LBL-90 Revised
UC-414
September 1993

A GUIDE TO EXPERIMENTAL ELEMENTARY PARTICLE PHYSICS LITERATURE 1988–1992

S.I. Alekhin, V.V. Ezhela, B.B. Filimonov, S.B. Lugovsky, A.S. Nikolaev, S.I. Striganov, Yu.G. Stroganov, and O.P. Yushchenko

Compilation, Analysis and Systematization Group, Institute for High Energy Physics*
Protvino, Moscow Region, Russian Federation

G.A. Arutyunyants and S.M. Kiselev

Institute of Theoretical and Experimental Physics
Moscow, Russian Federation

B. Armstrong, R.M. Barnett
T.G. Trippe, G.S. Wagman, and C.G. Wohl

Berkeley Particle Data Group,† Lawrence Berkeley Laboratory
University of California, Berkeley, California, 94720, USA

Abstract

We present an indexed guide to the literature in experimental particle physics for the years 1988–1992. About 4,000 papers are indexed by Beam/Target/Momentum, Reaction/Momentum (including the final state), Final State Particle, and Accelerator/Detector/Experiment. All indices are cross-referenced to the paper's title and reference in the ID/Reference/Title Index. The information in this guide is also publicly available from a regularly updated computer database.

*The COMPAS Group is supported in part by the Russian Foundation for Fundamental Investigations under contract RFFI-93-02-3733.

†The Berkeley Particle Data Group is supported by the Director, Office of Energy Research, Office of High Energy and Nuclear Physics, Division of High Energy Physics of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098, and by the U.S. National Science Foundation under Agreement No. PHY-9015724. Partial funding to cover the cost of this publication is also provided by an implementing arrangement between the governments of Japan (Monbusho) and the United States (DOE) on cooperative research and development.

MASTER

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

TABLE OF CONTENTS

Introduction

1. Overview 1
2. Scope of this Compilation 1
3. Using this Compilation 1
4. High-Energy Physics Databases 2
5. Accessing the High-Energy Physics Databases 4
   - 5.1 Databases from the World-Wide Web on the INTERNET 4
   - 5.2 IHEP Databases on PPDS at CERN 4
   - 5.3 Library Databases on ALICE at CERN 5
   - 5.4 QALICE Access to ALICE at CERN 5
   - 5.5 Databases on SPIRES at SLAC 5
   - 5.6 QSPIRES Access to *HEP* at the Yukawa Institute 5
   - 5.7 Durham-RAL Databases on BDMS at Durham and CERN 5
   - 5.8 Menu-Driven RPP Database at LBL 5

References 6

Indices

ID/Reference/Title Index 7
Beam/Target/Momentum Index 115
Reaction/Momentum/Data-Descriptor Index 157
Particle/Decay Index 329
Accelerator/Experiment/Detector Index 395

Vocabularies

Particle Vocabulary 421
Accelerator Vocabulary 441
Detector Vocabulary 445
Data Descriptor Vocabulary 451

History Plots and Chronology of Particle Discoveries . . 453

1. Overview

This report is a guide to experimental particle physics papers containing new experimental data published or preprinted during the years 1988–1992. Earlier papers may be found in previous editions of this report. [1] No actual data are presented in this report. The report is based on the *DOCUMENTS* database, maintained by the COMPAS Group at IHEP Protvino on the BDMS system under OpenVMS. The database is accessible from many sites around the world.

In this Introduction, Section 2 discusses the scope of this compilation and the sources of information. Section 3 tells how to use this book. Section 4 describes publicly-accessible databases of interest to high-energy physicists. Section 5 tells how to access those databases, including the *DOCUMENTS* database on which this book is based.

The body of this report contains five *Indices* followed by four *Vocabularies*. In the Indices, papers are referenced by an identifier (ID) consisting of the first author's name and the year of first preprinting or publication, *e.g.* Smith 91. The first Index, the ID/Reference/Title Index, lists IDs, each with the title and preprint number and/or publication reference. From the ID of a paper in any of the other Indices, you can find the full reference in the first Index. The Beam/Target/Momentum Index lists papers by beam particle, target particle, and beam momentum (or center-of-mass energy). The Reaction/Momentum/Data-Descriptor Index lists papers by the full reaction. The Particle/Decay Index lists papers by a specific particle and its decay. The Accelerator/Experiment/Detector Index lists papers by the facility at which the experiment was done.

Four *Vocabularies* follow the Indices. The Particle Vocabulary gives our spelling conventions for particle names. We use the same nomenclature for particles as does the "Review of Particle Properties." [2] The Accelerator and Detector Vocabularies give the names and abbreviations assigned to accelerators and detectors. The Data Descriptor Vocabulary gives abbreviations used in the Reaction/Momentum/Data Descriptor Index.

At the end of this report is an historical section, "History Plots and Chronology of Particle Physics Discoveries," which is a prototype and will no doubt be found to have omissions.

Please bring any errors and omissions you may find to our attention.

2. Scope of this Compilation

Compilation of this report begins with extraction of bibliographic data from a scan of the literature made by the COMPAS Group at IHEP Protvino. Additional bibliographic data comes from the SLAC-SPIRES *HEP* database, a joint project of the SLAC and DESY libraries. From the papers in these databases, we select those with experimental data. In cases of uncertainty about the newness or originality of data, we include the paper. All decisions are made by a physicist.

"Data" means not only the obvious experimentally measured quantities, but also some derived quantities, such as partial-wave amplitudes. Also, theoretical papers that extract new information from experiments are included. We exclude instrumentation papers and papers mainly of interest only to nuclear physicists, such as nuclear-level or other nuclear-structure measurements. There are of course gray areas: many particle physics experiments measure scattering phenomena off nuclei. Heavy-ion experiments are also sometimes of interest to elementary particle physicists. In these areas, we generally include papers that report more than just nuclear-structure parameters and that involve beam energies above about 1 GeV/nucleon, or that report measurements on light nuclear targets, such as the isotopes of hydrogen, helium, or lithium. Other papers are decided on a case-by-case basis by a physicist.

We also publish "Current Experiments in Elementary Particle Physics," LBL-91 Revised (1992), [3] covering current, approved experiments at the major world accelerators and underground/underwater detectors. It includes a Beam/Target/Momentum Index, a Spokesperson Index, and summaries of each of the experiments.

3. Using this Compilation

Each paper is assigned a unique ID, consisting of the first author's name and the year of the first preprinting or publication. In case of duplicates, we append a letter to distinguish IDs, as in:

```
Jones 91
Jones 91B
Jones 91C.
```

The maximum length of the ID is 16 characters; thus long names are truncated.

All references for a paper correspond to a single ID given in the ID/Reference/Title Index. When a paper has been both preprinted and published, both references are given. In these cases, the year in the ID, which is usually that of the preprint, may not match the year of the published reference. In the very few cases where the first author of the preprint is not the same as that of the publication, the ID usually contains the preprint's first author.

To see a paper's full author list or to search for a set of papers by the name of one or more authors, one may query the *DOCUMENTS* or *HEP* databases (see Sections 4 and 5 below).

The first page of each Index explains its use. It is worthwhile to understand a few of our conventions.

- We follow the particle naming scheme used in the "Review of Particle Properties"[2] and in the previous two editions of this report; see the latest edition of the "Review" for a complete description. A full list of the particle terms, including terms used to describe collisions and decays is given in the Particle Vocabulary.
- Some "particle names" actually represent groups of particles. For example,

* "X" is used for inclusive measurements or, if used as the only particle in the final state, for total-cross-section measurements;
* "inelastic" represents a sum over all inelastic final states;
* "jet" represents a jet of particles, treated as a single entity;
* "(vees)" represents *zero or more* unspecified neutral vees, "vee (vees)" represents *one or more* unspecified neutral vees, and "2vee (vees)" represents *two or more* of the same;
* "mult[charged-hadron]" represents a *collection of reactions* for which the multiplicity distribution of charged hadrons has been measured, or also represents a sum over final states with the specified lower and upper bounds on multiplicity;
* "0γ" means final states in which the occurrence of photons in the inclusive part of the final state has been excluded.

- In using the computer database, all antiparticles that are commonly written with a bar over the name are spelled with the letters "BAR" appended to the particle name, *e.g.*, PBAR, LAMBDA/CBAR-.
- Particles tend to be encoded in the same language that the experimenters used. Thus, some inevitable ambiguity occurs; for example, "charged" in one paper may be called "charged-hadron" in another.
- Reactions are listed in the shortest form possible. Identical particles are grouped together, so the reaction $\pi^- p \to \pi^+\pi^+\pi^-\pi^-\pi^- p$ will appear as $\pi^- p \to p 2\pi^+ 3\pi^-$.

4. High-Energy Physics Databases

This section describes publicly accessible databases of interest to high-energy physicists. See Table 1 for availability, contacts, and user guides. For databases that are derived from other databases, see also the description of the originating database. See Section 5 for information on accessing these databases.

1. *CONF (CERN)*, a subset of *LIB*, contains forthcoming conferences of interest for high-energy physics and accelerator research and contains past conferences back to 1986.
2. *CONF (SLAC)* contains names and dates of past and future conferences of interest to high-energy physicists.
3. *CS*, regularly updated from the *REACTIONS* database, contains data from CERN-HERA, UCRL, and LBL cross-section compilations covering 1950 to the present.
4. *DIR*, the Directory of Research Institutes in High Energy Physics, contains addresses, telephone, fax, and telex numbers, and e-mail nodes, as well as brief information on CERN's research programs and accelerators. To obtain *DIR* in a Filemaker PRO format for Macintosh computers, contact the SIS Secretariat at CERN or Wolfgang Simon (ISI@CERNVM.CERN.CH).
5. *DOCUMENTS* contains two groups of keys: (1) Bibliographic: ID, references, year of preprinting or publication, authors and affiliations, and experiment number. (2) Topical: beam particle, target particle, reactions, particles in the final states of reactions, momenta in initial states, types of data obtained, particles whose property has been measured, accelerator and/or detector, and initial state polarization.
6. *E-MAIL IDS*, derived from *HEPNAMES*, contains e-mail addresses of many people working in high-energy physics.
7. *EXPERIMENTS* contains summaries of approved experiments at major laboratories. It covers approximately 1975 to 1992, with coverage since 1980 being more complete. It is searchable by experiment number, author, accelerator, detector, reaction, beam momentum, journal paper, and other items. The report "Current Experiments in Elementary Particle Physics"[3] is produced from it.
8. *HEP (SPIRES-HEP)*, a joint project of the SLAC and DESY libraries, contains 270,000 bibliographic entries on particle physics papers (journal articles, preprints, reports, theses, *etc.*). It covers 1974 to the present and is updated daily. It is searchable by author, institution, title, topic, report number, citation, bulletin board number, and other bibliographic items. It is used to produce the weekly "Preprints in Particles and Fields" which is posted to the World-Wide Web.
9. *HEPNAMES* contains 23,000 e-mail addresses of many people working in high-energy physics.
10. *INSTITUTIONS* contains 3,000 addresses and, often, phone and fax numbers of high-energy physics-related institutions.
11. *LIB* contains the CERN library's catalogue of books, reports, preprints, and other information.
12. *PARTICLE PROPERTIES*—see *PARTICLES*.
13. *PARTICLES* contains the Full Listings from the "Review of Particle Properties,"[2] indexed by particle and property, but does not contain the Particle Properties Summary Tables or Miscellaneous Tables, Figures, and Formulae from the "Review." It is updated around April each year. It is searchable by particle and particle property (*e.g.*, mass, lifetime, *etc.*).
14. *PP* contains information on particle properties derived from the "Review of Particle Properties" Summary Tables.
15. *PREP*, a subset of *LIB*, contains entries for preprints, reports, conference papers, and CERN publications. It covers nearly all preprints and reports received in the CERN Library since 1980. It also has publication details for all papers published with CERN as an affiliation and for most conference papers published in proceedings since about 1987.

Table 1. Summary of High-Energy Physics Databases

NAME	SYSTEM	AVAILABILITY	CONTACTS	USER GUIDE
CONF (CERN)[1]	ALICE	WWW,CERN	*a*	*b*
CONF (SLAC)[1]	SPIRES	WWW,SLAC	*c*	*c*
CS[2]	PPDS	IHEP,CERN	*e*	*e,f*
DIR	ALICE	WWW,CERN	*a*	*g*
DOCUMENTS	PPDS	IHEP,CERN	*e*	*e,f*
E-MAIL IDS[3]	BDMS	WWW,DURHAM,CERN	*h*	*g,h*
EXPERIMENTS[4]	BDMS	WWW,DURHAM,CERN	*h*	*g,h*
EXPERIMENTS[4]	PPDS	IHEP,CERN	*e*	*e,f*
EXPERIMENTS[4]	SPIRES	WWW,SLAC	*d*	*d*
HEP[5] *(SPIRES-HEP)*	SPIRES	WWW,SLAC,DESY,KEK,Yukawa	*d,i,j,k*	*d*
HEPNAMES	SPIRES	WWW,SLAC	*l*	*d*
INSTITUTIONS[6]	SPIRES	WWW,SLAC	*d*	*d*
LIB	ALICE	WWW,CERN	*a*	*b*
PARTICLE PROPERTIES[7]	BDMS	WWW,DURHAM,CERN	*h*	*g,h*
PARTICLES[8]	SPIRES	WWW,SLAC	*f*	*d*
PP[9]	PPDS	IHEP,CERN	*e*	*e,f*
PREP	ALICE	WWW,CERN	*a*	*b*
REACTION DATA[10]	BDMS	WWW,DURHAM,CERN	*h*	*g,h*
REACTIONS (IHEP)[11]	PPDS	IHEP,CERN	*e*	*e,f*
REACTIONS (SLAC)[12]	SPIRES	SLAC	*h*	*d*
RPP[8]	MENU-DRIVEN	WWW,LBL	*f*	—
SLACPPF/CITATIONS[13]	BDMS	WWW,DURHAM,CERN	*h*	*g,h*
VOCABULARY	PPDS	IHEP,CERN	*e*	*e,f*

[1] *CONF (CERN)* and *CONF (SLAC)* are similar in nature, but are not identical.
[2] Derived from *REACTIONS (IHEP)*.
[3] Derived from *HEPNAMES*.
[4] Maintained by SLAC, transferred to other institutions. (Ref. 3).
[5] Maintained by SLAC in collaboration with the DESY HEP Index Group, transferred to other institutions nightly.
[6] Maintained by SLAC in collaboration with the LBL Particle Data Group.
[7] Derived from *PARTICLES*.
[8] Derived from the Full Listings from "Review of Particle Properties" (Ref. 2).
[9] Derived from the Summary Tables from "Review of Particle Properties" (Ref. 2).
[10] Maintained by the HEP Database Group at Durham, data exchanged twice yearly with IHEP.
[11] Maintained by the COMPAS Group at IHEP Protvino with input from ITEP; data exchanged twice yearly with Durham.
[12] Same as *REACTION DATA*, but only updated yearly.
[13] A subset of *SPIRES-HEP*.

a: `MALICE@VXLIB.CERN.CH`
b: `SISSECR@CERNVM.CERN.CH` (Anita Olofsson, CERN Library, CH-1211 Geneva 23 Switzerland)
c: `CONF@SLACVM.SLAC.STANFORD.EDU` (Georgia Row, SLAC Library, P.O. Box 4349, Stanford, CA 94309, USA)
d: `QSPI@SLACVM.SLAC.STANFORD.EDU` (Hrvoje Galić, SLAC, P.O. Box 4349, Stanford, CA 94309, USA)
e: `ALEKHIN@MX.IHEP.SU` or `EZHELA@MX.IHEP.SU` (Sergey Alekhin or Vladimir Ezhela, IHEP, Protvino, Moscow Region, Russian Federation)
f: `PDG@LBL.GOV` (Particle Data Group, LBL, 50-308, Berkeley, CA 94720, USA)
g: `ANTON@CERNVM.CERN.CH` (Anna Anton, CERN Library, CH-1211 Geneva 23 Switzerland)
h: `M.R.WHALLEY@DURHAM.AC.UK` or `MRW@CERNVM.CERN.CH` (Mike Whalley, Durham Univ., South Rd., Durham City, DH1 3LE, UK) or `RGR@UKACRL.BITNET` (Dick Roberts, Rutherford Appleton Laboratory, Chilton, Didcot, Oxon. OX11 0QX, UK)
i: `LOOHTP@DHHDESY3.BITNET` (H. Preissner, DESY, Notkestrasse 85, D-22603 Hamburg, Germany)
j: `MIURA@JPNKEKVM.BITNET` (Y. Miura, KEK, 1-1 Oho, Tsukuba-shi, Ibaraki-ken 305, Japan)
k: `AOKI@JPNYIPP.BITNET` (K. Aoki, Yukawa Inst., Kyoto Univ., Kyoto 505, Japan)
l: `HEPNAMES@SLACVM.SLAC.STANFORD.EDU`

16. *REACTION DATA* is a compilation of numerical experimental particle physics reaction data, including data from 2-body (and quasi-2-body) scattering, e^+e^- annihilation, and inclusive hadron, photon, and lepton physics such as total and differential cross sections, fragmentation functions, structure functions, and polarization measurements.
17. *REACTIONS (IHEP)*, in conjunction with *REACTION DATA*, contains numerical data on reactions: differential and total cross sections, structure functions, polarization measurements, and other quantities. It covers 1978 to the present and is updated approximately quarterly.
18. *REACTIONS (SLAC)*—see *REACTION DATA*.
19. *RPP* contains the Full Listings from the "Review of Particle Properties."[2] Through user-friendly menus, users may query by paper, particle, mass range, quantum numbers, or detector, and can select specific properties or classes of properties like masses or decay parameters. All other relevant information (*e.g.*, footnotes and references) is included. Complete instructions are available online. The database is completely updated in the Spring of even-numbered years for publication of the "Review," and is less thoroughly updated in the Spring of odd-numbered years.
20. *SLACPPF/CITATIONS*, a subset of the *SPIRES-HEP* literature-searching guide, contains references to papers and preprints since 1980, being comprised of the SLAC PPF (preprint) records with PPA (published references to PPF) updates compiled by the SLAC library. Many journal publications compiled by the DESY library are also included.
21. *VOCABULARY* controls usage of particle names, accelerator names, detector names, and data descriptors in the *DOCUMENTS* database.

5. Accessing the High-Energy Physics Databases

5.1 Databases from the World-Wide Web on the INTERNET

Many databases, including several of the high-energy physics databases discussed above, are accessible via the World-Wide Web (W3 or WWW) (see Table 1), which is an INTERNET-based wide-area hypermedia information retrieval system. There are several browsers available (WWW line-mode browser, NCSA's Mosaic browser for X Windows, SLAC's MidasWWW browser for X Windows, Cello browser for MSDOS, *etc.*) that may already be installed at your institution; if not, try `TELNET INFO.CERN.CH`, which will connect you to WWW and will explain how to acquire the browsers.

5.2 IHEP Databases on PPDS at CERN

Anyone who has an account on VXCERN can directly access the databases maintained there by the IHEP Protivno COMPAS Group and with input from the world-wide Particle Data Group collaboration. Otherwise, remote interactive access can be achieved from other OpenVMS computers with DECNET access to VXCERN. The remote software (20,000 blocks) can be obtained from either `LUGOVSKY@MX.IHEP.SU` or `LBL::PDG`.

In the following description, words in **Typewriter Font** must be typed as given. Only the letters in UPPER CASE are necessary and these must be entered in upper case. *Italic words* in brackets ⟨...⟩ are variables for which the user substitutes an appropriate value, again in upper case (but without the brackets).

Access to the IHEP Protvino databases at CERN, running under the Berkeley Database Management System (BDMS), can then be initialized by the system manager (as is done on VXCERN) or by having each user type:

`@`*disk*`:[`*directory*`.COMPAS.BDMS.COM]BDMSINI`

(For example, on the CSA cluster at LBL, substitute `DISK$PHYSICS00` for '*disk*' and `WAGMAN` for '*directory*'.)

- To enter the system and obtain general information, type:
  `PPDS`
  or, to open a particular database, type:
  `PPDS` ⟨*database-name*⟩
  (*e.g.*, `PPDS DOCuments`)
- For a short explanation of the database, type:
  `HELpbase`
- For a list of BDMS commands, type:
  `?`
- For an explanation of a particular BDMS command, type:
  `?`⟨*command-word*⟩
  (*e.g.*, `?FInd`, `?HELpbase`, `??`)
- To see the record structure and names of keys for searching, type:
  `FDT`
- To browse the index of a key, type:
  `INDex,`⟨*key-name*⟩
  (*e.g.*, `INDex,AC`)
- To search an index, type:
  `FInd` ⟨*key-name*⟩`=`⟨*key-value*⟩`;**`

Note the use of '**' to terminate each search statement and the use of ';' to separate data elements.

The following examples typify the `FIND` search command.

```
FInd AC=BNL;**
FInd AC=BNL; OR AC=BONN;**
```

Each successful search produces a list of all previous searches and labels them with a 'set number.' A previous search result can then be combined with a current search by use of set numbers:

```
FInd (1) and RE=PI+ P --> PI+ P;**
FInd (1) and (2) **
```

Note that ';' is not used in searches that only use 'sets'. Enter `DIR` to get a list of these set numbers and search commands.

- To do a truncated search, use a slash after the key value:
  `FInd DE=HBC/;**`
  This finds all detectors that begin with `HBC`.

- To do a string search, use /C after the key name:
  `FInd DE/C=BC;**`
  This finds all detectors that have BC anywhere in the name.
- The following examples are WRONG:
  `find ac=bnl;**` (Error: uses lowercase)
  `FInd AC BNL;**` (Error: no '=')
  `FInd AC=BNL **` (Error: no ';')
  `FInd AC=BNL OR BONN;**` (Error: no ';' & no 'AC=')
- To see the results of a search with key names, type:
  `LISt`
- Or to restrict data elements shown, append the desired key names. For example:
  `LISt,AC,RE,SC.`
  The leading comma and terminal period are required.
- Or for an attractive listing, type:
  `DOcument` then
  `LOokfile`
- To save the result of a search in a file, type one of the following:
  `DOcument`
  `DUmp`
  `PRInt`

The results are stored in the files DOC.DOC, DOC.DUM, or DOC.PRN. The first file contains a user-friendly listing, the second contains a highly compressed dump of each record (with data element and value), and the third contains a line-by-line decompressed version of the second file. Another file automatically created, DOC.AUD, contains a history of your commands.

5.3 Library Databases on ALICE at CERN

To access ALICE on DECNET, SET HOST VXLIB (22748) or on INTERNET, TELNET ALICE.CERN.CH (128.141.201.44). Then login to account ALICE (a password is not required) and select the terminal type according to the menu. ALICE is a full-screen system using the DEC international character set, which can be displayed on suitable terminals. Simple searching can be done by using a menu system or by using the full power of the ISO Common Command Language; HELP displays are provided to guide searching. With the MAIL command, the results of searches can be sent to any e-mail address for printing.

5.4 QALICE Access to ALICE at CERN

People without remote login access to CERN can use QALICE.

Typical messages from OpenVMS to QALICE:

```
msg VXLIB QALICE base prep;f black hole?;
msg VXLIB QALICE base and 1991-->1992/yr;show
msg VXLIB QALICE base dir;f org=cern;show full
```

Alternately, send e-mail to: QALICE@VXLIB.CERN.CH, put the query in the 'subject' field, and leave the 'message' area blank. For further information, send the 'subject' HELP to QALICE.

SDI (Selective Dissemination of Information) Service on QALICE Access

Regular weekly or monthly searches of the CERN databases can be arranged according to a personal search 'profile', with the results sent automatically by e-mail. For details, contact David Dallman, Scientific Information Service (SIS), CERN, CH-1211 Geneva 23, Switzerland (DALLMAN@CERNVM.CERN.CH).

5.5 Databases on SPIRES at SLAC

SLAC encourages the high-energy physics community to access its databases through the World-Wide Web, link

`http://slacvm.slac.stanford.edu:0080/FIND/slac.html`

SLAC's MidasWWW browser for X Windows features point and click links from the *SPIRES-HEP* database to most bulletin board preprints (full-text PostScript including figures and typeset equations). Creation of the PostScript files from the original TEX postings to the various bulletin boards is a joint project of the SLAC, DESY, and SSCL libraries and the CERN publications group.

People without INTERNET access to SLAC but who have BITNET access can access the databases at SLAC via QSPIRES. Contact Hrvoje Galić (QSPI@SLACVM.SLAC.STANFORD.EDU).

5.6 QSPIRES Access to HEP at the Yukawa Institute

The Yukawa Institute also operates QSPIRES for the Far East; contact K. Aoki (AOKI@JPNYIPP.BITNET).

5.7 Durham-RAL Databases on BDMS at Durham and CERN

Databases running under the Berkeley Database Management System (BDMS) that are menu driven with on-line help information are available on the CERN IBM/VM system and on the Durham OpenVMS system. On the VM system, enter GIME UDISK followed by HEPDATA. To access the Durham OpenVMS system on DECNET, SET HOST DURPDG (19788) or on INTERNET, TELNET DURPDG.DUR.AC.UK (129.234.8.100). A guest account PDG, password HEPDATA, is available on this machine.

Retrieve data by using simple keyword-based searches; resulting data records can be listed on the terminal or transferred to the user's own host machine.

5.8 Menu-Driven RPP Database at LBL

To access the *RPP* database on DECNET, SET HOST MUSE (42062) or on INTERNET, TELNET MUSE.LBL.GOV (131.243.48.11). Then login to the captive account PDG_PUBLIC (a password is not required).

REFERENCES

1. S.I. Alekhin *et al.*, "A Guide to Experimental Elementary Particle Physics Literature," LBL-90, revised, 1990.
   G.P. Yost *et al.*, "A Guide to Data in Elementary Particle Physics," LBL-90, revised, 1986.
   C.P. Horne *et al.*, "Indexed Compilation of Experimental High Energy Physics Literature," LBL-90, 1978.
2. Particle Data Group, "Review of Particle Properties," Phys. Rev. **D45**, Number 11, Part II, (1992).
3. Particle Data Group, "Current Experiments in Elementary Particle Physics," LBL-91 Revised (1992).

This Index provides the full reference and title and a short identifier (ID) for each of the papers referred to in the later Indices. The ID consists of the name of the first author and the year the paper appeared, as in JONES 91. Other papers with the same first author and year are listed as JONES 91B, JONES 91C, etc.

One may use this index to see if a preprint has been published. Note, however, that the year of preprinting and the year of publishing are often different, and our ID is usually that of the year of preprinting.

Due to text processing procedures, titles of papers in this index may differ slightly from the original titles, especially regarding particle names.

Illustrative Key

Document ID: all other indices in this volume refer to this paper by this ID.

Primary Reference: the journal reference for this paper, if the paper was published.

Additional References: the preprint number (occasionally there is more than one).

Title of Paper

Dougherty 88	LBL-26303; **An Experimental Investigation of Double Beta Decay of ^{100}Mo**
Dowell 88	CERN-EP-88-154; **Recent Results from the UA1 Experiment**
Drechsel 85	Phys. Rev. Lett. 54:30,1985; **Search for Anomalous Fragments of ^{56}Fe Using Plastic Nuclear Track Detectors**
Dropesky 86	Phys. Rev. C32:1305,1985; **Excitation Functions for the Production of ^{18}Fl and ^{24}Na from Al and Si with Fast Pions**
Druzhinin 88	Z. Phys. C37:1,1988; NOVO-87-52; **Search for Rare Radiative Decays of the ϕ Meson at VEPP−2M**
Dubar 89	Yad. Phys. 49:1239,1989; **Parametrization of Total Cross Sections at Intermediate Energies**
Dubinina 88	Pisma Zh. Eksp. Teor. Fiz. 48:233,1988; **Observation of the Slow Pion Production in the Nucleus Nucleus Interactions**
Duffy 85	Phys. Rev. Lett. 55:1816,1985; ***A*-dependence of Charm Production**
Dugan 85B	Phys. Rev. Lett. 55:170,1985; HUTP-85/A033; **New Neutrino Constraints on Majorana Mass Matrices**
Dukhovskoj 87	Yad. Phys. 47:1816,1988; ITEP-87-198; **Measurement of the Total Cross Sections of the Proton Interactions with Nuclei ^{6}Li, ^{7}Li, and ^{9}Be at 2 GeV/ c**

Aarnio 89 Phys. Lett. 231B:539, 1989; CERN-EP-89-134;
Measurement of the Mass and Width of the Z^0 Particle from Multihadronic Final States Produced in $e^+ e^-$ Annihilations

Aarnio 90 Phys. Lett. 240B:271, 1990; CERN-EP-90-19;
Study of Hadronic Decays of the Z^0 Boson

Aarnio 90C Phys. Lett. 241B:425, 1990; CERN-EP-90-31;
Study of the Leptonic Decays of the Z^0 Boson

Abachi 88 Phys. Lett. 212B:533, 1988; ANL-HEP-PR-88-5; IUHEE-88-3; UM-HE-88-5; PU-88-614;
Measurement of Upper Limits for the Decay Widths of $D^*(2010)^+$ and $D^*(2010)^0$

Abachi 88B Phys. Lett. 205B:111, 1988;
Production of η Mesons in $e^+ e^-$ Annihilation at $\sqrt{s}$=29 GeV

Abachi 88C Phys. Lett. 205B:411, 1988;
Measurement of the $D^0 \rightarrow K^- \pi^+$ Branching Fraction

Abachi 89 Phys. Lett. 226B:405, 1989; PU-89-628; IM-HE-89-23; IUHEE-89-3;
Measurement of the Branching Ratio for $\tau^- \rightarrow e^- \bar{\nu}_e \nu_\tau$

Abachi 89B Phys. Rev. D40:902, 1989; ANL-HEP-PR-88-90; IUHEE-88-9; UM-HE-88-38; PU-88-624;
Production Cross Section and Topological Decay Branching Fractions of the Tau Lepton

Abachi 89C Phys. Rev. D41:2045, 1990; ANL-HEP-PR-89-73; IUHEE-89-4; UM-HE-89-25; PU-89-631;
Quark Hadronization Probed by K^0 Mesons

Abachi 89D Phys. Rev. D40:706, 1989; ANL-HEP-PR-89-09; IUHEE-89-1; UM-HE-89-01; PU-89-625;
Study of Vector Meson Production in $e^+ e^-$ Annihilation at $\sqrt{s}$=29 GeV

Abachi 90 Phys. Rev. D41:1414, 1990;
Measurement of the Branching Ratio for $\tau^- \rightarrow e^- \bar{\nu}_e \nu_\tau$

Abaev 88B Yad. Phys. 48:1338, 1988; Sov. J. Nucl. Phys. 48:852, 1988;
Measurement of the Spin Rotation Parameters R and A in Elastic $\pi^- p$ Scattering at 450 and 560 MeV

Abaev 92 LNPI-92-1794;
Phase-shift Analysis of π nucleon Scattering in the Region 160 – 600 MeV

Abatzis 90 Phys. Lett. 244B:130, 1990; CERN-EP-90-50;
Λ and $\bar{\Lambda}$ Production in Sulphur-Tungsten Interactions at 200 GeV/c per Nucleon

Abatzis 90B Phys. Lett. 259B:509, 1991; CERN-PPE-90-165;
Production of Multistrange Baryons and Antibaryons in Sulphur-Tungsten Interactions at 200 GeV/c per Nucleon

Abatzis 91 Phys. Lett. 270B:123, 1991; CERN-PPE-91-112;
Ξ^-, $\bar{\Xi}^+$, Λ and $\bar{\Lambda}$ Production in Sulphur-Tungsten Interactions at 200 GeV/c per Nucleon

Abatzis 91B Nucl. Phys. A525:441C, 1991;
Multi-Strange Baryon and Antibaryon Production in Sulphur-Tungsten and Proton-Tungsten Interactions at 200 GeV/c per Nucleon

Abazov 91 Phys. Rev. Lett. 67:3332, 1991;
Search for Neutrinos from the Sun Using the Reaction ν_e ^{71}Ga $\rightarrow e^-$ ^{71}Ge

Abbott 90 Phys. Rev. Lett. 64:847, 1990;
Kaon and Pion Production in Central Si Au Collisions at 14.6 A GeV/c

Abbott 91 Phys. Lett. 271B:447, 1991;
Antiproton Production in 14.6 A GeV Si Nucleus Collisions

Abbott 91B Nucl. Phys. A525:231C, 1991;
Particle Production in Si Nucleus and p Nucleus Collisions at 14.6 A GeV/c

Abbott 91C Phys. Rev. Lett. 66:1567, 1991;
Comparison of p Au and Si Au Collisions at 14.6 GeV/c

Abbott 91D Nucl. Phys. A525:531C, 1991;
Bose-Einstein Correlations in 14.6 A GeV/c ^{28}Si + Nucleus Collisions

Abbott 92 Phys. Rev. D45:3906, 1992;
Measurement of Particle Production in Proton-Induced Reactions at 14.6 GeV/c

Abbott 92B Phys. Rev. C45:2933, 1992;
Global Transverse Energy Distributions in Relativistic Nuclear Collisions at 14.6 A GeV/c

Abbott 92C Phys. Lett. 291B:341, 1992;
Centrality Dependence of K^+ and π^+ Multiplicities from Si + Nucleus Collisions at 14.6 A GeV/c

Abdinov 88 JINR-P1-88-102;
Observation of Narrow Diproton States in $p\ p\ \gamma$ Channel

Abdullah 90 Phys. Rev. Lett. 65:2347, 1990;
New Experimental Limit on the Electron Electric Dipole Moment

Abdullin 88 Yad. Phys. 48:917, 1988;
Analysis of the ^{3}He $p \rightarrow$ deuteron $p\ n\ \pi^+$ Reactions at 5 GeV/c ^{3}He Momentum in the Entire Phase Space

Abdullin 88B ITEP-88-130;
An Investigation of the Reaction ^{3}H $p \rightarrow 2p\ 2n\ (\pi^0)$ at the ^{3}H Momentum of 5 GeV/c

Abdullin 88C ITEP-88-159;
Analysis of the ^{3}He $p \rightarrow 2p\ 2n\ \pi^+$ Reaction at the ^{3}He Momentum of 5 GeV/c in the Total Phase Volume

Abdullin 88D ITEP-88-161;
Analysis of the ^{3}He $p \rightarrow$ deuteron $p\ n\ \pi^+$ Reaction at the ^{3}He Momentum of 5 GeV/c in the Total Phase Volume

Abdullin 89 Yad. Phys. 49:169, 1989;
Cross Section of Tritium Interactions with Protons and ^{3}H p Elastic Scattering at 5 GeV/c

Abdullin 89B ITEP-89-17;
Quasielastic ^{3}H p Scattering at 5 GeV/c ^{3}H Momentum

Abdullin 89C Yad. Phys. 50:400, 1989; ITEP-89-7;
Reaction ^{3}H $p \rightarrow$ deuteron $p\ n$ at 5 GeV/c ^{3}H Momentum

Abdullin 89D Pisma Zh. Eksp. Teor. Fiz. 49:413, 1989; Jetp Lett. 49:471, 1989; ITEP-89-51;
Determination of the Nucleon Momentum Distributions in the ^{3}He and ^{3}H Nucleus from the Reactions ^{3}He $p \rightarrow p\ p$ deuteron and ^{3}H $p \rightarrow p\ n$ deuteron

Abdullin 89E Yad. Phys. 49:1645, 1989; Sov. J. Nucl. Phys. 49:1018, 1989;
Total Phase Space Analysis of Reaction ^{3}He $p \rightarrow 2p\ 2n\ \pi^+$ at 5 GeV/c Momentum of Nuclei

Abdullin 89F Yad. Phys. 52:15, 1990; ITEP-89-96;
Cumulative Nucleon Production in ^{3}He p and ^{3}H p Interactions at the 5 GeV/c Nucleus Momentum

Abdullin 89G ITEP-89-159;
The Total Phase Space Study of the Reaction ^{3}H $p \rightarrow$ deuteron $p\ p\ \pi^-$ at Nucleus Momentum of 5 GeV/c

Abdullin 89H Pisma Zh. Eksp. Teor. Fiz. 50:213, 1989; Jetp Lett. 50:237, 1989; ITEP-89-117;
A Search for Anomalons with Charge Z =2 in the ^{3}He p Interactions at 5 GeV/c ^{3}He Momentum

Abdullin 90 Yad. Phys. 51:1215, 1990;
Search for a $\Delta(1232\ P_{33})^{++}$ $n\ n$ Configuration in ^{3}He

Abdullin 90B ITEP-90-3;
Reaction ^{3}H $p \rightarrow p\ p\ p\ n\ \pi^-$ at the Projectile Nucleus Momenta of 5 GeV/c

Abdullin 90C Yad. Phys. 52:1423, 1990;
Search for Tribaryon Resonances with Isospin T=3/2 in ^{3}H p and ^{3}He p Interactions at Nucleus Momentum of 5 GeV/c

Abdullin 90D Nucl. Phys. A506:471, 1990;
The ^{3}H $p \rightarrow p\ n$ deuteron Reaction at a Tritium Momentum of 5 GeV/c

Abdullin 92 Yad. Phys. 56-4:204, 1993; ITEP-92-86;
Cross Sections of ^{4}He Interaction with Protons and He p Elastic Scattering at 2.7 GeV/c

Abdurakhimov 88 JINR-P1-88-406;
Size of π^- Meson Emission Region in Inelastic and Central Nuclear-Nuclear Interactions at E=3.66 A GeV

Abdurakhimov 88B JINR-P1-88-903;
Emission of Rigid Gamma Quanta in π^- Xe Interactions at 3.5 GeV/c

Abdurakhimov 89 JINR-P1-89-272;
Longitudinal and Transverse Dimensions of π^- Meson Emission Region in Central ^{12}C + Cu Collisions at 3.66 A GeV Energy

Abdurakhimov 89C Nuovo Cim. 102A:645, 1989;
Experimental Study of Relativistic Hypernuclei Using the HYBS-Spectrometer

Abdurakhimov 91 JINR-P1-91-240;
Topological Characteristics of the Charge Exchange Reaction ^{3}H $\rightarrow$ ^{3}He on Neon and Magnesium Nuclei at 9 GeV/c

Abdurazakova 88 Yad. Phys. 47:1299, 1988;
The Shape of Relativistic ^{4}He Transverse Momentum Distribution in High Energy Nucleus-Nucleus Collisions

Abduzhamilov 88 Yad. Phys. 48:446, 1988; Sov. J. Nucl. Phys. 48:280, 1988;
Azimuthal Correlation in Six-Prong $p\ p$ Interactions at 200 and 400 GeV/c

Abduzhamilov 88B Z. Phys. C40:1, 1988;
Angular Distributions in Proton-Nucleus Interactions in Emulsion at 800 GeV

Abduzhamilov 88C Z. Phys. C40:223, 1988;
Multiplicity in Proton-Nucleus Interactions in Emulsion at 800 GeV

Abduzhamilov 89 Phys. Rev. D39:86, 1989;
Central Collisions of 800 GeV Protons with Ag/Br Nuclei in Nuclear Emulsion

Abduzhamilov 91 Yad. Phys. 53:1311, 1991;
Some Peculiarities of Multiple Production in $p\ p$ Interactions at 200 and 400 GeV

Abe 88 Phys. Lett. 200B:266, 1988;
Leading Particles Distribution in 200 GeV/c $p + A$ Interactions

Abe 88B Phys. Lett. 207B:355, 1988; KEK-87-165; HUPD-8803; KOBE-HEP-88-01; KUNS-914; OULNS-87-08; TMUP-HEL-88-20;
Study of Multihadron Events with Isolated Leptons in $e^+\ e^-$ Annihilation at 50 < $\sqrt{s}$ < 55 GeV

Abe 88C Phys. Rev. Lett. 61:1819, 1988; ANL-HEP-PR-88-32;
Transverse Momentum Distributions of Charged Particles Produced in $\bar{p}\ p$ Interactions at $\sqrt{s}$=630 and 1800 GeV

Abe 88D Phys. Rev. Lett. 61:915, 1988;
Search for New Charged Leptons Decaying into Massive Neutrinos and Stable Charged Leptons in $e^+\ e^-$ Collisions

Abe 88E Phys. Lett. 213B:409, 1988; KEK-88-33; KOBE-HEP-88-02; KUNS-937; HUPD-8808; OULNS-88-04; TMUP-HEL-88-22;
Search for Excited Electrons in the $e^+\ e^-$ Reactions up to the $\sqrt{s}$=56 GeV

Abe 88F Phys. Rev. D39:3524, 1989; KUNS-954; OULNS-88-08; HUPD-8815; KOBE-HEP-88-06; KEK-88-111; TMUP-HEL-88-23;
Search for a Fourth Generation Quark with Q=e/3 in $e^+\ e^-$ Collisions at $\sqrt{s}$=56 - 57 GeV

Abe 89 Phys. Rev. Lett. 62:613, 1989; FERMILAB-PUB-88-213-E;
Measurement of the Inclusive Jet Cross Section in $\bar{p}\ p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 89B Phys. Rev. Lett. 62:1005, 1989; FERMILAB-PUB-88-207-E;
Measurement of $W^{\pm}$-Boson Production in 1.8 TeV $\bar{p}\ p$ Collisions

Abe 89C Phys. Rev. Lett. 62:1825, 1989;
Limits on the Masses of Supersymmetric Particles from 1.8 TeV $p\ \bar{p}$ Collisions

Abe 89D Phys. Rev. Lett. 62:3020, 1989; FERMILAB-PUB-89-62-E;
Dijet Angular Distributions from $\bar{p}\ p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 89E Phys. Rev. Lett. 62:1709, 1989;
Determination of $\sin^2\theta_W$ from Measurements of Differential Cross Sections for Muon-Neutrino and Antineutrino Scattering by Electron

Abe 89F Z. Phys. C45:175, 1989; KEK-89-66; OULNS-89-06; KOBE-HEP-89-03; HUPD-8909; KUNS-982; TMUP-HEL-89-20;
Measurement of the Differential Cross Section of $e^+\ e^- \rightarrow \gamma\ \gamma$ and $e^+\ e^- \rightarrow \gamma\ \gamma\ \gamma$ at $\sqrt{s}$=55, 56, 56.5 and 57 GeV and Search for Unstable Photino Pair Production

Abe 89G Phys. Rev. Lett. 64:142, 1989; FERMILAB-PUB-89-212-E; UPR-0172E;
A Search for the Top Quark in the Reaction $\bar{p}\ p \rightarrow e^-$ jets at $\sqrt{s}$=1.8 TeV

Abe 89H Phys. Rev. Lett. 63:1447, 1989; ANL-HEP-PR-89-71; FERMILAB-PUB-89-161-E;
Search for Heavy Stable Charged Particles in 1.8 TeV $\bar{p}\ p$ Collisions at the Fermilab Collider

Abe 89I Phys. Lett. 232B:431, 1989; KOBE-HEP-89-04; HUPD-8910; TMUP-HEL-89-21; OULNS-89-07; KEK-89-68; KUNS-983;
A Study on Single Photon Production at $\sqrt{s}$=54.0 - 61.4 GeV

Abe 89J Phys. Rev. Lett. 63:1776, 1989; KEK-89-39;
Search for Isolated Photons from Flavor-Changing Neutral-Current Decay of a New Quark at the KEK $e^+\ e^-$ Collider TRISTAN

Abe 89K Phys. Lett. 232B:425, 1989; KEK-89-89; HUPD-8911; KOBE-HEP-89-05; KUNS-984; TMUP-HEL-89-22;
Charge Asymmetry of Hadron Jets and Limits on the Compositeness Scales in $e^+\ e^- \rightarrow q\ \bar{q}$ Reaction at $\sqrt{s}$=57.6 GeV

Abe 89L Phys. Rev. D40:3791, 1989;
K^0 Production in $\bar{p}\ p$ Interactions at $\sqrt{s}$=630 and 1800 GeV

See the legend on page 7.

Abe 89M Phys. Rev. D41:2330, 1990; FERMILAB-PUB-89-201-E;
Pseudorapidity Distributions of Charged Particles Produced in $\bar{p}\,p$ Interactions at $\sqrt{s}$=630 and 1800 GeV

Abe 89N Phys. Rev. Lett. 64:157, 1990; FERMILAB-PUB-89-206-E;
Two Jet Differential Cross Section in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 89O Phys. Rev. Lett. 64:348, 1990; FERMILAB-PUB-89-171-E;
Measurement of $D^*(2010)$ Produced in Jets from $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 89P Z. Phys. C48:13, 1990; KEK-89-192;
Measurement of the Reactions $e^+\,e^- \to \mu^+\,\mu^-$ and $e^+\,e^- \to \tau^+\,\tau^-$ between E_{cm}=50 and 60.8 GeV

Abe 89Q Phys. Rev. Lett. 64:152, 1990; FERMILAB-PUB-89-245-E;
Measurement of the Ratio $\sigma \times \mathrm{Br}(W^\pm \to e^\pm\,\nu)/\sigma \times \mathrm{Br}(Z^0 \to e^-\,e^+)$ in $\bar{p}\,p$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 89R Phys. Rev. D41:1717, 1990; FERMILAB-PUB-89-250-E;
Search for a Light Higgs Boson at the Tevatron Proton-Antiproton Collider

Abe 89S Phys. Rev. D41:1722, 1990; FERMILAB-PUB-89-229-E;
The Two Jet Invariant Mass Distribution at $\sqrt{s}$=1.8 TeV

Abe 89T Phys. Rev. Lett. 63:720, 1989; FERMILAB-PUB-89-160-E; ANL-HEP-PR-89-66;
Measurement of the Mass and Width of Z^0 Boson at the Fermilab Tevatron

Abe 90 Phys. Lett. 234B:382, 1990; KEK-89-135; HUPD-8916; KOBE-HEP-89-09; KUNS-990; OULNS-89-10; TMUP-HEL-89-31;
Measurement of R and Search for New Quark Flavors Decaying into Multi-Jet Final States in $e^+\,e^-$ Collisions between 54 GeV and 61.4 GeV c.m. Energies

Abe 90B Phys. Rev. Lett. 65:968, 1990; FERMILAB-PUB-90-71-E;
Jet Fragmentation Properties of $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 90C Phys. Lett. 240B:232, 1990; OULNS-89-13; KEK-90-4; KOBE-HEP-90-01; KUNS-1005; HUPD-9004; TMUP-HEP-90-10;
Determination of the QCD Scale Parameter Λ_{MS} with QCD Cascade on the Basis of the Next-to-Leading Logarithmic Approximation

Abe 90D Phys. Lett. 246B:297, 1990; KEK-90-34;
Experimental Limits on Extra-Z^0 Bosons from $e^+\,e^-$ Annihilation Data with the VENUS Detector at $\sqrt{s}$ = 50 – 64 GeV

Abe 90E KEK-90-23; AMY-90-3;
Recent Result at TRISTAN

Abe 90F Phys. Rev. Lett. 66:280, 1990; KEK-90-62;
Experimental Study of Color-Degree of Freedom of Gluons in $e^+\,e^-$ Annihilation at $\sqrt{s}$ Around 60 GeV

Abe 90G Phys. Rev. Lett. 64:147, 1990;
Search for New Heavy Quarks in Electron-Muon Events at the Fermilab Tevatron Collider

Abe 90H KEK-90-136;
$e^+\,e^-$ Physics below Z^0

Abe 90I Phys. Rev. D43:664, 1991; FERMILAB-PUB-90-137-E; ANL-HEP-PR-90-109; CDF-PUB-HEAVYFLAVOR-PUBLIC-1188; UPR-0193E;
Top Quark Search in Electron + Jets Channel in Proton-Antiproton Collisions at $\sqrt{s}$=1.8 TeV

Abe 90J Phys. Rev. D43:2070, 1991; ANL-HEP-PR-90-72; FERMILAB-PUB-90-162-E;
A Measurement of the $W^\pm$ Boson Mass in 1.8 TeV $\bar{p}\,p$ Collisions

Abe 90K Phys. Rev. Lett. 65:2243, 1990; FERMILAB-PUB-90-161-E;
A Measurement of the $W^\pm$ Boson Mass

Abe 90L Phys. Rev. D44:29, 1991; FERMILAB-PUB-90-229-E;
A Measurement of $\sigma \times \mathrm{Br}(W^\pm \to e^\pm\,\nu)$ and $\sigma \times \mathrm{Br}(Z^0 \to e^+\,e^-)$ in $\bar{p}\,p$ Collisions at $\sqrt{s}$ =1800 GeV

Abe 91 Phys. Rev. Lett. 66:2951, 1991; FERMILAB-PUB-91-33-E;
Measurement of the $W^\pm$ p_T Distribution in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 91B Phys. Rev. D44:601, 1991; FERMILAB-PUB-91-23-E;
Measurement of QCD Jet Broadening in $p\,\bar{p}$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 91C Phys. Rev. Lett. 67:1502, 1991; FERMILAB-PUB-91-134-E;
A Determination of $\sin^2\theta_W$ from the Forward-Backward Asymmetry in $p\,\bar{p} \to Z^0\,X \to e^+\,e^-\,X$ Interactions at $\sqrt{s}$=1.8 TeV

Abe 91D Phys. Rev. Lett. 67:2418, 1991; FERMILAB-PUB-91-169-E;
Measurement of the $e^+\,e^-$ Invariant Mass Distribution in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 91E Phys. Rev. Lett. 67:2609, 1991; FERMILAB-PUB-91-208-E;
Search for $W'^\pm \to e^\pm\,\nu$ and $W'^\pm \to \mu^\pm\,\nu$ in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 91F Phys. Rev. Lett. 68:1104, 1992; FERMILAB-PUB-91-231-E;
Inclusive Jet Cross Section in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 91G Phys. Rev. Lett. 68:447, 1992; FERMILAB-PUB-91-280;
A Lower Limit on the Top Quark Mass from Events with Two Leptons in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 91H Phys. Rev. Lett. 68:1463, 1992; FERMILAB-PUB-91-327-E;
A Search for New Gauge Bosons in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 91I Phys. Rev. D45:2249, 1992; FERMILAB-PUB-91-283-E;
Properties of Events with Large Total Transverse Energy Produced in Proton-Antiproton Collisions at $\sqrt{s}$=1.8 TeV

Abe 91J Phys. Rev. Lett. 67:2937, 1991; FERMILAB-PUB-91-199-E;
Measurement of the Z^0 p_T Distribution in $\bar{p}\,p$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 91K Phys. Rev. D45:3921, 1992; FERMILAB-PUB-91-352-E;
A Limit on the Top Quark Mass from Proton-Antiproton Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 91L Phys. Rev. Lett. 68:1458, 1992; FERMILAB-PUB-91-263-E;
Lepton Asymmetry in $W^\pm$ Decay from $\bar{p}\,p$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 91M Phys. Rev. Lett. 68:3398, 1992; FERMILAB-PUB-91-356-E;
Measurement of the Ratio $\sigma \times \mathrm{Br}(W^\pm \to \tau^\pm\,\nu)/\sigma \times \mathrm{Br}(W^\pm \to e^-\,\nu)$ in $\bar{p}\,p$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 91N Phys. Rev. Lett. 67:3351, 1991; FERMILAB-PUB-91-201-E;
Measurement of $B^0\,\bar{B}^0$ Mixing at the Fermilab Tevatron Collider

Abe 91O Phys. Rev. D45:1448, 1992; FERMILAB-PUB-91-181-E;
The Topology of Three Jet Events in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 92 Phys. Rev. Lett. 68:3403, 1992; FERMILAB-PUB-92-21-E;
A Measurement of the B-Meson and b-Quark Cross Sections at $\sqrt{s}$=1.8 TeV Using the Exclusive Decay $B^\pm \to J/\psi(1S)\,K^\pm$

Abe 92B Phys. Rev. Lett. 68:2734, 1992; FERMILAB-PUB-92-31-E;
Measurement of the Isolated Prompt Photon Cross Section in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 92C Phys. Rev. Lett. 69:28, 1992; FERMILAB-PUB-92-69-E;
A Measurement of the Production and Muonic Decay Rate of $W^{\pm}$ and Z^0 Bosons in $p\,\bar{p}$ Collisions at $\sqrt{s}$=1.8 TeV

Abe 92D Phys. Rev. Lett. 69:2896, 1992; FERMILAB-PUB-92-182-E;
The Dijet Angular Distribution in $p\,p$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 92E Phys. Rev. D47:R2639, 1993; FERMILAB-PUB-92-250-E;
Search for $\Lambda_b \to J/\psi(1S)\,\Lambda$ in $p\,\bar{p}$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 92F Phys. Rev. Lett. 69:2160, 1992; FERMILAB-PUB-92-157-E;
Limits on the Rare Decay $W^{\pm} \to \gamma\,\pi^{\pm}$ in $p\,\bar{p}$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 92G Phys. Rev. Lett. 69:3704, 1992; FERMILAB-PUB-92-236-E;
Inclusive $J/\psi(1S)$, $\psi(2S)$ and b-Quark Production in $\bar{p}\,p$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 92H Phys. Rev. Lett. 70:713, 1993; FERMILAB-PUB-92-167-E;
A Measurement of Jet Shapes in $p\,\bar{p}$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 92I Phys. Rev. Lett. 70:1376, 1993; FERMILAB-PUB-92-286-E;
Comparison of Jet Production in $\bar{p}\,p$ Collisions at $\sqrt{s}$ = 546 and 1800 GeV

Abe 92J Phys. Rev. D46:R1889, 1992; FERMILAB-PUB-92-152-E; CDF-PUB-EXOTIC-CDFR-1716;
Limits on the Production of Massive Stable Charged Particles

Abe 92K Phys. Rev. Lett. 70:2232, 1993; FERMILAB-PUB-92-380-E;
Measurement of the Cross Section for Production of Two Isolated Prompt Photons in $\bar{p}\,p$ Collisions at $\sqrt{s}$ = 1.8 TeV

Abe 93 KEK-92-198;
Search for Heavy Neutral Spinless Particles Using $e^+\,e^- \to e^+\,e^-$ and $e^+\,e^- \to \gamma\,\gamma$ Reactions in CM Energy Range between 54 and 64 GeV

Abe 93B Phys. Lett. 304B:373, 1993; KEK-92-205;
Search for a Narrow Resonance in $e^+\,e^-$ Collisions between E_{cm} = 58 and 60 GeV

Abegg 88 Phys. Rev. C38:2173, 1988; TRI-PP-88-33;
Ratio of Spin Transfer Parameters d_t/r_t in deuteron (p, n) $p\,p$ Quasielastic Scattering

Abegg 89 Phys. Rev. D39:2464, 1989; TRI-PP-87-60;
Charge Symmetry Breaking in $n\,p$ Elastic Scattering at 477 MeV

Abegg 89B Phys. Rev. C40:2406, 1990; TRI-PP-89-56;
$n\,p$ Elastic Scattering Analyzing Power Characteristics at Intermediate Energies

Abegg 89C Phys. Rev. C40:2684, 1989; TRI-PP-89-57;
The Spin Correlation Parameter and Analyzing Power in $n\,p$ Elastic Scattering at Intermediate Energies

Abegg 91 Nucl. Phys. A539:573, 1992; TRI-PP-91-81;
Measurement of the Polarization Transfer Coefficient K_{LS} in the $p\uparrow\,p \to$ deuteron$\uparrow\,\pi^+$ Reaction

Abegg 92 TRI-PP-92-112;
Search for Charge Symmetry Violation in $n\,p$ Elastic Scattering

Abegg 92B TRI-PP-92-123;
Measurement of Charge Symmetry Breaking in n-p Elastic Scattering at 350 MeV

Ableev 87C Yad. Phys. 48:27, 1988; JINR-P1-87-374;
Charge-Exchange of ^{3}He Relativistic Nuclei to Tritons on Carbon with Δ-Isobar Excitation in the Target Nucleus

Ableev 88 Pisma Zh. Eksp. Teor. Fiz. 47:558, 1988; Jetp Lett. 47:649, 1988; JINR-E1-88-250;
Measurement of Tensor Analyzing Power for the ^{12}C (deuteron, p) Reaction at P=9.1 GeV/c and Zero Angle Proton Emission

Ableev 89 JINR-E1-89-341;
Proton and Triton Momentum Distributions from ^{4}He Fragmentation at Relativistic Energies

Ableev 91 Yad. Phys. 53:457, 1991;
Angular Dependence of the Differential Cross Sections of the (^{3}He, ^{3}H) Charge Exchange with $\Delta(1232\,P_{33})$-Isobar Excitation at 6.91 GeV/c on Protons and Carbon Nuclei

Ableev 91B Kr. Soob. JINR 43:5, 1991;
Measurement of the Tensor Analyzing Power for ^{12}C (deuteron, p) Reaction at P of Deuteron 9.1 GeV/c and Zero Angle Proton Emission

Ableev 91C Z. Phys. A340:191, 1991;
Diffraction Scattering of Alpha-Particles on Nuclei at 17.9 GeV/c

Ableev 91D Phys. Lett. 264B:264, 1991;
Nonquasifree Production of Δ Isobar in the ^{3}He ^{12}C $\to$ ^{3}H X Reaction at 4.4 – 18.3 GeV/c

Abov 89 Phys. Lett. 217B:225, 1989;
The Investigation of Parity Violation in the Process ^{207}Pb (n, γ) ^{208}Pb

Abraamyan 88 JINR-P1-88-334;
Inclusive Production of π^0 Mesons in p C Collisions at 4.5 GeV/c

Abraamyan 89 Yad. Phys. 51:150, 1989; JINR-P1-89-240;
Inclusive π^0 Production in He C Interactions at 4.5 GeV/c/Nucleon

Abraamyan 90 Kr. Soob. JINR 46:19, 1990;
Inclusive π^0 Production in C C Interactions at 4.5 GeV/c/Nucleon

Abraamyan 91 Yad. Phys. 53:472, 1991;
Inclusive π^0 Production in C C Interactions at 4.5 GeV/c/Nucleon

Abraamyan 92 JINR-E1-92-307;
Inclusive Neutral Pion Production at Forward Angles at 4.5 GeV/c per Nucleon in Nucleus-Nuclei Reactions

Abramov 88 Yad. Phys. 48:154, 1988; Sov. J. Nucl. Phys. 48:96, 1988;
Measurement of $\pi^{\pm}\,n \to p$ X Inclusive Cross Sections at 1.84, 2.22 and 2.63 GeV/c and Test of Inelastic Intermediate States Model for Pion-Deuteron Backward Scattering

Abramov 89B Yad. Phys. 50:1042, 1989; ITEP-89-106;
New Results on Backward Pion-Deuteron Scattering from 0.83 to 1.16 GeV/c

Abramov 89C ITEP-89-29;
A Search for Exotic Baryon E^{+++} in the Baryon Exchange Reaction $\pi^+\,p \to p\,\pi^+\,\pi^+\,\pi^-$ at 4 GeV/c

Abramov 90 IFVE-90-103;
High Momentum Transfer Hadron Pair Production in Proton-Nuclear Collisions at 70 GeV

Abramov 90B ITEP-90-127;
Pion-Deuteron Elastic Scattering at Large Angles from 0.90 to 2.025 GeV/c

Abramov 91 Yad. Phys. 53:179, 1991; ITEP-90-68;
Search for Exotic Boson Resonances in the Baryon Exchange Reaction $\pi^+\,p \to p\,\pi^+\,\pi^+\,\pi^-$ at 4 GeV/c

See the legend on page 7.

Abramov 91B FERMILAB-PUB-91-62-E; IFVE-91-9;
Properties of $J/\psi(1S)$ Production in π^- Be and p Be Collisions at 530 GeV

Abramov 91C Yad. Phys. 54:550, 1991; ITEP-91-43;
Pion-Proton Elastic Scattering at Large Angles from 0.9 to 2.0 GeV/c

Abramov 91D Yad. Phys. 54:1591, 1991; ITEP-91-64;
Investigation of $\pi^+ n \to \Lambda K^+$ (backward) at 1.97 GeV/c

Abramov 91E Yad. Phys. 54:1013, 1991;
Comparison of Elastic and Inelastic Channels in the π^- deuteron $\to$ deuteron X – Reaction for Large Momentum Transfers to the Deuteron

Abramov 91F ITEP-91-65;
Spectrometer of Two-Particles Effective Mass for Search of Reactions with Large Transverse Momenta

Abramov 92 ITEP-92-88;
Two-Protons Mass-Spectra in Reaction $p\ n \to 2p\ \pi^-$ (Backwards) at 1.98 GeV/c

Abrams 89 Phys. Rev. Lett. 63:724, 1989; SLAC-PUB-5037; LBL-27518;
Initial Measurements of Z^0-Boson Resonance Parameters in $e^+ e^-$ Annihilation

Abrams 89B Phys. Rev. Lett. 63:2173, 1989; SLAC-PUB-5113; LBL-27857;
Measurements of Z^0-Boson Resonance Parameters in $e^+ e^-$ Annihilation

Abrams 89C Phys. Rev. Lett. 63:2780, 1989; SLAC-PUB-5124; LBL-27898;
Measurement of Z^0 Decays into Lepton Pairs

Abrams 89D Phys. Rev. Lett. 63:1558, 1989; SLAC-PUB-5045; LBL-27557; CALT-68-1605;
First Measurements of Hadronic Decays of the Z^0 Boson

Abrams 89E Phys. Rev. Lett. 64:1334, 1990; SLAC-PUB-5092; LBL-27740;
Measurements of Charged Particle Inclusive Distributions in Hadronic Decays of the Z^0 Boson

Abrams 89F Phys. Rev. Lett. 63:2447, 1989; SLAC-PUB-5106; LBL-27838;
Searches for New Quarks and Leptons Produced in Z^0 Boson Decay

Abreu 89 CERN-PRE-89-078; LAPP-EXP-89-15;
The Production of ϕ in 200 GeV/Nucleon S-U and O-U Interactions

Abreu 90 CERN-PPE-90-163;
Search for Higgs Bosons Using the DELPHI Detector

Abreu 90B Phys. Lett. 242B:536, 1990; CERN-EP-90-46;
Search for t and b' Quarks in Hadronic Decays of the Z^0

Abreu 90C Phys. Lett. 245B:276, 1990; CERN-EP-90-60;
Search for Pair Production of Neutral Higgs Bosons in Z^0 Decays

Abreu 90D Phys. Lett. 247B:137, 1990; CERN-EP-90-78;
A Study for Intermittency in Hadronic Z^0 Decays

Abreu 90E Phys. Lett. 247B:148, 1990; CERN-EP-90-79;
Search for Scalar Quarks in Z^0 Decays

Abreu 90F Nucl. Phys. B342:1, 1990; CERN-EP-90-44;
Search for Light Neutral Higgs Particles Produced in Z^0 Decays

Abreu 90G Phys. Lett. 247B:167, 1990; CERN-EP-90-89;
A Comparison of Jet Production Rates on the Z^0 Resonance to Perturbative QCD

Abreu 90H Phys. Lett. 241B:435, 1990; CERN-EP-90-32;
A Precise Measurement of the Z^0 Resonance Parameters through its Hadronic Decays

Abreu 90I Phys. Lett. 247B:157, 1990; CERN-EP-90-80;
A Search for Sleptons and Gauginos in Z^0 Decays

Abreu 90J CERN-PPE-90-117;
Charged Multiplicity and Rapidity Distributions in Z^0 Hadronic Decays

Abreu 90K CERN-PPE-90-118;
A Measurement of the Partial Width of the Z^0 Boson into b Quark Pairs

Abreu 90L CERN-PPE-90-119;
DELPHI Results on the Z^0 Resonance Parameters through its Hadronic and Leptonic Decay Modes

Abreu 90M Phys. Lett. 252B:149, 1990; CERN-PPE-90-122;
Energy-Energy Correlations in Hadronic Final States from Z^0 Decays

Abreu 90N Phys. Lett. 252B:140, 1990; CERN-PPE-90-123;
Measurement of the Partial Width of Decay of the Z^0 into Charm Quark Pairs

Abreu 90O Z. Phys. C51:25, 1991; CERN-PPE-90-193;
Search for Low Mass Higgs Bosons Produced in Z^0 Decays

Abreu 90P Phys. Lett. 241B:449, 1990; CERN-EP-90-33;
Search for Heavy Charged Scalars in Z^0 Decays

Abreu 90Q CERN-PPE-90-167;
Search for Non-Standard Z^0 Decays in Two-Particle Final States

Abreu 90R Z. Phys. C50:185, 1991; CERN-PPE-90-173;
Charged Particle Multiplicity Distributions in Z^0 Hadronic Decays

Abreu 90S Phys. Lett. 255B:466, 1991; CERN-PPE-90-174;
Experimental Study of the Triple-Gluon Vertex

Abreu 91 Phys. Lett. 260B:240, 1991; CERN-PPE-91-43;
A Study of the Reaction $e^+ e^- \to \mu^+ \mu^-$ around the Z^0 Pole

Abreu 91B Nucl. Phys. B367:511, 1991; CERN-PPE-91-095;
Determination of Z^0 Resonance Parameters and Couplings from its Hadronic and Leptonic Decays

Abreu 91C Z. Phys. C52:271, 1991; CERN-PPE-91-78;
Charged Particle Multiplicity Distributions in Restricted Rapidity Intervals in Z^0 Hadronic Decays

Abreu 91D Z. Phys. C53:567, 1992; CERN-PPE-91-131;
Measurement of the Average Lifetime of B Hadrons

Abreu 91E Nucl. Phys. A525:469C, 1991;
Transverse Momentum of Dimuons Produced in p-U, O-U and S-U Collisions at 200 GeV/Nucleon

Abreu 91F Phys. Lett. 274B:498, 1992; CERN-PPE-91-79;
Study of Orientation of 3-Jet Events in Z^0 Hadronic Decays Using the DELPHI Detector

Abreu 91G Z. Phys. C53:41, 1992; CERN-PPE-91-100;
Search for Excited Charged Leptons in Z^0 Decays

Abreu 91H Phys. Lett. 268B:296, 1991; CERN-PPE-91-109;
The Reaction $e^+ e^- \to \gamma\ \gamma\ (\gamma)$ at Z^0 Energies

Abreu 91I Phys. Lett. 267B:422, 1991; CERN-PPE-91-115;
A Measurement of the Lifetime of the Tau Lepton

Abreu 91J Nucl. Phys. B373:3, 1992; CERN-PPE-91-132;
A Search for Neutral Higgs Particles in Z^0 Decays

Abreu 91K Phys. Lett. 275B:222, 1992; CERN-PPE-91-138;
Search for Scalar Leptoquarks from Z^0 Decays

Abreu 91L Z. Phys. C54:55, 1992; CERN-PPE-91-181; CERN-PPE-91-181-REV;
Determination of α_S in Second Order QCD in Hadronic Z^0 Decays

Abreu 91M Z. Phys. C53:555, 1992; CERN-PPE-91-174;
Study of Final State Photons in Hadronic Z^0 Decay and Limits on New Phenomena

Abreu 91N Phys. Lett. 274B:230, 1991; CERN-PPE-91-175;
Searches for Heavy Neutrinos from Z^0 Decays

Abreu 91O Phys. Lett. 275B:231, 1991; CERN-PPE-91-207;
Production of Strange Particles in the Hadronic Decays of the Z^0

Abreu 91P Phys. Lett. 277B:371, 1992; CERN-PPE-91-211;
A Measurement of $\sin^2\theta_W$ from the Charge Asymmetry of Hadronic Events at the Z^0 Peak

Abreu 91Q Phys. Lett. 276B:536, 1992; CERN-PPE-91-213;
A Measurement of the $b\,\bar{b}$ Forward Backward Asymmetry Using the Semileptonic Decay into Muons

Abreu 91R Phys. Lett. 276B:254, 1992; CERN-PPE-91-194;
Multiplicity Dependence of Mean Transverse Momentum in $e^+\,e^-$ Annihilations at LEP Energies

Abreu 92 Phys. Lett. 281B:383, 1992; CERN-PPE-92-007;
Measurement of Z^0 Branching Fraction to b Quark Pairs Using the Boosted Sphericity Product

Abreu 92B Z. Phys. C55:555, 1992; CERN-PPE-92-60;
A Study of the Decays of Tau Leptons Produced on the Z^0 Resonance at LEP

Abreu 92C Z. Phys. C56:63, 1992; CERN-PPE-92-64;
Charged Particle Multiplicity Distributions for Fixed Number of Jets in Z^0 Hadronic Decays

Abreu 92D Z. Phys. C56:47, 1992; CERN-PPE-92-79;
Measurement of the Partial Width of the Z^0 into $b\,\bar{b}$ Final States using their Semileptonic Decays

Abreu 92E Nucl. Phys. B386:471, 1992; CERN-PPE-92-120;
Multiplicity Fluctuations in Hadronic Final States from the Decay of the Z^0

Abreu 92F Phys. Lett. 289B:199, 1992; CERN-PPE-92-104;
Evidence for B_S Meson Production in Z^0 Decays

Abreu 92G Phys. Lett. 286B:201, 1992; CERN-PPE-92-75;
Bose-Einstein Correlations in the Hadronic Decays of the Z^0

Abreu 92H Phys. Lett. 295B:383, 1992; CERN-PPE-92-151;
Classification of the Hadronic Decays of the Z^0 into b and c Quark Pairs Using a Neural Network

Abreu 92I Z. Phys. C57:181, 1993; CERN-PPE-92-174;
A Measurement of B Meson Production and Lifetime Using $D\,\ell^-$ Events in Z^0 Decays

Abreu 92J Phys. Lett. 298B:236, 1993; CERN-PPE-92-183;
Measurement of Inclusive Production of Light Meson Resonances in Hadronic Decays of the Z^0

Abreu 92K Phys. Lett. 298B:247, 1993; CERN-PPE-92-190;
A Search for Lepton Flavour Violation in Z^0 Decays

Abreu 92L Phys. Lett. 301B:145, 1993; CERN-PPE-92-203;
A Study of B^0-$\bar{B}^0$ Mixing Using Semileptonic Decays of B Hadrons Produced from Z^0

Abreu 93 Phys. Lett. 302B:356, 1993; CERN-PPE-93-012;
A Measurement of the Tau Lifetime

Abreu 93B CERN-PPE-93-29;
Measurement of the Triple-Gluon Vertex from 4-Jet Events at LEP

Abreu 93C CERN-PPE-93-32;
Measurement of Λ_b Production and Lifetime in Z^0 Hadronic Decays

Achasov 91 Usp. Fiz. Nauk 161:53, 1991;
Sums of the Search for Four-Quark States in $\gamma\,\gamma$ Collisions

Ackleh 89 SLAC-PUB-4473; UTHEP-87-1101;
A Search for a Short Lived Axion Decaying to $e^+\,e^-$ in a 20 GeV Photoproduction Experiment

Acton 89 Nucl. Instr. and Meth. A284:101, 1989;
Measurement of the Neutron Lifetime by Magnetic Storage of Free Neutrons

Acton 91 Phys. Lett. 267B:143, 1991; CERN-PPE-91-110;
A Study of Bose-Einstein Correlations in $e^+\,e^-$ Annihilations at LEP

Acton 91B Phys. Lett. 268B:122, 1991; CERN-PPE-91-116;
Decay Mode Independent Search for a Light Higgs Boson and New Scalars

Acton 91C Phys. Lett. 273B:338, 1991; CERN-PPE-91-155;
A Measurement of Photon Radiation in Lepton Pair Events from Z^0 Decays

Acton 91D Phys. Lett. 273B:355, 1991; CERN-PPE-91-164;
Measurement of the Tau Lepton Lifetime

Acton 91E Z. Phys. C53:539, 1992; CERN-PPE-91-176;
A Study of Charged Particle Multiplicities in Hadronic Decays of the Z^0

Acton 91F Phys. Lett. 274B:513, 1992; CERN-PPE-91-201;
Measurement of the Average B Hadron Lifetime in Z^0 Decays

Acton 91H Phys. Lett. 276B:547, 1992; CERN-PPE-91-214;
An Improved Measurement of $\alpha_S(M_Z)$ Using Energy Correlation with the OPAL Detector at LEP

Acton 91I Z. Phys. C54:193, 1992; CERN-PPE-91-189;
Properties of Multihadronic Events with a Final State Photon at $\sqrt{s} = M_{Z^0}$

Acton 91J Phys. Lett. 278B:485, 1992; CERN-PPE-91-230;
Search for Free Gluons in Hadronic Z^0 Decays

Acton 92 Phys. Lett. 281B:405, 1992; CERN-PPE-92-014;
Test of CP-Invariance in $e^+\,e^- \to Z^0 \to \tau^+\,\tau^-$ and a Limit on the Weak Dipole Moment of the $\tau^\pm$ Lepton

Acton 92B Phys. Lett. 276B:379, 1992; CERN-PPE-91-212;
Measurement of $B^0 - \bar{B}^0$ Mixing in Hadronic Z^0 Decays

Acton 92C Z. Phys. C56:521, 1992; CERN-PPE-92-116;
Inclusive Neutral Vector Meson Production in Hadronic Z^0 Decays

See the legend on page 7.

Acton 92D Phys. Lett. 291B:503, 1992; CERN-PPE-92-118;
A Measurement of Strange Baryon Production in Hadronic Z^0 Decays

Acton 92E Phys. Lett. 287B:389, 1992; CERN-PPE-92-57;
A Test of Higher Order Electroweak Theory in Z^0 Decays to Two Leptons with an Associated Pair of Charged Particles

Acton 92F Phys. Lett. 288B:373, 1992; CERN-PPE-92-66;
Measurement of the $\tau^\pm$ Topological Branching Ratios at LEP

Acton 92G Phys. Lett. 287B:401, 1992; CERN-PPE-92-89;
A Study of Two Particle Momentum Correlations in Hadronic Z^0 Decays

Acton 92H Z. Phys. C55:1, 1992; CERN-PPE-92-18;
A Global Determination of $\alpha_S(M_{Z^0})$ at LEP

Acton 92I Phys. Lett. 281B:394, 1992; CERN-PPE-92-34;
Evidence for b-Flavored Baryon Production in Z^0 Decays at LEP

Acton 92J Z. Phys. C55:191, 1992; CERN-PPE-92-38;
A Measurement of Electron Production in Hadronic Z^0 Decays and a Determination of $\Gamma(Z^0 \to b\,\bar{b})$

Acton 92K Phys. Lett. 294B:436, 1992; CERN-PPE-92-119;
A Measurement of the Forward-Backward Charge Asymmetry in Hadronic Decays of the Z^0

Acton 92L Phys. Lett. 295B:347, 1992; CERN-PPE-92-139;
A Search for Doubly-Charged Higgs Production in Z^0 Decays

Acton 92M Phys. Lett. 295B:357, 1992; CERN-PPE-92-144;
Evidence for the Existence of the Strange b-Flavored Meson B_S in Z^0 Decays

Acton 92N Phys. Lett. 298B:456, 1993; CERN-PPE-92-192;
A Study of K_S K_S Bose-Einstein Correlations in Hadronic Z^0 Decays

Acton 92O CERN-PPE-92-213;
A Measurement of $K^*(892)^\pm$ Production in Hadronic Z^0 Decays

Acton 92P CERN-PPE-92-217;
A Study of the Electric Charge Distributions of Quark and Gluon Jets in Hadronic Z^0 Decays

Acton 92Q CERN-PPE-92-215;
Studies of Strong and Electroweak Interactions Using Final State Photon Emission in Hadronic Z^0 Decays

Acton 92R CERN-PPE-92-216;
QCD Coherence Studies Using Two Particle Azimuthal Correlations

Acton 92T CERN-PPE-93-26;
Evidence for Chain-Like Production of Strange Baryon Pairs in Jets

Acton 93 CERN-PPE-93-02;
A Studies of Differences between Quark and Gluon Jets Using Vertex Tagging of Quark Jets

Acton 93B CERN-PPE-93-09;
Measurement of the $\tau^\pm$ Lifetime

Acton 93C CERN-PPE-93-003;
Precision Measurements of the Neutral Current from Hadron and Lepton Production at LEP

Acton 93D CERN-PPE-93-033;
Measurement of the B^0 and B^+ Lifetime

Acton 93E CERN-PPE-93-38;
A Determination of $\alpha_S(M_Z)$ at LEP Using Resummed QCD Calculations

Acton 93F CERN-PPE-93-46;
Measurement of $\Gamma(Z^0 \to b\,\bar{b})/\Gamma(Z^0 \to$ hadrons) Using Leptons

Adachi 88 Phys. Lett. 200B:391, 1988; KEK-87-103; DPNU-87-53; KOBE-HEP-87-06; NWU-HEP-87-02; OCU-HEP-87-02; TUAT-HEP-87-02; UT-HE-87-07;
Measurement of the Processes $e^+ e^- \to e^+ e^-$ and $e^+ e^- \to \gamma\,\gamma$ at $\sqrt{s}$=50 GeV

Adachi 88B Phys. Rev. D37:1339, 1988; INS-661; KEK-87-109; UT-HE-87-08; DPNU-87-54; KOBE-HEP-87-07; NWU-HEP-87-03; OCU-HEP-87-03; TUAT-HEP-87-03;
Search for Sequential Heavy Leptons in $e^+ e^-$ Collisions at $\sqrt{s}$=52 GeV

Adachi 88C Phys. Rev. Lett. 60:97, 1988; UT-HE-87-06;
Search for Top Quark in $e^+ e^-$ Collisions at $\sqrt{s}$=52 GeV

Adachi 88D Phys. Lett. 208B:319, 1988;
Charge Asymmetry Measurement in $e^+ e^- \to \mu^+ \mu^-$ and $\tau^+ \tau^-$ Reactions at $\sqrt{s}$=52 GeV and 55 GeV

Adachi 89 Phys. Lett. 218B:105, 1989; KEK-88-101;
Search for SUSY Particles at TRISTAN

Adachi 89B KEK-89-31;
Search for New Particles in $e^+ e^-$ Annihilation at TRISTAN

Adachi 89C Phys. Lett. 227B:495, 1989; KEK-89-37;
Measurement of α_S in $e^+ e^-$ Annihilation at $\sqrt{s}$=53.3 GeV and 59.5 GeV

Adachi 89D Phys. Lett. 228B:553, 1989; KEK-89-90; UT-HE-89-07; TUAT-HEP-89-02; TU-HEP-89-02; PU-89-634; OCU-HEP-89-03; NWU-HEP-89-03; KOBE-HEP-89-07; INS-REP-767; DPNU-89-45;
A Search for Excited Leptons in the Energy Region $\sqrt{s}$=52 – 60.8 Gev

Adachi 89E Phys. Lett. 229B:427, 1989; KEK-89-75;
A Search for a Fourth-Generation Charge −1/3 (b') Quark Using Inclusive Muons in $e^+ e^-$ Annihilations at $\sqrt{s}$=56.5 to 60.9 GeV

Adachi 90 Phys. Lett. 234B:185, 1990; KEK-89-156;
A Study of Pion Pair Production in the Two-Photon Process

Adachi 90B Phys. Lett. 234B:525, 1990; TU-HEP-89-03; TUAT-HEP-89-03; DPNU-89-51; KOBE-HEP-89-10; OCU-HEP-89-04; PU-89-636; NWU-HEP-89-04; INS-779; KEK-89-136; UT-HE-89-08;
Measurement of the Total Hadronic Cross Section in $e^+ e^-$ Annihilation and Determination of the Standard Model Parameters

Adachi 90C Phys. Lett. 240B:513, 1990; KEK-90-11;
A Search for Charged Higgs Bosons at TRISTAN

Adachi 90D Phys. Lett. 244B:352, 1990; KEK-90-37;
Search for Pair Production of Heavy Stable Particles at TRISTAN

Adachi 90E Phys. Lett. 234B:197, 1990;
A Search for a b' Quark with Flavor Changing Neutral Current Decay Modes at TRISTAN

Adachi 90F Phys. Rev. Lett. 65:2634, 1990;
Measurement of $e^+ e^-$ Annihilation at Rest into Four γ Rays

Adachi 91 Phys. Lett. 249B:336, 1991; KEK-90-84; DPNU-90-32; INS-838; KOBE-HEP-90-05; NWU-HEP-90-03; OCU-HEP-90-03; PU-90-648; TIT-HPE-90-04; TU-HEP-09-03; TUAT-HEP-90-03; UT-HEP-90-06;
A Search for Inclusive Production of Heavy Stable Particles by the TOPAZ Detector at TRISTAN

Adachi 91B Phys. Lett. 255B:613, 1991; KEK-90-185; DPNU-91-08; INS-865; KOBE-HEP-91-01; NWU-HEP-91-01; PU-91-653; OCU-HEP-91-1; TU-HEP-91-01; TIT-HPE-91-01; TUAT-HEP-91-01A; UT-HE-91-03;
Charge Asymmetry of Hadronic Events in $e^+ e^-$ Annihilation at $\sqrt{s}$ = 57.9 GeV

Adamo 92 Phys. Lett. 284B:448, 1992;
A Measurement of the $K^+ K^-/\pi^+ \pi^-$ Ratio from $\bar{p}$ Annihilation in Deuterium and Hydrogen Gas

Adamo 92B Yad. Phys. 55:3099, 1992;
First Physics Results from OBELIX

Adamo 92C Phys. Lett. 287B:368, 1992;
Meson Spectroscopy with Antineutrinos

Adamovich 88 Phys. Lett. 201B:397, 1988;
Multiplicities and Rapidity Densities in 200 A GeV ^{16}O Interactions with Emulsion Nuclei

Adamovich 88B Phys. Rev. Lett. 62:2801, 1989; LUIP-8813; CERN-PRE-88-090;
Limiting Fragmentation in Oxygen Induced Emulsion Interactions at 14.6, 60 and 200 A GeV

Adamovich 88C Phys. Lett. 223B:262, 1989; LUIP-8814; CERN-PRE-88-092;
Scaling Properties of Charged Particles Multiplicity Distributions in Oxygen Induced Emulsion Interactions at 14.6, 60 and 200 A GeV

Adamovich 88D HZPP-88-01; CERN-PRE-89-039;
Charged Particle Spectra in Oxygen Induced Reactions at 14.6 GeV/Nucleon and 60 GeV/Nucleon

Adamovich 89 Phys. Lett. 227B:285, 1989; LUIP-8905;
Rapidity Densities and their Fluctuations in Central 200 A GeV ^{32}S Interactions with Au and Ag/Br Nuclei

Adamovich 89B LUIP-8904;
Substructural Dependence of the Multiparticle Production in Relativistic Heavy-Ion Interactions

Adamovich 89C Phys. Lett. 234B:180, 1989; LUIP-8906; CERN-PRE-89-053;
Target Nucleus Fragmentation in ^{16}O + (Ag, Br) Interactions at 200 A GeV

Adamovich 89D Phys. Lett. 230B:175, 1989; LUIP-8907; CERN-PRE-89-055;
A Study of Recoil Protons in Ultra-Relativistic Nucleus-Nucleus Collisions

Adamovich 89E LUIP-8912;
On the Multiplicity Fluctuations in Relativistic Heavy Ion Collisions

Adamovich 89F Phys. Rev. C40:66, 1989;
Production of Helium (Z=2) Projectile Fragments in ^{16}O Emulsion Interactions from E/A = 2 to 200 GeV

Adamovich 90 Mod. Phys. Lett. A5:169, 1990;
On the Energy and Mass Dependence of the Multiplicity in Relativistic Heavy Ion Interactions

Adamovich 90B Z. Phys. C49:395, 1991; HZPP-90-8;
Energy, Target, Projectile and Multiplicity Dependences of Intermittency Behavior in High-Energy O (Si, S) Induced Interactions

Adamovich 90C Phys. Lett. 263B:539, 1991; LUIP-9011;
On the Systematic Behavior of the Intermittency Indices in Nuclear Interactions

Adamovich 90D Phys. Rev. Lett. 65:412, 1990;
Scaled-Factorial-Moment Analysis of 200 A GeV Sulphur + Gold Interaction

Adamovich 91 Mod. Phys. Lett. A6:469, 1991; Mod. Phys. Lett. A6:1629, 1991; LUIP-9010;
Stochastic Emission of Particles in Ultra-relativistic Heavy-Ion Collisions

Adamovich 91B Phys. Rev. Lett. 67:1201, 1991; LUIP-9102;
Multiplicities in ^{16}O Induced Heavy Ion Collisions from 5 A to $2 \cdot 10^5$ A MeV

Adamovich 91C Phys. Lett. 262B:369, 1991; LUIP-9103;
Slow, Target Associated Particles Produced in Ultrarelativistic Heavy-Ion Interaction

Adamovich 91D Phys. Lett. 280B:163, 1992; CERN-PPE-92-15;
Measurement of Relative Branching Fractions of D^0 Cabibbo-Suppressed Decays

Adamovich 91E Phys. Lett. 268B:142, 1991; CERN-PPE-91-99;
A Study of the Semileptonic Decay $D^+ \to \overline{K}^*(892)^0 e^+ \nu_e$

Adamovich 92 Phys. Lett. 284B:453, 1992; CERN-PPE-92-56;
Nuclear Dependence of Charm Production by a 340 GeV π^- Beam

Adamovich 92B Nucl. Phys. B388:3, 1992; LUIP-9202;
Intermittency in Heavy Ion Reactions and the Importance of γ-Conversion in a Multi-Dimensional Intermittency Analysis

Adamovich 92C Z. Phys. C56:509, 1992; LUIP-9203;
Local Particle Densities and Global Multiplicities in Central Heavy Ion Interactions at 3.7, 14.6, 60 and 200 A GeV

Adamovich 92D Phys. Rev. Lett. 69:745, 1992; LUIP-9204;
Rapidity Density Distributions in ^{16}O, ^{28}Si, ^{32}S, ^{197}Au and ^{208}Pb Induced Heavy Ion Interactions at 4 A – 200 A GeV

Adamovich 93 Mod. Phys. Lett. A8:21, 1993;
Study of Angular Distribution of Helium Projectile Fragments in Interactions of 200 A GeV ^{32}S Ions with Emulsion Nuclei

Adams 88 Nucl. Phys. A480:530, 1988;
Spin Observables in Small-Angle Elastic p deuteron $\to$ p deuteron Scattering with an L Type Deuteron Target at 800 MeV

Adams 89 Phys. Lett. 219B:399, 1989;
Analyzing Powers for $p\uparrow$ deuteron $\to$ ^{3}He π^0 at 800 MeV

Adams 91 Z. Phys. C56:181, 1992; FERMILAB-PUB-91-13-E; IFVE-91-49;
Large-x_F Spin Asymmetry in π^0 Production by 200 GeV Polarized Protons

Adams 91B Phys. Lett. 276B:531, 1992; FERMILAB-PUB-91-14-E; IFVE-91-50;
High-x_F Single-Spin Asymmetry in π^0 and η Production at x_F=0 by 200 GeV Polarized Antiprotons and Protons

Adams 91C Phys. Lett. 261B:201, 1991; FERMILAB-PUB-91-15-E; IFVE-91-51;
Comparison of Spin Asymmetries and Cross Sections in π^0 Production by 200 GeV Polarized Antiprotons and Protons

Adams 91D Phys. Lett. 261B:197, 1991; FERMILAB-PUB-91-16-E; IFVE-91-52;
First Results for the Two-Spin Parameter A_{ll} in π^0 Production by 200 GeV Polarized Protons and Antiprotons

See the legend on page 7.

Adams 91E Phys. Lett. 272B:163, 1991; FERMILAB-PUB-91-217;
Distributions of Charged Hadrons Observed in Deep-Inelastic Muon-Deuterium Scattering at 490 GeV

Adams 91F Phys. Lett. 264B:462, 1991;
Analyzing Power in Inclusive π^+ and π^- Production at High x_F with a 200 GeV Polarized Proton Beam

Adams 92 BNL-46965;
Recent Results from E-810

Adams 92B Phys. Rev. Lett. 68:3266, 1992; FERMILAB-PUB-92-51-E;
Saturation of Shadowing at Very Low x_{Bj}

Adams 92C Phys. Rev. Lett. 69:1026, 1992; FERMILAB-PUB-92-52-E;
First Measurements of Jet Production Rates in Deep-Inelastic Lepton-Proton Scattering

Adams 92D Phys. Lett. 287B:375, 1992;
Shadowing in the Muon-Xenon Inelastic Scattering Cross Section at 490 GeV

Adams 92E IFVE-92-40;
Analyzing Power in Inclusive π^+, π^- Production at Large x_F, Using 200 GeV Polarized Proton Beam

Adamus 86C Yad. Phys. 47:429, 1988; Z. Phys. C35:7, 1987; Sov. J. Nucl. Phys. 47:271, 1988; IFVE-86-210;
Inclusive π^0 Production in π^+ p, K^+ p and p p Interactions at 250 GeV/c

Adamus 87B Phys. Lett. 183B:425, 1987; Yad. Phys. 47:136, 1988; Sov. J. Nucl. Phys. 47:89, 1988; IFVE-86-211;
Suppression of Valence Quark Recombination in π^+ Fragmentation into $\rho(770)^+$

Adamus 88 Z. Phys. C37:347, 1988;
Bose-Einstein Correlation in K^+ p and π^+ p at 250 GeV

Adamus 88B Z. Phys. C37:215, 1988; CERN-PRE-87-081; HEN-284;
Phase Space Dependence of the Multiplicity Distribution in π^+ p and p p Collisions at 250 GeV/c

Adamus 88C Phys. Lett. 205B:401, 1988; CERN-PRE-88-016; HEN-291;
Multiplicity Distribution in Separated Phase Space Intervals

Adamus 88F Z. Phys. C39:301, 1988; CERN-PRE-87-139; PHE-87-10;
Single Diffraction Dissociation in π^+ p and K^+ p Interactions at 250 GeV/c

Adamus 88G Z. Phys. C39:311, 1988; IFVE-88-121;
Charged Particle Production in K^+ p, π^+ p and p p Interactions at 250 GeV/c

Adamyan 88 YERE-1061(24)-88;
Experimental Study of the Photoproduction γ deuteron $\rightarrow$ deuteron π^0 and Photodisintegration γ deuteron $\rightarrow$ p n, γ ^{6}Li $\rightarrow$ p n X and γ ^{4}He $\rightarrow$ p n X Processes by Linearly Polarized Photons in Energy Range 0.3 – 1 GeV

Adamyan 89 Phys. Lett. 232B:296, 1989;
Cross Section Asymmetry for the Reaction γ deuteron $\rightarrow$ deuteron π^0 in the Energy Range 0.5 – 0.9 GeV

Adarkar 91 Phys. Lett. 267B:138, 1991;
A Multi TeV Muon Bundle Observed in the KGF Underground Detector

Adelberger 90 Phys. Rev. D42:3267, 1990;
Testing the Equivalence Principle in the Field of the Earth: Particle Physics at Masses below 1 μeV

Aderholz 89 Phys. Rev. Lett. 63:2349, 1989; IIHE-88-08;
Coherent Production of π^+ and π^- Mesons by Charged Current Interactions of Neutrinos and Antineutrinos on Neon Nuclei at the Fermilab TEVATRON

Adeva 88 Phys. Rev. D38:2665, 1988;
Electroweak Studies in e^+ e^- Collisions 12 < $\sqrt{s}$ < 46.78 GeV

Adeva 89 Phys. Lett. 231B:509, 1989; L3-001;
A Determination of the Properties of the Neutral Intermediate Vector Boson Z^0

Adeva 89B Phys. Lett. 233B:530, 1989; L3-002;
Mass Limits for Scalar Muons, Scalar Electrons, and Winos from e^+ e^- Collisions Near $\sqrt{s}$ = 91 GeV

Adeva 90 Phys. Lett. 237B:136, 1990; L3-004; CALT-68-1615;
Measurement of Z^0 Decays to Hadrons, and a Precise Determination of the Number of Neutrino Species

Adeva 90B Phys. Lett. 236B:109, 1990; L3-003;
Measurement of g_A and g_V the Neutral Current Coupling Constant to Leptons

Adeva 90C Phys. Lett. 238B:122, 1990; CALT-68-1617; L3-005;
A Measurement of the Z^0 Leptonic Partial Widths and the Vector and Axial Vector Coupling Constants

Adeva 90D Phys. Lett. 241B:416, 1990; L3-006;
Measurement of $Z^0 \rightarrow b\ \bar{b}$ Decay Properties

Adeva 90E Phys. Lett. 250B:199, 1990; L3-013;
Test of QED in e^+ e^- $\rightarrow$ γ γ at LEP

Adeva 90F Phys. Lett. 247B:177, 1990; L3-007;
Mass Limits for Excited Electrons and Muons from Z^0 Decay

Adeva 90G Phys. Lett. 247B:473, 1990; L3-008;
A Determination of Electroweak Parameters from $Z^0 \rightarrow \mu^+ \mu^- (\gamma)$

Adeva 90H Phys. Lett. 249B:341, 1990; L3-009;
A Precision Measurement of the Number of Neutrino Species

Adeva 90I Phys. Lett. 248B:203, 1990; L3-010;
Search for Neutral Higgs Boson in Z^0 Decay

Adeva 90J Phys. Lett. 248B:464, 1990; L3-011;
Determination of α_S from Jet Multiplicities on the Z^0 Resonance

Adeva 90K Phys. Lett. 248B:227, 1990; L3-012;
A Test of QCD Based on 4-Jet Events from Z^0 Decays

Adeva 90L Phys. Lett. 250B:205, 1990; L3-014;
Search for Excited Taus from Z^0 Decays

Adeva 90M Phys. Lett. 251B:311, 1990; L3-015;
Search for Neutral Higgs Bosons of the Minimal Supersymmetric Standard Model from Z^0 Decays

Adeva 90N Phys. Lett. 251B:321, 1990; L3-016;
A Search for Heavy Charged and Neutral Leptons from Z^0 Decays

Adeva 90O Phys. Lett. 250B:183, 1990; L3-017;
A Determination of Electroweak Parameters from Z^0 Decays into Charged Leptons

Adeva 90P Phys. Lett. 252B:511, 1990; L3-018;
Search for the Charged Higgs Boson in Z^0 Decay

Adeva 90Q Phys. Lett. 252B:518, 1990; L3-019;
Search for a Low Mass Neutral Higgs Boson in Z^0 Decay

Adeva 90R Phys. Lett. 252B:703, 1990; L3-020;
A Measurement of B^0 $\bar{B}^0$ Mixing in Z^0 Decays

Adeva 90S Phys. Lett. 252B:525, 1990; L3-021;
Search for Excited Neutrinos from Z^0 Decays

Adeva 90T Phys. Lett. 252B:713, 1990; L3-022;
A Measurement of the $Z^0 \to b\,\bar{b}$ Forward-Backward Asymmetry

Adeva 90U Phys. Lett. 257B:469, 1991; L3-023;
Determination of α_S from Energy-Energy Correlations Measured on the Z^0 Resonance

Adeva 90V Phys. Lett. 257B:450, 1991; L3-024;
Search for the Neutral Higgs Boson

Adeva 91 Phys. Lett. 259B:199, 1991; L3-025;
Measurement of the Inclusive Production of Neutral Pions and Charged Particles on the Z^0 Resonance

Adeva 91B Phys. Lett. 261B:169, 1991; L3-026;
Search for Leptoquarks in Z^0 Decays

Adeva 91C Phys. Lett. 261B:177, 1991; L3-027;
Measurement of $Z^0 \to b\,\bar{b}$ Decays and the Semileptonic Branching Ratio Br($b \to \ell$ X)

Adeva 91D Z. Phys. C51:179, 1991; L3-028;
Measurement of Electroweak Parameters from Hadronic and Leptonic Decays of the Z^0

Adeva 91E Phys. Lett. 262B:155, 1991; L3-029;
Search for Narrow High-Mass Resonances in Radiative Decays of the Z^0

Adeva 91F Phys. Lett. 271B:461, 1991; L3-033;
Measurement of the Strong Coupling Constant α_S for Bottom Quarks at the Z^0 Resonance

Adeva 91G Phys. Lett. 271B:453, 1991; L3-034;
Search for Lepton Flavour Violation in Z^0 Decays

Adeva 91H Phys. Lett. 263B:551, 1991; L3-030;
A Test of QCD Based on Three-Jet Events from Z^0 Decays

Adeva 91I Phys. Lett. 265B:451, 1991; L3-031;
Decay Properties of $\tau^\pm$ Leptons Measured at the Z^0 Resonance

Adeva 91J Phys. Lett. 270B:111, 1991; L3-032;
Measurement of the Lifetime of B-Hadrons and a Determination of $|V_{cb}|$

Adeva 91K Phys. Lett. 275B:209, 1991; L3-035;
A Direct Determination of the Number of Light Neutrino Families from $e^+ e^- \to \nu\,\bar{\nu}\,\gamma$ at LEP

Adeva 92 Phys. Lett. 288B:395, 1992; CERN-PPE-92-84; L3-041;
An Improved Measurement of B^0 $\bar{B}^0$ Mixing in Z^0 Decays

Adeva 92B Phys. Lett. 283B:454, 1992; CERN-PPE-92-40; L3-037;
Search for the Neutral Higgs Boson at LEP

Adeva 92D Z. Phys. C55:39, 1992; CERN-PPE-92-050; L3-038;
Studies of Hadronic Event Structure and Comparisons with QCD Models at the Z^0 Resonance

Adiels 88 Z. Phys. C42:49, 1989; CERN-EP-88-142;
Experimental Study of the Inclusive η-Spectrum from $p\,\bar{p}$ Annihilations at Rest in Liquid Hydrogen

Adler 88 Phys. Rev. Lett. 60:1375, 1988; Phys. Rev. Lett. 63:1658, 1989; SLAC-PUB-4343;
Search for the Decay $D^+ \to \mu^+\,\nu_\mu$ and Upper Limit on the Pseudoscalar Decay Constant

Adler 88B Phys. Rev. D37:2023, 1988; Phys. Rev. D40:3788, 1989; SLAC-PUB-4438;
Search for the Decay $D^0 \to e^+\,e^-$

Adler 88C Phys. Lett. 208B:152, 1988; Phys. Lett. 227B:501, 1989; SLAC-PUB-4518;
Measurement of the $D^*(2010)$ Branching Ratios

Adler 88D SLAC-PUB-4686;
Measurements of $f_1(1285) \to \pi^+\,\pi^-\,\pi^+\,\pi^-$, $\eta_c(1S) \to \rho(770)^0\,\rho(770)^0$ and $\eta_c(1S) \to f_2(1270)\,f_2(1270)$ in Radiative $J/\psi(1S)$ Decays

Adler 88F Phys. Rev. Lett. 60:89, 1988; SLAC-PUB-4291;
A Reanalysis of Charmed D Meson Branching Fractions

Adler 89 Phys. Rev. Lett. 62:1821, 1989; SLAC-PUB-4745;
Measurement of the Branching Fractions for $D^0 \to \pi^-\,e^+\,\nu_e$ and $D^0 \to K^-\,e^+\,\nu_e$ and Determination of $(V_{cd}/V_{cs})^2$

Adler 89B Phys. Rev. Lett. 63:1211, 1989; SLAC-PUB-4952;
Observation of $D_S^+ \to \bar{K}^0\,K^+$ and $D_S^+ \to \bar{K}^*(892)^0\,K^+$ and an Upper Limit on $D_S^+ \to K^0\,\pi^+$

Adler 89C Phys. Rev. D40:906, 1989; SLAC-PUB-4671;
A Search for the Decay $D^0 \to \bar{K}^0\,e^+\,e^-$

Adler 89D Phys. Rev. Lett. 64:2615, 1990; SLAC-PUB-5130; CALT-68-1606;
Resonant Substructure in $K^-\,\pi^+\,\pi^+\,\pi^-$ Decays of D^0 Mesons

Adler 89E SLAC-PUB-5052;
Recent Results on Hadronic D_S^+ and D Meson Decays from the MARK-III

Adler 91 Phys. Lett. 267B:154, 1991; CERN-PPE-91-98;
Determination of the Relative Branching Ratios for $p\,\bar{p} \to \pi^+\,\pi^-$ and $p\,\bar{p} \to K^+\,K^-$

Adriani 92 Phys. Lett. 284B:471, 1992; CERN-PPE-92-58; L3-039;
Determination of α_S from Hadronic Event Shapes Measured on the Z^0 Resonance

Adriani 92B Phys. Lett. 294B:457, 1992; CERN-PPE-92-87; L3-042;
A Test of Quantum Electrodynamics in the Reaction $e^+\,e^- \to 2\gamma$ (γ's)

Adriani 92C Phys. Lett. 286B:403, 1992; CERN-PPE-92-83; L3-040;
Measurement of Inclusive η Production in Hadronic Decays of the Z^0

Adriani 92D Phys. Lett. 288B:412, 1992; CERN-PPE-92-99; L3-043;
Inclusive $J/\psi(1S)$ Production in Z^0 Decays

Adriani 92E Phys. Lett. 292B:454, 1992; CERN-PPE-92-121; L3-044;
Measurement of the $e^+\,e^- \to b\,\bar{b}$ and $e^+\,e^- \to c\,\bar{c}$ Forward-Backward Asymmetries at the Z^0 Resonance

Adriani 92F Phys. Lett. 292B:463, 1992; CERN-PPE-92-128; L3-045;
Determination of the Number of Light Neutrino Species

Adriani 92G Phys. Lett. 292B:472, 1992; CERN-PPE-92-131; L3-046;
Isolated Hard Photon Emission in Hadronic Z^0 Decays

Adriani 92H Phys. Lett. 294B:466, 1992; CERN-PPE-92-132; L3-047;
A Measurement of $\tau^\pm$ Polarization in Z^0 Decays

See the legend on page 7.

Adriani 92I Phys. Lett. 288B:404, 1992; CERN-PPE-92-140; L3-048;
Searches for Non-minimal Higgs Bosons in Z^0 Decays

Adriani 92J CERN-PPE-92-163; L3-050;
Search for Non-Minimal Higgs Bosons in Z^0 Decays

Adriani 92K Phys. Lett. 295B:337, 1992; CERN-PPE-92-152; L3-049;
High Mass Photon Pairs in $\ell^+ \ell^- \gamma \gamma$ Events at LEP

Adriani 92L Phys. Lett. 295B:371, 1992; CERN-PPE-92-164; L3-051;
Search for Isosinglet Neutral Heavy Leptons in Z^0 Decays

Adriani 92M Phys. Lett. 297B:469, 1993; CERN-PPE-92-185;
Search for Anomalous Production of Single-Photon Events in $e^+ e^-$ Annihilations at the Z^0 Resonance

Adriani 92N Phys. Lett. 301B:136, 1993; CERN-PPE-92-209;
Determination of Quark Electroweak Coupling from Direct Photon Production in Hadronic Z^0 Decays

Adriani 93 CERN-PPE-93-030;
A Search for the Neutral Higgs Boson at LEP

Adriani 93B CERN-PPE-93-031;
Results from the L3 Experiment at LEP

Adyasevich 88B Vopr. At. Nauki i Techn. ser. Obsch. 2-42:13, 1988;
The Measurement of Two-particle Correlations of Fragments in the Interaction of ^{12}C Nuclei at the 3.6 GeV/Nucleon Energy with Pb Nuclei

Adyasevich 89 Vopr. At. Nauki i Techn. ser. Yad. 2:9, 1989;
The Measurement of Two-Particle Correlation in the Reactions C + Pb (3.6 GeV/Nucleon)

Afanasiev 90B Kr. Soob. JINR 46:6, 1990;
An Experiment to Search Cumulative Muon Pairs with Low Invariant Mass

Afanasiev 91 Kr. Soob. JINR 51:5, 1991;
An Experiment on the A-Dependence of the Cross Section for Relativistic Deuteron Fragmentation

Afanasyev 88 Yad. Phys. 47:1656, 1988;
Cross Sections of K^+ Meson Interaction with C, Al, Ti, and Cd Nuclei in 1.5 GeV/c Range

Afanasyev 90 Phys. Lett. 236B:116, 1990;
Measurement of the Branching Ratio for π^0-Meson Decay into a Photon and a Positronium Atom

Afanasyev 90B Yad. Phys. 51:1040, 1990;
Measurement of the Photon Internal Conversion Coefficient into Positronium Atom and of the $\pi^0 \to \gamma$ positronium Branching Ratio

Afanasyev 90C Yad. Phys. 52:1046, 1990; Phys. Lett. 255B:146, 1991; JINR-P1-90-149;
Observation of the Coulomb Interaction Effect in Pion Pairs from the Reaction p Ta $\to \pi^+ \pi^-$ X at Proton Energy 70 GeV

Afonin 88 KIAE-88-4746-2;
Measurements in the Neutrino Flux of the Rovno AES by Spectrometer RONS

Afonin 88B Zh. Eksp. Teor. Fiz. 94(2):1, 1988;
Investigation of the ν_e $p \to e^+$ n Reaction in a Nuclear Reactor

Agababyan 89 Z. Phys. C41:539, 1989; IFVE-89-120;
Inclusive Meson Resonance Production in K^+ p Interactions at 250 GeV/c

Agababyan 89B Yad. Phys. 50:1341, 1989;
Measurement of Polarization Parameters Σ, T, and P in π^0 Photoproduction at E_γ =0.9 – 1.35 GeV

Agababyan 90 Z. Phys. C46:387, 1990;
Inclusive Production of Vector Mesons in π^+ p Interactions at 250 GeV/c

Agababyan 90B Z. Phys. C49:235, 1991; NEN-90-329; CERN-PRE-90-049;
Triple Regge Analysis of Inclusive Λ Production in K^+ p and π^+ p Interactions at 250 GeV/c

Agababyan 90C Z. Phys. C50:361, 1991; IHHE-90-02; CERN-PRE-90-063;
Rapidity and Transverse Momentum Structure in π^+ and K^+ Collisions with Al and Au Nuclei at 250 GeV/c

Agababyan 91 Phys. Lett. 261B:165, 1991; CERN-PRE-91-014; HEN-338-1991;
Low p_T Intermittency in π^+ p and K^+ p Collisions at 250 GeV/c

Agababyan 91B Z. Phys. C52:231, 1991;
Deuteron Production in Collisions of 250 GeV/c π^+ and K^+ Mesons with Al and Au Nuclei

Agakishiev 87 Yad. Phys. 47:1292, 1988; Sov. J. Nucl. Phys. 47:822, 1988; JINR-P1-87-442;
Two Particle Correlations and Regions of Proton Emittance Regions in p Ta Interactions at P=10 GeV/c

Agakishiev 88 Yad. Phys. 49:481, 1989; JINR-P1-88-154;
Dependence of the Characteristics of Proton-Nucleus Interactions at 4.2 and 10 GeV/c on a Leading-Particles Energy

Agakishiev 89 JINR-P1-89-557;
Characteristics of Cumulative Λ Hyperons Produced in Nucleus-Nucleus Collisions

Agakishiev 89B Yad. Phys. 51:1591, 1990; JINR-P1-89-793;
Dependence of π^- Meson Spectra at Fixed Angles on the Atomic Weight of Projectile in Interactions between Light Nuclei (p, deuteron, ^{4}He, C) and Carbon Nucleus at 4.2 GeV/c per Nucleon

Agakishiev 89C Yad. Phys. 51:759, 1990; JINR-P1-89-488;
Comparative Characteristics of Central and Noncentral C C Interactions at 4.2 GeV per Nucleon

Agakishiev 91 Yad. Phys. 55:736, 1992; JINR-P1-91-394;
Dependence of Shape of Spectra and Cross Sections of π^- Mesons Yield at Fixed Angles on Atomic Weights of Colliding Nuclei in Nucleus-Nucleus Interactions at 4.2 GeV/c per Nucleon

Aggarwal 90 Int. Jour. Mod. Phys. A5:3985, 1990;
Rapidity Dependence of Multiplicity Distributions in Alpha-Emulsion Interactions at 12.4 A GeV

Aggarwal 91 Int. Jour. Mod. Phys. A6:865, 1991;
Hadron Production in the Restricted Rapidity Intervals in Proton Nucleus Interactions at High Energies

Aglietta 89 Eur. Lett. 8:611, 1989;
Experimental Study of Atmospheric Neutrino Flux in the NUSEX Experiment

Aglietta 89B LNF-89-077-P;
Primary Cosmic Ray Spectrum in the 10^{13} – 10^{17} eV Energy Range from the Analysis of Multiple Muon Events in the NUSEX Experiment

Aglietta 89C LNF-89-079-P;
Observation of Excess Muon Events from the Direction of Cygnus X-3 in the NUSEX Experiment

Aglietta 90	VENEZIA-90 p. 195; **The EAS-TOP Array at the Gran Sasso: 1987 - 1989**
Aglietta 91	Eur. Lett. 15:559, 1991; LNF-91-028; **Experimental Study of Upward Stopping Muons in NUSEX**
Agnello 90	Nucl. Phys. A516:662, 1990; **Multiplicity and Angular Distribution of Charged Pions Emitted Following $\bar{n}$ Annihilation on Fe at Low Energy**
Agnello 91	Phys. Lett. 256B:349, 1991; **Measurement of the $\bar{p}$ p Annihilation Cross-Sections at Very Low Energies**
Aguilarbenit 87	Phys. Lett. 199B:462, 1987; CERN-EP-87-126; IFVE-88-30; **Λ_c^+ Production Characteristics in Proton-Proton Interactions at 400 GeV/c**
Aguilarbenit 87C	Phys. Lett. 189B:476, 1987; Yad. Phys. 48:757, 1988; CERN-EP-87-45; IFVE-87-189; **D-Meson Production from 400 GeV/c p p Interactions**
Aguilarbenit 87F	Z. Phys. C36:559, 1987; Z. Phys. C38:520, 1988; CERN-EP-87-61; **Exclusive Hadron Branching Ratios of the D Meson**
Aguilarbenit 87H	Phys. Lett. 189B:254, 1987; Yad. Phys. 48:1310, 1988; Sov. J. Nucl. Phys. 48:833, 1988; CERN-EP-87-17; IFVE-87-114; **Lifetime Measurement of Λ_c^+**
Aguilarbenit 88	Phys. Lett. 201B:176, 1988; CERN-EP-87-212; **D-Meson Production from 400 GeV/c p p Interactions. Evidence for Leading Diquarks?**
Aguilarbenit 88B	Z. Phys. C40:321, 1988, CERN-EP-88-49; **Charm Hadron Properties in 400 GeV/c p p Interactions**
Aguilarbenit 88C	Z. Phys. C41:191, 1988; CERN-EP-88-77; **Comparative Properties of 400 GeV/c Proton-Proton Interactions with and without Charm Production**
Aguilarbenit 89	Z. Phys. C44:531, 1989; CERN-EP-89-58; **Vector Meson Production in π^- p Interaction at 360 GeV/c**
Aguilarbenit 91	Z. Phys. C50:405, 1991; Yad. Phys. 54:967, 1991; CERN-PPE-91-21; **Inclusive Particle Production in 400 GeV/c p p Interactions**
Aguilarbenit 91B	Z. Phys. C54:21, 1992; CERN-PPE-91-102; **Bose-Einstein Correlations in p p Collisions at 400 GeV/c**
Ahlen 88	Phys. Rev. Lett. 61:145, 1988; **New Limit on the Low-Energy $\bar{p}/p$ Ratio in the Galactic Cosmic Radiation**
Ahlen 90	Phys. Lett. 249B:149, 1990; LNF-90-037-P; **Study of Penetrating Cosmic Ray Muons and Search for Large Scale Anisotropies at the Gran Sasso Laboratory**
Ahlen 92	PR D46, R895; LNGS-92-25; **Study of the Ultrahigh-Energy Primary Cosmic Ray Composition with the MACRO Experiment**
Ahlen 92B	Phys. Rev. D46:4836, 1992; LNGS-92-29; **Measurement of the Decoherence Function with the MACRO Detector at Gran Sasso**
Ahmad 88	Phys. Rev. D38:2102, 1988; TRI-PP-88-61; **Search for Muon-Electron and Muon-Positron Conversion**
Ahmad 89	Acta Phys. Polon. B20:701, 1989; **Multiparticle Production in 340 GeV π^- Nucleus Collisions**
Ahmad 89B	Nucl. Phys. A499:821, 1989; **Properties of Projectile Fragments from ^{12}C Emulsion Interactions at 4.5 A GeV/c**
Ahmad 89C	Int. Jour. Mod. Phys. A4:5287, 1989; **Search for Anomalous $Z = 2$ Fragments from ^{12}C Emulsion Interactions at 4.5 GeV/c**
Ahmad 90	Nuovo Cim. 103A:517, 1990; **Characteristics of Hadron Nucleus Interactions with and without Emission of Hadrons in the Backward Hemisphere**
Ahmad 91	Mod. Phys. Lett. A6:1643, 1991; **Mean Free Paths of He Fragments Produced During the Interaction of Carbon and Silicon Nuclei at 4.5 A GeV/c**
Ahmad 91B	Phys. Rev. C44:1555, 1991; **Features of Compound Multiplicity in Heavy-Ion Interactions at 4.5 A GeV/c**
Ahmad 91C	Mod. Phys. Lett. A6:3313, 1991; **Fragmentation of Silicon Nuclei at 4.5 A GeV/c**
Ahmad 92	Nuovo Cim. 105A:91, 1992; **Some Interesting Features of Relativistic Particles Produced in Carbon and Silicon Emulsion Interactions**
Ahmad 92B	Phys. Lett. 281B:29, 1992; **Transverse Momentum Distributions of π^- from 14.6 A GeV/c Silicon Ion Interactions in Copper and Gold**
Ahmed 92B	Phys. Lett. 299B:385, 1993; DESY-92-164; **Observation of Deep Inelastic Scattering at Low x**
Ahmed 92C	Phys. Lett. 298B:469, 1993; DESY-92-162; **Measurement of the Hadronic Final State in Deep Inelastic Scattering at HERA**
Ahmed 92D	Phys. Lett. 299B:374, 1993; DESY-92-160; **Total Photoproduction Cross Section Measurement at HERA Energies**
Ahmed 92E	Phys. Lett. 297B:205, 1993; DESY-92-142; **Hard Scattering in γ p Interactions**
Ahrens 88	Phys. Lett. 202B:284, 1988; **A Study of the Axial-Vector Form Factor and Second-Class Currents in Antineutrino Quasielastic Scattering**
Ahrens 90	Phys. Rev. D41:3297, 1990; **Determination of Electroweak Parameters from the Elastic Scattering of Muon Neutrinos and Antineutrinos on Electrons**
Ahumacher 88	Phys. Rev. C38:2205, 1988; **Exclusive Quasi-Deuteron Absorption of Pions in ^{16}O and ^{18}O at 116 MeV**
Aid 90	FERMILAB-CONF-90-125-E; **Preliminary Results from E665 on Cross Section Ratios at Low x Using H_2, deuteron and Xe Target**
Aihara 88	Phys. Rev. D37:28, 1988; **Production of Four-Prong Final States in Photon-Photon Collisions**
Aihara 88B	Phys. Rev. Lett. 60:2355, 1988; **Charmonium Production in Photon-Photon Collisions**

See the legend on page 7.

Aihara 88C Phys. Rev. Lett. 61:1263, 1988; LBL-24896;
Charged Hadron Inclusive Cross Sections and Fractions in $e^+ e^-$ Annihilations at $\sqrt{s}$=29 GeV

Aihara 88D Phys. Rev. D38:1, 1988;
Formation of Spin-One Mesons by Photon-Photon Fusion

Aihara 88E Phys. Lett. 209B:107, 1988;
$f_1(1285)$ Formation in Photon-Photon Fusion Reaction

Aihara 88F LBL-23737;
Charged Hadron Production in $e^+ e^-$ Annihilation at $\sqrt{s}$=29 GeV

Aihara 89 Phys. Rev. D40:2772, 1989; NIKHEF-H-89-9;
Exclusive Production of $p\,\bar{p}\,\pi^+\,\pi^-$ in Photon Photon Collisions

Aihara 89B Z. Phys. C44:357, 1989; UT-HE-89-02;
Evidence of Soft and Collinear Gluon Emission in $e^+ e^-$ Hadronic Events

Aihara 89C Phys. Rev. D41:2667, 1990; SLAC-PUB-5101; UC-HRPA-89-02;
A Measurement of the Total Hadronic Cross Section in Tagged $\gamma\,\gamma$ Reactions

Aihara 89D Phys. Rev. Lett. 64:172, 1990; UCSB-HEP-89-04;
Investigation of the Electromagnetic Structure of η and η' Mesons by Two Photon Interactions

Aihara 91 Phys. Rev. D43:29, 1991;
Test of Spin Dependence in Charm-Quark Fragmentation to $D^*(2010)$

Aivazyan 88 Phys. Lett. 209B:103, 1988; HEN-286; CERN-PRE-88-030;
Multiplicity Dependence of the Average Transverse Momentum in $\pi^+\,p$, $K^+\,p$ and $p\,p$ Collisions at 250 GeV

Aivazyan 89 Z. Phys. C42:533, 1989; CERN-PRE-88-084; HEN-308;
Forward-Backward Multiplicity Correlations in $\pi^+\,p$, $K^+\,p$ and $p\,p$ Collisions at 250 GeV/c

Aivazyan 91 Z. Phys. C51:167, 1991; CERN-PRE-90-085; HEN-330-90;
Rapidity Correlations in $\pi^+\,p$, $K^+\,p$ and $p\,p$ Interactions at 250 GeV/c

Aivazyan 91B Phys. Lett. 258B:487, 1991; HEN-332-90; CERN-PRE-90-079;
Factorial Correlators from $\pi^+\,p$ and $K^+\,p$ Collisions at 250 GeV/c

Ajaltouni 88 LAL-88-30;
Three and Five Photon Decays of the $J/\psi(1S)$

Ajaltouni 88B LAL-88-06;
Study of the Decays $J/\psi(1S) \to$ Vector + Pseudoscalar

Ajimura 92 Phys. Rev. Lett. 68:2137, 1992;
Polarization of Λ Hyperons Produced by the Quasifree (π^+, K^+) Reaction on ^{12}C

Ajinenko 89 Z. Phys. C42:377, 1989; CERN-PRE-88-067;
Multiplicity Distribution in K^+ Al and K^+ Au Collisions at 250 GeV/c and a Test of the Multiple Collisions Model

Ajinenko 89B Z. Phys. C43:15, 1989; IFVE-89-70;
A Study of 4 and 6 Body Reaction in $K^+\,p$ and $\pi^+\,p$ Interactions at 250 GeV/c

Ajinenko 89C Phys. Lett. 222B:306, 1989; HEN-309; CERN-PRE-89-005;
Intermittency Patterns in $\pi^+\,p$ and $K^+\,p$ Collisions at 250 GeV/c

Ajinenko 89D Z. Phys. C43:37, 1989;
Charge and Energy Flow in $\pi^+\,p$, $K^+\,p$ and $p\,p$ Interactions at 250 GeV/c

Ajinenko 89E Z. Phys. C44:573, 1989; IFVE-89-172;
Strange and Non-Strange Baryon Production in $\pi^+\,p$ and $K^+\,p$ Interactions at 250 GeV/c

Ajinenko 90 Phys. Lett. 235B:377, 1990;
Intermittency Effects in $\pi^+\,p$ and $K^+\,p$ Collisions at 250 GeV/c

Ajinenko 90B Z. Phys. C46:569, 1990;
Negative Binomial and Multiplicity Distributions in 250 GeV/c K^+ and π^+ Interactions on Al and Au Nuclei

Ajinenko 90C Z. Phys. C49:367, 1991; HEN-321-90;
Collective Characteristics of Hadron Systems Produced in Beam Fragmentation of $\pi^+\,p$ Collisions at 250 GeV/c

Ajinenko 90D Z. Phys. C46:525, 1990;
Neutral Kaon Production in $K^+\,p$ and $\pi^+\,p$ Interactions at 250 GeV/c

Ajinenko 92 Phys. Lett. 277B:524, 1992;
Inclusive ρ^0, $K^*(892)$ and $\overline{K}^*(892)^0$ Production in Peripheral K^+ Al, π^+ Al and π^+ Au Collisions at 280 GeV/c

Ajnutdinov 88 ITEP-88-118;
The Track Experiment for Double β-Decay of ^{136}Xe

Akagi 92 Phys. Rev. D47:R2644, 1993; KEK-92-35;
Estimation of the Branching Ratio of the Decay $K_L \to e^+ e^- e^+ e^-$ from the $K_L \to e^+ e^-$ X Process

Akchurin 89 Phys. Lett. 229B:299, 1989; ANL-HEP-PR-89-82;
Analyzing-Power Measurement of Coulomb-Nuclear Interference with the Polarized-Proton and Antiproton Beams at 185 GeV/c

Akei 89 Nuovo Cim. 102A:457, 1989;
Study of ^{12}C and ^{56}Fe Hypernuclei by (π^+, K^+) Reactions at KEK 12 GeV PS

Akei 91 Nucl. Phys. A534:478, 1991; INS-854; OULNS-90-17;
The (π^+, K^+) Reaction on ^{12}C and ^{56}Fe

Aker 91 Phys. Lett. 260B:249, 1991; CERN-PPE-91-28;
Observation of a 2^{++} Resonance at 1515 MeV in Proton Antiproton Annihilation into $3\pi^0$

Akerib 91 Phys. Rev. Lett. 67:1692, 1991; CLNS-91-1089; CLEO-91-5;
Measurement of the Inclusive B Cross Section Above the $\Upsilon(4S)$

Akerib 92 Phys. Rev. Lett. 69:3610, 1992; CLNS-92-1163; CLEO-92-8;
Measurement of the Tau Lepton Electronic Branching Fraction

Akerlof 88 Phys. Rev. D37:577, 1988;
Experimental Limits on Massive Neutrinos from $e^+ e^-$ Annihilation at 29 GeV

Akesson 88 Z. Phys. C38:383, 1988; CERN-EP-87-176;
The Transverse Energy Distribution in ^{16}O-Nucleus Collisions at 60 and 200 GeV per Nucleon

Akesson 88B Z. Phys. C38:397, 1988; CERN-EP-87-170;
The Transverse Energy Distribution in Hadron-Lead Collisions

Akesson 88C Phys. Lett. 214B:295, 1988; CERN-EP-88-121;
The Transverse-Energy Distribution of ^{32}S-Nucleus Collisions at 200 GeV per Nucleon

Akesson 88D Phys. Rev. D38:2687, 1988;
Comparison of Low p_T Photon Production in High- and Low-multiplicity Collisions at the CERN-ISR

Akesson 89 Phys. Lett. 231B:359, 1989;
Measurement $d\sigma/dE_t$ in Collisions of Light Nuclei at $\sqrt{s_{NN}}$=31. 5 GeV

Akesson 89B Nucl. Phys. B333:48, 1990; CERN-EP-89-97;
Charged Particle Multiplicity Distributions in Oxygen - Nucleus Collisions at 60 GeV and 200 GeV per Nucleon

Akesson 89D Z. Phys. C46:369, 1990; CERN-EP-89-113;
Inclusive Photon Production in p A and A A Collisions at 200 GeV/Nucleon

Akesson 89E Z. Phys. C46:361, 1990; CERN-EP-89-111;
Inclusive Negative Particle p_T Spectra in p-Nucleus and Nucleus-Nucleus Collisions at 200 GeV per Nucleon

Akesson 90 Nucl. Phys. B342:279, 1990; CERN-EP-90-42;
An Emulsion Study of ^{16}O and ^{32}S Interactions at 200 GeV per Nucleon Selected by Transverse Energy

Akesson 90B Phys. Lett. 238B:442, 1990; CERN-EP-89-172;
Search for Scalar Electrons and Winos at the CERN $\bar{p}$ p Collider

Akesson 90C Z. Phys. C46:179, 1990; CERN-EP-89-152;
Search for Top Quark Production at the CERN $\bar{p}$ p Collider

Akesson 90D Phys. Lett. 252B:303, 1990; CERN-PPE-90-120;
A Search for Multiplicity Fluctuation in High Energy Nucleus-Nucleus Collisions

Akesson 90E Nucl. Phys. B353:1, 1991; Nucl. Phys. B357:208, 1991; CERN-PPE-90-130;
Measurement of the Transverse Energy Flow in Nucleus-Nucleus Collisions at 200 GeV per Nucleon

Akesson 90F Z. Phys. C49:355, 1991; CERN-PPE-90-133;
Diffraction Dissociation of Nuclei in 450 GeV/c Proton - Nucleus Collisions

Akesson 90G Z. Phys. C52:219, 1991; CERN-PPE-90-186;
A Search for Weakly Interacting Neutral Particles in Missing Energy Events on 450 GeV/c p nucleon Collisions

Akesson 91 Z. Phys. C53:183, 1992; CERN-PPE-91-77;
Proton Distributions in the Target Fragmentation Region in Proton-Nucleus and Nucleus-Nucleus Collisions at High Energies

Akesson 92 Phys. Lett. 296B:273, 1992; CERN-PPE-92-130;
Kaon Production in 200 GeV/Nucleon Nucleus-Nucleus Collisions

Akesson 92B CERN-PPE-92-214;
Transverse Energy Measurements in Proton-Nucleus Interactions at High Energy

Akimenko 89 Yad. Phys. 51:437, 1989; IFVE-89-95;
Study of Exclusive Processes $\pi^+ \to \eta$ and $\pi^+ \to \pi^0$ π^0 on Nuclei at 10.5 GeV/c

Akimenko 90B Yad. Phys. 53:429, 1991; IFVE-90-10;
Experimental Study of K^0-Meson Inclusive Production in K^+ nucleus Interaction at 11.2 GeV

Akimenko 90C Yad. Phys. 52:1397, 1990; IFVE-90-36;
Experimental Study of Inclusive $K^*(892)^0$ Meson Production in K^+ nucleus Interactions at 11.2 GeV

Akimenko 91 Phys. Lett. 259B:225, 1991;
Measurement of the $K^+ \to \pi^-$ e^+ ν Form Factors

Akimenko 92 Yad. Phys. 56-5:83, 1993; JINR-P1-92-299;
Study of Inclusive K_S-Meson Production in π^+-Nucleus and K^+-Nucleus Interactions at 11.2 GeV

Akimov 89 Kr. Soob. JINR 35:11, 1989;
Investigation of Anomalous Pion Production in the Reaction p Cu $\to \pi^+$ X by 350 MeV Protons

Akimov 91 Yad. Phys. 53:1187, 1991;
Studying π^+ ^{12}C $\to$ p p X Reaction at Pion Energies 26-39 MeV

Akimov 92 Nucl. Phys. A541:433, 1992;
Positive-Pion Absorption on Carbon at Low Pion Energies

Akopyan 91 Phys. Lett. 272B:443, 1991;
Search for a Light Shortlived Neutral Boson in Orthopositronium Decay

Akopyan 92 INR-92-754;
Search for a Light Shortlived Neutral Boson in Orthopositronium Decay

Akrawy 89 Phys. Lett. 231B:530, 1989; CERN-EP-89-133;
Measurement of the Z^0 Mass and Width with the OPAL Detector at LEP

Akrawy 89B Phys. Lett. 236B:364, 1989; CERN-EP-89-154;
A Search for the t and b' Quarks in Hadronic Z^0 Decays

Akrawy 89C Phys. Lett. 235B:389, 1989; CERN-EP-89-153;
A Study of Jet Production Rates and a Test of QCD on the Z^0 Resonance

Akrawy 89D CERN-EP-89-175;
A Search for New Charged Heavy Leptons with the OPAL Detectors at LEP

Akrawy 89E Phys. Lett. 240B:261, 1990; CERN-EP-89-176;
A Search for Acoplanar Pairs of Leptons or Jets in Z^0 Decays: Mass Limits on Supersymmetric Particles

Akrawy 90 Phys. Lett. 235B:379, 1990; CERN-EP-89-147;
Measurement of the Decay of the Z^0 into Lepton Pairs

Akrawy 90B Phys. Lett. 240B:250, 1990; CERN-EP-90-09;
A Direct Search for New Charged Heavy Leptons at LEP

Akrawy 90C Z. Phys. C47:505, 1990; CERN-EP-90-48;
A Measurement of Global Event Shape Distributions in the Hadronic Decays of the Z^0

Akrawy 90D Phys. Lett. 242B:299, 1990; CERN-EP-90-38;
A Search for Technipions and Charged Higgs Bosons at LEP

Akrawy 90E Phys. Lett. 240B:497, 1990; CERN-EP-90-27;
A Combined Analysis of the Hadronic and Leptonic Decays of the Z^0

Akrawy 90F Phys. Lett. 241B:133, 1990; CERN-EP-90-29;
A Study of the Reaction e^+ e^- $\to 2\gamma$ at LEP

Akrawy 90G Phys. Lett. 244B:135, 1990; CERN-EP-90-49;
Search for Excited Leptons at LEP

Akrawy 90H Phys. Lett. 246B:285, 1990; CERN-EP-90-55;
Evidence for Final State Photons in Multihadronic Decays of the Z^0

See the legend on page 7.

Akrawy 90I Phys. Lett. 247B:448, 1990; CERN-EP-90-72;
Limits on Neutral Heavy Lepton Production from Z^0 Decay

Akrawy 90J Phys. Lett. 236B:224, 1990; CERN-EP-89-174;
Mass Limits for Standard Model Higgs Boson in $e^+ e^-$ Collisions at LEP

Akrawy 90K Phys. Lett. 247B:458, 1990; CERN-EP-90-81;
Analysis of Z^0 Couplings to Charged Leptons

Akrawy 90L Phys. Lett. 247B:617, 1990; CERN-EP-90-94;
A Study of Coherence of Soft Gluons in Hadron Jets

Akrawy 90M Phys. Lett. 248B:211, 1990; CERN-PPE-90-95;
A Direct Search for Neutralino Production at LEP

Akrawy 90N Z. Phys. C49:1, 1991; CERN-EP-90-100;
Search for Neutral Higgs Bosons in $e^+ e^-$ Collisions at LEP

Akrawy 90O Phys. Lett. 251B:211, 1990; CERN-PPE-90-116;
Limits on a Light Higgs Boson in $e^+ e^-$ Collisions at LEP

Akrawy 90P Phys. Lett. 252B:159, 1990; CERN-PPE-90-121;
A Measurement of Energy Correlations and a Determination of $\alpha_S(m^2_{Z^0})$ in $e^+ e^-$ Annihilations at $\sqrt{s}$=91 GeV

Akrawy 90Q Phys. Lett. 252B:290, 1990; CERN-PPE-90-132;
Search for Pair Produced Stable Singly-Charged Heavy Particles in Z^0 Decays

Akrawy 90R Z. Phys. C49:375, 1991; CERN-PPE-90-143; CERN-PPE-90-143-E;
A Study of the Recombination Scheme Dependence of Jet Production Rates and of $\alpha_S(m_{Z^0})$ in Hadronic Z^0 Decays

Akrawy 90S Phys. Lett. 254B:293, 1990; CERN-PPE-90-148;
A Search for Lepton Flavour Violation in Z^0 Decays

Akrawy 90T Phys. Lett. 253B:511, 1990; CERN-PPE-90-150;
Search for the Minimal Standard Model Higgs Boson in $e^+ e^-$ Collisions at LEP

Akrawy 90U Z. Phys. C50:373, 1991; CERN-PPE-90-187;
A Direct Measurement of the Z^0 Invisible Width by Single Photon Counting

Akrawy 90V Z. Phys. C49:49, 1991; CERN-PPE-90-97;
A Study of Angular Correlations in 4-Jet Final States of Hadronic Z^0 Decays

Akrawy 91 Phys. Lett. 262B:351, 1991; CERN-PPE-91-37;
Intermittency in Hadronic Decays of the Z^0

Akrawy 91B Phys. Lett. 261B:334, 1991; CERN-PPE-91-31;
A Model Independent Observation of the String Effect Using Quark Tagging at LEP

Akrawy 91C Phys. Lett. 263B:311, 1991; CERN-PPE-91-48;
A Study of Heavy Flavour Production Using Muons in Hadronic Z^0 Decays

Akrawy 91D Phys. Lett. 257B:531, 1991; CERN-PPE-90-189;
Measurement of the Cross-Sections of the Reactions $e^+ e^- \to \gamma\gamma$ and $e^+ e^- \to \gamma\gamma\gamma$ at LEP

Alam 89 Phys. Rev. D40:712, 1989; Phys. Rev. D40:3790, 1989; CLEO-89-4; CLNS-89-888;
Search for a Neutral Higgs Boson in B Meson Decay

Alam 89B Phys. Lett. 226B:401, 1989; CLNS-89-921; CLEO-89-9;
Measurement of the Isospin Mass Splitting between $\Xi_c(2460)^+$ and $\Xi_c(2460)^0$

Alam 92 Phys. Rev. D46:4822, 1992; CLNS-92-1145; CLEO-92-1;
Shape Studies of Quark Jets vs Gluon Jets at $\sqrt{s}$ = 10 GeV

Alanakyan 88 Yad. Phys. 47:1653, 1988; YERE-979(29)-87;
Different Features of Spectra and Structure Functions of Nuclei from Inclusive and Backward-Forward Correlation Production of Cumulative Photoprotons

Alanakyan 90 YERE-1303(89)-90;
The $(e^-, e^- p)$ Reaction on ^{12}C with Backward Protons

Alanakyan 91 YERE-1351(46)-91;
Spectra of Cumulative Protons in $e^- {}^{12}$C $\to p$ X Reactions

Albajar 88 Nucl. Phys. B309:405, 1988; CERN-EP-88-29;
Production of Low Transverse Energy Cluster in $p\,p$ Collisions at $\sqrt{s}$=0.2 – 0.9 TeV and their Interpretation in Terms of QCD Jets

Albajar 88B Phys. Lett. 209B:385, 1988; CERN-EP-88-45;
Direct Photon Production at the CERN Proton-Antiproton Collider

Albajar 88C Phys. Lett. 209B:397, 1988; CERN-EP-88-46;
Low Mass Dimuon Production at the CERN Proton-Antiproton Collider

Albajar 88D Phys. Lett. 213B:405, 1988; CERN-EP-88-100;
Measurement of the Bottom Quark Production Cross Section in Proton-Antiproton Collisions at $\sqrt{s}$=0.63 TeV

Albajar 88E Phys. Lett. 200B:380, 1988; CERN-EP-87-175;
High Transverse Momentum $J/\psi(1S)$ Production at the CERN Proton-Antiproton Collider

Albajar 88F Z. Phys. C37:489, 1988; CERN-EP-87-189;
Study of Heavy Flavor Production in Events with a Muon Accompanied by Jet(s) at the CERN Proton-Antiproton Collider

Albajar 88G Z. Phys. C37:505, 1988; CERN-EP-87-190;
Search for New Heavy Quarks at CERN Proton-Antiproton Collider

Albajar 88H Phys. Lett. 209B:127, 1988; CERN-EP-88-54;
Two Jet Mass Distributions at the CERN Proton-Antiproton Collider

Albajar 89 Phys. Lett. 226B:410, 1989; Phys. Lett. 229B:439, 1989; CERN-EP-89-71;
Bose-Einstein Correlation in $p\,p$ Interactions at $\sqrt{s}$=0.2 to 0.9 TeV

Albajar 89B Z. Phys. C44:15, 1989; CERN-EP-88-168;
Studies of Intermediate Vector Boson Production and Decay in UA1 at the CERN Proton-Antiproton Collider

Albajar 89C CERN-EP-89-138;
Comparison of $W^\pm$ and Direct Photon Cross Sections at Large Transverse Momenta

Albajar 90 Nucl. Phys. B345:1, 1990; CERN-EP-90-56;
Intermittency Studies in $p\,p$ Collisions at $\sqrt{s}$=630 GeV

Albajar 90B Nucl. Phys. B335:261, 1990; CERN-EP-89-85;
A Study of the General Characteristics of Proton-Antiproton Collisions at $\sqrt{s}$ = 0.2 TeV to 0.9 TeV

Albajar 90C Phys. Lett. 241B:283, 1990; CERN-EP-90-35;
Experimental Limit on the Decay $W^{\pm} \to \pi^{\pm} \gamma$ at the CERN Proton-Antiproton Collider

Albajar 90D Phys. Lett. 244B:566, 1990; CERN-EP-90-61;
A Study of the $D^*(2010)$ Content of Jets at the CERN $p \bar{p}$ Collider

Albajar 90E Z. Phys. C48:1, 1990; CERN-EP-90-57;
Search for New Heavy Quarks in Proton-Antiproton Collisions at $\sqrt{s}$=0.63 TeV

Albajar 90F Phys. Lett. 253B:503, 1990; CERN-PPE-90-141;
Measurement of the Ratio $R = \sigma_W \mathrm{Br}(W \to \mu\nu) / \sigma_Z \mathrm{Br}(Z \to \mu\mu)$ and Γ_W^{tot} at the CERN Proton-Antiproton Collider

Albajar 90G Phys. Lett. 256B:112, 1991; CERN-PPE-90-154;
$J/\psi(1S)$ and $\psi(2S)$ Production at the CERN $\bar{p}\, p$ Collider

Albajar 90H Phys. Lett. 257B:459, 1991; CERN-PPE-90-180;
Limits on t-Quark Decay into Charged Higgs from a Direct Search at the CERN $p\, \bar{p}$ Collider

Albajar 91 Phys. Lett. 256B:121, 1991; Phys. Lett. 262B:497, 1991; CERN-PPE-90-155; CERN-PPE-90-155-REV.;
Beauty Production at the CERN $\bar{p}\, p$ Collider

Albajar 91B Phys. Lett. 262B:163, 1991; CERN-PPE-91-54;
A Search for Rare B Meson Decays at the CERN $Sp\bar{p}S$ Collider

Albajar 91C Phys. Lett. 262B:171, 1991; CERN-PPE-91-055;
Measurement of B^0-$\bar{B}^0$ Mixing at the CERN $Sp\bar{p}S$ Collider

Albajar 91D Phys. Lett. 273B:540, 1991; CERN-PPE-91-202;
First Observation of the Beauty Baryon Λ_b in the Decay Channel $\Lambda_b \to J/\psi(1S)\, \Lambda$ at the CERN Proton-Antiproton Collider

Albajar 92 Z. Phys. C56:37, 1992; CERN-PPE-92-85;
Multifractal Analysis of Minimum Bias Events in $\sqrt{s}$=630 GeV $\bar{p}\, p$ Collisions

Albrecht 87N Phys. Lett. 207B:349, 1988; DESY-87-156;
Measurement of D_S^*-$D_S^{\pm}$ Mass Difference

Albrecht 88 Phys. Lett. 202B:596, 1988; CERN-PRE-87-119; GSI-87-81;
Charge Particles Distributions in ^{16}O Induced Nuclear Reactions at 60 and 200 GeV

Albrecht 88B Phys. Lett. 201B:390, 1988; CERN-PRE-87-120; GSI-87-82;
Photon and Neutral Pion Distribution in 60 and 200 A GeV ^{16}O + Nucleus and Proton + Nucleus Reactions

Albrecht 88C Phys. Lett. 202B:149, 1988; DESY-87-148;
An Improved Upper Limit on the ν_τ Mass from the Decay $\tau^- \to 3\pi^-\, 2\pi^+\, \nu_\tau$

Albrecht 88D Phys. Lett. 207B:109, 1988; DESY-88-011;
Observation of the Charmed Baryon Λ_c^+ in $e^+\, e^-$ Annihilation at 10 GeV

Albrecht 88E Phys. Lett. 210B:258, 1988; DESY-88-062;
Search for Decay $B \to K^*\, \gamma$

Albrecht 88F Phys. Lett. 209B:380, 1988; DESY-88-053;
Search for D^0 Decays into Lepton Pairs

Albrecht 88G Phys. Lett. 210B:263, 1988; DESY-88-012;
Observation of Inclusive Beauty-Meson Decays into Λ_c^+ Baryons

Albrecht 88H Phys. Lett. 211B:489, 1988; DESY-88-058;
Observation of the Charmed Baryon $\Sigma_c(2455)$ in $e^+\, e^-$ Annihilations

Albrecht 88I Z. Phys. C39:177, 1988; DESY-87-141;
Hyperon Production in $e^+\, e^-$ Annihilation at 10 GeV Centre of Mass Energy

Albrecht 88J Phys. Lett. 210B:267, 1988; DESY-88-037;
Lifetimes of Charmed Mesons

Albrecht 88K Z. Phys. C41:557, 1989; DESY-88-079;
Inclusive $\phi(1020)$-Meson Production in Electron-Positron Interactions in the Energy Region of the Υ Resonances

Albrecht 88L Phys. Lett. 210B:273, 1988; DESY-88-016;
A Search for $\omega\, \phi$ and $\phi\, \phi$ Production in the Reactions $\gamma\, \gamma \to K^+\, K^-\, \pi^+\, \pi^-\, \pi^0$ and $\gamma\, \gamma \to 2K^+\, 2K^-$

Albrecht 88M Phys. Lett. 215B:424, 1988; DESY-88-131;
B Meson Decays to $D\, \pi$ and $D\, \rho(770)$

Albrecht 88N Phys. Lett. 212B:528, 1988; DESY-88-084;
First Observation of $\gamma\, \gamma \to K^*(892)^+\, K^*(892)^-$

Albrecht 88O Z. Phys. C41:1, 1988; DESY-88-088;
Measurement of the Decays $\tau^- \to K^*(892)^-\, \nu_\tau$ and $\tau^- \to \rho(770)^-\, \nu_\tau$

Albrecht 88P Z. Phys. C41:405, 1988; DESY-88-113;
Upper Limit for the Decay of $\tau^{\pm}$ Leptons into η Mesons

Albrecht 88Q Phys. Lett. 215B:429, 1989; DESY-88-072;
Observation of the Orbitally Excited $\Lambda(1520\, D_{03})$ Baryon in $e^+\, e^-$ Annihilations

Albrecht 88R Z. Phys. C42:543, 1989; DESY-88-194;
Two-Photon Production of Final States with a $p\, \bar{p}$ Pair

Albrecht 88S Z. Phys. C43:181, 1988; DESY-88-168;
Measurement of D^0 Decays into $\bar{K}^0\, \omega$, $\bar{K}^0\, \eta$ and $\bar{K}^*(892)^0\, \eta$

Albrecht 88T Phys. Lett. 209B:119, 1988; DESY-88-056;
Observation of the Charmless B Meson Decays

Albrecht 89 Phys. Lett. 221B:422, 1989; DESY-88-179;
Observation of $D^*(2459)^0$ in $e^+\, e^-$ Annihilation

Albrecht 89B Z. Phys. C43:45, 1989; DESY-89-013;
Results on Baryon Antibaryon Correlations in $e^+\, e^-$ Annihilation

Albrecht 89C Phys. Lett. 219B:121, 1989; DESY-88-178;
Measurement of $D^*(2010)^+$ Polarization in the Decay $\bar{B}^0 \to D^*(2010)^+\, e^-\, \nu$

Albrecht 89D Phys. Lett. 221B:427, 1989; GSI-89-29; CERN-PRE-89-017; GSI-89-29;
Fluctuation and Intermittency in 200 A GeV ^{16}O + (C, Au) Reaction

Albrecht 89E Z. Phys. C42:519, 1989; DESY-88-145;
Measurement of Inclusive B-Meson Decays into Baryons

Albrecht 89F Phys. Lett. 217B:205, 1989; DESY-88-150;
A Measurement of $\gamma\, \gamma \to \rho(770)^+\, \rho(770)^-$

See the legend on page 7.

Albrecht 89G Z. Phys. C46:15, 1990; DESY-89-066;
Inclusive π^0 and η Production in Electron Positron Interactions at $\sqrt{s}$=10 GeV

Albrecht 89H Z. Phys. C44:547, 1989; DESY-89-014;
Inclusive Production of Charged Pions, Charged and Neutral Kaons and Antiprotons in $e^+ e^-$ Annihilation at 10 GeV and in Direct $\Upsilon(2S)$ Decays

Albrecht 89I Phys. Lett. 230B:169, 1989; DESY-89-061;
Observation of $\Delta(1232\ P_{33})^{++}$ Production in $e^+ e^-$ Annihilations around 10 GeV

Albrecht 89J Z. Phys. C42:349, 1989; DESY-88-116;
Search for Exclusive Radiative Decays of $\Upsilon(1S)$ and $\Upsilon(2S)$ Mesons

Albrecht 89K Z. Phys. C48:183, 1990; DESY-89-179;
Measurement of $K^+ K^-$ Production in $\gamma\ \gamma$ Collisions

Albrecht 89L Phys. Lett. 229B:304, 1989; DESY-89-086;
Search for $b \to s\ \gamma$ in Exclusive Decays of B Mesons

Albrecht 89M Z. Phys. C45:31, 1989; LUIP-8903; CERN-PRE-89-056;
Global and Local Fluctuations in Multiplicity and Transverse Energy for Central Ultra-Relativistic Heavy-Ion Interactions

Albrecht 89N Phys. Lett. 229B:175, 1989; DESY-89-082;
Measurement of the Decay $B^0 \to D^- \ell^+ \nu$

Albrecht 89O Phys. Lett. 236B:102, 1990; DESY-89-144;
Study of Antideuteron Production in $e^+ e^-$ Annihilation at 10 GeV Center of Mass Energy

Albrecht 89P Phys. Lett. 230B:162, 1989; DESY-89-119;
Observation of a New Charmed-Strange Meson

Albrecht 89Q Phys. Lett. 232B:554, 1989; DESY-89-117;
Measurement of the Lifetime Ratio $\tau(B^+)/\tau(B^0)$

Albrecht 89R Z. Phys. C46:9, 1990; DESY-89-102;
A Study of Cabibbo-Suppressed D^0 Decays

Albrecht 89S Phys. Lett. 254B:288, 1990; DESY-89-096;
Search for $b \to s$ gluon in B-Meson Decays

Albrecht 89T DESY-89-163;
Search for Rare Semileptonic B-Meson Decays

Albrecht 89U Phys. Lett. 262B:148, 1991; DESY-89-166;
Search for $B \to$ strange charged$^+$ charged$^-$ in Exclusive Decays of B Mesons

Albrecht 89V Phys. Lett. 232B:398, 1989; DESY-89-103;
Resonance Decomposition of the $D_1(2420)^0$ Through a Decay Angular Analysis

Albrecht 89W DESY-89-164;
Evidence for a Higher Twist Effect in Electron Positron Annihilation into Hadrons at 10 GeV Centre of Mass Energy

Albrecht 89X Phys. Lett. 231B:208, 1989; DESY-89-085;
Observation of the Charged Isospin Partner of the $D_2^*(2460)^0$

Albrecht 90 Phys. Lett. 245B:315, 1990; DESY-90-032;
Observation of the Decay $D_S^+ \to \eta'\ \pi^+$

Albrecht 90B Z. Phys. C49:349, 1991; DESY-90-033;
Study of $p\ p$ and $\Lambda\ \Lambda$ Production in $e^+ e^-$ Annihilation at 10 GeV Center of Mass Energy

Albrecht 90C Z. Phys. C45:529, 1990; GSI-89-59;
Transverse Energy Production in the Target Fragmentation Region in ^{16}O Nucleus Reactions at 60 A GeV and 200 A GeV

Albrecht 90D Phys. Lett. 234B:409, 1990; DESY-89-152;
Observation of Semileptonic Charmless B-Meson Decays

Albrecht 90E Phys. Lett. 241B:278, 1990; DESY-90-008;
Search for Hadronic $b \to u$ Decays

Albrecht 90F Z. Phys. C47:367, 1990; GSI-89-03; CERN-PRE-89-003;
Transverse Momentum Distributions of Neutral Pions from Central and Peripheral ^{16}O Au Collisions at 200 A GeV

Albrecht 90G Z. Phys. C48:543, 1990; DESY-90-046;
Exclusive Hadronic Decays of B Mesons

Albrecht 90H Phys. Lett. 249B:359, 1990; DESY-90-088;
Study of Inclusive Semileptonic B-Meson Decays

Albrecht 90I Phys. Lett. 250B:164, 1990; DESY-90-079;
Determination of the Tau-Neutrino Helicity

Albrecht 90J Phys. Lett. 247B:121, 1990; DESY-90-063;
Measurement of $\Xi_c(2460)$ Production in $e^+ e^-$ Annihilation at 10.5 GeV Centre-of-Mass Energies

Albrecht 90K DESY-90-157;
Determination of the Branching Ratios of $\bar{B}^0 \to D^*(2010)^+ D_S^{*-}$ and $D_S^+ \to \phi(1020)\ \pi$

Albrecht 90L Phys. Lett. 246B:278, 1990; DESY-90-059;
Determination of the Michel Parameter in Tau Decay

Albrecht 90M Z. Phys. C50:1, 1991; DESY-90-034;
Observation of Spin-Parity 2^+ Dominance in the Reaction $\gamma\ \gamma \to \rho(770)^0\ \rho(770)^0$ near Threshold

Albrecht 91 Z. Phys. C51:1, 1991; CERN-PPE-91-1;
Upper Limit for Thermal Direct Photon Production in Heavy-Ion Collisions at 60 and 200 A GeV

Albrecht 91B Phys. Lett. 255B:634, 1991; DESY-90-138;
Observation of the Decays $D_S^- \to \phi\ e^-\ \bar{\nu}_e$ and $D^- \to K^*(892)^0\ e^-\ \bar{\nu}_e$

Albrecht 91C Phys. Lett. 260B:259, 1991; DESY-90-155;
Observation of the Decay $\tau^+ \to \rho(770)\ \pi\ \pi\ \nu_\tau$

Albrecht 91D Phys. Lett. 277B:209, 1992; DESY-91-077;
First Evidence of $\chi_{c1}(1P)$ Production in B Meson Decays

Albrecht 91E DESY-91-056;
A Measurement of $\tau(B^+)/\tau(B^0)$ from the Lepton and Dilepton Rates in $\Upsilon(4S)$ Decays

Albrecht 91F Phys. Lett. 269B:234, 1991; DESY-91-055;
Observation of Λ_c^+ Semileptonic Decay

Albrecht 91G Z. Phys. C52:353, 1991; DESY-91-023;
Inclusive Production of D^0, D^+ and $D^*(2010)^+$ Mesons in B Decays and Nonresonant $e^+ e^-$ Annihilation at 10.6 GeV

Albrecht 91H Nucl. Phys. A525:333C, 1991;
Bose-Einstein Correlations in the Target Fragmentation Region of 200 A GeV ^{16}O + nucleus Collisions

Albrecht 91I Phys. Lett. 258B:297, 1991; DESY-90-121;
Reconstruction of Semileptonic $b \to u$ Decays

Albrecht 91J Z. Phys. C54:1, 1992; DESY-91-121;
Production of D_S^+ Mesons in B Decays and Determination of F_{D_S}

Albrecht 91K Phys. Lett. 278B:202, 1992; DESY-91-112;
A Measurement of the Inclusive Semileptonic Decay Fraction of Charmed Hadrons

Albrecht 91L Z. Phys. C54:13, 1992; DESY-91-092;
Measurement of R and Determination of the Charged-Particle Multiplicity in $e^+ e^-$ Annihilation at $\sqrt{s}$ around 10 GeV

Albrecht 91M Z. Phys. C53:367, 1992; DESY-91-084;
Measurement of Exclusive One-Prong and Inclusive Three-Prong Branching Ratios of the Tau Lepton

Albrecht 91N Phys. Lett. 267B:535, 1991; DESY-91-19;
A Spin-Parity Analysis of $\gamma \gamma \to \rho(770)^+ \rho(770)^-$

Albrecht 91O Nucl. Phys. A525:305C, 1991;
Search for Direct Photons in Heavy-Ion Collisions

Albrecht 91P Z. Phys. C53:361, 1992; DESY-91-066;
The Measurement of D_S^+ and D^+ Meson Decays into $K^*(892)^+ \bar{K}^*(892)^0$

Albrecht 92 Z. Phys. C55:179, 1992; DESY-92-013;
Search for Neutrinoless $\tau^\pm$ Decays

Albrecht 92B Phys. Lett. 275B:195, 1992; DESY-91-122;
Measurement of the Decay $B^- \to D^*(2010)^0 \ell^- \bar{\nu}$

Albrecht 92C Phys. Lett. 274B:239, 1992; DESY-91-091;
A Measurement of Asymmetry in the Decay $\Lambda_c^+ \to \Lambda \pi^+$

Albrecht 92D Z. Phys. C56:1, 1992; DESY-92-074;
Measurement of Inclusive Baryon Production in B Meson Decays

Albrecht 92E DESY-92-029;
Exclusive Semileptonic Decays of B Mesons to D Mesons

Albrecht 92F Phys. Lett. 292B:221, 1992; DESY-92-086;
A Measurement of the Tau Mass

Albrecht 92G Z. Phys. C56:7, 1992; DESY-92-077;
New Results on D^0 Decays

Albrecht 92H Z. Phys. C55:25, 1992; DESY-92-008;
Search for Charm Production in Direct Decays of the $\Upsilon(1S)$ Resonance

Albrecht 92I Z. Phys. C56:339, 1992; DESY-92-082;
Measurement of the Decay $\tau^- \to \rho(770)^- \nu_\tau$

Albrecht 92J Phys. Lett. 288B:367, 1992; DESY-92-052;
Evidence for the Production of the Charmed, Doubly Strange Baryon Ω_c in $e^+ e^-$ Annihilation

Albrecht 92K Z. Phys. C55:357, 1992; DESY-92-050;
A New Determination of the B^0-$\bar{B}^0$ Oscillation Strength

Albrecht 92L Z. Phys. C53:225, 1992;
Bose-Einstein Correlations in the Target Fragmentation Region in 200 GeV ^{16}O + Nucleus Collisions

Albrecht 92M DESY-92-125;
Analysis of the Decay $\tau^- \to \pi^- \pi^- \pi^+ \nu_\tau$ and Determination of the $a_1(1260)$ Resonance Parameters

Albrecht 92N Phys. Lett. 297B:425, 1993; DESY-92-124;
Observation of the Decay $D_{S1}(2536)^+ \to D^*(2010)^0 K^+$

Albrecht 92O DESY-92-056;
Search for $D^0 \to K^+ \pi^-$

Albrecht 92P DESY-92-146;
Investigation of the Decays $\bar{B}^0 \to D^*(2010)^+ \ell^- \bar{\nu}$ and $\bar{B} \to D^{**} \ell^- \bar{\nu}$

Albrecht 92Q DESY-92-155;
Inclusive Production of Charged Pions, Kaons and Protons in $\Upsilon(4S)$ Decays

Albrecht 92R DESY-92-184;
Observation of $\Xi_c(2460)^0$ Semileptonic Decay

Albrecht 92S DESY-92-174;
Inclusive Production of $\eta'(958)$ and $f_0(975)$ Mesons in the Υ Energy Region

Albrecht 93 DESY-93-003;
A Partial Wave Analysis of the Decay $D^0 \to K_S \pi^+ \pi^-$

Albrow 88 RAL-88-057;
Summary Talk: 23rd Rencontre De Moriond, March 13 – 19, 1988

Alde 87 Phys. Lett. 201B:160, 1988; Yad. Phys. 47:1639, 1988; Sov. J. Nucl. Phys. 47:1038, 1988; CERN-EP-87-197; IFVE-87-163;
Production of $f_0(1590)$ Meson in 300 GeV Central $\pi^- N$ Nuclei Collisions

Alde 87B Z. Phys. C36:603, 1987; Yad. Phys. 47:385, 1988; Sov. J. Nucl. Phys. 47:243, 1988; CERN-EP-87-196; IFVE-87-88;
Study of Neutral Decays of the η' Meson

Alde 87C Yad. Phys. 47:1273, 1988; IFVE-87-171;
Observation of the Tensor $X(1810)$ Meson in 300 GeV Central $\pi^- n$ Collisions

Alde 87D Phys. Lett. 198B:286, 1987; Yad. Phys. 47:997, 1988; Sov. J. Nucl. Phys. 47:635, 1988; CERN-EP-87-161; IFVE-87-100;
Neutral Mesons Decaying into $4\pi^0$

Alde 88B Z. Phys. C43:541, 1989; Yad. Phys. 49:712, 1989; Sov. J. Nucl. Phys. 49:440, 1989; CERN-EP-88-170; IFVE-88-154;
Pseudoscalar Meson Production in Central $\pi^- n$ Interactions at 300 GeV

Alde 88C Yad. Phys. 49:1021, 1989; Sov. J. Nucl. Phys. 49:636, 1989; IFVE-88-163;
Study of $\omega(783)$ $\omega(783)$ Systems Produced in 38 GeV/c $\pi^- p$ Collisions

Alde 88D Yad. Phys. 48:1724, 1988; Phys. Lett. 216B:477, 1989; Sov. J. Nucl. Phys. 48:1035, 1988; IFVE-88-153; CERN-EP-88-159;
Evidence for a 1.9 GeV Meson Decaying into $\eta'(958)$ η

See the legend on page 7.

Alde 88E Phys. Lett. 205B:397, 1988; CERN-EP-88-15;
Evidence for a 1^{-+} Exotic Meson

Alde 89 Phys. Lett. 216B:451, 1989; CERN-EP-88-160;
Study of $\omega(783)$ $\omega(783)$ Systems Produced in 38 GeV/c π^- p Collisions

Alde 90 Yad. Phys. 52:779, 1990; Phys. Lett. 241B:600, 1990; IFVE-90-9; CERN-EP-90-39;
Further Study of Mesons which Decay into ω ω

Alde 90B Phys. Rev. Lett. 66:133, 1991; FERMILAB-PUB-90-156-E;
The A-Dependence of $J/\psi(1S)$ and $\psi(2S)$ Production at 800 GeV/c

Alde 90C Phys. Rev. Lett. 64:2479, 1990;
Nuclear Dependence of Dimuon Production at 800 GeV

Alde 91 Phys. Rev. Lett. 66:2285, 1991; FERMILAB-PUB-91-37;
Nuclear Dependence of the Production of Υ Resonances at 800 GeV

Alde 91B Yad. Phys. 54:745, 1991; IFVE-91-41;
Study of $X(1740)$ Production

Alde 91C Phys. Lett. 276B:375, 1992; Yad. Phys. 54:751, 1991; IFVE-91-40; CERN-PPE-91-236;
Further Study of the $X(1910)$ Meson

Alde 91D Nucl. Phys. A525:285C, 1991;
$J/\psi(1S)$ and $\psi(3770)$ Production with 800 GeV Protons

Alde 91E Yad. Phys. 54:1311, 1991; Sov. J. Nucl. Phys. 54:798, 1992; Z. Phys. C54:549, 1992; IFVE-91-88;
Study π^- $p \to \eta'(958)$ π^0 n Reaction at 38 GeV/c and 100 GeV/c

Alde 91F Phys. Lett. 284B:457, 1992; CERN-PPE-91-200;
Production Mechanism of the $X(1740)$ Meson

Alde 91G Yad. Phys. 55:410, 1992; Sov. J. Nucl. Phys. 55:226, 1992; IFVE-91-115;
Study of $\omega(783)$ π^0 System at the High Masses

Alde 92 Z. Phys. C54:553, 1992; CERN-PPE-92-39;
Study of the $\omega(783)$ π^0 System

Alder 89 Phys. Rev. Lett. 64:169, 1990; SLAC-PUB-5044;
Upper Limit on the Absolute Branching Fraction for $D_S^+ \to \phi\ \pi^+$

Aleem 92 Int. Jour. Mod. Phys. A7:3665, 1992;
String Fragmentation Model and Inclusive Production of K Mesons

Aleev 88 Z. Phys. C37:243, 1988; JINR-E1-87-265;
Production of $\bar{D}^0$ and D^- Mesons in Neutron-Carbon Interactions at 40 – 70 GeV

Aleev 88B JINR-P1-88-51;
Diffraction Dissociation of Neutrons in Λ K^0 on Hydrogen at about 40 GeV Energy

Aleev 88C JINR-P1-88-397;
Production of Charmed Baryons Λ_c^+ in n p Interactions at 40 – 70 GeV Neutron Energy

Aleev 88D JINR-D1-88-368;
Observation of Narrow Baryoniums in the Experiment BIS-2. Strange Baryoniums

Aleev 88F JINR-D1-88-369;
Observation of Narrow Baryoniums at the Experiment BIS-2. Baryoniums with Hidden Strangeness

Aleev 88G JINR-D1-88-194;
Search for Nonstrange Baryonium Decaying into Strange Particles

Aleev 89 JINR-D1-89-624;
Search for Narrow Baryonium Resonance with Hidden Strangeness

Aleev 89B JINR-D1-89-701;
Observation of $\Sigma_c(2455)$ Charmed Baryon in n p Interaction at the Serpukhov Accelerator

Aleev 89C Czech. J. Phys. 40:1216, 1990; JINR-D1-89-345;
Inclusive Production of ϕ Mesons in Neutrino-Proton Interactions at 30 – 70 GeV

Aleev 90 Z. Phys. C47:533, 1990; JINR-D1-89-398;
Search for Narrow Baryonia with Negative and Positive Strangeness

Aleev 90B JINR-P1-90-595;
Observation of $\bar{D}^0 \to K^+\ \pi^-\ \rho(770)^0$ Produced in Interactions of 40 – 70 GeV Neutrons with Hydrogen, Carbon and Aluminium

Aleev 90C JINR-D1-90-168;
A-Dependence of Inclusive $\phi(1020)$ Mesons Production in Neutron-Nucleus Interactions at 30 – 70 GeV

Aleev 90D JINR-E1-90-316;
ϕ Meson Production in Neutron-Nucleus Interactions at 30 – 70 GeV

Aleev 90E JINR-E1-90-305;
Search for Narrow Baryonia

Aleev 90F JINR-P1-90-128;
Determination of the Upper Limit of the Branching Ratio of the $\Lambda_c^+ \to \Sigma^0\ \pi^+\ \pi^+\ \pi^-$ Decay in the BIS-2 Experiment

Aleklett 88 Phys. Rev. C38:1658, 1988;
Unusual Behavior of Projectile Fragments Produced by the Interactions of Relativistic Ar Ions with Copper

Aleksandrov 89 LENI-89-1561;
Measurement of Spallation Cross Sections at the Synchrocyclotron Internal Beam

Alekseev 88 ITEP-88-23;
Measurement of Λ-Hyperon Polarization Produced by Neutrons with Momenta 4 – 10 GeV/c on Carbon Nucleus

Alekseev 88B ITEP-88-185;
Measurement of Relative Differential Cross Section of the Elastic π^- p Scattering in the Backward Hemisphere at 1.43 – 2.07 GeV/c

Alekseev 88C Phys. Lett. 205B:209, 1988;
Detection of the Neutrino Signal from SN1987A in the LMC Using the INR Baksan Underground Scintillation Telescope

Alekseev 89 Yad. Phys. 51:425, 1989; Nucl. Phys. B348:257, 1990; ITEP-89-111;
Asymmetry in π^- $p\uparrow$ Elastic Scattering in Momentum Range 1.4 – 2.1 GeV/c

Alekseev 90 Yad. Phys. 52:1612, 1990; ITEP-90-80;
Search for H Dibaryon

Alekseev 91 Yad. Phys. 55:1912, 1992, ITEP-91-108;
Asymmetry in Dipion Production on Transversely Polarized Proton Target at 1.78 GeV/c

Alekseev 91B	Yad. Phys. 54:1597, 1991; ITEP-91-60; **A K^0 Pair Production for Neutron Interaction with Nuclei**
Alekseeva 88	Vopr. At. Nauki i Techn. ser. Obsch. 2-42:5, 1988; **The Influence of the Fragment Production Angle on the Anomalon Effect**
Aleshin 87D	Yad. Phys. 48:148, 1988; Sov. J. Nucl. Phys. 48:92, 1987; ITEP-87-92; **Nonconservation of Helicity at the Diffraction Production of $b_1(1235)$ Mesons in the $\pi^- p \to b_1(1235)^- p$**
Aleshin 90	Phys. Lett. 237B:29, 1990; **Study Proton-Deuteron Break-up Reaction in Complete Kinematics at 1 GeV**
Aleshin 91	Yad. Phys. 55:2462, 1992; LENI-91-1753; **Search for Narrow Dibaryons in Deuteron Break-up Reaction p deuteron $\to p\,p\,n$ in Kinematically Complete Experiment**
Aleshin 92	ITEP-92-45; **Search of Production of $p\,\eta$ and $p\,\omega$ – Systems in Reaction $\pi^- p \to p\,\pi^+\,2\pi^-\,\pi^0$ at Momentum 3.92 GeV/c**
Aleshin 92B	Yad. Phys. 55:3255, 1992; **Production of Isobar $N(1700\,B)^+$ in the Reaction $\pi^- p \to p\,\pi^+\,\pi^-\,\pi^-\,\pi^0$ at 3.92 GeV/c**
Alessandrell 92	Phys. Lett. 285B:176, 1992; **A Search for Neutrinoless Double Beta Decay of ^{130}Te with Thermal Detector**
Alexander 89	CLNS-89-940; CLEO-89-12; **The Decay $D^0 \to K^0\,\bar{K}^0$**
Alexander 90	Phys. Rev. Lett. 64:2226, 1990; CLEO-90-2; **Observation of $\Upsilon(4S)$ Decays into non $B\,\bar{B}$ Final States Containing ψ Mesons**
Alexander 90B	Phys. Rev. Lett. 65:1531, 1990; CLNS-90-1003; CLEO-90-9; **Determination of Br($D_S^+ \to \phi\,\pi^+$) via Observation of $D_S^+ \to \phi\,\ell^+\,\nu$**
Alexander 90C	Phys. Rev. Lett. 65:1184, 1990; CLEO-90-8; CLNS-90-998; **Study of the Decays $D^0 \to K\,\bar{K}$, $\pi\,\pi$**
Alexander 91	Phys. Lett. 262B:341, 1991; CERN-PPE-91-63; **A Study of $D^*(2010)^\pm$ Production in Z^0 Decays**
Alexander 91B	Phys. Lett. 263B:123, 1991; CERN-PPE-91-61; **A Search for Scalar Leptoquarks in Z^0 Decays**
Alexander 91C	Z. Phys. C52:175, 1991; CERN-PPE-91-067; **Measurement of the Z^0 Line Shape Parameters and the Electroweak Couplings of Charged Leptons**
Alexander 91D	Phys. Lett. 264B:219, 1991; CERN-PPE-91-81; **A Measurement of the Electroweak Couplings of Up and Down Type Quarks Using Final State Photons in Hadronic Z^0 Decays**
Alexander 91E	Phys. Lett. 264B:467, 1991; CERN-PPE-91-86; **A Study of K_S Production in Z^0 Decays**
Alexander 91F	Z. Phys. C52:543, 1991; CERN-PPE-91-97; **Measurement of Three-Jet Distributions Sensitive to the Gluon Spin in $e^+\,e^-$ Annihilations at $\sqrt{s}$ = 91 GeV**
Alexander 91G	Phys. Lett. 266B:201, 1991; CERN-PPE-91-103; **Measurement of Branching Ratios and τ^- Polarization from $\tau^- \to e^-\,\nu\,\bar{\nu}$, $\tau^- \to \mu^-\,\nu\,\bar{\nu}$, and $\tau^- \to \pi(K)\,\nu$ Decays at LEP**
Alexander 91H	Phys. Lett. 265B:462, 1991; CERN-PPE-91-91; **A Direct Observation of Quark-Gluon Jet Differences at LEP**
Alexander 91I	Phys. Lett. 266B:485, 1991; CERN-PPE-91-92; **Observation of $J/\psi(1S)$ Production in Multihadronic Z^0 Decays**
Alexander 92	Phys. Rev. Lett. 68:1275, 1992; **D_S^+ Decays to $\eta\,\pi^+$ and $\eta'\,\pi^+$**
Alexandrov 89	Nucl. Instr. and Meth. A284:134, 1989; **On the Study of Electromagnetic Properties of the Neutron at JINR Dubna**
Alexandrov 90	Izv. Akad. Nauk. Arm. SSR 54:2249, 1990; **The Radionuclides Production by 1 GeV Protons in the Middle Atomic Weight Elements**
Alexopoulos 88B	Phys. Rev. Lett. 60:1622, 1988; DUKHEP-88-1; **Multiplicity Dependence of the Transverse-Momentum Spectrum for Centrally Produced Hadrons in Antiproton-Proton Collisions at $\sqrt{s}$=1.8 TeV**
Alexopoulos 90B	Phys. Rev. Lett. 64:991, 1990; UND-HEP-02-02-90; **Mass Identified Particle Yields in Antiproton-Proton Collisions at $\sqrt{s}$ = 1.8 TeV**
Alexopoulos 92	Phys. Rev. D46:2773, 1992; **Hyperon Production from Proton-Antiproton Collisions at $\sqrt{s}$=1.8 TeV**
Alfimenkov 88	LENI-88-1392; **On Neutron Lifetime Measurement with Ultracold Neutrons**
Alfimenkov 90	Pisma Zh. Eksp. Teor. Fiz. 52:984, 1990; LENI-90-1629; **Results of Neutron Lifetime Measurements with Gravitational UCN trap**
Alfimenkov 91	Yad. Phys. 54:1489, 1991; **Parity Violation in Rb and ^{113}Cd Neutron Resonances**
Alfimenkov 92	Zh. Eksp. Teor. Fiz. 102:740, 1992; **Result of the Neutron Lifetime Measurement in the Gravitational Trap Experiment and Analysis of the Experimental Errors**
Alford 89	Phys. Rev. C39:1189, 1989; **Zero Degree Cross Sections for the Reaction ^{14}C (p, n) ^{14}Nit(2.31), ^{14}Nit(3.95) at 200, 300, and 450 MeV**
Aliev 89	Yad. Phys. 51:1597, 1990; PTIU-89-103; **Forward-Backward Correlation in Hadron-Nucleus Interactions**
Alimov 88	PTIU-88-66; **Observation of the Cumulative Isobars in p ^{20}Ne Interactions at 300 GeV/c**
Alimov 89	PTIU-89-105; **Cumulative Nucleons and Processes of Intranucleus Absorbtion of Pions by Two-nucleon Systems in p ^{20}Ne Interactions at 300 GeV**
Alimov 89B	Yad. Phys. 51:1600, 1990; FVE-89-106; **Correlation between γ-Quanta and Charged Particles Multiplicities in p ^{20}Ne and p nucleon Interactions at 300 GeV**
Alitti 89	Phys. Lett. 235B:363, 1989; CERN-EP-89-151; **A Search for the Squark and Gluino Production at the CERN $\bar{p}\,p$ Collider**

See the legend on page 7.

Alitti 90 Z. Phys. C47:11, 1990; CERN-EP-90-20;
Measurement of $W^{\pm}$ and Z^0 Production Cross Section at the CERN $\bar{p}\,p$ Collider

Alitti 90B Z. Phys. C47:523, 1990; CERN-EP-90-52;
Measurement of the Transverse Momentum Distributions of $W^{\pm}$ and Z^0 Bosons at the CERN $\bar{p}\,p$ Collider

Alitti 90C Phys. Lett. 241B:150, 1990; CERN-EP-90-22;
A Precise Determination of the $W^{\pm}$ and Z^0 Masses at the CERN $\bar{p}\,p$ Collider

Alitti 90D Z. Phys. C49:17, 1991; CERN-PPE-90-105;
A Measurement of Two-Jet Decays of the $W^{\pm}$ and Z^0 Bosons at the CERN $\bar{p}\,p$ Collider

Alitti 90E Phys. Lett. 257B:232, 1991; CERN-PPE-90-188;
Inclusive Jet Cross-Section and a Search for Quark Compositeness at the CERN $\bar{p}\,p$ Collider

Alitti 91 Phys. Lett. 263B:544, 1991; CERN-PPE-91-68;
A Measurement of the Direct Photon Production Cross Section at the CERN $\bar{p}\,p$ Collider

Alitti 91B Phys. Lett. 263B:563, 1991; CERN-PPE-91-62;
A Determination of the Strong Coupling Constant α_S from $W^{\pm}$ Production at the CERN $\bar{p}\,p$ Collider

Alitti 91C Z. Phys. C52:209, 1991; CERN-PPE-91-69;
A Measurement of Electron-Tau Universality from Decays of Intermediate Vector Bosons at the CERN $\bar{p}\,p$ Collider

Alitti 91D Phys. Lett. 274B:507, 1992; CERN-PPE-91-158;
A Search for Scalar Leptoquarks at the CERN $\bar{p}\,p$ Collider

Alitti 91E Phys. Lett. 276B:365, 1992; CERN-PPE-91-162;
A Measurement of the $W^{\pm}$ and Z^0 Production Cross Sections and a Determination of $\Gamma_{W^{\pm}}$ at the CERN $\bar{p}\,p$ Collider

Alitti 91F Phys. Lett. 276B:354, 1992; CERN-PPE-91-163;
An Improved Determination of the Ratio of $W^{\pm}$ and Z^0 Masses at the CERN $\bar{p}\,p$ Collider

Alitti 91G Phys. Lett. 268B:145, 1991; CERN-PPE-91-101;
A Study of Multi-Jet Events at the CERN $\bar{p}\,p$ Collider and a Search for Double Parton Scattering

Alitti 91H Phys. Lett. 275B:202, 1992; CERN-PPE-91-177;
Study of Electron Pair Production below the Z^0 Mass at the CERN $\bar{p}\,p$ Collider

Alitti 91I Phys. Lett. 277B:203, 1992; CERN-PPE-91-208;
Experimental Limit on the Decay $W^{\pm} \to \pi^{\pm}\,\gamma$ at the CERN $\bar{p}\,p$ Collider

Alitti 91J Phys. Lett. 277B:194, 1992; CERN-PPE-91-216;
Direct Measurement of the $W^{\pm}-\gamma$ Coupling at the CERN $\bar{p}\,p$ Collider

Alitti 92 Phys. Lett. 280B:137, 1992; CERN-PPE-92-13;
A Search for Charged Higgs from Top Quark Decay at the CERN $\bar{p}\,p$ Collider

Alitti 92B Phys. Lett. 288B:386, 1992; CERN-PPE-92-100;
A Measurement of Single and Double Prompt Photon Production at the CERN $\bar{p}\,p$ Collider

Alitti 92C Phys. Lett. 299B:174, 1993; CERN-PPE-92-169;
Measurement of the Gluon Structure Function from Direct Photon Data at the CERN $\bar{p}\,p$ Collider

Allaby 88 Z. Phys. C38:403, 1988; CERN-EP-87-225;
Total Cross Sections of Charged-Current Neutrino and Antineutrino Interactions on Isoscalar Nuclei

Allaby 88C Phys. Lett. 213B:554, 1988; CERN-EP-88-81;
Experimental Study of x-Distributions in Semileptonic Neutral-Current Neutrino and Antineutrino Reactions

Allaby 89 Phys. Lett. 231B:317, 1989; CERN-EP-89-79;
Evidence for Neutral Neutrino Current Coupling to Right-Handed Quarks

Allasia 88 Z. Phys. C37:527, 1988; CERN-PRE-87-123; DFUB-87-18;
Bose-Einstein Correlations in Neutrino and Antineutrino Interactions in Deuterium

Allasia 88B Phys. Rev. D37:219, 1988; CERN-PRE-87-065; DFUB-87-12;
Search for Fractionally Charged Particles in (Anti)neutrino-Deuterium Interactions

Allasia 88C Nucl. Phys. B307:1, 1988; DPHPE-88-03; CERN-PRE-88-023;
Determination of the Neutral Current Chiral Coupling Constants U_l, U_r, D_l and D_r from Neutrino and Antineutrino Deuterium Experiment

Allasia 90 Nucl. Phys. B343:285, 1990;
Investigation of Exclusive Channels in $\nu/\bar{\nu}$ deuteron Charged Current Interactions

Allasia 90B Phys. Lett. 249B:366, 1990; CERN-PPE-90-103;
Measurement of the Neutron and the Proton F_2 Structure Function Ratio

Allasia 90C Phys. Lett. 258B:493, 1991, CERN-PPE-90-178;
Inelastic $J/\psi(1S)$ Production in Deep Inelastic Scattering from Hydrogen and Deuterium and the Gluon Distribution of Free Nucleons

Allday 88 Z. Phys. C40:29, 1988;
Annihilation and Topological Cross Sections for $p\,p$ and $p\,p$ Interactions at 200 GeV/c

Allen 89 Phys. Rev. Lett. 64:1330, 1990; LA-UR-89-3723;
Measurement of Interference Between $W^{\pm}$ and Z^0 Exchange in Electron-Neutrino Electron Scattering

Allen 91 Phys. Rev. D43:R1, 1991; LA-UR-90-2981;
Experimental Bound on the Charge Radius of the Electron Neutrino

Allen 93 Phys. Rev. D47:11, 1993;
Study of Electron-Neutrino-Electron Elastic Scattering at LAMPF

Alliegro 92 Phys. Rev. Lett. 68:278, 1992;
Study of the Decay $K^+ \to \pi^+\,e^+\,e$

Allison 89 ANL-HEP-CP-89-100; PDK-411;
Underground Muon Observations in the SOUDAN-2 Detector

Allison 89B ANL-HEP-CP-89-92; PDK-402;
Contained Events in SOUDAN-2

Allison 90 PDK-437; ANL-HEP-CP-90-49;
Initial Data from the SOUDAN-2 Experiment, May 1990

Allport 89 Phys. Lett. 232B:417, 1989; CERN-EP-89-127;
Observation of Shadowing of Neutrino and Antineutrino-Nucleus Interactions and Comparison with PCAC Predictions

Alstongarnjo 88 Phys. Rev. Lett. 60:1928, 1988;
Limit on Majoron Emission in $\beta\,\beta$ Decay of ^{100}Mo

Alstongarnjo 89 Phys. Rev. Lett. 63:1671, 1989;
Search for Neutrinoless Double-β Decay of ^{100}Mo

Alstongarnjo 90	Phys. Lett. 252B:499, 1990; SLAC-PUB-5348; NIKHEF-H-90-16; LBL-29657; **Inclusive $D^*(2010)^+$ Production in Photon-Photon Collisions**
Altarev 92	Phys. Lett. 276B:242, 1992; **New Measurement of the Electric Dipole Moment of the Neutron**
Althoff 89	Z. Phys. C43:375, 1989; BONN-ME-89-01; **Photodisintegration of Polarized Deuterons Measurement of Angular Distributions at E_γ =450, 550 and 650 MeV**
Alvarez 90	Z. Phys. C47:539, 1990, CERN-EP-90-26; **Lifetime Measurements of the D^+, D^0, D_S^+, and Λ_c^+ Charmed Particles**
Alvarez 90B	Phys. Lett. 246B:256, 1990; CERN-EP-90-66; **Photoproduction of the Λ_c Charmed Baryon**
Alvarez 90C	Phys. Lett. 246B:261, 1990; CERN-EP-90-65; **Measurement of D_S^+ and Cabibbo-Suppressed D^+ Decays**
Alvarez 90D	Z. Phys. C50:11, 1991; CERN-PPE-90-112; **Branching Ratios and Properties of D-Meson Decays**
Alvarez 91	Phys. Lett. 255B:639, 1991; CERN-PPE-90-179; **Results Concerning the Decay $D_S^+ \to \eta'(958)\,\pi^+$**
Alvarez 91B	Phys. Lett. 278B:385, 1992; CERN-PPE-91-209; **$D\,D$ Correlation in Photoproduction**
Alvarez 92	CERN-PPE-92-28; **Study of Charm Photoproduction Mechanisms**
Alverson 91	Phys. Rev. D45:R3899, 1992; FERMILAB-PUB-91-211; **Production of π^0 Mesons at High p_T in π^- Be and p Be Collisions at 500 GeV/c**
Alverson 91B	Phys. Rev. Lett. 68:2584, 1992; FERMILAB-PUB-91-212; **Direct Photon Production at High p_T in π^- Be and p Be Collisions at 500 GeV/c**
Alves 92	Phys. Rev. Lett. 69:3147, 1992; FERMILAB-PUB-92-208-E; **Feynman-x and Transverse Momentum Dependence of D^+ and D^0, $\bar{D}^0$ Production in 250 GeV π^- Nucleon Interactions**
Alves 92B	Phys. Rev. Lett. 70:72, 1993; FERMILAB-PUB-92-279-E; **Atomic Mass Dependence of D^+ and D^0, $\bar{D}^0$ Production in 250 GeV π^+ Nucleon Interactions**
Amaglobeli 89	Yad. Phys. 50:695, 1989; **Asymmetry Measurement in π^0- and η-Meson Inclusive Production in Central Region at 40 GeV/c**
Amaudruz 91	Phys. Rev. Lett. 66:2712, 1991; CERN-PPE-91-5; **The Gottfried Sum from the Ratio $F_2(n)/F_2(p)$**
Amaudruz 91B	Z. Phys. C51:387, 1991; CERN-PPE-91-52; **Precision Measurement of the Structure Function Ratios F_2(He)/F_2(deuteron), F_2(C)/F_2(deuteron) and F_2(Ca)/F_2(deuteron)**
Amaudruz 91C	Z. Phys. C53:73, 1992; CERN-PPE-91-147; **Precision Measurement of Structure Function Ratios for ^{6}Li, ^{12}C and ^{40}Ca**
Amaudruz 91D	Nucl. Phys. B370:3, 1992; CERN-PPE-91-167; **The Ratio of $F_2(n)/F_2(p)$ in Deep Inelastic Muon Scattering**
Amaudruz 91E	Nucl. Phys. B371:553, 1992; CERN-PPE-91-198; **Ratio of $J/\psi(1S)$ Production Cross Sections in Deep Inelastic Muon Scattering from Sn and Carbon**
Amaudruz 91F	Z. Phys. C54:239, 1992; CERN-PPE-91-228; **Transverse Momentum Distributions for Exclusive $\rho(770)^0$ Muoproduction**
Amaudruz 92	Phys. Lett. 294B:120, 1992; CERN-PPE-92-134; **Measurements of $R_d - R_p$ and $R_{Ca} - R_C$ in Deep Inelastic Muon Scattering**
Amaudruz 92B	PL 295B, 159; CERN-PPE-92-124; **Proton and Deuteron F_2 Functions in Deep Inelastic Muon Scattering**
Ameeva 89	Yad. Phys. 51:1047, 1990; JINR-P1-89-560; **Inelastic Interaction of Silicon Nuclei with Nuclear Emulsion at 4.5 GeV/c**
Ameeva 92	Yad. Phys. 55:425, 1992; **Estimate of Nuclear Fireball Baryon Charge on the Basis of 4.2 GeV/N Data on Ne + AgBr Interactions**
Amelin 90	Pisma Zh. Eksp. Teor. Fiz. 51:607, 1990; Jetp Lett. 51:688, 1990; **Production of the Superheavy Hydrogen Isotopes in the π^- Capture by ^{6}Li, ^{7}Li Nuclei**
Amelin 90B	Yad. Phys. 52:1231, 1990; **^{10}Li Formation in Absorbtion of Stopped Negative Pions in ^{11}Bor Nuclei**
Amelin 91	Yad. Phys. 54:1021, 1991; ITEP-91-41; **Scaling Properties of π^--Meson Spectra in π^- Ne Interactions at the Initial Momentum 6.2 GeV/c**
Amelin 92	Yad. Phys. 55:2945, 1992; ITEP-92-21; **Polarization of Λ-Hyperons in $\pi^+ p$ Interactions at 4.2 GeV/c**
Amendolia 87	Eur. Lett. 5:407, 1988; CERN-EP-87-20; **A Measurement of D^0 Lifetime**
Amenomori 92	Phys. Rev. Lett. 69:2468, 1992; **Search for Steady Emission of 10 TeV Gamma Rays from the Crab Nebula, Cygnus X-3, and Hercules X-1 Using the Tibet Air Shower Array**
Amidei 88	Phys. Rev. D37:1750, 1988; SLAC-PUB-4362; LBL-23707; **Measurement of the τ^+ Lifetime**
Ammar 88	LEBD-88-48; **The Study of Cumulative Effects in the Neutrino Emulsion Collisions**
Ammar 88B	Phys. Rev. Lett. 61:2185, 1988; **D-Meson Production in 800 GeV/c $p\,p$ Interactions**
Ammar 89	Pisma Zh. Eksp. Teor. Fiz. 49:189, 1989; Jetp Lett. 49:219, 1989; **Cumulative Proton Production in the Interaction of Neutrino with Photoemulsion Nuclei**
Ammar 89B	Pisma Zh. Eksp. Teor. Fiz. 49:421, 1989; Jetp Lett. 49:480, 1989; IFVE-89-71; **Nuclear Effects on the Average Multiplicity of Charged Particles in High Energy Neutrino Interactions**
Ammar 91	Phys. Rev. D45:3976, 1992; CLNS-91-1123; CLEO-91-10; **The Electronic Branching Ratio of the Tau Lepton**
Ammar 91B	Phys. Rev. D44:3383, 1991, CLNS-91-1058; CLEO-91-2; **Unusual Decay Modes of D^0 and D^+ Mesons**

See the legend on page 7.

Ammosov 88 Yad. Phys. 47:1015, 1988; Sov. J. Nucl. Phys. 47:646, 1988; IFVE-87-81;
Study of Nucleon Structure Function in Neutrino Interactions at 10 – 200 GeV

Ammosov 88B Yad. Phys. 50:106, 1989; Sov. J. Nucl. Phys. 50:67, 1989; IFVE-88-122;
Study of $\nu\ p \to \mu^-\ \Delta(1232\ P_{33})^{++}$ Reaction at Energy 3 – 30 GeV

Ammosov 88C Pisma Zh. Eksp. Teor. Fiz. 47:555, 1988; Jetp Lett. 47:645, 1988; IFVE-88-77;
Observation of $a_1(1260)^-$ Coherent Production in Antineutrino Neon Charged Current Interactions

Ammosov 88D Z. Phys. C40:487, 1988; IFVE-88-81;
$\nu_e - \nu_\mu$ Universality Check and Search for Neutrino Oscillations

Ammosov 88E Z. Phys. C40:493, 1988; IFVE-88-82;
Final Result on $\mu^- e^+$ Pair Production in Neutrino Interactions with Chamber SKAT Filled with Freon

Ammosov 88G Yad. Phys. 47:113, 1988;
Observation of Muon Internal Bremsstrahlung in ν_μ nucleus $\to \mu^-$ X Reaction

Ammosov 89 PHE-89-14;
Study of Identical Particle Correlations in Neutrino-Nucleus Interactions

Ammosov 90 Yad. Phys. 53:986, 1991; IFVE-90-94;
Study of Interference Correlation Effects for Identical Particles in Neutrino-Nucleus Interactions

Ammosov 90B Yad. Phys. 53:999, 1991; IFVE-90-97;
Search for Prompt Neutrino Production in p nucleus Interactions at 70 GeV in SCAT Bubble Chamber

Ammosov 92 Yad. Phys. 55:1000, 1992;
Emission of Charged Particles with Kinetic Energies up to 30 MeV/Nucleon in Interactions of Muon Neutrino with Heavy Nuclei in Emulsion

Ammosov 92B Fiz. Elem. Chastits At. Yadra 23:648, 1992;
Study of Neutrino Interaction on Bubble Chamber SKAT

Amos 88 Phys. Rev. Lett. 61:525, 1988; FERMILAB-PUB-88-38-E;
Measurement of the Nuclear Slope Parameter of the $\bar{p}\ p$ Elastic Scattering Distribution at $\sqrt{s}$=1800 GeV

Amos 89 Phys. Rev. Lett. 63:2784, 1990; FERMILAB-PUB-89-176-E;
Measurement of the $\bar{p}\ p$ Total Cross Section at $\sqrt{s}$=1.8 TeV

Amos 90 Phys. Lett. 243B:158, 1990; CLNS-90-981;
A Luminosity-Independent Measurement of the $\bar{p}\ p$ Total Cross Sections at $\sqrt{s}$ = 1.8 TeV

Amos 90B Phys. Lett. 247B:127, 1990; FERMILAB-PUB-90-96-E;
Antiproton-Proton Elastic Scattering at $\sqrt{s}$=1.8 TeV from $|t|$=.034 to .65 (GeV/c)^2

Amos 91 FERMILAB-FN-562;
Elastic $\bar{p}\ p$ Scattering at $\sqrt{s}$=1.8 TeV

Amos 91B Phys. Rev. Lett. 68:2433, 1992; FERMILAB-PUB-91-267;
Measurement of ρ, the Ratio of the Real to Imaginary Part of the $\bar{p}\ p$ Forward Elastic Scattering Amplitude, at $\sqrt{s}$=1.8 TeV

Amos 92 FERMILAB-PUB-92-203;
Antiproton-Proton Elastic Scattering at $\sqrt{s}$ = 1020 GeV

Amos 92B Phys. Lett. 301B:313, 1993; FERMILAB-PUB-92-377-E;
Diffraction Dissociation in $\bar{p}\ p$ Collisions at $\sqrt{s}$=1.8 TeV

Amroyan 88 Yad. Phys. 48:461, 1988;
Analysis of Charge Distribution of Ag Photospallation Products at E<4.5 GeV

Amroyan 89 YERE-1193(70)-89;
Investigation of Some Characteristics of Photoproduction of ^{7}Be and ^{24}Na

Amsler 91 CERN-PPE-91-29;
Low Energy Antiproton Physics

Amsler 91B Sov. J. Nucl. Phys. 55:767, 1992; CERN-PPE-91-188;
Recent Results from the Crystal Barrel Experiment

Amsler 92B Phys. Lett. 291B:347, 1992; CERN-PPE-92-114;
Proton-Antiproton Annihilation into $\eta\ \eta\ \pi^0$ — Observation of a Scalar Resonance Decaying into $\eta\ \eta$

Amsler 92C Phys. Lett. 294B:451, 1992; CERN-PPE-92-147;
The Pseudoscalar Mixing Angle Θ_{PS} from η and η' Production in $\bar{p}\ p$ Annihilation at Rest

Amsler 92D Phys. Lett. 297B:214, 1992; CERN-PPE-92-176;
P- Versus S-Wave $\bar{p}\ p$ Annihilation at Rest in LH_2

Anada 88 Phys. Rev. D37:552, 1988;
Neutrino Vacuum Oscillation and Neutrino Burst from SN1987A

Ananien 90 Yad. Phys. 52:323, 1990;
Investigation of Pion Production in $\gamma\ ^{12}C \to \pi^-\ p$ X Reaction in $\Delta(1232\ P_{33})$ Region

Ananieva 92 Kr. Soob. JINR 54:5, 1992;
On the Observation of Hybrid Resonance States 1^{-+} and 1^{++} in the Diffractively Produced 3π System

Anassontzis 87 Phys. Rev. D38:1377, 1988; FERMILAB-PUB-87-217-E;
High Mass Dimuon Production in $p\ n$ and $\pi^-\ n$ Interactions at 125 GeV/c

Anassontzis 90 Yad. Phys. 51:1314, 1990; CERN-EP-89-98;
High p_T γ and π^0 Production, Inclusive and with a Recoil Hadronic Jet, in $\bar{p}\ p$ Collisions at $\sqrt{s}$ = 63 GeV

Ander 89 Phys. Rev. Lett. 62:985, 1989;
Test of Newton's Inverse-Squared Law in the Greenland Ice Cap

Andersen 89 Phys. Lett. 220B:328, 1989; CERN-EP-89-35;
A Measurement of Cross Sections for ^{32}S Interactions with Al, Fe, Cu, Ag and Pb at 200 GeV/c per Nucleon

Andersen 92 Phys. Rev. C46:727, 1992;
Target Dependence of Central Rapidity Λ Production in Sulfur-Nucleus Collisions at 200 GeV/c per Nucleon

Ando 90 Phys. Lett. 291B:496, 1992, KEK-90-65;
Experimental Study of the Axial-Vector Resonances of $a_1(1260)$ and $h_1(1170)$ in the $\pi^-\ p$ Charge Exchange Reaction

Andreev 88 Vopr. At. Nauki i Techn. ser. Obsch. 1-41:29, 1988;
The Possible Observation of the Dibaryon Resonances in the Reaction p deuteron $\to p\ p\ n$

Andreev 88B LENI-88-1453;
Experimental Study of the Reaction $p\ p \to p\ p\ \pi^0$ in the Energy Region 600 – 900 MeV

Andreev 88C Z. Phys. A329:371, 1988;
Measurement of the Cross Section of the Reaction $p\ p \to p\ p\ \pi^0$

Andreev 90B — Nuovo Cim. 103A:1163, 1990; Yad. Phys. 51:142, 1990;
Multiplicities and Correlations of Secondary Charged Particles in the Interactions of Antineutrons and Antideuterons with a Momentum of 6.1 GeV/c per Nucleon with Tantalum Nuclei

Andreev 92 — Yad. Phys. 55:1275, 1992;
Multiplicity of Secondary Charged Particles from 6 GeV/c Antineutron Interactions on Tantalum

Andreeva 88 — Yad. Phys. 47:157, 1988; JINR-P1-86-828;
Fragmentation of ^{22}Ne Relativistic Nuclei on Photoemulsion Nuclei

Andreeva 88B — Pisma Zh. Eksp. Teor. Fiz. 47:20, 1988; Jetp Lett. 47:23, 1988;
Transverse Momentum Alpha-Fragments from Collisions ^{22}Ne with Emulsion Nucleus at the 4.1 A GeV/c Momentum

Andreeva 88C — Yad. Phys. 47:949, 1988;
Correlation Phenomena in Fragmentation of Relativistic Nucleus ^{22}Ne at P=90 GeV/c

Andreeva 89 — JINR-P1-89-213;
Central Interactions of ^{22}Ne Nuclei with Heavy Photoemulsion Nuclei at P=4.1 A GeV/c

Andreeva 92 — Yad. Phys. 55:1010, 1992;
Characteristics of the Total Ag, Br Nuclei Disintegration by ^{22}Ne and ^{28}Si Nuclei with 4.1 – 4.5 A GeV/c Momentum

Andryakov 87 — Yad. Phys. 47:1268, 1988; ITEP-87-83;
Interference of Pions, Observed in $\pi^+ p$ Interactions at 4 GeV/c and Influence of the Resonances on Space-Time Characteristics

Andryakov 88 — ITEP-88-37;
The Interference of the Pairs of Pions. Discovering of the Positive Correlations in ($\pi^0 \pi^+$) Systems

Andryakov 89 — ITEP-89-67;
Interference of Identical Pions in $\pi^+ p$ Interactions at 4.5 GeV/c

Andryakov 90 — ITEP-90-104;
Strange Particle Production in Antiproton Annihilation on Xenon Nucleus

Andryakov 91 — Yad. Phys. 53:423, 1991;
Correlation between Charged and Neutral Pions in $\pi^- p \to p \pi^- \pi^+ \pi^0$ Reaction at 4 GeV/c Momentum

Andryakov 92 — LNF-92-030-P;
Strange Particle Production in $\bar{p}$ Xe Annihilation at Rest and at 0.4 – 0.9 GeV/c

Angelescu 90 — Nuovo Cim. 103A:93, 1990;
Pion Absorbtion in ^{3}He at 100, 120, and 145 MeV

Angelis 88 — Nucl. Phys. B303:569, 1988; CERN-EP-87-192;
Three-Jet Events at the CERN Intersecting Storage Rings

Angelis 89 — Nucl. Phys. B327:541, 1989; CERN-PPE-89-42;
Direct Photon Production at the CERN ISR

Angelis 91 — Nucl. Phys. B348:1, 1991; PRINT-90-0537-MICHIGAN-STATE; CERN-PRE-90-044;
A Study of Massive Electron Pairs and Associated Particles Produced at the CERN ISR

Angelopoulos 88 — Phys. Lett. 205B:590, 1988;
Neutron Emission from Antiproton Annihilation at Rest in Uranium

Angelopoulos 88B — Phys. Lett. 212B:129, 1988;
A Measurement of the S- and P-Wave Content of Antiproton Annihilation at Rest into Two Pions in Liquid Deuterium

Angelopoulos 92 — Phys. Lett. 286B:180, 1992; CERN-PPE-92-32;
First Determination of CP Violation Parameter from $K^0 - \bar{K}^0$ Decay Asymmetry

Angelov 88 — JINR-P1-88-905;
The Correlation of Secondary Particles in p C, deuteron C, ^{4}He C, C C Interactions at 4.2 GeV/c per Nucleon Momentum

Angelov 89 — Kr. Soob. JINR 38:11, 1989;
Clusterization in Processes of Multiple Particle Production by Nuclei and its Connection with Cumulative Creation of Hadrons

Angelov 90 — Kr. Soob. JINR 2(41)-:4, 1990;
Clusterization in Multiple Hadron Production by Nuclei Accompanied by Strange Particles

Angelov 90B — Kr. Soob. JINR 43:20, 1990;
Clusterization in Processes of Multiple Particle Production on Nuclei. Energy Characteristics of Cluster Decay

Angelov 91 — Kr. Soob. JINR 47:27, 1991;
Itermittency Effect in Cluster Nuclear Interactions

Angelov 92 — Kr. Soob. JINR 51:14, 1992;
Clusterization of Secondary Particles in Cumulative Hadron and Nucleus-Nucleus Interactions

Angelov 92B — Yad. Phys. 55:2953, 1992;
Clusterization of Secondaries in Nuclear Interactions with Production of Strange and Cumulative Hadrons

Anikeyev 91 — IFVE-91-139;
Search for Light Neutral Scalar and Pseudoscalar Particles in p Fe Interactions at 70 GeV

Anikina 89 — Kr. Soob. JINR 34:12, 1989;
Experimental Data on Multiplicities in Central Collisions

Anjos 87B — Phys. Rev. Lett. 60:1379, 1988; FERMILAB-PUB-87-218-E;
Measurements of the Λ_c^+ Lifetime

Anjos 88 — Phys. Rev. Lett. 60:1239, 1988; FERMILAB-PUB-87-219-E;
Study of D^0-$\bar{D}^0$ Mixing

Anjos 88B — Phys. Rev. Lett. 62:1587, 1989; FERMILAB-PUB-88-141-E; FERMILAB-CONF-87-142-E;
A Study of the Semileptonic Decay Mode $D^0 \to K^- e^+ \nu_e$

Anjos 88C — Phys. Rev. Lett. 62:513, 1989; FERMILAB-PUB-88-125-E;
Charm Photoproduction Results from E691

Anjos 88D — Phys. Rev. Lett. 62:125, 1989; FERMILAB-PUB-88-90-E;
Measurement of D_s^+ Decays to Non-strange States

Anjos 88E — Phys. Rev. Lett. 62:722, 1989; FERMILAB-PUB-88-143-E;
Experimental Study of the Semileptonic Decay $D^+ \to K^*(892)^0 e^+ \nu_e$

Anjos 88F — Phys. Rev. Lett. 62:1717, 1989; FERMILAB-PUB-88-155-E;
Observation of Excited Charmed Mesons

Anjos 88G — Phys. Rev. Lett. 60:897, 1988; FERMILAB-PUB-87-203-E;
Measurement of D_s^+ Decays and Cabibbo-Suppressed D^+ Decays

See the legend on page 7.

Anjos 89 Phys. Rev. Lett. 62:1721, 1989; FERMILAB-PUB-89-29-E;
Observation of $\Sigma_c(2455)^0 \to \Lambda_c^+ \pi^-$ Decays

Anjos 89B Phys. Lett. 223B:267, 1989; FERMILAB-PUB-89-23-E;
A Study of D_S^+ and D^+ Decays into Four-Body Final States, Including $\eta \pi^+$ and $\omega \pi^+$

Anjos 89C Phys. Rev. D41:801, 1990; FERMILAB-PUB-89-144-E;
A Study of Decays of the Λ_c^+

Anjos 90 Phys. Rev. D43:R635, 1991; FERMILAB-PUB-90-183-E;
Some Cabibbo-Suppressed Decays of the D^0 Meson

Anjos 90B Phys. Rev. Lett. 65:2630, 1990; FERMILAB-PUB-90-124-E;
Measurement of the Form Factors in the Decay $D^+ \to K^*(892)\, e^+ \nu_e$

Anjos 90C Phys. Rev. Lett. 64:2885, 1990; FERMILAB-PUB-90-82-E;
Study of $D_S^+ \to \phi\, e^+ \nu_e$ and the Absolute $D_S^+ \to \phi\, \pi^+$ Branching Fraction

Anjos 90D Phys. Rev. D42:2414, 1990; FERMILAB-PUB-90-106-E;
Experimental Results on the Decays $D \to K\, 4\pi$

Anjos 90E Phys. Rev. D41:2705, 1990;
Study of the Decays $D^+ \to \bar{K}^0 \pi^+$ and $D^+ \to \bar{K}^0 K^+$

Anjos 91 Phys. Rev. D43:R2063, 1991;
Study of the Decay $D_S^+ \to \eta' \pi^+$

Anjos 91B Phys. Rev. D44:R3371, 1991; FERMILAB-PUB-91-147;
Measurement of the Decay $D^0 \to \pi^- \pi^+$ and $D^0 \to K^+ K^-$

Anjos 91C Phys. Rev. Lett. 67:1507, 1991; FERMILAB-PUB-91-151;
A Study of the Decay $D^+ \to K^0 e^+ \nu_e$

Anjos 91D Phys. Rev. Lett. 69:2892, 1992; FERMILAB-PUB-91-331;
Study of the Doubly Cabibbo-Suppressed Decay $D^+ \to \phi\, K^+$ and the Singly Cabibbo-Suppressed Decay $D_S^+ \to \phi\, K^+$

Anjos 92 Phys. Rev. D46:R1, 1992; FERMILAB-PUB-92-80;
Experimental Probes of Final State Interactions in D^0 Meson Decays

Anjos 92B Phys. Rev. D45:R2177, 1992;
Study of the Decay $D^+ \to K\, \pi\, \pi\, e^+ \nu_e$ and $D^+ \to K^*(892)\, \pi\, e^+ \nu_e$

Ansari 88 Phys. Lett. 215B:175, 1988; CERN-EP-88-134;
Measurement of the Strong Coupling Constant α_S from a Study of $W^\pm$ Bosons Produced in Association with Jets

Ansari 88B Z. Phys. C41:395, 1988;
Direct Photon Production in $p\, p$ at E_{cm}=630 GeV

Anselmann 92 Phys. Lett. 285B:376, 1992;
Solar Neutrinos Observed by GALLEX at Gran Sasso

Anselmann 92B Phys. Lett. 285B:390, 1992;
Implication of the GALLEX Determination of the Solar Neutrino Flux

Ansorge 88 Z. Phys. C41:179, 1988;
Kaon Production in $p\, p$ Interactions at c.m. Energies from 200 to 900 GeV

Ansorge 89 Z. Phys. C43:75, 1989;
Photon Production at c.m. Energies of 200 and 900 GeV

Ansorge 89B Nucl. Phys. B328:36, 1989; USIP-89-02; CERN-EP-89-41;
Hyperon Production at 200 GeV and 900 GeV c.m. Energy

Ansorge 89C Z. Phys. C43:357, 1989; CERN-EP-88-172;
Charged Particle Multiplicity Distributions at 200 GeV and 900 GeV c.m. Energy

Antipov 87 Yad. Phys. 48:471, 1988; IFVE-87-153;
Inclusive Cross Section Measurement of Cumulative Protons Production in π^- (K$^-$, p) Be Interaction at 40 GeV/c

Antipov 87B Yad. Phys. 48:138, 1988; Sov. J. Nucl. Phys. 48:85, 1988; JINR-P1-87-539;
Elastic Scattering of π^- and K^- Mesons on Protons at 43 GeV/c Momentum

Antipov 88 IFVE-88-177;
On Measurement of $\rho(770)^0 \to \mu^+ \mu^-$ Decay Branching Ratio in Coherent Dissociation Processes $\pi^- \to \mu^+ \mu^- \pi^-$ and $\pi^- \to \pi^+ \pi^- \pi^-$

Antipov 88B Pisma Zh. Eksp. Teor. Fiz. 48:519, 1988; Jetp Lett. 48:561, 1988;
Measurement of $\rho(770)^0 \to \mu^+ \mu^-$ Decay Branching Ratio

Antipov 89 Z. Phys. C42:185, 1989;
Determination of the Branching Ratio of $\rho(770)^0 \to \mu^+ \mu^-$ in the Coherent Dissociation $\pi^- \to \mu^+ \mu^- \pi^-$ and $\pi^- \to \pi^+ \pi^- \pi^-$

Antipov 89B Yad. Phys. 51:705, 1990; Eur. Lett. 11:725, 1990; JINR-P1-89-367;
The Investigation of Radiative Scattering $\pi^- p \to \pi^- p \gamma$ at 43 GeV

Antipov 89C JINR-P1-89-282;
The Diffractive Production of $K^- \pi^- \pi^+$ System on Nuclei at 40 GeV

Antipov 90 Yad. Phys. 53:1314, 1991; IFVE-90-168;
Search for Dibaryon Resonances Produced in Target Fragmentation Region with Emission of Strummer Particle Pairs in π^- Be Interactions at 43 GeV/c

Antipov 90B IFVE-90-128;
Estimation of the Secondary Particles Emission Range in the Cumulative Particle Production

Antipov 90C Yad. Phys. 53:439, 1991; IFVE-90-51;
Inclusive Cross-Section of Cumulative Proton Production in π^- (K$^-$, p) Be, Al, Cu, Pb Interactions at 40 GeV/c

Antipov 90D IFVE-90-171;
Study of Fast p, $\bar{p}$ Yields in π^- Be Interaction at 40 GeV/c with Cumulative Particle Production

Antipov 90E Yad. Phys. 53:1324, 1991; IFVE-90-167;
Search for Dibaryon Resonances in Processes with Cumulative Protons Emitted from π^- Be Interactions at 40 GeV/c

Antipov 92 Nucl. Phys. A536:637, 1992;
Cross Sections of Backward Proton Production in 40 GeV/c π^- (K$^-$, p) A Interactions

Anton 92	BONN-IR-93-23; **Photoproduction of η Mesons**
Antonchik 90	Yad. Phys. 51:765, 1990; **Interaction of Relativistic Nuclei ^{40}Ar and Cascade-Evaporation Model**
Antonchik 90B	Yad. Phys. 51:936, 1990; **The Effect of Bombarding Nucleus Mass upon Light Charged Particles Emission with Energy below 400 MeV/Nucleon**
Antonelli 88	Phys. Lett. 212B:133, 1988; LAL-88-11; **Measurement of the Reaction $e^+ e^- \to \eta \pi^+ \pi^-$ in the Center of Mass Energy Interval 1350 – 2400 MeV**
Antonelli 92	Z. Phys. C56:15, 1992; LAL-92-08; **Measurement of the $e^+ e^- \to \pi^+ \pi^- \pi^0$ and $e^+ e^- \to \omega \pi^+ \pi^-$ Reactions in the Energy Interval 1350 – 2400 MeV**
Antoniazzi 92	Phys. Rev. Lett. 70:383, 1993; FERMILAB-PUB-92-140-E; **Production of $J/\psi(1S)$ via $\psi(2S)$ and χ Decay in 300 GeV/c Proton and $\pi^\pm$ Nucleon Interaction**
Antoniazzi 92B	Phys. Rev. D46:4828, 1992; FERMILAB-PUB-92-141-E; **A Measurement of $J/\psi(1S)$ and $\psi(2S)$ Production in 300 GeV/c Proton, Antiproton and $\pi^\pm$ Nucleon Interactions**
Antos 88	Yad. Phys. 48:723, 1988; **$\Delta(1232\, P_{33})^{++}$ Inclusive Production in $\pi^- p$ Interactions at 5 GeV/c**
Antreasyan 86B	Nuovo Cim. 99A:595, 1988; INFN-PI-AE-86-9; **Associated Multiplicities in $\mu^\pm$ Pair Events at the ISR**
Antreasyan 90	Z. Phys. C48:553, 1990; DESY-90-038; **Observation of the Exclusive Decay $B \to e^- \nu D^*(2010)$ and Search for $B \to e^\pm \nu \pi^0$**
Antreasyan 90B	PL 251B, 204; SLAC-PUB-5307; DESY-90-094; **Limits on Axion and Light Higgs Boson Production in $\Upsilon(1S)$ Decays**
Antreasyan 90C	Z. Phys. C48:561, 1990; DESY-90-054; SLAC-PUB-5254; **First Observation of the Reaction $\gamma \gamma \to \pi_2(1670) \to 3\pi^0$**
Antreasyan 91	DESY-91-076; **Search for D^0 and B^0 Decays into $\pi^0 \pi^0$**
Antreasyan 91B	Phys. Lett. 259B:216, 1991; SLAC-PUB-5403; DESY-91-001; HEN-334; **Measurements of the Branching Ratios for the Decays $\tau^\pm \to$ hadron $\pi^0 \nu$ and $\tau^\pm \to$ hadron $\pi^0 \pi^0 \nu$**
Aoki 88	Phys. Lett. 209B:113, 1988; CERN-EP-88-52; **Some Properties of Charmed Particles Produced in Nucleus Interactions**
Aoki 89	Phys. Lett. 224B:441, 1989; CERN-EP-89-67; **The Production of Charmed Particles in High Energy ^{16}O-Emulsion Central Interactions**
Aoki 90	Phys. Rev. Lett. 65:1729, 1990; **Search for the H Dibaryon in (K^-, K^+) Reactions**
Aoki 91	Progr. of Theor. Phys. 85:951, 1991; DPNU-91-06; KEK-91-60; **Evidence of Weak Decay of Heavy Double Hypernuclei**
Aoki 91B	Progr. of Theor. Phys. 87:1305, 1992; CERN-PPE-91-220; **Charm Production by 350 GeV/c π^- Interaction in Nuclear Emulsion**
Aoki 91C	Progr. of Theor. Phys. 87:1315, 1992; Progr. of Theor. Phys. 88:621, 1992; CERN-PPE-91-221; **Hadroproduction of $D\bar{D}$ Pairs in the Interaction of 350 GeV/c π^- Mesons with Nuclei**
Aoki 91D	KEK-91-104; **Two Single Hypernuclei Production by Ξ^- Capture**
Aoki 91E	Progr. of Theor. Phys. 85:1287, 1991; KEK-91-59; DPNU-91-26; **Direct Observation of Sequential Weak Decay of a Double Hypernucleus**
Aoki 92	CERN-PPE-92-157; **The First Observation of the Muonic Decay $D_S^\pm \to \mu^\pm \nu_\mu$**
Aoki 92B	Phys. Rev. Lett. 69:2345, 1992; **Measurement at 0° of Negatively Charged Particles and Antinuclei Produced in Collision of 14.6 A GeV/c Si on Al, Cu, and Au Targets**
Apanasenko 92	LEBD-92-45; **On the Interaction of α-Particles with Iron Nucleus at the Energy of 100 TeV/N**
Apokin 86B	Yad. Phys. 47:1644, 1988; Sov. J. Nucl. Phys. 47:1041, 1988; IFVE-86-239; **$\pi^- p \to f_2(1270)\, n$ Reaction in the Region $-t < 2.0$ at 40 GeV/c**
Apokin 88	Yad. Phys. 47:727, 1988; IFVE-87-44; **Asymmetry Observation in the Reaction $\pi^- p \to \pi^0 \pi^0 n$**
Apokin 88B	Yad. Phys. 49:156, 1989; Sov. J. Nucl. Phys. 49:97, 1989; IFVE-88-78; **Asymmetry Measurement of π^0 Mesons Produced in Beam Fragmentation Region on Polarized Protons**
Apokin 88C	Yad. Phys. 49:165, 1989; Sov. J. Nucl. Phys. 49:103, 1989; IFVE-88-79; **Result on Azimuthal Asymmetry Measurement of π^0 Mesons Produced in Beam Fragmentation Region on Polarized Deuterons**
Apokin 89	IFVE-89-37; **Measurement of One-Spin Asymmetries in Inclusive π^0 and η Production at 90° CMS in the Reactions $\pi^- p\uparrow \to \pi^0\ (\eta)$ X at 40 GeV/c**
Apokin 89B	Yad. Phys. 49:445, 1989; Sov. J. Nucl. Phys. 49:278, 1989; IFVE-88-76; **$\pi^+ \pi^- \to 2\pi^0$ Cross Section at c.m. Energies 0.55 GeV $< m <$ 2 GeV from the Reaction $\pi^- p \to 2\pi^0 n$ at 39.1 GeV/c**
Apokin 90	Phys. Lett. 243B:461, 1990; **Observation of Significant Spin Effects in Hard Collisions at 40 GeV/c**
Apokin 92	Yad. Phys. 56-3:82, 1993; JINR-P1-92-351; **Spin Asymmetry of Cumulative Protons in π^- deuteron $\to p(90°)$ X and K^- deuteron $\to p(90°)$ X Reactions at 40 GeV/c**
Appel 91	Nucl. Phys. A527:581, 1991; **Hard Exclusive Hadron Nucleon Scattering and Color Transparency**
Appel 92	FERMILAB-PUB-92-49; **Hadroproduction of Charm Particles**
Apsimon 89	Z. Phys. C43:63, 1989; CERN-EP-89-31; **Inclusive Photoproduction of Single Charged Particles at High p_T**

See the legend on page 7.

Apsimon 90 Z. Phys. C46:35, 1990; CERN-EP-90-15;
A Study of the Point-Like Interactions of the Photon Using Energy-Flows in Photo- and Hadro-Production for Incident Energies between 65 and 170 GeV

Apsimon 90B Z. Phys. C47:397, 1990;
Forward Charge Asymmetry in Low-p_T Photoproduction of Hadrons

Apsimon 90C Z. Phys. C50:179, 1991; CERN-PPE-90-115;
Separation of Minimum and Higher Twist in Photoproduction

Apsimon 91 Z. Phys. C52:397, 1991;
Inclusive Production of π^0-Mesons in $\pi\ p$, $K\ p$ and $\gamma\ p$ Collisions at Energies around 100 GeV

Apsimon 91B Z. Phys. C53:581, 1992; CERN-PPE-91-172;
Comparison of Photon and Hadron Induced Production of ρ^0 Mesons in the Energy Range of 65 to 175 GeV

Apsimon 92 Z. Phys. C54:185, 1992;
Inclusive Production of η-Meson in $\pi\ p$, $K\ p$ and $\gamma\ p$ Collisions at Energies around 100 GeV

Apsimon 92B Z. Phys. C56:185, 1992; CERN-PPE-92-135;
Production of $f_2(1270)$ and $f_0(975)$ Mesons by Photons and Hadrons of Energy 65 – 175 GeV

Arabkin 90 Kr. Soob. Fiz. 10:31, 1990;
About Validity of Quasiscaling Models of Multiparticle Production at Superhigh Energies

Arakelyan 89 Yad. Phys. 49:1253, 1989;
Electrofission Cross Section and Fission Yield Measurement for ^{235}U and ^{238}U Nuclei at Energies 1.33 – 4.32 GeV

Arakelyan 89C YERE-1104(67)-88;
Measurement of the Cross Sections of Photo- and Electrofission of ^{235}U and ^{238}U in the Energy Range 1.33 – 4.32 GeV

Arakelyan 89D YERE-1165(42)-89;
Measurement of Charged Hadron Production Multiplicity at Interaction of Photons with E=.5 – 3.3 GeV with Al, Cu and Pb Nuclei

Arakelyan 89E Yad. Phys. 49:1651, 1989; YERE-1103(66)-88;
Experimental Study of Shadowing in the Electrofission of ^{238}U Nuclei at E_γ =1–3.5 GeV and Low Q^2

Arakelyan 90 Yad. Phys. 51:1582, 1990;
Investigation of the (γ, π) and (γ, π Xn) Reactions on Medium Weight and Medium Heavy Nuclei

Arakelyan 90B Yad. Phys. 52:1392, 1990; YERE-1228(14)-90;
Semi-Inclusive Spectra of Cumulative Protons in π^- C Interactions at 5 GeV/c

Arakelyan 90C Yad. Phys. 52:1387, 1990;
Total Hadroproduction Cross Section on ^{235}U and ^{238}U by 0.3 – 3.5 GeV Tagged Photons

Arakelyan 90D YERE-1249(35)-90;
The Total Cross Section of Hadroproduction on ^{235}U Nuclei in the Photon Energy Range 0.3 – 3.5 GeV Obtained by Measuring the Photofission Cross Section

Arakelyan 90E YERE-1250(36)-90;
The ^{238}U Photofission Cross Section in the Energy Range of Tagged Photons 0.3 – 3.5 GeV

Arakelyan 90F Yad. Phys. 52:1217, 1990;
Recoil Properties of Nuclei Produced in ^{65}Cu Photospallation

Arakelyan 91 Nucl. Phys. A534:535, 1991;
Recoil Properties of Nuclei Produced in the Photospallation on ^{65}Cu

Arakelyan 91B Nucl. Phys. A548:675, 1991;
Semi-Inclusive Spectra of Cumulative Protons in π^- C Interactions at 5 GeV/c

Ardito 87 Eur. Lett. 6:131, 1988; CERN-EP-87-162;
Interactions of 60 and 200 A GeV ^{16}O Ions in Nuclear Emulsion

Ardouin 90 Nucl. Phys. A514:564, 1990;
Preequilibrium Particles and Mean-Field Effects from Particle-Particle Correlations in Heavy-Ion Collisions

Arefiev 90 Yad. Phys. 51:406, 1990;
Reaction $\pi^+ p \to p\ \pi^+\ \pi^+\ \pi^-\ (\pi^0)$ at 3.94 GeV/c Incident Momentum: Analysis in the OPER Model

Arefiev 90B Yad. Phys. 51:414, 1990;
Reaction $\pi^+ p \to p\ \pi^+\ \pi^+\ \pi^-\ (\pi^0)$ at 3.94 GeV/c Incident Momentum: Production of Resonances, Including Those with I=5/2 in Baryon Exchange Processes

Arena 92 Nuovo Cim. 105A:883, 1992;
Study of Intermittency in hadron-hadron Collisions at $\sqrt{s}$=16.7 GeV

Arends 88 BONN-IR-88-05;
Photonuclear Reactions in the $\Delta(1232\ P_{33})$ Resonance Region

Arends 91 Nucl. Phys. A526:479, 1991;
Photon-Induced Emission of Pions and Protons from Various Nuclei in the Δ-Resonance Region

Argan 88 Phys. Lett. 206B:4, 1988;
The Threshold Photoproduction of π^0 on Nucleons and on Few-nucleon Systems

Arkhipov 88 Yad. Phys. 47:1649, 1988; Sov. J. Nucl. Phys. 47:1044, 1988;
$\pi^-\ p \to \eta\ \Delta(1232\ P_{33})^0$ Differential Cross Section at 3.3 and 4.75 GeV/c

Armstrong 88 CERN-EP-88-124;
A Search for Glueballs in the Central Region in the Reaction $p\ p \to p_f$ X p_s at 300 GeV/c Using the CERN OMECA Spectrometer

Armstrong 89 Phys. Lett. 221B:216, 1989; CERN-EP-89-23;
A Spin-Parity Analysis of the $f_1(1285)$ and $f_1(1420)$ Mesons Centrally Produced in the Reaction $p\ p \to p$ ($K_S\ K^\pm\ \pi^\pm$) p at 300 GeV/c

Armstrong 89B Phys. Lett. 221B:221, 1989; CERN-EP-89-22;
Observation of Double ϕ-Meson Production in the Central Region for the Reaction $p\ p \to p$ ($K^+\ K^-\ K^+\ K^-$) p at 300 GeV/c

Armstrong 89C Z. Phys. C43:55, 1989; CERN-EP-89-24;
Study of the $\pi^+\ \pi^+\ \pi^-\ \pi^-$ System Centrally Produced by Incident π^+ and p Beams at 85 GeV/c

Armstrong 89D Phys. Lett. 227B:186, 1989; CERN-EP-89-70;
Observation of Centrally Produced $f_2(1720)$ in the Reaction $p\ p \to p_f\ (K\ \bar{K})\ p_s$ at 300 GeV/c

Armstrong 89E Phys. Lett. 228B:536, 1989; CERN-EP-89-81;
Evidence for New States Produced in the Central Region in the Reaction $p\ p \to p_f\ \pi^+\ \pi^-\ \pi^+\ \pi^-\ p_s$ at 300 GeV/c

Armstrong 89F CERN-EP-89-144;
Recent WA76 Results on Central Production

Armstrong 89G Phys. Rev. C40:R1100, 1989; TRI-PP-89-2;
Radiative Muon Capture on Oxygen and the Induced Pseudoscalar Coupling

Armstrong 89H Z. Phys. A332:467, 1989;
Energy Transfer by Intranuclear Cascade of π^0 Produced in $\bar{p}$ Annihilation at Rest in Nuclear Targets

Armstrong 90 Z. Phys. C46:405, 1990; CERN-EP-89-108;
A Study of the Centrally Produced $K^*(892)^0$ $K^*(892)^0$ Final State in the Reaction $p\,p \to p_f\,(K^+\,K^-\,\pi^+\,\pi^-)\,p_s$ at 300 GeV/c

Armstrong 90B Z. Phys. C48:213, 1990; CERN-EP-90-86;
A Study of the Centrally Produced $\pi^+\,\pi^-\,\pi^0$ System Formed in the Reaction $p\,p \to p_f\,(\pi^+\,\pi^-\,\pi^0)\,p_s$ at 300 GeV/c

Armstrong 90C Phys. Rev. C43:1425, 1991; TRI-PP-90-21;
Radiative Muon Capture on Carbon, Oxygen and Calcium

Armstrong 91 Z. Phys. C51:351, 1991; CERN-PPE-91-40;
Study of the Centrally Produced $\pi\,\pi$ and $K\,\bar{K}$ Systems at 85 and 300 GeV/c

Armstrong 91B Phys. Rev. Lett. 68:1468, 1992; FERMILAB-PUB-91-299-E;
Precision Measurements of Charmonium States Formed in $\bar{p}\,p$ Annihilation

Armstrong 91C Z. Phys. C54:371, 1992; CERN-PPE-91-219;
Study of the $\pi^+\,\pi^-\,\gamma$ System Centrally Produced in the Reaction $p\,p \to p_f\,(\pi^+\,\pi^-\,\gamma)\,p_s$ at 300 GeV/c

Armstrong 91D Nucl. Phys. B373:35, 1992; FERMILAB-PUB-91-213-E;
Study of the $\chi_{c1}(1P)$ and $\chi_{c2}(1P)$ Charmonium States Formed in $\bar{p}\,p$ Annihilations

Armstrong 91E Z. Phys. C52:389, 1991; CERN-PPE-91-93;
Study of the $\eta\,\pi^+\,\pi^-$ System Centrally Produced in the Reaction $p\,p \to p_f\,(\eta\,\pi^+\,\pi^-)\,p_s$ at 300 GeV/c

Armstrong 92 Z. Phys. C56:29, 1992; CERN-PPE-92-94;
Further Study of the $f_1(1420)$ Meson in Central Production

Armstrong 92B CERN-PPE-92-106;
Fission of Heavy Hypernuclei Formed in Antiproton Annihilation

Armstrong 92C Phys. Rev. Lett. 69:2337, 1992; FERMILAB-PUB-92-186-E;
Observation of the $^1P_1$ State of Charmonium

Armstrong 92D Phys. Rev. Lett. 70:1212, 1993; FERMILAB-PUB-92-244-E;
Measurement of the Proton Electromagnetic Form Factors in the Time-Like Region at 8.9 and 13.0 GeV^2

Armstrong 92E Phys. Rev. D47:772, 1993; FERMILAB-PUB-92-245-E;
Measurement of the $J/\psi(1S)$, $\psi(2S)$ Resonance Parameters in $\bar{p}\,p$ Annihilation

Armstrong 92F Phys. Rev. C46:1094, 1992; TRI-PP-92-80;
Radiative Muon Capture on Al, Si, Mo, Sn and Pb

Armstrong 92G Yad. Phys. 55:1568, 1992;
A New Measurement of the Proton Electromagnetic Form Factors in the Time-Like Region at High Energy

Arnautlijsky 87 Yad. Phys. 48:466, 1988; JINR-P1-87-471;
The Study of p C Interactions at P=10 GeV/c with the Emission of Cumulative Deuterons

Arnautlijsky 87B Yad. Phys. 48:161, 1988; JINR-P1-87-423;
Inclusive Characteristics of π^- Mesons Produced in p C and p Ta Interactions at 10 GeV/c Proton Momentum

Arnautlijsky 88 Yad. Phys. 47:739, 1988; Sov. J. Nucl. Phys. 47:473, 1988; JINR-P1-87-97;
Production of Λ-Hyperons and K-Mesons in Cumulative p C Interactions at 10 GeV/c

Arnautlijsky 89 Yad. Phys. 49:182, 1989; JINR-P1-87-905;
Angular and Momentum Characteristics of Proton from deuteron Ta and C Ta Interactions at 4.2 GeV/c per Nucleon

Arnautlijsky 91 JINR-P1-91-191;
Hadron Spectra in Hadron-Nucleus Collisions

Arnaudon 93 CERN-PPE-93-053; CERN-SL-93-17;
Measurement of the Mass of the Z^0 Boson and the Energy Calibration of LEP

Arndt 90 Phys. Rev. Lett. 65:157, 1990;
Determination of the $\pi\,n\,n$ Coupling Constant from Elastic Pion-Nucleon Scattering Data

Arndt 91 Phys. Rev. D43:2131, 1991;
Pion-Nucleon Partial Wave Analysis to 2 GeV

Arndt 92 Phys. Rev. D45:3995, 1992;
Nucleon-Nucleon Partial Wave Analysis to 1.6 GeV

Arneodo 88 Phys. Lett. 211B:493, 1988; CERN-EP-88-56;
Shadowing in Deep-Inelastic Muon Scattering from Nuclear Targets

Arneodo 88B Z. Phys. C40:347, 1988; CERN-EP-88-55;
Charged Structure of the Hadronic Final State in Deep-Inelastic Muon-Nucleon Scattering

Arneodo 89 Nucl. Phys. B321:541, 1989; CERN-EP-89-25;
Measurements of the u Valence Quark Distribution Function in the Proton and u Quark Fragmentation Functions

Arneodo 89B Nucl. Phys. B333:1, 1990; CERN-EP-89-121;
Measurement of the Nucleon Structure Function in the Range $0.002 < x < 0.17$ and $0.2 < Q^2 < 8$ GeV^2 in Deuterium, Carbon and Calcium

Arneodo 92 CERN-PPE-92-113;
Nuclear Effects in Structure Functions

Arnold 88 Phys. Rev. Lett. 61:806, 1988; SLAC-PUB-4612;
Measurements of Transverse Quasielastic Electron Scattering from the Deuteron at High Momentum Transfers

Arnold 89 SLAC-PUB-4918;
Transverse Electrodisintegration of the Deuteron in the Threshold Region at High Q^2

Arora 89 Z. Phys. A333:373, 1989;
A Study of Angular Correlations of Projectile and Target Fragments in 1.4 A GeV Kr + Ag(Br) Collisions

Arpesella 88B SACLAY-DPhPE-88-13;
A Review of Running Underground Experiments

Artemiev 89B ITEP-89-20;
Search of Background Processes in Experiment by 2β Decay of ^{136}Xe

See the legend on page 7.

Artemiev 91 Yad. Phys. 54:1485, 1991;
Search for $2\beta\ 2\nu$ Decay of ^{136}Xe in the Proportional-Drift Detector

Artemiev 91B Phys. Lett. 280B:159, 1992; ITEP-91-34;
The Search for ^{136}Xe $2\beta\ 2\nu$ Decay at the Proportional-Drift Detector

Artuso 89B CLNS-89-926;
What Did We Learn about V_{ub} from B Decays?

Artuso 89C Phys. Rev. Lett. 62:2233, 1989; CLNS-89-889; CLEO-89-5;
$B^0\ \bar{B}^0$ Mixing at the $\Upsilon(4S)$

Artuso 92 Phys. Rev. Lett. 69:3278, 1992; CLNS-92-1159; CLEO-92-07;
Measurement of τ^+ Decays Involving η Mesons

Artykov 90 Yad. Phys. 51:744, 1990; FVE-89-99;
Transverse Momenta of γ Quanta in $p\ ^{20}$Ne and p nucleon Interactions at 300 GeV

Artykov 90B Yad. Phys. 52:795, 1990;
Production Cross Sections and Multiplicities of Neutral Strange Particles in p Ne and $p\ n$ Collisions at 300 GeV

Asai 89 INS-REP-775;
Search for $\Delta(1232\ P_{33})$-$\Delta(1232\ P_{33})$ Component in Deuteron

Asai 89C Z. Phys. C46:593, 1990; CERN-EP-89-180;
Experimental Results on Proton Diffractive Dissociation — Study of the Quark-Diquark Pomeron Coupling

Asano 88 J. Phys. Soc. Jpn. 57:2995, 1988;
Spallation of Tantalum, Tungsten and Gold by 12 GeV Protons

Asanuma 90 Phys. Lett. 237B:588, 1990;
A Search for Correlated $e^+\ e^-$ Pairs in the Decay of ^{241}Am

Ashery 88 Phys. Lett. 215B:41, 1988;
A Search for $\pi\ n\ n$ Bound Systems

Ashitkov 91 Izv. Akad. Nauk SSSR, Fiz. 55:744, 1991;
Muon Interaction Cross Section with Energy Transfer > 10 GeV in the .4 – 4 TeV Range

Ashman 88 Phys. Lett. 202B:603, 1988; CERN-EP-88-06;
Measurement of the Ratios of Deep Inelastic Muon-Nucleus Cross Sections on Various Nuclei Compared to Deuterium

Ashman 88B Phys. Lett. 206B:364, 1988; CERN-EP-87-230;
A Measurement of the Spin Asymmetry and Determination of the Structure Function g_1 in Deep Inelastic Muon-Proton Scattering

Ashman 88C Z. Phys. C39:169, 1988; CERN-EP-87-231; CERN-EP-88-83;
Exclusive $\rho(770)^0$ and ϕ Production in Deep Inelastic Muon Scattering

Ashman 89 Nucl. Phys. B328:1, 1989; CERN-EP-89-73;
An Investigation of the Spin Structure of the Proton in Deep Inelastic Scattering of Polarized Muons on Polarized Protons

Ashman 91 Z. Phys. C52:361, 1991; CERN-PPE-91-53;
Forward Produced Hadrons in $\mu^-\ p$ and μ^- deuteron Scattering and Investigation of the Charge Structure of the Nucleon

Ashman 91B Z. Phys. C52:1, 1991; CERN-PPE-91-60;
Comparison of Forward Hadrons Produced in Muon Interactions on Nuclear Targets and Deuterium

Ashman 92 Z. Phys. C56:21, 1992; CERN-PPE-92-102;
Muoproduction of $J/\psi(1S)$ and the Gluon Distribution of the Nucleon

Ashman 92B Z. Phys. C57:211, 1993; CERN-PPE-92-155;
A Measurement of the Ratio of the Nucleon Structure Function in Copper and Deuterium

Aslanides 91 Nucl. Phys. A528:608, 1991; CRN-PN-91-01;
Search for Multibaryonic Resonances in the p deuteron $\to \pi^-$ X Reaction

Asman 88 Z. Phys. C37:191, 1988;
Charged Particles Correlation in $p\ p$ at c.m. Energies of 200, 546 and 900 GeV

Asratyan 87C Z. Phys. C40:483, 1988; ITEP-87-214;
Studying $(c\ s)$ Spectroscopy in $\nu\ n$ Collisions

Asratyan 90 Phys. Lett. 257B:525, 1991; CERN-PPE-90-166;
Production of D_s^+ Mesons in Antineutrino-Neon Charged Current Interactions

Asratyan 92 CERN-PPE-92-191;
Diffractive Production of Charmed Strange Mesons by Neutrinos and Antineutrinos

Astabatyan 90 YERE-1280(60)-90;
The Results of Measurement of the Yields of Photofragmentation on C, Al, Ag and Au Nuclei

Astier 89 Phys. Lett. 220B:646, 1989; CERN-EP-89-18;
Search for Neutrino Oscillations

Astier 89B Nucl. Phys. B335:517, 1990; CERN-EP-89-128;
A Search for Neutrino Oscillations

Aston 88 Phys. Lett. 201B:573, 1988; DPNU-87-51; SLAC-PUB-4394;
Evidence for Two Strangeonium Resonances with $J^{PC} = 1^{++}$ and 1^{+-} in $K^-\ p$ Interactions at 11 GeV/c

Aston 88B Nucl. Phys. B296:493, 1988; SLAC-PUB-4260; DPNU-87-25;
A Study of $K^-\ \pi^+$ Scattering in the Reaction $K^-\ p \to K^-\ \pi^+\ n$ at 11 GeV/c

Aston 88C Nucl. Phys. B301:525, 1988; SLAC-PUB-4279; DPNU-87-15;
A Study of the $K_S\ K_S$ System in the Reaction $K^-\ p \to K_S\ K_S\ \Lambda$ at 11 GeV/c

Aston 88D Phys. Lett. 208B:324, 1988; SLAC-PUB-4489;
Spin Parity Determination of the $\phi_3(1850)$ from $K^-\ p$ Interactions at 11 GeV/c

Aston 88E Phys. Lett. 215B:799, 1988; SLAC-PUB-4657;
Observation of a New Ω^* at 2.47 GeV/c^2 in $K^-\ p$ Interactions at 11 GeV/c

Aston 88F Phys. Lett. 215B:199, 1988; SLAC-PUB-4661; DPNU-88-24;
Evidence for a $J^{PC} = 4^{++}$ $K\ K$ State at 2.2 GeV/c^2 from $K^-\ p$ Interaction at 11 GeV/c

Aston 88G Phys. Lett. 201B:169, 1988; SLAC-PUB-4393; DPNU-87-45;
Observation of the Selective Coupling of K^* States to the $K^-\ \eta$ Channel

Aston 88H SLAC-PUB-4773;
Recent Result in Strangeonium Spectroscopy

Aston 88I SLAC-PUB-4709;
The Spectroscopy of Mesons Containing Strange Quarks

Aston 88J SLAC-PUB-4768;
The Strangeonium Spectrum Seen in LASS: Implications for Glueball Spectroscopy

Aston 89 SLAC-PUB-5150;
Strangeonia and Kin: New Results from Kaon Hadroproduction with LASS

Aston 89B SLAC-PUB-5151;
Update on K^* Studies at SLAC

Aston 89C SLAC-PUB-4821; DPNU-88-50;
Recent Results from $S=-3$ Baryon Spectroscopy from the LASS Spectrometer

Aston 90 SLAC-PUB-5269;
New Results on Hypercharge Exchange Reactions from LASS

Aston 90B SLAC-PUB-5380;
Strangeonium Production from LASS

Aston 90C SLAC-PUB-5392;
Evidence for $\rho_1(1270)$ Production in the Reaction $K^- p \to \pi^+ \pi^- \Lambda$

Aston 91 SLAC-PUB-5657;
Production of the $\rho(1300)$ in the Reaction $K^- p \to \pi^+ \pi^- \Lambda$ at 11 GeV/c

Aston 91B SLAC-PUB-5682;
The Strange 0^{++} and 2^{++} Radial Excitations: A Review of LASS Data

Aston 91C SLAC-PUB-5722;
Recent Result on $K\,\omega$ and $\pi\,\pi$ Systems from LASS

Aston 92 SLAC-PUB-5721;
$J^P = 1^-$ Radial Excitations from LASS Data

Aston 92B SLAC-PUB-5634;
New Results in the Partial Wave Analysis of the $K^-\,\omega$ System in the Reaction $K^- p \to K^- \pi^+ \pi^- \pi^0 p$

Astone 91 Z. Phys. C50:21, 1991;
Evaluation and Preliminary Measurement of the Interaction of a Dynamical Gravitational near Field with Cryogenic Gravitational Wave Antenna

Atageldieva 88 Yad. Phys. 48:1729, 1988;
Deuteron-Triton Component in Energy Spectra of Slow Particles

Atayan 90 Z. Phys. C50:353, 1991; HEN-331-90; CERN-PRE-90-080;
A Study of Double Pomeron Exchange in $\pi^+ p$ and $K^+ p$ Interactions at 200 GeV/c

Atayan 91 Z. Phys. C54:247, 1992; HEN-344;
π^0 and η Meson Production in $\pi^+ p$ and $K^+ p$ Collision at 250 GeV/c

Atiya 89 Phys. Rev. Lett. 63:2177, 1989; BNL-43212; PRINCETON-HEP-89-01; TRI-PP-89-70;
Search for a Light Higgs Boson in the Decay $K^+ \to \pi^+$ higgs, higgs $\to \mu^+ \mu^-$

Atiya 89B FERMILAB-CONF-89-56;
Kaon Physics in the 1990's: Rare Decays and CP Violations

Atiya 90 Phys. Rev. Lett. 64:21, 1990; TRI-PP-89-101;
Search for the Decay $K^+ \to \pi^+ \nu \bar{\nu}$

Atiya 90B Phys. Rev. Lett. 65:1188, 1990; TRI-PP-90-24; BNL-44701; PRINCETON-HEP-90-01;
Search for the Decay $K^+ \to \pi^+ \gamma \gamma$

Atiya 91 TRI-PP-91-51;
Recent Results on Rare K^+ Decays from BNL E787

Atiya 91B Phys. Rev. Lett. 66:2189, 1991;
Upper Limit on the Branching Ratio for the Decay $\pi^0 \to \nu \bar{\nu}$

Atiya 92 Phys. Rev. Lett. 70:2521, 1993; TRI-PP-92-102;
Search for Decay $K^+ \to \pi^+ \nu \bar{\nu}$

Atiya 92B Phys. Rev. Lett. 69:733, 1992; TRI-PP-92-16;
Search for the Decay $\pi^0 \to \gamma$ X

Atkinson 88 Z. Phys. C38:535, 1988;
Photon Diffractive Dissociation to $2\rho(770)\,\pi$ and $\rho(770)\,3\pi$ States

Atoyan 89 Phys. Lett. 220B:317, 1989;
A Search for Photonless Annihilation of Orthopositronium

Atoyan 90 MINR-90-P-0659;
A Search for a Light Pseudoscalar Particle in One Photon Orthopositronium Decay: $e^+ e^- \to$ positronium $\to \gamma$ axion

Aubert 89 Phys. Lett. 218B:248, 1989; CERN-EP-88-33;
Evidence for Anomalous Prompt Photons in Deep Inelastic Muon Scattering at 200 GeV

Auchincloss 90 Z. Phys. C48:411, 1990; NEVIS-1394;
Measurement of the Inclusive Charged Current Cross-Section for Neutrino and Anti-Neutrino Scattering on Isoscalar Nucleons

Audit 89 Phys. Lett. 227B:331, 1989;
First Measurement of the Reaction $\gamma\,{}^3$He $\to p\,p\,n$

Auer 88 Phys. Rev. Lett. 62:2649, 1989; ANL-HEP-PR-88-96;
Observation of Structures in the Mass Range of 2700 to 2900 MeV in the Difference between the $p\,p$ Total Cross Sections for Pure Helicity States

Auge 89 LAL-89-20;
Present Status of the NA31 Experiment

Auge 89B LAL-89-26;
Study of Some K^0 Rare Decay Processes in NA31

Augustin 88 Phys. Rev. Lett. 60:2238, 1988; LAL-87-25;
Measurement of Radiative $J/\psi(1S)$ Decays in $K\,\bar{K}$ States

Augustin 88B Nucl. Phys. B320:1, 1989; LAL-88-05;
Study of the $J/\psi(1S)$ Decay into Five Pions

Augustin 88C LAL-88-31;
Spectroscopy Related to Two Photon Physics

Augustin 89 Phys. Rev. D42:10, 1990; LAL-89-59;
Radiative Decay of $J/\psi(1S)$ into $\eta(1440)$ and Nearby States

Augustin 90B Phys. Rev. D46:1951, 1992; LAL-90-53;
Partial Wave Analysis of DM2 Data in the $\eta(1440)$ Energy Range

See the legend on page 7.

Augustin 90C LAL-90-70;
0^{-+} and 1^{++} States from $J/\psi(1S)$ Radiative Decays

Augustin 90D LAL-90-87;
Recent Physics Results from LEP

Avakyan 88B Pisma Zh. Eksp. Teor. Fiz. 48:235, 1988; Jetp Lett. 48:254. 1988;
About Possible Excess of the Hadronic Groups in the Direction on Cygnus X-3, observed by the PION Detector

Avakyan 88C Yad. Phys. 48:1716, 1988; Sov. J. Nucl. Phys. 48:1030, 1988;
Measurement of Polarization of Protons in the Reaction $\gamma\ p \rightarrow p\ \pi^0$ at θ_{π^0} = 80 Degrees in a Photon Linearly Polarized Beam

Avakyan 89 Yad. Phys. 49:468, 1989;
Polarization of Cumulative Protons in γ nucleus $\rightarrow p$ X Reaction

Avakyan 89B Yad. Phys. 50:134, 1989;
Differential Energy Spectrum and Angular Distribution of Hadrons at Mountain Altitude at Energies $E > 10^3$ GeV

Avakyan 89C Yad. Phys. 50:1348, 1989;
The Study of the Dependence of Hadron Inelastic Interaction Cross Section on Energy and Atomic Number of Target in the Range 0.5 – 10 TeV

Avakyan 90 Yad. Phys. 51:1585, 1990;
Polarization of Cumulative Protons in γ nucleus $\rightarrow p$ X Reaction

Avakyan 90B Yad. Phys. 52:312, 1990;
Proton Polarization Measurement in the Reaction γ deuteron $\rightarrow p\ n$ on Linearly Polarized Photon Beam in the Range of E=310 – 450 MeV at 75° Proton c.m.s. Angle

Avakyan 90C Yad. Phys. 52:618, 1990; YERE-1251(37)-90;
Measurement of Proton Polarization in the Deuteron Photodisintegration Reaction on Linearly Polarized Photon Beam in the Range of E=290 – 420 MeV for c.m.s. Angle θ = 65°

Avakyan 90D Yad. Phys. 51:770, 1990;
Pion and Proton Fluxes at Mountain Altitudes at TeV Energies

Avakyan 91 Yad. Phys. 53:717, 1991; YERE-1283(69)-90;
Measurement of P_x, P_y, P_z – – Components of the Proton's Polarization Vector in the $\gamma\ p \rightarrow p\ \pi^0$ Reaction with Linearly Polarized Photons

Avakyan 91B YERE-1326(21)-91;
Interpretation of Distributions on K_{π^0} in p Fe, n Fe and π Fe Interactions at 0.5 – 5.0 TeV in the Framework of Contemporary Models

Avakyan 91C Yad. Phys. 54:1642, 1991;
Distributions of Partial Inelasticity Coefficient K_{π^0} in Pion, Proton, and Neutron Interactions with Iron Nuclei at 0.5 – 5.0 TeV

Avakyan 91D Izv. Akad. Nauk SSSR, Fiz. 55:669, 1991;
Investigation of Jet Generations with Large Transversal Momenta

Avdejchikov 87B Yad. Phys. 48:1736, 1988; JINR-P1-87-872;
Experimental Study of Intermediate Mass Fragment Formation Mechanism in p Au and ^{4}He Au Interactions

Avdejchikov 87H Pisma Zh. Eksp. Teor. Fiz. 47:131, 1988; Jetp Lett. 47:157, 1988; JINR-P1-87-830;
Observation of Minimum in Energy Dependence of Tau Parameter of Charge Fragment Yield in Interaction of ^{4}He Relativistic Nuclei with Gold Nuclei

Avdejchikov 88 Yad. Phys. 50:409, 1989; JINR-P1-88-796;
Analyzing Power Measurement of deuteron↑ p Elastic Scattering at 2 – 12 GeV/c and in deuteron↑ C $\rightarrow p$ X Reaction at 2.38 GeV/c

Avenier 89 Nucl. Instr. and Meth. A284:29, 1989;
Neutrino Oscillation Experiments at Reactors

Averichev 89 Kr. Soob. JINR 37:5, 1989;
Experimental Data on the Investigation of Two-Particle Pion-Proton, Proton-Proton and Deuteron-Proton Correlations in the Cumulative Particle Production in Proton, Deuteron and ^{4}He-Nuclei Interactions with Nuclei

Averill 89 Phys. Rev. D39:123, 1989;
Measurement of the D^0, D^+, and D_S^+ Meson Lifetime

Avery 89 LBL-26593;
Bose-Einstein Correlations of Pions in $e^+\ e^-$ Annihilation at 29 GeV Center-of-Mass Energy

Avery 89B Phys. Lett. 223B:470, 1989; CLNS-89-886; CLEO-89-2;
A Search for Exclusive Penguin Decays of B Mesons

Avery 89C Phys. Rev. Lett. 62:863, 1989; CLNS-88-872; CLEO-88-2;
Observation of the Charmed Strange Baryon $\Xi_c(2460)^0$

Avery 90 Phys. Rev. D41:774, 1990; CLNS-89-939; CLEO-89-11;
P-wave Charmed Mesons in $e^+\ e^-$ Annihilation

Avery 90B Phys. Rev. D43:3599, 1991; CLNS-90-992; CLEO-90-5;
Inclusive Production of the Charmed Baryon Λ_c from $e^+\ e^-$ Annihilations at 10.55 GeV (E_{cm})

Avery 90C Phys. Rev. Lett. 65:2842, 1990; CLNS-90-1013; CLEO-90-10;
Measurement of the Λ_c^+ Decay Asymmetry Parameter

Avery 92 Phys. Rev. Lett. 68:1279, 1992;
D_S^+ Decays to $\eta\ \rho(770)^+$, $\eta'(958)\ \rho(770)^+$ and $\phi(1020)\ \rho(770)^+$

Avignone 88 Phys. Rev. D37:618, 1988;
Search for Axions from 1115 keV Transition of ^{65}Cu

Avignone 91 Phys. Lett. 256B:559, 1991;
Confirmation of the Observation of $2\nu\ \beta\ \beta$ Decay of ^{76}Ge

Avramenko 88 Pisma Zh. Eksp. Teor. Fiz. 48:474, 1988; Jetp Lett. 48:516, 1988; JINR-D1-88-691;
Production and Decay of Relativistic Hydrogen Hypernuclei

Avramenko 90 JINR-P1-90-554;
Cross Sections of the ^{12}C Nuclei Interactions at the Energy of 500 – 800 MeV/Nucleon

Avramenko 91 JINR-P1-91-239;
Cross Sections of the ^{3}H $\rightarrow$ ^{3}He Reactions on Hydrogen, Carbon, Aluminium, Copper and Lead at 9 GeV/c

Avramenko 91B Yad. Phys. 55:721, 1992; JINR-P1-91-235;
Central Mg Mg Collisions with Λ Production at a Momentum of 4.3 GeV/c per Nucleon

Avramenko 91C JINR-P1-91-206;
Charge Exchange ^{7}Li → ^{7}Be Cross Sections at 21 GeV/c on p, C, Al, Cu, Pb Nuclei

Avramenko 92 JINR-P1-92-284;
A Study of the Production and Lifetime of the Lightest Relativistic Hypernuclei

Avramenko 92B Kr. Soob. JINR 54:13, 1992; Pisma Zh. Eksp. Teor. Fiz. 55:676, 1992;
Collective Excitation of Delta-Isobar in Charge Exchange Reactions (^{7}Li,^{7}Be) and (^{3}H, ^{3}He) at a Projectile Momentum of 3 GeV/c per Nucleon

Azhgirey 88 Yad. Phys. 48:1758, 1988; Sov. J. Nucl. Phys. 48:1058, 1988; JINR-P1-88-23;
Spectra of Deuterons Emitted with Large Transversal Momenta in Collisions of 9 GeV/c Deuterons with Hydrogen, Deuterium and Carbon Nuclei

Azhgirey 91 Nucl. Phys. A528:621, 1991;
Fragmentation of 9 GeV/c Deuterons in the Region of Proton Transverse Momenta of 0.5 – 1 GeV/c and the Deuteron Wave Function at Small Distances

Azhgirey 91B Yad. Phys. 53:1591, 1991;
Fragmentation of 9 GeV/c Deuterons on Nuclei at Proton Transverse Momenta of 0.5 – 1 GeV/c

Aziz 88 Yad. Phys. 47:1035, 1988; Z. Phys. C34:429, 1987; Sov. J. Nucl. Phys. 47:659, 1988; CERN-EP-86-166; IFVE-87-62;
Neutral Strange Particles Correlation in 360 GeV/c p p Interactions

Baatar 88 Yad. Phys. 48:764, 1988;
Analysis of Cumulative Hadron Nuclear Interactions at 4 – 40 GeV/c as a Function of Target Mass

Baatar 88B JINR-P1-88-469;
The Dependence of Characteristics of π^+ Mesons Produced in π^- C Interactions at 40 GeV/c on Total Energy in the c.m.s. and QCD of Semihard Process

Baatar 89 JINR-P1-89-46;
Dependence of Characteristics of Hadron-Carbon Interactions at 4 – 40 GeV/c with Cumulative π^- Meson and Proton Emission on Target Mass and their Connection with Generation of Particles with Large Transverse Momentum

Baatar 89B Yad. Phys. 53:451, 1991; JINR-P1-89-424;
Inclusive Cross Section of Cumulative π^- Meson Production in π^- C Interactions of 40 GeV/c as Function of Kinetic and Transverse Energies

Baatar 90 Yad. Phys. 53:465, 1991; JINR-P1-90-26;
Inclusive π^- Meson Spectra with Cumulative Number N_K>0.35 Produced in deuteron C, He C and C C Interactions at 4.2 GeV per Nucleon

Baatar 90B Yad. Phys. 52:787, 1990; JINR-P1-90-202;
Cumulative Production of π^- Mesons in π^- C Interaction at 40 GeV/c

Baatar 90C Yad. Phys. 52:783, 1990; JINR-P1-90-201;
Study of Intermittency in Multiple Production of Pions in π^- C Interactions at 40 GeV/c

Baatar 91 Yad. Phys. 53:204, 1991;
Fluctuations in Hadron Multiple Generation in Nucleus-Nucleus Collisions at P=4.2 GeV/c per Nucleon

Babaev 90 Yad. Phys. 51:524, 1990;
Azimuthal Correlations between Secondary Charged Particles from Inelastic Interactions of Relativistics Nuclei

Babintsev 88 Yad. Phys. 50:1013, 1989; IFVE-89-4;
Study of Strange Boson Resonance Production in p p Interactions at 32 GeV/c

Bacala 88 KEK-88-44; AMY-88-07;
Measurement of Cross Sections and Charge Asymmetry for $e^+ e^- \to \tau^+ \tau^-$ and $e^+ e^- \to \mu^+ \mu^-$ for $\sqrt{s}$=52, 55 and 56 GeV

Bacala 88B Phys. Lett. 218B:112, 1989; KEK-88-81; AMY-88-15;
Measurement of Cross Sections and Charge Asymmetry for $e^+ e^- \to \tau^+ \tau^-$ and $e^+ e^- \to \mu^+ \mu^-$ for $\sqrt{s}$ from 52 to 57 GeV

Bacci 91 DPHPE-91-19; LNGSE-92-22;
Direct Detection of Dark Matter with NaI Crystals

Bacci 92 DAPNIA-SPP-92-17;
Direct Detection of Dark Matter with NaI Crystals

Bacci 92B Phys. Lett. 293B:460, 1992;
WIMPs Search with Low Activity NaI Crystals. Preliminary Results

Bachler 91 Z. Phys. C51:157, 1991;
Charged Particle Multiplicities in Nuclear Collisions at 200 GeV/N

Bachler 91B Z. Phys. C52:239, 1991; CERN-PRE-91-017; IKF-91-1;
Study of the Energy Flow in Sulphur- and Oxygen-Nucleus Collisions at 60 and 200 GeV/Nucleon

Bachler 92 MPI-PHE-92-16;
Multiplicity Distributions in Small Phase-Space Domains in Central Nucleus-Nucleus Collisions

Backovic 91 JINR-E1-91-376;
The Temperatures of Negative Pions in Light Ions Collisions with Carbon and Tantalum Nuclei at 4.2 A GeV/c

Backovic 92 Z. Phys. C53:613, 1992;
Scaling of Multiplicity in Nucleus-Nucleus Interactions

Backovic 92B Phys. Rev. C46:1501, 1992;
Temperature of Negative Pions in Inelastic (deuteron, He, C) + (C, Ta) Collisions at 4.2 A GeV/c

Backovic 92C Yad. Phys. 56-4:211, 1993; JINR-P1-92-262;
Dependence of Spectra and Cross Sections of Proton Yield at Fixed Angles on the Atomic Weight of Colliding Nuclei in Nucleus-Nucleus Interactions at 4.2 GeV/c per Nucleon

Baechler 91 Nucl. Phys. A525:221C, 1991;
Strangeness Enhancement in Central S S Collisions at 200 GeV/Nucleon

Baechler 91B Nucl. Phys. A525:59C, 1991;
Pion and Proton Spectra in ^{32}S S Collisions at 200 GeV/Nucleon

Baechler 91C Nucl. Phys. A525:689C, 1991; CERN-PRE-90-054; LBL-29578;
Proton Rapidity Distributions from 60 GeV/N ^{16}O + Au Collisions

Bagdasaryan 88 YERE-1077(40)-88;
Measurement of the Spectra of (e^-, e^-) Scattering from ^{9}Be and ^{12}C Nuclei in the Inelastic Region at Q^2> 0.4 GeV/c

See the legend on page 7.

Bagdasaryan 90 YERE-1216(2)-90;
Phenomenological Analysis of Experimental Data on Photoproduction of π^0 Mesons

Bagheri 88 Phys. Rev. C38:885, 1988; TRI-PP-87-90;
Reaction $\pi^- p \to \pi^0 n$ below $\Delta(1232\, P_{33})$ Resonance

Bagheri 88B Phys. Rev. C38:875, 1988; TRI-PP-87-89;
Reaction $\pi^- p \to \gamma n$ below $\Delta(1232\, P_{33})$ Resonance

Baglin 89 Phys. Lett. 220B:471, 1989;
The Production of $J/\psi(1S)$ in 200 GeV/Nucleon Oxygen-Uranium Interactions

Baglin 89B Phys. Lett. 225B:296, 1989; CERN-EP-89-60;
Precision Measurements of $\bar{p}\, p$ Elastic Scattering Cross Section at 90° in Incident Momentum Range between 3.5 GeV/c and 5.7 GeV/c

Baglin 89C Phys. Lett. 231B:557, 1989; CERN-EP-89-95;
Measurement of the $\phi\, \phi$ Cross Section in $\bar{p}\, p$ Annihilation at E_{cm}=3 GeV

Baglin 90 Phys. Lett. 251B:465, 1990;
Transverse Momentum of $J/\psi(1S)$ Produced in Oxygen-Uranium Collisions at 200 GeV per Nucleon

Baglin 90B Phys. Lett. 251B:472, 1990;
Transverse Energy Distribution in Nucleus-Nucleus Collisions at 200 GeV/Nucleon

Baglin 91 Phys. Lett. 255B:459, 1991;
Study of $J/\psi(1S)$ Production in p U, O U and Si U Interactions at 200 GeV per Nucleon

Baglin 91B Phys. Lett. 262B:362, 1991;
Transverse Momentum of $J/\psi(1S)$ Production in p Cu, p U, ^{16}O Cu, ^{16}O U and ^{32}S U Collisions at 200 GeV per Nucleon

Baglin 91C Phys. Lett. 268B:453, 1991;
Initial State Interactions and $J/\psi(1S)$ Production in Nucleus-Nucleus Collisions

Baglin 91D Phys. Lett. 272B:449, 1991;
ϕ, $\rho(770)$ and $\omega(783)$ Production in p U, O U and Si U Reactions at 200 GeV per Nucleon

Baglin 91E Phys. Lett. 270B:105, 1991;
$J/\psi(1S)$ and Muon-Pair Production Cross Sections in Proton-Nucleus and Nucleus-Nucleus Collisions at 200 GeV per Nucleon

Baglin 92 Nucl. Phys. B368:175, 1992;
Measurement of the $\pi^0\, \pi^0$ Cross Section in $\bar{p}\, p$ Annihilations at $\sqrt{s}$=3.0 GeV

Bai 90 Phys. Rev. Lett. 65:686, 1990; SLAC-PUB-5191;
Measurement of the Absolute Inclusive Leptonic Decay Branching Fraction of the D_S^+ Meson

Bai 90B Phys. Rev. Lett. 65:1309, 1990; SLAC-PUB-5159;
Observation of a Pseudoscalar State in $J/\psi(1S) \to \gamma\, \phi\, \phi$ near $\phi\, \phi$ Threshold

Bai 90C Phys. Rev. Lett. 66:1011, 1991; SLAC-PUB-5341; UHUC-HEPG-90-69;
Measurement of the Hadronic Structure of Semileptonic D^0 and D^+ Decays

Bai 90D Phys. Rev. Lett. 65:2507, 1990; SLAC-PUB-5275;
Partial Wave Analysis of $J/\psi(1S) \to \gamma\, K_S\, K^\pm\, \pi^\mp$

Baillon 92 CERN-PPE-92-178;
Detection of Very High Energy Gamma Rays from the CRAB Source

Bailly 87C Z. Phys. C36:545, 1987; Yad. Phys. 49:1014, 1989; Sov. J. Nucl. Phys. 49:631, 1989; CERN-EP-87-108; IFVE-88-64;
Inclusive Production of $\rho(770)^0$ and $f_2(1270)$ Mesons in $\pi^- p$ Interactions at 360 GeV/c

Bailly 87F Z. Phys. C40:13, 1988; CERN-EP-87-113-Rev.;
Two Particle Correlations in 360 GeV/c $\bar{p}\, p$ Interactions

Bailly 87H Yad. Phys. 48:1333, 1988; Sov. J. Nucl. Phys. 48:848, 1988; IFVE-87-188;
Longitudinal Distribution of Charged Particles Produced in 360 GeV/c $\pi^- p$ Interactions on EHS

Bailly 88 Z. Phys. C40:215, 1988; CERN-EP-88-10;
Rapidity Dependence of Multiplicity Distributions in Proton-Nucleus Collisions at 360 GeV/c

Bailly 88B Phys. Lett. 206B:371, 1988; CERN-EP-87-220;
Event Shape in Momentum Space of Proton-Proton Interaction at 360 GeV/c and Comparison to $e^+ e^-$ Data

Bailly 88C Z. Phys. C37:7, 1988; IFVE-87-80; CERN-EP-87-118;
The Impact Parameter Analysis of Proton-Proton Elastic and Inelastic Interactions at 360 GeV/c

Bailly 88E Z. Phys. C43:341, 1989; CERN-EP-88-177;
Bose-Einstein Correlation for Pions Produced in $\bar{p}\, p$ Collisions at 360 GeV/c

Bajramov 89 Yad. Phys. 49:1337, 1989;
Study of Partial Inelasticity Coefficients of Charged Secondary Pions in Hadron-Nucleus Interactions at High Energies

Bakatanov 88 Pisma Zh. Eksp. Teor. Fiz. 48:121, 1988; Jetp Lett. 48:129, 1988;
Cross Section of the Photoproduction at the Photon Energy from 0.9 to 10 TeV

Bakatanov 92 Yad. Phys. 55:2107, 1992;
Cosmic Ray Muon and Primary Nucleon Intensity from the Baksan Underground Scintillation Telescope

Baker 88 Nucl. Phys. A483:631, 1988;
Measurement of X-Rays from Anti-Protonic Hydrogen and Deuterium

Baker 89 Phys. Rev. D40:2753, 1989; Phys. Rev. D41:1715, 1990;
Measurement of Muon-Neutrino-Electron Elastic Scattering in the Fermilab 15 Foot Bubble Chamber

Baker 90 Phys. Rev. D41:2653, 1990;
ν_μ-ν_l Universality in Charged Current Neutrino Interactions

Baker 91 Phys. Rev. D43:2765, 1991;
$\mu^- e^+$ Dilepton Production in Charged-Current ν_μ Interactions

Balats 87 Yad. Phys. 49:1332, 1989; Sov. J. Nucl. Phys. 49:828, 1989; ITEP-87-186;
Search for $K_S \to 2\gamma$ Decay

Balats 92 ITEP-92-85;
The Research of Semi-inclusive Processes with Deep Fragmentation at the Detector "SFINKS"

Baldin 88 Pisma Zh. Eksp. Teor. Fiz. 48:127, 1988; Jetp Lett. 48:137, 1988;
Measurement of the Antiproton Yield in the Collisions of C with Cu at the Energy 3.65 GeV/N

Baldin 88B Yad. Phys. 48:995, 1988;
Clusterization in Four-dimensional Relative Velocity Space and Invariant Distribution of Hadron Jets

Baldin 88C Yad. Phys. 49:1304, 1989; JINR-P1-88-331;
Automodel Properties of Baryon Clusters in Interactions of p, deuteron, He, C and π^- Particles with Carbon Nuclei within 4 – 40 GeV/c per Nucleon Momentum Interval

Baldin 90	Kr. Soob. Fiz. 6:42, 1990; **Anomalies in the β Decay Detected by D.V. Skobeltsyn and New Resonances in QED**
Baldin 90B	Nucl. Phys. A519:407C, 1990; **Subthreshold Antiproton Production in Nucleon-Nucleus and Nucleus-Nucleus Collisions**
Baldin 90C	Yad. Phys. 52:1427, 1990; JINR-P1-90-263; **Investigation of a Possibility of a Quasi-Stationary State Production in the Relativistic Nucleus-Nucleus Collisions**
Baldin 92	Kr. Soob. JINR 54:20, 1992; **Kaon and Pion Production Cross Sections in p+C, H_2+C and C+C Collisions as a Function of Projectile Energy from 2.5 to 8.1 GeV/Nucleon**
Baldisseri 90	LAPP-T-90-02; **Etude des Resonances de Basse Masse ρ, ω, ϕ dans les Collisions S-U et O-U a 200 GeV/nucleon**
Baldwin 92	Phys. Rev. C46:258, 1992; **Inclusive Neutron Cross Section from Ne-Pb Collisions at 790 MeV/Nucleon**
Balestra 88	Phys. Lett. 215B:247, 1988; **p ^{3}He Reaction Cross Section at 200 MeV/c**
Balestra 89	Phys. Lett. 217B:43, 1989; **An Observation of a Leading Meson in p Ne Reaction at 600 MeV/c Incident Momentum**
Balestra 89B	Phys. Lett. 230B:36, 1989; CERN-EP-89-03; **Antiproton-Helium Annihilation around 45 MeV/c**
Balestra 89C	Nucl. Phys. A491:541, 1989; **Antiproton-Neon Annihilation at Rest and at 607 MeV/c**
Balestra 89D	Nucl. Phys. A491:572, 1989; **Evidence of Isospin Effects in Antiproton-Nucleus Annihilation**
Balestra 90	OSLO-90-25; **Note on Possible Production of Glueballs in p ^{4}He Reactions at 0.6 GeV/c Incident Momentum**
Balestra 90B	OSLO-90-28; **Anomalous Emission of Glueball Candidates in the Reaction p Ne at 607 MeV/c**
Balestra 91	Phys. Scr. 43:456, 1991; OSLO-90-17; CERN-PRE-90-047; **Possible Production of Glueballs in p ^{4}He Reactions at 0.6 GeV/c Incident Momentum**
Balestra 91B	Nucl. Phys. A526:415, 1991; **Strangeness Production in Antiproton Annihilation at Rest on ^{3}He, ^{4}He, and ^{20}Ne**
Balgansuren 88	JINR-P1-88-503; **The Study of Dibaryon States in deuteron p Interactions**
Balke 88	Phys. Rev. D37:587, 1988; **Precise Measurement of the Asymmetry Parameter Δ in Muon Decay**
Ball 88	Z. Phys. C40:193, 1988; **Measurement of the Spin Correlation A_{00kk} in n p Elastic Scattering between 0.63 and 1.08 GeV**
Ballagh 86	Phys. Rev. D37:1744, 1988; UCPPG-86-7-17; **Observation of Coherent $\rho(770)^+$ Production in Neutrino-Neon Interactions**
Ballagh 89	Phys. Rev. D40:2764, 1989; **Left-Right Asymmetry in Neutrino Produced Hadron Jets**
Baller 88	Phys. Rev. Lett. 60:1118, 1988; **Comparison of Exclusive Reactions at Large T**
Baloshin 87	Sov. J. Nucl. Phys. 48:770, 1988; Yad. Phys. 48:1213, 1988; ITEP-87-137; **Evidence of Resonance with Mass of 3075 MeV/c^2 and Spin 4 in $\pi^- p \to K_S K_S n$ at 40 GeV/c**
Baltrusaitis 88	Nucl. Instr. and Meth. A264:87, 1988; **The Fly's Eye Detector: Present and Future**
Balysh 92	Phys. Lett. 283B:32, 1992; **The Heidelberg-Moscow Double Beta Decay Experiment with Enriched ^{76}Ge. First Results**
Bambade 92	LAL-92-31; CERN-PPE-92-35; **DELPHI Results on the $Z^0 \to B\bar{B}$ Partial Width and on the Average B Hadrons Semileptonic Branching Ratio**
Bamberger 88	Phys. Lett. 203B:320, 1988; CERN-PRE-87-141; LBL-24646; **Probing the Space-Time Geometry of Ultrarelativistic Heavy-Ion Collision**
Bamberger 88B	Phys. Lett. 205B:583, 1988; **Charged Particles Multiplicities and Inelastic Cross Sections in High Energy Nuclear Collisions**
Bamberger 89	Z. Phys. C43:25, 1989; MPI-PAE-EXP-EL-198; **A Study of K^0, Λ and $\bar{\Lambda}$ Production in 60 GeV and 200 GeV per Nucleon O Au and p Au Collisions with a Streamer Chamber Detector at the CERN SPS**
Band 88	Phys. Lett. 200B:221, 1988; **Additional Evidence for B^0-$\bar{B}^0$ Mixing**
Band 89	Phys. Lett. 218B:369, 1989; SLAC-PUB-4871; **A Measurement of the $e^+e^- \to B\bar{B}$ Forward-Backward Charge Asymmetry at $\sqrt{s}$=29 GeV**
Bando 90	Int. Jour. Mod. Phys. A5:4021, 1990; **Production, Structure and Decay of Hypernuclei**
Banerjee 88	Z. Phys. C41:17, 1988; **General Features of K^+ deuteron Interactions at 70 GeV/c**
Banerjee 89	Phys. Rev. Lett. 62:12, 1989; **Λ and $\bar{\Lambda}$ Production from Proton-Antiproton Collisions at $\sqrt{s}$=1.8 TeV**
Banerjee 91	Int. Jour. Mod. Phys. A7:1853, 1992; TIFR-EHEP-91-1; **Z^0 Parameters and M_{top} from LEP 1990 Data**
Banks 90	RALT-122; **Measurement of the Tau Branching Ratios and Polarization at LEP**
Bannik 87	Z. Phys. A329:341, 1988; JINR-P1-87-546; **Observation of Particle Collective Flux in the Collisions of 4.1 A GeV/c ^{22}Ne with Ag, Br Emulsion Nuclei**
Bannikov 88	Z. Phys. C49:245, 1991; JINR-E1-88-476; **Evidence for High Twist Mechanisms in High p_T $\pi^- p$ Events with Prompt $\rho(770)^0$ Production at 38 GeV/c**
Bannikov 89	Yad. Phys. 51:749, 1990; JINR-P1-89-308; **Production of Backward Protons with Momenta 0.2 - 0.5 GeV/c in Lab. System which Are Generated in π^- nucleus Interactions at 40 GeV/c**

See the legend on page 7.

Bannikov 89B JINR-E1-89-486;
Resonance Pattern of Low Muon Pairs Produced in 38 GeV/c π^- C Interactions

Bannikov 90 Yad. Phys. 52:1040, 1990; JINR-P1-90-286;
About Rescattering Contribution to the Production of High p_T Particles in the π^- A Interactions at 38 GeV/c

Bannwarth 92 FREI-MEP-92-01;
Production of Charged Pions in Neutron-Proton Collisions

Barabash 88 ITEP-88-104;
Search for 2β (2ν) Decay of ^{96}Zr by Nuclear Emulsion

Barabash 89 Phys. Lett. 223B:273, 1989;
Result of the Experiment on Search for Double β Decay of ^{136}Xe, ^{134}Xe and ^{124}Xe

Barabash 89B ITEP-89-130;
Status Report on Double β Decay Experiment in the USSR

Barabash 89C ITEP-89-125;
Search for Double β Decay of ^{116}Cd to First Exited State of ^{116}Sn

Barabash 89D ITEP-89-184;
Search for Double β Decay of ^{100}Mo to the Exited States of ^{100}Ru

Barabash 90 Yad. Phys. 51:3, 1990;
Results of ^{136}Xe Double β Decay Experiment

Barabash 90B Phys. Lett. 249B:186, 1990;
Search for Double β Decay of ^{100}Mo and ^{116}Cd to Exited State of ^{100}Ru and ^{116}Sn

Barabash 90C ITEP-90-131;
Search for 2β Decay of ^{96}Zr and ^{94}Zr with Photographic Emulsion

Barabash 92 Yad. Phys. 55:3247, 1992; Phys. Lett. 295B:154, 1992;
Restraints on Light Higgs Boson Mass from π-, K-, and $\eta'(958)$-Meson Decays in Proton Beam-Dump Experiment

Baran 88B Phys. Rev. Lett. 61:400, 1988;
$\Delta(1232\, P_{33})$ Electroproduction and Inelastic Charge Scattering from Carbon and Iron

Baranov 90 Yad. Phys. 53:1302, 1991; JINR-P1-90-464;
Search for $\mu^+ \to e^+ e^+ e^-$ Decay

Baranov 91B Yad. Phys. 54:1298, 1991;
On $\pi^+ \to \mu^- 2e^+ \nu$ Decay

Baranov 91C Yad. Phys. 55:2940, 1992; JINR-P1-91-564;
Measurement of Decay $\pi^+ \to e^+ \nu_e e^+ e^-$

Barbarogalti 89 LBL-26917;
The Search for the Top Quark

Barbarogalti 90 FERMILAB-CONF-90-42-E; LBL-28673;
Search for the Top Quark in Electron-Muon Events with CDF

Barbarogalti 91 FERMILAB-CONF-91-66-E;
Search for the Top Quark with CDF

Barbarogalti 92 FERMILAB-CONF-92-45-E;
Heavy Flavor Physics at Hadron Colliders

Barbera 90 Nucl. Phys. A518:767, 1990;
Evidence of a Two-Source Emission for Light Charged Particles in Coincidence with Pions Produced in ^{16}O ^{27}Al Collisions at 94 MeV/Nucleon

Barbier 88 Phys. Rev. D37:1113, 1988;
Correlation among the Particles Produced in Proton Interactions with Emulsion Nuclei at 800 GeV/c

Barbier 88C Phys. Rev. Lett. 60:405, 1988;
Central Collisions of 14.6, 60, and 200 GeV/Nucleon ^{16}O Nuclei in Nuclear Emulsion

Barbieri 88B Phys. Rev. Lett. 61:27, 1988; UM-PP-88-143;
Limit on the Magnetic Moment of the Neutrino from Supernova SN1987A Observations

Bardadinotwi 92 CERN-PPE-92-6;
Limits on Compositeness from Lepton and Photon Channels at LEP

Bardadinotwi 92B PCCF-RI-9209;
Compositeness at LEP

Bardin 91 Phys. Lett. 257B:514, 1991; CERN-PPE-91-30;
Precise Determination of the Electromagnetic Form Factor of the Proton in the Time-Like Region up to S=4.2 GeV^2

Bardin 91B Phys. Lett. 255B:149, 1991;
Measurement of the Proton Electromagnetic Form Factor near Threshold in the Time-Like Region

Bardin 92 Yad. Phys. 55:1563, 1992;
Proton E.M. Form Factor: Accurate Measurements in the Time-Like Region for Incident $\bar{p}$ Momentum Ranging from 300 to 900 MeV/c

Bari 91 Nuovo Cim. 104A:1787, 1991; CERN-PRE-91-91; DFUB-91-5;
The Λ_b Beauty Baryon Production in Proton-Proton Interactions at $\sqrt{s}$=62 Gev: a Second Observation

Bari 91B Nuovo Cim. 104A:571, 1991;
A Measurement of Λ_c^+ Baryon Production in Proton-Proton Interactions at $\sqrt{s}$=62 GeV

Baringer 88 Phys. Lett. 206B:551, 1988; CLEO-87-8; CLNS-87-105;
Production Cross Section and Electroweak Asymmetry of $D^*(2010)$ and D Mesons Produced in $e^+ e^-$ Annihilation at 29 GeV

Barish 88 Phys. Rept. 157:1, 1988;
The Physics of the Tau Lepton

Barish 91 CALT-68-1766;
Non-Accelerator Physics

Barit 91 INR-91-726;
Phase Analysis of Deuteron Scattering on ^{4}He Nucleus at the 0.87 – 4.81 MeV Energies

Barker 90 Phys. Rev. D41:3546, 1990; EFI-90-15;
A New Limit on $K_L \to \pi^0 e^+ e^-$

Barker 91 EFI-91-04;
Recent K^0 Decay Results from Fermilab E-731

Barklow 90 SLAC-PUB-5196; LBL-28581;
Searches for Supersymmetric Particles Produced in Z^0 Boson Decay

Barklow 92 Phys. Rev. Lett. 68:13, 1992; SLAC-PUB-5600;
Search for the Final State $\tau^+ \tau^- \to e^+ e^-, \tau^+ \tau^- \to \mu^+ \mu^-, \tau^+ \tau^- \to \pi^+ \pi^-$ Annihilation at $\sqrt{s}$=29 GeV

Barkov 88 Yad. Phys. 47:393, 1988;
The Investigation of Multipion Creation with the Cryogenic Magnetic Detector at the VEPP-2M Storage Ring

Barkov 89 NOVO-89-15;
Investigation of the Process $e^+ e^- \to \pi^+ \pi^- \pi^0$ at the Energy Range 2.420 – 2.510 MeV on VEPP-2M with the Help of Cryogenic Magnetic Detector

Barkov 90 ITEP-90-79;
Beam Fragmentation Production of K_S K_L and K_L π^0 Systems in $K^- p$ Interaction at 40 GeV/c

Barlag 88 Z. Phys. C39:451, 1988; MPI-PAE-EXP-EL-192; CERN-PRE-88-045;
Production of D, $D^*(2010)$ and D_S^+ Mesons in 200 GeV/c π^-, K^- and p Si Interactions

Barlag 88B Phys. Lett. 218B:374, 1989; CERN-EP-88-105;
Precise Determination of the Lifetime of the Charmed Baryon Λ_c^+

Barlag 88C CERN-EP-88-103;
Results on Λ_c^+, D_S^+, D^0 and D^+ Decay Properties from the NA32 Experiment

Barlag 88D CERN-EP-88-104;
Results on Λ_c^+, D_S^+, D^0 and D^+ Production Properties in 230 GeV π^- Cu Interactions from the NA32 Experiment

Barlag 89 CERN-EP-89-43;
Measurement of the Mass and Lifetime of the Charmed Strange Baryons $\Xi_c(2460)^+$ in Two New Decay Modes

Barlag 89B Phys. Lett. 232B:561, 1989;
Measurement of Branching Ratios and Branching Fractions of the Charmed Meson D^0

Barlag 89C Phys. Lett. 233B:522, 1989; CERN-EP-89-145;
Measurement of the Mass and Lifetime of the Charmed Strange Baryon

Barlag 90 Phys. Lett. 236B:495, 1990; CERN-EP-90-08;
First Measurement of the Lifetime of the Charmed Strange Baryon

Barlag 90B Z. Phys. C46:563, 1990; CERN-PRE-90-002; MPI-PAE-EXP-EL-220;
Measurement of the Masses and Lifetimes of the Charmed Mesons D^0, D^+ and D_S^+

Barlag 90C CERN-EP-90-47;
Measurement of Frequencies of Various Decay Modes of Charmed Particles D^0, D^+, D_S^+ and Λ_c^+ Including the Observation of New Channels

Barlag 90D Phys. Lett. 247B:113, 1990; CERN-EP-90-77;
Production of the Charmed Baryon Λ_c^+ in π^- Cu and K^- Cu Interactions at 230 GeV

Barlag 90E Z. Phys. C49:555, 1991; CERN-PPE-90-145;
Production Properties of D^0, D^+, $D^*(2010)^+$ and D_S^+ in 230 GeV/c π^- and K^- Cu Interactions

Barlag 90F Z. Phys. C48:29, 1990;
Measurement of Various Decay Modes of Charmed Particles D^0, D^+, D_S^+, and Λ_c^+

Barlag 91 Phys. Lett. 257B:519, 1991;
Azimuthal Correlations between Charmed Particles Produced in 230 GeV/c π^- Cu Interactions

Barlag 92 Phys. Lett. 278B:480, 1992; CERN-PPE-92-17;
Measurement of the Mass and Width of the Charmed Meson $D^*(2010)^+$

Barlag 92B Phys. Lett. 283B:465, 1992;
An Observation of Exclusive Λ_c^+ Decays into Σ^+ and Mesons

Barlett 91 Phys. Lett. 264B:21, 1991;
Inclusive Quasielastic Spin Observables for $p\vec{p}$ H_2, ^{12}C at 500 MeV

Barloutaud 88 DPHPE-88-15;
Review of Nucleon Decay Experiments

Barloutaud 91 DPHPE-91-16;
Status of the Search for Matter Stability

Barlow 88 Nucl. Instr. and Meth. A271:471, 1988;
Production of High Momentum Negative Pions by 800 MeV Protons at 0° to 20°

Barlow 88B Phys. Rev. C37:1977, 1988;
Measurement of the Spin Correlation Parameters $A_{\parallel}$ and $A_{\perp}$ for the Reaction $p\,p \to$ deuteron π^+

Barlow 89 Phys. Rev. Lett. 62:1009, 1989;
Measurement of the Spin-Rotation Parameters A and R for $\pi^+ p \to \pi^+ p$ and $\pi^- p \to \pi^- p$ Scattering from 471 to 625 MeV/c

Barlow 92 Phys. Rev. C45:293, 1992;
^{3}He and ^{4}He Production by 800 MeV Protons from ^{12}C, Ti, and Pb at Forward Angles

Barmin 87 Yad. Phys. 47:1011, 1988; ITEP-87-108;
Measurement of the Probability of $K^+ \to \mu^+ \nu \gamma$ Decay

Barmin 88B Yad. Phys. 48:1719, 1988; Sov. J. Nucl. Phys. 48:1032, 1988; ITEP-88-71;
The Measurement of the Probability of $K^+ \to \pi^0 \pi^0 e^+ \nu$ Decay

Barmin 89 Yad. Phys. 50:3, 1989;
Radiative Capture of Stopped π^- Mesons by Xenon Nuclei

Barmin 89B Yad. Phys. 50:679, 1989;
The Measurement of the $K^+ \to \pi^+ \pi^+ \pi^- \gamma$ Decay Probability

Barmin 90 Yad. Phys. 53:981, 1991; ITEP-90-112;
Measurement of Branching Ratio for $K^+ \to e^+ \pi^0 \nu \gamma$ Decay

Barmin 90D ITEP-90-19;
Production of Λ Hyperons and K_S Mesons in Annihilation of Antiprotons in Xe Nuclei at Rest and at 0.4 – 0.9 GeV/c

Barmin 91 Yad. Phys. 55:976, 1992; ITEP-91-93;
Experimental Restrictions on Probability of Decays $K^+ \to e^+ 2\pi^0 \nu_e \gamma$ and $K^+ \to e^+ 3\pi^0 \nu_e$

Barnes 88 Phys. Lett. 206B:146, 1988; CERN-EP-87-209;
A Measurement of Cross Sections for ^{16}O Al and ^{16}O Pb Interactions at 60 and 200 GeV/c per Nucleon

See the legend on page 7.

Barnes 89 Nuovo Cim. 102A:541, 1989;
Study of the Reaction $p\,p \to \Lambda\,\Lambda$ Close to Threshold at LEAR

Barnes 89B Phys. Lett. 229B:432, 1989; CERN-EP-89-78;
Threshold Measurement of the Reaction $p\,p \to \Lambda\,\Lambda$ at LEAR

Barnes 90 Phys. Lett. 246B:273, 1990; CERN-EP-90-40;
Measurement of the Reaction $p\,p \to \Lambda\,\Sigma^0$ + CC at 1.695 GeV/c

Barnes 90B Nucl. Phys. A526:575, 1991; CERN-PPE-90-169;
Study of the Reaction $p\,p \to \Lambda\,\Lambda$ at 1.546 and 1.695 GeV/c

Baroni 90 Nucl. Phys. A516:673, 1990; CERN-EP-90-05;
Electromagnetic Dissociation of 200 GeV/Nucleon ^{16}O and ^{32}S Ions in Nuclear Emulsions

Baroni 91 Nucl. Phys. A531:691, 1991; CERN-PPE-91-3;
Interaction of 200 GeV/Nucleon ^{16}O and ^{32}S Ions in Nuclear Emulsion

Baroni 92 Nucl. Phys. A540:646, 1992; CERN-PPE-92-8;
The Electromagnetic and Hadronic Diffractive Dissociation of ^{16}O Ions

Barr 88 Phys. Lett. 214B:303, 1988; MZ-ETAP-88-18; CERN-PRE-88-057;
Search for the Decay $K_L \to \pi^0\,e^+\,e^-$

Barr 90 CERN-EP-90-01;
NA31 Results on CP Violation in K Decays, and a Test of CPT

Barr 90B Phys. Lett. 235B:356, 1990; CERN-EP-89-156;
Search for a Neutral Higgs Particle in the Decay Sequence $K_L \to \pi^0$ higgs and higgs $\to e^+\,e^-$

Barr 90C Phys. Lett. 242B:523, 1990; CERN-EP-90-69;
Observation of the Decay $K_L \to \pi^0\,2\gamma$

Barr 90D Phys. Lett. 240B:283, 1990; CERN-PPE-90-11; MZ-ETAP-90-7;
Measurement of the Rate of the Decay $K_L \to e^+\,e^-\,\gamma$ and Observation of a Form Factor in this Decay

Barr 91 Phys. Lett. 259B:389, 1991; CERN-PPE-91-56;
Observation of the Decay $K_L \to e^+\,e^-\,e^+\,e^-$

Barr 92 Phys. Lett. 284B:440, 1992; CERN-PPE-92-110;
A Measurement of the Decay $K_L \to \pi^0\,\gamma\,\gamma$

Barrette 90 Phys. Rev. Lett. 64:1219, 1990;
Energy Flow and Stopping in Relativistic Heavy Ion Collisions at E_{lab}/A = 14.6 GeV

Barrette 90B Phys. Lett. 252B:550, 1990;
Search for Strange Quark Matter in High-Energy Heavy-Ion Collisions

Barrette 90C Phys. Rev. C41:1512, 1990;
Electromagnetic Dissociation of ^{28}Si at E_{lab}/A = 14.6 GeV by Nucleon Emission

Barrette 91 Nucl. Phys. A525:91C, 1991;
Forward Baryon Emission and Charged Multiplicity in Si-nucleus Collisions

Barrette 92 Phys. Rev. C45:2427, 1992;
Electromagnetic Dissociation of Relativistic ^{28}Si into p+Al

Barrette 92B Phys. Rev. C45:819, 1992;
Forward Baryons in Relativistic Nucleus-Nucleus Collisions

Barrette 92C Phys. Rev. C46:312, 1992;
Charged Particle Multiplicity in ^{28}Si + Al, Cu and Pb Reactions at E_{lab} = 14.6 GeV/Nucleon

Bartels 88 Z. Phys. C38:85, 1988;
Spectra of Negative Particles and Photons in Collisions of p-Wt and ^{16}O-Wt at 200 GeV/N

Bartelt 87 Phys. Rev. D36:1990, 1987; Phys. Rev. D40:1701, 1989;
Monopole-Flux and Proton-Decay Limits from the SOUDAN-I Detector

Bartke 89 Int. Jour. Mod. Phys. A4:1319, 1989;
Relativistic Heavy Ion Reactions

Bartke 90 Z. Phys. C48:191, 1990;
Neutral Strange Particle Production in Sulphur-Sulphur and Proton-Sulphur Collisions at 200 GeV/Nucleon

Baru 89 Z. Phys. C42:505, 1989;
A Search for $f_4(2220)$ and $X(2200)$ in Radiative Decays of the $\Upsilon(1S)$ Meson

Baru 90 Z. Phys. C48:581, 1990; NOVO-90-53;
Measurements of Two-Photon Widths of the $a_2(1320)$, η', η

Baru 91 Z. Phys. C54:229, 1992; NOVO-91-110;
Measurement of the Branching Ratio for $\Upsilon(1S)$ State into $\mu^+\,\mu^-$ and Search for Decays $\Upsilon(1S) \to \pi^+\,\pi^-$, $K^+\,K^-$, $p\,\bar{p}$

Baru 92 Z. Phys. C53:219, 1992; NOVO-91-52;
Total Cross Section of Two Photon Production of Hadrons

Baru 92B Z. Phys. C56:547, 1992; BUDKERINP-92-46;
Determination of the $\Upsilon(1S)$ Leptonic Width

Barwolff 88 Z. Phys. C37:337, 1988;
Neutral Strange Particle Production in High Transverse Momentum π^- nucleus Interactions at 40 GeV/c

Barz 92 Nucl. Phys. A548:427, 1992;
Analysis of Central Events in the Reaction of ^{16}O and ^{36}Ar with Emulsion at 210 and 65 MeV per Nucleon

Basdevant 90 Phys. Lett. 234B:395, 1990;
Is there Room for Charged Dark Matter?

Baskov 88 LEBD-88-143;
Electron-Positron Pair Production by γ Quanta with Energies from 13 to 25 GeV in Oriented Tungsten Crystals

Bastid 89 Nucl. Phys. A506:637, 1990; PCCF-RI-89-02;
Exclusive Measurements of Light Fragment Production at Forward Angles in Ne-Pb and Ne-NaF Collisions at E/A = 400 MeV and 800 MeV

Batkin 91 Fiz. Elem. Chastits At. Yadra 22:512, 1991;
Subthreshold Pion Production in Ion-Ion Collisions at the Intermediate Energies

Batskovich 88 Yad. Phys. 50:1613, 1989; JINR-P1-88-858;
Correlation over Multiplicity between Negative Pions and Protons-Participants in C-Ta Interactions at 4.2 GeV/c per Nucleon Momentum

Batskovich 91 Yad. Phys. 54:1126, 1991;
Scaling in Multiplicity in Nucleus-Nucleus Interactions

Battiston 92	Phys. Rept. 214:293, 1992; **Status and Perspectives of K Decay Physics**
Battle 92	Phys. Lett. 291B:488, 1992; CLNS-92-1157; CLEO-92-06; **A Measurement of the Tau Lepton Lifetime**
Baturin 88	Yad. Phys. 47:708, 1988; JINR-P1-87-71; **Determination of Nucleon Form Factor on the Basis of Data from $\pi^+ {}^7Li \to e^+ e^- X$ Reaction at 380 MeV Kinetic Pion Energy**
Baturin 91	LNPI-91-1747; **Search for Effects of Baryon Resonances in the Correlation Experiment on Studying Cumulative Protons Production in $p {}^6Li$ Interactions at the Energy 1 GeV**
Batusov 87	Yad. Phys. 47:1004, 1988; JINR-P1-87-308; **Observation of the Decays of Charmed D Mesons and $\Sigma_c(2455)^{++}$ Baryon Produced in Neutrino Emulsion Interactions**
Batusov 88	Kr. Soob. JINR 33:15, 1988; **Antiproton-^{4}He Elastic Scattering at 600 MeV/c**
Batusov 88B	Kr. Soob. JINR 33:23, 1988; **Production of Neutral Strange Particles in $\bar{p}$ ^{4}He Annihilation at 600 MeV/c**
Batusov 88C	Pisma Zh. Eksp. Teor. Fiz. 47:485, 1988; Jetp Lett. 47:569, 1988; JINR-P1-88-120; **Observation of Production and Decay of Excited (c $\bar{s}$) State with Approximately 2790 MeV/c^2 Mass in Nuclear Photoemulsion**
Batusov 89B	JINR-P1-89-875; **Estimation of $\nu_\mu \leftrightarrow \nu_\tau$ Oscillation Parameters in Hybrid Experiment E-564**
Batusov 89C	Yad. Phys. 50:1524, 1989; JINR-E1-89-222; **Production of Λ Hyperons and K_S Mesons in Annihilation of Antiproton in ^{4}He Nuclei at 600 MeV/c**
Batusov 90	JINR-E1-90-486; **Experimental Study of the Annihilation of Antiprotons at Rest in Nuclear Photoemulsion and the Optical Cascade Approach**
Batusov 90B	Yad. Phys. 52:1222, 1990; Sov. J. Nucl. Phys. 52:776, 1990; JINR-E1-90-328; CERN-PRE-90-032; **Elastic Scattering of Antiprotons on ^{4}He at 600 MeV/c**
Batusov 90C	Z. Phys. C45:557, 1990; JINR-D1-88-932; **Neutrino Production of Charmed Particles in Hybrid Experiment E-564**
Batusov 90D	JINR-E1-90-118; **Production of Neutral Strange Particles in Antiproton ^{3}He Annihilation at Rest**
Batusov 90E	Z. Phys. C48:209, 1990; JINR-E1-90-134; **Estimation of $\nu_\mu \leftrightarrow \nu_\tau$ Oscillation Parameters in the E-564 Hybrid Experiment**
Batusov 92	Yad. Phys. 56-5:6, 1993; JINR-E1-92-256; **Production of Hyperfragments by Antiprotons at Rest Annihilating on Nuclei in Nuclear Photoemulsion**
Batyunya 86	Czech. J. Phys. B38:257, 1988; JINR-P1-86-793; **Cross Section of Two Prong Exclusive Reactions in $\bar{p}$ p Interactions at 22.4 GeV/c**
Batyunya 86B	Yad. Phys. 47:127, 1988; Sov. J. Nucl. Phys. 47:83, 1988; JINR-P1-86-839; **Multiplicity Distribution of Charged Particles in $\bar{n}$ p and n p Interactions and $\bar{n}$ p Annihilation at 6.1 GeV/c**
Batyunya 87	Yad. Phys. 47:1278, 1988; JINR-P1-87-523; **Determination of the Topological Cross Sections of Inelastic deuteron deuteron Interaction at 12 GeV/c**
Batyunya 87E	Yad. Phys. 47:413, 1988; JINR-P1-87-83; **The Study of the Diffraction Processes in the $\bar{p}$ $p \to \bar{p}$ p π^+ π^- π^0 Reaction at 22.4 GeV/c**
Batyunya 87G	Sov. J. Nucl. Phys. 48:475, 1988; Yad. Phys. 48:746, 1988; JINR-P1-87-792; **The Study of $\bar{n}$ n Interactions at 6.1 GeV/c**
Batyunya 88	Yad. Phys. 48:1746, 1988; JINR-P1-88-45; **The Multiscattering Process Part in deuteron deuteron Interactions at 12 GeV/c Determination**
Batyunya 88B	Yad. Phys. 47:731, 1988; JINR-P1-87-67; **Study of the Resonance Production in $\bar{n}$ p Interactions at 6.1 GeV/c**
Batyunya 89	JINR-1-89-28; **Difference of Nonannihilation $\bar{p}$ p Interactions at 22.4 GeV/c from p p Interactions at Close Energy**
Batyunya 90	Yad. Phys. 51:1573, 1990; JINR-P1-89-556; **Peculiarities of Nonannihilation of p p Interactions at 22.4 GeV/c**
Batyunya 90B	JINR-P1-90-303; **$\rho(770)^0$, $\omega(783)$, $f_2(1270)$ and $\phi(1020)$ Meson Production in p p Interactions at 22.4 GeV/c**
Baumann 88	Phys. Rev. D37:3107, 1988; **Experimental Limit for Charge of the Free Neutron**
Bayukov 88	ITEP-88-2; **The Size and Form of the Region of Hadron-Nucleus Reactions**
Bayukov 89	Yad. Phys. 50:719, 1989; **Measurement of the Correlation Function of the Cumulative Protons in Proton-Nuclear Interactions at 7.5 GeV/c**
Bayukov 89B	Yad. Phys. 50:1023, 1989; **The Size and Shape of the Region of Emission of Secondaries in Hadron-Nucleus Reactions**
Bayukov 89C	Yad. Phys. 52:480, 1990; ITEP-89-137; **Correlation Functions of Cumulative Baryons in p nucleus and π nucleus Interactions at 3 GeV/c Initial Momentum**
Bayukov 91	ITEP-91-4; **Investigation of Nuclear Pionic Degrees of Freedom in the Reaction π nucleus $\to \pi$ π at 1.4 GeV**
Bayukov 92	Yad. Phys. 55:3261, 1992; **A (π, π π) X Reaction Study at 1.4 GeV at Small Energies Transferred to the Nucleus and Transferred Momenta of Order of p_F**
Bazhanov 88	Pisma Zh. Eksp. Teor. Fiz. 47:435, 1988, Jetp Lett. 47:515, 1988; **Measurement of Polarization Parameter M_{SOKO} in p p Scattering at 950 MeV**
Bazhanov 88B	LENI-88-1367; **Polarization in the Scattering of Polarized Protons on the Polarized Proton Target at 950 MeV**
Bazhanov 91	Pisma Zh. Eksp. Teor. Fiz. 54:549, 1991; **Vector Analyzing Power iT_{11} in the Reaction π^+ deuteron $\to p$ p at the Energy Range 350 - 450 MeV**

See the legend on page 7.

Bazhanov 93 Phys. Rev. C47:395, 1993;
Vector Analyzing Power iT_{11} in the π^+ deuteron $\to$ 2p Reaction in the Energy Region T_{π^+} = 350 - 450 MeV

Bazhenov 92 Phys. Lett. 289B:17, 1992;
Circular Polarization of γ-Quanta in $n\ p \to$ deuteron γ Reactions with Polarized Neutrons

Bazin 90 Nucl. Phys. A515:349, 1990;
Zero Degree Measurements of Isotopic Distributions in 44 MeV/N ^{86}Kr-Induced Reactions for the Production of Nuclei Far from Stability

Bean 92 Phys. Rev. Lett. 70:138, 1993; CLNS-92-1172; CLEO-92-11;
A Search for $\tau^- \to \gamma\ \mu^-$: A Test of Lepton Number Conservation

Bean 92B Phys. Rev. Lett. 70:2681, 1993; CLNS-92-1174; CLEO-92-12;
Search for Exclusive $b \to u$ Semileptonic Decays of B Mesons

Beavis 92 Phys. Rev. C45:299, 1992;
Collective Motion in Ar + Pb Collisions at Beam Energies Between 400 and 1800 MeV/Nucleon

Bebek 89 Phys. Rev. Lett. 62:8, 1989;
Search for the Charmless Decays $B \to p\ p\ \pi$ and $p\ \bar{p}\ \pi\ \pi$

Beck 90B Phys. Rev. Lett. 65:1841, 1990;
Measurement of the $p(\gamma, \pi^0)$ Cross-Section at Threshold

Beckerszendy 90 Phys. Rev. D42:2974, 1990;
Search for Proton Decay into $e^+\ \pi^0$ in IMB-3 Detector

Beckerszendy 91 Phys. Rev. D46:3720, 1992; BUHEP-91-24;
The Electron- and Muon-Neutrino Content of the Atmospheric Flux

Beckerszendy 92 Phys. Rev. Lett. 69:1010, 1992;
Search for Muon Neutrino Oscillations with the Irvine-Michigan-Brookhaven Detector

Beddo 91 Phys. Lett. 258B:24, 1991; ANL-HEP-PR-90-116;
Measurements of $\Delta\Sigma_l$ $(n\ p)$ between 500 and 800 MeV

Beene 90 Phys. Rev. C41:920, 1990;
Heavy-Ion Coulomb Excitation and Photon Decay of the Giant Dipole Resonance in ^{208}Pb

Begalli 92 Z. Phys. C55:531, 1992; DESY-92-027;
Multiplicity Structure of Inclusive Diffraction in $\pi^+\ p$ and $K^+\ p$ Interactions at 250 GeV/c

Behrend 88 Phys. Lett. 200B:226, 1988; DESY-87-127;
Upper Limit for the Decay $\tau^- \to \eta\ \pi^-\ \nu$

Behrend 88B Phys. Lett. 202B:154, 1988; DESY-87-150;
A Study of the Three- and Four-Photon Final States Produced in $e^+\ e^-$ Annihilation at $35 \leq \sqrt{s} \leq 46.8$ GeV

Behrend 88C Z. Phys. C41:7, 1988; DESY-88-060;
A Search for New Leptons

Behrend 88D Phys. Lett. 215B:186, 1988; DESY-88-052;
Neutrino Counting with the CELLO Detector and Search for Supersymmetric Particle

Behrend 88E Z. Phys. C43:91, 1989; DESY-88-193;
The $K_S\ K_S$ Final State in $\gamma\ \gamma$ Interactions

Behrend 88F Phys. Lett. 212B:515, 1988; DESY-88-086;
An Analysis of Multihadronic Events Produced with Two Energetic Leptons in $e^+\ e^-$ Annihilation

Behrend 88G Z. Phys. C43:1, 1989; DESY-88-192; LAL-88-61;
An Experimental Study of $e^+\ e^-$ Annihilation into Four Leptons at $\sqrt{s} \geq 35$ GeV

Behrend 89 Phys. Lett. 218B:493, 1989; DESY-88-185;
Measurement of the Reaction $\gamma\ \gamma \to \rho(770)^+\ \rho(770)^-$ with the CELLO Detector

Behrend 89B Z. Phys. C47:1, 1990; DESY-89-008;
Measurement of Inclusive γ, π^0 and η Production in $e^+\ e^-$ Annihilation at $\sqrt{s}$=35 GeV

Behrend 89C Z. Phys. C44:63, 1989; DESY-89-019;
Model Dependent Limits on Λ_{QCD} from $e^+\ e^-$ Annihilation in the Energy Range from 14 to 46 GeV

Behrend 89D Phys. Lett. 222B:163, 1989; DESY-89-016;
$\tau^\pm$ Production and Decay with the CELLO Detector at PETRA

Behrend 89E Z. Phys. C42:367, 1989; DESY-88-149;
$K_S\ K\ \pi$ Production in Tagged and Untagged $\gamma\ \gamma$ Interactions

Behrend 89F Z. Phys. C46:397, 1990; DESY-89-140;
Inclusive Strange Particle Production in $e^+\ e^-$ Annihilation

Behrend 89G Z. Phys. C46:583, 1990; DESY-89-177;
$a_2(1320)$ and $\pi_2(1670)$ Formation in the Reaction $\gamma\ \gamma \to \pi^+\ \pi^-\ \pi^0$

Behrend 89H Z. Phys. C46:537, 1990; DESY-89-126;
Exclusive $\tau^\pm$ Decay with the CELLO Detector at PETRA

Behrend 89I Z. Phys. C51:143, 1991; DESY-89-176;
Limits on Electron Compositeness from Bhabha Scattering

Behrend 89J Z. Phys. C47:333, 1990; DESY-89-125;
Heavy Quark Charge Asymmetries with the CELLO Detector

Behrend 90 Z. Phys. C51:149, 1991; DESY-90-149;
A Search for Substructure of Leptons and Quarks with the CELLO Detector

Behrend 90B Phys. Lett. 245B:298, 1990; DESY-90-039;
Global Properties Pion Production in the Reaction $\gamma\ \gamma \to 3\pi^+\ 3\pi^-$

Behrend 90C Phys. Lett. 257B:505, 1991; DESY-90-137;
Cross-Section Measurement and Spin Parity Analysis of the Reaction $\gamma\ \gamma \to \omega\ \rho(770)$

Behrend 90D Phys. Lett. 256B:97, 1991; DESY-90-114;
Fractal Dimensions from a 3 Dimensional Intermittency Analysis in $e^+\ e^-$ Annihilation

Behrend 90E Z. Phys. C49:401, 1991; DESY-90-110;
A Measurement of the π^0, η and η' Electromagnetic Form Factors

Behrend 90F Z. Phys. C49:43, 1991; DESY-90-066; TAUP-1801-90;
ρ^0 Production in the Reaction $\gamma\ \gamma \to 3\pi^+\ 3\pi^-$ and Search for $\gamma\ \gamma \to \rho^0\ \rho(1700)^0$

Behrend 91 Z. Phys. C51:365, 1991; DESY-91-006;
Studies of Multihadronic Final States in Photon-Photon Interactions

Behrends 92 FERMILAB-CONF-92-353-E;
Scaling Behavior of Jet Production at CDF

Beier 92	Phys. Lett. 283B:446, 1992; **Survey of Atmospheric Neutrino Data and Implications for Neutrino Mass and Mixing**
Beise 89	Phys. Rev. Lett. 62:2593, 1989; **Measurement of $\gamma\ ^{16}O \rightarrow\ ^{15}O\ n$ at Medium Energies**
Bekmirzaev 87C	Yad. Phys. 47:1284, 1988; Sov. J. Nucl. Phys. 47:817, 1988; JINR-P1-87-311; **Momentum and Angular Characteristics of π^- Mesons Produced in $n\ p$, $p\ p$, n C and n Ta Interactions at 4.2 GeV/c Momentum**
Bekmirzaev 88	Yad. Phys. 49:488, 1989; JINR-E1-88-196; **Investigation of Momentum and Angular Characteristics of Protons Produced in n C and n Ta Interaction at 4.2 GeV/c Momentum**
Bekmirzaev 88B	JINR-P1-88-617; **The Study of Neutron Interactions with Protons and Carbon Nuclei at 4.2 GeV/c**
Bekmirzaev 88C	JINR-E1-88-192; **The Study of Fast Neutron Production (P_n>1 GeV/c) in $^{12}C\ p$ and $^{12}C\ ^{12}C$ Interactions at P =4.2 GeV/c per Nucleon**
Bekmirzaev 89	Yad. Phys. 49:1030, 1989; Sov. J. Nucl. Phys. 49:637, 1989; **Fast Neutron Production (P_n>1 GeV/c) in $p\ p$ and $p\ ^{12}C$ Interactions at P =4.2 and 10 GeV/c**
Bekmirzaev 91	JINR-P1-91-495; **The Study of Secondary Neutron Production in π^- Xe – Interactions at 3.5 GeV/c**
Beladidze 92	Yad. Phys. 55:2748, 1992; IFVE-92-37; **Study of the Process π^- nucleus $\rightarrow \pi^-\ \eta'\ \eta$ nucleus at 36 GeV/c**
Belikov 89	IFVE-89-167; **Preliminary Results of the 1989 Experiment on Prompt Muon Production in 70 GeV/c p nucleus Interactions**
Belikov 90	IFVE-90-180; **Inclusive Prompt Muon Yields and Charm Production Cross Section Estimate at $\sqrt{s}$=11.5 GeV**
Bellgardt 88	Nucl. Phys. B299:1, 1988; SIN-PR-87-09; PR-87-09; **Search for the Decay $\mu^+ \rightarrow e^+\ e^+\ e^-$**
Bellini 89	Z. Phys. A333:393, 1989; **A Study of Angular Correlations of Projectile and Target Fragments in 1.4 A GeV Kr + Ag(Br) Collisions**
Bellotti 89	Phys. Lett. 221B:209, 1989; **A Search for Lepton Number Nonconservation in Double β Decay of ^{136}Xe**
Bellotti 89C	BUHEP-89-29g; **Search for Stellar Collapse with the MACRO Detector at Gran Sasso**
Bellotti 89E	BUHEP-89-29e; **Study of the Primary Cosmic Rays at E=10^{13} eV to 10^{16} eV by Simultaneous Observation of Extensive Air Showers and Underground Muons at the Gran Sasso Laboratory**
Bellotti 89F	BUHEP-89-29d; **Multiple Muon Physics with the MACRO Detector at Gran Sasso**
Bellotti 89G	BUHEP-89-29c; **Single Muon Physics with the MACRO Detector**
Bellotti 89H	BUHEP-89-29b; **A Search for Magnetic Monopoles with the MACRO Detector at Gran Sasso**
Bellotti 90	VENEZIA-90 p. 183; **MACRO at Gran Sasso : Results and Perspectives**
Bellotti 91	Phys. Lett. 266B:193, 1991; **A Search for Two Neutrino and Neutrinoless Double β Decay of ^{136}Xe in the Gran Sasso Underground Laboratory**
Belomyttsev 88	LENI-88-1391; **On Measurement of the Correlation Coefficients in Neutron β Decay with Ultracold Neutrons**
Belousov 88	Kr. Soob. Fiz. 88-7:21, 1988; **Estimation of Resonance Parameters of $\Delta(1232\ P_{33})$ from the Data on Photoproduction of π^0 Mesons on the ^{12}C Nuclei**
Belousov 91	Yad. Phys. 53:609, 1991; **Photoproduction of π^0 Mesons on Complex Nuclei at Small Angles in the $\Delta(1232\ P_{33})$ Resonance Region**
Belovitsky 91	Kr. Soob. Fiz. 8:15, 1991; **Emission of Charged Particles in Absorbtion of Stopped Negative Pions by U Nuclei**
Belovitsky 92	Yad. Phys. 55:2319, 1992; **Emission of Charged Particles at Absorbtion of Slow Negative Pions by Uranium Nuclei**
Belyaev 88	Yad. Phys. 49:473, 1989; JINR-P1-88-33; **Energy Dependence of Pions Yield in Reaction $p\ C \rightarrow \pi^+\ X$ for Proton with Energy from 15 to 67 GeV**
Belyaev 88B	JINR-P1-88-34; **The Cross Section of Pions Production at an Angle of 159 Degrees for Interactions of Protons Having Energy from 15 to 61 GeV with Carbon Nuclei**
Belyaev 88C	Kr. Soob. JINR 28:5, 1988; **Cumulative Proton Polarization in $p\ ^{12}C \rightarrow p\ X$ Reaction for Incident Protons in 17 to 62 GeV Energy Region**
Belyaev 88D	Kr. Soob. JINR 33:38, 1988; **A-dependence of Cumulative Pion Production Cross Sections in Proton Nucleus Interactions at High Energies**
Belyaev 89	Kr. Soob. JINR 34:5, 1989; **Measurement of Scattering Asymmetry of Cumulative Protons and Deuterons Emitted at Angle of 95 Degrees l.s. in p C Interactions at Energies of Incident Protons from 17 to 62 GeV. Cumulative Proton Polarization**
Belyaev 89B	JINR-P1-89-112; **The Cross Section of π^+ and π^- Production at an Angle of 159 Degrees l.s. in Proton-Nuclear Interactions at the Energy of the Incident Proton from 15 to 65 GeV**
Belyaev 89C	JINR-P1-89-463; **Spin Effects in Cumulative Production of Protons and Deuterons in Proton-Nucleus Interactions at 16 – 64 GeV**
Belyaev 90	JINR-P1-90-551; **The Cross Section of Proton and Deuteron Production at an Angle 159 Degrees of l.s. in Proton-Nuclear Interactions at the Energy of the Incident Protons from 15 to 65 GeV**

See the legend on page 7.

Belyaev 90B LENI-90-1575;
Identification of the Massive Particle-Unstable Fragment in Disintegrations Induced in Heavy Nuclei by 1 GeV Protons

Belzer 90 Yad. Phys. 52:1407, 1990;
Hadron Fragmentation on Nuclei and Intranuclear Absorbtion

Belzer 92 Yad. Phys. 55:2740, 1992;
Proton Yield Differential Cross Sections in Interactions of Protons with Nuclei at 9 GeV/c

Benayoun 92 CERN-PPE-92-156;
Experimental Evidences for the Box Anomaly in η/η' Decays and the Electric Charge of Quarks

Bendiscioli 90 Nucl. Phys. A518:683, 1990; CERN-EP-90-24;
Pionic Annihilation of Antiprotons Stopped of ^{3}He

Benedic 92 CRN-92-15;
Etude de la Production de Mesons Charmes $D^*(2010)$ dans les Desintegrations du Boson Z^0 Observees par L'Experience DELPHI a LEP

Bensinger 88 Phys. Lett. 215B:195, 1988;
Upper Limit for the $\Xi^0 \to \Sigma^0 \gamma$ Radiative Decay

Benvenuti 89 Phys. Lett. 223B:485, 1989; JINR-E1-89-540; CERN-EP-89-06;
A High Statistics Measurement of the Proton Structure Function $F_2(x, Q^2)$ and R from Deep Inelastic Muon Scattering at High Q^2

Benvenuti 89B Phys. Lett. 237B:592, 1990; CERN-EP-89-170; JINR-E1-90-284;
A High Statistics Measurement of the Deuteron Structure Functions $F_2(x, Q^2)$ and R from Deep Inelastic Muon Scattering at High Q^2

Benvenuti 89C Phys. Lett. 223B:490, 1989; CERN-EP-89-07; JINR-E1-89-541;
Test of QCD and a Measurement of Λ_S from Scaling Violations in the Proton Structure Function $F_2(x, Q^2)$ at High Q^2

Berdnikov 91 Yad. Phys. 53:200, 1991;
$(K^+, K^+ p)$ Reaction on Photoemulsion Light Nuclei at Energy of 60 MeV

Berdnikov 91B Yad. Phys. 54:350, 1991;
$(K^+, K^+ p)$ Reaction at 200 MeV

Berdnikov 91C Yad. Phys. 54:1197, 1991;
$(K^+, K^+$ deuteron$)$ Reaction at 130 and 268 MeV

Berdnikov 92 Yad. Phys. 55:2634, 1992;
$(K^+, K^0 p)$ Reactions on Photoemulsion Light Nuclei at Initial Energy 60 MeV

Berdnikov 92B IFVE-92-62;
Study of the Reaction $\pi^- p \to \eta' \eta' n$

Beretvas 90 FERMILAB-CONF-90-221-E;
Limits on the Masses of Supersymmetric Particles from 1.8 TeV $p\,p$ Collisions

Berg 91 Z. Phys. A340:297, 1991;
Neutral Meson Production in Relativistic Heavy Ion Collisions

Berge 89 Z. Phys. C49:187, 1991; CERN-EP-89-103;
A Measurement of Differential Cross Sections and Nucleon Structure Functions in Charged-Current Neutrino Interactions on Iron

Berger 88 Z. Phys. C37:329, 1988; DESY-87-104;
Tensor Meson Excitation in the Reaction $\gamma\,\gamma \to K_S\,K_S$

Berger 88B Z. Phys. C38:521, 1988; DESY-87-173;
Measurement and Analysis of the Reaction $\gamma\,\gamma \to 2\pi^+\,2\pi^-$

Berger 88C Phys. Rev. Lett. 61:919, 1988;
Identification of deuteron $p \to {}^3$He η Reaction very near Threshold: Cross Section and Deuteron Tensor Analyzing Power

Berger 88D Nucl. Instr. and Meth. A264:24, 1988;
Recent Results from the FREJUS Experiment

Berger 89 Nucl. Phys. B313:509, 1989; LAL-88-28;
Result from the FREJUS Experiment for Nucleon Decay Modes into ν + meson

Berger 89B Phys. Lett. 227B:489, 1989; LAL-89-23;
Study of Atmospheric Neutrino Interactions with the FREJUS Detector

Berger 89C Phys. Lett. 240B:237, 1990; DPHPE-89-21;
Search for Neutron-Antineutron Oscillations in the FREJUS Detector

Berger 90 Phys. Lett. 245B:305, 1990; LAL-90-21;
A Study of Atmospheric Neutrino Oscillations in the FREJUS Experiment

Berger 90B Z. Phys. C50:385, 1991; PITHA-90-20;
Results from the FREJUS Experiment on Nucleon Decay Modes with Charged Leptons

Berger 90C Z. Phys. C48:221, 1990;
A Search for High Energy Neutrinos from SN1987A, the Crab, Hercules X-1, and Cygnus X-3 with FREJUS Detector

Berger 91 Phys. Lett. 269B:227, 1991;
Lifetime Limits on $B-L$-violating Nucleon Decay and Di-nucleon Decay Modes from the FREJUS Experiment

Berggren 90 Z. Phys. C50:427, 1991; USIP-90-07;
A Determination of α_S from the Transverse Momenta of Hadrons Produced in Neutrino and Anti-Neutrino Interactions

Bergsma 88 Z. Phys. C40:171, 1988; CERN-EP-88-51;
A Search for Neutrino Oscillations

Bermon 90 Phys. Rev. Lett. 64:839, 1990;
New Limit Set on Cosmic-Ray Monopole Flux by a Large-Area Superconducting Magnetic-Induction Detector

Bernardi 88 Phys. Lett. 203B:332, 1988; CERN-EP-87-234;
Further Limit on Heavy Neutrino Coupling

Bernasconi 88 Phys. Lett. 206B:163, 1988;
Direct Photon Production in Proton-Antiproton Interactions at $\sqrt{s}$=24.3 GeV

Bernstein 88 Phys. Rev. D37:3103, 1988;
Search for New, Long-Lived, Neutral Particles

Bershady 90 Phys. Rev. Lett. 66:1398, 1991; FERMILAB-PUB-90-244-A;
Telescope Search for Multi-eV Axions

Bertani 90	Eur. Lett. 12:613, 1990; **Search for Magnetic Monopoles at the TEVATRON Collider**
Bertin 88	Nuovo Cim. 100A:305, 1988; **Low Energy Pion Yield at High Energy Accelerators as a Function of the Primary Proton Beam Momentum**
Bertin 91	LAL-91-17; **Recherche de Neutralinos dans les Desintegrations du Z^0 avec le Detecteur ALEPH au LEP**
Bertini 88	Phys. Lett. 203B:18, 1988; **Strong Energy Dependence of the Analysing Power in the $p\,p \to$ deuteron π^+ Reaction and the Question of an Isovector Dibaryon Resonance. II.**
Bertini 88B	DPH-N-SACLAY-2531B; **Spin Observables in $p\,p$ Elastic and $p\,p$ Inelastic Scattering**
Bertini 88C	DPH-N-SACLAY-2537T; **Spin Observables in $p\,n$ Elastic Scattering**
Bertini 89	Phys. Lett. 228B:531, 1989; CERN-EP-89-83; **Full Angular Distribution of the Analyzing Power in $p\,p$ Elastic Scattering at 697 MeV/c**
Bethke 88	Phys. Lett. 213B:235, 1988; DESY-88-105; **Experimental Investigation of the Energy Dependence of the Strong Coupling Strength**
Bethke 88B	LBL-25247; **Jet Physics in $e^+\,e^-$ Annihilation: Evidence for the Running of α_s**
Bethke 89	LBL-28112; **Recent Results on Jet Physics and Tests of QCD in $e^+\,e^-$ Annihilation**
Bethke 89B	Z. Phys. C43:331, 1989; **An Experimental Approach to Optimize and Test Perturbative QCD to $O(\alpha_s^2)$**
Bethke 89C	Z. Phys. C43:325, 1989; SLAC-PUB-4944; LBL-26957; **Studies of Jet Production Rates in $e^+\,e^-$ Annihilation at E_{cm}=29 GeV**
Bethke 91	Jour. de Phys. G17:1455, 1991; CERN-PPE-91-36; **Experimental Overview of Jet Physics and Tests of QCD**
Bethke 91B	HD-PY-91-5; **Tests of QCD at LEP**
Beznogikh 88	JINR-E2-88-609; **Measurement of Vector Analyzing Power of Reactions deuteron$^\uparrow$ C $\to$ p X and deuteron$^\uparrow$ C $\to$ deuteron X at 800 MeV/Nucleon**
Beznogikh 91	Kr. Soob. JINR 50:5, 1991; **Analyzing Power in deuteron C $\to$ p X and deuteron C $\to$ 2p deuteron X Reactions for Fast Protons Scattered at Large Angles**
Beznogikh 91B	Yad. Phys. 54:1333, 1991; **Analyzing Power of deuteron$^\uparrow$ C $\to$ p X and deuteron$^\uparrow$ C $\to$ $p\,p$ (deuteron) X Reactions at 0.6 – 2.1 GeV/Nucleon Energy**
Beznogikh 91C	Yad. Phys. 54:111, 1991; JINR-P1-90-52; **Narrow Resonances Search During the Investigation of $p\,p$ Scattering over an Energy Range of 116 – 199 MeV**
Bezrukov 90	Yad. Phys. 52:86, 1990; **Search for Superheavy Magnetic Monopoles in Deep Underwater Experiments at Lake Baikal**
Bhattacharje 89	Czech. J. Phys. B39:12, 1989; **The Study of Cluster Phenomenon at Accelerator Energies**
Bhattacharje 89B	Phys. Lett. 225B:459, 1989; **Empirical Regularity for Multiplicity Distribution in $p\,n$ Interactions**
Bhattacharje 89C	Acta Phys. Polon. B20:941, 1989; **Scaling of Multiplicity Distribution in $p\,n$ Interactions at High Energy**
Bhattacharje 90	Phys. Rev. D41:9, 1990; Phys. Rev. D42:2412, 1990; **Multiplicity Distribution in $p\,n$ Interaction at 400 GeV/c and Its Empirical Regularity**
Bhattacharje 91	Z. Phys. C52:265, 1991; **Clan Structure in High Energy $p\,n$, $p\,p$ and $p\,p$ Interactions**
Bhattacharyy 91	Mod. Phys. Lett. A6:2921, 1991; TIFR-EHEP-91-7; CUPP-91-7; **Bounds on Mixing Angles of Fermions with their Exotic Partners Using LEP 1990 data**
Bieler 90	Z. Phys. C49:225, 1991; SLAC-PUB-5301; DESY-90-086; **Measurement of π^0 and η Meson Production in $e^+\,e^-$ Annihilation at $\sqrt{s}$ near 10 GeV**
Bienlein 88	DESY-88-165; **Observed and Unobserved States — Crystal Ball Results on Two-Photon Physics**
Bienlein 90	DESY-90-133; **Recent Crystal Ball Results on Resonance Formation in $\gamma\,\gamma$ Reactions**
Bienlein 91	DESY-91-145-A; **Resonance Formation in $\gamma\,\gamma$ Collisions: As Observed with the Crystal Ball Detector**
Bienlein 92	DESY-92-083; **a) New Crystal Ball Data on Resonance Formation by $\gamma\,\gamma$ Collision, b) Representation of Results on $\gamma\,\gamma$ Formation of Resonances by Helicity Amplitudes**
Bienz 90	SLAC-369; **Strangeonium Spectroscopy at 11 GeV/c and Cerenkov Ring Imaging at the SLD**
Bimbot 90	Phys. Rev. C42:2367, 1990; **Nuclear Spin Response of ^{40}Ca to 800 MeV Polarized Protons**
Bini 89B	Phys. Lett. 221B:99, 1989; **A Sensitive Search for the Emission of a Neutral Particle in the Decay of the First Excited State in ^{16}O**
Bini 91	Phys. Lett. 262B:135, 1991; CERN-PPE-91-64; **Scattering of Thermal Photons by a 46 GeV Positron Beam at LEP**
Binkley 90	FERMILAB-CONF-90-28-E; **Log(s) Physics Results from CDF**
Binz 89	Phys. Lett. 231B:323, 1989; FREI-MEP-89-02; **Measurement of the ($p^\uparrow$, $n^\uparrow$) Inclusive Spin Transfer Parameters K_{0nn0} and K_{0kk0} on Carbon with 590 MeV Protons**
Binz 89B	FREI-MEP-89-03; **Measurement of the Total Cross Section Differences $\sigma_L(n\,p)$ and $\sigma_T(n\,p)$ in the Energy Range from 140 to 590 MeV**

See the legend on page 7.

Bionta 88 Phys. Rev. D38:768, 1988;
Contained Neutrino Interactions in an Underground Water Detector

Bird 88 SLAC-332;
Cerenkov Ring Imaging and Spectroscopy of Charged K^+ Interactions at 11 GeV/c

Birman 88 Phys. Rev. Lett. 61:1557, 1988; BNL-41406; IUHEE-88-5;
Partial Wave Analysis of the $K^+ K^0 \pi^-$ System

Birsa 90 Phys. Lett. 246B:267, 1990; CERN-EP-90-68;
Measurement of the Analysing Power and the Differential Cross Section of the $\bar{p}\ p$ Charge-Exchange Reaction at LEAR

Birsa 91 Phys. Lett. 273B:533, 1991; CERN-PPE-91-203;
Measurement of the Analyzing Power of the Charge-Exchange $\bar{p}\ p \to n\ n$ Reaction in the Momentum Range 546-875 MeV/c at LEAR

Bisello 88 Phys. Lett. 200B:215, 1988; LAL-87-34;
First Observation of the $\eta_c(1S) \to 2\rho(770)^0$ Decay

Bisello 88B Z. Phys. C39:13, 1988; LAL-88-01;
Study of Reaction $e^+ e^- \to K^+ K^-$ in the Energy Range 1350 $< \sqrt{s} <$ 2400 MeV

Bisello 89 Phys. Rev. D39:701, 1989; LAL-88-12;
First Observation of Three Pseudoscalar States in the $J/\psi(1S) \to \gamma\ 2\rho$ Decay

Bisello 89B Phys. Lett. 220B:321, 1989; LAL-88-47;
The Pion Electromagnetic Formfactor in the Time-Like Energy Range 1.35 $< \sqrt{s} <$ 2.4 GeV

Bisello 90 Z. Phys. C48:23, 1990; LAL-90-13;
Baryon Pair Production in $e^+ e^-$ Annihilation at $\sqrt{s}$=2.4 GeV

Bisello 90B Nucl. Phys. B350:1, 1991; LAL-90-14;
Study of the $\eta_c(1S)$ Decays

Bisello 90C Phys. Lett. 241B:617, 1990; LAL-90-12;
Study of the $J/\psi(1S) \to \gamma\ \phi(1020)\ \phi(1020)$ Decay

Bisello 90D LAL-90-35;
DM2 Results on $e^+ e^-$ Annihilation into Multi-Hadrons in the 1350 MeV - 2400 MeV Energy Range

Bisello 90E LAL-90-71;
$e^+ e^-$ Annihilation into Multi-Hadrons in the 1350 MeV - 2400 MeV Energy Range

Bisello 91 Z. Phys. C52:227, 1991; LAL-91-24;
Observation of an Isoscalar Vector Meson at 1650 MeV/c^2 in the $e^+ e^- \to K\ \bar{K}\ \pi$ Reaction

Bisello 91B LAL-91-65;
Evidence of the $\phi(1680)$ in $e^+ e^-$ Annihilation

Bisello 91C LAL-91-64;
PWA of the $e^+ e^- \to \pi^+ \pi^- \pi^+ \pi^-$ Reactions in the $\rho(1700)$ Mass Range

Bitter 89 Phys. Lett. 236B:95, 1990; PD-1989-97;
A New Experimental Limit on Neutron-Antineutron Transitions

Bityukov 87 Yad. Phys. 47:1258, 1988; IFVE-87-155;
Study of Light Mesons Radiative Decays

Bityukov 88 Phys. Lett. 203B:327, 1988; Pisma Zh. Eksp. Teor. Fiz. 45:368, 1987; Jetp Lett. 45:486, 1987; IFVE-87-35;
Observation of $f_1(1285) \to \phi\ \gamma$ Radiative Decay

Bityukov 89 IFVE-89-192;
Search for Rare Radiative Decay $f_1(1285) \to \rho(770)\ \gamma$

Bityukov 90 Z. Phys. C50:451, 1991; IFVE-90-22;
Study of the Radiative Decay $\eta' \to \pi^+ \pi^- \gamma$

Bityukov 91 Phys. Lett. 268B:137, 1991; IFVE-91-26;
Observation of Resonance with Mass M=1814 MeV Decaying into $\pi^+ \eta\ \eta$

Bityukov 91B Yad. Phys. 54:529, 1991;
Study of $\eta' \to \pi^+ \pi^- \gamma$ Decay and Search for Rare Radiative Decay $f_1(1285) \to \rho(770)\ \gamma$

Bityukov 91C Z. Phys. C54:235, 1992; IFVE-91-95;
Observation of the Decay $a_2(1320) \to \pi\ \eta'$

Bityukov 91D Z. Phys. C54:367, 1992; IFVE-91-156;
Study of the Reaction $\pi^- p \to \omega\ \omega\ n$ at P_{π^-} =36 GeV/c

Bizzeti 89 Phys. Rev. Lett. 62:2901, 1989;
Search for a Composition-Dependent Fifth Force

Bizzeti 91 Phys. Lett. 267B:286, 1991; DESY-91-051; SLAC-PUB-5400;
Measurement of the Direct Photon Spectrum from $\Upsilon(1S)$ Decay

Bjorken 88 Phys. Rev. D38:3375, 1988; FERMILAB-PUB-88-44;
Search for Neutral Metastable Penetrating Particles Produced in the SLAC Beam Dump

Blagus 91 Phys. Rev. C44:325, 1991;
^{4}H Nucleus and the deuteron (^{3}H, (^{3}H, p)) n Reaction

Blair 89 ANL-HEP-CP-89-07;
The CDF Direct Photon Analysis

Blanpied 88 Phys. Rev. C37:1987, 1988;
Elastic and Inelastic Scattering of 0.8 GeV Polarized Protons from ^{24}Mg and ^{26}Mg

Blanpied 88B Phys. Rev. C38:2180, 1988;
Elastic and Inelastic Scattering of 0.8 GeV Protons from ^{20}Ne and ^{22}Ne

Blanpied 88C Phys. Rev. C37:1304, 1988;
Elastic and Inelastic Scattering of 0.8 GeV Protons from ^{40}Ar

Blanpied 92 Phys. Rev. Lett. 69:1880, 1992;
p (γ^*, π^0) Reaction and the $E2$ Excitation of the Δ

Bleszynski 88 Phys. Rev. C37:1527, 1988;
Energy Dependence of Relativistic Effects in the Elastic Scattering of Polarized Protons from ^{16}O and ^{40}Ca

Blinov 88 Yad. Phys. 47:933, 1988;
Quasielastic Charge-Exchange Reaction $p\ ^3$He $\to n\ p\ p\ p$ at Intermediate Energies

Blinov 88B Yad. Phys. 47:889, 1988;
Limit on the Two Photon Width of the Particles with the Mass of 1.8 MeV/c^2

Blinov 90 Phys. Lett. 245B:311, 1990; NOVO-90-44;
Search for the Decay $\Upsilon(1S) \to \rho(770)^0\ \pi^0$

Blinov 90B — Nucl. Phys. A510:803, 1990;
The Quasi-Elastic Charge Exchange Reaction $p\ ^3He \to n_j\ p\ p\ p$ at Intermediate Energies

Blinov 91 — Z. Phys. C49:239, 1991;
The Search for Narrow Resonances in the Reaction $e^+\ e^- \to$ Hadrons at Centre-of-Mass Energy Range between 7.23 and 10.34 GeV

Blinov 91B — Z. Phys. C53:33, 1992; NOVO-91-71;
Pion Pair Production in Photon-Photon Collisions

Blondel 90 — Z. Phys. C45:361, 1990; CERN-EP-89-101;
Electroweak Parameters from a High Statistics Neutrino Nucleon Scattering Experiment

Bloomer 90 — Nucl. Phys. A527:595c, 1991; LBL-29552;
New Results from AGS Heavy Ion Experiments

Blum 92 — Phys. Lett. 275B:506, 1992;
Search for γ-Rays Following $\beta\ \beta$ Decay of ^{100}Mo to Exited States of ^{100}Ru

Blumenfeld 89 — Phys. Rev. Lett. 62:2237, 1989;
Search for $\nu_\mu \leftrightarrow \nu_\tau$ Oscillations

Blumlein 90 — Z. Phys. C51:341, 1991; PHE-90-03;
Limits on Neutral Light Scalar and Pseudoscalar Particles in Proton Beam Dump Experiment

Blumlein 91 — Int. Jour. Mod. Phys. A7:3835, 1992; PHE-91-11;
Limits on the Mass of Light (Pseudo)scalar Particles from Bethe-Heitler $e^+\ e^-$ and $\mu^+\ \mu^-$ Pair Production in Proton-Iron Beam Dump Experiment

Blumlein 92 — Phys. Lett. 279B:405, 1992; IFVE-91-165;
Investigation of Prompt Electron-Neutrino Production in a Proton Beam Dump Experiment with the IHEP-JINR ν Detector

Blumlein 92B — Yad. Phys. 55:2092, 1992;
Search for Direct Neutrino Produced in the Absorbtion of the Proton Beam by Iron on the IHEP-JINR Neutrino Detector

Bobodjanov 91 — Yad. Phys. 54:125, 1991;
Total Disintegration of Nuclei

Bobrakov 91 — LENI-91-1754;
The Search of Quasi-magnetic Electron-Electron Interaction in the Experiment with SQUID

Boca 90 — Z. Phys. C49:543, 1991; FERMILAB-PUB-90-148-E;
Average Fraction of Jet Momentum Carried of High p_T Leading Hadrons

Boca 92 — Nuovo Cim. 105A:865, 1992;
A Fractal Analysis of Multiparticle Production in Hadron-Hadron Collisions at $\sqrt{s}$=16.7 GeV

Bock 89 — GSI-89-12;
Source Parameters Deduced from Bose-Einstein Correlations of Two and Three Soft Pions in Symmetric Heavy Ion Interactions at 650 A MeV

Bock 89B — Mod. Phys. Lett. A3:1745, 1989;
Bose-Einstein Correlations of Positive Pions in Collisions of Nb + Nb and Au + Au at 650 A MeV

Bodek 89 — UR-1120; ER-13065-587;
A Comparison of Quark and Gluon Jets Produced in 3 Jet $e^+\ e^-$ Annihilation Events

Bodek 92 — UR-1269; ER-40685-723;
Tests of Perturbative QCD Using CCFR Data for Measurements of Nucleon Structure Functions

Boden 91 — Z. Phys. C49:175, 1991; BONN-ME-90-06;
Elastic Electron Deuteron Scattering on a Tensor Polarized Solid ND-3 Target

Boden 92 — Nucl. Phys. A549:471, 1992;
Electrodisintegration of the Deuteron in the Δ-Resonance Region

Bodmann 92 — Phys. Lett. 280B:198, 1992;
Cross Section of the Charged Current Reaction ^{12}C (ν_e, e^-) ^{12}Nit$_{g.s.}$

Boehm 88 — Nucl. Instr. and Meth. A264:114, 1988;
Neutrino Oscillation Experiments

Bogdanov 88 — Yad. Phys. 47:316, 1988;
Topological Characteristics of ^{12}C and ^{22}Ne Fragmentation on Nucleons

Bogdanov 91 — Yad. Phys. 53:900, 1991;
Investigating Momentum Characteristics of Relativistic ^{22}Ne Fragments in the Reaction Transverse Plane

Boggild 92 — CERN-PPE-92-196;
Identified Pion Interferometry in Heavy-Ion Collision at CERN

Bogolyubsky 86E — Yad. Phys. 47:1027, 1988; Sov. J. Nucl. Phys. 47:654, 1988; IFVE-86-219;
Study of Diffractive Processes in Exclusive Channel $\bar{p}\ p \to \bar{p}\ p\ 2\pi^+\ 2\pi^-$ at 32 GeV/c

Bogolyubsky 87B — Yad. Phys. 48:448, 1988; Sov. J. Nucl. Phys. 48:282, 1988; IFVE-87-154;
A Study of the Proton Diffractive Structure in Reaction $\bar{p}\ p \to \bar{p}$ ($p\ 2\pi^+\ 2\pi^-$) at 32 GeV/c

Bogolyubsky 87C — Sov. J. Nucl. Phys. 48:467, 1988; Yad. Phys. 48:733, 1988; IFVE-87-167;
Study of K_S-Mesons Inclusive Production in $\bar{p}\ p$ Interactions at 32 GeV/c

Bogolyubsky 88 — Yad. Phys. 47:142, 1988;
Dependence of Characteristics of $p\ p$ Interactions at 32 GeV/c upon Nature and Energy of the Leading Particles

Bogolyubsky 88B — Yad. Phys. 47:401, 1988;
Baryon Number, Strangeness and Electric Charge Distribution in $p\ p$ Interactions at 32 GeV/c in Events with Leading Baryons

Bogolyubsky 88C — Yad. Phys. 47:712, 1988;
Study of Inclusive and Semi-inclusive Transverse Momentum Distributions of the Charged Hadrons in $p\ p$ Interactions at 32 GeV/c

Bogolyubsky 88E — Yad. Phys. 49:732, 1989; Sov. J. Nucl. Phys. 49:454, 1989; IFVE-88-119;
Inclusive Production of γ Quanta and π^0 Mesons in $p\ p$ Interactions at 32 GeV/c

Bogolyubsky 88F — Yad. Phys. 50:683, 1989; IFVE-89-5;
Study of Neutral Strange Particle Production in $p\ p$ Interactions at 32 GeV/c and Comparison with $\bar{p}\ p$ Data

Bogolyubsky 88G — Yad. Phys. 48:1322, 1988; Sov. J. Nucl. Phys. 48:841, 1988; IFVE-88-29;
Study of Enlarged p_T Event Structure in $p\ p$ Interactions at 32 GeV/c

Bogolyubsky 89B — Yad. Phys. 49:436, 1989; Sov. J. Nucl. Phys. 49:272, 1989;
Mean Multiplicities and Mean Energies of Particles in Diffraction Clusters in 32 GeV $p\ p$ Interactions

see the legend on page 7.

Bogolyubsky 89C IFVE-89-33;
Possibility Finding Hadron Jets in Four-Dimensional Relative Velocity Space in $p\ p$ Interactions at 32 GeV/c

Bogolyubsky 89D Yad. Phys. 50:115, 1989; Sov. J. Nucl. Phys. 50:73, 1989;
Angular Distributions of Secondaries in Diffractively Produced Systems in 32 GeV/c $p\ p$ Interactions

Bogolyubsky 90 Yad. Phys. 52:1605, 1990;
Characteristics of the Exclusive Channels in $p\ p$ Interactions at 32 GeV/c

Boisgard 91 Z. Phys. A338:243, 1991;
Break up of Spectator Residues at Ultra-Relativistic Energies

Bokemeyer 88 GSI-88-68A;
Narrow Positron Line Emission in Collisions of Very Heavy Ions

Bokemeyer 89 GSI-89-49;
Correlated Electron-Positron Emission in Heavy-Ion Collisions

Bokemeyer 90 GSI-90-29;
Positron Line Emission in Very Heavy Ion Collisions. A Status Report on Experimental Results

Bokemeyer 91 GSI-91-45;
Recent Aspects of the Electron-Positron Puzzle — A Short Summary of Experimental Results

Bolonkin 88 Nucl. Phys. B309:426, 1988; Yad. Phys. 46:799, 1987;
$f_2(1720)$ and $f_2(2300)$ Resonances in the $\pi^- p \to K_S K_S n$ Reaction at Momentum 40 GeV/c

Bolonkin 89 ITEP-89-149;
The Study of the Reaction $K^- p \to \Lambda \bar{\Lambda} Y^*$(unspec) at the 40 GeV/$c$ Momentum

Bolotov 88 Pisma Zh. Eksp. Teor. Fiz. 47:8, 1988; Jetp Lett. 47:7, 1988;
Measurement of Decay's Formfactor for $K^- \to \pi^0 e^- \bar{\nu}$

Bolotov 90 Yad. Phys. 51:717, 1990; Phys. Lett. 243B:308, 1990; MINR-P-0654;
The Experimental Study of the $\pi^- \to e^- \bar{\nu}_e \gamma$ Decay in Flight

Bolton 88 Phys. Rev. D38:2077, 1988;
Search for Rare Muon Decays with the Crystal Box Detector

Bolton 91 Phys. Lett. 278B:495, 1992; SLAC-PUB-5201; UWSEA-PUB-90-1;
Observation of $f_1(1285) \to \pi^+ \pi^- \pi^+ \pi^-$ in Radiative $J/\psi(1S)$ Decays

Bolton 92 Phys. Rev. Lett. 69:1328, 1992; Phys. Rev. Lett. 69:1328, 1992; SLAC-PUB-5632;
Partial Wave Analysis of $J/\psi(1S) \to \gamma\ \eta\ \pi^+\ \pi^-$

Bond 88B Phys. Rev. Lett. 60:1110, 1988; KEK-87-148; ICR-REPORT-154-87-8;
Search for Gamma Rays from Supernova 1987A at Energies Greater than 100 TeV

Bond 89 Phys. Rev. Lett. 61:2292, 1989; KEK-88-7; ICR-REPORT-161-88-7;
Search for TeV Gamma Rays from SN 1987A December 1987 and January 1988

Bondarenko 91 Izv. VUZ, Fiz. 5:19, 1991;
Relativistic Alpha Particles from Inelastic Collisions ^{24}Mg Nuclei in Photoemulsion at 4.5 GeV/c/Nucleon

Bondarenko 92 Yad. Phys. 55:137, 1992;
Study of Inelastic Fragmentation of ^{24}Mg Nucleus at p_0/A=4.5 GeV/c in Nuclear Emulsion

Bonesini 88 Z. Phys. C37:535, 1988; CERN-EP-87-185;
High Transverse Momentum Prompt Photon Production by π^- and π^+ on Protons at 280 GeV/c

Bonesini 88B Z. Phys. C38:371, 1988; CERN-EP-87-222;
Production of High Transverse Momentum Prompt Photons and Neutral Pions in Proton-Proton Interactions at 280 GeV/c

Bonesini 89 Z. Phys. C42:527, 1989; CERN-EP-88-178;
High Transverse Momentum η Production in $\pi^- p$, $\pi^+ p$ and $p\ p$ Interactions at 280 GeV/c

Bonesini 89B Z. Phys. C44:71, 1989;
The Structure of Events Triggered by Direct Photons in $\pi^- p$, $\pi^+ p$ and $p\ p$ Collisions at 280 GeV/c

Bonino 88 Phys. Lett. 211B:239, 1988; CERN-EP-88-60;
Evidence for Transverse Jets in High-Mass Diffraction

Bonner 88 Phys. Rev. D38:729, 1988;
Spin-Parameter Measurement in Λ and K_S Production

Bonner 88B Phys. Rev. Lett. 61:1918, 1988; ANL-HEP-PR-89-41;
Analyzing Power Measurement in Inclusive π^0 Production at High x_F

Bonner 89 Phys. Rev. Lett. 62:1591, 1989;
Spin-Parameter Measurement in Inclusive Σ^0 Production

Bonner 90 Phys. Rev. D41:13, 1990;
Analyzing Power of Inclusive Production of π^+, π^-, and K_S by Polarized Protons at 13.3 and 18.5 GeV/c

Bonnetbidaud 88 Phys. Rept. 170:325, 1988;
Cygnus X-3, a Critical Review

Bonutti 93 Phys. Rev. C47:863, 1993;
Total Cross Section for the A (π^+, $\pi^+ \pi^-$) Reaction at T_{π^+} = 280 MeV

Bonvicini 92 CERN-PPE-92-54;
Statistical Issues in the 17 keV Neutrino Experiments

Bonvicini 92B CERN-PPE-92-117;
The 17 keV Neutrino Does Not Exist

Bonvin 89 Z. Phys. C41:591, 1989; CERN-EP-88-128;
Double Prompt Photon Production at High Transverse Momentum by π^- on Protons at 280 GeV/c

Bonvin 90 Phys. Lett. 236B:523, 1990; CERN-EP-90-07;
Intrinsic Transverse Momenta in the $\pi^- p \to \gamma\ \gamma$ X Reaction at 280 GeV/c

Bonvin 90B Z. Phys. C51:163, 1991; CERN-PPE-90-102;
The Contribution of Bremsstrahlung γ to the High p_T γ Production Cross-Section in $\pi^- p$ Collisions at 280 GeV/c

Boos 88 ALMA-88-04;
Investigation of Total Destruction of the Atomic Nuclei in the Inelastic Hadron Nucleus Interactions at the 40 GeV/c

Boos 88B ALMA-88-16;
Investigation of Multiparticle Correlations in the Range 200 – 400 GeV

Boos 88C Yad. Phys. 48:1005, 1988;
Study of Diffractive Production of Hadron Systems in $p\ p$ Interactions at 69 GeV/c

Boos 89	ALMA-89-01; **Investigation of Exclusive Reaction with Six Charged Particles in $\bar{p}\,p$ Interactions at 22.4 GeV/c Momentum**
Boos 90	ALMA-90-03; **Investigation of Multiparticle Correlations in the Inelastic Proton (Antiproton)-Proton Collisions at the 20 – 400 GeV Energy Range**
Boos 90B	Yad. Phys. 54:538, 1991; ALMA-90-11; **Study of Clusters in Multidimensional Phase Space for Exclusive $p\,p$ Reactions at 32 GeV/c**
Bordalo 88	Z. Phys. C39:7, 1988; CERN-EP-88-39; **Open Beauty Production in High Energy π^- Tungsten Interactions**
Boris 87B	Phys. Rev. Lett. 58:2019, 1987; Phys. Rev. Lett. 61:245, 1988; **Neutrino Mass from the β Spectrum in the Decay of Tritium**
Borner 90	RALT-118; **Neutral Current Electroweak Interactions and the Structure of the Proton**
Borodovsky 92	Phys. Rev. Lett. 68:274, 1992; **Search for Muon-Neutrino Oscillations $\nu_\mu \leftrightarrow \nu_e$ ($\nu_\mu \leftrightarrow \nu_\tau$) in a Wide-Band Neutrino Beam**
Bortoletto 88	Phys. Rev. D37:1719, 1988; Phys. Rev. D39:1471, 1989; **Charm Production Nonresonant $e^+\,e^-$ Annihilation at $\sqrt{s}$=10.55 GeV**
Bortoletto 89	Phys. Rev. Lett. 62:2436, 1989; CLNS-89-887; CLEO-89-3; **A Search for $b \to u$ Transitions in Exclusive Hadronic B Meson Decays**
Bortoletto 89B	Phys. Rev. Lett. 63:1667, 1989; **Study of the Decays $\overline{B}^0 \to D^*(2010)^+\,\ell^-\,\nu$**
Bortoletto 90	Phys. Rev. Lett. 64:217, 1990; CLEO-90-1; **Exclusive and Inclusive Decays of B Mesons into D_S^+ Mesons**
Bortoletto 91	Phys. Rev. D45:21, 1992; CLNS-91-1102; CLEO-91-8; **Inclusive and Exclusive Decays of B Mesons to Final States Including Charm and Charmonium Mesons**
Bortoletto 92	Phys. Rev. Lett. 69:2046, 1992; CLNS-92-1152; CLEO-92-04; **Isospin Mass Splittings from Precision Measurements of $D^*(2010)$-D Mass Differences**
Bortolotto 91	UDINE-91-04-AA; HU-SEFT-1991-17; INFN-AE-91-12; **A Measurement of the Partial Hadronic Widths of the Z^0 Using Neural Networks**
Borzakov 90	JINR-P15-90-60; **A Search for 180° Correlated Pairs of Gamma-Quanta in α-Decay of ^{239}Pu**
Bosetti 90	Z. Phys. C46:377, 1990; CERN-PRE-89-087; **Analysis of Transverse Momentum and Event Shape in $\nu\,n$ Scattering**
Bosshard 90	Phys. Rev. Lett. 64:2619, 1990; **Polarized-Target Asymmetry in Pion-Proton Bremsstrahlung at 298 GeV**
Bossingham 89	LBL-27340; **Measurement of the η Parameter in μ^+ Decay**
Bossy 91	Phys. Rev. C47:1659, 1993; LBL-31629; **Two-Pion Correlations and Multiplicity Effects in La on La Collisions**
Bosted 89	SLAC-PUB-5131; **Measurement of the Deuteron and Proton Magnetic Form Factors at Large Momentum Transfers**
Bosted 92	Phys. Rev. C46:2505, 1992; SLAC-PUB-5840; **Measurement of νW_2 and $R = \sigma_L/\sigma_T$ from Inelastic Electron-Aluminum Scattering Near x =1**
Bosted 92B	Phys. Rev. Lett. 68:3841, 1992; SLAC-PUB-5744; **Measurement of the Electric and Magnetic Form Factors of the Proton from Q^2=1.75 to 8.35 (GeV/c)^2**
Boswell 92	FERMILAB-CONF-92-347-E; **Inclusive χ_c Production in $\bar{p}\,p$ Collisions at $\sqrt{s}$=1.8 TeV**
Botje 92	H-K-92-01; **Nucleon Structure Functions from Deep Inelastic Muon Scattering**
Botner 89	Phys. Lett. 236B:488, 1990; CERN-EP-89-80; **Production of Prompt Electrons in the Charm p_T Region at $\sqrt{s}$=630 GeV**
Botterweck 90	Z. Phys. C51:37, 1991; HHE-90-03; CERN-PRE-90-062; **Factorial Moments and Correlations in Meson-Nucleus Interactions at 250 GeV/c**
Botterweck 91	Z. Phys. C51:541, 1991; **Direct Soft Photon Production in $K^+\,p$ and $\pi^+\,p$ Interactions at 250 GeV/c**
Botterweck 92	Z. Phys. C55:373, 1992, HHE-92-01; **Neutral Strange Particle Production in K^+ and π^+ Collisions with Al and Au Nuclei at 250 GeV/c**
Botvina 91	FVE-91-146; **Charged Particles Multiplicity in the Interactions of Oxygen Nucleus with Hydrogen at 3.1 A GeV/c Momentum**
Botvina 91B	JINR-P1-91-545; **Formation of Light Fragments of Oxygen Nucleus in ^{16}O p Interactions at Momentum 3.1 A GeV/c**
Boucher 88	Phys. Lett. 207B:217, 1988; **New Experimental Limits on Radiative Neutrino Decay**
Bouchez 88	DPHPE-88-14; **Neutrino Oscillations at Reactors**
Bouchiat 86B	Science 234:1203, 1986; Usp. Fiz. Nauk 155:299, 1988; **Optical Experiments and Weak Interactions**
Bouchiat 90	ENSP-PREPRINT; **Atomic Parity Violation. A Low Energy Test of the Electroweak Standard Model**
Boucrot 92	LAL-92-29; **Charm and Beauty Decays in the ALEPH Experiment**
Boudard 88	Phys. Lett. 214B:6, 1988; **The T_{20} of the deuteron $p \to {}^3$He π^0 Reaction at Threshold and π Absorbtion on a Pair of Nucleons**
Bougault 90	LPCC-90-02; **Sidewards Flow Effect in Kr + Au Central Collisions at 43 MeV/u**
Bourdarios 88	LAL-88-34; **Results of the FREJUS Experiment on Nucleon Decay**
Boutemeur 88	LAPP-EXP-88-20; **Analysis of the Reaction $\pi^-\,p \to \pi^0\,\eta\,n$ at 100 GeV**
Boutemeur 89	CERN-PRE-89-075; LAPP-EXP-89-17; **A New Scalar Meson Decaying into $\eta\,\pi^0$ and Results of $\eta'\,\pi^0$ Analysis at 100 GeV/c**

See the legend on page 7.

Boutemeur 89B CERN-EP-89-99;
Results from GAMS

Bowcock 88 Phys. Rev. D38:2679, 1988; Phys. Rev. D40:1701, 1989;
Investigation of the Total Charm-Pair Cross Section in Nonresonant $e^+ e^-$ Annihilation at $\sqrt{s}$=10.5 GeV

Bowcock 89 Phys. Rev. Lett. 62:1240, 1989; CLNS-88-876; CLEO-88-3;
$\Sigma_c(2455)^{++}$ and $\Sigma_c(2455)^0$ Production from $e^+ e^-$ Annihilation in the Υ Energy Region

Bowcock 89B Phys. Rev. D40:263, 1989; CLNS-89-895; CLEO-89-6;
Search for the Production of Fractionally Charged Particles in $e^+ e^-$ Annihilations at $\sqrt{s}$=10.5 GeV

Bowcock 90 Phys. Rev. D41:805, 1990; CLNS-89-950; CLEO-89-13;
Search for Neutrinoless Decays of the $\tau^\pm$ Lepton

Bowman 91 Nucl. Phys. A523:386, 1991;
Equilibrium and Non-Equilibrium Complex Fragment Emission in 50 - 100 MeV/u ^{139}La ^{12}C Reactions

Boyarinov 88 Yad. Phys. 47:942, 1988; ITEP-86-165;
Production of Deuterons and Tritium Nuclei with the Momentum of 0.6 - 1.83 GeV/c on the Be, Al, Cu, Ta at 119° by Protons of 10 GeV

Boyarinov 88B ITEP-88-13;
The Cumulative K^+ Mesons Production by Proton with Energy 10 GeV

Boyarinov 88C ITEP-88-138;
The Cumulative K^- Mesons Production by Proton with Energy 10 GeV

Boyarinov 89 Yad. Phys. 50:1605, 1989;
The Cumulative Kaon Production by 10 GeV Protons

Boyarinov 90 ITEP-90-109;
The Cumulative Hadron Production and Quark Gluon Plasma

Boyarinov 91 Yad. Phys. 54:119, 1991; ITEP-91-23;
The Cumulative Production of Antiprotons by 10 GeV Protons Bombarding Nuclear Targets

Boyarinov 92 ITEP-92-54;
Production of High-Energy Cumulative Pions at 97° in Lab. Sys. by 10 GeV Energy Protons

Boyarinov 92B ITEP-92-53;
Production of High-Energy Cumulative Protons at 97° in Lab. Sys. by 10 GeV Energy Protons

Boyarinov 92C ITEP-92-74;
Production of High-Energy Cumulative Kaons at 97° in Lab. Sys. by 10 GeV Energy Protons

Boyer 90 Phys. Rev. D42:1350, 1990;
Two Photon Production of Pion Pairs

Boyle 91 RALT-125;
A Study of Energy-Energy Correlations in Charged Tracks from Hadronic Decays of the Z^0 at $\sqrt{s}$ = 91.2 GeV

Bozhko 92 IFVE-92-110;
Search for Prompt Muon Neutrinos in 70 GeV Protons Interactions with Iron Nuclei

Brack 88 TRI-PP-88-24;
Large-Angle $\pi^+ p$ Elastic Scattering at 66.8 MeV

Brack 88B Phys. Rev. C38:2427, 1988; TRI-PP-88-24;
Large-Angle $\pi^+ p$ Elastic Scattering at 66.8 MeV

Brack 89 Phys. Rev. C41:2202, 1990; TRI-PP-89-102;
Absolute Differential Cross Section for $\pi^\pm p$ Elastic Scattering at 30 MeV $< T_{\pi^\pm} <$ 67 MeV

Brack 91 Phys. Rev. C45:698, 1992; TRI-PP-91-82;
Analyzing Powers for $\pi^\pm$ - ^{13}C$^\uparrow$ Scattering at T_π =100 MeV

Bradamante 91 Yad. Phys. 55:1157, 1992; INFN-AE-91-17;
Spin Physics at LEAR

Brady 88 Phys. Rev. Lett. 60:1699, 1988;
Large p_T from the Fragmentation of 1.2 GeV/Nucleon ^{139}La Nuclei

Braeunig 90 Nucl. Phys. A519:631, 1990;
Proton Stripping Induced by ^{13}C at 50 MeV/Nucleon on ^{12}C, ^{40}Ca and ^{58}Ni

Branchina 90 Phys. Rev. Lett. 65:3237, 1990;
Hadronic Width of the Z^0 from a Global Fit to $e^+ e^- \to$ hadrons Data

Branchina 92 Phys. Rev. D46:75, 1992;
Combined Fit to $R(e^+ e^- \to$ hadrons) and Data from the CERN $e^+ e^-$ Collider LEP

Brandl 92 HD-THEP-92-4; CERN-PRE-92-20;
Measurement of the Partial Width of the Z^0 into $b\,\bar{b}$

Brandt 92 Phys. Rev. C45:1194, 1992; JINR-E1-89-803;
Enhanced Production of ^{24}Na by Wide-Angle Secondaries Produced in the Interaction of Relativistic Carbon Ions with Copper

Brau 88 Phys. Rev. D37:2379, 1988; SLAC-PUB-4424; SLAC-PUB-4431; UTHEP-87-0901; RAL-87-078;
Production and Decay Properties of $\omega\,\pi^0$ State at 1250 MeV/c^2 Produced by 20 GeV Polarized Photons on Hydrogen

Braun 89 Czech. J. Phys. B39:1267, 1989;
Cross Section of the Interactions of ^{4}He Nuclei with Protons at 8.6 and 13.4 GeV/c

Braunmunzing 88 Z. Phys. C38:45, 1988; BNL-40838;
Transverse Energy Distributions in Si-Nucleus Collisions at 10 GeV/Nucleon

Braunschweig 88 Z. Phys. C38:543, 1988; DESY-88-005;
A Search for Particles with Magnetic Charge Produced in $e^+ e^-$ Annihilations at $\sqrt{s}$=35 GeV

Braunschweig 88B Z. Phys. C37:171, 1988; ETUAM-87-07; PITHA-87-18; DESY-87-115;
A Study of Bhabha Scattering at PETRA Energies

Braunschweig 88C Z. Phys. C41:359, 1988; DESY-88-107;
Jet Fragmentation and QCD Models in $e^+ e^-$ Annihilation at c.m. Energies between 12.0 and 41.5 GeV

Braunschweig 88D Z. Phys. C39:331, 1988; DESY-88-034;
A Measurement of the $\tau^\pm$ Lifetime

Braunschweig 88E Z. Phys. C40:163, 1988; Z. Phys. C42:348, 1988; DESY-88-059;
A Measurement of Muon Pair Production in $e^+ e^-$ Annihilations at Centre of Mass Energies 35.0 $< \sqrt{s} <$ 46.8 GeV

Braunschweig 88F Z. Phys. C41:353, 1988; DESY-88-091;
Measurement of the Two-Photon Reaction $\gamma\,\gamma \to \pi^+\,\pi^+\,\pi^-\,\pi^-$ at Large Values of Q^2

Braunschweig 88G Z. Phys. C41:385, 1988; DESY-88-100;
Evidence for Direct Photons from Quarks in Electron-Positron Annihilation

Braunschweig 88H Phys. Lett. 214B:286, 1988; DESY-88-046; OUNP-29-88; OXFORD-NP-29-88;
Analysis of Multi-Jet Final States in $e^+ e^-$ Annihilation

Braunschweig 89 Z. Phys. C41:533, 1989; DESY-88-050; WIS-88-15-PH;
Study of $\eta_b(1S)$ Production in Two-Photon Collisions

Braunschweig 89B Z. Phys. C42:189, 1989; DESY-88-164;
Pion, Kaon and Proton Cross Sections in $e^+ e^-$ Annihilation at 34 and 44 GeV c.m. Energy

Braunschweig 89C Z. Phys. C42:17, 1989; DESY-88-112;
A Study of Jets from b Quarks Produced in $e^+ e^-$ Annihilations at $\sqrt{s}$=35 – 46 GeV

Braunschweig 89D Z. Phys. C45:193, 1989; DESY-89-038;
Charged Multiplicity Distributions and Correlations in $e^+ e^-$ Annihilation at PETRA Energies

Braunschweig 89E Z. Phys. C45:1, 1989; DESY-89-032; WIS-89-7-PH;
Comparison of Inclusive Fractional Momentum Distributions of Quark and Gluon Jets Produced in $e^+ e^-$ Annihilation

Braunschweig 89F Z. Phys. C43:549, 1989; DESY-89-035;
A Measurement of Electroweak Effects in the Reaction $e^+ e^- \to \tau^+ \tau^-$ at 35 GeV and 42.4 GeV

Braunschweig 89G Z. Phys. C44:365, 1989; DESY-89-053;
Production and Decay of Charmed Mesons in $e^+ e^-$ Annihilation at $\sqrt{s} > 28$ GeV

Braunschweig 89H Z. Phys. C45:11, 1989; DESY-89-069; FTUAM-EP-89-03;
Experimental Study of Jet Masses in $e^+ e^-$ Annihilation at c.m. Energies Between 12 and 43.5 GeV

Braunschweig 89I Z. Phys. C45:209, 1989; DESY-88-173; OUNP-89-3;
Strange Baryon Production in $e^+ e^-$ Annihilation

Braunschweig 89J Phys. Lett. 231B:548, 1989; DESY-89-092;
Study of Intermittency in Electron-Positron Annihilation into Hadrons

Braunschweig 89K Z. Phys. C47:181, 1990; DESY-89-132; FTUAM-EP-89-06;
Experimental Study of the Orientation of Three-Jet Events in $e^+ e^-$ Annihilation at PETRA

Braunschweig 89L Z. Phys. C44:1, 1989; DESY-88-159;
Measurement of the Average Lifetime of B Hadrons

Braunschweig 89M Z. Phys. C47:167, 1990; DESY-89-156; FTUAM-EP-89-04;
Strange Meson Production in $e^+ e^-$ Annihilation

Braunschweig 90 Z. Phys. C47:187, 1990; DESY-90-013;
Global Jet Properties at 14 – 44 GeV Center of Mass Energy in $e^+ e^-$ Annihilation

Braunschweig 90B Z. Phys. C47:499, 1990; DESY-90-012;
Production of Charmed Mesons in $\gamma\gamma$ Interactions

Braunschweig 90C Z. Phys. C48:433, 1990; DESY-90-047;
Measurement of the Asymmetry of b Quark Production in $e^+ e^-$ Annihilation of $\sqrt{s}$ = 35 GeV

Bravina 89 Yad. Phys. 50:392, 1989;
Multiplicity Correlations in Forward and Backward Hemispheres in c.m.s. in $\bar{p}\,p$ and $p\,p$ Interactions at 32 GeV/c

Bravina 92 Yad. Phys. 55:1705, 1992;
Factorial Moments in $\bar{p}\,p$ and $p\,p$ Interactions at 32 GeV/c

Breakstone 88 Z. Phys. C40:207, 1988; CERN-EP-88-21;
Contribution of Single Diffraction Dissociation to High p_T Production in Proton-Proton Collisions at $\sqrt{s}$=62 GeV at the CERN ISR

Breakstone 88B Nuovo Cim. 102A:1199, 1989; CERN-EP-88-133;
Charged Multiplicity Distributions in Rapidity Bins for $p\,p$ Collisions at $\sqrt{s}$=31, 44 and 62 GeV

Breakstone 88C Z. Phys. C40:41, 1988; CERN-EP-88-13;
Transverse Momentum Distribution in Pomeron-Pomeron Collisions at CERN ISR

Breakstone 88D Eur. Lett. 7:131, 1988; CERN-EP-88-58;
Rapidity and Multiplicity Dependence of Transverse Momentum Spectra in $p\,p$ Collisions at ISR Energies

Breakstone 89 Z. Phys. C43:185, 1989; CERN-EP-89-21;
Production of Meson Resonances as Leading Particles in Jets in Proton-Proton Collisions at $\sqrt{s}$=62 GeV at the CERN ISR

Breakstone 89B Z. Phys. C43:522, 1989; Z. Phys. C42:387, 1989; IS-J-3226; CERN-PRE-89-015;
Inclusive Pomeron-Pomeron Interactions at the CERN ISR

Breakstone 90 Phys. Lett. 248B:220, 1990; CERN-EP-90-74;
A Sensitive Test of QCD from Parton-Parton Scattering of the ISR

Breakstone 90B IS-J-3745;
Exclusive Neutral Strange Particle Production in Double Pomeron Exchange Reactions from $p\,p$ Interactions at E_{cm} = 62 GeV

Breakstone 90C Z. Phys. C48:569, 1990; IS-J-4087; CERN-PRE-90-051;
The Reaction pomeron pomeron $\to \pi^+ \pi^-$ and an Unusual Production Mechanism for the $f_2(1270)$

Breakstone 91 Z. Phys. C52:551, 1991; CERN-PPE-91-59;
High Order QCD Effects and Particle Density in Full Phase Space from High p_T Interactions at the ISR

Breakstone 91B Mod. Phys. Lett. A6:2785, 1991; CERN-EP-88-132;
Three-Particle Rapidity Correlations in Proton-Proton Interactions at ISR Energies

Brechtmann 88 Z. Phys. A331:463, 1988; SI-88-16;
Fragmentation Cross Sections of ^{32}S at 0.7, 1.2 and 200 GeV/Nucleon

Brechtmann 88B Z. Phys. A330:407, 1988; SI-88-08;
Fragmentation Cross Sections of ^{16}O at 60 and 200 GeV/Nucleon

Brechtmann 89 Phys. Rev. C39:2222, 1989;
Fragmentation Cross Sections of ^{28}Si at 14.5 GeV/Nucleon

Breedon 88 Rockefeller University;
A Measurement of Proton-Proton and Proton-Antiproton Forward Elastic Scattering at E_{cm} = 24.3 GeV with Silicon Barrier Detectors

Breedon 89 Phys. Lett. 216B:459, 1989; CERN-EP-88-153;
Precise Comparison of Antiproton-Proton and Proton-Proton Forward Elastic Scattering at $\sqrt{s}$=24.3 GeV

Bressi 89 Z. Phys. C43:175, 1989;
Search for Free Neutron-Antineutron Oscillations

Bressi 90 Nuovo Cim. 103A:731, 1990;
Final Results of a Search for Free Neutron-Antineutron Oscillations

See the legend on page 7.

Brick 89 Phys. Rev. D39:2484, 1989;
Multiparticle Production by 200 GeV/c Hadrons on Gold, Silver and Magnesium Targets
Brick 90 Phys. Rev. D41:765, 1990;
Rapidities of Produced Particles in 200-GeV/c $\pi^+/p/K^+$ Interactions on Au, Ag, and Mg
Brick 92 Phys. Rev. D45:734, 1992;
Neutral-Strange-Particle Production in 200-GeV/c $p/\pi^+/K^+$ Interactions on Au, Ag, and Mg
Britton 88 TRI-PP-88-52;
A Study of the Decay $\pi^+ \to e^+ \nu_e$
Britton 92 Phys. Rev. D46:R885, 1992; TRI-PP-92-29;
Improved Search for Massive Neutrinos in $\pi^+ \to e^+ \nu$ Decay
Britton 92B Phys. Rev. Lett. 68:3000, 1992; TRI-PP-92-15;
Measurement of the $\pi^+ \to e^+ \nu$ Branching Ratio
Brock 91 Phys. Rev. D43:1448, 1991; CLNS-90-1031; CLEO-90-12;
Study of $\pi^+ \pi^-$ Transitions from the $\Upsilon(3S)$ and a Search for the $h_b(1P)$
Brockstedt 91 Nucl. Phys. A530:571, 1991;
The (^{3}He,^{3}H) Reaction at Intermediate Energies: Spin-Isospin Multipole Transitions
Brogligysin 92 Nucl. Phys. A541:137, 1992;
Neutron-Proton Analyzing A_y at 68 MeV
Bronikowski 91 Phys. Rev. C44:1661, 1991;
Target Fragmentation of Silver by 14.6 GeV/Nucleon ^{16}O Ions
Brooks 92 Phys. Rev. C45:2343, 1992;
Neutron Induced Pion Production on C, Al, Cu, and Wt at 200 – 600 MeV
Bross 89 Phys. Rev. Lett. 67:2942, 1991; FERMILAB-PUB-89-138-E;
A Search for Short-Lived Particles Produced in an Electron Beam Dump
Brovkin 89 ITEP-89-131;
About Possible Existence of Strange Exotic Baryon Resonance in $p\ 3\pi^+\ \pi^-$ System
Brovkin 90 ITEP-90-110;
Resonance States, Including the Exotic, in the Reaction $\pi^+\ p \to n\ 4\pi^+\ 2\pi^-$ at Beam Momentum 4.2 GeV/c
Brovkin 91B Yad. Phys. 55:978, 1992; ITEP-91-50;
The Reaction $\pi^+\ p \to p\ 2\pi^+\ \pi^-$ at the Momentum 4.2 GeV/c: the Cross Sections of the Resonances in the Final State
Brovkin 91C Yad. Phys. 55:986, 1992; ITEP-91-109;
Secondary Interaction of π^+ Meson and $\Delta(1232\ P_{33}^{++}$ Isobar in Reaction $\pi^+\ p \to p\ 2\pi^+\ \pi^-$: Exotic Baryon Resonances
Brovkin 92 ITEP-92-60;
Resonance in the $p\ \omega$ System
Browder 89 SLAC-PUB-5118;
Recent Results on Weak Decays of Charmed Mesons from the MARK-III Experiment
Brown 89 Phys. Rev. Lett. 63:2637, 1989;
Dimuon Production in 800 GeV Proton-Nucleus Collisions
Bruckner 90 Z. Phys. A352:217, 1990; CERN-EP-89-105;
Measurement of the Antiproton-Proton Annihilation Cross Section in the Beam Momentum Range between 180 and 600 MeV
Bruckner 91B Z. Phys. A339:367, 1991; CERN-PPE-91-41;
Measurements of the Antiproton-Proton Elastic Cross Section in the Beam Momentum Range between 189 and 600 MeV/c
Bruckner 91C Z. Phys. A339:379, 1991; CERN-PPE-91-42;
Ranges of Interaction in $p\ \bar{p}$ Scattering at Low Energies
Brunner 89 Z. Phys. C42:361, 1989; PHE-87-05; IFVE-89-94;
Neutron to Proton Cross Section Ratios in Neutrino and Antineutrino Charged Current Reactions for E<30 GeV
Brunner 89B Z. Phys. C45:551, 1990; PHE-89-15;
Quasielastic Nucleon and Hyperon Production by Neutrinos and Anti-neutrinos with Energies below 30 GeV
Bryman 90 TRI-PP-90-20;
Recent Results from Rare Kaon Decay Experiments
Bryman 92 Phys. Rev. D46:1064, 1992; TRI-PP-92-3;
Tau-Electron and Tau-Muon Universality from $\tau^+ \to \pi\ \nu$ Decays
Buchholz 90 FERMILAB-CONF-90-261-E;
Recent Results on Charm from FERMILAB Experiment E-687
Buchholz 90B FN-555;
Photoproduction of D Mesons
Buchle 88 Phys. Lett. 213B:125, 1988;
Pion Production on Carbon by Medium Energy Neutrons
Buchle 89 Nucl. Phys. A515:541, 1990; FREI-MEP-89-01;
Neutron Induced Pion Production on Carbon, Copper and Bismuth at Intermediate Energies
Buchler 91 BONN-IR-91-57;
Messung des differentiellen Wirkungsquerschnitts der Reaktion $\gamma\ p \to \pi^+\ n$ am energiemarkierten Photonenstrahl des PHOENICS-Experiments
Buckland 90 Phys. Rev. D41:2726, 1990;
Results of a Magnetic-Monopole Search Utilizing a Large-Area Proportional-Tube Array
Buckleygeer 91 FERMILAB-CONF-91-193-E;
Jets in CDF
Budagov 91 JINR-E1-91-496;
The Differential Cross Sections for Inclusive Reactions π^+ nucleus $\to \eta$ X at 10 GeV
Budick 91 Phys. Rev. Lett. 67:2626, 1991;
Bremsstrahlung Technique for Measuring the End Point of Tritium β Decay
Budick 91B Phys. Rev. Lett. 67:2630, 1991;
Half-Life of Molecular Tritium and the Axial Vector Interaction in Tritium β Decay
Budilov 90 Phys. Lett. 243B:341, 1990;
Small Angle Proton-Proton Correlations in Collisions of High Energy Light Ions with Carbon and Gold Nuclei

Budyashov 91B JINR-P1-91-439;
The Measurement of the Differential Cross Section in the Double Quasi-Elastic Proton Scattering from Carbon Nuclei at the Energy of (660±7) MeV

Budyashov 92B JINR-P1-92-13;
On Mechanisms of the Direct Knock-Out Reaction of Proton Pairs from the Carbon Nucleus by Protons at 600 MeV

Budyashov 92C JINR-P1-92-439;
Effective Mass Spectra of Three Secondary Protons in the (p, $3p$) Reaction on the Carbon Nucleus at 660 MeV

Budyashov 92D JINR-P1-92-193;
Effective Mass Spectra of Three Secondary Protons in the (p, $3p$) Reaction on the ^{12}C Nucleus at 660 MeV

Buenerd 92 CERN-PPE-92-16;
The Hyperon Charge and Matter Form-Factors: Experimental Prospects

Bukin 89 Yad. Phys. 50:999, 1989;
The Process $e^+ e^- \to \pi^+ \pi^- \pi^0$ in Nonresonance Energy Region $2E$ up to 1.4 GeV

Bunyatov 92 Fiz. Elem. Chastits At. Yadra 23:581, 1992;
Charmed Nuclei

Burchat 89 SCIPP-89-26;
First Results from the SLAC Linear Collider and MARK-II Detector

Burchat 90 Phys. Rev. D41:3542, 1990; SLAC-PUB-5172; LBL-28396;
A Search for Decays of the Z^0 to Unstable Neutral Leptons with Mass between 2.5 and 22 GeV

Burchell 92 CERN-PPE-92-158;
A Review of Recent Activity in the Field of Light-Quark Meson Spectroscopy

Burkhardt 88 Phys. Lett. 206B:169, 1988; LAL-88-36; CERN-EP-88-47;
First Evidence for Direct CP Violation

Burkhardt 91 Ann. Rev. Nucl. and Part. Sci. 41:55, 1991; CERN-PPE-91-50;
Test of the Electroweak Theory at the Z^0 Resonance

Burlein 89 Phys. Rev. C40:785, 1989;
Pion Inelastic Scattering to the Low-Lying Broad 2^+ in ^{20}Ne

Burman 91 LA-UR-91-2817;
Experimental Study of Neutrino Properties

Burrows 92 SLAC-PUB-5802;
First QCD results from SLD

Burrows 92B Phys. Rev. Lett. 68:3834, 1992; FERMILAB-PUB-92-29-A;
Massive Dirac Neutrinos and SN1987A

Buschbeck 89 Mod. Phys. Lett. A4:1871, 1989;
Intermittency in Multiparticle Production — a Brief Experimental Survey

Buschbeck 91 HEPHY-PUB-554-91;
Intermittency, A Short Experimental Review

Busenmitz 89 Phys. Rev. D40:1, 1989;
High Energy Photoproduction of $\pi^+ \pi^- \pi^0$, $K^+ K^-$, and $p \bar{p}$ States

Buskulic 92 Phys. Lett. 294B:145, 1992; CERN-PPE-92-73;
Observation of the Semileptonic Decays of B_s and Λ_b Hadrons at LEP

Buskulic 92B Phys. Lett. 285B:309, 1992; CERN-PPE-92-59;
Search for a Very Light CP-odd Neutral Higgs Boson of the MSSM

Buskulic 92C Z. Phys. C55:209, 1992; CERN-PPE-92-62;
Properties of Hadronic Z^0 Decays and Test of QCD Generators

Buskulic 92D Phys. Lett. 292:210, 1992; CERN-PPE-92-74;
Measurement of the Production Rates of η and $\eta'(958)$ in Hadronic Z^0 Decays

Buskulic 92E Phys. Lett. 284B:177, 1992; CERN-PPE-92-48;
Measurement of B^0-$\bar{B}^0$ Mixing at the Z^0 using a Jet-Charge Method

Buskulic 92F Phys. Lett. 295B:174, 1992; CERN-PPE-92-133;
Updated Measurement of the Average b Hadron Lifetime

Buskulic 92G Phys. Lett. 297B:449, 1993; CERN-PPE-92-138;
A Measurement of the b Baryon Lifetime

Buskulic 92H Phys. Lett. 295B:396, 1992; CERN-PPE-92-142;
Measurement of Mean Lifetime and Branching Fractions of b Hadrons Decaying to $J/\psi(1S)$

Buskulic 92I CERN-PPE-92-143;
Measurement of Prompt Photon Production in Hadronic Z^0 Decays

Buskulic 92J Phys. Lett. 297B:459, 1993; CERN-PPE-92-161;
Search for CP Violation in $Z^0 \to \tau^+ \tau^-$

Buskulic 92K Phys. Lett. 298B:479, 1993; CERN-PPE-92-184;
Measurement of the $b \to \tau^- \bar{\nu}_\tau$ X Branching Ratio

Buskulic 92L Phys. Lett. 297B:432, 1993; CERN-PPE-92-186;
A Precise Measurement of the τ^+ Lepton Lifetime

Buskulic 92M CERN-PPE-92-210;
Search for Particles with Unexpected Mass and Charge in Z^0 Decays

Buskulic 93 CERN-PPE-93-040;
Update of Electroweak Parameters from Z^0 Decays

Buskulic 93B CERN-PPE-93-39;
Measurement of the Tau Polarisation at the Z^0 Resonance

Buskulic 93C CERN-PPE-93-41;
Measurement of the Strong Coupling Constant Using τ^+ Decays

Buskulic 93D CERN-PPE-93-42;
Measurement of the B^0 and B^- Meson Lifetime

Bussiere 88 Z. Phys. C38:117, 1988; CERN-EP-88-25;
The Production of $J/\psi(1S)$ in 200 GeV/A Oxygen-Uranium Interactions

Busto 90 Nucl. Phys. A513:291, 1990;
The $0^+ \to 2^+$ Neutrinoless Double β Decay of ^{76}Ge: Results of the FREJUS Experiment

Butler 90 Phys. Rev. D42:1368, 1990;
Measurement of the Two-Photon Width of the $\eta'(958)$

See the legend on page 7.

Butler 92 Phys. Rev. Lett. 69:2041, 1992; CLNS-92-1143; CLEO-92-03;
Measurement of the $D^*(2010)$ Branching Fractions

Byrne 89 Nucl. Instr. and Meth. A284:116, 1989;
Determination of the Neutron Lifetime by Counting Trapped Protons

Byrne 90 Phys. Rev. Lett. 65:289, 1990;
Measurement of the Neutron Lifetime by Counting Trapped Protons

Caldwell 88 Int. Jour. Mod. Phys. A4:1851, 1989; UCSB-HEP-88-8;
Review of Double β Decay Experiments

Caldwell 88B UCSB-HEP-88-10;
Experimental Search for Dark Matter — an Update

Caldwell 88C Nucl. Instr. and Meth. A264:106, 1988;
Review of $\beta\beta$ Decay and Dark Matter Searches with $\beta\beta$ Apparatus

Caldwell 90 Phys. Rev. Lett. 65:1305, 1990; UCSB-HEP-90-10;
Searching for the Cosmion by Scattering in Si Detectors

Caldwell 90B Mod. Phys. Lett. A5:1543, 1990;
The Search for Dark Matter

Calloway 89 Phys. Lett. 232B:549, 1989;
A Search for Free Quarks in Heavy-Ion Collisions at 60 and 200 GeV/Nucleon

Calvino 90 CAB-LFAE-90-07;
Study of Double Charm Events in the NA14/2 Photoproduction Experiment

Campagnari 88 Phys. Rev. Lett. 61:2062, 1988;
Search for the Decay $K^+ \to \pi^+ \mu^+ e$

Campagnari 91 FERMILAB-CONF-91-168-E;
Top Physics at CDF

Campagnolle 89 Nuovo Cim. 102A:653, 1989; CERN-EP-89-13;
Production of Heavy Hypernuclei with Antiproton

Campion 91 RALT-124;
A Measurement of the τ^+ Lifetime using the DELPHI Silicon Microstrip Vertex Detector

Candlin 88 Nucl. Phys. B311:613, 1988; RAL-88-056;
Measurement of the Spin-Rotation Parameter,β, in the Reaction $\pi^+ p \to K^+ \Sigma^+$ at 1.69 and 1.88 GeV/c

Capon 91 LNF-91-027-R;
B Physics at LEP

Caracappa 91 Phys. Rev. Lett. 67:1206, 1991;
Beam-Polarization Observables in $\gamma\uparrow$ deuteron $\to p\, n$ and the Nuclear Tensor Force

Carey 90 Phys. Rev. Lett. 64:357, 1990;
Measurement of the Analyzing Power in the Primakoff Process with a High-Energy Polarized Proton Beam

Carnoy 90 Phys. Rev. Lett. 65:3249, 1990;
Limits on Nonstandard Weak Currents from the Positron Decays of ^{14}O and ^{10}C

Carosi 90 Phys. Lett. 237B:303, 1990; CERN-EP-90-06;
A Measurement of the Phases of the CP-Violating Amplitudes in $K^0 \to 2\pi$ Decays and a Test of CPT Invariance

Carroll 88 Phys. Rev. Lett. 61:1698, 1988;
Nuclear Transparency to Large Angle $p\,p$ Elastic Scattering

Carroll 88B Nucl. Phys. A488:203, 1988;
Latest Results on "Subthreshold" Production of Kaons and Antiprotons

Carroll 89 Phys. Rev. Lett. 62:1829, 1989;
Subthreshold Antiproton Production in ^{28}Si ^{28}Si Collisions at 2.1 GeV/Nucleon

Carusotto 92 Phys. Rev. Lett. 69:1722, 1992; CERN-PPE-92-63;
Test of the g Universality with a Galileo Type Experiment

Cason 89 PRINT-89-0374-NOTRE-DAME;
Search for Exotic Mesons in the $K\,\bar{K}\,\pi$ Final State

Casper 90 Phys. Rev. Lett. 66:2561, 1991; BU-HEP-90-23;
Measurement of Atmospheric Neutrino Composition with IMB-3

Cassata 88 IFVE-88-178;
On Measuring $\pi_2(1670) \to \rho(770)^0\,\pi^-$ Decay Probability in $\pi^- n \to \pi^+ \pi^- \pi^- n$ at 40 GeV/c

Cassel 90 CLNS-90-1014;
B Meson Decays: $b \to c$

Cassiday 89 Phys. Rev. Lett. 62:383, 1989;
Evidence for 10^{18} eV Neutral Particles from the Direction of Cygnus X-3

Cassiday 89B Phys. Rev. Lett. 63:2329, 1989;
Search for γ Rays Above 10^{14} eV from Cygnus X-3 During the June and July 1989 Radio Outbursts

Castro 88 LAL-88-58;
The π, K, Proton Electromagnetic Form Factors and New Related DM2 Results

Catanesi 88 Phys. Lett. 202B:453, 1988; CERN-EP-87-216;
Experimental Study of $B\,\bar{B}$ Production in π^- U Interaction at 320 GeV Energy

Catanesi 89 Phys. Lett. 231B:328, 1989; CERN-EP-89-118;
$B\,\bar{B}$ Inclusive Cross Section in 320 GeV π^- U Interactions

Cebra 89 Phys. Lett. 227B:336, 1989;
Two-Particle Correlations from 500 MeV p Ag and p Be

Celler 90 TRI-PP-90-63;
Distribution of Spin Dipole Transition Strength in the $n\,^{15}$Nit $\to p\,^{15}$C Reaction

Chacon 88 Phys. Rev. Lett. 60:780, 1988;
Observation of a Nonspherical Pion Source in Relativistic Heavy-Ion Collisions

Chacon 91 Phys. Rev. C43:2670, 1991; LBL-30084;
Pion Correlations in Relativistic Heavy Ion Collisions for Three Symmetric Systems

Chan 88 BNL-42223;
Production and Phenomenology of Glueballs

Chan 90 Nucl. Phys. A510:713, 1990;
A Complete Measurement of Spin-Observables for Intermediate-Energy Inclusive Quasielastic Polarized Proton Scattering from ^{12}C

Charity 88	Nucl. Phys. A476:516, 1988; **Emission of Complex Fragments from Highly Excited Systems Produced in ^{93}Nb ^{9}Be and ^{27}Al Reactions at E/A=25.4 and 30.3 MeV**
Charity 88B	Nucl. Phys. A483:371, 1988; **Systematics of Complex Fragment Emission in Niobium-Induced Reactions**
Charity 90	Nucl. Phys. A511:59, 1990; **Sources of Complex Fragment Emission in Lanthanum-Induced Reactions at E/A=14.7 and 18.0 MeV**
Chekulaev 88B	Sov. J. Nucl. Phys. 49:282, 1989; Yad. Phys. 49:452, 1989; IFVE-88-31; **Study of Meson System Structure in Events with Two Leading Particles in $p\ p$ Interactions at 32 GeV/c**
Chen 89	Phys. Rev. D39:4528, 1989; CLNS-89-885; CLEO-89-1; **Measurement of the Muonic Branching Fractions of the $\Upsilon(1S)$ and $\Upsilon(3S)$**
Chen 89B	Phys. Lett. 226B:192, 1989; CLNS-89-920, CLEO-89-8; **Measuring of D_s^+ Decay Modes**
Chen 89C	Phys. Lett. 243B:169, 1990; CLEO-89-15; **Measurement of $\gamma\ \gamma$ Widths of Charmonium States**
Chen 89D	Nucl. Phys. A505:670, 1989; **Analyzing Powers and Cross Sections of Inclusive Polarized Proton Scattering on ^{208}Pb**
Chen 90	Mod. Phys. Lett. A5:1381, 1990; **Z^0 Physics from L3 Detector at LEP**
Chen 90B	SLAC-PUB-5378; **Amplitude Analysis of the $K\ K$ system in $J/\psi(1S)$ radiative decay**
Chen 91	SLAC-PUB-5674; **Evidence for $\rho(1700)$ from the Decay $J/\psi(1S) \to \pi^- \pi^+ \pi^0$**
Chen 91B	Phys. Rev. Lett. 66:1283, 1991; **Longitudinal and Transverse Response Function ^{56}Fe (e^-, e^-) at Momentum Transfer near 1 GeV/c**
Chen 92	Phys. Rev. C45:2332, 1992; **Neutron Yields and Angular Distributions Produced in Antiproton Annihilation at Rest in Uranium**
Chen 92B	Phys. Rev. Lett. 69:3286, 1992, FERMILAB-PUB-92-242; **First Observation of Magnetic Moment Precession of Channeled Particles in Bent Crystals**
Chernikov 92	Phys. Rev. Lett. 68:3383, 1992; **Low-Temperature Upper Limit of the Photon Mass: Experimental Null Test of Ampere's Law**
Cheung 92	Phys. Lett. 284B:210, 1992; **Polarization Transfer in ^{1}H (deuteron$\uparrow$, $p\uparrow$) X at 2.1 GeV**
Chiba 87B	Phys. Lett. 202B:447, 1988; KEK-87-141; **Search for Narrow Peaks in Inclusive π^0 Spectra from $p\ p$ Annihilation at Rest**
Chiba 88	Phys. Rev. D38:2021, 1988; KEK-88-25; **Antiproton-Proton Annihilation at Rest into π^0 Meson and γ Meson with Meson = ϕ, η', $\rho(770)^0$, η and π^0**
Chiba 88B	Nucl. Phys. A478:491C, 1988; **Quasifree Δ Production in Hadron-Nucleus Reactions**
Chiba 89	Phys. Rev. D39:3227, 1989; KEK-89-6; **η and η' Production in $p\ p$ Annihilation at Rest**
Chiba 90	KEK-90-89; **Search for Narrow States in the Inclusive γ-Ray Spectra from Antiproton-Deuterium Annihilation at Rest**
Chiba 91	Phys. Rev. Lett. 67:1982, 1991; KEK-91-80; **Coincidence Measurement for p, n Reaction at 1.5 GeV/c on C and p in the Δ Excitation Region**
Chiba 91B	Phys. Rev. D44:1933, 1991; KEK-91-75; **Measurement of γ-Ray from Antiproton-Deuterium Annihilation at Rest**
Chilingarian 88	LEBD-88-75; **Upper Boundary of Iron Nuclei Fraction in Primary Cosmic Rays at $E > 10^{16}$ eV**
Chine 92	Phys. Rev. Lett. 68:270, 1992; **Constraints on 17-keV Neutrinos**
Chkhaidze 92	Z. Phys. C54:179, 1992; **The Temperatures of Protons and π^- Mesons in Central Nucleus-Nucleus Interactions at a Momentum of 4.5 GeV/c per Incident Nucleon**
Chlapnikov 90	Phys. Lett. 240B:519, 1990; **Production Ratio of Pseudoscalar to Vector Mesons**
Chlapnikov 92	Usp. Fiz. Nauk 162:1, 1992; IFVE-92-1; **Charged Particle Multiplicity Distributions in the Process of $e^+\ e^-$ Annihilation into Hadrons in the LEP Experiments**
Chmeissani 92	UM-HE-92-6; **Measurement of the Strong Coupling Constant α_S at the Z^0 Resonance Using Modified Jet Mass Difference**
Choban 91	INR-735-91; **Trimuons of Non-Electromagnetic Origin in Neutrino(Antineutrino)-Nucleon Collisions**
Chrien 88	Phys. Rev. Lett. 60:2595, 1988; **Search for Bound States of the η Meson in Light Nuclei**
Chrin 92	CERN-PPE/92-201; **Recent Results on the Strong Coupling Constant from the DELPHI Experiment at LEP**
Christie 91	Nucl. Phys. A525:649C, 1991; **Pion Correlation in Relativistic Heavy Ion Collisions at the BEVALAC**
Christie 92	Phys. Rev. C45:2836, 1992; **Pion Correlations in 1.8 A GeV Ar on KCl and 1.2 A GeV Xe on La**
Christie 93	Phys. Rev. C47:779, 1993; **Pion Correlation for 1.2 A GeV Lanthanum on Lanthanum**
Chupp 89	Phys. Rev. Lett. 62:505, 1989; **Experimental Limits on the Radiative Decay of SN1987A Neutrinos**
Ciampa 90	Phys. Rev. D42:281, 1990; **Search for >200 TeV Photons from Cygnus X-3 in 1988 and 1989**
Claesson 90	Phys. Lett. 251B:23, 1990; **Proton Emission in ^{139}La + La Collisions at E/A=138 and 246 MeV**
Clauton 92	Phys. Rev. C45:1810, 1992; **Proton-Deuteron Bremsstrahlung at 145 and 195 MeV**

See the legend on page 7.

Clauton 92B	Phys. Rev. C45:1815, 1992; **High Energy Gamma Ray Production in Proton-Induced Reactions at 104 , 145 and 195 MeV**
Cline 92	Mod. Phys. Lett. A7:1201, 1992; UCLA-APH-0051-2-92; **The Evidence for a 17-keV Neutrino Revisited**
Cobbaert 88	Phys. Lett. 206B:546, 1988, CERN-EP-88-34; ***A*-dependence of the Charm Production Cross Section in 300 GeV/c Proton Interaction**
Cobbaert 88B	Phys. Lett. 213B:395, 1988; CERN-EP-88-109; ***A*-dependence of Low Mass Muon Pair Production in 300 GeV/c p and 320 GeV/c π Interactions**
Coc 92	Yad. Phys. 55:3141, 1992; **Neutral Strange Particle Production in Antideuteron-Nuclei Interactions at 12.2 GeV/c**
Cocconi 88	Phys. Lett. 206B:705, 1988; **Upper Limit for Electric Charge of the Photons from the Millisecond Pulsar 1937+21 Observation**
Coffman 87	Phys. Rev. D36:2185, 1987; SLAC-PUB-4314; **Upper Limit on Br($\tau^+ \to \eta \pi \nu$)**
Coffman 88	Phys. Rev. D38:2695, 1988; Phys. Rev. D40:3788, 1989; **Measurement of $J/\psi(1S)$ Decays into a Vector and a Pseudoscalar Meson**
Coffman 89	Phys. Rev. D41:1410, 1990; SLAC-PUB-5104; **Study of the Doubly Radiative Decay $J/\psi(1S) \to \gamma \gamma \rho(770)^0$**
Coffman 91	Phys. Lett. 263B:135, 1991; SLAC-PUB-5311; **Measurement of the Inclusive Decay Properties of Charmed Mesons**
Coffman 92	Phys. Rev. Lett. 68:282, 1992; Phys. Rev. Lett. 69:3689, 1992; SLAC-PUB-5592, IOWA-91-17; **Direct Measurement of the $J/\psi(1S)$ Leptonic Branching Fraction**
Coffman 92B	SLAC-PUB-5447; **Resonant Substructure in K p p p Decays of D Mesons**
Colas 91	DPHPE-91-12; ***B* Physics at LEP**
Cole 88	Phys. Rev. D37:1105, 1988; **Nonsinglet Valence-Quark Distribution from Neutrino-Deuterium Deep-inelastic Scattering**
Comets 89	IPNO-T-89-12; **Etude des voies Inelastiques Nucleon-Nucleon dans la Reaction p p $\to \pi$ X et Recherche de Resonances Dibaryoniques d'Isospin 2**
Condo 90	Phys. Rev. D41:3317, 1990; **Charge-Exchange Photoproduction of the $a_2(1320)$ in Association with $\Delta(1232\ P_{33})^{++}$ at 19.3 GeV/c**
Condo 91	Phys. Rev. D43:2787, 1991; **Photoproduction of an Isovector $\rho(770)$ π State at 1775 MeV**
Connell 88	Phys. Rev. Lett. 60:2242, 1988; **Search for Low-Energy Resonances in the Electron-Positron Annihilation-in-Flight Photon Spectrum**
Contreras 90	FERMILAB-CONF-90-165-E; **Search for the Top Quark and the Other New Particles at p p Colliders**
Contreras 91	FERMILAB-CONF-91-294-E; **Top Search at CDF**
Conway 89	Phys. Rev. D39:92, 1989; **Experimental Study of Muon Pairs Produced by 252 GeV Pions on Tungsten**
Coopersarkar 91	Phys. Lett. 280B:153, 1992; OUNP-91-36; **Bound on the Tau Neutrino Magnetic Moment from the BEBC Beam Dump Experiment**
Corcoran 91	Phys. Lett. 259B:209, 1991; ANL-HEP-PR-90-119; DOE-ER-05096-42; **Evidence for Multiple Scattering of High-Energy Partons in Nuclei**
Corriveau 88	Z. Phys. C38:15, 1988; **Transverse Energy Distribution in ^{16}O-Nucleus Collisions**
Cosmo 92	UDINE-92-02-AA; **DELPHI Results on the Measurement of the Partial Hadronic Widths of the Z^0 Using Neural Networks**
Cosulich 92	Phys. Lett. 295B:143, 1992; **Detection of ^{187}Re β Decay with a Cryogenic Microcalorimeter. Preliminary Results**
Coupal 90	SLAC-PUB-5240; **Review of Results from the MARK-II Experiment at SLC**
Cousins 88	Phys. Rev. D38:2914, 1988; **Search for the Decay $K_L \to \mu^+ e^-$, $K_L \to \mu^- e^+$ and $K_L \to e^+ e^-$**
Cowan 88	LBL-24715; **Inclusive $\pi^\pm$, $K^\pm$ and p p Production in $e^+ e^-$ Annihilation at $\sqrt{s}$=29 GeV**
Cowen 90	RX-1312 (WISCONSIN); **Searches for Pair Produced Charged Higgs Bosons and Neutral Supersymmetric Higgs Bosons in Z^0 Decays**
Cowley 88	Phys. Lett. 201B:196, 1988; **Coincident Proton Emission from the Continuum Induced by 200 MeV Proton on ^{12}C**
Cowley 90	Eur. Lett. 13:37, 1990; **Importance of Nucleon-Nucleon Scattering in the Interaction of Proton with ^{197}Au at 200 MeV**
Cowley 91	Phys. Rev. C44:329, 1991; **Quasifree Knockout in ^{16}O (p, 2p) ^{15}Nit at the Incident Energy of 151 MeV**
Cowsik 88	Phys. Rev. Lett. 61:2179, 1988; **Limit on the Strength of Intermediate-Range Forces Coupling to Isospin**
Cowsik 90	Phys. Rev. Lett. 64:336, 1990; **Strength of Intermediate-Range Forces Coupling to Isospin**
Crabb 88	Phys. Rev. Lett. 60:2351, 1988; UM-HE-88-4; **Measurement of Spin Effects in p p $\to p$ p at 18.5 GeV/c**
Crabb 90	Phys. Rev. Lett. 65:3241, 1990; **High-Precision Measurement of the Analyzing Power in Large-p_T^2 Spin-Polarized 24 GeV/c Proton-Proton Elastic Scattering**
Crawford 88	Phys. Lett. 213B:391, 1988, SIN-PR-88-05; **Precision Measurement of the Mass Difference $m_{\pi^-} - m_{\pi^0}$**
Crawford 91	Phys. Rev. D44:3394, 1991; **Measurement of the Ratio Br($D^0 \to K^*(892)\ e^+ \nu_e$)/Br($D^0 \to K^- e^+ \nu_e$)**
Crawford 91B	Phys. Rev. D45:752, 1992; CLNS-91-1066; CLEO-91-3; **Measurement of Baryon Production in B-Meson Decay**

Crawford 91C Phys. Rev. D43:46, 1991; PSI-PR-90-25;
Precision Measurement of the Pion Mass Difference $m_{\pi^-} - m_{\pi^0}$

Crawford 92 Phys. Lett. 294B:139, 1993; CLNS-92-1151; CLEO-92-2;
Exclusive $\chi_{b1}(2P)$, $\chi_{b2}(2P)$ Production in $\Upsilon(3S)$ Decay

Cronin 92 Phys. Rev. D45:4385, 1992;
Search for Discrete Sources of 100 TeV Gamma Radiation

Cronstrom 91 PREPRINT-LUND;
Kaons in Flavor Tagged B Meson Decays

Crosland 91 RALT-117;
Studies of Muon-Pair Production in $e^+ e^-$ Annihilations at the LEP Collider

Cumalat 87 Phys. Lett. 210B:253, 1988; FERMILAB-PUB-87-192-E;
Observation of $D^0 \to K^0 \bar{K}^0$

Cummings 92 Phys. Rev. Lett. 68:293, 1992;
Energetic Protons and Deuterons Emitted Following μ^- Capture by ^{3}He Nuclei

Cutler 90 LBL-29551;
Mayflower Mine 1.5 TV Detector: Cosmic Ray Anisotropy and Search for Cygnus X-3

Czapek 91 Jour. of Phys. G 17:S41, 1991;
A Precision Measurement of the Branching Ratio of the Rare Pion Decay into a Positron and a Neutrino

Dalitz 90 Phys. Lett. 236B:76, 1990;
Is There a Bound ^{4}H$_S$

Dallatorreco 89 Nucl. Phys. A505:561, 1989;
Measurement of the Polarization of the Proton-Proton Elastic Reaction at Small Scattering Angles between 940 and 2440 MeV

Dallatorreco 92 Yad. Phys. 55:1176, 1992;
Measurement of the Depolarization Parameter and the Spin Transfer Parameter in the Charge-Exchange Reaction $\bar{p}\, p \to \bar{n}\, n$ at LEAR

Dam 92 CERN-PPE-92-82; UIO-PHYS-92-16;
$\tau^\pm$ Physics at LEP

Damdinsuren 88 JINR-P1-88-135;
Yield Determination of Radionuclides Formed in Interactions of Relativistic Nuclei with Complex Nuclei

Damdinsuren 88B JINR-P1-88-312;
Application of Robust Fitting to Determination of Isobaric Cross Sections of Residual Nuclei in Relativistic Interactions

Damdinsuren 89 JINR-E1-89-481;
Yield of Radionuclides Formed in the Interaction of 3.65 A GeV ^{12}C-Ions and Protons with Pb

Damdinsuren 89B Yad. Phys. 52:330, 1990; JINR-P1-89-757;
Target Residues from the Reactions of 3.65 A GeV Deuterons with ^{93}Nb, ^{109}Ag, ^{159}Tb, ^{197}Au, and ^{207}Pb

Danevich 89 Pisma Zh. Eksp. Teor. Fiz. 49:417, 1989; Jetp Lett. 49:476, 1989;
Search for Double β Decay of ^{116}Cd with the Help of Scintillator $CdWO_4$

Daniel 92 JINR-E1-92-174;
Neutron Production in Lead Targets by High-Energy Light-Mass Heavy Ions

Danielewicz 88 Phys. Rev. C38:120, 1988;
Collective Motion in Nucleus-Nucleus Collisions at 800 MeV/Nucleon

Danielsen 92 Nuovo Cim. 105A:879, 1992;
Note on a Narrow Peak at 1170 MeV/c^2 in Neutral Three-Pion Systems Produced in the Reaction $p\, p \to p\, p\, \pi^+\, \pi^-\, \pi^0$ at 19 GeV/c

Danilov 89 Mod. Phys. Lett. A5:73, 1990; ITEP-88-180; DESY-89-147;
Recent ARGUS Results on B Meson Decays

Danilova 92 Yad. Phys. 55:2968, 1992;
Energy Dependence of Nuclear Content of Primary Cosmic Radiation in the Range from 1 to 10 PeV

Danzmann 89 Phys. Rev. Lett. 62:2353, 1989;
Correlated Two-Photon Lines from 6 MeV/Nucleon U Th, U U, and Th Th Collisions

Daoudi 91 Phys. Rev. D45:3965, 1992; CLNS-91-1108; CLEO-91-9;
Two-Body D_S^+ Decays to $\eta\, \pi^+$, $\eta'(958)\, \pi^+$, $\eta\, \rho(770)^+$, and $\phi\, \rho(770)^+$

Dasgupta 90 ANL-HEP-PR-90-94;
Coincidences between Extensive Air Showers and the SOUDAN-1 Underground Muon Detector

Dassie 91 LAL-91-29;
Double β Decay Prototype Detector with Multiwire Drift in the Geiger Mode

Dasu 87 Phys. Rev. Lett. 61:1061, 1988; ROCH-UR-991-87;
Precision Measurement of $R=\sigma_L/\sigma_T$ in Deep Inelastic Electron Scattering

Dasu 88 Phys. Rev. Lett. 60:2591, 1988;
Measurement of the Difference in $R=\sigma_L/\sigma_T$ and σ^A/σ^D in Deep-Inelastic e^--deuteron, e^--Fe and e^--Au Scattering

Daum 91 Phys. Lett. 265B:425, 1991; PSI-PR-91-07;
New Precision Measurement of the Muon Momentum in Pion Decay at Rest

Davier 89 Phys. Lett. 229B:150, 1989; LAL-89-24;
An Unambiguous Search for a Light Higgs Boson

Davis 88 TRI-PP-88-72;
Measurements of the $n\, p$ Observables at TRIUMF

Davis 88B NEUTRINO-88 p. 518;
Report on the Chlorine Solar Neutrino Experiment

Davis 90 VENEZIA-90 p. 1;
The Solar Homestake Chlorine Experiments and the Variation in the Solar Neutrino Flux

De 89 FERMILAB-CONF-89-151-E;
The Production of $J/\psi(1S)$ and Associated Particles in the Collision of 530 GeV/c Protons and Pions with Nuclear Targets

Deangelis 91 UDINE-91-07-AA;
Intermittency in $e^+ e^-$ Annihilations

Deangelis 91B UDINE-91-08-AA;
Hadronic Branching Fractions of the Z^0 Boson

Deangelis 91C UDINE-91-05-AA; INFN-AE-91-11;
Recent DELPHI Results on Multiplicity Fluctuations in Hadronic Final States from the Decay of the Z^0 Boson

Debarbaro 90 UR-1157; ER-13065-618;
A Search for Neutral Heavy Leptons in ν_μ-Nucleus Interactions

Debarbaro 90B UR-1233; ER-13065-685;
Search for Neutral Heavy Leptons in Neutrino-Nucleon Interactions at the FNAL Tevatron

Debevec 92 Phys. Rev. C45:904, 1992;
Absolute Measurement of the Differential Cross Section for Deuteron Photodisintegration from 63 to 71 MeV

Deboer 89 DESY-89-130;
Recent Results from PEP and PETRA

Deboer 91 Phys. Rev. D43:3063, 1991;
Search for Bound State of Negative Pions and Neutrons in Relativistics Heavy-Ion Reaction

Decamp 89 Phys. Lett. 231B:519, 1989; CERN-EP-89-132;
Determination of the Number of Light Neutrino Species

Decamp 89B Phys. Lett. 235B:399, 1990; CERN-EP-89-169;
A Precise Determination of the Number of Families with Light Neutrinos and of the Z^0 Boson Partial Widths

Decamp 89C Phys. Lett. 236B:233, 1990; CERN-EP-89-157;
Search for the Neutral Higgs Boson from Z^0 Decay

Decamp 89D Phys. Lett. 236B:86, 1990; CERN-EP-89-158;
Search for Supersymmetric Particles Using Acoplanar Charged-Particle Pairs from Z^0 Decays

Decamp 89E Phys. Lett. 236B:511, 1990; CERN-EP-89-165;
A Search for New Quarks and Leptons from Z^0 Decay

Decamp 89G Phys. Lett. 234B:399, 1990; CERN-EP-89-141;
Determination of the Leptonic Branching Ratios of the Z^0

Decamp 89H Phys. Lett. 237B:291, 1990; CERN-EP-89-168;
Search for Neutral Higgs Bosons from Supersymmetry in Z^0 Decays

Decamp 90 Phys. Lett. 255B:623, 1991; CERN-PPE-90-176;
Measurement of the Strong Coupling Constant α_S from Global Event-Shape Variables of Hadronic Z^0 Decays

Decamp 90B Phys. Lett. 241B:635, 1990; CERN-EP-90-23;
Search for Decays of the Z^0 into a Photon and a Pseudoscalar Meson

Decamp 90C Phys. Lett. 244B:551, 1990; CERN-EP-90-54;
Heavy Flavour Production in Z^0 Decays

Decamp 90D Phys. Lett. 244B:541, 1990; CERN-EP-90-63;
Search for Neutralino Production in Z^0 Decays

Decamp 90E Phys. Lett. 241B:141, 1990; CERN-EP-90-16;
Search for the Neutral Higgs Boson from Z^0 Decays in the Higgs Mass Range between 11 and 24 GeV

Decamp 90F Phys. Lett. 234B:209, 1990; CERN-EP-89-139;
Properties of Hadronic Events in $e^+ e^-$ Annihilation at $\sqrt{s}$=91 GeV

Decamp 90G Phys. Lett. 236B:501, 1990; CERN-EP-89-167;
Search for Exited Leptons in Z^0 Decay

Decamp 90H Phys. Lett. 245B:289, 1990; CERN-EP-90-70;
Search for a Very Light Higgs Boson in Z^0 Decays

Decamp 90I Phys. Lett. 250B:172, 1990; CERN-PPE-90-107;
Search for Excited Neutrinos in Z^0 Decay

Decamp 90J Phys. Lett. 246B:306, 1990; CERN-PPE-90-101;
Searches for the Standard Higgs Boson

Decamp 90K Z. Phys. C48:365, 1990; CERN-PPE-90-104;
Measurement of Electroweak Parameters from Z^0 Decays into Fermion Pairs

Decamp 90M Phys. Lett. 257B:492, 1991; CERN-PPE-90-195;
Measurement of the B Hadron Lifetime

Decamp 90N Phys. Lett. 257B:479, 1991; CERN-PPE-90-196;
Measurement of α_S from the Structure of Particle Clusters Produced in Hadronic Z^0 Decays

Decamp 90O Phys. Lett. 241B:623, 1990; CERN-EP-90-34;
A Search for Pair-Produced Charged Higgs Boson in Z^0 Decays

Decamp 91 CERN-PPE-91-19;
Search for the Standard Higgs Boson Produced in the Reaction $e^+ e^- \to$ higgs Z^{0*}

Decamp 91B Phys. Lett. 259B:377, 1991; CERN-PPE-91-27;
Measurement of Charge Asymmetry in Hadronic Z^0 Decays

Decamp 91C Phys. Lett. 262B:139, 1991; CERN-PPE-91-26;
Search for a New Weakly Interacting Particle

Decamp 91D Phys. Lett. 258B:236, 1991; CERN-PPE-90-194;
Measurement of B-$\bar{B}$ Mixing at the [illegible]

Decamp 91E Phys. Lett. 264B:476, 1991; CERN-PPE-91[illegible]
Measurement of Isolated Photon Production in Hadronic Z^0 Decays

Decamp 91F Phys. Lett. 263B:112, 1991; CERN-PPE-91-65;
Charged Particle Pair Production Associated with a Lepton Pair Production in Z^0 Decays

Decamp 91G Phys. Lett. 263B:325, 1991; CERN-PPE-91-71;
Measurement of the Forward-Backward Asymmetry in $Z^0 \to b\,\bar{b}$ and $Z^0 \to c\,\bar{c}$

Decamp 91H Phys. Lett. 265B:430, 1991; CERN-PPE-91-94;
Measurement of the Polarization of $\tau^\pm$ Leptons Produced in Z^0 Decays

Decamp 91I Phys. Lett. 265B:475, 1991; CERN-PPE-91-111;
Search for the Higgs Bosons of the MSSM and other Two-doublet Models

Decamp 91J Phys. Lett. 266B:218, 1991; CERN-PPE-91-114;
Production and Decay of Charmed Mesons at Z^0 Resonance

Decamp 91K Z. Phys. C53:21, 1992; CERN-PPE-91-121;
An Investigation into Intermittency

Decamp 91L Phys. Lett. 273B:181, 1991; CERN-PPE-91-159;
Measurement of the Charged Particle Multiplicity Distribution in Hadronic Z^0 Decays

Decamp 91M Phys. Rept. 216:253, 1992; CERN-PPE-91-149;
Searches for New Particles in Z^0 Decays Using the ALEPH Detector

Decamp 91N Z. Phys. C53:1, 1992; CERN-PPE-91-105;
Improved Measurements of Electroweak Parameters from Z^0 Decays into Fermion Pairs

Decamp 91O Z. Phys. C53:375, 1992; CERN-PPE-91-129;
Measurement of the Absolute Luminosity with the ALEPH Detector

Decamp 91P Z. Phys. C54:75, 1992; CERN-PPE-91-183;
A Study of Bose-Einstein Correlations in $e^+ e^-$ Annihilation at 91 GeV

Decamp 91Q Phys. Lett. 278B:209, 1992; CERN-PPE-91-229;
Evidence for b Baryons in Z^0 Decays

Decamp 91R Z. Phys. C54:211, 1992; CERN-PPE-91-186;
Measurement of Tau Branching Ratios

Decamp 91S Phys. Lett. 276B:247, 1992; CERN-PPE-91-232; L3-036;
Electroweak Parameters of the Z^0 Resonance and the Standard Model

Decamp 92 Phys. Lett. 279B:411, 1992; CERN-PPE-92-3;
Measurement of the Tau Lepton Lifetime

Decamp 92B Phys. Lett. 284B:163, 1992; CERN-PPE-92-33;
Measurement of the α_S in Hadronic Z^0 Decays Using All-Orders Resummed Predictions

Decamp 92C Phys. Lett. 284B:151, 1992; CERN-PPE-92-31;
Evidence for the Triple-Gluon Vertex from Measurements of the QCD Colour Factors in Z^0 Decay into 4 Jets

Degtyarenko 89 ITEP-89-62;
Inelastic Electron-Nucleus Interactions at 5 GeV Detected by ARGUS

Degtyarenko 90 ITEP-90-12;
Production of Cumulative $\Delta(1232\, P_{33})$ in e^+ nucleus Interactions at 5 GeV

Degtyarenko 91 ITEP-91-36;
"Lambdameter"

Dehning 90 Phys. Lett. 249B:145, 1990; CERN-SL-90-86-EA;
Scattering of High-Energy Electrons off Thermal Photons

Dejongh 89 CALT-68-1578;
Resonant Substructure in $K^- \pi^+ \pi^+ \pi^-$ and $K^0 \pi^+ \pi^+ \pi^-$ Decays of Charmed D Mesons

Dejongh 90 RX-1300 (CALTECH);
Resonant Substructure in $K^- \pi^+ \pi^+ \pi^-$ Decays of D Mesons

Deleenerrost 91 Phys. Rev. D43:3611, 1991;
Search for Massive Neutrinos in $\pi^- \to e^- \bar{\nu}$ Decay

Delesquen 88 Nucl. Phys. B304:673, 1988;
Measurement of Analyzing Power and Spin Correlations in $n\, p$ Elastic Scattering at .744 and .794 GeV Using a Deuteron Polarized Beam

Delesquen 89 Phys. Rev. D39:21, 1989;
Measurement of the Reaction $K^+ n \to K^+ \pi^- p$ at 5.98 and 11.85 GeV/c Using a Transversely Polarized Deuteron Target

Delnna 89 Nuovo Cim. 101A:975, 1989;
Cross Section of Ternary Fission of Al, Ti, Co and Zr Nuclei Induced by (0.8 - 1.8) GeV Photons

Delnna 90B Nuovo Cim. 103A:701, 1990;
Fission of Al, Ti, Co, Zr, Nb, Ag, In, Nd, Sm and Ta Nuclei Induced by (0.8 - 1.8) GeV Photons

Delloro 90 FERMILAB-CONF-90-86-E;
Large p_T Jets at CDF

Delloro 90B FERMILAB-CONF-90-32-E;
The Dijet Invariant Mass at the TEVATRON Collider

Demarzo 90 Phys. Rev. D42:748, 1990;
Measurement of the Production of High-Mass $\gamma\, \gamma$, $\pi^0\, \pi^0$, and $\gamma\, \pi^0$ Pairs in $\pi^- p$, $\pi^+ p$, and $p\, p$ Collisions at 300 GeV/c

Dementiev 92 INR-794-92;
Study of A (p, π^0) X Reaction at Photon Beam of the Moscow Meson Facility

Dementy 88 Yad. Phys. 48:609, 1988;
Experimental Study of Inclusive Quasielastic Electron Scattering on ^{4}He

Demidov 89 ITEP-89-103;
Measurement of the $K^+ \to \mu^+ \nu \gamma$ Decay Probability

Demidov 90 Yad. Phys. 52:1595, 1990;
Measurement of the Structure Radiative Form Factors in Decay $K^+ \to \mu^+ \nu \gamma$

Denegri 90 Rev. of Mod. Phys. 62:1, 1990;
The Number of Neutrino Species

Denisov 91 Pisma Zh. Eksp. Teor. Fiz. 54:557, 1991;
New Measurement of the K^- Meson Mass

Derado 88 Z. Phys. C40:25, 1988;
Long-Range Correlations in Hadron-Nucleus Interactions

Derado 90 Z. Phys. C47:23, 1990; MPI-PAE-EXP-EL-221;
Investigation of Intermittency in Muon-Proton Scattering at 280 GeV

Derado 90B Z. Phys. C50:41, 1991; PRINT-90-0705 (MPI,MUNICH);
Production of Neutral Strange Particles in p Ar, p Xe and p Xe Collisions at 200 GeV

Derado 91 Z. Phys. C54:357, 1992; MPI-PHE-91-08;
A Study of Fluctuations and Correlations in Deep-Inelastic Muon-Nucleon Scattering at 280 GeV

Derado 92 Phys. Lett. 283B:151, 1992; MPI-PHE-91-05;
Multifractal Properties of Muon-Induced Multiparticle Production

Derbin 92 LENI-92-1764;
Experimental Study of Antineutrino Scattering by Electron at Rovno Power Plant Reactor

Derbin 92B LENI-92-1765;
A Bound on the Magnetic Moment of the Reactor's Neutrino

Deroeck 93 DESY-93-014;
First Measurements at HERA of Deep Inelastic Scattering at Low x

Derrick 92 Phys. Lett. 293B:465, 1992; DESY-92-127;
A Measurement of $\sigma_{tot}(\gamma\, p)$ at $\sqrt{s} = 210$ GeV

See the legend on page 7.

Derrick 92B Phys. Lett. 297B:404, 1993; DESY-92-138;
Observation of Hard Scattering in Photoproduction at HERA

Derrick 92C DESY-92-180;
Initial Study of Deep Inelastic Scattering with ZEUS at HERA

Derrick 93 Phys. Lett. 306B:158, 1993; Phys. Lett. 306B:158, 1993; DESY-93-017;
Search for Leptoquarks with ZEUS Detector

Desantics 88 LNF-88-54;
A Critical Review of Deuteron Photodisintegration Data

Dibon 90 NEPHY-PUB-90-541; CERN-PRE-90-053;
Results from UA1 Minimum Bias Events at $\sqrt{s}$=630 GeV on Intermittency and Multifractal Structure

Didenko 91B INR-E1-91-329;
Search for and Study of the Effective Mass Spectra of Nucleon Clusters Produced in Relativistic Nucleon Collisions

Didenlez 91 Nucl. Phys. A535:445, 1991;
Total Cross Sections for the $p\ p\ \pi^0$ Channel in the Inelastic $p\ p$ Interaction

Diehl 91 Phys. Rev. Lett. 67:804, 1991; FERMILAB-PUB-91-165;
Measurement of the Ω^- Magnetic Moment

Dieter 89 BONN-IR-89-07;
Comparison between Photoproduction and Hadroproduction of $\rho(770)^0$ Mesons Using the CERN Ω Spectrometer

Dingus 88 Phys. Rev. Lett. 60:1785, 1988;
Search for Signal from Cygnus X-3 at Energies above 50 TeV

Dingus 88B Phys. Rev. Lett. 61:1906, 1988;
Ultrahigh-Energy Pulsed Emission from Hercules X-1 with Anomalous Air-Shower Muon Production

Distelbrink 91 Phys. Lett. 271B:47, 1991;
The $\gamma\ ^{14}$Nit $\rightarrow \pi^+\ ^{14}$C Reaction through the Δ Resonance Region

Dittmar 92 CERN-PPE-92-177;
Searching for Rare Exotic Z^0 Decays

Ditzler 92 Phys. Rev. D46:2792, 1992; ANL-HEP-PR-92-21;
Neutron-Proton Elastic Scattering Spin-Spin Correlation Parameter Measurements Between 500 and 800 MeV. 1. C_{sl} and C_{ll} at Backward c.m. Angles

Dobrovolsky 88 LENI-88-1454;
Experimental Data on Elastic $p\ p$, $n\ p$, p deuteron, and p He Forward Scattering at Intermediate Energies

Dodelson 92 Phys. Rev. Lett. 68:2572, 1992;
Constraints to the Decays of Dirac Neutrino from SN1987A

Dohner 89 Nucl. Instr. and Meth. A284:123, 1989;
Measurement of Neutron-Decay Parameters with PERKEO

Dolgolenko 92 Yad. Phys. 55:1253, 1992;
Strangeness Production in $\bar{p}$ Xe Annihilations at Low Energy

Dolinsky 88 Sov. J. Nucl. Phys. 48:277, 1988; Yad. Phys. 48:442, 1988;
Observation of the Decay $\omega(783) \rightarrow \pi^0\ e^+\ e^-$

Dolinsky 88B Z. Phys. C42:511, 1989; NOVO-88-89;
Radiative Decays of $\rho(770)$ and $\omega(783)$ Mesons

Dolinsky 89 NOVO-89-68;
Review of $e^+\ e^-$ Experiments with Neutral Detector on VEPP-2M. Part 1

Dolinsky 89B NOVO-89-104;
Review of $e^+\ e^-$ Experiments with Neutral Detector on VEPP-2M. Part 2

Domkin 92 Yad. Phys. 55:876, 1992;
On the Mechanism of Xe Isotope Production in the Interaction of Ta Nuclei with E_p=1 GeV Protons

Domogatsky 89 Acta Phys. Hung. 65:323, 1989;
Searching for Monopoles in Lake Baikal

Donnachie 89 Z. Phys. C42:671, 1989;
Omegaprimes and Glueballs

Donnachie 91 Z. Phys. C51:689, 1991;
The Decays of the $\rho(1450)$ and $\omega(1390)$ Mesons

Dorenbosch 87 Z. Phys. C40:497, 1988; CERN-EP-87-167;
Prompt Neutrino Production in 400 GeV Proton-Copper Interactions

Dorenbosch 89 Z. Phys. C41:567, 1989; Z. Phys. C51:142, 1991; CERN-EP-88-136;
Experimental Results on Neutrino-Electron Scattering

Doser 88 Phys. Lett. 215B:792, 1988;
$\bar{p}\ p$ Annihilation into $K^0\ \bar{K}^0$ in Hydrogen Gas

Doser 88B Nucl. Phys. A486:493, 1988;
$\bar{p}\ p$ Annihilation into $\pi^+\ \pi^-$ and $K^+\ K^-$ from Atomic P States

Doss 88 Phys. Rev. C37:163, 1988;
Multiplicity and Bombarding Energy Dependence of the Entropy in Relativistic Heavy-Ion Reactions

Dougherty 88 LBL-26303;
An Experimental Investigation of Double β Decay of ^{100}Mo

Dowell 88 CERN-EP-88-154;
Recent Results from the UA1 Experiment

Drell 89 CLNS-89-932;
$B^0\ \bar{B}^0$ Mixing and Charmless B^* Decays: Recent CLEO Results

Drell 92 CLNS-92-1146;
Recent results from CLEO

Drell 92B CLNS-92-1177;
Weak Decays, Rare Decays, Mixing, and CP Violation

Dremin 90 Yad. Phys. 52:840, 1990;
Properties of the Ring-Like Events in $p\ p$ Interactions at 205 and 360 GeV

Dreute 91 Phys. Rev. C44:1057, 1991; SI-91-02;
Fragmentation of Gold Projectiles with Energies of 200 – 980 MeV/Nucleon. Part I: Experimental Method, Charge Yields and Transverse Momenta

Drinkard 90 SCIPP-90-16;
Partial Wave Analyses of $J/\psi(1S) \rightarrow \gamma\ K\ \bar{K}\ \pi$ and $J/\psi(1S) \rightarrow \gamma\ \eta\ \pi^+\ \pi^-$

Drutskoy 88	ITEP-88-1; **Exotic Baryons with Isotope Spin I=5/2 in π^+ p Interactions**
Drutskoy 89	ITEP-89-142; **Search for Strange Exotic Baryon Resonances at the 4.23 GeV/c Momentum**
Druzhinin 88	Z. Phys. C37:1, 1988; NOVO-87-52; **Search for Rare Radiative Decays of ϕ(1020) Meson at VEPP-2M**
Dubar 89	Yad. Phys. 49:1239, 1989; **Parametrization of Total Cross Sections at Intermediate Energies**
Dubbers 88	Nucl. Instr. and Meth. A264:120, 1988; **Particle Physics with Slow Neutrons at the Institute Laue-Langevin**
Dubbers 90	Eur. Lett. 11:195, 1990; **Determination of the Weak-Coupling Constants from Free-Neutron Decay Experiment**
Dubinina 88	Pisma Zh. Eksp. Teor. Fiz. 48:233, 1988; Jetp Lett. 48:251, 1988; **Observation of the Slow Pion Production in the Nucleus-Nucleus Interactions**
Dubovy 88	Yad. Phys. 47:1663, 1988; Sov. J. Nucl. Phys. 47:1054, 1988; **Nuclear Composition of 300 – 500 TeV Cosmic Rays from EAS Hadronic Component**
Duch 89	Z. Phys. C45:223, 1989; MZ-ETAP-89-5; CERN-PRE-89-146; **Observation and Analysis of E Mesons in p p Annihilation at Rest in H_2 Gas**
Dudkin 90	Nucl. Phys. A509:783, 1990; **Multiplicities of Secondaries in Interactions of 1.8 GeV/Nucleon ^{56}Fe Nuclei with Photoemulsion and the Cascade Evaporation Model**
Dudkin 91	Nucl. Phys. A530:759, 1991; **Target Fragments in Collisions of 1.8 GeV/Nucleon ^{56}Fe Nuclei with Photoemulsion Nuclei, and the Cascade-Evaporation Model**
Duffy 88	Phys. Rev. D38:2032, 1988; **Neutrino Production by 400 GeV/c Protons in Beam-Dump Experiment**
Dukhovskoy 87	Yad. Phys. 47:1816, 1988; ITEP-87-198; **Measurement of the Total Cross Sections of the Proton Interactions with Nuclei ^{6}Li, ^{7}Li, and ^{9}Be at 2 GeV/c**
Dunwoodie 91	SLAC-PUB-5675; **Two Variations on a ρ' Theme: Data from LASS and MARK III**
Dupieux 91	Z. Phys. A340:165, 1991; **Baryon-Baryon Correlation at Small Relative Momentum in Neon- and Argon-Nucleus Collisions between E/A=200 and 1000 MeV**
Durand 90	Nucl. Phys. A511:442, 1990; **Light Fragment Emission Correlated with Large Transverse Momentum Protons in 94 MeV/u ^{16}O Induced Reactions**
Durieux 91	Preprint; **Etude de la Production de η et de Photons de Bremsstrahlung dans des Collisions p p et π p a 280 GeV/c**
Durkin 88	Phys. Rev. Lett. 61:1811, 1988; **Limit on $\bar{\nu}_\mu \leftrightarrow \bar{\nu}_e$ Oscillations**
Duryea 91	Phys. Rev. Lett. 67:1193, 1991; FERMILAB-PUB-91-209; **Polarization of Ξ^- Hyperons Produced by 800 GeV Protons**
Duryea 92	Phys. Rev. Lett. 68:768, 1992; **Precise Measurement of the Ξ^- Magnetic Moment**
Dworkin 90	Phys. Rev. D41:780, 1990; **High Statistics Measurement of g_a/g_v in $\Lambda \to p\,\ell^-\,\bar{\nu}$**
Dyakonov 89	Pisma Zh. Eksp. Teor. Fiz. 50:408, 1989; Jetp Lett. 50:442, 1989; **On Change of Nuclear Composition of Primary Cosmic Radiation in the Energy Range 10^{17} – 10^{19} eV**
Dydak 91	CERN-PPE-91-14; **Results from LEP and the SLC**
Dzhaoshvili 88	Yad. Phys. 48:299, 1988; **Particle Distribution at the Target Fragmentation Region in Hadron-Carbon Interactions at the Average Energy .4 TeV**
Dzhaoshvili 88B	Yad. Phys. 48:1853, 1988; **About Fluctuations of Transverse Energy and Multiplicity Distributions on Pseudorapidity in the Interactions of Hadrons with Carbon Nuclei at Average Energy of .4 TeV**
Dzhaoshvili 90	Nucl. Phys. B336:86, 1990; **Dependence of Inelasticity Coefficients of Charged Particles on the Atomic Number of a Target Nucleus in the Energy Range 0.2 – 2.0 TeV**
Eastman 90	LBL-30035; **Kaon Content of Three Prong Decays of the Tau Lepton**
Eckart 88	BONN-IR-88-21; **Two-Particle Correlations and Density Fluctuations in Proton-Antiproton Interactions at c.m. Energies from 200 to 900 GeV**
Eckhardt 88	Phys. Rev. Lett. 60:2567, 1988; **Tower Gravity Experiment: Evidence for Non-Newtonian Gravity**
Edberg 88	LBL-25652; **Inclusive Production of Vector Mesons in e^+ e^- Annihilation at $\sqrt{s}$=29 GeV**
Edgorov 92	Yad. Phys. 55:2962, 1992; **Correlation Effects in Cumulative Proton Production in p Ne Interactions at 300 GeV/c**
Edwards 89	SLAC-PUB-5160; **Hadron Production in e^+ e^- Annihilation from $\sqrt{s}$=5.0 to 7.4 GeV**
Edwards 92	Nucl. Phys. A543:685, 1992; **Forward p(n, deuteron) γ Cross Sections Above the Pion Production Threshold**
Eerola 92	UDINE-92-07-PE-REV; **Classification of the Decays of the Z^0 into b and c Quark Pairs Using a Neural Network**
Efendiev 89	Kr. Soob. JINR 36:9, 1989; **The Partial Wave Analysis of K^- π^- π^+ System Coherently Produced on Nuclei at 40 GeV**
Efimov 89	Yad. Phys. 49:900, 1989; **About Cross Section of the Interaction of Protons with Air Nuclei at the Energies 2 · 10^{16} eV**
Eggert 89	CERN-EP-89-42; **Experimental Situation of Beauty Oscillations**

See the legend on page 7.

Egli 89 Phys. Lett. 222B:533, 1989; PSI-PR-89-02;
Measurement of the Decay $\pi^+ \to e^+ \nu_e e^+ e$ and Search for a Light Higgs Boson

Eigen 90 CALT-68-1698;
Study of $K^*(892)^0$ $K^*(892)^0$ Production in Radiative $J/\psi(1S)$ Decays

Eisele 92 DESY-92-140;
First Results from the H1 Experiment at HERA

Eiseman 90 Phys. Lett. 248B:254, 1990; BNL-44716;
Neutral vee Production with 14.6 A GeV/c Silicon Beam

Eiseman 92 Phys. Lett. 292:10, 1992; BNL-47171;
Rapidity Distributions and Nuclear Transparency in Heavy Ion Collisions

Eiseman 92B Phys. Lett. 297B:44, 1992; BNL-47886;
Rapidity Distributions of K_S and Λ's Produced by 14.6 GeV/c Si Beams on Si and Pb Targets

Ejiri 89 Phys. Lett. 228B:24, 1989;
Search for the Dihyperon by Double Weak Decay of Nuclei

Ejiri 91 Phys. Lett. 258B:17, 1991;
Double β Decays of ^{100}Mo

Ejiri 91B Nucl. Phys. A522:305c, 1991;
Double Beta Decays and Related Subjects for Particle and Nuclear Physics

Eklund 91 Nucl. Phys. A525:657C, 1991;
WA80 Multiplicity Results at 200 A GeV

Eklund 92 PREPRINT(LUND);
Particle Production in Hot and Dense Nuclear Matter

Ellegaard 89 Phys. Lett. 231B:365, 1989;
Spin Structure of the $\Delta(1232\, P_{33})$ Excitation

Ellis 90 Phys. Rept. 195:23, 1990; UCR-HEP-A1-89-10;
Heavy Quark Production at the CERN $p\,\bar{p}$ Collider

Ellis 91 Phys. Lett. 267B:132, 1991;
On the Extraction of $\alpha_S(M_{Z^0})$ from LEP Jet Data

Elnadi 88 Phys. Rev. Lett. 61:1271, 1988;
Production of a New Light Neutral Boson in High Energy Collisions

Elnadi 92 Phys. Lett. 295B:148, 1992;
Negative-Binomial Multiplicity Distribution in the Interactions of ^{24}Mg Ions with Light and Heavy Emulsion Nuclei

Elnaghy 87B Jour. of Phys. G 14:1125, 1988; JINR-E1-87-547;
Fragmentation of ^{22}Ne in Emulsion at 4.1 A GeV/c

Elsen 90 Z. Phys. C46:349, 1990; DESY-89-127;
A Measurement of the Weak Axial Couplings of the b and c Quarks

Elsener 88 Nucl. Phys. A481:227, 1988;
Determination of the M-Matrix in deuteron-^{4}He Elastic Scattering from a Complete Set of Experiments

Emura 90 INS-847;
Photon Absorbtion Mechanism in the $\gamma\ ^4\mathrm{He} \to n\ n\ p\ p$ Reaction

Emura 91 Phys. Lett. 286B:229, 1992; INS-891;
The Total Cross Section for the $\gamma\ ^4\mathrm{He} \to n\ n\ p\ p$ Reaction in the Δ-Resonance Region

Emura 91B Phys. Lett. 267B:460, 1991;
Measurement of the $\gamma\ ^4\mathrm{He} \to n\ n\ p\ p$ Reaction in the Δ-Resonance Region

Endo 88 INS-724;
Reaction Mechanism of ^{4}He $(\gamma, p\ n)$ X at E_γ =0.17 GeV to 0.27 GeV

Engels 90 SINGAPORE-90 V.2, P. 1439;
Direct Photon Production in Hadron-Hadron Collisions at 530 GeV Fermilab E706

Eno 88 KEK-88-47; AMY-88-10;
A Search for New Heavy Quarks Using Hadronic Events Containing Leptons

Eno 89 KEK-89-4; AMY-89-01;
Recent Results from AMY Experiment

Eno 89B Phys. Rev. Lett. 63:1910, 1989; KEK-89-46; AMY-89-08;
Search for a Fourth-Generation Charge −1/3 Quark

Eno 89C UR-1132;
A Search for a Fourth Generation Charge −1/3 Quark

Enomoto 89 Phys. Rev. Lett. 64:2603, 1990; KEK-89-178;
Observation of γ Ray Point Sources with Energy Greater than 40 GeV along the Galactic Plane by Airborne Experiment

Enomoto 91 Mod. Phys. Lett. A6:1, 1991;
Search for High Energy Gamma Rays from the Galactic Plane by Airborne Experiment

Enomoto 91B Phys. Rev. D44:3419, 1991; KEK-91-113;
Atmospheric Electron Flux at Airplane Altitude

Enomoto 92 Phys. Rev. D46:3239, 1992; KEK-92-81;
Search for Localized γ-Ray Source Along the Galactic Plane by an Airborne Experiment

Enomoto 92B KEK-92-157;
Search for High-Energy γ-Ray Source Burst by an Airborne experiment

Enqvist 92 Phys. Lett. 288B:145, 1992; NORDITA-92-37-P;
Atmospheric Neutrino Fluxes and Sterile Neutrinos

Epstein 90 Phys. Rev. C42:510, 1990;
deuteron $(p, 2p)$ n Reaction at 508 MeV: Recoil Momentum > 200 MeV/c

Erazmus 88 Nucl. Phys. A481:821, 1988;
Linear Momentum Transfer in Pion Accompanied ^{16}O Induced Reaction on ^{232}Th at 95 MeV per Nucleon

Erazmus 90 GANIL-P-90-04;
Experimental Search for Subthreshold Coherent Pion Production

Erozolimskii 90 Yad. Phys. 52:1583, 1990;
Electron Momentum − Neutron Spin Angular Correlation Measurement

Erozolimskii 90B LENI-90-1589;
New Measurement of the Electron-Neutron Spin Asymmetry

Erozolimskii 91 Phys. Lett. 263B:33, 1991;
New Measurement of the Electron-Neutron Spin Asymmetry in Neutron Beta Decay

Errede 90 SINGAPORE-90 V.2, P. 1432;
Hadroproduction of Charm at Fermilab E769

Etchegoyen 90 Nucl. Phys. A518:572, 1990;
^{18}O ^{58}Ni Reaction at 35 MeV/Nucleon

Etkin 88 Phys. Lett. 201B:568, 1988; BNL-40200; BNL-40716;
Increased Statistics and Observation of g_T, g'_T and g''_T 2^{++} Resonances in Glueball Enhanced Channel $\pi^- p \to \phi\ \phi\ n$

Evans 92 RALT-130;
Strange/Multistrange Baryon/Antibaryon Production in Sulphur-Tungsten Interactions at 200 GeV/c per Nucleon

Eversheim 91 Phys. Lett. 256B:11, 1991;
Parity Violation in Proton-Proton Scattering at 13.6 MeV

Fabbri 88 DFUB-88-20;
Maximum Charged Particle Densities in Small Intervals of Rapidity at ISR Energies

Fabbri 91 DFUB-91-19;
Measurements of α_S and Tests of QCD at LEP

Fairfield 88 SLAC-PUB-4667;
Search for Axion Production in $\Upsilon(1S)$ Decays

Faissner 88 Z. Phys. C37:231, 1988;
Search for Two-Photon Decay of a Light Penetrating Particle from 590 MeV Proton Beam Dump

Faissner 89 Z. Phys. C44:557, 1989;
Search for the Electron-Positron Decay of an Axionlike Particle from a 590 MeV Proton Beam Dump

Falvard 88 Phys. Rev. D38:2706, 1988; LAL-88-04;
Study of Hadronic $J/\psi(1S)$ Decays Involving ϕ and ω Production

Farley 89 CERN-LEP-DI-89-42;
The Muon $g-2$ Experiments

Fawcett 90 Z. Phys. C46:513, 1990;
Inclusive $\bar{K}^*(892)^0$ and $K^*(892)^0$ Production on Silicon by 200 GeV K^- and π^-

Fawcett 90B Z. Phys. C46:521, 1990;
$K^*(892)^0$ and $K^*(892)^0$ Production at Low p_T and the Quark Parton Model

Fayard 89 LAL-89-40;
Status in CP Violation

Fayard 90 LAL-90-48;
$W^{\pm}$ and Z^0 Production at Hadron Colliders

Fayet 89 Phys. Lett. 219B:521, 1989; LPTENS-88-33;
Flux Limit for High Energy Cosmic Photinos from Underground Experiments

Federspiel 91 Phys. Rev. Lett. 67:1511, 1991;
Proton Compton Effect: A Measurement of the Electric and Magnetic Polarizabilities of the Proton

Feindt 88 DESY-88-157;
1988 CELLO, JADE and PLUTO Contributions to 'Exotic' Meson Spectroscopy

Feindt 89 DESY-89-142;
Light Hadrons as Seen via Two Photons by CELLO

Feindt 90 Nucl. Phys. (PS) B21:61, 1991; DESY-90-146;
Two Photon Couplings of Scalar and Tensor Mesons

Feindt 90B DESY-90-128;
Some Snapshots of New CELLO and Crystal Ball results on $\gamma\ \gamma$ reactions

Feindt 92B CERN-PPE-92-154;
B^0 and B^+ Lifetime Measurements at LEP

Feindt 92C CERN-PPE-92-148;
Evidence for the Box Anomaly in η and η' Decays

Felcini 89 CERN-EP-89-173;
Search for t-Quark Decay into Charged Higgs with the UA1 Experiment

Felcini 91 BUHEP-91-8;
A Search for t-Quark Decay into Charged Higgs at the CERN Proton-Antiproton Collider

Felcini 92 CERN-PPE-92-208;
The Hunt for the Higgs Boson(s) at LEP: Present and Future

Feldman 89 SLAC-PUB-5143;
Measurement of the Z^0 Boson Resonance Parameters

Feldman 89B SLAC-PUB-5152;
Production and Decay of Z^0 Bosons at the SLC

Felipcic 89 CERN-EP-89-115;
$\pi^- p$ Elastic Scattering from 295 to 450 MeV/c

Feltman 91 Phys. Rev. Lett. 66:2573, 1991; TRI-PP-91-1;
Spin-Transfer Measurement of the π deuteron$\uparrow \to p\ p\uparrow$ Reaction Spanning the Δ Resonance

Feng 90 Phys. Rev. C42:451, 1990;
Cross Section for ^{27}Al (p, n) ^{28}Mg Reaction at 800 MeV

Fergerson 88 Phys. Rev. C38:2193, 1988;
Polarization Transfer for Inclusive Proton-Nucleus Inelastic Scattering at 800 MeV

Ferrarotto 88 Z. Phys. C44:541, 1989; INFN-88-923; ROME-923-1988;
Search for the Inclusive Production of $J/\psi(1S)$ in $e^+\ e^-$ Collisions Using PLUTO Data

Fiedler 91 BONN-IR-91-55;
Das $f_2(1270)$ Meson im Vergleich Inklusiver Photo- und Hadroerzeugung em CERN-OMEGA-Spektrometer

Filatov 88 LENI-88-1404;
Ternary Nuclear Fission and Fission with a Large Multiplicity of Charged Particles in ^{238}U Nuclei by 1 GeV Protons

Finlay 93 Phys. Rev. C47:237, 1993;
Neutron Total Cross Sections at Intermediate Energies

Fischer 88 Z. Phys. C38:105, 1988;
Transverse Momentum Systematics in Proton-Proton and Light Ion Collisions at the ISR

Fisher 89 Phys. Lett. 218B:257, 1989;
A Search for Double β Decay in ^{76}Ge

See the legend on page 7.

Fitch 88 Phys. Rev. Lett. 60:1801, 1988;
Limits on the Existence of a Material-Dependent Intermediate-Range Force

Flauger 91 FERMILAB-CONF-91-235-E;
The Dijet Mass and Angular Distributions at CDF

Flaugher 90 FERMILAB-CONF-90-159-E;
QCD Studies at the Hadron Colliders

Flaugher 92 FERMILAB-CONF-92-24-E;
QCD and Jets at CDF

Flaugher 92B FERMILAB-CONF-92-253-E;
QCD Tests with CDF

Foley 90 SINGAPORE-90 V.2, P.1092;
Studies of Neutral Vee Production by Si Ions at 14.5 A GeV/c in Au and Cu

Fontaine 89 Nucl. Phys. B321:299, 1989;
Measurement of the Spin Correlation Parameters A_{00kk} and A_{00sk} in $p\ p$ Elastic Scattering from .88 to 2.4 GeV

Fonvieille 89 Phys. Lett. 233B:65, 1989;
Dalitz Decay. $\pi^0 \to \gamma\ e^+\ e^-$ and π^0 Electromagnetic Transition Form Factor

Fonvieille 89B Phys. Lett. 233B:60, 1989;
Inverse Pion Electroproduction at Threshold. $\pi^-\ p \to n\ e^+\ e^-$

Ford 89 Phys. Rev. D40:1385, 1989; SLAC-PUB-4348;
Measurement of α_S from Hadron Jets in $e^+\ e^-$ Annihilation at $\sqrt{s}$ of 29 GeV

Fordham 90 SLAC-374;
Neutral Kaon and Λ Production in Electron-Positron Annihilation at 29 GeV and the Z^0 Boson Resonance

Foucher 91 FERMILAB-CONF-91-112;
Hyperon Radiative Decays, the α Parameter of $\Sigma^+ \to p\ \gamma$. First Results from Fermilab E761

Foucher 92 Phys. Rev. Lett. 68:3004, 1992; FERMILAB-PUB-92-64-E;
Measurement of the Asymmetry Parameter in the Hyperon Radiative Decay $\Sigma^+ \to p\ \gamma$

Foudas 88 UR-1057;
Neutrino Production of Opposite-Sign Dimuons at the TEVATRON

Foudas 88B FERMILAB-CONF-88-160-E;
Neutrino Production of Charm at FNAL E744

Foudas 90 Phys. Rev. Lett. 64:1207, 1990; NEVIS-R-1418;
Neutrino Production of Opposite-Sign Dimuons at Fermilab TEVATRON Energies

Frabetti 90 Phys. Lett. 251B:639, 1990; FERMILAB-PUB-90-158-E;
Measurement of the Λ_c^+ and D_S^+ Lifetimes

Frabetti 91 Phys. Lett. 263B:584, 1991; FERMILAB-PUB-91-75-E;
Measurement of the D^0 and D^+ Lifetimes

Frabetti 92 Phys. Lett. 300B:190, 1993; FERMILAB-PUB-92-315-E;
First Evidence of $\Omega_c \to \Omega^-\ \pi^+$

Frabetti 92B Phys. Lett. 286B:195, 1992; FERMILAB-PUB-92-153;
Study of $D^0 \to K_S\ \pi^+\ \pi^-$ and $D^0 \to K_S\ K^+\ K^-$ in High Energy Photoproduction

Frabetti 92C Phys. Rev. Lett. 70:1381, 1993; FERMILAB-PUB-92-352-E;
Measurement of the Mass and Lifetime of the $\Xi_c(2460)^+$

Frabetti 92D Phys. Lett. 281B:167, 1992;
Measurement of the Decays $D^0 \to \pi^+\ \pi^+\ \pi^-\ \pi^-$, $D^0 \to K^+\ K^-$ and $D_S^+ \to \phi(1020)\ \pi^+\ \pi^+\ \pi^-$

Frabetti 92E FERMILAB-PUB-92-355-E;
A Measurement of the Λ_c^+ Lifetime

Franklin 88 TUHE-88-102;
Experimental and Theoretical Status of Baryon Magnetic Moments

Fransson 90 UUPP-THESIS;
A Search for Prompt Electrons with Low Transverse Momentum in 630 GeV Proton-Antiproton Collisions

Franz 88 Nucl. Phys. A490:667, 1988;
Total Neutron-Nucleus Cross Sections at Intermediate Energies

Franz 88B LBL-25705;
Study of High Energy Nucleus-Nucleus Collisions

Franz 89 Nucl. Phys. A510:774, 1990; FREI-MEP-89-04;
Neutron Induced Production of Protons, Deuterons and Tritons on Copper and Bismuth

Franzini 89 Phys. Rept. 173:1, 1989; CERN-TH-5083;
$B\ \bar{B}$ Mixing: A Review of Recent Progress

Frascaria 89 Nuovo Cim. 102A:561, 1989;
Hyperon-Nucleon Final-State Interaction in $p\ p \to K^+$ X Experiment and the $\Lambda N(2130\ ^3S_1)^+$ $S = -1$ Strange Dibaryon

Fredj 91 PCCF-T-9102;
Etude Experimentale Inclusive de la Production de Dimuons dans les Interactions Proton-Noyau a 450 GeV/c

Freedman 89 Nucl. Instr. and Meth. A284:50, 1989;
Search for Short-Lived Axions

Freedman 93 Phys. Rev. D47:811, 1993;
Limits on Neutrino Oscillations from $\bar{\nu}_e$ Appearance

Freeman 89 FERMILAB-CONF-89-148-E;
A Missing Transverse Energy Analysis of 1.8 TeV $\bar{p}\ p$ Collisions Observed at CDF

Freudenreich 90 Int. Jour. Mod. Phys. A5:3643, 1990;
Lepton Pair Production in Fixed Target Hadron-Hadron Collisions

Freudenreich 90B Phys. Rev. D41:2732, 1990;
Study of Hadrons at the Cores of Extensive Air Showers and the Elemental Composition of Cosmic Rays at 10^{15} eV

Friedman 89 Phys. Lett. 231B:39, 1989; TRI-PP-89-49;
Integral Cross Sections for $\pi^+\ p$ Scattering between 52 and 126 MeV

Friedman 90 Nucl. Phys. A514:601, 1990; TRI-PP-90-9;
Integral Cross Sections for $\pi^+\ p$ Interactions at Low Energies

Friedman 91 Phys. Lett. 254B:40, 1991;
Integral Cross Sections for $\pi^+ p$ Interaction in the 3,3 Resonance Region

Friedman 91B Phys. Lett. 257B:17, 1991;
Total Reaction Cross Section for 20 – 30 MeV Pions and the Anomaly of Pionic Atoms

Frisch 90 FERMILAB-CONF-90-254-E; EFI-90-83;
Recent Results from Hadron Colliders

Frommhold 92 Phys. Lett. 295B:28, 1992;
Total Photofission Cross Section for ^{238}U as a Substitute for the Photon Absorbtion Cross Section in the Energy Range of the First Baryon Resonances

Fry 89 KEK-89-30; AMY-89-02;
Tests of QCD at the TRISTAN $e^+ e^-$ Collider

Fuess 91 FERMILAB-CONF-91-250-E;
Search for $W'^{\pm}$ and Z' at CDF

Fuess 92 FERMILAB-CONF-92-336-E;
Inclusive $J/\psi(1S)$, $\psi(2S)$ and b-quark Production in $p\,p$ Collisions at $\sqrt{s} = 1.8$ TeV

Fuhrberg 92 Nucl. Phys. A548:579, 1992;
Compton Scattering by Mesons in Nuclei Experiment on ^{208}Pb

Fujii 90 KEK-89-182;
$e^+ e^-$ Physics below Z^0

Fujino 92 SLAC-PUB-5635;
Measurement of the B Hadron Lifetime at the SLC

Fujisaki 88 Nuovo Cim. 99A:395, 1988;
Polarization Measurement in Pion-Nucleon Charge Exchange $\pi^+ n \to \pi^0 p$ at 6 GeV/c

Fukuda 91 Phys. Lett. 268B:339, 1991;
Neutron Halo in ^{11}Be Studied via Reaction Cross Sections

Fukugita 90 Phys. Rev. Lett. 65:1975, 1990; RIFP-858;
Possible Solution to the Discrepancy between the HOMESTAKE and the KAMIOKANDE Solar Neutrino Experiments

Fukuhisa 92 Phys. Rev. D46:2787, 1992;
$\bar{p}\,p \to K^+ K^- \pi^+ \pi^-$ Reaction in the Momentum range 400 – 6700 MeV/c

Fukui 88 Phys. Lett. 202B:441, 1988; KEK-87-152;
Vector Resonances Around 1.6 GeV of the $\eta\,\pi^+ \pi^-$ System in the $\pi^- p$ Charge Exchange Reaction at 8.95 GeV/c

Fukui 90 Phys. Lett. 257B:241, 1991; KEK-90-167;
Study of $\omega\,\pi^0$ System in the $\pi^- p$ Charge Exchange Reaction at 8.95 GeV/c

Fukui 91 Phys. Lett. 267B:293, 1991; KEK-90-191;
Study of $\eta\,\pi^+ \pi^-$ System in the $\pi^- p$ Charge Exchange Reaction at 8.95 GeV/c

Fulton 89 Phys. Lett. 224B:445, 1989; CLNS-88-877; CLEO-88-4;
First Observation of Inclusive $J/\psi(1S)$ Production in Υ Decays

Fulton 89B Phys. Rev. D41:1401, 1990; CLNS-89-913; CLEO-89-7;
Radiative $\Upsilon(1S)$ Decays

Fulton 89C Phys. Rev. Lett. 64:16, 1990; CLEO-89-14; CLNS-89-951;
Observation of B-Meson Semileptonic Decays to Non-Charmed Final States

Fulton 90 Phys. Rev. D43:651, 1991; CLNS-90-989; CLEO-90-4;
Exclusive and Inclusive Semileptonic Decays of B Mesons to D Mesons

Gabrielse 90 Phys. Rev. Lett. 65:1317, 1990; CERN-PPE-90-98;
A 1000-Fold Improvement in the Measured Antiproton Mass

Gabunia 89 Yad. Phys. 50:1035, 1989;
Yields of Neutral Strange Particles in Pion-Nuclear Interactions at 40 GeV/c

Gabunia 90 Yad. Phys. 51:1607, 1990;
Associative Multiplicity in $\pi^- A$ Interactions with Strange Particle Production

Gagarin 89 Pisma Zh. Eksp. Teor. Fiz. 49:424, 1989; Jetp Lett. 49:483, 1989;
Nuclear Scaling Destruction in the Heavy Nucleus Interactions

Gaisser 89 Phys. Rev. Lett. 62:1425, 1989;
Search for Photon of Energy $>$ 50 TeV from SN 1987A in Early 1988

Gajewski 89 Phys. Rev. Lett. 62:2069, 1989;
Experimental Upper Limit to the Galactic Stellar-Collapse Rate

Gall 88 Phys. Rev. Lett. 60:186, 1988;
Precision Measurement of K^- and Σ^- Masses

Galumyan 88 YERE-1084(47)-88;
Polarization Investigations of Photoproduction on Deuteron in the Dibaryon Resonance Excitation Region

Gan 87B Phys. Lett. 197B:561, 1987; SLAC-PUB-4365;
Upper Limit on the Branching Ratio for the Decay $\tau^- \to \pi^- \eta\,\nu_\tau$

Gan 88 Int. Jour. Mod. Phys. A3:531, 1988; SLAC-PUB-4331;
New Leptons: An Experimental Review

Gan 88B SLAC-PUB-4609;
Review of Recent Results on the $\tau^\pm$ Lepton

Gan 90 DOE-ER-01545-449;
Multiple-Neutral-Meson Decays of the $\tau^\pm$ Lepton

Ganenko 88 Pisma Zh. Eksp. Teor. Fiz. 47:438, 1988; Jetp Lett. 47:519, 1988;
Asymmetry in Cross Section of Inclusive Reaction (γ, p) and (γ, π) on the ^{3}He and ^{4}He Nuclei

Ganenko 89 Pisma Zh. Eksp. Teor. Fiz. 50:220, 1989;
The Measurement of Deuteron Splitting Cross Section by Photons Polarized Parallel and Transverse with Respect to Reaction Plane

Ganenko 91 Yad. Phys. 54:1495, 1991;
Investigations of A-dependence of the Cross Sections Asymmetry of Inclusive (γ, π) Reaction

Ganenko 92 Yad. Phys. 55:2311, 1992;
Deuteron Photodisintegration Cross Section Measurement in the Energy Range of 250 – 500 MeV

Garcon 89 SACLAY-DPhN-2569;
Polarization Measurements in Elastic Electron-Deuteron Scattering

See the legend on page 7.

Gardner 91 Phys. Rev. D44:622, 1991;
Search for Cosmic Ray Magnetic Monopoles Using a Three-Loop Superconductive Detector

Garnett 89 Phys. Rev. D40:1708, 1989; ANL-HEP-PR-89-21;
Measurement of a Mixed Spin-Spin Correlation Parameter for $n\ p$ Elastic Scattering

Garutchava 87 Pisma Zh. Eksp. Teor. Fiz. 47:121, 1988; Jetp Lett. 47:145, 1988; IFVE-87-184;
An Estimate of the Central $\bar{\Lambda}$ Production in Cross Section of the Reaction $K^+\ p \to \bar{\Lambda}\ X$ at 32 GeV/c

Garutchava 87B Yad. Phys. 48:1142, 1988; IFVE-87-110;
The Triple Regge Analysis of Inclusive Production of Λ and $\bar{\Lambda}$ Interactions at 32 GeV/c

Gaspero 92 INFN-ROMA-92-885;
Evidence for the Dominance of an $I^G\ J^{PC} = 0^+\ 0^{++}$ Resonance in $\bar{p}\ n \to 2\pi^+\ 3\pi^-$ Annihilation at Rest

Gaspero 92B Yad. Phys. 55:1443, 1992; Sov. J. Nucl. Phys. 55:795, 1992;
Evidence for $I^G\ J^{PC} = 0^+\ 0^{++}$ Resonance at 1.39 GeV/c^2 and Confutation of $\zeta(1480)$ in a Reanalysis of the $\bar{p}\ n \to 2\pi^+\ 3\pi^-$ Annihilation at Rest

Gastaldi 91 Nucl. Phys. (PS) B23:224, 1991; CERN-PPE-91-57;
Meson Spectroscopy at LEAR

Gates 91 Phys. Rev. D46:1263, 1992; YCTP-P26-91;
Solar Neutrino Data and Their Implications

Gauthier 92 FERMILAB-CONF-92-112-E;
Search for the Λ_b Baryon at CDF

Gavrilov 89 ITEP-89-128;
Deep-Inelastic Nuclear Reactions and Some Aspects of Quantum Chromodynamics

Gavrilov 92 ITEP-92-15;
Search for Multiquark Bag-Bag Interaction in Nucleus-Nucleus Collisions

Gavrin 89 Yad. Phys. 49:321, 1989;
Pion Charge-Exchange Reaction $\pi^+\ {}^{37}Cl \to {}^{37}Ar\ \pi^0$. Total Cross Section Measurement at 380, 335, and 390 MeV

Gavrishchuk 91 Phys. Lett. 255B:321, 1991;
Polarization of Backwardly Produced Protons in Proton-Nucleus Collisions at 17 – 64 GeV

Gavrishchuk 91B Nucl. Phys. A523:589, 1991;
Charged Pion Backward Production in 15 – 65 GeV Proton-Nucleus Collisions

Gavrishchuk 91C JINR-E1-91-325;
K^+ Backward Production in p A Interactions at 15 – 65 GeV

Gavrishchuk 92 Kr. Soob. JINR 55:4, 1992;
K^+ Backward Production in p-Nuclear Interactions at 15 – 65 GeV

Gazdzicki 91 Nucl. Phys. A528:754, 1991;
Hadron Production in Nucleon-Nucleon Collisions at 200 GeV/c — A Compilation

Gebert 92 BONN-IR-92-40;
Inklusive Erzeugung von ϕ, $K^*(892)^0$ und $\bar{K}^*(892)^0$ Mesonen mit Photon, Pion und Kaonstrahlen am CERN-Ω-Spektrometer

Geer 89 FERMILAB-CONF-89-207-E;
Recent Results from the CDF Experiment at the Tevatron Proton-Antiproton Collider

Geer 90 FERMILAB-CONF-90-146-E;
Recent Results from Proton-Antiproton Colliders

Geerts 91 BONN-IR-91-67;
A Study of the $D^*(2010)^+$ Production in Z^0 Decays

Geesaman 89 Phys. Rev. Lett. 63:734, 1989;
Proton Propagation in Nuclear Studied in the A-dependence of the $(e^-,\ e^-\ p)$ Reaction in the Quasifree Region

Geichgiabel 89 Int. Jour. Mod. Phys. A4:1527, 1989;
Particle Production at Collider Energies

Geiregat 89 Phys. Lett. 232B:539, 1989; CERN-EP-89-136;
A New Determination of the Electroweak Mixing Angle from $\nu_\mu\ e^-$ Scattering

Geiregat 90 Phys. Lett. 245B:271, 1990; CERN-EP-90-75;
First Observation of Neutrino Trident Production

Geiregat 90B Phys. Lett. 247B:131, 1990; CERN-EP-90-76;
A New Measurement of the Cross Section of the Inverse Muon Decay Reaction $\nu_\mu\ e^- \to \mu^-\ \nu_e$

Geiregat 91 Phys. Lett. 259B:499, 1991; CERN-PPE-91-15;
An Improved Determination of the Electroweak Mixing Angle From Muon-Neutrino Electron Scattering

Geist 89 CERN-EP-89-166;
Non-Trivial Dynamical Features of Parton-Parton Scattering at the ISR

Geist 91 CRN-LIE-91-01;
Atomic Mass Dependence in Soft and Hard p nucleus Collisions

Geld 92 Phys. Rev. D45:3949, 1992;
Study of Inclusive Λ Production in $e^+\ e^-$ Annihilations at 29 GeV

Gelovani 92 Yad. Phys. 55:2481, 1992;
Analysis of Factorial Moments of Charged Particle Pseudorapidity Distributions in C – Ne, Cu Collisions at 4.5 A GeV/c

Gemesy 90 KFKI-1990-07-A;
Inclusive Ξ^- and $\bar{\Xi}^+$ Production in 360 GeV/c $p\ p$ Interactions using the European Hybrid Spectrometer

Geng 89 Phys. Rev. D41:2351, 1990; TRI-PP-89-84;
Constraints on t-Quark Mass and Quark Mixings from $K_L \to \mu^+\ \mu^-$, and Relations to Other Rare Decays

Genser 89 DESY-F1-89-01;
Jet Properties in $e^+\ e^-$ Annihilation at the Center-of-Mass Energies between 14 GeV and 44 GeV

Gerbier 90 DPHPE-90-13;
WIMP's Search: the Saclay Program

Gerbier 91 DPHPE-91-13;
Dark Matter: An Overview of Direct Searches

Ghedira 90 Phys. Rev. C41:653, 1990;
^{14}Nit $(\gamma,\ \pi^+)\ {}^{14}$C at Photon Energies of 230, 260, and 320 MeV

Ghosh 89	Phys. Lett. 218B:431, 1989; **The Validity of the Negative Binomial Multiplicity Distribution in the Case of the Relativistic Nucleus-Nucleus Interaction**
Ghosh 89B	Nuovo Cim. 101A:129, 1989; **Many Pion Correlation in ^{16}O Ag/Br Interaction at 2.1 GeV/c/Nucleon**
Ghosh 89C	Nuovo Cim. 101A:467, 1989; **Strong Pion Correlation in Target Fragmentation Region Observed in 5 GeV/c**
Ghosh 89D	Mod. Phys. Lett. A4:1197, 1989; **Zonal Poissonian Pion Multiplicity in Central ^{24}Mg Ag/Br Collisions at Dubna Energies**
Ghosh 89E	Nucl. Phys. A491:684, 1989; **Two- and Three-Particle Pseudo-Rapidity Dynamical Correlation in Central Mg Ag/Br Interactions at 4.5 A GeV/c**
Ghosh 89F	Nucl. Phys. A499:850, 1989; **Multiplicity Characteristics of Heavy-Ion Interactions at 4.5 GeV/c per Nucleon**
Ghosh 90	Nuovo Cim. 103A:423, 1990; **Study of Transverse Momentum Spectrum of Proton Projectile Fragments in 4.5 A GeV/c ^{12}C Emulsion Interactions. Evidence of a Single Temperature**
Ghosh 90B	Eur. Lett. 11:535, 1990; **Multiplicity Characteristics of Symmetric and Asymmetric Heavy-Ion Interactions at 4.5 GeV/c**
Ghosh 90C	Eur. Lett. 12:25, 1990; **Supermassive Magnetic Monopoles Flux from the Oldest Mica Samples**
Ghosh 91	Phys. Lett. 272B:5, 1991; **Study of Fractality in Nucleus-Nucleus Interactions at a Few GeV/c**
Ghosh 92	Nuovo Cim. 105A:159, 1992; **Multiparticle Clustering in High Energy Interaction. A Direct Search**
Ghosh 92B	Nuovo Cim. 105A:99, 1992; **Measurement of Charge of Projectile Fragments. Search for Fractionally Charged Projectile Fragments**
Ghosh 92C	Phys. Rev. D46:3712, 1992; **Self-Similarity in Particle Production in Hadron-Nucleus Interactions at 350 and 200 GeV/c**
Giacomelli 90	Int. Jour. Mod. Phys. A5:223, 1990; **Inclusive and Semiinclusive Hadron Interactions at ISR and Collider Energies**
Giacomelli 93	CERN-PPE-93-18; **The Search for the Standard Model Higgs Boson: Results at LEP 100 and Prospects for LEP 200**
Giannetti 90	FERMILAB-CONF-90-85-E; **The Dijet Invariant Mass at the TEVATRON Collider**
Giannetti 91	FERMILAB-CONF-91-137-E; **QCD Tests at CDF**
Gibbons 88	Phys. Rev. Lett. 61:2661, 1988; PRINT-88-0734-CHICAGO; **New Limits on K_L, $K_S \to \pi^0\, e^+\, e^-$**
Gibson 89	CERN-EP-89-94; **An Experimental Test of CPT Invariance in the Neutral Kaon System**
Gidal 88B	Phys. Rev. Lett. 59:2012, 1988; SLAC-PUB-4274; LBL-22690; **Observation of Spin-1 $f_1(1285)$ in the Reaction $\gamma\, \gamma^* \to \eta\, \pi^+\, \pi^-$**
Gidal 88C	LBL-26172; **Resonance Formation in $\gamma\, \gamma$ Collisions**
Gill 90	Int. Jour. Mod. Phys. A5:755, 1990; **Study of the Characteristics of ^{139}La Emulsion Interactions at 1.2 GeV**
Gill 91	Int. Jour. Mod. Phys. A6:3723, 1991; **Study of Nonperipheral ^{139}La Collisions with Emulsion Nuclei at 1.2 A GeV**
Gilman 89	SLAC-PUB-4984; **Rare Decays**
Gilman 90	Phys. Rev. Lett. 64:622, 1990; **Forward-Angle Charged-Pion Electroproduction in the Deuteron**
Gilman 90B	Phys. Rev. Lett. 65:1733, 1990; **Measurement of Tensor Analyzing Power in Electron-Deuteron Elastic Scattering**
Gittelman 91	CLNS-91-1112; **Experimental Status of Heavy Quark Decay**
Gladney 90	FERMILAB-CONF-90-15-E; **A Study of $\tau^{\pm}$ Decays of the $W^{\pm}$ Boson at CDF**
Gladyszdziad 88	INP-1432-PH; **Intermittency in Super-High Energy Cosmic Ray Events**
Glagolev 88	JINR-P1-88-6; **Break-up of the Polarized Deuteron: deuteron $p \to p\, p\, n$**
Glagolev 88B	JINR-P1-88-592; **Total Disintegration of Helium Nuclei in ^{3}He p Interaction at 13.5 GeV/c**
Glagolev 89	JINR-P1-89-218; **Multiplicity of Charged Particles in Interactions of Oxygen Nuclei with Hydrogen at 3.1 GeV/c Momentum**
Glagolev 89B	JINR-E1-89-246; **Further Evidence for Narrow Dibaryon States in deuteron p Interactions**
Glagolev 89C	JINR-P1-89-584; **Characteristics of deuteron $p \to p\, p\, p\, \pi^-$ and $n\, p \to p\, p\, \pi^-$ Reactions and deuteron Wave Function**
Glagolev 90	Yad. Phys. 51:736, 1990; **Narrow Dibaryon States in deuteron p Interactions**
Glagolev 90B	JINR-P1-90-561; **Determination of Cross Sections for ^{3}He p Interactions at 13.5 GeV/c**
Glagolev 90C	JINR-P1-90-560; **Fragmentation of Oxygen Nuclei in Interactions with Hydrogen at Momentum 3.1 A GeV/c**
Glagolev 90D	JINR-P1-90-584; **Total Breakup of ^{3}He and ^{4}He Nuclei in Interactions with Protons**
Glagolev 91	JINR-E1-91-511; **The Study of Reactions with Deuteron and Pions in the Final State by $n\, p$ and deuteron p Interactions Comparison**

See the legend on page 7.

Glavanakov 89 Yad. Phys. 50:1516, 1989;
Photoproduction of Neutral Pions on Light Nuclei near Threshold

Gninenko 89 Phys. Lett. 237B:287, 1989;
A Search for a keV Pseudoscalar in the Two Body Decay of Orthopositronium

Gobbi 92 FERMILAB-CONF-92-302;
First $W^{\pm}$ Decays Observed with the D0 Detector

Gobel 92 GSI-92-72;
Bhabha to Möller Cross Section Ratios in the Energy Range 2.15 - 2.45 MeV

Gokhberg 91 Yad. Phys. 53:649, 1991;
Fission Cross Section of ^{245}Cm by Fast Neutrons and Angular Distributions of Fragments

Gold 91 FERMILAB-CONF-91-287-E;
Direct Production of High p_T Leptons and Search for Additional Heavy Bosons at 1.8 TeV

Gold 92 FERMILAB-CONF-92-287-E;
Search for Exotic Particles at CDF

Goldberg 90 Phys. Lett. 251B:223, 1990; CLNS-90-997; CLEO-90-7;
Study of $K^*(892)$ Production in $\tau^{\pm}$ Decay

Goldhaber 90 LBL-29712;
A Study of Z^0 Decay Results from the MARK-II Detector at the SLAC Linear Collider (SLC)

Goldman 87C Phys. Rev. Lett. 60:1789, 1988; TAUP-1543-87;
Implications of the Supernova SN1987A Neutrino Signals

Goldzahl 91 Nucl. Phys. A533:675, 1991;
The First Observation of π^0 Production in the Reaction deuteron deuteron → He π^0 Violating Charge Symmetry Conservation and Measurement of the Reaction deuteron deuteron → He γ

Golovin 88 JINR-E1-88-175;
Fragmentation Cross Section of ^{19}Fl at 4 A GeV

Golubeva 89 Phys. Lett. 221B:238, 1989;
Inclusive Proton Spectra from 0.6 - 1 GeV/c Pions Interactions with Nuclei

Golubeva 90 Pisma Zh. Eksp. Teor. Fiz. 51:298, 1990; Jetp Lett. 51:338, 1990;
Excitation of Δ Isobars in Nuclei in the Single Charge-Exchange Pion Reaction at the Energy of 1 GeV

Golutvin 89 Usp. Fiz. Nauk 157:369, 1989;
Oscillation of B Mesons

Gomezcadenas 90 Phys. Rev. Lett. 66:1007, 1991; SLAC-PUB-5009; SCIPP-90-05; LBL-27367;
A Search for Elastic Nondiagonal Lepton Pair Production in $e^+ e^-$ Annihilation at $\sqrt{s}$=29 GeV

Gonzalezgarc 90 Phys. Rev. D41:2355, 1990; SLAC-PUB-5076;
Constraints on Additional Z' Gauge Bosons from Precise Measurement of the Z^0 Mass

Goobar 91 PREPRINT-STOH;
Search for Higgs Bosons in Z^0 Decays Using the DELPHI Detector

Gorgen 90 Phys. Rev. D42:2374, 1990;
Analyzing Powers for the Reaction $\pi^- p\uparrow \to \pi^0 n$ at T =161 MeV

Gorgen 91 Phys. Rev. Lett. 66:2193, 1991;
Analyzing Powers for Pion Charge Exchange on Polarized ^{13}C

Gorichev 91 ITEP-91-14;
Charged-Particles Production with Kinetic Energy Less 30 MeV/Nucleon for Neutrino Interaction at Mean Energy 50 GeV with Emulsion Nuclei

Gornov 88 Yad. Phys. 47:959, 1988;
Emission of Protons in Absorbtion of Stopped Negative Pions by Be, C, Si, Cu and Ge Nuclei

Gornov 91 Nucl. Phys. A531:613, 1991;
Search for Superheavy Hydrogen Isotopes and Multineutrons in π^- Absorption on ^{9}Be

Gorringe 88 Phys. Rev. C40:2390, 1989; TRI-PP-88-47;
Search for the Tetraneutron Using the Reaction ^{4}He (π^-, π^+) tetraneutron

Gosset 89 Phys. Rev. Lett. 62:1251, 1989;
Nuclear Collective Flow and Charged Pion Emission in Ne-Nucleus Collisions at E/A=800 MeV

Govorkov 88 Yad. Phys. 48:237, 1988;
On the Spectrum of Radial Excitations of $\rho(770)$ and $\omega(783)$ Mesons and Possible Existence of ρ_g and ω_g Hybrids

Grab 88 SLAC-PUB-4809;
Rare Decays of Charmed D Mesons

Grabez 88 Phys. Lett. 207B:27, 1988;
Mechanisms of Light Fragment Production in the Interactions of 8.8 GeV ^{4}He with ^{208}Pb

Grabosch 89 Z. Phys. C41:527, 1989;
Cross Section Measurement of Single Pion Production in Charged Current Neutrino and Antineutrino Interactions

Graham 92 Phys. Lett. 295B:169, 1992;
Search for the Decay $K_L \to \pi^0 \nu \bar{\nu}$

Gram 89 Phys. Rev. Lett. 62:1837, 1989;
Dependence of the Cross Section for Inclusive Pion Double Charge Exchange on Nuclear Mass and Charge

Granier 88 Nucl. Phys. A481:109, 1988;
Study of the ^{129}Xe Ag$_{nat}$, ^{197}Au Systems at 23.7 and 27 MeV/u

Grassler 88 Yad. Phys. 47:722, 1988;
Study of $\pi^+ p$, $K^+ p$ and $p p$ Elastic Scattering at 250 GeV/c

Grassmann 92 FERMILAB-CONF-92-105;
Status Report from CDF

Gray 90 CLNS-90-1010;
Results from CLEO

Grebenjuk 89 Nucl. Phys. A500:637, 1989;
Elastic p deuteron and p ^{4}He Scattering at Intermediate Energies

Greenlee 88 Phys. Rev. Lett. 60:893, 1988; BNL-40452;
Search for $K_L \to \mu^+ e^-$, $K_L \to \mu^- e^+$ and $K_L \to e^- e^+$

Greenshaw 89 Z. Phys. C42:1, 1989; DESY-88-154;
A Measurement of the Charge Asymmetry of Hadronic Events in Electron Positron Annihilation

Gridnev 90 LENI-90-1660;
Test of Charge Symmetry in π^- deuteron and π^+ deuteron Elastic Scattering at Energy T = 417 MeV

Grigalashvil 88 Yad. Phys. 48:476, 1988;
Inelastic Cross Sections and Multiplicities of Secondaries Produced in Collisions of Relativistic Nuclei with Carbon and Tantalum at 2.3 A and 4.2 A GeV/c

Grigorov 89B Doklady Akad. Nauk SSSR 308:850, 1989;
Part of Protons in the Cosmic Ray Flux at the Energies > 25 TeV

Grigorov 89C Pisma Zh. Eksp. Teor. Fiz. 49:246, 1989; Jetp Lett. 49:278, 1989;
Charge Distribution of Cosmic Rays at the Energy > 1 TeV

Grigorov 90 Yad. Phys. 51:157, 1990;
Satellite Studies of High and Superhigh Energy Cosmic Rays

Grion 89 Nucl. Phys. A492:509, 1989;
Pion Production by Pions in the $^{16}O(\pi^+, \pi^+ \pi\ )$ Reaction at T_{π^+} =280 MeV

Grishin 86B Yad. Phys. 47:439, 1988; Sov. J. Nucl. Phys. 47:278, 1988; JINR-P1-86-585;
Observation of $\pi^0\ \pi^0$ Interference Effect and Size of Neutral Pion Emission Volume in π^- Xe Interactions at 3.5 GeV/c

Grishin 88 JINR-P1-88-520;
Neutral Star Characteristics in π^- Xe Interactions at 3.5 GeV/c Momentum

Grishin 88B JINR-P1-88-821;
Investigation of $\Delta(1232\ P_{33})^{++}$ Isobar Generation in Light Nucleus (p, deuteron, ^{4}He, ^{12}C) Interactions with Carbon and Hydrogen Nuclei at 4.2 GeV/c Momentum

Grishin 90 Yad. Phys. 51:1712, 1990;
Interference Correlations and Sizes of Hadron Jet and Baryon Cluster Formation in Collisions of Relativistic Hadrons and Nuclei

Grishin 90B JINR-P1-90-510;
Characteristics of Neutral Stars in π^- Xe Interactions at 3.5 GeV/c

Grivaz 88 LAL-88-14;
Neutrino Counting in Single Photon Experiments

Gross 92 CERN-PPE-92-91;
The Search for the SM Higgs Boson at LEP-I. A Comparative Study

Gross 92B Int. Jour. Mod. Phys. A8:407, 1993; CERN-PPE-92-153;
SM Higgs Boson Hunting at LEP

Guanziroli 88 Z. Phys. C37:545, 1988; CERN-EP-87-199;
Angular Distributions of Muon Pairs Produced by Negative Pions on Deuterium and Tungsten

Guaraldo 89 Nuovo Cim. 102A:1137, 1989; CERN-EP-89-87;
Antiproton-Nucleus Interaction at Intermediate Energies

Guaraldo 89B TORINO-89;
Antiproton-Nucleus Physics: Experimental Overview

Guillemaudmu 90 Phys. Rev. C41:937, 1990;
Particle Stability of the Isotopes ^{26}O and ^{32}Ne in the Reaction 44 MeV/Nucleon ^{48}Ca + Ta

Gulamov 91 Yad. Phys. 54:1327, 1991;
Proton Collisions with Heavy Photoemulsion Nuclei at 20.8 GeV

Gulkanyan 88 JINR-P1-88-143;
Investigation of Correlations between Protons in Nuclear-Nuclear Interactions at 4.2 GeV/c per Nucleon

Gulkanyan 88B Yad. Phys. 50:123, 1989; JINR-P1-88-226;
π^0-Meson Spectra in C Ta and Multinucleon C C Interactions at 4.2 GeV/c per Nucleon

Gulkanyan 88C Yad. Phys. 50:128, 1989; JINR-P1-88-645;
Summary Characteristics of Pions in Nucleus-Nucleus Interactions at 4.2 GeV/c per Nucleon

Gulkanyan 88D Yad. Phys. 50:415, 1989; JINR-P1-88-685;
Inclusive and Multiple Characteristics of Cumulative Protons in Nucleus-Nucleus Interactions at 4.2 GeV/c per Nucleon

Gulkanyan 89 YERE-1150(27)-89;
The Measurement of Inelastic and Topological Cross Section of Deuteron-Carbon Interactions at the Energy 1 GeV/Nucleon

Gulkanyan 91 YERE-1333(28)-91;
Production of π^- Meson in the Fragmentation and Central Region of deuteron-C Interactions at 1 GeV per Nucleon

Gulkanyan 91B YERE-1354(49)-91;
Measurement of the Yield, Momentum and Angular Distributions of π^- Mesons in the Interactions of Deuteron with Carbon and Beryllium Thick Target at the Energy of 1 GeV per Nucleon

Gulkanyan 92 Nucl. Phys. A546:677, 1992;
Production of π^- Mesons in the Fragmentation and Central Regions of deuteron-C Interactions at 1 GeV/Nucleon

Guo 89 Phys. Rev. D41:2924, 1990; FERMILAB-PUB-89-234-E;
Improved Limit on Axion Production in 800 GeV Hadronic Showers

Gustafsson 88 Mod. Phys. Lett. A3:1323, 1988;
Energy and Multiplicity Dependence of Fragment Flow in High Energy Nuclear Collisions

Gutbrod 89 Phys. Lett. 216B:267, 1989;
A New Component of the Collective Flow in Relativistic Heavy-Ion Collisions

Guy 89 Phys. Lett. 229B:421, 1989; CERN-EP-89-76;
Neutrino Interactions, Proton Production and a Nuclear Effect

Guyot 92 DAPNIA-SPP-92-28;
Test of CP Violation Using K^0-$\bar{K}^0$ Interferometry

Guzhavin 90 Yad. Phys. 51:1569, 1990;
Study of the Reactions $\pi^-\ p \to p\ \pi^+\ \pi^-\ \pi^-$, $\pi^-\ p \to p\ \pi^+\ \pi^-\ \pi^-\ \pi^0$, $\pi^-\ p \to n\ \pi^+\ \pi^+\ \pi^-\ \pi^-$ with Baryon Exchange at 4.5 GeV/c

Haas 88 Phys. Rev. Lett. 60:1614, 1988;
Upper Limits on Charm-Changing Neutral Current Interactions

Haba 88 Nucl. Phys. B299:627, 1988;
A Precision Measurement of Polarization Parameters for the $\pi^+\ p \to K^+\ \Sigma^+$ Reaction at 13 Laboratory Momenta 1490 and 2069 MeV/c

Hagberg 92 TASCC-P-92-8;
Precise Studies of $0^+ \to 0^+$ Superallowed Beta Emitters at Chalk River

See the legend on page 7.

Hagemann 90 Z. Phys. C48:401, 1990; DESY-90-087;
A Measurement of the Average Lifetime of B Hadrons Produced by $e^+ e^-$ Collisions at $\sqrt{s}$ = 36.3 GeV

Hagmann 90 Phys. Rev. D42:1297, 1990;
Results from a Search for Cosmic Axions

Haines 88 Nucl. Instr. and Meth. A264:28, 1988;
Neutrinos from SN1987A in the IMB Detector

Haines 90 Phys. Rev. D41:692, 1990; LA-UR-89-1405;
A Limit on Possible Energy Dependent Velocities for Massless Particles

Haissinski 90 LAL-90-64;
Physics from LEP

Halley 91 RALT-120;
A Study of the Forward-Backward Charge Asymmetry in Hadronic Z^0 Decays

Hallin 92 Phys. Rev. D45:3955, 1992;
Sensitive Search for Resonances in Low-Energy $e^+ e^-$ Scattering

Halling 89 CLNS-89-910;
Recent Results from CLEO with Fully Reconstructed B Mesons

Halliwell 90 FERMILAB-CONF-90-227-E;
Measurement of the Xenon/Deuterium Inelastic Cross Section Ratio Using 490 GeV/c Muons

Hamann 90 CERN-PPE-90-108;
In-Flight Annihilation $\bar{p}\, p \to \phi\, \phi$ and $\bar{p}\, p \to \bar{K}\, K$ with JETSET at LEAR

Hamann 92 Yad. Phys. 55:1501, 1992;
Status of the JETSET(PS202) Experiment at CERN-LEAR

Han 89 Nucl. Phys. A492:138, 1989;
Complex-Fragment Emission in 12.6 MeV/Nucleon ^{63}Cu-Induced Reactions on ^{12}C and ^{27}Al Targets

Harder 89 DESY-F15-89-01;
Measurement of Inclusive Production of D Mesons in B Decays with the ARGUS Detector

Hardy 89 TASCC-P-89-4;
Superallowed $0^+ \to 0^+$ Nuclear β Decays: A Critical Survey with Tests of CVC and the Standard Model

Harjes 91 DESY-FCE-91-01;
Experimental Investigation of the Reaction $\gamma\, \gamma \to \pi^+\, \pi^-$ with CELLO Detector

Harjes 91B DESY-91-145-B;
CELLO Results on $\gamma\, \gamma \to \pi^+\, \pi^-$

Harris 90 FERMILAB-CONF-90-118-E;
Recent Results on Direct Photons from CDF

Harris 90B CERN-PRE-90-017; LBL-28838;
Collision Dynamics and Particle Production in Relativistic Nucleus-Nucleus Collisions at CERN

Harris 91 FERMILAB-CONF-91-236-E;
Isolated Single and Double Direct Photon Production at CDF

Harris 91B ILL-NPL-91-011; CERN-PRE-91-53;
First Results from the JETSET Experiment at LEAR

Harris 92 FERMILAB-CONF-92-146;
QCD Physics at CDF

Harris 92B FERMILAB-CONF-92-317-E;
Isolated Double Prompt Photon Production at CDF

Hasan 92 Nucl. Phys. B378:3, 1992;
Differential Cross Sections and Analysing Powers for $\bar{p}\, p \to \pi^-\, \pi^+$ and $K^+\, K^-$ from 360 to 1550 MeV/c

Hasinoff 88 TRI-PP-88-82;
Radiative Muon Capture with the TRIUMF TPC

Hasinoff 89 TRI-PP-89-54;
Radiative Muon Capture in Light Nuclei

Hasinoff 92 TRI-PP-92-86;
Radiative Muon Capture on Hydrogen and the Induced Pseudoscalar Coupling

Hasinoff 92B TRI-PP-92-85;
Radiative Muon Capture and Renormalization of the Induced Pseudoscalar Coupling Constant in Nuclei

Hausammann 89 Phys. Rev. D40:22, 1989;
Direct Experimental Reconstruction of the $p\, p$ Elastic Scattering Amplitude between 447 and 579 MeV

Hauser 90 FERMILAB-CONF-90-109-E;
Structure Function Dependence of $W^\pm/Z^0$ and Lepton Pair Production at the TEVATRON

Hausser 88 TRI-PP-88-12;
Complete Spin Observables for Quasielastic Proton Scattering from ^{54}Fe at 290 MeV

Hausser 90 Phys. Rev. C43:230, 1991; TRI-PP-90-61;
The Nuclear Response in the ^{54}Fe (p, p') Reaction at 290 MeV

Hausser 91 TRI-PP-91-46;
Scattering of Protons and Pions from Polarized ^{3}He

Hawkins 89 SLAC-337;
Tests of QED to Fourth Order in α_S in Electron-Positron Collisions at 29 GeV

Hawkins 89B SLAC-PUB-4949;
Search for a Charged Lepton Specific Force in Electron-Positron Collisions

Hayano 88 INS-705;
Observation of a Bound State of $^4_\Sigma$He Hypernucleus

Hayano 89 Phys. Lett. 231B:355, 1989;
Evidence for a Bound State of the $^4_\Sigma$He Hypernucleus

Hayano 91 Nucl. Phys. A527:477, 1991;
Light Σ Hypernuclei

Hayashi 88 Phys. Rev. C38:1229, 1988;
Production of Pions and Light Fragments in 0.8 A GeV La La Collisions

Hayashii 91 Phys. Lett. 279B:422, 1992; KEK-91-208; NWU-HEP-92-01; DPNU-92-06; INS-REP-911; KOBE-HEP-92-01; OCU-HEP-92-01; PU-92-658; TIT-HEP-92-01; TU-HEP-92-01; TUAT-HEP-92-01; UT-HE-92-03;
An Experimental Study of Muon Pair Production in Tagged Two-Photon Interaction

Hayes 89 Phys. Rev. D38:3351, 1989;
Statistical Study of Tau-Decay Data

Hayes 89B SLAC-PUB-5061;
Status of the Tau One Prong Problem

He 90 Phys. Lett. 252B:331, 1990;
Interactions of Projectile Fragments at 14.5 A GeV. Search for Anomalons

Hearty 88 Phys. Rev. D39:3207, 1989; SLAC-PUB-4684; UWSEA-PUB-88-2;
Search for the Anomalous Production of Single Photons in $e^+ e^-$ Annihilation at $\sqrt{s}$=29 GeV

Hearty 89 LBL-28547;
Measurement of the Z^0 Boson Resonance Parameters at SLC

Hebbeker 91 PITHA-91-17;
QCD Studies at LEP

Hebbeker 91B Phys. Rept. 217:69, 1991;
Test of Quantum Chromodynamics in Hadronic Decays of Z^0 Bosons Produced in $e^+ e^-$ Annihilation

Heck 88 Z. Phys. C38:19, 1988; CERN-PRE-88-002; GSI-PRE-88-08;
Study of the Energy Flow in ^{16}O-Nucleus Collisions at 60 and 200 GeV/Nucleon

Hegner 89 Z. Phys. C46:547, 1990; DESY-89-178;
Final Results on μ^+ and τ^+ Pair Production by the JADE Collaboration at PETRA

Heinrich 89 Phys. Rev. Lett. 63:356, 1989;
Measurement of the Ratio of Sea to Valence Quarks in the Nucleon

Heinson 91 Phys. Rev. D44:R1, 1991;
Higher-statistics Measurement of the Branching Ratio for the Decay $K^0 \to \mu^+ \mu^-$

Heintz 91 Phys. Rev. Lett. 66:1563, 1991;
Sequential Decays of the $\Upsilon(3S)$

Heltsley 92 CLNS-92-1171;
New CLEO Results on Tau Physics

Hemmick 90 Phys. Rev. D41:2074, 1990;
Search for Low-Z Nuclei Containing Massive Stable Particles

Henderson 91 Phys. Rev. D45:2212, 1992; CLNS-91-1101; CLEO-91-7;
Measurement of the Semileptonic Branching Fractions of B Mesons at the $\Upsilon(4S)$ Resonance

Henderson 91B Phys. Lett. 283B:161, 1992; CLNS-91-1125;
Observation of the Decay $\Xi_c(2460)^0 \to \Omega^- K^+$

Henderson 92 Phys. Rev. Lett. 69:1733, 1992;
Search in s Channel for Production of 1 – 2 MeV/c^2 Long-Lived $e^+ e^-$ Resonances

Heppelmann 89 Phys. Lett. 232B:167, 1989;
Momentum Dependence of Nuclear Spectral Functions as Observed in (p, 2p) Quasielastic Scattering at Large Q^2

Herrera 91 DORTMUND-91;
Bose-Einstein Correlations in $e^+ e^-$ Annihilations in the Energy Region of the $\Upsilon(1S)$ Resonance

Hertzog 88 Phys. Rev. D37:1142, 1988;
Exotic-Atom Measurement of the Magnetic Dipole Moment of the Σ^- Hyperon

Hertzog 92 ILL-P-92-90;
Search for Exotic Mesons at LEAR-CERN

Hessey 89 Z. Phys. C42:175, 1989;
A Measurement of the Branching Ratio for $\Sigma^+ \to p\,\gamma$ Decay

Hessing 90 FERMILAB-CONF-90-91-E; CDF-PUB-JET-PUBLIC-1175;
Inclusive Jet Cross Section at $\sqrt{s}$=1.8 TeV

Heusch 90B SCIPP-90-13;
An Investigation of Lepton Flavor Conservation at High Momentum Transfers

Heusch 91 CERN-PPE-91-225;
Status of Gluonium Searches

Hicks 88 Phys. Rev. C38:229, 1988;
Inelastic Proton Scattering at 200 to 400 MeV for ^{24}Mg and ^{28}Si in a Microscopic Framework

Hicks 92 Phys. Lett. 276B:423, 1992;
Search for a Light Neutral Boson Associated with Beta Decay

Hicks 93 Phys. Rev. C47:260, 1993;
Comparison of the Quasifree Charge-Exchange Reaction for ^{12}C and ^{54}Fe

Hidaka 91 Phys. Rev. D44:927, 1991;
Absolute Mass Limits of the Gaugino-Higgsino Sector in the Minimal Supersymmetric Model from Data from the CERN Collider LEP and the Fermilab TEVATRON

Hiel 89 Nucl. Phys. B327:1, 1989;
Improved Limits on the Weak, Neutral, Hadronic Axial Vector Coupling Constant from Quasielastic Scattering of Polarized Electron

Hilgart 90 RX-1326-WISCONSIN;
A Search for the Standard Model Neutral Higgs Boson in the higgs $e^+ e^-$ and higgs $\mu^+ \mu^-$ Channels in Z^0 Decays

Hill 88 Phys. Rev. Lett. 60:999, 1988;
Electromagnetic Dissociation for High-Z Projectiles and at Ultrarelativistic Energies

Hill 88B Phys. Rev. C38:1722, 1988;
Electromagnetic Dissociation of ^{59}Co and ^{197}Au Targets by Relativistic ^{139}La Projectiles

Hill 89 Z. Phys. C42:355, 1989; DESY-88-166;
Observation of Spin-1 Resonance Formation in the Final State $K\,K\,\pi$ Produced in Tagged Two-Photon Collisions

Hill 91 Phys. Lett. 273B:371, 1991;
Observation of Very Large Electromagnetic Dissociation Cross Sections

Hime 91 Phys. Lett. 257B:441, 1991; OUNP-91-01;
New Evidence for the 17-keV Neutrino

Hime 91B OUNP-91-10;
Experimental Status of the 17-keV Neutrino

Hime 92 Mod. Phys. Lett. A7:1301, 1992;
Pursuing the 17-keV Neutrino

Hinode 93 KEK-92-194;
A Study of Charged $D^*(2010)$ Production in $e^+ e^-$ Annihilation at an Average Center-of-Mass Energy of 58 GeV

See the legend on page 7.

Hintz 88 Phys. Rev. C37:692, 1988;
Energy Dependence of Neutron-Proton Matrix Element Ratios Derived from 25 – 800 MeV Energy Proton Scattering

Hirata 88B Phys. Lett. 205B:416, 1988;
Experimental Study of the Atmospheric Neutrino Flux

Hirata 88C Phys. Rev. Lett. 61:2653, 1988; Phys. Rev. Lett. 62:694, 1989; ICR-177-88-23; KEK-88-37;
Search for Correlation of Neutrino Events with Solar Fluxes in KAMIOKANDE

Hirata 88D Phys. Lett. 220B:308, 1989; KEK-88-116;
Experimental Limits on Nucleon Lifetime for Lepton + Meson Decay Modes

Hirata 88E KEK-88-131;
Search for "Solar-flare Neutrino" Events in KAMIOKANDE

Hirata 88F Phys. Rev. D38:448, 1988;
Observation in the KAMIOKANDE-II Detector of the Neutrino Burst from Supernova SN1987A

Hirata 89 Phys. Rev. Lett. 63:16, 1989; ICR-REPORT-188-89-5; KEK-89-2;
Observation of Solar Neutrinos in the KAMIOKANDE-II Detector

Hirata 89B KEK-89-45;
Recent Results and Status of the KAMIOKANDE Project

Hirata 89C ICR-Report-195-89-12;
Recent Solar Neutrino Data from KAMIOKANDE-II Detector

Hirata 89D 359:574, 1990; ICR-201-89-18; KEK-89-151; KOBE-AP-89-06; OULNS-89-11; UPR-178E;
Search for Neutrino Events in the KAMIOKANDE-II Detector in Correlation with the Solar-flare Activity in March 1989

Hirata 90 Phys. Rev. Lett. 65:1297, 1990; ICR-213-90-6; KEK-90-43; KOBE-AP-90-02; NUIG-DP-90-02; OULNS-90-03; TIT-HPE-90-2; UPR-0189E;
Results from One Thousand Days of Real-Time Directional Solar Neutrino Data

Hirata 90B Phys. Rev. Lett. 65:1301, 1990; ICR-214-90-7; KEK-90-57; TOKAI-U-KAM-90-02; KOBE-AP-90-03; NIG-DP-90-3; OULNS-90-04; TIT-HPE-90-3; UPR-0192E;
Constraints on Neutrino Oscillation Parameters from the KAMIOKANDE-II Solar Neutrino Data

Hirata 90C Phys. Rev. Lett. 66:9, 1991; ICRR-222-90-15; KEK-90-96; TOKAI-U-KAM-9-03; KOBE-AP-90-04; NIIG-DP-90-5; OULNS-90-12; TIT-HPE-90-4; UPR-0197E;
Search for Day/Night and Semiannual Variations in the Solar Neutrino Flux Observed in the KAMIOKANDE-II Detector

Hirata 91 ICRR-239-91-8;
Search for Supernova Neutrinos at KAMIOKANDE-II

Hirata 91B Phys. Rev. D44:2241, 1991; Phys. Rev. D45:2170, 1992;
Real-Time, Directional Measurement of ^{8}Bor Solar Neutrinos in the KAMIOKANDE-II Detector

Hirata 91C Phys. Lett. 280B:146, 1992; UPR-0210E; ICRR-263-92-1; KEK-PREPRINT-91-197; TOKAI-U-KAM-91-01; KOBE-AP-91-08; NIIG-DP-91-6; OULNS-91-13; TIT-HPE-91-6;
Observation of a Small Atmospheric ν_μ/ν_e Ratio in KAMIOKANDE

Hirata 92 Phys. Rev. D45:3355, 1992;
Search for Neutrino Induced Low-Energy-Electron-Event Clusters in KAMIOKANDE-II

Hirzebruch 92 Phys. Rev. C46:1487, 1992;
Fragmentation Cross Sections of ^{16}O between 0.9 and 200 GeV/Nucleon

Hitlin 88 CALT-68-1533;
Status of the $\theta/f_2(1720)$

Ho 89 Phys. Lett. 244B:573, 1990; KEK-89-195; AMY-89-22;
Observation of Anomalous Production of Muon Pairs in $e^+ e^-$ Annihilation into Four-Lepton Final States

Ho 90 Phys. Rev. Lett. 65:1713, 1990; UM-HE-90-12; DOE-ER-40105-836;
Production Polarization and Magnetic Moment of Ξ^{--} Anti-Hyperons Produced by 800 GeV/c Protons

Ho 90B UR-1162;
Experimental Studies of Electron-Positron Annihilation into Four-Lepton Final States at Center-of-Mass Energies from 50 to 61.4 GeV

Ho 91 Phys. Rev. D44:3402, 1991;
Measurement of the Polarization and Magnetic Moment of Ξ^+ Antihyperons Produced by 800 GeV/c Protons

Hoeger 90 BONN-IR-90-47;
Separation of Minimum and Higher Twist in Meson Photoproduction with Large Transverse

Hoffman 88 Phys. Lett. 208B:149, 1988; LA-UR-88-426;
The New Limit for the Branching Ratio for the Decay $\pi^0 \to \nu\,\nu$ from Beam Dump Experiments

Hoffmann 88 Phys. Lett. 200B:583, 1988;
Search for Projectile Fragments with Fractional Charge in Relativistic Heavy Ion Collisions

Hoffmann 88B Phys. Rev. C37:397, 1988;
Differential Cross Section and Analyzing Power Measurements for $p\,p$ Elastic Scattering at 497.5 MeV

Hoffmann 88C Phys. Rev. C37:1307, 1988;
Large Angle $p\,^{40}$Ca Elastic Scattering at 497.5 MeV

Hoffmann 90 Phys. Rev. Lett. 65:3096, 1990;
Polarized-Proton Elastic Scattering from Polarized ^{13}C

Hoffmann 90B Phys. Rev. C41:1651, 1990;
Cross Sections, Analyzing Powers, and Spin Rotation Depolarization Observables for 500 MeV Proton Elastic Scattering from ^{12}C and ^{13}C

Hofmann 90 Nucl. Phys. A512:669, 1990;
Charged-Particle Spectra from Antiproton Annihilation at Rest in A=12 – 238 Nuclei

Hofmann 91 BONN-IR-91-26;
Inklusive Erzeugung von ρ^0-Mesonen an Protonen mit Photonen, Pion- und Kaonstrahlen im Energiebereich von 65 bis 175 GeV

Hofmann 92 Yad. Phys. 55:1281, 1992;
Antiproton Induced Fission and Fragmentation

Hohler 89 TKP-89-3;
Methods and Results of Pion-Nucleon Partial Wave Analysis

Holder 89 SI-89-11;
Experimental Status of CP Violation

Holder 90 SI-90-09;
Status of CP-Violation Experiments

Holder 90B SI-90-10;
CP-Violation in K^0-Decays at CERN

Holynski 89 INS-1456-PH;
One- and Two-Dimensional Analysis of the Factorial Moments in 200 GeV/Nucleon p ^{16}O and ^{32}S Interactions with Ag/Br Nuclei

Holynski 89B Phys. Rev. Lett. 62:733, 1989;
Evidence for Intermittent Patterns of Fluctuations in Particle Production in High-Energy Interactions in Nuclear Emulsion

Holzkamp 88 BONN-IR-88-40;
Inclusive Photoproduction of Kaons and Pions in the Momentum Range 100 GeV/c – 170 GeV/c

Holzschuh 92 Phys. Lett. 287B:381, 1992;
Measurement of the Electron Neutrino Mass from Tritium β-Decay

Homolka 92 Phys. Rev. C45:1276, 1992;
Measurement of the ^{12}C (p, π^0) ^{13}Nit Reaction by Recoil Detection

Howell 92 Phys. Lett. 291B:206, 1992; KEK-92-49; DPNU-92-31; KOBE-HEP-92-03; OCU-HEP-92-03; INS-REP-938; NWU-HEP-92-04; TAUT-HEP-92-04; PU-92-660; TIT-HPE-92-05;
Cross Sections and Charged Asymmetries for $e^+ e^- \to \mu^+ \mu^-$ and $e^+ e^- \to \tau^+ \tau^-$ Reactions at $\sqrt{s}$ = 52 – 61.4 GeV

Hsiung 88 FERMILAB-CONF-88-164-E;
Measurement of ϵ'/ϵ at Fermilab

Hsiung 90 FERMILAB-CONF-90-268-E;
Recent Results on CP-Violation from Fermilab Experiment E-731

Hsiung 90B FERMILAB-CONF-90-163-E;
CP-Violation Experiment at Fermilab

Hsiung 92 FERMILAB-CONF-92-79;
Latest Results on the Direct CP-Violation Measurements – ϵ'/ϵ

Hsueh 88 Phys. Rev. D38:2056, 1988;
High-Precision Measurement of Polarized Σ^- β Decay

Hsueh 92 FERMILAB-PUB-92-05;
The Width of the $J/\psi(1S)$ Resonance

Huang 91 Nucl. Phys. A527:625C, 1991;
Dilepton (e^+ e^-) Production at BEVALAC Energies

Huang 92 Phys. Lett. 297B:233, 1992;
Dielectron Yields in p deuteron and p p Collisions at 4.9 GeV

Hubbard 89B LBL-27687;
Fragmentation Properties of Jets Production in Proton-Antiproton Collisions at $\sqrt{s}$=1.8 TeV

Hubele 91 Z. Phys. A340:263, 1991;
Fragmentation of Gold Projectiles: from Evaporation to Total Disassembly

Huber 88 Phys. Rev. Lett. 61:2189, 1988; TRI-PP-88-30;
Search for Mixing of (μ^+ e^-) and (μ^- e^+) with Fermi Coupling Strength

Huber 88B Phys. Rev. C37:1161, 1988;
Comparison of ^{13}C (p, π^-) ^{14}O* and ^{13}C (p, π^+) ^{14}C* Reactions in the Region of $\Delta(1232\, P_{33})$ Resonance

Huber 88C Phys. Rev. C38:1304, 1988;
^{7}Li (p, π^-) ^{8}Bor* and ^{7}Li (p, π^+) ^{8}Li* Reactions in the Region of the $\Delta(1232\, P_{33})$ Resonance

Huber 88D Phys. Rev. C37:2051, 1988; TRI-PP-87-93;
Proton-Induced Inclusive Pion Production from Light Nuclei in the Region of the $\Delta(1232\, P_{33})$ Resonance

Huber 89 Phys. Rev. D41:2709, 1990; TRI-PP-89-64;
Search for Mixing of Muonium (μ^+ e^-) and Antimuonium (μ^- e^+)

Huber 90 Phys. Rev. Lett. 64:835, 1990;
Limit on the Flux of Cosmic-Ray Magnetic Monopoles from Operation of an Eight-Loop Superconducting Detector

Huber 91 Phys. Rev. D44:636, 1991;
Search for a Flux of Cosmic Ray Magnetic Monopoles with an Eight-Channel Superconductive Detector

Huffman 92 FERMILAB-CONF-92-337-E;
The Bottom Quark Cross Section in p $\bar{p}$ Collisions from Inclusive Decays to Muons

Hughes 89 LA-UR-89-1011;
Non-Newtonian Gravitational Forces and the Greenland Ice-Sheet Experiment

Hughes 92 Phys. Rev. Lett. 69:578, 1992;
Electric Charges of Positrons and Antiprotons

Humanic 88 Z. Phys. C38:79, 1988;
Pion Interferometry with Ultrarelativistic Heavy-Ion Collisions from the NA35 Experiment

Huo 90 BIHEP-CR-90-01;
Very High Energy Particle Emission from Solar Cosmic Ray Flares

Hurst 89 Eur. Lett. 10:213, 1989;
A Single PEP Upper Limit on B^0 $\bar{B}^0$ Mixing

Hurst 90 FERMILAB-CONF-90-33-E;
Asymmetry in Z^0 Decay at CDF

Hutcheon 88 Nucl. Phys. A483:429, 1988;
The Elastic Scattering of Intermediate Energy Protons from ^{40}Ca and ^{208}Pb

Hutcheon 89 Phys. Rev. Lett. 64:176, 1990; TRI-PP-89-55;
Measurement of n p $\to$ deuteron π^0 Cross Sections very near Threshold

Hutcheon 89B Nucl. Phys. A503:649, 1989;
Spin Transfer, K_{88} in the p p $\to$ deuteron π^+ Reaction

Hutcheon 90 TRI-PP-90-71;
Measurement of n n $\to$ deuteron π Cross Sections Near Threshold

Hutcheon 91 Nucl. Phys. A535:618, 1991; TRI-PP-91-10;
Measurement of nucleon nucleon $\to$ deuteron π Very Near Threshold. I. The n p $\to$ deuteron π^0 Cross Section

Hyman 90 Phys. Rev. C41:409, 1990;
^{16}O (π^+, 2p) Reaction at 165 MeV

Hyman 92 PSI-PR-92-32;
Energy Dependence of Two-Nucleon Pion Absorbtion on ^{16}O

See the legend on page 7.

Hyslop 92 Phys. Rev. D46:961, 1992;
Partial-Wave Analysis of K^+-Nucleon Scattering

Iconomidoufa 91 LAL-91-05;
A New Measurement of ϵ'/ϵ by the NA31 Experiment

Iddir 88 Phys. Lett. 205B:564, 1988; LPTHE-ORSAY-88-03;
(q, q, gluon) Hybrid and ($2q$, $2\bar{q}$) Diquonium Interpretation of GAMS 1^{-+} Resonance

Ieiri 89 Nucl. Phys. A504:477, 1989;
Polarization Transfer Measurements for the (deuteron, p X) Reaction at E_d=65 MeV and the Reaction Mechanism for the Protons in the Continuum

Igarashi 87 Phys. Rev. Lett. 60:2359, 1988; KEK-87-142; AMY-87-06;
Search for Isolated Leptons in Low Thrust $e^+ e^-$ Annihilation Events at $\sqrt{s}$=50 and 52 GeV

Iijima 92 Nucl. Phys. A546:588, 1992; KEK-92-4;
(K^-, K^+) Reaction on Nuclear Targets at P_{K^-}=1.65 GeV/c

Imanishi 88 Nuovo Cim. 100A:735, 1988;
Measurement of Large Angle Cross Sections of Coherent Pion Photoproduction on Deuteron

Imazato 92 Phys. Rev. Lett. 69:877, 1992; INS-928; KEK-92-30;
Search for Right-Handed Currents in the Decay Chain $K^+ \to \mu^+ \nu$, $\mu^+ \to e^+ \nu \bar{\nu}$

Imazato 92B KEK-92-145;
Kaon Decay Studies at KEK

Inagaki 88 KEK-88-26;
Search for Rare Decays $K_L \to \mu^+ e^-$, $K_L \to \mu^- e^+$ and $K_L \to e^+ e^-$

Inagaki 89 Phys. Rev. D40:.712, 1989; KEK-89-25; UT-HE-89-03;
Search for $K_L \to \mu^+ e^-$, $K_L \to \mu^- e^+$ and $K_L \to e^+ e^-$ Decays

Inagaki 89B KEK-89-3;
A Series of Experiments at KEK for Light Quark Meson Spectroscopy, E64/121/135

Inagaki 89C KEK-89-12;
The Experimental Status of E137 at KEK (Search for Rare Decay $K_L \to \mu^+ e^-$ and $K_L \to \mu^- e^+$)

Inagaki 91 Phys. Rev. Lett. 67:2614, 1991; KEK-91-84;
Search for the Rare Decays $K_L \to \mu^\pm e^\mp$ and $K_L \to e^+ e^-$

Inagaki 91B Phys. Rev. Lett. 67:2618, 1991; KEK-91-83;
Measurement of the Branching Ratio of the Decay $K_L \to \mu^+ \mu^-$

Incagli 92 FERMILAB-CONF-92-338-E;
Dijet Invariant Mass Spectrum at CDF

Innes 90 SLAC-PUB-5115;
A Search for New Particles in Z^0 Decay

Inzhechik 90 Yad. Phys. 51:14, 1990;
Spatial Parity Violation on E_1 Transition of ^{237}Np Nucleus

Iovchev 87 Yad. Phys. 47:451, 1988; JINR-E1-87-166;
Study of the Polarization for Λ Hyperon Produced in C ^{12}C and C Ta Interactions at 4.2 GeV/c per Nucleon

Iovchev 90 Kr. Soob. JINR 46:27, 1990;
A Comparative Analysis of the Process of K^0 and Λ Hyperon Production in Nucleus Collisions

Itoh 90 KEK-90-128;
Recent Results from the Three TRISTAN Experin

Ivanenko 88B Pisma Zh. Eksp. Teor. Fiz. 48:468, 1988; Jetp Lett. 48:5
Energy Spectrum and Charge Component of the smic Rays with the Energy Greater 2 TeV

Ivanenko 89 Pisma Zh. Eksp. Teor. Fiz. 49:192, 1989; Jetp Lett. 49:2.
Energy Spectrum of the Primary Cosmic Rays at y 1 – 100 TeV from the SOKOL Data

Ivanenko 92 Pisma Zh. Eksp. Teor. Fiz. 56:192, 1992;
Linearity in the Gamma-Hadron Families of Cosmic Rays and Characteristics of Interactions at E=10^{16} eV

Ivanov 92 Yad. Phys. 55:3, 1992;
Low Energy and Momentum Transfer Fission of ^{237}Np and ^{238}U by Intermediate Energy Photons

Iwasaki 89 KEK-89-163;
Recent Results on QCD from TRISTAN

Iwasaki 91 KEK-91-43;
Discovery of Antiproton Trapping by Long-Lived Metastable States in Liquid Helium

Iwata 89 KEK-89-128;
Tests of Standard Model at TRISTAN

Izen 88 SLAC-PUB-4753;
Semileptonic Charm Decay

Jacob 91 Int. Jour. Mod. Phys. A6:2569, 1991; CERN-TH-5848-90;
Heavy Ion Collision Phenomenology

Jacobsen 91 SLAC-381;
A Measurement of the Branching Ratio of the Z^0 Boson to Bottom Quarks Using Precision Tracking

Jacobsen 91B Phys. Rev. Lett. 67:3347, 1991; SLAC-PUB-5603; LBL-31095;
Measurements of the b b Fraction in Hadronic Z^0 Decays with Precision Vertex Detector

Jacoquet 90 Nucl. Phys. A511:195, 1990;
Production and Deexcitation of Hot Nuclei in Collision of 27 MeV/Nucleon ^{40}Ar with ^{238}U

Jaffe 88 Phys. Rev. D38:1016, 1988;
High Transverse-Momentum Hadron-Hadron Correlations in $\sqrt{s}$=38.8 GeV Proton Proton Interactions

Jaffe 89 Phys. Rev. D40:2777, 1989; FERMILAB-PUB-89-69-E; CERN-PRE-89-037;
High Transverse Momentum Single Hadron Production in p p and p deuteron Collisions at $\sqrt{s}$ = 27.4 GeV and $\sqrt{s}$ = 38.8 GeV

Jain 88 Nucl. Phys. B301:517, 1988;
Hadron Production by 150 GeV Muons in Nuclear Emulsion

Jain 88B Nuovo Cim. 99A:9, 1988;
Multiplicity Dependence of the Number of Projectile Collisions in Hadron-Nucleus Interactions

Jain 90 Phys. Lett. 235B:351, 1990;
Observation of Scaling in Nucleus-Nucleus Interactions at Ultra-Relativistic Energies

Jain 90B Phys. Lett. 241B:273, 1990;
Multifractality of Inelastic Nuclear Interactions at 1 – 6 TeV

Jain 90C	Phys. Rev. D41:2057, 1990; UH-511-685-89; CERN-PRE-89-060; **Dimuon Production by Neutrinos in the Fermilab 15 ft Bubble Chamber at the TEVATRON**
Jain 91	Phys. Rev. C44:844, 1991; **Production of Fast and Slow Particles in Nucleus-Nucleus Collisions at Ultrarelativistic Energies**
Jain 91B	Z. Phys. C52:465, 1991; UB-HEX-91-06; **Intranuclear Cascading at Ultrahigh Energy in Heavy-Ion Interactions**
Jain 91C	Phys. Rev. C44:854, 1991; **One- and Two-dimensional Analysis of Intermittency in Ultrarelativistic Nucleus-Nucleus Interactions**
Jain 92	Phys. Rev. Lett. 68:1656, 1992; **Intermittency in Nuclear Multifragmentation at Relativistic Energy**
Jain 92B	Mod. Phys. Lett. A7:93, 1992; **Investigation of Intermittency in ^{28}Si-Nucleus Collisions at 14.5 A GeV**
Jain 92C	Z. Phys. C53:355, 1992; **Intermittency in Relativistic Heavy-Ion Collisions**
Jain 92D	Mod. Phys. Lett. 7:93, 1992; **Investigation of Intermittency in ^{28}Si-Nucleus Collisions at 14.5 A GeV**
Jain 92E	Int. Jour. Mod. Phys. A7:1907, 1992; **Multiplicity and Pseudorapidity Distributions in He-Nucleus Interactions at Ultrarelativistic Energy**
Jakobsson 90	Nucl. Phys. A509:195, 1990; **On the Observation of a Transition from Fission to Multifragmentation in High Multiplicity ^{16}O Induced Reaction**
Jakubowski 88	Z. Phys. C40:49, 1988; DESY-88-032; SLAC-PUB-4567; **Determination of $\Gamma_{e^+e^-}$ of the $\Upsilon(1S)$ and $\Upsilon(2S)$ Resonances, and Measurement of R at W=9.39 GeV**
Jakubowski 90	DESY-F31-90-01; **Measurement of Total Hadronic Cross Section $\sigma(e^+ e^- \to$ hadrons) in the Continuum at the c.m. Energy W=9.39 GeV and Determination of $\Gamma_{e^+e^-}$ of the $\Upsilon(1S)$ and $\Upsilon(2S)$ Resonances**
James 90	Phys. Rev. Lett. 64:843, 1990; **Branching Ratio and Asymmetry for $\Xi^0 \to \Lambda\ \gamma$**
Jammes 89	Phys. Lett. 227B:21, 1989; SACLAY-DPH-N-2550; **Total Cross Section Measurement of π^0 Photoproduction near Threshold on Complex Nuclei**
Janissen 89	TRI-PP-89-89; **Muonium Production from Fine Silica Powder**
Janot 90	LAL-90-27; CERN-PRE-90-037; **Search for New Particles**
Janssen 89	Phys. Lett. 228B:273, 1989; DESY-89-054; SLAC-PUB-4958; HEN-317; **The Michel Parameter for the Decay $\tau^\pm \to e^\pm\ \nu\ \bar{\nu}$**
Janssen 90	NIJM-THESIS; **Leptonic Decay Modes of the $\tau^\pm$ Lepton**
Janssen 92	CERN-PPE-92-162; **New Particle Searches at LEP**
Jastrzebski 93	Phys. Rev. C47:216, 1993; **Interaction of Stopped Antiprotons with Copper**
Jastrzembski 88	Phys. Rev. Lett. 61:2300, 1988; BNL-41507; **Limit on $K_L \to \pi^0\ e^+\ e^-$ and $K_L \to e^+\ e^-$**
Jekeli 90	Phys. Rev. Lett. 64:1204, 1990; **Tower Gravity Experiment: No Evidence for non-Newtonian Gravity**
Jenni 89	CERN-EP-89-51; **Collider Experiments**
Jensen 89	DOE-ER-01545-429; **Two-Photon Production of the $\eta_c(1S)$**
Jiang 89	Nucl. Phys. A503:560, 1989; **Saturation of the Thermal Energy Deposited in Au and Th Nuclei by Ar Projectiles Between 27 and 77 MeV/u**
Jiang 92	Phys. Rev. Lett. 68:2739, 1992; **High-Order Collective-Flow Correlations in Heavy-Ion Collisions**
Jin 91	PHYSICS IN COLLISIONS-11, p. 231; **BES Results on $J/\psi(1S)$ Decay into $\gamma\ K^+\ K^-$ and $\omega\ \pi^+\ \pi^-$**
Jocksch 89	BONN-IR-89-02; **Investigation of the Reaction $\gamma\ \gamma \to \pi^+\ \pi^-$ in TASSO**
Jodidio 86	Phys. Rev. D34:1967, 1986; Phys. Rev. D37:237, 1988; LBL-21616; **Search for Right-Handed Currents in Muon Decay**
Johansson 90	CERN-PPE-90-146; **Hyperon-Antihyperon Production at LEAR**
Johansson 90B	LUND; **A Study of $\mu^\pm\ \mu^\pm$ and $\mu^\pm\ e^\pm$ Pairs Produced in 450 GeV/c p Be Collisions in HELIOS, and Software Development for DELPHI**
Johns 89	ANL-HEP-CP-89-99; **Underground Muons from Direction of Cygnus X-3**
Jones 89	Z. Phys. C43:349, 1989; **Search for Fractional Electric Charge in Meteorite Samples**
Jones 89B	Z. Phys. C43:527, 1989; MPI-PAE-EXP-EL-199; **Experimental Test of the PCAC Hypothesis in the Reactions $\nu_\mu\ p \to \mu^-\ p\ \pi^+$ and $\bar{\nu}_\mu\ p \to \mu^+\ p\ \pi^-$ in the $\Delta(1232\ P_{33})$ Region**
Jones 89C	Z. Phys. C44:379, 1989; CERN-PRE-89-043; OUNP-89-18; **A Measurement of the Proton Structure Functions from Neutrino Hydrogen and Antineutrino Hydrogen Charged Current Interactions**
Jones 90	Z. Phys. C46:25, 1990; **W^2 and Q^2 Dependence of Charged Hadron and Pion Multiplicities in $\nu\ p$ and $\bar{\nu}\ p$ Charged Current Interactions**
Jones 91	Z. Phys. C51:205, 1991; MPI-PREPRINT; CERN-PRE-91-018; **Inclusive $f_2(1270)$ Meson Production in $\nu\ p$ and $\bar{\nu}\ p$ Charged Current Interactions**

See the legend on page 7.

Jones 91B	Z. Phys. C51:11, 1991; MPI-PAE-EXP-EL-235; CERN-PRE-91-010; **Inclusive $\rho(770)^0$ Meson Production in $\nu\ p$ and $\bar{\nu}\ p$ Charged Current Interactions**
Jones 91C	Z. Phys. C54:45, 1992; MPI-PHE-91-03; CERN-PRE-91-95; **Multiplicity Distributions of Charged Hadrons in $\nu\ p$ and $\bar{\nu}\ p$ Charged Current Interactions**
Jones 92	Phys. Lett. 278B:419, 1992; **Energy Dependence of the Total ^{12}C (π^+, $2p$) Cross Section**
Jongejans 89	Nuovo Cim. 101A:435, 1989; **Multiplicity Distributions of Charged Hadrons Produced in (Anti)Neutrino-Deuterium Charged- and Neutral-Current Interactions**
Jousset 88	Phys. Rev. D41:1389, 1990; LAL-88-25; **The $J/\psi(1S) \rightarrow$ Vector + Pseudoscalar Decays and the η, $\eta'(958)$ Quark Content**
Joyce 91	UCR-UA1-91-02; **An Investigation of Double Pomeron Exchange in $\bar{p}\ p$ Interaction at a c.m. Energy of 630 GeV**
Joyner 89	Phys. Rev. D39:1865, 1989; **Diffractive Production of $\pi^-\ \pi^-\ \pi^+$ in 200 GeV/c $\pi^-\ n$ Interactions**
Judge 90	Phys. Rev. Lett. 65:972, 1990; GSI-90-03; **Search for Longlived Neutral Resonances in Bhabha Scattering around 1.8 MeV/c^2**
Julien 88	Z. Phys. A330:83, 1988; **Neutral Pion Production in Subthreshold Heavy Ion Collision with ^{16}O (38 Mev/u) and ^{20}Ne (200 Mev/u) Beams**
Julien 91	Phys. Lett. 264B:269, 1991; **Subthreshold K^+ Production in Heavy Ion Collisions**
Jung 89	Phys. Rev. Lett. 64:1091, 1990; SLAC-PUB-5136; LBL-27998; **Search for Long-Lived Massive Neutrinos in Z^0 decays**
Juricic 88	Phys. Rev. D39:1, 1989; LBL-25018; **Bose-Einstein Correlations in $e^+\ e^-$ Collisions**
Kaarsberg 89	Phys. Rev. Lett. 62:2077, 1989; **Measurement of the Branching Ratio for Decay of Υ States to $\mu^-\ \mu^+$**
Kagaya 89	Nucl. Phys. A503:766, 1989; **Spin-Isospin Flip Transitions in ^{40}Ca (γ, π^+) ^{40}KK Reaction**
Kajita 90	ICRR-226-90-19; **Results from Kamiokande on Solar and Atmospheric Neutrinos**
Kalantarnaye 89	Phys. Rev. Lett. 63:2032, 1989; **Energy Dependence of Dispersive Effects in ^{12}C**
Kalinowsky 92	Yad. Phys. 55:1541, 1992; **Ultra Cold Antiprotons at LEAR**
Kamae 88	UT-HE-88-05; **New Results from $e^+\ e^-$ Collisions**
Kamon 89	FERMILAB-CONF-89-246-E; **A Study of Weak Boson Production with $W^\pm \rightarrow e^\pm\ \nu$ and $Z^0 \rightarrow e^+\ e^-$ at CDF**
Kampert 92	Progr. Part. Nucl. Phys. 30:171, 1993; IKP-MS-92-1101; **Target Fragmentation in Proton and Heavy-Ion Induced Reactions at High Energies**
Kanarek 88	Yad. Phys. 48:1752, 1988; JINR-P1-88-30; **Proton and π^- Meson Spectra in C C Interaction at 4.2 GeV/c per Nucleon**
Kanavets 88	ITEP-88-115; **Isospin Invariance Test of Experimental Data on Pion-Nucleon Scattering at 1.53 – 2.07 GeV/c and Direct Reconstruction of Transverse Isodublet Amplitudes**
Kanazirski 89	Czech. J. Phys. B39:623, 1989; **The Interactions $\bar{p}\ p \rightarrow \bar{n}\ \pi^-\ p$ at 22.4 GeV/c**
Kang 90	KEK-90-70; **Measurement of the Polarization of Tau Leptons from $e^+\ e^- \rightarrow \tau^+\ \tau^-$ at $\sqrt{s}$=57 GeV**
Kanzaki 91	KEK-91-120; **Selected Topics from Recent Physics Analyses at TRISTAN**
Kaplan 89	Phys. Rev. D43:955, 1991; Phys. Rev. D41:2334, 1990; FERMILAB-PUB-89-263-E; **Test of Scaling of the Massive-Dihadron Cross Section**
Karabarbouni 91	Nucl. Phys. A525:327C, 1991; **Bose Einstein Correlations in Ultrarelativistic Heavy Ion Collisions**
Karch 90	Phys. Lett. 249B:353, 1990; DESY-90-068; SLAC-PUB-5266; **Observation of a New $\eta\ \pi^0\ \pi^0$ Resonance at 1900 MeV/c^2 in Two-Photon Scattering**
Karch 90B	DESY-90-117; **Two-Photon Production of $\eta\ \pi\ \pi$ Final States**
Karch 91	DESY-91-022; **Recent CRYSTAL BALL Results on Resonances Formation in Photon-Photon Collisions**
Karch 91B	Z. Phys. C54:33, 1992; DESY-91-126; **Analysis of the $\eta\ \pi^0\ \pi^0$ Final State in Photon-Photon Collisions**
Karch 91C	DESY-91-094; **Resonance Formation in $\gamma\ \gamma$ Collisions**
Karev 88	Yad. Phys. 50:727, 1989; JINR-E1-88-110; **Anomalous Component of the Absorption Function of Relativistic Fragments Produced in Interactions of Magnesium Nuclei with Plexiglas at Momentum of 4.5 A GeV/c**
Karlen 88B	Phys. Rev. D39:1861, 1989; SLAC-PUB-4560; LBL-24942; **Measurement of Single and Double Radiative Low Q^2 Bhabha Scattering at E_{cm}=29 GeV**
Karlen 88C	SLAC-325; **A Study of Low Q^2 Radiative Bhabha Scattering**
Karlsson 90	Phys. Rev. Lett. 64:2976, 1990; DPHPE-90-01; **A Test of CPT Symmetry Through a Determination of the Difference in the Phases of η_{00} and η_{+-} in $K \rightarrow 2\pi$ Decays**
Karnaukhov 92	Phys. Lett. 281B:148, 1992; **About Possible 3.52 GeV/c^2 Very Narrow Resonance**
Kartik 90	Phys. Rev. D41:1, 1990; **A-dependence of $J/\psi(1S)$ Production in π^- Nucleus Collisions at 530 GeV/c**

Kass 89 DOE-ER-01545-430;
Precision Measurement of the $\tau^{\pm}$ Lifetime
Kawai 88 Nucl. Phys. A481:806, 1988;
Search for Proton-Proton Dibaryon Resonances in the deuteron $p \rightarrow (p\ p)\ n$ Reaction
Kawakami 89 INS-758; KEK-89-60;
Third Measurement of Anti-Electron-Neutrino Mass at INS
Kawakami 91 Phys. Lett. 256B:105, 1991;
New Upper Bound on the Electron Anti-Neutrino Mass
Kawakami 92 Phys. Lett. 287B:45, 1992; KEK-92-14; INS-REP-921;
High Sensitivity Search for a 17 keV Neutrino: Negative Indication with an Upper Limit of 0.1%
Kawamura 89 Phys. Rev. D40:729, 1989; ICR-172-88-18;
"Quasidirect" Observations of Cosmic-Ray Primaries in the Energy Region 10^{12} – 10^{14} eV
Kechechyan 89 Kr. Soob. JINR 35:5, 1989;
Scaling of Proton Cluster Distributions in the Range of the First Intermediate Asymptotics
Kechechyan 90 Kr. Soob. JINR 42:11, 1990;
Asymptotic Properties of Baryon Clusters Containing Λ Hyperons
Kechechyan 90B Kr. Soob. JINR 40:5, 1990;
Proton Correlation from n C and π C Interactions in the Four Momentum Space
Keeble 92 FERMILAB-CONF-92-161-E;
A Study of Four-Jet Events and Search for Double Parton Scattering at $\sqrt{s}$=1.8 TeV
Keeble 92B FERMILAB-CONF-92-339-E;
A Study of Four-Jet Events and Search for Double Parton Interactions at $\sqrt{s}$ = 1.8 TeV
Keh 88B Phys. Lett. 212B:123, 1988; DESY-88-065; SLAC-PUB-4634; HEN-295;
Search for Exotic $\tau^{\pm}$ Decays
Keranen 91 HU-SEFT-1991-09;
Energy Measurement in Collider Experiments and the Search for Scalar Quarks in Z^0 Decays at LEP I
Kernel 89 Phys. Lett. 225B:198, 1989;
Measurement of $\pi^-\ p \rightarrow \pi^-\ p\ \pi^0$ Reaction near Threshold and Breaking of Chiral Symmetry
Kernel 89B CERN-EP-89-104;
Measurement of $\pi^-\ p \rightarrow \pi^-\ p\ \pi^0$ and $\pi^-\ p \rightarrow \pi^+\ \pi^-\ n$ near Threshold and Breaking of Chiral Symmetry
Kernel 89C Phys. Lett. 216B:244, 1989; CERN-EP-88-116;
Cross-section Measurement of $\pi^-\ p \rightarrow \pi^-\ \pi^+\ n$ Reaction Near Threshold
Kernel 90 CERN-PPE-90-152;
Measurement of Pion Production in $\pi^{\pm}\ p$ Interactions Near Threshold
Kernel 90B Z. Phys. C48:201, 1990; CERN-EP-90-82;
Measurement of the Reaction $\pi^+\ p \rightarrow \pi^+\ \pi^+\ n$ Near Threshold
Kernel 91 Z. Phys. C51:377, 1991; CERN-PPE-91-83;
Experimental Study of $\pi^-\ \pi^+$ System at Low Invariant-Masses
Ketov 88 Pisma Zh. Eksp. Teor. Fiz. 47:177, 1988; Jetp Lett. 47:215, 1988;
The Spectra of $\bar{\nu}_e$ from the Atomic Reactor and the Test of the Electroweak Theory
Ketov 92 Pisma Zh. Eksp. Teor. Fiz. 55:544, 1992;
New Type of Experiment on the Search of the Neutrino Oscillations at the Nuclear Reactor
Khan 88 Nuovo Cim. 99A:417, 1988;
Interactions of Relativistic Carbon Nuclei in Nuclear Emulsion
Khan 89 Nuovo Cim. 101A:93, 1989;
Interaction Mean Free Path of Projectile Fragments from ^{12}C Emulsion Collisions at 4.5 GeV/c
Kharitonov 89 Nucl. Instr. and Meth. A284:98, 1989;
Preliminary Results of Neutron Lifetime Measurements with Gravitational UCN Trap
Khiari 89 Phys. Rev. D39:45, 1989; UM-HE-87-36;
Acceleration of Polarized Protons to 22 GeV/c and the Measurement of Spin-Spin Effects in $p\uparrow\ p\uparrow \rightarrow p\ p$
Khriplovich 88 Usp. Fiz. Nauk 155:323, 1988;
Parity Nonconservation in Atoms
Kichimi 88 KEK-88-96;
Search for New Particles at TRISTAN
Kienle 90 GSI-90-56;
First Experimental Results from SIS/ESR
Kiesling 91 DESY-91-067;
$\tau^{\pm}$ Decays: An Experimental Review
Kihara 92 ICRR-274-92-12;
An Experimental Study on the ^{8}Bor Solar Neutrino Flux in the KAMIOKANDE-II Detector
Kim 88 KEK-88-42; AMY-88-05;
A Search for Charged and Neutral Heavy Leptons in $e^+\ e^-$ Annihilations at $\sqrt{s}$=56 GeV
Kim 88B KEK-88-61;
Asymmetry in Lepton Pair Production from $e^+\ e^-$ at KEK
Kim 88C KEK-88-49; AMY-88-12;
A Study of QED Processes in the Electron-Positron Interactions and Search for Excited Leptons at $\sqrt{s}$=50 to 56 GeV
Kim 88D Phys. Rev. Lett. 61:911, 1988; KEK-88-8; AMY-88-01; KNUHEP-88-01;
Experimental Mass Limit for a Fourth Generation Sequential Lepton from $e^+\ e^-$ Annihilations at $\sqrt{s}$=56 GeV
Kim 89 Phys. Lett. 219B:62, 1989;
Test on $\pi\ n$ Partial Wave Analysis at Onset of the Roper Resonance
Kim 89B Phys. Lett. 223B:476, 1989; KEK-88-125; AMY-88-18;
Search for the Substructure of Leptons in High Energy QED Processes at TRISTAN
Kim 89C Phys. Rev. Lett. 63:1772, 1989; KEK-89-44; AMY-89-07;
A Comparison of Quark and Gluon Jets Produced in High Energy $e^+\ e^-$ Annihilations
Kim 89D Phys. Rev. D40:244, 1989;
Differential Cross Section for $\pi^-\ p \rightarrow \gamma\ n$ from 427 to 625 MeV/c
Kim 89E KEK-89-54; AMY-89-13;
Recent Results from AMY

See the legend on page 7.

Kim 89F KEK-89-52; AMY-89-11;
Measurement of the Cross Section for $e^+ e^- \to \gamma \gamma$ at TRISTAN
Kim 89G Phys. Lett. 240B:243, 1990; KEK-89-177; AMY-89-20;
A Search for Leptoquark and Colored Lepton Pair Production in $e^+ e^-$ Annihilations at TRISTAN
Kim 90 Phys. Rev. D41:733, 1990;
Analyzing Power for $\pi^- p$ Charge Exchange in the Backward Hemisphere from 301 to 625 MeV/c and a Test of Pion Nucleon Partial-Wave Analyses
Kim 90B KEK-90-79;
Comparison of Quark and Gluon Jets Using Three-Jet Events from $e^+ e^-$ Annihilation at TRISTAN
Kim 90C Int. Jour. Mod. Phys. A6:2583, 1991; KEK-90-55;
Searches for Charged Heavy Leptons with Arbitrary Neutrino Masses in $e^+ e^-$ Annihilations at $\sqrt{s}$=50 - 60.8 GeV
Kim 90D KEK-90-107;
Recent Results from TRISTAN
Kim 91 Phys. Rev. D43:687, 1991;
Measurement of the Left-Right Asymmetry in $\pi^- p \to \gamma n$ from 301 to 625 MeV/c at Backward Angles
Kinashi 91 KEK-91-203;
Partial Wave Analysis, $\pi^- p \to \omega \pi^0 n$
Kinoshita 88B Phys. Rev. Lett. 60:1610, 1988; KEK-87-149;
Search for Highly Ionizing Particles in $e^+ e^-$ Annihilations at $\sqrt{s}$=50 - 52 GeV
Kinoshita 88C KEK-88-32;
Recent Results from NIKKO at TRISTAN
Kinoshita 89B Phys. Lett. 228B:543, 1989; KEK-89-50;
Search for Highly Ionizing Particles in $e^+ e^-$ Annihilation at $\sqrt{s}$=50 - 60.8 GeV
Kinoshita 90 Phys. Rev. D43:2836, 1991; CLNS-90-1030; CLEO-90-11;
Study of D^0 Decays into Final States with a π^0 or η
Kinoshita 92 Phys. Rev. D46:R881, 1992;
Search for Highly Ionizing Particles in $e^+ e^-$ Annihilations at $\sqrt{s}$=91.1 GeV
Kinson 91 Nucl. Phys. A544:321C, 1992; CERN-PRE-91-94;
Strange Particle Production in Sulphur-Tungsten Interactions at 200 GeV/c per Nucleon
Kirpichnikov 89 ITEP-89-177;
Double β Decay Experiment
Kirpichnikov 91 ITEP-91-91;
Recent Limit for Neutrinoless Double β-Decay of ^{76}Ge
Kiselevich 92 ITEP-92-63;
Effect of Nuclear Transparency for Interaction of Negative Pions at 6.2 GeV/c and Neon Nuclei
Kiselevich 92B Yad. Phys. 55:2100, 1992;
Multiplicity of Secondary Particles in Inelastic Collisions of Negative Pions with Ne Nuclei at 6.2 GeV/c
Kishida 89 Phys. Rev. C41:180, 1990; UT-HE-89-05;
Measurement of Deuteron-Deuteron Total Cross Sections in the Incident Momentum Range 1.5 - 4.0 GeV/c
Kishida 92 Phys. Rev. C45:2926, 1992;
Measurement of deuteron-C and deuteron-Al Total Cross Sections in the Incident Momentum Range 2.0 - 4.0 GeV/c
Kiss 89 Nucl. Phys. A499:131, 1989;
Fragment Production in ^{14}Nit C, Ni, Ho Reactions at 35 MeV/Nucleon
Kistryn 89 Phys. Lett. 219B:58, 1989;
Measurement of Parity Nonconservation in Proton-Deuteron Scattering at 43 MeV
Kistryn 92 Nucl. Phys. A548:49, 1992;
Analyzing Power of the deuteron(n, n p)n Breakup Reaction at 67 MeV in Selected Kinematical Configurations
Kitagaki 88 Phys. Lett. 214B:281, 1988; FERMILAB-PUB-88-59-E;
A New Method to Investigate the Nuclear Effect in Leptonic Interactions
Kitagaki 90 Phys. Rev. D42:1331, 1990;
Study of ν deuteron $\to \mu^- p\, p$(spect) and ν deuteron $\to \mu^- \Delta(1232\, P_{33})^{++}\, n$(spect) Using the BNL 7-foot Deuterium-Filled Bubble Chamber
Klapdorklein 91 Izv. Akad. Nauk SSSR, Fiz. 55:893, 1991;
Double-Beta Decay, Neutrino Mass and Nuclear Structure
Klein 88 SLAC-330;
Charmed and Strange Baryon Production in 29 GeV Electron-Positron Annihilation
Klein 89 Phys. Rev. Lett. 62:2444, 1989; SLAC-PUB-4696; LBL-25827;
Λ_c^+ Production and Semileptonic Decay in 29 GeV $e^+ e^-$ Annihilation
Klein 89B BUHEP-89-30;
First Results from MACRO
Klein 89C Int. Jour. Mod. Phys. A5:1457, 1990; BUHEP-89-16;
Charmed Baryons: A New Laboratory for Charm Studies
Kleinknecht 91 MZ-ETAP-91-02;
New Results on CP Violation in Decays of Neutral K Mesons
Kleinwort 89 Z. Phys. C42:7, 1989; DESY-88-155;
A Measurement of the $\tau^\pm$ Lepton Lifetime
Klem 86 Phys. Rev. D37:41, 1988; SLAC-300; SLAC-PUB-4025;
Measurement of the Average Lifetime of Hadrons Containing Bottom Quarks
Klemt 88 Z. Phys. C37:179, 1988;
The β-Decay Asymmetry of the Neutron
Klimenko 89 MINR-89-11;
Baksan Experiment on the Search of $\beta\,\beta$ Decay of ^{100}Mo
Klimov 90 Yad. Phys. 52:1574, 1990;
Reactor $\overline{\nu}_e$ Spectrum Measurement
Klingensmith 88 Phys. Rev. C38:818, 1988;
Fragment Emission in the Interaction of ^{238}U with 400 GeV Protons
Klinken 88 Phys. Lett. 205B:223, 1988;
Search for Resonant Bhabha Scattering Around an Invariant Mass of 1.8 MeV

Klomp 91 THEF-NYM-91-10;
Analysis of the A_{zz} Measurement in $n\ p$ Scattering at T_{lab} = 67.5 MeV

Klotzengmann 89 Nucl. Phys. A499:392, 1989;
Properties of Binary Fission and Multifragmentation in the Transition Regime

Kluberg 88 Nucl. Phys. A488:613, 1988;
Properties of Photons and Dileptons Produced in Collisions at 60 and 200 GeV per Nucleon

Knutson 91 Phys. Rev. Lett. 66:1410, 1991;
Charge-Symmetry Violation in Neutron-Proton Elastic Scattering at E_n=183 MeV

Ko 88 KEK-88-30; AMY-88-03;
$e^+\ e^-$ Physics at TRISTAN — the First Year and a Half of AMY

Kobayashi 88 Phys. Rev. Lett. 60:2599, 1988; KEK-87-78;
Projectile Fragmentation of the Extremely Neutron-Rich Nucleus ^{11}Li at 0.79 GeV/Nucleon

Kobayashi 88B KEK-88-134;
π^+ Induced Quasifree Double-Charge-Exchange Reaction on ^{6}Li

Kobayashi 89 Phys. Lett. 232B:51, 1989; KEK-89-27;
Electromagnetic Dissociation and Soft Giant Dipole Resonance of the Neutron-Dripline Nucleus ^{11}Li

Kobayashi 89B KEK-89-169;
Projectile Fragmentation of a Weakly-bound ^{11}Be Nucleus at 0.8 GeV/nucleon

Kobayashi 89C KEK-89-157;
Electromagnetic Dissociation of Exotic Projectiles at 0.8 GeV/Nucleon

Kobayashi 91 KEK-91-135;
Energy Dependent Measurements of the $p\ p$ Analyzing Power and Narrow Dibaryon Resonances

Kobel 91 Z. Phys. C53:193, 1992; DESY-91-089; SLAC-PUB-5402;
Measurement of the Decay of the $\Upsilon(1S)$ and $\Upsilon(2S)$ Resonances to Muon Pairs

Koch 89 Phys. Rev. Lett. 63:498, 1989;
Differential Cross Sections for Coherent and Incoherent Neutral-Pion Photoproduction from Calcium

Kochocki 89 ANL-HEP-CP-89-93; PDK-403;
Studies of $\mu^\pm$ Underground with the SOUDAN-2 Tracker

Kochocki 90 Phys. Rev. D42:2967, 1990; ANL-HEP-PR-90-85; PDK-447;
Study of Muons from the Direction of Cygnus X-3 Using an Underground Proportional Tube Array

Kodama 91 Phys. Lett. 263B:573, 1991; CMU-HEP-91-17;
Charm Meson Production in 800 GeV/c Proton Emulsion Interactions

Kodama 91B Phys. Lett. 263B:579, 1991; CMU-HEP-91-18;
Charm Pair Correlations in 800 GeV/c Proton Emulsion Interactions

Kodama 91C Phys. Rev. Lett. 66:1819, 1991;
Measurement of Relative Branching Fraction $\Gamma(D^0 \to K\ \mu^-\ \nu)\ /\ \Gamma(D^0 \to \mu^-\ X)$

Kodama 92 Phys. Lett. 274B:246, 1992;
Measurement of the Form Factor Ratios in the Decay $D^+ \to \overline{K}^*(892)^0\ \mu^+\ \nu$

Kodama 92B Phys. Lett. 286B:187, 1992; CMU-HEP-92-10;
Measurement of the Branching Ratio for $D^+ \to \overline{K}^*(892)^0\ \mu^+\ \nu$

Kodama 92C Phys. Lett. 284B:461, 1992; UCDPHY-92-9;
Charm Meson Production in 600 GeV/c π^- Emulsion Interactions

Kodama 92D DPNU-92-37; OHSTPY-HEP-E-92-019;
Measurement of the Lifetimes of Charged and Neutral Beauty Hadrons

Koenig 89 Phys. Lett. 218B:12, 1989; GSI-88-66;
On the Momentum Correlation of $(e^+\ e^-)$ Pairs Observed in U U and U Pb Collisions

Koetke 91 SLAC-PUB-5650;
Measuring the Branching Fraction for $Z^0 \to B\ \overline{B}$ Using Vertex Detectors

Koetke 92 Phys. Rev. C46:2554, 1992; LA-UR-92-1562;
Muon-Neutrino Carbon Charged-Current Interaction Near the Muon Threshold

Kohler 91 Phys. Rev. C44:15, 1991;
Absolute Differential Cross Sections and Charge Asymmetries for π deuteron Elastic Scattering at 65 MeV

Kolb 89 Phys. Rev. Lett. 62:509, 1989;
Limits to the Radiative Decays of Neutrinos and Axions from Gamma-Ray Observations of SN1987A

Kolb 91 Phys. Rev. Lett. 67:533, 1991; FERMILAB-PUB-91-28-A;
Constraints from Primordial Nucleosynthesis to the Mass of the $\tau^\pm$ Neutrino

Komamiya 89 Phys. Rev. D40:721, 1989; SLAC-PUB-4771; LBL-26186;
Searches for Nonminimal Higgs Bosons from a Virtual Z^0 Decaying into a Muon Pair at PEP

Komamiya 89B Phys. Rev. Lett. 64:987, 1989; SLAC-PUB-5137; LBL-27999;
Determination of α_S from a Differential Jet Multiplicity Distribution at SLC and PEP

Komamiya 89C SLAC-PUB-5154;
Study of Hadronic Final States of Z^0 Boson Decays

Komamiya 90 SLAC-PUB-5247;
Determination of α_S from a Differential Jet Multiplicity Distribution at SLC and PEP

Komamiya 90B Phys. Rev. Lett. 64:2881, 1990; SLAC-PUB-5175; LBL-28457;
Search for Nonminimal Higgs Bosons from Z^0 Boson Decay

Kopeikin 90 Pisma Zh. Eksp. Teor. Fiz. 51:75, 1990; Jetp Lett. 51:86, 1990;
A Search for Massive Neutrino in the Reactor of Rovno AES

Kopke 89 Phys. Rept. 174:67, 1989; CERN-EP-88-93;
$J/\psi(1S)$ Decays

Koptyev 88 Zh. Eksp. Teor. Fiz. 94(1):1, 1988;
Subthreshold Production of K^+ Mesons in Proton-Nuclear Interactions

Korkmaz 90 Phys. Rev. C40:813, 1990;
^{12}C, ^{13}C $(p,\ \pi^\pm)$ Reactions at 200 MeV

Korkmaz 91 Nucl. Phys. A535:637, 1991; TRI-PP-91-11;
Measurement of nucleon nucleon $\to$ deuteron π Very Near Threshold. II. The $p\ p \to$ deuteron π^+ Analyzing Power

Korsgen 88 BONN-IR-88-47;
Research on the Charge Asymmetry in Inclusive Photoproduction of Mesons in the Forward Direction in the Momentum Range of 60 GeV/c – 170 GeV/c in the CERN Ω Spectrometer (WA-69)

Kortelling 90 Phys. Rev. C41:2571, 1990;
Light Fragment Emission as Studied by (p, p He) Reactions on Be and Ag with 300 MeV Protons

Koslowsky 89 TASCC-P-89-3;
Precise β-Decay Half-Lives for the Determination of the Weak Vector Coupling Constant

Kossakowski 89 Nucl. Phys. A503:473, 1989;
Neutron Lifetime Measurement with a Helium-Filled Time Projection Chamber

Kox 91 Phys. Lett. 266B:264, 1991;
The deuteron $p \to 2p\ n$ Reaction as a Basis for a Deuteron Tensor Polarimeter at Intermediate Energies

Kozhuharov 88 GSI-88-68B;
Experiments on Low Energy Bhabha Scattering. Search for Neutral Resonances in the MeV/c^2 Mass Region

Kozma 86 Czech. J. Phys. B38:1317, 1988; JINR-E1-86-606;
Spallation of Copper by 9 GeV/c Protons and Deuterons

Kozma 88 JINR-E1-88-245;
Nuclear Reaction of Medium and Heavy Target Nuclei with High Energy Projectiles. Fragmentation of ^{197}Au by 3.65 A GeV ^{12}C Ions and 3.65 GeV Protons

Kozma 88B Czech. J. Phys. B40:29, 1989; JINR-E1-88-244;
Nuclear Reactions of Medium and Heavy Target Nuclei with High-Energy Projectiles. Spallation of ^{55}Mn, ^{59}Co, Ni and Cu by 3.65 A GeV ^{12}C Ions and 3.65 GeV Protons

Kozma 89 JINR-E1-89-252;
Nuclear Reactions of Tantalum with 3.65 A GeV ^{12}C Ions and 3.65 GeV Protons

Kozma 89B Nucl. Instr. and Meth. A291:662, 1990; JINR-E1-89-745;
Cross Sections for the Production of ^{11}C in C Targets by 3.65 A GeV Projectiles

Kozma 89C JINR-E1-89-482;
Target Residues from Reaction of 3.65 A GeV ^{12}C with ^{232}Th and ^{238}U

Kozma 90 Czech. J. Phys. B40:38, 1990;
Nuclear Reaction of Medium and Heavy Target Nuclei with High Energy Projectiles. Fragmentation of Ag and ^{197}Au by 3.65 A GeV ^{12}C Ions and 3.65 GeV Protons

Kozma 90B JINR-E1-90-185;
Systematics of Target Recoil Properties of Intermediate Fragments Produced in the Interaction of 3.65 A GeV ^{12}C Ions and Protons with Complex Nuclei

Kozma 90C Czech. J. Phys. B40:513, 1990;
Nuclear Reactions of Medium and Heavy Target Nuclei with High-Energy Projectiles III. Emission of ^{24}Na and ^{28}Mg Fragments

Kozma 90D JINR-E1-90-189;
Recoil Properties of Deep Spallation and Fragmentation Products in the Interaction of Tantalum with 3.65 A GeV ^{12}C Ions and Protons

Kozma 91 Yad. Phys. 53:722, 1991;
Spallation of Nickel and Copper Isotopes Induced by 3.65 GeV Protons

Kozma 91B Yad. Phys. 54:558, 1991;
Isomer Yield Ratios of ^{99}Rh and ^{110}In Residual Nuclei Produced in Reactions Induced by Relativistic Protons and ^{12}C Ions on Sn Isotopes

Krakauer 90 Phys. Lett. 252B:177, 1990; LA-UR-90-2015;
Limits on the Neutrino Magnetic Moment from a Measurement of Neutrino-Electron Elastic Scattering

Krakauer 91 Phys. Rev. D45:975, 1992; ANL-HEP-PR-91-80;
Limits on Flavor-Changing Neutral Currents from a Measurement of Neutrino-Electron Elastic Scattering

Krakauer 91B Phys. Lett. 263B:534, 1991;
Search for the Exotic Decay $\mu^+ \to e^+\ \bar{\nu}_e\ \nu_\mu$

Krakauer 91C Phys. Rev. D44:R6, 1991;
Direct Experimental Lower Bound on the Radiative Lifetime of the Muon Neutrino

Kral 89 Phys. Rev. Lett. 64:1211, 1990; SLAC-PUB-5147; LBL-28099;
Measurement of the $b\ \bar{b}$ Fraction in Hadronic Z^0 Decays

Kral 90 LBL-29485;
Measurement of the Z^0 Boson Branching Fraction into Hadrons Containing Bottom Quarks

Kramer 90 Phys. Lett. 245B:17, 1990;
On the Systematics of Positron Production in Elastic Heavy Ion Collisions

Krasnov 87 Yad. Phys. 47:1309, 1988; JINR-P1-87-348;
The Study of Two-Particle Correlations in Inelastic Interactions of ^{22}Ne Nucleus with Emulsion at 4.1 GeV/c per Nucleon

Krasnov 88 JINR-P1-88-389;
The Study of Total Disintegration of Lead Nuclei with ^{24}Mg Nuclei at 4.5 A GeV/c

Krasnov 88B JINR-P1-88-252;
The Topological Characteristics of Silicon Nuclei Fragmentation at 4.5 GeV/c

Krastev 88 JINR-P1-88-31;
$\Lambda(1520\ D_{03})$ Production in Neutron-Nucleon Interactions at 40 GeV Neutron Energy

Krause 92 Nucl. Phys. A548:387, 1992;
Photodisintegration of the Deuteron by Linearly Polarized Photons

Krauss 89 Phys. Rev. Lett. 64:999, 1989; YCTP-P14-89;
Z^0 Decay and the Search for Dark Matter

Kreinick 89 CLNS-89-956;
B Physics from CLEO

Kreutzmann 91 BONN-IR-91-08;
Untersuchung zur koharenten Emission von Gluonen in QCD Jets aus Elektron-Positron-Vernichtung

Krisch 91 UM-HE-91-22;
Spin Effects in High-$p_T{}^2$ Elastic Scattering

Krivicich 88 LBL-25233;
A New Limit on the Neutrinoless Double β Decay of ^{100}Mo

Krizmanic 89 JHU-THESIS;
A Search for the Oscillation of Muon Antineutrinos to Electron Antineutrinos using the AGS Wide Band Beam

Kroha 89B MPI-PAE-EXP-EL-215-89;
Measurement of Heavy Quark Charge Asymmetries at 35 GeV and 43 GeV and Heavy Flavor Physics with CELLO

Kroha 90	MPI-PAE-EXP-EL-227; **Heavy Quark Charge Asymmetries Below the Z^0 Resonance**
Kroha 90B	MPI-PAE-EXP-EL-230; **Reinvestigation of Compositeness Limits from $e^+ e^-$ Annihilation**
Kroha 90C	MPI-PAE-EXP-EL-226; **Limits on Compositeness of Quarks and Leptons from $e^+ e^-$ Annihilation**
Kroha 92	Phys. Rev. D46:58, 1992; **Compositeness Limits from $e^+ e^-$ Annihilation Reexamined**
Kruger 89	Nucl. Instr. and Meth. A284:143, 1989; **Precision Measurement of $\hbar/m_n$**
Kubota 91	Phys. Rev. D44:593, 1991; CLNS-91-1042; **Study of Continuum $D^*(2010)^+$ Spin Alignment**
Kuhlen 90	CALT-68-1619; **Z^0 Decays into Lepton Pairs**
Kuhlmann 89	ANL-HEP-CP-89-60; **Jets, $W^{\pm}$'s, and Z^0's at $\sqrt{s}$ = 1.8-TeV**
Kuhlmann 91	FERMILAB-CONF-91-265-E; **New Particles Searches at CDF**
Kulik 90	IFVE-90-135; **Further Analysis of the Exotic Mesons Decaying into $\eta' \eta$**
Kumar 89	Mod. Phys. Lett. A4:115, 1989; **Multiparticle Production in Hadron Nucleus Collision and the Negative Binomial Distribution**
Kumita 89	KEK-89-48; AMY-89-10; **Measurement of R for $e^+ e^-$ Annihilation at TRISTAN**
Kumita 89B	Phys. Rev. D42:1339, 1990; KEK-89-188; AMY-89-21; **Measurement of R for $e^+ e^-$ Annihilation at TRISTAN**
Kundrat 92	Phys. Rev. D46:4087, 1992; **High-Energy Elastic Hadron Scattering in Coulomb and Hadronic Region**
Kunne 88	Phys. Lett. 206B:557, 1988; CERN-EP-88-22; **Asymmetry in $\bar{p}\, p$ Elastic Scattering**
Kunne 88B	Nucl. Phys. B323:1, 1989; CERN-EP-88-171; **Measurement of $d\sigma/d\omega$ and A_{0n} in $\bar{p}\, p$ Elastic Scattering Between 497 and 1550 MeV/c**
Kunne 88C	THESIS; **Measurement of Asymmetries and Differential Cross Sections in Antiproton-Proton Elastic Scattering at Momenta between 497 and 1550 MeV/c**
Kunne 91	Phys. Lett. 261B:191, 1991; **First Measurement of D_{0n0n} in $\bar{p}\, p$ Elastic Scattering**
Kuno 90	TRI-PP-90-69; **Experimental Rare K Decays**
Kuno 92	KEK-92-128; **Search for $K^+ \to \pi^+ \nu \bar{\nu}$**
Kuplennikov 90	Yad. Phys. 51:1210, 1990; **Study of the Quasifree Peak Shift in the $e^- {}^4He \to e^- X$ Reaction**
Kuplennikov 90B	Vopr. At. Nauki i Techn. ser. Yad. 9:5, 1990; **Inclusive Electron Scattering on ^{4}He Nucleus**
Kuplennikov 91	Vopr. At. Nauki i Techn. ser. Yad. 20:63, 1991; **Manifestation of the Internucleon Interactions in the Reactions $e^- p \to e^- X$, $e^- {}^3He \to e^- X$, and $e^- Be \to e^- X$**
Kuplennikov 92	Yad. Phys. 55:716, 1992; **Inclusive Scattering of Electron on ^{3}He Nucleus**
Kurdadze 88	Pisma Zh. Eksp. Teor. Fiz. 47:432, 1988; Jetp Lett. 47:512, 1988; **Investigation of the Reaction $e^+ e^- \to \pi^+ \pi^- \pi^+ \pi^-$ for $2E$ up to 1.4 GeV**
Kurepin 88	Pisma Zh. Eksp. Teor. Fiz. 47:16, 1988; Jetp Lett. 47:17, 1988; **Yield of Pions and Kaons in the Collisions of Relativistic Nucleus with Energy 3.65 GeV/N**
Kurihara 89	KEK-89-64; AMY-89-16; **Study of $e^+ e^-$ Annihilation into Four-Lepton Final State**
Kurz 90	HD-90; **Die Suche nach dem Top-Quark am CERN $p\, \bar{p}$-Speicherring**
Kuvshinnikov 90	Yad. Phys. 52:472, 1990; **Measuring the $\bar{\nu}_e\, p \to n\, e^+$ Cross Section and β-Decay Axial Constant in a New Experiment at Rovno NPP Reactor**
Kuvshinnikov 91	Pisma Zh. Eksp. Teor. Fiz. 54:259, 1991; **Precision Measurement the $\bar{\nu}_e\, p \to n\, e^+$ Cross Section at Rovno AES Reactor**
Kuzichev 88	ITEP-88-112; **Detector for the Antiproton Annihilation**
Kuzichev 89	ITEP-89-60; **Antiproton-Nuclei Annihilation Cross Section on Be, C, Al, Fe, Cu, Cd and Pb at the Momenta 1.26, 1.53, 1.76, and 2.5 GeV/c**
Kuzichev 92	ITEP-92-46; **The Antiproton-Nuclei Annihilation at the Momentum Range from 0.70 GeV/c to 2.50 GeV/c**
Kuzichev 92B	ITEP-92-16; **Annihilation Cross Section of $\bar{p}$ with Be, C, Al, Fe, Cu, Cd and Pb Nuclei at Momenta 0.7 and 0.95 GeV/c**
Kuzminov 92	INR-788-92; **Searching for "Heavy" Neutrino with Mass of 17 keV in the β Spectrum of ^{14}C**
Kvatadze 88	Z. Phys. C38:551, 1988; **On the Directional Dependence of Bose-Einstein Correlations**
Kwatonjock 88	Nucl. Phys. A489:368, 1988; **Impact Parameter Dependence of High-Energy Gamma-Ray Production in Argon Induced Reaction at 85 MeV/Nucleon**
Laasanen 91	Mod. Phys. Lett. A7:2659, 1992; FERMILAB-CONF-91-234-E; **Search for New Particles in CDF**

See the legend on page 7.

Labs 90	SLAC-PUB-5372; **Recent Results in Charm Decays from MARK-III**
Lac 88	Nucl. Phys. B297:653, 1988; **Measurement of the Spin Correlation Parameters A_{00sk} and A_{00kk} in $p\ p$ Elastic Scattering at .84 and 1.0 GeV**
Lac 89	Nucl. Phys. B315:269, 1989; **Measurement of the Parameters N_{0nkk}, D_{0s0k} and K_{0sk0} in $p\ p$ Elastic Scattering between 0.84 and 2.7 GeV**
Lac 89B	Nucl. Phys. B315:284, 1989; **Measurement of the Parameters D_{0n0n} and K_{0nn0} in $p\ p$ Elastic Scattering between 0.84 and 2.7 GeV**
Lac 89C	Nucl. Phys. B321:269, 1989; **Measurement of the Parameters N_{0sk0}, D_{0n0n} and K_{0sk0} in $p\ p$ Elastic Scattering between .84 and 2.1 GeV**
Lac 89D	Nucl. Phys. B321:284, 1989; **Measurement of the Parameters N_{0snk}, K_{0ss0}, K_{0nn0} and D_{0s0k} in $p\ p$ Elastic Scattering between .84 and 2.7 GeV**
Lach 89	FERMILAB-CONF-89-19-E; **Magnetic Moments of the Hyperons: A Short Experimental Review**
Lach 90	FERMILAB-CONF-90-238-E; **Magnetic Moments of the Baryons an Experimental Review**
Lamoreaux 89	Nucl. Instr. and Meth. A284:43, 1989; **The Electric Dipole Moment of Atoms: Limits on P, T Violations within the Atom**
Landsberg 88	IFVE-88-143; **Study of Meson Spectroscopy on "LEPTON" Apparatus**
Landsberg 89	IFVE-89-54; **Exotic Hadrons**
Landsberg 90	Usp. Fiz. Nauk 162:3, 1992; IFVE-90-182; **Hadronic Spectroscopy at Low Energies**
Landsberg 90B	Fiz. Elem. Chastits At. Yadra 21:1054, 1990; **Meson Spectroscopy Experiments on LEPTON Facility**
Landsberg 91	Yad. Phys. 55:1896, 1992; IFVE-91-44; **C(1480)-Meson and Electromagnetic Processes**
Landsberg 92	Yad. Phys. 55:1494, 1992; **GAMS Results on the ω(783) π^0 System**
Langenbrunne 92	Phys. Rev. Lett. 69:1508, 1992; **Evidence for Direct Triton Knockout in the ^{4}He (π, π' ^{3}H) p Reaction**
Lantsev 90	Yad. Phys. 52:647, 1990; **Mechanism of Proton Emission by Ag and Br Nuclei in (π^+, π^+ $2p$) and (π^+, π^+ $3p$) Reactions at 170 MeV**
Lantsev 90B	Yad. Phys. 52:347, 1990; **π A $\rightarrow$ π p n B Reaction on Ag and Br Nuclei at 170 MeV**
Lantsev 90C	Yad. Phys. 52:351, 1990; **deuteron, ^{3}H, and He Formation Mechanism in 60 and 170 MeV Pion Absorbtion by Ag, Br Nuclei**
Lantsev 91	Yad. Phys. 54:346, 1991; **Fast Nucleon Formation Mechanism in (π^+, $2p$ X) and (π^+, p X) Reactions on Ag and Br Nuclei at 170 MeV**
Last 88	Phys. Rev. Lett. 60:995, 1988; **Pulsed-Beam Neutron-Lifetime Measurement**
Lattimer 88	Phys. Rev. Lett. 61:23, 1988; **Limits on the Neutrino Magnetic Moment From SN1987A**
Lawrence 89	Phys. Rev. Lett. 63:1121, 1989; OG-4-1-22; **Upper Limit to the Flux of Neutral Particles from Cygnus X-3 above $5 \cdot 10^{17}$ eV**
Lazarus 92	Phys. Rev. Lett. 69:2333, 1992; UR-1253; **A Search for Solar Axions**
Lebedev 88	Vopr. At. Nauki i Techn. ser. Obsch. 2-42:12, 1988; **The Analysis of the Two-Particles Inclusive Cross Section of Protons Production in the Interaction of 3.6 GeV/Nucleon ^{12}C with Pb in the B_{ik} Variables**
Lee 88	Phys. Lett. 205B:219, 1988; **Intermediate Energy Proton Scattering from ^{40}Ca, ^{90}Zr and ^{208}Pb**
Lee 89	Nucl. Phys. A492:607, 1989; **Intermediate-Energy Proton Scattering to the Ground and Negative-Parity States of ^{40}Ca, ^{90}Zr and ^{208}Pb**
Lee 90	Phys. Rev. Lett. 64:165, 1990; **Improved Limit on the Branching Ratio of $K^+ \rightarrow \pi^+ \mu^+ e^-$**
Leeb 92	Phys. Rev. Lett. 68:1472, 1992; **Constraint on Hypothetical Light Interacting Bosons from Low-Energy Neutron Experiments**
Leefranzini 90	Phys. Rev. Lett. 65:2947, 1990; **Hyperfine Splitting of B Mesons and B_S Production at the Υ(10860)**
Lehar 88	Nucl. Phys. B296:535, 1988; **Measurement of the Spin Correlation Parameter A_{00kk} in $p\ p$ Elastic Scattering from 0.88 to 2.7 GeV**
Leiendecker 92	BONN-IR-92-27; **Bestimmung des Longitudinal-Transversalen Interferenzterms in der Elektrospaltung des Deuterons**
Leitch 91	Nucl. Phys. A522:351c, 1991; **Nuclear Medium Effects on Quarks, Gluons, and Vector Meson Production: New Insight from Dimuon Production**
Lemaire 91	Phys. Rev. C43:2711, 1991; **Charged-Pion Production in Noninclusive Proton-Nucleus Interactions at 0.8 and 1.6 GeV Incident Energies**
Lemaire 91B	DPHN-SACLAY-91-13; **Invariant Cross Section in Non-Inclusive Proton-Nucleus Interactions Studied at 0.8 and 1.6 GeV Incident Kinetic Energy**
Leone 90	INFN-PI-AE-90-7; **Lepton Charge Asymmetry from $W^\pm \rightarrow \ell^\pm \nu$ at the TEVATRON Collider**
Leone 91	FERMILAB-CONF-91-152-E; **$W^\pm$ Mass and $W^\pm$ Asymmetry at CDF**

Leone 92 FERMILAB-CONF-92-297-E;
CDF Measurements of the $W^{\pm}$ Mass and Search for the Top

Lepekhin 89 LENI-89-1557;
The Search for Correlated Groups of Particles Produced in the Interactions of ^{22}Ne Nucleus with Nuclei of Photoemulsion

Lesiak 91 Z. Phys. C55:33, 1992; DESY-91-075;
Search for Radiative B Meson Decays

Letessiersel 89 Phys. Rev. C40:1513, 1989; LBL-26802;
Mass and Transverse Momentum Dependence of the Dielectron Yield in p Be Collisions at 4.9 GeV

Letessiersel 89B LBL-27080;
Mass and Transverse Momentum Dependence of the Dielectron Yield in p Be Collisions at 4.9 GeV

Levy 88 DESY-88-115;
Two Photon Production of Exclusive Final States

Lewenkopf 91 SI-91-03;
Fragmentation of Gold Projectiles with Energies of 200 – 980 MeV/Nucleon. Part II: Multiplicity Distributions and Correlations

Lhote 89 SACLAY-DPH-N-2553B;
Inclusive Experiments, Correlation and Pion Photoproduction Data

Li 89 KEK-89-34; AMY-89-03;
Multihadronic Event Properties in $e^+ e^-$ Annihilation at $\sqrt{s}$=52 to 57 GeV

Li 89B Phys. Rev. D41:2675, 1990; KEK-89-149; AMY-89-19;
Multi-hadron Event Properties in $e^+ e^-$ Annihilation at $\sqrt{s}$ = 52 GeV to 57 GeV

Li 93 KEK-92-185;
A Determination of α_S from $e^+ e^-$ Collisions at TRISTAN Energies

Liesenfeld 88 Nucl. Phys. A485:580, 1988;
Electroproduction of Negative Pions on ^{15}Nit Leading to the Ground State of ^{15}O

Lile 89 JHU-THESIS;
Neutrino Oscillations: A Search for Electron Neutrino Appearance in a Wide Band Muon Neutrino Beam

Lim 90 KEK-90-9; CERN-TH-5680-90;
Correlation Between Solar Neutrino Flux and Solar Magnetic Activity for Majorana Neutrinos

Lim 90B KEK-90-61;
Measurement of the $e^+ e^- \to B \overline{B}$ Cross Section and Forward-Backward Charge Asymmetry at Centre-of-Mass Energy of 57.2 GeV

Lin 88 Nucl. Phys. A481:484, 1988;
Double Beta–Decay of Tellurium-128 and Tellurium-130

Lindgren 92 Phys. Rev. D45:3038, 1992;
Measurement of the Strong Coupling Constant α_s in $W^{\pm}$-Boson Production at the CERN Proton-Antiproton Collider

Lindsey 91 FERMILAB-CONF-91-336;
Results from E735 at the TEVATRON Proton-Antiproton Collider with $\sqrt{s}$=1.8 TeV

Lipa 91 HEPHY-PUB-559-91;
Recent Results from UA1

Lippich 90 MUNI-THESIS;
Messung des Wirkungsquershcnitts des Inversen Myonzerfalls $\nu_\mu e^- \to \mu^- \nu_e$

Lipton 92 FERMILAB-CONF-92-06;
Charm and Beauty Physics at Fermilab

Liss 90 FERMILAB-CONF-90-17-E;
$J/\psi(1S)$ and $\Upsilon(1S)$ Production at CDF

Liss 91 FERMILAB-CONF-91-253-E;
The Search for Top at CDF

List 88 Phys. Rev. C37:1594, 1988;
Neutron-Proton Final-State Interaction in π deuteron Breakup: Vector Analyzing Power

List 88B Phys. Rev. C37:1587, 1988;
Neutron-Proton Final-State Interaction in π deuteron Breakup: Differential Cross Section

Littenberg 89 BNL-43660;
Rare Kaon Decays

Littenberg 89B Phys. Rev. D39:3322, 1989;
CP-Violating Decay $K_L \to \pi^0 \nu \overline{\nu}$

Littenberg 91 Phys. Rev. Lett. 68:443, 1992; ITP-SB-91-35; BNL-46613;
Upper Bounds on Lepton Number Violating Meson Decays

Liu 88 Phys. Rev. Lett. 58:2288, 1988;
Evidence of $2q\ 2\overline{q}$ Mesons in $\overline{p}\ n$ Annihilations and $\gamma\ \gamma$ Reactions

Liu 88B Phys. Rev. Lett. 61:271, 1988;
Nuclearite Flux Limit from Gravitational-Wave Detectors

Locher 90 PSI-PR-90-30;
Experiments with Spin at PSI

Lockman 89 SLAC-PUB-5139;
Production of the $f_0(975)$ Meson in $J/\psi(1S)$ Decays

Lockman 90 SLAC-PUB-5395;
A Study of the $a_0(980)$ Meson in Radiative $J/\psi(1S)$ Decays

Logan 91 Mod. Phys. Lett. A6:3283, 1991;
Evidence for a Neutrino with a Mass of 17 keV

Lohner 88 Z. Phys. C38:97, 1988;
Neutral Transverse Momentum Spectra in 60 and 200 A GeV ^{16}O Nucleus and Proton Nucleus Reactions

London 89 SACLAY-DPHPE-89-03;
Results from the CERN Pilot Study of Ultrarelativistic Nucleus-Nucleus Interactions

Longuemare 88 LAL-88-33;
Study of Atmospheric Neutrino Interactions with the FREJUS Detector

Longuemare 89 LAL-89-35;
Study of Neutrino Oscillations in the FREJUS Experiment

Lorenz 88 Phys. Lett. 214B:10, 1988; MPI-PAE-EXP-EL-190;
Search for Narrow Resonance Production in Bhabha Scattering at Centre-of-Mass Energies near 1.8 MeV

See the legend on page 7.

Losecco 89 UND-PDK-89-4;
Search for Dark Matter with IMB-1

Lourie 90 Phys. Rev. C42:441, 1990;
Measurement of Inclusive ^{12}C (e , p) Cross Sections

Loveland 88 Phys. Rev. C37:1311, 1988;
Unusual Backward Emission of Multifragmentation Products in Ultrarelativistic Nucleus-Nucleus Collision

Loverre 88 Phys. Lett. 206B:711, 1988; CERN-EP-87-202;
Limits on Neutrino Oscillations Derived from the Ratio of Neutral-to-Charged Current Cross Sections of Neutrinos Measured at the CERN SPS NBB

Low 89 Phys. Lett. 228B:548, 1989; KEK-89-47; AMY-89-09;
Search for Non-Minimal Higgs Production in $e^+ e^-$ Annihilations at $\sqrt{s}$=56 GeV

Lubatti 89 UWSEA-PUB-89-12;
Search for $K^+ \to \pi^+ \mu^+ e^-$ and Study of $K^+ \to \pi^+ e^+ e^-$ at BNL

Lubatti 90 FERMILAB-CONF-90-271-E;
Energy Flow and Transverse Momentum of Hadron Jets Produced in Deep Inelastic Muon Scattering

Luk 88 Phys. Rev. D38:19, 1988;
New Measurement of Properties of Ω^- Hyperon

Luk 92 LBL-31802;
An Experimental Review of Hyperon Magnetic Moments

Luk 93 Phys. Rev. Lett. 70:900, 1993; LBL-32409;
Polarization of Ω^- Hyperons Produced in 800 GeV Proton-Beryllium Collisions

Lumsdon 90 RALT-114;
A Study of the Multihadronic Properties of Photon-Photon Interactions

Lund 88 Z. Phys. C38:51, 1988;
Charged Particle Spectra in ^{16}O-Induced Nuclear Collisions at the CERN SPS

Lund 89 GSI-89-04;
Fluctuation in Multi-Particle Production and γ/π^0 Ratios in 200 GeV A ^{16}O + Au Collisions

Lundberg 89 Phys. Rev. D40:3557, 1989;
Polarization in Inclusive Λ and $\bar{\Lambda}$ Production at Large p_T

Lung 93 Phys. Rev. Lett. 70:718, 1993;
Measurement of the Electric and Magnetic Form Factors of the Neutron from Q^2 =1.75 to 4.00 (GeV/c)^2

Lyndon 92 Phys. Rev. C45:308, 1992;
Coincidence Analyzing-Power Measurements of the Reaction ^{12}C (p, $p\,\gamma$) C* through the 15.11 MeV State

Lyubimov 88 Kr. Soob. JINR 33:5, 1988;
Properties of Four-Dimensional Baryon Clusters in Cumulative Nucleus-Nucleus Interactions

Lyukov 89 Nuovo Cim. 102A:583, 1989;
Study of Hypernuclear Production and Search for Supernuclei in Proton-Nuclear Interactions in Photoemulsion at 70 and 250 GeV

Macgregor 91 Nucl. Phys. A533:269, 1991;
The ^{16}O (γ, 2n) Reaction Measured with Tagged Photons

Madaras 92 FERMILAB-CONF-92-365;
Highlights from D0

Madey 88 Phys. Rev. C38:184, 1988;
Inclusive Neutron Spectra at 0° from Nb-Nb and Au-Au Collisions at 800 MeV/Nucleon

Maeshima 92 FERMILAB-CONF-92-160-E; CDF-PUB-ELECTROWEAK-PUBLIC-1766;
Heavy Gauge Boson and Λ_b Baryon Searches at CDF

Magill 90 FERMILAB-CONF-90-127-E;
Xe/deuteron Cross Section Ratio at Low x from Muon Scattering at 490 GeV/c

Magnussen 91 Z. Phys. C49:29, 1991; DESY-90-089;
A Comparison of Measured Jet Cross-Sections with QCD Calculations for $e^+ e^-$ Annihilation

Mahi 88 Phys. Rev. Lett. 60:1936, 1988;
Energy Dependence of Proton-Induced Xenon Fragmentation and the Approach to Liquid Gas Criticality in Nuclear Matter

Mai 91 PREPRINT-HAMB;
Bestimmung des Semileptonischen Verzweigungsverhaltnisses von B^0 Mesonen

Maki 88 KEK-88-112;
Recent Results from TRISTAN

Maki 88B KEK-88-52;
Recent Results from TRISTAN

Maki 89 KEK-89-145;
Results from TRISTAN

Maki 91 KEK-91-100;
Electroweak Studies at TRISTAN

Malek 91 Phys. Lett. 266B:255, 1991;
Photon Spectrum of the Neutron-Proton Bremsstrahlung at 170 MeV

Mallik 89B SLAC-PUB-4828;
Results from MARK-III on the $J/\psi(1S)$ Decays

Mampe 89 Phys. Rev. Lett. 63:593, 1989;
Neutron Lifetime Measured with Stored Ultracold Neutrons

Mampe 89B Nucl. Instr. and Meth. A284:111, 1989;
Neutron Lifetime from a Liquid Walled Bottle

Manabe 89 Phys. Rev. Lett. 63:490, 1989;
Polarizations and Cross Sections of Λ Hyperons Produced at Backward Angles in the Reaction π^+ ^{12}C $\to$ Λ X at 4 GeV/c

Mandelli 88 CERN-EP-88-182;
UA2 Results from the 1987 Run

Marage 89 Z. Phys. C43:523, 1989;
Coherent Production of π^+ Mesons in ν Ne Interactions

Marage 91 Z. Phys. C49:385, 1991;
Coherent Production of $a_1(1260)^-$ Mesons and ($\rho\,\pi$) Systems by Antineutrinos on Neon

Mardor 90 Phys. Rev. Lett. 65:2110, 1990;
K^+ Total Cross Sections as a Test for Nucleon "Swelling"

Maringer 92 BONN-IR-92-17;
Untersuchung der K^0- und $K^*(892)^{\pm}$-Produktion in $e^+ e^-$-Reaktionen auf dem Z^0-Pol

Markeloff 92 FERMILAB-CONF-92-348-E;
An Analysis of the CDF Monojet Data

Markiel 88 Nucl. Phys. A485:445, 1988;
Emission of Helium Ions after Antiproton Annihilation in Nuclei

Markytan 89 Z. Phys. C43:557, 1989;
Studies in $\bar{p}\ p$ Annihilation

Marshall 88 TRI-PP-88-53;
An Improved Limit for Conversion of $(\mu^+ e^-)$ to $(\mu^- e^+)$

Marshall 89 RAL-89-021;
$e^+ e^-$ Annihilation at High Energies

Marsiske 90 Phys. Rev. D41:3324, 1990; SLAC-PUB-5163; DESY-90-002;
A Measurement of $\pi^0 \pi^0$ Production in Two-Photon Collisions

Martin 88 Nucl. Phys. A487:563, 1988;
Polarization at Small Angles in Antiproton-Carbon Elastic Scattering at LEAR Energies

Maruyama 89 INS-REP-761;
Exclusive Photoreactions on Light Nuclei

Maschmann 89 Z. Phys. C46:555, 1990; DESY-89-141; SLAC-PUB-5133;
Inclusive $J/\psi(1S)$ Production in Decays of B Mesons

Masuda 88 DPNU-88-52;
A Study of Multihadron Production at TRISTAN

Masuda 90 KEK-90-20;
Present Status of P-Violation and Future T-Violation Experiments on Neutron-Nucleus Interaction at KEK

Masuda 90B KEK-90-113;
P-Violation and T-Violation Experiments on Neutron-Nucleus Interaction at KEK

Masuda 92 KEK-92-124;
Neutron Polarization for P- and T-Violation Experiments

Masuda 92B KEK-92-123;
Neutron Spin as a Probe Concerning P- and T-Violation

Mathiazhagan 89 Phys. Rev. Lett. 63:2181, 1989; UCI-89-40;
New Experimental Limits on $K_L \to \mu^- e^+$, $K_L \to \mu^+ e^-$ and $K_L \to e^+ e^-$ Branching Ratios

Mathiazhagan 89B Phys. Rev. Lett. 63:2185, 1989; UCI-89-41; KL-245;
Measurement of the Branching Ratio for the Decay $K_L \to \mu^+ \mu^-$

Mathis 88 LBL-25261;
A Search for New Leptons with Heavy Neutrinos in $e^+ e^-$ Annihilation at $\sqrt{s}$=29 GeV

Matis 88 Phys. Rev. D39:1851, 1989; LBL-25680;
Search for Free Quarks Produced at 800 GeV/c Using a New Concentration Technique

Matis 90 LBL-28730;
Production of $e^+ e^-$ Pairs at the BEVALAC

Matis 90B LBL-29336; C90-05-07;
Search for Free Quarks Produced in Ultrarelativistic Collisions at BNL and CERN

Matsinos 89 Z. Phys. C44:79, 1989; CERN-EP-89-57;
Backward Particle Production in Neutrino Neon Interactions

Matsuda 91 KEK-91-184;
Study of the $\eta\ \pi^-$ System in $\pi^-\ p$ Reaction at 6 GeV/c

Matthias 91 Phys. Rev. Lett. 66:2716, 1991;
New Search for the Spontaneous Conversion of Muonium to Antimuonium

Mattig 89 Phys. Rept. 177:141, 1989;
The Structure of Jets in $e^+ e^-$ Collisions

Mattig 91 BONN-HE-91-19;
QCD Measurements with Heavy Quarks at LEP

Mattison 90 Phys. Rev. D42:1311, 1990;
Nucleon Neutral-Current Structure Functions

Matveev 92 Yad. Phys. 55:1268, 1992;
Pion and Proton Multiplicity Correlations in $\bar{p}$ Xe Annihilations at Low Energy

May 89 Phys. Lett. 225B:450, 1989;
Observation of an Isoscalar Meson $AX(1565)$ in Annihilation of the $\bar{p}\ p$ Atom from P State

May 89B Nuovo Cim. 102A:401, 1989;
Strangeness-2 Hypernuclei

May 90 Z. Phys. C46:191, 1990;
Antiproton-Proton Annihilation at Rest in H_2 Gas into $\pi^+ \pi^- \pi^0$. I. Annihilation from S States

May 90B Z. Phys. C46:203, 1990;
Antiproton-Proton Annihilation at Rest in H_2 Gas into $\pi^+ \pi^- \pi^0$. II. Annihilation from P States

Mayer 89 SACLAY-DPhN-2565;
η (and π) Production and Decay at SATURNE

Mayle 87 Phys. Lett. 203B:188, 1988; FERMILAB-PUB-87-225-A; EFI-87-104-CHICAGO; UMN-TH-87-837; CERN-TH-4887;
Constraints on Axions from SN1987A

Mayle 92 FERMILAB-PUB-92-381-A;
Constr ints on Dirac Neutrinos from SN1987A

Maytalbeck 92 Phys. Rev. Lett. 68:3012, 1992;
Proton Polarization from π^+ Absorbtion in ^{3}He

Mcdonough 88 Phys. Rev. D38:2121, 1988;
New Search for the C-Noninvariant Decay $\pi^0 \to 3\gamma$ and the Rare Decay $\pi^0 \to 4\gamma$

Mcgaughey 92 Phys. Rev. Lett. 69:1726, 1992;
Limit on the $\bar{d}/\bar{u}$ Asymmetry of the Nucleon Sea from Drell-Yan Production

Mcnaughton 90 Phys. Rev. C41:2809, 1990;
Three-Spin Measurements in $p\ p \to p\ p$ at 730 MeV

Mcnaughton 91 ANL-HEP-PR-91-103;
$n\ p$ Elastic Spin-Transfer Measurements at 788 MeV

See the legend on page 7.

Mcnaughton 92 Phys. Rev. C45:2564, 1992;
deuteron (p, n) 2p Spin Transfer from 305 to 788 MeV

Mcnaughton 92B Phys. Rev. C46:47, 1992;
n p Elastic Spin-Transfer Measurements at 485 and 635 MeV

Mcneil 88 KEK-88-128;
Recent Results from TRISTAN

Meier 89 CERN-EP-89-178;
Physics with Jets — Recent Results from UA2

Meijerdrees 92 Phys. Rev. D45:1439, 1992;
Measurement of the π^0 Electromagnetic Transition Form Factor

Meijerdrees 92B Phys. Rev. Lett. 68:3845, 1992;
Search for Weakly Interacting Neutral Bosons Produced in $\pi^- p$ Interactions at Rest and Decaying into $e^+ e^-$ Pairs

Meinhard 91 SIEG-THESIS;
Elastische Electron-Positron-Streuung bei Schwerpunktenergien um die Z^0-Resonanz

Meissner 90 Mod. Phys. Lett. A5:1703, 1990; BUTP-90-02-BERN;
Parity Violation in Few Nucleon Systems: Where do we stand?

Mekhtiev 88 JINR-P1-88-760;
Analysis of Transverse Energy Spectra in Collisions of Light Relativistic Nuclei

Melku 91 Izv. Akad. Nauk SSSR, Fiz. 55:635, 1991;
Two Particle Rapidity Distributions in Hadron Interactions and a Comparison with Cluster Model

Melnikov 89 Vopr. At. Nauki i Techn. ser. Yad. 2:11, 1989;
Spatial Parity Nonconservation in γ-Decay of ^{237}Np

Merenyi 92 Phys. Rev. D45:743, 1992;
Determination of Pion Intranuclear Rescattering Rates in ν_μ-Ne Versus ν_μ-deuteron Interactions for the Atmospheric ν Flux

Metcalf 89 KEK-89-21;
Recent Results from TRISTAN

Meyer 88 Phys. Rev. D38:754, 1988;
Measurement of Pion-Proton Bremsstrahlung for Pions at 299 MeV

Meyer 88B BONN-IR-88-60;
Polarized Target Physics at the Bonn Electron Accelerators

Meyer 90 Phys. Rev. Lett. 65:2846, 1990;
Total Cross Section for $p\,p \to p\,p\,\pi^0$ near Threshold Measured with the Indiana Cooler

Meyer 92 Nucl. Phys. A539:633, 1992;
Total Cross Section for $p\,p \to p\,p\,\pi^0$ Close to Threshold

Mezani 92 Phys. Rev. Lett. 69:41, 1992;
High Momentum Transfer $R_{T,L}$ Inclusive Response Functions for ^{3}He, ^{4}He

Miake 88 Z. Phys. C38:135, 1988;
Preliminary Spectrometer Results from E802

Michaelian 90 Phys. Rev. D41:2689, 1990;
Proton-Proton Bremsstrahlung at 280 MeV

Miettinen 88 Phys. Lett. 207B:222, 1988;
Jet Production from Nuclei at 400 GeV/c

Mikaelyan 88 Pisma Zh. Eksp. Teor. Fiz. 47:124, 1988; Jetp Lett. 47:149, 1988;
Cross Section of the Reaction $\bar{\nu}_e\, p \to n\, e^+$ and Fundamental Characteristics of the Weak Interaction

Mikaelyan 91 Izv. Akad. Nauk SSSR, Fiz. 55:1005, 1991;
Investigation of the Electron Antineutrino Interaction with Protons and Deuterons on the Rovensk AES

Mildenberger 90 TRI-PP-90-23;
Isospin Symmetry in Nuclear Scattering from ^{6}Li and ^{12}C at 280 MeV

Miley 90 Phys. Rev. Lett. 65:3092, 1990;
Suggestive Evidence for the Two-Neutrino Double-β Decay of ^{76}Ge

Miljanic 90 Phys. Lett. 252B:487, 1990;
Test of the Pauli Principle in Nuclear Reactions

Miller 89 PU-89-643;
Recent Results from CLEO on B Physics at the $\Upsilon(4S)$

Miller 90 Mod. Phys. Lett. A5:2683, 1990;
Recent Results in B Physics

Milsztajn 92 DAPNIA-SPP-92-15; NMC-92-08;
Target Dependence of R Measured in Deep Inelastic Muon Scattering

Minor 92 Yad. Phys. 55:1243, 1992;
Proton Spectra Following Antiproton Annihilation at Rest in Carbon and Uranium

Minowa 89 Phys. Rev. Lett. 62:1091, 1989; UT-ICEPP-88-05;
Search for Resonances in the $e^+ e^- \to \gamma\,\gamma$ Process in the Mass Region around 1.032 MeV/c^2

Mir 88 SLAC-PUB-4651; UWSEA-88-01;
$J/\psi(1S)$ Results from MARK-III

Mir 89 SLAC-PUB-5114;
Recent $\psi(2S)$ Results from MARK-III

Mishra 89 Z. Phys. C44:187, 1989;
A Study of Wrong-Sign Muon Production in ν_μ Nucleon Interaction

Mishra 89B Phys. Rev. Lett. 63:132, 1989;
Measurement of Inverse Muon Decay $\nu_\mu\, e^- \to \mu^-\, \nu_e$ at Fermilab TEVATRON Energies 15 - 600 GeV

Mishra 90 FERMILAB-CONF-90-100-E;
Dilepton and Dihadron Production in Proton-Nucleus Collisions at 800 GeV

Mishra 90B Phys. Lett. 252B:170, 1990; NEVIS-1424;
Inverse Muon Decay, $\nu_\mu\, e^- \to \mu^-\, \nu_e$, at the FERMILAB Tevatron

Mishra 91 Phys. Rev. Lett. 66:3117, 1991;
Neutrino Tridents and $W^\pm$-Z^0 Interference

Mishra 92 Phys. Rev. Lett. 68:3499, 1992;
Search for Right-Handed Coupling in ν-n Scattering

Mistry 89 CLNS-89-916;
Recent CLEO Results on B Decays

Miyamoto 90	KEK-90-42; **Searches for New Particles at TRISTAN**
Miyano 88B	Phys. Rev. C38:2788, 1988; KEK-87-160; **Neutral Strange Particle Production and Inelastic Cross Section in $\bar{p}$ Ta Reaction at 4 GeV/c**
Mkrtchyan 90	Vopr. At. Nauki i Techn. ser. Yad. 9:32, 1990; **Inclusive Spectra of (e,e') on ^{9}Be and ^{12}C Nucleus in Inelastic Region $Q^2 < 0.4$ (GeV/c)^2**
Moisan 92	Nucl. Phys. A537:667, 1992; **Neutral Pion Production in Reactions ^{16}O + ^{27}Al, ^{58}Ni, ^{208}Pb at E_{lab}=95 MeV/Nucleon**
Moller 90	NBI-HE-90-51; **Recent Results from the DELPHI Collaboration at LEP**
Monch 91	PITHA-91-2; **Ergebnise des FREJUS-Experiments sur Stabilitat des Nucleons**
Moody 93	Phys. Rev. Lett. 70:1195, 1993; **Gauss's Law of Gravity at Short Range**
Mooney 89	Phys. Rev. D39:2494, 1989; **Inclusive Charged-D^*(2010) Production in 205 GeV/c π^- Be Interactions**
Moore 90	Phys. Lett. 244B:347, 1990; ANL-HEP-PR-89-131; **Longitudinal Energy Flow in Hard Proton-Nucleus Collisions**
Morales 88	Nuovo Cim. 100A:525, 1988; **Result of a Search on the Neutrinoless Double β Decay of ^{76}Ge to the Excited States of ^{76}Se**
Morel 90	Phys. Lett. 252B:505, 1990; CERN-PPE-90-127; **Measurement of the Inclusive $J/\psi(1S)$ Production Cross-Sections in $\bar{p}\,p$ and $p\,p$ Collisions at $\sqrt{s}$=24.3 GeV**
Morel 90B	RX-1314-LAUSANNE; **Measurement of the Inclusive Production Cross Section of $J/\psi(1S)$ in Proton-Proton and Anti-Proton – Proton Collisions at $\sqrt{s}$ = 24.3 GeV**
Moreno 91	Phys. Rev. D43:2815, 1991; FERMILAB-PUB-90-223-E; **Dimuon Production in Proton-Copper Collisions at $\sqrt{s}$=38.8 GeV**
Morfin 92	FERMILAB-CONF-92-129-E; **Recent Experimental Studies of Hadron Showers Produced in High Energy Muon-Nucleus Interactions**
Morgan 90	RAL-90-030; DTP-90-24; **Amplitude Analysis of $\gamma\,\gamma \rightarrow \pi\,\pi$ from Threshold to 1.4 GeV**
Mori 88	KEK-88-43; AMY-88-06; **Measurements of R and a Search for Heavy Quark Production in $e^+\,e^-$ Annihilation for $\sqrt{s}$ from 50 to 56 GeV**
Mori 89	Phys. Lett. 218B:499, 1989; AMY-88-16; KEK-88-109; **Measurement of the $e^+\,e^-$ Total Hadronic Cross Section and Determination of M_{Z0} and Λ_{MS}**
Mori 89B	UR-1104; ER-13065-571; **Total Hadronic Cross Section in Electron-Positron Annihilation at Center-of-Mass Energies from 50 GeV to 57 GeV**
Mori 90	Phys. Rev. D43:2843, 1991; KEK-90-153; NIIG-DP-90-6; ICRR-223-90-16; TOKAI-U-KAM-90-04; KOBE-AP-90-05; OULNS-90-19; TIT-HPE-90-5; UPR-0199E; **Search for Fractionally Charged Particles in KAMIOKANDE-II**
Mori 91	KEK-91-39; **Recent Results from KAMIOKANDE-II**
Mori 91B	Phys. Lett. 270B:89, 1991; KEK-91-62; NGTHEP-91-2; ICRR-244-91-13; UPR-0205E; TIT-HPE-91-2; OULNS-91-05; KOBE-AP-91-05; **Search for Neutralino Dark Matter in KAMIOKANDE**
Mori 91C	Phys. Lett. 278B:217, 1992; KEK-91-180; **A Limit on Spontaneous R Parity Breaking from KAMIOKANDE**
Mori 92	Phys. Lett. 289B:463, 1992; KEK-92-44; **A Limit on Massive Neutrino Dark Matter from KAMIOKANDE**
Morjean 91	Nucl. Phys. A524:179, 1991; **Energy Dissipation in Peripheral Reactions Induced by ^{40}Ar Beams between 27 and 44 MeV/u**
Morozov 89	Nucl. Instr. and Meth. A284:108, 1989; **Neutron Lifetime Determination by Ultracold Neutron Storage**
Morrison 91	CERN-PPE-91-140; **Review of 17 keV Neutrino Experiments**
Morrison 91B	Phys. Rev. Lett. 67:1696, 1991; CLNS-91-1091; CLEO-91-6; **Inclusive $\chi_{b1}(2P)$ Production in $\Upsilon(3S)$ Decay**
Morrison 92	CERN-PPE-92-80; **Updated Review of 17-keV Neutrino Experiments**
Morsch 92	Phys. Rev. Lett. 69:1336, 1992; **Radial Excitation of the Nucleon to the P_{11}(1440 MeV) Resonance in Alpha-Proton Scattering**
Morse 90	Phys. Rev. D45:36, 1992; YAUG-A-90-4; **Observation of the Decay Mode $K_L \rightarrow \gamma\,\gamma\,e^+\,e^-$**
Morse 91	BNL-46282; **Results from AGS E845: $K_L \rightarrow \pi^0\,e^+\,e^-$, $e^+\,e^-\,\gamma$, $e^+\,e^-\,e^+\,e^-$**
Mortara 93	Phys. Rev. Lett. 70:394, 1993; **Evidence against a 17 keV Neutrino from ^{35}S Beta Decay**
Moshi 90	Phys. Rev. C41:1279, 1990; **Analyzing Powers for Polarized p + ^{208}Pb at Large Momentum Transfers**
Moskowitz 88	Nucl. Instr. and Meth. A264:98, 1988; **Cosmic Axion Searches**
Motobayashi 88	Nucl. Phys. A481:207, 1988; **Tensor Analyzing Power Measurement of p (deuteron, ^{2}He) n Reaction at 70 MeV**
Motobayashi 89	Phys. Lett. 233B:69, 1989; **Measurements of Tensor Analyzing Powers in the deuteron $p \rightarrow 2p\,n$ Reaction at 200 MeV**
Moulding 92	FERMILAB-CONF-92-341-E; **New Limits on Generation-1 Leptoquarks**
Mukherjee 86	Phys. Rev. Lett. 60:991, 1988; FERMILAB-CONF-86-102-E; FERMILAB-PUB-87-200-E; **Azimuthal Energy Flow in Deep Inelastic Neutrino Scattering**

See the legend on page 7.

Mukhopadhyay 91 Phys. Rev. D46:3682, 1992; OSU-RN-263; AZPH-TH-91-63;
Constraints on Sterile Neutrinos from SN1987A

Muller 89 Phys. Rev. Lett. 63:2621, 1989;
Determination of the Gravitational Constant by an Experiment at a Pumped-Storage Reservoir

Munakata 91 J. Phys. Soc. Jpn. 60:2808, 1991; KEK-91-50; SHINSHU-CRP-91-01; NGPHEP-1; ICRR-242-91-11; KOBE-AP-91-04; OULNS-91-01; TIT-HPE-91-1; UPR-0204E;
Time Variation of the Cosmic Ray Muon Flux in Underground Detectors and Correlation with Atmospheric Temperature

Muraki 90 ICRR-212-90-5;
Observation of Ultra High-Energy Photons from Cygnus X-3

Murtagh 89 BNL-39661;
Review of the Brookhaven Neutrino Workshop

Mutchler 88 Phys. Rev. D38:742, 1988;
Measurement of Imaginary Part of the $I=1$ $\bar{n}$ n S-Wave Scattering Length

Myung 88 KEK-88-46; AMY-88-09;
A Search for MARK-J Events at TRISTAN

Myung 89 KEK-89-62; AMY-89-15;
A Study of Multihadron Events with Isolated Leptons Produced in e^+ e^- Annihilation at $\sqrt{s}$=50 to 61.4 GeV

Myung 90 KEK-90-66;
Measurement of Heavy Quark Fragmentation at TRISTAN

Nagai 91 Phys. Lett. 278B:506, 1992; KEK-91-213; DPNU-92-09; KOBE-HEP-92-02; TU-HEP-92-02; UT-HE-92-04; OCU-HEP-92-02; INS-REP-915; NWU-HEP-92-02; TUAT-HEP-92-02; PU-92-659; TIT-HEP-92-02;
Experimental Study of b-quark Jets in e^+ e^- Annihilation at TRISTAN

Nagy 89 Acta Phys. Hung. 64:177, 1989;
Recent Results of the European Muon Collaboration

Nakahata 90 KAMIOKANDE-97;
Implications of the HOMESTAKE and KAMIOKANDE-II Results on Matter Enhanced Neutrino Oscillations under Uncertainties in the Standard Solar Model Predictions

Nakai 89 KEK-88-21;
Quasifree Hadron Productions in 3.9 GeV/c Nuclear Reactions

Nakai 91 KEK-91-132;
Studies of Hadron-Induced Reactions with the FANCY Spectrometer

Nakamura 88 ICR-182-88-28;
Results in Nonaccelerator Particle Physics

Nakamura 89 Phys. Rev. D39:1261, 1989;
Search for Long Lived Exotic Particles in 12 GeV Proton-Nucleus Interactions

Nakamura 91 Phys. Lett. 263B:529, 1991;
A New Limit on the Flux of Strange Matter

Nammans 91 Phys. Rev. Lett. 66:2293, 1991;
Neutron-Proton Spin-Correlation Parameter A_{zz} at 68 MeV

Napolitano 88 Phys. Rev. Lett. 61:2530, 1988;
Measurement of the Differential Cross Section for the Reaction γ deuteron $\rightarrow$ n p at High Energies and θ_{cm} =90°

Narain 90 Phys. Rev. Lett. 65:2749, 1990;
Search for Direct Photons in $\Upsilon(4S)$ Decays

Narain 91 Phys. Rev. Lett. 66:3113, 1991;
$E1$ Transitions from the $\Upsilon(3S)$ State and the Fine Structure of the χ_b States

Nash 89 SLAC-PUB-5141;
A Measurement of the Z^0 Boson Resonance Parameters at the SLC

Nash 90 SLAC-356;
A Measurement of the Resonance Parameters of the Neutral Intermediate Vector Boson

Nasr 92 Nuovo Cim. 105A:1, 1992;
Some Features of Relativistic Particles Produced in High Energy Particle-Nucleus Collisions

Nath 89 Phys. Rev. D39:3520, 1989; ANL-HEP-PR-89-20;
Spin Correlation Parameter A_{nn} for n p Elastic Scattering at 790 MeV

Naudet 88 LBL-25353;
Threshold Behavior of Direct Electron Production in Proton Beryllium Collisions

Naudet 88B Phys. Rev. Lett. 62:2652, 1989; LBL-26461;
Threshold Behavior of Electron Pair Production in p Be Collisions

Naudet 88C LBL-25660;
Electron Pair Production in p Be and Ca Ca Collisions at the BEVALAC

Naumenko 89 Pisma Zh. Eksp. Teor. Fiz. 50:226, 1989; Jetp Lett. 50:251, 1989;
Direct Measurement of π^0 Meson Photoproduction on the Light Nuclei

Navia 88 Nuovo Cim. 99A:619, 1988;
Hadron Produced in Atmospheric Interactions

Nelson 90 Phys. Rev. D42:963, 1990;
Search for an Intermediate-Range Composition-Dependent Force Coupling to N-Z

Neumeister 91 Phys. Lett. 275B:186, 1992; CERN-PPE-91-156; HEPHY-PUB-91-558;
Higher Order Bose-Einstein Correlations in p $\bar{p}$ Collisions at $\sqrt{s}$ = 630 and 900 GeV

Newman 90 CALT-68-1691;
Search for New Particles in L3 at LEP: Beyond the Standard Model

Newsom 89 Phys. Rev. C39:965, 1989;
Neutron-Proton Analyzing Power Measurements from 375 to 775 MeV

Nezrick 92 FERMILAB-PUB-92-156;
A Search for Solar Axions

Ng 88 ANL-HEP-PR-88-11; IUHEE-88-4; UM-HE-88-12; PU-88-616;
Study of b Quark Production and Decay in e^+ e^- Annihilations at 29 GeV

Niebuhr 89 Phys. Rev. D40:2796, 1989; PSI-PR-89-04;
Search for the Decay $\pi^0 \rightarrow e^+$ e^-

Nieto 89 LA-UR-89-239;
Analysis of the Greenland Ice Sheet Experiment in Terms of New Gravitational Forces

Nikitas 90 RALT-108;
B Meson Decays at the CERN Proton-Antiproton Collider

Nikolsky 92 LEBD-92-42;
Experimental Data on Inelastic Collisions with Light Nuclei of Cosmic Ray Protons in the Energy Range 10^{15} - 10^{17} eV

Noble 92 Phys. Rev. Lett. 69:414, 1992;
Measurement of the $\Lambda \rightarrow n\ \gamma$ Branching Ratio

Nodulman 89 ANL-HEP-CP-89-122;
Hadron Collider Physics at FERMILAB

Noecker 88 Phys. Rev. Lett. 61:310, 1988;
Precision Measurement of Parity Nonconservation in Atomic Cesium: A Low-Energy Test of the Electroweak Theory

Noguchi 88 Phys. Rev. C38:1811, 1988;
Nuclear Reactions of ^{48}Ti, ^{56}Fe, ^{58}Ni, ^{63}Cu and ^{65}Cu by 12 GeV Protons

Norman 89 Phys. Rev. D39:2499, 1989; LBL-22884;
Search for Supermassive Chan-Glashow Particles in Lead

Norman 91 Jour. of Phys. G 17:S291, 1991;
Evidence for the Emission of a Massive Neutrino in the Nuclear β Decay

Novikov 89 Jetp Lett. 49:81, 1989; Pisma Zh. Eksp. Teor. Fiz. 49:68, 1989;
Experimental Test of a Possible Violation of the Pauli Principle

Novikov 90 Pisma Zh. Eksp. Teor. Fiz. 51:3, 1990;
Test of the Pauli Principle

Novikov 90B Phys. Lett. 240B:227, 1990;
Test of the Pauli Exclusion Principle for Atomic Electrons

Nozaki 89 KEK-89-19;
Tests of the Standard Model of Electroweak Interactions at the $e^+\ e^-$ Collider TRISTAN

Nozaki 92 KEK-92-36;
$e^+\ e^-$ Annihilation into Four-Lepton Final States with the AMY Detector

Numao 89 TRI-PP-89-52;
Lepton Flavor Conserving Rare Pion and Kaon Decays

Numao 92 TRI-PP-92-41;
Precision Tests of e^+-μ^+ Universality — Measurement of the $\pi^+ \rightarrow e^+\ \nu$ Branching Ratio

Numao 92B TRI-PP-92-49;
Precision Tests of e^+-μ^+ Universality: Measurement of the $\pi^+ \rightarrow e^+\ \nu$ Branching Ratio

Numao 92C Mod. Phys. Lett. A7:3357, 1992; TRI-PP-92-88;
Precise Tests of e-μ Universality

Nurushev 89 IFVE-89-169;
Polarization Study

Nuttall 92 RALT-132;
Tau Lepton Polarization from the Three Charged Pion Decay Channel

Obserstedt 92 Nucl. Phys. A548:525, 1992;
Light-Particle Emission and Heavy-Residue Formation in the Fusion-Like Reaction ^{40}Ar ^{40}Ca at 15 MeV/u and ^{28}Si+^{28}Si at 20 MeV/u

Odaka 89 KEK-89-49;
New Limits on Neutral Scalar Bosons

Odaka 90 KEK-90-164;
Neutral Current Properties of Tau Leptons at PEP / PETRA / TRISTAN

Odowd 90 RALT-121;
A Search for Top Quark at LEP

Odyniec 89 LBL-27926;
Ultrarelativistic Nucleus-Nucleus Collisions at CERN: The NA35 Experiment

Odyniec 91 LBL-29996;
Strangeness Production in Nucleus-Nucleus Collisions: an Experimental Review

Odyniec 91B LBL-31483;
Review of CERN Heavy-Ion Physics

Oest 90 Z. Phys. C47:343, 1990; DESY-90-025;
Measurement of Resonance Production in the Reaction $\gamma\ \gamma \rightarrow \pi^0\ \pi^0$ and $\gamma\ \gamma \rightarrow \pi^0\ \eta$

Oest 90B DESY-F22-90-01;
Untersuchung von Resonanzproduction in den Reaktionen $\gamma\ \gamma \rightarrow \pi^0\ \pi^0$, $\pi^0\ \eta$ mit dem JADE-Detektor

Ogawa 88 KEK-88-99;
Experimental Test of the Law of Gravitation

Ogawa 89 KEK-89-51;
Results from VENUS

Ohl 90 Phys. Rev. Lett. 64:2755, 1990; YAUG-A-90-2;
Improved Experimental Limit on $K_L \rightarrow \pi^0\ e^+\ e^-$

Ohl 90B Phys. Rev. Lett. 65:1407, 1990; YAUG-A-90-5;
A Measurement of the Branching Ratio and Form Factor for $K_L \rightarrow e^+\ e^-\ \gamma$

Ohlsson 90 UUPP-THES;
Study of $\bar{p}\ p \rightarrow \overline{\text{hyperon}}$ hyperon near Threshold

Ohnori 88 Phys. Lett. 230B:27, 1989; KEK-88-117; DPNU-89-1;
Measurement of Analyzing Power in Forward Angle for Elastic p deuteron Scattering at 3.5 GeV

Ohnori 89 Phys. Lett. 243B:29, 1990; KEK-89-104; DPNU-89-43;
Analyzing Powers of Quasi-Elastic C (p, $2p$) and Cu (p, $2p$) Scattering at 3.5 GeV and Relativistic Effects

Ohshima 92 KEK-92-120;
0.073% (95% C.L.) Upper Limit on 17 keV Neutrino Admixture

Ohshima 93 KEK-92-184; INS-REP-964;
No 17 keV Neutrino: Admixture <0.073% (95% C.L.)

Okamoto 91 Phys. Lett. 278B:393, 1992; KEK-91-150;
Measurement of the Forward-Backward Asymmetry of Charm Quark Production in $e^+\ e^-$ Annihilation at $<\sqrt{s}>$ =58.4 GeV

See the legend on page 7.

Okonov 88	JINR-P1-88-546; **The Pion Production Multiplicity as a Measure of Excitation Degrees in Nucleus-Nucleus Collisions at 3.66 GeV/A**
Okusawa 88	KEK-87-146; **Study of Baryon Production and Its Features in 405 GeV/c Proton-Proton Interactions**
Olin 91	TRI-PP-91-62; **Production and Weak Decay of Polarized Hypernuclei**
Olsen 88	ROCH-UR-1089-88; **Test of the Standard Model in High Energy $e^+ e^-$ Reactions at TRISTAN**
Olsen 91	KEK-91-118; AMY-91-02; **Recent Results from TRISTAN**
Omori 89	KEK-89-1; **A Search for a Baryonium in $\bar{p}\ p$ Annihilation at Rest**
Onel 89	Phys. Rev. D40:35, 1989; **Elastic $p\uparrow\ p\uparrow$ Scattering between 240 and 470 MeV**
Ong 88	Phys. Rev. Lett. 60:2587, 1988; SLAC-PUB-4550; LBL-24908; CALT-68-1487; **Inclusive Lepton Production in $e^+ e^-$ Annihilation at 29 GeV**
Ong 88B	SLAC-PUB-4511; **Measurement of the B Hadron Lifetime from MARK-II at PEP**
Ong 89	Phys. Rev. Lett. 62:1236, 1989; SLAC-PUB-4559; LBL-24937; **A Refined Measurement of the B Hadron Lifetime**
Orito 89	Phys. Rev. Lett. 63:597, 1989; UT-ICEPP-89-01; **New Limits on Exotic Two-Body Decay of Orthopositronium**
Orito 91	Phys. Rev. Lett. 66:1951, 1991; **Search for Supermassive Relics with a 2000-m^2 Array of Plastic Track Detectors**
Ortner 90	Phys. Rev. Lett. 64:2759, 1990; **Kinematically Complete Measurement of the Reaction $\pi^- p \to \pi^+ \pi^- n$ in the Region of Δ Dominance as a Test of Chiral Lagrangians**
Oshaughnessy 90	SLAC-360; **Properties of Hadronic Decays of the Z^0 Boson**
Oshaughnessy 90B	SLAC-PUB-5216; **Charged-Particles Inclusive Distributions from Hadronic Z^0 Decays**
Otterlund 88	Z. Phys. C38:65, 1988; **Review of High Energy Heavy Ion Reactions in Emulsion**
Otterlund 88B	LUIP-8806; **Multiplicities and Rapidity Densities in Nucleus-Nucleus Collisions at Ultrarelativistic Energies**
Otterlund 90	LUIP-9012; **Central Heavy Ion Interaction at 15 and 200 GeV — A Comparison**
Otterlund 91	LUIP-9105; **Extrapolation based on EMU01-Data from Oxygen, Silicon and Sulphur Induced Violent Interactions at Medium and High Energies**
Ottermann 88	Phys. Rev. C38:2310, 1988; **Polarization Observables in (π, deuteron) Elastic Scattering: Analyzing Power τ_{22} and iT_{11}**
Ottermann 88B	Phys. Rev. C38:2296, 1988; **Polarization Observables in (π, deuteron) Elastic Scattering: Analyzing Powers T_{20} and τ_{21}**
Ouldsaada 88	Z. Phys. C39:1, 1988; DESY-88-015; **Comparison of the Particle Flow in $q\ \bar{q}\ \gamma$ and $q\ \bar{q}$ gluon Events from $e^+ e^-$ Annihilation at PETRA**
Ouldsaada 88B	DESY-88-177; **Recent Results from PETRA**
Ouldsaada 89	Z. Phys. C44:567, 1989; DESY-89-063; **A Measurement of the Charmed Quark Asymmetry in $e^+ e^-$ Annihilation**
Oyama 88	Phys. Rev. D39:1481, 1989; KEK-88-51; **Experimental Study of Upward-Going Muons in Kamiokande**
Oyama 88B	KEK-88-16; **Search for High-Energy Neutrinos from SN1987A**
Palsania 91	Mod. Phys. Lett. A6:2749, 1991; **A Study of Bounce-off Effect in 1.1 A GeV ^{139}La Ag/Br Collision**
Pan 92	Mod. Phys. Lett. A7:1287, 1992; **Experimental Search for Anomalous Spin-Spin Interactions**
Panagiotou 89	Int. Jour. Mod. Phys. A5:1197, 1990; CERN-EP-89-131; **A Polarization in Hadron-Nucleon, Hadron-Nucleus and Nucleus-Nucleus Interactions**
Pancella 88	Phys. Rev. C38:2716, 1988; **Measurement of π^+ deuteron $\to \Delta(1232\ P_{33})^{++}\ n$ at Intermediate Energy**
Paoletti 89	FERMILAB-CONF-89-264-E; **Small Angle Physics at CDF: A Progress Report**
Papadimitrio 89	Phys. Rev. Lett. 63:28, 1989; EFI-89-24; **A Search for $K_L \to \pi^0\ \gamma\ \gamma$**
Papadimitrio 91	Phys. Rev. D44:R573, 1991; **Measurement of the Branching Ratio of the Decay $K_L \to \pi^0\ \gamma\ \gamma$**
Papadimitrio 92	FERMILAB-CONF-92-252-E; **Inclusive $J/\psi(1S)$, $\psi(2S)$ and b-Quark Production in $\bar{p}\ p$ Collisions at $\sqrt{s} = 1.8$ TeV**
Pare 90	Phys. Lett. 242B:531, 1990; CERN-EP-89-181; **Inclusive Production of π^0 and Feynman Scaling Test in the Fragmentation Region at the $Sp\bar{p}S$ Collider**
Park 88	KEK-88-45; AMY-88-08; **The Physics of Jets Produced in Electron-Positron Collisions at Center of Mass Energies from 50 to 56 GeV**
Park 89	Phys. Rev. Lett. 62:1713, 1989; KEK-88-113; AMY-88-17; **Experimental Evidence for the Non-Abelian Nature of QCD from a Study of Multijet Events Produced in $e^+ e^-$ Annihilation**
Park 89B	KEK-89-53; AMY-89-12; **Determination of the QCD Renormalization Scale and $\Lambda_{\overline{MS}}$ from Multi-Jet Events Produced in Electron-Positron Collisions**

Parker 89	Phys. Rev. Lett. 63:1570, 1989; **Search for a T=2 Dibaryon**
Parker 90	Phys. Lett. 251B:483, 1990; **Search for Superheavy Hydrogen-6**
Patterson 90	Phys. Rev. Lett. 64:1491, 1990; **Determination of Re(ϵ/ϵ') by the Simultaneous Detection of the Four K_L, $K_S \to 2\pi$ Decay Modes**
Patton 91	RALT-127; **B^0-$\overline{B}^0$ Mixing at the Z^0 Pole**
Paul 89	Z. Phys. C45:25, 1989; BONN-HE-89-07; **Measurement of the Neutron Lifetime in a Magnetic Storage Ring**
Pauletta 87	Phys. Lett. 211B:19, 1988; KEK-87-138; **A_{LL} at Small Momentum Transfers for the First Complete Determination of the Forward $p\,p$ Scattering Amplitude**
Pauss 89	CERN-EP-89-93; **Physics in $p\,\bar{p}$ Collisions**
Pawlyak 91	Yad. Phys. 54:1613, 1991; **Secondary Particle Multiplicity Correlations in Hadron-Nucleus Interactions at Intermediate Energies**
Pelzer 89	BONN-IR-89-05; **Production of Rare Particles in Proton-Antiproton Interactions at Center-of-Mass Energies from 200 GeV to 900 GeV**
Peng 89	Phys. Rev. Lett. 63:2353, 1989; **Coherent η Meson Production in the Reaction $\pi^- {}^3$He $\to \eta\, {}^3$H**
Peng 92	FERMILAB-CONF-92-301; **Preliminary Results from FERMILAB E789**
Peralta 91	Nucl. Phys. A525:665C, 1991; **Meson Production in Oxygen-Uranium and Sulphur-Uranium Collisions at 200 Gev/Nucleon**
Perdereau 89	LAL-89-06; **New Results from Atmospheric Neutrino Studies in the FREJUS Experiment**
Perdereau 89B	LAL-89-11; **Recherche D'Oscillations des Neutrinos Atmospheriques dans L'Experience du FREJUS**
Perdereau 91	LAL-91-06; **Final Results of the FREJUS Proton Decay Experiment on Atmospheric Neutrinos**
Perdereau 92	LAL-92-26; CERN-PRE-92-36; **New Results on Direct CP Violation from the NA31 Experiment**
Perepelitsa 88	Phys. Lett. 203B:335, 1988; **Events with Apparent Electrical Charge Nonconservation**
Perepelitsa 90	Z. Phys. C50:395, 1991; CERN-PPE-90-164; **Backward Production of Mesons Associated with $\Delta(1232\,P_{33})^{++}$ in $\pi^+\,p$ Interactions at 20 GeV/c**
Perepelitsa 91	Z. Phys. C52:407, 1991; CERN-PPE-91-118; **Observation of Meson Central Production in Baryon Exchange Processes**
Perera 93	Phys. Rev. Lett. 70:1053, 1993; **Search for Fractional-Charge Impurities in Silicon Using Infrared Photoionization and Field Ionization**
Perez 91	DPHPE-91-96; **Measurement of Isolated Photon Production in Hadronic Z^0 Decay**
Perl 90	SLAC-PUB-5388; **The Discovery of the Tau and its Major Properties: 1970-1985**
Perl 91	SLAC-PUB-5614; **The Tau Lepton**
Perrot 88	Nucl. Phys. B296:527, 1988; **Measurement of the Spin Correlation Parameter A_{00nk} in $p\,p$ Elastic Scattering from 0.88 to 2.7 GeV**
Perrotkunne 91	Phys. Lett. 261B:188, 1991; DPHN-SACLAY-91-14; **Measurement of the Analyzing Power in $\bar{p}\,p$ Elastic Scattering at 439 and 544 MeV/c**
Peter 90	Nucl. Phys. A519:611, 1990; **Global Variables and Impact Parameter Determination in Nucleus-Nucleus Collisions Below 100 MeV/u**
Peters 90	DESY-FCE-90-01; **Production of η, $\eta'(958)$ and $f_1(1285)$ Mesons in Tagged and Untagged Two Photon Reactions**
Peters 92	Yad. Phys. 55:1429, 1992; **All Neutral Final States in $\bar{p}\,p$ Annihilation at Rest**
Petersen 88	Phys. Rev. D37:1, 1988; SLAC-PUB-4290; LBL-23243; **Multihadronic Events at E_{cm}=29 GeV and Prediction of QCD Models from E_{cm}=29 GeV to E_{cm}=93 GeV**
Petradza 89	SLAC-347; **Study of Four-Lepton Final States in Electron-Positron Interactions at 29 GeV**
Petradza 90	Phys. Rev. D42:2171, 1990; LBL-27192; SLAC-PUB-4981; UM-HE-89-12; **Test of QED to Fourth Order by Study of Four-Lepton Final States in $e^+\,e^-$ Interactions at E_{cm}=29 GeV with the MARK-II Detector**
Petradza 90B	Phys. Rev. D42:2180, 1990; **Test of QED to Fourth Order by Study of Four-Lepton Final States in $e^+\,e^-$ Interactions at E_{cm}=29 GeV with the HRS Detector**
Peyaud 89	DPHPE-89-22; **Recent Results on CP and CPT Studies from K_L, $K_S \to 2\pi$ Decays**
Phair 92	Nucl. Phys. A548:489, 1992; **Impact-Parameter Filters for ^{36}Ar ^{197}Au Collisions at E/A =50, 80 and 110 MeV**
Phillips 88	Nucl. Instr. and Meth. A264:125, 1988; **Recent Results in the Search for Fractional Charge at Stanford**
Phillips 89	Phys. Lett. 224B:348, 1989; **A Search for Nucleon Decay with Multiple Muon Decays**
Picciotto 88	Phys. Rev. D37:1131, 1988; TRI-PP-87-58; **Search for Majoron Production and Other Process Associated with $\pi^+ \to e^+\,\nu$ Decay**
Piccolo 89	LNF-89-019-P; **B Meson Lifetime Measurement**
Pieri 91	CERN-PPE-91-141; **Searches for the Neutral Higgs Boson at LEP**

See the legend on page 7.

Pierre 90 SACLAY-DPHPE-90-19;
Review of Experimental Results on Neutrino Oscillations
Pietrzyk 91 Acta Phys. Polon. B22:247, 1991;
Triumph of the Standard Model in the ALEPH and Other Experiments at LEP
Pile 91 Phys. Rev. Lett. 66:2585, 1991;
Study of Hypernuclei by Associated Production
Pillai 88 Phys. Lett. 207B:389, 1988;
A Study of Charge Symmetry Violation in π^+ and π^- Elastic Scattering from ^{3}H and ^{3}He
Pinsent 90 RALT-116;
A Study of Leptonic Decay Channels at the Z^0 Resonance Peak
Pinston 89 Phys. Lett. 218B:128, 1989;
Nuclear Bremsstrahlung Production in Proton-Nucleus Reactions at 168 and 200 MeV
Pinston 90 Phys. Lett. 249B:402, 1990;
Proton-Deuteron Bremsstrahlung at 200 MeV
Pinston 92 Nucl. Phys. A536:321, 1992;
High-Energy γ-Ray Production from 284 MeV ^{3}He on Nuclei
Pitman 89 SLAC-PUB-4826;
Evidence for $D_S^+ \to e^+$ X
Pitzl 89 Z. Phys. C46:1, 1990; DESY-89-129;
A Study of Photon Production in Hadronic Events from $e^+ e^-$ Annihilation
Platchkov 89 SACLAY-DPHN-2572B;
Deuteron $A(Q^2)$ Structure Function and the Neutron Electric Formfactor
Platchkov 90 Nucl. Phys. A510:740, 1990;
The Deuteron $A(Q^2)$ Structure Function and the Neutron Electric Form Factor
Plothowbesch 88 IHEP-HD-88-5;
Recent Results and Future Prospects of the UA2 Experiment at the CERN $\bar{p}\,p$ Collider
Plothowbesch 91 CERN-PPE-91-206;
Measurement of $W^\pm$ Properties at $\bar{p}\,p$ Colliders
Plouin 92 Phys. Lett. 276B:526, 1992;
The η-Meson Mass
Plunkett 89 FERMILAB-CONF-89-261-E;
Jet Dynamics at the Tevatron Collider
Plunkett 91 FERMILAB-CONF-91-288-E;
QCD Results from CDF
Pluta 88 JINR-E1-88-450;
Nuclear Matter Excitation in Pion-Xenon Collisions at 3.5 GeV/c Inclusive Spectra of Neutral Pions
Pluta 88B JINR-E1-88-754;
Space-Time Characteristics of Secondary Proton Sources in Relativistic Nuclear Collisions from Two-Particle Correlations
Poblaguev 91 Yad. Phys. 55:2085, 1992; TRI-PP-91-90; INR-91-744;
On the Consistency of the $\pi^+ \to e^+ \nu_e \gamma$ Experimental Data
Podobrin 91 DESY-91-111;
CELLO Results on Multiparticle Production
Poitou 92 Nucl. Phys. A536:767, 1992;
Charged Pion Anisotropy in Relativistic Nucleus-Nucleus Collisions
Pokotilovsky 92 Yad. Phys. 55:2305, 1992;
Experimental Test of Skobeltsyn-Baldin Hypothesis on Emission of Nonstable Particles in ^{214}Bi Decay
Pokotilovsky 93 Fiz. Elem. Chastits At. Yadra 24:5, 1993;
"Darmstadt Effect" and Related Topics
Polikanov 90 GSI-90-68;
Search for Supermassive Nuclei in Nature
Ponting 88 Phys. Rev. Lett. 63:1792, 1990; TRI-PP-88-89;
Analyzing Power Measurement in $p\uparrow n \to \pi^- p\,p$ (singlet S wave): Pion Absorption by Quark Clusters?
Porile 89 Phys. Rev. C39:1914, 1989;
Approach to Criticality in the Fragmentation of Xenon by 1 – 19 GeV Protons
Porter 89 SLAC-PUB-5148;
Measurement of B^0-$\bar{B}^0$ Mixing using the MARK-II at PEP
Poutissou 89 TRI-PP-89-111;
Experiments on Rare Processes at TRIUMF
Poutissou 90 TRI-PP-90-16;
Search for the Rare Decay $K^+ \to \pi^+ \nu \bar{\nu}$
Price 88 Phys. Rev. Lett. 61:2193, 1988;
Electromagnetic Spallation of 6.4 TeV ^{32}S Nuclei
Price 90 Phys. Rev. Lett. 65:149, 1990;
High-Luminosity Search for Highly Ionizing Particles at the Fermilab Collider
Privitera 91 CERN-PPE-91-185; IEKP-KA-91-09;
Physics of the $\tau^\pm$ Lepton at LEP
Procario 91 CMU-HEP-91-12;
Recent Results on Charm Decays at $\sqrt{s} = 10$ GeV
Procario 92 Phys. Rev. Lett. 70:1207, 1993; CLNS-92-1165; CLEO-92-9;
Tau Decays with One Charged Particle Plus Multiple π^0's
Procario 92B CLNS-92-1167; CLEO-92-10;
Study of D^0 Decays into $\bar{K}^0$ and $\bar{K}^*(892)^0$
Prokoshkin 90 Doklady Akad. Nauk SSSR 316:900, 1991; IFVE-90-78;
$f_0(1590)$, $f_2(1520)$ and $f_2(1720)$ Decays Through $\eta\,\eta$ and $K\,\bar{K}$ Channels
Pruneau 89 Nucl. Phys. A500:168, 1989;
Peripheral Collisions of 40 MeV/u ^{14}Nit with a ^{197}Au Target
Przewoski 92 Phys. Rev. C45:2001, 1992;
Differential Cross Sections for Proton-Proton Bremsstrahlung at 294 MeV
Pugh 88 Acta Phys. Polon. B19:307, 1988;
Search for the Quark-Gluon Plasma — the NA35 Experiment at the CERN SPS

Pugh 89	Phys. Scr. T32:208, 1990; CERN-PRE-89-065; LBL-27833; **Search for the Quark-Gluon Plasma (1989): The NA35 Experiment at the CERN SPS**
Pumplin 92	Phys. Lett. 276B:517, 1992; DESY-91-143; **Analysis of Elastic Scattering at Low Momentum Transfer**
Punjabi 88	TRI-PP-88-85; **The deuteron (p, $2p$) n Reaction at 508 Mev. Part I.**
Punjabi 88B	Phys. Rev. C38:2728, 1988; **deuteron (p, $2p$) n at 508 MeV: Recoil Momenta $\leq$200 MeV/c**
Punjabi 89	Phys. Rev. C39:608, 1989; **Deuteron Breakup at 2.1 and 1.25 GeV**
Punjabi 92	Phys. Rev. C46:984, 1992; **T_{20} in the Inclusive Breackup of 4.5 GeV Polarized ^{6}Li**
Purohit 88	FERMILAB-CONF-88-200-E; **Charm Physics**
Pust 91	Z. Phys. C51:531, 1991; DESY-91-003; **Measurement and Analysis of the Reaction $\gamma\ \gamma \rightarrow 3\pi^+\ 3\pi^-$**
Raab 87	Phys. Rev. D37:2391, 1988; FERMILAB-PUB-87-144-E; **Measurement of the D^0, D^+, and D_S^+ Lifetime**
Rabin 88	ITEP-88-34; **The Photoemulsion Nucleus Splitting in Inelastic Muon Scattering at Small Angle with 32 GeV/c Momentum. Slow Particle Production**
Rabinowitz 93	Phys. Rev. Lett. 70:134, 1993; **Measurement of the Strange Sea Distribution Using Neutrino Charm Production**
Raffelt 90	Mod. Phys. Lett. A5:2581, 1990; MPI-PAE-PTH8-90; **What Have We Learned from SN 1987A**
Raha 91	Int. Jour. Mod. Phys. A6:517, 1991; **Dileptons and Photons in High Energy Heavy Ion Reactions: A Review**
Rahav 92B	Phys. Rev. C46:1167, 1992; **Nucleon Knockout from Polarized ^{3}He by Polarized Protons at 290 MeV**
Rahav 92C	Phys. Lett. 275B:259, 1992; **Proton-Induced Nucleon Knockout from Polarized ^{3}He at 290 MeV**
Ramberg 90	Phys. Lett. 238B:438, 1990; **Experimental Limit on a Small Violation of the Pauli Principle**
Ramberg 91	FERMILAB-CONF-91-258; **The Neutral Kaon Program at Fermilab and Recent E731 Results**
Ramberg 92	Phys. Rev. Lett. 70:2525, 1993; FERMILAB-PUB-92-384-E; **Simultaneous Measurement of K_S and K_L Decays into $\pi^+\ \pi^-\ \gamma$**
Ramberg 92B	Phys. Rev. Lett. 70:2529, 1993; FERMILAB-PUB-92-385-E; **First Measurement of the CP–Violation Parameter $\eta_{+-\gamma}$ in Neutral Kaon Decays**
Ramello 88	Z. Phys. C38:73, 1988; **First Result from Hybrid Emulsion Experiment on ^{16}O-Nucleus Collisions at 200 GeV/N**
Ransome 90	Phys. Rev. Lett. 64:372, 1990; **Charged-Particle Multiplicities Following Pion Absorbtion on ^{6}Li**
Rath 88	Phys. Rev. Lett. 61:802, 1988; PRINT-88-0542 (NOTRE DAME); **Evidence for $\eta(1440)$ Production in $\pi^-\ p$ Interactions at 21.4 GeV/c**
Rath 89	Phys. Rev. D40:693, 1989; PRINT-89-0158-NOTRE-DAME; **The $K_S\ K_S\ \pi^0$ System Produced in $\pi^-\ p$ Interactions at 21.4 GeV/c**
Ratti 90	FN-554; **Measurement of the $J/\psi(1S)$ Elastic Photoproduction from 100 GeV to 400 GeV in the Experiment E687 at Fermilab**
Ray 92	Yad. Phys. 55:1473, 1992; **Recent Results from Fermilab Experiment 760: Charmonium Formation in $\bar{p}\ p$ Annihilation**
Raychaudhuri 91	Mod. Phys. Lett. A6:2003, 1991; **Time Variations in KAMIOKANDE Solar Neutrino Data**
Reesager 90	Phys. Lett. 235B:30, 1990; **First Observation of β-Delayed Deuteron Emission**
Remsberg 88	Z. Phys. C38:35, 1988; BNL-40536; **Measurement of Energy and Charged Particle Emission in the Central Rapidity Region from ^{16}O nucleus and p nucleus Collisions at 14.5 GeV/c per Nucleon and Preliminary Results from Si nucleus Collisions**
Ren 88	Phys. Rev. D38:1404, 1988; ICR-153-87-7; **Hadronic Interactions and Primary Cosmic Ray Composition at Energies around 10^{15} eV to 10^{16} eV Derived from the Analysis of High-Energy γ Families**
Ren 88B	Phys. Rev. D38:1417, 1988; **Properties of Hadron Families Observed with Thick-Type Emulsion Chambers at Mts. Kanbala and Fuji and Search for Centauro Events**
Ren 88C	Phys. Rev. D38:1426, 1988; **Primary Cosmic Ray Protons above 10^{15} eV Derived from the Observation of Superhigh Energy Halo Events**
Renton 90	Mod. Phys. Lett. A6:279, 1990; OUNP-90-7; **Recent Physics Results from DELPHI**
Reusser 91	Phys. Lett. 255B:143, 1991; **Limits on Cold Dark Matter from the Gotthard Ge Experiment**
Reutens 90	Z. Phys. C45:539, 1990; **A Measurement of the Neutral Current Electroweak Parameters using the Fermilab Narrow Band Neutrino Beam**
Richard 90	LAL-90-51; **Searches for New Particles with $e^+\ e^-$ Colliders**
Riedlberger 89	Phys. Rev. C40:2717, 1989; **Antiproton Annihilation at Rest in Nitrogen and Deuterium Gas**
Riisager 92	Nucl. Phys. A540:365, 1992; **Two-Neutron Removal Reactions for Very Neutron-Rich Nuclei**

See the legend on page 7.

Riles 88 SLAC-PUB-4742;
Application of New Technique for Identifying Exotic Events with Low Visible Energy in $e^+ e^-$ Annihilation at 29 GeV

Riles 89 SLAC-342;
A Search for a Close Mass Lepton Doublet

Riles 89B Phys. Rev. D42:1, 1990; SLAC-PUB-5043; LBL-27555;
Search for a Nearly Degenerate Lepton Doublet (ℓ^-, heavy-lepton^0)

Riles 92 Int. Jour. Mod. Phys. A7:7647, 1992; UM-HE-92-15;
Review of Tau Lepton Studies at LEP

Rimondi 89 DFUB-89-17; FERMILAB-CONF-90-34-E;
Particle Correlations in Interactions at E_{cm}=1800 and 630 GeV

Rimondi 90 FERMILAB-CONF-90-166-E; CDF-PUB-CDF-PUBLIC-1283;
Multifractal Structures in Multiparticle Production in $p\,p$ Interactions at $\sqrt{s}$=1800 GeV

Rimondi 92 FERMILAB-CONF-92-12-E;
Intermittency Studies in $p\,p$ Collisions at $\sqrt{s}$=1800 GeV

Rimondi 92B FERMILAB-CONF-92-325-E;
Particle Production and Energy Flow in $W^\pm$ and Z^0 Underlying Events

Ritchie 91 Phys. Rev. Lett. 66:568, 1991;
Total and Differential Cross Sections for $\pi^+ D \to p\,p$ below 21 MeV

Ritter 88 LBL-25574;
Transverse Energy and Multiplicity Distributions in Collisions at 60 GeV per Nucleon and 200 GeV per Nucleon

Ritter 90 Phys. Rev. D42:977, 1990;
Experimental Test of Equivalence Principle with Polarized Masses

Roach 90 RALT-111;
Tau-Pairs from Z^0 Decays at the LEP Collider

Roberts 91 Jour. of Phys. G 17:D1, 1991;
A Compilation of Structure Functions in Deep Inelastic Scattering

Robertson 91 Phys. Rev. Lett. 67:957, 1991;
Limit on $\bar{\nu}_e$ Mass from Observation of the β Decay of Molecular Tritium

Roche 88 LBL-25475; LBL-26460;
Dielectron Production in p Be and Ca Ca Collisions at the BEVALAC

Roche 88B LBL-25325;
First Observation of Dielectron Production at the BEVALAC

Roche 88C Phys. Rev. Lett. 61:1069, 1988;
First Observation of Dielectron Production in Proton-Nucleus Collisions below 10 GeV

Roche 89 Phys. Lett. 226B:228, 1989; LBL-27050;
Dielectron Production in Ca Ca Collisions at 1 A GeV and 2 A GeV

Rock 91 Phys. Rev. D46:24, 1992; SLAC-PUB-5239;
Measurement of Elastic Electron-Neutron Scattering and Inelastic Electron-Deuteron Scattering Cross Sections at High Momentum Transfer

Rodrigo 92 FERMILAB-CONF-92-342-E;
Jet Multiplicity in $W^\pm \to \ell\,\nu$ at $\sqrt{s}$=1.8 TeV $p\,p$ Collisions

Roe 89 SLAC-338;
Resonance Production in Two Photon Interactions

Roe 89B Phys. Rev. D41:17, 1990; SLAC-PUB-4931;
Measurement of the Two-Photon Width of the η and η' Mesons

Roehn 91 MINZ-THESIS;
Measurement of $\tau^\pm$ Production and Decay Parameters with the Process $e^+ e^- \to Z^0 \to \tau^+ \tau^-$, $\tau^\pm \to \mu\,\nu_\tau\,\nu_\mu$

Rokni 88 Phys. Lett. 202B:35, 1988;
Isobaric-Analog-State Transitions in Pion Charge-Exchange Reactions above the $\Delta(1232\,P_{33})$ Resonance

Rolandi 92 CERN-PPE-92-175;
Precision Tests of the Electroweak Interaction

Rollnik 92 BONN-IR-92-38;
Indentiflkation von Elektronen aus Semileptonischen b Quark-Zerfallen Bestimmung von Γ_{bb}/Γ_{had} bei der Z^0 Rezonanz mit dem OPAL Detektor

Romano 89 CERN-EP-89-30;
Summary of Emulsion Data on High Energy Nucleus-Nucleus Interactions

Ronan 91 LBL-30734;
Meson and Baryon Correlation Studies Using the PEP-TPC/2γ Facility

Rosch 89 Nucl. Phys. A496:141, 1989;
Preequilibrium Emission in Central Collisions of the Mass-Symmetric System ^{40}Ar ^{40}Ca at 20 MeV/u

Rose 90 Phys. Lett. 234B:460, 1990;
Polarizability of the Neutron

Rose 90B Nucl. Phys. A514:621, 1990;
Quasi-Free Compton Scattering by the Neutron

Rosen 88 Comm. on Nuc. and Part. Phys. 18:31, 1988; LA-UR-87-3423;
On Seeing the First Double β Decay

Rosenfeld 88 KEK-88-41; AMY-88-04;
Results from the First Year at AMY

Rossi 89 CERN-EP-89-137;
Heavy Quark Production

Rossi 91 INFN-AE-91-16;
Heavy Quark Production

Rotscheidt 88 BONN-IR-88-55;
Investigation of Inelastic Scattering in $\gamma\,p$ Reactions in the Energy Range 65 GeV to 175 GeV Using the CERN Ω Spectrometer

Roudeau 88 LAL-88-37;
Charm Photoproduction Mechanisms and a Few Preliminary Results from the NA14 Experiment

Rousselchoma 88 Nucl. Phys. A477:345, 1988;
^{16}O Elastic Scattering at E_{lab}=94 MeV/Nucleon

Rubinstein 90 FERMILAB-CONF-90-160-E;
Total, Elastic and Diffractive Cross Sections at High Energies

Rubinstein 91 FERMILAB-CONF-91-227;
Measurement of ρ, the Ratio of the Real to Imaginary Part of the $\bar{p}\,p$ Forward Elastic Scattering Amplitude, at $\sqrt{s}$=1.8 TeV

Ruf 92 Yad. Phys. 55:1527, 1992;
First Results of the CPLEAR Experiment at CERN

Ruhl 91 Nucl. Phys. A524:377, 1991;
Analyzing Power in n deuteron Elastic Scattering at 67 MeV

Ruhlmann 88 SACLAY-DPHPE-88-18;
Measurement of the Strong Coupling Constant α_S from a Study of $W^{\pm}$ Bosons Produced in Association with Jets

Rui 90 Nucl. Phys. A517:455, 1990;
$\pi^+\,\pi^-$ Coincidence Measurement in the π^+ deuteron $\rightarrow \pi^+\,\pi^-\,p\,p$ Reaction at T_{π^+} =280 MeV

Ruoso 92 FERMILAB-PUB-92-48-E;
Limits on Light Scalar and Pseudoscalar Particles from a Photon Regeneration Experiment

Safronov 88 Yad. Phys. 47:1523, 1988;
Fast Deuterons from Proton-Nucleus Collisions at 2.5 - 9.2 GeV

Safronov 88B ITEP-88-144;
Production of High Energy Nuclei ^{4}He, ^{3}He, deuteron, ^{3}H in Interaction 10.1 GeV/c Protons with Be, Al, Cu, Ta

Sagawa 88 Phys. Rev. Lett. 60:93, 1988; KEK-87-84;
Measurements of R and a Search for Heavy-Quark Production in $e^+\,e^-$ Annihilation at $\sqrt{s}$=50 and 52 GeV

Sagawa 89 Phys. Rev. Lett. 63:2341, 1989; KEK-89-38; AMY-89-04;
Measurement of $e^+\,e^- \rightarrow b\,\bar{b}$ Forward-Backward Charge Asymmetry between $\sqrt{s}$=52 and 57 GeV

Sagawa 90 KEK-90-67; AMY-90-8;
Comparison of the Next to Leading Logarithm QCD Approximation with TRISTAN Data and a Determination of $\Lambda_{\overline{MS}}$

Saito 90 Phys. Rev. Lett. 65:2094, 1990;
Is There Strange Quark Matter in Galactic Cosmic Rays?

Sakaguchi 89 Nuovo Cim. 102A:511, 1989;
A Measurement of the π^0 Decay of ^{12}C and ^{11}Bor Hypernuclei

Sakaguchi 90 Phys. Rev. C43:73, 1991; INS-841; HUPD-9019;
π^0 Decay Process of $^{12}_{\Lambda}$C and $^{11}_{\Lambda}$Bor Hypernuclei

Sakai 89 KEK-89-42; AMY-89-06;
A Search for Heavy Leptons and New Particles Beyond the Standard Model in $e^+\,e^-$ Annihilation at $\sqrt{s}$=50 - 60.8 GeV

Sakai 90 Phys. Lett. 234B:534, 1990; KEK-89-134; AMY-89-18;
A Search for SUSY Particles in $e^+\,e^-$ Annihilations at $\sqrt{s}$=50 - 60.8 GeV

Sakai 92 INS-REP-935;
Confirmation of the Reported 330-keV Electron Line in e^+ Th Interaction with Use of Another Kind of Positron Emitter

Sakuda 88 KEK-88-88;
Tests of the Standard Model at TRISTAN

Sakumoto 92 Phys. Rev. D45:3042, 1992;
Measurement of TeV Muon Energy Loss in Iron

Salabura 90 GSI-90-06;
Correlated Positron-Electron Emission in Heavy-Ion Collisions at the Coulomb Barrier

Salabura 90B Phys. Lett. 245B:153, 1990; GSI-90-33;
Correlated $e^+\,e^-$ Peaks Observed in Heavy-Ion Collisions

Salgado 91 FERMILAB-CONF-91-225-E;
Jet Rates from Deep Inelastic Muon Scattering in the W Range of 15 to 35 GeV

Salgado 92 FERMILAB-CONF-92-262-E;
Multi-Jet Production Rates in Deep-Inelastic Muon-Proton Scattering

Salvini 88 Phys. Rept. 171:231, 1988;
Physics with Matter-Antimatter Colliders

Salvisberg 92 PSI-PR-92-10;
Pion Absorption in Tritium at Intermediate Energies

Sambamurti 90 Phys. Rev. D41:1371, 1990;
A Dependence of Highly Inelastic p-Nucleus Collisions

Samoylenko 91 Doklady Akad. Nauk SSSR 318:1367, 1991; IFVE-91-37;
Observation of Reaction $\pi^-\,p \rightarrow \omega(783)\,\eta\,n$ at 38 GeV/c

Sandler 92 Z. Phys. C57:1, 1993; WISC-EX-92-324;
Neutrino Production of Same-Sign Dimuons at FERMILAB Tevatron

Sanghera 92 Phys. Rev. D47:791, 1993; CLNS-92-1156; CLEO-92-5;
Lepton Asymmetry Measurements in $\overline{B} \rightarrow D^*(2010)\,\ell^-\,\bar{\nu}$ and Implications for V-A and the Form Factor

Sansoni 91 LNF-91-022-P;
B Physics at CDF

Santi 88 Phys. Rev. C38:2466, 1988;
Evidence for Narrow Structure in Analyzing Power of the ^{3}He (p, deuteron) X Reaction

Sarkisyan 91 Yad. Phys. 53:1336, 1991; LEBD-90-155;
On Maximum Fluctuations of Charged Particles in Narrow Pseudorapidity Intervals in Interactions of C and Cu Nuclei at the Momentum 4.5 GeV/c per Nucleon

Sarkisyan 92 Yad. Phys. 55:417, 1992;
One- and Two-Dimensional Analysis of Maximum Fluctuations of Charged-Particle Transverse-Momentum Distributions Produced in Central C Cu Nucleus Collisions at 4.5 GeV/c per Nucleon

Sarkisyan 92B Phys. Lett. 279B:177, 1992;
Maximum Fluctuations in the Two-Dimensional Space of Central C Cu Collisions at 4.5 GeV/c/Nucleon

Saroff 90 Phys. Rev. Lett. 64:995, 1990; AZPH-EX-89-01;
Single-Spin Asymmetry in Inclusive Reaction $p\uparrow\,p \rightarrow \pi^+$ X, $p\uparrow\,p \rightarrow \pi^-$ X, $p\uparrow\,p \rightarrow p$ X, at 13.3 and 18.5 GeV/c

See the legend on page 7.

Sarty 93 Phys. Rev. C47:459, 1993;
Measurement of the Reaction ^{3}He (γ, 2p) n and Its Relation to Three-Body Forces
Sasaki 88 KEK-88-48; AMY-88-11;
Hadron Production in γ γ Collisions at Large Q^2 at AMY
Sasaki 89 KEK-89-56; AMY-89-14;
A Measurement of the Photon Structure Function F_2 at an Average Q^2 of 67 (GeV/c)^2
Sasaki 90 Phys. Lett. 252B:491, 1990; KEK-90-95; AMY-90-12;
A Measurement of the Photon Structure Function F_2
Sato 90 Phys. Rev. D44:2220, 1991; KEK-90-166;
Mass Limits for Dark Matter Particles Derived from High-Energy Neutrinos from the Sun
Savage 88C Phys. Rev. D37:1134, 1988;
New Limit on Light Scalar and Pseudoscalar Particles Produced in Nuclear Decay
Sawyer 91 FSU-HEP-072691;
A Study of the Charge Asymmetry in Hadronic Events Produced in Electron-Positron Collisions at the Z^0 Resonance
Scarha 90 FERMILAB-CONF-90-242-E;
New Particle Searches at $\bar{p}$ p Experiments
Schablitzky 89 BONN-IR-89-32;
Separation der Elektrischen Formfaktoren G_c and G_q des Deuterons bei Q^2=0.495 (GeV/c)^2
Schaefer 89 Nucl. Phys. A495:451, 1989;
X-Rays from Proton-Antiproton Annihilation into Charged Final States
Schaeffer 90 Acta Phys. Polon. B21:357, 1990;
SN1987A. A Review
Schafer 91 DESY-F15-91-02;
Messung der Starke von B^0 $\bar{B}^0$ Oszillationen mit dem Detektor ARGUS
Schaffer 88 LAL-88-56;
First Evidence for Direct CP Violation
Schaffner 89 Phys. Rev. D39:990, 1989;
Limit on the Decays $K_L \to \mu^+ e^-$ and $K_L \to \mu^- e^+$
Schelhaas 90 Nucl. Phys. A506:307, 1990;
Nuclear Photon Scattering by ^{12}C*
Schellman 91B FERMILAB-CONF-91-325-E;
Preliminary Results from FNAL E665 Muon Scattering at Low x_{Bj}
Schiavon 89 Nucl. Phys. A505:595, 1990; CERN-EP-89-38;
Real to Imaginary Ratio of the $\bar{p}$ p Forward Elastic Scattering Amplitude at 550 MeV/c, 757 MeV/c and 1077 MeV/c
Schindler 88 SLAC-PUB-4694;
Results on Semileptonic D^0 and $D_S^\pm$ Decays and Evidence for Non-D $\bar{D}$ Decays of the ψ(3770)
Schindler 89 Nucl. Phys. (PS) B13:233, 1990; SLAC-PUB-4997;
An Experimental Review of the Decays of the $D_S^\pm$ Meson
Schindler 90 SLAC-PUB-5342;
Search for Doubly Cabibbo-Suppressed D^+ Decays
Schmidt 87 Acta Phys. Polon. B19:399, 1988; GSI-87-64;
Oxygen Induced Reaction at 200 and 60 GeV/Nucleon
Schmidt 88 Z. Phys. C38:109, 1988; GSI-88-10; CERN-PRE-88-10;
Target Fragmentation in Proton-Nucleus and ^{16}O-Nucleus Reactions at 60 and 200 GeV/Nucleon
Schmidt 92 Nucl. Phys. A544:449C, 1992; GSI-92-10; CERN-PRE-92-7;
Pion Absorption in Excited Nuclear Matter
Schmidt 92B GSI-92-19; CERN-PPE-92-42;
The Physics of Ultrarelativistic Heavy Ion Collisions
Schmiedmayer 88 Phys. Rev. Lett. 61:1065, 1988;
Measurement of the Electric Polarizability of the Neutron
Schmiedmayer 89 Nucl. Instr. and Meth. A284:137, 1989;
The Electric Polarizability of the Neutron
Schmiedmayer 89B Nucl. Instr. and Meth. A284:59, 1989;
The Equivalence of the Gravitational and Inertial Mass of the Neutron
Schmiedmayer 91 Phys. Rev. Lett. 66:1015, 1991;
Measurement of the Electric Polarizability of the Neutron
Schmitt 88 Z. Phys. C40:199, 1988; DESY-88-031; SLAC-PUB-4568;
Search for Radiative $\Upsilon(1S)$ Decays into Light Mesons
Schmitt 90 FERMILAB-CONF-90-126-E;
Muon Interactions at 490 GeV
Schmitz 88 MPI-PAE-EXP-EL-193;
Hadron Production in High Energy Neutrino and Antineutrino Collisions
Schmitz 91 MPI-PHE-91-09;
A Review of Experimental Results on Intermittency
Schneider 90 Z. Phys. C46:341, 1990; IPNL-89-8;
Inclusive Ξ^0, $\Xi(1530\,P_{13})^-$ and $\Xi(1530\,P_{13})^0$ Production in Ξ^- Be Interactions at 116 GeV/c
Schnetzer 89 Phys. Rev. C40:640, 1989; LBL-26761;
Inclusive Production of K^+ Mesons in 2.1 GeV/Nucleon Nuclear Collisions
Schramm 89 Nucl. Instr. and Meth. A284:84, 1989;
Cosmology and the Neutron Lifetime
Schreckenbac 89 Nucl. Instr. and Meth. A284:120, 1989;
Neutron Decay Measurements with Helium-Filled Time Projection Chamber
Schroeder 90 LBL-29536;
Dilepton (e^+ e^-) Production at BEVALAC Energies
Schubert 89 IEKP-KA-89-6;
Review of B-Meson Decay Results
Schukraft 88 Z. Phys. C38:59, 1988;
Measurement of Multiplicity Distributions in Oxygen-Tungsten Collisions at 200 GeV per Nucleon

Schukraft 88B	CERN-EP-88-176; **Recent Result from HELIOS (NA34) on Proton-Nucleus and Nucleus-Nucleus Reaction**
Schukraft 91	CERN-PPE-91-137; **Ultra-Relativistic Heavy-Ion Collisions or the Quest for the Quark-Gluon Plasma**
Schumm 88	Phys. Rev. Lett. 60:1618, 1988; **Neutrino Production of Same-Sign Dimuons**
Schumm 92	Phys. Rev. D46:453, 1992; SLAC-PUB-5727; **Measurement of the Charged Multiplicity of Events Containing Bottom Hadrons at E_{cm} = 91 GeV**
Schutt 88	Phys. Lett. 203B:22, 1988; **Nucleon Scattering from ^{208}Pb at Low and Intermediate Energies**
Schutte 89	DESY-89-007; **Measurement of the Direct Photon Spectrum from the $\Upsilon(1S)$**
Schwartz 88	Phys. Rev. D37:1758, 1988; **Photino Flux Limits from the Harvard-Purdue-Wisconsin Underground Detector**
Schwiening 91	BONN-IR-91-42; **Untersuching zur K_S Produktion mit dem OPAL – Detector: Vergleich von OPAL – Daten mit Monte-Carlo-Simulationen**
Sealock 89	Phys. Rev. Lett. 62:1350, 1989; **Electroproduction of the $\Delta(1232\,P_{33})$ in Nuclei**
Sedlak 88	Fiz. Elem. Chastits At. Yadra 19:445, 1988; **Antinucleon Nucleon Annihilation at Rest and Flight**
Seftor 89	Phys. Rev. D39:2457, 1989; **Recoil Proton Polarization in $\pi\ p$ Elastic Scattering at 547 and 625 MeV/c**
Seidel 88	Phys. Rev. Lett. 61:2522, 1988; **Search for Multitrack Nucleon Decay**
Seidl 91	Nucl. Phys. A525:299C, 1991; **Low-Mass Dileptons in p nucleus and nucleus nucleus Collisions**
Selen 89	DOE-ER-3072-49; **Hunting for the Rare Decay $K^+ \to \pi^+\ \mu^+\ \mu^-$**
Semertzidis 90	Phys. Rev. Lett. 64:2988, 1990; UR-1152; ER-13065-613; **Limits on the Production of Light Scalar and Pseudoscalar Particles**
Semyarchuk 90	JINR-P1-90-306; **Charge Distributions of Fragments in ^{16}O p Interactions at 3.1 GeV/c per Nucleon**
Sengupta 88	Phys. Lett. 213B:548, 1988; **Multiplicity Distribution and their Fluctuations in Pseudo-rapidity Windows at Relativistic Heavy-Ion Collisions**
Sengupta 89	Eur. Lett. 8:15, 1989; **Mean Free Paths of He Fragments Produced in Collisions of ^{16}O at 60 GeV/N**
Sengupta 89B	Phys. Lett. 222B:301, 1989; **On the Production of Helium Fragments in Ultrarelativistic Heavy-Ion Collisions**
Sengupta 90	Phys. Lett. 236B:219, 1990; **Intermittency in Multiparticle Production at Ultra-Relativistic Heavy-Ion Collisions**
Sengupta 90B	Mod. Phys. Lett. A5:285, 1990; **Characteristics of Central and Minimal-Bias Events in Ultra-Relativistic Heavy-Ion Collisions**
Sengupta 91	Mod. Phys. Lett. A6:29, 1991; **Target-Associated Particle Production in Ultrarelativistic Nucleus Nucleus Collisions**
Serin 91	LAL-91-11; **Studies of Rare Kaon Decays in the NA31 Experiment**
Serin 91B	LAL-91-16; **Mise en Evidence et Etude de la Desintegration du K_L en $\pi^0\ \gamma\ \gamma$ avec l'Experience NA31**
Seth 91	Phys. Rev. Lett. 66:2448, 1991; **Evidence for Dineutrons in Extremely Neutron-Rich Nuclei**
Settles 92	MPI-PHE-92-19; **ALEPH in 1991**
Sevior 91	Phys. Rev. Lett. 66:2569, 1991; TRI-PP-90-90; **Measurement of the $\pi^+\ p \to \pi^+\ \pi^+\ n$ Cross Section Very Near Threshold and Chiral Symmetry**
Seywerd 92	MPI-PHE-92-20; **New Results on $\tau^\pm$ Physics from LEP**
Shakhbasyan 92	Kr. Soob. JINR 54:38, 1992; **The Observation of Stable $S = -2$ and $S = -3$ Dibaryons**
Shakhbasyan 92B	Kr. Soob. JINR 54:51, 1992; **The Observation of the Second Heavy Stable Dibaryon ($S = -2$)**
Shakhbazyan 88	Z. Phys. C39:151, 1988; **An Evidence for a Possible Stable Dibaryon**
Shakhbazyan 90	Phys. Lett. 235B:208, 1990; Phys. Lett. 244B:580, 1990; Kr. Soob. JINR 38:5, 1989; **The Observation of a Stable Dibaryon**
Shakhbazyan 91	Kr. Soob. JINR 48:5, 1991; **Multiquark Stable and Metastable States**
Shaw 89	Phys. Rev. Lett. 63:1342, 1989; KEK-89-41; AMY-89-05; **A Search for Unstable Heavy Neutral Leptons in $e^+\ e^-$ Annihilation at $\sqrt{s}$ from 50 and 60.8 GeV**
Shephard 90	FERMILAB-CONF-90-260-E; **Fermilab Experiment E-687: Recent Results on Charm**
Shigin 91	Yad. Phys. 53:653, 1991; **Fission Cross Section of ^{242}Am by Fast Neutrons and Angular Distributions of Fragments**
Shima 92	Phys. Rev. D47:29, 1993; ANL-HEP-PR-92-45; **Neutron-Proton Elastic Scattering Spin-Spin Correlation Parameter Measurements Between 500 and 800 MeV. 2. C_{ss} and C_{ls} at Forward c.m. Angles**
Shimansky 88	JINR-P1-88-443; **Spectra of Protons Flying Out at Big Angles in deuteron $p \to p$ X Reaction at 3.3 GeV/c**
Shimizu 89	Phys. Rev. C42:R483, 1990; KEK-89-146; **Observation of Narrow Structure in the $p\ p$ Elastic Analyzing Power**
Shimizu 92	KEK-92-52; **Longitudinal Asymmetry and γ-Ray Angular Distribution in Neutron Radiative Capture Reaction**

See the legend on page 7.

Shimonaka 91 Phys. Lett. 268B:457, 1991; KEK-91-109;
Measurement of b-Quark Forward-Backward Charge Asymmetry and Axial-Vector Coupling Using Inclusive Muons in $e^+ e^-$ Annihilation at $\sqrt{s}$=52 – 61.4 GeV

Shimozawa 92 Phys. Lett. 284B:144, 1992;
Studies of $e^+ e^- \rightarrow \gamma \gamma$ and $e^+ e^- \rightarrow \gamma \gamma \gamma$ Reaction

Shipbaugh 88B RX-1221-ILLINOIS;
Production of Charm Mesons by High Energy Neutrons

Shirai 88 KEK-88-56;
Recent Result from TRISTAN

Shirai 91 KEK-91-186;
Recent Study of $e^+ e^-$ Interactions below Z^0

Shirai 92 KEK-92-109;
A High-Sensitivity Search for a 17 keV Neutrino

Shirakata 91 Phys. Lett. 278B:499, 1992; KEK-91-192;
Measurement of Forward-Backward Charge Asymmetry in the Process of b-Quark Production in $e^+ e^-$ Annihilation around $\sqrt{s}$ = 60 GeV

Shivpuri 88 Nuovo Cim. 97A:773, 1988;
Fireball Parameters in Proton Nucleus Interactions at 400 GeV

Shivpuri 88B Nuovo Cim. 99A:385, 1988;
Multiplicity Correlations among the Charged Secondaries in Proton-Nucleus Interactions at 400 GeV

Shivpuri 91 Phys. Rev. D43:696, 1991;
Study of Nuclear Dependence of Scaling in 800 GeV Proton Interactions with Emulsion Nuclei

Shklyarevsky 86 Yad. Phys. 47:117, 1988; LENI-86-1176;
Phase Shift Analysis of the $p\ p$ Amplitudes in the Energy Range 380 – 1000 MeV

Shoda 88 Nucl. Phys. A486:512, 1988;
Charge Number Dependence of π^+ Production from Nuclei by 200 MeV Electron

Shoda 88B Nucl. Phys. A486:526, 1988;
Branching of π^+ in $^{12}C(\gamma, \pi^+)$ Reaction

Shoemaker 88 Phys. Rev. D37:1120, 1988;
Search for Strange Baryonium States in $\bar{p}$ deuteron Interactions at 8.9 GeV/c

Shor 89 Phys. Rev. Lett. 63:2192, 1989;
Subthreshold $\bar{p}$, K^-, K^+, and Energetic Pion Production in Relativistic Nucleus-Nucleus Collisions

Shukla 89 Int. Jour. Mod. Phys. A4:4845, 1989;
Study of Clusters and Heavy Clusters in ^{4}He Emulsion Interactions at 12 A GeV/c

Shukla 91 FERMILAB-CONF-91-216;
Measurement of $\bar{p}\ p$ Elastic Scattering Parameters at $\sqrt{s}$=1.8 TeV

Shukla 91B FERMILAB-CONF-91-277;
Measurement of the Ratio of the Real to the Imaginary Part of the Forward Nuclear Amplitude for $\bar{p}\ p$ Elastic Scattering at $\sqrt{s}$=1.8 TeV

Shukla 92 FERMILAB-CONF-92-360;
Recent Results on L=1 Charmed Mesons

Shukla 92B FERMILAB-CONF-92-139-E;
Charm-Studies in Experiment E687 at FERMILAB

Shypit 88 Phys. Rev. Lett. 60:901, 1988;
Evidence Against Broad Dibaryon

Shypit 88B Nucl. Phys. A477:541, 1988;
A_{SL}, A_{LL} and A_{N0} for $n\ n \rightarrow \pi$ deuteron at 492, 729 and 796 MeV

Shypit 89 Phys. Rev. C40:2203, 1989;
Spin Dependence of $p\ p \rightarrow n\ p\ \pi^+$ from 492 to 796 MeV

Sibirtsev 88 Yad. Phys. 47:1040, 1988;
A-dependence of Proton, π^+ and K^+ Meson Production in 10.1 GeV/c Proton Interaction with Nuclei

Sibirtsev 88B ITEP-88-60;
About Reaction K^+ nucleus $\rightarrow K^+\ p$ X with Light Nuclei at Energy of Kaons 130, 283 MeV

Sibirtsev 90 Yad. Phys. 51:1587, 1990;
Study of A Universality in Proton and Pion Production at Intermediate Energies

Sibirtsev 91 Yad. Phys. 53:191, 1991;
Antiproton Production in Proton-Nucleus Interactions at 10.1 GeV/c

Siebert 91 IPNO-T-91-01;
High Resolution Study of the Two-Baryon-System with Strangeness –1 by Means of the Reaction $p\ p \rightarrow K^+$ X

Sihver 92 Nucl. Phys. A543:703, 1992;
Gold Target Fragmentation by 800 GeV Protons

Silk 88 Phys. Rev. C37:158, 1988;
Fragmentation of ^{16}O Projectiles at 100 MeV Per Nucleon

Silverman 89 Nucl. Phys. A499:763, 1989;
Differential Cross Sections and Analyzing Powers for Small Angle Neutron-Proton Elastic Scattering Between 378 and 1135 MeV

Silvestrov 89 JINR-P1-89-452;
What Experiments Say about the Possibility of New Particle Existence with Mass Less Than Kaon Mass

Simic 88B Phys. Rev. C37:2064, 1988;
Influence of Collision Centrality upon Participant Protons in deuteron C, ^{4}He C, C C Interactions at 4.2 GeV/c per Nucleon

Simic 90 Z. Phys. C48:577, 1990;
Influence of Collision Centrality Upon Negative Particle Production in deuteron C, He C, and C C Interactions at 4.2 GeV/c per Nucleon

Simic 92 Phys. Rev. C45:2417, 1992;
Two-Particle Azimuthal Correlations in Light Nuclei Collisions at 4.2 GeV/c per Nucleon

Simon 91 BONN-IR-91-75;
Suche nach Top- und Leptoquarks im Bereich der Z^0 Resonanz

Simpson 89 Phys. Rev. D39:1825, 1989;
Evidence of the 17 keV Neutrino in the β Spectrum of ^{35}S

Simpson 89B	Phys. Rev. D39:1837, 1989; **Evidence of the 17 keV Neutrino in the β Spectrum of ^{3}H**
Sinervo 89	UPR-0171E; **New Particle Searches at CDF**
Sinervo 92	UTPT-92-10; **The Search for Physics Beyond the Standard model with CDF**
Singh 88	Phys. Rev. Lett. 61:1073, 1988; **Multiplicity Distribution in Pseudorapidity Intervals with ^{32}S at 200 GeV/Nucleon and ^{16}O at 200 and 60 GeV/Nucleon**
Singh 88B	Phys. Lett. 214B:480, 1988; **Interaction Mean Free Paths of He Fragments from Ultrahigh-Energy Nucleus-Nucleus Collisions in Emulsion**
Singh 89	Phys. Rev. C39:1835, 1989; **Long-Range Correlations in Nucleus-Nucleus Interactions at Ultrahigh Energies**
Singh 90	Phys. Rev. C41:999, 1990; **Electromagnetic Dissociation of ^{32}S at Ultrarelativistic Energy in Nuclear Emulsion**
Singh 91	Phys. Lett. 261B:155, 1991; **A Study of Particle Densities in Rapidity Space in $p\ p$ Collisions at 360 GeV/c**
Singh 91B	Phys. Lett. 261B:160, 1991; **Intermittency Pattern in $p\ p$ Collisions at 360 GeV/c**
Singh 92	Mod. Phys. Lett. A7:1113, 1992; **Nuclear Multifragmentation and Intermittency**
Sirunyan 88	YERE-1083(46)-88; **Polarization Investigation of the Photoproduction of π and η Mesons on Nucleons in the Resonance Energy Range 1 – 2 GeV**
Skalsey 92	Phys. Rev. Lett. 68:456, 1992; **Search for Three Photon Final State Resonances in Low-Energy $e^+\ e^-$ Scattering**
Skalsey 92B	Mod. Phys. Lett. A7:2251, 1992; **Tests of CP and CPT with Polarized Positronium**
Skarha 89	WISC-THESIS; **Forward Muon Production in Proton-Antiproton Collisions at E_{cm}=1.8 TeV**
Skorokhvatov 92	Pisma Zh. Eksp. Teor. Fiz. 55:421, 1992; **Search for the Massive Neutrino in the Nuclear Reactor Experiment**
Sliwa 90	FERMILAB-CONF-90-93-E; TUFTS-CONF-90-13-1-E; **A New Limit on the Mass of the Top Quark**
Sliwa 91	FERMILAB-CONF-91-286; **Search for Top Quark at Fermilab Collider**
Smirnitsky 91	Yad. Phys. 55:1686, 1992; ITEP-91-117; **Cumulative Λ-Particles Production**
Smirnova 88	Yad. Phys. 47:419, 1988; **Dynamical Characteristics of High-Energy $\bar{p}\ p$ Annihilation**
Smith 88	Phys. Rev. C38:251, 1988; TRI-PP-88-10; **Energy Dependence of T_{20} and τ_{21} in (π, deuteron) Elastic Scattering**
Smith 88B	Phys. Rev. C38:240, 1988; TRI-PP-87-69; **Energy Dependence of the Charge Asymmetry $A(T,\ \theta)$ in (π, deuteron) Elastic Scattering**
Smith 89	FERMILAB-CONF-89-275-E; **Intermediate Vector Bosons in the Muon Channel**
Smith 90	Phys. Rev. D42:949, 1990; KEK-90-3; AMY-90-01; **Mass Limits of Charged Higgs at Large tan(β) from $e^+\ e^-$ Annihilations at $\sqrt{s}$ = 50 – 60.8 GeV**
Smith 90B	Phys. Lett. 234B:191, 1990; **A Search for the Electric Dipole Moment of the Neutron**
Smith 92	Phys. Lett. 283B:155, 1992; CERN-PPE-92-27; **Further Evidence for Pomeron-Quark Interactions: Observation of Large Λ Polarization in $p\ p \rightarrow (\Lambda\ K^+)\ p$**
Smith 92B	WISC-EX-92-328; **Neutrino Scattering Results from CCFR**
Smith 92C	Yad. Phys. 55:1439, 1992; **Prospects for Neutral Light Quark Meson Spectroscopy Using the Fermilab Antiproton Accumulator**
Smith 93	Phys. Rev. Lett. 70:123, 1993; **Test of the Equivalence Principle for Ordinary Matter Falling Toward Dark Matter**
Smizanska 90	Czech. J. Phys. 40:1293, 1990; **Diffractive Dissociation Reaction $n\ p \rightarrow \Lambda\ K^0\ p$ for Incident Neutron Momenta between 30 and 70 GeV/c**
Snyder 89	Phys. Lett. 229B:169, 1989; SLAC-PUB-4986; IUHEE-89-2; **Search for B Decay to Higgs Bosons for Higgs Boson Masses between 50 MeV/c^2 and 210 MeV/c^2**
Sobchak 88	JINR-P1-88-393; **Momentum Distributions of Nucleons Flying at Large Angles in ^{4}He p Collisions**
Soderstrom 90	SLAC-PUB-5192; LBL-28860; CALT-68-1616; **A Search for Pair Production of Heavy Stable Charged Particles in Z^0 Decays**
Sokolsky 92	Phys. Rept. 217:225, 1992; **Extremely High Energy Cosmic Rays**
Somalwar 92	Phys. Rev. Lett. 68:2580, 1992; **Measurement of the Quadratic Slope Parameter in the $K_L \rightarrow 3\pi^0$ Decay Dalitz Plot**
Son 88	KEK-88-76; AMY-88-14; **Search for New Heavy Flavors with AMY at TRISTAN**
Sonderegger 88	Z. Phys. C38:129, 1988; CERN-EP-88-26; **The Study of π and K Production in Proton-Uranium and Oxygen-Uranium Interactions at 200 GeV/Nucleon Using Decay Muon**
Sonderegger 89	CERN-EP-89-19; **Dimuon and $J/\psi(1S)$ Production in Ultrarelativistic Ion Collisions**
Song 91	FERMILAB-CONF-91-237-E; **Measurement of $B^0\ \overline{B}^0$ Mixing at CDF**
Sopczak 92	CERN-PPE-92-137; L3-NOTE-1245; **Searches for Non-Minimal Higgs Bosons at LEP-I**

See the legend on page 7.

Sopczak 92B L3-NOTE-1295;
New Results on Searches for Non-Minimal Higgs Bosons from L3

Sopczak 92C UCSD-THESIS;
Search for Non-Minimal Higgs Bosons in Z^0 Decays with the L3 Detector at LEP

Sorensen 88 Z. Phys. C38:3, 1988;
Oxygen-Induced Reactions at 60 A GeV and 200 A GeV Studied by Calorimetry

Sossi 91 TRI-PP-91-47;
Pion Induced Pion Production on Deuterium and Hydrogen

Sossi 92 Nucl. Phys. A548:562, 1992;
Pion-Induced Pion Production on Deuterium: a Quasifree Process

Souder 90 Phys. Rev. Lett. 65:694, 1990;
Measurement of Parity Violation in the Elastic Scattering of Polarized Electrons from ^{12}C

Spahn 89 Phys. Rev. Lett. 63:1574, 1989;
Study of Charge Symmetry in ^{4}He by Simultaneous e^- ^{4}He $\rightarrow$ e^- p ^{3}H and e^- ^{4}He $\rightarrow$ e^- n ^{3}He Measurements

Speake 90 Phys. Rev. Lett. 65:1967, 1990;
Test of the Inverse Square Law of Gravitation Using the 300-m Tower at Erie, Colorado

Sphicas 88 CERN-EP-88-184;
High E_t Jets in UA1

Spiegel 91 FERMILAB-CONF-91-328;
Recent Heavy Flavor Physics Results from Fixed Target Experiments

Spiro 90 DPHPE-90-10;
Detection of Dark Matter

Spiro 92 DAPNIA-SPP-92-20;
Solar Neutrino Experiments

Spivak 88 Zh. Eksp. Teor. Fiz. 94(9):1, 1988;
Neutron Lifetime in KIAE Experiment

Stahl 91 HEID-PREPRINT;
A Study of Muonic Decays of $\tau^\pm$ by ALEPH detector at LEP

Stanco 88 LAL-88-51;
New DM2 Results on $f_1(1285)$ and $\eta(1440)$

Stanislaus 89 Phys. Lett. 219B:237, 1989; TRI-PP-88-70;
Search for T=2 Dibaryons via π^- deuteron $\rightarrow$ γ X

Steckmeyer 89 Nucl. Phys. A500:372, 1989;
Transfer Reactions and Sequential Decays of the Projectile-Like Fragments in the 60 MeV/Nucleon ^{40}Ar + Ag$_{nat}$, ^{197}Au Reactions

Steele 89 SLAC-350;
A Search for Single Electron Production in Electron Positron Annihilation at E=29 GeV

Stege 88 Nucl. Phys. A489:146, 1988;
Evidence for Cluster Emission in Fusion Reactions between ^{48}Ti and ^{45}Sc at 16 MeV/u

Steinberger 89 Mod. Phys. Lett. A4:2319, 1989;
Resume of the First Results of ALEPH at LEP

Steinberger 90 Phys. Rept. 203:345, 1991; CERN-PPE-90-149;
First Results at the LEP e^+ e^- Collider

Stenlund 88 LUIP-8807;
Search for Non-statistical Particle Density Fluctuations in ^{16}O + Ag/Br and ^{32}S + Au Interactions at 200 A GeV

Stenlund 90 LUIP-9004;
Recent Results from EMU01

Stenlund 90B Mod. Phys. Lett. A5:1159, 1990; LUIP-9003;
Aspects of the Nuclear Geometry in Ultrarelativistic Heavy Ion Collisions

Stenlund 90C LUIP-9008;
Non-Statistical Fluctuations in Relativistic Heavy-Ion Collisions

Stenlund 90D LUIP-9007;
Review on Some Selected, Recent Heavy-Ion Results from Emulsion

Stenlund 91 LUIP-9106;
Recent EMU01-Results on Fluctuations and Intermittency

Sterbenz 92 Phys. Rev. C45:2578, 1992;
Inelastic Scattering of Polarized Protons from ^{4}He at 500 and 800 MeV

Stevenson 90 TRI-PP-90-57;
Analyzing Power Measurement in π deuteron Elastic Scattering at 50 MeV

Stevenson 90C Phys. Rev. Lett. 65:1987, 1990; TRI-PP-90-51;
Role of the π n P_{11} Interaction in π deuteron Elastic Scattering at 50 MeV

Stewart 90 Phys. Rev. D42:1385, 1990; FERMILAB-PUB-90-22-E;
Production of High p_T Jets in Hadron-Nucleus Collisions

Stoker 89 Phys. Rev. D39:1811, 1989; SLAC-PUB-4590; JHU-HEP-88-0301;
Limits on New Lepton Pairs (ℓ^-, heavy-lepton^0) with Arbitrary Neutrino Mass

Stoker 91 SLAC-PUB-5605;
Review of Tau Lepton Decays

Stoks 92 THEF-NYM-92-05;
On the Pion-Nucleon Coupling Constant

Stone 89 CLNS-89-924;
Charmed Semileptonic B Meson Decays

Strakovskii 91 Fiz. Elem. Chastits At. Yadra 22:615, 1991;
Dibaryons and Thresholds

Straub 92 Phys. Rev. D45:3030, 1992;
Particle Ratios of High-x_T Hadrons in p A Interactions at $\sqrt{s}$=38.8 GeV

Straub 92B Phys. Rev. Lett. 68:452, 1992;
Nuclear Dependence of High-x_t Hadron and High-τ Hadron-Pair Production in p A Interactions at $\sqrt{s}$ = 38.8 GeV

Streets 89 Phys. Rev. Lett. 66:864, 1991; FERMILAB-PUB-89-42-E;
Atomic Weight Dependence of the Production of Hadron Pairs from 800 GeV/c Protons on Nuclear Targets

Strobele 88 Z. Phys. C38:89, 1988; CERN-PRE-88-001; GSI-PRE-88-07;
Negative Particle Production in Nuclear Collisions at 60 and 200 GeV/Nucleon

Strongin 91 Phys. Rev. D43:2778, 1991;
Study of Opposite-Sign Dimuon Production in High-Energy Neutrino-Nucleon Interactions

Strugalski 88 JINR-E1-88-211;
Experimental Study of Hadron Passage through Intranuclear Matter

Strugalski 88B JINR-E1-88-669;
Energy Dependence of the Total Cross Section for Electron-Positron Pair Creation by γ Quanta in Liquid Xenon, Measured in Bubble Chamber

Strugalski 88C JINR-E1-88-639;
Retardation of Hadrons in Passing through Intranuclear Matter

Strugalski 90 JINR-E1-90-459;
Characteristics of Neutral Pion Production Process in π^- Xe Nuclear Collision at 3.5 GeV/c Momentum

Strugalski 91 JINR-E1-91-146;
Hadrons in Statu Nascendi

Strugalski 91B JINR-E1-91-243;
Matter Density Distribution in Atomic Nuclei as Illuminated by High Energy Hadrons

Strugalski 91C JINR-E1-91-490;
Intensity of the Neutron Emission from Nuclei, Induced by High Energy Hadronic Projectiles

Strugalski 92 JINR-E1-92-69;
Characteristics of the Pion Production and Nucleon Emission Processes in Pion-Carbon Nuclear Collisions at 40 GeV/c

Strugalski 92B JINR-E1-92-68;
Characteristics of the Pion Production and Proton Emission Processes in Proton-Carbon Nuclear Collisions at 4.2 GeV/c Momentum

Strugalski 92C JINR-E1-92-133;
The Mean Characteristics of the Pion Production and Nucleon Emission Processes in Pion-Carbon Nuclear Collisions at 40 GeV/c Momentum

Stuart 90 Phys. Rev. Lett. 64:983, 1990; KEK-89-127; AMY-89-17;
Forward-Backward Charge Asymmetry in $e^+ e^- \to$ hadron jets

Stubbs 89 Phys. Rev. Lett. 62:609, 1989;
Limits on Composition-Dependent Interactions Using a Laboratory Source: Is There a Fifth Force Coupled to Isospin?

Stubbs 93 Phys. Rev. Lett. 70:119, 1993;
Experimental Limit on Any Long Range Nongravitational Interaction between Dark and Ordinary Matter

Stubenrauch 89 Czech. J. Phys. B39:266, 1989; SACLAY-DPHPE-87-20;
Test of the Standard Model with Weak Bosons in UA1

Stuttge 92 Nucl. Phys. A539:511, 1992;
Energy Dumping and Intermediate-Velocity Fragment Emission in Peripheral Kr+Au Collisions at 43 MeV/u

Sugahara 88 KEK-88-10;
New Results from TOPAZ at TRISTAN on Hadron Physics

Sugahara 88B KEK-88-94;
Present and Future of B Physics

Sugimoto 88 Phys. Rev. D37:583, 1988; KEK-87-132;
Search for Structures in the $\bar{p}\, p \to \pi^+ \pi^-$ and $\bar{p}\, p \to K^+ K^-$ Cross Sections between 360 and 760 MeV/c

Sullivan 90 Phys. Lett. 249B:8, 1990; LPCC-90-04;
Disappearance of Flow as a Function of Impact Parameter and Energy in Nucleus-Nucleus Collisions

Sulyaev 88 IFVE-88-100;
High p_T Hadron Production in Hadron-Nuclei Collisions

Sumiyoshi 88 KEK-88-28;
Recent Results from VENUS at TRISTAN

Summerer 90 Phys. Rev. C42:2546, 1990; GSI-90-47;
Target Fragmentation of Au and Th by 2.6 GeV Protons

Suomijarvi 89 Nucl. Phys. A491:314, 1989;
Excitation of Giant Resonances in ^{20}Ne ^{90}Zr and ^{208}Pb Inelastic Scattering at 40 MeV/u

Suomijarvi 90 Nucl. Phys. A509:369, 1990;
Excitation of Giant Resonances in Heavy-Ion Reactions at Intermediate Energies: Results from the ^{40}Ar ^{90}Zr and ^{208}Pb Experiments at 41 MeV/u

Sur 91 Phys. Rev. Lett. 66:2444, 1991; LBL-30109;
Evidence for the Emission of a 17-keV Neutrino in the β Decay of ^{14}C

Suzuki 88 KEK-88-38;
Review of Atmospheric Neutrino Phenomena in Underground Nucleon Decay Detectors

Suzuki 89 KEK-89-40;
Solar Neutrino Observation at KAMIOKANDE-II

Suzuki 90 VENEZIA-90 p. 15; KEK-90-31;
^{8}Bor Solar Neutrino Observation and Possible Tests on Solar Neutrino Problem in KAMIOKANDE-II

Suzuki 90B Phys. Rev. D43:3557, 1991; KEK-90-51;
Constraints on Dirac-Type Neutrino Magnetic Moment from ^{37}Cl and KAMIOKANDE-II Solar Neutrino Observation

Suzuki 91 Phys. Lett. 257B:27, 1991;
Negative Pion Production in Subthreshold Heavy Ion Collisions

Suzuki 91B ICRR-234-91-3;
A Search for Dark Matter in the KAMIOKANDE-II

Suzuki 91C KEK-91-187;
KAMIOKANDE Solar Neutrino Experiment and Solar Neutrino Problem

Svec 90 Phys. Rev. D42:934, 1990; MCGILL-90-0352;
Spin Dependence of Matter Creation in Hadron Collisions

Svec 91 Phys. Rev. D45:55, 1992; MCGILL-91-09;
Amplitude Analysis of Reaction $\pi^+ n\uparrow \to \pi^+ \pi^- p$ at 5.98 and 11.85 GeV/c

Svec 91B Phys. Rev. D45:1518, 1992; MCGILL-91-16;
Amplitude Analysis of Reaction $K^+ n\uparrow \to K^+ \pi^- p$ at 5.98 GeV/c

See the legend on page 7.

Svec 92 Phys. Rev. D46:949, 1992; MCGILL-92-02;
On the Evidence for a Scalar State $I = 0$ $0^{++}(750)$ from the Measurements of π nucleon$\uparrow \rightarrow \pi^+ \pi^-$ nucleon on Polarized Target at 5.98, 11.85 and 17.2 GeV/c

Sviridov 88 Yad. Phys. 49:172, 1989; IFVE-88-101;
Analysis of Inclusive Prompt Muon Production in p Fe Interaction at 70 GeV

Swartz 90 Phys. Rev. Lett. 64:2877, 1990; SLAC-PUB-5176; LBL-28458;
A Search for Doubly Charged Higgs Scalars in Z^0 Decays

Szklarz 89 LAL-89-61;
Partial Wave Analysis of $\eta(1440)$ from DM2

Takahashi 88 DPNU-89-14;
Search for Supersymmetric Particles in $e^+ e^-$ Annihilation at TRISTAN

Takahashi 91 Nucl. Phys. A525:591C, 1991;
Study of Correlations of Positive and Negative Charged Particles

Takaki 93 KEK-92-220;
Particle Spectrum in Gluon Jets Produced in $e^+ e^-$ Annihilations at $\sqrt{s}$ Around 58 GeV

Takamatsu 89 KEK-89-154;
Experimental Studies on Meson Spectroscopy at KEK

Taketani 90 Phys. Lett. 234B:202, 1990; KEK-89-123; HUPD-8913; KOBE-HEP-89-08; KUNS-986; TMUP-HEL-89-30;
Search for SUSY Partners of Charged Leptons in $e^+ e^-$ Collisions with $\sqrt{s}$ up to 60.8 GeV

Takibaev 88 Yad. Phys. 47:446, 1988;
Azimuthal Asymmetry and Fluctuations in Slow-Particle Emission in High Energy Proton-Nucleus Interactions

Takibaev 90 Yad. Phys. 51:925, 1990;
Energy Characteristics of Double Charged Particles from High Energy Hadron-Nucleus Interactions

Takita 89B ICR-186-89-3;
An Experimental Study of Atmospheric Neutrino Flux with the KAMIOKANDE Detector

Tamura 88 INS-685;
Formation of ^4H_S Hyperfragment from K^- Absorption at Rest on Light Nuclei

Tanaka 88 Phys. Rev. C37:2071, 1988;
Spin Dependence of p p Inelasticities at Intermediate Energies

Tanaka 91 Phys. Lett. 277B:215, 1992; KEK-91-14; AMY-91-1;
Evidence for Hard Scattering of Hadronic Constituents of Photons in Photon-Photon Collisions at TRISTAN

Tanaka 92 KEK-92-37;
A Study of the Hadron Production in γ γ Collisions with AMY Detector

Tang 88 Phys. Rev. C38:846, 1988;
Observations of Hyperon-Nucleus Systems Produced on ^{12}C and ^7Li Targets using the (K^-, π^+) Reaction at 715 MeV/c

Tanihata 88 Phys. Lett. 206B:592, 1988;
Measurement of Interaction Cross Sections Using Isotope Beams of Be and Bor and Isospin Dependence of the Nuclear Radii

Tanimori 89 KEK-89-35;
JANZOS Results on PeV and TeV Gamma Rays from SN1987A and the Future Plan for a TeV Collaboration with Adelaide

Tanimori 89B Phys. Rev. D41:744, 1990; KEK-89-140;
Experimental Study of the Reactions $\bar{p}$ $p \rightarrow \pi^+ \pi^-$ and $K^+ K^-$ between 360 and 760 MeV/c

Tannenbaum 88 BNL-41354;
Measurement of Energy Flow from Oxygen, Silicon and Proton Interactions with Nuclei at the BNL TANDEM-AGS

Tannenbaum 89 Int. Jour. Mod. Phys. A4:3377, 1989; BNL-42802;
Transverse Energy Production in Light and Heavy Ion Interactions

Tao 88 Int. Jour. Mod. Phys. A1:749, 1988;
The UA1 Experiment

Taran 90 FIAN-90-100;
Experimental Investigation of the Central Interaction of ^{12}C Nuclei with Ne, Cu and Pb Nuclei at the Momentum of 4.5 GeV/c per Nucleon

Tariq 90 Acta Phys. Polon. B21:215, 1990;
Some Angle Dependent Characteristics of Charged Shower Particles Produced at High Energies

Tatishcheff 92 Phys. Rev. C45:2005, 1992;
Measurement of the p (deuteron, p p) X Reaction and Possible Evidence for a Structure at M_{pp} = 1945 MeV

Tatishvili 92 Yad. Phys. 55:1512, 1992;
Narrow Baryonia with Open and Hidden Strangeness

Tauchi 88 KEK-88-39;
Test of the Standard Model of Electroweak Interactions at TRISTAN

Tauseef 92 Phys. Rev. C46:1483, 1992;
Forward-Backward Multiplicity Correlations in 4.5 GeV/c Silicon-Nucleus Interactions

Taylor 90 RALT-113;
Inclusive Charged and Strange Particle Production at the CERN $Sp\bar{p}S$ Collider

Tenchini 90 INFN-PI-AE-90-10;
Results from LEP on Heavy Quark Physics

Tenner 88 NIKHEF-H-88-6;
An Estimate of the Rescattering Fraction in Neutrino and Antineutrino Deuteron Interactions

Tenner 91 Nuovo Cim. 105A:1001, 1992; NIKHEF-H-91-22;
Rescattering in $\nu/\bar{\nu}$-Deuteron Reactions

Tesch 91 BONN-IR-91-69;
Bestimmung der Impulsverteilungen geladener Hadronen aus Z^0-Zerfallen mittels dE/dx – Messungen in der Jetkammer des OPAL-Detektors

Teshima 89 Phys. Rev. Lett. 64:1628, 1990; ICR-202-89-19;
Neutral Particles from Cygnus X-3 above 5×10^{17} eV

The 91 Phys. Rev. Lett. 67:173, 1991;
Measurement of Tensor Polarization in Elastic Electron-Deuteron Scattering in the Momentum-Transfer Range $3.8 < Q < 4.6$ 1/fm

Thomas 89	Phys. Rev. Lett. 63:1902, 1989; **Testing the Inverse-Square Law of Gravity on a 465-m Tower**
Thompson 89	Nucl. Instr. and Meth. A284:40, 1989; **The Search for the Electric Dipole Moment of the Neutron at the ILL**
Thompson 92	Phys. Rev. Lett. 68:2901, 1992; Phys. Rev. Lett. 69:391, 1992; **Quasielastic Scattering of Polarized Electrons from Polarized ^{3}He and Measurement of the Neutron's Form Factor**
Thomson 91	Phys. Lett. 269B:220, 1991; **The Observation of Underground Muons from the Direction of Cygnus X-3 During the January 1991 Radio Flare**
Thorndike 88	Phys. Rept. 157:183, 1988; **Decays of the b Quark**
Thorne 92	FERMILAB CONF-92-174; **Update on Hadroproduced Charm at TPL**
Thron 92	Phys. Rev. D46:4846, 1992; ANL-HEP-PR-92-49; PDK-522; **A Search for Magnetic Monopoles with the SOUDAN-2 Detector**
Timmermans 91	Phys. Rev. Lett. 67:1074, 1991; THEF-NYM-90-13; **Determination of the Charged Pion Coupling Constant from Data on the Charge Exchange Reaction $\bar{p}\ p \to \bar{n}\ n$**
Tixier 88	Phys. Lett. 212B:523, 1988; LAL-88-13; **Looking at CP Invariance and Quantum Mechanics in $J/\psi(1S) \to \Lambda\ \bar{\Lambda}$ Decay**
Toki 88	SLAC-PUB-4784; **Review of $J/\psi(1S)$ Decays**
Toki 88B	SLAC-PUB-4824; **BNL Glueball Review**
Toki 89	SLAC-PUB-5093; **Study of $\psi(2S)$ Decays**
Toki 89B	SLAC-PUB-5087; **Study of $D_S^{\pm}$ Decays**
Tokushuku 90	Phys. Lett. 235B:245, 1990; KEK-89-100; **Analysis of Deuteron Spectra from Hadron-Nucleus Reactions at Several GeV/c with the Coalescence Model**
Tonelli 88	INFN-PI-AE-88-8; **CDF Results and Prospects for Elastic Scattering**
Tonelli 89	INFN-PI-AE-89-7; **Proton-Antiproton Collisions at $\sqrt{s}$=1.8 TeV: Recent Results from the CDF**
Tonwar 91	Phys. Rev. Lett. 67:2248, 1991; **Detection of Ultrahigh-Energy Radiation from Scorpius X-1: Ooty Observations During 1984 – 1987**
Tornow 91	Phys. Lett. 257B:273, 1991; **The Low Energy Neutron-Deuteron Analyzing Power and $^3P_{0,1,2}$ Interactions of Nucleon-Nucleon Potentials**
Tosello 89	Nuovo Cim. 102A:663, 1989; **Strangeness Production by Antiproton**
Totsuka 88	ICR-REPORT-180-88-26; **Non-Accelerator Particle Physics**
Totsuka 89	ICR-Report-192-89-9; **Search for WIMPS**
Totsuka 89B	ICR-Report-194-89-11; **KAMIOKANDE, 1983 – 1989 – 1990's**
Totsuka 90	ICRR-220-90-13; **Recent Results on Solar Neutrinos from KAMIOKANDE**
Totsuka 91	ICRR-237-91-6; **Neutrino Astronomy**
Totsuka 92	ICCR-264-92-2; **Solar and Atmospheric Neutrinos Observed at KAMIOKANDE**
Tretyakova 88	LEBD-88-244; **Central Interactions of ^{16}O Nuclei with Heavy Nuclei of Photoemulsion at 200 GeV/Nucleon**
Trischuk 91	CERN-PPE-91-128; **B and D Lifetimes at LEP**
Trischuk 92	CERN-PPE-92-197; **A Review of the $\tau^{\pm}$ Lifetime**
Trost 89	Phys. Rev. D40:1703, 1989; FERMILAB-PUB-89-145-E; **New Measurement of the Production Polarization and Magnetic Moment of the Cascade Minus Hyperon**
Troyan 88	JINR-D1-88-329; **Narrow Diproton Resonances in the Reaction of $n\ p \to p\ p\ \pi^-$**
Troyan 90	Yad. Phys. 54:1301, 1991; JINR-P1-90-78; **Search for Narrow Diproton Resonances in the Reactions $n\ p \to p\ p\ \pi^-$ and $n\ p \to p\ p\ \pi^-\ \pi^0$ at Momenta of n = 1.43, 1.72, 2.23 GeV/c and 3.83 GeV/c**
Troyan 90B	JINR-P1-90-79; **Investigation of Narrow Resonances in Differential Cross Section of Elastic $p\ p$ Scattering in the Interval of 116 – 199 MeV**
Trzaska 91B	Phys. Lett. 269B:54, 1991; **Search for Resonant Electron-Positron Annihilation-in-Flight**
Trzaska 91C	Z. Phys. A340:325, 1991; HD-PY-91-2; **Excitation of the $\Delta(1232\ P_{33})$ – Resonance in Proton-Nucleus Collisions**
Tschirhart 88	Phys. Lett. 205B:407, 1988; **Measurement of the Inclusive K_S Branching Fraction in $\tau^{\pm}$ Decay**
Tsertos 88	Phys. Lett. 207B:273, 1988; **Sensitive Search for Neutral Resonances in Bhabha Scattering around 1.8 MeV/c^2**
Tsertos 88B	Z. Phys. A331:103, 1988; **New Limits for Resonant Bhabha Scattering around the Invariant Mass of 1.8 MeV/c^2**
Tsertos 89B	Phys. Rev. D40:1397, 1989; GSI-89-21; **High Sensitivity Measurements of the Excitation Function for Bhabha Scattering at MeV Energies**

See the legend on page 7.

Tsertos 89C Nucl. Instr. and Meth. A284:54, 1989; GSI-89-33;
Search for Resonant Bhabha Scattering at MeV Energies

Tsertos 91 Phys. Lett. 266B:259, 1991; GSI-91-21;
Experimental Exclusion of Neutral Resonances in Bhabha Scattering at MeV Energies

Tsertos 91B Z. Phys. A342:79, 1992; GSI-91-22;
Systematic Studies of Positron Production in Heavy-Ion Collisions near the Coulomb Barrier

Tsipolitis 90 DESY-F15-90-01;
$\omega\ \omega$ and $\rho(770)^+\ \rho(770)^-$ Production in Two Photon Interactions at ARGUS

Tsuboyama 88 Nucl. Phys. A486:669, 1988;
Study of the $n\ p \to p\ p\ \pi^-$ Reaction in the Incident Neutron Momentum Range 1.0 – 1.9 GeV/c

Tsuboyama 92 KEK-92-172;
Recent Results from TRISTAN

Tsuchiaki 90 Phys. Lett. 236B:81, 1990;
Search for Neutral Boson in Orthopositronium Decay

Tufail 90 Phys. Rev. D42:2187, 1990;
Nuclear Interactions at 340 GeV Pion

Tufail 90B Nuovo Cim. 103A:1435, 1990;
Clustering in Multiparticle Production at 340 GeV/c Pion-Nucleus Interactions

Tufail 91 Int. Jour. Mod. Phys. A6:929, 1991;
Particle Production in π^- Nucleus Collisions at 340 GeV/c

Tufail 92 Nuovo Cim. 105A:439, 1992;
A Study of Pion-Nucleon Interactions in Emulsion

Tuominiemi 90 Acta Phys. Polon. B21:327, 1990;
Search for Top Quark in UA1 and in the Other Hadron Collider Experiments

Turkevich 91 Phys. Rev. Lett. 67:3211, 1991;
Double β Decay of ^{238}U

Turkot 88 FERMILAB-CONF-88-199-E;
Quark Gluon Plasma — Overview and Experimental Results from E-735

Turkot 90 FERMILAB-CONF-90-205-E;
A Quark-Gluon Plasma Search in $\bar{p}\ p$ at $\sqrt{s}$ = 1.8 TeV

Turner 88 Phys. Rev. Lett. 60:1797, 1988;
Axions from SN1987A

Turner 90 Phys. Rept. 197:67, 1990;
Windows on the Axion

Turner 91 RALT-126;
Tests of QCD at the Z^0 Resonance

Tzamarias 90 FERMILAB-PUB-90-63-E;
$J/\psi(1S)$ Production in $\bar{p}$ nucleon and π^- nucleon Interactions at 125 GeV/c and a Determination of the Gluon Structure Functions of the $\bar{p}$ and π^-

Uehara 91 Phys. Lett. 266B:188, 1991; KEK-91-56; HUPD-9109; KUNS-1073; OULNS-91-02; TMUP-HEP-91-11;
Search for $\chi_{c2}(1P)$ Production in Two-Photon Processes

Unal 90 LAL-90-36;
Search for New Particle with UA2

Unal 91 LAL-91-13;
Mesure de la Masse du $W^\pm$ avec UA2

Underwood 89 IFVE-89-55;
The First Results of FNAL Polarized Program (Experiment E-581/E-704)

Unno 88 KEK-88-64;
Recent Result from VENUS at TRISTAN

Unno 90 KEK-90-150;
Experimental Study of Color Degree of Freedom of Gluons in $e^+\ e^-$ Annihilations at $\sqrt{s}$ Around 60 GeV

Usher 92 Phys. Rev. D45:3961, 1992; SLAC-PUB-5726;
A Precision Measurement of the Branching Ratio $K^+ \to \pi^+\ \pi^0/K^+ \to \mu^+\ \nu_\mu$

Ushida 88 Phys. Lett. 206B:380, 1988;
Production Characteristics of Charmed Particles in Neutrino Interactions

Ushida 88B Phys. Lett. 206B:375, 1988;
Cross Section for Neutrino Production of Charmed Particles

Vandervelde 89 Phys. Rev. D39:1492, 1989;
Possible Evidence for a New Particle from SN1987A

Vane 92 Phys. Rev. Lett. 69:1911, 1992;
Electron-Positron Pair Production in Coulomb Collisions of Ultrarelativistic Sulphur Ions with Fixed Targets

Vanhecke 91 Nucl. Phys. A525:227C, 1991;
Measurement of Kaons in the HELIOS Experiment

Vankooten 90 SLAC-367;
Searches for New Quarks and Leptons in Z^0 Boson Decays

Vankooten 90B SLAC-PUB-5246;
Searches for New Particles Produced in Z^0 Boson Decay

Vapenikova 88 Z. Phys. C37:251, 1988;
Electroproduction of Single Charged Pions from Deuterium at Q^2=1 GeV^2 in the Resonance Region

Vartapetyan 89 YERE-1151(28)-89;
The Longitudinal and Transverse Response Functions of the ^{12}C Nucleus at Q=600 and 660 MeV/c

Vartapetyan 90 Vopr. At. Nauki i Techn. ser. Yad. 9:35, 1990;
Investigation of Longitudinal and Transverse Components of $e^-\ ^{12}C \to e^-$ X Reaction Cross Section in the Quasielastic Peak Region

Vasenko 88 ITEP-88-75;
Double-β Experiment with Enriched Germanium Detector

Vasenko 89 Mod. Phys. Lett. A5:1299, 1990; ITEP-89-178;
New Results in the ITEP/YEPI Double β Decay Experiment with Enriched Germanium Detector

Vashkevich 88 Yad. Phys. 47:1054, 1988;
Experimental Study of High-Energy EAS Muons

Vasserman 87B Yad. Phys. 47:1635, 1988; Sov. J. Nucl. Phys. 47:1035, 1988; NOVO-87-120;
Observation of $\rho(770)^0 \rightarrow \pi^+ \pi^- \gamma$ Decay

Vasserman 88 Yad. Phys. 48:753, 1988;
Search for $\rho(770)^0 \rightarrow \pi^+ \pi^- \pi^0$ Decay

Vecko 89 Czech. J. Phys. B39:297, 1989; FZU-8-88;
Production of the Charmed Baryon Λ_c^+ in Neutron-Proton Interactions

Vejcik 92 FERMILAB-CONF-92-361-E;
Measurement of the Bottom Quark Cross Section in $\bar{p}\,p$ Collisions Using the Exclusive Decay $B^0 \rightarrow J/\psi(1S)$ $K^*(892)^0$

Velichko 88 Yad. Phys. 47:1185, 1988;
Elastic p deuteron Scattering at Small Angles in the Energy Range of 700 – 1000 MeV

Venema 92 Phys. Rev. Lett. 68:135, 1992;
Search for a Coupling of the Earth's Gravitational Field to Nuclear Spins in Atomic Mercury

Verkerk 91 DPHPE-91-20;
Search for Superheavy Hydrogen in Sea Water

Verluyten 91 Phys. Lett. 260B:456, 1991;
Study of Factorial Moments in Neutrino Charged Current Interactions on Neon and Deuterium

Vershinsky 90 Pisma Zh. Eksp. Teor. Fiz. 51:82, 1990; Jetp Lett. 51:94, 1990;
Observation of the Reactor Antineutrino Interaction with Deuteron in the Neutral and Charged Current Channels on the Rovno AES

Vesna 89 Yad. Phys. 52:620, 1990; LENI-89-1560;
The Observation and Analysis of P-violating Effects such as $\Sigma_N \times P_\gamma$ in the Integral γ-Spectra from the Reactions $n\ ^{113}Cd \rightarrow \gamma\ ^{114}Cd$, and $n\ ^{56}Fe \rightarrow \gamma\ ^{57}Fe$

Vesna 90 Pisma Zh. Eksp. Teor. Fiz. 52:660, 1990;
The Investigation of P-violating Effects in the Reaction $n\ ^6Li \rightarrow\ ^4He\ ^3H$ with Polarized Neutrons

Vesztergombi 88 Z. Phys. C38:125, 1988;
First Results on Strangeness Production in 60 and 200 GeV/Nucleon Heavy Ion Reactions from the NA35 Streamer Chamber

Vetterli 92 Nucl. Phys. A548:541, 1992;
$\pi^+ \pi^-$ Coincidence Measurement in the ^4He (π^+, $\pi^+ \pi^-$) Reaction at T_{π^+} =280 MeV

Victorov 90 Yad. Phys. 52:494, 1990; ITEP-90-7;
Investigation of Hyperon Yield in Proton Nucleus Interactions at the Energy of 70 GeV

Vidyakin 89 Pisma Zh. Eksp. Teor. Fiz. 49:130, 1989; Jetp Lett. 49:151, 1989;
Observation of the Weak Charge Current in the Interaction of the Reactor Antineutrino with Deuteron

Vidyakin 89B Pisma Zh. Eksp. Teor. Fiz. 49:646, 1989; Jetp Lett. 49:740, 1989;
Investigation of the Antineutrino-Electron Scattering with the Help of Organofluoric Scintillator Detector

Vidyakin 90 Pisma Zh. Eksp. Teor. Fiz. 51:245, 1990; Jetp Lett. 51:279, 1990;
Observation of the Weak Neutral Current in the Interaction of the Reactor Antineutrino with Deuteron

Vidyakin 90B Zh. Eksp. Teor. Fiz. 98:764, 1990;
Experimental Limits on the Neutrino Oscillation Parameters for Reactor Antineutrinos

Vidyakin 91 1:85, 1991;
Interactions of Reactor Antineutrinos and Constraints on Neutrino Oscillations Parameters

Vidyakin 92 Pisma Zh. Eksp. Teor. Fiz. 55:212, 1992;
Limitations on the Magnetic Moment and Charged Radius of the Electron Antineutrino

Vilain 92 Phys. Lett. 281B:159, 1992; CERN-PPE-92-43;
Neutral Current Coupling Constants from Neutrino- and Antineutrino-Electron Scattering

Vilain 93 CERN-PPE-93-13;
Measurement of Differential Cross Sections for Muon-Neutrino Electron Scattering

Villari 91 Phys. Lett. 268B:345, 1991;
Measurement of Reaction Cross Sections for Neutron-rich Exotic Nuclei by a New Direct Method

Vinitsky 91 Yad. Phys. 54:1636, 1991;
Multiparticle Azimuthal Correlations in Carbon-Carbon Interactions at 4.2 GeV/c per Nucleon

Vinson 90 KEK-90-80;
A Search for Charged Higgs Boson in $e^+ e^-$ Annihilation Using the AMY Detector at $\sqrt{s}$=50 – 61.4 GeV

Virchaux 90 SACLAY-DPHPE-90-20;
Present Status and Future of Structure Function Measurements in Deep Inelastic Scattering

Virchaux 92 DAPNIA-SPP-92-30;
Nucleon Structure Functions

Virodov 89 Vopr. At. Nauki i Techn. ser. Yad. 2:9, 1989;
Experiment on the Dirac Monopole Search at the CERN Accelerator

Virtue 90 Nucl. Phys. A517:509, 1990; TRI-PP-90-10;
Photon Asymmetry in Radiative Muon Capture on Calcium

Viryasov 89 JINR-P1-89-511;
Momentum and Angular Distributions of π^- Mesons Produced in deuteron C Interactions at 1 GeV/c

Viryasov 90 JINR-P1-90-521;
General Characteristics of π^- Mesons Produced in deuteron C, He C Interactions at 1 GeV/N and 3 GeV/N

Viryasov 91B JINR-P1-91-455;
π-Meson Production in the Interaction of Deuterons at 1 GeV per Nucleon with Carbon and Beryllium Extended Targets

Viryasov 92 JINR-P1-92-286;
π-Meson Production in the Interaction of Deuterons and Alpha-Particles with Carbon and Beryllium Extended Targets at 1.0, 2.0 and 3.3 GeV per Nucleon

Vlasov 88 Yad. Phys. 52:489, 1990; ITEP-88-101;
Measurement of the Correlation Function of the Three Cumulative Baryons

Vlasov 89 ITEP-89-11;
Measurement of the Correlation Function of the Cumulative Protons and Neutrons

Vlasov 89B Yad. Phys. 50:712, 1989;
Study of p deuteron, $p\ ^3H$ and deuteron deuteron Correlation Functions

Vlasov 90 ITEP-90-63;
Investigation of Pion Correlations with Pions and Cumulative Baryons in Proton-Nucleus Interactions at 7.5 GeV/c

See the legend on page 7.

Vlasov 90B ITEP-90-57;
Analysis of Experimental Data on Correlation of Cumulative Particles

Vlasov 92 Yad. Phys. 55:2468, 1992;
Correlations between Two π^+ Mesons and between π^+ Meson and Cumulative Baryons in Proton-Nucleus Interactions at 7.5 GeV/c

Voitsekhovsk 92 NOVO-92-19;
Measurement of the Tensor Analyzing Power T_{20} and T_{22} in the Deuteron Photodisintegration

Vokal 88 Yad. Phys. 50:1046, 1989; JINR-P1-88-215;
Spectra of $\pi^{\pm}$ Mesons and Protons in Central and Peripheral Collision of p, ^{12}C, ^{22}Ne with Photoemulsion at 4.5 GeV/c

Vokal 91 JINR-P1-91-85;
The Production of Two Multicharged Fragments in Fragmentation of ^{28}Si on Photoemulsion Nuclei

Volkov 92 Jetp Lett. 55:610, 1992; IFVE-92-52;
Angular Dependence of Parton-Parton Scattering Extracted from Hadron Pair Production in $p\,p$ Collisions at $\sqrt{s}$=11.5 GeV

Vonfeilitzsc 88 Phys. Lett. 200B:580, 1988;
Limits on Neutrino Stability from the γ Ray Flux Measured in Coincidence with Neutrinos from SN1987A

Vonfrankenbe 89 CERN-EP-89-155;
Progress in Hyperon Production at LEAR

Vongersdorff 89 Phys. Rev. C39:1385, 1989;
Single-Particle and Multiparticle Analysis of Nucleus-Nucleus Collisions at 14.6, 60, and 200 GeV/nucleon

Vonreden 90 Phys. Rev. C41:1084, 1990;
Quasielastic Electron Scattering and Coulomb Sum Rule in ^{4}He

Vonzanthier 90 Phys. Rev. D43:34, 1991; SLAC-PUB-5213; LBL-28859;
Measurement of the Total Hadronic Cross Section in $e^+\,e^-$ Annihilation at $\sqrt{s}$=29 GeV

Vorobiev 88B Phys. Lett. 208B:146, 1988;
New Limit on the Arion Interaction Constant

Vorobiev 88C Yad. Phys. 48:436, 1988; Sov. J. Nucl. Phys. 48:273, 1988;
Upper Limit on the Electron Widths of C-even Mesons: $\eta'(958)$, $f_0(975)$, $f_2(1270)$, $f_0(1400)$, $a_0(980)$, $a_2(1320)$

Vorobiev 88D ITEP-88-72;
Soft π^+ Mesons in p nucleus and π^- nucleus Interactions

Vorobiev 88E ITEP-88-113;
The Polarization of Cumulative Λ's Flying from C, Al, Cu, Cd, Pb Nucleus at 90 Degrees in l.s.

Vorobiev 89 NOVO-89-31;
Preliminary Results of the Search for Exotic Long Range Interaction with Violation of T Invariance

Vorobiev 89B Pisma Zh. Eksp. Teor. Fiz. 49:584, 1989; Jetp Lett. 49:670, 1989;
Soft Pion Production in p nucleus Interactions

Vorobiev 89C ITEP-89-27;
The Results of Electronic Experiment on the Investigation of the Reaction ($\pi^{\pm}$, p) A(C, Al, Cu, Cd, Pb) $\rightarrow$ Λ X

Vorobiev 90 ITEP-90-5;
Cumulative $\Delta(1232\,P_{33})$ Production in p A Interactions at 7.5 GeV/c

Vorobiev 90B Yad. Phys. 51:135, 1990;
Search for Narrow Diproton Resonance

Vorobiev 91 Yad. Phys. 53:732, 1991; ITEP-91-35;
Cumulative Λ Particles: Nuclear Scaling and Search for Baryon Rich Quark-Gluon Plasma

Vorobiev 92 LNPI-92-1812;
Quasi-Elastic Scattering of 1 GeV Protons on ^{28}Si and ^{34}S Nuclei

Voronin 88 ITEP-88-117;
The Creation of Antiprotons with Momentum from 1.25 to 5 GeV/c in Interactions of Protons with Be, Al, Cu and Ta Nucleus at 10.1 GeV/c

Voronko 88 JINR-P1-88-294;
Generation of Neutrons in a Lead Target by Protons, Deuterons, and Alpha Particles with 4.5 GeV/c per Nucleon Momentum

Vorontsov 88B ITEP-88-11;
A-dependence of Proton's Fragmentation with Energy 9.2 GeV on Nucleus

Vovchenko 89 Yad. Phys. 49:720, 1989;
Polarization Parameters A_{000n} and A_{00nn} in Proton Proton Elastic Scattering at 690 – 890 MeV

Vovchenko 89B Yad. Phys. 50:1005, 1989;
Energy Dependence of Polarization Transfer Parameter in $p\,p$ Scattering

Vuaridel 88 Nucl. Phys. A484:34, 1988;
Experimental Investigation of Charge Symmetry Breaking Effects in the Reaction ^{4}He (deuteron,^{3}He) ^{3}H between E_d=32 and 50 MeV

Wachs 89 Z. Phys. C42:33, 1989; DESY-88-111; SLAC-PUB-4691;
The Electron Spectrum from B Meson Decays

Wachsmuth 91 CERN-PPE-91-145;
Determination of the Strong Coupling Constant from $e^+\,e^-$ Collisions at LEP

Wada 92 Nucl. Phys. A539:316, 1992;
Mechanisms of Non-Equilibrium Light-Particle Emission in ^{32}S+Ag Reactions at 30 A MeV

Wada 92B Nucl. Phys. A548:471, 1992;
Dynamical Aspects of Intermediate Mass Fragment Emission in the Reaction of ^{32}S Ag at 30 A MEV

Wagner 89 CDF-PUB-CDFR-1033;
Search for Supersymmetric Particles at CDF

Wagner 89B Phys. Rev. Lett. 64:1095, 1990; SLAC-PUB-5107; LBL-27839; COLO-HEP-198;
Measurement of the B^0 Meson Lifetime

Wainer 91 FERMILAB-CONF-91-138-E;
Jet Results from CDF

Wainer 91B FERMILAB-CONF-91-249-E;
Inclusive Jet Cross Sections and Jet Shapes at CDF

Walker 89 Phys. Lett. 224B:353, 1989; Phys. Lett. 240B:522, 1990;
Measurement of the Proton Elastic Form Factors for Q^2=1 – 3 (GeV/c)^2

Walker 90 KEK-90-60;
Bose-Einstein Correlations in Pion Production at TRISTAN

Walker 91 Phys. Lett. 255B:155, 1991;
Vector Boson Production in Hadron Nucleus Collisions

Wallace 91 Nucl. Phys. A532:617, 1991;
Differential Cross Section for the Reaction deuteron (γ, p) n from 133 to 158 MeV

Wasiliev 90 Pisma Zh. Eksp. Teor. Fiz. 51:550, 1990; Jetp Lett. 51:622, 1990;
Observation of the Event Excesses in the Experiment on the Search for Double β Decay of ^{100}Mo

Wasserbaech 89 SLAC-PUB-5012;
Results on D and $D_S^{\pm}$ Decays from MARK-III

Wasserbaech 89B SLAC-345;
Hadronic Decays of the $D_S^{\pm}$ Meson

Watson 89 Phys. Rev. C40:22, 1989;
^{7}Li (p, n) ^{7}Be and ^{12}C (p, n) ^{12}Nit Reaction at 200, 300, and 400 MeV

Watson 90 RALT-106;
Event Reconstruction and a Study of Electroweak Effects in $e^+ e^- \to \mu^+ \mu^- (\gamma)$ at OPAL

Watts 90 FERMILAB-CONF-90-112-E;
Properties of Inclusive $W^{\pm}$, Z^0 Events in $\bar{p}\, p$ Collisions at 1.8 TeV

Webber 90 Phys. Rev. C41:520, 1990;
Total Charge and Mass Changing Cross Sections of Relativistic Nuclei in Hydrogen, Helium and Carbon Target

Webber 90B Phys. Rev. C41:533, 1990;
Individual Charge Changing Fragmentation Cross Sections of Relativistic Nuclei in Hydrogen, Helium, and Carbon Targets

Webber 90C Phys. Rev. C41:547, 1990;
Individual Isotopic Fragmentation Cross Sections of Relativistic Nuclei in Hydrogen, Carbon, and Helium Targets

Weber 89 Phys. Lett. 230B:31, 1989; TRI-PP-89-58;
Multi-Nucleon Pion Absorbtion in the ^{4}He (π^+, $p\, p\, p$) n Reaction

Weber 89B Nucl. Phys. A501:765, 1989;
Two-Nucleon Absorption of π^+ and π^- on ^{3}He Across the Delta-resonance Region

Weber 90 Phys. Rev. C43:1553, 1991; TRI-PP-90-62;
Multi-Nucleon Pion Absorbtion in the π^+ ^{4}He $\to p\, p\, p\, n$ Reaction

Wegner 90 Z. Phys. C48:393, 1990; DESY-90-069;
Measurement of Two Photon Production of $\rho(770)^0\, \omega$

Weidenauer 90 Z. Phys. C47:353, 1990;
Antiproton-Proton Annihilation at Rest into $\pi^+ \pi^- \eta'$ and $\pi^+ \pi^- \eta$ from Atomic S and D States

Weinstein 89 CALT-68-1591;
Results from the MARK-II at SLC on Decays of the Z^0

Weinstein 93 Phys. Rev. C47:225, 1993;
N^* Electroproduction and Propagation in Nuclei

Weir 89 Phys. Rev. D41:1384, 1990; SLAC-PUB-4999; CALT-68-1559;
Upper Limits on $D^{\pm}$ and $B^{\pm}$ Decays to Two Leptons Plus $\pi^{\pm}$ or $K^{\pm}$

Weir 89B Phys. Lett. 240B:289, 1990; SLAC-PUB-5146; CALT-68-1604;
A Reanalysis of B^0-$\bar{B}^0$ Mixing in $e^+ e^-$ Annihilation at 29 GeV

Weir 90 CALT-68-1603;
A Measurement of B^0-$\bar{B}^0$ Mixing in $e^+ e^-$ Annihilation at 29 GeV

Weitz 92 Phys. Rev. Lett. 68:1120, 1992;
Precise Optical Lamb Shift Measurements in Atomic Hydrogen

Welch 92 Phys. Rev. Lett. 69:2761, 1992;
Electroproduction of π^0 on the Proton near Threshold

Weller 88 Phys. Lett. 213B:413, 1988;
The Energy Dependence of Polarization Observables in the deuteron deuteron $\to$ ^{4}He γ Reaction

Wenninger 92 GEVA-THESIS-2544;
Mesure de Parametres Electro-Faibles du Z^0 avec la Reaction $e^+ e^- \to e^+ e^- (\gamma)$

Wenzel 91 FERMILAB-CONF-91-264-E;
B-Physics at CDF and Prospects for the Next Run

Wesseling 92 Nucl. Phys. A547:519, 1992;
Electron-Induced Proton Knock-out from ^{30}Si, ^{31}Ph and ^{32}S

Westenius 90 Nucl. Phys. A509:630, 1990;
Light-Particle Emission and Projectile Breakup in 36 A MeV ^{12}C Induced Collisions

Westphal 91 Phys. Rev. C44:1687, 1991;
Measurements of Cross Sections for Charge Pickup by Relativistic Holmium Ions on Heavy Targets

White 91 FERMILAB-CONF-91-268-E;
Measurement of the $\bar{p}\, p$ Total Cross Section at $\sqrt{s}$=1800 GeV

Whitehouse 89 Phys. Rev. Lett. 63:1352, 1989;
Radiative Kaon Capture at Rest in Hydrogen

Whitlow 90 SLAC-357;
Deep Inelastic Structure Functions from Electron Scattering on Hydrogen, Deuterium, and Iron at 0.6 GeV^2 $< Q^2 <$ 30.0 GeV^2

Whitlow 90B Phys. Lett. 250B:193, 1990; SLAC-PUB-5284; UR-1102;
A Precise Extraction of $R = \sigma_L/\sigma_T$ from a Global Analysis of the SLAC Deep Inelastic $e^- p$ and e^- deuteron Scattering Cross-Sections

Whitlow 91 Phys. Lett. 282B:475, 1992; SLAC-PUB-5442;
Precise Measurements of the Proton and Deuteron Structure Functions from a Global Analysis of the SLAC Deep Inelastic Electron Scattering Sections

Widmann 91 Z. Phys. A340:209, 1991; GSI-91-20;
Limits for Two-Photon and $e^+ e^-$ Decay Widths of Positron-Electron-Scattering Resonances for $\sqrt{s}$=1.78 to 1.92 MeV

See the legend on page 7.

Wiedner 89 Phys. Rev. D40:3568, 1989;
Hidden Strangeness in the Proton? Determination of the Real Part at the Isospin-Even Forward-Scattering Amplitude of Pion-Nucleon Scattering at 5.43 MeV

Wiencke 92 Phys. Rev. D46:3708, 1992; FERMILAB-PUB-92-67-E;
Observation of Coulomb Effects in Production of $\pi^+ \pi^-$, $p \pi^-$,and $K^+ K^-$ Pairs in $p p$ Collisions at 27.5 GeV/c

Wightman 88 Phys. Rev. D38:3365, 1988;
$\pi^- p$ Charge-Exchange Analyzing Power from 547 to 687 MeV/c

Wilczynska 90 Phys. Rev. D41:3336, 1990;
Observation of Associated Bottom Production and Decay in High-Energy Hadron Interaction

Wilkes 91 UWSEA-PUB-91-10;
Fluctuations and Correlations in 200 A GeV nucleus nucleus Collisions

Williams 88 Phys. Rev. D38:1365, 1988; DESY-88-033; SLAC-PUB-4573;
Formation of Pseudoscalars π^0, η and η' in the Reaction $\gamma \gamma \rightarrow \gamma \gamma$

Williams 89B Phys. Lett. 216B:11, 1989;
Pion Double Charge Exchange Above the $\Delta(1232\, P_{33})$ Resonance

Willis 89 Phys. Lett. 229B:33, 1989;
Experimental Search for B=2, T=2 Bound States Around the π nucleon nucleon Threshold

Willocq 91 Z. Phys. C53:207, 1992; IHEP-91-03;
Neutral Strange Particle Production in Antineutrino-Neon Charged Current Interactions

Willocq 92 TUHEP-92-02;
Coherent Production of Single Pions and $\rho^\pm$ Mesons in Charged Current Interactions of Neutrinos and Antineutrinos on Neon Nuclei at the FERMILAB Tevatron

Willocq 92B Phys. Rev. D47:2661, 1993; DOE-ER-40702-1;
Coherent Production of Pions and $\rho(770)$ Mesons in Neutrino Charged Current Interactions on Neon Nuclei at the FERMILAB Tevatron

Winer 91B FERMILAB-CONF-91-276;
The Lepton Asymmetry in $W^\pm$ Production and Decay at CDF

Winer 91C LBL-30221;
The $W^\pm$ Boson Transverse Momentum Spectrum in Proton-Antiproton Collisions at $\sqrt{s}$ = 1.8 TeV

Winger 90 Phys. Rev. C41:2931, 1990;
^{12}C (^{28}Si, X) ^{11}C Cross Section at 13.4 GeV/Nucleon

Winstein 89 EFI-89-60;
A Measurement of ϵ'/ϵ by E731

Winstein 91 EFI-91-11;
CP Violation in the Decays of the Neutral Kaon

Witherell 88 Nucl. Phys. B3:239, 1988;
High-Energy Photoproduction

Wittek 88 Z. Phys. C40:231, 1988; MPI-PAE-EXP-EL-188; CERN-PRE-88-021;
Production of π^0 Mesons and Charged Hadrons in $\bar{\nu}$ Neon Charged Current Interactions

Wittek 89 Z. Phys C44:175, 1989; MPI-PAE-EXP-EL-201; CERN-PRE-89-043;
Production of $\rho(770)^+$, $\rho(770)^-$, $\rho(770)^0$, η, ω and $f_2(1270)$ Mesons in Antineutrino-Neon and Neutrino-Neon Charged Current Interactions

Wolbers 90 FERMILAB-CONF-90-233-E;
Hadronic Final States in 490 GeV Muon Deep Inelastic Scattering

Wolf 92 DESY-92-190;
First Results from HERA

Wong 91 Phys. Rev. Lett. 67:1218, 1991;
New Limit on Neutrinoless Double β Decay in ^{136}Xe with a Time Projection Chamber

Wood 88 Phys. Rev. D37:3091, 1988; SLAC-PUB-4374; LBL-23812;
Determination of α_S from Energy-Energy Correlation in $e^+ e^-$ Annihilation at 29 GeV

Wood 90 RALT-112;
Determination of the Number of Light Neutrino Generations

Woods 88 Phys. Rev. Lett. 60:1695, 1988;
First Result on a New Measurement of ϵ'/ϵ in the Neutral Kaon System

Woolcock 91 Mod. Phys. Lett. A6:2579, 1991;
Consistency of β-Decay Data

Wormser 88 Phys. Rev. D38:1001, 1988; SLAC-PUB-4536; LBL-24793;
Observation of $J/\psi(1S)$ Production in $e^+ e^-$ Annihilation at 29 GeV

Wormser 88B Phys. Rev. Lett. 61:1057, 1988; LBL-25072; SLAC-PUB-4554;
η and η' Production in $e^+ e^-$ Annihilation at 29 GeV: Indications for the $D_S^\pm$ Decays into $\eta \pi^\pm$ and $\eta' \pi^\pm$

Wormser 89 LAL-89-10;
Selected Topics from NA14′: Charm Production and New Results on $D_S^\pm$ Decays

Wormser 89B LAL-89-27;
NA14′ Results on $D_S^\pm$ Decays

Wormser 90 LAL-90-37;
Point-Like Interactions of Photons in High p_T Photoproduction

Wormser 90B LAL-90-28;
Search for New Particles with DELPHI

Wright 91 TRI-PP-91-61;
Radiative Muon Capture on Hydrogen

Wu 89 Phys. Rev. D41:2339, 1990; SLAC-PUB-5128; LBL-27924;
Radiative $\tau^\pm$ Production and Decay

Wu 91 Phys. Lett. 273B:177, 1991;
Measurement of the B^* Cross Section at $\sqrt{s}$=10.61 to 10.70 GeV

Wu 92 Phys. Rev. Lett. 69:1729, 1992;
Search for Low-Mass States in Elastic $e^+ e^-$ Scattering

Wuensch 89 UR-1107; ER-13065-574;
Laboratory Limits on Axions and Other Weakly-Coupled Nearly Massless Particles

Wuensch 89B Phys. Rev. D40:3153, 1990; FERMILAB-PUB-89-185-E;
Results of a Laboratory Search for Cosmic Axions and Other Weakly-Coupled Light Particles

Yagi 90 KEK-90-143;
Production and Polarization of Strange Quarks from Nuclear Matter

Yamada 91 Phys. Rev. D44:617, 1991; KEK-91-81; NGTHEP-91-4; ICRR-Report-246-91-15; KOBE-AP-91-06; OULNS-91-07; TIT-HPE-91-3; UPR-0202E;
Measurements of the Charge Ratio and Polarization of 1.2 TeV/c Cosmic-Ray Muons with the KAMIOKANDE-II Detector

Yamanaka 89 FERMILAB-CONF-89-35-E;
A CP Violation and Rare Kaon Decay Experiment at Fermilab

Yamanaka 90 FERMILAB-CONF-90-14-E;
A New Measurement of CP Violation Parameter ϵ'/ϵ

Yamauchi 88 KEK-88-63;
Recent Result from TOPAZ at TRISTAN

Yamauchi 90 KEK-90-135;
Electroweak Physics at TRISTAN

Yamazaki 89 Phys. Rev. Lett. 63:1590, 1989;
Trapping of Negative Kaons by Metastable States During the Atomic Cascade in Liquid Helium

Yanagisawa 91 Phys. Rev. Lett. 66:2436, 1991;
B Semileptonic Decays at the $\Upsilon(4S)$ and the $\Upsilon(10860)$

Yavin 89 TRI-PP-89-109;
Antiproton-Nucleus Experiments at LEAR and KAON

Yeh 90 FERMILAB-CONF-90-138-E;
Top Quark and SUSY Searches at CDF

Yeh 92 FERMILAB-CONF-92-76-E;
CDF: Recent Results and Future Prospects

Yen 91 Phys. Lett. 269B:59, 1991;
Search for Resonant Structure in the p Cu $\rightarrow \pi^{\pm}$ X Reaction

Yen 91B Phys. Rev. Lett. 66:1959, 1991;
Asymmetry Measurement of Pion Elastic Scattering from Polarized ^{13}C in the Energy Region of the P_{33} Resonance

Yennello 90 Phys. Lett. 246B:26, 1990;
Complex Fragment Emission from ^{3}He Ag System between .48 and 3.6 GeV

Yepes 91 CERN-PPE-91-157;
Soft QCD Physics from LEP

Yokosawa 90 ANL-HEP-CP-90-101;
Experiments with Fermilab Polarized Proton and Anti-proton Beams

Yokosawa 90B Int. Jour. Mod. Phys. A5:3089, 1990;
New Experimental Results for Intermediate- and High-Energy Polarization Asymmetry

Yokosawa 91 ANL-HEP-CP-91-105;
Experimental Results for High-Energy Polarization Asymmetry

Yokosawa 92 ANL-HEP-CP-92-29;
Experimental Results with the FERMILAB Polarized Beams

Yokota 89 Phys. Rev. C40:1069, 1989;
Broad Component of the (π^+, $2p$) Angular Correlation

Yonezawa 91 Phys. Lett. 264B:212, 1991;
Study of the $e^+ e^- \rightarrow \mu^+ \mu^- \gamma$ Reaction at Center-of-Mass Energies Between 54 and 64 GeV

Yonnet 90 TRI-PP-90-88; LNS-PH-90-1;
Measurements of Angular Distributions of Absolute Cross Sections and Analyzing Powers of the Reaction $p\ p \rightarrow$ deuteron π^+ between 1.3 and 2.4 GeV

Yoshida 89 Phys. Rev. D39:3516, 1989;
High Resolution Measurement of Massive Dielectron Production in 800 GeV Proton Beryllium Collisions

Yoshida 91 Nucl. Phys. A541:443, 1992; KEK-91-146;
Energy Dependence of the Analyzing Power for the $p\ p \rightarrow \pi^+$ deuteron Reaction in the Energy Region 500 – 800 MeV

You 89 BIHEP-EP-89-1;
A Search for Neutrinoless Double β Decay of ^{48}Ca

You 91 Phys. Lett. 265B:53, 1991; BIHEP-EP-DBD-91-1;
A Search for Neutrinoless Double β Decay of ^{48}Ca

Yuldashev 90 WISC-EX-90-307;
Observation of Cumulative Isobars in p ^{20}Ne Interactions at 300 GeV/c

Yuldashev 90B Phys. Rev. D43:2792, 1991; WISC-EX-90-308;
Neutral Strange Particle Production in p ^{20}Ne and p n Interactions at 300 GeV/c

Yuldashev 90C Phys. Rev. D43:2803, 1991; WISC-EX-90-309;
γ Production in p ^{20}Ne and p n Interactions at 300 GeV

Yuldashev 90D Phys. Rev. D46:45, 1992; WISC-EX-90-310;
Cumulative Particle Production in p ^{20}Ne Interactions at 300 GeV

Yun 90 FERMILAB-CONF-90-220-E;
Recent QCD Results from CDF

Yuzuki 91 Phys. Lett. 267B:309, 1991; KEK-91-63; HUPD-9110; KUNS-1078; OULNS-91-04; TMUP-HEP-91-12;
Search for Charged Scalars in $e^+ e^-$ Annihilation up to 64 GeV c.m. Energy

Zakharov 90 YERE-1287(73)-90;
The Study of ^{209}Bi Fission into Two and Three Fragments with Comparable Masses under the Effect of Bremsstrahlung Photons with Maximum Energy 4.5 GeV

Zatsepin 89 Yad. Phys. 49:426, 1989;
Study of Muon Inelastic Scattering with 100-ton Scintillation Detector of the INR Artyomovsk Scientific Station

Zdesenko 92 KINR-92-15;
Experimental Limits on the Probabilities of Double Beta Processes

Zelinski 88 Yad. Phys. 47:744, 1988;
Azimuthal Correlations and Deuteron Production in Proton Interactions with Light Nuclei

Zenoni 92 Yad. Phys. 55:1459, 1992;
Observation of Structures in Four Pion Invariant Mass in Antiproton-^{4}He and Antiproton-^{3}He Annihilation (Streamer Chamber Data, PS179 Experiment at LEAR)

See the legend on page 7.

Zenoni 92B Yad. Phys. 55:1466, 1992;
Observation of Structures in Four Pion Invariant Mass in Antiproton-^{4}He at Rest (OBELIX Data, PS201 Experiment at LEAR)

Zhang 88 Phys. Rev. Lett. 61:385, 1988;
Experimental Limit on the Flux of Relic Antineutrinos from Past Supernovae

Zhang 92 Phys. Rev. C45:2819, 1992;
$P - A$ in the ^{48}Ca (p, n) ^{48}Sc Reaction at 135 MeV

Zhdanov 91 Pisma Zh. Eksp. Teor. Fiz. 54:311, 1991;
Fission of ^{238}U Nuclei into 3 Fragments with about Equal Masses

Zhdanov 91B LENI-91-1683;
Experimental Study of 1 GeV Proton Fission Processes in ^{238}U Nuclei using Photoemulsion

Zhdanov 91C LENI-91-1693;
Recoil Effects in Nuclear Disintegrations with Multiparticle Emission

Zheng 90 Phys. Rev. D42:737, 1990; KEK-90-5; AMY-90-02;
Charged Hadron Multiplicities in $e^+ e^-$ Annihilation at $\sqrt{s}$=50 to 61.4 GeV

Zhokin 88 ITEP-88-114;
Analysis of Reaction $\pi^+ p \to p \pi^- 2\pi^+$ with Backward π^- in Laboratory System at 4 GeV/c Using OPER Model

Zhokin 89 ITEP-89-80;
Binary Reaction of Baryon Exchange

Zieger 92 Phys. Lett. 278B:34, 1992;
180° Compton Scattering by Proton below the Pion Threshold

Zieger 92B Phys. Lett. 285B:1, 1992;
Forward Photodisintegration of the Deuteron between 20 and 100 MeV Photon Energy

Ziegler 88 Phys. Lett. 206B:151, 1988; CERN-EP-88-05;
Measurement of the Strong-Interaction Shift and Broadening of the Ground State of the $(\bar{p}, p)$ Atom

Zielinska 91 JINR-E1-91-386;
Neutron Emission from Target Nuclei Induced by High Energy Hadronic Projectiles

Zielinsky 88 UUPP-TSL-ISV-88-16;
Enhancements in Two-Nucleon Invariant Masses: A Survey of Experimental Data

Zlatanov 89 JINR-PJ-89-64;
An Impact Parameter Analysis of Antiproton-Proton Elastic and Inelastic Scattering at 22.4 GeV/c

Zlimen 91 Phys. Rev. Lett. 67:560, 1991; RUDER-4-15-91-LEI;
Evidence for a 17 keV Neutrino

Zomer 91 LAL-91-02;
$\tau^\pm$ Polarization Measurement in the $\tau^\pm \to \pi \nu$ Channel

Zomer 91B LAL-91-04;
Mesure de la Polarisation des Leptons Tau a LEP par l'Etude du Canal $\tau^\pm \to \pi \nu$ dans l'Experience ALEPH

Zumberge 91 Phys. Rev. Lett. 67:3051, 1991;
Submarine Measurement of the Newtonian Gravitational Constant

Zybalov 88 Yad. Phys. 47:1505, 1988;
Proton Polarization in γ ^{3}He (^{4}He) $\to p\uparrow$ X Reactions and Quasideutron Model

Zybalov 90 Yad. Phys. 51:32, 1990;
Proton Polarization in Deuterium Photodisintegration at E=200 – 350 MeV

Zybalov 90B Yad. Phys. 51:609, 1990;
A Measurement of Inclusive Proton Polarization in Reaction γ nucleus $\to p$ X on Nuclei ^{6}Li, ^{9}Be, ^{12}C, ^{27}Al

Zybalov 91 Nucl. Phys. A533:642, 1991;
Proton Polarization in Deuteron Photodisintegration in the $\Delta(1232\, P_{33})$-Resonance Region

Zylberajch 91 DPHPE-91-02;
MACHOS, WIMPS or Dust: What is Dark Matter

This index lists papers by beam, target, and beam momentum. The ordering is by beam particle, then by target particle, then beam momentum.

Particle names follow the ordering in the Particle Vocabulary of this compilation. The particle ordering is: gauge bosons, leptons, mesons, baryons, atoms, and nuclei, and within each group the ordering is mainly by increasing mass. However, within mesons and baryons, ordering is nonstrange, strange, charmed, bottom .... To simplify searching in this Index, a short "Table of Contents" of the full Index comes first.

For a given beam, target, and momentum, papers are ordered by year (most recent first), then first author name. For the full reference, see the ID/Reference/Title Index.

In most cases, we give both the equivalent lab momentum for scattering on a fixed target and, in parentheses, the total c.m. energy E_{cm}. However, for colliding beam experiments, we usually only give E_{cm}; we also give only E_{cm} for reactions above 2 TeV/c equivalent lab momentum. When a range of momenta are studied, we list the range, *e.g.* "50 – 70," ordered by its lower end. For some experiments, such as neutrino experiments, the listed range is only approximate.

A question mark means that the indicated information is unknown to us, usually because it was not given in the paper.

Illustrative Key

Beam and Target: see the *Particle Vocabulary* for nomenclature.

Lab Momentum: in GeV/c (not listed for colliding beam experiments).

Document ID: see the *ID/Reference/Title Index* for the full reference.

CM Energy E_{cm}: in GeV, listed in parentheses.

p p	
(63)	Akesson 88D
	Akesson 87
	Akesson 87B
	Akesson 87C
	Akesson 87D
	Akesson 87E
	Chauvat 87
	Smith 85D
(> 433.2)	Linsley 84
p n	
0.1374 – 1.464 (1.883 – 2.243)	
	Bystricky 86D
0.6103 (1.966)	
	Sowinski 87
0.9543 (2.068)	
	Ponting 88
1.463 (2.243)	Barlett 85
6 – 8 (3.63 – 4.111)	
	Soffer 85
21 – 25 (6.424 – 6.984)	
	Saidkhanov 86

This is a short "Table of Contents" of the full Beam/Target/Momentum Index

γ . . . 120
axion . . . 120
ν . . . 120
ν_e . . . 120
$\overline{\nu}_e$ . . . 120
ν_μ . . . 120
$\overline{\nu}_\mu$ . . . 120
$e^\pm$ . . . 120
$\mu^\pm$ . . . 120
μ^- . . . 120
μ^+ . . . 120
heavy-ν . . . 120
q . . . 120
photino . . . 120
higgs$^-$ . . . 120
dark . . . 120
monopole . . . 120
π . . . 120
nucleon . . . 120
p . . . 120
n . . . 120
nuclearite . . . 120
nucleus . . . 120
deuteron . . . 120
^{3}He . . . 120
^{4}He . . . 120
He . . . 120
^{7}Li . . . 120
Fe . . . 120
mult[μ] . . . 120
unspec . . . 120
neutral . . . 120
charged . . . 121
multicharged . . . 121
hadron . . . 121
$\gamma\ \gamma$ . . . 121
$\gamma\ \gamma^*$ . . . 121
γ nucleon . . . 121
$\gamma\ p$ . . . 121
$\gamma\ n$ . . . 121
γ Cs(atom) . . . 121
γ Tl(atom) . . . 121
γ Bi(atom) . . . 121
γ nucleus . . . 121
γ deuteron . . . 121
$\gamma\ ^3$He . . . 121
$\gamma\ ^4$He . . . 122
γ He . . . 122
$\gamma\ ^6$Li . . . 122
$\gamma\ ^7$Li . . . 122
γ Be . . . 122
$\gamma\ ^9$Be . . . 122
$\gamma\ ^{11}$Bor . . . 122
γ C . . . 122
$\gamma\ ^{12}$C . . . 122
γ Nit . . . 122
$\gamma\ ^{14}$Nit . . . 122
$\gamma\ ^{15}$Nit . . . 122
γ O . . . 122
$\gamma\ ^{16}$O . . . 122
γ Al . . . 122
$\gamma\ ^{27}$Al . . . 122
γ Si . . . 122
γ Ca . . . 122
$\gamma\ ^{40}$Ca . . . 122
γ Ti . . . 122
γ Co . . . 122
$\gamma\ ^{59}$Co . . . 122
$\gamma\ ^{60}$Ni . . . 122
$\gamma\ ^{61}$Ni . . . 122
$\gamma\ ^{62}$Ni . . . 122
γ Cu . . . 122
$\gamma\ ^{65}$Cu . . . 122
γ Ge . . . 122
γ Zr . . . 122
γ Nb . . . 122
γ Ag . . . 122
γ Cd . . . 122
γ In . . . 122
$\gamma\ ^{116}$Sn . . . 122
γ Sn . . . 122
$\gamma\ ^{120}$Sn . . . 122
$\gamma\ ^{122}$Sn . . . 122
$\gamma\ ^{124}$Sn . . . 122
γ Xe . . . 122
γ Nd . . . 122
γ Sm . . . 122
γ Ta . . . 122
$\gamma\ ^{184}$Wt . . . 123
γ Au . . . 123
γ Pb . . . 123
$\gamma\ ^{208}$Pb . . . 123
$\gamma\ ^{209}$Bi . . . 123
$\gamma\ ^{235}$U . . . 123
$\gamma\ ^{238}$U . . . 123
$\gamma\ ^{237}$Np . . . 123
$\gamma^*\ p$ . . . 123
higgs p . . . 123
higgs C . . . 123
axion γ^* . . . 123
axion p . . . 123
axion nucleus . . . 123
axion C . . . 123
$\nu\ e^-$ . . . 123
$\nu\ p$ . . . 123
$\nu\ n$ . . . 123
ν nucleus . . . 123
ν deuteron . . . 123
ν Ne . . . 123
ν Fe . . . 123
$\overline{\nu}$ deuteron . . . 123
$\overline{\nu}$ Ne . . . 123
$\overline{\nu}$ Fe . . . 123
$\nu_e\ e^-$ . . . 123
ν_e nucleon . . . 123
$\nu_e\ n$ . . . 123
ν_e nucleus . . . 123
$\nu_e\ ^{12}$C . . . 123
$\nu_e\ ^{37}$Cl . . . 123
$\nu_e\ ^{71}$Ga . . . 123
$\overline{\nu}_e\ e^-$ . . . 123
$\overline{\nu}_e$ nucleon . . . 123
$\overline{\nu}_e\ p$ . . . 123
$\overline{\nu}_e$ nucleus . . . 123
$\overline{\nu}_e$ deuteron . . . 123
$\nu_\mu\ e^-$ . . . 123
$\nu_\mu\ q$ . . . 123
ν_μ nucleon . . . 123
$\nu_\mu\ p$ . . . 124
$\nu_\mu\ n$ . . . 124
ν_μ nucleus . . . 124
ν_μ deuteron . . . 124
$\nu_\mu\ ^{12}$C . . . 124
ν_μ Ne . . . 124
ν_μ Fe . . . 124
$\overline{\nu}_\mu\ e^-$ . . . 124
$\overline{\nu}_\mu\ q$ . . . 124
$\overline{\nu}_\mu$ nucleon . . . 124
$\overline{\nu}_\mu\ p$ . . . 124
$\overline{\nu}_\mu\ n$ . . . 124
$\overline{\nu}_\mu$ nucleus . . . 124
$\overline{\nu}_\mu$ deuteron . . . 124
$\overline{\nu}_\mu$ Ne . . . 124
$\overline{\nu}_\mu$ Fe . . . 125
$\nu_\tau\ e^-$ . . . 125
ν_τ nucleus . . . 125
$\overline{\nu}_\tau\ e^-$ . . . 125
$e^\pm$ nucleus . . . 125
$e^-\ \gamma$ . . . 125
$e^-\ e^-$ . . . 125
e^- nucleon . . . 125
$e^-\ p$ . . . 125
$e^-\ n$ . . . 125
e^- nucleus . . . 125
e^- deuteron . . . 125
$e^-\ ^3$He . . . 125
$e^-\ ^4$He . . . 125
e^- He . . . 125
$e^-\ ^7$Li . . . 125
$e^-\ ^7$Be . . . 125
e^- Be . . . 125
$e^-\ ^9$Be . . . 125
e^- C . . . 125
$e^-\ ^{12}$C . . . 125
$e^-\ ^{15}$Nit . . . 125
e^- Al . . . 125
$e^-\ ^{28}$Si . . . 125
$e^-\ ^{30}$Si . . . 125
$e^-\ ^{31}$Ph . . . 125
$e^-\ ^{32}$S . . . 125
e^- Ca . . . 125
$e^-\ ^{40}$Ca . . . 125
$e^-\ ^{51}$Va . . . 125
$e^-\ ^{50}$Cr . . . 125
$e^-\ ^{55}$Fe . . . 125
$e^-\ ^{56}$Fe . . . 125
e^- Fe . . . 125
$e^-\ ^{58}$Ni . . . 126
e^- Ni . . . 126
e^- Cu . . . 126
$e^-\ ^{64}$Zn . . . 126
$e^-\ ^{71}$Ge . . . 126
$e^-\ ^{78}$Kr . . . 126
$e^-\ ^{84}$Sr . . . 126
$e^-\ ^{93}$Nb . . . 126
$e^-\ ^{92}$Mo . . . 126
$e^-\ ^{96}$Ru . . . 126
e^- Ag . . . 126
$e^-\ ^{106}$Cd . . . 126
$e^-\ ^{112}$Sn . . . 126
$e^-\ ^{120}$Te . . . 126
$e^-\ ^{124}$Xe . . . 126
$e^-\ ^{130}$Ba . . . 126
e^- Ta . . . 126
e^- Wt . . . 126
$e^-\ ^{184}$Os . . . 126
$e^-\ ^{190}$Pt . . . 126
e^- Au . . . 126
$e^-\ ^{235}$U . . . 126
$e^-\ ^{238}$U . . . 126
$e^+\ \gamma$ . . . 126
$e^+\ e^-$ . . . 126
e^+ nucleus . . . 130
e^+ Th . . . 130
$\mu^\pm\ p$ . . . 130
$\mu^\pm$ nucleus . . . 130
$\mu^\pm$ deuteron . . . 130
$\mu^\pm$ Fe . . . 130
$\mu^-\ \gamma^*$ . . . 130
$\mu^-\ p$ . . . 130
μ^- nucleus . . . 130
$\mu^-\ ^3$He . . . 130
μ^- C . . . 130
$\mu^-\ ^{12}$C . . . 130
$\mu^-\ ^{16}$O . . . 130
$\mu^-\ ^{27}$Al . . . 130
$\mu^-\ ^{28}$Si . . . 130
$\mu^-\ ^{40}$Ca . . . 130
μ^- Ti . . . 130
μ^- Fe . . . 130
μ^- Cu . . . 130
μ^- Mo . . . 130
μ^- Sn . . . 130
μ^- Pb . . . 130
$\mu^+\ \gamma^*$ . . . 130
$\mu^+\ e^-$ . . . 131
μ^+ nucleon . . . 131
$\mu^+\ p$ . . . 131
$\mu^+\ n$ . . . 131
μ^+ nucleus . . . 131
μ^+ deuteron . . . 131
μ^+ He . . . 131
$\mu^+\ ^6$Li . . . 131
μ^+ C . . . 131
$\mu^+\ ^{12}$C . . . 131
μ^+ Nit . . . 131
μ^+ Ca . . . 131
$\mu^+\ ^{40}$Ca . . . 131
μ^+ Fe . . . 131
μ^+ Cu . . . 131
μ^+ Sn . . . 131
μ^+ Xe . . . 131
$q\ q$ . . . 131
$q\ \overline{q}$ . . . 131
q Hg . . . 131
u gluon . . . 131
d gluon . . . 131
dark dark . . . 131
dark nucleus . . . 131
monopole p . . . 131
meson$^+\ p$ . . . 131
meson$^+$ Al . . . 132
meson$^+$ Au . . . 132
π nucleus . . . 132
π deuteron . . . 132
π Be . . . 132
π C . . . 132
$\pi\ ^{12}$C . . . 132
π Al . . . 132
π Fe . . . 132
π Cu . . . 132
π Wt . . . 132
$\pi^\pm\ p$ . . . 132
$\pi^\pm$ C . . . 132
$\pi^\pm$ Fe . . . 132
$\pi^\pm$ Pb . . . 132
$\pi^+\ \pi^-$ . . . 132
$\pi^+\ p$ . . . 132
$\pi^+\ n$ . . . 132
$\pi^+\ \Delta(1232\,P_{33})^{++}$ . . . 132
π^+ nucleus . . . 132
π^+ deuteron . . . 132
$\pi^+\ ^3$H . . . 132
$\pi^+\ ^3$He . . . 132
$\pi^+\ ^4$He . . . 132
π^+ He . . . 132
π^+ Li . . . 132
$\pi^+\ ^6$Li . . . 132
$\pi^+\ ^7$Li . . . 133
π^+ Be . . . 133
$\pi^+\ ^9$Be . . . 133
$\pi^+\ ^{11}$Bor . . . 133
π^+ C . . . 133
$\pi^+\ ^{12}$C . . . 133
$\pi^+\ ^{13}$C . . . 133
$\pi^+\ ^{14}$C . . . 133
$\pi^+\ ^{15}$Nit . . . 133
π^+ O . . . 133
$\pi^+\ ^{16}$O . . . 133
$\pi^+\ ^{18}$O . . . 133
$\pi^+\ ^{20}$Ne . . . 133
π^+ Mg . . . 133
π^+ Al . . . 133
$\pi^+\ ^{27}$Al . . . 133
$\pi^+\ ^{28}$Si . . . 133
π^+ Cl . . . 133
$\pi^+\ ^{37}$Cl . . . 133
π^+ Ca . . . 133
$\pi^+\ ^{40}$Ca . . . 133
π^+ Ti . . . 133

This is a short "Table of Contents" of the full Beam/Target/Momentum Index

π^+ ^{51}Va 133
π^+ ^{56}Fe 133
π^+ Fe 133
π^+ Ni 133
π^+ ^{60}Ni 133
π^+ Cu 133
π^+ ^{89}Yt 133
π^+ ^{90}Zr 133
π^+ Rh 133
π^+ Ag 133
π^+ Cd 133
π^+ ^{120}Sn 133
π^+ Wt 133
π^+ Au 133
π^+ Pb 133
π^+ ^{208}Pb 133
π^- e^- 133
π^- nucleon 133
π^- p 133
π^- n 134
π^- nucleus 134
π^- deuteron 134
π^- ^{3}H 134
π^- ^{3}He 134
π^- ^{4}He 134
π^- He 134
π^- Li 135
π^- ^{6}Li 135
π^- ^{7}Li 135
π^- ^{8}Be 135
π^- Be 135
π^- ^{9}Be 135
π^- ^{11}Bor 135
π^- C 135
π^- ^{12}C 135
π^- ^{13}C 135
π^- O 135
π^- Ne 135
π^- ^{20}Ne 135
π^- Al 135
π^- Si 135
π^- S 135
π^- Cl 135
π^- Ca 135
π^- Ti 135
π^- Fe 135
π^- Ni 135
π^- Cu 135
π^- Ge 135
π^- Rh 135
π^- Ag 135
π^- Cd 135
π^- Xe 135
π^- Ta 135
π^- Wt 135
π^- Pb 136
π^- ^{238}U 136
π^- U 136
$\rho(770)^0$ nucleon 136
$f_2(1270)$ nucleon 136
$K^\pm$ p 136
K^+ nucleon 136
K^+ p 136
K^+ n 136
K^+ nucleus 136
K^+ deuteron 136
K^+ Be 136
K^+ C 136
K^+ Mg 136
K^+ Al 136
K^+ Ti 136
K^+ Cu 136
K^+ Ag 136
K^+ Cd 136
K^+ Xe 136
K^+ Au 136
K^+ Pb 136
K^- e^- 136
K^- nucleon 136
K^- p 136
K^- n 136
K^- nucleus 136
K^- deuteron 137
K^- ^{4}He 137
K^- Li 137
K^- ^{7}Li 137
K^- Be 137
K^- ^{9}Be 137
K^- C 137
K^- ^{12}C 137
K^- ^{16}O 137
K^- Al 137
K^- Si 137
K^- S 137
K^- ^{40}Ca 137
K^- Ti 137
K^- Cu 137
K^- Ag 137
K^- Cd 137
K^- Wt 137
K^- Pt 137
K^- Pb 137
K_L e 137
K_L p 137
K_L nucleus 137
K_L deuteron 137
K_L Cu 137
pomeron pomeron 137
nucleon nucleon 137
nucleon nucleus 137
p nucleon 137
p p 137
p n 138
p $\bar{p}$ 138
p nucleus 138
p deuteron 139
p ^{3}He 139
p ^{4}He 139
p He 139
p Li 139
p ^{6}Li 139
p ^{7}Li 139
p Be 139
p ^{9}Be 139
p C 139
p ^{12}C 140
p ^{13}C 140
p ^{14}C 140
p ^{14}Nit 140
p ^{16}O 140
p ^{19}Fl 140
p Ne 140
p ^{20}Ne 140
p ^{22}Ne 140
p ^{24}Mg 140
p Mg 140
p ^{26}Mg 140
p Al 140
p ^{27}Al 141
p Si 141
p ^{28}Si 141
p S 141
p ^{34}S 141
p Cl 141
p Ar 141
p ^{40}Ar 141
p Ca 141
p ^{40}Ca 141
p ^{48}Ca 141
p ^{48}Ti 141
p Ti 141
p ^{55}Mn 141
p ^{54}Fe 141
p ^{56}Fe 141
p Fe 141
p ^{57}Fe 141
p Co 141
p ^{59}Co 141
p ^{58}Ni 141
p Ni 141
p ^{60}Ni 141
p ^{62}Ni 141
p ^{63}Cu 141
p Cu 141
p ^{64}Cu 141
p ^{65}Cu 141
p Zn 141
p ^{89}Yt 141
p ^{90}Zr 141
p Zr 141
p Nb 141
p ^{96}Mo 141
p Mo 141
p ^{108}Ag 141
p Ag 141
p Cd 142
p ^{118}Sn 142
p Sn 142
p ^{124}Sn 142
p Xe 142
p Gd 142
p Tb 142
p ^{159}Tb 142
p Ho 142
p Tm 142
p Ta 142
p ^{181}Ta 142
p Wt 142
p Pt 142
p Au 142
p ^{197}Au 142
p Hg 142
p Pb 142
p ^{208}Pb 142
p Ac 142
p Th 142
p ^{238}U 142
p U 143
n e^- 143
n nucleon 143
n p 143
n n 143
n Pb(atom) 143
n Bi(atom) 143
n nucleus 143
n deuteron 143
n ^{6}Li 143
n ^{9}Be 143
n C 143
n ^{12}C 143
n Nit 143
n ^{15}Nit 143
n O 143
n ^{19}Fl 143
n ^{23}Na 143
n Al 143
n ^{27}Al 143
n Si 143
n ^{40}Ca 143
n Va 143
n Mn 143
n ^{56}Fe 143
n Fe 143
n Co 143
n Cu 143
n ^{81}Br 144
n Rb 144
n ^{90}Zr 144
n ^{93}Nb 144
n ^{108}Pd 144
n Ag 144
n ^{111}Cd 144
n ^{113}Cd 144
n Sn 144
n ^{124}Sn 144
n ^{127}I 144
n Xe 144
n ^{133}Cs 144
n ^{138}La 144
n ^{139}La 144
n Ce 144
n Ta 144
n ^{181}Ta 144
n Wt 144
n Pb 144
n ^{207}Pb 144
n ^{208}Pb 144
n ^{208}Bi 144
n Bi 144
n ^{238}U 144
n U 144
n ^{242}Am 144
n ^{245}Cm 144
$\bar{n}$ nucleon 144
$\bar{n}$ p 144
$\bar{n}$ n 144
$\bar{n}$ C 144
$\bar{n}$ ^{12}C 144
$\bar{n}$ ^{56}Fe 144
$\bar{n}$ Ta 144
$\bar{n}$ ^{181}Ta 144
$\bar{p}$ p 144
$\bar{p}$ n 146
$\bar{p}$ nucleus 146
$\bar{p}$ deuteron 146
$\bar{p}$ ^{3}He 146
$\bar{p}$ ^{4}He 146
$\bar{p}$ He 146
$\bar{p}$ Li 146
$\bar{p}$ ^{7}Li 146
$\bar{p}$ Be 146
$\bar{p}$ ^{9}Be 146
$\bar{p}$ C 146
$\bar{p}$ ^{12}C 146
$\bar{p}$ Nit 146
$\bar{p}$ Ne 146
$\bar{p}$ ^{20}Ne 146
$\bar{p}$ Al 147
$\bar{p}$ ^{27}Al 147
$\bar{p}$ S 147
$\bar{p}$ Ar 147
$\bar{p}$ ^{40}Ca 147
$\bar{p}$ ^{54}Fe 147
$\bar{p}$ Fe 147
$\bar{p}$ ^{63}Cu 147
$\bar{p}$ Cu 147
$\bar{p}$ ^{92}Mo 147
$\bar{p}$ Mo 147
$\bar{p}$ ^{98}Mo 147
$\bar{p}$ Cd 147
$\bar{p}$ ^{112}Cd 147
$\bar{p}$ ^{115}In 147
$\bar{p}$ Xe 147
$\bar{p}$ Ta 147
$\bar{p}$ Wt 147
$\bar{p}$ Pt 147
$\bar{p}$ ^{197}Au 147
$\bar{p}$ Pb 147
$\bar{p}$ ^{208}Pb 147

This is a short "Table of Contents" of the full Beam/Target/Momentum Index

$\bar{p}$ ^{209}Bi 147
$\bar{p}$ ^{238}U 147
$\bar{p}$ U 147
Λ Cu 147
Σ^+ γ^* 147
Σ^0 Cu 147
Σ^- e^- 147
Σ^- p 147
Σ^- Be 147
Σ^- Wt 147
Σ^- Pb 147
Ξ^- p 147
Ξ^- nucleus 147
Ξ^- Be 147
Ξ^- ^{12}C 147
Ω^- p 147
nucleus p 147
nucleus nucleus 147
nucleus He 147
nucleus C 147
nucleus Ta 147
fragb nucleus 147
deuteron p 147
deu :eron nucleus 147
deu eron deuteron 147
deuteron ^{4}He 147
deuteron He 147
deuteron ^{7}Li 147
deuteron Be 147
deuteron C 148
deuteron ^{12}C 148
deuteron Al 148
deuteron Ti 148
deuteron ^{58}Ni 148
deuteron Cu 148
deuteron ^{93}Nb 148
deuteron Ag 148
deuteron Sn 148
deuteron ^{159}Tb 148
deuteron Ta 148
deuteron Au 148
deuteron ^{197}Au 148
deuteron Pb 148
deuteron deuteron 148
deuteron C 148
deuteron Ta 148
deuteron Pb 148
^{3}H p 148
^{3}H deuteron 148
^{3}H C 148
^{3}H Ne 148
^{3}H Mg 148
^{3}H Al 148
^{3}H Cu 148
^{3}H Pb 148
^{3}He p 148
^{3}He deuteron 148
^{3}He C 148
^{3}He ^{12}C 148
^{3}He ^{26}Mg 148
^{3}He ^{40}Ca 148
^{3}He ^{48}Ca 148
^{3}He ^{54}Fe 148
^{3}He Cu 148
^{3}He ^{90}Zr 148
^{3}He Ag 148
^{3}He Au 148
^{3}He ^{208}Pb 148
^{4}He p 148
^{4}He nucleus 148
^{4}He ^{4}He 148
^{4}He Li 148
^{4}He Be 148
^{4}He C 148
^{4}He ^{12}C 148
^{4}He Ne 148
^{4}He ^{27}Al 148
^{4}He Fe 148
^{4}He Cu 148
^{4}He Zr 149
^{4}He Mo 149
^{4}He ^{165}Ho 149
^{4}He Ta 149
^{4}He ^{181}Ta 149
^{4}He Au 149
^{4}He ^{197}Au 149
^{4}He Pb 149
^{4}He ^{208}Pb 149
^{4}He ^{232}Th 149
He p 149
He nucleus 149
He Li 149
He C 149
He Al 149
He Cu 149
He Ta 149
He Pb 149
^{6}He nucleus 149
^{6}He C 149
^{8}He Be 149
^{8}He C 149
^{8}He Ni 149
^{8}He Au 149
Li nucleus 149
^{6}Li p 149
^{6}Li C 149
^{6}Li Pb 149
^{7}Li p 149
^{7}Li C 149
^{7}Li Mg 149
^{7}Li Al 149
^{7}Li Cu 149
^{7}Li Pb 149
^{9}Li nucleus 149
^{11}Li nucleus 149
^{11}Li Be 149
^{11}Li C 149
^{11}Li Al 149
^{11}Li Ni 149
^{11}Li Cu 149
^{11}Li Au 149
^{11}Li Pb 149
Be nucleus 149
^{11}Be nucleus 149
^{11}Be Be 149
^{11}Be C 149
^{11}Be Al 149
^{12}Be Be 149
^{12}Be C 149
^{12}Be Al 149
^{14}Be Be 149
^{14}Be C 149
^{14}Be Ni 149
^{14}Be Au 149
^{8}Bor Be 149
^{8}Bor C 149
^{8}Bor Al 149
Bor nucleus 149
^{11}Bor p 149
^{11}Bor He 149
^{11}Bor C 149
^{12}Bor Be 149
^{12}Bor C 149
^{12}Bor Al 149
^{13}Bor Be 149
^{13}Bor C 149
^{13}Bor Al 149
^{14}Bor Be 149
^{14}Bor C 149
^{14}Bor Al 149
^{15}Bor Be 149
^{15}Bor C 149
^{15}Bor Al 149
C p 149
C nucleus 149
C He 149
C C 149
C Ne 150
C Cu 150
C Ta 150
C Pb 150
^{12}C p 150
^{12}C nucleus 150
^{12}C C 150
^{12}C ^{12}C 150
^{12}C Ne 150
^{12}C Al 150
^{12}C ^{27}Al 150
^{12}C ^{28}Si 150
^{12}C ^{55}Mn 150
^{12}C ^{59}Co 150
^{12}C Ni 150
^{12}C Cu 150
^{12}C ^{64}Cu 150
^{12}C ^{89}Yt 150
^{12}C ^{108}Ag 150
^{12}C Ag 150
^{12}C Sn 150
^{12}C Ta 150
^{12}C ^{181}Ta 150
^{12}C Au 150
^{12}C ^{197}Au 150
^{12}C Pb 150
^{12}C ^{232}Th 150
^{12}C ^{238}U 150
^{12}C U 150
^{13}C C 150
^{13}C ^{12}C 150
^{13}C Al 150
^{13}C ^{40}Ca 150
^{13}C ^{58}Ni 150
Nit p 150
Nit nucleus 150
Nit He 150
Nit C 150
^{14}Nit nucleus 150
^{14}Nit C 150
^{14}Nit Ni 150
^{14}Nit Ag 150
^{14}Nit Ho 150
^{14}Nit ^{197}Au 150
O p 150
O nucleus 150
O He 150
O C 150
O Ne 150
O Al 150
O Ar 150
O Cu 150
O Ag 151
O Wt 151
O Au 151
O ^{197}Au 151
O Pb 151
O U 151
^{16}O p 151
^{16}O nucleus 151
^{16}O He 151
^{16}O C 151
^{16}O Ne 151
^{16}O Al 151
^{16}O ^{27}Al 151
^{16}O ^{40}Ca 151
^{16}O Va 151
^{16}O ^{58}Ni 151
^{16}O Cu 151
^{16}O Br 151
^{16}O ^{90}Zr 152
^{16}O Ag 152
^{16}O Wt 152
^{16}O Au 152
^{16}O ^{197}Au 152
^{16}O Hg 152
^{16}O Pb 152
^{16}O ^{207}Pb 152
^{16}O ^{208}Pb 152
^{16}O ^{232}Th 152
^{16}O ^{238}U 152
^{16}O U 152
^{17}O Pb 152
^{18}O ^{58}Ni 152
Fl C 152
^{19}Fl C 152
^{19}Fl Mg 152
^{19}Fl Al 152
^{19}Fl Cu 152
^{19}Fl In 152
^{19}Fl Wt 152
^{19}Fl Bi 152
^{19}Fl U 152
Ne p 152
Ne nucleus 152
Ne C 152
Ne Fl 152
Ne Na 152
Ne Al 152
Ne Nb 152
Ne Pb 152
^{20}Ne nucleus 152
^{20}Ne Al 152
^{20}Ne ^{27}Al 152
^{20}Ne ^{90}Zr 152
^{20}Ne Ag 152
^{20}Ne ^{208}Pb 152
^{22}Ne p 153
^{22}Ne nucleus 153
^{22}Ne ^{12}C 153
^{23}Na p 153
^{23}Na C 153
^{24}Mg nucleus 153
^{24}Mg Mg 153
Mg p 153
Mg nucleus 153
Mg C 153
Mg Mg 153
Mg Pb 153
Al p 153
Al nucleus 153
Al He 153
Al C 153
Al Cu 153
Si p 153
Si nucleus 153
Si C 153
Si Al 153
Si Si 153
Si Cu 153
Si Ag 153
Si Au 153
Si Pb 153
^{28}Si p 153
^{28}Si nucleus 153
^{28}Si C 153
^{28}Si Al 153
^{28}Si ^{27}Al 153
^{28}Si ^{28}Si 153
^{28}Si Cu 153
^{28}Si ^{64}Cu 153
^{28}Si Ag 153
^{28}Si Sn 153

This is a short "Table of Contents" of the full Beam/Target/Momentum Index

^{28}Si ^{120}Sn 153
^{28}Si Au 153
^{28}Si ^{197}Au 153
^{28}Si Pb 153
^{28}Si ^{208}Pb 153
S *p* 153
S nucleus 153
S C 153
S S 153
S Cu 153
S Ag 153
S Wt 153
S Au 153
S Pb 153
S U 153
^{32}S *p* 153
^{32}S nucleus 154
^{32}S C 154
^{32}S Al 154
^{32}S S 154
^{32}S ^{32}S 154
^{32}S Fe 154
^{32}S Cu 154
^{32}S Pd 154
^{32}S Ag 154
^{32}S Wt 154
^{32}S Pt 154
^{32}S Au 154
^{32}S Hg 154
^{32}S Pb 154
^{32}S U 154
^{36}Ar nucleus 154
^{36}Ar C 154
^{36}Ar Al 154
^{36}Ar ^{27}Al 154
^{36}Ar ^{48}Ti 154
^{36}Ar Cu 154
^{36}Ar Ag 154
^{36}Ar ^{159}Tb 154
^{36}Ar ^{197}Au 154
Ar *K* 154
Ar *p* 154
Ar nucleus 154
Ar C 154
Ar Fl 154
Ar Na 154
Ar Cl 154
Ar Ca 154
Ar Cu 154
Ar Nb 154
Ar La 154
Ar Pb 154
^{40}Ar nucleus 154
^{40}Ar Al 154
^{40}Ar ^{27}Al 154
^{40}Ar ^{40}Ca 154
^{40}Ar Ti 154
^{40}Ar ^{90}Zr 154
^{40}Ar ^{103}Rh 154
^{40}Ar Ag 155
^{40}Ar ^{197}Au 155
^{40}Ar ^{208}Pb 155
^{40}Ar ^{232}Th 155
^{40}Ar ^{238}U 155
Ca *p* 155
Ca nucleus 155
Ca C 155
Ca Ca 155
^{48}Ca ^{9}Be 155
^{48}Ca ^{64}Ni 155
^{48}Ca Ta 155
^{48}Ca ^{181}Ta 155
^{48}Ti ^{45}Sc 155
^{56}Fe *p* 155
^{56}Fe nucleus 155
^{56}Fe C 155
^{56}Fe Nit 155
^{56}Fe O 155
^{56}Fe Fe 155
^{56}Fe Br 155
^{56}Fe Ag 155
^{56}Fe ^{197}Au 155
Fe *p* 155
Fe nucleus 155
Fe He 155
Fe C 155
Fe Fe 155
Ni *p* 155
Ni nucleus 155
Ni C 155
^{63}Cu ^{12}C 155
^{63}Cu ^{27}Al 155
^{84}Kr nucleus 155
^{84}Kr ^{197}Au 155
Kr Ag 155
Kr Au 155
Kr Th 155
^{86}Kr ^{27}Al 155
^{86}Kr ^{103}Rh 155
^{86}Kr ^{197}Au 155
Nb Nb 155
^{93}Nb ^{9}Be 155
^{93}Nb ^{12}C 155
^{93}Nb ^{27}Al 155
Xe La 155
^{129}Xe Ag 155
^{129}Xe ^{197}Au 155
^{131}Xe nucleus 155
^{136}Xe C 155
^{136}Xe Pb 155
^{139}La nucleus 155
^{139}La C 155
^{139}La ^{12}C 155
^{139}La ^{27}Al 155
^{139}La ^{59}Co 155
^{139}La ^{139}La 155
^{139}La La 155
^{139}La ^{197}Au 155
^{139}La ^{238}U 155
La La 155
Ho C 155
Ho Cu 155
Ho Ag 155
Ho Sn 155
Ho Pb 155
Ho U 155
Au C 155
Au Al 155
Au Cu 155
Au Au 155
^{197}Au nucleus 156
^{197}Au C 156
^{197}Au Al 156
^{197}Au Cu 156
^{208}Pb ^{208}Pb 156
^{208}Pb ^{232}Th 156
^{208}Pb ^{238}U 156
^{232}Th Tl(atom) 156
^{232}Th ^{181}Ta 156
^{232}Th ^{232}Th 156
^{232}Th ^{238}U 156
^{232}Th ^{248}Cm 156
^{238}U nuclearite 156
^{238}U Tl(atom) 156
^{238}U nucleus 156
^{238}U ^{110}Pd 156
^{238}U ^{181}Ta 156
^{238}U ^{197}Au 156
^{238}U ^{208}Pb 156
^{238}U ^{232}Th 156
^{238}U ^{238}U 156
^{238}U ^{248}Cm 156
U Ta 156
U Pb 156
U Th 156
U U 156
unspec nucleus 156
unspec C 156
hadron *p* 156
hadron nucleus 156
hadron C 156
hadron^{+} *p* 156
hadron^{+} nucleus 156
hadron^{+} Be 156
hadron^{+} Al 156
hadron^{+} Cu 156
hadron^{+} Wt 156
hadron^{+} Pb 156
hadron^{-} *p* 156
hadron^{-} Be 156
hadron^{-} Al 156
hadron^{-} Cu 156
hadron^{-} Wt 156

γ

0 – 0.005	Bonnetbidaud 88
> 0.0002	Hirata 89B
> 20	Enomoto 92
	Enomoto 92B
25 – 440	Hirata 88E
> 40	Enomoto 91
	Enomoto 89
> 1000	Bond 89
$3000 - 1.5 \cdot 10^4$	Baillon 92
$> 10^4$	Amenomori 92
$> 5 \cdot 10^4$	Gaisser 89
$7.5 \cdot 10^4$	Tanimori 89
$> 10^5$	Cronin 92
	Cassiday 89B
	Bond 88B
$< 1.5 \cdot 10^5$	Aglietta 90
$> 2 \cdot 10^5$	Ciampa 90
$> 2.5 \cdot 10^5$	Tonwar 91
?	Bershady 90
	Muraki 90
	Cocconi 88
	Vonfeilitzsc 88

axion

?	Lazarus 92
	Nezrick 92

ν

0.008 – 0.04	Denegri 90
0.2 – 2.6	Aglietta 89
> 10	Suzuki 91B
$> 10^5$	Aglietta 89B
?	Dodelson 92
	Enqvist 92
	Gates 91
	Totsuka 91
	Allison 90
	Berger 90C
	Klein 89B
	Losecco 89
	Berger 88D
	Haines 88

ν_e

0 – 0.014	Pierre 90
0.0002 – 0.007	Hirata 89
> 0.0002	Spiro 92
	Hirata 89B
	Hirata 89C
< 0.0004	Anselmann 92
> 0.0008	Spiro 92
0.0009	Anselmann 92
0.005 – 0.02	Suzuki 90B
0.005 – 0.05	Mayle 92
	Mukhopadhyay 91
	Alekseev 88C
0.006 – 0.03	Hirata 92
> 0.007	Anselmann 92B
	Totsuka 92
	Hirata 90
	Suzuki 90
	Suzuki 90B
0.0075 – 0.015	Kihara 92
> 0.0075	Hirata 91B
	Raychaudhuri 91
	Suzuki 91C
	Hirata 90B
	Hirata 90C
	Totsuka 90
> 0.0076	Takita 89B
> 0.0093	Spiro 92
< 0.014	Anselmann 92
	Anselmann 92B
0.02 – 0.05	Mayle 92
	Mukhopadhyay 91
< 0.05	Arpesella 88B
0.05	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E
0.1	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E

ν_e

0.1 – 1.5	Beckerszendy 91
< 1	Totsuka 92
< 2	Beier 92
	Totsuka 92
	Casper 90
	Pierre 90
?	Anselmann 92B
	Beier 92
	Abazov 91
	Hirata 91C
	Mori 91
	Perdereau 91
	Berger 90
	Berger 90C
	Fukugita 90
	Lim 90
	Schaeffer 90
	Longuemare 89
	Suzuki 89
	Totsuka 89B
	Hirata 88F

$\bar{\nu}_e$

0.0002 – 0.007	Hirata 89
> 0.0002	Hirata 89B
	Hirata 89C
0.002 – 0.009	Klimov 90
	Ketov 88
0.005 – 0.05	Mayle 92
	Mukhopadhyay 91
	Alekseev 88C
0.006 – 0.03	Hirata 92
> 0.0075	Totsuka 90
> 0.0076	Takita 89B
< 0.01	Ketov 92
	Skorokhvatov 92
0.01	Bellotti 89C
0.019 – 0.035	Zhang 88
0.02 – 0.05	Mayle 92
	Mukhopadhyay 91
< 0.05	Arpesella 88B
0.05	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E
0.1	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E
0.1 – 1.5	Beckerszendy 91
0.2 – 2	Arpesella 88B
< 1	Totsuka 92
< 2	Beier 92
	Totsuka 92
	Casper 90
	Pierre 90
?	Beier 92
	Hirata 91
	Hirata 91C
	Perdereau 91
	Berger 90
	Schaeffer 90
	Longuemare 89
	Suzuki 89
	Totsuka 89B
	Hirata 88F

ν_μ

0 – 300	Borner 90
0.05	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E
0.1	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E
> 0.175	Takita 89B
0.2 – 20	Arpesella 88B
0.3 – 1.5	Beckerszendy 91
< 1	Totsuka 92
< 2	Beier 92
	Totsuka 92
	Casper 90
	Pierre 90

ν_μ

$1000 - 10^6$	Gyama 88B
?	Beier 92
	Mori 92
	Hirata 91C
	Mori 91C
	Perdereau 91
	Berger 90
	Berger 90C
	Longuemare 89
	Suzuki 89
	Totsuka 89B

$\bar{\nu}_\mu$

0 – 300	Borner 90
0.05	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E
0.1	Hirata 89D
	Hirata 88B
	Hirata 88C
	Hirata 88E
> 0.175	Takita 89B
0.2 – 2	Arpesella 88B
0.3 – 1.5	Beckerszendy 91
< 1	Totsuka 92
< 2	Beier 92
	Totsuka 92
	Casper 90
	Pierre 90
$1000 - 10^6$	Oyama 88B
?	Beier 92
	Hirata 91C
	Perdereau 91
	Berger 90
	Longuemare 89
	Suzuki 89
	Totsuka 89B

$e^\pm$

> 1	Enomoto 91B
?	Muraki 90

$\mu^\pm$

1 – 1000	Bellotti 89F
	Bellotti 89G
	Klein 89B
> 1	Beckerszendy 92
> 1.697	Oyama 88
100 – 5000	Bonnetbidaud 88
> 700	Thomson 91
> 800	Kochocki 90
> 1000	Bellotti 90
> 3000	Arpesella 88B
> 3500	Aglietta 89C
10^4	Adarkar 91
$> 2 \cdot 10^4$	Ahlen 92B
$> 2 \cdot 10^5$	Ciampa 90
?	Ahlen 92
	Mori 91B
	Ahlen 90
	Cutler 90
	Muraki 90
	Allison 89
	Johns 89
	Kochocki 89
	Losecco 89
	Berger 88D

μ^-

?	Aglietta 91
	Munakata 91
	Yamada 91

μ^+

?	Munakata 91
	Yamada 91

heavy-ν

?	Dodelson 92

q

?	Mori 90

photino

< 100	Perdereau 89B
$1000 - 10^6$	Fayet 89
?	Schwartz 88

higgs$^-$

(54 – 64)	Yuzuki 91

dark

?	Smith 93
	Stubbs 93
	Bacci 92
	Bacci 92B
	Bacci 91
	Verkerk 91
	Caldwell 90B
	Berger 88D
	Caldwell 88C

monopole

> 1000	Bellotti 90
?	Thron 92
	Buckland 90
	Bellotti 89H
	Bartelt 87

π

1024 – 2800	Avakyan 90D

nucleon

$900 - 1.2 \cdot 10^4$	Bakatanov 92

p

> 0.01	Hirata 88E
$1000 - 10^5$	Ivanenko 89
1024 – 2800	Avakyan 90D
> 2000	Ivanenko 88B
$> 2.5 \cdot 10^4$	Grigorov 89B
?	Denegri 90

n

?	Kruger 89

nuclearite

?	Nakamura 91
	Orito 91
	Liu 88B

nucleus

$1000 - 10^5$	Ivanenko 89
> 2000	Ivanenko 88B
$10^4 - 10^7$	Dasgupta 90
	Freudenreich 90B
$10^6 - 10^7$	Danilova 92

deuteron

?	Denegri 90

^{3}He

?	Denegri 90

^{4}He

?	Denegri 90

He

> 2000	Ivanenko 88B
?	Denegri 90

^{7}Li

?	Denegri 90

Fe

$> 10^7$	Chilingarian 88

mult[μ]

1 – 1000	Bellotti 89F
$> 2 \cdot 10^4$	Ahlen 92B

unspec

10^4	Huo 90
$10^8 - 10^{11}$	Sokolsky 92

neutral

$> 5 \cdot 10^8$	Cassiday 89
	Lawrence 89
	Teshima 89

charged

> 60	Hirata 92
1000 – 10^5	Ivanenko 89
> 1000	Grigorov 89C
> 10^9	Baltrusaitis 88

multicharged

?	Saito 90

hadron

> 1000	Avakyan 88B

γ γ

(0 – 29)	Alstongarnjo 90
(0.1 – 1.5)	Bienlein 91
(0.35 – 1.6)	Boyer 90
(0.6 – 2)	Jocksch 89
(0.7 – 1.6)	Harjes 91B
(0.7 – 3.4)	Albrecht 89F
(0.75 – 2)	Harjes 91
(0.8 – 2)	Bienlein 91
(1 – 2.1)	Bienlein 91
(1 – 2.5)	Albrecht 89K
(1 – 3)	Berger 88
(1 – 3.2)	Berger 88B
(1 – 3.5)	Levy 88
(1 – 6)	Levy 88
(1 – 7)	Levy 88
(1.1 – 2.3)	Albrecht 90M
(1.2 – 2.2)	Albrecht 91N
(1.2 – 3.6)	Aihara 88
(1.25 – 4.25)	Baru 92
(1.3 – 3)	Behrend 90C
(1.35 – 2.85)	Behrend 89
(< 1.4)	Morgan 90
(1.4 – 1.6)	Aihara 88
(1.4 – 3.5)	Tsipolitis 90
(1.5 – 2)	Liu 88
(1.5 – 2.7)	Albrecht 88N
(1.5 – 5.5)	Pust 91
(1.6)	Behrend 90F
(1.6 – 7.5)	Behrend 90B
(1.8 – 3.6)	Aihara 88
(1.8 – 4)	Aihara 88
(1.9 – 3.4)	Albrecht 88L
(2 – 2.9)	Albrecht 88R
(2 – 7.5)	Behrend 90F
(2.5 – 3.5)	Albrecht 88R
(2.5 – 4)	Albrecht 88R
(2.5 – 5.5)	Aihara 89
(3 – 5)	Aihara 88
(3 – 9)	Aihara 89C
(< 4)	Behrend 90C
(4 – 9)	Lumsdon 90
	Behrend 91
(4 – 15)	Tanaka 92
(5)	Juricic 88
(7.5)	Behrend 90F
2 – 3.873 (55 – 61.4)	Tanaka 91
?	Bienlein 92
	Burchell 92
	Achasov 91
	Bienlein 91
	Blinov 91B
	Harjes 91B
	Karch 91
	Karch 91C
	Uehara 91
	Adachi 90
	Behrend 90F
	Bienlein 90
	Boyer 90
	Braunschweig 90B
	Butler 90
	Feindt 90
	Feindt 90B
	Fujii 90
	Karch 90
	Karch 90B
	Marsiske 90
	Oest 90
	Oest 90B
	Peters 90
	Behrend 89E
	Behrend 89G

γ γ

	Braunschweig 89
	Chen 89C
	Feindt 89
	Jensen 89
	Aihara 88
	Albrow 88
	Behrend 88E
	Berger 88
	Bienlein 88
	Feindt 88

γ γ*

(0.001 – 1.8)	Ruoso 92
(0.25 – 2)	Aihara 89D
?	Feindt 90B
	Semertzidis 90

γ nucleon

20 – 70 (6.204 – 11.51)	Klein 89C
40 – 120 (8.723 – 15.05)	Witherell 88
45 – 85 (9.246 – 12.68)	Busennitz 89
50 – 150 (9.741 – 16.82)	Alvarez 91
	Alvarez 90
	Alvarez 90B
	Alvarez 90C
	Calvino 90
	Rossi 89
	Wormser 89
	Roudeau 88
50 – 200 (9.741 – 19.41)	Alvarez 90D
80 – 160 (12.2 – 17.37)	Alvarez 92
80 – 230 (12.2 – 20.82)	Anjos 89C
100 (13.74)	Wormser 89B
145 (16.54)	Purohit 88

γ p

0.032 – 0.072 (0.9697 – 1.008)	Federspiel 91
0.098 (1.032)	Zieger 92
0.132 (1.062)	Zieger 92
0.137 – 0.155 (1.067 – 1.082)	Argan 88
0.146 – 0.156 (1.074 – 1.083)	Beck 90B
0.21 – 0.96 (1.129 – 1.638)	Buchler 91
0.243 – 0.314 (1.156 – 1.212)	Blanpied 92
0.35 (1.23)	Ganenko 91
0.7 (1.481)	Meyer 88B
0.7 – 1 (1.481 – 1.66)	Anton 92
0.7 – 1.6 (1.481 – 1.971)	Bagdasaryan 90
0.707 – 0.723 (1.486 – 1.496)	Anton 92
0.73 – 1.066 (1.5 – 1.697)	Avakyan 88C
0.85 (1.573)	Meyer 88B
0.875 – 1.175 (1.588 – 1.757)	Avakyan 91
0.9 – 1.35 (1.603 – 1.848)	Agababyan 89B
0.9 – 1.65 (1.603 – 1.994)	Sirunyan 88
1 – 1.1 (1.66 – 1.716)	Meyer 88B
1.1 – 1.3 (1.716 – 1.822)	Meyer 88B
1.39 – 1.8 (1.868 – 2.064)	Sirunyan 88
3.7 – 18.3 (2.797 – 5.935)	Arneodo 92
17.6 – 21 (5.823 – 6.347)	Condo 91
19.3 (6.091)	Condo 90
20 (6.198)	Ackleh 89

γ p

	Brau 88
20 – 70 (6.198 – 11.4)	Landsberg 91
	Landsberg 90
	Donnachie 89
	Atkinson 88
20 – 310 (6.198 – 24.14)	Rossi 91
35 – 165 (8.158 – 17.62)	Busennitz 89
60 – 170 (10.65 – 17.89)	Apsimon 92
	Apsimon 91
	Korsgen 88
60 – 225 (10.65 – 20.57)	Busennitz 89
65 – 175 (11.08 – 18.15)	Apsimon 92B
	Gebert 92
	Apsimon 91B
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Apsimon 90B
	Apsimon 89
	Dieter 89
	Rotscheidt 88
70 – 90 (11.4 – 13.03)	Apsimon 90C
70 – 170 (11.4 – 17.89)	Hoeger 90
80 – 230 (12.29 – 20.7)	Anjos 89B
90 (13.03)	Wormser 90
100 (13.73)	Spiegel 91
100 – 170 (13.73 – 17.89)	Holzkamp 88
100 – 260 (13.73 – 22.11)	Spiegel 91
110 – 170 (14.3 – 17.89)	Apsimon 90C
145 (16.52)	Anjos 90C
(90 – 290)	Ahmed 92D
(100 – 295)	Derrick 92B
(100 – 300)	Wolf 92
(175 – 250)	Wolf 92
(186 – 233)	Derrick 92
(200)	Eisele 92
?	Landsberg 90B

γ n

0.5 – 2.2 (1.34 – 2.23)	Meyer 88B
0.7 (1.483)	Meyer 88B
0.85 (1.575)	Meyer 88B

γ Cs(atom)

0 (132.9)	Noecker 88
?	Bouchiat 90
	Bouchiat 86B

γ Tl(atom)

?	Abdullah 90
	Bouchiat 90
	Bouchiat 86B

γ Bi(atom)

?	Bouchiat 90
	Khriplovich 88

γ nucleus

0.1 – 0.53	Arends 88
0.187 – 0.427	Maruyama 89
0.2 – 0.4	Arends 88
0.23 – 0.45	Arends 88
13 – 25	Baskov 88
100 – 1000	Zatsepin 89
221	Frabetti 92
	Frabetti 92E
	Frabetti 91
	Spiegel 91
	Frabetti 90
900 – 10^4	Bakatanov 88
> 1000	Bond 89

γ nucleus

> 5 · 10^4	Haines 90
	Dingus 88
	Dingus 88B
> 10^5	Bond 88B
?	Bando 90

γ deuteron

0.01 – 1 (1.886 – 2.696)	Desantics 88
0.02 – 0.1 (1.896 – 1.973)	Zieger 92B
0.03 – 0.1 (1.905 – 1.973)	Ganenko 89
0.034 – 0.606 (1.909 – 2.407)	Voitsekhovsk 92
0.054 (1.929)	Krause 92
0.06 (1.935)	Krause 92
0.063 – 0.071 (1.938 – 1.945)	Debevec 92
0.068 (1.942)	Krause 92
0.08 – 0.13 (1.954 – 2.001)	Rose 90
0.088 (1.962)	Krause 92
< 0.1 (< 1.973)	Meissner 90
0.1 – 0.21 (1.973 – 2.075)	Desantics 88
0.13 (2.001)	Rose 90B
0.133 – 0.158 (2.004 – 2.028)	Wallace 91
0.137 – 0.155 (2.008 – 2.025)	Argan 88
0.187 – 0.427 (2.054 – 2.263)	Maruyama 89
0.191 (2.058)	Caracappa 91
0.192 – 0.536 (2.059 – 2.351)	Ganenko 92
0.2 – 0.35 (2.066 – 2.198)	Zybalov 90
0.2 – 0.367 (2.066 – 2.212)	Zybalov 91
0.222 (2.086)	Caracappa 91
0.235 (2.098)	Sarty 93
0.28 – 0.52 (2.137 – 2.339)	Zielinsky 88
0.3 – 1 (2.155 – 2.696)	Adamyan 88
0.31 – 0.45 (2.164 – 2.282)	Avakyan 90B
	Avakyan 90C
0.4 – 0.5 (2.24 – 2.322)	Yokosawa 90B
0.4 – 0.8 (2.24 – 2.553)	Galumyan 88
0.45 (2.282)	Yokosawa 90B
	Althoff 89
	Meyer 88B
0.5 – 0.9 (2.322 – 2.626)	Adamyan 89
	Adamyan 88
0.5 – 1 (2.322 – 2.696)	Imanishi 88
0.55 (2.362)	Yokosawa 90B
	Althoff 89
	Meyer 88B
0.566 – 0.846 (2.375 – 2.587)	Asai 89
0.65 (2.441)	Yokosawa 90B
	Althoff 89
	Meyer 88B
0.8 – 1.6 (2.553 – 3.085)	Napolitano 88
1.5 – 4.5 (3.024 – 4.516)	Avakyan 90
3.7 – 18.3 (4.171 – 8.495)	Arneodo 92
45 – 85 (13.13 – 17.95)	Busennitz 89
60 – 225 (15.12 – 29.11)	Busennitz 89

γ ^{3}He

0.06 (2.854)	Ganenko 88

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

γ ^{3}He

0.09 – 0.25 (2.883 – 3.034) Sarty 93
0.137 – 0.155 (2.928 – 2.945) Argan 88
0.14 (2.931) Ganenko 88
0.275 – 0.474 (3.057 – 3.234) Audit 89
0.35 (3.125) Ganenko 88
Zybalov 88

γ ^{4}He

0.06 (3.786) Ganenko 88
0.135 – 0.455 (3.859 – 4.156) Emura 91
Emura 91B
0.137 – 0.155 (3.861 – 3.878) Argan 88
0.14 (3.864) Ganenko 88
0.17 – 0.45 (3.892 – 4.152) Emura 90
Maruyama 89
Endo 88
0.35 (4.061) Ganenko 88
Zybalov 88
0.45 – 0.55 (4.152 – 4.241) Adamyan 88

γ He

0.1379 – 0.1699 (3.864 – 3.895) Jammes 89
0.187 – 0.427 (3.911 – 4.133) Maruyama 89

γ ^{6}Li

0 – 0.6 (5.589 – 6.15) Zybalov 90B
0.137 – 0.147 (5.724 – 5.734) Glavanakov 89
0.3 – 0.45 (5.881 – 6.022) Belousov 91
0.3 – 1 (5.881 – 6.513) Adamyan 88
0.35 (5.929) Ganenko 91
0.5 (6.068) Naumenko 89

γ ^{7}Li

0.35 (6.861) Ganenko 91

γ Be

0.187 – 0.427 (8.57 – 8.812) Maruyama 89
0.227 (8.619) Arends 91
0.282 (8.672) Arends 91
0.391 (8.777) Arends 91
70 – 260 (35.2 – 66.6) Anjos 90E
80 – 230 (37.5 – 62.71) Anjos 92B
Anjos 90B
Anjos 90D
Anjos 89
Rossi 89
Anjos 88
Anjos 88B
Anjos 88C
Anjos 88D
Anjos 88E
Anjos 88F
Anjos 88G
Anjos 87B
Raab 87
80 – 240 (37.5 – 64.03) Anjos 92
Anjos 91C
Anjos 91D
Anjos 90
Witherell 88
90 – 260 (39.77 – 66.6) Anjos 90D
100 – 200 (41.83 – 58.55) Klein 89C
100 – 350 (41.83 – 77.12) Buchholz 90
Buchholz 90B
Shephard 90
100 – 400 (41.83 – 82.38) Ratti 90
145 (50.05) Anjos 91
Anjos 91B
Anjos 90C
200 (58.55) Shukla 92
Shukla 92B
220 (61.35) Frabetti 92C
221 (61.49) Frabetti 92B
Frabetti 92D

γ ^{9}Be

0 – 0.6 (8.383 – 8.963) Zybalov 90B
0.137 – 0.147 (8.519 – 8.529) Glavanakov 89
0.35 (8.726) Ganenko 91

γ ^{11}Bor

1.5 – 4.5 (11.65 – 14.04) Arakelyan 90

γ C

0.1379 – 0.1699 (11.33 – 11.36) Jammes 89
0.187 – 0.427 (11.37 – 11.61) Maruyama 89
0.227 (11.41) Arends 91
0.282 (11.47) Arends 91
0.3 – 0.44 (11.48 – 11.62) Belousov 88
0.34 – 0.58 (11.52 – 11.75) Maruyama 89
0.391 (11.57) Arends 91
1.5 (12.5) Avakyan 89
1.5 – 4.5 (12.5 – 15.03) Alanakyan 88
2 (13.04) Astabatyan 90
3 (13.87) Astabatyan 90
3.7 – 18.3 (14.42 – 23.12) Arneodo 92
4.5 (15.03) Avakyan 89

γ ^{12}C

0 – 0.6 (11.18 – 11.76) Zybalov 90B
0.015 – 0.14 (11.1 – 11.32) Schelhaas 90
0.137 – 0.147 (11.32 – 11.33) Glavanakov 89
0.3 – 0.45 (11.48 – 11.62) Belousov 91
0.35 (11.52) Ganenko 91
< 0.45 (< 11.62) Ananien 90
0.5 (11.67) Naumenko 89
0.696 (11.86) Weinstein 93
0.698 (11.86) Weinstein 93
0.796 (11.95) Weinstein 93

γ Nit

0.173 (13.22) Ghedira 90
0.2 (13.25) Ghedira 90
0.23 (13.28) Ghedira 90
0.26 (13.3) Ghedira 90
0.32 (13.36) Ghedira 90

γ ^{14}Nit

0.4 (13.44) Distelbrink 91

γ ^{15}Nit

0.17 (14.14) Liesenfeld 88

γ O

0.227 (15.13) Arends 91
0.282 (15.18) Arends 91
0.391 (15.29) Arends 91

γ ^{16}O

0.08 – 0.131 (14.98 – 15.03) Macgregor 91
0.137 – 0.147 (15.04 – 15.05) Glavanakov 89
0.15 (15.05) Beise 89
0.2 (15) Beise 89
0.25 (15.15) Beise 89

γ Al

0.5 – 3.3 (25.63 – 28.24) Arakelyan 89D
0.8 – 1.8 (25.92 – 26.87) Delima 90B
1.5 – 4.5 (26.59 – 29.29) Avakyan 90
2 (27.06) Astabatyan 90
3 (27.97) Astabatyan 90

γ ^{27}Al

0 – 0.6 (25.15 – 25.74) Zybalov 90B
0.3 – 0.45 (25.45 – 25.5) Belousov 91
0.35 (25.4) Ganenko 91
0.8 – 1.8 (25.94 – 26.89) Delima 89
1.5 – 4.5 (26.61 – 29.31) Arakelyan 90

γ Si

50 – 200 (57.45 – 105.6) Alvarez 91B
70 – 225 (65.93 – 111.6) Klein 89C

γ Ca

0.1379 – 0.1699 (37.47 – 37.5) Jammes 89

γ ^{40}Ca

0.168 (37.43) Koch 89

γ Ti

0.227 (44.85) Arends 91
0.282 (44.9) Arends 91
0.391 (45.01) Arends 91
0.8 – 1.8 (45.41 – 46.39) Delima 90B
Delima 89

γ Co

0.8 – 1.8 (55.69 – 56.67) Delima 90B

γ ^{59}Co

0.8 – 1.8 (55.75 – 56.73) Delima 89

γ ^{60}Ni

1.5 – 4.5 (57.37 – 60.22) Arakelyan 90

γ ^{61}Ni

1.5 – 4.5 (58.3 – 61.16) Arakelyan 90

γ ^{62}Ni

1.5 – 4.5 (59.23 – 62.09) Arakelyan 90

γ Cu

0.3 – 0.45 (59.4 – 59.65) Belousov 91
0.5 – 3.3 (59.69 – 62.41) Arakelyan 89D
0.6 (59.79) Amroyan 89
0.78 (59.97) Amroyan 89
2 (61.16) Amroyan 89
3 (62.12) Amroyan 89
3.7 – 18.3 (62.79 – 75.31) Arneodo 92
4 (63.07) Amroyan 89

γ Cu

5 (64) Amroyan 89

γ ^{65}Cu

1.5 – 4.5 (62.03 – 64.89) Arakelyan 90
Arakelyan 90F
4.5 (64.89) Arakelyan 91

γ Ge

70 – 225 (118.5 – 187.1) Klein 89C
Amendolia 87

γ Zr

0.8 – 1.8 (85.77 – 86.75) Delima 90B
Delima 89

γ Nb

0.8 – 1.8 (87.34 – 88.32) Delima 90B
4.5 (90.93) Amroyan 89

γ Ag

0.78 (101.3) Amroyan 89
0.8 – 1.8 (101.3 – 102.3) Delima 90B
1 (101.5) Amroyan 89
1.5 – 4.5 (101 – 104.9) Amroyan 88
2 (102.5) Astabatyan 90
2.9 (103.3) Amroyan 89
3 (103.4) Astabatyan 90
4.5 (104.9) Amroyan 89

γ Cd

0.3 – 0.45 (104 – 105.1) Belousov 91

γ In

0.8 – 1.8 (107.7 – 108.7) Delima 90B

γ ^{116}Sn

1.5 – 4.5 (109.5 – 112.5) Arakelyan 90

γ Sn

1.5 (112.1) Avakyan 89
4.5 (114) Avakyan 89

γ ^{120}Sn

1.5 – 4.5 (113.3 – 116.2) Arakelyan 90

γ ^{122}Sn

1.5 – 4.5 (115.1 – 118.1) Arakelyan 90

γ ^{124}Sn

1.5 – 4.5 (117 – 119.9) Arakelyan 90

γ Xe

0.025 – 2.5 (122.3 – 124.8) Strugalski 88B

γ Nd

0.8 – 1.8 (135.2 – 136.1) Delima 90B

γ Sm

0.8 – 1.8 (140.8 – 141.8) Delima 90B

γ Ta

0.8 – 1.8 (169.3 – 170.3) Delima 90B
2.9 (171.4) Amroyan 89
4 (172.5) Amroyan 89
4.5 (172) Amroyan 89

γ ^{184}Wt

0.35 (171.7) Ganenko 91

γ Au

2 (185.5) Astabatyan 90
3 (186.4) Astabatyan 90

γ Pb

0.227 (193.2) Arends 91
0.282 (193.3) Arends 91
0.391 (193.4) Arends 91
0.5 – 3.3 (193.5 – 196.3) Arakelyan 89D
1.5 – 4.5 (194.5 – 197.5) Avakyan 90
3.7 – 18.3 (196.7 – 210.5) Arneodo 92

γ ^{208}Pb

0.058 (193.8) Fuhrberg 92
0.075 (193.8) Fuhrberg 92

γ ^{209}Bi

< 4.5 (< 199.1) Zakharov 90

γ ^{235}U

0.15 – 4.32 (219 – 223.2) Arakelyan 89, Arakelyan 89C
0.3 – 3.5 (219.2 – 222.4) Arakelyan 90C

γ ^{238}U

0.05 – 0.8 (221.8 – 222.5) Frommhold 92
0.06 – 0.24 (221.8 – 221.9) Ivanov 92
0.15 – 3.55 (221.8 – 225.2) Arakelyan 89E
0.15 – 4.32 (221.8 – 225) Arakelyan 89, Arakelyan 89C
0.3 – 3.5 (221 – 225.2) Arakelyan 90C, Arakelyan 90D, Arakelyan 90E

γ ^{237}Np

0.06 – 0.24 (220.8 – 220) Ivanov 92

γ^* p

(100 – 295) Ahmed 92E

higgs p

? Blumlein 91

higgs C

? Blumlein 91

axion γ^*

? Lazarus 92, Nezrick 92, Ruoso 92

axion p

? Blumlein 91

axion nucleus

? Moskowitz 88

axion C

? Blumlein 91

ν e

> 0.0075 (> 0.0028) Kajita 90

ν p

10 – 260 (4.432 – 22.11) Jongejans 89
30 – 300 (7.562 – 23.75) Klein 89C

ν n

10 – 260 (4.436 – 22.12) Jongejans 89

ν nucleus

> 1 Sato 90
50 Ammar 89B

ν deuteron

0 – 260 (1.876 – 31.29) Tenner 91
10 – 100 (6.406 – 19.46) Matsinos 89

ν Ne

10 – 100 (26.9 – 64.11) Matsinos 89
50 (47.24) Ammar 89B

ν Fe

10 – 260 (61.21 – 172.5) Virchaux 92, Berge 89
60 (94.5) Choban 91
165 (140) Choban 91

$\bar{\nu}$ deuteron

0 – 260 (1.876 – 31.29) Tenner 91
10 – 100 (6.406 – 19.46) Matsinos 89

$\bar{\nu}$ Ne

10 – 100 (26.9 – 64.11) Matsinos 89

$\bar{\nu}$ Fe

10 – 260 (61.21 – 172.5) Virchaux 92, Berge 89

ν_e e^-

0 – 0.053 (0.0005 – 0.0074) Allen 93, Allen 91, Krakauer 91, Krakauer 90, Allen 89
0.0002 – 0.007 (0.0007 – 0.0027) Hirata 89
0.005 – 0.05 (0.0023 – 0.0072) Hirata 88F
> 0.007 (> 0.0027) Anselmann 92B
> 0.0075 (> 0.0028) Suzuki 91C, Suzuki 90
< 0.02 (< 0.0045) Nakamura 88
0.02 – 0.053 (0.0045 – 0.0074) Burman 91
? Spiro 92, Nakahata 90, Raffelt 90, Suzuki 89, Totsuka 89B

ν_e nucleon

0 – 7 (0.94 – 3.748) Blumenfeld 89
0 – 10 (0.94 – 4.437) Borodovsky 92
3 – 30 (2.554 – 7.569) Ammosov 88D
10 – 240 (4.437 – 21.26) Baker 90

ν_e n

> 0.2 (> 1.122) Allison 89B
1.5 (1.924) Lile 89

ν_e nucleus

0.02 – 0.06 Gajewski 89
0.1 – 1.1 Suzuki 88
0.2 – 20 Berger 89B, Perdereau 89, Longuemare 88
0.4 – 2 Nakamura 88
1 – 2 Bergsma 88
3 – 30 Ammosov 92B
13 Bergsma 88
? Blumlein 92, Blumlein 92B, Kajita 90

ν_e ^{12}C

0 – 0.0528 (11.18 – 11.23) Bodmann 92

ν_e ^{37}Cl

> 0.0008 (> 34.47) Davis 90, Nakahata 90, Davis 88B
0.005 – 0.02 (34.47 – 34.49) Suzuki 90B
< 0.02 (< 34.49) Nakamura 88
? Anselmann 92B, Spiro 92

ν_e ^{71}Ga

< 0.0004 (< 66.1) Anselmann 92
0.0009 (66.1) Anselmann 92
< 0.014 (< 66.11) Anselmann 92, Anselmann 92B
? Spiro 92, Abazov 91

$\bar{\nu}_e$ e^-

0.0002 – 0.002 (0.0007 – 0.0015) Derbin 92
0.0006 – 0.0052 (0.0009 – 0.0024) Derbin 92B
0.002 – 0.009 (0.0015 – 0.0031) Vidyakin 91, Ketov 88
0.004 – 0.01 (0.0021 – 0.0032) Vidyakin 92, Vidyakin 89B

$\bar{\nu}_e$ nucleon

0 – 10 (0.94 – 4.437) Borodovsky 92
10 – 240 (4.437 – 21.26) Baker 90

$\bar{\nu}_e$ p

0 – 0.01 (0.9383 – 0.9482) Bouchez 88
0 – 0.053 (0.9383 – 0.9899) Durkin 88
0.001 – 0.01 (0.9393 – 0.9482) Avenier 89
0.002 – 0.009 (0.9403 – 0.9472) Kuvshinnikov 91, Mikaelyan 91, Vidyakin 91, Klimov 90, Kopeikin 90, Vershinsky 90, Afonin 88, Afonin 88B, Ketov 88, Mikaelyan 88
0.002 – 0.01 (0.9403 – 0.9482) Kuvshinnikov 90
0.004 – 0.01 (0.9423 – 0.9482) Vidyakin 90B
0.005 – 0.05 (0.9433 – 0.987) Hirata 88F
< 0.01 (< 0.9482) Ketov 92, Skorokhvatov 92, Boehm 88
1.5 (1.922) Krizmanic 89
? Freedman 93

$\bar{\nu}_e$ p

Raffelt 90

$\bar{\nu}_e$ nucleus

0.1 – 1.1 Suzuki 88
0.2 – 20 Berger 89B, Perdereau 89, Longuemare 88
0.4 – 2 Nakamura 88
1 – 2 Bergsma 88
13 Bergsma 88
? Blumlein 92, Blumlein 92B

$\bar{\nu}_e$ deuteron

0.002 – 0.009 (1.878 – 1.885) Mikaelyan 91, Vidyakin 91, Vershinsky 90, Ketov 88
0.004 – 0.01 (1.87 – 1.886) Vidyakin 90, Vidyakin 89

ν_μ e^-

0.0298 (0.0055) Krakauer 90
1.27 (0.036) Abe 89E
< 5 (< 0.0714) Ahrens 90
10 – 160 (0.101 – 0.404) Dorenbosch 89, Geiregat 89
10 – 200 (0.101 – 0.4517) Baker 89
15 – 600 (0.1237 – 0.7823) Mishra 90B, Mishra 89B
23.7 (0.1555) Vilain 93, Rolandi 92, Vilain 92
23.8 (0.1558) Geiregat 91, Geiregat 90B, Lippich 90

ν_μ q

? Mishra 92

ν_μ nucleon

0 – 7 (0.94 – 3.748) Blumenfeld 89
0 – 10 (0.94 – 4.437) Borodovsky 92
0 – 230 (0.94 – 20.82) Mukherjee 86
3 – 30 (2.554 – 7.569) Ammosov 88B, Ammosov 88D, Ammosov 88E
4 – 160 (2.899 – 17.37) Loverre 88
10 – 160 (4.437 – 17.37) Rolandi 92, Allaby 89, Allaby 88
10 – 200 (4.437 – 19.41) Virchaux 92, Ammosov 88, Ushida 88, Ushida 88B, Asratyan 87C
10 – 230 (4.437 – 20.82) Mishra 89
10 – 240 (4.437 – 21.26) Baker 90
15 – 600 (5.393 – 33.5) Mishra 90B
20 – 200 (6.204 – 19.41) Choban 91
20 – 230 (6.204 – 20.82) Reutens 90
30 – 300 (7.569 – 23.77) Auchincloss 90
30 – 600 (7.569 – 33.5) Foudas 90

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

ν_μ nucleon

Foudas 88B
< 600 (< 33.5)
Debarbaro 90B

ν_μ p

0 – 30 (0.9383 – 7.562)
Schmitz 88
0 – 150 (0.9383 – 16.8)
Asratyan 92
0 – 200 (0.9383 – 19.3)
Schmitz 88
0 – 300 (0.9383 – 23.75)
Borner 90
3 – 30 (2.552 – 7.562)
Ammosov 92B
Brunner 89
Grabosch 89
3 – 100 (2.552 – 13.73)
Allasia 90
5 – 150 (3.204 – 16.8)
Virchaux 92
Bosetti 90
Jones 90
Jones 89B
Jones 89C
10 – 150 (4.432 – 16.8)
Jones 91C
10 – 200 (4.432 – 19.3)
Jones 91
Jones 91B
Batusov 88C
10 – 250 (4.432 – 21.68)
Virchaux 92
10 – 260 (4.432 – 22.11)
Jongejans 89
Allasia 88C
10 – 300 (4.432 – 23.75)
Guy 89
25 (6.913) Batusov 90C

ν_μ n

0 – 30 (0.9396 – 7.567)
Schmitz 88
0 – 200 (0.9396 – 19.41)
Schmitz 88
> 0.15 (> 1.079)
Allison 89B
1.5 (1.924) Lile 89
3 – 30 (2.554 – 7.567)
Ammosov 92B
Brunner 89
Brunner 89B
Grabosch 89
3 – 100 (2.554 – 13.74)
Allasia 90
10 – 250 (4.436 – 21.69)
Virchaux 92
10 – 260 (4.436 – 22.12)
Jongejans 89
Allasia 88C

ν_μ nucleus

0 – 200 Asratyan 92
0 – 300 Schmitz 88
0 – 500 Kitagaki 88
0.1 – 1.1 Suzuki 88
0.2 – 20 Berger 89B
Perdereau 89
Longuemare 88
0.4 – 2 Bionta 88
Nakamura 88
1 – 2 Bergsma 88
3 – 30 Ammosov 92B
Ammosov 90
Ammosov 88G
10 – 100 Asratyan 92
Berggren 90
10 – 160 Allaby 88C
10 – 200 Ammosov 92
Gorichev 91
Batusov 90C
Ammar 89
Ammar 88
Batusov 88C

ν_μ nucleus

Asratyan 87C
Batusov 87
10 – 250 Mattison 90
10 – 320 Ballagh 89
10 – 400 Jain 90C
10 – 600 Mishra 91
10.5 Ammosov 89
13 Bergsma 88
20 – 500 Strongin 91
30 – 600 Rabinowitz 93
Smith 92B
Debarbaro 90
1000 – 10^6 Oyama 88B
? Mori 92
Mori 91C
Kajita 90

ν_μ deuteron

0 – 260 (1.876 – 31.29)
Asratyan 92
0 – 500 (1.876 – 43.35)
Kitagaki 88
0.4 – 6 (2.24 – 5.102)
Merenyi 92
1.6 (3.085) Kitagaki 90
5 – 200 (4.71 – 27.45)
Verluyten 91
10 – 100 (6.406 – 19.46)
Allport 89
10 – 200 (6.406 – 27.45)
Cole 88
10 – 260 (6.406 – 31.29)
Allasia 88
Allasia 88B
Allasia 88C
Tenner 88
10 – 300 (6.406 – 33.5)
Guy 89

ν_μ ^{12}C

202 (68.13) Koetke 92

ν_μ Ne

0 – 200 (18.79 – 88.7)
Schmitz 88
0 – 300 (18.79 – 107.8)
Schmitz 88
0.4 – 6 (19.18 – 24.05)
Merenyi 92
5 – 150 (23.26 – 77.39)
Bosetti 90
10 – 100 (26.9 – 64.11)
Choban 91
Allport 89
Marage 89
Wittek 89
Wittek 88
10 – 200 (26.9 – 88.7)
Baker 91
10 – 300 (26.9 – 107.8)
Willocq 92
Guy 89
10 – 320 (26.9 – 111.3)
Ballagh 86
10 – 400 (26.9 – 124)
Willocq 92B
40 – 300 (43.08 – 107.8)
Aderholz 89
< 400 (< 124) Wittek 88

ν_μ Fe

5 – 160 (56.8 – 139.1)
Virchaux 90
10 – 150 (61.21 – 135.3)
Choban 91
10 – 160 (61.21 – 139.1)
Rolandi 92
Blondel 90
Loverre 88
10 – 260 (61.21 – 172.5)
Virchaux 92
10 – 600 (61.21 – 255.2)
Mishra 92

ν_μ Fe

30 – 600 (76.34 – 255.2)
Bodek 92
Sandler 92
Foudas 88
Schumm 88
37.1 – 230 (81.03 – 163.2)
Virchaux 92

$\bar{\nu}_\mu$ e

0 – 0.053 (0.0005 – 0.0074)
Krakauer 90
1.23 (0.0354) Abe 89E
< 5 (< 0.0714)
Ahrens 90
10 – 160 (0.101 – 0.404)
Dorenbosch 89
Geiregat 89
19.1 (0.1396) Vilain 93
Rolandi 92
Vilain 92
19.3 (0.1403) Geiregat 91

$\bar{\nu}_\mu$ q

? Mishra 92

$\bar{\nu}_\mu$ nucleon

0 – 10 (0.94 – 4.437)
Borodovsky 92
0 – 230 (0.94 – 20.82)
Mukherjee 86
10 – 160 (4.437 – 17.37)
Allaby 89
Allaby 88
10 – 200 (4.437 – 19.41)
Virchaux 92
Ammosov 88
Ushida 88B
Asratyan 87C
10 – 240 (4.437 – 21.26)
Baker 90
20 – 200 (6.204 – 19.41)
Choban 91
20 – 230 (6.204 – 20.82)
Reutens 90
30 – 300 (7.569 – 23.77)
Auchincloss 90
30 – 600 (7.569 – 33.5)
Foudas 90
Foudas 88B

ν_μ p

0 – 12 (0.9383 – 4.837)
Ahrens 88
0 – 30 (0.9383 – 7.562)
Schmitz 88
0 – 150 (0.9383 – 16.8)
Asratyan 92
0 – 200 (0.9383 – 19.3)
Schmitz 88
0 – 300 (0.9383 – 23.75)
Borner 90
> 0.15 (> 1.078)
Allison 89B
1.5 (1.922) Krizmanic 89
3 – 30 (2.552 – 7.562)
Ammosov 92B
Brunner 89
Brunner 89B
Grabosch 89
3 – 100 (2.552 – 13.73)
Allasia 90
5 – 150 (3.204 – 16.8)
Virchaux 92
Jones 90
Jones 89B
Jones 89C
10 – 150 (4.432 – 16.8)
Jones 91C
10 – 200 (4.432 – 19.3)
Jones 91
Jones 91B
10 – 250 (4.432 – 21.68)
Virchaux 92

$\bar{\nu}_\mu$ p

10 – 260 (4.432 – 22.11)
Jongejans 89
Allasia 88C
10 – 300 (4.432 – 23.75)
Guy 89

$\bar{\nu}_\mu$ n

0 – 30 (0.9396 – 7.567)
Schmitz 88
0 – 200 (0.9396 – 19.41)
Schmitz 88
3 – 30 (2.554 – 7.567)
Ammosov 92B
Brunner 89
Grabosch 89
3 – 100 (2.554 – 13.74)
Allasia 90
10 – 250 (4.436 – 21.69)
Virchaux 92
10 – 260 (4.436 – 22.12)
Jongejans 89
Allasia 88C

$\bar{\nu}_\mu$ nucleus

0 – 200 Asratyan 92
0.1 – 1.1 Suzuki 88
0.2 – 20 Berger 89B
Perdereau 89
Longuemare 88
0.4 – 2 Bionta 88
Nakamura 88
1 – 2 Bergsma 88
3 – 30 Ammosov 92B
10 – 100 Asratyan 92
Berggren 90
10 – 160 Geiregat 90
Allaby 88C
10 – 165 Mattison 90
10 – 200 Ammosov 92
Asratyan 87C
10 – 400 Jain 90C
13 Bergsma 88
20 – 500 Strongin 91
30 – 600 Rabinowitz 93
Smith 92B
1000 – 10^6 Oyama 88B

$\bar{\nu}_\mu$ deuteron

0 – 260 (1.876 – 31.29)
Asratyan 92
10 – 100 (6.406 – 19.46)
Allport 89
10 – 250 (6.406 – 30.68)
Arneodo 92
10 – 260 (6.406 – 31.29)
Allasia 88
Allasia 88B
Allasia 88C
Tenner 88
10 – 300 (6.406 – 33.5)
Guy 89

$\bar{\nu}_\mu$ Ne

0 – 200 (18.79 – 88.7)
Schmitz 88
0 – 300 (18.79 – 107.8)
Schmitz 88
10 – 100 (26.9 – 64.11)
Marage 91
Allport 89
Wittek 89
Wittek 88
10 – 200 (26.9 – 88.7)
Willocq 91
Ammosov 88C
10 – 250 (26.9 – 98.73)
Arneodo 92
10 – 300 (26.9 – 107.8)
Willocq 92
Asratyan 90
Guy 89
10 – 400 (26.9 – 124)
Willocq 92B

$\bar{\nu}_\mu$ Ne

40 – 300 (43.08 – 107.8) Aderholz 89

$\bar{\nu}_\mu$ Fe

5 – 160 (56.8 – 139.1) Virchaux 90
10 – 150 (61.21 – 135.3) Choban 91
10 – 160 (61.21 – 139.1) Rolandi 92, Blondel 90
10 – 260 (61.21 – 172.5) Virchaux 92
10 – 600 (61.21 – 255.2) Mishra 92
30 – 600 (76.34 – 255.2) Sandler 92, Foudas 88, Schumm 88
37.1 – 230 (81.03 – 163.2) Virchaux 92

ν_τ e^-

? Coopersarkar 91

ν_τ nucleus

0 – 260 Batusov 90E

ν_τ e

? Coopersarkar 91

$e^\pm$ nucleus

5 Degtyarenko 90, Degtyarenko 89

e^- γ

3 – 12 (0.0005) Fujii 90, Hill 89
14.5 (0.0005) Aihara 89C, Aihara 88D, Aihara 88E, Gidal 88B
17.4 (0.0005) Berger 88B
17.5 (0.0005) Braunschweig 88F
23.3 (0.0005) Braunschweig 88F
25 – 28 (0.0005) Fujii 90, Sasaki 89, Sasaki 88
25 – 30.7 (0.0005) Sasaki 90
45.6 (0.0005) Dehning 90
? Ouldsaada 88B, Toki 88B

e^- e^-

0.0026 – 0.0029 (0.0018 – 0.0019) Gobel 92
(0.32 – 1.1) Salvini 88

e^- nucleon

20 (6.204) Bjorken 88

e^- p

0.2 (1.121) Platchkov 90, Shoda 88
0.3 (1.201) Platchkov 90
0.35 (1.23) Welch 92
0.3655 (1.252) Vonreden 90
0.5 (1.349) Welch 92, Platchkov 90
0.504 – 1.286 (1.351 – 1.815) Bosted 89
0.6455 (1.446) Gilman 90
0.65 (1.449) Platchkov 90
0.96 (1.638) Sealock 89
1.1 (1.716) Sealock 89
1.3 (1.822) Sealock 89
1.5 (1.922) Sealock 89
1.5 – 9.8 (1.922 – 4.38) Bosted 92B
1.6 (1.971) Virchaux 92

e^- p

4.6 (3.084) Vapenikova 88
8 (3.987) Virchaux 92
9.71 (4.371) Yokosawa 90B
9.8 – 21 (4.38 – 6.347) Rock 91
12.95 (5.018) Yokosawa 90B
16.18 (5.58) Yokosawa 90B
16.19 (5.591) Yokosawa 90B
20 (6.198) Virchaux 92, Yokosawa 90B
22.66 (6.588) Yokosawa 90B
(295) Ahmed 92E, Derrick 92B, Eisele 92
(295.4) Derrick 92
(296) Derrick 93
(314) Deroeck 93, Ahmed 92B, Ahmed 92C, Derrick 92C, Wolf 92
? Buenerd 92

e^- n

4.6 (3.087) Vapenikova 88
9.8 – 21 (4.393 – 6.352) Rock 91

e^- nucleus

0.96 Sealock 89
1.1 Sealock 89
1.3 Sealock 89
1.5 Sealock 89
1.6 Davier 89
275 Bross 89

e^- deuteron

0.1748 (2.043) Kuplennikov 91
0.2 (2.066) Platchkov 90
0.2005 (2.066) Platchkov 89
0.279 (2.137) Kuplennikov 91
0.3 (2.155) Platchkov 90
0.3005 (2.155) Platchkov 89
0.3282 (2.179) Kuplennikov 91
0.4447 (2.277) Kuplennikov 91
0.5 (2.322) Platchkov 90
0.5005 (2.323) Platchkov 89
0.6455 (2.437) Gilman 90
0.65 (2.441) Platchkov 90, Garcon 89
0.6505 (2.441) Platchkov 89
0.653 (2.443) The 91
0.7 – 1.3 (2.479 – 2.897) Bosted 89
0.75 (2.516) Garcon 89
0.755 (2.51) The 91
0.843 (2.585) Arnold 88
0.85 (2.58) Garcon 89
0.853 (2.592) The 91
1.02 (2.71) Arnold 88
1.105 (2.768) Leiendecker 92
1.107 (2.76) Leiendecker 92
1.128 (2.784) Arnold 88
1.189 (2.825) Arnold 88
1.2 (2.832) Boden 92
1.5 – 5.5 (3.024 – 4.914) Lung 93
1.6 (3.085) Virchaux 92
2 (3.31) Boden 91, Gilman 90B, Meyer 88B
2.5 (3.591) Schabl tzky 89
3 (3.843) Arneodo 92
3.7 – 18 (4.171 – 8.429) Whitlow 90
3.75 – 16 (4.193 – 7.971) Roberts 91
3.75 – 19.5 (4.193 – 8.756) Arneodo 92, Dasu 88, Dasu 87
4.5 – 20 (4.516 – 8.862) Arneodo 92
4.6 (4.558) Vapenikova 88

e^- deuteron

5 (4.71) Arneodo 92
6 (5.102) Arneodo 92
7 (5.457) Arneodo 92
8 (5.79) Virchaux 92
8 – 24.5 (5.79 – 9.768) Arneodo 92
9.8 – 21 (6.347 – 9.072) Rock 91
20 (8.862) Virchaux 92
? Buenerd 92

e^- ^{3}He

0.578 (3.323) Thompson 92
0.9 – 4.3 (3.583 – 5.643) Mezani 92
1.211 (3.818) Kuplennikov 92
1.216 (3.821) Kuplennikov 91

e^- ^{4}He

0.183 (3.905) Spahn 89
0.2795 – 0.7255 (3.996 – 4.392) Vonreden 90
0.8 – 1.2 (4.455 – 4.778) Dementy 88
0.9 – 4.3 (4.538 – 6.777) Mezani 92
0.96 (4.587) Sealock 89
1.1 (4.699) Sealock 89
1.174 (4.757) Kuplennikov 90
1.175 (4.758) Kuplennikov 90B
1.3 (4.855) Sealock 89
1.5 (5.006) Sealock 89

e^- He

8 – 24.5 (8.576 – 14.02) Arneodo 92

e^- ^{7}Li

0.2 (6.717) Shoda 88

e^- ^{7}Be

? Anselmann 92

e^- Be

8 – 24.5 (14.31 – 21.95) Arneodo 92
13 (16.99) Arneodo 92
20 (20.16) Arneodo 92

e^- ^{9}Be

0.3 (8.678) Hiel 89
0.8185 (9.165) Kuplennikov 91
1.45 (9.726) Mkrtchyan 90
1.45 – 2.13 (9.726 – 10.2) Bagdasaryan 88
1.67 (9.913) Mkrtchyan 90
1.93 (10.13) Mkrtchyan 90
2.13 (10.2) Mkrtchyan 90

e^- C

0.653 – 1.65 (11.82 – 12.73) Baran 88B
0.78 (11.94) Geesaman 89
0.96 (12.11) Sealock 89
1.1 (12.24) Sealock 89
1.3 (12.42) Sealock 89
1.5 (12.5) Sealock 89
8 – 24.5 (17.44 – 25.95) Arneodo 92

e^- ^{12}C

0.2 (11.38) Shoda 88B
0.205 (11.38) Shoda 88B
0.25 (11.43) Souder 90
0.46 (11.63) Lourie 90
0.505 (11.67) Lourie 90
0.647 (11.81) Lourie 90
0.686 (11.85) Lourie 90
0.69 (11.85) Kalantarnaye 89
0.698 (11.86) Lourie 90
0.8 (11.95) Lourie 90
1 – 2.13 (12.14 – 13.14) Vartapetyan 90
1.45 (12.55) Mkrtchyan 90

e^- ^{12}C

1.45 – 2.13 (12.55 – 13.14) Bagdasaryan 88
1.67 (12.74) Mkrtchyan 90
1.67 – 2.13 (12.74 – 13.14) Vartapetyan 89
1.93 (12.97) Mkrtchyan 90
1.94 (12.98) Alanakyan 91, Alanakyan 90
2.13 (13.14) Mkrtchyan 90

e^- ^{15}Nit

0.17 (14.14) Liesenfeld 88

e^- Al

0.78 (25.9) Geesaman 89
1.5 – 9.8 (26.59 – 33.53) Bosted 92
3 (27.97) Arneodo 92
4.5 – 20 (29.29 – 40.46) Arneodo 92
5 (29.72) Arneodo 92
6 (30.55) Arneodo 92
7 (31.36) Arneodo 92
8 – 24.5 (32.15 – 43.16) Arneodo 92
9.8 – 21 (33.53 – 41.08) Rock 91
13 (35.85) Arneodo 92
20 (40.46) Arneodo 92

e^- ^{28}Si

0.2 (26.28) Shoda 88

e^- ^{30}Si

0.33 (28.27) Wesseling 92
0.454 (28.3) Wesseling 92

e^- ^{31}Ph

0.33 Wesseling 92
0.454 Wesseling 92

e^- ^{32}S

0.33 (30.14) Wesseling 92
0.454 (30.26) Wesseling 92

e^- Ca

8 – 24.5 (44.62 – 56.77) Arneodo 92

e^- ^{40}Ca

0.1855 (37.45) Kagaya 89

e^- ^{51}Va

0.2 (47.71) Shoda 88

e^- ^{50}Cr

? Zdesenko 92

e^- ^{55}Fe

0 Hime 92, Norman 91

e^- ^{56}Fe

0.9 – 4.3 (53.06 – 56.3) Chen 91B

e^- Fe

0.653 – 1.65 (52.67 – 53.65) Baran 88B
0.96 (52.97) Sealock 89
1.1 (53.11) Sealock 89
1.3 (53.31) Sealock 89
1.5 (53.5) Sealock 89
3.7 – 18 (55.5 – 67.67) Whitlow 90
3.75 – 19.5 (55.65 – 68.81) Arneodo 92, Dasu 88, Dasu 87
8 – 24.5 (59.49 – 72.49) Arneodo 92

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

e^- ^{58}Ni

?	Zdesenko 92

e^- Ni

0.78 (55.46)	Geesaman 89

e^- Cu

13 (71.02)	Arneodo 92
20 (76.63)	Arneodo 92

e^- ^{64}Zn

?	Zdesenko 92

e^- ^{71}Ge

0 (66.1)	Hime 92

e^- ^{78}Kr

?	Zdesenko 92

e^- ^{84}Sr

?	Zdesenko 92

e^- ^{93}Nb

0.2 (87.13)	Shoda 88

e^- ^{92}Mo

?	Zdesenko 92

e^- ^{96}Ru

?	Zdesenko 92

e^- Ag

8 – 24.5 (108.2 – 122.6)	Arneodo 92

e^- ^{106}Cd

?	Zdesenko 92

e^- ^{112}Sn

?	Zdesenko 92

e^- ^{120}Te

?	Zdesenko 92

e^- ^{124}Xe

?	Zdesenko 92

e^- ^{130}Ba

?	Zdesenko 92

e^- Ta

0.78 (169.3)	Geesaman 89

e^- Wt

0.96 (172.2)	Sealock 89
1.1 (172.4)	Sealock 89
1.3 (172.6)	Sealock 89
1.5 (172.8)	Sealock 89
1.6 (172.9)	Davier 89

e^- ^{184}Os

?	Zdesenko 92

e^- ^{190}Pt

?	Zdesenko 92

e^- Au

3.75 – 19.5 (187.2 – 202)	Arneodo 92
	Dasu 88
	Dasu 87
8 – 24.5 (191.3 – 206.5)	Arneodo 92
13 (196)	Arneodo 92
20 (202.5)	Arneodo 92

e^- ^{235}U

1.33 – 4.32 (220.2 – 223.2)	Arakelyan 89
	Arakelyan 89C

e^- ^{238}U

1.33 – 4.32 (223 – 225)	Arakelyan 89
	Arakelyan 89C

e^+ γ

14.5 (0.0005)	Aihara 88D
	Aihara 88E
	Gidal 88B
17.4 (0.0005)	Berger 88B
46 (0.0005)	Bini 91

e^+ e^-

0 (0.001)	Skalsey 92B
	Atoyan 90
	Gninenko 89
(0.001 – 0.0012)	Minowa 89
0 – 0.0019 (0.001 – 0.0016)	Adachi 90F
(< 0.0011)	Kozhuharov 88
0.0012 – 0.0013 (0.0013 – 0.0014)	Tsertos 88
	Tsertos 88B
0.001 – 0.0017 (0.0013 – 0.0015)	Tsertos 89B
(0.0015 – 0.0019)	Henderson 92
0.0019 (0.0016)	Connell 88
0.002 – 0.0023 (0.0016 – 0.0017)	Judge 90
(0.0016 – 0.0019)	Wu 92
	Lorenz 88
0.0021 – 0.0024 (0.0017)	Tsertos 91
0.0024 – 0.003 (0.0017 – 0.0019)	Hallin 92
0.0027 (0.0018)	Connell 88
(0.0018 – 0.0019)	Widmann 91
0.0026 – 0.0028 (0.0018 – 0.0019)	Tsertos 89C
0.0026 – 0.0029 (0.0018 – 0.0019)	Gobel 92
(< 0.002)	Skalsey 92
< 0.0046 (< 0.0023)	Trzaska 91B
(< 0.0025)	Klinken 88
1.35 – 2.4 (0.0371 – 0.0495)	Bisello 90E
38.4 (0.1979)	Braunschweig 89I
42.1 (0.2072)	Braunschweig 89I
(0.36 – 1)	Benayoun 92
	Feindt 92C
(0.48 – 1.9)	Govorkov 88
(0.5 – 0.75)	Dolinsky 89B
(0.5 – 1)	Dolinsky 89
	Dolinsky 88B
(0.5 – 1.05)	Dolinsky 89
(0.5 – 1.4)	Dolinsky 89B
	Vorobiev 88C
(0.64 – 1.4)	Kurdadze 88
(0.66 – 0.95)	Vasserman 88
(0.66 – 0.98)	Dolinsky 89
(0.66 – 1.4)	Bukin 89
	Dolinsky 89B
(0.76 – 0.8)	Dolinsky 88
(0.77)	Dolinsky 89
	Dolinsky 89B
	Dolinsky 88B
	Kurdadze 88
	Vasserman 88
	Vasserman 87B
(0.782)	Barkov 89
	Dolinsky 89
	Dolinsky 89B
	Dolinsky 88
	Dolinsky 88B
	Kurdadze 88
	Vasserman 88
(0.81 – 1.39)	Dolinsky 89B
(0.84 – 1.02)	Barkov 89
(0.85 – 1.395)	Dolinsky 89B
(0.93 – 1.39)	Dolinsky 89B
(0.958)	Dolinsky 89B
	Vorobiev 88C
(0.96 – 1.4)	Dolinsky 89B

e^+ e^-

(0.975)	Dolinsky 89B
	Vorobiev 88C
(0.98)	Dolinsky 89B
	Vorobiev 88C
(1)	Dolinsky 89B
(1 – 1.05)	Dolinsky 89
	Dolinsky 89B
	Druzhinin 88
(1 – 1.4)	Donnachie 91
	Dolinsky 89B
	Govorkov 88
(1 – 1.9)	Donnachie 89
(1.005 – 1.395)	Dolinsky 89B
(1.019 – 1.403)	Barkov 88
(1.02)	Barkov 89
	Dolinsky 89
	Dolinsky 89B
	Barkov 88
	Dolinsky 88
	Druzhinin 88
(1.075 – 1.375)	Dolinsky 89B
(1.27)	Dolinsky 89B
	Vorobiev 88C
(1.28 – 1.4)	Dolinsky 89B
(1.32)	Dolinsky 89B
	Vorobiev 88C
(1.35 – 2.4)	Antonelli 92
	Bisello 91
	Bisello 91B
	Bisello 91C
	Donnachie 91
	Bisello 90D
	Bisello 89B
	Antonelli 88
	Bisello 88B
(1.39)	Donnachie 91
	Donnachie 89
	Govorkov 88
(1.4)	Dolinsky 89B
	Vorobiev 88C
(1.4 – 2.2)	Donnachie 89
(1.45)	Donnachie 91
	Dolinsky 89B
	Govorkov 88
(1.5 – 2.2)	Castro 88
(1.5 – 55)	Marshall 89
(1.5 – 91)	Chliapnikov 92
(1.6)	Donnachie 89
	Govorkov 88
(1.68)	Bisello 91
	Bisello 91B
(1.7)	Dolinsky 89B
	Govorkov 88
(1.9 – 2.4)	Castro 88
(2.234 – 44.68)	Marshall 89
(2.386)	Bisello 90
(< 2.4)	Salvini 88
(2.4)	Castro 88
(3)	Bethke 91
(3 – 3.2)	Bisello 88
	Tixier 88
(3 – 7.5)	Perl 90
(3.08 – 3.12)	Jin 91
(3.095 – 29)	Juricic 88
(3.1)	Bolton 92
	Bolton 91
	Chen 91
	Dunwoodie 91
	Jin 91
	Augustin 90B
	Augustin 90C
	Bai 90B
	Bai 90D
	Bisello 90B
	Bisello 90C
	Chen 90B
	Drinkard 90
	Eigen 90
	Augustin 89
	Bisello 89
	Coffman 89

e^+ e^-

	Lockman 89
	Mallik 89B
	Szklarz 89
	Adler 88D
	Ajaltouni 88
	Ajaltouni 88B
	Augustin 88
	Augustin 88B
	Coffman 88
	Falvard 88
	Hitlin 88
	Jousset 88
	Mir 88
	Stanco 88
	Toki 88
	Toki 88B
(3.5 – 7.2)	Barish 88
(3.6)	Blinov 88B
(3.69)	Coffman 92
	Mir 89
	Toki 89
(3.77)	Coffman 92B
	Coffman 91
	Bai 90C
	Dejongh 90
	Gan 90
	Labs 90
	Schindler 90
	Adler 89
	Adler 89C
	Adler 89D
	Adler 89E
	Browder 89
	Dejongh 89
	Wasserbaech 89
	Adler 88
	Adler 88B
	Adler 88F
	Grab 88
	Hitlin 88
	Izen 88
	Schindler 88
	Coffman 87
(3.77 – 46.8)	Gan 88B
(3.8)	Bethke 91
(3.9 – 7.8)	Perl 90
(4 – 5)	Gan 90
(4 – 9)	Behrend 91
(4.1 – 4.2)	Perl 90
(4.14)	Coffman 91
	Bai 90
	Adler 89B
	Adler 89E
	Alder 89
	Browder 89
	Pitman 89
	Toki 89B
	Wasserbaech 89
	Wasserbaech 89B
	Adler 88C
	Schindler 88
(4.4 – 5.8)	Perl 90
(4.5 – 6.8)	Klein 89C
(4.7 – 5.3)	Albrecht 91N
	Albrecht 89F
	Albrecht 88N
	Albrecht 88R
(4.8)	Bethke 91
	Perl 90
(5)	Karch 91
(5 – 7.4)	Edwards 89
(5 – 31.6)	Marshall 89
(5 – 61.4)	Branchina 92
(6 – 23.39)	Hill 89
(6.2)	Bethke 91
(6.4 – 7.4)	Perl 90
(7.2 – 10)	Blinov 91B
(7.2 – 10.4)	Baru 90
(7.23 – 10.34)	Blinov 91
(7.4)	Bethke 91
(7.6 – 10)	Baru 91
(7.7 – 9.7)	Baru 92
(8.4)	Lockman 90
(9 – 29)	Gidal 88C

e^+e^-

(9.3 – 10.5)	Herrera 91
(9.36)	Albrecht 91L
(9.388 – 9.479)	Jakubowski 88
(9.39)	Jakubowski 90
(9.39 – 10.52)	Bieler 90
(9.4)	Albrecht 92F
(9.4 – 10.5)	Albrecht 89W
	Kaarsberg 89
(9.4 – 10.6)	Albrecht 92
	Albrecht 92I
	Albrecht 92M
	Albrecht 92S
	Albrecht 91C
	Albrecht 91M
	Ammar 91B
	Antreasyan 91B
	Donnachie 91
	Karch 91C
	Albrecht 90I
	Albrecht 90L
	Gan 90
	Janssen 90
	Marsiske 90
	Morgan 90
	Tsipolitis 90
	Albrecht 89
	Albrecht 89K
	Albrecht 88C
	Albrecht 88J
	Albrecht 88L
	Albrecht 88O
	Albrecht 88P
	Albrecht 88Q
	Govorkov 88
	Williams 88
	Albrecht 87N
(9.4 – 11.4)	Herrera 91
(9.46)	Alam 92
	Albrecht 92H
	Baru 92B
	Baru 91
	Bizzeti 91
	Antreasyan 90B
	Blinov 90
	Jakubowski 90
	Kroha 90
	Albrecht 89J
	Baru 89
	Bethke 89
	Chen 89
	Fulton 89B
	Schutte 89
	Albrecht 88K
	Albrecht 88Q
	Fairfield 88
	Schmitt 88
(9.46 – 10.58)	Albrecht 92G
	Antreasyan 91
(9.46 – 10.6)	Albrecht 89B
	Fulton 89
	Klein 89C
	Maschmann 89
	Albrecht 88D
	Albrecht 88I
(9.5 – 10.5)	Albrecht 89R
(9.5 – 10.65)	Maschmann 89
(9.8 – 10.3)	Janssen 89
(9.966 – 10.04)	Jakubowski 88
(9.98)	Aleem 92
	Albrecht 89H
(9.99 – 44.68)	Marshall 89
(10)	Albrecht 93
	Albrecht 92O
	Bean 92
	Bienlein 92
	Albrecht 91K
	Bienlein 91
	Karch 91B
	Kobel 91
	Abe 90H
	Albrecht 90
	Albrecht 90B
	Antreasyan 90C

e^+e^-

	Bienlein 90
	Feindt 90B
	Karch 90
	Karch 90B
	Albrecht 89B
	Albrecht 89G
	Albrecht 89I
	Albrecht 89O
	Albrecht 89P
	Albrecht 89T
	Albrecht 89V
	Behrend 89F
	Klein 89C
	Albrecht 88F
	Albrecht 88H
	Albrecht 88I
	Albrecht 88S
	Bienlein 88
(10 – 45)	Mattig 89
(10 – 60)	Kass 89
(10.02)	Jakubowski 90
	Albrecht 89J
	Bethke 89
	Albrecht 88K
	Albrecht 88Q
(10.2)	Albrecht 90M
	Keh 88B
(10.2 – 10.5)	Albrecht 89N
(10.3 – 10.5)	Bowcock 88
(10.3 – 10.58)	Albrecht 91P
	Procario 91
(10.3 – 10.6)	Haas 88
(10.35)	Albrecht 91B
	Crawford 91
(10.35 – 10.58)	Alexander 92
(10.35 – 10.6)	Avery 92
(10.35 – 10.87)	Goldberg 90
(10.36)	Crawford 92
(10.36 – 10.58)	Daoudi 91
(10.36)	Alam 92
	Alexander 92
	Brock 91
	Heintz 91
	Morrison 91B
	Narain 91
	Yanagisawa 91
	Bethke 89
	Chen 89
(10.36 – 10.7)	Procario 92B
(10.36 – 10.86)	Bowcock 90
(10.4)	Albrecht 92C
	Albrecht 92N
	Albrecht 92R
	Albrecht 91F
(10.45)	Albrecht 88K
(10.46 – 10.52)	Wachs 89
(10.46 – 10.59)	Lesiak 91
(10.47)	Albrecht 91G
	Albrecht 91L
(10.49)	Aleem 92
	Maschmann 89
(10.5)	Trischuk 92
	Albrecht 91J
	Kubota 91
	Albrecht 90J
	Alexander 90B
	Gan 90
	Alexander 89
	Avery 89C
	Bowcock 89
	Bowcock 89B
	Chen 89B
	Klein 89C
(10.5 – 10.58)	Crawford 91B
(10.5 – 10.65)	Wachs 89
(10.5 – 10.7)	Alam 89B
(10.5 – 10.9)	Ammar 91
(10.52)	Alam 92

e^+e^-

	Bean 92B
	Avery 90C
	Fulton 89
	Kreinick 89
	Miller 89
	Bortoletto 88
(10.52 – 10.86)	Chen 89C
	Jensen 89
(10.55)	Avery 90B
	Franzini 89
	Golutvin 89
	Harder 89
(10.55 – 11.25)	Leefranzini 90
(10.57 – 10.59)	Wachs 89
(10.58)	Albrecht 92B
	Albrecht 92D
	Albrecht 92E
	Albrecht 92J
	Albrecht 92K
	Albrecht 92P
	Albrecht 92Q
	Alexander 92
	Battle 92
	Bean 92B
	Drell 92
	Sanghera 92
	Albrecht 91B
	Albrecht 91D
	Albrecht 91E
	Albrecht 91G
	Albrecht 91I
	Albrecht 91J
	Antreasyan 91
	Bortoletto 91
	Crawford 91
	Crawford 91B
	Cronstrom 91
	Henderson 91
	Mai 91
	Schafer 91
	Albrecht 90D
	Albrecht 90E
	Albrecht 90G
	Albrecht 90H
	Albrecht 90K
	Alexander 90
	Antreasyan 90
	Avery 90C
	Bortoletto 90
	Cassel 90
	Fujii 90
	Fulton 90
	Gray 90
	Kroha 90
	Miller 90
	Narain 90
	Weir 90
	Alam 89
	Albrecht 89C
	Albrecht 89E
	Albrecht 89L
	Albrecht 89Q
	Albrecht 89S
	Albrecht 89U
	Albrecht 89X
	Artuso 89C
	Avery 89B
	Bebek 89
	Bortoletto 89
	Bortoletto 89B
	Danilov 89
	Drell 89
	Franzini 89
	Fulton 89C
	Golutvin 89
	Halling 89
	Harder 89
	Kreinick 89
	Miller 89
	Mistry 89
	Schubert 89
	Albrecht 88E

e^+e^-

	Albrecht 88G
	Albrecht 88M
	Albrecht 88T
	Bortoletto 88
	Thorndike 88
(10.58 – 10.8)	Alexander 90C
(10.58 – 10.86)	Procario 91
(10.58 – 10.87)	Henderson 91B
	Kinoshita 90
(10.6)	Akerib 92
	Albrecht 92F
	Artuso 92
	Bortoletto 92
	Butler 92
	Heltsley 92
	Procario 92
	Albrecht 88E
(10.61 – 10.65)	Wu 91
(10.61 – 10.7)	Akerib 91
(10.7)	Wu 91
(10.86)	Crawford 91
	Yanagisawa 91
	Avery 90C
	Leefranzini 90
(12 – 41.5)	Marshall 89
	Braunschweig 88C
(12 – 43.5)	Braunschweig 89H
(12 – 46)	Bethke 91
(12 – 46.8)	Fujii 90
	Braunschweig 89J
	Braunschweig 89K
	Braunschweig 88B
	Braunschweig 88H
(14)	Kroha 92
	Magnussen 91
	Braunschweig 90
	Kroha 90B
(14 – 34.6)	Marshall 89
(14 – 42)	Abe 90H
(14 – 43.8)	Odaka 90
(14 – 44)	Genser 89
	Ouldsaada 88B
(14 – 45)	Hayes 89B
(14 – 46)	Fujii 90
	Braunschweig 88G
(14 – 46.1)	Adeva 88
(14 – 46.8)	Fujii 90
	Behrend 89C
	Behrend 89D
	Braunschweig 89D
	Behrend 88
(14 – 91)	Chliapnikov 92
(14.8)	Braunschweig 89M
(14.8 – 42.6)	Aleem 92
(15 – 30)	Fujii 90
	Braunschweig 88G
(15 – 45)	Gan 88
(17)	Braunschweig 90B
(17.5)	Behrend 91
	Behrend 90D
	Braunschweig 90B
	Behrend 88E
(18)	Oest 90
(20 – 42)	Albrow 88
(21.5)	Braunschweig 89M
(22)	Kroha 92
	Magnussen 91
	Braunschweig 90
	Kroha 90B
	Marshall 89
(22 – 38)	Braunschweig 89E
(22 – 46)	Bethke 89
(22 – 46.7)	Fujii 90
	Bethke 88
(22 – 56)	Bethke 88B
(22 – 61.4)	Branchina 90
(28 – 46.8)	Fujii 90
	Braunschweig 89G
(29)	Fujii 90
	Aleem 92
	Barklow 92

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

$e^+ e^-$

Chliapnikov 92
Geld 92
Kroha 92
Aihara 91
Bethke 91
Ronan 91
Schmitz 91
Abachi 90
Abe 90H
Alstongarnjo 90
Boyer 90
Butler 90
Denegri 90
Eastman 90
Fordham 90
Fujii 90
Gan 90
Gomezcadenas 90
Grishin 90
Heusch 90B
Komamiya 90
Kroha 90
Kroha 90B
Kroha 90C
Morgan 90
Odaka 90
Petradza 90
Petradza 90B
Vonzanthier 90
Abachi 89
Abachi 89B
Abachi 89C
Abachi 89D
Aihara 89
Aihara 89B
Aihara 89C
Aihara 89D
Averill 89
Avery 89
Band 89
Bethke 89
Bethke 89B
Bethke 89C
Buschbeck 89
Deboer 89
Ford 89
Franzini 89
Golutvin 89
Hawkins 89
Hawkins 89B
Hurst 89
Klein 89
Klein 89C
Komamiya 89
Komamiya 89B
Ong 89
Petradza 89
Porter 89
Riles 89
Riles 89B
Roe 89
Roe 89B
Snyder 89
Steele 89
Stoker 89
Wagner 89B
Weir 89
Weir 89B
Wu 89
Abachi 88
Abachi 88B
Abachi 88C
Aihara 88
Aihara 88B
Aihara 88C
Aihara 88E
Aihara 88F
Akerlof 88
Amidei 88
Band 88
Baringer 88
Cowan 88
Edberg 88
Gidal 88B

$e^+ e^-$

Hearty 88
Karlen 88B
Karlen 88C
Klein 88
Mathis 88
Ng 88
Ong 88
Ong 88B
Petersen 88
Riles 88
Tschirhart 88
Wood 88
Wormser 88
Wormser 88B
Gan 87B
Klem 86
(29 – 35) Marshall 89
(29 – 37.5) Piccolo 89
(29 – 42.6) Grivaz 88
(29 – 90) Buschbeck 91
(30 – 35) Ferrarotto 88
(30 – 36) Braunschweig 88G
(30 – 46.7) Fujii 90
Kleinwort 89
Ouldsaada 88
(33 – 45) Kroha 90C
(34) Aleem 92
Braunschweig 89
Braunschweig 89B
Marshall 89
(34.2 – 43.8) Ouldsaada 88B
(34.2 – 46.1) Ouldsaada 88B
(34.4) Kroha 92
Kroha 90
Kroha 90B
(34.5) Aleem 92
Kroha 92
Kroha 90
Kroha 90B
Braunschweig 89M
Berger 88
(34.6) Kroha 92
Kroha 90
Kroha 90B
Kroha 90C
Franzini 89
Golutvin 89
Marshall 89
(34.7) Kroha 92
Kroha 90B
Berger 88B
(34.7 – 42.8) Adeva 88
(34.8) Kroha 92
Kroha 90
Kroha 90B
Braunschweig 89I
Ouldsaada 88B
(35) Aleem 92
Bryman 92
Kroha 92
Magnussen 91
Podobrin 91
Abe 90H
Behrend 90
Behrend 90B
Behrend 90E
Behrend 90F
Braunschweig 90
Braunschweig 90C
Elsen 90
Feindt 90B
Fujii 90
Gan 90
Hagemann 90
Kroha 90
Kroha 90B
Lumsdon 90
Peters 90
Behrend 89B
Behrend 89H
Behrend 89I
Behrend 89J
Braunschweig 89
Braunschweig 89L

$e^+ e^-$

Braunschweig 89M
Buschbeck 89
Deboer 89
Greenshaw 89
Hegner 89
Jocksch 89
Kroha 89B
Ouldsaada 89
Pitzl 89
Braunschweig 88
Braunschweig 88D
Braunschweig 88E
Braunschweig 88F
Kamae 88
Ouldsaada 88B
(35 – 42.4) Fujii 90
Braunschweig 89F
(35 – 42.6) Ouldsaada 88B
(35 – 44) Abe 90H
(35 – 46) Fujii 90
Braunschweig 89C
(35 – 46.57) Behrend 88D
(35 – 46.8) Fujii 90
Behrend 88B
Behrend 88F
Behrend 88G
(35 – 47) Kroha 90C
(35 – 56) Kamae 88
(35.3) Kroha 90
(36) Abe 90H
Oest 90B
Wegner 90
(36 – 45) Gan 88
(36.2) Kroha 90
(36.3) Braunschweig 88D
(36.4) Pust 91
(37) Kroha 90
(38) Ouldsaada 88B
(38.3) Kroha 92
Kroha 90B
(38.3 – 46.8) Braunschweig 88E
(39.5) Adeva 88
(40) Ouldsaada 88B
(41.5) Kroha 92
Hagemann 90
Kroha 90B
(42) Abe 90H
(42.1) Braunschweig 89I
(42.4) Kroha 92
Kroha 90B
(42.6) Aleem 92
Braunschweig 89M
(43) Kroha 92
Behrend 90
Kroha 90
Kroha 90B
Behrend 89J
Kroha 89B
Ouldsaada 88B
(43.6) Kroha 92
Kroha 90B
Ouldsaada 88B
(43.7) Kroha 92
Braunschweig 90
Kroha 90B
(44) Magnussen 91
Elsen 90
Fujii 90
Kroha 90
Braunschweig 89B
Genser 89
Greenshaw 89
Pitzl 89
(44.2) Fujii 90
Behrend 88C
(44.8) Kroha 92
Kroha 90B
(45) Gan 88
(46.6) Braunschweig 88F
(47) Ouldsaada 88B
(50) Deboer 89
Eno 89
Kim 89C
Adachi 88C

$e^+ e^-$

Masuda 88
Rosenfeld 88
Sagawa 88
Sugahara 88
Unno 88
Igarashi 87
(50 – 52) Kinoshita 88B
(50 – 55) Abe 88B
Albrow 88
(50 – 56) Eno 88
Kinoshita 88C
Ko 88
Maki 88B
Mori 88
Myung 88
Park 88
Shirai 88
Son 88
(50 – 57) Fujii 90
Deboer 89
Kim 89B
Metcalf 89
Mori 89
Mori 89B
Park 89
Park 89B
Sasaki 89
Kamae 88
Kichimi 88
Mcneil 88
Sakuda 88
Yamauchi 88
(50 – 60.4) Zheng 90
(50 – 60.8) Adachi 90E
Fujii 90
Kim 90B
Kim 90C
Sakai 90
Smith 90
Stuart 90
Abe 89P
Bodek 89
Eno 89B
Eno 89C
Kim 89E
Kim 89G
Kinoshita 89B
Kurihara 89
Low 89
Sakai 89
Shaw 89
(50 – 61.4) Nozaki 92
Shimozawa 92
Shirai 91
Abe 90E
Adachi 90B
Ho 90B
Myung 90
Vinson 90
Ho 89
Iwasaki 89
Kim 89F
Kumita 89B
Maki 89
Myung 89
(50 – 62) Kanzaki 91
Olsen 91
(50 – 64) Shirai 91
Shirakata 91
Abe 90D
Abe 90H
Miyamoto 90
Odaka 90
Yamauchi 90
(51 – 61.4) Abe 90H
(52) Fujii 90
Adachi 89
Deboer 89
Eno 89
Adachi 88
Adachi 88B
Adachi 88C
Adachi 88D
Bacala 88

e^+e^-

	Bacala 88B
	Kim 88B
	Kim 88C
	Masuda 88
	Rosenfeld 88
	Sagawa 88
	Sugahara 88
	Unno 88
	Yamauchi 88
	Igarashi 87
(52 – 56)	Park 88
	Tauchi 88
(52 – 57)	Sagawa 90
	Adachi 89
	Li 89
	Li 89B
	Metcalf 89
	Sagawa 89
	Takahashi 88
(52 – 60)	Adachi 90D
	Bethke 89
(52 – 60.8)	Adachi 89B
	Adachi 89D
	Ogawa 89
(52 – 61.4)	Howell 92
	Adachi 91
	Hayashii 91
	Nagai 91
	Okamoto 91
	Shimonaka 91
	Adachi 90C
	Kang 90
	Abe 89K
(53.3)	Fujii 90
	Adachi 89C
(54 – 61.4)	Bethke 91
	Abe 90
	Abe 90C
	Abe 90F
	Fujii 90
	Unno 90
	Abe 89I
(54 – 64)	Yuzuki 91
	Abe 93
	Shirai 91
	Uehara 91
	Yonezawa 91
	Abe 90F
	Unno 90
(54.4)	Tauchi 88
(54.5)	Olsen 88
(55)	Fujii 90
	Adachi 89
	Eno 89
	Adachi 88D
	Bacala 88
	Bacala 88B
	Kim 88B
	Kim 88C
	Masuda 88
	Rosenfeld 88
	Sugahara 88
	Sumiyoshi 88
	Unno 88
	Yamauchi 88
(55 – 57)	Abe 89F
(55 – 60.8)	Adachi 90
	Taketani 90
	Abe 89J
	Iwata 89
	Odaka 89
(55 – 61.4)	Tanaka 92
	Tanaka 91
(55.2)	Kroha 90
(56)	Fujii 90
	Eno 89
	Abe 88D
	Abe 88E
	Bacala 88
	Bacala 88B
	Kim 88
	Kim 88B
	Kim 88C
	Kim 88D

e^+e^-

	Maki 88
	Rosenfeld 88
	Sumiyoshi 88
	Unno 88
(56 – 57)	Abe 88F
(56 – 60.8)	Nozaki 89
(56.5)	Adachi 89
	Eno 89
	Unno 88
(56.5 – 60.8)	Adachi 89E
(56.6)	Shirai 91
(56.9)	Kroha 92
(57)	Kanzaki 91
	Fujii 90
	Adachi 89
	Eno 89
	Mori 89B
	Bacala 88B
	Shirai 88
	Unno 88
	Yamauchi 88
(57.2)	Shirai 91
	Lim 90B
	Walker 90
(57.4 – 59.8)	Abe 93B
(57.6)	Shirai 91
(57.9)	Adachi 91B
	Shirai 91
(58)	Hinode 93
	Li 93
	Takaki 93
	Tsuboyama 92
	Kanzaki 91
	Maki 91
	Abe 90H
	Itoh 90
	Kim 90D
(58.3)	Shirai 91
(58.4)	Shirai 91
(58.5 – 61.4)	Kumita 89
(58.7)	Shirai 91
(59.5)	Fujii 90
	Adachi 89C
(< 60)	Salvini 88
(60 – 84)	Acton 91C
(60.8)	Fry 89
	Kim 89C
(88 – 93)	Dydak 91
	Augustin 90D
	Fordham 90
	Oshaughnessy 90
(88 – 94)	Branchina 92
	Dittmar 92
	Acton 91
	Haissinski 90
(88 – 94.5)	Decamp 91O
	Meinhard 91
(88 – 95)	Buskulic 92B
	Decamp 91E
	Perez 91
	Haissinski 90
(88.2 – 93.8)	Adriani 92K
(88.2 – 94.2)	Adriani 93B
	Abreu 92B
	Abreu 92C
	Abreu 92E
	Acton 92E
	Acton 92F
	Adriani 92H
	Buskulic 92F
	Dam 92
	Adeva 91B
	Adeva 91D
	Adeva 91E
	Adeva 91F
	Banerjee 91
	Burkhardt 91
	Decamp 91H
	Decamp 91S
	Privitera 91
	Zomer 91
	Zomer 91B
	Abreu 90O
	Adeva 90M

e^+e^-

	Adeva 90R
	Adeva 90T
	Goldhaber 90
	Steinberger 90
	Steinberger 89
(88.2 – 94.22)	Abreu 91M
(88.2 – 94.3)	Adriani 93
	Buskulic 93
	Nuttall 92
	Alexander 91B
(88.2 – 95)	Abreu 91C
	Akrawy 90T
(88.22 – 94.28)	
	Decamp 90K
(88.22 – 94.2)	Buskulic 93B
(88.22 – 94.22)	
	Bardadinotwi 92
	Bardadinotwi 92B
	Abreu 91
	Abreu 91B
	Abreu 91H
	Acton 91C
	Adeva 90H
	Adeva 90O
	Akrawy 90U
(88.22 – 94.23)	
	Abreu 91B
(88.22 – 94.28)	
	Decamp 91N
(88.22 – 95.03)	
	Adeva 90H
(88.22 – 95.35)	
	Abreu 91B
(88.22 – 95.4)	Abreu 90L
(88.22 – 94.21)	
	Watson 90
(88.23 – 94.28)	
	Decamp 90K
(88.23 – 95.04)	
	Decamp 90K
(88.23 – 94.23)	
	Akrawy 91D
(88.23 – 95.04)	
	Alexander 91C
(88.24 – 94.23)	
	Wenninger 92
(88.25 – 95)	Decamp 91B
	Sawyer 91
(88.27 – 94.28)	
	Abreu 90L
(88.27 – 95.02)	
	Roach 90
(88.28 – 94.28)	
	Acton 92Q
	Alexander 91D
	Alexander 91G
	Crosland 91
	Banks 90
(88.28 – 95.03)	
	Akrawy 91
	Akrawy 90O
(88.28 – 95.04)	
	Decamp 91
	Aarnio 90C
	Decamp 90J
	Renton 90
	Wood 90
	Abreu 90H
(88.3 – 94.3)	Buskulic 93C
	Buskulic 93D
	Acton 92G
	Bryman 92
	Maringer 92
	Rolandi 92
	Adeva 91K
	Abreu 90L
	Adeva 90S
	Decamp 90K
	Haissinski 90
(88.3 – 95)	Pietrzyk 91
	Abreu 90H
	Decamp 90J
	Renton 90

e^+e^-

(88.48 – 93.72)	
	Acton 93C
(88.5 – 93.7)	Adriani 93B
	Adriani 92B
	Buskulic 92L
	Buskulic 92M
(88.6 – 93.8)	Adriani 92F
(89.2 – 93)	Abrams 89D
	Jung 89
(89.3 – 93)	Coupal 90
(89.5)	Adeva 90E
(90)	Deangelis 91
	Schmitz 91
(90.22)	Decamp 91G
(91)	Abreu 92G
	Bambade 92
	Chliapnikov 92
	Abreu 91F
	Alexander 91F
	Bethke 91
	Deangelis 91C
	Decamp 91K
	Decamp 91P
	Kreutzmann 91
	Schwiening 91
	Abreu 90N
	Abreu 90R
	Haissinski 90
	Komamiya 90
(91 – 91.5)	Adriani 92G
	Adriani 92N
	Decamp 90
	Decamp 90N
(91.09)	Abreu 90Q
(91.1)	Kinoshita 92
	Abrams 89E
(91.2)	Abreu 93B
	Abreu 93C
	Acton 93
	Acton 93E
	Acton 93F
	Buskulic 93
	Giacomelli 93
	Abreu 92
	Abreu 92D
	Abreu 92F
	Abreu 92H
	Abreu 92I
	Abreu 92J
	Abreu 92K
	Abreu 92L
	Acton 92
	Acton 92C
	Acton 92D
	Acton 92H
	Acton 92I
	Acton 92J
	Acton 92L
	Acton 92M
	Acton 92N
	Acton 92O
	Acton 92P
	Acton 92T
	Adeva 92
	Adeva 92B
	Adeva 92D
	Adriani 92
	Adriani 92C
	Adriani 92D
	Adriani 92I
	Adriani 92J
	Adriani 92L
	Adriani 92M
	Barklow 92
	Benedic 92
	Boucrot 92
	Brandl 92
	Burrows 92
	Buskulic 92
	Buskulic 92D
	Buskulic 92E
	Buskulic 92G
	Buskulic 92H
	Buskulic 92I

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

$e^+ e^-$

Buskulic 92J
Buskulic 92K
Chmeissani 92
Chrin 92
Cosmo 92
Decamp 92
Decamp 92B
Decamp 92C
Feindt 92B
Felcini 92
Fujino 92
Gross 92
Gross 92B
Schumm 92
Sopczak 92
Sopczak 92B
Sopczak 92C
Trischuk 92
Abreu 91D
Abreu 91G
Abreu 91I
Abreu 91J
Abreu 91K
Abreu 91L
Abreu 91N
Abreu 91O
Abreu 91P
Abreu 91Q
Abreu 91R
Acton 91B
Acton 91D
Acton 91E
Acton 91F
Acton 91I
Acton 91J
Adeva 91
Adeva 91C
Adeva 91G
Adeva 91H
Adeva 91I
Adeva 91J
Akrawy 91B
Akrawy 91C
Alexander 91
Alexander 91H
Bertin 91
Bhattacharyy 91
Bortolotto 91
Boyle 91
Campion 91
Capon 91
Colas 91
Deangelis 91B
Decamp 91C
Decamp 91F
Decamp 91I
Decamp 91J
Decamp 91M
Decamp 91Q
Decamp 91R
Dydak 91
Ellis 91
Goobar 91
Halley 91
Hebbeker 91
Hebbeker 91B
Jacobsen 91
Jacobsen 91B
Keranen 91
Koetke 91
Mattig 91
Patton 91
Pieri 91
Roehn 91
Simon 91
Stahl 91
Tesch 91
Trischuk 91
Turner 91
Wachsmuth 91
Yepes 91
Aarnio 90
Abreu 90
Abreu 90B

$e^+ e$

Abreu 90C
Abreu 90D
Abreu 90E
Abreu 90F
Abreu 90G
Abreu 90I
Abreu 90J
Abreu 90M
Abreu 90P
Abreu 90S
Adeva 90
Adeva 90B
Adeva 90C
Adeva 90D
Adeva 90F
Adeva 90G
Adeva 90I
Adeva 90J
Adeva 90K
Adeva 90L
Adeva 90N
Adeva 90P
Adeva 90Q
Adeva 90U
Adeva 90V
Akrawy 90
Akrawy 90B
Akrawy 90C
Akrawy 90D
Akrawy 90E
Akrawy 90F
Akrawy 90G
Akrawy 90H
Akrawy 90I
Akrawy 90J
Akrawy 90K
Akrawy 90L
Akrawy 90M
Akrawy 90N
Akrawy 90P
Akrawy 90Q
Akrawy 90R
Akrawy 90S
Akrawy 90V
Barklow 90
Burchat 90
Chen 90
Cowen 90
Decamp 90B
Decamp 90C
Decamp 90D
Decamp 90E
Decamp 90F
Decamp 90G
Decamp 90H
Decamp 90I
Decamp 90M
Decamp 90O
Gonzalezgarc 90
Hilgart 90
Innes 90
Janot 90
Komamiya 90B
Kral 90
Kuhlen 90
Moller 90
Nash 90
Newman 90
Odowd 90
Oshaughnessy 90
Oshaughnessy 90B
Pinsent 90
Richard 90
Soderstrom 90
Swartz 90
Tenchini 90
Vankooten 90
Vankooten 90B
Wormser 90B
Aarnio 89
Abrams 89
Abrams 89C
Abrams 89F
Adeva 89

$e^+ e^-$

Adeva 89B
Akrawy 89
Akrawy 89B
Akrawy 89C
Akrawy 89D
Akrawy 89E
Bethke 89
Burchat 89
Deboer 89
Decamp 89
Decamp 89B
Decamp 89C
Decamp 89D
Decamp 89E
Decamp 89G
Decamp 89H
Feldman 89
Feldman 89B
Hearty 89
Komamiya 89C
Kral 89
Nash 89
Weinstein 89
(91.22) Adriani 92B
Decamp 91G
Adeva 90E
(91.24) Adriani 92E
(91.25) Buskulic 92C
Decamp 91L
(91.28) Adeva 90E
(91.3) Acton 92B
Acton 92K
Acton 92R
Eerola 92
Riles 92
Rollnik 92
Settles 92
Seyweird 92
Acton 91H
Alexander 91I
Decamp 91D
Geerts 91
Abreu 90K
Abrams 89B
(91.31) Alexander 91E
Alexander 91I
(92.1) Bethke 91B
Fabbri 91
(92.2) Abreu 91G
(92.22) Decamp 91G
(93.17) Adeva 90E
? kopyan 91
ch 91C
Langsberg 91
Bieler 90
Miyamoto 90
Abachi 89
Atoyan 89
Riles 89B
Chan 88
Ouldsaada 88B
Sedlak 88
Unno 88

e^+ nucleus

46 Bini 91

e^+ Th

0.0007 (216.1 – 216.1) Sakai 92

$\mu^\pm$ p

100 – 280 (13.73 – 22.94) Nagy 89

$\mu^\pm$ nucleus

32 Rabin 88
100 – 280 Nagy 89
400 – 5000 Zatsepin 89

$\mu^\pm$ deuteron

100 – 280 (19.46 – 32.46) Nagy 89

$\mu^\pm$ Fe

58 – 1130 (93.49 – 346.8) Sakumoto 92

$\mu^- \gamma^*$

1.28 Farley 89
3.094 Farley 89

$\mu^- p$

0 (1.044) Hasinoff 92, Hasinoff 92B, Wright 91, Poutissou 89

μ^- nucleus

150 Jain 88

$\mu^- {}^3$He

0 (2.9) Cummings 92

$\mu^- C$

120 (53.01) Virchaux 92
200 (67.83) Virchaux 92
209 (69.29) Arneodo 92
280 (79.94) Virchaux 92

$\mu^- {}^{12}$C

0 (11.29) Armstrong 90C, Hasinoff 89, Hasinoff 88

$\mu^- {}^{16}$O

0 (15.01) Armstrong 90C, Hasinoff 89, Hasinoff 88
0.073 (15.03) Armstrong 89G

$\mu^- {}^{27}$Al

0 (25.26) Armstrong 92F, Hasinoff 92B

$\mu^- {}^{28}$Si

0 (26.19) Armstrong 92F, Hasinoff 92B

$\mu^- {}^{40}$Ca

0 (37.37) Armstrong 92F, Hasinoff 92B, Armstrong 90C, Hasinoff 89, Hasinoff 88
0.075 (37.39) Virtue 90

$\mu^- Ti$

0 (44.73) Ahmad 88

$\mu^- Fe$

93 (111.3) Virchaux 92
215 (158.4) Virchaux 92
400 – 4000 (210.5 – 647.2) Ashitkov 91

$\mu^- Cu$

209 (168.1) Arneodo 92

$\mu^- Mo$

0 (89.47) Armstrong 92F, Hasinoff 92B

$\mu^- Sn$

0 (110.7) Armstrong 92F, Hasinoff 92B

$\mu^- Pb$

0 (193.1) Armstrong 92F, Hasinoff 92B

$\mu^+ \gamma^*$

0.04 Farley 89
< 0.1 Farley 89
3.094 Farley 89

$\mu^+ e$

0 (0.1062)	Matthias 91
	Poutissou 89
	Huber 88
0.02 (0.1062)	Matthias 91
	Huber 88
0.02 – 0.029 (0.1062)	
	Huber 89
	Janissen 89

μ^+ nucleon

0.09 (1.075)	Drell 92B

$\mu^+ p$

4.5 – 21 (3.056 – 6.348)	
	Virchaux 90
90 (13.03)	Amaudruz 92
	Amaudruz 92B
	Botje 92
	Milsztajn 92
	Virchaux 92
	Amaudruz 91
	Amaudruz 91D
96 (13.46)	Virchaux 92
100 (13.73)	Virchaux 92
	Ashman 91
	Bethke 91
	Roberts 91
	Virchaux 90
	Yokosawa 90B
	Ashman 89
	Benvenuti 89
	Benvenuti 89C
	Ashman 88B
120 (15.04)	Virchaux 92
	Bethke 91
	Roberts 91
	Virchaux 90
	Yokosawa 90B
	Ashman 89
	Benvenuti 89
	Benvenuti 89C
	Ashman 88B
	Ashman 88C
147 (16.64)	Virchaux 92
200 (19.3)	Virchaux 92
	Bethke 91
	Roberts 91
	Virchaux 90
	Yokosawa 90B
	Ashman 89
	Aubert 89
	Benvenuti 89
	Benvenuti 89C
	Ashman 88B
	Ashman 88C
219 (20.29)	Virchaux 92
240 (21.24)	Virchaux 92
	Roberts 91
	Virchaux 90
247 (21.55)	Allasia 90B
274 (22.6)	Roberts 91
280 (22.94)	Amaudruz 92
	Amaudruz 92B
	Botje 92
	Derado 92
	Milsztajn 92
	Virchaux 92
	Amaudruz 91
	Amaudruz 91D
	Amaudruz 91F
	Ashman 91
	Bethke 91
	Buschbeck 91
	Derado 91
	Roberts 91
	Schmitz 91
	Allasia 90C
	Derado 90
	Virchaux 90
	Arneodo 89
	Benvenuti 89
	Benvenuti 89C
	Arneodo 88B

$\mu^+ p$

460 – 520 (29.3 – 31.25)	
	Aid 90
	Magill 90
	Schmitt 90
490 (30.34)	Adams 92C
	Morfin 92
	Salgado 92
	Salgado 91
	Lubatti 90
	Wolbers 90

$\mu^+ n$

90 (13.04)	Amaudruz 91D
280 (22.96)	Amaudruz 91D

μ^+ nucleus

100	Roberts 91
120	Roberts 91
200	Ashman 92
	Roberts 91

μ^+ deuteron

4.5 – 21 (4.518 – 9.072)	
	Virchaux 90
90 (18.47)	Amaudruz 92
	Amaudruz 92B
	Botje 92
	Milsztajn 92
	Virchaux 92
	Amaudruz 91
100 (19.46)	Arneodo 92
	Ashman 92B
	Ashman 91
	Ashman 91B
	Ashman 88
120 (21.2)	Arneodo 92
	Ashman 92B
	Virchaux 92
	Ashman 91B
	Roberts 91
	Virchaux 90
	Benvenuti 89B
	Ashman 88
147 (23.56)	Virchaux 92
200 (27.45)	Arneodo 92
	Ashman 92B
	Virchaux 92
	Amaudruz 91B
	Ashman 91B
	Roberts 91
	Virchaux 90
	Benvenuti 89B
	Ashman 88
240 (30.06)	Virchaux 90
247 (30.4)	Allasia 90B
274 (32.11)	Roberts 91
280 (32.46)	Amaudruz 92
	Amaudruz 92B
	Arneodo 92
	Ashman 92B
	Botje 92
	Milsztajn 92
	Virchaux 92
	Amaudruz 91
	Amaudruz 91F
	Ashman 91
	Ashman 91B
	Roberts 91
	Allasia 90C
	Virchaux 90
	Arneodo 89
	Arneodo 89B
	Benvenuti 89B
	Arneodo 88
	Arneodo 88B
	Ashman 88
460 (41.58)	Halliwell 90
460 – 520 (41.58 – 44.21)	
	Aid 90
	Magill 90
	Schmitt 90
490 (42.91)	Adams 92B
	Adams 92D

μ^+ deuteron

	Arneodo 92
	Morfin 92
	Adams 91E
	Schellman 91B
	Lubatti 90
	Wolbers 90

μ^+ He

200 (38.7)	Arneodo 92
	Amaudruz 91B
274 (45.36)	Roberts 91

μ^+ ^{6}Li

90 (32.21)	Amaudruz 91C

μ^+ C

90 (46.25)	Amaudruz 92
100 (48.61)	Arneodo 92
	Roberts 91
	Ashman 88
114 (51.73)	Roberts 91
120 (53.01)	Arneodo 92
	Virchaux 92
	Roberts 91
	Ashman 88
192 (66.49)	Roberts 91
200 (67.83)	Arneodo 92
	Virchaux 92
	Amaudruz 91B
	Amaudruz 91E
	Roberts 91
	Ashman 88
271 (78.67)	Roberts 91
274 (79)	Roberts 91
280 (79.94)	Amaudruz 92
	Arneodo 92
	Virchaux 92
	Amaudruz 91E
	Amaudruz 91F
	Roberts 91
	Arneodo 89B
	Arneodo 88
	Ashman 88

μ^+ ^{12}C

90 (46.23)	Amaudruz 91C

μ^+ Nit

120 (57.46)	Ashman 88C
200 (73.41)	Roberts 91
	Ashman 88C
280 (86.47)	Arneodo 92
	Roberts 91

μ^+ Ca

90 (90.08)	Amaudruz 92
100 (94.13)	Roberts 91
120 (101.8)	Roberts 91
200 (127.8)	Arneodo 92
	Amaudruz 91B
	Roberts 91
274 (147.8)	Roberts 91
280 (149.3)	Amaudruz 92
	Arneodo 92
	Virchaux 92
	Amaudruz 91F
	Roberts 91
	Arneodo 89B
	Arneodo 88

μ^+ ^{40}Ca

90 (89.97)	Amaudruz 91C

μ^+ Fe

93 (111.3)	Virchaux 92
120 (123.3)	Arneodo 92
	Roberts 91
200 (153.3)	Arneodo 92
	Roberts 91
215 (158.4)	Virchaux 92
250 (169.5)	Arneodo 92
	Roberts 91

μ^+ Fe

280 (178.4)	Arneodo 92
	Roberts 91

μ^+ Cu

100 (123.9)	Arneodo 92
	Ashman 92B
	Ashman 91B
	Ashman 88
120 (133.1)	Arneodo 92
	Ashman 92B
	Ashman 91B
	Ashman 88
200 (164.9)	Arneodo 92
	Ashman 92B
	Ashman 91B
	Ashman 88
280 (191.5)	Arneodo 92
	Ashman 92B
	Ashman 91B
	Roberts 91
	Ashman 88

μ^+ Sn

100 (185.3)	Arneodo 92
	Ashman 91B
	Ashman 88
120 (196.9)	Arneodo 92
	Ashman 91B
	Ashman 88
200 (237.6)	Arneodo 92
	Amaudruz 91E
	Ashman 91B
	Ashman 88
280 (272.3)	Arneodo 92
	Amaudruz 91E
	Ashman 91B
	Roberts 91
	Ashman 88

μ^+ Xe

460 (357.1)	Halliwell 90
460 – 520 (357.1 – 377)	
	Aid 90
	Magill 90
	Schmitt 90
490 (367.2)	Adams 92B
	Adams 92D
	Arneodo 92
	Morfin 92
	Schellman 91B
	Wolbers 90

q q

?	Flaugher 92B
	Incagli 92

q $\bar{q}$

?	Sinervo 92
	Yeh 92
	Abe 91H
	Gold 91

q Hg

?	Matis 90B

u gluon

?	Breakstone 90

d gluon

?	Breakstone 90

dark dark

?	Mori 92

dark nucleus

?	Mori 91B

monopole p

?	Bezrukov 90

meson$^+$ p

250	Aivazyan 91

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

meson$^+$ Al

250 Botterweck 90

meson$^+$ Au

250 Botterweck 90

π nucleus

250 Rossi 91
600 Lipton 92

π deuteron

(2.115 – 3.02) Strakovskii 91
0.2355 (2.137) Smith 88
0.2551 (2.152) Smith 88
0.2878 (2.177) Smith 88
0.3317 (2.211) Smith 88
0.3704 (2.241) Smith 88

π Be

250 (65.33) Spiegel 91

π C

40 (31.94) Angelov 92

π ^{12}C

40 (31.93) Angelov 91

π Al

250 (114.9) Spiegel 91

π Fe

500 – 5000 (233.9 – 723.1)
Avakyan 91B
Avakyan 91C

π Cu

250 (181.9) Spiegel 91

π Wt

250 (339.1) Spiegel 91

$\pi^\pm$ p

80 – 140 (12.29 – 16.24)
Apsimon 92B

$\pi^\pm$ C

500 – 10^4 (106.4 – 473.2)
Avakyan 89C

$\pi^\pm$ Fe

500 – 10^4 (233.9 – 1021)
Avakyan 89C

$\pi^\pm$ Pb

500 – 10^4 (479.9 – 1974)
Avakyan 89C

π^+ π^-

(0.55 – 2) Apokin 89B

π^+ p

0 – 200 (1.078 – 19.3)
Hohler 89
0.03 – 0.67 (1.081 – 1.478)
Brack 89
0.0668 (1.091) Brack 88
0.1208 – 0.2259 (1.116 – 1.182)
Friedman 90
0.1305 – 0.2258 (1.122 – 1.182)
Friedman 89
0.1356 (1.125) Wiedner 89
0.152 (1.135) Brack 88B
0.2258 – 0.3114 (1.182 – 1.241)
Friedman 91
0.2651 – 0.7263 (1.209 – 1.513)
Abaev 92
0.2875 – 0.3096 (1.225 – 1.23)
Sevior 91
0.297 – 0.48 (1.231 – 1.356)
Kernel 90B
0.3 – 0.45 (1.233 – 1.336)
Kernel 90
0.3957 (1.299) Sossi 91
0.415 (1.312) Bosshard 90

π^+ p

0.4158 (1.313) Meyer 88
0.471 – 0.625 (1.34 – 1.44)
Barlow 89
0.547 (1.39) Seftor 89
0.547 – 0.687 (1.39 – 1.488)
Wightman 88
0.625 (1.44) Seftor 89
1.49 – 2.069 (1.926 – 2.189)
Haba 88
1.69 (2.02) Candlin 88
1.84 (2.089) Abramov 88
1.88 (2.107) Candlin 88
< 2.135 (< 2.217)
Arndt 91
Arndt 90
2.22 (2.253) Abramov 88
2.63 (2.417) Abramov 88
3.94 (2.881) Arefiev 90
Arefiev 90B
Zhokin 89
Zhokin 88
4 (2.9) Abramov 91
Brovkin 91C
Abramov 89C
4.2 (2.964) Brovkin 92
Brovkin 91B
Brovkin 90
Brovkin 89
4.23 (2.974) Amelin 92
Drutskoy 89
Drutskoy 88
(3 – 12) Zhokin 89
4.5 (3.058) Andryakov 89
6 (3.487) Appel 91
(3.94) Arefiev 90B
9.9 (4.414) Baller 88
10 (4.435) Appel 91
10.64 (4.568) Budagov 91
15.5 (5.476) Silvestrov 89
16 – 147 (5.561 – 16.64)
Chliapnikov 90
18.5 (5.968) Panagiotou 89
20 (6.199) Perepelitsa 91
Perepelitsa 90
39.5 (8.662) Freudenreich 90
80 (12.29) Apsimon 92
Gebert 92
Apsimon 91B
Fiedler 91
Hofmann 91
Apsimon 90
Hoeger 90
80 – 140 (12.29 – 16.24)
Apsimon 91
Apsimon 89
85 (12.67) Armstrong 92
Armstrong 91
Armstrong 89C
Augustin 88C
140 (16.24) Apsimon 92
Gebert 92
Fiedler 91
Hofmann 91
Apsimon 90
Hoeger 90
147 (16.64) Boca 92
200 (19.3) Brick 90
Brick 89
250 (21.68) Begalli 92
Agababyan 91
Aivazyan 91
Aivazyan 91B
Atayan 91
Botterweck 91
Schmitz 91
Agababyan 90
Agababyan 90B
Ajinenko 90
Ajinenko 90C
Ajinenko 90D
Atayan 90
Aivazyan 89
Ajinenko 89B
Ajinenko 89C

π^+ p

Ajinenko 89D
Ajinenko 89E
Buschbeck 89
Adamus 88
Adamus 88B
Adamus 88C
Adamus 88F
Adamus 88G
Aivazyan 88
Grassler 88
Adamus 86C
280 (22.94) Durieux 91
Bonesini 89
Bonesini 89B
Bonesini 88
300 (23.75) Demarzo 90

π^+ n

0 – 200 (1.079 – 19.41)
Hohler 89
1.07 (1.712) Ajimura 92
1.97 (2.148) Abramov 91D
5.98 (3.485) Svec 92
Svec 91
6 (3.49) Svec 90
Fujisaki 88
11.85 (4.814) Svec 92
Svec 91
Fujisaki 88
12 (4.843) Svec 90

π^+ $\Delta(1232\,P_{33})^{++}$

4 (3.376) Brovkin 91C

π^+ nucleus

0.1426 Lantsev 90C
0.2763 Lantsev 91
Lantsev 90
Lantsev 90B
Lantsev 90C
0.3957 Gavrin 89
0.4536 Gavrin 89
0.5109 Gavrin 89
1.07 Ajimura 92
7.5 Takibaev 90
10.5 Akimenko 89
27 – 280 Freudenreich 90
100 Geist 91
Walker 91
150 Freudenreich 90
200 Geist 91
Schmitz 91
Brick 90
Freudenreich 90
225 Freudenreich 90
250 Alves 92B
280 Freudenreich 90
? Bando 90

π^+ deuteron

0.0323 (2.019) Hutcheon 90
0.0323 – 0.0784 (2.019 – 2.034)
Ritchie 91
0.0377 (2.01) Hutcheon 90
0.0526 (2.024) Hutcheon 90
0.0669 (2.029) Hutcheon 90
0.0784 (2.034) Hutcheon 90
0.1283 (2.061) Stevenson 90
Stevenson 90C
0.1496 (2.075) Kohler 91
0.2008 – 0.3691 (2.111 – 2.24)
Feltman 91
(2.115 – 3.02) Strakovskii 91
0.2165 – 0.2514 (2.122 – 2.149)
Yokosawa 90B
0.2177 (2.123) Salvisberg 92
0.2189 (2.124) Maytalbeck 92
Yokosawa 90B
0.2217 (2.126) Ashery 88
0.2353 (2.136) Yokosawa 90B
List 88
Ottermann 88
0.2399 (2.13) Yokosawa 90B

π^+ deuteron

0.2422 (2.142) Yokosawa 90B
0.2445 (2.143) Yokosawa 90B
0.2457 (2.144) Smith 88B
0.2549 (2.151) Yokosawa 90B
0.2875 (2.176) Ottermann 88
Smith 88B
0.3116 (2.195) Pancella 88
0.3303 (2.2) Ottermann 88
0.3314 (2.211) Smith 88B
0.34 (2.217) List 88
0.3503 (2.225) Pancella 88
0.3637 (2.236) Maytalbeck 92
0.3701 (2.241) Yokosawa 90B
Ottermann 88
Ottermann 88B
Smith 88B
0.3876 (2.255) Pancella 88
0.3957 (2.261) Sossi 92
Sossi 91
Rui 90
0.4105 (2.272) List 88B
Ottermann 88
Ottermann 88B
0.425 (2.284) Pancella 88
0.4692 (2.318) Bazhanov 91
0.4692 – 0.5728 (2.318 – 2.398)
Bazhanov 93
0.4838 (2.329) Pancella 88
0.5212 (2.358) Bazhanov 91
0.5388 (2.372) Gridnev 90
0.543 (2.375) Pancella 88
0.5728 (2.398) Bazhanov 91
0.597 (2.416) Pancella 88
3.9 (4.263) Nakai 89
6 (5.104) Fujisaki 88
10.64 (6.592) Budagov 91
11.85 (6.928) Fujisaki 88

π^+ ^{3}H

0.2177 (3.045) Salvisberg 92
0.2445 (3.066) Pillai 88
0.2875 (3.101) Pillai 88
0.3161 (3.124) Salvisberg 92
0.3314 (3.137) Pillai 88
0.4168 (3.207) Salvisberg 92

π^+ ^{3}He

0.1482 (2.994) Weber 89B
0.1947 (3.028) Hausser 91
Angelescu 90
0.2177 (3.045) Weber 89B
0.2189 (3.046) Maytalbeck 92
Angelescu 90
0.2445 (3.066) Pillai 88
0.248 (3.069) Angelescu 90
0.2673 (3.085) Weber 89B
0.2875 (3.101) Pillai 88
0.3161 (3.124) Weber 89B
0.3314 (3.137) Pillai 88
0.3637 (3.163) Maytalbeck 92

π^+ ^{4}He

0.2707 (4.022) Weber 90
Weber 89
0.2875 (4.035) Langenbrunne 92
0.3957 (4.127) Vetterli 92

π^+ He

0.2875 (4.038) Gram 89
0.353 (4.093) Gram 89
0.3957 (4.129) Bonutti 93

π^+ Li

0.8 (7.233) Chrien 88
3.9 (9.606) Nakai 89
10.64 (13.39) Budagov 91

π^+ ^{6}Li

0.1947 (5.825) Locher 90
0.2353 (5.858) Locher 90
0.2537 (5.873) Ransome 90
0.2696 (5.886) Locher 90
0.2707 (5.887) Yokota 89

π^+ ^{6}Li

0.2875 (5.902) Gram 89
0.3303 (5.938) Locher 90
0.353 (5.958) Gram 89
0.5 – 1.5 (6.088 – 6.935) Kobayashi 88B
4 (8.718) Yagi 90

π^+ ^{7}Li

0.2707 (6.819) Yokota 89
0.2875 (6.834) Gram 89
0.353 (6.891) Gram 89
0.4168 (6.947) Rokni 88
0.5005 (7.022) Baturin 88
0.547 (7.063) Rokni 88
0.6242 (7.132) Rokni 88
0.6753 (7.178) Rokni 88
300 (62.89) Antoniazzi 92, Antoniazzi 92B

π^+ Be

0.2875 (8.7) Gram 89
0.353 (8.767) Gram 89
10.5 (15.71) Akimenko 89
10.64 (15.78) Budagov 91
11.2 (16.08) Akimenko 92

π^+ ^{9}Be

1.048 (9.382) Pile 91

π^+ ^{11}Bor

1 (11.21) Olin 91

π^+ C

0.0891 (11.35) Akimov 92
0.0927 (11.36) Akimov 92
0.0963 (11.36) Akimov 92, Friedman 91B
0.0998 (11.36) Akimov 92
0.1065 (11.36) Akimov 92
0.1114 (11.37) Akimov 92
0.2707 (11.49) Yokota 89
0.2875 (11.5) Gram 89
0.353 (11.56) Gram 89
0.6 (11.79) Golubeva 89
0.8 (11.97) Chrien 88
1.1 (12.25) Golubeva 90
3 (13.87) Smirnitsky 91, Vorobiev 91, Vorobiev 89C, Vorobiev 88E
3.9 (14.58) Nakai 89
7.5 (17.12) Bayukov 89C
530 (109.5) De 89

π^+ ^{12}C

0.026 – 0.039 (11.32 – 11.32) Akimov 91
0.0753 – 0.2422 (11.34 – 11.46) Jones 92
0.45 (11.64) Akei 89
0.47 (11.66) Akei 89
0.49 (11.68) Akei 89
0.51 (11.6) Akei 89
1 (12.15) Olin 91
1.048 (12.19) Pile 91
1.07 (12.21) Ajimura 92, Akei 91
4 (14.65) Nakai 91, Yagi 90, Manabe 89

π^+ ^{13}C

0.1947 (12.35) Brack 91
0.2117 (12.36) Yen 91B
0.233 (12.38) Yen 91B
0.248 (12.39) Yen 91B
0.2685 (12.41) Gorgen 91
0.2707 (12.41) Yen 91B
0.2875 (12.43) Yen 91B
0.3433 (12.47) Yen 91B

π^+ ^{14}C

0.4084 – 0.6497 (13.47 – 13.69) Williams 89B
0.4168 (13.47) Rokni 88
0.547 (13.59) Rokni 88
0.6242 (13.67) Rokni 88
0.6753 (13.71) Rokni 88

π^+ ^{15}Nit

0.2696 (14.27) Locher 90

π^+ O

0.2129 (15.16) Hyman 92
0.2707 (15.21) Hyman 92, Hyman 90
0.2875 (15.22) Gram 89
0.353 (15.28) Gram 89
0.3957 (15.32) Bonutti 93
0.8 (15.69) Chrien 88

π^+ ^{16}O

0.2141 (15.15) Ahumacher 88
0.3957 (15.31) Grion 89
1.048 (15.92) Pile 91

π^+ ^{18}O

0.2141 (17.02) Ahumacher 88
0.4084 – 0.6497 (17.19 – 17.42) Williams 89B

π^+ ^{20}Ne

0.2189 (18.89) Burlein 89
0.2875 (18.95) Burlein 89

π^+ Mg

200 (97.82) Brick 92, Brick 90, Brick 89

π^+ Al

0.8 (25.93) Chrien 88
1.1 (26.22) Golubeva 90
3 (27.98) Vorobiev 89C
3.9 (28.77) Nakai 89
4 (28.86) Tokushuku 90
10.64 (34.15) Budagov 91
250 (114.9) Ajinenko 92, Botterweck 92, Agababyan 91B, Agababyan 90C, Ajinenko 90B, Botterweck 90
530 (165.1) De 89

π^+ ^{27}Al

0.4168 (25.59) Rokni 88
0.547 (25.71) Rokni 88
0.6242 (25.78) Rokni 88
0.6753 (25.83) Rokni 88

π^+ ^{28}Si

1.048 (27.12) Pile 91

π^+ Cl

530 (197.1) De 89

π^+ ^{37}Cl

0.3957 (34.88) Gavrin 89
0.4536 (34.94) Gavrin 89
0.5109 (34.99) Gavrin 89

π^+ Ca

0.2875 (37.65) Gram 89
0.353 (37.71) Gram 89

π^+ ^{40}Ca

1.048 (38.3) Pile 91

π^+ Ti

1.39 (45.9) Bayukov 91
7.5 (51.58) Bayukov 89C

π^+ ^{51}Va

1.048 (48.56) Pile 91

π^+ ^{56}Fe

0.45 (52.63) Akei 89
0.47 (52.65) Akei 89
0.49 (52.67) Akei 89
0.51 (52.69) Akei 89
1.07 (53.23) Akei 91

π^+ Fe

1.07 (53.09) Akei 91
1.39 (53.4) Bayukov 91

π^+ Ni

0.0963 (54.86) Friedman 91B

π^+ ^{60}Ni

0.4168 (56.33) Rokni 88
0.547 (56.45) Rokni 88
0.6242 (56.53) Rokni 88
0.6753 (56.58) Rokni 88

π^+ Cu

0.6 (59.81) Golubeva 89
0.8 (60) Golubeva 89
1 (60.1) Golubeva 89
3 (62.13) Vorobiev 89C
3.9 (62.98) Nakai 89
10.5 (68.9) Akimenko 89
10.64 (69.02) Budagov 91
11.2 (69.5) Akimenko 92
530 (257.4) De 89

π^+ ^{89}Yt

1.048 (83.95) Pile 91

π^+ ^{90}Zr

0.4168 (84.27) Rokni 88
0.547 (84.3) Rokni 88
0.6242 (84.47) Rokni 88
0.6753 (84.52) Rokni 88

π^+ Rh

0.2875 (96.18) Gram 89
0.353 (96.24) Gram 89

π^+ Ag

200 (224.3) Brick 92, Brick 90, Brick 89

π^+ Cd

3 (107.7) Vorobiev 89C

π^+ ^{120}Sn

0.4168 (112.2) Rokni 88
0.547 (112.4) Rokni 88
0.6242 (112.4) Rokni 88
0.6753 (112.5) Rokni 88

π^+ Wt

39.5 (207) Freudenreich 90
250 (339.1) Heinrich 89

π^+ Au

200 (327.2) Brick 92, Brick 90, Brick 89
250 (354.1) Ajinenko 92, Botterweck 92, Agababyan 91B, Agababyan 90C, Ajinenko 90B, Botterweck 90

π^+ Pb

0.2875 (193.3) Gram 89
0.353 (193.4) Gram 89
0.3957 (193.4) Bonutti 93
0.6 (193.6) Golubeva 89
3 (195) Smirnitsky 91, Vorobiev 91

π^+ Pb

Vorobiev 89C
Vorobiev 88E
4 (196) Tokushuku 90
7.5 (200.4) Bayukov 89C
10.5 (203.2) Akimenko 89
200 (338.3) Akesson 88B
530 (491.8) De 89

π^+ ^{208}Pb

0.4168 (194.2) Rokni 88
0.547 (194.3) Rokni 88
0.6242 (194.4) Rokni 88
0.6753 (194.4) Rokni 88

π^- e^-

300 (0.5705) Buenerd 92

π^- nucleon

50 (9.742) Bajramov 89
150 (16.82) Freudenreich 90
185 (18.67) Freudenreich 90
200 (19.41) Freudenreich 90, Joyner 89
252 (21.79) Conway 89
280 (22.96) Freudenreich 90
300 (23.77) Prokoshkin 90, Alde 88B, Augustin 88C, Alde 87, Alde 87C
320 (24.55) Catanesi 88
350 (25.67) Aoki 91B

π^- p

0 (1.078) Crawford 91C, Fonvieille 89, Fonvieille 89B, Niebuhr 89, Crawford 88
0 – 200 (1.078 – 19.3) Hohler 89
0.03 – 0.67 (1.081 – 1.478) Brack 89
0.0773 (1.095) Stanislaus 89
0.095 (1.103) Meijerdrees 92, Meijerdrees 92B
0.1217 (1.117) Bagheri 88
0.123 (1.118) Bagheri 88B
0.1356 (1.125) Wiedner 89
0.1457 (1.131) Bagheri 88, Bagheri 88B
0.1648 (1.142) Bagheri 88, Bagheri 88B
0.1844 (1.155) Bagheri 88, Bagheri 88B
0.203 (1.167) Bagheri 88, Bagheri 88B
0.2211 (1.179) Bagheri 88, Bagheri 88B
0.2651 – 0.7263 (1.209 – 1.513) Abaev 92
0.2662 (1.2) Gorgen 90
0.29 – 0.45 (1.226 – 1.336) Kernel 89, Kernel 89B
0.295 – 0.45 (1.22 – 1.336) Kernel 91, Felipcic 89, Kernel 89C
0.3 – 0.45 (1.233 – 1.336) Kernel 90
0.301 (1.234) Kim 91
0.301 – 0.625 (1.234 – 1.44) Kim 90, Kim 89
0.316 (1.244) Kim 91
0.3605 (1.275) Ortner 90
0.3999 (1.302) Ortner 90
0.427 (1.32) Kim 91
0.427 – 0.625 (1.32 – 1.44) Kim 89D
0.4484 (1.335) Ortner 90
0.45 (1.336) Abaev 88B

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

$\pi^- p$

0.471 (1.34)	Kim 91
0.471 – 0.625 (1.34 – 1.44)	
	Barlow 89
0.547 (1.39)	Kim 91
	Seftor 89
0.547 – 0.687 (1.39 – 1.488)	
	Wightman 88
0.56 (1.408)	Abaev 88B
0.586 (1.425)	Kim 91
0.625 (1.44)	Kim 91
	Seftor 89
0.9 – 2 (1.615 – 2.159)	
	Abramov 91C
1.43 – 2.07 (1.896 – 2.189)	
	Alekseev 89
	Alekseev 88B
1.53 – 2.07 (1.945 – 2.189)	
	Kanavets 88
1.78 (2.062)	Alekseev 91
1.84 (2.089)	Abramov 88
< 2.135 (< 2.217)	
	Arndt 91
	Arndt 90
2.22 (2.253)	Abramov 88
2.63 (2.417)	Abramov 88
3.3 (2.664)	Arkhipov 88
3.92 (2.874)	Aleshin 92
	Aleshin 92B
3.93 (2.877)	Andryakov 91
3.95 (2.884)	Amelin 92
4 (2.9)	Andryakov 87
4 – 205 (2.9 – 19.64)	
	Panagiotou 89
(3)	Andryakov 88
(3 – 6)	Zhokin 89
(3 – 12)	Zhokin 89
4.5 (3.058)	Andryakov 91
	Guzhavin 90
	Perepelitsa 88
	Aleshin 87D
4.75 (3.133)	Arkhipov 88
5 (3.207)	Bajramov 89
	Antos 88
6 (3.487)	Appel 91
	Matsuda 91
	Takamatsu 89
8 (3.989)	Augustin 88C
	Birman 88
	Chan 88
	Toki 88B
8.01 (3.992)	Inagaki 89B
8.06 (4.003)	Ando 90
	Takamatsu 89
	Chan 88
8.95 (4.207)	Fukui 91
	Kinashi 91
	Fukui 90
	Takamatsu 89
	Augustin 88C
	Fukui 88
9.9 (4.414)	Baller 88
10 (4.435)	Appel 91
15.5 (5.476)	Silvestrov 89
16 (5.561)	Karnaukhov 92
	Silvestrov 89
17 (5.727)	Silvestrov 89
17.2 (5.76)	Svec 92
	Svec 90
21.4 (6.408)	Chan 88
	Rath 88
	Toki 88B
22 (6.495)	Landsberg 90
	Aston 89
	Rath 89
	Augustin 88C
	Etkin 88
25 (6.915)	Landsberg 90B
30 (7.563)	Alde 87B
32 (7.807)	Bityukov 91B
32.5 (7.867)	Donnachie 91
	Landsberg 91
	Bityukov 90
	Landsberg 90
	Landsberg 90B

$\pi^- p$

	Bityukov 89
	Augustin 88C
	Bityukov 88
	Landsberg 88
	Bityukov 87
33 (7.926)	Landsberg 90B
36 (8.274)	Bityukov 91D
37 (8.386)	Berdnikov 92B
38 (8.498)	Alde 92
	Landsberg 92
	Alde 91B
	Alde 91C
	Alde 91E
	Alde 91F
	Alde 91G
	Samoylenko 91
	Alde 90
	Bannikov 90
	Kulik 90
	Landsberg 90
	Alde 89
	Boutemeur 89B
	Alde 88C
	Alde 88D
	Augustin 88C
	Bannikov 88
	Toki 88B
	Alde 87B
39.1 (8.618)	Apokin 88
39.5 (8.662)	Freudenreich 90
40 (8.716)	Angelov 92B
	Bityukov 91
	Yokosawa 91
	Angelov 90
	Angelov 90B
	Apokin 90
	Baatar 90C
	Gabunia 90
	Grishin 90
	Yokosawa 90B
	Amaglobeli 89
	Antipov 89B
	Apokin 89
	Bajramov 89
	Gabunia 89
	Nurushev 89
	Apokin 88B
	Baldin 88B
	Bolonkin 88
	Toki 88B
	Antipov 87B
	Baloshin 87
	Apokin 86B
80 (12.29)	Apsimon 92
	Gebert 92
	Apsimon 91B
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Hoeger 90
80 – 140 (12.29 – 16.24)	
	Apsimon 91
	Apsimon 89
100 (13.73)	Alde 92
	Landsberg 92
	Alde 91E
	Landsberg 90
	Boutemeur 89
	Boutemeur 89B
	Alde 88E
	Augustin 88C
	Boutemeur 88
	Iddir 88
	Toki 88B
	Alde 87D
140 (16.24)	Apsimon 92
	Gebert 92
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Hoeger 90
200 (19.3)	Appel 92
	Tannenbaum 89
230 (20.7)	Appel 92

$\pi^- p$

	Boutemeur 89B
	Toki 88B
250 (21.68)	Rossi 91
	Adamus 87B
280 (22.94)	Durieux 91
	Bonvin 90
	Bonvin 90B
	Bonesini 89
	Bonesini 89B
	Bonvin 89
	Bonesini 88
300 (23.75)	Demarzo 90
340 (25.28)	Appel 92
	Rossi 91
360 (26.01)	Appel 92
	Rossi 91
	Aguilarbenit 89
	Klein 89C
	Aguilarbenit 87F
	Aguilarbenit 87H
	Bailly 87C
	Bailly 87H
?	Burchell 92
	Landsberg 91
	Landsberg 90B
	Albrow 88

$\pi^- n$

0 – 200 (1.079 – 19.41)	
	Hohler 89
1.84 (2.09)	Abramov 88
2.22 (2.254)	Abramov 88
2.63 (2.419)	Abramov 88
340 (25.29)	Tufail 92

π^- nucleus

0.2763	Lantsev 90B
	Lantsev 90C
0.3957	Gavrin 89
0.4536	Gavrin 89
2.9	Smirnitsky 91
3.9	Panagiotou 89
4	Kechechyan 89
	Shakhbazyan 88
5	Panagiotou 89
	Abdinov 88
	Zielinsky 88
21	Cason 89
27 – 280	Freudenreich 90
38	Barwolff 88
40	Panagiotou 89
	Boos 88
	Cassata 88
50	Tariq 90
	Bajramov 89
	Kumar 89
80	Freudenreich 90
	Albrow 88
100	Geist 91
	Walker 91
150	Freudenreich 90
200	Ghosh 92C
	Geist 91
	Freudenreich 90
	Joyner 89
	Jain 88B
225	Freudenreich 90
250	Alves 92
	Alves 92B
	Appel 92
	Thorne 92
252	Freudenreich 90
280	Freudenreich 90
300	Prokoshkin 90
	Alde 88B
320	Appel 92
340	Ghosh 92
	Nasr 92
	Adamovich 91D
	Adamovich 91E
	Rossi 91
	Tufail 91
	Ahmad 90
	Tariq 90

π^- nucleus

	Tufail 90
	Tufail 90B
	Ahmad 89
350	Aoki 92
	Ghosh 92C
	Aoki 91B
	Aoki 91C
	Aoki 88
530	Kartik 90
600	Kodama 92B
	Kodama 92C
	Kodama 92D
	Spiegel 91
?	Bando 90

π^- deuteron

0 (2.015)	Chiba 91B
0.0773 (2.034)	Stanislaus 89
0.1283 (2.061)	Stevenson 90
0.1496 (2.075)	Kohler 91
0.2146 (2.121)	Ashery 88
0.2177 (2.123)	Salvisberg 92
0.2353 (2.136)	Yokosawa 90B
0.2445 (2.143)	Yokosawa 90B
0.2457 (2.144)	Smith 88B
0.2875 (2.176)	Smith 88B
0.3314 (2.211)	Smith 88B
0.3701 (2.241)	Yokosawa 90B
	Smith 88B
0.4075 (2.27)	Parker 89
0.5388 (2.372)	Gridnev 90
0.86 – 1.16 (2.609 – 2.814)	
	Abramov 89B
0.9 (2.637)	Abramov 91E
0.9 – 2.025 (2.637 – 3.339)	
	Abramov 90B
1.15 (2.808)	Abramov 91E
1.31 (2.912)	Abramov 91E
1.45 (3)	Abramov 91E
1.54 (3.056)	Abramov 91E
1.64 (3.116)	Abramov 91E
1.83 (3.228)	Abramov 91E
1.84 (3.234)	Abramov 88
2.025 (3.339)	Abramov 91E
2.22 (3.447)	Abramov 88
2.63 (3.663)	Abramov 88
38 (12.09)	Bannikov 90
40 (12.39)	Apokin 92
	Yokosawa 91
	Apokin 90
	Amaglobeli 89
	Apokin 89
	Nurushev 89
	Apokin 88C
140 (22.99)	Freudenreich 90
194 (27.04)	Freudenreich 90
286 (32.81)	Freudenreich 90
	Guanziroli 88

$\pi^- {}^3$H

0.2177 (3.045)	Salvisberg 92
0.2445 (3.066)	Pillai 88
0.2875 (3.101)	Pillai 88
0.3314 (3.137)	Pillai 88

$\pi^- {}^3$He

0.1482 (2.994)	Weber 89B
0.2177 (3.045)	Weber 89B
0.2445 (3.066)	Pillai 88
0.2673 (3.085)	Weber 89B
0.2875 (3.101)	Pillai 88
0.3161 (3.124)	Weber 89B
0.3314 (3.137)	Pillai 88
0.59 – 0.68 (3.349 – 3.422)	
	Peng 89

$\pi^- {}^4$He

0.1695 (3.942)	Gorringe 88
0.2875 (4.035)	Langenbrunne 92

π^- He

0.2875 (4.038)	Gram 89
0.353 (4.093)	Gram 89

π^- Li

40 (23.64)	Boos 88

π^- ^{6}Li

0 (5.729)	Amelin 90
0.2248 (5.849)	Seth 91
0.2707 (5.887)	Yokota 89
0.2875 (5.902)	Gram 89
0.3314 (5.939)	Seth 91
	Parker 90
0.353 (5.958)	Gram 89

π^- ^{7}Li

0 (6.65)	Amelin 90
0.2707 (6.819)	Yokota 89
0.2875 (6.834)	Gram 89
0.353 (6.891)	Gram 89
300 (62.89)	Antoniazzi 92
	Antoniazzi 92B

π^- ^{8}Be

0.2248 (7.713)	Seth 91

π^- Be

0 (8.535)	Gornov 88
0.2875 (8.7)	Gram 89
0.353 (8.767)	Gram 89
0.9902 – 4.998 (9.343 – 12.43)	
	Gavrilov 89
1.26 – 2.5 (9.58 – 10.61)	
	Kuzichev 89
36 (25.98)	Beladidze 92
40 (27.24)	Ananieva 92
	Antipov 92
	Antipov 90
	Antipov 90B
	Antipov 90C
	Antipov 90D
	Antipov 90E
	Antipov 87
85 (38.6)	Augustin 88C
125 (46.57)	Tzamarias 90
175 – 197.5 (54.85 – 58.19)	
	Freudenreich 90
185 (56.36)	Antoniazzi 92
	Freudenreich 90
205 (59.27)	Mooney 89
250 (65.33)	Alves 92
500 (92.01)	Alverson 91
	Alverson 91B
530 (94.71)	Abramov 91B
	Engels 90
?	Burchell 92

π^- ^{9}Be

0 (8.523)	Gornov 91

π^- ^{11}Bor

0 (10.39)	Amelin 90B

π^- C

0 (11.33)	Gornov 88
0.0773 (11.35)	Friedman 91B
0.0963 (11.36)	Friedman 91B
0.2707 (11.49)	Yokota 89
0.2875 (11.5)	Gram 89
0.353 (11.56)	Gram 89
0.6 (11.79)	Golubeva 89
0.9902 – 4.998 (12.15 – 15.3)	
	Gavrilov 89
1.1 (12.25)	Golubeva 90
1.2 (12.34)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
1.26 – 2.5 (12.39 – 13.46)	
	Kuzichev 89
3 (13.87)	Degtyarenko 91
	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
	Vorobiev 88E
3.5 (14.27)	Strugalski 92
4 (14.65)	Smirnitsky 91
	Zielinsky 88

π^- C

5 (15.3)	Arakelyan 91B
	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89B
	Vorobiev 89C
	Abdinov 88
	Vorobiev 88D
	Zielinsky 88
7 (16.79)	Smirnitsky 91
36 (30.51)	Bityukov 91
	Bityukov 91C
38 (31.23)	Bannikov 90
	Bannikov 89B
	Barwolff 88
40 (31.94)	Ananieva 92
	Angelov 92B
	Strugalski 92
	Strugalski 92C
	Armutlijsky 91
	Angelov 90
	Angelov 90B
	Artykov 90
	Baatar 90B
	Baatar 90C
	Gabunia 90
	Grishin 90
	Aliev 89
	Baatar 89
	Baatar 89B
	Bannikov 89
	Gabunia 89
	Angelov 88
	Baatar 88
	Baatar 88B
	Baldin 88B
	Baldin 88C
	Boos 88
	Zielinsky 88
530 (109.5)	Spiegel 91
	Kartik 90
	De 89

π^- ^{12}C

4 (14.65)	Kechechyan 90
	Kechechyan 90B
5 (15.39)	Bajramov 89
39.1 (31.61)	Apokin 89B
40 (31.93)	Angelov 89
	Bajramov 89

π^- ^{13}C

0.2117 (12.36)	Yen 91B
0.233 (12.38)	Yen 91B
0.248 (12.39)	Yen 91B
0.2707 (12.41)	Yen 91B
0.2875 (12.43)	Yen 91B
0.3433 (12.47)	Yen 91B

π^- O

0.2875 (15.22)	Gram 89
0.353 (15.28)	Gram 89

π^- Ne

6.2 (24.21)	Kiselevich 92
	Kiselevich 92B
	Amelin 91
	Zielinsky 88

π^- ^{20}Ne

0.2875 (18.95)	Burlein 89

π^- Al

0.9902 – 4.998 (26.11 – 29.72)	
	Gavrilov 89
1.1 (26.22)	Golubeva 90
1.2 (26.31)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
1.26 – 2.5 (26.37 – 27.52)	
	Kuzichev 89
3 (27.98)	Degtyarenko 91
	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
	Vorobiev 88E
5 (29.72)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
40 (51.4)	Ananieva 92
	Antipov 92
	Antipov 90C
250 (114.9)	Alves 92
320 (129.3)	Cobbaert 88B
530 (165.1)	Spiegel 91
	Kartik 90
	De 89

π^- Si

0 (26.3)	Gornov 88
40 (52.7)	Ananieva 92
200 (105.6)	Fawcett 90
	Fawcett 90B
	Barlag 88
340 (135.9)	Adamovich 92

π^- S

40 (57.28)	Boos 88

π^- Cl

530 (197.1)	De 89

π^- Ca

0.2875 (37.65)	Gram 89
0.353 (37.71)	Gram 89

π^- Ti

1.39 (45.9)	Bayukov 91
1.4 (46.01)	Bayukov 92
40 (74.57)	Ananieva 92

π^- Fe

1.26 – 2.5 (53.27 – 54.47)	
	Kuzichev 89
1.39 (53.4)	Bayukov 91
1.4 (53.41)	Bayukov 92
320 (189.7)	Cobbaert 88B

π^- Ni

0.0773 (54.85)	Friedman 91B
0.0963 (54.86)	Friedman 91B

π^- Cu

0 (59.34)	Gornov 88
0.6 (59.81)	Golubeva 89
0.8 (60)	Golubeva 89
1 (60.1)	Golubeva 89
1.2 (60.39)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
1.26 – 2.5 (60.45 – 61.65)	
	Kuzichev 89
3 (62.13)	Degtyarenko 91
	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
	Vorobiev 88E
5 (64)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
38 (89.46)	Bannikov 90
	Barwolff 88
40 (90.78)	Ananieva 92
	Antipov 92
	Antipov 90C
	Gabunia 90
	Bannikov 89
	Gabunia 89
	Boos 88
50 (97.08)	Landsberg 90
	Antipov 89
	Antipov 88
	Antipov 88B
125 (135.3)	Tzamarias 90
230 (175.3)	Appel 92
	Barlag 92
	Barlag 92B
	Barlag 91

π^- Cu

	Rossi 91
	Spiegel 91
	Barlag 90
	Barlag 90B
	Barlag 90C
	Barlag 90D
	Barlag 90E
	Barlag 90F
	Barlag 89
	Barlag 89B
	Barlag 89C
	Klein 89C
	Rossi 89
	Barlag 88B
	Barlag 88C
	Barlag 88D
250 (181.9)	Alves 92
340 (209.2)	Adamovich 92
500 (250.4)	Alverson 91
530 (257.4)	Spiegel 91
	Engels 90
	Kartik 90
	De 89

π^- Ge

0 (67.76)	Gornov 88

π^- Rh

0.2875 (96.18)	Gram 89
0.353 (96.24)	Gram 89

π^- Ag

40 (134.7)	Ananieva 92

π^- Cd

1.2 (105.9)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
1.26 – 2.5 (105 – 107.2)	
	Kuzichev 89
3 (107.7)	Degtyarenko 91
	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
	Vorobiev 88E
5 (109.6)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C

π^- Xe

0 (122.4)	Barmin 89
2.34 (124.6)	Strugalski 88
3.5 (125.8)	Bekmirzaev 91
	Pawlyak 91
	Strugalski 91
	Strugalski 91B
	Strugalski 91C
	Zielinska 91
	Grishin 90B
	Strugalski 90
	Abdurakhimov 88B
	Grishin 88
	Pluta 88
	Pluta 88B
	Strugalski 88
	Strugalski 88C
	Grishin 86B
9 (131)	Strugalski 88

π^- Ta

40 (204.7)	Ananieva 92

π^- Wt

39.5 (207)	Freudenreich 90
125 (268.6)	Freudenreich 90
	Tzamarias 90
	Anassontzis 87
140 (277)	Freudenreich 90
	Rossi 89
	Bordalo 88
	Guanziroli 88
150 (284.1)	Freudenreich 90
194 (309.5)	Freudenreich 90

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

π^- Wt

	Rossi 89
	Bordalo 88
	Guanziroli 88
250 (339.1)	Alves 92
	Heinrich 89
252 (340.1)	Conway 89
286 (356.8)	Freudenreich 90
	Rossi 89
	Bordalo 88
	Guanziroli 88
340 (381.8)	Adamovich 92

π^- Pb

0.2875 (193.3)	Gram 89
0.353 (193.4)	Gram 89
0.6 (193.6)	Golubeva 89
0.9902 – 4.998 (194 – 197.9)	
	Gavrilov 89
1.2 (194.2)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
1.26 – 2.5 (194.3 – 195.5)	
	Kuzichev 89
3 (195)	Degtyarenko 91
	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89C
	Vorobiev 88E
5 (197.9)	Smirnitsky 91
	Vorobiev 91
	Vorobiev 89B
	Vorobiev 89C
	Vorobiev 88D
38 (227.9)	Bannikov 90
	Barwolff 88
40 (229.6)	Ananieva 92
	Antipov 92
	Antipov 90C
	Gabunia 90
	Bannikov 89
	Gabunia 89
	Boos 88
530 (491.8)	Spiegel 91
	Kartik 90
	De 89

π^- ^{238}U

0.1947 (221.9)	Belovitsky 92
	Belovitsky 91

π^- U

320 (437.1)	Catanesi 89
	Rossi 89
	Catanesi 88
	Cobbaert 88B

$\rho(770)^0$ nucleon

0 – 3.9 (1.71 – 2.992)	
	Nakai 89

$f_2(1270)$ nucleon

0 – 3.9 (2.214 – 3.197)	
	Nakai 89

K^+ p

80 – 140 (12.2 – 16.24)	
	Apsimon 92B

K^+ nucleon

< 3.105 (< 2.653)	
	Hyslop 92

K^+ p

5 – 250 (3.248 – 21.69)	
	Chliapnikov 90
6 (3.524)	Appel 91
8.2 – 70 (4.067 – 11.51)	
	Panagiotou 89
9.9 (4.441)	Baller 88
10 (4.462)	Appel 91
32.1 (7.834)	Garutchava 87
	Garutchava 87B
80 (12.2)	Apsimon 92

K^+ p

	Gebert 92
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Hoeger 90
80 – 140 (12.2 – 16.24)	
	Apsimon 91
	Apsimon 89
140 (16.24)	Apsimon 92
	Gebert 92
	Apsimon 91B
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Hoeger 90
147 (16.64)	Boca 92
200 (19.4)	Brick 90
	Brick 89
250 (21.69)	Begalli 92
	Agababyan 91
	Aivazyan 91
	Aivazyan 91B
	Atayan 91
	Botterweck 91
	Schmitz 91
	Agababyan 90B
	Ajinenko 90
	Ajinenko 90D
	Atayan 90
	Agababyan 89
	Aivazyan 89
	Ajinenko 89B
	Ajinenko 89C
	Ajinenko 89D
	Ajinenko 89E
	Buschbeck 89
	Adamus 88
	Adamus 88F
	Adamus 88G
	Aivazyan 88
	Grassler 88
	Adamus 86C

K^+ n

5.98 (3.522)	Svec 91B
	Delesquen 89
6 (3.527)	Svec 90
11.85 (4.839)	Delesquen 89
12 (4.868)	Svec 90
70 (11.52)	Banerjee 88
?	Hyslop 92

K^+ nucleus

0.2507	Berdnikov 92
	Berdnikov 91
0.3811	Berdnikov 91C
	Sibirtsev 88B
0.4873	Berdnikov 91B
0.58	Berdnikov 91C
0.5996	Sibirtsev 88B
27 – 280	Freudenreich 90
100	Geist 91
200	Geist 91
?	Bando 90

K^+ deuteron

0.453 (2.505)	Mardor 90
0.507 (2.533)	Mardor 90
0.559 (2.561)	Mardor 90
0.641 (2.607)	Mardor 90
0.703 (2.643)	Mardor 90
0.74 (2.664)	Mardor 90
5.98 (5.125)	Svec 91B
70 (16.32)	Banerjee 88
?	Hyslop 92

K^+ Be

11.2 (16.09)	Akimenko 92
	Akimenko 90B
	Akimenko 90C

K^+ C

0.453 (11.85)	Mardor 90
0.507 (11.88)	Mardor 90

K^+ C

0.559 (11.92)	Mardor 90
0.641 (11.98)	Mardor 90
0.703 (12.03)	Mardor 90
0.74 (12.05)	Mardor 90
1.6 (12.76)	Afanasyev 88
1.8 (12.93)	Afanasyev 88

K^+ Mg

200 (97.82)	Brick 92
	Brick 90
	Brick 89

K^+ Al

1.6 (26.76)	Afanasyev 88
1.8 (26.94)	Afanasyev 88
250 (114.9)	Ajinenko 92
	Botterweck 92
	Agababyan 91B
	Agababyan 90C
	Ajinenko 90B
	Botterweck 90
	Ajinenko 89

K^+ Ti

1.6 (46.27)	Afanasyev 88
1.8 (46.45)	Afanasyev 88

K^+ Cu

11.2 (69.51)	Akimenko 92
	Akimenko 90B
	Akimenko 90C

K^+ Ag

200 (224.3)	Brick 92
	Brick 90
	Brick 89

K^+ Cd

1.6 (106.4)	Afanasyev 88
1.8 (106.6)	Afanasyev 88

K^+ Xe

0.56 – 0.81 (123.1 – 123.3)	
	Barmin 89B

K^+ Au

200 (327.2)	Brick 92
	Brick 90
	Brick 89
250 (354.1)	Botterweck 92
	Agababyan 91B
	Agababyan 90C
	Ajinenko 90B
	Botterweck 90
	Ajinenko 89

K^+ Pb

11.2 (203.9)	Akimenko 90B
	Akimenko 90C
200 (338.3)	Akesson 88B

K^- e

250 (0.7062)	Buenerd 92

K^- nucleon

32.5 (7.889)	Landsberg 90B

K^- p

0 (1.432)	Noble 92
	Hessey 89
	Whitehouse 89
0.68 (1.643)	Gall 88
	Hertzog 88
1.66 (2.091)	Iijima 92
3.93 – 110 (2.925 – 14.41)	
	Chliapnikov 90
3.93 – 176 (2.925 – 18.2)	
	Panagiotou 89
6 (3.524)	Appel 91
6.5 (3.655)	Landsberg 90
8.25 (4.078)	Landsberg 90
	Yokosawa 90B

K^- p

9.9 (4.441)	Baller 88
10 (4.462)	Appel 91
11 (4.668)	Aston 92
	Aston 92B
	Aston 91
	Aston 91B
	Aston 91C
	Dunwoodie 91
	Aston 90
	Aston 90B
	Aston 90C
	Bienz 90
	Fujii 90
	Aston 89
	Aston 89B
	Aston 89C
	Aston 88
	Aston 88B
	Aston 88C
	Aston 88D
	Aston 88E
	Aston 88F
	Aston 88G
	Aston 88H
	Aston 88I
	Aston 88J
	Augustin 88C
	Bird 88
	Hitlin 88
	Toki 88B
12 (4.864)	Yokosawa 90B
16 (5.582)	Yokosawa 90B
32.5 (7.882)	Landsberg 90
	Landsberg 88
40 (8.729)	Barkov 90
	Amaglobeli 89
	Apokin 89
	Bolonkin 89
	Nurushev 89
	Apokin 88B
	Bolonkin 88
	Toki 88B
	Antipov 87B
80 (12.2)	Apsimon 92
	Gebert 92
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Hoeger 90
80 – 140 (12.2 – 16.24)	
	Apsimon 91
	Apsimon 89
110 (14.41)	Tannenbaum 89
140 (16.24)	Apsimon 92
	Gebert 92
	Apsimon 91B
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Hoeger 90
150 (16.81)	Freudenreich 90
176 (18.2)	Yokosawa 90B
200 (19.4)	Appel 92
230 (20.8)	Appel 92

K^- n

32.5 (7.887)	Bityukov 87

K^- nucleus

0	Tamura 88
1.5	May 89B
1.66	Iijima 92
	Aoki 91
	Aoki 91D
	Aoki 91E
	Aoki 90
4	May 89B
27 – 280	Freudenreich 90
32.5	Landsberg 90B
38	Efendiev 89
40	Boos 88
?	Bando 90

K^- deuteron

40 (12.4)	Apokin 92
	Amaglobeli 89
	Apokin 89
	Nurushev 89
	Apokin 88C

K^- ^{4}He

0 (4.21)	Hayano 91
	Hayano 89
	Yamazaki 89
	Hayano 88
0 – 0.3 (4.21 – 4.293)	
	Dalitz 90

K^- Li

40 (23.65)	Boos 88

K^- ^{7}Li

0 (7.014)	Tamura 88
0.715 (7.354)	Tang 88

K^- Be

38 (26.62)	Efendiev 89
40 (27.25)	Antipov 92
	Antipov 90C
	Antipov 89C
	Antipov 87

K^- ^{9}Be

0 (8.877)	Tamura 88

K^- C

1.6 (12.76)	Afanasyev 88
1.66 (12.81)	Iijima 92
1.8 (12.93)	Afanasyev 88
40 (31.95)	Boos 88

K^- ^{12}C

0 (11.67)	Sakaguchi 90
	Sakaguchi 89
	Tamura 88
0.715 (12.03)	Tang 88
?	Denisov 91

K^- ^{16}O

0 (15.39)	Tamura 88

K^- Al

1.6 (26.76)	Afanasyev 88
1.66 (26.81)	Iijima 92
1.8 (26.94)	Afanasyev 88
38 (50.42)	Efendiev 89
40 (51.41)	Antipov 92
	Antipov 90C

K^- Si

200 (105.6)	Fawcett 90
	Fawcett 90B
	Barlag 88

K^- S

40 (57.28)	Boos 88

K^- ^{40}Ca

0 (37.75)	Tamura 88

K^- Ti

1.6 (46.27)	Afanasyev 88
1.8 (46.45)	Afanasyev 88

K^- Cu

1.66 (60.91)	Iijima 92
38 (89.46)	Efendiev 89
40 (90.78)	Antipov 92
	Antipov 90C
	Antipov 89C
	Boos 88
230 (175.3)	Spiegel 91
	Barlag 90D
	Barlag 90E

K^- Ag

1.66 (102.2)	Iijima 92
38 (133.2)	Efendiev 89
40 (134.7)	Antipov 89C

K^- Cd

1.6 (106.4)	Afanasyev 88
1.8 (106.6)	Afanasyev 88

K^- Wt

0 (171.8)	Gall 88
6 (177.2)	Bensinger 88

K^- Pt

150 (295.9)	Freudenreich 90

K^- Pb

0 (193.5)	Gall 88
1.66 (194.7)	Iijima 92
38 (227.9)	Efendiev 89
40 (229.6)	Antipov 92
	Antipov 90C
	Antipov 89C
	Boos 88

K_L e^-

?	Buenerd 92

K_L p

?	Hyslop 92

K_L nucleus

50 – 200	Ramberg 92B
70	Hsiung 92
	Barker 91
	Kleinknecht 91
	Winstein 91

K_L deuteron

10 – 50 (6.428 – 13.83)	
	Silvestrov 89

K_L Cu

1.6 – 7.4 (60.85 – 66.2)	
	Balats 87
4 – 20 (63.1 – 76.64)	
	Silvestrov 89

pomeron pomeron

(0.3 – 3)	Breakstone 88C
(0.3 – 5)	Breakstone 89B
	Breakstone 88C
?	Breakstone 90C

nucleon nucleon

(1.88 – 3.02)	Strakovskii 91
4.2 (3.13)	Simic 90
200.9 (19.48)	Aoki 89
?	Berger 91
	Ejiri 91B

nucleon nucleus

4.5 – 200	Schmidt 92B
14.6 – 200	Schmidt 92B

p nucleon

1.696 (2.326)	Naudet 88B
2.88 (2.734)	Naudet 88B
3.88 (3.044)	Nakai 91
5.762 (3.569)	Naudet 88B
70 (11.55)	Ammosov 90B
	Belikov 89
	Sviridov 88
(20 – 63)	Freudenreich 90
300 (23.79)	Artykov 90
	Artykov 90B
	Yuldashev 90B
	Yuldashev 90C
	Alimov 89B
400 (27.45)	Freudenreich 90
	Virodov 89
800 (38.8)	Spiegel 91
	Abduzhamilov 89
(39)	Albrow 88
?	Burchell 92

$p\,p$

0.045 (1.877)	Yokosawa 90B
(1.88 – 3.02)	Strakovskii 91
0.2224 (1.88)	Locher 90
0.2733 (1.896)	Locher 90
0.287 (1.898)	Bruckner 91B
	Bruckner 91C
0.3 – 2.5 (1.89 – 2.602)	
	Yokosawa 90B
0.4 – 0.579 (1.917 – 1.957)	
	Onel 89
0.447 – 0.597 (1.926 – 1.962)	
	Hausammann 89
(1.93 – 1.97)	Beznogikh 91C
0.4808 – 0.6427 (1.934 – 1.974)	
	Troyan 90B
0.5 – 2 (1.938 – 2.43)	
	Kobayashi 91
0.52 – 2.8 (1.943 – 2.702)	
	Yokosawa 90B
0.6 – 0.9 (1.962 – 2.04)	
	Andreev 88B
0.6444 – 1.198 (1.974 – 2.148)	
	Yokosawa 90B
0.7405 – 0.7942 (2.001 – 2.017)	
	Korkmaz 91
0.7771 (2.012)	Michaelian 90
0.781 (2.013)	Meyer 90
0.781 – 0.8459 (2.013 – 2.033)	
	Meyer 90
0.7857 – 0.8468 (2.014 – 2.033)	
	Meyer 92
0.7872 (2.015)	Meyer 92
0.7942 (2.017)	Hutcheon 90
0.7988 (2.018)	Przewoski 92
0.8004 (2.019)	Hutcheon 90
0.8081 – 1.463 (2.021 – 2.241)	
	Yokosawa 90B
< 0.8828 (< 2.044)	
	Stoks 92
0.926 (2.058)	Shklyarevsky 86
0.94 – 2.44 (2.062 – 2.582)	
	Dallatorreco 89
0.9821 (2.076)	Yokosawa 90B
0.99[illegible] (2.081)	Shklyarevsky 86
0.9959 – 3.204 (2.081 – 2.833)	
	Yokosawa 90B
1 – 2.25 (2.082 – 2.517)	
	Yokosawa 90B
1 – 3 (2.082 – 2.768)	
	Yokosawa 90B
	Shimizu 89
1.044 (2.096)	Yokosawa 90B
1.064 (2.103)	Didenlez 91
1.07 (2.108)	Yokosawa 90B
	Shypit 88
	Shypit 88B
1.07 – 1.459 (2.108 – 2.239)	
	Shypit 89
1.087 (2.111)	Hoffmann 88B
1.09 (2.112)	Barlett 91
	Didenlez 91
	Yoshida 91
	Barlow 88B
1.09 – 1.463 (2.112 – 2.241)	
	Yokosawa 90B
1.099 (2.115)	Abegg 91
	Hutcheon 89B
1.103 (2.116)	Yokosawa 90B
1.1 (2.118)	Shklyarevsky 86
1.116 (2.121)	Didenlez 91
1.142 (2.12)	Didenlez 91
1.151 (2.133)	Yokosawa 90B
1.168 (2.138)	Didenlez 91
1.17 – 2.49 (2.139 – 2.599)	
	Yokosawa 90B
1.189 (2.145)	Yokosawa 90B
	Shypit 88
1.191 (2.146)	Locher 90
1.194 (2.147)	Shklyarevsky 86
1.217 (2.155)	Yokosawa 90B
1.217 – 1.536 (2.155 – 2.267)	
	Andreev 88C
1.219 (2.156)	Locher 90
	Barlow 88B
1.273 (2.174)	Yokosawa 90B

$p\,p$

	Shypit 88
1.279 (2.177)	Yokosawa 90B
1.279 – 1.687 (2.177 – 2.32)	
	Dobrovolsky 88
1.282 (2.177)	Yokosawa 90B
	Barlow 88B
	Tanaka 88
	Pauletta 87
	Shklyarevsky 86
1.3 – 2.4 (2.184 – 2.568)	
	Yonnet 90
1.341 (2.198)	Yokosawa 90B
1.343 (2.199)	Barlow 88B
	Shklyarevsky 86
1.373 – 3.099 (2.2 – 2.79)	
	Bertini 88B
1.378 (2.211)	Yokosawa 90B
	Shypit 88
	Shypit 88B
1.379 (2.212)	Mcnaughton 90
1.404 (2.22)	Barlow 88B
	Shklyarevsky 86
1.45 (2.236)	Willis 89
1.45 – 2.7 (2.236 – 2.669)	
	Comets 89
1.451 (2.237)	Yokosawa 90B
1.455 (2.238)	Yokosawa 90B
1.459 (2.239)	Yokosawa 90B
	Shypit 88
	Shypit 88B
1.463 (2.241)	Yoshida 91
	Yokosawa 90B
	Vovchenko 89B
	Barlow 88B
	Fergerson 88
	Tanaka 88
	Pauletta 87
	Shklyarevsky 86
1.49 (2.251)	Chiba 91
1.5 – 300 (2.254 – 23.76)	
	Panagiotou 89
1.504 (2.255)	Lac 88
1.504 – 2.991 (2.255 – 2.765)	
	Yokosawa 90B
	Lac 89C
1.504 – 3.511 (2.255 – 2.929)	
	Lac 89D
1.511 – 3.515 (2.258 – 2.931)	
	Lac 89
	Lac 89B
1.522 (2.262)	Vovchenko 89
	Vovchenko 89B
1.551 – 3.19 (2.272 – 2.832)	
	Yokosawa 90B
	Fontaine 89
1.558 – 3.515 (2.274 – 2.931)	
	Lehar 88
	Perrot 88
1.569 (2.279)	Vovchenko 89
1.581 (2.283)	Vovchenko 89B
< 1.6 (< 2.289)	
	Arndt 92
1.639 (2.303)	Bazhanov 88
	Bazhanov 88B
1.662 (2.311)	Vovchenko 89B
1.69 (2.321)	Lac 88
1.696 (2.323)	Shklyarevsky 86
1.75 – 5.5 (2.342 – 3.497)	
	Yokosawa 90B
1.921 (2.403)	Bertini 88
1.921 – 3.099 (2.403 – 2.79)	
	Yokosawa 90B
2 (2.43)	Yokosawa 90B
2 – 3 (2.43 – 2.768)	
	Yokosawa 90B
	Auer 88
2.142 (2.47)	Bertini 88
2.359 (2.554)	Bertini 88
2.466 (2.591)	Bertini 88
2.573 (2.627)	Bertini 88
2.75 – 5 (2.686 – 3.363)	
	Yokosawa 90B
2.784 (2.697)	Bertini 88
3 (2.768)	Yokosawa 90B
3.099 (2.79)	Siebert 91

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

p p

	Frascaria 89
	Bertini 88
(3)	Angelis 88
3.88 (3.042)	Nakai 91
4 (3.077)	Yokosawa 90B
	Auer 88
4.2 (3.136)	Bekmirzaev 89
	Bekmirzaev 87C
5 (3.363)	Yokosawa 90B
	Auer 88
5.762 (3.566)	Huang 92
< 6 (< 3.627)	Meissner 90
6 (3.627)	Appel 91
	Yokosawa 90B
	Carroll 88
9 (4.329)	Belzer 92
	Belzer 90
10 (4.53)	Appel 91
	Bekmirzaev 89
	Carroll 88
11.75 (4.887)	Yokosawa 90B
	Auer 88
12 – 405 (4.934 – 27.6)	
	Chliapnikov 90
13.3 (5.175)	Yokosawa 91
	Saroff 90
13.3 – 18.5 (5.175 – 6.043)	
	Khiari 89
15 – 5000 (5.474 – 96.87)	
	Sedlak 88
18.5 (6.043)	Yokosawa 91
	Saroff 90
	Yokosawa 90B
	Crabb 88
19 (6.12)	Danielsen 92
19 – 303 (6.12 – 23.88)	
	Tannenbaum 89
22.4 (6.621)	Batyunya 89
24 (6.843)	Krisch 91
	Yokosawa 91
	Batyunya 90
	Crabb 90
27.5 (7.307)	Wiencke 92
32 (7.864)	Bravina 92
	Bogolyubsky 89C
32 – 400 (7.864 – 27.43)	
	Boos 90
32.1 (7.876)	Bogolyubsky 90
	Bravina 89
	Bogolyubsky 88F
69 (11.46)	Boos 88C
(11.5)	Volkov 92
(11.5 – 62.2)	Bhattacharje 91
85 (12.6)	Armstrong 92
	Armstrong 91
	Armstrong 89C
	Armstrong 89E
	Augustin 88C
	Toki 88B
147 (16.66)	Boca 92
176 (18.22)	Yokosawa 90B
185 (18.68)	Yokosawa 92
	Yokosawa 91
	Yokosawa 90B
	Akchurin 89
	Nurushev 89
	Bonner 88B
200 (19.42)	Adams 92E
	Appel 92
	Pumplin 92
	Yokosawa 92
	Abduzhamilov 91
	Adams 91
	Adams 91B
	Adams 91C
	Adams 91D
	Adams 91F
	Gazdzicki 91
	Yokosawa 91
	Brick 90
	Yokosawa 90
	Brick 89
	Tannenbaum 89
	Abduzhamilov 88
	Abe 88

p p

	Allday 88
	Boos 88B
	Derado 88
200.9 (19.46)	Harris 90B
205 (19.66)	Gazdzicki 91
	Dremin 90
	Baldin 88B
250 (21.7)	Aivazyan 91
	Aivazyan 89
	Ajinenko 89D
	Adamus 88B
	Adamus 88G
	Aivazyan 88
	Grassler 88
	Adamus 86C
280 (22.96)	Durieux 91
	Bonesini 89
	Bonesini 89B
	Bonesini 88B
(23)	Fischer 88
(23 – 53)	Giacomelli 90
(23 – 62)	Giacomelli 90
(23.5 – 62.4)	Tannenbaum 89
300 (23.76)	Armstrong 92
	Armstrong 91
	Armstrong 91C
	Armstrong 91E
	Gazdzicki 91
	Armstrong 90
	Armstrong 90B
	Demarzo 90
	Prokoshkin 90
	Yuldashev 90B
	Yuldashev 90C
	Alimov 89B
	Armstrong 89
	Armstrong 89B
	Armstrong 89D
	Armstrong 89E
	Armstrong 89F
	Tannenbaum 89
	Armstrong 88
	Chan 88
	Toki 88B
(24)	Tannenbaum 89
(24.3)	Morel 90
	Morel 90B
	Breedon 89
	Breedon 88
360 (26.03)	Singh 91
	Singh 91B
	Dremin 90
	Gemesy 90
	Asai 89C
	Aziz 88
	Bailly 88B
	Bailly 88C
	Bailly 88E
	Bailly 87F
370 (26.38)	Appel 92
400 (27.43)	Appel 92
	Abduzhamilov 91
	Aguilarbenit 91
	Aguilarbenit 91B
	Corcoran 91
	Rossi 91
	Bhattacharje 90
	Jaffe 89
	Klein 89C
	Rossi 89
	Tannenbaum 89
	Abduzhamilov 88
	Aguilarbenit 88
	Aguilarbenit 88B
	Aguilarbenit 88C
	Boos 88B
	Miettinen 88
	Aguilarbenit 87
	Aguilarbenit 87C
	Aguilarbenit 87F
	Aguilarbenit 87H
405 (27.6)	Okusawa 88
(30)	Tannenbaum 89
(30.6 – 62.7)	Sedlak 88

p p

(31)	Breakstone 91B
	Giacomelli 90
	Tannenbaum 89
	Breakstone 88B
	Breakstone 88D
	Fischer 88
(31 – 62)	Giacomelli 90
	Panagiotou 89
(31.5)	Akesson 89
800 (38.77)	Appel 92
	Mcgaughey 92
	Rossi 91
	Spiegel 91
	Sambamurti 90
	Stewart 90
	Jaffe 89
	Rossi 89
	Tannenbaum 89
	Ammar 88B
(38.8)	Jaffe 88
(40 – 63)	Toki 88B
(44)	Breakstone 91B
	Breakstone 88B
	Breakstone 88D
	Antreasyan 86B
(45)	Tannenbaum 89
(53)	Kundrat 92
	Raha 91
	Giacomelli 90
	Tannenbaum 89
	Kvatadze 88
(62)	Bari 91
	Bari 91B
	Breakstone 91
	Breakstone 91B
	Breakstone 90
	Breakstone 90B
	Breakstone 90C
	Giacomelli 90
	Breakstone 89
	Breakstone 89B
	Geist 89
	Angelis 88
	Breakstone 88
	Breakstone 88B
	Breakstone 88C
	Breakstone 88D
	Fabbri 88
(62.3)	Angelis 91
(62.4)	Tannenbaum 89
(< 62.5)	Buenerd 92
(62.8)	Smith 92
(63)	Anassontzis 90
	Angelis 89
	Tannenbaum 89
	Akesson 88D
	Fischer 88
	Kvatadze 88
	Antreasyan 86B
(540)	Tannenbaum 89
10^6 (1360)	Avakyan 91D
?	Anselmann 92
	Burchell 92
	Berger 91
	Bertini 88B

p n

0.6103 (1.966)	Klomp 91
0.9543 (2.068)	Ponting 88
1.1 – 6 (2.117 – 3.62)	
	Yokosawa 90B
1.3 – 1.82 (2.185 – 2.369)	
	Yokosawa 90B
1.97 (2.422)	Abramov 91F
1.98 (2.425)	Abramov 92
100 – 300 (13.77 – 23.78)	
	Bhattacharje 89B
(13.8 – 27.5)	Bhattacharje 91
200 (19.43)	Gazdzicki 91
300 (23.78)	Yuldashev 90C
	Alimov 89B
400 (27.45)	Bhattacharje 90
	Bhattacharje 89C
(27.5)	Bhattacharje 91
?	Berger 91

p $\bar{p}$

(630)	Neumeister 91
(900)	Neumeister 91

p nucleus

0 – 800	Sulyaev 88
0.1441 – 200.9	Otterlund 91
1 – 12	Nakai 91
1.05 – 400.9	Atageldieva 88
1.45	Freedman 93
1.463	Krakauer 91B
1.921	Antonchik 90B
2.03 – 10.1	Sibirtsev 90
2.88	Schnetzer 89
4.2	Grishin 88B
4.491	Kozma 90C
4.5	Ghosh 89F
	Vokal 88
4.9	Schmidt 92
4.911 – 200	Adamovich 91B
6	Yokosawa 90B
6.129 – 800	Kumar 89
7.1	Guaraldo 89B
10	Bobodjanov 91
	Shakhbazyan 88
10.14	Boyarinov 90
12 – 2070	Panagiotou 89
20.8	Gulamov 91
21	Bajramov 89
24	Abduzhamilov 88B
27 – 280	Freudenreich 90
28	Silvestrov 89
59.99 – 800	Schmitz 91
60	Schmidt 92
	Matis 90B
60 – 800	Geist 91
67	Takibaev 88
69.99	Victorov 90
70	Ammosov 92B
	Bunyatov 92
	Bobodjanov 91
	Bhattacharje 89
	Lyukov 89
70 – 400	Geist 91
100	Geist 91
	Walker 91
150	Freudenreich 90
185	Yokosawa 92
	Yokosawa 90B
	Akchurin 89
	Nurushev 89
200	Schmidt 92
	Aggarwal 91
	Bobodjanov 91
	Geist 91
	Brick 90
	Freudenreich 90
	Stenlund 90D
	Takibaev 90
	Abduzhamilov 89
	Buschbeck 89
	Holynski 89B
	Abduzhamilov 88B
	Abe 88
	Boos 88B
	Takibaev 88
200.9	Holynski 89
220	Dzhaoshvili 90
225	Freudenreich 90
250	Bunyatov 92
	Lyukov 89
300	Appel 92
	Freudenreich 90
	Jain 88B
350	Appel 92
360	Hsiung 92
	Iconomidoufa 91
	Kleinknecht 91
	Winstein 91
370	Appel 92
400	Nasr 92
	Aggarwal 91
	Bobodjanov 91
	Geist 91
	Rossi 91

p nucleus

	Ahmad 90
	Freudenreich 90
	James 90
	Moore 90
	Takibaev 90
	Tariq 90
	Abduzhamilov 88B
	Boos 88B
	Jain 88B
	Shivpuri 88
	Shivpuri 88B
	Takibaev 88
450	Hsiung 92
	Iconomidoufa 91
	Kleinknecht 91
	Winstein 91
	Akesson 90G
800	Chen 92B
	Foucher 92
	Kodama 92
	Lipton 92
	Alde 91
	Kodama 91
	Kodama 91B
	Kodama 91C
	Leitch 91
	Rossi 91
	Shivpuri 91
	Spiegel 91
	Alde 90B
	Mishra 90
	Sengupta 90
	Abduzhamilov 89
	Buschbeck 89
	Holynski 89B
	Abduzhamilov 88B
	Abduzhamilov 88C
	Barbier 88
	Jain 88B
1000	Melku 91
$1000 - 10^5$	Kawamura 89
1500	Dzhaoshvili 90
$8 \cdot 10^4$	Otterlund 88
$3 \cdot 10^5 - 5 \cdot 10^5$	Dubovy 88
$10^6 - 5 \cdot 10^7$	Nikolsky 92
$2.3 \cdot 10^6 - 10^8$	Nikolsky 92
$2 \cdot 10^7$	Efimov 89
?	Bando 90

p deuteron

0.2076 (2.829)	Locher 90
0.24 (2.834)	Yokosawa 90B
0.2873 (2.842)	Kistryn 89
0.5 (2.896)	Yokosawa 90B
0.5414 (2.909)	Clauton 92
0.6356 (2.941)	Clauton 92
0.6444 (2.944)	Pinston 90
0.65 (2.946)	Yokosawa 90B
0.6842 (2.959)	Abegg 88
0.8 (3.004)	Yokosawa 90B
	Adams 89
0.8444 (3.022)	Abegg 88
0.896 (3.044)	Mayer 89
0.9543 (3.069)	Ponting 88
0.989 (3.084)	Abegg 88
1.07 (3.125)	Abegg 88
1.085 (3.127)	Yokosawa 90B
1.09 (3.12)	Yokosawa 90B
1.099 (3.134)	Punjabi 88
$1.1 - 6$ (3.134 – 5.213)	Yokosawa 90B
1.101 (3.134)	Epstein 90
	Punjabi 88
	Punjabi 88B
1.278 (3.216)	Yokosawa 90B
1.337 (3.244)	Grebenjuk 89
	Velichko 88
1.337 – 1.686 (3.244 – 3.411)	Dobrovolsky 88
1.438 (3.292)	Andreev 88
1.45 (3.298)	Aslanides 91
1.455 (3.3)	Grebenjuk 89

p deuteron

	Velichko 88
1.463 (3.304)	Yokosawa 90B
	Adams 88
	Fergerson 88
1.5 – 1.7 (3.322 – 3.418)	Zielinsky 88
1.503 (3.323)	Andreev 88
1.561 (3.351)	Andreev 88
1.569 (3.355)	Grebenjuk 89
	Velichko 88
1.669 (3.403)	Andreev 88
1.686 (3.411)	Grebenjuk 89
	Velichko 88
1.696 (3.416)	Aleshin 91
	Aleshin 90
2.1 (3.609)	Aslanides 91
2.7 (3.889)	Aslanides 91
3.5 (4.242)	Yokosawa 90B
	Ohmori 88
3.88 (4.401)	Nakai 91
3.9 (4.4)	Nakai 89
5.762 (5.128)	Huang 92
9 (6.192)	Belzer 92
70 (16.34)	Abramov 90
400 (38.79)	Jaffe 89
450 (41.14)	Akesson 92B
800 (54.82)	Arneodo 92
	Alde 91
	Alde 91D
	Leitch 91
	Alde 90B
	Alde 90C
	Mishra 90

p ^{3}He

0.6791 (3.894)	Hausser 91
0.7926 (3.944)	Rahav 92B
	Rahav 92C
	Hausser 91
0.8354 (3.964)	Blinov 88
0.9543 (4.021)	Hausser 91
1.09 (4.09)	Hausser 91
1.46 (4.288)	Santi 88
1.6 (4.365)	Zielinsky 88
1.671 (4.405)	Blinov 88
1.9 (4.531)	Zielinsky 88
2.251 (4.724)	Ellegaard 89
2.784 (5.011)	Ellegaard 89
3.099 (5.176)	Ellegaard 89

p ^{4}He

1.337 (5.18)	Grebenjuk 89
1.455 (5.25)	Grebenjuk 89
1.569 (5.328)	Grebenjuk 89
1.686 (5.398)	Grebenjuk 89
(124)	Fischer 88
(157.5)	Akesson 89
(220)	Tannenbaum 89

p He

0.6791 (4.839)	Abdullin 92
1.09 (5.05)	Sterbenz 92
1.337 – 1.686 (5.192 – 5.401)	Dobrovolsky 88
1.463 (5.267)	Sterbenz 92
400 (54.75)	Miettinen 88

p Li

3.9 (9.723)	Nakai 89
6 (11.01)	Heppelmann 89
	Carroll 88
10 (13.14)	Heppelmann 89
	Carroll 88

p ^{6}Li

0.28 (6.562)	Mildenberger 90
1.696 (7.334)	Baturin 91
2 (7.537)	Dukhovskoy 87

p ^{7}Li

0.0287 (7.459)	Savage 88C
0.044 (7.459)	Savage 88C
0.28 (7.494)	Mildenberger 90

p ^{7}Li

0.4446 (7.545)	Watson 89
0.5211 (7.575)	Watson 89
0.6444 (7.631)	Alford 89
	Watson 89
0.7771 (7.699)	Huber 88C
0.8081 (7.716)	Alford 89
	Watson 89
0.8886 (7.762)	Huber 88C
0.9543 (7.8)	Watson 89
1.023 (7.842)	Alford 89
1.076 (7.874)	Huber 88C
2 (8.497)	Dukhovskoy 87
300 (62.89)	Antoniazzi 92
	Antoniazzi 92B

p Be

0.8081 (9.599)	Kortelling 90
1.09 (9.773)	Cebra 89
1.26 – 2.5 (9.886 – 10.78)	Kuzichev 89
1.463 (10.03)	Barlow 88
1.468 – 1.685 (10.03 – 10.18)	Koptyev 88
1.693 (10.19)	Koptyev 88
1.696 (10.19)	Seidl 91
	Matis 90
	Naudet 88B
	Naudet 88C
	Roche 88
1.696 – 17.91 (10.19 – 19.3)	Schroeder 90
1.742 (10.23)	Naudet 88
2.5 (10.78)	Safronov 88
2.88 (11.06)	Seidl 91
	Matis 90
	Naudet 88
	Naudet 88B
	Naudet 88C
	Roche 88
3.7 (11.64)	Safronov 88
5.5 (12.85)	Safronov 88
5.762 (13.01)	Huang 91
	Seidl 91
	Matis 90
	Schroeder 90
	Letessiersel 89
	Letessiersel 89B
	Naudet 88
	Naudet 88B
	Naudet 88C
	Roche 88
	Roche 88B
	Roche 88C
7.2 (13.9)	Safronov 88
9.2 (15.05)	Safronov 88
10 (15.54)	Boyarinov 92
	Boyarinov 92B
	Boyarinov 92C
10.1 (15.55)	Sibirtsev 91
	Safronov 88B
	Sibirtsev 88
	Voronin 88
	Vorontsov 88B
10.14 (15.57)	Boyarinov 91
	Boyarinov 89
	Boyarinov 88
	Boyarinov 88B
	Boyarinov 88C
13.3 (17.18)	Bonner 90
	Yokosawa 90B
	Bonner 88
14.5 (17.76)	Schukraft 91
14.57 (17.79)	Abbott 91C
14.6 (17.8)	Abbott 92
	Abbott 92B
	Abbott 91B
	Bloomer 90
14.97 – 18.98 (17.98 – 19.76)	Gavrishchuk 91B
14.97 – 64.99 (17.98 – 34)	Gavrishchuk 92
	Belyaev 90
	Belyaev 89B

p Be

15 – 65 (17.99 – 34)	Gavrishchuk 91C
17.98 – 63.99 (19.33 – 33.85)	Belyaev 89C
18.5 (19.55)	Bonner 90
	Yokosawa 90B
	Bonner 88
22 (21)	Yokosawa 91
	Yokosawa 90B
	Bonner 89
25 – 65 (22.17 – 34)	Belyaev 88D
28.5 (23.45)	Yokosawa 91
	Freudenreich 90
	Yokosawa 90B
53.99 – 61.99 (31.27 – 33.35)	Gavrishchuk 91B
69.99 (35.31)	Balats 92
70 (35.31)	Gavrilov 92
	Abramov 90
200 (58.56)	Akesson 92B
360 (78.2)	Perdereau 92
400 (82.39)	Yokosawa 90B
	Lundberg 89
	Bernstein 88
	Duffy 88
	Luk 88
	Miettinen 88
450 (87.33)	Akesson 92B
	Perdereau 92
	Barr 91
	Serin 91B
	Akesson 90F
	Akesson 90G
	Barr 90C
	Barr 90D
	Johansson 90B
	Fayard 89
450.9 (87.42)	Schukraft 88B
500 (92.01)	Alverson 91
	Alverson 91B
530 (94.71)	Abramov 91B
	Engels 90
800 (116.2)	Luk 93
	Duryea 92
	Hsiung 92
	Peng 92
	Ramberg 92
	Ramberg 92B
	Somalwar 92
	Straub 92
	Straub 92B
	Barker 91
	Duryea 91
	Ho 91
	Kleinknecht 91
	Papadimitrio 91
	Winstein 91
	Yokosawa 91
	Boca 90
	Freudenreich 90
	Ho 90
	Hsiung 90B
	Karlsson 90
	Patterson 90
	Sambamurti 90
	Stewart 90
	Yamanaka 90
	Fayard 89
	Streets 89
	Tannenbaum 89
	Winstein 89
	Yamanaka 89
	Yoshida 89
	Gibbons 88

p ^{9}Be

2 (10.4)	Dukhovskoy 87
16.97 – 63.99 (18.87 – 33.83)	Gavrishchuk 91

p C

0.3467 – 0.5708 (12.18 – 12.27)	Watson 89

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

p C

0.4539 (12.22) Clauton 92B
0.5414 (12.26) Clauton 92
Clauton 92B
0.5592 (12.27) Homolka 92
0.5823 (12.28) Homolka 92
0.5861 (12.28) Pinston 89
0.6194 (12.2) Homolka 92
0.6356 (12.3) Clauton 92
0.6444 (12.31) Pinston 89
Watson 89
0.6462 (12.31) Bellini 89
0.6515 (12.31) Homolka 92
0.6585 (12.32) Bellini 89
0.8081 (12.4) Watson 89
0.8354 (12.42) Lyndon 92
0.9543 (12.49) Watson 89
1.206 (12.66) Binz 89
1.26 – 2.5 (12.6 – 13.63)
Kuzichev 89
1.294 (12.72) Budyashov 92B
Budyashov 92C
Budyashov 92D
Budyashov 91B
1.46 (12.84) Barlow 92
1.463 (12.84) Lemaire 91
Lemaire 91B
Trzaska 91C
Barlow 88
1.468 – 1.685 (12.85 – 13.01)
Koptyev 88
1.49 (12.86) Chiba 91
1.693 (13.01) Koptyev 88
1.696 (13.02) Baturin 91
2.3 (13.48) Grigalashvil 88
2.359 (13.52) Lemaire 91
Lemaire 91B
Trzaska 91C
3 (14.01) Vorobiev 91
Vorobiev 89C
3.308 (14.25) Baldin 92
3.88 (14.68) Nakai 91
3.9 (14.69) Nakai 89
4 (14.76) Chiba 88B
4.2 (14.91) Backovic 92
Backovic 92C
Strugalski 92B
Baatar 91
Batskovich 91
Didenko 91B
Angelov 90
Angelov 90B
Baldin 90C
Agakishiev 89B
Aliev 89
Baatar 89
Agakishiev 88
Angelov 88
Baatar 88
Baldin 88C
Grigalashvil 88
Gulkanyan 88D
Mekhtiev 88
Pluta 88B
4.338 (15.01) Ohmori 89
4.491 (15.12) Baldin 92
4.5 (15.13) Abraamyan 88
4.9 (15.42) Schmidt 92
5 (15.49) Arakelyan 90B
5.1 (15.56) Budilov 90
5.357 (15.74) Baldin 92
6 (16.18) Heppelmann 89
Carroll 88
6.875 (16.77) Baldin 92
7.5 (17.18) Vlasov 92
Degtyarenko 91
Smirnitsky 91
Vorobiev 91
Vlasov 90
Vlasov 90B
Vorobiev 90
Vorobiev 90B
Bayukov 89
Bayukov 89B
Bayukov 89C

p C

Vlasov 89
Vlasov 89B
Vorobiev 89B
Vorobiev 89C
Bayukov 88
Vlasov 88
Vorobiev 88D
8.989 (18.12) Baldin 92
9 (18.13) Belzer 92
Belzer 90
10 (18.73) Angelov 92
Shakhbasyan 92B
Armutlijsky 91
Baatar 89
Heppelmann 89
Agakishiev 88
Angelov 88
Armutlijsky 88
Baatar 88
Baldin 88C
Carroll 88
Lyubimov 88
Armutlijsky 87
Armutlijsky 87B
12 (19.88) Carroll 88
14.5 (21.24) Remsberg 88
Tannenbaum 88
14.6 (21.29) Abbott 92B
14.97 – 18.98 (21.49 – 23.48)
Gavrishchuk 91B
14.97 – 64.99 (21.49 – 39.76)
Gavrishchuk 92
15 – 65 (21.5 – 39.76)
Gavrishchuk 91C
17.98 – 63.99 (22.9 – 39.47)
Belyaev 89C
25 – 65 (26.19 – 39.76)
Belyaev 88D
52.99 – 60.99 (36.22 – 38.61)
Gavrishchuk 91B
60 (38.32) Schmidt 92
70 (41.14) Gavrilov 92
Afanasyev 90
Afanasyev 90B
200 (67.83) Schmidt 92
Albrecht 91O
Yokosawa 90
200.9 (67.99) Kampert 92
Albrecht 91
Schmidt 88
400 (95.27) Miettinen 88
450 (100) Fredj 91
500 – 10^4 (106.4 – 473.2)
Avakyan 89C
530 (109.5) De 89
800 (134.3) Arneodo 92
Mcgaughey 92
Alde 91
Alde 91D
Leitch 91
Spiegel 91
Alde 90B
Alde 90C
Mishra 90
Sambamurti 90
Stewart 90
Tannenbaum 89

p ^{12}C

0.0024 (12.12) Miljanic 90
0.046 (12.12) Sedlak 88
0.28 (12.16) Mildenberger 90
0.537 (12.25) Dementiev 92
0.5681 (12.26) Dementiev 92
0.6444 (12.3) Korkmaz 90
Cowley 88
0.7926 (12.38) Hicks 93
Chan 90
0.9821 (12.4) Hicks 93
Chan 90
1.09 (12.57) Barlett 91
Hoffmann 90B
1.463 (12.84) Fergerson 88
4.2 (14.9) Angelov 91

p ^{12}C

Angelov 89
Bekmirzaev 89
4.3 (14.98) Bajramov 89
4.491 (15.12) Baldin 90B
Kozma 89B
5.357 (15.73) Baldin 90B
6.875 (16.76) Baldin 90B
8.989 (18.11) Baldin 90B
9.9 (18.66) Bajramov 89
10 (18.72) Shakhbasyan 92
Angelov 91
Shakhbazyan 91
Shakhbazyan 90
Angelov 89
Bekmirzaev 89
14.97 – 64.99 (21.48 – 39.74)
Belyaev 90
15 – 61 (21.49 – 38.6)
Belyaev 88
Belyaev 88B
16.97 – 31.99 (22.49 – 29.01)
Belyaev 89
16.97 – 61.99 (22.49 – 38.89)
Belyaev 88C
16.97 – 63.99 (22.49 – 39.46)
Gavrishchuk 91
31.99 – 46.99 (29.01 – 34.3)
Belyaev 89
46.99 – 61.99 (34.3 – 38.89)
Belyaev 89
70 (41.12) Denisov 91

p ^{13}C

0.0573 (13.05) Savage 88C
0.6444 (13.23) Korkmaz 90
0.7291 (13.28) Huber 88B
Huber 88D
0.8886 (13.37) Huber 88B
Huber 88D
1.076 (13.49) Huber 88B
Huber 88D
1.087 (13.5) Hoffmann 90
1.09 (13.5) Hoffmann 90B

p ^{14}C

0.6444 (14.16) Alford 89
0.8081 (14.26) Alford 89
1.023 (14.39) Alford 89

p ^{14}Nit

21 (26.82) Bajramov 89

p ^{16}O

0.5533 (15.98) Cowley 91
0.7291 (16.07) Huber 88D
0.8384 (16.14) Bleszynski 88
0.8886 (16.17) Huber 88D
1.076 (16.29) Huber 88D
1.09 (16.3) Bleszynski 88
1.282 (16.44) Bleszynski 88

p ^{19}Fl

0.0398 (18.64) Savage 88C
0.057 (18.64) Bini 89B

p Ne

300 (107.8) Artykov 90
Yuldashev 90C
Alimov 89B

p ^{20}Ne

1.463 (20.32) Blanpied 88B
300 (107.4) Edgorov 92
Artykov 90B
Yuldashev 90
Yuldashev 90B
Yuldashev 90C
Yuldashev 90D
Aliev 89
Alimov 89
Alimov 88
Zielinsky 88

p ^{22}Ne

1.463 (22.18) Blanpied 88B

p ^{24}Mg

0.7291 (23.53) Hicks 88
1.463 (24.05) Blanpied 88

p Mg

200 (97.82) Brick 92
Geist 91
Brick 90
Brick 89
Abe 88

p ^{26}Mg

1.463 (25.92) Blanpied 88

p Al

0.5681 (26.22) Dementiev 92
0.5861 (26.23) Pinston 89
1 – 12 (26.49 – 35.18)
Nakai 91
1.26 – 2.5 (26.67 – 27.69)
Kuzichev 89
1.693 (27.02) Koptyev 88
2.5 (27.69) Safronov 88
3 (28.12) Vorobiev 89C
3.7 (28.71) Safronov 88
3.9 (28.88) Nakai 89
4 (28.97) Tokushuku 90
4.9 (29.72) Schmidt 92
5.5 (30.22) Safronov 88
6 (30.62) Heppelmann 89
Carroll 88
7.2 (31.58) Safronov 88
7.5 (31.82) Vorobiev 89C
9 (32.98) Belzer 92
Belzer 90
9.2 (33.13) Safronov 88
10 (33.73) Heppelmann 89
Carroll 88
10 (33.7) Boyarinov 92
Boyarinov 92B
Boyarinov 92C
10.1 (33.7) Sibirtsev 91
Safronov 88B
Sibirtsev 88
Voronin 88
Vorontsov 88B
10.14 (33.83) Boyarinov 91
Boyarinov 89
Boyarinov 88
Boyarinov 88B
Boyarinov 88C
12 (35.18) Carroll 88
14.5 (36.92) Remsberg 88
Tannenbaum 88
14.6 (36.99) Abbott 92
Abbott 92B
14.97 – 64.99 (37.24 – 62.45)
Gavrishchuk 92
Belyaev 90
Belyaev 89B
15 – 65 (37.26 – 62.45)
Gavrishchuk 91C
15.97 – 19.98 (37.9 – 40.47)
Gavrishchuk 91B
25 – 65 (43.48 – 62.45)
Belyaev 88D
55.99 – 63.99 (58.71 – 62.04)
Gavrishchuk 91B
60 (60.41) Schmidt 92
200 (103.4) Akesson 92B
Schmidt 92
Eklund 91
200.9 (103.6) Kampert 92
220 (108.1) Dzhaoshvili 90
300 (125.3) Cobbaert 88
Cobbaert 88B
360 (136.9) Bailly 88
400 (144) Miettinen 88
450 (152.5) Akesson 92B
Fredj 91
Akesson 90F

p Al

450.9 (152.6) Schukraft 88B
530 (165.1) De 89
800 (202.1) Boca 90
Streets 89
Tannenbaum 89
1500 (275.7) Dzhaoshvili 90

p ^{27}Al

0.2136 (26.11) Hallin 92
0.6462 (26.28) Bellini 89
1.463 (26.85) Feng 90

p Si

200 (105.6) Barlag 88

p ^{28}Si

0.6444 (27.21) Hicks 88
0.7291 (27.26) Hicks 88
0.9543 (27.4) Hicks 88
1.696 (27.97) Vorobiev 92

p S

200 (113.4) Bachler 91
Baechler 91
Eklund 91
Odyniec 91
Schukraft 91
Bartke 90

p ^{34}S

1.696 (33.5) Vorobiev 92

p Cl

530 (197.1) De 89

p Ar

200 (127.6) Derado 90B
Derado 88

p ^{40}Ar

1.463 (38.97) Blanpied 88C

p Ca

0.5681 (38.43) Dementiev 92
800 (247.2) Arneodo 92
Alde 91
Alde 91D
Leitch 91
Spiegel 91
Alde 90B
Alde 90C
Mishra 90

p ^{40}Ca

0.6444 (38.39) Hutcheon 88
Lee 88
0.8081 (38.49) Hutcheon 88
0.8384 (38.51) Bleszynski 88
0.9002 (38.55) Lee 89
Lee 88
0.9543 (38.59) Hutcheon 88
Lee 88
1.087 (38.68) Hoffmann 88C
1.09 (38.68) Bleszynski 88
Hutcheon 88
1.282 (38.83) Bleszynski 88
1.463 (38.97) Bimbot 90

p ^{48}Ca

0.5211 (45.78) Zhang 92

p ^{48}Ti

12 (55.47) Noguchi 88

p Ti

1.46 (46.33) Barlow 92
1.693 (46.52) Koptyev 88
1.696 (46.53) Alexandrov 90
7.5 (51.64) Vlasov 92
Vlasov 90
Vlasov 90B
Bayukov 89
Bayukov 89B
Bayukov 89C
Vlasov 89
Vlasov 89B
Bayukov 88
Vlasov 88
14.97 – 64.99 (57.71 – 88.27)
Gavrishchuk 92
Belyaev 90
Belyaev 89B
15 – 65 (57.73 – 88.28)
Gavrishchuk 91C
15.97 – 19.98 (58.48 – 61.45)
Gavrishchuk 91B
25 – 65 (64.9 – 88.28)
Belyaev 88D
28.3 (67.22) Krizmanic 89
Lile 89
53.99 – 61.99 (82.53 – 86.75)
Gavrishchuk 91B

p ^{55}Mn

4.491 (55.61) Kozma 90B
Kozma 88B

p ^{54}Fe

0.7926 (51.52) Hicks 93
Hausser 90
Hausser 88
0.9821 (51.65) Hicks 93

p ^{56}Fe

12 (63.07) Noguchi 88

p Fe

1.26 – 2.5 (53.58 – 54.64)
Kuzichev 89
1.696 (53.93) Alexandrov 90
70 (99.95) Barabash 92
Blumlein 92
Blumlein 92B
Bozhko 92
Anikeyev 91
Blumlein 91
Ammosov 90B
Belikov 90
Blumlein 90
Belikov 89
Sviridov 88
300 (184.2) Cobbaert 88
Cobbaert 88B
500 – 5000 (233.9 – 723.1)
Avakyan 91B
Avakyan 91C
500 – 10^4 (233.9 – 1021)
Avakyan 89C
800 (293.2) Arneodo 92
Alde 91
Alde 91D
Leitch 91
Spiegel 91
Alde 90B
Alde 90C
Boca 90
Mishra 90
Streets 89

p ^{57}Fe

12 (64.02) Noguchi 88

p Co

1.696 (56.81) Alexandrov 90

p ^{59}Co

4.491 (59.38) Kozma 90B
Kozma 88B

p ^{58}Ni

0.6462 (55.16) Bellini 89
0.8578 (55.29) Hintz 88
1.087 (55.45) Hintz 88

p ^{58}Ni

4.491 (58.44) Kozma 91
12 (64.96) Noguchi 88

p Ni

4.491 (59.11) Kozma 88B

p ^{60}Ni

4.491 (60.31) Kozma 91
12 (66.86) Noguchi 88

p ^{62}Ni

4.491 (62.18) Kozma 91

p ^{63}Cu

4.491 (63.11) Kozma 91
12 (69.6) Noguchi 88

p Cu

0.5861 (60.3) Pinston 89
0.8474 – 0.9668 (60.46 – 60.54)
Akimov 89
0.8769 – 0.8944 (60.47 – 60.49)
Yen 91
1.26 – 2.5 (60.75 – 61.82)
Kuzichev 89
1.468 – 1.685 (60.92 – 61.1)
Koptyev 88
1.693 (61.11) Koptyev 88
1.696 (61.11) Alexandrov 90
2.5 (61.82) Safronov 88
3 (62.27) Vorobiev 89C
3.7 (62.91) Safronov 88
3.9 (63.09) Nakai 89
4.338 (63.49) Ohmori 89
4.491 (63.63) Kozma 88B
4.9 (63.9) Schmidt 92
5.5 (64.54) Safronov 88
6 (64.99) Heppelmann 89
Carroll 88
7.2 (66.07) Safronov 88
7.5 (66.33) Vorobiev 90B
Vorobiev 89C
9 (67.65) Belzer 92
Belzer 90
Kozma 86
9.2 (67.82) Safronov 88
9.956 (68.48) Gavrilov 92
10 (68.52) Heppelmann 89
Carroll 88
10 (68.5) Bovarinov 92
Bovarinov 92B
Bovarinov 92C
10.1 (68.6) Sibirtsev 91
Safronov 88B
Sibirtsev 88
Voronin 88
Vorontsov 88B
10.14 (68.64) Bovarinov 91
Bovarinov 89
Bovarinov 88
Bovarinov 88B
Bovarinov 88C
12 (70.22) Inagaki 89C
14.5 (72.29) Remsberg 88
Tannenbaum 88
14.6 (72.37) Abbott 92
Abbott 92B
24 (79.68) Heinson 91
Winstein 91
Morse 90
Ohl 90
60 (103) Schmidt 92
70 (108.6) Abramov 90
200 (164.9) Akesson 92B
Schmidt 92
Eklund 91
200.9 (165.2) Kampert 92
Baglin 91B
Baglin 91C
Baglin 91E
Sonderegger 89
Schmidt 88
220 (171.9) Dzhaoshvili 90

p Cu

400 (225.5) Coopersarkar 91
Trost 89
Duffy 88
Miettinen 88
Dorenbosch 87
450 (238.3) Fredj 91
Akesson 90F
500 (250.4) Alverson 91
530 (257.4) De 89
800 (313.4) Moreno 91
Freudenreich 90
Stewart 90
Brown 89
Guo 89
Tannenbaum 89
1500 (425.6) Dzhaoshvili 90

p ^{64}Cu

4.491 (64.05) Kozma 90B

p ^{65}Cu

4.491 (64.98) Kozma 91
12 (71.58) Noguchi 88

p Zn

0.4539 (61.94) Clauton 92B
0.5414 (61.98) Clauton 92B

p ^{89}Yt

0.6462 (84.04) Bellini 89
0.6585 (84.04) Bellini 89
4.491 (87.37) Kozma 90B

p ^{90}Zr

0.6444 (84.97) Lee 88
0.9002 (85.13) Lee 88
0.9543 (85.17) Lee 89
Lee 88

p Zr

1.693 (86.89) Koptyev 88

p Nb

1.463 (88.27) Lemaire 91
Lemaire 91B
Trzaska 91C
2.359 (89.05) Lemaire 91
Lemaire 91B
Trzaska 91C

p ^{96}Mo

16.97 – 63.99 (105.1 – 139.4)
Gavrishchuk 91

p Mo

14.97 – 64.99 (103.3 – 140)
Gavrishchuk 92
Belyaev 90
Belyaev 89B
15 – 65 (103.3 – 140)
Gavrishchuk 91C
15.97 – 19.98 (104.1 – 107.5)
Gavrishchuk 91B
17.98 – 63.99 (105.9 – 139.4)
Belyaev 89C
25 – 65 (111.6 – 140)
Belyaev 88D
56.99 – 64.99 (134.8 – 140)
Gavrishchuk 91B

p ^{108}Ag

4.491 (105.1) Kozma 90B

p Ag

0.5861 (101.6) Pinston 89
0.6444 (101.6) Pinston 89
0.8081 (101.7) Kortelling 90
1.09 (101.9) Cebra 89
4.491 (104) Kozma 90
4.9 (105.4) Schmidt 92
12 (111.9) Asano 88
60 (148.8) Schmidt 92

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

p Ag

200 (224.3)	Brick 92
	Schmidt 92
	Geist 91
	Brick 90
	Brick 89
	Abe 88
200.9 (224.7)	Kampert 92
	Schmidt 88

p Cd

1.26 – 2.5 (106.3 – 107.3)	
	Kuzichev 89
3 (107.8)	Vorobiev 89C
7.5 (112)	Vorobiev 89C

p ^{118}Sn

0.6462 (111.1)	Bellini 89

p Sn

1.468 – 1.685 (112.3 – 112.5)	
	Koptyev 88
1.693 (112.5)	Koptyev 88
3.65 (114.3)	Kozma 91B
8.1 (118.4)	Kozma 91B
9 (119.3)	Belzer 92
400 (317.3)	Miettinen 88

p ^{124}Sn

0.6462 (116.6)	Bellini 89

p Xe

1 – 20 (123.7 – 140.9)	
	Mahi 88
2.032 – 20.02 (124.5 – 140.9)	
	Porile 89
200 (252.8)	Derado 90B
	Derado 88

p Gd

0.3438 – 1.627 (158.2 – 159.1)	
	Aleksandrov 89

p Tb

0.3438 – 1.627 (149 – 149.9)	
	Aleksandrov 89
0.5861 (149.1)	Pinston 89

p ^{159}Tb

4.491 (152.6)	Kozma 90B

p Ho

0.3438 – 1.627 (154.6 – 155.5)	
	Aleksandrov 89

p Tm

0.3438 – 1.627 (158.4 – 159.2)	
	Aleksandrov 89

p Ta

0.3438 – 1.627 (169.5 – 170.4)	
	Aleksandrov 89
1.693 (170.5)	Koptyev 88
1.696 (170.5)	Domkin 92
2.3 (171)	Grigalashvil 88
2.5 (171.2)	Safronov 88
3.7 (172.3)	Safronov 88
4.2 (172.8)	Backovic 92C
	Gulkanyan 88D
4.491 (173.1)	Kozma 90D
	Kozma 89
5.5 (174)	Safronov 88
6.1 (174.6)	Andreev 92
7.2 (175.7)	Safronov 88
9.2 (177.6)	Safronov 88
9.956 (178.3)	Gavrilov 89
10 (178.3)	Angelov 92
	Angelov 91
	Armutlijsky 91
	Agakishiev 88
	Pluta 88B
	Agakishiev 87
	Armutlijsky 87B
10 (178.4)	Boyarinov 92

p Ta

	Boyarinov 92B
	Boyarinov 92C
10.1 (178.4)	Sibirtsev 91
	Safronov 88B
	Sibirtsev 88
	Voronin 88
	Vorontsov 88B
10.14 (178.4)	Boyarinov 91
	Boyarinov 89
	Boyarinov 88
	Boyarinov 88B
	Boyarinov 88C
12 (180.2)	Asano 88
70 (228.1)	Afanasyev 90C

p ^{181}Ta

4.491 (173.1)	Kozma 90B

p Wt

10 (181)	Bertin 88
12 (182.9)	Asano 88
14.97 – 64.99 (185.7 – 227.1)	
	Gavrishchuk 92
	Belyaev 90
	Belyaev 89B
15 – 65 (185.7 – 227.1)	
	Gavrishchuk 91C
15.97 – 19.98 (186.6 – 190.2)	
	Gavrishchuk 91B
25 – 65 (194.7 – 227.1)	
	Belyaev 88D
53.99 – 62.99 (218.7 – 225.6)	
	Gavrishchuk 91B
125 (268.6)	Freudenreich 90
150 (284.1)	Freudenreich 90
200 (312.8)	Akesson 92B
	Evans 92
	Abatzis 91B
	Odyniec 91
	Schukraft 91
	Vanhecke 91
200.9 (313.3)	Akesson 92
	Akesson 91
	Odyniec 91B
	Schukraft 91
	Akesson 89D
	Akesson 89E
	Bartels 88
	Kluberg 88
	Schukraft 88B
400 (407.8)	Freudenreich 90
	Duffy 88
450 (428.3)	Akesson 92B
	Fredj 91
800 (550.8)	Arneodo 92
	Mcgaughey 92
	Straub 92
	Straub 92B
	Alde 91
	Alde 91D
	Leitch 91
	Spiegel 91
	Alde 90B
	Alde 90C
	Boca 90
	Mishra 90
	Kaplan 89
	Streets 89

p Pt

12 (193.4)	Nakamura 89

p Au

0.3438 – 1.627 (184.5 – 185.3)	
	Aleksandrov 89
0.5861 (184.6)	Pinston 89
0.6444 (184.6)	Pinston 89
3.308 – 8.386 (186.9 – 191.7)	
	Avdejchikov 87B
3.412 (186)	Summerer 90
4.9 (188.4)	Schmidt 92
5.1 (188.6)	Budilov 90
5.762 (189.2)	Kampert 92
14.5 (197.5)	Schukraft 91

p Au

	Tannenbaum 89
	Remsberg 88
	Tannenbaum 88
14.57 (197.5)	Abbott 91C
14.6 (197.6)	Abbott 92
	Abbott 92B
	Abbott 91B
	Bloomer 90
60 (235)	Schmidt 92
60.93 (236.7)	Kampert 92
	Odyniec 91B
	Bamberger 89
	Albrecht 88B
	Franz 88B
	Kluberg 88
	Lohner 88
	Vesztergombi 88
200 (327.2)	Brick 92
	Schmidt 92
	Albrecht 91O
	Bachler 91
	Eklund 91
	Geist 91
	Brick 90
	Brick 89
	London 89
	Tannenbaum 89
	Abe 88
200.9 (327.7)	Kampert 92
	Albrecht 91
	Odyniec 91B
	Albrecht 90F
	Bartke 90
	Bamberger 89
	Odyniec 89
	Pugh 89
	Albrecht 88B
	Franz 88B
	Kluberg 88
	Lohner 88
	Schmidt 88
	Strobele 88
	Vesztergombi 88
	Schmidt 87
360 (407.1)	Bailly 88
800 (572)	Peng 92

p ^{197}Au

0.6444 (185.5)	Cowley 90
1.65 (186.2)	Hill 91
1.696 (186.3)	Belyaev 90B
4.491 (188.9)	Kozma 90
	Kozma 90B
	Damdinsuren 88B
	Kozma 88
800 (573.5)	Sihver 92

p Hg

800 (577.8)	Matis 88

p Pb

0.4539 (194.1)	Clauton 92B
0.5414 (194.1)	Clauton 92B
0.5681 (194.1)	Dementiev 92
0.6462 (194.1)	Bellini 89
1 – 12 (194.4 – 204.7)	
	Nakai 91
1.206 (194.5)	Faissner 89
	Faissner 88
1.26 – 2.5 (194.6 – 195.7)	
	Kuzichev 89
1.46 (194.7)	Barlow 92
1.463 (194.7)	Lemaire 91
	Lemaire 91B
	Trzaska 91C
1.468 – 1.685 (194.7 – 194.9)	
	Koptyev 88
1.693 (194.9)	Koptyev 88
1.696 (194.9)	Daniel 92
2.359 (195.5)	Lemaire 91
	Lemaire 91B
	Trzaska 91C
2.784 (195.9)	Daniel 92
2.88 (196)	Schnetzer 89

p Pb

3 (196.1)	Vorobiev 91
	Vlasov 90B
	Vorobiev 89C
3.35 (196.5)	Daniel 92
4 (197.1)	Tokushuku 90
4.491 (197.5)	Kozma 90B
	Damdinsuren 89
4.5 (197.6)	Voronko 88
5 (198)	Vlasov 90B
6 (198)	Heppelmann 89
	Carroll 88
7.5 (200.4)	Vlasov 92
	Smirnitsky 91
	Vorobiev 91
	Vlasov 90
	Vlasov 90B
	Vorobiev 90
	Vorobiev 90B
	Bayukov 89
	Bayukov 89B
	Bayukov 89C
	Gavrilov 89
	Vlasov 89
	Vlasov 89B
	Vorobiev 89B
	Vorobiev 89C
	Bayukov 88
	Vlasov 88
	Vorobiev 88D
8.9 (201.8)	Averichev 89
9 (201.9)	Belzer 92
	Belzer 90
10 (202.8)	Heppelmann 89
	Carroll 88
70 (253.5)	Bobodjanov 91
	Abramov 90
185 (329.6)	Yokosawa 92
	Yokosawa 91
	Carey 90
	Yokosawa 90B
	Underwood 89
200 (338.3)	Yokosawa 90
	Tannenbaum 89
	Akesson 88B
200.9 (338.9)	Baglin 91
220 (349.5)	Dzhaoshvili 90
400 (437.8)	Corcoran 91
	Lundberg 89
	Miettinen 88
500 – 10^4 (479.9 – 1974)	
	Avakyan 89C
530 (491.8)	De 89
800 (588.3)	Sambamurti 90
	Stewart 90
	Tannenbaum 89
1500 (785)	Dzhaoshvili 90

p ^{208}Pb

0.6444 (194.9)	Lee 89
	Hutcheon 88
	Lee 88
0.6585 (194.9)	Bellini 89
0.7926 (194)	Chen 89D
0.8081 (194)	Hutcheon 88
0.8354 (195)	Hintz 88
0.9002 (195)	Lee 88
0.9543 (195.1)	Lee 89
	Hutcheon 88
	Lee 88
1.09 (195.2)	Chen 89D
	Hutcheon 88
1.463 (195.5)	Moshi 90

p Ac

3.9 (215.4)	Nakai 89

p Th

3.412 (219.7)	Summerer 90

p ^{238}U

0.6462 (222.8)	Bellini 89
1.696 (223.6)	Zhdanov 91
	Zhdanov 91B

p ^{238}U

Zhdanov 91C
Belyaev 90B
Filatov 88
200.9 (371.8) Sonderegger 88
400 (475.9) Klingensmith 88

p U

0.105 (222.7) Chen 92
1.693 (223.7) Koptyev 88
22 – 29.5 (242.8 – 249.5)
Freudenreich 90
200 (371.3) Akesson 92B
Abreu 91E
200.9 (371.9) Baglin 91B
Baglin 91C
Baglin 91D
Baglin 91E
Jacob 91
Odyniec 91
Odyniec 91B
Schukraft 91
Baldisseri 90
Sonderegger 89
Kluberg 88
300 (426.9) Cobbaert 88
Cobbaert 88B
320 (437.1) Catanesi 89

n e

< 0.0043 (< 0.9401)
Leeb 92
0 (0.9401) Schmiedmayer 89B
0 – 0.0004 (0.9401)
Alexandrov 89
? Buenerd 92

n nucleon

560 (32.47) Cumalat 87

n p

0 (1.878) Bazhenov 92
0.17 (1.885) Malek 91
0.22 (1.891) Klomp 91
Abegg 89C
0.22 – 0.477 (1.891 – 1.934)
Abegg 89B
0.287 (1.899) Bruckner 91B
Bruckner 91C
0.325 (1.905) Klomp 91
Abegg 89C
0.3625 (1.911) Klomp 91
Nammans 91
Locher 90
0.3639 (1.912) Brogligysin 92
0.425 (1.923) Klomp 91
Abegg 89C
0.5317 – 1.207 (1.947 – 2.153)
Binz 89B
0.6143 (1.967) Knutson 91
0.6449 – 1.091 (1.975 – 2.113)
Davis 88
0.7409 – 0.7947 (2.002 – 2.018)
Hutcheon 91
0.7411 – 0.7941 (2.002 – 2.018)
Hutcheon 89
0.7728 (2.012) Hutcheon 90
0.776 (2.012) Hutcheon 90
0.7822 (2.014) Hutcheon 90
0.7947 (2.018) Hutcheon 90
< 0.8828 (< 2.045)
Stoks 92
0.8833 (2.045) Abegg 92
Abegg 92B
0.8978 (2.04) Edwards 92
0.9194 – 1.434 (2.057 – 2.232)
Newsom 89
0.9237 (2.058) Silverman 89
0.9237 – 1.84 (2.058 – 2.378)
Dobrovolsky 88
0.9688 (2.073) Edwards 92
1 – 1.9 (2.083 – 2.396)
Tsuboyama 88
1.037 (2.095) Edwards 92
1.06 (2.103) Abegg 89

n p

1.066 (2.105) Silverman 89
1.06 (2.106) Yokosawa 90B
Garnett 89
1.071 (2.106) Mcnaughton 92B
1.091 – 1.464 (2.113 – 2.242)
Ditzler 92
Shima 92
Beddo 91
Yokosawa 90B
1.133 (2.127) Silverman 89
1.197 (2.149) Silverman 89
1.25 (2.167) Troyan 88
Zielinsky 88
1.257 (2.16) Yokosawa 90B
Ball 88
1.261 (2.171) Silverman 89
1.261 – 1.67 (2.171 – 2.318)
Dobrovolsky 88
1.262 (2.172) Yokosawa 90B
Garnett 89
1.264 (2.172) Mcnaughton 92B
1.323 (2.193) Silverman 89
1.353 (2.203) Silverman 89
1.397 (2.219) Yokosawa 90B
Delesquen 88
1.43 (2.23) Troyan 90
Troyan 88
1.445 (2.236) Silverman 89
1.44 (2.237) Yokosawa 90B
Garnett 89
1.452 (2.238) Yokosawa 90B
Nath 89
1.457 (2.23) Yokosawa 90B
Delesquen 88
1.464 (2.242) Mcnaughton 91
1.504 (2.256) Silverman 89
1.558 (2.275) Yokosawa 90B
Ball 88
1.563 (2.277) Silverman 89
< 1.6 (< 2.29) Arndt 92
1.621 (2.298) Silverman 89
1.674 (2.316) Yokosawa 90B
Ball 88
1.67 (2.318) Silverman 89
1.72 (2.333) Troyan 90
Troyan 88
1.73 (2.336) Glagolev 91
Glagolev 89C
1.788 (2.357) Yokosawa 90B
Ball 88
1.793 (2.358) Silverman 89
1.84 (2.378) Silverman 89
2.23 (2.511) Troyan 90
Troyan 88
Zielinsky 88
3.83 (3.027) Troyan 90
4.2 (3.137) Bekmirzaev 88B
Bekmirzaev 87C
5.1 (3.39) Zielinsky 88
6.1 (3.653) Batyunya 86B
20 – 70 (6.272 – 11.54)
Tatishvili 92
Aleev 90E
Aleev 89
Aleev 89B
Aleev 88D
Aleev 88F
30 – 70 (7.622 – 11.54)
Smirzanska 90
Aleev 89C
40 (8.766) Aleev 90
Aleev 88B
Aleev 88G
40 – 70 (8.766 – 11.54)
Aleev 90B
Aleev 90F
Vecko 89
Aleev 88C
200 (19.42) Gazdzicki 91
450.9 – 570.9 (29.12 – 32.76)
Bannwarth 92

n n

200 (19.43) Gazdzicki 91
? Berger 91

n Pb(atom)

0 (193.9) Schmiedmayer 89

n Bi(atom)

0 – 0.0004 (195.9)
Alexandrov 89

n nucleus

0 Freedman 89
Schmiedmayer 88
< 0.0043 Leeb 92
7 Kechechyan 89
Shakhbazyan 88
20 – 70 Tatishvili 92
Aleev 90E
40 Aleev 88G
40 – 70 Augustin 88C
640 Klein 89C

n deuteron

0.0971 (2.819) Tornow 91
0.1107 (2.81) Tornow 91
0.1267 (2.821) Tornow 91
0.3611 (2.85) Kistryn 92
Ruhl 91
0.3639 (2.86) Locher 90

n ^{6}Li

0 (6.529) Vesna 90
0.28 (6.563) Mildenberger 90

n Be

0.5712 – 1.188 (9.477 – 9.838)
Franz 88
640 (104) Klein 89C
Shipbaugh 88B

n ^{9}Be

0 – 1.21 (9.323 – 9.847)
Finlay 93

n C

0 – 1.21 (12.13 – 12.67)
Finlay 93
0.17 (12.14) Malek 91
0.5712 – 1.188 (12.27 – 12.65)
Franz 88
0.6449 – 1.188 (12.31 – 12.65)
Brooks 92
0.8085 – 1.194 (12.4 – 12.65)
Buchle 89
Buchle 88
1.045 (12.55) Buchle 89
1.144 (12.62) Buchle 89
3 – 10 (14.01 – 18.73)
Alekseev 90
4.2 (14.91) Bekmirzaev 88
Bekmirzaev 88B
Bekmirzaev 87C
4.849 – 10.8 (15.38 – 19.26)
Alekseev 91B
20 – 70 (23.96 – 41.14)
Aleev 89
Aleev 88D
Aleev 88F
30 – 70 (28.24 – 41.14)
Aleev 90C
Aleev 90D
40 (31.96) Krastev 88
40 – 70 (31.96 – 41.14)
Aleev 90B
Klein 89C
Aleev 88
500 – 10^4 (106.4 – 473.2)
Avakyan 89C

n ^{12}C

0.28 (12.16) Mildenberger 90
0.8085 – 1.194 (12.39 – 12.64)
Franz 89
3 – 10 (14.01 – 18.72)
Alekseev 88
7 (16.85) Kechechyan 90B
8 (17.49) Kechechyan 90
40 (31.95) Landsberg 90

n Nit

0 – 1.21 (13.99 – 14.54)
Finlay 93

n ^{15}Nit

0.79 (15.18) Celler 90

n O

0 – 1.21 (15.84 – 16.3)
Finlay 93
0.5712 – 1.188 (15.99 – 16.37)
Franz 88

n ^{19}Fl

0 – 1.21 (18.64 – 19.1)
Finlay 93

n ^{23}Na

0 – 1.21 (22.36 – 22.93)
Finlay 93

n Al

0.5712 – 1.188 (26.23 – 26.62)
Franz 88
20 – 70 (40.48 – 64.43)
Aleev 89
Aleev 88D
Aleev 88F
30 – 70 (46.27 – 64.43)
Aleev 90C
Aleev 90D
40 (51.42) Krastev 88
40 – 70 (51.42 – 64.43)
Aleev 90B

n ^{27}Al

0 – 1.21 (26.09 – 26.66)
Finlay 93

n Si

0 – 1.21 (27.1 – 27.67)
Finlay 93
640 (184.9) Shipbaugh 88B

n ^{40}Ca

0 – 1.21 (38.1 – 38.78)
Finlay 93

n Va

0.5712 – 1.188 (48.55 – 48.95)
Franz 88

n Mn

0.5712 – 1.188 (52.27 – 52.68)
Franz 88

n ^{56}Fe

< 0.005 (< 53.1)
Vesna 89

n Fe

500 – 5000 (233.9 – 723.1)
Avakyan 91B
Avakyan 91C
500 – 10^4 (233.9 – 1021)
Avakyan 89C

n Co

0.5712 – 1.188 (55.99 – 56.3)
Franz 88

n Cu

0 – 1.21 (60.14 – 60.72)
Finlay 93
0.5712 – 1.188 (60.29 – 60.6)
Franz 88
0.8085 – 1.194 (60.43 – 60.7)
Buchle 89
Franz 89
3 – 10 (62.27 – 68.52)
Alekseev 90
4.849 – 10.8 (63.95 – 69.28)
Alekseev 91B
20 – 70 (76.65 – 108.6)
Aleev 89
Aleev 88D

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

n Cu

Aleev 88F
30 – 70 (84.02 – 108.6)
Aleev 90C
Aleev 90D
40 (90.79) Krastev 88

n ^{81}Br

< 0.0001 (< 76.39)
Masuda 92B
0 – 0.0001 (76.39)
Masuda 92
Shimizu 92

n Rb

0.0001 – 0.0002 (80.55)
Alfimenkov 91

n ^{90}Zr

0 – 1.21 (84.77 – 85.37)
Finlay 93

n ^{93}Nb

< 0.0001 (< 87.87)
Masuda 92B
0 – 0.0001 (87.87)
Masuda 92
Shimizu 92
0 – 1.21 (87.87 – 88.46)
Finlay 93

n ^{108}Pd

0 – 0.0001 Masuda 92
Shimizu 92
< 0.0001 Masuda 92B

n Ag

0.5712 – 1.188 (101.6 – 101)
Franz 88

n ^{111}Cd

0 – 0.0001 Masuda 92
Shimizu 92
< 0.0001 Masuda 92B

n ^{113}Cd

< 0.005 (< 106.1)
Vesna 89
0.0001 – 0.0002 (106.1)
Alfimenkov 91

n Sn

0 – 1.21 (111.5 – 112.1)
Finlay 93

n ^{124}Sn

< 0.0001 (< 116.4)
Masuda 92B
0 – 0.0001 (116.4)
Masuda 92
Shimizu 92

n ^{127}I

0 – 1.21 (26.09 – 26.66)
Finlay 93

n Xe

0 – 2 (12.[illegible] – 124.5)
Strugalski 91C

n ^{133}Cs

0 – 1.21 (124.8 – 125.4)
Finlay 93

n ^{138}La

0 (129.5) Masuda 90

n ^{139}La

0 (< 130.4) Masuda 90B
< 0.0001 (< 130.4)
Masuda 92B
0.0014 – 0.001 (< 130.4)
Masuda 90B
0 – 0.0001 (130.4)
Masuda 92

n ^{139}La

Shimizu 92
0.0001 – 0.0002 (130.4)
Alfimenkov 91

n Ce

0.5712 – 1.188 (131.6 – 132)
Franz 88

n Ta

0.5712 – 1.188 (169.6 – 170.1)
Franz 88
4.2 (172.8) Bekmirzaev 88
Bekmirzaev 87C

n ^{181}Ta

0 – 1.21 (169.5 – 170.1)
Finlay 93

n Wt

640 (498.5) Shipbaugh 88B

n Pb

0 (193.9) Schmiedmayer 89
0.5712 – 1.188 (194.1 – 194.5)
Franz 88
500 – 10^4 (479.9 – 1974)
Avakyan 89C

n ^{207}Pb

< 0.0971 (< 193.7)
Abov 89

n ^{208}Pb

0.0003 – 0.0087 (194.7)
Schmiedmayer 91
0 – 1.21 (194.7 – 195.3)
Finlay 93
0.0868 – 0.7296 (194.7 – 194.9)
Schutt 88

n ^{208}Bi

0 – 1.21 (208.9 – 209.5)
Finlay 93

n Bi

0 – 0.0004 (195.6)
Alexandrov 89
0.5712 – 1.188 (195.8 – 196.2)
Franz 88
0.8085 – 1.194 (195.9 – 196.2)
Buchle 89
Franz 89

n ^{238}U

0 (222.6) Damdinsuren 88

n U

0.5712 – 1.188 (222.8 – 223.2)
Franz 88

n ^{242}Am

0.0173 – 0.0971 (242.9 – 242.9)
Shigin 91

n ^{245}Cm

0.0336 – 0.0971 (245.9 – 245.9)
Gokhberg 91

$\bar{n}$ nucleon

0 – 0.043 (1.87 – 1.88)
Mutchler 88

$\bar{n}$ p

0 (1.878) Adamo 92B
Hertzog 92
0.1 – 0.29 (1.881 – 1.89)
Adamo 92C
0.48 – 0.72 (1.935 – 1.996)
Sedlak 88
6.1 (3.653) Batyunya 88B
Batyunya 86B

$\bar{n}$ n

6.1 (3.656) Batyunya 87G

$\bar{n}$ C

0 (12.13) Bitter 89
Bressi 89

$\bar{n}$ ^{12}C

1.4 (12.79) Guaraldo 89B

$\bar{n}$ ^{56}Fe

0.15 (53.12) Agnello 90
0.2101 (53.13) Agnello 90
0.25 (53.14) Agnello 90
0.2652 (53.14) Agnello 90
0.2943 (53.15) Agnello 90
0.3871 (53.18) Agnello 90
0.4249 (53.19) Agnello 90
0.48 (53.22) Agnello 90
0.5325 (53.24) Agnello 90

$\bar{n}$ Ta

6.1 (174.6) Andreev 92
Andreev 90B

$\bar{n}$ ^{181}Ta

6.1 (174.7) Guaraldo 89B

$\bar{p}$ p

0 (1.877) Adamo 92B
Amsler 92B
Amsler 92C
Amsler 92D
Angelopoulos 92
Guyot 92
Hertzog 92
Peters 92
Ruf 92
Usher 92
Zenoni 92B
Adler 91
Aker 91
Amsler 91
Amsler 91B
Gastaldi 91
Chiba 90
Holder 90
Holder 90B
May 90
May 90B
Weidenauer 90
Chiba 89
Duch 89
May 89
Omori 89
Schaefer 89
Adiels 88
Baker 88
Chiba 88
Doser 88
Doser 88B
Toki 88B
Chiba 87B
0 – 0.7 (1.877 – 1.989)
Sedlak 88
0.0136 (1.877) Eversheim 91
(1.877 – 2.06) Gastaldi 91
0.0664 (1.878) Agnello 91
0.0651 – 0.0725 (1.878 – 1.878)
Agnello 91
0.0689 (1.878) Agnello 91
0.0714 (1.878) Agnello 91
< 0.1 (< 1.879)
Adamo 92
0.1 – 1.55 (1.879 – 2.272)
Bradamante 91
0.1 – 7 (1.879 – 3.875)
Sedlak 88
0.1 – 100 (1.879 – 13.76)
Sedlak 88
0.105 (1.87) Batusov 90D
Ziegler 88
0.15 – 0.3 (1.883 – 1.89)
Bardin 91B
0.18 – 0.6 (1.885 – 1.962)
Amsler 91
0.18 – 1.5 (1.885 – 2.254)
Amsler 91

$\bar{p}$ p

0.181 (1.885) Bruckner 91B
Bruckner 91C
0.181 – 0.59 (1.885 – 1.95)
Bruckner 91B
Bruckner 91C
0.2 (1.887) Armstrong 89H
0.2 – 1.5 (1.887 – 2.254)
Amsler 91
0.22 – 0.6 (1.889 – 1.962)
Bradamante 91
0.287 (1.898) Bruckner 91B
Bruckner 91C
0.29 (1.898) Sedlak 88
0.3 – 0.58 (1.89 – 1.957)
Bruckner 90
0.3 – 0.9 (1.89 – 2.04)
Bardin 92
0.3 – 10 (1.89 – 4.53)
Sedlak 88
(1.9 – 2.4) Sedlak 88
(1.9 – 2.7) Sedlak 88
0.36 – 0.76 (1.9 – 2.007)
Tanimori 89B
Sugimoto 88
0.36 – 1.55 (1.9 – 2.272)
Hasan 92
0.4 – 0.67 (1.917 – 1.981)
Fukuhisa 92
0.4 – 0.9 (1.917 – 2.04)
Timmermans 91
0.415 (1.91) Mutchler 88
0.439 (1.925) Perrotkunne 91
0.439 – 1.55 (1.925 – 2.272)
Amsler 91
0.497 – 1.55 (1.937 – 2.272)
Yokosawa 90B
Kunne 88
Kunne 88B
Kunne 88C
0.5 – 1.5 (1.938 – 2.254)
Birsa 90
0.5 – 3 (1.938 – 2.768)
Sedlak 88
0.505 (1.939) Bruckner 91B
Bruckner 91C
0.54 – 0.9 (1.947 – 2.04)
Bardin 91
0.544 (1.948) Perrotkunne 91
0.546 (1.949) Birsa 91
0.55 (1.94) Schiavon 89
0.59 (1.95) Bruckner 91B
Bruckner 91C
(1.96 – 2.43) Harris 91B
0.6 (1.962) Dallatorreco 92
0.6 – 1.3 (1.962 – 2.184)
Amsler 91
0.656 (1.977) Birsa 91
0.679 – 1.55 (1.984 – 2.272)
Kunne 91
0.697 (1.989) Bertini 89
0.7 (1.989) Bertini 88C
0.7 – 2.12 (1.989 – 2.472)
Sedlak 88
0.7 – 2.53 (1.989 – 2.612)
Sedlak 88
0.7 – 7.2 (1.989 – 3.923)
Sedlak 88
0.7 – 100 (1.989 – 13.76)
Sedlak 88
0.702 (1.98) Sedlak 88
0.7373 – 7.52 (2 – 4)
Sedlak 88
0.7373 – 105.6 (2 – 14.14)
Sedlak 88
0.757 (2.006) Schiavon 89
Sedlak 88
0.76 (2.007) Sedlak 88
0.767 (2.009) Birsa 91
0.8 (2.019) Martin 88
0.875 (2.042) Birsa 91
< 0.8828 (< 2.044)
Stoks 92
0.9 (2.04) Dallatorreco 92

$\bar{p}\,p$

1 – 8 (2.082 – 4.108)	
	Sedlak 88
1 – 600 (2.082 – 43.34)	
	Sedlak 88
(2.1 – 2.5)	Sedlak 88
1.077 (2.107)	Schiavon 89
1.1 (2.115)	Martin 88
1.1 – 2 (2.115 – 2.43)	
	Sedlak 88
1.2 – 2 (2.149 – 2.43)	
	Hertzog 92
1.2 – 9.2 (2.149 – 4.372)	
	Sedlak 88
1.3 – 1.58 (2.184 – 2.282)	
	Barnes 89
1.4 – 1.7 (2.219 – 2.325)	
	Johansson 90
1.435 – 1.447 (2.231 – 2.235)	
	Vonfrankenbe 89
1.435 – 1.45 (2.231 – 2.236)	
	Barnes 89
1.435 – 1.92 (2.231 – 2.402)	
	Vonfrankenbe 89
1.435 – 145 (2.231 – 16.55)	
	Barnes 89
1.449 – 4.289 (2.236 – 3.162)	
	Sedlak 88
1.476 – 1.507 (2.246 – 2.257)	
	Barnes 89B
1.5 (2.254)	Hamann 92
1.5 – 2.1 (2.254 – 2.465)	
	Sedlak 88
1.545 (2.27)	Vonfrankenbe 89
1.546 (2.27)	Barnes 90B
1.6 (2.289)	Sedlak 88
1.65 (2.307)	Amsler 91
1.695 (2.323)	Barnes 90
	Barnes 90B
	Ohlsson 90
	Vonfrankenbe 89
1.95 – 4 (2.413 – 3.077)	
	Tosello 89
< 2 (< 2.43)	Hamann 90
2.3 – 9.2 (2.534 – 4.372)	
	Sedlak 88
2.814 – 3.432 (2.707 – 2.905)	
	Baglin 92
3 – 7 (2.768 – 3.875)	
	Armstrong 92E
(2.963)	Augustin 88C
3.65 – 5.65 (2.972 – 3.537)	
	Baglin 89B
(3)	Armstrong 92D
	Baglin 89C
(3 – 3.6)	Ray 92
	Spiegel 91
(3.096 – 3.098)	
	Ray 92
(3.1)	Smith 92C
4.6 (3.251)	Markytan 89
	Sedlak 88
(3.5)	Armstrong 92D
(3.509 – 3.512)	
	Lipton 92
	Ray 92
(3.51)	Armstrong 91B
5.55 (3.511)	Sedlak 88
5.6 (3.524)	Sedlak 88
(3.524 – 3.59)	Armstrong 92C
(3.54 – 3.566)	Ray 92
5.7 (3.54)	Sedlak 88
(3.55)	Armstrong 92G
(3.55 – 3.566)	Armstrong 91D
(3.554 – 3.565)	
	Lipton 92
(3.564)	Augustin 88C
(3.6)	Armstrong 92D
6 (3.627)	Appel 91
6.1 (3.653)	Batyunya 86B
(3.67)	Armstrong 91B
(3.685 – 3.688)	
	Ray 92
7.3 (3.946)	Markytan 89
8.8 (4.286)	Sedlak 88

$\bar{p}\,p$

9 (4.329)	Sedlak 88
9.1 (4.351)	Markytan 89
	Sedlak 88
9.1 – 405 (4.351 – 27.6)	
	Sedlak 88
9.9 (4.519)	Baller 88
10 (4.53)	Appel 91
12 (4.934)	Markytan 89
	Sedlak 88
(5.56)	Armstrong 91B
22.4 (6.621)	Batyunya 90
	Batyunya 90B
	Boos 90
	Boos 89
	Kanazirski 89
	Zlatanov 89
	Sedlak 88
	Batyunya 87E
	Batyunya 86
24 (6.843)	Batyunya 89
32 (7.864)	Bravina 92
	Boos 90
	Boos 90B
32.1 (7.876)	Bogolyubsky 89B
	Bogolyubsky 89D
	Bravina 89
	Babintsev 88
	Bogolyubsky 88
	Bogolyubsky 88B
	Bogolyubsky 88C
	Bogolyubsky 88E
	Bogolyubsky 88G
	Chekulaev 88B
	Sedlak 88
	Smirnova 88
	Bogolyubsky 87B
	Bogolyubsky 87C
	Bogolyubsky 86E
40 (8.766)	Apokin 88B
101 (13.83)	Sedlak 88
150 (16.83)	Freudenreich 90
176 (18.22)	Yokosawa 90B
200 (19.42)	Yokosawa 92
	Adams 91B
	Adams 91C
	Adams 91D
	Yokosawa 91
	Yokosawa 90
	Allday 88
	Derado 88
(24.3)	Morel 90
	Morel 90B
	Breedon 89
	Bernasconi 88
	Breedon 88
315 (24.35)	Freudenreich 90
(27)	Tannenbaum 89
(30.6 – 62.7)	Sedlak 88
(31 – 62)	Panagiotou 89
1078 (44.9)	Sedlak 88
(53)	Raha 91
	Giacomelli 90
	Geichgimbel 89
	Tannenbaum 89
	Kvatadze 88
(53 – 900)	Giacomelli 90
	Tannenbaum 89
1800 (58.13)	Rolandi 92
	Abe 90J
	Hurst 90
(63)	Kvatadze 88
(100)	Harris 91
(200)	Albajar 90B
	Albajar 89
	Ansorge 89
	Ansorge 89B
	Ansorge 89C
	Geichgimbel 89
	Jenni 89
	Asman 88
	Eckart 88
	Salvini 88
	Tao 88
(200 – 900)	Bhattacharje 91
	Geichgimbel 89

$\bar{p}\,p$

	Pelzer 89
	Albajar 88
	Ansorge 88
	Tao 88
(260)	Albajar 89
(300)	Lindsey 91
	Nodulman 89
	Paoletti 89
(350)	Geichgimbel 89
	Tao 88
(380)	Albajar 89
(456)	Asman 88
(500)	Albajar 89
(536)	Albajar 89B
(540)	Kroha 90
	Geichgimbel 89
	Jenni 89
	Paoletti 89
	Tannenbaum 89
	Albajar 88B
	Albrow 88
	Tao 88
(546)	Abe 92I
	Behrends 92
	Bryman 92
	Flaugher 92B
	Lindgren 92
	Pumplin 92
	Lindsey 91
	Albajar 90B
	Albajar 90C
	Ellis 90
	Giacomelli 90
	Albajar 89B
	Franzini 89
	Geichgimbel 89
	Golutvin 89
	Jenni 89
	Nodulman 89
	Pauss 89
	Stubenrauch 89
	Ansari 88
	Dowell 88
	Eckart 88
	Loverre 88
	Plothowbesch 88
	Ruhlmann 88
	Salvini 88
	Sphicas 88
	Tao 88
(570)	Dowell 88
(620)	Albajar 89
(630)	Albajar 92
	Alitti 92
	Alitti 92B
	Alitti 92C
	Barbarogalti 92
	Bryman 92
	Gauthier 92
	Lindgren 92
	Rolandi 92
	Albajar 91
	Albajar 91B
	Albajar 91C
	Albajar 91D
	Alitti 91
	Alitti 91B
	Alitti 91C
	Alitti 91D
	Alitti 91E
	Alitti 91F
	Alitti 91G
	Alitti 91H
	Alitti 91I
	Alitti 91J
	Bethke 91
	Felcini 91
	Joyce 91
	Lipa 91
	Plothowbesch 91
	Rossi 91
	Unal 91
	Akesson 90B
	Akesson 90C

$\bar{p}\,p$

	Albajar 90
	Albajar 90C
	Albajar 90D
	Albajar 90E
	Albajar 90F
	Albajar 90G
	Albajar 90H
	Alitti 90
	Alitti 90B
	Alitti 90C
	Alitti 90D
	Alitti 90E
	Binkley 90
	Contreras 90
	Denegri 90
	Dibon 90
	Ellis 90
	Fayard 90
	Flaugher 90
	Fransson 90
	Frisch 90
	Geer 90
	Kroha 90
	Kurz 90
	Liss 90
	Nikitas 90
	Pare 90
	Scarha 90
	Taylor 90
	Tuominiemi 90
	Unal 90
	Abe 89L
	Abe 89M
	Albajar 89
	Albajar 89B
	Albajar 89C
	Alitti 89
	Barbarogalti 89
	Botner 89
	Buschbeck 89
	Felcini 89
	Franzini 89
	Geichgimbel 89
	Golutvin 89
	Jenni 89
	Meier 89
	Pauss 89
	Rimondi 89
	Stubenrauch 89
	Tannenbaum 89
	Abe 88C
	Albajar 88B
	Albajar 88C
	Albajar 88D
	Albajar 88E
	Albajar 88F
	Albajar 88G
	Albajar 88H
	Albrow 88
	Ansari 88
	Ansari 88B
	Bonino 88
	Dowell 88
	Gan 88
	Loverre 88
	Mandelli 88
	Plothowbesch 88
	Ruhlmann 88
	Salvini 88
	Sphicas 88
	Tao 88
(640)	Schmitz 91
(790)	Albajar 89
(900)	Albajar 90B
	Albajar 89
	Ansorge 89
	Ansorge 89B
	Ansorge 89C
	Geichgimbel 89
	Jenni 89
	Asman 88
	Eckart 88
	Salvini 88
	Tao 88

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

$\bar{p}\,p$

(1000)	Lindsey 91
	Nodulman 89
	Paoletti 89
(1020)	Amos 92
(1800)	Abe 92
	Abe 92B
	Abe 92C
	Abe 92D
	Abe 92E
	Abe 92F
	Abe 92G
	Abe 92H
	Abe 92I
	Abe 92J
	Abe 92K
	Alexopoulos 92
	Amos 92B
	Barbarogalti 92
	Behrends 92
	Boswell 92
	Flaugher 92
	Flaugher 92B
	Fuess 92
	Gauthier 92
	Gold 92
	Grassmann 92
	Harris 92
	Harris 92B
	Huffman 92
	Incagli 92
	Keeble 92
	Keeble 92B
	Leone 92
	Lipton 92
	Madaras 92
	Maeshima 92
	Markeloff 92
	Moulding 92
	Papadimitrio 92
	Pumplin 92
	Rimondi 92
	Rimondi 92B
	Rodrigo 92
	Sinervo 92
	Vejcik 92
	Yeh 92
	Abe 91
	Abe 91B
	Abe 91C
	Abe 91D
	Abe 91E
	Abe 91F
	Abe 91G
	Abe 91H
	Abe 91I
	Abe 91J
	Abe 91K
	Abe 91L
	Abe 91M
	Abe 91N
	Abe 91O
	Amos 91
	Amos 91B
	Barbarogalti 91
	Bethke 91
	Buckleygeer 91
	Campagnari 91
	Contreras 91
	Flauger 91
	Fuess 91
	Giannetti 91
	Gold 91
	Harris 91
	Kuhlmann 91
	Laasanen 91
	Leone 91
	Lindsey 91
	Liss 91
	Odyniec 91B
	Plothowbesch 91
	Plunkett 91
	Rubinstein 91
	Sansoni 91
	Shukla 91

$\bar{p}\,p$

	Shukla 91B
	Sliwa 91
	Song 91
	Wainer 91
	Wainer 91B
	Wenzel 91
	White 91
	Winer 91B
	Winer 91C
	Abe 90B
	Abe 90G
	Abe 90I
	Abe 90K
	Abe 90L
	Alexopoulos 90B
	Amos 90
	Amos 90B
	Barbarogalti 90
	Beretvas 90
	Bertani 90
	Binkley 90
	Contreras 90
	Dellorso 90
	Dellorso 90B
	Fayard 90
	Flaugher 90
	Frisch 90
	Geer 90
	Giannetti 90
	Gladney 90
	Gonzalezgarc 90
	Harris 90
	Hauser 90
	Hessing 90
	Leone 90
	Liss 90
	Price 90
	Rubinstein 90
	Scarha 90
	Sliwa 90
	Tuominiemi 90
	Turkot 90
	Watts 90
	Yeh 90
	Yun 90
	Abe 89
	Abe 89B
	Abe 89C
	Abe 89D
	Abe 89G
	Abe 89H
	Abe 89L
	Abe 89M
	Abe 89N
	Abe 89O
	Abe 89Q
	Abe 89R
	Abe 89S
	Abe 89T
	Amos 89
	Banerjee 89
	Barbarogalti 89
	Blair 89
	Freeman 89
	Geer 89
	Hubbard 89B
	Jenni 89
	Kamon 89
	Kuhlmann 89
	Nodulman 89
	Paoletti 89
	Pauss 89
	Plunkett 89
	Rimondi 89
	Sinervo 89
	Skarha 89
	Smith 89
	Tannenbaum 89
	Tonelli 89
	Wagner 89
	Abe 88C
	Albrow 88
	Alexopoulos 88B
	Amos 88

$\bar{p}\,p$

	Tonelli 88
	Turkot 88
(2000)	Gobbi 92
?	Buenerd 92
	Burchell 92
	Pauss 89
	Bertini 88B
	Sedlak 88

$\bar{p}\,n$

0 (1.878)	Gaspero 92
	Gaspero 92B
	Amsler 91
	Gastaldi 91
	Chiba 90
0.45 – 0.97 (1.928 – 2.073)	
	Sedlak 88
4.33 – 9.2 (3.176 – 4.375)	
	Sedlak 88
5.6 (3.526)	Sedlak 88
8.9 (4.311)	Shoemaker 88
9.1 (4.354)	Sedlak 88
9.2 (4.375)	Sedlak 88
?	Burchell 92
	Gaspero 92B

$\bar{p}$ nucleus

0	Batusov 90
0 – 4	Guaraldo 89
	Tosello 89
0.3	Guaraldo 89
0.5	Guaraldo 89
4 – 400	Panagiotou 89
40	Boos 88
100	Walker 91
185	Yokosawa 92
	Yokosawa 90B
	Akchurin 89
	Nurushev 89
?	Bando 90

$\bar{p}$ deuteron

0 (2.814)	Adamo 92B
	Gaspero 92
	Peters 92
	Chiba 91B
	Gastaldi 91
	Chiba 90
	Riedlberger 89
	Angelopoulos 88B
	Baker 88
0 – 0.65 (2.814 – 2.946)	
	Liu 88
0 – 2.9 (2.814 – 3.979)	
	Tosello 89
< 0.1 (< 2.817)	
	Adamo 92
0.2 (2.828)	Armstrong 89H
0.2 – 0.6 (2.828 – 2.929)	
	Sedlak 88
0.5708 (2.919)	Guaraldo 89
1 – 3 (3.089 – 4.024)	
	Guaraldo 89B
1.6 – 2 (3.36 – 3.562)	
	Guaraldo 89B
2.359 – 2.784 (3.731 – 3.927)	
	Guaraldo 89
8.9 (6.162)	Shoemaker 88
40 (12.43)	Apokin 88C
?	Sedlak 88

$\bar{p}\,^{3}$He

0 (3.733)	Zenoni 92
	Balestra 91B
	Bendiscioli 90
	Balestra 89D
0.105 (3.737)	Batusov 90D
0.1928 (3.747)	Balestra 88

$\bar{p}\,^{4}$He

0 (4.664)	Zenoni 92B
	Balestra 91B
0.04 – 0.05 (4.665 – 4.665)	
	Balestra 89B

$\bar{p}\,^{4}$He

0.18 (4.678)	Sedlak 88
0.2 – 0.6 (4.681 – 4.802)	
	Sedlak 88
0.6 (4.802)	Zenoni 92
	Balestra 91
	Balestra 90
0.6077 (4.806)	Batusov 90B
	Batusov 89C
	Batusov 88
	Batusov 88B

$\bar{p}$ He

0.519 (4.773)	Iwasaki 91

$\bar{p}$ Li

40 (23.66)	Boos 88

$\bar{p}\,^{7}$Li

0.18 (7.473)	Sedlak 88
300 (62.89)	Antoniazzi 92B

$\bar{p}$ Be

0.7 (9.53)	Kuzichev 92B
0.7 – 2.5 (9.53 – 10.78)	
	Kuzichev 92
0.95 (9.684)	Kuzichev 92B
1.26 – 2.5 (9.886 – 10.78)	
	Kuzichev 89
40 (27.26)	Antipov 92
	Antipov 90C
	Antipov 87
125 (46.58)	Tzamarias 90

$\bar{p}\,^{9}$Be

0.18 (9.337)	Sedlak 88
1.76 (10.23)	Kuzichev 88

$\bar{p}$ C

0 (12.13)	Batusov 92
	Minor 92
0.2 (12.15)	Armstrong 89H
0.7 (12.34)	Kuzichev 92B
0.7 – 2.5 (12.34 – 13.63)	
	Kuzichev 92
0.8 (12.3)	Martin 88
0.95 (12.49)	Kuzichev 92B
1.1 (12.59)	Martin 88
1.26 – 2.5 (12.6 – 13.63)	
	Kuzichev 89
40 (31.96)	Boos 88
200 (67.83)	Yokosawa 90

$\bar{p}\,^{12}$C

0 (12.12)	Hofmann 90
	Markiel 88
0.046 (12.12)	Sedlak 88
0.18 (12.13)	Sedlak 88
0.2 – 0.6 (12.14 – 12.28)	
	Sedlak 88
0.3 – 0.3049 (12.16 – 12.16)	
	Yavin 89
0.6 (12.28)	Guaraldo 89B

$\bar{p}$ Nit

0 (13.99)	Riedlberger 89

$\bar{p}$ Ne

0 (19.73)	Balestra 89C
0.193 (19.75)	Guaraldo 89
	Sedlak 88
0.306 (19.77)	Guaraldo 89
	Sedlak 88
0.607 (19.8)	Balestra 89C
	Tosello 89
0.608 (19.8)	Guaraldo 89
	Sedlak 88
0.6084 (19.8)	Guaraldo 89

$\bar{p}\,^{20}$Ne

0 (19.57)	Balestra 91B
0.18 (19.58)	Sedlak 88

$\bar{p}$ ^{20}Ne

0.2 – 0.6 (19.59 – 19.73) Sedlak 88
0.6 (19.73) Balestra 90B
0.607 (19.74) Balestra 89, Guaraldo 89B
0.608 (19.74) Guaraldo 89B

$\bar{p}$ Al

0.7 (26.29) Kuzichev 92B
0.7 – 2.5 (26.29 – 27.69) Kuzichev 92
0.95 (26.45) Kuzichev 92B
1.26 – 2.5 (26.67 – 27.69) Kuzichev 89
40 (51.42) Antipov 92, Antipov 90C

$\bar{p}$ ^{27}Al

0.18 (26.1) Sedlak 88
0.2 – 0.6 (26.11 – 26.26) Sedlak 88

$\bar{p}$ S

0 (30.8) Batusov 92
40 (57.29) Boos 88

$\bar{p}$ Ar

200 (127.6) Derado 88

$\bar{p}$ ^{40}Ca

0 (38.1) Hofmann 90, Markiel 88
0.18 (38.22) Sedlak 88
0.2 – 0.6 (38.22 – 38.37) Sedlak 88

$\bar{p}$ ^{54}Fe

0.18 (51.26) Sedlak 88

$\bar{p}$ Fe

0.7 (53.19) Kuzichev 92B
0.7 – 2.5 (53.19 – 54.64) Kuzichev 92
0.95 (53.35) Kuzichev 92B
1.26 – 2.5 (53.58 – 54.64) Kuzichev 89

$\bar{p}$ ^{63}Cu

0 (59.62) Hofmann 90, Markiel 88
0.18 (59.64) Sedlak 88
0.2 – 0.6 (59.64 – 59.79) Sedlak 88

$\bar{p}$ Cu

0 (60.14) Jastrzebski 93
0.7 (60.36) Kuzichev 92B
0.7 – 2.5 (60.36 – 61.82) Kuzichev 92
0.95 (60.52) Kuzichev 92B
1.26 – 2.5 (60.75 – 61.82) Kuzichev 89
40 (90.79) Antipov 92, Antipov 90C, Boos 88
125 (135.3) Tzamarias 90

$\bar{p}$ ^{92}Mo

0 Hofmann 90, Markiel 88

$\bar{p}$ Mo

0 (90.31) Guaraldo 89

$\bar{p}$ ^{98}Mo

0 (92.24) Hofmann 90, Markiel 88

$\bar{p}$ Cd

0.7 (105.9) Kuzichev 92B
0.7 – 2.5 (105.9 – 107.3) Kuzichev 92

$\bar{p}$ Cd

0.95 (106) Kuzichev 92B
1.26 – 2.5 (106.3 – 107.3) Kuzichev 89

$\bar{p}$ ^{112}Cd

1.76 (106.3) Kuzichev 88

$\bar{p}$ ^{115}In

0.18 (108.1) Sedlak 88

$\bar{p}$ Xe

0 (123.2) Andryakov 92, Dolgolenko 92, Matveev 92, Andryakov 90, Barmin 90D
0 – 0.9 (123.2 – 123.6) Andryakov 92, Dolgolenko 92, Andryakov 90
0.4 – 0.9 (123.3 – 123.6) Andryakov 92, Dolgolenko 92, Matveev 92, Andryakov 90, Barmin 90D
1.05 (123.7) Guaraldo 89
200 (252.8) Derado 90B, Derado 88

$\bar{p}$ Ta

4 (172.6) Tosello 89, Miyano 88B
6.066 (174.6) Guaraldo 89

$\bar{p}$ Wt

125 (268.6) Freudenreich 90, Tzamarias 90, Anassontzis 87
150 (284.1) Freudenreich 90

$\bar{p}$ Pt

150 (295.9) Freudenreich 90

$\bar{p}$ ^{197}Au

0.18 (185.3) Sedlak 88

$\bar{p}$ Pb

0.7 (194.2) Kuzichev 92B
0.7 – 2.5 (194.2 – 195.7) Kuzichev 92
0.95 (194.3) Kuzichev 92B
1.26 – 2.5 (194.6 – 195.7) Kuzichev 89
40 (229.6) Antipov 92, Antipov 90C, Boos 88

$\bar{p}$ ^{208}Pb

0.18 (194.7) Sedlak 88

$\bar{p}$ ^{209}Bi

0.1 (195.6) Campagnolle 89

$\bar{p}$ ^{238}U

0 (222.6) Hofmann 92, Hofmann 90, Markiel 88
0.1 (222.6) Campagnolle 89
0.105 (222.6) Armstrong 92B

$\bar{p}$ U

0 (222.7) Minor 92, Guaraldo 89B, Angelopoulos 88
0.2 (222.7) Armstrong 89H
0.607 (222.8) Guaraldo 89

Λ Cu

300 – 800 (197.5 – 313.4) Diehl 91

Λ Cu

Yokosawa 91

Σ^+ γ^*

375 Chen 92B

Σ^0 Cu

300 – 800 (197.5 – 313.4) Diehl 91, Yokosawa 91

Σ^- e^-

360 (1.342) Buenerd 92

Σ^- p

360 (26.04) Buenerd 92

Σ^- Be

135 (48.36) Klein 89C, Augustin 88C

Σ^- Wt

0 (172.5) Gall 88
0.1728 (172.5) Hertzog 88

Σ^- Pb

0 (194.2) Gall 88
0.1728 (194.2) Hertzog 88

Ξ^- p

135 (15.9) Buenerd 92
360 (26.04) Buenerd 92

Ξ^- nucleus

0 May 89B
? Aoki 91, Aoki 91D, Aoki 91E

Ξ^- Be

116 (44.94) Schneider 90

Ξ^- ^{12}C

0 (12.5) May 89B

Ω^- p

360 (26.06) Buenerd 92

nucleus p

? Webber 90

nucleus nucleus

1 – 3200 Bartke 89
< 1.6 Pokotilovsky 93
2 – 3200 Bartke 89
4.2 – 50.4 Bartke 89, Angelov 88
5 – 3200 Bartke 89
12 – 3200 Bartke 89
16.8 – 3200 Bartke 89
36 – 3200 Bartke 89
40 – 3200 Bartke 89
48 – 64 Agakishiev 89
200 – 3200 Bartke 89
232 – 6400 Bartke 89
960 – 6400 Bartke 89
1000 – 10^5 Kawamura 89
10^4 – 10^7 Dasgupta 90
$5 \cdot 10^4$ – 10^7 Ahlen 92
10^6 Avakyan 91D
? Schmidt 92B

nucleus He

? Webber 90

nucleus C

? Webber 90

nucleus Ta

0.59 – 2.3 Villari 91

fragb nucleus

4.5 Ahmad 89C, Khan 89

fragb nucleus

4.5 – 45 Ahmad 91C

deuteron p

0.5172 (2.837) Motobayashi 88
0.8889 (2.87) Motobayashi 89
1 (2.896) Viryasov 89
1.112 – 1.891 (2.914 – 3.065) Mcnaughton 92
1.198 (2.928) Kox 91
1.28 (2.944) Boudard 88
1.7 – 2.28 (3.025 – 3.153) Kawai 88
1.829 (3.052) Yokosawa 90B, Delesquen 88
1.89 (3.067) Yokosawa 90B, Delesquen 88
2 – 3.8 (3.089 – 3.514) Tsuboyama 88
2.038 – 2.134 (3.098 – 3.119) Mayer 89
2.38 – 12 (3.176 – 5.214) Avdejchikov 88
2.5 (3.204) Punjabi 89
3 (3.322) Ableev 88
3.07 (3.339) Tatishcheff 92
3.146 (3.357) Berger 88C
3.149 (3.358) Berger 88C
3.155 (3.359) Berger 88C
3.165 (3.362) Berger 88C
3.229 (3.377) Berger 88C
3.3 (3.394) Glagolev 91
3.33 (3.402) Glagolev 90, Glagolev 89B, Glagolev 89C, Balgansuren 88, Glagolev 88, Shimansky 88, Zielinsky 88
3.392 (3.416) Gulkanyan 89
3.505 (3.444) Cheung 92, Tatishcheff 92, Punjabi 89
3.77 (3.507) Plouin 92
9 (4.653) Azhgirey 91, Azhgirey 91B, Azhgirey 88

deuteron nucleus

3.392 Gulkanyan 89
5.779 Schnetzer 89
8.4 Grishin 88B
9 Bobodjanov 91

deuteron deuteron

0.0335 – 0.436 (3.751 – 3.776) Weller 88
1.5 – 4 (4.006 – 4.859) Kishida 89
2.31 (4.266) Goldzahl 91
2.38 (4.28) Avdejchikov 88
4.18 (4.922) Avdejchikov 88
9 (6.444) Azhgirey 91, Azhgirey 91B, Azhgirey 88
12.2 (7.303) Batyunya 88
(124) Tannenbaum 89, Fischer 88
(126) Akesson 89

deuteron ^{4}He

0.0571 – 0.1344 (5.602 – 5.605) Barit 91
0.2116 (5.6) Elsener 88
0.3485 – 0.4346 (5.623 – 5.635) Vuaridel 88

deuteron He

3.505 (6.86) Punjabi 89

deuteron ^{7}Li

8.9 (12.83) Averichev 89

deuteron Be

2.17 (11.06) Viryasov 91B

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

deuteron Be

3.392 (11.79)	Viryasov 92
3.4 (11.7)	Gulkanyan 91B
5.568 (13.14)	Viryasov 92

deuteron C

1 (13.28)	Viryasov 89
1.2 (13.36)	Beznogikh 91B
1.6 (13.56)	Beznogikh 91B
	Beznogikh 88
2 (13.79)	Kishida 92
	Beznogikh 91B
	Viryasov 90
2.17 (13.89)	Viryasov 91B
2.38 (14.02)	Avdejchikov 88
2.4 (14.03)	Kishida 92
	Beznogikh 91
3 (14.42)	Kishida 92
3.2 (14.55)	Beznogikh 91
3.392 (14.68)	Gulkanyan 92
	Viryasov 92
	Gulkanyan 91
	Gulkanyan 89
3.4 (14.68)	Gulkanyan 91B
3.505 (14.75)	Punjabi 89
3.953 (15.05)	Baldin 92
4 (15.08)	Kishida 92
	Beznogikh 91
	Budilov 90
4.2 (15.22)	Beznogikh 91B
	Baldin 90C
	Gulkanyan 88D
4.5 (15.42)	Baldin 92
4.6 (15.49)	Grigalashvil 88
5.198 (15.88)	Baldin 92
6.6 (16.7)	Viryasov 90
8.266 (17.84)	Viryasov 92
8.4 (17.92)	Backovic 92
	Backovic 92B
	Backovic 92C
	Simic 92
	Baatar 91
	Backovic 91
	Batskovich 91
	Beznogikh 91
	Didenko 91B
	Angelov 90
	Angelov 90B
	Baatar 90
	Simic 90
	Agakishiev 89B
	Angelov 88
	Baldin 88C
	Bekmirzaev 88
	Grigalashvil 88
	Gulkanyan 88
	Mekhtiev 88
	Pluta 88B
	Simic 88B
	Zielinsky 88
9 (18.29)	Afanasiev 91
	Azhgirey 88

deuteron ^{12}C

0.4981 (13.11)	Ieiri 89
8.982 (18.27)	Baldin 90B
	Kozma 89B
9 (18.28)	Azhgirey 91
	Azhgirey 91B
9.1 (18.34)	Ableev 91B
	Ableev 88

deuteron Al

2 (27.8)	Kishida 92
3 (28.51)	Kishida 92
4 (29.28)	Kishida 92
9 (33.13)	Afanasiev 91

deuteron Ti

3.505 (48.47)	Punjabi 89

deuteron ^{58}Ni

0.4981 (55.97)	Ieiri 89

deuteron Cu

9 (67.7)	Afanasiev 91
	Kozma 86

deuteron ^{93}Nb

8.982 (95.69)	Damdinsuren 89B

deuteron Ag

8.982 (109.3)	Damdinsuren 89B

deuteron Sn

3.505 (114.5)	Punjabi 89

deuteron ^{159}Tb

8.982 (157)	Damdinsuren 89B

deuteron Ta

4.2 (173.1)	Gulkanyan 88D
4.6 (173.5)	Grigalashvil 88
8.4 (176)	Backovic 92B
	Backovic 92C
	Agakishiev 91
	Backovic 91
	Armutlijsky 89
	Bekmirzaev 88
	Gulkanyan 88C

deuteron Au

4 (187.8)	Budilov 90

deuteron ^{197}Au

8.982 (193.3)	Damdinsuren 89B

deuteron Pb

3.392 (196.9)	Daniel 92
4.5 (197.8)	Afanasiev 90B
5.779 (199)	Schnetzer 89
8.9 (201.9)	Averichev 89
8.982 (201)	Damdinsuren 89B
9 (202)	Afanasiev 91
	Voronko 88

deuteron deuteron

12.2 (7.303)	Coc 92
	Batyunya 87
	Batyunya 87G

deuteron C

12.2 (20.12)	Coc 92

deuteron Ta

12.2 (180.5)	Andreev 90B

deuteron Pb

12.2 (204)	Coc 92

^{3}H p

5 (4.409)	Abdullin 90B
	Abdullin 90C
	Abdullin 90D
	Abdullin 89
	Abdullin 89B
	Abdullin 89C
	Abdullin 89D
	Abdullin 89F
	Abdullin 89G
	Abdullin 88B
9 (5.136)	Avramenko 92B
	Avramenko 91

^{3}H deuteron

0.4106 (4.682)	Blagus 91
0.4468 (4.684)	Blagus 91

^{3}H C

9 (18.54)	Avramenko 91

^{3}H Ne

9 (26.74)	Abdurakhimov 91

^{3}H Mg

9 (30.77)	Avramenko 92B
	Abdurakhimov 91

^{3}H Al

9 (33.36)	Avramenko 91

^{3}H Cu

9 (68.03)	Avramenko 92B
	Avramenko 91

^{3}H Pb

9 (202.2)	Avramenko 92B
	Avramenko 91

^{3}He p

2.5 (3.966)	Blinov 90B
	Blinov 88
4.8 (4.372)	Zielinsky 88
5 (4.409)	Abdullin 90
	Abdullin 90C
	Blinov 90B
	Abdullin 89D
	Abdullin 89E
	Abdullin 89F
	Abdullin 89H
	Abdullin 88
	Abdullin 88C
	Abdullin 88D
	Blinov 88
6.8 (4.742)	Ableev 91
13.5 (5.879)	Glagolev 90B
	Glagolev 88B
40.8 (9.243)	Glagolev 90D

^{3}He deuteron

1.287 (4.782)	Pinston 92

^{3}He C

1.287 (14.21)	Pinston 92
6.8 (17.25)	Ableev 91
13.5 (21.01)	Avramenko 92

^{3}He ^{12}C

4.4 (15.79)	Ableev 91D
	Ableev 87C
6.81 (17.25)	Ableev 91D
	Ableev 87C
10.79 (19.55)	Ableev 91D
	Ableev 87C
18.3 (23.38)	Ableev 91D
	Ableev 87C

^{3}He ^{26}Mg

2.417 (27.81)	Brockstedt 91
3.896 (28.75)	Brockstedt 91

^{3}He ^{40}Ca

2.417 (40.88)	Brockstedt 91
3.896 (41.87)	Brockstedt 91

^{3}He ^{48}Ca

2.417 (48.35)	Brockstedt 91
3.896 (49.35)	Brockstedt 91

^{3}He ^{54}Fe

2.417 (53.94)	Brockstedt 91
3.896 (54.96)	Brockstedt 91

^{3}He Cu

1.287 (62.26)	Pinston 92

^{3}He ^{90}Zr

2.417 (87.4)	Brockstedt 91
3.896 (88.54)	Brockstedt 91

^{3}He Ag

1.707 – 5.752 (103.7 – 106.7)	
	Yennello 90

^{3}He Au

1.287 (186.5)	Pinston 92

^{3}He ^{208}Pb

2.417 (197.4)	Brockstedt 91
3.896 (198.5)	Brockstedt 91

^{4}He p

2.7 (4.837)	Abdullin 92
8.6 (5.688)	Braun 89
	Sobchak 88
	Zelinski 88
	Zielinsky 88
13.5 (6.407)	Braun 89
	Sobchak 88
	Zelinski 88
34.4 (8.927)	Glagolev 90D
54.4 (10.82)	Glagolev 90D

^{4}He nucleus

4.5	Khan 89
16.8	Grishin 88B
18	Bobodjanov 91
	Abdurakhimov 89C
	Avramenko 88
49.46	Aggarwal 90
	Shukla 89
523.7 – 683.7	Jain 92E
	Jain 91
	Jain 91B
	Jain 91C
803.7	Baroni 90
$3.3 \cdot 10^5$ – $7.2 \cdot 10^5$	
	Apanasenko 92

^{4}He ^{4}He

(248)	Tannenbaum 89
	Fischer 88
(252)	Akesson 89
	Akesson 88D

^{4}He Li

18 (17.13)	Abdurakhimov 88

^{4}He Be

11.12 (16.77)	Viryasov 92

^{4}He C

4.2 (16.27)	Angelov 88
	Gulkanyan 88D
5.838 (17.15)	Lhote 89
8 (18.34)	Budilov 90
9.2 (19)	Grigalashvil 88
13.2 (21.12)	Viryasov 90
16.51 (22.76)	Viryasov 92
16.8 (22.89)	Backovic 92
	Backovic 92B
	Baatar 91
	Batskovich 91
	Simic 90
	Agakishiev 89B
	Angelov 88
	Baldin 88C
	Grigalashvil 88
	Mekhtiev 88
	Pluta 88B
	Simic 88B
	Zielinsky 88
18 (23.46)	Avramenko 92
	Abraamyan 89
	Abdurakhimov 88

^{4}He ^{12}C

0.4324 (14.92)	Dubar 89
2.65 (15.53)	Ableev 89
4.2 (16.26)	Angelov 91
4.52 (16.43)	Ableev 89
17.94 (23.42)	Kozma 89B

^{4}He Ne

18 (32.52)	Abdurakhimov 88

^{4}He ^{27}Al

0.4324 (28.8)	Dubar 89

^{4}He Fe

$8 \cdot 10^4$ – 10^5 (2886 – 3226)	
	Apanasenko 92

^{4}He Cu

5.838 (65.86)	Lhote 89

^{4}He Zr
0.4324 (88.72) Dubar 89

^{4}He Mo
0.4324 (93.12) Dubar 89

^{4}He ^{165}Ho
1.471 (157.7) Klotzengmann 89
2.907 (158.4) Klotzengmann 89
5.838 (160.5) Klotzengmann 89

^{4}He Ta
4.2 (174.1) Gulkanyan 88D
9.2 (178.2) Grigalashvil 88
16.8 (184) Backovic 92B

^{4}He ^{181}Ta
0.4324 (172.4) Dubar 89

^{4}He Au
3.373 – 16.82 (188.5 – 199) Avdejchikov 87B, Avdejchikov 87H
8 (192.1) Budilov 90

^{4}He ^{197}Au
0.4324 (188.1) Dubar 89
1.471 (188.3) Klotzengmann 89
2.907 (189) Klotzengmann 89
5.838 (191.2) Klotzengmann 89

^{4}He Pb
5.838 (199.9) Lhote 89
17.8 (210.4) Averichev 89
18 (210.6) Bobodjanov 91

^{4}He ^{208}Pb
11.96 (205.9) Grabez 88

^{4}He ^{232}Th
1.471 (220.1) Klotzengmann 89
2.907 (220.8) Klotzengmann 89
5.838 (222) Klotzengmann 89

He p
7 (5.447) Morsch 92

He nucleus
0 – 60 Sengupta 89
0 – 803.7 Singh 88B
18 Ahmad 91
803.7 Baroni 91
1000 – 10^5 Kawamura 89
$2 \cdot 10^5$ Wilczynska 90

He Li
18 (17.13) Chkhaidze 92

He C
16.8 (22.89) Backovic 92C, Simic 92, Backovic 91, Didenko 91B, Angelov 90, Angelov 90B, Baatar 90, Gulkanyan 88
17.9 (23.41) Ableev 91C
18 (23.46) Chkhaidze 92

He Al
17.9 (39.56) Ableev 91C

He Cu
17.9 (75.39) Ableev 91C

He Ta
16.8 (184) Backovic 92C, Agakishiev 91, Backovic 91

He Pb
6.76 (200.6) Daniel 92
17.9 (210.5) Ableev 91C

He Pb
18 (210.6) Voronko 88

^{6}He nucleus
8.758 Kobayashi 89C

^{6}He C
8.686 (19.69) Kobayashi 88

^{8}He Be
1.907 (15.97) Riisager 92

^{8}He C
11.58 (22.11) Kobayashi 88

^{8}He Ni
1.907 (62.35) Riisager 92

^{8}He Au
1.907 (191.2) Riisager 92

Li nucleus
1206 Baroni 91, Baroni 90

^{6}Li p
8.39 (7.145) P[illegible]jabi 92

^{6}Li C
8.686 (19.69) Tanihata 88
27 (27.81) Avramenko 92

^{6}Li Pb
10.15 (204.3) Daniel 92

^{7}Li p
21 (9.201) Avramenko 92B, Avramenko 91C

^{7}Li C
21 (25.68) Avramenko 92B, Avramenko 91C

^{7}Li Mg
21 (39.38) Avramenko 92B

^{7}Li Al
21 (42.18) Avramenko 91C

^{7}Li Cu
21 (78.42) Avramenko 91C

^{7}Li Pb
21 (213) Avramenko 92B, Avramenko 91C

^{9}Li nucleus
13.14 Kobayashi 89C

^{11}Li nucleus
16.06 Kobayashi 89C

^{11}Li Be
2.621 (18.79) Riisager 92
15.93 (22.21) Kobayashi 89

^{11}Li C
15.93 (25.57) Kobayashi 89, Kobayashi 88

^{11}Li Al
15.93 (41.09) Kobayashi 89

^{11}Li Ni
2.621 (65.21) Riisager 92

^{11}Li Cu
15.93 (76.49) Kobayashi 89

^{11}Li Au
2.621 (194) Riisager 92

^{11}Li Pb
15.93 (211.3) Kobayashi 89, Kobayashi 88

Be nucleus
1808 Baroni 91, Baroni 90

^{11}Be nucleus
16.06 Kobayashi 89C

^{11}Be Be
15.93 (22.21) Tanihata 88

^{11}Be C
2.752 (21.62) Fukuda 91
15.93 (25.57) Tanihata 88

^{11}Be Al
2.752 (35.64) Fukuda 91
15.93 (41.09) Tanihata 88

^{12}Be Be
17.37 (23.29) Tanihata 88

^{12}Be C
17.37 (26.69) Tanihata 88

^{12}Be Al
17.37 (42.37) Tanihata 88

^{14}Be Be
3.336 (21.5) Riisager 92

^{14}Be C
20.27 (28.89) Tanihata 88

^{14}Be Ni
3.336 (68.07) Riisager 92

^{14}Be Au
3.336 (196.9) Riisager 92

^{8}Bor Be
11.58 (18.9) Tanihata 88

^{8}Bor C
11.58 (22.11) Tanihata 88

^{8}Bor Al
11.58 (37.14) Tanihata 88

Bor nucleus
2010 Baroni 91, Baroni 90

^{11}Bor p
9.292 (11.48) Webber 90B
10.51 (11.55) Webber 90B
10.74 (11.56) Webber 90B
12.83 (11.69) Webber 90B

^{11}Bor He
12.83 (15.53) Webber 90B

^{11}Bor C
9.292 (23.23) Webber 90B
10.51 (23.64) Webber 90B
10.74 (23.71) Webber 90B
12.83 (24.44) Webber 90B
16.06 (25.62) Kobayashi 89B

^{12}Bor Be
17.38 (23.29) Tanihata 88

^{12}Bor C
17.38 (26.6) Tanihata 88

^{12}Bor Al
17.38 (42.37) Tanihata 88

^{13}Bor Be
18.82 (24.35) Tanihata 88

^{13}Bor C
18.82 (27.7) Tanihata 88

^{13}Bor Al
18.82 (43.63) Tanihata 88

^{14}Bor Be
19.3 (25.1) Tanihata 88

^{14}Bor C
19.3 (28.55) Tanihata 88

^{14}Bor Al
19.3 (44.39) Tanihata 88

^{15}Bor Be
20.76 (26.17) Tanihata 88

^{15}Bor C
20.76 (29.65) Tanihata 88

^{15}Bor Al
20.76 (45.64) Tanihata 88

C p
9.597 – 27.89 (12.3 – 13.51) Webber 90
9.67 – 33.36 (12.4 – 13.86) Webber 90C
14.59 (12.67) Webber 90C
15.98 (12.75) Webber 90B
19.14 (12.95) Webber 90B
20.53 (13.04) Webber 90B
27.89 (13.51) Webber 90B
50.4 (14.93) Bekmirzaev 88C

C nucleus
9.597 – 27.89 Webber 90
23.01 Antonchik 90B
53.96 Okonov 88
54 Ahmad 92, Tauseef 92
2411 Baroni 91, Baroni 90

C He
13.9 (16.51) Webber 90
19.14 (17.45) Webber 90
27.89 (19.06) Webber 90, Webber 90B

C C
4.2 (22.75) Angelov 88, Gulkanyan 88D, Lyubimov 88
4.5 (22.81) Iovchev 90
7.886 (23.59) Baldin 92
8.725 (23.83) Baldin 92
9.597 – 27.89 (24.09 – 30.38) Webber 90
9.747 (24.13) Baldin 92
14.59 (25.73) Webber 90C
15.98 (26.21) Webber 90B
19.14 (27.32) Webber 90B
20.53 (27.81) Webber 90B
27.6 (30.28) Grigalashvil 88
27.89 (30.38) Webber 90B
34.63 (32.63) Carroll 88B
50.4 (37.49) Angelov 92, Angelov 92B, Backovic 92, Backovic 92B, Backovic 92C, Simic 92, Backovic 91, Batskovich 91, Didenko 91B, Vinitsky 91, Angelov 90, Angelov 90B, Baatar 90

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

C C

	Baldin 90C
	Grishin 90
	Simic 90
	Agakishiev 89
	Agakishiev 89B
	Agakishiev 89C
	Panagiotou 89
	Angelov 88
	Baldin 88C
	Bekmirzaev 88C
	Grigalashvil 88
	Gulkanyan 88
	Gulkanyan 88B
	Gulkanyan 88C
	Kanarek 88
	Mekhtiev 88
	Pluta 88B
	Zielinsky 88
	Iovchev 87
54 (38.53)	Chkhaidze 92
	Panagiotou 89

C Ne

4.5 (30.52)	Iovchev 90
54 (50.5)	Chkhaidze 92
	Gelovani 92

C Cu

54 (100.8)	Chkhaidze 92
	Gelovani 92
	Sarkisyan 92
	Sarkisyan 92B
	Sarkisyan 91
54.04 (100.8)	Brandt 92

C Ta

4.2 (180.5)	Gulkanyan 88D
27.6 (196.4)	Grigalashvil 88
50.4 (214.3)	Angelov 92
	Backovic 92
	Backovic 92B
	Backovic 92C
	Agakishiev 91
	Backovic 91
	Batskovich 91
	Armutlijsky 89
	Panagiotou 89
	Batskovich 88
	Gulkanyan 88B
	Gulkanyan 88C
	Mekhtiev 88
	Iovchev 87
53.84 (216)	Kozma 90D

C Pb

20.31 (215.2)	Daniel 92
41.73 (232.5)	Adyasevich 89
54 (242.2)	Chkhaidze 92

^{12}C p

4.5 (12.19)	Khan 89
51.99 (15.02)	Bogdanov 88
54 (15.14)	Khan 88

^{12}C nucleus

4.077	Batkin 91
4.077 – 4.913	Batkin 91
4.5	Ghosh 90
	Ahmad 89C
	Ghosh 89C
	Khan 89
4.544	Batkin 91
4.853	Batkin 91
39.63 – 64.21	Abdurazakova 88
50.4	Grishin 88B
	Shakhbazyan 88
53.83	Kozma 90C
54	Ahmad 91
	Ahmad 91B
	Bobodjanov 91
	Babaev 90
	Ghosh 90B
	Ahmad 89B
	Ghosh 89D

^{12}C nucleus

	Ghosh 89F
	Elnadi 88
	Khan 88
	Vokal 88
64.21	Ahmad 89B

^{12}C C

3.093 (22.58)	Westenius 90
13.05 – 17.52 (25.19 – 26.74)	Avramenko 90
50.4 (37.49)	Baatar 91
	Grigalashvil 88
	Simic 88B
53.83 (38.48)	Kurepin 88
54 (38.52)	Anikina 89

^{12}C ^{12}C

0.8196 (22.38)	Dubar 89
1.14 (22.39)	Erazmus 90
1.365 (22.4)	Dubar 89
2.124 (22.46)	Dubar 89
2.607 (22.51)	Dubar 89
4.2 (22.74)	Angelov 91
53.83 (38.46)	Baldin 90B
	Kozma 89B
54 (38.51)	Abraamyan 91
	Abraamyan 90

^{12}C Ne

54 (50.4)	Taran 90
	Abdurakhimov 88

^{12}C Al

3.093 (36.6)	Westenius 90
13.05 – 17.52 (40.25 – 42.44)	Avramenko 90

^{12}C ^{27}Al

0.8196 (36.35)	Dubar 89
1.365 (36.39)	Dubar 89
2.124 (36.47)	Dubar 89
2.607 (36.54)	Dubar 89

^{12}C ^{28}Si

171.6 (98.88)	Winger 90

^{12}C ^{55}Mn

53.83 (38.46)	Kozma 88B
53.83 (91.52)	Kozma 90B
	Kozma 88B

^{12}C ^{59}Co

53.83 (38.46)	Kozma 88B
53.83 (95.86)	Kozma 90B
	Kozma 88B

^{12}C Ni

53.83 (38.46)	Kozma 88B
53.83 (95.55)	Kozma 88B

^{12}C Cu

53.83 (38.46)	Kozma 88B
3.093 (70.73)	Westenius 90
13.05 – 17.52 (75.26 – 78.04)	Avramenko 90
53.83 (100.7)	Baldin 90B
	Baldin 88
	Kozma 88B
53.95 (100.8)	Abdurakhimov 89
54 (100.8)	Taran 90
	Abdurakhimov 88

^{12}C ^{64}Cu

53.83 (101.2)	Kozma 90B

^{12}C ^{89}Yt

0.8196 (94.11)	Dubar 89
1.365 (94.15)	Dubar 89
2.124 (94.26)	Dubar 89
2.607 (94.34)	Dubar 89

^{12}C ^{108}A

53.83 (145)	Kozma 90B

^{12}C Ag

53.83 (145.8)	Kozma 90

^{12}C Sn

43.8 (149.5)	Kozma 91B

^{12}C Ta

53.83 (216)	Kozma 89

^{12}C ^{181}Ta

53.83 (217)	Kozma 90B
	Damdinsuren 88

^{12}C Au

3.093 (195)	Westenius 90

^{12}C ^{197}Au

53.83 (233.2)	Kozma 90
	Kozma 90B
	Damdinsuren 88B
	Kozma 88

^{12}C Pb

41.73 (232.5)	Adyasevich 88B
	Lebedev 88
53.83 (242.1)	Damdinsuren 89
	Kurepin 88
54 (242.2)	Bobodjanov 91
	Taran 90
	Krasnov 88

^{12}C ^{232}Th

53.83 (265.7)	Kozma 90B
	Kozma 89C

^{12}C ^{238}U

53.83 (271.4)	Kozma 89C

^{12}C U

53.83 (271.4)	Kozma 90B

^{13}C C

3.252 (23.5)	Fukuda 91

^{13}C ^{12}C

4.021 (23.5)	Braeunig 90

^{13}C Al

3.252 (37.53)	Fukuda 91

^{13}C ^{40}Ca

4.021 (49.86)	Braeunig 90

^{13}C ^{58}Ni

4.021 (66.66)	Braeunig 90

Nit p

14.12 (14.39)	Webber 90B
15.51 (14.46)	Webber 90
	Webber 90B
17.02 (14.54)	Webber 90C

Nit nucleus

15.51	Webber 90
2813	Baroni 91
	Baroni 90

Nit He

15.51 (18.31)	Webber 90
	Webber 90B

Nit C

14.12 (26.93)	Webber 90B
15.51 (27.37)	Webber 90
	Webber 90B
17.02 (27.84)	Webber 90C

^{14}Nit nucleus

3.608	Batkin 91
39.63 – 64.21	Abdurazakova 88
40.6	Babaev 90

^{14}Nit C

3.608 (24.45)	Kiss 89

^{14}Nit C

3.912 (24.49)	Suzuki 91
5.034 (24.66)	Suzuki 91
5.51 (24.74)	Suzuki 91
7.271 (25.09)	Suzuki 91

^{14}Nit Ni

3.608 (68.12)	Kiss 89

^{14}Nit Ag

20.43 (123)	Klotzengmann 89

^{14}Nit Ho

3.608 (167.1)	Kiss 89

^{14}Nit ^{197}Au

3.863 (197.9)	Pruneau 89
10.18 (200.6)	Klotzengmann 89

O p

10.28 – 44.47 (16.03 – 17.64)	Webber 90C
16.13 (16.25)	Webber 90
17.2 (16.2)	Webber 90B
19.27 (16.39)	Webber 90
19.45 (16.4)	Webber 90C
20.82 (16.46)	Webber 90
	Webber 90B
25.29 (16.68)	Webber 90
	Webber 90B
37.02 (17.26)	Webber 90
	Webber 90B

O nucleus

16.13	Webber 90
17.39	Webber 90C
19.27	Webber 90
20.82	Webber 90
25.29	Webber 90
30.67	Antonchik 90B
37.02	Webber 90
71.94	Okonov 88
960	Matis 90B
3200	Matis 90B
3215	Raha 91

O He

17.2 (20.14)	Webber 90B
19.27 (20.44)	Webber 90
37.02 (23)	Webber 90
	Webber 90B

O C

16.13 (28.96)	Webber 90
17.2 (29.27)	Webber 90B
19.27 (29.87)	Webber 90
19.45 (29.93)	Webber 90C
20.82 (30.34)	Webber 90
	Webber 90B
25.29 (31.69)	Webber 90
	Webber 90B
37.02 (35.22)	Webber 90
	Webber 90B
974.8 (148.9)	Ritter 88
3215 (268.9)	Ritter 88

O Ne

4.5 (34.06)	Iovchev 90

O Al

4.3 (40.42)	Julien 88
233.6 (112.3)	Abbott 92B

O Ar

232 (137.5)	Matis 90B

O Cu

233.6 (177.3)	Abbott 92B
960 (342.6)	Bachler 91B
974.8 (345.2)	Ritter 88
3200 (618.5)	Bachler 91
3215 (619)	Baglin 91E
	Ritter 88

O Ag

233.6 (239.5) Abbott 92B
960 (450.8) Bachler 91B
974.8 (454.1) Ritter 88
3215 (810.2) Ritter 88

O Wt

3215 (1063) Ritter 88

O Au

233.6 (346.1) Abbott 92B
960 (621.4) Bachler 91B
974.8 (625.8) Ritter 88
3200 (1099) Bachler 92
Bachler 91
Bachler 91B
3215 (1102) Ritter 88

O ^{197}Au

4.3 (199.8) Julien 88

O Pb

72 (256.6) Chkhaidze 92
Panagiotou 89

O U

3200 (1212) Peralta 91
Abreu 89
3215 (1215) Baglin 91D
Baglin 91E
Raha 91
Baldisseri 90

^{16}O p

3.1 (15.86) Botvina 91B
25.23 (16.67) Hirzebruch 92
46.16 (17.72) Bartke 89
49.51 (17.89) Hirzebruch 92
49.6 (17.89) Botvina 91
Semyarchuk 90
62.76 (18.55) Glagolev 90C
Glagolev 89
70.95 (18.95) Hirzebruch 92
230.4 (25.62) Hirzebruch 92
974.8 (45.3) Brechtmann 88B
3215 (79.09) Baroni 92
Brechtmann 88B

^{16}O nucleus

1.546 – 3215 Adamovich 91B
2.297 – 3215 Otterlund 91
3.476 Batkin 91
4.29 Batkin 91
6.823 Batkin 91
6.862 Batkin 91
7.088 – 3215 Otterlund 90
7.761 – 3200 Bartke 89
10.56 Barz 92
14.5 Tannenbaum 89
25.23 Hirzebruch 92
30.12 – 233.1 Stenlund 90
30.12 – 3200 Stenlund 90B
33.6 Ghosh 91
43.94 – 3200 London 89
44.47 Otterlund 88
46.16 Ghosh 92B
Adamovich 89F
Ghosh 89B
46.16 – 3215 Adamovich 90
Adamovich 89B
Adamovich 89D
49.51 Hirzebruch 92
70.95 Hirzebruch 92
72.59 Adamovich 92C
Adamovich 92D
72.59 – 3215 Otterlund 91
230 – 3200 Bartke 89
230.4 Hirzebruch 92
232 Remsberg 88
Tannenbaum 88
233.1 Adamovich 92B
Adamovich 91
Adamovich 91C
Buschbeck 91
Schmitz 91

^{16}O nucleus

Stenlund 91
Adamovich 90B
Adamovich 90C
Otterlund 90
Stenlund 90
Stenlund 90C
Stenlund 90D
248.1 Adamovich 92C
Adamovich 92D
Adamovich 89E
Adamovich 89F
Tannenbaum 89
Vongersdorff 89
Adamovich 88B
Adamovich 88C
Adamovich 88D
Barbier 88C
Otterlund 88
248.1 – 3215 Adamovich 89D
959.9 Adamovich 92B
Jain 92C
Adamovich 91
Adamovich 91C
Stenlund 91
Adamovich 90B
Adamovich 90C
Otterlund 90
Stenlund 90
Stenlund 90C
Stenlund 90D
974.8 Adamovich 92C
Adamovich 92D
Jain 92D
Jain 92E
Jain 91
Jain 91B
Sengupta 91
Jain 90
Sengupta 90B
Adamovich 89E
Buschbeck 89
Holynski 89B
Romano 89
Sengupta 89
Sengupta 89B
Singh 89
Tannenbaum 89
Vongersdorff 89
Adamovich 88B
Adamovich 88C
Adamovich 88D
Bamberger 88B
Barbier 88C
Brechtmann 88B
Otterlund 88
Sengupta 88
Singh 88
Ardito 87
3200 Adamovich 92B
Jain 92C
Adamovich 91
Adamovich 91C
Buschbeck 91
Schmitz 91
Stenlund 91
Adamovich 90B
Adamovich 90C
Otterlund 90
Stenlund 90
Stenlund 90C
Stenlund 90D
3215 Adamovich 93
Adamovich 92C
Adamovich 92D
Baroni 92
Jain 92D
Jain 92E
Kampert 92
Baroni 91
Jacob 91
Jain 91
Jain 91B
Jain 91C
Sengupta 91

^{16}O nucleus

Akesson 90
Baroni 90
Jain 90
Jain 90B
Sengupta 90
Sengupta 90B
Adamovich 89C
Adamovich 89E
Aoki 89
Buschbeck 89
Holynski 89
Holynski 89B
London 89
Romano 89
Sengupta 89B
Singh 89
Tannenbaum 89
Vongersdorff 89
Adamovich 88
Adamovich 88B
Adamovich 88C
Bamberger 88B
Barbier 88C
Brechtmann 88B
Otterlund 88
Ramello 88
Sengupta 88
Singh 88
Singh 88B
Stenlund 88
Tretyakova 88
Ardito 87

^{16}O He

974.8 (86.63) Pugh 88
3215 (155.6) Pugh 88

^{16}O C

25.23 (31.67) Hirzebruch 92
49.51 (38.78) Hirzebruch 92
70.95 (44.38) Hirzebruch 92
230.4 (74.26) Hirzebruch 92
232 (74.49) Remsberg 88
974.8 (148.9) Tannenbaum 89
Albrecht 88
Albrecht 88B
Brechtmann 88B
Franz 88B
Lohner 88
Lund 88
Otterlund 88B
Schmidt 88
Sorensen 88
Schmidt 87
3200 (268.2) Albrecht 92L
Albrecht 91H
Albrecht 91O
3215 (268.9) Odyniec 91B
Albrecht 89D
Tannenbaum 89
Albrecht 88
Albrecht 88B
Brechtmann 88B
Franz 88B
Heck 88
Kluberg 88
Lohner 88
Lund 88
Otterlund 88B
Schmidt 88
Sorensen 88
Schmidt 87

^{16}O Ne

72 (57.77) Abdurakhimov 88
974.8 (192.9) Pugh 88
3215 (348.4) Pugh 88

^{16}O Al

6.854 (40.96) Silk 88
49.51 (58.76) Hirzebruch 92
70.95 (67.07) Hirzebruch 92
230.4 (111.6) Hirzebruch 92
974.8 (223.3) Akesson 89B

^{16}O Al

Tannenbaum 89
Akesson 88
Brechtmann 88B
Corriveau 88
3200 (402.1) Bachler 91B
3215 (403.1) Kampert 92
Akesson 89B
Odyniec 89
Tannenbaum 89
Akesson 88
Barnes 88
Brechtmann 88B
Corriveau 88
Pugh 88

^{16}O ^{27}Al

0.946 (40.07) Dubar 89
6.862 (40.98) Barbera 90
Durand 90
6.89 (40.99) Moisan 92

^{16}O ^{40}Ca

6.862 (53.22) Rousselchoma 88

^{16}O Va

246.5 (160.9) Loveland 88

^{16}O ^{58}Ni

6.89 (70.11) Moisan 92

^{16}O Cu

14.5 (78.66) Tannenbaum 89
49.51 (99.23) Hirzebruch 92
70.95 (110.9) Hirzebruch 92
230.4 (176.2) Hirzebruch 92
232 (176.8) Remsberg 88
Tannenbaum 88
246.5 (181.5) Loveland 88
960 (342.6) Bachler 91B
974.8 (345.2) Albrecht 90C
Tannenbaum 89
Albrecht 88
Bamberger 88B
Brechtmann 88B
Franz 88B
Heck 88
Lund 88
Otterlund 88B
Pugh 88
Schmidt 88
Sorensen 88
Schmidt 87
3200 (618.5) Albrecht 92L
Albrecht 91H
Bachler 91B
3215 (619) Kampert 92
Baglin 91B
Baglin 91C
Jacob 91
Odyniec 91B
Albrecht 90C
Baglin 90B
Odyniec 89
Sonderegger 89
Tannenbaum 89
Albrecht 88
Bamberger 88B
Brechtmann 88B
Franz 88B
Heck 88
Lund 88
Otterlund 88B
Pugh 88
Schmidt 88
Sorensen 88
Schmidt 87

^{16}O Br

2.077 – 6.862 (89.45 – 90.58)
Jakobsson 90
4.948 – 10.88 (89.9 – 92.24)
Jakobsson 90

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

^{16}O ^{90}Zr

6.862 (100)	Rousselchoma 88

^{16}O Ag

2.077 – 6.862 (115.5 – 116.7)	Jakobsson 90
4.948 – 10.88 (116.1 – 118.4)	Jakobsson 90
49.51 (143.9)	Hirzebruch 92
70.95 (157.8)	Hirzebruch 92
230.4 (238.2)	Hirzebruch 92
233.6 (239.5)	Bronikowski 91
246.5 (244.8)	Loveland 88
960 (450.8)	Bachler 91B
974.8 (454.1)	Albrecht 90C
	Akesson 89B
	Tannenbaum 89
	Akesson 88
	Albrecht 88
	Brechtmann 88B
	Corriveau 88
	Franz 88B
	Heck 88
	Lund 88
	Otterlund 88B
	Schmidt 88
	Sorensen 88
	Schmidt 87
3200 (808.3)	Albrecht 92L
	Albrecht 91H
	Bachler 91B
	Akesson 90D
3215 (810.2)	Kampert 92
	Albrecht 90C
	Akesson 89B
	Odyniec 89
	Tannenbaum 89
	Akesson 88
	Albrecht 88
	Brechtmann 88B
	Corriveau 88
	Franz 88B
	Heck 88
	Lund 88
	Otterlund 88B
	Pugh 88
	Schmidt 88
	Sorensen 88
	Schmidt 87

^{16}O Wt

974.8 (602.9)	Akesson 89B
	Tannenbaum 89
	Akesson 88
	Corriveau 88
3200 (1061)	Akesson 90E
	Otterlund 90
3215 (1063)	Akesson 91
	Schukraft 91
	Akesson 89B
	Akesson 89D
	Akesson 89E
	Tannenbaum 89
	Akesson 88
	Bartels 88
	Corriveau 88
	Kluberg 88
	Schukraft 88
	Schukraft 88B

^{16}O Au

6.854 (199.8)	Silk 88
14.5 (203.7)	Tannenbaum 89
232 (345.2)	Remsberg 88
	Tannenbaum 88
246.5 (352.8)	Loveland 88
959.9 (621.4)	Stenlund 90B
960 (621.4)	Bachler 91B
	Baechler 91C
974.8 (625.8)	Odyniec 91
	Odyniec 91B
	Schukraft 91
	Albrecht 90C
	Bamberger 89
	Odyniec 89

^{16}O Au

	Tannenbaum 89
	Albrecht 88
	Albrecht 88B
	Bamberger 88B
	Franz 88B
	Heck 88
	Kluberg 88
	Lohner 88
	Lund 88
	Otterlund 88B
	Pugh 88
	Schmidt 88
	Sorensen 88
	Strobele 88
	Vesztergombi 88
	Schmidt 87
3200 (1099)	Albrecht 92L
	Albrecht 91H
	Albrecht 91O
	Bachler 91B
	Schmitz 91
	Otterlund 90
	Stenlund 90B
3215 (1102)	Eklund 92
	Kampert 92
	Albrecht 91
	Odyniec 91B
	Schukraft 91
	Albrecht 90C
	Albrecht 90F
	Harris 90B
	Albrecht 89D
	Albrecht 89M
	Bamberger 89
	Bartke 89
	London 89
	Lund 89
	Odyniec 89
	Pugh 89
	Tannenbaum 89
	Albrecht 88
	Albrecht 88B
	Bamberger 88
	Bamberger 88B
	Franz 88B
	Heck 88
	Humanic 88
	Kluberg 88
	Lohner 88
	Lund 88
	Otterlund 88B
	Pugh 88
	Schmidt 88
	Sorensen 88
	Strobele 88
	Vesztergombi 88
	Schmidt 87

^{16}O ^{197}Au

974.8 (627.4)	Hill 88
3215 (1104)	Hill 88

^{16}O Hg

974.8 (632)	Calloway 89
1935 (870.7)	Calloway 89

^{16}O Pb

25.23 (220.9)	Hirzebruch 92
49.51 (239.6)	Hirzebruch 92
70.95 (255.9)	Hirzebruch 92
230.4 (355.8)	Hirzebruch 92
246.5 (364.4)	Hoffmann 88
974.8 (643.3)	Barnes 88
	Brechtmann 88B
3215 (1131)	Baglin 91
	Schukraft 91
	Odyniec 89
	Pugh 89
	Tannenbaum 89
	Barnes 88
	Brechtmann 88B
	Bussiere 88
	Hoffmann 88

^{16}O ^{207}Pb

6.89 (209.1)	Moisan 92

^{16}O ^{208}Pb

6.862 (210)	Rousselchoma 88

^{16}O ^{232}Th

6.89 (232.4)	Erazmus 88

^{16}O ^{238}U

974.8 (694)	Sonderegger 88
3215 (1214)	Sonderegger 88

^{16}O U

3200 (1212)	Abreu 91E
3215 (1215)	Baglin 91B
	Baglin 91C
	Jacob 91
	Odyniec 91
	Odyniec 91B
	Schukraft 91
	Baglin 90
	Baglin 90B
	Baglin 89
	London 89
	Sonderegger 89
	Kluberg 88

^{17}O Pb

6.875 (210.2)	Beene 90

^{18}O ^{58}Ni

4.639 (71.27)	Etchegoyen 90

Fl C

79.8 (47.62)	Grigalashvil 88

^{19}Fl C

76 (46.74)	Golovin 88

^{19}Fl Mg

85.5 (69.13)	Anikina 89

^{19}Fl Al

76 (69.77)	Golovin 88

^{19}Fl Cu

76 (114.3)	Golovin 88

^{19}Fl In

76 (168.7)	Golovin 88

^{19}Fl Wt

76 (237.4)	Golovin 88

^{19}Fl Bi

76 (261.9)	Golovin 88

^{19}Fl U

76 (289)	Golovin 88

Ne *p*

20.96 (20.17)	Webber 90
	Webber 90B
24.37 (20.29)	Webber 90
	Webber 90B
24.39 (20.29)	Webber 90C
24.59 (20.2)	Webber 90B
25.02 (20.31)	Webber 90
35.23 (20.71)	Webber 90
	Webber 90B

Ne nucleus

12.8	Dupieux 91
12.8 – 33.93	Dupieux 91
19	Dupieux 91
	Bastid 89
20.96	Webber 90
24.37	Webber 90
24.39	Dupieux 91
25.02	Webber 90
29.28	Bastid 89
	Lhote 89

Ne nucleus

33.93	Dupieux 91
35.23	Webber 90
38.44	Antonchik 90B
57.81	Schnetzer 89
79.82	Dubinina 88
90	Bobodjanov 91
90.05	Okonov 88

Ne C

20.96 (33.29)	Webber 90
	Webber 90B
24.37 (34.16)	Webber 90
	Webber 90B
24.39 (34.16)	Webber 90C
24.59 (34.21)	Webber 90B
25.02 (34.33)	Webber 90
35.23 (37.03)	Webber 90
	Webber 90B

Ne Fl

19 (40.18)	Poitou 92
24.39 (41.9)	Poitou 92
29.28 (43.56)	Poitou 92
	Gosset 89

Ne Na

19 (44.25)	Poitou 92
24.39 (46.14)	Poitou 92
29.28 (47.96)	Poitou 92
	Gosset 89

Ne Al

12.8 (46.15)	Julien 88
17.66 (47.76)	Berg 91

Ne Nb

12.8 (108.6)	Dupieux 91
12.8 – 33.93 (108.6 – 120.6)	Dupieux 91
19 (111.7)	Poitou 92
	Dupieux 91
24.39 (114.8)	Poitou 92
	Dupieux 91
29.28 (117.7)	Poitou 92
	Gosset 89
33.93 (120.6)	Dupieux 91

Ne Pb

12.8 (215.4)	Dupieux 91
12.8 – 33.93 (215.4 – 229.3)	Dupieux 91
19 (218)	Poitou 92
	Dupieux 91
	Bastid 89
24.39 (222.5)	Poitou 92
	Dupieux 91
29.04 (225.7)	Baldwin 92
29.28 (225.9)	Poitou 92
	Bastid 89
	Gosset 89
33.93 (229.3)	Dupieux 91
57.81 (247.1)	Schnetzer 89

^{20}Ne nucleus

55.59	Shor 89

^{20}Ne Al

17.6 (47.61)	Kienle 90

^{20}Ne ^{27}Al

1.058 (43.7)	Dubar 89
1.933 (43.84)	Dubar 89
3.357 (43.95)	Dubar 89

^{20}Ne ^{90}Zr

5.518 (103.1)	Suomijarvi 89

^{20}Ne Ag

3.357 (119.4)	Dubar 89

^{20}Ne ^{208}Pb

5.518 (213.1)	Suomijarvi 89

^{22}Ne p

88.55 (24.32)	Bogdanov 88

^{22}Ne nucleus

39.63 – 64.21	Abdurazakova 88
54	Elnadi 88
90	Ameeva 92
90.2	Andreeva 92
	Bogdanov 91
	Babaev 90
	Andreeva 89
	Lepekhin 89
	Alekseeva 88
	Andreeva 88
	Andreeva 88B
	Andreeva 88C
	Bannik 87
	Elnaghy 87B
	Krasnov 87
99	Elnadi 88
	Vokal 88

^{22}Ne ^{12}C

90.2 (51.12)	Elnaghy 87B

^{23}Na p

23.81 (22.8)	Webber 90B

^{23}Na C

23.81 (36.07)	Webber 90B

^{24}Mg nucleus

108	Bondarenko 92
	Bondarenko 91
	Ghosh 91
	Ghosh 89D
	Ghosh 89E
	Ghosh 89F
	Karev 88

^{24}Mg Mg

108 (77.5)	Anikina 89

Mg p

19.77 (23.87)	Webber 90B
19.79 (23.87)	Webber 90
25.61 (24.03)	Webber 90B
29.32 (24.14)	Webber 90C
33.43 (24.27)	Webber 90
	Webber 90B
52.92 (24.93)	Webber 90
	Webber 90B

Mg nucleus

19.79	Webber 90
33.43	Webber 90
52.92	Webber 90
79.82	Dubinina 88
108	Elnadi 92
	Ghosh 89

Mg C

19.77 (36.1)	Webber 90B
19.79 (36.2)	Webber 90
25.61 (37.45)	Webber 90B
29.32 (38.2)	Webber 90C
33.43 (39.26)	Webber 90
	Webber 90B
52.92 (43.88)	Webber 90
	Webber 90B
102 (54.55)	Grigalashvil 88

Mg Mg

103.2 (76.22)	Avramenko 91B
108 (77.5)	Chkhaidze 92

Mg Pb

108 (283.5)	Bobodjanov 91
	Krasnov 88

Al p

31.46 (26.61)	Webber 90
	Webber 90B

Al nucleus

31.46	Webber 90

Al ile

31.46 (30.75)	Webber 90
	Webber 90B

Al C

4.5 (36.44)	Abraamyan 92
31.46 (40.72)	Webber 90
	Webber 90B

Al Cu

4.5 (84.61)	Abraamyan 92

Si p

30.58 (27.58)	Webber 90
	Webber 90B
39.91 (27.84)	Webber 90
	Webber 90B
56.71 (28.33)	Webber 90
	Webber 90B

Si nucleus

30.58	Webber 90
39.91	Webber 90
41.91	Webber 90C
56.71	Webber 90
126	Tauseef 92
407	Buschbeck 91
	Adamovich 90B
	Otterlund 90

Si C

30.58 (41.35)	Webber 90
	Webber 90B
39.91 (43.33)	Webber 90
	Webber 90B
56.71 (46.98)	Webber 90
	Webber 90B

Si Al

305 (129.3)	Braunmunzing 88
406 (147.5)	Schukraft 91
	Remsberg 88
408.8 (148)	Abbott 91

Si Si

408.8 (151)	Eiseman 92B

Si Cu

305 (201.1)	Braunmunzing 88
406 (228.8)	Schukraft 91
	Foley 90
434.2 (235)	Barrette 90B

Si Ag

406 (304.2)	Schukraft 91

Si Au

406 (428.5)	Schukraft 91
	Foley 90
	Remsberg 88
407 (429.4)	Stenlund 90B
408.8 (429.7)	Abbott 91
431.4 (439.2)	Miake 88

Si Pb

305 (395.1)	Braunmunzing 88
408.8 (442.8)	Eiseman 92B

^{28}Si p

431.3 (38.63)	Brechtmann 89

^{28}Si nucleus

4.5	Vokal 91
	Ameeva 89
54	Ahmad 91B
126	Ahmad 92
	Andreeva 92
	Ahmad 91
	Ahmad 91C
	Krasnov 88B
127	Adamovich 92D
405.2	Jain 92B
	Jain 92C

^{28}Si nucleus

406	London 89
407	Adamovich 92B
	Adamovich 91
	Adamovich 91C
	Stenlund 91
	Adamovich 90C
	Stenlund 90C
431.3	Jain 92D
	Jain 91B
	Jain 91C
	Brechtmann 89
434.1	Adamovich 92C
	Adamovich 92D
	Otterlund 91

^{28}Si C

431.3 (102.3)	Brechtmann 89
434.1 (102.6)	Barrette 92

^{28}Si Al

280 (124.3)	Tannenbaum 89
405.2 (147.4)	Barrette 91
406 (147.5)	Tannenbaum 89
407 (147.9)	Barrette 90
408.8 (147)	Abbott 92C
	Aoki 92B
431.3 (151.8)	Brechtmann 89
	Tannenbaum 89
434.1 (152.2)	Barrette 92
	Barrette 92B
	Barrette 92C

^{28}Si ^{27}Al

408.8 (148)	Abbott 91D
	Bloomer 90
434.1 (152.3)	Barrette 90C

^{28}Si ^{28}Si

5.434 (52.44)	Obserstedt 92
47.38 – 80.78 (64.67 – 76.08)	
	Carroll 88B
55.54 (67.54)	Carroll 88B
67.41 (71.63)	Shor 89
77.83 (75.12)	Shor 89
80.78 (76.08)	Carroll 89

^{28}Si Cu

280 (193.6)	Tannenbaum 89
405.2 (228.6)	Barrette 91
406 (228.8)	Tannenbaum 89
407 (229.3)	Barrette 90
408.8 (229.5)	Abbott 92C
	Adams 92
	Ahmad 92B
	Aoki 92B
	Odyniec 91
	Bloomer 90
	Eiseman 90
431.3 (235.2)	Brechtmann 89
434.1 (235.9)	Barrette 92
	Barrette 92B
	Barrette 92C

^{28}Si ^{64}Cu

408.8 (230.4)	Bloomer 90

^{28}Si Ag

406 (304.2)	Tannenbaum 89
431.3 (312.4)	Brechtmann 89

^{28}Si Sn

434.1 (330.3)	Barrette 92

^{28}Si ^{120}Sn

434.1 (332.3)	Barrette 90C

^{28}Si Au

406 (428.5)	Tannenbaum 89
408.8 (429.7)	Abbott 92C
	Adams 92
	Ahmad 92B
	Aoki 92B
	Eiseman 92

^{28}Si Au

	Odyniec 91
	Bloomer 90
	Eiseman 90
411.6 (430.9)	Abbott 91B
431.3 (439.2)	Tannenbaum 89

^{28}Si ^{197}Au

407 (430.6)	Abbott 91C
	Odyniec 91
	Abbott 90
408.8 (430.9)	Abbott 91D

^{28}Si Pb

280 (382.7)	Tannenbaum 89
405.2 (441.2)	Barrette 91
407 (442.4)	Barrette 90
431.3 (452.5)	He 90
	Brechtmann 89
434.1 (453.7)	Barrette 92
	Barrette 92B

^{28}Si ^{208}Pb

408.8 (443.8)	Bloomer 90
434.1 (454.7)	Barrette 90C

S p

38.93 (31.38)	Webber 90C
40.89 (31.43)	Webber 90
	Webber 90B
59.17 (31.89)	Webber 90
59.57 (31.9)	Webber 90B

S nucleus

40.89	Webber 90
59.17	Webber 90
6400	Matis 90B
6420	Wilkes 91
	Singh 90

S C

38.93 (45.99)	Webber 90C
40.89 (46.37)	Webber 90
	Webber 90B
59.17 (50)	Webber 90
59.57 (50.08)	Webber 90B

S S

6390 (619.7)	Baechler 91
	Karabarbouni 91
6400 (619.7)	Bachler 92
	Bachler 91
	Odyniec 91
	Schukraft 91
	Bartke 90

S Cu

6400 (872)	Andersen 92
	Bachler 91

S Ag

6390 (1139)	Karabarbouni 91
6400 (1139)	Andersen 92

S Wt

6390 (1491)	Vanhecke 91
6400 (1491)	Odyniec 91

S Au

6390 (1544)	Karabarbouni 91
6400 (1544)	Bachler 92
	Boisgard 91

S Pb

6400 (1584)	Andersen 92

S U

6390 (1699)	Abreu 89
6400 (1699)	Peralta 91
6420 (1703)	Baldisseri 90

^{32}S p

42.86 (31.42)	Brechtmann 88
6420 (113.8)	Brechtmann 88

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

^{32}S nucleus

42.86	Brechtmann 88
1940	Sengupta 91
	Sengupta 89B
6390	Adamovich 92B
	Jain 92C
	Adamovich 91
	Adamovich 91C
	Buschbeck 91
	Schmitz 91
	Stenlund 91
	Adamovich 90B
	Adamovich 90C
	Otterlund 90
	Stenlund 90C
	Stenlund 90D
6420	Adamovich 93
	Adamovich 92C
	Adamovich 92D
	Jain 92D
	Jain 92E
	Baroni 91
	Jacob 91
	Jain 91
	Jain 91B
	Jain 91C
	Otterlund 91
	Sengupta 91
	Akesson 90
	Baroni 90
	Jain 90
	Jain 90B
	Sengupta 90
	Sengupta 90B
	Singh 90
	Adamovich 89
	Adamovich 89B
	Buschbeck 89
	Holynski 89
	London 89
	Romano 89
	Sengupta 89B
	Singh 89
	Brechtmann 88
	Sengupta 88
	Singh 88
	Singh 88B
	Stenlund 88

^{32}S C

42.86 (46.71)	Brechtmann 88
6420 (380.6)	Brechtmann 88

^{32}S Al

61.35 (70.35)	Brechtmann 88
464 (157.8)	Tannenbaum 88
6390 (568.5)	Akesson 90E
6400 (568.5)	Eklund 91
6420 (569.8)	Eklund 92
	Kampert 92
	Vane 92
	Schukraft 91
	Andersen 89
	Tannenbaum 89
	Akesson 88C
	Brechtmann 88
	Price 88
	Schukraft 88B

^{32}S S

6400 (619.7)	Bachler 91B
6420 (621.1)	Jacob 91
	Odyniec 91B
	Schukraft 91
	Odyniec 89
	Pugh 89

^{32}S ^{32}S

6390 (619.1)	Baechler 91B
6400 (619.1)	Panagiotou 89
6420 (620.6)	Harris 90B

^{32}S Fe

6420 (820.1)	Andersen 89

^{32}S Cu

61.35 (111.7)	Brechtmann 88
464 (243.8)	Tannenbaum 88
6400 (872)	Bachler 91B
	Eklund 91
6420 (875)	Eklund 92
	Kampert 92
	Andersen 89
	Odyniec 89
	Brechtmann 88
	Price 88

^{32}S Pd

6420 (1134)	Vane 92

^{32}S Ag

7.626 (131)	Wada 92
	Wada 92B
42.86 (146.5)	Brechtmann 88
464 (323.1)	Tannenbaum 88
6390 (1139)	Akesson 90D
	Akesson 90E
6400 (1139)	Bachler 91B
	Eklund 91
6420 (1142)	Eklund 92
	Kampert 92
	Odyniec 91B
	Schukraft 91
	Andersen 89
	Odyniec 89
	Tannenbaum 89
	Akesson 88C
	Brechtmann 88
	Schukraft 88B

^{32}S Wt

6390 (1491)	Akesson 90E
6400 (1491)	Evans 92
	Abatzis 91
	Abatzis 91B
	Kinson 91
	Odyniec 91
	Schukraft 91
	Abatzis 90B
6420 (1494)	Akesson 92
	Akesson 91
	Jacob 91
	Odyniec 91
	Odyniec 91B
	Schukraft 91
	Abatzis 90
	Akesson 90
	Akesson 89D
	Akesson 89E
	Tannenbaum 89
	Akesson 88C
	Ritter 88
	Schukraft 88B

^{32}S Pt

6390 (1536)	Akesson 90E
6420 (1530)	Schukraft 91
	Akesson 89D
	Akesson 89E
	London 89
	Tannenbaum 89
	Akesson 88C
	Schukraft 88B

^{32}S Au

464 (452.9)	Tannenbaum 88
6390 (1544)	Adamovich 92B
	Adamovich 91
	Stenlund 91
	Adamovich 90C
	Adamovich 90D
	Otterlund 90
	Stenlund 90C
6400 (1544)	Bachler 91B
	Eklund 91
6420 (1547)	Eklund 92
	Kampert 92
	Vane 92
	Odyniec 91B
	Adamovich 89
	Odyniec 89

^{32}S Au

	Heck 88
	Otterlund 88B
	Ritter 88

^{32}S Hg

6420 (1562)	Calloway 89

^{32}S Pb

197.8 (339.6)	Takahashi 91
6390 (1584)	Akesson 90E
6400 (1584)	Boggild 92
6420 (1588)	Baglin 91
	Odyniec 91B
	Schukraft 91
	Andersen 89
	Tannenbaum 89
	Akesson 88C
	Brechtmann 88
	Price 88
	Schukraft 88B

^{32}S U

6390 (1699)	Abreu 91E
	Akesson 90E
6420 (1703)	Baglin 91B
	Baglin 91C
	Baglin 91D
	Baglin 91E
	Jacob 91
	Odyniec 91B
	Schukraft 91
	Baglin 90B
	Sonderegger 89
	Tannenbaum 89
	Akesson 88C
	Kluberg 88
	Schukraft 88B

^{36}Ar nucleus

12.74	Barz 92

^{36}Ar C

14.65 (45.48)	Kwatonjock 88

^{36}Ar Al

14.65 (59.96)	Sullivan 90

^{36}Ar ^{27}Al

14.65 (59.98)	Kwatonjock 88

^{36}Ar ^{48}Ti

15.27 (80.11)	Julien 91

^{36}Ar Cu

14.65 (94.66)	Kwatonjock 88

^{36}Ar Ag

14.65 (136.3)	Kwatonjock 88

^{36}Ar ^{159}Tb

14.65 (184.1)	Kwatonjock 88

^{36}Ar ^{197}Au

11.13 (219.4)	Phair 92
14.19 (220.3)	Phair 92
14.65 (220.4)	Kwatonjock 88
16.77 (221.2)	Phair 92

Ar K

100.8 (38.62)	Christie 91

Ar p

43.88 (38.65)	Webber 90
	Webber 90B
57.03 (38.9)	Webber 90
	Webber 90B

Ar nucleus

11.43	Batkin 91
43.88	Webber 90
45.35 – 98.68	Lhote 89
57.03	Webber 90
57.41	Lhote 89

Ar nucleus

	Aleklett 88
	Danielewicz 88
100.8	Christie 92
101.6	Chacon 91
104.9	Aleklett 88

Ar C

43.88 (52.89)	Webber 90
	Webber 90B
57.03 (55.08)	Webber 90
	Webber 90B

Ar Fl

37.48 (59.73)	Poitou 92
47.84 (61.99)	Poitou 92

Ar Na

37.48 (64.06)	Poitou 92
47.84 (66.61)	Poitou 92

Ar Cl

100.8 (101.3)	Christie 91

Ar Ca

25.33 – 66.51 (78.36 – 92.03)	
	Dupieux 91
37.48 (81.99)	Dupieux 91
57.41 (88.81)	Dupieux 91
66.51 (92.03)	Berg 91

Ar Cu

62 (115)	Aleklett 88
100.8 (132.7)	Aleklett 88

Ar Nb

25.33 – 66.51 (129.1 – 148.5)	
	Dupieux 91
37.48 (134.2)	Poitou 92
	Dupieux 91
47.84 (139.2)	Poitou 92

Ar La

100.8 (214.3)	Christie 92
	Christie 91

Ar Pb

25.33 – 66.51 (236.7 – 260.9)	
	Dupieux 91
37.48 (242.9)	Beavis 92
	Jiang 92
	Poitou 92
	Dupieux 91
47.84 (249.1)	Poitou 92
57.41 (255)	Beavis 92
	Dupieux 91
	Danielewicz 88
100.8 (283)	Beavis 92

^{40}Ar nucleus

67.68 – 76.69	Antonchik 90
76.69	Antonchik 90B

^{40}Ar Al

8.69 – 14.16 (62.79 – 63.43)	
	Sullivan 90

^{40}Ar ^{27}Al

8.69 (62.81)	Peter 90
10.46 (62.99)	Peter 90
11.72 (63.13)	Peter 90
14.16 (63.45)	Peter 90

^{40}Ar ^{40}Ca

6.714 (74.82)	Obserstedt 92
7.763 (74.92)	Rosch 89

^{40}Ar Ti

13.59 (83.18)	Ardouin 90

^{40}Ar ^{90}Zr

11.18 (122.2)	Suomijarvi 90

^{40}Ar ^{103}Rh

9.036	Morjean 91

^{40}Ar ^{103}Rh

10.31	Morjean 91
11.59	Morjean 91

^{40}Ar Ag

13.59 (139.5)	Steckmeyer 89

^{40}Ar ^{197}Au

9.036 (222.5)	Morjean 91
	Jiang 89
10.31 (222.8)	Morjean 91
	Jiang 89
11.59 (223.1)	Morjean 91
	Jiang 89
13.59 (223.6)	Ardouin 90
	Steckmeyer 89
15.46 (224.1)	Jiang 89

^{40}Ar ^{208}Pb

11.18 (232.4)	Suomijarvi 90

^{40}Ar ^{232}Th

9.036 (254.3)	Jiang 89
10.31 (254.6)	Jiang 89
11.59 (254.9)	Jiang 89
15.46 (255)	Jiang 89

^{40}Ar ^{238}U

9.036 (259.9)	Jacoquet 90
102.7 (314.6)	Deboer 91

Ca p

48.66 (38.86)	Webber 90C
52.25 (38.93)	Webber 90
	Webber 90B

Ca nucleus

52.25	Webber 90
600 – 8000	Gagarin 89

Ca C

48.66 (53.77)	Webber 90C
52.25 (54.37)	Webber 90
	Webber 90B

Ca Ca

22 – 70 (77.61 – 93.34)	
	Gustafsson 88
38.09 (82.28)	Gustafsson 88
67.73 (92.53)	Huang 91
	Seidl 91
	Matis 90
	Schroeder 90
	Roche 89
	Naudet 88C
	Roche 88
70 (93.34)	Gustafsson 88
111.2 (107.5)	Roche 89
	Naudet 88C
	Roche 88
113.3 (108.2)	Seidl 91
115.5 (108.8)	Matis 90
	Carroll 88B

^{48}Ca ^{9}Be

13.9 (53.43)	Guillemaudmu 90

^{48}Ca ^{64}Ni

13.9 (105.5)	Guillemaudmu 90

^{48}Ca Ta

13.9 (214.9)	Guillemaudmu 90

^{48}Ca ^{181}Ta

13.9 (214)	Guillemaudmu 90

^{48}Ti ^{45}Sc

8.323 (86.98)	Stege 88

^{56}Fe p

143.8 (54.85)	Dudkin 90

^{56}Fe nucleus

39.63 – 64.21	Abdurazakova 88

^{56}Fe nucleus

140	Babaev 90
143.8	Dudkin 91
	Dudkin 90

^{56}Fe C

143.8 (79.18)	Dudkin 90

^{56}Fe Nit

143.8 (82.96)	Dudkin 90

^{56}Fe O

143.8 (86.62)	Dudkin 90

^{56}Fe Fe

137.8 (144.1)	Chacon 88

^{56}Fe Br

143.8 (176.2)	Dudkin 90

^{56}Fe Ag

143.8 (208.7)	Dudkin 90

^{56}Fe ^{197}Au

79.64 (267)	Bartke 89

Fe p

44.5 – 124.1 (53.25 – 54.4)	
	Webber 90C
47.09 (53.28)	Webber 90B
47.09 – 130.9 (53.28 – 54.51)	
	Webber 90
55.26 (53.38)	Webber 90B
61.59 (53.46)	Webber 90B
67.25 (53.54)	Webber 90C
71.51 (53.6)	Webber 90B
75.69 (53.66)	Webber 90B
89.99 (53.87)	Webber 90B
98.91 (54.01)	Webber 90B
118.6 (54.32)	Webber 90B
124.8 (54.41)	Webber 90B
130.9 (54.51)	Webber 90B
141.8 (54.69)	Dudkin 90

Fe nucleus

47.09 – 130.9	Webber 90
105.9	Antonchik 90B
141.8	Dudkin 90
825 – $1.1 \cdot 10^4$	Gagarin 89

Fe He

55.26 (57.32)	Webber 90B
55.63 (57.34)	Webber 90
75.69 (58.35)	Webber 90
	Webber 90B
124.8 (61.06)	Webber 90B
130.9 (61.4)	Webber 90

Fe C

47.09 (66.34)	Webber 90B
47.09 – 130.9 (66.34 – 77.35)	
	Webber 90
55.26 (67.3)	Webber 90B
61.59 (68.08)	Webber 90B
67.25 (68.8)	Webber 90C
71.51 (69.36)	Webber 90B
75.69 (69.9)	Webber 90B
81.36 (70.66)	Webber 90C
89.99 (71.81)	Webber 90B
98.91 (73.02)	Webber 90B
118.6 (75.69)	Webber 90B
124.8 (76.53)	Webber 90B
130.9 (77.35)	Webber 90B

Fe Fe

135.9 (143.4)	Chacon 91

Ni p

68.62 (56.18)	Webber 90

Ni nucleus

68.62	Webber 90

Ni C

68.62 (71.27)	Webber 90

^{63}Cu ^{12}C

9.685 (69.99)	Han 89

^{63}Cu ^{27}Al

9.685 (84.07)	Han 89

^{84}Kr nucleus

179.5	Arora 89

^{84}Kr ^{197}Au

24.05 (265.1)	Stuttge 92

Kr Ag

23.87 (180.5)	Bougault 90

Kr Au

23.87 (264)	Bougault 90

Kr Th

23.87 (296.8)	Bougault 90

^{86}Kr ^{27}Al

24.91 (106.2)	Bazin 90

^{86}Kr ^{103}Rh

24.91	Bazin 90

^{86}Kr ^{197}Au

24.91 (267.1)	Bazin 90

Nb Nb

50.78 – 118 (179.9 – 200.8)	
	Doss 88
50.78 – 161.4 (179.9 – 216)	
	Gustafsson 88
118 (200.8)	Bock 89
	Bock 89B
134.7 (206.6)	Madey 88
211.2 (233.4)	Chacon 91

^{93}Nb ^{9}Be

13.62 (95.41)	Charity 88B
15.48 (95.43)	Charity 88B
17.14 (95.46)	Charity 88B
20.4 (95.52)	Charity 88
22.31 (95.56)	Charity 88

^{93}Nb ^{12}C

13.62 (98.23)	Charity 88B
15.48 (98.27)	Charity 88B
17.14 (98.3)	Charity 88B

^{93}Nb ^{27}Al

13.62 (112.3)	Charity 88B
15.48 (112.4)	Charity 88B
17.14 (112.5)	Charity 88B
20.4 (112.6)	Charity 88
22.31 (112.7)	Charity 88

Xe La

251.3 (322.5)	Christie 92
336.6 (352.7)	Christie 91

^{129}Xe Ag

27.28 (222)	Granier 88

^{129}Xe ^{197}Au

27.28 (306.3)	Granier 88
29.14 (306.6)	Granier 88

^{131}Xe nucleus

254.1	Singh 92

^{136}Xe C

182.2 (145.4)	Kienle 90

^{136}Xe Pb

182.2 (372.8)	Kienle 90

^{139}La nucleus

250	Palsania 91
266.5	Gill 91
	Gill 90

^{139}La C

266.5 (153.4)	Brady 88

^{139}La ^{12}C

23 (140.8)	Charity 90
25.58 (140.9)	Charity 90
42.99 (141.2)	Bowman 91
54.81 (141.6)	Bowman 91
61.59 (141.8)	Bowman 91

^{139}La ^{27}Al

23 (154)	Charity 90
25.58 (155.1)	Charity 90

^{139}La ^{59}Co

275.7 (230.8)	Hill 88B

^{139}La ^{139}La

14.42 (259.4)	Hayashi 88
73.05 (268.4)	Claesson 90
100.1 (275.6)	Claesson 90

^{139}La La

275.7 (335.2)	Bossy 91

^{139}La ^{197}Au

275.7 (403.8)	Hill 88
	Hill 88B

^{139}La ^{238}U

281.9 (451.1)	Deboer 91

La La

57.41 (264.8)	Danielewicz 88
155.8 – 287 (293.1 – 339.4)	
	Lhote 89
265.1 (331.4)	Christie 93

Ho C

275.6 (175.5)	Westphal 91

Ho Cu

275.6 (253.9)	Westphal 91

Ho Ag

275.6 (311.6)	Westphal 91

Ho Sn

275.6 (324.9)	Westphal 91

Ho Pb

275.6 (427.4)	Westphal 91

Ho U

275.6 (461.2)	Westphal 91

Au C

239.5 (201.3)	Hubele 91

Au Al

239.5 (222.4)	Hubele 91

Au Cu

239.5 (269)	Hubele 91

Au Au

108.2 – 251.8 (381.4 – 426.2)	
	Doss 88
108.2 – 287.5 (381.4 – 438.7)	
	Gustafsson 88
108.2 – 344.5 (381.4 – 458.9)	
	Gustafsson 88
126.5 (386.1)	Kienle 90
187.4 (404.4)	Gutbrod 89
251.8 (426.2)	Bock 89
	Bock 89B
287.5 (438.7)	Madey 88

Entries are in order of beam name, then target name, then beam momentum. Particle names are ordered as described in the legend on page 115 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 116. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are equivalent p_{lab} in GeV/c; then E_{cm} in GeV follows in parentheses. For certain initial states only E_{cm} (in parentheses) is given.

^{197}Au nucleus

330.4	Dreute 91
	Lewenkopf 91

^{197}Au C

240.7 (202.2)	Kienle 90

^{197}Au Al

240.7 (223.3)	Kienle 90

^{197}Au Cu

240.7 (270.9)	Kienle 90

^{208}Pb ^{208}Pb

26.23 (388.4)	Kramer 90
1366 (780.8)	Tsertos 91B

^{208}Pb ^{232}Th

1408 (835.7)	Tsertos 91B

^{208}Pb ^{238}U

26.23 (416.4)	Kramer 90

^{232}Th Tl(atom)

24.36 (407.1)	Bokemeyer 90

^{232}Th ^{181}Ta

24.36 (385.3)	Bokemeyer 91

^{232}Th ^{232}Th

24.05 (432.9)	Danzmann 89
24.36 (432.9)	Bokemeyer 91
24.42 (432.9)	Danzmann 89

^{232}Th ^{238}U

24.36 (438.5)	Bokemeyer 91

^{232}Th ^{248}Cm

24.36	Bokemeyer 91

^{238}U nuclearite

14.17	Polikanov 90

^{238}U Tl(atom)

24.99 (412.7)	Bokemeyer 90

^{238}U nucleus

14.17	Polikanov 90
386.3	Jain 92
	Singh 92

^{238}U ^{110}Pd

1611 (626.5)	Tsertos 91B

^{238}U ^{181}Ta

24.93 – 25.99 (390.9 – 390)	
	Bokemeyer 91
	Bokemeyer 90
	Bokemeyer 88
25.06 – 25.48 (390.9 – 390.9)	
	Bokemeyer 89
25.2 (390.9)	Salabura 90
25.7 – 25.99 (390.9 – 390)	
	Bokemeyer 89
25.83 (390.9)	Bokemeyer 91
1611 (791.1)	Tsertos 91B

^{238}U ^{197}Au

391.8 (499.1)	Hill 91
1611 (826.2)	Tsertos 91B

^{238}U ^{208}Pb

24.99 (416.1)	Bokemeyer 91

^{238}U ^{232}Th

24.78 – 24.99 (438.5 – 438.5)	
	Salabura 90
24.89 (438.5)	Danzmann 89
24.91 – 24.99 (438.5 – 438.5)	
	Bokemeyer 91
	Bokemeyer 90
	Bokemeyer 89

^{238}U ^{232}Th

	Bokemeyer 88
24.99 (438.5)	Bokemeyer 91
25 (438.5)	Danzmann 89
25.31 (438.5)	Danzmann 89
1611 (893.6)	Tsertos 91B

^{238}U ^{238}U

24.78 (444.1)	Bokemeyer 91
24.99 (444.1)	Bokemeyer 91
	Bokemeyer 90
	Bokemeyer 88
25 (444.1)	Danzmann 89
1611 – 1683 (905.1 – 922.4)	
	Tsertos 91B

^{238}U ^{248}Cm

24.99	Bokemeyer 91

U Ta

24.8 (390.9)	Salabura 90B
24.99 (390.9)	Salabura 90B

U Pb

24.99 (415.4)	Koenig 89

U Th

24.8 (438.6)	Salabura 90B
24.99 (438.6)	Salabura 90B

U U

24.99 (444.2)	Koenig 89

unspec nucleus

> 10	Vashkevich 88
100 – $5 \cdot 10^5$	Bonnetbidaud 88
> 100	Bonnetbidaud 88
2000	Navia 88
10^4 – 10^8	Aglietta 89B
> $5 \cdot 10^4$	Dingus 88
10^5 – 10^6	Ren 88
	Ren 88B
	Ren 88C
10^5 – 10^8	Bellotti 89E
> $2 \cdot 10^5$	Adarkar 91
10^6	Gladyszdziad 88
10^6 – 10^{10}	Dyakonov 89
$5 \cdot 10^6$ – $2 \cdot 10^7$	
	Arabkin 90
10^7	Ivanenko 92

unspec C

400	Dzhaoshvili 88B

hadron p

(22 – 630)	Buschbeck 91

hadron nucleus

200	Brick 89
> 1000	Avakyan 89B

hadron C

100 – 2000	Dzhaoshvili 88

hadron$^+$ p

140	Apsimon 90C
147	Arena 92

hadron$^+$ nucleus

200	Brick 92

hadron$^+$ Be

250	Errede 90

hadron$^+$ Al

250	Errede 90

hadron$^+$ Cu

250	Errede 90

hadron$^+$ Wt

250	Errede 90

hadron$^+$ Pb

200	Akesson 88B

hadron$^-$ p

140	Apsimon 90C

hadron$^-$ Be

250	Errede 90

hadron$^-$ Al

250	Errede 90

hadron$^-$ Cu

250	Errede 90

hadron$^-$ Wt

250	Errede 90

This index lists papers by entire reactions: beam, target, final state, and momentum. There are three kinds of "reactions" in the data base: particle fluxes, particle decays, and collisions of two particles. Fluxes go first here, then collisions. Decays are indexed in the Particle/Decay Index.

In each class the ordering is by beam particle name, then by target particle name. For a given beam and target, reactions are further divided into two classes, inclusive and exclusive, with inclusive first. In each inclusive or exclusive sample, ordering is by the final state multiplicity with separation of semileptonic from nonleptonic final states, with semileptonic first. Reactions are further ordered by names of the final state particles, taking into account the weak and strong isospin multiplet structures.

Particle names follow the ordering in the Particle Vocabulary of this compilation. The particle ordering is: gauge bosons, leptons, mesons, baryons, atoms, and nuclei, and within each group the ordering is mainly by increasing mass. However, within mesons and baryons, ordering is nonstrange, strange, charmed, bottom . . . . To simplify searching in this Index, a short "Table of Contents" of the full Index comes first.

The beam momentum is the equivalent lab momentum in GeV/c. For most colliding beam experiments and for reactions above 2 TeV/c equivalent lab momentum, we give instead the c.m. energy E_{cm}, in GeV. C.m. energies are enclosed in parentheses. For a given beam momentum, papers are ordered by year (most recent just), then first author name.

When a range of momenta were studied, we list the range, e.g. "50 – 70," ordered by the lower end. For some experiments, such as neutrino experiments, the listed range is only approximate.

A question mark means that information is unknown, usually because it was not given in the paper.

Illustrative Key

Initial State of the Reaction: see the *Particle Vocabulary* for nomenclature.

Final State of the Reaction: see the *Particle Vocabulary* for nomenclature.

Document ID: see the *ID/Reference/Title Index* for the full reference.

Lab Momentum: in GeV/c or (in parentheses) the c.m. energy E_{cm}, in GeV.

Data Descriptor: brief description of the data measured; see the *Data Descriptor Vocabulary* for nomenclature.

$\gamma\, p$		
J/ψ X		
80 – 190	Sokoloff 86	cs
$D^{\pm}$ X		
20	Butler 86	–
D_s^- X		
100 – 260	Anjos 89B	cs
D_s^+ X		
100 – 260	Anjos 89B	cs
	Anjos 87C	–
$D^*(2010)^0$ X		
20	Abe 86	cs
$\overline{D}^*(2010)^0$ X		
20	Abe 86	cs
$D^*(2010)^+$ X		
20	Abe 86	cs
(40 – 160)	Sliwa 83	angp, cs, pt
$D^*(2010)^-$ X		
20	Abe 86	cs

This is a short "Table of Contents" of the full Reaction/Momentum/Data-Descriptor Index

γ . . . 162
axion . . . 162
ν . . . 162
ν_e . . . 162
$\bar{\nu}_e$ . . . 162
ν_μ . . . 162
$\bar{\nu}_\mu$ . . . 162
$e^\pm$ . . . 162
$\mu^\pm$ . . . 162
μ^- . . . 162
μ^+ . . . 162
heavy-ν . . . 163
q . . . 163
photino . . . 163
higgs$^-$ . . . 163
dark . . . 163
monopole . . . 163
π . . . 163
nucleon . . . 163
p . . . 163
n . . . 163
nuclearite . . . 163
nucleus . . . 163
deuteron . . . 163
^{3}He . . . 163
^{4}He . . . 163
He . . . 163
^{7}Li . . . 163
Fe . . . 163
mult[μ] . . . 163
unspec . . . 163
neutral . . . 163
charged . . . 163
multicharged . . . 163
hadron . . . 163
$\gamma\ \gamma$ . . . 163
$\gamma\ \gamma^*$ . . . 165
γ nucleon . . . 165
$\gamma\ p$ . . . 166
$\gamma\ n$ . . . 167
γ Cs(atom) . . . 167
γ Tl(atom) . . . 167
γ Bi(atom) . . . 167
γ nucleus . . . 167
γ deuteron . . . 167
$\gamma\ ^3$He . . . 167
$\gamma\ ^4$He . . . 167
γ He . . . 168
$\gamma\ ^6$Li . . . 168
$\gamma\ ^7$Li . . . 168
γ Be . . . 168
$\gamma\ ^9$Be . . . 169
$\gamma\ ^{11}$Bor . . . 169
γ C . . . 169
$\gamma\ ^{12}$C . . . 169
γ Nit . . . 169
$\gamma\ ^{14}$Nit . . . 169
$\gamma\ ^{15}$Nit . . . 169
γ O . . . 169
$\gamma\ ^{16}$O . . . 170
γ Al . . . 170
$\gamma\ ^{27}$Al . . . 170
γ Si . . . 170
γ Ca . . . 170
$\gamma\ ^{40}$Ca . . . 170
γ Ti . . . 170
γ Co . . . 170
$\gamma\ ^{59}$Co . . . 170
$\gamma\ ^{60}$Ni . . . 170
$\gamma\ ^{61}$Ni . . . 170
$\gamma\ ^{62}$Ni . . . 170
γ Cu . . . 170
$\gamma\ ^{65}$Cu . . . 170
γ Ge . . . 170
γ Zr . . . 170
γ Nb . . . 170
γ Ag . . . 170
γ Cd . . . 170
γ In . . . 170
$\gamma\ ^{116}$Sn . . . 170
γ Sn . . . 171
$\gamma\ ^{120}$Sn . . . 171
$\gamma\ ^{122}$Sn . . . 171
$\gamma\ ^{124}$Sn . . . 171
γ Xe . . . 171
γ Nd . . . 171
γ Sm . . . 171
γ Ta . . . 171
$\gamma\ ^{184}$Wt . . . 171
γ Au . . . 171
γ Pb . . . 171
$\gamma\ ^{208}$Pb . . . 171
$\gamma\ ^{209}$Bi . . . 171
$\gamma\ ^{235}$U . . . 171
$\gamma\ ^{238}$U . . . 171
$\gamma\ ^{237}$Np . . . 171
$\gamma^*\ p$ . . . 171
higgs p . . . 171
higgs C . . . 171
axion γ^* . . . 171
axion p . . . 171
axion nucleus . . . 171
axion C . . . 171
$\nu\ e^-$ . . . 171
$\nu\ p$ . . . 171
$\nu\ n$ . . . 171
ν nucleus . . . 171
ν deuteron . . . 171
ν Ne . . . 172
ν Fe . . . 172
$\bar{\nu}$ deuteron . . . 172
$\bar{\nu}$ Ne . . . 172
$\bar{\nu}$ Fe . . . 172
$\nu_e\ e^-$ . . . 172
ν_e nucleon . . . 172
$\nu_e\ n$ . . . 172
ν_e nucleus . . . 172
$\nu_e\ ^{12}$C . . . 172
$\nu_e\ ^{37}$Cl . . . 172
$\nu_e\ ^{71}$Ga . . . 172
$\bar{\nu}_e\ e^-$ . . . 172
$\bar{\nu}_e$ nucleon . . . 172
$\bar{\nu}_e\ p$ . . . 172
$\bar{\nu}_e$ nucleus . . . 172
$\bar{\nu}_e$ deuteron . . . 173
$\nu_\mu\ e^-$ . . . 173
$\nu_\mu\ q$ . . . 173
ν_μ nucleon . . . 173
$\nu_\mu\ p$ . . . 173
$\nu_\mu\ n$ . . . 173
ν_μ nucleus . . . 174
ν_μ deuteron . . . 175
$\nu_\mu\ ^{12}$C . . . 175
ν_μ Ne . . . 175
ν_μ Fe . . . 176
$\bar{\nu}_\mu\ e^-$ . . . 176
$\bar{\nu}_\mu\ q$ . . . 176
$\bar{\nu}_\mu$ nucleon . . . 176
$\bar{\nu}_\mu\ p$ . . . 176
$\bar{\nu}_\mu\ n$ . . . 177
$\bar{\nu}_\mu$ nucleus . . . 177
$\bar{\nu}_\mu$ deuteron . . . 177
$\bar{\nu}_\mu$ Ne . . . 177
$\bar{\nu}_\mu$ Fe . . . 178
$\nu_\tau\ e^-$ . . . 178
ν_τ nucleus . . . 178
$\bar{\nu}_\tau\ e^-$ . . . 178
$e^\pm$ nucleus . . . 178
$e^-\ \gamma$ . . . 178
$e^-\ e^-$ . . . 179
e^- nucleon . . . 179
$e^-\ p$ . . . 179
$e^-\ n$ . . . 179
e^- nucleus . . . 179
e^- deuteron . . . 179
$e^-\ ^3$He . . . 179
$e^-\ ^4$He . . . 179
e^- He . . . 180
$e^-\ ^7$Li . . . 180
$e^-\ ^7$Be . . . 180
e^- Be . . . 180
$e^-\ ^9$Be . . . 180
e^- C . . . 180
$e^-\ ^{12}$C . . . 180
$e^-\ ^{15}$Nit . . . 180
e^- Al . . . 180
$e^-\ ^{28}$Si . . . 180
$e^-\ ^{30}$Si . . . 180
$e^-\ ^{31}$Ph . . . 180
$e^-\ ^{32}$S . . . 180
e^- Ca . . . 180
$e^-\ ^{40}$Ca . . . 180
$e^-\ ^{51}$Va . . . 180
$e^-\ ^{50}$Cr . . . 180
$e^-\ ^{55}$Fe . . . 180
$e^-\ ^{56}$Fe . . . 180
e^- Fe . . . 180
$e^-\ ^{58}$Ni . . . 180
e^- Ni . . . 180
e^- Cu . . . 180
$e^-\ ^{64}$Zn . . . 180
$e^-\ ^{71}$Ge . . . 180
$e^-\ ^{78}$Kr . . . 180
$e^-\ ^{84}$Sr . . . 180
$e^-\ ^{93}$Nb . . . 180
$e^-\ ^{92}$Mo . . . 180
$e^-\ ^{96}$Ru . . . 180
e^- Ag . . . 180
$e^-\ ^{106}$Cd . . . 181
$e^-\ ^{112}$Sn . . . 181
$e^-\ ^{120}$Te . . . 181
$e^-\ ^{124}$Xe . . . 181
$e^-\ ^{130}$Ba . . . 181
e^- Ta . . . 181
e^- Wt . . . 181
$e^-\ ^{184}$Os . . . 181
$e^-\ ^{190}$Pt . . . 181
e^- Au . . . 181
$e^-\ ^{235}$U . . . 181
$e^-\ ^{238}$U . . . 181
$e^+\ \gamma$ . . . 181
$e^+\ e^-$ . . . 181
e^+ nucleus . . . 205
e^+ Th . . . 205
$\mu^\pm\ p$ . . . 205
$\mu^\pm$ nucleus . . . 205
$\mu^\pm$ deuteron . . . 205
$\mu^\pm$ Fe . . . 205
$\mu^-\ \gamma^*$ . . . 205
$\mu^-\ p$ . . . 205
μ^- nucleus . . . 205
$\mu^-\ ^3$He . . . 205
μ^- C . . . 205
$\mu^-\ ^{12}$C . . . 205
$\mu^-\ ^{16}$O . . . 205
$\mu^-\ ^{27}$Al . . . 205
$\mu^-\ ^{28}$Si . . . 205
$\mu^-\ ^{40}$Ca . . . 205
μ^- Ti . . . 205
μ^- Fe . . . 205
μ^- Cu . . . 205
μ^- Mo . . . 205
μ^- Sn . . . 205
μ^- Pb . . . 205
$\mu^+\ \gamma^*$ . . . 205
$\mu^+\ e^-$ . . . 205
μ^+ nucleon . . . 205
$\mu^+\ p$ . . . 206
$\mu^+\ n$ . . . 206
μ^+ nucleus . . . 206
μ^+ deuteron . . . 206
μ^+ He . . . 207
$\mu^+\ ^6$Li . . . 207
μ^+ C . . . 207
$\mu^+\ ^{12}$C . . . 207
μ^+ Nit . . . 207
μ^+ Ca . . . 207
$\mu^+\ ^{40}$Ca . . . 207
μ^+ Fe . . . 207
μ^+ Cu . . . 207
μ^+ Sn . . . 207
μ^+ Xe . . . 207
$q\ q$ . . . 207
$q\ \bar{q}$ . . . 207
q Hg . . . 207
u gluon . . . 207
d gluon . . . 207
dark dark . . . 208
dark nucleus . . . 208
monopole p . . . 208
meson$^+$ p . . . 208
meson$^+$ Al . . . 208
meson$^+$ Au . . . 208
π nucleus . . . 208
π deuteron . . . 208
π Be . . . 208
π C . . . 208
$\pi\ ^{12}$C . . . 208
π Al . . . 208
π Fe . . . 208
π Cu . . . 208
π Wt . . . 208
$\pi^\pm\ p$ . . . 208
$\pi^\pm$ C . . . 208
$\pi^\pm$ Fe . . . 208
$\pi^\pm$ Pb . . . 208
$\pi^+\ \pi^-$ . . . 208
$\pi^+\ p$ . . . 208
$\pi^+\ n$ . . . 210
$\pi^+\ \Delta(1232\ P_{33})^{++}$ . . . 210
π^+ nucleus . . . 210
π^+ deuteron . . . 211
$\pi^+\ ^3$H . . . 211
$\pi^+\ ^3$He . . . 211
$\pi^+\ ^4$He . . . 211
π^+ He . . . 211
π^+ Li . . . 211
$\pi^+\ ^6$Li . . . 211
$\pi^+\ ^7$Li . . . 211
π^+ Be . . . 212
$\pi^+\ ^9$Be . . . 212
$\pi^+\ ^{11}$Bor . . . 212
π^+ C . . . 212
$\pi^+\ ^{12}$C . . . 212
$\pi^+\ ^{13}$C . . . 212
$\pi^+\ ^{14}$C . . . 212
$\pi^+\ ^{15}$Nit . . . 212
π^+ O . . . 212
$\pi^+\ ^{16}$O . . . 212
$\pi^+\ ^{18}$O . . . 212
$\pi^+\ ^{20}$Ne . . . 212
π^+ Mg . . . 212
π^+ Al . . . 212
$\pi^+\ ^{27}$Al . . . 213
$\pi^+\ ^{28}$Si . . . 213
π^+ Cl . . . 213
$\pi^+\ ^{37}$Cl . . . 213
π^+ Ca . . . 213
$\pi^+\ ^{40}$Ca . . . 213
π^+ Ti . . . 213

This is a short "Table of Contents" of the full Reaction/Momentum/Data-Descriptor Index

π^+ ^{51}Va 213
π^+ ^{56}Fe 213
π^+ Fe 213
π^+ Ni 213
π^+ ^{60}Ni 213
π^+ Cu 213
π^+ ^{89}Yt 213
π^+ ^{90}Zr 213
π^+ Rh 214
π^+ Ag 214
π^+ Cd 214
π^+ ^{120}Sn 214
π^+ Wt 214
π^+ Au 214
π^+ Pb 214
π^+ ^{208}Pb 215
π^- e^- 215
π^- nucleon 215
π^- p 215
π^- n 219
π^- nucleus 219
π^- deuteron 220
π^- ^{3}H 221
π^- ^{3}He 221
π^- ^{4}He 221
π^- He 221
π^- Li 221
π^- ^{6}Li 221
π^- ^{7}Li 221
π^- ^{8}Be 221
π^- Be 221
π^- ^{9}Be 222
π^- ^{11}Bor 222
π^- C 222
π^- ^{12}C 223
π^- ^{13}C 223
π^- O 223
π^- Ne 223
π^- ^{20}Ne 223
π^- Al 223
π^- Si 224
π^- S 224
π^- Cl 224
π^- Ca 224
π^- Ti 224
π^- Fe 224
π^- Ni 224
π^- Cu 224
π^- Ge 226
π^- Rh 226
π^- Ag 226
π^- Cd 226
π^- Xe 226
π^- Ta 227
π^- Wt 227
π^- Pb 227
π^- ^{238}U 227
π^- U 227
$\rho(770)^0$ nucleon 228
$f_2(1270)$ nucleon 228
$K^\pm$ p 228
K^+ nucleon 228
K^+ p 228
K^+ n 229
K^+ nucleus 229
K^+ deuteron 229
K^+ Be 229
K^+ C 229
K^+ Mg 229
K^+ Al 229
K^+ Ti 230
K^+ Cu 230
K^+ Ag 230
K^+ Cd 230
K^+ Xe 230
K^+ Au 230
K^+ Pb 231
K^- e^- 231
K^- nucleon 231
K^- p 231
K^- n 233
K^- nucleus 233
K^- deuteron 233
K^- ^{4}He 233
K^- Li 233
K^- ^{7}Li 233
K^- Be 233
K^- ^{9}Be 233
K^- C 233
K^- ^{12}C 234
K^- ^{16}O 234
K^- Al 234
K^- Si 234
K^- S 234
K^- ^{40}Ca 234
K^- Ti 234
K^- Cu 234
K^- Ag 235
K^- Cd 235
K^- Wt 235
K^- Pt 235
K^- Pb 235
K_L e^- 235
K_L p 235
K_L nucleus 235
K_L deuteron 235
K_L Cu 235
pomeron pomeron 235
nucleon nucleon 235
nucleon nucleus 235
p nucleon 235
p p 236
p n 242
p $\bar{p}$ 242
p nucleus 242
p deuteron 244
p ^{3}He 245
p ^{4}He 245
p He 245
p Li 245
p ^{6}Li 245
p ^{7}Li 245
p Be 246
p ^{9}Be 247
p C 247
p ^{12}C 250
p ^{13}C 250
p ^{14}C 250
p ^{14}Nit 250
p ^{16}O 250
p ^{19}Fl 250
p Ne 250
p ^{20}Ne 250
p ^{22}Ne 251
p ^{24}Mg 251
p Mg 251
p ^{26}Mg 251
p Al 251
p ^{27}Al 252
p Si 252
p ^{28}Si 252
p S 253
p ^{34}S 253
p Ci 253
p Ar 253
p ^{40}Ar 253
p Ca 253
p ^{40}Ca 253
p ^{48}Ca 253
p ^{48}Ti 253
p Ti 253
p ^{55}Mn 254
p ^{54}Fe 254
p ^{56}Fe 254
p Fe 254
p ^{57}Fe 255
p Co 255
p ^{59}Co 255
p ^{58}Ni 255
p Ni 255
p ^{60}Ni 255
p ^{62}Ni 255
p ^{63}Cu 255
p Cu 255
p ^{64}Cu 257
p ^{65}Cu 257
p Zn 257
p ^{89}Yt 257
p ^{90}Zr 257
p Zr 257
p Nb 257
p ^{96}Mo 257
p Mo 257
p ^{108}Ag 258
p Ag 258
p Cd 258
p ^{118}Sn 258
p Sn 258
p ^{124}Sn 258
p Xe 258
p Gd 259
p Tb 259
p ^{159}Tb 259
p Ho 259
p Tm 259
p Ta 259
p ^{181}Ta 259
p Wt 259
p Pt 260
p Au 260
p ^{197}Au 261
p Hg 262
p Pb 262
p ^{208}Pb 263
p Ac 263
p Th 263
p ^{238}U 263
p U 263
n e^- 263
n nucleon 264
n p 264
n n 265
n Pb(atom) 265
n Bi(atom) 265
n nucleus 265
n deuteron 266
n ^{6}Li 266
n Be 266
n ^{9}Be 266
n C 266
n ^{12}C 266
n Nit 266
n ^{15}Nit 266
n O 266
n ^{19}Fl 266
n ^{23}Na 266
n Al 266
n ^{27}Al 267
n Si 267
n ^{40}Ca 267
n Va 267
n Mn 267
n ^{56}Fe 267
n Fe 267
n Co 267
n Cu 267
n ^{81}Br 267
n Rb 267
n ^{90}Zr 267
n ^{93}Nb 267
n ^{108}Pd 267
n Ag 267
n ^{111}Cd 267
n ^{113}Cd 267
n Sn 267
n ^{124}Sn 268
n ^{127}I 268
n Xe 268
n ^{133}Cs 268
n ^{138}La 268
n ^{139}La 268
n Ce 268
n Ta 268
n ^{181}Ta 268
n Wt 268
n Pb 268
n ^{207}Pb 268
n ^{208}Pb 268
n ^{208}Bi 268
n Bi 268
n ^{238}U 268
n U 268
n ^{242}Am 268
n ^{245}Cm 268
$\bar{n}$ nucleon 268
$\bar{n}$ p 268
$\bar{n}$ n 269
$\bar{n}$ C 269
$\bar{n}$ ^{12}C 269
$\bar{n}$ ^{56}Fe 269
$\bar{n}$ Ta 269
$\bar{n}$ ^{181}Ta 269
$\bar{p}$ p 269
$\bar{p}$ n 282
$\bar{p}$ nucleus 282
$\bar{p}$ deuteron 283
$\bar{p}$ ^{3}He 283
$\bar{p}$ ^{4}He 283
$\bar{p}$ He 284
$\bar{p}$ Li 284
$\bar{p}$ ^{7}Li 284
$\bar{p}$ Be 284
$\bar{p}$ ^{9}Be 284
$\bar{p}$ C 284
$\bar{p}$ ^{12}C 284
$\bar{p}$ Nit 284
$\bar{p}$ Ne 284
$\bar{p}$ ^{20}Ne 285
$\bar{p}$ Al 285
$\bar{p}$ ^{27}Al 285
$\bar{p}$ S 285
$\bar{p}$ Ar 285
$\bar{p}$ ^{40}Ca 285
$\bar{p}$ ^{54}Fe 285
$\bar{p}$ Fe 285
$\bar{p}$ ^{63}Cu 285
$\bar{p}$ Cu 285
$\bar{p}$ ^{92}Mo 285
$\bar{p}$ Mo 285
$\bar{p}$ ^{98}Mo 286
$\bar{p}$ Cd 286
$\bar{p}$ ^{112}Cd 286
$\bar{p}$ ^{115}In 286
$\bar{p}$ Xe 286
$\bar{p}$ Ta 287
$\bar{p}$ Wt 287
$\bar{p}$ Pt 287
$\bar{p}$ ^{197}Au 287
$\bar{p}$ Pb 287
$\bar{p}$ ^{208}Pb 287

This is a short "Table of Contents" of the full Reaction/Momentum/Data-Descriptor Index

$\bar{p}$ ^{209}Bi 287
$\bar{p}$ ^{238}U 287
$\bar{p}$ U 287
Λ Cu 288
Σ^+ γ^* 288
Σ^0 Cu 288
Σ^- e^- 288
Σ^- p 288
Σ^- Be 288
Σ^- Wt 288
Σ^- Pb 288
Ξ^- p 288
Ξ^- nucleus 288
Ξ^- Be 288
Ξ^- ^{12}C 288
Ω^- p 288
nucleus p 288
nucleus nucleus 288
nucleus He 288
nucleus C 288
nucleus Ta 288
fragb nucleus 288
deuteron p 288
deuteron nucleus 289
deuteron deuteron 289
deuteron ^{4}He 289
deuteron He 289
deuteron ^{7}Li 289
deuteron Be 289
deuteron C 289
deuteron ^{12}C 290
deuteron Al 290
deuteron Ti 290
deuteron ^{58}Ni 290
deuteron Cu 290
deuteron ^{93}Nb 290
deuteron Ag 290
deuteron Sn 290
deuteron ^{159}Tb 290
deuteron Ta 290
deuteron Au 290
deuteron ^{197}Au 290
deuteron Pb 290
$\overline{\text{deuteron}}$ deuteron 290
$\overline{\text{deuteron}}$ C 291
$\overline{\text{deuteron}}$ Ta 291
$\overline{\text{deuteron}}$ Pb 291
^{3}H p 291
^{3}H deuteron 292
^{3}H C 292
^{3}H Ne 292
^{3}H Mg 292
^{3}H Al 292
^{3}H Cu 292
^{3}H Pb 292
^{3}He p 292
^{3}He deuteron 292
^{3}He C 292
^{3}He ^{12}C 292
^{3}He ^{26}Mg 292
^{3}He ^{40}Ca 292
^{3}He ^{48}Ca 292
^{3}He ^{54}Fe 292
^{3}He Cu 292
^{3}He ^{90}Zr 292
^{3}He Ag 292
^{3}He Au 292
^{3}He ^{208}Pb 292
^{4}He p 293
^{4}He nucleus 293
^{4}He ^{4}He 293
^{4}He Li 293
^{4}He Be 293
^{4}He C 293
^{4}He ^{12}C 294
^{4}He Ne 294
^{4}He ^{27}Al 294
^{4}He Fe 294
^{4}He Cu 294
^{4}He Zr 294
^{4}He Mo 294
^{4}He ^{165}Ho 294
^{4}He Ta 294
^{4}He ^{181}Ta 294
^{4}He Au 294
^{4}He ^{197}Au 294
^{4}He Pb 294
^{4}He ^{208}Pb 294
^{4}He ^{232}Th 294
He p 294
He nucleus 294
He Li 294
He C 294
He Al 294
He Cu 294
He Ta 294
He Pb 294
^{6}He nucleus 295
^{6}He C 295
^{8}He Be 295
^{8}He C 295
^{8}He Ni 295
^{8}He Au 295
Li nucleus 295
^{6}Li p 295
^{6}Li C 295
^{6}Li Pb 295
^{7}Li p 295
^{7}Li C 295
^{7}Li Mg 295
^{7}Li Al 295
^{7}Li Cu 295
^{7}Li Pb 295
^{9}Li nucleus 295
^{11}Li nucleus 295
^{11}Li Be 295
^{11}Li C 295
^{11}Li Al 295
^{11}Li Ni 295
^{11}Li Cu 295
^{11}Li Au 295
^{11}Li Pb 295
Be nucleus 295
^{11}Be nucleus 295
^{11}Be Be 295
^{11}Be C 295
^{11}Be Al 295
^{12}Be Be 295
^{12}Be C 295
^{12}Be Al 295
^{14}Be Be 295
^{14}Be C 295
^{14}Be Ni 295
^{14}Be Au 295
^{8}Bor Be 295
^{8}Bor C 295
^{8}Bor Al 295
Bor nucleus 295
^{11}Bor p 295
^{11}Bor He 296
^{11}Bor C 296
^{12}Bor Be 296
^{12}Bor C 296
^{12}Bor Al 296
^{13}Bor Be 296
^{13}Bor C 296
^{13}Bor Al 296
^{14}Bor Be 296
^{14}Bor C 296
^{14}Bor Al 296
^{15}Bor Be 296
^{15}Bor C 296
^{15}Bor Al 296
C p 296
C nucleus 296
C He 296
C C 296
C Ne 297
C Cu 297
C Ta 297
C Pb 297
^{12}C p 297
^{12}C nucleus 297
^{12}C C 298
^{12}C ^{12}C 298
^{12}C Ne 298
^{12}C Al 298
^{12}C ^{27}Al 298
^{12}C ^{28}Si 298
^{12}C ^{55}Mn 298
^{12}C ^{59}Co 299
^{12}C Ni 299
^{12}C Cu 299
^{12}C ^{64}Cu 299
^{12}C ^{89}Yt 300
^{12}C ^{108}Ag 300
^{12}C Ag 300
^{12}C Sn 300
^{12}C Ta 300
^{12}C ^{181}Ta 300
^{12}C Au 300
^{12}C ^{197}Au 300
^{12}C Pb 300
^{12}C ^{232}Th 301
^{12}C ^{238}U 301
^{12}C U 301
^{13}C C 301
^{13}C ^{12}C 301
^{13}C Al 301
^{13}C ^{40}Ca 301
^{13}C ^{58}Ni 301
Nit p 301
Nit nucleus 301
Nit He 301
Nit C 301
^{14}Nit nucleus 301
^{14}Nit C 301
^{14}Nit Ni 301
^{14}Nit Ag 301
^{14}Nit Ho 301
^{14}Nit ^{197}Au 301
O p 302
O nucleus 302
O He 302
O C 302
O Ne 302
O Al 302
O Ar 302
O Cu 302
O Ag 302
O Wt 302
O Au 302
O ^{197}Au 302
O Pb 302
O U 302
^{16}O p 303
^{16}O nucleus 303
^{16}O He 306
^{16}O C 306
^{16}O Ne 306
^{16}O Al 306
^{16}O ^{27}Al 307
^{16}O ^{40}Ca 307
^{16}O Va 307
^{16}O ^{58}Ni 307
^{16}O Cu 307
^{16}O Br 307
^{16}O ^{90}Zr 307
^{16}O Ag 307
^{16}O Wt 309
^{16}O Au 309
^{16}O ^{197}Au 310
^{16}O Hg 310
^{16}O Pb 310
^{16}O ^{207}Pb 310
^{16}O ^{208}Pb 310
^{16}O ^{232}Th 310
^{16}O ^{238}U 310
^{16}O U 311
^{17}O Pb 311
^{18}O ^{58}Ni 311
Fl C 311
^{19}Fl C 311
^{19}Fl Mg 311
^{19}Fl Al 311
^{19}Fl Cu 311
^{19}Fl In 311
^{19}Fl Wt 311
^{19}Fl Bi 311
^{19}Fl U 311
Ne p 311
Ne nucleus 311
Ne C 311
Ne Fl 311
Ne Na 312
Ne Al 312
Ne Nb 312
Ne Pb 312
^{20}Ne nucleus 312
^{20}Ne Al 312
^{20}Ne ^{27}Al 312
^{20}Ne ^{90}Zr 312
^{20}Ne Ag 312
^{20}Ne ^{208}Pb 312
^{22}Ne p 312
^{22}Ne nucleus 312
^{22}Ne ^{12}C 313
^{23}Na p 313
^{23}Na C 313
^{24}Mg nucleus 313
^{24}Mg Mg 313
Mg p 313
Mg nucleus 313
Mg C 313
Mg Mg 313
Mg Pb 313
Al p 313
Al nucleus 313
Al He 313
Al C 314
Al Cu 314
Si p 314
Si nucleus 314
Si C 314
Si Al 314
Si Si 314
Si Cu 314
Si Ag 314
Si Au 314
Si Pb 314
^{28}Si p 314
^{28}Si nucleus 314
^{28}Si C 315
^{28}Si Al 315
^{28}Si ^{27}Al 315
^{28}Si ^{28}Si 315
^{28}Si Cu 315
^{28}Si ^{64}Cu 316
^{28}Si Ag 316
^{28}Si Sn 316

This is a short "Table of Contents" of the full Reaction/Momentum/Data-Descriptor Index

^{28}Si ^{120}Sn 316
^{28}Si Au 316
^{28}Si ^{197}Au 316
^{28}Si Pb 316
^{28}Si ^{208}Pb 316
S *p* 316
S nucleus 316
S C 317
S S 317
S Cu 317
S Ag 317
S Wt 317
S Au 317
S Pb 317
S U 317
^{32}S *p* 317
^{32}S nucleus 317
^{32}S C 318
^{32}S Al 318
^{32}S S 318
^{32}S ^{32}S 319
^{32}S Fe 319
^{32}S Cu 319
^{32}S Pd 319
^{32}S Ag 319
^{32}S Wt 319
^{32}S Pt 320
^{32}S Au 320
^{32}S Hg 320
^{32}S Pb 320
^{32}S U 320
^{36}Ar nucleus 321
^{36}Ar C 321
^{36}Ar Al 321
^{36}Ar ^{27}Al 321
^{36}Ar ^{48}Ti 321
^{36}Ar Cu 321
^{36}Ar Ag 321
^{36}Ar ^{159}Tb 321
^{36}Ar ^{197}Au 321
Ar *K* 321
Ar *p* 321
Ar nucleus 321
Ar C 321
Ar Fl 321
Ar Na 321
Ar Cl 321
Ar Ca 321
Ar Cu 321
Ar Nb 321
Ar La 321
Ar Pb 321
^{40}Ar nucleus 321
^{40}Ar Al 322
^{40}Ar ^{27}Al 322
^{40}Ar ^{40}Ca 322
^{40}Ar Ti 322
^{40}Ar ^{90}Zr 322
^{40}Ar ^{103}Rh 322
^{40}Ar Ag 322
^{40}Ar ^{197}Au 322
^{40}Ar ^{208}Pb 322
^{40}Ar ^{232}Th 322
^{40}Ar ^{238}U 322
Ca *p* 322
Ca nucleus 322
Ca C 322
Ca Ca 322
^{48}Ca ^{9}Be 323
^{48}Ca ^{64}Ni 323
^{48}Ca Ta 323
^{48}Ca ^{181}Ta 323
^{48}Ti ^{45}Sc 323
^{56}Fe *p* 323
^{56}Fe nucleus 323
^{56}Fe C 323
^{56}Fe Nit 323
^{56}Fe O 323
^{56}Fe Fe 323
^{56}Fe Br 323
^{56}Fe Ag 323
^{56}Fe ^{197}Au 323
Fe *p* 323
Fe nucleus 323
Fe He 323
Fe C 323
Fe Fe 324
Ni *p* 324
Ni nucleus 324
Ni C 324
^{63}Cu ^{12}C 324
^{63}Cu ^{27}Al 324
^{84}Kr nucleus 324
^{84}Kr ^{197}Au 324
Kr Ag 324
Kr Au 324
Kr Th 324
^{86}Kr ^{27}Al 324
^{86}Kr ^{103}Rh 324
^{86}Kr ^{197}Au 324
Nb Nb 324
^{93}Nb ^{9}Be 324
^{93}Nb ^{12}C 324
^{93}Nb ^{27}Al 324
Xe La 324
^{129}Xe Ag 324
^{129}Xe ^{197}Au 324
^{131}Xe nucleus 324
^{136}Xe C 324
^{136}Xe Pb 324
^{139}La nucleus 324
^{139}La C 324
^{139}La ^{12}C 324
^{139}La ^{27}Al 325
^{139}La ^{59}Co 325
^{139}La ^{139}La 325
^{139}La La 325
^{139}La ^{197}Au 325
^{139}La ^{238}U 325
La La 325
Ho C 325
Ho Cu 325
Ho Ag 325
Ho Sn 325
Ho Pb 325
Ho U 325
Au C 325
Au Al 325
Au Cu 325
Au Au 325
^{197}Au nucleus 325
^{197}Au C 325
^{197}Au Al 325
^{197}Au Cu 325
^{208}Pb ^{208}Pb 325
^{208}Pb ^{232}Th 325
^{208}Pb ^{238}U 325
^{232}Th Tl(atom) 325
^{232}Th ^{181}Ta 325
^{232}Th ^{232}Th 325
^{232}Th ^{238}U 325
^{232}Th ^{248}Cm 325
^{238}U nuclearite 325
^{238}U Tl(atom) 325
^{238}U nucleus 325
^{238}U ^{110}Pd 325
^{238}U ^{181}Ta 326
^{238}U ^{197}Au 326
^{238}U ^{208}Pb 326
^{238}U ^{232}Th 326
^{238}U ^{238}U 326
^{238}U ^{248}Cm 326
U Ta 326
U Pb 326
U Th 326
U U 326
unspec nucleus 326
unspec C 326
hadron *p* 326
hadron nucleus 326
hadron C 326
hadron^{+} *p* 326
hadron^{+} nucleus 326
hadron^{+} Be 326
hadron^{+} Al 326
hadron^{+} Cu 326
hadron^{+} Wt 326
hadron^{+} Pb 327
hadron^{-} *p* 327
hadron^{-} Be 327
hadron^{-} Al 327
hadron^{-} Cu 327
hadron^{-} Wt 327

γ

0 – 0.005	Bonnetbidaud 88	flux
> 0.0002	Hirata 89B	flux
> 20	Enomoto 92	flux
	Enomoto 92B	flux
25 – 440	Hirata 88E	flux
> 40	Enomoto 91	flux
	Enomoto 89	flux
> 1000	Bond 89	flux
$3000 - 1.5 \cdot 10^4$		
	Baillon 92	flux
$> 10^4$	Amenomori 92	flux
$> 5 \cdot 10^4$	Gaisser 89	flux
$7.5 \cdot 10^4$	Tanimori 89	flux
$> 10^5$	Cronin 92	flux
	Cassiday 89B	flux
	Bond 88B	flux
$< 1.5 \cdot 10^5$	Aglietta 90	flux
$> 2 \cdot 10^5$	Ciampa 90	flux
$> 2.5 \cdot 10^5$	Tonwar 91	flux
?	Bershady 90	flux
	Muraki 90	flux
	Cocconi 88	flux
	Vonfeilitzsc 88	flux

axion

?	Lazarus 92	flux
	Nezrick 92	flux

ν

0.008 – 0.04	Denegri 90	flux
0.2 – 2.6	Aglietta 89	flux
> 10	Suzuki 91B	flux
$> 10^5$	Aglietta 89B	flux
?	Dodelson 92	flux
	Enqvist 92	flux
	Gates 91	flux
	Totsuka 91	flux,p
	Allison 90	flux
	Berger 90C	flux
	Klein 89B	flux
	Losecco 89	flux
	Berger 88D	flux
	Haines 88	flux

ν_e

0 – 0.014	Pierre 90	flux
0.0002 – 0.007	Hirata 89	flux
> 0.0002	Spiro 92	flux
	Hirata 89B	flux
	Hirata 89C	flux
< 0.0004	Anselmann 92	flux
> 0.0008	Spiro 92	flux
0.0009	Anselmann 92	flux
0.005 – 0.02	Suzuki 90B	flux
0.005 – 0.05	Mayle 92	flux
	Mukhopadhyay 91	flux
	Alekseev 88C	flux
0.006 – 0.03	Hirata 92	flux
> 0.007	Anselmann 92B	flux
	Totsuka 92	flux
	Hirata 90	flux
	Suzuki 90	flux
	Suzuki 90B	flux
0.0075 – 0.015	Kihara 92	flux
> 0.0075	Hirata 91B	flux
	Raychaudhuri 91	cor,flux
	Suzuki 91C	cor,flux
	Hirata 90B	flux
	Hirata 90C	flux
	Totsuka 90	flux
> 0.0076	Takita 89B	flux
> 0.0093	Spiro 92	flux
< 0.014	Anselmann 92	flux
	Anselmann 92B	flux
0.02 – 0.05	Mayle 92	flux
	Mukhopadhyay 91	flux
< 0.05	Arpesella 88B	flux
0.05	Hirata 89D	cor,flux
	Hirata 88B	flux
	Hirata 88C	flux
	Hirata 88E	flux
0.1	Hirata 89D	cor,flux
	Hirata 88B	flux
	Hirata 88C	flux
	Hirata 88E	flux
0.1 – 1.5	Beckerszendy 91	flux
< 1	Totsuka 92	flux
< 2	Beier 92	flux
	Totsuka 92	flux
	Casper 90	flux
	Pierre 90	flux
?	Anselmann 92B	flux
	Beier 92	flux
	Abazov 91	flux
	Hirata 91C	flux
	Mori 91	flux
	Perdereau 91	flux
	Berger 90	flux
	Berger 90C	flux
	Fukugita 90	flux
	Lim 90	flux
	Schaeffer 90	flux
	Longuemare 89	flux
	Suzuki 89	flux
	Totsuka 89B	flux
	Hirata 88F	flux

$\bar{\nu}_e$

0.0002 – 0.007	Hirata 89	flux
> 0.0002	Hirata 89B	flux
	Hirata 89C	flux
0.002 – 0.009	Klimov 90	flux
	Ketov 88	flux
0.005 – 0.05	Mayle 92	flux
	Mukhopadhyay 91	flux
	Alekseev 88C	flux
0.006 – 0.03	Hirata 92	flux
> 0.0075	Totsuka 90	flux
> 0.0076	Takita 89B	flux
< 0.01	Ketov 92	flux
	Skorokhvatov 92	flux
0.01	Bellotti 89C	flux
0.019 – 0.035	Zhang 88	cs
0.02 – 0.05	Mayle 92	flux
	Mukhopadhyay 91	flux
< 0.05	Arpesella 88B	flux
0.05	Hirata 89D	cor,flux
	Hirata 88B	flux
	Hirata 88C	flux
	Hirata 88E	flux
0.1	Hirata 89D	cor,flux
	Hirata 88B	flux
	Hirata 88C	flux
	Hirata 88E	flux
0.1 – 1.5	Beckerszendy 91	flux
0.2 – 2	Arpesella 88B	flux
< 1	Totsuka 92	flux
< 2	Beier 92	flux
	Totsuka 92	flux
	Casper 90	flux
	Pierre 90	flux
?	Beier 92	flux
	Hirata 91	flux
	Hirata 91C	flux
	Perdereau 91	flux
	Berger 90	flux
	Schaeffer 90	flux
	Longuemare 89	flux
	Suzuki 89	flux
	Totsuka 89B	flux
	Hirata 88F	flux

ν_μ

0 – 300	Borner 90	flux
0.05	Hirata 89D	cor,flux
	Hirata 88E	flux
	Hirata 88C	flux
	Hirata 88E	flux
0.1	Hirata 89D	cor,flux
	Hirata 88B	flux
	Hirata 88C	flux
	Hirata 88E	flux
> 0.175	Takita 89B	flux
0.2 – 20	Arpesella 88B	flux
0.3 – 1.5	Beckerszendy 91	flux
< 1	Totsuka 92	flux
< 2	Beier 92	flux
	Totsuka 92	flux
	Casper 90	flux
	Pierre 90	flux
$1000 - 10^6$	Oyama 88B	flux
?	Beier 92	flux
	Mori 92	flux
	Hirata 91C	flux
	Mori 91C	flux
	Perdereau 91	flux
	Berger 90	flux
	Berger 90C	flux
	Longuemare 89	flux
	Suzuki 89	flux
	Totsuka 89B	flux

$\bar{\nu}_\mu$

0 – 300	Borner 90	flux
0.05	Hirata 89D	cor,flux
	Hirata 88B	flux
	Hirata 88C	flux
	Hirata 88E	flux
0.1	Hirata 89D	cor,flux
	Hirata 88B	flux
	Hirata 88C	flux
	Hirata 88E	flux
> 0.175	Takita 89B	flux
0.2 – 2	Arpesella 88B	flux
0.3 – 1.5	Beckerszendy 91	flux
< 1	Totsuka 92	flux
< 2	Beier 92	flux
	Totsuka 92	flux
	Casper 90	flux
	Pierre 90	flux
$1000 - 10^6$	Oyama 88B	flux
?	Beier 92	flux
	Hirata 91C	flux
	Perdereau 91	flux
	Berger 90	flux
	Longuemare 89	flux
	Suzuki 89	flux
	Totsuka 89B	flux

$e^\pm$

> 1	Enomoto 91B	flux
?	Muraki 90	flux

$\mu^\pm$

1 – 1000	Bellotti 89F	flux
	Bellotti 89G	flux
	Klein 89B	flux
> 1	Beckerszendy 92	flux
> 1.697	Oyama 88	flux
100 – 5000	Bonnetbidaud 88	flux
> 700	Thomson 91	flux
> 800	Kochocki 90	flux
> 1000	Bellotti 90	flux
> 3000	Arpesella 88B	flux
> 3500	Aglietta 89C	flux
10^4	Adarkar 91	flux
$> 2 \cdot 10^4$	Ahlen 92B	flux
$> 2 \cdot 10^5$	Ciampa 90	flux
?	Ahlen 92	flux
	Mori 91B	flux
	Ahlen 90	flux
	Cutler 90	flux
	Muraki 90	flux
	Allison 89	flux
	Johns 89	flux
	Kochocki 89	flux
	Losecco 89	flux
	Berger 88D	flux

μ^-

?	Aglietta 91	flux
	Munakata 91	flux
	Yamada 91	angp,flux,pol

μ^+

?	Munakata 91	flux

μ^+

	Yamada 91	angp,flux,pol

heavy-ν

?	Dodelson 92	flux

q

?	Mori 90	flux

photino

< 100	Perdereau 89B	flux
$1000 - 10^6$	Fayet 89	flux
?	Schwartz 88	flux

higgs$^-$

(54 – 64)	Yuzuki 91	cs

dark

?	Smith 93	const
	Stubbs 93	const
	Bacci 92	flux
	Bacci 92B	flux
	Bacci 91	flux
	Verkerk 91	flux
	Caldwell 90B	flux
	Berger 88D	flux
	Caldwell 88C	flux

monopole

> 1000	Bellotti 90	flux
?	Thron 92	flux
	Buckland 90	flux
	Bellotti 89H	flux
	Bartelt 87	flux

π

1024 – 2800	Avakyan 90D	flux

nucleon

$900 - 1.2 \cdot 10^4$	Bakatanov 92	flux

p

> 0.01	Hirata 88E	–
$1000 - 10^5$	Ivanenko 89	flux
1024 – 2800	Avakyan 90D	flux
> 2000	Ivanenko 88B	flux
$> 2.5 \cdot 10^4$	Grigorov 89B	flux
?	Denegri 90	flux

n

?	Kruger 89	const

nuclearite

?	Nakamura 91	flux
	Orito 91	flux
	Liu 88B	flux

nucleus

$1000 - 10^5$	Ivanenko 89	flux
> 2000	Ivanenko 88B	flux
$10^4 - 10^7$	Dasgupta 90	a-dep,flux
	Freudenreich 90B	a-dep,flux
$10^6 - 10^7$	Danilova 92	a-dep,flux

deuteron

?	Denegri 90	flux

^{3}He

?	Denegri 90	flux

^{4}He

?	Denegri 90	flux

He

> 2000	Ivanenko 88B	flux

He

?	Denegri 90	flux

^{7}Li

?	Denegri 90	flux

Fe

$> 10^7$	Chilingarian 88	flux

mult[μ]

1 – 1000	Bellotti 89F	flux,mult
$> 2 \cdot 10^4$	Ahlen 92B	flux,mult

unspec

10^4	Huo 90	flux
$10^8 - 10^{11}$	Sokolsky 92	flux

neutral

$> 5 \cdot 10^8$	Cassiday 89	flux
	Lawrence 89	flux
	Teshima 89	flux

charged

> 60	Hirata 92	flux
$1000 - 10^5$	Ivanenko 89	flux
> 1000	Grigorov 89C	flux
$> 10^9$	Baltrusaitis 88	flux

multicharged

?	Saito 90	flux

hadron

> 1000	Avakyan 88B	flux

$\gamma\gamma$

X

(1 – 6)	Levy 88	cs
(3 – 9)	Aihara 89C	cs

mult[charged-hadron] X

(4 – 15)	Tanaka 92	mult

jet X

(4 – 15)	Tanaka 92	pt
2 – 3.873	Tanaka 91	col,pt

charged-hadron X

(4 – 15)	Tanaka 92	pt

π^0 X

?	Karch 91C	–

η X

?	Karch 91C	–

$\eta'(958)$ X

?	Karch 91C	–

$a_0(980)^0$ X

?	Karch 91C	–

$f_2(1270)$ X

?	Karch 91C	–

$a_2(1320)^0$ X

?	Karch 91C	–

$f_0(1590)$ X

?	Karch 91C	–

$\pi_2(1670)^0$ X

?	Karch 91C	–

$f_2(1720)$ X

?	Karch 91C	–

charm X

?	Braunschweig 90B	cs

$D^*(2010)^\pm$ X

(0 – 29)	Alstongarnjo 90	cs
?	Braunschweig 90B	cs

2hadron (hadrons)

(4 – 9)	Behrend 91	angp,col,pt

2γ X

?	Karch 91C	mass

$\gamma\gamma$

$2\pi^+$ X

(5)	Juricic 88	ang,p

$2\pi^-$ X

(5)	Juricic 88	ang,p

$D^0\ \overline{D}^0$ X

?	Braunschweig 90B	cs

3hadron (hadrons)

(1.25 – 4.25)	Baru 92	cs

charged-hadron 2hadron (hadrons)

(1.25 – 4.25)	Baru 92	mult

$3\pi^+$ X

(5)	Juricic 88	ang,p

$3\pi^-$ X

(5)	Juricic 88	ang,p

4hadron (hadrons)

2 – 3.873	Tanaka 91	–

4charged-hadron (hadrons)

(4 – 9)	Lumsdon 90	col,pt
(4 – 15)	Tanaka 92	col,cs

4γ X

?	Karch 91C	mass

$2\pi^+\ 2\pi^-$ X

(1.1 – 2.3)	Albrecht 90M	mass

6γ X

?	Karch 91C	mass

10γ X

?	Karch 91C	mass

meson^0

?	Harjes 91B	–
	Karch 91	–
	Bienlein 90	cs
	Boyer 90	–
	Feindt 90	–
	Feindt 90B	cs

π^0

?	Bienlein 91	amp
	Bienlein 90	cs
	Albrow 88	–
	Bienlein 88	–

η

?	Bienlein 91	amp
	Bienlein 90	cs
	Albrow 88	–
	Bienlein 88	–

$\eta'(958)$

?	Bienlein 91	amp
	Karch 91	–
	Bienlein 90	cs
	Butler 90	–
	Feindt 90B	–
	Karch 90	–
	Karch 90B	–
	Peters 90	cs
	Feindt 89	cs
	Albrow 88	–
	Bienlein 88	–

$f_0(975)$

(< 1.4)	Morgan 90	–
?	Bienlein 91	–
	Karch 91	–
	Bienlein 90	cs
	Feindt 90	–
	Oest 90	cs
	Oest 90B	cs
	Bienlein 88	–
	Feindt 88	cs

$a_0(980)$

?	Feindt 90	–
	Oest 90	cs
	Oest 90B	cs

$a_0(980)^0$

?	Bienlein 90	cs
	Bienlein 88	–
	Feindt 88	cs

$f_0(1240)$

?	Bienlein 92	–

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\gamma\gamma$

$f_0(1240)$		
	Bienlein 91	–
	Karch 91	–
$f_2(1270)$		
(< 1.4)	Morgan 90	–
?	Bienlein 92	–
	Bienlein 91	–
	Blinov 91B	–
	Harjes 91B	–
	Karch 91	–
	Adachi 90	–
	Bienlein 90	cs
	Boyer 90	–
	Feindt 90	–
	Oest 90	cs
	Oest 90B	cs
	Feindt 89	cs
	Berger 88	cs
	Bienlein 88	–
	Feindt 88	cs
$f_1(1285)$		
?	Feindt 89	cs
	Feindt 88	cs
$\eta(1295)$		
?	Bienlein 91	amp
$\pi(1300)^0$		
?	Bienlein 91	amp
$a_2(1320)$		
?	Feindt 90	–
	Oest 90	cs
	Oest 90B	cs
	Berger 88	cs
$a_2(1320)^0$		
?	Bienlein 90	cs
	Butler 90	–
	Behrend 89G	cs
	Feindt 89	cs
	Bienlein 88	–
	Feindt 88	cs
$f_0(1400)$		
?	Feindt 90	–
	Bienlein 88	–
$f_1(1420)$		
?	Feindt 89	cs
	Feindt 88	cs
$\eta(1440)$		
?	Behrend 89E	cs
	Feindt 89	cs
	Feindt 88	cs
$f_1(1510)$		
?	Feindt 88	cs
$f_2(1520)$		
?	Feindt 90	–
$f_0(1525)$		
?	Feindt 90	–
$f_2'(1525)$		
?	Harjes 91B	–
	Feindt 90	–
	Feindt 89	–
	Berger 88	cs
	Feindt 88	cs
$f_0(1590)$		
?	Bienlein 91	–
	Harjes 91B	–
	Feindt 90	–
$\pi_2(1670)$		
?	Karch 91	–
$\pi_2(1670)^0$		
?	Bienlein 90	cs
	Behrend 89G	cs
	Feindt 89	cs
	Bienlein 88	–
$f_2(1720)$		
?	Feindt 90	–
	Behrend 88E	cs

$\gamma\gamma$

$f_2(1720)$		
	Berger 88	–
	Feindt 88	cs
$f_2(1810)$		
?	Harjes 91B	–
$\eta_2(1870)$		
?	Bienlein 92	–
	Karch 90	cs
	Karch 90B	cs
$f_4(2050)$		
?	Oest 90	cs
	Oest 90B	cs
$X(2200)$		
?	Feindt 90	–
$f_4(2220)$		
?	Behrend 88E	cs
	Berger 88	–
	Feindt 88	cs
$\eta_c(1S)$		
?	Braunschweig 89	–
	Chen 89C	–
	Jensen 89	–
	Aihara 88	–
$J/\psi(1S)$		
?	Albrow 88	–
$\chi_{c0}(1P)$		
?	Chen 89C	–
$\chi_{c2}(1P)$		
?	Uehara 91	–
	Chen 89C	–
exotic-meson		
?	Achasov 91	–
$X(1600)$		
(1.1 – 2.3)	Albrecht 90M	–
$e^- e^+$		
(0.35 – 1.6)	Boyer 90	cs
$\mu^- \mu^+$		
(0.35 – 1.6)	Boyer 90	cs
2γ		
(0.1 – 1.5)	Bienlein 91	amp
$2\pi^0$		
(0.8 – 2)	Bienlein 91	cs,pwa
(< 1.4)	Morgan 90	angp,mass
?	Bienlein 92	cs,pwa
	Karch 91	angp,cs,mass,pwa
	Bienlein 90	mass
	Feindt 90	angp,cs,mass
	Marsiske 90	–
	Oest 90	cs
	Oest 90B	cs
	Bienlein 88	mass
$\pi^+ \pi^-$		
(0.35 – 1.6)	Boyer 90	ang,cs
(0.6 – 2)	Jocksch 89	angp,cs
(0.7 – 1.6)	Harjes 91B	angp,cs,pwa
(0.75 – 2)	Harjes 91	angp,cs,pwa
(< 1.4)	Morgan 90	angp,mass
?	Blinov 91B	mass
	Feindt 90	angp,cs,mass
$\eta\,\pi^0$		
?	Achasov 91	cs
	Bienlein 90	mass
	Feindt 90	cs,mass
	Oest 90	cs
	Oest 90B	cs
	Bienlein 88	mass
2η		
(1 – 2.1)	Bienlein 91	cs
?	Bienlein 92	cs,pwa
	Feindt 90	–
$2\rho(770)^0$		
(1 – 3.2)	Berger 88B	ang,angp,cs
(1 – 3.5)	Levy 88	cs
(1.1 – 2.3)	Albrecht 90M	mass,pwa

$\gamma\gamma$

$2\rho(770)^0$		
(1.2 – 3.6)	Aihara 88	cs
(1.4 – 1.6)	Aihara 88	ang,angp
(1.5 – 2)	Liu 88	–
?	Achasov 91	cs
	Feindt 90	cs,mass
$\rho(770)^+ \rho(770)^-$		
(0.7 – 3.4)	Albrecht 89F	cs
(1 – 3.5)	Levy 88	cs
(1.2 – 2.2)	Albrecht 91N	cs,mass,pwa
(1.35 – 2.85)	Behrend 89	cs
(1.4 – 3.5)	Tsipolitis 90	cs,dme
?	Achasov 91	cs
	Feindt 89	cs
$\omega(783)\ \rho(770)^0$		
(1 – 3.5)	Levy 88	cs
(1.3 – 3)	Behrend 90C	cs
?	Achasov 91	cs
$2\omega(783)$		
(1 – 3.5)	Levy 88	cs
(1.4 – 3.5)	Tsipolitis 90	cs,dme
?	Achasov 91	cs
$a_0(980)\ \pi^0$		
?	Karch 91	ang,mass
$f_2(1270)\ \pi^0$		
?	Karch 91	mass
$a_2(1320)\ \pi^0$		
?	Karch 91	ang,mass
$\rho(1700)^0\ \rho(770)^0$		
(2 – 7.5)	Behrend 90F	cs
$K^0\ \overline{K}^0$		
?	Feindt 90	cs,mass
$K^+\ K^-$		
(1 – 2.5)	Albrecht 89K	angp,cs,pwa
?	Feindt 90	cs,mass
$2K_S$		
(1 – 3)	Berger 88	mass
?	Fujii 90	cs
$K^*(892)^0\ \overline{K}^*(892)^0$		
(1 – 3.5)	Levy 88	cs
(1.8 – 4)	Aihara 88	cs
?	Achasov 91	cs
$K^*(892)^+\ K^*(892)^-$		
(1 – 3.5)	Levy 88	cs
(1.5 – 2.7)	Albrecht 88N	cs
?	Achasov 91	cs
$\phi(1020)\ \rho(770)^0$		
(1 – 3.5)	Levy 88	cs
?	Achasov 91	cs
$\phi(1020)\ \omega(783)$		
(1 – 3.5)	Levy 88	cs
(1.9 – 3.4)	Albrecht 88L	cs
?	Achasov 91	cs
$2\phi(1020)$		
(1 – 3.5)	Levy 88	cs
(1.9 – 3.4)	Albrecht 88L	cs
?	Achasov 91	cs
$p\ \overline{p}$		
(2 – 2.9)	Albrecht 88R	angp,cs
$\Delta(1232\,P_{33})^0\ \overline{\Delta}(1232\,P_{33})^0$		
(2.5 – 4)	Albrecht 88R	cs
(2.5 – 5.5)	Aihara 89	cs
$\Delta(1232\,P_{33})^{++}\ \overline{\Delta}(1232\,P_{33})^{--}$		
(2.5 – 4)	Albrecht 88R	cs
(2.5 – 5.5)	Aihara 89	cs
$\Lambda\ \overline{\Lambda}$		
(2.5 – 4)	Albrecht 88R	cs
$3\pi^0$		
?	Karch 91	mass
	Bienlein 90	mass
	Bienlein 88	mass

$\gamma\,\gamma$

$\pi^+\,\pi^0\,\pi^-$		
?	Behrend 89G	mass
$\eta\,2\pi^0$		
?	Bienlein 92	cs,pwa
	Karch 91	ang,mass
	Bienlein 90	mass
	Feindt 90B	mass
	Karch 90	mass
	Karch 90B	mass
	Bienlein 88	mass
$\eta\,\pi^+\,\pi^-$		
?	Feindt 90B	mass
$\rho(770)^+\,\pi^0\,\pi^- + \rho(770)^-\,\pi^+\,\pi^0$		
(0.7 – 3.4)	Albrecht 89F	cs
(1.2 – 2.2)	Albrecht 91N	cs
$\rho(770)^0\,\pi^+\,\pi^-$		
(1 – 3.2)	Berger 88B	ang,angp,cs
(1 – 3.5)	Levy 88	cs
(1.2 – 3.6)	Aihara 88	cs
$K^+\,\overline{K}^0\,\pi^- + K^0\,K^-\,\pi^+$		
?	Fujii 90	cs
$K^*(892)^0\,K^-\,\pi^+ + \overline{K}^*(892)^0\,K^+\,\pi^-$		
(1.8 – 4)	Aihara 88	cs
$\phi(1020)\,\pi^+\,\pi^-$		
(1.8 – 4)	Aihara 88	cs
$p\,\overline{p}\,\pi^0$		
(2 – 2.9)	Albrecht 88R	cs
$p\,\overline{\Delta}(1232\,P_{33})^{--}\,\pi^+ +$		
$\overline{p}\,\Delta(1232\,P_{33})^{++}\,\pi^-$		
(2.5 – 3.5)	Albrecht 88R	cs
4γ		
?	Bienlein 92	mass
	Karch 91	mass,pt
$\pi^+\,\pi^-\,2\gamma$		
?	Feindt 90B	mass
nonres < 4π >		
(1.2 – 2.2)	Albrecht 91N	cs
$\pi^+\,2\pi^0\,\pi^-$		
(0.7 – 3.4)	Albrecht 89F	cs
(1.2 – 2.2)	Albrecht 91N	mass
(1.35 – 2.85)	Behrend 89	mass
(1.4 – 3.5)	Tsipolitis 90	ang,cs,mass,pwa
$2\pi^+\,2\pi^-$		
(1 – 3.2)	Berger 88B	ang,angp,cs
(1.2 – 3.6)	Aihara 88	mass
$2\rho(770)^0\,\pi^+\,\pi^-$		
(1.5 – 5.5)	Pust 91	cs
(2 – 7.5)	Behrend 90F	cs,mass
$K^+\,K^-\,\pi^+\,\pi^-$		
(1.8 – 3.6)	Aihara 88	ang,angp
(1.8 – 4)	Aihara 88	mass
$K^+\,K_S\,\pi^0\,\pi^-$		
(1.5 – 2.7)	Albrecht 88N	cs
$K_S\,K^-\,\pi^+\,\pi^0$		
(1.5 – 2.7)	Albrecht 88N	cs
$2K_S\,\pi^+\,\pi^-$		
(1.5 – 2.7)	Albrecht 88N	cs
$2K^+\,2K^-$		
(1.9 – 3.4)	Albrecht 88L	cs,mass,pt
(3 – 5)	Aihara 88	mass
$p\,\overline{p}\,\pi^+\,\pi^-$		
(2.5 – 4)	Albrecht 88R	cs
(2.5 – 5.5)	Aihara 89	cs,mass
$2\pi^+\,\pi^0\,2\pi^-$		
(< 4)	Behrend 90C	cs,mass,pwa
$\eta\,2\pi\,2\gamma$		
?	Burchell 92	–

$\gamma\,\gamma$

$\rho(770)^0\,2\pi^+\,2\pi^-$		
(1.5 – 5.5)	Pust 91	cs,mass
?	Behrend 90F	–
$K\,\overline{K}\,\pi\,2\gamma$		
?	Burchell 92	–
$K^+\,K^-\,\pi^+\,\pi^0\,\pi^-$		
(1.9 – 3.4)	Albrecht 88L	cs,mass,pt
$p\,\overline{p}\,\pi^+\,\pi^0\,\pi^-$		
(2.5 – 4)	Albrecht 88R	cs
6γ		
?	Bienlein 92	mass
	Karch 91	mass,pt
	Feindt 90B	mass
	Karch 90	mass
	Karch 90B	mass
$2\pi^+\,2\pi^-\,2\gamma$		
?	Feindt 90B	mass
$2\pi^+\,2\pi^0\,2\pi^-$		
(1.4 – 3.5)	Tsipolitis 90	ang,cs,mass,pwa
$3\pi^+\,3\pi^-$		
(1 – 7)	Levy 88	cs
(1.5 – 5.5)	Pust 91	cor,cs,mass
(1.6)	Behrend 90F	angp,cs,mass
(1.6 – 7.5)	Behrend 90B	angp,cs,pt
(7.5)	Behrend 90F	angp,cs,mass
8γ		
?	Karch 91	mass,pt
10γ		
?	Karch 91	mass,pt
12γ		
?	Karch 91	mass,pt

$\gamma\,\gamma^*$

axion		
(0.001 – 1.8)	Ruoso 92	–
?	Semertzidis 90	cs
meson^0		
?	Semertzidis 90	cs
π^0		
?	Feindt 90B	–
η		
(0.25 – 2)	Aihara 89D	mass
?	Feindt 90B	–
$\eta'(958)$		
(0.25 – 2)	Aihara 89D	mass
?	Feindt 90B	–
2γ		
?	Feindt 90B	mass
$\gamma\,\gamma^*$		
?	Semertzidis 90	asym
$\pi^+\,\pi^-\,\gamma$		
(0.25 – 2)	Aihara 89D	mass
$\pi^+\,\pi^-\,2\gamma$		
(0.25 – 2)	Aihara 89D	mass

γ nucleon

$\bar{c}$ X + c X		
80 – 160	Alvarez 92	cs
charm X		
145	Purohit 88	cs
charmed-meson X		
40 – 120	Witherell 88	cs,pt
50 – 150	Wormser 89	cs,pt
	Roudeau 88	cs,pt
$\overline{\text{charmed}}$-meson X		
50 – 150	Wormser 89	cs,pt
	Roudeau 88	cs,pt
DC X		
50 – 150	Calvino 90	p,pt
$D^\pm$ X		
50 – 150	Alvarez 91	–

γ nucleon

$D^\pm$ X		
80 – 160	Alvarez 92	cs,p,pt
D X		
50 – 150	Rossi 89	p,pt
80 – 160	Alvarez 92	cs
D^+ X		
50 – 150	Alvarez 90	–
	Alvarez 90C	–
	Wormser 89	cs
	Roudeau 88	cs
50 – 200	Alvarez 90D	cs
100	Wormser 89B	–
D^0 X		
40 – 120	Witherell 88	–
50 – 150	Alvarez 90	–
	Alvarez 90C	–
	Wormser 89	cs
	Roudeau 88	cs
50 – 200	Alvarez 90D	cs
100	Wormser 89B	–
D^0 X + $\overline{D}^0$ X		
80 – 160	Alvarez 92	cs,p,pt
$\overline{D}$ X		
80 – 160	Alvarez 92	cs
$D^*(2010)^+$ X		
50 – 150	Wormser 89	cs
$D_S^\pm$ X		
50 – 150	Alvarez 91	–
D_S^+ X		
50 – 150	Alvarez 90	–
	Alvarez 90C	–
	Wormser 89	cs
	Roudeau 88	cs
80 – 160	Alvarez 92	cs
100	Wormser 89B	–
D_S^- X		
50 – 150	Wormser 89	cs
80 – 160	Alvarez 92	cs
$D_1(2420)^0$ X + $\overline{D}_1(2420)^0$ X		
50 – 150	Roudeau 88	–
Λ_c^+ X		
20 – 70	Klein 89C	–
50 – 150	Alvarez 90	–
	Alvarez 90B	–
	Wormser 89	cs
	Roudeau 88	cs
80 – 160	Alvarez 92	cs
80 – 230	Anjos 89C	–
$\overline{\Lambda}_c^-$ X		
50 – 150	Alvarez 90B	–
80 – 160	Alvarez 92	cs
80 – 230	Anjos 89C	–
$K^-\,\pi^+$ X		
50 – 150	Alvarez 90	mass
	Alvarez 90C	mass
100	Wormser 89B	mass
charm $\overline{\text{charm}}$ X		
50 – 150	Wormser 89	cs,pt
	Roudeau 88	cs,pt
$D^0\,\gamma$ X		
100	Wormser 89B	–
$D\,\overline{D}$ X		
50 – 150	Calvino 90	ang,cor,mass,p
$K^-\,2\pi^+$ X		
50 – 150	Alvarez 90	mass
	Alvarez 90C	mass
100	Wormser 89B	mass
$K^-\,\pi^+\,\pi^0$ X		
100	Wormser 89B	mass
$K^+\,K^-\,\pi^+$ X		
50 – 150	Alvarez 90C	mass
$p\,K^-\,\pi^+$ X		
50 – 150	Alvarez 90	mass
	Alvarez 90B	mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

γ nucleon

$\bar{p}\ K^+\ \pi^-$ X
50 – 150 Alvarez 90B mass
$\pi^+\ \pi^-\ \pi^\pm\ \gamma$ X
50 – 150 Alvarez 91 mass
$K^+\ K^-\ \pi^+\ \pi^0$ X
50 – 150 Alvarez 90C mass
$p\ \bar{K}^0\ \pi^+\ \pi^-$ X
80 – 230 Anjos 89C mass
$\Lambda\ 2\pi^+\ \pi^-$ X
80 – 230 Anjos 89C mass
$K^+\ K^-\ 2\pi^+\ \pi^-$ X
50 – 150 Alvarez 90C mass
nucleon $\phi(1020)$
45 – 85 Busennitz 89 angp,cs

$\gamma\ p$

X
3.7 – 18.3 Arneodo 92 cs
(90 – 290) Ahmed 92D cs
(100 – 300) Wolf 92 cs,et,pt
(175 – 250) Wolf 92 cs
(186 – 233) Derrick 92 cs
(200) Eisele 92 cs
charged X
65 – 175 Apsimon 89 angp,cs,pt
70 – 90 Apsimon 90C p
110 – 170 Apsimon 90C p
(175 – 250) Wolf 92 angp,col,pt
jet X
(175 – 250) Wolf 92 pt
hadron X
65 – 175 Rotscheidt 88 p,pt
70 – 170 Hoeger 90 p,pt
γ X
90 Wormser 90 pt
axion X
20 Ackleh 89 cs
c X
20 – 310 Rossi 91 pt
$\pi^\pm$ X
100 – 170 Holzkamp 88 p
π^+ X
0.35 Ganenko 91 a-dep,asym,p
π^0 X
60 – 170 Apsimon 91 p,pt
90 Wormser 90 pt
η X
60 – 170 Apsimon 92 p,pt
$\rho(770)^0$ X
65 – 175 Apsimon 92B cs
Apsimon 91B angp,cs,p,pt
Hofmann 91 p,pt
$f_0(975)$ X
65 – 175 Apsimon 92B cs
$f_2(1270)$ X
65 – 175 Apsimon 92B angp,cs,p,pt
Fiedler 91 cs,p,pt
K^+ X
100 – 170 Holzkamp 88 p
$K^*(892)^0$ X
65 – 175 Gebert 92 cs,p,pt
$\bar{K}^*(892)^0$ X
65 – 175 Gebert 92 cs,p,pt
$\phi(1020)$ X
65 – 175 Gebert 92 cs,p,pt
D^+ X
80 – 230 Anjos 89B cs
100 Spiegel 91 cs
100 – 260 Spiegel 91 –
D^0 X
100 Spiegel 91 cs

$\gamma\ p$

D^0 X
100 – 260 Spiegel 91 –
D_S^+ X
80 – 230 Anjos 89B cs
100 Spiegel 91 –
D_S^- X
80 – 230 Anjos 89B cs
$J/\psi(1S)$ X
90 Wormser 90 pt
Λ_c^+ X
100 Spiegel 91 cs
$\bar{\Lambda}_c^-$ X
100 Spiegel 91 cs
charged (chargeds) (neutrals)
65 – 175 Apsimon 90 col,pt
charged$^+$ charged$^-$ X
65 – 175 Apsimon 90B angp,asym,p
2jet X
(175 – 250) Wolf 92 cor
2γ X
60 – 170 Apsimon 92 mass
meson mult[charged] (neutrals)
60 – 170 Korsgen 88 mult,p
$\pi^+\ \pi^-$ X
65 – 175 Apsimon 92B mass
Fiedler 91 mass
Hofmann 91 mass,p,pt
$\eta\ \pi^+$ X
80 – 230 Anjos 89B mass
$\omega(783)\ \pi^+$ X
80 – 230 Anjos 89B mass
$K^+\ \pi^-$ X
65 – 175 Gebert 92 mass
$K^-\ \pi^+$ X
65 – 175 Gebert 92 mass
$K^+\ K^-$ X
65 – 175 Gebert 92 mass
$\phi(1020)\ \pi^+$ X
145 Anjos 90C mass
$\phi(1020)\ e^+\ \nu_e$ X
145 Anjos 90C mass
$\phi(1020)\ \pi^+\ \pi^0$ X
80 – 230 Anjos 89B mass
$p\ \pi^+\ \pi^-$ X
20 Brau 88 mass
$2\pi^+\ \pi^0\ \pi^-$ X
80 – 230 Anjos 89B mass
$K^+\ K^-\ \pi^+\ \pi^0$ X
80 – 230 Anjos 89B mass
$p\ \pi^+\ \pi^0\ \pi^-$ X
20 Brau 88 mass
$p\ \gamma$
0.032 – 0.072 Federspiel 91 angp,p
0.098 Zieger 92 angp
0.132 Zieger 92 angp
n meson$^+$
17.6 – 21 Condo 91 cs
$p\ \pi^0$
0.137 – 0.155 Argan 88 amp,cs
0.146 – 0.156 Beck 90B angp,cs
0.243 – 0.314 Blanpied 92 angp,asym
0.7 – 1.6 Bagdasaryan 90 angp,cs,p,pol
0.73 – 1.066 Avakyan 88C pol
0.875 – 1.175 Avakyan 91 pol
0.9 – 1.35 Agababyan 89B pol
0.9 – 1.65 Sirunyan 88 asym
1 – 1.1 Meyer 88B asym
$n\ \pi^+$
0.21 – 0.96 Buchler 91 angp,p

$\gamma\ p$

$n\ \pi^+$
0.7 Meyer 88B asym
0.85 Meyer 88B asym
0.9 – 1.65 Sirunyan 88 asym
$p\ \eta$
0.7 – 1 Anton 92 angp,cs,pwa
0.707 – 0.723 Anton 92 cs
1.39 – 1.8 Sirunyan 88 asym
$p\ \rho(770)^0$
20 Brau 88 angp
65 – 175 Dieter 89 cs,p,pt
$p\ \omega(783)$
60 – 225 Busennitz 89 angp,cs
$p\ b_1(1235)^0$
20 Brau 88 –
$p\ \omega(1390)$
20 – 70 Donnachie 89 cs
$p\ \omega(1600)$
20 – 70 Donnachie 89 cs
$n\ \pi_2(1670)^+$
17.6 – 21 Condo 91 cs
$p\ \phi(1020)$
35 – 165 Busennitz 89 angp,cs
p glueball
20 – 70 Donnachie 89 cs
$p\ C(1480)^0$
20 – 70 Landsberg 91 cs
? Landsberg 90B –
$\Delta(1232\ P_{33})^{++}$ meson$^-$
17.6 – 21 Condo 91 cs
$\Delta(1232\ P_{33})^{++}\ a_2(1320)^-$
19.3 Condo 90 cs
$\Delta(1232\ P_{33})^{++}\ \pi_2(1670)^-$
17.6 – 21 Condo 91 cs
$\Lambda\ K^+$
1.1 – 1.3 Meyer 88B amp,asym,pwa
$p\ \pi^+\ \pi^-$
65 – 175 Dieter 89 mass
$p\ \rho(770)^+\ \pi^-$
20 – 70 Donnachie 89 mass
$p\ \rho(770)^0\ \pi^0$
20 – 70 Donnachie 89 mass
$p\ \rho(770)^-\ \pi^+$
20 – 70 Donnachie 89 mass
$p\ \omega(783)\ \pi^0$
20 Brau 88 ang,angp,cs
$p\ K^+\ K^-$
35 – 165 Busennitz 89 mass
$p\ K^*(892)^+\ K^-$
20 – 70 Landsberg 90 cs
$p\ K^*(892)^0\ K_S$
20 – 70 Landsberg 90 cs
$p\ K^*(892)^-\ K^+$
20 – 70 Landsberg 90 cs
$p\ \bar{K}^*(892)^0\ K_S$
20 – 70 Landsberg 90 cs
$p\ \phi(1020)\ \pi^0$
20 – 70 Landsberg 90 cs
? Landsberg 90B –
$2p\ \bar{p}$
60 – 225 Busennitz 89 mass
fragt 2jet
(100 – 295) Derrick 92B cs,pt
$p\ \pi^+\ \pi^0\ \pi^-$
60 – 225 Busennitz 89 mass
$n\ 2\pi^+\ \pi^-$
17.6 – 21 Condo 91 ang,mass
$p\ \rho(770)^+\ \rho(770)^0\ \pi^-$
20 – 70 Atkinson 88 mass

$\gamma\ p$

$p\ 2\rho(770)^0\ \pi^0$		
20 – 70	Atkinson 88	mass
$p\ \rho(770)^0\ \rho(770)^-\ \pi^+$		
20 – 70	Atkinson 88	mass
$p\ \omega(783)\ \pi^+\ \pi^-$		
20 – 70	Donnachie 89	mass
$\Delta(1232\ P_{33})^{++}\ \pi^+\ 2\pi^-$		
19.3	Condo 90	ang,angp,dme,mass
$p\ \pi^+\ \pi^-\ 2\gamma$		
60 – 225	Busennitz 89	mass
$p\ \pi^+\ 2\pi^0\ \pi^-$		
20	Brau 88	mass
$p\ 2\pi^+\ 2\pi$		
17.6 – 21	Condo 91	ang,mass
19.3	Condo 90	ang,angp,mass
$p\ \rho(770)^+\ \pi^+\ 2\pi^-$		
20 – 70	Atkinson 88	mass
$p\ \rho(770)^0\ \pi^+\ \pi^0\ \pi^-$		
20 – 70	Atkinson 88	mass
$p\ \rho(770)^-\ 2\pi^+\ \pi^-$		
20 – 70	Atkinson 88	mass
$p\ 2\pi^+\ \pi^0\ 2\pi^-$		
20 – 70	Atkinson 88	mass

$\gamma\ n$

$p\ \pi^-$		
0.5 – 2.2	Meyer 88B	asym
0.7	Meyer 88B	asym
0.85	Meyer 88B	asym

γ Cs(atom)

Cs(atom) γ		
0	Noecker 88	asym,qnc
?	Bouchiat 90	asym,qnc
	Bouchiat 86B	asym,qnc

γ Tl(atom)

Tl(atom)		
?	Abdullah 90	-
Tl(atom) γ		
?	Bouchiat 90	asym,qnc
	Bouchiat 86B	asym,qnc

γ Bi(atom)

Bi(atom) γ		
?	Bouchiat 90	asym,qnc
	Khriplovich 88	asym,qnc

γ nucleus

X		
0.1 – 0.53	Arends 88	cs
100 – 1000	Zatsepin 89	cs
> 1000	Bond 89	cs
> 10^5	Bond 88B	cs
inelastic		
900 – 10^4	Bakatanov 88	cs
μ^+ X		
> $5 \cdot 10^4$	Dingus 88	cs
	Dingus 88B	cs
shower X		
> $5 \cdot 10^4$	Haines 90	cs
	Dingus 88	cs
	Dingus 88B	cs
π^+ X		
0.2 – 0.4	Arends 88	p
π^0 X		
0.23 – 0.45	Arends 88	angp,cs
π^- X		
0.2 – 0.4	Arends 88	p

γ nucleus

D^+ X		
221	Frabetti 91	angp
	Spiegel 91	-
D^0 X		
221	Frabetti 91	angp
	Spiegel 91	-
D_S^+ X		
221	Spiegel 91	-
	Frabetti 90	-
p X		
0.187 – 0.427	Maruyama 89	angp,cs,p
0.2 – 0.4	Arends 88	p
Ξ^- X		
221	Frabetti 92	mass
Λ_c^+ X		
221	Frabetti 92E	-
	Spiegel 91	-
	Frabetti 90	-
Ω_c X		
221	Frabetti 92	-
hypernucleus X		
?	Bando 90	-
$\Lambda\ \pi^-$ X		
221	Frabetti 92	mass
$\Omega^-\ \pi^+$ X		
221	Frabetti 92	mass
$K^+\ K^-\ \pi^+$ X		
221	Frabetti 90	mass
$p\ K^-\ \pi^+$ X		
221	Frabetti 92E	mass
	Frabetti 91	mass
	Frabetti 90	mass
$\Lambda\ K^-\ \pi^+$ X		
221	Frabetti 92	mass
$p\ K^-\ 2\pi^+$ X		
221	Frabetti 91	mass
$\Xi^-\ K^-\ 2\pi^+$ X		
221	Frabetti 92	mass
$\Omega^-\ 2\pi^+\ \pi^-$ X		
221	Frabetti 92	mass
$p\ K^-\ 2\pi^+\ \pi^-$ X		
221	Frabetti 91	mass
nucleus $e^-\ e^+$		
13 – 25	Baskov 88	ang,p

γ deuteron

X		
3.7 – 18.3	Arneodo 92	cs
p X		
0.133 – 0.158	Wallace 91	angp
1.5 – 4.5	Avakyan 90	p,pol
$p\ \bar{p}$ X		
60 – 225	Busennitz 89	mass
$p\ n$		
0.01 – 1	Desantics 88	cs
0.02 – 0.1	Zieger 92B	angp
0.03 – 0.1	Ganenko 89	angp,p
0.034 – 0.606	Voitsekhovsk 92	angp
0.054	Krause 92	angp,pol
0.06	Krause 92	angp,pol
0.063 – 0.071	Debevec 92	angp
0.068	Krause 92	angp,pol
0.088	Krause 92	angp,pol
< 0.1	Meissner 90	asym,qnc
0.1 – 0.21	Desantics 88	angp
0.187 – 0.427	Maruyama 89	-
0.191	Caracappa 91	angp,asym
0.192 – 0.536	Ganenko 92	angp
0.2 – 0.35	Zybalov 90	angp,pol
0.2 – 0.367	Zybalov 91	pol
0.222	Caracappa 91	angp,asym
0.235	Sarty 93	angp,cs
0.3 – 1	Adamyan 88	asym
0.31 – 0.45	Avakyan 90B	pol

γ deuteron

$p\ n$		
	Avakyan 90C	pol
0.4 – 0.5	Yokosawa 90B	angp,pol
0.4 – 0.8	Galumyan 88	asym,pol
0.45	Yokosawa 90B	asym
	Althoff 89	asym
	Meyer 88B	asym
0.55	Yokosawa 90B	asym
	Althoff 89	asym
	Meyer 88B	asym
0.65	Yokosawa 90B	asym
	Althoff 89	asym
	Meyer 88B	asym
0.8 – 1.6	Napolitano 88	angp,p
deuteron π^0		
0.137 – 0.155	Argan 88	amp,cs
0.4 – 0.8	Galumyan 88	asym,pol
0.5 – 0.9	Adamyan 89	cs
	Adamyan 88	asym
0.5 – 1	Imanishi 88	angp
$p\ n\ \gamma$		
0.08 – 0.13	Rose 90	angp
0.13	Rose 90B	angp,p
$2p\ \pi^-$		
0.28 – 0.52	Zielinsky 88	cs,mass
$n\ \Delta(1232\ P_{33})^{++}\ \pi^-$		
0.566 – 0.846	Asai 89	cs
$p\ n\ \pi^+\ \pi^-$		
0.566 – 0.846	Asai 89	angp,mass
$p\ n\ K^+\ K^-$		
45 – 85	Busennitz 89	mass

$\gamma\ {}^3\mathrm{He}$

π^+ X		
0.35	Ganenko 88	angp,asym,p
π^- X		
0.35	Ganenko 88	angp,asym,p
p X		
0.06	Ganenko 88	angp,asym,p
0.14	Ganenko 88	angp,asym,p
0.35	Ganenko 88	angp,asym,p
	Zybalov 88	pol
${}^3\mathrm{He}\ \pi^0$		
0.137 – 0.155	Argan 88	amp,cs
$2p\ n$		
0.09 – 0.25	Sarty 93	angp,cs
0.275 – 0.474	Audit 89	angp

$\gamma\ {}^4\mathrm{He}$

π^- X		
0.35	Ganenko 88	angp,asym,p
p X		
0.06	Ganenko 88	angp,asym,p
0.14	Ganenko 88	angp,asym,p
0.17 – 0.45	Maruyama 89	p
	Endo 88	p
0.35	Ganenko 88	angp,asym,p
	Zybalov 88	pol
n X		
0.17 – 0.45	Maruyama 89	p
	Endo 88	p
$p\ n$ X		
0.17 – 0.45	Maruyama 89	angp,cor
	Endo 88	angp,cor
0.45 – 0.55	Adamyan 88	asym
${}^4\mathrm{He}\ \pi^0$		
0.137 – 0.155	Argan 88	amp,cs
deuteron $p\ n$		
0.17 – 0.45	Maruyama 89	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\gamma\ ^4$He

deuteron $p\ n$

	Endo 88	cs

$2p\ 2n$

0.135 – 0.455	Emura 91	angp,cs,p
	Emura 91B	angp,mass,p
0.17 – 0.45	Emura 90	cs,mass,p
	Maruyama 89	cs
	Endo 88	cs

γ He

π^0 X

0.1379 – 0.1699		
	Jammes 89	cs

p X

0.187 – 0.427	Maruyama 89	angp,cs,p

$\gamma\ ^6$Li

π^+ X

0.35	Ganenko 91	a-dep,asym,p

π^0 X

0.137 – 0.147	Glavanakov 89	a-dep,cs
0.3 – 0.45	Belousov 91	angp,p

π^- X

0.35	Ganenko 91	a-dep,asym,p

p X

0 – 0.6	Zybalov 90B	a-dep,angp,pol

$p\ n$ X

0.3 – 1	Adamyan 88	asym

^{6}Li* π^0

0.5	Naumenko 89	cs

^{6}Li $\pi^0\ \gamma$

0.5	Naumenko 89	p

$\gamma\ ^7$Li

π^+ X

0.35	Ganenko 91	a-dep,asym,p

π^- X

0.35	Ganenko 91	a-dep,asym,p

γ Be

π^+ X

0.227	Arends 91	a-dep,angp,p
0.282	Arends 91	a-dep,angp,p
0.391	Arends 91	a-dep,angp,p

π^- X

0.227	Arends 91	a-dep,angp,p
0.282	Arends 91	a-dep,angp,p
0.391	Arends 91	a-dep,angp,p

charmed-meson X

80 – 240	Witherell 88	cs,pt

$D^\pm$ X

100 – 350	Buchholz 90B	cs,p,pt
	Shephard 90	pt

D X

80 – 230	Rossi 89	p,pt

D^+ X

70 – 260	Anjos 90E	–
80 – 230	Anjos 92B	–
	Anjos 90B	–
	Anjos 88	–
	Anjos 88C	cs,p,pt
	Anjos 88D	–
	Anjos 88E	–
	Anjos 88G	–
	Raab 87	–
80 – 240	Anjos 91C	–
	Anjos 91D	mass
	Witherell 88	–
90 – 260	Anjos 90D	–
100 – 350	Buchholz 90	cs
	Shephard 90	–

γ Be

D^+ X

145	Anjos 91	cs
	Anjos 90C	–

D^0 X

80 – 230	Anjos 88	–
	Anjos 88B	–
	Anjos 88C	cs,p,pt
	Raab 87	–
80 – 240	Anjos 90	–
	Witherell 88	–
90 – 260	Anjos 90D	–
100 – 350	Buchholz 90	cs
	Shephard 90	–
145	Anjos 91B	–
200	Shukla 92B	–
221	Frabetti 92B	–
	Frabetti 92D	–

$\overline{D}^0$ X

80 – 230	Anjos 88B	–
	Anjos 88C	cs,p,pt
	Raab 87	–

D^- X

80 – 230	Anjos 88C	cs,p,pt
	Anjos 88D	–
	Anjos 88E	–
	Anjos 88G	–
	Raab 87	–

$D^*(2010)^\pm$ X

100 – 350	Buchholz 90B	cs,p,pt
	Shephard 90	pt

$D^*(2010)^+$ X

80 – 230	Anjos 88	–
	Anjos 88B	–
80 – 240	Anjos 92	–
100 – 350	Buchholz 90	cs
145	Anjos 91B	–

$D^*(2010)^-$ X

80 – 230	Anjos 88B	–
145	Anjos 91B	–

D_S^+ X

70 – 260	Anjos 90E	–
80 – 230	Anjos 88C	cs,p,pt
	Anjos 88D	–
	Anjos 88G	–
	Raab 87	–
80 – 240	Anjos 91D	mass
	Witherell 88	–
100 – 350	Buchholz 90	cs
	Shephard 90	–
145	Anjos 91	cs
	Anjos 90C	–
200	Shukla 92B	–
221	Frabetti 92D	–

D_S^- X

80 – 230	Anjos 88C	cs,p,pt
	Anjos 88D	–
	Anjos 88G	–
	Raab 87	–

$D_1(2420)^0$ X

80 – 230	Anjos 88F	–
200	Shukla 92	–

$\overline{D}_1(2420)^0$ X

80 – 230	Anjos 88F	–

$D_2^*(2460)^0$ X

200	Shukla 92	–
	Shukla 92B	–

$D_{S1}(2536)^+$ X

200	Shukla 92	–

p X

0.187 – 0.427	Maruyama 89	angp,cs,p
0.227	Arends 91	a-dep,angp,p
0.282	Arends 91	a-dep,angp,p
0.391	Arends 91	a-dep,angp,p

Λ_c^+ X

80 – 230	Anjos 88C	cs,p,pt
	Anjos 87B	–
80 – 240	Witherell 88	–

γ Be

Λ_c^+ X

100 – 200	Klein 89C	–
100 – 350	Buchholz 90	cs
	Shephard 90	–

$\overline{\Lambda}_c^-$ X

80 – 230	Anjos 88C	cs,p,pt

$\Sigma_c(2455)^{++}$ X

80 – 230	Anjos 89	cs

$\Sigma_c(2455)^0$ X

80 – 230	Anjos 89	cs

$\pi^+\ \pi^-$ X

80 – 240	Anjos 90	mass
145	Anjos 91B	mass

$\overline{K}^0\ \pi^+$ X

70 – 260	Anjos 90E	mass

$K^-\ \pi^+$ X

80 – 230	Anjos 88	mass
145	Anjos 91B	mass
221	Frabetti 92D	mass

$K^+\ \overline{K}^0$ X

70 – 260	Anjos 90E	mass

$K^+\ K^-$ X

80 – 240	Anjos 90	mass
145	Anjos 91B	mass
221	Frabetti 92D	mass

$\overline{K}^*(892)^0\ \eta$ X

80 – 230	Anjos 90D	mass

$\overline{K}^*(892)^0\ \omega(783)$ X

80 – 230	Anjos 90D	mass

$K^*(892)^+\ K^-$ X

80 – 240	Anjos 90	mass

$K^*(892)^0\ \overline{K}^0$ X

80 – 240	Anjos 90	mass

$K^*(892)^0\ K^-$ X

80 – 230	Anjos 88G	mass
	Raab 87	mass

$\overline{K}^*(892)^0\ K^+$ X

80 – 230	Anjos 88G	mass
	Raab 87	mass

$\overline{K}^*(892)^0\ K^0$ X

80 – 240	Anjos 90	mass

$K^*(892)^-\ K^+$ X

80 – 240	Anjos 90	mass

$K^*(892)^0\ \overline{K}^*(892)^0$ X

80 – 240	Anjos 90	mass

$\phi(1020)\ \pi^+$ X

70 – 260	Anjos 90E	mass
80 – 230	Anjos 88G	mass
	Raab 87	mass

$\phi(1020)\ \pi^-$ X

80 – 230	Anjos 88G	mass
	Raab 87	mass

$D^+\ \pi^-$ X

80 – 230	Anjos 88F	mass
200	Shukla 92	mass

$D^0\ \pi^+$ X

80 – 230	Anjos 88	mass
80 – 240	Anjos 92	–

$D^-\ \pi^+$ X

80 – 230	Anjos 88F	mass

$D^*(2010)^+\ \pi^-$ X

80 – 230	Anjos 88F	mass
200	Shukla 92	mass

$D^*(2010)^-\ \pi^+$ X

80 – 230	Anjos 88F	mass

$D^*(2010)^+\ K_S$ X

200	Shukla 92	mass

$\pi^+\ \pi^-\ e^+$ X

80 – 240	Anjos 91C	mass

γ Be

$K^+ \pi^- e^- X$
80 – 230 Anjos 88B ang,angp,mass
Anjos 88E ang,angp,mass

$K^- \pi^+ e^+ X$
80 – 230 Anjos 90B ang,angp,mass
Anjos 88B ang,angp,mass
Anjos 88E ang,angp,mass

$\overline{K}^*(892)^0 e^+ \nu_e X$
145 Anjos 90C mass

$2\pi^+ \pi^- X$
80 – 230 Anjos 88D mass

$\pi^+ 2\pi^- X$
80 – 230 Anjos 88D mass

$K^+ 2\pi^- X$
80 – 230 Anjos 88D mass

$\overline{K}^0 \pi^+ \pi^- X$
100 – 350 Buchholz 90 mass

$K^- 2\pi^+ X$
70 – 260 Anjos 90E mass
80 – 230 Anjos 92B –
Anjos 88 mass
Anjos 88D mass
80 – 240 Anjos 91C mass

$K_S \pi^+ \pi^0 X$
80 – 240 Anjos 92 mass

$K_S \pi^+ \pi^- X$
221 Frabetti 92B mass,pwa

$K^+ \overline{K}^0 \pi^- X$
80 – 240 Anjos 90 mass

$K^+ K^- \pi^+ X$
80 – 230 Anjos 88G mass
100 – 350 Buchholz 90 mass
145 Anjos 91B mass

$K^+ K^- \pi^- X$
80 – 230 Anjos 88G mass
145 Anjos 91B mass

$K^0 K^- \pi^+ X$
80 – 240 Anjos 90 mass

$2K_S \pi^+ X$
80 – 240 Anjos 92 mass

$K^+ \overline{K}^0 K^- X$
100 – 350 Buchholz 90 mass

$K^+ K_S K^- X$
221 Frabetti 92B mass,pwa

$\phi(1020) \pi^+ \pi^- X$
80 – 240 Anjos 90 mass

$p K^- \pi^+ X$
80 – 230 Anjos 87B mass
100 – 350 Buchholz 90 mass

$\Xi^- 2\pi^+ X$
220 Frabetti 92C mass

$\overline{K}^0 \pi^+ \pi^- e^+ X$
80 – 230 Anjos 92B mass

$K^- \pi^+ \pi^0 e^+ X$
80 – 230 Anjos 92B mass

$2\pi^+ \pi^- \gamma X$
145 Anjos 91 mass

$2\pi^+ 2\pi^- X$
80 – 240 Anjos 90 mass
100 – 350 Buchholz 90 mass
221 Frabetti 92D mass

$K^+ \pi^+ 2\pi^- X$
80 – 230 Anjos 88F mass
Raab 87 mass

$K^- 2\pi^+ \pi^- X$
80 – 230 Anjos 88 mass
Anjos 88F mass
Raab 87 mass

γ Be

$K^- 2\pi^+ \pi^- X$
100 – 350 Buchholz 90 mass
221 Frabetti 92D mass

$K^+ K^- \pi^+ \pi^- X$
80 – 240 Anjos 90 mass

$\phi(1020) 2\pi^+ \pi^- X$
221 Frabetti 92D mass

$p K^- 2\pi^+ X$
80 – 230 Anjos 89 mass

$p K^- \pi^+ \pi^- X$
80 – 230 Anjos 89 mass

$\Lambda 2\pi^+ \pi^- X$
220 Frabetti 92C mass

$3\pi^+ 2\pi^- X$
80 – 230 Anjos 88D mass

$2\pi^+ 3\pi^- X$
80 – 230 Anjos 88D mass

$\overline{K}^0 2\pi^+ 2\pi^- X$
80 – 230 Anjos 90D mass

$K^- 3\pi^+ \pi^- X$
80 – 230 Anjos 90D mass

$K^- 2\pi^+ \pi^0 \pi^- X$
80 – 230 Anjos 90D mass

$K^+ K^- 2\pi^+ \pi^- X$
80 – 230 Anjos 88G mass
221 Frabetti 92D mass

$K^+ K^- \pi^+ 2\pi^- X$
80 – 230 Anjos 88G mass

$3\pi^+ \pi^0 2\pi^- X$
145 Anjos 91 mass

$K^+ 2\pi^+ 3\pi^- X$
80 – 230 Anjos 88F mass

$K^- 3\pi^+ 2\pi^- X$
80 – 230 Anjos 88F mass

Be $J/\psi(1S)$
100 – 400 Ratti 90 cs

γ ^{9}Be

$\pi^+ X$
0.35 Ganenko 91 a-dep,asym,p

$\pi^0 X$
0.137 – 0.147 Glavanakov 89 a-dep,cs

$\pi^- X$
0.35 Ganenko 91 a-dep,asym,p

$p X$
0 – 0.6 Zybalov 90B a-dep,angp,pol

γ ^{11}Bor

^{11}C π^-
1.5 – 4.5 Arakelyan 90 cs

γ C

X
3.7 – 18.3 Arneodo 92 cs

$\pi^+ X$
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p

$\pi^0 X$
0.1379 – 0.1699 Jammes 89 cs
0.3 – 0.44 Belousov 88 angp

$\pi^- X$
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p

$p X$
0.187 – 0.427 Maruyama 89 angp,cs,p
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p

γ C

$p X$
0.34 – 0.58 Maruyama 89 angp,cs,p
0.391 Arends 91 a-dep,angp,p
1.5 Avakyan 89 pol
1.5 – 4.5 Alanakyan 88 p
4.5 Avakyan 89 pol

fragt X
2 Astabatyan 90 angp
3 Astabatyan 90 angp

$p \pi X$
1.5 – 4.5 Alanakyan 88 p

$2p X$
1.5 – 4.5 Alanakyan 88 p

γ ^{12}C

γX
0.015 – 0.14 Schelhaas 90 angp,p

$\pi^+ X$
0.35 Ganenko 91 a-dep,asym,p

$\pi^0 X$
0.137 – 0.147 Glavanakov 89 a-dep,cs
0.3 – 0.45 Belousov 91 angp,p

$\pi^- X$
0.35 Ganenko 91 a-dep,asym,p

$p X$
0 – 0.6 Zybalov 90B a-dep,angp,pol

^{11}C $N(1520\, D_{13})^0$
0.696 Weinstein 93 cs,mass
0.698 Weinstein 93 cs,mass
0.796 Weinstein 93 cs,mass

^{11}C $N(1535\, S_{11})^0$
0.696 Weinstein 93 cs,mass
0.698 Weinstein 93 cs,mass
0.796 Weinstein 93 cs,mass

^{12}C* π^0
0.5 Naumenko 89 cs

^{11}C $p \pi^-$
< 0.45 Ananien 90 mass,p

^{12}C $\pi^0 \gamma$
0.5 Naumenko 89 p

γ Nit

^{14}C π^+
0.173 Ghedira 90 angp,p
0.2 Ghedira 90 angp,p
0.23 Ghedira 90 angp,p
0.26 Ghedira 90 angp,p
0.32 Ghedira 90 angp,p

γ ^{14}Nit

^{14}C π^+
0.4 Distelbrink 91 angp

γ ^{15}Nit

^{15}O π^-
0.17 Liesenfeld 88 angp

γ O

$\pi^+ X$
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p

$\pi^- X$
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p

$p X$
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses $E_{c.m}$ in GeV.

$\gamma\ ^{16}O$

π^0 X
0.137 – 0.147 Glavanakov 89 a-dep,cs
2p X
0.08 – 0.131 Macgregor 91 cs
p n X
0.08 – 0.131 Macgregor 91 cs
^{15}O n
0.15 Beise 89 angp
0.2 Beise 89 angp
0.25 Beise 89 angp

γ Al

mult[charged] X
0.5 – 3.3 Arakelyan 89D mult
p X
1.5 – 4.5 Avakyan 90 p,pol
fragt X
2 Astabatyan 90 angp
3 Astabatyan 90 angp
2fragt (fragts)
0.8 – 1.8 Delima 90B cs

$\gamma\ ^{27}Al$

π^+ X
0.35 Ganenko 91 a-dep,asym,p
π^0 X
0.3 – 0.45 Belousov 91 angp,p
π^- X
0.35 Ganenko 91 a-dep,asym,p
p X
0 – 0.6 Zybalov 90B a-dep,angp,pol
2fragt X
0.8 – 1.8 Delima 89 angp,cs,p
3fragt X
0.8 – 1.8 Delima 89 angp,cs,p
$^{27}Mg\ \pi^+$
1.5 – 4.5 Arakelyan 90 cs

γ Si

DC^+ X
50 – 200 Alvarez 91B p,pt
Λ_c^+ X
70 – 225 Klein 89C –
$D\ \bar{D}$ X
50 – 200 Alvarez 91B ang,mass,p,pt

γ Ca

π^0 X
0.1379 – 0.1699 Jammes 89 cs

$\gamma\ ^{40}Ca$

π^0 X
0.168 Koch 89 angp,cs
$^{40}Ca\ \pi^0$
0.168 Koch 89 angp,cs
$Ca^*\ \pi^0$
0.168 Koch 89 angp,cs

γ Ti

π^+ X
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p
π^- X
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p
p X
0.227 Arends 91 a-dep,angp,p

γ Ti

p X
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p
2fragt X
0.8 – 1.8 Delima 89 angp,cs,p
2fragt (fragts)
0.8 – 1.8 Delima 90B cs
3fragt X
0.8 – 1.8 Delima 89 angp,cs,p

γ Co

2fragt (fragts)
0.8 – 1.8 Delima 90B cs

$\gamma\ ^{59}Co$

2fragt X
0.8 – 1.8 Delima 89 angp,cs,p
3fragt X
0.8 – 1.8 Delima 89 angp,cs,p

$\gamma\ ^{60}Ni$

$^{60}Cu\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs
$^{59}Fe\ p\ \pi^+$
1.5 – 4.5 Arakelyan 90 cs

$\gamma\ ^{61}Ni$

$^{61}Co\ \pi^+$
1.5 – 4.5 Arakelyan 90 cs
$^{61}Cu\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs

$\gamma\ ^{62}Ni$

$^{62}Co\ \pi^+$
1.5 – 4.5 Arakelyan 90 cs
$^{61}Fe\ p\ \pi^+$
1.5 – 4.5 Arakelyan 90 cs

γ Cu

X
3.7 – 18.3 Arneodo 92 cs
mult[charged] X
0.5 – 3.3 Arakelyan 89D mult
π^0 X
0.3 – 0.45 Belousov 91 angp,p
^7Be X
4 Amroyan 89 cs
^{24}Na X
0.6 Amroyan 89 cs
0.78 Amroyan 89 cs
2 Amroyan 89 cs
3 Amroyan 89 cs
4 Amroyan 89 cs
5 Amroyan 89 cs

$\gamma\ ^{65}Cu$

^{24}Na X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{42}KK X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{43}KK X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{43}Sc X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{44}Sc X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{47}Sc X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs

$\gamma\ ^{65}Cu$

^{48}Va X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{52}Mn X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{56}Mn X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{56}Co X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{58}Co X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
^{61}Cu X
1.5 – 4.5 Arakelyan 90F a-dep,p
4.5 Arakelyan 91 cs
$^{65}Ni\ \pi^+$
1.5 – 4.5 Arakelyan 90 cs
$^{63}Zn\ 2n\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs
$^{62}Zn\ 3n\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs

γ Ge

D^0 X
70 – 225 Amendolia 87 –
$\bar{D}^0$ X
70 – 225 Amendolia 87 –
Λ_c^+ X
70 – 225 Klein 89C –

γ Zr

2fragt X
0.8 – 1.8 Delima 89 angp,cs,p
2fragt (fragts)
0.8 – 1.8 Delima 90B cs
3fragt X
0.8 – 1.8 Delima 89 angp,cs,p

γ Nb

^7Be X
4.5 Amroyan 89 cs
^{24}Na X
4.5 Amroyan 89 cs
2fragt (fragts)
0.8 – 1.8 Delima 90B cs

γ Ag

fragt X
1.5 – 4.5 Amroyan 88 cs
2 Astabatyan 90 angp
3 Astabatyan 90 angp
^7Be X
2.9 Amroyan 89 cs
4.5 Amroyan 89 cs
^{24}Na X
0.78 Amroyan 89 cs
1 Amroyan 89 cs
2.9 Amroyan 89 cs
4.5 Amroyan 89 cs
2fragt (fragts)
0.8 – 1.8 Delima 90B cs

γ Cd

π^0 X
0.3 – 0.45 Belousov 91 angp,p

γ In

2fragt (fragts)
0.8 – 1.8 Delima 90B cs

$\gamma\ ^{116}Sn$

$^{116}In^*\ \pi^+$
1.5 – 4.5 Arakelyan 90 cs

$\gamma\ ^{116}Sn$

$^{116}Sb\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs

γ Sn

p X
1.5 Avakyan 89 pol
4.5 Avakyan 89 pol

$\gamma\ ^{120}Sn$

$^{120}Sb\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs
$^{118}Sb\ 2n\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs

$\gamma\ ^{122}Sn$

$^{122}Sb\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs

$\gamma\ ^{124}Sn$

$^{124}Sb\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs
$^{120}Sb\ 4n\ \pi^-$
1.5 – 4.5 Arakelyan 90 cs

γ Xe

Xe $e^-\ e^+$
0.025 – 2.5 Strugalski 88B cs

γ Nd

2fragt (fragts)
0.8 – 1.8 Delima 90B cs

γ Sm

2fragt (fragts)
0.8 – 1.8 Delima 90B cs

γ Ta

^7Be X
4 Amroyan 89 cs
^{24}Na X
2.9 Amroyan 89 cs
4.5 Amroyan 89 cs
2fragt (fragts)
0.8 – 1.8 Delima 90B cs

$\gamma\ ^{184}Wt$

π^+ X
0.35 Ganenko 91 a-dep,asym,p
π^- X
0.35 Ganenko 91 a-dep,asym,p

γ Au

fragt X
2 Astabatyan 90 angp
3 Astabatyan 90 angp

γ Pb

X
3.7 – 18.3 Arneodo 92 cs
mult[charged] X
0.5 – 3.3 Arakelyan 89D mult
π^+ X
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p
π^- X
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p
0.391 Arends 91 a-dep,angp,p
p X
0.227 Arends 91 a-dep,angp,p
0.282 Arends 91 a-dep,angp,p

γ Pb

p X
0.391 Arends 91 a-dep,angp,p
1.5 – 4.5 Avakyan 90 p,pol

$\gamma\ ^{208}Pb$

γ X
0.058 Fuhrberg 92 p
$^{208}Pb\ \gamma$
0.058 Fuhrberg 92 cs
0.075 Fuhrberg 92 cs

$\gamma\ ^{209}Bi$

2fragt X
< 4.5 Zakharov 90 p
2fragt
< 4.5 Zakharov 90 p
3fragt
< 4.5 Zakharov 90 p

$\gamma\ ^{235}U$

fragt X
0.15 – 4.32 Arakelyan 89 cs
Arakelyan 89C cs
hadron (hadrons) X
0.3 – 3.5 Arakelyan 90C cs
fragt (fragts) X
0.3 – 3.5 Arakelyan 90C cs

$\gamma\ ^{238}U$

X
0.15 – 3.55 Arakelyan 89E cs
fragt X
0.15 – 4.32 Arakelyan 89 cs
Arakelyan 89C cs
fragt (fragts)
0.05 – 0.8 Frommhold 92 cs
hadron (hadrons) X
0.3 – 3.5 Arakelyan 90C cs
Arakelyan 90D cs
fragt (fragts) X
0.3 – 3.5 Arakelyan 90C cs
Arakelyan 90E cs
fragt (fragts) hadron
0.06 – 0.24 Ivanov 92 cs
γ fragt (fragts)
0.06 – 0.24 Ivanov 92 cs

$\gamma\ ^{237}Np$

fragt (fragts) hadron
0.06 – 0.24 Ivanov 92 cs
γ fragt (fragts)
0.06 – 0.24 Ivanov 92 cs

$\gamma^*\ p$

fragt 2jet
(100 – 295) Ahmed 92E cor,pt

higgs p

$p\ e^-\ e^+$
? Blumlein 91 –
$p\ \mu^-\ \mu^+$
? Blumlein 91 –

higgs C

C $e^-\ e^+$
? Blumlein 91 –
C $\mu^-\ \mu^+$
? Blumlein 91 –

axion γ^*

γ
? Lazarus 92 const

axion γ^*

γ
Nezrick 92 const
Ruoso 92 –

axion p

$p\ e^-\ e^+$
? Blumlein 91 –
$p\ \mu^-\ \mu^+$
? Blumlein 91 –

axion nucleus

nucleus γ
? Moskowitz 88 –

axion C

C $e^-\ e^+$
? Blumlein 91 –
C $\mu^-\ \mu^+$
? Blumlein 91 –

$\nu\ e^-$

$e^-\ \nu$
> 0.0075 Kajita 90 cs,p

$\nu\ p$

ν mult[charged-hadron] (neutrals)
10 – 260 Jongejans 89 mult,p
$\Sigma_c(2455)^+\ \mu^-$ X
30 – 300 Klein 89C –
ν charged-hadron (charged-hadrons) (neutrals)
10 – 260 Jongejans 89 mult,p

$\nu\ n$

ν (charged-hadrons) (neutrals)
10 – 260 Jongejans 89 mult,p
ν mult[charged-hadron] (neutrals)
10 – 260 Jongejans 89 mult,p

ν nucleus

shower X
50 Ammar 89B mult
grey X
50 Ammar 89B mult
black X
50 Ammar 89B mult
($\pi^{\pm}$'s) $\ell^{\pm}$ X
> 1 Sato 90 cs,p
$\pi^{\pm}$ ($\pi^{\pm}$'s) X
> 1 Sato 90 cs,p

ν deuteron

(neutrals) even-charged
0 – 260 Tenner 91 mult
(neutrals) odd-charged
0 – 260 Tenner 91 mult
$\pi^+\ \mu^-$ X
10 – 100 Matsinos 89 angp,p,pt
$\pi^-\ \mu^-$ X
10 – 100 Matsinos 89 angp,p,pt
$p\ \mu^-$ X
10 – 100 Matsinos 89 angp,p,pt
hadron$^-$ (neutrals) even-charged
0 – 260 Tenner 91 mult
K_S (neutrals) even-charged
0 – 260 Tenner 91 mult
K_S (neutrals) odd-charged
0 – 260 Tenner 91 mult
$K^*(892)$ (neutrals) even-charged
0 – 260 Tenner 91 mult
$K^*(892)$ (neutrals) odd-charged
0 – 260 Tenner 91 mult

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

ν deuteron

Λ (neutrals) even-charged

0 – 260	Tenner 91	mult

Λ (neutrals) odd-charged

0 – 260	Tenner 91	mult

K_S hadron$^-$ (neutrals) even-charged

0 – 260	Tenner 91	mult

$K^*(892)$ hadron$^-$ (neutrals) even-charged

0 – 260	Tenner 91	mult

Λ hadron$^-$ (neutrals) even-charged

0 – 260	Tenner 91	mult

ν Ne

shower X

50	Ammar 89B	mult

grey X

50	Ammar 89B	mult

black X

50	Ammar 89B	mult

$\pi^+ \mu^-$ X

10 – 100	Matsinos 89	angp,p,pt

$\pi^- \mu^-$ X

10 – 100	Matsinos 89	angp,p,pt

$p \mu^-$ X

10 – 100	Matsinos 89	angp,p,pt

p mult[p] μ^- X

10 – 100	Matsinos 89	angp,mult

ν Fe

μ^- X

10 – 260	Virchaux 92	p
	Berge 89	p

$3\mu^\pm$ X

60	Choban 91	cs
165	Choban 91	cs

$\bar{\nu}$ deuteron

(neutrals) even-charged

0 – 260	Tenner 91	mult

(neutrals) odd-charged

0 – 260	Tenner 91	mult

$\pi^+ \mu^+$ X

10 – 100	Matsinos 89	angp,p,pt

$\pi^- \mu^+$ X

10 – 100	Matsinos 89	angp,p,pt

$p \mu^+$ X

10 – 100	Matsinos 89	angp,p,pt

hadron$^-$ (neutrals) even-charged

0 – 260	Tenner 91	mult

K_S (neutrals) even-charged

0 – 260	Tenner 91	mult

K_S (neutrals) odd-charged

0 – 260	Tenner 91	mult

$K^*(892)$ (neutrals) even-charged

0 – 260	Tenner 91	mult

$K^*(892)$ (neutrals) odd-charged

0 – 260	Tenner 91	mult

Λ (neutrals) even-charged

0 – 260	Tenner 91	mult

Λ (neutrals) odd-charged

0 – 260	Tenner 91	mult

K_S hadron$^-$ (neutrals) even-charged

0 – 260	Tenner 91	mult

$K^*(892)$ hadron$^-$ (neutrals) even-charged

0 – 260	Tenner 91	mult

Λ hadron$^-$ (neutrals) even-charged

0 – 260	Tenner 91	mult

ν Ne

$\pi^+ \mu^+$ X

10 – 100	Matsinos 89	angp,p,pt

$\pi^- \mu^+$ X

10 – 100	Matsinos 89	angp,p,pt

$p \mu^+$ X

10 – 100	Matsinos 89	angp,p,pt

p mult[p] μ^+ X

10 – 100	Matsinos 89	angp,mult

$\bar{\nu}$ Fe

μ^+ X

10 – 260	Virchaux 92	p
	Berge 89	p

ν_e e^-

e^- ν_e

0 – 0.053	Allen 93	cs
	Allen 91	angp
	Krakauer 91	cs,qnc
	Krakauer 90	cs
	Allen 89	cs
0.0002 – 0.007	Hirata 89	cs
0.005 – 0.05	Hirata 88F	cs
> 0.007	Anselmann 92B	cs
> 0.0075	Suzuki 91C	p
	Suzuki 90	cs
< 0.02	Nakamura 88	p
0.02 – 0.053	Burman 91	angp,const
?	Spiro 92	–
	Nakahata 90	flux
	Raffelt 90	–
	Suzuki 89	–
	Totsuka 89B	–

ν_e nucleon

e^- X

0 – 7	Blumenfeld 89	p
0 – 10	Borodovsky 92	p
3 – 30	Ammosov 88D	cs
10 – 240	Baker 90	cs

e^- charged-hadron X

10 – 240	Baker 90	mult,p

e^- e^+ X

10 – 240	Baker 90	cs

e^- strange^0 X

10 – 240	Baker 90	cs

ν_e n

p e^-

> 0.2	Allison 89B	cs
1.5	Lile 89	cs

ν_e nucleus

ν_e X

0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux

e^- X

0.02 – 0.06	Gajewski 89	flux
0.1 – 1.1	Suzuki 88	flux
0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux
0.4 – 2	Nakamura 88	–
1 – 2	Bergsma 88	cs
3 – 30	Ammosov 92B	cs
13	Bergsma 88	cs
?	Blumlein 92	p
	Blumlein 92B	p
	Kajita 90	cs,p

charged X

0.1 – 1.1	Suzuki 88	flux

ν_e ^{12}C

^{12}Nit e^-

0 – 0.0528	Bodmann 92	cs

ν_e ^{37}Cl

^{37}Ar e^-

> 0.0008	Davis 90	flux
	Nakahata 90	flux
	Davis 88B	flux
0.005 – 0.02	Suzuki 90B	p
< 0.02	Nakamura 88	p
?	Anselmann 92B	cs
	Spiro 92	

ν_e ^{71}Ga

^{71}Ge e

< 0.0004	Anselmann 92	cs
0.0009	Anselmann 92	cs
< 0.014	Anselmann 92	cs
	Anselmann 92B	cs
?	Spiro 92	
	Abazov 91	

$\bar{\nu}_e$ e^-

e^- $\bar{\nu}_e$

0.0002 – 0.002	Derbin 92	cs
0.0006 – 0.0052		
	Derbin 92B	cs
0.002 – 0.009	Vidyakin 91	const,c
	Ketov 88	cs
0.004 – 0.01	Vidyakin 92	cs
	Vidyakin 89B	cs

$\bar{\nu}_e$ nucleon

e^+ X

0 – 10	Borodovsky 92	p
10 – 240	Baker 90	cs

e^+ charged-hadron X

10 – 240	Baker 90	mult,p

e^- e^+ X

10 – 240	Baker 90	cs

e^+ strange^0 X

10 – 240	Baker 90	cs

$\bar{\nu}_e$ p

n e^+

0 – 0.01	Bouchez 88	cs,p
0 – 0.053	Durkin 88	
0.001 – 0.01	Avenier 89	
0.002 – 0.009	Kuvshinnikov 91	const,cs
	Mikaelyan 91	cs
	Vidyakin 91	cs
	Klimov 90	cs
	Kopeikin 90	p
	Vershinsky 90	cs
	Afonin 88	cs
	Afonin 88B	cs,p
	Ketov 88	cs
	Mikaelyan 88	cs
0.002 – 0.01	Kuvshinnikov 90	cs
0.004 – 0.01	Vidyakin 90B	cs
0.005 0.05	Hirata 88F	cs
< 0.01	Ketov 92	cs
	Skorokhvatov 92	cs
	Boehm 88	cs
1.5	Krizmanic 89	cs
?	Freedman 93	–
	Raffelt 90	

$\bar{\nu}_e$ nucleus

e^+ X

0.1 – 1.1	Suzuki 88	flux
0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux
0.4 – 2	Nakamura 88	–
1 – 2	Bergsma 88	cs
13	Bergsma 88	cs
?	Blumlein 92	p
	Blumlein 92B	p

$\bar{\nu}_e$ X

0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux

$\overline{\nu}_e$ nucleus

charged X

0.1 – 1.1	Suzuki 88	flux

$\overline{\nu}_e$ deuteron

$p\ n\ \overline{\nu}_e$

0.002 – 0.009	Mikaelyan 91	cs
	Vidyakin 91	cs
	Vershinsky 90	cs
	Ketov 88	cs
0.004 – 0.01	Vidyakin 90	cs

$2n\ e^+$

0.002 – 0.009	Mikaelyan 91	cs
	Vidyakin 91	cs
	Vershinsky 90	cs
	Ketov 88	cs
0.004 – 0.01	Vidyakin 90	cs
	Vidyakin 89	cs

ν_μ e^-

$e^-\ \nu_\mu$

0.0298	Krakauer 90	cs
1.27	Abe 89E	angp,const
< 5	Ahrens 90	angp,const,cs
10 – 160	Dorenbosch 89	const,cs
	Geiregat 89	const,cs
10 – 200	Baker 89	const,cs
23.7	Vilain 93	angp,const
	Rolandi 92	angp,const,cs
	Vilain 92	angp,const,cs
23.8	Geiregat 91	const,cs

$\mu^-\ \nu_e$

10 – 160	Dorenbosch 89	const,cs
15 – 600	Mishra 90B	const,cs
	Mishra 89B	angp,const,cs
23.8	Geiregat 90B	cs,pt
	Lippich 90	angp,const,cs

ν_μ q

$\mu^-\ q$

?	Mishra 92	const

ν_μ nucleon

e^- X

0 – 7	Blumenfeld 89	p

ν_μ X

4 – 160	Loverre 88	cs
10 – 160	Rolandi 92	cs
	Allaby 89	p
10 – 200	Ushida 88B	cs
20 – 230	Reutens 90	const,cs

μ^- X

0 – 10	Borodovsky 92	p
3 – 30	Ammosov 88D	cs
4 – 160	Loverre 88	cs
10 – 160	Rolandi 92	cs
	Allaby 88	cs
10 – 200	Virchaux 92	p
	Ammosov 88	p
	Ushida 88B	cs
10 – 240	Baker 90	cs
15 – 600	Mishra 90B	const,cs
20 – 230	Reutens 90	const,cs
30 – 300	Auchincloss 90	cs

$\mu^+\ 0\mu^\pm$ X

10 – 230	Mishra 89	cs

heavy-lepton^0 X

< 600	Debarbaro 90B	–

charm X

10 – 200	Ushida 88B	cs

μ^- hadron$^+$ X

0 – 230	Mukherjee 86	angp

μ^- hadron$^-$ X

0 – 230	Mukherjee 86	angp

μ^- charged-hadron X

10 – 240	Baker 90	mult,p

ν_μ nucleon

$\mu^-\ e^-$ X

3 – 30	Ammosov 88E	cs

$\mu^-\ e^+$ X

3 – 30	Ammosov 88E	cs,mass,p

$\mu^-\ \mu^+$ X

10 – 240	Baker 90	cs
30 – 600	Foudas 90	cs,p
	Foudas 88B	cs,p,pt

μ^- strange^0 X

10 – 240	Baker 90	cs

μ^- charm X

10 – 200	Ushida 88	ang,p
	Ushida 88B	cs
30 – 600	Foudas 88B	–

charmed-meson μ^- X

10 – 200	Ushida 88	p,pt

$\Lambda_c^+\ \mu^-$ X

10 – 200	Ushida 88	p,pt
	Ushida 88B	cs

charm $\overline{\text{charm}}$ X

10 – 200	Ushida 88B	cs

μ^- hadron jet X

0 – 230	Mukherjee 86	angp

$2\mu^-\ \mu^+$ X

20 – 200	Choban 91	cs,p

ν_μ charm $\overline{\text{charm}}$ X

10 – 200	Ushida 88B	cs

$D_{S1}(2536)^+\ \mu^-\ \gamma$ X

10 – 200	Asratyan 87C	–

$D_{SJ}(2564)^+\ \mu^-\ \gamma$ X

10 – 200	Asratyan 87C	–

$D^*(2010)^+\ K^0\ \mu^-\ \gamma$ X

10 – 200	Asratyan 87C	mass,p

$\Delta(1232\ P_{33})^{++}\ \mu^-$

3 – 30	Ammosov 88B	cs,p

$p\ \pi^+\ \mu^-$

3 – 30	Ammosov 88B	p

ν_μ p

ν_μ X

0 – 300	Borner 90	cs,p
10 – 260	Allasia 88C	const,cs

μ^- X

3 – 30	Ammosov 92B	cs
	Brunner 89	cs,p
5 – 150	Virchaux 92	p
	Jones 89C	p
10 – 250	Virchaux 92	cs,p
10 – 260	Allasia 88C	const,cs

μ^- mult[charged] (neutrals)

10 – 150	Jones 91C	mass,mult,p

μ^- mult[charged-hadron] (neutrals)

10 – 260	Jongejans 89	mult,p

mult[p] μ^- X

10 – 300	Guy 89	cs,mult,p

μ^- charged X

5 – 150	Bosetti 90	mass,pt

ν_μ hadron$^+$ X

0 – 200	Schmitz 88	mult

ν_μ hadron$^-$ X

0 – 200	Schmitz 88	mult

μ^- hadron$^+$ X

0 – 200	Schmitz 88	mult

μ^- hadron$^-$ X

0 – 200	Schmitz 88	mult

$\pi^+\ \mu^-$ X

0 – 200	Schmitz 88	mult

$\pi^-\ \mu^-$ X

0 – 200	Schmitz 88	mult

ν_μ p

$\rho(770)^0\ \mu^-$ X

0 – 200	Schmitz 88	pol

$f_2(1270)\ \mu^-$ X

10 – 200	Jones 91	angp,mass,mult,p,pt

$D_S^+\ \mu^-$ X

0 – 150	Asratyan 92	angp,cs

$D_S^{*+}\ \mu^-$ X

0 – 150	Asratyan 92	angp,cs

$\mu^\pm$ hadron hadron$^+$ (hadrons)

5 – 150	Jones 90	mult,p

μ^- hadron hadron$^+$ (hadrons)

5 – 150	Jones 90	mult,p

μ^- hadron hadron$^-$ (hadrons)

5 – 150	Jones 90	mult,p

$\pi^\pm\ \mu^-$ hadron (hadrons)

5 – 150	Jones 90	mult,p

$\pi^+\ \mu^-$ hadron (hadrons)

5 – 150	Jones 90	mult,p

$\pi^-\ \mu^-$ hadron (hadrons)

5 – 150	Jones 90	mult,p

$\rho(770)^0\ \mu^-$ hadron (hadrons)

10 – 200	Jones 91B	angp,mult,p

p (p's) μ^- X

10 – 300	Guy 89	cs,mult,p

$\pi^+\ \pi^-\ \mu^-$ hadron (hadrons)

10 – 200	Jones 91B	mass

μ^- 3charged (chargeds) (neutrals)

5 – 150	Bosetti 90	mass,pt

$\Delta(1232\ P_{33})^{++}\ \mu^-$

3 – 30	Ammosov 92B	cs
3 – 100	Allasia 90	cs

$p\ \pi^+\ \mu^-$

0 – 30	Schmitz 88	cs
3 – 30	Ammosov 92B	cs
	Grabosch 89	angp,cs,mass
3 – 100	Allasia 90	angp,cs,dme,mass
5 – 150	Jones 89B	p

$p\ D_S^*(2790)^+\ \mu^-$

10 – 200	Batusov 88C	–
25	Batusov 90C	–

$p\ D^*(2010)^0\ K^+\ \mu^-$

25	Batusov 90C	–

$p\ 2\pi^0\ \nu_e$ heavy-lepton^0

3 – 30	Ammosov 92B	–

$p\ 2\pi^+\ \pi^-\ \mu^-$

3 – 100	Allasia 90	angp

$p\ D^0\ K^+\ \mu^-\ \gamma$

25	Batusov 90C	–

$p\ \overline{K}^*(892)^0\ K^+\ 2\pi^0\ \mu^-\ \gamma$

25	Batusov 90C	–

$p\ K^+\ K^-\ \pi^+\ \mu^-\ 5\gamma$

25	Batusov 90C	–

ν_μ n

ν_μ X

10 – 260	Allasia 88C	const,cs

μ^- X

3 – 30	Ammosov 92B	cs
	Brunner 89	cs,p
10 – 250	Virchaux 92	cs,p
10 – 260	Allasia 88C	const,cs

μ^- mult[charged-hadron] (neutrals)

10 – 260	Jongejans 89	mult,p

ν_μ hadron$^+$ X

0 – 200	Schmitz 88	mult

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\nu_\mu\ n$

ν_μ hadron$^-$ X

0 – 200	Schmitz 88	mult

μ^- hadron$^+$ X

0 – 200	Schmitz 88	mult

μ^- hadron$^-$ X

0 – 200	Schmitz 88	mult

$p\ \mu^-$

> 0.15	Allison 89B	cs
1.5	Lile 89	cs
3 – 30	Ammosov 92B	cs,p
	Brunner 89B	angp,const,cs
3 – 100	Allasia 90	angp,cs

$\Delta(1232\ P_{33})^+\ \mu^-$

3 – 100	Allasia 90	cs

$p\ \pi^0\ \mu^-$

0 – 30	Schmitz 88	cs
3 – 30	Ammosov 92B	cs
	Grabosch 89	angp,cs,mass
3 – 100	Allasia 90	angp,cs,dme,mass

$n\ \pi^+\ \mu^-$

0 – 30	Schmitz 88	cs
3 – 30	Ammosov 92B	cs
	Grabosch 89	angp,cs,mass
3 – 100	Allasia 90	angp,cs,dme,mass

$p\ \rho(770)^0\ \mu^-$

3 – 100	Allasia 90	cs

$p\ \pi^+\ \pi^-\ \mu^-$

3 – 100	Allasia 90	angp

ν_μ nucleus

ν_μ X

0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux
3 – 30	Ammosov 92B	cs
10 – 160	Allaby 88C	cs
10 – 250	Mattison 90	p
30 – 600	Smith 92B	const,cs

μ^- X

0.1 – 1.1	Suzuki 88	flux
0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux
0.4 – 2	Bionta 88	cs
	Nakamura 88	–
1 – 2	Bergsma 88	cs
3 – 30	Ammosov 92B	cs
10 – 250	Mattison 90	p
13	Bergsma 88	cs
30 – 600	Smith 92B	const,cs
1000 – 10^6	Oyama 88B	cs
?	Mori 92	–
	Mori 91C	–
	Kajita 90	cs,p

μ^- 0charm X

10 – 200	Batusov 90C	cs

charged X

0.1 – 1.1	Suzuki 88	flux
0.4 – 2	Bionta 88	cs

heavy-lepton^0 X

30 – 600	Debarbaro 90	cs

D^+ X

10 – 200	Batusov 90C	–

D^0 X

10 – 200	Batusov 90C	–

D_S^+ X

10 – 200	Batusov 90C	–

p X

10 – 200	Ammar 89	angp,cor,cs,mult

ν_μ nucleus

p X

	Ammar 88	angp,cs,mult,p

Λ_c^+ X

10 – 200	Batusov 90C	–

$\Sigma_c(2455)^{++}$ X

10 – 200	Batusov 90C	–

$\Sigma_c(2455)^0$ X

10 – 200	Batusov 90C	–

$\Sigma_c(2510)^{++}$ X

10 – 200	Batusov 90C	–

mult[π^+] μ^- X

3 – 30	Ammosov 92B	mult

mult[π^0] μ^- X

3 – 30	Ammosov 92B	mult

mult[π^-] μ^- X

3 – 30	Ammosov 92B	mult

μ^- mult[shower] X

10 – 200	Ammosov 92	mult

μ^- mult[grey] X

10 – 200	Ammosov 92	mult

μ^- mult[htrack] X

10 – 200	Ammosov 92	mult

μ^- mult[black] X

10 – 200	Ammosov 92	mult

μ^- charged X

10 – 200	Gorichev 91	ang,mult,p

μ^- hadron$^+$ X

3 – 30	Ammosov 92B	p
10 – 320	Ballagh 89	asym,p

μ^- hadron$^-$ X

3 – 30	Ammosov 92B	p
10 – 320	Ballagh 89	asym,p

μ^- charged-hadron X

3 – 30	Ammosov 92B	p,pt
10 – 100	Berggren 90	col,const,mass,p,pt
10 – 320	Ballagh 89	asym,p

μ^- shower X

10 – 200	Ammosov 92	mult

μ^- grey X

10 – 200	Ammosov 92	mult

μ^- htrack X

10 – 200	Ammosov 92	mult

μ^- black X

10 – 200	Ammosov 92	mult

$\mu^-\ \gamma$ X

3 – 30	Ammosov 92B	angp
	Ammosov 88G	ang,cs,p

$\mu^-\ e^-$ X

3 – 30	Ammosov 92B	cs

$\mu^-\ e^+$ X

3 – 30	Ammosov 92B	cs

$2\mu^-$ X

10 – 400	Jain 90C	cs
30 – 600	Smith 92B	cs

$\mu^-\ \mu^+$ X

10 – 400	Jain 90C	cs
20 – 500	Strongin 91	const,cs,p
30 – 600	Rabinowitz 93	const,cs
	Smith 92B	cs

$\pi^+\ \mu^-$ X

3 – 30	Ammosov 92B	p

$\pi^0\ \mu^-$ X

3 – 30	Ammosov 92B	mult

$\pi^-\ \mu^-$ X

3 – 30	Ammosov 92B	p

$\rho(770)^0\ \mu^-$ X

3 – 30	Ammosov 92B	mult,p,pt

ν_μ nucleus

μ^- strange X

3 – 30	Ammosov 92B	cs

$K_S\ \mu^-$ X

3 – 30	Ammosov 92B	cs,p,pt

μ^- charm X

0 – 300	Schmitz 88	cs
3 – 30	Ammosov 92B	cs
10 – 200	Batusov 90C	cs

$D\ \mu^-$ X

3 – 30	Ammosov 92B	cs

$D_S^+\ \mu^-$ X

0 – 200	Asratyan 92	angp,cs
10 – 100	Asratyan 92	angp,cs

$D_S^{*+}\ \mu^-$ X

0 – 200	Asratyan 92	angp,cs
10 – 100	Asratyan 92	angp,cs

$D_S^*(2790)^+\ \mu^-$ X

10 – 200	Batusov 88C	–

$p\ \mu^-$ X

3 – 30	Ammosov 92B	p

$\Lambda\ \mu^-$ X

3 – 30	Ammosov 92B	cs,p,pt

$\Lambda_c^+\ \mu^-$ X

3 – 30	Ammosov 92B	cs

μ^- fragt (neutrals)

0 – 500	Kitagaki 88	a-dep,cs,p

mult[shower] mult[charged] X

0 – 500	Kitagaki 88	cor,mult

mult[p] shower X

10 – 200	Ammar 89	angp,cor,mult

mult[p] grey X

10 – 200	Ammar 89	angp,cor,mult

mult[p] black X

10 – 200	Ammar 89	angp,cor,mult

$K^-\ \pi^+$ X

10 – 200	Batusov 87	mass

p mult[shower] X

10 – 200	Ammar 88	mult,p

p mult[grey] X

10 – 200	Ammar 88	mult,p

p mult[black] X

10 – 200	Ammar 88	mult,p

p shower X

10 – 200	Ammar 88	cs,mult,p

p grey X

10 – 200	Ammar 88	cs,mult,p

p black X

10 – 200	Ammar 88	cs,mult,p

$\Lambda_c^+\ \pi^+$ X

10 – 200	Batusov 90C	mass
	Batusov 87	mass

$\Lambda_c^+\ \pi^-$ X

10 – 200	Batusov 90C	mass

μ^- mult[black] mult[shower] X

10 – 200	Batusov 90C	mult

μ^- charged (chargeds) (neutrals)

0 – 500	Kitagaki 88	a-dep,cs,p

$\mu^-\ \mu^+\ \nu_\mu$ X

10 – 600	Mishra 91	cs

$\pi^0\ \mu^-$ mult[hadron$^-$] X

3 – 30	Ammosov 92B	mult

$2\pi^+\ \mu^-$ X

3 – 30	Ammosov 92B	mass
	Ammosov 90	angp,mass
10.5	Ammosov 89	angp,mass

ν_μ nucleus

$\pi^+ \pi^- \mu^- X$		
3 – 30	Ammosov 92B	mass
$2\pi^- \mu^- X$		
3 – 30	Ammosov 92B	mass
	Ammosov 90	angp,mass
10.5	Ammosov 89	angp,mass
$K^- \pi^+ e^+ X$		
10 – 200	Batusov 90C	mass
p mult[p] $\mu^- X$		
3 – 30	Ammosov 92B	mult
$p \pi^+ \mu^- X$		
3 – 30	Ammosov 92B	p
$p \pi^- \mu^- X$		
3 – 30	Ammosov 92B	p
$2p \mu^- X$		
3 – 30	Ammosov 92B	p
	Ammosov 90	angp
10.5	Ammosov 89	angp,p
$\overline{K}^0 \pi^+ \pi^- X$		
10 – 200	Batusov 90C	mass
	Batusov 87	mass
$K^- 2\pi^+ X$		
10 – 200	Batusov 90C	mass
	Batusov 87	mass
$K^- \pi^+ \pi^0 X$		
10 – 200	Batusov 90C	mass
$p K^- \pi^+ X$		
10 – 200	Batusov 90C	mass
μ^- charm mult[black] mult[shower] X		
10 – 200	Batusov 90C	mult
3charged-hadron hadron^0 X		
10 – 200	Batusov 90C	mass
$2\pi^+ \pi^0 \pi^- X$		
10 – 200	Batusov 90C	mass
$K^- \pi^+ 2\pi^0 X$		
10 – 200	Batusov 90C	mass
$n 2\pi^+ \pi^- X$		
10 – 200	Batusov 90C	mass
$p K^- 2\pi^+ X$		
10 – 200	Batusov 90C	mass
	Batusov 87	mass
$p K^- \pi^+ \pi^- X$		
10 – 200	Batusov 90C	mass
$n K^- 2\pi^+ X$		
10 – 200	Batusov 90C	mass
$K^+ K^- \pi^+ \mu^- \gamma X$		
10 – 200	Asratyan 87C	mass
$n 3\pi^+ \pi^- X$		
10 – 200	Batusov 90C	mass
$n 2\pi^+ 2\pi^- X$		
10 – 200	Batusov 90C	mass
$n K^- 3\pi^+ X$		
10 – 200	Batusov 90C	mass
$n K^- 2\pi^+ \pi^- X$		
10 – 200	Batusov 90C	mass
$K^+ K^- 2\pi^+ \pi^- \mu^- \gamma X$		
10 – 200	Asratyan 87C	mass
nucleus $\pi^+ \mu^-$		
3 – 30	Ammosov 92B	cs
nucleus $\pi^0 \nu_\mu$		
3 – 30	Ammosov 92B	cs

ν_μ deuteron

$\nu_\mu X$		
10 – 260	Allasia 88C	const,cs
$\mu^- X$		
0 – 500	Kitagaki 88	a-dep,cs,p
0.4 – 6	Merenyi 92	angp,p
10 – 100	Allport 89	a-dep,p
10 – 200	Cole 88	p
10 – 260	Allasia 88C	const,cs

ν_μ deuteron

$\pi^\pm X$		
0.4 – 6	Merenyi 92	angp,p
μ^- mult[charged] (neutrals)		
5 – 200	Verluyten 91	cor,mult,p
mult[p] $\mu^- X$		
10 – 300	Guy 89	cs,mult,p
μ^- (neutrals) even-charged		
10 – 260	Tenner 88	angp
0p μ^- (neutrals) even-charged		
10 – 260	Tenner 88	p
μ^- (neutrals) odd-charged		
10 – 260	Tenner 88	angp
0p μ^- (neutrals) odd-charged		
10 – 260	Tenner 88	p
$\nu_\mu q X$		
10 – 260	Allasia 88B	cs
$\mu^- q X$		
10 – 260	Allasia 88B	cs
$D_S^+ \mu^- X$		
0 – 260	Asratyan 92	angp,cs
$D_S^{*+} \mu^- X$		
0 – 260	Asratyan 92	angp,cs
mult[p] μ^- mult[hadron$^-$] X		
10 – 300	Guy 89	a-dep,mult
$\pi^+ \mu^-$ (neutrals) odd-charged		
10 – 260	Tenner 88	angp
$\pi^- \mu^-$ (neutrals) odd-charged		
10 – 260	Tenner 88	angp
$2\pi^+ \nu_\mu X$		
10 – 260	Allasia 88	mass,pt
$2\pi^+ \mu^- X$		
10 – 260	Allasia 88	mass,pt
$\pi^+ \pi^- \nu_\mu X$		
10 – 260	Allasia 88	mass,pt
$\pi^+ \pi^- \mu^- X$		
10 – 260	Allasia 88	mass,pt
$2\pi^- \nu_\mu X$		
10 – 260	Allasia 88	mass,pt
$2\pi^- \mu^- X$		
10 – 260	Allasia 88	mass,pt
p (p's) $\mu^- X$		
10 – 300	Guy 89	cs,mult,p
$p \mu^-$ (neutrals) even-charged		
10 – 260	Tenner 88	p
$p \mu^-$ (neutrals) odd-charged		
10 – 260	Tenner 88	p
p(spect) $n \pi^+ \pi^0$ (π^0's) μ^-		
0.4 – 6	Merenyi 92	cs
n(spect) $p \pi^+ \pi^0$ (π^0's) μ^-		
0.4 – 6	Merenyi 92	cs
n(spect) $n 2\pi^+$ (π^0's) μ^-		
0.4 – 6	Merenyi 92	cs
2p μ^-		
1.6	Kitagaki 90	p
p(spect) $p \mu^-$		
0.4 – 6	Merenyi 92	cs
$n \Delta(1232 P_{33})^{++} \mu^-$		
1.6	Kitagaki 90	p
p(spect) $p \pi^0 \mu^-$		
0.4 – 6	Merenyi 92	cs
p(spect) $n \pi^+ \mu^-$		
0.4 – 6	Merenyi 92	cs
n(spect) $p \pi^+ \mu^-$		
0.4 – 6	Merenyi 92	cs

ν_μ deuteron

p(spect) $p 2\pi^0 \mu^-$		
0.4 – 6	Merenyi 92	cs
p(spect) $p \pi^+ \pi^- \mu^-$		
0.4 – 6	Merenyi 92	cs

ν_μ ^{12}C

$\mu^- X$		
202	Koetke 92	cs
^{12}Nit μ^-		
202	Koetke 92	cs

ν_μ Ne

$\mu^- X$		
0.4 – 6	Merenyi 92	angp,p
10 – 100	Allport 89	a-dep,p
mult[charged-hadron] X		
< 400	Wittek 88	mult
mult[hadron$^+$] X		
< 400	Wittek 88	mult
mult[hadron$^-$] X		
< 400	Wittek 88	mult
mult[π^0] X		
< 400	Wittek 88	mult
$\pi^\pm X$		
0.4 – 6	Merenyi 92	angp,p
μ^- mult[charged-hadron] X		
10 – 100	Wittek 88	angp,mult,p
μ^- mult[hadron$^+$] X		
10 – 100	Wittek 88	angp,mult,p
μ^- mult[hadron$^-$] X		
10 – 100	Wittek 88	angp,mult,p
mult[π^+] $\mu^- X$		
10 – 100	Wittek 88	angp,mult,p
mult[π^0] $\mu^- X$		
10 – 100	Wittek 88	angp,mult,p
mult[π^-] $\mu^- X$		
10 – 100	Wittek 88	angp,mult,p
mult[p] $\mu^- X$		
10 – 300	Guy 89	cs,mult,p
μ^- charged X		
5 – 150	Bosetti 90	mass,pt
μ^- hadron$^+$ X		
0 – 300	Schmitz 88	asym
μ^- hadron$^-$ X		
0 – 300	Schmitz 88	asym
$\mu^- e^+ X$		
10 – 200	Baker 91	cs,p
$\pi^+ \mu^- X$		
0 – 200	Schmitz 88	mult
$\pi^0 \mu^- X$		
0 – 200	Schmitz 88	mult
$\pi^- \mu^- X$		
0 – 200	Schmitz 88	mult
$\eta \mu^- X$		
10 – 100	Wittek 89	mult,p,pt
$\rho(770)^+ \mu^- X$		
0 – 200	Schmitz 88	mult
$\rho(770)^0 \mu^- X$		
0 – 200	Schmitz 88	mult
10 – 100	Wittek 89	mult,p,pt
$\rho(770)^- \mu^- X$		
0 – 200	Schmitz 88	mult
$\omega(783) \mu^- X$		
10 – 100	Wittek 89	mult,p,pt
$f_2(1270) \mu^- X$		
10 – 100	Wittek 89	mult,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

ν_μ Ne

$D^+ \mu^- X$
10 – 200 Baker 91 cs
$D^0 \mu^- X$
10 – 200 Baker 91 cs
$p \mu^- X$
0 – 200 Schmitz 88 mult
0 – 300 Schmitz 88 asym
0.4 – 6 Merenyi 92 cs
$\Lambda_c^+ \mu^- X$
10 – 200 Baker 91 cs
mult[p] μ^- mult[hadron$^-$] X
10 – 300 Guy 89 a-dep,mult
$2\mu^- e^+ X$
10 – 100 Choban 91 cs
$2\mu^- \mu^+ X$
10 – 100 Choban 91 cs
$\rho(770)^+ \pi^- \mu^- X$
10 – 100 Wittek 89 mult,p,pt
$\rho(770)^- \pi^+ \mu^- X$
10 – 100 Wittek 89 mult,p,pt
$K_S \mu^- e^+ X$
10 – 200 Baker 91 cs
p (p's) $\mu^- X$
10 – 300 Guy 89 cs,mult,p
$p \pi^+ \mu^- X$
0.4 – 6 Merenyi 92 cs
$p \pi^0 \mu^- X$
0.4 – 6 Merenyi 92 cs
$n \pi^+ \mu^- X$
0.4 – 6 Merenyi 92 cs
$\Lambda \mu^- e^+ X$
10 – 200 Baker 91 cs
$p\, 2\pi^0 \mu^- X$
0.4 – 6 Merenyi 92 cs
$p \pi^+ \pi^- \mu^- X$
0.4 – 6 Merenyi 92 cs
$p \pi^+ \pi^0$ (π^0's) $\mu^- X$
0.4 – 6 Merenyi 92 cs
$n\, 2\pi^+$ (π^0's) $\mu^- X$
0.4 – 6 Merenyi 92 cs
$n \pi^+ \pi^0$ (π^0's) $\mu^- X$
0.4 – 6 Merenyi 92 cs
Ne $\pi^+ \mu^-$
10 – 100 Marage 89 angp,cs,p
10 – 300 Willocq 92 angp,cs
10 – 400 Willocq 92B angp,cs,mass,p
40 – 300 Aderholz 89 cs
Ne $\rho(770)^+ \mu^-$
10 – 300 Willocq 92 angp,cs
10 – 320 Ballagh 86 angp,p
10 – 400 Willocq 92B angp,cs,mass,p

ν_μ Fe

$\nu_\mu X$
10 – 160 Rolandi 92 const,cs,p
Blondel 90 const,cs,p
Loverre 88 cs
$\mu^- X$
5 – 160 Virchaux 90 p
10 – 160 Rolandi 92 const,cs,p
Blondel 90 const,cs,p
Loverre 88 cs
10 – 260 Virchaux 92 cs,p
10 – 600 Mishra 92 p
30 – 600 Bodek 92 p
37.1 – 230 Virchaux 92 cs
$2\mu^- X$
30 – 600 Sandler 92 ang,cs,p,pt

ν_μ Fe

$2\mu^- X$
Schumm 88 p,pt
$\mu^- \mu^+ X$
30 – 600 Foudas 88 cs,p,pt
μ^- charm X
30 – 600 Foudas 88 –
$2\mu^- \mu^+ X$
10 – 150 Choban 91 cs,mass
$\mu^- 2\mu^+ X$
10 – 150 Choban 91 cs,mass

$\bar{\nu}_\mu e^-$

$e^- \bar{\nu}_\mu$
0 – 0.053 Krakauer 90 cs
1.23 Abe 89E angp,const
< 5 Ahrens 90 angp,const,cs
10 – 160 Dorenbosch 89 const,cs
Geiregat 89 const,cs
19.1 Vilain 93 angp,const
Rolandi 92 angp,const,cs
Vilain 92 angp,const,cs
19.3 Geiregat 91 const,cs

$\bar{\nu}_\mu q$

$\mu^+ q$
? Mishra 92 const

$\bar{\nu}_\mu$ nucleon

$\mu^+ X$
0 – 10 Borodovsky 92 p
10 – 160 Allaby 88 cs
10 – 200 Virchaux 92 p
Ammosov 88 p
Ushida 88B cs
10 – 240 Baker 90 cs
20 – 230 Reutens 90 const,cs
30 – 300 Auchincloss 90 cs
$\bar{\nu}_\mu X$
10 – 160 Allaby 89 p
20 – 230 Reutens 90 const,cs
μ^+ hadron$^+$ X
0 – 230 Mukherjee 86 angp
μ^+ hadron$^-$ X
0 – 230 Mukherjee 86 angp
μ^+ charged-hadron X
10 – 240 Baker 90 mult,p
$\mu^- \mu^+ X$
10 – 240 Baker 90 cs
30 – 600 Foudas 90 cs,p
Foudas 88B cs,p,pt
μ^+ strange^0 X
10 – 240 Baker 90 cs
μ^+ charm X
10 – 200 Ushida 88B cs
30 – 600 Foudas 88B –
μ^+ hadron jet X
0 – 230 Mukherjee 86 angp
$\mu^- 2\mu^+ X$
20 – 200 Choban 91 cs,p
$D_S^- \mu^+ \gamma X$
10 – 200 Asratyan 87C mass,p
$D_S^{*-} \mu^+ \gamma X$
10 – 200 Asratyan 87C mass,p
$D_{S1}(2536)^- \mu^+ \gamma X$
10 – 200 Asratyan 87C –
$D_{SJ}(2564)^- \mu^+ \gamma X$
10 – 200 Asratyan 87C –

$\bar{\nu}_\mu p$

$\mu^+ X$
3 – 30 Ammosov 92B cs

$\bar{\nu}_\mu p$

$\mu^+ X$
Brunner 89 cs,p
5 – 150 Virchaux 92 p
Jones 89C p
10 – 250 Virchaux 92 cs,p
10 – 260 Allasia 88C const,cs
$\bar{\nu}_\mu X$
0 – 300 Borner 90 cs,p
10 – 260 Allasia 88C const,cs
μ^+ mult[charged] (neutrals)
10 – 150 Jones 91C mass,mult,p
μ^+ mult[charged-hadron] (neutrals)
10 – 260 Jongejans 89 mult,p
mult[p] $\mu^+ X$
10 – 300 Guy 89 cs,mult,p
μ^+ hadron$^+$ X
0 – 200 Schmitz 88 mult
μ^+ hadron$^-$ X
0 – 200 Schmitz 88 mult
$\bar{\nu}_\mu$ hadron$^+$ X
0 – 200 Schmitz 88 mult
$\bar{\nu}_\mu$ hadron$^-$ X
0 – 200 Schmitz 88 mult
$\pi^+ \mu^+ X$
0 – 200 Schmitz 88 mult
$\pi^- \mu^+ X$
0 – 200 Schmitz 88 mult
$\rho(770)^0 \mu^+ X$
0 – 200 Schmitz 88 pol
$f_2(1270) \mu^+ X$
10 – 200 Jones 91 angp,mass,mult,p,pt
$D_S^- \mu^- X$
0 – 150 Asratyan 92 angp,cs
$D_S^{*-} \mu^- X$
0 – 150 Asratyan 92 angp,cs
$\pi^\pm \mu^+$ hadron (hadrons)
5 – 150 Jones 90 mult,p
$\pi^+ \mu^+$ hadron (hadrons)
5 – 150 Jones 90 mult,p
$\pi^- \mu^+$ hadron (hadrons)
5 – 150 Jones 90 mult,p
$\rho(770)^0 \mu^+$ hadron (hadrons)
10 – 200 Jones 91B angp,mult,p
p (p's) $\mu^+ X$
10 – 300 Guy 89 cs,mult,p
$\pi^+ \pi^- \mu^+$ hadron (hadrons)
10 – 200 Jones 91B mass
$n \mu^+$
0 – 12 Ahrens 88 p
> 0.15 Allison 89B cs
1.5 Krizmanic 89 cs
3 – 30 Ammosov 92B cs,p
Brunner 89B angp,const,cs
$\Delta(1232\, P_{33})^0 \mu^+$
3 – 100 Allasia 90 cs
$\Lambda \mu^+$
3 – 30 Ammosov 92B cs
Brunner 89B angp,const,cs
$p \pi^- \mu^+$
0 – 30 Schmitz 88 cs
3 – 30 Ammosov 92B cs
Grabosch 89 angp,cs,mass
3 – 100 Allasia 90 angp,cs,dme,mass
5 – 150 Jones 89B p

$\bar{\nu}_\mu\ p$

$n\ \pi^0\ \mu^+$

0 – 30	Schmitz 88	cs
3 – 30	Ammosov 92B	cs
	Grabosch 89	angp,cs,mass

$p\ \pi^+\ 2\pi^-\ \mu^+$

3 – 100	Allasia 90	angp

$\bar{\nu}_\mu\ n$

μ^+ **X**

3 – 30	Ammosov 92B	cs
	Brunner 89	cs,p
10 – 250	Virchaux 92	cs,p
10 – 260	Allasia 88C	const,cs

$\bar{\nu}_\mu$ **X**

10 – 260	Allasia 88C	const,cs

μ^+ **mult[charged-hadron] (neutrals)**

10 – 260	Jongejans 89	mult,p

μ^+ **hadron$^+$ X**

0 – 200	Schmitz 88	mult

μ^+ **hadron$^-$ X**

0 – 200	Schmitz 88	mult

$\bar{\nu}_\mu$ **hadron$^+$ X**

0 – 200	Schmitz 88	mult

$\bar{\nu}_\mu$ **hadron$^-$ X**

0 – 200	Schmitz 88	mult

$\Delta(1232\ P_{33})^-\ \mu^+$

3 – 100	Allasia 90	cs

$n\ \pi^-\ \mu^+$

0 – 30	Schmitz 88	cs
3 – 30	Ammosov 92B	cs
	Grabosch 89	angp,cs,mass
3 – 100	Allasia 90	angp,cs,dme,mass

$\bar{\nu}_\mu$ nucleus

μ^+ **X**

0.1 – 1.1	Suzuki 88	flux
0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux
0.4 – 2	Bionta 88	cs
	Nakamura 88	–
1 – 2	Bergsma 88	cs
3 – 30	Ammosov 92B	cs
10 – 165	Mattison 90	p
13	Bergsma 88	cs
30 – 600	Smith 92B	const,cs
1000 – 10^6	Oyama 88B	cs

$\bar{\nu}_\mu$ **X**

0.2 – 20	Berger 89B	flux
	Perdereau 89	flux
	Longuemare 88	flux
3 – 30	Ammosov 92B	cs
10 – 160	Allaby 88C	cs
10 – 165	Mattison 90	p
30 – 600	Smith 92B	const,cs

charged X

0.1 – 1.1	Suzuki 88	flux
0.4 – 2	Bionta 88	cs

mult[π^+] μ^+ **X**

3 – 30	Ammosov 92B	mult

mult[π^0] μ^+ **X**

3 – 30	Ammosov 92B	mult

mult[π^-] μ^+ **X**

3 – 30	Ammosov 92B	mult

μ^+ **mult[shower] X**

10 – 200	Ammosov 92	mult

μ^+ **mult[grey] X**

10 – 200	Ammosov 92	mult

μ^+ **mult[htrack] X**

10 – 200	Ammosov 92	mult

$\bar{\nu}_\mu$ nucleus

μ^+ **mult[black] X**

10 – 200	Ammosov 92	mult

μ^+ **hadron$^+$ X**

3 – 30	Ammosov 92B	mult

μ^+ **hadron$^-$ X**

3 – 30	Ammosov 92B	mult

μ^+ **charged-hadron X**

3 – 30	Ammosov 92B	p,pt
10 – 100	Berggren 90	col,const,mass,p,pt

μ^+ **shower X**

10 – 200	Ammosov 92	mult

μ^+ **grey X**

10 – 200	Ammosov 92	mult

μ^+ **htrack X**

10 – 200	Ammosov 92	mult

μ^+ **black X**

10 – 200	Ammosov 92	mult

$\mu^-\ \mu^+$ **X**

10 – 400	Jain 90C	cs
20 – 500	Strongin 91	const,cs,p
30 – 600	Rabinowitz 93	const,cs
	Smith 92B	cs

$2\mu^+$ **X**

10 – 400	Jain 90C	cs
30 – 600	Smith 92B	cs

$\pi^+\ \mu^+$ **X**

3 – 30	Ammosov 92B	p

$\pi^0\ \mu^+$ **X**

3 – 30	Ammosov 92B	mult

$\pi^-\ \mu^+$ **X**

3 – 30	Ammosov 92B	p

$D_S^-\ \mu^-$ **X**

0 – 200	Asratyan 92	angp,cs
10 – 100	Asratyan 92	angp,cs

$D_S^{*-}\ \mu^-$ **X**

0 – 200	Asratyan 92	angp,cs
10 – 100	Asratyan 92	angp,cs

$p\ \mu^+$ **X**

3 – 30	Ammosov 92B	p

$\pi^0\ \mu^+$ **mult[hadron$^-$] X**

3 – 30	Ammosov 92B	mult

$K_S\ K^-\ \mu^+$ **X**

10 – 200	Asratyan 87C	mass

$\phi(1020)\ \pi^-\ \mu^+$ **X**

10 – 200	Asratyan 87C	mass

$p\ \pi^+\ \mu^+$ **X**

3 – 30	Ammosov 92B	p

$p\ \pi^-\ \mu^+$ **X**

3 – 30	Ammosov 92B	p

$2p\ \mu^+$ **X**

3 – 30	Ammosov 92B	p

$K_S\ K^-\ \pi^0\ \mu^+$ **X**

10 – 200	Asratyan 87C	mass

$\phi(1020)\ \pi^0\ \pi^-\ \mu^+$ **X**

10 – 200	Asratyan 87C	mass

$K^+\ K_S\ 2\pi^-\ \mu^+$ **X**

10 – 200	Asratyan 87C	mass

$K_S\ K^-\ \pi^+\ \pi^-\ \mu^+$ **X**

10 – 200	Asratyan 87C	mass

$\phi(1020)\ \pi^+\ 2\pi^-\ \mu^+$ **X**

10 – 200	Asratyan 87C	mass

nucleus $\pi^-\ \mu^+$

3 – 30	Ammosov 92B	cs

nucleus $\mu^-\ \mu^+\ \bar{\nu}_\mu$

10 – 160	Geiregat 90	cs

$\bar{\nu}_\mu$ deuteron

μ^+ **X**

10 – 100	Allport 89	a-dep,p
10 – 250	Arneodo 92	a-dep,p,pt
10 – 260	Allasia 88C	const,cs

$\bar{\nu}_\mu$ **X**

10 – 260	Allasia 88C	const,cs

mult[p] μ^+ **X**

10 – 300	Guy 89	cs,mult,p

μ^+ **(neutrals) even-charged**

10 – 260	Tenner 88	angp

0p μ^+ **(neutrals) even-charged**

10 – 260	Tenner 88	p

μ^+ **(neutrals) odd-charged**

10 – 260	Tenner 88	angp

0p μ^+ **(neutrals) odd-charged**

10 – 260	Tenner 88	p

$\mu^+\ q$ **X**

10 – 260	Allasia 88B	cs

$\bar{\nu}_\mu\ q$ **X**

10 – 260	Allasia 88B	cs

$D_S^-\ \mu^-$ **X**

0 – 260	Asratyan 92	angp,cs

$D_S^{*-}\ \mu^-$ **X**

0 – 260	Asratyan 92	angp,cs

mult[p] μ^+ **mult[hadron$^-$] X**

10 – 300	Guy 89	a-dep,mult

$\pi^+\ \mu^+$ **(neutrals) odd-charged**

10 – 260	Tenner 88	angp

$\pi^-\ \mu^+$ **(neutrals) odd-charged**

10 – 260	Tenner 88	angp

$2\pi^+\ \mu^+$ **X**

10 – 260	Allasia 88	mass,pt

$2\pi^+\ \bar{\nu}_\mu$ **X**

10 – 260	Allasia 88	mass,pt

$\pi^+\ \pi^-\ \mu^+$ **X**

10 – 260	Allasia 88	mass,pt

$\pi^+\ \pi^-\ \bar{\nu}_\mu$ **X**

10 – 260	Allasia 88	mass,pt

$2\pi^-\ \mu^+$ **X**

10 – 260	Allasia 88	mass,pt

$2\pi^-\ \bar{\nu}_\mu$ **X**

10 – 260	Allasia 88	mass,pt

p **(p's)** μ^+ **X**

10 – 300	Guy 89	cs,mult,p

$p\ \mu^+$ **(neutrals) even-charged**

10 – 260	Tenner 88	p

$p\ \mu^+$ **(neutrals) odd-charged**

10 – 260	Tenner 88	p

$\bar{\nu}_\mu$ Ne

μ^+ **X**

10 – 100	Allport 89	a-dep,p
10 – 250	Arneodo 92	a-dep,p,pt

μ^+ **mult[charged-hadron] X**

10 – 100	Wittek 88	angp,mult,p

μ^+ **mult[hadron$^+$] X**

10 – 100	Wittek 88	angp,mult,p

μ^+ **mult[hadron$^-$] X**

10 – 100	Wittek 88	angp,mult,p

mult[π^+] μ^+ **X**

10 – 100	Wittek 88	angp,mult,p

mult[π^0] μ^+ **X**

10 – 100	Wittek 88	angp,mult,p

mult[π^-] μ^+ **X**

10 – 100	Wittek 88	angp,mult,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{\nu}_\mu$ Ne

mult[p] μ^+ X
10 – 300 Guy 89 cs,mult,p
$\pi^+ \mu^+$ X
0 – 200 Schmitz 88 mult
$\pi^0 \mu^+$ X
0 – 200 Schmitz 88 mult
$\pi^- \mu^+$ X
0 – 200 Schmitz 88 mult
$\eta \mu^+$ X
10 – 100 Wittek 89 mult,p,pt
$\rho(770)^+ \mu^+$ X
0 – 200 Schmitz 88 mult
$\rho(770)^0 \mu^+$ X
0 – 200 Schmitz 88 mult
10 – 100 Wittek 89 mult,p,pt
$\rho(770)^- \mu^+$ X
0 – 200 Schmitz 88 mult
$\omega(783) \mu^+$ X
10 – 100 Wittek 89 mult,p,pt
$f_2(1270) \mu^+$ X
10 – 100 Wittek 89 mult,p,pt
$K_S \mu^+$ X
10 – 200 Willocq 91 mult,p,pt
$D_S^- \mu^+$ X
0 – 300 Schmitz 88 cs
$p \mu^+$ X
0 – 200 Schmitz 88 mult
0 – 300 Schmitz 88 asym
$\Lambda \mu^+$ X
10 – 200 Willocq 91 mult,p,pol,pt
$\bar{\Lambda} \mu^+$ X
10 – 200 Willocq 91 mult
$\Sigma^0 \mu^+$ X
10 – 200 Willocq 91 mult
$D_S^- \gamma$ X
10 – 300 Asratyan 90 mass
mult[p] μ^+ mult[hadron$^-$] X
10 – 300 Guy 89 a-dep,mult
$\pi^+ \pi^- \mu^+$ X
10 – 200 Willocq 91 mass
$\rho(770)^+ \pi^- \mu^+$ X
10 – 100 Wittek 89 mult,p,pt
$2K_S \mu^+$ X
10 – 200 Willocq 91 mult
$\phi(1020) \pi^- \mu^+$ X
0 – 300 Schmitz 88 mass
p (p's) μ^+ X
10 – 300 Guy 89 cs,mult,p
$p \pi^- \mu^+$ X
10 – 200 Willocq 91 mass
$\Lambda \mu^+ \gamma$ X
10 – 200 Willocq 91 mass
$\Lambda K_S \mu^+$ X
10 – 200 Willocq 91 mult
$\bar{\Lambda} K_S \mu^+$ X
10 – 200 Willocq 91 mult
$2\Lambda \mu^+$ X
10 – 200 Willocq 91 mult
$\Lambda \bar{\Lambda} \mu^+$ X
10 – 200 Willocq 91 mult
$K_S K^- \gamma$ X
10 – 300 Asratyan 90 mass
$K^*(892)^0 K^- \gamma$ X
10 – 300 Asratyan 90 mass

$\bar{\nu}_\mu$ Ne

$\phi(1020) \pi^- \gamma$ X
10 – 300 Asratyan 90 mass
$\Lambda\ 2K_S \mu^+$ X
10 – 200 Willocq 91 mult
$2K_S \pi^- \gamma$ X
10 – 300 Asratyan 90 mass
$\phi(1020) \pi^0 \pi^- \gamma$ X
10 – 300 Asratyan 90 mass
Ne $\pi^- \mu^+$
10 – 300 Willocq 92 angp,cs
10 – 400 Willocq 92B angp,cs,mass,p
40 – 300 Aderholz 89 cs
Ne $\rho(770)^- \mu^+$
10 – 300 Willocq 92 angp,cs
10 – 400 Willocq 92B angp,cs,mass,p
Ne $a_1(1260)^- \mu^+$
10 – 100 Marage 91 cs
10 – 200 Ammosov 88C cs
Ne $\rho(770)^0 \pi^- \mu^+$
10 – 100 Marage 91 cs,mass
Ne $\rho(770)^- \pi^0 \mu^+$
10 – 100 Marage 91 cs,mass
Ne $\pi^0 \pi^- \mu^+ \gamma$
10 – 100 Marage 91 angp,cs,mass
Ne $2\pi^0 \pi^- \mu^+$
10 – 100 Marage 91 angp,cs,mass
Ne $\pi^+ 2\pi^- \mu^+$
10 – 100 Marage 91 angp,cs,mass

$\bar{\nu}_\mu$ Fe

μ^+ X
5 – 160 Virchaux 90 p
10 – 160 Rolandi 92 const,cs,p
Blondel 90 const,cs,p
10 – 260 Virchaux 92 cs,p
10 – 600 Mishra 92 p
37.1 – 230 Virchaux 92 cs
$\bar{\nu}_\mu$ X
10 – 160 Rolandi 92 const,cs,p
Blondel 90 const,cs,p
$\mu^- \mu^+$ X
30 – 600 Foudas 88 cs,p,pt
$2\mu^+$ X
30 – 600 Sandler 92 ang,cs,p,pt
Schumm 88 p,pt
$\mu^+ \overline{\text{charm}}$ X
30 – 600 Foudas 88 –
$2\mu^- \mu^+$ X
10 – 150 Choban 91 cs,mass
$\mu^- 2\mu^+$ X
10 – 150 Choban 91 cs,mass

$\nu_\tau e^-$

$e^- \nu_\tau$
? Coopersarkar 91 cs

ν_τ nucleus

τ^- X
0 – 260 Batusov 90E cs

$\bar{\nu}_\tau e^-$

$e^- \bar{\nu}_\tau$
? Coopersarkar 91 cs

$e^\pm$ nucleus

p X
5 Degtyarenko 90 p
$\Delta(1232\, P_{33})^{++}$ X
5 Degtyarenko 90 p

$e^\pm$ nucleus

$\Delta(1232\, P_{33})^0$ X
5 Degtyarenko 90 p
mult[p] $e^\pm$ X
5 Degtyarenko 89 mult
$e^\pm \gamma$ X
5 Degtyarenko 89 mult
$\pi^+ e^\pm$ X
5 Degtyarenko 89 mult
$\pi^0 e^\pm$ X
5 Degtyarenko 89 mult
$\pi^- e^\pm$ X
5 Degtyarenko 89 mult
$K^+ e^\pm$ X
5 Degtyarenko 89 mult
$K^- e^\pm$ X
5 Degtyarenko 89 mult
$K_S e^\pm$ X
5 Degtyarenko 89 mult
$p e^\pm$ X
5 Degtyarenko 89 mult
$\bar{p} e^\pm$ X
5 Degtyarenko 89 mult
$\Lambda e^\pm$ X
5 Degtyarenko 89 mult
deuteron $e^\pm$ X
5 Degtyarenko 89 p
$p \pi^+$ X
5 Degtyarenko 90 mass
$p \pi^-$ X
5 Degtyarenko 90 mass
$2\pi e^\pm$ X
5 Degtyarenko 89 cor
$2p e^\pm$ X
5 Degtyarenko 89 cor,mass

$e^- \gamma$

e^- X
14.5 Aihara 89C cs
25 – 28 Fujii 90 p
Sasaki 89 p
Sasaki 88 p
25 – 30.7 Sasaki 90 p
$e^- \gamma$
45.6 Dehning 90 angp
meson^0 e^-
14.5 Aihara 88D cs
? Toki 88B –
$\eta'(958) e^-$
14.5 Aihara 88D cs
Gidal 88B cs
$f_1(1285) e^-$
14.5 Aihara 88D cs
Aihara 88E cs
Gidal 88B cs
? Ouldsaada 88B –
Toki 88B –
$f_1(1420) e^-$
3 – 12 Fujii 90 –
Hill 89 –
? Ouldsaada 88B –
Toki 88B –
$\eta_c(1S) e^-$
? Ouldsaada 88B –
$2\rho(770)^0 e^-$
17.4 Berger 88B cs
17.5 Braunschweig 88F cs
23.3 Braunschweig 88F cs
? Toki 88B mass
$\rho(770)^+ \rho(770)^- e^-$
? Toki 88B mass

$e^- \gamma$

$2\omega(783)\, e^-$

?	Toki 88B	mass

$K^*(892)^0\, \overline{K}^*(892)^0\, e^-$

?	Toki 88B	mass

$K^*(892)^+\, K^*(892)^-\, e^-$

?	Toki 88B	mass

$2\phi(1020)\, e^-$

?	Toki 88B	mass

$\eta\, \pi^+\, \pi^-\, e^-$

14.5	Gidal 88B	mass
?	Toki 88B	mass

$\rho(770)^0\, \pi^+\, \pi^-\, e^-$

17.5	Braunschweig 88F	cs
23.3	Braunschweig 88F	cs

$K^+\, K_S\, \pi^-\, e^-$

?	Toki 88B	mass

$2\pi^+\, 2\pi^-\, e^-$

17.5	Braunschweig 88F	cs,mass
23.3	Braunschweig 88F	cs,mass

$e^- e^-$

$2e^-$

0.0026 – 0.0029	Gobel 92	angp
(0.32 – 1.1)	Salvini 88	angp,cs

e^- nucleon

neutral X

20	Bjorken 88	p

$e^- p$

X

(295)	Ahmed 92E	cs,et
	Derrick 92B	cs,et

ν_e X

(296)	Derrick 93	cs,mass,p

e^- X

0.96	Sealock 89	angp,cs,mass
1.1	Sealock 89	angp,cs,mass
1.3	Sealock 89	angp,cs,mass
1.5	Sealock 89	angp,cs,mass
1.6	Virchaux 92	cs,p
8	Virchaux 92	cs,p
16.19	Yokosawa 90B	asym,p
20	Virchaux 92	cs,p
	Yokosawa 90B	asym
22.66	Yokosawa 90B	asym,p
(295)	Derrick 92B	cs,et
	Eisele 92	angp,cs
(295.4)	Derrick 92	angp,p
(296)	Derrick 93	cs,mass,p
(314)	Deroeck 93	p
	Ahmed 92B	p
	Derrick 92C	p
	Wolf 92	p

lepton-quark X

(296)	Derrick 93	cs

π^+ X

0.2	Shoda 88	angp,p

e^- charged X

(314)	Wolf 92	angp,col,et,pt

ν_e jet X

(296)	Derrick 93	cs,mass,p

e^- jet X

(295)	Ahmed 92E	et,pt
(296)	Derrick 93	cs,mass,p

e^- hadron X

(295)	Ahmed 92E	p

e^- charged-hadron X

(314)	Ahmed 92C	p,pt

$\Delta(1232\, P_{33})\, e^-$ X

0.96	Sealock 89	–

$e^- p$

$\Delta(1232\, P_{33})\, e^-$ X

1.1	Sealock 89	–
1.3	Sealock 89	–
1.5	Sealock 89	–

e^- 2hadron (hadrons)

9.71	Yokosawa 90B	angp,asym
12.95	Yokosawa 90B	angp,asym
16.18	Yokosawa 90B	angp,asym

e^- 2charged-hadron (charged-hadrons)

(314)	Ahmed 92C	angp,col,et,p

$p\, e^-$

0.2	Platchkov 90	angp
0.3	Platchkov 90	angp
0.3655	Vonreden 90	angp,p
0.5	Platchkov 90	angp
0.504 – 1.286	Bosted 89	angp
0.65	Platchkov 90	angp
1.5 – 9.8	Bosted 92B	angp
9.8 – 21	Rock 91	angp
?	Buenerd 92	angp

$p\, \pi^0\, e^-$

0.35	Welch 92	angp
0.5	Welch 92	angp

$n\, \pi^+\, e^-$

0.6455	Gilman 90	cs
4.6	Vapenikova 88	angp,mass

$e^- n$

$n\, e^-$

9.8 – 21	Rock 91	angp

$p\, \pi^-\, e^-$

4.6	Vapenikova 88	angp,mass

e^- nucleus

e^- X

0.96	Sealock 89	angp,cs,mass
1.1	Sealock 89	angp,cs,mass
1.3	Sealock 89	angp,cs,mass
1.5	Sealock 89	angp,cs,mass

axion X

275	Bross 89	–

$e^-\, e^+$ X

275	Bross 89	cs,mass

$\Delta(1232\, P_{33})\, e^-$ X

0.96	Sealock 89	–
1.1	Sealock 89	–
1.3	Sealock 89	–
1.5	Sealock 89	–

nucleus e^- higgs

1.6	Davier 89	cs

nucleus $2e^-\, e^+$

1.6	Davier 89	mass,p

e^- deuteron

e^- X

0.1748	Kuplennikov 91	angp,p
0.279	Kuplennikov 91	angp,p
0.3282	Kuplennikov 91	angp,p
0.4447	Kuplennikov 91	angp,p
1.6	Virchaux 92	cs,p
3	Arneodo 92	angp,p
3.7 – 18	Whitlow 90	p
3.75 – 16	Roberts 91	p
3.75 – 19.5	Arneodo 92	a-dep,angp,p
	Dasu 88	a-dep,angp,p
	Dasu 87	p
4.5 – 20	Arneodo 92	angp,p
5	Arneodo 92	angp,p
6	Arneodo 92	angp,p
7	Arneodo 92	angp,p

e^- deuteron

e^- X

8	Virchaux 92	cs,p
8 – 24.5	Arneodo 92	a-dep,angp,p
9.8 – 21	Rock 91	angp,p
20	Virchaux 92	cs,p

$p\, e^-$ X

1.2	Boden 92	angp,p

deuteron e^-

0.2	Platchkov 90	angp
0.2005	Platchkov 89	angp
0.3	Platchkov 90	angp
0.3005	Platchkov 89	angp
0.5	Platchkov 90	angp
0.5005	Platchkov 89	angp
0.65	Platchkov 90	angp
	Garcon 89	pol
0.6505	Platchkov 89	angp
0.653	The 91	angp,pol
0.7 – 1.3	Bosted 89	angp
0.75	Garcon 89	pol
0.755	The 91	angp,pol
0.85	Garcon 89	pol
0.853	The 91	angp,pol
2	Boden 91	cs,pol
	Gilman 90B	angp,pol
	Meyer 88B	asym
2.5	Schablitzky 89	angp
?	Buenerd 92	angp

$p\, n\, e^-$

0.843	Arnold 88	angp,p
1.02	Arnold 88	angp,p
1.105	Leiendecker 92	angp,asym,p
1.107	Leiendecker 92	angp,asym,p
1.128	Arnold 88	angp,p
1.189	Arnold 88	angp,p
1.5 – 5.5	Lung 93	angp,mass

$2p\, \pi^-\, e^-$

0.6455	Gilman 90	cs

$2n\, \pi^+\, e^-$

0.6455	Gilman 90	cs

p(spect) $p\, \pi^-\, e^-$

4.6	Vapenikova 88	angp,mass

n(spect) $n\, \pi^+\, e^-$

4.6	Vapenikova 88	angp,mass

$e^-\, {}^3\mathrm{He}$

e^- X

0.9 – 4.3	Mezani 92	angp,p
1.211	Kuplennikov 92	angp,p
1.216	Kuplennikov 91	angp,p

${}^3\mathrm{He}\, e^-$

0.578	Thompson 92	angp,asym

$e^-\, {}^4\mathrm{He}$

e^- X

0.8 – 1.2	Dementy 88	p
0.9 – 4.3	Mezani 92	angp p
0.96	Sealock 89	angp,cs,mass
1.1	Sealock 89	angp,cs,mass
1.174	Kuplennikov 90	angp,p
1.175	Kuplennikov 90B	angp,p
1.3	Sealock 89	angp,cs,mass
1.5	Sealock 89	angp,cs,mass

$\Delta(1232\, P_{33})\, e^-$ X

0.96	Sealock 89	–
1.1	Sealock 89	–
1.3	Sealock 89	–
1.5	Sealock 89	–

${}^4\mathrm{He}\, e^-$ X

0.2795 – 0.7255	Vonreden 90	angp,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

e^- ^{4}He

^{3}H p e^-

0.183	Spahn 89	angp

^{3}He n e^-

0.183	Spahn 89	angp

e^- He

e^- X

8 – 24.5	Arneodo 92	a-dep,angp,p

e^- ^{7}Li

π^+ X

0.2	Shoda 88	angp,p

e^- ^{7}Be

^{7}Li ν_e

?	Anselmann 92	p

e^- Be

e^- X

8 – 24.5	Arneodo 92	a-dep,angp,p
13	Arneodo 92	angp,p
20	Arneodo 92	angp,p

e^- ^{9}Be

e^- X

0.8185	Kuplennikov 91	angp,p
1.45	Mkrtchyan 90	angp,p
1.67	Mkrtchyan 90	angp,p
1.93	Mkrtchyan 90	angp,p
2.13	Mkrtchyan 90	angp,p

p e^- X

1.45 – 2.13	Bagdasaryan 88	angp,p

^{9}Be e^-

0.3	Hiel 89	asym,const

e^- C

e^- X

0.653 – 1.65	Baran 88B	angp,p
0.96	Sealock 89	angp,cs,mass
1.1	Sealock 89	angp,cs,mass
1.3	Sealock 89	angp,cs,mass
1.5	Sealock 89	angp,cs,mass
8 – 24.5	Arneodo 92	a-dep,angp,p

p e^- X

0.78	Geesaman 89	a-dep,angp,p

$\Delta(1232\,P_{33})$ e^- X

0.96	Sealock 89	–
1.1	Sealock 89	–
1.3	Sealock 89	–
1.5	Sealock 89	–

e^- ^{12}C

e^- X

1 – 2.13	Vartapetyan 90	angp,p
1.45	Mkrtchyan 90	angp,p
1.67	Mkrtchyan 90	angp,p
1.67 – 2.13	Vartapetyan 89	angp
1.93	Mkrtchyan 90	angp,p
2.13	Mkrtchyan 90	angp,p

π^+ X

0.2	Shoda 88B	angp,p
0.205	Shoda 88B	angp,p

p X

0.46	Lourie 90	angp,p
0.505	Lourie 90	angp,p
0.647	Lourie 90	angp,p
0.686	Lourie 90	angp,p
0.698	Lourie 90	angp,p
0.8	Lourie 90	angp,p

p e^- X

1.45 – 2.13	Bagdasaryan 88	angp,p
1.94	Alanakyan 91	angp,p
	Alanakyan 90	angp,p

e^- ^{12}C

^{12}C e^-

0.25	Souder 90	pol
0.69	Kalantarnaye 89	cs

e^- ^{15}Nit

π^- X

0.17	Liesenfeld 88	angp,p

e^- Al

e^- X

1.5 – 9.8	Bosted 92	p
3	Arneodo 92	angp,p
4.5 – 20	Arneodo 92	angp,p
5	Arneodo 92	angp,p
6	Arneodo 92	angp,p
7	Arneodo 92	angp,p
8 – 24.5	Arneodo 92	a-dep,angp,p
9.8 – 21	Rock 91	angp,p
13	Arneodo 92	angp,p
20	Arneodo 92	angp,p

p e^- X

0.78	Geesaman 89	a-dep,angp,p

e^- ^{28}Si

π^+ X

0.2	Shoda 88	angp,p

e^- ^{30}Si

^{29}Al p e^-

0.33	Wesseling 92	p
0.454	Wesseling 92	p

e^- ^{31}Ph

^{30}Si p e^-

0.33	Wesseling 92	p
0.454	Wesseling 92	p

e^- ^{32}S

^{31}Ph p e^-

0.33	Wesseling 92	p
0.454	Wesseling 92	p

e^- Ca

e^- X

8 – 24.5	Arneodo 92	a-dep,angp,p

e^- ^{40}Ca

^{40}KK π^+ e^-

0.1855	Kagaya 89	angp,p

^{40}KK* π^+ e^-

0.1855	Kagaya 89	angp,p

e^- ^{51}Va

π^+ X

0.2	Shoda 88	angp,p

e^- ^{50}Cr

^{50}Ti e^+

?	Zdesenko 92	–

^{50}Ti e^+ $2\nu_e$

?	Zdesenko 92	–

e^- ^{55}Fe

^{55}Mn ν_e γ

0	Hime 92	p
	Norman 91	p

e^- ^{56}Fe

Fe* e^-

0.9 – 4.3	Chen 91B	angp,p

e^- Fe

e^- X

0.653 – 1.65	Baran 88B	angp,p

e^- Fe

e^- X

0.96	Sealock 89	angp,cs,mass
1.1	Sealock 89	angp,cs,mass
1.3	Sealock 89	angp,cs,mass
1.5	Sealock 89	angp,cs,mass
3.7 – 18	Whitlow 90	p
3.75 – 19.5	Arneodo 92	a-dep,angp,p
	Dasu 88	a-dep,angp,p
	Dasu 87	p
8 – 24.5	Arneodo 92	a-dep,angp,p

$\Delta(1232\,P_{33})$ e^- X

0.96	Sealock 89	–
1.1	Sealock 89	–
1.3	Sealock 89	–
1.5	Sealock 89	–

e^- ^{58}Ni

^{58}Fe e^+

?	Zdesenko 92	–

^{58}Fe e^+ $2\nu_e$

?	Zdesenko 92	–

e^- Ni

p e^- X

0.78	Geesaman 89	a-dep,angp,p

e^- Cu

e^- X

13	Arneodo 92	angp,p
20	Arneodo 92	angp,p

e^- ^{64}Zn

^{64}Ni e^+

?	Zdesenko 92	–

^{64}Ni e^+ $2\nu_e$

?	Zdesenko 92	–

e^- ^{71}Ge

^{71}Ga ν γ

0	Hime 92	p

e^- ^{78}Kr

^{78}Se) e^+

?	Zdesenko 92	–

^{78}Se) e^+ $2\nu_e$

?	Zdesenko 92	–

e^- ^{84}Sr

^{84}Kr e^+ X

?	Zdesenko 92	–

e^- ^{93}Nb

π^+ X

0.2	Shoda 88	angp,p

e^- ^{92}Mo

^{92}Zr e^+

?	Zdesenko 92	–

^{92}Zr e^+ $2\nu_e$

?	Zdesenko 92	–

e^- ^{96}Ru

^{96}Mo e^+

?	Zdesenko 92	–

^{96}Mo e^+ $2\nu_e$

?	Zdesenko 92	–

e^- Ag

e^- X

8 – 24.5	Arneodo 92	a-dep,angp,p

$e^-\ ^{106}Cd$

$^{106}Pd\ e^+$
? Zdesenko 92 –
$^{106}Pd\ e^+\ 2\nu_e$
? Zdesenko 92 –

$e^-\ ^{112}Sn$

$^{112}Cd\ e^+$ X
? Zdesenko 92 –

$e^-\ ^{120}Te$

$^{120}Sn\ e^+$ X
? Zdesenko 92 –

$e^-\ ^{124}Xe$

$^{124}Te\ e^+$
? Zdesenko 92 –
$^{124}Te\ e^+\ 2\nu_e$
? Zdesenko 92 –

$e^-\ ^{130}Ba$

$^{130}Xe\ e^+$ X
? Zdesenko 92 –

e^- Ta

$p\ e^-$ X
0.78 Geesaman 89 a-dep,angp,p

e^- Wt

e^- X
0.96 Sealock 89 angp,cs,mass
1.1 Sealock 89 angp,cs,mass
1.3 Sealock 89 angp,cs,mass
1.5 Sealock 89 angp,cs,mass

$\Delta(1232\ P_{33})\ e^-$ X
0.96 Sealock 89 –
1.1 Sealock 89 –
1.3 Sealock 89 –
1.5 Sealock 89 –

Wt e^- higgs
1.6 Davier 89 cs

Wt $2e^-\ e^+$
1.6 Davier 89 mass,p

$e^-\ ^{184}Os$

$^{184}Wt\ e^+$ X
? Zdesenko 92 –

$e^-\ ^{190}Pt$

$^{190}Os\ e^+$ X
? Zdesenko 92 –

e^- Au

e^- X
3.75 – 19.5 Arneodo 92 a-dep,angp,p
Dasu 88 a-dep,angp,p
Dasu 87 p
8 – 24.5 Arneodo 92 a-dep,angp,p
13 Arneodo 92 angp,p
20 Arneodo 92 angp,p

$e^-\ ^{235}U$

fragt X
1.33 – 4.32 Arakelyan 89 cs
Arakelyan 89C cs

$e^-\ ^{238}U$

fragt X
1.33 – 4.32 Arakelyan 89 cs
Arakelyan 89C cs

$e^+\ \gamma$

$e^+\ \gamma$
46 Bini 91 p

$e^+\ \gamma$

meson^0 e^+
14.5 Aihara 88D cs

$\eta'(958)\ e^+$
14.5 Aihara 88D cs
Gidal 88B cs

$f_1(1285)\ e^+$
14.5 Aihara 88D cs
Aihara 88E cs

$2\rho(770)^0\ e^+$
17.4 Berger 88B cs

$\eta\ \pi^+\ \pi^-\ e^+$
14.5 Gidal 88B mass

$e^+\ e^-$

X
(10.52) Kreinick 89 –
Miller 89 –

mult[jet]
(12 – 43.5) Braunschweig 89H mass
(12 – 46) Bethke 91 const,cs
(22 – 46) Bethke 89 cs
(29) Bethke 91 const,cs
Bethke 89 cs
Deboer 89 mult
(35) Deboer 89 mult
(50 – 57) Deboer 89 mult
(52 – 60) Bethke 89 const,cs
(54 – 61.4) Bethke 91 cs
Abe 90 ang
(88.2 – 94.2) Steinberger 90 const,cor
(91) Bethke 91 cs
(91.2) Acton 93E const,cs,mult
Acton 92H col,mass
Adriani 92 const,cs
Burrows 92 const,cs
Chrin 92 const,cor
Hebbeker 91 const,cs
Hebbeker 91B const,cs
Vankooten 90B col,mass
Deboer 89 mult
(91.25) Buskulic 92C cs
(92.1) Bethke 91B cs
Fabbri 91 const,cs

mult[hadron]
(58) Li 93 col,const,cor
Tsuboyama 92 col,const,cs
(88.2 – 94.2) Adriani 93B col,const,cor
(91.2) Acton 93E col,const
Chmeissani 92 col,const
(91.3) Acton 92R cor

ℓ X
(35) Ouldsaada 88B asym
(43) Ouldsaada 88B asym

$\ell^\pm$ X
(91.2) Colas 91 angp

$e^\pm$ X
(10.46 – 10.52) Wachs 89 p
(10.57 – 10.59) Wachs 89 p
(29) Ng 88 –
Ong 88B p,pt
(29 – 35) Marshall 89 mult
(35) Hagemann 90 pt
(41.5) Hagemann 90 pt
(50 – 55) Abe 88B col,cs
(50 – 56) Ko 88 col
(55) Sumiyoshi 88 col
(56) Sumiyoshi 88 col
(91.24) Adriani 92E col

e^- X
(10.3 – 10.5) Bowcock 88 p
(29) Fujii 90 cs
Weir 89B cs
(88.2 – 94.2) Adeva 90T ang,col,p,pt
? Abachi 89 cs

$e^+\ e^-$

e^+ X
(10.3 – 10.5) Bowcock 88 p
(29) Fujii 90 cs
Weir 89B cs
(88.2 – 94.2) Adeva 90T ang,col,p,pt
? Abachi 89 cs

$\mu^\pm$ X
(3.9 – 7.8) Perl 90 cs,p
(14 – 46.1) Adeva 88 angp,asym,cs
(29) Ong 88 p,pt
Ong 88B p,pt
(29 – 35) Marshall 89 mult
(35) Hagemann 90 pt
(41.5) Hagemann 90 pt
(50 – 55) Abe 88B col,cs
(50 – 56) Ko 88 col
(50 – 61.4) Myung 90 p
(55) Sumiyoshi 88 col
(56) Sumiyoshi 88 col
(56 – 57) Abe 88F ang
(56.5 – 60.8) Adachi 89E col
(91.24) Adriani 92E col

μ^- X
(29) Fujii 90 asym,p,pt
Band 89 asym,p,pt
Weir 89B cs
Band 88 p,pt
(88.2 – 94.2) Adeva 90T ang,col,p,pt

μ^+ X
(29) Fujii 90 asym,p,pt
Band 89 asym,p,pt
Weir 89B cs
Band 88 p,pt
(88.2 – 94.2) Adeva 90T ang,col,p,pt

τ^- X
(3.77 – 46.8) Gan 88B –
(14 – 46.8) Behrend 88 –
(29) Tschirhart 88 –

τ^+ X
(29) Tschirhart 88 –

mult[charged] X
(14) Braunschweig 90 mult
(22) Braunschweig 90 mult
(29) Schmitz 91 angp,col,p
(35) Braunschweig 90 mult
(43.7) Braunschweig 90 mult
(90) Schmitz 91 angp,col,p

mult[charged] (neutrals)
(10) Albrecht 89B angp,col
(10 – 45) Mattig 89 cs,mult
(12 – 46.8) Braunschweig 89J mult,p
(14 – 91) Chliapnikov 92 col,mult
(17.5) Behrend 90D mult,p
(22) Marshall 89 mult
(29) Abe 90H mult
Buschbeck 89 mult,p
(29 – 90) Buschbeck 91 angp,col,mult,p
(34) Marshall 89 mult
(35) Podobrin 91 col,cor,mult,p,pt
Buschbeck 89 mult,p
(35 – 46) Braunschweig 89C col,const,mass,mult,p
(50 – 60.4) Zheng 90 cs,mult
(88.2 – 94.2) Abreu 92E mult,pt
(88.2 – 95) Abreu 91C mult,p
(88.28 – 95.03) Akrawy 91 mult,p
(90) Deangelis 91 angp,col,mult,p,pt
(91) Deangelis 91C mult,p
Abreu 90R cor,cs,mult
(91.1) Abrams 89E cs,mult
(91.2) Adeva 92D mult,p
Hebbeker 91B cs,mult
Yepes 91 p

mult[charged] mult[neutral]
(29) Abe 90H mult

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

mult[jet] X

(29)	Komamiya 90	ang,mass,mult,p
	Abachi 89C	col,mult
(52)	Adachi 88B	angp,p
(54 – 61.4)	Abe 90C	const,mult
(56)	Maki 88	cs
(91)	Komamiya 90	ang,mass,mult,p

mult[hadron] X

(56)	Kim 88	col
	Kim 88D	angp,col,p,pt
(88.2 – 94.2)	Adeva 90M	col

mult[charged-hadron] X

(50 – 60.8)	Kim 90C	mass

mult[charged-hadron] (neutrals)

(91)	Decamp 91K	col,mult,p
(91.2)	Abreu 91R	col,pt
	Acton 91E	cs,mult
	Oshaughnessy 90	col,mass
(91.25)	Decamp 91L	cs,mult

mult[η] X

(29)	Abachi 88B	mult

charged X

(1.5 – 55)	Marshall 89	mult
(1.5 – 91)	Chliapnikov 92	mult
(5 – 31.6)	Marshall 89	p
(9.36)	Albrecht 91L	mult
(10.47)	Albrecht 91L	mult
(14 – 46.8)	Braunschweig 89D	mult
(52 – 57)	Li	p,pt
(88.5 – 93.7)	Buskulic 92M	cs
(91)	Kreutzmann 91	p,pt
(91.1)	Abrams 89E	p,pt
(91.2)	Adeva 91	const,mult,p
	Hebbeker 91	mult
	Hebbeker 91B	mult,p
	Yepes 91	mult
	Vankooten 90B	ang

multicharged X

(50 – 52)	Kinoshita 88B	cs
(50 – 60.8)	Kinoshita 89B	cs
(88.5 – 93.7)	Buskulic 92M	cs

jet X

(10 – 45)	Mattig 89	angp,p
(14 – 44)	Genser 89	col
(34.8)	Ouldsaada 88B	ang,angp,p
(35 – 46)	Braunschweig 89C	col,const,mass,mult,p
(38)	Ouldsaada 88B	ang,angp,p
(43.6)	Ouldsaada 88B	ang,angp,p
(50 – 57)	Mcneil 88	cs
(50 – 60.8)	Sakai 90	angp,col,p
(< 60)	Salvini 88	angp,cs,p,pt
(88.2 – 94.2)	Adriani 93B	const,mult
(91)	Bambade 92	col,p,pt
	Kreutzmann 91	p,pt

hadron X

(10 – 45)	Mattig 89	cs,p
(34)	Braunschweig 89B	p
(44)	Braunschweig 89B	p
(< 60)	Salvini 88	angp,cs,p,pt
(91.2)	Chrin 92	const,p

hadron (hadrons)

(3.08 – 3.12)	Jin 91	cs

charged-hadron X

(9.4 – 10.5)	Albrecht 89W	angp,p
(50 – 57)	Yamauchi 88	mult,p,pt
(50 – 61.4)	Vinson 90	col
(52 – 57)	Li	p,pt
(89.3 – 93)	Coupal 90	mult,p,pt
(91)	Bethke 91	p,pt
(91.1)	Abrams 89E	p,pt
(91.25)	Buskulic 92C	p,pt

$e^+ e^-$

longlived X

(88.5 – 93.7)	Buskulic 92M	cs

γ X

(5 – 31.6)	Marshall 89	p
(10.46 – 10.59)	Lesiak 91	p
(10.55 – 11.25)	Leefranzini 90	p
(29 – 35)	Marshall 89	mult
(35)	Behrend 89B	mult,p
(52 – 60.8)	Ogawa 89	p
(91.2)	Vankooten 90B	ang

γ (neutrals)

(88 – 94)	Dittmar 92	–

γ (hadrons)

(91 – 91.5)	Adriani 92N	col,const

higgs (hadrons)

(88.2 – 94.2)	Abreu 90O	cs,mass

heavy-lepton X

(29)	Riles 88	–
(50)	Rosenfeld 88	cs
(50 – 57)	Kichimi 88	cs
(52)	Rosenfeld 88	cs
(55)	Rosenfeld 88	cs
(56)	Rosenfeld 88	cs

heavy-lepton^0 X

(50 – 57)	Kamae 88	col,cs
(56)	Maki 88	cs

heavy-lepton$^-$ X

(50 – 57)	Kamae 88	col,cs

heavy-lepton$^-$ X + heavy-lepton$^+$ X

(56)	Maki 88	cs

heavy-lepton$^+$ X

(50 – 57)	Kamae 88	col,cs

q X

(10.5)	Bowcock 89B	–
(88.5 – 93.7)	Buskulic 92M	cs

$\bar{q}$ X

(10.5)	Bowcock 89B	–

b X

(12 – 46.8)	Fujii 90	const,cs
(35 – 46)	Braunschweig 89C	col,const,mass,mult,p
(91.2)	Buskulic 92K	–

$\bar{b}$ X

(35 – 46)	Braunschweig 89C	col,const,mass,mult,p

photino X

(50 – 57)	Kamae 88	col,cs

higgsino X

(50 – 57)	Kamae 88	col,cs

$\tilde{e}^-$ X

(50 – 57)	Kamae 88	col,cs

$\tilde{e}^+$ X

(50 – 57)	Kamae 88	col,cs

$\tilde{\mu}^-$ X

(50 – 57)	Kamae 88	col,cs

$\tilde{\mu}^+$ X

(50 – 57)	Kamae 88	col,cs

X $\tilde{q}$

(50 – 57)	Kamae 88	col,cs
	Kichimi 88	cs

$e^{*\pm}$ X

(50 – 57)	Kichimi 88	cs

e^{*-} X

(50 – 57)	Kamae 88	col,cs
(55)	Sumiyoshi 88	–
(56)	Sumiyoshi 88	–

e^{*+} X

(50 – 57)	Kamae 88	col,cs
(55)	Sumiyoshi 88	–
(56)	Sumiyoshi 88	–

$\mu^{*\pm}$ X

(50 – 57)	Kichimi 88	cs

$e^+ e^-$

μ^{*-} X

(50 – 57)	Kamae 88	col,cs

μ^{*+} X

(50 – 57)	Kamae 88	col,cs

τ^* X

(50 – 57)	Kichimi 88	cs

τ^{*-} X

(50 – 57)	Kamae 88	col,cs

τ^{*+} X

(50 – 57)	Kamae 88	col,cs

monopole X

(50 – 52)	Kinoshita 88B	cs
(50 – 56)	Kinoshita 88C	cs
(50 – 57)	Kichimi 88	cs
(50 – 60.8)	Kinoshita 89B	cs
(57)	Shirai 88	cs
(91.1)	Kinoshita 92	–

$\pi^\pm$ X

(5 – 31.6)	Marshall 89	p
(29)	Grishin 90	cor
	Avery 89	cor
	Aihara 88C	cs,mult,p
(29 – 35)	Marshall 89	mult
(58)	Itoh 90	p
(91.2)	Tesch 91	p

π^+ X

(10 – 45)	Mattig 89	cs,p
(91)	Abreu 90N	pt

π^+ X + π^- X

(29)	Aihara 88F	p,pt
	Cowan 88	cs,p
(34)	Braunschweig 89B	mult,p
(44)	Braunschweig 89B	mult,p

π^0 X

(5 – 31.6)	Marshall 89	p
(10)	Albrecht 89G	cs,mult,p
(10 – 45)	Mattig 89	cs,p
(29 – 35)	Marshall 89	mult
(35)	Behrend 89B	mult,p
	Pitzl 89	mult,p
(44)	Braunschweig 89B	mult,p
	Pitzl 89	mult,p
(91.2)	Adeva 91	const,mult,p
	Hebbeker 91	mult,p
	Hebbeker 91B	mult,p
?	Bieler 90	–

π^- X

(10 – 45)	Mattig 89	cs,p
(91)	Abreu 90N	pt
(91.2)	Tesch 91	p

η X

(9.39 – 10.52)	Bieler 90	mult,p
(10)	Albrecht 89G	cs,mult,p
(10 – 45)	Mattig 89	cs,p
(29)	Abachi 88B	p
(29 – 35)	Marshall 89	mult
(35)	Behrend 89B	mult,p
	Pitzl 89	mult,p
(91.2)	Adriani 92C	p
	Buskulic 92D	mult,p

$\rho(770)^0$ X

(10 – 45)	Mattig 89	cs,p
(29)	Ronan 91	mult
	Abachi 89D	cs,p
	Edberg 88	mult,p
(29 – 35)	Marshall 89	mult
(91.2)	Abreu 92J	mult,p

$\eta'(958)$ X

(9.4 – 10.6)	Albrecht 92S	cs
(29)	Wormser 88B	cs,mass
(91.2)	Buskulic 92D	mult,p

$f_0(975)$ X

(9.4 – 10.6)	Albrecht 92S	cs
(10 – 45)	Mattig 89	cs,p

$e^+ e^-$

$f_0(975)$ X

(91.2)	Abreu 92J	mult,p

$f_2(1270)$ X

(10 – 45)	Mattig 89	cs,p
(91.2)	Abreu 92J	mult,p

$K^\pm$ X

(5 – 31.6)	Marshall 89	p
(9.98)	Aleem 92	mult,p
(10.49)	Aleem 92	mult
(29)	Aleem 92	p
	Aihara 88C	cs,mult,p
(29 – 35)	Marshall 89	mult
(34)	Aleem 92	mult,p
(58)	Itoh 90	p
(91.2)	Tesch 91	p

K^+ X

(10 – 45)	Mattig 89	cs,p

K^+ X + K^- X

(29)	Aihara 88F	p,pt
	Cowan 88	cs,p
(34)	Braunschweig 89B	mult,p
(44)	Braunschweig 89B	mult,p

K^0 X

(10 – 45)	Mattig 89	cs,p
(29)	Fordham 90	col,mult,p
(91.2)	Hebbeker 91	mult,p
	Hebbeker 91B	mult,p

K^0 X + $\overline{K}^0$ X

(5 – 31.6)	Marshall 89	p
(9.98)	Aleem 92	mult,p
(10.49)	Aleem 92	mult,p
(14.8 – 42.6)	Aleem 92	col,cs,mult,p,pt
(29)	Aleem 92	mult,p
(29 – 35)	Marshall 89	mult
(35)	Aleem 92	cs,mult,p

$\overline{K}^0$ X

(10 – 45)	Mattig 89	cs,p
(91.2)	Hebbeker 91B	mult,p

K^- X

(10 – 45)	Mattig 89	cs,p
(91.2)	Tesch 91	p

K_S X

(10)	Behrend 89F	p
(14.8)	Braunschweig 89M	cs,mult,p
(21.5)	Braunschweig 89M	cs,mult,p
(29)	Abachi 89C	cs,p
(34.5)	Braunschweig 89M	cs,mult,p
(35)	Braunschweig 89M	cs,mult,p
(42.6)	Braunschweig 89M	cs,mult,p
(88.3 – 94.3)	Maringer 92	cs,p
(91)	Schwiening 91	angp
(91.31)	Alexander 91E	cs,mult,p

$K^*(892)^\pm$ X

(29)	Aleem 92	mult
(29 – 35)	Marshall 89	mult
(34.5)	Aleem 92	cs,mult,p
(35)	Aleem 92	cs,mult,p
(42.6)	Aleem 92	cs,mult,p

$K^*(892)^+$ X

(10)	Behrend 89F	p
(10 – 45)	Mattig 89	cs,p
(14.8)	Braunschweig 89M	cs,mult,p
(21.5)	Braunschweig 89M	cs,mult,p
(29)	Ronan 91	mult
(34.5)	Braunschweig 89M	cs,mult,p

$e^+ e^-$

$K^*(892)^+$ X

(35)	Braunschweig 89M	cs,mult,p
(42.6)	Braunschweig 89M	cs,mult,p
(91.2)	Hebbeker 91B	mult,p

$K^*(892)^+$ X + $K^*(892)^-$ X

(88.3 – 94.3)	Maringer 92	cs,p
(91.2)	Acton 92O	mult,p

$K^*(892)^0$ X

(10 – 45)	Mattig 89	cs,p
(29)	Aleem 92	mult,p
	Ronan 91	mult
	Abachi 89D	cs,p
	Edberg 88	mult,p
(91.2)	Abreu 92J	mult,p

$K^*(892)^0$ X + $\overline{K}^*(892)^0$ X

(29 – 35)	Marshall 89	mult

$\overline{K}^*(892)^0$ X

(29)	Ronan 91	mult
	Abachi 89D	cs,p
(91.2)	Abreu 92J	mult,p

$K^*(892)^-$ X

(10)	Behrend 89F	p
(10 – 45)	Mattig 89	cs,p
(14.8)	Braunschweig 89M	cs,mult,p
(21.5)	Braunschweig 89M	cs,mult,p
(29)	Ronan 91	mult
(34.5)	Braunschweig 89M	cs,mult,p
(35)	Braunschweig 89M	cs,mult,p
(42.6)	Braunschweig 89M	cs,mult,p
(91.2)	Hebbeker 91B	mult,p

$K_2^*(1430)^0$ X

(10 – 45)	Mattig 89	cs,p

$\phi(1020)$ X

(10 – 45)	Mattig 89	cs,p
(10.45)	Albrecht 88K	cs,p
(29)	Ronan 91	mult
	Edberg 88	mult,p
(29 – 35)	Marshall 89	mult

charm X

(29)	Ng 88	cs
	Ong 88	cs,p
	Ong 88B	–
	Klem 86	–

$\overline{\text{charm}}$ X

(29)	Ong 88B	–
	Klem 86	–

$D^\pm$ X

(29 – 35)	Marshall 89	mult

D^+ X

(4.14)	Adler 88C	cs,mass
(9.4 – 10.6)	Albrecht 88J	–
(10.3 – 10.5)	Bowcock 88	cs
(10.47)	Albrecht 91G	cs,p
(10.52)	Bortoletto 88	cs,p
(10.55)	Harder 89	cs,p
(10.58)	Bortoletto 88	cs,p
(29)	Kroha 90	asym,const
	Averill 89	–

D^0 X + $\overline{D}^0$ X

(29 – 35)	Marshall 89	mult

D^0 X

(9.4 – 10.6)	Albrecht 88J	–
(10)	Albrecht 88F	–
	Albrecht 88S	–
(10.3 – 10.5)	Bowcock 88	cs
(10.36 – 10.7)	Procario 92B	–
(10.47)	Albrecht 91G	cs,p
(10.5)	Alexander 89	–
(10.52)	Bortoletto 88	cs,p
(10.55)	Harder 89	cs,p

$e^+ e^-$

D^0 X

(10.58)	Bortoletto 88	cs,p
(29)	Kroha 90	asym,const
	Averill 89	–
	Baringer 88	mass

$\overline{D}^0$ X

(9.4 – 10.6)	Albrecht 88J	–
(10)	Albrecht 88F	–
(10.3 – 10.5)	Bowcock 88	cs
(10.5)	Alexander 89	–
(10.52)	Bortoletto 88	cs,p
(10.55)	Harder 89	cs,p
(10.58)	Bortoletto 88	cs,p
(29)	Kroha 90	asym,const
	Averill 89	–
	Baringer 88	mass

D^- X

(4.14)	Adler 88C	cs,mass
(9.4 – 10.6)	Albrecht 88J	–
(10.3 – 10.5)	Bowcock 88	cs
(10.35)	Albrecht 91B	–
(10.52)	Bortoletto 88	cs,p
(10.55)	Harder 89	cs,p
(10.58)	Albrecht 91B	–
	Bortoletto 88	cs,p
(29)	Kroha 90	asym,const
	Averill 89	–

$D^*(2010)^\pm$ X

(29 – 35)	Marshall 89	mult
(35)	Ouldsaada 88B	angp
(91.3)	Geerts 91	p

$D^*(2010)$ X

(10)	Albrecht 92O	–

$D^*(2010)^+$ X + $D^*(2010)^-$ X

(58)	Hinode 93	cs

$D^*(2010)^+$ X

(9.4 – 10.6)	Albrecht 88J	–
(9.46 – 10.58)	Albrecht 92G	–
(9.5 – 10.5)	Albrecht 89R	–
(10.3 – 10.5)	Bowcock 88	cs
(10.36 – 10.7)	Procario 92B	–
(10.47)	Albrecht 91G	cs,p
(10.5)	Kubota 91	angp
(10.52)	Bortoletto 88	cs,p
(10.58)	Bortoletto 88	cs,p
(10.6)	Bortoletto 92	–
	Butler 92	–
(28 – 46.8)	Fujii 90	asym,cs,p
	Braunschweig 89G	asym,cs,p
(29)	Aihara 91	asym,pol
	Kroha 90	asym,const
	Abachi 89C	cs
	Averill 89	–
	Abachi 88	–
	Baringer 88	angp,cs,p,pt
(34.4)	Kroha 90	asym,const
(34.6)	Kroha 90	asym,const
(35)	Kroha 90	asym,const
(36.2)	Kroha 90	asym,const
(44)	Kroha 90	asym,const
(91.2)	Alexander 91	p

$D^*(2010)^0$ X + $\overline{D}^*(2010)^0$ X

(29 – 35)	Marshall 89	mult

$D^*(2010)^0$ X

(10.52)	Bortoletto 88	cs,p
(10.58)	Bortoletto 88	cs,p
(10.6)	Bortoletto 92	–
	Butler 92	–
(29)	Abachi 88	–

$\overline{D}^*(2010)^0$ X

(10.52)	Bortoletto 88	cs,p
(10.58)	Bortoletto 88	cs,p
(29)	Abachi 88	–

$D^*(2010)^-$ X

(9.4 – 10.6)	Albrecht 88J	–
(10.3 – 10.5)	Bowcock 88	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$D^*(2010)^- X$

(10.52)	Bortoletto 88	cs,p
(10.58)	Bortoletto 88	cs,p
(28 – 46.8)	Fujii 90	asym,cs,p
	Braunschweig 89G	asym,cs,p
(29)	Aihara 91	asym,pol
	Averill 89	–
	Abachi 88	–
	Baringer 88	angp,cs,p,pt
(91.2)	Alexander 91	p

$D_S^{\pm} X$

(4.14)	Adler 89E	–
	Toki 89B	–

$D_S^+ X$

(4.14)	Wasserbaech 89B	mass
(9.4 – 10.6)	Albrecht 88J	–
(10)	Albrecht 90	cs,mass
(10.35 – 10.58)	Alexander 92	–
(10.35 – 10.6)	Avery 92	–
(10.36 – 10.58)	Daoudi 91	–
(10.5)	Albrecht 91J	cs,p
	Alexander 90B	–
	Chen 89B	cs,p
(10.52)	Bortoletto 88	cs,p
(10.58)	Bortoletto 88	cs,p
(29)	Averill 89	–

$D_S^- X$

(4.14)	Wasserbaech 89B	mass
(9.4 – 10.6)	Albrecht 88J	–
(10.35)	Albrecht 91B	–
(10.5)	Albrecht 91J	cs,p
	Chen 89B	cs,p
(10.52)	Bortoletto 88	cs,p
(10.58)	Albrecht 91B	–
	Bortoletto 88	cs,p
(29)	Averill 89	–

$D_S^{*+} X$

(9.4 – 10.6)	Albrecht 87N	cs

$D_S^{*-} X$

(9.4 – 10.6)	Albrecht 87N	cs

$D_1(2420)^0 X$

(10)	Albrecht 89V	angp,mass,p

$D_2^*(2460)^+ X$

(10.58)	Albrecht 89X	–

$D_2^*(2460)^0 X$

(9.4 – 10.6)	Albrecht 89	p
(10)	Albrecht 89V	angp,mass,p

$D_2^*(2460)^- X$

(10.58)	Albrecht 89X	–

$D_{S1}(2536)^+ X$

(10)	Albrecht 89P	cs
(10.4)	Albrecht 92N	cs

$J/\psi(1S) X$

(8.4)	Lockman 90	–
(10.49)	Maschmann 89	cs
(29)	Wormser 88	cs,p
(30 – 35)	Ferrarotto 88	cs
(91.31)	Alexander 91I	cs
?	Chan 88	–

$\chi_{c1}(1P) X$

(10.58)	Albrecht 91D	–

bottom X + $\overline{\text{bottom}}$ X

(88.2 – 94.2)	Buskulic 92F	cs

bottom X

(29)	Fujii 90	–
	Ong 89	–
	Ng 88	cs
	Ong 88	cs,p
	Ong 88B	–
	Klem 86	–

$e^+ e^-$

bottom X

(29 – 37.5)	Piccolo 89	–
(35)	Hagemann 90	–
(35 – 46)	Braunschweig 89C	col,const,mass,mult,p
(41.5)	Hagemann 90	–
(50 – 57)	Kichimi 88	cs
(88.2 – 94.2)	Adriani 93B	p
(91.2)	Colas 91	p

$\overline{\text{bottom}}$ X

(29)	Ong 89	–
	Ong 88B	–
	Klem 86	–
(29 – 37.5)	Piccolo 89	–
(35)	Hagemann 90	–
(35 – 46)	Braunschweig 89C	col,const,mass,mult,p
(41.5)	Hagemann 90	–
(88.2 – 94.2)	Adriani 93B	p

$B^+ X$

(88.3 – 94.3)	Buskulic 93D	cs

$B^0 X$

(10.2 – 10.5)	Albrecht 89N	–
(29)	Averill 89	–
	Wagner 89B	–
(88.3 – 94.3)	Buskulic 93D	cs

$\overline{B}^0 X$

(10)	Albrecht 89T	–
(29)	Averill 89	–
(88.3 – 94.3)	Buskulic 93D	cs

$B^- X$

(10)	Albrecht 89T	–
(88.3 – 94.3)	Buskulic 93D	cs

$B^* X$

(10.61 – 10.7)	Akerib 91	cs

$\Upsilon(1S) X$

(10)	Albrecht 89G	–
	Albrecht 89I	–

$\Upsilon(2S) X$

(9.98)	Albrecht 89H	–
(10)	Albrecht 89G	–

top X

(50 – 57)	Kichimi 88	cs

p X

(10 – 45)	Mattig 89	cs,p
(10.5 – 10.58)	Crawford 91B	p

p X + $\bar{p}$ X

(5 – 31.6)	Marshall 89	p
(29)	Aihara 88C	cs,mult,p
	Aihara 88F	p,pt
	Cowan 88	cs,p
(29 – 35)	Marshall 89	mult
(34)	Braunschweig 89B	mult,p
(44)	Braunschweig 89B	mult,p
(58)	Itoh 90	p
(91.2)	Tesch 91	p

$\bar{p}$ X

(29 – 35)	Marshall 89	mult
(91.2)	Tesch 91	p

$\Delta(1232\,P_{33})^{++} X$

(10)	Albrecht 89I	cs
(10 – 45)	Mattig 89	cs,p

$\overline{\Delta}(1232\,P_{33})^{--} X$

(10)	Albrecht 89I	cs

Λ X

(10)	Behrend 89F	p
(10 – 45)	Mattig 89	cs,p
(29)	Ronan 91	mult
	Abe 90H	cs
	Fordham 90	col,mult,p
(34.8)	Braunschweig 89I	cs,p,pt
(42.1)	Braunschweig 89I	cs,p,pt

$e^+ e^-$

Λ X

(91.2)	Hebbeker 91	mult,p
	Hebbeker 91B	mult,p

Λ X + $\bar{\Lambda}$ X

(10)	Albrecht 88I	cs,p
(29)	Geld 92	mult,p
(29 – 35)	Marshall 89	mult

$\bar{\Lambda}$ X

(29 – 35)	Marshall 89	mult
(91.2)	Hebbeker 91B	mult,p

$\Lambda(1520\,D_{03})$ X

(9.4 – 10.6)	Albrecht 88Q	cs

Σ^+ X + Σ^- X

(29 – 35)	Marshall 89	mult

Σ^0 X

(10 – 45)	Mattig 89	cs,p

Σ^0 X + $\bar{\Sigma}^0$ X

(10)	Albrecht 88I	cs,mass

$\Sigma(1385\,P_{13})^+$ X

38.4	Braunschweig 89I	cs
42.1	Braunschweig 89I	cs
(10 – 45)	Mattig 89	cs,p

$\Sigma(1385\,P_{13})^+$ X + $\bar{\Sigma}(1385\,P_{13})^-$ X

(10)	Albrecht 88I	cs,mass

$\Sigma(1385\,P_{13})^-$ X

38.4	Braunschweig 89I	cs
42.1	Braunschweig 89I	cs

$\Sigma(1385\,P_{13})^-$ X + $\bar{\Sigma}(1385\,P_{13})^+$ X

(10)	Albrecht 88I	cs,mass

Ξ X

(10 – 45)	Mattig 89	cs,p

Ξ^- X

(29)	Ronan 91	mult
	Abe 90H	cs
	Klein 88	cs,p
(34.8)	Braunschweig 89I	cs,p,pt
(42.1)	Braunschweig 89I	cs,p,pt
(91.2)	Hebbeker 91B	mult,p

Ξ^- X + $\bar{\Xi}^+$ X

(10)	Albrecht 88I	cs,mass,p
(29 – 35)	Marshall 89	mult

$\bar{\Xi}^+$ X

(29)	Klein 88	cs,p
(91.2)	Hebbeker 91B	mult,p

$\Xi(1530\,P_{13})^0$ X

(10 – 45)	Mattig 89	cs,p
(29)	Klein 88	cs

$\Xi(1530\,P_{13})^0$ X + $\bar{\Xi}(1530\,P_{13})^0$ X

(10)	Albrecht 88I	cs,mass

Ω^- X

(10 – 45)	Mattig 89	cs,p
(29)	Ronan 91	mult
	Abe 90H	cs
	Klein 88	cs,pt

Ω^- X + $\bar{\Omega}^+$ X

(10)	Albrecht 88I	cs,mass
(29 – 35)	Marshall 89	mult

$\bar{\Omega}^+$ X

(29)	Klein 88	cs,pt

Λ_c X

(10.55)	Avery 90B	cs,p
(29)	Ronan 91	mult

Λ_c^+ X

(4.5 – 6.8)	Klein 89C	cs
(9.46 – 10.6)	Klein 89C	cs,p
	Albrecht 88D	cs,p
(10.3 – 10.58)	Procario 91	–
(10.4)	Albrecht 92C	–
	Albrecht 91F	cs
(10.52)	Avery 90C	–

$e^+ e^-$

Λ_c^+ X

	Bortoletto 88	cs,p
(10.58)	Avery 90C	-
	Bortoletto 88	cs,p
(10.86)	Avery 90C	-
(29)	Abe 90H	cs
	Klein 89	cs
	Klein 89C	cs
	Klein 88	cs,p

$\overline{\Lambda}_c^-$ X

(9.46 – 10.6)	Albrecht 88D	cs,p
(10.52)	Bortoletto 88	cs,p
(10.58)	Bortoletto 88	cs,p
(29)	Klein 89	cs
	Klein 88	cs,p

$\Sigma_c(2455)^{++}$ X

(10)	Klein 89C	p
	Albrecht 88H	p
(10.5)	Bowcock 89	cs
(29)	Klein 89C	cs
	Klein 88	cs

$\Sigma_c(2455)^0$ X

(10)	Klein 89C	p
	Albrecht 88H	p
(10.5)	Bowcock 89	cs
(29)	Klein 89C	cs
	Klein 88	cs

$\overline{\Sigma}_c(2455)^0$ X

(10)	Albrecht 88H	p
(29)	Klein 88	cs

$\overline{\Sigma}_c(2455)^{--}$ X

(10)	Albrecht 88H	p
(29)	Klein 88	cs

$\Xi_c(2460)^+$ X

(10.5)	Albrecht 90J	cs,p
(10.5 – 10.7)	Alam 89B	-

$\Xi_c(2460)^0$ X

(10.4)	Albrecht 92R	cs
(10.5)	Albrecht 90J	cs,p
	Avery 89C	-
	Klein 89C	-
(10.5 – 10.7)	Alam 89B	-
(10.58 – 10.86)	Procario 91	-
(29)	Klein 89C	-
	Klein 88	-

$\overline{\Xi}_c(2460)^0$ X

(10.5)	Avery 89C	-
(10.5 – 10.7)	Alam 89B	-

$\overline{\Xi}_c(2460)^-$ X

(10.5 – 10.7)	Alam 89B	-

Ω_c X

(10.58)	Albrecht 92J	cs

Λ_b X

(91.2)	Abreu 93C	cs

$\overline{\Lambda}_b$ X

(91.2)	Abreu 93C	cs

Ξ^*(unspec)^0 X

(29)	Ronan 91	mult

deuteron X

(10 – 45)	Mattig 89	cs,p

$\overline{\text{deuteron}}$ X

(10)	Albrecht 89O	p

$2\ell^-$ X

(10.55)	Franzini 89	cs,p
	Golutvin 89	cs,p
(29)	Franzini 89	cs,p
	Golutvin 89	cs,p
(34.6)	Franzini 89	cs,p
	Golutvin 89	cs,p
(88.2 – 94.2)	Steinberger 90	asym,p,pt
(91.2)	Abreu 92L	ang,col
	Colas 91	-

$\ell^+ \ell^-$ X

(10.55)	Franzini 89	cs,p
	Golutvin 89	cs,p
(10.58)	Schafer 91	ang,mass
(29)	Franzini 89	cs,p
	Golutvin 89	cs,p
(34.6)	Franzini 89	cs,p
	Golutvin 89	cs,p
(88.2 – 94.2)	Steinberger 90	asym,p,pt
(91.2)	Abreu 92L	ang,col
	Colas 91	-

$2\ell^+$ X

(10.55)	Franzini 89	cs,p
	Golutvin 89	cs,p
(29)	Franzini 89	cs,p
	Golutvin 89	cs,p
(34.6)	Franzini 89	cs,p
	Golutvin 89	cs,p
(88.2 – 94.2)	Steinberger 90	asym,p,pt
(91.2)	Abreu 92L	ang,col
	Colas 91	-

$2\ell^+$ X + $2\ell^-$ X

(10.58)	Schafer 91	ang,mass

$\nu\ \bar{\nu}$ X

(88.2 – 94.2)	Adeva 91B	mass
(88.2 – 94.3)	Alexander 91B	mass

e^- mult[charged] X

(29)	Wagner 89B	col,pt

e^+ mult[charged] X

(29)	Wagner 89B	col,pt

$e^\pm$ mult[hadron] X

(56)	Kim 88D	ang,mass

e^+ mult[hadron] X

(50 – 60.8)	Kim 90C	mass

$e^\pm$ charged (neutrals)

(29)	Heusch 90B	p

e^- jet X

(35)	Kroha 89B	col,pt
(43)	Kroha 89B	col,pt

e^+ jet X

(35)	Kroha 89B	col,pt
(43)	Kroha 89B	col,pt

$e^\pm$ (hadrons) jet

(52 – 61.4)	Nagai 91	angp

e^- hadron$^+$ X + e^+ hadron$^-$ X

(10.58)	Schafer 91	p

e^- hadron$^-$ X + e^+ hadron$^+$ X

(10.58)	Schafer 91	p

$e^\pm$ charged-hadron (neutrals)

(4.1 – 4.2)	Perl 90	cs
(4.4 – 5.8)	Perl 90	cs
(6.4 – 7.4)	Perl 90	cs

$e^-\ \gamma$ X

(1 – 1.05)	Druzhinin 88	cs

$e^+\ \gamma$ X

(1 – 1.05)	Druzhinin 88	cs

$2e^\pm$ X

(29)	Porter 89	cs,p,pt

$2e^-$ X

(29)	Kroha 90	-
	Hurst 89	cs,p
	Weir 89B	cs
(88.2 – 94.2)	Adeva 90R	p,pt
	Adeva 90T	ang,col,p,pt

$e^-\ e^+$ X

(9.5 – 10.65)	Maschmann 89	mass
(10)	Albrecht 88F	mass,p
(29)	Hurst 89	cs,p
(35)	Lumsdon 90	angp,col,mass
	Peters 90	mass
(50)	Masuda 88	cs
(50 – 57)	Fujii 90	-
	Sasaki 89	-
(50 – 60.8)	Kim 90C	mass
(52)	Masuda 88	cs
(55)	Masuda 88	cs
(88.2 – 94.2)	Adeva 91B	mass
	Adeva 90R	p,pt
	Adeva 90T	ang,col,p,pt
(88.2 – 94.3)	Alexander 91B	mass
(91.24)	Adriani 92E	col

$2e^+$ X

(29)	Kroha 90	-
	Hurst 89	cs,p
	Weir 89B	cs
(88.2 – 94.2)	Adeva 90R	p,pt
	Adeva 90T	ang,col,p,pt

$e^-\ e^+$ (γ's)

(88 – 94)	Dittmar 92	p

$e^-\ e^+$ mult[jet]

(35)	Lumsdon 90	angp,col,mass
(50 – 62)	Olsen 91	col,pt
(58)	Tsuboyama 92	pt

μ^- mult[charged] X

(29)	Wagner 89B	col,pt

μ^+ mult[charged] X

(29)	Wagner 89B	col,pt

μ^+ mult[hadron] X

(50 – 60.8)	Kim 90C	mass

$\mu^\pm$ charged (neutrals)

(4.8)	Perl 90	ang,angp

μ^- jet X

(35)	Kroha 89B	col,pt
(43)	Kroha 89B	col,pt

μ^+ jet X

(35)	Kroha 89B	col,pt
(43)	Kroha 89B	col,pt

μ^- hadron$^+$ X + μ^+ hadron$^-$ X

(10.58)	Schafer 91	p

μ^- hadron$^-$ X + μ^+ hadron$^+$ X

(10.58)	Schafer 91	p

$\mu^\pm\ e^\pm$ X

(29)	Porter 89	cs,p,pt

$\mu^-\ e^-$ X

(29)	Kroha 90	-
	Hurst 89	cs,p
	Weir 89B	cs
(88.2 – 94.2)	Adeva 90R	p,pt

$\mu^-\ e^+$ X

(10)	Albrecht 88F	mass,p
(29)	Hurst 89	cs,p
	Mathis 88	p
(50 – 60.8)	Kim 90C	mass
(88.2 – 94.2)	Adeva 90R	p,pt
(91.24)	Adriani 92E	col

$\mu^+\ e^-$ X

(10)	Albrecht 88F	mass,p
(29)	Mathis 88	p
(50 – 60.8)	Kim 90C	mass
(88.2 – 94.2)	Adeva 90R	p,pt
(91.24)	Adriani 92E	col

$\mu^+\ e^+$ X

(29)	Kroha 90	-
	Hurst 89	cs,p
	Weir 89B	cs
(88.2 – 94.2)	Adeva 90R	p,pt

$2\mu^\pm$ X

(29)	Porter 89	cs,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$2\mu^- X$

(29)	Kroha 90	-
	Hurst 89	cs,p
	Weir 89B	cs
(88.2 – 94.2)	Adeva 90R	p,pt
	Adeva 90T	ang,col,p,pt

$\mu^- \mu^+ X$

(10)	Albrecht 88F	mass,p
(14.8 – 42.6)	Aleem 92	cs
(29)	Hurst 89	cs,p
	Band 88	p,pt
	Wormser 88	mass
(35)	Aleem 92	cs
	Abe 90H	ang
(50 – 60.8)	Kim 90C	mass
(56)	Maki 88	asym,p
(88.2 – 94.2)	Adeva 91B	mass
	Adeva 90R	p,pt
	Adeva 90T	ang,col,p,pt
(88.2 – 94.3)	Alexander 91B	mass
(91.24)	Adriani 92E	col

$2\mu^+ X$

(29)	Kroha 90	-
	Hurst 89	cs,p
	Weir 89B	cs
	Band 88	p,pt
(88.2 – 94.2)	Adeva 90R	p,pt
	Adeva 90T	ang,col,p,pt

$\mu^- \mu^+$ (γ's)

(88 – 94)	Dittmar 92	p
(88.22 – 94.21)	Watson 90	angp,asym,const,cs

$\mu^- \mu^+$ mult[jet]

(88.2 – 94.2)	Adeva 90M	mass

$\tau^- \tau^+ X$

(10 – 60)	Kass 89	-
(30 – 46.7)	Kleinwort 89	cs
(50)	Masuda 88	cs
(52)	Masuda 88	cs
(55)	Masuda 88	cs
(56)	Maki 88	asym,p
(88.2 – 94.2)	Adeva 91B	mass
(88.2 – 94.3)	Alexander 91B	mass

$\tau^- \tau^+$ (γ's)

(88 – 94)	Dittmar 92	p

$\pi^+ e^- X$

(29)	Mathis 88	p

$\pi^- e^+ X$

(29)	Mathis 88	p

$K^+ e^+ X$

(10.58)	Cronstrom 91	ang

$K^- e^+ X$

(10.58)	Cronstrom 91	ang

$K_S e^+ X$

(10.58)	Cronstrom 91	ang

$K^+ \mu^+ X$

(10.58)	Cronstrom 91	ang

$K^- \mu^+ X$

(10.58)	Cronstrom 91	ang

$K_S \mu^+ X$

(10.58)	Cronstrom 91	ang

$K^*(892)^+ \ell^+ X$

(10.58)	Cronstrom 91	ang,mass

$K^*(892)^0 \ell^+ X$

(10.58)	Cronstrom 91	ang,mass

$\overline{K}^*(892)^0 \ell^+ X$

(10.58)	Cronstrom 91	ang,mass

$K^*(892)^- \ell^+ X$

(10.58)	Cronstrom 91	ang,mass

$\omega(1020) \ell^+ X$

(10.58)	Cronstrom 91	-

$e^+ e^-$

$\phi(1020) e^- X$

(10.35)	Albrecht 91B	mass
(10.58)	Albrecht 91B	mass

$D^+ \ell^- X$

(10.58)	Albrecht 92E	p

$D^0 \ell^- X$

(10.58)	Albrecht 92E	p
(88.3 – 94.3)	Buskulic 93D	mass,p

$\overline{D}^0 \ell^+ X$

(88.3 – 94.3)	Buskulic 93D	mass,p

$D^*(2010)^+ \ell^- X$

(10.58)	Albrecht 92E	p
	Schafer 91	-
(88.3 – 94.3)	Buskulic 93D	mass,p

$D^*(2010)^+ \ell^+ X$

(10.58)	Schafer 91	-

$D^*(2010)^- \ell^+ X$

(88.3 – 94.3)	Buskulic 93D	mass,p

$D^*(2010)^+ e^- X$

(29)	Wagner 89B	pt

$D^*(2010)^- e^+ X$

(29)	Wagner 89B	pt

$D^*(2010)^+ \mu^- X$

(29)	Wagner 89B	pt

$D^*(2010)^- \mu^+ X$

(29)	Wagner 89B	pt

$\overline{B}^0 \ell^- X$

(10.58)	Schafer 91	-

$\overline{B}^0 \ell^+ X$

(10.58)	Schafer 91	-

$\Lambda \ell^+ X$

(91.2)	Abreu 93C	mass,pt

$\overline{\Lambda} \ell^- X$

(91.2)	Abreu 93C	mass,pt

$\Lambda e^+ X$

(29)	Klein 89	cs,mass

$\overline{\Lambda} e^- X$

(29)	Klein 89	cs,mass

$\Lambda \mu^+ X$

(29)	Klein 89	cs,mass

$\overline{\Lambda} \mu^- X$

(29)	Klein 89	cs,mass

$\Xi^- \ell^+ X$

(10.4)	Albrecht 92R	mass,p

mult[lepton] mult[hadron] X

(56)	Kim 88	col

2charged X

(35)	Podobrin 91	col,cor,pt
(52)	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
(55)	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
(56)	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
(57)	Bacala 88B	angp,asym,cs
(91)	Deangelis 91C	ang,cor,pt

2charged$^+$ X + 2charged$^-$ X

(57.2)	Walker 90	cor,p

2charged$^+$ X

(91)	Abreu 92G	ang,cor

charged$^+$ charged$^-$ X

(57.2)	Walker 90	cor,p
(91)	Abreu 92G	ang,cor

$e^+ e^-$

2charged$^-$ X

(91)	Abreu 92G	ang,cor

2charged (neutrals)

(9.4 – 10.6)	Albrecht 91M	cs

(jets) jet X

(14 – 44)	Genser 89	col

2jet X

(14.8)	Braunschweig 89M	-
(21.5)	Braunschweig 89M	-
(22 – 46.7)	Fujii 90	p
	Bethke 88	p
(29)	Fujii 90	cs
	Abachi 89C	col,mult
	Bethke 89C	cs
	Ford 89	col
	Ng 88	-
(34.5)	Braunschweig 89M	-
(34.8)	Ouldsaada 88B	ang,angp,p
(35)	Podobrin 91	col,cor,pt
	Braunschweig 89M	-
(38)	Ouldsaada 88B	ang,angp,p
(42.6)	Braunschweig 89M	-
(43.6)	Ouldsaada 88B	ang,angp,p
(50 – 60.8)	Sakai 90	angp,col,p
(52)	Adachi 89	cs
(55)	Adachi 89	cs
(56)	Unno 88	-
(56.5)	Adachi 89	cs
(57)	Adachi 89	cs

(jets) 2jet

(4 – 9)	Behrend 91	angp,col,pt
(35 – 46)	Braunschweig 89C	col,const,mass,mult,p
(50 – 60.8)	Kim 89E	col,p
(52 – 57)	Sagawa 90	const,mult,p,pt

2jet < mult[hadron] >

(91.3)	Acton 92R	cor

2hadron X

(29)	Deboer 89	col,const
(35)	Deboer 89	col,const

2hadron$^+$ X

(91)	Decamp 91P	cor

hadron$^+$ hadron$^-$ X

(91)	Decamp 91P	cor

2hadron (hadrons)

(0.81 – 1.39)	Dolinsky 89B	cs
$4892 - 1.957 \cdot 10^6$	Marshall 89	cs
(3)	Bethke 91	col
(3.8)	Bethke 91	col
(4.8)	Bethke 91	col
(5 – 7.4)	Edwards 89	cs
(5 – 61.4)	Branchina 92	const,cs
(6.2)	Bethke 91	col
(7.23 – 10.34)	Blinov 91	cs
(7.4)	Bethke 91	col
(9.388 – 9.479)	Jakubowski 88	cs
(9.39)	Jakubowski 90	cs
(9.4 – 10.5)	Kaarsberg 89	cs
(9.966 – 10.04)	Jakubowski 88	cs
(9.98)	Albrecht 89H	mass
(10)	Abe 90H	cs
(10 – 45)	Mattig 89	col,cs,p,pt
(10.5 – 10.65)	Wachs 89	cs
(10.55 – 11.25)	Leefranzini 90	cs
(12 – 41.5)	Marshall 89	col
	Braunschweig 88C	col,mult
(12 – 43.5)	Braunschweig 89H	col,mass
(12 – 46)	Bethke 91	col
(12 – 46.8)	Braunschweig 89K	angp,col
(14)	Braunschweig 90	ang,col,cs,p

$e^+ e^-$

2hadron (hadrons)

(14 – 42)	Abe 90H	cs
(14 – 46.8)	Fujii 90	col
	Behrend 89C	col
(22)	Braunschweig 90	ang,col,cs,p
(22 – 38)	Braunschweig 89E	–
(22 – 46)	Bethke 89	cs
(22 – 61.4)	Branchina 90	const,cs
(29)	Bethke 91	col
	Abe 90H	cs
	Vonzanthier 90	cs
	Bethke 89	cs
	Komamiya 89B	ang,p
	Wood 88	ang,p
(34.8)	Ouldsaada 88B	–
(35)	Braunschweig 90	ang,col,cs,p
	Braunschweig 89L	ang,col,mass
(38)	Ouldsaada 88B	–
(43.6)	Ouldsaada 88B	–
(43.7)	Braunschweig 90	ang,col,cs,p
(44)	Genser 89	cs
(44.2)	Behrend 88C	angp,p
(50)	Deboer 89	const,cs
	Eno 89	col,const,cs
	Masuda 88	cs
	Rosenfeld 88	cs
	Sagawa 88	col,cs
	Sugahara 88	angp,col
	Unno 88	cs
(50 – 55)	Albrow 88	col,cs
(50 – 56)	Ko 88	col,cs
	Maki 88B	col,cs
	Mori 88	cs
	Park 88	ang,col,p
	Shirai 88	col,cs
	Son 88	col,cs
(50 – 57)	Deboer 89	const,cs
	Metcalf 89	cs
	Mori 89	cs
	Mori 89B	col,cs
	Kamae 88	col,cs
	Kichimi 88	col
	Mcneil 88	const,cs
	Yamauchi 88	col,cs,p,pt
(50 – 60.4)	Zheng 90	cs,mult
(50 – 60.8)	Eno 89B	col
	Kim 89E	cs
(50 – 61.4)	Abe 90E	const,cs
	Adachi 90B	cs
	Iwasaki 89	ang,const,cor,cs
	Kumita 89B	cs
	Maki 89	cs
(50 – 62)	Olsen 91	cs
(50 – 64)	Abe 90D	asym,const,cs
	Abe 90H	cs
(52)	Deboer 89	const,cs
	Eno 89	col,const,cs
	Adachi 88C	col,cs
	Masuda 88	cs
	Rosenfeld 88	cs
	Sagawa 88	col,cs
	Sugahara 88	angp,col
	Unno 88	cs
(52 – 56)	Tauchi 88	cs
(52 – 57)	Sagawa 90	const,mult,p,pt
	Li	col
(52 – 60)	Bethke 89	const,cs
(52 – 60.8)	Ogawa 89	col,cs
(53.3)	Fujii 90	col,p
	Adachi 89C	col,p
(54 – 61.4)	Abe 90	cs
	Abe 90C	col,p
(55)	Eno 89	col,const,cs
	Masuda 88	cs
	Rosenfeld 88	cs
	Sugahara 88	angp,col
	Sumiyoshi 88	col,cs
	Unno 88	cs

$e^+ e^-$

2hadron (hadrons)

(55 – 60.8)	Odaka 89	cs
(56)	Eno 89	col,const,cs
	Maki 88	col,cs
	Rosenfeld 88	cs
	Sumiyoshi 88	col,cs
	Unno 88	cs
(56 – 57)	Abe 88F	col
(56 – 60.8)	Nozaki 89	const,cs
(56.5)	Eno 89	col,const,cs
	Unno 88	cs
(57)	Eno 89	col,const,cs
	Unno 88	cs
(57.4 – 5[illegible].8)	Abe 93B	cs
(58)	Li 93	col,const,cor
	Tsuboyama 92	col,const,cs
	Maki 91	cs
	Itoh 90	col
	Kim 90D	cs
(58.5 – 61.4)	Kumita 89	col,cs
(59.5)	Fujii 90	col,p
	Adachi 89C	col,p
(< 60)	Salvini 88	col,cor,cs
(60.8)	Fry 89	ang,const,cor,cs
(88 – 94)	Branchina 92	const,cs
(88 – 95)	Haissinski 90	cs
(88.2 – 94.2)	Adriani 93B	angp,const,cs,p
	Adeva 91D	cs
	Banerjee 91	const,cs
	Burkhardt 91	cs
	Decamp 91S	const,cs
	Steinberger 90	cs
	Steinberger 89	cs
(88.2 – 94.3)	Buskulic 93	angp,const,cs
(88.22 – 94.28)	Decamp 91N	asym,const,cs
(88.22 – 95.03)	Adeva 90H	cs
(88.22 – 95.35)	Abreu 91B	const,cs
(88.22 – 95.4)	Abreu 90L	cs
(88.23 – 95.04)	Decamp 90K	cs
	Alexander 91C	angp,const,cs
(88.28 – 95.04)	Renton 90	cs
	Wood 90	cs
	Abreu 90H	cs
(88.3 – 94.3)	Rolandi 92	const,cs
(88.3 – 95)	Pietrzyk 91	cs
(88.48 – 93.72)	Acton 93C	angp,const,cs
(89.2 – 93)	Abrams 89D	col
(89.3 – 93)	Coupal 90	col,cs
(91)	Bethke 91	col,const,cs
(91 – 91.5)	Decamp 90	col
	Decamp 90N	col,const,cor
(91.2)	Acton 92H	const,cs
	Adeva 92D	col
	Adriani 92	col,const,cor,mass
	Chrin 92	const,cor
	Decamp 92B	col,const
	Hebbeker 91	col,cor
	Hebbeker 91B	col,cor
	Adeva 90U	asym,const,cor,p
(91.3)	Acton 91H	ang,asym,col,const,cor
	Abreu 90K	col
(92.1)	Bethke 91B	const,cs
	Fabbri 91	col,const,cs

2charged-hadron X

(88.3 – 94.3)	Acton 92G	cor,p
(91.2)	Boyle 91	ang,const,cor

2charged-hadron (hadrons)

(9.36)	Albrecht 91L	cs
(10.47)	Albrecht 91L	cs
(88 – 94)	Acton 91	col,const,mass
(88.25 – 95)	Sawyer 91	asym,col
(91.2)	Burrows 92	ang,const,cor

$e^+ e^-$

2charged-hadron (charged-hadrons)

(54 – 64)	Abe 90F	col
	Unno 90	col

longlived$^+$ longlived$^-$ X

(52 – 61.4)	Adachi 91	cs

γ mult[hadron] X

(35)	Pitzl 89	mult,p
(44)	Pitzl 89	mult,p

γ neutral (neutrals)

(1 – 1.05)	Druzhinin 88	cs

γ charged X

(10.46 – 10.59)	Lesiak 91	angp

γ jet$^+$ X

(29)	Abe 90H	ang

γ (jets) jet

(88.28 – 94.28)	Alexander 91D	mass

γ hadron (hadrons)

(88 – 95)	Decamp 91E	cs,p,pt
	Perez 91	cs
(88.2 – 94.2)	Adriani 93B	angp,const,cs,p
	Adeva 91E	mass,p
(88.2 – 94.22)	Abreu 91M	p,pt
(88.28 – 94.28)	Alexander 91D	mass
(91 – 91.5)	Adriani 92G	col,p,pt

2γ X

(9.39 – 10.52)	Bieler 90	mass
(10.6)	Artuso 92	mass

2γ (neutrals)

(88 – 94)	Dittmar 92	ang,cs

2γ (γ's)

(88.5 – 93.7)	Adriani 92B	angp,const,cs

heavy-lepton$^-$ heavy-lepton$^+$ mult[γ]

(29)	Riles 89	–

$q\ \bar{q}$ X

(52 – 61.4)	Adachi 91	cs
?	Miyamoto 90	–

b (jets) jet

(35 – 46)	Braunschweig 89C	cor

$\bar{b}$ (jets) jet

(35 – 46)	Braunschweig 89C	cor

π^+ hadron (hadrons) + π^- hadron (hadrons)

(9.98)	Albrecht 89H	mult,p

2$\pi^\pm$ X

(29)	Grishin 90	cor

2π^+ X

(3.095 – 29)	Juricic 88	ang,p
(29)	Avery 89	cor
(58)	Itoh 90	p
(91)	Decamp 91P	cor
(91.2)	Hebbeker 91B	cor

2π^+ X + 2π^- X

(9.3 – 10.5)	Herrera 91	col,pt
(29)	Ronan 91	cor,p

2π^0 X

(9.46 - 10.58)	Antreasyan 91	mass,p

$\pi^+ \pi^-$ X

(9.3 – 10.5)	Herrera 91	col,pt
(10)	Behrend 89F	mass
(29)	Ronan 91	cor,p
	Abachi 89C	mass
	Abachi 89D	mass,p
	Avery 89	cor
	Edberg 88	mass
(58)	Itoh 90	p
(91)	Decamp 91P	cor
(91.2)	Abreu 92J	mass

2π^- X

(3.095 – 29)	Juricic 88	ang,p
(29)	Avery 89	cor

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$2\pi^- X$

(58)	Itoh 90	p
(91.2)	Hebbeker 91B	cor

$\eta \pi^\pm X$

(4.14)	Adler 89E	mass

$\eta \pi^+ X$

(4.14)	Wasserbaech 89B	mass
(10.3 – 10.58)	Procario 91	mass
(10.35 – 10.58)	Alexander 92	mass
(10.36 – 10.58)	Daoudi 91	mass

$\eta \pi^- X$

(4.14)	Wasserbaech 89B	mass

$\rho(770)^0 \gamma X$

(10)	Albrecht 90	cs,mass

$\rho(770)^+ \eta X$

(10.3 – 10.58)	Procario 91	mass
(10.35 – 10.6)	Avery 92	mass
(10.36 – 10.58)	Daoudi 91	mass

$\eta'(958) \pi^\pm X$

(4.14)	Adler 89E	mass

$\eta'(958) \pi^+ X$

(4.14)	Wasserbaech 89B	mass
(10)	Albrecht 90	cs,mass
(10.3 – 10.58)	Procario 91	mass
(10.35 – 10.58)	Alexander 92	mass
(10.36 – 10.58)	Daoudi 91	mass
(29)	Wormser 88B	cs,mass

$\eta'(958) \pi^- X$

(4.14)	Wasserbaech 89B	mass
(29)	Wormser 88B	cs,mass

$\eta'(958) \rho(770)^+ X$

(10.3 – 10.58)	Procario 91	mass
(10.35 – 10.6)	Avery 92	mass
(10.36 – 10.58)	Daoudi 91	mass

$f_0(975) \pi^\pm X$

(4.14)	Adler 89E	mass
	Toki 89B	cs,mass

K_S charged X

(14.8)	Braunschweig 89M	col,pt
(21.5)	Braunschweig 89M	col,pt
(34.5)	Braunschweig 89M	col,pt
(35)	Braunschweig 89M	col,pt
(42.6)	Braunschweig 89M	col,pt

K^+ hadron (hadrons) +
K^- hadron (hadrons)

(9.98)	Albrecht 89H	mult,p

K^0 hadron (hadrons) +
$\overline{K}^0$ hadron (hadrons)

(9.98)	Albrecht 89H	mult,p

$K^+ \pi^+ X$

(91)	Decamp 91P	cor

$K^+ \pi^0 X$

(3.77)	Labs 90	p

$K^+ \pi^- X$

(4.14)	Adler 88C	mass
(9.4 – 10.6)	Albrecht 88J	mass
(29)	Abachi 89D	mass,p
	Averill 89	mass
	Baringer 88	mass
	Edberg 88	mass
(91.2)	Abreu 92J	mass

$\overline{K}^0 \pi^0 X$

(10.36 – 10.7)	Procario 92B	mass

$K^- \pi^+ X$

(4.14)	Adler 88C	mass
(9.4 – 10.6)	Albrecht 88J	mass

$e^+ e^-$

$K^- \pi^+ X$

(10)	Albrecht 88S	mass
(29)	Abachi 89D	mass,p
	Averill 89	mass
	Baringer 88	mass
(91)	Decamp 91P	cor
(91.2)	Abreu 92J	mass

$K_S \pi^+ X$

(10)	Behrend 89F	mass

$K_S \pi^+ X + K_S \pi^- X$

(88.3 – 94.3)	Maringer 92	mass,p
(91.2)	Acton 92O	mass,p

$K_S \pi^- X$

(10)	Behrend 89F	mass

$\overline{K}^0 \eta X$

(10.36 – 10.7)	Procario 92B	mass

$\overline{K}^0 \eta'(958) X$

(10.36 – 10.7)	Procario 92B	mass

$K^+ \overline{K}^0 X$

(4.14)	Bai 90	cs,mass
	Alder 89	cs,mass
(10.5)	Chen 89B	mass

$K^+ K^- X$

(10.45)	Albrecht 88K	mass
(10.58)	Cronstrom 91	mass
(29)	Edberg 88	mass

$K^0 K^- X$

(4.14)	Bai 90	cs,mass
	Alder 89	cs,mass
(10.5)	Chen 89B	mass

$K^*(892)^+$ charged X

(14.8)	Braunschweig 89M	col,pt
(21.5)	Braunschweig 89M	col,pt
(34.5)	Braunschweig 89M	col,pt
(35)	Braunschweig 89M	col,pt
(42.6)	Braunschweig 89M	col,pt

$K^*(892)^-$ charged X

(14.8)	Braunschweig 89M	col,pt
(21.5)	Braunschweig 89M	col,pt
(34.5)	Braunschweig 89M	col,pt
(35)	Braunschweig 89M	col,pt
(42.6)	Braunschweig 89M	col,pt

$K^*(892)^+ \gamma X$

(10.6)	Albrecht 88E	mass

$K^*(892)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$\overline{K}^*(892)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$K^*(892)^- \gamma X$

(10.6)	Albrecht 88E	mass

$\overline{K}^*(892)^0 \pi^0 X$

(10.36 – 10.7)	Procario 92B	mass

$\overline{K}^*(892)^0 \eta X$

(10.36 – 10.7)	Procario 92B	mass

$\overline{K}^*(892)^0 \eta'(958) X$

(10.36 – 10.7)	Procario 92B	mass

$K^*(892)^+ \overline{K}^0 X$

(10.5)	Chen 89B	mass

$K^*(892)^0 K^- X$

(4.14)	Bai 90	cs,mass
	Alder 89	cs,mass

$e^+ e^-$

$K^*(892)^0 K^- X$

	Wasserbaech 89B	mass
(10.5)	Chen 89B	mass

$\overline{K}^*(892)^0 K^+ X$

(4.14)	Bai 90	cs,mass
	Alder 89	cs,mass
	Wasserbaech 89B	mass
(10.5)	Chen 89B	mass

$K^*(892)^- K^0 X$

(10.5)	Chen 89B	mass

$K^*(892)^+ \overline{K}^*(892)^0 X$

(4.14)	Bai 90	cs,mass
	Alder 89	cs,mass
(10.3 – 10.58)	Albrecht 91P	mass

$K^*(892)^0 K^*(892)^- X$

(4.14)	Bai 90	cs,mass
	Alder 89	cs,mass

$K_1(1400)^+ \gamma X$

(10.6)	Albrecht 88E	mass

$K_1(1400)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$\overline{K}_1(1400)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$K_1(1400)^- \gamma X$

(10.6)	Albrecht 88E	mass

$K_2^*(1430)^+ \gamma X$

(10.6)	Albrecht 88E	mass

$K_2^*(1430)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$\overline{K}_2^*(1430)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$K_2^*(1430)^- \gamma X$

(10.6)	Albrecht 88E	mass

$K_3^*(1780)^+ \gamma X$

(10.6)	Albrecht 88E	mass

$K_3^*(1780)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$\overline{K}_3^*(1780)^0 \gamma X$

(10.6)	Albrecht 88E	mass

$K_3^*(1780)^- \gamma X$

(10.6)	Albrecht 88E	mass

$\phi(1020) \pi^+ X$

(4.14)	Wasserbaech 89B	mass
(9.4 – 10.6)	Albrecht 88J	mass
(10)	Albrecht 90	cs,mass
(10.3 – 10.58)	Procario 91	mass
(10.35 – 10.58)	Alexander 92	mass
(10.36 – 10.58)	Daoudi 91	mass
(10.5)	Alexander 90B	mass
	Chen 89B	mass
(29)	Averill 89	mass

$\phi(1020) \pi^- X$

(4.14)	Wasserbaech 89B	mass
(9.4 – 10.6)	Albrecht 88J	mass
(10.5)	Chen 89B	mass
(29)	Averill 89	mass

$\phi(1020) \rho(770)^+ X$

(10.3 – 10.58)	Procario 91	mass
(10.35 – 10.6)	Avery 92	mass
(10.36 – 10.58)	Daoudi 91	mass

$D^+ \gamma X$

(10.6)	Butler 92	mass

$D^0 \gamma X$

(10.6)	Butler 92	mass

$D^+ \pi^0 X$

(10.6)	Bortoletto 92	mass
	Butler 92	mass

$e^+ e^-$

$D^+ \pi^- X$
(29) Abachi 88 mass

$D^0 \pi^+ X$
(9.46 – 10.58) Albrecht 92G –
(10) Albrecht 92O mass
Albrecht 89V mass
(29) Abachi 89C cs
Abachi 88 mass
Baringer 88 mass
(91.2) Alexander 91 mass

$D^0 \pi^0 X$
(10.6) Bortoletto 92 mass
Butler 92 mass

$D^0 \pi^- X$
(10) Albrecht 92O mass

$\bar{D}^0 \pi^- X$
(29) Abachi 88 mass
Baringer 88 mass
(91.2) Alexander 91 mass

$D^- \pi^+ X$
(29) Abachi 88 mass

$D^*(2010)^+ \pi^+ X$
(29) Abachi 88C mass

$D^*(2010)^+ \pi^- X$
(10) Albrecht 89V mass

$D^*(2010)^0 K^+ X$
(10.4) Albrecht 92N mass

$D^*(2010)^- K^+ X$
(10.58) Cronstrom 91 ang

$D^*(2010)^- K^- X$
(10.58) Cronstrom 91 ang

$D^*(2010)^- K_S X$
(10.58) Cronstrom 91 ang

$D^*(2010)^+$ charm$^-$ X
(10) Albrecht 91K –

$D_S^+ \gamma X$
(9.4 – 10.6) Albrecht 87N mass

$D_S^- \gamma X$
(9.4 – 10.6) Albrecht 87N mass

$D_S^+ \pi^- X$
(29) Wormser 88B cs,mass

$D_S^- \pi^+ X$
(29) Wormser 88B cs,mass

$D_S^* \bar{D}^*(2010) X$
(10.58) Albrecht 91J mass

$J/\psi(1S) \gamma X$
(10.58) Albrecht 91D mass

$K^\pm \chi_{c1}(1P) X$
(10.58) Albrecht 91D –

$B \bar{B} X$
(29) Fujii 90
Band 89 –

$B^0 \bar{B}^0 X$
(29) Kroha 90 cs
Franzini 89 cs,p
Golutvin 89 cs,p
Porter 89 –
Weir 89B –
Band 88 –
(34.6) Franzini 89 cs,p
Golutvin 89 cs,p

$B^0 B_S X$
(29) Porter 89 –

$\bar{B}^0 B_S X$
(29) Porter 89

$B_S \bar{B}_S X$
(29) Kroha 90 cs
Franzini 89 cs,p

$B_S \bar{B}_S X$
Golutvin 89 cs,p
Porter 89 –
Weir 89B –
(34.6) Franzini 89 cs,p
Golutvin 89 cs,p

p hadron (hadrons) + $\bar{p}$ hadron (hadrons)
(9.98) Albrecht 89H mult,p

$p \pi^+ X$
(10) Albrecht 89I mass

$p \pi^- X$
(10) Albrecht 89I mass
Behrend 89F mass
(10.5 – 10.58) Crawford 91B mass,p
(34.8) Braunschweig 89I mass
(42.1) Braunschweig 89I mass

$p \pi^- X + \bar{p} \pi^+ X$
(10) Albrecht 88I mass

$p \bar{K}^0 X$
(9.46 – 10.6) Albrecht 88D mass
(10.55) Avery 90B mass

$p K^- X$
(9.4 – 10.6) Albrecht 88Q mass

$\bar{p} K^0 X$
(9.46 – 10.6) Albrecht 88D mass

$2p X + 2\bar{p} X$
(10) Albrecht 90B ang,p

$p \bar{p} X$
(10) Albrecht 89B angp,cor,pt

$\Lambda \gamma X + \bar{\Lambda} \gamma X$
(10) Albrecht 88I mass

$\Lambda \pi^+ X$
(10.3 – 10.58) Procario 91 mass
(10.4) Albrecht 92C ang,mass
(10.55) Avery 90B mass

$\Lambda \pi^+ X + \bar{\Lambda} \pi^- X$
(10) Albrecht 88I mass

$\Lambda \pi^- X + \bar{\Lambda} \pi^+ X$
(10) Albrecht 88I mass

$\Lambda K^- X + \bar{\Lambda} K^+ X$
(10) Albrecht 88I mass

$2\Lambda X + 2\bar{\Lambda} X$
38.4 Braunschweig 89I cs
42.1 Braunschweig 89I cs
(10) Albrecht 90B ang,p
(29) Geld 92 mult
Ronan 91 cor,p

$2\Lambda X$
(91.2) Acton 92T cor,p

$\Lambda \bar{\Lambda} X$
38.4 Braunschweig 89I cs
42.1 Braunschweig 89I cs
(10) Albrecht 89B angp,cor,pt
(29) Geld 92 mult
Ronan 91 cor,p
Abe 90H cs
(91.2) Acton 92T cor,p

$2\bar{\Lambda} X$
(91.2) Acton 92T cor,p

$\Lambda \Lambda(1520\, D_{03}) X$
(10) Albrecht 89B angp,cor,pt

$\Sigma^0 \pi^+ X$
(10.3 – 10.58) Procario 91 mass

$\Xi^- \pi^+ X$
(10.5) Avery 89C mass
(10.58 – 10.86) Procario 91 mass
(10.58 – 10.87) Henderson 91B mass

$\Xi^- \pi^+ X$
(29) Klein 88 mass

$\bar{\Xi}^+ \pi^- X$
(10.5) Avery 89C mass
(29) Klein 88 mass

$\Xi^- K^+ X$
(29) Klein 88 mass

$\bar{\Lambda} \Xi X$
(29) Abe 90H cs

$\Lambda \bar{\Xi} X$
(10) Albrecht 89B angp,cor,pt
(91.2) Acton 92T cor,p

$\Lambda \bar{\Xi}^+ X$
(91.2) Acton 92T cor,p

$\Xi^- \bar{\Xi}^+ X$
(91.2) Acton 92T cor,p

$\Omega^- \pi^+ X$
(29) Klein 88 mass

$\Omega^- K^+ X$
(10.58 – 10.86) Procario 91 mass
(10.58 – 10.87) Henderson 91B mass

$\Lambda_c^+ \pi^+ X$
(10) Albrecht 88H mass
(10.5) Bowcock 89 mass

$\Lambda_c^+ \pi^- X$
(10) Albrecht 88H mass
(10.5) Bowcock 89 mass

$\bar{\Lambda}_c^- \pi^+ X$
(10) Albrecht 88H mass

$\bar{\Lambda}_c^- \pi^- X$
(10) Albrecht 88H mass

ℓ 2hadron (hadrons)
? Unno 88 –

$e^\pm$ 2hadron (hadrons)
(50) Igarashi 87 col
(50 – 56) Eno 88 ang,col,mass
Myung 88 ang,col
Son 88 col,cs
(50 – 57) Yamauchi 88 angp,col
(50 – 61.4) Myung 89 col,cs
(52) Igarashi 87 col
(52 – 61.4) Nagai 91 angp,col,mult,p

e^- 2hadron (hadrons)
(29) Ong 89 pt
Klem 86 p,pt

e^+ 2hadron (hadrons)
(29) Ong 89 pt
Klem 86 p,pt

$e^- e^+$ mult[charged-hadron] X
(50 – 60.8) Sakai 89 col,cs
Shaw 89 cs

$e^- e^+$ neutral (neutrals)
(52) Adachi 89 cs
(52 – 60.8) Adachi 89B angp
(55) Adachi 89 cs
(56.5) Adachi 89 cs
(57) Adachi 89 cs
(88.28 – 95.03) Akrawy 90O mass

$e^+ \nu_e$ hadron (hadrons)
(50) Rosenfeld 88 col
Sugahara 88 angp,col
(52) Rosenfeld 88 col
Sugahara 88 angp,col
(55) Rosenfeld 88 col
Sugahara 88 angp,col
(56) Rosenfeld 88 col

$e^- e^+$ hadron (hadrons)
(10.3 – 10.6) Haas 88
(50 – 62) Olsen 91 col,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$e^- \bar{\nu}_e$ hadron (hadrons)

(50)	Rosenfeld 88	col
	Sugahara 88	angp,col
(52)	Rosenfeld 88	col
	Sugahara 88	angp,col
(55)	Rosenfeld 88	col
	Sugahara 88	angp,col
(56)	Rosenfeld 88	col

$\mu^\pm$ 2charged (neutrals)

(10.58)	Battle 92	–

$\mu^\pm$ 2hadron (hadrons)

(50)	Igarashi 87	col
(50 – 56)	Eno 88	ang,col,mass
	Maki 88B	col,pt
	Myung 88	ang,col
	Shirai 88	col,cs
	Son 88	col,cs
(50 – 57)	Yamauchi 88	angp,col
(50 – 61.4)	Myung 89	col,cs
(52)	Igarashi 87	col
(52 – 61.4)	Shimonaka 91	–

μ^- 2hadron (hadrons)

(29)	Ong 89	pt

μ^+ 2hadron (hadrons)

(29)	Ong 89	pt

$\mu^- e^+$ mult[charged-hadron] X

(50 – 60.8)	Sakai 89	col,cs
	Shaw 89	cs

$\mu^+ e^-$ mult[charged-hadron] X

(50 – 60.8)	Sakai 89	col,cs
	Shaw 89	cs

$\mu^- e^+$ neutral (neutrals)

(4.1 – 4.2)	Perl 90	cs
(4.4 – 5.8)	Perl 90	cs
(6.4 – 7.4)	Perl 90	cs

$\mu^+ e^-$ neutral (neutrals)

(4.1 – 4.2)	Perl 90	cs
(4.4 – 5.8)	Perl 90	cs
(6.4 – 7.4)	Perl 90	cs

$\mu^- e^+$ hadron (hadrons) + $\mu^+ e^-$ hadron (hadrons)

(10.3 – 10.6)	Haas 88	–

$\mu^- \mu^+$ mult[hadron] X

(88.2 – 94.2)	Adeva 90M	col

$\mu^- \mu^+$ mult[charged-hadron] X

(50 – 60.8)	Sakai 89	col,cs
	Shaw 89	cs

$\mu^- \mu^+$ neutral (neutrals)

(52)	Adachi 89	cs
(52 – 60.8)	Adachi 89B	angp
(55)	Adachi 89	cs
(56.5)	Adachi 89	cs
(57)	Adachi 89	cs
(88.28 – 95.03)	Akrawy 90O	mass

$\mu^+ \nu_\mu$ hadron (hadrons)

(50)	Rosenfeld 88	col
	Sugahara 88	angp,col
(52)	Rosenfeld 88	col
	Sugahara 88	angp,col
(55)	Rosenfeld 88	col
	Sugahara 88	angp,col
(56)	Rosenfeld 88	col

$\mu^- \mu^+$ hadron (hadrons)

(10.3 – 10.6)	Haas 88	–
(30 – 35)	Ferrarotto 88	mass

$\mu^- \bar{\nu}_\mu$ hadron (hadrons)

(50)	Rosenfeld 88	col
	Sugahara 88	angp,col
(52)	Rosenfeld 88	col
	Sugahara 88	angp,col
(55)	Rosenfeld 88	col
	Sugahara 88	angp,col
(56)	Rosenfeld 88	col

$e^+ e^-$

$\tau^- \tau^+$ neutral (neutrals)

(52)	Adachi 89	cs
(52 – 60.8)	Adachi 89B	angp
(55)	Adachi 89	cs
(56.5)	Adachi 89	cs
(57)	Adachi 89	cs

$\pi^0 e^\pm$ charged-hadron (neutrals)

(10.6)	Procario 92	mass

$\pi^0 \pi^\pm \ell$ X

(10.52)	Bean 92B	mass
(10.58)	Bean 92B	mass

$\pi^+ \pi^- \ell$ X

(10.52)	Bean 92B	mass
(10.58)	Bean 92B	mass

$\rho(770)^0 e^- e^+$ (hadrons)

(10.3 – 10.6)	Haas 88	–

$\rho(770)^0 \mu^- \mu^+$ (hadrons)

(10.3 – 10.6)	Haas 88	–

$K^+ \pi^- e^-$ X

(10.35)	Albrecht 91B	mass
(10.58)	Albrecht 91B	mass

$K^+ K^- e^\pm$ X

(10.58)	Cronstrom 91	mass

$K^+ K^- e^-$ X

(10.35)	Albrecht 91B	mass
(10.58)	Albrecht 91B	mass

$K^+ K^- \mu^\pm$ X

(10.58)	Cronstrom 91	mass

$\phi(1020) e^+ \nu_e$ X

(10.5)	Alexander 90B	mass

$\phi(1020) \mu^+ \nu_\mu$ X

(10.5)	Alexander 90B	mass

$e^- e^+$ charm X

(17)	Braunschweig 90B	angp,cs,mass,p
(17.5)	Braunschweig 90B	angp,cs,mass,p

$D^0 \pi^+ e^-$ X

(29)	Wagner 89B	mass

$\bar{D}^0 \pi^- e^+$ X

(29)	Wagner 89B	mass

$D^0 \pi^+ \mu^-$ X

(29)	Wagner 89B	mass

$\bar{D}^0 \pi^- \mu^+$ X

(29)	Wagner 89B	mass

$D^*(2010)^\pm e^- e^+$ X

(29)	Alstongarnjo 90	cs

$D^*(2010)^+ e^- \bar{\nu}_e$ X

(10)	Albrecht 91K	–

$D^*(2010)^0 e^- \bar{\nu}_e$ X

(10.58)	Albrecht 92B	mass,p

$D^*(2010)^+ \mu^- \bar{\nu}_\mu$ X

(10)	Albrecht 91K	–

$D^*(2010)^0 \mu^- \bar{\nu}_\mu$ X

(10.58)	Albrecht 92B	mass,p

$p \pi^- e^+$ X

(10.4)	Albrecht 91F	mass,p

$p \pi^- \mu^+$ X

(10.4)	Albrecht 91F	mass,p

$\Lambda \pi^- e^+$ X

(10.4)	Albrecht 92R	mass,p

$\Lambda \pi^- \mu^+$ X

(10.4)	Albrecht 92R	mass,p

$\Lambda \pi^- \mu^+$ X + $\Lambda \pi^- e^+$ X

(10.4)	Albrecht 92R	mass,p

$e^+ e^-$

mult[charged-hadron] 2neutral (neutrals)

(14 – 44)	Genser 89	p,pt

2charged (chargeds) (neutrals)

(52 – 57)	Li 89	col,p

mult[γ] charged$^+$ charged$^-$ (neutrals)

(29)	Riles 89	angp,p
	Riles 88	angp,p

(jets) 2jet X

(34.8)	Ouldsaada 88B	–
(38)	Ouldsaada 88B	–
(43.6)	Ouldsaada 88B	–

neutral (neutrals) 2jet

(52 – 60.8)	Adachi 89B	angp

3jet X

(14.8)	Braunschweig 89M	–
(21.5)	Braunschweig 89M	–
(22 – 46.7)	Fujii 90	p
	Bethke 88	p
(29)	Fujii 90	cs
	Bethke 89C	cs
	Ford 89	col
(34.5)	Braunschweig 89M	–
(34.8)	Ouldsaada 88B	–
(35)	Braunschweig 89M	–
(38)	Ouldsaada 88B	–
(42.6)	Braunschweig 89M	–
(43.6)	Ouldsaada 88B	–
(50 – 61.4)	Vinson 90	ang,p

(jets) 3jet

(91.2)	Adriani 92C	mass

2hadron (hadrons) neutral

(50 – 60.8)	Low 89	col

γ 2neutral (neutrals)

(35 – 46.57)	Behrend 88D	p,pt
(54 – 61.4)	Abe 89I	cs

γ 2hadron (hadrons)

(29)	Abe 90H	p
(55 – 60.8)	Abe 89J	ang,p

2γ neutral (neutrals)

(88.28 – 95.03)	Akrawy 90O	mass

3γ (neutrals)

(88 – 94)	Dittmar 92	cs

higgs 2hadron (hadrons)

(88.28 – 95.04)	Decamp 91	angp,et,mass

$q \bar{q}$ (gluons) gluon

(91.2)	Adriani 92C	–

$\pi^\pm$ 2hadron (hadrons)

(29)	Aihara 89B	col,p
(35 – 44)	Abe 90H	col,p

$\pi^\pm$ 2γ X

(4.14)	Adler 89E	mass

3π^+ X

(3.095 – 29)	Juricic 88	ang,p
(29)	Avery 89	cor

3π^+ X + 3π^- X

(9.3 – 10.5)	Herrera 91	col,pt

π^+ 2π^0 X

(10.58 – 10.8)	Alexander 90C	mass

3π^0 X

(10.6)	Artuso 92	mass

$\pi^+ \pi^- \pi^\pm$ X

(4.14)	Adler 89E	mass
	Toki 89B	cs,mass

2$\pi^+ \pi^-$ X

(10.58 – 10.8)	Alexander 90C	mass
(29)	Avery 89	cor

2$\pi^+ \pi^-$ X + π^+ 2π^- X

(9.3 – 10.5)	Herrera 91	col,pt

$e^+ e^-$

$\pi^+ \pi^0 \pi^- X$

(10.6)	Artuso 92	mass

$\pi^+ 2\pi^- X$

(29)	Avery 89	cor

$3\pi^- X$

(3.095 – 29)	Juricic 88	ang,p
(29)	Avery 89	cor

η 2charged (neutrals)

(10.6)	Artuso 92	–

$\eta \pi^+ \pi^0 X$

(10.35 – 10.6)	Avery 92	ang,mass
(10.36 – 10.58)	Daoudi 91	mass

$\eta \pi^+ \pi^- X$

(29)	Wormser 88B	cs,mass

$\eta \pi^0 \pi^- X$

(10.6)	Artuso 92	mass

$\eta'(958) \pi^+ \pi^0 X$

(10.35 – 10.6)	Avery 92	ang,mass
(10.36 – 10.58)	Daoudi 91	mass

$K^+ \pi^+ \pi^- X$

(3.77)	Labs 90	mass
(10)	Albrecht 92O	mass
(29)	Abachi 88	mass

$K^+ 2\pi^- X$

(4.14)	Adler 88C	mass
(9.4 – 10.6)	Albrecht 88J	mass
(10)	Albrecht 92O	mass
(10.2 – 10.5)	Albrecht 89N	mass
(10.3 – 10.5)	Bowcock 88	mass
(28 – 46.8)	Braunschweig 89G	mass
(29)	Averill 89	mass
	Baringer 88	mass

$\overline{K}^0 \pi^+ \pi^0 X$

(9.46 – 10.58)	Albrecht 92G	mass

nonres $< \overline{K}^0 2\pi^0 >$ X

(10.36 – 10.7)	Procario 92B	mass

$\overline{K}^0 2\pi^0 X$

(10.36 – 10.7)	Procario 92B	mass

$\overline{K}^0 \pi^+ \pi^- X$

(10.36 – 10.7)	Procario 92B	mass

$K^- 2\pi^+ X$

(4.14)	Adler 88C	mass
(9.4 – 10.6)	Albrecht 88J	mass
(9.46 – 10.58)	Albrecht 92G	mass
(10.3 – 10.5)	Bowcock 88	mass
(10.58 – 10.8)	Alexander 90C	mass
(10.58 – 10.87)	Kinoshita 90	mass
(28 – 46.8)	Braunschweig 89G	mass
(29)	Abachi 89C	mass
	Averill 89	mass
	Abachi 88C	mass
	Baringer 88	mass

$K^- \pi^+ \pi^0 X$

(10.36 – 10.7)	Procario 92B	mass

$K^- \pi^+ \pi^- X$

(29)	Abachi 88	mass

$\overline{K}^0 \omega(783) \pi^+ X$

(9.46 – 10.58)	Albrecht 92G	mass

$\overline{K}^0 \eta'(958) \pi^+ X$

(9.46 – 10.58)	Albrecht 92G	mass

$K^- \eta'(958) \pi^+ X$

(10.36 – 10.7)	Procario 92B	mass

$K^+ K^- \pi^+ X$

(4.14)	Bai 90	cs,mass
	Alder 89	cs,mass
	Wasserbaech 89B	mass
(9.4 – 10.6)	Albrecht 88J	mass
(10.5)	Alexander 90B	mass
	Chen 89B	mass
(10.52)	Bortoletto 88	mass
(10.58)	Bortoletto 88	mass
(10.58 – 10.8)	Alexander 90C	mass

$e^+ e^-$

$K^+ K^- \pi^- X$

(4.14)	Alder 89	cs,mass
	Wasserbaech 89B	mass
(9.4 – 10.6)	Albrecht 88J	mass
(10.5)	Chen 89B	mass
(10.52)	Bortoletto 88	mass
(10.58)	Bortoletto 88	mass

$2K_S \pi^+ X$

(10.58 – 10.8)	Alexander 90C	mass

$\overline{K}^*(892)^0 \omega(783) \pi^+ X$

(9.46 – 10.58)	Albrecht 92G	mass

$K^*(892)^+ K^- \pi^+ X$

(10.3 – 10.58)	Albrecht 91P	mass

$\overline{K}^*(892)^0 K^0 \pi^+ X$

(10.3 – 10.58)	Albrecht 91P	mass

$\phi(1020) \pi^+ \gamma X$

(9.4 – 10.6)	Albrecht 87N	mass

$\phi(1020) \pi^- \gamma X$

(9.4 – 10.6)	Albrecht 87N	mass

$\phi(1020) \pi^+ \pi^0 X$

(10.35 – 10.6)	Avery 92	ang,mass
(10.36 – 10.58)	Daoudi 91	mass

$D^0 K^+ \gamma X$

(10.4)	Albrecht 92N	mass

$D^0 K^+ \pi^0 X$

(10.4)	Albrecht 92N	mass

$K^\pm J/\psi(1S) \gamma X$

(10.58)	Albrecht 91D	mass

$p \pi^+ \pi^- X$

(34.8)	Braunschweig 89I	mass
(42.1)	Braunschweig 89I	mass

$p 2\pi^- X$

(10.5 – 10.58)	Crawford 91B	mass,p
(34.8)	Braunschweig 89I	mass
(42.1)	Braunschweig 89I	mass

$p K^- \pi^+ X$

(9.46 – 10.6)	Albrecht 88D	mass
(10.5 – 10.58)	Crawford 91B	mass,p
(10.52)	Bortoletto 88	mass
(10.55)	Avery 90B	mass
(10.58)	Bortoletto 88	mass

$p K^+ \pi^- X$

(9.46 – 10.6)	Albrecht 88D	mass
(10.52)	Bortoletto 88	mass
(10.58)	Bortoletto 88	mass

$\Lambda \pi^+ \pi^0 X$

(10.3 – 10.58)	Procario 91	mass

$\Lambda \pi^+ \pi^- X$

(10.5)	Avery 89C	mass

$\overline{\Lambda} \pi^+ \pi^- X$

(10.5)	Avery 89C	mass

$\Lambda K^+ K^- X$

(10.58 – 10.87)	Henderson 91B	mass

$\Lambda \overline{\Lambda} \pi X$

(91.2)	Acton 92T	cor,p

$\Xi^- 2\pi^+ X$

(10.5 – 10.7)	Alam 89B	mass

$\overline{\Xi}^+ 2\pi^- X$

(10.5 – 10.7)	Alam 89B	mass

$\Xi^- K^+ \pi^+ X$

(10.55)	Avery 90B	mass

$\overline{\Lambda} \Xi^- \pi^+ X$

(91.2)	Acton 92T	cor,p

$\Lambda \overline{\Xi}^+ \pi^- X$

(91.2)	Acton 92T	cor,p

2ℓ 2hadron X

(50 – 57)	Kichimi 88	col

$\ell^+ \ell^-$ 2hadron (hadrons)

(35)	Elsen 90	p

$e^+ e^-$

$\ell^+ \ell^-$ 2hadron (hadrons)

	Behrend 89J	–
(43)	Behrend 89J	–
(44)	Elsen 90	p
(88.28 – 95.04)	Decamp 90J	mass

$\nu \overline{\nu}$ 2hadron (hadrons)

(88.28 – 95.04)	Decamp 90J	mass

$e^\pm$ 3charged X

(10.58)	Battle 92	–

$e^\pm$ 3charged (neutrals)

(29)	Heusch 90B	p

e^- 3charged (chargeds)

(29)	Akerlof 88	mass

e^+ 3charged (chargeds)

(29)	Akerlof 88	mass

$e^\pm$ (ν's) 2γ charged

(10.2)	Keh 88B	ang,mass,p

$e^- e^+$ 2neutral (neutrals)

(10.6)	Heltsley 92	–
(50 – 60.8)	Sakai 90	angp,col,mass
(55 – 60.8)	Taketani 90	col

$e^- e^+$ 2charged (neutrals)

(88 – 94)	Dittmar 92	cs

$e^- e^+$ charged$^+$ charged$^-$ (neutrals)

(88.2 – 94.2)	Acton 92E	ang,mass

$2e^\pm$ 2hadron (hadrons)

(35)	Kamae 88	ang,cs,p

$e^- e^+$ 2hadron (hadrons)

(9.4 – 10.6)	Albrecht 88L	–
(10.52)	Fulton 89	mass
(17.5)	Behrend 91	–
(29)	Aihara 89C	angp
(88.28 – 95.04)	Decamp 90J	mass

$e^- e^+ \gamma$ neutral (neutrals)

(29)	Riles 89B	cs,p

$e^- e^+ 2\gamma$ (γ's)

(10)	Bienlein 91	–

$2e^- 2e^+ X$

(29)	Petradza 90	angp,cs,p

$\mu^- e^+ 0\gamma$ 2neutral (neutrals)

(3 – 7.5)	Perl 90	cs

$\mu^+ e^- 0\gamma$ 2neutral (neutrals)

(3 – 7.5)	Perl 90	cs

$\mu^\pm e^\pm$ 2hadron (hadrons)

(35)	Kamae 88	ang,cs,p

$\mu^\pm e^\pm \gamma$ neutral (neutrals)

(29)	Riles 89B	cs,p

$\mu^- \mu^+$ 2neutral (neutrals)

(50 – 60.8)	Sakai 90	angp,col,mass
(55 – 60.8)	Taketani 90	col

$\mu^- \mu^+$ 2charged (neutrals)

(88 – 94)	Dittmar 92	cs

$\mu^- \mu^+$ charged$^+$ charged$^-$ (neutrals)

(88.2 – 94.2)	Acton 92E	ang,mass

$2\mu^\pm$ 2hadron (hadrons)

(35)	Kamae 88	ang,cs,p

$\mu^- \mu^+$ 2hadron (hadrons)

(10.52)	Fulton 89	mass
(88.28 – 95.04)	Decamp 90J	mass

$\mu^- \mu^+ e^- e^+ X$

(29)	Petradza 90	angp,cs,p

$2\mu^- 2\mu^+ X$

(29)	Petradza 90	angp,cs,p

$\tau^- \tau^+$ 2neutral (neutrals)

(55 – 60.8)	Taketani 90	col

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$\tau^- \tau^+$ 2charged (neutrals)
(88 – 94) Dittmar 92 cs

$\tau^- \tau^+$ charged$^+$ charged$^-$ (neutrals)
(88.2 – 94.2) Acton 92E ang,mass

$\tau^- \tau^+$ 2hadron (hadrons)
(88.28 – 95.04) Decamp 90J mass

$\pi^\pm e^\pm \gamma$ neutral (neutrals)
(29) Riles 89B cs,p

$\pi^+ e^- e^+$ hadron (hadrons)
(10.3 – 10.6) Haas 88 –

$\pi^\pm \mu^\pm \gamma$ neutral (neutrals)
(29) Riles 89B cs,p

$\pi^+ \mu^- e^+$ hadron (hadrons) + $\pi^- \mu^+ e^-$ hadron (hadrons)
(10.3 – 10.6) Haas 88 –

$\pi^+ \mu^- \mu^+$ hadron (hadrons)
(10.3 – 10.6) Haas 88 –

$2\pi^0 e^\pm$ charged-hadron (neutrals)
(10.6) Procario 92 mass

$\pi^+ \pi^0 \pi^- \ell$ X
(10.52) Bean 92B mass
(10.58) Bean 92B mass

$\eta \pi^+ e^-$ neutral (neutrals)
(3.77) Coffman 87 –

$\eta \pi^- e^+$ neutral (neutrals)
(3.77) Coffman 87 –

$\eta \pi^+ \mu^-$ neutral (neutrals)
(3.77) Coffman 87 –

$\eta \pi^- \mu^+$ neutral (neutrals)
(3.77) Coffman 87 –

$K^+ K^- e^+ \nu_e$ X
(10.5) Alexander 90B mass

$K^+ K^- \mu^+ \nu_\mu$ X
(10.5) Alexander 90B mass

$D^0 e^- \bar{\nu}_e \gamma$ X
(10.58) Albrecht 92B mass,p

$D^0 \mu^- \bar{\nu}_\mu \gamma$ X
(10.58) Albrecht 92B mass,p

jet jet $< D_S^+ \mu^-$ X $>$ + jet jet $< D_S^- \mu^+$ X $>$
(91.2) Abreu 92F cs

2charged 2neutral (neutrals)
(52 – 61.4) Kang 90 p

3charged (chargeds) (neutrals)
(35) Hagemann 90 angp,col
(41.5) Hagemann 90 angp,col

4charged X
(29) Petradza 90 angp,mass,p

4charged (neutrals)
(9.4 – 10.6) Albrecht 91M cs
(29) Amidei 88 –

2neutral (neutrals) 2jet
(88.2 – 95) Akrawy 90T ang,mass,pt

4jet X
(22 – 46.7) Fujii 90 p
Bethke 88 p
(29) Fujii 90 cs
Bethke 89C cs
Ford 89 col
(34.8) Ouldsaada 88B –
(38) Ouldsaada 88B –
(43.6) Ouldsaada 88B –
(50 – 60.8) Adachi 90E col
(50 – 61.4) Vinson 90 ang,p

$e^+ e^-$

4jet X
(54 – 61.4) Abe 90F ang
Unno 90 ang

mult[γ] hadron$^+$ hadron$^-$ 2neutral
(9.4 – 10.6) Antreasyan 91B mass

γ 2charged (chargeds) (neutrals)
(91.2) Abreu 91G ang

γ (jets) 2jet X
(50 – 60.8) Adachi 90E col

4γ (γ's)
(0.5 – 1) Dolinsky 88B cs,mass,p
(0.5 – 1.4) Dolinsky 89B mass

$\pi^+ \pi^- 2\gamma$ X
(10) Albrecht 88S mass
(29) Wormser 88B mass

$\pi^+ \pi^0 \pi^- \pi^\pm$ X
(4.14) Adler 89E mass

$2\pi^+ 2\pi^-$ X
(10.2) Albrecht 90M –

$\eta \pi^+ \pi^- \gamma$ X
(8.4) Lockman 90 mass

$\eta \pi^+ \pi^- \pi^\pm$ X
(4.14) Adler 89E mass

$\eta 2\pi^+ \pi^-$ X
(10) Albrecht 90 cs,mass

$K^+ 2\pi^- \gamma$ X
(10.52) Bortoletto 88 mass
(10.58) Bortoletto 88 mass

$K^- 2\pi^+ \gamma$ X
(10.52) Bortoletto 88 mass
(10.58) Bortoletto 88 mass

$K^+ \pi^+ 2\pi^-$ X
(9.4 – 10.6) Albrecht 88J mass

$K^+ \pi^0 2\pi^-$ X
(10.52) Bortoletto 88 mass
(10.58) Bortoletto 88 mass
(28 – 46.8) Braunschweig 89G mass

$K^0 2\pi^+ \pi^-$ X
(10.58 – 10.87) Kinoshita 90 mass

$\bar{K}^0 2\pi^+ \pi^-$ X
(9.46 – 10.58) Albrecht 92G mass

$K^- 2\pi^+ \pi^0$ X
(9.46 – 10.58) Albrecht 92G mass
(10.52) Bortoletto 88 mass
(10.58) Bortoletto 88 mass
(10.58 – 10.87) Kinoshita 90 mass
(28 – 46.8) Braunschweig 89G mass
(29) Abachi 89C mass

$K^- 2\pi^+ \pi^-$ X
(9.4 – 10.6) Albrecht 89 mass
Albrecht 88J mass
(10) Albrecht 89V mass
(10.36 – 10.7) Procario 92B mass

$K_S 2\pi^+ \pi^0$ X
(10.58 – 10.87) Kinoshita 90 mass

$K_S 2\pi^+ \pi^-$ X
(10.58 – 10.8) Alexander 90C mass

$K^- \eta 2\pi^+$ X
(10.58 – 10.87) Kinoshita 90 mass

$K^- \omega(783) 2\pi^+$ X
(9.46 – 10.58) Albrecht 92G mass

$K^+ K^- \pi^+ \gamma$ X
(9.4 – 10.6) Albrecht 87N mass
(10.4) Albrecht 92N mass

$K^+ K^- \pi^- \gamma$ X
(9.4 – 10.6) Albrecht 87N mass

$K^+ K_S \pi^- \gamma$ X + $K_S K^- \pi^+ \gamma$ X
(8.4) Lockman 90 mass

$e^+ e^-$

$K^+ \bar{K}^0 \pi^+ \pi^-$ X
(10.3 – 10.58) Albrecht 91P mass

$K^+ K^- \pi^+ \pi^0$ X
(4.14) Bai 90 cs,mass
Alder 89 cs,mass
(10.4) Albrecht 92N mass

$K^+ K^- \pi^0 \pi^-$ X
(4.14) Bai 90 cs,mass
Alder 89 cs,mass

$K^0 K^- \pi^+ \pi^-$ X
(10) Albrecht 89P mass

$K_S K^- 2\pi^+$ X
(10.3 – 10.58) Albrecht 91P mass

$p \pi^+ 2\pi^-$ X
(10.5) Albrecht 90J mass,p
Avery 89C mass

$\bar{p} 2\pi^+ \pi^-$ X
(10.5) Avery 89C mass

$p \bar{K}^0 \pi^+ \pi^-$ X
(10.55) Avery 90B mass

$p K^+ K^- \pi^-$ X
(10.58 – 10.87) Henderson 91B mass

$2p 2\pi^-$ X
(91.2) Acton 92T mass,p

$p \bar{p} \pi^+ \pi^-$ X
(91.2) Acton 92T mass,p

$2\bar{p} 2\pi^+$ X
(91.2) Acton 92T mass,p

$\Lambda 3\pi^+$ X
(10.5 – 10.7) Alam 89B mass

$\Lambda 2\pi^+ \pi^-$ X
(9.46 – 10.6) Albrecht 88D mass
(10.55) Avery 90B mass

$\bar{\Lambda} \pi^+ 2\pi^-$ X
(9.46 – 10.6) Albrecht 88D mass

$\bar{\Lambda} 3\pi^-$ X
(10.5 – 10.7) Alam 89B mass

$\Xi^- K^- 2\pi^+$ X
(10.58) Albrecht 92J mass

$e^\pm$ 3charged neutral (neutrals)
(10.5 – 10.9) Ammar 91 ang,mass,p

$e^- e^+$ 2charged (chargeds) (neutrals)
(35 – 46.8) Behrend 88F cs,mass,p

$e^- e^+$ 3hadron (hadrons)
(7.7 – 9.7) Baru 92 –

$e^- e^+$ 3charged-hadron (hadrons)
(55 – 61.4) Tanaka 92 –

$\mu^\pm$ 3charged (chargeds) (neutrals)
(4.8) Perl 90 cs

$\mu^\pm e^\pm$ 2charged (chargeds) (neutrals)
(35 – 46.8) Behrend 88F cs,mass,p

$\mu^- \mu^+$ 2charged (chargeds) (neutrals)
(35 – 46.8) Behrend 88F cs,mass,p

$\pi^+ e^- 2\gamma$ neutral (neutrals)
(3.77) Coffman 87 mass

$\pi^- e^+ 2\gamma$ neutral (neutrals)
(3.77) Coffman 87 mass

$\pi^+ \mu^- 2\gamma$ neutral (neutrals)
(3.77) Coffman 87 mass

$\pi^- \mu^+ 2\gamma$ neutral (neutrals)
(3.77) Coffman 87 mass

$\pi^0 \pi^\pm e^\pm \gamma$ neutral (neutrals)
(29) Riles 89B cs,p

$\pi^+ \pi^- e^- e^+ \gamma$ (γ's)
(29) Butler 90 ang,mass,pt

$e^+ e^-$

$\pi^0 \pi^\pm \mu^\pm \gamma$ neutral (neutrals)
(29) Riles 89B cs,p

$\pi^+ 2\pi^- e^+$ neutral (neutrals)
(9.4) Albrecht 92F mass,p
(10.6) Albrecht 92F mass,p

$3\pi^0 e^\pm$ charged-hadron (neutrals)
(10.6) Procario 92 mass

$\pi^+ 2\pi^- \mu^+$ neutral (neutrals)
(9.4) Albrecht 92F mass,p
(10.6) Albrecht 92F mass,p

$K^- \pi^+ e^- \bar{\nu}_e \gamma$ X
(10.58) Albrecht 92B mass,p

$K^- \pi^+ \mu^- \bar{\nu}_\mu \gamma$ X
(10.58) Albrecht 92B mass,p

$K^+ K^- \pi^+ e^- e^+$ X
(29) Weir 89 mass

4charged neutral (neutrals)
(10.35 – 10.87) Goldberg 90 –
(10.5 – 10.9) Ammar 91 ang,mass,p

5jet X
(22 – 46.7) Fujii 90 p
Bethke 88 p
(29) Fujii 90 cs
Bethke 89C cs
(34.8) Ouldsaada 88B –
(38) Ouldsaada 88B –
(43.6) Ouldsaada 88B –

4hadron (hadrons) charged
(29) Petersen 88 ang,p,pt

5hadron (hadrons)
(29) Petersen 88 ang,col
(55 – 60.8) Iwata 89 cs
(91.25) Buskulic 92C col,mass

5charged-hadron (hadrons)
(91.2) Acton 92H col,const,cor
Abreu 91P asym,col,const
Halley 91 asym,col,const

2γ 2hadron (hadrons) (neutrals)
(9.4 – 10.6) Karch 91C –

5γ (γ's)
(0.5 – 1) Dolinsky 89 p

π^0 4charged-hadron (neutrals)
(10.6) Procario 92 mass

$\pi^+ \pi^- \pi^\pm 2\gamma$ X
(4.14) Adler 89E mass

$2\pi^+ \pi^0 2\pi^-$ X
(10) Albrecht 88S mass

η 4charged (neutrals)
(10.6) Artuso 92 –

$2\eta \pi^+ \pi^-$ neutral (neutrals)
(29) Gan 87B mass

$K^+ \pi^+ 3\pi^-$ X
(10.3 – 10.5) Bowcock 88 mass
(28 – 46.8) Braunschweig 89G mass

$\bar{K}^0 2\pi^+ \pi^0 \pi^-$ X
(9.46 – 10.58) Albrecht 92G mass

$K^- 3\pi^+ \pi^-$ X
(10.3 – 10.5) Bowcock 88 mass
(10.58 – 10.87) Kinoshita 90 mass
(28 – 46.8) Braunschweig 89G mass
(29) Abachi 89C mass

$K_S 2\pi^+ \pi^0 \pi^-$ X
(10.58 – 10.87) Kinoshita 90 mass

$K_S 2\pi^+ 2\pi^-$ X
(10) Albrecht 89V mass

$K^+ K_S \pi^+ \pi^- \gamma$ X
(10.4) Albrecht 92N mass

$e^+ e^-$

$K^+ K^- 2\pi^+ \pi^-$ X
(4.14) Bai 90 cs,mass
Alder 89 cs,mass

$K^+ K^- \pi^+ 2\pi^-$ X
(4.14) Bai 90 cs,mass
Alder 89 cs,mass

$K^0 K^- \pi^+ \pi^0 \pi^-$ X
(10) Albrecht 89P mass

$K^+ K_S \pi^+ \pi^0 \pi^-$ X
(10.4) Albrecht 92N mass

$2K^+ K_S K^- \gamma$ X
(10.4) Albrecht 92N mass

$2K^+ K_S K^- \pi^0$ X
(10.4) Albrecht 92N mass

$p\, 2\pi^+ 2\pi^-$ X
(10.5) Albrecht 90J mass,p

$e^- e^+$ 4hadron (hadrons)
(55 – 61.4) Tanaka 91 –

$e^- e^+$ 4charged-hadron (hadrons)
(35) Lumsdon 90 angp,col,mass
(55 – 61.4) Tanaka 92 –

$\pi^+ 2\pi^0$ (π^0's) $\mu^- \bar{\nu}_\tau \gamma$
(10) Bean 92 ang,mass,qnc

$2\pi^+ \pi^0 \pi^- e^-$ neutral (neutrals)
(3.77) Coffman 87 mass

$\pi^+ \pi^0 2\pi^- e^+$ neutral (neutrals)
(3.77) Coffman 87 mass

$4\pi^0 e^\pm$ charged-hadron (neutrals)
(10.6) Procario 92 mass

$2\pi^+ \pi^0 \pi^- \mu^-$ neutral (neutrals)
(3.77) Coffman 87 mass

$\pi^+ \pi^0 2\pi^- \mu^+$ neutral (neutrals)
(3.77) Coffman 87 mass

$K_S \pi^+ \pi^- e^- \bar{\nu}_e \gamma$ X
(10.58) Albrecht 92B mass,p

$K_S \pi^+ \pi^- \mu^- \bar{\nu}_\mu \gamma$ X
(10.58) Albrecht 92B mass,p

6charged (neutrals)
(29) Amidei 88 –

6γ X
? Karch 91C mass

$2\pi^0$ 4charged-hadron (neutrals)
(10.6) Procario 92 mass

$2\pi^+ 2\pi^-$ (γ's) 2neutral
(9.4 – 10.6) Albrecht 92M mass

$2\pi^+ 2\pi^- 2\gamma$ X
(29) Wormser 88B mass

$K^+ \pi^+ 2\pi^-$ (γ's) 2neutral
(9.4 – 10.6) Albrecht 92M mass

$\bar{K}^0 3\pi^+ 2\pi^-$ X
(9.46 – 10.58) Albrecht 92G mass

$K^- 3\pi^+ \pi^0 \pi^-$ X
(9.46 – 10.58) Albrecht 92G mass
(10.58 – 10.87) Kinoshita 90 mass

$K^- 3\pi^+ 2\pi^-$ X
(10) Albrecht 89V mass

2kaon (kaons) 2π (π's) γ
(4.14) Adler 89B mass

$K^0 K^- 2\pi^+ 2\pi^-$ X
(10) Albrecht 89P mass

$p\, 4\pi^+ \pi^-$ X
(10.5 – 10.7) Alam 89B mass

$p\, 2\pi^+ 3\pi^-$ X
(10.5) Albrecht 90J mass,p

$e^+ e^-$

$\bar{p} \pi^+ 4\pi^-$ X
(10.5 – 10.7) Alam 89B mass

$e^\pm$ 5charged jet X
(29) Porter 89 p,pt

$\mu^\pm$ 5charged jet X
(29) Porter 89 p,pt

jet < $\mu^\pm$ hadron (hadrons) > 2jet < hadron (hadrons) >
(91.2) Yepes 91 ang

π^0 (π^0's) 2ν 4charged-hadron
(10.6) Heltsley 92 mass

$2\pi^+ \pi^0 \pi^-$ (π^0's) $\mu^- \bar{\nu}_\tau \gamma$
(10) Bean 92 ang,mass,qnc

$K^- 2\pi^+ \pi^- e^- \bar{\nu}_e \gamma$ X
(10.58) Albrecht 92B mass,p

$K^- 2\pi^+ \pi^- \mu^- \bar{\nu}_\mu \gamma$ X
(10.58) Albrecht 92B mass,p

jet < $\Lambda \ell^-$ X > jet < $\bar{\Lambda} \ell^+$ X >
(91.2) Abreu 93C mass,pt

7charged X
(91.2) Abreu 91Q col

$3\pi^0$ 4charged-hadron (neutrals)
(10.6) Procario 92 mass

$e^- e^+$ 6charged (neutrals)
(17) Braunschweig 90B angp,cs,mass,p
(17.5) Braunschweig 90B angp,cs,mass,p

$2\pi^0$ (π^0's) 2ν 4charged-hadron
(10.6) Heltsley 92 mass

$4\pi^0$ 4charged-hadron (neutrals)
(10.6) Procario 92 mass

$3\pi^0$ (π^0's) 2ν 4charged-hadron
(10.6) Heltsley 92 mass

$e^- e^+$ 8charged (neutrals)
(17) Braunschweig 90B angp,cs,mass,p
(17.5) Braunschweig 90B angp,cs,mass,p

$4\pi^0$ (π^0's) 2ν 4charged-hadron
(10.6) Heltsley 92 mass

unspec
0.0019 Connell 88 mass
(0.0016 – 0.0019) Lorenz 88 –
0.0021 – 0.0024 Tsertos 91 –
0.0027 Connell 88 mass
(< 0.002) Skalsey 92 –
< 0.0046 Trzaska 91B mass,p

neutral
0.002 – 0.0023 Judge 90 cs
(55 – 60.8) Odaka 89 cs

longlived
0.002 – 0.0023 Judge 90 cs

Z^0
(88 – 93) Dydak 91 –
Augustin 90D –
Fordham 90 –
Oshaughnessy 90 –
(88 – 94) Dittmar 92 –
(88.2 – 94.2) Adeva 91D –
Adeva 91E –
Decamp 91S –
Privitera 91 –
Zomer 91 –
Zomer 91B –
Adeva 90R –
Adeva 90T –
Goldhaber 90 cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

Z^0

(88.2 – 94.22)	Abreu 91M	–
(88.2 – 95)	Akrawy 90T	–
(88.22 – 94.22)	Abreu 91	–
	Abreu 91H	–
	Acton 91C	–
	Adeva 90O	–
	Akrawy 90U	–
(88.25 – 95)	Sawyer 91	–
(88.28 – 94.28)	Crosland 91	–
	Banks 90	–
(88.28 – 95.04)	Decamp 91	–
	Aarnio 90C	–
(88.3 – 94.3)	Bryman 92	–
	Abreu 90L	–
	Adeva 90S	–
	Decamp 90K	cs
	Haissinski 90	–
(88.3 – 95)	Abreu 90H	–
	Decamp 90J	–
	Renton 90	cs
(89.3 – 93)	Coupal 90	cs
(91)	Bambade 92	–
	Abreu 90N	–
(91.09)	Abreu 90Q	–
(91.2)	Acton 93F	–
	Giacomelli 93	–
	Abreu 92	–
	Abreu 92D	–
	Abreu 92H	–
	Abreu 92I	–
	Abreu 92K	–
	Abreu 92L	–
	Acton 92	–
	Acton 92C	–
	Acton 92D	–
	Acton 92I	–
	Acton 92J	–
	Acton 92L	–
	Acton 92M	–
	Acton 92N	–
	Adeva 92	–
	Adeva 92B	–
	Adriani 92D	–
	Adriani 92I	–
	Adriani 92J	–
	Adriani 92L	–
	Barklow 92	–
	Benedic 92	–
	Boucrot 92	–
	Brandl 92	–
	Buskulic 92	–
	Buskulic 92E	–
	Buskulic 92G	–
	Buskulic 92H	–
	Buskulic 92J	–
	Cosmo 92	–
	Decamp 92	–
	Decamp 92C	–
	Feindt 92B	–
	Felcini 92	–
	Fujino 92	–
	Gross 92	–
	Gross 92B	–
	Schumm 92	–
	Sopczak 92	–
	Sopczak 92B	–
	Sopczak 92C	–
	Trischuk 92	–
	Abreu 91D	–
	Abreu 91I	–
	Abreu 91J	–
	Abreu 91K	–
	Abreu 91L	–
	Abreu 91N	–
	Abreu 91O	–
	Abreu 91P	–
	Acton 91B	–
	Acton 91D	–
	Acton 91F	–
	Acton 91I	–
	Acton 91J	–
	Adeva 91C	–
	Adeva 91G	–

$e^+ e^-$

Z^0

	Adeva 91I	–
	Adeva 91J	–
	Akrawy 91B	–
	Akrawy 91C	–
	Bertin 91	–
	Bhattacharyy 91	–
	Bortolotto 91	–
	Campion 91	–
	Capon 91	–
	Colas 91	–
	Deangelis 91B	–
	Decamp 91C	–
	Decamp 91F	–
	Decamp 91I	–
	Decamp 91J	–
	Decamp 91M	–
	Decamp 91Q	–
	Decamp 91R	–
	Dydak 91	–
	Ellis 91	–
	Goobar 91	–
	Jacobsen 91	–
	Jacobsen 91B	–
	Keranen 91	–
	Koetke 91	–
	Mattig 91	–
	Patton 91	–
	Pieri 91	–
	Roehn 91	–
	Simon 91	–
	Stahl 91	–
	Turner 91	–
	Wachsmuth 91	–
	Aarnio 90	–
	Abreu 90	–
	Abreu 90B	–
	Abreu 90C	–
	Abreu 90D	–
	Abreu 90E	–
	Abreu 90F	–
	Abreu 90G	–
	Abreu 90I	–
	Abreu 90J	–
	Abreu 90M	–
	Abreu 90P	–
	Abreu 90S	–
	Adeva 90	cs
	Adeva 90B	cs
	Adeva 90C	cs
	Adeva 90D	–
	Adeva 90F	–
	Adeva 90G	–
	Adeva 90I	–
	Adeva 90J	–
	Adeva 90K	–
	Adeva 90L	–
	Adeva 90N	–
	Adeva 90P	–
	Adeva 90Q	–
	Adeva 90V	–
	Akrawy 90	–
	Akrawy 90B	–
	Akrawy 90C	–
	Akrawy 90D	–
	Akrawy 90E	–
	Akrawy 90F	–
	Akrawy 90G	–
	Akrawy 90H	–
	Akrawy 90I	–
	Akrawy 90J	–
	Akrawy 90K	–
	Akrawy 90L	–
	Akrawy 90M	–
	Akrawy 90N	–
	Akrawy 90P	–
	Akrawy 90Q	–
	Akrawy 90R	–
	Akrawy 90S	–
	Akrawy 90V	–
	Barklow 90	–
	Burchat 90	–
	Chen 90	cs
	Cowen 90	–

$e^+ e^-$

Z^0

	Decamp 90B	–
	Decamp 90C	–
	Decamp 90D	–
	Decamp 90E	cs,mass
	Decamp 90F	–
	Decamp 90G	–
	Decamp 90H	–
	Decamp 90I	–
	Decamp 90M	–
	Decamp 90O	–
	Gonzalezgarc 90	cs
	Hilgart 90	–
	Innes 90	–
	Janot 90	–
	Komamiya 90B	–
	Kral 90	–
	Kuhlen 90	cs
	Moller 90	–
	Nash 90	–
	Newman 90	–
	Odowd 90	–
	Oshaughnessy 90B	–
	Pinsent 90	–
	Richard 90	–
	Soderstrom 90	–
	Swartz 90	–
	Tenchini 90	–
	Vankooten 90	–
	Wormser 90B	–
	Aarnio 89	cs
	Abrams 89	cs
	Abrams 89C	–
	Abrams 89F	–
	Adeva 89	cs
	Adeva 89B	cs
	Akrawy 89	cs
	Akrawy 89B	–
	Akrawy 89C	–
	Akrawy 89D	–
	Akrawy 89E	–
	Bethke 89	–
	Burchat 89	cs
	Decamp 89	cs
	Decamp 89B	cs
	Decamp 89C	–
	Decamp 89D	–
	Decamp 89E	–
	Decamp 89G	cs
	Decamp 89H	–
	Feldman 89	–
	Feldman 89B	–
	Hearty 89	cs
	Komamiya 89C	–
	Kral 89	–
	Nash 89	–
	Weinstein 89	cs
(91.22)	Adriani 92B	–
	Adeva 90E	–
(91.3)	Acton 92B	–
	Eerola 92	–
	Riles 92	–
	Rollnik 92	–
	Settles 92	–
	Seywerd 92	–
	Acton 91H	–
	Alexander 91I	–
	Decamp 91D	–
	Geerts 91	–
	Abreu 90K	–
	Abrams 89B	cs
higgs		
(54 – 64)	Yuzuki 91	cs
axion		
0.0012 – 0.0013		
	Tsertos 88	cs
	Tsertos 88B	cs
meson^0		
0.0024 – 0.003	Hallin 92	cs
(1.35 – 2.4)	Bisello 91C	–
(54 – 64)	Abe 93	–
(57.4 – 59.8)	Abe 93B	–

$e^+ e^-$

$\rho(770)^0$		
(0.77)	Dolinsky 89	–
	Dolinsky 89B	–
	Dolinsky 88B	–
	Kurdadze 88	–
	Vasserman 88	–
	Vasserman 87B	–
$\omega(783)$		
(0.782)	Barkov 89	–
	Dolinsky 89	–
	Dolinsky 89B	–
	Dolinsky 88	cs
	Dolinsky 88B	–
	Kurdadze 88	–
	Vasserman 88	–
$\eta'(958)$		
(0.958)	Dolinsky 89B	–
	Vorobiev 88C	–
$f_0(975)$		
(0.975)	Dolinsky 89B	–
	Vorobiev 88C	–
$a_0(980)^0$		
(0.98)	Dolinsky 89B	–
	Vorobiev 88C	–
$f_2(1270)$		
(1.27)	Dolinsky 89B	–
	Vorobiev 88C	–
$a_2(1320)^0$		
(1.32)	Dolinsky 89B	–
	Vorobiev 88C	–
$\omega(1390)$		
(1.39)	Donnachie 91	–
	Donnachie 89	–
	Govorkov 88	–
$f_0(1400)$		
(1.4)	Dolinsky 89B	–
	Vorobiev 88C	–
$\rho(1450)^0$		
(1.45)	Donnachie 91	–
	Dolinsky 89B	–
	Govorkov 88	–
$\omega(1600)$		
(1.6)	Donnachie 89	–
	Govorkov 88	–
$\rho(1700)^0$		
(1.7)	Dolinsky 89B	–
	Govorkov 88	–
$\phi(1020)$		
(1.02)	Barkov 89	–
	Dolinsky 89	–
	Dolinsky 89B	–
	Barkov 88	cs
	Dolinsky 88	cs
	Druzhinin 88	–
$\phi(1680)$		
(1.68)	Bisello 91	–
	Bisello 91B	–
$J/\psi(1S)$		
(3.1)	Bolton 92	–
	Bolton 91	–
	Chen 91	–
	Dunwoodie 91	–
	Jin 91	–
	Augustin 90B	–
	Augustin 90C	–
	Bai 90B	–
	Bai 90D	–
	Bisello 90B	–
	Bisello 90C	–
	Chen 90B	–
	Drinkard 90	–
	Eigen 90	–
	Augustin 89	–
	Bisello 89	–
	Coffman 89	–
	Lockman 89	–

$e^+ e^-$

$J/\psi(1S)$		
	Mallik 89B	–
	Szklarz 89	–
	Adler 88D	–
	Ajaltouni 88	cs
	Ajaltouni 88B	–
	Augustin 88	–
	Augustin 88B	–
	Coffman 88	–
	Falvard 88	cs
	Hitlin 88	–
	Jousset 88	–
	Mir 88	–
	Stanco 88	–
	Toki 88	–
	Toki 88B	–
$\psi(2S)$		
(3.69)	Coffman 92	–
	Mir 89	–
	Toki 89	–
(3.77)	Hitlin 88	–
$\psi(3770)$		
(3.77)	Coffman 92B	–
	Coffman 91	–
	Bai 90C	–
	Dejongh 90	–
	Labs 90	–
	Adler 89	–
	Adler 89C	–
	Adler 89D	–
	Adler 89E	–
	Browder 89	–
	Dejongh 89	–
	Wasserbaech 89	–
	Adler 88	–
	Adler 88B	–
	Adler 88F	–
	Grab 88	–
	Izen 88	cs
	Schindler 88	–
$\Upsilon(1S)$		
(9.388 – 9.479)	Jakubowski 88	–
(9.4 – 10.5)	Kaarsberg 89	–
(9.46)	Alam 92	–
	Albrecht 92H	–
	Baru 92B	–
	Baru 91	–
	Bizzeti 91	–
	Antreasyan 90B	–
	Blinov 90	–
	Jakubowski 90	–
	Albrecht 89J	–
	Baru 89	–
	Bethke 89	–
	Chen 89	–
	Fulton 89B	–
	Schutte 89	–
	Albrecht 88K	–
	Albrecht 88Q	–
	Fairfield 88	–
	Schmitt 88	–
(9.46 – 10.6)	Albrecht 89B	–
	Fulton 89	–
	Maschmann 89	–
	Albrecht 88D	–
	Albrecht 88I	–
(9.966 – 10.04)	Jakubowski 88	–
(10)	Kobel 91	–
$\Upsilon(2S)$		
(9.388 – 9.479)	Jakubowski 88	–
(9.4 – 10.5)	Kaarsberg 89	–
(9.46 – 10.6)	Albrecht 89B	–
	Maschmann 89	–
	Albrecht 88D	–
	Albrecht 88I	–
(9.966 – 10.04)	Jakubowski 88	–
(10)	Kobel 91	–
(10.02)	Jakubowski 90	–
	Albrecht 89J	–
	Bethke 89	–
	Albrecht 88K	–
	Albrecht 88Q	–

$e^+ e^-$

$\Upsilon(3S)$		
(9.4 – 10.5)	Kaarsberg 89	–
(10.35)	Crawford 91	–
(10.35 – 10.6)	Avery 92	–
(10.36)	Crawford 92	–
	Alam 92	–
	Alexander 92	–
	Brock 91	–
	Heintz 91	–
	Morrison 91B	–
	Narain 91	–
	Bethke 89	–
	Chen 89	–
$\Upsilon(4S)$		
(9.46)	Kroha 90	–
(9.46 – 10.6)	Albrecht 89B	–
	Fulton 89	–
	Maschmann 89	–
	Albrecht 88D	–
	Albrecht 88I	–
(10.35 – 10.6)	Avery 92	–
(10.36)	Yanagisawa 91	–
(10.58)	Albrecht 92B	–
	Albrecht 92D	–
	Albrecht 92E	–
	Albrecht 92K	–
	Albrecht 92P	–
	Albrecht 92Q	–
	Alexander 92	–
	Drell 92	–
	Sanghera 92	–
	Albrecht 91E	–
	Albrecht 91G	–
	Albrecht 91I	–
	Albrecht 91J	–
	Bortoletto 91	–
	Crawford 91	–
	Crawford 91B	–
	Cronstrom 91	–
	Henderson 91	–
	Mai 91	–
	Schafer 91	–
	Albrecht 90D	–
	Albrecht 90E	–
	Albrecht 90G	–
	Albrecht 90H	–
	Albrecht 90K	–
	Alexander 90	–
	Antreasyan 90	–
	Bortoletto 90	–
	Cassel 90	–
	Fujii 90	–
	Fulton 90	–
	Gray 90	–
	Kroha 90	–
	Miller 90	–
	Narain 90	–
	Weir 90	–
	Alam 89	–
	Albrecht 89C	–
	Albrecht 89E	–
	Albrecht 89L	–
	Albrecht 89Q	–
	Albrecht 89S	–
	Albrecht 89U	–
	Albrecht 89X	–
	Artuso 89C	–
	Avery 89B	–
	Bebek 89	–
	Bortoletto 89	–
	Bortoletto 89B	–
	Danilov 89	–
	Drell 89	–
	Franzini 89	–
	Fulton 89C	–
	Golutvin 89	–
	Halling 89	–
	Harder 89	–
	Kreinick 89	–
	Miller 89	–
	Mistry 89	–
	Schubert 89	cs,p
	Albrecht 88E	–
	Albrecht 88G	–

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$\Upsilon(4S)$

	Albrecht 88M	–
	Albrecht 88T	–
	Thorndike 88	–

$\Upsilon(10860)$

(10.86)	Crawford 91	–
	Yanagisawa 91	–
	Leefranzini 90	–

$C(1480)$

(1.28 – 1.4)	Dolinsky 89B	cs

positronium

?	Akopyan 91	–
	Atoyan 89	–

$\ell^+ \ell^-$

(29)	Stoker 89	–
(50 – 60.8)	Sakai 89	–
(88.2 – 94.2)	Banerjee 91	angp,asym,const,cs
	Decamp 91S	angp,asym,const,cs
(88.2 – 94.3)	Buskulic 93	angp,const,cs
(88.22 – 94.23)	Abreu 91B	asym,const,cs
(88.22 – 94.28)	Decamp 91N	asym,const,cs
(88.3 – 94.3)	Rolandi 92	const,cs
(88.3 – 95)	Pietrzyk 91	cs

$\nu \bar{\nu}$

(89.2 – 93)	Jung 89	cs

$e^- e^+$

(< 0.0011)	Kozhuharov 88	cs
0.0012 – 0.0013	Tsertos 88	cs
	Tsertos 88B	cs
0.001 – 0.0017	Tsertos 89B	cs
(0.0015 – 0.0019)	Henderson 92	cs
0.002 – 0.0023	Judge 90	angp,cs
(0.0016 – 0.0019)	Wu 92	cs
	Lorenz 88	cs,p
0.0021 – 0.0024	Tsertos 91	cs
0.0024 – 0.003	Hallin 92	cs,mass
(0.0018 – 0.0019)	Widmann 91	cs,p
0.0026 – 0.0028	Tsertos 89C	cs
0.0026 – 0.0029	Gobel 92	angp
(< 0.0025)	Klinken 88	cs
(0.5 – 1.4)	Vorobiev 88C	cs
(< 2.4)	Salvini 88	–
(3.08 – 3.12)	Jin 91	cs
(10.6)	Akerib 92	cs
	Heltsley 92	angp
(12 – 46.8)	Braunschweig 88B	angp
(14)	Kroha 92	angp,const
	Kroha 90B	angp,const
(14 – 34.6)	Marshall 89	angp
(14 – 44)	Ouldsaada 88B	angp
(22)	Kroha 92	angp,const
	Kroha 90B	angp,const
(29)	Kroha 92	angp,const
	Kroha 90B	angp,const
	Kroha 90C	angp,const,cs
	Deboer 89	angp,const
(33 – 45)	Kroha 90C	angp,const,cs
(34.6)	Kroha 92	angp,const
	Kroha 90B	angp,const
	Kroha 90C	angp,const,cs
(34.7)	Kroha 92	angp,const
	Kroha 90B	angp,const
(34.8)	Kroha 92	angp,const
	Kroha 90B	angp,const
(35)	Kroha 92	angp,const
	Behrend 90	angp

$e^+ e^-$

$e^- e^+$

	Kroha 90B	angp,const
	Behrend 89I	–
	Deboer 89	angp,const
(35 – 47)	Kroha 90C	angp,const,cs
(38.3)	Kroha 92	angp,const
	Kroha 90B	angp,const
(43.6)	Kroha 92	angp,const
	Kroha 90B	angp,const
(43.7)	Kroha 92	angp,const
	Kroha 90B	angp,const
(50)	Rosenfeld 88	angp
(50 – 56)	Maki 88B	angp,cs
	Shirai 88	angp,asym,cs
(50 – 57)	Kim 89B	angp,mass
(52)	Adachi 88	angp
	Kim 88C	angp,cs
	Rosenfeld 88	angp
(52 – 56)	Tauchi 88	angp
(52 – 57)	Metcalf 89	angp
(52 – 60.8)	Ogawa 89	angp,cs
(54 – 64)	Abe 93	angp,cs
(55)	Kim 88C	angp,cs
	Rosenfeld 88	angp
	Sumiyoshi 88	angp
	Unno 88	angp
(56)	Kim 88C	angp,cs
	Rosenfeld 88	angp
	Sumiyoshi 88	angp
	Unno 88	angp
(56 – 60.8)	Nozaki 89	angp,asym,const
(57)	Mori 89B	angp
	Unno 88	angp
(57.4 – 59.8)	Abe 93B	cs
(58)	Tsuboyama 92	angp,const,cs
(88 – 93)	Dydak 91	angp,const
	Augustin 90D	angp,const
(88 – 94)	Haissinski 90	cs
(88 – 94.5)	Decamp 91O	angp
	Meinhard 91	angp,const
(88.2 – 94.2)	Adriani 93B	angp,const,cs,p
	Adeva 91D	asym,const,cs
	Banerjee 91	angp,asym,const,cs
	Burkhardt 91	asym,const,cs
	Decamp 91S	angp,asym,const,cs
	Steinberger 90	asym,const,cs
	Steinberger 89	cs
(88.2 – 94.3)	Buskulic 93	angp,const,cs
(88.22 – 94.28)	Decamp 90K	angp,asym,const,cs
(88.22 – 94.22)	Bardadinotwi 92	cs
	Bardadinotwi 92B	cs
	Abreu 91B	asym,const,cs
	Adeva 90O	angp,asym,const,cs
(88.22 – 94.28)	Decamp 91N	asym,const,cs
(88.22 – 95.4)	Abreu 90L	cs
(88.23 – 95.04)	Alexander 91C	angp,const,cs
(88.24 – 94.23)	Wenninger 92	angp,const,cs
(88.28 – 95.04)	Aarnio 90C	cs
	Renton 90	cs
(88.3 – 95)	Pietrzyk 91	cs
(88.48 – 93.72)	Acton 93C	angp,const,cs

$\mu^- e^+$

(29)	Heusch 90B	cs

$\mu^+ e^-$

(29)	Heusch 90B	cs

$e^+ e^-$

$\mu^- \mu^+$

(5 – 7.4)	Edwards 89	cs
(7.6 – 10)	Baru 91	cs
(9.4 – 10.5)	Kaarsberg 89	cs
$9.785 \cdot 10^4 - 1.957 \cdot 10^6$	Marshall 89	angp,cs
(10)	Kobel 91	cs,mass
(10.55 – 11.25)	Leefranzini 90	cs
(14 – 42)	Abe 90H	angp,cs
(14 – 46.1)	Adeva 88	angp,asym,cs
(29)	Abe 90H	angp,cs
(33 – 45)	Kroha 90C	angp,const,cs
(34.2 – 46.1)	Ouldsaada 88B	angp
(34.4)	Kroha 92	angp,const
	Kroha 90B	angp,const
(34.5)	Kroha 92	angp,const
	Kroha 90B	angp,const
(34.6)	Kroha 90C	angp,const,cs
(35)	Kroha 92	angp,const
	Behrend 90	angp
	Kroha 90B	angp,const
	Hegner 89	angp,const
	Braunschweig 88E	angp,asym
(35 – 46)	Fujii 90	const,mass
(35 – 47)	Kroha 90C	angp,const,cs
(35 – 56)	Kamae 88	angp,asym,cs
(38.3)	Kroha 92	angp,const
	Kroha 90B	angp,const
(38.3 – 46.8)	Braunschweig 88E	angp,asym
(41.5)	Kroha 92	angp,const
	Kroha 90B	angp,const
(43)	Kroha 92	angp,const
	Behrend 90	angp
	Kroha 90B	angp,const
(43.6)	Kroha 92	angp,const
	Kroha 90B	angp,const
(44)	Genser 89	cs
(44.8)	Kroha 92	angp,const
	Kroha 90B	angp,const
(50)	Eno 89	col,const,cs
	Rosenfeld 88	angp,asym
	Unno 88	angp
(50 – 56)	Ko 88	angp,asym
	Maki 88B	angp,cs
	Shirai 88	angp,asym,cs
(50 – 57)	Kim 89B	angp,mass
	Metcalf 89	cs
	Mcneil 88	angp,asym,const
	Sakuda 88	cs
(50 – 60.8)	Abe 89P	ang,asym,cs
	Kim 89E	cs
(50 – 61.4)	Shirai 91	angp,cs
	Abe 90E	angp,const,cs
	Kumita 89B	cs
	Maki 89	asym,const,cs
(50 – 62)	Olsen 91	angp,asym,cs
(50 – 64)	Shirai 91	angp,cs
	Abe 90D	asym,const,cs
	Abe 90H	angp,cs
	Miyamoto 90	angp
	Yamauchi 90	asym,cs
(52)	Eno 89	col,const,cs
	Adachi 88D	angp,asym,const,cs
	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
	Kim 88B	angp,asym
	Rosenfeld 88	angp,asym
	Unno 88	angp
(52 – 57)	Metcalf 89	angp
(52 – 60.8)	Ogawa 89	angp,cs
(52 – 61.4)	Howell 92	angp,const,cs
(54 – 61.4)	Abe 90	cs
(54.4)	Tauchi 88	angp
(54.5)	Olsen 88	angp,const
(55)	Eno 89	col,const,cs

$e^+ e^-$

$\mu^- \mu^+$

	Adachi 88D	angp,asym,const,cs
	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
	Kim 88B	angp,asym
	Rosenfeld 88	angp,asym
	Sumiyoshi 88	angp,asym,cs
	Unno 88	angp
(55 – 60.8)	Iwata 89	angp,cs
(56)	Eno 89	col,const,cs
	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
	Kim 88B	angp,asym
	Rosenfeld 88	angp,asym
	Sumiyoshi 88	angp,asym,cs
(56 – 60.8)	Nozaki 89	angp,asym,const
(56.5)	Eno 89	col,const,cs
(56.9)	Kroha 92	angp,const
(57)	Eno 89	col,const,cs
	Bacala 88B	angp,asym,cs
(57.4 – 59.8)	Abe 93B	cs
(58)	Tsuboyama 92	angp,const,cs
	Maki 91	angp,asym,cs
	Itoh 90	angp
(58.5 – 61.4)	Kumita 89	col,cs
(< 60)	Salvini 88	angp,cs
(60 – 84)	Acton 91C	cs
(88 – 93)	Dydak 91	angp,const
	Augustin 90D	angp,const
(88 – 94)	Haissinski 90	cs
(88.2 – 94.2)	Adriani 93B	angp,const,cs,p
	Adeva 91D	asym,const,cs
	Banerjee 91	angp,asym,const,cs
	Burkhardt 91	asym,const,cs
	Decamp 91S	angp,asym,const,cs
	Steinberger 90	asym,const,cs
	Steinberger 89	cs
(88.2 – 94.3)	Buskulic 93	angp,const,cs
(88.22 – 94.22)	Abreu 91	asym,const,cs
	Abreu 91B	asym,const,cs
	Adeva 90H	asym,const,cs
	Adeva 90O	angp,asym,const,cs
(88.22 – 94.28)	Decamp 91N	asym,const,cs
(88.22 – 94.21)	Watson 90	angp,asym,const,cs
(88.23 – 94.28)	Decamp 90K	angp,asym,const,cs
(88.23 – 95.04)	Alexander 91C	angp,const,cs
(88.27 – 94.28)	Abreu 90L	angp,asym,const,cs
(88.28 – 94.28)	Crosland 91	asym,const,cs
(88.28 – 95.04)	Aarnio 90C	cs
	Renton 90	cs
(88.3 – 95)	Pietrzyk 91	cs
(88.48 – 93.72)	Acton 93C	angp,const,cs
(89.3 – 93)	Coupal 90	cs

$\tau^- e^+$

(29)	Gomezcadenas 90	cs
	Heusch 90B	cs

$e^+ e^-$

$\tau^+ e^-$

(29)	Gomezcadenas 90	cs
	Heusch 90B	cs

$\tau^- \mu^+$

(29)	Gomezcadenas 90	cs

$\tau^+ \mu^-$

(29)	Gomezcadenas 90	cs

$\tau^- \tau^+$

(3.5 – 7.2)	Barish 88	angp,cs
(3.77)	Gan 90	–
	Coffman 87	–
(4 – 5)	Gan 90	–
(4.1 – 4.2)	Perl 90	cs
(4.4 – 5.8)	Perl 90	cs
(6.4 – 7.4)	Perl 90	cs
(9.4)	Albrecht 92F	–
(9.4 – 10.6)	Albrecht 92	–
	Albrecht 92I	–
	Albrecht 92M	–
	Albrecht 91C	–
	Albrecht 91M	–
	Antreasyan 91B	–
	Donnachie 91	–
	Albrecht 90I	–
	Albrecht 90L	–
	Gan 90	–
	Janssen 90	cs
	Albrecht 88C	–
	Albrecht 88O	cs
	Albrecht 88P	–
	Govorkov 88	–
(9.8 – 10.3)	Janssen 89	–
$9.785 \cdot 10^4 - 1.957 \cdot 10^6$	Marshall 89	angp,cs
(10)	Bean 92	ang,mass,qnc
(10.2)	Keh 88B	–
(10.35 – 10.87)	Goldberg 90	–
(10.36 – 10.86)	Bowcock 90	–
(10.5)	Trischuk 92	–
	Gan 90	–
(10.5 – 10.9)	Ammar 91	–
(10.58)	Battle 92	–
(10.6)	Akerib 92	cs
	Albrecht 92F	–
	Artuso 92	–
	Heltsley 92	cs
	Procario 92	–
(14 – 42)	Abe 90H	angp,cs
(14 – 43.8)	Odaka 90	angp,const,cs,pol
(14 – 45)	Hayes 89B	–
(14 – 46.1)	Adeva 88	angp,asym,cs
(14 – 46.8)	Fujii 90	angp,cs
	Behrend 89D	angp,cs
(15 – 45)	Gan 88	asym
(29)	Abachi 90	–
	Abe 90H	angp,cs
	Eastman 90	–
	Fujii 90	cs
	Gan 90	–
	Odaka 90	angp,const,cs,pol
	Abachi 89	–
	Abachi 89B	cs
	Stoker 89	cs
	Amidei 88	–
	Gan 87B	cs
	Klem 86	–
(30 – 46.7)	Fujii 90	cs
(33 – 45)	Kroha 90C	angp,const,cs
(34.2 – 43.8)	Ouldsaada 88B	angp
(34.5)	Kroha 92	angp,const
	Kroha 90B	angp,const
(34.6)	Kroha 92	angp,const
	Kroha 90B	angp,const
(35)	Bryman 92	–
	Kroha 92	angp,const
	Behrend 90	angp
	Gan 90	–
	Kroha 90B	angp,const
	Behrend 89H	–

$e^+ e^-$

$\tau^- \tau^+$

	Hegner 89	angp,const
	Braunschweig 88D	–
(35 – 42.4)	Fujii 90	angp,cs
	Braunschweig 89F	angp,cs
(35 – 46)	Fujii 90	const,mass
(35 – 47)	Kroha 90C	angp,const,cs
(35 – 56)	Kamae 88	angp,asym,cs
(36.3)	Braunschweig 88D	–
(42.4)	Kroha 92	angp,const
	Kroha 90B	angp,const
(43)	Kroha 92	angp,const
	Behrend 90	angp
	Kroha 90B	angp,const
(50)	Rosenfeld 88	angp,asym
	Unno 88	angp
(50 – 56)	Ko 88	angp,asym
	Maki 88B	angp,cs
	Shirai 88	angp,asym,cs
(50 – 57)	Mcneil 88	angp,asym,const
	Sakuda 88	cs
(50 – 60.8)	Abe 89P	ang,asym,cs
	Kim 89E	cs
(50 – 61.4)	Shirai 91	angp,cs
	Abe 90E	angp,const,cs
	Maki 89	asym,const,cs
(50 – 62)	Olsen 91	angp,asym,cs
(50 – 64)	Shirai 91	angp,cs
	Abe 90D	asym,const,cs
	Abe 90H	angp,cs
	Miyamoto 90	angp
	Odaka 90	angp,const,cs,pol
	Yamauchi 90	asym,cs
(52)	Adachi 88D	angp,asym,const,cs
	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
	Kim 88B	angp,asym
	Rosenfeld 88	angp,asym
	Unno 88	angp
(52 – 57)	Metcalf 89	angp
(52 – 60.8)	Ogawa 89	angp,cs
(52 – 61.4)	Howell 92	angp,const,cs
	Kang 90	pol
(54.4)	Tauchi 88	angp
(54.5)	Olsen 88	angp,const
(55)	Adachi 88D	angp,asym,const,cs
	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
	Kim 88B	angp,asym
	Rosenfeld 88	angp,asym
	Sumiyoshi 88	angp,asym,cs
	Unno 88	angp
(55 – 60.8)	Iwata 89	angp,cs
(56)	Bacala 88	angp,asym,cs
	Bacala 88B	angp,asym,cs
	Kim 88B	angp,asym
	Rosenfeld 88	angp,asym
	Sumiyoshi 88	angp,asym,cs
(56 – 60.8)	Nozaki 89	angp,asym,const
(56.9)	Kroha 92	angp,const
(57)	Bacala 88B	angp,asym,cs
(58)	Tsuboyama 92	angp,const,cs
	Maki 91	angp,asym,cs
	Itoh 90	angp
	Kim 90D	const,pol
(< 60)	Salvini 88	angp,cs
(88 – 93)	Dydak 91	angp,const
	Augustin 90D	angp,const
(88 – 94)	Haissinski 90	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$\tau^- \tau^+$

(88.2 – 94.2)	Adriani 93B	angp,const,cs,p
	Abreu 92B	const,pol
	Acton 92F	–
	Adriani 92H	const,pol
	Dam 92	angp,asym,const,pol,qnc
	Adeva 91D	asym,const,cs
	Banerjee 91	angp,asym,const,cs
	Burkhardt 91	asym,const,cs
	Decamp 91H	const,pol
	Decamp 91S	angp,asym,const,cs
	Privitera 91	angp,const,cs,pol
	Zomer 91	const,pol
	Zomer 91B	const,pol
	Steinberger 90	asym,const,cs
	Steinberger 89	cs
(88.2 – 94.3)	Buskulic 93	angp,const,cs
	Nuttall 92	pol
(88.22 – 94.2)	Buskulic 93B	const,pol
(88.22 – 94.22)	Abreu 91B	asym,const,cs
	Adeva 90O	angp,asym,const,cs
(88.22 – 94.28)	Decamp 91N	asym,const,cs
(88.23 – 94.28)	Decamp 90K	angp,asym,const,cs
(88.23 – 95.04)	Alexander 91C	angp,const,cs
(88.27 – 94.28)	Abreu 90L	angp,asym,const,cs
(88.27 – 95.02)	Roach 90	asym,const,cs
(88.28 – 94.28)	Alexander 91G	asym,const,pol
	Banks 90	asym,const,pol
(88.28 – 95.04)	Aarnio 90C	cs
	Renton 90	cs
(88.3 – 94.3)	Buskulic 93C	–
	Rolandi 92	const,pol
(88.3 – 95)	Pietrzyk 91	cs
(88.48 – 93.72)	Acton 93C	angp,const,cs
(88.5 – 93.7)	Buskulic 92L	cs
(89.3 – 93)	Coupal 90	cs
(91.2)	Buskulic 93	const,pol

$\bar{\nu}\ \nu^*$

(88.22 – 94.22)	Bardadinotwi 92	–
	Bardadinotwi 92B	–

$e^\pm\ e^{*\pm}$

(52)	Kim 88C	–
(55)	Kim 88C	–
(56)	Kim 88C	–

$e^-\ e^{*+}$

(50 – 56)	Maki 88B	cs
(50 – 57)	Kim 89B	cs
(52 – 60.8)	Adachi 89D	cs
(56)	Abe 88E	cs
	Unno 88	–
(57)	Shirai 88	–
(88.22 – 94.22)	Bardadinotwi 92	–
	Bardadinotwi 92B	–
(92.2)	Abreu 91G	cs

$e^+\ e^{*-}$

(50 – 56)	Maki 88B	cs
(50 – 57)	Kim 89B	cs
(52 – 60.8)	Adachi 89D	cs
(56)	Abe 88E	cs
	Unno 88	–
(57)	Shirai 88	–
(92.2)	Abreu 91G	cs

$\mu^+\ \mu^{*\pm}$

(52)	Kim 88C	–

$e^+ e^-$

$\mu^\pm\ \mu^{*\pm}$

(55)	Kim 88C	–
(56)	Kim 88C	–

$\mu^-\ \mu^{*+}$

(50 – 57)	Kim 89B	cs
(52 – 60.8)	Adachi 89D	cs
(57)	Shirai 88	–
(88.22 – 94.22)	Bardadinotwi 92	–
	Bardadinotwi 92B	–
(92.2)	Abreu 91G	cs

$\mu^+\ \mu^{*-}$

(50 – 57)	Kim 89B	cs
(52 – 60.8)	Adachi 89D	cs
(57)	Shirai 88	–
(92.2)	Abreu 91G	cs

$\tau^-\ \tau^{*+}$

(92.2)	Abreu 91G	cs

$\tau^+\ \tau^{*-}$

(92.2)	Abreu 91G	cs

2unspec

(1)	Dolinsky 89B	cs

2jet

(6.2)	Bethke 91	angp
(7.4)	Bethke 91	angp
(10 – 45)	Mattig 89	ang,cor,et
(12 – 46.8)	Fujii 90	const,cs
	Braunschweig 88H	const,cs
(14)	Magnussen 91	const,cs
(14 – 46.8)	Behrend 89C	mass
(15 – 30)	Fujii 90	angp
	Braunschweig 88G	angp
(22)	Magnussen 91	const,cs
(29)	Bethke 89B	p
(35)	Magnussen 91	const,cs
	Fujii 90	angp,asym
	Braunschweig 89L	ang,col,mass
	Greenshaw 89	angp,asym
(44)	Magnussen 91	const,cs
	Fujii 90	angp,asym
	Greenshaw 89	angp,asym
(50)	Kim 89C	–
(50 – 56)	Maki 88B	cs
(50 – 57)	Fujii 90	const,cs
	Park 89B	cs
	Kamae 88	col,cs
(50 – 60.8)	Fujii 90	angp,mass,p
	Bodek 89	–
	Kim 89E	angp,mass
(51 – 61.4)	Abe 90H	const,cs
(52 – 56)	Park 88	angp
(52 – 60.8)	Ogawa 89	col,cs
(52 – 61.4)	Abe 89K	angp
(55 – 60.8)	Iwata 89	cs
(58)	Li 93	const,cs,p
	Itoh 90	const,cs
	Kim 90D	const,cs
(< 60)	Salvini 88	angp,cs,p,pt
(60.8)	Kim 89C	–
(88.2 – 94.2)	Adriani 93B	cs
	Abreu 92C	–
(89.2 – 93)	Abrams 89D	cs
(91)	Chliapnikov 92	mult
	Haissinski 90	const,cs
(91 – 91.5)	Decamp 90	const
(91.2)	Decamp 92B	ang,const,mass
(91.3)	Abreu 90K	cs

jet$^+$ jet$^-$

(29)	Abe 90H	angp
(35 – 44)	Abe 90H	angp
(50 – 60.8)	Stuart 90	asym
(56.6)	Shirai 91	angp,cs
(57.6)	Shirai 91	angp,cs
(57.9)	Adachi 91B	angp,asym,cs
	Shirai 91	angp,cs

$e^+ e^-$

jet$^+$ jet$^-$

(58)	Abe 90H	angp
	Itoh 90	angp

2longlived

(89.2 – 93)	Jung 89	cs

longlived$^+$ longlived$^-$

(52 – 60)	Adachi 90D	cs

γ neutral

0	Atoyan 90	cs
	Gninenko 89	cs
(91.2)	Adriani 92M	p

γ jet

(91.2)	Buskulic 92I	cs

2γ

(0.001 – 0.0012)	Minowa 89	mass
0 – 0.0019	Adachi 90F	cs
(< 0.0011)	Kozhuharov 88	cs
0.0019	Connell 88	mass
0.0027	Connell 88	mass
(0.0018 – 0.0019)	Widmann 91	cs,p
< 0.0046	Trzaska 91B	mass,p
(< 2.4)	Salvini 88	–
(10.6)	Akerib 92	cs
	Heltsley 92	angp
(14 – 34.6)	Marshall 89	angp
(50)	Rosenfeld 88	angp
(50 – 56)	Maki 88B	angp,cs
	Shirai 88	angp,asym,cs
(50 – 57)	Kim 89B	angp,mass
(50 – 60.8)	Kim 89E	cs
(50 – 61.4)	Shimozawa 92	angp,cs
	Kim 89F	angp,cs
(52)	Adachi 88	angp
	Kim 88C	angp,cs
	Rosenfeld 88	angp
(52 – 56)	Tauchi 88	angp
(52 – 60.8)	Adachi 89D	cs
	Ogawa 89	angp,cs
(54 – 64)	Abe 93	angp,cs
(55)	Kim 88C	angp,cs
	Rosenfeld 88	angp
	Sumiyoshi 88	angp
	Unno 88	angp
(55 – 57)	Abe 89F	angp,cs
(56)	Kim 88C	angp,cs
	Maki 88	cs
	Rosenfeld 88	angp
	Sumiyoshi 88	angp
	Unno 88	angp
(56 – 60.8)	Nozaki 89	angp,const,cs
(56.5)	Unno 88	angp
(57)	Unno 88	angp
(57.4 – 59.8)	Abe 93B	cs
(58)	Tsuboyama 92	angp,const,cs
(88.22 – 94.22)	Bardadinotwi 92	angp,cs
	Bardadinotwi 92B	angp,cs
	Abreu 91H	angp,const,cs
(88.23 – 94.23)	Akrawy 91D	angp,cs
(88.24 – 94.23)	Wenninger 92	angp,cs
(88.5 – 93.7)	Adriani 93B	const,cs
	Adriani 92B	angp,const,cs
(89.5)	Adeva 90E	angp,const,cs
(91.09)	Abreu 90Q	angp,cs
(91.28)	Adeva 90E	angp,const,cs
(93.17)	Adeva 90E	angp,const,cs

γ higgs

(50)	Igarashi 87	–
(52)	Igarashi 87	–

Z^0 higgs

(88.28 – 95.03)	Akrawy 90O	cs

$e^+ e^-$

2higgs

(50 – 60.8)	Low 89	–

higgs$^+$ higgs$^-$

(40)	Ouldsaada 88B	–
(47)	Ouldsaada 88B	–
(50 – 60.8)	Smith 90	–
	Kim 89E	cs
(50 – 61.4)	Vinson 90	cs
(50 – 64)	Miyamoto 90	–
(52 – 61.4)	Adachi 90C	cs
(88.28 – 95.04)	Renton 90	cs

γ axion

0	Atoyan 90	cs
	Gninenko 89	cs

2Z'

(50 – 60.8)	Kim 89E	cs

2heavy-lepton

(56)	Kim 88	–

heavy-lepton^0

(50 – 60.8)	Kim 89E	cs

heavy-lepton^0 heavy-lepton^0

(36 – 45)	Gan 88	–
(44.2)	Fujii 90	mass
	Behrend 88C	mass
(50 – 60.8)	Sakai 89	–
	Shaw 89	–

heavy-lepton$^-$ heavy-lepton$^+$

(29)	Fujii 90	–
	Mathis 88	cs
(36 – 45)	Gan 88	–
(44.2)	Fujii 90	mass
	Behrend 88C	mass
(50)	Igarashi 87	–
(50 – 56)	Ko 88	–
	Maki 88B	cs
	Shirai 88	cs
(50 – 60.8)	Kim 90C	cs
	Kim 89E	cs
(52)	Adachi 88B	angp,p
	Yamauchi 88	cs
	Igarashi 87	–
(52 – 60.8)	Adachi 89B	–
(55)	Sumiyoshi 88	–
	Yamauchi 88	cs
(56)	Abe 88D	cs
	Kim 88D	cs
	Sumiyoshi 88	–
	Unno 88	–

heavy-ν heavy-$\bar{\nu}$

(29)	Akerlof 88	cs

2heavy-e

(0.5 – 1.4)	Dolinsky 89B	–

$q\,\bar{q}$

(10.52)	Alam 92	–
(29)	Chliapnikov 92	ang
(50)	Sagawa 88	cs
	Igarashi 87	–
(50 – 57)	Kamae 88	col,cs
(50 – 61.4)	Myung 89	–
(50 – 64)	Miyamoto 90	cs
(52)	Sagawa 88	cs
	Igarashi 87	–
(58)	Tsuboyama 92	angp,const,cs
(88.25 – 95)	Decamp 91B	asym,col,const
(91)	Chliapnikov 92	ang
(91.3)	Acton 92K	angp,const,cs

$c\,c$

(29)	Abe 90H	angp
	Kroha 90	asym,const
(33 – 45)	Kroha 90C	angp,const,cs
(34.4)	Kroha 90	asym,const
(34.6)	Kroha 90	asym,const
(34.8)	Kroha 90	asym,const
(35)	Behrend 90	angp

$e^+ e^-$

$\bar{c}\,c$

	Elsen 90	const
	Kroha 90	asym,const
	Behrend 89J	angp,const
	Kroha 89B	asym,cs
	Ouldsaada 88B	asym
(35 – 47)	Kroha 90C	angp,const,cs
(35.3)	Kroha 90	asym,const
(36)	Abe 90H	angp
(36.2)	Kroha 90	asym,const
(42)	Abe 90H	angp
(43)	Behrend 90	angp
	Kroha 90	asym,const
	Behrend 89J	angp,const
	Kroha 89B	asym,cs
	Ouldsaada 88B	asym
(44)	Elsen 90	const
	Kroha 90	asym,const
(50 – 61.4)	Myung 90	p
(52 – 61.4)	Okamoto 91	angp,const,cs
(54 – 64)	Shirai 91	angp
(57)	Kanzaki 91	asym
(58)	Hinode 93	angp,cs
	Tsuboyama 92	angp,const,cs
	Kanzaki 91	asym
	Maki 91	asym
	Abe 90H	angp
	Itoh 90	angp
(90.22)	Decamp 91G	angp,asym,const
(91.22)	Decamp 91G	angp,asym,const
(91.24)	Adriani 92E	angp,const,cs
(92.22)	Decamp 91G	angp,asym,const

$\bar{b}\,b$

(29)	Abe 90H	angp
	Kroha 90	asym,const
	Ng 88	asym
(33 – 45)	Kroha 90C	angp,const,cs
(34.5)	Kroha 90	asym,const
(34.6)	Kroha 90	asym,const
	Marshall 89	angp
(34.8)	Kroha 90	asym,const
(35)	Behrend 90	angp
	Braunschweig 90C	ang
	Elsen 90	const
	Kroha 90	asym,const
	Behrend 89J	angp,const
	Kroha 89B	asym,cs
	Ouldsaada 88B	asym
(35 – 47)	Kroha 90C	angp,const,cs
(35.3)	Kroha 90	asym,const
(36)	Abe 90H	angp
(37)	Kroha 90	asym,const
(42)	Abe 90H	angp
(43)	Behrend 90	angp
	Kroha 90	asym,const
	Behrend 89J	angp,const
	Kroha 89B	asym,cs
	Ouldsaada 88B	asym
(44)	Elsen 90	const
	Kroha 90	asym,const
(50 – 60.8)	Kim 89E	angp,cs
(50 – 61.4)	Myung 90	p
(50 – 64)	Shirakata 91	angp
(52 – 57)	Sagawa 89	angp,cs
(52 – 61.4)	Nagai 91	angp
	Shimonaka 91	angp,const,cs
(55.2)	Kroha 90	asym,const
(56 – 60.8)	Nozaki 89	angp,asym,const
(57)	Kanzaki 91	asym
(57.2)	Shirai 91	angp
	Lim 90B	angp,cs
(58)	Tsuboyama 92	angp,const,cs

$e^+ e^-$

$\bar{b}\,b$

	Kanzaki 91	asym
	Maki 91	asym
	Abe 90H	angp
	Itoh 90	angp
	Kim 90D	angp
(58.3)	Shirai 91	angp
(58.4)	Shirai 91	angp
(88.2 – 94.2)	Adriani 93B	angp,const,cs
(90.22)	Decamp 91G	angp,asym,const
(91.2)	Abreu 91Q	angp,asym,const
	Akrawy 91C	asym
	Trischuk 91	–
(91.22)	Decamp 91G	angp,asym,const
(91.24)	Adriani 92E	angp,const,cs
(91.3)	Abreu 90K	cs
(92.22)	Decamp 91G	angp,asym,const

$\bar{t}\,t$

(52 – 60.8)	Ogawa 89	angp,cs

2diquark

(52 – 60)	Adachi 90D	cs

$\bar{b}'\,b'$

(50 – 60.8)	Eno 89B	col
	Eno 89C	–
(55 – 60.8)	Abe 89J	–

2s-particle

(50 – 60.8)	Sakai 89	–
(52)	Yamauchi 88	cs
(55)	Yamauchi 88	cs

2gaugino

(52)	Yamauchi 88	cs
(55)	Yamauchi 88	cs

chargino$^+$ chargino$^-$

(52 – 57)	Adachi 89	–
	Takahashi 88	–
(52 – 60)	Adachi 90D	cs
(52 – 60.8)	Adachi 89B	–

2photino

(55 – 57)	Abe 89F	–

2higgsino

(50 – 60.8)	Sakai 90	cs

higgs($CP = -1$) higgs

(29)	Komamiya 89	cs

higgs($CP = +1$) higgs($CP = -1$)

(88 – 95)	Buskulic 92B	–
(88.2 – 94.2)	Adeva 90M	angp,cs
(88.28 – 95.04)	Renton 90	cs

$\tilde{\ell}^+\,\tilde{\ell}^-$

(52 – 60)	Adachi 90D	cs

$\tilde{e}^-\,\tilde{e}^+$

(45)	Gan 88	–
(50 – 60.8)	Sakai 90	cs
	Sakai 89	–
(52)	Yamauchi 88	cs
(52 – 57)	Adachi 89	–
	Takahashi 88	–
(52 – 60.8)	Adachi 89B	–
(55)	Yamauchi 88	cs
(55 – 60.8)	Taketani 90	cs

$\tilde{\mu}^-\,\tilde{\mu}^+$

(45)	Gan 88	–
(50 – 60.8)	Sakai 90	cs
	Sakai 89	–
(52)	Yamauchi 88	cs
(52 – 57)	Adachi 89	–
	Takahashi 88	–
(52 – 60.8)	Adachi 89B	–
(55)	Yamauchi 88	cs
(55 – 60.8)	Taketani 90	cs

$\tilde{\tau}^-\,\tilde{\tau}^+$

(45)	Gan 88	–

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c or in parentheses E_{cm} in GeV.

$e^+ e^-$

$\tilde{\tau}^- \tilde{\tau}^+$		
(52)	Yamauchi 88	cs
(52 – 57)	Adachi 89	–
(52 – 60.8)	Adachi 89B	–
(55)	Yamauchi 88	cs
(55 – 60.8)	Taketani 90	cs
$\tilde{q}\ \tilde{q}$		
(50 – 60.8)	Sakai 90	cs
(52 – 57)	Adachi 89	–
	Takahashi 88	–
(52 – 60.8)	Adachi 89B	–
$e^{*-}\ e^{*+}$		
(50 – 56)	Maki 88B	cs
(50 – 57)	Kim 89B	cs
(52)	Kim 88C	–
(52 – 60.8)	Adachi 89D	cs
(55)	Kim 88C	–
(56)	Abe 88E	cs
	Kim 88C	–
	Unno 88	–
(57)	Shirai 88	–
	Yamauchi 88	cs
$\mu^{*+}\ \mu^{*-}$		
(50 – 56)	Maki 88B	cs
(50 – 57)	Kim 89B	cs
(52)	Kim 88C	–
(52 – 60.8)	Adachi 89D	cs
(55)	Kim 88C	–
(56)	Kim 88C	–
(57)	Shirai 88	–
	Yamauchi 88	cs
$\tau^{*+}\ \tau^{*-}$		
(52 – 60.8)	Adachi 89D	cs
(57)	Yamauchi 88	cs
$q^*\ \overline{q}$		
(88.2 – 94.22)	Abreu 91M	cs
$\overline{q}^*\ q^*$		
(52 – 60.8)	Ogawa 89	angp,cs
2monopole		
(35)	Braunschweig 88	–
(50 – 56)	Maki 88B	cs
2lepton-colored		
(50 – 60.8)	Kim 89G	cs
$\overline{\text{lepton-colored}}$ lepton-colored		
(50 – 64)	Miyamoto 90	–
2e-color$^\pm$		
(50 – 60.8)	Kim 89E	cs
2lepton-quark		
(50 – 60.8)	Kim 89E	cs
	Kim 89G	cs
$\overline{\text{lepton-quark}}$ lepton-quark		
(50 – 64)	Miyamoto 90	–
(88.2 – 94.2)	Adeva 91B	cs
(88.2 – 94.3)	Alexander 91B	cs
(91.2)	Abreu 91K	–
meson$^+$ meson$^-$		
(54 – 64)	Yuzuki 91	cs
$\pi^0\ \gamma$		
(0.5 – 1.05)	Dolinsky 89	p
(0.782)	Dolinsky 89B	mass
(< 2.4)	Salvini 88	–
$2\pi^0$		
(0.958)	Dolinsky 89B	–
$\pi^+\ \pi^-$		
(0.36 – 1)	Benayoun 92	cs
	Feindt 92C	cs
(1 – 1.05)	Dolinsky 89	cs
(1.35 – 2.4)	Bisello 89B	cs
(1.5 – 2.2)	Castro 88	cs
(7.6 – 10)	Baru 91	cs
?	Landsberg 91	cs
$\eta\ \gamma$		
(0.5 – 1.05)	Dolinsky 89	p
$\eta\ \pi^0$		
(0.96 – 1.4)	Dolinsky 89B	–

$e^+ e^-$

$\rho(770)\ \pi$		
(1.35 – 2.4)	Antonelli 92	cs
$\rho(770)^+\ \pi^-$		
(1.35 – 2.4)	Donnachie 91	cs
$\rho(770)^0\ \pi^0$		
(1 – 1.9)	Donnachie 89	cs
(1.35 – 2.4)	Donnachie 91	cs
$\rho(770)^-\ \pi^+$		
(1.35 – 2.4)	Donnachie 91	cs
$\omega(783)\ \pi^0$		
(0.93 – 1.39)	Dolinsky 89B	cs
(1 – 1.4)	Donnachie 91	cs
	Govorkov 88	cs
(1.35 – 2.4)	Bisello 91C	cs
	Donnachie 91	cs
	Bisello 90D	cs
?	Landsberg 91	cs
$\eta'(958)\ \gamma$		
(1 – 1.05)	Dolinsky 89	mass
$\rho(770)\ f_0(700)$		
(1.35 – 2.4)	Bisello 91C	–
$a_1(1260)\ \pi$		
(1.35 – 2.4)	Bisello 91C	–
$K^+\ K^-$		
(1.35 – 2.4)	Bisello 88B	cs
(1.5 – 2.2)	Castro 88	cs
(7.6 – 10)	Baru 91	cs
$K_S\ K_L$		
(0.5 – 1.4)	Dolinsky 89B	cs
$\phi(1020)\ \pi^0$		
(1.28 – 1.4)	Dolinsky 89B	cs
charmed-meson $\overline{\text{charmed-meson}}$		
(35)	Elsen 90	angp
(44)	Elsen 90	angp
$D^0\ \overline{D}^0$		
(4.14)	Adler 88C	–
(9.4 – 10.6)	Ammar 91B	–
(9.46 – 10.58)	Antreasyan 91	–
(10.58 – 10.87)	Kinoshita 9[illegible]	–
$D^+\ D^-$		
(3.77)	Schindler 90	–
(4.14)	Adler 88C	–
(9.4 – 10.6)	Ammar 91B	–
$D^*(2010)^+\ D^-$		
(4.14)	Adler 88C	–
$D^*(2010)^0\ \overline{D}^0$		
(4.14)	Adler 88C	–
$\overline{D}^*(2010)^0\ D^0$		
(4.14)	Adler 88C	–
$D^*(2010)^-\ D^+$		
(4.14)	Adler 88C	–
$D^*(2010)^0\ \overline{D}^*(2010)^0$		
(4.14)	Adler 88C	–
(10.3 – 10.58)	Procario 91	–
$D^*(2010)^+\ D^*(2010)^-$		
(4.14)	Adler 88C	–
(10)	Albrecht 93	–
(10.3 – 10.58)	Procario 91	–
(10.58 – 10.8)	Alexander 90C	–
(10.58 – 10.87)	Kinoshita 90	–
(35)	Fujii 90	angp
	Ouldsaada 89	angp
$D_S^+\ D_S^-$		
(4.14)	Wasserbaech 89	–
(10.3 – 10.58)	Procario 91	–
$D_S^*\ D_S^\pm$		
(4.14)	Adler 89E	–
	Toki 89B	–
$D_S^{*+}\ D_S^- + D_S^{*-}\ D_S^+$		
(4.14)	Adler 89B	cs

$e^+ e^-$

$D_S^{*+}\ D_S^-$		
(4.14)	Bai 90	cs
	Alder 89	cs
	Browder 89	–
	Wasserbaech 89B	cs
$D_S^{*-}\ D_S^+$		
(4.14)	Bai 90	cs
	Alder 89	cs
	Browder 89	–
	Pitman 89	–
	Wasserbaech 89B	cs
	Schindler 88	–
$\eta_c(1S)\ \gamma$		
(3 – 3.2)	Bisello 88	cs,mass
bottom $\overline{\text{bottom}}$		
(50 – 64)	Yamauchi 90	asym
(58)	Maki 91	asym
$B\ \overline{B}$		
(10.46 – 10.59)	Lesiak 91	–
(10.58)	Albrecht 92D	–
	Albrecht 91D	–
	Albrecht 91J	ang
(29)	Snyder 89	–
$B^0\ \overline{B}^0$		
(10.52)	Bean 92B	–
(10.55)	Franzini 89	cs,p
	Golutvin 89	cs,p
(10.58)	Bean 92B	–
	Antreasyan 91	–
	Miller 89	–
	Schubert 89	cs,p
(91.2)	Trischuk 91	–
$B^+\ B^-$		
(10.52)	Bean 92B	–
(10.58)	Bean 92B	–
	Miller 89	–
	Schubert 89	cs,p
B(unspec) $\overline{\text{B}}$(unspec)		
(10.46 – 10.52)	Wachs 89	–
(10.57 – 10.59)	Wachs 89	–
(35)	Elsen 90	angp
(44)	Elsen 90	angp
$\overline{B}\ B^*$		
(10.61 – 10.65)	Wu 91	cs
(10.7)	Wu 91	cs
$B\ \overline{B}^*$		
(10.61 – 10.65)	Wu 91	cs
(10.7)	Wu 91	cs
$\overline{B}^*\ B^*$		
(10.7)	Wu 91	cs
$\overline{\text{top}}$ top		
(50)	Adachi 88C	cs
(50 – 56)	Ko 88	–
	Shirai 88	cs
	Son 88	–
(50 – 61.4)	Myung 89	–
(52)	Adachi 88C	cs
(55)	Sugahara 88	cs
	Sumiyoshi 88	–
(56)	Sumiyoshi 88	–
(57)	Yamauchi 88	cs
$n\ \overline{n}$		
(2.386)	Bisello 90	cs
(2.4)	Castro 88	cs
$p\ \overline{p}$		
(1.9 – 2.4)	Castro 88	cs
(2.386)	Bisello 90	cs
(7.6 – 10)	Baru 91	cs
?	Sedlak 88	angp
$\Lambda\ \overline{\Lambda}$		
(2.386)	Bisello 90	cs
(2.4)	Castro 88	cs
$\Lambda\ \overline{\Sigma}^0 + \overline{\Lambda}\ \Sigma^0$		
(2.386)	Bisello 90	cs
$\Lambda\ \overline{\Sigma}^0$		
(2.4)	Castro 88	cs

$e^+ e^-$

$\Sigma^0 \bar{\Sigma}^0$
(2.386) Bisello 90 cs
(2.4) Castro 88 cs

$\Xi_c(2460)^0 \bar{\Xi}_c(2460)^0$
(10.58 – 10.87) Henderson 91B –

positronium γ
0 Skalsey 92B –

$\nu \bar{\nu} \gamma$
(29) Denegri 90 cs
Fujii 90 cs
(29 – 42.6) Grivaz 88 cs
(35 – 42.6) Ouldsaada 88B –
(35 – 46.57) Behrend 88D cs
(50 – 61.4) Maki 89 cs
(50 – 62) Kanzaki 91 cs
(54 – 61.4) Fujii 90 cs
Abe 89I –
(88 – 94) Dittmar 92 p
(88.2 – 94.2) Adriani 93B angp,const,cs,p
(88.22 – 94.22) Akrawy 90U angp,cs
(88.3 – 94.3) Adeva 91K cs
Adeva 90S p
(88.6 – 93.8) Adriani 92F angp,cs,p

$\ell^+ \ell^-$ higgs
(88 – 94) Haissinski 90 –
(88.2 – 94.2) Abreu 90O cs,mass
(88.28 – 95.04) Decamp 91 angp,et,mass

$\nu \bar{\nu}$ higgs
(88.2 – 94.2) Abreu 90O cs,mass
(88.2 – 94.3) Adriani 93 cs
(88.2 – 95) Akrawy 90T cs
(88.28 – 95.04) Decamp 91 angp,et,mass
Decamp 90J cs
Renton 90 cs,mass
(88.3 – 94.3) Haissinski 90 –

$e^- \nu W^+$
(88.3 – 94.3) Adeva 90S ang,mass,p

$e^- e^+$ unspec
(3.6) Blinov 88B cs
(29) Hawkins 89B mass

$e^- e^+ \gamma$
(0.66 – 0.98) Dolinsky 89 –
(1 – 1.05) Dolinsky 89B ang,cs,mass
(29) Fujii 90 cs,mass
Karlen 88B cs,mass
Karlen 88C asym,cs,mass
(50 – 57) Kim 89B angp,mass
(52) Kim 88C angp,asym,cs,mass
(55) Kim 88C angp,asym,cs,mass
Sumiyoshi 88 mass
(56) Abe 88E angp,mass
Kim 88C angp,asym,cs,mass
Maki 88 cs
Sumiyoshi 88 mass
Unno 88 mass
(57) Shirai 88 ang,mass
(88.2 – 94.2) Adeva 91E mass,p
(88.22 – 94.22) Adeva 90O angp,asym,const,cs
(88.24 – 94.23) Wenninger 92 angp,const,cs
(92.2) Abreu 91G angp,mass

$e^- e^+$ higgs
(88.2 – 94.2) Abreu 90O cs,mass
(88.2 – 94.3) Adriani 93 cs
(88.2 – 95) Akrawy 90T cs
(88.28 – 95.04) Decamp 91 angp,et,mass
Decamp 90J cs
Renton 90 cs,mass

$e^+ e^-$

$\mu^- \mu^+ \gamma$
(34.7 – 42.8) Adeva 88 ang,asym,cs,mass,p
(50 – 57) Kim 89B angp,mass
(52) Kim 88C angp,asym,cs,mass
(54 – 64) Yonezawa 91 asym,cs
(55) Kim 88C angp,asym,cs,mass
(56) Kim 88C angp,asym,cs,mass
(57) Shirai 88 ang,mass
(58) Maki 91 cs
(88.2 – 94.2) Adeva 91E mass,p
(88.22 – 94.22) Adeva 90H asym,const,cs
Adeva 90O angp,asym,const,cs
(88.22 – 94.21) Watson 90 angp,asym,const,cs
(92.2) Abreu 91G angp,mass

$\mu^- \mu^+$ higgs
(88.2 – 94.2) Abreu 90O cs,mass
(88.2 – 94.3) Adriani 93 cs
(88.2 – 95) Akrawy 90T cs
(88.28 – 95.04) Decamp 91 angp,et,mass
Decamp 90J cs
Renton 90 cs,mass

$\tau^+ \nu_\tau$ jet
(52 – 61.4) Adachi 90C mass

$\tau^- \bar{\nu}_\tau$ jet
(52 – 61.4) Adachi 90C mass

$\tau^- \tau^+ \gamma$
(29) Barklow 92 cs
Wu 89 cs
(88.22 – 94.22) Adeva 90O angp,asym,const,cs
(92.2) Abreu 91G angp,mass

$\tau^- \tau^+$ higgs
(88.28 – 95.04) Decamp 91 angp,et,mass
Decamp 90J cs

$e^\pm$ heavy-e γ
(0.5 – 1.4) Dolinsky 89B –

$\nu \bar{\nu}$ higgs($CP = +1$)
(88 – 95) Buskulic 92B –

$e^+ \tilde{\nu}_e$ wino$^-$
(29) Steele 89 cs

$e^- \tilde{e}^+$ photino
(45) Gan 88 –

$e^+ \tilde{e}^-$ photino
(29) Steele 89 cs

$\ell \bar{q}$ lepton-quark
(91.2) Abreu 91K –

$\pi^0 e^- e^+$
(0.76 – 0.8) Dolinsky 88 ang,cs,mass
(1 – 1.05) Dolinsky 89 cs
(9 – 29) Gidal 88C cs
(9.4 – 10.6) Williams 88 mass,pt
(35) Behrend 90E mass

$\eta e^- e^+$
(1 – 1.05) Dolinsky 89 cs
(7.2 – 10.4) Baru 90 cs
(9 – 29) Gidal 88C cs
(9.4 – 10.6) Williams 88 mass,pt
(29) Fujii 90 cs
Roe 89 cs
Roe 89B cs
(35) Behrend 90E mass

$\eta'(958) e^- e^+$
(7.2 – 10.4) Baru 90 cs
(9 – 29) Gidal 88C cs
(9.4 – 10.6) Williams 88 mass,pt
(10) Karch 91B –

$e^+ e^-$

$\eta'(958) e^- e^+$
(29) Butler 90 cs
Fujii 90 cs
Roe 89 cs
Roe 89B cs
(35) Behrend 90E mass

$f_0(975) e^- e^+$
(9 – 29) Gidal 88C cs
(9.4 – 10.6) Marsiske 90 –

$a_0(980)^0 e^- e^+$
(9 – 29) Gidal 88C cs

$f_2(1270) e^- e^+$
(9 – 29) Gidal 88C cs
(9.4 – 10.6) Marsiske 90 –
(29) Roe 89 cs
(58) Tsuboyama 92 cs

$f_1(1285) e^- e^+$
(9 – 29) Gidal 88C cs

$a_2(1320) e^- e^+$
(29) Butler 90 cs

$a_2(1320)^0 e^- e^+$
(7.2 – 10.4) Baru 90 cs
(9 – 29) Gidal 88C cs

$f_2'(1525) e^- e^+$
(9 – 29) Gidal 88C cs

$\pi_2(1670)^0 e^- e^+$
(9 – 29) Gidal 88C cs
(10) Antreasyan 90C cs

$\eta_2(1870) e^- e^+$
(10) Karch 91B –

$\eta_c(1S) e^- e^+$
(9 – 29) Gidal 88C cs
(10.52 – 10.86) Jensen 89 cs

$\chi_{c2}(1P) e^- e^+$
(54 – 64) Uehara 91 angp,cs

charged 2jet
(22 – 38) Braunschweig 89E p

3jet
(10 – 45) Mattig 89 ang,cor,et
(12 – 46.8) Fujii 90 const,cs
Braunschweig 89K angp,col
Braunschweig 88H const,cs
(14) Magnussen 91 const,cs
(20 – 42) Albrow 88 cs
(22) Magnussen 91 const,cs
(22 – 56) Bethke 88B cs
(29) Bethke 89B p
Deboer 89 pt
(30 – 46.7) Ouldsaada 88 angp,col
(34) Marshall 89 angp
(35) Magnussen 91 const,cs
Deboer 89 pt
(44) Magnussen 91 const,cs
(50) Kim 89C –
(50 – 56) Maki 88B cs
Park 88 cs
(50 – 57) Fujii 90 const,cs
Park 89 const,cs
Park 89B cs
Kamae 88 col,cs
Mcneil 88 col,const,cor
(50 – 60.8) Fujii 90 angp,mass,p
Kim 90B –
Bodek 89 –
(50 – 61.4) Iwasaki 89 ang,const,cor,cs
Maki 89 ang,const,cor
(51 – 61.4) Abe 90H const,cs
(54.5) Olsen 88 col,const
(55 – 60.8) Iwata 89 cs
(58) Li 93 const,cs,p
Itoh 90 const,cs
Kim 90D const,cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

3jet

(< 60)	Salvini 88	angp,cs,p,pt
(60.8)	Fry 89	ang,const,cor,cs
	Kim 89C	–
(88.2 – 94.2)	Adriani 93B	cs
	Abreu 92C	–
	Adeva 91F	const,cs,p,pt
(89.2 – 93)	Abrams 89D	cs
(91)	Chliapnikov 92	mult
	Abreu 91F	angp,col
	Alexander 91F	ang,p
	Haissinski 90	const,cs
(91.2)	Acton 93	ang,p
	Adeva 92D	ang
	Decamp 92B	ang,const,mass
	Adeva 91H	ang,angp
	Alexander 91H	ang,p
(92.1)	Bethke 91B	p

γ 0γ 2neutral

(50 – 62)	Kanzaki 91	cs

γ 2neutral

(91.2)	Adriani 92M	p

γ 2jet

(14 – 46)	Fujii 90	angp,p
	Braunschweig 88G	angp
(30 – 36)	Braunschweig 88G	p
(30 – 46.7)	Ouldsaada 88	angp,col
(88.28 – 94.28)	Acton 92Q	cs
(91 – 91.5)	Adriani 92G	mass
(91.2)	Buskulic 92I	cs

3γ

0	Atoyan 90	cs
	Gninenko 89	cs
(< 0.002)	Skalsey 92	mass,p
(0.5 – 1)	Dolinsky 88B	cs,mass,p
(0.5 – 1.05)	Dolinsky 89	mass,p
(35)	Kamae 88	ang,cs,p
(35 – 46.8)	Behrend 88B	angp,mass,p
(50 – 61.4)	Shimozawa 92	mass,p
(55 – 57)	Abe 89F	ang,angp,cs,mass
(88.22 – 94.22)	Bardadinotwi 92	cs
	Bardadinotwi 92B	cs
(88.23 – 94.23)	Akrawy 91D	angp,cs
(88.24 – 94.23)	Wenninger 92	angp,cs
(88.5 – 93.7)	Adriani 93B	const,cs
(91.22)	Adriani 92B	cs
	Adeva 90E	cs

gluon charged jet

(22 – 38)	Braunschweig 89E	p

heavy-lepton$^-$ heavy-lepton$^+$ γ

?	Riles 89B	–

γ q $\bar{q}$

(35)	Pitzl 89	p
(58)	Takaki 93	ang
	Maki 91	p
(88.2 – 94.22)	Abreu 91M	p,pt
(91 – 91.5)	Adriani 92N	const

2q gluon

(29)	Fujii 90	angp

q $\bar{q}$ gluon

(29)	Chliapnikov 92	ang
(50 – 60.8)	Kim 90B	–
(58)	Takaki 93	ang
(91)	Chliapnikov 92	ang
(91.2)	Acton 93	ang,p
	Adeva 91H	ang,angp
	Alexander 91H	ang,p
	Yepes 91	–

$\bar{b}$ b gluon

(88.2 – 94.2)	Adeva 91F	const,cs,p,pt
(91.2)	Acton 92P	p,pt

γ 2photino

(50 – 62)	Kanzaki 91	cs

γ 2gravitino

(91.2)	Adriani 92M	p

3higgs($CP = -1$)

(29)	Komamiya 89	cs

2π^0 γ

(0.5 – 1.4)	Dolinsky 89B	mass
(0.66 – 0.98)	Dolinsky 89	mass,p

$\pi^+ \pi^- \gamma$

(0.5 – 1)	Dolinsky 89	cs,p

$\pi^+ \pi^0 \pi^-$

1.35 – 2.4	Bisello 90E	cs,mass
(0.48 – 1.9)	Govorkov 88	cs
(0.66 – 0.98)	Dolinsky 89	cs
(0.66 – 1.4)	Bukin 89	cs
	Dolinsky 89B	cs,mass
(0.84 – 1.02)	Barkov 89	cs
(1.35 – 2.4)	Antonelli 92	mass
	Bisello 91B	cs
	Bisello 90D	cs,mass

η π^0 γ

(0.66 – 0.98)	Dolinsky 89	mass,p

η $\pi^+ \pi^-$

(1 – 1.4)	Dolinsky 89B	–
(1.075 – 1.375)	Dolinsky 89B	cs
(1.35 – 2.4)	Antonelli 88	ang,cs,mass

2$\rho(770)^0$ γ

(3 – 3.2)	Bisello 88	cs,mass

$\omega(783)$ $\pi^+ \pi^-$

(1.35 – 2.4)	Antonelli 92	cs
	Bisello 91B	cs,mass
	Bisello 90D	cs
(1.4 – 2.2)	Donnachie 89	cs

$\rho(1450)$ 2π

(1.35 – 2.4)	Bisello 91C	–

K_L 2γ

(0.5 – 1.4)	Dolinsky 89B	cs

K_L 2π^0

(0.5 – 1.4)	Dolinsky 89B	cs

K_L $\pi^+ \pi^-$

(0.5 – 1.4)	Dolinsky 89B	cs

$K^+ K^- \pi^0$

(1.35 – 2.4)	Bisello 91	cs,mass

$K^+ K_S \pi^-$

(1.35 – 2.4)	Bisello 91	cs,mass

$K^+ K_S \pi^- + K_S K^- \pi^+$

1.35 – 2.4	Bisello 90E	cs,mass
(1.35 – 2.4)	Bisello 90D	cs,mass
(6 – 23.39)	Hill 89	mass,pt

$K_S K^- \pi^+$

(1.35 – 2.4)	Bisello 91	cs,mass

$K^*(892)^0 K^- \pi^+$

(1.35 – 2.4)	Bisello 90D	cs

$D^\pm K^\pm \pi^0$

(3.77)	Schindler 90	mass,p

$D_S^+ D_S^- \gamma$

(4.14)	Coffman 91	–
	Bai 90	–
	Adler 89E	–
	Alder 89	–
	Toki 89B	–

bottom 2jet + $\overline{\text{bottom 2jet}}$

(35)	Braunschweig 89L	–

$\ell^\pm$ 3jet

(91.2)	Acton 92P	p,pt

$\ell^+ \ell^-$ 2jet

(50 – 64)	Shirakata 91	col,pt
(88.2 – 94.2)	Adeva 91B	mass

$\ell^+ \ell^-$ 2jet

(88.2 – 94.3)	Alexander 91B	mass
(91.2)	Abreu 91K	–

ν $\bar{\nu}$ 2jet

(88.2 – 94.2)	Adeva 91B	mass
(88.2 – 94.3)	Alexander 91B	mass

ν $\bar{\nu}$ 2γ

(29)	Hearty 88	cs

$e^\pm$ 3jet

(88.2 – 94.2)	Adeva 91F	const,cs,p,pt

e^- e^+ 2jet

(88.2 – 95)	Akrawy 90T	ang,mass,pt
(88.23 – 95.04)	Alexander 91C	angp,const,cs

e^- e^+ 2γ

(0.5 – 1.4)	Dolinsky 89B	cs,mass,p
(0.76 – 0.8)	Dolinsky 88	ang,cs,mass
(1 – 1.05)	Dolinsky 89	cs
(9 – 29)	Gidal 88C	mass,pwa
(9.4 – 10.6)	Williams 88	mass,pt
(10)	Bienlein 90	–
	Bienlein 88	mass
(10.36)	Crawford 92	mass,p
(29)	Fujii 90	cs,mass
	Hawkins 89	cs
	Roe 89	mass
	Roe 89B	mass
	Karlen 88B	cs,mass
	Karlen 88C	asym,cs,mass
(35)	Behrend 90E	mass
	Feindt 90B	–
(50 – 57)	Kim 89B	angp,mass
(52)	Kim 88C	cs
(55)	Kim 88C	cs
	Sumiyoshi 88	mass
(55 – 60.8)	Adachi 90	–
(56)	Abe 88E	mass
	Kim 88C	cs
	Maki 88	cs
	Sumiyoshi 88	mass
(57)	Shirai 88	ang,mass
	Yamauchi 88	mass
(88.2 – 93.8)	Adriani 92K	cs,mass,p
(88.24 – 94.23)	Wenninger 92	mass
(92.2)	Abreu 91G	angp,mass
?	Ouldsaada 88B	–
	Unno 88	–

2e^- 2e^+

(0.5 – 1.4)	Dolinsky 89B	cs,mass,p
(1.019 – 1.403)	Barkov 88	cs,mass
(3.6)	Blinov 88B	cs
(7.2 – 10)	Blinov 91B	mass
(29)	Barklow 92	cs
	Boyer 90	mass
	Petradza 90B	ang,angp,mass,p
	Hawkins 89	cs
	Hawkins 89B	mass
	Petradza 89	angp,cs,mass,p
(35 – 46.8)	Fujii 90	ang,angp,mass,p
	Behrend 88G	ang,angp,mass,p
(50 – 60.8)	Kurihara 89	angp,mass,p
(50 – 61.4)	Nozaki 92	ang,angp,mass
	Ho	angp,mass,p,pt
	Ho 89	ang,angp,mass
(52)	Fujii 90	angp,asym,cs
	Kim 88C	cs,mass
(55)	Fujii 90	angp,asym,cs
	Kim 88C	cs,mass
(56)	Fujii 90	angp,asym,cs
	Kim 88C	cs,mass
(57)	Fujii 90	angp,asym,cs
(88.2 – 94.2)	Acton 92E	ang,mass

$e^+ e^-$

$\mu^\pm$ 3jet
(88.2 – 94.2) Adeva 91F const,cs,p,pt

$\mu^- \mu^+$ 2jet
(52 – 57) Sagawa 89 col
(88.2 – 95) Akrawy 90T ang,mass,pt
(88.23 – 95.04) Alexander 91C angp,const,cs

$\mu^- \mu^+ 2\gamma$
(10.36) Crawford 92 mass,p
(50 – 57) Kim 89B angp,mass
(52) Kim 88C cs
(55) Kim 88C cs
(56) Kim 88C cs
Maki 88 cs
(57) Shirai 88 ang,mass
Yamauchi 88 mass
(88 – 94) Dittmar 92 mass
(88.2 – 93.8) Adriani 92K cs,mass,p

$\mu^- \mu^+ e^- e^+$
(7.2 – 10) Blinov 91B mass
(29) Barklow 92 cs
Boyer 90 mass
Petradza 90B ang,angp,mass,p
Hawkins 89B mass
Petradza 89 angp,cs,mass,p
(35 – 46.8) Fujii 90 ang,angp,mass,p
Behrend 88G ang,angp,mass,p
(39.5) Adeva 88 ang,cs,mass,pt
(50 – 56) Shirai 88 cs
(50 – 60.8) Kurihara 89 angp,mass,p
(50 – 61.4) Nozaki 92 ang,angp,mass
Ho angp,mass,p,pt
Ho 89 ang,angp,mass
(52) Fujii 90 angp,asym,cs
(52 – 61.4) Hayashii 91 angp,mass,p
(55) Fujii 90 angp,asym,cs
(56) Fujii 90 angp,asym,cs
(57) Fujii 90 angp,asym,cs
(58) Maki 91 angp,mass
(88.2 – 94.2) Acton 92E ang,mass

$\mu^- \mu^+ e^- e^+ + \mu^- \mu^+ e^- e^+ \gamma$
(35 – 46.8) Behrend 88F cs

$2\mu^- 2\mu^+$
(29) Barklow 92 cs
Petradza 90B ang,angp,mass,p
Petradza 89 angp,cs,mass,p
(35 – 46.8) Fujii 90 ang,angp,mass,p
Behrend 88G ang,angp,mass,p
(52) Kim 88C cs,mass
(55) Kim 88C cs,mass
(56) Kim 88C cs,mass
(88.2 – 94.2) Acton 92E ang,mass

$\tau^- \tau^+$ 2jet
(88.2 – 94.2) Adeva 90M mass

$\tau^- \tau^+ 2\gamma$
(57) Yamauchi 88 mass

$\tau^- \tau^+ \nu \bar{\nu}$
(88.28 – 95.04) Decamp 90J mass

$\tau^- \tau^+ e^- e^+$
(29) Barklow 92 cs
(88.2 – 94.2) Acton 92E ang,mass
(88.2 – 95) Akrawy 90T ang,mass,pt
(88.28 – 95.04) Decamp 90J mass

$\tau^- \tau^+ \mu^- \mu^+$
(29) Barklow 92 cs
(88.2 – 94.2) Acton 92E ang,mass
(88.2 – 95) Akrawy 90T ang,mass,pt
(88.28 – 95.04) Decamp 90J mass

$2\tau^- 2\tau^+$
(88.2 – 94.2) Adeva 90M mass
(88.28 – 95.04) Decamp 90J mass

$\tau^- \tau^+ \nu_\tau \bar{\nu}_\tau$
(50 – 60.8) Smith 90 –
(52 – 61.4) Adachi 90C mass

$\tau^- \tau^+ \bar{b} b$
(88.2 – 94.2) Adeva 90M mass

$\pi^+ \mu^- \bar{\nu}_\tau \gamma$
(10) Bean 92 ang,mass,qnc

$2\pi^0 e^- e^+$
(9 – 29) Gidal 88C mass,pwa
(9.4 – 10.6) Marsiske 90 angp,cs
Morgan 90 angp

$\pi^+ \pi^- e^- e^+$
(7.2 – 10) Blinov 91B mass
(9 – 29) Gidal 88C mass,pwa
(29) Barklow 92 cs
Boyer 90 mass
Morgan 90 angp
(35) Jocksch 89 mass
(55 – 60.8) Adachi 90 mass
(88.2 – 94.2) Acton 92E ang,mass

$\pi^+ \pi^- \mu^- \mu^+$
(29) Barklow 92 cs
(88.2 – 94.2) Acton 92E ang,mass

$\pi^+ \pi^- \tau^- \tau^+$
(29) Barklow 92 cs
(88.2 – 94.2) Acton 92E ang,mass

$\eta \pi^0 e^- e^+$
(9 – 29) Gidal 88C mass,pwa

$\rho(770) e^- e^+ \gamma$
(35) Behrend 90E mass

$f_0(975) \eta e^- e^+$
(10) Karch 91B –

$a_0(980)^0 \pi^0 e^- e^+$
(10) Karch 91B –

$f_2(1270) \eta e^- e^+$
(10) Karch 91B –

$a_2(1320)^0 \pi^0 e^- e^+$
(10) Karch 91B –

$f_0(1400) \eta e^- e^+$
(10) Karch 91B –

$K^+ K^- e^- e^+$
(9.4 – 10.6) Albrecht 89K angp,mass

$2K_S e^- e^+$
(9 – 29) Gidal 88C mass,pwa
(17.5) Behrend 88E –
(34.5) Berger 88 mass

$J/\psi(1S) e^- e^+ \gamma$
(54 – 64) Uehara 91 ang,angp,mass

$p \bar{p} e^- e^+$
(4.7 – 5.3) Albrecht 88R –

4charged
(29) Aihara 88 –

neutral 3jet
(50 – 60.8) Low 89 et

charged 3jet
(22 – 38) Braunschweig 89E p

4jet
(12 – 46.8) Fujii 90 const,cs
Braunschweig 88H const,cs
(14) Magnussen 91 const,cs
(22) Magnussen 91 const,cs
(29) Bethke 89B p
(35) Magnussen 91 const,cs
(44) Magnussen 91 const,cs
(50 – 56) Maki 88B cs
(50 – 57) Park 89 ang,col,cor
Park 89B cs
(50 – 60.8) Fujii 90 angp,mass,p
(50 – 61.4) Iwasaki 89 ang,const,cor,cs
Maki 89 ang,const,cor
(51 – 61.4) Abe 90H const,cs
(52 – 61.4) Adachi 90C mass
(58) Abe 90H ang
Itoh 90 ang
Kim 90D ang
(58.7) Shirai 91 cs
(60.8) Fry 89 ang,const,cor,cs
(88.2 – 94.2) Adriani 93B cs
Abreu 92C –
Adeva 90M mass
(89.2 – 93) Abrams 89D cs
(91) Chliapnikov 92 mult
Haissinski 90 const,cs
(91.2) Abreu 93B ang,const,p
(92.1) Bethke 91B mass
Fabbri 91 mass

hadron$^+$ hadron$^-$ 2neutral
(10.6) Heltsley 92 ang,mass

γ 3jet
(88.28 – 94.28) Acton 92Q cs
(91.2) Buskulic 92I cs

2γ 2jet
(91 – 91.5) Adriani 92G mass

4γ
0 – 0.0019 Adachi 90F cs
(0.5 – 0.75) Dolinsky 89B cs,mass,p
(29) Hawkins 89 cs
(35) Kamae 88 ang,cs,p
(35 – 46.8) Behrend 88B angp,mass,p

$2\bar{b} 2b$
(88.2 – 94.2) Adeva 90M mass

$\pi^+ \pi^- 2\gamma$
(0.66 – 0.95) Vasserman 88 cs
(0.66 – 0.98) Dolinsky 89 cs
(0.66 – 1.4) Dolinsky 89B cs,mass
(1.35 – 2.4) Antonelli 88 mass

$3\pi^0 \gamma$
(0.5 – 1.05) Dolinsky 89 mass,p

$\pi^+ 2\pi^0 \pi^-$
1.35 – 2.4 Bisello 90E cs,mass
(0.85 – 1.395) Dolinsky 89B cs,mass
(1.35 – 2.4) Bisello 91C cs
Bisello 90D cs,mass

$\pi^+ 2\pi^0 \pi^- - \omega(783) \pi^0$
(1.35 – 2.4) Bisello 91C cs

$2\pi^+ 2\pi^-$
1.35 – 2.4 Bisello 90E cs,mass
(0.64 – 1.4) Kurdadze 88 cs,mass
(1.005 – 1.395) Dolinsky 89B cs,mass
(1.019 – 1.403) Barkov 88 cs,mass
(1.35 – 2.4) Bisello 91C cs,pwa
Bisello 90D cs,mass

$\eta \pi^+ \pi^- \gamma$
(1 – 1.05) Dolinsky 89 mass

$\rho(770)^+ \rho(770)^-$ 2neutral
(9.4 – 10.6) Albrecht 92I pol

$K_L 3\pi^0$
(1.28 – 1.4) Dolinsky 89B cs

$K^+ K_S \pi^- \gamma + K_S K^- \pi^+ \gamma$
(3.1) Bai 90D –

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$e^+ e^-$

$K^+ K^- \pi^+ \pi^-$

1.35 – 2.4	Bisello 90E	cs,mass
(1.35 – 2.4)	Bisello 90D	cs,mass

$D^\pm K^\pm \pi^+ \pi^-$

(3.77)	Schindler 90	mass,p

$p \bar{p} \pi^+ \pi^-$

(3 – 3.2)	Tixier 88	mass

$e^- e^+ \gamma$ charged$^+$ charged$^-$

(54 – 64)	Uehara 91	ang,angp,mass

$e^- e^+ 3\gamma$

(29)	Hawkins 89	cs

$2e^- 2e^+ \gamma$

(29)	Hawkins 89	cs

$\mu^- \mu^+ 2\nu \gamma$

(10)	Bean 92	ang,mass,qnc

$\mu^- e^+ \bar{\nu}_\tau \nu_e \gamma$

(10)	Bean 92	ang,mass,qnc

$\pi^+ \pi^- e^- e^+ \gamma$

(29)	Aihara 89D	–
(35)	Behrend 90E	mass

$\pi^+ \pi^0 \mu^- \bar{\nu}_\tau \gamma$

(10)	Bean 92	ang,mass,qnc

$\pi^+ \pi^0 \pi^- e^- e^+$

(9 – 29)	Gidal 88C	mass,pwa

$\eta\, 2\pi^0 e^- e^+$

(10)	Karch 91B	mass,pwa

$\eta\, \pi^+ \pi^- e^- e^+$

(29)	Butler 90	mass,pt
	Gidal 88B	ang
(35)	Behrend 90E	mass

$K^+ K_S \pi^- e^- e^+ + K_S K^- \pi^+ e^- e^+$

(9 – 29)	Gidal 88C	mass,pwa
(34)	Braunschweig 89	cs,mass,pt
(35)	Braunschweig 89	cs,mass,pt

$K^+ K_S \pi^- e^- e^+$

(29)	Aihara 88B	mass

$K_S K^- \pi^+ e^- e^+$

(29)	Aihara 88B	mass

$p \bar{p} \pi^0 e^- e^+$

(4.7 – 5.3)	Albrecht 88R	–

5jet

(12 – 46.8)	Fujii 90	const,cs
	Braunschweig 88H	const,cs
(50 – 56)	Maki 88B	cs
(58)	Itoh 90	const,cs
(89.2 – 93)	Abrams 89D	cs
(91)	Haissinski 90	const,cs

5γ

(0.66 – 0.98)	Dolinsky 89	mass,p
(29)	Hawkins 89	cs

π^0 hadron$^+$ hadron$^-$ 2neutral

(10.6)	Heltsley 92	ang,mass

$\pi^+ \pi^- 3\gamma$

(1 – 1.05)	Dolinsky 89	mass

$2\pi^+ 2\pi^- \gamma$

(1.35 – 2.4)	Antonelli 88	mass
(3 – 3.2)	Bisello 88	cs,mass

$2\pi^+ \pi^0 2\pi^-$

1.35 – 2.4	Bisello 90E	cs,mass
(1.019 – 1.403)	Barkov 88	cs,mass
(1.35 – 2.4)	Antonelli 92	mass
	Bisello 91B	cs,mass
	Bisello 90D	cs,mass
	Antonelli 88	mass

$2K^+ 2K^- \gamma$

(3.1)	Bai 90B	ang,mass

$e^+ e^-$

$K^+ K_S K_L K^- \gamma$

(3.1)	Bai 90B	ang,mass

$e^- e^+$ 4charged

(10.52 – 10.86)	Chen 89C	mass

$e^- e^+ 4\gamma$

(10)	Bienlein 92	angp,mass
	Bienlein 90	–
	Bienlein 88	mass
(18)	Oest 90	mass
(36)	Oest 90B	mass

$\pi^0 e^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$\pi^0 \mu^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$\pi^+ \pi^- e^- e^+ 2\gamma$

(29)	Butler 90	mass,pt
	Aihara 88E	angp,p
(35)	Behrend 90E	mass
	Feindt 90B	–

$2\pi^+ \pi^- \mu^- \bar{\nu}_\tau \gamma$

(10)	Bean 92	ang,mass,qnc

$\pi^+ 2\pi^0 \pi^- e^- e^+$

(4.7 – 5.3)	Albrecht 91N	–
	Albrecht 89F	–
(9.4 – 10.6)	Tsipolitis 90	–

$2\pi^+ 2\pi^- e^- e^+$

(9 – 29)	Gidal 88C	mass,pwa
(9.4 – 11.4)	Herrera 91	mass,pt
(29)	Aihara 88B	mass
(34)	Braunschweig 89	cs,mass,pt
(34.5)	Berger 88	mass
(34.7)	Berger 88B	–
(35)	Braunschweig 89	cs,mass,pt
	Braunschweig 88F	–
(46.6)	Braunschweig 88F	–

$K^+ K^- \pi^+ \pi^- e^- e^+$

(9 – 29)	Gidal 88C	mass,pwa
(29)	Aihara 88B	mass
(34)	Braunschweig 89	cs,mass,pt
(35)	Braunschweig 89	cs,mass,pt

$K^+ K_S \pi^0 \pi^- e^- e^+$

(4.7 – 5.3)	Albrecht 88N	–

$K_S K^- \pi^+ \pi^0 e^- e^+$

(4.7 – 5.3)	Albrecht 88N	–

$2K_S \pi^+ \pi^- e^- e^+$

(4.7 – 5.3)	Albrecht 88N	–

$2K^+ 2K^- e^- e^+$

(29)	Aihara 88B	mass

$p \bar{p} \pi^+ \pi^- e^- e^+$

(4.7 – 5.3)	Albrecht 88R	–
(29)	Aihara 89	–

6jet

(51 – 61.4)	Abe 90H	const,cs

$2\pi^0$ hadron$^+$ hadron$^-$ 2neutral

(10.6)	Heltsley 92	ang,mass

$\pi^+ \pi^- 4\gamma$

(0.85 – 1.395)	Dolinsky 89B	cs,mass

$\pi^+ 2\pi^0 \pi^-$ 2neutral

(9.4 – 10.6)	Albrecht 92I	ang,mass

$2\pi^+ 2\pi^0 2\pi^-$

(1.019 – 1.403)	Barkov 88	cs,mass

$3\pi^+ 3\pi^-$

(1.019 – 1.403)	Barkov 88	cs,mass

$\rho(770)^+ \pi^+ 2\pi^-$ 2neutral

(9.4 – 10.6)	Albrecht 92I	pol

$2\pi^0 e^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$e^+ e^-$

$2\pi^0 \mu^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$\pi^+ 2\pi^- e^+ \nu_e$ 2neutral

(9.4 – 10.6)	Albrecht 92M	mass

$\pi^+ 2\pi^- \mu^+ \nu_\mu$ 2neutral

(9.4 – 10.6)	Albrecht 92M	mass

$2\pi^+ 2\pi^- e^- e^+ \gamma$

(29)	Butler 90	mass,pt

$2\pi^+ \pi^0 2\pi^- e^- e^+ + 2\pi^+ 2\pi^- e^- e^+ \gamma$

(35)	Behrend 90E	mass

$2\pi^+ \pi^0 2\pi^- e^- e^+$

(29)	Butler 90	mass,pt
(36)	Wegner 90	–

$p \bar{p} \pi^+ \pi^0 \pi^- e^- e^+$

(4.7 – 5.3)	Albrecht 88R	–

7γ

(0.5 – 1.05)	Dolinsky 89	mass,p

$3\pi^0$ hadron$^+$ hadron$^-$ 2neutral

(10.6)	Heltsley 92	ang,mass

$2\pi^+ 2\pi^- \gamma$ 2neutral +

$2\pi^+ 2\pi^-$ 2neutral

(9.4)	Albrecht 92F	mass,p
(10.6)	Albrecht 92F	mass,p

$2\pi^+ \pi^0 2\pi^-$ 2neutral

(9.4 – 10.6)	Albrecht 92I	ang,mass

$K^+ \pi^+ 2\pi^- \gamma$ 2neutral +

$K^+ \pi^+ 2\pi^-$ 2neutral

(9.4)	Albrecht 92F	mass,p
(10.6)	Albrecht 92F	mass,p

$e^- e^+ 6\gamma$

(5)	Karch 91	–
(9 – 29)	Gidal 88C	mass,pwa
(10)	Bienlein 92	angp,mass
	Bienlein 90	–
	Feindt 90B	–
	Karch 90	–
	Karch 90B	–
	Bienlein 88	mass

$3\pi^0 e^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$3\pi^0 \mu^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$2\pi^+ 2\pi^- e^- e^+ 2\gamma$

(35)	Feindt 90B	–

$2\pi^+ 2\pi^0 2\pi^- e^- e^+$

(9.4 – 10.6)	Tsipolitis 90	–

$3\pi^+ 3\pi^- e^- e^+$

(9.4 – 11.4)	Herrera 91	mass,pt
(35)	Behrend 90B	–
	Behrend 90F	mass
(36.4)	Pust 91	–

$4\pi^0$ hadron$^+$ hadron$^-$ 2neutral

(10.6)	Heltsley 92	ang,mass

$4\pi^0 e^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$4\pi^0 \mu^\pm 3\nu$ charged-hadron

(10.6)	Heltsley 92	mass

$3\pi^+ \pi^0 3\pi^- e^- e^+$

(9.4 – 11.4)	Herrera 91	mass,pt

$e^- e^+ 8\gamma$

(5)	Karch 91	–

$3\pi^+ 2\pi^0 3\pi^- e^- e^+$

(9.4 – 11.4)	Herrera 91	mass,pt

$4\pi^+ 4\pi^- e^- e^+$

(9.4 – 11.4)	Herrera 91	mass,pt

$e^- e^+ 10\gamma$

(5)	Karch 91	–

$e^+ e^-$

$e^- e^+ 12\gamma$
(5) Karch 91 –

e^+ nucleus

nucleus $e^+ \gamma$
46 Bini 91 p

e^+ Th

unspec X
0.0007 Sakai 92 –
$e^- e^+$ X
0.0007 Sakai 92 mass

$\mu^\pm p$

mult[charged] X
100 – 280 Nagy 89 cs,mult,p
mult[strange] X
100 – 280 Nagy 89 cs,mult,p
mult[K^+] X
100 – 280 Nagy 89 cs,mult,p
mult[K^0] X
100 – 280 Nagy 89 cs,mult,p
mult[K^-] X
100 – 280 Nagy 89 cs,mult,p
mult[Λ] X
100 – 280 Nagy 89 cs,mult,p
mult[$\overline{\Lambda}$] X
100 – 280 Nagy 89 cs,mult,p
$\rho(770)^0$ X
100 – 280 Nagy 89 cs,p
$\omega(783)$ X
100 – 280 Nagy 89 cs,p
$\phi(1020)$ X
100 – 280 Nagy 89 cs,p
$J/\psi(1S)$ X
100 – 280 Nagy 89 cs,p
p $\rho(770)^0$ $\mu^\pm$
100 – 280 Nagy 89 p,pol

$\mu^\pm$ nucleus

$\mu^\pm$ X
400 – 5000 Zatsepin 89 p
$\mu^\pm$ mult[fragt]
32 Rabin 88 angp,p
nucleus $\rho(770)^0$ $\mu^\pm$
100 – 280 Nagy 89 p,pol

$\mu^\pm$ deuteron

mult[charged] X
100 – 280 Nagy 89 cs,mult,p
mult[strange] X
100 – 280 Nagy 89 cs,mult,p
mult[K^+] X
100 – 280 Nagy 89 cs,mult,p
mult[K^0] X
100 – 280 Nagy 89 cs,mult,p
mult[K^-] X
100 – 280 Nagy 89 cs,mult,p
mult[Λ] X
100 – 280 Nagy 89 cs,mult,p
mult[$\overline{\Lambda}$] X
100 – 280 Nagy 89 cs,mult,p
$\rho(770)^0$ X
100 – 280 Nagy 89 cs,p
$\omega(783)$ X
100 – 280 Nagy 89 cs,p
$\phi(1020)$ X
100 – 280 Nagy 89 cs,p

$\mu^\pm$ deuteron

$J/\psi(1S)$ X
100 – 280 Nagy 89 cs,p
2strange X
100 – 280 Nagy 89 p

$\mu^\pm$ Fe

$\mu^\pm$ X
58 – 1130 Sakumoto 92 p

$\mu^- \gamma^*$

$\mu^- \gamma^*$
1.28 Farley 89 –
3.094 Farley 89 –

$\mu^- p$

$n\ \nu_\mu\ \gamma$
0 Hasinoff 92 const,cs,p
Hasinoff 92B const,cs,p
Wright 91 const,p
Poutissou 89 const

μ^- nucleus

mult[shower] X
150 Jain 88 mult
mult[black] X
150 Jain 88 mult
shower X
150 Jain 88 mult,p
mult[black] mult[shower] X
150 Jain 88 cor,mult
mult[black] shower X
150 Jain 88 cor,mult,p

μ^- ^{3}He

deuteron $n\ \nu_\mu$
0 Cummings 92 p
p $2n\ \nu_\mu$
0 Cummings 92 p

μ^- C

X
209 Arneodo 92 cs
μ^- X
120 Virchaux 92 p
200 Virchaux 92 p
280 Virchaux 92 p

μ^- ^{12}C

γ X
0 Armstrong 90C cs,p
^{12}Bor $\nu_\mu\ \gamma$
0 Hasinoff 89 p
Hasinoff 88 p

μ^- ^{16}O

ν_μ X
0.073 Armstrong 89G cs
γ X
0 Armstrong 90C cs,p
$\nu_\mu\ \gamma$ X
0.073 Armstrong 89G p
^{16}Nit $\nu_\mu\ \gamma$
0 Hasinoff 89 p
Hasinoff 88 p

μ^- ^{27}Al

γ X
0 Armstrong 92F
a-dep,const,cs,p
Hasinoff 92B
a-dep,const,cs,p

μ^- ^{28}Si

γ X
0 Armstrong 92F
a-dep,const,cs,p
Hasinoff 92B
a-dep,const,cs,p

μ^- ^{40}Ca

γ X
0 Armstrong 92F
a-dep,const,cs,p
Hasinoff 92B
a-dep,const,cs,p
Armstrong 90C cs,p
^{40}KK $\nu_\mu\ \gamma$
0 Hasinoff 89 p
Hasinoff 88 p
0.075 Virtue 90 const,pol

μ^- Ti

Ca* e^+
0 Ahmad 88 cs,p,qnc
Ti e^-
0 Ahmad 88 cs,p,qnc

μ^- Fe

μ^- X
93 Virchaux 92 p
215 Virchaux 92 p
400 – 4000 Ashitkov 91 cs

μ^- Cu

X
209 Arneodo 92 cs

μ^- Mo

γ X
0 Armstrong 92F
a-dep,const,cs,p
Hasinoff 92B
a-dep,const,cs,p

μ^- Sn

γ X
0 Armstrong 92F
a-dep,const,cs,p
Hasinoff 92B
a-dep,const,cs,p

μ^- Pb

γ X
0 Armstrong 92F
a-dep,const,cs,p
Hasinoff 92B
a-dep,const,cs,p

$\mu^+ \gamma^*$

$\mu^+ \gamma^*$
0.04 Farley 89 –
< 0.1 Farley 89 –
3.094 Farley 89 –

$\mu^+ e^-$

muonium
0.02 Matthias 91 –
Huber 88 flux
0.02 – 0.029 Janissen 89 cs
$\mu^- e^+$
0 Matthias 91 amp
Poutissou 89 const
Huber 88 cs
0.02 – 0.029 Huber 89 –

μ^+ nucleon

nucleon e^+
0.09 Drell 92B cs,qnc

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\mu^+ p$

μ^+ X

4.5 – 21	Virchaux 90	p
90	Amaudruz 92	p
	Amaudruz 92B	p
	Botje 92	p
	Milsztajn 92	p
	Virchaux 92	p
	Amaudruz 91	p
	Amaudruz 91D	p
96	Virchaux 92	p
100	Virchaux 92	p
	Bethke 91	const,p
	Roberts 91	p
	Virchaux 90	p
	Yokosawa 90B	asym,p
	Ashman 89	p,pol
	Benvenuti 89	p
	Benvenuti 89C	const,p
	Ashman 88B	asym
120	Virchaux 92	p
	Bethke 91	const,p
	Roberts 91	p
	Virchaux 90	p
	Yokosawa 90B	asym,p
	Ashman 89	p,pol
	Benvenuti 89	p
	Benvenuti 89C	const,p
	Ashman 88B	asym
147	Virchaux 92	p
200	Virchaux 92	p
	Bethke 91	const,p
	Roberts 91	p
	Virchaux 90	p
	Yokosawa 90B	asym,p
	Ashman 89	p,pol
	Benvenuti 89	p
	Benvenuti 89C	const,p
	Ashman 88B	asym
219	Virchaux 92	p
240	Virchaux 92	p
	Roberts 91	p
	Virchaux 90	p
247	Allasia 90B	p
274	Roberts 91	p
280	Amaudruz 92	p
	Amaudruz 92B	p
	Botje 92	p
	Milsztajn 92	p
	Virchaux 92	p
	Amaudruz 91	p
	Amaudruz 91D	p
	Bethke 91	const,p
	Roberts 91	p
	Virchaux 90	p
	Benvenuti 89	p
	Benvenuti 89C	const,p
460 – 520	Aid 90	p
	Magill 90	p
490	Lubatti 90	col,p

μ^+ mult[charged] X

280	Schmitz 91	angp,col,p
490	Lubatti 90	mult,p,pt

μ^+ mult[charged] (neutrals)

280	Derado 92	mult
	Buschbeck 91	angp,col,mult,p,pt
	Derado 91	col,mult
	Derado 90	mult
	Arneodo 88B	col,mass,mult,p

μ^+ mult[charged$^+$] (neutrals)

280	Derado 91	col,mult

μ^+ mult[charged$^-$] (neutrals)

280	Derado 91	col,mult

μ^+ charged X

280	Arneodo 88B	p

μ^+ jet X

490	Adams 92C	cs
	Morfin 92	cs
	Salgado 91	cs

$\mu^+ p$

μ^+ hadron X

460 – 520	Schmitt 90	angp,p

μ^+ hadron$^+$ X

100	Ashman 91	mass,p
280	Ashman 91	mass,p

μ^+ hadron$^-$ X

100	Ashman 91	mass,p
280	Ashman 91	mass,p

μ^+ charged-hadron X

100	Ashman 91	pt
280	Ashman 91	pt

$\mu^+ \gamma$ X

200	Aubert 89	angp,p,pt

$\pi^+ \mu^+$ X

280	Arneodo 89	p

$\pi^0 \mu^+$ X

200	Aubert 89	p,pt

$\pi^- \mu^+$ X

280	Arneodo 89	p

$K^+ \mu^+$ X

280	Arneodo 89	p

$K^- \mu^+$ X

280	Arneodo 89	p

$K_S \mu^+$ X

490	Wolbers 90	p

$J/\psi(1S) \mu^+$ X

280	Allasia 90C	angp,p

$p \mu^+$ X

280	Arneodo 89	p

$\bar{p} \mu^+$ X

280	Arneodo 89	p

μ^+ 2jet X

490	Adams 92C	cs
	Morfin 92	cs
	Salgado 91	cs
	Lubatti 90	p
	Wolbers 90	–

μ^+ 2hadron (hadrons)

490	Salgado 91	col

μ^+ 3jet X

490	Morfin 92	cs

μ^+ 2hadron (hadrons) X

490	Wolbers 90	col,pt

μ^+ (jets) 3jet X

490	Adams 92C	cs
	Salgado 91	cs

$p \rho(770)^0 \mu^+$

120	Ashman 88C	angp,cs
200	Ashman 88C	angp,cs
280	Amaudruz 91F	angp,pt
460 – 520	Schmitt 90	angp,pol

$p \phi(1020) \mu^+$

120	Ashman 88C	angp,cs
200	Ashman 88C	angp,cs

μ^+ 3jet

490	Salgado 92	mass

$\mu^+ n$

μ^+ X

90	Amaudruz 91D	p
280	Amaudruz 91D	p

μ^+ nucleus

μ^+ X

100	Roberts 91	p
120	Roberts 91	p
200	Roberts 91	p

$J/\psi(1S) \mu^+$ X

200	Ashman 92	p,pt

μ^+ deuteron

μ^+ X

4.5 – 21	Virchaux 90	p
90	Amaudruz 92	p
	Botje 92	p
	Milsztajn 92	p
	Amaudruz 91	p
100	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Ashman 88	a-dep,p
120	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Virchaux 92	p
	Roberts 91	p
	Virchaux 90	p
	Benvenuti 89B	p
	Ashman 88	a-dep,p
147	Virchaux 92	p
200	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Virchaux 92	p
	Amaudruz 91B	a-dep,p
	Roberts 91	p
	Virchaux 90	p
	Benvenuti 89B	p
	Ashman 88	a-dep,p
240	Virchaux 90	p
247	Allasia 90B	p
274	Roberts 91	p
280	Amaudruz 92	p
	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Botje 92	p
	Milsztajn 92	p
	Virchaux 92	p
	Amaudruz 91	p
	Roberts 91	p
	Virchaux 90	p
	Arneodo 89B	p
	Benvenuti 89B	p
	Arneodo 88	p
	Ashman 88	a-dep,p
460	Halliwell 90	a-dep,angp,p
460 – 520	Aid 90	p
	Magill 90	p
	Schmitt 90	p
490	Adams 92B	p
	Adams 92D	angp,p
	Arneodo 92	p
	Morfin 92	p
	Schellman 91B	p
	Lubatti 90	col,p

μ^+ mult[charged] X

490	Lubatti 90	mult,p,pt

μ^+ mult[charged] (neutrals)

280	Arneodo 88B	col,mass,mult,p

μ^+ charged X

280	Arneodo 88B	p
490	Morfin 92	angp,p,pt

μ^+ hadron X

460 – 520	Schmitt 90	angp,p

μ^+ hadron$^+$ X

100	Ashman 91	mass,p
280	Ashman 91	mass,p

μ^+ hadron$^-$ X

100	Ashman 91	mass,p
280	Ashman 91	mass,p

μ^+ charged-hadron X

100	Ashman 91	pt
	Ashman 91B	a-dep,ang,p,pt
120	Ashman 91B	a-dep,ang,p,pt
200	Ashman 91B	a-dep,ang,p,pt
280	Ashman 91	pt
	Ashman 91B	a-dep,ang,p,pt
490	Adams 91E	p,pt

μ^+ deuteron

$\pi^+ \mu^+$ X

280	Arneodo 89	p

$\pi^- \mu^+$ X

280	Arneodo 89	p

$K^+ \mu^+$ X

280	Arneodo 89	p

$K^- \mu^+$ X

280	Arneodo 89	p

$K_S \mu^+$ X

490	Wolbers 90	p

$J/\psi(1S) \mu^+$ X

280	Allasia 90C	angp,p

$p \mu^+$ X

280	Arneodo 89	p

$\bar{p} \mu^+$ X

280	Arneodo 89	p

μ^+ 2jet X

490	Lubatti 90	p
	Wolbers 90	–

μ^+ 2hadron (hadrons) X

490	Wolbers 90	col,pt

deuteron μ^+

90	Amaudruz 92B	p
	Virchaux 92	p
280	Amaudruz 92B	p
	Virchaux 92	p

deuteron $\rho(770)^0$ μ^+

280	Amaudruz 91F	angp,pt
460 – 520	Schmitt 90	angp,pol

μ^+ He

μ^+ X

200	Arneodo 92	a-dep,p
	Amaudruz 91B	a-dep,p
274	Roberts 91	p

μ^+ ^{6}Li

μ^+ X

90	Amaudruz 91C	p

μ^+ C

μ^+ X

90	Amaudruz 92	p
100	Arneodo 92	a-dep,p
	Roberts 91	p
	Ashman 88	a-dep,p
114	Roberts 91	p
120	Arneodo 92	a-dep,p
	Virchaux 92	p
	Roberts 91	p
	Ashman 88	a-dep,p
192	Roberts 91	p
200	Arneodo 92	a-dep,p
	Virchaux 92	p
	Amaudruz 91B	a-dep,p
	Roberts 91	p
	Ashman 88	a-dep,p
271	Roberts 91	p
274	Roberts 91	p
280	Amaudruz 92	p
	Arneodo 92	a-dep,p
	Virchaux 92	p
	Roberts 91	p
	Arneodo 89B	p
	Arneodo 88	p
	Ashman 88	a-dep,p

$J/\psi(1S) \mu^+$ X

200	Arneodo 92	p,pt
	Amaudruz 91E	p,pt
280	Arneodo 92	p,pt
	Amaudruz 91E	p,pt

C $\rho(770)^0$ μ^+

280	Amaudruz 91F	angp,pt

μ^+ ^{12}C

μ^+ X

90	Amaudruz 91C	p

μ^+ Nit

μ^+ X

200	Roberts 91	p
280	Arneodo 92	a-dep,p
	Roberts 91	p

$\pi^+ \pi^-$ X

120	Ashman 88C	mass
200	Ashman 88C	mass

$K^+ K^-$ X

120	Ashman 88C	mass
200	Ashman 88C	mass

μ^+ Ca

μ^+ X

90	Amaudruz 92	p
100	Roberts 91	p
120	Roberts 91	p
200	Arneodo 92	a-dep,p
	Amaudruz 91B	a-dep,p
	Roberts 91	p
274	Roberts 91	p
280	Amaudruz 92	p
	Arneodo 92	a-dep,p
	Virchaux 92	p
	Roberts 91	p
	Arneodo 89B	p
	Arneodo 88	p

Ca $\rho(770)^0$ μ^+

280	Amaudruz 91F	angp,pt

μ^+ ^{40}Ca

μ^+ X

90	Amaudruz 91C	p

μ^+ Fe

μ^+ X

93	Virchaux 92	p
120	Arneodo 92	p
	Roberts 91	p
200	Arneodo 92	p
	Roberts 91	p
215	Virchaux 92	p
250	Arneodo 92	p
	Roberts 91	p
280	Arneodo 92	a-dep,p
	Roberts 91	p

μ^+ Cu

μ^+ X

100	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Ashman 88	a-dep,p
120	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Ashman 88	a-dep,p
200	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Ashman 88	a-dep,p
280	Arneodo 92	a-dep,p
	Ashman 92B	a-dep,p
	Roberts 91	p
	Ashman 88	a-dep,p

μ^+ charged-hadron X

100	Ashman 91B	a-dep,ang,p,pt
120	Ashman 91B	a-dep,ang,p,pt
200	Ashman 91B	a-dep,ang,p,pt
280	Ashman 91B	a-dep,ang,p,pt

μ^+ Sn

μ^+ X

100	Arneodo 92	a-dep,p
	Ashman 88	a-dep,p
120	Arneodo 92	a-dep,p
	Ashman 88	a-dep,p
200	Arneodo 92	a-dep,p
	Ashman 88	a-dep,p
280	Arneodo 92	a-dep,p
	Roberts 91	p
	Ashman 88	a-dep,p

μ^+ charged-hadron X

100	Ashman 91B	a-dep,p
120	Ashman 91B	a-dep,p
200	Ashman 91B	a-dep,p
280	Ashman 91B	a-dep,p

$J/\psi(1S) \mu^+$ X

200	Arneodo 92	p,pt
	Amaudruz 91E	p,pt
280	Arneodo 92	p,pt
	Amaudruz 91E	p,pt

μ^+ Xe

μ^- X

490	Adams 92B	p
	Adams 92D	angp,p
	Arneodo 92	p

μ^+ X

460	Halliwell 90	a-dep,angp,p
460 – 520	Aid 90	p
	Magill 90	p
	Schmitt 90	p
490	Morfin 92	p
	Schellman 91B	p

μ^+ charged X

490	Morfin 92	angp,p,pt

μ^+ hadron X

460 – 520	Schmitt 90	angp,p

$K_S \mu^+$ X

490	Wolbers 90	p

μ^+ 2jet X

490	Wolbers 90	–

μ^+ 2hadron (hadrons) X

490	Wolbers 90	col,pt

Xe $\rho(770)^0$ μ^+

460 – 520	Schmitt 90	angp,pol

$q\ q$

$2q$

?	Flaugher 92B	const
	Incagli 92	const

$q\ \bar{q}$

$e^-\ e^+$

?	Sinervo 92	const
	Yeh 92	const
	Gold 91	const

$\mu^-\ \mu^+$

?	Sinervo 92	const
	Abe 91H	const
	Gold 91	const

$q\ \bar{q}$

?	Sinervo 92	const
	Yeh 92	const

q Hg

X

?	Matis 90B	–

u gluon

u gluon

?	Breakstone 90	angp

d gluon

d gluon

?	Breakstone 90	angp

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

dark dark

ν_μ X
? Mori 92 -

dark nucleus

$\mu^\pm$ X
? Mori 91B -

monopole p

$2\pi^0$ (π^0's) e^+ monopole
? Bezrukov 90 flux

$K^+ \pi^- \mu^+$ monopole
? Bezrukov 90 flux

meson$^+$ p

2charged$^+$ mult[charged] X
250 Aivazyan 91 cor,p

charged$^+$ charged$^-$ mult[charged] X
250 Aivazyan 91 cor,p

2charged$^-$ mult[charged] X
250 Aivazyan 91 cor,p

3charged X
250 Aivazyan 91 cor,p,pt

3charged$^+$ X
250 Aivazyan 91 cor,p,pt

2charged$^+$ charged$^-$ X
250 Aivazyan 91 cor,p

charged$^+$ 2charged$^-$ X
250 Aivazyan 91 cor,p

3charged$^-$ X
250 Aivazyan 91 cor,p,pt

meson$^+$ Al

2charged$^+$ X
250 Botterweck 90 cor,p,pt

2charged$^-$ X
250 Botterweck 90 cor,p,pt

mult[shower] 2charged X
250 Botterweck 90 cor,p

meson$^+$ Au

2charged$^+$ X
250 Botterweck 90 cor,p,pt

2charged$^-$ X
250 Botterweck 90 cor,p,pt

mult[shower] 2charged X
250 Botterweck 90 cor,p

π nucleus

D X
600 Lipton 92 a-dep,p,pt

D^+ X
250 Rossi 91 a-dep

D^0 X
250 Rossi 91 a-dep

B X
600 Lipton 92 cs,p,pt

π deuteron

dibaryon
(2.115 – 3.02) Strakovskii 91 -

deuteron π
(2.115 – 3.02) Strakovskii 91 pwa
0.2355 Smith 88 angp,pol
0.2551 Smith 88 angp,pol
0.2878 Smith 88 angp,pol
0.3317 Smith 88 angp,pol
0.3704 Smith 88 angp,pol

π Be

D^+ X
250 Spiegel 91 a-dep

π Be

D^0 X
250 Spiegel 91 a-dep

π C

2p (p's) ($\pi^\pm$'s) X
40 Angelov 92 ang,cor,p

π ^{12}C

mult[charged] (neutrals)
40 Angelov 91 mult

π Al

D^+ X
250 Spiegel 91 a-dep

D^0 X
250 Spiegel 91 a-dep

π Fe

π^0 X
500 – 5000 Avakyan 91B p
Avakyan 91C p

π Cu

D^+ X
250 Spiegel 91 a-dep

D^0 X
250 Spiegel 91 a-dep

π Wt

D^+ X
250 Spiegel 91 a-dep

D^0 X
250 Spiegel 91 a-dep

$\pi^\pm p$

$\rho(770)^0$ X
80 – 140 Apsimon 92B cs

$f_0(975)$ X
80 – 140 Apsimon 92B cs

$f_2(1270)$ X
80 – 140 Apsimon 92B angp,cs,p,pt

$\pi^+ \pi^-$ X
80 – 140 Apsimon 92B mass

$\pi^\pm$ C

inelastic
500 – 10^4 Avakyan 89C a-dep,cs

$\pi^\pm$ Fe

inelastic
500 – 10^4 Avakyan 89C a-dep,cs

$\pi^\pm$ Pb

inelastic
500 – 10^4 Avakyan 89C a-dep,cs

$\pi^+ \pi^-$

$2\pi^0$
(0.55 – 2) Apokin 89B cs

$\pi^+ p$

mult[charged] X
250 Aivazyan 91B col,p,pt
Schmitz 91 angp,col,p,pt
Adamus 88G mult

mult[charged] (neutrals)
147 Boca 92 col,mult,p
250 Agababyan 91 mult,p,pt
Ajinenko 90 angp,mult,p
Ajinenko 90C col,mass,mult,p,pt

$\pi^+ p$

mult[charged] (neutrals)
Ajinenko 89C mult,p
Ajinenko 89D col,p
Buschbeck 89 mult,p

charged X
80 – 140 Apsimon 89 angp,cs,pt
250 Aivazyan 89 mult,p
Adamus 88B mult,p,pt
Adamus 88C mult,p
Aivazyan 88 mult,p,pt

charged$^+$ X
250 Aivazyan 89 mult,p
Adamus 88G mult,p,pt

charged$^-$ X
200 Brick 90 cor,mult,p
250 Aivazyan 89 mult,p
Adamus 88G mult,p,pt

hadron X
80 Hoeger 90 p,pt
140 Hoeger 90 p,pt

shower X
200 Brick 90 cor,mult,p
Brick 89 mult

γ X
250 Botterweck 91 cs,p,pt
280 Bonesini 88 p,pt

π^0 X
80 – 140 Apsimon 91 p,pt
250 Atayan 91 cs,p,pt
Adamus 86C cs,mult,p,pt

η X
10.64 Budagov 91 a-dep,p,pt
80 Apsimon 92 p,pt
140 Apsimon 92 p,pt
250 Atayan 91 cs,p
280 Durieux 91 p,pt
Bonesini 89 cs,p,pt

$\rho(770)^+$ X
250 Agababyan 90 cs,mult,p

$\rho(770)^0$ X
80 Apsimon 91B angp,cs,p,pt
Hofmann 91 p,pt
140 Hofmann 91 p,pt
250 Agababyan 90 cs,mult,p

$\omega(783)$ X
250 Agababyan 90 cs,mult,p

$f_2(1270)$ X
80 Fiedler 91 cs,p,pt
140 Fiedler 91 cs,p,pt

K_S X
16 – 147 Chliapnikov 90 cs

$K^*(892)^+$ X
16 – 147 Chliapnikov 90 cs

$K^*(892)^0$ X
16 – 147 Chliapnikov 90 cs
80 Gebert 92 cs,p,pt
140 Gebert 92 cs,p,pt
250 Agababyan 90 cs,mult,p

$\bar{K}^*(892)^0$ X
16 – 147 Chliapnikov 90 cs
80 Gebert 92 cs,p,pt
140 Gebert 92 cs,p,pt
250 Agababyan 90 cs,mult,p

$\phi(1020)$ X
80 Gebert 92 cs,p,pt
140 Gebert 92 cs,p,pt

p X
1.84 Abramov 88 ang,angp,p
2.22 Abramov 88 ang,angp,p
2.63 Abramov 88 ang,angp,p
200 Brick 89 mult
250 Ajinenko 89E cs,mult,p,pt

$\pi^+ p$

$\Delta(1232 P_{33})^{++}$ X
250 Ajinenko 89E cs,mult,p,pt

Λ X
4.23 Amelin 92 mass,p,pol,pt
18.5 Panagiotou 89 p,pol,pt
250 Agababyan 90B angp,p
Ajinenko 89E cs,mult,p,pt

$\bar{\Lambda}$ X
250 Ajinenko 89E cs,mult,p,pt

$\Sigma(1385 P_{13})^+$ X
250 Ajinenko 89E cs,mult,p,pt

$\mu^- \mu^+$ X
39.5 Freudenreich 90 a-dep,mass,p,pt

2charged X
200 Brick 90 cor,mult,p

2charged$^+$ X
250 Aivazyan 91 cor,p

charged$^+$ charged$^-$ X
250 Aivazyan 91 cor,p

2charged$^-$ X
250 Aivazyan 91 cor,p

γ jet X
280 Bonesini 89B p,pt

2γ X
250 Atayan 91 mass
300 Demarzo 90 angp,pt

DD < mult[charged] (neutrals) > π^+
250 Begalli 92 mass,mult

π^+ mult[charged] (neutrals)
250 Adamus 88F mult

$2\pi^+$ X
250 Adamus 88 angp,cor,p

$\pi^+ \pi^0$ X
250 Agababyan 90 mass

$2\pi^0$ X
300 Demarzo 90 angp,mass,pt

$\pi^+ \pi^-$ X
80 Fiedler 91 mass
140 Fiedler 91 mass
250 Agababyan 90 mass

$2\pi^-$ X
250 Adamus 88 angp,cor,p

K_S mult[charged] (neutrals)
250 Ajinenko 90D cs,mult,p,pt

$K^+ \pi^-$ X
80 Gebert 92 mass
140 Gebert 92 mass
250 Agababyan 90 mass

$K^- \pi^+$ X
80 Gebert 92 mass
140 Gebert 92 mass
250 Agababyan 90 mass

$K^+ K^-$ X
80 Gebert 92 mass
140 Gebert 92 mass

DD < mult[charged] (neutrals) > p
250 Begalli 92 mass,mult

p mult[charged] (neutrals)
250 Adamus 88F mult

2charged (chargeds) (neutrals)
80 Apsimon 90 col,pt
140 Apsimon 90 col,pt

DD < charged (chargeds) (neutrals) > π^+
250 Begalli 92 mass,mult

$\pi^+ p$

DD < charged (chargeds) (neutrals) > π^+
Adamus 88F cs,p

$\pi^+ \pi^0 \pi^-$ X
250 Agababyan 90 mass

DD < charged (chargeds) (neutrals) > p
250 Begalli 92 mass,mult
Adamus 88F cs,p

$\mu^- \mu^+$ 2neutral X
15.5 Silvestrov 89 mass

$p \pi^+$
0 – 200 Hohler 89 angp,pol,pwa
0.03 – 0.67 Brack 89 angp,cs
0.0668 Brack 88 angp
0.1208 – 0.2259 Friedman 90 cs
0.1305 – 0.2258 Friedman 89 cs
0.1356 Wiedner 89 amp,angp
0.152 Brack 88B angp
0.2258 – 0.3114 Friedman 91 angp,cs
0.2651 – 0.7263 Abaev 92 pwa
0.471 – 0.625 Barlow 89 angp,asym,pol
0.547 Seftor 89 pol
0.547 – 0.687 Wightman 88 angp,asym,pol
0.625 Seftor 89 pol
< 2.135 Arndt 91 pwa
Arndt 90 const,pwa
(3 – 12) Zhokin 89 angp
6 Appel 91 cs
9.9 Baller 88 angp,cs,pt
10 Appel 91 cs
250 Grassler 88 angp,cs

$p\ \rho(770)^+$
6 Appel 91 cs
9.9 Baller 88 angp,cs,pt
10 Appel 91 cs

$p\ a_1(1260)^+$
4.2 Brovkin 91B cs

$p\ a_2(1320)^+$
4.2 Brovkin 91B cs

$N(1440 B)^+ \pi^+$
4.2 Brovkin 91B cs

$\Delta(1232 P_{33})^{++} \pi^0$
20 Perepelitsa 90 angp,cs,p

$\Delta(1232 P_{33})^+ \pi^+$
6 Appel 91 cs
9.9 Baller 88 angp,cs,pt
10 Appel 91 cs

$\Delta(1232 P_{33})^{++} \rho(770)^0$
3.94 Arefiev 90B cs
4 Abramov 91 cs
Brovkin 91C cs
4.2 Brovkin 91B cs
20 Perepelitsa 90 angp,cs,dme,p

$\Delta(1232 P_{33})^{++} \omega(783)$
20 Perepelitsa 90 angp,cs,dme,p

$\Delta(1232 P_{33})^{++} f_2(1270)$
3.94 Arefiev 90B cs
Zhokin 89 angp,cs
4 Abramov 91 cs
4.2 Brovkin 91B cs
20 Perepelitsa 90 angp,cs,dme,p

$\Delta(1232 P_{33})^{++} \rho_3(1690)^0$
20 Perepelitsa 90 angp,cs,dme,p

$\Delta(1700 D_{33})^+ \pi^+$
4.2 Brovkin 91B cs

$\pi^+ p$

$\Sigma^+ K^+$
1.49 – 2.069 Haba 88 angp,pol,pwa
1.69 Candlin 88 angp,pol
1.88 Candlin 88 angp,pol
9.9 Baller 88 angp,cs,pt

$\Sigma(1385 P_{13})^+ K^*(892)^+$
4.23 Drutskoy 89 cs

$\Sigma(1385 P_{13})^+ K^*(1410)^+$
4.23 Drutskoy 89 cs

exotic-nucleon π^-
4.2 Brovkin 89 cs

$N^*_{5/2}(1380)^{+++} \pi^-$
4.23 Drutskoy 88 cs

$N^*_{5/2}(1480)^{+++} \pi^-$
(3.94) Arefiev 90B –

$N^*_{5/2}(1650)^{+++} \pi^-$
4.23 Drutskoy 88 cs

$N^*_{5/2}(1760)^{+++} \pi^-$
4.23 Drutskoy 88 cs

$N^*_{5/2}(1760)^+ \pi^+$
4.2 Brovkin 92 cs,mass

$N^*_{5/2}(2070)^{+++} \pi^-$
4.23 Drutskoy 88 cs

$N^*_{5/2}(\text{unspec})^{+++} \pi^-$
4 Abramov 91 cs
Brovkin 91C cs
Abramov 89C cs

baryon $K^0 \pi^+$
4.23 Drutskoy 89 –

$p \pi^+ \gamma$
0.415 Bosshard 90 angp,asym
0.4158 Meyer 88 angp,p

$n\ 2\pi^+$
0.2875 – 0.3096 Sevior 91 cs
0.297 – 0.48 Kernel 90B angp,const,cs,mass
0.3 – 0.45 Kernel 90 cs
0.3957 Sossi 91 angp

$p\ \rho(770)^0 \pi^+$
4 Abramov 91 cs
4.2 Brovkin 91B cs
20 Perepelitsa 91 angp,cs,dme
250 Ajinenko 89B cs

$p\ \omega(783) \pi^+$
4.2 Brovkin 92 cs,mass

$p\ f_2(1270) \pi^+$
4 Abramov 91 cs
20 Perepelitsa 91 angp,cs,dme
250 Ajinenko 89B cs

$p\ f_1(1285) \pi^+$
85 Armstrong 89C cs
Augustin 88C mass

$p\ f_1(1420) \pi^+$
85 Armstrong 92 –
Augustin 88C mass

$p\ \rho_3(1690)^0 \pi^+$
20 Perepelitsa 91 angp,cs,dme

$N(1440 B)^0\ 2\pi^+$
4.2 Brovkin 91B cs

$N(1700 B)^0\ 2\pi^+$
4.2 Brovkin 91B cs

$\Delta(1232 P_{33})^{++} \pi^+ \pi^-$
4 Abramov 91 cs
4.2 Brovkin 91B cs
250 Ajinenko 89B cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\pi^+ p$

$\Delta(1232 P_{33})^0 2\pi^+$
4.2 Brovkin 91B cs

$\Lambda K^+ \pi^+$
4.23 Amelin 92 cs

$\Lambda K^*(892)^+ \pi^+$
4.23 Drutskoy 89 cs

$\Sigma(1385 P_{13})^+ K^0 \pi^+$
4.23 Drutskoy 89 cs

$N^*_{5/2}(1480)^{+++} \pi^0 \pi^-$
(3.94) Arefiev 90B –

$p 2\pi^+ \pi^-$
3.94 Arefiev 90 mass,p
Arefiev 90B mass
Zhokin 89 cs,mass
Zhokin 88 mass
4 Abramov 91 mass
Brovkin 91C cs,mass
Abramov 89C mass
4.2 Brovkin 91B cs,mass
4.23 Drutskoy 88 mass,p
20 Perepelitsa 91 mass,p
85 Armstrong 91 –
250 Atayan 90 angp,cs,mass,p
Ajinenko 89B cs

DD $< 2\pi^+ \pi^- >$ p
250 Ajinenko 89B cs,mass,p

DD $< p \pi^+ \pi^- >$ π^+
250 Ajinenko 89B cs,mass,p

$p 2\rho(770)^0 \pi^+$
85 Armstrong 89C cs

$p a_0(980)^+ \pi^+ \pi^-$
85 Augustin 88C mass

$p a_0(980)^- 2\pi^+$
85 Augustin 88C mass

$p a_2(1320)^+ \pi^+ \pi^- + p a_2(1320)^- 2\pi^+$
85 Armstrong 89C cs

$p K^*(892)^+ K^- \pi^+$
85 Augustin 88C mass

$p K^*(892)^0 \overline{K}^0 \pi^+$
85 Augustin 88C mass

$p \overline{K}^*(892)^0 K^0 \pi^+$
85 Augustin 88C mass

$p K^*(892)^- K^+ \pi^+$
85 Augustin 88C mass

$\Lambda K^+ \pi^+ \pi^0$
4.23 Amelin 92 cs

$\Lambda K^0 2\pi^+$
4.23 Amelin 92 cs
Drutskoy 89 cs,mass

$p 2\pi^+ \pi^0 \pi^-$
3.94 Arefiev 90 mass,p
Arefiev 90B mass
4.2 Brovkin 92 cs,mass
Brovkin 91B cs,mass
4.5 Andryakov 89 cor
85 Armstrong 91 –

$n 3\pi^+ \pi^-$
4.2 Brovkin 91B cs,mass
4.5 Andryakov 89 cor

$p \rho(770)^0 2\pi^+ \pi^-$
85 Armstrong 89C cs

$p f_2(1270) 2\pi^+ \pi^-$
85 Armstrong 89C cs

$p K^+ K_S \pi^+ \pi^-$
85 Armstrong 92 mass
Augustin 88C mass,pwa

$p K_S K^- 2\pi^+$
85 Armstrong 92 mass
Augustin 88C mass,pwa

$\pi^+ p$

$N(1440 B)^0 3\pi^+ \pi^-$
4.2 Brovkin 90 cs

$\Lambda K^+ 2\pi^+ \pi^-$
4.23 Amelin 92 cs

$\Lambda K^0 2\pi^+ \pi^0$
4.23 Amelin 92 cs

$N^*_{5/2}(\text{unspec})^{--} 4\pi^+$
4.2 Brovkin 90 cs

DD $< 3\pi^+ 2\pi^- >$ p
250 Ajinenko 89B cs,mass,p

DD $< p 2\pi^+ 2\pi^- >$ π^+
250 Ajinenko 89B cs,mass,p

$p 3\pi^+ 2\pi^-$
4.2 Brovkin 90 cs
Brovkin 89 mass,p
85 Armstrong 89C mass,pwa
250 Ajinenko 89B cs

$p 3\pi^+ \pi^0 2\pi^-$
4.2 Brovkin 90 cs

$n 4\pi^+ 2\pi^-$
4.2 Brovkin 90 cs

$\pi^+ n$

p meson^0
5.98 Svec 92 –
11.85 Svec 92 –

$p \pi^0$
0 – 200 Hohler 89 angp,pol,pwa
6 Fujisaki 88 pol
11.85 Fujisaki 88 pol

$n \pi^+$
0 – 200 Hohler 89 angp,pol,pwa

$p \eta$
6 Fujisaki 88 pol
11.85 Fujisaki 88 pol

p glueball
5.98 Svec 92 –
11.85 Svec 92 –

ΛK^+
1.07 Ajimura 92 angp,pol
1.97 Abramov 91D angp,p,pol

$p 2\gamma$
6 Fujisaki 88 mass
11.85 Fujisaki 88 mass

$p \pi^+ \pi^-$
5.98 Svec 92 mass,pwa
Svec 91 pwa
6 Svec 90 angp,dme,mass,pwa
11.85 Svec 92 mass,pwa
Svec 91 pwa
12 Svec 90 angp,dme,mass,pwa

$\pi^+ \Delta(1232 P_{33})^{++}$

$N^*_{5/2}(\text{unspec})^{+++}$
4 Brovkin 91C cs

nonres $< \Delta(1232 P_{33})^{++} \pi^+ >$
4 Brovkin 91C cs

π^+ nucleus

inelastic
0.1426 Lantsev 90C cs
0.2763 Lantsev 90C cs

mult[charged] X
200 Schmitz 91 col,p

charged X
100 Geist 91 a-dep,mult
200 Geist 91 a-dep,mult

$\rho(770)^0$ X
100 Walker 91 mult

π^+ nucleus

$\omega(783)$ X
100 Walker 91 mult

$f_2(1270)$ X
100 Walker 91 mult

D^+ X
250 Alves 92B a-dep,p,pt

D^0 X
250 Alves 92B a-dep,p,pt

$\overline{D}^0$ X
250 Alves 92B a-dep,p,pt

D^- X
250 Alves 92B a-dep,p,pt

$J/\psi(1S)$ X
27 – 280 Freudenreich 90 a-dep,p,pt

p X
0.1426 Lantsev 90C mult
0.2763 Lantsev 91 ang,cs,p
Lantsev 90C mult

hypernucleus X
? Bando 90 –

deuteron X
0.1426 Lantsev 90C cs,mult,p
0.2763 Lantsev 90C angp,cs,mult,p

^{3}H X
0.1426 Lantsev 90C cs,mult,p
0.2763 Lantsev 90C cs,mult,p

^{3}He X
0.1426 Lantsev 90C cs,mult,p
0.2763 Lantsev 90C angp,cs,mult,p

^{4}He X
0.1426 Lantsev 90C cs,mult,p
0.2763 Lantsev 90C angp,cs,mult,p

He X
7.5 Takibaev 90 p

^{37}Ar X
0.3957 Gavrin 89 cs,mult
0.4536 Gavrin 89 cs,mult
0.5109 Gavrin 89 cs,mult

$\mu^- \mu^+$ X
150 Freudenreich 90 angp,mass,p,pt
200 Freudenreich 90 a-dep,mass,p,pt
225 Freudenreich 90 angp,mass,p,pt
280 Freudenreich 90 a-dep,mass,p,pt

0p 2charged X
200 Brick 90 cor,mult,p

2γ X
10.5 Akimenko 89 mass,p

$2\pi^0$ X
10.5 Akimenko 89 mass,p

$K^+ \pi^-$ X
1.07 Ajimura 92 angp,p

2p X
0.2763 Lantsev 91 ang,cs,p

deuteron p X
0.1426 Lantsev 90C ang,cs,p
0.2763 Lantsev 90C cs,p

^{3}H p X
0.1426 Lantsev 90C cs,p
0.2763 Lantsev 90C cs,p

^{3}He p X
0.1426 Lantsev 90C cs,p
0.2763 Lantsev 90C cs,p

^{4}He p X
0.1426 Lantsev 90C cs,p
0.2763 Lantsev 90C cs,p

He mult[htrack] X
7.5 Takibaev 90 p

π^+ nucleus

$\pi^+ \pi^-$ mult[grey] X

100	Walker 91	mass

$2p\ \pi^+$ X

0.2763	Lantsev 90	ang,angp,cs,p

$p\ n\ \pi^+$ X

0.2763	Lantsev 90B	angp,cs,p

4γ X

10.5	Akimenko 89	mass,p

$3p\ \pi^+$ X

0.2763	Lantsev 90	ang,angp,cs,p

π^+ deuteron

η X

10.64	Budagov 91	a-dep,p,pt

$\rho(770)^0$ X

3.9	Nakai 89	a-dep,cs

$f_2(1270)$ X

3.9	Nakai 89	a-dep,cs

$\pi^+ \pi^-$ X

3.9	Nakai 89	a-dep,mass

$2p$

0.0323	Hutcheon 90	angp,cs
0.0323 – 0.0784	Ritchie 91	angp,cs,p
0.0377	Hutcheon 90	angp,cs
0.0526	Hutcheon 90	angp,cs
0.0669	Hutcheon 90	angp,cs
0.0784	Hutcheon 90	angp,cs
0.2008 – 0.3691	Feltman 91	pol
(2.115 – 3.02)	Strakovskii 91	pwa
0.2177	Salvisberg 92	angp,cs
0.2189	Maytalbeck 92	pol
0.3637	Maytalbeck 92	pol
0.4105	List 88B	angp
0.4692	Bazhanov 91	angp,p,pol
0.4692 – 0.5728	Bazhanov 93	cs,pol
0.5212	Bazhanov 91	angp,p,pol
0.5728	Bazhanov 91	angp,p,pol

$n\ \Delta(1232\ P_{33})^{++}$

0.3116	Pancella 88	angp
0.3503	Pancella 88	angp
0.3876	Pancella 88	angp
0.425	Pancella 88	angp
0.4838	Pancella 88	angp
0.543	Pancella 88	angp
0.597	Pancella 88	angp

deuteron π^+

0.1283	Stevenson 90	angp,pol
	Stevenson 90C	angp,asym,pol
0.1496	Kohler 91	cs
0.2165 – 0.2514	Yokosawa 90B	angp,pol
0.2189	Yokosawa 90B	dme
0.2353	Yokosawa 90B	angp,pol,pwa
	Ottermann 88	angp,pol
0.2399	Yokosawa 90B	dme
0.2422	Yokosawa 90B	angp,pol
0.2445	Yokosawa 90B	pol
0.2457	Smith 88B	angp
0.2549	Yokosawa 90B	angp,asym,pol
0.2875	Ottermann 88	angp,pol
	Smith 88B	angp
0.3303	Ottermann 88	angp,pol
0.3314	Smith 88B	angp
0.3701	Yokosawa 90B	angp,pol,pwa
	Ottermann 88	angp,pol
	Ottermann 88B	angp,pol
	Smith 88B	angp
0.4105	List 88B	angp
	Ottermann 88	angp,pol

π^+ deuteron

deuteron π^+

	Ottermann 88B	pol
0.5388	Gridnev 90	angp

dibaryon π^-

0.2217	Ashery 88	angp,cs

$p\ n\ \pi^+$

0.2353	List 88	angp,pol
0.34	List 88	angp,pol
0.4105	List 88B	angp

p(spect) $p\ \pi^0$

6	Fujisaki 88	–
11.85	Fujisaki 88	–

p(spect) $p\ \eta$

6	Fujisaki 88	–
11.85	Fujisaki 88	–

p(spect) $p\ 2\gamma$

6	Fujisaki 88	mass
11.85	Fujisaki 88	mass

$2p\ \pi^+\ \pi^-$

0.2217	Ashery 88	angp,mass
0.3957	Sossi 92	angp,p
	Sossi 91	angp
	Rui 90	angp,cs,p

$\pi^+ {}^3$H

deuteron p

0.2177	Salvisberg 92	angp,cs
0.3161	Salvisberg 92	angp,cs
0.4168	Salvisberg 92	angp,cs

^{3}H π^+

0.2445	Pillai 88	angp
0.2875	Pillai 88	angp
0.3314	Pillai 88	angp

$2p\ n$

0.2177	Salvisberg 92	angp,cs,cs,p
0.3161	Salvisberg 92	angp,cs,cs,p
0.4168	Salvisberg 92	angp,cs,cs,p

$\pi^+ {}^3$He

X

0.1947	Angelescu 90	cs
0.2189	Angelescu 90	cs
0.248	Angelescu 90	cs

^{3}He π^+

0.1947	Hausser 91	angp,asym
	Angelescu 90	cs
0.2189	Angelescu 90	cs
0.2445	Pillai 88	angp
0.248	Angelescu 90	cs
0.2875	Pillai 88	angp
0.3314	Pillai 88	angp

$3p$

0.1482	Weber 89B	angp,p
0.1947	Angelescu 90	ang,cs,p
0.2177	Weber 89B	angp,p
0.2189	Maytalbeck 92	pol
	Angelescu 90	ang,cs,p
0.248	Angelescu 90	ang,cs,p
0.2673	Weber 89B	angp,p
0.3161	Weber 89B	angp,p
0.3637	Maytalbeck 92	pol

$\pi^+ {}^4$He

$\pi^+ \pi^-$ X

0.3957	Vetterli 92	angp,cs,p

^{3}H $p\ \pi^+$

0.2875	Langenbrunne 92	angp

$3p\ n$

0.2707	Weber 90	cor,cs,p
	Weber 89	cs,p

π^+ He

π^- X

0.2875	Gram 89	a-dep,cs

π^+ He

π^- X

0.353	Gram 89	a-dep,cs

$\pi^+ \pi^-$ X

0.3957	Bonutti 93	cs

π^+ Li

η X

10.64	Budagov 91	a-dep,p,pt

p X

0.8	Chrien 88	angp,p

$\pi^+ \pi^-$ X

3.9	Nakai 89	a-dep,mass

$\pi^+ {}^6$Li

π^- X

0.2875	Gram 89	a-dep,cs
0.353	Gram 89	a-dep,cs

Λ X

4	Yagi 90	angp,p,pol

$2p$ X

0.2537	Ransome 90	cs,p
0.2707	Yokota 89	ang,cor

deuteron p X

0.2537	Ransome 90	cs,p

$2p\ \pi^-$ X

0.5 – 1.5	Kobayashi 88B	angp,cs,mass

$3p$ X

0.2537	Ransome 90	cs,p

$2p\ n$ X

0.2537	Ransome 90	cs,p

$4n$ X

0.2537	Ransome 90	cs,p

^{6}Li π^+

0.1947	Locher 90	angp,pol
0.2353	Locher 90	angp,pol
0.2696	Locher 90	angp,pol
0.3303	Locher 90	angp,pol

He $2p$

0.2537	Ransome 90	cs,p

He* $2p$

0.2537	Ransome 90	cs,p

^{3}H $3p$

0.2537	Ransome 90	cs,p

$\pi^+ {}^7$Li

π^0 X

0.4168	Rokni 88	a-dep,angp
0.547	Rokni 88	a-dep,angp
0.6242	Rokni 88	a-dep,angp
0.6753	Rokni 88	a-dep,angp

π^- X

0.2875	Gram 89	a-dep,cs
0.353	Gram 89	a-dep,cs

$J/\psi(1S)$ X

300	Antoniazzi 92	cs,mass
	Antoniazzi 92B	cs,p,pt

$\chi_{c1}(1P)$ X

300	Antoniazzi 92	cs

$\chi_{c2}(1P)$ X

300	Antoniazzi 92	cs

$\psi(2S)$ X

300	Antoniazzi 92	cs
	Antoniazzi 92B	cs

$e^- e^+$ X

0.5005	Baturin 88	angp,cs

$\mu^- \mu^+$ X

300	Antoniazzi 92	mass
	Antoniazzi 92B	mass

$J/\psi(1S)\ \gamma$ X

300	Antoniazzi 92	mass

$2p$ X

0.2707	Yokota 89	ang,cor

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

π^+ ^{7}Li

μ^- μ^+ γ X
300 Antoniazzi 92 mass

^{6}Li p e^- e^+
0.5005 Baturin 88 angp,cs

π^+ Be

π^- X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

η X
10.64 Budagov 91 a-dep,p,pt

η mult[fragt]
10.5 Akimenko 89 a-dep,ang,angp,cs,p

K_S X
11.2 Akimenko 92 a-dep,angp,p,pt

2π^0 mult[fragt]
10.5 Akimenko 89 a-dep,cs

π^+ ^{9}Be

^{9}Be$_S$ K^+
1.048 Pile 91 angp,p

π^+ ^{11}Bor

Λ K^+ X
1 Olin 91 angp,pol

^{11}Bor$_S$ K^+
1 Olin 91 angp,p

π^+ C

inelastic
0.0963 Friedman 91B cs

π^0 X
1.1 Golubeva 90 p

π^- X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

$\rho(770)^0$ X
3.9 Nakai 89 a-dep,cs

$f_2(1270)$ X
3.9 Nakai 89 a-dep,cs

$J/\psi(1S)$ X
530 De 89 a-dep,cs,p

χ_c(unspec) X
530 De 89

p X
0.6 Golubeva 89 angp
0.8 Chrien 88 angp,p

Λ X
3 Smirnitsky 91 pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
Vorobiev 88E p,pol

π^+ π^- X
3.9 Nakai 89 a-dep,mass

$J/\psi(1S)$ γ X
530 De 89 mass

p π^- X
3 Vorobiev 88E ang,mass,p

2p X
0.0891 Akimov 92 cs,p
0.0927 Akimov 92 cs,p
0.0963 Akimov 92 cs,p
0.0998 Akimov 92 cs,p
0.1065 Akimov 92 cs,p
0.1114 Akimov 92 cs,p
0.2707 Yokota 89 ang,cor
7.5 Bayukov 89C ang,angp,p

π^+ C

deuteron p X
7.5 Bayukov 89C ang,angp,p

2deuteron X
7.5 Bayukov 89C ang,angp,p

^{3}H p X
7.5 Bayukov 89C ang,angp,p

μ^- μ^+ γ X
530 De 89 mass

π^+ ^{12}C

Λ X
4 Nakai 91 angp,p
Yagi 90 angp,p,pol
Manabe 89 angp,p,pol

K^+ π^- X
1.07 Ajimura 92 angp,p

2p X
0.026 – 0.039 Akimov 91 angp,cs,p
0.0753 – 0.2422 Jones 92 angp

Λ K^+ X
1 Olin 91 angp,pol
1.07 Akei 91 angp,p

^{12}C$_S$ K^+
1 Olin 91 angp,p
1.048 Pile 91 angp,p
1.07 Akei 91 angp,p

C$_S$ K^+
0.45 Akei 89 p
0.47 Akei 89 p
0.49 Akei 89 p
0.51 Akei 89 p

π^+ ^{13}C

π^0 X
0.2685 Gorgen 91 angp,asym

^{13}C π^+
0.1947 Brack 91 angp,pol
0.2117 Yen 91B angp,asym
0.233 Yen 91B angp,asym
0.248 Yen 91B angp,asym
0.2707 Yen 91B angp,asym
0.2875 Yen 91B angp,asym
0.3433 Yen 91B angp,asym

π^+ ^{14}C

π^0 X
0.4168 Rokni 88 a-dep,angp
0.547 Rokni 88 a-dep,angp
0.6242 Rokni 88 a-dep,angp
0.6753 Rokni 88 a-dep,angp

π^- X
0.4084 – 0.6497 Williams 89B angp,mass

^{14}O π^-
0.4084 – 0.6497 Williams 89B angp

π^+ ^{15}Nit

^{15}Nit π^+
0.2696 Locher 90 angp,pol

π^+ O

π^- X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

p X
0.2129 Hyman 92 angp,p
0.2707 Hyman 92 angp,p
0.8 Chrien 88 angp,p

π^+ π^- X
0.3957 Bonutti 93 cs

π^+ O

Nit 2p
0.2129 Hyman 92 ang,angp,p
0.2707 Hyman 92 ang,angp,p
Hyman 90 ang,p

π^+ ^{16}O

π^+ π^- X
0.3957 Grion 89 angp,mass,p

^{16}O$_S$ K^+
1.048 Pile 91 angp,p

^{14}Nit 2p
0.2141 Ahumacher 88 angp

π^+ ^{18}O

π^- X
0.4084 – 0.6497 Williams 89B angp,mass

^{18}Ne π^-
0.4084 – 0.6497 Williams 89B angp

^{16}Nit 2p
0.2141 Ahumacher 88 angp

π^+ ^{20}Ne

^{20}Ne* π^+
0.2189 Burlein 89 angp,p
0.2875 Burlein 89 angp,p

π^+ Mg

mult[charged] X
200 Brick 89 mult

mult[charged$^-$] X
200 Brick 89 mult

mult[shower] X
200 Brick 89 mult

charged X
200 Brick 89 mult

charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

shower X
200 Brick 90 cor,mult,p
Brick 89 mult

K^0 X + $\bar{K}^0$ X
200 Brick 92 a-dep,cs,mult,p

Λ X
200 Brick 92 a-dep,cs,mult,p

$\bar{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p

mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

2charged X
200 Brick 90 cor,mult,p

mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult

mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult

π^+ Al

mult[charged] X
250 Ajinenko 90B angp,mult,p
Botterweck 90 mult,p

mult[charged$^-$] X
250 Ajinenko 90B angp,mult,p

π^+ Al

mult[charged] (neutrals)
250 Botterweck 92 mult
mult[deuteron] X
250 Agababyan 91B angp,mult,p
charged$^+$ X
250 Agababyan 90C angp,p,pt
charged$^-$ X
250 Agababyan 90C angp,p,pt
π^0 X
1.1 Golubeva 90 p
η X
10.64 Budagov 91 a-dep,p,pt
$\rho(770)^0$ X
3.9 Nakai 89 a-dep,cs
$f_2(1270)$ X
3.9 Nakai 89 a-dep,cs
K_S X
250 Botterweck 92 a-dep,cs,mult,p,pt
p X
0.8 Chrien 88 angp,p
4 Tokushuku 90 angp
250 Botterweck 92 mult
Λ X
3 Vorobiev 89C angp
250 Botterweck 92 a-dep,cs,mult,p,pt
deuteron X
4 Tokushuku 90 angp
mult[p] mult[charged] X
250 Agababyan 91B angp,mult,p
mult[deuteron] mult[charged] X
250 Agababyan 91B angp,mult,p
mult[deuteron] mult[p] X
250 Agababyan 91B angp,mult,p
mult[grey] mult[charged] X
250 Ajinenko 90B angp,mult,p
mult[grey] mult[charged$^-$] X
250 Ajinenko 90B angp,mult,p
charged$^-$ mult[charged$^-$] X
250 Agababyan 90C cor,mult,pt
mult[grey] charged$^-$ X
250 Agababyan 90C cor,mult,p
2charged X
250 Botterweck 90 cor,p
2charged$^+$ X
250 Botterweck 90 cor,p
2charged$^-$ X
250 Botterweck 90 cor,p
$\pi^+\pi^-$ X
3.9 Nakai 89 a-dep,mass
$\rho(770)^0$ mult[grey] X
250 Ajinenko 92 mult
K_S mult[charged$^-$] X
250 Botterweck 92 mult
2K_S X
250 Botterweck 92 cs
$K^*(892)^0$ mult[grey] X
250 Ajinenko 92 mult
$\bar{K}^*(892)^0$ mult[grey] X
250 Ajinenko 92 mult

π^+ Al

$J/\psi(1S)$ γ X
530 De 89 mass
Λ mult[charged$^-$] X
250 Botterweck 92 mult
Λ K_S X
250 Botterweck 92 cs
2Λ X
250 Botterweck 92 cs
$\mu^-\mu^+\gamma$ X
530 De 89 mass
$\pi^+\pi^-$ mult[grey] X
250 Ajinenko 92 mass,mult
(K_S's) K_S mult[charged] (neutrals)
250 Botterweck 92 mult
mult[p] K_S charged$^-$ X
250 Botterweck 92 mult
$K^+\pi^-$ mult[grey] X
250 Ajinenko 92 mass,mult
$K^-\pi^+$ mult[grey] X
250 Ajinenko 92 mass,mult
p (K_S's) K_S X
250 Botterweck 92 mult
Λ (Λ's) mult[charged] (neutrals)
250 Botterweck 92 mult
mult[p] Λ charged$^-$ X
250 Botterweck 92 mult
p Λ (Λ's) X
250 Botterweck 92 mult

π^+ ^{27}Al

π^0 X
0.4168 Rokni 88 a-dep,angp
0.547 Rokni 88 a-dep,angp
0.6242 Rokni 88 a-dep,angp
0.6753 Rokni 88 a-dep,angp

π^+ ^{28}Si

^{28}Si$_S$ K^+
1.048 Pile 91 angp,p

π^+ Cl

χ_c(unspec) X
530 De 89 -

π^+ ^{37}Cl

^{37}Ar π^0
0.3957 Gavrin 89 cs
0.4536 Gavrin 89 cs
0.5109 Gavrin 89 cs

π^+ Ca

π^- X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

π^+ ^{40}Ca

^{40}Ca$_S$ K^+
1.048 Pile 91 angp,p

π^+ Ti

2p X
7.5 Bayukov 89C ang,angp,p
deuteron p X
7.5 Bayukov 89C ang,angp,p
2deuteron X
7.5 Bayukov 89C ang,angp,p
^{3}H p X
7.5 Bayukov 89C ang,angp,p

π^+ Ti

2$\pi^\pm$ fragt X
1.39 Bayukov 91 p
$\pi^+\pi^-$ fragt X
1.39 Bayukov 91 p

π^+ ^{51}Va

^{51}Va$_S$ K^+
1.048 Pile 91 angp,p

π^+ ^{56}Fe

^{56}Fe$_S$ K^+
1.07 Akei 91 angp,p
Fe$_S$ K^+
0.45 Akei 89 p
0.47 Akei 89 p
0.49 Akei 89 p
0.51 Akei 89 p

π^+ Fe

Λ K^+ X
1.07 Akei 91 angp,p
2$\pi^\pm$ fragt X
1.39 Bayukov 91 p
$\pi^+\pi^-$ fragt X
1.39 Bayukov 91 p

π^+ Ni

inelastic
0.0963 Friedman 91B cs

π^+ ^{60}Ni

π^0 X
0.4168 Rokni 88 a-dep,angp
0.547 Rokni 88 a-dep,angp
0.6242 Rokni 88 a-dep,angp
0.6753 Rokni 88 a-dep,angp

π^+ Cu

η X
10.64 Budagov 91 a-dep,p,pt
η mult[fragt]
10.5 Akimenko 89 a-dep,ang,angp,cs,p
$\rho(770)^0$ X
3.9 Nakai 89 a-dep,cs
$f_2(1270)$ X
3.9 Nakai 89 a-dep,cs
K_S X
11.2 Akimenko 92 a-dep,angp,p,pt
χ_c(unspec) X
530 De 89 -
p X
0.6 Golubeva 89 angp
0.8 Golubeva 89 angp
1 Golubeva 89 angp
Λ X
3 Vorobiev 89C angp
2π^0 mult[fragt]
10.5 Akimenko 89 a-dep,cs
$J/\psi(1S)$ γ X
530 De 89 mass
$\mu^-\mu^+\gamma$ X
530 De 89 mass

π^+ ^{89}Yt

^{89}Yt$_S$ K^+
1.048 Pile 91 angp,p

π^+ ^{90}Zr

π^0 X
0.4168 Rokni 88 a-dep,angp
0.547 Rokni 88 a-dep,angp

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as scribed in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

π^+ ^{90}Zr

π^0 X
0.6242 Rokni 88 a-dep,angp
0.6753 Rokni 88 a-dep,angp

π^+ Rh

π^- X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

π^+ Ag

mult[charged] X
200 Brick 89 mult

mult[charged$^-$] X
200 Brick 89 mult

mult[shower] X
200 Brick 89 mult

charged X
200 Brick 89 mult

charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

shower X
200 Brick 90 cor,mult,p
Brick 89 mult

K^0 X + $\overline{K}^0$ X
200 Brick 92 a-dep,cs,mult,p

Λ X
200 Brick 92 a-dep,cs,mult,p

$\overline{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p

mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

2charged X
200 Brick 90 cor,mult,p

mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult

mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult

π^+ Cd

Λ X
3 Vorobiev 89C angp

π^+ ^{120}Sn

π^0 X
0.4168 Rokni 88 a-dep,angp
0.547 Rokni 88 a-dep,angp
0.6242 Rokni 88 a-dep,angp
0.6753 Rokni 88 a-dep,angp

π^+ Wt

μ^- μ^+ X
39.5 Freudenreich 90 a-dep,mass,p,pt
250 Heinrich 89 p

π^+ Au

mult[charged] X
200 Brick 89 mult
250 Ajinenko 90B angp,mult,p
Botterweck 90 mult,p

mult[charged$^-$] X
200 Brick 89 mult
250 Ajinenko 90B angp,mult,p

mult[charged] (neutrals)
250 Botterweck 92 mult

π^+ Au

mult[deuteron] X
250 Agababyan 91B angp,mult,p

mult[shower] X
200 Brick 89 mult

charged X
200 Brick 89 mult

charged$^+$ X
250 Agababyan 90C angp,p,pt

charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult
250 Agababyan 90C angp,p,pt

shower X
200 Brick 90 cor,mult,p
Brick 89 mult

K^0 X + $\overline{K}^0$ X
200 Brick 92 a-dep,cs,mult,p

K_S X
250 Botterweck 92 a-dep,cs,mult,p,pt

p X
250 Botterweck 92 mult

Λ X
200 Brick 92 a-dep,cs,mult,p
250 Botterweck 92 a-dep,cs,mult,p,pt

$\overline{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p

mult[p] mult[charged] X
250 Agababyan 91B angp,mult,p

mult[deuteron] mult[charged] X
250 Agababyan 91B angp,mult,p

mult[deuteron] mult[p] X
250 Agababyan 91B angp,mult,p

mult[grey] mult[charged] X
250 Ajinenko 90B angp,mult,p

mult[grey] mult[charged$^-$] X
250 Ajinenko 90B angp,mult,p

charged$^-$ mult[charged$^-$] X
250 Agababyan 90C cor,mult,pt

mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult
250 Agababyan 90C cor,mult,p

2charged X
200 Brick 90 cor,mult,p
250 Botterweck 90 cor,p

2charged$^+$ X
250 Botterweck 90 cor,p

2charged$^-$ X
250 Botterweck 90 cor,p

mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult

$\rho(770)^0$ mult[grey] X
250 Ajinenko 92 mult

K_S mult[charged$^-$] X
250 Botterweck 92 mult

2K_S X
250 Botterweck 92 cs

π^+ Au

$K^*(892)^0$ mult[grey] X
250 Ajinenko 92 mult

$\overline{K}^*(892)^0$ mult[grey] X
250 Ajinenko 92 mult

Λ mult[charged$^-$] X
250 Botterweck 92 mult

Λ K_S X
250 Botterweck 92 cs

2Λ X
250 Botterweck 92 cs

mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult

π^+ π^- mult[grey] X
250 Ajinenko 92 mass,mult

(K_S's) Ks mult[charged] (neutrals)
250 Botterweck 92 mult

mult[p] K_S charged$^-$ X
250 Botterweck 92 mult

K^+ π^- mult[grey] X
250 Ajinenko 92 mass,mult

K^- π^+ mult[grey] X
250 Ajinenko 92 mass,mult

p (K_S's) Ks X
250 Botterweck 92 mult

Λ (Λ's) mult[charged] (neutrals)
250 Botterweck 92 mult

mult[p] Λ charged$^-$ X
250 Botterweck 92 mult

p Λ (Λ's) X
250 Botterweck 92 mult

π^+ Pb

hadron X
200 Akesson 88B angp,et

π^- X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

η mult[fragt]
10.5 Akimenko 89 a-dep,ang,angp,cs,p

χ_c(unspec) X
530 De 89 -

p X
0.6 Golubeva 89 angp
4 Tokushuku 90 angp

Λ X
3 Smirnitsky 91 pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
Vorobiev 88E p,pol

deuteron X
4 Tokushuku 90 angp

π^+ π^- X
0.3957 Bonutti 93 cs

2π^0 mult[fragt]
10.5 Akimenko 89 a-dep,cs

$J/\psi(1S)$ γ X
530 De 89 mass

p π^- X
3 Vorobiev 88E ang,mass,p

2p X
7.5 Bayukov 89C ang,angp,p

deuteron p X
7.5 Bayukov 89C ang,angp,p

2deuteron X
7.5 Bayukov 89C ang,angp,p

π^+ Pb

^{3}H p X

7.5	Bayukov 89C	ang,angp,p

$\mu^- \mu^+ \gamma$ X

530	De 89	mass

π^+ ^{208}Pb

π^0 X

0.4168	Rokni 88	a-dep,angp
0.547	Rokni 88	a-dep,angp
0.6242	Rokni 88	a-dep,angp
0.6753	Rokni 88	a-dep,angp

$\pi^- e^-$

$\pi^- e^-$

300	Buenerd 92	angp

π^- nucleon

π^+ X

50	Bajramov 89	p

π^- X

50	Bajramov 89	p

η X

300	Prokoshkin 90	mass,p,pt

$f_2(1520)$ X

300	Prokoshkin 90	cs

$f_0(1590)$ X

300	Prokoshkin 90	cs

$f_2(1720)$ X

300	Prokoshkin 90	cs

$J/\psi(1S)$ X

185	Freudenreich 90	cs

$\chi_{c1}(1P)$ X

185	Freudenreich 90	cs

$\chi_{c2}(1P)$ X

185	Freudenreich 90	cs

$\Upsilon(1S)$ X

150	Freudenreich 90	p
200	Freudenreich 90	p
280	Freudenreich 90	p

$\mu^- \mu^+$ X

252	Conway 89	angp,mass,p,pt

charm $\overline{\text{charm}}$ X

350	Aoki 91B	cs

bottom $\overline{\text{bottom}}$ X

320	Catanesi 88	cs

nucleon $a_3(2050)^-$

200	Joyner 89	cs

nucleon $\pi^0 \pi^-$

300	Alde 88B	p,pt

nucleon $\eta \pi^-$

300	Alde 88B	p,pt

nucleon $\rho(770)^0 \pi^-$

200	Joyner 89	cs

nucleon $\eta'(958) \pi^-$

300	Alde 88B	p,pt

nucleon $f_0(1240) \pi^-$

200	Joyner 89	cs

nucleon $f_0(1590) \pi^-$

300	Augustin 88C	-
	Alde 87	cs,p

nucleon $f_2(1720) \pi^-$

300	Augustin 88C	-

nucleon $f_2(1810) \pi^-$

300	Alde 87C	cs,p

nucleon $\pi^+ 2\pi^-$

200	Joyner 89	cs,mass

nucleon $2\eta \pi^-$

300	Augustin 88C	mass

π^- nucleon

nucleon $2\eta \pi^-$

	Alde 87	ang,mass

nucleon $\pi^- 4\gamma$

300	Augustin 88C	mass

nucleon $\pi^- 8\gamma$

300	Alde 87C	mass

$\pi^- p$

mult[charged] (neutrals)

4.5	Perepelitsa 88	cs,qnc

($\pi^\pm$'s) X

40	Baatar 90C	cor,p

charged X

80 – 140	Apsimon 89	angp,cs,pt

charged$^+$ X

38	Bannikov 90	a-dep,p,pt

charged$^-$ X

38	Bannikov 90	a-dep,p,pt
40	Gabunia 90	a-dep,mult,p

jet X

40	Grishin 90	col,cor,p
	Baldin 88B	ang,p
200	Tannenbaum 89	angp,p,pt

hadron X

80	Hoeger 90	p,pt
140	Hoeger 90	p,pt

γ X

0.0773	Stanislaus 89	p
280	Durieux 91	p
	Bonesini 88	p,pt

meson^0 X

17	Silvestrov 89	-

$\pi^\pm$ X

40	Baatar 90C	mult
	Grishin 90	col,cor,p

π^+ X

5	Bajramov 89	p
40	Bajramov 89	p
360	Bailly 87H	cs,p,pt

π^0 X

0.095	Meijerdrees 92	-
40	Yokosawa 91	asym,pt
	Apokin 90	asym,pt
	Amaglobeli 89	asym,pt
	Apokin 89	asym,pt
	Nurushev 89	asym,pt
	Apokin 88B	angp,asym,p
80 – 140	Apsimon 91	p,pt
280	Durieux 91	p
360	Bailly 87H	cs,p,pt

π^- X

5	Bajramov 89	p
40	Bajramov 89	p
360	Bailly 87H	cs,p,pt

η X

3.3	Arkhipov 88	angp,mass
4.75	Arkhipov 88	angp,mass
40	Amaglobeli 89	asym,pt
	Apokin 89	asym,pt
	Nurushev 89	asym,pt
80	Apsimon 92	p,pt
140	Apsimon 92	p,pt
280	Durieux 91	p,pt
	Bonesini 89	cs,p,pt
360	Bailly 87H	cs,p,pt

$\rho(770)^+$ X

250	Adamus 87B	cs
360	Aguilarbenit 89	cs,p,pt

$\rho(770)^0$ X

38	Bannikov 88	angp
80	Apsimon 91B	angp,cs,p,pt
	Hofmann 91	p,pt

$\pi^- p$

$\rho(770)^0$ X

140	Hofmann 91	p,pt
250	Adamus 87B	cs
360	Aguilarbenit 89	cs,p,pt
	Bailly 87C	cs,p,pt

$\rho(770)^-$ X

250	Adamus 87B	cs
360	Aguilarbenit 89	cs,p,pt

$\omega(783)$ X

250	Adamus 87B	cs

$\eta'(958)$ X

360	Bailly 87H	cs,p,pt

$b_1(1235)^0$ X

32.5	Landsberg 90B	cs

$f_2(1270)$ X

80	Fiedler 91	cs,p,pt
140	Fiedler 91	cs,p,pt
360	Bailly 87C	cs,p,pt

$\rho_3(1690)^0$ X

360	Bailly 87C	cs,p,pt

$X(1814)^-$ X

40	Bityukov 91	cs

K^+ X

360	Bailly 87H	cs,p,pt

K^0 X

40	Gabunia 89	a-dep,mult

K^- X

360	Bailly 87H	cs,p,pt

$K^*(892)^+$ X

360	Aguilarbenit 89	cs,p,pt

$K^*(892)^0$ X

80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt
360	Aguilarbenit 89	cs,p,pt

$\overline{K}^*(892)^0$ X

80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt
360	Aguilarbenit 89	cs,p,pt

$K^*(892)^-$ X

360	Aguilarbenit 89	cs,p,pt

$\phi(1020)$ X

80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt
360	Aguilarbenit 89	cs,p,pt

DC X

200	Appel 92	cs,p,pt
230	Appel 92	cs,p,pt
340	Appel 92	p,pt
360	Appel 92	cs,p,pt
	Rossi 91	cs

$D^\pm$ X

250	Rossi 91	p

D X

340	Rossi 91	p,pt
360	Rossi 91	p

D^+ X

230	Appel 92	cs
340	Rossi 91	p
360	Aguilarbenit 87F	-

D^0 X

230	Appel 92	cs
360	Aguilarbenit 87F	-

$\overline{D}$ X

340	Rossi 91	p

$\overline{D}^0$ X

360	Aguilarbenit 87F	-

D^- X

340	Rossi 91	p
360	Aguilarbenit 87F	-

$D^*(2010)$ X

230	Appel 92	cs

$D_S^\pm$ X

230	Appel 92	cs,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\pi^- p$

X $C(1480)$
? Landsberg 90B –

p X
1.84 Abramov 88 ang,angp,p
2.22 Abramov 88 ang,angp,p
2.63 Abramov 88 ang,angp,p
360 Bailly 87H cs,p,pt

$\bar{p}$ X
360 Bailly 87H cs,p,pt

$\Delta(1232\,P_{33})^{++}$ X
5 Antos 88 angp,cs,p

Λ X
3.95 Amelin 92 p
4 – 205 Panagiotou 89 p,pol,pt
40 Gabunia 89 a-dep,mult

Λ_c X
230 Appel 92 cs,p,pt

Λ_c^+ X
360 Klein 89C –
Aguilarbenit 87H –

$\bar{\Lambda}_c^-$ X
360 Aguilarbenit 87H –

$\Xi_c(2460)^+$ X
230 Appel 92 cs

$\Xi_c(2460)^0$ X
230 Appel 92 cs

$\bar{\Xi}_c(2460)^-$ X
230 Appel 92 cs

$e^- e^+$ X
16 Silvestrov 89 mass
17 Silvestrov 89 mass

$\mu^- \mu^+$ X
15.5 Silvestrov 89 mass
39.5 Freudenreich 90 a-dep,mass,p,pt

charged (chargeds) X
40 Angelov 90 angp,p
Angelov 90B angp,p

2hadron (hadrons)
40 Baldin 88B col

γ (hadrons) X
280 Bonvin 90B pt

γ jet X
280 Bonesini 89B p,pt

2γ X
3.3 Arkhipov 88 mass
4.75 Arkhipov 88 mass
40 Yokosawa 91 mass
Apokin 90 mass
Amaglobeli 89 asym,mass
Apokin 89 asym,mass
280 Bonvin 90 cs,p,pt
Bonvin 89 cs,mass,p,pt
300 Demarzo 90 angp,pt
? Albrow 88 pt

π^- mult[charged] X
40 Angelov 92B col,pt

π^0 (hadrons) X
280 Bonvin 90B pt

$\pi^0\ \gamma$ X
300 Demarzo 90 angp,pt

$2\pi^\pm$ X
40 Grishin 90 col,cor,p

$\pi^+\ \pi^0$ X
360 Aguilarbenit 89 mass,p,pt

$2\pi^0$ X
300 Demarzo 90 angp,mass,pt

$\pi^+\ \pi^-$ X
38 Bannikov 88 mass

$\pi^- p$

$\pi^+\ \pi^-$ X
80 Fiedler 91 mass
140 Fiedler 91 mass
360 Aguilarbenit 89 mass,p,pt
Bailly 87C mass,p

$\pi^0\ \pi^-$ X
360 Aguilarbenit 89 mass,p,pt

K^0 mult[charged] X
40 Angelov 92B col

K^0 charged$^-$ X
40 Gabunia 90 a-dep,mult,p

$K^+\ \pi^0$ X
360 Aguilarbenit 89 mass,p,pt

$K^+\ \pi^-$ X
80 Gebert 92 mass
140 Gebert 92 mass
360 Aguilarbenit 89 mass,p,pt

$K^-\ \pi^+$ X
80 Gebert 92 mass
140 Gebert 92 mass
360 Aguilarbenit 89 mass,p,pt

$K^-\ \pi^0$ X
360 Aguilarbenit 89 mass,p,pt

$K^+\ K^-$ X
80 Gebert 92 mass
140 Gebert 92 mass
360 Aguilarbenit 89 mass,p,pt

$\phi(1020)\ \pi^0$ X
? Landsberg 90B –

charm $\overline{\text{charm}}$ X
360 Appel 92 ang

$D\ \bar{D}$ X
230 Appel 92 ang,cs

$D_S^-\ D$ X
230 Appel 92 ang,cs

p mult[charged] X
40 Angelov 92B col,pt

$p\ \pi^+$ X
5 Antos 88 mass

Λ mult[charged] X
40 Angelov 92B col

Λ charged$^-$ X
40 Gabunia 90 a-dep,mult,p

$\bar{\Lambda}_c^-\ D$ X
230 Appel 92 ang,cs

2charged (chargeds) (neutrals)
80 Apsimon 90 col,pt
140 Apsimon 90 col,pt

$\pi^+\ \pi^0\ \pi^-$ X
250 Adamus 87B mass
360 Aguilarbenit 89 mass,p,pt

$K^0\ \bar{K}^0$ charged$^-$ X
40 Gabunia 90 a-dep,mult,p

$K^+\ K^0\ \pi^-$ X
8 Chan 88 mass,pwa

$p\ \pi^+\ \pi^0\ 2\pi^-$ (π^0's)
(3) Andryakov 88 angp,cor,p

$p\ K^+\ \bar{K}^0\ 2\pi^-$ (neutrals)
16 Karnaukhov 92 mass,p

$\pi^- p$

$p\ K^0\ K^-\ \pi^+\ \pi^-$ (neutrals)
16 Karnaukhov 92 mass,p

$2\pi^+\ 2\pi^-$ 2neutral (neutrals)
4 Andryakov 87 p

$p\ \pi^+\ 2\pi^0\ 2\pi^-$ (π^0's)
4 Andryakov 87 p

baryon meson^0
16 Karnaukhov 92 –

$n\ \gamma$
0.0773 Stanislaus 89 p
0.123 Bagheri 88B angp
0.1457 Bagheri 88B angp
0.1648 Bagheri 88B angp
0.1844 Bagheri 88B angp
0.203 Bagheri 88B angp
0.2211 Bagheri 88B angp
0.301 Kim 91 angp,asym
0.316 Kim 91 angp,asym
0.427 Kim 91 angp,asym
0.427 – 0.625 Kim 89D angp
0.471 Kim 91 angp,asym
0.547 Kim 91 angp,asym
0.586 Kim 91 angp,asym
0.625 Kim 91 angp,asym

p meson$^-$
6 Takamatsu 89 mass,pwa

n meson^0
0.095 Meijerdrees 92B cs
8.95 Fukui 91 angp
Takamatsu 89 cs
17.2 Svec 92 –
32.5 Landsberg 88 angp,cs
38 Alde 91G cs
Samoylenko 91 cs
Landsberg 90 cs,pwa
Boutemeur 89B –
40 Toki 88B –
Baloshin 87 angp,cs
100 Landsberg 90 cs
Boutemeur 89 cs,pwa
Boutemeur 89B –
Boutemeur 88 cs

$p\ \pi^-$
0 – 200 Hohler 89 angp,pol,pwa
0.03 – 0.67 Brack 89 angp,cs
0.1356 Wiedner 89 amp,angp
0.2651 – 0.7263 Abaev 92 pwa
0.295 – 0.45 Felipcic 89 angp
0.45 Abaev 88B pol
0.471 – 0.625 Barlow 89 angp,asym,pol
0.547 Seftor 89 pol
0.547 – 0.687 Wightman 88 angp,asym,pol
0.56 Abaev 88B pol
0.625 Seftor 89 pol
0.9 – 2 Abramov 91C angp
1.43 – 2.07 Alekseev 89 asym
Alekseev 88B angp,asym
1.53 – 2.07 Kanavets 88 amp,angp
< 2.135 Arndt 91 pwa
Arndt 90 const,pwa
(3 – 12) Zhokin 89 angp
6 Appel 91 cs
9.9 Baller 88 angp,cs,pt
10 Appel 91 cs
40 Antipov 87B angp,cs

$n\ \pi^0$
0 Crawford 91C p
Fonvieille 89 –
Niebuhr 89 –
Crawford 88 p
0.095 Meijerdrees 92B –
0.1217 Bagheri 88 angp
0.1457 Bagheri 88 angp
0.1648 Bagheri 88 angp
0.1844 Bagheri 88 angp
0.203 Bagheri 88 angp

$\pi^- p$

$n \pi^0$

0.2211	Bagheri 88	angp
0.2662	Gorgen 90	angp,asym
0.301 – 0.625	Kim 90	angp,asym
	Kim 89	angp
0.547 – 0.687	Wightman 88	angp,asym,pol
< 2.135	Arndt 91	pwa
	Arndt 90	const,pwa
(3 – 6)	Zhokin 89	cs
40	Yokosawa 90B	angp,pol

$n \eta$

25	Landsberg 90B	–
32.5	Landsberg 88	ang,angp,mass
33	Landsberg 90B	–
40	Yokosawa 90B	angp,pol

$p \rho(770)^-$

(3 – 6)	Zhokin 89	cs
6	Appel 91	cs
9.9	Baller 88	angp,cs,pt
10	Appel 91	cs

$n \omega(783)$

25	Landsberg 90B	–
32.5	Landsberg 88	ang,angp,mass
	Bityukov 87	cs
33	Landsberg 90B	–
40	Yokosawa 90B	angp,asym

$n \eta'(958)$

25	Landsberg 90B	–
30	Alde 87B	–
32	Bityukov 91B	–
32.5	Bityukov 90	–
	Landsberg 88	ang,angp,mass
33	Landsberg 90B	–
38	Landsberg 90	–
	Alde 87B	–
40	Yokosawa 90B	angp,pol

$p a_0(980)^-$

6	Matsuda 91	–

$n a_0(980)^0$

100	Boutemeur 89	cs,pwa
	Augustin 88C	–
	Boutemeur 88	cs

$n h_1(1170)$

8.01	Inagaki 89B	cs
8.06	Ando 90	angp
	Takamatsu 89	cs

$p b_1(1235)^-$

4.5	Aleshin 87D	pol

$n b_1(1235)$

8.95	Fukui 90	–
38	Alde 91G	–

$n b_1(1235)^0$

8.95	Kinashi 91	cs
	Takamatsu 89	cs
38	Alde 92	cs
	Landsberg 92	cs
100	Alde 92	cs
	Landsberg 92	cs
?	Landsberg 90B	–

$n a_1(1260)^0$

8.01	Inagaki 89B	cs
8.06	Ando 90	angp
	Takamatsu 89	cs

$n f_2(1270)$

(3 – 6)	Zhokin 89	cs
40	Bolonkin 88	cs
	Apokin 86B	angp,cs
100	Alde 87D	cs

$n f_1(1285)$

8	Augustin 88C	–
	Birman 88	ang,angp
8.06	Takamatsu 89	cs

$\pi^- p$

$n f_1(1285)$

8.95	Fukui 91	angp
	Takamatsu 89	cs
	Augustin 88C	mass,pwa
21.4	Rath 88	–
22	Rath 89	cs
32	Bityukov 91B	–
32.5	Landsberg 90B	–
	Bityukov 89	cs,mass
	Augustin 88C	mass
	Bityukov 88	–
	Bityukov 87	cs

$n \eta(1295)$

8	Augustin 88C	–
	Birman 88	ang,angp
8.06	Takamatsu 89	cs
8.95	Fukui 91	angp
	Takamatsu 89	cs
	Augustin 88C	mass,pwa
32.5	Landsberg 90B	cs
	Bityukov 87	cs

$p a_2(1320)^-$

3.92	Aleshin 92	cs
	Aleshin 92B	cs
6	Matsuda 91	–

$n a_2(1320)^0$

38	Alde 91E	cs
40	Bolonkin 88	cs
100	Boutemeur 89	cs,pwa
	Alde 88E	cs
	Augustin 88C	–
	Boutemeur 88	cs

$n h_1(1380)$

8	Birman 88	ang,angp

$n \hat{\rho}(1405)^0$

100	Boutemeur 89B	–
	Alde 88E	cs
	Augustin 88C	–

$n f_1(1420)$

8	Birman 88	ang,angp
32.5	Landsberg 90B	cs
	Augustin 88C	mass
	Bityukov 87	cs
40	Bolonkin 88	cs

$n \eta(1440)$

8	Augustin 88C	–
	Birman 88	ang,angp
	Toki 88B	–
8.06	Takamatsu 89	cs
	Chan 88	–
8.95	Fukui 91	angp
	Takamatsu 89	cs
	Augustin 88C	mass,pwa
21.4	Rath 88	–
32.5	Landsberg 90B	cs
	Bityukov 87	cs

$n \rho(1450)^0$

8.95	Kinashi 91	cs
	Fukui 90	–
	Takamatsu 89	cs
	Fukui 88	angp

$n f_1(1510)$

8	Birman 88	ang,angp

$n f_2'(1525)$

40	Bolonkin 88	cs

$n f_0(1590)$

38	Kulik 90	angp,cs
	Boutemeur 89B	–
	Toki 88B	–
100	Boutemeur 89B	–
	Toki 88B	–
	Alde 87D	cs
230	Boutemeur 89B	–
	Toki 88B	–

$n f_2(1640)$

36	Bityukov 91D	cs
38	Alde 90	angp,cs
	Alde 89	cs

$\pi^- p$

$n f_2(1640)$

	Boutemeur 89B	–
	Alde 88C	cs

$n \rho_3(1690)$

38	Alde 91G	–

$n \rho_3(1690)^0$

8.95	Fukui 88	angp
38	Alde 92	cs
	Landsberg 92	cs
	Landsberg 90	cs,pwa
100	Alde 92	cs
	Landsberg 92	cs

$n \rho(1700)^0$

8.95	Takamatsu 89	cs
	Fukui 88	angp

$n f_2(1720)$

40	Bolonkin 88	cs
	Toki 88B	–

$n X(1740)$

38	Alde 91F	ang,cs,p
	Boutemeur 89B	–

$n f_0(1750)$

40	Bolonkin 88	cs

$n f_2(1810)$

100	Alde 87D	cs

$n X(1910)$

36	Bityukov 91D	cs
37	Berdnikov 92B	–
38	Alde 91C	angp,cs
	Alde 90	angp,cs
	Kulik 90	angp,cs
	Alde 89	cs
	Boutemeur 89B	–
	Alde 88C	cs
	Alde 88D	angp,cs

$n f_2(2010)$

22	Augustin 88C	–
40	Bolonkin 88	cs

$n f_4(2050)$

36	Bityukov 91D	cs
38	Alde 90	angp,cs
40	Bolonkin 88	cs

$n \rho(2110)^0$

38	Alde 92	cs
	Landsberg 92	cs
100	Alde 92	cs
	Landsberg 92	cs

$n f_4(2220)$

38	Boutemeur 89B	–
	Augustin 88C	–
40	Toki 88B	–
100	Boutemeur 89B	–
	Augustin 88C	–

$n f_2(2300)$

22	Augustin 88C	–
40	Bolonkin 88	cs

$n f_2(2340)$

22	Augustin 88C	–

$n f_6(2510)$

38	Boutemeur 89B	–

$n \phi(1020)$

32.5	Landsberg 90B	cs

n glueball

17.2	Svec 92	–
21.4	Chan 88	–
22	Landsberg 90	–
	Aston 89	–
	Etkin 88	–

$n C(1480)^0$

8.95	Kinashi 91	cs
32.5	Donnachie 91	cs
	Landsberg 91	cs
	Landsberg 90B	cs
	Augustin 88C	mass
	Landsberg 88	angp,cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\pi^- p$

$n\, C(1480)^0$

	Landsberg 90	angp,cs

$N(1520\, B)^0\, \rho(770)^0$

4.5	Guzhavin 90	cs

$N(1680\, F_{15})^0\, \pi^0$

(3 – 6)	Zhokin 89	cs

$N(1680\, F_{15})^0\, \rho(770)^0$

(3 – 6)	Zhokin 89	cs

$N(1680\, F_{15})^0\, f_2(1270)$

(3 – 6)	Zhokin 89	cs

$N(1700\, B)^+\, \pi^-$

3.92	Aleshin 92	cs
	Aleshin 92B	cs

$N(1700\, B)^0\, \rho(770)^0$

4.5	Guzhavin 90	cs

$\Delta(1232\, P_{33})^+\, \pi^-$

6	Appel 91	cs

$\Delta(1232\, P_{33})^0\, \pi^0$

(3 – 6)	Zhokin 89	cs

$\Delta(1232\, P_{33})^-\, \pi^+$

(3 – 6)	Zhokin 89	cs
6	Appel 91	cs
9.9	Baller 88	angp,cs,pt
10	Appel 91	cs

$\Delta(1232\, P_{33})^0\, \eta$

3.3	Arkhipov 88	–
4.75	Arkhipov 88	–

$\Delta(1232\, P_{33})^0\, \rho(770)^0$

(3 – 6)	Zhokin 89	cs

$\Delta(1232\, P_{33})^0\, f_2(1270)$

(3 – 6)	Zhokin 89	cs

$\Delta(1232\, P_{33})^0\, X(1740)$

38	Alde 91B	angp,cs
	Alde 91F	ang,cs,p

$\Sigma^-\, K^+$

9.9	Baller 88	angp,cs,pt

$n\, e^-\, e^+$

0	Fonvieille 89B	ang,mass,p
	Niebuhr 89	ang,angp,mass

$p\, \pi^-\, \gamma$

40	Antipov 89B	angp,cs,mass

$p\, \pi^0\, \pi^-$

0.29 – 0.45	Kernel 89	amp,cs
	Kernel 89B	amp,cs,mass
0.3 – 0.45	Kernel 90	cs

$n\, 2\pi^0$

38	Kulik 90	mass
	Alde 88D	mass
39.1	Apokin 88	angp,asym,mass
40	Apokin 86B	mass

$n\, \pi^+\, \pi^-$

0.29 – 0.45	Kernel 89B	amp,cs,mass
0.295 – 0.45	Kernel 91	ang,mass
	Kernel 89C	amp,angp,cs,mass
0.3 – 0.45	Kernel 90	cs
0.3605	Ortner 90	ang,angp,const,mass,p
0.3999	Ortner 90	ang,angp,const,mass,p
0.4484	Ortner 90	ang,angp,const,mass,p
1.78	Alekseev 91	asym
17.2	Svec 92	mass,pwa
	Svec 90	angp,dme,mass,pwa
32.5	Landsberg 88	ang,angp,mass

$\pi^- p$

$p\, \eta\, \pi^-$

3.92	Aleshin 92	cs
6	Matsuda 91	asym,mass
	Takamatsu 89	mass,pwa

$n\, \eta\, \pi^0$

100	Boutemeur 89	–
	Alde 88E	angp,mass,pwa
	Augustin 88C	mass,pwa
	Boutemeur 88	–
	Iddir 88	ang,angp,mass,pwa
?	Burchell 92	–

$n\, 2\eta$

38	Kulik 90	mass
	Alde 88D	mass
	Toki 88B	mass
100	Toki 88B	mass
230	Toki 88B	mass
?	Burchell 92	–

$n\, \rho(770)^0\, \gamma$

32	Bityukov 91B	–
32.5	Bityukov 89	cs,mass

$p\, \rho(770)^0\, \pi^-$

4.5	Guzhavin 90	cs

$n\, \rho(770)^0\, \eta$

8.95	Fukui 91	angp,mass,pwa

$p\, \omega(783)\, \pi^-$

3.92	Aleshin 92	cs
4.5	Guzhavin 90	cs
	Aleshin 87D	ang,angp,mass,p,pwa

$n\, \omega(783)\, \pi^0$

8.95	Kinashi 91	angp,mass,pwa
	Fukui 90	angp,mass,pwa
	Takamatsu 89	mass,pwa
38	Alde 92	ang,angp,mass
	Landsberg 92	ang,angp,mass
	Alde 91G	ang,angp,mass
100	Alde 92	ang,angp,mass
	Landsberg 92	ang,angp,mass
?	Landsberg 91	–
	Landsberg 90B	–

$n\, \omega(783)\, \eta$

38	Samoylenko 91	mass

$n\, 2\omega(783)$

36	Bityukov 91D	mass,pwa
38	Alde 90	mass

$n\, \eta'(958)\, \pi^0$

38	Alde 91E	mass
100	Alde 91E	mass
	Boutemeur 89	–

$n\, \eta'(958)\, \eta$

38	Kulik 90	mass
	Alde 88D	mass
	Augustin 88C	mass
	Toki 88B	mass
100	Augustin 88C	mass
	Toki 88B	mass
230	Toki 88B	mass
?	Burchell 92	–

$n\, 2\eta'(958)$

37	Berdnikov 92B	cs,mass,p

$n\, a_0(980)^+\, \pi^-$

8	Toki 88B	mass
8.95	Fukui 91	angp,mass,pwa

$n\, a_0(980)^0\, \pi^0$

21.4	Toki 88B	mass
22	Rath 89	cs

$\pi^- p$

$n\, a_0(980)^-\, \pi^+$

8.95	Fukui 91	angp,mass,pwa

$n\, a_2(1320)^0\, \pi^0$

22	Rath 89	cs

$p\, f_0(1400)\, \pi^-$

4.5	Guzhavin 90	cs

$n\, \eta(1440)\, \gamma$

21.4	Toki 88B	–

$n\, K^+\, K^-$

32.5	Landsberg 90B	mass
	Landsberg 88	ang,angp,mass

$n\, 2K_S$

38	Kulik 90	mass
	Alde 88D	mass
40	Bolonkin 88	angp,mass,pwa
	Toki 88B	mass
	Baloshin 87	angp,mass
?	Burchell 92	–

$n\, K^*(892)^0\, K_S + n\, \bar{K}^*(892)^0\, K_S$

21.4	Toki 88B	mass

$n\, K^*(892)^0\, K_S + n\, K^*(892)^-\, K^+$

8	Toki 88B	mass

$n\, \phi(1020)\, \gamma$

32.5	Landsberg 90B	mass
	Augustin 88C	mass
	Bityukov 88	ang,mass

$n\, \phi(1020)\, \pi^0$

32.5	Donnachie 91	mass
	Landsberg 91	ang,mass,p
	Landsberg 90B	mass
	Augustin 88C	mass
	Landsberg 88	ang,angp,mass
?	Burchell 92	–

$n\, 2\phi(1020)$

22	Aston 89	mass,pwa
	Augustin 88C	mass,pwa
	Etkin 88	mass,pwa
?	Burchell 92	–

$N(1520\, B)^0\, \pi^+\, \pi^-$

4.5	Guzhavin 90	cs

$N(1700\, B)^0\, \pi^+\, \pi^-$

4.5	Guzhavin 90	cs

$\Delta(1232\, P_{33})^0\, 2\gamma$

3.3	Arkhipov 88	–
4.75	Arkhipov 88	–

$\Delta(1232\, P_{33})^0\, \pi^+\, \pi^-$

4.5	Guzhavin 90	cs

$n\, e^-\, e^+\, \gamma$

0	Fonvieille 89	mass,p

$p\, \pi^-\, 2\gamma$

6	Matsuda 91	mass

$n\, \pi^+\, \pi^-\, \gamma$

32	Bityukov 91B	ang,mass
32.5	Bityukov 90	ang,mass
	Landsberg 90B	mass
	Bityukov 89	cs,mass
	Landsberg 88	ang,angp,mass
	Bityukov 87	mass

$p\, \pi^+\, 2\pi^-$

4.5	Guzhavin 90	mass

$n\, \pi^+\, \pi^0\, \pi^-$

8.01	Inagaki 89B	mass,pwa
8.06	Ando 90	mass,pwa
	Takamatsu 89	mass,pwa
32.5	Landsberg 90B	mass
	Landsberg 88	ang,angp,mass

$n\, \eta\, 2\gamma$

38	Kulik 90	mass

$\pi^- p$

$n \eta 2\gamma$

	Alde 88D	mass

$n \eta \pi^0 \gamma$

38	Samoylenko 91	mass

$n \eta 2\pi$

?	Burchell 92	–

$n \eta \pi^+ \pi^-$

8.01	Inagaki 89B	mass,pwa
8.95	Fukui 91	angp,mass,pwa
	Takamatsu 89	mass,pwa
	Augustin 88C	mass
	Fukui 88	mass,pwa
?	Landsberg 91	cs

$n K^+ K^- \gamma$

32.5	Landsberg 90B	mass
	Augustin 88C	mass
	Bityukov 88	ang,mass
	Landsberg 88	ang,angp,mass
	Bityukov 87	mass

$n K \overline{K} \pi$

?	Burchell 92	–

$n K^+ \overline{K}^0 \pi^-$

8	Birman 88	angp,mass

$n K^+ K^- \pi^0$

32.5	Landsberg 90B	mass
	Augustin 88C	mass
	Landsberg 88	ang,angp,mass

$n K^+ K_S \pi^- + n K_S K^- \pi^+$

8.06	Chan 88	mass,pwa

$n K^+ K_S \pi^-$

8	Augustin 88C	mass
	Toki 88B	mass
8.01	Inagaki 89B	mass,pwa
8.06	Takamatsu 89	mass,pwa

$n K_S K^- \pi^+$

8.01	Inagaki 89B	mass,pwa
8.06	Takamatsu 89	mass,pwa

$n 2K_S \pi^0$

21.4	Chan 88	mass,pwa
	Rath 88	mass,pwa
	Toki 88B	mass
22	Rath 89	mass

$n K^*(892)^0 K_S \pi^0$

22	Rath 89	cs

$n K^+ K \phi(1020)$

22	Aston 89	mass
	Augustin 88C	mass
	Etkin 88	mass

$\Delta(1232 P_{33})^{++} \pi^0 2\pi^-$

4.5	Guzhavin 90	cs

$\Delta(1232 P_{33})^+ \pi^+ 2\pi^-$

4.5	Guzhavin 90	cs

$\Delta(1232 P_{33})^- 2\pi^+ \pi^-$

4.5	Guzhavin 90	cs

$2\pi^+ 2\pi^-$ neutral

(3)	Andryakov 88	angp,cor,p

$n 4\gamma$

38	Alde 91C	angp,mass
	Kulik 90	mass
	Alde 88D	mass
	Augustin 88C	mass
	Toki 88B	mass
100	Boutemeur 89	mass
	Alde 88E	ang,mass
	Augustin 88C	mass
	Boutemeur 88	mass
	Toki 88B	mass
230	Toki 88B	mass

$n 2\pi^0 2\gamma$

38	Alde 90	mass

$\pi^- p$

$n \pi^+ \pi^- 2\gamma$

8.01	Inagaki 89B	mass,pwa
8.95	Fukui 91	angp,mass
	Augustin 88C	mass
	Fukui 88	mass,pwa
32.5	Landsberg 88	ang,angp,mass

$p \pi^+ \pi^0 2\pi^-$

3.92	Aleshin 92	cs
	Aleshin 92B	mass
3.93	Andryakov 91	cor
4	Andryakov 87	p
(3)	Andryakov 88	angp,cor,p
4.5	Andryakov 91	cor
	Guzhavin 90	mass
	Aleshin 87D	ang,angp,mass,p

$n 4\pi^0$

38	Toki 88B	mass
100	Toki 88B	mass
	Alde 87D	mass
230	Toki 88B	mass

$n \pi^+ 2\pi^0 \pi^-$

8.95	Kinashi 91	mass
	Fukui 90	mass
	Takamatsu 89	mass,pwa

$n 2\pi^+ 2\pi^-$

4	Andryakov 87	p
(3)	Andryakov 88	angp,cor,p
4.5	Guzhavin 90	mass

$n K^+ K^- 2\gamma$

32.5	Landsberg 88	ang,angp,mass

$n 2K^+ 2K^-$

22	Aston 89	mass
	Augustin 88C	mass
	Etkin 88	mass

$n 5\gamma$

38	Alde 92	mass
	Landsberg 92	mass
	Alde 91G	mass
	Samoylenko 91	mass
100	Alde 92	mass
	Landsberg 92	mass

$n 6\gamma$

38	Alde 91B	angp,mass
	Alde 90	mass
	Alde 89	mass
	Alde 88C	mass

$n 8\gamma$

38	Toki 88B	mass
100	Toki 88B	mass
	Alde 87D	mass
230	Toki 88B	mass

$n 2\pi^+ 2\pi^- 4\gamma$

36	Bityukov 91D	mass
37	Berdnikov 92B	mass

$\pi^- n$

p X

1.84	Abramov 88	ang,angp,p
2.22	Abramov 88	ang,angp,p
2.63	Abramov 88	ang,angp,p

2shower X

340	Tufail 92	cor,p

$n \pi^-$

0 – 200	Hohler 89	angp,pol,pwa

π^- nucleus

inelastic

0.2763	Lantsev 90C	cs

mult[charged$^+$] X

40	Boos 88	a-dep,mult

mult[charged$^-$] X

40	Boos 88	a-dep,mult

π^- nucleus

mult[shower] X

50	Kumar 89	angp,mult
200	Ghosh 92C	col
340	Nasr 92	mult
	Tufail 90	mult
350	Ghosh 92C	col

mult[grey] X

40	Boos 88	a-dep,mult
340	Ahmad 90	angp,mult
	Tufail 90	mult
	Ahmad 89	mult

mult[htrack] X

340	Tufail 90	mult
	Ahmad 89	mult

mult[black] X

340	Tufail 90	mult
	Ahmad 89	mult

charged X

100	Geist 91	a-dep,mult
200	Geist 91	a-dep,mult

charged$^+$ X

40	Boos 88	a-dep,mult

charged$^-$ X

40	Boos 88	a-dep,mult

X star

40	Boos 88	a-dep,cs

shower X

200	Ghosh 92C	p
340	Tufail 91	p
	Tufail 90	mult
350	Ghosh 92C	p

grey X

40	Boos 88	a-dep,mult
340	Tufail 90	mult
	Ahmad 89	angp,mult

htrack X

340	Tufail 90	mult

black X

340	Tufail 90	mult
	Ahmad 89	angp,mult

π^+ X

50	Bajramov 89	p

π^- X

50	Bajramov 89	p

$\rho(770)^0$ X

100	Walker 91	mult

$\omega(783)$ X

100	Walker 91	mult

$f_2(1270)$ X

100	Walker 91	mult

charm^0 X

350	Aoki 91B	cs

charm$^\pm$ X

350	Aoki 91B	cs

DC X

250	Alves 92	a-dep,p,pt
	Appel 92	cs
350	Aoki 91C	p,pt

$D^\pm$ X

250	Alves 92	a-dep,p,pt
	Appel 92	a-dep,p
600	Kodama 92C	cs,p,pt

D^+ X + $\overline{D}^0$ X

250	Alves 92	a-dep,p,pt

D^+ X

250	Alves 92	a-dep,p,pt
	Alves 92B	a-dep,p,pt
	Thorne 92	a-dep,p,pt
340	Adamovich 91E	–
600	Kodama 92B	–

D^0 X + D^- X

250	Alves 92	a-dep,p,pt

D^0 X + $\overline{D}^0$ X

250	Alves 92	a-dep,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

π^- nucleus

D^0 X + $\overline{D}^0$ X

600	Kodama 92C	cs,p,pt

D^0 X

250	Alves 92B	a-dep,p,pt
	Appel 92	a-dep,p
	Thorne 92	a-dep,p,pt
340	Adamovich 91D	-
	Rossi 91	a-dep
350	Aoki 92	-
600	Kodama 92B	-

$\overline{D}^0$ X

250	Alves 92B	a-dep,p,pt

D^- X

250	Alves 92	a-dep,p,pt
	Alves 92B	a-dep,p,pt

$D^*(2010)^\pm$ X

600	Kodama 92C	cs

$D_S^\pm$ X

250	Appel 92	cs

D_S^+ X

350	Aoki 92	-

$J/\psi(1S)$ X

27 – 280	Freudenreich 90	a-dep,p,pt
80	Albrow 88	pol
530	Kartik 90	p,pt

p X

0.2763	Lantsev 90C	mult

Λ X

2.9	Smirnitsky 91	pol
3.9	Panagiotou 89	p,pol,pt
5	Panagiotou 89	p,pol,pt
40	Panagiotou 89	p,pol,pt

hypernucleus X

?	Bando 90	-

deuteron X

0.2763	Lantsev 90C	mult

dibaryon($S = -2$) X

4	Shakhbazyan 88	cs,mass

^{3}H X

0.2763	Lantsev 90C	mult

^{3}He X

0.2763	Lantsev 90C	mult

^{4}He X

0.2763	Lantsev 90C	mult

^{37}Ar X

0.3957	Gavrin 89	cs,mult
0.4536	Gavrin 89	cs,mult

$\mu^- \mu^+$ X

80	Freudenreich 90	mass,p
150	Freudenreich 90	a-dep,mass,p,pt
200	Freudenreich 90	a-dep,mass,p,pt
225	Freudenreich 90	a-dep,mass,p
252	Freudenreich 90	mass,p
280	Freudenreich 90	a-dep,mass,p,pt
530	Kartik 90	mass,p

mult[grey] mult[shower] X

340	Tufail 90	mult
	Ahmad 89	mult

mult[htrack] mult[shower] X

340	Nasr 92	mult
	Ahmad 89	mult

mult[black] mult[shower] X

340	Ahmad 89	mult

mult[charged$^+$] X star

40	Boos 88	a-dep,mult

mult[charged$^-$] X star

40	Boos 88	a-dep,mult

π^- nucleus

mult[grey] X star

40	Boos 88	a-dep,mult

charged$^+$ X star

40	Boos 88	a-dep,mult

charged$^-$ X star

40	Boos 88	a-dep,mult

mult[grey] shower X

50	Tariq 90	cor,mult,p
340	Tufail 91	cor,mult,p
	Ahmad 90	angp,mult
	Tariq 90	cor,mult,p

mult[htrack] shower X

340	Tufail 91	cor,mult,p

2shower X

340	Tufail 90B	cor,p

grey mult[shower] X

200	Jain 88B	cor,mult,p

grey mult[grey] X

340	Ahmad 90	angp,mult

mult[black] grey X

340	Ahmad 89	mult

grey X star

40	Boos 88	a-dep,mult

grey shower X

200	Jain 88B	cor,mult,p

black mult[grey] X

340	Ahmad 89	mult

K_S charged X

38	Barwolff 88	ang

$K^+ \pi^-$ X

250	Alves 92	mass
	Alves 92B	mass

$K^- \pi^+$ X

250	Alves 92	mass
	Alves 92B	mass
600	Kodama 92C	mass

2charm^0 X

350	Aoki 91B	cs

charm$^\pm$ charm^0 X

350	Aoki 91B	cs

2charm$^\pm$ X

350	Aoki 91B	cs

charm $\overline{\text{charm}}$ X

320	Appel 92	a-dep
350	Aoki 91B	cs

$D^0 \pi^+$ X

600	Kodama 92C	mass

$D \overline{D}$ X

350	Aoki 91C	ang,mass,p,pt

$D^+ \overline{D}^0$ X

350	Aoki 88	ang

$D^0 \overline{D}^0$ X

350	Aoki 88	ang

$D^+ D^-$ X

350	Aoki 88	ang

$D^0 D^-$ X

350	Aoki 88	ang

bottom $\overline{\text{bottom}}$ X

600	Spiegel 91	-

$B \overline{B}$ X

600	Kodama 92D	-

2p X

4	Kechechyan 89	p
5	Zielinsky 88	cs,mass

Λ charged X

38	Barwolff 88	ang

$\overline{\Lambda}$ charged X

38	Barwolff 88	ang,p,pt

2Λ X

4	Shakhbazyan 88	cs,mass

π^- nucleus

$p\ \Sigma^-$ X

4	Shakhbazyan 88	cs,mass

$K^- \pi^+ e^+$ X

340	Adamovich 91E	ang,mass

mult[grey] 2shower X

340	Tufail 90B	cor,mult,p

3shower X

340	Ghosh 92	ang,col

$\pi^- 2\gamma$ X

300	Alde 88B	mass

$\pi^+ \pi^-$ mult[grey] X

100	Walker 91	mass

$K^+ \pi^+ \pi^-$ X

250	Alves 92	mass
	Alves 92B	mass

$K^- 2\pi^+$ X

340	Adamovich 91E	mass
600	Kodama 92C	mass

$K^- \pi^+ \pi^-$ X

250	Alves 92	mass
	Alves 92B	mass

2K_S π^0 X

21	Cason 89	mass

2p γ X

5	Abdinov 88	mass,p

$p\ n\ \pi^-$ X

0.2763	Lantsev 90B	angp,cs,p

mult[grey] (showers) 2shower X

340	Tufail 91	cor,mult,p

4shower X

340	Ghosh 92	ang,col

4γ X

300	Prokoshkin 90	mass

$K^- 2\pi^+ \pi^-$ X

600	Kodama 92C	mass

5shower X

340	Ghosh 92	ang,col

$\pi^- 6\gamma$ X

300	Alde 88B	mass

nucleus $\pi_2(1670)^-$

40	Cassata 88	cs

nucleus $a_3(2050)^-$

40	Cassata 88	cs
200	Joyner 89	cs

nucleus $\rho(770)^0$ π^-

40	Cassata 88	cs,mass
200	Joyner 89	cs

nucleus $f_0(1240)$ π^-

200	Joyner 89	cs

nucleus $\pi^+ 2\pi^-$

200	Joyner 89	cs,mass

DD $< \pi^+ 2\pi^- >$ nucleus

40	Cassata 88	cs,mass

π^- deuteron

charged$^+$ X

38	Bannikov 90	a-dep,p,pt

charged$^-$ X

38	Bannikov 90	a-dep,p,pt

γ X

0	Chiba 91B	p
0.0773	Stanislaus 89	p

π^0 X

40	Yokosawa 91	asym,pt
	Apokin 90	asym,pt
	Amaglobeli 89	asym,pt
	Apokin 89	asym,pt
	Nurushev 89	asym,pt
	Apokin 88C	angp,asym,p

π^- deuteron

η X

40	Amaglobeli 89	asym,pt
	Apokin 89	asym,pt
	Nurushev 89	asym,pt

$\Upsilon(1S)$ X

194	Freudenreich 90	a-dep,p,pt
286	Freudenreich 90	a-dep,p,pt

p X

1.84	Abramov 88	ang,angp,p
2.22	Abramov 88	ang,angp,p
2.63	Abramov 88	ang,angp,p
40	Apokin 92	asym

$\mu^-\ \mu^+$ X

140	Freudenreich 90	a-dep,ang,mass,p,p,pt
194	Freudenreich 90	a-dep,ang,mass,p,p,pt
286	Freudenreich 90	a-dep,ang,mass,p,p,pt
	Guanziroli 88	angp

2γ X

40	Yokosawa 91	mass
	Apokin 90	mass
	Amaglobeli 89	asym,mass
	Apokin 89	asym,mass

dibaryon

0.0773	Stanislaus 89	-

$2n$

0.2177	Salvisberg 92	angp,cs

deuteron π^-

0.1283	Stevenson 90	angp,pol
0.1496	Kohler 91	cs
0.2353	Yokosawa 90B	angp,pol,pwa
0.2445	Yokosawa 90B	angp,pol,pwa
0.2457	Smith 88B	angp
0.2875	Smith 88B	angp
0.3314	Smith 88B	angp
0.3701	Yokosawa 90B	angp,pol,pwa
	Smith 88B	angp
0.5388	Gridnev 90	angp
0.86 – 1.16	Abramov 89B	angp
0.9	Abramov 91E	angp,p
0.9 – 2.025	Abramov 90B	angp
1.15	Abramov 91E	angp,p
1.31	Abramov 91E	angp,p
1.45	Abramov 91E	angp,p
1.54	Abramov 91E	angp,p
1.64	Abramov 91E	angp,p
1.83	Abramov 91E	angp,p
2.025	Abramov 91E	angp,p

dibaryon π^+

0.2146	Ashery 88	angp,cs

$2n\ \gamma$

0.0773	Stanislaus 89	p

deuteron $\pi^0\ \pi^-$

0.9	Abramov 91E	angp,p
1.15	Abramov 91E	angp,p
1.31	Abramov 91E	angp,p
1.45	Abramov 91E	angp,p
1.54	Abramov 91E	angp,p
1.64	Abramov 91E	angp,p
1.83	Abramov 91E	angp,p
2.025	Abramov 91E	angp,p

$2n\ \pi^+\ \pi^-$

0.2146	Ashery 88	angp,mass
0.4075	Parker 89	mass

$\pi^-\ {}^3$H

^{3}H π

0.2445	Pillai 88	angp
0.2875	Pillai 88	angp
0.3314	Pillai 88	angp

$\pi^-\ {}^3$H

$3n$

0.2177	Salvisberg 92	angp,cs,p

$\pi^-\ {}^3$He

2γ X

0.59 – 0.68	Peng 89	mass

^{3}H η

0.59 – 0.68	Peng 89	angp,p

^{3}He π^-

0.2445	Pillai 88	angp
0.2875	Pillai 88	angp
0.3314	Pillai 88	angp

$p\ 2n$

0.1482	Weber 89B	angp,p
0.2177	Weber 89B	angp,p
0.2673	Weber 89B	angp,p
0.3161	Weber 89B	angp,p

$\pi^-\ {}^4$He

tetraneutron π^+

0.1695	Gorringe 88	angp,p

^{3}H $p\ \pi^-$

0.2875	Langenbrunne 92	angp

π^- He

π^+ X

0.2875	Gram 89	a-dep,cs
0.353	Gram 89	a-dep,cs

π^- Li

mult[charged$^+$] X

40	Boos 88	a-dep,mult

mult[charged$^-$] X

40	Boos 88	a-dep,mult

mult[grey] X

40	Boos 88	a-dep,mult

charged$^+$ X

40	Boos 88	a-dep,mult

charged$^-$ X

40	Boos 88	a-dep,mult

X star

40	Boos 88	a-dep,cs

grey X

40	Boos 88	a-dep,mult

mult[charged$^+$] X star

40	Boos 88	a-dep,mult

mult[charged$^-$] X star

40	Boos 88	a-dep,mult

mult[grey] X star

40	Boos 88	a-dep,mult

charged$^+$ X star

40	Boos 88	a-dep,mult

charged$^-$ X star

40	Boos 88	a-dep,mult

grey X star

40	Boos 88	a-dep,mult

$\pi^-\ {}^6$Li

π^+ X

0.2875	Gram 89	a-dep,cs
0.3314	Seth 91	angp,mass
	Parker 90	mass
0.353	Gram 89	a-dep,cs

p X

0	Amelin 90	p
0.2248	Seth 91	angp,mass

deuteron X

0	Amelin 90	p

$2p$ X

0.2707	Yokota 89	ang,cor

dineutron π^+ X

0.3314	Seth 91	angp,mass

$\pi^-\ {}^6$Li

dineutron p X

0.2248	Seth 91	angp,mass

^{4}H deuteron

0	Amelin 90	cs,mass

^{5}H p

0	Amelin 90	cs,mass

^{6}H π^+

0.3314	Parker 90	cs

$\pi^-\ {}^7$Li

π^+ X

0.2875	Gram 89	a-dep,cs
0.353	Gram 89	a-dep,cs

$J/\psi(1S)$ X

300	Antoniazzi 92	cs,mass
	Antoniazzi 92B	cs,p,pt

$\chi_{c1}(1P)$ X

300	Antoniazzi 92	cs

$\chi_{c2}(1P)$ X

300	Antoniazzi 92	cs

$\psi(2S)$ X

300	Antoniazzi 92	cs
	Antoniazzi 92B	cs

p X

0	Amelin 90	p

deuteron X

0	Amelin 90	p

^{3}H X

0	Amelin 90	p

$\mu^-\ \mu^+$ X

300	Antoniazzi 92	mass
	Antoniazzi 92B	mass

$J/\psi(1S)\ \gamma$ X

300	Antoniazzi 92	mass

$2p$ X

0.2707	Yokota 89	ang,cor

$\mu^-\ \mu^+\ \gamma$ X

300	Antoniazzi 92	mass

^{4}H ^{3}H

0	Amelin 90	cs,mass

^{5}H deuteron

0	Amelin 90	cs,mass

$\pi^-\ {}^8$Be

p X

0.2248	Seth 91	angp,mass

dineutron p X

0.2248	Seth 91	angp,mass

π^- Be

inelastic

1.26 – 2.5	Kuzichev 89	a-dep,cs

γ X

500	Alverson 91B	p,pt
530	Engels 90	pt

π^+ X

0.2875	Gram 89	a-dep,cs
0.353	Gram 89	a-dep,cs

π^0 X

500	Alverson 91	a-dep,p,pt
	Alverson 91B	p,pt

$X(1814)^-$ X

36	Beladidze 92	cs

$f_2(2300)$ X

85	Augustin 88C	-

$f_2(2340)$ X

85	Augustin 88C	-

DC^- X

250	Alves 92	a-dep,p,pt

$J/\psi(1S)$ X

125	Tzamarias 90	angp,cs,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

π^- Be

$J/\psi(1S)$ X
185 Freudenreich 90 cs
530 Abramov 91B cs,p,pt

$\chi_{c1}(1P)$ X
185 Antoniazzi 92 cs
Freudenreich 90 cs

$\chi_{c2}(1P)$ X
185 Antoniazzi 92 cs
Freudenreich 90 cs

p X
0 Gornov 88 a-dep,p
0.9902 – 4.998 Gavrilov 89 p
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp
Antipov 87 p

dibaryon X
40 Antipov 90 cs
Antipov 90E cs

$\mu^- \mu^+$ X
175 – 197.5 Freudenreich 90 mass

2γ X
500 Alverson 91 mass,p,pt

$2\phi(1020)$ X
85 Augustin 88C mass
? Burchell 92 -

charmed-meson charmed-meson X
205 Mooney 89 cs

charmed-meson D^0 X
205 Mooney 89 cs

charmed-meson $\bar{D}^0$ X
205 Mooney 89 cs

charmed-meson $D^*(2010)^+$ X
205 Mooney 89 cs

charmed-meson $D^*(2010)^-$ X
205 Mooney 89 cs

$J/\psi(1S)$ γ X
185 Antoniazzi 92 cs,mass

$p K^+$ X + $p \pi^+$ X
40 Antipov 90D angp,p,pt

$p K^-$ X + $p \pi^-$ X
40 Antipov 90D angp,p,pt

$2p$ X
40 Antipov 90 mass
Antipov 90D angp,p,pt
Antipov 90E mass

$p \bar{p}$ X
40 Antipov 90D angp,p,pt

deuteron π^+ X
40 Antipov 90 mass

deuteron π^- X
40 Antipov 90 mass

$\mu^- \mu^+$ charged X
530 Abramov 91B mass,mult,p,pt

$\mu^- \mu^+ \gamma$ X
185 Antoniazzi 92 mass

$2\pi^- \pi^+$ X
40 Antipov 90B angp,cor,p

$p\, 2\pi^-$ X
40 Antipov 90B angp,cor,p

$2p\, \pi^-$ X
40 Antipov 90E mass

$2K^+ 2K^-$ X
85 Augustin 88C mass

$K^+ K^- 2\pi^+ 2\pi^- \mu^-$ X
205 Mooney 89 mass,p

$K^+ K^- 2\pi^+ 2\pi^- \mu^+$ X
205 Mooney 89 mass,p

DD $< \pi^+ 2\pi^- >$ Be
40 Ananieva 92 angp,mass,pwa

π^- ^{9}Be

$2p$ X
0 Gornov 91 mass

deuteron p X
0 Gornov 91 mass

2deuteron X
0 Gornov 91 mass

^{3}H p X
0 Gornov 91 mass

^{3}H deuteron X
0 Gornov 91 mass

$2\,^3$H X
0 Gornov 91 mass

^{3}He ^{3}H X
0 Gornov 91 p

^{4}He deuteron X + ^{3}He ^{3}H X
0 Gornov 91 p

^{4}He ^{3}H X
0 Gornov 91 p

π^- ^{11}Bor

p X
0 Amelin 90B p

deuteron X
0 Amelin 90B p

^{3}H X
0 Amelin 90B p

^{8}Li ^{3}H
0 Amelin 90B cs

^{9}Li deuteron
0 Amelin 90B cs

^{10}Li p
0 Amelin 90B cs

π^- C

inelastic
0.0773 Friedman 91B cs
0.0963 Friedman 91B cs
1.26 – 2.5 Kuzichev 89 a-dep,cs

mult[charged$^+$] X
40 Boos 88 a-dep,mult

mult[charged$^-$] X
40 Boos 88 a-dep,mult

mult[charged] (neutrals)
40 Baatar 88 cor,mass,mult,p,pt

($\pi^{\pm}$'s) X
40 Baatar 90C cor,p

mult[π^-] X
40 Baatar 90B mult

mult[p] X
40 Bannikov 89 mult
Baldin 88C angp,cor

mult[p] mult[π^0]
3.5 Strugalski 92 mult

mult[grey] X
40 Boos 88 a-dep,mult

charged$^+$ X
38 Bannikov 90 a-dep,p,pt
40 Boos 88 a-dep,mult

charged$^-$ X
38 Bannikov 90 a-dep,p,pt
40 Gabunia 90 a-dep,mult,p
Boos 88 a-dep,mult

jet X
40 Grishin 90 col,cor,p
Baldin 88B ang,p

X star
40 Boos 88 a-dep,cs

grey X
40 Boos 88 a-dep,mult

π X
40 Armutlijsky 91 angp

π^- C

$\pi^{\pm}$ X
40 Baatar 90C mult
Grishin 90 col,cor,p

π^+ X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs
5 Vorobiev 89B a-dep,angp
Vorobiev 88D a-dep,angp

π^0 X
1.1 Golubeva 90 p

π^- X
40 Baatar 90B angp,et,p,pt
Baatar 89B angp,et,p

η X
38 Bannikov 89B cs

$\rho(770)^0$ X
38 Bannikov 89B cs

$\omega(783)$ X
38 Bannikov 89B cs

$\eta'(958)$ X
38 Bannikov 89B cs

$a_2(1320)^-$ X
36 Bityukov 91C -

K^0 X
40 Gabunia 89 a-dep,mult

$J/\psi(1S)$ X
530 Spiegel 91 a-dep
Kartik 90 a-dep,cs,p,pt
De 89 a-dep,cs,p

χ_c(unspec) X
530 De 89 -

nucleon X
40 Gabunia 90 a-dep,mult,p

p X
0 Gornov 88 a-dep,p
0.6 Golubeva 89 angp
0.9902 – 4.998 Gavrilov 89 p
5 Arakelyan 91B angp,p
40 Armutlijsky 91 angp
Bannikov 89 a-dep,angp,cs,mult

Λ X
1.2 Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
3 Degtyarenko 91 a-dep,angp,p
Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
Vorobiev 88E p,pol
4 Smirnitsky 91 pol
5 Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
7 Smirnitsky 91 pol
40 Gabunia 89 a-dep,mult

$\mu^- \mu^+$ X
38 Bannikov 89B ang,mass,pt

mult[π] mult[charged] (neutrals)
40 Baatar 88 cor,mass,mult,p,pt

mult[p] mult[charged] (neutrals)
40 Baatar 88 cor,mass,mult,p,pt

π^- C

mult[p] mult[π^-] X
40 Strugalski 92C angp,cor,mult,p

charged (chargeds) X
40 Angelov 90 angp,p
Angelov 90B angp,p

mult[p] charged$^-$ X
40 Bannikov 89 angp,mult

2hadron (hadrons)
40 Baldin 88B col

mult[charged$^+$] X star
40 Boos 88 a-dep,mult

mult[charged$^-$] X star
40 Boos 88 a-dep,mult

mult[grey] X star
40 Boos 88 a-dep,mult

charged$^+$ X star
40 Boos 88 a-dep,mult

charged$^-$ X star
40 Boos 88 a-dep,mult

shower mult[shower] X
40 Aliev 89 angp,cor,mult

grey X star
40 Boos 88 a-dep,mult

$\pi^\pm$ mult[charged] X
40 Baatar 88B mass,mult,p,pt

π^- mult[charged] X
40 Angelov 92B col,pt
Baatar 89B angp,p

π mult[charged] (neutrals)
40 Baatar 89 angp,mass,mult,pt

π^- mult[π^-] X
40 Aliev 89 angp,cor,mult

mult[p] π^0 X
40 Strugalski 92 angp,cor,mult,p,pt

π^+ mult[grey] X
40 Artykov 90 mult,p,pt

π^- mult[grey] X
40 Artykov 90 mult,p,pt

$2\pi^\pm$ X
40 Grishin 90 col,cor,p

$2\pi^+$ X
5 Vorobiev 89B angp,cor,pt
Vorobiev 88D angp,cor

$\pi^+ \pi^-$ X
38 Barwolff 88 mass

$\eta \pi^-$ X
36 Bityukov 91C ang,mass,pwa

$\eta'(958) \pi^-$ X
36 Bityukov 91C ang,mass,pwa

K^0 mult[charged] X
40 Angelov 92B col

K^0 charged$^-$ X
40 Gabunia 90 a-dep,mult,p

K_S charged X
38 Barwolff 88 a-dep,cs,mult,p,pt

$J/\psi(1S)$ γ X
530 De 89 mass

p mult[charged] X
40 Angelov 92B col,pt

π^- C

p mult[charged] (neutrals)
40 Baatar 89 angp,mass,mult,pt

p (p's) X
40 Angelov 88 angp,col

p charged$^-$ X
40 Bannikov 89 angp,mult

$p \pi^-$ X
3 Vorobiev 88E ang,mass,p
38 Barwolff 88 mass

$\bar{p} \pi^+$ X
38 Barwolff 88 mass

nucleon K^0 X
40 Gabunia 90 a-dep,mult,p

$2p$ X
0.2707 Yokota 89 ang,cor
4 Zielinsky 88 cs,mass
5 Zielinsky 88 cs,mass
40 Zielinsky 88 cs,mass

Λ mult[charged] X
40 Angelov 92B col

Λ charged X
38 Barwolff 88 a-dep,cs,mult,p,pt

Λ charged$^-$ X
40 Gabunia 90 a-dep,mult,p

$\bar{\Lambda}$ charged X
38 Barwolff 88 a-dep,cs,mult

nucleon Λ X
40 Gabunia 90 a-dep,mult,p

$\mu^- \mu^+ \gamma$ X
38 Bannikov 89B ang,mass,pt
530 De 89 mass

(p's) π (π's) X
40 Strugalski 92C angp,cor,mult,p

$2\eta \pi^-$ X
36 Bityukov 91 ang,mass

$\eta'(958) \eta \pi^-$ X
36 Bityukov 91 ang,mass

$K^0 \bar{K}^0$ charged$^-$ X
40 Gabunia 90 a-dep,mult,p

p (p's) (π's) X
40 Strugalski 92C angp,cor,mult,p

nucleon $K^0 \bar{K}^0$ X
40 Gabunia 90 a-dep,mult,p

$2p \gamma$ X
5 Abdinov 88 mass,p

$\pi^+ \pi^0 2\pi^-$ X
36 Bityukov 91C mass

$\pi^+ 2\pi^- 2\gamma$ X
36 Bityukov 91C mass

$\pi^+ 2\pi^- 4\gamma$ X
36 Bityukov 91 mass

DD < $\pi^+ 2\pi^-$ > C
40 Ananieva 92 angp,mass,pwa

π^- ^{12}C

π^+ X
5 Bajramov 89 p
40 Bajramov 89 p

π^- ^{12}C

π^- X
5 Bajramov 89 p
40 Bajramov 89 p

π^+ mult[grey] X
5 Bajramov 89 mult,p
40 Bajramov 89 mult,p

π^- mult[grey] X
5 Bajramov 89 mult,p
40 Bajramov 89 mult,p

$2p$ X
4 Kechechyan 90B cor,p

mult[charged] 2neutral (neutrals)
40 Angelov 89 col,p

$2p$ Λ X
4 Kechechyan 90 cor,p

$\pi^\pm$ mult[charged] 2neutral (neutrals)
40 Angelov 89 col,p

p mult[charged] 2neutral (neutrals)
40 Angelov 89 col,p

^{12}C* $2\pi^0$
39.1 Apokin 89B angp,mass

π^- ^{13}C

^{13}C π^-
0.2117 Yen 91B angp,asym
0.233 Yen 91B angp,asym
0.248 Yen 91B angp,asym
0.2707 Yen 91B angp,asym
0.2875 Yen 91B angp,asym
0.3433 Yen 91B angp,asym

π^- O

π^+ X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

π^- Ne

$2p$ X
6.2 Zielinsky 88 cs,mass

mult[p] mult[π^+] mult[π^-] X
6.2 Kiselevich 92B mult

$p \pi^+ \pi^-$ X
6.2 Amelin 91 angp,p

p (p's) $\pi^+ \pi^-$ (π^+'s) (π^-'s) X
6.2 Kiselevich 92 mult,p,pt

π^- ^{20}Ne

^{20}Ne* π^-
0.2875 Burlein 89 angp

π^- Al

inelastic
1.26 – 2.5 Kuzichev 89 a-dep,cs

π^0 X
1.1 Golubeva 90 p

DC X
250 Alves 92 a-dep,p,pt

$J/\psi(1S)$ X
530 Spiegel 91 a-dep
Kartik 90 a-dep,cs,p,pt

p X
0.9902 – 4.998 Gavrilov 89 p
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp

Λ X
1.2 Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
3 Degtyarenko 91 a-dep,angp,p
Smirnitsky 91 a-dep,p,pol

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

π^- Al

Λ X

	Vorobiev 91	a-dep,angp,p,pol
	Vorobiev 89C	angp
	Vorobiev 88E	p,pol
5	Smirnitsky 9[illegible]	a-dep,p,pol
	Vorobiev 91	a-dep,angp,p,pol
	Vorobiev 89C	angp

$\mu^- \mu^+$ X

320	Cobbaert 88B	a-dep,mass,p

$J/\psi(1S)$ γ X

530	De 89	mass

p π^- X

3	Vorobiev 88E	ang,mass,p

$\mu^- \mu^+ \gamma$ X

530	De 89	mass

DD $< \pi^+ 2\pi^- >$ Al

40	Ananieva 92	angp,mass,pwa

π^- Si

K_S X

340	Adamovich 92	a-dep,p

$K^*(892)^0$ X

200	Fawcett 90	angp,cs,p,pt
	Fawcett 90B	p

$\overline{K}^*(892)^0$ X

200	Fawcett 90	angp,cs,p,pt
	Fawcett 90B	p

D^+ X

200	Barlag 88	cs,p,pt

D^0 X

200	Barlag 88	cs,p,pt
340	Adamovich 92	a-dep,p

$\overline{D}^0$ X

200	Barlag 88	cs,p,pt

D^- X

200	Barlag 88	cs,p,pt

$D^*(2010)^+$ X

200	Barlag 88	cs,p,pt

$D^*(2010)^-$ X

200	Barlag 88	cs,p,pt

D_S^+ X

200	Barlag 88	cs,p,pt

D_S^- X

200	Barlag 88	cs,p,pt

p X

0	Gornov 88	a-dep,p

$K^+ \pi^-$ X

200	Fawcett 90	mass

$K^- \pi^+$ X

200	Fawcett 90	mass

$K^+ K^- 2\pi^+ 2\pi^-$ X

200	Barlag 88	mass

DD $< \pi^+ 2\pi^- >$ Si

40	Ananieva 92	angp,mass,pwa

π^- S

mult[charged$^+$] X

40	Boos 88	a-dep,mult

mult[charged$^-$] X

40	Boos 88	a-dep,mult

mult[grey] X

40	Boos 88	a-dep,mult

charged$^+$ X

40	Boos 88	a-dep,mult

π^- S

charged$^-$ X

40	Boos 88	a-dep,mult

X star

40	Boos 88	a-dep,cs

grey X

40	Boos 88	a-dep,mult

mult[charged$^+$] X star

40	Boos 88	a-dep,mult

mult[charged$^-$] X star

40	Boos 88	a-dep,mult

mult[grey] X star

40	Boos 88	a-dep,mult

charged$^+$ X star

40	Boos 88	a-dep,mult

charged$^-$ X star

40	Boos 88	a-dep,mult

grey X star

40	Boos 88	a-dep,mult

π^- Cl

χ_c(unspec) X

530	De 89	-

π^- Ca

π^+ X

0.2875	Gram 89	a-dep,cs
0.353	Gram 89	a-dep,cs

π^- Ti

$2\pi^+$ X

1.4	Bayukov 92	angp,p

$\pi^+ \pi^-$ X

1.4	Bayukov 92	angp,p

$2\pi^-$ X

1.4	Bayukov 92	angp,p

$2\pi^\pm$ fragt X

1.39	Bayukov 91	p

$\pi^+ \pi^-$ fragt X

1.39	Bayukov 91	p

DD $< \pi^+ 2\pi^- >$ Ti

40	Ananieva 92	angp,mass,pwa

π^- Fe

inelastic

1.26 – 2.5	Kuzichev 89	a-dep,cs

$\mu^- \mu^+$ X

320	Cobbaert 88B	a-dep,mass,p

$2\pi^+$ X

1.4	Bayukov 92	angp,p

$\pi^+ \pi^-$ X

1.4	Bayukov 92	angp,p

$2\pi^-$ X

1.4	Bayukov 92	angp,p

$2\pi^\pm$ fragt X

1.39	Bayukov 91	p

$\pi^+ \pi^-$ fragt X

1.39	Bayukov 91	p

π^- Ni

inelastic

0.0773	Friedman 91B	cs
0.0963	Friedman 91B	cs

π^- Cu

inelastic

1.26 – 2.5	Kuzichev 89	a-dep,cs

mult[charged$^+$] X

40	Boos 88	a-dep,mult

π^- Cu

mult[charged$^-$] X

40	Boos 88	a-dep,mult

mult[p] X

40	Bannikov 89	mult

mult[grey] X

40	Boos 88	a-dep,mult

charged$^+$ X

38	Bannikov 90	a-dep,p,pt
40	Boos 88	a-dep,mult

charged$^-$ X

38	Bannikov 90	a-dep,p,pt
40	Gabunia 90	a-dep,mult,p
	Boos 88	a-dep,mult

X star

40	Boos 88	a-dep,cs

grey X

40	Boos 88	a-dep,mult

π^0 X

500	Alverson 91	a-dep,p,pt
530	Engels 90	angp

K^0 X

40	Gabunia 89	a-dep,mult

K_S X

340	Adamovich 92	a-dep,p

DC X

250	Alves 92	a-dep,p,pt

D X

230	Rossi 91	pt
	Rossi 89	p,pt

D^+ X

230	Spiegel 91	p,pt
	Barlag 90B	-
	Barlag 90C	p
	Barlag 90E	angp,cs,p
	Barlag 90F	angp,cs,p
	Barlag 88C	-
	Barlag 88D	angp,cs,p,pt

D^0 X

230	Spiegel 91	p,pt
	Barlag 90B	-
	Barlag 90C	p
	Barlag 90E	angp,cs,p
	Barlag 90F	angp,cs,p
	Barlag 89B	-
	Barlag 88C	-
	Barlag 88D	angp,cs,p,pt
340	Adamovich 92	a-dep,p

$\overline{D}^0$ X

230	Barlag 88C	-
	Barlag 88D	angp,cs,p,pt

D^- X

230	Barlag 88C	-
	Barlag 88D	angp,cs,p,pt

$D^*(2010)^+$ X

230	Barlag 92	-
	Barlag 90E	angp,cs,p

$D^*(2010)^0$ X

230	Barlag 92	-

D_S^+ X

230	Spiegel 91	-
	Barlag 90B	-
	Barlag 90C	p
	Barlag 90E	angp,cs,p
	Barlag 90F	angp,cs,p
	Barlag 88C	-
	Barlag 88D	angp,cs,p,pt

D_S^- X

230	Barlag 88C	-
	Barlag 88D	angp,cs,p,pt

$J/\psi(1S)$ X

125	Tzamarias 90	angp,cs,p,pt
530	Spiegel 91	a-dep
	Kartik 90	a-dep,cs,p,pt

π^- Cu

χ_c(unspec) X
530 De 89 –

X $C(1480)^-$
50 Landsberg 90 cs

nucleon X
40 Gabunia 90 a-dep,mult,p

p X
0 Gornov 88 a-dep,p
0.6 Golubeva 89 angp
0.8 Golubeva 89 angp
1 Golubeva 89 angp
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp
Bannikov 89 a-dep,angp,cs,mult

Λ X
1.2 Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
3 Degtyarenko 91 a-dep,angp,p
Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
Vorobiev 88E p,pol
5 Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
40 Gabunia 89 a-dep,mult

Λ_c^+ X
230 Barlag 92B cs
Barlag 90B –
Barlag 90C p
Barlag 90D p
Barlag 90F angp,cs,p
Klein 89C –
Rossi 89 cs
Barlag 88B –
Barlag 88C –
Barlag 88D angp,cs,p,pt

$\bar{\Lambda}_c^-$ X
230 Barlag 90C p
Barlag 90D p
Barlag 88C –
Barlag 88D angp,cs,p,pt

$\Xi_c(2460)$ X
230 Klein 89C mass

$\Xi_c(2460)^+$ X
230 Barlag 89C cs

$\Xi_c(2460)^0$ X
230 Spiegel 91 –
Barlag 90 –

mult[kaon] mult[π] X
230 Barlag 89B mass

mult[p] charged$^-$ X
40 Bannikov 89 angp,mult

mult[charged$^+$] X star
40 Boos 88 a-dep,mult

mult[charged$^-$] X star
40 Boos 88 a-dep,mult

mult[grey] X star
40 Boos 88 a-dep,mult

charged$^+$ X star
40 Boos 88 a-dep,mult

charged$^-$ X star
40 Boos 88 a-dep,mult

grey X star
40 Boos 88 a-dep,mult

π^- Cu

2γ X
530 Engels 90 mass

$\pi^+\, \pi^-$ X
38 Barwolff 88 mass
230 Barlag 90F angp,mass,p

K^0 charged$^-$ X
40 Gabunia 90 a-dep,mult,p

K_S charged X
38 Barwolff 88 a-dep,cs,mult,p,pt

$K^+\, \pi^-$ X
230 Barlag 88D mass

$K^-\, \pi^+$ X
230 Barlag 90B mass
Barlag 90E angp,mass,p
Barlag 90F angp,mass,p
Barlag 88D mass

$K^+\, K^-$ X
230 Barlag 90F angp,mass,p

$\bar{K}^*(892)^0\, K^+$ X
230 Barlag 90F angp,mass,p

$K^*(892)^+\, \bar{K}^*(892)^0$ X
230 Barlag 90F angp,mass,p

$\phi(1020)\, \pi^+$ X
230 Barlag 90F angp,mass,p

$K^0\, \phi(1020)$ X
230 Barlag 88C mass

$\bar{K}^0\, \phi(1020)$ X
230 Barlag 90F angp,mass,p
Barlag 88C mass

$D\, \bar{D}$ X
230 Barlag 91 ang
Spiegel 91 ang

$D^+\, \bar{D}^0$ X + $D^0\, D^-$ X
230 Barlag 91 ang

$D^0\, \bar{D}^0$ X
230 Barlag 91 ang

$D^+\, D^-$ X
230 Barlag 91 ang

$D_S^+\, \bar{D}$ X + $D_S^-\, D$ X
230 Barlag 91 ang

$D_S^+\, \bar{D}$ X
230 Spiegel 91 ang

$J/\psi(1S)\, \gamma$ X
530 De 89 mass

p charged$^-$ X
40 Bannikov 89 angp,mult

$p\, \pi^-$ X
3 Vorobiev 88E ang,mass,p
38 Barwolff 88 mass

$\bar{p}\, \pi^+$ X
38 Barwolff 88 mass

nucleon K^0 X
40 Gabunia 90 a-dep,mult,p

$p\, \phi(1020)$ X
230 Barlag 90F angp,mass,p
Barlag 88C mass

$\bar{p}\, \phi(1020)$ X
230 Barlag 88C mass

Λ charged X
38 Barwolff 88 a-dep,cs,mult,p,pt

Λ charged$^-$ X
40 Gabunia 90 a-dep,mult,p

$\bar{\Lambda}$ charged X
38 Barwolff 88 a-dep,cs,mult

π^- Cu

nucleon Λ X
40 Gabunia 90 a-dep,mult,p

$\Lambda_c^+\, K^-$ X
230 Barlag 90 mass

$\Lambda_c^+\, \bar{D}$ X + $\bar{\Lambda}_c^-\, D$ X
230 Barlag 91 ang

$\Lambda_c^+\, \bar{D}$ X
230 Spiegel 91 ang

$\Lambda_c^+\, \bar{\Lambda}_c^-$ X
230 Appel 92 ang,cs

$\mu^-\, \mu^+\, \gamma$ X
530 De 89 mass

$2\pi^+\, \pi^-$ X
230 Barlag 90F angp,mass,p

$\pi^+\, \pi^0\, \pi^-$ X
230 Barlag 90F angp,mass,p

$K^+\, \pi^+\, \pi^-$ X
230 Barlag 90F angp,mass,p

$K^+\, 2\pi^-$ X
230 Barlag 88D mass

$K^0\, \pi^+\, \pi^-$ X
230 Barlag 88C mass

$\bar{K}^0\, \pi^+\, \pi^-$ X
230 Barlag 90F angp,mass,p
Barlag 88C mass

$K^-\, 2\pi^+$ X
230 Barlag 90B mass
Barlag 90E angp,mass,p
Barlag 90F angp,mass,p
Barlag 88D mass

$K^-\, \pi^+\, \pi^0$ X
230 Barlag 90F angp,mass,p

$K^0\, \bar{K}^0$ charged$^-$ X
40 Gabunia 90 a-dep,mult,p

$K^+\, \bar{K}^0\, \pi^-$ X
230 Barlag 88C mass

$K^+\, K^-\, \pi^+$ X
230 Barlag 90B mass
Barlag 90E angp,mass,p
Barlag 90F angp,mass,p
Barlag 88D mass

$K^+\, K^-\, \pi^-$ X
230 Barlag 88D mass

$K^0\, K^-\, \pi^+$ X
230 Barlag 88C mass

$K^+\, \bar{K}^0\, K^-$ X
230 Barlag 90F angp,mass,p

$\phi(1020)\, \pi^+\, \pi^0$ X
230 Barlag 90F angp,mass,p

$\phi(1020)\, \pi^+\, \pi^-$ X
230 Barlag 90F angp,mass,p

$p\, \pi^+\, \pi^-$ X
230 Barlag 90F angp,mass,p

$p\, K^-\, \pi^+$ X
230 Barlag 90B mass
Barlag 90C angp,mass,p
Barlag 90D angp,mass,p
Barlag 90F angp,mass,p
Barlag 88B mass
Barlag 88C mass
Barlag 88D mass

$\bar{p}\, K^+\, \pi^-$ X
230 Barlag 90C angp,mass,p
Barlag 90D angp,mass,p
Barlag 88C mass
Barlag 88D mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

π^- Cu

nucleon K^0 $\bar{K}^0$ X
40 Gabunia 90 a-dep,mult,p

p K^+ K^- X
230 Barlag 90F angp,mass,p

p $\bar{K}^*(892)^0$ K^- X
230 Barlag 90 mass

Σ^+ K^- π^+ X
230 Barlag 89 mass
Barlag 89C mass

Ξ^- $2\pi^+$ X
230 Barlag 89 mass
Barlag 89C mass

$2\pi^+$ π^0 π^- X
230 Barlag 90F angp,mass,p

$2\pi^+$ $2\pi^-$ X
230 Barlag 90F angp,mass,p

K^+ $2\pi^+$ π^- X
230 Barlag 88D mass

K^+ π^+ π^0 π^- X
230 Barlag 90F angp,mass,p

$\bar{K}^0$ $2\pi^+$ π^- X
230 Barlag 90F angp,mass,p

$\bar{K}^0$ π^+ π^0 π^- X
230 Barlag 90F angp,mass,p

K^- $2\pi^+$ π^0 X
230 Barlag 90F angp,mass,p

K^- π^+ $2\pi^0$ X
230 Barlag 90F angp,mass,p

K^- $2\pi^+$ π^- X
230 Barlag 90B mass
Barlag 90E angp,mass,p
Barlag 90F angp,mass,p

K^- π^+ $2\pi^-$ X
230 Barlag 88D mass

K^+ $\bar{K}^0$ π^+ π^- X
230 Barlag 90F angp,mass,p

K^+ K^- π^+ π^0 X
230 Barlag 90F angp,mass,p

K^+ K^- π^+ π^- X
230 Barlag 90F angp,mass,p

K^0 K^- $2\pi^+$ X
230 Barlag 90F angp,mass,p

K^+ $\bar{K}^0$ K^- π^0 X
230 Barlag 90F angp,mass,p

$\phi(1020)$ $2\pi^+$ π^- X
230 Barlag 90F angp,mass,p

p π^+ π^0 π^- X
230 Barlag 90F angp,mass,p

p $\bar{K}^0$ π^+ π^- X
230 Barlag 90F angp,mass,p
Barlag 88C mass

p K^- π^+ π^0 X
230 Barlag 90F angp,mass,p

p K^0 π^+ π^- X
230 Barlag 88C mass

p $2K^-$ π^+ X
230 Barlag 90 mass

Λ $2\pi^+$ π^- X
230 Barlag 90F angp,mass,p
Barlag 89C mass

$3\pi^+$ $2\pi^-$ X
230 Barlag 90F angp,mass,p

$2\pi^+$ π^0 $2\pi^-$ X
230 Barlag 90F angp,mass,p

$\bar{K}^0$ $2\pi^+$ π^0 π^- X
230 Barlag 90F angp,mass,p

$\bar{K}^0$ $2\pi^+$ $2\pi^-$ X
230 Barlag 90F angp,mass,p

π^- Cu

K^- $2\pi^+$ $2\pi^0$ X
230 Barlag 90F angp,mass,p

K^- $3\pi^+$ π^- X
230 Barlag 90E angp,mass,p
Barlag 90F angp,mass,p

K^- $2\pi^+$ π^0 π^- X
230 Barlag 90F angp,mass,p

K^+ K^- $2\pi^+$ π^- X
230 Barlag 90F angp,mass,p
Barlag 88C mass

K^+ K^- π^+ π^0 π^- X
230 Barlag 90F angp,mass,p

p $2\pi^+$ $2\pi^-$ X
230 Barlag 90F angp,mass,p

p $\bar{K}^0$ π^+ π^0 π^- X
230 Barlag 90F angp,mass,p

p K^- π^+ $2\pi^0$ X
230 Barlag 90F angp,mass,p

p K^- $2\pi^+$ π^- X
230 Barlag 90F angp,mass,p

$3\pi^+$ π^0 $2\pi^-$ X
230 Barlag 90F angp,mass,p

$3\pi^+$ $3\pi^-$ X
230 Barlag 90F angp,mass,p

$\bar{K}^0$ $3\pi^+$ $2\pi^-$ X
230 Barlag 90F angp,mass,p

K^- $3\pi^+$ π^0 π^- X
230 Barlag 90F angp,mass,p

Cu $\rho(770)^0$ π^-
50 Antipov 89 –
Antipov 88 –
Antipov 88B pt

Cu π^- μ^- μ^+
50 Antipov 89 cs,mass,pwa
Antipov 88 cs,mass,p
Antipov 88B cs

Cu π^+ $2\pi^-$
50 Antipov 88B cs

DD < π^+ $2\pi^-$ > Cu
40 Ananieva 92 angp,mass,pwa

π^- Ge

p X
0 Gornov 88 a-dep,p

π^- Rh

π^+ X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs

π^- Ag

DD < π^+ $2\pi^-$ > Ag
40 Ananieva 92 angp,mass,pwa

π^- Cd

inelastic
1.26 – 2.5 Kuzichev 89 a-dep,cs

Λ X
1.2 Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
3 Degtyarenko 91 a-dep,angp,p
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
Vorobiev 88E p,pol
5 Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp

π^- Cd

p π^- X
3 Vorobiev 88E ang,mass,p

Λ
1.2 Smirnitsky 91 a-dep,p,pol
3 Smirnitsky 91 a-dep,p,pol
5 Smirnitsky 91 a-dep,p,pol

π^- Xe

X
0 Barmin 89 cs

(π^0's) X
3.5 Strugalski 90 angp,mass,mult,p

(p's) (n's)
3.5 Grishin 88 mult

mult[p] X
2.34 Strugalski 88 mult
3.5 Strugalski 88 mult
9 Strugalski 88 mult

mult[p] mult[π^0]
3.5 Strugalski 91 mult

mult[n] X
3.5 Bekmirzaev 91 mult

γ X
0 Barmin 89 p
3.5 Abdurakhimov 88B angp,pt

π^0 X
3.5 Pawlyak 91 p
Pluta 88 angp

mult[p] π^0
3.5 Strugalski 91 angp,cor,mult,p,pt

p X
3.5 Bekmirzaev 91 p
Pawlyak 91 p

n X
3.5 Bekmirzaev 91 angp,p

(p's) (π^0's) X
3.5 Strugalski 90 angp,mass,mult,p

(p's) (n's) X
3.5 Grishin 90B angp,mult

mult[γ] mult[charged] X
3.5 Abdurakhimov 88B mult

mult[p] mult[n] X
3.5 Strugalski 91C cor,mult
Zielinska 91 mult

mult[p] mult[n] mult[frag]
2.34 Strugalski 88 cs
3.5 Strugalski 88 cs
9 Strugalski 88 cs

mult[p] mult[fragt] X
3.5 Strugalski 91B mult

($\pi^{\pm}$'s) π X
3.5 Pawlyak 91 mult,p

(π^0's) π X
3.5 Pawlyak 91 mult,p

(p's) π X
3.5 Pawlyak 91 mult,p

(p's) (n's) π
3.5 Grishin 88 angp,mult

mult[p] π^0 X
3.5 Pluta 88 angp,cor,mult
Strugalski 88C cor,mult,p

$2\pi^0$ X
3.5 Grishin 86B p,pt

π^- Xe

p (π's) X
3.5 Pawlyak 91 mult,p
p (p's) X
3.5 Pawlyak 91 mult,p
$2p$ X
3.5 Pluta 88B angp,cor
mult[p] mult[π] mult[fragt] X
3.5 Strugalski 91B mult
mult[p] mult[π^-] mult[fragt] X
3.5 Strugalski 91B mult
mult[p] mult[n] π^- mult[frag]
3.5 Strugalski 88 cs

π^- Ta

DD < π^+ $2\pi^-$ > Ta
40 Ananieva 92 angp,mass,pwa

π^- Wt

K_S X
340 Adamovich 92 a-dep,p
DC X
250 Alves 92 a-dep,p,pt
D^0 X
340 Adamovich 92 a-dep,p
$J/\psi(1S)$ X
125 Tzamarias 90 angp,cs,p,pt
$\psi(2S)$ X
125 Tzamarias 90 angp,cs,p,pt
$\Upsilon(1S)$ X
194 Freudenreich 90 a-dep,p,pt
286 Freudenreich 90 a-dep,p,pt
μ^- μ^+ X
39.5 Freudenreich 90 a-dep,mass,p,pt
125 Freudenreich 90 ang,angp,mass,p,pt
Anassontzis 87 ang,angp,mass,p,pt
140 Freudenreich 90 a-dep,ang,mass,p,p,pt
Guanziroli 88 angp
150 Freudenreich 90 ang,angp,mass,p,pt
194 Freudenreich 90 a-dep,ang,mass,p,p,pt
Guanziroli 88 angp
250 Heinrich 89 p
252 Conway 89 angp,mass,p,pt
286 Freudenreich 90 a-dep,ang,mass,p,p,pt
Guanziroli 88 angp
B $\bar{B}$ X
140 Rossi 89 cs
Bordalo 88 cs
194 Rossi 89 cs
Bordalo 88 cs
286 Rossi 89 cs
Bordalo 88 cs
μ^+ μ^- μ^+ X
140 Bordalo 88 –
194 Bordalo 88 –
286 Bordalo 88 –

π^- Pb

inelastic
1.26 – 2.5 Kuzichev 89 a-dep,cs
mult[charged$^+$] X
40 Boos 88 a-dep,mult
mult[charged$^-$] X
40 Boos 88 a-dep,mult

π^- Pb

mult[p] X
40 Bannikov 89 mult
mult[grey] X
40 Boos 88 a-dep,mult
charged$^+$ X
38 Bannikov 90 a-dep,p,pt
40 Boos 88 a-dep,mult
charged$^-$ X
38 Bannikov 90 a-dep,p,pt
40 Gabunia 90 a-dep,mult,p
Boos 88 a-dep,mult
X star
40 Boos 88 a-dep,cs
grey X
40 Boos 88 a-dep,mult
π^+ X
0.2875 Gram 89 a-dep,cs
0.353 Gram 89 a-dep,cs
5 Vorobiev 89B a-dep,angp
Vorobiev 88D a-dep,angp
K^0 X
40 Gabunia 89 a-dep,mult
$J/\psi(1S)$ X
530 Spiegel 91 a-dep
Kartik 90 a-dep,cs,p,pt
χ_c(unspec) X
530 De 89 –
nucleon X
40 Gabunia 90 a-dep,mult,p
p X
0.6 Golubeva 89 angp
0.9902 – 4.998 Gavrilov 89 p
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp
Bannikov 89 a-dep,angp,cs,mult
Λ X
1.2 Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
3 Degtyarenko 91 a-dep,angp,p
Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
Vorobiev 88E p,pol
5 Smirnitsky 91 a-dep,p,pol
Vorobiev 91 a-dep,angp,p,pol
Vorobiev 89C angp
40 Gabunia 89 a-dep,mult
mult[p] charged$^-$ X
40 Bannikov 89 angp,mult
mult[charged$^+$] X star
40 Boos 88 a-dep,mult
mult[charged$^-$] X star
40 Boos 88 a-dep,mult
mult[grey] X star
40 Boos 88 a-dep,mult
charged$^+$ X star
40 Boos 88 a-dep,mult
charged$^-$ X star
40 Boos 88 a-dep,mult
grey X star
40 Boos 88 a-dep,mult

π^- Pb

$2\pi^+$ X
5 Vorobiev 89B angp,cor,pt
Vorobiev 88D angp,cor
π^+ π^- X
38 Barwolff 88 mass
K^0 charged$^-$ X
40 Gabunia 90 a-dep,mult,p
K_S charged X
38 Barwolff 88 a-dep,cs,mult,p,pt
$J/\psi(1S)$ γ X
530 De 89 mass
p charged$^-$ X
40 Bannikov 89 angp,mult
p π^- X
3 Vorobiev 88E ang,mass,p
38 Barwolff 88 mass
$\bar{p}$ π^+ X
38 Barwolff 88 mass
nucleon K^0 X
40 Gabunia 90 a-dep,mult,p
Λ charged X
38 Barwolff 88 a-dep,cs,mult,p,pt
Λ charged$^-$ X
40 Gabunia 90 a-dep,mult,p
$\bar{\Lambda}$ charged X
38 Barwolff 88 a-dep,cs,mult
nucleon Λ X
40 Gabunia 90 a-dep,mult,p
μ^- μ^+ γ X
530 De 89 mass
K^0 $\bar{K}^0$ charged$^-$ X
40 Gabunia 90 a-dep,mult,p
nucleon K^0 $\bar{K}^0$ X
40 Gabunia 90 a-dep,mult,p
DD < π^+ $2\pi^-$ > Pb
40 Ananieva 92 angp,mass,pwa

π^- ^{238}U

p fragt (fragts)
0.1947 Belovitsky 92 ang,cs,p
Belovitsky 91 ang,cs,p
deuteron fragt (fragts)
0.1947 Belovitsky 92 ang,cs,p
Belovitsky 91 ang,cs,p
^{3}H fragt (fragts)
0.1947 Belovitsky 92 ang,cs,p
Belovitsky 91 ang,cs,p
^{4}He fragt (fragts)
0.1947 Belovitsky 91 ang,cs,p

π^- U

$J/\psi(1S)$ X
320 Catanesi 89 cs
$2\mu^-$ X
320 Catanesi 88 p,pt
μ^- μ^+ X
320 Catanesi 88 p,pt
Cobbaert 88B a-dep,mass,p
$2\mu^+$ X
320 Catanesi 88 p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

π^- U

bottom $\overline{\text{bottom}}$ X

320	Catanesi 89	cs
	Rossi 89	cs
	Catanesi 88	cs

$\rho(770)^0$ nucleon

X

0 – 3.9	Nakai 89	cs

$f_2(1270)$ nucleon

X

0 – 3.9	Nakai 89	cs

$K^\pm p$

$\rho(770)^0$ X

80 – 140	Apsimon 92B	cs

$f_0(975)$ X

80 – 140	Apsimon 92B	cs

$f_2(1270)$ X

80 – 140	Apsimon 92B	angp,cs,p,pt

$\pi^+ \pi^-$ X

80 – 140	Apsimon 92B	mass

K^+ nucleon

nucleon K^+

< 3.105	Hyslop 92	pwa

$K^+ p$

mult[charged] X

250	Aivazyan 91B	col,p,pt
	Schmitz 91	angp,col,p,pt
	Adamus 88G	mult

mult[charged] (neutrals)

147	Boca 92	col,mult,p
250	Agababyan 91	mult,p,pt
	Ajinenko 90	angp,mult,p
	Ajinenko 89C	mult,p
	Ajinenko 89D	col,p
	Buschbeck 89	mult,p

charged X

80 – 140	Apsimon 89	angp,cs,pt
250	Aivazyan 89	mult,p
	Aivazyan 88	mult,p,pt

charged$^+$ X

250	Aivazyan 89	mult,p
	Adamus 88G	mult,p,pt

charged$^-$ X

200	Brick 90	cor,mult,p
250	Aivazyan 89	mult,p
	Adamus 88G	mult,p,pt

hadron X

80	Hoeger 90	p,pt
140	Hoeger 90	p,pt

shower X

200	Brick 90	cor,mult,p
	Brick 89	mult

γ X

250	Botterweck 91	cs,p,pt

π^0 X

80 – 140	Apsimon 91	p,pt
250	Atayan 91	cs,p,pt
	Adamus 86C	cs,mult,p,pt

η X

80	Apsimon 92	p,pt
140	Apsimon 92	p,pt
250	Atayan 91	cs,p

$\rho(770)^+$ X

250	Agababyan 89	cs,p

$\rho(770)^0$ X

80	Hofmann 91	p,pt

$K^+ p$

$\rho(770)^0$ X

140	Apsimon 91B	angp,cs,p,pt
	Hofmann 91	p,pt
250	Agababyan 89	cs,p

$\omega(783)$ X

250	Agababyan 89	cs,p

$f_2(1270)$ X

80	Fiedler 91	cs,p,pt
140	Fiedler 91	cs,p,pt
250	Agababyan 89	cs,p

DD < X > K^+

32.1	Garutchava 87B	angp,mass

K_S X

5 – 250	Chliapnikov 90	cs

$K^*(892)^+$ X

5 – 250	Chliapnikov 90	cs
250	Agababyan 89	cs,p

$K^*(892)^0$ X

5 – 250	Chliapnikov 90	cs
80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt
250	Agababyan 89	cs,p

$\overline{K}^*(892)^0$ X

80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt
250	Agababyan 89	cs,p

$K_2^*(1430)^0$ X

250	Agababyan 89	cs,p

$\phi(1020)$ X

80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt
250	Agababyan 89	cs,p

p X

200	Brick 89	mult
250	Ajinenko 89E	cs,mult,p,pt

$\Delta(1232\, P_{33})^{++}$ X

250	Ajinenko 89E	cs,mult,p,pt

Λ X

8.2 – 70	Panagiotou 89	p,pol,pt
250	Agababyan 90B	angp,p
	Ajinenko 89E	cs,mult,p,pt

$\overline{\Lambda}$ 0strange X

32.1	Garutchava 87	asym,cs,p

DD < X > $\overline{\Lambda}$

32.1	Garutchava 87B	angp,mass

$\overline{\Lambda}$ X

8.2 – 70	Panagiotou 89	p,pol,pt
250	Ajinenko 89E	cs,mult,p,pt

$\Sigma(1385\, P_{13})^+$ X

250	Ajinenko 89E	cs,mult,p,pt

2charged$^+$ X

250	Aivazyan 91	cor,p

charged$^+$ charged$^-$ X

250	Aivazyan 91	cor,p

2charged$^-$ X

250	Aivazyan 91	cor,p

$2\pi^+$ X

250	Adamus 88	angp,cor,p

$\pi^+ \pi^0$ X

250	Agababyan 89	mass,p

$\pi^+ \pi^-$ X

80	Fiedler 91	mass
140	Fiedler 91	mass

$K^+ p$

$\pi^+ \pi^-$ X

250	Agababyan 89	mass,p

$2\pi^-$ X

250	Adamus 88	angp,cor,p

$\rho(770)^0$ charged X

250	Agababyan 89	cs,p

DD < mult[charged] (neutrals) > K^+

250	Begalli 92	mass,mult

K^+ mult[charged] (neutrals)

250	Adamus 88F	mult

K_S mult[charged] (neutrals)

250	Ajinenko 90D	cs,mult,p,pt

$K^+ \pi^0$ X

250	Agababyan 89	mass,p

$K^+ \pi^-$ X

80	Gebert 92	mass
140	Gebert 92	mass
250	Agababyan 89	mass,p

$K^- \pi^+$ X

80	Gebert 92	mass
140	Gebert 92	mass
250	Agababyan 89	mass,p

$K^+ K^-$ X

80	Gebert 92	mass
140	Gebert 92	mass
250	Agababyan 89	mass,p

$K^*(892)^0$ charged X

250	Agababyan 89	cs,p

$\overline{K}^*(892)^0$ charged X

250	Agababyan 89	cs,p

DD < mult[charged] (neutrals) > p

250	Begalli 92	mass,mult

p mult[charged] (neutrals)

250	Adamus 88F	mult

$\overline{\Lambda}$ strange X

32.1	Garutchava 87	asym,cs,p

2charged (chargeds) (neutrals)

80	Apsimon 90	col,pt
140	Apsimon 90	col,pt

$\pi^+ \pi^0 \pi^-$ X

250	Agababyan 89	mass,p

DD < charged (chargeds) (neutrals) > K^+

250	Begalli 92	mass,mult
	Adamus 88F	cs,p

DD < charged (chargeds) (neutrals) > p

250	Begalli 92	mass,mult
	Adamus 88F	cs,p

p K^+

6	Appel 91	cs
9.9	Baller 88	angp,cs,pt
10	Appel 91	cs
250	Grassler 88	angp,cs

p $K^*(892)^+$

6	Appel 91	cs

$\Delta(1232\, P_{33})^+$ K^+

6	Appel 91	cs

p K^+ $\rho(770)^0$

250	Ajinenko 89B	cs

p K^+ $f_2(1270)$

250	Ajinenko 89B	cs

p $K^*(892)^0$ π^+

250	Ajinenko 89B	cs

p $K_2^*(1430)^0$ π^+

250	Ajinenko 89B	cs

$\Delta(1232\, P_{33})^{++}$ K^+ π^-

250	Ajinenko 89B	cs

$K^+ p$

$p K^+ \pi^+ \pi^-$
250 Atayan 90 angp,cs,mass,p
Ajinenko 89B cs

DD < $K^+ \pi^+ \pi^-$ > p
250 Ajinenko 89B cs,mass,p

DD < $p \pi^+ \pi^-$ > K^+
250 Ajinenko 89B cs,mass,p

$p K^+ 2\pi^+ 2\pi^-$
250 Ajinenko 89B cs

DD < $p 2\pi^+ 2\pi^-$ > K^+
250 Ajinenko 89B cs,mass,p

DD < $K^+ 2\pi^+ 2\pi^-$ > p
250 Ajinenko 89B cs,mass,p

$K^+ n$

mult[charged] (neutrals)
70 Banerjee 88 cs,mult

$p K^0$
? Hyslop 92 angp,cs,pwa

$n K^+$
? Hyslop 92 angp,cs,pwa

$p K^+ \pi^-$
5.98 Svec 91B amp,angp,pwa
Delesquen 89 amp,dme,pol
6 Svec 90 angp,dme,mass,pwa
11.85 Delesquen 89 amp,dme,pol
12 Svec 90 angp,dme,mass,pwa

K^+ nucleus

charged X
100 Geist 91 a-dep,mult
200 Geist 91 a-dep,mult

$J/\psi(1S)$ X
27 – 280 Freudenreich 90 a-dep,p,pt

hypernucleus X
? Bando 90 -

$p K^+$ X
0.3811 Sibirtsev 88B ang,p,pt
0.4873 Berdnikov 91B angp,cs,p
0.5996 Sibirtsev 88B ang,p,pt

$p K^0$ X
0.2507 Berdnikov 92 ang,angp,cs,p

deuteron K^+ (fragts)
0.3811 Berdnikov 91C angp,cs,p
0.58 Berdnikov 91C angp,cs,p

nucleus $p K^+$ X
0.2507 Berdnikov 91 ang,angp,cs,p

K^+ deuteron

X
0.453 Mardor 90 cs
0.507 Mardor 90 cs
0.559 Mardor 90 cs
0.641 Mardor 90 cs
0.703 Mardor 90 cs
0.74 Mardor 90 cs

mult[charged] (neutrals)
70 Banerjee 88 cs,mult

p(spect) X
70 Banerjee 88 angp

3charged (chargeds) (neutrals)
70 Banerjee 88 cs

K^+ deuteron

deuteron K^+
? Hyslop 92 angp,cs,pwa

deuteron $K^*(892)^+$
70 Banerjee 88 cs

$2p K^0$
? Hyslop 92 angp,cs,pwa

$p n K^+$
? Hyslop 92 angp,cs,pwa

p(spect) $p K^+ \pi^-$
5.98 Svec 91B -

K^+ Be

K^0 X
11.2 Akimenko 90B a-dep,angp,p,pt

K_S X
11.2 Akimenko 92 a-dep,angp,p,pt

$K^*(892)^0$ X
11.2 Akimenko 90C a-dep,angp,p,pt

K^+ C

X
0.453 Mardor 90 cs
0.507 Mardor 90 cs
0.559 Mardor 90 cs
0.641 Mardor 90 cs
0.703 Mardor 90 cs
0.74 Mardor 90 cs
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs

inelastic
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs

K^+ Mg

mult[charged] X
200 Brick 89 mult

mult[charged$^-$] X
200 Brick 89 mult

mult[shower] X
200 Brick 89 mult

charged X
200 Brick 89 mult

charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

shower X
200 Brick 90 cor,mult,p
Brick 89 mult

K^0 X + $\overline{K}^0$ X
200 Brick 92 a-dep,cs,mult,p

Λ X
200 Brick 92 a-dep,cs,mult,p

$\overline{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p

mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult

mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult

K^+ Al

X
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs

inelastic
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs

mult[charged] X
250 Ajinenko 90B angp,mult,p
Botterweck 90 mult,p
Ajinenko 89 mult

mult[charged$^+$] X
250 Ajinenko 89 mult

mult[charged$^-$] X
250 Ajinenko 90B angp,mult,p
Ajinenko 89 mult

mult[charged] (neutrals)
250 Botterweck 92 mult

mult[deuteron] X
250 Agababyan 91B angp,mult,p

mult[grey] X
250 Ajinenko 89 mult

charged X
250 Ajinenko 89 mult

charged$^+$ X
250 Agababyan 90C angp,p,pt
Ajinenko 89 mult

charged$^-$ X
250 Agababyan 90C angp,p,pt
Ajinenko 89 mult

K_S X
250 Botterweck 92 a-dep,cs,mult,p,pt

p X
250 Botterweck 92 mult
Ajinenko 89 p

Λ X
250 Botterweck 92 a-dep,cs,mult,p,pt

mult[p] mult[charged] X
250 Agababyan 91B angp,mult,p

mult[deuteron] mult[charged] X
250 Agababyan 91B angp,mult,p

mult[deuteron] mult[p] X
250 Agababyan 91B angp,mult,p

mult[grey] mult[charged] X
250 Ajinenko 90B angp,mult,p

mult[grey] mult[charged$^-$] X
250 Ajinenko 90B angp,mult,p
Ajinenko 89 cor,mult

charged$^-$ mult[charged$^-$] X
250 Agababyan 90C cor,mult,pt

mult[grey] charged$^-$ X
250 Agababyan 90C cor,mult,p
Ajinenko 89 cor,mult

2charged X
250 Botterweck 90 cor,p

2charged$^+$ X
250 Botterweck 90 cor,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

K^+ Al

2charged$^-$ X
250 Botterweck 90 cor,p
$\rho(770)^0$ mult[grey] X
250 Ajinenko 92 mult
K_S mult[charged$^-$] X
250 Botterweck 92 mult
2K_S X
250 Botterweck 92 cs
$K^*(892)^0$ mult[grey] X
250 Ajinenko 92 mult
$\bar{K}^*(892)^0$ mult[grey] X
250 Ajinenko 92 mult
Λ mult[charged$^-$] X
250 Botterweck 92 mult
Λ K_S X
250 Botterweck 92 cs
2Λ X
250 Botterweck 92 cs
$\pi^+\pi^-$ mult[grey] X
250 Ajinenko 92 mass,mult
(K_S's) K_S mult[charged] (neutrals)
250 Botterweck 92 mult
mult[p] K_S charged$^-$ X
250 Botterweck 92 mult
$K^+\pi^-$ mult[grey] X
250 Ajinenko 92 mass,mult
$K^-\pi^+$ mult[grey] X
250 Ajinenko 92 mass,mult
p (K_S's) K_S X
250 Botterweck 92 mult
Λ (Λ's) mult[charged] (neutrals)
250 Botterweck 92 mult
mult[p] Λ charged$^-$ X
250 Botterweck 92 mult
p Λ (Λ's) X
250 Botterweck 92 mult

K^+ Ti

X
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs
inelastic
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs

K^+ Cu

K^0 X
11.2 Akimenko 90B a-dep,angp,p,pt
K_S X
11.2 Akimenko 92 a-dep,angp,p,pt
$K^*(892)^0$ X
11.2 Akimenko 90C a-dep,angp,p,pt

K^+ Ag

mult[charged] X
200 Brick 89 mult
mult[charged$^-$] X
200 Brick 89 mult
mult[shower] X
200 Brick 89 mult
charged X
200 Brick 89 mult
charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult
250 Agababyan 90C angp,p,pt

K^+ Ag

charged$^-$ X
Brick 89 mult
shower X
200 Brick 90 cor,mult,p
Brick 89 mult
K^0 X + $\bar{K}^0$ X
200 Brick 92 a-dep,cs,mult,p
Λ X
200 Brick 92 a-dep,cs,mult,p
$\bar{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p
mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult
mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult
mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult

K^+ Cd

X
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs
inelastic
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs

K^+ Xe

K^+ X
0.56 - 0.81 Barmin 89B –

K^+ Au

mult[charged] X
200 Brick 89 mult
250 Ajinenko 90B angp,mult,p
Botterweck 90 mult,p
Ajinenko 89 mult
mult[charged$^+$] X
250 Ajinenko 89 mult
mult[charged$^-$] X
200 Brick 89 mult
250 Ajinenko 90B angp,mult,p
Ajinenko 89 mult
mult[charged] (neutrals)
250 Botterweck 92 mult
mult[deuteron] X
250 Agababyan 91B angp,mult,p
mult[shower] X
200 Brick 89 mult
mult[grey] X
250 Ajinenko 89 mult
charged X
200 Brick 89 mult
250 Ajinenko 89 mult
charged$^+$ X
250 Agababyan 90C angp,p,pt
Ajinenko 89 mult
charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult
250 Agababyan 90C angp,p,pt

K^+ Au

charged$^-$ X
Ajinenko 89 mult
shower X
200 Brick 90 cor,mult,p
Brick 89 mult
K^0 X + $\bar{K}^0$ X
200 Brick 92 a-dep,cs,mult,p
K_S X
250 Botterweck 92 a-dep,cs,mult,p,pt
p X
250 Botterweck 92 mult
Ajinenko 89 p
Λ X
200 Brick 92 a-dep,cs,mult,p
250 Botterweck 92 a-dep,cs,mult,p,pt
$\bar{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p
mult[p] mult[charged] X
250 Agababyan 91B angp,mult,p
mult[deuteron] mult[charged] X
250 Agababyan 91B angp,mult,p
mult[deuteron] mult[p] X
250 Agababyan 91B angp,mult,p
mult[grey] mult[charged] X
250 Ajinenko 90B angp,mult,p
mult[grey] mult[charged$^-$] X
250 Ajinenko 90B angp,mult,p
Ajinenko 89 cor,mult
charged$^-$ mult[charged$^-$] X
250 Agababyan 90C cor,mult,pt
mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult
250 Agababyan 90C cor,mult,p
Ajinenko 89 cor,mult
2charged X
250 Botterweck 90 cor,p
2charged$^+$ X
250 Botterweck 90 cor,p
2charged$^-$ X
250 Botterweck 90 cor,p
mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult
K_S mult[charged$^-$] X
250 Botterweck 92 mult
2K_S X
250 Botterweck 92 cs
Λ mult[charged$^-$] X
250 Botterweck 92 mult
Λ K_S X
250 Botterweck 92 cs
2Λ X
250 Botterweck 92 cs
mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult
(K_S's) K_S mult[charged] (neutrals)
250 Botterweck 92 mult
mult[p] K_S charged$^-$ X
250 Botterweck 92 mult

K^+ Au

p (K_S's) K_S X

250	Botterweck 92	mult

Λ (Λ's) mult[charged] (neutrals)

250	Botterweck 92	mult

mult[p] Λ charged$^-$ X

250	Botterweck 92	mult

p Λ (Λ's) X

250	Botterweck 92	mult

K^+ Pb

hadron X

200	Akesson 88B	angp,et

K^0 X

11.2	Akimenko 90B	a-dep,angp,p,pt

$K^*(892)^0$ X

11.2	Akimenko 90C	a-dep,angp,p,pt

$K^- e^-$

$K^- e^-$

250	Buenerd 92	angp

K^- nucleon

hyperon $f_2'(1525)$

32.5	Landsberg 90B	–

hyperon $C(1480)$

32.5	Landsberg 90B	cs

hyperon $\phi(1020)$ π^0

32.5	Landsberg 90B	ang,mass

hyperon K^+ K^- γ

32.5	Landsberg 90B	ang,mass

$K^- p$

mult[charged] X

110	Tannenbaum 89	p,pt

charged X

80 – 140	Apsimon 89	angp,cs,pt
110	Tannenbaum 89	p,pt

hadron X

80	Hoeger 90	p,pt
140	Hoeger 90	p,pt

π^0 X

40	Amaglobeli 89	asym,pt
	Apokin 89	asym,pt
	Nurushev 89	pt
	Apokin 88B	angp,asym,p
80 – 140	Apsimon 91	p,pt

η X

80	Apsimon 92	p,pt
140	Apsimon 92	p,pt

$\rho(770)^0$ X

80	Hofmann 91	p,pt
140	Apsimon 91B	angp,cs,p,pt
	Hofmann 91	p,pt

$f_2(1270)$ X

80	Fiedler 91	cs,p,pt
140	Fiedler 91	cs,p,pt

$f_2'(1525)$ X

40	Toki 88B	–

K_S X

3.93 – 110	Chliapnikov 90	cs

$K^*(892)^0$ X

80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt

$\overline{K}^*(892)^0$ X

3.93 – 110	Chliapnikov 90	cs
80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt

$K^- p$

$K^*(892)^-$ X

3.93 – 110	Chliapnikov 90	cs

$\phi(1020)$ X

80	Gebert 92	cs,p,pt
140	Gebert 92	cs,p,pt

DC X

200	Appel 92	cs,p,pt
230	Appel 92	cs,p,pt

$D_S^\pm$ X

230	Appel 92	cs

Λ X

3.93 – 176	Panagiotou 89	p,pol,pt
8.25	Yokosawa 90B	cs,mass,p,pol,pt
12	Yokosawa 90B	p,pol,pt
16	Yokosawa 90B	p,pol,pt
176	Yokosawa 90B	pol

Λ (π's)

3.93 – 176	Panagiotou 89	p,pol,pt

Σ^0 X

8.25	Yokosawa 90B	cs,mass,p,pol,pt

$\Omega(2250)^-$ X

11	Aston 89C	cs

$\Omega(2470)^-$ X

11	Aston 89C	cs

Ω^*(unspec)$^-$ X

11	Aston 88E	cs

Λ_c X

230	Appel 92	cs

$\Xi_c(2460)^+$ X

230	Appel 92	cs

$\Xi_c(2460)^0$ X

230	Appel 92	cs

$\mu^- \mu^+$ X

150	Freudenreich 90	mass,p

$\pi^+ \pi^-$ X

80	Fiedler 91	mass
140	Fiedler 91	mass

$K^+ \pi^-$ X

80	Gebert 92	mass
140	Gebert 92	mass

$K^- \pi^+$ X

80	Gebert 92	mass
140	Gebert 92	mass

$K^+ K^-$ X

80	Gebert 92	mass
140	Gebert 92	mass

$2K_S$ X

40	Toki 88B	mass

Λ charged X

8.25	Yokosawa 90B	cs,mass,p,pol,pt

Σ^0 charged X

8.25	Yokosawa 90B	cs,mass,p,pol,pt

$\Xi(1530\, P_{13})^0$ K^- X

11	Aston 89C	mass

2charged (chargeds) (neutrals)

80	Apsimon 90	col,pt
140	Apsimon 90	col,pt

Λ K $\overline{K}$ (π's)

3.93 – 176	Panagiotou 89	p,pol,pt

Ξ^- K^- π^+ X

11	Aston 89C	mass

Ω^- π^+ π^- X

11	Aston 89C	mass
	Aston 88E	mass

Λ K^- π^+ π^- X

11	Aston 89C	mass

p K^-

6	Appel 91	cs

K^- p

p K^-

9.9	Baller 88	angp,cs,pt
10	Appel 91	cs
40	Antipov 87B	angp,cs

p $K^*(892)^-$

6	Appel 91	cs
11	Bird 88	–

n $\overline{K}^*(892)^0$

11	Aston 89B	–
	Aston 88B	mass,pwa
	Aston 88I	–

n $\overline{K}_1(1400)^0$

11	Aston 88I	–

p $K^*(1410)^-$

11	Aston 92	–
	Bird 88	–

n $\overline{K}^*(1370)^0$

11	Aston 92	–
	Aston 88B	mass,pwa
	Aston 88I	–

p $K_0^*(1430)^-$

11	Aston 91B	–

n $\overline{K}_0^*(1430)^0$

11	Aston 91B	–
	Aston 88B	mass,pwa
	Aston 88I	–

p $K_2^*(1430)^-$

11	Aston 92B	–
	Aston 91C	–
	Aston 89B	–
	Aston 88G	cs
	Aston 88I	–
	Bird 88	–

n $\overline{K}_2^*(1430)^0$

11	Aston 91B	–
	Aston 89B	–
	Aston 88B	mass,pwa
	Aston 88I	–

p $K^*(1680)^-$

11	Aston 92	–
	Bird 88	–

n $\overline{K}^*(1680)^0$

11	Aston 92	–
	Aston 88B	mass,pwa
	Aston 88I	–

p $K_2(1770)^-$

11	Aston 92B	–

p $K_3^*(1780)^-$

11	Aston 92B	–
	Aston 91C	–
	Aston 89B	–
	Aston 88G	cs
	Aston 88I	–
	Bird 88	–

n $\overline{K}_3^*(1780)^0$

11	Aston 89B	–
	Aston 88B	mass,pwa
	Aston 88I	–

p $K_0^*(1950)^-$

11	Bird 88	–

n $\overline{K}_0^*(1950)^0$

11	Aston 88B	mass,pwa
	Aston 88I	–

n $\overline{K}_2^*(1980)^0$

11	Aston 88I	–

n $\overline{K}_4^*(2045)^0$

11	Aston 89B	–
	Aston 88B	mass,pwa
	Aston 88I	–

n $\overline{K}_5^*(2380)^0$

11	Aston 89B	–
	Aston 88B	mass,pwa
	Aston 88I	–

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$K^- p$

$n \overline{K}^*(\text{unspec})^0$

11	Aston 91B	–

$\Lambda \gamma$

0	Whitehouse 89	cs

Λ meson^0

11	Aston 92	–
	Aston 91	–
	Dunwoodie 91	mass,pwa
	Aston 90	cs
	Aston 90B	cs
	Aston 89	mass
	Toki 88B	–
32.5	Landsberg 88	angp,cs

$\Lambda \pi^0$

0	Noble 92	cs

$\Lambda \rho(770)^0$

11	Aston 91	–
	Aston 90C	–

$\Lambda \eta'(958)$

11	Aston 90	cs
	Bienz 90	angp,cs

$\Lambda f_0(975)$

11	Aston 88I	–
	Aston 88J	–

$\Lambda f_2(1270)$

11	Aston 91	–
	Aston 90C	–

$\Lambda h_1(1380)$

11	Aston 88	–
	Aston 88I	–
	Aston 88J	–
	Augustin 88C	–

$\Lambda \rho(1450)^0$

11	Aston 91C	–

$\Lambda f_1(1510)$

11	Aston 88	–
	Aston 88I	–
	Aston 88J	–
	Augustin 88C	–
	Toki 88B	–

$\Lambda f_0(1525)$

11	Aston 88I	–
	Aston 88J	–

$\Lambda f_2'(1525) + \Sigma^0 f_2'(1525)$

40	Bolonkin 88	cs

$\Lambda f_2'(1525)$

11	Fujii 90	cs
	Aston 89	cs
	Aston 88C	cs
	Aston 88I	–
	Aston 88J	–
	Augustin 88C	–
	Toki 88B	–

$\Lambda f_2(1720)$

11	Aston 88H	cs
	Hitlin 88	–

$\Lambda X(2200)$

11	Toki 88B	–

$\Lambda f_4(2220)$

11	Fujii 90	cs
	Aston 89	–
	Aston 88C	–
	Aston 88F	–
	Aston 88I	–
	Aston 88J	–

$\Lambda \phi(1020)$

11	Aston 88I	–
	Aston 88J	–

$\Lambda \phi_3(1850)$

11	Aston 89	–
	Aston 88D	–
	Aston 88I	–
	Aston 88J	–

$\Lambda C(1480)^0$

32.5	Landsberg 88	angp,cs

$K^- p$

$\Lambda C(1480)^0$

	Landsberg 90	angp,cs

$\Lambda(1670\, S_{01})\, \eta$

11	Bienz 90	cs

$\Sigma^0 \gamma$

0	Whitehouse 89	cs

$\Sigma^+ \pi^-$

0	Hessey 89	cs
6	Appel 91	cs

$\Sigma^- \pi^+$

0.68	Gall 88	–
	Hertzog 88	–
6	Appel 91	cs

$\Sigma(1385\, P_{13})^+ a_0(980)^-$

11	Bienz 90	cs

$\Sigma(1385\, P_{13})^- a_0(980)^+$

11	Bienz 90	cs

$Y^*(\text{unspec})$ meson^0

40	Bolonkin 89	cs

$Y^*(\text{unspec})\, \pi^+$

6.5	Landsberg 90	angp
8.25	Landsberg 90	angp

$Y^*(\text{unspec})^0 f_2'(1525)$

40	Bolonkin 88	cs

$Y^*(\text{unspec})^0 f_2(1720)$

40	Bolonkin 88	cs

$\Xi^- K^+$

1.66	Iijima 92	cs

$\Xi(1530\, P_{13})^- K^+$

1.66	Iijima 92	cs

$\Lambda (K K)_{L=0}$

11	Aston 88H	cs

$p \overline{K}^0 \pi^-$

11	Aston 92	mass,pwa
	Aston 91B	mass,pwa
	Aston 89B	mass,pwa
	Bird 88	mass,pwa

$n K^- \pi^+$

11	Aston 92	mass,pwa
	Aston 91B	mass,pwa
	Aston 89B	mass,pwa
	Aston 88B	mass,pwa
	Aston 88I	mass,pwa

$p K_S \pi^-$

11	Bird 88	mass,pwa

$n K_S \pi^0$

40	Barkov 90	mass

$p K^- \eta$

11	Aston 89B	–
	Aston 88G	mass,pwa
	Aston 88I	mass,pwa

$p K^- \omega(783)$

11	Aston 92B	mass,pwa
	Aston 91C	pwa
	Aston 89B	–
	Aston 88G	–

hyperon $2K_S$

40	Bolonkin 88	mass,pwa

$\Lambda \pi^+ \pi^-$

11	Aston 92	mass,pwa
	Aston 91	mass,pwa
	Aston 91C	mass
	Dunwoodie 91	mass,pwa
	Aston 90C	mass

$\Lambda \rho(770)^0 \eta$

11	Bienz 90	cs

$\Lambda a_0(980)^- \pi^+$

11	Aston 90	cs
	Aston 90B	cs

$\Lambda K \overline{K}$

11	Toki 88B	mass

$K^- p$

$\Lambda K^+ K^-$

11	Aston 89	mass,pwa
	Aston 88D	mass,pwa
	Aston 88F	angp,mass,pwa
	Aston 88H	mass
	Aston 88I	mass,pwa
	Aston 88J	mass,pwa
	Augustin 88C	mass,pwa
32.5	Landsberg 88	ang,angp,mass

$\Lambda 2K_S$

11	Aston 89	mass
	Aston 88C	mass
	Aston 88F	mass
	Aston 88H	mass
	Aston 88I	mass,pwa
	Aston 88J	mass,pwa

$\Lambda K^*(892)^0 \overline{K}^0$

11	Aston 89	cs,mass,pwa

$\Lambda K^*(892)^0 K_S + \Lambda K^*(892)^- K^+$

11	Toki 88B	mass

$\Lambda \overline{K}^*(892)^0 K^0$

11	Aston 89	cs,mass,pwa

$\Lambda K^*(892)^0 \overline{K}^*(892)^0$

11	Aston 90	cs,mass
	Aston 90B	mass,pwa
	Bienz 90	angp,cs,mass,pwa

$\Lambda K^*(892)^+ K^*(892)^-$

11	Aston 90	cs,mass
	Aston 90B	mass,pwa

$\Lambda \phi(1020)\, \rho(770)^0$

11	Bienz 90	cs,mass

$\Lambda 2\phi(1020)$

11	Aston 90	cs,mass
	Aston 90B	mass,pwa
	Bienz 90	cs,mass,pwa

$\Sigma(1385\, P_{13})^+ K_S K^-$

11	Bienz 90	cs

$\Sigma(1385\, P_{13})^+ \phi(1020)\, \pi^-$

11	Bienz 90	cs

$\Sigma(1385\, P_{13})^- \phi(1020)\, \pi^+$

11	Bienz 90	cs

$Y^*(\text{unspec})^0 K_S K_L$

40	Barkov 90	mass,p

$\Lambda \overline{\Lambda}\, Y^*(\text{unspec})$

40	Bolonkin 89	ang,mass

$n\, 3\gamma$

0	Noble 92	cs,mass

$n \overline{K}^0 \pi^+ \pi^-$

11	Aston 92	mass,pwa
	Aston 91B	mass,pwa
	Aston 89B	mass,pwa
	Aston 88I	mass,pwa

$\Lambda \eta \pi^+ \pi^-$

11	Aston 90	cs,mass
	Aston 90B	mass
	Bienz 90	cs,mass,pwa

$\Lambda K^+ K^- \gamma$

32.5	Landsberg 88	ang,angp,mass

$\Lambda K^+ \overline{K}^0 \pi^-$

11	Aston 89	mass,pwa

$\Lambda K^+ K^- \pi^0$

32.5	Landsberg 88	ang,angp,mass

$\Lambda K^0 K^- \pi^+$

11	Aston 89	mass,pwa

$\Lambda K^+ K_S \pi^- + \Lambda K_S K^- \pi^+$

11	Aston 88H	mass

$\Lambda K^+ K_S \pi^-$

11	Aston 89	mass,pwa

$K^- p$

$\Lambda K^+ K_S \pi^-$

	Aston 88	mass,pwa
	Aston 88D	mass,pwa
	Aston 88I	mass,pwa
	Aston 88J	mass,pwa
	Augustin 88C	mass,pwa
	Toki 88B	mass

$\Lambda K_S K^- \pi^+$

11	Aston 90	cs,mass
	Bienz 90	cs,mass
	Aston 89	mass,pwa
	Aston 88	mass,pwa
	Aston 88D	mass,pwa
	Aston 88I	mass,pwa
	Aston 88J	mass,pwa
	Augustin 88C	mass,pwa

$\Lambda \phi(1020) \pi^+ \pi^-$

11	Bienz 90	cs,mass

$\Lambda K^+ K^- \phi(1020)$

11	Bienz 90	cs,mass

$p K^- \pi^+ \pi^0 \pi^-$

11	Aston 92B	mass
	Aston 91C	mass
	Aston 89B	mass,pwa
	Aston 88G	cs,mass
	Aston 88I	cs,mass

$\Lambda K^+ K^- 2\gamma$

32.5	Landsberg 88	ang,angp,mass

$\Lambda K^+ K^- \pi^+ \pi^-$

11	Aston 90B	mass
	Bienz 90	cs,mass

$\Lambda 2K_S \pi^+ \pi^-$

11	Aston 90B	mass

$\Lambda 2K^+ 2K^-$

11	Aston 90B	mass
	Bienz 90	cs,mass

$p \bar{p} Y^*$(unspec) $\pi^+ \pi^-$

40	Bolonkin 89	mass

$\Lambda 2\pi^+ \pi^0 2\pi^-$

11	Aston 90B	mass
	Bienz 90	cs,mass

$K^- n$

hyperon $f_1(1420)$

32.5	Bityukov 87	cs

hyperon $\eta(1440)$

32.5	Bityukov 87	cs

hyperon $f_1(1510)$

32.5	Bityukov 87	cs

hyperon $K^+ K^- \gamma$

32.5	Bityukov 87	mass

K^- nucleus

mult[charged$^+$] X

40	Boos 88	a-dep,mult

mult[charged$^-$] X

40	Boos 88	a-dep,mult

mult[grey] X

40	Boos 88	a-dep,mult

charged$^+$ X

40	Boos 88	a-dep,mult

charged$^-$ X

40	Boos 88	a-dep,mult

X star

40	Boos 88	a-dep,cs

grey X

40	Boos 88	a-dep,mult

K^+ X

1.66	Iijima 92	a-dep,cs,p
	Aoki 90	p

K^- nucleus

$J/\psi(1S)$ X

27 – 280	Freudenreich 90	a-dep,p,pt

Ξ^- X

1.5	May 89B	–
4	May 89B	–

hypernucleus X

?	Bando 90	–

mult[charged$^+$] X star

40	Boos 88	a-dep,mult

mult[charged$^-$] X star

40	Boos 88	a-dep,mult

mult[grey] X star

40	Boos 88	a-dep,mult

charged$^+$ X star

40	Boos 88	a-dep,mult

charged$^-$ X star

40	Boos 88	a-dep,mult

grey X star

40	Boos 88	a-dep,mult

$\Xi^- K^+$ X

1.66	Aoki 91	p
	Aoki 91D	p
	Aoki 91E	p

$^4H_S \pi^-$ X

0	Tamura 88	a-dep

$^4H_S \pi^- \pi$ X

0	Tamura 88	a-dep

nucleus $K_1(1270)^-$

38	Efendiev 89	cs

nucleus $K_1(1400)^-$

38	Efendiev 89	cs

nucleus $K(1460)^-$

38	Efendiev 89	cs

hyperon $K^+ K^- \pi^0$

32.5	Landsberg 90B	ang,mass

K^- deuteron

π^0 X

40	Amaglobeli 89	asym,pt
	Apokin 89	asym,pt
	Nurushev 89	pt
	Apokin 88C	angp,asym,p

p X

40	Apokin 92	asym

K^- ^{4}He

μ^- X

0	Yamazaki 89	p

π^+ X

0	Hayano 91	p
	Hayano 88	p

π^- X

0	Hayano 91	p
	Yamazaki 89	p
	Hayano 88	p

hypernucleus π^+

0	Hayano 89	p

hypernucleus π^-

0	Hayano 88	p

$^4He_S \pi^-$

0	Hayano 89	p

^{4}He $\mu^- \bar{\nu}_\mu$

0	Yamazaki 89	–

^{3}He $\Lambda \pi^-$

0 – 0.3	Dalitz 90	p

^{3}He $\Sigma^0 \pi^-$

0 – 0.3	Dalitz 90	p

K^- ^{4}He

^{4}He $\pi^0 \pi^-$

0	Yamazaki 89	–

deuteron $n \Sigma^+ \pi^-$

0 – 0.3	Dalitz 90	p

deuteron $n \Sigma^- \pi^+$

0 – 0.3	Dalitz 90	p

$p\, 2n\, \Sigma^+ \pi^-$

0 – 0.3	Dalitz 90	p

$p\, 2n\, \Sigma^- \pi^+$

0 – 0.3	Dalitz 90	p

K^- Li

mult[charged$^+$] X

40	Boos 88	a-dep,mult

mult[charged$^-$] X

40	Boos 88	a-dep,mult

mult[grey] X

40	Boos 88	a-dep,mult

charged$^+$ X

40	Boos 88	a-dep,mult

charged$^-$ X

40	Boos 88	a-dep,mult

X star

40	Boos 88	a-dep,cs

grey X

40	Boos 88	a-dep,mult

mult[charged$^+$] X star

40	Boos 88	a-dep,mult

mult[charged$^-$] X star

40	Boos 88	a-dep,mult

mult[grey] X star

40	Boos 88	a-dep,mult

charged$^+$ X star

40	Boos 88	a-dep,mult

charged$^-$ X star

40	Boos 88	a-dep,mult

grey X star

40	Boos	a-dep,mult

K^- ^{7}Li

π^- X

0	Tamura 88	p

hypernucleus π^+

0.715	Tang 88	angp

K^- Be

p X

40	Antipov 92	a-dep,p
	Antipov 90C	a-dep,angp
	Antipov 87	p

DD < $K^- \pi^+ \pi^-$ > Be

40	Antipov 89C	a-dep,angp,cs,mass

Be $K^- \pi^+ \pi^-$

38	Efendiev 89	mass,pwa

K^- ^{9}Be

π^- X

0	Tamura 88	p

K^- C

X

1.6	Afanasyev 88	a-dep,angp,cs
1.8	Afanasyev 88	a-dep,angp,cs

inelastic

1.6	Afanasyev 88	a-dep,angp,cs
1.8	Afanasyev 88	a-dep,angp,cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

K^- C

mult[charged$^+$] X
40 Boos 88 a-dep,mult
mult[charged$^-$] X
40 Boos 88 a-dep,mult
mult[grey] X
40 Boos 88 a-dep,mult
charged$^+$ X
40 Boos 88 a-dep,mult
charged$^-$ X
40 Boos 88 a-dep,mult
X star
40 Boos 88 a-dep,cs
grey X
40 Boos 88 a-dep,mult
K^+ X
1.66 Iijima 92 a-dep,cs,p
mult[charged$^+$] X star
40 Boos 88 a-dep,mult
mult[charged$^-$] X star
40 Boos 88 a-dep,mult
mult[grey] X star
40 Boos 88 a-dep,mult
charged$^+$ X star
40 Boos 88 a-dep,mult
charged$^-$ X star
40 Boos 88 a-dep,mult
grey X star
40 Boos 88 a-dep,mult

K^- ^{12}C

γ X
? Denisov 91 –
π^- X
0 Tamura 88 p
π^0 π^- X
0 Sakaguchi 90 p
Sakaguchi 89 p
hypernucleus π^+
0.715 Tang 88 angp
C_S π^-
0 Sakaguchi 90 –
Sakaguchi 89 –
C_S^* π^-
0 Sakaguchi 90 –
^{11}Bor$_S$ p π^-
0 Sakaguchi 90 –
Sakaguchi 89 –

K^- ^{16}O

π^- X
0 Tamura 88 p

K^- Al

X
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs
inelastic
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs
K^+ X
1.66 Iijima 92 a-dep,cs,p
p X
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp
Al K^- π^+ π^-
38 Efendiev 89 mass,pwa

K^- Si

$K^*(892)^0$ X
200 Fawcett 90 angp,cs,p,pt
Fawcett 90B p
$\bar{K}^*(892)^0$ X
200 Fawcett 90 angp,cs,p,pt
Fawcett 90B p
D^+ X
200 Barlag 88 cs,p,pt
D^0 X
200 Barlag 88 cs,p,pt
$\bar{D}^0$ X
200 Barlag 88 cs,p,pt
D^- X
200 Barlag 88 cs,p,pt
$D^*(2010)^+$ X
200 Barlag 88 cs,p,pt
$D^*(2010)^-$ X
200 Barlag 88 cs,p,pt
D_S^+ X
200 Barlag 88 cs,p,pt
D_S^- X
200 Barlag 88 cs,p,pt
K^+ π^- X
200 Fawcett 90 mass
K^- π^+ X
200 Fawcett 90 mass
K^+ K^- $2\pi^+$ $2\pi^-$ X
200 Barlag 88 mass

K^- S

mult[charged$^+$] X
40 Boos 88 a-dep,mult
mult[charged$^-$] X
40 Boos 88 a-dep,mult
mult[grey] X
40 Boos 88 a-dep,mult
charged$^+$ X
40 Boos 88 a-dep,mult
charged$^-$ X
40 Boos 88 a-dep,mult
X star
40 Boos 88 a-dep,cs
grey X
40 Boos 88 a-dep,mult
mult[charged$^+$] X star
40 Boos 88 a-dep,mult
mult[charged$^-$] X star
40 Boos 88 a-dep,mult
mult[grey] X star
40 Boos 88 a-dep,mult
charged$^+$ X star
40 Boos 88 a-dep,mult
charged$^-$ X star
40 Boos 88 a-dep,mult
grey X star
40 Boos 88 a-dep,mult

K^- ^{40}Ca

π^- X
0 Tamura 88 p

K^- Ti

X
1.6 Afanasyev 88 a-dep,angp,cs
1.8 Afanasyev 88 a-dep,angp,cs
inelastic
1.6 Afanasyev 88 a-dep,angp,cs

K^- Ti

inelastic
1.8 Afanasyev 88 a-dep,angp,cs

K^- Cu

mult[charged$^+$] X
40 Boos 88 a-dep,mult
mult[charged$^-$] X
40 Boos 88 a-dep,mult
mult[grey] X
40 Boos 88 a-dep,mult
charged$^+$ X
40 Boos 88 a-dep,mult
charged$^-$ X
40 Boos 88 a-dep,mult
X star
40 Boos 88 a-dep,cs
grey X
40 Boos 88 a-dep,mult
K^+ X
1.66 Iijima 92 a-dep,cs,p
D^+ X
230 Spiegel 91 p,pt
Barlag 90E angp,cs,p
D^0 X
230 Spiegel 91 p,pt
Barlag 90E angp,cs,p
$D^*(2010)^+$ X
230 Barlag 90E angp,cs,p
D_S^+ X
230 Barlag 90E angp,cs,p
p X
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp
Λ_c^+ X
230 Barlag 90D p
$\bar{\Lambda}_c^-$ X
230 Barlag 90D p
mult[charged$^+$] X star
40 Boos 88 a-dep,mult
mult[charged$^-$] X star
40 Boos 88 a-dep,mult
mult[grey] X star
40 Boos 88 a-dep,mult
charged$^+$ X star
40 Boos 88 a-dep,mult
charged$^-$ X star
40 Boos 88 a-dep,mult
grey X star
40 Boos 88 a-dep,mult
K^- π^+ X
230 Barlag 90E angp,mass,p
K^- $2\pi^+$ X
230 Barlag 90E angp,mass,p
K^+ K^- π^+ X
230 Barlag 90E angp,mass,p
p K^- π^+ X
230 Barlag 90D angp,mass,p
$\bar{p}$ K^+ π^- X
230 Barlag 90D angp,mass,p
K^- $2\pi^+$ π^- X
230 Barlag 90E angp,mass,p
K^- $3\pi^+$ π^- X
230 Barlag 90E angp,mass,p
DD < K^- π^+ π^- > Cu
40 Antipov 89C a-dep,angp,cs,mass

K^- Cu

Cu K^- π^+ π^-			
38	Efendiev 89	mass,pwa	

K^- Ag

K^+ X			
1.66	Iijima 92	a-dep,cs,p	
Ag K^- π^+ π^-			
38	Efendiev 89	mass,pwa	
DD < K^- π^+ π^- > Ag			
40	Antipov 89C	a-dep,angp,cs,mass	

K^- Cd

X			
1.6	Afanasyev 88	a-dep,angp,cs	
1.8	Afanasyev 88	a-dep,angp,cs	
inelastic			
1.6	Afanasyev 88	a-dep,angp,cs	
1.8	Afanasyev 88	a-dep,angp,cs	

K^- Wt

γ X			
0	Gall 88	p	
Ξ^0 X			
6	Bensinger 88	-	
Λ π^0 X			
6	Bensinger 88	cs,mass	
Λ 2γ X			
6	Bensinger 88	cs,mass	

K^- Pt

μ^- μ^+ X			
150	Freudenreich 90	mass,p	

K^- Pb

mult[charged$^+$] X			
40	Boos 88	a-dep,mult	
mult[charged$^-$] X			
40	Boos 88	a-dep,mult	
mult[grey] X			
40	Boos 88	a-dep,mult	
charged$^+$ X			
40	Boos 88	a-dep,mult	
charged$^-$ X			
40	Boos 88	a-dep,mult	
X star			
40	Boos 88	a-dep,cs	
grey X			
40	Boos 88	a-dep,mult	
γ X			
0	Gall 88	p	
K^+ X			
1.66	Iijima 92	a-dep,cs,p	
p X			
40	Antipov 92	a-dep,p	
	Antipov 90C	a-dep,angp	
mult[charged$^+$] X star			
40	Boos 88	a-dep,mult	
mult[charged$^-$] X star			
40	Boos 88	a-dep,mult	
mult[grey] X star			
40	Boos 88	a-dep,mult	
charged$^+$ X star			
40	Boos 88	a-dep,mult	
charged$^-$ X star			
40	Boos 88	a-dep,mult	

K^- Pb

grey X star			
40	Boos 88	a-dep,mult	
DD < K^- π^+ π^- > Pb			
40	Antipov 89C	a-dep,angp,cs,mass	
Pb K^- π^+ π^-			
38	Efendiev 89	mass,pwa	

K_L e^-

K_S e^-			
?	Buenerd 92	angp	

K_L p

n K^+			
?	Hyslop 92	angp,cs,pwa	

K_L nucleus

nucleus K_S			
50 – 200	Ramberg 92B	angp	
70	Hsiung 92	amp	
	Barker 91	amp	
	Kleinknecht 91	amp	
	Winstein 91	amp	

K_L deuteron

deuteron e^- e^+ X			
10 – 50	Silvestrov 89	mass	
deuteron μ^- e^+ X +			
deuteron μ^+ e^- X			
10 – 50	Silvestrov 89	mass	
deuteron μ^- μ^+ X			
10 – 50	Silvestrov 89	mass	

K_L Cu

μ^- μ^+ X			
4 – 20	Silvestrov 89	mass	
Cu K_S			
1.6 – 7.4	Balats 87	p,pt	

pomeron pomeron

$\pi^\pm$ X			
(0.3 – 3)	Breakstone 88C	-	
$f_2(1270)$			
?	Breakstone 90C	-	
π^+ π^-			
(0.3 – 5)	Breakstone 89B	cs	
	Breakstone 88C	-	
K^+ K^-			
(0.3 – 5)	Breakstone 89B	cs	
p $\bar{p}$			
(0.3 – 5)	Breakstone 89B	cs	
2π^+ 2π^-			
(0.3 – 5)	Breakstone 89B	cs	
K^+ K^- π^+ π^-			
(0.3 – 5)	Breakstone 89B	cs	
p $\bar{p}$ π^+ π^-			
(0.3 – 5)	Breakstone 89B	cs	
3π^+ 3π^-			
(0.3 – 5)	Breakstone 89B	cs	

nucleon nucleon

π^- X			
4.2	Simic 90	angp,mult,p,pt	
charm X			
200.9	Aoki 89	cs	
dibaryon($S = -2$) X			
?	Ejiri 91B	-	
dibaryon			
(1.88 – 3.02)	Strakovskii 91	-	
ℓ^+ ℓ^-			
?	Berger 91	-	

nucleon nucleon

2π			
?	Berger 91	-	
2nucleon			
(1.88 – 3.02)	Strakovskii 91	pwa	

nucleon nucleus

inelastic			
4.5 – 200	Schmidt 92B	a-dep,cs	
mult[charged] (neutrals)			
14.6 – 200	Schmidt 92B	a-dep,et,mult,p	
charged X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
γ X			
14.6 – 200	Schmidt 92B	a-dep,pt	
π^+ X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
π^0 X			
14.6 – 200	Schmidt 92B	a-dep,pt	
π^- X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
η X			
14.6 – 200	Schmidt 92B	a-dep,pt	
$\rho(770)^0$ X			
14.6 – 200	Schmidt 92B	a-dep,pt	
$\omega(783)$ X			
14.6 – 200	Schmidt 92B	a-dep,pt	
K^+ X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
K^- X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
K_S X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
$\phi(1020)$ X			
14.6 – 200	Schmidt 92B	a-dep,pt	
$J/\psi(1S)$ X			
14.6 – 200	Schmidt 92B	a-dep,pt	
p X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
Λ X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
$\bar{\Lambda}$ X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
Ξ^- X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
$\bar{\Xi}^+$ X			
4.5 – 200	Schmidt 92B	a-dep,cs,mult,p,pt	
μ^- μ^+ X			
14.6 – 200	Schmidt 92B	a-dep,mass,pt	
2charged X			
4.5 – 200	Schmidt 92B	cor	
2π^- X			
4.5 – 200	Schmidt 92B	cor	

p nucleon

shower X			
800	Abduzhamilov 89	mult,p	
γ X			
300	Artykov 90	pt	
	Yuldashev 90C	mult,p,pt	

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p nucleon

monopole X

400	Virodov 89	cs

π^0 X

300	Yuldashev 90C	mult,p,pt

η X

300	Yuldashev 90C	mult,p,pt

K_S X

300	Artykov 90B	cs,mult
	Yuldashev 90B	a-dep,cs,mult,p,pt

charm X

70	Belikov 89	cs

D^+ X

800	Spiegel 91	cs

D^0 X

800	Spiegel 91	cs

$\Upsilon(1S)$ X

(20 – 63)	Freudenreich 90	p
(39)	Albrow 88	mass

$\Upsilon(2S)$ X

(39)	Albrow 88	mass

$\Upsilon(3S)$ X

(39)	Albrow 88	mass

Λ X

300	Artykov 90B	cs,mult
	Yuldashev 90B	a-dep,cs,mult,p,pt

$\bar{\Lambda}$ X

300	Artykov 90B	cs,mult
	Yuldashev 90B	a-dep,cs,mult,p,pt

$e^-\,e^+$ X

1.696	Naudet 88B	cs,mass,p
2.88	Naudet 88B	cs,mass,p
5.762	Naudet 88B	cs,mass,p

$\mu^-\,\mu^+$ X

400	Freudenreich 90	mass,p
(39)	Albrow 88	mass

γ mult[charged$^-$] X

300	Yuldashev 90C	cor,mult,p
	Alimov 89B	mult,p

K_S mult[charged$^-$] X

300	Artykov 90B	mult
	Yuldashev 90B	cor,mult

$2\phi(1020)$ X

?	Burchell 92	–

charm $\overline{\text{charm}}$ X

70	Ammosov 90B	cs
	Sviridov 88	cs

charmed-meson $\overline{\text{charmed}}$-meson X

70	Sviridov 88	cs

$p\,\pi^-$ X

3.88	Nakai 91	mass

Λ mult[charged$^-$] X

300	Artykov 90B	mult
	Yuldashev 90B	cor,mult

Λ_c^+ $\overline{\text{charmed}}$-meson X

70	Sviridov 88	cs

$K^+\,K^-\,2\phi(1020)$ X

?	Burchell 92	–

$p\,p$

X

0.3 – 2.5	Yokosawa 90B	cs
0.52 – 2.8	Yokosawa 90B	cs
0.9959 – 3.204	Yokosawa 90B	asym
1 – 2.25	Yokosawa 90B	angp,asym,p
1.17 – 2.49	Yokosawa 90B	cs
2	Yokosawa 90B	cs
2 – 3	Yokosawa 90B	cs
	Auer 88	cs
3	Yokosawa 90B	cs
4	Yokosawa 90B	cs
	Auer 88	cs
5	Yokosawa 90B	cs
	Auer 88	cs
6	Yokosawa 90B	cs
11.75	Yokosawa 90B	cs
	Auer 88	cs
200	Yokosawa 90	cs
(23 – 53)	Giacomelli 90	cs
(30.6 – 62.7)	Sedlak 88	cs

inelastic

1.463	Fergerson 88	pol

mult[charged] X

19 – 303	Tannenbaum 89	mult
32	Bravina 92	angp,col,p
250	Adamus 88G	mult
300	Tannenbaum 89	ang,angp,et,p
360	Singh 91	cor,mult,p
400	Tannenbaum 89	ang,angp,et,p
(30)	Tannenbaum 89	col,et,p
(31)	Giacomelli 90	mult,p
	Breakstone 88D	col,mult,p,pt
800	Ammar 88B	–
(44)	Breakstone 88D	col,mult,p,pt
(45)	Tannenbaum 89	col,et,p
(53)	Tannenbaum 89	ang,et,p
(62)	Giacomelli 90	mult,p
	Breakstone 88D	col,mult,p,pt
	Fabbri 88	angp,mult,p
(63)	Tannenbaum 89	col,et,p
(540)	Tannenbaum 89	mult,p

mult[charged] (neutrals)

(11.5 – 62.2)	Bhattacharje 91	mult
147	Boca 92	col,mult,p
200	Allday 88	cs,mult
205	Dremin 90	angp,mult,p
250	Ajinenko 89D	col,p
360	Singh 91B	mult,p
	Dremin 90	angp,mult,p
400	Bhattacharje 90	mult
	Miettinen 88	a-dep,angp,col,et,mult,p
(31)	Breakstone 88B	angp,mult,p
800	Sambamurti 90	cor,et,mult
(44)	Breakstone 88B	angp,mult,p
(62)	Breakstone 88B	angp,mult,p
	Fabbri 88	angp,mult,p
(63)	Akesson 88D	pt

mult[neutral] X

(31)	Tannenbaum 89	et,p
(63)	Tannenbaum 89	et,p

mult[jet] X

(62)	Breakstone 89	–

mult[hadron] X

200	Tannenbaum 89	et,p
(24)	Tannenbaum 89	et,p
800	Tannenbaum 89	et,p
(540)	Tannenbaum 89	et,p

charged X

32.1	Bravina 89	mult,p
200	Gazdzicki 91	mult
	Allday 88	pt
200.9	Harris 90B	p
250	Aivazyan 89	mult,p
	Adamus 88B	mult,p,pt
	Aivazyan 88	mult,p,pt
(23)	Fischer 88	p,pt
360	Bailly 88B	col,p,pt
(31)	Fischer 88	p,pt
800	Sambamurti 90	a-dep,pt
(63)	Fischer 88	p,pt

charged$^+$ X

200	Allday 88	pt
250	Aivazyan 89	mult,p
	Adamus 88G	mult,p,pt
(23 – 62)	Giacomelli 90	p,pt
(62)	Breakstone 88D	p,pt

charged$^-$ X

200	Gazdzicki 91	mult
	Brick 90	cor,mult,p
	Allday 88	pt
250	Aivazyan 89	mult,p
	Adamus 88G	mult,p,pt
(23)	Fischer 88	p,pt
(23 – 62)	Giacomelli 90	p,pt
(31)	Fischer 88	p,pt
(62)	Breakstone 88D	p,pt
(63)	Fischer 88	p,pt

jet X

200	Tannenbaum 89	angp,p,pt
205	Baldin 88B	ang,p
800	Stewart 90	a-dep,angp,col,pt
(62)	Breakstone 91	ang,angp,pt
10^6	Avakyan 91D	pt

hadron X

32	Bogolyubsky 89C	angp,p
(31.5)	Akesson 89	et

hadron$^+$ X

400	Jaffe 89	pt
800	Jaffe 89	pt

hadron$^-$ X

400	Jaffe 89	pt
800	Jaffe 89	pt

hadron (hadrons)

800	Sambamurti 90	cor,cs,et,mult,p,pt

shower X

200	Brick 89	mult

γ X

280	Bonesini 88B	p,pt
300	Yuldashev 90C	mult
	Alimov 89B	mult
(53)	Raha 91	pt
(63)	Anassontzis 90	pt
	Angelis 89	pt

meson^0 X

(63)	Angelis 89	pt

$\pi^\pm$ X

4.2	Bekmirzaev 89	mult
10	Bekmirzaev 89	mult
200	Yokosawa 92	asym,p
(23 – 62)	Giacomelli 90	p,pt
(38.8)	Jaffe 88	angp

π^+ X

13.3	Yokosawa 91	asym,p,pt
	Saroff 90	asym,p,pt
18.5	Yokosawa 91	asym,p,pt
	Saroff 90	asym,p,pt
200	Adams 92E	asym,p,pt
	Adams 91F	asym,p
	Gazdzicki 91	mult
	Yokosawa 91	asym,p
400	Aguilarbenit 91	cs,mult,p,pt
	Jaffe 89	pt
800	Jaffe 89	pt

π^0 X

24	Yokosawa 91	asym,pt
185	Yokosawa 90B	asym,p
	Nurushev 89	asym,p
	Bonner 88B	asym,p
200	Yokosawa 92	asym,p

$p\,p$

π^0 X

	Adams 91	asym
	Adams 91B	asym
	Adams 91C	asym,cs
	Adams 91D	asym
	Gazdzicki 91	mult
	Yokosawa 91	asym
	Yokosawa 90	asym,p,pt
250	Adamus 86C	cs,mult,p,pt
280	Bonesini 88B	p,pt
(23.5 – 62.4)	Tannenbaum 89	angp,pt
400	Aguilarbenit 91	cs,mult,p,pt
(53)	Raha 91	pt
(63)	Anassontzis 90	pt

π^- X

1.45	Willis 89	angp,mass,pol
1.45 – 2.7	Comets 89	mass,pol
4.2	Bekmirzaev 89	mult,p,pt
	Bekmirzaev 87C	angp,p,pt
10	Bekmirzaev 89	mult,p,pt
13.3	Saroff 90	asym,p,pt
18.5	Saroff 90	asym,p,pt
32	Bogolyubsky 89C	angp,p
200	Adams 92E	asym,p,pt
	Adams 91F	asym,p
	Gazdzicki 91	mult
	Yokosawa 91	asym,p
400	Aguilarbenit 91	cs,mult,p,pt
	Jaffe 89	pt
800	Jaffe 89	pt

η X

200	Yokosawa 92	asym
	Adams 91B	asym
	Yokosawa 91	asym,p
280	Durieux 91	p,pt
	Bonesini 89	cs,p,pt
400	Aguilarbenit 91	cs,mult,p,pt

$\rho(770)^+$ X

400	Aguilarbenit 91	cs,mult,p,pt

$\rho(770)^0$ X

400	Aguilarbenit 91	cs,mult,p,pt

$\rho(770)^-$ X

400	Aguilarbenit 91	cs,mult,p,pt

$\omega(783)$ X

400	Aguilarbenit 91	cs,mult,p,pt

$f_0(975)$ X

400	Aguilarbenit 91	cs,mult

$f_2(1270)$ X

400	Aguilarbenit 91	cs,mult

K^+ X

(23 – 62)	Giacomelli 90	p,pt

K^+ X

3.099	Siebert 91	angp,mass
	Frascaria 89	mass
200	Gazdzicki 91	mult
400	Aguilarbenit 91	cs,mult,p,pt
	Jaffe 89	pt
800	Jaffe 89	pt

K^- X

200	Gazdzicki 91	mult
400	Aguilarbenit 91	cs,mult,p,pt
	Jaffe 89	pt
800	Jaffe 89	pt

$p\,p$

K_S X

12 – 405	Chliapnikov 90	cs
15 – 5000	Sedlak 88	cs
32.1	Bogolyubsky 88F	p,pt
200	Gazdzicki 91	mult
205	Gazdzicki 91	p,pt
300	Gazdzicki 91	p,pt
360	Bailly 87F	ang,angp,asym,p,pt

$K^*(892)^+$ X

12 – 405	Chliapnikov 90	cs
32.1	Bogolyubsky 88F	cs
400	Aguilarbenit 91	cs,mult

$K^*(892)^0$ X

400	Aguilarbenit 91	cs,mult,pt

$\bar{K}^*(892)^0$ X

400	Aguilarbenit 91	cs,mult,pt

$K^*(892)^-$ X

32.1	Bogolyubsky 88F	cs
400	Aguilarbenit 91	cs,mult

$\phi(1020)$ X

400	Aguilarbenit 91	cs,mult,pt

DC^+ X

200	Appel 92	cs,p,pt
370	Appel 92	p,pt
400	Rossi 91	p
800	Rossi 91	p

D^- X

400	Rossi 89	p,pt

D^+ X

400	Aguilarbenit 88	cs,p
	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs,p,pt
	Aguilarbenit 87F	–
800	Ammar 88B	cs,p,pt

D^0 X

400	Aguilarbenit 88	cs,p
	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs,p,pt
	Aguilarbenit 87F	–
800	Ammar 88B	cs,p,pt

$\bar{D}^0$ X

400	Aguilarbenit 88	cs,p
	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs,p,pt
	Aguilarbenit 87F	–
800	Ammar 88B	cs,p,pt

D^- X

400	Aguilarbenit 88	cs,p
	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs,p,pt
	Aguilarbenit 87F	–
800	Ammar 88B	cs,p,pt

$D^*(2010)^+$ X

400	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs

$D^*(2010)^0$ X

400	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs

$\bar{D}^*(2010)^0$ X

400	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs

$p\,p$

$D^*(2010)^-$ X

400	Aguilarbenit 88B	angp,cs,p,pt
	Aguilarbenit 87C	cs

D_S^+ X

400	Aguilarbenit 88B	angp,cs,p,pt

D_S^- X

400	Aguilarbenit 88B	angp,cs,p,pt

$J/\psi(1S)$ X

(24.3)	Morel 90	cs,p
	Morel 90B	cs,p
800	Spiegel 91	a-dep

$\psi(2S)$ X

800	Spiegel 91	a-dep

$\Upsilon(1S)$ X

800	Spiegel 91	a-dep

$\Upsilon(3S)$ X + $\Upsilon(2S)$ X

800	Spiegel 91	a-dep

p X

4.2	Bekmirzaev 89	mult
9	Belzer 92	a-dep,p
	Belzer 90	angp,p
10	Bekmirzaev 89	mult
13.3	Saroff 90	asym,p,pt
18.5	Saroff 90	asym,p,pt
22.4	Batyunya 89	cs,p
32.1	Bogolyubsky 88F	cs
200	Gazdzicki 91	mult
	Brick 89	mult
	Abe 88	p
400	Aguilarbenit 91	cs,mult,p,pt
	Jaffe 89	pt
800	Jaffe 89	pt
(62)	Breakstone 88	p,pt

DD < X > p

(62)	Breakstone 88	p,pt

n X

1.49	Chiba 91	angp
4.2	Bekmirzaev 89	mult
10	Bekmirzaev 89	mult
200	Gazdzicki 91	mult

$\bar{n}$ X

200	Gazdzicki 91	mult

$\bar{p}$ X

200	Gazdzicki 91	mult
(23 – 62)	Giacomelli 90	p,pt
400	Aguilarbenit 91	cs,mult,p,pt
	Jaffe 89	pt
800	Jaffe 89	pt

$\Delta(1232\,P_{33})^{++}$ X

400	Aguilarbenit 91	cs,mult,p,pt
405	Okusawa 88	cs,p

$\Delta(1232\,P_{33})^+$ X

400	Aguilarbenit 91	cs,mult,p,pt

$\Delta(1232\,P_{33})^0$ X

400	Aguilarbenit 91	cs,mult,p,pt

$\bar{\Delta}(1232\,P_{33})^0$ X

400	Aguilarbenit 91	cs,mult

$\bar{\Delta}(1232\,P_{33})^{--}$ X

400	Aguilarbenit 91	cs,mult

Λ X + $\bar{\Lambda}$ X

32.1	Bogolyubsky 88F	p,pt

Λ X

1.5 – 300	Panagiotou 89	p,pol,pt
32.1	Bogolyubsky 88F	p,pt
176	Yokosawa 90B	pol
300	Yuldashev 90B	pol,pt
360	Gemesy 90	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$p\,p$

Λ X
(31 – 62) Panagiotou 89 p,pol,pt

Λ X + Σ^0 X
200 Gazdzicki 91 mult
205 Gazdzicki 91 p,pt
300 Gazdzicki 91 p,pt

$\bar{\Lambda}$ X
1.5 – 300 Panagiotou 89 p,pol,pt
32.1 Bogolyubsky 88F cs
360 Gemesy 90 cs
(31 – 62) Panagiotou 89 p,pol,pt

$\bar{\Lambda}$ X + $\bar{\Sigma}^0$ X
200 Gazdzicki 91 mult
205 Gazdzicki 91 p,pt
300 Gazdzicki 91 p,pt

$\Lambda(1520\ D_{03})$ X
400 Aguilarbenit 91 cs,mult,p,pt

Σ^+ X
405 Okusawa 88 cs,p

Σ^0 X
32.1 Bogolyubsky 88F cs

Σ^- X
405 Okusawa 88 cs,p

$\Sigma(1385\ P_{13})^+$ X
32.1 Bogolyubsky 88F cs
400 Aguilarbenit 91 cs,mult

$\Sigma(1385\ P_{13})^-$ X
32.1 Bogolyubsky 88F cs
400 Aguilarbenit 91 cs,mult

Ξ^- X
360 Gemesy 90 cs,p

$\bar{\Xi}^+$ X
360 Gemesy 90 cs,p

Λ_c^+ X
400 Klein 89C –
Aguilarbenit 88B angp,cs,p,pt
Aguilarbenit 87 cs,p
Aguilarbenit 87H –
(62) Bari 91B cs,p,pt

$\bar{\Lambda}_c^-$ X
400 Aguilarbenit 88B angp,cs,p,pt
Aguilarbenit 87 cs,p
Aguilarbenit 87H –

dibaryon X
2 – 3 Auer 88 mass
4 Auer 88 mass
5 Auer 88 mass
11.75 Auer 88 mass

$e^-\ e^+$ X
5.762 Huang 92 cs,mass,p
(62.3) Angelis 91 mass,pt

$\mu^-\ \mu^+$ X
800 Mcgaughey 92 mass
Spiegel 91 a-dep

$\Lambda_b\ e^+$ X
(62) Bari 91 cs,p

mult[π^0] mult[charged] X
360 Singh 91 cor,mult,p

mult[shower] mult[charged] (neutrals)
200 Boos 88B ang,angp,cor,mult
400 Boos 88B ang,angp,cor,mult

2charged X
200 Brick 90 cor,mult,p
Derado 88 a-dep,cor,mult,p
(53) Kvatadze 88 angp,cor,p
(63) Kvatadze 88 angp,cor,p

2charged$^+$ X
250 Aivazyan 91 cor,p

$p\,p$

charged$^+$ charged$^-$ X
27.5 Wiencke 92 mass,p,pt
250 Aivazyan 91 cor,p
(31) Breakstone 91B cor,p
(44) Breakstone 91B cor,p
(62) Breakstone 91B cor,p

2charged$^-$ X
250 Aivazyan 91 cor,p
(31) Breakstone 91B cor,p
(44) Breakstone 91B cor,p
(62) Breakstone 91B cor,p

(jets) jet X
400 Miettinen 88 a-dep,angp,et,p

2jet X
(3) Angelis 88 const,cs,p
32 Bogolyubsky 89C mass
800 Stewart 90 a-dep,angp,col,et
(62) Angelis 88 const,cs,p

hadron$^+$ charged X
9 Belzer 90 ang,angp,p

2hadron$^+$ X
360 Bailly 87F ang,angp,asym,p,pt

hadron$^+$ hadron$^-$ X
360 Bailly 87F ang,angp,asym,p,pt
(38.8) Jaffe 88 cor

2hadron$^-$ X
360 Bailly 87F ang,angp,asym,p,pt

2hadron (hadrons)
205 Baldin 88B col
(62) Breakstone 89 angp,p,pt

shower jet X
200 Boos 88B angp,mult
400 Boos 88B angp,mult

γ mult[charged] (neutrals)
(63) Akesson 88D cs,pt

γ charged X
(63) Angelis 89 ang

γ charged$^+$ X
(63) Angelis 89 p

γ charged$^-$ X
(63) Angelis 89 p

γ jet X
280 Bonesini 89B p,pt
(63) Anassontzis 90 pt

γ hadron$^+$ X + hadron$^+$ charged X
9 Belzer 90 ang,angp,p

2γ X
300 Demarzo 90 angp,pt
Yuldashev 90C mass

$\bar{c}\ c$ X
800 Appel 92 cs,p,pt

meson^0 charged X
(63) Angelis 89 ang

meson^0 charged$^+$ X
(63) Angelis 89 p

meson^0 charged$^-$ X
(63) Angelis 89 p

π^+ mult[charged] X
(62) Breakstone 91 ang,angp,pt

π^- mult[charged] X
(62) Breakstone 91 ang,angp,pt

π^0 charged X
(62.4) Tannenbaum 89 ang,cor,pt

$p\,p$

π^+ jet X
(62) Breakstone 90 angp,p
Geist 89 angp,col,p,pt

π^- jet X
(62) Breakstone 90 angp,p
Geist 89 angp,col,p,pt

$\pi^\pm$ hadron$^+$ X
9 Belzer 90 ang,angp,p

$\pi^0\ \gamma$ X
300 Demarzo 90 angp,pt

2$\pi^\pm$ X
400 Aguilarbenit 91B angp,cor,p

2π^+ X
360 Bailly 88E p,pt
Bailly 87F ang,angp,asym,p,pt
400 Aguilarbenit 91B angp,cor

2π^+ X + 2π^- X
(31 – 62) Giacomelli 90 cor,pt

2π^0 X
300 Demarzo 90 angp,mass,pt

$\pi^+\ \pi^-$ X
27.5 Wiencke 92 p
(11.5) Volkov 92 angp,mass
360 Bailly 87F ang,angp,asym,p,pt
400 Aguilarbenit 91B angp,cor,p
(31 – 62) Giacomelli 90 cor,pt

2π^- X
360 Bailly 88E p,pt
Bailly 87F ang,angp,asym,p,pt
400 Aguilarbenit 91B angp,cor

K^+ mult[charged] X
(62) Breakstone 91 ang,angp,pt

K^- mult[charged] X
(62) Breakstone 91 ang,angp,pt

K_S mult[charged] (neutrals)
32.1 Bogolyubsky 88F cs,mult

K^+ jet X
(62) Breakstone 90 angp,p
Geist 89 angp,col,p,pt

K^- jet X
(62) Geist 89 angp,col,p,pt

$K^\pm\ \pi^\pm$ X
400 Aguilarbenit 91B angp,cor

$K^+\ \pi^-$ X
(11.5) Volkov 92 angp,mass

$K^-\ \pi^+$ X
(11.5) Volkov 92 angp,mass

$K_S\ \pi^+$ X
360 Aziz 88 mass

$K_S\ \pi^-$ X
360 Aziz 88 mass

2$K^\pm$ X
400 Aguilarbenit 91B angp,cor

2K^+ X
400 Aguilarbenit 91 cs,mult

$K\ \bar{K}$ X
32.1 Bogolyubsky 88F cs

$K^+\ K^-$ X
27.5 Wiencke 92 p
(11.5) Volkov 92 angp,mass

$p\,p$

$2K^-$ X
400 Aguilarbenit 91 cs,mult

$K^\pm\,K_S$ X
360 Bailly 87F ang,angp,asym,p,pt

$2K_S$ X
32.1 Bogolyubsky 88F cs
360 Aziz 88 ang,cs,mass,p,pt

charm mult[charged] (neutrals)
400 Aguilarbenit 88C mult

π^- charm X
400 Aguilarbenit 88C p,pt

charm $\overline{\text{charm}}$ X
400 Appel 92 ang,cs,p,pt
Rossi 89 cs
800 Rossi 89 cs

charmed-meson $\overline{\text{charmed-meson}}$ X
400 Aguilarbenit 87C cs

$D^+\,\bar{D}^0$ X + $D^0\,D^-$ X
400 Aguilarbenit 87C cs

$D^+\,\bar{D}^0$ X
400 Aguilarbenit 88B cor,cs,mass,p,pt

$D^0\,\bar{D}^0$ X
400 Aguilarbenit 88B cor,cs,mass,p,pt
Aguilarbenit 87C cs

$D^+\,D^-$ X
400 Aguilarbenit 88B cor,cs,mass,p,pt
Aguilarbenit 87C cs

$D^0\,D^-$ X
400 Aguilarbenit 88B cor,cs,mass,p,pt

p mult[charged] (neutrals)
22.4 Batyunya 89 cs,p

DD < mult[charged] (neutrals) > p
(11.5 – 62.2) Bhattacharje 91 mult

DD < charged > p X
69 Boos 88C p,pt

$p\,\pi^\pm$ X
9 Belzer 90 ang,angp,p

$p\,\pi^+$ X
9 Belzer 90 ang,angp,p
69 Boos 88C p,pt
(53) Giacomelli 90 angp,p

$p\,\pi^-$ X
27.5 Wiencke 92 p
69 Boos 88C p,pt
(11.5) Volkov 92 angp,mass

$n\,\pi^+$ X
1.49 Chiba 91 angp,mass

$\bar{p}\,\pi^+$ X
(11.5) Volkov 92 angp,mass

$p\,K^+$ X
(53) Giacomelli 90 angp,p

$p\,K^-$ X
(11.5) Volkov 92 angp,mass

$p\,K_S$ X
32.1 Bogolyubsky 88F cs

$2p$ X
0.781 Meyer 90 mass
6 Carroll 88 angp
10 Carroll 88 angp
(53) Giacomelli 90 angp,p
(62) Breakstone 89B angp,cs,mass,pt

$p\,n$ X
1.49 Chiba 91 angp

$p\,\bar{p}$ X
27.5 Wiencke 92 p

$p\,\bar{p}$ X
(11.5) Volkov 92 angp,mass
360 Bailly 87F ang,angp,asym,p,pt

$2\bar{p}$ X
400 Aguilarbenit 91 cs,mult

hyperon kaon X
32.1 Bogolyubsky 88F cs

hyperon $\overline{\text{hyperon}}$ X
32.1 Bogolyubsky 88F cs

Λ mult[charged] (neutrals)
32.1 Bogolyubsky 88F cs,mult

$\bar{\Lambda}$ mult[charged] (neutrals)
32.1 Bogolyubsky 88F cs,mult

Λ charged-hadron X
360 Bailly 87F ang,angp,asym,p,pt

$\Lambda\,\pi^+$ X
360 Bailly 87F ang,angp,asym,p,pt

$\Lambda\,\pi^-$ X
360 Bailly 87F ang,angp,asym,p,pt

$\Lambda\,K_S$ X
32.1 Bogolyubsky 88F cs
360 Aziz 88 ang,cs,mass,p,pt
Bailly 87F ang,angp,asym,p,pt

$\bar{\Lambda}\,K_S$ X
32.1 Bogolyubsky 88F cs
360 Aziz 88 cs

$p\,\Lambda$ X + $p\,\bar{\Lambda}$ X
32.1 Bogolyubsky 88F cs

2Λ X
32.1 Bogolyubsky 88F cs

$\Lambda\,\bar{\Lambda}$ X
32.1 Bogolyubsky 88F cs
360 Aziz 88 cs
Bailly 87F ang,angp,asym,p,pt

Λ_c^+ $\overline{\text{charm}}$ X
400 Aguilarbenit 87 cs

$\bar{\Lambda}_c^-$ charm X
400 Aguilarbenit 87 cs

$\Lambda_c^+\,\bar{D}$ X
(62) Bari 91B cs

$e^-\,e^+$ jet X
(62.3) Angelis 91 ang,pt

$e^-\,e^+$ hadron X
(62.3) Angelis 91 ang,mass,mult,pt

$\mu^-\,\mu^+$ mult[charged-hadron] (neutrals)
(44) Antreasyan 86B mass,mult,pt
(63) Antreasyan 86B mass,mult,pt

mult[π^0] mult[vee] mult[charged] X
360 Singh 91 cor,mult,p

2charged (chargeds) (neutrals)
24 Batyunya 90 cs
32 – 400 Boos 90 cor,p

mult[p] 2charged X
200 Derado 88 a-dep,cor,mult,p

3charged X
400 Aguilarbenit 87 –

3charged$^+$ X
(31) Breakstone 91B cor,p
(44) Breakstone 91B cor,p
(62) Breakstone 91B cor,p

2charged$^+$ charged$^-$ X
(31) Breakstone 91B cor,p
(44) Breakstone 91B cor,p
(62) Breakstone 91B cor,p

charged$^+$ 2charged$^-$ X
(31) Breakstone 91B cor,p
(44) Breakstone 91B cor,p
(62) Breakstone 91B cor,p

3charged$^-$ X
(31) Breakstone 91B cor,p
(44) Breakstone 91B cor,p
(62) Breakstone 91B cor,p

mult[charged] 2jet X
400 Corcoran 91 ang,angp,cor,et,mult,p

3jet X
(3) Angelis 88 const,cs,p
(62) Angelis 88 const,cs,p

π^+ 2jet X
(62) Geist 89 angp,col,p,pt

π^- 2jet X
(62) Geist 89 angp,col,p,pt

$2\pi^\pm$ mult[charged] X
400 Aguilarbenit 91B angp,cor,mult

$3\pi^\pm$ X
400 Aguilarbenit 91B angp,cor

$3\pi^+$ X
360 Bailly 88E p,pt
400 Aguilarbenit 91B angp,cor

$3\pi^-$ X
360 Bailly 88E p,pt
400 Aguilarbenit 91B angp,cor

K^+ 2jet X
(62) Geist 89 angp,col,p,pt

K^- 2jet X
(62) Geist 89 angp,col,p,pt

$2K_S$ mult[charged] (neutrals)
32.1 Bogolyubsky 88F cs,mult

$2K_S\,\pi^\pm$ X
360 Aziz 88 mass

$3K^-$ X
400 Aguilarbenit 91 cs,mult

p 2charged X
400 Aguilarbenit 87 –

$p\,2K_S$ X
32.1 Bogolyubsky 88F cs

$2p\,\pi^\pm$ X
(62) Breakstone 88C angp,p,pt

$p\,n\,\pi^+$ X
1.49 Chiba 91 angp

$\Lambda\,K_S$ mult[charged] (neutrals)
32.1 Bogolyubsky 88F cs,mult

$\Lambda\,2K_S$ X
32.1 Bogolyubsky 88F cs

$2\Lambda\,K_S$ X
32.1 Bogolyubsky 88F cs

$p\,K^-\,\pi^+\,e^-$ X
(62) Bari 91B mass

$p\,K^-\,\pi^+\,e^+$ X
(62) Bari 91B mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p p

$p\,D^0\,\pi^-\,e^+$ X

(62)	Bari 91	mass,p

4jet X

(62)	Breakstone 89	–

$2K\ 2\overline{K}$ X

32.1	Bogolyubsky 88F	cs

DD < $2\pi^+\,\pi^-$ (neutrals) > p

380	Asai 89C	mass,p,pt

hyperon $2K\ \overline{K}$ X

32.1	Bogolyubsky 88F	cs

2hyperon 2kaon X

32.1	Bogolyubsky 88F	cs

$p\,\Lambda\ 2K_S$ X + $p\,\overline{\Lambda}\ 2K_S$ X

32.1	Bogolyubsky 88F	cs

$\Lambda_c^+\ \pi^+\ 2\pi^-\ e^+$ X

(62)	Bari 91	mass,p

6charged (neutrals)

200	Abduzhamilov 91	col,cor
	Abduzhamilov 88	col,cor
400	Abduzhamilov 91	col,cor
	Abduzhamilov 88	col,cor

dibaryon

1.921	Bertini 88	–
2.142	Bertini 88	–
2.359	Bertini 88	–
2.466	Bertini 88	–
2.573	Bertini 88	–
2.784	Bertini 88	–
3.099	Bertini 88	–

$2e^+$

?	Berger 91	–

$\mu^+\ e^+$

?	Berger 91	–

$2\mu^+$

?	Berger 91	–

nucleon ℓ^+

?	Berger 91	–

$p\ e^+$

?	Berger 91	–

$p\ \mu^+$

?	Berger 91	–

$\Delta(1232\,P_{33})^+\ e^+$

?	Berger 91	–

$\Delta(1232\,P_{33})^+\ \mu^+$

?	Berger 91	–

$2\pi^+$

?	Berger 91	–

2p

0.045	Yokosawa 90B	cs
0.2224	Locher 90	angp,pol
0.2733	Locher 90	angp,pol
0.287	Bruckner 91B	angp
	Bruckner 91C	angp
0.4 – 0.579	Onel 89	pol
0.447 – 0.597	Hausammann 89	amp
(1.93 – 1.97)	Beznogikh 91C	cs,pt
0.4808 – 0.6427	Troyan 90B	angp,mass
0.5 – 2	Kobayashi 91	asym,mass,pol
0.6444 – 1.198	Yokosawa 90B	cs
0.8081 – 1.463	Yokosawa 90B	asym,cs,pol
< 0.8828	Stoks 92	const
0.926	Shklyarevsky 86	pwa
0.94 – 2.44	Dallatorreco 89	angp,asym
0.9959	Shklyarevsky 86	pwa
1 – 3	Yokosawa 90B	pol
	Shimizu 89	pol

p p

2p

1.087	Hoffmann 88B	angp,pol
1.09	Barlett 91	angp,pol
1.1	Shklyarevsky 86	pwa
1.194	Shklyarevsky 86	pwa
1.219	Locher 90	angp,pol
1.279 – 1.687	Dobrovolsky 88	angp
1.282	Yokosawa 90B	asym
	Tanaka 88	cs
	Pauletta 87	asym
	Shklyarevsky 86	pwa
1.343	Shklyarevsky 86	pwa
1.379	Mcnaughton 90	angp,pol
1.404	Shklyarevsky 86	pwa
1.463	Yokosawa 90B	asym
	Vovchenko 89B	angp,p,pol,pwa
	Tanaka 88	cs
	Pauletta 87	asym
	Shklyarevsky 86	pwa
1.504	Lac 88	asym
1.504 – 2.991	Yokosawa 90B	angp,p,pol
	Lac 89C	angp,p,pol
1.504 – 3.511	Lac 89D	angp,p,pol
1.511 – 3.515	Lac 89	angp,pol
	Lac 89B	angp,pol
1.522	Vovchenko 89	angp,pol
	Vovchenko 89B	angp p,pol,pwa
1.551 – 3.19	Yokosawa 90B	angp,p,pol
	Fontaine 89	angp,p,pol
1.558 – 3.515	Lehar 88	asym,pol
	Perrot 88	asym,pol
1.569	Vovchenko 89	angp,pol
1.581	Vovchenko 89B	angp,p,pol,pwa
< 1.6	Arndt 92	pwa
1.639	Bazhanov 88	asym,pol
	Bazhanov 88B	pol,pwa
1.662	Vovchenko 89B	angp,p,pol,pwa
1.69	Lac 88	asym
1.696	Shklyarevsky 86	pwa
1.75 – 5.5	Yokosawa 90B	angp
2.75 – 5	Yokosawa 90B	asym,pol
3.88	Nakai 91	p
< 6	Meissner 90	asym,qnc
6	Appel 91	cs
	Yokosawa 90B	asym,cs
10	Appel 91	cs
13.3 – 18.5	Khiari 89	pol
18.5	Yokosawa 90B	asym,pol
	Crabb 88	asym,pol
24	Krisch 91	pol,pt
	Crabb 90	asym,pol,pt
32.1	Bogolyubsky 90	cs
185	Yokosawa 92	angp,asym,pol
	Yokosawa 91	angp,asym,pol
	Yokosawa 90B	angp,asym,pol
	Akchurin 89	angp,asym,pol
	Nurushev 89	angp,asym,pol
200	Pumplin 92	angp
	Yokosawa 90	angp,asym
250	Grassler 88	angp,cs
(24.3)	Breedon 89	angp
	Breedon 88	angp
360	Bailly 88C	angp,cs
(53)	Kundrat 92	amp,angp,cs
	Giacomelli 90	angp
(< 62.5)	Buenerd 92	angp

$n\ \Delta(1232\,P_{33})^{++}$

< 6	Meissner 90	asym,qnc

$p\ \Delta(1232\,P_{33})^+$

6	Appel 91	cs

p p

deuteron π^+

(1.88 – 3.02)	Strakovskii 91	pwa
0.7405 – 0.7942	Korkmaz 91	angp,pol
0.7942	Hutcheon 90	angp,pol
0.8004	Hutcheon 90	angp,pol
1.07	Shypit 88B	cor,pol
1.09	Yoshida 91	angp
	Barlow 88B	angp,pol
1.09 – 1.463	Yokosawa 90B	pol
1.099	Abegg 91	angp,pol
	Hutcheon 89B	pol
1.151	Yokosawa 90B	angp,asym,pwa
1.191	Locher 90	angp,pol
1.217	Yokosawa 90B	angp,asym,pwa
1.219	Barlow 88B	angp,pol
1.279	Yokosawa 90B	angp,asym,pwa
1.282	Barlow 88B	angp,pol
	Tanaka 88	cs,pol
1.3 – 2.4	Yonnet 90	angp,pol
1.341	Yokosawa 90B	angp,asym,pwa
1.343	Barlow 88B	angp,pol
1.373 – 3.099	Bertini 88B	angp
1.378	Shypit 88B	cor,pol
1.404	Barlow 88B	angp,pol
1.451	Yokosawa 90B	angp,asym,pwa
1.455	Yokosawa 90B	angp,asym,pwa
1.459	Shypit 88B	cor,pol
1.463	Yoshida 91	angp
	Barlow 88B	angp,pol
	Tanaka 88	cs,pol
1.921	Bertini 88	asym
1.921 – 3.099	Yokosawa 90B	asym
2.142	Bertini 88	asym
2.359	Bertini 88	asym
2.466	Bertini 88	asym
2.573	Bertini 88	asym
2.784	Bertini 88	asym
3.099	Bertini 88	asym

dibaryon($S = -1$) K^+

3.099	Siebert 91	cs

$\Lambda N(2130\,^3S_1)^+\ K^+$

3.099	Frascaria 89	–

deuteron $e^+\ \nu_e$

?	Anselmann 92	p

$2p\ \gamma$

0.7771	Michaelian 90	asym
0.7988	Przewoski 92	angp,mass,p

2p meson^0

19	Danielsen 92	–
85	Armstrong 91	–
300	Armstrong 91	–
	Armstrong 89E	cs,mass,pwa
(40 – 63)	Toki 88B	–

$2p\ \pi^0$

0.6 – 0.9	Andreev 88B	angp,cs,mass,p
0.781 – 0.8459	Meyer 90	cs
0.7857 – 0.8468	Meyer 92	cs
0.7872	Meyer 92	angp
0.7988	Przewoski 92	angp,mass,p
1.064	Didenlez 91	angp,cs,p
1.09	Didenlez 91	angp,cs,p
1.116	Didenlez 91	angp,cs,p
1.142	Didenlez 91	angp,cs,p
1.168	Didenlez 91	angp,cs,p
1.217 – 1.536	Andreev 88C	cs

$p\ n\ \pi^+$

0.9821	Yokosawa 90B	asym
1.044	Yokosawa 90B	asym
1.07	Yokosawa 90B	pol,pwa

p p

$p\,n\,\pi^+$

	Shypit 88	pol,pwa
1.07 – 1.459	Shypit 89	asym,mass,pt
1.103	Yokosawa 90B	asym
1.189	Yokosawa 90B	pol,pwa
	Shypit 88	pol,pwa
1.273	Yokosawa 90B	pol,pwa
	Shypit 88	pol,pwa
1.378	Yokosawa 90B	pol,pwa
	Shypit 88	pol,pwa
1.459	Yokosawa 90B	pol,pwa
	Shypit 88	pol,pwa

$2p\,\eta$

300	Armstrong 90B	cs

$2p\,\rho(770)^0$

85	Armstrong 91	cs
300	Armstrong 91	cs

$2p\,\omega(783)$

300	Armstrong 90B	cs

$2p\,\eta'(958)$

300	Armstrong 91C	–
	Armstrong 91E	–

$2p\,f_0(975)$

85	Armstrong 91	cs
300	Armstrong 91	cs
(40 – 63)	Toki 88B	–
(62)	Breakstone 90C	cs

$2p\,a_1(1260)^0$

300	Armstrong 90B	cs

$2p\,f_2(1270)$

85	Armstrong 91	cs
300	Armstrong 91	cs
	Armstrong 89D	–
(62)	Breakstone 90C	angp,cs,p

$2p\,f_1(1285)$

85	Armstrong 89C	cs
	Armstrong 89E	cs
	Augustin 88C	–
300	Armstrong 91C	–
	Armstrong 91E	–
	Armstrong 89	cs
	Armstrong 89E	cs,mass,pwa

p(spect) $p\,f_1(1285)$

300	Toki 88B	–

$2p\,a_2(1320)^0$

300	Armstrong 90B	cs

$2p\,f_0(1400)$

(62)	Breakstone 90C	cs

$2p\,f_1(1420)$

85	Armstrong 92	–
	Augustin 88C	–
300	Armstrong 92	–
	Armstrong 91E	–
	Armstrong 89	cs

p(spect) $p\,f_1(1420)$

300	Toki 88B	–

$2p\,\rho(1450)^0$

300	Armstrong 89E	cs,mass,pwa

$2p\,f_2(1520)$

300	Prokoshkin 90	cs

$2p\,f_2'(1525)$

85	Armstrong 91	–
	Toki 88B	–
300	Armstrong 91	–

$2p\,f_2(1720)$

85	Armstrong 91	–
	Toki 88B	–
300	Armstrong 91	–
	Prokoshkin 90	cs

$2p\,\phi(1020)$

85	Armstrong 91	–
300	Armstrong 91	–

p p

$2p$ glueball

300	Chan 88	–

$p\,\Lambda\,K^+$

?	Bertini 88B	pol

DD < $\Lambda\,K^+$ > p

(62.8)	Smith 92	angp,mass,pol

$2p\,2\pi$

(40 – 63)	Toki 88B	mass

$2p\,2\pi^0$

85	Armstrong 91	mass
300	Armstrong 91	mass

$2p\,\pi^+\,\pi^-$

32.1	Bogolyubsky 90	cs
85	Armstrong 91	amp,mass,p
300	Armstrong 91	amp,mass,p
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass
	Chan 88	mass
(62)	Breakstone 90C	cs,mass,pwa
	Breakstone 89B	angp,cs,mass,pt
	Breakstone 88C	mass,pt

DD < $p\,\pi^+\,\pi^-$ > p

360	Asai 89C	mass,p,pt

$2p\,\rho(770)\,\gamma$

?	Burchell 92	–

$2p\,\rho(770)^0\,\gamma$

300	Armstrong 91C	angp,mass
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass

$2p\,2\rho(770)^0$

300	Armstrong 89E	cs,mass,pwa

$2p\,a_0(980)^+\,\pi^-$ + $2p\,a_0(980)^-\,\pi^+$

300	Armstrong 91E	–

$2p\,a_0(980)^+\,\pi^-$

85	Augustin 88C	mass

$2p\,a_0(980)^-\,\pi^+$

85	Augustin 88C	mass

$2p\,a_2(1320)^+\,\pi^-$ + $2p\,a_2(1320)^-\,\pi^+$

85	Armstrong 89C	cs
300	Armstrong 91E	–

$2p\,a_2(1320)^+\,\pi^-$

300	Armstrong 89E	cs,mass,pwa

$2p\,a_2(1320)^-\,\pi^+$

300	Armstrong 89E	cs,mass,pwa

$2p\,K\,\overline{K}$

85	Toki 88B	mass

$2p\,K^+\,K^-$

32.1	Bogolyubsky 90	cs
85	Armstrong 91	amp,mass,p
300	Armstrong 91	amp,mass,p
	Prokoshkin 90	dme,mass
	Armstrong 89D	dme,mass
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass
(62)	Breakstone 89B	angp,cs,mass,pt
?	Burchell 92	–

p p

$2p\,2K_S$

300	Prokoshkin 90	dme,mass
	Armstrong 89D	dme,mass
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass
(62)	Breakstone 90B	cs
?	Burchell 92	–

$2p\,K^*(892)^+\,K^-$

85	Augustin 88C	mass

$2p\,K^*(892)^0\,\overline{K}^0$

85	Augustin 88C	mass

p(spect) $p\,K^*(892)^0\,K_S$ +

p(spect) $p\,K^*(892)^-\,K^+$

300	Toki 88B	mass

$2p\,\overline{K}^*(892)^0\,K^0$

85	Augustin 88C	mass

2DD < p > $K^*(892)^0\,\overline{K}^*(892)^0$

300	Armstrong 90	cs

$2p\,K^*(892)^-\,K^+$

85	Augustin 88C	mass

$2p\,2\phi(1020)$

300	Armstrong 89B	cs

$3p\,\overline{p}$

32.1	Bogolyubsky 90	cs
(62)	Breakstone 89B	angp,cs,mass,pt

$p\,\Delta(1232\,P_{33})^{++}\,\rho(770)^0\,\pi^-$

85	Armstrong 89C	cs

$2p\,\Lambda\,\overline{\Lambda}$

(62)	Breakstone 90B	cs

$2p\,\pi^+\,\pi^-\,\gamma$

300	Armstrong 91C	mass

$2p\,\pi^+\,\pi^0\,\pi^-$

19	Danielsen 92	mass
85	Armstrong 91	mass
300	Armstrong 91	mass
	Armstrong 90B	mass

DD < $p\,\pi^+\,\pi^0\,\pi^-$ > p

360	Asai 89C	mass,p,pt

DD < $n\,2\pi^+\,\pi^-$ > p

360	Asai 89C	mass,p,pt

$2p\,\eta\,2\pi$

?	Burchell 92	–

$2p\,\eta\,\pi^+\,\pi^-$

300	Armstrong 91E	ang,mass,p,pwa
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass

$2p\,\rho(770)^0\,\pi^+\,\pi^-$

85	Armstrong 89C	cs
300	Armstrong 89E	cs,mass,pwa

$2p\,f_2(1270)\,\pi^+\,\pi^-$

85	Armstrong 89C	cs
300	Armstrong 89E	cs,mass,pwa

$2p\,K\,\overline{K}\,\pi$

?	Burchell 92	–

$2p\,K^+\,K^-\,\pi^0$

85	Armstrong 92	mass
300	Armstrong 92	mass

$2p\,K^+\,K^-\,\phi(1020)$

300	Armstrong 89B	cs

$2p\,K^+\,K_S\,\pi^-$

85	Armstrong 92	mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$p\,p$

$2p\,K^+\,K_S\,\pi^-$

	Augustin 88C	mass,pwa
300	Armstrong 92	mass
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass

$2p\,K^+\,K_S\,\pi^- + 2p\,K_S\,K^-\,\pi^+$

300	Armstrong 89	mass
(62)	Breakstone 90B	cs

p(spect) $p\,K^+\,K_S\,\pi^-$

300	Toki 88B	mass

$2p\,K_S\,K^-\,\pi^+$

85	Armstrong 92	mass
	Augustin 88C	mass,pwa
300	Armstrong 92	mass
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass

$2p\,2K_S\,\pi^0$

85	Armstrong 92	mass
300	Armstrong 92	mass

$p\,\Delta(1232\,P_{33})^{++}\,\pi^+\,2\pi^-$

300	Armstrong 89E	cs,mass

$p\,\Delta(1232\,P_{33})^0\,2\pi^+\,\pi^-$

300	Armstrong 89E	cs,mass

$2p\,\pi^+\,\pi^-\,2\gamma$

300	Armstrong 91E	mass,p

DD $< p\,\pi^+\,2\pi^0\,\pi^- >\,p$

360	Asai 89C	mass,p,pt

2DD $< p >\,2\pi^+\,2\pi^-$

300	Armstrong 89E	angp,mass

$2p\,2\pi^+\,2\pi^-$

32.1	Bogolyubsky 90	cs
85	Armstrong 89C	mass,pwa
300	Armstrong 89E	angp,mass
	Armstrong 89F	ang,angp,mass
	Armstrong 88	ang,angp,mass
(62)	Breakstone 89B	angp,cs,mass,pt
	Breakstone 88C	pt

2DD $< p >\,K^+\,K^-\,\pi^+\,\pi^-$

300	Armstrong 90	angp,mass

$2p\,K^+\,K^-\,\pi^+\,\pi^-$

300	Armstrong 90	angp,mass
(62)	Breakstone 89B	angp,cs,mass,pt

$2p\,2K^+\,2K^-$

300	Armstrong 89B	mass

$3p\,\bar{p}\,\pi^+\,\pi^-$

(62)	Breakstone 89B	angp,cs,mass,pt

$2p\,2\pi^+\,\pi^0\,2\pi^-$

300	Armstrong 91E	mass,p

$2p\,3\pi^+\,3\pi^-$

32.1	Bogolyubsky 90	cs
(62)	Breakstone 89B	angp,cs,mass,pt

$2p\,4\pi^+\,4\pi^-$

32.1	Bogolyubsky 90	cs

$2p\,5\pi^+\,5\pi^-$

32.1	Bogolyubsky 90	cs

$p\,n$

X

1.1 – 6	Yokosawa 90B	cs

$p\,n$

mult[charged] (neutrals)

(13.8 – 27.5)	Bhattacharje 91	mult
400	Bhattacharje 90	mult
	Bhattacharje 89C	mult,p

mult[hadron] X

100 – 300	Bhattacharje 89B	mult

γ X

300	Yuldashev 90C	mult
	Alimov 89B	mult

K^+ X

200	Gazdzicki 91	mult

K^- X

200	Gazdzicki 91	mult

K_S X

200	Gazdzicki 91	mult

p X

200	Gazdzicki 91	mult

n X

200	Gazdzicki 91	mult

$\bar{n}$ X

200	Gazdzicki 91	mult

$\bar{p}$ X

200	Gazdzicki 91	mult

Λ X + Σ^0 X

200	Gazdzicki 91	mult

$\bar{\Lambda}$ X + $\bar{\Sigma}^0$ X

200	Gazdzicki 91	mult

2γ X

300	Yuldashev 90C	mass

DD $<$ mult[charged] (neutrals) $>\,p$

(27.5)	Bhattacharje 91	mult

$e^+\,\bar{\nu}$

?	Berger 91	–

$\mu^+\,\bar{\nu}$

?	Berger 91	–

nucleon ℓ^+

?	Berger 91	–

$n\,e^+$

?	Berger 91	–

$n\,\mu^+$

?	Berger 91	–

$\Delta(1232\,P_{33})^0\,e^+$

?	Berger 91	–

$\Delta(1232\,P_{33})^0\,\mu^+$

?	Berger 91	–

$\pi^+\,\pi^0$

?	Berger 91	–

$p\,n$

0.6103	Klomp 91	angp,asym
1.3 – 1.82	Yokosawa 90B	pol

dibaryon π^-

1.98	Abramov 92	–

$2p\,\pi^-$

0.9543	Ponting 88	asym,pwa
1.97	Abramov 91F	cs
1.98	Abramov 92	cs,mass,p

$p\,\bar{p}$

2π X

(630)	Neumeister 91	p,pt
(900)	Neumeister 91	p,pt

3π X

(630)	Neumeister 91	p,pt
(900)	Neumeister 91	p,pt

4π X

(630)	Neumeister 91	p,pt
(900)	Neumeister 91	p,pt

5π X

(630)	Neumeister 91	p,pt
(900)	Neumeister 91	p,pt

p nucleus

X

$1000 - 10^5$	Kawamura 89	–

inelastic

60 – 800	Geist 91	a-dep,cs
$2 \cdot 10^7$	Efimov 89	cs

ν_e X + $\bar{\nu}_e$ X

70	Ammosov 92B	cs

ν_μ X

70	Ammosov 92B	cs

$\mu^\pm$ X

$10^6 - 5 \cdot 10^7$	Nikolsky 92	mult

μ^+ X

1.45	Freedman 93	–

$\bar{\nu}_\mu$ X

70	Ammosov 92B	cs

mult[charged] X

0.1441 – 200.9	Otterlund 91	mult
4.911 – 200	Adamovich 91B	mult
59.99 – 800	Schmitz 91	col,p
200.9	Holynski 89	mult

mult[charged] (neutrals)

200	Buschbeck 89	mult,p
800	Buschbeck 89	mult,p

($\pi^\pm$'s) X

60	Schmidt 92	col,cor
200	Schmidt 92	col,cor

(π^+'s) X

4.9	Schmidt 92	col,cor

(p's) X

4.9	Schmidt 92	col,cor
60	Schmidt 92	col,cor
200	Schmidt 92	col,cor

mult[shower] X

0.1441 – 200.9	Otterlund 91	mult
4.5	Ghosh 89F	mult
4.911 – 200	Adamovich 91B	mult
6.129 – 800	Kumar 89	mult
70	Bhattacharje 89	angp,cor,mult,p
200	Aggarwal 91	cor,mult,p
	Holynski 89B	cor,mult,p
400	Nasr 92	mult
	Aggarwal 91	cor,mult,p
800	Shivpuri 91	mult,p
	Sengupta 90	mult,p
	Abduzhamilov 89	mult
	Holynski 89B	cor,mult,p
	Abduzhamilov 88C	a-dep,mult

mult[grey] X

0.1441 – 200.9	Otterlund 91	mult
4.5	Ghosh 89F	mult
4.911 – 200	Adamovicl 91B	mult
400	Ahmad 90	angp,mult
800	Abduzhamilov 89	mult
	Abduzhamilov 88C	a-dep,mult

mult[htrack] X

4.5	Ghosh 89F	mult
200	Aggarwal 91	mult
400	Aggarwal 91	mult
800	Abduzhamilov 88C	a-dep,mult

mult[black] X

0.1441 – 200.9	Otterlund 91	mult
4.5	Ghosh 89F	mult
4.911 – 200	Adamovich 91B	mult
800	Abduzhamilov 88C	a-dep,mult

neutral X

220	Dzhaoshvili 90	p
1500	Dzhaoshvili 90	p

charged X

100	Geist 91	a-dep,mult

p nucleus

charged X

200	Geist 91	a-dep,mult
220	Dzhaoshvili 90	mult,p
1500	Dzhaoshvili 90	mult,p
$8 \cdot 10^4$	Otterlund 88	p

hadron X

400	Geist 91	a-dep,pt
$2.3 \cdot 10^6 - 10^8$	Nikolsky 92	mult,p

hadron$^+$ X

0 – 800	Sulyaev 88	a-dep,angp,p,pt

hadron$^-$ X

0 – 800	Sulyaev 88	a-dep,angp,p,pt

longlived^0 X

450	Akesson 90G	cs

shower X

24	Abduzhamilov 88B	p
200	Abduzhamilov 88B	p
400	Abduzhamilov 88B	p
800	Abduzhamilov 89	mult,p
	Abduzhamilov 88B	p
	Abduzhamilov 88C	a-dep,mult
1000	Melku 91	mult,p

grey X

24	Abduzhamilov 88B	angp
200	Stenlund 90D	angp
	Abduzhamilov 89	angp
	Abduzhamilov 88B	angp
400	Abduzhamilov 88B	angp
800	Abduzhamilov 89	angp
	Abduzhamilov 88B	angp
	Abduzhamilov 88C	a-dep,mult

htrack X

800	Abduzhamilov 88C	a-dep,mult

black X

1.05 – 400.9	Atageldieva 88	mult,p
24	Abduzhamilov 88B	angp
200	Abduzhamilov 88B	angp
400	Abduzhamilov 88B	angp
800	Abduzhamilov 88B	angp
	Abduzhamilov 88C	a-dep,mult

γ X

$8 \cdot 10^4$	Otterlund 88	p,pt
$2.3 \cdot 10^6 - 10^8$	Nikolsky 92	mult,p

q X

60	Matis 90B	qnc

c X

400	Rossi 91	a-dep

$\pi^\pm$ X

4.5	Vokal 88	p

π^+ X

0 – 800	Sulyaev 88	a-dep,angp,p,pt
1.45	Freedman 93	–
1.463	Krakauer 91B	–
2.03 – 10.1	Sibirtsev 90	a-dep,angp,p
10.14	Boyarinov 90	a-dep,angp,p,pt
70 – 400	Geist 91	a-dep,p,pt

π^- X

0 – 800	Sulyaev 88	a-dep,angp,p,pt
10.14	Boyarinov 90	a-dep,angp,p,pt

p nucleus

π^- X

21	Bajramov 89	p
69.99	Victorov 90	p
70 – 400	Geist 91	a-dep,p,pt

$\rho(770)^0$ X

70 – 400	Geist 91	a-dep,p,pt
100	Walker 91	mult

$\omega(783)$ X

100	Walker 91	mult

$f_2(1270)$ X

100	Walker 91	mult

K^+ X

2.88	Schnetzer 89	angp,cs,p
10.14	Boyarinov 90	a-dep,angp,p,pt
70 – 400	Geist 91	a-dep,p,pt

K^- X

10.14	Boyarinov 90	a-dep,angp,p,pt
70 – 400	Geist 91	a-dep,p,pt

K_S X

70 – 400	Geist 91	a-dep,p,pt
360	Hsiung 92	–
	Iconomidoufa 91	–
	Kleinknecht 91	–
	Winstein 91	–

K_L X

450	Hsiung 92	–
	Iconomidoufa 91	–
	Kleinknecht 91	–
	Winstein 91	–

$\phi(1020)$ X

70 – 400	Geist 91	a-dep,p,pt

charm X

800	Spiegel 91	p,pt

DC X

370	Appel 92	a-dep

D X

800	Lipton 92	a-dep,p,pt

D^+ X

800	Kodama 92	cs
	Kodama 91	cs,p,pt

D^0 X

800	Kodama 91	cs,p,pt
	Kodama 91C	cs

$J/\psi(1S)$ X

27 – 280	Freudenreich 90	a-dep,p,pt
200	Geist 91	a-dep,pt
800	Rossi 91	a-dep,p,pt

$\Upsilon(1S)$ X

800	Rossi 91	a-dep,p,pt

nucleon X

$3 \cdot 10^5 - 5 \cdot 10^5$	Dubovy 88	p

p X

1 – 12	Nakai 91	angp,p
1.921	Antonchik 90B	angp,mult,p
2.03 – 10.1	Sibirtsev 90	a-dep,angp,p
10.14	Boyarinov 90	a-dep,angp,p,pt
70 – 400	Geist 91	a-dep,p,pt

n X

1 – 12	Nakai 91	angp,p

$\bar{p}$ X

10.14	Boyarinov 90	a-dep,angp,p,pt
69.99	Victorov 90	p
70 – 400	Geist 91	a-dep,p,pt

$\Delta(1232\,P_{33})^{++}$ X

20.8	Gulamov 91	cs,mult

Λ X

12 – 2070	Panagiotou 89	a-dep,p,pol,pt
70 – 400	Geist 91	a-dep,p,pt

p nucleus

$\bar{\Lambda}$ X

70 – 400	Geist 91	a-dep,p,pt

Σ^+ X

800	Chen 92B	–
	Foucher 92	–

Σ^- X

69.99	Victorov 90	p

Ξ^0 X

70 – 400	Geist 91	a-dep,p,pt
400	James 90	–

fireball X

400	Shivpuri 88	angp,mass,p

nucleus X

$3 \cdot 10^5 - 5 \cdot 10^5$	Dubovy 88	p

hypernucleus X

?	Bando 90	–

charmed-nucleus X

70	Bunyatov 92	cs
	Lyukov 89	cs
250	Bunyatov 92	cs
	Lyukov 89	cs

dibaryon($S = -2$) X

10	Shakhbazyan 88	cs,mass

He X

200	Takibaev 90	p
400	Takibaev 90	p

^{24}Na X

4.491	Kozma 90C	angp,p

supernucleus X

70	Bunyatov 92	cs
250	Bunyatov 92	cs

$\mu^-\ \mu^+$ X

0 – 800	Sulyaev 88	a-dep,angp,p,pt
28	Silvestrov 89	mass
150	Freudenreich 90	angp,mass,p,pt
200	Freudenreich 90	a-dep,mass,p
225	Freudenreich 90	angp,mass,p,pt
300	Freudenreich 90	a-dep,mass,p
400	Freudenreich 90	a-dep,mass,p
800	Alde 91	mass
	Leitch 91	a-dep,mass,p,pt
	Alde 90B	mass
	Mishra 90	mass

mult[p] mult[$\pi^\pm$] X

7.1	Guaraldo 89B	cor,mult

mult[grey] mult[shower] X

4.5	Ghosh 89F	mult

mult[htrack] mult[shower] X

4.5	Ghosh 89F	mult
200	Aggarwal 91	cor,mult,p
400	Nasr 92	mult
	Aggarwal 91	cor,mult,p
800	Abduzhamilov 89	mult

mult[htrack] mult[grey] X

800	Abduzhamilov 89	mult

mult[black] mult[shower] X

4.5	Ghosh 89F	mult

mult[htrack] mult[black] X

67	Takibaev 88	ang,cor
200	Takibaev 88	ang,cor
400	Takibaev 88	ang,cor

0p 2charged X

200	Brick 90	cor,mult,p

2jet X

400	Moore 90	a-dep,angp,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p nucleus

2hadron X
400 Geist 91 a-dep,pt

hadron$^+$ hadron$^-$ X
0 – 800 Sulyaev 88 a-dep,angp,p,pt

shower mult[shower] X
800 Abduzhamilov 88B cor,mult,p

mult[grey] shower X
24 Abduzhamilov 88B cor,mult,p
200 Abduzhamilov 88B cor,mult,p
400 Ahmad 90 angp,mult
Tariq 90 cor,mult,p
Abduzhamilov 88B cor,mult,p
800 Abduzhamilov 88B cor,mult,p
Abduzhamilov 88C cor,mult

mult[htrack] shower X
10 Bobodjanov 91 angp,mult
70 Bobodjanov 91 angp,mult
200 Bobodjanov 91 mult
400 Bobodjanov 91 mult
800 Abduzhamilov 89 mult,p
Abduzhamilov 88C cor,mult

mult[black] shower X
800 Abduzhamilov 88C cor,mult

shower jet X
200 Boos 88B angp,mult
400 Boos 88B angp,mult

2shower X
70 Bhattacharje 89 cor,p
800 Barbier 88 ang,angp,mult
1000 Melku 91 cor,p

grey mult[shower] X
300 Jain 88B cor,mult,p
400 Jain 88B cor,mult,p
800 Abduzhamilov 88C cor,mult
Jain 88B cor,mult,p

grey mult[grey] X
400 Ahmad 90 angp,mult
800 Abduzhamilov 88B angp,cor,mult

mult[htrack] grey X
10 Bobodjanov 91 mult
70 Bobodjanov 91 mult
200 Bobodjanov 91 mult
400 Bobodjanov 91 mult
800 Abduzhamilov 89 mult,p
Abduzhamilov 88C cor,mult

mult[black] grey X
800 Abduzhamilov 88B angp,cor,mult
Abduzhamilov 88C cor,mult

grey shower X
300 Jain 88B cor,mult,p
400 Jain 88B cor,mult,p
Shivpuri 88B mult
800 Jain 88B cor,mult,p

htrack mult[shower] X
400 Shivpuri 88 angp,mult
800 Abduzhamilov 88C cor,mult

htrack mult[grey] X
800 Abduzhamilov 88C cor,mult

p nucleus

htrack mult[black] X
800 Abduzhamilov 88C cor,mult

htrack shower X
400 Shivpuri 88B cor,mult,p

htrack grey X
400 Shivpuri 88B mult

black mult[shower] X
800 Abduzhamilov 88C cor,mult

black mult[grey] X
800 Abduzhamilov 88B angp,cor,mult
Abduzhamilov 88C cor,mult

mult[htrack] black X
1.05 – 400.9 Atageldieva 88 mult,p
200 Bobodjanov 91 mult
400 Bobodjanov 91 mult
800 Abduzhamilov 88C cor,mult

black mult[black] X
800 Abduzhamilov 88B angp,cor,mult

black shower X
400 Shivpuri 88B mult

black grey X
400 Shivpuri 88B mult

htrack black X
400 Shivpuri 88B mult

$\bar{c}$ c X
70 Ammosov 92B cs
350 Appel 92 ang
800 Spiegel 91 angp,mass,p,pt

$\pi^\pm$ mult[grey] X
200 Abe 88 mult

π^- mult[grey] X
200 Abe 88 mult

$2\pi^0$ X
0 – 800 Sulyaev 88 a-dep,angp,p,pt

$\pi^+ \pi^-$ X
0 – 800 Sulyaev 88 a-dep,angp,p,pt

$K^+ K^-$ X
0 – 800 Sulyaev 88 a-dep,angp,p,pt

charm $\overline{\text{charm}}$ X
300 Appel 92 a-dep
800 Kodama 91B ang,angp,cor,mass,mult,p,pt
Spiegel 91 –

p mult[grey] X
200 Abe 88 p

p htrack X
20.8 Gulamov 91 mult,p,pt

$p\ \gamma$ X
800 Foucher 92 ang,mass

$p\ \pi^+$ X
4.2 Grishin 88B mass
20.8 Gulamov 91 mass,p,pt

$\Lambda\ \gamma$ X
400 James 90 ang,mass,pol

$\Lambda\ \pi^0$ X
400 James 90 ang,mass,pol

2Λ X
10 Shakhbazyan 88 cs,mass

$p\ \Sigma^-$ X
10 Shakhbazyan 88 cs,mass

2fireball X
400 Shivpuri 88 angp,mass,p

p nucleus

He mult[htrack] X
200 Takibaev 90 p
400 Takibaev 90 p

$K^-\ \pi^+\ \mu^+$ X
800 Kodama 92 mass

3shower X
70 Bhattacharje 89 cor,p

grey 2shower X
800 Barbier 88 angp,mult

$\pi^\pm$ mult[grey] mult[charged$^-$] X
200 Abe 88 mult

π^- mult[grey] mult[charged$^-$] X
200 Abe 88 mult

$\pi^+\ \pi^-$ mult[grey] X
100 Walker 91 mass

p mult[grey] mult[charged$^-$] X
200 Abe 88 p

p neutral (neutrals) X
800 Foucher 92 ang,mass

$p\ \pi^+$ (showers) X
20.8 Gulamov 91 ang,angp,cor

4shower X
70 Bhattacharje 89 cor,p

nucleus p
6 Yokosawa 90B asym
185 Yokosawa 92 angp,asym,pol
Yokosawa 90B angp,asym,pol
Akchurin 89 angp,asym,pol
Nurushev 89 angp,asym,asym,pol

p deuteron

X
1.1 – 6 Yokosawa 90B cs

inelastic
1.463 Fergerson 88 pol

hadron X
450 Akesson 92B et

hadron$^+$ X
400 Jaffe 89 pt

hadron$^-$ X
400 Jaffe 89 pt

γ X
0.5414 Clauton 92 angp,cs,p
0.6356 Clauton 92 angp,cs,p

π^+ X
400 Jaffe 89 pt

π^- X
1.45 Aslanides 91 cs,mass,p,pol
2.1 Aslanides 91 cs,mass,p,pol
2.7 Aslanides 91 cs,mass,p,pol
400 Jaffe 89 pt

K^+ X
400 Jaffe 89 pt

K^- X
400 Jaffe 89 pt

$J/\psi(1S)$ X
800 Alde 91D p,pt
Leitch 91 a-dep,p,pt
Alde 90B a-dep,p,pt

$\psi(2S)$ X
800 Leitch 91 a-dep
Mishra 90 a-dep,p,pt

$\psi(3770)$ X
800 Alde 91D p,pt

$\Upsilon(1S)$ X
800 Alde 91 a-dep,cs,p,pt

p deuteron

$\Upsilon(1S)$ X

	Leitch 91	a-dep
	Mishra 90	a-dep

$\Upsilon(3S)$ X + $\Upsilon(2S)$ X

800	Alde 91	a-dep,cs,p,pt

p X

3.9	Nakai 89	a-dep,angp
9	Belzer 92	a-dep,p
400	Jaffe 89	pt

$\bar{p}$ X

400	Jaffe 89	pt

$e^-\ e^+$ X

5.762	Huang 92	cs,mass,p

$\mu^-\ \mu^+$ X

800	Arneodo 92	a-dep,mass,p,pt
	Alde 91	a-dep,cs
	Alde 90B	a-dep
	Alde 90C	a-dep,mass,p,pt
	Mishra 90	a-dep,p,pt

2meson X

70	Abramov 90	angp,pt

$\pi^+\ \pi^-$ X

3.9	Nakai 89	a-dep,mass

p meson X

70	Abramov 90	angp,pt

$p\ \pi^+$ X

3.88	Nakai 91	mass
3.9	Nakai 89	a-dep,mass

$p\ \pi^-$ X

3.88	Nakai 91	mass
3.9	Nakai 89	a-dep,mass

$2p$ X

70	Abramov 90	angp,pt

$2p\ \pi^+$ X

3.9	Nakai 89	a-dep,angp

$2p\ \pi^-$ X

3.9	Nakai 89	a-dep,angp

deuteron p

0.2076	Locher 90	angp,pol
0.24	Yokosawa 90B	pol
0.2873	Kistryn 89	pol
1.085	Yokosawa 90B	pol
1.09	Yokosawa 90B	asym,pol
1.278	Yokosawa 90B	pol
1.337	Grebenjuk 89	angp,cs
	Velichko 88	angp
1.337 – 1.686	Dobrovolsky 88	angp
1.455	Grebenjuk 89	angp,cs
	Velichko 88	angp
1.463	Yokosawa 90B	asym,pol
	Adams 88	cor,pol
1.569	Grebenjuk 89	angp,cs
	Velichko 88	angp
1.686	Grebenjuk 89	angp,cs
	Velichko 88	angp
3.5	Yokosawa 90B	pol
	Ohmori 88	pol

dibaryon p

1.438	Andreev 88	
1.503	Andreev 88	
1.561	Andreev 88	
1.669	Andreev 88	
1.696	Aleshin 91	cs

dibaryon n

1.438	Andreev 88	
1.503	Andreev 88	
1.561	Andreev 88	
1.669	Andreev 88	

^{3}He π^0

0.8	Adams 89	pol

^{3}He η

0.896	Mayer 89	cs

$2p\ n$

0.2873	Kistryn 89	pol

p deuteron

$2p\ n$

0.5	Yokosawa 90B	pol
0.65	Yokosawa 90B	pol
0.6842	Abegg 88	pol
0.8	Yokosawa 90B	pol
0.8444	Abegg 88	pol
0.989	Abegg 88	pol
1.07	Abegg 88	pol
1.099	Punjabi 88	angp,p
1.101	Epstein 90	angp,p
	Punjabi 88	angp,p
	Punjabi 88B	angp,p
1.438	Andreev 88	ang,mass
1.5 – 1.7	Zielinsky 88	cs,mass
1.503	Andreev 88	ang,mass
1.561	Andreev 88	ang,mass
1.669	Andreev 88	ang,mass
1.696	Aleshin 91	angp,p
	Aleshin 90	angp,pol

deuteron $p\ \gamma$

0.6444	Pinston 90	angp,p

p(spect) $2p\ \pi^-$

0.9543	Ponting 88	asym,pwa

$p\ ^3$He

deuteron X

1.46	Santi 88	angp,pol
1.6	Zielinsky 88	cs,mass
1.9	Zielinsky 88	cs,mass

$2p$ X

0.6791	Hausser 91	asym,p,pol
0.7926	Rahav 92B	ang,dme,p,pt
	Rahav 92C	angp,p
	Hausser 91	asym,p,pol

$p\ n$ X

0.6791	Hausser 91	asym,p,pol
0.7926	Rahav 92B	ang,dme,p,pt
	Rahav 92C	angp,p
	Hausser 91	asym,p,pol

^{3}H $\Delta(1232\ P_{33})^{++}$

2.251	Ellegaard 89	pol
2.784	Ellegaard 89	pol
3.099	Ellegaard 89	pol

^{3}He p

0.6791	Hausser 91	angp,asym,pol
0.7926	Hausser 91	angp,asym,pol
0.9543	Hausser 91	angp,asym,pol
1.09	Hausser 91	angp,asym,pol

$3p\ n$

0.8354	Blinov 88	angp,cs,mass,p
1.671	Blinov 88	angp,cs,mass,p

$p\ ^4$He

mult[charged] X

(220)	Tannenbaum 89	et,p

charged X

(124)	Fischer 88	a-dep,p,pt

charged $^-$ X

(124)	Fischer 88	a-dep,p,pt

hadron X

(157.5)	Akesson 89	et

^{4}He p

1.337	Grebenjuk 89	angp,cs
1.455	Grebenjuk 89	angp,cs
1.569	Grebenjuk 89	angp,cs
1.686	Grebenjuk 89	angp,cs

p He

mult[charged] (neutrals)

400	Miettinen 88	a-dep,angp,col,et,mult,p

p X

1.09	Sterbenz 92	mass

(jets) jet X

400	Miettinen 88	a-dep,angp,et,p

He p

0.6791	Abdullin 92	angp
1.09	Sterbenz 92	angp
1.337 – 1.686	Dobrovolsky 88	angp

He* p

1.09	Sterbenz 92	angp
1.463	Sterbenz 92	angp

p Li

$\pi^+\ \pi^-$ X

3.9	Nakai 89	a-dep,mass

$2p$ X

6	Carroll 88	angp
10	Carroll 88	angp

$2p$ fragt (neutrals)

6	Heppelmann 89	angp
10	Heppelmann 89	angp

$p\ ^6$Li

X

2	Dukhovskoy 87	cs

p X

0.28	Mildenberger 90	cs

n X

0.28	Mildenberger 90	cs

p mult[p] X

1.696	Baturin 91	mult

$2p$ X

1.696	Baturin 91	angp,col,mass,p

$p\ \Delta(1232\ P_{33})$ X

1.696	Baturin 91	

$p\ ^7$Li

X

2	Dukhovskoy 87	cs

$J/\psi(1S)$ X

300	Antoniazzi 92	cs,mass
	Antoniazzi 92B	cs,p,pt

$\chi_{c1}(1P)$ X

300	Antoniazzi 92	cs

$\chi_{c2}(1P)$ X

300	Antoniazzi 92	cs

$\psi(2S)$ X

300	Antoniazzi 92	cs
	Antoniazzi 92B	cs

$\mu^-\ \mu^+$ X

300	Antoniazzi 92	mass
	Antoniazzi 92B	mass

$J/\psi(1S)\ \gamma$ X

300	Antoniazzi 92	mass

$\mu^-\ \mu^+\ \gamma$ X

300	Antoniazzi 92	mass

^{8}Be*

0.0287	Savage 88C	
0.044	Savage 88C	

^{8}Li* π^+

0.7771	Huber 88C	angp,p,pol
0.8886	Huber 88C	angp,p,pol
1.076	Huber 88C	angp,p,pol

^{7}Be n + ^{7}Be* n

0.4446	Watson 89	angp
0.5211	Watson 89	angp
0.6444	Watson 89	angp
0.8081	Watson 89	angp

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$p\ ^7Li$

$^7Be\ n\ +\ ^7Be^*\ n$

0.9543	Watson 89	angp

$^7Be\ n$

0.28	Mildenberger 90	–
0.6444	Alford 89	ang,cs,p
0.8081	Alford 89	ang,cs,p
1.023	Alford 89	ang,cs,p

$^8Bor^*\ \pi^-$

0.7771	Huber 88C	angp,p,pol
0.8886	Huber 88C	angp,p,pol
1.076	Huber 88C	angp,p,pol

p Be

inelastic

1.26 – 2.5	Kuzichev 89	a-dep,cs

charged-lepton X

400	Bernstein 88	cs,p

ν_e X

400	Duffy 88	a-dep,cs,p,pt

$\bar{\nu}_e$ X

400	Duffy 88	a-dep,cs,p,pt

ν_μ X

400	Duffy 88	a-dep,cs,p,pt

$\bar{\nu}_\mu$ X

400	Duffy 88	a-dep,cs,p,pt

mult[charged] (neutrals)

400	Miettinen 88	a-dep,angp,col,et,mult,p

mult[hadron] X

800	Tannenbaum 89	et,p

charged X

14.6	Abbott 92B	cs,et,p
400	Bernstein 88	cs,p
800	Sambamurti 90	a-dep,pt

jet X

800	Boca 90	angp,mass,p,pt
	Stewart 90	a-dep,angp,col,pt

hadron X

200	Akesson 92B	et,p
450	Akesson 92B	et

hadron$^+$ X

800	Boca 90	angp,mass,p,pt

hadron$^-$ X

800	Boca 90	angp,mass,p,pt

charged-hadron X

400	Bernstein 88	cs,p

longlived X

400	Bernstein 88	cs,p

longlived^0 X

450	Akesson 90G	cs

γ X

450.9	Schukraft 88B	angp,pt
500	Alverson 91B	p,pt
530	Engels 90	pt

heavy-lepton X

400	Duffy 88	cs

π^+ X

10	Boyarinov 92	a-dep,angp,cs,p
10.1	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
13.3	Bonner 90	angp,p,pol
14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt
14.97 – 18.98	Gavrishchuk 91B	p
14.97 – 64.99	Belyaev 89B	a-dep,angp
18.5	Bonner 90	angp,p,pol
25 – 65	Belyaev 88D	a-dep,angp
53.99 – 61.99	Gavrishchuk 91B	p
800	Straub 92	pt
	Straub 92B	pt

p Be

π^+ X

	Straub 92B	pt

π^0 X

500	Alverson 91	a-dep,p,pt
	Alverson 91B	p,pt

π^- X

1.463	Barlow 88	angp
10	Boyarinov 92	a-dep,angp,cs,p
10.1	Vorontsov 88B	a-dep,angp
13.3	Bonner 90	angp,p,pol
14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt
14.97 – 18.98	Gavrishchuk 91B	p
14.97 – 64.99	Belyaev 89B	a-dep,angp
18.5	Bonner 90	angp,p,pol
53.99 – 61.99	Gavrishchuk 91B	p
800	Straub 92	pt
	Straub 92B	pt

K^+ X

1.468 – 1.685	Koptyev 88	cs
1.693	Koptyev 88	cs
10	Boyarinov 92C	a-dep,angp,cs,p
10.1	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
10.14	Boyarinov 89	a-dep,angp
	Boyarinov 88B	angp
14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt
14.97 – 64.99	Gavrishchuk 92	a-dep,angp,cs,p
15 – 65	Gavrishchuk 91C	a-dep,angp,p
800	Straub 92	pt
	Straub 92B	pt

K^- X

10	Boyarinov 92C	a-dep,angp,cs,p
10.1	Vorontsov 88B	a-dep,angp
10.14	Boyarinov 89	a-dep,angp
	Boyarinov 88C	angp
14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt
14.97 – 64.99	Gavrishchuk 92	a-dep,angp,cs,p
15 – 65	Gavrishchuk 91C	a-dep,angp,p
800	Straub 92	pt
	Straub 92B	pt

K_S X

13.3	Bonner 90	angp,p,pol
	Yokosawa 90B	asym,pol
	Bonner 88	asym,pol
18.5	Bonner 90	angp,p,pol
	Yokosawa 90B	asym,pol
	Bonner 88	asym,pol
360	Perdereau 92	–
450	Fayard 89	p
800	Ramberg 92	–
	Hsiung 90B	p
	Karlsson 90	p
	Patterson 90	p
	Yamanaka 90	p
	Fayard 89	p
	Winstein 89	p

K_L X

450	Perdereau 92	–

p Be

K_L X

	Barr 91	p
	Serin 91B	–
	Barr 90C	–
	Barr 90D	p
	Fayard 89	p
800	Hsiung 92	–
	Ramberg 92	–
	Ramberg 92B	p
	Somalwar 92	p
	Barker 91	–
	Kleinknecht 91	–
	Winstein 91	–
	Hsiung 90B	p
	Karlsson 90	p
	Patterson 90	p
	Yamanaka 90	p
	Fayard 89	p
	Winstein 89	p

charm X

400	Duffy 88	a-dep,cs

$\overline{\text{charm}}$ X

400	Duffy 88	a-dep,cs

D^0 X

800	Peng 92	a-dep,cs

$J/\psi(1S)$ X

530	Abramov 91B	cs,p,pt

bottom X

400	Duffy 88	cs

$\overline{\text{bottom}}$ X

400	Duffy 88	cs

Υ(unspec) X

800	Yoshida 89	p

p X

2.5	Safronov 88	angp
3.7	Safronov 88	angp
5.5	Safronov 88	angp
7.2	Safronov 88	angp
9.2	Safronov 88	angp
10	Boyarinov 92B	a-dep,angp,cs,p
10.1	Safronov 88B	angp
	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt
14.97 – 64.99	Belyaev 90	a-dep,p
17.98 – 63.99	Belyaev 89C	angp,p,pol
800	Straub 92	pt
	Straub 92B	pt

DD $< p >$ X

450	Akesson 90F	a-dep,angp,mass,mult,p,pt

$\bar{p}$ X

10.1	Sibirtsev 91	a-dep,angp,p
	Voronin 88	a-dep,angp
10.14	Boyarinov 91	a-dep,angp,p
800	Straub 92	pt
	Straub 92B	pt

Λ X

13.3	Yokosawa 90B	asym,pol
	Bonner 88	asym,pol
18.5	Yokosawa 90B	asym,pol
	Bonner 88	asym,pol
28.5	Yokosawa 91	cs,p,pol,pt
	Yokosawa 90B	pol
400	Lundberg 89	pol

$\bar{\Lambda}$ X

400	Lundberg 89	pol

Σ^+ X

400	Yokosawa 90B	pol

Σ^0 X

22	Yokosawa 91	p,pol

p Be

Σ^0 X

	Yokosawa 90B	p,pol
	Bonner 89	p,pol
28.5	Yokosawa 91	cs,p,pol,pt
	Yokosawa 90B	pol

Ξ^- X

800	Duryea 92	–
	Duryea 91	angp,p,pol
	Ho 91	angp,p,pol
	Yokosawa 91	angp,p,pol
	Ho 90	pol

$\bar{\Xi}^+$ X

800	Ho 91	angp,p,pol
	Yokosawa 91	angp,p,pol
	Ho 90	pol

Ω^- X

400	Luk 88	–
800	Luk 93	pol

deuteron X

2.5	Safronov 88	angp
3.7	Safronov 88	angp
5.5	Safronov 88	angp
7.2	Safronov 88	angp
9.2	Safronov 88	angp
10.1	Safronov 88B	angp
10.14	Boyarinov 88	angp,p
14.6	Abbott 92	angp,p,pt
14.97 – 64.99	Belyaev 90	a-dep,p
17.98 – 63.99	Belyaev 89C	angp,p,pol

^{3}H X

10.1	Safronov 88B	angp
10.14	Boyarinov 88	angp,p

^{3}He X

0.8081	Kortelling 90	angp,p
10.1	Safronov 88B	angp

^{4}He X

0.8081	Kortelling 90	angp,p
10.1	Safronov 88B	angp

$2e^-$ X

5.762	Letessiersel 89B	mass,pt

$2e^-$ X + $2e^+$ X

5.762	Roche 88C	mass,p,pt

e^- e^+ X

1.696	Seidl 91	cs
	Matis 90	cs,mass
	Naudet 88B	cs,mass,p
	Naudet 88C	mass,pt
	Roche 88	mass,pt
1.696 – 17.91	Schroeder 90	cs
1.742	Naudet 88	cs,mass,pt
2.88	Seidl 91	cs
	Matis 90	cs,mass
	Naudet 88	cs,mass,pt
	Naudet 88B	cs,mass,p
	Naudet 88C	mass
	Roche 88	mass
5.762	Huang 91	mass
	Seidl 91	mass
	Matis 90	cs,mass,pt
	Schroeder 90	mass
	Letessiersel 89	mass,pt
	Letessiersel 89B	mass,pt
	Naudet 88	cs,mass,pt
	Naudet 88B	cs,mass,p
	Naudet 88C	mass
	Roche 88	mass
	Roche 88B	cs,mass,pt
	Roche 88C	mass,p,pt
28.5	Freudenreich 90	mass
800	Yoshida 89	mass,p,pt

$2e^+$ X

5.762	Letessiersel 89B	mass,pt

μ^- e^- X + μ^+ e^+ X

450	Johansson 90B	mass,p,pt

p Be

μ^- e^+ X

450	Johansson 90B	mass,p,pt

μ^+ e^- X

450	Johansson 90B	mass,p,pt

$2\mu^-$ X + $2\mu^+$ X

450	Johansson 90B	mass,p,pt

μ^- μ^+ X

450	Johansson 90B	mass,p,pt
800	Freudenreich 90	mass

(jets) jet X

400	Miettinen 88	a-dep,angp,et,p

2jet X

800	Boca 90	angp,mass,p,pt
	Stewart 90	a-dep,angp,col,et

2hadron$^+$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

hadron$^+$ hadron$^-$ X

800	Straub 92B	mass,pt
	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

2hadron$^-$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

2γ X

500	Alverson 91	mass,p,pt

π^0 charged X

69.99	Balats 92	cs,p

2π X

70	Gavrilov 92	mass

π^+ π^- X

13.3	Bonner 88	mass
18.5	Bonner 88	mass
70	Abramov 90	angp,pt
800	Straub 92	mass,pt

η charged X

69.99	Balats 92	cs,p

ω(783) charged X

69.99	Balats 92	cs,p

K^+ π^- X

800	Straub 92	mass,pt

K^- π^+ X

800	Straub 92	mass,pt

K^+ K^- X

800	Straub 92	mass,pt

$2K_L$ X

800	Yamanaka 89	p
	Gibbons 88	angp,p

charmed-meson $\overline{\text{charmed-meson}}$ X

400	Duffy 88	a-dep,cs

p π^- X

13.3	Bonner 88	mass
18.5	Bonner 88	mass
70	Abramov 90	angp,pt
800	Straub 92	mass,pt

$\bar{p}$ π^+ X

800	Straub 92	mass,pt

p K^- X

800	Straub 92	mass,pt

$\bar{p}$ K^+ X

800	Straub 92	mass,pt

$2p$ X

1.09	Cebra 89	cor,p

p Be

p $\bar{p}$ X

800	Straub 92	mass,pt

Λ_c^+ $\overline{\text{charmed-meson}}$ X

400	Duffy 88	a-dep,cs

deuteron p X

1.09	Cebra 89	cor,p

2deuteron X

1.09	Cebra 89	cor,p

2^{3}H X

1.09	Cebra 89	cor,p

^{4}He mult[p] X

0.8081	Kortelling 90	angp,mult

^{4}He p X

0.8081	Kortelling 90	angp,p
1.09	Cebra 89	cor,p

^{4}He deuteron X

1.09	Cebra 89	cor,p

μ^- μ^+ charged X

530	Abramov 91B	mass,mult,p,pt

π^0 2γ X

800	Papadimitrio 91	mass

π^+ π^- γ X

800	Ramberg 92	mass,p,pt

p $2\pi^-$ X

800	Yokosawa 91	angp,mass
	Ho 90	angp,mass

$\bar{p}$ $2\pi^+$ X

800	Yokosawa 91	angp,mass
	Ho 90	angp,mass

p K^- π^- X

400	Luk 88	mass

p ^{9}Be

X

2	Dukhovskoy 87	cs

p X

16.97 – 63.99	Gavrishchuk 91	a-dep,pol

p C

inelastic

1.26 – 2.5	Kuzichev 89	a-dep,cs
4.2	Grigalashvil 88	cs
500 – 10^4	Avakyan 89C	a-dep,cs

mult[charged] X

4.2	Mekhtiev 88	et
14.5	Remsberg 88	mult

mult[charged$^+$] X

10	Armutlijsky 87B	cs,mult

mult[charged$^-$] X

2.3	Grigalashvil 88	a-dep,mult
4.2	Backovic 92	cor,mult,p
	Batskovich 91	cor,mult,p
	Grigalashvil 88	a-dep,mult
10	Armutlijsky 87B	cs,mult

mult[charged] (neutrals)

4.2	Baatar 88	cor,mass,mult,p,pt
10	Baatar 88	cor,mass,mult,p,pt
400	Miettinen 88	a-dep,angp,col,et,mult,p
800	Sambamurti 90	cor,et,mult

mult[hadron] X

800	Tannenbaum 89	et,p

mult[π^+] X

1.463	Trzaska 91C	cs,mult

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p C

mult[π^+] X
2.359 Trzaska 91C cs,mult

mult[π^-] X
1.463 Trzaska 91C cs,mult
2.359 Trzaska 91C cs,mult

mult[p] X
1.463 Trzaska 91C cs,mult
2.359 Trzaska 91C cs,mult
4.2 Baldin 88C angp,cor
Gulkanyan 88D mult
10 Baldin 88C angp,cor

mult[fragt] X
1.463 Lemaire 91 mult
2.359 Lemaire 91 mult

neutral X
14.5 Remsberg 88 p
Tannenbaum 88 et,p

charged X
2.3 Grigalashvil 88 a-dep,mult
4.2 Mekhtiev 88 et,mult
14.6 Abbott 92B cs,et,p
800 Sambamurti 90 a-dep,pt

charged$^-$ X
2.3 Grigalashvil 88 a-dep,mult
4.2 Grigalashvil 88 a-dep,mult

jet X
800 Stewart 90 a-dep,angp,col,pt

hadron$^+$ X
9 Belzer 90 angp,p

hadron (hadrons)
800 Sambamurti 90 cor,cs,et,mult,p,pt

γ X
0.4539 Clauton 92B angp,cs,p
0.5414 Clauton 92 angp,cs,p
Clauton 92B angp,cs,p
0.6356 Clauton 92 angp,cs,p
70 Afanasyev 90 cs
Afanasyev 90B cs
200 Albrecht 91O cs
200.9 Albrecht 91 pt

π X
10 Armutlijsky 91 a-dep,angp
70 Gavrilov 92 pt

$\pi^\pm$ X
4.9 Schmidt 92 a-dep,p
60 Schmidt 92 a-dep,p
200 Schmidt 92 a-dep,p
200.9 Kampert 92 a-dep,p

π^+ X
1.463 Lemaire 91B angp,mult
Trzaska 91C cs
2.359 Lemaire 91B angp,mult
Trzaska 91C cs
3.308 Baldin 92 cs
4.491 Baldin 92 cs
5.357 Baldin 92 cs
6.875 Baldin 92 cs
7.5 Vorobiev 89B a-dep,angp
Vorobiev 88D a-dep,angp
8.989 Baldin 92 cs
14.97 – 18.98 Gavrishchuk 91B p
25 – 65 Belyaev 88D a-dep,angp
52.99 – 60.99 Gavrishchuk 91B p

π^0 X
0.6462 Bellini 89 a-dep,cs
0.6585 Bellini 89 ang,p
4.5 Abraamyan 88 p,pt
200 Albrecht 91O cs
200.9 Albrecht 91 pt

p C

π^- X
1.463 Lemaire 91B angp,mult
Trzaska 91C cs
Barlow 88 angp
2.359 Lemaire 91B angp,mult
Trzaska 91C cs
4.2 Agakishiev 89B angp,mult,p
10 Armutlijsky 87B a-dep,angp,mult,p
14.97 – 18.98 Gavrishchuk 91B p
52.99 – 60.99 Gavrishchuk 91B p

$K^\pm$ X
3.308 Baldin 92 cs
4.491 Baldin 92 cs
5.357 Baldin 92 cs
6.875 Baldin 92 cs
8.989 Baldin 92 cs

K^+ X
1.468 – 1.685 Koptyev 88 cs
1.693 Koptyev 88 cs
14.97 – 64.99 Gavrishchuk 92 a-dep,angp,cs,p
15 – 65 Gavrishchuk 91C a-dep,angp,p

K^- X
14.97 – 64.99 Gavrishchuk 92 a-dep,angp,cs,p
15 – 65 Gavrishchuk 91C a-dep,angp,p

ϕ(1020) X
450 Fredj 91 a-dep,cs,p,pt

$J/\psi(1S)$ X
450 Fredj 91 a-dep,cs,p,pt
530 De 89 a-dep,cs,p
800 Alde 91D p,pt
Leitch 91 a-dep,p,pt
Spiegel 91 a-dep
Alde 90B a-dep,p,pt
Mishra 90 a-dep,p,pt

$\psi(2S)$ X
450 Fredj 91 a-dep,cs,p,pt
800 Leitch 91 a-dep
Spiegel 91 a-dep
Alde 90B a-dep
Mishra 90 a-dep

ψ(3770) X
800 Alde 91D p,pt

χ_c(unspec) X
530 De 89

$\Upsilon(1S)$ X
800 Alde 91 a-dep,cs,p,pt
Leitch 91 a-dep
Spiegel 91 a-dep
Mishra 90 a-dep

$\Upsilon(3S)$ X + $\Upsilon(2S)$ X
800 Alde 91 a-dep,cs,p,pt
Spiegel 91 a-dep

p X
3.88 Nakai 91 p
3.9 Nakai 89 a-dep,angp
4.2 Backovic 92C a-dep,angp,p
Agakishiev 88 p
Gulkanyan 88D a-dep,angp,cor,cs,mult
4.9 Schmidt 92 a-dep,p
5 Arakelyan 90B angp
9 Belzer 92 a-dep,p
Belzer 90 angp,p
10 Agakishiev 88 p
Armutlijsky 87 p
17.98 – 63.99 Belyaev 89C angp,p,pol
60 Schmidt 92 a-dep,p
200 Schmidt 92 a-dep,p
200.9 Kampert 92 a-dep,p
Schmidt 88 p,pt

n X
1.206 Binz 89 pol

p C

n X
1.49 Chiba 91 angp
4.2 Agakishiev 88 p
7.5 Vlasov 89 a-dep,angp
10 Agakishiev 88 p

$\Delta(1232\,P_{33})^{++}$ X
2.359 Trzaska 91C cs
7.5 Vorobiev 90 angp

$\Delta(1232\,P_{33})^0$ X
2.359 Trzaska 91C cs

Λ X
3 Vorobiev 91 –
Vorobiev 89C angp
7.5 Degtyarenko 91 angp,p
Smirnitsky 91 pol
Vorobiev 91 –
Vorobiev 89C angp

positronium X
70 Afanasyev 90 cs
Afanasyev 90B cs

deuteron X
4.9 Schmidt 92 a-dep,p
10 Armutlijsky 87 cs,p
17.98 – 63.99 Belyaev 89C angp,p,pol
60 Schmidt 92 a-dep,p
200 Schmidt 92 a-dep,p
200.9 Kampert 92 a-dep,p

dibaryon X
4.2 Didenko 91B ang

tribaryon X
4.2 Didenko 91B ang

^{3}He X
1.46 Barlow 92 a-dep,angp,p

^{4}He X
1.46 Barlow 92 a-dep,angp,p

$\mu^-\ \mu^+$ X
450 Fredj 91 a-dep,mass,p,pt
800 Arneodo 92 a-dep,mass,p,pt
Mcgaughey 92 mass
Alde 91 a-dep,cs
Spiegel 91 a-dep
Alde 90B a-dep
Alde 90C a-dep,mass,p,pt
Mishra 90 a-dep,p,pt

(p's) ($\pi^\pm$'s) X
4.2 Baatar 91 col,mult,p

mult[π] mult[charged] (neutrals)
4.2 Baatar 88 cor,mass,mult,p,pt
10 Baatar 88 cor,mass,mult,p,pt

mult[p] mult[charged] (neutrals)
4.2 Baatar 88 cor,mass,mult,p,pt
10 Baatar 88 cor,mass,mult,p,pt

mult[p] mult[$\pi^\pm$] X
4.2 Strugalski 92B mult

mult[π^+] mult[fragt] X
1.463 Lemaire 91 mult
2.359 Lemaire 91 mult

mult[π^-] mult[fragt] X
1.463 Lemaire 91 mult
2.359 Lemaire 91 mult

charged (chargeds) X
4.2 Angelov 90 angp,mult,p
Angelov 90B angp,mult,p

2charged$^+$ X
4.2 Angelov 88 ang,cor

(jets) jet X
400 Miettinen 88 a-dep,angp,et,p

p C

2jet X
800 Stewart 90 a-dep,angp,col,et

hadron$^+$ charged X
9 Belzer 90 ang,angp,p

shower mult[shower] X
4.2 Aliev 89 angp,cor,mult

γ hadron$^+$ X
9 Belzer 90 angp,p

γ hadron$^+$ X + hadron$^+$ charged X
9 Belzer 90 ang,angp,p

2γ X
4.5 Abraamyan 88 mass

π mult[charged] (neutrals)
4.2 Baatar 89 angp,mass,mult,pt
10 Baatar 89 angp,mass,mult,pt

(p's) $\pi^\pm$ X
4.2 Strugalski 92B angp,p

π^- mult[π^-] X
4.2 Aliev 89 angp,cor,mult

π^+ mult[fragt] X
1.463 Lemaire 91 mult
Lemaire 91B angp,mult
2.359 Lemaire 91 mult
Lemaire 91B angp,mult

π^- mult[fragt] X
1.463 Lemaire 91 mult
Lemaire 91B angp,mult
2.359 Lemaire 91 mult
Lemaire 91B angp,mult

π^+ charged$^+$ X
4.2 Angelov 88 ang,cor

π^- charged$^+$ X
4.2 Angelov 88 ang,cor

π hadron X
10 Lyubimov 88 col

$\pi^\pm$ hadron$^+$ X
9 Belzer 90 ang,angp,p

2π^+ X
7.5 Vlasov 92 a-dep,ang,angp,cor,p
Vlasov 90 a-dep,ang,angp,cor,p
Vorobiev 89B angp,cor,pt
Vorobiev 88D angp,cor

π^+ π^- X
3.9 Nakai 89 a-dep,mass
4.2 Angelov 88 ang,cor

2π^- X
4.2 Angelov 88 ang,cor

K_S π X
10 Armutlijsky 88 angp,mult,p,pt

$J/\psi(1S)$ γ X
530 De 89 mass

p mult[charged] X
5 Arakelyan 90B angp,mult

p mult[charged] (neutrals)
4.2 Baatar 89 angp,mass,mult,pt
10 Baatar 89 angp,mass,mult,pt

p ($\pi^\pm$'s) X
4.2 Strugalski 92B angp,p

p (p's) X
4.2 Angelov 88 angp,col
10 Angelov 88 angp,col

p C

p mult[π^+] X
5 Arakelyan 90B angp,mult

p mult[π^-] X
5 Arakelyan 90B angp,mult

p charged X
4.2 Agakishiev 88 mult,p
10 Agakishiev 88 mult,p

p charged$^+$ X
4.2 Angelov 88 ang,cor

p charged$^-$ X
4.2 Agakishiev 88 mult,p
10 Agakishiev 88 mult,p

n charged X
4.2 Agakishiev 88 mult,p
10 Agakishiev 88 mult,p

n charged$^-$ X
4.2 Agakishiev 88 mult,p
10 Agakishiev 88 mult,p

p $\pi^\pm$ X
4 Chiba 88B angp,mass,p
7.5 Vorobiev 90 mass
9 Belzer 90 ang,angp,p

p π^+ X
1.463 Trzaska 91C cs
2.359 Trzaska 91C cs
3.88 Nakai 91 mass
3.9 Nakai 89 a-dep,mass
7.5 Vlasov 92 a-dep,ang,angp,cor,p
Vlasov 90 a-dep,ang,angp,cor,p
Vorobiev 90 mass
9 Belzer 90 ang,angp,p

p π^- X
1.463 Trzaska 91C cs
2.359 Trzaska 91C cs
3.88 Nakai 91 mass
3.9 Nakai 89 a-dep,mass
4.2 Angelov 88 ang,cor

n π^+ X
1.49 Chiba 91 angp,mass

p K_S X
10 Armutlijsky 88 angp,mult,p,pt

2p X
1.696 Baturin 91 angp,col,mass,p
4.2 Angelov 88 ang,cor
Pluta 88B angp,cor,p
4.338 Ohmori 89 angp,pol
5.1 Budilov 90 angp,cor,p
6 Carroll 88 angp
7.5 Vlasov 90B cor,p
Vorobiev 90B ang,angp,mass,p
Bayukov 89 ang,angp,p
Bayukov 89B ang,angp,p
Bayukov 89C ang,angp,p
Bayukov 88 angp,cor
10 Carroll 88 angp
12 Carroll 88 angp

p n X
1.49 Chiba 91 angp
7.5 Vlasov 89 a-dep,ang,cor,p

Λ π X
10 Armutlijsky 88 mult,p,pt

p Λ X
10 Armutlijsky 88 mult,p,pt

deuteron charged$^+$ X
10 Armutlijsky 87 pt

p C

deuteron charged$^-$ X
10 Armutlijsky 87 pt

deuteron π^+ X
7.5 Vlasov 92 a-dep,ang,angp,cor,p
Vlasov 90 a-dep,ang,angp,cor,p
10 Armutlijsky 87 mult

deuteron π^0 X
10 Armutlijsky 87 mult,p

deuteron π^- X
10 Armutlijsky 87 angp,mult,p

deuteron p X
7.5 Bayukov 89C ang,angp,p
Vlasov 89B ang,p
10 Armutlijsky 87 cor,mult

deuteron n X
7.5 Vlasov 89 a-dep,ang,cor,p

2deuteron X
7.5 Bayukov 89C ang,angp,p
Vlasov 89B ang,p

^{3}H p X
7.5 Bayukov 89C ang,angp,p
Vlasov 89B ang,p

μ^- μ^+ γ X
530 De 89 mass

K_S π^+ π X
10 Armutlijsky 88 mult

K_S π^- π X
10 Armutlijsky 88 angp,mult,p

p charged$^+$ charged$^-$ X
4.2 Agakishiev 88 p
10 Agakishiev 88 p

n charged$^+$ charged$^-$ X
4.2 Agakishiev 88 p
10 Agakishiev 88 p

p K_S π X
10 Armutlijsky 88 mult

p K_S π^+ X
10 Armutlijsky 88 mult

p K_S π^- X
10 Armutlijsky 88 angp,mult,p

2p (p's) X
4.2 Baldin 90C angp,cor,mass
5 Arakelyan 90B angp

2p π^+ X
1.463 Trzaska 91C cs
2.359 Trzaska 91C cs
3.9 Nakai 89 a-dep,angp

2p π^0 X
10 Armutlijsky 87 mult,p

2p π^- X
1.463 Trzaska 91C cs
2.359 Trzaska 91C cs
3.9 Nakai 89 a-dep,angp

p n π^+ X
1.49 Chiba 91 angp

2p K_S X
10 Armutlijsky 88 mult

3p X
1.294 Budyashov 92B angp,mass,p
Budyashov 92C ang,mass,p
Budyashov 92D mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p C

$3p$ X

	Budyashov 91B	angp,mass,p
7.5	Vlasov 88	ang,angp,cor
10	Armutlijsky 87	cor

$2p$ n X

1.49	Chiba 91	angp

Λ π^+ π X

10	Armutlijsky 88	mult

Λ π^- π X

10	Armutlijsky 88	angp,mult,p

p Λ π X

10	Armutlijsky 88	mult

p Λ π^+ X

10	Armutlijsky 88	mult

p Λ π^- X

10	Armutlijsky 88	angp,mult,p

$2p$ Λ X

10	Armutlijsky 88	mult

$2p$ fragt (neutrals)

6	Heppelmann 89	angp
10	Heppelmann 89	angp

deuteron $2p$ X

7.5	Vlasov 88	ang,angp,cor

2deuteron p X

7.5	Vlasov 88	ang,angp,cor

$2p$ (p's) ($\pi^{\pm}$'s) X

10	Angelov 92	ang,cor,p

$3p$ (p's) X

10	Lyubimov 88	col

$3p$ π^+ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

$3p$ π^- X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

C p

200	Yokosawa 90	angp,asym

C* p

0.8354	Lyndon 92	p,pol

^{12}Nit n

0.3467 – 0.5708	Watson 89	angp
0.6444	Watson 89	angp
0.8081	Watson 89	angp
0.9543	Watson 89	angp

^{13}Nit π^0

0.5592	Homolka 92	angp,cs
0.5823	Homolka 92	angp,cs
0.6194	Homolka 92	angp,cs
0.6515	Homolka 92	angp,cs

C p γ

0.5861	Pinston 89	cs
0.6444	Pinston 89	cs

dibaryon($S = -2$) n $2K^+$

10	Shakhbasyan 92B	cs,mass

p ^{12}C

mult[charged] (neutrals)

4.2	Angelov 91	mult
10	Angelov 91	mult

γ X

70	Denisov 91	–

π^+ X

15 – 61	Belyaev 88	angp
	Belyaev 88B	angp

π^0 X

0.5681	Dementiev 92	angp

π^- X

4.3	Bajramov 89	p

p ^{12}C

π^- X

9.9	Bajramov 89	p
15 – 61	Belyaev 88	angp
	Belyaev 88B	angp

p X

0.28	Mildenberger 90	cs
0.7926	Chan 90	angp,p,pol
0.9821	Chan 90	angp,p,pol
1.463	Fergerson 88	pol
14.97 – 64.99	Belyaev 90	a-dep,p
16.97 – 31.99	Belyaev 89	ang,angp,p,pol
16.97 – 61.99	Belyaev 88C	angp,pol
16.97 – 63.99	Gavrishchuk 91	a-dep,pol
31.99 – 46.99	Belyaev 89	ang,angp,p,pol
46.99 – 61.99	Belyaev 89	ang,angp,p,pol

n X

0.28	Mildenberger 90	cs
0.7926	Hicks 93	angp,cs,pol
0.9821	Hicks 93	angp,cs,pol
4.2	Bekmirzaev 89	mult,p
10	Bekmirzaev 89	mult,p

$\bar{p}$ X

4.491	Baldin 90B	p
5.357	Baldin 90B	p
6.875	Baldin 90B	p
8.989	Baldin 90B	p

deuteron X

14.97 – 64.99	Belyaev 90	a-dep,p
16.97 – 31.99	Belyaev 89	ang,angp,p,pol
31.99 – 46.99	Belyaev 89	ang,angp,p,pol
46.99 – 61.99	Belyaev 89	ang,angp,p,pol

dibaryon($S = -2$) X

10	Shakhbazyan 91	cs,mass
	Shakhbazyan 90	cs,mass

dibaryon($S = -3$) X

10	Shakhbasyan 92	cs,mass

^{11}C X

4.491	Kozma 89B	cs

2γ X

0.537	Dementiev 92	mass
0.5681	Dementiev 92	mass

$2p$ X

0.6444	Cowley 88	angp,p
1.09	Barlett 91	angp,pol

dibaryon($S = -2$) K^+ X

10	Shakhbasyan 92	cs,mass

mult[charged] 2neutral (neutrals)

4.2	Angelov 89	col,p
10	Angelov 89	col,p

$\pi^{\pm}$ mult[charged] 2neutral (neutrals)

4.2	Angelov 89	col,p
10	Angelov 89	col,p

p mult[charged] 2neutral (neutrals)

4.2	Angelov 89	col,p
10	Angelov 89	col,p

nucleus p

0.0024	Miljanic 90	angp,p

nucleus He

0.0024	Miljanic 90	angp,p

^{12}C p

0.046	Sedlak 88	angp
1.09	Hoffmann 90B	angp,pol

^{13}C* π^+

0.6444	Korkmaz 90	angp,p

p ^{13}C

^{14}Nit*

0.0573	Savage 88C	–

p ^{13}C

^{13}C p

1.087	Hoffmann 90	angp,pol
1.09	Hoffmann 90B	angp,pol

^{14}C π^+

0.7291	Huber 88B	angp
	Huber 88D	angp
0.8886	Huber 88B	angp
	Huber 88D	angp
1.076	Huber 88B	angp
	Huber 88D	angp

^{14}C* π^+

0.6444	Korkmaz 90	angp,p
0.7291	Huber 88B	angp
0.8886	Huber 88B	angp
1.076	Huber 88B	angp

^{14}O π^-

0.7291	Huber 88B	angp
	Huber 88D	angp
0.8886	Huber 88B	angp
	Huber 88D	angp
1.076	Huber 88B	angp
	Huber 88D	angp

^{14}O* π^-

0.6444	Korkmaz 90	angp,p
0.7291	Huber 88B	angp
0.8886	Huber 88B	angp
1.076	Huber 88B	angp

p ^{14}C

^{14}Nit* n

0.6444	Alford 89	ang,cs,p
0.8081	Alford 89	ang,cs,p
1.023	Alford 89	ang,cs,p

p ^{14}Nit

π^- X

21	Bajramov 89	p

p ^{16}O

π^+ X

0.7291	Huber 88D	pol
0.8886	Huber 88D	pol
1.076	Huber 88D	pol

^{16}O p

0.8384	Bleszynski 88	angp,pol
1.09	Bleszynski 88	angp,pol
1.282	Bleszynski 88	angp,pol

^{17}O π^+

0.7291	Huber 88D	angp
0.8886	Huber 88D	angp
1.076	Huber 88D	angp

^{15}Nit $2p$

0.5533	Cowley 91	angp

p ^{19}Fl

^{16}O* ^{4}He

0.0398	Savage 88C	–
0.057	Bini 89B	cs

p Ne

γ X

300	Artykov 90	pt
	Alimov 89B	mult

γ mult[charged$^-$] X

300	Yuldashev 90C	cor,mult,p
	Alimov 89B	mult,p

γ mult[grey] X

300	Artykov 90	mult,p,pt
	Alimov 89B	mult,p

γ mult[grey] mult[charged$^-$] X

300	Alimov 89B	mult

p ^{20}Ne

mult[π^+] X

300	Yuldashev 90D	angp,mult

$p\ ^{20}Ne$

mult[π^-] X
300 Yuldashev 90D angp,mult

mult[p] X
300 Yuldashev 90D angp,mult

γ X
300 Yuldashev 90C mult,p,pt

π^+ X
300 Yuldashev 90D angp,mult,p

π^0 X
300 Yuldashev 90C mult,p,pt

π^- X
300 Yuldashev 90D angp,mult,p

η X
300 Yuldashev 90C mult,p,pt

$\rho(770)^0$ X
300 Yuldashev 90D angp,cs

$\omega(783)$ X
300 Yuldashev 90D angp,cs

K_S X
300 Artykov 90B angp,cs,mult
Yuldashev 90B a-dep,cs,mult,p,pt
Yuldashev 90D angp,mult

p X
300 Artykov 90B p
Yuldashev 90B p
Yuldashev 90D angp,mult,p
Alimov 89 angp,cs,mult,p

$N(1440\ P_{11})^0$ X
300 Yuldashev 90
Yuldashev 90D angp,cs

$N(1440\ B)^0$ X
300 Alimov 88 angp,cs

$\Delta(1232\ P_{33})^{++}$ X
300 Yuldashev 90
Yuldashev 90D angp,cs
Alimov 88 angp,cs

$\Delta(1232\ P_{33})^0$ X
300 Yuldashev 90
Yuldashev 90D angp,cs
Alimov 88 angp,cs

Λ X
300 Artykov 90B angp,cs,mult
Yuldashev 90B a-dep,cs,mult,p,pt
Yuldashev 90D angp,mult

$\bar{\Lambda}$ X
300 Artykov 90B cs,mult
Yuldashev 90B a-dep,cs,mult,p,pt

Σ^0 X
300 Yuldashev 90B mult

shower mult[shower] X
300 Aliev 89 angp,cor,mult

γ mult[grey] X
300 Yuldashev 90C cor,mult,p,pt

2γ X
300 Yuldashev 90C mass

π^- mult[π^-] X
300 Aliev 89 angp,cor,mult

$p\ ^{20}Ne$

π^+ mult[grey] X
300 Yuldashev 90D angp,mult

π^- mult[grey] X
300 Yuldashev 90D angp,mult

K_S mult[charged$^-$] X
300 Artykov 90B mult
Yuldashev 90B cor,mult

mult[p] K_S X
300 Artykov 90B mult

K_S mult[grey] X
300 Yuldashev 90B cor,mult

$K_S\ \pi^0$ X
300 Yuldashev 90B mass

p mult[grey] X
300 Yuldashev 90D angp,mult

$p\ \pi^\pm$ X
300 Edgorov 92 angp,mass,p

$p\ \pi^+$ X
300 Yuldashev 90 angp,mass
Yuldashev 90D angp,mass
Alimov 89 angp,mult,p
Alimov 88 angp,mass

$p\ \pi^-$ X
300 Yuldashev 90 angp,mass
Yuldashev 90D angp,mass
Alimov 89 angp,mult,p
Alimov 88 angp,mass

2p 0$\pi^\pm$ X
300 Alimov 89 mass

2p X
300 Edgorov 92 angp,p
Alimov 89 mass
Zielinsky 88 cs,mass

Λ mult[charged$^-$] X
300 Artykov 90B mult
Yuldashev 90B cor,mult

mult[p] Λ X
300 Artykov 90B mult

Λ mult[grey] X
300 Yuldashev 90B cor,mult

$\Lambda\ \gamma$ X
300 Yuldashev 90B mass

$\Lambda\ \pi^0$ X
300 Yuldashev 90B mass

2p mult[$\pi^\pm$] X
300 Alimov 89 mass

$^{20}Ne\ p$
1.463 Blanpied 88B angp

$^{20}Ne^*\ p$
1.463 Blanpied 88B angp

$p\ ^{22}Ne$

$^{22}Ne^*\ p$
1.463 Blanpied 88B angp

$p\ ^{24}Mg$

$^{24}Mg\ p$
0.7291 Hicks 88 angp,pol
1.463 Blanpied 88 angp,pol

$^{24}Mg^*\ p$
0.7291 Hicks 88 angp,pol
1.463 Blanpied 88 angp,pol

p Mg

inelastic
200 Abe 88 cs

mult[charged] X
200 Brick 89 mult

mult[charged$^-$] X
200 Brick 89 mult

mult[shower] X
200 Brick 89 mult

charged X
200 Brick 89 mult

charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

shower X
200 Brick 90 cor,mult,p
Brick 89 mult

grey X
200 Abe 88 mult

$\pi^\pm$ X
200 Abe 88 mult

π^- X
200 Abe 88 mult

K^0 X + $\bar{K}^0$ X
200 Brick 92 a-dep,cs,mult,p

p X
200 Abe 88 p

Λ X
200 Brick 92 a-dep,cs,mult,p

$\bar{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p

mult[p] charged$^-$ X
200 Geist 91 cor,mult

mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

2charged X
200 Brick 90 cor,mult,p

mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult

mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult

$p\ ^{26}Mg$

$^{26}Mg\ p$
1.463 Blanpied 88 angp,pol

$^{26}Mg^*\ p$
1.463 Blanpied 88 angp,pol

p Al

inelastic
1.26 – 2.5 Kuzichev 89 a-dep,cs

μ^- X
300 Cobbaert 88 a-dep

μ^+ X
300 Cobbaert 88 a-dep

mult[charged] X
360 Bailly 88 mult,p

mult[charged] (neutrals)
400 Miettinen 88 a-dep,angp,col,et,mult,p

mult[hadron] X
800 Tannenbaum 89 et,p

neutral X
14.5 Remsberg 88 p
Tannenbaum 88 et,p
220 Dzhaoshvili 90 p
1500 Dzhaoshvili 90 p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p Al

charged X

14.6	Abbott 92B	cs,et,p
220	Dzhaoshvili 90	mult,p
1500	Dzhaoshvili 90	mult,p

jet X

800	Boca 90	angp,mass,p,pt

hadron X

200	Akesson 92B	et,p
450	Akesson 92B	et

hadron$^+$ X

800	Boca 90	angp,mass,p,pt

hadron$^-$ X

800	Boca 90	angp,mass,p,pt

γ X

450.9	Schukraft 88B	angp,pt

$\pi^\pm$ X

4.9	Schmidt 92	a-dep,p
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p

π^+ X

10	Boyarinov 92	a-dep,angp,cs,p
10.1	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
14.6	Abbott 92	angp,p,pt
14.97 – 64.99	Belyaev 89B	a-dep,angp
15.97 – 19.98	Gavrishchuk 91B	p
25 – 65	Belyaev 88D	a-dep,angp
55.99 – 63.99	Gavrishchuk 91B	p

π^0 X

0.5681	Dementiev 92	angp

π^- X

1 – 12	Nakai 91	angp,p
10	Boyarinov 92	a-dep,angp,cs,p
10.1	Vorontsov 88B	a-dep,angp
14.6	Abbott 92	angp,p,pt
14.97 – 64.99	Belyaev 89B	a-dep,angp
15.97 – 19.98	Gavrishchuk 91B	p
55.99 – 63.99	Gavrishchuk 91B	p

K^+ X

1.693	Koptyev 88	cs
10	Boyarinov 92C	a-dep,angp,cs,p
10.1	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
10.14	Boyarinov 89	a-dep,angp
	Boyarinov 88B	angp
14.6	Abbott 92	angp,p,pt
14.97 – 64.99	Gavrishchuk 92	a-dep,angp,cs,p
15 – 65	Gavrishchuk 91C	a-dep,angp,p

K^- X

10	Boyarinov 92C	a-dep,angp,cs,p
10.1	Vorontsov 88B	a-dep,angp
10.14	Boyarinov 89	a-dep,angp
	Boyarinov 88C	angp
14.6	Abbott 92	angp,p,pt
14.97 – 64.99	Gavrishchuk 92	a-dep,angp,cs,p
15 – 65	Gavrishchuk 91C	a-dep,angp,p

$\phi(1020)$ X

450	Fredj 91	a-dep,cs,p,pt

charm X

300	Cobbaert 88	a-dep,cs

$J/\psi(1S)$ X

450	Fredj 91	a-dep,cs,p,pt

$\psi(2S)$ X

450	Fredj 91	a-dep,cs,p,pt

p Al

p X

1 – 12	Nakai 91	angp,p
2.5	Safronov 88	angp
3.7	Safronov 88	angp
3.9	Nakai 89	a-dep,angp
4	Tokushuku 90	angp
4.9	Schmidt 92	a-dep,p
5.5	Safronov 88	angp
7.2	Safronov 88	angp
9	Belzer 92	a-dep,p
	Belzer 90	angp,p
9.2	Safronov 88	angp
10	Boyarinov 92B	a-dep,angp,cs,p
10.1	Safronov 88B	angp
	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
14.6	Abbott 92	angp,p,pt
14.97 – 64.99	Belyaev 90	a-dep,p
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p
	Eklund 91	a-dep,mult

DD < p > X

450	Akesson 90F	a-dep,angp,mass,mult,p,pt

$\bar{p}$ X

10.1	Sibirtsev 91	a-dep,angp,p
	Voronin 88	a-dep,angp
10.14	Boyarinov 91	a-dep,angp,p

Λ X

3	Vorobiev 89C	angp
7.5	Vorobiev 89C	angp

deuteron X

1 – 12	Nakai 91	angp,p
2.5	Safronov 88	angp
3.7	Safronov 88	angp
4	Tokushuku 90	angp
4.9	Schmidt 92	a-dep,p
5.5	Safronov 88	angp
7.2	Safronov 88	angp
9.2	Safronov 88	angp
10.1	Safronov 88B	angp
10.14	Boyarinov 88	angp,p
14.6	Abbott 92	angp,p,pt
14.97 – 64.99	Belyaev 90	a-dep,p
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p

^{3}H X

10.1	Safronov 88B	angp
10.14	Boyarinov 88	angp,p

^{3}He X

10.1	Safronov 88B	angp

^{4}He X

10.1	Safronov 88B	angp

$\mu^-\ \mu^+$ X

300	Cobbaert 88	a-dep
	Cobbaert 88B	a-dep,mass,p
450	Fredj 91	a-dep,mass,p,pt

(jets) jet X

400	Miettinen 88	a-dep,angp,et,p

2jet X

800	Boca 90	angp,mass,p,pt

hadron$^+$ charged X

9	Belzer 90	ang,angp,p

2hadron$^+$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

hadron$^+$ hadron$^-$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

p Al

2hadron$^-$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

γ hadron$^+$ X + hadron$^+$ charged X

9	Belzer 90	ang,angp,p

$\pi^\pm$ hadron$^+$ X

9	Belzer 90	ang,angp,p

$2\pi^+$ X

200.9	Kampert 92	cor,p

$\pi^+\ \pi^-$ X

3.9	Nakai 89	a-dep,mass

$J/\psi(1S)\ \gamma$ X

530	De 89	mass

$p\ \pi^\pm$ X

9	Belzer 90	ang,angp,p

$p\ \pi^+$ X

9	Belzer 90	ang,angp,p

$2p$ X

6	Carroll 88	angp
10	Carroll 88	angp
12	Carroll 88	angp
200.9	Kampert 92	cor,p

$\mu^-\ \mu^+\ \gamma$ X

530	De 89	mass

$2p\ \pi^-$ X

3.9	Nakai 89	a-dep,angp

$2p$ fragt (neutrals)

6	Heppelmann 89	angp
10	Heppelmann 89	angp

Al $p\ \gamma$

0.5861	Pinston 89	cs

$p\ ^{27}$Al

π^0 X

0.6462	Bellini 89	a-dep,cs

^{27}Si n

0.2136	Hallin 92	–

^{28}Mg $2\pi^+$

1.463	Feng 90	cs

p Si

D^+ X

200	Barlag 88	cs,p,pt

D^0 X

200	Barlag 88	cs,p,pt

$\bar{D}^0$ X

200	Barlag 88	cs,p,pt

D^- X

200	Barlag 88	cs,p,pt

$D^*(2010)^+$ X

200	Barlag 88	cs,p,pt

$D^*(2010)^-$ X

200	Barlag 88	cs,p,pt

D_S^+ X

200	Barlag 88	cs,p,pt

D_S^- X

200	Barlag 88	cs,p,pt

$K^+\ K^-\ 2\pi^+\ 2\pi^-$ X

200	Barlag 88	mass

$p\ ^{28}$Si

^{28}Si p

0.6444	Hicks 88	angp,pol
0.7291	Hicks 88	angp,pol
0.9543	Hicks 88	angp,pol

^{28}Si* p

0.6444	Hicks 88	angp,pol
0.7291	Hicks 88	angp,pol
0.9543	Hicks 88	angp,pol

$p\ ^{28}Si$

$^{27}Al\ 2p$
1.696 Vorobiev 92 angp,p
$^{27}Si\ p\ n$
1.696 Vorobiev 92 angp,p

p S

inelastic
200 Bartke 90 cs
mult[charged] X
200 Bachler 91 mult
charged X
200 Bartke 90 mult
charged X
200 Bachler 91 mult
Bartke 90 mult
hadron X
200 Baechler 91 mult,pt
K_S X
200 Baechler 91 mult,pt
Odyniec 91 mult,pt
Schukraft 91 mult,pt
Bartke 90 mult,p,pt
p X
200 Eklund 91 a-dep,mult
Λ X
200 Baechler 91 mult,pt
Odyniec 91 mult,pt
Schukraft 91 mult,pt
Bartke 90 mult,p,pt
$\bar{\Lambda}$ X
200 Baechler 91 mult,pt
K_S mult[charged] X
200 Bartke 90 cor,mult
Λ mult[charged] X
200 Bartke 90 cor,mult
$\bar{\Lambda}$ mult[charged] X
200 Bartke 90 cor,mult
$\Lambda\ \pi^+$ X
200 Odyniec 91 mult,pt
Schukraft 91 mult,pt
Bartke 90 mult,p,pt

$p\ ^{34}S$

$^{33}Ph\ 2p$
1.696 Vorobiev 92 angp,p
$^{33}S\ p\ n$
1.696 Vorobiev 92 angp,p

p Cl

χ_c(unspec) X
530 De 89

p Ar

mult[charged] X
200 Derado 90B mult
charged X
200 Derado 90B p
K_S X
200 Derado 90B a-dep,cs,mult,p,pt
Λ X
200 Derado 90B a-dep,cs,mult,p,pt
2charged X
200 Derado 88 a-dep,cor,mult,p
$\pi^+\ \pi^-$ X
200 Derado 90B mass
K_S mult[charged] X
200 Derado 90B cor,mult
mult[p] K_S X
200 Derado 90B cor,mult

p Ar

$p\ \pi^-$ X
200 Derado 90B mass
Λ mult[charged] X
200 Derado 90B mult
$\bar{\Lambda}$ mult[charged] X
200 Derado 90B cor,mult
mult[p] Λ X
200 Derado 90B cor,mult
$\bar{\Lambda}$ charged X
200 Derado 90B p
mult[p] 2charged X
200 Derado 88 a-dep,cor,mult,p

$p\ ^{40}Ar$

$^{40}Ar\ p$
1.463 Blanpied 88C angp
$^{40}Ar^*\ p$
1.463 Blanpied 88C angp

p Ca

π^0 X
0.5681 Dementiev 92 angp
$J/\psi(1S)$ X
800 Alde 91D p,pt
Leitch 91 a-dep,p,pt
Spiegel 91 a-dep
Alde 90B a-dep,p,pt
Mishra 90 a-dep,p,pt
$\psi(2S)$ X
800 Leitch 91 a-dep
Spiegel 91 a-dep
Alde 90B a-dep
Mishra 90 a-dep
$\psi(3770)$ X
800 Alde 91D p,pt
$\Upsilon(1S)$ X
800 Alde 91 a-dep,cs,p,pt
Leitch 91 a-dep
Spiegel 91 a-dep
Mishra 90 a-dep
$\Upsilon(3S)$ X + $\Upsilon(2S)$ X
800 Alde 91 a-dep,cs,p,pt
Spiegel 91 a-dep
$\mu^-\ \mu^+$ X
800 Arneodo 92 a-dep,mass,p,pt
Alde 91 a-dep,cs
Spiegel 91 a-dep
Alde 90B a-dep
Alde 90C a-dep,mass,p,pt
Mishra 90 a-dep,p,pt

$p\ ^{40}Ca$

p X
1.463 Bimbot 90 angp,p
$^{40}Ca\ p$
0.6444 Hutcheon 88 angp,pol
Lee 88 angp
0.8081 Hutcheon 88 angp,pol
0.8384 Bleszynski 88 angp,pol
0.9002 Lee 89 angp,pol
Lee 88 angp
0.9543 Hutcheon 88 angp,pol
Lee 88 angp
1.087 Hoffmann 88C angp,pol
1.09 Bleszynski 88 angp,pol
Hutcheon 88 angp,pol
1.282 Bleszynski 88 angp,pol
$^{40}Ca^*\ p$
0.9002 Lee 89 angp,pol

$p\ ^{48}Ca$

$^{48}Sc^*\ n$
0.5211 Zhang 92 p,pol

$p\ ^{48}Ti$

fragt X
12 Noguchi 88 cs

p Ti

ν_e X
28.3 Krizmanic 89 flux
Lile 89 flux
$\bar{\nu}_e$ X
28.3 Krizmanic 89 flux
Lile 89 flux
ν_μ X
28.3 Krizmanic 89 flux
Lile 89 flux
$\bar{\nu}_\mu$ X
28.3 Krizmanic 89 flux
Lile 89 flux
π^+ X
14.97 – 64.99 Belyaev 89B a-dep,angp
25 – 65 Belyaev 88D a-dep,angp
π^- X
14.97 – 64.99 Belyaev 89B a-dep,angp
15.97 – 19.98 Gavrishchuk 91B p
53.99 – 61.99 Gavrishchuk 91B p
K^+ X
1.693 Koptyev 88 cs
14.97 – 64.99 Gavrishchuk 92 a-dep,angp,cs,p
15 – 65 Gavrishchuk 91C a-dep,angp,p
K^- X
14.97 – 64.99 Gavrishchuk 92 a-dep,angp,cs,p
15 – 65 Gavrishchuk 91C a-dep,angp,p
p X
14.97 – 64.99 Belyaev 90 a-dep,p
deuteron X
14.97 – 64.99 Belyaev 90 a-dep,p
^3He X
1.46 Barlow 92 a-dep,angp,p
^4He X
1.46 Barlow 92 a-dep,angp,p
^7Be X
1.696 Alexandrov 90 cs
^{22}Na X
1.696 Alexandrov 90 cs
^{24}Na X
1.696 Alexandrov 90 cs
^{28}Mg X
1.696 Alexandrov 90 cs
^{42}KK X
1.696 Alexandrov 90 cs
^{43}KK X
1.696 Alexandrov 90 cs
^{47}Ca X
1.696 Alexandrov 90 cs
^{43}Sc X
1.696 Alexandrov 90 cs
^{44}Sc X
1.696 Alexandrov 90 cs
^{46}Sc X
1.696 Alexandrov 90 cs
^{47}Sc X
1.696 Alexandrov 90 cs
^{48}Sc X
1.696 Alexandrov 90 cs
^{48}Va X
1.696 Alexandrov 90 cs
$2\pi^+$ X
7.5 Vlasov 92 a-dep,ang,angp,cor,p
Vlasov 90 a-dep,ang,angp,cor,p
$p\ \pi^+$ X
7.5 Vlasov 92 a-dep,ang,angp,cor,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p Ti

$p\ \pi^+$ X

	Vlasov 90	a-dep,ang,angp,cor,p

2p X

7.5	Vlasov 90B	cor,p
	Bayukov 89	ang,angp,p
	Bayukov 89B	ang,angp,p
	Bayukov 89C	ang,angp,p
	Bayukov 88	angp,cor

$p\ n$ X

7.5	Vlasov 89	a-dep,ang,cor,p

deuteron π^+ X

7.5	Vlasov 92	a-dep,ang,angp,cor,p
	Vlasov 90	a-dep,ang,angp,cor,p

deuteron p X

7.5	Bayukov 89C	ang,angp,p
	Vlasov 89B	ang,p

deuteron n X

7.5	Vlasov 89	a-dep,ang,cor,p

2deuteron X

7.5	Bayukov 89C	ang,angp,p
	Vlasov 89B	ang,p

^{3}H n X

7.5	Bayukov 89C	ang,angp,p
	Vlasov 89B	ang,p

3p X

7.5	Vlasov 88	ang,angp,cor

deuteron 2p X

7.5	Vlasov 88	ang,angp,cor

2deuteron p X

7.5	Vlasov 88	ang,angp,cor

$p\ ^{55}$Mn

frag X

4.491	Kozma 88B	cs

^{24}Na X

4.491	Kozma 90B	angp,p
	Kozma 88B	cs

^{28}Mg X

4.491	Kozma 90B	angp,p
	Kozma 88B	cs

^{42}KK X

4.491	Kozma 88B	cs

^{43}KK X

4.491	Kozma 88B	cs

^{43}Sc X

4.491	Kozma 88B	cs

^{44}Sc X

4.491	Kozma 88B	cs

^{46}Sc X

4.491	Kozma 88B	cs

^{47}Sc X

4.491	Kozma 88B	cs

^{48}Sc X

4.491	Kozma 88B	cs

^{48}Va X

4.491	Kozma 88B	cs

^{48}Cr X

4.491	Kozma 88B	cs

^{51}Cr X

4.491	Kozma 88B	cs

^{52}Mn X

4.491	Kozma 88B	cs

^{54}Mn X

4.491	Kozma 88B	cs

^{52}Fe X

4.491	Kozma 88B	cs

$p\ ^{54}$Fe

p X

0.7926	Hausser 90	angp,cs,p,pol
	Hausser 88	cs,p,pol

n X

0.7926	Hicks 93	angp,cs,pol
0.9821	Hicks 93	angp,cs,pol

$p\ ^{56}$Fe

fragt X

12	Noguchi 88	cs

p Fe

inelastic

1.26 – 2.5	Kuzichev 89	a-dep,cs
500 – 10^4	Avakyan 89C	a-dep,cs

ν_e X + $\bar{\nu}_e$ X

70	Ammosov 90B	cs

ν_e X

70	Blumlein 92	cs
	Blumlein 92B	cs

$\bar{\nu}_e$ X

70	Blumlein 92	cs
	Blumlein 92B	cs

ν_μ X

70	Ammosov 90B	cs

μ^- X

70	Belikov 90	angp
	Belikov 89	cs
300	Cobbaert 88	a-dep

μ^+ X

70	Belikov 90	angp
	Belikov 89	cs
300	Cobbaert 88	a-dep

$\bar{\nu}_\mu$ X

70	Ammosov 90B	cs

jet X

800	Boca 90	angp,mass,p,pt

hadron$^+$ X

800	Boca 90	angp,mass,p,pt

hadron$^-$ X

800	Boca 90	angp,mass,p,pt

higgs X

70	Barabash 92	–
	Anikeyev 91	–
	Blumlein 91	–
	Blumlein 90	cs

axion X

70	Barabash 92	–
	Anikeyev 91	–
	Blumlein 91	–
	Blumlein 90	cs

c X

70	Blumlein 92	cs
	Blumlein 92B	cs

π^0 X

500 – 5000	Avakyan 91B	p
	Avakyan 91C	p

charm X

70	Bozhko 92	cs
300	Cobbaert 88	a-dep,cs

$J/\psi(1S)$ X

800	Alde 91D	p,pt
	Leitch 91	a-dep,p,pt
	Spiegel 91	a-dep
	Alde 90B	a-dep,p,pt
	Mishra 90	a-dep,p,pt

$\psi(2S)$ X

800	Leitch 91	a-dep
	Spiegel 91	a-dep
	Alde 90B	a-dep
	Mishra 90	a-dep

$\psi(3770)$ X

800	Alde 91D	p,pt

p Fe

$\Upsilon(1S)$ X

800	Alde 91	a-dep,cs,p,pt
	Leitch 91	a-dep
	Spiegel 91	a-dep
	Mishra 90	a-dep

$\Upsilon(3S)$ X + $\Upsilon(2S)$ X

800	Alde 91	a-dep,cs,p,pt
	Spiegel 91	a-dep

^{7}Be X

1.696	Alexandrov 90	cs

^{22}Na X

1.696	Alexandrov 90	cs

^{24}Na X

1.696	Alexandrov 90	cs

^{28}Mg X

1.696	Alexandrov 90	cs

^{42}KK X

1.696	Alexandrov 90	cs

^{43}KK X

1.696	Alexandrov 90	cs

^{43}Sc X

1.696	Alexandrov 90	cs

^{44}Sc X

1.696	Alexandrov 90	cs

^{46}Sc X

1.696	Alexandrov 90	cs

^{47}Sc X

1.696	Alexandrov 90	cs

^{48}Sc X

1.696	Alexandrov 90	cs

^{48}Va X

1.696	Alexandrov 90	cs

^{48}Cr X

1.696	Alexandrov 90	cs

^{51}Cr X

1.696	Alexandrov 90	cs

^{52}Mn X

1.696	Alexandrov 90	cs

^{54}Mn X

1.696	Alexandrov 90	cs

^{56}Mn X

1.696	Alexandrov 90	cs

^{52}Fe X

1.696	Alexandrov 90	cs

^{55}Co X

1.696	Alexandrov 90	cs

^{56}Co X

1.696	Alexandrov 90	cs

^{57}Co X

1.696	Alexandrov 90	cs

$\mu^-\ \nu_\mu$ X

70	Bozhko 92	p

$\mu^-\ \mu^+$ X

70	Sviridov 88	angp
300	Cobbaert 88	a-dep
	Cobbaert 88B	a-dep,mass,p
800	Arneodo 92	a-dep,mass,p,pt
	Alde 91	a-dep,cs
	Spiegel 91	a-dep
	Alde 90B	a-dep
	Alde 90C	a-dep,mass,p,pt
	Mishra 90	a-dep,p,pt

$\mu^+\ \bar{\nu}_\mu$ X

70	Bozhko 92	p

2jet X

800	Boca 90	angp,mass,p,pt

2hadron$^+$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

hadron$^+$ hadron$^-$ X

800	Boca 90	angp,mass,p,pt

p Fe

hadron$^+$ hadron$^-$ X		
	Streets 89	a-dep,ang,mass,pt
2hadron$^-$ X		
800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt
charm $\overline{\text{charm}}$ X		
70	Belikov 90	cs
	Sviridov 88	–
charmed-meson $\overline{\text{charmed-meson}}$ X		
70	Sviridov 88	–
Λ_c^+ $\overline{\text{charmed-meson}}$ X		
70	Sviridov 88	–

p ^{57}Fe

fragt X		
12	Noguchi 88	cs

p Co

^{7}Be X		
1.696	Alexandrov 90	cs
^{22}Na X		
1.696	Alexandrov 90	cs
^{24}Na X		
1.696	Alexandrov 90	cs
^{28}Mg X		
1.696	Alexandrov 90	cs
^{42}KK X		
1.696	Alexandrov 90	cs
^{43}KK X		
1.696	Alexandrov 90	cs
^{43}Sc X		
1.696	Alexandrov 90	cs
^{44}Sc X		
1.696	Alexandrov 90	cs
^{46}Sc X		
1.696	Alexandrov 90	cs
^{47}Sc X		
1.696	Alexandrov 90	cs
^{48}Sc X		
1.696	Alexandrov 90	cs
^{48}Va X		
1.696	Alexandrov 90	cs
^{48}Cr X		
1.696	Alexandrov 90	cs
^{51}Cr X		
1.696	Alexandrov 90	cs
^{52}Mn X		
1.696	Alexandrov 90	cs
^{54}Mn X		
1.696	Alexandrov 90	cs
^{56}Mn X		
1.696	Alexandrov 90	cs
^{52}Fe X		
1.696	Alexandrov 90	cs
^{59}Fe X		
1.696	Alexandrov 90	cs
^{55}Co X		
1.696	Alexandrov 90	cs
^{56}Co X		
1.696	Alexandrov 90	cs
^{57}Co X		
1.696	Alexandrov 90	cs
^{58}Co X		
1.696	Alexandrov 90	cs
^{57}Ni X		
1.696	Alexandrov 90	cs

p ^{59}Co

frag X		
4.491	Kozma 88B	cs
^{24}Na X		
4.491	Kozma 90B	angp,p

p ^{59}Co

^{24}Na X		
	Kozma 88B	cs
^{28}Mg X		
4.491	Kozma 90B	angp,p
	Kozma 88B	cs
^{42}KK X		
4.491	Kozma 88B	cs
^{43}KK X		
4.491	Kozma 88B	cs
^{43}Sc X		
4.491	Kozma 88B	cs
^{44}Sc X		
4.491	Kozma 88B	cs
^{46}Sc X		
4.491	Kozma 88B	cs
^{47}Sc X		
4.491	Kozma 88B	cs
^{48}Sc X		
4.491	Kozma 88B	cs
^{48}Va X		
4.491	Kozma 88B	cs
^{48}Cr X		
4.491	Kozma 88B	cs
^{51}Cr X		
4.491	Kozma 88B	cs
^{52}Mn X		
4.491	Kozma 88B	cs
^{54}Mn X		
4.491	Kozma 88B	cs
^{56}Mn X		
4.491	Kozma 88B	cs
^{52}Fe X		
4.491	Kozma 88B	cs
^{55}Co X		
4.491	Kozma 88B	cs
^{56}Co X		
4.491	Kozma 88B	cs
^{57}Co X		
4.491	Kozma 88B	cs
^{58}Co X		
4.491	Kozma 88B	cs

p ^{58}Ni

π^0 X		
0.6462	Bellini 89	a-dep,cs
fragt X		
4.491	Kozma 91	cs
12	Noguchi 88	cs
^{58}Ni p		
0.8578	Hintz 88	angp
1.087	Hintz 88	angp
^{58}Ni* p		
0.8578	Hintz 88	angp
1.087	Hintz 88	angp

p Ni

frag X		
4.491	Kozma 88B	cs
^{24}Na X		
4.491	Kozma 88B	cs
^{28}Mg X		
4.491	Kozma 88B	cs
^{42}KK X		
4.491	Kozma 88B	cs
^{43}KK X		
4.491	Kozma 88B	cs
^{43}Sc X		
4.491	Kozma 88B	cs
^{44}Sc X		
4.491	Kozma 88B	cs
^{46}Sc X		
4.491	Kozma 88B	cs
^{47}Sc X		
4.491	Kozma 88B	cs

p Ni

^{48}Sc X		
4.491	Kozma 88B	cs
^{48}Va X		
4.491	Kozma 88B	cs
^{48}Cr X		
4.491	Kozma 88B	cs
^{51}Cr X		
4.491	Kozma 88B	cs
^{52}Mn X		
4.491	Kozma 88B	cs
^{54}Mn X		
4.491	Kozma 88B	cs
^{56}Mn X		
4.491	Kozma 88B	cs
^{52}Fe X		
4.491	Kozma 88B	cs
^{55}Co X		
4.491	Kozma 88B	cs
^{56}Co X		
4.491	Kozma 88B	cs
^{57}Co X		
4.491	Kozma 88B	cs
^{56}Ni X		
4.491	Kozma 88B	cs
^{57}Ni X		
4.491	Kozma 88B	cs

p ^{60}Ni

fragt X		
4.491	Kozma 91	cs
12	Noguchi 88	cs

p ^{62}Ni

fragt X		
4.491	Kozma 91	cs

p ^{63}Cu

fragt X		
4.491	Kozma 91	cs
12	Noguchi 88	cs

p Cu

inelastic		
1.26 – 2.5	Kuzichev 89	a-dep,cs
ν_e X + $\bar{\nu}_e$ X		
400	Dorenbosch 87	angp,p
ν_e X		
400	Duffy 88	a-dep,cs,p,pt
$\bar{\nu}_e$ X		
400	Duffy 88	a-dep,cs,p,pt
ν_μ X + $\bar{\nu}_\mu$ X		
400	Dorenbosch 87	angp,p
ν_μ X		
400	Duffy 88	a-dep,cs,p,pt
$\bar{\nu}_\mu$ X		
400	Duffy 88	a-dep,cs,p,pt
ν_τ X		
400	Coopersarkar 91	–
$\bar{\nu}_\tau$ X		
400	Coopersarkar 91	–
mult[charged] (neutrals)		
400	Miettinen 88	a-dep,angp,col,et,mult,p
mult[hadron] X		
800	Tannenbaum 89	et,p
neutral X		
14.5	Remsberg 88	p
	Tannenbaum 88	et,p
220	Dzhaoshvili 90	p
1500	Dzhaoshvili 90	p
charged X		
14.6	Abbott 92B	cs,et,p
220	Dzhaoshvili 90	mult,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p Cu

charged X

1500	Dzhaoshvili 90	mult,p

jet X

800	Stewart 90	a-dep,angp,col,pt

hadron X

200	Akesson 92B	et,p

axion X

800	Guo 89	–

heavy-lepton X

400	Duffy 88	cs

$\pi^{\pm}$ X

0.8474 – 0.9668	Akimov 89	angp
4.9	Schmidt 92	a-dep,p
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p
200.9	Kampert 92	a-dep,p

π^{+} X

0.8769 – 0.8944	Yen 91	angp,p
9.956	Gavrilov 92	p
10	Boyarinov 92	a-dep,angp,cs,p
10.1	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
14.6	Abbott 92	angp,p,pt

π^{0} X

400	Dorenbosch 87	cs
500	Alverson 91	a-dep,p,pt

π^{-} X

0.8769 – 0.8944	Yen 91	angp,p
9.956	Gavrilov 92	p
10	Boyarinov 92	a-dep,angp,cs,p
10.1	Vorontsov 88B	a-dep,angp
14.6	Abbott 92	angp,p,pt

K^{+} X

1.468 – 1.685	Koptyev 88	cs
1.693	Koptyev 88	cs
9.956	Gavrilov 92	p
10	Boyarinov 92C	a-dep,angp,cs,p
10.1	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
10.14	Boyarinov 89	a-dep,angp
	Boyarinov 88B	angp
14.6	Abbott 92	angp,p,pt

K^{-} X

9.956	Gavrilov 92	p
10	Boyarinov 92C	a-dep,angp,cs,p
10.1	Vorontsov 88B	a-dep,angp
10.14	Boyarinov 89	a-dep,angp
	Boyarinov 88C	angp
14.6	Abbott 92	angp,p,pt

K_L X

12	Inagaki 89C	–
24	Heinson 91	–
	Winstein 91	–
	Morse 90	–
	Ohl 90	–

$\phi(1020)$ X

450	Fredj 91	a-dep,cs,p,pt

charm X

400	Duffy 88	a-dep,cs

$\overline{\text{charm}}$ X

400	Duffy 88	a-dep,cs

$J/\psi(1S)$ X

200.9	Baglin 91B	pt
	Baglin 91C	pt
	Baglin 91E	a-dep,cs

p Cu

$J/\psi(1S)$ X

	Sonderegger 89	cs,et
450	Fredj 91	a-dep,cs,p,pt

$\psi(2S)$ X

450	Fredj 91	a-dep,cs,p,pt

χ_c(unspec) X

530	De 89	–

bottom X

400	Duffy 88	cs

$\overline{\text{bottom}}$ X

400	Duffy 88	cs

$\Upsilon(1S)$ X

800	Moreno 91	p
	Freudenreich 90	cs

$\Upsilon(2S)$ X

800	Moreno 91	p
	Freudenreich 90	cs

$\Upsilon(3S)$ X

800	Moreno 91	p
	Freudenreich 90	cs

p X

0.8769 – 0.8944	Yen 91	angp,p
2.5	Safronov 88	angp
3.7	Safronov 88	angp
4.9	Schmidt 92	a-dep,p
5.5	Safronov 88	angp
7.2	Safronov 88	angp
9	Belzer 92	a-dep,p
	Belzer 90	angp,p
9.2	Safronov 88	angp
9.956	Gavrilov 92	p
10	Boyarinov 92B	a-dep,angp,cs,p
10.1	Safronov 88B	angp
	Sibirtsev 88	a-dep,angp
	Vorontsov 88B	a-dep,angp
14.6	Abbott 92	angp,p,pt
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p
	Eklund 91	a-dep,mult
200.9	Kampert 92	a-dep,p
	Schmidt 88	p,pt

DD < p > X

450	Akesson 90F	a-dep,angp,mass,mult,p,pt

$\bar{p}$ X

9.956	Gavrilov 92	p
10.1	Sibirtsev 91	a-dep,angp,p
	Voronin 88	a-dep,angp
10.14	Boyarinov 91	a-dep,angp,p

Λ X

3	Vorobiev 89C	angp
7.5	Vorobiev 89C	angp

Ξ^{-} X

400	Trost 89	p,pol

frag X

4.491	Kozma 88B	cs

deuteron X

2.5	Safronov 88	angp
3.7	Safronov 88	angp
4.9	Schmidt 92	a-dep,p
5.5	Safronov 88	angp
7.2	Safronov 88	angp
9.2	Safronov 88	angp
10.1	Safronov 88B	angp
10.14	Boyarinov 88	angp,p
14.6	Abbott 92	angp,p,pt
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p
200.9	Kampert 92	a-dep,p

^{3}H X

10.1	Safronov 88B	angp
10.14	Boyarinov 88	angp,p

p Cu

^{3}He X

10.1	Safronov 88B	angp

^{4}He X

10.1	Safronov 88B	angp

^{7}Be X

1.696	Alexandrov 90	cs

^{24}Na X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{28}Mg X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{42}KK X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{43}KK X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{43}Sc X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{44}Sc X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{46}Sc X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{47}Sc X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{48}Sc X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{48}Va X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{48}Cr X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{51}Cr X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{52}Mn X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{54}Mn X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{56}Mn X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{52}Fe X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs

^{53}Fe X

9	Kozma 86	cs

^{59}Fe X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{55}Co X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

p Cu

^{56}Co X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{57}Co X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{58}Co X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{60}Co X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs

^{56}Ni X

4.491	Kozma 88B	cs
9	Kozma 86	cs

^{57}Ni X

1.696	Alexandrov 90	cs
4.491	Kozma 88B	cs
9	Kozma 86	cs

^{61}Cu X

1.696	Alexandrov 90	cs

^{64}Cu X

1.696	Alexandrov 90	cs

^{62}Zn X

1.696	Alexandrov 90	cs

$e^- e^+$ X

800	Guo 89	ang,mass

$\mu^- \mu^+$ X

200.9	Baglin 91B	pt
	Baglin 91C	pt
	Sonderegger 89	cs,et
450	Fredj 91	a-dep,mass,p,pt
800	Moreno 91	mass,mass,p,pt
	Freudenreich 90	mass
	Brown 89	p

$\nu_\mu \bar{\nu}_\mu$ X

400	Dorenbosch 87	cs

(jets) jet X

400	Miettinen 88	a-dep,angp,et,p

2jet X

800	Stewart 90	a-dep,angp,col,et

hadron$^+$ charged X

9	Belzer 90	ang,angp,p

γ hadron$^+$ X + hadron$^+$ charged X

9	Belzer 90	ang,angp,p

π^+ hadron$^+$ X

9	Belzer 90	ang,angp,p

$2\pi^+$ X

200.9	Kampert 92	cor,p

$\pi^+ \pi^-$ X

70	Abramov 90	angp,pt

charm $\overline{\text{charm}}$ X

400	Dorenbosch 87	cs

charmed-meson $\overline{\text{charmed-meson}}$ X

400	Duffy 88	a-dep,cs

$J/\psi(1S)$ (neutrals) X

200.9	Baglin 91E	et

$J/\psi(1S)$ γ X

530	De 89	mass

$p\ \pi^+$ X

9	Belzer 90	ang,angp,p

$p\ \pi^+$ X

9	Belzer 90	ang,angp,p

$p\ \pi^-$ X

70	Abramov 90	angp,pt

2p X

4.338	Ohmori 89	angp,pol

p Cu

2p X

6	Carroll 88	angp
7.5	Vorobiev 90B	ang,angp,mass,p
10	Carroll 88	angp
200.9	Kampert 92	cor,p

$\Lambda\ \pi^-$ X

400	Trost 89	angp,mass

Λ_c^+ $\overline{\text{charmed-meson}}$ X

400	Duffy 88	a-dep,cs

$\mu^- \mu^+ \gamma$ X

530	De 89	mass

$\pi^0 e^- e^+$ X

24	Morse 90	mass

$p\ 2\pi^-$ X

400	Trost 89	angp,mass

2$p\ \pi^+$ X

3.9	Nakai 89	a-dep,angp

2$p\ \pi^-$ X

3.9	Nakai 89	a-dep,angp

2p fragt (neutrals)

6	Heppelmann 89	angp
10	Heppelmann 89	angp

$e^- e^+ 2\gamma$ X

24	Morse 90	mass

Cu $p\ \gamma$

0.5861	Pinston 89	cs

p ^{64}Cu

^{24}Na X

4.491	Kozma 90B	angp,p

^{28}Mg X

4.491	Kozma 90B	angp,p

p ^{65}Cu

fragt X

4.491	Kozma 91	cs
12	Noguchi 88	cs

p Zn

γ X

0.4539	Clauton 92B	angp,cs,p
0.5414	Clauton 92B	angp,cs,p

p ^{89}Yt

π^0 X

0.6462	Bellini 89	a-dep,cs
0.6585	Bellini 89	ang,p

^{24}Na X

4.491	Kozma 90B	angp,p

^{28}Mg X

4.491	Kozma 90B	angp,p

p ^{90}Zr

^{90}Zr p

0.6444	Lee 88	angp
0.9002	Lee 88	angp
0.9543	Lee 89	angp,pol
	Lee 88	angp

^{90}Zr* p

0.9543	Lee 89	angp,pol

p Zr

K^+ X

1.693	Koptyev 88	cs

p Nb

mult[π^+] X

1.463	Trzaska 91C	cs,mult
2.359	Trzaska 91C	cs,mult

mult[π^-] X

1.463	Trzaska 91C	cs,mult

p Nb

mult[π^-] X

2.359	Trzaska 91C	cs,mult

mult[p] X

1.463	Trzaska 91C	cs,mult
2.359	Trzaska 91C	cs,mult

mult[fragt] X

1.463	Lemaire 91	mult
2.359	Lemaire 91	mult

π^+ X

1.463	Lemaire 91B	angp,mult
	Trzaska 91C	cs
2.359	Lemaire 91B	angp,mult
	Trzaska 91C	cs

π^- X

1.463	Lemaire 91B	angp,mult
	Trzaska 91C	cs
2.359	Lemaire 91B	angp,mult
	Trzaska 91C	cs

mult[π^+] mult[fragt] X

1.463	Lemaire 91	mult
2.359	Lemaire 91	mult

mult[π^-] mult[fragt] X

1.463	Lemaire 91	mult
2.359	Lemaire 91	mult

π^+ mult[fragt] X

1.463	Lemaire 91	mult
	Lemaire 91B	angp,mult
2.359	Lemaire 91	mult
	Lemaire 91B	angp,mult

π^- mult[fragt] X

1.463	Lemaire 91	mult
	Lemaire 91B	angp,mult
2.359	Lemaire 91	mult
	Lemaire 91B	angp,mult

$p\ \pi^+$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

$p\ \pi^-$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

2$p\ \pi^+$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

2$p\ \pi^-$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

3$p\ \pi^+$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

3$p\ \pi^-$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs

p ^{96}Mo

p X

16.97 – 63.99	Gavrishchuk 91	a-dep,pol

p Mo

π^+ X

14.97 – 64.99	Belyaev 89B	a-dep,angp

π^- X

14.97 – 64.99	Belyaev 89B	a-dep,angp
15.97 – 19.98	Gavrishchuk 91B	p
25 – 65	Belyaev 88D	a-dep,angp
56.99 – 64.99	Gavrishchuk 91B	p

K^+ X

14.97 – 64.99	Gavrishchuk 92	a-dep,angp,cs,p
15 – 65	Gavrishchuk 91C	a-dep,angp,p

K^- X

14.97 – 64.99	Gavrishchuk 92	a-dep,angp,cs,p
15 – 65	Gavrishchuk 91C	a-dep,angp,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p Mo

p X
14.97 – 64.99 Belyaev 90 a-dep,p
17.98 – 63.99 Belyaev 89C angp,p,pol

deuteron X
14.97 – 64.99 Belyaev 90 a-dep,p
17.98 – 63.99 Belyaev 89C angp,p,pol

p ^{108}Ag

^{24}Na X
4.491 Kozma 90B angp,p

^{28}Mg X
4.491 Kozma 90B angp,p

p Ag

inelastic
4.491 Kozma 90 cs
200 Abe 88 cs

mult[charged] X
200 Brick 89 mult

mult[charged$^-$] X
200 Brick 89 mult

mult[shower] X
200 Brick 89 mult

charged X
200 Brick 89 mult

charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

shower X
200 Brick 90 cor,mult,p
Brick 89 mult

grey X
200 Abe 88 mult

$\pi^\pm$ X
4.9 Schmidt 92 a-dep,p
60 Schmidt 92 a-dep,p
200 Schmidt 92 a-dep,p
Abe 88 mult
200.9 Kampert 92 a-dep,p

π^- X
200 Abe 88 mult

K^0 X + $\overline{K}^0$ X
200 Brick 92 a-dep,cs,mult,p

p X
4.9 Schmidt 92 a-dep,p
60 Schmidt 92 a-dep,p
200 Schmidt 92 a-dep,p
Abe 88 p
200.9 Kampert 92 a-dep,p
Schmidt 88 p,pt

Λ X
200 Brick 92 a-dep,cs,mult,p

$\overline{\Lambda}$ X
200 Brick 92 a-dep,cs,mult,p

fragt X
12 Asano 88 cs

deuteron X
4.9 Schmidt 92 a-dep,p
60 Schmidt 92 a-dep,p
200 Schmidt 92 a-dep,p
200.9 Kampert 92 a-dep,p

^{3}He X
0.8081 Kortelling 90 angp,p

^{4}He X
0.8081 Kortelling 90 angp,p

Na X
4.491 Kozma 90 cs

Mg X
4.491 Kozma 90 cs

KK X
4.491 Kozma 90 cs

p Ag

Sc X
4.491 Kozma 90 cs

Mn X
4.491 Kozma 90 cs

Fe X
4.491 Kozma 90 cs

^{55}Co X
4.491 Kozma 90 cs

^{57}Co X
4.491 Kozma 90 cs

Zn X
4.491 Kozma 90 cs

Ga X
4.491 Kozma 90 cs

As X
4.491 Kozma 90 cs

Se X
4.491 Kozma 90 cs

Br X
4.491 Kozma 90 cs

Kr X
4.491 Kozma 90 cs

Rb X
4.491 Kozma 90 cs

Yt X
4.491 Kozma 90 cs

Zr X
4.491 Kozma 90 cs

Nb X
4.491 Kozma 90 cs

Mo X
4.491 Kozma 90 cs

Tc X
4.491 Kozma 90 cs

Ru X
4.491 Kozma 90 cs

Rh X
4.491 Kozma 90 cs

Pd X
4.491 Kozma 90 cs

Ag* X
4.491 Kozma 90 cs

mult[p] charged$^-$ X
200 Geist 91 cor,mult

mult[grey] charged$^-$ X
200 Brick 90 cor,mult,p
Brick 89 mult

2charged X
200 Brick 90 cor,mult,p

mult[grey] shower X
200 Brick 90 cor,mult,p
Brick 89 mult

$2\pi^+$ X
200.9 Kampert 92 cor,p

2p X
1.09 Cebra 89 cor,p
200.9 Kampert 92 cor,p

deuteron p X
1.09 Cebra 89 cor,p

2deuteron X
1.09 Cebra 89 cor,p

2^{3}H X
1.09 Cebra 89 cor,p

^{4}He mult[p] X
0.8081 Kortelling 90 angp,mult

^{4}He p X
0.8081 Kortelling 90 angp,p
1.09 Cebra 89 cor,p

^{4}He deuteron X
1.09 Cebra 89 cor,p

mult[grey] charged$^+$ charged$^-$ X
200 Brick 89 mult

p Ag

Ag p γ
0.5861 Pinston 89 cs
0.6444 Pinston 89 cs

p Cd

inelastic
1.26 – 2.5 Kuzichev 89 a-dep,cs

Λ X
3 Vorobiev 89C angp
7.5 Vorobiev 89C angp

p ^{118}Sn

π^0 X
0.6462 Bellini 89 a-dep,cs

p Sn

mult[charged] (neutrals)
400 Miettinen 88 a-dep,angp,coi,et,mult,p

K^+ X
1.468 – 1.685 Koptyev 88 cs
1.693 Koptyev 88 cs

p X
9 Belzer 92 a-dep,p

^{99}Rh X
3.65 Kozma 91B cs
8.1 Kozma 91B cs

^{110}In X
3.65 Kozma 91B cs
8.1 Kozma 91B cs

(jets) jet X
400 Miettinen 88 a-dep,angp,et,p

p ^{124}Sn

π^0 X
0.6462 Bellini 89 a-dep,cs

p Xe

mult[charged] X
200 Derado 90B mult

charged$^-$ X
200 Derado 90B p

K_S X
200 Derado 90B a-dep,cs,mult,p,pt

Λ X
200 Derado 90B a-dep,cs,mult,p,pt

frag X
1 – 20 Mahi 88 angp,p

fragt X
2.032 – 20.02 Porile 89 a-dep,angp,cs,p

2charged X
200 Derado 88 a-dep,cor,mult,p

π^+ π^- X
200 Derado 90B mass

K_S mult[charged$^-$] X
200 Derado 90B cor,mult

mult[p] K_S X
200 Derado 90B cor,mult

p π^- X
200 Derado 90B mass

Λ mult[charged] X
200 Derado 90B mult

Λ mult[charged$^-$] X
200 Derado 90B cor,mult

mult[p] Λ X
200 Derado 90B cor,mult

Λ charged$^-$ X
200 Derado 90B p

p Xe

mult[p] 2charged X
200 Derado 88 a-dep,cor,mult,p

p Gd

^{149}Tb X
0.3438 – 1.627 Aleksandrov 89 cs

p Tb

^{149}Tb X
0.3438 – 1.627 Aleksandrov 89 cs

Tb p γ
0.5861 Pinston 89 angp,cs

p ^{159}Tb

^{24}Na X
4.491 Kozma 90B angp,p

^{28}Mg X
4.491 Kozma 90B angp,p

p Ho

^{149}Tb X
0.3438 – 1.627 Aleksandrov 89 cs

p Tm

^{149}Tb X
0.3438 – 1.627 Aleksandrov 89 cs

p Ta

mult[charged] X
2.3 Grigalashvil 88 a-dep,mult

mult[charged$^-$] X
2.3 Grigalashvil 88 a-dep,mult

mult[charged] (neutrals)
10 Angelov 91 mult

mult[p] X
6.1 Andreev 92 mult
10 Agakishiev 87 mult

charged X
2.3 Grigalashvil 88 a-dep,mult
6.1 Andreev 92 mult

charged$^-$ X
2.3 Grigalashvil 88 a-dep,mult

$\pi^\pm$ X
6.1 Andreev 92 mult

π^+ X
9.956 Gavrilov 89 p
10 Boyarinov 92 a-dep,angp,cs,p
10.1 Sibirtsev 88 a-dep,angp
Vorontsov 88B a-dep,angp

π^- X
9.956 Gavrilov 89 p
10 Armutlijsky 87B a-dep,angp,mult,p
Boyarinov 92 a-dep,angp,cs,p
10.1 Vorontsov 88B a-dep,angp

K^+ X
1.693 Koptyev 88 cs
9.956 Gavrilov 89 p
10 Boyarinov 92C a-dep,angp,cs,p
10.1 Sibirtsev 88 a-dep,angp
Vorontsov 88B a-dep,angp
10.14 Boyarinov 89 a-dep,angp
Boyarinov 88B angp

p Ta

K^- X
9.956 Gavrilov 89 p
10 Boyarinov 92C a-dep,angp,cs,p
10.1 Vorontsov 88B a-dep,angp
10.14 Boyarinov 89 a-dep,angp
Boyarinov 88C angp

p X
2.5 Safronov 88 angp
3.7 Safronov 88 angp
4.2 Backovic 92C a-dep,angp,p
Gulkanyan 88D a-dep,angp,cor,cs,mult
5.5 Safronov 88 angp
6.1 Andreev 92 mult
7.2 Safronov 88 angp
9.2 Safronov 88 angp
9.956 Gavrilov 89 p
10 Armutlijsky 91 a-dep,angp
Agakishiev 88 p
Agakishiev 87 mult
Boyarinov 92B a-dep,angp,cs,p
10.1 Safronov 88B angp
Sibirtsev 88 a-dep,angp
Vorontsov 88B a-dep,angp

n X
10 Agakishiev 88 p

$\bar{p}$ X
10.1 Sibirtsev 91 a-dep,angp,p
Voronin 88 a-dep,angp
10.14 Boyarinov 91 a-dep,angp,p

fragt X
1.696 Domkin 92 angp,mass,p
4.491 Kozma 89 cs
12 Asano 88 cs

deuteron X
2.5 Safronov 88 angp
3.7 Safronov 88 angp
5.5 Safronov 88 angp
7.2 Safronov 88 angp
9.2 Safronov 88 angp
10.1 Safronov 88B angp
10.14 Boyarinov 88 angp,p

^{3}H X
10.1 Safronov 88B angp
10.14 Boyarinov 88 angp,p

^{3}He X
10.1 Safronov 88B angp

^{4}He X
10.1 Safronov 88B angp

^{24}Na X
4.491 Kozma 89 angp

^{28}Mg X
4.491 Kozma 89 angp

^{149}Tb X
0.3438 – 1.627 Aleksandrov 89 cs

π^+ π^- X
70 Afanasyev 90C cor,p,pt

p charged X
10 Agakishiev 88 mult,p

p charged$^-$ X
10 Agakishiev 88 mult,p

n charged X
10 Agakishiev 88 mult,p

n charged$^-$ X
10 Agakishiev 88 mult,p

2p X
10 Pluta 88B angp,cor,p
Agakishiev 87 p

p Ta

fragt (fragts) X
4.491 Kozma 90D angp,p

p charged$^+$ charged$^-$ X
10 Agakishiev 88 p

n charged$^+$ charged$^-$ X
10 Agakishiev 88 p

2p mult[p] X
10 Agakishiev 87 p

2p (p's) ($\pi^\pm$'s) X
10 Angelov 92 ang,cor,p

p ^{181}Ta

^{24}Na X
4.491 Kozma 90B angp,p

^{28}Mg X
4.491 Kozma 90B angp,p

p Wt

ν_e X
400 Duffy 88 a-dep,cs,p,pt

$\bar{\nu}_e$ X
400 Duffy 88 a-dep,cs,p,pt

ν_μ X
400 Duffy 88 a-dep,cs,p,pt

$\bar{\nu}_\mu$ X
400 Duffy 88 a-dep,cs,p,pt

charged$^-$ X
200.9 Schukraft 91 et,p,pt
Akesson 89E cs,et,pt
Bartels 88 pt
Schukraft 88B et,p,pt

jet X
800 Boca 90 angp,mass,p,pt

hadron X
200 Akesson 92B et,p
450 Akesson 92B et

hadron$^+$ X
800 Boca 90 angp,mass,p,pt

hadron$^-$ X
800 Boca 90 angp,mass,p,pt

γ X
200.9 Schukraft 91 cs,et,pt
Akesson 89D cs,et,pt
Bartels 88 pt
Kluberg 88 pt

heavy-lepton X
400 Duffy 88 cs

π^+ X
10 Bertin 88 angp
14.97 – 64.99 Belyaev 89B a-dep,angp
25 – 65 Belyaev 88D a-dep,angp
200 Odyniec 91 p,pt
200.9 Akesson 92 et,pt
800 Straub 92 pt
Straub 92B pt

π^0 X
200.9 Schukraft 91 cs,et,pt
Akesson 89D cs,et,pt

π^- X
14.97 – 64.99 Belyaev 89B a-dep,angp
15.97 – 19.98 Gavrishchuk 91B p
53.99 – 62.99 Gavrishchuk 91B p
200 Odyniec 91 p,pt
Vanhecke 91 cs,pt
200.9 Akesson 92 et,pt
800 Straub 92 pt
Straub 92B pt

K^+ X
14.97 – 64.99 Gavrishchuk 92 a-dep,angp,cs,p
15 – 65 Gavrishchuk 91C a-dep,angp,p
200 Odyniec 91 p,pt
Vanhecke 91 cs,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

p Wt

K^+ X

200.9	Akesson 92	et,pt
800	Straub 92	pt
	Straub 92B	pt

K^- X

14.97 – 64.99	Gavrishchuk 92	a-dep,angp,cs,p
15 – 65	Gavrishchuk 91C	a-dep,angp,p
200	Odyniec 91	p,pt
	Vanhecke 91	cs,pt
200.9	Akesson 92	et,pt
800	Straub 92	pt
	Straub 92B	pt

K_S X

200	Evans 92	cs,pt

$\phi(1020)$ X

450	Fredj 91	a-dep,cs,p,pt

charm X

400	Duffy 88	a-dep,cs

$\overline{\text{charm}}$ X

400	Duffy 88	a-dep,cs

$J/\psi(1S)$ X

450	Fredj 91	a-dep,cs,p,pt
800	Alde 91D	p,pt
	Leitch 91	a-dep,p,pt
	Spiegel 91	a-dep
	Alde 90B	a-dep,p,pt
	Mishra 90	a-dep,p,pt

$\psi(2S)$ X

450	Fredj 91	a-dep,cs,p,pt
800	Leitch 91	a-dep
	Spiegel 91	a-dep
	Alde 90B	a-dep
	Mishra 90	a-dep

$\psi(3770)$ X

800	Alde 91D	p,pt

bottom X

400	Duffy 88	cs

$\overline{\text{bottom}}$ X

400	Duffy 88	cs

$\Upsilon(1S)$ X

800	Alde 91	a-dep,cs,p,pt
	Leitch 91	a-dep
	Spiegel 91	a-dep
	Mishra 90	a-dep

$\Upsilon(3S)$ X + $\Upsilon(2S)$ X

800	Alde 91	a-dep,cs,p,pt
	Spiegel 91	a-dep

p X

14.97 – 64.99	Belyaev 90	a-dep,p
200	Vanhecke 91	cs,pt
800	Straub 92	pt
	Straub 92B	pt

$\bar{p}$ X

800	Straub 92	pt
	Straub 92B	pt

Λ X

200	Evans 92	cs,pt
	Schukraft 91	mult,pt
200.9	Odyniec 91B	mult

$\bar{\Lambda}$ X

200	Evans 92	cs,pt
	Schukraft 91	mult,pt
200.9	Odyniec 91B	mult

Ξ^- X

200	Abatzis 91B	cs
200.9	Odyniec 91B	mult

$\bar{\Xi}^+$ X

200	Abatzis 91B	cs
200.9	Odyniec 91B	mult

fragt X

12	Asano 88	cs

deuteron X

14.97 – 64.99	Belyaev 90	a-dep,p

p Wt

$\mu^- \mu^+$ X

125	Freudenreich 90	ang,angp,mass,p,pt
150	Freudenreich 90	ang,angp,mass,p,pt
400	Freudenreich 90	mass,p
450	Fredj 91	a-dep,mass,p,pt
800	Arneodo 92	a-dep,mass,p,pt
	Mcgaughey 92	mass
	Alde 91	a-dep,cs
	Spiegel 91	a-dep
	Alde 90B	a-dep
	Alde 90C	a-dep,mass,p,pt
	Mishra 90	a-dep,p,pt

2jet X

800	Boca 90	angp,mass,p,pt

2hadron X

800	Kaplan 89	ang,mass,p,pt

2hadron$^+$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

hadron$^+$ hadron$^-$ X

800	Straub 92B	mass,pt
	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

2hadron$^-$ X

800	Boca 90	angp,mass,p,pt
	Streets 89	a-dep,ang,mass,pt

$\pi^+ \pi^-$ X

800	Straub 92	mass,pt

K_S mult[charged$^-$] X

200	Evans 92	mult

$K^+ \pi^-$ X

800	Straub 92	mass,pt

$K^- \pi^+$ X

800	Straub 92	mass,pt

$K^+ K^-$ X

800	Straub 92	mass,pt

charmed-meson $\overline{\text{charmed-meson}}$ X

400	Duffy 88	a-dep,cs

p (hadrons) X

200.9	Akesson 91	cor,et,p,pt

$p \pi^-$ X

800	Straub 92	mass,pt

$\bar{p} \pi^+$ X

800	Straub 92	mass,pt

$p K^-$ X

800	Straub 92	mass,pt

$\bar{p} K^+$ X

800	Straub 92	mass,pt

$p \bar{p}$ X

800	Straub 92	mass,pt

Λ mult[charged$^-$] X

200	Evans 92	mult

$\bar{\Lambda}$ mult[charged$^-$] X

200	Evans 92	mult

Λ_c^+ $\overline{\text{charmed-meson}}$ X

400	Duffy 88	a-dep,cs

p Pt

longlived X

12	Nakamura 89	–

p Au

inelastic

200	Abe 88	cs

p Au

mult[charged] X

200	Brick 89	mult
360	Bailly 88	mult,p

mult[charged$^-$] X

200	Bachler 91	mult
	Brick 89	mult

mult[neutral] X

14.5	Tannenbaum 89	et,p

mult[hadron] X

200	Tannenbaum 89	et,p

mult[shower] X

200	Brick 89	mult

neutral X

14.5	Remsberg 88	p
	Tannenbaum 88	et,p

charged X

14.6	Abbott 92B	cs,et,p
200	Brick 89	mult

charged$^-$ X

60.93	Bamberger 89	mult,p,pt
200	Bachler 91	mult
	Brick 90	cor,mult,p
	Brick 89	mult
200.9	Bartke 90	mult
	Bamberger 89	mult,p,pt

shower X

200	Brick 90	cor,mult,p
	Brick 89	mult

grey X

200	Abe 88	mult

γ X

60.93	Odyniec 91B	p,pt
	Albrecht 88B	pt
	Kluberg 88	pt
	Lohner 88	pt
200	Albrecht 91O	cs
200.9	Albrecht 91	pt
	Odyniec 91B	p,pt
	Albrecht 88B	pt
	Kluberg 88	pt
	Lohner 88	pt

$\pi^\pm$ X

4.9	Schmidt 92	a-dep,p
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p
	Abe 88	mult
200.9	Kampert 92	a-dep,p

π^+ X

14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt

π^0 X

60.93	Albrecht 88B	pt
	Franz 88B	angp,pt
	Lohner 88	angp,pt
200	Albrecht 91O	cs
200.9	Albrecht 91	pt
	Albrecht 90F	angp,pt
	Albrecht 88B	pt
	Franz 88B	angp,pt
	Lohner 88	angp,pt

π^- X

14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt
200	London 89	angp
	Abe 88	mult

K^+ X

14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt

p Au

K^0 X + $\bar{K}^0$ X

200	Brick 92	a-dep,cs,mult,p

K^0 X

200.9	Odyniec 89	mult

K^- X

14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt

K_S X

60.93	Bamberger 89	mult,p,pt
200	London 89	angp
200.9	Bartke 90	mult
	Bamberger 89	mult,p,pt
	Pugh 89	pt
	Vesztergombi 88	cs,p,pt

D^0 X

800	Peng 92	a-dep,cs

bottom X

800	Peng 92	cs

baryon X

200.9	Schmidt 87	p

p X

4.9	Schmidt 92	a-dep,p
14.5	Schukraft 91	p
14.57	Abbott 91C	angp,p,pt
14.6	Abbott 92	angp,p,pt
	Abbott 91B	p,pt
	Bloomer 90	p,pt
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p
	Eklund 91	a-dep,mult
	Abe 88	p
200.9	Kampert 92	a-dep,p
	Schmidt 88	p,pt

Λ X

60.93	Bamberger 89	mult,p,pt
200	Brick 92	a-dep,cs,mult,p
	London 89	angp
200.9	Bartke 90	mult
	Bamberger 89	mult,p,pt
	Odyniec 89	mult
	Pugh 89	pt
	Vesztergombi 88	cs,p,pt

$\bar{\Lambda}$ X

200	Brick 92	a-dep,cs,mult,p
	London 89	angp
200.9	Bartke 90	mult
	Odyniec 89	mult
	Vesztergombi 88	cs,p,pt

fragt X

3.412	Summerer 90	cs

deuteron X

4.9	Schmidt 92	a-dep,p
14.6	Abbott 92	angp,p,pt
60	Schmidt 92	a-dep,p
200	Schmidt 92	a-dep,p
200.9	Kampert 92	a-dep,p

Bor X

3.308 – 8.386	Avdejchikov 87B	angp

C X

3.308 – 8.386	Avdejchikov 87B	angp

Nit X

3.308 – 8.386	Avdejchikov 87B	angp

O X

3.308 – 8.386	Avdejchikov 87B	angp

Fl X

3.308 – 8.386	Avdejchikov 87B	angp

Ne X

3.308 – 8.386	Avdejchikov 87B	angp

Na X

3.308 – 8.386	Avdejchikov 87B	angp

Mg X

3.308 – 8.386	Avdejchikov 87B	angp

p Au

^{149}Tb X

0.3438 – 1.627	Aleksandrov 89	cs

mult[p] charged$^-$ X

200	Geist 91	cor,mult

mult[grey] charged$^-$ X

200	Brick 90	cor,mult,p
	Brick 89	mult

2charged X

200	Brick 90	cor,mult,p

hadron charged$^-$ X

200.9	Strobele 88	cs,et,mult,p

mult[grey] shower X

200	Brick 90	cor,mult,p
	Brick 89	mult

γ mult[charged] X

60.93	Kluberg 88	mult,pt
	Lohner 88	mult,pt
200.9	Kluberg 88	mult,pt
	Lohner 88	mult,pt

γ hadron X

60.93	Lohner 88	p,pt
200.9	Lohner 88	p,pt

2γ X

200.9	Albrecht 91	mass,p,pt
	Albrecht 88B	mass

π^0 hadron X

200.9	Albrecht 90F	angp,p,pt

2π^+ X

200.9	Kampert 92	cor,p

π^+ π^- X

60.93	Bamberger 89	mass
	Vesztergombi 88	mass
200.9	Bamberger 89	mass
	Vesztergombi 88	mass

p π^- X

60.93	Bamberger 89	mass
	Vesztergombi 88	mass
200.9	Bamberger 89	mass
	Vesztergombi 88	mass

$\bar{p}$ π^+ X

60.93	Bamberger 89	mass
	Vesztergombi 88	mass
200.9	Bamberger 89	mass
	Vesztergombi 88	mass

2p X

5.1	Budilov 90	angp,cor,p
200.9	Kampert 92	cor,p

$\bar{\Lambda}$ π^+ X

60.93	Bamberger 89	mult,p,pt
200.9	Bamberger 89	mult,p,pt

mult[grey] charged$^+$ charged$^-$ X

200	Brick 89	mult

2$\pi^\pm$ ($\pi^\pm$'s) X

5.762	Kampert 92	ang,col
60.93	Kampert 92	ang,col
200.9	Kampert 92	ang,col

mult[p] 2π^+ X

200.9	Kampert 92	cor,mult,p

2p (p's) X

5.762	Kampert 92	ang,col
60.93	Kampert 92	ang,col
200.9	Kampert 92	ang,col

Au p γ

0.5861	Pinston 89	angp,cs
0.6444	Pinston 89	angp,cs

p ^{197}Au

inelastic

4.491	Kozma 90	cs
	Kozma 88	cs

nucleus X

1.696	Belyaev 90B	angp,p

frag X

800	Sihver 92	angp,cs,p

p ^{197}Au

fragt X

4.491	Damdinsuren 88B	cs

Na X

4.491	Kozma 90	cs
	Kozma 88	cs

^{24}Na X

4.491	Kozma 90B	angp,p

Mg X

4.491	Kozma 90	cs
	Kozma 88	cs

^{28}Mg X

4.491	Kozma 90B	angp,p

Sc X

4.491	Kozma 90	cs
	Kozma 88	cs

Va X

4.491	Kozma 90	cs
	Kozma 88	cs

Mn X

4.491	Kozma 90	cs
	Kozma 88	cs

Fe X

4.491	Kozma 90	cs
	Kozma 88	cs

Zn X

4.491	Kozma 90	cs
	Kozma 88	cs

As X

4.491	Kozma 90	cs
	Kozma 88	cs

Se X

4.491	Kozma 90	cs
	Kozma 88	cs

Rb X

4.491	Kozma 90	cs
	Kozma 88	cs

^{87}Yt X

4.491	Kozma 90	cs
	Kozma 88	cs

Nb X

4.491	Kozma 90	cs
	Kozma 88	cs

Tc X

4.491	Kozma 90	cs
	Kozma 88	cs

Rh X

4.491	Kozma 90	cs
	Kozma 88	cs

Sb X

4.491	Kozma 90	cs
	Kozma 88	cs

Te X

4.491	Kozma 90	cs
	Kozma 88	cs

Xe X

4.491	Kozma 90	cs
	Kozma 88	cs

Ba X

4.491	Kozma 90	cs
	Kozma 88	cs

Pr X

4.491	Kozma 90	cs
	Kozma 88	cs

Eu X

4.491	Kozma 90	cs
	Kozma 88	cs

Gd X

4.491	Kozma 90	cs
	Kozma 88	cs

Tb X

4.491	Kozma 90	cs
	Kozma 88	cs

Dy X

4.491	Kozma 90	cs
	Kozma 88	cs

Yb X

4.491	Kozma 90	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$p\ ^{197}$Au

Yb X

	Kozma 88	cs

Lu X

4.491	Kozma 90	cs
	Kozma 88	cs

Hf X

4.491	Kozma 90	cs
	Kozma 88	cs

Re X

4.491	Kozma 90	cs
	Kozma 88	cs

^{196}Au X

1.65	Hill 91	cs

2p X

0.6444	Cowley 90	ang,angp,p

p Hg

q X

800	Matis 88	cs

p Pb

inelastic

1.26 – 2.5	Kuzichev 89	a-dep,cs
500 – 10^4	Avakyan 89C	a-dep,cs

mult[charged] (neutrals)

400	Miettinen 88	a-dep,angp,col,et,mult,p
800	Sambamurti 90	cor,et,mult

mult[hadron] X

200	Tannenbaum 89	et,p
800	Tannenbaum 89	et,p

mult[π^+] X

1.463	Trzaska 91C	cs,mult
2.359	Trzaska 91C	cs,mult

mult[π^-] X

1.463	Trzaska 91C	cs,mult
2.359	Trzaska 91C	cs,mult

mult[p] X

1.463	Trzaska 91C	cs,mult
2.359	Trzaska 91C	cs,mult

mult[n] X

4.5	Voronko 88	cs

mult[fragt] X

1.463	Lemaire 91	mult
2.359	Lemaire 91	mult

neutral X

220	Dzhaoshvili 90	p
1500	Dzhaoshvili 90	p

charged X

220	Dzhaoshvili 90	mult,p
800	Sambamurti 90	a-dep,pt
1500	Dzhaoshvili 90	mult,p

jet X

800	Stewart 90	a-dep,angp,col,pt

hadron X

200	Akesson 88B	angp,et

hadron (hadrons)

800	Sambamurti 90	cor,cs,et,mult,p,pt

γ X

0.4539	Clauton 92B	angp,cs,p
0.5414	Clauton 92B	angp,cs,p

$\pi^\pm$ X

3.35	Daniel 92	angp,p

π^+ X

1.463	Lemaire 91B	angp,mult
	Trzaska 91C	cs
2.359	Lemaire 91B	angp,mult
	Trzaska 91C	cs
7.5	Vorobiev 89B	a-dep,angp
	Vorobiev 88D	a-dep,angp

p Pb

π^0 X

0.5681	Dementiev 92	angp
0.6462	Bellini 89	a-dep,cs
185	Underwood 89	asym,p

π^- X

1 – 12	Nakai 91	angp,p
1.463	Lemaire 91B	angp,mult
	Trzaska 91C	cs
2.359	Lemaire 91B	angp,mult
	Trzaska 91C	cs

K^+ X

1.468 – 1.685	Koptyev 88	cs
1.693	Koptyev 88	cs
2.88	Schnetzer 89	angp,cs,p

χ_c(unspec) X

530	De 89	–

p X

1 – 12	Nakai 91	angp,p
3.35	Daniel 92	angp,p
4	Tokushuku 90	angp
7.5	Vlasov 90B	p
	Gavrilov 89	p
9	Belzer 92	a-dep,p
	Belzer 90	angp,p

n X

1.696	Daniel 92	angp,p
2.784	Daniel 92	angp,p
3.35	Daniel 92	angp,p
7.5	Vlasov 89	a-dep,angp

$\Delta(1232\,P_{33})^{++}$ X

7.5	Vorobiev 90	angp

Λ X

3	Vorobiev 91	–
	Vorobiev 89C	angp
7.5	Smirnitsky 91	pol
	Vorobiev 91	–
	Vorobiev 89C	angp
400	Lundberg 89	pol

fragt X

4.491	Damdinsuren 89	cs

deuteron X

4	Tokushuku 90	angp

^{3}He X

1.46	Barlow 92	a-dep,angp,p

^{4}He X

1.46	Barlow 92	a-dep,angp,p

^{24}Na X

4.491	Kozma 90B	angp,p

^{28}Mg X

4.491	Kozma 90B	angp,p

$e^-\ e^+$ X

1.206	Faissner 89	p

2μ^- X + 2μ^+ X

200.9	Baglin 91	mass

$\mu^-\ \mu^+$ X

200.9	Baglin 91	mass

mult[π^+] mult[fragt] X

1.463	Lemaire 91	mult
2.359	Lemaire 91	mult

mult[π^-] mult[fragt] X

1.463	Lemaire 91	mult
2.359	Lemaire 91	mult

(jets) jet X

400	Miettinen 88	a-dep,angp,et,p

2jet X

800	Stewart 90	a-dep,angp,col,et

hadron$^+$ charged X

9	Belzer 90	ang,angp,p

mult[htrack] shower X

70	Bobodjanov 91	mult

mult[htrack] grey X

70	Bobodjanov 91	mult

p Pb

mult[htrack] black X

70	Bobodjanov 91	mult

γ hadron$^+$ X + hadron$^+$ charged X

9	Belzer 90	ang,angp,p

2γ X

1.206	Faissner 88	ang,p

2meson X

70	Abramov 90	angp,pt

π^+ mult[fragt] X

1.463	Lemaire 91	mult
	Lemaire 91B	angp,mult
2.359	Lemaire 91	mult
	Lemaire 91B	angp,mult

π^- mult[fragt] X

1.463	Lemaire 91	mult
	Lemaire 91B	angp,mult
2.359	Lemaire 91	mult
	Lemaire 91B	angp,mult

$\pi^\pm$ hadron$^+$ X

9	Belzer 90	ang,angp,p

2π^+ X

7.5	Vlasov 92	a-dep,ang,angp,cor,p
	Vlasov 90	a-dep,ang,angp,cor,p
	Vorobiev 89B	angp,cor,pt
	Vorobiev 88D	angp,cor

$\pi^+\ \pi^-$ X

70	Abramov 90	angp,pt

$J/\psi(1S)$ (neutrals) X

200.9	Baglin 91	cor,cs,et

$J/\psi(1S)\ \gamma$ X

530	De 89	mass

p meson X

70	Abramov 90	angp,pt

$p\ \pi^\pm$ X

9	Belzer 90	ang,angp,p

$p\ \pi^+$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs
7.5	Vlasov 92	a-dep,ang,angp,cor,p
	Vlasov 90	a-dep,ang,angp,cor,p
8.9	Averichev 89	cor,mass
9	Belzer 90	ang,angp,p

$p\ \pi^-$ X

1.463	Trzaska 91C	cs
2.359	Trzaska 91C	cs
8.9	Averichev 89	cor,mass
70	Abramov 90	angp,pt

2p X

3	Vlasov 90B	ang,cor
5	Vlasov 90B	ang,cor
6	Carroll 88	angp
7.5	Vlasov 90B	cor,p
	Vorobiev 90B	ang,angp,mass,p
	Bayukov 89	ang,angp,p
	Bayukov 89B	ang,angp,p
	Bayukov 89C	ang,angp,p
	Bayukov 88	angp,cor
8.9	Averichev 89	cor,mass
10	Carroll 88	angp
70	Abramov 90	angp,pt

$p\ n$ X

7.5	Vlasov 89	a-dep,ang,cor,p

2n X

7.5	Gavrilov 89	p

deuteron π^+ X

7.5	Vlasov 92	a-dep,ang,angp,cor,p

p Pb

deuteron π^+ X
Vlasov 90 a-dep,ang,angp,cor,p

deuteron p X
7.5 Bayukov 89C ang,angp,p
Vlasov 89B ang,p

deuteron n X
7.5 Vlasov 89 a-dep,ang,cor,p

2deuteron X
7.5 Bayukov 89C ang,angp,p
Vlasov 89B ang,p

^{3}H p X
7.5 Bayukov 89C ang,angp,p
Vlasov 89B ang,p

$\mu^-\ \mu^+$ (neutrals) X
200.9 Baglin 91 cor,cs,et

$\mu^-\ \mu^+\ \gamma$ X
530 De 89 mass

mult[charged] 2jet X
400 Corcoran 91 ang,angp,cor,et,mult,p

2p π^+ X
1.463 Trzaska 91C cs
2.359 Trzaska 91C cs

3p X
7.5 Vlasov 88 ang,angp,cor

2p fragt (neutrals)
6 Heppelmann 89 angp
10 Heppelmann 89 angp

deuteron 2p X
7.5 Vlasov 88 ang,angp,cor

2deuteron p X
7.5 Vlasov 88 ang,angp,cor

3p π^- X
1.463 Trzaska 91C cs
2.359 Trzaska 91C cs

4p X
7.5 Vlasov 88 ang,angp,cor

Pb p π^0
185 Yokosawa 92 angp,asym,mass
Yokosawa 91 angp,asym,mass
Carey 90 angp,asym,mass
Yokosawa 90B angp,asym,mass
Underwood 89 mass
200 Yokosawa 90 angp,asym

p ^{208}Pb

π^0 X
0.6585 Bellini 89 ang,p

p X
0.7926 Chen 89D angp,p,pol
1.09 Chen 89D angp,p,pol

^{3}H X + deuteron X + p X
1.463 Moshi 90 angp

^{208}Pb p
0.6444 Lee 89 angp,pol
Hutcheon 88 angp,pol
Lee 88 angp
0.8081 Hutcheon 88 angp,pol
0.8354 Hintz 88 angp
0.9002 Lee 88 angp
0.9543 Lee 89 angp,pol
Hutcheon 88 angp,pol
Lee 88 angp
1.09 Hutcheon 88 angp,pol
1.463 Moshi 90 angp

p ^{208}Pb

^{208}Pb* p
0.6444 Lee 89 angp,pol
0.7926 Chen 89D angp,p,pol
0.8354 Hintz 88 angp
0.9543 Lee 89 angp,pol
1.09 Chen 89D angp,p,pol
1.463 Moshi 90 angp

p Ac

2p π^+ X
3.9 Nakai 89 a-dep,angp

p Th

fragt X
3.412 Summerer 90 cs

p ^{238}U

π^0 X
0.6462 Bellini 89 a-dep,cs

nucleus X
1.696 Belyaev 90B angp,p

^{47}Ca X
400 Klingensmith 88 angp,p

^{48}Sc X
400 Klingensmith 88 angp,p

^{67}Cu X
400 Klingensmith 88 angp,p

^{69}Zn X
400 Klingensmith 88 angp,p

^{72}Ga X
400 Klingensmith 88 angp,p

^{72}As X
400 Klingensmith 88 angp,p

^{76}As X
400 Klingensmith 88 angp,p

^{82}Br X
400 Klingensmith 88 angp,p

^{95}Zr X
400 Klingensmith 88 angp,p

^{97}Zr X
400 Klingensmith 88 angp,p

^{96}Nb X
400 Klingensmith 88 angp,p

^{99}Mo X
400 Klingensmith 88 angp,p

^{96}Tc X
400 Klingensmith 88 angp,p

^{101}Rh X
400 Klingensmith 88 angp,p

^{105}Rh X
400 Klingensmith 88 angp,p

^{103}Pd X
400 Klingensmith 88 angp,p

^{115}Cd X
400 Klingensmith 88 angp,p

^{120}Sb X
400 Klingensmith 88 angp,p

^{127}Sb X
400 Klingensmith 88 angp,p

^{124}I X
400 Klingensmith 88 angp,p

^{132}Cs X
400 Klingensmith 88 angp,p

^{140}Ba X
400 Klingensmith 88 angp,p

^{143}Ce X
400 Klingensmith 88 angp,p

2μ^- X + 2μ^+ X
200.9 Sonderegger 88 pt

2fragt X
1.696 Zhdanov 91 ang,cs
Zhdanov 91B ang,cs
Zhdanov 91C ang,angp,cs
Filatov 88 ang,col,cs,p

p ^{238}U

2fragt 0charged X
1.696 Zhdanov 91B cs

2fragt (neutrals)
1.696 Filatov 88 ang,col,cs,p

2fragt mult[charged] X
1.696 Zhdanov 91B ang,mult
Zhdanov 91C ang,mult
Filatov 88 mult

3fragt X
1.696 Zhdanov 91 ang,cs
Zhdanov 91B ang,cs
Zhdanov 91C ang,cs
Filatov 88 ang,col,cs,p

p U

μ^- X
300 Cobbaert 88 a-dep

μ^+ X
300 Cobbaert 88 a-dep

hadron X
200 Akesson 92B et,p

ω(783) X + ρ(770)^0 X
200.9 Baglin 91D a-dep
Odyniec 91 et,mult
Odyniec 91B et,mult
Schukraft 91 et,mult
Baldisseri 90 cs

K^+ X
1.693 Koptyev 88 cs

ϕ(1020) X
200.9 Baglin 91D a-dep
Odyniec 91 et,mult
Odyniec 91B et,mult
Schukraft 91 et,mult
Baldisseri 90 cs

charm X
300 Cobbaert 88 a-dep,cs

$J/\psi(1S)$ X
200.9 Baglin 91B pt
Baglin 91C pt
Baglin 91E a-dep,cs
Odyniec 91B et,mult

2μ^- X + 2μ^+ X
200.9 Sonderegger 89 et,mass

$\mu^-\ \mu^+$ X
22 – 29.5 Freudenreich 90 -
200.9 Baglin 91B pt
Baglin 91C pt
Baglin 91D mass
Jacob 91 et
Odyniec 91B mass
Baldisseri 90 mass,p,pt
Sonderegger 89 et,mass
300 Cobbaert 88 a-dep
Cobbaert 88B a-dep,mass,p
320 Catanesi 89 mass,p,pt

ω(783) (neutrals) X + ρ(770)^0 (neutrals) X
200.9 Baglin 91D cs,et

ϕ(1020) (neutrals) X
200.9 Baglin 91D cs,et

$J/\psi(1S)$ (neutrals) X
200 Abreu 91E et,pt
200.9 Baglin 91E et
Kluberg 88 cor,cs,et,pt

n fragt X
0.105 Chen 92 angp,p

$\mu^-\ \mu^+$ (neutrals) X
200 Abreu 91E et,pt
200.9 Baglin 91D cs,et
Kluberg 88 cor,cs,et,pt

$n\ e^-$

$n\ e^-$
< 0.0043 Leeb 92 -

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$n\,e^-$

$n\,e^-$		
0	Schmiedmayer 89B	cs
0 – 0.0004	Alexandrov 89	cs
?	Buenerd 92	angp
n nucleon		
$K^*(892)^+$ X		
560	Cumalat 87	–
$K^*(892)^0$ X		
560	Cumalat 87	–
D^0 X		
560	Cumalat 87	–
$\bar{D}^0$ X		
560	Cumalat 87	–
$D^*(2010)^+$ X		
560	Cumalat 87	–
$D^*(2010)^-$ X		
560	Cumalat 87	–
$2K_S$ X		
560	Cumalat 87	mass
$K^+ K^- \pi^-$ X		
560	Cumalat 87	mass
$n\,p$		
X		
0.5317 – 1.207	Binz 89B	cs
1.257	Yokosawa 90B	cs
1.558	Yokosawa 90B	cs
1.674	Yokosawa 90B	cs
1.788	Yokosawa 90B	cs
charged X		
6.1	Batyunya 86B	mult
200	Gazdzicki 91	mult
charged $^-$ X		
200	Gazdzicki 91	mult
π^+ X		
4.2	Bekmirzaev 88B	angp,mult,p,pt
200	Gazdzicki 91	mult
π^0 X		
200	Gazdzicki 91	mult
π^- X		
4.2	Bekmirzaev 88B	angp,mult,p,pt
	Bekmirzaev 87C	angp,p,pt
200	Gazdzicki 91	mult
$\phi(1020)$ X		
30 – 70	Aleev 89C	cs,p,pt
$\bar{D}^0$ X		
40 – 70	Aleev 90B	–
baryonium X		
20 – 70	Tatishvili 92	cs
	Aleev 90E	cs
	Aleev 89	–
	Aleev 88F	–
40	Aleev 88G	cs
baryonium($S = -1$) X		
20 – 70	Tatishvili 92	cs
	Aleev 90E	cs
	Aleev 88D	–
40	Aleev 90	–
baryonium($S = +1$) X		
20 – 70	Tatishvili 92	cs
	Aleev 90E	cs
	Aleev 88D	–
40	Aleev 90	–
p X		
4.2	Bekmirzaev 88B	angp,mult,p,pt
Λ_c^+ X		
40 – 70	Aleev 90F	mass
	Vecko 89	cs
	Aleev 88C	cs,p,pt
$\Lambda_c^+ \pi^+$ X		
20 – 70	Aleev 89B	mass

$n\,p$

$\Lambda_c^+ \pi^-$ X		
20 – 70	Aleev 89B	mass
$\bar{p}\,\Lambda\,\pi^+$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 88D	mass
40	Aleev 90	mass
$\bar{p}\,\Lambda\,\pi^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 88D	mass
40	Aleev 90	mass
$p\,\bar{\Lambda}\,\pi^+$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 88D	mass
40	Aleev 90	mass
$p\,\bar{\Lambda}\,\pi^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 88D	mass
40	Aleev 90	mass
$\bar{p}\,\Lambda\,K^+$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
$p\,\bar{\Lambda}\,K^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
$p\,\bar{K}^0\,\pi^+\,\pi^-$ X		
40 – 70	Aleev 88C	mass
$p\,K^-\,2\pi^+$ X		
20 – 70	Aleev 89B	mass
$p\,K^-\,\pi^+\,\pi^-$ X		
20 – 70	Aleev 89B	mass
$p\,\bar{p}\,K^+\,K_S$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
$p\,\bar{p}\,K_S\,K^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
$\Lambda\,2\pi^+\,\pi^-$ X		
40 – 70	Aleev 88C	mass
$\bar{p}\,\Lambda\,2\pi^+$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 88D	mass
40	Aleev 90	mass
$\bar{p}\,\Lambda\,\pi^+\,\pi^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 88D	mass
40	Aleev 90	mass
$\bar{p}\,\Lambda\,2\pi^-$ X		
20 – 70	Tatishvili 92	mass
$p\,\bar{\Lambda}\,2\pi^+$ X		
20 – 70	Tatishvili 92	mass
$p\,\bar{\Lambda}\,\pi^+\,\pi^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 88D	mass
40	Aleev 90	mass
$p\,\bar{\Lambda}\,2\pi^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass

$n\,p$

$p\,\bar{\Lambda}\,2\pi^-$ X		
	Aleev 88D	mass
40	Aleev 90	mass
$\bar{p}\,\Lambda\,K^+\,\pi^+$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
$\bar{p}\,\Lambda\,K^+\,\pi^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
$p\,\bar{\Lambda}\,K^-\,\pi^+$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
$p\,\bar{\Lambda}\,K^-\,\pi^-$ X		
20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
	Aleev 89	mass
	Aleev 88F	mass
40	Aleev 88G	mass
dibaryon		
1.43	Troyan 90	cs
1.72	Troyan 90	cs
2.23	Troyan 90	cs
3.83	Troyan 90	cs
$p\,n$		
0.22	Klomp 91	angp,asym,p,pol
	Abegg 89C	angp,asym,p,pol
0.22 – 0.477	Abegg 89B	angp,pol
0.287	Bruckner 91B	angp
	Bruckner 91C	angp
0.325	Klomp 91	angp,asym,p,pol
	Abegg 89C	angp,asym,p,pol
0.3625	Klomp 91	angp,pol
	Nammans 91	angp,pol
	Locher 90	angp,pol
0.3639	Brogligysin 92	pol
0.425	Klomp 91	angp,asym,p,pol
	Abegg 89C	angp,asym,p,pol
0.6143	Knutson 91	angp,asym
0.6449 – 1.091	Davis 88	angp,pol
< 0.8828	Stoks 92	const
0.8833	Abegg 92	angp,asym
	Abegg 92B	pol
0.9194 – 1.434	Newsom 89	ang,asym,p,pol
0.9237	Silverman 89	angp
0.9237 – 1.84	Dobrovolsky 88	angp
1.06	Abegg 89	pol
1.066	Silverman 89	angp
1.06	Yokosawa 90B	pol
	Garnett 89	pol
1.071	Mcnaughton 92B	angp,pol
1.091 – 1.464	Ditzler 92	angp,pol
	Shima 92	angp,pol
	Beddo 91	cs,pol
	Yokosawa 90B	pol
1.133	Silverman 89	angp
1.197	Silverman 89	angp
1.257	Ball 88	asym,pol
1.261	Silverman 89	angp
1.261 – 1.67	Dobrovolsky 88	pol
1.262	Yokosawa 90B	pol
	Garnett 89	pol
1.264	Mcnaughton 92B	angp,pol
1.323	Silverman 89	angp
1.353	Silverman 89	angp

$n\ p$

$p\ n$

1.397	Yokosawa 90B	pol
	Delesquen 88	pol
1.445	Silverman 89	angp
1.44	Yokosawa 90B	pol
	Garnett 89	pol
1.452	Yokosawa 90B	angp,pol
	Nath 89	angp,pol
1.457	Yokosawa 90B	pol
	Delesquen 88	pol
1.464	Mcnaughton 91	angp,pol
1.504	Silverman 89	angp
1.558	Ball 88	asym,pol
1.563	Silverman 89	angp
< 1.6	Arndt 92	pwa
1.621	Silverman 89	angp
1.674	Ball 88	asym,pol
1.67	Silverman 89	angp
1.788	Ball 88	asym,pol
1.793	Silverman 89	angp
1.84	Silverman 89	angp

$p\ \Delta(1232\ P_{33})^0$

1 – 1.9	Tsuboyama 88	angp,cs

deuteron γ

0	Bazhenov 92	pol
0.8978	Edwards 92	angp,p
0.9688	Edwards 92	angp,p
1.037	Edwards 92	angp,p

deuteron π^0

0.7409 – 0.7947	Hutcheon 91	angp,cs,p
0.7411 – 0.7941	Hutcheon 89	angp,cs
0.7728	Hutcheon 90	angp,cs
0.776	Hutcheon 90	angp,cs
0.7822	Hutcheon 90	angp,cs
0.7947	Hutcheon 90	angp,cs

dibaryon π^-

1.25	Troyan 88	cs
1.43	Troyan 88	cs
1.72	Troyan 88	cs
2.23	Troyan 88	cs

$p\ n\ \gamma$

0.17	Malek 91	angp,p

$2p\ \pi^-$

1.25	Troyan 88	mass
	Zielinsky 88	cs,mass
1.43	Troyan 88	mass
1.72	Troyan 88	mass
1.73	Glagolev 89C	angp,col,p
2.23	Troyan 88	mass
	Zielinsky 88	cs,mass
5.1	Zielinsky 88	cs,mass
450.9 – 570.9	Bannwarth 92	angp,cs,p

$2n\ \pi^+$

450.9 – 570.9	Bannwarth 92	angp,cs,p

$p\ \Lambda\ K^0$

30 – 70	Smizanska 90	ang,angp,mass
40	Aleev 88B	mass,p,pt

DD $< \Lambda\ K^0 >\ p$

40	Aleev 88B	cs,mass,pt

deuteron $\pi^+\ \pi^-$

1.73	Glagolev 91	angp,cs,p

$2p\ \pi^+\ 2\pi^-$

40	Aleev 88B	mass

$2p\ \pi^+\ \pi^0\ 2\pi^-$

1.25	Zielinsky 88	cs,mass
2.23	Zielinsky 88	cs,mass
5.1	Zielinsky 88	cs,mass

$n\ n$

charged X

200	Gazdzicki 91	mult

charged X

200	Gazdzicki 91	mult

$n\ n$

π^+ X

200	Gazdzicki 91	mult

π^0 X

200	Gazdzicki 91	mult

π^- X

200	Gazdzicki 91	mult

K^+ X

200	Gazdzicki 91	mult

K^- X

200	Gazdzicki 91	mult

K_S X

200	Gazdzicki 91	mult

p X

200	Gazdzicki 91	mult

n X

200	Gazdzicki 91	mult

$\bar{n}$ X

200	Gazdzicki 91	mult

$\bar{p}$ X

200	Gazdzicki 91	mult

Λ X + Σ^0 X

200	Gazdzicki 91	mult

$\bar{\Lambda}$ X + $\bar{\Sigma}^0$ X

200	Gazdzicki 91	mult

$\nu_e\ \bar{\nu}_e$

?	Berger 91	–

$\nu_\mu\ \bar{\nu}_\mu$

?	Berger 91	–

nucleon ℓ^+

?	Berger 91	–

$\Delta(1232\ P_{33})^-\ e^+$

?	Berger 91	–

$\Delta(1232\ P_{33})^-\ \mu^+$

?	Berger 91	–

$2\pi^0$

?	Berger 91	–

$\pi^+\ \pi^-$

?	Berger 91	–

n Pb(atom)

X

0	Schmiedmayer 89	cs

n Bi(atom)

X

0 – 0.0004	Alexandrov 89	cs

n nucleus

axion X

0	Freedman 89	–

baryonium X

20 – 70	Tatishvili 92	cs
	Aleev 90E	cs
40	Aleev 88G	cs

baryonium($S = -1$) X

20 – 70	Tatishvili 92	cs
	Aleev 90E	cs

baryonium($S = +1$) X

20 – 70	Tatishvili 92	cs
	Aleev 90E	cs

$X(3100)$ X

40 – 70	Augustin 88C	cs

$X(3100)^0$ X

40 – 70	Augustin 88C	cs

$X(3100)^{--}$ X

40 – 70	Augustin 88C	cs

$\Xi_c(2460)^+$ X

640	Klein 89C	a-dep,cs,p

dibaryon($S = -2$) X

7	Shakhbazyan 88	cs,mass

n nucleus

$e^-\ e^+$ X

0	Freedman 89	p

$2p$ X

7	Kechechyan 89	p

2Λ X

7	Shakhbazyan 88	cs,mass

$p\ \Sigma^-$ X

7	Shakhbazyan 88	cs,mass

$\bar{p}\ \Lambda$ mult[π] X

40 – 70	Augustin 88C	mass

$\bar{p}\ \Lambda\ \pi^+$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40 – 70	Augustin 88C	mass

$\bar{p}\ \Lambda\ \pi^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40 – 70	Augustin 88C	mass

$p\ \bar{\Lambda}\ \pi^+$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass

$p\ \bar{\Lambda}\ \pi^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass

$\bar{p}\ \Lambda\ K^+$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

$p\ \bar{\Lambda}\ K^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

$p\ \bar{p}\ K^+\ K_S$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

$p\ \bar{p}\ K_S\ K^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

$\bar{p}\ \Lambda\ 2\pi^+$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass

$\bar{p}\ \Lambda\ \pi^+\ \pi^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass

$p\ \Lambda\ 2\pi^-$ X

20 – 70	Tatishvili 92	mass

$p\ \bar{\Lambda}\ 2\pi^+$ X

20 – 70	Tatishvili 92	mass

$p\ \bar{\Lambda}\ \pi^+\ \pi^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass

$p\ \bar{\Lambda}\ 2\pi^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass

$\bar{p}\ \Lambda\ K^+\ \pi^+$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

$\bar{p}\ \Lambda\ K^+\ \pi^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

$p\ \bar{\Lambda}\ K^-\ \pi^+$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

$p\ \bar{\Lambda}\ K^-\ \pi^-$ X

20 – 70	Tatishvili 92	mass
	Aleev 90E	mass
40	Aleev 88G	mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

n nucleus

nucleus n

0	Schmiedmayer 88	cs
< 0.0043	Leeb 92	–

n deuteron

deuteron n

0.0971	Tornow 91	angp,pol
0.1107	Tornow 91	angp,pol
0.1267	Tornow 91	angp,pol
0.3611	Ruhl 91	pol
0.3639	Locher 90	angp,pol

p 2n

0.3611	Kistryn 92	pol

n ^{6}Li

p X

0.28	Mildenberger 90	cs

^{4}He ^{3}H

0	Vesna 90	asym

n Be

X

0.5712 – 1.188	Franz 88	cs

$D^*(2010)^+$ X

640	Shipbaugh 88B	a-dep,cs,p,pt

$D^*(2010)^-$ X

640	Shipbaugh 88B	a-dep,cs,p,pt

D_S^+ X

640	Shipbaugh 88B	cs,p

D_S^- X

640	Shipbaugh 88B	cs,p

$\Sigma_c(2455)^{++}$ X

640	Klein 89C	–

$\Sigma_c(2455)^0$ X

640	Klein 89C	–

$\phi(1020)$ π^+ X

640	Shipbaugh 88B	mass

$\phi(1020)$ π^- X

640	Shipbaugh 88B	mass

K^+ K^- π^+ X

640	Shipbaugh 88B	mass

K^+ K^- π^- X

640	Shipbaugh 88B	mass

n ^{9}Be

X

0 – 1.21	Finlay 93	a-dep,cs,p

n C

X

0 – 1.21	Finlay 93	a-dep,cs,p
0.5712 – 1.188	Franz 88	cs

inelastic

500 – 10^4	Avakyan 89C	a-dep,cs

γ X

0.17	Malek 91	angp,p

$\pi^\pm$ X

0.8085 – 1.194	Buchle 89	a-dep,angp,p
	Buchle 88	angp

π^+ X

1.045	Buchle 89	angp
1.144	Buchle 89	angp
4.2	Bekmirzaev 88B	angp,mult,p,pt

π^- X

0.6449 – 1.188	Brooks 92	angp,cs,p
1.045	Buchle 89	angp
1.144	Buchle 89	angp
4.2	Bekmirzaev 88B	angp,mult,p,pt
	Bekmirzaev 87C	angp,p,pt

n C

$\phi(1020)$ X

30 – 70	Aleev 90C	a-dep,cs,p
	Aleev 90D	a-dep,cs

$\bar{D}^0$ X

40 – 70	Aleev 90B	–
	Aleev 88	cs,p,pt

D^- X

40 – 70	Aleev 88	cs,p,pt

baryonium X

20 – 70	Aleev 89	–
	Aleev 88F	–

baryonium($S = -1$) X

20 – 70	Aleev 88D	–

baryonium($S = +1$) X

20 – 70	Aleev 88D	–

p X

4.2	Bekmirzaev 88	a-dep,angp,mult,p,pt
	Bekmirzaev 88B	angp,mult,p,pt

$\Lambda(1520\ D_{03})$ X

40	Krastev 88	cs,p

Λ_c^+ X

40 – 70	Klein 89C	cs,p,pt

dibaryon($S = -2$) X

3 – 10	Alekseev 90	cs

K_S π^+ X

40 – 70	Aleev 88	mass

K_S π^- X

40 – 70	Aleev 88	mass

$K^*(892)^+$ π^- X

40 – 70	Aleev 88	mass

$K^*(892)^-$ π^+ X

40 – 70	Aleev 88	mass

Λ K^0 X

4.849 – 10.8	Alekseev 91B	mass,p,pt

K_S π^+ π^- X

40 – 70	Aleev 88	mass

$K^*(892)^+$ 2π^- X

40 – 70	Aleev 88	mass

$K^*(892)^-$ 2π^+ X

40 – 70	Aleev 88	mass

Λ π^+ π^- X

40	Krastev 88	mass

$\bar{p}$ Λ π^+ X

20 – 70	Aleev 88D	mass

$\bar{p}$ Λ π^- X

20 – 70	Aleev 88D	mass

p $\bar{\Lambda}$ π^+ X

20 – 70	Aleev 88D	mass

p $\bar{\Lambda}$ π^- X

20 – 70	Aleev 88D	mass

$\bar{p}$ Λ K^+ X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

p $\bar{\Lambda}$ K^- X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

K_S 2π^+ π^- X

40 – 70	Aleev 88	mass

K_S π^+ 2π^- X

40 – 70	Aleev 88	mass

p $\bar{p}$ K^+ K_S X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

p $\bar{p}$ K_S K^- X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

$\bar{p}$ Λ 2π^+ X

20 – 70	Aleev 88D	mass

n C

$\bar{p}$ Λ π^+ π^- X

20 – 70	Aleev 88D	mass

p $\bar{\Lambda}$ π^+ π^- X

20 – 70	Aleev 88D	mass

p $\bar{\Lambda}$ 2π^- X

20 – 70	Aleev 88D	mass

$\bar{p}$ Λ K^+ π^+ X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

$\bar{p}$ Λ K^+ π^- X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

p $\bar{\Lambda}$ K^- π^+ X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

p $\bar{\Lambda}$ K^- π^- X

20 – 70	Aleev 89	mass
	Aleev 88F	mass

n ^{12}C

p X

0.28	Mildenberger 90	cs
0.8085 – 1.194	Franz 89	angp,p

Λ X

3 – 10	Alekseev 88	–

$N\phi(1950)^0$ X

40	Landsberg 90	cs,p,pt

deuteron X

0.8085 – 1.194	Franz 89	angp,p

^{3}H X

0.8085 – 1.194	Franz 89	angp,p

2p X

7	Kechechyan 90B	cor,p

Λ K^+ π^- X

40	Landsberg 90	mass

2p Λ X

8	Kechechyan 90	cor,p

n Nit

X

0 – 1.21	Finlay 93	a-dep,cs,p

n ^{15}Nit

^{15}C p

0.79	Celler 90	angp,cs

n O

X

0 – 1.21	Finlay 93	a-dep,cs,p
0.5712 – 1.188	Franz 88	cs

n ^{19}Fl

X

0 – 1.21	Finlay 93	a-dep,cs,p

n ^{23}Na

X

0 – 1.21	Finlay 93	a-dep,cs,p

n Al

X

0.5712 – 1.188	Franz 88	cs

$\phi(1020)$ X

30 – 70	Aleev 90C	a-dep,cs,p
	Aleev 90D	a-dep,cs

$\bar{D}^0$ X

40 – 70	Aleev 90B	–

baryonium X

20 – 70	Aleev 89	–
	Aleev 88F	–

baryonium($S = -1$) X

20 – 70	Aleev 88D	–

baryonium($S = +1$) X

20 – 70	Aleev 88D	–

n Al

$\Lambda(1520\, D_{03})$ X
40 Krastev 88 cs,p

$\Lambda\ \pi^+\ \pi^-$ X
40 Krastev 88 mass

$\bar{p}\ \Lambda\ \pi^+$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ \pi^-$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ \pi^+$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ \pi^-$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ K^+$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{\Lambda}\ K^-$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{p}\ K^+\ K_S$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{p}\ K_S\ K^-$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$\bar{p}\ \Lambda\ 2\pi^+$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ \pi^+\ \pi^-$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ \pi^+\ \pi^-$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ 2\pi^-$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ K^+\ \pi^+$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$\bar{p}\ \Lambda\ K^+\ \pi^-$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{\Lambda}\ K^-\ \pi^+$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{\Lambda}\ K^-\ \pi^-$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

n ^{27}Al

X
0 – 1.21 Finlay 93 a-dep,cs,p

n Si

X
0 – 1.21 Finlay 93 a-dep,cs,p

$D^*(2010)^+$ X
640 Shipbaugh 88B a-dep,cs,p,pt

$D^*(2010)^-$ X
640 Shipbaugh 88B a-dep,cs,p,pt

D_S^+ X
640 Shipbaugh 88B cs,p

D_S^- X
640 Shipbaugh 88B cs,p

$\phi(1020)\ \pi^+$ X
640 Shipbaugh 88B mass

$\phi(1020)\ \pi^-$ X
640 Shipbaugh 88B mass

$K^+\ K^-\ \pi^+$ X
640 Shipbaugh 88B mass

$K^+\ K^-\ \pi^-$ X
640 Shipbaugh 88B mass

n ^{40}Ca

X
0 – 1.21 Finlay 93 a-dep,cs,p

n Va

X
0.5712 – 1.188 Franz 88 cs

n Mn

X
0.5712 – 1.188 Franz 88 cs

n ^{56}Fe

^{57}Fe γ
< 0.005 Vesna 89 asym

n Fe

inelastic
500 – 10^4 Avakyan 89C a-dep,cs

π^0 X
500 – 5000 Avakyan 91B p
Avakyan 91C p

n Co

X
0.5712 – 1.188 Franz 88 cs

n Cu

X
0 – 1.21 Finlay 93 a-dep,cs,p
0.5712 – 1.188 Franz 88 cs

$\pi^\pm$ X
0.8085 – 1.194 Buchle 89 a-dep,angp,p

$\phi(1020)$ X
30 – 70 Aleev 90C a-dep,cs,p
Aleev 90D a-dep,cs

baryonium X
20 – 70 Aleev 89
Aleev 88F

baryonium($S = -1$) X
20 – 70 Aleev 88D

baryonium($S = +1$) X
20 – 70 Aleev 88D

p X
0.8085 – 1.194 Franz 89 angp,p

$\Lambda(1520\, D_{03})$ X
40 Krastev 88 cs,p

deuteron X
0.8085 – 1.194 Franz 89 angp,p

dibaryon($S = -2$) X
3 – 10 Alekseev 90 cs

^{3}H X
0.8085 – 1.194 Franz 89 angp,p

$\Lambda\ K^0$ X
4.849 – 10.8 Alekseev 91B mass,p,pt

$\Lambda\ \pi^+\ \pi^-$ X
40 Krastev 88 mass

$\bar{p}\ \Lambda\ \pi^+$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ \pi^-$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ \pi^+$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ \pi^-$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ K^+$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{\Lambda}\ K^-$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{p}\ K^+\ K_S$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{p}\ K_S\ K^-$ X
20 – 70 Aleev 89 mass

n Cu

$p\ \bar{p}\ K_S\ K^-$ X
Aleev 88F mass

$\bar{p}\ \Lambda\ 2\pi^+$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ \pi^+\ \pi^-$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ \pi^+\ \pi^-$ X
20 – 70 Aleev 88D mass

$p\ \bar{\Lambda}\ 2\pi^-$ X
20 – 70 Aleev 88D mass

$\bar{p}\ \Lambda\ K^+\ \pi^+$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$\bar{p}\ \Lambda\ K^+\ \pi^-$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{\Lambda}\ K^-\ \pi^+$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

$p\ \bar{\Lambda}\ K^-\ \pi^-$ X
20 – 70 Aleev 89 mass
Aleev 88F mass

n ^{81}Br

^{82}Br γ
< 0.0001 Masuda 92B asym
0 – 0.0001 Masuda 92 asym
Shimizu 92 angp,asym,pwa

n Rb

Rb n
0.0001 – 0.0002 Alfimenkov 91 cs

n ^{90}Zr

X
0 – 1.21 Finlay 93 a-dep,cs,p

n ^{93}Nb

X
0 – 1.21 Finlay 93 a-dep,cs,p

^{94}Nb γ
< 0.0001 Masuda 92B asym
0 – 0.0001 Masuda 92 asym
Shimizu 92 angp,asym,pwa

n ^{108}Pd

^{109}Pd γ
0 – 0.0001 Masuda 92 asym
Shimizu 92 angp,asym,pwa
< 0.0001 Masuda 92B asym

n Ag

X
0.5712 – 1.188 Franz 88 cs

n ^{111}Cd

^{112}Cd γ
0 – 0.0001 Masuda 92 asym
Shimizu 92 angp,asym,pwa
< 0.0001 Masuda 92B asym

n ^{113}Cd

^{113}Cd n
0.0001 – 0.0002 Alfimenkov 91 cs

^{114}Cd γ
< 0.005 Vesna 89 asym

n Sn

X
0 – 1.21 Finlay 93 a-dep,cs,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$n\ ^{124}Sn$

$^{125}Sn\ \gamma$
< 0.0001 Masuda 92B asym
0 – 0.0001 Masuda 92 asym
Shimizu 92 angp,asym,pwa

$n\ ^{127}I$

X
0 – 1.21 Finlay 93 a-dep,cs,p

n Xe

mult[charged] (neutrals)
0 – 2 Strugalski 91C mult

$n\ ^{133}Cs$

X
0 – 1.21 Finlay 93 a-dep,cs,p

$n\ ^{138}La$

$^{139}La\ \gamma$
0 Masuda 90 asym,qnc

$n\ ^{139}La$

$^{139}La\ n$
< 0.0001 Masuda 90B angp,asym
0.0001 – 0.0002 Alfimenkov 91 cs

$^{140}La\ \gamma$
0 – 0.0001 Masuda 90B angp,asym
< 0.0001 Masuda 92B asym
0 – 0.0001 Masuda 92 asym
Shimizu 92 angp,asym,pwa

n Ce

X
0.5712 – 1.188 Franz 88 cs

n Ta

X
0.5712 – 1.188 Franz 88 cs

π^- X
4.2 Bekmirzaev 87C angp,p,pt

p X
4.2 Bekmirzaev 88 a-dep,angp,mult,p,pt

$n\ ^{181}Ta$

X
0 – 1.21 Finlay 93 a-dep,cs,p

n Wt

$D^*(2010)^+$ X
640 Shipbaugh 88B a-dep,cs,p,pt

$D^*(2010)^-$ X
640 Shipbaugh 88B a-dep,cs,p,pt

D_S^+ X
640 Shipbaugh 88B cs,p

D_S^- X
640 Shipbaugh 88B cs,p

$\phi(1020)\ \pi^+$ X
640 Shipbaugh 88B mass

$\phi(1020)\ \pi^-$ X
640 Shipbaugh 88B mass

$K^+\ K^-\ \pi^+$ X
640 Shipbaugh 88B mass

$K^+\ K^-\ \pi^-$ X
640 Shipbaugh 88B mass

n Pb

X
0.5712 – 1.188 Franz 88 cs

n Pb

inelastic
500 – 10^4 Avakyan 89C a-dep,cs

Pb n
0 Schmiedmayer 89 cs

$n\ ^{207}Pb$

$^{208}Pb\ \gamma$
< 0.0971 Abov 89 asym

$n\ ^{208}Pb$

X
0 – 1.21 Finlay 93 a-dep,cs,p
0.0868 – 0.7296 Schutt 88 cs

$^{208}Pb\ n$
0.0003 – 0.0087 Schmiedmayer 91 cs

$n\ ^{208}Bi$

X
0 – 1.21 Finlay 93 a-dep,cs,p

n Bi

X
0.5712 – 1.188 Franz 88 cs

$\pi^\pm$ X
0.8085 – 1.194 Buchle 89 a-dep,angp,p

p X
0.8085 – 1.194 Franz 89 angp,p

deuteron X
0.8085 – 1.194 Franz 89 angp,p

^3H X
0.8085 – 1.194 Franz 89 angp,p

Bi n
0 – 0.0004 Alexandrov 89 cs

$n\ ^{238}U$

2frag (fragts)
0 Damdinsuren 88 p

n U

X
0.5712 – 1.188 Franz cs

$n\ ^{242}Am$

fragt (fragts)
0.0173 – 0.0971 Shigin 91 angp,cs

$n\ ^{245}Cm$

fragt (fragts)
0.0336 – 0.0971 Gokhberg 91 angp,cs

$\bar{n}$ nucleon

annihil
0 – 0.043 Mutchler 88 amp,cs

$\bar{n}\ p$

inelastic
6.1 Batyunya 86B cs

annihil
6.1 Batyunya 86B cs

mult[charged] (neutrals)
6.1 Batyunya 86B cs

charged X
6.1 Batyunya 86B mult

annihil charged
6.1 Batyunya 86B mult

$\rho(770)^0$ X
6.1 Batyunya 88B cs,mult

$\rho(770)^0$ annihil
6.1 Batyunya 88B cs,mult

$\omega(783)$ X
6.1 Batyunya 88B cs,mult

$\bar{n}\ p$

$\omega(783)$ annihil
6.1 Batyunya 88B cs,mult

$f_2(1270)$ X
6.1 Batyunya 88B cs,mult

$f_2(1270)$ annihil
6.1 Batyunya 88B cs,mult

p X
6.1 Batyunya 86B cs

$\bar{p}$ X
6.1 Batyunya 86B cs

$\Delta(1232\ P_{33})^{++}$ X
6.1 Batyunya 88B cs,mult

$\Delta(1232\ P_{33})^0$ X
6.1 Batyunya 88B cs,mult

$\bar{\Delta}(1232\ P_{33})^0$ X
6.1 Batyunya 88B cs,mult

$\bar{\Delta}(1232\ P_{33})^{--}$ X
6.1 Batyunya 88B cs,mult

annihil mult[charged] (neutrals)
6.1 Batyunya 86B cs

$\pi^+\ \pi^-$ X
6.1 Batyunya 88B mass

$\rho(770)^0$ mult[charged] (neutrals)
6.1 Batyunya 88B cs,mult

$\omega(783)$ mult[charged] (neutrals)
6.1 Batyunya 88B cs,mult

$f_2(1270)$ mult[charged] (neutrals)
6.1 Batyunya 88B cs,mult

p mult[charged] (neutrals)
6.1 Batyunya 86B cs

$\bar{p}$ mult[charged] (neutrals)
6.1 Batyunya 86B cs

$p\ \pi^+$ X
6.1 Batyunya 88B mass

$p\ \pi^-$ X
6.1 Batyunya 88B mass

$\bar{p}\ \pi^+$ X
6.1 Batyunya 88B mass

$\bar{p}\ \pi^-$ X
6.1 Batyunya 88B mass

$\Delta(1232\ P_{33})^{++}$ mult[charged] (neutrals)
6.1 Batyunya 88B cs,mult

$2\pi^+\ \pi^-$ X
0 Adamo 92B mass

$\rho(770)^0$ annihil mult[charged] (neutrals)
6.1 Batyunya 88B cs,mult

$\omega(783)$ annihil mult[charged] (neutrals)
6.1 Batyunya 88B cs,mult

$f_2(1270)$ annihil mult[charged] (neutrals)
6.1 Batyunya 88B cs,mult

$2\pi^+\ \pi^0\ \pi^-$ (π^0's)
0.48 – 0.72 Sedlak 88 cs

$3\pi^+\ 2\pi^-$ X
0 Adamo 92B mass

$3\pi^+\ \pi^0\ 2\pi^-$ (π^0's)
0.48 – 0.72 Sedlak 88 cs

π^+ meson^0
0 Adamo 92B –
0.1 – 0.29 Adamo 92C –

$\rho(770)^0\ \pi^+$
0 Adamo 92B –
0.1 – 0.29 Adamo 92C –

$f_2(1270)\ \pi^+$
0 Adamo 92B –
0.1 – 0.29 Adamo 92C –

$f_2(1520)\ \pi^+$
0 Hertzog 92 –

$\bar{n}$ p

$2\pi^+\ \pi^-$

0.1 – 0.29	Adamo 92C	mass
0.48 – 0.72	Sedlak 88	cs

$3\pi^+\ 2\pi^-$

0.1 – 0.29	Adamo 92C	mass
0.48 – 0.72	Sedlak 88	cs

$\bar{n}$ n

charged$^+$ X

6.1	Batyunya 87G	p

charged$^-$ X

6.1	Batyunya 87G	p

π^+ X

6.1	Batyunya 87G	cs

π^0 X

6.1	Batyunya 87G	ang,angp

π^- X

6.1	Batyunya 87G	cs

p X

6.1	Batyunya 87G	cs

n X

6.1	Batyunya 87G	ang,angp

$\bar{n}$ X

6.1	Batyunya 87G	ang,angp

$\bar{p}$ X

6.1	Batyunya 87G	cs

p π^- neutral (neutrals)

6.1	Batyunya 87G	cs

$\bar{p}$ π^+ neutral (neutrals)

6.1	Batyunya 87G	cs

p $\bar{p}$ neutral (neutrals)

6.1	Batyunya 87G	cs

$2\pi^+\ 2\pi^-$ neutral (neutrals)

6.1	Batyunya 87G	cs

p $\pi^+\ 2\pi^-$ neutral (neutrals)

6.1	Batyunya 87G	cs

$\bar{p}$ $2\pi^+\ \pi^-$ neutral (neutrals)

6.1	Batyunya 87G	cs

p $\bar{p}$ $\pi^+\ \pi^-$ neutral (neutrals)

6.1	Batyunya 87G	cs

$3\pi^+\ 3\pi^-$ neutral (neutrals)

6.1	Batyunya 87G	cs

p $\bar{p}$

6.1	Batyunya 87G	cs

$\pi^+\ \pi^0\ \pi^-$

6.1	Batyunya 87G	cs

p $\bar{n}$ π^-

6.1	Batyunya 87G	cs

p $\bar{p}$ π^0

6.1	Batyunya 87G	cs

n $\bar{p}$ π^+

6.1	Batyunya 87G	cs

$2\pi^+\ 2\pi^-$

6.1	Batyunya 87G	cs

p $\bar{p}$ $\pi^+\ \pi^-$

6.1	Batyunya 87G	cs

p $\bar{n}$ $\pi^+\ 2\pi^-$

6.1	Batyunya 87G	cs

p $\bar{p}$ $\pi^+\ \pi^0\ \pi^-$

6.1	Batyunya 87G	cs

n $\bar{p}$ $2\pi^+\ \pi^-$

6.1	Batyunya 87G	cs

$2\pi^+\ 2\pi^0\ 2\pi^-$

6.1	Batyunya 87G	cs

$3\pi^+\ 3\pi^-$

6.1	Batyunya 87G	cs

p $\bar{p}$ $2\pi^+\ 2\pi^-$

6.1	Batyunya 87G	cs

$\bar{n}$ n

$3\pi^+\ \pi^0\ 3\pi^-$

6.1	Batyunya 87G	cs

p $\bar{n}$ $2\pi^+\ 3\pi^-$

6.1	Batyunya 87G	cs

n $\bar{p}$ $3\pi^+\ 2\pi^-$

6.1	Batyunya 87G	cs

$4\pi^+\ \pi^0\ 4\pi^-$

6.1	Batyunya 87G	cs

n $\bar{p}$ $4\pi^+\ 3\pi^-$

6.1	Batyunya 87G	cs

$\bar{n}$ C

annihil

0	Bitter 89	–

mult[charged] X

0	Bressi 89	cs

$\bar{n}$ ^{12}C

mult[p] mult[π^+] X

1.4	Guaraldo 89B	cor,mult

$\bar{n}$ ^{56}Fe

$\pi^\pm$ X

0.15	Agnello 90	angp,mult
0.2101	Agnello 90	angp,mult
0.25	Agnello 90	angp,mult
0.2652	Agnello 90	angp,mult
0.2943	Agnello 90	angp,mult
0.3871	Agnello 90	angp,mult
0.4249	Agnello 90	angp,mult
0.48	Agnello 90	angp,mult
0.5325	Agnello 90	angp,mult

$\bar{n}$ Ta

mult[charged] X

6.1	Andreev 92	mult
	Andreev 90B	mult

mult[$\pi^\pm$] X

6.1	Andreev 92	mult

mult[π^-] X

6.1	Andreev 92	mult

mult[p] X

6.1	Andreev 92	mult
	Andreev 90B	mult

charged X

6.1	Andreev 92	mult
	Andreev 90B	mult

charged$^-$ X

6.1	Andreev 90B	mult

shower X

6.1	Andreev 90B	mult

$\pi^\pm$ X

6.1	Andreev 92	mult

π^+ X

6.1	Andreev 92	mult

π^- X

6.1	Andreev 92	mult

p X

6.1	Andreev 92	mult
	Andreev 90B	mult

mult[p] mult[$\pi^\pm$] X

6.1	Andreev 92	mult

mult[p] shower X

6.1	Andreev 90B	mult

mult[p] $\pi^\pm$ X

6.1	Andreev 92	mult

p mult[$\pi^\pm$] X

6.1	Andreev 92	mult

p mult[π^+] X

6.1	Andreev 90B	mult

p mult[π^-] X

6.1	Andreev 90B	mult

$\bar{n}$ Ta

p mult[shower] X

6.1	Andreev 90B	mult

$\bar{n}$ ^{181}Ta

mult[p] mult[π^+] X

6.1	Guaraldo 89B	cor,mult

$\bar{p}$ p

X

0.1 – 100	Sedlak 88	cs
0.2 – 1.5	Amsler 91	cs
0.22 – 0.6	Bradamante 91	cs
200	Yokosawa 90	cs
(30.6 – 62.7)	Sedlak 88	cs
(53 – 900)	Giacomelli 90	cs
(200)	Geichgimbel 89	cs
	Salvini 88	cs
(540)	Geichgimbel 89	et
(546)	Geichgimbel 89	cs
	Jenni 89	angp,cs
	Salvini 88	cs
(630)	Mandelli 88	et
	Salvini 88	cs
(900)	Geichgimbel 89	cs
	Jenni 89	angp,cs
	Salvini 88	cs
(1020)	Amos 92	cs
(1800)	Sinervo 92	et
	Abe 91B	col,et
	Abe 91I	et
	Giannetti 91	et
	Wainer 91	et
	White 91	cs
	Amos 90	cs
	Rubinstein 90	cs

inelastic

0.1 – 100	Sedlak 88	cs
6.1	Batyunya 86B	cs
(200)	Salvini 88	cs
(300)	Paoletti 89	angp
(540)	Paoletti 89	angp
(546)	Salvini 88	cs
(630)	Salvini 88	cs
(900)	Salvini 88	cs
(1000)	Paoletti 89	angp
(1800)	White 91	cs
	Amos 90	cs
	Paoletti 89	angp

annihil

0.0664	Agnello 91	cs
0.0689	Agnello 91	cs
0.0714	Agnello 91	cs
0.1 – 100	Sedlak 88	cs
0.2 – 1.5	Amsler 91	cs
0.3 – 0.58	Bruckner 90	cs

mult[π]

2.3 – 9.2	Sedlak 88	pt

mult[$\pi^\pm$]

5.6	Sedlak 88	cs

$e^\pm$ X

(1800)	Maeshima 92	pt
	Sinervo 92	mass
	Fuess 91	mass,pt
	Gold 91	pt
	Kuhlmann 91	pt
	Sansoni 91	pt
	Scarha 90	pt

e^- X + e^+ X

(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult

e^- X

(630)	Fransson 90	pt
	Botner 89	pt
(1800)	Barbarogalti 92	pt

e^+ X

(630)	Fransson 90	pt
	Botner 89	pt

$\mu^\pm$ X

(630)	Ellis 90	pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\,p$

$\mu^{\pm}$ X

	Pauss 89	pt
(1800)	Madaras 92	pt
	Maeshima 92	pt
	Sinervo 92	mass
	Fuess 91	mass,pt
	Gold 91	pt
	Kuhlmann 91	pt
	Laasanen 91	pt

μ^- X

(630)	Albajar 88D	pt
	Albajar 88F	et,pt

μ^+ X

(630)	Albajar 88D	pt
	Albajar 88F	et,pt
(1800)	Skarha 89	pt

(neutrals) X

(630)	Alitti 89	pt
(1800)	Tonelli 89	et
	Wagner 89	et

mult[charged] X

32	Bravina 92	angp,col,p
(53)	Geichgimbel 89	mult
	Tannenbaum 89	ang,et,p
(53 – 900)	Giacomelli 90	cor,mult,p
(200)	Ansorge 89C	mult
	Geichgimbel 89	mult
	Eckart 88	col,cor,mult,p
(300)	Nodulman 89	col,pt
(540)	Tannenbaum 89	ang,et,p
(546)	Geichgimbel 89	mult
	Nodulman 89	col,pt
	Eckart 88	col,cor,mult,p
(630)	Albajar 92	angp,col,p
	Joyce 91	et,mass,p,pt,pt
	Tannenbaum 89	ang,et,p
(640)	Schmitz 91	angp,col,p
(900)	Ansorge 89C	mult
	Geichgimbel 89	mult
	Eckart 88	col,cor,mult,p
(1000)	Nodulman 89	col,pt
(1800)	Rimondi 92B	mult
	Buckleygeer 91	pt
	Nodulman 89	col,pt
	Turkot 88	cor,mult,pt

(chargeds) (neutrals)

22.4	Batyunya 90	cs
(630)	Lipa 91	angp,col,mult
(1800)	Freeman 89	et

mult[charged] (neutrals)

0.3 – 10	Sedlak 88	cs
6.1	Batyunya 86B	cs
32.1	Bogolyubsky 88	p
200	Allday 88	cs,mult
(53)	Geichgimbel 89	p
(200)	Albajar 90B	et,mult,p,pt
	Albajar 89	cor,p
	Geichgimbel 89	p
	Tao 88	mult
(200 – 900)	Bhattacharje 91	mult
(260)	Albajar 89	cor,p
(300)	Lindsey 91	mult,p
(350)	Tao 88	mult
(380)	Albajar 89	cor,p
(500)	Albajar 89	cor,p
(546)	Lindsey 91	mult,p
	Albajar 90B	et,mult,p,pt
	Geichgimbel 89	p
(620)	Albajar 89	cor,p
(630)	Albajar 90	mult,p,pt
	Dibon 90	angp,mult
	Albajar 89	cor,p
	Buschbeck 89	–
	Tao 88	mult
(790)	Albajar 89	cor,p

$\bar{p}\,p$

mult[charged] (neutrals)

(900)	Albajar 90B	et,mult,p,pt
	Albajar 89	cor,p
	Geichgimbel 89	p
	Tao 88	mult
(1000)	Lindsey 91	mult,p
(1800)	Rimondi 92	mult,p
	Lindsey 91	mult,p
	Hubbard 89B	col,et,mass,mult,p,pt
	Alexopoulos 88B	mult,p,pt

mult[charged] mult[neutral]

1.6	Sedlak 88	mult

mult[γ] X

0	Chiba 89	mass
	Chiba 88	–
0.2	Armstrong 89H	mult,p,pt

mult[jet] X

(200 – 900)	Tao 88	mult
(630)	Joyce 91	et,mult
	Flaugher 90	col
(1800)	Flaugher 92	et
	Abe 91I	mass,mult,pt
	Giannetti 91	mult
	Flaugher 90	col
	Nodulman 89	et
	Sinervo 89	et,mass

mult[hadron] X

(1800)	Rimondi 92B	et

mult[π] X

1.5 – 2.1	Sedlak 88	pt

mult[$\pi^{\pm}$] X

(1800)	Alexopoulos 90B	mult,p,pt

mult[π^0] X

0.2	Armstrong 89H	mult,p,pt

mult[$K^{\pm}$] X

(200 – 900)	Pelzer 89	cs,mult,p,pt
(1800)	Alexopoulos 90B	mult,p,pt

mult[K_S] X

(200 – 900)	Pelzer 89	cs,mult,p,pt

mult[$\bar{p}$] X

(1800)	Alexopoulos 90B	mult,p,pt

mult[Λ] X

(200 – 900)	Pelzer 89	cs,mult,p,pt

mult[$\bar{\Lambda}$] X

(200 – 900)	Pelzer 89	cs,mult,p,pt

unspec X

(546)	Albajar 89B	cs
(630)	Albajar 89B	cs
(1800)	Laasanen 91	–

charged 0jet X

(200)	Geichgimbel 89	pt
(350)	Geichgimbel 89	pt
(630)	Geichgimbel 89	pt
(900)	Geichgimbel 89	pt

charged X

32.1	Bravina 89	mult,p
	Bogolyubsky 88C	p,pt
200	Allday 88	pt
(27)	Tannenbaum 89	pt
(53)	Geichgimbel 89	p
	Tannenbaum 89	pt
(53 – 900)	Tannenbaum 89	p
(200)	Albajar 90B	p,pt
	Ansorge 89	angp,mult
	Geichgimbel 89	p
	Jenni 89	p
(540)	Tannenbaum 89	pt
(546)	Albajar 90B	p,pt

$\bar{p}\,p$

charged X

	Albajar 89B	mult,pt
	Geichgimbel 89	p
	Jenni 89	p
	Tao 88	angp,pt
(630)	Joyce 91	p
	Binkley 90	cs,p
	Taylor 90	mult,p,pt
	Abe 89M	angp,p
	Albajar 89B	mult,pt
	Abe 88C	cs,p,pt
(900)	Albajar 90B	p,pt
	Ansorge 89	angp,mult
	Geichgimbel 89	p
	Jenni 89	p
(1800)	Rimondi 92B	mult,pt
	Binkley 90	cs,p
	Abe 89D	angp,cs,p,pt
	Abe 89H	pt
	Abe 89M	angp,p
	Tannenbaum 89	pt
	Tonelli 89	pt
	Abe 88C	cs,p,pt
	Albrow 88	angp,mult,pt
	Alexopoulos 88B	mult,p,pt
	Turkot 88	cor,mult,p,pt

charged$^+$ X

200	Allday 88	pt

charged$^-$ X

32.1	Bogolyubsky 88C	p,pt
200	Allday 88	pt

charged inelastic

0.7373 – 105.6	Sedlak 88	mult

annihil charged

0.7373 – 105.6	Sedlak 88	mult

multicharged X

(1800)	Price 90	cs

jet X

(200 – 900)	Geichgimbel 89	cs
	Albajar 88	pt
	Tao 88	cs,et,pt
(546)	Abe 92I	pt
	Behrends 92	et
	Flaugher 92B	pt
	Jenni 89	et,pt
	Salvini 88	angp,p,pt
	Tao 88	et
(630)	Bethke 91	pt
	Alitti 90E	p,pt
	Flaugher 90	angp,et
	Geer 90	–
	Meier 89	pt
	Pauss 89	pt
	Albrow 88	pt
	Salvini 88	angp,p,pt
	Tao 88	et
(900)	Jenni 89	et,pt
	Salvini 88	angp,p,pt
(1800)	Abe 92H	et
	Abe 92I	pt
	Behrends 92	et
	Flaugher 92	et
	Flaugher 92B	pt
	Harris 92	et
	Madaras 92	et
	Sinervo 92	pt
	Yeh 92	et
	Abe 91F	pt
	Abe 91I	p,pt
	Bethke 91	pt
	Buckleygeer 91	pt
	Giannetti 91	pt
	Plunkett 91	et
	Wainer 91B	col,et
	Dellorso 90	pt
	Dellorso 90B	pt
	Flaugher 90	angp,et
	Geer 90	–
	Hessing 90	et
	Yun 90	et

$\bar{p}\,p$

jet X

	Abe 89	et
	Abe 89C	et
	Abe 89O	mult
	Geer 89	pt
	Jenni 89	et,pt
	Kuhlmann 89	et
	Nodulman 89	et
	Pauss 89	pt
	Tonelli 89	et

hadron X

(630)	Botner 89	pt

hadron$^+$ X

(630)	Fransson 90	pt

hadron$^-$ X

(630)	Fransson 90	pt

charged-hadron X

(630)	Abe 89L	cs,p,pt
(1800)	Gladney 90	et,pt
	Abe 89L	cs,p,pt

longlived X

(1800)	Gold 92	pt

γ X

0	Omori 89	p
0.105	Ziegler 88	p
32.1	Bogolyubsky 88	p
	Bogolyubsky 88E	cs,mult,p,pt
(24.3)	Bernasconi 88	cs,pt
(53)	Raha 91	pt
(100)	Harris 91	pt
(200)	Ansorge 89	angp,mult
	Geichgimbel 89	mult
(540)	Albajar 88B	angp,pt
(546)	Geichgimbel 89	mult
	Salvini 88	angp,p,pt
(630)	Alitti 92B	pt
	Alitti 91	pt
	Flaugher 90	pt
	Albajar 89C	pt
	Pauss 89	pt
	Albajar 88B	angp,pt
	Albrow 88	pt
	Ansari 88B	ang,p,pt
	Salvini 88	angp,p,pt
(900)	Ansorge 89	angp,mult
	Geichgimbel 89	mult
	Salvini 88	angp,p,pt
(1800)	Abe 92B	angp,pt
	Flaugher 92	pt
	Flaugher 92B	pt
	Harris 92	pt
	Madaras 92	pt
	Yeh 92	pt
	Giannetti 91	pt
	Plunkett 91	pt
	Flaugher 90	pt
	Geer 90	pt
	Harris 90	p,pt
	Yun 90	pt

$W^\pm$ 0jet X

(546)	Lindgren 92	const,cs
	Ruhlmann 88	cs
(630)	Lindgren 92	const,cs
	Ruhlmann 88	cs

$W^\pm$ X

1800	Rolandi 92	–
	Abe 90J	–
(536)	Albajar 89B	cs,p,pt
(546)	Bryman 92	–
	Albajar 90C	–
	Pauss 89	cs,pt
	Ansari 88	cs
	Dowell 88	cs,pt
	Tao 88	cs,p,pt
(570)	Dowell 88	cs,pt
(630)	Bryman 92	–
	Rolandi 92	cs
	Alitti 91B	const,cs
	Alitti 91C	–
	Alitti 91E	cs

$\bar{p}\,p$

$W^\pm$ X

	Alitti 91F	cs
	Alitti 91I	–
	Plothowbesch 91	cs
	Albajar 90C	–
	Albajar 90F	cs
	Alitti 90	cs
	Alitti 90B	pt
	Alitti 90C	–
	Denegri 90	cs
	Fayard 90	cs
	Frisch 90	–
	Geer 90	–
	Kurz 90	p,pt
	Tuominiemi 90	–
	Albajar 89B	cs,p,pt
	Albajar 89C	pt
	Meier 89	cs
	Pauss 89	cs,pt
	Ansari 88	cs
	Dowell 88	cs,pt
	Tao 88	cs,p,pt
(1800)	Abe 92C	cs
	Abe 92F	–
	Grassmann 92	p
	Leone 92	–
	Madaras 92	cs
	Sinervo 92	–
	Abe 91	pt
	Abe 91M	cs
	Plothowbesch 91	cs
	Winer 91C	pt
	Abe 90K	–
	Abe 90L	cs
	Fayard 90	cs
	Frisch 90	–
	Geer 90	cs,pt
	Gladney 90	–
	Scarha 90	–
	Tuominiemi 90	–
	Watts 90	pt
	Abe 89Q	cs
	Geer 89	–
	Kamon 89	cs,pt
	Kuhlmann 89	et
	Pauss 89	–
	Smith 89	–
	Albrow 88	cs
(2000)	Gobbi 92	–

W^+ X

(540)	Jenni 89	cs,pt
(546)	Stubenrauch 89	ang,cs,p,pt
	Loverre 88	cs
	Plothowbesch 88	cs
	Salvini 88	cs,p,pt
(630)	Jenni 89	cs,pt
	Stubenrauch 89	ang,cs,p,pt
	Gan 88	–
	Loverre 88	cs
	Mandelli 88	p
	Plothowbesch 88	cs
	Salvini 88	cs,p,pt
(1800)	Abe 91L	pol
	Leone 91	angp
	Winer 91B	angp
	Hauser 90	p,pt
	Leone 90	p
	Abe 89B	cs
	Jenni 89	cs,pt
	Nodulman 89	p,pt

W^- X

(540)	Jenni 89	cs,pt
(546)	Stubenrauch 89	ang,cs,p,pt
	Loverre 88	cs
	Plothowbesch 88	cs
	Salvini 88	cs,p,pt
(630)	Jenni 89	cs,pt
	Stubenrauch 89	ang,cs,p,pt
	Gan 88	–

$\bar{p}\,p$

W^- X

	Loverre 88	cs
	Mandelli 88	p
	Plothowbesch 88	cs
	Salvini 88	cs,p,pt
(1800)	Abe 91L	pol
	Leone 91	angp
	Winer 91B	angp
	Hauser 90	p,pt
	Leone 90	p
	Abe 89B	cs
	Jenni 89	cs,pt
	Nodulman 89	p,pt

Z^0 X

1800	Hurst 90	–
(536)	Albajar 89B	cs,p,pt
(540)	Jenni 89	cs,pt
(546)	Pauss 89	cs,pt
	Stubenrauch 89	cs,pt
	Loverre 88	cs
	Plothowbesch 88	cs
	Salvini 88	cs,p,pt
	Tao 88	cs,p,pt
(630)	Rolandi 92	cs
	Alitti 91C	cs
	Alitti 91E	cs
	Alitti 91F	cs
	Plothowbesch 91	cs
	Akesson 90B	–
	Albajar 90F	cs
	Alitti 90	cs
	Alitti 90B	pt
	Alitti 90C	–
	Contreras 90	–
	Denegri 90	cs
	Fayard 90	cs
	Frisch 90	–
	Geer 90	–
	Albajar 89B	cs,p,pt
	Jenni 89	cs,pt
	Meier 89	cs
	Pauss 89	cs,pt
	Stubenrauch 89	cs,pt
	Gan 88	–
	Loverre 88	cs
	Plothowbesch 88	cs
	Salvini 88	cs,p,pt
	Tao 88	cs,p,pt
(1800)	Abe 92C	cs
	Madaras 92	–
	Abe 91C	–
	Abe 91J	pt
	Abe 90L	cs
	Fayard 90	cs
	Geer 90	cs,pt
	Gonzalezgarc 90	–
	Watts 90	pt
	Abe 89Q	cs
	Abe 89T	–
	Geer 89	–
	Jenni 89	cs,pt
	Kamon 89	cs,pt
	Kuhlmann 89	et
	Nodulman 89	p,pt
	Smith 89	–

Z^0 X + W^- X + W^+ X

(630)	Alitti 90D	cs

$W'^\pm$ X

(630)	Pauss 89	–
(1800)	Gold 92	cs
	Maeshima 92	cs
	Sinervo 92	cs
	Yeh 92	cs
	Abe 91E	cs
	Fuess 91	cs
	Kuhlmann 91	cs
	Contreras 90	–
	Frisch 90	–
	Geer 90	–
	Geer 89	cs

W'^+ X

(546)	Stubenrauch 89	cs
(630)	Stubenrauch 89	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\,p$

W'^{+} X + Z' X + W'^{-} X

(630)	Alitti 90D	cs

W'^{-} X

(546)	Stubenrauch 89	cs
(630)	Stubenrauch 89	cs

Z' X

(546)	Stubenrauch 89	cs
(630)	Pauss 89	–
	Stubenrauch 89	cs
(1800)	Gold 92	cs
	Maeshima 92	cs
	Sinervo 92	–
	Yeh 92	cs
	Abe 91D	–
	Abe 91H	cs
	Fuess 91	cs
	Kuhlmann 91	cs
	Contreras 90	–
	Frisch 90	–
	Geer 90	–
	Geer 89	cs

X axigluon

(546)	Sphicas 88	cs
(630)	Pauss 89	–
	Sphicas 88	cs
(1800)	Incagli 92	cs

q X

(546)	Geichgimbel 89	–

c X

(630)	Ellis 90	cs,pt

b X

(630)	Barbarogalti 92	cs,pt
	Albajar 91	cs,pt
	Ellis 90	cs,pt
	Pauss 89	pt
(1800)	Abe 92	cs
	Abe 92G	pt
	Barbarogalti 92	cs,pt
	Boswell 92	cs
	Fuess 92	cs
	Huffman 92	pt
	Papadimitrio 92	pt
	Yeh 92	cs,pt

t X

(630)	Felcini 91	–
	Akesson 90C	p
	Contreras 90	–
	Ellis 90	cs
	Unal 90	cs
	Felcini 89	–
	Pauss 89	–
(1800)	Geer 89	–
	Sinervo 89	et,mass

$\tilde{t}$ X

(630)	Felcini 89	–

b' X

(630)	Ellis 90	cs
	Pauss 89	–

gluino X

(630)	Dowell 88	–
(1800)	Laasanen 91	–
	Scarha 90	–
	Sinervo 89	et,mass

$\tilde{\ell}$ X

(630)	Dowell 88	–

X $\tilde{q}$

(630)	Dowell 88	–
(1800)	Laasanen 91	–
	Scarha 90	–

monopole X

(540)	Geichgimbel 89	–
(1800)	Bertani 90	cs
	Price 90	cs

π X

(630)	Botner 89	pt

$\pi^{\pm}$ X

8.8	Sedlak 88	p
9.1	Sedlak 88	p

$\bar{p}\,p$

$\pi^{\pm}$ X

200	Yokosawa 92	asym,p
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult
(1800)	Odyniec 91B	p,pt
	Alexopoulos 90B	mult,p,pt
	Turkot 90	pt

π^{+} X

5.55	Sedlak 88	angp
12	Sedlak 88	p
32.1	Bogolyubsky 88	p
	Smirnova 88	mult,p,pt
1078	Sedlak 88	p
(630)	Joyce 91	p

π^{0} X

5.55	Sedlak 88	angp
40	Apokin 88B	angp,asym,p
200	Yokosawa 92	asym,p
	Adams 91B	asym
	Adams 91C	asym,cs
	Adams 91D	asym
	Yokosawa 91	asym
	Yokosawa 90	asym,p,pt
(24.3)	Bernasconi 88	cs,pt
(53)	Raha 91	pt
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(630)	Pare 90	angp,p,pt
	Ansari 88B	p,pt
(900)	Geichgimbel 89	mult
(1800)	Harris 92	cs
	Harris 91	cs

π^{-} X

0.7 – 100	Sedlak 88	cs
5.55	Sedlak 88	angp
5.7	Sedlak 88	angp,pt
12	Sedlak 88	p
32.1	Bogolyubsky 88	p
	Bogolyubsky 88C	p,pt
	Smirnova 88	mult,p,pt
1078	Sedlak 88	p
(630)	Joyce 91	p

π annihil

?	Sedlak 88	mult,p

$\pi^{\pm}$ annihil

8.8	Sedlak 88	p
9.1	Sedlak 88	p
?	Sedlak 88	mult,p

π^{+} annihil

12	Sedlak 88	p
1078	Sedlak 88	p

π^{0} annihil

?	Sedlak 88	mult,p

π^{-} annihil

12	Sedlak 88	p
1078	Sedlak 88	p

π^{0} (π^{0}'s)

?	Sedlak 88	cs

π^{0} mult[$\pi^{\pm}$]

5.6	Sedlak 88	cs

η X

0	Chiba 89	cs
	Adiels 88	p
(24.3)	Bernasconi 88	cs,pt
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(630)	Albajar 88C	–
(900)	Geichgimbel 89	mult
(1800)	Harris 92	cs
	Harris 91	cs

$\rho(770)^{0}$ X

0.7 – 100	Sedlak 88	cs
9.1 – 405	Sedlak 88	p
12	Sedlak 88	amp
22.4	Batyunya 90B	cs,mult,pt
	Sedlak 88	amp

$\bar{p}\,p$

$\rho(770)^{0}$ X

(630)	Albajar 88C	–

$\rho(770)^{0}$ annihil

9.1 – 405	Sedlak 88	p

$\rho(770)^{0}$ mult[$\pi^{\pm}$]

9.1	Sedlak 88	cs,mult

$\omega(783)$ X

22.4	Batyunya 90B	cs,mult,pt
(630)	Albajar 88C	–

$\omega(783)$ mult[$\pi^{\pm}$]

9.1	Sedlak 88	cs,mult

$\eta'(958)$ X

0	Chiba 89	cs
(630)	Albajar 88C	–

$f_2(1270)$ X

0.7 – 100	Sedlak 88	cs
9.1	Sedlak 88	p
22.4	Batyunya 90B	cs,mult,pt

$f_2(1270)$ annihil

9.1	Sedlak 88	p

strange X

32.1	Bogolyubsky 88B	p

$K^{\pm}$ X

(200)	Geichgimbel 89	pt
(200 – 900)	Ansorge 88	cs,mult,pt
(546)	Geichgimbel 89	pt
(900)	Geichgimbel 89	pt
(1800)	Odyniec 91B	p,pt
	Alexopoulos 90B	mult,p,pt
	Turkot 90	pt

K X

0.1 – 7	Sedlak 88	cs

K^{+} X + K^{-} X

(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult

K^{+} X

0	Usher 92	–
1078	Sedlak 88	p
(630)	Joyce 91	p

K^{0} X

32.1	Bogolyubsky 88B	mult

K^{-} X

5.7	Sedlak 88	angp,pt
(630)	Joyce 91	p

K_S X

0.105	Batusov 90D	cs
0.7 – 100	Sedlak 88	cs
1 – 1000	Sedlak 88	cs
1.95 – 4	Tosello 89	cs,mult
9.1 – 405	Sedlak 88	p
32.1	Bogolyubsky 88	p
	Bogolyubsky 87C	cs,p,pt
(200)	Geichgimbel 89	pt
(200 – 900)	Ansorge 88	cs,mult,pt
(546)	Geichgimbel 89	pt
(630)	Taylor 90	mult,p,pt
	Abe 89L	cs,p,pt
(900)	Geichgimbel 89	pt
(1800)	Abe 89L	cs,p,pt

K_S annihil

9.1 – 405	Sedlak 88	p

$K^{*}(892)^{+}$ X + $K^{*}(892)^{-}$ X

32.1	Babintsev 88	p,pt

$K^{*}(892)^{+}$ X

0.7 – 100	Sedlak 88	cs
32.1	Babintsev 88	cs

$K^{*}(892)^{-}$ X

0.7 – 100	Sedlak 88	cs
32.1	Babintsev 88	cs

$\bar{p}\,p$

$K_2^*(1430)^+$ X		
32.1	Babintsev 88	cs
$K_2^*(1430)^-$ X		
32.1	Babintsev 88	cs
$\phi(1020)$ X		
22.4	Batyunya 90B	cs,mult,pt
(630)	Albajar 88C	–
(1800)	Lindsey 91	p,pt
charm X		
(630)	Albajar 88F	cs,pt
$\overline{\text{charm}}$ X		
(630)	Albajar 88F	cs,pt
$J/\psi(1S)$ X		
3 – 7	Armstrong 92E	–
(24.3)	Morel 90	cs,p
	Morel 90B	cs,p
(546)	Tao 88	pt
(630)	Albajar 90G	cs,pt
	Ellis 90	cs,p,pt
	Frisch 90	–
	Liss 90	–
	Nikitas 90	cs,p,pt
	Albajar 88C	–
	Albajar 88D	pt
	Albajar 88E	cs,p,pt
	Tao 88	pt
(1800)	Abe 92G	pt
	Fuess 92	cs,pt
	Papadimitrio 92	cs,pt
	Sansoni 91	–
	Wenzel 91	–
	Frisch 90	–
	Geer 90	–
	Liss 90	–
	Yeh 90	–
$\chi_{c1}(1P)$ X		
(3.524 – 3.59)	Armstrong 92C	cs
$\psi(2S)$ X		
3 – 7	Armstrong 92E	–
(630)	Albajar 90G	cs
	Frisch 90	–
	Nikitas 90	cs
(1800)	Abe 92G	pt
	Fuess 92	cs,pt
	Papadimitrio 92	cs,pt
	Frisch 90	–
	Yeh 90	–
$\psi(3770)$ X		
(1800)	Wenzel 91	–
χ_c(unspec) X		
(630)	Albajar 88E	cs,p,pt
(1800)	Boswell 92	cs
	Frisch 90	–
bottom X		
(630)	Barbarogalti 92	cs,pt
	Albajar 91	cs,pt
	Albajar 88E	cs,p,pt
	Albajar 88F	cs,pt
(1800)	Sansoni 91	cs
	Wenzel 91	cs,pt
	Yeh 90	–
$\overline{\text{bottom}}$ X		
(630)	Albajar 88E	cs,p,pt
	Albajar 88F	cs,pt
$B^\pm$ X		
(1800)	Wenzel 91	–
B X		
(630)	Rossi 91	pt
	Nikitas 90	cs,pt
(1800)	Lipton 92	cs,pt
B^+ X		
(1800)	Barbarogalti 92	cs,pt
	Yeh 92	cs
B^0 X		
(630)	Barbarogalti 92	–
	Albajar 91B	–

$\bar{p}\,p$

B^0 X		
	Ellis 90	–
	Pauss 89	–
(1800)	Vejcik 92	cs
	Wenzel 91	–
B^- X		
(1800)	Abe 92	cs
	Yeh 92	cs
B(unspec) X		
(630)	Albajar 91B	–
$\Upsilon(1S)$ X		
(630)	Liss 90	–
(1800)	Frisch 90	–
	Geer 90	–
	Liss 90	–
	Yeh 90	–
$\Upsilon(2S)$ X		
(1800)	Frisch 90	–
	Geer 90	–
	Yeh 90	–
$\Upsilon(3S)$ X		
(1800)	Frisch 90	–
	Geer 90	–
	Yeh 90	–
Υ(unspec) X		
(546)	Tao 88	cs
(630)	Ellis 90	cs
	Tao 88	cs
(1800)	Madaras 92	–
top X		
(540)	Jenni 89	–
(630)	Scarha 90	–
	Jenni 89	–
	Albajar 88G	cs
	Dowell 88	–
(1800)	Scarha 90	–
	Jenni 89	–
$\overline{\text{top}}$ X		
(540)	Jenni 89	–
(630)	Jenni 89	–
	Albajar 88G	cs
	Dowell 88	–
(1800)	Jenni 89	–
baryon X		
32.1	Bogolyubsky 88B	p
p X + $\bar{p}$ X		
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult
(1800)	Alexopoulos 92	cs
p X		
24	Batyunya 89	cs,p
32.1	Bogolyubsky 88	p
(630)	Joyce 91	p
	Bonino 88	angp,p
DD < X > F		
(200)	Geichgimbel 89	cs,mass
(900)	Geichgimbel 89	cs,mass
(1800)	Amos 90	cs
	Rubinstein 90	cs
n X + $\bar{n}$ X		
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult
$\bar{n}$ X		
0.415	Mutchler 88	–
DD < X > $\bar{p}$		
32.1	Bogolyubsky 89B	cs
	Bogolyubsky 89D	angp
(546)	Geichgimbel 89	cs,mass
(1800)	Amos 90	cs
	Rubinstein 90	cs
$\bar{p}$ X		
0.8	Martin 88	angp
1.1	Martin 88	angp
(630)	Joyce 91	p

$\bar{p}\,p$

$\bar{p}$ X		
(1800)	Amos 92B	angp,cs,mass,p
	Odyniec 91B	p,pt
	Alexopoulos 90B	mult,p,pt
	Turkot 90	pt
Λ X + $\bar{\Lambda}$ X + Σ^0 X + $\bar{\Sigma}^0$ X		
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult
(1800)	Alexopoulos 92	cs
Λ X + $\bar{\Lambda}$ X		
(200)	Geichgimbel 89	pt
(546)	Geichgimbel 89	pt
(900)	Geichgimbel 89	pt
(1800)	Alexopoulos 92	pt
	Turkot 90	pt
	Turkot 88	pt
Λ X		
1.95 – 4	Tosello 89	cs,mult
32.1	Bogolyubsky 88	p
	Bogolyubsky 87C	cs,p,pt
(31 – 62)	Panagiotou 89	p,pol,pt
(200)	Ansorge 89B	cs,p,pt
(900)	Ansorge 89B	cs,p,pt
(1800)	Alexopoulos 92	pt
	Odyniec 91B	p,pt
	Banerjee 89	p,pt
	Turkot 88	pt
$\bar{\Lambda}$ X		
1.95 – 4	Tosello 89	cs,mult
32.1	Bogolyubsky 88B	mult
176	Yokosawa 90B	pol
(31 – 62)	Panagiotou 89	p,pol,pt
(1800)	Alexopoulos 92	pt
	Banerjee 89	p,pt
	Turkot 88	pt
Σ^+ X + Σ^- X + $\bar{\Sigma}^+$ X + $\bar{\Sigma}^-$ X		
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult
Ξ^0 X + Ξ^- X + $\bar{\Xi}^+$ X + $\bar{\Xi}^0$ X		
(1800)	Alexopoulos 92	cs
Ξ^0 X + $\bar{\Xi}^0$ X		
(200)	Geichgimbel 89	mult
(200 – 900)	Pelzer 89	cs,pt
(546)	Geichgimbel 89	mult
(900)	Geichgimbel 89	mult
Ξ^- X		
(200)	Ansorge 89B	cs,p,pt
(900)	Ansorge 89B	cs,p,pt
Ξ^- X + $\bar{\Xi}^+$ X		
(200)	Geichgimbel 89	mult
(546)	Geichgimbel 89	pt
(900)	Geichgimbel 89	mult
(1800)	Alexopoulos 92	pt
Λ_b X		
(1800)	Abe 92E	–
	Gauthier 92	cs
	Maeshima 92	cs
ℓ jet X		
(546)	Salvini 88	angp,mass,p,pt
(630)	Salvini 88	angp,mass,p,pt
(900)	Salvini 88	angp,mass,p,pt
$2\ell^-$ X		
(546)	Franzini 89	cs,p
	Golutvin 89	cs,p
(630)	Franzini 89	cs,p
	Golutvin 89	cs,p
$\ell^+\,\ell^-$ X		
(546)	Franzini 89	cs,p
	Golutvin 89	cs,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\,p$

$\ell^+\,\ell^-$ X

(630)	Franzini 89	cs,p
	Golutvin 89	cs,p

$2\ell^+$ X

(546)	Franzini 89	cs,p
	Golutvin 89	cs,p
(630)	Franzini 89	cs,p
	Golutvin 89	cs,p

$e^\pm$ neutral X

(630)	Unal 91	et,mass

$e^\pm$ jet X

(630)	Unal 90	mass
(1800)	Abe 91I	cs

$e^\pm\,\nu$ X

(1800)	Gold 92	pt
	Leone 92	pt
(2000)	Gobbi 92	pt

$2e^\pm$ X

(1800)	Kuhlmann 91	–

$2e^-$ X + $2e^+$ X

(1800)	Song 91	–

$2e^-$ X

(1800)	Yeh 92	cs
	Abe 91N	cs,pt

$e^+\,\nu_e$ X

(1800)	Abe 89B	et,mass

$e^-\,e^+$ X

(3 – 3.6)	Ray 92	mass
315	Freudenreich 90	mass
(630)	Alitti 91H	cs,mass
	Unal 91	et,mass
	Scarha 90	pt
(1800)	Barbarogalti 92	cs,pt
	Gold 92	mass
	Madaras 92	ang,et
	Maeshima 92	mass
	Sinervo 92	mass
	Yeh 92	cs
	Abe 91D	mass
	Abe 91G	–
	Abe 91K	pt
	Abe 91N	cs,pt
	Barbarogalti 91	ang,et
	Campagnari 91	ang,et
	Fuess 91	mass,pt
	Kuhlmann 91	pt
	Liss 91	pt
	Song 91	–
	Geer 90	mass
	Scarha 90	pt
	Sliwa 90	ang,p,pt
	Yeh 90	ang,mass,p,pt

$e^-\,\bar{\nu}_e$ X

(1800)	Abe 89B	et,mass

$2e^+$ X

(1800)	Barbarogalti 92	cs,pt
	Yeh 92	cs
	Abe 91N	cs,pt

$\mu^\pm$ mult[jet] X

(630)	Ellis 90	mult

μ^+ jet X

(1800)	Skarha 89	pt

$\mu^\pm\,\nu$ X

(1800)	Gold 92	pt
	Leone 92	pt

$\mu^\pm\,e^\pm$ X

(1800)	Barbarogalti 91	pt
	Campagnari 91	ang,et
	Kuhlmann 91	pt
	Sansoni 91	–

$\mu^-\,e^-$ X + $\mu^+\,e^+$ X

(1800)	Barbarogalti 92	cs,pt
	Abe 91N	cs,pt
	Song 91	–
	Wenzel 91	mass

$\bar{p}\,p$

$\mu^-\,e^-$ X

(1800)	Yeh 92	cs

$\mu^-\,e^+$ X + $\mu^+\,e^-$ X

(1800)	Barbarogalti 92	cs,pt
	Madaras 92	ang,et
	Abe 91N	cs,pt
	Song 91	–
	Wenzel 91	mass

$\mu^-\,e^+$ X

(1800)	Barbarogalti 92	ang,p,pt
	Yeh 92	cs
	Abe 91G	–
	Abe 91K	pt
	Liss 91	pt
	Abe 90G	pt
	Barbarogalti 90	pt
	Sliwa 90	ang,p,pt
	Yeh 90	ang,mass,p,pt

$\mu^+\,e^-$ X

(1800)	Barbarogalti 92	ang,p,pt
	Yeh 92	cs
	Abe 91G	–
	Abe 91K	pt
	Liss 91	pt
	Abe 90G	pt
	Barbarogalti 90	pt
	Sliwa 90	ang,p,pt
	Yeh 90	ang,mass,p,pt

$\mu^+\,e^+$ X

(1800)	Yeh 92	cs

$\mu^\pm\,\nu_\mu$ X

(200 – 900)	Ansorge 88	mass

$2\mu^\pm$ X

(1800)	Kuhlmann 91	–

$2\mu^-$ X

(540)	Kroha 90	ang,mass,pt
(546)	Tao 88	cs
(630)	Barbarogalti 92	pt
	Albajar 91C	pt
	Ellis 90	cs
	Kroha 90	ang,mass,pt
	Tao 88	cs
(1800)	Barbarogalti 92	cs,pt
	Abe 91N	cs,pt

$\mu^-\,\mu^+$ X

150	Freudenreich 90	mass,p
(540)	Kroha 90	ang,mass,pt
(546)	Tao 88	ang,cs,pt
(630)	Barbarogalti 92	pt
	Albajar 91C	pt
	Ellis 90	ang
	Kroha 90	ang,mass,pt
	Liss 90	mass,pt
	Nikitas 90	mass,p,pt
	Pauss 89	pt
	Albajar 88C	–
	Albajar 88D	pt
	Albajar 88E	mass,p,pt
	Albajar 88F	et,pt
	Albajar 88G	cor,et,pt
	Tao 88	ang,cs,pt
(1800)	Abe 92	mass
	Barbarogalti 92	cs,pt
	Gold 92	mass
	Maeshima 92	mass
	Sinervo 92	mass
	Abe 91G	–
	Abe 91K	pt
	Abe 91N	cs,pt
	Barbarogalti 91	ang,et
	Campagnari 91	ang,et
	Fuess 91	mass,pt
	Liss 91	pt
	Wenzel 91	mass
	Liss 90	mass,pt
	Sliwa 90	ang,p,pt
	Yeh 90	ang,mass,p,pt

$\bar{p}\,p$

$2\mu^+$ X

(540)	Kroha 90	ang,mass,pt
(546)	Tao 88	cs
(630)	Barbarogalti 92	pt
	Albajar 91C	pt
	Ellis 90	cs
	Kroha 90	ang,mass,pt
	Tao 88	cs
(1800)	Barbarogalti 92	cs,pt
	Abe 91N	cs,pt

annihil mult[charged-meson] (neutrals)

0.0651 – 0.0725	Agnello 91	mult

charged$^-$ mult[charged] (neutrals)

32.1	Bogolyubsky 88	p

2charged X

200	Derado 88	a-dep,cor,mult,p
(53)	Kvatadze 88	angp,cor,p
(63)	Kvatadze 88	angp,cor,p
(200)	Geichgimbel 89	cor,p
	Asman 88	cor,mult,p
	Eckart 88	cor
(456)	Asman 88	cor,mult,p
(546)	Geichgimbel 89	cor,mult
	Eckart 88	cor
(630)	Binkley 90	cor
(900)	Geichgimbel 89	cor,p
	Asman 88	cor,mult,p
	Eckart 88	cor
(1800)	Binkley 90	cor

2charged$^+$ X

(200)	Albajar 89	cor,p
(260)	Albajar 89	cor,p
(380)	Albajar 89	cor,p
(500)	Albajar 89	cor,p
(620)	Albajar 89	cor,p
(630)	Albajar 89	cor,p
(790)	Albajar 89	cor,p
(900)	Albajar 89	cor,p

charged$^+$ charged$^-$ X

(1800)	Abe 89H	pt

2charged$^-$ X

(200)	Albajar 89	cor,p
(260)	Albajar 89	cor,p
(380)	Albajar 89	cor,p
(500)	Albajar 89	cor,p
(620)	Albajar 89	cor,p
(630)	Albajar 89	cor,p
(790)	Albajar 89	cor,p
(900)	Albajar 89	cor,p

charged jet X

(200)	Geichgimbel 89	pt
(350)	Geichgimbel 89	pt
(630)	Geichgimbel 89	pt
(900)	Geichgimbel 89	pt

2jet X

(200 – 900)	Albajar 88	ang,et
(540)	Tao 88	ang
(546)	Salvini 88	angp,mass,p,pt
	Sphicas 88	angp,mass,p,pt
	Tao 88	et
(630)	Alitti 90D	angp,mass
	Contreras 90	et
	Fayard 90	mass
	Flaugher 90	mass,p
	Frisch 90	mass
	Geer 90	mass
	Kurz 90	mass
	Jenni 89	angp
	Meier 89	angp,col,mass
	Albajar 88H	angp,mass
	Salvini 88	angp,mass,p,pt
	Sphicas 88	angp,mass,p,pt

$\bar{p}\,p$

2jet X

	Tao 88	ang
(900)	Salvini 88	angp,mass,p,pt
(1800)	Abe 92D	ang,mass
	Flaugher 92	mass
	Flaugher 92B	ang,mass
	Harris 92	ang,mass
	Incagli 92	mass
	Sinervo 92	ang,mass
	Buckleygeer 91	mass
	Flauger 91	ang,mass
	Giannetti 91	mass
	Wainer 91	mass
	Abe 90B	–
	Contreras 90	et
	Dellorso 90	mass
	Dellorso 90B	mass
	Flaugher 90	mass,p
	Frisch 90	mass
	Geer 90	mass
	Giannetti 90	mass
	Yun 90	mass
	Abe 89D	angp,cs,p,pt
	Abe 89N	angp
	Abe 89S	mass
	Geer 89	pt
	Hubbard 89B	et,p,pt
	Nodulman 89	ang,angp,p
	Plunkett 89	angp
	Tonelli 89	ang
?	Pauss 89	ang

hadron charged X

32.1	Bogolyubsky 88G	angp,mult,p,pt

2hadron (hadrons)

(200 – 900)	Albajar 88	et
(546)	Sphicas 88	angp,col,pt
(630)	Rimondi 89	cor,p
	Sphicas 88	angp,col,pt
(1800)	Rimondi 89	cor,p
	Albrow 88	et

longlived$^+$ longlived$^-$ X

(1800)	Abe 92J	–

γ mult[charged] X

(1800)	Turkot 90	cor,mult,pt

γ mult[charged] (neutrals)

32.1	Bogolyubsky 88E	cs,mult
(200)	Ansorge 89	cor,mult
(900)	Ansorge 89	cor,mult

γ charged X

(200)	Ansorge 89	cor
(900)	Ansorge 89	cor

γ jet X

(630)	Alitti 92C	angp,p
	Ansari 88B	ang,p,pt
(1800)	Flaugher 92	ang
	Flaugher 92B	ang
	Grassmann 92	ang
	Harris 92	ang
	Abe 91I	cs
	Harris 91	ang

2γ X

(100)	Harris 91	pt
(540)	Albajar 88B	angp,pt
(630)	Alitti 92B	pt
	Pare 90	mass
	Albajar 88B	angp,pt
	Albrow 88	pt
	Ansari 88B	ang,p,pt
(1800)	Abe 92B	mass
	Abe 92K	ang,pt
	Flaugher 92B	pt
	Harris 92	mass
	Harris 92B	pt
	Laasanen 91	pt

$W^\pm$ mult[charged] X

(1800)	Rimondi 92B	mult

$\bar{p}\,p$

$W^\pm$ mult[jet] X

(546)	Albajar 89B	mult
	Tao 88	et,mult
(630)	Albajar 89B	mult
	Tao 88	et,mult
(1800)	Flaugher 92B	mult
	Madaras 92	mult
	Rodrigo 92	mult
	Watts 90	mult
	Geer 89	mult
	Kamon 89	mult

W^+ mult[jet] X

(546)	Stubenrauch 89	mult
(630)	Stubenrauch 89	mult

W^- mult[jet] X

(546)	Stubenrauch 89	mult
(630)	Stubenrauch 89	mult

$W^\pm$ mult[hadron] X

(1800)	Rimondi 92B	et

$W^\pm$ charged X

(546)	Albajar 89B	mult,pt
(630)	Albajar 89B	mult,pt
(1800)	Rimondi 92B	mult,pt

$W^\pm$ jet X

(546)	Lindgren 92	const,cs
	Albajar 89B	ang,angp,et
	Ansari 88	cs
	Plothowbesch 88	cs
	Ruhlmann 88	cs
(630)	Lindgren 92	const,cs
	Alitti 91B	const,cs
	Denegri 90	–
	Albajar 89B	ang,angp,et
	Pauss 89	–
	Ansari 88	cs
	Plothowbesch 88	cs
	Ruhlmann 88	cs
(1800)	Watts 90	pt
	Geer 89	mass,pt
	Kamon 89	pt

W^+ jet X

(546)	Stubenrauch 89	ang
(630)	Stubenrauch 89	ang

W^- jet X

(546)	Stubenrauch 89	ang
(630)	Stubenrauch 89	ang

$W^\pm$ γ X

(630)	Alitti 91J	const,cs

Z^0 mult[charged] X

(1800)	Rimondi 92B	mult

Z^0 mult[jet] X

(546)	Albajar 89B	mult
	Stubenrauch 89	mult
	Tao 88	et,mult
(630)	Albajar 89B	mult
	Stubenrauch 89	mult
	Tao 88	et,mult
(1800)	Watts 90	mult
	Kamon 89	mult

Z^0 mult[hadron] X

(1800)	Rimondi 92B	et

Z^0 charged X

(1800)	Rimondi 92B	mult,pt

Z^0 jet X

(546)	Tao 88	pt
(630)	Denegri 90	–
	Tao 88	pt
(1800)	Markeloff 92	cs

$W^\pm$ higgs X

(1800)	Abe 89R	–

W^+ higgs X

(1800)	Geer 89	pt

$\bar{p}\,p$

W^- higgs X

(1800)	Geer 89	pt

Z^0 higgs X

(1800)	Abe 89R	–
	Geer 89	pt

Z^0 higgs X + $W^\pm$ higgs X

(1800)	Geer 90	cs

heavy-lepton$^-$ heavy-lepton$^+$ X

(630)	Dowell 88	–

$q\,\bar{q}$ X

(1800)	Abe 92J	–

$\bar{c}\,c$ X

(630)	Ellis 90	cs
	Fransson 90	cs
	Botner 89	cs
	Pauss 89	cs

$\bar{b}\,b$ X

(630)	Ellis 90	cs
	Frisch 90	cs
	Pauss 89	cs
(1800)	Frisch 90	–

$t\,\bar{b}$ X

(630)	Alitti 92	–
	Barbarogalti 92	cs
	Albajar 90E	cs
	Albajar 90H	–
	Frisch 90	–
	Barbarogalti 89	–
(1800)	Barbarogalti 89	–

$\bar{t}\,b$ X

(630)	Frisch 90	–

$\bar{t}\,t$ X

(630)	Alitti 92	–
	Albajar 90E	cs
	Albajar 90H	–
	Frisch 90	–
	Tuominiemi 90	–
	Barbarogalti 89	–
(1800)	Madaras 92	–
	Yeh 92	cs
	Abe 91G	cs
	Abe 91K	–
	Barbarogalti 91	cs
	Campagnari 91	cs
	Contreras 91	cs
	Liss 91	cs
	Sliwa 91	cs
	Abe 90G	cs
	Abe 90I	cs
	Barbarogalti 90	cs
	Contreras 90	–
	Frisch 90	–
	Sliwa 90	–
	Tuominiemi 90	–
	Yeh 90	cs
	Abe 89G	cs
	Barbarogalti 89	–
	Pauss 89	–
	Tonelli 89	–

$b'\,\bar{t}$ X

(630)	Tuominiemi 90	–

$\bar{b}'\,t$ X

(630)	Tuominiemi 90	–

$\bar{b}'\,b'$ X

(630)	Tuominiemi 90	–

2gluino X

(546)	Plothowbesch 88	cs
(630)	Contreras 90	–
	Alitti 89	–
	Pauss 89	–
	Plothowbesch 88	cs
(1800)	Contreras 90	–
	Pauss 89	–

2$\tilde{e}$ X

(630)	Scarha 90	–

gluino X $\tilde{q}$

(546)	Plothowbesch 88	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\,p$

gluino X $\tilde{q}$
(630) Contreras 90 –
Alitti 89 –
Pauss 89 –
Plothowbesch 88 cs
(1800) Contreras 90 –
Pauss 89 –

X 2$\tilde{q}$
(546) Plothowbesch 88 cs
(630) Plothowbesch 88 cs

X $\bar{\tilde{q}}$ $\tilde{q}$
(630) Contreras 90 –
Alitti 89 –
Pauss 89 –
(1800) Contreras 90 –
Pauss 89 –

2lepton-quark X
(630) Alitti 91D –
(1800) Sinervo 92 –

lepton-quark lepton-quark X
(1800) Moulding 92 cs

$\pi^{\pm}$ mult[charged] X
(1800) Turkot 90 cor,mult,pt

π^{+} mult[charged] X
22.4 Batyunya 90 p

π^{+} mult[charged] (neutrals)
32.1 Bogolyubsky 88 p

π^{0} mult[charged] (neutrals)
4.6 Sedlak 88 mult

2π X
22.4 Sedlak 88 p

2$\pi^{\pm}$ X
(630) Lipa 91 angp,cor

2π^{+} X
(200) Albajar 89 cor,p
(260) Albajar 89 cor,p
(380) Albajar 89 cor,p
(500) Albajar 89 cor,p
(620) Albajar 89 cor,p
(630) Albajar 89 cor,p
(790) Albajar 89 cor,p
(900) Albajar 89 cor,p

2π^{+} X + 2π^{-} X
(53) Giacomelli 90 cor,pt
(630) Lipa 91 angp,cor
(1800) Lindsey 91 angp,cor,p,pt

π^{+} π^{0} X
(200 – 900) Ansorge 88 mass

π^{+} π^{-} X
0 Adamo 92B mass
Gastaldi 91 –
0.4 – 0.67 Fukuhisa 92 mass
(53) Giacomelli 90 cor,pt
(200 – 900) Ansorge 88 mass
(630) Lipa 91 angp,cor
Abe 89L mass
(1800) Abe 89L mass

π^{0} π^{-} X
(200 – 900) Ansorge 88 mass

2π^{-} X
(200) Albajar 89 cor,p
(260) Albajar 89 cor,p
(380) Albajar 89 cor,p
(500) Albajar 89 cor,p
(620) Albajar 89 cor,p
(630) Albajar 89 cor,p
(790) Albajar 89 cor,p
(900) Albajar 89 cor,p

2π^{+} annihil
101 Sedlak 88 p

π^{+} π^{-} annihil
12 Sedlak 88 p

$\bar{p}\,p$

$\rho(770)^{0}$ mult[charged] (neutrals)
22.4 Batyunya 90B cs,mult,pt

$\rho(770)^{0}$ π^{0} mult[$\pi^{\pm}$]
9.1 Sedlak 88 cs,mult

$\omega(783)$ mult[charged] (neutrals)
22.4 Batyunya 90B cs,mult,pt

$f_2(1270)$ mult[charged] (neutrals)
22.4 Batyunya 90B cs,mult,pt

$K^{\pm}$ mult[charged] X
(1800) Turkot 90 cor,mult,pt

K_S mult[charged] (neutrals)
32.1 Bogolyubsky 87C cs,mult,p

K^{+} π^{-} X
0.4 – 0.67 Fukuhisa 92 mass

K^{-} π^{+} X
0.4 – 0.67 Fukuhisa 92 mass

K_S π^{+} X
32.1 Babintsev 88 mass

K_S π^{-} X
32.1 Babintsev 88 mass

K^{+} K^{-} X
0 Gastaldi 91 –
0.4 – 0.67 Fukuhisa 92 mass

2K_S X
32.1 Bogolyubsky 87C cs,p,pt

$K^{*}(892)^{\pm}$ mult[charged] (neutrals) +
$K^{*}(892)^{-}$ mult[charged] (neutrals)
32.1 Babintsev 88 cs

$K^{*}(892)^{+}$ K_S X + $K^{*}(892)^{-}$ K_S X
32.1 Babintsev 88 cs

$\phi(1020)$ mult[charged] (neutrals)
(1800) Lindsey 91 mult,pt

charm $\overline{\text{charm}}$ X
(630) Albajar 88C cs,pt

$D^{*}(2010)^{\pm}$ jet X
(546) Ellis 90 –

$D^{*}(2010)^{+}$ jet X
(630) Albajar 90D mult
(1800) Abe 89O mult

$D^{*}(2010)^{-}$ jet X
(630) Albajar 90D mult
(1800) Abe 89O mult

$J/\psi(1S)$ mult[hadron] X
(630) Albajar 88E col,p,pt

$J/\psi(1S)$ hadron X
(630) Albajar 90G ang

bottom $\overline{\text{bottom}}$ X
(540) Kroha 90 –
(630) Albajar 91C –
Kroha 90 –
Albajar 88C cs,pt
Albajar 88D cs,p,pt
Dowell 88 cs

B $\bar{B}$ X
(630) Rossi 91 cs

B^{0} $\bar{B}^{0}$ X
(546) Franzini 89 cs,p
Golutvin 89 cs,p
(630) Barbarogalti 92 –
Franzini 89 cs,p
Golutvin 89 cs,p
Dowell 88 cs
(1800) Barbarogalti 92 –
Abe 91N –

B(unspec) $\bar{B}$(unspec) X
(546) Tao 88 cs

$\bar{p}\,p$

B(unspec) $\bar{B}$(unspec) X
(630) Tao 88 cs

B_S $\bar{B}_S$ X
(546) Franzini 89 cs,p
Golutvin 89 cs,p
(630) Barbarogalti 92 –
Franzini 89 cs,p
Golutvin 89 cs,p

baryonium γ (γ's)
0 May 89 p

p mult[charged] X
22.4 Batyunya 90 p

p mult[charged] X +
$\bar{p}$ mult[charged] X
(1800) Alexopoulos 92 cor,mult,pt

$\bar{p}$ mult[charged] X
(1800) Turkot 90 cor,mult,pt

p mult[charged] (neutrals)
24 Batyunya 89 cs,p
(630) Bonino 88 angp,et,p
(1800) Lindsey 91 mult,pt

$\bar{p}$ mult[charged] (neutrals)
32.1 Bogolyubsky 89B angp,p
(1800) Lindsey 91 mult,pt

DD < charged X > p
(200) Geichgimbel 89 mass,mult
(900) Geichgimbel 89 p

p charged^{-} X
32.1 Bogolyubsky 88 p

DD < charged X > $\bar{p}$
(546) Geichgimbel 89 mass,mult

$\bar{p}$ charged^{+} (neutrals)
32.1 Bogolyubsky 89B mult,p

DD < jet X > p
(630) Bonino 88 angp,cs,mass,p

DD < γ X > $\bar{p}$
32.1 Bogolyubsky 89D angp

p π^{+} X
32.1 Bogolyubsky 88 p

p π^{0} X
32.1 Bogolyubsky 88 p

p π^{-} X
(200) Ansorge 89B cs
(900) Ansorge 89B cs
(1800) Alexopoulos 92 mass
Turkot 88 mass

$\bar{p}$ π^{+} X
(1800) Alexopoulos 92 mass
Turkot 88 mass

DD < π^{+} X > $\bar{p}$
32.1 Bogolyubsky 89D angp

DD < π^{-} X > $\bar{p}$
32.1 Bogolyubsky 89D angp

p K_S X
32.1 Bogolyubsky 88 p

DD < K^{0} X > $\bar{p}$
32.1 Bogolyubsky 89D angp

DD < p X > $\bar{p}$
32.1 Bogolyubsky 89D angp

DD < π^{+} X > $\bar{\Delta}(1232\,P_{33})^{--}$
32.1 Bogolyubsky 89D angp

DD < π^{-} X > $\bar{\Delta}(1232\,P_{33})^{--}$
32.1 Bogolyubsky 89D angp

DD < p X > $\bar{\Delta}(1232\,P_{33})^{--}$
32.1 Bogolyubsky 89D angp

$\bar{p}\,p$

Λ mult[charged] X +
$\bar{\Lambda}$ mult[charged] X
(1800) Alexopoulos 92 cor,mult,pt
Turkot 90 cor,mult,pt
Turkot 88 cor,mult,pt

Λ mult[charged] X
(1800) Turkot 88 cor,mult,pt

$\bar{\Lambda}$ mult[charged] X
(1800) Turkot 88 cor,mult,pt

Λ mult[charged] (neutrals) +
$\bar{\Lambda}$ mult[charged] (neutrals)
(1800) Lindsey 91 mult,pt

Λ mult[charged] (neutrals)
(1800) Banerjee 89 p,pt

$\bar{\Lambda}$ mult[charged] (neutrals)
(1800) Banerjee 89 p,pt

Λ charged$^-$ X
32.1 Bogolyubsky 88 p

$\Lambda\ \pi^+$ X
32.1 Bogolyubsky 88 p

$\Lambda\ \pi^0$ X
32.1 Bogolyubsky 88 p

$\bar{\Lambda}\ \pi^+$ X
32.1 Bogolyubsky 88 mult,p

$\bar{\Lambda}\ \pi^-$ X
32.1 Bogolyubsky 88 mult,p

$\Lambda\ K_S$ X
32.1 Bogolyubsky 88 p
Bogolyubsky 87C cs,p,pt

$\Lambda\ K^*(892)^+$ X + $\bar{\Lambda}\ K^*(892)^-$ X
32.1 Babintsev 88 cs

$\Lambda\ J/\psi(1S)$ X
(1800) Abe 92E mass
Gauthier 92 mass

DD < Λ X > $\bar{p}$
32.1 Bogolyubsky 89D angp

$p\ \bar{\Lambda}$ X
32.1 Bogolyubsky 88 p

2Λ X
32.1 Bogolyubsky 87C cs,p,pt

$\Lambda\ \bar{\Lambda}$ X
32.1 Bogolyubsky 88 p
Bogolyubsky 87C cs,p,pt

2$\bar{\Lambda}$ X
32.1 Bogolyubsky 87C cs,p,pt

$\Lambda_b\ B^+$ X
(630) Gauthier 92 cs
Albajar 91D cs

$\Lambda_b\ B^0$ X
(630) Gauthier 92 cs
Albajar 91D cs

0$e^\pm$ 0$\mu^\pm$ neutral 2jet 0jet X
(1800) Beretvas 90 et

e^+ (jets) jet X
(630) Barbarogalti 92 pt

e^- (jets) jet X
(630) Albajar 88C cor,et,pt

e^+ (jets) jet X
(630) Albajar 88C cor,et,pt

$e^\pm$ 2jet X
(1800) Moulding 92 angp,p

e^- 2jet X
(1800) Kuhlmann 91 –

$\bar{p}\,p$

$e^\pm$ (jets) 2jet
(1800) Sinervo 89 et,mass

μ^- (jets) jet X
(630) Albajar 88F et,pt
Albajar 88G cor,et,pt

μ^+ (jets) jet X
(630) Albajar 88F et,pt
Albajar 88G cor,et,pt

$\mu^\pm$ 2jet X
(630) Ellis 90 ang,et,pt

$\mu^-\ \mu^+$ (jets) jet
(630) Albajar 88C mass,pt

$K^-\ \mu^-\ \mu^+$ X
(1800) Abe 92 mass

2charged (chargeds) (neutrals)
22.4 Boos 90 cor,p
32 Boos 90 cor,p

mult[p] 2charged X
200 Derado 88 a-dep,cor,mult,p

(jets) 2jet X
(630) Unal 90 pt
(1800) Gold 92 pt
Kuhlmann 91 pt
Laasanen 91 pt
Geer 90 et
Scarha 90 pt
Yeh 90 et

neutral 2jet X
(1800) Beretvas 90 et

3jet X
(540) Tao 88 ang
(546) Sphicas 88 mass,p
(630) Sphicas 88 mass,p
Tao 88 ang
(1800) Flaugher 92 mass,p
Harris 92 ang
Madaras 92 et
Abe 91O ang,angp,mass,p
Buckleygeer 91 ang
Giannetti 91 ang,p
Wainer 91 ang,p
Frisch 90 mass
Geer 90 p
Yun 90 p
Plunkett 89 p

γ 2jet X
(1800) Abe 91I cs

$W^\pm$ 2jet X
(546) Ruhlmann 88 cs
(630) Ruhlmann 88 cs
(1800) Leone 92 –
Watts 90 pt
Geer 89 mass,pt
Kamon 89 pt

W^+ 2jet X
(546) Sphicas 88 mass,pt
(630) Sphicas 88 mass,pt

W^- 2jet X
(546) Sphicas 88 mass,pt
(630) Sphicas 88 mass,pt

Z^0 2jet X
(1800) Abe 91I cs

π^0 mult[charged] neutral (neutrals)
32.1 Bogolyubsky 88 p

2π^+ mult[charged] X +
2π^- mult[charged] X
(1800) Turkot 90 cor,mult,pt

3π^+ X + 3π^- X
(630) Lipa 91 angp,cor

$\bar{p}\,p$

2$\pi^+\ \pi^-$ X
(200 – 900) Ansorge 88 mass

π^+ 2π^- X
(200 – 900) Ansorge 88 mass

$\pi^+\ \pi^0\ \pi^-$ (π^0's)
? Sedlak 88 cs

$\rho(770)^0\ \pi^+\ \pi^-$ (neutrals)
5.7 Sedlak 88 amp

K_S mult[charged] neutral (neutrals)
32.1 Bogolyubsky 88 p

$K_S\ \pi^+$ mult[charged] (neutrals)
32.1 Babintsev 88 mass

$K_S\ \pi^-$ mult[charged] (neutrals)
32.1 Babintsev 88 mass

2K_S mult[charged] (neutrals)
32.1 Bogolyubsky 87C cs,mult,p

3K_S X
32.1 Bogolyubsky 87C cs,p,pt

π^0 exotic-meson γ (γ's)
0 May 89 p

$p\ \pi^+$ mult[charged] (neutrals)
24 Batyunya 89 p,pt

$p\ \pi^-$ mult[charged] (neutrals)
24 Batyunya 89 p,pt

$\bar{p}\ \pi^0$ mult[charged] (neutrals)
32.1 Bogolyubsky 89B cs,mult

p 2π^- X
(200) Ansorge 89B cs
(900) Ansorge 89B cs
(1800) Alexopoulos 92 mass

$\bar{p}$ 2π^+ X
(1800) Alexopoulos 92 mass

$\bar{p}\ K^0$ mult[charged] (neutrals)
32.1 Bogolyubsky 89B mult,p

$p\ \bar{p}$ mult[charged] X
(630) Joyce 91 et,mass,p,pt,pt

$p\ \bar{p}$ mult[charged] (neutrals)
32.1 Chekulaev 88B angp,mass,mult,p

$p\ \bar{p}$ mult[jet] X
(630) Joyce 91 et,mult

$p\ \bar{p}$ charged X
(630) Joyce 91 p

$p\ \bar{p}\ \pi^+$ X
(630) Joyce 91 p

$p\ \bar{p}\ \pi^-$ X
(630) Joyce 91 p

$p\ \bar{p}\ K^+$ X
(630) Joyce 91 p

$p\ \bar{p}\ K^-$ X
(630) Joyce 91 p

2$p\ \bar{p}$ X
(630) Joyce 91 p

p 2$\bar{p}$ X
(630) Joyce 91 p

$\bar{\Lambda}$ mult[charged] neutral (neutrals)
32.1 Bogolyubsky 88 p

$\Lambda\ K_S$ mult[charged] (neutrals)
32.1 Bogolyubsky 87C cs,mult,p

Λ 2K_S X
32.1 Bogolyubsky 87C cs,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\,p$

$\bar{\Lambda}\,2K_S$ X
32.1 Bogolyubsky 87C cs,p,pt

$\bar{p}\,\Lambda$ mult[charged] (neutrals)
32.1 Bogolyubsky 89B mult,p

$\Lambda\,\bar{\Lambda}\,K_S$ X
32.1 Bogolyubsky 87C cs,p,pt

$2\Lambda\,\bar{\Lambda}$ X
32.1 Bogolyubsky 87C cs,p,pt

$\Lambda\,2\bar{\Lambda}$ X
32.1 Bogolyubsky 87C cs,p,pt

ℓ (jets) 2jet X
(630) Scarha 90 pt
(1800) Leone 92 –
Scarha 90 pt

$e^\pm$ neutral (neutrals) (jets) jet
(630) Akesson 90C p

$e^\pm$ (jets) 2jet X
(630) Scarha 90 pt
(1800) Barbarogalti 91 mass,pt
Kuhlmann 91 ang

e^- (jets) 2jet X
(1800) Barbarogalti 92 ang,p,pt
Liss 91 ang,mass,p,pt
Abe 90I ang,mass,p,pt
Sliwa 90 ang,p,pt
Abe 89G ang,mass,p,pt

e^+ (jets) 2jet X
(1800) Barbarogalti 92 ang,p,pt
Sliwa 90 ang,p,pt

$e^\pm$ 3jet X
(1800) Madaras 92 et
Abe 91I cs

$2e^\pm$ 2jet X
(1800) Gold 92 pt

$e^-\,e^+$ 2jet X
(1800) Madaras 92 et
Moulding 92 angp,p

$\mu^\pm$ (jets) 2jet X
(1800) Kuhlmann 91 ang

μ^- (jets) 2jet X
(1800) Barbarogalti 92 ang,p,pt
Liss 91 ang,mass,p,pt
Sliwa 90 ang,p,pt

μ^+ (jets) 2jet X
(1800) Barbarogalti 92 ang,p,pt
Sliwa 90 ang,p,pt

$\mu^-\,e^-$ 2jet X
(1800) Abe 91G –

$\mu^+\,e^+$ 2jet γ
(1800) Abe 91G –

$2\mu^-$ 2jet X
(1800) Abe 91G –

$2\mu^+$ 2jet X
(1800) Abe 91G –

K (π's) $\mu^-\,\mu^+$ X
(1800) Wenzel 91 mass

$D^*(2010)^+\,\mu^-$ 2jet X +
$D^*(2010)^-\,\mu^+$ 2jet X
(630) Ellis 90 cs

$\bar{p}\,p$

$D^*(2010)^+\,\mu^+$ 2jet X +
$D^*(2010)^-\,\mu^-$ 2jet X
(630) Ellis 90 cs

$p\,\pi^-\,\mu^-\,\mu^+$ X
(1800) Abe 92E mass
Gauthier 92 mass

4jet X
(546) Sphicas 88 mass,p
(630) Alitti 91G cs,pt
Frisch 90 ang,col,mass
Geer 90 col,mass
Meier 89 col,mass
Sphicas 88 mass,p
(1800) Flaugher 92B ang
Keeble 92 ang,col,pt
Keeble 92B ang,col,pt
Giannetti 91 mass

γ 3jet X
(1800) Abe 91I cs

$W^\pm$ (jets) 2jet X
(1800) Kamon 89 mass

$W^\pm$ 3jet X
(1800) Leone 92 –

$\pi^+\,\pi^0\,\pi^-\,\gamma$ (γ's)
0 May 89 mass,p

$4\pi^+$ X + $4\pi^-$ X
(630) Lipa 91 angp,cor

$2\pi^+\,2\pi^-$ X
0 Zenoni 92B ang,mass
5.7 Sedlak 88 p

$\Lambda\,\bar{\Lambda}\,2K_S$ X
32.1 Bogolyubsky 87C cs,p,pt

ℓ (jets) 3jet X
(1800) Leone 92 –

2ℓ (jets) 2jet X
(630) Scarha 90 pt
(1800) Leone 92 –
Scarha 90 pt

$\mu^\pm\,\ell$ (jets) 2jet X
(1800) Leone 92 –

$\mu^\pm\,e^\pm$ (jets) 2jet X
(1800) Barbarogalti 91 ang
Campagnari 91 pt

$\mu^-\,e^+$ 3jet X
(1800) Abe 91K pt

$\mu^+\,e^-$ 3jet X
(1800) Abe 91K pt

$2\mu^\pm$ (jets) 2jet X
(1800) Campagnari 91 pt

$\mu^-\,\mu^+$ 3jet X
(1800) Abe 91K pt

neutral 4jet X
(1800) Beretvas 90 et

5jet X
(630) Alitti 91G cs,pt
(1800) Giannetti 91 mass

2γ 3jet X
(1800) Abe 91I cs

$2\pi^+\,\pi^0\,2\pi^-$ (π^0's)
? Sedlak 88 cs

$K^+\,\pi^+\,2\pi^-$ neutral (neutrals)
0 Duch 89 ang,mass

$K^-\,2\pi^+\,\pi^-$ neutral (neutrals)
0 Duch 89 ang,mass

6jet X
(630) Alitti 91G cs,pt

$2\pi^+\,2\pi^-$ 2neutral (neutrals)
0 Weidenauer 90 pwa

$\bar{p}\,p$

$2\pi^+\,2\pi^0\,2\pi^-$ (π^0's)
? Sedlak 88 cs

$3\pi^+\,2\pi^0\,3\pi^-$ (π^0's)
? Sedlak 88 cs

$f_0(975)$
0.702 Sedlak 88 cs
0.757 Sedlak 88 cs

$f_2(1520)$
0 Amsler 91B cs

$f_4(2220)$
1.2 – 2 Hertzog 92 –

$\eta_c(1S)$
(2.963) Augustin 88C –
(3.564) Augustin 88C –

$J/\psi(1S)$
(3 – 3.6) Spiegel 91 –
(3.096 – 3.098) Ray 92 cs

$\chi_{c1}(1P)$
(3 – 3.6) Spiegel 91 –
(3.509 – 3.512) Lipton 92 cs
Ray 92 cs
(3.51) Armstrong 91B –
(3.55 – 3.566) Armstrong 91D –

$\chi_{c2}(1P)$
(2.963) Augustin 88C –
(3 – 3.6) Spiegel 91 –
(3.54 – 3.566) Ray 92 cs
(3.55 – 3.566) Armstrong 91D –
(3.554 – 3.565) Lipton 92 cs
(3.564) Augustin 88C –
(5.56) Armstrong 91B –

$\psi(2S)$
(3 – 3.6) Spiegel 91 –
(3.67) Armstrong 91B –
(3.685 – 3.688) Ray 92 cs

$(\bar{p}p)_{atom}$
0 Schaefer 89 angp,p

$e^-\,e^+$
0 Amsler 91 cs
(1.877 – 2.06) Gastaldi 91 cs
0.15 – 0.3 Bardin 91B angp,cs
0.3 – 0.9 Bardin 92 angp,cs
0.54 – 0.9 Bardin 91 angp,cs
(3) Armstrong 92D cs
(3.5) Armstrong 92D cs
(3.55) Armstrong 92G ang,cs
(3.6) Armstrong 92D cs
? Buenerd 92 cs
Sedlak 88 cs

2jet
4.6 Markytan 89 col,pt
7.3 Markytan 89 col,pt
9.1 Markytan 89 col,pt
12 Markytan 89 col,pt

hadron$^+$ hadron$^-$
0.3 – 0.9 Bardin 92 angp
0.54 – 0.9 Bardin 91 angp,cs

γ jet
(1800) Blair 89 angp

2γ
0 Amsler 91 cs
(2.963) Augustin 88C mass
(3.564) Augustin 88C mass

$\bar{t}\,t$
(1800) Kuhlmann 91 cs

$\bar{\bar{q}}\,\bar{\bar{q}}$
(1800) Kuhlmann 91 –

$\pi^0\,\gamma$
0 Amsler 91 cs
Chiba 88 cs
? Sedlak 88 cs

π^0 meson^0
0 Adamo 92B –
Peters 92 –

$\bar{p}\,p$

$2\pi^0$

0	Amsler 92D	cs
	Amsler 91	cs
	Chiba 88	cs
	Chiba 87B	cs
1.1 – 2	Sedlak 88	amp,angp,cs,pol
2.814 – 3.432	Baglin 92	angp,cs
?	Sedlak 88	cs

$\pi^+\,\pi^-$

0	Ruf 92	cs
	Adler 91	cs
	Amsler 91	cs
	Gastaldi 91	cs
	Doser 88B	cs
< 0.1	Adamo 92	cs
0.36 – 0.76	Tanimori 89B	angp,cs,p
	Sugimoto 88	angp,cs,p
0.36 – 1.55	Hasan 92	angp,asym,cs,pwa
0.7373 – 7.52	Sedlak 88	angp
1.1 – 2	Sedlak 88	amp,angp,cs,pol
1.449 – 4.289	Sedlak 88	cs
4.6	Markytan 89	col,pt
6	Appel 91	cs
7.3	Markytan 89	col,pt
9.1	Markytan 89	col,pt
12	Markytan 89	col,pt
?	Sedlak 88	cs

$\eta\,\gamma$

0	Chiba 88	cs

$\eta\,\pi^0 + \eta\,\gamma$

0	Chiba 89	cs

$\eta\,\pi^0$

0	Amsler 92C	cs,p
	Amsler 91	cs
	Chiba 89	cs
	Adiels 88	cs
	Chiba 88	cs
	Chiba 87B	cs
?	Sedlak 88	cs

2η

0	Amsler 92C	cs,p
	Amsler 91	cs
	Chiba 89	cs
	Adiels 88	cs

$\rho(770)^+\,\pi^-$

0	Amsler 91	cs
	May 90	cs
	May 90B	cs
?	Sedlak 88	cs

$\rho(770)^0\,\pi^0$

0	Adamo 92B	–
	Amsler 91	cs
	Chiba 88	cs
	Chiba 87B	cs
0.7 – 2.53	Sedlak 88	cs
?	Sedlak 88	cs

$\rho(770)^-\,\pi^+$

0	Amsler 91	cs
	May 90	cs
	May 90B	cs
?	Sedlak 88	cs

$\rho(770)^0\,\eta$

0	Amsler 91	cs
	Weidenauer 90	mass,pwa
	Chiba 89	cs
	Adiels 88	cs
?	Sedlak 88	cs

$2\rho(770)^0$

0	Amsler 91	cs
?	Sedlak 88	cs

$\omega(783)\,\gamma + \rho(770)^0\,\gamma$

0	Chiba 88	cs

$\omega(783)\,\gamma$

0	Chiba 88	cs

$\omega(783)\,\pi^0 + \rho(770)^0\,\pi^0$

0	Chiba 88	cs

$\omega(783)\,\pi^0$

0	Amsler 91	cs
	Amsler 91B	cs
	Chiba 88	cs
	Chiba 87B	cs
?	Sedlak 88	cs

$\omega(783)\,\eta$

0	Amsler 92C	cs,p
	Amsler 91	cs
	Amsler 91B	cs
	Chiba 89	cs
	Adiels 88	cs

$\omega(783)\,\rho(770)^0$

0	Amsler 91	cs
?	Sedlak 88	cs

$2\omega(783)$

0	Amsler 91	cs
< 2	Hamann 90	angp,cs,pwa

$\eta'(958)\,\gamma$

0	Chiba 88	cs

$\eta'(958)\,\pi^0$

0	Amsler 92C	cs,p
	Amsler 91	cs
	Chiba 88	cs
	Chiba 87B	cs
?	Sedlak 88	cs

$\eta'(958)\,\eta$

0	Amsler 92C	cs,p
	Amsler 91	cs
	Chiba 89	cs
	Adiels 88	cs

$\eta'(958)\,\rho(770)^0$

0	Amsler 91	cs

$\eta'(958)\,\omega(783)$

0	Amsler 92C	cs,p

$f_0(975)\,\eta$

0	Amsler 91B	cs

$f_0(975)\,\rho(770)^0$

0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$a_0(980)^+\,\pi^-$

0	Amsler 91	cs

$a_0(980)^0\,\pi^0$

0	Amsler 91B	cs

$a_0(980)^-\,\pi^+$

0	Amsler 91	cs

$a_0(980)^0\,\eta$

0	Amsler 91B	cs

$b_1(1235)^+\,\pi^- + b_1(1235)^-\,\pi^+$

?	Sedlak 88	cs

$b_1(1235)^+\,\pi^-$

0	Amsler 91	cs

$b_1(1235)^-\,\pi^+$

0	Amsler 91	cs

$f_2(1270)\,\pi^0$

0	Adamo 92B	–
	Peters 92	–
	Aker 91	cs
	Amsler 91	cs
	May 90	cs
	May 90B	cs
?	Sedlak 88	cs

$f_2(1270)\,\eta$

0	Weidenauer 90	mass,pwa

$f_2(1270)\,\rho(770)$

0	Amsler 91	cs

$f_2(1270)\,\omega(783)$

0	Amsler 91	cs
?	Sedlak 88	cs

$f_1(1285)\,\pi^0$

0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$a_2(1320)^+\,\pi^- + a_2(1320)^-\,\pi^+$

?	Sedlak 88	cs

$a_2(1320)^+\,\pi^-$

0	Amsler 91	cs
	Weidenauer 90	mass,pwa
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$a_2(1320)^0\,\pi^0$

0	Amsler 91B	cs
	Adiels 88	cs

$a_2(1320)^-\,\pi^+$

0	Amsler 91	cs
	Weidenauer 90	mass,pwa
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$a_2(1320)^+\,\rho(770)^-$

0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$a_2(1320)^-\,\rho(770)^+$

0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$f_0(1400)\,\pi^0$

0	Amsler 91B	cs

$f_1(1420)\,\pi^0$

0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$f_2(1520)\,\pi^0$

0	Hertzog 92	–
	Aker 91	cs
	Amsler 91	cs
	Gastaldi 91	–

$f_2'(1525)\,\pi^0$

0.702	Sedlak 88	cs
0.757	Sedlak 88	cs

$f_0(1590)\,\pi^0$

0	Hertzog 92	–
	Amsler 91B	cs

$f_2(1810)\,\pi^0$

0	Aker 91	cs

$K\,\bar{K}$

< 2	Hamann 90	angp,cs,pwa

$K^0\,\bar{K}^0$

0	Amsler 91	cs
	Doser 88	cs

$K^+\,K^-$

0	Ruf 92	cs
	Adler 91	cs
	Amsler 91	cs
	Gastaldi 91	cs
	Doser 88B	cs
< 0.1	Adamo 92	cs
0.36 – 0.76	Tanimori 89B	angp,cs,p
	Sugimoto 88	angp,cs,p
0.36 – 1.55	Hasan 92	angp,asym,cs,pwa
0.7 – 2.12	Sedlak 88	angp,cs
0.7373 – 7.52	Sedlak 88	angp
6	Appel 91	cs
?	Sedlak 88	cs

$K^0\,K_S$

0.5 – 3	Sedlak 88	cs

$2K_S$

0	Gastaldi 91	cs
	Doser 88	cs
0.5 – 3	Sedlak 88	cs
1.3 – 1.58	Barnes 89	cs

$K_S\,K_L$

0	Gastaldi 91	cs
	Doser 88	cs
0.5 – 3	Sedlak 88	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\,p$

$K_S\,K_L$		
?	Sedlak 88	cs
$K^*(892)^+\,K^-$		
0	Amsler 91	cs
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$K^*(892)^0\,K_S$		
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$\bar{K}^*(892)^0\,K^0$		
0	Amsler 91	cs
$K^*(892)^-\,K^+$		
0	Amsler 91	cs
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$\bar{K}^*(892)^0\,K_S$		
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$K^*(892)^0\,\bar{K}^*(892)^0$		
0	Amsler 91	cs
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$K^*(892)^+\,K^*(892)^-$		
0	Amsler 91	cs
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$K_2^*(1430)^+\,K^-$		
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$K_2^*(1430)^0\,K_S$		
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$K_2^*(1430)^-\,K^+$		
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$\bar{K}_2^*(1430)^0\,K_S$		
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$\phi(1020)\,\gamma$		
0	Chiba 88	cs
$\phi(1020)\,\pi^0$		
0	Amsler 91B	cs
	Chiba 88	cs
	Chiba 87B	cs
$\phi(1020)\,\eta$		
0	Amsler 91	cs
	Amsler 91B	cs
	Chiba 89	cs
$\phi(1020)\,\rho(770)^0$		
0.702	Sedlak 88	cs
0.757	Sedlak 88	cs
$\phi(1020)\,\omega(783)$		
0	Amsler 91	cs
< 2	Hamann 90	angp,cs,pwa
$2\phi(1020)$		
(1.96 – 2.43)	Harris 91B	cs
1.5	Hamann 92	cs
< 2	Hamann 90	angp,cs,pwa
(3)	Baglin 89C	angp,cs
$B^0\,\bar{B}^0$		
(1800)	Song 91	–
baryonium γ		
0	Amsler 91	p
	Chiba 90	mass,p
	Omori 89	p
	Chiba 87B	cs
π^0 baryonium		
0	Chiba 87B	cs
$n\,\bar{n}$		
0.1 – 1.55	Bradamante 91	angp,cs,pol
0.18 – 0.6	Amsler 91	cs
0.287	Bruckner 91B	angp
	Bruckner 91C	angp

$\bar{p}\,p$

$n\,\bar{n}$		
0.4 – 0.9	Timmermans 91	pwa
0.5 – 1.5	Birsa 90	angp,pol
0.546	Birsa 91	angp,pol
0.6	Dallatorreco 92	angp,pol
0.6 – 1.3	Amsler 91	angp,pol
0.656	Birsa 91	angp,pol
0.767	Birsa 91	angp,pol
0.875	Birsa 91	angp,pol
0.9	Dallatorreco 92	angp,pol
$p\,\bar{p}$		
0.0136	Eversheim 91	asym
0.1 – 1.55	Bradamante 91	angp,cs,pol
0.1 – 100	Sedlak 88	cs
0.18 – 1.5	Amsler 91	angp,cs
0.181	Bruckner 91B	angp
	Bruckner 91C	angp
0.181 – 0.59	Bruckner 91B	cs
	Bruckner 91C	cs
0.287	Bruckner 91B	angp
	Bruckner 91C	angp
0.29	Sedlak 88	amp,angp
0.439	Perrotkunne 91	angp,pol
0.439 – 1.55	Amsler 91	angp,pol
0.497 – 1.55	Yokosawa 90B	asym
	Kunne 88	asym
	Kunne 88B	angp,cs,pol
	Kunne 88C	angp,cs,pol
0.505	Bruckner 91B	angp
	Bruckner 91C	angp
0.544	Pe rotkunne 91	angp,pol
0.55	Schiavon 89	amp,angp,cs
0.59	Bruckner 91B	angp
	Bruckner 91C	angp
0.679 – 1.55	Kunne 91	angp,asym,pol
0.697	Bertini 89	angp,pol
0.7	Bertini 88C	angp,pol
0.757	Schiavon 89	amp,angp,cs
0.8	Martin 88	asym
< 0.8828	Stoks 92	const
(2.1 – 2.5)	Sedlak 88	cs
1.077	Schiavon 89	amp,angp,cs
1.1	Martin 88	asym
3.65 – 5.65	Baglin 89B	angp
6	Appel 91	cs
9.9	Baller 88	angp,cs,pt
10	Appel 91	cs
22.4	Zlatanov 89	amp,angp
32.1	Bogolyubsky 89B	cs
(24.3)	Breedon 89	angp
	Breedon 88	angp
(53)	Giacomelli 90	angp
(300)	Nodulman 89	angp
	Paoletti 89	angp
(540)	Paoletti 89	angp
	Albrow 88	amp
(546)	Pumplin 92	amp,angp
	Giacomelli 90	angp
	Geichgimbel 89	angp,cs
	Jenni 89	angp,cs
	Nodulman 89	angp
(630)	Geichgimbel 89	angp,cs
(900)	Jenni 89	angp,cs
(1000)	Nodulman 89	angp
	Paoletti 89	angp
(1020)	Amos 92	angp
(1800)	Pumplin 92	angp
	Amos 91	angp
	Amos 91B	amp,angp,cs
	Rubinstein 91	amp,angp,cs
	Shukla 91	amp,angp,cs
	Shukla 91B	amp,angp,cs
	White 91	cs

$\bar{p}\,p$

$p\,\bar{p}$		
	Amos 90	cs
	Amos 90B	angp
	Rubinstein 90	angp,cs
	Amos 89	cs
	Nodulman 89	angp
	Paoletti 89	angp
	Amos 88	angp
	Tonelli 88	angp
?	Bertini 88B	pol
$\bar{p}\,N(1440\,P_{11})^+$		
32	Boos 90B	–
$p\,\bar{N}(1440\,P_{11})^-$		
32	Boos 90B	–
$\Lambda\,\bar{\Lambda}$		
1.4 – 1.7	Johansson 90	angp,cs,pol
1.435 – 1.447	Vonfrankenbe 89	cs
1.435 – 1.92	Vonfrankenbe 89	angp
1.435 – 145	Barnes 89	angp,cs,pol
1.476 – 1.507	Barnes 89B	angp,cs,pol
1.545	Vonfrankenbe 89	pol
1.546	Barnes 90B	angp,cs,pol
1.65	Amsler 91	angp,cs,pol
1.695	Barnes 90B	angp,cs,pol
	Ohlsson 90	angp,cs,pol
	Vonfrankenbe 89	pol
$\bar{\Lambda}\,\Sigma^0$		
1.65	Amsler 91	angp,cs,pol
1.695	Barnes 90	angp,cs,pol
	Vonfrankenbe 89	angp,cs
$\Lambda\,\bar{\Sigma}^0 + \bar{\Lambda}\,\Sigma^0$		
1.4 – 1.7	Johansson 90	angp,cs,pol
1.695	Ohlsson 90	angp,cs,pol
$\Lambda\,\bar{\Sigma}^0$		
1.65	Amsler 91	angp,cs,pol
1.695	Barnes 90	angp,cs,pol
$\gamma\,(\bar{p}p)_{atom}$		
0	Amsler 91	p
$e^-\,e^+\,\gamma$		
(3.55 – 3.566)	Armstrong 91D	mass
$\pi^+\,\pi^-\,\gamma$		
0	Gastaldi 91	cs
$3\pi^0$		
0	Peters 92	mass,pwa
	Aker 91	mass,pwa
	Amsler 91B	mass
	Gastaldi 91	–
(3.1)	Smith 92C	mass
?	Burchell 92	–
$\pi^+\,\pi^0\,\pi^-$		
0	Amsler 91	cs,mass
	Gastaldi 91	mass
	May 90	mass,pwa
	May 90B	mass,pwa
1.449 – 4.289	Sedlak 88	cs
?	Burchell 92	–
	Sedlak 88	cs
$\eta\,2\pi^0$		
0	Peters 92	mass,pwa
	Amsler 91B	mass
$\eta\,\pi^+\,\pi^-$		
0	Amsler 91	cs,mass
	Amsler 91B	–
	Weidenauer 90	mass,pwa
?	Sedlak 88	cs
$2\eta\,\pi^0$		
0	Amsler 92B	mass,pwa
	Peters 92	mass,pwa
	Amsler 91B	mass
	Gastaldi 91	–
?	Burchell 92	–
$\rho(770)^0\,\pi^+\,\pi^-$		
1 – 8	Sedlak 88	cs

$\bar{p}\,p$

$\rho(770)^0\,\pi^+\,\pi^-$

?	Sedlak 88	cs

$\omega(783)\,\pi^+\,\pi^-$

0.7 – 7.2	Sedlak 88	cs
1 – 8	Sedlak 88	cs
?	Sedlak 88	cs

$\eta'(958)\,\pi^+\,\pi^-$

0	Amsler 91	cs,mass
	Weidenauer 90	mass,pwa

$f_1(1285)\,\pi^+\,\pi^-$

0	Duch 89	–

$\eta(1295)\,2\pi$

0	Toki 88B	–

$f_1(1420)\,\pi^+\,\pi^-$

0	Gastaldi 91	–

$\eta(1440)\,2\pi$

0	Toki 88B	–

$\eta(1440)\,\pi^+\,\pi^-$

0	Duch 89	–

$K^+\,K^-\,\gamma$

0	Gastaldi 91	cs

$2K_S\,\gamma$

0	Gastaldi 91	cs

$K_S\,K_L\,\gamma$

0	Gastaldi 91	cs

$K^+\,\bar{K}^0\,\pi^-$

0	Angelopoulos 92	–
	Guyot 92	–
	Ruf 92	mass
	Holder 90	cs
	Holder 90B	cs

$K^0\,K^-\,\pi^+$

0	Angelopoulos 92	–
	Guyot 92	–
	Ruf 92	mass
	Holder 90	cs
	Holder 90B	cs

$K^+\,K_S\,\pi^- + K_S\,K^-\,\pi^+$

(1.9 – 2.4)	Sedlak 88	cs
5.7	Sedlak 88	cs

$2K_S\,\pi^0$

(1.9 – 2.4)	Sedlak 88	cs
5.7	Sedlak 88	cs

$n\,\bar{n}\,\gamma$

0	Chiba 90	mass,p

$p\,\bar{p}\,\gamma$

0	Chiba 90	mass,p
	Baker 88	p

$p\,\bar{n}\,\pi^-$

22.4	Kanazirski 89	ang,cs
	Batyunya 86	cs

$p\,\bar{p}\,\pi^0$

22.4	Batyunya 86	cs

$n\,\bar{p}\,\pi^+$

22.4	Batyunya 86	cs

$p\,\bar{p}\,\omega(783)$

22.4	Batyunya 87E	angp,cs
32	Boos 90B	–

$\bar{p}\,\Delta(1232\,P_{33})^{++}\,\pi^-$

32	Boos 90B	–

$p\,\bar{\Delta}(1232\,P_{33})^{--}\,\pi^+$

32	Boos 90B	–

4γ

0	Amsler 92C	mass
	Amsler 92D	mass

4π

(1.9 – 2.7)	Sedlak 88	cs
4.6	Sedlak 88	pt

$2\pi^+\,2\pi^-$

0	Weidenauer 90	pwa
	Doser 88	mass

$\bar{p}\,p$

$2\pi^+\,2\pi^-$

1.2 – 9.2	Sedlak 88	angp
1.449 – 4.289	Sedlak 88	cs
4.6	Markytan 89	col,pt
5.7	Sedlak 88	p
7.3	Markytan 89	col,pt
9	Sedlak 88	col
9.1	Markytan 89	col,pt
12	Markytan 89	col,pt
32.1	Sedlak 88	cs
?	Sedlak 88	cs

$\rho(770)^+\,\pi^+\,2\pi^- + \rho(770)^-\,2\pi^+\,\pi^-$

?	Sedlak 88	cs

$\rho(770)^0\,\pi^+\,\pi^0\,\pi^-$

1 – 8	Sedlak 88	cs
?	Sedlak 88	cs

$a_0(980)^+\,\pi^+\,2\pi^-$

0	Amsler 91	mass

$a_0(980)^-\,2\pi^+\,\pi^-$

0	Amsler 91	mass

$f_2(1270)\,\pi^+\,\pi^0\,\pi^-$

1 – 8	Sedlak 88	cs

$K^+\,K^-\,\pi^+\,\pi^-$

0.4 – 0.67	Fukuhisa 92	cs

$K^+\,K_S\,\pi^0\,\pi^- + K_S\,K^-\,\pi^+\,\pi^0$

5.7	Sedlak 88	cs

$2K_S\,\pi^+\,\pi^-$

5.7	Sedlak 88	cs

$K_S\,K_L\,\pi^+\,\pi^-$

5.7	Sedlak 88	cs

$2K^+\,2K^-$

(1.96 – 2.43)	Harris 91B	mass
1.5	Hamann 92	mass
(3)	Baglin 89C	mass

$p\,\bar{p}\,\pi^+\,\pi^-$

1.435 – 1.45	Barnes 89	mass
1.476 – 1.507	Barnes 89B	mass
1.546	Barnes 90B	mass
1.695	Barnes 90B	mass
4.6	Markytan 89	col,pt
7.3	Markytan 89	col,pt
9	Sedlak 88	col
9.1	Markytan 89	col,pt
12	Markytan 89	col,pt
32	Boos 90B	ang,col,mass,p

$p\,\bar{p}\,\rho(770)^+\,\pi^-$

22.4	Batyunya 87E	angp,cs

$p\,\bar{p}\,\rho(770)^-\,\pi^+$

22.4	Batyunya 87E	angp,cs

$\bar{p}\,\Delta(1232\,P_{33})^{++}\,\pi^0\,\pi^-$

22.4	Batyunya 87E	angp,cs

$p\,\bar{\Delta}(1232\,P_{33})^{--}\,\pi^+\,\pi^0$

22.4	Batyunya 87E	angp,cs

$\bar{p}\,N^*_{5/2}(1480)^{+++}\,2\pi^-$

32.1	Bogolyubsky 86E	cs

5γ

0	Amsler 92C	mass

$2\pi^+\,2\pi^-\,\gamma$

0	Weidenauer 90	pwa

5π

(1.9 – 2.7)	Sedlak 88	cs
4.6	Sedlak 88	pt

$2\pi^+\,\pi^0\,2\pi^-$

0	Amsler 91	cs,mass
	Weidenauer 90	pwa
0 – 0.7	Sedlak 88	p
1.449 – 4.289	Sedlak 88	cs
4.6	Markytan 89	col,pt
5.7	Sedlak 88	p
7.3	Markytan 89	col,pt
9.1	Markytan 89	col,pt
12	Markytan 89	col,pt
32.1	Sedlak 88	cs

$\bar{p}\,p$

$2\pi^+\,\pi^0\,2\pi^-$

?	Sedlak 88	cs

$\eta\,2\pi^+\,2\pi^-$

?	Sedlak 88	cs

$\rho(770)^0\,2\pi^+\,2\pi^-$

1 – 8	Sedlak 88	cs

$\omega(783)\,2\pi^+\,2\pi^-$

1 – 8	Sedlak 88	cs
?	Sedlak 88	cs

$\eta'(958)\,2\pi^+\,2\pi^-$

?	Sedlak 88	cs

$f_2(1270)\,2\pi^+\,2\pi^-$

1 – 8	Sedlak 88	cs

$K\,\bar{K}\,3\pi$

?	Burchell 92	–

K_S kaon 3π

0	Toki 88B	mass,pwa

$K^+\,K_S\,\pi^+\,2\pi^-$

0	Amsler 91	mass

$K^+\,K_S\,\pi^+\,2\pi^- + K_S\,K^-\,2\pi^+\,\pi^-$

5.7	Sedlak 88	cs
12	Sedlak 88	cs

$K_S\,K^-\,2\pi^+\,\pi^-$

0	Amsler 91	mass

$2K_S\,\pi^+\,\pi^0\,\pi^-$

5.7	Sedlak 88	cs

$K^+\,K_L\,\pi^+\,2\pi^-$

0	Gastaldi 91	mass

$K_L\,K^-\,2\pi^+\,\pi^-$

0	Gastaldi 91	mass

$p\,\bar{p}\,\pi^+\,\pi^0\,\pi^-$

22.4	Batyunya 87E	cs,mass
32	Boos 90B	ang,col,mass,p

DD $< \bar{p}\,\pi^+\,\pi^0\,\pi^- > p$

22.4	Batyunya 87E	angp,cs

DD $< p\,\pi^+\,\pi^0\,\pi^- > \bar{p}$

22.4	Batyunya 87E	angp,cs

DD $< p\,\pi^0 >$ DD $< \bar{p}\,\pi^+\,\pi^- >$

22.4	Batyunya 87E	angp,cs

DD $< p\,\pi^+\,\pi^- >$ DD $< \bar{p}\,\pi^0 >$

22.4	Batyunya 87E	angp,cs

DD $< p\,\rho(770)^0\,\pi^+\,\pi^- > \bar{p}$

32.1	Bogolyubsky 87B	cs

$p\,\bar{p}\,\rho(770)^0\,\pi^+\,\pi^-$

32.1	Bogolyubsky 86E	cs

$\bar{p}\,\Delta(1232\,P_{33})^{++}\,\pi^+\,2\pi^-$

22.4	Boos 89	cs
32.1	Bogolyubsky 86E	cs

$p\,\bar{\Delta}(1232\,P_{33})^{--}\,2\pi^+\,\pi^-$

32.1	Bogolyubsky 86E	cs

6γ

0	Peters 92	mass,pwa
	Aker 91	mass,pwa
	Amsler 91B	mass

6π

4.6	Sedlak 88	pt

$\pi^-\,5\pi$

9.1	Sedlak 88	col

$3\pi^+\,3\pi^-$

1.449 – 4.289	Sedlak 88	cs
4.6	Markytan 89	col,pt
7.3	Markytan 89	col,pt
9	Sedlak 88	col
9.1	Markytan 89	col,pt
12	Markytan 89	col,pt
32.1	Sedlak 88	cs
?	Sedlak 88	cs

$\rho(770)^0\,2\pi^+\,\pi^0\,2\pi^-$

1 – 8	Sedlak 88	cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\,p$

$K^+\,K_S\,\pi^+\,\pi^0\,2\pi^- +$
$K_S\,K^-\,2\pi^+\,\pi^0\,\pi^-$
5.7 Sedlak 88 cs
$K^+\,K_S\,\pi^+\,\pi^0\,2\pi^- + K^0\,K_S\,2\pi^+\,2\pi^- +$
$K_S\,K^-\,2\pi^+\,\pi^0\,\pi^-$
12 Sedlak 88 col
$K^+\,K_S\,\pi^+\,\pi^0\,2\pi^- + K_S\,K^-\,2\pi^+\,\pi^0\,\pi^- +$
$K^0\,K_S\,2\pi^+\,\pi^0\,2\pi^-$
12 Sedlak 88 angp
$2K_S\,2\pi^+\,2\pi^-$
0.76 Sedlak 88 p
5.7 Sedlak 88 cs
$K_S\,K_L\,2\pi^+\,2\pi^-$
5.7 Sedlak 88 cs
DD $< p\,2\pi^+\,2\pi^- > \bar{p}$
32.1 Bogolyubsky 87B ang,cs,mass,p
$p\,\bar{p}\,2\pi^+\,2\pi^-$
4.6 Markytan 89 col,pt
7.3 Markytan 89 col,pt
9 Sedlak 88 col
9.1 Markytan 89 col,pt
12 Markytan 89 col,pt
22.4 Boos 89 angp,asym,cs,mass,p
32.1 Bogolyubsky 86E ang,cs,mass,p
$\bar{n}\,\Delta(1232\,P_{33})^{++}\,\pi^+\,3\pi^-$
22.4 Boos 89 cs
$\bar{p}\,\Delta(1232\,P_{33})^{++}\,\pi^+\,\pi^0\,2\pi^-$
22.4 Boos 89 cs
7π
4.6 Sedlak 88 pt
$3\pi^+\,\pi^0\,3\pi^-$
1.449 – 4.289 Sedlak 88 cs
4.6 Markytan 89 col,pt
7.3 Markytan 89 col,pt
9.1 Markytan 89 col,pt
12 Markytan 89 col,pt
32.1 Sedlak 88 cs
? Sedlak 88 cs
$\rho(770)^0\,3\pi^+\,3\pi^-$
1 – 8 Sedlak 88 cs
$K^+\,K_S\,2\pi^+\,3\pi^- + K_S\,K^-\,3\pi^+\,2\pi^-$
12 Sedlak 88 cs
$2K_S\,2\pi^+\,\pi^0\,2\pi^-$
5.7 Sedlak 88 cs
$p\,\bar{n}\,2\pi^+\,3\pi^-$
22.4 Boos 89 angp,asym,cs,mass,p
$p\,\bar{p}\,2\pi^+\,\pi^0\,2\pi^-$
22.4 Boos 89 angp,asym,cs,mass,p
$n\,\bar{p}\,3\pi^+\,2\pi^-$
22.4 Boos 89 cs
8γ
0 Amsler 92C mass
8π
4.6 Sedlak 88 pt
$4\pi^+\,4\pi^-$
1.449 – 4.289 Sedlak 88 cs
4.6 Markytan 89 col,pt
7.3 Markytan 89 col,pt
9.1 Markytan 89 col,pt
12 Markytan 89 col,pt
32.1 Sedlak 88 cs
$K^+\,K_S\,2\pi^+\,\pi^0\,3\pi^- + K^0\,K_S\,3\pi^+\,3\pi^- +$
$K_S\,K^-\,3\pi^+\,\pi^0\,2\pi^-$
12 Sedlak 88 col
$K^+\,K_S\,2\pi^+\,\pi^0\,3\pi^- + K^0\,K_S\,3\pi^+\,3\pi^- +$
$K_S\,K^-\,3\pi^+\,\pi^0\,2\pi^-$
12 Sedlak 88 angp

$\bar{p}\,p$

$p\,\bar{p}\,3\pi^+\,3\pi^-$
4.6 Markytan 89 col,pt
7.3 Markytan 89 col,pt
9.1 Markytan 89 col,pt
12 Markytan 89 col,pt
9γ
0 Amsler 92C mass
9π
4.6 Sedlak 88 pt
$4\pi^+\,\pi^0\,4\pi^-$
1.449 – 4.289 Sedlak 88 cs
4.3 Markytan 89 col,pt
7.3 Markytan 89 col,pt
9.1 Markytan 89 col,pt
12 Markytan 89 col,pt
32.1 Sedlak 88 cs
$5\pi^+\,5\pi^-$
1.449 – 4.289 Sedlak 88 cs
32.1 Sedlak 88 cs
$5\pi^+\,\pi^0\,5\pi^-$
1.449 – 4.289 Sedlak 88 cs
32.1 Sedlak 88 cs
$6\pi^+\,6\pi^-$
32.1 Sedlak 88 cs
$6\pi^+\,\pi^0\,6\pi^-$
32.1 Sedlak 88 cs

$\bar{p}\,n$

mult[$\pi^\pm$]
5.6 Sedlak 88 cs
π^0 mult[$\pi^\pm$]
5.6 Sedlak 88 cs
$\rho(770)^0$ mult[$\pi^\pm$]
9.1 Sedlak 88 cs,mult
$\omega(783)$ mult[$\pi^\pm$]
9.1 Sedlak 88 cs,mult
$\rho(770)^0\,\pi^0$ mult[$\pi^\pm$]
9.1 Sedlak 88 cs,mult
$\pi^+\,\pi^0\,2\pi^-$ (π^0's)
0.45 – 0.97 Sedlak 88 cs
$2\pi^+\,3\pi^-$ neutral (neutrals)
9.2 Sedlak 88 cs
$2\pi^+\,\pi^0\,3\pi^-$ (π^0's)
0.45 – 0.97 Sedlak 88 cs
$3\pi^+\,4\pi^-$ neutral (neutrals)
9.2 Sedlak 88 cs
$4\pi^+\,5\pi^-$ neutral (neutrals)
9.2 Sedlak 88 cs
π^- meson^0
0 Gaspero 92 mass
Gastaldi 91 –
? Gaspero 92B –
$K^0\,K^-$
0 Amsler 91 cs
K_L exotic-meson
8.9 Shoemaker 88 –
baryonium γ
0 Chiba 90 mass,p
$\pi^+\,2\pi^-$
0.45 – 0.97 Sedlak 88 cs
9.2 Sedlak 88 cs
? Burchell 92 –
$n\,\bar{p}\,\gamma$
0 Chiba 90 mass,p
$n\,\bar{\Sigma}^-\,K_L$
8.9 Shoemaker 88 cs,mass
$\pi^+\,\pi^0\,2\pi^-$
0.45 – 0.97 Sedlak 88 cs
9.2 Sedlak 88 cs
$\rho(770)^0\,\pi^+\,2\pi^-$
4.33 – 9.2 Sedlak 88 mult
$\omega(783)\,\pi^+\,2\pi^-$
4.33 – 9.2 Sedlak 88 mult

$\bar{p}\,n$

$n\,\bar{\Lambda}\,K_L\,\pi^-$
8.9 Shoemaker 88 cs,mass
$p\,\bar{\Sigma}^-\,K_L\,\pi^-$
8.9 Shoemaker 88 cs,mass
$2\pi^+\,3\pi^-$
0 Gaspero 92B angp,mass,pwa
Gastaldi 91 –
0.45 – 0.97 Sedlak 88 cs
9.2 Sedlak 88 cs
$\rho(770)^0\,\pi^+\,\pi^0\,2\pi^-$
4.33 – 9.2 Sedlak 88 mult
$p\,\bar{\Lambda}\,K_L\,2\pi^-$
8.9 Shoemaker 88 cs,mass
$n\,\bar{\Sigma}^+\,K_L\,2\pi^-$
8.9 Shoemaker 88 cs,mass
$n\,\bar{\Sigma}^-\,K_L\,\pi^+\,\pi^-$
8.9 Shoemaker 88 cs,mass
$2\pi^+\,\pi^0\,3\pi^-$
0.45 – 0.97 Sedlak 88 cs
9.2 Sedlak 88 cs
$\rho(770)^0\,2\pi^+\,3\pi^-$
4.33 – 9.2 Sedlak 88 mult
$\omega(783)\,2\pi^+\,3\pi^-$
4.33 – 9.2 Sedlak 88 mult
$3\pi^+\,4\pi^-$
9.2 Sedlak 88 cs
$\rho(770)^0\,2\pi^+\,\pi^0\,3\pi^-$
4.33 – 9.2 Sedlak 88 mult
$3\pi^+\,\pi^0\,4\pi^-$
9.2 Sedlak 88 cs
$4\pi^+\,5\pi^-$
9.2 Sedlak 88 cs
$4\pi^+\,\pi^0\,5\pi^-$
9.2 Sedlak 88 cs

$\bar{p}$ nucleus

mult[charged] X
0.3 Guaraldo 89 mult
0.5 Guaraldo 89 mult
mult[charged$^+$] X
40 Boos 88 a-dep,mult
mult[charged$^-$] X
40 Boos 88 a-dep,mult
mult[grey] X
40 Boos 88 a-dep,mult
charged X
0 Batusov 90 angp,mult
charged$^+$ X
40 Boos 88 a-dep,mult
charged$^-$ X
40 Boos 88 a-dep,mult
X star
40 Boos 88 a-dep,cs
grey X
40 Boos 88 a-dep,mult
$\rho(770)^0$ X
100 Walker 91 mult
$\omega(783)$ X
100 Walker 91 mult
$f_2(1270)$ X
100 Walker 91 mult
K_S X
0 – 4 Guaraldo 89 angp,cs,p
Tosello 89 cs,mult
Λ X
0 – 4 Guaraldo 89 angp,cs,p
Tosello 89 cs,mult
4 – 400 Panagiotou 89 a-dep,p,pol,pt

$\bar{p}$ nucleus

$\bar{\Lambda}$ X		
0 – 4	Tosello 89	cs,mult
hypernucleus X		
?	Bando 90	–
mult[charged$^+$] X star		
40	Boos 88	a-dep,mult
mult[charged$^-$] X star		
40	Boos 88	a-dep,mult
mult[grey] X star		
40	Boos 88	a-dep,mult
charged$^+$ X star		
40	Boos 88	a-dep,mult
charged$^-$ X star		
40	Boos 88	a-dep,mult
(showers) shower X		
0	Batusov 90	angp,mult
grey (greys) X		
0	Batusov 90	angp,mult
grey X star		
40	Boos 88	a-dep,mult
black (blacks) X		
0	Batusov 90	angp,mult
π^+ π^- mult[grey] X		
100	Walker 91	mass
nucleus $\bar{p}$		
185	Yokosawa 92	angp,asym,pol
	Yokosawa 90B	angp,asym,pol
	Akchurin 89	angp,asym,pol
	Nurushev 89	angp,asym,asym,pol

$\bar{p}$ deuteron

X		
0	Adamo 92B	cs
0.2 – 0.6	Sedlak 88	cs
mult[γ] X		
0.2	Armstrong 89H	mult,p,pt
mult[π^0] X		
0.2	Armstrong 89H	mult,p,pt
π^+ X		
0	Riedlberger 89	mult,p
π^0 X		
40	Apokin 88C	angp,asym,p
π^- X		
0	Riedlberger 89	mult,p
K_S X		
0 – 2.9	Tosello 89	cs,mult
p X		
0	Riedlberger 89	p
Λ X		
0	Riedlberger 89	p
0 – 2.9	Tosello 89	cs,mult
$\bar{\Lambda}$ X		
0 – 2.9	Tosello 89	cs,mult
γ mult[charged] (neutrals)		
0	Chiba 91B	cs,mult,p
p π^- X		
0 – 0.65	Liu 88	mass,p
p(spect) K_L X		
8.9	Shoemaker 88	p
p(spect) π^0 π^- (π^0's)		
?	Sedlak 88	cs
p K $\bar{K}$ X		
0.5708	Guaraldo 89	p

$\bar{p}$ deuteron

p(spect) π^+ $2\pi^-$ (π^0's)		
?	Sedlak 88	cs
p(spect) $2\pi^+$ $3\pi^-$ (π^0's)		
?	Sedlak 88	cs
p(spect) $3\pi^+$ π^0 $4\pi^-$ (π^0's)		
?	Sedlak 88	cs
p π^-		
0	Adamo 92B	cs
	Riedlberger 89	p
n π^0		
0	Peters 92	–
n η		
0	Peters 92	–
p $\rho(770)^-$		
0	Angelopoulos 88B	p
exotic-nucleon γ		
0	Chiba 91B	–
n 2γ		
0	Peters 92	mass
p π^- meson^0		
0	Gaspero 92	mass
p π^0 π^-		
0	Angelopoulos 88B	p
n π^+ π^-		
0	Angelopoulos 88B	p
< 0.1	Adamo 92	cs
p(spect) π^0 π^-		
?	Sedlak 88	cs
n(spect) π^+ π^-		
0	Riedlberger 89	cs,p
?	Sedlak 88	cs
p(spect) η π^-		
?	Sedlak 88	cs
n $\rho(770)^+$ π^- + n $\rho(770)^0$ π^0 + n $\rho(770)^-$ π^+		
0	Angelopoulos 88B	p
p(spect) $\rho(770)^0$ π^-		
?	Sedlak 88	cs
p(spect) $\omega(783)$ π^-		
?	Sedlak 88	cs
p(spect) $f_2(1270)$ π^-		
?	Sedlak 88	cs
p(spect) $a_2(1320)^0$ π^- + p(spect) $a_2(1320)^-$ π^0		
?	Sedlak 88	cs
n K^+ K^-		
< 0.1	Adamo 92	cs
n(spect) K^+ K^-		
0	Riedlberger 89	cs,p
n(spect) K_S K_L		
?	Sedlak 88	cs
nucleon baryonium γ		
0	Chiba 91B	–
p π^- baryonium		
0 – 0.65	Liu 88	mass,p
Λ K^+ π^-		
0	Riedlberger 89	p
deuteron $\bar{p}$ γ		
0	Baker 88	p
n $3\pi^0$		
0	Peters 92	mass
n π^+ π^0 π^-		
0	Angelopoulos 88B	p
p(spect) π^+ $2\pi^-$		
0	Riedlberger 89	p
?	Sedlak 88	p
p(spect) $\rho(770)^+$ $2\pi^-$		
?	Sedlak 88	cs

$\bar{p}$ deuteron

p(spect) $\rho(770)^0$ π^0 π^-		
?	Sedlak 88	cs
p(spect) $\rho(770)^-$ π^+ π^-		
?	Sedlak 88	cs
p K $\bar{K}$ π		
1 – 3	Guaraldo 89B	p
p(spect) K $\bar{K}$ π		
?	Sedlak 88	p
2n $\bar{n}$ γ		
0	Chiba 90	mass,p
p n $\bar{p}$ γ		
0	Chiba 90	mass,p
2p $\bar{p}$ π^-		
1.6 – 2	Guaraldo 89B	p
2.359 – 2.784	Guaraldo 89	p
p(spect) π^+ π^0 $2\pi^-$		
?	Sedlak 88	p
p $2\pi^+$ $3\pi^-$		
2.359 – 2.784	Guaraldo 89	p
p(spect) $2\pi^+$ $3\pi^-$		
0	Gastaldi 91	mass
	Riedlberger 89	p
?	Sedlak 88	p
p(spect) $\omega(783)$ π^+ π^0 $2\pi^-$		
?	Sedlak 88	cs
p(spect) $2\pi^+$ π^0 $3\pi^-$		
?	Sedlak 88	p

$\bar{p}$ ^{3}He

inelastic		
0.1928	Balestra 88	cs
mult[charged] X		
0	Balestra 89D	cs,mult
0.1928	Balestra 88	mult
charged X		
0	Balestra 91B	mult,p
charged$^-$ X		
0	Balestra 91B	mult,p
π^- X		
0	Balestra 91B	mult,p
K_S X		
0	Balestra 91B	cs,p
0.105	Batusov 90D	cs
Λ X		
0.105	Batusov 90D	cs
Λ X + Σ^0 X		
0	Balestra 91B	cs,p
deuteron (π^+'s) (π^0's) (π^-'s)		
0	Bendiscioli 90	mult,p
$2\pi^+$ $2\pi^-$ X		
0	Zenoni 92	ang,mass
p n (π^+'s) (π^0's) (π^-'s)		
0	Bendiscioli 90	mult,p
2p π^- (π^+'s) (π^0's) (π^-'s)		
0	Bendiscioli 90	mult,p
2n π^+ (π^+'s) (π^0's) (π^-'s)		
0	Bendiscioli 90	mult,p

$\bar{p}$ ^{4}He

X		
0.04 – 0.05	Balestra 89B	cs
0.18	Sedlak 88	cs
0.2 – 0.6	Sedlak 88	cs
0.6077	Batusov 88	cs
charged X		
0	Balestra 91B	mult,p
charged$^-$ X		
0	Balestra 91B	mult,p
vee X		
0.6077	Batusov 89C	cs,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\ ^4He$

π^- X		
0	Balestra 91B	mult,p
K_S X		
0	Balestra 91B	cs,p
0.6077	Batusov 89C	cs,p,pt
	Batusov 88B	cs,p,pt
glueball X		
0.6	Balestra 91	ang,mass
	Balestra 90	–
Λ X		
0.6077	Batusov 89C	cs,p,pt
	Batusov 88B	cs,p,pt
Λ X + Σ^0 X		
0	Balestra 91B	cs,p
$2\pi^\pm$ X		
0.6	Balestra 91	mass
$2K_S$ X		
0.6077	Batusov 89C	cs
$p\ \pi^\pm$ X		
0.6	Balestra 91	mass
$\Lambda\ K_S$ X		
0.6077	Batusov 89C	cs
$2\pi^+\ 2\pi^-$ X		
0	Zenoni 92B	ang,mass
0.6	Zenoni 92	ang,mass
	Balestra 91	ang,mass
$K^\pm\ 3\pi^\pm$ X		
0.6	Balestra 91	mass
$K\ 3\pi^\pm$ X		
0.6	Balestra 91	mass
$2K^\pm\ 2\pi^\pm$ X		
0.6	Balestra 91	mass
$p\ 3\pi^\pm$ X		
0.6	Balestra 91	mass
$3\pi^+\ 3\pi^-$ X		
0.6	Balestra 90	ang,mass
$^4He\ \bar{p}$		
0.6077	Batusov 90B	angp,cs,pwa
	Batusov 88	amp,angp,cs

$\bar{p}$ He

X		
0.519	Iwasaki 91	cs

$\bar{p}$ Li

mult[charged$^+$] X		
40	Boos 88	a-dep,mult
mult[charged$^-$] X		
40	Boos 88	a-dep,mult
mult[grey] X		
40	Boos 88	a-dep,mult
charged$^+$ X		
40	Boos 88	a-dep,mult
charged$^-$ X		
40	Boos 88	a-dep,mult
X star		
40	Boos 88	a-dep,cs
grey X		
40	Boos 88	a-dep,mult
mult[charged$^+$] X star		
40	Boos 88	a-dep,mult
mult[charged$^-$] X star		
40	Boos 88	a-dep,mult
mult[grey] X star		
40	Boos 88	a-dep,mult
charged$^+$ X star		
40	Boos 88	a-dep,mult
charged$^-$ X star		
40	Boos 88	a-dep,mult
grey X star		
40	Boos 88	a-dep,mult

$\bar{p}\ ^7Li$

X		
0.18	Sedlak 88	cs
$J/\psi(1S)$ X		
300	Antoniazzi 92B	cs,p,pt
$\mu^-\ \mu^+$ X		
300	Antoniazzi 92B	mass

$\bar{p}$ Be

annihil		
0.7	Kuzichev 92B	cs
0.7 – 2.5	Kuzichev 92	a-dep,cs
0.95	Kuzichev 92B	cs
1.26 – 2.5	Kuzichev 89	a-dep,cs
$J/\psi(1S)$ X		
125	Tzamarias 90	angp,cs,p,pt
p X		
40	Antipov 92	a-dep,p
	Antipov 90C	a-dep,angp
	Antipov 87	p

$\bar{p}\ ^9Be$

X		
0.18	Sedlak 88	cs
annihil		
1.76	Kuzichev 88	cs

$\bar{p}$ C

annihil		
0.7	Kuzichev 92B	cs
0.7 – 2.5	Kuzichev 92	a-dep,cs
0.95	Kuzichev 92B	cs
1.26 – 2.5	Kuzichev 89	a-dep,cs
mult[charged$^+$] X		
40	Boos 88	a-dep,mult
mult[charged$^-$] X		
40	Boos 88	a-dep,mult
mult[γ] X		
0.2	Armstrong 89H	mult,p,pt
mult[π] X		
0.2	Armstrong 89H	mult,pt
mult[π^+] X		
0.2	Armstrong 89H	mult
mult[π^0] X		
0.2	Armstrong 89H	mult,p,pt
mult[π^-] X		
0.2	Armstrong 89H	mult
mult[grey] X		
40	Boos 88	a-dep,mult
charged$^+$ X		
40	Boos 88	a-dep,mult
charged$^-$ X		
40	Boos 88	a-dep,mult
X star		
40	Boos 88	a-dep,cs
grey X		
40	Boos 88	a-dep,mult
π X		
0	Minor 92	mult,p
p X		
0	Minor 92	mult,p
$\bar{p}$ X		
0.8	Martin 88	angp
1.1	Martin 88	angp
^3H_S X		
0	Batusov 92	cs,mass
^4H_S X		
0	Batusov 92	cs,mass
mult[charged$^+$] X star		
40	Boos 88	a-dep,mult

$\bar{p}$ C

mult[charged$^-$] X star		
40	Boos 88	a-dep,mult
mult[grey] X star		
40	Boos 88	a-dep,mult
charged$^+$ X star		
40	Boos 88	a-dep,mult
charged$^-$ X star		
40	Boos 88	a-dep,mult
grey X star		
40	Boos 88	a-dep,mult
C $\bar{p}$		
0.8	Martin 88	asym
1.1	Martin 88	asym
200	Yokosawa 90	angp,asym

$\bar{p}\ ^{12}C$

X		
0.18	Sedlak 88	cs
0.2 – 0.6	Sedlak 88	cs
p X		
0	Hofmann 90	a-dep,p
	Markiel 88	mult
0.6	Guaraldo 89B	p
deuteron X		
0	Hofmann 90	a-dep,p
	Markiel 88	mult
^3H X		
0	Hofmann 90	a-dep,p
	Markiel 88	mult
^3He X		
0	Markiel 88	mult,p
^4He X		
0	Markiel 88	mult,p
^6He X		
0	Markiel 88	mult
^8He X		
0	Markiel 88	mult
Li X		
0	Markiel 88	mult
$^{12}C\ \bar{p}$		
0.046	Sedlak 88	angp
0.3 – 0.3049	Yavin 89	angp

$\bar{p}$ Nit

π^+ X		
0	Riedlberger 89	mult,p
π^- X		
0	Riedlberger 89	mult,p
p X		
0	Riedlberger 89	mult,p
Λ X		
0	Riedlberger 89	p

$\bar{p}$ Ne

mult[charged] X		
0.193	Guaraldo 89	mult
0.306	Guaraldo 89	mult
0.608	Guaraldo 89	mult
mult[charged] (neutrals)		
0.193	Sedlak 88	cs
0.306	Sedlak 88	cs
0.608	Sedlak 88	cs
charged X		
0	Balestra 89C	mult
0.607	Balestra 89C	mult
π^- 0vee X		
0.607	Tosello 89	mult
π^- X		
0	Balestra 89C	angp,p
0.607	Balestra 89C	angp,p
0.608	Guaraldo 89	p,pt
frag X		
0	Balestra 89C	p
0.607	Balestra 89C	p

$\bar{p}$ Ne

π^- mult[charged] X
0.6084 Guaraldo 89 cor,mult
K_S π^- X
0.607 Tosello 89 mult
Λ π^- X
0.607 Tosello 89 mult
π^- frag X
0 Balestra 89C mult
0.607 Balestra 89C mult

$\bar{p}$ ^{20}Ne

X
0.18 Sedlak 88 cs
0.2 – 0.6 Sedlak 88 cs
charged X
0 Balestra 91B mult,p
charged$^-$ X
0 Balestra 91B mult,p
0Λ π^- X
0.607 Balestra 89 mult,p
π^- X
0 Balestra 91B mult,p
K_S X
0 Balestra 91B cs,p
0.607 Balestra 89 mult,p
glueball X
0.6 Balestra 90B -
p X
0.608 Guaraldo 89B p
Λ X + Σ^0 X
0 Balestra 91B cs,p
π^- mult[charged] (neutrals)
0.607 Guaraldo 89B cor,mult
K_S π^- X
0.607 Balestra 89 mult,p
Λ π^- X
0.607 Balestra 89 mult,p
$3\pi^+$ $3\pi^-$ X
0.6 Balestra 90B ang,mass,pt

$\bar{p}$ Al

annihil
0.7 Kuzichev 92B cs
0.7 – 2.5 Kuzichev 92 a-dep,cs
0.95 Kuzichev 92B cs
1.26 – 2.5 Kuzichev 89 a-dep,cs
p X
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp

p ^{27}Al

X
0.18 Sedlak 88 cs
0.2 – 0.6 Sedlak 88 cs

p S

mult[charged$^+$] X
40 Boos 88 a-dep,mult
mult[charged$^-$] X
40 Boos 88 a-dep,mult
mult[grey] X
40 Boos 88 a-dep,mult
charged$^+$ X
40 Boos 88 a-dep,mult
charged$^-$ X
40 Boos 88 a-dep,mult
X star
40 Boos 88 a-dep,cs
grey X
40 Boos 88 a-dep,mult

$\bar{p}$ S

^{4}H$_S$ X
0 Batusov 92 cs,mass
mult[charged$^+$] X star
40 Boos 88 a-dep,mult
mult[charged$^-$] X star
40 Boos 88 a-dep,mult
mult[grey] X star
40 Boos 88 a-dep,mult
charged$^+$ X star
40 Boos 88 a-dep,mult
charged$^-$ X star
40 Boos 88 a-dep,mult
grey X star
40 Boos 88 a-dep,mult

$\bar{p}$ Ar

2charged X
200 Derado 88 a-dep,cor,mult,p
mult[p] 2charged X
200 Derado 88 a-dep,cor,mult,p

$\bar{p}$ ^{40}Ca

X
0.18 Sedlak 88 cs
0.2 – 0.6 Sedlak 88 cs
p X
0 Hofmann 90 a-dep,p
Markiel 88 mult
deuteron X
0 Hofmann 90 a-dep,p
Markiel 88 mult
^{3}H X
0 Hofmann 90 a-dep,p
Markiel 88 mult
^{3}He X
0 Markiel 88 mult,p
^{4}He X
0 Markiel 88 mult,p
^{6}He X
0 Markiel 88 mult
^{8}He X
0 Markiel 88 mult
Li X
0 Markiel 88 mult

$\bar{p}$ ^{54}Fe

X
0.18 Sedlak 88 cs

$\bar{p}$ Fe

annihil
0.7 Kuzichev 92B cs
0.7 – 2.5 Kuzichev 92 a-dep,cs
0.95 Kuzichev 92B cs
1.26 – 2.5 Kuzichev 89 a-dep,cs

$\bar{p}$ ^{63}Cu

X
0.18 Sedlak 88 cs
0.2 – 0.6 Sedlak 88 cs
p X
0 Hofmann 90 a-dep,p
Markiel 88 mult
deuteron X
0 Hofmann 90 a-dep,p
Markiel 88 mult
^{3}H X
0 Hofmann 90 a-dep,p
Markiel 88 mult
^{3}He X
0 Markiel 88 mult,p
^{4}He X
0 Markiel 88 mult,p

$\bar{p}$ ^{63}Cu

^{6}He X
0 Markiel 88 mult
^{8}He X
0 Markiel 88 mult
Li X
0 Markiel 88 mult

$\bar{p}$ Cu

annihil
0.7 Kuzichev 92B cs
0.7 – 2.5 Kuzichev 92 a-dep,cs
0.95 Kuzichev 92B cs
1.26 – 2.5 Kuzichev 89 a-dep,cs
mult[charged$^+$] X
40 Boos 88 a-dep,mult
mult[charged$^-$] X
40 Boos 88 a-dep,mult
mult[grey] X
40 Boos 88 a-dep,mult
charged$^+$ X
40 Boos 88 a-dep,mult
charged$^-$ X
40 Boos 88 a-dep,mult
X star
40 Boos 88 a-dep,cs
grey X
40 Boos 88 a-dep,mult
$J/\psi(1S)$ X
125 Tzamarias 90 angp,cs,p,pt
p X
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp
frag X
0 Jastrzebski 93 a-dep,cs
mult[charged$^+$] X star
40 Boos 88 a-dep,mult
mult[charged$^-$] X star
40 Boos 88 a-dep,mult
mult[grey] X star
40 Boos 88 a-dep,mult
charged$^+$ X star
40 Boos 88 a-dep,mult
charged$^-$ X star
40 Boos 88 a-dep,mult
grey X star
40 Boos 88 a-dep,mult

$\bar{p}$ ^{92}Mo

p X
0 Hofmann 90 a-dep,p
Markiel 88 mult
deuteron X
0 Hofmann 90 a-dep,p
Markiel 88 mult
^{3}H X
0 Hofmann 90 a-dep,p
Markiel 88 mult
^{3}He X
0 Markiel 88 mult,p
^{4}He X
0 Markiel 88 mult,p
^{6}He X
0 Markiel 88 mult
^{8}He X
0 Markiel 88 mult
Li X
0 Markiel 88 mult

p Mo

fragt X
0 Guaraldo 89 cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}\ ^{98}$Mo

p X		
0	Hofmann 90	a-dep,p
	Markiel 88	mult
deuteron X		
0	Hofmann 90	a-dep,p
	Markiel 88	mult
^{3}H X		
0	Hofmann 90	a-dep,p
	Markiel 88	mult
^{3}He X		
0	Markiel 88	mult,p
^{4}He X		
0	Markiel 88	mult,p
^{6}He X		
0	Markiel 88	mult
^{8}He X		
0	Markiel 88	mult
Li X		
0	Markiel 88	mult

$\bar{p}$ Cd

annihil		
0.7	Kuzichev 92B	cs
0.7 – 2.5	Kuzichev 92	a-dep,cs
0.95	Kuzichev 92B	cs
1.26 – 2.5	Kuzichev 89	a-dep,cs

$\bar{p}\ ^{112}$Cd

annihil		
1.76	Kuzichev 88	cs

$\bar{p}\ ^{115}$In

X		
0.18	Sedlak 88	cs

$\bar{p}$ Xe

X		
0	Andryakov 92	cs
	Andryakov 90	cs
	Barmin 90D	cs
0.4 – 0.9	Andryakov 92	cs
	Andryakov 90	cs
	Barmin 90D	cs
mult[charged] X		
200	Derado 90B	mult
mult[$\pi^\pm$] X		
0	Matveev 92	mult
0.4 – 0.9	Matveev 92	mult
mult[π^0] X		
0	Matveev 92	mult
0.4 – 0.9	Matveev 92	mult
mult[p] X		
0	Matveev 92	mult
0.4 – 0.9	Matveev 92	mult
charged$^-$ X		
200	Derado 90B	p
$\pi^\pm$ X		
0	Andryakov 92	mult
	Dolgolenko 92	mult
	Matveev 92	mult
0.4 – 0.9	Andryakov 92	mult
	Dolgolenko 92	mult
	Matveev 92	mult
π^+ X		
0	Andryakov 90	mult
0.4 – 0.9	Andryakov 90	mult
π^0 X		
0	Andryakov 92	mult
	Dolgolenko 92	mult
	Matveev 92	mult
0.4 – 0.9	Andryakov 92	mult
	Dolgolenko 92	mult
	Matveev 92	mult
π^- X		
0	Andryakov 90	mult
0.4 – 0.9	Andryakov 90	mult
ω(783) X		
0	Dolgolenko 92	cs

$\bar{p}$ Xe

ω(783) X		
0.4 – 0.9	Dolgolenko 92	cs
K^+ X		
0	Andryakov 90	mult
0 – 0.9	Dolgolenko 92	p,pt
0.4 – 0.9	Andryakov 90	mult
K^0 X		
1.05	Guaraldo 89	cs,p
K^- X		
0	Andryakov 90	mult
0.4 – 0.9	Andryakov 90	mult
K_S X		
0	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
	Barmin 90D	cs,p
0 – 0.9	Andryakov 92	p,pt
	Andryakov 90	p
0.4 – 0.9	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
	Barmin 90D	cs,p
200	Derado 90B	a-dep,cs,mult,p,pt
p X		
0	Andryakov 92	mult
	Dolgolenko 92	mult
	Matveev 92	mult
0.4 – 0.9	Andryakov 92	mult
	Dolgolenko 92	mult
	Matveev 92	mult
Λ X + Σ^0 X		
0	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
Λ X		
0	Andryakov 92	cs
	Andryakov 90	cs
	Barmin 90D	cs,p
0 – 0.9	Andryakov 92	p,pt
	Dolgolenko 92	p,pt
	Andryakov 90	p
0.4 – 0.9	Andryakov 92	cs
	Andryakov 90	cs
	Barmin 90D	cs,p
1.05	Guaraldo 89	cs,p
200	Derado 90B	a-dep,cs,mult,p,pt
Σ^0 X		
0	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
mult[π^0] mult[$\pi^\pm$] X		
0	Matveev 92	mult
0.4 – 0.9	Matveev 92	mult
mult[p] mult[$\pi^\pm$] X		
0	Matveev 92	mult
0.4 – 0.9	Matveev 92	mult
mult[p] mult[π^0] X		
0	Matveev 92	mult
0.4 – 0.9	Matveev 92	mult
2charged X		
200	Derado 88	a-dep,cor,mult,p
$\pi^+\ \pi^-$ X		
0	Andryakov 92	mass
	Dolgolenko 92	mass
	Andryakov 90	mass
0.4 – 0.9	Andryakov 92	mass
	Dolgolenko 92	mass
	Andryakov 90	mass
200	Derado 90B	mass

$\bar{p}$ Xe

K_S mult[charged$^-$] X		
200	Derado 90B	cor,mult
mult[p] K_S X		
200	Derado 90B	cor,mult
$K^+\ \bar{K}^0$ X		
1.05	Guaraldo 89	cs,p
$K^0\ \bar{K}^0$ X		
1.05	Guaraldo 89	cs,p
$K^+\ K^-$ X		
0	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
$K^0\ K^-$ X		
1.05	Guaraldo 89	cs,p
$K^+\ K_S$ X		
0	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
$K_S\ K^-$ X		
0	Andryakov 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Andryakov 90	cs
2K_S X		
0	Andryakov 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Andryakov 90	cs
$p\ \pi^-$ X		
0	Andryakov 92	mass
	Dolgolenko 92	mass
	Andryakov 90	mass
0.4 – 0.9	Andryakov 92	mass
	Dolgolenko 92	mass
	Andryakov 90	mass
200	Derado 90B	mass
Λ mult[charged] X		
200	Derado 90B	mult
Λ mult[charged$^-$] X		
200	Derado 90B	cor,mult
mult[p] Λ X		
200	Derado 90B	cor,mult
Λ charged$^-$ X		
200	Derado 90B	p
$\Lambda\ K^+$ X		
0	Barmin 90D	cs
0.4 – 0.9	Barmin 90D	cs
1.05	Guaraldo 89	cs,p
$\Lambda\ K^+$ X + $\Sigma^0\ K^+$ X		
0	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Dolgolenko 92	cs
	Andryakov 90	cs
$\Lambda\ K^0$ X		
1.05	Guaraldo 89	cs,p
$\Lambda\ K^-$ X		
0	Barmin 90D	cs
0.4 – 0.9	Barmin 90D	cs
$\Lambda\ K_S$ X		
0	Barmin 90D	cs
0.4 – 0.9	Barmin 90D	cs
$\Lambda\ K_S$ X + $\Sigma^0\ K_S$ X		
0	Andryakov 92	cs
	Andryakov 90	cs
0.4 – 0.9	Andryakov 92	cs
	Andryakov 90	cs

$\bar{p}$ Xe

$\Sigma^+ K^+$ X
0 Dolgolenko 92 cs
0.4 – 0.9 Dolgolenko 92 cs

$\Sigma^+ K^+$ X + $\Sigma^- K^+$ X
0 Andryakov 92 cs
Andryakov 90 cs
0.4 – 0.9 Andryakov 92 cs
Andryakov 90 cs

$\Sigma^+ K^0$ X + $\Sigma^- K^0$ X
0 Andryakov 92 cs
Andryakov 90 cs
0.4 – 0.9 Andryakov 92 cs
Andryakov 90 cs

$\Sigma^0 K^+$ X
0 Dolgolenko 92 cs
0.4 – 0.9 Dolgolenko 92 cs

$\Sigma^- K^+$ X
0 Dolgolenko 92 cs
0.4 – 0.9 Dolgolenko 92 cs

mult[p] 2charged X
200 Derado 88 a-dep,cor,mult,p

3γ X
0 Dolgolenko 92 mass
0.4 – 0.9 Dolgolenko 92 mass

$K \bar{K} \pi^\pm$ X
0 Andryakov 92 mult
Dolgolenko 92 mult
0.4 – 0.9 Andryakov 92 mult
Dolgolenko 92 mult

$K \bar{K} \pi^0$ X
0 Andryakov 92 mult
Dolgolenko 92 mult
0.4 – 0.9 Andryakov 92 mult
Dolgolenko 92 mult

$p K \bar{K}$ X
0 Andryakov 92 mult
Dolgolenko 92 mult
0.4 – 0.9 Andryakov 92 mult
Dolgolenko 92 mult

$\Lambda \bar{K} \pi^\pm$ X + $\bar{\Lambda} K \pi^\pm$ X
0 Andryakov 92 mult
Dolgolenko 92 mult
0.4 – 0.9 Andryakov 92 mult
Dolgolenko 92 mult

$\Lambda \bar{K} \pi^0$ X + $\bar{\Lambda} K \pi^0$ X
0 Andryakov 92 mult
Dolgolenko 92 mult
0.4 – 0.9 Andryakov 92 mult
Dolgolenko 92 mult

$\Lambda K^+ K_S$ X
0 Barmin 90D cs
0.4 – 0.9 Barmin 90D cs

$\Lambda 2K_S$ X
0 Barmin 90D cs
0.4 – 0.9 Barmin 90D cs

$p \Lambda \bar{K}$ X + $p \bar{\Lambda} K$ X
0 Andryakov 92 mult
Dolgolenko 92 mult
0.4 – 0.9 Andryakov 92 mult
Dolgolenko 92 mult

5γ X
0 Dolgolenko 92 mass
0.4 – 0.9 Dolgolenko 92 mass

$\bar{p}$ Ta

X inelastic
4 Miyano 88B cs

K_S X
4 Tosello 89 angp,p
Miyano 88B cs

Λ X
4 Tosello 89 angp,p
Miyano 88B cs

$\bar{\Lambda}$ X
4 Miyano 88B cs

$\bar{p}$ Ta

K_S mult[charged] X
4 Miyano 88B mult

K_S mult[charged$^+$] X
4 Miyano 88B mult

K_S mult[charged$^-$] X
4 Miyano 88B mult

$2K_S$ X
4 Miyano 88B cs

p mult[π^+] X
6.066 Guaraldo 89 cor,mult

Λ mult[charged] X
4 Miyano 88B mult

Λ mult[charged$^+$] X
4 Miyano 88B mult

Λ mult[charged$^-$] X
4 Miyano 88B mult

ΛK_S X
4 Miyano 88B cs

$\bar{\Lambda} K_S$ X
4 Miyano 88B cs

2Λ X
4 Miyano 88B cs

$\Lambda \bar{\Lambda}$ X
4 Miyano 88B cs

$2\Lambda K_S$ X
4 Miyano 88B cs

$\bar{p}$ Wt

$J/\psi(1S)$ X
125 Tzamarias 90 angp,cs,p,pt

$\psi(2S)$ X
125 Tzamarias 90 angp,cs,p,pt

$\mu^- \mu^+$ X
125 Freudenreich 90 ang,angp,mass,p,pt
Anassontzis 87 ang,angp,mass,p,pt
150 Freudenreich 90 ang,angp,mass,p,pt

$\bar{p}$ Pt

$\mu^- \mu^+$ X
150 Freudenreich 90 mass,p

$\bar{p}$ ^{197}Au

X
0.18 Sedlak 88 cs

$\bar{p}$ Pb

annihil
0.7 Kuzichev 92B cs
0.7 – 2.5 Kuzichev 92 a-dep,cs
0.95 Kuzichev 92B cs
1.26 – 2.5 Kuzichev 89 a-dep,cs

mult[charged$^+$] X
40 Boos 88 a-dep,mult

mult[charged$^-$] X
40 Boos 88 a-dep,mult

mult[grey] X
40 Boos 88 a-dep,mult

charged$^+$ X
40 Boos 88 a-dep,mult

charged$^-$ X
40 Boos 88 a-dep,mult

X star
40 Boos 88 a-dep,cs

grey X
40 Boos 88 a-dep,mult

$\bar{p}$ Pb

p X
40 Antipov 92 a-dep,p
Antipov 90C a-dep,angp

mult[charged$^+$] X star
40 Boos 88 a-dep,mult

mult[charged$^-$] X star
40 Boos 88 a-dep,mult

mult[grey] X star
40 Boos 88 a-dep,mult

charged$^+$ X star
40 Boos 88 a-dep,mult

charged$^-$ X star
40 Boos 88 a-dep,mult

grey X star
40 Boos 88 a-dep,mult

$\bar{p}$ ^{208}Pb

X
0.18 Sedlak 88 cs

$\bar{p}$ ^{209}Bi

hypernucleus X
0.1 Campagnolle 89 cs

$\bar{p}$ ^{238}U

p X
0 Hofmann 90 a-dep,p
Markiel 88 mult

fragt X
0 Hofmann 92 mass,p

hypernucleus X
0.1 Campagnolle 89 cs
0.105 Armstrong 92B –

deuteron X
0 Hofmann 90 a-dep,p
Markiel 88 mult

^{3}H X
0 Hofmann 90 a-dep,p
Markiel 88 mult

^{3}He X
0 Markiel 88 mult,p

^{4}He X
0 Markiel 88 mult,p

^{6}He X
0 Markiel 88 mult

^{8}He X
0 Markiel 88 mult

Li X
0 Markiel 88 mult

2fragt X
0 Hofmann 92 ang

$\bar{p}$ U

mult[frag]
0 Guaraldo 89B cs

mult[γ] X
0.2 Armstrong 89H mult,p,pt

mult[π^+] X
0.2 Armstrong 89H mult

mult[π^0] X
0.2 Armstrong 89H mult,p,pt

mult[π^-] X
0.2 Armstrong 89H mult

π X
0 Minor 92 mult,p

π^+ X
0.607 Guaraldo 89 angp

p X
0 Minor 92 mult,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

$\bar{p}$ U

p X		
0.607	Guaraldo 89	angp
n X		
0	Guaraldo 89B	p
	Angelopoulos 88	p

Λ Cu

Ω^- X		
300 – 800	Diehl 91	pol
	Yokosawa 91	pol

$\Sigma^+ \gamma^*$

Σ^+		
375	Chen 92B	pol

Σ^0 Cu

Ω^- X		
300 – 800	Diehl 91	pol
	Yokosawa 91	pol

$\Sigma^- e^-$

$\Sigma^- e^-$		
360	Buenerd 92	angp

$\Sigma^- p$

X		
360	Buenerd 92	cs
n Λ		
360	Buenerd 92	angp
n Σ^0		
360	Buenerd 92	angp
p Σ^-		
360	Buenerd 92	angp

Σ^- Be

$X(3100)^+$ X		
135	Augustin 88C	–
$X(3100)^0$ X		
135	Augustin 88C	–
$X(3100)^-$ X		
135	Augustin 88C	–
$\Xi_c(2460)^+$ X		
135	Klein 89C	p
$\Xi_c(2460)^0$ X		
135	Klein 89C	p
Ω_c X		
135	Klein 89C	p
$\bar{p}$ Λ $2\pi^+$ X		
135	Augustin 88C	mass
$\bar{p}$ Λ π^+ π^- X		
135	Augustin 88C	mass
$\bar{p}$ Λ $2\pi^+$ π^- X		
135	Augustin 88C	mass

Σ^- Wt

γ X		
0	Gall 88	p
0.1728	Hertzog 88	p

Σ^- Pb

γ X		
0	Gall 88	p
0.1728	Hertzog 88	p

$\Xi^- p$

X		
360	Buenerd 92	cs
n Ξ^0		
360	Buenerd 92	angp
p Ξ^-		
135	Buenerd 92	angp
360	Buenerd 92	angp

Ξ^- nucleus

hypernucleus(S = −2) X		
?	Aoki 91	–
	Aoki 91D	–
	Aoki 91E	–
^{10}Be$_{SS}$ X		
0	May 89B	–

Ξ^- Be

$\Xi(1530\,P_{13})^0$ X		
116	Schneider 90	cs,p,pt
$\Xi(1530\,P_{13})^-$ X		
116	Schneider 90	cs,p,pt
Ξ^0 charged X		
116	Schneider 90	cs,p,pt
Ξ^0 π^- X		
116	Schneider 90	mass
Ξ^- π^+ X		
116	Schneider 90	mass

Ξ^- ^{12}C

^{7}Li ^{6}He$_{SS}$		
0	May 89B	–

Ω^- p

p Ω^-		
360	Buenerd 92	angp

nucleus p

fragb X		
?	Webber 90	a-dep

nucleus nucleus

X		
1000 – 10^5	Kawamura 89	–
inelastic		
2 – 3200	Bartke 89	cs
e^+ X		
< 1.6	Pokotilovsky 93	a-dep,mass,p
$\mu^\pm$ X		
$5 \cdot 10^4$ – 10^7	Ahlen 92	a-dep
mult[charged$^-$] X		
5 – 3200	Bartke 89	mult
mult[γ] X		
1000 – 10^5	Kawamura 89	p
mult[μ] X		
10^4 – 10^7	Dasgupta 90	–
neutral X		
232 – 6400	Bartke 89	et
charged$^-$ X		
200 – 3200	Bartke 89	p
jet X		
10^6	Avakyan 91D	pt
hadron X		
960 – 6400	Bartke 89	et
meson X		
40 – 3200	Bartke 89	mult
π^- X		
1 – 3200	Bartke 89	pt
48 – 64	Agakishiev 89	mult,pt
Λ X		
48 – 64	Agakishiev 89	mult,p,pt
nucleus mult[fragb]		
?	Schmidt 92B	a-dep,cs
fragb X		
12 – 3200	Bartke 89	a-dep,angp,p,pt
fragt X		
16.8 – 3200	Bartke 89	a-dep,cs
e^- e^+ X		
< 1.6	Pokotilovsky 93	a-dep,mass,p

nucleus nucleus

$2\pi^-$ X		
36 – 3200	Bartke 89	angp,cor
$2p$ X		
4.2 – 50.4	Bartke 89	angp,cor
	Angelov 88	angp,mass,p
nucleus p fragt		
?	Schmidt 92B	a-dep,cs

nucleus He

fragb X		
?	Webber 90	a-dep

nucleus C

fragb X		
?	Webber 90	a-dep

nucleus Ta

inelastic		
0.59 – 2.3	Villari 91	cs

fragb nucleus

inelastic		
4.5	Ahmad 89C	cs
	Khan 89	cs
4.5 – 45	Ahmad 91C	cs

deuteron p

mult[π^-] X		
3.392	Gulkanyan 89	mult
π^- X		
1	Viryasov 89	angp,p
p X		
2.5	Punjabi 89	pt
3.33	Shimansky 88	angp
3.505	Cheung 92	pol
	Punjabi 89	ang,pt
9	Azhgirey 91	angp,p
	Azhgirey 91B	angp
deuteron X		
9	Azhgirey 88	angp
dibaryon X		
3.07	Tatishcheff 92	–
3.505	Tatishcheff 92	–
$2p$ X		
3.07	Tatishcheff 92	dme,mass
3.505	Tatishcheff 92	dme,mass
deuteron p		
2.38 – 12	Avdejchikov 88	asym
3	Ableev 88	pol
deuteron $N(1440\,B)^+$		
9	Azhgirey 88	angp
deuteron $N(1520\,B)^+$		
9	Azhgirey 88	angp
deuteron $N(1680\,F_{15})^+$		
9	Azhgirey 88	angp
dibaryon p		
1.7 – 2.28	Kawai 88	cs
3.33	Glagolev 90	cs
	Glagolev 89B	cs
dibaryon n		
1.7 – 2.28	Kawai 88	cs
3.33	Glagolev 90	cs
	Glagolev 89B	cs
^{2}He n		
0.5172	Motobayashi 88	pol
^{3}He π^0		
1.28	Boudard 88	pol
3.77	Plouin 92	p
^{3}He η		
2.038 – 2.134	Mayer 89	cs
3.146	Berger 88C	angp,pol
3.149	Berger 88C	angp,pol
3.155	Berger 88C	angp,pol

deuteron p

^{3}He η
3.165 Berger 88C angp,pol
3.229 Berger 88C angp,pol
3.77 Plouin 92 p

2p n
0.8889 Motobayashi 89 angp,cs,pol
1.112 – 1.891 Mcnaughton 92 pol
1.198 Kox 91 angp,pol
1.7 – 2.28 Kawai 88 mass
3.33 Glagolev 90 mass
Glagolev 89B mass
Balgansuren 88 mass,p
Glagolev 88 angp
Zielinsky 88 cs,mass

p(spect) p n
1.829 Yokosawa 90B –
Delesquen 88 –
1.89 Yokosawa 90B –
Delesquen 88 –

deuteron n π^+
3.3 Glagolev 91 angp,cs,mass,p

dibaryon p π^+
3.33 Glagolev 90 cs
Glagolev 89B cs

3p π
2 – 3.8 Tsuboyama 88 angp,cs,mass
3.33 Glagolev 89C angp,col,p

p 2n π^+
3.33 Glagolev 90 mass
Glagolev 89B mass
Balgansuren 88 mass,p
Zielinsky 88 cs,mass

p(spect) 2p π
2 – 3.8 Tsuboyama 88 angp,cs,mass

deuteron p π^+ π
3.3 Glagolev 91 angp,cs,mass,p

deuteron nucleus

inelastic
3.392 Gulkanyan 89 cs

mult[charged] X
3.392 Gulkanyan 89 mult

mult[π^-] X
3.392 Gulkanyan 89 mult

K^+ X
5.779 Schnetzer 89 angp,cs,p

mult[htrack] shower X
9 Bobodjanov 91 mult

mult[htrack] grey X
9 Bobodjanov 91 mult

mult[htrack] black X
9 Bobodjanov 91 mult

p π^+ X
8.4 Grishin 88B mass

nucleus deuteron
3.392 Gulkanyan 89 cs

deuteron deuteron

X
1.5 – 4 Kishida 89 cs

mult[neutral] X
(124) Tannenbaum 89 et,p

charged X
(124) Fischer 88 a-dep,p,pt

charged $^-$ X
(124) Fischer 88 a-dep,p,pt

hadron X
(126) Akesson 89 et

deuteron deuteron

π^+ X
(124) Fischer 88 a-dep,p,pt

π^- X
(124) Fischer 88 a-dep,p,pt

K^+ X
(124) Fischer 88 a-dep,p,pt

K^- X
(124) Fischer 88 a-dep,p,pt

p X
9 Azhgirey 91 angp,p
Azhgirey 91B angp
(124) Fischer 88 a-dep,p,pt

p(spect) X
12.2 Batyunya 88 cs,p

$\bar{p}$ X
(124) Fischer 88 a-dep,p,pt

deuteron X
9 Azhgirey 88 angp

p(spect) mult[charged] X
12.2 Batyunya 88 mult

2deuteron
2.38 Avdejchikov 88 asym
4.18 Avdejchikov 88 asym

^{4}He γ
0.0335 – 0.436 Weller 88 pol

He γ
2.31 Goldzahl 91 angp

He π^0
2.31 Goldzahl 91 angp

deuteron ^{4}He

^{3}He ^{3}H
0.3485 – 0.4346 Vuaridel 88 angp,cs,pol

^{4}He deuteron
0.0571 – 0.1344 Barit 91 pwa
0.2116 Elsener 88 pol

deuteron He

p X
3.505 Punjabi 89 ang,pt

deuteron ^{7}Li

2p X
8.9 Averichev 89 cor,mass

deuteron Be

inelastic
3.4 Gulkanyan 91B cs

mult[π^-] X
2.17 Viryasov 91B mult

π^- X
2.17 Viryasov 91B angp,p,pt
3.392 Viryasov 92 angp,cs,p,pt
3.4 Gulkanyan 91B angp,mult,p,pt
5.568 Viryasov 92 angp,cs,p,pt

deuteron C

inelastic
3.392 Gulkanyan 89 cs
8.4 Grigalashvil 88 cs

mult[charged] X
3.392 Gulkanyan 89 mult
8.4 Mekhtiev 88 et

mult[charged $^-$] X
4.6 Grigalashvil 88 a-dep,mult
8.4 Backovic 92 cor,mult,p
Batskovich 91 cor,mult,p
Grigalashvil 88 a-dep,mult

deuteron C

mult[π^-] X
2.17 Viryasov 91B mult
3.392 Gulkanyan 89 mult
9 Afanasiev 91 a-dep,mult

mult[p] X
4.2 Gulkanyan 88D mult
8.4 Baldin 88C angp,cor
Simic 88B angp,mult,p,pt

charged X
3.392 Gulkanyan 89 mult
4.6 Grigalashvil 88 a-dep,mult
8.4 Mekhtiev 88 et,mult

charged $^-$ X
4.6 Grigalashvil 88 a-dep,mult
8.4 Grigalashvil 88 a-dep,mult

$\pi^\pm$ X
3.953 Baldin 92 cs
4.5 Baldin 92 cs
5.198 Baldin 92 cs

π^- X
1 Viryasov 89 angp,cs,p,pt
2 Viryasov 90 angp,p,pt
2.17 Viryasov 91B angp,p,pt
3.392 Gulkanyan 92 angp,p
Viryasov 92 angp,cs,p,pt
Gulkanyan 91 angp,cs,mult,p,pt
Gulkanyan 89 cs,mult
3.4 Gulkanyan 91B angp,mult,p,pt
6.6 Viryasov 90 angp,p,pt
8.266 Viryasov 92 angp,cs,p,pt
8.4 Backovic 92B angp,p
Backovic 91 a-dep,p,pt
Baatar 90 angp,et,p,pt
Agakishiev 89B angp,mult,p
9 Afanasiev 91 p

$K^\pm$ X
3.953 Baldin 92 cs
4.5 Baldin 92 cs
5.198 Baldin 92 cs

p X
1.2 Beznogikh 91B p,pol
1.6 Beznogikh 91B p,pol
Beznogikh 88 angp,asym
2 Beznogikh 91B p,pol
2.38 Avdejchikov 88 asym,p
2.4 Beznogikh 91 angp
3.2 Beznogikh 91 angp
3.392 Gulkanyan 89 mult
3.505 Punjabi 89 ang,pt
4 Beznogikh 91 angp
4.2 Beznogikh 91B p,pol
Gulkanyan 88D a-dep,angp,cor,cs,mult,p
8.4 Backovic 92C a-dep,angp,p
Beznogikh 91 angp
Bekmirzaev 88 a-dep,angp,mult,p,pt

deuteron X
1.6 Beznogikh 88 angp,asym
2 Kishida 92 angp,cs
2.38 Avdejchikov 88 asym,p
2.4 Kishida 92 angp,cs
3 Kishida 92 angp,cs
4 Kishida 92 angp,cs
9 Azhgirey 88 angp

dibaryon X
8.4 Didenko 91B ang

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

deuteron C

^{3}H X
2.38 Avdejchikov 88 asym,p

tribaryon X
8.4 Didenko 91B ang

^{3}He X
2.38 Avdejchikov 88 asym,p

He X
2.38 Avdejchikov 88 asym,p

(p's) ($\pi^{\pm}$'s) X
8.4 Baatar 91 col,mult,p

charged (chargeds) X
8.4 Angelov 90 angp,mult,p
Angelov 90B angp,mult,p

2charged^{+} X
8.4 Angelov 88 ang,cor

π^{+} charged^{+} X
8.4 Angelov 88 ang,cor

π^{-} charged^{+} X
8.4 Angelov 88 ang,cor

π^{+} π^{-} X
8.4 Angelov 88 ang,cor

2π^{-} X
8.4 Simic 92 ang
Angelov 88 ang,cor

p (p's) X
8.4 Angelov 88 angp,col

p charged^{+} X
8.4 Angelov 88 ang,cor

p π^{-} X
8.4 Simic 92 ang,p
Angelov 88 ang,cor
Gulkanyan 88 ang,angp,cor,p,pt

2p X
1.6 Beznogikh 91B cor,p,pol
3.2 Beznogikh 91 angp,cor
4 Budilov 90 angp,cor,p
8.4 Simic 92 ang,p,pt
Angelov 88 ang,cor
Pluta 88B angp,cor,p
Zielinsky 88 cs,mass

deuteron p X
1.6 Beznogikh 91B cor,p,pol

2p (p's) X
4.2 Baldin 90C angp,cor,mass

mult[fragt] mult[fragb] mult[charged^{+}] mult[charged^{-}] X
8.4 Simic 90 angp,mult,p,pt

deuteron ^{12}C

p X
0.4981 Ieiri 89 angp,p,pol
9 Azhgirey 91 angp,p
Azhgirey 91B angp
9.1 Ableev 91B angp,p,pol
Ableev 88 cs,pol

$\bar{p}$ X
8.982 Baldin 90B p

^{11}C X
8.982 Kozma 89B cs

deuteron Al

mult[π^{-}] X
9 Afanasiev 91 a-dep,mult

π^{-} X
9 Afanasiev 91 p

deuteron X
2 Kishida 92 angp,cs

deuteron Al

deuteron X
3 Kishida 92 angp,cs
4 Kishida 92 angp,cs

deuteron Ti

p X
3.505 Punjabi 89 ang,pt

deuteron ^{58}Ni

p X
0.4981 Ieiri 89 angp,p,pol

deuteron Cu

mult[π^{-}] X
9 Afanasiev 91 a-dep,mult

π^{-} X
9 Afanasiev 91 p

^{24}Na X
9 Kozma 86 cs

^{28}Mg X
9 Kozma 86 cs

^{42}KK X
9 Kozma 86 cs

^{43}KK X
9 Kozma 86 cs

^{43}Sc X
9 Kozma 86 cs

^{44}Sc X
9 Kozma 86 cs

^{46}Sc X
9 Kozma 86 cs

^{47}Sc X
9 Kozma 86 cs

^{48}Sc X
9 Kozma 86 cs

^{48}Va X
9 Kozma 86 cs

^{48}Cr X
9 Kozma 86 cs

^{51}Cr X
9 Kozma 86 cs

^{52}Mn X
9 Kozma 86 cs

^{54}Mn X
9 Kozma 86 cs

^{56}Mn X
9 Kozma 86 cs

^{53}Fe X
9 Kozma 86 cs

^{59}Fe X
9 Kozma 86 cs

^{55}Co X
9 Kozma 86 cs

^{56}Co X
9 Kozma 86 cs

^{57}Co X
9 Kozma 86 cs

^{58}Co X
9 Kozma 86 cs

^{56}Ni X
9 Kozma 86 cs

^{57}Ni X
9 Kozma 86 cs

deuteron ^{93}Nb

fragt X
8.982 Damdinsuren 89B cs

deuteron Ag

fragt X
8.982 Damdinsuren 89B cs

deuteron Sn

p X
3.505 Punjabi 89 ang,pt

deuteron ^{159}Tb

fragt X
8.982 Damdinsuren 89B cs

deuteron Ta

mult[charged] X
4.6 Grigalashvil 88 a-dep,mult

mult[charged^{-}] X
4.6 Grigalashvil 88 a-dep,mult

charged X
4.6 Grigalashvil 88 a-dep,mult

charged^{-} X
4.6 Grigalashvil 88 a-dep,mult

π X
8.4 Gulkanyan 88C mult,p

π^{+} X
8.4 Gulkanyan 88C mult,p

π^{0} X
8.4 Gulkanyan 88C mult,p

π^{-} X
8.4 Backovic 92B angp,p
Agakishiev 91 a-dep,angp
Backovic 91 a-dep,p,pt
Gulkanyan 88C mult,p

p X
4.2 Gulkanyan 88D a-dep,angp,cor,cs,mult,p
8.4 Backovic 92C a-dep,angp,p
Armutlijsky 89 a-dep,angp,mult,p,pt
Bekmirzaev 88 a-dep,angp,mult,p,pt

deuteron Au

2p X
4 Budilov 90 angp,cor,p

deuteron ^{197}Au

fragt X
8.982 Damdinsuren 89B cs

deuteron Pb

mult[π^{-}] X
9 Afanasiev 91 a-dep,mult

mult[n] X
9 Voronko 88 cs

π^{-} X
9 Afanasiev 91 p

K^{+} X
5.779 Schnetzer 89 angp,cs,p

n X
3.392 Daniel 92 angp,p

fragt X
8.982 Damdinsuren 89B cs

μ^{-} μ^{+} X
4.5 Afanasiev 90B ang,cs,mass,p,pt

2p X
8.9 Averichev 89 cor,mass

deuteron p X
8.9 Averichev 89 cor,mass

deuteron deuteron

inelastic
12.2 Batyunya 87 cs

mult[charged] (neutrals)
12.2 Batyunya 87 cs

K_S X
12.2 Coc 92 mult,p,pt

deuteron deuteron

Λ X		
12.2	Coc 92	mult,p,pt
$\bar{\Lambda}$ X		
12.2	Coc 92	mult
p(spect) $\bar{p}$(spect) X		
12.2	Batyunya 87G	

deuteron C

0K_S charged X		
12.2	Coc 92	mult
0Λ charged X		
12.2	Coc 92	mult
0vee charged$^+$ X		
12.2	Coc 92	pt
0K_S charged$^+$ X		
12.2	Coc 92	mult
0Λ charged$^+$ X		
12.2	Coc 92	mult
0K_S charged$^-$ X		
12.2	Coc 92	mult
0Λ charged$^-$ X		
12.2	Coc 92	mult
0vee charged$^-$ X		
12.2	Coc 92	pt
0K_S shower X		
12.2	Coc 92	mult
0Λ shower X		
12.2	Coc 92	mult
0K_S shower$^+$ X		
12.2	Coc 92	mult
0Λ shower$^+$ X		
12.2	Coc 92	mult
0K_S shower$^-$ X		
12.2	Coc 92	mult
0Λ shower$^-$ X		
12.2	Coc 92	mult
K_S X		
12.2	Coc 92	mult,p,pt
Λ X		
12.2	Coc 92	mult,p,pt
$\bar{\Lambda}$ X		
12.2	Coc 92	mult
vee charged$^+$ X		
12.2	Coc 92	pt
vee charged$^-$ X		
12.2	Coc 92	pt
K_S charged X		
12.2	Coc 92	mult
K_S charged$^+$ X		
12.2	Coc 92	mult
K_S charged$^-$ X		
12.2	Coc 92	mult
K_S shower X		
12.2	Coc 92	mult
K_S shower$^+$ X		
12.2	Coc 92	mult
K_S shower$^-$ X		
12.2	Coc 92	mult
Λ charged X		
12.2	Coc 92	mult
Λ charged$^+$ X		
12.2	Coc 92	mult
Λ charged$^-$ X		
12.2	Coc 92	mult
Λ shower X		
12.2	Coc 92	mult
Λ shower$^+$ X		
12.2	Coc 92	mult
Λ shower$^-$ X		
12.2	Coc 92	mult

deuteron Ta

mult[charged] X		
12.2	Andreev 90B	mult
mult[p] X		
12.2	Andreev 90B	mult
charged X		
12.2	Andreev 90B	mult
charged$^-$ X		
12.2	Andreev 90B	mult
shower X		
12.2	Andreev 90B	mult
p X		
12.2	Andreev 90B	mult
mult[p] shower X		
12.2	Andreev 90B	mult
p mult[π^+] X		
12.2	Andreev 90B	mult
p mult[π^-] X		
12.2	Andreev 90B	mult
p mult[shower] X		
12.2	Andreev 90B	mult

deuteron Pb

0K_S charged X		
12.2	Coc 92	mult
0Λ charged X		
12.2	Coc 92	mult
0K_S charged$^+$ X		
12.2	Coc 92	mult
0Λ charged$^+$ X		
12.2	Coc 92	mult
0vee charged$^+$ X		
12.2	Coc 92	pt
0vee charged$^-$ X		
12.2	Coc 92	pt
0K_S charged$^-$ X		
12.2	Coc 92	mult
0Λ charged$^-$ X		
12.2	Coc 92	mult
0K_S shower X		
12.2	Coc 92	mult
0Λ shower X		
12.2	Coc 92	mult
0K_S shower$^+$ X		
12.2	Coc 92	mult
0Λ shower$^+$ X		
12.2	Coc 92	mult
0K_S shower$^-$ X		
12.2	Coc 92	mult
0Λ shower$^-$ X		
12.2	Coc 92	mult
K_S X		
12.2	Coc 92	mult,p,pt
Λ X		
12.2	Coc 92	mult,p,pt
$\bar{\Lambda}$ X		
12.2	Coc 92	mult
vee charged$^+$ X		
12.2	Coc 92	pt
vee charged$^-$ X		
12.2	Coc 92	pt
K_S charged X		
12.2	Coc 92	mult
K_S charged$^+$ X		
12.2	Coc 92	mult
K_S charged$^-$ X		
12.2	Coc 92	mult
K_S shower X		
12.2	Coc 92	mult
K_S shower$^+$ X		
12.2	Coc 92	mult

deuteron Pb

K_S shower$^-$ X		
12.2	Coc 92	mult
Λ charged X		
12.2	Coc 92	mult
Λ charged$^+$ X		
12.2	Coc 92	mult
Λ charged$^-$ X		
12.2	Coc 92	mult
Λ shower X		
12.2	Coc 92	mult
Λ shower$^+$ X		
12.2	Coc 92	mult
Λ shower$^-$ X		
12.2	Coc 92	mult

^{3}H p

X		
5	Abdullin 89	cs
charged (neutrals)		
5	Abdullin 89	cs
p X		
5	Abdullin 89B	angp
	Abdullin 89F	cs,mult,p
n X		
5	Abdullin 89F	cs,mult,p
^{3}He X		
9	Avramenko 92B	cs
	Avramenko 91	cs
2charged (neutrals)		
5	Abdullin 89	cs
3charged (neutrals)		
5	Abdullin 89	cs
deuteron p n (π^0's)		
5	Abdullin 89	cs
4charged (neutrals)		
5	Abdullin 89	cs
2p 2n (π^0's)		
5	Abdullin 89	cs
deuteron 2n π^+ (π^0's)		
5	Abdullin 89	cs
p 3n π^+ (π^0's)		
5	Abdullin 89	cs
^{3}H p		
5	Abdullin 89	angp,cs
	Abdullin 89C	cs
deuteron p n		
5	Abdullin 90D	angp,cs,mass,p
	Abdullin 89	cs
	Abdullin 89C	cs
	Abdullin 89D	ang,cs,p
	Abdullin 89F	angp,p
dibaryon 2p		
5	Abdullin 90B	cs
dibaryon p n		
5	Abdullin 90B	cs
dibaryon 2n		
5	Abdullin 88B	cs
^{3}H p π^0		
5	Abdullin 89	cs
^{3}H n π^+		
5	Abdullin 89	cs
tribaryon p π^+		
5	Abdullin 90C	cs
tribaryon p π^-		
5	Abdullin 90B	cs
tribaryon n π^-		
5	Abdullin 90B	cs
	Abdullin 90C	cs
2p 2n		
5	Abdullin 88B	angp,cs,mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{3}H p

deuteron 2p π^-
5 Abdullin 89F angp,p
Abdullin 89G cs,mass,p

deuteron p n π^0
5 Abdullin 89F angp,p

dibaryon 2n π^0
5 Abdullin 88B cs

3p n π^-
5 Abdullin 90B angp,cs,mass,p
Abdullin 90C cs,mass,p
Abdullin 89F angp,p

2p 2n π^0
5 Abdullin 89F angp,p
Abdullin 88B angp,cs,mass

p 3n π^+
5 Abdullin 90C cs,mass,p
Abdullin 89F angp,p

^{3}H deuteron

^{3}H p n
0.4106 Blagus 91 angp
0.4468 Blagus 91 angp

^{3}H C

^{3}He X
9 Avramenko 91 cs

^{3}H Ne

^{3}He mult[p] mult[$\pi^\pm$] X
9 Abdurakhimov 91 a-dep,cs,mult

^{3}H Mg

^{3}He (charged-hadrons) X
9 Avramenko 92B angp,cs,mult

^{3}He mult[p] mult[$\pi^\pm$] X
9 Abdurakhimov 91 a-dep,cs,mult

^{3}H Al

^{3}He X
9 Avramenko 91 cs

^{3}H Cu

^{3}He X
9 Avramenko 92B cs
Avramenko 91 cs

^{3}H Pb

^{3}He X
9 Avramenko 92B cs
Avramenko 91 cs

^{3}He p

X
13.5 Glagolev 90B cs

charged X
5 Abdullin 89H cs

p X
5 Abdullin 89F cs,mult,p

n X
5 Abdullin 89F cs,mult,p

anomalon X
5 Abdullin 89H cs

deuteron X
4.8 Zielinsky 88 cs,mass

^{3}H X
6.8 Ableev 91 angp

mult[charged] (neutrals) X
13.5 Glagolev 90B cs,mult

deuteron dibaryon
5 Abdullin 88D cs

^{3}He p

tribaryon p
5 Abdullin 89E cs
Abdullin 88C cs

^{3}He p
13.5 Glagolev 90B angp,cs

deuteron 2p
5 Abdullin 89D ang,cs,p
Abdullin 89F angp,p
Abdullin 88 ang,angp,cs,p

deuteron n $\Delta(1232\,P_{33})^{++}$
5 Abdullin 88D cs,mass

dibaryon 2p
5 Abdullin 89E cs

dibaryon p n
5 Abdullin 88D cs

dibaryon 2n
5 Abdullin 89E cs
Abdullin 88C cs

deuteron dibaryon π^+
5 Abdullin 88D cs

tribaryon p π^+
5 Abdullin 89E cs
Abdullin 88C cs
Abdullin 88D cs

tribaryon n π^+
5 Abdullin 88D cs

tribaryon n π^0
5 Abdullin 90C cs

3p n
2.5 Blinov 90B angp,cs,mass,p
Blinov 88 –
5 Blinov 90B angp,cs,mass,p
Abdullin 89F angp,p
Blinov 88 –
13.5 Glagolev 88B ang,angp,cor,cs,p
40.8 Glagolev 90D cs,mass

p 2n $\Delta(1232\,P_{33})^{++}$
5 Abdullin 90 angp,p
Abdullin 89E angp,cs,p
Abdullin 88C cs,mass

deuteron 2p π^0
5 Abdullin 89F angp,p

deuteron p n π^+
5 Abdullin 89F angp,p
Abdullin 88 ang,angp,cs,p
Abdullin 88D angp,cs,mass

dibaryon 2p π^+
5 Abdullin 89E cs
Abdullin 88C cs

dibaryon 2n π^+
5 Abdullin 89E cs
Abdullin 88C cs

3p n π^0
5 Abdullin 90C cs,mass,p
Abdullin 89F angp,p

2p 2n π^+
5 Abdullin 90 angp,mass,p
Abdullin 89E angp,cs,mass,p
Abdullin 89F angp,p
Abdullin 88C angp,cs,mass

^{3}He deuteron

γ X
1.287 Pinston 92 angp,p

^{3}He C

γ X
1.287 Pinston 92 angp,p

^{3}H X
6.8 Ableev 91 angp

^{3}H$_S$ X
13.5 Avramenko 92 cs

^{3}He ^{12}C

^{3}H X
4.4 Ableev 91D angp,p
Ableev 87C angp
6.81 Ableev 91D angp,p
Ableev 87C angp
10.79 Ableev 91D angp,p
Ableev 87C angp
18.3 Ableev 91D angp,p
Ableev 87C angp

^{3}H $\Delta(1232\,P_{33})^{++}$ X
4.4 Ableev 91D angp,p
6.81 Ableev 91D angp,p
10.79 Ableev 91D angp,p
18.3 Ableev 91D angp,p

^{3}He ^{26}Mg

^{3}H X
2.417 Brockstedt 91 a-dep,angp,p
3.896 Brockstedt 91 a-dep,angp,p

^{3}He ^{40}Ca

^{3}H X
2.417 Brockstedt 91 a-dep,angp,p
3.896 Brockstedt 91 a-dep,angp,p

^{3}He ^{48}Ca

^{3}H X
2.417 Brockstedt 91 a-dep,angp,p
3.896 Brockstedt 91 a-dep,angp,p

^{3}He ^{54}Fe

^{3}H X
2.417 Brockstedt 91 a-dep,angp,p
3.896 Brockstedt 91 a-dep,angp,p

^{3}He Cu

γ X
1.287 Pinston 92 angp,p

^{3}He ^{90}Zr

^{3}H X
2.417 Brockstedt 91 a-dep,angp,p
3.896 Brockstedt 91 a-dep,angp,p

^{3}He Ag

fragt X
1.707 – 5.752 Yennello 90 angp

C X
1.707 – 5.752 Yennello 90 angp

^{3}He Au

γ X
1.287 Pinston 92 angp,p

^{3}He ^{208}Pb

^{3}H X
2.417 Brockstedt 91 a-dep,angp,p
3.896 Brockstedt 91 a-dep,angp,p

^{4}He p

X
8.6 Braun 89 cs
13.5 Braun 89 cs

p X
8.6 Sobchak 88 angp
13.5 Sobchak 88 angp

n X
8.6 Sobchak 88 angp
13.5 Sobchak 88 angp

mult[charged] (neutrals) X
8.6 Braun 89 cs
13.5 Braun 89 cs

^{3}He deuteron
2.7 Abdullin 92 cs

^{4}He p
2.7 Abdullin 92 cs
8.6 Braun 89 angp,cs
13.5 Braun 89 angp,cs

2deuteron p
2.7 Abdullin 92 cs

^{3}H 2p
2.7 Abdullin 92 cs

^{3}He p n
2.7 Abdullin 92 cs

deuteron 2p n
2.7 Abdullin 92 cs
8.6 Zelinski 88 ang,p
Zielinsky 88 cs,mass
13.5 Zelinski 88 ang,p

3p 2n
34.4 Glagolev 90D cs,mass
54.4 Glagolev 90D cs,mass

4p n π^-
8.6 Zielinsky 88 cs,mass

^{4}He nucleus

inelastic
4.5 Khan 89 cs
803.7 Baroni 90 cs

mult[shower] X
49.46 Aggarwal 90 angp,mult,p
Shukla 89 angp,col,mult,p
523.7 – 683.7 Jain 92E mult,p
Jain 91 mult
Jain 91B mult

mult[grey] X
523.7 – 683.7 Jain 91 mult

mult[black] X
523.7 – 683.7 Jain 91 mult

charged X
$3.3 \cdot 10^5 - 7.2 \cdot 10^5$ Apanasenko 92 mult,p

shower X
523.7 – 683.7 Jain 92E mult,p
Jain 91 angp,mult
Jain 91B p

grey X
523.7 – 683.7 Jain 91 angp,mult

black X
523.7 – 683.7 Jain 91 angp,mult

γ X
$3.3 \cdot 10^5 - 7.2 \cdot 10^5$ Apanasenko 92 mult,p,pt

^{3}H$_S$ X
18 Abdurakhimov 89C

^{4}H$_S$ X
18 Abdurakhimov 89C cs
Avramenko 88 cs,p

mult[grey] mult[shower] X
523.7 – 683.7 Jain 91 mult

^{4}He nucleus

mult[htrack] mult[shower] 0fragb X
523.7 – 683.7 Jain 91C mult,p

mult[htrack] mult[shower] X
49.46 Aggarwal 90 angp,mult,p
Shukla 89 angp,col,mult,p

mult[black] mult[grey] X
523.7 – 683.7 Jain 91 mult

shower mult[fragb] X
523.7 – 683.7 Jain 92E mult,p

mult[grey] shower X
523.7 – 683.7 Jain 91 cor,mult,p

mult[htrack] shower X
18 Bobodjanov 91 mult

grey mult[grey] X
523.7 – 683.7 Jain 91 angp,cor,mult

mult[htrack] grey X
18 Bobodjanov 91 mult

mult[htrack] black X
18 Bobodjanov 91 mult

black mult[black] X
523.7 – 683.7 Jain 91 angp,cor,mult

p π^+ X
16.8 Grishin 88B mass

^{3}He π^- X
18 Avramenko 88 cs,p

^{4}He π^- X
18 Avramenko 88 cs,p

mult[grey] shower mult[shower] X
523.7 – 683.7 Jain 91B cor,mult,p

^{4}He ^{4}He

mult[charged] X
(248) Tannenbaum 89 et,p

mult[charged] (neutrals)
(252) Akesson 88D pt

mult[neutral] X
(248) Tannenbaum 89 et,p

charged X
(248) Fischer 88 a-dep,p,pt

charged$^-$ X
(248) Fischer 88 a-dep,p,pt

hadron X
(252) Akesson 89 et

π^+ X
(248) Fischer 88 a-dep,p,pt

π^- X
(248) Fischer 88 a-dep,p,pt

K^+ X
(248) Fischer 88 a-dep,p,pt

K^- X
(248) Fischer 88 a-dep,p,pt

p X
(248) Fischer 88 a-dep,p,pt

$\bar{p}$ X
(248) Fischer 88 a-dep,p,pt

γ mult[charged] (neutrals)
(252) Akesson 88D cs,pt

^{4}He Li

2π^- X
18 Abdurakhimov 88 angp,cor

^{4}He Be

π^- X
11.12 Viryasov 92 angp,cs,p,pt

^{4}He C

inelastic
16.8 Grigalashvil 88 cs

mult[charged] X
16.8 Mekhtiev 88 et

mult[charged$^-$] X
9.2 Grigalashvil 88 a-dep,mult
16.8 Backovic 92 cor,mult,p
Batskovich 91 cor,mult,p
Grigalashvil 88 a-dep,mult

mult[p] X
4.2 Gulkanyan 88D mult
16.8 Baldin 88C angp,cor,pt
Simic 88B angp,mult,p,pt

charged X
9.2 Grigalashvil 88 a-dep,mult
16.8 Mekhtiev 88 et,mult

charged$^-$ X
9.2 Grigalashvil 88 a-dep,mult
16.8 Grigalashvil 88 a-dep,mult

π^0 X
18 Abraamyan 89 angp,p,pt

π^- X
13.2 Viryasov 90 angp,p,pt
16.51 Viryasov 92 angp,cs,p,pt
16.8 Backovic 92B angp,p
Agakishiev 89B angp,mult,p

p X
4.2 Gulkanyan 88D a-dep,angp,cor,cs,mult,p

^{3}H$_S$ X
18 Avramenko 92 cs

^{4}H$_S$ X
18 Avramenko 92 cs

(p's) ($\pi^\pm$'s) X
16.8 Baatar 91 col,mult,p

2charged$^+$ X
4.2 Angelov 88 ang,cor

2γ X
18 Abraamyan 89 mass

π^+ mult[grey] X
5.838 Lhote 89 mult

π^- mult[grey] X
5.838 Lhote 89 mult

π^+ charged$^+$ X
4.2 Angelov 88 ang,cor

π^- charged$^+$ X
4.2 Angelov 88 ang,cor

π^+ π^- X
4.2 Angelov 88 ang,cor

2π^- X
4.2 Angelov 88 ang,cor
18 Abdurakhimov 88 angp,cor

p (p's) X
16.8 Angelov 88 angp,col

p charged$^+$ X
4.2 Angelov 88 ang,cor

p π^- X
4.2 Angelov 88 ang,cor

2p X
4.2 Angelov 88 ang,cor
8 Budilov 90 angp,cor,p
16.8 Pluta 88B angp,cor,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{4}He C

2p X
Zielinsky 88 cs,mass

mult[fragt] mult[fragb] mult[charged$^+$] mult[charged$^-$] X
16.8 Simic 90 angp,mult,p,pt

^{4}He ^{12}C

inelastic
0.4324 Dubar 89 cs

mult[charged] (neutrals)
4.2 Angelov 91 mult

p X
2.65 Ableev 89 angp
4.52 Ableev 89 angp

^{3}H X
2.65 Ableev 89 angp
4.52 Ableev 89 angp

^{11}C X
17.94 Kozma 89B cs

^{4}He Ne

2π^- X
18 Abdurakhimov 88 angp,cor

^{4}He ^{27}Al

inelastic
0.4324 Dubar 89 cs

^{4}He Fe

^{3}He 29charged (neutrals)
$8 \cdot 10^4 - 10^5$ Apanasenko 92 p

^{4}He Cu

π^+ mult[grey] X
5.838 Lhote 89 mult

π^- mult[grey] X
5.838 Lhote 89 mult

^{4}He Zr

inelastic
0.4324 Dubar 89 cs

^{4}He Mo

inelastic
0.4324 Dubar 89 cs

^{4}He ^{165}Ho

2frag X
1.471 Klotzengmann 89 angp,cs,p
2.907 Klotzengmann 89 angp,cs,p
5.838 Klotzengmann 89 angp,cs,p

^{4}He Ta

mult[charged] X
9.2 Grigalashvil 88 a-dep,mult

mult[charged$^-$] X
9.2 Grigalashvil 88 a-dep,mult

charged X
9.2 Grigalashvil 88 a-dep,mult

charged$^-$ X
9.2 Grigalashvil 88 a-dep,mult

π^- X
16.8 Backovic 92B angp,p

p X
4.2 Gulkanyan 88D a-dep,angp,cor,cs,mult,p

^{4}He ^{181}Ta

inelastic
0.4324 Dubar 89 cs

^{4}He Au

Bor X
3.373 – 16.82 Avdejchikov 87B angp
Avdejchikov 87H a-dep,p

C X
3.373 – 16.82 Avdejchikov 87B angp
Avdejchikov 87H a-dep,p

Nit X
3.373 – 16.82 Avdejchikov 87B angp
Avdejchikov 87H a-dep,p

O X
3.373 – 16.82 Avdejchikov 87B angp
Avdejchikov 87H a-dep,p

Fl X
3.373 – 16.82 Avdejchikov 87B angp
Avdejchikov 87H a-dep,p

Ne X
3.373 – 16.82 Avdejchikov 87B angp

Na X
3.373 – 16.82 Avdejchikov 87B angp

Mg X
3.373 – 16.82 Avdejchikov 87B angp

2p X
8 Budilov 90 angp,cor,p

^{4}He ^{197}Au

inelastic
0.4324 Dubar 89 cs

2frag X
1.471 Klotzengmann 89 angp,cs,p
2.907 Klotzengmann 89 angp,cs,p
5.838 Klotzengmann 89 angp,cs,p

^{4}He Pb

mult[htrack] shower X
18 Bobodjanov 91 mult

mult[htrack] grey X
18 Bobodjanov 91 mult

mult[htrack] black X
18 Bobodjanov 91 mult

π^+ mult[grey] X
5.838 Lhote 89 mult

π^- mult[grey] X
5.838 Lhote 89 mult

p π^+ X
17.8 Averichev 89 cor,mass

p π^- X
17.8 Averichev 89 cor,mass

2p X
17.8 Averichev 89 cor,mass

^{4}He ^{208}Pb

mult[fragt] X
11.96 Grabez 88 mult

^{4}He ^{232}Th

2frag X
1.471 Klotzengmann 89 angp,cs,p
2.907 Klotzengmann 89 angp,cs,p
5.838 Klotzengmann 89 angp,cs,p

He p

He X
7 Morsch 92 mass

He $N(1440\,P_{11})^+$
7 Morsch 92 angp

He nucleus

X
0 – 60 Sengupta 89 cs
0 – 803.7 Singh 88B cs
1000 – 10^5 Kawamura 89 –

inelastic
803.7 Baroni 91 cs

charged X
18 Ahmad 91 cs

B^0 B^- X
$2 \cdot 10^5$ Wilczynska 90 –

He Li

π^- 0fragb X
18 Chkhaidze 92 p,pt

p 0fragb X
18 Chkhaidze 92 p,pt

He C

π^- 0fragb X
18 Chkhaidze 92 p,pt

π^- X
16.8 Backovic 91 a-dep,p,pt
Baatar 90 angp,et,p,pt

p X
16.8 Backovic 92C a-dep,angp,p

p 0fragb X
18 Chkhaidze 92 p,pt

dibaryon X
16.8 Didenko 91B ang

tribaryon X
16.8 Didenko 91B ang

He X
17.9 Ableev 91C angp

charged (chargeds) X
16.8 Angelov 90 angp,mult,p
Angelov 90B angp,mult,p

2π^- X
16.8 Simic 92 ang

p π^- X
16.8 Simic 92 ang
Gulkanyan 88 ang,angp,cor,p,pt

2p X
16.8 Simic 92 ang

He Al

He X
17.9 Ableev 91C angp

He Cu

He X
17.9 Ableev 91C angp

He Ta

π^- X
16.8 Agakishiev 91 a-dep,angp
Backovic 91 a-dep,p,pt

p X
16.8 Backovic 92C a-dep,angp,p

He Pb

mult[n] X
18 Voronko 88 cs

n X
6.76 Daniel 92 angp,p

He Pb

He X		
17.9	Ableev 91C	angp

^{6}He nucleus

inelastic		
8.758	Kobayashi 89C	a-dep,cs
^{5}He n X		
8.758	Kobayashi 89C	a-dep,cs
^{4}He 2n X		
8.758	Kobayashi 89C	a-dep,cs

^{6}He C

^{3}He X		
8.686	Kobayashi 88	cs,pt
^{4}He X		
8.686	Kobayashi 88	cs,pt

^{8}He Be

^{6}He n X		
1.907	Riisager 92	–

^{8}He C

^{4}He X		
11.58	Kobayashi 88	cs,pt
^{6}He X		
11.58	Kobayashi 88	cs,pt

^{8}He Ni

^{6}He n X		
1.907	Riisager 92	–

^{8}He Au

^{6}He n X		
1.907	Riisager 92	–

Li nucleus

inelastic		
1206	Baroni 91	cs
	Baroni 90	cs

^{6}Li p

deuteron X		
8.39	Punjabi 92	dme,pt
^{3}H X		
8.39	Punjabi 92	dme,pt
^{4}He X		
8.39	Punjabi 92	dme,pt

^{6}Li C

inelastic		
8.686	Tanihata 88	a-dep,cs
^{3}H$_S$ X		
27	Avramenko 92	cs
^{4}H$_S$ X		
27	Avramenko 92	cs

^{6}Li Pb

n X		
10.15	Daniel 92	angp,p

^{7}Li p

^{7}Be X		
21	Avramenko 92B	cs
	Avramenko 91C	cs

^{7}Li C

^{7}Be X		
21	Avramenko 92B	cs
	Avramenko 91C	cs

^{7}Li Mg

^{7}Be (charged-hadrons) X		
21	Avramenko 92B	angp,cs,mult

^{7}Li Al

^{7}Be X		
21	Avramenko 91C	cs

^{7}Li Cu

^{7}Be X		
21	Avramenko 91C	cs

^{7}Li Pb

^{7}Be X		
21	Avramenko 92B	cs
	Avramenko 91C	cs

^{9}Li nucleus

inelastic		
13.14	Kobayashi 89C	a-dep,cs
^{8}Li n X		
13.14	Kobayashi 89C	a-dep,cs
^{7}Li 2n X		
13.14	Kobayashi 89C	a-dep,cs

^{11}Li nucleus

inelastic		
16.06	Kobayashi 89C	a-dep,cs
^{10}Li n X		
16.06	Kobayashi 89C	a-dep,cs
^{9}Li 2n X		
16.06	Kobayashi 89C	a-dep,cs

^{11}Li Be

inelastic		
15.93	Kobayashi 89	a-dep,cs
^{9}Li n X		
2.621	Riisager 92	–

^{11}Li C

inelastic		
15.93	Kobayashi 89	a-dep,cs
^{3}He X		
15.93	Kobayashi 88	cs,pt
^{4}He X		
15.93	Kobayashi 88	cs,pt
^{6}He X		
15.93	Kobayashi 88	cs,pt
^{8}He X		
15.93	Kobayashi 88	cs,pt
^{6}Li X		
15.93	Kobayashi 88	cs,pt
^{7}Li X		
15.93	Kobayashi 88	cs,pt
^{8}Li X		
15.93	Kobayashi 88	cs,pt
^{9}Li X		
15.93	Kobayashi 89	a-dep,cs
	Kobayashi 88	cs,pt

^{11}Li Al

inelastic		
15.93	Kobayashi 89	a-dep,cs

^{11}Li Ni

^{9}Li n X		
2.621	Riisager 92	–

^{11}Li Cu

inelastic		
15.93	Kobayashi 89	a-dep,cs
^{9}Li X		
15.93	Kobayashi 89	a-dep,cs

^{11}Li Au

^{9}Li n X		
2.621	Riisager 92	–

^{11}Li Pb

inelastic		
15.93	Kobayashi 89	a-dep,cs
^{6}He X		
15.93	Kobayashi 88	cs,pt
^{9}Li X		
15.93	Kobayashi 89	a-dep,cs
	Kobayashi 88	cs,pt

Be nucleus

inelastic		
1808	Baroni 91	cs
	Baroni 90	cs

^{11}Be nucleus

inelastic		
16.06	Kobayashi 89C	a-dep,cs
^{10}Be n X		
16.06	Kobayashi 89C	a-dep,cs
^{9}Be 2n X		
16.06	Kobayashi 89C	a-dep,cs

^{11}Be Be

inelastic		
15.93	Tanihata 88	a-dep,cs

^{11}Be C

inelastic		
2.752	Fukuda 91	cs
15.93	Tanihata 88	a-dep,cs
^{10}Be X		
2.752	Fukuda 91	cs

^{11}Be Al

inelastic		
2.752	Fukuda 91	cs
15.93	Tanihata 88	a-dep,cs
^{10}Be X		
2.752	Fukuda 91	cs

^{12}Be Be

inelastic		
17.37	Tanihata 88	a-dep,cs

^{12}Be C

inelastic		
17.37	Tanihata 88	a-dep,cs

^{12}Be Al

inelastic		
17.37	Tanihata 88	a-dep,cs

^{14}Be Be

^{12}Be X		
3.336	Riisager 92	angp,cs

^{14}Be C

inelastic		
20.27	Tanihata 88	a-dep,cs

^{14}Be Ni

^{12}Be X		
3.336	Riisager 92	angp,cs

^{14}Be Au

^{12}Be X		
3.336	Riisager 92	angp,cs

^{8}Bor Be

inelastic		
11.58	Tanihata 88	a-dep,cs

^{8}Bor C

inelastic		
11.58	Tanihata 88	a-dep,cs

^{8}Bor Al

inelastic		
11.58	Tanihata 88	a-dep,cs

Bor nucleus

inelastic		
2010	Baroni 91	cs
	Baroni 90	cs

^{11}Bor p

fragb X		
9.292	Webber 90B	a-dep,cs
10.51	Webber 90B	a-dep,cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{11}Bor p

fragb X
10.74 Webber 90B a-dep,cs
12.83 Webber 90B a-dep,cs

^{11}Bor He

fragb X
12.83 Webber 90B a-dep,cs

^{11}Bor C

fragb X
9.292 Webber 90B a-dep,cs
10.51 Webber 90B a-dep,cs
10.74 Webber 90B a-dep,cs
12.83 Webber 90B a-dep,cs

^{10}Be X
16.06 Kobayashi 89B pt

^{10}Be n X
16.06 Kobayashi 89B pt

^{12}Bor Be

inelastic
17.38 Tanihata 88 a-dep,cs

^{12}Bor C

inelastic
17.38 Tanihata 88 a-dep,cs

^{12}Bor Al

inelastic
17.38 Tanihata 88 a-dep,cs

^{13}Bor Be

inelastic
18.82 Tanihata 88 a-dep,cs

^{13}Bor C

inelastic
18.82 Tanihata 88 a-dep,cs

^{13}Bor Al

inelastic
18.82 Tanihata 88 a-dep,cs

^{14}Bor Be

inelastic
19.3 Tanihata 88 a-dep,cs

^{14}Bor C

inelastic
19.3 Tanihata 88 a-dep,cs

^{14}Bor Al

inelastic
19.3 Tanihata 88 a-dep,cs

^{15}Bor Be

inelastic
20.76 Tanihata 88 a-dep,cs

^{15}Bor C

inelastic
20.76 Tanihata 88 a-dep,cs

^{15}Bor Al

inelastic
20.76 Tanihata 88 a-dep,cs

C p

n X
50.4 Bekmirzaev 88C mult,p

fragb X
9.597 – 27.89 Webber 90 cs
14.59 Webber 90C a-dep
15.98 Webber 90B a-dep,cs
19.14 Webber 90B a-dep,cs
20.53 Webber 90B a-dep,cs
27.89 Webber 90B a-dep,cs

C p

Mn X
9.67 – 33.36 Webber 90C cs

n mult[fragb] mult[charged$^+$] mult[charged$^-$] X
50.4 Bekmirzaev 88C mult

C nucleus

inelastic
2411 Baroni 91 cs
Baroni 90 cs

mult[$\pi^\pm$] X
54 Tauseef 92 angp,mult

mult[p] X
54 Tauseef 92 angp,mult

mult[shower] X
54 Tauseef 92 angp,mult

mult[grey] X
54 Tauseef 92 angp,mult

shower X
54 Ahmad 92 p

p X
23.01 Antonchik 90B angp,mult,p

fragb X
9.597 – 27.89 Webber 90 cs

shower mult[shower] X
54 Ahmad 92 mult,p

mult[grey] shower X
54 Ahmad 92 mult,p

mult[htrack] shower X
54 Ahmad 92 mult,p

mult[p] mult[π^+] mult[π^-] X
53.96 Okonov 88 cor,mult

C He

fragb X
13.9 Webber 90 cs
19.14 Webber 90 cs
27.89 Webber 90 cs
Webber 90B a-dep,cs

C C

mult[charged] X
50.4 Agakishiev 89C mult
Mekhtiev 88 et

mult[charged$^+$] X
50.4 Agakishiev 89C mult

mult[charged$^-$] X
27.6 Grigalashvil 88 a-dep,mult
50.4 Backovic 92 cor,mult,p
Batskovich 91 cor,mult,p
Agakishiev 89C mult
Grigalashvil 88 a-dep,mult

mult[π^-] X
50.4 Agakishiev 89C angp,mult,p,pt

mult[p] X
4.2 Gulkanyan 88D mult
50.4 Baldin 88C angp,cor,pt

charged X
27.6 Grigalashvil 88 a-dep,mult
50.4 Mekhtiev 88 et,mult

charged$^-$ X
27.6 Grigalashvil 88 a-dep,mult
50.4 Grigalashvil 88 a-dep,mult

γ X
50.4 Gulkanyan 88B p,pt

C C

π X
50.4 Gulkanyan 88C mult,p

$\pi^\pm$ X
7.886 Baldin 92 cs
8.725 Baldin 92 cs
9.747 Baldin 92 cs

π^+ X
50.4 Gulkanyan 88C mult,p

π^0 X
50.4 Gulkanyan 88B p,pt
Gulkanyan 88C mult,p

π^- 0fragb X
50.4 Agakishiev 89B angp,mult,p

π^- X
50.4 Backovic 92B p
Backovic 91 a-dep,p,pt
Baatar 90 angp,et,p,pt
Agakishiev 89B angp,mult,p
Gulkanyan 88B p,pt
Gulkanyan 88C mult,p
Kanarek 88 angp

$K^\pm$ X
7.886 Baldin 92 cs
8.725 Baldin 92 cs
9.747 Baldin 92 cs

K^0 X
4.5 Iovchev 90 angp,pt

K^- X
34.63 Carroll 88B angp

p X
4.2 Gulkanyan 88D a-dep,angp,cor,cs,mult,p
50.4 Backovic 92C a-dep,angp,p
Grishin 90 col,cor,p
Kanarek 88 angp,p

p 0fragb X
54 Chkhaidze 92 p,pt

n X
50.4 Bekmirzaev 88C angp,mult,p

Λ X
4.5 Iovchev 90 angp,pt
50.4 Panagiotou 89 p,pol,pt
Iovchev 87 pol
54 Panagiotou 89 p,pol,pt

fragb X
9.597 – 27.89 Webber 90 cs
14.59 Webber 90C a-dep
15.98 Webber 90B a-dep,cs
19.14 Webber 90B a-dep,cs
20.53 Webber 90B a-dep,cs
27.89 Webber 90B a-dep,cs

dibaryon X
50.4 Didenko 91B ang

tribaryon X
50.4 Didenko 91B ang

charged (chargeds) X
50.4 Angelov 90 angp,mult,p
Angelov 90B angp,mult,p

2charged$^+$ X
4.2 Angelov 88 ang,cor

π^- mult[charged] X
50.4 Angelov 92B col,pt
Agakishiev 89 angp,et

π^- mult[π^-] X
50.4 Agakishiev 89 angp,mult

mult[p] π^- X
50.4 Agakishiev 89 angp,p

π^+ charged$^+$ X
4.2 Angelov 88 ang,cor

C C

π^- charged$^+$ X
4.2 Angelov 88 ang,cor
π hadron X
4.2 Lyubimov 88 col
$\pi^+ \pi^-$ X
4.2 Angelov 88 ang,cor
$2\pi^-$ X
4.2 Angelov 88 ang,cor
K^0 mult[charged] X
50.4 Angelov 92B col
p mult[charged] X
50.4 Angelov 92B col,pt
p (p's) X
50.4 Angelov 88 angp,col
p charged$^+$ X
4.2 Angelov 88 ang,cor
$p\ \pi^-$ X
4.2 Angelov 88 ang,cor
50.4 Gulkanyan 88 ang,angp,cor,p,pt
$2p$ X
4.2 Angelov 88 ang,cor
50.4 Simic 92 ang,p,pt
Grishin 90 col,cor,p
Pluta 88B angp,cor,p
Zielinsky 88 cs,mass
Λ mult[charged] X
50.4 Angelov 92B col
2fragb X
4.2 Angelov 88 ang,cor
2π (π's) X
50.4 Vinitsky 91 col
$2p$ (p's) X
50.4 Vinitsky 91 col
Baldin 90C angp,cor,mass
Agakishiev 89C angp,mult,p,pt
mult[fragt] mult[fragb] mult[charged$^+$] mult[charged$^-$] X
50.4 Simic 90 angp,mult,p,pt
$2p$ (p's) (π^+'s) X
50.4 Angelov 92 ang,cor,p
$3p$ (p's) X
4.2 Lyubimov 88 col

C Ne

0fragb mult[charged] X
54 Gelovani 92 col
π^- 0fragb X
54 Chkhaidze 92 p,pt
K^0 X
4.5 Iovchev 90 angp,pt
p 0fragb X
54 Chkhaidze 92 p,pt
Λ X
4.5 Iovchev 90 angp,pt

C Cu

0fragb mult[charged] X
54 Gelovani 92 col
mult[charged] X
54 Sarkisyan 92 col
Sarkisyan 92B col
Sarkisyan 91 mult,p
charged X
54 Sarkisyan 91 p
π^- 0fragb X
54 Chkhaidze 92 p,pt
p 0fragb X
54 Chkhaidze 92 p,pt

C Cu

^{24}Na X
54.04 Brandt 92 angp,cs

C Ta

inelastic
50.4 Batskovich 88 cs
mult[charged] X
27.6 Grigalashvil 88 a-dep,mult
50.4 Batskovich 88 cor,mult
Mekhtiev 88 et
mult[charged$^-$] X
27.6 Grigalashvil 88 a-dep,mult
50.4 Backovic 92 cor,mult,p
Batskovich 91 cor,mult,p
mult[γ] X
50.4 Gulkanyan 88C p,pt
mult[π^+] X
50.4 Gulkanyan 88C p,pt
mult[π^-] X
50.4 Gulkanyan 88C p,pt
charged X
27.6 Grigalashvil 88 a-dep,mult
50.4 Batskovich 88 cor,mult
charged$^-$ X
27.6 Grigalashvil 88 a-dep,mult
γ X
50.4 Gulkanyan 88B p,pt
π X
50.4 Gulkanyan 88C mult,p
π^+ X
50.4 Gulkanyan 88C mult,p
π^0 X
50.4 Gulkanyan 88B p,pt
Gulkanyan 88C mult,p
π^- X
50.4 Backovic 92B p
Agakishiev 91 a-dep,angp
Backovic 91 a-dep,p,pt
Batskovich 88 cor,mult
Gulkanyan 88B p,pt
Gulkanyan 88C mult,p
p X
4.2 Gulkanyan 88D a-dep,angp,cor,cs,mult,p
50.4 Backovic 92C a-dep,angp,p
Armutlijsky 89 a-dep,angp,mult,p,pt
Λ X
50.4 Panagiotou 89 p,pol,pt
Iovchev 87 pol
fragb X
50.4 Batskovich 88 cor,mult
fragt (fragts) X
53.84 Kozma 90D angp,p
mult[π^-] mult[fragb] mult[charged] X
50.4 Batskovich 88 angp,cor,mult
$2p$ (p's) (π^+'s) X
50.4 Angelov 92 ang,cor,p

C Pb

π^- 0fragb X
54 Chkhaidze 92 p,pt
p X
20.31 Daniel 92 angp,p
p 0fragb X
54 Chkhaidze 92 p,pt

C Pb

n X
20.31 Daniel 92 angp,p
deuteron X
20.31 Daniel 92 angp,p
^{3}H X
20.31 Daniel 92 angp,p
$2p$ X
41.73 Adyasevich 89 angp,cor

^{12}C p

mult[He] X
4.5 Khan 89 mult
fragb X
51.99 Bogdanov 88 cs
54 Khan 88 a-dep,mult

^{12}C nucleus

inelastic
4.5 Khan 89 cs
mult[charged] X
54 Ghosh 90B mult,p
mult[He] X
4.5 Ahmad 89C mult
Khan 89 mult
mult[shower] X
54 Babaev 90 ang
Ghosh 89D mult,p
Ghosh 89F mult
Khan 88 a-dep,mult
mult[grey] X
54 Babaev 90 ang
Ghosh 89F mult
Khan 88 a-dep,mult
mult[htrack] X
54 Ghosh 89F mult
Khan 88 a-dep,mult
mult[black] X
54 Babaev 90 ang
Ghosh 89F mult
Khan 88 a-dep,mult
shower X
54 Khan 88 a-dep,angp,mult
grey X
54 Khan 88 a-dep,angp,mult
black X
54 Khan 88 a-dep,angp,mult
meson^0 X
54 Elnadi 88 cs
$\pi^\pm$ X
54 Vokal 88 p
π^+ X
4.077 – 4.913 Batkin 91 angp
π^0 X
4.077 Batkin 91 cs,p
4.544 Batkin 91 cs,p
4.853 Batkin 91 cs,p
π^- X
4.077 – 4.913 Batkin 91 angp
p X
4.5 Ghosh 90 angp,p,pt
fragb X
4.5 Ghosh 90 angp,p,pt
Ahmad 89C mult
Khan 89 mult
54 Ahmad 91 angp
Ahmad 89B angp,cor,mult
Khan 88 a-dep,mult
dibaryon($S = -2$) X
50.4 Shakhbazyan 88 cs,mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{12}C nucleus

^{4}He X
39.63 – 64.21 Abdurazakova 88 pt
He X
54 Ahmad 91 angp
^{24}Na X
53.83 Kozma 90C angp,p
e^- e^+ X
54 Elnadi 88 mass
mult[shower] mult[fragb] X
54 Babaev 90 ang
mult[grey] mult[fragb] X
54 Babaev 90 ang
mult[grey] mult[shower] X
54 Ahmad 91B mult
Babaev 90 ang
Ghosh 89F mult
mult[htrack] mult[shower] X
54 Ghosh 89F mult
mult[black] mult[fragb] X
54 Babaev 90 ang
mult[black] mult[shower] X
54 Babaev 90 ang
Ghosh 89F mult
mult[black] mult[grey] X
54 Babaev 90 ang
mult[htrack] shower X
54 Bobodjanov 91 mult
Khan 88 cor,mult
mult[htrack] grey X
54 Bobodjanov 91 mult
htrack mult[shower] X
54 Khan 88 cor,mult
black mult[grey] X
54 Khan 88 cor,mult
mult[htrack] black X
54 Bobodjanov 91 mult
p π^+ X
50.4 Grishin 88B mass
2Λ X
50.4 Shakhbazyan 88 cs,mass
p Σ^- X
50.4 Shakhbazyan 88 cs,mass
fragb mult[charged] X
4.5 Khan 89 mult
mult[htrack] fragb X
54 Ahmad 91 angp,mult
htrack fragb X
64.21 Ahmad 89B angp,mult
2fragb X
39.63 – 64.21 Abdurazakova 88 ang,cor
He mult[htrack] X
54 Ahmad 91 angp,mult
2shower fragb X
4.5 Ghosh 89C cor,p,pt

^{12}C C

inelastic
13.05 – 17.52 Avramenko 90 cs
50.4 Grigalashvil 88 cs
mult[charged$^-$] X
54 Anikina 89 mult
mult[π^-] X
54 Anikina 89 mult
mult[p] X
50.4 Simic 88B angp,mult,p,pt
charged$^-$ X
54 Anikina 89 mult

^{12}C C

π^+ X
53.83 Kurepin 88 a-dep,angp
π^- X
53.83 Kurepin 88 a-dep,angp
K^+ X
53.83 Kurepin 88 a-dep,angp
K^- X
53.83 Kurepin 88 a-dep,angp
p X
3.093 Westenius 90 a-dep,angp,p
deuteron X
3.093 Westenius 90 a-dep,angp,p
^{3}H X
3.093 Westenius 90 a-dep,angp,p
^{3}He X
3.093 Westenius 90 a-dep,angp,p
^{4}He X
3.093 Westenius 90 a-dep,angp,p
(p's) ($\pi^{\pm}$'s) X
50.4 Baatar 91 col,mult,p
mult[frag] mult[charged] X
54 Anikina 89 mult
p fragb X
3.093 Westenius 90 cor
^{4}He fragb X
3.093 Westenius 90 cor

^{12}C ^{12}C

inelastic
0.8196 Dubar 89 cs
1.365 Dubar 89 cs
2.124 Dubar 89 cs
2.607 Dubar 89 cs
mult[charged] (neutrals)
4.2 Angelov 91 mult
π^0 X
54 Abraamyan 91 pt
Abraamyan 90 p,pt
$\bar{p}$ X
53.83 Baldin 90B p
^{11}C X
53.83 Kozma 89B cs
2γ X
54 Abraamyan 91 mass
Abraamyan 90 mass
^{12}C π^0 X
1.14 Erazmus 90 cs

^{12}C Ne

0fragb mult[charged] X
54 Taran 90 a-dep,mult
0fragb mult[charged$^-$] X
54 Taran 90 a-dep,mult
mult[p] 0fragb X
54 Taran 90 a-dep,mult
0fragb charged X
54 Taran 90 a-dep,mult
0fragb charged$^-$ X
54 Taran 90 a-dep,mult
p 0fragb X
54 Taran 90 a-dep,angp,mult,p,pt
2π^- fragb X
54 Abdurakhimov 88 angp,cor

^{12}C Al

inelastic
13.05 – 17.52 Avramenko 90 cs

^{12}C Al

p X
3.093 Westenius 90 a-dep,angp,p
deuteron X
3.093 Westenius 90 a-dep,angp,p
^{3}H X
3.093 Westenius 90 a-dep,angp,p
^{3}He X
3.093 Westenius 90 a-dep,angp,p
^{4}He X
3.093 Westenius 90 a-dep,angp,p
p fragb X
3.093 Westenius 90 cor
^{4}He fragb X
3.093 Westenius 90 cor

^{12}C ^{27}Al

inelastic
0.8196 Dubar 89 cs
1.365 Dubar 89 cs
2.124 Dubar 89 cs
2.607 Dubar 89 cs

^{12}C ^{28}Si

^{11}C X
171.6 Winger 90 cs

^{12}C ^{55}Mn

frag X
53.83 Kozma 88B cs
^{24}Na X
53.83 Kozma 90B angp,p
Kozma 88B cs
^{28}Mg X
53.83 Kozma 90B angp,p
Kozma 88B cs
^{42}KK X
53.83 Kozma 88B cs
^{43}KK X
53.83 Kozma 88B cs
^{43}Sc X
53.83 Kozma 88B cs
^{44}Sc X
53.83 Kozma 88B cs
^{46}Sc X
53.83 Kozma 88B cs
^{47}Sc X
53.83 Kozma 88B cs
^{48}Sc X
53.83 Kozma 88B cs
^{48}Va X
53.83 Kozma 88B cs
^{48}Cr X
53.83 Kozma 88B cs
^{51}Cr X
53.83 Kozma 88B cs
^{52}Mn X
53.83 Kozma 88B cs
^{54}Mn X
53.83 Kozma 88B cs
^{56}Mn X
53.83 Kozma 88B cs
^{52}Fe X
53.83 Kozma 88B cs
^{59}Fe X
53.83 Kozma 88B cs
^{56}Co X
53.83 Kozma 88B cs
^{57}Co X
53.83 Kozma 88B cs
^{58}Co X
53.83 Kozma 88B cs

$^{12}C\ ^{55}Mn$

^{60}Co X
53.83 Kozma 88B cs
^{56}Ni X
53.83 Kozma 88B cs
^{57}Ni X
53.83 Kozma 88B cs
^{65}Zn X
53.83 Kozma 88B cs

$^{12}C\ ^{59}Co$

frag X
53.83 Kozma 88B cs
^{24}Na X
53.83 Kozma 90B angp,p
Kozma 88B cs
^{28}Mg X
53.83 Kozma 90B angp,p
Kozma 88B cs
^{42}KK X
53.83 Kozma 88B cs
^{43}KK X
53.83 Kozma 88B cs
^{43}Sc X
53.83 Kozma 88B cs
^{44}Sc X
53.83 Kozma 88B cs
^{46}Sc X
53.83 Kozma 88B cs
^{47}Sc X
53.83 Kozma 88B cs
^{48}Sc X
53.83 Kozma 88B cs
^{48}Va X
53.83 Kozma 88B cs
^{48}Cr X
53.83 Kozma 88B cs
^{51}Cr X
53.83 Kozma 88B cs
^{52}Mn X
53.83 Kozma 88B cs
^{54}Mn X
53.83 Kozma 88B cs
^{52}Fe X
53.83 Kozma 88B cs
^{59}Fe X
53.83 Kozma 88B cs
^{55}Co X
53.83 Kozma 88B cs
^{56}Co X
53.83 Kozma 88B cs
^{57}Co X
53.83 Kozma 88B cs
^{58}Co X
53.83 Kozma 88B cs
^{60}Co X
53.83 Kozma 88B cs
^{56}Ni X
53.83 Kozma 88B cs
^{57}Ni X
53.83 Kozma 88B cs
^{65}Zn X
53.83 Kozma 88B cs

^{12}C Ni

frag X
53.83 Kozma 88B cs
^{24}Na X
53.83 Kozma 88B cs
^{28}Mg X
53.83 Kozma 88B cs
^{42}KK X
53.83 Kozma 88B cs
^{43}KK X
53.83 Kozma 88B cs
^{43}Sc X
53.83 Kozma 88B cs

^{12}C Ni

^{44}Sc X
53.83 Kozma 88B cs
^{46}Sc X
53.83 Kozma 88B cs
^{47}Sc X
53.83 Kozma 88B cs
^{48}Sc X
53.83 Kozma 88B cs
^{48}Va X
53.83 Kozma 88B cs
^{48}Cr X
53.83 Kozma 88B cs
^{51}Cr X
53.83 Kozma 88B cs
^{52}Mn X
53.83 Kozma 88B cs
^{54}Mn X
53.83 Kozma 88B cs
^{56}Mn X
53.83 Kozma 88B cs
^{52}Fe X
53.83 Kozma 88B cs
^{59}Fe X
53.83 Kozma 88B cs
^{55}Co X
53.83 Kozma 88B cs
^{56}Co X
53.83 Kozma 88B cs
^{57}Co X
53.83 Kozma 88B cs
^{58}Co X
53.83 Kozma 88B cs
^{60}Co X
53.83 Kozma 88B cs
^{56}Ni X
53.83 Kozma 88B cs
^{57}Ni X
53.83 Kozma 88B cs
^{61}Cu X
53.83 Kozma 88B cs
^{65}Zn X
53.83 Kozma 88B cs

^{12}C Cu

inelastic
13.05 – 17.52 Avramenko 90 cs
Ofragb mult[charged] X
54 Taran 90 a-dep,mult
Ofragb mult[charged$^-$] X
54 Taran 90 a-dep,mult
mult[p] Ofragb X
54 Taran 90 a-dep,mult
Ofragb charged X
54 Taran 90 a-dep,mult
Ofragb charged$^-$ X
54 Taran 90 a-dep,mult
π^- X
53.83 Baldin 88 angp
p Ofragb X
54 Taran 90
a-dep,angp,mult,p,pt
p X
3.093 Westenius 90
a-dep,angp,p
$\bar{p}$ X
53.83 Baldin 90B p
Baldin 88 angp
frag X
53.83 Kozma 88B cs
deuteron X
3.093 Westenius 90
a-dep,angp,p
^3H X
3.093 Westenius 90
a-dep,angp,p

^{12}C Cu

^3He X
3.093 Westenius 90
a-dep,angp,p
^4He X
3.093 Westenius 90
a-dep,angp,p
^{24}Na X
53.83 Kozma 88B cs
^{28}Mg X
53.83 Kozma 88B cs
^{42}KK X
53.83 Kozma 88B cs
^{43}KK X
53.83 Kozma 88B cs
^{43}Sc X
53.83 Kozma 88B cs
^{44}Sc X
53.83 Kozma 88B cs
^{46}Sc X
53.83 Kozma 88B cs
^{47}Sc X
53.83 Kozma 88B cs
^{48}Sc X
53.83 Kozma 88B cs
^{48}Va X
53.83 Kozma 88B cs
^{48}Cr X
53.83 Kozma 88B cs
^{51}Cr X
53.83 Kozma 88B cs
^{52}Mn X
53.83 Kozma 88B cs
^{54}Mn X
53.83 Kozma 88B cs
^{56}Mn X
53.83 Kozma 88B cs
^{52}Fe X
53.83 Kozma 88B cs
^{59}Fe X
53.83 Kozma 88B cs
^{55}Co X
53.83 Kozma 88B cs
^{56}Co X
53.83 Kozma 88B cs
^{57}Co X
53.83 Kozma 88B cs
^{58}Co X
53.83 Kozma 88B cs
^{60}Co X
53.83 Kozma 88B cs
^{56}Ni X
53.83 Kozma 88B cs
^{57}Ni X
53.83 Kozma 88B cs
^{61}Cu X
53.83 Kozma 88B cs
^{65}Zn X
53.83 Kozma 88B cs
p fragb X
3.093 Westenius 90 cor
^4He fragb X
3.093 Westenius 90 cor
$2\pi^-$ fragb X
53.95 Abdurakhimov 89
angp,cor
54 Abdurakhimov 88
angp,cor

$^{12}C\ ^{64}Cu$

^{24}Na X
53.83 Kozma 90B angp,p
^{28}Mg X
53.83 Kozma 90B angp,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{12}C ^{89}Yt

inelastic		
0.8196	Dubar 89	cs
1.365	Dubar 89	cs
2.124	Dubar 89	cs
2.607	Dubar 89	cs

^{12}C ^{108}Ag

^{24}Na X		
53.83	Kozma 90B	angp,p
^{28}Mg X		
53.83	Kozma 90B	angp,p

^{12}C Ag

inelastic		
53.83	Kozma 90	cs
Na X		
53.83	Kozma 90	cs
Mg X		
53.83	Kozma 90	cs
KK X		
53.83	Kozma 90	cs
Sc X		
53.83	Kozma 90	cs
Mn X		
53.83	Kozma 90	cs
Fe X		
53.83	Kozma 90	cs
^{55}Co X		
53.83	Kozma 90	cs
^{57}Co X		
53.83	Kozma 90	cs
Zn X		
53.83	Kozma 90	cs
Ga X		
53.83	Kozma 90	cs
As X		
53.83	Kozma 90	cs
Se X		
53.83	Kozma 90	cs
Br X		
53.83	Kozma 90	cs
Kr X		
53.83	Kozma 90	cs
Rb X		
53.83	Kozma 90	cs
Yt X		
53.83	Kozma 90	cs
Zr X		
53.83	Kozma 90	cs
Nb X		
53.83	Kozma 90	cs
Mo X		
53.83	Kozma 90	cs
Tc X		
53.83	Kozma 90	cs
Ru X		
53.83	Kozma 90	cs
Rh X		
53.83	Kozma 90	cs
Pd X		
53.83	Kozma 90	cs
Ag^{+} X		
53.83	Kozma 90	cs

^{12}C Sn

^{99}Rh X		
43.8	Kozma 91B	cs
^{110}In X		
43.8	Kozma 91B	cs

^{12}C Ta

fragt X		
53.83	Kozma 89	cs
^{24}Na X		
53.83	Kozma 89	angp

^{12}C Ta

^{28}Mg X		
53.83	Kozma 89	angp

^{12}C ^{181}Ta

^{24}Na X		
53.83	Kozma 90B	angp,p
^{28}Mg X		
53.83	Kozma 90B	angp,p
2frag (frags)		
53.83	Damdinsuren 88	p

^{12}C Au

***p* X**		
3.093	Westenius 90	a-dep,angp,p
deuteron X		
3.093	Westenius 90	a-dep,angp,p
^{3}He X		
3.093	Westenius 90	a-dep,angp,p
^{4}He X		
3.093	Westenius 90	a-dep,angp,p

^{12}C ^{197}Au

inelastic		
53.83	Kozma 90	cs
	Kozma 88	cs
fragt X		
53.83	Damdinsuren 88B	cs
Na X		
53.83	Kozma 90	cs
	Kozma 88	cs
^{24}Na X		
53.83	Kozma 90B	angp,p
Mg X		
53.83	Kozma 90	cs
	Kozma 88	cs
^{28}Mg X		
53.83	Kozma 90B	angp,p
Sc X		
53.83	Kozma 90	cs
	Kozma 88	cs
Va X		
53.83	Kozma 90	cs
	Kozma 88	cs
Mn X		
53.83	Kozma 90	cs
	Kozma 88	cs
Fe X		
53.83	Kozma 90	cs
	Kozma 88	cs
Zn X		
53.83	Kozma 90	cs
	Kozma 88	cs
As X		
53.83	Kozma 90	cs
	Kozma 88	cs
Se X		
53.83	Kozma 90	cs
	Kozma 88	cs
Rb X		
53.83	Kozma 90	cs
	Kozma 88	cs
^{87}Yt X		
53.83	Kozma 90	cs
	Kozma 88	cs
Nb X		
53.83	Kozma 90	cs
	Kozma 88	cs
Tc X		
53.83	Kozma 90	cs
	Kozma 88	cs
Rh X		
53.83	Kozma 90	cs

^{12}C ^{197}Au

Rh X		
	Kozma 88	cs
Sb X		
53.83	Kozma 90	cs
	Kozma 88	cs
Te X		
53.83	Kozma 90	cs
	Kozma 88	cs
Xe X		
53.83	Kozma 90	cs
	Kozma 88	cs
Ba X		
53.83	Kozma 90	cs
	Kozma 88	cs
Pr X		
53.83	Kozma 90	cs
	Kozma 88	cs
Eu X		
53.83	Kozma 90	cs
	Kozma 88	cs
Gd X		
53.83	Kozma 90	cs
	Kozma 88	cs
Tb X		
53.83	Kozma 90	cs
	Kozma 88	cs
Dy X		
53.83	Kozma 90	cs
	Kozma 88	cs
Yb X		
53.83	Kozma 90	cs
	Kozma 88	cs
Lu X		
53.83	Kozma 90	cs
	Kozma 88	cs
Hf X		
53.83	Kozma 90	cs
	Kozma 88	cs
Re X		
53.83	Kozma 90	cs
	Kozma 88	cs

^{12}C Pb

0fragb mult[charged] X		
54	Taran 90	a-dep,mult
0fragb mult[charged^{-}] X		
54	Taran 90	a-dep,mult
mult[*p*] 0fragb X		
54	Taran 90	a-dep,mult
mult[htrack] X		
54	Krasnov 88	mult
0fragb charged X		
54	Taran 90	a-dep,mult
0fragb charged^{-} X		
54	Taran 90	a-dep,mult
π^{+} X		
53.83	Kurepin 88	a-dep,angp
π^{-} X		
53.83	Kurepin 88	a-dep,angp
K^{+} X		
53.83	Kurepin 88	a-dep,angp
K^{-} X		
53.83	Kurepin 88	a-dep,angp
***p* X**		
41.73	Adyasevich 88B	angp
***p* 0fragb X**		
54	Taran 90	a-dep,angp,mult,p,pt
fragt X		
53.83	Damdinsuren 89	cs
mult[htrack] shower X		
54	Bobodjanov 91	mult
	Krasnov 88	mult

^{12}C Pb

mult[htrack] grey X
54 Bobodjanov 91 mult
htrack mult[htrack] X
54 Krasnov 88 angp,mult
mult[htrack] black X
54 Bobodjanov 91 mult
Krasnov 88 mult
$\pi^{\pm}$ mult[htrack] X
54 Krasnov 88 mult
2p X
41.73 Adyasevich 88B angp,p
Lebedev 88 angp,p

^{12}C ^{232}Th

fragt X
53.83 Kozma 89C cs
^{24}Na X
53.83 Kozma 90B angp,p
^{28}Mg X
53.83 Kozma 90B angp,p

^{12}C ^{238}U

fragt X
53.83 Kozma 89C cs

^{12}C U

^{24}Na X
53.83 Kozma 90B angp,p
^{28}Mg X
53.83 Kozma 90B angp,p

^{13}C C

inelastic
3.252 Fukuda 91 cs

^{13}C ^{12}C

^{13}Nit ^{12}Bor
4.021 Braeunig 90 angp,p

^{13}C Al

inelastic
3.252 Fukuda 91 cs

^{13}C ^{40}Ca

^{41}Sc ^{12}Bor
4.021 Braeunig 90 angp,p

^{13}C ^{58}Ni

^{59}Cu ^{12}Bor
4.021 Braeunig 90 angp,p

Nit p

fragb X
14.12 Webber 90B a-dep,cs
15.51 Webber 90 cs
Webber 90B a-dep,cs
17.02 Webber 90C a-dep

Nit nucleus

inelastic
2813 Baroni 91 cs
Baroni 90 cs
fragb X
15.51 Webber 90 cs

Nit He

fragb X
15.51 Webber 90 cs
Webber 90B a-dep,cs

Nit C

fragb X
14.12 Webber 90B a-dep,cs
15.51 Webber 90 cs
Webber 90B a-dep,cs
17.02 Webber 90C a-dep

^{14}Nit nucleus

mult[shower] X
40.6 Babaev 90 ang
mult[grey] X
40.6 Babaev 90 ang
mult[black] X
40.6 Babaev 90 ang
π^{0} X
3.608 Batkin 91 angp,cs,p
^{4}He X
39.63 – 64.21 Abdurazakova 88 pt
mult[shower] mult[fragb] X
40.6 Babaev 90 ang
mult[grey] mult[fragb] X
40.6 Babaev 90 ang
mult[grey] mult[shower] X
40.6 Babaev 90 ang
mult[black] mult[fragb] X
40.6 Babaev 90 ang
mult[black] mult[shower] X
40.6 Babaev 90 ang
mult[black] mult[grey] X
40.6 Babaev 90 ang
2fragb X
39.63 – 64.21 Abdurazakova 88 ang,cor

^{14}Nit C

π^{-} X
3.912 Suzuki 91 angp,p
5.034 Suzuki 91 angp,p
5.51 Suzuki 91 angp,p
7.271 Suzuki 91 angp,p
^{6}Li X
3.608 Kiss 89 angp,p
^{7}Li X
3.608 Kiss 89 angp,p
^{7}Be X
3.608 Kiss 89 angp,p
^{9}Be X
3.608 Kiss 89 angp,p
^{10}Be X
3.608 Kiss 89 angp,p
^{8}Bor X
3.608 Kiss 89 angp,p
^{10}Bor X
3.608 Kiss 89 angp,p
^{11}Bor X
3.608 Kiss 89 angp,p
^{12}Bor X
3.608 Kiss 89 angp,p
^{10}C X
3.608 Kiss 89 angp,p
^{11}C X
3.608 Kiss 89 angp,p
^{12}C X
3.608 Kiss 89 angp,p
^{13}C X
3.608 Kiss 89 angp,p

^{14}Nit Ni

^{6}Li X
3.608 Kiss 89 angp,p
^{7}Li X
3.608 Kiss 89 angp,p
^{7}Be X
3.608 Kiss 89 angp,p
^{9}Be X
3.608 Kiss 89 angp,p
^{10}Be X
3.608 Kiss 89 angp,p
^{8}Bor X
3.608 Kiss 89 angp,p
^{10}Bor X
3.608 Kiss 89 angp,p

^{14}Nit Ni

^{11}Bor X
3.608 Kiss 89 angp,p
^{11}C X
3.608 Kiss 89 angp,p
^{12}C X
3.608 Kiss 89 angp,p
^{13}C X
3.608 Kiss 89 angp,p

^{14}Nit Ag

2frag X
20.43 Klotzengmann 89 angp,cs,p

^{14}Nit Ho

^{6}Li X
3.608 Kiss 89 angp,p
^{7}Li X
3.608 Kiss 89 angp,p
^{8}Li X
3.608 Kiss 89 angp,p
^{7}Be X
3.608 Kiss 89 angp,p
^{9}Be X
3.608 Kiss 89 angp,p
^{10}Be X
3.608 Kiss 89 angp,p
^{10}Bor X
3.608 Kiss 89 angp,p
^{11}Bor X
3.608 Kiss 89 angp,p
^{12}Bor X
3.608 Kiss 89 angp,p
^{13}Bor X
3.608 Kiss 89 angp,p
^{11}C X
3.608 Kiss 89 angp,p
^{12}C X
3.608 Kiss 89 angp,p
^{13}C X
3.608 Kiss 89 angp,p

^{14}Nit ^{197}Au

^{7}Be X
3.863 Pruneau 89 angp,p
^{9}Be X
3.863 Pruneau 89 angp,p
^{10}Be X
3.863 Pruneau 89 angp,p
^{8}Bor X
3.863 Pruneau 89 angp,p
^{10}Bor X
3.863 Pruneau 89 angp,p
^{11}Bor X
3.863 Pruneau 89 angp,p
^{11}C X
3.863 Pruneau 89 angp,p
^{12}C X
3.863 Pruneau 89 angp,p
^{13}C X
3.863 Pruneau 89 angp,p
^{14}C X
3.863 Pruneau 89 angp,p
Nit X
3.863 Pruneau 89 angp,p
2frag X
10.18 Klotzengmann 89 angp,cs,p
^{7}Be p X
3.863 Pruneau 89 p
^{7}Be deuteron X
3.863 Pruneau 89 p
^{7}Be ^{3}H X
3.863 Pruneau 89 p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{14}Nit ^{197}Au

^{7}Be ^{4}He X
3.863 Pruneau 89 p

Be p X
3.863 Pruneau 89 angp,cs

Be deuteron X
3.863 Pruneau 89 angp,cs

Be ^{3}H X
3.863 Pruneau 89 angp,cs

Be ^{4}He X
3.863 Pruneau 89 angp,cs

^{9}Be p X
3.863 Pruneau 89 p

^{9}Be deuteron X
3.863 Pruneau 89 p

^{9}Be ^{3}H X
3.863 Pruneau 89 p

^{9}Be ^{4}He X
3.863 Pruneau 89 p

Bor p X
3.863 Pruneau 89 angp,cs

Bor deuteron X
3.863 Pruneau 89 angp,cs

Bor ^{3}H X
3.863 Pruneau 89 angp,cs

Bor ^{4}He X
3.863 Pruneau 89 angp,cs

^{10}Bor p X
3.863 Pruneau 89 p

^{10}Bor deuteron X
3.863 Pruneau 89 p

^{10}Bor ^{3}H X
3.863 Pruneau 89 p

^{10}Bor ^{4}He X
3.863 Pruneau 89 p

^{11}Bor p X
3.863 Pruneau 89 p

^{11}Bor deuteron X
3.863 Pruneau 89 p

^{11}Bor ^{3}H X
3.863 Pruneau 89 p

^{11}Bor ^{4}He X
3.863 Pruneau 89 p

C p X
3.863 Pruneau 89 angp,cs

C deuteron X
3.863 Pruneau 89 angp,cs

C ^{3}H X
3.863 Pruneau 89 angp,cs

C ^{4}He X
3.863 Pruneau 89 angp,cs

^{12}C p X
3.863 Pruneau 89 p

^{12}C deuteron X
3.863 Pruneau 89 p

^{12}C ^{3}H X
3.863 Pruneau 89 p

^{12}C ^{4}He X
3.863 Pruneau 89 p

^{13}C p X
3.863 Pruneau 89 p

^{13}C deuteron X
3.863 Pruneau 89 p

^{13}C ^{3}H X
3.863 Pruneau 89 p

^{13}C ^{4}He X
3.863 Pruneau 89 p

O p

fragb X
16.13 Webber 90 cs
17.2 Webber 90B a-dep,cs
19.27 Webber 90 cs
19.45 Webber 90C a-dep
20.82 Webber 90 cs
Webber 90B a-dep,cs
25.29 Webber 90 cs
Webber 90B a-dep,cs
37.02 Webber 90 cs
Webber 90B a-dep,cs

Be X
10.28 – 44.47 Webber 90C cs

O nucleus

γ X
3215 Raha 91 a-dep,et,pt

q X
960 Matis 90B qnc
3200 Matis 90B qnc

π^0 X
3215 Raha 91 a-dep,et,pt

p X
30.67 Antonchik 90B angp,mult,p

fragb X
16.13 Webber 90 cs
19.27 Webber 90 cs
20.82 Webber 90 cs
25.29 Webber 90 cs
37.02 Webber 90 cs

Nit X
17.39 Webber 90C a-dep

mult[p] mult[π^+] mult[π^-] X
71.94 Okonov 88 cor,mult

O He

fragb X
17.2 Webber 90B a-dep,cs
19.27 Webber 90 cs
37.02 Webber 90 cs
Webber 90B a-dep,cs

O C

mult[charged] (neutrals)
974.8 Ritter 88 et,mult
3215 Ritter 88 et,mult

fragb X
16.13 Webber 90 cs
17.2 Webber 90B a-dep,cs
19.27 Webber 90 cs
19.45 Webber 90C a-dep
20.82 Webber 90 cs
Webber 90B a-dep,cs
25.29 Webber 90 cs
Webber 90B a-dep,cs
37.02 Webber 90 cs
Webber 90B a-dep,cs

O Ne

K^0 X
4.5 Iovchev 90 angp,pt

Λ X
4.5 Iovchev 90 angp,pt

O Al

charged X
233.6 Abbott 92B cs,et,p

π^0 X
4.3 Julien 88 angp,p

O Ar

q X
232 Matis 90B qnc

O Cu

mult[charged] X
3200 Bachler 91 mult

mult[charged$^-$] X
3200 Bachler 91 mult

mult[charged] (neutrals)
974.8 Ritter 88 et,mult

O Cu

mult[charged] (neutrals)
3215 Ritter 88 et,mult

charged X
233.6 Abbott 92B cs,et,p
3200 Bachler 91 mult

charged$^-$ X
3200 Bachler 91 mult

$J/\psi(1S)$ X
3215 Baglin 91E a-dep,cs

fragb X
960 Bachler 91B p

$J/\psi(1S)$ (neutrals) X
3215 Baglin 91E cor,et

O Ag

mult[charged] (neutrals)
974.8 Ritter 88 et,mult
3215 Ritter 88 et,mult

charged X
233.6 Abbott 92B cs,et,p

fragb X
960 Bachler 91B p

O Wt

mult[charged] (neutrals)
3215 Ritter 88 et,mult

O Au

mult[charged] X
3200 Bachler 91 mult

mult[charged$^-$] X
3200 Bachler 92 mult,p
Bachler 91 mult

mult[charged] (neutrals)
974.8 Ritter 88 et,mult
3215 Ritter 88 et,mult

charged X
233.6 Abbott 92B cs,et,p
3200 Bachler 91 mult

charged$^-$ X
3200 Bachler 91 mult

fragb X
960 Bachler 91B p
3200 Bachler 91B p

O ^{197}Au

π^0 X
4.3 Julien 88 angp,p

O Pb

π^- 0fragb X
72 Chkhaidze 92 p,pt

Λ X
72 Panagiotou 89 p,pol,pt

O U

$\omega(783)$ X + $\rho(770)^0$ X
3215 Baglin 91D a-dep
Baldisseri 90 cs

$\phi(1020)$ X
3215 Baglin 91D a-dep
Baldisseri 90 cs

$J/\psi(1S)$ X
3215 Baglin 91E a-dep,cs
Raha 91 et,pt

μ^- μ^+ X
3215 Baglin 91D mass
Raha 91 et,mass
Baldisseri 90 mass,p,pt

$\omega(783)$ (neutrals) X + $\rho(770)^0$ (neutrals) X
3215 Baglin 91D cs,et

O U

ω(783) mult[charged] (neutrals) + ρ(770)^0 mult[charged] (neutrals)
3200 Abreu 89 cs

K^+ mult[neutral] X + π^+ mult[neutral] X
3200 Peralta 91 cor,et,pt

K^- mult[neutral] X + π^- mult[neutral] X
3200 Peralta 91 cor,et,pt

φ(1020) (neutrals) X
3215 Baglin 91D cs,et

φ(1020) mult[charged] (neutrals)
3200 Abreu 89 cs

J/ψ(1S) (neutrals) X
3215 Baglin 91E cor,et

$\mu^- \mu^+$ (neutrals) X
3215 Baglin 91D cs,et

$\mu^- \mu^+$ mult[charged] (neutrals)
3200 Abreu 89 et,mass

$2\mu^-$ mult[neutral] X
3200 Peralta 91 cor,et,pt

$2\mu^+$ mult[neutral] X
3200 Peralta 91 cor,et,pt

^{16}O p

0fragb X
49.6 Botvina 91 cs

0π^- mult[charged] X
62.76 Glagolev 89 mult

mult[charged] X
49.6 Botvina 91 mult
62.76 Glagolev 89 mult

mult[charged$^+$] X
49.6 Botvina 91 mult
62.76 Glagolev 90C mult

mult[charged$^-$] X
49.6 Botvina 91 mult

mult[charged] (neutrals)
974.8 Brechtmann 88B cs
3215 Brechtmann 88B cs

(fragbs) X
49.6 Semyarchuk 90 cs

mult[fragb] X
49.6 Botvina 91 mult

p X
3.1 Botvina 91B mult,p

frag X
974.8 Brechtmann 88B cs
3215 Brechtmann 88B cs

fragb X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

hypernucleus X
46.16 Bartke 89 cs

deuteron X
3.1 Botvina 91B mult,p

^{3}H X
3.1 Botvina 91B mult,p

^{4}H X
3.1 Botvina 91B mult,p

^{3}He X
3.1 Botvina 91B mult,p

He X
3.1 Botvina 91B mult,p

^{5}He X
3.1 Botvina 91B mult,p

C X
25.23 Hirzebruch 92 cs

^{16}O p

C X
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

Nit X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

mult[charged$^-$] mult[charged] X
49.6 Botvina 91 mult

mult[charged$^+$] mult[charged$^-$] X
49.6 Botvina 91 mult

(π^-'s) (fragbs) X
62.76 Glagolev 90C mult

mult[π^-] mult[charged] X
62.76 Glagolev 89 cor,mult

mult[p] mult[π^-] X
3.1 Botvina 91B cor,mult

mult[fragb] mult[charged] X
62.76 Glagolev 89 cor,mult

mult[fragb] mult[charged$^-$] X
49.6 Botvina 91 mult

mult[π^-] mult[fragb] X
3.1 Botvina 91B cor,mult
62.76 Glagolev 89 cor,mult

2charged (neutrals)
62.76 Glagolev 89 cs

π^- mult[charged] X
62.76 Glagolev 89 mult

2charged (neutrals) inelastic
62.76 Glagolev 89 cs

2π^- mult[charged] X
62.76 Glagolev 89 mult

3π^- mult[charged] X
62.76 Glagolev 89 mult

C He p
3215 Baroni 92 angp,cs,p

Nit 2p
3215 Baroni 92 angp,cs,p

^{16}O nucleus

0He 0p 0fragb X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

0fragb X
974.8 Sengupta 89B cs
3215 Sengupta 89B cs

X
44.47 Otterlund 88 cs
248.1 Adamovich 88B cs
974.8 Adamovich 88B cs
Otterlund 88 cs
3215 Adamovich 88B cs
Otterlund 88 cs
Ramello 88 cs

inelastic
43.94 – 3200 London 89 cs
233.1 Stenlund 90D cs
248.1 Barbier 88C cs
959.9 Stenlund 90D cs
974.8 Sengupta 91 cs
Sengupta 89B cs
Bamberger 88B cs
Singh 88 cs
3200 Stenlund 90D cs
3215 Baroni 91 cs
Sengupta 91 cs
Baroni 90 cs
Romano 89 cs
Sengupta 89B cs
Bamberger 88B cs
Barbier 88C cs

^{16}O nucleus

inelastic
Ramello 88 cs
Singh 88 cs

mult[charged] X
1.546 – 3215 Adamovich 91B mult
2.297 – 3215 Otterlund 91 mult
233.1 Schmitz 91 angp,col,p
Adamovich 90B mult,p
248.1 Vongersdorff 89 cor,mult,p
959.9 Adamovich 90B mult,p
974.8 Vongersdorff 89 cor,mult,p
Sengupta 88 cor,mult,p
3200 Schmitz 91 angp,col,p
Adamovich 90B mult,p
3215 Holynski 89 mult
Vongersdorff 89 cor,mult,p
Sengupta 88 cor,mult,p

mult[charged] (neutrals)
33.6 Ghosh 91 cor,mult,p
233.1 Buschbeck 91 angp,col,mult,p
974.8 Buschbeck 89 mult,p
Brechtmann 88B cs
3200 Buschbeck 91 angp,col,mult,p
3215 Buschbeck 89 mult,p
Brechtmann 88B cs

(showers) X
233.1 Adamovich 92B angp,col,mult,p
Stenlund 91 angp,col,mult,p
Stenlund 90D cor,mult,p
959.9 Adamovich 92B angp,col,mult,p
Stenlund 91 angp,col,mult,p
Stenlund 90D cor,mult,p
3200 Adamovich 92B angp,col,mult,p
Stenlund 91 angp,col,mult,p
Stenlund 90D cor,mult,p

mult[neutral] X
14.5 Tannenbaum 89 et,p

mult[He] X
974.8 Sengupta 89 cs
Sengupta 89B cs
3215 Sengupta 89B cs
6420 Adamovich 93 –

mult[fragb] X
233.1 Otterlund 90 mult
959.9 Otterlund 90 mult
3200 Otterlund 90 mult
3215 Ramello 88 mult

mult[shower] X
1.546 – 3215 Adamovich 91B mult
2.297 – 3215 Otterlund 91 mult
72.59 Adamovich 92C mult,p
233.1 Adamovich 92B mult
Adamovich 91 mult,p
Adamovich 91C mult
Adamovich 90C mult,p
Stenlund 90 mult
Stenlund 90C mult,p
Stenlund 90D mult
248.1 Adamovich 92C mult,p
Adamovich 89E cor,mult,p
Adamovich 88C mult
Otterlund 88 mult
959.9 Adamovich 92B mult
Adamovich 91 mult,p
Adamovich 91C mult
Adamovich 90C mult,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{16}O nucleus

mult[shower] X

	Stenlund 90	mult
	Stenlund 90C	mult,p
	Stenlund 90D	mult
974.8	Adamovich 92C	mult,p
	Jain 92E	mult,p
	Jain 91	mult
	Jain 91B	mult
	Sengupta 91	mult
	Jain 90	mult
	Sengupta 90B	mult
	Adamovich 89E	cor,mult,p
	Holynski 89B	cor,mult,p
	Adamovich 88C	mult
	Otterlund 88	mult
	Singh 88	ang,cor,mult,p
3200	Adamovich 92B	mult
	Adamovich 91	mult,p
	Adamovich 91C	mult
	Adamovich 90C	mult,p
	Otterlund 90	cor,mult,p
	Stenlund 90	mult
	Stenlund 90C	mult,p
	Stenlund 90D	mult
3215	Adamovich 92C	mult,p
	Jain 92E	mult,p
	Jain 91	mult
	Jain 91B	mult
	Sengupta 91	mult
	Jain 90	mult
	Sengupta 90B	mult
	Adamovich 89E	cor,mult,p
	Holynski 89B	cor,mult,p
	Romano 89	et,mult
	Adamovich 88	mult
	Adamovich 88C	mult
	Otterlund 88	mult
	Singh 88	ang,cor,mult,p
	Stenlund 88	angp,cor,mult,p
	Tretyakova 88	cor,mult,p

mult[shower] 0fragb X

974.8	Sengupta 90B	mult
	Romano 89	mult
3215	Jain 90B	cor,mult,p
	Sengupta 90B	mult
	Romano 89	mult

mult[grey] X

1.546 – 3215	Adamovich 91B	mult
2.297 – 3215	Otterlund 91	mult
7.088 – 3215	Otterlund 90	mult
30.12 – 233.1	Stenlund 90	mult
46.16 – 3215	Adamovich 89D	mult
959.9	Stenlund 90	mult
974.8	Jain 91	mult
	Sengupta 91	mult
3200	Stenlund 90	mult
3215	Jain 91	mult
	Sengupta 91	mult
	Adamovich 89C	mult

mult[htrack] X

248.1	Adamovich 88D	mult
974.8	Adamovich 88D	mult
3215	Otterlund 88	mult
	Ramello 88	mult

mult[htrack] 0fragb X

3215	Baroni 91	mult

mult[black] X

1.546 – 3215	Adamovich 91B	mult
2.297 – 3215	Otterlund 91	mult
248.1	Adamovich 88D	mult
974.8	Jain 91	mult
	Sengupta 91	mult
	Adamovich 88D	mult
3215	Jain 91	mult
	Sengupta 91	mult
	Adamovich 89C	mult

^{16}O nucleus

neutral X

232	Remsberg 88	p
	Tannenbaum 88	et,p

charged X

33.6	Ghosh 91	mult,p
974.8	Sengupta 90B	mult,p
	Bamberger 88B	et,mult,p
3215	Akesson 90	cor,et,mult,p
	Sengupta 90B	mult,p
	London 89	a-dep,p
	Romano 89	et,mult,p
	Bamberger 88B	et,mult,p
	Ramello 88	et,p,pt

0fragb charged X

974.8	Sengupta 90B	mult,p
3215	Sengupta 90B	mult,p

charged$^-$ X

974.8	Bamberger 88B	et,mult,p
3215	Bamberger 88B	et,mult,p

shower X + fragb X

248.1	Adamovich 88C	angp,p
974.8	Adamovich 88C	angp,p
3215	Adamovich 88C	angp,p

shower X

30.12 – 3200	Stenlund 90B	mult
46.16 – 3215	Adamovich 90	mult
	Adamovich 89B	mult
72.59	Adamovich 92C	mult,p
	Adamovich 92D	mult,p
72.59 – 3215	Otterlund 91	mult,p
230 – 3200	Bartke 89	p
233.1	Otterlund 90	p
	Stenlund 90	p
	Stenlund 90D	mult
248.1	Adamovich 92C	mult,p
	Adamovich 92D	mult,p
	Tannenbaum 89	p
	Adamovich 88B	mult,p
	Adamovich 88D	mult,p
959.9	Otterlund 90	p
	Stenlund 90	p
	Stenlund 90D	mult
974.8	Adamovich 92C	mult,p
	Adamovich 92D	mult,p
	Jain 92E	mult,p
	Jain 91	angp,mult
	Jain 91B	p
	Sengupta 91	p
	Jain 90	mult,p
	Tannenbaum 89	p
	Adamovich 88B	mult,p
	Adamovich 88D	mult,p
	Singh 88	mult,p
3200	Otterlund 90	p
	Stenlund 90	p
	Stenlund 90D	mult
3215	Adamovich 92C	mult,p
	Adamovich 92D	mult,p
	Jain 92E	mult,p
	Baroni 91	mult,p
	Jain 91	angp,mult
	Jain 91B	p
	Sengupta 91	p
	Jain 90	mult,p
	Tannenbaum 89	p
	Adamovich 88B	mult,p
	Singh 88	mult,p
	Tretyakova 88	mult

shower 0fragb X

974.8	Jain 90	mult,p
3215	Baroni 91	cs,mult
	Jain 90	mult,p

grey X

233.1	Adamovich 91C	angp,mult
	Otterlund 90	angp

^{16}O nucleus

grey X

	Stenlund 90	angp
	Stenlund 90D	angp
248.1 – 3215	Adamovich 89D	angp,mult
959.9	Adamovich 91C	angp,mult
	Otterlund 90	angp
	Stenlund 90	angp
	Stenlund 90D	angp
974.8	Jain 91	angp,mult
	Sengupta 91	angp
	Ardito 87	cor
3200	Adamovich 91C	angp,mult
	Otterlund 90	angp
	Stenlund 90	angp
	Stenlund 90D	angp
3215	Baroni 91	angp
	Jain 91	angp,mult
	Sengupta 91	angp
	Adamovich 89C	mult
	Tretyakova 88	mult
	Ardito 87	cor

htrack X

233.1	Stenlund 90D	mult
959.9	Stenlund 90D	mult
3200	Stenlund 90D	mult
3215	Baroni 91	cs,mult
	Ramello 88	angp,mult
	Tretyakova 88	mult

htrack 0fragb X

3215	Baroni 91	cs,mult

black X + grey X

974.8	Ardito 87	mult
3215	Ardito 87	mult

black X

233.1	Adamovich 91C	angp,mult
	Otterlund 90	angp
	Stenlund 90D	angp
959.9	Adamovich 91C	angp,mult
	Otterlund 90	angp
	Stenlund 90D	angp
974.8	Jain 91	angp,mult
	Sengupta 91	angp
	Ardito 87	cs
3200	Adamovich 91C	angp,mult
	Otterlund 90	angp
	Stenlund 90D	angp
3215	Baroni 91	angp
	Jain 91	angp,mult
	Sengupta 91	angp
	Adamovich 89C	mult
	Ramello 88	angp,mult
	Tretyakova 88	mult
	Ardito 87	cs

$\pi^\pm$ X

3215	Kampert 92	a-dep,p

π^+ X

6.823	Batkin 91	angp
6.862	Batkin 91	angp

π^0 X

3.476	Batkin 91	angp,cs,p
4.29	Batkin 91	angp,cs,p

π^- X

6.823	Batkin 91	angp
6.862	Batkin 91	angp

ω(783) X

3215	Jacob 91	cs,et

ϕ(1020) X

3215	Jacob 91	cs,et

charm X

3215	Aoki 89	cs

baryon X

3215	Kampert 92	a-dep,p

nucleus mult[fragb]

3215	Romano 89	cs

^{16}O nucleus

frag X
10.56 Barz 92 angp
974.8 Brechtmann 88B cs
3215 Brechtmann 88B cs

fragb X
25.23 Hirzebruch 92 cs
46.16 Ghosh 92B –
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs
974.8 Ardito 87 cs
3215 Romano 89 angp,p
Otterlund 88 cs
Ardito 87 cs

fragt X
974.8 Ardito 87 mult
3215 Ardito 87 mult

^{4}He X
974.8 Ardito 87 cs
3215 Ardito 87 cs

He X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs
974.8 Sengupta 89 mult
Sengupta 89B cs
3200 Stenlund 90 p
3215 Sengupta 89B cs
Otterlund 88 angp,mult
Singh 88B cs

C X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

Nit X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

mult[shower] mult[fragb] X
72.59 Adamovich 92C mult,p
233.1 Adamovich 91 mult,p
Adamovich 91C mult
Adamovich 90C mult,p
Stenlund 90C mult,p
248.1 Adamovich 92C mult,p
959.9 Adamovich 91 mult,p
Adamovich 91C mult
Adamovich 90C mult,p
Stenlund 90C mult,p
974.8 Adamovich 92C mult,p
3200 Adamovich 91 mult,p
Adamovich 91C mult
Adamovich 90C mult,p
Stenlund 90C mult,p
3215 Adamovich 92C mult,p

mult[grey] mult[shower] X
974.8 Jain 91 mult
3215 Jain 91 mult

mult[htrack] (showers) 0fragb X
959.9 Jain 92C angp,col,mult,p
3200 Jain 92C angp,col,mult,p

mult[He] mult[htrack] X
974.8 Sengupta 89 cs
3215 Baroni 91 mult

mult[htrack] mult[fragb] X
3215 Baroni 91 mult

mult[htrack] mult[shower] X
248.1 Adamovich 88D mult
974.8 Adamovich 88D mult

mult[htrack] mult[shower] 0fragb X
974.8 Jain 92D angp,col,mult,p
3215 Jain 92D angp,col,mult,p
Jain 91C mult,p

^{16}O nucleus

mult[htrack] mult[shower] 0fragb X
Sengupta 90 mult,p

mult[black] mult[grey] X
974.8 Jain 91 mult
3215 Jain 91 mult

0fragb 2charged X
974.8 Sengupta 90B angp,cor,mult,p
3215 Sengupta 90B angp,cor,mult,p

2charged X
248.1 Vongersdorff 89 cor,mult,p
974.8 Sengupta 90B angp,cor,mult,p
Vongersdorff 89 cor,mult,p
3215 Sengupta 90B angp,cor mult,p
Vongersdorff 89 cor,mult,p

mult[He] shower X
3215 Baroni 91 cs,mult

shower mult[fragb] X
72.59 Adamovich 92C mult,p
Adamovich 92D mult,p
72.59 – 3215 Otterlund 91 mult,p
233.1 Adamovich 91C mult
Otterlund 90 mult
248.1 Adamovich 92C mult,p
Adamovich 92D mult,p
959.9 Adamovich 91C mult
Otterlund 90 mult
974.8 Adamovich 92C mult,p
Adamovich 92D mult,p
Jain 92E mult,p
3200 Adamovich 91C mult
Otterlund 90 mult
3215 Adamovich 92C mult,p
Adamovich 92D mult,p
Jain 92E mult,p
Baroni 91 cs,mult

shower mult[shower] 0fragb X
974.8 Singh 89 cor,mult,p
3215 Singh 89 cor,mult,p

shower mult[shower] X
3215 Adamovich 88 p

mult[grey] shower X
974.8 Jain 91 cor,mult,p
3215 Jain 91 cor,mult,p

mult[htrack] shower X
233.1 Stenlund 90D mult
248.1 Adamovich 88B cor,mult,p
Adamovich 88D mult,p
959.9 Stenlund 90D mult
974.8 Adamovich 88B cor,mult,p
Adamovich 88D mult,p
3200 Stenlund 90D mult
3215 Adamovich 88B cor,mult,p

2shower X
46.16 Ghosh 89B cor,p

grey mult[fragb] X
233.1 Adamovich 91C angp,mult
Otterlund 90 angp,mult
959.9 Adamovich 91C angp,mult
Otterlund 90 angp,mult
3200 Adamovich 91C angp,mult
Otterlund 90 angp,mult

grey mult[shower] X
233.1 Adamovich 91C mult
248.1 – 3215 Adamovich 89D mult
959.9 Adamovich 91C mult
3200 Adamovich 91C mult

^{16}O nucleus

grey mult[grey] X
974.8 Jain 91 angp,cor,mult
3215 Jain 91 angp,cor,mult

grey shower X
3215 Otterlund 88 cor,mult

mult[He] htrack X
3215 Baroni 91 cs,mult

htrack mult[fragb] X
3215 Baroni 91 cs,mult
Ramello 88 mult

black mult[fragb] X
233.1 Adamovich 91C angp,mult
Otterlund 90 angp
959.9 Adamovich 91C angp,mult
Otterlund 90 angp
3200 Adamovich 91C angp,mult
Otterlund 90 angp

black mult[shower] X
233.1 Adamovich 91C mult
959.9 Adamovich 91C mult
3200 Adamovich 91C mult

black mult[black] X
974.8 Jain 91 angp,cor,mult
3215 Jain 91 angp,cor,mult

$2\pi^-$ X
3215 London 89 angp,cor,pt

mult[htrack] fragb X
3215 Otterlund 88 mult

fragb charged X
3215 London 89 cor,mult,p

black fragb X
974.8 Ardito 87 cs
3215 Ardito 87 cs

***p* fragb X**
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

^{4}He black X
974.8 Ardito 87 cs
3215 Ardito 87 cs

2^{4}He X
974.8 Ardito 87 cs
3215 Ardito 87 cs

He mult[htrack] X
974.8 Sengupta 89 mult
3215 Singh 88B cs

He *B* X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

2He X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

nucleus Li X
3215 Baroni 90 cs,p

Li He X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

nucleus Be X
3215 Baroni 90 cs,p

C He X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

^{15}Nit *p* X
3215 Ramello 88 pt

^{15}O *n* X
7.761 – 3200 Bartke 89 α-dep,cs

mult[htrack] mult[shower] (fragbs) X
3215 Tretyakova 88 mult

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{16}O nucleus

mult[grey] shower mult[shower] X
974.8 Jain 91B cor,mult,p
3215 Jain 91B cor,mult,p

mult[htrack] shower (fragbs) X
3215 Tretyakova 88 mult

3shower X
46.16 Ghosh 89B cor,p

mult[htrack] grey (fragbs) X
3215 Tretyakova 88 mult

mult[htrack] black (fragbs) X
3215 Tretyakova 88 mult

htrack mult[shower] fragb X
248.1 Barbier 88C mult
974.8 Barbier 88C mult
3215 Barbier 88C mult

htrack shower fragb X
248.1 Barbier 88C cs,mult,p
974.8 Barbier 88C cs,mult,p
3215 Barbier 88C cs,mult,p
Otterlund 88 p

charm mult[shower] fragb X
3215 Aoki 89 cs,mult

2^{4}He black X
974.8 Ardito 87 cs
3215 Ardito 87 cs

3^{4}He X
974.8 Ardito 87 cs
3215 Ardito 87 cs

3He X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

Li 2He X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

4shower X
46.16 Ghosh 89B cor,p

3^{4}He black X
974.8 Ardito 87 cs
3215 Ardito 87 cs

4^{4}He X
974.8 Ardito 87 cs
3215 Ardito 87 cs

4He X
46.16 Adamovich 89F angp,cs,p
248.1 Adamovich 89F angp,cs

4^{4}He black X
974.8 Ardito 87 cs
3215 Ardito 87 cs

nucleus C He
3215 Baroni 92 angp,cs,p
Baroni 90 cs,p

nucleus ^{12}C ^{4}He
974.8 Ardito 87 cs
3215 Ardito 87 cs

nucleus Nit *p*
3215 Baroni 92 angp,cs,p

nucleus ^{15}Nit *p*
974.8 Ardito 87 ang,cs,pt
3215 Baroni 90 cs,p
Ardito 87 ang,cs,pt

nucleus Bor He *p*
3215 Baroni 90 cs,p

nucleus C 2*p*
3215 Baroni 90 cs,p

nucleus 4He
3215 Baroni 90 cs,p

nucleus Bor 3*p*
3215 Baroni 90 cs,p

nucleus 3He 2*p*
3215 Baroni 90 cs,p

nucleus 2He 4*p*
3215 Baroni 90 cs,p

^{16}O nucleus

nucleus He 6*p*
3215 Baroni 90 cs,p

^{16}O He

inelastic
974.8 Pugh 88 cs
3215 Pugh 88 cs

^{16}O C

mult[charged] X
232 Remsberg 88 mult
974.8 Albrecht 88 mult
Otterlund 88B mult,p
3215 Albrecht 89D cor,mult,p
Albrecht 88 mult
Lund 88 mult
Otterlund 88B mult,p

mult[charged] (neutrals)
974.8 Brechtmann 88B cs
Franz 88B cor,et,mult,p
3215 Brechtmann 88B cs
Franz 88B cor,et,mult,p
Schmidt 87 mult

mult[neutral] X
974.8 Tannenbaum 89 et,p
3215 Tannenbaum 89 et,p

mult[hadron] X
974.8 Tannenbaum 89 et,p
3215 Tannenbaum 89 et,p

charged X
974.8 Albrecht 88 a-dep,et,p
3215 Albrecht 88 a-dep,et,p
Lund 88 p
Schmidt 87 p

hadron X
974.8 Lund 88 cs
Sorensen 88 cs,et,p
Schmidt 87 et
3215 Heck 88 et
Lund 88 cs
Sorensen 88 cs,et,p
Schmidt 87 p

γ X
974.8 Lohner 88 pt
3200 Albrecht 91O cs
3215 Odyniec 91B p,pt
Albrecht 88B pt
Kluberg 88 p,pt
Lohner 88 pt
Schmidt 87 pt

π^0 X
974.8 Albrecht 88B pt
Lohner 88 pt
3200 Albrecht 91O cs
3215 Albrecht 88B pt
Franz 88B angp,pt
Lohner 88 angp,pt
Schmidt 87 pt

baryon X
974.8 Schmidt 88 p
3215 Schmidt 88 mult,p
Schmidt 87 mult,p

***p* X**
3215 Schmidt 88 p,pt

frag X
974.8 Brechtmann 88B cs
3215 Brechtmann 88B cs

fragb X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs
3215 Tannenbaum 89 p

C X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs

^{16}O C

C X
230.4 Hirzebruch 92 cs

Nit X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

2γ X
3215 Lohner 88 mass
Schmidt 87 mass

2π^+ X
3200 Albrecht 92L cor,p,pt
Albrecht 91H cor

fragt fragb X
3215 Franz 88B cor,mult,p

^{16}O Ne

inelastic
974.8 Pugh 88 cs
3215 Pugh 88 cs

2π^- fragb X
72 Abdurakhimov 88 angp,cor

^{16}O Al

0fragb X
3200 Bachler 91B et,p

X
3200 Bachler 91B et,p

inelastic
3215 Barnes 88 cs

mult[charged] X
974.8 Akesson 89B cor,mult,p
3200 Bachler 91B et,p
3215 Akesson 89B cor,mult,p

mult[neutral] X
3200 Bachler 91B et,p
3215 Tannenbaum 89 et,p

mult[hadron] X
974.8 Tannenbaum 89 et,p
3215 Tannenbaum 89 et,p

charged X
974.8 Akesson 89B cor,et,p
3215 Akesson 89B cor,et,p

hadron X
974.8 Akesson 88 a-dep,angp,et
Corriveau 88 et
3215 Odyniec 89 et
Akesson 88 a-dep,angp,et
Corriveau 88 et
Pugh 88 et

shower X
3215 Barnes 88 cs

frag X
974.8 Brechtmann 88B cs
3215 Brechtmann 88B cs

fragb X
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

^{7}Be X
6.854 Silk 88 angp,cs

Be X
6.854 Silk 88 a-dep,angp,cs

^{9}Be X
6.854 Silk 88 angp,cs

^{10}Be X
6.854 Silk 88 angp,cs

^{8}Bor X
6.854 Silk 88 angp,cs

Bor X
6.854 Silk 88 a-dep,angp,cs

^{11}Bor X
6.854 Silk 88 angp,cs

^{16}O Al

^{12}Bor X
6.854 Silk 88 angp,cs

^{10}C X
6.854 Silk 88 angp,cs

^{11}C X
6.854 Silk 88 angp,cs

C X
6.854 Silk 88 a-dep,angp,cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

^{12}C X
6.854 Silk 88 angp,cs

^{13}C X
6.854 Silk 88 angp,cs

^{14}C X
6.854 Silk 88 angp,cs

^{13}Nit X
6.854 Silk 88 angp,cs

Nit X
6.854 Silk 88 a-dep,angp,cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

^{14}Nit X
6.854 Silk 88 angp,cs

^{15}Nit X
6.854 Silk 88 angp,cs

$2\pi^+$ X
3215 Kampert 92 cor,p

$2p$ X
3215 Kampert 92 cor,p

^{16}O ^{27}Al

inelastic
0.946 Dubar 89 cs

charged X
6.862 Durand 90 mult

$\pi^\pm$ X
6.862 Barbera 90 angp,p

π^0 X
6.89 Moisan 92 angp,p,pt

p X
6.862 Barbera 90 angp,p
Durand 90 angp,p

frag X
6.862 Barbera 90 mult

He X
6.862 Barbera 90 angp,p
Durand 90 angp,p

p charged X
6.862 Durand 90 mult

p $\pi^\pm$ X
6.862 Barbera 90 angp,p

$\pi^\pm$ frag X
6.862 Barbera 90 mult

p frag X
6.862 Barbera 90 mult

He $\pi^\pm$ X
6.862 Barbera 90 angp,p

He p X
6.862 Barbera 90 angp,p
Durand 90 angp,p

^{16}O ^{40}Ca

^{40}Ca ^{16}O
6.862 Rousselchoma 88 angp

^{16}O Va

^{24}Na X
246.5 Loveland 88 angp

^{16}O ^{58}Ni

π^0 X
6.89 Moisan 92 angp,p,pt

^{16}O Cu

0fragb X
960 Bachler 91B et,p
3200 Bachler 91B et,p

X
960 Bachler 91B et,p
3200 Bachler 91B et,p

inelastic
974.8 Bamberger 88B cs
Pugh 88 cs
3215 Bamberger 88B cs
Pugh 88 cs

mult[charged] X
232 Remsberg 88 mult
960 Bachler 91B et,p
974.8 Albrecht 88 mult
Otterlund 88B mult,p
3200 Bachler 91B et,p
3215 Albrecht 88 mult
Lund 88 mult
Otterlund 88B mult,p

mult[charged] (neutrals)
974.8 Brechtmann 88B cs
Franz 88B cor,et,mult,p
3215 Brechtmann 88B cs
Franz 88B cor,et,mult,p
Schmidt 87 mult

mult[neutral] X
14.5 Tannenbaum 89 et,p
960 Bachler 91B et,p
974.8 Tannenbaum 89 et,p
3200 Bachler 91B et,p
3215 Tannenbaum 89 et,p

mult[hadron] X
974.8 Tannenbaum 89 et,p
3215 Tannenbaum 89 et,p

neutral X
232 Remsberg 88 p
Tannenbaum 88 et,p

charged X
974.8 Albrecht 90C a-dep,et,p
Albrecht 88 a-dep,et,p
Bamberger 88B et,mult,p
Otterlund 88B a-dep,p
3215 Albrecht 90C a-dep,et,p
Albrecht 88 a-dep,et,p
Bamberger 88B et,mult,p
Lund 88 p
Otterlund 88B a-dep,p
Schmidt 87 p

charged$^-$ X
974.8 Bamberger 88B et,mult,p
3215 Bamberger 88B et,mult,p

hadron X
974.8 Heck 88 p
Lund 88 cs
Sorensen 88 cs,et,p
Schmidt 87 et
3215 Odyniec 89 et
Heck 88 et
Lund 88 cs
Pugh 88 et
Sorensen 88 cs,et,p
Schmidt 87 p

$\pi^\pm$ X
974.8 Albrecht 90C a-dep,et,p
3215 Albrecht 90C a-dep,et,p

$J/\psi(1S)$ X
3215 Baglin 91B pt
Baglin 91C pt
Jacob 91 et,mass,pt
Odyniec 91B et,mult
Sonderegger 89 cs,et

baryon X
974.8 Albrecht 90C a-dep,et,p
Schmidt 88 p

^{16}O Cu

baryon X
3215 Albrecht 90C a-dep,et,p
Schmidt 88 mult,p

p X
3215 Schmidt 88 p,pt

fragb X
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs
3215 Tannenbaum 89 p

C X
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

Nit X
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs

^{24}Na X
246.5 Loveland 88 angp

$2\mu^-$ X + $2\mu^+$ X
3215 Sonderegger 89 et,mass

μ^- μ^+ X
3215 Baglin 91B pt
Baglin 91C pt
Jacob 91 et,mass,pt
Sonderegger 89 cs,et

$2\pi^+$ X
3200 Albrecht 92L cor,p,pt
Albrecht 91H cor
3215 Kampert 92 cor,p

$J/\psi(1S)$ (neutrals) X
3215 Baglin 91B cor,et,pt
Baglin 91C cor,et,pt
Baglin 90B et

$2p$ X
3215 Kampert 92 cor,p

fragt fragb X
3215 Franz 88B cor,mult,p

μ^- μ^+ (neutrals) X
3215 Baglin 91B cor,et,pt
Baglin 91C cor,et,pt
Baglin 90B et

^{16}O Br

charged X
2.077 – 6.862 Jakobsson 90 mult
4.948 – 10.88 Jakobsson 90 mult

^{16}O ^{90}Zr

^{90}Zr ^{16}O
6.862 Rousselchoma 88 angp

^{16}O Ag

0fragb X
960 Bachler 91B et,p
3200 Bachler 91B et,p

X
960 Bachler 91B et,p
3200 Bachler 91B et,p

mult[charged] X
960 Bachler 91B et,p
974.8 Akesson 89B cor,mult,p
Albrecht 88 mult
Otterlund 88B mult,p
3200 Bachler 91B et,p
3215 Akesson 89B cor,mult,p
Albrecht 88 mult
Lund 88 mult
Otterlund 88B mult,p

mult[charged] (neutrals)
974.8 Brechtmann 88B cs
Franz 88B cor,et,mult,p
3215 Brechtmann 88B cs
Franz 88B cor,et,mult,p
Schmidt 87 mult

Entries are in order of beam, name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{16}O Ag

mult[neutral] X		
960	Bachler 91B	et,p
974.8	Tannenbaum 89	et,p
3200	Bachler 91B	et,p
3215	Tannenbaum 89	et,p
mult[hadron] X		
974.8	Tannenbaum 89	et,p
3215	Tannenbaum 89	et,p
mult[shower] X		
3200	Akesson 90D	et,mult,p
charged X		
2.077 – 6.862	Jakobsson 90	mult
4.948 – 10.88	Jakobsson 90	mult
974.8	Albrecht 90C	a-dep,et,p
	Akesson 89B	cor,et,p
	Albrecht 88	a-dep,et,p
	Otterlund 88B	a-dep,p
3215	Albrecht 90C	a-dep,et,p
	Akesson 89B	cor,et,p
	Albrecht 88	a-dep,et,p
	Lund 88	p
	Otterlund 88B	a-dep,p
	Schmidt 87	p
hadron X		
974.8	Akesson 88	a-dep,angp,et
	Corriveau 88	et
	Heck 88	p
	Lund 88	cs
	Sorensen 88	cs,et,p
	Schmidt 87	et
3215	Odyniec 89	et
	Akesson 88	a-dep,angp,et
	Corriveau 88	et
	Heck 88	et
	Lund 88	cs
	Pugh 88	et
	Sorensen 88	cs,et,p
	Schmidt 87	p
$\pi^{\pm}$ X		
974.8	Albrecht 90C	a-dep,et,p
3215	Albrecht 90C	a-dep,et,p
baryon X		
974.8	Albrecht 90C	a-dep,et,p
	Schmidt 88	p
3215	Albrecht 90C	a-dep,et,p
	Schmidt 88	mult,p
p X		
3215	Schmidt 88	p,pt
frag X		
974.8	Brechtmann 88B	cs
3215	Brechtmann 88B	cs
fragb X		
49.51	Hirzebruch 92	cs
70.95	Hirzebruch 92	cs
230.4	Hirzebruch 92	cs
3215	Tannenbaum 89	p
C X		
49.51	Hirzebruch 92	cs
70.95	Hirzebruch 92	cs
230.4	Hirzebruch 92	cs
Nit X		
49.51	Hirzebruch 92	cs
70.95	Hirzebruch 92	cs
230.4	Hirzebruch 92	cs
^{22}Na X		
233.6	Bronikowski 91	cs,mass
^{24}Na X		
233.6	Bronikowski 91	cs,mass
246.5	Loveland 88	angp
^{28}Mg X		
233.6	Bronikowski 91	cs,mass
^{39}Cl X		
233.6	Bronikowski 91	cs,mass
^{43}KK X		
233.6	Bronikowski 91	cs,mass

^{16}O Ag

^{47}Ca X		
233.6	Bronikowski 91	cs,mass
^{43}Sc X		
233.6	Bronikowski 91	cs,mass
^{44}Sc X		
233.6	Bronikowski 91	cs,mass
^{46}Sc X		
233.6	Bronikowski 91	cs,mass
^{48}Sc X		
233.6	Bronikowski 91	cs,mass
^{48}Va X		
233.6	Bronikowski 91	cs,mass
^{52}Mn X		
233.6	Bronikowski 91	cs,mass
^{54}Mn X		
233.6	Bronikowski 91	cs,mass
^{59}Fe X		
233.6	Bronikowski 91	cs,mass
^{56}Co X		
233.6	Bronikowski 91	cs,mass
^{57}Co X		
233.6	Bronikowski 91	cs,mass
^{58}Co X		
233.6	Bronikowski 91	cs,mass
^{65}Zn X		
233.6	Bronikowski 91	cs,mass
^{67}Ga X		
233.6	Bronikowski 91	cs,mass
^{67}Ge X		
233.6	Bronikowski 91	cs,mass
^{69}Ge X		
233.6	Bronikowski 91	cs,mass
^{71}As X		
233.6	Bronikowski 91	cs,mass
^{72}As X		
233.6	Bronikowski 91	cs,mass
X		
233.6	Bronikowski 91	cs,mass
^{72}Se X		
233.6	Bronikowski 91	cs,mass
^{73}Se X		
233.6	Bronikowski 91	cs,mass
^{75}Se X		
233.6	Bronikowski 91	cs,mass
^{75}Br X		
233.6	Bronikowski 91	cs,mass
^{76}Br X		
233.6	Bronikowski 91	cs,mass
^{77}Br X		
233.6	Bronikowski 91	cs,mass
^{76}Kr X		
233.6	Bronikowski 91	cs,mass
^{77}Kr X		
233.6	Bronikowski 91	cs,mass
^{79}Kr X		
233.6	Bronikowski 91	cs,mass
^{81}Rb X		
233.6	Bronikowski 91	cs,mass
^{82}Rb X		
233.6	Bronikowski 91	cs,mass
^{83}Rb X		
233.6	Bronikowski 91	cs,mass
^{84}Rb X		
233.6	Bronikowski 91	cs,mass
^{86}Rb X		
233.6	Bronikowski 91	cs,mass
^{81}Sr X		
233.6	Bronikowski 91	cs,mass
^{83}Sr X		
233.6	Bronikowski 91	cs,mass
^{85}Sr X		
233.6	Bronikowski 91	cs,mass
^{84}Yt X		
233.6	Bronikowski 91	cs,mass

^{16}O Ag

^{85}Yt X		
233.6	Bronikowski 91	cs,mass
^{86}Yt X		
233.6	Bronikowski 91	cs,mass
^{87}Yt X		
233.6	Bronikowski 91	cs,mass
^{88}Yt X		
233.6	Bronikowski 91	cs,mass
^{86}Zr X		
233.6	Bronikowski 91	cs,mass
^{88}Zr X		
233.6	Bronikowski 91	cs,mass
^{89}Zr X		
233.6	Bronikowski 91	cs,mass
^{89}Nb X		
233.6	Bronikowski 91	cs,mass
^{90}Nb X		
233.6	Bronikowski 91	cs,mass
^{92}Nb X		
233.6	Bronikowski 91	cs,mass
^{95}Nb X		
233.6	Bronikowski 91	cs,mass
^{96}Nb X		
233.6	Bronikowski 91	cs,mass
^{90}Mo X		
233.6	Bronikowski 91	cs,mass
^{93}Mo X		
233.6	Bronikowski 91	cs,mass
^{99}Mo X		
233.6	Bronikowski 91	cs,mass
^{93}Tc X		
233.6	Bronikowski 91	cs,mass
^{94}Tc X		
233.6	Bronikowski 91	cs,mass
^{95}Tc X		
233.6	Bronikowski 91	cs,mass
^{96}Tc X		
233.6	Bronikowski 91	cs,mass
^{94}Ru X		
233.6	Bronikowski 91	cs,mass
^{95}Ru X		
233.6	Bronikowski 91	cs,mass
^{97}Ru X		
233.6	Bronikowski 91	cs,mass
^{103}Ru X		
233.6	Bronikowski 91	cs,mass
^{97}Rh X		
233.6	Bronikowski 91	cs,mass
^{98}Rh X		
233.6	Bronikowski 91	cs,mass
^{99}Rh X		
233.6	Bronikowski 91	cs,mass
^{100}Rh X		
233.6	Bronikowski 91	cs,mass
^{101}Rh X		
233.6	Bronikowski 91	cs,mass
^{102}Rh X		
233.6	Bronikowski 91	cs,mass
^{105}Rh X		
233.6	Bronikowski 91	cs,mass
^{106}Rh X		
233.6	Bronikowski 91	cs,mass
^{98}Pd X		
233.6	Bronikowski 91	cs,mass
^{99}Pd X		
233.6	Bronikowski 91	cs,mass
^{100}Pd X		
233.6	Bronikowski 91	cs,mass
^{101}Pd X		
233.6	Bronikowski 91	cs,mass
^{103}Ag X		
233.6	Bronikowski 91	cs,mass
^{104}Ag X		
233.6	Bronikowski 91	cs,mass

^{16}O Ag

^{105}Ag X
233.6 Bronikowski 91 cs,mass
^{106}Ag X
233.6 Bronikowski 91 cs,mass
^{110}Ag X
233.6 Bronikowski 91 cs,mass
$2\pi^+$ X
3200 Albrecht 92L cor,p,pt
Albrecht 91H cor
3215 Kampert 92 cor,p
2p X
3215 Kampert 92 cor,p
fragt fragb X
3215 Franz 88B cor,mult,p

^{16}O Wt

mult[charged] X
974.8 Akesson 89B cor,mult,p
3215 Akesson 89B cor,mult,p
Schukraft 88 mult,p
(hadrons) X
3200 Otterlund 90 cor,et
mult[hadron] X
974.8 Tannenbaum 89 et,p
3215 Tannenbaum 89 et,p
charged X
974.8 Akesson 89B cor,et,p
3215 Schukraft 91 cor,et,p
Akesson 89B cor,et,p
Schukraft 88 et,p
charged$^-$ X
3215 Schukraft 91 p,pt
Akesson 89E cs,et,pt
Bartels 88 pt
Schukraft 88B p,pt
hadron X
974.8 Akesson 88 a-dep,angp,et
Corriveau 88 et
3200 Akesson 90E et,p
3215 Akesson 88 a-dep,angp,et
Corriveau 88 et
γ X
3215 Schukraft 91 cs,et,pt
Akesson 89D cs,et,pt
Bartels 88 pt
Kluberg 88 pt
π^0 X
3215 Schukraft 91 cs,et,pt
Akesson 89D cs,et,pt
p (hadrons) X
3215 Akesson 91 cor,et,p,pt

^{16}O Au

0fragb X
960 Bachler 91B et,p
3200 Bachler 91B et,p
X
960 Bachler 91B et,p
3200 Bachler 91B et,p
inelastic
974.8 Bamberger 88B cs
Pugh 88 cs
3215 Bamberger 88B cs
Pugh 88 cs
mult[charged] X
232 Remsberg 88 mult
960 Bachler 91B et,p
974.8 Albrecht 88 mult
Lund 88 mult
Otterlund 88B mult,p
3200 Bachler 91B et,p
3215 Albrecht 89D cor,mult,p
Lund 89 mult,p

^{16}O Au

mult[charged] X
Albrecht 88 mult
Lund 88 mult
Otterlund 88B mult,p
mult[charged$^-$] X
3200 Schmitz 91 angp,col,p
mult[charged] (neutrals)
974.8 Franz 88B cor,et,mult,p
3215 Franz 88B cor,et,mult,p
Schmidt 87 mult
(hadrons) X
959.9 Stenlund 90B et
3200 Stenlund 90B et
mult[neutral] X
14.5 Tannenbaum 89 et,p
960 Bachler 91B et,p
974.8 Tannenbaum 89 et,p
3200 Bachler 91B et,p
3215 Tannenbaum 89 et,p
mult[hadron] X
974.8 Tannenbaum 89 et,p
3215 Tannenbaum 89 et,p
neutral X
232 Remsberg 88 p
Tannenbaum 88 et,p
charged X
974.8 Albrecht 90C a-dep,et,p
Albrecht 88 a-dep,et,p
Bamberger 88B et,mult,p
Lund 88 p
Otterlund 88B a-dep,p
3215 Albrecht 90C a-dep,et,p
Albrecht 88 a-dep,et,p
Bamberger 88B et,mult,p
Lund 88 p
Otterlund 88B a-dep,p
Schmidt 87 p
charged$^-$ X
974.8 Bamberger 89 mult,p,pt
Odyniec 89 p,pt
Bamberger 88B et,mult,p
Pugh 88 pt
Strobele 88 cor,cs,mult,p
3215 Bamberger 89 mult,p,pt
Odyniec 89 p,pt
Pugh 89 pt
Bamberger 88 mult,p
Bamberger 88B et,mult,p
Humanic 88 mult,p
Pugh 88 angp,p,pt
hadron X
974.8 Odyniec 91B et
Heck 88 p
Lund 88 cs
Pugh 88 p
Sorensen 88 cs,et,p
Schmidt 87 et
3215 Odyniec 91B et
Albrecht 90C p
Odyniec 89 pt
Heck 88 p
Lund 88 cs
Pugh 88 p
Sorensen 88 cs,et,p
Schmidt 87 p
γ X
974.8 Odyniec 91B p,pt
Albrecht 88B pt
Lohner 88 pt
Schmidt 87 pt
3200 Albrecht 91O cs
3215 Albrecht 91 pt
Odyniec 91B p,pt
London 89 pt
Lund 89 angp,pt

^{16}O Au

γ X
Albrecht 88B pt
Kluberg 88 p,pt
Lohner 88 pt
Schmidt 87 pt
$\pi^\pm$ X
974.8 Odyniec 91 pt
Albrecht 90C a-dep,et,p
3215 Albrecht 90C a-dep,et,p
π^0 X
974.8 Albrecht 88B pt
Franz 88B angp,pt
Lohner 88 angp,pt
Schmidt 87 pt
3200 Albrecht 91O cs
3215 Albrecht 91 pt
Albrecht 90F angp,pt
London 89 pt
Lund 89 angp,pt
Albrecht 88B pt
Franz 88B angp,pt
Lohner 88 angp,pt
Schmidt 87 pt
π^- X
960 Baechler 91C p
3215 Odyniec 91B pt
Harris 90B pt
London 89 angp
Odyniec 89 pt
Pugh 89 pt
$K^\pm$ X
974.8 Odyniec 91 pt
K^0 X
3215 Odyniec 89 mult,pt
K_S X
974.8 Odyniec 91 pt
Bamberger 89 mult,p,pt
Vesztergombi 88 cs,p,pt
3215 Odyniec 91B pt
Harris 90B pt
Bamberger 89 mult,p,pt
London 89 angp
Pugh 89 pt
Vesztergombi 88 cs,p,pt
$J/\psi(1S)$ X
3215 Bartke 89 et,pt
$\psi(2S)$ X
3215 Bartke 89 et,pt
baryon X
974.8 Albrecht 90C a-dep,et,p
Schmidt 88 p
3215 Albrecht 90C a-dep,et,p
Schmidt 88 mult,p
p X
960 Baechler 91C p
3215 Odyniec 91B pt
Albrecht 90C pt
Schmidt 88 et,p,pt
Λ X
974.8 Odyniec 91 pt
Bamberger 89 mult,p,pt
Vesztergombi 88 cs,p,pt
3215 Odyniec 91B pt
Harris 90B pt
Bamberger 89 mult,p,pt
London 89 angp
Odyniec 89 mult,pt
Pugh 89 pt
Vesztergombi 88 cs,p,pt
$\bar{\Lambda}$ X
974.8 Vesztergombi 88 cs,p,pt
3215 London 89 angp
Odyniec 89 mult,pt
Pugh 89 pt
Vesztergombi 88 cs,p,pt
fragb X
3215 Tannenbaum 89 p
deuteron X
3215 Schmidt 88 mult

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{16}O Au

^{7}Be X
6.854 Silk 88 angp,cs
Be X
6.854 Silk 88 a-dep,angp,cs
^{9}Be X
6.854 Silk 88 angp,cs
^{10}Be X
6.854 Silk 88 angp,cs
^{8}Bor X
6.854 Silk 88 angp,cs
Bor X
6.854 Silk 88 a-dep,angp,cs
^{11}Bor X
6.854 Silk 88 angp,cs
^{12}Bor X
6.854 Silk 88 angp,cs
^{10}C X
6.854 Silk 88 angp,cs
^{11}C X
6.854 Silk 88 angp,cs
C X
6.854 Silk 88 a-dep,angp,cs
^{12}C X
6.854 Silk 88 angp,cs
^{13}C X
6.854 Silk 88 angp,cs
^{14}C X
6.854 Silk 88 angp,cs
^{13}Nit X
6.854 Silk 88 angp,cs
Nit X
6.854 Silk 88 a-dep,angp,cs
^{14}Nit X
6.854 Silk 88 angp,cs
^{15}Nit X
6.854 Silk 88 angp,cs
^{24}Na X
246.5 Loveland 88 angp
$\mu^- \mu^+$ X
3215 Bartke 89 et,pt
(fragbs) mult[charged] X
3200 Otterlund 90 cor,mult,p
(fragbs) (hadrons) X
3200 Otterlund 90 cor,et,p
charged neutral X
232 Remsberg 88 cor,mult,p
2charged$^-$ X
3215 Pugh 88 angp,cor
hadron mult[charged] X
3215 Eklund 92 cor,mult,p
Albrecht 89M cor,mult,p
hadron charged X
3215 Eklund 92 cor,et,p
Albrecht 89M cor,et,p
Lund 88 p
Pugh 88 cor,mult,p
hadron charged$^-$ X
974.8 Strobele 88 cor,cs,et,mult,p,pt
3215 Strobele 88 cor,cs,et,mult,p,pt
γ mult[charged] X
974.8 Kluberg 88 mult,pt
Lohner 88 mult,pt
3215 Kluberg 88 mult,pt
Lohner 88 mult,pt
γ mult[hadron] X
3215 Lund 89 angp,p,pt
γ hadron X
974.8 Lohner 88 p,pt
3215 Lohner 88 p,pt
2γ X
3215 Albrecht 91 mass,p,pt

^{16}O Au

2γ X
Albrecht 90F mass
Lund 89 mass,pt
Albrecht 88B mass
Lohner 88 mass
Schmidt 87 mass
π^0 mult[hadron] X
3215 Lund 89 angp,p,pt
π^0 hadron X
3215 Franz 88B angp,cor,p,pt
2π^+ X
3200 Albrecht 92L cor,p,pt
Albrecht 91H cor
3215 Kampert 92 cor,p
$\pi^+ \pi^-$ X
974.8 Bamberger 89 mass
Vesztergombi 88 mass
3215 Bamberger 89 mass
Vesztergombi 88 mass
2π^- X
974.8 Odyniec 91B cor
Schukraft 91 angp,cor
3215 Odyniec 91B cor
Schukraft 91 angp,cor
Odyniec 89 angp,cor
Bamberger 88 cor
Humanic 88 angp,cor,p
$p\ \pi^-$ X
974.8 Bamberger 89 mass
Vesztergombi 88 mass
3215 Bamberger 89 mass
Vesztergombi 88 mass
$\bar{p}\ \pi^+$ X
974.8 Bamberger 89 mass
Vesztergombi 88 mass
3215 Bamberger 89 mass
Vesztergombi 88 mass
2p X
3215 Kampert 92 cor,p
$\bar{\Lambda}\ \pi^+$ X
974.8 Bamberger 89 mult,p,pt
3215 Bamberger 89 mult,p,pt
π^0 fragb X
3215 Albrecht 90F angp,p,pt
fragt fragb X
3215 Franz 88B cor,mult,p
mult[p] 2π^+ X
3215 Kampert 92 cor,mult,p
3π^- X
3215 Odyniec 89 angp,cor

^{16}O ^{197}Au

^{196}Au X
974.8 Hill 88 cs
3215 Hill 88 cs

^{16}O Hg

q X
974.8 Calloway 89 –
1935 Calloway 89 –

^{16}O Pb

inelastic
974.8 Barnes 88 cs
3215 Barnes 88 cs
mult[charged] (neutrals)
974.8 Brechtmann 88B cs
3215 Brechtmann 88B cs
mult[hadron] X
3215 Tannenbaum 89 et,p
hadron X
3215 Odyniec 89 et
Pugh 89 et
shower X
974.8 Barnes 88 cs

^{16}O Pb

shower X
3215 Barnes 88 cs
q X
246.5 Hoffmann 88 cs
3215 Hoffmann 88 cs
$J/\psi(1S)$ X
3215 Schukraft 91 cs,et
Bussiere 88 cs
frag X
974.8 Brechtmann 88B cs
3215 Brechtmann 88B cs
fragb X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs
C X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs
Nit X
25.23 Hirzebruch 92 cs
49.51 Hirzebruch 92 cs
70.95 Hirzebruch 92 cs
230.4 Hirzebruch 92 cs
2μ^- X + 2μ^+ X
3215 Baglin 91 mass
Bussiere 88 mass
$\mu^- \mu^+$ X
3215 Baglin 91 mass
Schukraft 91 et,mass
Bussiere 88 mass
$J/\psi(1S)$ (neutrals) X
3215 Baglin 91 cor,cs,et
$J/\psi(1S)$ neutral X
3215 Bussiere 88 cs,et,pt
$\mu^- \mu^+$ (neutrals) X
3215 Baglin 91 cor,cs,et
2μ^- neutral X + 2μ^+ neutral X
3215 Bussiere 88 et
$\mu^- \mu^+$ neutral X
3215 Bussiere 88 et

^{16}O ^{207}Pb

π^0 X
6.89 Moisan 92 angp,p,pt

^{16}O ^{208}Pb

^{208}Pb ^{16}O
6.862 Rousselchoma 88 angp

^{16}O ^{232}Th

2frag X
6.89 Erazmus 88 ang
π^+ 2frag X
6.89 Erazmus 88 cs,p
p 2frag X
6.89 Erazmus 88 cs,p

^{16}O ^{238}U

2μ^- X
3215 Sonderegger 88 mass,pt
2μ^- X + 2μ^+ X
3215 Sonderegger 88 pt
2μ^+ X
3215 Sonderegger 88 mass,pt
2μ^- (neutrals) X
3215 Sonderegger 88 et
2μ^- (neutrals) X + 2μ^+ (neutrals) X
974.8 Sonderegger 88 et,pt
2μ^+ (neutrals) X
3215 Sonderegger 88 et

^{16}O U

$\omega(783)$ X + $\rho(770)^0$ X

3215	Odyniec 91	et,mult
	Odyniec 91B	et,mult
	Schukraft 91	et,mult

$\phi(1020)$ X

3215	Odyniec 91	et,mult
	Odyniec 91B	et,mult
	Schukraft 91	et,mult

$J/\psi(1S)$ X

3215	Baglin 91B	pt
	Baglin 91C	pt
	Jacob 91	et,mass,pt
	Odyniec 91B	et,mult
	Schukraft 91	cs,pt
	Baglin 89	cs,et
	London 89	et,pt
	Sonderegger 89	cs,et,pt

$2\mu^-$ X

3215	Baglin 90	pt

$2\mu^-$ X + $2\mu^+$ X

3215	Baglin 89	et,mass
	Sonderegger 89	et,mass
	Kluberg 88	et,mass

$\mu^-\ \mu^+$ X

3215	Baglin 91B	pt
	Baglin 91C	pt
	Jacob 91	et,mass,pt
	Odyniec 91	mass
	Odyniec 91B	et,mass
	Baglin 90	pt
	Baglin 89	et,mass
	London 89	et,mass,pt
	Sonderegger 89	cs,et,pt
	Kluberg 88	et,mass

$2\mu^+$ X

3215	Baglin 90	pt

$J/\psi(1S)$ (neutrals) X

3200	Abreu 91E	et,pt
3215	Baglin 91B	cor,et,pt
	Baglin 91C	cor,et,pt
	Baglin 90	cor,et,pt
	Baglin 90B	et
	Kluberg 88	cor,cs,et,pt

$\mu^-\ \mu^+$ (neutrals) X

3200	Abreu 91E	et,pt
3215	Baglin 91B	cor,et,pt
	Baglin 91C	cor,et,pt
	Baglin 90	cor,et,pt
	Baglin 90B	et
	Kluberg 88	cor,cs,et,pt

^{17}O Pb

Pb* ^{17}O

6.875	Beene 90	cs

^{18}O ^{58}Ni

^{7}Li X

4.639	Etchegoyen 90	angp,cs,p

^{9}Be X

4.639	Etchegoyen 90	angp,cs,p

^{10}Be X

4.639	Etchegoyen 90	angp,cs,p

^{10}Bor X

4.639	Etchegoyen 90	angp,cs,p

^{11}Bor X

4.639	Etchegoyen 90	angp,cs,p

^{12}Bor X

4.639	Etchegoyen 90	angp,cs,p

^{12}C X

4.639	Etchegoyen 90	angp,cs,p

^{18}O ^{58}Ni

^{13}C X

4.639	Etchegoyen 90	angp,cs,p

^{14}C X

4.639	Etchegoyen 90	angp,cs,p

^{14}Nit X

4.639	Etchegoyen 90	angp,cs,p

^{15}Nit X

4.639	Etchegoyen 90	angp,cs,p

^{16}Nit X

4.639	Etchegoyen 90	angp,cs,p

^{16}O X

4.639	Etchegoyen 90	angp,cs,p

^{17}O X

4.639	Etchegoyen 90	angp,cs,p

Fl C

inelastic

79.8	Grigalashvil 88	cs

mult[charged$^-$] X

79.8	Grigalashvil 88	a-dep,mult

charged$^-$ X

79.8	Grigalashvil 88	a-dep,mult

^{19}Fl C

fragb X

76	Golovin 88	cs

^{19}Fl Mg

mult[charged$^-$] X

85.5	Anikina 89	mult

mult[π^-] X

85.5	Anikina 89	mult

charged$^-$ X

85.5	Anikina 89	mult

mult[frag] mult[charged] X

85.5	Anikina 89	mult

^{19}Fl Al

fragb X

76	Golovin 88	cs

^{19}Fl Cu

fragb X

76	Golovin 88	cs

^{19}Fl In

fragb X

76	Golovin 88	cs

^{19}Fl Wt

fragb X

76	Golovin 88	cs

^{19}Fl Bi

fragb X

76	Golovin 88	cs

^{19}Fl U

fragb X

76	Golovin 88	cs

Ne p

fragb X

20.96	Webber 90	cs
	Webber 90B	a-dep,cs
24.37	Webber 90	cs
	Webber 90B	a-dep,cs

Ne p

fragb X

24.39	Webber 90C	a-dep
24.59	Webber 90B	a-dep,cs
25.02	Webber 90	cs
35.23	Webber 90	cs
	Webber 90B	a-dep,cs

Ne nucleus

mult[charged] (neutrals)

19	Bastid 89	mult
29.28	Bastid 89	mult

$0\pi^\pm$ mult[htrack] X

79.82	Dubinina 88	angp,p

charged X

19	Bastid 89	angp,p
29.28	Bastid 89	angp,p

π^+ X

79.82	Dubinina 88	angp,p

π^- X

79.82	Dubinina 88	angp,p

K^+ X

57.81	Schnetzer 89	angp,cs,p

p X

38.44	Antonchik 90B	angp,mult,p

fragb X

20.96	Webber 90	cs
24.37	Webber 90	cs
25.02	Webber 90	cs
35.23	Webber 90	cs

mult[htrack] shower X

90	Bobodjanov 91	mult

mult[htrack] grey X

90	Bobodjanov 91	mult

mult[htrack] black X

90	Bobodjanov 91	mult

$\pi^\pm$ mult[htrack] X

79.82	Dubinina 88	angp,p

$p\ \pi^+$ X

29.28	Lhote 89	mass

$2p$ X

12.8	Dupieux 91	p
12.8 – 33.93	Dupieux 91	
19	Dupieux 91	a-dep
24.39	Dupieux 91	p
33.93	Dupieux 91	p

mult[p] mult[π^+] mult[π^-] X

90.05	Okonov 88	cor,mult

2charged (chargeds) (neutrals)

19	Bastid 89	angp,mult,p
29.28	Bastid 89	angp,mult,p

Ne C

fragb X

20.96	Webber 90	cs
	Webber 90B	a-dep,cs
24.37	Webber 90	cs
	Webber 90B	a-dep,cs
24.39	Webber 90C	a-dep
24.59	Webber 90B	a-dep,cs
25.02	Webber 90	cs
35.23	Webber 90	cs
	Webber 90B	a-dep,cs

Ne Fl

π^+ X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

π^- X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

Ne Na

π^+ X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

π^- X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

Ne Al

π^0 X

12.8	Julien 88	angp,p
17.66	Berg 91	p

Ne Nb

π^+ X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

π^- X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

2p X

12.8	Dupieux 91	p
12.8 – 33.93	Dupieux 91	–
19	Dupieux 91	a-dep
24.39	Dupieux 91	p
33.93	Dupieux 91	p

He deuteron X

19	Dupieux 91	cor,p

Ne Pb

mult[charged] (neutrals)

19	Bastid 89	mult
29.28	Bastid 89	mult

charged X

19	Bastid 89	angp,p
29.28	Bastid 89	angp,p

π^+ X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

π^- X

19	Poitou 92	col
24.39	Poitou 92	col
29.28	Poitou 92	col
	Gosset 89	angp,p

K^+ X

57.81	Schnetzer 89	angp,cs,p

p X

29.28	Poitou 92	col,p,pt

n X

29.04	Baldwin 92	angp,p,pt

2p X

12.8	Dupieux 91	p
12.8 – 33.93	Dupieux 91	–
19	Dupieux 91	a-dep
24.39	Dupieux 91	p
33.93	Dupieux 91	p

He deuteron X

19	Dupieux 91	cor,p

2charged (chargeds) (neutrals)

19	Bastid 89	angp,mult,p
29.28	Bastid 89	angp,mult,p

^{20}Ne nucleus

π^- X

55.59	Shor 89	angp

K^- X

55.59	Shor 89	angp

$\bar{p}$ X

55.59	Shor 89	angp

^{20}Ne Al

π^0 X

17.6	Kienle 90	cs

^{20}Ne ^{27}Al

inelastic

1.058	Dubar 89	cs
1.933	Dubar 89	cs
3.357	Dubar 89	cs

^{20}Ne ^{90}Zr

^{20}Ne* X

5.518	Suomijarvi 89	angp

^{20}Ne Ag

inelastic

3.357	Dubar 89	cs

^{20}Ne ^{208}Pb

^{20}Ne* X

5.518	Suomijarvi 89	angp

^{22}Ne p

fragb X

88.55	Bogdanov 88	cs,mult

^{22}Ne nucleus

mult[charged] X

90.2	Bannik 87	angp,mult,p

mult[charged] (neutrals)

90.2	Elnaghy 87B	mult

mult[fragb] X

90.2	Andreeva 88C	col,cor
	Bannik 87	angp,mult,p

mult[fragt] X

90.2	Bannik 87	angp,mult,p

mult[shower] X

90.2	Babaev 90	ang
	Lepekhin 89	ang,angp,col
	Bannik 87	angp,mult,p

mult[shower] (neutrals)

90.2	Andreeva 89	mult,p

mult[grey] X

90.2	Babaev 90	ang
	Bannik 87	angp,mult,p

mult[grey] (neutrals)

90.2	Andreeva 89	mult,p
	Andreeva 88	mult
	Elnaghy 87B	mult

mult[black] X

90.2	Babaev 90	ang
	Bannik 87	angp,mult,p

mult[black] (neutrals)

90.2	Andreeva 89	mult,p
	Andreeva 88	mult
	Elnaghy 87B	mult

shower X

90.2	Andreeva 89	mult,p
	Lepekhin 89	mult
	Andreeva 88	angp,mult,pt
99	Vokal 88	p

grey X

90.2	Andreeva 89	mult,p
	Lepekhin 89	mult
	Andreeva 88	angp,mult,pt
99	Vokal 88	p

black X

90.2	Andreeva 89	mult,p
	Lepekhin 89	mult
	Andreeva 88	angp,mult,pt

meson^0 X

99	Elnadi 88	–

$\pi^\pm$ X

99	Vokal 88	p

^{22}Ne nucleus

p X

90.2	Andreeva 88B	angp
99	Vokal 88	p

anomalon X

90.2	Alekseeva 88	angp,cs

fragb X

90.2	Bogdanov 91	pt
	Lepekhin 89	mult
	Andreeva 88C	angp,pt

fragt X

90.2	Lepekhin 89	mult

deuteron X

99	Vokal 88	p

^{3}H X

99	Vokal 88	p

^{4}He X

39.63 – 64.21	Abdurazakova 88	pt

He X

90.2	Andreeva 88B	angp

$e^- e^+$ X

54	Elnadi 88	mass

mult[shower] mult[fragb] X

90.2	Babaev 90	ang

mult[grey] mult[fragb] X

90.2	Babaev 90	ang

mult[grey] mult[shower] X

90.2	Babaev 90	ang

mult[He] mult[htrack] X

90.2	Andreeva 88B	mult

mult[black] mult[fragb] X

90.2	Babaev 90	ang

mult[black] mult[shower] X

90.2	Babaev 90	ang

mult[black] mult[grey] X

90.2	Babaev 90	ang

2charged X

90.2	Krasnov 87	cor

shower jet X

90.2	Lepekhin 89	mult

grey jet X

90.2	Lepekhin 89	mult

grey shower X

90.2	Krasnov 87	cor

black jet X

90.2	Lepekhin 89	mult

black shower X

90.2	Krasnov 87	cor

$\pi^\pm$ mult[htrack] X

90	Ameeva 92	mult,p
99	Vokal 88	angp,mult,p,pt

p(spect) mult[fragb] X

90.2	Bogdanov 91	mult,pt

p mult[htrack] X

90	Ameeva 92	mult,p
99	Vokal 88	angp,mult,p,pt

fireball mult[htrack] X

90	Ameeva 92	const

2frag (frags)

90.2	Andreeva 88	cs
	Elnaghy 87B	cs

fragb mult[fragb] X

90.2	Bogdanov 91	mult,pt

fragb jet X

90.2	Lepekhin 89	mult

$\pi^\pm$ fragb X

99	Vokal 88	angp,mult,p,pt

p fragb X

99	Vokal 88	angp,mult,p,pt

2fragb X

39.63 – 64.21	Abdurazakova 88	ang,cor

^{22}Ne nucleus

fragt jet X
90.2 Lepekhin 89 mult
shower fragt X
90.2 Krasnov 87 cor
grey fragt X
90.2 Krasnov 87 cor
black fragt X
90.2 Krasnov 87 cor
He mult[htrack] X
90.2 Andreeva 88B angp,cor,mult,pt
mult[black] 2shower X
90.2 Krasnov 87 cor
mult[black] grey shower X
90.2 Krasnov 87 cor
mult[black] 2grey X
90.2 Krasnov 87 cor
black mult[black] shower X
90.2 Krasnov 87 cor
2black mult[black] X
90.2 Krasnov 87 cor
mult[black] shower fragt X
90.2 Krasnov 87 cor
2shower fragt X
90.2 Krasnov 87 cor
mult[black] grey fragt X
90.2 Krasnov 87 cor
grey shower fragt X
90.2 Krasnov 87 cor
2grey fragt X
90.2 Krasnov 87 cor
black mult[black] fragt X
90.2 Krasnov 87 cor
black shower fragt X
90.2 Krasnov 87 cor
2black fragt X
90.2 Krasnov 87 cor
28htrack (htracks) X
90.2 Andreeva 92 cs
28htrack (htracks) mult[shower] X
90.2 Andreeva 92 mult
28htrack (htracks) mult[grey] X
90.2 Andreeva 92 mult
28htrack mult[black] (htracks) X
90.2 Andreeva 92 mult
28htrack (htracks) shower X
90.2 Andreeva 92 mult,p
28htrack (htracks) grey X
90.2 Andreeva 92 mult,p
28htrack black (htracks) X
90.2 Andreeva 92 mult,p

^{22}Ne ^{12}C

mult[charged] (neutrals)
90.2 Elnaghy 87B mult

^{23}Na p

fragb X
23.81 Webber 90B a-dep,cs

^{23}Na C

fragb X
23.81 Webber 90B a-dep,cs

^{24}Mg nucleus

mult[charged] (neutrals)
108 Ghosh 91 cor,mult,p
mult[shower] X
108 Ghosh 89D mult,p

^{24}Mg nucleus

mult[shower] X
Ghosh 89E cor
Ghosh 89F mult
mult[grey] X
108 Ghosh 89F mult
mult[htrack] X
108 Ghosh 89F mult
mult[black] X
108 Ghosh 89F mult
charged X
108 Ghosh 91 mult,p
anomalon X
108 Karev 88
frag X
108 Karev 88
fragb X
108 Bondarenko 92 a-dep,mult,pt
^{4}He X
108 Bondarenko 91 a-dep,mult,pt
mult[grey] mult[shower] X
108 Ghosh 89F mult
mult[htrack] mult[shower] X
108 Ghosh 89F mult
mult[black] mult[shower] X
108 Ghosh 89F mult
fragb (fragbs) X
108 Bondarenko 92 col,cor
2fragb X
108 Bondarenko 91 ang,cor

^{24}Mg Mg

mult[charged] X
108 Anikina 89 mult
mult[charged $^-$] X
108 Anikina 89 mult
mult[π^-] X
108 Anikina 89 mult
charged X
108 Anikina 89 mult
charged $^-$ X
108 Anikina 89 mult
π^- X
108 Anikina 89 mult
mult[frag] mult[charged] X
108 Anikina 89 mult

Mg p

fragb X
19.77 Webber 90B a-dep,cs
19.79 Webber 90 cs
25.61 Webber 90B a-dep,cs
29.32 Webber 90C a-dep
33.43 Webber 90 cs
Webber 90B a-dep,cs
52.92 Webber 90 cs
Webber 90B a-dep,cs

Mg nucleus

mult[charged] X
108 Ghosh 89 cor,mult,p
mult[shower] X
108 Elnadi 92 mult
0π^+ mult[htrack] X
79.82 Dubinina 88 angp,p
shower X
108 Elnadi 92 mult
htrack X
108 Elnadi 92 mult
π^+ X
79.82 Dubinina 88 angp,p

Mg nucleus

π^- X
79.82 Dubinina 88 angp,p
fragb X
19.79 Webber 90 cs
33.43 Webber 90 cs
52.92 Webber 90 cs
108 Elnadi 92 mult
$\pi^\pm$ mult[htrack] X
79.82 Dubinina 88 angp,p

Mg C

inelastic
102 Grigalashvil 88 cs
mult[charged $^-$] X
102 Grigalashvil 88 a-dep,mult
charged $^-$ X
102 Grigalashvil 88 a-dep,mult
fragb X
19.77 Webber 90B a-dep,cs
19.79 Webber 90 cs
25.61 Webber 90B a-dep,cs
29.32 Webber 90C a-dep
33.43 Webber 90 cs
Webber 90B a-dep,cs
52.92 Webber 90 cs
Webber 90B a-dep,cs

Mg Mg

π^- 0fragb X
108 Chkhaidze 92 p,pt
Λ X
103.2 Avramenko 91B angp,p,pt
2Λ 2π (π's) X
103.2 Avramenko 91B angp,p,pt

Mg Pb

mult[htrack] X
108 Krasnov 88 mult
mult[htrack] shower X
108 Bobodjanov 91 mult
Krasnov 88 mult,p
mult[htrack] grey X
108 Bobodjanov 91 mult
htrack mult[htrack] X
108 Krasnov 88 angp,mult
mult[htrack] black X
108 Bobodjanov 91 mult
Krasnov 88 mult
$\pi^\pm$ mult[htrack] X
108 Krasnov 88 mult
mult[htrack] fragb X
108 Krasnov 88 mult
htrack mult[htrack] shower X
108 Krasnov 88 ang,angp,cor

Al p

fragb X
31.46 Webber 90 cs
Webber 90B a-dep,cs

Al nucleus

fragb X
31.46 Webber 90 cs

Al He

fragb X
31.46 Webber 90 cs
Webber 90B a-dep,cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

Al C

π^0 X
4.5 Abraamyan 92 a-dep,cs,p,pt

fragb X
31.46 Webber 90 cs
Webber 90B a-dep,cs

Al Cu

π^0 X
4.5 Abraamyan 92 a-dep,cs,p,pt

Si p

fragb X
30.58 Webber 90 cs
Webber 90B a-dep,cs
39.91 Webber 90 cs
Webber 90B a-dep,cs
56.71 Webber 90 cs
Webber 90B a-dep,cs

Si nucleus

mult[charged] X
407 Adamovich 90B mult,p

mult[charged] (neutrals)
407 Buschbeck 91 angp,col,mult,p

(fragbs) X
407 Otterlund 90 p

mult[$\pi^{\pm}$] X
126 Tauseef 92 angp,mult

mult[p] X
126 Tauseef 92 angp,mult

mult[shower] X
126 Tauseef 92 angp,mult

mult[grey] X
126 Tauseef 92 angp,mult

fragb X
30.58 Webber 90 cs
39.91 Webber 90 cs
41.91 Webber 90C a-dep
56.71 Webber 90 cs

mult[$\pi^{\pm}$] mult[htrack] X
126 Tauseef 92 angp,cor,mult

mult[p] mult[htrack] X
126 Tauseef 92 angp,cor,mult

mult[$\pi^{\pm}$] mult[black] X
126 Tauseef 92 angp,cor,mult

mult[p] mult[black] X
126 Tauseef 92 angp,cor,mult

Si C

fragb X
30.58 Webber 90 cs
Webber 90B a-dep,cs
39.91 Webber 90 cs
Webber 90B a-dep,cs
56.71 Webber 90 cs
Webber 90B a-dep,cs

Si Al

(neutrals) X
406 Schukraft 91 et

neutral X
406 Remsberg 88 p

hadron X
305 Braunmunzing 88 et,p

π^- X
408.8 Abbott 91 p,pt

K^- X
408.8 Abbott 91 p,pt

Si Al

$\bar{p}$ X
408.8 Abbott 91 p,pt

Si Si

K_S X
408.8 Eiseman 92B p

Λ X
408.8 Eiseman 92B p

K_S mult[charged$^-$] X
408.8 Eiseman 92B mult,p

Λ mult[charged$^-$] X
408.8 Eiseman 92B mult,p

Si Cu

(neutrals) X
406 Schukraft 91 et

hadron X
305 Braunmunzing 88 et,p

X nuclearite
434.2 Barrette 90B cs

K_S mult[hadron$^-$] X
406 Foley 90 mult

Λ mult[hadron$^-$] X
406 Foley 90 mult

Si Ag

(neutrals) X
406 Schukraft 91 et

Si Au

(neutrals) X
406 Schukraft 91 et
407 Stenlund 90B et

neutral X
406 Remsberg 88 p

π^+ X
406 Schukraft 91 p
431.4 Miake 88 angp,p

π^- X
406 Schukraft 91 p
408.8 Abbott 91 p,pt
431.4 Miake 88 angp,p

K^+ X
406 Schukraft 91 p
431.4 Miake 88 angp,p

K^- X
406 Schukraft 91 p
408.8 Abbott 91 p,pt
431.4 Miake 88 angp,p

p X
406 Schukraft 91 p

$\bar{p}$ X
408.8 Abbott 91 p,pt

K_S mult[hadron$^-$] X
406 Foley 90 mult

Λ mult[hadron$^-$] X
406 Foley 90 mult

Si Pb

hadron X
305 Braunmunzing 88 et,p

K_S X
408.8 Eiseman 92B p

Λ X
408.8 Eiseman 92B p

K_S mult[charged$^-$] X
408.8 Eiseman 92B mult,p

p π^- X
408.8 Eiseman 92B mass

Λ mult[charged$^-$] X
408.8 Eiseman 92B mult,p

^{28}Si p

fragb X
431.3 Brechtmann 89 cs

^{28}Si nucleus

(showers) X
407 Adamovich 92B col,mult,p
Stenlund 91 col,mult,p

mult[fragb] X
126 Ahmad 91C mult

mult[shower] X
4.5 Ameeva 89 mult
407 Adamovich 92B mult,p
Adamovich 91 mult,p
Stenlund 91 mult,p
Adamovich 90C mult,p
Stenlund 90C mult,p
431.3 Jain 91B mult

mult[grey] X
4.5 Ameeva 89 mult

mult[htrack] 0fragb X
405.2 Jain 92B cs,mult

mult[black] X
4.5 Ameeva 89 mult

hadron X
406 London 89 angp,et

shower X
4.5 Ameeva 89 mult,p
126 Ahmad 92 p
Ahmad 91C angp
Krasnov 88B cs,mult,p
127 Adamovich 92D mult,p
407 Adamovich 91C mult
431.3 Jain 91B p
434.1 Adamovich 92C mult,p
Adamovich 92D mult,p
Otterlund 91 mult,p

grey X
4.5 Ameeva 89 angp,mult
126 Krasnov 88B cs,mult,p
407 Adamovich 91C angp,mult

black X
4.5 Ameeva 89 angp,mult
126 Krasnov 88B cs,mult,p
407 Adamovich 91C angp,mult

fragb X
126 Ahmad 91 angp
Krasnov 88B cs
431.3 Brechtmann 89 cs

fragt X
126 Krasnov 88B cs

He X
126 Ahmad 91 angp

mult[shower] mult[fragb] X
407 Adamovich 91 mult,p
Adamovich 90C mult,p
Stenlund 90C mult,p
434.1 Adamovich 92C mult,p

mult[grey] mult[shower] X
54 Ahmad 91B mult

mult[htrack] (showers) 0fragb X
405.2 Jain 92B angp,col,mult,p
Jain 92C angp,col,mult,p

mult[htrack] mult[shower] 0fragb X
431.3 Jain 92D angp,col,mult,p
Jain 91C mult,p

shower mult[fragb] X
127 Adamovich 92D mult,p
407 Adamovich 91C mult
434.1 Adamovich 92C mult,p
Adamovich 92D mult,p

^{28}Si nucleus

shower mult[fragb] X
Otterlund 91 mult,p
shower mult[shower] X
126 Ahmad 92 mult,p
mult[grey] shower X
126 Ahmad 92 mult,p
mult[htrack] shower X
126 Ahmad 92 mult,p
mult[htrack] shower 0fragb X
431.3 Jain 92D mult
grey mult[fragb] X
407 Adamovich 91C angp,mult
grey mult[shower] X
4.5 Ameeva 89 mult
407 Adamovich 91C mult
black mult[fragb] X
407 Adamovich 91C angp,mult
black mult[shower] X
4.5 Ameeva 89 mult
407 Adamovich 91C mult
2frag (frags)
126 Krasnov 88B cs
mult[shower] fragb X
4.5 Ameeva 89 ang,p
mult[htrack] fragb X
4.5 Ameeva 89 ang,p
126 Ahmad 91 angp,mult
Ahmad 91C mult
mult[black] fragb X
4.5 Ameeva 89 ang,p
2fragb X
4.5 Vokal 91 cs
He mult[htrack] X
126 Ahmad 91 angp,mult
mult[grey] shower mult[shower] X
431.3 Jain 91B cor,mult,p
28htrack (htracks) X
126 Andreeva 92 cs,mult
28htrack (htracks) mult[shower] X
126 Andreeva 92 angp,mult
28htrack (htracks) mult[grey] X
126 Andreeva 92 angp,mult
28htrack mult[black] (htracks) X
126 Andreeva 92 angp,mult
28htrack (htracks) shower X
126 Andreeva 92 angp,mult,p
28htrack (htracks) grey X
126 Andreeva 92 angp,mult,p
28htrack black (htracks) X
126 Andreeva 92 angp,mult,p

^{28}Si C

fragb X
431.3 Brechtmann 89 cs
Al C p
434.1 Barrette 92 cs,p

^{28}Si Al

inelastic
408.8 Abbott 92C cs
mult[charged] X
405.2 Barrette 91 mult,p
434.1 Barrette 92C cs,et,mult
mult[neutral] X
406 Tannenbaum 89 et,p

^{28}Si Al

mult[hadron] X
280 Tannenbaum 89 et,p
mult[p] X
434.1 Barrette 92B et,mult
mult[n] X
434.1 Barrette 92B et,mult
hadron X
407 Barrette 90 et,p
π^- X
408.8 Aoki 92B p
K^- X
408.8 Aoki 92B p
$\bar{p}$ X
408.8 Aoki 92B p
fragb X
408.8 Abbott 92C cs,p
431.3 Brechtmann 89 cs
Tannenbaum 89 p
deuteron X
408.8 Aoki 92B p
π^+ mult[fragb] X
408.8 Abbott 92C mult
K^+ mult[fragb] X
408.8 Abbott 92C mult
fragb mult[neutral] X
431.3 Tannenbaum 89 p
2Al p
434.1 Barrette 92 cs,p

^{28}Si ^{27}Al

hadron (hadrons)
408.8 Bloomer 90 et
2π^+ X
408.8 Abbott 91D cor
2π^- X
408.8 Abbott 91D cor
p fragb X
434.1 Barrette 90C a-dep,cs
n fragb X
434.1 Barrette 90C a-dep,cs
2p fragb X
434.1 Barrette 90C a-dep,cs
2n fragb X
434.1 Barrette 90C a-dep,cs
3p fragb X
434.1 Barrette 90C a-dep,cs
2^{27}Al p
434.1 Barrette 90C a-dep,cs
^{27}Si ^{27}Al n
434.1 Barrette 90C a-dep,cs
^{27}Al ^{26}Mg 2p
434.1 Barrette 90C a-dep,cs
^{27}Al ^{26}Al p n
434.1 Barrette 90C a-dep,cs
^{27}Al ^{26}Si 2n
434.1 Barrette 90C a-dep,cs
^{27}Al ^{25}Mg 2p n
434.1 Barrette 90C a-dep,cs
^{27}Al ^{25}Al p 2n
434.1 Barrette 90C a-dep,cs
^{27}Al ^{24}Mg 2p 2n
434.1 Barrette 90C a-dep,cs

^{28}Si ^{28}Si

π X
67.41 Shor 89 angp
77.83 Shor 89 angp
80.78 Carroll 89 angp
K^+ X
55.54 Carroll 88B angp
77.83 Shor 89 angp

^{28}Si ^{28}Si

K X
47.38 – 80.78 Carroll 88B angp
67.41 Shor 89 angp
77.83 Shor 89 angp
n X
5.434 Obserstedt 92 angp,p
$\bar{p}$ X
67.41 Shor 89 angp
77.83 Shor 89 angp
80.78 Carroll 89 angp
frag X
5.434 Obserstedt 92 p

^{28}Si Cu

inelastic
408.8 Abbott 92C cs
mult[charged] X
405.2 Barrette 91 mult,p
434.1 Barrette 92C cs,et,mult
mult[neutral] X
406 Tannenbaum 89 et,p
mult[hadron] X
280 Tannenbaum 89 et,p
mult[p] X
434.1 Barrette 92B et,mult
mult[n] X
434.1 Barrette 92B et,mult
charged$^+$ X
408.8 Adams 92 p,pt
charged X
408.8 Adams 92 p,pt
Ahmad 92B pt
Bloomer 90 p,pt
hadron X
407 Barrette 90 et,p
π X
408.8 Aoki 92B p
K X
408.8 Aoki 92B p
K_S 0fragb X
408.8 Bloomer 90 pt
K_S X
408.8 Adams 92 p,pt
Eiseman 90 pt
p X
408.8 Bloomer 90 p,pt
$\bar{p}$ X
408.8 Aoki 92B p
Λ X
408.8 Adams 92 p,pt
Eiseman 90 pt
Λ 0fragb X
408.8 Bloomer 90 pt
fragb X
408.8 Abbott 92C cs,p
431.3 Brechtmann 89 cs
deuteron X
408.8 Aoki 92B p
π^+ mult[fragb] X
408.8 Abbott 92C mult
π^+ π X
408.8 Adams 92 mass
Eiseman 90 mass
K_S mult[charged] X
408.8 Adams 92 cor,mult,p
Odyniec 91 cor,mult
Eiseman 90 cor,mult
K^+ mult[fragb] X
408.8 Abbott 92C mult
p π X
408.8 Adams 92 mass
Eiseman 90 mass

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{28}Si Cu

Λ mult[charged⁻] X		
408.8	Adams 92	cor,mult,p
	Odyniec 91	cor,mult
	Eiseman 90	cor,mult
Cu Al p		
434.1	Barrette 92	cs,p

^{28}Si ^{64}Cu

hadron (hadrons)		
408.8	Bloomer 90	et

^{28}Si Ag

mult[neutral] X		
406	Tannenbaum 89	et,p
fragb X		
431.3	Brechtmann 89	cs

^{28}Si Sn

Sn Al p		
434.1	Barrette 92	cs,p

^{28}Si ^{120}Sn

p fragb X		
434.1	Barrette 90C	a-dep,cs
n fragb X		
434.1	Barrette 90C	a-dep,cs
2p fragb X		
434.1	Barrette 90C	a-dep,cs
2n fragb X		
434.1	Barrette 90C	a-dep,cs
3p fragb X		
434.1	Barrette 90C	a-dep,cs
^{120}Sn ^{27}Al p		
434.1	Barrette 90C	a-dep,cs
^{120}Sn ^{27}Si n		
434.1	Barrette 90C	a-dep,cs

^{28}Si Au

inelastic		
408.8	Abbott 92C	cs
mult[neutral] X		
406	Tannenbaum 89	et,p
charged⁺ X		
408.8	Adams 92	p,pt
charged⁻ X		
408.8	Adams 92	p,pt
	Ahmad 92B	pt
	Bloomer 90	p,pt
π⁺ 0fragb X		
408.8	Bloomer 90	p,pt
π⁺ X		
411.6	Abbott 91B	p,pt
π⁻ X		
408.8	Aoki 92B	p
411.6	Abbott 91B	p,pt
π⁻ 0fragb X		
408.8	Bloomer 90	p,pt
K⁺ 0fragb X		
408.8	Bloomer 90	p,pt
K⁺ X		
411.6	Abbott 91B	p,pt
K⁻ X		
408.8	Aoki 92B	p
411.6	Abbott 91B	p,pt
K⁻ 0fragb X		
408.8	Bloomer 90	p,pt
K_S X		
408.8	Adams 92	p,pt
	Eiseman 90	pt
K_S 0fragb X		
408.8	Bloomer 90	pt

^{28}Si Au

p 0fragb X		
408.8	Bloomer 90	p,pt
p X		
408.8	Bloomer 90	p,pt
411.6	Abbott 91B	p,pt
p̄ X		
408.8	Aoki 92B	p
Λ X		
408.8	Adams 92	p,pt
	Eiseman 90	pt
Λ 0fragb X		
408.8	Bloomer 90	pt
fragb X		
408.8	Abbott 92C	cs,p
431.3	Tannenbaum 89	p
deuteron X		
408.8	Aoki 92B	p
π⁻ mult[charged] X		
408.8	Eiseman 92	mult,p
π⁺ mult[fragb] X		
408.8	Abbott 92C	mult
π⁺ π⁻ X		
408.8	Adams 92	mass
	Eiseman 90	mass
K_S mult[charged⁻] X		
408.8	Adams 92	cor,mult,p
	Odyniec 91	cor,mult
	Eiseman 90	cor,mult
K⁺ mult[fragb] X		
408.8	Abbott 92C	mult
p mult[charged] X		
408.8	Eiseman 92	mult,p
p π⁻ X		
408.8	Adams 92	mass
	Eiseman 90	mass
Λ mult[charged⁻] X		
408.8	Adams 92	cor,mult,p
	Odyniec 91	cor,mult
	Eiseman 90	cor,mult
fragb mult[neutral] X		
431.3	Tannenbaum 89	p

^{28}Si ^{197}Au

π⁺ X		
407	Abbott 91C	angp,p,pt
	Odyniec 91	p,pt
	Abbott 90	p,pt
π⁻ X		
407	Abbott 91C	angp,p,pt
	Odyniec 91	p,pt
	Abbott 90	p,pt
K⁺ X		
407	Abbott 91C	angp,p,pt
	Odyniec 91	p,pt
	Abbott 90	p,pt
K⁻ X		
407	Abbott 91C	angp,p,pt
	Odyniec 91	p,pt
	Abbott 90	p,pt
p X		
407	Abbott 91C	angp,p,pt
	Odyniec 91	p,pt
	Abbott 90	p,pt
2π⁺ X		
408.8	Abbott 91D	cor
2π⁻ X		
408.8	Abbott 91D	cor

^{28}Si Pb

mult[charged] X		
405.2	Barrette 91	mult,p
mult[hadron] X		
280	Tannenbaum 89	et,p

^{28}Si Pb

mult[p] X		
434.1	Barrette 92B	et,mult
mult[n] X		
434.1	Barrette 92B	et,mult
hadron X		
407	Barrette 90	et,p
p X		
407	Barrette 90	et,mult
434.1	Barrette 92B	p,pt
n X		
407	Barrette 90	et,mult
fragb X		
431.3	He 90	cs
	Brechtmann 89	cs
p mult[charged] X		
405.2	Barrette 91	et,mult,p
n mult[charged] X		
405.2	Barrette 91	et,mult,p
Pb Al p		
434.1	Barrette 92	ang,cs,p

^{28}Si ^{208}Pb

hadron (hadrons)		
408.8	Bloomer 90	et
n hadron X		
408.8	Bloomer 90	et,p,pt
p fragb X		
434.1	Barrette 90C	a-dep,cs
n fragb X		
434.1	Barrette 90C	a-dep,cs
2p fragb X		
434.1	Barrette 90C	a-dep,cs
2n fragb X		
434.1	Barrette 90C	a-dep,cs
3p fragb X		
434.1	Barrette 90C	a-dep,cs
^{208}Pb ^{27}Al p		
434.1	Barrette 90C	a-dep,cs
^{208}Pb ^{27}Si n		
434.1	Barrette 90C	a-dep,cs

S p

fragb X		
38.93	Webber 90C	a-dep
40.89	Webber 90	cs
	Webber 90B	a-dep,cs
59.17	Webber 90	cs
59.57	Webber 90B	a-dep,cs

S nucleus

mult[charged] X		
6420	Wilkes 91	col,mult,p
q X		
6400	Matis 90B	qnc
fragb X		
40.89	Webber 90	cs
59.17	Webber 90	cs
2charged X		
6420	Wilkes 91	cor,p
nucleus ^{31}Fl p		
6420	Singh 90	cs
nucleus Mg Be		
6420	Singh 90	cs
nucleus Si He		
6420	Singh 90	cs
nucleus Mg 2He		
6420	Singh 90	cs
nucleus Al He p		
6420	Singh 90	cs
nucleus Si 2p		
6420	Singh 90	cs

S nucleus

nucleus Mg He 2p
6420 Singh 90 cs
nucleus Al 3p
6420 Singh 90 cs
nucleus Mg 4p
6420 Singh 90 cs

S C

fragb X
38.93 Webber 90C a-dep
40.89 Webber 90 cs
Webber 90B a-dep,cs
59.17 Webber 90 cs
59.57 Webber 90B a-dep,cs

S S

inelastic
6400 Bartke 90 cs
mult[charged] X
6400 Bachler 91 mult
mult[charged$^-$] X
6400 Bachler 92 mult,p
Bachler 91 mult
charged X
6400 Bachler 91 mult
Bartke 90 mult
charged$^-$ X
6400 Bachler 91 mult
Odyniec 91 mult,p,pt
Bartke 90 mult
hadron$^-$ X
6390 Baechler 91 mult,p,pt
K_S X
6390 Baechler 91 mult,p,pt
6400 Odyniec 91 mult,p,pt
Bartke 90 mult,p,pt
p X
6400 Bachler 91 mult
Λ X
6390 Baechler 91 mult,p,pt
6400 Odyniec 91 mult,p,pt
Bartke 90 mult,p,pol,pt
$\bar{\Lambda}$ X
6390 Baechler 91 mult,p,pt
6400 Odyniec 91 mult,p,pt
Bartke 90 mult,p,pt
$2\pi^-$ X
6390 Karabarbouni 91 cor
K_S mult[charged$^-$] X
6400 Odyniec 91 cor,mult
Schukraft 91 cor,mult
Bartke 90 cor,mult
Λ mult[charged$^-$] X
6400 Odyniec 91 cor,mult
Schukraft 91 cor,mult
Bartke 90 cor,mult
$\bar{\Lambda}$ mult[charged$^-$] X
6400 Odyniec 91 cor,mult
Schukraft 91 cor,mult
Bartke 90 cor,mult

S Cu

mult[charged] X
6400 Bachler 91 mult
mult[charged$^-$] X
6400 Bachler 91 mult
mult[Λ] X
6400 Andersen 92 a-dep,et,mult,p
charged X
6400 Bachler 91 mult
charged$^-$ X
6400 Bachler 91 mult
p(spect) X
6400 Andersen 92 a-dep,p

S Ag

mult[Λ] X
6400 Andersen 92 a-dep,et,mult,p
p(spect) X
6400 Andersen 92 a-dep,p
$2\pi^-$ X
6390 Karabarbouni 91 cor

S Wt

π^+ X
6400 Odyniec 91 p,pt
π^- X
6390 Vanhecke 91 cs,pt
6400 Odyniec 91 p,pt
K^+ X
6390 Vanhecke 91 cs,pt
6400 Odyniec 91 p,pt
K^- X
6390 Vanhecke 91 cs,pt
6400 Odyniec 91 p,pt
p X
6390 Vanhecke 91 cs,pt

S Au

mult[charged$^-$] X
6400 Bachler 92 et,mult,p
$2\pi^-$ X
6390 Karabarbouni 91 cor
frag (frags) X
6400 Boisgard 91 cs

S Pb

mult[Λ] X
6400 Andersen 92 a-dep,et,mult,p
p(spect) X
6400 Andersen 92 a-dep,p

S U

$\omega(783)$ X + $\rho(770)^0$ X
6420 Baldisseri 90 cs
$\phi(1020)$ X
6420 Baldisseri 90 cs
μ^- μ^+ X
6420 Baldisseri 90 mass,p,pt
$\omega(783)$ mult[charged] (neutrals) + $\rho(770)^0$ mult[charged] (neutrals)
6390 Abreu 89 cs
K^+ mult[neutral] X + π^+ mult[neutral] X
6400 Peralta 91 cor,et,pt
K^- mult[neutral] X + π^- mult[neutral] X
6400 Peralta 91 cor,et,pt
$\phi(1020)$ mult[charged] (neutrals)
6390 Abreu 89 cs
μ^- μ^+ mult[charged] (neutrals)
6390 Abreu 89 et,mass
$2\mu^-$ mult[neutral] X
6400 Peralta 91 cor,et,pt
$2\mu^+$ mult[neutral] X
6400 Peralta 91 cor,et,pt

^{32}S p

frag X
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs
charged (chargeds) (neutrals)
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs

^{32}S nucleus

0fragb X
6420 Sengupta 89B cs
inelastic
6390 Stenlund 90D cs
6420 Baroni 91 cs
Sengupta 91 cs
Baroni 90 cs
Romano 89 cs
Sengupta 89B cs
Singh 88 cs
mult[charged] X
6390 Schmitz 91 angp,col,p
Adamovich 90B mult,p
6420 Holynski 89 mult
Sengupta 88 cor,mult,p
mult[charged] (neutrals)
6390 Buschbeck 91 angp,col,mult,p
6420 Buschbeck 89 mult,p
(showers) X
6390 Adamovich 92B col,mult,p
Stenlund 91 col,mult,p
Stenlund 90D cor,mult,p
mult[hadron] X
6420 Adamovich 93 mult,p
mult[He] X
1940 Sengupta 89B mult
6420 Adamovich 93 mult,p
Sengupta 89B cs
mult[shower] X
6390 Adamovich 92B mult,p
Adamovich 91 mult,p
Stenlund 91 mult,p
Adamovich 90C mult,p
Otterlund 90 cor,mult,p
Stenlund 90C mult,p
Stenlund 90D mult
6420 Adamovich 92C mult,p
Jain 92E mult,p
Jain 91 mult
Jain 91B mult
Sengupta 91 mult
Jain 90 mult
Sengupta 90B mult
Romano 89 et,mult
Singh 88 ang,cor,mult,p
Stenlund 88 angp,cor,mult,p
mult[shower] 0fragb X
6420 Jain 90B cor,mult,p
Sengupta 90B mult
Romano 89 mult
mult[grey] X
6420 Jain 91 mult
Sengupta 91 mult
mult[htrack] 0fragb X
6420 Baroni 91 mult
mult[black] X
6420 Jain 91 mult
Sengupta 91 mult
charged X
6420 Akesson 90 cor,et,mult,p
Sengupta 90B mult,p
0fragb charged X
6420 Sengupta 90B mult,p
hadron X
6420 London 89 et,p
shower X
1940 Sengupta 91 p
6390 Adamovich 91C mult
Stenlund 90D mult
6420 Adamovich 92C mult,p
Adamovich 92D mult,p
Jain 92E mult,p
Baroni 91 mult,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{32}S nucleus

shower X
Jain 91 angp,mult
Jain 91B p
Otterlund 91 mult,p
Sengupta 91 p
Jain 90 mult,p
Adamovich 89 mult,p
Adamovich 89B mult
Singh 88 mult,p

shower 0fragb X
6420 Baroni 91 cs,mult
Jain 90 mult,p

grey X
6390 Adamovich 91C angp,mult
Otterlund 90 angp
6420 Baroni 91 angp
Jain 91 angp,mult
Sengupta 91 angp

htrack X
6390 Stenlund 90D mult
6420 Baroni 91 cs,mult

htrack 0fragb X
6420 Baroni 91 cs,mult

black X
6390 Adamovich 91C angp,mult
Otterlund 90 angp
6420 Baroni 91 angp
Jain 91 angp,mult
Sengupta 91 angp

ω(783) X
6420 Jacob 91 cs,et

ϕ(1020) X
6420 Jacob 91 cs,et

nucleus mult[fragb]
6420 Romano 89 cs

frag X
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs

fragb X
6420 Singh 90 a-dep
Romano 89 angp,p

^{4}He X
6420 Jain 92E –

He X
6420 Adamovich 93 angp,p
Sengupta 89B cs
Singh 88B cs

He 0charged-hadron X
6420 Adamovich 93 angp

mult[shower] mult[fragb] X
6390 Adamovich 91 mult,p
Adamovich 90C mult,p
Stenlund 90C mult,p
6420 Adamovich 92C mult,p

mult[grey] mult[shower] X
6420 Jain 91 mult

mult[htrack] (showers) 0fragb X
6390 Jain 92C angp,col,mult,p

mult[He] mult[htrack] X
6420 Baroni 91 mult

mult[htrack] mult[fragb] X
6420 Baroni 91 mult

mult[htrack] mult[shower] 0fragb X
6420 Jain 92D angp,col,mult,p
Jain 91C mult,p
Sengupta 90 mult,p

mult[black] mult[grey] X
6420 Jain 91 mult

charged (chargeds) (neutrals)
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs

^{32}S nucleus

0fragb 2charged X
6420 Sengupta 90B angp,cor,mult,p

2charged X
6420 Sengupta 90B angp,cor,mult,p

2charged$^-$ X
6420 Romano 89 angp,cor

mult[He] shower X
6420 Baroni 91 cs,mult

shower mult[fragb] X
6390 Adamovich 91C mult
6420 Adamovich 92C mult,p
Adamovich 92D mult,p
Jain 92E mult,p
Baroni 91 cs,mult
Otterlund 91 mult,p

shower mult[shower] X
6420 Adamovich 89 mult,p

shower mult[shower] 0fragb X
6420 Singh 89 cor,mult,p

mult[grey] shower X
6420 Jain 91 cor,mult,p

grey mult[fragb] X
6390 Adamovich 91C angp,mult

grey mult[shower] X
6390 Adamovich 91C mult

grey mult[grey] X
6420 Jain 91 angp,cor,mult

mult[He] htrack X
6420 Baroni 91 cs,mult

htrack mult[fragb] X
6420 Baroni 91 cs,mult

black mult[fragb] X
6390 Adamovich 91C angp,mult

black mult[shower] X
6390 Adamovich 91C mult

black mult[black] X
6420 Jain 91 angp,cor,mult

He mult[htrack] X
6420 Singh 88B cs

He charged-hadron X
6420 Adamovich 93 angp

nucleus He X
6420 Baroni 90 cs,p

nucleus ^{16}O X
6420 Baroni 90 cs,p

nucleus Fl X
6420 Baroni 90 cs,p

nucleus Ne X
6420 Baroni 90 cs,p

nucleus Na X
6420 Baroni 90 cs,p

nucleus Mg X
6420 Baroni 90 cs,p

mult[grey] shower mult[shower] X
6420 Jain 91B cor,mult,p

nucleus Si He
6420 Baroni 90 cs,p

nucleus Ph p
6420 Baroni 90 cs,p

nucleus Al He p
6420 Baroni 90 cs,p

nucleus Si 2p
6420 Baroni 90 cs,p

nucleus Al 3p
6420 Baroni 90 cs,p

^{32}S C

frag X
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs

charged (chargeds) (neutrals)
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs

^{32}S Al

inelastic
6420 Andersen 89 a-dep,cs

e^+ X
6420 Vane 92 a-dep,angp,cs,p

mult[charged] X
6420 Eklund 92 et,mult,p

mult[neutral] X
6420 Tannenbaum 89 et,p

neutral X
464 Tannenbaum 88 p

charged X
6400 Eklund 91 mult,p
6420 Eklund 92 p

hadron X
6390 Akesson 90E et
6420 Schukraft 91 et
Akesson 88C a-dep,cor,et,p
Schukraft 88B a-dep,et,p

shower X
6420 Andersen 89 a-dep,cs

frag X
61.35 Brechtmann 88 cs

fragb X
464 Tannenbaum 88 p
6420 Andersen 89 a-dep,cs
Price 88 cs

charged (chargeds) (neutrals)
61.35 Brechtmann 88 cs
6420 Brechtmann 88 cs

2π^+ X
6420 Kampert 92 cor,p

fragb neutral X
464 Tannenbaum 88 cor,p

^{32}S S

0fragb X
6400 Bachler 91B et,p

X
6400 Bachler 91B et,p

mult[charged] X
6400 Bachler 91B et,p

mult[neutral] X
6400 Bachler 91B et,p

mult[hadron] X
6420 Odyniec 89 cor,et,p

charged$^-$ X
6420 Odyniec 91B mult
Odyniec 89 p,pt

hadron$^-$ X
6420 Odyniec 91B p

π^- X
6420 Schukraft 91 pt
Odyniec 89 pt
Pugh 89 pt

K^0 X
6420 Odyniec 89 pt

K_S X
6420 Odyniec 91B mult
Schukraft 91 pt
Pugh 89 pt

p X
6420 Odyniec 91B p
Schukraft 91 p
Odyniec 89 p,pt

^{32}S S

p X
Pugh 89 pt

Λ X
6420 Odyniec 91B mult,p
Schukraft 91 pt
Odyniec 89 pt
Pugh 89 pt

$\bar{\Lambda}$ X
6420 Odyniec 91B mult,p
Odyniec 89 pt

fragb X
6400 Bachler 91B p

mult[K_S] mult[charged$^-$] X
6420 Odyniec 91B mult

mult[Λ] mult[charged$^-$] X
6420 Odyniec 91B mult

mult[$\bar{\Lambda}$] mult[charged$^-$] X
6420 Odyniec 91B mult

$2\pi^-$ X
6420 Odyniec 91B cor
Schukraft 91 angp,cor

Λ mult[charged$^-$] X
6420 Jacob 91 cor,mult

$\bar{\Lambda}$ mult[charged$^-$] X
6420 Jacob 91 cor,mult

^{32}S ^{32}S

charged X
6420 Harris 90B p,pt

hadron$^-$ X
6390 Baechler 91B p

π^- X
6420 Harris 90B pt

p X
6390 Baechler 91B p
6420 Harris 90B p,pt

Λ X
6400 Panagiotou 89 p,pol,pt
6420 Harris 90B p,pt

Λ mult[charged] X
6420 Harris 90B cor,mult

^{32}S Fe

inelastic
6420 Andersen 89 a-dep,cs

shower X
6420 Andersen 89 a-dep,cs

fragb X
6420 Andersen 89 a-dep,cs

^{32}S Cu

0fragb X
6400 Bachler 91B et,p

X
6400 Bachler 91B et,p

inelastic
6420 Andersen 89 a-dep,cs

mult[charged] X
6400 Bachler 91B et,p
6420 Eklund 92 et,mult,p

mult[neutral] X
6400 Bachler 91B et,p

mult[hadron] X
6420 Odyniec 89 cor,et,p

neutral X
464 Tannenbaum 88 p

charged X
6400 Eklund 91 mult,p
6420 Eklund 92 p
Kampert 92 a-dep,p

shower X
6420 Andersen 89 a-dep,cs

^{32}S Cu

frag X
61.35 Brechtmann 88 cs
6420 Brechtmann 88 cs

fragb X
6400 Bachler 91B p
6420 Andersen 89 a-dep,cs
Price 88 cs

charged (chargeds) (neutrals)
61.35 Brechtmann 88 cs
6420 Brechtmann 88 cs

$2\pi^+$ X
6420 Kampert 92 cor,p

^{32}S Pd

e^+ X
6420 Vane 92 a-dep,angp,cs,p

^{32}S Ag

0fragb X
6400 Bachler 91B et,p

X
6400 Bachler 91B et,p

inelastic
6420 Andersen 89 a-dep,cs

mult[charged] X
6400 Bachler 91B et,p
6420 Eklund 92 et,mult,p

mult[neutral] X
6400 Bachler 91B et,p
6420 Tannenbaum 89 et,p

mult[hadron] X
6420 Odyniec 89 cor,et,p

mult[shower] X
6390 Akesson 90D et,mult,p

neutral X
464 Tannenbaum 88 p

charged X
6400 Eklund 91 mult,p
6420 Eklund 92 p
Kampert 92 a-dep,p

hadron X
6390 Akesson 90E et
6420 Schukraft 91 et
Akesson 88C a-dep,cor,et,p
Schukraft 88B a-dep,et,p

shower X
6420 Andersen 89 a-dep,cs

frag X
7.626 Wada 92B angp,p
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs

fragb X
6400 Bachler 91B p
6420 Andersen 89 a-dep,cs

Be X
7.626 Wada 92 angp,p

C X
7.626 Wada 92 angp,p

O X
7.626 Wada 92 angp,p

Ne X
7.626 Wada 92 angp,p

Mg X
7.626 Wada 92 angp,p

Si X
7.626 Wada 92 angp,p

charged (chargeds) (neutrals)
42.86 Brechtmann 88 cs
6420 Brechtmann 88 cs

$2\pi^+$ X
6420 Kampert 92 cor,p

$2\pi^-$ X
6420 Odyniec 91B cor

^{32}S Ag

$2\pi^-$ X
Schukraft 91 angp,cor

2frag X
7.626 Wada 92B cor

p fragb X
7.626 Wada 92 angp,p

deuteron fragb X
7.626 Wada 92 angp,p

^{4}He fragb X
7.626 Wada 92 angp,p

^{32}S Wt

mult[charged] (neutrals)
6420 Ritter 88 et,mult

mult[neutral] X
6420 Tannenbaum 89 et,p

charged X
6420 Akesson 90 cor,et,mult,p

charged$^-$ X
6420 Schukraft 91 et,p,pt
Akesson 89E cs,et,pt
Schukraft 88B et,p,pt

hadron X
6390 Akesson 90E angp,et,p
6420 Schukraft 91 et
Akesson 88C a-dep,cor,et,p
Schukraft 88B a-dep,et,p

γ X
6420 Schukraft 91 cs,et,pt
Akesson 89D cs,et,pt
Schukraft 88B pt

π^+ X
6420 Akesson 92 et,pt

π^0 X
6420 Schukraft 91 cs,et,pt
Akesson 89D cs,et,pt

π^- X
6420 Akesson 92 et,pt

K^+ X
6420 Akesson 92 et,pt

K^- X
6420 Akesson 92 et,pt

K_S X
6400 Evans 92 cs,pt
Kinson 91 cs,mult,p,pt

Λ X
6400 Evans 92 cs,pt
Abatzis 91 cs,p,pt
Kinson 91 cs,mult,p,pt
Schukraft 91 mult,pt
6420 Odyniec 91B mult
Abatzis 90 p,pt

$\bar{\Lambda}$ X
6400 Evans 92 cs,pt
Abatzis 91 cs,p,pt
Kinson 91 cs,mult,p,pt
Schukraft 91 mult,pt
6420 Odyniec 91B mult
Abatzis 90 p,pt

Ξ^- X
6400 Evans 92 cs,pt
Abatzis 91 cs,p,pt
Abatzis 91B cs
Kinson 91 cs,mult,p,pt
Odyniec 91 mult
Schukraft 91 mult
Abatzis 90B angp,mult
6420 Odyniec 91B mult

$\bar{\Xi}^+$ X
6400 Evans 92 cs,pt
Abatzis 91 cs,p,pt
Abatzis 91B cs
Kinson 91 cs,mult,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{32}S Wt

Ξ^+ X

	Odyniec 91	mult
	Schukraft 91	mult
	Abatzis 90B	angp,mult
6420	Odyniec 91B	mult

charged mult[charged] X

6420	Odyniec 91	mult,p
	Abatzis 90	mult,p

$\pi^+ \pi^-$ X

6400	Evans 92	mass
	Kinson 91	mass

K_S mult[charged] X

6400	Evans 92	mult

p (hadrons) X

6420	Akesson 91	cor,et,p,pt

$p \pi^-$ X

6400	Evans 92	mass
	Abatzis 91	mass
	Kinson 91	mass
6420	Abatzis 90	mass

$\bar{p} \pi^+$ X

6400	Evans 92	mass
	Abatzis 91	mass
	Kinson 91	mass
6420	Abatzis 90	mass

Λ mult[charged] X

6420	Odyniec 91	mult,p
	Abatzis 90	mult,p

Λ mult[charged$^-$] X

6400	Evans 92	mult
6420	Jacob 91	cor,mult

Λ mult[charged] X

6420	Odyniec 91	mult,p
	Abatzis 90	mult,p

Λ mult[charged$^+$] X

6400	Evans 92	mult
6420	Jacob 91	cor,mult

$\Lambda \pi^-$ X

6400	Evans 92	mass
	Abatzis 91	mass
	Kinson 91	mass
	Odyniec 91	mass
	Abatzis 90B	mass

$\Lambda \pi^+$ X

6400	Evans 92	mass
	Abatzis 91	mass
	Kinson 91	mass
	Odyniec 91	mass
	Abatzis 90B	mass

^{32}S Pt

mult[neutral] X

6420	Tannenbaum 89	et,p

charged X

6420	Akesson 89E	cs,et,pt

hadron X

6390	Akesson 90E	et
6420	Schukraft 91	et
	Akesson 88C	a-dep,cor,et,p
	Schukraft 88B	a-dep,et,p

γ X

6420	Schukraft 91	cs,et,pt
	Akesson 89D	cs,et,pt

π^0 X

6420	Schukraft 91	cs,et,pt
	Akesson 89D	cs,et,pt

$2\mu^-$ X + $2\mu^+$ X

6420	Schukraft 88B	mass,p

$\mu^- \mu^+$ X

6420	London 89	mass
	Schukraft 88B	mass,p,pt

^{32}S Au

0fragb X

6400	Bachler 91B	et,p

X

6400	Bachler 91B	et,p

e^+ X

6420	Vane 92	a-dep,angp,cs,p

mult[charged] X

6400	Bachler 91B	et,p
6420	Eklund 92	et,mult,p

mult[charged] (neutrals)

6420	Ritter 88	et,mult

0fragb mult[charged] (neutrals)

6390	Adamovich 90D	mult,p

(showers) X

6390	Adamovich 92B	angp,col,mult,p
	Stenlund 91	angp,col,mult,p

mult[neutral] X

6400	Bachler 91B	et,p

mult[hadron] X

6420	Odyniec 89	cor,et,p

mult[shower] X

6390	Adamovich 92B	mult,p
	Adamovich 91	mult,p
	Stenlund 91	mult,p
	Adamovich 90C	mult,p
	Otterlund 90	cor,mult,p
	Stenlund 90C	mult,p

neutral X

464	Tannenbaum 88	p

charged X

6400	Eklund 91	mult,p
6420	Eklund 92	p
	Kampert 92	a-dep,p
	Otterlund 88B	et

hadron X

6420	Odyniec 91B	et
	Heck 88	et

shower X

6420	Adamovich 89	mult,p

fragb X

464	Tannenbaum 88	p
6400	Bachler 91B	p
6420	Odyniec 91B	cor,et,p

mult[shower] mult[fragb] X

6390	Adamovich 91	mult,p
	Adamovich 90C	mult,p
	Stenlund 90C	mult,p

shower mult[shower] X

6420	Adamovich 89	mult,p

$2\pi^+$ X

6420	Kampert 92	cor,p

fragb neutral X

464	Tannenbaum 88	cor,p

mult[p] $2\pi^+$ X

6420	Kampert 92	cor,mult,p

^{32}S Hg

q X

6420	Calloway 89	

^{32}S Pb

inelastic

6420	Andersen 89	a-dep,cs

mult[charged] X

6420	Odyniec 91B	mult

mult[neutral] X

6420	Tannenbaum 89	et,p

hadron X

6390	Akesson 90E	et
6420	Schukraft 91	et
	Akesson 88C	a-dep,cor,et,p

^{32}S Pb

hadron X

	Schukraft 88B	a-dep,et,p

hadron$^+$ X

197.8	Takahashi 91	pt

hadron$^-$ X

197.8	Takahashi 91	pt

shower X

6420	Andersen 89	a-dep,cs

frag X

6420	Brechtmann 88	cs

fragb X

6420	Andersen 89	a-dep,cs
	Price 88	cs

$2\mu^-$ X + $2\mu^+$ X

6420	Baglin 91	mass

$\mu^- \mu^+$ X

6420	Baglin 91	mass

charged (chargeds) (neutrals)

6420	Brechtmann 88	cs

2hadron$^+$ X

197.8	Takahashi 91	cor

hadron$^+$ hadron$^-$ X

197.8	Takahashi 91	cor

2hadron$^-$ X

197.8	Takahashi 91	cor

$\pi^+ \pi^-$ X

6400	Boggild 92	angp,cor
6420	Odyniec 91B	mass

$J/\psi(1S)$ (neutrals) X

6420	Baglin 91	cor,cs,et

$p \pi^-$ X

6420	Odyniec 91B	mass

$\bar{p} \pi^+$ X

6420	Odyniec 91B	mass

$\mu^- \mu^+$ (neutrals) X

6420	Baglin 91	cor,cs,et

^{32}S U

(neutrals) X

6420	Baglin 90B	et

mult[neutral] X

6420	Tannenbaum 89	et,p

hadron X

6390	Akesson 90E	et
6420	Schukraft 91	et
	Akesson 88C	a-dep,cor,et,p
	Schukraft 88B	a-dep,et,p

$\omega(783)$ X + $\rho(770)^0$ X

6420	Baglin 91D	a-dep
	Odyniec 91B	et,mult

$\phi(1020)$ X

6420	Baglin 91D	a-dep
	Odyniec 91B	et,mult

$J/\psi(1S)$ X

6420	Baglin 91B	pt
	Baglin 91C	pt
	Baglin 91E	cs
	Odyniec 91B	et,mult
	Sonderegger 89	cs,et,pt

$2\mu^-$ X + $2\mu^+$ X

6420	Sonderegger 89	et,mass
	Kluberg 88	et,mass

$\mu^- \mu^+$ X

6420	Baglin 91B	pt
	Baglin 91C	pt
	Baglin 91D	mass
	Jacob 91	et
	Odyniec 91B	mass
	Sonderegger 89	et,mass
	Kluberg 88	et,mass

^{32}S U

ω(783) (neutrals) X +
ρ(770)^0 (neutrals) X
6420 Baglin 91D cs,et
φ(1020) (neutrals) X
6420 Baglin 91D cs,et
J/ψ(1S) (neutrals) X
6390 Abreu 91E et,pt
6420 Baglin 91B cor,et,pt
Baglin 91C cor,et,pt
Baglin 91E et
Baglin 90B et
Kluberg 88 cs,et,pt
μ$^-$ μ$^+$ (neutrals) X
6390 Abreu 91E et,pt
6420 Baglin 91B cor,et,pt
Baglin 91C cor,et,pt
Baglin 91D cs,et
Baglin 90B et
Kluberg 88 cs,et,pt

^{36}Ar nucleus

frag X
12.74 Barz 92 angp

^{36}Ar C

γ X
14.65 Kwatonjock 88 angp,cs,p

^{36}Ar Al

mult[frag]
14.65 Sullivan 90 col

^{36}Ar ^{27}Al

charged X
14.65 Kwatonjock 88 mult
γ X
14.65 Kwatonjock 88 angp,cs,p
γ charged X
14.65 Kwatonjock 88 mult

^{36}Ar ^{48}Ti

K$^+$ X
15.27 Julien 91 cs

^{36}Ar Cu

γ X
14.65 Kwatonjock 88 angp,cs,p

^{36}Ar Ag

γ X
14.65 Kwatonjock 88 angp,cs,p

^{36}Ar ^{159}Tb

γ X
14.65 Kwatonjock 88 angp,cs,p

^{36}Ar ^{197}Au

γ X
14.65 Kwatonjock 88 angp,cs,p
frag X
11.13 Phair 92 angp,p
14.19 Phair 92 angp,p
16.77 Phair 92 angp,p

Ar K

2π$^-$ X
100.8 Christie 91 cor

Ar p

fragb X
43.88 Webber 90 cs

Ar p

fragb X
Webber 90B a-dep,cs
57.03 Webber 90 cs
Webber 90B a-dep,cs

Ar nucleus

mult[charged] X
57.41 Aleklett 88 mult
104.9 Aleklett 88 mult
mult[He] X
57.41 Aleklett 88 mult
104.9 Aleklett 88 mult
mult[fragt] X
57.41 Aleklett 88 mult
104.9 Aleklett 88 mult
mult[shower] X
57.41 Aleklett 88 mult
104.9 Aleklett 88 mult
mult[htrack] X
57.41 Aleklett 88 mult
104.9 Aleklett 88 mult
π^0 X
11.43 Batkin 91 cs,p
π$^-$ X
57.41 Lhote 89 angp
p X
57.41 Lhote 89 angp
Danielewicz 88 p
fragb X
43.88 Webber 90 cs
57.03 Webber 90 cs
deuteron X
57.41 Danielewicz 88 p,pt
π$^-$ mult[grey] X
45.35 – 98.68 Lhote 89 mult
2π$^-$ X
100.8 Christie 92 cor,p
101.6 Chacon 91 angp,cor
2deuteron X
57.41 Danielewicz 88 cor,pt

Ar C

fragb X
43.88 Webber 90 cs
Webber 90B a-dep,cs
57.03 Webber 90 cs
Webber 90B a-dep,cs

Ar Fl

π$^+$ X
37.48 Poitou 92 col
47.84 Poitou 92 col
π$^-$ X
37.48 Poitou 92 col
47.84 Poitou 92 col

Ar Na

π$^+$ X
37.48 Poitou 92 col
47.84 Poitou 92 col
π$^-$ X
37.48 Poitou 92 col
47.84 Poitou 92 col

Ar Cl

2π$^-$ X
100.8 Christie 91 cor

Ar Ca

π^0 X
66.51 Berg 91 cs,p,pt
η X
66.51 Berg 91 cs,p,pt
2p X
25.33 – 66.51 Dupieux 91 -
37.48 Dupieux 91 cor

Ar Ca

He deuteron X
57.41 Dupieux 91 cor,p

Ar Cu

^{7}Be X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{22}Na X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{24}Na X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{28}Mg X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{44}Sc X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{46}Sc X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{54}Mn X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{56}Co X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep
^{58}Co X
62 Aleklett 88 a-dep
100.8 Aleklett 88 a-dep

Ar Nb

π$^+$ X
37.48 Poitou 92 col
47.84 Poitou 92 col
π$^-$ X
37.48 Poitou 92 col
47.84 Poitou 92 col
2p X
25.33 – 66.51 Dupieux 91 -
37.48 Dupieux 91 -

Ar La

2π$^-$ X
100.8 Christie 92 cor
Christie 91 cor

Ar Pb

π$^+$ X
37.48 Poitou 92 col
47.84 Poitou 92 col
π$^-$ X
37.48 Poitou 92 col
47.84 Poitou 92 col
57.41 Beavis 92 p
100.8 Beavis 92 p
p X
37.48 Beavis 92 p
57.41 Beavis 92 p
100.8 Beavis 92 p
deuteron X
37.48 Beavis 92 p
57.41 Beavis 92 p
Danielewicz 88 p,pt
100.8 Beavis 92 p
2p X
25.33 – 66.51 Dupieux 91 -
37.48 Dupieux 91 cor
He deuteron X
57.41 Dupieux 91 cor,p
2frag mult[charged] X
37.48 Jiang 92 ang,cor
2frag (frags) mult[charged] X
37.48 Jiang 92 ang,col

^{40}Ar nucleus

charged X
67.68 – 76.69 Antonchik 90 mult

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{40}Ar nucleus

shower X
67.68 – 76.69 Antonchik 90 mult
grey X
67.68 – 76.69 Antonchik 90 mult
black X
67.68 – 76.69 Antonchik 90 mult
p X
76.69 Antonchik 90B angp,mult,p,pt
fragb X
67.68 – 76.69 Antonchik 90 angp,mult,pt
He X
76.69 Antonchik 90B angp,mult,p,pt
mult[htrack] charged X
67.68 – 76.69 Antonchik 90 mult
mult[htrack] shower X
67.68 – 76.69 Antonchik 90 mult
mult[htrack] grey X
67.68 – 76.69 Antonchik 90 mult
mult[htrack] black X
67.68 – 76.69 Antonchik 90 mult
mult[htrack] fragb X
67.68 – 76.69 Antonchik 90 mult

^{40}Ar Al

mult[frag]
8.69 – 14.16 Sullivan 90 col

^{40}Ar ^{27}Al

charged X
8.69 Peter 90 col,mult,p
10.46 Peter 90 col,mult,p
11.72 Peter 90 col,mult,p
14.16 Peter 90 col,mult,p

^{40}Ar ^{40}Ca

n X
6.714 Obserstedt 92 angp,p
frag X
6.714 Obserstedt 92 angp
p frag X
7.763 Rosch 89 angp,p
n frag X
7.763 Rosch 89 angp,p

^{40}Ar Ti

2p X
13.59 Ardouin 90 cor
2deuteron X
13.59 Ardouin 90 cor
^{4}He deuteron X
13.59 Ardouin 90 cor
2^{4}He X
13.59 Ardouin 90 cor

^{40}Ar ^{90}Zr

inelastic
11.18 Suomijarvi 90 p
^{90}Zr ^{40}Ar
11.18 Suomijarvi 90 angp

^{40}Ar ^{103}Rh

mult[n] fragb X
9.036 Morjean 91 angp,cor,mult,p
10.31 Morjean 91 angp,cor,mult,p
11.59 Morjean 91 angp,cor,mult,p

^{40}Ar Ag

fragb X
13.59 Steckmeyer 89 angp,p

^{40}Ar Ag

fragb charged X
13.59 Steckmeyer 89 angp,mult,p

^{40}Ar ^{197}Au

mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
p X
13.59 Ardouin 90 angp,p
fragb X
13.59 Steckmeyer 89 angp,p
deuteron X
13.59 Ardouin 90 angp,p
^{3}H X
13.59 Ardouin 90 angp,p
^{4}He X
9.036 Jiang 89 p
10.31 Jiang 89 p
11.59 Jiang 89 p
13.59 Ardouin 90 angp,p
15.46 Jiang 89 p
p mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
2p X
13.59 Ardouin 90 cor
mult[n] fragb X
9.036 Morjean 91 angp,cor,mult,p
10.31 Morjean 91 angp,cor,mult,p
11.59 Morjean 91 angp,cor,mult,p
fragb charged X
13.59 Steckmeyer 89 angp,mult,p
deuteron mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
2deuteron X
13.59 Ardouin 90 cor
^{3}H mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
^{4}He deuteron X
13.59 Ardouin 90 cor
2^{4}He X
13.59 Ardouin 90 cor
He mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
Li mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
Be mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult

^{40}Ar ^{208}Pb

inelastic
11.18 Suomijarvi 90 p
^{208}Pb ^{40}Ar
11.18 Suomijarvi 90 angp

^{40}Ar ^{232}Th

mult[n] X
9.036 Jiang 89 mult

^{40}Ar ^{232}Th

mult[n] X
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
p mult[n] X
9.036 Jiang 89 mult
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
deuteron mult[n] X
9.036 Jiang 89 mult
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
^{3}H mult[n] X
9.036 Jiang 89 mult
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
He mult[n] X
9.036 Jiang 89 mult
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
Li mult[n] X
9.036 Jiang 89 mult
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
Be mult[n] X
9.036 Jiang 89 mult
10.31 Jiang 89 mult
11.59 Jiang 89 mult
15.46 Jiang 89 mult
Bor mult[n] X
9.036 Jiang 89 mult
mult[n] 2frag X
9.036 Jiang 89 mult

^{40}Ar ^{238}U

frag^{-} X
102.7 Deboer 91 cs
2frag X
9.036 Jacoquet 90 ang
fragb frag X
9.036 Jacoquet 90 ang
p 2frag X
9.036 Jacoquet 90 angp,p
^{4}He 2frag X
9.036 Jacoquet 90 angp,p

Ca p

fragb X
48.66 Webber 90C a-dep
52.25 Webber 90 cs
Webber 90B a-dep,cs

Ca nucleus

p X
600 – 8000 Gagarin 89 angp,p
fragb X
52.25 Webber 90 cs
p mult[htrack] X
600 – 8000 Gagarin 89 angp,p

Ca C

fragb X
48.66 Webber 90C a-dep
52.25 Webber 90 cs
Webber 90B a-dep,cs

Ca Ca

mult[p] X
38.09 Gustafsson 88 col,mult,p

Ca Ca

mult[p] X

70	Gustafsson 88	col,mult,p

charged X

22 – 70	Gustafsson 88	p,pt

K^- X

115.5	Carroll 88B	angp

e^- e^+ X

67.73	Huang 91	mass
	Seidl 91	mass
	Matis 90	cs
	Schroeder 90	mass
	Roche 89	cs,mass,pt
	Naudet 88C	mass,pt
	Roche 88	mass,pt
111.2	Roche 89	cs,mass,pt
	Naudet 88C	mass
	Roche 88	mass
113.3	Seidl 91	mass
115.5	Matis 90	cs

^{48}Ca ^{9}Be

O X

13.9	Guillemaudmu 90	cs

Fl X

13.9	Guillemaudmu 90	cs

^{48}Ca ^{64}Ni

Nit X

13.9	Guillemaudmu 90	cs

^{48}Ca Ta

^{12}Be X

13.9	Guillemaudmu 90	cs

^{14}Be X

13.9	Guillemaudmu 90	cs

^{14}Bor X

13.9	Guillemaudmu 90	cs

^{15}Bor X

13.9	Guillemaudmu 90	cs

^{17}Bor X

13.9	Guillemaudmu 90	cs

^{17}C X

13.9	Guillemaudmu 90	cs

^{18}C X

13.9	Guillemaudmu 90	cs

^{20}C X

13.9	Guillemaudmu 90	cs

^{20}Nit X

13.9	Guillemaudmu 90	cs

^{21}N X

13.9	Guillemaudmu 90	cs

^{23}N X

13.9	Guillemaudmu 90	cs

^{23}O X

13.9	Guillemaudmu 90	cs

^{24}O X

13.9	Guillemaudmu 90	cs

^{26}O X

13.9	Guillemaudmu 90	cs

^{26}Fl X

13.9	Guillemaudmu 90	cs

^{27}Fl X

13.9	Guillemaudmu 90	cs

^{29}Fl X

13.9	Guillemaudmu 90	cs

^{29}Ne X

13.9	Guillemaudmu 90	cs

^{30}Ne X

13.9	Guillemaudmu 90	cs

^{32}Ne X

13.9	Guillemaudmu 90	cs

^{33}Na X

13.9	Guillemaudmu 90	cs

^{35}Na X

13.9	Guillemaudmu 90	cs

^{48}Ca ^{181}Ta

C X

13.9	Guillemaudmu 90	cs

^{48}Ti ^{45}Sc

frag X

8.323	Stege 88	angp,p

^{56}Fe p

inelastic

143.8	Dudkin 90	cs

fragb X

143.8	Dudkin 90	angp,cs

^{56}Fe nucleus

inelastic

143.8	Dudkin 90	cs

mult[shower] X

140	Babaev 90	ang

mult[grey] X

140	Babaev 90	ang

mult[black] X

140	Babaev 90	ang

p X

143.8	Dudkin 91	mult,p,pt

fragb X

143.8	Dudkin 90	angp,cs

^{4}He X

39.63 – 64.21	Abdurazakova 88	pt
143.8	Dudkin 91	mult,p,pt

mult[shower] mult[fragb] X

140	Babaev 90	ang

mult[grey] mult[fragb] X

140	Babaev 90	ang

mult[grey] mult[shower] X

140	Babaev 90	ang

mult[black] mult[fragb] X

140	Babaev 90	ang

mult[black] mult[shower] X

140	Babaev 90	ang

mult[black] mult[grey] X

140	Babaev 90	ang

p mult[htrack] X

143.8	Dudkin 91	mult,p,pt

2fragb X

39.63 – 64.21	Abdurazakova 88	ang,cor

^{4}He mult[htrack] X

143.8	Dudkin 91	mult,p,pt

^{56}Fe C

inelastic

143.8	Dudkin 90	cs

^{56}Fe Nit

inelastic

143.8	Dudkin 90	cs

^{56}Fe O

inelastic

143.8	Dudkin 90	cs

^{56}Fe Fe

$2\pi^-$ X

137.8	Chacon 88	angp,cor

^{56}Fe Br

inelastic

143.8	Dudkin 90	cs

^{56}Fe Ag

inelastic

143.8	Dudkin 90	cs

^{56}Fe ^{197}Au

^{196}Au X

79.64	Bartke 89	cs

Fe p

shower X

141.8	Dudkin 90	mult

grey X

141.8	Dudkin 90	mult

htrack X

141.8	Dudkin 90	mult

black X

141.8	Dudkin 90	mult

fragb X

47.09	Webber 90B	a-dep,cs
47.09 – 130.9	Webber 90	cs
55.26	Webber 90B	a-dep,cs
61.59	Webber 90B	a-dep,cs
71.51	Webber 90B	a-dep,cs
75.69	Webber 90B	a-dep,cs
89.99	Webber 90B	a-dep,cs
98.91	Webber 90B	a-dep,cs
118.6	Webber 90B	a-dep,cs
124.8	Webber 90B	a-dep,cs
130.9	Webber 90B	a-dep,cs

Nit X

44.5 – 124.1	Webber 90C	cs

Mn X

44.5 – 124.1	Webber 90C	cs

Ag X

67.25	Webber 90C	a-dep

Fe nucleus

shower X

141.8	Dudkin 90	mult

grey X

141.8	Dudkin 90	mult

htrack X

141.8	Dudkin 90	mult

black X

141.8	Dudkin 90	mult

p X

105.9	Antonchik 90B	angp,mult,p
$825 - 1.1 \cdot 10^4$	Gagarin 89	angp,p

fragb X

47.09 – 130.9	Webber 90	cs

grey shower X

141.8	Dudkin 90	cor

htrack grey X

141.8	Dudkin 90	cor

black grey X

141.8	Dudkin 90	cor

p mult[htrack] X

$825 - 1.1 \cdot 10^4$	Gagarin 89	angp,p

Fe He

fragb X

55.26	Webber 90B	a-dep,cs
55.63	Webber 90	cs
75.69	Webber 90	cs
	Webber 90B	a-dep,cs
124.8	Webber 90B	a-dep,cs
130.9	Webber 90	cs

Fe C

fragb X

47.09	Webber 90B	a-dep,cs
47.09 – 130.9	Webber 90	cs
55.26	Webber 90B	a-dep,cs
61.59	Webber 90B	a-dep,cs
71.51	Webber 90B	a-dep,cs
75.69	Webber 90B	a-dep,cs
89.99	Webber 90B	a-dep,cs
98.91	Webber 90B	a-dep,cs
118.6	Webber 90B	a-dep,cs
124.8	Webber 90B	a-dep,cs
130.9	Webber 90B	a-dep,cs

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

Fe C

Al X
81.36 Webber 90C a-dep
Ag X
67.25 Webber 90C a-dep

Fe Fe

$2\pi^-$ X
135.9 Chacon 91 angp,cor

Ni p

fragb X
68.62 Webber 90 cs

Ni nucleus

fragb X
68.62 Webber 90 cs

Ni C

fragb X
68.62 Webber 90 cs

^{63}Cu ^{12}C

frag X
9.685 Han 89 angp,cs,p
2frag X
9.685 Han 89 cs

^{63}Cu ^{27}Al

frag X
9.685 Han 89 angp,cs,p
2frag X
9.685 Han 89 cs

^{84}Kr nucleus

mult[fragt] mult[fragb] X
179.5 Arora 89 ang,cor,mult

^{84}Kr ^{197}Au

frag X
24.05 Stuttge 92 angp,p

Kr Ag

mult[frag]
23.87 Bougault 90 col

Kr Au

mult[frag]
23.87 Bougault 90 col

Kr Th

mult[frag]
23.87 Bougault 90 col

^{86}Kr ^{27}Al

frag X
24.91 Bazin 90 cs,p

^{86}Kr ^{103}Rh

frag X
24.91 Bazin 90 cs,p

^{86}Kr ^{197}Au

frag X
24.91 Bazin 90 cs,p

Nb Nb

mult[frag]
50.78 – 118 Doss 88 mult,p
mult[p] X
50.78 – 161.4 Gustafsson 88 col,mult,p
charged X
50.78 – 161.4 Gustafsson 88 p,pt
n X
134.7 Madey 88 angp,p

Nb Nb

$2\pi^+$ X
118 Bock 89 cor
Bock 89B cor
$2\pi^-$ X
211.2 Chacon 91 angp,cor
$3\pi^+$ X
118 Bock 89 cor
Bock 89B cor

^{93}Nb ^{9}Be

frag X
13.62 Charity 88B cs
15.48 Charity 88B cs
17.14 Charity 88B angp,p
20.4 Charity 88 angp,cs,p
22.31 Charity 88 angp,cs,p
2frag X
13.62 Charity 88B cs
17.14 Charity 88B cs
20.4 Charity 88 cs
22.31 Charity 88 cs

^{93}Nb ^{12}C

frag X
13.62 Charity 88B cs
15.48 Charity 88B cs
17.14 Charity 88B cs

^{93}Nb ^{27}Al

frag X
13.62 Charity 88B cs
15.48 Charity 88B cs
17.14 Charity 88B angp,p
20.4 Charity 88 angp,cs,p
22.31 Charity 88 angp,cs,p
2frag X
20.4 Charity 88 cs
22.31 Charity 88 cs

Xe La

$2\pi^-$ X
251.3 Christie 92 cor
336.6 Christie 91 cor

^{129}Xe Ag

frag X
27.28 Granier 88 angp,p

^{129}Xe ^{197}Au

frag X
27.28 Granier 88 angp,p
29.14 Granier 88 angp,p

^{131}Xe nucleus

mult[frag] X
254.1 Singh 92 col,mult
frag X
254.1 Singh 92 mass,mult

^{136}Xe C

mult[n] mult[frag]
182.2 Kienle 90 cor,mult

^{136}Xe Pb

mult[n] mult[frag]
182.2 Kienle 90 cor,mult
Pb Xe* mult[n]
182.2 Kienle 90 cs

^{139}La nucleus

0htrack X
266.5 Gill 90 cs
0fragb X
266.5 Gill 90 cs
X
266.5 Gill 90 cs

^{139}La nucleus

mult[shower] X
266.5 Gill 90 mult
mult[grey] X
266.5 Gill 90 mult
mult[htrack] X
266.5 Gill 90 cs
0htrack shower X
266.5 Gill 90 angp,mult
shower 0fragb X
266.5 Gill 90 angp,mult
grey 0fragb X
266.5 Gill 90 angp,mult
grey X
266.5 Gill 90 angp,mult
htrack 0fragb X
266.5 Gill 90 angp,mult
htrack X
250 Palsania 91 angp,mult
black X
266.5 Gill 90 angp,mult
fragb X
250 Palsania 91 angp,mult
266.5 Gill 90 mult
0htrack fragb X
266.5 Gill 90 angp,mult
^{4}He 0fragb X
266.5 Gill 90 angp,mult
^{4}He X
266.5 Gill 90 mult
^{4}He 0htrack X
266.5 Gill 90 angp,mult
mult[He] mult[charged] X
266.5 Gill 91 mult
mult[fragb] mult[charged] X
266.5 Gill 91 mult
mult[He] mult[htrack] X
266.5 Gill 91 mult
mult[htrack] mult[fragb] X
266.5 Gill 91 mult
shower mult[charged] X
266.5 Gill 91 mult,p
mult[htrack] shower X
266.5 Gill 91 mult,p
Gill 90 angp,mult
grey mult[charged] X
266.5 Gill 91 angp,mult
grey mult[fragb] X
266.5 Gill 90 angp,mult
mult[htrack] grey X
266.5 Gill 91 angp,mult
Gill 90 angp,mult
black mult[charged] X
266.5 Gill 91 angp,mult
black mult[grey] X
266.5 Gill 90 mult
mult[htrack] black X
266.5 Gill 91 angp,mult
mult[htrack] fragb X
266.5 Gill 90 angp,mult
^{4}He mult[htrack] X
266.5 Gill 90 angp,mult
8htrack (htracks) 4fragb (fragbs) X
250 Palsania 91 col

^{139}La C

fragb X
266.5 Brady 88 angp,mass

^{139}La ^{12}C

mult[frag] X
42.99 Bowman 91 angp,cor,p

^{139}La ^{12}C

mult[frag] X
54.81 Bowman 91 angp,cor,p
61.59 Bowman 91 angp,cor,p

frag X
23 Charity 90 angp,cs,p
25.58 Charity 90 angp,cs,p

2fragt X
23 Charity 90 cs
25.58 Charity 90 cs

^{139}La ^{27}Al

frag X
23 Charity 90 angp,cs,p
25.58 Charity 90 angp,cs,p

2fragt X
23 Charity 90 cs
25.58 Charity 90 cs

^{139}La ^{59}Co

^{58}Co X
275.7 Hill 88B cs

^{139}La ^{139}La

π^- X
14.42 Hayashi 88 angp,cs,mult,p,pt

p X
14.42 Hayashi 88 angp,cs,mult,p,pt
73.05 Claesson 90 angp,p
100.1 Claesson 90 angp,p

deuteron X
14.42 Hayashi 88 angp,cs,p

^{3}H X
14.42 Hayashi 88 angp,cs,p

^{3}He X
14.42 Hayashi 88 angp,cs,p

^{4}He X
14.42 Hayashi 88 angp,cs,p

p mult[charged] X
73.05 Claesson 90 angp,cor,mult,p
100.1 Claesson 90 angp,cor,mult,p

^{139}La La

$2\pi^-$ X
275.7 Bossy 91 angp,cor,p

$2\pi^-$ mult[charged] X
275.7 Bossy 91 angp,cor,mult,p

^{139}La ^{197}Au

^{196}Au X
275.7 Hill 88 cs
Hill 88B cs

^{139}La ^{238}U

frag$^-$ X
281.9 Deboer 91 cs

La La

p X
57.41 Danielewicz 88 p

deuteron X
57.41 Danielewicz 88 p,pt

π^- mult[grey] X
155.8 – 287 Lhote 89 mult

$2\pi^-$ X
265.1 Christie 93 cor,p

2deuteron X
57.41 Danielewicz 88 cor,pt

Ho C

Eu X
275.6 Westphal 91 cs

Ho Cu

Eu X
275.6 Westphal 91 cs

Ho Ag

Eu X
275.6 Westphal 91 cs

Ho Sn

Eu X
275.6 Westphal 91 cs

Ho Pb

Eu X
275.6 Westphal 91 cs

Ho U

Eu X
275.6 Westphal 91 cs

Au C

mult[fragb] X
239.5 Hubele 91 cor

Au Al

mult[fragb] X
239.5 Hubele 91 cor

Au Cu

mult[fragb] X
239.5 Hubele 91 cor

fragb X
239.5 Hubele 91 p

mult[p] mult[fragb] X
239.5 Hubele 91 cor

mult[deuteron] mult[fragb] X
239.5 Hubele 91 cor

mult[trit] mult[fragb] X
239.5 Hubele 91 cor

Au Au

mult[frag]
108.2 – 251.8 Doss 88 mult,p
126.5 Kienle 90 mult

mult[p] X
108 2 – 287.5 Gustafsson 88 col,mult,p

charged X
108.2 – 344.5 Gustafsson 88 p,pt

n X
287.5 Madey 88 angp,p

$2\pi^+$ X
251.8 Bock 89 cor
Bock 89B cor

mult[charged] 2neutral (neutrals)
187.4 Gutbrod 89 cor

$3\pi^+$ X
251.8 Bock 89 cor
Bock 89B cor

^{197}Au nucleus

mult[fragb] X
330.4 Lewenkopf 91 mult,p

fragb X
330.4 Dreute 91 mult,pt

^{197}Au C

mult[frag] X
240.7 Kienle 90 cor,mult

^{197}Au Al

mult[frag] X
240.7 Kienle 90 cor,mult

^{197}Au Cu

mult[frag] X
240.7 Kienle 90 cor,mult

^{208}Pb ^{208}Pb

e^+ X
26.23 Kramer 90 p
1366 Tsertos 91B a-dep,angp,p

^{208}Pb ^{232}Th

e^+ X
1408 Tsertos 91B a-dep,angp,p

^{208}Pb ^{238}U

e^+ X
26.23 Kramer 90 p

^{232}Th Tl(atom)

e^- X
24.36 Bokemeyer 90 p

e^+ X
24.36 Bokemeyer 90 p

^{232}Th ^{181}Ta

e^+ X
24.36 Bokemeyer 91 p

^{232}Th ^{232}Th

e^+ X
24.36 Bokemeyer 91 p

unspec X
24.05 Danzmann 89 p
24.42 Danzmann 89 p

2γ X
24.05 Danzmann 89 p
24.42 Danzmann 89 p

^{232}Th ^{238}U

e^+ X
24.36 Bokemeyer 91 p

^{232}Th ^{248}Cm

e^+ X
24.36 Bokemeyer 91 p

^{238}U nuclearite

^{238}U nuclearite
14.17 Polikanov 90 angp

^{238}U Tl(atom)

e^- X
24.99 Bokemeyer 90 p

e^+ X
24.99 Bokemeyer 90 p

^{238}U nucleus

mult[frag] X
386.3 Singh 92 col,mult

mult[fragb] X
386.3 Jain 92 mult

p X
386.3 Jain 92 mult,p

fragb X
386.3 Jain 92 mass,mult,p

^{4}He X
386.3 Jain 92 mult,p

fragb (fragbs) X
386.3 Jain 92 col,mult,p

nucleus ^{238}U
14.17 Polikanov 90 angp

^{238}U ^{110}Pd

e^+ X
1611 Tsertos 91B a-dep,angp,p

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

^{238}U ^{181}Ta

e^- X

24.93 – 25.99	Bokemeyer 90	p
	Bokemeyer 88	p
25.06 – 25.48	Bokemeyer 89	p
25.7 – 25.99	Bokemeyer 89	p

e^+ X

24.93 – 25.99	Bokemeyer 91	p
	Bokemeyer 90	p
	Bokemeyer 88	p
25.06 – 25.48	Bokemeyer 89	p
25.7 – 25.99	Bokemeyer 89	p
1611	Tsertos 91B	a-dep,angp,p

e^- e^+ X

24.93 – 25.99	Bokemeyer 91	p
25.06 – 25.48	Bokemeyer 89	p
25.7 – 25.99	Bokemeyer 89	p
25.83	Bokemeyer 91	mass,p

e^- fragt fragb

25.2	Salabura 90	ang,p

e^+ fragt fragb

25.2	Salabura 90	ang,p

^{238}U ^{181}Ta e^- e^+

25.2	Salabura 90	ang,p

^{238}U ^{197}Au

e^+ X

1611	Tsertos 91B	a-dep,angp,p

^{196}Au X

391.8	Hill 91	cs

^{238}U ^{208}Pb

e^- e^+ X

24.99	Bokemeyer 91	mass,p

^{238}U ^{232}Th

e^- X

24.91 – 24.99	Bokemeyer 90	p
	Bokemeyer 89	p
	Bokemeyer 88	p

e^+ X

24.91 – 24.99	Bokemeyer 91	p
	Bokemeyer 90	p
	Bokemeyer 89	p
	Bokemeyer 88	p
24.99	Bokemeyer 91	p
1611	Tsertos 91B	a-dep,angp,p

unspec X

24.89	Danzmann 89	p
25	Danzmann 89	p
25.31	Danzmann 89	p

e^- e^+ X

24.91 – 24.99	Bokemeyer 91	p
	Bokemeyer 89	p

2γ X

24.89	Danzmann 89	p
25	Danzmann 89	p
25.31	Danzmann 89	p

e^- fragt fragb

24.78 – 24.99	Salabura 90	ang,p

e^+ fragt fragb

24.78 – 24.99	Salabura 90	ang,p

^{238}U ^{232}Th e^- e^+

24.78 – 24.99	Salabura 90	ang,p

^{238}U ^{238}U

e^- X

24.99	Bokemeyer 90	p
	Bokemeyer 88	p

e^+ X

24.99	Bokemeyer 91	p
	Bokemeyer 90	p
	Bokemeyer 88	p
1611 – 1683	Tsertos 91B	a-dep,angp,p

^{238}U ^{238}U

unspec X

25	Danzmann 89	p

e^- e^+ X

24.78	Bokemeyer 91	mass,p

2γ X

25	Danzmann 89	p

^{238}U ^{248}Cm

e^+ X

24.99	Bokemeyer 91	p

U Ta

e^- e^+ X

24.8	Salabura 90B	mass
24.99	Salabura 90B	mass

U Pb

e^- e^+ X

24.99	Koenig 89	ang,p

U Th

e^- e^+ X

24.8	Salabura 90B	mass
24.99	Salabura 90B	mass

U U

e^- e^+ X

24.99	Koenig 89	ang,p

unspec nucleus

μ^+ X

$> 5 \cdot 10^4$	Dingus 88	cs

μ^- X

> 100	Bonnetbidaud 88	p

μ^+ X

> 100	Bonnetbidaud 88	p

mult[charged] X

10^5 – 10^6	Ren 88C	mult,p

mult[γ] X

2000	Navia 88	p
10^5 – 10^6	Ren 88	mult,p
	Ren 88C	mult,p
10^6	Gladyszdziad 88	cor,mult,p
10^7	Ivanenko 92	p,pt

mult[μ] X

10^4 – 10^8	Aglietta 89B	

mult[hadron] X

2000	Navia 88	p
10^6	Gladyszdziad 88	cor,mult,p

shower X

100 – $5 \cdot 10^5$	Bonnetbidaud 88	p
$> 5 \cdot 10^4$	Dingus 88	cs
10^5 – 10^6	Ren 88	mult,p
10^6 – 10^{10}	Dyakonov 89	flux,mass
$5 \cdot 10^6$ – $2 \cdot 10^7$	Arabkin 90	p

X centauro

10^5 – 10^6	Ren 88B	mult,p

μ^+ (μ^+'s) shower

10^5 – 10^8	Bellotti 89E	ang

mult[γ] mult[charged] X

10^7	Ivanenko 92	p,pt

mult[γ] mult[hadron] X

10^5 – 10^6	Ren 88B	mult,p

mult[μ] shower X

> 10	Vashkevich 88	cs

20μ^+ X

$> 2 \cdot 10^5$	Adarkar 91	p

unspec C

jet X

400	Dzhaoshvili 88B	angp,p,pt

hadron p

mult[charged] (neutrals)

(22 – 630)	Buschbeck 91	angp,col,mult,p,pt

hadron nucleus

inelastic

> 1000	Avakyan 89B	cs

grey X

200	Brick 89	angp

black X

200	Brick 89	angp

hadron C

mult[hadron] mult[jet]

100 – 2000	Dzhaoshvili 88	mult

jet X

100 – 2000	Dzhaoshvili 88	cor,p,pt

hadron (hadrons) 0jet

100 – 2000	Dzhaoshvili 88	angp,p

hadron (hadrons) (jets) jet

100 – 2000	Dzhaoshvili 88	angp,p

hadron$^+$ p

mult[charged] (neutrals)

147	Arena 92	col,mult,p,pt

hadron X

140	Apsimon 90C	p

π^0 X

140	Apsimon 90C	p

hadron$^+$ nucleus

K^0 mult[grey] X + $\bar{K}^0$ mult[grey] X

200	Brick 92	cor,mult,p,pt

K^0 π^+ X + $\bar{K}^0$ π^+ X

200	Brick 92	mult

p K^0 X + p $\bar{K}^0$ X

200	Brick 92	mult

Λ mult[grey] X

200	Brick 92	cor,mult,p,pt

Λ π^+ X

200	Brick 92	mult

p Λ X

200	Brick 92	mult

hadron$^+$ Be

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

hadron$^+$ Al

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

hadron$^+$ Cu

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

hadron$^+$ Wt

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

hadron$^+$ Pb

hadron X

200	Akesson 88B	angp,et

hadron$^-$ p

hadron$^+$ X

140	Apsimon 90C	p

π^0 X

140	Apsimon 90C	p

hadron$^-$ Be

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

hadron$^-$ Al

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

hadron$^-$ Cu

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

hadron$^-$ Wt

D^+ X

250	Errede 90	a-dep,p,pt

D^0 X

250	Errede 90	a-dep,p,pt

Entries are in order of beam name, then target name, then multiplicity of final state. Particle names are ordered as described in the legend on page 157 and as listed in the Particle Vocabulary. See also the Table of Contents of this Index beginning on the page 158. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). Beam momenta are p_{lab} in GeV/c, or in parentheses E_{cm} in GeV.

This index lists papers by names of particles studied or produced and their decays, ordered by particle name, then decay.

Particle names follow the ordering in the Particle Vocabulary of this compilation. The particle ordering is: gauge bosons, leptons, mesons, baryons, atoms, and nuclei, and within each group the ordering is mainly by increasing mass. However, within mesons and baryons, ordering is nonstrange, strange, charmed, bottom . . . . To simplify searching in this Index, a short "Table of Contents" of the full Index comes first.

For a given particle, the decays are divided into two classes: inclusive and exclusive, with inclusive first. In each inclusive or exclusive sample, ordering is by the final-state multiplicity, with separation of semileptonic from nonleptonic final states; semileptonic appear first, then nonleptonic. The decays are further ordered by names of the final-state particles, taking into account the weak and strong isospin multiplet structures. When no decay mode is given, no mode was given in the original paper.

For a given decay, papers are ordered by year (most recent first), then first author name. For the full reference, see the ID/Reference/Title Index.

Illustrative Key

Particle: see the *Particle Vocabulary* for nomenclature.

Decay: decay mode of the particle.

$a_2(1320)^+$

Ahmad 92
Baltrusaitis 91
Bisello 91B
Kopke 89
Thorndike 88

$\eta\ \pi^+$

Atkinson 92C
Landsberg 91

$K^+\ K_S$

Landsberg 91

Document ID: see *ID/Reference/Title Index* for the full reference.

This is a short "Table of Contents" of the full Particle/Decay Index

jet . . . 332
jet$^+$ . . . 332
jet$^-$ . . . 332
longlived . . . 332
longlived$^+$ . . . 332
longlived^0 . . . 332
longlived$^-$ . . . 332
narrow . . . 332
vee . . . 332
γ^* . . . 332
$W^\pm$ . . . 332
W^+ . . . 333
W^- . . . 333
Z^0 . . . 333
gluon . . . 338
higgs . . . 338
axion . . . 338
$W'^\pm$ . . . 339
W'^+ . . . 339
W'^- . . . 339
Z' . . . 339
goldstone . . . 339
majoron . . . 339
familon . . . 339
axigluon . . . 339
higgs^{++} . . . 339
higgs^{--} . . . 339
S^0 . . . 339
ℓ . . . 339
charged-lepton . . . 339
$\ell^\pm$ . . . 339
ℓ^- . . . 339
ℓ^+ . . . 339
ν . . . 340
ν_e . . . 340
e^- . . . 340
$\bar{\nu}_e$ . . . 340
ν_μ . . . 340
μ . . . 340
μ^+ . . . 340
$\bar{\nu}_\mu$ . . . 340
ν_τ . . . 340
$\tau^\pm$ . . . 340
τ . . . 340
τ^+ . . . 343
$\bar{\nu}_\tau$ . . . 345
heavy-lepton . . . 345
heavy-ν . . . 345
heavy-$\bar{\nu}$ . . . 345
heavy-ν_e . . . 345
heavy-$\bar{\nu}_e$ . . . 345
heavy-ν_μ . . . 345
heavy-$\bar{\nu}_\mu$ . . . 345
heavy-ν_τ . . . 345
heavy-$\bar{\nu}_\tau$ . . . 345
heavy-lepton^0 . . . 345
$\overline{\text{heavy-lepton}}^0$ . . . 345
heavy-lepton$^-$ . . . 345
heavy-lepton$^+$ . . . 345
heavy-e . . . 346
q . . . 346
$\bar{q}$ . . . 346
u . . . 346
$\bar{u}$ . . . 346
d . . . 346
$\bar{d}$ . . . 346
s . . . 346
$\bar{s}$ . . . 346
c . . . 347
$\bar{c}$ . . . 347
b . . . 347
$\bar{b}$ . . . 348
t . . . 348
$\bar{t}$ . . . 349
b' . . . 349
$\bar{b}'$ . . . 349
gaugino . . . 349
neutralino . . . 349
chargino . . . 349
chargino$^+$ . . . 349
chargino$^-$ . . . 349
photino . . . 349
wino$^+$ . . . 350
wino$^-$ . . . 350
gluino . . . 350
higgsino . . . 350
higgsino$^+$ . . . 350
higgsino$^-$ . . . 350
goldstino . . . 350
higgs($CP = -1$) . . . 350
higgs($CP = +1$) . . . 350
higgs$^\pm$ . . . 350
higgs$^+$ . . . 350
higgs$^-$ . . . 350
$\tilde{\ell}$ . . . 350
$\tilde{\ell}^-$ . . . 350
$\tilde{\ell}^+$ . . . 350
$\tilde{\nu}$ . . . 350
$\bar{\tilde{\nu}}$ . . . 350
$\tilde{\nu}_e$ . . . 350
$\bar{\tilde{\nu}}_e$ . . . 350
$\tilde{e}$ . . . 350
$\tilde{e}^-$ . . . 350
$\tilde{e}^+$ . . . 351
$\tilde{\mu}^-$ . . . 351
$\tilde{\mu}^+$ . . . 351
$\tilde{\tau}^-$ . . . 351
$\tilde{\tau}^+$ . . . 351
$\tilde{q}$ . . . 351
$\bar{\tilde{q}}$ . . . 351
$\tilde{u}$ . . . 351
$\tilde{d}$ . . . 351
ν^* . . . 351
$\bar{\nu}^*$ . . . 351
$e^{*\pm}$ . . . 351
e^{*-} . . . 351
e^{*+} . . . 351
$\mu^{*\pm}$ . . . 351
μ^{*-} . . . 351
μ^{*+} . . . 351
τ^* . . . 351
τ^{*-} . . . 351
τ^{*+} . . . 351
q^* . . . 351
$\bar{q}^*$ . . . 351
monopole . . . 351
technipion$^+$ . . . 351
technipion$^-$ . . . 351
lepton-colored . . . 351
$\overline{\text{lepton-colored}}$ . . . 351
lepton-quark . . . 351
$\overline{\text{lepton-quark}}$ . . . 352
meson . . . 352
meson$^+$ . . . 352
meson^0 . . . 352
meson$^-$ . . . 352
π^+ . . . 352
π^0 . . . 353
π^- . . . 353
η . . . 353
$\rho(770)$ . . . 354
$\rho(770)^\pm$ . . . 354
$\rho(770)^+$ . . . 354
$\rho(770)^0$ . . . 354
$\rho(770)^-$ . . . 355
$\omega(783)$ . . . 355
$\eta'(958)$ . . . 355
$f_0(700)$ . . . 356
$f_0(975)$ . . . 356
$a_0(980)$ . . . 356
$a_0(980)^+$ . . . 356
$a_0(980)^0$ . . . 356
$a_0(980)^-$ . . . 356
$h_1(1170)$ . . . 356
$b_1(1235)$ . . . 356
$b_1(1235)^+$ . . . 356
$b_1(1235)^0$ . . . 356
$b_1(1235)^-$ . . . 356
$f_0(1240)$ . . . 356
$a_1(1260)$ . . . 356
$a_1(1260)^+$ . . . 356
$a_1(1260)^0$ . . . 356
$a_1(1260)^-$ . . . 357
$f_2(1270)$ . . . 357
$f_1(1285)$ . . . 357
$\eta(1295)$ . . . 357
$\pi(1300)^0$ . . . 357
$a_2(1320)$ . . . 357
$a_2(1320)^+$ . . . 357
$a_2(1320)^0$ . . . 357
$a_2(1320)^-$ . . . 358
$h_1(1380)$ . . . 358
$\omega(1390)$ . . . 358
$f_0(1400)$ . . . 358
$\hat{\rho}(1405)^0$ . . . 358
$f_1(1420)$ . . . 358
$f_2(1430)$ . . . 358
$\eta(1440)$ . . . 358
$\rho(1450)$ . . . 358
$\rho(1450)^0$ . . . 358
$\rho(1450)^-$ . . . 358
$f_1(1510)$ . . . 358
$f_2(1520)$ . . . 358
$f_0(1525)$ . . . 359
$f_2'(1525)$ . . . 359
$f_0(1590)$ . . . 359
$\omega(1600)$ . . . 359
$f_2(1640)$ . . . 359
$\pi_2(1670)$ . . . 359
$\pi_2(1670)^+$ . . . 359
$\pi_2(1670)^0$ . . . 359
$\pi_2(1670)^-$ . . . 359
$\rho_3(1690)$ . . . 359
$\rho_3(1690)^0$ . . . 359
$\rho(1700)^0$ . . . 359
$\rho(1700)^-$ . . . 359
$X(1700)$ . . . 359
$f_2(1720)$ . . . 359
$X(1740)$ . . . 359
$f_0(1750)$ . . . 359
$\eta(1760)$ . . . 359
$f_2(1810)$ . . . 359
$X(1814)^-$ . . . 359
$\eta_2(1870)$ . . . 359
$X(1910)$ . . . 359
$f_2(2010)$ . . . 359
$a_3(2050)^-$ . . . 359
$f_4(2050)$ . . . 360
$\eta(2100)$ . . . 360
$\rho(2110)^0$ . . . 360
$X(2200)$ . . . 360
$f_4(2220)$ . . . 360
$f_2(2300)$ . . . 360
$f_2(2340)$ . . . 360
$f_6(2510)$ . . . 360
strange . . . 360
strange^0 . . . 360
$K^\pm$ . . . 360
K . . . 360
K^+ . . . 360
K^0 . . . 360
$\bar{K}^0$ . . . 360
K^- . . . 360
K_S . . . 360
K_L . . . 361
$K^*(892)$ . . . 362
$K^*(892)^\pm$ . . . 362
$K^*(892)^+$ . . . 362
$K^*(892)^0$ . . . 362
$\bar{K}^*(892)$ . . . 362
$\bar{K}^*(892)^0$ . . . 362
$K^*(892)^-$ . . . 363
$K_1(1270)^+$ . . . 363
$K_1(1270)^0$ . . . 363
$\bar{K}_1(1270)^0$ . . . 363
$K_1(1270)^-$ . . . 363
$K_1(1400)$ . . . 363
$K_1(1400)^+$ . . . 363
$K_1(1400)^0$ . . . 363
$\bar{K}_1(1400)^0$ . . . 363
$K_1(1400)^-$ . . . 363
$K^*(1410)^+$ . . . 363
$K^*(1410)^0$ . . . 363
$\bar{K}^*(1410)$ . . . 363
$\bar{K}^*(1370)^0$ . . . 363
$K^*(1410)^-$ . . . 363
$\bar{K}_0^*(1430)^0$ . . . 363
$K_0^*(1430)^-$ . . . 363
$K_2^*(1430)^+$ . . . 363
$K_2^*(1430)^0$ . . . 363
$\bar{K}_2^*(1430)^0$ . . . 363
$K_2^*(1430)^-$ . . . 363
$K(1460)^-$ . . . 363
$K^*(1680)^+$ . . . 364
$K^*(1680)^0$ . . . 364
$\bar{K}^*(1680)$ . . . 364
$\bar{K}^*(1680)^0$ . . . 364
$K^*(1680)^-$ . . . 364
$K_2(1770)$ . . . 364
$K_2(1770)^-$ . . . 364
$K_3^*(1780)^+$ . . . 364
$K_3^*(1780)^0$ . . . 364
$\bar{K}_3^*(1780)^0$ . . . 364
$K_3^*(1780)^-$ . . . 364
$\bar{K}_0^*(1950)^0$ . . . 364
$K_0^*(1950)^-$ . . . 364
$\bar{K}_2^*(1980)^0$ . . . 364
$K_4^*(2045)$ . . . 364
$K_4^*(2045)^+$ . . . 364
$K_4^*(2045)^0$ . . . 364
$\bar{K}_4^*(2045)^0$ . . . 364
$K_4^*(2045)^-$ . . . 364
$\bar{K}_5^*(2380)^0$ . . . 364
$\bar{K}^*(\text{unspec})^0$ . . . 364
$K^*(\text{unspec})^-$ . . . 364
$\phi(1020)$ . . . 364
$\phi(1680)$ . . . 365
$\phi_3(1850)$ . . . 365
charm . . . 365
$\overline{\text{charm}}$ . . . 365
charm^0 . . . 365
charm$^\pm$ . . . 365
charm$^-$ . . . 365
charmed-meson . . . 365
$\overline{\text{charmed-meson}}$ . . . 365
DC . . . 365
$D^\pm$ . . . 365
D . . . 365
D^+ . . . 365
D^0 . . . 366
$\bar{D}$ . . . 369
$\bar{D}^0$ . . . 369
D^- . . . 369
$D^*(2010)^\pm$ . . . 370
$D^*(2010)$ . . . 370
$D^*(2010)^+$ . . . 370
$D^*(2010)^0$ . . . 370
$\bar{D}^*(2010)$ . . . 371
$\bar{D}^*(2010)^0$ . . . 371

This is a short "Table of Contents" of the full Particle/Decay Index

$D^*(2010)^-$ . . . 371
$D_S^\pm$ . . . 371
D_S^+ . . . 371
D_S^- . . . 372
D_S^* . . . 372
D_S^{*+} . . . 372
D_S^{*-} . . . 372
$D_1(2420)^+$ . . . 372
$D_1(2420)^0$ . . . 372
$\overline{D}_1(2420)^0$ . . . 372
$D_J(2440)^0$ . . . 372
$D_2^*(2460)^+$ . . . 372
$D_2^*(2460)^0$ . . . 372
$\overline{D}_2^*(2460)^0$ . . . 373
$D_2^*(2460)^-$ . . . 373
$D_J^*(2470)^0$ . . . 373
$D_{S1}(2536)^+$ . . . 373
$D_{S1}(2536)^-$ . . . 373
$D_{SJ}(2564)^+$ . . . 373
$D_{SJ}(2564)^-$ . . . 373
$D_S^*(2790)^+$ . . . 373
$\eta_c(1S)$ . . . 373
$J/\psi(1S)$ . . . 373
$\chi_{c0}(1P)$ . . . 376
$\chi_{c1}(1P)$ . . . 376
$\chi_{c2}(1P)$ . . . 376
$\psi(2S)$ . . . 376
$\psi(3770)$ . . . 376
χ_c(unspec) . . . 376
bottom . . . 376
$\overline{\text{bottom}}$ . . . 377
$B^\pm$ . . . 377
B . . . 377
B^+ . . . 378
B^0 . . . 378
$\overline{B}$ . . . 380
$\overline{B}^0$ . . . 380
B^- . . . 382
B(unspec) . . . 383
$\overline{B}$(unspec) . . . 383
B^* . . . 383
$\overline{B}^*$ . . . 383
B_S . . . 383
$\overline{B}_S$ . . . 384
B_S^* . . . 384
$\eta_b(1S)$ . . . 384
$\Upsilon(1S)$ . . . 384
$h_b(1P)$ . . . 384
$\chi_{b0}(1P)$ . . . 384
$\chi_{b1}(1P)$ . . . 384
$\chi_{b2}(1P)$ . . . 384
$\Upsilon(1D)$ . . . 384
$\Upsilon(2S)$ . . . 384
$\chi_{b0}(2P)$ . . . 385
$\chi_{b1}(2P)$ . . . 385
$\chi_{b2}(2P)$ . . . 385
$\Upsilon(3S)$ . . . 385
$\Upsilon(4S)$ . . . 385
$\Upsilon(10860)$ . . . 386
Υ(unspec) . . . 386
top . . . 386
$\overline{\text{top}}$ . . . 386
exotic-meson . . . 386
glueball . . . 386
$C(1480)$ . . . 386
$C(1480)^+$ . . . 386
$C(1480)^0$ . . . 386
$C(1480)^-$ . . . 386
$X(1600)$ . . . 386
baryonium . . . 386
baryonium($S = -1$) . . . 387
baryonium($S = +1$) . . . 387
$X(3100)$ . . . 387
$X(3100)^+$ . . . 387
$X(3100)^0$ . . . 387
$X(3100)^-$ . . . 387
$X(3100)^{--}$ . . . 387
baryon . . . 387
nucleon . . . 387
p . . . 387
n . . . 387
$\overline{\text{nucleon}}$ . . . 388
$\overline{n}$ . . . 388
$N(1440\,P_{11})^+$ . . . 388
$N(1440\,P_{11})^0$ . . . 388
$\overline{N}(1440\,P_{11})^-$ . . . 388
$N(1440\,B)^+$ . . . 388
$N(1440\,B)^0$ . . . 388
$N(1520\,D_{13})^0$ . . . 388
$N(1520\,B)^+$ . . . 388
$N(1520\,B)^0$ . . . 388
$N(1535\,S_{11})^0$ . . . 388
$N(1680\,F_{15})^+$ . . . 388
$N(1680\,F_{15})^0$ . . . 388
$N(1700\,B)^+$ . . . 388
$N(1700\,B)^0$ . . . 388
$\Delta(1232\,P_{33})$ . . . 388
$\Delta(1232\,P_{33})^{++}$ . . . 388
$\Delta(1232\,P_{33})^+$ . . . 388
$\Delta(1232\,P_{33})^0$ . . . 388
$\Delta(1232\,P_{33})^-$ . . . 388
$\overline{\Delta}(1232\,P_{33})^0$ . . . 388
$\overline{\Delta}(1232\,P_{33})^{--}$ . . . 389
$\Delta(1700\,D_{33})^+$ . . . 389
Δ(unspec)$^{++}$ . . . 389
Δ(unspec)^0 . . . 389
hyperon . . . 389
$\overline{\text{hyperon}}$ . . . 389
Λ . . . 389
$\overline{\Lambda}$ . . . 389
$\Lambda(1520\,D_{03})$ . . . 389
$\Lambda(1670\,S_{01})$ . . . 389
Σ . . . 389
Σ^+ . . . 389
Σ^0 . . . 389
Σ^- . . . 389
$\overline{\Sigma}^+$ . . . 389
$\overline{\Sigma}^0$ . . . 389
$\overline{\Sigma}^-$ . . . 389
$\Sigma(1385\,P_{13})^+$ . . . 389
$\Sigma(1385\,P_{13})^0$ . . . 389
$\Sigma(1385\,P_{13})^-$ . . . 389
$\overline{\Sigma}(1385\,P_{13})^+$ . . . 389
$\overline{\Sigma}(1385\,P_{13})^0$ . . . 389
$\overline{\Sigma}(1385\,P_{13})^-$ . . . 389
Y^*(unspec) . . . 389
Y^*(unspec)^0 . . . 390
Ξ . . . 390
Ξ^0 . . . 390
Ξ^- . . . 390
$\overline{\Xi}^+$ . . . 390
$\overline{\Xi}^0$ . . . 390
$\Xi(1530\,P_{13})^0$ . . . 390
$\Xi(1530\,P_{13})^-$ . . . 390
$\overline{\Xi}(1530\,P_{13})^+$ . . . 390
$\overline{\Xi}(1530\,P_{13})^0$ . . . 390
Ω^- . . . 390
$\overline{\Omega}^+$ . . . 390
$\Omega(2250)^-$ . . . 390
$\Omega(2470)^-$ . . . 390
Ω^*(unspec)$^-$ . . . 390
Λ_c . . . 390
Λ_c^+ . . . 390
$\overline{\Lambda}_c^-$ . . . 391
$\Sigma_c(2455)^{++}$ . . . 391
$\Sigma_c(2455)^+$ . . . 391
$\Sigma_c(2455)^0$ . . . 391
$\overline{\Sigma}_c(2455)^0$ . . . 391
$\overline{\Sigma}_c(2455)^-$ . . . 391
$\Sigma_c(2510)^{++}$ . . . 391
$\Xi_c(2460)$ . . . 391
$\Xi_c(2460)^+$ . . . 391
$\Xi_c(2460)^0$ . . . 391
$\overline{\Xi}_c(2460)^0$ . . . 391
$\overline{\Xi}_c(2460)^-$ . . . 391
Ω_c . . . 391
Λ_b . . . 391
$\overline{\Lambda}_b$ . . . 391
exotic-nucleon . . . 391
$N_{5/2}^*(1380)^{+++}$ . . . 391
$N_{5/2}^*(1480)^{+++}$ . . . 391
$N_{5/2}^*(1650)^{+++}$ . . . 391
$N_{5/2}^*(1760)^{+++}$ . . . 391
$N_{5/2}^*(1760)^+$ . . . 391
$N_{5/2}^*(2070)^{+++}$ . . . 391
$N_{5/2}^*$(unspec) . . . 391
$N_{5/2}^*$(unspec)$^{+++}$ . . . 391
$N_{5/2}^*$(unspec)$^{--}$ . . . 392
$N\phi(1950)^0$ . . . 392
Ξ^*(unspec)^0 . . . 392
anomalon . . . 392
fireball . . . 392
centauro . . . 392
nuclearite . . . 392
positronium . . . 392
positronium* . . . 392
muonium . . . 392
$\overline{\text{muonium}}$ . . . 392
$(\overline{p}p)_{\text{atom}}$ . . . 392
H(atom) . . . 392
^{50}Ti(atom) . . . 392
^{50}Ti(atom)* . . . 392
^{42}Cr(atom) . . . 392
^{55}Mn(atom) . . . 392
^{55}Fe(atom) . . . 392
^{58}Fe(atom) . . . 392
^{58}Fe(atom)* . . . 392
^{58}Ni(atom) . . . 392
^{64}Ni(atom) . . . 392
^{64}Ni(atom)* . . . 392
^{64}Zn(atom) . . . 392
^{71}Ga(atom) . . . 392
^{71}Ge(atom) . . . 392
^{92}Zr(atom) . . . 392
^{92}Zr(atom)* . . . 392
^{92}Mo(atom) . . . 392
^{106}Pd(atom) . . . 392
^{108}Pd(atom)* . . . 392
^{106}Cd(atom) . . . 392
^{108}Cd(atom) . . . 392
^{125}Te(atom) . . . 392
^{125}I(atom) . . . 392
Cs(atom) . . . 392
^{180}Hf(atom)* . . . 392
^{180}Wt(atom) . . . 392
^{196}Pt(atom)* . . . 392
^{196}Hg(atom) . . . 392
Tl(atom) . . . 392
Bi(atom) . . . 392
nucleus . . . 392
hypernucleus . . . 392
charmed-nucleus . . . 392
deuteron . . . 392
dibaryon . . . 392
dineutron . . . 393
dibaryon($S = -1$) . . . 393

jet

Abreu 93C
Acton 93
Adriani 93B
Derrick 93
Takaki 93
Abe 92I
Abreu 92F
Acton 92K
Adams 92C
Adriani 92E
Adriani 92L
Ahmed 92E
Alitti 92C
Bambade 92
Barbarogalti 92
Behrends 92
Buskulic 92I
Decamp 92C
Flaugher 92B
Grassmann 92
Harris 92
Lindgren 92
Madaras 92
Markeloff 92
Morfin 92
Rollnik 92
Sinervo 92
Tanaka 92
Wolf 92
Yeh 92
Abe 91F
Acton 91I
Adeva 91C
Adeva 91J
Alexander 91D
Alexander 91H
Alitti 91B
Angelis 91
Avakyan 91D
Bethke 91
Breakstone 91
Buckleygeer 91
Contreras 91
Decamp 91G
Harris 91
Hebbeker 91
Kreutzmann 91
Mattig 91
Nagai 91
Pieri 91
Plunkett 91
Salgado 91
Shirai 91
Sliwa 91
Tanaka 91
Yepes 91
Adachi 90C
Adeva 90I
Adeva 90V
Akesson 90C
Alitti 90E
Anassontzis 90
Breakstone 90
Dellorso 90
Dellorso 90B
Denegri 90
Flaugher 90
Frisch 90
Fujii 90
Grishin 90
Hessing 90
Sakai 90
Stewart 90
Tuominiemi 90
Unal 90
Watts 90
Yun 90
Abe 89
Abe 89C
Abe 89O
Albajar 89B
Blair 89
Braunschweig 89C
Braunschweig 89E

jet

Decamp 89C
Geichgimbel 89
Geist 89
Genser 89
Jenni 89
Kamon 89
Kim 89G
Komamiya 89C
Kroha 89B
Kuhlmann 89
Lepekhin 89
Mattig 89
Meier 89
Nodulman 89
Pauss 89
Porter 89
Skarha 89
Stubenrauch 89
Tannenbaum 89
Tonelli 89
Weinstein 89
Albajar 88
Albajar 88C
Albajar 88F
Albajar 88G
Albrow 88
Ansari 88
Ansari 88B
Baldin 88B
Bonino 88
Boos 88B
Dzhaoshvili 88B
Mcneil 88
Miettinen 88
Ouldsaada 88B
Plothowbesch 88
Ruhlmann 88
Salvini 88
Mukherjee 86

mult[charged] (neutrals)

Abreu 92C
Abreu 90G

charged X

Abe 90B
Hubbard 89B
Plunkett 89
Tao 88

hadron X

Bodek 89
Geer 89
Kim 89C
Dzhaoshvili 88
Maki 88B
Park 88

hadron$^+$ X

Boca 90

hadron$^-$ X

Boca 90

hadron (hadrons)

Acton 93F
Adeva 92D
Akrawy 91B
Bethke 91

π (π's)

Markytan 89

$\rho(770)^0$ X

Breakstone 89

$f_2(1270)$ X

Breakstone 89

$K^*(892)^0$ X

Breakstone 89

$\bar{K}^*(892)^0$ X

Breakstone 89

$D^*(2010)^{\pm}$ X

Ellis 90
Geer 90
Plunkett 89

$D^*(2010)^+$ X

Albajar 90D

$D^*(2010)^-$ X

Albajar 90D

2hadron (hadrons)

Flaugher 92

jet

Abe 91I
Giannetti 91
Wainer 91
Wainer 91B
Bodek 89
Braunschweig 89H
Kim 89C
Maki 88

K_S mult[charged] (neutrals)

Braunschweig 89M

K_S charged (neutrals)

Abachi 89C

$K^*(892)^+$ mult[charged] (neutrals)

Braunschweig 89M

$K^*(892)^-$ mult[charged] (neutrals)

Braunschweig 89M

2charged (chargeds) X

Abe 92H

2charged (chargeds) (neutrals)

Bodek 89
Bonesini 89B

4hadron (hadrons)

Kim 90B

charged-hadron 3hadron (hadrons)

Kim 90B

mult[charged-hadron]

Abreu 90S

jet$^+$

Adachi 91B
Shirai 91
Abe 90H
Itoh 90
Stuart 90

jet$^-$

Adachi 91B
Shirai 91
Abe 90H
Itoh 90
Stuart 90

longlived

Atiya 92B
Battiston 92
Buskulic 92M
Gold 92
Nakamura 89
Bernstein 88

$e^- e^+$

Henderson 92
Wu 92
Judge 90
Freedman 89
Tsertos 89B
Tsertos 89C

$e^+ \ell^- \nu_\ell$

Jung 89

longlived$^+$

Abe 92J
Adachi 91
Dydak 91
Adachi 90D
Akrawy 90Q

longlived^0

Akesson 90G

longlived$^-$

Abe 92J
Adachi 91
Dydak 91
Adachi 90D
Akrawy 90Q

narrow

2hadron (hadrons)

Adriani 92G

vee

Coc 92
Pieri 91
Abreu 90O
Batusov 89C
Decamp 89C

$e^- e^+$

Decamp 91F

$\mu^- \mu^+$

Decamp 91F

$\pi^+ \pi^-$

Decamp 91F

γ^*

Semertzidis 90
Farley 89

$W^{\pm}$

Abe 92C
Abe 92F
Bryman 92
Flaugher 92B
Gobbi 92
Grassmann 92
Leone 92
Lindgren 92
Madaras 92
Rimondi 92B
Rodrigo 92
Rolandi 92
Sinervo 92
Abe 91
Abe 91M
Alitti 91B
Alitti 91C
Alitti 91E
Alitti 91F
Alitti 91I
Alitti 91J
Plothowbesch 91
Winer 91C
Abe 90J
Abe 90K
Abe 90L
Albajar 90C
Albajar 90F
Alitti 90
Alitti 90B
Alitti 90C
Denegri 90
Frisch 90
Geer 90
Gladney 90
Kurz 90
Scarha 90
Tuominiemi 90
Watts 90
Abe 89Q
Abe 89R
Albajar 89B
Albajar 89C
Geer 89
Kamon 89
Kuhlmann 89
Meier 89
Pauss 89
Smith 89
Albrow 88
Ansari 88
Dowell 88
Plothowbesch 88
Ruhlmann 88
Tao 88

2ℓ

Kim 88

$e^- \bar{\nu}_e$

Rolandi 92

2jet

Fayard 90
Frisch 90
Geer 90

$W^{\pm}$

2q
Kim 88

W^+

Barbarogalti 92
Decamp 91M
Adachi 89E
Nodulman 89
Mandelli 88
Salvini 88
Sphicas 88

$\ell^+ \nu$
Denegri 90

$e^+ \nu_e$
Alitti 92
Bryman 92
Flaugher 92B
Gobbi 92
Grassmann 92
Leone 92
Lindgren 92
Madaras 92
Rimondi 92B
Rodrigo 92
Rolandi 92
Sinervo 92
Abe 91
Abe 91L
Abe 91M
Alitti 91C
Alitti 91E
Alitti 91F
Alitti 91J
Leone 91
Plothowbesch 91
Unal 91
Winer 91B
Winer 91C
Abe 90J
Abe 90K
Abe 90L
Alitti 90B
Alitti 90C
Fayard 90
Geer 90
Hauser 90
Leone 90
Watts 90
Abe 89B
Abe 89Q
Abe 89R
Albajar 89B
Geer 89
Jenni 89
Kamon 89
Kuhlmann 89
Pauss 89
Stubenrauch 89
Ansari 88
Dowell 88
Loverre 88
Plothowbesch 88
Tao 88

$\mu^+ \nu_\mu$
Abe 92C
Flaugher 92B
Grassmann 92
Leone 92
Madaras 92
Rimondi 92B
Rodrigo 92
Rolandi 92
Leone 91
Plothowbesch 91
Winer 91B
Abe 90J
Abe 90K
Albajar 90F
Fayard 90
Geer 90
Hauser 90
Leone 90
Abe 89R
Albajar 89B
Kuhlmann 89
Pauss 89
Stubenrauch 89
Dowell 88
Tao 88

$\tau^+ \nu_\tau$
Alitti 92
Bryman 92
Grassmann 92
Abe 91M
Alitti 91C
Geer 90
Gladney 90
Albajar 89B
Pauss 89
Stubenrauch 89
Dowell 88
Tao 88

ν heavy-lepton$^+$
Albajar 89B
Pauss 89

$\bar{\nu}$ heavy-lepton$^+$
Gan 88

$\nu_e\ e^{*+}$
Gan 88

2jet
Madaras 92
Adeva 90S
Alitti 90D
Jenni 89

$q\ \bar{q}$
Barbarogalti 89
Meier 89

$t\ \bar{b}$
Plothowbesch 88

$\bar{t}\ b$
Tuominiemi 90

$\tilde{\ell}^+ \tilde{\nu}$
Pauss 89

$\tilde{\nu}\ \tilde{e}^+$
Albajar 89B

$\tilde{\nu}_e\ \tilde{e}^+$
Stubenrauch 89

$\pi^+ \gamma$
Abe 92F
Sinervo 92
Alitti 91I
Albajar 90C

W^-

Decamp 91M
Eno 89C
Nodulman 89
Mandelli 88
Salvini 88
Sphicas 88

$\ell^- \bar{\nu}$
Denegri 90

$e^- \bar{\nu}_e$
Flaugher 92B
Gobbi 92
Grassmann 92
Leone 92
Lindgren 92
Madaras 92
Rimondi 92B
Rodrigo 92
Rolandi 92
Sinervo 92
Abe 91
Abe 91L
Alitti 91C
Alitti 91E
Alitti 91F
Alitti 91J
Leone 91
Unal 91
Winer 91B
Winer 91C
Abe 90J
Abe 90K
Abe 90L
Alitti 90B
Alitti 90C
Fayard 90
Geer 90
Hauser 90
Leone 90
Abe 89R
Albajar 89B
Kuhlmann 89
Pauss 89
Stubenrauch 89
Dowell 88
Tao 88

$\mu^- \bar{\nu}_\mu$
Abe 92C
Flaugher 92B
Grassmann 92
Leone 92
Madaras 92
Rimondi 92B
Rodrigo 92
Rolandi 92
Leone 91
Winer 91B
Abe 90J
Abe 90K
Albajar 90F
Fayard 90
Geer 90
Hauser 90
Leone 90
Abe 89R
Albajar 89B
Kuhlmann 89
Pauss 89
Smith 89
Stubenrauch 89
Dowell 88
Tao 88

$\tau^- \bar{\nu}_\tau$
Grassmann 92
Alitti 91C
Geer 90
Gladney 90
Albajar 89B
Pauss 89
Stubenrauch 89
Dowell 88
Tao 88

ν heavy-lepton$^-$
Gan 88

$\bar{\nu}$ heavy-lepton$^-$
Albajar 89B

$\bar{\nu}_e\ e^{*-}$
Gan 88

2jet
Madaras 92
Alitti 90D
Jenni 89

$q\ \bar{q}$
Meier 89

$t\ b$
Tuominiemi 90

$\bar{t}\ b$
Plothowbesch 88

$\tilde{\ell}^- \tilde{\nu}$
Pauss 89

$\bar{\tilde{\nu}}\ \tilde{e}^-$
Albajar 89B

$\bar{\tilde{\nu}}_e\ \tilde{e}^-$
Stubenrauch 89

$\pi^- \gamma$
Abe 92F
Sinervo 92
Alitti 91I
Albajar 90C

Z^0

Abreu 91K
Abreu 91P
Alitti 90
Frisch 90
Gonzalezgarc 90
Nash 89
Salvini 88

X
Acton 93C
Buskulic 93
Adeva 91D
Bethke 89

mult[jet]
Ellis 91
Wachsmuth 91
Adeva 90J
Akrawy 90R
Newman 90
Bethke 89
Feldman 89B

mult[hadron]
Ellis 91
Abreu 90S

$0\mu^{\pm}$ mult[charged] X
Dittmar 92

$e^{\pm}$ X
Brandl 92
Adeva 91C
Akrawy 90I

e^- X
Decamp 90C

e^+ X
Decamp 90C

$\mu^{\pm}$ X
Brandl 92
Adeva 91C
Akrawy 90I

μ^- X
Decamp 90C

μ^+ X
Decamp 90C

$\tau^{\pm}$ X
Akrawy 90I

τ^- X
Stahl 91

mult[charged] X
Dittmar 92
Oshaughnessy 90B

mult[charged] (neutrals)
Abreu 90D
Abreu 90J

mult[γ] (hadrons)
Newman 90

mult[jet] X
Dydak 91

mult[charged-hadron] X
Schumm 92

mult[charged-hadron] (neutrals)
Settles 92

charged X
Eerola 92
Deangelis 91B
Mattig 91
Abreu 90J
Oshaughnessy 90

jet X
Komamiya 89C
Weinstein 89

charged-hadron X
Mattig 91
Akrawy 90L
Oshaughnessy 90
Komamiya 89C
Weinstein 89

γ (neutrals)
Dittmar 92

γ mult[jet]
Acton 91I

heavy-lepton^0 X
Goldhaber 90
Weinstein 89

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

Z^0

heavy-lepton$^-$ X
Akrawy 90B
heavy-lepton$^+$ X
Akrawy 90B
b' X
Weinstein 89
meson^0 X
Newman 90
π^0 X
Mattig 91
K^+ X
Abreu 91O
K^0 X
Abreu 91O
Deangelis 91B
$\overline{K}^0$ X
Abreu 91O
K^- X
Abreu 91O
K_S X
Abreu 91O
Mattig 91
Fordham 90
$K^*(892)^+$ X
Abreu 91O
$K^*(892)^0$ X
Acton 92C
$\overline{K}^*(892)^0$ X
Acton 92C
$K^*(892)^-$ X
Abreu 91O
$\phi(1020)$ X
Acton 92C
charm X
Boucrot 92
D^+ X
Boucrot 92
D^0 X
Boucrot 92
$D^*(2010)^\pm$ X
Geerts 91
$D^*(2010)^+$ X
Benedic 92
Boucrot 92
Mattig 91
$D^*(2010)^+$ X + $D^*(2010)^-$ X
Deangelis 91B
Tenchini 90
$D^*(2010)^-$ X
Boucrot 92
Mattig 91
$J/\psi(1S)$ X
Adriani 93B
Adriani 92D
Boucrot 92
Capon 91
bottom X
Boucrot 92
Buskulic 92H
Schumm 92
Settles 92
Decamp 90M
Kral 90
$\overline{\text{bottom}}$ X
Decamp 90M
Kral 90
B^+ X
Boucrot 92
Kral 90
$\overline{B}$ X
Abreu 92I
B^- X
Kral 90
B_S X
Boucrot 92
Buskulic 92
top X
Weinstein 89
Λ X
Acton 92D
Abreu 91O
Deangelis 91B

Z^0

Fordham 90
$\overline{\Lambda}$ X
Abreu 91O
$\Sigma(1385\,P_{13})^+$ X
Acton 92D
$\Sigma(1385\,P_{13})^-$ X
Acton 92D
Ξ^- X
Acton 92D
Abreu 91O
Deangelis 91B
$\overline{\Xi}^+$ X
Abreu 91O
$\Xi(1530\,P_{13})^0$ X
Acton 92D
Ω^- X
Acton 92D
Λ_b X
Boucrot 92
Buskulic 92
Buskulic 92G
Settles 92
Decamp 91Q
$\ell^+\gamma$ X + $\ell^-\gamma$ X
Newman 90
$2\ell^-$ X
Adeva 92
Decamp 91D
$\ell^+\ell^-$ X
Adeva 92
Decamp 91D
$2\ell^+$ X
Adeva 92
Decamp 91D
$2e^\pm$ X
Adeva 91C
$2e^-$ X
Acton 92B
Adeva 92
Decamp 91D
e^-e^+ X
Acton 92B
Adeva 92
Boucrot 92
Decamp 91D
$2e^+$ X
Acton 92B
Adeva 92
Decamp 91D
e^-e^+ (γ's)
Dittmar 92
$\mu^\pm$ mult[charged] X
Dittmar 92
$\mu^\pm e^\pm$ X
Adeva 91C
μ^-e^- X
Acton 92B
Decamp 91D
μ^-e^+ X
Acton 92B
Adeva 92
Decamp 91D
μ^+e^- X
Acton 92B
Adeva 92
Decamp 91D
μ^+e^+ X
Acton 92B
Decamp 91D
$2\mu^\pm$ X
Adeva 91C
$2\mu^-$ X
Acton 92B
Adeva 92
Decamp 91D
$\mu^-\mu^+$ X
Acton 92B
Boucrot 92
Decamp 91D
$2\mu^+$ X
Acton 92B

Z^0

Adeva 92
Decamp 91D
$\mu^-\mu^+$ (γ's)
Dittmar 92
$\tau^-\tau^+$ (γ's)
Dittmar 92
$\Lambda\,\ell^-$ X
Boucrot 92
Buskulic 92G
Decamp 91Q
$\Lambda\,\ell^+$ X
Boucrot 92
Buskulic 92G
Decamp 91Q
$\overline{\Lambda}\,\ell^-$ X
Buskulic 92G
Decamp 91Q
$\overline{\Lambda}\,\ell^+$ X
Buskulic 92G
Decamp 91Q
2charged (neutrals)
Abreu 90I
Akrawy 90Q
2jet X
Dittmar 92
Eerola 92
Feindt 92B
Augustin 90D
2hadron (hadrons)
Acton 93C
Adriani 93B
Chrin 92
Cosmo 92
Schumm 92
Abreu 91B
Acton 91H
Adeva 91D
Alexander 91C
Banerjee 91
Bortolotto 91
Burkhardt 91
Colas 91
Crosland 91
Decamp 91N
Decamp 91S
Dydak 91
Jacobsen 91
Jacobsen 91B
Koetke 91
Mattig 91
Pietrzyk 91
Wachsmuth 91
Aarnio 90
Abreu 90H
Abreu 90L
Abreu 90M
Adeva 90
Adeva 90H
Adeva 90J
Akrawy 90C
Akrawy 90E
Akrawy 90K
Akrawy 90P
Augustin 90D
Branchina 90
Chen 90
Coupal 90
Decamp 90F
Decamp 90K
Kuhlen 90
Moller 90
Nash 90
Pinsent 90
Renton 90
Steinberger 90
Wood 90
Wormser 90B
Aarnio 89
Abrams 89
Abrams 89B
Abrams 89C
Adeva 89
Akrawy 89

Z^0

Akrawy 89B
Akrawy 89C
Burchat 89
Decamp 89
Decamp 89B
Decamp 89G
Feldman 89
Feldman 89B
Hearty 89
Komamiya 89C
Kral 89
Krauss 89
Steinberger 89
Weinstein 89
2charged-hadron (hadrons)
Decamp 90F
γ (jets) jet
Acton 91I
Alexander 91D
γ hadron (hadrons)
Adriani 92G
Abreu 91M
Acton 91I
Alexander 91D
Akrawy 90H
2γ (neutrals)
Dittmar 92
$2\pi^+$ X
Acton 92C
$\pi^+\pi^-$ X
Acton 92C
$2\pi^-$ X
Acton 92C
$K^+\pi^-$ X
Acton 92C
$K^-\pi^+$ X
Acton 92C
Feindt 92B
Decamp 91J
K^+K^- X
Acton 92C
$2K_S$ X
Acton 92N
$D^0\pi^-$ X
Boucrot 92
$\overline{D}^0\pi^+$ X
Boucrot 92
$K^+\,J/\psi(1S)$ X
Boucrot 92
bottom $\overline{\text{bottom}}$ X
Feindt 92B
$2B^0$ X
Acton 92B
Adeva 92
$B^0\overline{B}^0$ X
Acton 92B
$2\overline{B}^0$ X
Acton 92B
Adeva 92
B^0B_S X
Acton 92B
$\overline{B}^0\overline{B}_S$ X
Acton 92B
$2B_S$ X
Acton 92B
Adeva 92
$B_S\overline{B}_S$ X
Acton 92B
$2\overline{B}_S$ X
Acton 92B
Adeva 92
$\Lambda\,J/\psi(1S)$ X
Boucrot 92
$3\ell^\pm$ X
Adeva 92
$2\mu^\pm$ mult[charged] X
Dittmar 92
$\phi(1020)\,\pi\,\ell^+$ X
Boucrot 92
2charged (chargeds) (neutrals)
Komamiya 90B
neutral (neutrals) 2jet
Keranen 91

Z^0

Abreu 90E
3jet X
Augustin 90D
3hadron (hadrons)
Akrawy 91B
charged-hadron 2jet X
Decamp 91J
Mattig 91
γ 2neutral (neutrals)
Decamp 90B
γ 2hadron (hadrons)
Cosmo 92
Bortolotto 91
Dydak 91
3γ (neutrals)
Dittmar 92
higgs 2hadron (hadrons)
Decamp 89C
$K^+ \pi^+ \pi^- X$
Boucrot 92
$K^+ 2\pi^- X$
Decamp 91J
$K^- 2\pi^+ X$
Boucrot 92
Feindt 92B
Decamp 91J
$K^- \pi^+ \pi^0 X$
Boucrot 92
$K^- \pi^+ \pi^- X$
Boucrot 92
Feindt 92B
$K_S \pi^+ \pi^- X$
Boucrot 92
$p K^- \pi^+ X$
Boucrot 92
$\ell^\pm$ (jets) 3jet
Adriani 92L
$\nu \bar{\nu}$ 2hadron (hadrons)
Adeva 90I
$e^- e^+$ 2hadron (hadrons)
Adeva 90I
$\mu^- \mu^+$ 2hadron (hadrons)
Adeva 90I
$\nu_\tau \bar{\nu}_\tau$ charged$^+$ charged$^-$ (neutrals)
Acton 92
$K^+ K^- \pi^- \ell X$
Boucrot 92
charged$^+$ charged$^-$ 2neutral (neutrals)
Buskulic 92J
(hadrons) 4charged
Abreu 91L
4jet X
Decamp 92C
Augustin 90D
3jet < hadron (hadrons) >
Turner 91
5hadron (hadrons)
Turner 91
5charged (chargeds) X
Oshaughnessy 90B
$\bar{\nu}$ jet
Adriani 92L
$\ell^+ \ell^-$
Buskulic 93
Chrin 92
Settles 92
Abreu 91B
Banerjee 91
Bhattacharyy 91
Burkhardt 91
Decamp 91N
Decamp 91S
Pietrzyk 91
Wachsmuth 91
Abreu 90H
Adeva 90H
Akrawy 90S
Denegri 90
Steinberger 90
Steinberger 89

Z^0

$\nu \bar{\nu}$
Acton 93C
Adriani 93B
Buskulic 93
Adriani 92F
Markeloff 92
Abreu 91B
Adeva 91D
Burkhardt 91
Decamp 91N
Decamp 91S
Pietrzyk 91
Wachsmuth 91
Abreu 90L
Adeva 90H
Akrawy 90O
Akrawy 90U
Decamp 90K
Denegri 90
Steinberger 90
Decamp 89G
Jung 89
Pauss 89
Steinberger 89

$e^- e^+$
Acton 93C
Adriani 93B
Buskulic 93
Madaras 92
Rimondi 92B
Rolandi 92
Wenninger 92
Abe 91C
Abe 91I
Abe 91J
Abreu 91B
Adeva 91D
Alexander 91C
Alitti 91E
Alitti 91F
Banerjee 91
Bhattacharyy 91
Decamp 91N
Decamp 91S
Dydak 91
Meinhard 91
Pietrzyk 91
Plothowbesch 91
Unal 91
Aarnio 90C
Abe 90L
Abreu 90H
Abreu 90L
Adeva 90C
Adeva 90O
Akrawy 90
Akrawy 90E
Akrawy 90K
Akrawy 90O
Alitti 90B
Alitti 90C
Augustin 90D
Chen 90
Coupal 90
Decamp 90K
Fayard 90
Geer 90
Hurst 90
Kuhlen 90
Moller 90
Pinsent 90
Renton 90
Watts 90
Aarnio 89
Abe 89Q
Abe 89R
Abe 89T
Abrams 89
Abrams 89C
Adeva 89
Akrawy 89
Akrawy 89E
Albajar 89B
Burchat 89
Decamp 89

Z^0

Decamp 89B
Decamp 89G
Geer 89
Jenni 89
Kamon 89
Kuhlmann 89
Nodulman 89
Pauss 89
Steinberger 89
Stubenrauch 89
Weinstein 89
Loverre 88
Plothowbesch 88
Tao 88

$\mu^- e^+ + \mu^+ e^-$
Abreu 92K

$\mu^- e^+$
Adriani 93B
Adeva 91G
Decamp 91M
Akrawy 90S

$\mu^+ e^-$
Adriani 93B
Drell 92B
Adeva 91G
Decamp 91M
Akrawy 90S

$\mu^- \mu^+$
Acton 93C
Adriani 93B
Buskulic 93
Abe 92C
Dittmar 92
Rimondi 92B
Abe 91J
Abreu 91
Abreu 91B
Adeva 91D
Alexander 91C
Banerjee 91
Bhattacharyy 91
Burkhardt 91
Crosland 91
Decamp 91N
Decamp 91S
Dydak 91
Pietrzyk 91
Plothowbesch 91
Aarnio 90C
Abreu 90H
Abreu 90L
Adeva 90B
Adeva 90C
Adeva 90G
Adeva 90O
Akrawy 90
Akrawy 90E
Akrawy 90K
Akrawy 90O
Albajar 90F
Augustin 90D
Chen 90
Coupal 90
Decamp 90K
Fayard 90
Geer 90
Kuhlen 90
Moller 90
Nash 90
Pinsent 90
Renton 90
Steinberger 90
Abe 89R
Abe 89T
Abrams 89
Abrams 89B
Abrams 89C
Adeva 89
Akrawy 89E
Albajar 89B
Burchat 89
Decamp 89B
Decamp 89G
Feldman 89

Z^0

Feldman 89B
Geer 89
Hearty 89
Jenni 89
Krauss 89
Kuhlmann 89
Nodulman 89
Pauss 89
Smith 89
Steinberger 89
Stubenrauch 89
Weinstein 89
Tao 88

$\tau^- e^+ + \tau^+ e^-$
Abreu 92K
Dittmar 92

$\tau^- e^+$
Adriani 93B
Adeva 91G
Decamp 91M
Akrawy 90S

$\tau^+ e^-$
Adriani 93B
Drell 92B
Adeva 91G
Decamp 91M
Akrawy 90S

$\tau^- \mu^+ + \tau^+ \mu^-$
Abreu 92K
Dittmar 92

$\tau^- \mu^+$
Adriani 93B
Adeva 91G
Decamp 91M
Stahl 91
Akrawy 90S

$\tau^+ \mu^-$
Adriani 93B
Drell 92B
Adeva 91G
Decamp 91M
Stahl 91
Akrawy 90S

$\tau^- \tau^+$
Acton 93C
Adriani 93B
Buskulic 93
Acton 92
Bryman 92
Decamp 92
Dittmar 92
Drell 92B
Riles 92
Settles 92
Seyward 92
Trischuk 92
Abreu 91B
Abreu 91I
Acton 91D
Adeva 91D
Adeva 91I
Alexander 91C
Alitti 91C
Banerjee 91
Bhattacharyy 91
Burkhardt 91
Campion 91
Decamp 91N
Decamp 91R
Decamp 91S
Dydak 91
Pietrzyk 91
Privitera 91
Roehn 91
Zomer 91
Zomer 91B
Aarnio 90C
Abreu 90H
Abreu 90L
Adeva 90B
Adeva 90O
Akrawy 90
Akrawy 90E

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

Z^0

Akrawy 90K
Augustin 90D
Banks 90
Chen 90
Coupal 90
Decamp 90K
Haissinski 90
Kuhlen 90
Moller 90
Nash 90
Pinsent 90
Renton 90
Roach 90
Steinberger 90
Abrams 89
Abrams 89B
Abrams 89C
Akrawy 89E
Burchat 89
Decamp 89B
Decamp 89G
Feldman 89
Feldman 89B
Hearty 89
Krauss 89
Steinberger 89
Weinstein 89

$\bar{\nu}$ heavy-lepton^0
Adriani 92L
Adeva 90S
Akrawy 90I

ν heavy-$\overline{\text{lepton}}^0$
Akrawy 90I

$\bar{\nu}\ \nu^*$
Dydak 91
Adeva 90S
Decamp 90I

$\nu\ \bar{\nu}^*$
Dydak 91
Decamp 90I

$e^-\ e^{*+}$
Dydak 91
Adeva 90F
Akrawy 90G
Decamp 90G
Gan 88

$e^+\ e^{*-}$
Dydak 91
Adeva 90F
Akrawy 90G
Decamp 90G
Gan 88

$\mu^-\ \mu^{*+}$
Dydak 91
Adeva 90F
Akrawy 90G
Decamp 90G

$\mu^+\ \mu^{*-}$
Dydak 91
Adeva 90F
Akrawy 90G
Decamp 90G

$\tau^-\ \tau^{*+}$
Dydak 91
Adeva 90L
Akrawy 90G
Decamp 90G

$\tau^+\ \tau^{*-}$
Dydak 91
Adeva 90L
Akrawy 90G
Decamp 90G

2neutral
Burchat 90

2jet
Decamp 91D
Abreu 90G
Adeva 90J
Alitti 90D
Coupal 90
Fayard 90
Frisch 90
Geer 90
Oshaughnessy 90

Z^0

Renton 90
Wormser 90B
Akrawy 89C
Akrawy 89E

2longlived
Soderstrom 90
Jung 89

longlived$^+$ longlived$^-$
Dydak 91
Akrawy 90Q

γ narrow
Adriani 92G

2γ
Adriani 93B
Adriani 92B
Akrawy 91D
Adeva 90E
Akrawy 90F

γ higgs
Abreu 91M

higgs^{++} higgs^{--}
Acton 92L
Swartz 90

higgs$^+$ higgs$^-$
Adriani 92I
Adriani 92J
Felcini 92
Sopczak 92
Sopczak 92B
Sopczak 92C
Decamp 91M
Dydak 91
Abreu 90
Abreu 90P
Adeva 90P
Akrawy 90D
Cowen 90
Decamp 90O
Wormser 90B

heavy-lepton^0 heavy-$\overline{\text{lepton}}^0$
Abreu 91N
Dydak 91
Adeva 90N
Akrawy 90I
Burchat 90
Innes 90
Abrams 89F
Decamp 89E

heavy-lepton$^-$
heavy-lepton$^+$
Dydak 91
Adeva 90N
Soderstrom 90
Vankooten 90
Akrawy 89D
Decamp 89E

heavy-ν heavy-$\bar{\nu}$
Abreu 91N

heavy-ν_e heavy-$\bar{\nu}_e$
Abreu 91N
Vankooten 90

heavy-ν_μ heavy-$\bar{\nu}_\mu$
Abreu 91N
Vankooten 90

heavy-ν_τ heavy-$\bar{\nu}_\tau$
Abreu 91N
Vankooten 90

$q\ \bar{q}$
Dydak 91
Sawyer 91
Vankooten 90
Decamp 89E
Meier 89

$\bar{u}\ u$
Acton 92Q
Cosmo 92
Alexander 91D
Bortolotto 91
Dydak 91

$\bar{d}\ d$
Acton 92Q
Cosmo 92

Z^0

Alexander 91D
Bortolotto 91
Dydak 91

$\bar{d}\ d + \bar{u}\ u$
Deangelis 91B

$\bar{s}\ s$
Acton 92Q
Cosmo 92
Alexander 91D
Bortolotto 91
Deangelis 91B

$\bar{s}\ s + \bar{d}\ d + \bar{u}\ u$
Abreu 92H
Eerola 92

$\bar{c}\ c$
Abreu 92H
Acton 92Q
Benedic 92
Cosmo 92
Eerola 92
Settles 92
Akrawy 91C
Alexander 91
Alexander 91D
Bortolotto 91
Capon 91
Deangelis 91B
Dydak 91
Geerts 91
Mattig 91
Abreu 90N
Decamp 90C
Tenchini 90

$\bar{b}\ b$
Acton 93F
Abreu 92
Abreu 92D
Abreu 92H
Abreu 92L
Acton 92B
Acton 92I
Acton 92J
Acton 92M
Acton 92Q
Adeva 92
Adriani 92D
Brandl 92
Buskulic 92E
Buskulic 92G
Cosmo 92
Eerola 92
Rollnik 92
Schumm 92
Settles 92
Adeva 91C
Adeva 91J
Akrawy 91C
Alexander 91D
Alexander 91I
Bortolotto 91
Capon 91
Deangelis 91B
Decamp 91D
Decamp 91Q
Dydak 91
Jacobsen 91
Jacobsen 91B
Koetke 91
Mattig 91
Patton 91
Abreu 90K
Adeva 90D
Adeva 90T
Decamp 90C
Tenchini 90
Kral 89

$\bar{t}\ t$
Dydak 91
Simon 91
Abreu 90B
Innes 90
Odowd 90
Vankooten 90
Abrams 89F

Z^0

Akrawy 89B
Decamp 89E

$b'\ b$
Adriani 93B

$\bar{b}'\ b'$
Dydak 91
Abreu 90B
Innes 90
Vankooten 90
Abrams 89F
Akrawy 89B

2s-particle
Decamp 91M
Barklow 90
Richard 90
Akrawy 89E

2neutralino
Bertin 91
Decamp 91M
Abreu 90I
Akrawy 90M
Barklow 90
Decamp 90D
Janot 90

2chargino
Decamp 91M
Abreu 90Q
Barklow 90

chargino$^+$ chargino$^-$
Abreu 90I

2photino
Abreu 90I

wino$^-$ wino$^+$
Abreu 90I
Chen 90
Contreras 90
Geer 90
Adeva 89B
Decamp 89D
Pauss 89

2zino
Abreu 90I

2higgsino^0
Abreu 90I

higgsino$^+$ higgsino$^-$
Abreu 90I

higgs($CP = -1$) higgs
Adriani 92I
Adriani 92J
Sopczak 92B
Sopczak 92C
Decamp 91M

higgs($CP = +1$)
higgs($CP = -1$)
Felcini 92
Sopczak 92
Abreu 91J
Decamp 91I
Abreu 90
Abreu 90C
Adeva 90M
Akrawy 90N
Cowen 90
Haissinski 90
Komamiya 90B
Decamp 89H

2$\tilde{\ell}$
Decamp 91M
Abreu 90Q

$\tilde{\ell}^+\ \tilde{\ell}^-$
Abreu 90I
Soderstrom 90
Decamp 89D
Pauss 89

$\tilde{e}^-\ \tilde{e}^+$
Abreu 90I
Akesson 90B
Chen 90
Contreras 90
Geer 90
Adeva 89B
Akrawy 89E
Albajar 89B
Decamp 89D

Z^0

$\tilde{\mu}^- \tilde{\mu}^+$
Abreu 90I
Chen 90
Adeva 89B
Akrawy 89E
Decamp 89D

$\tilde{\tau}^- \tilde{\tau}^+$
Abreu 90I
Akrawy 89E
Decamp 89D

$\tilde{q}\ \bar{\tilde{q}}$
Keranen 91
Abreu 90E

$\nu^*\ \bar{\nu}^*$
Dydak 91
Decamp 90I

$e^{*-}\ e^{*+}$
Dydak 91
Akrawy 90G
Decamp 90G

$\mu^{*+}\ \mu^{*-}$
Dydak 91
Akrawy 90G
Decamp 90G

$\tau^{*+}\ \tau^{*-}$
Dydak 91
Adeva 90L
Akrawy 90G
Decamp 90G

$q^*\ \bar{q}$
Adriani 92G

$\bar{q}^*\ q$
Adriani 92G

$\bar{q}^*\ q^*$
Adriani 92G

technipion$^+$ technipion$^-$
Akrawy 90D

lepton-quark lepton-quark
Simon 91

meson^0 γ
Acton 91C
Adeva 91E

$\pi^0\ \gamma$
Adriani 93B
Adriani 92B
Bardadinotwi 92
Dittmar 92
Abreu 91H
Akrawy 91D
Decamp 91M
Dydak 91
Abreu 90Q
Adeva 90E
Akrawy 90F
Decamp 90B

$\pi^+\ W^-$
Decamp 91M

$\pi^-\ W^+$
Decamp 91M

$\eta\ \gamma$
Adriani 93B
Adriani 92B
Bardadinotwi 92
Abreu 91H
Akrawy 91D
Decamp 91M
Dydak 91
Abreu 90Q
Adeva 90E
Akrawy 90F
Decamp 90B

$\rho(770)^+\ W^-$
Decamp 91M

$\rho(770)^-\ W^+$
Decamp 91M

$\eta'(958)\ \gamma$
Decamp 91M
Dydak 91
Decamp 90B

2bottom
Decamp 91D

Z^0

bottom $\overline{\text{bottom}}$
Acton 92B
Rollnik 92
Abreu 91D
Acton 91F
Adeva 91J
Alexander 91I
Dydak 91
Jacobsen 91
Jacobsen 91B

2$\overline{\text{bottom}}$
Decamp 91D

$B\ \bar{B}$
Bambade 92
Fujino 92

$B^0\ \bar{B}^0$
Abreu 92L
Colas 91
Dydak 91
Adeva 90R

$B^+\ B^-$
Colas 91
Kral 90

$B_S\ \bar{B}_S$
Adeva 90R

$\overline{\text{top}}$ top
Decamp 89E

$\bar{\nu}$ 2jet
Adriani 92L

$\ell^+\ \ell^-$ neutral
Dittmar 92
Decamp 91C

$\nu\ \bar{\nu}$ jet
Adeva 90I
Decamp 89C

$\ell^+\ \ell^-$ vee
Decamp 89C

$\ell^+\ \ell^-$ higgs
Settles 92
Decamp 91
Decamp 91I
Decamp 91M
Pieri 91
Abreu 90
Adeva 90Q
Decamp 90H
Decamp 90J
Janot 90
Steinberger 90
Decamp 89C

$\nu\ \bar{\nu}$ higgs
Giacomelli 93
Adeva 92B
Adriani 92I
Adriani 92J
Felcini 92
Gross 92
Gross 92B
Settles 92
Sopczak 92B
Sopczak 92C
Abreu 91J
Decamp 91
Decamp 91I
Decamp 91M
Dydak 91
Goobar 91
Pieri 91
Abreu 90F
Adeva 90I
Adeva 90V
Akrawy 90J
Akrawy 90N
Akrawy 90T
Decamp 90E
Decamp 90J
Janot 90
Renton 90
Steinberger 90
Wormser 90B

$e^-\ e^+$ neutral
Decamp 91C

$e^-\ e^+$ jet
Adeva 90I

Z^0

$e^-\ e^+$ vee
Decamp 91F

$e^-\ e^+\ \gamma$
Acton 91C
Decamp 91M

$e^-\ e^+$ higgs
Giacomelli 93
Adeva 92B
Adriani 92I
Adriani 92J
Felcini 92
Gross 92
Gross 92B
Sopczak 92B
Sopczak 92C
Abreu 91J
Acton 91B
Decamp 91
Decamp 91I
Dydak 91
Goobar 91
Abreu 90
Abreu 90F
Adeva 90I
Adeva 90V
Akrawy 90J
Akrawy 90N
Akrawy 90T
Augustin 90D
Decamp 90E
Decamp 90H
Decamp 90J
Hilgart 90
Janot 90
Renton 90
Wormser 90B
Decamp 89C

$\mu^-\ \mu^+$ neutral
Decamp 91C

$\mu^-\ \mu^+$ jet
Adeva 90I

$\mu^-\ \mu^+$ vee
Decamp 91F

$\mu^-\ \mu^+\ \gamma$
Acton 91C
Decamp 91M
Adeva 90G

$\mu^-\ \mu^+$ higgs
Giacomelli 93
Adeva 92B
Adriani 92I
Adriani 92J
Felcini 92
Gross 92
Gross 92B
Sopczak 92B
Sopczak 92C
Abreu 91J
Acton 91B
Decamp 91
Decamp 91I
Dydak 91
Goobar 91
Abreu 90
Abreu 90F
Adeva 90I
Adeva 90V
Akrawy 90J
Akrawy 90N
Akrawy 90T
Augustin 90D
Decamp 90E
Decamp 90H
Decamp 90J
Hilgart 90
Janot 90
Renton 90
Wormser 90B
Decamp 89C

$\tau^-\ \tau^+$ vee
Decamp 91F

Z^0

$\tau^-\ \tau^+\ \gamma$
Acton 91C
Decamp 91M

$\tau^-\ \tau^+$ higgs
Adeva 92B
Gross 92B
Abreu 91J
Decamp 91
Decamp 91I
Goobar 91
Abreu 90
Abreu 90F
Decamp 90J
Decamp 89C

$\ell^+\ \ell^-$ higgs($CP = +1$)
Sopczak 92
Decamp 91I

$\nu\ \bar{\nu}$ higgs($CP = +1$)
Felcini 92
Decamp 91I

$e^-\ e^+$ higgs($CP = +1$)
Felcini 92
Decamp 91I

$\mu^-\ \mu^+$ higgs($CP = +1$)
Felcini 92
Decamp 91I

$\tau^-\ \tau^+$ higgs($CP = +1$)
Decamp 91I

meson^0 $\nu\ \bar{\nu}$
Acton 91B

meson^0 $e^-\ e^+$
Acton 91B

meson^0 $\mu^-\ \mu^+$
Acton 91B

neutral 2jet
Acton 91J

3jet
Acton 91J
Akrawy 91B
Mattig 91
Abreu 90G
Adeva 90J
Coupal 90
Oshaughnessy 90
Akrawy 89C

γ 2jet
Acton 91I

3γ
Adriani 92B
Bardadinotwi 92B
Abreu 91H
Akrawy 91D
Decamp 91M
Dydak 91
Adeva 90E
Akrawy 90F
Richard 90

γ 2gluon
Bardadinotwi 92B

higgs 2jet
Giacomelli 93
Adeva 92B

$\gamma\ q\ \bar{q}$
Decamp 91M

$q\ \bar{q}$ gluon
Adriani 92D
Acton 91J
Mattig 91

$q\ \bar{q}$ higgs
Gross 92B
Decamp 91M
Goobar 91
Abreu 90F
Janot 90

$q\ \bar{q}\ S^0$
Adriani 92G

$\bar{c}\ c$ gluon
Akrawy 91B
Mattig 91

$\bar{b}\ b$ gluon
Akrawy 91B

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

Z^0

Mattig 91
γ 2neutralino
Bertin 91
Akrawy 90M
Janot 90
$q\ \bar{q}$ higgs($CP = -1$)
Sopczak 92
3higgs($CP = -1$)
Felcini 92
Decamp 91I
Decamp 91M
$q\ \bar{q}$ higgs($CP = +1$)
Sopczak 92
$\nu\ \bar{\nu}$ 2jet
Adeva 90I
$e^-\ e^+$ 2jet
Adeva 90I
$e^-\ e^+\ 2\gamma$
Decamp 91M
$2e^-\ 2e^+$
Barklow 92
$\mu^-\ \mu^+$ 2jet
Adeva 90I
$\mu^-\ \mu^+\ 2\gamma$
Decamp 91M
$\mu^-\ \mu^+\ e^-\ e^+$
Barklow 92
$2\mu^-\ 2\mu^+$
Barklow 92
$\tau^-\ \tau^+$ 2jet
Janot 90
$\tau^-\ \tau^+\ 2\gamma$
Decamp 91M
$\tau^-\ \tau^+\ e^-\ e^+$
Barklow 92
$\tau^-\ \tau^+\ \mu^-\ \mu^+$
Barklow 92
$\pi^+\ \pi^-\ e^-\ e^+$
Barklow 92
$\pi^+\ \pi^-\ \mu^-\ \mu^+$
Barklow 92
$\pi^+\ \pi^-\ \tau^-\ \tau^+$
Barklow 92
4jet
Abreu 91J
Mattig 91
Abreu 90G
Abreu 90S
Adeva 90J
Adeva 90K
Akrawy 90V
Janot 90
Oshaughnessy 90
Wormser 90B
Akrawy 89C
γ 3jet
Acton 91I
$q\ \bar{q}$ 2gluon
Decamp 92C
$2q\ 2\bar{q}$
Decamp 92C
2γ 2neutralino
Bertin 91
5jet
Abreu 90G
Akrawy 89C
$\bar{b}$ < jet > b < jet >
gluon < jet >
Wachsmuth 91

gluon

Acton 91J
Adeva 91F
Adeva 91H
Adachi 90E
Breakstone 90
Fujii 90
Innes 90
Miyamoto 90
Abrams 89F
Adachi 89E
Albrecht 89S
Eno 89B
Eno 89C
Pauss 89
mult[charged] X
Alam 92
mult[charged] (neutrals)
Abreu 92C
Acton 92P
Chliapnikov 92
mult[charged-hadron] (neutrals)
Acton 93
Alexander 91H
Mattig 91
charged X
Abe 90H
Maki 88B
Tao 88
jet X
Decamp 92C
hadron X
Deboer 89
hadron (hadrons)
Braunschweig 89E
η X
Adriani 92C
$J/\psi(1S)$ X
Adriani 92D
jet < charged X >
Takaki 93
Hebbeker 91
Yepes 91
2hadron (hadrons)
Abe 90H
jet
Acton 93
Akrawy 91B
Alexander 91H
Mattig 91
Fujii 90
Kim 90B
Kim 89C

higgs

Felcini 92
Blumlein 91
Dydak 91
Goobar 91
Yuzuki 91
Abreu 90F
Adeva 90I
Adeva 90Q
Antreasyan 90B
Augustin 90D
Decamp 90H
Hilgart 90
Renton 90
Steinberger 90
Poutissou 89
X −
mult[e^-] mult[e^+] mult[γ]
Acton 91B
mult[γ]
Pieri 91
$e^\pm$ X
Igarashi 87
$\mu^\pm$ X
Igarashi 87
charged X
Pieri 91
vee (neutrals)
Abreu 90O
mult[e^-] mult[e^+] mult[γ]
Acton 91B
(jets) 2jet
Adeva 90V
2hadron (hadrons)
Settles 92
Abreu 91M
Decamp 91
Decamp 91I
Decamp 91M

higgs

Adachi 90C
Decamp 90J
Decamp 89C
jet
Pieri 91
Adeva 90V
vee
Pieri 91
Abreu 90O
$\ell^+\ \ell^-$
Settles 92
Decamp 91M
Pieri 91
$e^-\ e^+$
Barabash 92
Gross 92B
Anikeyev 91
Decamp 91I
Abreu 90
Akrawy 90O
Barr 90B
Blumlein 90
Haissinski 90
Janot 90
Auge 89B
Davier 89
Decamp 89C
Egli 89
Gilman 89
Snyder 89
$\mu^-\ \mu^+$
Gross 92B
Decamp 91I
Geer 90
Poutissou 90
Abe 89R
Alam 89
Atiya 89
Decamp 89C
Geer 89
Gilman 89
Halling 89
Komamiya 89
Selen 89
$\tau^-\ \tau^+$
Adriani 93
Giacomelli 93
Adeva 92B
Adriani 92I
Adriani 92J
Gross 92
Gross 92B
Sopczak 92B
Sopczak 92C
Abreu 91J
Decamp 91
Decamp 91I
Decamp 91M
Akrawy 90J
Akrawy 90N
Akrawy 90T
Decamp 90J
Decamp 89C
2jet
Adriani 93
Giacomelli 93
Adeva 92B
Gross 92
Settles 92
Abreu 91J
Decamp 91I
Adeva 90V
Akrawy 90J
Akrawy 90N
Akrawy 90T
Decamp 90E
hadron$^+$ hadron$^-$
Decamp 89C
2γ
Barabash 92
Anikeyev 91
Abreu 90
Akrawy 90O
Atiya 90B

higgs

Blumlein 90
Haissinski 90
Poutissou 90
Druzhinin 88
$q\ \bar{q}$
Gross 92B
Low 89
$\bar{c}\ c$
Wormser 90B
$\bar{b}\ b$
Adriani 92I
Adriani 92J
Sopczak 92B
Sopczak 92C
Decamp 91M
Abreu 90
Decamp 90E
Haissinski 90
2higgs($CP = -1$)
Adriani 92I
Adriani 92J
Sopczak 92B
Sopczak 92C
Komamiya 89
$\pi^+\ \pi^-$
Giacomelli 93
Geer 90
Abe 89R
Alam 89
Albrecht 89J
Geer 89
Halling 89
Druzhinin 88
$K^+\ K^-$
Giacomelli 93
Geer 90
Alam 89
Albrecht 89J
Geer 89
Halling 89
$K^*(892)^+\ K^-$
Alam 89
$K^*(892)^0\ \bar{K}^0$
Alam 89
$\bar{K}^*(892)^0\ K^0$
Alam 89
$K^*(892)^-\ K^+$
Alam 89
$K^*(892)^0\ \bar{K}^*(892)^0$
Alam 89
$p\ \bar{p}$
Albrecht 89J
$q\ \bar{q}$ higgs
Low 89

axion

Imazato 92B
Ruoso 92
Blumlein 91
Antreasyan 90B
Atoyan 90
Semertzidis 90
Turner 90
Gninenko 89
Orito 89
Balke 88
$e^-\ e^+$
Pokotilovsky 93
Barabash 92
Anikeyev 91
Blumlein 90
Ackleh 89
Bross 89
Faissner 89
Freedman 89
Guo 89
Tsertos 89B
Tsertos 89C
Druzhinin 88
Fairfield 88
Tsertos 88
Tsertos 88B
2γ
Akopyan 92

axion

Barabash 92
Anikeyev 91
Bershady 90
Blumlein 90
Hagmann 90
Kolb 89
Wuensch 89
Avignone 88
Druzhinin 88
Fairfield 88
Faissner 88

$W'^{\pm}$

Gold 92
Sinervo 92
Yeh 92
Abe 91E
Fuess 91
Kuhlmann 91
Contreras 90
Frisch 90
Geer 90
Geer 89
Pauss 89

$e^{\pm}\ \nu$

Maeshima 92
Scarha 90

$\mu^{\pm}\ \nu$

Maeshima 92

W'^{+}

Stubenrauch 89

e^{+} **X**

Frisch 90

$\ell^{+}\ \nu$

Kuhlmann 91

$e^{+}\ \nu_e$

Gold 92
Sinervo 92
Yeh 92
Abe 91E
Fuess 91
Contreras 90
Albajar 89B
Pauss 89

$e^{+}\ \bar{\nu}_e$

Geer 90

$\mu^{+}\ \nu_\mu$

Gold 92
Sinervo 92
Yeh 92
Abe 91E
Fuess 91

2jet

Alitti 90D

W'^{-}

Stubenrauch 89

e^{-} **X**

Frisch 90

$\ell^{-}\ \bar{\nu}$

Kuhlmann 91

$e^{-}\ \nu_e$

Geer 90

$e^{-}\ \bar{\nu}_e$

Gold 92
Sinervo 92
Yeh 92
Abe 91E
Fuess 91
Albajar 89B
Pauss 89

$\mu^{-}\ \bar{\nu}_\mu$

Gold 92
Sinervo 92
Yeh 92
Abe 91E
Fuess 91

2jet

Alitti 90D

Z'

Geer 89
Stubenrauch 89

Z'

e^{-} **X**

Frisch 90

$e^{-}\ e^{+}$

Gold 92
Maeshima 92
Sinervo 92
Yeh 92
Abe 91D
Fuess 91
Kuhlmann 91
Contreras 90
Geer 90
Scarha 90
Albajar 89B
Pauss 89

$\mu^{-}\ \mu^{+}$

Gold 92
Maeshima 92
Sinervo 92
Yeh 92
Abe 91H
Fuess 91

2jet

Alitti 90D

goldstone

Albrecht 90L

majoron

Zdesenko 92
Ejiri 91B
Mori 91C
Barabash 90
Barabash 89
Barabash 89B
Barabash 89C
Fisher 89
Kirpichnikov 89
Vasenko 89
Alstongarnjo 88
Britton 88
Caldwell 88
Dougherty 88
Nakamura 88
Totsuka 88
Vasenko 88

familon

Jodidio 86

axigluon

2jet

Incagli 92
Pauss 89
Sphicas 88

higgs^{++}

$2\ell^{+}$

Acton 92L
Swartz 90

higgs^{--}

$2\ell^{-}$

Acton 92L
Swartz 90

S^0

2γ

Adriani 92G

ℓ

Abreu 92
Battiston 92
Bean 92B
Boucrot 92
Leone 92
Abreu 91K
Adeva 91C
Akrawy 91B
Alexander 91B
Berger 91
Mattig 91
Akrawy 90I
Elsen 90
Miyamoto 90

ℓ

Scarha 90
Artuso 89B
Kim 89G
Schubert 89
Ouldsaada 88B
Salvini 88
Unno 88

charged-lepton

Bernstein 88

$\ell^{\pm}$

Acton 93
Acton 92P
Adriani 92L
Alexander 91H
Colas 91
Gittelman 91
Mattig 91
Sato 90

ℓ^{-}

Abreu 93C
Buskulic 93
Buskulic 93D
Abreu 92I
Abreu 92L
Acton 92P
Adeva 92
Albrecht 92E
Albrecht 92K
Bean 92B
Boucrot 92
Buskulic 92E
Buskulic 92F
Buskulic 92G
Chrin 92
Dittmar 92
Drell 92B
Hsueh 92
Rolandi 92
Settles 92
Sopczak 92
Abreu 91B
Abreu 91K
Abreu 91N
Acton 91C
Adeva 91B
Alexander 91B
Banerjee 91
Bhattacharyy 91
Burkhardt 91
Colas 91
Crawford 91B
Deangelis 91B
Decamp 91
Decamp 91C
Decamp 91D
Decamp 91I
Decamp 91M
Decamp 91N
Decamp 91Q
Decamp 91S
Dydak 91
Gittelman 91
Kuhlmann 91
Patton 91
Pieri 91
Pietrzyk 91
Schafer 91
Shirakata 91
Simon 91
Trischuk 91
Wachsmuth 91
Yuzuki 91
Abreu 90
Abreu 90H
Abreu 90O
Abreu 90Q
Adeva 90H
Adeva 90Q
Akrawy 90S
Alexander 90
Cassel 90
Decamp 90H

ℓ^{-}

Decamp 90J
Denegri 90
Elsen 90
Fujii 90
Fulton 90
Gray 90
Haissinski 90
Janot 90
Kroha 90
Miller 90
Newman 90
Steinberger 90
Tenchini 90
Adachi 89B
Albrecht 89T
Artuso 89C
Behrend 89J
Decamp 89C
Franzini 89
Gilman 89
Golutvin 89
Halling 89
Jung 89
Steinberger 89
Behrend 88C

($K^{\pm}$'s) 4K$^{\pm}$ heavy-lepton^0 γ (γ's)

Stoker 89

5$\pi^{\pm}$ ($\pi^{\pm}$'s) heavy-lepton^0 γ (γ's)

Stoker 89

π^{-} heavy-lepton^0

Stoker 89

$\rho(770)^{-}$ heavy-lepton^0

Stoker 89

$a_1(1260)^{-}$ heavy-lepton^0

Stoker 89

$e^{-}\ \nu_\mu\ \bar{\nu}_e$

Sakai 89

$\mu^{-}\ \nu_\mu\ \bar{\nu}_\mu$

Sakai 89

$\tau^{-}\ \bar{\nu}_\tau\ \nu_\mu$

Sakai 89

$e^{-}\ \bar{\nu}_e$ **heavy-lepton^0**

Stoker 89

$\mu^{-}\ \bar{\nu}_\mu$ **heavy-lepton^0**

Stoker 89

$\nu_\mu\ q\ \bar{q}$

Sakai 89

ℓ^{+}

Abreu 93C
Buskulic 93
Buskulic 93D
Abreu 92L
Acton 92M
Acton 92P
Adeva 92
Albrecht 92D
Albrecht 92K
Albrecht 92R
Bean 92B
Boucrot 92
Buskulic 92F
Buskulic 92G
Chrin 92
Dittmar 92
Drell 92B
Feindt 92B
Hsueh 92
Kodama 92B
Rolandi 92
Settles 92
Sopczak 92
Abreu 91B
Abreu 91K
Abreu 91N
Acton 91C
Adeva 91B
Alexander 91B
Banerjee 91
Berger 91
Bhattacharyy 91

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

ℓ^+

Burkhardt 91
Colas 91
Crawford 91B
Cronstrom 91
Deangelis 91B
Decamp 91
Decamp 91C
Decamp 91D
Decamp 91I
Decamp 91M
Decamp 91N
Decamp 91Q
Decamp 91S
Dydak 91
Kuhlmann 91
Pieri 91
Pietrzyk 91
Schafer 91
Shirakata 91
Simon 91
Trischuk 91
Wachsmuth 91
Yuzuki 91
Abreu 90
Abreu 90H
Abreu 90O
Abreu 90Q
Adeva 90H
Adeva 90Q
Akrawy 90S
Alexander 90
Cassel 90
Decamp 90H
Decamp 90J
Denegri 90
Elsen 90
Fujii 90
Gray 90
Haissinski 90
Janot 90
Kroha 90
Miller 90
Newman 90
Scarha 90
Steinberger 90
Tenchini 90
Adachi 89B
Albrecht 89N
Albrecht 89Q
Artuso 89C
Behrend 89J
Decamp 89C
Franzini 89
Gilman 89
Golutvin 89
Halling 89
Schubert 89
Steinberger 89
Stoker 89
Behrend 88C

$e^+ \bar{\nu}_\mu \nu_e$ Sakai 89
$\mu^+ \nu_\mu \bar{\nu}_\mu$ Sakai 89
$\tau^+ \nu_\tau \bar{\nu}_\mu$ Sakai 89
$\bar{\nu}_\mu q \bar{q}$ Sakai 89

ν

ν_e Kuzminov 92
Ohshima 92
Shirai 92

$\nu \gamma$ Chupp 89
Kolb 89
Vonfeilitzsc 88

ν_e

γ **X** Burman 91

ν Ohshima 93
Cline 92

ν_e

Kawakami 92
Boehm 88

$0\nu_e \nu$ Pierre 90
Totsuka 88

$\bar{\nu}_e$ Freedman 93

ν_μ Ammosov 92B
Beier 92
Aglietta 91
Gates 91
Hirata 91C
Perdereau 91
Suzuki 91C
Berger 90
Kajita 90
Nakahata 90
Pierre 90
Raffelt 90
Schaeffer 90
Suzuki 90
Longuemare 89
Suzuki 89
Takita 89B
Afonin 88B
Ammosov 88D
Anada 88
Totsuka 88

$\bar{\nu}_\mu$ Lim 90

ν_τ Pierre 90

e^-

$\nu_e \gamma$ Ejiri 91B

$\nu_e \nu \bar{\nu}$ Ejiri 91B

$2\nu_e \bar{\nu}_e$ Reusser 91

$\bar{\nu}_e$

X Ketov 92
Vidyakin 90B

γ **X** Boucher 88

ν Avenier 89
Bouchez 88

$0\bar{\nu}_e \nu$ Pierre 90
Nakamura 88

$\bar{\nu}_\mu$ Beier 92
Perdereau 91
Berger 90
Kopeikin 90
Longuemare 89

ν_μ

γ **X** Krakauer 91C

ν Bergsma 88

$0\nu_\mu \nu$ Pierre 90

ν_e Ammosov 92B
Beier 92
Borodovsky 92
Aglietta 91
Gates 91
Hirata 91C
Perdereau 91
Berger 90
Pierre 90
Astier 89
Astier 89B
Blumenfeld 89
Lile 89
Longuemare 89
Murtagh 89
Bergsma 88

ν_μ

Bionta 88
Oyama 88

$\bar{\nu}_e$ Freedman 93

ν_τ Beckerszendy 92
Beier 92
Enqvist 92
Perdereau 91
Batusov 90E
Berger 90
Pierre 90
Batusov 89B
Longuemare 89
Perdereau 89
Perdereau 89B
Takita 89B
Nakamura 88

μ^-

$e^- \gamma$ Ahmad 88

$e^- 2\nu$ Farley 89

$2e^- e^+$ Ahmad 88

$e^- \nu_\mu \bar{\nu}_e$ Yamada 91
Farley 89

μ^+

$e^+ \gamma$ Bolton 88

e^+ **axion** Balke 88

e^+ **familon** Jodidio 86

$e^+ 2\gamma$ Bolton 88

$e^+ 2\nu$ Farley 89

$e^+ \nu \bar{\nu}$ Bossingham 89

$e^- 2e^+$ Baranov 91B
Baranov 90
Bellgardt 88
Bolton 88

$e^+ \nu_\mu \bar{\nu}_e$ Freedman 93
Krakauer 91B

$e^+ \bar{\nu}_\mu \nu_e$ Freedman 93
Bodmann 92
Britton 92B
Imazato 92
Numao 92
Numao 92B
Yamada 91
Farley 89
Balke 88
Bolton 88
Jodidio 86

$e^- 2e^+ \bar{\nu}_\mu \nu_e$ Bellgardt 88

$\bar{\nu}_\mu$

γ **X** Krakauer 91C

$\bar{\nu}$ Bergsma 88

$\bar{\nu}_e$ Freedman 93
Beier 92
Borodovsky 92
Perdereau 91
Berger 90
Lim 90
Astier 89
Astier 89B
Krizmanic 89
Longuemare 89
Murtagh 89

$\bar{\nu}_\mu$

Bergsma 88
Durkin 88
Oyama 88

$\bar{\nu}_\tau$ Beier 92
Perdereau 91
Berger 90
Longuemare 89
Perdereau 89
Perdereau 89B

ν_τ

ν_μ Beier 92
Perdereau 91
Berger 90
Longuemare 89

$\tau^\pm$

Akrawy 90I

charged X Deboer 89

3charged X Deboer 89

3charged (neutrals) Eastman 90
Vinson 90

(π^0's) ν 3charged-hadron Procario 92

$e^\pm \nu \bar{\nu}$ Procario 92
Kang 90

$\mu^\pm \nu \bar{\nu}$ Kang 90

π^0 ν charged-hadron Procario 92

$2\pi^0$ ν charged-hadron Procario 92

$3\pi^0$ ν charged-hadron Procario 92

$4\pi^0$ ν charged-hadron Procario 92

τ^-

Acton 93C
Adriani 93
Buskulic 93
Giacomelli 93
Abreu 92K
Acton 92E
Adeva 92B
Adriani 92I
Adriani 92J
Barklow 92
Bryman 92
Dittmar 92
Grassmann 92
Gross 92
Gross 92B
Howell 92
Kroha 92
Procario 92
Rolandi 92
Sopczak 92B
Sopczak 92C
Tsuboyama 92
Abreu 91B
Abreu 91G
Abreu 91J
Acton 91C
Adeva 91B
Adeva 91D
Adeva 91G
Alexander 91B
Alexander 91C
Banerjee 91
Bhattacharyy 91
Burkhardt 91
Decamp 91
Decamp 91F
Decamp 91I
Decamp 91M
Decamp 91N
Decamp 91S

τ^-

Dydak 91
Goobar 91
Maki 91
Olsen 91
Pietrzyk 91
Shirai 91
Aarnio 90C
Abe 90D
Abe 90E
Abe 90H
Abreu 90
Abreu 90C
Abreu 90F
Abreu 90H
Abreu 90L
Adachi 90C
Adeva 90B
Adeva 90M
Adeva 90O
Akrawy 90
Akrawy 90D
Akrawy 90E
Akrawy 90G
Akrawy 90J
Akrawy 90K
Akrawy 90N
Akrawy 90S
Akrawy 90T
Augustin 90D
Behrend 90
Chen 90
Coupal 90
Cowen 90
Decamp 90G
Decamp 90J
Decamp 90K
Decamp 90O
Fujii 90
Gan 90
Geer 90
Gomezcadenas 90
Haissinski 90
Heusch 90B
Innes 90
Itoh 90
Janot 90
Kroha 90B
Kroha 90C
Kuhlen 90
Miyamoto 90
Moller 90
Nash 90
Odaka 90
Pinsent 90
Renton 90
Roach 90
Steinberger 90
Taketani 90
Vankooten 90
Wormser 90B
Yamauchi 90
Abe 89P
Abrams 89
Abrams 89B
Abrams 89C
Abrams 89F
Adachi 89
Adachi 89B
Adachi 89D
Akrawy 89E
Albajar 89B
Burchat 89
Decamp 89B
Decamp 89C
Decamp 89D
Decamp 89G
Decamp 89H
Eno 89B
Felcini 89
Feldman 89
Feldman 89B
Hearty 89
Hegner 89
Iwata 89

τ^-

Kim 89E
Krauss 89
Maki 89
Metcalf 89
Nozaki 89
Ogawa 89
Pauss 89
Sakai 89
Shaw 89
Steinberger 89
Stubenrauch 89
Weinstein 89
Adeva 88
Behrend 88C
Kamae 88
Kim 88B
Ko 88
Maki 88
Maki 88B
Masuda 88
Mcneil 88
Olsen 88
Ouldsaada 88B
Rosenfeld 88
Sakuda 88
Salvini 88
Shirai 88
Sumiyoshi 88
Takahashi 88
Tao 88
Tauchi 88
Unno 88
Yamauchi 88

X
Bryman 92
Buskulic 92L
Kiesling 91

e^- X
Marshall 89
Gan 88B
Klem 86

μ^- X
Marshall 89

ν_τ X
Abreu 93
Buskulic 92K

ν_τ mult[hadron]
Adeva 90L

mult[charged] (neutrals)
Dam 92
Kiesling 91
Privitera 91

charged (neutrals)
Behrend 89D
Marshall 89
Barish 88

charged$^-$ (neutrals)
Smith 90
Vinson 90

ν_τ charged (neutrals)
Abreu 93
Acton 93B
Adriani 93B
Acton 92F
Decamp 92
Riles 92
Seyverd 92
Trischuk 92
Abreu 91I
Acton 91D
Adeva 91I
Campion 91
Stoker 91
Banks 90

ν_τ charged$^-$ (neutrals)
Acton 92

ν_τ (ν's) charged$^-$
Keh 88B

ν_τ hadron (hadrons)
Buskulic 93C
Acton 92H
Chrin 92
Wachsmuth 91

τ^-

Gladney 90

η ν_τ X
Albrecht 88P

$\omega(783)$ ν_τ X
Albrecht 88P

K^- ν_τ (neutrals)
Hayes 89B

$K^*(892)^-$ ν_τ (neutrals)
Goldberg 90

charged neutral (neutrals)
Drell 92
Drell 92B
Settles 92
Ammar 91
Decamp 91R
Batusov 90E
Abachi 89B
Braunschweig 89F
Hayes 89
Adachi 88D
Albrecht 88O
Bacala 88
Bacala 88B
Braunschweig 88D
Gan 88

charged$^-$ neutral (neutrals)
Buskulic 92J

hadron$^-$ neutral (neutrals)
Perl 90

2hadron (hadrons)
Dowell 88

π^0 π^- (neutrals)
Barish 88

π^0 π^- (π^0's) ν_τ
Stoker 89

K^- π (π's) ν_τ
Barish 88

K^0 K^- ν_τ (neutrals)
Goldberg 90

$\overline{K}^*(892)^0$ π^- ν_τ (neutrals)
Goldberg 90

$K^*(892)^0$ K^- ν_τ (neutrals)
Goldberg 90

3charged (neutrals)
Battle 92
Albrecht 91M
Smith 90
Abachi 89B
Behrend 89D
Braunschweig 89F
Hayes 89
Kleinwort 89
Marshall 89
Adachi 88D
Barish 88
Braunschweig 88D
Gan 88

ν_τ 3charged (neutrals)
Abreu 93
Acton 93B
Adriani 93B
Acton 92F
Decamp 92
Riles 92
Seyverd 92
Trischuk 92
Abreu 91I
Acton 91D
Adeva 91I
Stoker 91
Banks 90

(π^0's) ν_τ 3charged-hadron
Heltsley 92

$2\pi^0$ (π^0's) meson$^-$ ν_τ
Kiesling 91

3π ν_τ (neutrals)
Eastman 90

π^+ $2\pi^-$ (π^0's) ν_τ
Nuttall 92

K^- ν_τ 2charged (neutrals)
Eastman 90

τ^-

kaon 2π ν_τ (neutrals)
Eastman 90

K^- π^+ π^- ν_τ (neutrals)
Eastman 90

2kaon π ν_τ (neutrals)
Eastman 90

K^+ K^- π^- ν_τ (neutrals)
Eastman 90

3kaon ν_τ (neutrals)
Eastman 90

3charged neutral (neutrals)
Drell 92
Settles 92
Ammar 91
Decamp 91R

ν_τ γ (γ's) 3charged-hadron
Behrend 89H

ν_τ 3γ (γ's) hadron$^-$
Behrend 89H

π^0 (π^0's) ν_τ 3hadron
Decamp 91R

π^0 (π^0's) ν_τ hadron$^+$ 2hadron$^-$
Privitera 91

$3\pi^0$ (π^0's) ν_τ hadron$^-$
Decamp 91R
Privitera 91

$3\pi^0$ (π^0's) meson$^-$ ν_τ
Kiesling 91

π^+ $2\pi^-$ π (π's) ν_τ
Barish 88

$3\pi^0$ π^- (π^0's) ν_τ
Dam 92
Behrend 89H

π^+ π^0 $2\pi^-$ (π^0's) ν_τ
Dam 92
Behrend 89H
Stoker 89
Gan 88

K^- π^+ π^- π (π's) ν_τ
Barish 88

5charged (neutrals)
Behrend 89D
Marshall 89
Barish 88
Gan 88

ν_τ 5charged (neutrals)
Acton 92F
Riles 92
Seyverd 92
Stoker 91

(π^0's) ν_τ 2hadron$^+$ 3hadron$^-$
Privitera 91

ν_τ (γ's) 5charged-hadron
Behrend 89H

π^0 (π^0's) 3meson (mesons) ν_τ
Kiesling 91

$2\pi^+$ $3\pi^-$ (π^0's) ν_τ
Dam 92
Decamp 91R
Behrend 89H

5charged neutral (neutrals)
Drell 92B
Settles 92
Decamp 91R

e^- γ
Albrecht 92
Janssen 90
Gan 88
Gan 88B
Keh 88B

e^- goldstone
Albrecht 90L

μ^- γ
Albrecht 92
Bean 92

μ^- goldstone
Albrecht 90L

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

τ^-

ν_τ **hadron**
Decamp 91R
ν_τ **hadron**$^-$ $-$ $K^*(892)^-$ ν_τ
Decamp 91R
ν_τ **hadron**$^-$
Drell 92B
Heltsley 92
Riles 92
Privitera 91
Stoker 91
Behrend 89H
meson$^-$ ν_τ
Kiesling 91
π^0 e^-
Albrecht 92
Janssen 90
Gan 88
Gan 88B
Keh 88B
π^0 μ^-
Albrecht 92
Dydak 91
Augustin 90D
π^- ν_τ
Buskulic 93B
Abreu 92B
Buskulic 92J
Seyward 92
Alexander 91G
Decamp 91H
Kiesling 91
Stoker 91
Zomer 91
Zomer 91B
Banks 90
Haissinski 90
Kang 90
Kim 90D
Behrend 89H
Hayes 89
Hayes 89B
Stoker 89
Barish 88
Gan 88
η e^-
Albrecht 92
Janssen 90
Gan 88B
Keh 88B
η μ^-
Albrecht 92
$\rho(770)^0$ e^-
Albrecht 92
Gan 88
$\rho(770)^0$ μ^-
Albrecht 92
Gan 88
$\rho(770)^-$ ν_τ
Adriani 93B
Buskulic 93B
Abreu 92B
Adriani 92H
Albrecht 92I
Buskulic 92J
Dam 92
Seyward 92
Decamp 91H
Kiesling 91
Stoker 91
Zomer 91
Zomer 91B
Kang 90
Kim 90D
Abachi 89B
Behrend 89H
Hayes 89
Hayes 89B
Albrecht 88O
Barish 88
Gan 88
Tschirhart 88
$a_0(980)^-$ ν_τ
Eastman 90

τ^-

$a_1(1260)^-$ ν_τ
Adriani 93B
Adriani 92H
Albrecht 92F
Albrecht 92M
Decamp 91H
Zomer 91
Zomer 91B
Albrecht 90I
$\rho(1450)^-$ ν_τ
Donnachie 91
Govorkov 88
$\rho(1700)^-$ ν_τ
Govorkov 88
K^0 e^-
Gan 88
K^0 μ^-
Gan 88
K^- ν_τ + π^- ν_τ
Adriani 93B
Adriani 92H
Dam 92
Privitera 91
K^- ν_τ
Abreu 92B
Seyward 92
Alexander 91G
Kiesling 91
Stoker 91
Banks 90
Hayes 89
Barish 88
Gan 88
$K^*(892)^0$ e^-
Gan 88
$\overline{K}^*(892)^0$ e^-
Albrecht 92
$K^*(892)^0$ μ^-
Gan 88
$\overline{K}^*(892)^0$ μ^-
Albrecht 92
$K^*(892)^-$ ν_τ
Kiesling 91
Stoker 91
Eastman 90
Abachi 89B
Hayes 89
Hayes 89B
Albrecht 88O
Gan 88
Tschirhart 88
π^- γ
Albrecht 92
π^0 π^-
Albrecht 92
$\overline{p}$ γ
Albrecht 92
$\overline{p}$ π^0
Albrecht 92
$\overline{p}$ η
Albrecht 92
$2e^-$ e^+
Albrecht 92
Bowcock 90
Gan 88
μ^- e^- e^+
Albrecht 92
Bowcock 90
Gan 88
μ^+ $2e^-$
Albrecht 92
Bowcock 90
$2\mu^-$ e^+
Albrecht 92
Bowcock 90
μ^- μ^+ e^-
Albrecht 92
Bowcock 90
Gan 88
$2\mu^-$ μ^+
Albrecht 92
Bowcock 90
Gan 88

τ^-

ℓ^- ν_τ $\overline{\nu}$
Chrin 92
e^- ν_τ $\overline{\nu}_e$
Adriani 93B
Buskulic 93B
Abreu 92B
Acton 92H
Adriani 92H
Akerib 92
Battle 92
Bryman 92
Buskulic 92J
Dam 92
Decamp 92
Drell 92
Drell 92B
Heltsley 92
Riles 92
Settles 92
Seyward 92
Adeva 91I
Alexander 91G
Alitti 91C
Ammar 91
Decamp 91H
Decamp 91R
Kiesling 91
Privitera 91
Stoker 91
Wachsmuth 91
Zomer 91
Zomer 91B
Abachi 90
Albrecht 90L
Banks 90
Fujii 90
Janssen 90
Kim 90D
Perl 90
Abachi 89
Behrend 89H
Hayes 89
Hayes 89B
Janssen 89
Kass 89
Kleinwort 89
Marshall 89
Stoker 89
Amidei 88
Barish 88
Gan 88
Tschirhart 88
Coffman 87
μ^- ν_τ $\overline{\nu}_\mu$
Adriani 93B
Buskulic 93B
Abreu 92B
Acton 92H
Adriani 92H
Battle 92
Bryman 92
Buskulic 92J
Dam 92
Decamp 92
Drell 92B
Heltsley 92
Riles 92
Seyward 92
Adeva 91I
Albrecht 91M
Alexander 91G
Decamp 91H
Decamp 91R
Kiesling 91
Privitera 91
Roehn 91
Stahl 91
Stoker 91
Wachsmuth 91
Zomer 91
Zomer 91B
Albrecht 90L
Banks 90
Kim 90D

τ^-

Hayes 89
Hayes 89B
Marshall 89
Stoker 89
Gan 88
Coffman 87
π^0 ν_τ **hadron**$^-$
Drell 92B
Heltsley 92
Riles 92
Antreasyan 91B
Decamp 91R
Stoker 91
π^0 **meson**$^-$ ν_τ
Kiesling 91
π^+ π^- e^-
Albrecht 92
Bowcock 90
Gan 88
$2\pi^-$ e^+
Albrecht 92
Bowcock 90
π^+ π^- μ^-
Albrecht 92
Bowcock 90
Gan 88
$2\pi^-$ μ^+
Albrecht 92
Bowcock 90
π^0 π^- ν_τ $-$
K^- $<$ π^0 π^- $>$ ν_τ
Decamp 91R
π^0 π^- ν_τ
Albrecht 92I
η π^- ν_τ
Artuso 92
Hayes 89B
Barish 88
Behrend 88
Gan 88
Gan 88B
Coffman 87
Gan 87B
$\omega(783)$ π^- ν_τ
Albrecht 91C
Donnachie 91
Barish 88
Gan 88
Govorkov 88
K^+ π^- e^-
Bowcock 90
K^- π^+ e^-
Albrecht 92
Bowcock 90
Gan 88
K^- π^- e^+
Albrecht 92
Bowcock 90
K^+ π^- μ^-
Bowcock 90
K^- π^+ μ^-
Albrecht 92
Bowcock 90
Gan 88
K^- π^- μ^+
Albrecht 92
Bowcock 90
K^- η ν_τ
Artuso 92
K^0 K^- ν_τ
Eastman 90
Barish 88
Gan 88
$K^*(892)^-$ **meson**^{0} ν_τ
Kiesling 91
ν_τ **3hadron**
Settles 92
Decamp 91R
ν_τ **hadron**$^+$ **2hadron**$^-$
Privitera 91
ν_τ **3charged-hadron**
Behrend 89H

τ^-

ν_τ 2γ **hadron**$^-$
Behrend 89H
$e^- \nu_\tau \bar{\nu}_e \gamma$
Akerib 92
$\mu^- \nu_\tau \bar{\nu}_\mu \gamma$
Wu 89
3meson ν_τ
Kiesling 91
$2\pi^0$ ν_τ **hadron**$^-$
Drell 92B
Heltsley 92
Riles 92
Settles 92
Antreasyan 91B
Decamp 91R
Privitera 91
Stoker 91
$2\pi^0$ ν_τ **hadron**$^-$ $-$
$K^*(892)^-$ ν_τ $-$ $\omega(783)$ π^- ν_τ
Decamp 91R
$2\pi^0$ **meson**$^-$ ν_τ
Kiesling 91
3π ν_τ
Kiesling 91
3π ν_τ $-$ $K < 2\pi >$ π ν_τ
Decamp 91R
$2\pi^0$ π^- ν_τ
Dam 92
Kiesling 91
Stoker 91
Behrend 89H
Hayes 89
Hayes 89B
Barish 88
Gan 88
Gan 88B
$2\pi^0$ π^- ν_τ $-$
$K^- < \pi^0 \pi^- > \pi^0$ ν_τ
Decamp 91R
π^+ $2\pi^-$ ν_τ
Albrecht 92F
Albrecht 92I
Albrecht 92M
Dam 92
Drell 92B
Nuttall 92
Stoker 91
Albrecht 90I
Behrend 89H
Barish 88
Gan 88
Gan 88B
η π^0 ν_τ **hadron**$^-$
Drell 92B
η π^0 π^- ν_τ
Artuso 92
Gan 88
Gan 88B
2η π^- ν_τ
Artuso 92
Gan 88
Gan 88B
$\rho(770)$ 2π ν_τ
Albrecht 91C
$\rho(770)^0$ π^0 π^- ν_τ
Nuttall 92
K 2π ν_τ
Kiesling 91
K^- π^+ π^- ν_τ
Barish 88
K $\bar{K}$ π ν_τ
Kiesling 91
K^+ K^- π^- ν_τ
Barish 88
$K^*(892)^0$ π^- **meson**^{0} ν_τ
Kiesling 91
$K^*(892)^0$ K^- **meson**^{0} ν_τ
Kiesling 91
$3\pi^0$ ν_τ **hadron**$^-$
Drell 92B
Heltsley 92

τ^-

Stoker 91
π^0 3π ν_τ
Kiesling 91
$3\pi^0$ π^- ν_τ
Kiesling 91
Stoker 91
Hayes 89B
Barish 88
Gan 88
Gan 88B
π^+ π^0 $2\pi^-$ ν_τ
Nuttall 92
Albrecht 91C
Stoker 91
Gan 88B
η $2\pi^0$ π^- ν_τ
Artuso 92
Gan 88
Gan 88B
η π^+ $2\pi^-$ ν_τ
Gan 88
Gan 88B
2η π^0 π^- ν_τ
Artuso 92
$4\pi^0$ ν_τ **hadron**$^-$
Drell 92B
Heitsley 92
5π ν_τ
Kiesling 91
Gan 88
$4\pi^0$ π^- ν_τ
Artuso 92
$2\pi^+$ $3\pi^-$ ν_τ
Stoker 91
Albrecht 88C
Barish 88
6π ν_τ
Kiesling 91
π^0 5π ν_τ
Gan 88
$2\pi^+$ π^0 $3\pi^-$ ν_τ
Stoker 91
Barish 88

τ^+

Acton 93C
Adriani 93
Adriani 93B
Buskulic 93
Buskulic 93B
Buskulic 93C
Giacomelli 93
Abreu 92K
Acton 92E
Adeva 92B
Adriani 92H
Adriani 92I
Adriani 92J
Albrecht 92
Albrecht 92F
Albrecht 92I
Albrecht 92M
Artuso 92
Barklow 92
Battle 92
Bryman 92
Buskulic 92L
Dam 92
Decamp 92
Dittmar 92
Drell 92
Drell 92B
Felcini 92
Grassmann 92
Gross 92
Gross 92B
Howell 92
Kroha 92
Nuttall 92
Procario 92
Riles 92
Rolandi 92
Settles 92
Seyverd 92

τ^+

Sopczak 92B
Sopczak 92C
Trischuk 92
Tsuboyama 92
Abreu 91B
Abreu 91G
Abreu 91J
Acton 91C
Adeva 91B
Adeva 91D
Adeva 91G
Alexander 91B
Alexander 91C
Alexander 91G
Ammar 91
Banerjee 91
Bhattacharyy 91
Burkhardt 91
Decamp 91
Decamp 91F
Decamp 91H
Decamp 91I
Decamp 91M
Decamp 91N
Decamp 91R
Decamp 91S
Donnachie 91
Dydak 91
Goobar 91
Maki 91
Olsen 91
Pietrzyk 91
Privitera 91
Shirai 91
Stahl 91
Aarnio 90C
Abe 90D
Abe 90E
Abe 90H
Abreu 90
Abreu 90C
Abreu 90F
Abreu 90H
Abreu 90L
Abreu 90P
Adachi 90C
Adeva 90B
Adeva 90L
Adeva 90M
Adeva 90O
Akrawy 90
Akrawy 90D
Akrawy 90E
Akrawy 90G
Akrawy 90J
Akrawy 90K
Akrawy 90N
Akrawy 90S
Akrawy 90T
Albajar 90H
Albrecht 90I
Albrecht 90L
Augustin 90D
Behrend 90
Bowcock 90
Chen 90
Coupal 90
Cowen 90
Decamp 90G
Decamp 90J
Decamp 90K
Decamp 90O
Eastman 90
Fujii 90
Geer 90
Goldberg 90
Gomezcadenas 90
Haissinski 90
Heusch 90B
Itoh 90
Janot 90
Kroha 90B
Kroha 90C
Kuhlen 90

τ^+

Miyamoto 90
Moller 90
Nash 90
Odaka 90
Odowd 90
Perl 90
Pinsent 90
Renton 90
Roach 90
Smith 90
Steinberger 90
Taketani 90
Wormser 90B
Yamauchi 90
Abe 89P
Abrams 89
Abrams 89B
Abrams 89C
Adachi 89
Adachi 89B
Adachi 89D
Akrawy 89E
Albajar 89B
Burchat 89
Decamp 89B
Decamp 89C
Decamp 89D
Decamp 89G
Decamp 89H
Eno 89B
Felcini 89
Feldman 89
Feldman 89B
Hayes 89B
Hearty 89
Hegner 89
Iwata 89
Kim 89E
Krauss 89
Maki 89
Metcalf 89
Nozaki 89
Ogawa 89
Pauss 89
Sakai 89
Shaw 89
Steinberger 89
Stoker 89
Stubenrauch 89
Weinstein 89
Adeva 88
Behrend 88C
Govorkov 88
Kamae 88
Kim 88B
Ko 88
Maki 88
Maki 88B
Masuda 88
Mcneil 88
Olsen 88
Ouldsaada 88B
Rosenfeld 88
Sakuda 88
Salvini 88
Shirai 88
Sumiyoshi 88
Takahashi 88
Tao 88
Tauchi 88
Unno 88
Yamauchi 88
e^+ **X**
Marshall 89
Klem 86
μ^+ **X**
Marshall 89
charged X
Abe 91M
charged (neutrals)
Marshall 89
charged$^+$ **(neutrals)**
Vinson 90

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

τ^+

$\bar{\nu}_\tau$ **charged (neutrals)**
Acton 92F
Abreu 91I
Acton 91D
Adeva 91I
Campion 91
Banks 90

$\bar{\nu}_\tau$ **charged$^+$ (neutrals)**
Acton 92
Gan 90

$\bar{\nu}_\tau$ (ν's) **charged$^+$**
Keh 88B

$\bar{\nu}_\tau$ **hadron (hadrons)**
Wachsmuth 91
Gladney 90

$\pi^+ \bar{\nu}_\tau$ (γ's)
Albrecht 88P

$K^+ \bar{\nu}_\tau$ (γ's)
Albrecht 88P

charged neutral (neutrals)
Abachi 89B
Behrend 89D
Braunschweig 89F
Hayes 89
Adachi 88D
Albrecht 88O
Bacala 88
Bacala 88B
Barish 88
Braunschweig 88D
Gan 88

charged$^+$ neutral (neutrals)
Buskulic 92J

2hadron (hadrons)
Dowell 88

$\pi^+ \pi^0$ **(neutrals)**
Barish 88

ν_τ **2hadron (hadrons)**
Alitti 92

$K^+ \pi$ (π's) $\bar{\nu}_\tau$
Barish 88

3charged X
Abe 91M

3charged (neutrals)
Albrecht 91M
Abachi 89B
Behrend 89D
Braunschweig 89F
Hayes 89
Marshall 89
Adachi 88D
Barish 88
Braunschweig 88D
Gan 88

$\bar{\nu}_\tau$ **3charged (neutrals)**
Acton 92F
Abreu 91I
Acton 91D
Adeva 91I
Banks 90

(π^0's) $\bar{\nu}_\tau$ **3charged-hadron**
Heltsley 92

$\pi^+ 2\pi^0$ (π^0's) $\bar{\nu}_\tau$
Bean 92

$\bar{\nu}_\tau \gamma$ (γ's) **3charged-hadron**
Behrend 89H

$\bar{\nu}_\tau 3\gamma$ (γ's) **hadron$^+$**
Behrend 89H
Deboer 89

$2\pi^+ \pi^- \pi$ (π's) $\bar{\nu}_\tau$
Barish 88

π^0 (π^0's) $3\pi \bar{\nu}_\tau$
Deboer 89

$\pi^+ 3\pi^0$ (π^0's) $\bar{\nu}_\tau$
Behrend 89H
Deboer 89

$2\pi^+ \pi^0 \pi^-$ (π^0's) $\bar{\nu}_\tau$
Bean 92
Behrend 89H
Gan 88

τ^+

$K^+ \pi^+ \pi^- \pi$ (π's) $\bar{\nu}_\tau$
Barish 88

5charged (neutrals)
Behrend 89D
Marshall 89
Barish 88
Gan 88

$\bar{\nu}_\tau$ **5charged (neutrals)**
Acton 92F

$\bar{\nu}_\tau$ (γ's) **5charged-hadron**
Behrend 89H

(π^0's) $5\pi \bar{\nu}_\tau$
Deboer 89

$3\pi^+ 2\pi^-$ (π^0's) $\bar{\nu}_\tau$
Behrend 89H

$e^+ \gamma$
Drell 92B
Janssen 90
Gan 88
Keh 88B

$\mu^+ \gamma$
Drell 92B

$\bar{\nu}_\tau$ **hadron**
Deboer 89

$\bar{\nu}_\tau$ **hadron$^+$**
Heltsley 92
Behrend 89H

$\pi^0 e^+$
Drell 92B
Janssen 90
Gan 88
Keh 88B

$\pi^0 \mu^+$
Drell 92B
Dydak 91
Augustin 90D

$\pi^+ \bar{\nu}_\tau$
Abreu 92B
Bean 92
Bryman 92
Buskulic 92J
Albrecht 91C
Albrecht 91M
Zomer 91
Zomer 91B
Kang 90
Kim 90D
Behrend 89H
Deboer 89
Hayes 89
Albrecht 88C
Barish 88
Gan 88

ηe^+
Janssen 90
Keh 88B

$\rho(770)^0 e^+$
Gan 88

$\rho(770)^0 \mu^+$
Gan 88

$\rho(770)^+ \bar{\nu}_\tau$
Abreu 92B
Buskulic 92J
Kang 90
Kim 90D
Abachi 89B
Behrend 89H
Deboer 89
Hayes 89
Albrecht 88O
Barish 88
Gan 88
Tschirhart 88

$\bar{K}^0 e^+$
Gan 88

$\bar{K}^0 \mu^+$
Gan 88

$K^+ \bar{\nu}_\tau$
Abreu 92B
Albrecht 91C
Albrecht 91M
Deboer 89
Hayes 89

τ^+

Albrecht 88C
Barish 88
Gan 88

$\bar{K}^*(892)^0 e^+$
Gan 88

$\bar{K}^*(892)^0 \mu^+$
Gan 88

$K^*(892)^+ \bar{\nu}_\tau$
Abachi 89B
Hayes 89
Albrecht 88O
Gan 88
Tschirhart 88

$e^- 2e^+$
Gan 88

$\mu^+ e^- e^+$
Gan 88

$\mu^- \mu^+ e^+$
Gan 88

$\mu^- 2\mu^+$
Gan 88

$e^+ \bar{\nu}_\tau \nu_e$
Abreu 92B
Akerib 92
Bean 92
Buskulic 92J
Heltsley 92
Adeva 91I
Albrecht 91C
Albrecht 91M
Alitti 91C
Wachsmuth 91
Abachi 90
Fujii 90
Janssen 90
Kim 90D
Abachi 89
Behrend 89H
Deboer 89
Hayes 89
Janssen 89
Kass 89
Kleinwort 89
Marshall 89
Albrecht 88C
Albrecht 88P
Amidei 88
Barish 88
Gan 88
Tschirhart 88
Coffman 87

$\mu^+ \bar{\nu}_\tau \nu_\mu$
Abreu 92B
Bean 92
Buskulic 92J
Heltsley 92
Adeva 91I
Albrecht 91C
Albrecht 91M
Felcini 91
Roehn 91
Wachsmuth 91
Kim 90D
Deboer 89
Hayes 89
Marshall 89
Albrecht 88C
Albrecht 88P
Barish 88
Gan 88
Coffman 87

$\pi^0 \bar{\nu}_\tau$ **hadron$^+$**
Heltsley 92
Antreasyan 91B

$\pi^+ \bar{\nu}_\tau \gamma$
Albrecht 91C

$\pi^+ \pi^- e^+$
Gan 88

$\pi^+ \pi^- \mu^+$
Gan 88

$\pi^+ \pi^0 \bar{\nu}_\tau$
Bean 92

$\eta \pi^+ \bar{\nu}_\tau$
Gan 90

τ^+

Barish 88
Gan 88
Coffman 87
Gan 87B

$\omega(783) \pi^+ \bar{\nu}_\tau$
Barish 88
Gan 88

$K^+ \bar{\nu}_\tau \gamma$
Albrecht 91C

$K^+ \pi^- e^+$
Gan 88

$K^+ \pi^- \mu^+$
Gan 88

$K \pi \bar{\nu}_\tau$
Deboer 89

$K \bar{K} \bar{\nu}_\tau$
Deboer 89

$K^+ \bar{K}^0 \bar{\nu}_\tau$
Barish 88
Gan 88

$\bar{\nu}_\tau$ **3hadron**
Deboer 89

$\bar{\nu}_\tau$ **3charged-hadron**
Behrend 89H

$\bar{\nu}_\tau 2\gamma$ **hadron$^+$**
Behrend 89H
Deboer 89

$e^+ \bar{\nu}_\tau \nu_e \gamma$
Akerib 92

$\mu^+ \bar{\nu}_\tau \nu_\mu \gamma$
Wu 89

$\pi^+ \bar{\nu}_\tau 2\gamma$
Albrecht 91C

$2\pi^0 \bar{\nu}_\tau$ **hadron$^+$**
Heltsley 92
Antreasyan 91B

$3\pi \bar{\nu}_\tau$
Deboer 89

$\pi^+ 2\pi^0 \bar{\nu}_\tau$
Gan 90
Behrend 89H
Deboer 89
Hayes 89
Barish 88
Gan 88

$2\pi^+ \pi^- \bar{\nu}_\tau$
Bean 92
Gan 90
Behrend 89H
Barish 88
Gan 88

$\eta \pi^+ \pi^0 \bar{\nu}_\tau$
Gan 90
Gan 88

$2\eta \pi^+ \bar{\nu}_\tau$
Gan 88

$K^+ \bar{\nu}_\tau 2\gamma$
Albrecht 91C

$K 2\pi \bar{\nu}_\tau$
Deboer 89

$K^+ \pi^+ \pi^- \bar{\nu}_\tau$
Barish 88

$K \bar{K} \pi \bar{\nu}_\tau$
Deboer 89

$K^+ K^- \pi^+ \bar{\nu}_\tau$
Barish 88

$\bar{\nu}_\tau \gamma$ **3hadron** + $\bar{\nu}_\tau$ **3hadron**
Deboer 89

$3\pi^0 \bar{\nu}_\tau$ **hadron$^+$**
Heltsley 92

$\pi^+ 3\pi^0 \bar{\nu}_\tau$
Gan 90
Barish 88
Gan 88

$\eta \pi^+ 2\pi^0 \bar{\nu}_\tau$
Gan 88

$\eta 2\pi^+ \pi^- \bar{\nu}_\tau$
Gan 88

$4\pi^0 \bar{\nu}_\tau$ **hadron$^+$**
Heltsley 92

$5\pi \bar{\nu}_\tau$
Deboer 89
Gan 88

τ^+

$3\pi^+ \; 2\pi^- \; \nu_\tau$ — Barish 88
$6\pi \; \nu_\tau$ — Deboer 89
$\pi^0 \; 5\pi \; \bar{\nu}_\tau$ — Gan 88
$3\pi^+ \; \pi^0 \; 2\pi^- \; \bar{\nu}_\tau$ — Barish 88

ν_τ

ν_μ — Beier 92, Perdereau 91, Berger 90, Longuemare 89

heavy-lepton

Kichimi 88, Riles 88, Rosenfeld 88
ν_e X — Duffy 88
ν_μ X — Duffy 88
ν hadron (hadrons) — Maki 88B
$\nu \; q$ — Unno 88
3ℓ — Maki 88B
$2\ell \; \nu$ — Kim 88
$\nu \; q \; \bar{q}$ — Kim 88

heavy-ν

Imazato 92B, Deleeuerrosi 91
$\mu^+ \; e^- \; X$ — Akerlof 88
$\pi^+ \; e^- \; X$ — Akerlof 88
$K^+ \; e^- \; X$ — Akerlof 88
$\ell^+ \; \ell^- \; \nu$ — Abreu 91N
$\ell^- \; q \; \bar{q}$ — Abreu 91N

heavy-ν

Abreu 91N
$\mu^- \; e^+ \; X$ — Akerlof 88
$\pi^- \; e^+ \; X$ — Akerlof 88
$K^- \; e^+ \; X$ — Akerlof 88

heavy-ν_e

Abreu 91N, Hime 91B, Morrison 91
$e^- \; e^+ \; \nu_e$ — Bernardi 88
$e^- \; q \; \bar{q}$ — Vankooten 90

heavy-ν_e

Hime 92, Abreu 91N, Hime 91, Hime 91B, Morrison 91, Sur 91, Vankooten 90, Simpson 89, Simpson 89B

heavy-ν_μ

Abreu 91N
$e^- \; e^+ \; \nu_\mu$ — Bernardi 88
$\mu^- \; q \; q$ — Vankooten 90

heavy-$\bar{\nu}_\mu$

Abreu 91N, Vankooten 90

heavy-ν_τ

Abreu 91N
$\tau^- \; q \; \bar{q}$ — Vankooten 90

heavy-$\bar{\nu}_\tau$

Abreu 91N, Vankooten 90

heavy-lepton^0

Adriani 92L, Dydak 91, Adeva 90N, Burchat 90, Fujii 90, Goldhaber 90, Decamp 89E, Riles 89, Riles 89B, Stoker 89, Weinstein 89, Kamae 88
ν X — Debarbaro 90B
e^- X — Innes 90, Abrams 89F
μ^- X — Debarbaro 90, Debarbaro 90B, Innes 90, Abrams 89F
τ^- X — Innes 90, Abrams 89F
ℓ hadron (hadrons) — Akrawy 90I
$\ell^+ \; \ell^-$ (neutrals) — Fujii 90, Behrend 88C
$\nu \; \gamma$ — Adeva 90S
$e^- \; W^+$ — Adeva 90S
$\mu^- \; \mu^+$ — Maki 88
$\tau^- \; \tau^+$ — Maki 88
$\ell^+ \; \ell^- \; \nu$ — Abreu 91N
$e^- \; e^+ \; \nu_e$ — Sakai 89, Shaw 89
$\mu^- \; e^+ \; \nu_e$ — Ammosov 92B, Sakai 89, Shaw 89, Gan 88
$\mu^+ \; e^- \; \nu_\mu$ — Gan 88
$\tau^+ \; e^- \; \nu_\tau$ — Sakai 89, Shaw 89
$\tau^+ \; \mu^- \; \nu_\tau$ — Sakai 89, Shaw 89
$\ell^- \; q \; q$ — Abreu 91N
$e^- \; q \; \bar{q}$ — Sakai 89, Shaw 89
$\mu^- \; q \; q$ — Sakai 89, Shaw 89
$\mu^+ \; e^- \; \nu_\tau \; \nu_\mu \; \bar{\nu}_e$ — Gan 88

heavy-lepton^0

Abreu 91N, Dydak 91

heavy-lepton^0

Adeva 90N, Akrawy 90I, Burchat 90, Fujii 90, Innes 90, Abrams 89F, Decamp 89E, Behrend 88C
$e^- \; e^+ \; \bar{\nu}_e$ — Sakai 89, Shaw 89
$\mu^+ \; e^- \; \bar{\nu}_e$ — Sakai 89, Shaw 89, Gan 88
$\mu^- \; e^+ \; \bar{\nu}_\mu$ — Gan 88
$\tau^- \; e^+ \; \bar{\nu}_\tau$ — Sakai 89, Shaw 89
$\tau^- \; \mu^+ \; \bar{\nu}_\tau$ — Sakai 89, Shaw 89
$e^+ \; q \; \bar{q}$ — Sakai 89, Shaw 89
$\mu^+ \; q \; \bar{q}$ — Sakai 89, Shaw 89
$\mu^- \; e^+ \; \bar{\nu}_\tau \; \bar{\nu}_\mu \; \nu_e$ — Gan 88

heavy-lepton$^-$

Dydak 91, Adeva 90N, Akrawy 90B, Soderstrom 90, Vankooten 90, Akrawy 89D, Decamp 89E, Kim 89E, Adachi 88B, Dowell 88, Kamae 88, Ko 88, Maki 88, Maki 88B, Unno 88, Yamauchi 88
ν X — Abe 88D
ν (hadrons) — Kim 90C
e^- X — Kim 90C
μ^- X — Kim 90C
heavy-lepton^0 X — Fujii 90
ν hadron (hadrons) — Gan 88, Igarashi 87
$\ell^- \; \nu$ X — Dydak 91
ν 2hadron (hadrons) — Kim 88D, Sumiyoshi 88
2ℓ (leptons) ν — Kim 88D
$\pi^- \; \nu$ — Mathis 88
$d \; \bar{u}$ — Albajar 89B
π^- heavy-lepton^0 — Riles 89, Riles 89B
$\rho(770)^-$ heavy-lepton^0 — Riles 89, Riles 89B
$a_1(1260)^-$ heavy-lepton^0 — Riles 89

heavy-lepton$^-$

K^- heavy-lepton^0 — Riles 89
$K^*(892)^-$ heavy-lepton^0 — Riles 89
$\ell^- \; \nu \; \bar{\nu}$ — Adachi 89B
$e^- \; \nu_e \; \nu$ — Fujii 90, Behrend 88C
$e^- \; \bar{\nu}_e \; \nu$ — Gan 88, Mathis 88
$\mu^- \; \nu_\mu \; \nu$ — Fujii 90, Behrend 88C
$\mu^- \; \bar{\nu}_\mu \; \nu$ — Gan 88, Mathis 88
$\tau^- \; \nu_\tau \; \nu$ — Fujii 90, Behrend 88C
$e^- \; \bar{\nu}_e$ heavy-lepton^0 — Riles 89, Riles 89B
$\mu^- \; \bar{\nu}_\mu$ heavy-lepton^0 — Riles 89, Riles 89B
$\nu \; q \; \bar{q}$ — Fujii 90, Behrend 88C, Shirai 88
$\nu \; \bar{c} \; s$ — Albajar 89B

heavy-lepton$^+$

Dydak 91, Adeva 90N, Akrawy 90B, Fujii 90, Soderstrom 90, Vankooten 90, Akrawy 89D, Decamp 89E, Kim 89E, Riles 89, Riles 89B, Adachi 88B, Dowell 88, Kamae 88, Ko 88, Maki 88, Maki 88B, Unno 88, Yamauchi 88
$\bar{\nu}$ X — Abe 88D
$\bar{\nu}$ (hadrons) — Kim 90C
e^+ X — Kim 90C
μ^+ X — Kim 90C
$\bar{\nu}$ hadron (hadrons) — Gan 88, Igarashi 87
$\ell^+ \; \nu$ X — Dydak 91
$\bar{\nu}$ 2hadron (hadrons) — Kim 88D, Sumiyoshi 88
2ℓ (leptons) $\bar{\nu}$ — Kim 88D
$\pi^+ \; \bar{\nu}$ — Mathis 88
$\bar{d} \; u$ — Albajar 89B
$\ell^+ \; \nu \; \bar{\nu}$ — Adachi 89B
$e^+ \; \nu_e \; \bar{\nu}$ — Fujii 90, Behrend 88C, Gan 88, Mathis 88

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

heavy-lepton$^+$

$\mu^+ \nu_\mu \bar{\nu}$
Fujii 90
Behrend 88C
Gan 88
Mathis 88

$\tau^+ \nu_\tau \bar{\nu}$
Fujii 90
Behrend 88C

$\bar{\nu}\, q\, \bar{q}$
Fujii 90
Pauss 89
Behrend 88C
Shirai 88

$\bar{\nu}\, c\, \bar{s}$
Albajar 89B

heavy-e

$e^\pm \gamma$
Dolinsky 89B

q

Abe 92J
Adriani 92D
Adriani 92G
Adriani 92N
Barbarogalti 92
Buskulic 92M
Gross 92B
Madaras 92
Mishra 92
Sinervo 92
Sopczak 92
Tsuboyama 92
Yeh 92
Abe 91K
Abreu 91K
Abreu 91M
Abreu 91N
Acton 91J
Adachi 91
Adeva 91H
Alexander 91B
Alitti 91D
Barbarogalti 91
Campagnari 91
Decamp 91B
Decamp 91M
Dydak 91
Goobar 91
Kuhlmann 91
Liss 91
Maki 91
Sawyer 91
Simon 91
Abe 90I
Abreu 90F
Contreras 90
Ellis 90
Fujii 90
Janot 90
Matis 90B
Miyamoto 90
Sakai 90
Unal 90
Vankooten 90
Vinson 90
Yeh 90
Abe 89G
Abe 89J
Adachi 89
Adachi 89B
Alitti 89
Barbarogalti 89
Bowcock 89B
Calloway 89
Decamp 89E
Eno 89B
Eno 89C
Geichgimbel 89
Gilman 89
Low 89
Meier 89
Myung 89
Pauss 89
Pitzl 89
Sakai 89
Shaw 89
Allasia 88B
Behrend 88C
Hoffmann 88
Kamae 88
Kim 88
Matis 88
Plothowbesch 88
Shirai 88
Takahashi 88
Unno 88

$e^\pm$ **X**
Igarashi 87

$\mu^\pm$ **X**
Igarashi 87

mult[charged] X
Alam 92

mult[charged] (neutrals)
Abreu 92C
Chliapnikov 92

mult[charged-hadron] (neutrals)
Acton 93
Alexander 91H
Mattig 91

charged X
Abe 90H
Maki 88B
Tao 88

jet X
Decamp 92C

hadron X
Deboer 89

hadron (hadrons)
Braunschweig 89E

η **X**
Adriani 92C

jet < charged X >
Takaki 93
Acton 92K
Hebbeker 91
Yepes 91

2hadron (hadrons)
Abe 90H
Sagawa 88

jet
Acton 93
Alexander 91H
Mattig 91
Fujii 90
Kim 90B
Kim 89C

$\ell^\pm$ **jet**
Acton 93
Alexander 91H
Mattig 91

$\bar{q}$

Acton 93
Takaki 93
Abe 92J
Adriani 92C
Adriani 92D
Adriani 92G
Adriani 92N
Barbarogalti 92
Chliapnikov 92
Decamp 92C
Gross 92B
Sinervo 92
Sopczak 92
Tsuboyama 92
Yeh 92
Abe 91K
Abreu 91K
Abreu 91M
Abreu 91N
Acton 91J
Adachi 91
Adeva 91H
Alexander 91H
Barbarogalti 91
Campagnari 91
Decamp 91B
Decamp 91M
Dydak 91
Goobar 91
Kuhlmann 91
Liss 91
Maki 91
Mattig 91
Sawyer 91
Yepes 91
Abe 90I
Abreu 90F
Contreras 90
Ellis 90
Fujii 90
Janot 90
Kim 90B
Miyamoto 90
Unal 90
Vankooten 90
Vinson 90
Yeh 90
Abe 89G
Abe 89J
Adachi 89
Adachi 89B
Alitti 89
Barbarogalti 89
Bowcock 89B
Decamp 89E
Eno 89B
Eno 89C
Gilman 89
Low 89
Meier 89
Myung 89
Pauss 89
Pitzl 89
Sakai 89
Shaw 89
Behrend 88C
Kamae 88
Kim 88
Ouldsaada 88B
Shirai 88
Takahashi 88

$e^\pm$ **X**
Igarashi 87

$\mu^\pm$ **X**
Igarashi 87

mult[charged] X
Alam 92

jet < charged X >
Acton 92K

2hadron (hadrons)
Sagawa 88

u

Abreu 92H
Acton 92Q
Cosmo 92
Eerola 92
Moulding 92
Adeva 91B
Albrecht 91I
Alexander 91D
Bortolotto 91
Deangelis 91B
Dydak 91
Albrecht 90D
Breakstone 90
Gray 90
Miller 90
Albajar 89B
Artuso 89B
Eno 89B
Fulton 89C
Kreinick 89
Miller 89

$\bar{u}$

Abreu 92H
Acton 92Q
Cosmo 92
Eerola 92
Alexander 91D
Bortolotto 91
Deangelis 91B
Dydak 91
Gray 90
Albajar 89B
Eno 89B

d

Abreu 92H
Acton 92Q
Cosmo 92
Eerola 92
Moulding 92
Adeva 91B
Alexander 91D
Bortolotto 91
Deangelis 91B
Dydak 91
Breakstone 90
Albajar 89B
Eno 89B

$\bar{d}$

Abreu 92H
Acton 92Q
Cosmo 92
Eerola 92
Alexander 91D
Bortolotto 91
Deangelis 91B
Dydak 91
Albajar 89B
Eno 89B

s

Abreu 92H
Acton 92Q
Adriani 92I
Adriani 92J
Cosmo 92
Eerola 92
Sopczak 92B
Sopczak 92C
Adeva 91B
Alexander 91D
Bortolotto 91
Deangelis 91B
Lesiak 91
Akrawy 90D
Cowen 90
Decamp 90O
Miyamoto 90
Myung 90
Albajar 89B
Albrecht 89L
Albrecht 89S
Eno 89B

$\bar{s}$

Abreu 92H
Acton 92Q
Adriani 92I
Adriani 92J
Cosmo 92
Eerola 92
Felcini 92
Sopczak 92B
Sopczak 92C
Alexander 91D
Bortolotto 91
Deangelis 91B
Simon 91
Abreu 90P
Akrawy 90D
Albajar 90H
Cowen 90
Decamp 90O
Myung 90
Albajar 89B
Albrecht 89L
Albrecht 89S
Eno 89B

c

Hinode 93
Abreu 92H
Acton 92Q
Adriani 92I
Adriani 92J
Alvarez 92
Ammosov 92B
Appel 92
Benedic 92
Blumlein 92
Blumlein 92B
Cosmo 92
Eerola 92
Felcini 92
Settles 92
Sopczak 92B
Sopczak 92C
Tsuboyama 92
Adeva 91B
Albrecht 91I
Alexander 91D
Bortolotto 91
Geerts 91
Kanzaki 91
Maki 91
Rossi 91
Simon 91
Abe 90H
Abreu 90
Abreu 90C
Abreu 90N
Abreu 90P
Akrawy 90D
Albajar 90E
Albajar 90H
Behrend 90
Cowen 90
Decamp 90C
Decamp 90O
Elsen 90
Fransson 90
Innes 90
Kroha 90C
Unal 90
Vankooten 90
Wormser 90B
Abrams 89F
Adachi 89E
Albajar 89B
Artuso 89B
Botner 89
Eno 89B
Eno 89C
Ouldsaada 88B

ℓ^+ **X**
Deangelis 91B
Tenchini 90

e^+ **X**
Dydak 91
Kroha 90
Kroha 89B
Marshall 89

$\mu^\pm$ **X**
Akrawy 91C
Mattig 91

μ^- **X**
Pauss 89

μ^+ **X**
Albajar 91
Dydak 91
Spiegel 91
Ellis 90
Kroha 90
Kroha 89B
Marshall 89

jet X
Kroha 89B

hadron X
Alexander 91
Mattig 91
Itoh 90
Marshall 89

π^+ **X**
Dydak 91

c

D^0 **X**
Okamoto 91

$D^*(2010)^\pm$ **X**
Capon 91

$D^*(2010)$ **X**
Itoh 90

$D^*(2010)^+$ **X**
Shirai 91

ℓ^+ **hadron (hadrons)**
Behrend 89J

$e^-\ e^+$ **X**
Haas 88

$\mu^-\ e^+$ **X**
Haas 88

$\mu^+\ e^-$ **X**
Haas 88

$\mu^-\ \mu^+$ **X**
Haas 88

ℓ **jet**
Akrawy 91B
Mattig 91

e^+ **jet**
Decamp 91G

μ^+ **jet** + e^+ **jet**
Adriani 92E

μ^+ **jet**
Decamp 91G

$\mu^+\ \nu_\mu\ s$
Myung 90

$2q\ \bar{q}$
Ellis 90

$\bar{c}$

Hinode 93
Abreu 92H
Acton 92Q
Adriani 92E
Adriani 92I
Adriani 92J
Alvarez 92
Ammosov 92B
Appel 92
Benedic 92
Cosmo 92
Eerola 92
Settles 92
Sopczak 92B
Sopczak 92C
Tsuboyama 92
Akrawy 91C
Alexander 91
Alexander 91D
Bortolotto 91
Capon 91
Deangelis 91B
Decamp 91G
Geerts 91
Kanzaki 91
Maki 91
Mattig 91
Okamoto 91
Shirai 91
Abe 90H
Abreu 90
Abreu 90C
Abreu 90N
Akrawy 90D
Behrend 90
Cowen 90
Decamp 90C
Decamp 90O
Elsen 90
Fransson 90
Kroha 90
Kroha 90C
Miyamoto 90
Tenchini 90
Wormser 90B
Albajar 89B
Botner 89
Eno 89B
Ouldsaada 88B

e^- **X**
Dydak 91

$\bar{c}$

Kroha 89B
Marshall 89

μ^- **X**
Dydak 91
Spiegel 91
Ellis 90
Kroha 89B
Marshall 89

μ^+ **X**
Pauss 89

jet X
Kroha 89B

π^- **X**
Dydak 91

$\bar{D}^*(2010)$ **X**
Itoh 90

ℓ^- **hadron (hadrons)**
Behrend 89J

ℓ **jet**
Akrawy 91B

$\mu^-\ \bar{\nu}_\mu\ \bar{s}$
Myung 90

$q\ 2\bar{q}$
Ellis 90

b

Abe 92
Abe 92G
Abreu 92H
Acton 92B
Acton 92Q
Adriani 92I
Adriani 92J
Alitti 92
Barbarogalti 92
Brandl 92
Cosmo 92
Eerola 92
Madaras 92
Settles 92
Sopczak 92B
Sopczak 92C
Tsuboyama 92
Adeva 91B
Akrawy 91B
Alexander 91D
Barbarogalti 91
Bortolotto 91
Decamp 91D
Decamp 91M
Jacobsen 91
Jacobsen 91B
Kanzaki 91
Koetke 91
Liss 91
Simon 91
Abe 90G
Abe 90H
Abe 90I
Abreu 90
Abreu 90K
Adachi 90E
Adeva 90M
Adeva 90T
Akesson 90C
Albajar 90E
Albajar 90H
Barbarogalti 90
Behrend 90
Contreras 90
Cowen 90
Decamp 90C
Decamp 90E
Elsen 90
Frisch 90
Fujii 90
Haissinski 90
Innes 90
Kroha 90C
Lim 90B
Odowd 90
Sliwa 90
Tuominiemi 90
Unal 90

b

Vankooten 90
Abe 89G
Abrams 89F
Adachi 89E
Barbarogalti 89
Eno 89B
Eno 89C
Felcini 89
Kral 89
Nozaki 89
Ng 88
Ouldsaada 88B
Plothowbesch 88

ℓ **X**
Abreu 92
Adeva 91C
Mattig 91

ℓ^- **X**
Abreu 92L
Deangelis 91B
Trischuk 91
Tenchini 90

$e^\pm$ **X**
Maki 91

e^- **X**
Acton 92J
Barbarogalti 92
Yeh 92
Adeva 91F
Campagnari 91
Capon 91
Dydak 91
Nagai 91
Braunschweig 90C
Frisch 90
Itoh 90
Kroha 90
Kroha 89B

e^+ **X**
Yeh 92
Marshall 89

$\mu^\pm$ **X**
Abreu 91Q
Akrawy 91C
Maki 91
Mattig 91

μ^- **X**
Huffman 92
Abe 91G
Abe 91K
Adeva 91F
Albajar 91
Capon 91
Dydak 91
Felcini 91
Shimonaka 91
Adeva 90D
Braunschweig 90C
Ellis 90
Frisch 90
Itoh 90
Kim 90D
Kroha 90
Tenchini 90
Yeh 90
Kroha 89B
Pauss 89

μ^+ **X**
Contreras 91
Felcini 91
Contreras 90
Marshall 89

mult[charged] (neutrals)
Braunschweig 89C

jet X
Nagai 91
Braunschweig 89C
Kroha 89B

hadron X
Adeva 91C
Mattig 91
Itoh 90

hadron (hadrons)
Trischuk 91

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

b

charged-hadron X
Schumm 92
u X
Albrecht 90D
Artuso 89B
Kreinick 89
Miller 89
$D^*(2010)^\pm$ X
Capon 91
$J/\psi(1S)$ X
Adriani 92D
Boswell 92
Fuess 92
Papadimitrio 92
Albajar 91
Alexander 91I
Pauss 89
$\psi(2S)$ X
Fuess 92
Papadimitrio 92
B^+ X
Yeh 92
$\bar{B}^0$ X
Adeva 92
$\bar{B}^0$ (hadrons)
Buskulic 92E
Patton 91
B_S X
Acton 92M
$\bar{B}_S$ X
Adeva 92
$\bar{B}_S$ (hadrons)
Buskulic 92E
Patton 91
Λ_b X
Acton 92I
Buskulic 92G
Decamp 91Q
ℓ^- mult[charged] (neutrals)
Acton 92P
ℓ^- hadron (hadrons)
Behrend 89J
$\ell\ \nu$ X
Adriani 93B
e^- jet X
Rollnik 92
Shirai 91
$e^-\ \bar{\nu}_e$ X
Abreu 92D
μ^- jet X
Shirai 91
μ^+ jet X
Yeh 92
$\mu^\pm$ hadron (hadrons)
Kim 89E
$\mu^-\ \bar{\nu}_\mu$ X
Abreu 92D
$\tau^-\ \bar{\nu}_\tau$ X
Buskulic 92K
$\mu^-\ c$ X
Albajar 91
$D\ e^+$ X
Yeh 92
2hadron (hadrons)
Ogawa 89
e^- 2hadron (hadrons)
Dydak 91
$e^-\ \bar{\nu}_e$ hadron (hadrons)
Shirakata 91
μ^- 2hadron (hadrons)
Sagawa 89
$\mu^-\ \bar{\nu}_\mu$ hadron (hadrons)
Shirakata 91
ℓ jet
Adeva 91C
Mattig 91
ℓ^- jet
Acton 93F
$e^\pm$ jet
Adeva 91J

b

e^- jet
Acton 93F
Decamp 91G
μ^- jet
Acton 93F
Decamp 91G
μ^- jet + e^- jet
Adriani 92E
$\gamma\ s$
Lesiak 91
Albrecht 89L
s gluon
Albrecht 89S
$\ell\ \nu\ u$
Artuso 89B
$\ell^-\ \bar{\nu}\ u$
Gray 90
$e^-\ \bar{\nu}_e\ u$
Albrecht 91I
Miller 90
Fulton 89C
$\mu^-\ \bar{\nu}_\mu\ u$
Albrecht 91I
Miller 90
Fulton 89C
$\ell\ \nu\ c$
Artuso 89B
$e^-\ \bar{\nu}_e\ c$
Albrecht 91I
$\mu^-\ \nu_\mu\ c$
Albrecht 91I
Myung 90
3jet
Braunschweig 90C
$2q\ \bar{q}$
Ellis 90

$\bar{b}$

Acton 93F
Adriani 93B
Abreu 92
Abreu 92H
Abreu 92L
Acton 92B
Acton 92J
Acton 92M
Acton 92Q
Adriani 92D
Adriani 92E
Adriani 92I
Adriani 92J
Alitti 92
Barbarogalti 92
Brandl 92
Buskulic 92G
Cosmo 92
Eerola 92
Rollnik 92
Settles 92
Sopczak 92B
Sopczak 92C
Tsuboyama 92
Adeva 91C
Akrawy 91B
Akrawy 91C
Alexander 91D
Alexander 91I
Barbarogalti 91
Bortolotto 91
Capon 91
Deangelis 91B
Decamp 91D
Decamp 91G
Decamp 91M
Decamp 91Q
Dydak 91
Jacobsen 91
Jacobsen 91B
Kanzaki 91
Koetke 91
Maki 91
Mattig 91
Shirai 91

$\bar{b}$

Shirakata 91
Abe 90G
Abe 90H
Abe 90I
Abreu 90
Abreu 90K
Adeva 90M
Adeva 90T
Albajar 90E
Albajar 90H
Barbarogalti 90
Behrend 90
Braunschweig 90C
Cowen 90
Decamp 90C
Decamp 90E
Elsen 90
Frisch 90
Haissinski 90
Kroha 90
Kroha 90C
Lim 90B
Sliwa 90
Tenchini 90
Tuominiemi 90
Abe 89G
Barbarogalti 89
Eno 89B
Felcini 89
Kral 89
Nozaki 89
Ng 88
Ouldsaada 88B
Plothowbesch 88
ℓ^+ X
Trischuk 91
e^- X
Marshall 89
e^+ X
Adeva 91F
Campagnari 91
Dydak 91
Nagai 91
Frisch 90
Itoh 90
Kroha 89B
$\mu^\pm$ X
Abreu 91Q
μ^- X
Marshall 89
μ^+ X
Adeva 91F
Dydak 91
Shimonaka 91
Adeva 90D
Ellis 90
Frisch 90
Itoh 90
Kim 90D
Yeh 90
Kroha 89B
Pauss 89
mult[charged] (neutrals)
Braunschweig 89C
jet X
Nagai 91
Braunschweig 89C
Kroha 89B
hadron (hadrons)
Trischuk 91
charged-hadron X
Schumm 92
$J/\psi(1S)$ X
Pauss 89
B^0 X
Adeva 92
B^- X
Yeh 92
B^0 (hadrons)
Buskulic 92E
Patton 91
B_S X
Adeva 92

$\bar{b}$

B_S (hadrons)
Buskulic 92E
Patton 91
$\bar{\Lambda}_b$ X
Acton 92I
ℓ^+ mult[charged] (neutrals)
Acton 92P
ℓ^+ hadron (hadrons)
Behrend 89J
$e^+\ \nu_e$ X
Abreu 92D
μ^- jet X
Yeh 92
$\mu^\pm$ hadron (hadrons)
Kim 89E
$\mu^+\ \nu_\mu$ X
Abreu 92D
$\bar{D}\ e^-$ X
Yeh 92
2hadron (hadrons)
Ogawa 89
μ^+ 2hadron (hadrons)
Sagawa 89
$e^\pm$ jet
Adeva 91J
$\gamma\ \bar{s}$
Albrecht 89L
$\bar{s}$ gluon
Albrecht 89S
$\ell^+\ \nu\ \bar{u}$
Gray 90
$\mu^+\ \nu_\mu\ \bar{c}$
Myung 90
$q\ 2\bar{q}$
Ellis 90

t

Dydak 91
Kuhlmann 91
Abreu 90B
Akrawy 89B
Decamp 89E
Sinervo 89
Plothowbesch 88
e^- X
Yeh 92
e^+ X
Abe 91K
Ellis 90
Frisch 90
Geer 89
Myung 89
Pauss 89
Tonelli 89
μ^- X
Yeh 92
μ^+ X
Abe 91K
Ellis 90
Frisch 90
Tuominiemi 90
Geer 89
Pauss 89
Tonelli 89
b X
Innes 90
Abrams 89F
$e^+\ \nu_e$ X
Abe 91G
Pauss 89
$e^-\ \bar{\nu}_e$ X
Contreras 91
Sliwa 91
μ^+ jet X
Frisch 90
Tuominiemi 90
$\mu^-\ e^+$ X
Frisch 90
$\mu^-\ \nu_\mu$ X
Contreras 91
Sliwa 91

t

$\mu^+ \nu_\mu$ **X**
Abe 91G
$\mu^- \mu^+$ **X**
Frisch 90
$e^- b$ **X**
Yeh 92
$\mu^- b$ **X**
Yeh 92
2hadron (hadrons)
Ogawa 89
e^+ **(jets) jet X**
Pauss 89
μ^+ **(jets) jet X**
Pauss 89
μ^+ **2jet X**
Tuominiemi 90
b **higgs**$^+$
Alitti 92
Felcini 91
Simon 91
Albajar 90H
Innes 90
Odowd 90
Vankooten 90
Abrams 89F
Felcini 89
$W^+ b$
Barbarogalti 92
Madaras 92
Barbarogalti 89
$e^- \bar{\nu}_e$ **jet**
Contreras 91
Sliwa 91
$\ell^+ \nu b$
Simon 91
$e^+ \nu_e b$
Barbarogalti 92
Barbarogalti 91
Campagnari 91
Liss 91
Abe 90G
Akesson 90C
Barbarogalti 90
Frisch 90
Odowd 90
Sliwa 90
Unal 90
Yeh 90
Barbarogalti 89
$e^- \bar{\nu}_e b$
Contreras 91
Contreras 90
$\mu^+ \nu_e b$
Barbarogalti 92
$\mu^+ \nu_\mu b$
Barbarogalti 91
Campagnari 91
Liss 91
Abe 90G
Albajar 90E
Albajar 90H
Barbarogalti 90
Odowd 90
Sliwa 90
Yeh 90
$\mu^- \bar{\nu}_\mu b$
Contreras 90
$\tau^+ \nu_\tau b$
Odowd 90
$3q$
Contreras 90
b **2jet**
Abe 91G
Contreras 91
Odowd 90
$b\, q\, \bar{q}$
Barbarogalti 92
Abe 91K
Barbarogalti 91
Campagnari 91
Liss 91
Abe 90I

t

Vankooten 90
Yeh 90
Abe 89G
$e^+ \bar{\nu}_e$ **2jet**
Tuominiemi 90

$\bar{t}$

Alitti 92
Madaras 92
Abe 91G
Abe 91K
Contreras 91
Dydak 91
Kuhlmann 91
Liss 91
Simon 91
Sliwa 91
Abreu 90B
Albajar 90E
Albajar 90H
Contreras 90
Innes 90
Odowd 90
Vankooten 90
Abrams 89F
Akrawy 89B
Barbarogalti 89
Decamp 89E
Pauss 89
Plothowbesch 88
e^- **X**
Frisch 90
Tonelli 89
e^+ **X**
Yeh 92
μ^- **X**
Frisch 90
Tuominiemi 90
Myung 89
Tonelli 89
μ^+ **X**
Yeh 92
μ^- **jet X**
Frisch 90
Tuominiemi 90
$\mu^+ e^-$ **X**
Frisch 90
$\mu^- \mu^+$ **X**
Frisch 90
$e^+ \bar{b}$ **X**
Yeh 92
$\mu^+ \bar{b}$ **X**
Yeh 92
2hadron (hadrons)
Ogawa 89
μ^- **2jet X**
Tuominiemi 90
$\bar{b}$ **higgs**$^-$
Felcini 89
$e^- \bar{\nu}_e \bar{b}$
Barbarogalti 92
Barbarogalti 91
Campagnari 91
Abe 90G
Abe 90I
Barbarogalti 90
Frisch 90
Sliwa 90
Yeh 90
Abe 89G
$\mu^- \bar{\nu}_\mu \bar{b}$
Barbarogalti 92
Barbarogalti 91
Campagnari 91
Abe 90G
Barbarogalti 90
Sliwa 90
Yeh 90
$\bar{b}\, q\, \bar{q}$
Barbarogalti 91
Campagnari 91
Yeh 90
$e^- \nu_e$ **2jet**
Tuominiemi 90

b'

Dydak 91
Abreu 90B
Akrawy 89B
Weinstein 89
e^+ **X**
Ellis 90
μ^+ **X**
Ellis 90
c **X**
Innes 90
Abrams 89F
μ^- **jet X**
Tuominiemi 90
e^- **(jets) jet X**
Pauss 89
μ^- **(jets) jet X**
Pauss 89
c **higgs**$^-$
Innes 90
Vankooten 90
Abrams 89F
$\gamma\, q$
Abe 89J
$W^+ c$
Adachi 89E
$W^- c$
Eno 89C
$\gamma\, b$
Adachi 90E
Innes 90
Vankooten 90
Abrams 89F
Eno 89B
Eno 89C
b **gluon**
Adachi 90E
Innes 90
Abrams 89F
Adachi 89E
Eno 89B
Eno 89C
$e^- \bar{\nu}_e c$
Unal 90
Eno 89B
$\mu^- \nu_\mu c$
Albajar 90E
$\mu^- \bar{\nu}_\mu c$
Eno 89B
$\tau^- \bar{\nu}_\tau c$
Eno 89B
$c\, d\, \bar{u}$
Eno 89B
$\bar{c}\, c\, s$
Eno 89B
b **2gluon**
Eno 89B
$b\, q\, \bar{q}$
Vankooten 90
Eno 89B
Eno 89C

$\bar{b}'$

Dydak 91
Abreu 90B
Innes 90
Vankooten 90
Abrams 89F
Akrawy 89B
Eno 89C
μ^+ **jet X**
Tuominiemi 90
$\gamma\, \bar{q}$
Abe 89J
$\gamma\, \bar{b}$
Eno 89B
$\bar{b}$ **gluon**
Eno 89B
$e^+ \nu_e \bar{c}$
Eno 89B
$\mu^+ \nu_\mu \bar{c}$
Eno 89B
$\tau^+ \nu_\tau \bar{c}$
Eno 89B

$\bar{b}'$

$\bar{c}\, \bar{d}\, u$
Eno 89B
$\bar{c}\, c\, \bar{s}$
Eno 89B
$\bar{b}$ **2gluon**
Eno 89B
$\bar{b}\, q\, \bar{q}$
Eno 89B

gaugino

$e^- \bar{\nu}_e$ **photino +**
$e^+ \nu_e$ **photino**
Yamauchi 89
$\mu^- \bar{\nu}_\mu$ **photino +**
$\mu^+ \nu_\mu$ **photino**
Yamauchi 88
$\tau^- \bar{\nu}_\tau$ **photino +**
$\tau^+ \nu_\tau$ **photino**
Yamauchi 88

neutralino

Dydak 91
ν **majoron**
Mori 91C

chargino

ℓ^- **X**
Abreu 90Q
ℓ^+ **X**
Abreu 90Q

chargino$^+$

Abreu 90I
Adachi 90D
Adachi 89
$e^+ \nu_e$ **photino**
Adachi 89B
Takahashi 88
$\mu^+ \nu_\mu$ **photino**
Adachi 89B
Takahashi 88
$\tau^+ \nu_\tau$ **photino**
Adachi 89B
Takahashi 88
$q\, \bar{q}$ **photino**
Adachi 89B
Takahashi 88

chargino$^-$

Abreu 90I
Adachi 90D
$e^- \bar{\nu}_e$ **photino**
Adachi 89
Adachi 89B
Takahashi 88
$\mu^- \bar{\nu}_\mu$ **photino**
Adachi 89
Adachi 89B
Takahashi 88
$\tau^- \bar{\nu}_\tau$ **photino**
Adachi 89
Adachi 89B
Takahashi 88
$q\, \bar{q}$ **photino**
Adachi 89
Adachi 89B
Takahashi 88

photino

Kuhlmann 91
Akesson 90B
Contreras 90
Geer 90
Sakai 90
Scarha 90
Taketani 90
Unal 90
Adachi 89
Adachi 89B
Albajar 89B
Alitti 89
Decamp 89D

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

photino

Pauss 89
Sakai 89
Steele 89
Gan 88
Kamae 88
Plothowbesch 88
Takahashi 88
Yamauchi 88

γ higgsino

Abe 89F
Pauss 89

γ goldstino

Abe 89F

wino$^+$

Abreu 90I
Chen 90
Adeva 89B

$e^+ \tilde{\nu}_e$

Akesson 90B
Contreras 90
Geer 90

$e^+ \tilde{\bar{\nu}}_e$

Pauss 89

$e^+ \nu_e$ photino

Decamp 89D

$\mu^+ \nu_\mu$ photino

Decamp 89D

$\tau^+ \nu_\tau$ photino

Decamp 89D

wino$^-$

Abreu 90I
Chen 90
Adeva 89B
Steele 89

$e^- \tilde{\nu}_e$

Pauss 89

$e^- \tilde{\bar{\nu}}_e$

Akesson 90B
Contreras 90
Geer 90

$e^- \bar{\nu}_e$ photino

Decamp 89D

$\mu^- \bar{\nu}_\mu$ photino

Decamp 89D

$\tau^- \bar{\nu}_\tau$ photino

Decamp 89D

gluino

Dydak 91
Sinervo 89
Dowell 88

(jets) 2jet X

Laasanen 91
Scarha 90

gluon photino

Pauss 89

$q\ \tilde{q}$

Pauss 89
Plothowbesch 88

photino $\tilde{q}$

Plothowbesch 88

$q\ \bar{q}$ photino

Kuhlmann 91
Contreras 90
Unal 90
Alitti 89

higgsino

Abe 89F
Pauss 89
Kamae 88

jet X

Sakai 90

higgsino$^+$

Abreu 90I

higgsino$^-$

Abreu 90I

goldstino

Abe 89F

higgs($CP = -1$)

Felcini 92
Sopczak 92
Decamp 91M
Adeva 90M
Haissinski 90
Komamiya 90B
Renton 90

2hadron (hadrons)

Decamp 89H

$e^-\ e^+$

Buskulic 92B

$\mu^-\ \mu^+$

Komamiya 89

$\tau^-\ \tau^+$

Adriani 92I
Adriani 92J
Sopczak 92B
Sopczak 92C
Abreu 91J
Abreu 90
Abreu 90C
Akrawy 90N
Decamp 89H

2jet

Abreu 91J
Decamp 91I
Abreu 90C
Akrawy 90N

hadron$^+$ hadron$^-$

Decamp 89H

2γ

Buskulic 92B

$\bar{c}\ c$

Abreu 90
Abreu 90C

$\bar{b}\ b$

Adriani 92I
Adriani 92J
Sopczak 92B
Sopczak 92C
Cowen 90

higgs($CP = +1$)

Felcini 92
Sopczak 92
Adeva 90M
Haissinski 90
Komamiya 90B
Renton 90

2hadron (hadrons)

Decamp 89H

$\ell^+\ \ell^-$

Decamp 91I

$e^-\ e^+$

Decamp 89H

$\mu^-\ \mu^+$

Decamp 89H

$\tau^-\ \tau^+$

Abreu 91J
Decamp 91I
Abreu 90
Abreu 90C
Akrawy 90N
Decamp 89H

2jet

Abreu 91J
Decamp 91I
Abreu 90C
Akrawy 90N

hadron$^+$ hadron$^-$

Decamp 89H

$\bar{c}\ c$

Abreu 90
Abreu 90C

$\bar{b}\ b$

Abreu 90
Cowen 90

2higgs($CP = -1$)

Buskulic 92B
Decamp 91I

higgs$^\pm$

$q\ \bar{q}$

Vinson 90

higgs$^+$

Sopczak 92
Adeva 90P
Innes 90
Miyamoto 90
Renton 90
Smith 90
Vankooten 90
Abrams 89F
Kim 89E

2jet X

Ouldsaada 88B

$\ell^+\ \nu$

Yuzuki 91
Scarha 90

$\tau^+\ \nu_\tau$

Adriani 92I
Adriani 92J
Alitti 92
Felcini 92
Sopczak 92B
Sopczak 92C
Decamp 91M
Dydak 91
Felcini 91
Abreu 90
Abreu 90P
Adachi 90C
Akrawy 90D
Albajar 90H
Cowen 90
Decamp 90O
Odowd 90
Vinson 90
Wormser 90B
Felcini 89
Ouldsaada 88B

2jet

Yuzuki 91
Abreu 90
Odowd 90
Wormser 90B

$q\ \bar{q}$

Decamp 91M

$c\ \bar{q}$

Ouldsaada 88B

$c\ \bar{s}$

Adriani 92I
Adriani 92J
Felcini 92
Sopczak 92B
Sopczak 92C
Simon 91
Abreu 90P
Akrawy 90D
Albajar 90H
Cowen 90
Decamp 90O

higgs$^-$

Felcini 92
Sopczak 92
Abreu 90P
Adachi 90C
Adeva 90P
Innes 90
Renton 90
Vankooten 90
Abrams 89F
Kim 89E
Ouldsaada 88B

$\ell^-\ \bar{\nu}$

Yuzuki 91

$\tau^-\ \bar{\nu}_\tau$

Adriani 92I
Adriani 92J
Sopczak 92B
Sopczak 92C
Decamp 91M
Dydak 91
Abreu 90

higgs$^-$

Akrawy 90D
Cowen 90
Decamp 90O
Miyamoto 90
Smith 90
Vinson 90
Wormser 90B
Felcini 89

2jet

Yuzuki 91
Abreu 90
Wormser 90B

$q\ \bar{q}$

Decamp 91M

$\bar{c}\ s$

Adriani 92I
Adriani 92J
Sopczak 92B
Sopczak 92C
Akrawy 90D
Cowen 90
Decamp 90O
Miyamoto 90

$\tilde{\ell}$

Dowell 88

ℓ^- X

Abreu 90Q

ℓ^+ X

Abreu 90Q

$\tilde{\ell}^-$

Abreu 90I
Adachi 90D
Soderstrom 90
Decamp 89D
Pauss 89

$\tilde{\ell}^+$

Abreu 90I
Adachi 90D
Soderstrom 90
Decamp 89D
Pauss 89

$\tilde{\nu}$

Pauss 89

ν photino

Albajar 89B

$\tilde{\bar{\nu}}$

Pauss 89

$\bar{\nu}$ photino

Albajar 89B

$\tilde{\nu}_e$

Akesson 90B
Contreras 90
Geer 90
Pauss 89
Steele 89
Stubenrauch 89

$\tilde{\bar{\nu}}_e$

Akesson 90B
Contreras 90
Geer 90
Pauss 89
Stubenrauch 89

$\tilde{e}$

$e^\pm$ photino

Scarha 90

$\tilde{e}^-$

Abreu 90I
Chen 90
Sakai 90
Adeva 89B
Akrawy 89E
Steele 89
Stubenrauch 89
Kamae 88

$\tilde{e}^-$

Yamauchi 88

e^- neutralino

Dydak 91

e^- photino

Akesson 90B
Contreras 90
Geer 90
Taketani 90
Adachi 89
Adachi 89B
Albajar 89B
Decamp 89D
Sakai 89
Gan 88
Takahashi 88

$\tilde{e}^+$

Abreu 90I
Chen 90
Adachi 89
Adeva 89B
Akrawy 89E
Stubenrauch 89
Kamae 88
Yamauchi 88

e^+ photino

Akesson 90B
Contreras 90
Geer 90
Sakai 90
Taketani 90
Adachi 89B
Albajar 89B
Decamp 89D
Sakai 89
Gan 88
Takahashi 88

$\tilde{\mu}^-$

Abreu 90I
Chen 90
Sakai 90
Adeva 89B
Akrawy 89E
Kamae 88
Yamauchi 88

μ^- neutralino

Dydak 91

μ^- photino

Taketani 90
Adachi 89
Adachi 89B
Decamp 89D
Sakai 89
Gan 88
Takahashi 88

$\tilde{\mu}^+$

Abreu 90I
Chen 90
Adachi 89
Adeva 89B
Akrawy 89E
Kamae 88
Yamauchi 88

μ^+ photino

Sakai 90
Taketani 90
Adachi 89B
Decamp 89D
Sakai 89
Gan 88
Takahashi 88

$\tilde{\tau}^-$

Abreu 90I
Akrawy 89E
Yamauchi 88

τ^- neutralino

Dydak 91

τ^- photino

Taketani 90
Adachi 89

$\tilde{\tau}^-$

Adachi 89B
Decamp 89D
Gan 88

$\tilde{\tau}^+$

Abreu 90I
Adachi 89
Akrawy 89E
Yamauchi 88

τ^+ photino

Taketani 90
Adachi 89B
Decamp 89D
Gan 88

$\tilde{q}$

Keranen 91
Abreu 90E
Dowell 88
Kamae 88
Kichimi 88

(jets) 2jet X

Laasanen 91
Scarha 90

q photino

Kuhlmann 91
Contreras 90
Sakai 90
Unal 90
Adachi 89
Adachi 89B
Alitti 89
Pauss 89
Plothowbesch 88
Takahashi 88

q gluino

Kuhlmann 91
Contreras 90
Unal 90
Alitti 89
Pauss 89
Plothowbesch 88

$\bar{\tilde{q}}$

Keranen 91
Kuhlmann 91
Abreu 90E
Contreras 90
Sakai 90
Adachi 89
Alitti 89
Pauss 89

$\bar{q}$ photino

Adachi 89B
Takahashi 88

$\tilde{u}$

u gluino

Dydak 91

$\tilde{d}$

d gluino

Dydak 91

ν^*

e^- X

Dydak 91

$\nu\ \gamma$

Bardadinotwi 92
Bardadinotwi 92B
Dydak 91
Adeva 90S
Decamp 90I

$e^-\ W^+$

Adeva 90S

$\bar{\nu}^*$

Decamp 90I

e^+ X

Dydak 91

$\nu\ \gamma$

Dydak 91

$e^{*\pm}$

$e^\pm\ \gamma$

Kichimi 88
Kim 88C

e^{*-}

$e^-\ \gamma$

Abreu 91G
Kim 89B
Kamae 88
Kim 88C
Dydak 91
Adeva 90F
Akrawy 90G
Decamp 90G
Adachi 89D
Abe 88E
Gan 88
Maki 88B
Shirai 88
Sumiyoshi 88
Unno 88
Yamauchi 88

$\mu^-\ \gamma$

Decamp 90G

$\tau^-\ \gamma$

Decamp 90G

e^{*+}

$e^+\ \gamma$

Abreu 91G
Kim 89B
Kamae 88
Kim 88C
Bardadinotwi 92
Bardadinotwi 92B
Dydak 91
Adeva 90F
Akrawy 90G
Decamp 90G
Adachi 89D
Abe 88E
Gan 88
Maki 88B
Shirai 88
Sumiyoshi 88
Unno 88
Yamauchi 88

$\mu^+\ \gamma$

Decamp 90G

$\tau^+\ \gamma$

Decamp 90G

$\mu^{*\pm}$

$\mu^\pm\ \gamma$

Kichimi 88
Kim 88C

μ^{*-}

$\mu^-\ \gamma$

Abreu 91G
Decamp 90G
Kim 89B
Kamae 88
Kim 88C
Dydak 91
Adeva 90F
Akrawy 90G
Adachi 89D
Maki 88B
Shirai 88
Yamauchi 88

μ^{*+}

$\mu^+\ \gamma$

Abreu 91G
Decamp 90G
Kim 89B
Kamae 88
Kim 88C
Bardadinotwi 92
Bardadinotwi 92B
Dydak 91

μ^{*+}

Adeva 90F
Akrawy 90G
Adachi 89D
Maki 88B
Shirai 88
Yamauchi 88

τ^*

Kichimi 88

τ^{*-}

$\tau^-\ \gamma$

Abreu 91G
Decamp 90G
Kamae 88
Dydak 91
Adeva 90L
Akrawy 90G
Adachi 89D
Yamauchi 88

τ^{*+}

$\tau^+\ \gamma$

Abreu 91G
Decamp 90G
Kamae 88
Dydak 91
Adeva 90L
Akrawy 90G
Adachi 89D
Yamauchi 88

q^*

$\gamma\ q$

Adriani 92G
Abreu 91M

$\gamma\ b$

Ogawa 89

$\bar{q}^*$

$\gamma\ \bar{b}$

Adriani 92G
Ogawa 89

monopole

Kinoshita 92
Bertani 90
Bezrukov 90
Price 90
Geichgimbel 89
Kinoshita 89B
Virodov 89
Kichimi 88
Kinoshita 88B
Kinoshita 88C
Shirai 88

technipion$^+$

$\tau^+\ \nu_\tau$

Akrawy 90D

$c\ \bar{s}$

Akrawy 90D

technipion$^-$

$\tau^-\ \bar{\nu}_\tau$

Akrawy 90D

$\bar{c}\ s$

Akrawy 90D

lepton-colored

ℓ jet

Kim 89G

ℓ gluon

Miyamoto 90

lepton-colored

Miyamoto 90

lepton-quark

ℓ jet

Kim 89G

ν_ℓ jet

Derrick 93

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

lepton-quark

e^- **jet**
Derrick 93

$\ell\ q$
Abreu 91K
Alexander 91B
Miyamoto 90

$\ell^-\ q$
Alexander 91B
Simon 91

$\ell^+\ q$
Alexander 91B
Simon 91

$\nu\ q$
Alexander 91B
Simon 91

$\bar{\nu}\ q$
Alexander 91B
Simon 91

$\nu_e\ q$
Sinervo 92
Alitti 91D

$e^-\ q$
Madaras 92
Sinervo 92
Alitti 91D

$e^-\ u$
Moulding 92
Adeva 91B

$\nu_e\ d$
Moulding 92
Adeva 91B

$\nu_\mu\ s$
Adeva 91B

$\mu^-\ c$
Adeva 91B

$\nu_\tau\ b$
Adeva 91B

$\tau^+\ b$
Adeva 91B

lepton-quark

Abreu 91K
Adeva 91B
Alexander 91B
Simon 91
Miyamoto 90

meson

Abramov 90
Bartke 89
Korsgen 88

$a_0(980)\ \pi$
Augustin 90B
Szklarz 89

$K^*(892)\ K$
Augustin 90B
Szklarz 89

$2\rho(770)\ \pi$
Atkinson 88

$K\ \bar{K}\ \pi$
Stanco 88

$\rho(770)\ 3\pi$
Atkinson 88

meson$^+$

Chen 91
Condo 91
Dunwoodie 91

$\ell^+\ \nu$
Yuzuki 91

2jet
Yuzuki 91

meson^0

Svec 92
Acton 91B
Chen 91
Dunwoodie 91
Kiesling 91
Aston 90B
Semertzidis 90
Angelis 89
Poutissou 89

meson^0

Silvestrov 89

$e^-\ e^+$ **(neutrals)**
Silvestrov 89

2neutral (neutrals)
Karnaukhov 92

2hadron (hadrons)
Abe 93B
Adeva 91E

$\ell^+\ \ell^-$
Acton 91C

$e^-\ e^+$
Abe 93
Abe 93B
Alliegro 92
Hallin 92
Meijerdrees 92B
Adeva 91E
Judge 90
Salabura 90
Salabura 90B
Bini 89B
Bokemeyer 89
Freedman 89
Tsertos 89B
Tsertos 89C
Bokemeyer 88
Elnadi 88
Kozhuharov 88
Savage 88C

$\mu^-\ \mu^+$
Abe 93B
Adeva 91E

2γ
Abe 93
Abe 93B
Harjes 91B
Boyer 90
Newman 90
Kozhuharov 88

2π
Toki 88B

$2\pi^0$
Peters 92
Gastaldi 91
Schmitt 88

$\pi^+\ \pi^-$
Adamo 92B
Adamo 92C
Aston 92
Armstrong 91
Aston 91
Dunwoodie 91
Harjes 91B
Feindt 90
Mallik 89B
Toki 88
Toki 88B

$\eta\ \pi^0$
Feindt 90
Landsberg 90
Boutemeur 89
Boutemeur 89B
Boutemeur 88

2η
Amsler 92B
Gastaldi 91
Boutemeur 89B
Schmitt 88

$\rho(770)\ \gamma$
Augustin 89

$\rho(770)^0\ \gamma$
Toki 88B

$\rho(770)^0\ \eta$
Fukui 91

$2\rho(770)^0$
Gaspero 92
Feindt 90
Berger 88B
Toki 88B

$\rho(770)^+\ \rho(770)^-$
Toki 88B

$\omega(783)\ \pi^0$
Alde 91G

meson^0

Takamatsu 89

$\omega(783)\ \eta$
Samoylenko 91

$2\omega(783)$
Boutemeur 89B
Toki 88B

$\eta'(958)\ \pi^0$
Boutemeur 89

$\eta'(958)\ \eta$
Landsberg 90

$\rho(770)\ f_0(700)$
Bisello 91C

$2f_0(975)$
Gaspero 92

$a_0(980)\ \pi$
Bolton 92

$a_2(1320)^+\ \pi^-$
Armstrong 89E

$a_2(1320)^-\ \pi^+$
Armstrong 89E

$K\ \bar{K}$
Toki 88B

$K^+\ K^-$
Chen 90B
Aston 89
Mallik 89B
Toki 88
Toki 88B

$2K_S$
Chen 90B
Mallik 89B
Toki 88
Toki 88B
Baloshin 87

$K^*(892)^+\ K^-$
Aihara 88D

$K^*(892)^0\ \bar{K}^0$
Aston 89

$\bar{K}^*(892)^0\ K^0$
Aston 89

$K^*(892)^-\ K^+$
Aihara 88D

$K^*(892)^0\ \bar{K}^*(892)^0$
Aston 90
Mallik 89B
Toki 88
Toki 88B

$K^*(892)^+\ K^*(892)^-$
Aston 90
Toki 88B

$\phi(1020)\ \pi^0$
Landsberg 88

$2\phi(1020)$
Bisello 90C
Toki 88B

$\Lambda\ \bar{\Lambda}$
Bolonkin 89

$2(\pi\pi)_{L=0}$
Gaspero 92B

3γ
Newman 90

$\pi^+\ \pi^0\ \pi^-$
Danielsen 92

$\eta\ 2\pi^0$
Karch 91
Bienlein 90
Feindt 90B

$\eta\ \pi^+\ \pi^-$
Toki 88B

$f_2(1270)\ \pi^+\ \pi^-$
Armstrong 89E

$K^\pm\ K_S\ \pi^\pm$
Bai 90D

$K^+\ K_S\ \pi^-$
Aihara 88D
Stanco 88

$K_S\ K^-\ \pi^+$
Aihara 88D
Stanco 88

4γ
Newman 90

meson^0

$4\pi^0$
Boutemeur 89B

$2\pi^+\ 2\pi^-$
Adamo 92B
Adamo 92C
Gaspero 92B
Gastaldi 91
Armstrong 89E

6γ
Karch 91

meson$^-$

Chen 91
Condo 91
Dunwoodie 91
Kiesling 91

$\ell^-\ \bar{\nu}$
Yuzuki 91

2jet
Yuzuki 91

$\eta\ \pi^-$
Takamatsu 89

π^+

e^+ **X**
Britton 88

$e^+\ \nu_e$
Britton 92
Britton 92B
Bryman 92
Numao 92C
Rolandi 92
Czapek 91
Deleenerrosi 91
Numao 89
Poutissou 89
Bernardi 88
Picciotto 88

$e^+\ \nu_e\ +\ e^+\ \nu_e\ \gamma$
Numao 92
Numao 92B

$\mu^+\ \nu_\mu$
Freedman 93
Britton 92B
Bryman 92
Numao 92C
Czapek 91
Daum 91
Krakauer 91B
Numao 89
Poutissou 89
Bernardi 88
Britton 88

$\mu^+\ \nu_\mu\ +\ \mu^+\ \nu_\mu\ \gamma$
Numao 92
Numao 92B

e^+ **heavy-ν**
Deleenerrosi 91

$e^+\ \nu_e\ \gamma$
Bryman 92
Numao 92C
Poblaguev 91
Numao 89
Poutissou 89

$e^+\ \nu_e$ **higgs**
Egli 89

$e^+\ \nu_e$ **majoron**
Britton 88

$e^+\ \nu_e\ \nu$
Picciotto 88

$\mu^+\ \nu_\mu\ \gamma$
Bryman 92
Numao 92C
Poutissou 89

meson^0 $e^+\ \nu_e$
Poutissou 89

$e^+\ \nu_e\ \nu\ \bar{\nu}$
Britton 88

$e^-\ 2e^+\ \nu_e$
Baranov 91B
Baranov 91C
Egli 89

π^+

$\mu^- 2e^+ \nu$
Baranov 91B

π^0

X
Balats 92

$\nu \bar{\nu}$
Atiya 91B
Poutissou 90
Littenberg 89
Poutissou 89

$e^- e^+$
Drell 92B
Barker 91
Littenberg 89
Niebuhr 89
Hsiung 88

$\nu_e \bar{\nu}_e$
Hoffman 88

$\mu^+ e^-$
Lee 90
Littenberg 89
Campagnari 88

$\nu_\mu \bar{\nu}_\mu$
Hoffman 88
Dorenbosch 87

$\nu_\tau \bar{\nu}_\tau$
Hoffman 88

γ longlived
Atiya 92B

2γ
Amsler 92C
Baglin 92
Balats 92
Bienlein 92
Dementiev 92
Abreu 91H
Adeva 91
Aguilarbenit 91
Atayan 91
Berg 91
Karch 91
Karch 91B
Karch 91C
Abraamyan 90
Alde 90
Antreasyan 90C
Batusov 90C
Behrend 90E
Kienle 90
Oest 90
Oest 90B
Pare 90
Abraamyan 89
Adler 89E
Alde 89
Amaglobeli 89
Apokin 89
Bannikov 89B
Boutemeur 89
Busennitz 89
Dolinsky 89
Dolinsky 89B
Glavanakov 89
Abraamyan 88
Adiels 88
Ajaltouni 88
Alde 88B
Alde 88C
Alde 88E
Augustin 88C
Batusov 88C
Bienlein 88
Bonner 88B
Boutemeur 88
Dolinsky 88B
Fujisaki 88
Gidal 88C
Keh 88B
Williams 88
Alde 87C
Apokin 86B
Ballagh 86

π^0

meson^0 γ
Meijerdrees 92B

positronium γ
Afanasyev 90
Afanasyev 90B

$e^- e^+ \gamma$
Meijerdrees 92
Abachi 89B
Fonvieille 89

γ 2longlived
Atiya 92B

3γ
Mcdonough 88

4γ
Mcdonough 88

π^-

$e^- \bar{\nu}_e \gamma$
Bolotov 90

η

Adriani 93B
Adriani 92B
Albrecht 92
Anton 92
Burchell 92
Drell 92B
Peters 92
Plouin 92
Schmidt 92B
Yokosawa 92
Achasov 91
Akrawy 91D
Alde 91F
Brock 91
Budagov 91
Decamp 91M
Dydak 91
Gittelman 91
Harris 91
Heusch 91
Landsberg 91
Monch 91
Abreu 90Q
Adeva 90E
Akrawy 90F
Anjos 90D
Aston 90B
Augustin 90B
Augustin 90C
Berger 90B
Drinkard 90
Feindt 90
Gan 90
Janssen 90
Labs 90
Lockman 90
Weidenauer 90
Yuldashev 90C
Akimenko 89
Albrecht 89G
Armstrong 89F
Augustin 89
Chiba 89
Feindt 89
Geichgimbel 89
Hayes 89B
Kopke 89
Landsberg 89
Mallik 89B
Marshall 89
Mattig 89
Miller 89
Nurushev 89
Schindler 89
Takamatsu 89
Abachi 88B
Aihara 88D
Albajar 88C
Armstrong 88
Aston 88I
Barish 88
Barloutaud 88
Berger 88C

η

Berger 88D
Bernasconi 88
Bourdarios 88
Chiba 88
Coffman 88
Feindt 88
Fukui 88
Gan 88B
Hitlin 88
Iddir 88
Mir 88
Ouldsaada 88B
Sedlak 88
Sirunyan 88
Bailly 87H
Chiba 87B
Coffman 87
Gan 87B

X
Balats 92

$\pi^+ \pi^-$ (neutrals)
Decamp 90B

$e^- e^+$
Mayer 89

$\mu^- e^+$
Mayer 89

$\mu^+ e^-$
Mayer 89

$\mu^- \mu^+$
Landsberg 90B
Mayer 89

2γ
Adriani 92C
Albrecht 92S
Alexander 92
Amsler 92B
Amsler 92C
Apsimon 92
Artuso 92
Avery 92
Balats 92
Bardadinotwi 92
Beladidze 92
Benayoun 92
Berdnikov 92B
Bienlein 92
Bolton 92
Buskulic 92D
Feindt 92C
Harris 92
Procario 92B
Abreu 91H
Adams 91B
Aguilarbenit 91
Alde 91B
Alde 91C
Alde 91E
Amsler 91B
Armstrong 91E
Atayan 91
Berg 91
Bienlein 91
Bityukov 91
Bityukov 91C
Daoudi 91
Durieux 91
Fukui 91
Karch 91
Karch 91B
Karch 91C
Matsuda 91
Procario 91
Samoylenko 91
Yokosawa 91
Albrecht 90
Baru 90
Behrend 90E
Bieler 90
Bienlein 90
Butler 90
Feindt 90B
Fujii 90
Gan 90
Karch 90

η

Karch 90B
Kinoshita 90
Kulik 90
Landsberg 90
Oest 90
Oest 90B
Peters 90
Prokoshkin 90
Yokosawa 90B
Adler 89E
Aihara 89D
Amaglobeli 89
Apokin 89
Behrend 89B
Berger 89
Bonesini 89
Boutemeur 89
Boutemeur 89B
Dolinsky 89
Dolinsky 89B
Hirata 89B
Inagaki 89B
Mir 89
Peng 89
Pitzl 89
Roe 89
Roe 89B
Wasserbaech 89B
Adiels 88
Aihara 88E
Ajaltouni 88
Ajaltouni 88B
Albrecht 88S
Albrow 88
Alde 88B
Alde 88D
Alde 88E
Antonelli 88
Arkhipov 88
Augustin 88C
Behrend 88
Bienlein 88
Boutemeur 88
Dolinsky 88B
Druzhinin 88
Fujisaki 88
Gan 88
Gidal 88B
Gidal 88C
Jousset 88
Keh 88B
Schmitt 88
Seidel 88
Toki 88
Toki 88B
Williams 88
Wormser 88B
Alde 87
Alde 87B

$\pi^+ \pi^-$
Mayer 89
Augustin 88C

$e^- e^+ \gamma$
Mayer 89

$\mu^- \mu^+ \gamma$
Landsberg 90B
Bannikov 89B
Mayer 89

$\pi^0 e^- e^+$
Mayer 89

$\pi^0 \mu^- \mu^+$
Landsberg 90B
Mayer 89

$\pi^+ \pi^- \gamma$
Benayoun 92
Feindt 92C
Amsler 91
Behrend 90E
Butler 90
Aihara 89D
Phillips 89
Ajaltouni 88B
Albrecht 88P

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

η

Antonelli 88
Augustin 88C
Jousset 88
Landsberg 88

$3\pi^0$

Amsler 92C
Artuso 92
Amsler 91B
Karch 91C
Bienlein 90
Berger 89
Boutemeur 89B
Hirata 89B
Alde 88B
Bienlein 88
Dolinsky 88B
Schmitt 88
Alde 87B

$\pi^+ \pi^0 \pi^-$

Aleshin 92
Aleshin 92B
Alexander 92
Artuso 92
Avery 92
Beladidze 92
Bolton 92
Procario 92B
Aguilarbenit 91
Amsler 91
Amsler 91B
Anjos 91
Armstrong 91E
Bityukov 91
Bityukov 91C
Daoudi 91
Procario 91
Albrecht 90E
Armstrong 90B
Aston 90
Behrend 90E
Bienz 90
Butler 90
Feindt 90B
Gan 90
Peters 90
Adler 89E
Aihara 89D
Anjos 89B
Aston 89B
Browder 89
Phillips 89
Wasserbaech 89B
Wittek 89
Ajaltouni 88B
Albrecht 88P
Albrecht 88S
Antonelli 88
Aston 88G
Augustin 88C
Behrend 88
Gan 88
Jousset 88

$\pi^0 \mu^- \mu^+ \gamma$

Landsberg 90B

$\rho(770)$

Antonelli 92
Burchell 92
Alvarez 91
Amsler 91
Bisello 91C
Gittelman 91
Behrend 90E
Landsberg 90B
Aihara 89D
Augustin 89
Bortoletto 89
Mir 89
Wormser 89B
Anjos 88D
Atkinson 88
Mir 88

2π

Albrecht 91C

$\rho(770)^\pm$

$\pi^0 \pi^\pm$

Baru 90

$\rho(770)^+$

Abreu 92B
Albrecht 92I
Buskulic 92J
Willocq 92
Willocq 92B
Achasov 91
Albrecht 91N
Amsler 91
Appel 91
Daoudi 91
Decamp 91M
Donnachie 91
Gittelman 91
Monch 91
Barlag 90C
Baru 90
Bisello 90B
Kang 90
Kim 90D
Abachi 89B
Aguilarbenit 89
Behrend 89H
Bisello 89
Danilov 89
Deboer 89
Donnachie 89
Halling 89
Hayes 89
Kopke 89
Landsberg 89
Albrecht 88M
Albrecht 88O
Atkinson 88
Baller 88
Barish 88
Barloutaud 88
Berger 88D
Bourdarios 88
Coffman 88
Gan 88
Levy 88
Seidel 88
Toki 88B

$\pi^+ \pi^0$

Avery 92
Bean 92B
Coffman 92B
Aguilarbenit 91
Chen 91
Procario 91
Agababyan 90
Albrecht 90E
Alvarez 90D
Butler 90
Dejongh 90
May 90
May 90B
Tsipolitis 90
Agababyan 89
Albrecht 89F
Behrend 89
Berger 89
Feindt 89
Phillips 89
Toki 89
Wittek 89
Angelopoulos 88B
Augustin 88B
Liu 88
Schmitz 88
Sedlak 88
Tschirhart 88
Adamus 87B
Batyunya 87E
Ballagh 86

$\rho(770)^0$

Albrecht 93
Abreu 92J
Albrecht 92

$\rho(770)^0$

Alexander 92
Drell 92B
Nuttall 92
Schmidt 92B
Shukla 92B
Achasov 91
Albrecht 91I
Ammar 91B
Amsler 91
Anjos 91
Armstrong 91
Bortoletto 91
Brovkin 91B
Brovkin 91C
Daoudi 91
Donnachie 91
Geist 91
Jones 91B
Marage 91
Monch 91
Odyniec 91B
Perepelitsa 91
Procario 91
Pust 91
Aleev 90B
Allasia 90
Alvarez 90D
Bai 90C
Baldisseri 90
Barlag 90C
Berger 90B
Bienz 90
Perepelitsa 90
Yuldashev 90D
Aihara 89D
Albrecht 89L
Albrecht 89S
Albrecht 89T
Armstrong 89F
Augustin 89
Avery 89B
Browder 89
Chiba 89
Danilov 89
Dejongh 89
Donnachie 89
Drell 89
Efendiev 89
Halling 89
Hirata 89B
Kopke 89
Landsberg 89
Marshall 89
Mattig 89
Mistry 89
Nagy 89
Schindler 89
Wasserbaech 89B
Zhokin 89
Adiels 88
Albrecht 88M
Aston 88I
Atkinson 88
Barloutaud 88
Bourdarios 88
Brau 88
Chiba 88
Coffman 88
Gan 88
Haas 88
Levy 88
Thorndike 88
Toki 88
Toki 88B
Witherell 88
Adamus 87B
Bogolyubsky 87B
Chiba 87B
Bogolyubsky 86E

$\mu^- \mu^+$

Baglin 91D
Odyniec 91
Schukraft 91
Abreu 89

$\rho(770)^0$

Antipov 89
Bannikov 89B
Albajar 88C
Antipov 88
Antipov 88B

$\pi^0 \gamma$

Dolinsky 89
Dolinsky 88B

$\pi^+ \pi^-$

Adamo 92B
Adamo 92C
Ajinenko 92
Albrecht 92F
Albrecht 92G
Albrecht 92M
Ammosov 92B
Apsimon 92B
Bean 92B
Benayoun 92
Coffman 92B
Feindt 92C
Frabetti 92B
Gaspero 92
Procario 92B
Abramov 91
Aguilarbenit 91
Albrecht 91J
Amaudruz 91F
Apsimon 91B
Armstrong 91C
Aston 91
Bityukov 91B
Chen 91
Condo 91
Decamp 91H
Fukui 91
Hofmann 91
Ronan 91
Walker 91
Zomer 91
Zomer 91B
Agababyan 90
Albrecht 90
Albrecht 90E
Albrecht 90M
Arefiev 90B
Aston 90C
Batyunya 90B
Behrend 90C
Behrend 90F
Bisello 90B
Bityukov 90
Blinov 90
Butler 90
Dejongh 90
Gray 90
Guzhavin 90
Peters 90
Schmitt 90
Wegner 90
Weidenauer 90
Abachi 89D
Adler 89D
Adler 89E
Agababyan 89
Aguilarbenit 89
Ajinenko 89B
Armstrong 89C
Armstrong 89E
Berger 89
Bityukov 89
Breakstone 89
Chen 89C
Coffman 89
Dieter 89
Joyner 89
Mallik 89B
Nakai 89
Phillips 89
Schubert 89
Toki 89
Wittek 89
Wormser 89B
Adler 88D

$\rho(770)^0$

Aihara 88
Aihara 88B
Ajaltouni 88B
Ammosov 88C
Angelopoulos 88B
Anjos 88D
Armstrong 88
Ashman 88C
Augustin 88B
Augustin 88C
Bannikov 88
Batyunya 88B
Berger 88B
Braunschweig 88F
Cassata 88
Edberg 88
Fukui 88
Jousset 88
Liu 88
Mir 88
Schmitz 88
Sedlak 88
Seidel 88
Bailly 87C

$\eta\ \gamma$

Dolinsky 89

$\omega(783)\ \pi^0$

Dolinsky 89B

$\pi^+\ \pi^-\ \gamma$

Dolinsky 89
Vasserman 87B

$\pi^+\ \pi^0\ \pi^-$

Dolinsky 89
Vasserman 88

$2\pi^+\ 2\pi^-$

Kurdadze 88

$\rho(770)^-$

Adriani 93B
Buskulic 93B
Abreu 92B
Adriani 92H
Buskulic 92J
Dam 92
Seyward 92
Willocq 92
Willocq 92B
Achasov 91
Albrecht 91N
Amsler 91
Appel 91
Bortoletto 91
Decamp 91M
Donnachie 91
Kiesling 91
Marage 91
Monch 91
Stoker 91
Baru 90
Berger 90B
Bisello 90B
Cassel 90
Kang 90
Kim 90D
Miller 90
Aguilarbenit 89
Behrend 89H
Bisello 89
Danilov 89
Donnachie 89
Halling 89
Hayes 89
Hayes 89B
Kopke 89
Kreinick 89
Landsberg 89
Miller 89
Riles 89
Riles 89B
Stoker 89
Zhokin 89
Albrecht 88M
Albrecht 88O
Atkinson 88

$\rho(770)^-$

Barish 88
Barloutaud 88
Bourdarios 88
Coffman 88
Gan 88
Levy 88
Seidel 88
Toki 88B

$\pi^0\ \pi^-$

Albrecht 92I
Bean 92B
Aguilarbenit 91
Chen 91
Decamp 91H
Zomer 91
Zomer 91B
Albrecht 90E
Albrecht 90G
Butler 90
May 90
May 90B
Tsipolitis 90
Abachi 89B
Albrecht 89F
Behrend 89
Feindt 89
Toki 89
Wittek 89
Angelopoulos 88B
Augustin 88B
Baller 88
Liu 88
Schmitz 88
Sedlak 88
Tschirhart 88
Adamus 87B
Batyunya 87E

$\omega(783)$

Albrecht 93
Amsler 92C
Antonelli 92
Burchell 92
Coffman 92B
Schmidt 92B
Achasov 91
Albrecht 91I
Aston 91C
Bisello 91C
Decamp 91R
Donnachie 91
Heusch 91
Jacob 91
Kinashi 91
Landsberg 91
Monch 91
Odyniec 91B
Anjos 90D
Baldisseri 90
Berger 90B
Fukui 90
Hamann 90
Kinoshita 90
Landsberg 90B
Miller 90
Perepelitsa 90
Yokosawa 90B
Yuldashev 90D
Chiba 89
Donnachie 89
Kopke 89
Landsberg 89
Lockman 89
Miller 89
Nagy 89
Schindler 89
Takamatsu 89
Adiels 88
Albrecht 88L
Barish 88
Barloutaud 88
Bourdarios 88
Chiba 88
Coffman 88

$\omega(783)$

Govorkov 88
Levy 88
Mir 88
Alde 87B
Chiba 87B

X

Balats 92

3γ X

Dolgolenko 92

$e^-\ e^+$

Dolinsky 89B

$\mu^-\ \mu^+$

Baglin 91D
Odyniec 91
Schukraft 91
Johansson 90B
Abreu 89
Albajar 88C

$\pi^0\ \gamma$

Alde 92
Balats 92
Landsberg 92
Alde 91G
Samoylenko 91
Alde 90
Alde 89
Berger 89
Boutemeur 89B
Dolinsky 89
Dolinsky 89B
Hirata 89B
Alde 88C

$\pi^+\ \pi^-$

Walker 91

$\eta\ \gamma$

Dolinsky 89
Dolinsky 88B

$\pi^0\ e^-\ e^+$

Dolinsky 89
Dolinsky 88

$\pi^0\ \mu^-\ \mu^+$

Landsberg 90B
Bannikov 89B

$2\pi^0\ \gamma$

Dolinsky 89
Dolinsky 88B

$\pi^+\ \pi^-\ \gamma$

Landsberg 90B
Bityukov 87

$\pi^+\ \pi^0\ \pi^-$

Albrecht 92G
Aleshin 92
Aston 92B
Bean 92B
Brovkin 92
Aguilarbenit 91
Albrecht 91C
Amsler 91
Amsler 91B
Bisello 91B
Bityukov 91D
Jin 91
Agababyan 90
Albrecht 90E
Armstrong 90B
Batusov 90C
Batyunya 90B
Behrend 90C
Bisello 90B
Bisello 90D
Boos 90B
Dejongh 90
Guzhavin 90
Tsipolitis 90
Wegner 90
Agababyan 89
Anjos 89B
Aston 89B
Barkov 89
Berger 89
Busennitz 89
Dolinsky 89B
Mallik 89B

$\omega(783)$

Phillips 89
Wittek 89
Ajaltouni 88B
Albrecht 88P
Albrecht 88S
Aston 88G
Augustin 88B
Augustin 88C
Batyunya 88B
Brau 88
Falvard 88
Gan 88
Jousset 88
Landsberg 88
Sedlak 88
Seidel 88
Vasserman 88
Adamus 87B
Aleshin 87D
Batyunya 87E

$2\pi^+\ 2\pi^-$

Kurdadze 88

$\eta'(958)$

Burchell 92
Alde 91F
Decamp 91M
Dydak 91
Gittelman 91
Feindt 90B
Labs 90
Weidenauer 90
Boutemeur 89
Browder 89
Chiba 89
Dolinsky 89
Kopke 89
Landsberg 89
Schindler 89
Wormser 89
Adiels 88
Albajar 88C
Chiba 88
Coffman 88
Hitlin 88
Mir 88
Sedlak 88
Bailly 87H
Chiba 87B

$\pi^+\ \pi^-$ (neutrals)

Decamp 90B

$e^-\ e^+$

Vorobiev 88C

2γ

Benayoun 92
Feindt 92C
Alde 91B
Alde 91C
Alde 91E
Bienlein 91
Karch 91C
Baru 90
Bienlein 90
Butler 90
Fujii 90
Kulik 90
Landsberg 90
Yokosawa 90B
Boutemeur 89B
Roe 89
Roe 89B
Aihara 88D
Ajaltouni 88
Albrow 88
Alde 88D
Augustin 88C
Bienlein 88
Gidal 88C
Toki 88B
Williams 88
Alde 87B

$2\pi^0$

Alde 87B

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$\eta'(958)$

$\rho(770)\ \gamma$	Alvarez 91 Behrend 90E Wormser 89B
$\rho(770)^0\ \gamma$	Albrecht 92G Alexander 92 Benayoun 92 Feindt 92C Procario 92B Albrecht 91J Anjos 91 Armstrong 91C Bityukov 91B Daoudi 91 Procario 91 Albrecht 90 Bityukov 90 Butler 90 Peters 90 Aihara 89D Wasserbaech 89B Ajaltouni 88B Augustin 88C Jousset 88
$\rho(770)\ \pi$	Aihara 89D
$\omega(783)\ \gamma$	Alde 87B
$\mu^-\ \mu^+\ \gamma$	Landsberg 90B Bannikov 89B
$\pi^0\ \mu^-\ \mu^+$	Landsberg 90B
$\eta\ \mu^-\ \mu^+$	Landsberg 90B
3γ	Alde 87B
$\pi^0\ 2\gamma$	Alde 87B
$\pi^+\ \pi^-\ \gamma$	Benayoun 92 Feindt 92C Amsler 91 Baru 90 Feindt 89 Landsberg 88
$3\pi^0$	Landsberg 90 Alde 87B
$\eta\ 2\pi^0$	Amsler 92C Procario 92B Alde 91E Karch 91B Karch 91C Bienlein 90 Feindt 90B Karch 90 Karch 90B Alde 88B Bienlein 88 Schmitt 88 Alde 87B
$\eta\ \pi^+\ \pi^-$	Albrecht 92S Alexander 92 Avery 92 Beladidze 92 Berdnikov 92B Bolton 92 Buskulic 92D Procario 92B Amsler 91 Anjos 91 Armstrong 91E Bityukov 91 Bityukov 91C Daoudi 91 Procario 91 Albrecht 90 Aston 90 Behrend 90E

$\eta'(958)$

	Bienz 90 Butler 90 Peters 90 Adler 89E Aihara 89D Dolinsky 89B Wasserbaech 89B Aihara 88D Ajaltouni 88B Augustin 88C Druzhinin 88 Gidal 88B Gidal 88C Jousset 88 Wormser 88B
$\pi^+\ \pi^-\ 2\gamma$	Behrend 90E
$4\pi^0$	Alde 87B
$2\pi^+\ \pi^0\ 2\pi^-\ +\ 2\pi^+\ 2\pi^-\ \gamma$	Behrend 90E
6γ	Feindt 90B Karch 90 Karch 90B
10γ	Karch 91 Karch 91C

$f_0(700)$

$\pi^+\ \pi^-$	Bisello 91C Bisello 91B

$f_0(975)$

	Abreu 92J Karch 91 Karch 91B Bai 90 Barlag 90C Marsiske 90 Alder 89 Browder 89 Drell 89 Kopke 89 Mattig 89 Mistry 89 Schindler 89 Toki 89B Anjos 88D Gidal 88C
$e^-\ e^+$	Vorobiev 88C
2γ	Bienlein 91 Jocksch 89
2π	Toki 88B
$2\pi^0$	Amsler 91B Bienlein 91 Bienlein 90 Feindt 90 Morgan 90 Oest 90 Oest 90B Dolinsky 89 Dolinsky 89B Lockman 89 Bienlein 88 Feindt 88
$\pi^+\ \pi^-$	Albrecht 93 Albrecht 92S Apsimon 92B Gaspero 92 Aguilarbenit 91 Armstrong 91 Breakstone 90C Feindt 90 Gray 90 Morgan 90 Adler 89E Jocksch 89

$f_0(975)$

	Lockman 89 Mallik 89B Augustin 88B Falvard 88
$K^+\ K^-$	Armstrong 91 Lockman 89
$2K_S$	Armstrong 91 Aston 88I Aston 88J Sedlak 88

$a_0(980)$

	Heusch 91 Karch 91 Augustin 90B Bai 90D Feindt 90 Oest 90 Oest 90B Augustin 89 Szklarz 89
$\eta\ \pi$	Bolton 92 Armstrong 91E
$K\ \overline{K}$	Drinkard 90 Toki 88B

$a_0(980)^+$

	Armstrong 91E Ouldsaada 88B
$\eta\ \pi^+$	Fukui 91 Augustin 90C Bienz 90 Lockman 90
$K^+\ K_S$	Amsler 91 Lockman 90 Augustin 88C Toki 88B

$a_0(980)^0$

	Karch 91B Kopke 89
$e^-\ e^+$	Vorobiev 88C
$\eta\ \pi^0$	Amsler 91B Karch 91C Bienlein 90 Feindt 90 Oest 90 Oest 90B Boutemeur 89 Dolinsky 89B Mallik 89B Augustin 88C Bienlein 88 Boutemeur 88 Feindt 88 Gidal 88C
$2K_S$	Rath 89 Toki 88B

$a_0(980)^-$

	Amsler 91 Armstrong 91E Aston 90B Eastman 90 Ouldsaada 88B
$\eta\ \pi^-$	Fukui 91 Matsuda 91 Aston 90 Augustin 90C Bienz 90 Lockman 90
$K_S\ K^-$	Aston 90

$a_0(980)^-$

	Lockman 90 Augustin 88C

$h_1(1170)$

$\pi^+\ \pi^0\ \pi^-$	Ando 90 Takamatsu 89
$\eta\ \pi^+\ \pi^-$	Inagaki 89B

$b_1(1235)$

$\omega(783)\ \pi^0$	Alde 91G Kinashi 91 Fukui 90

$b_1(1235)^+$

$\omega(783)\ \pi^+$	Amsler 91 Augustin 88B Sedlak 88

$b_1(1235)^0$

$\pi^+\ \pi^-$	Kinashi 91 Landsberg 90B
$\omega(783)\ \pi^0$	Mallik 89B Alde 92 Landsberg 92 Landsberg 90B Augustin 88B Brau 88
$\eta\ \pi^+\ \pi^-$	Takamatsu 89

$b_1(1235)^-$

$\omega(783)\ \pi^-$	Amsler 91 Augustin 88B Sedlak 88 Aleshin 87D

$f_0(1240)$

2γ	Karch 91 Bienlein 91
$2\pi^0$	Bienlein 92 Bienlein 91
$\pi^+\ \pi^-$	Joyner 89

$a_1(1260)$

	Bisello 91C

$a_1(1260)^+$

	Browder 89 Drell 89 Halling 89 Mistry 89 Thorndike 88
$\rho(770)^+\ \pi^0$	Albrecht 90E Alvarez 90D
$\rho(770)^0\ \pi^+$	Coffman 92B Albrecht 90E Dejongh 90 Gray 90
$2\pi^+\ \pi^-$	Brovkin 91B Adler 89D Adler 89E Dejongh 89

$a_1(1260)^0$

	Coffman 92B Dejongh 90

$a_1(1260)^0$

$\rho(770)^+ \pi^-$	Albrecht 90E
$\pi^+ \pi^0 \pi^-$	Ando 90, Armstrong 90B, Takamatsu 89
$\eta \pi^+ \pi^-$	Inagaki 89B

$a_1(1260)^-$

	Adriani 93B, Adriani 92H, Cassel 90, Miller 90, Drell 89, Halling 89, Kreinick 89, Miller 89, Mistry 89, Riles 89, Stoker 89, Thorndike 88
$\rho(770)^0 \pi^-$	Albrecht 92F, Albrecht 92M, Decamp 91H, Marage 91, Zomer 91, Zomer 91B, Albrecht 90E, Gray 90, Ammosov 88C
$\rho(770)^- \pi^0$	Marage 91, Albrecht 90E
$\pi^+ 2\pi^-$	Albrecht 90I
nonres $< \pi^+ 2\pi^- >$	Albrecht 92M

$f_2(1270)$

	Peters 92, Amsler 91, Armstrong 91, Brovkin 91B, Karch 91B, Perepelitsa 91, Marsiske 90, Miller 90, Perepelitsa 90, Avery 89B, Bortoletto 89, Drell 89, Halling 89, Kopke 89, Mattig 89, Mistry 89, Berger 88
$e^- e^+$	Vorobiev 88C
2γ	Tsuboyama 92, Bienlein 91, Blinov 91B, Harjes 91, Harjes 91B, Boyer 90, Albrecht 89K, Jocksch 89, Roe 89
$2\pi^0$	Bienlein 92, Aker 91, Bienlein 91, Karch 91, Antreasyan 90C, Bienlein 90, Feindt 90, Morgan 90, Oest 90, Oest 90B, Dolinsky 89B, Ajaltouni 88

$f_2(1270)$

	Augustin 88B, Bienlein 88, Feindt 88, Gidal 88C, Schmitt 88, Apokin 86B
$\pi^- \pi$	Batyunya 88B
$\pi^+ \pi^-$	Albrecht 93, Abreu 92J, Adamo 92B, Adamo 92C, Apsimon 92B, Tsuboyama 92, Abramov 91, Aguilarbenit 91, Aston 91, Condo 91, Fiedler 91, Harjes 91B, Jin 91, Jones 91, Walker 91, Adachi 90, Arefiev 90B, Aston 90C, Batyunya 90B, Breakstone 90C, Feindt 90, May 90, May 90B, Morgan 90, Weidenauer 90, Agababyan 89, Ajinenko 89B, Albrecht 89J, Armstrong 89C, Armstrong 89E, Breakstone 89, Feindt 89, Fulton 89B, Jocksch 89, Mallik 89B, Nakai 89, Wittek 89, Zhokin 89, Augustin 88B, Augustin 88C, Falvard 88, Feindt 88, Gidal 88C, Mir 88, Sedlak 88, Bailly 87C
$\eta \pi^0$	Karch 91C
2η	Bienlein 91, Karch 91C, Ajaltouni 88
$K^+ K^-$	Armstrong 89D, Aston 88H
$2K_S$	Armstrong 89D, Aston 88H, Bolonkin 88
$4\pi^0$	Alde 87D

$f_1(1285)$

$K^+ \pi^- X$	Duch 89
$K^- \pi^+ X$	Duch 89
2γ	Aihara 88D
$\rho(770) \gamma$	Landsberg 90B
$\rho(770)^0 \gamma$	Armstrong 91C, Bityukov 91B, Bityukov 89

$f_1(1285)$

	Coffman 89, Toki 88B
$a_0(980) \pi$	Bolton 92
$a_0(980)^+ \pi^-$	Fukui 91, Lockman 90, Augustin 88C, Ouldsaada 88B
$a_0(980)^0 \pi^0$	Rath 89
$a_0(980)^- \pi^+$	Fukui 91, Lockman 90, Augustin 88C, Ouldsaada 88B
$K^*(892)^+ K^-$	Augustin 88C
$K^*(892)^0 K_S$	Rath 89, Augustin 88C
$K^*(892)^- K^+$	Augustin 88C
$\overline{K}^*(892)^0 K_S$	Augustin 88C
$\phi(1020) \gamma$	Augustin 88C, Bityukov 88, Bityukov 87
$\eta \pi^+ \pi^-$	Armstrong 91E, Peters 90, Augustin 89, Feindt 89, Takamatsu 89, Aihara 88D, Aihara 88E, Augustin 88C, Feindt 88, Gidal 88B, Gidal 88C, Ouldsaada 88B, Toki 88B
$\rho(770)^0 \pi^+ \pi^-$	Armstrong 89C, Armstrong 89E, Augustin 88C
$K^+ K^- \gamma$	Landsberg 90B
$K^+ \overline{K}^0 \pi^-$	Birman 88
$K^+ K^- \pi^0$	Landsberg 90B
$K^+ K_S \pi^-$	Armstrong 89, Takamatsu 89, Aston 88J, Augustin 88C, Sedlak 88, Toki 88B
$K_S K^- \pi^+$	Armstrong 89, Takamatsu 89, Aston 88J, Augustin 88C, Sedlak 88
$2K_S \pi^0$	Cason 89, Rath 88
$2\pi^+ 2\pi^-$	Bolton 91, Armstrong 89E, Mallik 89B, Adler 88D, Aihara 88D, Augustin 88C, Mir 88, Stanco 88

$\eta(1295)$

	Bienlein 91

$\eta(1295)$

$\rho(770)^0 \gamma$	Coffman 89
$a_0(980)^+ \pi^-$	Fukui 91
$a_0(980)^- \pi^+$	Fukui 91
$\phi(1020) \gamma$	Landsberg 90B, Bityukov 87
$\eta \pi^+ \pi^-$	Augustin 89, Takamatsu 89
$K^+ \overline{K}^0 \pi^-$	Birman 88
K_S kaon π	Toki 88B
$K^+ K_S \pi^-$	Takamatsu 89, Augustin 88C
$K_S K^- \pi^+$	Takamatsu 89
$2\pi^+ 2\pi^-$	Stanco 88

$\pi(1300)^0$

	Bienlein 91

$a_2(1320)$

	Karch 91, Butler 90, Feindt 90, Oest 90, Oest 90B, Berger 88
$\eta \pi$	Armstrong 91E

$a_2(1320)^+$

	Coffman 92B, Amsler 91, Armstrong 91E, Drell 89, Halling 89, Kopke 89, Mistry 89, Bisello 88, Thorndike 88
$\eta \pi^+$	Weidenauer 90
$\rho(770)^0 \pi^+$	Dejongh 90, Gray 90, Armstrong 89C, Armstrong 89E, Augustin 88B, Sedlak 88
$K^+ K_S$	Sedlak 88
$2\pi^+ \pi^-$	Brovkin 91B

$a_2(1320)^0$

	Karch 91B, Kopke 89, Adiels 88, Sedlak 88
$e^- e^+$	Vorobiev 88C
2γ	Baru 90, Butler 90, Albrecht 89K
$\eta \pi^0$	Amsler 91B, Karch 91C, Bienlein 90, Feindt 90, Oest 90, Oest 90B, Boutemeur 89, Dolinsky 89B, Mallik 89B

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$a_2(1320)^0$

	Alde 88E
	Augustin 88C
	Bienlein 88
	Boutemeur 88
	Feindt 88
	Gidal 88C
$\rho(770)^+ \pi^-$	
	Baru 90
	Augustin 88B
$\rho(770)^+ \pi^- + \rho(770)^- \pi^+$	
	Butler 90
$\rho(770)^- \pi^+$	
	Baru 90
	Augustin 88B
$\eta'(958) \pi^0$	
	Alde 91E
$2K_S$	
	Rath 89
	Bolonkin 88
$\pi^+ \pi^0 \pi^-$	
	Armstrong 90B
	Behrend 89G
	Feindt 89
$\pi^+ \pi^- 2\gamma$	
	Baru 90

$a_2(1320)^-$

	Amsler 91
	Armstrong 91E
	Condo 90
	Drell 89
	Halling 89
	Kopke 89
	Mistry 89
	Bisello 88
	Thorndike 88
$\eta \pi^-$	
	Aleshin 92
	Aleshin 92B
	Bityukov 91C
	Matsuda 91
	Weidenauer 90
$\rho(770)^0 \pi^-$	
	Gray 90
	Armstrong 89C
	Armstrong 89E
	Augustin 88B
	Sedlak 88
$\eta'(958) \pi^-$	
	Bityukov 91C
$K_S K^-$	
	Sedlak 88

$h_1(1380)$

$K^*(892)^0 \overline{K}^0 + \overline{K}^*(892)^0 K^0$	
	Aston 88
$K^+ \overline{K}^0 \pi^-$	
	Birman 88
$K^+ K_S \pi^-$	
	Aston 88I
	Aston 88J
	Augustin 88C
$K_S K^- \pi^+$	
	Aston 88I
	Aston 88J
	Augustin 88C

$\omega(1390)$

$\rho(770)^+ \pi^-$	
	Donnachie 91
$\rho(770)^0 \pi^0$	
	Donnachie 91
	Donnachie 89
$\rho(770)^- \pi^+$	
	Donnachie 91
$\pi^+ \pi^0 \pi^-$	
	Govorkov 88
$\omega(783) \pi^+ \pi^-$	
	Donnachie 89

$f_0(1400)$

	Karch 91B
	Halling 89
$e^- e^+$	
	Vorobiev 88C
$2\pi^0$	
	Feindt 90
	Dolinsky 89B
	Bienlein 88
$\pi^+ \pi^-$	
	Albrecht 93
	Bolton 92
	Breakstone 90C
	Drinkard 90
	Feindt 90
	Guzhavin 90
2η	
	Amsler 91B
$K^0 \overline{K}^0$	
	Feindt 90
$K^+ K^-$	
	Feindt 90

$\hat{\rho}(1405)^0$

$\eta \pi^0$	
	Boutemeur 89B
	Alde 88E
	Augustin 88C
	Iddir 88

$f_1(1420)$

$a_0(980) \pi$	
	Toki 88B
$a_0(980)^+ \pi^-$	
	Amsler 91
	Augustin 88C
$a_0(980)^- \pi^+$	
	Amsler 91
	Augustin 88C
$2K_S$	
	Bolonkin 88
$K^*(892)^+ K^-$	
	Armstrong 92
	Augustin 88C
$K^*(892)^0 K_S + K^*(892)^- K^+$	
	Toki 88B
$K^*(892)^0 K_S$	
	Augustin 88C
$K^*(892)^- K^+$	
	Armstrong 92
	Augustin 88C
$\overline{K}^*(892)^0 K_S$	
	Augustin 88C
$\phi(1020) \gamma$	
	Landsberg 90B
	Augustin 88C
	Bityukov 87
$\eta \pi^+ \pi^-$	
	Armstrong 91E
$K^+ \overline{K}^0 \pi^-$	
	Birman 88
$K^+ K_S \pi^-$	
	Fujii 90
	Armstrong 89
	Feindt 89
	Hill 89
	Aston 88J
	Feindt 88
	Ouldsaada 88B
	Sedlak 88
	Toki 88B
$K_S K^- \pi^+$	
	Fujii 90
	Armstrong 89
	Feindt 89
	Hill 89
	Aston 88J
	Feindt 88
	Ouldsaada 88B
	Sedlak 88

$f_1(1420)$

$K^+ K_L \pi^-$	
	Gastaldi 91
$K_L K^- \pi^+$	
	Gastaldi 91

$f_2(1430)$

$\pi^+ \pi^-$	
	Gray 90

$\eta(1440)$

$K^+ \pi^- X$	
	Duch 89
$K^- \pi^+ X$	
	Duch 89
$\rho(770) \gamma$	
	Burchell 92
	Augustin 89
$\rho(770)^0 \gamma$	
	Toki 88
	Toki 88B
$2\rho(770)^0$	
	Bisello 89
	Augustin 88C
$\rho(770)^+ \rho(770)^-$	
	Bisello 89
$a_0(980) \pi$	
	Augustin 89
	Toki 88B
$a_0(980)^+ \pi^-$	
	Fukui 91
	Lockman 90
	Toki 88B
$a_0(980)^0 \pi^0$	
	Toki 88B
$a_0(980)^- \pi^+$	
	Fukui 91
	Lockman 90
$K^*(892) K$	
	Augustin 89
$K^*(892)^0 K_S + \overline{K}^*(892)^0 K_S$	
	Toki 88B
$K^*(892)^0 K_S + K^*(892)^- K^+$	
	Toki 88B
$\overline{K}^*(892) K + K^*(892) \overline{K}$	
	Toki 88B
$\phi(1020) \gamma$	
	Landsberg 90B
	Bityukov 87
$\eta 2\pi$	
	Burchell 92
$\eta \pi^+ \pi^-$	
	Augustin 89
	Takamatsu 89
	Toki 88
$K \overline{K} \pi$	
	Burchell 92
	Stanco 88
$K^+ \overline{K}^0 \pi^-$	
	Birman 88
$K^+ \overline{K}^0 \pi^- + K^0 K^- \pi^+$	
	Behrend 89E
	Feindt 88
$K^+ K^- \pi^0$	
	Augustin 88C
K_S kaon π	
	Toki 88B
$K^+ K_S \pi^-$	
	Bai 90D
	Feindt 89
	Fulton 89B
	Takamatsu 89
	Augustin 88C
	Chan 88
	Falvard 88
$K_S K^- \pi^+$	
	Bai 90D
	Feindt 89
	Fulton 89B
	Takamatsu 89
	Augustin 88C

$\eta(1440)$

	Chan 88
	Falvard 88
$2K_S \pi^0$	
	Cason 89
	Rath 88

$\rho(1450)$

	Bisello 91C

$\rho(1450)^0$

$\pi^+ \pi^-$	
	Aston 91C
$\rho(770)^0 \eta$	
	Fukui 88
$\omega(783) \pi^0$	
	Donnachie 91
	Kinashi 91
	Fukui 90
	Dolinsky 89B
	Govorkov 88
$\eta \pi^+ \pi^-$	
	Takamatsu 89
$\rho(770)^0 \pi^+ \pi^-$	
	Armstrong 89E
$2\pi^+ 2\pi^-$	
	Armstrong 89E

$\rho(1450)^-$

$\omega(783) \pi^-$	
	Donnachie 91
	Govorkov 88

$f_1(1510)$

$a_0(980) \pi$	
	Toki 88B
$K^*(892)^0 \overline{K}^0 + \overline{K}^*(892)^0 K^0$	
	Aston 88
$K^*(892)^0 K_S + K^*(892)^- K^+$	
	Toki 88B
$\phi(1020) \gamma$	
	Bityukov 87
$K^+ \overline{K}^0 \pi^-$	
	Birman 88
$K^+ K_S \pi^-$	
	Aston 88I
	Aston 88J
	Augustin 88C
	Feindt 88
$K_S K^- \pi^+$	
	Aston 88I
	Aston 88J
	Augustin 88C
	Feindt 88

$f_2(1520)$

	Amsler 91
2γ	
	Harjes 91
$2\pi^0$	
	Burchell 92
	Hertzog 92
	Aker 91
$\pi^+ \pi^-$	
	Hertzog 92
	Gastaldi 91
	Feindt 90
2η	
	Prokoshkin 90
$K^+ K^-$	
	Gastaldi 91
	Prokoshkin 90
$2K_S$	
	Prokoshkin 90
$3\pi^0$	
	Amsler 91B
$K \overline{K} \pi$	
	Burchell 92
$2\pi^+ 2\pi^-$	
	Hertzog 92

$f_0(1525)$

$K^0 \overline{K}^0$	Feindt 90
$K^+ K^-$	Feindt 90 Albrecht 89J
$2K_S$	Aston 88I Aston 88J

$f_2'(1525)$

2γ	Kopke 89 Gidal 88C Harjes 91 Harjes 91B Albrecht 89K
$\pi^+ \pi^-$	Armstrong 91 Harjes 91B
2η	Augustin 88C
$K \overline{K}$	Augustin 88 Toki 88B
$K^0 \overline{K}^0$	Feindt 90
$K^+ K^-$	Armstrong 91 Jin 91 Chen 90B Feindt 90 Landsberg 90B Fulton 89B Mallik 89B Aston 88I Aston 88J Augustin 88C Falvard 88
$2K_S$	Chen 90B Fujii 90 Aston 89 Feindt 89 Mallik 89B Aston 88C Aston 88I Aston 88J Augustin 88C Berger 88 Bolonkin 88 Feindt 88 Sedlak 88 Toki 88B
$\phi(1020)\ \gamma$	Landsberg 90B

$f_0(1590)$

2γ	Bienlein 91 Harjes 91 Harjes 91B
$2\pi^0$	Boutemeur 89B
$\pi^+ \pi^-$	Harjes 91B
2η	Beladidze 92 Burchell 92 Hertzog 92 Amsler 91B Bienlein 91 Karch 91C Feindt 90 Prokoshkin 90 Boutemeur 89B Augustin 88C Toki 88B Alde 87
$\eta'(958)\ \eta$	Beladidze 92 Burchell 92 Bienlein 91 Kulik 90 Boutemeur 89B

$f_0(1590)$

$4\pi^0$	Toki 88B Burchell 92 Toki 88B Alde 87D

$\omega(1600)$

$\rho(770)^0\ \pi^0$	Donnachie 89
$\pi^+ \pi^0 \pi^-$	Govorkov 88
$\omega(783)\ \pi^+ \pi^-$	Donnachie 89

$f_2(1640)$

$2\omega(783)$	Bityukov 91D Alde 90 Alde 89 Boutemeur 89B Alde 88C

$\pi_2(1670)$

$f_2(1270)\ \pi^0$	Karch 91
6γ	Karch 91

$\pi_2(1670)^+$

$\rho(770)^0\ \pi^+$	Condo 91
$f_2(1270)\ \pi^+$	Condo 91

$\pi_2(1670)^0$

2γ	Antreasyan 90C
$f_2(1270)\ \pi^0$	Antreasyan 90C Gidal 88C
$3\pi^0$	Karch 91C Bienlein 90 Bienlein 88
$\pi^+ \pi^0 \pi^-$	Behrend 89G Feindt 89

$\pi_2(1670)^-$

$\rho(770)^0\ \pi^-$	Condo 91 Cassata 88
$f_2(1270)\ \pi^-$	Condo 91

$\rho_3(1690)$

$\omega(783)\ \pi^0$	Alde 91G

$\rho_3(1690)^0$

$\pi^+ \pi^-$	Perepelitsa 91 Perepelitsa 90
2η	Bailly 87C
$\rho(770)^0\ \eta$	Landsberg 90
$\omega(783)\ \pi^0$	Fukui 88 Alde 92 Landsberg 92

$\rho(1700)^0$

$\rho(770)^0\ \eta$	Fukui 88
$\omega(783)\ \pi^0$	Dolinsky 89B Govorkov 88
$\eta\ \pi^+ \pi^-$	Takamatsu 89

$\rho(1700)^0$

$\rho(770)^0\ \pi^+ \pi^-$	Behrend 90F

$\rho(1700)^-$

$\omega(783)\ \pi^-$	Govorkov 88

$X(1700)$

$K^0 \overline{K}^0$	Falvard 88
$K^+ K^-$	Falvard 88

$f_2(1720)$

2γ	Aston 88H Berger 88 Harjes 91 Albrecht 89K
2π	Burchell 92
$2\pi^0$	Ajaltouni 88 Hitlin 88
$\pi^+ \pi^-$	Armstrong 91 Albrecht 89J Augustin 88C Hitlin 88
2η	Burchell 92 Karch 91C Feindt 90 Prokoshkin 90 Ajaltouni 88 Augustin 88C Hitlin 88 Schmitt 88
$2\rho(770)$	Hitlin 88
$2\omega(783)$	Hitlin 88
$\eta'(958)\ \eta$	Augustin 88C Hitlin 88
$K \overline{K}$	Augustin 88 Toki 88B
$K^0 \overline{K}^0$	Feindt 90
$K^+ K^-$	Armstrong 91 Jin 91 Chen 90B Feindt 90 Prokoshkin 90 Albrecht 89J Fulton 89B Mallik 89B Augustin 88C Hitlin 88
$2K_S$	Chen 90B Prokoshkin 90 Fulton 89B Mallik 89B Augustin 88C Behrend 88E Bolonkin 88 Feindt 88 Hitlin 88 Toki 88B
$K \overline{K}\ \pi$	Hitlin 88
$K \overline{K}\ 2\pi$	Hitlin 88

$X(1740)$

$2\pi^0$	Alde 91B Alde 91F
2η	Alde 91B Alde 91F

$X(1740)$

$\eta'(958)\ \eta$	Boutemeur 89B Alde 91B Alde 91F

$f_0(1750)$

$2K_S$	Bolonkin 88

$\eta(1760)$

$2\rho(770)^0$	Bisello 89 Augustin 88C
$\rho(770)^+\ \rho(770)^-$	Bisello 89

$f_2(1810)$

2γ	Harjes 91B
$2\pi^0$	Aker 91
$\pi^+ \pi^-$	Harjes 91B
$\eta\ 2\pi^0$	Bienlein 92
$4\pi^0$	Alde 87C Alde 87D

$X(1814)^-$

$f_0(1590)\ \pi^-$	Beladidze 92
$2\eta\ \pi^-$	Bityukov 91
$\eta'(958)\ \eta\ \pi^-$	Bityukov 91

$\eta_2(1870)$

$\eta\ 2\pi^0$	Bienlein 92 Karch 91B Karch 90 Karch 90B

$X(1910)$

$2\pi^0$	Alde 91C Kulik 90 Alde 88D
2η	Alde 91C Kulik 90 Alde 88D
$2\omega(783)$	Bityukov 91D Alde 90 Alde 89 Alde 88C
$\eta'(958)\ \eta$	Alde 91C Kulik 90 Boutemeur 89B Alde 88D
$2\eta'(958)$	Berdnikov 92B
$2K_S$	Kulik 90 Alde 88D

$f_2(2010)$

$2\phi(1020)$	Bolonkin 88 Augustin 88C Etkin 88

$a_3(2050)^-$

$\rho(770)^0\ \pi^-$	Cassata 88
$f_0(1240)\ \pi^-$	Joyner 89

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$f_4(2050)$

$2\pi^0$	Oest 90, Oest 90B
$2\omega(783)$	Bityukov 91D, Alde 90
$2K_S$	Bolonkin 88

$\eta(2100)$

$2\rho(770)^0$	Bisello 89, Augustin 88C
$\rho(770)^+ \rho(770)$	Bisello 89
$2\phi(1020)$	Bai 90B, Augustin 88C

$\rho(2110)^0$

$\omega(783)\ \pi^0$	Alde 92, Landsberg 92

$X(2200)$

2η	Feindt 90
$K\ K$	Augustin 88, Toki 88B
$K^+\ K^-$	Jin 91, Baru 89
$2\phi(1020)$	Baru 89

$f_4(2220)$

	Baru 89, Berger 88
2γ	Albrecht 89K
$\eta'(958)\ \eta$	Boutemeur 89B, Augustin 88C
$K\ K$	Augustin 88
$K^+\ K^-$	Albrecht 89J, Aston 88F, Aston 88I, Aston 88J, Augustin 88C
$2K_S$	Hertzog 92, Fujii 90, Aston 89, Aston 88C, Aston 88F, Augustin 88C, Behrend 88E, Feindt 88, Toki 88B
$\phi(1020)\ \omega(783)$	Mallik 89B
$2\phi(1020)$	Hertzog 92, Mallik 89B

$f_2(2300)$

$2K_S$	Bolonkin 88
$2\phi(1020)$	Bai 90B, Augustin 88C, Etkin 88

$f_2(2340)$

	Augustin 88C, Etkin 88

$f_6(2510)$

$2\pi^0$	Boutemeur 89B

strange

	Ammosov 92B, Gilman 89, Bogolyubsky 88B, Garutchava 87

strange^0

	Baker 90

$K^\pm$

$\pi^\pm\ \nu\ \nu$	Battiston 92
$\pi^\pm\ e^-\ e^+$	Battiston 92
$\pi^\pm\ \mu^-\ \mu^+$	Battiston 92
$\pi^\pm\ 2\gamma$	Battiston 92

K

$\ell\ \nu$	Battiston 92
2π	Battiston 92
$\pi\ \ell\ \nu$	Battiston 92
$\pi\ \mu^\pm\ e^\pm$	Battiston 92
3π	Battiston 92
$2\pi\ \ell\ \nu$	Battiston 92

K^+

π^+ **2neutral (neutrals)**	Bryman 90
$e^+\ \nu_e$	Bernardi 88
$\mu^+\ \nu_\mu$	Imazato 92, Imazato 92B, Usher 92, Phillips 89, Tanimori 89B, Ansorge 88, Bernardi 88
μ^+ **heavy-ν**	Imazato 92B
π^+ **unspec**	Atiya 92
π^+ **longlived**	Battiston 92
$\pi^+\ \gamma$	Imazato 92B
π^+ **higgs**	Atiya 90B, Poutissou 90, Atiya 89, Gilman 89, Poutissou 89, Selen 89
π^+ **axion**	Imazato 92B, Turner 90
π^+ **meson^0**	Alliegro 92
$\pi^+\ \pi^0$	Atiya 92B, Usher 92, Atiya 91B, Phillips 89, Tanimori 89B, Ansorge 88, Campagnari 88
$\mu^+\ \nu_\mu\ \gamma$	Demidov 90, Demidov 89, Numao 89, Barmin 87
μ^+ **heavy-ν** γ	Imazato 92B

K^+

$\pi^+\ \nu\ \nu$	Atiya 92, Drell 92B, Imazato 92B, Kuno 92, Atiya 91, Atiya 90, Bryman 90, Kuno 90, Poutissou 90, Atiya 89B, Geng 89, Littenberg 89, Numao 89, Poutissou 89
$\pi^+\ e^-\ e^+$	Alliegro 92, Kuno 90, Gilman 89, Littenberg 89, Lubatti 89
$\pi^+\ \nu_e\ \bar{\nu}_e$	Gilman 89
$\pi^0\ e^+\ \nu_e$	Akimenko 91, Tanimori 89B
$\pi^+\ \mu^-\ e^+ + \pi^+\ \mu^+\ e^-$	Bryman 90
$\pi^+\ \mu^+\ e^-$	Drell 92B, Lee 90, Atiya 89B, Gilman 89, Littenberg 89, Lubatti 89, Campagnari 88
$\pi^-\ \mu^+\ e^+$	Littenberg 91
$\pi^+\ \mu^-\ \mu^+$	Bryman 90, Kuno 90, Poutissou 90, Atiya 89, Gilman 89, Littenberg 89, Poutissou 89, Selen 89
$\pi^0\ \mu^+\ \nu_\mu$	Imazato 92B, Phillips 89, Tanimori 89B
$\pi^-\ 2\mu^+$	Littenberg 91
$\pi^+\ 2\gamma$	Imazato 92B, Atiya 90B, Bryman 90, Kuno 90, Poutissou 90, Poutissou 89
$\pi^+\ \pi^0\ \gamma$	Battiston 92
$\pi^+\ 2\pi^0$	Tanimori 89B
$2\pi^+\ \pi^-$	Phillips 89, Tanimori 89B, Ansorge 88
$\mu^-\ 2\mu^+\ \nu$	Bryman 90, Poutissou 90
$\mu^-\ 2\mu^+\ \nu_\mu$	Atiya 89, Littenberg 89, Poutissou 89, Selen 89
$\pi^0\ e^+\ \nu_e\ \gamma$	Barmin 90
$2\pi^0\ e^+\ \nu_e$	Barmin 88B
$\pi^+\ 3\gamma$	Imazato 92B

K^+

$\pi^+\ 2\pi^0\ \gamma$	Battiston 92
$2\pi^+\ \pi^-\ \gamma$	Battiston 92, Barmin 89B
$2\pi^0\ e^+\ \nu_e\ \gamma$	Barmin 91
$3\pi^0\ e^+\ \nu_e$	Barmin 91

K^0

$2\pi^0$	Hirata 89B
$\pi^+\ \pi^-$	Angelopoulos 92, Guyot 92, Ruf 92, Holder 90, Holder 90B, Adler 89B, Adler 89C, Hirata 89B, Aleev 88B
$\pi^0\ \nu\ \bar{\nu}$	Battiston 92
$\pi^+\ e^-\ \bar{\nu}_e$	Guyot 92
$\pi^-\ e^+\ \nu_e$	Guyot 92

$\bar{K}^0$

$\pi^+\ \pi^-$	Angelopoulos 92, Guyot 92, Ruf 92, Holder 90, Holder 90B, Adler 89B, Adler 89C
$\pi^+\ e^-\ \bar{\nu}_e$	Guyot 92
$\pi^-\ e^+\ \nu_e$	Guyot 92

K^-

$\pi^0\ \pi^-$	Ansorge 88
$\pi^0\ e^-\ \bar{\nu}_e$	Bolotov 88
$\pi^+\ 2\pi^-$	Ansorge 88
$3\pi^0\ e^-\ \bar{\nu}_e$	Bolotov 88

K_S

$e^-\ e^+$	Auge 89B
2γ	Battiston 92, Auge 89B, Dolinsky 89B, Balats 87
$2\pi^0$	Hsiung 92, Perdereau 92, Barker 91, Iconomidoufa 91, Kleinknecht 91, Schwiening 91, Winstein 91, Barmin 90D, Barr 90, Carosi 90, Holder 90, Holder 90B, Hsiung 90, Hsiung 90B, Karlsson 90, Patterson 90, Yamanaka 90, Auge 89, Berger 89, Dolinsky 89B

K_S

Fayard 89
Gibson 89
Holder 89
Peyaud 89
Winstein 89
Burkhardt 88
Hsiung 88
Schaffer 88
Woods 88

$\pi^+ \pi^-$

Acton 92N
Acton 92O
Adamovich 92
Adams 92
Andryakov 92
Anjos 92
Botterweck 92
Brick 92
Buskulic 92H
Coc 92
Dolgolenko 92
Eiseman 92B
Evans 92
Frabetti 92B
Hsiung 92
Maringer 92
Perdereau 92
Ramberg 92
Abreu 91O
Alexander 91E
Baker 91
Barker 91
Iconomidoufa 91
Kinson 91
Kleinknecht 91
Schwiening 91
Willocq 91
Winstein 91
Andryakov 90
Anjos 90E
Avery 90
Barmin 90D
Barr 90
Bartke 90
Bloomer 90
Carosi 90
Derado 90B
Eiseman 90
Holder 90
Holder 90B
Hsiung 90
Hsiung 90B
Karlsson 90
Patterson 90
Taylor 90
Yamanaka 90
Yuldashev 90B
Abachi 89B
Alexander 89
Auge 89
Berger 89
Dolinsky 89B
Fayard 89
Gibson 89
Holder 89
Peyaud 89
Phillips 89
Winstein 89
Aihara 88B
Albrecht 88O
Aleev 88G
Ansorge 88
Aston 88C
Barwolff 88
Bonner 88
Burkhardt 88
Doser 88
Hsiung 88
Schaffer 88
Tschirhart 88
Vesztergombi 88
Woods 88
Bogolyubsky 87C

K_S

$\pi^0 e^- e^+$

Battiston 92
Gibbons 88
Hsiung 88

$\pi^+ \pi^- \gamma$

Battiston 92
Ramberg 92
Ramberg 92B
Barker 91
Ramberg 91
Hsiung 90

$\pi^+ \pi^0 \pi^-$

Atiya 89B

K_L

Amsler 91B
Gastaldi 91
Bai 90B
Barkov 90
Berger 90B
Bisello 90C
Dolinsky 89B
Kopke 89
Mallik 89B
Augustin 88C
Doser 88
Sedlak 88
Shoemaker 88
Asratyan 87C

$e^- e^+$ **X**

Akagi 92
Silvestrov 89

meson^0 e^- e^+ (neutrals)

Silvestrov 89

π^0 2neutral (neutrals)

Bryman 90

$e^- e^+$

Battiston 92
Drell 92B
Imazato 92B
Inagaki 91
Bryman 90
Gilman 89
Inagaki 89
Inagaki 89C
Littenberg 89
Mathiazhagan 89
Schaffner 89
Cousins 88
Greenlee 88
Inagaki 88
Jastrzembski 88

$\mu^- e^+ + \mu^+ e^-$

Battiston 92
Drell 92B
Imazato 92B
Inagaki 91
Bryman 90

$\mu^- e^+$

Atiya 89B
Inagaki 89
Inagaki 89C
Littenberg 89
Mathiazhagan 89
Schaffner 89
Cousins 88
Greenlee 88
Inagaki 88

$\mu^+ e^-$

Atiya 89B
Gilman 89
Inagaki 89
Inagaki 89C
Littenberg 89
Mathiazhagan 89
Schaffner 89
Cousins 88
Greenlee 88
Inagaki 88

$\mu^- \mu^+$

Battiston 92
Drell 92B

K_L

Imazato 92B
Heinson 91
Inagaki 91B
Bryman 90
Kuno 90
Atiya 89B
Geng 89
Gilman 89
Inagaki 89
Inagaki 89C
Littenberg 89
Mathiazhagan 89
Mathiazhagan 89B
Schaffner 89
Inagaki 88

2γ

Battiston 92
Auge 89B

π^0 higgs

Barr 90B
Auge 89B
Gilman 89

$2\pi^0$

Hsiung 92
Perdereau 92
Barker 91
Iconomidoufa 91
Kleinknecht 91
Winstein 91
Barr 90
Carosi 90
Holder 90
Holder 90B
Hsiung 90
Hsiung 90B
Karlsson 90
Patterson 90
Yamanaka 90
Atiya 89B
Auge 89
Fayard 89
Gibson 89
Holder 89
Peyaud 89
Winstein 89
Yamanaka 89
Burkhardt 88
Hsiung 88
Schaffer 88
Woods 88

$\pi^+ \pi^-$

Hsiung 92
Perdereau 92
Ramberg 92
Barker 91
Heinson 91
Iconomidoufa 91
Inagaki 91
Inagaki 91B
Kleinknecht 91
Winstein 91
Barr 90
Carosi 90
Holder 90
Holder 90B
Hsiung 90
Hsiung 90B
Karlsson 90
Patterson 90
Yamanaka 90
Atiya 89B
Auge 89
Fayard 89
Gibson 89
Holder 89
Inagaki 89
Inagaki 89C
Mathiazhagan 89
Mathiazhagan 89B
Peyaud 89
Winstein 89
Burkhardt 88
Gibbons 88
Greenlee 88

K_L

Hsiung 88
Inagaki 88
Jastrzembski 88
Schaffer 88
Woods 88

$e^- e^+ \gamma$

Battiston 92
Morse 91
Barr 90D
Kuno 90
Ohl 90B
Auge 89B
Littenberg 89

$\mu^- \mu^+ \gamma$

Battiston 92

$\pi^0 \nu \bar{\nu}$

Graham 92
Winstein 91
Littenberg 89B

$\pi^0 e^- e^+$

Battiston 92
Imazato 92B
Morse 91
Serin 91B
Winstein 91
Barker 90
Bryman 90
Holder 90
Holder 90B
Kuno 90
Morse 90
Ohl 90
Atiya 89B
Auge 89B
Gilman 89
Holder 89
Littenberg 89
Yamanaka 89
Barr 88
Gibbons 88
Hsiung 88
Jastrzembski 88

$\pi^0 \mu^- \mu^+$

Battiston 92
Atiya 89B

$\pi^0 2\gamma$

Barr 92
Battiston 92
Drell 92B
Papadimitrio 91
Serin 91
Serin 91B
Barr 90C
Bryman 90
Holder 90
Holder 90B
Kuno 90
Atiya 89B
Auge 89B
Littenberg 89
Papadimitrio 89

$\pi^+ \pi^- \gamma$

Battiston 92
Ramberg 92
Ramberg 92B
Barker 91
Ramberg 91
Hsiung 90

$3\pi^0$

Somalwar 92
Barker 91
Hsiung 90

$\pi^+ \pi^0 \pi^-$

Barker 91
Ohl 90B
Jastrzembski 88

$e^- e^+ 2\gamma$

Morse 91
Morse 90

$2e^- 2e^+$

Akagi 92
Battiston 92
Imazato 92B
Barr 91

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

K_L

Morse 91
Serin 91
Littenberg 89

$\pi^+ \pi^0 e^- \bar{\nu}_e$
Barker 91

$\pi^0 \pi^- e^+ \nu_e$
Barker 91

$K^*(892)$

Heusch 91
Landsberg 91
Lesiak 91
Tenner 91
Augustin 90B
Bai 90D
Augustin 89
Szklarz 89
Sugahara 88B
Toki 88B

$K \pi$
Armstrong 92

$K^*(892)^\pm$

Aleem 92
Cronstrom 91
Marshall 89
Babintsev 88

$K_S \pi^\pm$
Acton 92O
Ronan 91

$K^*(892)^+$

Abreu 92F
Acton 92O
Armstrong 92
Gauthier 92
Lipton 92
Achasov 91
Aguilarbenit 91
Albajar 91D
Ammar 91B
Amsler 91
Appel 91
Gittelman 91
Hebbeker 91B
Monch 91
Ronan 91
Anjos 90
Aston 90B
Bai 90
Bai 90C
Barlag 90C
Barlag 90F
Chliapnikov 90
Landsberg 90
Landsberg 90B
Abachi 89B
Adler 89E
Albrecht 89S
Alder 89
Avery 89B
Behrend 89F
Browder 89
Chen 89B
Danilov 89
Halling 89
Hayes 89
Hirata 89B
Kopke 89
Landsberg 89
Mattig 89
Miller 89
Schindler 89
Schubert 89
Toki 89B
Aleev 88
Banerjee 88
Barlag 88C
Barloutaud 88
Bogolyubsky 88F
Bourdarios 88
Coffman 88
Falvard 88

$K^*(892)^+$

Gan 88
Jousset 88
Levy 88
Mir 88
Thorndike 88
Toki 88B
Cumalat 87

$K^+ \pi^0$
Agababyan 89
Aguilarbenit 89
Berger 89
Albrecht 88N

$K^0 \pi^+$
Asratyan 92
Maringer 92
Albrecht 91P
Drutskoy 89

$K_S \pi^+$
Buskulic 92H
Abreu 91O
Albrecht 91J
Cronstrom 91
Aston 90
Alam 89
Albrecht 89L
Albrecht 89U
Berger 89
Braunschweig 89M
Aihara 88D
Albrecht 88E
Albrecht 88N
Albrecht 88O
Augustin 88C
Babintsev 88
Sedlak 88
Tschirhart 88

$K^*(892)^0$

Acton 92M
Aleem 92
Barbarogalti 92
Drell 92B
Lipton 92
Achasov 91
Albajar 91B
Albrecht 91B
Ammar 91B
Amsler 91
Gittelman 91
Kiesling 91
Monch 91
Wenzel 91
Anjos 90
Armstrong 90
Aston 90B
Bai 90
Bai 90C
Barlag 90C
Berger 90B
Bienz 90
Chliapnikov 90
Fawcett 90B
Frisch 90
Goldberg 90
Landsberg 90
Adler 89B
Albrecht 89S
Alder 89
Aston 89
Avery 89B
Chen 89B
Danilov 89
Halling 89
Jensen 89
Kopke 89
Landsberg 89
Mallik 89B
Marshall 89
Mattig 89
Rath 89
Schubert 89
Wasserbaech 89B
Adler 88F
Anjos 88C

$K^*(892)^0$

Anjos 88E
Anjos 88G
Aston 88
Barlag 88C
Barloutaud 88
Bourdarios 88
Coffman 88
Gan 88
Jousset 88
Levy 88
Mir 88
Thorndike 88
Toki 88
Toki 88B
Cumalat 87

$K^+ \pi^-$
Abreu 92J
Acton 92C
Ajinenko 92
Asratyan 92
Boucrot 92
Buskulic 92
Buskulic 92H
Gauthier 92
Gebert 92
Vejcik 92
Aguilarbenit 91
Albajar 91D
Cronstrom 91
Ronan 91
Agababyan 90
Akimenko 90C
Albrecht 90K
Asratyan 90
Aston 90
Bisello 90B
Bisello 90D
Bortoletto 90
Eigen 90
Fawcett 90
Abachi 89D
Agababyan 89
Aguilarbenit 89
Ajinenko 89B
Alam 89
Albrecht 89L
Albrecht 89U
Berger 89
Breakstone 89
Chen 89C
Aihara 88
Albrecht 88E
Augustin 88C
Edberg 88
Sedlak 88
Raab 87

$K_S \pi^0$
Berger 89

$\pi^- \mu^+ \nu_\mu$
Hirata 89B

$3\pi^0$
Hirata 89B

$\bar{K}^*(892)$

Heusch 91
Landsberg 91
Albrecht 90G
Toki 88B

$K^- \pi^+$
Adler 89D

$\bar{K}^*(892)^0$

Abreu 92F
Albrecht 92
Achasov 91
Ammar 91B
Amsler 91
Bortoletto 91
Coffman 91
Cronstrom 91
Gittelman 91
Spiegel 91
Albrecht 90G
Anjos 90

$\bar{K}^*(892)^0$

Anjos 90B
Anjos 90D
Armstrong 90
Aston 90B
Bai 90
Bai 90C
Barlag 90C
Barlag 90F
Bienz 90
Cassel 90
Chliapnikov 90
Fawcett 90B
Goldberg 90
Landsberg 90
Miller 90
Adler 89B
Albrecht 89S
Alder 89
Aston 89
Avery 89B
Browder 89
Chen 89B
Dejongh 89
Efendiev 89
Halling 89
Jensen 89
Klein 89C
Kopke 89
Kreinick 89
Landsberg 89
Mallik 89B
Marshall 89
Miller 89
Mistry 89
Pitman 89
Schindler 89
Schubert 89
Toki 89B
Wasserbaech 89B
Adler 88F
Albrecht 88S
Anjos 88C
Anjos 88E
Anjos 88G
Aston 88
Barlag 88C
Batusov 88C
Coffman 88
Gan 88
Jousset 88
Levy 88
Mir 88
Schindler 88
Thorndike 88
Toki 88
Toki 88B
Witherell 88

$\bar{K}^0 \pi^0$
Procario 92B

$K^- \pi^+$
Abreu 92J
Acton 92C
Ajinenko 92
Albrecht 92G
Anjos 92B
Asratyan 92
Coffman 92B
Gebert 92
Kodama 92
Kodama 92B
Procario 92B
Adamovich 91E
Aguilarbenit 91
Albrecht 91J
Albrecht 91P
Crawford 91
Ronan 91
Agababyan 90
Alvarez 90C
Alvarez 90D
Anjos 90C
Aston 90
Barlag 90
Batusov 90C

$\overline{K}^*(892)^0$

Bisello 90B
Dejongh 90
Eigen 90
Fawcett 90
Kinoshita 90
Abachi 89D
Adler 89E
Agababyan 89
Aguilarbenit 89
Alam 89
Albrecht 89L
Aston 89B
Breakstone 89
Chen 89C
Aihara 88
Albrecht 88E
Aston 88B
Aston 88I
Augustin 88C
Sedlak 88
Raab 87

$K^*(892)^-$

Acton 92O
Armstrong 92
Lipton 92
Shukla 92B
Achasov 91
Aguilarbenit 91
Ammar 91B
Amsler 91
Appel 91
Bortoletto 91
Cronstrom 91
Decamp 91R
Gittelman 91
Hebbeker 91B
Kiesling 91
Ronan 91
Stoker 91
Albrecht 90G
Anjos 90
Aston 90B
Bai 90
Bai 90C
Cassel 90
Chliapnikov 90
Eastman 90
Goldberg 90
Landsberg 90
Landsberg 90B
Miller 90
Albrecht 89S
Alder 89
Avery 89B
Behrend 89F
Chen 89B
Halling 89
Hayes 89
Hayes 89B
Kopke 89
Kreinick 89
Landsberg 89
Mattig 89
Miller 89
Mistry 89
Riles 89
Aleev 88
Aston 88I
Barlag 88C
Bogolyubsky 88F
Coffman 88
Falvard 88
Gan 88
Jousset 88
Levy 88
Mir 88
Thorndike 88
Toki 88B

$\overline{K}^0\ \pi^-$

Albrecht 93
Anjos 92B
Asratyan 92
Coffman 92B

$K^*(892)^-$

Maringer 92
Dejongh 90
Bird 88

$K^-\ \pi^0$

Anjos 92B
Coffman 92B
Dejongh 90
Aguilarbenit 89
Albrecht 88N

$K_S\ \pi^-$

Buskulic 92H
Frabetti 92B
Abreu 91O
Crawford 91
Albrecht 90K
Aston 90
Bortoletto 90
Abachi 89B
Alam 89
Albrecht 89L
Braunschweig 89M
Aihara 88D
Albrecht 88E
Albrecht 88N
Albrecht 88O
Augustin 88C
Babintsev 88
Sedlak 88
Tschirhart 88

$K_1(1270)^+$

Gittelman 91

$K^+\ \rho(770)^0$

Albrecht 89L

$K_1(1270)^0$

Gittelman 91

$K^0\ \rho(770)^0$

Dejongh 90

$K_S\ \rho(770)^0$

Albrecht 89L

$\overline{K}_1(1270)^0$

Coffman 92B
Browder 89

$K_S\ \rho(770)^0$

Albrecht 89L

$\overline{K}^0\ \pi^+\ \pi^-$

Adler 89E

$K_S\ \pi^+\ \pi^-$

Dejongh 89

$K_1(1270)^-$

Adler 89D
Browder 89

$K^-\ \rho(770)^0$

Coffman 92B
Dejongh 90
Albrecht 89L
Efendiev 89

$\overline{K}^*(892)^0\ \pi^-$

Coffman 92B
Dejongh 90
Efendiev 89

$\overline{K}_0^*(1430)^0\ \pi^-$

Coffman 92B

$\overline{K}_2^*(1430)^0\ \pi^-$

Dejongh 90

$K^-\ \pi^+\ \pi^-$

Alvarez 90D
Adler 89E
Dejongh 89

$K_1(1400)$

Lesiak 91

$K_1(1400)^+$

Gittelman 91
Albrecht 89S

$K^*(892)^0\ \pi^+$

Albrecht 89L

$K_1(1400)^+$

Albrecht 88E

$K_1(1400)^0$

Gittelman 91
Albrecht 89S

$K^*(892)^+\ \pi^-$

Albrecht 89L
Albrecht 88E

$\overline{K}_1(1400)^0$

Albrecht 89S
Browder 89

$\overline{K}^0\ \rho(770)^0$

Aston 88I

$\overline{K}^*(892)^0\ \pi^0$

Coffman 92B
Dejongh 90

$K^*(892)^-\ \pi^+$

Coffman 92B
Dejongh 90
Albrecht 89L
Albrecht 88E
Aston 88I

$\overline{K}^0\ \pi^+\ \pi^-$

Adler 89E
Aston 88I

$K_S\ \pi^+\ \pi^-$

Dejongh 89

$K_1(1400)^-$

Coffman 92B
Albrecht 89S
Browder 89

$K^-\ \rho(770)^0$

Efendiev 89

$\overline{K}^*(892)^0\ \pi^-$

Albrecht 89L
Efendiev 89
Albrecht 88E

$K^-\ \pi^+\ \pi^-$

Dejongh 90
[illegible] 89E
[illegible]h 89

$K^*(141($

$K^0\ \pi^+$

[illegible]skoy 89

$K^*(1410)^0$

Dejongh 90

$\overline{K}^*(1410)$

$K^-\ \pi^+$

Aston 92

$\overline{K}^*(1370)^0$

Coffman 92B

$K^-\ \pi^+$

Aston 88B
Aston 88I

$\overline{K}^0\ \rho(770)^0$

Aston 88I

$K^*(892)^-\ \pi^+$

Aston 88I

$\overline{K}^0\ \pi^+\ \pi^-$

Aston 92
Aston 88I

$K^*(1410)^-$

Coffman 92B

$\overline{K}^0\ \pi^-$

Aston 92
Bird 88

$K^-\ \pi^+\ \pi^-$

Dejongh 90

$\overline{K}_0^*(1430)^0$

Coffman 92B
Aston 91B

$\overline{K}_0^*(1430)^0$

Aston 88B
Aston 88I

$K_0^*(1430)^-$

$\overline{K}^0\ \pi^-$

Albrecht 93
Aston 91B

$K_2^*(1430)^+$

Gittelman 91
Albrecht 89S
Kopke 89

$K_S\ \pi^+$

Albrecht 89L
Albrecht 88E
Babintsev 88
Sedlak 88

$K_2^*(1430)^0$

Gittelman 91
Albrecht 89S
Kopke 89
Mattig 89

$K^+\ \pi^-$

Agababyan 89
Ajinenko 89B
Albrecht 89L
Albrecht 88E
Sedlak 88

$\overline{K}_2^*(1430)^0$

Dejongh 90
Albrecht 89S
Kopke 89

$\overline{K}^0\ \pi^0$

Procario 92B

$K^-\ \pi^+$

Procario 92B
Aston 91B
Albrecht 89L
Aston 89B
Albrecht 88E
Aston 88B
Aston 88I
Sedlak 88

$\overline{K}^0\ \rho(770)^0$

Aston 88I

$K^*(892)^-\ \pi^+$

Aston 88I

$\overline{K}^0\ \pi^+\ \pi^-$

Aston 91B
Aston 88I

$K_2^*(1430)^-$

Albrecht 89S
Kopke 89

$\overline{K}^0\ \pi^-$

Albrecht 93
Aston 91B
Bird 88

$K_S\ \pi^-$

Albrecht 89L
Albrecht 88E
Babintsev 88
Sedlak 88

$K^-\ \eta$

Aston 89B
Aston 88G
Aston 88I

$K^-\ \omega(783)$

Aston 92B
Aston 91C

$K(1460)^-$

$K^-\ \rho(770)^0$

Efendiev 89

$\overline{K}^*(892)^0\ \pi^-$

Efendiev 89

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$K^*(1680)^+$

$K_S\ \pi^+$: Gittelman 91, Albrecht 89L

$K^*(1680)^0$

$K^+\ \pi^-$: Gittelman 91, Albrecht 89L

$\overline{K}^*(1680)$

$K^-\ \pi^+$: Aston 92

$\overline{K}^*(1680)^0$

$\overline{K}^0\ \rho(770)^0$: Albrecht 89L, Aston 88B, Aston 88I

$K^*(892)^-\ \pi^+$: Aston 88I

$\overline{K}^0\ \pi^+\ \pi^-$: Aston 88I

$K^*(1680)^-$

$\overline{K}^0\ \pi^-$: Aston 92, Bird 88

$K_S\ \pi^-$: Albrecht 89L

$K_2(1770)$

Lesiak 91

$K_2(1770)^-$

$K^-\ \omega(783)$: Aston 92B

$K_3^*(1780)^+$

$K_S\ \pi^+$: Gittelman 91

$K^+\ \rho(770)^0$: Albrecht 88E, Albrecht 89L

$K_3^*(1780)^0$

$K^+\ \pi^-$: Gittelman 91

$K_S\ \rho(770)^0$: Albrecht 88E, Albrecht 89L

$\overline{K}_3^*(1780)^0$

$K^-\ \pi^+$: Aston 89B, Albrecht 88E, Aston 88B

$\overline{K}^0\ \rho(770)^0$: Aston 88I

$K_S\ \rho(770)^0$: Aston 88I, Albrecht 89L

$K^*(892)^-\ \pi^+$: Aston 88I

$\overline{K}^0\ \pi^+\ \pi^-$: Aston 88I

$K_3^*(1780)^-$

$\overline{K}^0\ \pi^-$: Aston 91C, Bird 88

$K_S\ \pi^-$: Albrecht 88E

$K^-\ \eta$: Aston 89B, Aston 88G

$K^-\ \rho(770)^0$: Aston 88I, Albrecht 89L

$K_3^*(1780)^-$

$K^-\ \omega(783)$: Aston 92B

$\overline{K}_0^*(1950)^0$

$K^-\ \pi^+$: Aston 88B, Aston 88I

$K_0^*(1950)^-$

$\overline{K}^0\ \pi^-$: Bird 88

$\overline{K}_2^*(1980)^0$

$\overline{K}^0\ \pi^+\ \pi^-$: Aston 88I

$K_4^*(2045)$

Lesiak 91

$K_4^*(2045)^+$

$K_S\ \pi^+$: Gittelman 91, Albrecht 89L

$K_4^*(2045)^0$

$K^+\ \pi^-$: Gittelman 91, Albrecht 89L

$\overline{K}_4^*(2045)^0$

$K^-\ \pi^+$: Albrecht 89L, Aston 89B, Aston 88B, Aston 88I

$\overline{K}^0\ \rho(770)^0$: Aston 88I

$K^*(892)^-\ \pi^+$: Aston 88I

$\overline{K}^0\ \pi^+\ \pi^-$: Aston 88I

$K_4^*(2045)^-$

$K_S\ \pi^-$: Albrecht 89L

$\overline{K}_5^*(2380)^0$

$K^-\ \pi^+$: Aston 89B, Aston 88B, Aston 88I

$\overline{K}^*(\text{unspec})^0$

$\overline{K}^0\ \pi^+\ \pi^-$: Aston 91B, Aston 91B

$K^*(\text{unspec})^-$

$\overline{K}^0\ \pi^-$: Aston 91B

$\phi(1020)$

Abreu 92F, Acton 92M, Alvarez 92, Burchell 92, Gauthier 92, Lipton 92, Schmidt 92B, Shukla 92B, Achasov 91, Albajar 91D, Albrecht 91B, Ammar 91B, Baglin 91D, Bortoletto 91, Coffman 91, Donnachie 91, Geist 91, Gittelman 91, Heusch 91

$\phi(1020)$

Jacob 91, Landsberg 91, Lindsey 91, Odyniec 91B, Spiegel 91, Albrecht 90, Alexander 90B, Alvarez 90, Anjos 90, Anjos 90C, Anjos 90E, Bai 90, Bai 90C, Baldisseri 90, Barlag 90C, Barlag 90F, Bienz 90, Cassel 90, Hamann 90, Landsberg 90, Landsberg 90B, Miller 90, Shephard 90, Adler 89E, Albrecht 89S, Alder 89, Averill 89, Avery 89B, Barlag 89B, Browder 89, Chen 89B, Chiba 89, Danilov 89, Halling 89, Klein 89C, Kopke 89, Landsberg 89, Lockman 89, Mallik 89B, Marshall 89, Mattig 89, Miller 89, Mistry 89, Nagy 89, Pitman 89, Schindler 89, Toki 89B, Wasserbaech 89, Wasserbaech 89B, Wormser 89, Adler 88F, Ajaltouni 88B, Albrecht 88L, Albrow 88, Anjos 88C, Anjos 88G, Barlag 88C, Chiba 88, Coffman 88, Jousset 88, Landsberg 88, Levy 88, Mir 88, Schindler 88, Thorndike 88, Witherell 88, Chiba 87B

$\mu^-\ \mu^+$: Fredj 91, Odyniec 91, Schukraft 91, Abreu 89, Albajar 88C

γ **unspec**: Dolinsky 89

γ **higgs**: Druzhinin 88

γ **axion**: Druzhinin 88

$\pi^0\ \gamma$: Dolinsky 89

$\pi^+\ \pi^-$: Dolinsky 89

$\phi(1020)$

$\eta\ \gamma$: Dolinsky 89

$\eta'(958)\ \gamma$: Dolinsky 89, Druzhinin 88

$f_0(975)\ \gamma$: Dolinsky 89

$K^+\ K^-$: Acton 92C, Alexander 92, Asratyan 92, Avery 92, Boucrot 92, Buskulic 92, Buskulic 92H, Frabetti 92B, Frabetti 92D, Gebert 92, Hamann 92, Hertzog 92, Aguilarbenit 91, Albrecht 91J, Amsler 91, Amsler 91B, Anjos 91D, Armstrong 91, Cronstrom 91, Daoudi 91, Frabetti 91, Harris 91B, Procario 91, Ronan 91, Albrecht 90K, Aleev 90C, Aleev 90D, Alvarez 90C, Asratyan 90, Aston 90, Bai 90B, Batyunya 90B, Bisello 90B, Bisello 90C, Bortoletto 90, Buchholz 90, Frabetti 90, Landsberg 90B, Agababyan 89, Aguilarbenit 89, Aleev 89C, Anjos 89B, Armstrong 89B, Aston 89, Baglin 89C, Busennitz 89, Chen 89C, Wormser 89B, Aihara 88, Aihara 88B, Albrecht 88J, Albrecht 88K, Anjos 88D, Ashman 88C, Aston 88I, Aston 88J, Augustin 88C, Bityukov 88, Edberg 88, Etkin 88, Falvard 88, Schmitz 88, Shipbaugh 88B, Albrecht 87N, Asratyan 87C, Bityukov 87, Raab 87

$K_S\ K_L$: Amsler 91B, Bai 90B, Bisello 90C, Dolinsky 89B, Augustin 88C, Sedlak 88, Asratyan 87C

$\phi(1020)$

$\pi^0 e^- e^+$ — Dolinsky 89, Dolinsky 88
$\eta e^- e^+$ — Dolinsky 89
$2\pi^0 \gamma$ — Dolinsky 89, Druzhinin 88
$\pi^+ \pi^0 \pi^-$ — Barkov 89, Dolinsky 89B
$\eta \pi^0 \gamma$ — Dolinsky 89
$2\pi^+ \pi^0 2\pi^-$ — Barkov 88

$\phi(1680)$

$\omega(783) \pi^+ \pi^-$ — Bisello 91B
$K^+ K^- \pi^0$ — Bisello 91
$K^+ K_S \pi^-$ — Bisello 91
$K_S K^- \pi^+$ — Bisello 91

$\phi_3(1850)$

$K^+ K^-$ — Aston 89, Aston 88D, Aston 88I, Aston 88J
$K^+ K_S \pi^-$ — Aston 89, Aston 88D, Aston 88I, Aston 88J
$K_S K^- \pi^+$ — Aston 89, Aston 88D, Aston 88I, Aston 88J

charm

Ammosov 92B, Appel 92, Bozhko 92, Aoki 91B, Kodama 91B, Spiegel 91, Ammosov 90B, Batusov 90C, Braunschweig 90B, Aoki 89, Wormser 89, Aguilarbenit 88C, Purohit 88, Roudeau 88, Schmitz 88, Ushida 88, Aguilarbenit 87
ν_ℓ X — Duffy 88
$e^\pm$ X — Ng 88
e^+ X — Albrecht 92H, Ong 88B, Klem 86
ν_μ X — Duffy 88, Dorenbosch 87
$\mu^\pm$ X — Belikov 89
μ^- X — Cobbaert 88
μ^+ X — Belikov 90, Catanesi 89, Rossi 89, Albajar 88C, Albajar 88F, Cobbaert 88

charm

Foudas 88, Foudas 88B, Ong 88, Ong 88B, Sviridov 88, Ushida 88B
$D^*(2010)$ X — Boucrot 92

$\overline{\text{charm}}$

Appel 92, Aoki 91B, Kodama 91B, Spiegel 91, Ammosov 90B, Wormser 89, Roudeau 88, Aguilarbenit 87
e^- X — Ong 88B, Klem 86
$\overline{\nu}_e$ X — Duffy 88
μ^- X — Belikov 90, Catanesi 89, Rossi 89, Albajar 88C, Albajar 88F, Foudas 88, Foudas 88B, Ong 88B, Sviridov 88, Ushida 88B
$\overline{\nu}_\mu$ X — Duffy 88, Dorenbosch 87

charm^0

$\mu^\pm$ **2charged (neutrals)** — Aoki 91B
$\mu^\pm$ **4charged (neutrals)** — Aoki 91B

charm$^\pm$

$\mu^\pm$ **charged (neutrals)** — Aoki 91B
$\mu^\pm$ **3charged (neutrals)** — Aoki 91B
$\mu^\pm$ **5charged (neutrals)** — Aoki 91B

charm

$e^- \overline{\nu}_e$ X — Albrecht 91K
$\mu^- \overline{\nu}_\mu$ X — Albrecht 91K

charmed-meson

Wormser 89, Roudeau 88, Ushida 88, Witherell 88, Aguilarbenit 87C
ν_e X — Duffy 88
$e^\pm$ X — Wachs 89
ν_μ X — Duffy 88
μ^+ X — Mooney 89, Catanesi 88, Sviridov 88
ℓ **hadron (hadrons)** — Elsen 90

charmed-meson

Elsen 90, Wormser 89, Roudeau 88, Aguilarbenit 87C

charmed-meson

$\overline{\nu}_e$ X — Duffy 88
μ^- X — Mooney 89, Catanesi 88, Sviridov 88
$\overline{\nu}_\mu$ X — Duffy 88

DC

Alves 92, Appel 92, Alvarez 91B, Aoki 91C, Rossi 91
kaon π — Calvino 90
kaon 2π — Calvino 90
kaon 3π — Calvino 90

$D^\pm$

Alvarez 92, Alves 92, Appel 92, Kodama 92C, Rossi 91, Buchholz 90B, Schindler 90, Shephard 90, Marshall 89
$\eta'(958) \pi^\pm$ — Alvarez 91
$\rho(770) \pi^\pm \gamma$ — Alvarez 91

D

Alvarez 92, Ammosov 92B, Appel 92, Lipton 92, Yeh 92, Barlag 91, Rossi 91, Spiegel 91, Calvino 90, Dejongh 90
μ^+ X — Aoki 91C, Rossi 89, Bordalo 88
kaon π — Itoh 90
$\overline{K}\ \pi$ — Alvarez 91B
kaon 2π — Itoh 90
$\overline{K}\ 2\pi$ — Alvarez 91B
$\overline{K}\ 3\pi$ — Alvarez 91B

D^+

Appel 92, Barlag 91, Kodama 91, Rossi 91, Spiegel 91, Albrecht 90G, Avery 90, Cassel 90, Miller 90, Shephard 90, Halling 89, Kreinick 89, Miller 89, Mistry 89, Aguilarbenit 88, Anjos 88, Aoki 88, Grab 88, Roudeau 88, Thorndike 88

D^+

Aguilarbenit 87C
e^+ X — Baker 91, Bai 90C, Aguilarbenit 88B, Bowcock 88
μ^+ X — Kodama 92C
K^+ X — Coffman 91, Barlag 90C
K^0 X + $\overline{K}^0$ X — Coffman 91
K^- X — Coffman 91, Barlag 90C, Aguilarbenit 88B
$\overline{K}^0 e^+$ X — Baker 91
charged neutral (neutrals) — Aguilarbenit 88B, Ammar 88B
3charged (neutrals) — Ammar 88B
$K^- 2\pi^+$ X — Adamovich 91E
3charged neutral (neutrals) — Aguilarbenit 88B
5charged (neutrals) — Ammar 88B
5charged neutral (neutrals) — Aguilarbenit 88B
$\mu^+ \nu_\mu$ — Adler 88
$\eta \pi^+$ — Daoudi 91, Anjos 89B
$\rho(770) \pi^+$ — Anjos 88D
$\rho(770)^0 \pi^+$ — Witherell 88
$\rho(770)^+ \eta$ — Daoudi 91
$\omega(783) \pi^+$ — Anjos 89B
$\eta'(958) \pi^+$ — Anjos 91, Daoudi 91, Wormser 89
$\eta'(958) \rho(770)^+$ — Daoudi 91
$K^+ \pi^0$ — Labs 90, Schindler 90
$\overline{K}^0 \pi^+$ — Bortoletto 91, Coffman 91, Anjos 90E, Bortoletto 90, Adler 88F, Albrecht 88M, Izen 88, Asratyan 87C
$K_S \pi^+$ — Albrecht 91J
$\overline{K}^0 a_1(1260)^+$ — Coffman 92B, Dejongh 90, Adler 89E, Browder 89, Dejongh 89
$\overline{K}^0 a_2(1320)^+$ — Coffman 92B, Dejongh 90
$K^+ \overline{K}^0$ — Anjos 90E, Adler 88F
$\overline{K}^*(892)^0 \rho(770)^+$ — Coffman 92B, Dejongh 90

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

D^+

$\overline{K}^*(892)^0\ K^+$
Alvarez 90C
Barlag 90C
Barlag 90F
Adler 88F
Anjos 88G
Barlag 88C

$K^*(892)^+\ \overline{K}^*(892)^0$
Albrecht 91P
Gittelman 91
Barlag 90C

$K_1(1270)^0\ \pi^+$
Dejongh 90

$\overline{K}_1(1270)^0\ \pi^+$
Coffman 92B
Adler 89E
Browder 89
Dejongh 89

$\overline{K}_1(1400)^0\ \pi^+$
Coffman 92B
Dejongh 90
Adler 89E
Browder 89
Dejongh 89

$K^*(1410)^0\ \pi^+$
Dejongh 90

$\overline{K}^*(1370)^0\ \pi^+$
Coffman 92B

$\phi(1020)\ \pi^+$
Daoudi 91
Frabetti 91
Alvarez 90C
Barlag 90C
Barlag 90F
Buchholz 90
Adler 88F
Anjos 88G
Barlag 88C

$\phi(1020)\ \rho(770)^+$
Daoudi 91

$K^+\ \phi(1020)$
Anjos 91D

$\pi^+\ e^-\ e^+$
Weir 89
Haas 88

$\pi^0\ e^+\ \nu_e$
Bai 90C

$\pi^-\ 2e^+$
Weir 89

$\pi^+\ \mu^-\ e^+$
Weir 89
Haas 88

$\pi^+\ \mu^+\ e^-$
Weir 89

$\pi^-\ \mu^+\ e^+$
Weir 89

$\pi^+\ \mu^-\ \mu^+$
Weir 89
Haas 88

$\pi^-\ 2\mu^+$
Weir 89

$\rho(770)^0\ e^+\ \nu_e$
Bai 90C

$K^+\ e^-\ e^+$
Weir 89

$\overline{K}^0\ e^+\ \nu_e$
Lipton 92
Anjos 91C
Spiegel 91
Bai 90C
Izen 88

$K^-\ 2e^+$
Weir 89

$K^+\ \mu^-\ e^+$
Weir 89

$K^+\ \mu^+\ e^-$
Weir 89

$K^-\ \mu^+\ e^+$
Weir 89

$K^+\ \mu^-\ \mu^+$
Weir 89

D^+

$\overline{K}^0\ \mu^+\ \nu_\mu$
Bai 90C
Izen 88

$K^-\ 2\mu^+$
Weir 89

$K^*(892)^0\ \ell^+\ \nu$
Drell 92B

$\overline{K}^*(892)^0\ \ell^+\ \nu$
Kodama 92B

$\overline{K}^*(892)^0\ e^+\ \nu_e$
Adamovich 91E
Anjos 90B
Anjos 90C
Bai 90C
Anjos 88E

$\overline{K}^*(892)^0\ \mu^+\ \nu_\mu$
Kodama 92
Kodama 92B

$\phi(1020)\ e^+\ \nu_e$
Bai 90C

$\phi(1020)\ \mu^+\ \nu_\mu$
Bai 90C

$2\pi^+\ \pi^-$
Barlag 90C
Barlag 90F
Adler 88F
Anjos 88D
Witherell 88

$K^+\ \pi^+\ \pi^-$
Alves 92
Alves 92B
Thorne 92
Labs 90
Schindler 90

$\overline{K}^0\ \pi^+\ \pi^0$
Adler 88F
Asratyan 87C

$K^-\ 2\pi^+$
Abreu 92I
Albrecht 92E
Alvarez 92
Anjos 92B
Barlag 92
Bortoletto 92
Boucrot 92
Butler 92
Drell 92
Feindt 92B
Kodama 92B
Kodama 92C
Shukla 92
Albrecht 91G
Albrecht 91J
Ammar 91B
Anjos 91C
Bortoletto 91
Coffman 91
Daoudi 91
Frabetti 91
Procario 91
Spiegel 91
Alvarez 90
Alvarez 90C
Alvarez 90D
Anjos 90E
Barlag 90B
Barlag 90C
Barlag 90E
Barlag 90F
Batusov 90C
Bortoletto 90
Errede 90
Fulton 90
Gray 90
Kroha 90
Albrecht 89
Anjos 89B
Averill 89
Harder 89
Wormser 89B
Abachi 88
Adler 88C
Adler 88F

D^+

Albrecht 88J
Albrecht 88M
Anjos 88C
Anjos 88D
Anjos 88F
Barlag 88
Barlag 88C
Barlag 88D
Bortoletto 88
Izen 88
Asratyan 87C
Batusov 87
Raab 87

$\overline{K}^0\ \rho(770)^0\ \pi^+$
Coffman 92B
Dejongh 90

$K^-\ \rho(770)^+\ \pi^+$
Coffman 92B
Dejongh 90

$K^+\ K^-\ \pi^+$
Spiegel 91
Barlag 90B
Barlag 90C
Barlag 90F
Buchholz 90
Adler 88F
Albrow 88
Anjos 88G

$K^+\ K^-\ \pi^+\ -\ \overline{K}^*(892)^0\ K^+$
Barlag 88C

$K^+\ 2\overline{K}^0$
Ammar 91B

$\overline{K}^*(892)^0\ \pi^+\ \pi^0$
Coffman 92B
Dejongh 90

$K^*(892)^-\ 2\pi^+$
Coffman 92B
Dejongh 90

$K^*(892)^+\ K^-\ \pi^+$
Albrecht 91P

$\overline{K}^*(892)^0\ K^0\ \pi^+$
Albrecht 91P

$\phi(1020)\ \pi^0\ \pi$
Barlag 90C

$\phi(1020)\ \pi^+\ \pi^0$
Alvarez 90C
Barlag 90F
Anjos 89B

$\pi^+\ \pi^-\ e^+\ \nu_e$
Aguilarbenit 87F

$\overline{K}^0\ \pi^0\ e^+\ \nu_e$
Izen 88

$K^-\ \pi^+\ e^+\ \nu_e$
Adamovich 91E
Bai 90C
Batusov 90C
Izen 88
Aguilarbenit 87F

$\overline{K}^*(892)^0\ \pi^0\ e^+\ \nu_e$
Anjos 92B

$K^*(892)^-\ \pi^+\ e^+\ \nu_e$
Anjos 92B

3charged-hadron hadron^0
Batusov 90C

$2\pi^+\ \pi^0\ \pi^-$
Barlag 90C
Barlag 90F

$\overline{K}^0\ 2\pi^+\ \pi^-$
Coffman 92B
Coffman 91
Barlag 90C
Barlag 90F
Bortoletto 90
Dejongh 90
Adler 89E
Browder 89
Dejongh 89
Adler 88F
Albrecht 88M
Izen 88

D^+

Aguilarbenit 87F

nonres $< \overline{K}^0\ 2\pi^+\ \pi^- >$
Coffman 92B

$K^-\ 2\pi^+\ \pi^0$
Coffman 92B
Albrecht 91J
Barlag 90C
Barlag 90F
Dejongh 90
Anjos 89B
Aguilarbenit 87F

nonres $< K^-\ 2\pi^+\ \pi^0 >$
Coffman 92B

$K^+\ \overline{K}^0\ \pi^+\ \pi^-$
Albrecht 91P

$K^+\ K^-\ \pi^+\ \pi^0$
Barlag 90C
Barlag 90F
Anjos 89B

$K^0\ K^-\ 2\pi^+$
Albrecht 91P
Barlag 90C
Barlag 90F

$K^0\ K^-\ 2\pi^+\ -$
$K^*(892)^+\ \overline{K}^*(892)^0$
Albrecht 91P

$\overline{K}^*(892)^0\ 2\pi^+\ \pi^-$
Barlag 88C

$\phi(1020)\ 2\pi^+\ \pi^-$
Frabetti 92D
Alvarez 90C
Anjos 88G

$\overline{K}^0\ \pi^+\ \pi^-\ e^+\ \nu_e$
Anjos 92B
Aguilarbenit 87F

nonres $< \overline{K}^0\ \pi^+\ \pi^- >\ e^+\ \nu_e$
Anjos 92B

$K^-\ \pi^+\ \pi^0\ e^+\ \nu_e$
Anjos 92B
Aguilarbenit 87F

nonres $< K^-\ \pi^+\ \pi^0 >\ e^+\ \nu_e$
Anjos 92B

$3\pi^+\ 2\pi^-$
Barlag 90C
Barlag 90F
Anjos 88D

$\overline{K}^0\ 2\pi^+\ \pi^0\ \pi^-$
Barlag 90F
Aguilarbenit 87F

$K^-\ 2\pi^+\ 2\pi^0$
Barlag 90C
Barlag 90F
Aguilarbenit 87F

$K^-\ 3\pi^+\ \pi^-$
Spiegel 91
Anjos 90D
Barlag 90C
Barlag 90F
Barlag 88C

$K^+\ K^-\ 2\pi^+\ \pi^-$
Anjos 88G

$3\pi^+\ \pi^0\ 2\pi^-$
Barlag 90F

$\overline{K}^0\ 3\pi^+\ 2\pi^-$
Barlag 90C
Barlag 90F

$K^-\ 3\pi^+\ \pi^0\ \pi^-$
Barlag 90C
Barlag 90F

D^0

Appel 92
Barlag 91
Kodama 91
Mattig 91
Rossi 91
Spiegel 91
Albrecht 90G
Antreasyan 90
Cassel 90

D^0

Miller 90
Albrecht 89C
Halling 89
Kreinick 89
Marshall 89
Mistry 89
Schubert 89
Stone 89
Aguilarbenit 88
Aoki 88
Baringer 88
Ouldsaada 88B
Thorndike 88
Aguilarbenit 87C
Amendolia 87

e^- X

Aguilarbenit 88B

e^+ X

Baker 91
Bai 90C
Aguilarbenit 88B
Bowcock 88

μ^+ X

Kodama 92C
Kodama 91C

mult[charged] (neutrals)

Wagner 89B

K^+ X

Coffman 91
Barlag 90C

K^0 X + $\overline{K}^0$ X

Coffman 91
Barlag 90C

K^- X

Coffman 91
Barlag 90C
Aguilarbenit 88B

$\mu^+ \nu_\mu$ X

Aoki 92

$\overline{K}^0 e^+$ X

Baker 91

2charged (neutrals)

Ammar 88B

2charged neutral (neutrals)

Aguilarbenit 88B

$\overline{K}^0 \pi^+ \pi^-$ X

Batusov 87

4charged (neutrals)

Ammar 88B

4charged neutral (neutrals)

Aguilarbenit 88B

6charged (neutrals)

Ammar 88B

6charged neutral (neutrals)

Aguilarbenit 88B

$\overline{D}^0$

Albrecht 92O
Anjos 88
Purohit 88
Witherell 88

$e^- e^+$

Adler 88B
Albrecht 88F
Grab 88
Haas 88

$\mu^- e^+$

Adler 88F
Albrecht 88F
Haas 88

$\mu^+ e^-$

Adler 88F
Albrecht 88F
Grab 88
Haas 88

$\mu^- \mu^+$

Albrecht 88F
Haas 88

$2\pi^0$

Antreasyan 91
Gittelman 91
Alexander 90C

D^0

$\pi^+ \pi^-$

Adamovich 92
Lipton 92
Peng 92
Adamovich 91D
Anjos 91B
Gittelman 91
Spiegel 91
Alexander 90C
Anjos 90
Barlag 90C
Barlag 90F
Albrecht 89R
Barlag 89B
Miller 89
Adler 88F
Aguilarbenit 87F

$K^+ \pi^-$

Albrecht 92O
Ammar 91B

$\overline{K}^0 \pi^0$

Albrecht 92G
Anjos 92
Procario 92B
Kinoshita 90
Labs 90
Miller 89

$K^- \pi$

Barlag 89B

$K^- \pi^+$

Buskulic 93D
Hinode 93
Abreu 92I
Adamovich 92
Albrecht 92B
Albrecht 92E
Albrecht 92G
Albrecht 92H
Albrecht 92K
Albrecht 92N
Albrecht 92O
Albrecht 92P
Alvarez 92
Alves 92
Alves 92B
Barlag 92
Benedic 92
Bortoletto 92
Boucrot 92
Butler 92
Drell 92
Feindt 92B
Frabetti 92D
Kodama 92C
Peng 92
Shukla 92
Shukla 92B
Thorne 92
Adamovich 91D
Aihara 91
Albrecht 91G
Albrecht 91J
Albrecht 91K
Alexander 91
Ammar 91B
Anjos 91B
Bari 91
Bortoletto 91
Capon 91
Coffman 91
Crawford 91B
Decamp 91J
Frabetti 91
Geerts 91
Gittelman 91
Henderson 91
Kubota 91
Mai 91
Okamoto 91
Procario 91
Schafer 91
Shirai 91
Spiegel 91
Albajar 90D

D^0

Albrecht 90K
Alexander 90
Alexander 90C
Alstongarnjo 90
Alvarez 90
Alvarez 90C
Barlag 90B
Barlag 90C
Barlag 90E
Barlag 90F
Bortoletto 90
Braunschweig 90B
Buchholz 90B
Ellis 90
Errede 90
Fulton 90
Gray 90
Kinoshita 90
Kroha 90
Shephard 90
Yeh 90
Abachi 89C
Abe 89O
Albrecht 89P
Albrecht 89V
Albrecht 89X
Averill 89
Bortoletto 89B
Braunschweig 89G
Harder 89
Miller 89
Mooney 89
Wormser 89
Wormser 89B
Abachi 88
Abachi 88C
Adler 88C
Adler 88F
Albrecht 88J
Albrecht 88M
Albrecht 88S
Anjos 88
Anjos 88C
Anjos 88F
Barlag 88C
Barlag 88D
Bortoletto 88
Izen 88
Roudeau 88
Schindler 88
Shipbaugh 88B
Witherell 88
Aguilarbenit 87F
Asratyan 87C
Batusov 87
Raab 87

$K_S \pi^0$

Aihara 91

$\overline{K}^0 \eta$

Procario 92B
Labs 90
Albrecht 88S

$\overline{K}^0 \rho(770)^0$

Albrecht 93
Frabetti 92B
Shukla 92B

$K^- \rho(770)^+$

Gittelman 91

$\overline{K}^0 \omega(783)$

Albrecht 93
Albrecht 92G
Coffman 92B
Dejongh 90
Kinoshita 90
Miller 89
Albrecht 88S

$\overline{K}^0 \eta'(958)$

Albrecht 92G
Procario 92B
Labs 90

$\overline{K}^0 f_0(975)$

Albrecht 93

$\overline{K}^0 a_1(1260)^0$

Coffman 92B

D^0

Dejongh 90

$K^- a_1(1260)^+$

Coffman 92B
Alvarez 90D
Dejongh 90
Adler 89D
Adler 89E
Browder 89
Dejongh 89

$\overline{K}^0 f_2(1270)$

Albrecht 93

$K^- a_2(1320)^+$

Coffman 92B
Dejongh 90

$\overline{K}^0 f_0(1400)$

Albrecht 93

$K^0 \overline{K}^0$

Anjos 92
Gittelman 91
Alexander 90C
Albrecht 89R
Alexander 89
Adler 88F
Cumalat 87

$K^+ K^-$

Frabetti 92D
Lipton 92
Peng 92
Shukla 92B
Adamovich 91D
Anjos 91B
Gittelman 91
Spiegel 91
Alexander 90C
Alvarez 90D
Anjos 90
Barlag 90C
Barlag 90F
Albrecht 89R
Barlag 89B
Miller 89
Adler 88F
Barlag 88C

$\overline{K}^*(892)^0 \pi^0$

Procario 92B

$K^*(892)^- \pi^+$

Albrecht 93
Frabetti 92B
Shukla 92B
Gittelman 91

$\overline{K}^*(892)^0 \eta$

Procario 92B
Anjos 90D
Kinoshita 90
Miller 89
Albrecht 88S

$\overline{K}^*(892) \rho(770)^0$

Adler 89D

$\overline{K}^*(892)^0 \rho(770)^0$

Coffman 92B
Alvarez 90D
Dejongh 90
Adler 89E
Browder 89
Dejongh 89

$K^*(892)^- \rho(770)^+$

Coffman 92B
Dejongh 90

$\overline{K}^*(892)^0 \omega(783)$

Albrecht 92G
Anjos 90D

$\overline{K}^*(892)^0 \eta'(958)$

Procario 92B

$K^*(892)^+ K^-$

Lipton 92
Ammar 91B
Gittelman 91
Anjos 90

$K^*(892)^0 \overline{K}^0$

Lipton 92

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

D^0

Ammar 91B
Gittelman 91
Anjos 90

$\overline{K}^*(892)^0\ K^0$
Ammar 91B
Anjos 90

$K^*(892)^-\ K^+$
Lipton 92
Ammar 91B
Gittelman 91
Anjos 90
Barlag 88C

$K^*(892)^0\ \overline{K}^*(892)^0$
Ammar 91B
Anjos 90
Barlag 90C

$K_1(1270)^-\ \pi^+$
Coffman 92B
Alvarez 90D
Dejongh 90
Adler 89D
Adler 89E
Browder 89
Dejongh 89

$\overline{K}_1(1400)^0\ \pi^0$
Coffman 92B
Dejongh 90

$K_1(1400)^-\ \pi^+$
Coffman 92B
Dejongh 90
Adler 89E
Browder 89
Dejongh 89

$K^*(1410)^-\ \pi^+$
Coffman 92B
Dejongh 90

$K_0^*(1430)^-\ \pi^+$
Albrecht 93

$\overline{K}_2^*(1430)^0\ \pi^0$
Procario 92B

$K_2^*(1430)^-\ \pi^+$
Albrecht 93

$\phi(1020)\ \rho(770)$
Gittelman 91

$\phi(1020)\ \rho(770)^0$
Ammar 91B
Barlag 90C

$K^0\ \phi(1020)$
Barlag 89B

$\overline{K}^0\ \phi(1020)$
Lipton 92
Shukla 92B
Ammar 91B
Frabetti 91
Gittelman 91
Barlag 90C
Barlag 90F
Buchholz 90
Shephard 90
Adler 88F
Barlag 88C

$K_S\ \phi(1020)$
Frabetti 92B
Lipton 92

$\pi^-\ e^+\ \nu_e$
Bai 90C
Adler 89
Wasserbaech 89
Izen 88
Aguilarbenit 87F

$\rho(770)^0\ e^-\ e^+$
Haas 88

$\rho(770)^0\ \mu^-\ \mu^+$
Haas 88

$\overline{K}^0\ e^-\ e^+$
Adler 89C
Grab 88

$K^-\ e^+\ \nu_e$
Lipton 92
Crawford 91

D^0

Bai 90C
Adler 89
Wasserbaech 89
Anjos 88B
Izen 88
Aguilarbenit 87F

$K^-\ \mu^+\ \nu_\mu$
Kodama 92B
Lipton 92
Kodama 91C
Izen 88

$K^*(892)^-\ e^+\ \nu_e$
Crawford 91
Bai 90C

$\pi^+\ \pi^0\ \pi^-$
Barlag 90C
Barlag 90F
Barlag 89B

$K^0\ \pi^+\ \pi^-$
Bortoletto 90
Barlag 89B

nonres $< \overline{K}^0\ 2\pi^0 >$
Procario 92B

$\overline{K}^0\ \pi^+\ \pi^-$
Albrecht 93
Albrecht 92G
Procario 92B
Shukla 92B
Ammar 91B
Bortoletto 91
Coffman 91
Frabetti 91
Spiegel 91
Alexander 90C
Barlag 90C
Barlag 90F
Batusov 90C
Braunschweig 90B
Buchholz 90
Shephard 90
Albrecht 89V
Miller 89
Albrecht 88M
Schindler 88
Aguilarbenit 87F
Asratyan 87C

nonres $< \overline{K}^0\ \pi^+\ \pi^- >$
Albrecht 93

$K^-\ \pi^+\ \pi^0$
Adamovich 92
Albrecht 92G
Albrecht 92K
Bortoletto 92
Boucrot 92
Procario 92B
Aihara 91
Albrecht 91J
Okamoto 91
Shirai 91
Alvarez 90C
Alvarez 90D
Barlag 90C
Barlag 90F
Batusov 90C
Braunschweig 90B
Kinoshita 90
Kroha 90
Abachi 89C
Albrecht 89P
Barlag 89B
Braunschweig 89G
Miller 89
Ouldsaada 89
Wormser 89B
Adler 88F
Schindler 88
Aguilarbenit 87F
Asratyan 87C

$K_S\ \pi^+\ \pi^-$
Albrecht 92B
Albrecht 92H
Albrecht 92K
Albrecht 92N

D^0

Boucrot 92
Frabetti 92B
Shukla 92B
Albrecht 91J
Albrecht 91K

nonres $< K_S\ \pi^+\ \pi^- >$
Frabetti 92B
Shukla 92B

$K^-\ \rho(770)^0\ \pi^+$
Coffman 92B
Dejongh 90
Adler 89E
Browder 89
Dejongh 89

$K^-\ \omega(783)\ \pi^+$
Albrecht 92G

$K^-\ \eta'(958)\ \pi^+$
Procario 92B

$K^+\ \overline{K}^0\ \pi^-$
Lipton 92
Ammar 91B
Anjos 90
Barlag 88C

$K^0\ K^-\ \pi^+$
Lipton 92
Ammar 91B
Anjos 90

$\overline{K}^0\ K^-\ \pi^+$
Albrecht 89R

$K^+\ K^0\ K^-$
Barlag 89B

$K^+\ \overline{K}^0\ K^-$
Lipton 92
Shukla 92B
Ammar 91B
Frabetti 91
Barlag 90C
Barlag 90F
Buchholz 90
Shephard 90
Adler 88F
Barlag 88C

$K^+\ \overline{K}^0\ K^-\ -\ \overline{K}^0\ \phi(1020)$
Shukla 92B

$K^+\ K_S\ K^-$
Albrecht 92N
Frabetti 92B

$K^+\ K_S\ K^-\ -\ K_S\ \phi(1020)$
Frabetti 92B

$3K_S$
Ammar 91B
Albrecht 89R

$\overline{K}^*(892)^0\ 2\pi^0$
Batusov 90C
Batusov 88C

$\overline{K}^*(892)^0\ \pi^+\ \pi^-$
Coffman 92B
Dejongh 90
Adler 89E
Browder 89
Dejongh 89

$\phi(1020)\ \pi^+\ \pi^-$
Lipton 92
Anjos 90
Barlag 90C
Barlag 90F
Barlag 89B
Miller 89
Barlag 88C

$\pi^0\ \pi^-\ e^+\ \nu_e$
Aguilarbenit 87F

$\overline{K}^0\ \pi^-\ e^+\ \nu_e$
Bai 90C
Izen 88
Aguilarbenit 87F

$K^-\ \pi^0\ e^+\ \nu_e$
Bai 90C
Izen 88
Aguilarbenit 87F

D^0

$\overline{K}^0\ \pi^-\ \mu^+\ \nu_\mu$
Izen 88

$\overline{K}^*(892)^0\ \pi^-\ e^+\ \nu_e$
Crawford 91

$2\pi^+\ 2\pi^-$
Frabetti 92D
Lipton 92
Shukla 92B
Adamovich 91D
Ammar 91B
Spiegel 91
Anjos 90
Barlag 90C
Barlag 90F
Buchholz 90
Shephard 90
Barlag 89B
Barlag 88C
Aguilarbenit 87F

$K^+\ \pi^+\ 2\pi^-$
Ammar 91B

$K^0\ \pi^+\ \pi^0\ \pi^-$
Barlag 89B

$\overline{K}^0\ \pi^+\ \pi^0\ \pi^-$
Albrecht 92G
Coffman 92B
Barlag 90C
Barlag 90F
Dejongh 90
Kinoshita 90
Aguilarbenit 87F

nonres $< \overline{K}^0\ \pi^+\ \pi^0\ \pi^- >$
Coffman 92B

$K^-\ \pi^+\ 2\pi^0$
Barlag 90C
Barlag 90F
Barlag 89B
Adler 88F
Aguilarbenit 87F

$K^-\ 2\pi^+\ \pi^-$
Buskulic 93D
Adamovich 92
Albrecht 92B
Albrecht 92H
Albrecht 92K
Albrecht 92P
Alvarez 92
Barlag 92
Benedic 92
Coffman 92B
Drell 92
Frabetti 92D
Kodama 92C
Procario 92B
Shukla 92
Shukla 92B
Adamovich 91D
Aihara 91
Albrecht 91J
Albrecht 91K
Ammar 91B
Bortoletto 91
Coffman 91
Frabetti 91
Kubota 91
Okamoto 91
Shirai 91
Spiegel 91
Alexander 90
Alvarez 90D
Barlag 90B
Barlag 90C
Barlag 90E
Barlag 90F
Bortoletto 90
Braunschweig 90B
Buchholz 90
Buchholz 90B
Dejongh 90
Kroha 90
Shephard 90
Abachi 89C
Adler 89D

D^0

Adler 89E
Albrecht 89P
Albrecht 89V
Albrecht 89X
Barlag 89B
Bortoletto 89B
Braunschweig 89G
Browder 89
Dejongh 89
Miller 89
Ouldsaada 89
Adler 88F
Albrecht 88J
Albrecht 88M
Anjos 88
Anjos 88C
Barlag 88
Barlag 88C
Barlag 88D
Izen 88
Schindler 88
Witherell 88
Aguilarbenit 87F
Asratyan 87C
Raab 87

nonres $< K^- 2\pi^+ \pi^- >$
Coffman 92B

nonres $< K^+ K^- > \pi^+ \pi^-$
Barlag 89B

$K^+ K^- \pi^+ \pi^-$
Lipton 92
Ammar 91B
Spiegel 91
Anjos 90
Barlag 90C
Barlag 90F
Barlag 88C

$K^+ K^0 K^- \pi^0$
Barlag 89B

$K^+ \overline{K}^0 K^- \pi^0$
Barlag 90C
Barlag 90F

$\overline{K}^0 \pi^0 \pi^- e^+ \nu_e$
Aguilarbenit 87F

$K^- 2\pi^0 e^+ \nu_e$
Aguilarbenit 87F

$2\pi^+ \pi^0 2\pi^-$
Barlag 90C
Barlag 90F
Barlag 89B

$K^0 2\pi^+ 2\pi^-$
Barlag 89B

$\overline{K}^0 \pi^+ 2\pi^0 \pi^-$
Aguilarbenit 87F

$\overline{K}^0 2\pi^+ 2\pi^-$
Albrecht 92G
Ammar 91B
Spiegel 91
Anjos 90D
Barlag 90C
Barlag 90F

$K^- \pi^+ 3\pi^0$
Aguilarbenit 87F

$K^- 2\pi^+ \pi^0 \pi^-$
Albrecht 92G
Spiegel 91
Anjos 90D
Barlag 90C
Barlag 90F
Kinoshita 90
Barlag 89B
Miller 89

$K^+ K^- \pi^+ \pi^0 \pi^-$
Barlag 90C
Barlag 90F

$3\pi^+ 3\pi^-$
Barlag 90C
Barlag 90F
Barlag 89B

$K^0 3\pi^+ 3\pi^-$
Barlag 89B

$\overline{D}$

Alvarez 92
Appel 92
Yeh 92
Alvarez 91B
Barlag 91
Rossi 91
Spiegel 91
Calvino 90
Dejongh 90

μ^- **X**
Aoki 91C

μ^+ **X**
Rossi 89
Bordalo 88

kaon π
Itoh 90

$\overline{K}\ \pi$
Acton 93D

kaon 2π
Itoh 90

$\overline{K}\ 2\pi$
Acton 93D

$\overline{D}^0$

Buskulic 93D
Coffman 92B
Feindt 92B
Kodama 92C
Albrecht 91J
Ammar 91B
Antreasyan 91
Barlag 91
Coffman 91
Antreasyan 90
Kinoshita 90
Kroha 90
Labs 90
Miller 90
Shephard 90
Adler 89D
Adler 89E
Albrecht 89C
Alexander 89
Browder 89
Dejongh 89
Halling 89
Marshall 89
Schubert 89
Aguilarbenit 88
Aleev 88
Aoki 88
Baringer 88
Grab 88
Ouldsaada 88B
Purohit 88
Thorndike 88
Witherell 88
Aguilarbenit 87C
Amendolia 87

e^- **X**
Bai 90C
Bowcock 88

mult[charged] (neutrals)
Wagner 89B

K^+ **X**
Aguilarbenit 88B

2charged (neutrals)
Ammar 88B

2charged neutral (neutrals)
Aguilarbenit 88B

4charged (neutrals)
Ammar 88B

4charged neutral (neutrals)
Aguilarbenit 88B

6charged (neutrals)
Ammar 88B

6charged neutral (neutrals)
Aguilarbenit 88B

D^0
Anjos 88

$e^- e^+$
Adler 88B
Albrecht 88F

$\overline{D}^0$

$\mu^- e^+$
Adler 88F
Albrecht 88F

$\mu^+ e^-$
Adler 88F
Albrecht 88F

$\mu^- \mu^+$
Albrecht 88F

$\pi^+ \pi^-$
Adler 88F
Aguilarbenit 87F

$K^+ \pi^-$
Albrecht 92H
Albrecht 92O
Alvarez 92
Alves 92
Alves 92B
Boucrot 92
Alexander 91
Cronstrom 91
Decamp 91J
Geerts 91
Trischuk 91
Albajar 90D
Alexander 90
Alstongarnjo 90
Braunschweig 90B
Buchholz 90B
Ellis 90
Abe 89O
Albrecht 89Q
Albrecht 89X
Averill 89
Bortoletto 89B
Braunschweig 89G
Harder 89
Mooney 89
Wormser 89
Abachi 88
Adler 88C
Adler 88F
Albrecht 88J
Albrecht 88M
Anjos 88
Anjos 88C
Anjos 88F
Barlag 88C
Barlag 88D
Bortoletto 88
Roudeau 88
Shipbaugh 88B
Aguilarbenit 87F
Raab 87

$K^0 \overline{K}^0$
Adler 88F
Cumalat 87

$K^+ K^-$
Anjos 91B
Adler 88F
Barlag 88C

$K^*(892)^+ K^-$
Barlag 88C

$K^0 \phi(1020)$
Adler 88F
Barlag 88C

$\pi^+ e^- \overline{\nu}_e$
Bai 90C
Adler 89
Wasserbaech 89
Schindler 88
Aguilarbenit 87F

$K^+ e^- \overline{\nu}_e$
Bai 90C
Adler 89
Wasserbaech 89
Anjos 88B
Schindler 88
Aguilarbenit 87F

$K^0 e^- e^+$
Adler 89C

$K^+ \mu^- \overline{\nu}_\mu$
Schindler 88

$\overline{D}^0$

$K^*(892)^+ e^- \overline{\nu}_e$
Bai 90C

$K^+ \pi^0 \pi^-$
Braunschweig 89G
Ouldsaada 89
Adler 88F
Izen 88
Aguilarbenit 87F

$K^0 \pi^+ \pi^-$
Braunschweig 90B
Albrecht 88M
Izen 88
Aguilarbenit 87F

$K_S \pi^+ \pi^-$
Albrecht 92H

$K^+ \rho(770)^0 \pi^-$
Aleev 90B

$K^0 K^- \pi^+$
Barlag 88C

$K^+ K^0 K^-$
Adler 88F
Barlag 88C

$\phi(1020) \pi^+ \pi^-$
Barlag 88C

$\pi^+ \pi^0 e^- \overline{\nu}_e$
Aguilarbenit 87F

$K^+ \pi^0 e^- \overline{\nu}_e$
Bai 90C
Aguilarbenit 87F

$K^0 \pi^+ e^- \overline{\nu}_e$
Bai 90C
Aguilarbenit 87F

$2\pi^+ 2\pi^-$
Barlag 88C
Aguilarbenit 87F

$K^+ 2\pi^0 \pi^-$
Adler 88F
Aguilarbenit 87F

$K^+ \pi^+ 2\pi^-$
Albrecht 92H
Braunschweig 90B
Buchholz 90B
Albrecht 89X
Bortoletto 89B
Braunschweig 89G
Ouldsaada 89
Adler 88F
Albrecht 88J
Albrecht 88M
Anjos 88
Anjos 88C
Barlag 88
Barlag 88C
Barlag 88D
Aguilarbenit 87F
Raab 87

$K^0 \pi^+ \pi^0 \pi^-$
Aguilarbenit 87F

$K^+ K^- \pi^+ \pi^-$
Barlag 88C

$K^+ 2\pi^0 e^- \overline{\nu}_e$
Aguilarbenit 87F

$K^0 \pi^+ \pi^0 e^- \overline{\nu}_e$
Aguilarbenit 87F

$K^+ 3\pi^0 \pi^-$
Aguilarbenit 87F

$K^0 \pi^+ 2\pi^0 \pi^-$
Aguilarbenit 87F

D^-

Coffman 92B
Feindt 92B
Albrecht 91B
Albrecht 91J
Ammar 91B
Barlag 91
Coffman 91
Rossi 91
Labs 90
Miller 90
Schindler 90

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

D^-

Wilczynska 90
Adler 89E
Albrecht 89N
Browder 89
Danilov 89
Dejongh 89
Halling 89
Schubert 89
Aguilarbenit 88
Aleev 88
Aoki 88
Grab 88
Izen 88
Thorndike 88
Aguilarbenit 87C

e^- X
Bai 90C
Aguilarbenit 88B
Bowcock 88

K^+ X
Aguilarbenit 88B

charged neutral (neutrals)
Aguilarbenit 88B
Ammar 88B

3charged (neutrals)
Ammar 88B

3charged neutral (neutrals)
Aguilarbenit 88B

5charged (neutrals)
Ammar 88B

5charged neutral (neutrals)
Aguilarbenit 88B

$\rho(770)\ \pi^-$
Anjos 88D

$\eta'(958)\ \pi^-$
Wormser 89

$K^0\ \pi^-$
Adler 88
Adler 88F
Albrecht 88M

$K^0\ K^-$
Adler 88
Adler 88F

$K^*(892)^0\ K^-$
Adler 88F
Anjos 88G
Barlag 88C

$\phi(1020)\ \pi^-$
Adler 88F
Anjos 88G
Barlag 88C

$\pi^+\ 2e^-$
Weir 89

$\pi^0\ e^-\ \overline{\nu}_e$
Bai 90C

$\pi^-\ e^-\ e^+$
Weir 89
Haas 88

$\pi^+\ \mu^-\ e^-$
Weir 89

$\pi^-\ \mu^-\ e^+$
Weir 89

$\pi^-\ \mu^+\ e^-$
Weir 89
Haas 88

$\pi^+\ 2\mu^-$
Weir 89

$\pi^-\ \mu^-\ \mu^+$
Weir 89
Haas 88

$\rho(770)^0\ e^-\ \overline{\nu}_e$
Bai 90C

$K^+\ 2e^-$
Weir 89

$K^0\ e^-\ \overline{\nu}_e$
Gittelman 91
Bai 90C

$K^-\ e^-\ e^+$
Weir 89

$K^+\ \mu^-\ e^-$
Weir 89

$K^-\ \mu^-\ e^+$
Weir 89

D^-

$K^-\ \mu^+\ e^-$
Weir 89

$K^+\ 2\mu^-$
Weir 89

$K^0\ \mu^-\ \overline{\nu}_\mu$
Bai 90C

$K^-\ \mu^-\ \mu^+$
Weir 89

$K^*(892)^0\ e^-\ \overline{\nu}_e$
Gittelman 91
Bai 90C
Anjos 88E

$\phi(1020)\ e^-\ \overline{\nu}_e$
Bai 90C

$\phi(1020)\ \mu^-\ \overline{\nu}_\mu$
Bai 90C

$\pi^+\ 2\pi^-$
Adler 88F
Anjos 88D

$K^+\ 2\pi^-$
Alvarez 92
Kroha 90
Albrecht 89Q
Averill 89
Harder 89
Abachi 88
Adler 88
Adler 88C
Adler 88F
Albrecht 88J
Albrecht 88M
Anjos 88C
Anjos 88D
Anjos 88F
Barlag 88
Barlag 88C
Barlag 88D
Bortoletto 88
Raab 87

$K^0\ \pi^0\ \pi^-$
Adler 88
Adler 88F

$K^-\ \pi^+\ \pi^-$
Alves 92
Alves 92B

$K^+\ K^-\ \pi^-$ – $K^*(892)^0\ K^-$
Barlag 88C

$K^+\ K^-\ \pi^-$
Adler 88
Adler 88F
Anjos 88G

$\pi^+\ \pi^-\ e^-\ \overline{\nu}_e$
Aguilarbenit 87F

$K^+\ \pi^-\ e^-\ \overline{\nu}_e$
Bai 90C
Aguilarbenit 87F

$K^+\ \pi^0\ 2\pi^-$
Adler 88
Aguilarbenit 87F

$K^0\ \pi^+\ 2\pi^-$
Adler 88
Adler 88F
Albrecht 88M
Aguilarbenit 87F

$K^*(892)^0\ \pi^+\ 2\pi^-$
Barlag 88C

$\phi(1020)\ \pi^+\ 2\pi^-$
Anjos 88G

$K^+\ \pi^0\ \pi^-\ e^-\ \overline{\nu}_e$
Aguilarbenit 87F

$K^0\ \pi^+\ \pi^-\ e^-\ \overline{\nu}_e$
Aguilarbenit 87F

$2\pi^+\ 3\pi^-$
Anjos 88D

$K^+\ 2\pi^0\ 2\pi^-$
Aguilarbenit 87F

$K^+\ \pi^+\ 3\pi^-$
Barlag 88C

$K^0\ \pi^+\ \pi^0\ 2\pi^-$
Aguilarbenit 87F

D^-

$K^+\ K^-\ \pi^+\ 2\pi^-$
Anjos 88G

$D^*(2010)^\pm$

Albrecht 92H
Kodama 92C
Capon 91
Geerts 91
Alstongarnjo 90
Braunschweig 90B
Buchholz 90B
Ellis 90
Geer 90
Shephard 90
Marshall 89
Plunkett 89
Ouldsaada 88B

$D^*(2010)$

Albrecht 92O
Appel 92
Boucrot 92
Crawford 91B
Lesiak 91

$D\ \pi$
Itoh 90

$D^*(2010)^+$

Drell 92B
Sanghera 92
Deangelis 91B
Albrecht 90G
Avery 90
Cassel 90
Fujii 90
Miller 90
Tenchini 90
Albrecht 89C
Bortoletto 89
Halling 89
Kreinick 89
Miller 89
Mistry 89
Stone 89
Wormser 89
Aguilarbenit 88B
Anjos 88B
Bowcock 88
Thorndike 88
Aguilarbenit 87C
Cumalat 87

$D^+\ \gamma$
Butler 92
Drell 92
Gittelman 91
Procario 91
Adler 88C

$D^+\ \pi^0$
Bortoletto 92
Butler 92
Drell 92
Gittelman 91
Procario 91
Adler 88C
Asratyan 87C

$D^0\ \pi^+$
Albrecht 93
Buskulic 93D
Hinode 93
Albrecht 92E
Albrecht 92G
Albrecht 92H
Albrecht 92K
Albrecht 92O
Albrecht 92P
Anjos 92
Barlag 92
Benedic 92
Boucrot 92
Butler 92
Drell 92
Feindt 92B
Kodama 92C
Procario 92B

$D^*(2010)^+$

Shukla 92
Shukla 92B
Aihara 91
Albrecht 91G
Albrecht 91J
Albrecht 91K
Alexander 91
Anjos 91B
Bortoletto 91
Capon 91
Crawford 91
Crawford 91B
Decamp 91J
Geerts 91
Gittelman 91
Henderson 91
Kubota 91
Mai 91
Mattig 91
Procario 91
Schafer 91
Shirai 91
Albajar 90D
Albrecht 90K
Alexander 90
Alexander 90C
Alstongarnjo 90
Antreasyan 90
Barlag 90E
Bortoletto 90
Braunschweig 90B
Buchholz 90
Buchholz 90B
Ellis 90
Fulton 90
Kinoshita 90
Kroha 90
Shephard 90
Abachi 89C
Abe 89O
Albrecht 89P
Albrecht 89R
Albrecht 89V
Averill 89
Bortoletto 89B
Braunschweig 89G
Harder 89
Mooney 89
Ouldsaada 89
Wagner 89B
Abachi 88
Abachi 88C
Adler 88C
Albrecht 88J
Anjos 88
Anjos 88F
Baringer 88
Barlag 88
Bortoletto 88
Ouldsaada 88B
Roudeau 88
Shipbaugh 88B
Asratyan 87C

$K^-\ 2\pi^+$
Abreu 92I

$K^-\ 3\pi^+\ \pi^-$
Abreu 92I

$D^*(2010)^0$

Sanghera 92
Albrecht 90G
Batusov 90C
Bortoletto 90
Cassel 90
Miller 90
Marshall 89
Miller 89
Stone 89
Aguilarbenit 88B
Thorndike 88
Aguilarbenit 87C

$D^0\ \gamma$
Albrecht 92B
Albrecht 92E

$D^*(2010)^0$

Albrecht 92N
Butler 92
Drell 92
Albrecht 91J
Bortoletto 91
Gittelman 91
Procario 91
Fulton 90
Schubert 89
Wormser 89B
Adler 88C
Batusov 88C
Bortoletto 88
Asratyan 87C

$D^+ \pi^-$
Barlag 92
Abachi 88

$D^0 \pi^0$
Albrecht 92E
Albrecht 92N
Bortoletto 92
Butler 92
Drell 92
Albrecht 91J
Gittelman 91
Procario 91
Antreasyan 90
Fulton 90
Schubert 89
Adler 88C
Bortoletto 88
Asratyan 87C

$\overline{D}^*(2010)$

$\overline{D}\,\pi$
Albrecht 91J
Acton 93D
Itoh 90

$\overline{D}^*(2010)^0$

Sanghera 92
Albrecht 91J
Procario 91
Antreasyan 90
Marshall 89
Schubert 89
Aguilarbenit 88B
Thorndike 88
Aguilarbenit 87C

$\overline{D}^0 \gamma$
Adler 88C
Bortoletto 88

$\overline{D}^0 \pi^0$
Adler 88C
Bortoletto 88

$D^- \pi^+$
Abachi 88

$D^*(2010)^-$

Albrecht 93
Buskulic 93D
Hinode 93
Albrecht 92K
Feindt 92B
Sanghera 92
Aihara 91
Albrecht 91J
Alexander 91
Deangelis 91B
Mattig 91
Procario 91
Alexander 90C
Fujii 90
Kinoshita 90
Miller 90
Tenchini 90
Albrecht 89C
Danilov 89
Halling 89
Schubert 89
Stone 89
Aguilarbenit 88B
Anjos 88B

$D^*(2010)^-$

Bowcock 88
Thorndike 88
Aguilarbenit 87C
Cumalat 87

$D^- \gamma$
Adler 88C

$\overline{D}^0 \pi^-$
Albrecht 92H
Boucrot 92
Anjos 91B
Cronstrom 91
Decamp 91J
Geerts 91
Trischuk 91
Albajar 90D
Alexander 90
Alstongarnjo 90
Antreasyan 90
Braunschweig 90B
Buchholz 90B
Ellis 90
Shephard 90
Abe 89O
Albrecht 89Q
Averill 89
Bortoletto 89B
Braunschweig 89G
Harder 89
Mooney 89
Ouldsaada 89
Wagner 89B
Abachi 88
Adler 88C
Albrecht 88J
Anjos 88F
Baringer 88
Barlag 88
Bortoletto 88
Ouldsaada 88B
Roudeau 88
Shipbaugh 88B

$D^- \pi^0$
Adler 88C

$D_S^\pm$

$\eta'(958)\ \pi^\pm$
Appel 92
Adler 89E
Toki 89B

$\rho(770)\ \pi^\pm\ \gamma$
Alvarez 91
Alvarez 91

D_S^+

Bortoletto 90
Cassel 90
Shephard 90
Averill 89
Halling 89
Schubert 89
Aguilarbenit 88B
Bortoletto 88
Roudeau 88

$e^+\ X$
Bai 90
Pitman 89
Schindler 89

$K^+\ X$
Coffman 91

$K^0\ X + \overline{K}^0\ X$
Coffman 91

$K^-\ X$
Coffman 91

$\mu^+ \nu_\mu$
Aoki 92

$\eta\ \pi^+$
Alexander 92
Daoudi 91
Gittelman 91
Procario 91
Anjos 89B
Browder 89
Schindler 89

D_S^+

Wasserbaech 89B
Wormser 88B

$\rho(770)^0\ \pi^+$
Schindler 89
Witherell 88

$\rho(770)^+\ \eta$
Avery 92
Daoudi 91
Gittelman 91
Procario 91

$\omega(783)\ \pi^+$
Batusov 90C
Anjos 89B
Schindler 89

$\eta'(958)\ \pi^+$
Alexander 92
Albrecht 91J
Anjos 91
Daoudi 91
Gittelman 91
Procario 91
Albrecht 90
Browder 89
Schindler 89
Wasserbaech 89B
Wormser 89
Wormser 89B
Wormser 88B

$\eta'(958)\ \rho(770)^+$
Avery 92
Daoudi 91
Gittelman 91
Procario 91

$f_0(975)\ \pi^+$
Bai 90
Adler 89E
Alder 89
Browder 89
Schindler 89
Toki 89B
Anjos 88D

$K^0\ \pi^+$
Adler 89B

$\overline{K}^0\ \pi^+$
Schindler 89

$K^+\ \overline{K}^0$
Asratyan 92
Coffman 91
Anjos 90E
Bai 90
Adler 89B
Adler 89E
Alder 89
Browder 89
Chen 89B
Miller 89
Pitman 89
Schindler 89
Toki 89B
Schindler 88

$K^+\ K_S$
Albrecht 91J

$K^*(892)^0\ \rho(770)^+$
Barlag 90C

$K^*(892)^+\ K^0$
Schindler 89

$K^*(892)^+\ \overline{K}^0 +$
$\overline{K}^*(892)^0\ K^+$
Abreu 92F

$K^*(892)^+\ \overline{K}^0$
Asratyan 92
Chen 89B
Miller 89

$K^*(892)^+\ K_S$
Albrecht 91J

$\overline{K}^*(892)^0\ K^+$
Asratyan 92
Albrecht 91J
Coffman 91
Alvarez 90C
Bai 90
Barlag 90C

D_S^+

Barlag 90F
Adler 89B
Adler 89E
Alder 89
Browder 89
Chen 89B
Miller 89
Pitman 89
Schindler 89
Toki 89B
Wasserbaech 89B
Anjos 88C
Anjos 88G
Barlag 88C
Schindler 88
Witherell 88
Raab 87

$K^*(892)^+\ \overline{K}^*(892)^0$
Asratyan 92
Albrecht 91J
Albrecht 91P
Bai 90
Barlag 90C
Barlag 90F
Adler 89E
Alder 89
Browder 89
Schindler 89
Toki 89B
Barlag 88C

$\phi(1020)\ \pi^+$
Abreu 92F
Alexander 92
Alvarez 92
Asratyan 92
Avery 92
Shukla 92B
Albrecht 91J
Bortoletto 91
Coffman 91
Daoudi 91
Gittelman 91
Procario 91
Spiegel 91
Albrecht 90
Alexander 90B
Alvarez 90
Alvarez 90C
Anjos 90C
Anjos 90E
Bai 90
Barlag 90C
Barlag 90F
Buchholz 90
Frabetti 90
Adler 89E
Alder 89
Browder 89
Chen 89B
Pitman 89
Schindler 89
Toki 89B
Wasserbaech 89
Wasserbaech 89B
Wormser 89
Wormser 89B
Albrecht 88J
Albrow 88
Anjos 88C
Anjos 88D
Anjos 88G
Barlag 88C
Schindler 88
Shipbaugh 88B
Witherell 88
Albrecht 87N
Raab 87

$\phi(1020)\ \rho(770)^+$
Avery 92
Daoudi 91
Gittelman 91
Procario 91
Barlag 90C

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been charged to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

D_S^+

$K^+ \phi(1020)$
Anjos 91D
$\phi(1020) e^+ \nu_e$
Gittelman 91
Alexander 90B
Anjos 90C
$\phi(1020) \mu^+ \nu_\mu$
Lipton 92
Alexander 90B
$2\pi^+ \pi^-$
Barlag 90C
Barlag 90F
Schindler 89
Anjos 88D
Witherell 88
$\eta \pi^+ \pi^0$
Daoudi 91
$\eta'(958) \pi^+ \pi^0$
Daoudi 91
$K^+ \pi^+ \pi^-$
Barlag 90C
Barlag 90F
$K^+ K^- \pi^+ - \overline{K}^*(892)^0 K^+$
Barlag 88C
$K^+ K^- \pi^+$
Barlag 91
Spiegel 91
Barlag 90B
Barlag 90C
Barlag 90E
Barlag 90F
Schindler 89
Wasserbaech 89B
Albrow 88
Anjos 88G
Barlag 88
Barlag 88D
Witherell 88
$K^*(892)^+ K^- \pi^+$
Albrecht 91P
$\overline{K}^*(892)^0 K^0 \pi^+$
Albrecht 91P
$\phi(1020) \pi^+ \pi^0$
Albrecht 91J
Daoudi 91
Alvarez 90C
Bai 90
Barlag 90F
Adler 89E
Alder 89
Anjos 89B
Browder 89
Schindler 89
Toki 89B
Wormser 89
Wormser 89B
3charged-hadron hadron^0
Batusov 90C
$2\pi^+ \pi^0 \pi^-$
Barlag 90F
Anjos 89B
$K^+ \pi^+ \pi^0 \pi^-$
Barlag 90F
$K^+ \overline{K}^0 \pi^+ \pi^-$
Albrecht 91P
Barlag 90C
Barlag 90F
$K^+ K^- \pi^+ \pi^0$
Barlag 90F
Anjos 89B
$K^0 K^- 2\pi^+ -$
$K^*(892)^+ \overline{K}^*(892)^0$
Albrecht 91P
$K^0 K^- 2\pi^+$
Albrecht 91P
Barlag 90F
$\phi(1020) 2\pi^+ \pi^-$
Frabetti 92D
Lipton 92
Shukla 92B
Albrecht 91J

D_S^+

Alvarez 90C
Bai 90
Barlag 90C
Barlag 90F
Adler 89E
Alder 89
Browder 89
Schindler 89
Toki 89B
Anjos 88G
Barlag 88C
$3\pi^+ 2\pi^-$
Barlag 90C
Barlag 90F
Schindler 89
Anjos 88D
$K^+ K^- 2\pi^+ \pi^-$
Barlag 90C
Barlag 90F
Schindler 89
Anjos 88G
Barlag 88C
$3\pi^+ \pi^0 2\pi^-$
Barlag 90F

D_S^-

Abreu 92F
Alvarez 92
Appel 92
Albrecht 91J
Coffman 91
Gittelman 91
Procario 91
Cassel 90
Miller 90
Wilczynska 90
Adler 89E
Averill 89
Browder 89
Halling 89
Kreinick 89
Miller 89
Mistry 89
Toki 89B
Aguilarbenit 88B
Bortoletto 88
$e^- X$
Schindler 88
$\eta \pi^-$
Wasserbaech 89B
Wormser 88B
$\eta'(958) \pi^-$
Wasserbaech 89B
Wormser 89
Wormser 88B
$f_0(975) \pi^-$
Bai 90
Alder 89
Anjos 88D
$\overline{K}^0 \pi^-$
Adler 89B
$K^0 K^-$
Asratyan 92
Albrecht 90K
Asratyan 90
Bai 90
Bortoletto 90
Adler 89B
Alder 89
Chen 89B
Asratyan 87C
$K^*(892)^0 K^-$
Acton 92M
Asratyan 92
Boucrot 92
Buskulic 92
Albrecht 90K
Asratyan 90
Bai 90
Bortoletto 90
Adler 89B
Alder 89

D_S^-

Chen 89B
Wasserbaech 89B
Anjos 88C
Anjos 88G
Barlag 88C
Raab 87
$K^*(892)^- K^0$
Asratyan 92
Albrecht 90K
Bortoletto 90
Chen 89B
$K^*(892)^0 K^*(892)^-$
Asratyan 92
Albrecht 90K
Bai 90
Alder 89
Barlag 88C
$\phi(1020) \pi^-$
Acton 92M
Asratyan 92
Boucrot 92
Buskulic 92
Albrecht 90K
Asratyan 90
Bai 90
Bortoletto 90
Alder 89
Chen 89B
Wasserbaech 89
Wasserbaech 89B
Wormser 89
Albrecht 88J
Albrow 88
Anjos 88C
Anjos 88G
Barlag 88C
Schmitz 88
Shipbaugh 88B
Albrecht 87N
Asratyan 87C
Raab 87
$K^*(892)^0 e^- \overline{\nu}_e$
Albrecht 91B
$\phi(1020) e^- \overline{\nu}_e$
Albrecht 91B
$\pi^+ 2\pi^-$
Anjos 88D
$K^0 \overline{K}^0 \pi^-$
Asratyan 90
$K^+ K^- \pi^- - K^*(892)^0 K^-$
Barlag 88C
$K^+ K^- \pi^-$
Barlag 91
Wasserbaech 89B
Anjos 88G
Barlag 88
Barlag 88D
$K^0 K^- \pi^0$
Asratyan 87C
$\phi(1020) \pi^0 \pi^-$
Asratyan 90
Bai 90
Alder 89
Anjos 89B
Wormser 89
Asratyan 87C
$\pi^+ \pi^0 2\pi^-$
Anjos 89B
$K^+ K^- \pi^0 \pi^-$
Anjos 89B
Schindler 89
$K^0 K^- \pi^+ \pi^-$
Asratyan 87C
$K^+ K_S 2\pi^-$
Asratyan 87C
$\phi(1020) \pi^+ 2\pi^-$
Bai 90
Alder 89
Anjos 88G
Barlag 88C
Asratyan 87C

D_S^-

$2\pi^+ 3\pi^-$
Anjos 88D
$K^+ K^- \pi^+ 2\pi^-$
Anjos 88G
Barlag 88C

D_S^*

Albrecht 91J
Adler 89E
$D_S^\pm \gamma$
Toki 89B

D_S^{*+}

$D_S^+ \gamma$
Asratyan 92
Albrecht 91J
Bai 90
Adler 89B
Alder 89
Browder 89
Wasserbaech 89B
Albrecht 87N

D_S^{*-}

Gittelman 91
Miller 90
Browder 89
Pitman 89
$D_S^- \gamma$
Asratyan 92
Albrecht 90K
Asratyan 90
Bai 90
Adler 89B
Alder 89
Wasserbaech 89B
Schindler 88
Albrecht 87N
Asratyan 87C

$D_1(2420)^+$

$D^*(2010)^+ K^0$
Miller 89

$D_1(2420)^0$

$D^+ \pi^-$
Shukla 92
Avery 90
Miller 89
Anjos 88F
$D^*(2010)^+ \pi^-$
Albrecht 92P
Shukla 92
Avery 90
Albrecht 89V
Miller 89
Anjos 88F
Roudeau 88

$\overline{D}_1(2420)^0$

Stone 89
$D^- \pi^+$
Anjos 88F
$D^*(2010)^- \pi^+$
Anjos 88F
Roudeau 88

$D_J(2440)^0$

Cassel 90

$D_2^*(2460)^+$

$D^0 \pi^+$
Albrecht 89X

$D_2^*(2460)^0$

$D^+ \pi^-$
Shukla 92
Avery 90
Albrecht 89

$D_2^*(2460)^0$

$D^*(2010)^+ \pi^-$
Anjos 88F
Albrecht 92P
Shukla 92
Shukla 92B
Avery 90
Albrecht 89V

$\overline{D}_2^*(2460)^0$

$D^- \pi^+$
Anjos 88F

$D_2^*(2460)^-$

$\overline{D}^0 \pi^-$
Albrecht 89X

$D_J^*(2470)^0$

Cassel 90

$D_{S1}(2536)^+$

$D^*(2010)^+ K^0$
Albrecht 89P
Asratyan 87C

$D^*(2010)^0 K^+$
Albrecht 92N
Asratyan 87C

$D^*(2010)^+ K_S$
Shukla 92
Avery 90

$D_{S1}(2536)^-$

$D_S^{*-} \gamma$
Asratyan 87C

$D_{SJ}(2564)^+$

$D^*(2010)^+ K^0$
Asratyan 87C

$D^*(2010)^0 K^+$
Asratyan 87C

$D_{SJ}(2564)^-$

$D_S^{*-} \gamma$
Asratyan 87C

$D_S^*(2790)^+$

$D^*(2010)^0 K^+$
Batusov 90C
Batusov 88C

$\eta_c(1S)$

2γ
Kopke 89
Bisello 90B
Chen 89C
Aihara 88
Aihara 88B
Ajaltouni 88
Augustin 88C

$2\rho(770)^0$
Bisello 90B
Chen 89C
Jensen 89
Mallik 89
Adler 88D
Aihara 88B
Augustin 88C
Bisello 88
Mir 88

$\rho(770)^+ \rho(770)^-$
Bisello 90B

$2\omega(783)$
Bisello 90B
Mallik 89B

$2f_2(1270)$
Mallik 89B
Adler 88D
Augustin 88C
Mir 88

$\eta_c(1S)$

$a_2(1320)^+ \pi^-$
Bisello 88

$a_2(1320)^- \pi^+$
Bisello 88

$K^*(892)^0 \overline{K}^*(892)^0$
Bisello 90B
Eigen 90
Chen 89C
Jensen 89
Mallik 89B

$\phi(1020)\ \omega(783)$
Mallik 89B

$2\phi(1020)$
Bai 90B
Bisello 90B
Chen 89C
Jensen 89
Mallik 89B
Aihara 88
Aihara 88B

$p\ \overline{p}$
Bisello 90B

$\Lambda\ \overline{\Lambda}$
Bisello 90F

$K^+ K^- \pi^0$
Bisello 90B

$K^+ K_S \pi^- + K_S K^- \pi^+$
Chen 89C
Aihara 88B
Gidal 88C

$K^+ K_S \pi^-$
Bisello 90B
Braunschweig 89
Jensen 89
Ouldsaada 88B

$K_S K^- \pi^+$
Bisello 90B
Braunschweig 89
Jensen 89
Ouldsaada 88B

$K^*(892)^0 K^- \pi^+$
Jensen 89

$K^*(892)^0 K^- \pi^+ + \overline{K}^*(892)^0 K^+ \pi^-$
Chen 89C

$K^+ K^- \phi(1020)$
Aihara 88B

$2\pi^+ 2\pi^-$
Bisello 90B
Braunschweig 89
Chen 89C
Mallik 89F
Adler 88D
Aihara 88
Aihara 88B
Bisello 88
Gidal 88C
Ouldsaada 88B

$K^+ K^- \pi^+ \pi^-$
Braunschweig 89
Chen 89C
Aihara 88
Aihara 88B
Gidal 88C
Ouldsaada 88B

$2K^+ 2K^-$
Chen 89C
Aihara 88B

$p\ \overline{p}\ \pi^+ \pi^-$
Chen 89C

$J/\psi(1S)$

Adriani 93B
Acton 92M
Drell 92B
Maeshima 92
Schmidt 92B
Geist 91
Gittelman 91
Jacob 91
Odyniec 91B
Raha 91
Rossi 91

$J/\psi(1S)$

Schukraft 91
Spiegel 91
Albrecht 90G
Freudenreich 90
Miller 90
Wormser 90
Bartke 89
Catanesi 89
Fulton 89
Halling 89
Kreinick 89
Maschmann 89
Miller 89
Mistry 89
Nagy 89
Pauss 89
Albajar 88D
Albajar 88E
Tao 88
Thorndike 88

X
Jin 91

γ **X**
Kopke 89

π^+ **X**
Kopke 89

π^- **X**
Kopke 89

$\rho(770)^0$ **X**
Kopke 89

$\omega(783)$ **X**
Kopke 89

$f_0(975)$ **X**
Kopke 89

$f_2(1270)$ **X**
Kopke 89

K^+ **X**
Kopke 89

K^- **X**
Kopke 89

p **X**
Kopke 89

$\overline{p}$ **X**
Kopke 89

2hadron (hadrons)
Hsueh 92

$\pi^+ \pi^-$ **X**
Kopke 89

$2\phi(1020)\ \gamma$ **X**
Chan 88

$\ell^+ \ell^-$
Hsueh 92
Trischuk 91

$e^- e^+$
Albrecht 92H
Armstrong 92C
Armstrong 92E
Boucrot 92
Buskulic 92H
Coffman 92
Hsueh 92
Ray 92
Albrecht 91D
Alexander 91I
Armstrong 91B
Armstrong 91D
Bortoletto 91
Jin 91
Uehara 91
Cassel 90
Morel 90
Morel 90B
Kopke 89
Mir 89
Schubert 89
Schindler 88

$\mu^- \mu^+$
Abe 92
Abe 92E
Abe 92G
Albrecht 92H
Antoniazzi 92
Antoniazzi 92B

$J/\psi(1S)$

Arneodo 92
Ashman 92
Barbarogalti 92
Boswell 92
Boucrot 92
Buskulic 92H
Coffman 92
Fuess 92
Gauthier 92
Papadimitrio 92
Peng 92
Vejcik 92
Yeh 92
Abramov 91B
Abreu 91E
Albajar 91
Albajar 91D
Albrecht 91D
Alde 91D
Alexander 91I
Amaudruz 91E
Baglin 91
Baglin 91B
Baglin 91C
Baglin 91E
Bortoletto 91
Capon 91
Fredj 91
Leitch 91
Sansoni 91
Uehara 91
Wenzel 91
Albajar 90G
Alde 90B
Allasia 90C
Baglin 90
Baglin 90B
Cassel 90
Ellis 90
Freudenreich 90
Frisch 90
Geer 90
Kartik 90
Liss 90
Mishra 90
Nikitas 90
Ratti 90
Tzamarias 90
Yeh 90
Baglin 89
De 89
Kopke 89
London 89
Mir 89
Schubert 89
Sonderegger 89
Albajar 88C
Bussiere 88
Ferrarotto 88
Kluberg 88
Schindler 88
Wormser 88

$\mu^- \mu^+ + e^- e^+$
Adriani 92D

γ **axion**
Turner 90

meson$^0\ \gamma$
Bolton 92
Bai 90D
Bisello 90C
Chen 90B
Augustin 89
Mallik 89B
Stanco 88
Toki 88
Toki 88B

$\pi^0\ \gamma$
Kopke 89
Ajaltouni 88
Augustin 88C

π^+ **meson**$^-$
Chen 91
Dunwoodie 91

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$J/\psi(1S)$

π^0 meson^0
Chen 91
Dunwoodie 91

π^- meson$^+$
Chen 91
Dunwoodie 91

$\pi^+ \pi^-$
Kopke 89

$\eta \gamma$
Kopke 89
Ajaltouni 88
Augustin 88C

$\rho(770) \pi$
Mir 88

$\rho(770)^+ \pi^-$
Chen 91
Kopke 89
Toki 89
Coffman 88

$\rho(770)^0 \pi^0$
Chen 91
Kopke 89
Toki 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88

$\rho(770)^- \pi^+$
Chen 91
Kopke 89
Toki 89
Coffman 88

$\rho(770)^0 \eta$
Kopke 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88
Mir 88

$\rho(770)^+ \rho(770)^-$
Kopke 89

$\omega(783)$ meson^0
Mallik 89B

$\omega(783) \pi^0$
Kopke 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88
Mir 88

$\omega(783) \eta$
Kopke 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88
Mir 88

$\eta'(958) \gamma$
Bolton 92
Kopke 89
Ajaltouni 88
Augustin 88C

$\eta'(958) \rho(770)^0$
Kopke 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88
Mir 88

$\eta'(958) \omega(783)$
Kopke 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88
Mir 88

$f_0(975) \gamma$
Mallik 89B

$f_0(975) \omega(783)$
Kopke 89
Lockman 89
Augustin 88B
Falvard 88

$a_0(980)^0 \rho(770)^0$
Kopke 89
Mallik 89B

$b_1(1235)^+ \pi^-$
Augustin 88B

$b_1(1235)^0 \pi^0$
Augustin 88B

$b_1(1235)^- \pi^+$
Augustin 88B

$b_1(1235)^0 \omega(783)$
Mallik 89B

$f_2(1270) \gamma$
Kopke 89
Mallik 89B
Ajaltouni 88

$f_2(1270) \rho(770)^0$
Mallik 89B

$f_2(1270) \omega(783)$
Jin 91
Mallik 89B
Augustin 88B
Falvard 88

$f_1(1285) \gamma$
Bolton 92
Bolton 91
Landsberg 90B
Lockman 90
Augustin 89
Coffman 89
Mallik 89B
Adler 88D
Augustin 88C
Mir 88
Stanco 88
Toki 88B

$f_1(1285) \omega(783)$
Landsberg 90B

$\eta(1295) \gamma$
Augustin 89
Coffman 89
Stanco 88

$a_2(1320)^+ \rho(770)^-$
Kopke 89
Augustin 88B

$a_2(1320)^0 \rho(770)^0$
Kopke 89
Mallik 89B
Augustin 88B

$a_2(1320)^- \rho(770)^+$
Kopke 89
Augustin 88B

$a_2(1320)^0 \omega(783)$
Mallik 89B

$f_1(1420) \gamma$
Toki 88B

$\eta(1440) \gamma$
Bai 90D
Lockman 90
Augustin 89
Bisello 89
Augustin 88C
Stanco 88
Toki 88
Toki 88B

$f_1(1510) \gamma$
Toki 88B

$f_2'(1525) \gamma$
Jin 91
Chen 90B
Kopke 89
Mallik 89B
Augustin 88
Augustin 88C

$f_2'(1525) \omega(783)$
Kopke 89
Falvard 88

$X(1700) \omega(783)$
Falvard 88

$f_2(1720) \gamma$
Jin 91
Chen 90B
Mallik 89B
Ajaltouni 88
Augustin 88
Augustin 88C
Hitlin 88

$f_2(1720) \omega(783)$
Augustin 88C

$\eta(1760) \gamma$
Bisello 89
Augustin 88C

$\eta(2100) \gamma$
Bai 90B
Bisello 89
Augustin 88C

$X(2200) \gamma$
Jin 91
Augustin 88

$f_4(2220) \gamma$
Mallik 89B
Augustin 88
Augustin 88C

$f_2(2300) \gamma$
Bai 90B

$K_S K_L$
Kopke 89

$K^*(892)^+ K^- +$
$K^*(892)^- K^+$
Augustin 88C
Coffman 88
Mir 88

$K^*(892)^+ K^-$
Kopke 89
Jousset 88

$K^*(892)^0 \overline{K}^0 +$
$\overline{K}^*(892)^0 K^0$
Augustin 88C
Coffman 88
Mir 88

$K^*(892)^0 \overline{K}^0$
Kopke 89
Jousset 88

$\overline{K}^*(892)^0 K^0$
Kopke 89
Jousset 88

$K^*(892)^- K^+$
Kopke 89
Jousset 88

$K^*(892)^+ K^*(892)^-$
Kopke 89

$K_2^*(1430)^+ K^*(892)^-$
Kopke 89

$K_2^*(1430)^0 \overline{K}^*(892)^0$
Kopke 89

$\overline{K}_2^*(1430)^0 K^*(892)^0$
Kopke 89

$K_2^*(1430)^- K^*(892)^+$
Kopke 89

$\phi(1020) \pi^0$
Kopke 89
Augustin 88C
Coffman 88
Mir 88

$\phi(1020) \eta$
Kopke 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88
Mir 88

$\phi(1020) \eta'(958)$
Kopke 89
Ajaltouni 88B
Augustin 88C
Coffman 88
Jousset 88
Mir 88

$\phi(1020) f_0(975)$
Kopke 89
Lockman 89
Falvard 88

$f_2(1270) \phi(1020)$
Kopke 89
Falvard 88

$f_1(1285) \phi(1020)$
Landsberg 90B

$\eta(1440) \phi(1020)$
Falvard 88

$f_2'(1525) \phi(1020)$
Kopke 89
Mallik 89B
Falvard 88

$X(1700) \phi(1020)$
Falvard 88

$f_2(1720) \phi(1020)$
Augustin 88C

$\eta_c(1S) \gamma$
Bai 90B
Bisello 90B
Eigen 90
Kopke 89
Mallik 89B
Adler 88D
Ajaltouni 88
Augustin 88C
Bisello 88
Mir 88

γ glueball
Heusch 91
Jin 91
Kopke 89
Chan 88

$\omega(783)$ glueball
Heusch 91

$\phi(1020)$ glueball
Heusch 91

$\pi^- C(1480)^+$
Falvard 88

$\pi^+ C(1480)^- +$
$\pi^- C(1480)^+$
Landsberg 90B

$\pi^+ C(1480)^-$
Falvard 88

$n \overline{n}$
Kopke 89

$p \overline{p}$
Armstrong 92E
Kopke 89

$\overline{p} \Delta(1232 P_{33})^+$
Kopke 89

$\Delta(1232 P_{33})^{++}$
$\overline{\Delta}(1232 P_{33})^{--}$
Kopke 89

$\Lambda \overline{\Lambda}$
Kopke 89
Tixier 88

$\overline{\Lambda} \Sigma^0$
Kopke 89

$\Lambda \overline{\Sigma}^0$
Kopke 89

$\Sigma^0 \overline{\Sigma}^0$
Kopke 89

$\overline{\Lambda} \Sigma(1385 P_{13})^0$
Kopke 89

$\Sigma^- \overline{\Sigma}(1385 P_{13})^+$
Kopke 89

$\Sigma^+ \overline{\Sigma}(1385 P_{13})^-$
Kopke 89

$\Sigma(1385 P_{13})^- \overline{\Sigma}(1385 P_{13})^+$
Kopke 89

$\Sigma(1385 P_{13})^+ \overline{\Sigma}(1385 P_{13})^-$
Kopke 89

$\Xi^- \overline{\Xi}^+$
Kopke 89

$\overline{\Xi}^0 \Xi(1530 P_{13})^0$
Kopke 89

$\overline{\Xi}^+ \Xi(1530 P_{13})^-$
Kopke 89

$J/\psi(1S)$

$\Xi^- \bar{\Xi}(1530\ P_{13})^+$
Kopke 89
3γ
Bisello 90B
Kopke 89
Albrow 88
Augustin 88C
$2\pi^0\ \gamma$
Hitlin 88
$\pi^+\ \pi^-\ \gamma$
Mallik 89B
Augustin 88C
Hitlin 88
Toki 88
Toki 88B
$\pi^+\ \pi^0\ \pi^-$
Chen 91
Dunwoodie 91
Kopke 89
Augustin 88C
Coffman 88
$2\eta\ \gamma$
Burchell 92
Kopke 89
Augustin 88C
Hitlin 88
$\rho(770)\ 2\gamma$
Burchell 92
$\rho(770)^0\ 2\gamma$
Augustin 89
Coffman 89
Toki 88
Toki 88B
$2\rho(770)^0\ \gamma$
Bisello 90B
Eigen 90
Bisello 89
Kopke 89
Mallik 89B
Augustin 88C
Mir 88
Toki 88B
$\rho(770)^+\ \rho(770)^-\ \gamma$
Bisello 90B
Bisello 89
Toki 88B
$\rho(770)^+\ \rho(770)^0\ \pi^-$
Augustin 88B
$\rho(770)^0\ \rho(770)^-\ \pi^+$
Augustin 88B
$\omega(783)\ 2\pi^0$
Kopke 89
Augustin 88B
$\omega(783)\ \pi^+\ \pi^-$
Jin 91
Kopke 89
Lockman 89
Augustin 88B
$2\omega(783)\ \gamma$
Bisello 90B
Eigen 90
Kopke 89
Mallik 89B
Toki 88B
$\eta'(958)\ \eta\ \gamma$
Kopke 89
Augustin 88C
$a_0(980)\ \pi\ \gamma$
Bolton 92
Bai 90D
Drinkard 90
Toki 88B
$a_0(980)^+\ \pi^-\ \gamma$
Augustin 90C
$a_0(980)^-\ \pi^+\ \gamma$
Augustin 90C
$2f_2(1270)\ \gamma$
Mallik 89B
Augustin 88C
Mir 88

$J/\psi(1S)$

$f_0(1400)\ \eta\ \gamma$
Bolton 92
Drinkard 90
$K^+\ K^-\ \gamma$
Jin 91
Chen 90B
Kopke 89
Mallik 89B
Augustin 88C
Hitlin 88
Toki 88
Toki 88B
$2K_S\ \gamma$
Chen 90B
Kopke 89
Mallik 89B
Augustin 88C
Hitlin 88
Toki 88
Toki 88B
$K^+\ K^-\ \pi^0$
Kopke 89
Augustin 88C
$K^+\ K_S\ \pi^-$
Kopke 89
Augustin 88C
$K_S\ K^-\ \pi^+$
Kopke 89
Augustin 88C
$K^0\ \bar{K}^0\ \omega(783)$
Kopke 89
Falvard 88
$K^+\ K^-\ \omega(783)$
Kopke 89
Augustin 88C
Falvard 88
$2K_S\ \omega(783)$
Augustin 88C
Falvard 88
$K^*(892)\ K\ \gamma$
Bai 90D
$\bar{K}^*(892)\ K\ \gamma\ +$
$K^*(892)\ \bar{K}\ \gamma$
Toki 88B
$K^*(892)^0\ \bar{K}^*(892)^0\ \gamma$
Bisello 90B
Eigen 90
Mallik 89B
Toki 88
Toki 88B
$\phi(1020)\ 2\pi^0$
Lockman 89
$\phi(1020)\ \pi^+\ \pi^-$
Landsberg 90B
Kopke 89
Lockman 89
Falvard 88
$\phi(1020)\ \omega(783)\ \gamma$
Mallik 89B
$K^+\ K^-\ \phi(1020)$
Lockman 89
Augustin 88C
Falvard 88
$2K_S\ \phi(1020)$
Augustin 88C
Falvard 88
$K^*(892)^+\ K^-\ \phi(1020)$
Falvard 88
$K^*(892)^-\ K^+\ \phi(1020)$
Falvard 88
$2\phi(1020)\ \gamma$
Bai 90B
Bisello 90B
Bisello 90C
Eigen 90
Kopke 89
Mallik 89B
Augustin 88C
Toki 88B
$p\ \bar{p}\ \gamma$
Bisello 90B

$J/\psi(1S)$

Kopke 89
$p\ \bar{n}\ \pi^-$
Kopke 89
$p\ \bar{p}\ \pi^0$
Kopke 89
$n\ \bar{p}\ \pi^+$
Kopke 89
$p\ \bar{p}\ \eta$
Kopke 89
$p\ \bar{p}\ \rho(770)^0$
Kopke 89
$p\ \bar{p}\ \omega(783)$
Kopke 89
$p\ \bar{p}\ \eta'(958)$
Kopke 89
$p\ \bar{p}\ \phi(1020)$
Kopke 89
Falvard 88
$\bar{p}\ \Delta(1232\ P_{33})^{++}\ \pi^-$
Kopke 89
$\bar{p}\ \Lambda\ K^+$
Kopke 89
$p\ \bar{\Lambda}\ K^-$
Kopke 89
$\Lambda\ \bar{\Lambda}\ \gamma$
Bisello 90B
$\Lambda\ \bar{\Lambda}\ \pi^0$
Kopke 89
$\bar{p}\ \Sigma^0\ K^+$
Kopke 89
$p\ \bar{\Sigma}^0\ K^-$
Kopke 89
$\Lambda\ \bar{\Sigma}^+\ \pi^-$
Kopke 89
$\Lambda\ \bar{\Sigma}^-\ \pi^+$
Kopke 89
$p\ \bar{\Sigma}(1385\ P_{13})^0\ K^-$
Kopke 89
$\pi^+\ \pi^-\ 2\gamma$
Kopke 89
Toki 88
Toki 88B
$\pi^+\ 2\pi^0\ \pi^-$
Kopke 89
Augustin 88C
$\eta\ 2\pi\ \gamma$
Burchell 92
$\eta\ \pi^+\ \pi^-\ \gamma$
Bolton 92
Augustin 90B
Augustin 90C
Drinkard 90
Augustin 89
Augustin 88C
Toki 88
Toki 88B
$\eta\ \pi^+\ \pi^0\ \pi$
Mallik 89B
$\rho(770)^0\ \pi^+\ \pi^-\ \gamma$
Augustin 88C
$\omega(783)\ \eta\ \pi^+\ \pi^-$
Kopke 89
$K^+\ K^-\ 2\gamma$
Kopke 89
Augustin 88C
$K\ \bar{K}\ \pi\ \gamma$
Burchell 92
$K^+\ K^-\ \pi^0\ \gamma$
Augustin 90B
Augustin 90C
Bisello 90B
Drinkard 90
Augustin 89
Szklarz 89
Augustin 88C
Stanco 88
Toki 88B
$K^\pm\ K_S\ \pi^\pm\ \gamma$
Drinkard 90

$J/\psi(1S)$

$K^+\ K_S\ \pi^-\ \gamma$
Augustin 90B
Augustin 90C
Bai 90D
Bisello 90B
Augustin 89
Szklarz 89
Augustin 88C
Stanco 88
Toki 88B
$K_S\ K^-\ \pi^+\ \gamma$
Augustin 90B
Augustin 90C
Bai 90D
Bisello 90B
Augustin 89
Szklarz 89
Augustin 88C
Stanco 88
$2K_S\ \pi^0\ \gamma$
Toki 88B
$K^+\ K^-\ \pi^+\ \pi^-$
Falvard 88
$K^+\ \bar{K}^0\ \omega(783)\ \pi^-$
Kopke 89
$K^0\ \bar{K}^0\ \omega(783)\ \pi^0$
Kopke 89
$K^+\ K^-\ \omega(783)\ \pi^0$
Kopke 89
$K^0\ K^-\ \omega(783)\ \pi^+$
Kopke 89
$2K^+\ 2K^-$
Augustin 88C
Falvard 88
$K^+\ 2K_S\ K^-$
Augustin 88C
Falvard 88
$\phi(1020)\ \eta\ \pi^+\ \pi^-$
Kopke 89
$K\ \bar{K}\ \phi(1020)\ \pi$
Kopke 89
$K^+\ K_S\ \phi(1020)\ \pi^-$
Falvard 88
$K_S\ K^-\ \phi(1020)\ \pi^+$
Falvard 88
$p\ \bar{p}\ K^+\ K^-$
Falvard 88
$\pi^+\ \pi^-\ 3\gamma$
Toki 88
Toki 88B
$\pi^+\ \pi^0\ \pi^-\ 2\gamma$
Kopke 89
Augustin 88C
$2\pi^+\ 2\pi^-\ \gamma$
Bolton 91
Bisello 90B
Kopke 89
Mallik 89B
Augustin 88C
Bisello 88
Mir 88
Stanco 88
$2\pi^+\ \pi^0\ 2\pi^-$
Kopke 89
Mallik 89B
Augustin 88B
Augustin 88C
$\omega(783)\ \pi^+\ 2\pi^0\ \pi^-$
Kopke 89
$\omega(783)\ 2\pi^+\ 2\pi^-$
Kopke 89
$K^+\ K^-\ \pi^+\ \pi^-\ \gamma$
Eigen 90
Kopke 89
Augustin 88C
Toki 88
$K^+\ K^-\ \pi^+\ \pi^0\ \pi^-$
Kopke 89
Augustin 88C
Falvard 88

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$J/\psi(1S)$

$K^+ K_S \pi^+ 2\pi^-$
Falvard 88
$K_S K^- 2\pi^+ \pi^-$
Falvard 88
$2K_S \pi^+ \pi^0 \pi^-$
Augustin 88C
Falvard 88
$2K^+ 2K^- \gamma$
Mallik 89B
Augustin 88C
$K^+ K_S K_L K^- \gamma$
Bisello 90C
Mallik 89B
Augustin 88C
$2K^+ K_S K^- \pi^-$
Falvard 88
$\phi(1020)\ 2\pi^+ 2\pi^-$
Kopke 89
Falvard 88
$2\pi^+ 2\pi^- 2\gamma$
Jin 91
Kopke 89
$2\pi^+ \pi^0 2\pi^- \gamma$
Kopke 89
$2\pi^+ 2\pi^0 2\pi^-$
Kopke 89
Augustin 88C
$3\pi^+ 3\pi^-$
Falvard 88
$K^+ K^- \pi^+ \pi^- 2\gamma$
Kopke 89
Augustin 88C
Falvard 88
$2K_S \pi^+ \pi^- 2\gamma$
Falvard 88
$K^+ K^- 2\pi^+ 2\pi^-$
Falvard 88
$K^+ 2K_S 2K^- \pi^+$
Falvard 88
$2\pi^+ \pi^0 2\pi^- 2\gamma$
Kopke 89
$3\pi^+ 2\pi^0 3\pi^-$
Kopke 89

$\chi_{c0}(1P)$

2γ
Chen 89C
Aihara 88B
$2\rho(770)^0$
Chen 89C
Aihara 88B
$K^*(892)^0 \overline{K}^*(892)^0$
Chen 89C
$2\phi(1020)$
Chen 89C
Aihara 88B
$J/\psi(1S)\ \gamma$
Mir 89
$K^+ K_S \pi^- + K_S K^- \pi^+$
Chen 89C
Aihara 88B
$K^*(892)^0 K^- \pi^+ + \overline{K}^*(892)^0 K^+ \pi^-$
Chen 89C
$K^+ K^- \phi(1020)$
Aihara 88B
$2\pi^+ 2\pi^-$
Chen 89C
Mir 89
Aihara 88B
Schindler 88
$K^+ K^- \pi^+ \pi^-$
Chen 89C
Aihara 88B
$2K^+ 2K^-$
Chen 89C
Aihara 88B
$p \overline{p} \pi^+ \pi^-$
Chen 89C
$3\pi^+ 3\pi^-$
Mir 89

$\chi_{c0}(1P)$

Schindler 88

$\chi_{c1}(1P)$

Lipton 92
Gittelman 91
Spiegel 91
Freudenreich 90
$J/\psi(1S)\ \gamma$
Antoniazzi 92
Ray 92
Albrecht 91D
Armstrong 91B
Armstrong 91D
Mir 89
Schindler 88
$J/\psi(1S)\ \pi^0$
Armstrong 92C
$J/\psi(1S)\ 2\pi^0$
Armstrong 92C
$J/\psi(1S)\ \pi^+ \pi^-$
Armstrong 92C
$2\pi^+ 2\pi^-$
Mir 89
Schindler 88
$3\pi^+ 3\pi^-$
Mir 89
Schindler 88

$\chi_{c2}(1P)$

Lipton 92
Gittelman 91
Spiegel 91
Freudenreich 90
2γ
Uehara 91
Chen 89C
Aihara 88B
Augustin 88C
$2\rho(770)^0$
Chen 89C
Aihara 88B
$K^*(892)^0 \overline{K}^*(892)^0$
Chen 89C
$2\phi(1020)$
Chen 89C
Aihara 88B
$J/\psi(1S)\ \gamma$
Antoniazzi 92
Ray 92
Armstrong 91B
Armstrong 91D
Uehara 91
$K^+ K_S \pi^- + K_S K^- \pi^+$
Chen 89C
Aihara 88B
$K^*(892)^0 K^- \pi^+ + \overline{K}^*(892)^0 K^+ \pi^-$
Chen 89C
$K^+ K^- \phi(1020)$
Aihara 88B
$2\pi^+ 2\pi^-$
Chen 89C
Mir 89
Aihara 88B
Schindler 88
$K^+ K^- \pi^+ \pi^-$
Chen 89C
Aihara 88B
$2K^+ 2K^-$
Chen 89C
Aihara 88B
$p \overline{p} \pi^+ \pi^-$
Chen 89C
$3\pi^+ 3\pi^-$
Mir 89
Schindler 88

$\psi(2S)$

Spiegel 91
Cassel 90
Miller 90
Bartke 89
Halling 89
Kreinick 89
Miller 89
Hitlin 88
$J/\psi(1S)\ X$
Antoniazzi 92
Armstrong 92E
Ray 92
Armstrong 91B
Armstrong 91D
$\ell^+ \ell^-$
Alexander 90
$e^- e^+$
Armstrong 92E
Armstrong 91B
Armstrong 91D
Bortoletto 91
Albrecht 90G
Schubert 89
$\mu^- \mu^+$
Abe 92G
Antoniazzi 92B
Fuess 92
Papadimitrio 92
Bortoletto 91
Fredj 91
Leitch 91
Albajar 90G
Albrecht 90G
Alde 90B
Mishra 90
Nikitas 90
Tzamarias 90
Yeh 90
Schubert 89
$\rho(770)\ \pi$
Mir 89
$\rho(770)^+ \pi^-$
Toki 89
$\rho(770)^0 \pi^0$
Toki 89
$\rho(770)^- \pi^+$
Toki 89
$J/\psi(1S)\ \eta$
Mir 89
$\chi_{c0}(1P)\ \gamma$
Mir 89
$\chi_{c1}(1P)\ \gamma$
Mir 89
$\chi_{c2}(1P)\ \gamma$
Mir 89
$p \overline{p}$
Armstrong 92E
$\pi^+ \pi^0 \pi^-$
Mir 89
Toki 89
$J/\psi(1S)\ 2\gamma$
Mir 89
$J/\psi(1S)\ \pi^+ \pi$
Albajar 90G
$J/\psi(1S)\ \pi^+ \pi^-$
Coffman 92
Bortoletto 91
Albrecht 90G
Frisch 90
Nikitas 90
Mir 89
Schubert 89
Toki 89
$e^- e^+ 2\gamma$
Mir 89
$\mu^- \mu^+ 2\gamma$
Mir 89
$\pi^+ \pi^- \mu^- \mu^+$
Mir 89
$\pi^+ \pi^- 2\gamma$
Toki 89
$2\pi^+ 2\pi^- \gamma$
Mir 89
$2\pi^+ \pi^0 2\pi^-$
Toki 89

$\psi(2S)$

$3\pi^+ 3\pi^- \gamma$
Mir 89

$\psi(3770)$

Alexander 90
$\mu^- \mu^+$
Alde 91D
Wenzel 91
$D \overline{D}$
Dejongh 90
$D^0 \overline{D}^0$
Coffman 92B
Coffman 91
Bai 90C
Labs 90
Adler 89
Adler 89C
Adler 89D
Adler 89E
Browder 89
Dejongh 89
Wasserbaech 89
Adler 88B
Grab 88
Izen 88
Schindler 88
$D^+ D^-$
Coffman 92B
Coffman 91
Bai 90C
Labs 90
Adler 89E
Browder 89
Dejongh 89
Adler 88
Grab 88
Izen 88
$\chi_{c0}(1P)\ \gamma$
Schindler 88
$\chi_{c1}(1P)\ \gamma$
Schindler 88
$\chi_{c2}(1P)\ \gamma$
Schindler 88
$J/\psi(1S)\ \pi^+ \pi^-$
Schindler 88
$K^- 2\pi^+ \pi^-$
Adler 88F
$K^+ K^- \pi^+ \pi^-$
Adler 88F
$K^+ 2K^- \pi^+$
Adler 88F
$K^+ \overline{K}^0 \pi^+ 2\pi^-$
Adler 88F
$K^+ K^- \pi^+ \pi^0 \pi^-$
Adler 88F
$K^+ \overline{K}^0 \pi^+ \pi^0 2\pi^-$
Adler 88F
$K^+ K^- \pi^+ 2\pi^0 \pi^-$
Adler 88F
$K^+ K^- 2\pi^+ 2\pi^-$
Adler 88F
$K^+ \overline{K}^0 2\pi^+ 3\pi^-$
Adler 88F
$K^+ K^- 2\pi^+ \pi^0 2\pi^-$
Adler 88F
$K^+ K^- 3\pi^+ 3\pi^-$
Adler 88F

χ_c(unspec)

$J/\psi(1S)\ \gamma$
Boswell 92
Frisch 90
De 89
Albajar 88E

bottom

Adriani 93B
Acton 92B
Barbarogalti 92
Feindt 92B
Schumm 92
Abreu 91D
Albajar 91
Albajar 91C
Jacobsen 91B

bottom

Maki 91
Wenzel 91
Kral 90
Kroha 90
Yamauchi 90
Braunschweig 89C
Piccolo 89
Dowell 88
Kichimi 88

ℓ^- **X**
Buskulic 92F

$e^\pm$ **X**
Sansoni 91
Ng 88

e^- **X**
Acton 91F
Albrecht 90H
Decamp 90M
Fujii 90
Hagemann 90
Ong 89
Ong 88B
Klem 86

e^+ **X**
Dydak 91

$\overline{\nu}_e$ **X**
Duffy 88

μ^- **X**
Acton 91F
Spiegel 91
Albrecht 90H
Decamp 90M
Fujii 90
Hagemann 90
Ong 89
Albajar 88C
Albajar 88D
Albajar 88F
Ong 88
Ong 88B

μ^+ **X**
Dydak 91

$\overline{\nu}_\mu$ **X**
Duffy 88

mult[charged] (neutrals)
Braunschweig 89L

$D^*(2010)$ **X**
Boucrot 92

$J/\psi(1S)$ **X**
Adriani 92D
Buskulic 92H
Peng 92
Alexander 91I
Sansoni 91
Albajar 88D
Albajar 88E

$\ell^\pm\ \nu$ **X**
Colas 91

$\ell^-\ \overline{\nu}$ **X**
Drell 92B

$\ell^-\ \overline{\nu}$ **0charm X**
Drell 92B

e^- **jet X**
Rollnik 92
Settles 92

μ^- **jet X**
Settles 92

$\mu^\pm\ e^\pm$ **X**
Sansoni 91

charmed-meson μ^- **X**
Catanesi 88

$D^0\ e^-$ **X**
Yeh 90

2hadron (hadrons)
Jacobsen 91
Hagemann 90

bottom
Decamp 91D

ℓ **jet**
Adeva 91C

$\mu^\pm$ **jet**
Adeva 91J

bottom

γ **strange**
Gilman 89

higgs strange
Gilman 89

$\ell^+\ \ell^-$ **strange**
Gilman 89

$\mu^-\ \overline{\nu}_\mu$ **charm**
Catanesi 89
Rossi 89

$q\ \overline{q}$ **strange**
Gilman 89

bottom

Adriani 93B
Acton 92B
Feindt 92B
Rollnik 92
Abreu 91D
Albajar 91C
Alexander 91I
Dydak 91
Jacobsen 91
Jacobsen 91B
Maki 91
Kral 90
Kroha 90
Yamauchi 90
Braunschweig 89C
Piccolo 89
Dowell 88

ℓ^+ **X**
Buskulic 92F

ν_e **X**
Duffy 88

e^+ **X**
Acton 91F
Albrecht 90H
Decamp 90M
Hagemann 90
Ong 89
Ong 88B
Klem 86

ν_μ **X**
Duffy 88

μ^+ **X**
Acton 91F
Spiegel 91
Albrecht 90H
Decamp 90M
Hagemann 90
Ong 89
Albajar 88C
Albajar 88D
Albajar 88F
Ong 88B

mult[charged] (neutrals)
Braunschweig 89L

$J/\psi(1S)$ **X**
Albajar 88D
Albajar 88E

charmed-meson μ^+ **X**
Catanesi 88

2hadron (hadrons)
Hagemann 90

bottom
Decamp 91D

$\mu^\pm$ **jet**
Adeva 91J

$\mu^+\ \nu_\mu$ **charm**
Catanesi 89
Rossi 89

$B^\pm$

Wenzel 91

$K^\pm\ \chi_{c1}(1P)$
Albrecht 91D

B

Albrecht 92B
Lipton 92
Akerib 91
Bortoletto 91

B

Rossi 91
Schafer 91
Wu 91
Leefranzini 90
Adamovich 89F
Fulton 89C

$\ell^\pm$ **X**
Gittelman 91

e^+ **0charm X**
Albrecht 91I

e^+ **X**
Albrecht 91I

μ^- **X**
Fujii 90
Band 89

μ^+ **0charm X**
Albrecht 91I

μ^+ **X**
Bambade 92
Albrecht 91I

charged X
Fujino 92

jet X
Bambade 92

hadron (hadrons)
Bambade 92

higgs X
Alam 89
Halling 89
Snyder 89

K^+ **X**
Cronstrom 91

K^- **X**
Cronstrom 91

K_S **X**
Cronstrom 91

$K^*(892)^\pm$ **X**
Cronstrom 91

$K^*(892)^+$ **X**
Cronstrom 91

$K^*(892)^0$ **X**
Cronstrom 91

$\overline{K}^*(892)^0$ **X**
Cronstrom 91

$K^*(892)^-$ **X**
Cronstrom 91

$\phi(1020)$ **X**
Cronstrom 91

D^+ **X**
Albrecht 91G
Miller 89

D^0 **X**
Albrecht 91G
Miller 89

$D^*(2010)^+$ **X**
Albrecht 91G
Miller 89

$D^*(2010)^-$ **X**
Cronstrom 91

D_S^+ **X**
Albrecht 91J
Miller 89

$J/\psi(1S)$ **X**
Nikitas 90
Miller 89

$\chi_{c1}(1P)$ **X**
Albrecht 91D

$\psi(2S)$ **X**
Miller 89

p **X**
Albrecht 92D
Crawford 91B

p **X** $-$ Λ **X**
Crawford 91B

n **X** $-$ Λ **X**
Crawford 91B

n **X**
Crawford 91B

Λ **X**
Albrecht 92D
Crawford 91B

Ξ^- **X**
Crawford 91B

B

Λ_c^+ **X**
Miller 89

$\Xi_c(2460)$ **X**
Crawford 91B

$\ell\ \nu$ **X**
Schubert 89

$\ell^+\ \nu$ **X**
Cassel 90
Fujii 90
Artuso 89C

$e^+\ \nu_e$ **X**
Henderson 91
Yanagisawa 91
Albrecht 90D
Danilov 89

$\mu^+\ \nu_\mu$ **X**
Henderson 91
Albrecht 90D
Danilov 89

$\mu^-\ \mu^+$ **X**
Alam 89

$\overline{D}\ \ell^+$ **X**
Acton 93D

$D\ \mu^-$ **X**
Rossi 89
Bordalo 88

$\overline{D}^*(2010)\ \ell^+$ **X**
Acton 93D

$p\ \ell^+$ **X**
Albrecht 92D

$\Lambda\ \ell^-$ **X**
Crawford 91B

$\Lambda\ \ell^+$ **X**
Albrecht 92D
Crawford 91B

baryon (hadrons) X
Albrecht 92D

$p\ \overline{p}$ **X**
Albrecht 92D
Crawford 91B

$\overline{p}\ \Lambda$ **X**
Albrecht 92D
Crawford 91B

$\Lambda\ \overline{\Lambda}$ **X**
Albrecht 92D
Crawford 91B

$K^+\ \ell^+\ \nu$ **X**
Cronstrom 91

$K^-\ \ell^+\ \nu$ **X**
Cronstrom 91

$K_S\ \ell^+\ \nu$ **X**
Cronstrom 91

$K^*(892)^+\ \ell^+\ \nu$ **X**
Cronstrom 91

$K^*(892)^0\ \ell^+\ \nu$ **X**
Cronstrom 91

$\overline{K}^*(892)^0\ \ell^+\ \nu$ **X**
Cronstrom 91

$K^*(892)^-\ \ell^+\ \nu$ **X**
Cronstrom 91

$\phi(1020)\ \ell^+\ \nu$ **X**
Cronstrom 91

$\overline{p}\ \Lambda\ \ell^+$ **X**
Albrecht 92D

nucleon nucleon $D^*(2010)$ **X**
Crawford 91B

kaon π
Sugahara 88B

$K^*(892)\ \gamma$
Lesiak 91
Sugahara 88B

$K_1(1400)\ \gamma$
Lesiak 91

$K_2(1770)\ \gamma$
Lesiak 91

$K_4^*(2045)\ \gamma$
Lesiak 91

$D^*(2010)\ \gamma$
Lesiak 91

$D_S^*\ \overline{D}^*(2010)$
Albrecht 91J

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

B^+

Buskulic 93D
Albrecht 92E
Albrecht 91E
Albrecht 91I
Colas 91
Albrecht 90D
Albrecht 90G
Bortoletto 90
Cassel 90
Fujii 90
Fulton 90
Miller 90
Artuso 89C
Bortoletto 89
Bortoletto 89B
Kreinick 89
Miller 89
Mistry 89

e^+ **X**
Kroha 90
Weir 90
Weir 89B

μ^+ **X**
Kroha 90
Weir 90
Weir 89B

$e^+ \nu_e$ **X**
Kral 90

$\mu^+ \nu_\mu$ **X**
Kral 90

$\pi^+ \pi^0$
Albrecht 90E

$\eta \pi^+$
Albrecht 90E

$\rho(770)^+ \pi^0$
Albrecht 90E

$\rho(770)^0 \pi^+$
Albrecht 90E
Halling 89
Schubert 89

$\rho(770)^+ \rho(770)^0$
Albrecht 90E

$\omega(783) \pi^+$
Albrecht 90E

$a_1(1260)^+ \pi^0$
Albrecht 90E

$a_1(1260)^0 \pi^+$
Albrecht 90E

$a_1(1260)^+ \rho(770)^0$
Albrecht 90E
Halling 89
Thorndike 88

$a_1(1260)^+ a_1(1260)^0$
Albrecht 90E

$f_2(1270) \pi^+$
Halling 89

$a_2(1320)^+ \rho(770)^0$
Halling 89
Thorndike 88

$f_0(1400) \pi^+$
Halling 89

K^+ **higgs**
Alam 89

$K^0 \pi^+$
Albrecht 89S
Avery 89B
Danilov 89
Halling 89
Thorndike 88

$K^+ \rho(770)^0$
Albrecht 89S
Avery 89B
Danilov 89
Halling 89
Thorndike 88

$K^+ f_2(1270)$
Avery 89B

$K^+ f_0(1400)$
Halling 89

$K^*(892)^+ \gamma$
Gittelman 91
Albrecht 89L
Avery 89B
Danilov 89
Halling 89
Albrecht 88E
Thorndike 88

$K^*(892)^+$ **higgs**
Alam 89

$K^*(892)^0 \pi^+$
Albrecht 89S
Avery 89B
Danilov 89
Thorndike 88

$\overline{K}^*(892)^0 \pi^+$
Halling 89

$K^*(892)^+ \rho(770)^0$
Albrecht 89S
Danilov 89

$K_1(1270)^+ \gamma$
Gittelman 91
Albrecht 89L

$K_1(1400)^+ \gamma$
Gittelman 91
Albrecht 89L
Albrecht 88E

$K_1(1400)^0 \pi^+$
Albrecht 89S

$K_1(1400)^+ \rho(770)^0$
Albrecht 89S

$K_2^*(1430)^+ \gamma$
Gittelman 91
Albrecht 89L
Albrecht 88E

$K_2^*(1430)^0 \pi^+$
Albrecht 89S

$K_2^*(1430)^+ \rho(770)^0$
Albrecht 89S

$K^*(1680)^+ \gamma$
Gittelman 91
Albrecht 89L

$K_3^*(1780)^+ \gamma$
Gittelman 91
Albrecht 89L
Albrecht 88E

$K_4^*(2045)^+ \gamma$
Gittelman 91
Albrecht 89L

$K^+ \phi(1020)$
Albrecht 89S
Avery 89B
Danilov 89
Halling 89
Thorndike 88

$K^*(892)^+ \phi(1020)$
Albrecht 89S
Danilov 89

$K_1(1400)^+ \phi(1020)$
Albrecht 89S

$K_2^*(1430)^+ \phi(1020)$
Albrecht 89S

$\overline{D}^0 \pi^+$
Halling 89
Schubert 89
Albrecht 88M
Thorndike 88

$\overline{D}^0 \rho(770)^+$
Halling 89
Albrecht 88M

$D_S^+ \overline{D}^0$
Albrecht 91J
Schubert 89

$D_S^+ \overline{D}^*(2010)^0$
Albrecht 91J

$D_S^{*+} \overline{D}^0$
Albrecht 91J

$D_S^{*+} \overline{D}^*(2010)^0$
Albrecht 91J

$K^+ J/\psi(1S)$
Barbarogalti 92
Boucrot 92
Buskulic 92H
Gauthier 92
Yeh 92
Albajar 91D
Wenzel 91
Frisch 90
Halling 89
Schubert 89
Thorndike 88

$K^*(892)^+ J/\psi(1S)$
Buskulic 92H
Gauthier 92
Albajar 91D
Schubert 89
Thorndike 88

$K^+ \psi(2S)$
Halling 89
Schubert 89

$\bar{p} \Delta(1232 P_{33})^{++}$
Halling 89

$p \overline{\Delta}(1232 P_{33})^0$
Halling 89

$p \overline{\Lambda}$
Avery 89B
Halling 89

$\pi^+ e^- e^+$
Weir 89

$\pi^0 e^+ \nu_e$
Antreasyan 90

$\pi^- 2e^+$
Weir 89

$\pi^+ \mu^- e^+$
Weir 89

$\pi^+ \mu^+ e^-$
Weir 89

$\pi^- \mu^+ e^+$
Weir 89

$\pi^+ \mu^- \mu^+$
Weir 89

$\pi^- 2\mu^+$
Weir 89

$\rho(770)^0 \ell^+ \bar{\nu}$
Bean 92B
Schubert 89

$\rho(770)^0 e^+ \nu_e$
Danilov 89

$\rho(770)^0 \mu^+ \nu_\mu$
Danilov 89

$\omega(783) \ell^+ \bar{\nu}$
Bean 92B

$K^+ e^- e^+$
Albrecht 89U
Halling 89
Weir 89
Thorndike 88

$K^- 2e^+$
Weir 89

$K^+ \mu^- e^+$
Weir 89

$K^+ \mu^+ e^-$
Weir 89

$K^- \mu^+ e^+$
Weir 89

$K^+ \mu^- \mu^+$
Alam 89
Albrecht 89U
Halling 89
Weir 89
Thorndike 88

$K^- 2\mu^+$
Weir 89

$K^*(892)^+ e^- e^+$
Albrecht 89U
Avery 89B

$K^*(892)^+ \mu^- \mu^+$
Alam 89
Albrecht 89U
Avery 89B

$\overline{D}^0 \ell^+ \nu$
Feindt 92B
Trischuk 91
Miller 90
Albrecht 89Q

$\overline{D}^0 \ell^+ \bar{\nu}$
Schubert 89

$\overline{D}^*(2010)^0 \ell^+ \bar{\nu}$
Schubert 89

$\overline{D}^*(2010)^0 e^+ \nu_e$
Sanghera 92
Antreasyan 90

$\overline{D}^*(2010)^0 \mu^+ \nu_\mu$
Sanghera 92

$\overline{D}_1(2420)^0 e^+ \nu_e$
Stone 89

$\overline{D}_1(2420)^0 \mu^+ \nu_\mu$
Stone 89

$\pi^+ 2\pi^0$
Albrecht 90E

$2\pi^+ \pi^-$
Albrecht 90E
Halling 89
Schubert 89

$K^+ \pi^+ \pi^-$
Alam 89
Albrecht 89U
Avery 89B

nonres $< K^+ \pi^+ \pi^- >$
Halling 89

$2K^+ K^-$
Alam 89
Albrecht 89U

$K^*(892)^+ \pi^+ \pi^-$
Alam 89
Albrecht 89U

$K^*(892)^+ K^+ K^-$
Alam 89
Albrecht 89U

$K^*(892)^0 K^+ \overline{K}^0$
Alam 89

$K^*(892)^0 \overline{K}^*(892)^0 K^+$
Alam 89

$\overline{D}^0 \pi^+ \pi^0$
Schubert 89
Albrecht 88M
Thorndike 88

$D^- 2\pi^+$
Halling 89
Schubert 89

$D^*(2010)^- 2\pi^+$
Halling 89
Schubert 89
Thorndike 88

$p \bar{p} \pi^+$
Bebek 89
Schubert 89
Albrecht 88T

$2\pi^+ \pi^0 \pi^-$
Albrecht 90E

$D^*(2010)^- 2\pi^+ \pi^0$
Halling 89
Schubert 89
Thorndike 88

$K^+ J/\psi(1S) \pi^+ \pi^-$
Halling 89
Schubert 89

$3\pi^+ 2\pi^-$
Albrecht 90E

$3\pi^+ \pi^0 2\pi^-$
Albrecht 90E

B^0

Buskulic 93D
Albrecht 92E
Drell 92
Albrecht 91E
Albrecht 91I
Albrecht 90D
Albrecht 90G
Albrecht 90K
Bortoletto 90
Cassel 90
Fulton 90
Bortoletto 89
Kreinick 89

B^0

Miller 89
Mistry 89

ℓ^+ X

Adeva 92
Albrecht 92K

e^- X

Barbarogalti 92
Abe 91N

e^+ X

Yeh 92
Dydak 91
Song 91
Adeva 90R
Gray 90
Kroha 90
Weir 90
Porter 89
Weir 89B

μ^- X

Barbarogalti 92
Abe 91N
Albajar 91C
Kroha 90
Pauss 89
Band 88

μ^+ X

Yeh 92
Dydak 91
Song 91
Adeva 90R
Gray 90
Kroha 90
Weir 90
Pauss 89
Porter 89
Weir 89B

$D^*(2010)^+$ X

Averill 89

$J/\psi(1S)$ X

Trischuk 91

$\chi_{c1}(1P)$ X

Gittelman 91

$\chi_{c2}(1P)$ X

Gittelman 91

$\ell^- \bar{\nu}$ X

Schafer 91

$e^+ \nu_e$ X

Henderson 91
Mai 91
Drell 89

$\mu^+ \nu_\mu$ X

Henderson 91
Mai 91
Drell 89

$\mu^- \mu^+$ X

Barbarogalti 92
Frisch 90

$\ell^- \bar{\nu}$ hadron (hadrons)

Buskulic 92E
Patton 91

$\bar{B}^0$

Adriani 93B
Abreu 92L
Acton 92B
Adeva 92
Albrecht 92K
Barbarogalti 92
Buskulic 92E
Drell 92B
Yeh 92
Abe 91N
Albajar 91C
Capon 91
Colas 91
Decamp 91D
Dydak 91
Gittelman 91
Patton 91
Schafer 91
Shirai 91
Song 91
Wenzel 91
Abe 90H
Adeva 90R

B^0

Ellis 90
Fujii 90
Geer 90
Gray 90
Itoh 90
Kim 90D
Kroha 90
Miller 90
Steinberger 90
Tenchini 90
Weir 90
Artuso 89C
Danilov 89
Drell 89
Eggert 89
Franzini 89
Golutvin 89
Hurst 89
Pauss 89
Porter 89
Weir 89B
Band 88
Dowell 88
Sugahara 88B
Tao 88

$e^- e^+$

Avery 89B
Halling 89
Thorndike 88

$\mu^- e^+$

Avery 89B
Thorndike 88

$\mu^- e^+ + \mu^+ e^-$

Halling 89

$\mu^+ e^-$

Avery 89B
Thorndike 88

$\mu^- \mu^+$

Barbarogalti 92
Albajar 91B
Wenzel 91
Frisch 90
Avery 89B
Halling 89
Albajar 88C
Thorndike 88

$2\pi^0$

Antreasyan 91

$\pi^+ \pi^-$

Albrecht 90E
Danilov 89
Halling 89
Schubert 89
Thorndike 88

$\eta \pi^0$

Albrecht 90E

$\rho(770)^+ \pi^-$

Albrecht 90E

$\rho(770)^0 \pi^0$

Albrecht 90E
Danilov 89

$2\rho(770)^0$

Albrecht 90E
Halling 89
Schubert 89
Thorndike 88

$\rho(770)^+ \rho(770)^-$

Albrecht 90E
Danilov 89

$\omega(783) \pi^0$

Albrecht 90E

$a_1(1260)^+ \pi^- +$
$a_1(1260)^- \pi^+$

Halling 89

$a_1(1260)^+ \pi^-$

Albrecht 90E
Thorndike 88

$a_1(1260)^0 \pi^0$

Albrecht 90E

$a_1(1260)^- \pi^+$

Thorndike 88

B^0

$a_1(1260)^+ \rho(770)^-$

Albrecht 90E

$a_1(1260)^0 \rho(770)^0$

Albrecht 90E

$a_1(1260)^+ a_1(1260)^-$

Albrecht 90E
Halling 89

$a_2(1320)^+ \pi^- +$
$a_2(1320)^- \pi^+$

Halling 89

K^0 higgs

Alam 89

$K^+ \pi^-$

Albrecht 89S
Avery 89B
Danilov 89
Gilman 89
Halling 89

$K^- \pi^+$

Thorndike 88

$K^0 \rho(770)^0$

Albrecht 89S
Avery 89B
Danilov 89
Halling 89
Thorndike 88

$K^0 f_2(1270)$

Avery 89B

$K^0 f_0(1400)$

Halling 89

$K^*(892)^0 \gamma$

Gittelman 91
Albrecht 89L
Avery 89B
Danilov 89
Halling 89
Albrecht 88E

$K^*(892)^0$ higgs

Alam 89

$\bar{K}^*(892)^0$ higgs

Alam 89

$K^*(892)^+ \pi^-$

Albrecht 89S
Avery 89B
Danilov 89
Halling 89

$K^*(892)^- \pi^+$

Thorndike 88

$K^*(892)^0 \rho(770)^0$

Albrecht 89S
Avery 89B
Danilov 89
Halling 89

$K^*(892)^0 f_2(1270)$

Avery 89B

$K^*(892)^0 f_0(1400)$

Halling 89

$K_1(1270)^0 \gamma$

Gittelman 91
Albrecht 89L

$K_1(1400)^0 \gamma$

Gittelman 91
Albrecht 89L
Albrecht 88E

$K_1(1400)^+ \pi$

Albrecht 89S

$K_1(1400)^0 \rho(770)^0$

Albrecht 89S

$K_2^*(1430)^0 \gamma$

Gittelman 91
Albrecht 89L
Albrecht 88E

$K_2^*(1430)^+ \pi^-$

Albrecht 89S

$K_2^*(1430)^0 \rho(770)^0$

Albrecht 89S

$K^*(1680)^0 \gamma$

Gittelman 91
Albrecht 89L

B^0

$K_3^*(1780)^0 \gamma$

Gittelman 91
Albrecht 89L
Albrecht 88E

$K_4^*(2045)^0 \gamma$

Gittelman 91
Albrecht 89L

$K^0 \phi(1020)$

Albrecht 89S
Avery 89B
Danilov 89
Halling 89

$K^*(892)^0 \phi(1020)$

Albrecht 89S
Avery 89B
Danilov 89
Halling 89

$K_1(1400)^0 \phi(1020)$

Albrecht 89S

$K_2^*(1430)^0 \phi(1020)$

Albrecht 89S

$D^- \pi^+$

Halling 89
Schubert 89
Albrecht 88M
Thorndike 88

$\bar{D}^0 \rho(770)^0$

Albrecht 88M

$D^- \rho(770)^+$

Halling 89
Albrecht 88M

$D^*(2010)^- \pi^+$

Halling 89
Schubert 89
Thorndike 88

$D^*(2010)^- \rho(770)^+$

Halling 89

$D_S^+ D^-$

Albrecht 91J
Halling 89
Schubert 89

$D_S^+ D^*(2010)^-$

Albrecht 91J

$D_S^{*+} D^-$

Albrecht 91J

$D_S^{*+} D^*(2010)^-$

Albrecht 91J

$K^0 J/\psi(1S)$

Buskulic 92H
Gauthier 92
Albajar 91D
Halling 89
Schubert 89

$K_S J/\psi(1S)$

Gittelman 91

$K^*(892)^0 J/\psi(1S)$

Buskulic 92H
Gauthier 92
Vejcik 92
Albajar 91D
Wenzel 91
Halling 89
Schubert 89
Thorndike 88

$J/\psi(1S) \phi(1020)$

Gauthier 92
Albajar 91D

$\bar{K}^*(892)^0 \psi(2S)$

Schubert 89

$p \bar{p}$

Halling 89
Schubert 89
Thorndike 88

$\Delta(1232 P_{33})^0 \bar{\Delta}(1232 P_{33})^0$

Halling 89

$\Delta(1232 P_{33})^{++}$
$\bar{\Delta}(1232 P_{33})^{--}$

Halling 89

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

B^0

$\pi^- \ell^+ \overline{\nu}$
Schubert 89
$\pi^- e^+ \nu$
Danilov 89
$\pi^- \mu^+ \nu_\mu$
Danilov 89
$\rho(770)^- \ell^+ \overline{\nu}$
Bean 92B
$K^0 e^- e^+$
Albrecht 89U
Thorndike 88
$K^0 \mu^- \mu^+$
Thorndike 88
$K^*(892)^0 e^- e^+$
Albrecht 89U
Avery 89B
Halling 89
$K^*(892)^0 \mu^- \mu^+$
Barbarogalti 92
Albajar 91B
Frisch 90
Alam 89
Albrecht 89U
Avery 89B
Halling 89
$D^- \ell^+ \nu$
Feindt 92B
Miller 90
Albrecht 89N
Albrecht 89Q
$D^- e^+ \nu_e$
Wilczynska 90
Danilov 89
$D^- \mu^+ \nu_\mu$
Danilov 89
$D^*(2010)^+ \ell^- \overline{\nu}$
Halling 89
$D^*(2010)^- \ell^+ \nu$
Albrecht 92K
Feindt 92B
Trischuk 91
Miller 90
Albrecht 89Q
$D^*(2010)^- \ell^+ \overline{\nu}$
Schubert 89
$D^*(2010)^- e^+ \nu_e$
Sanghera 92
Antreasyan 90
Albrecht 89C
Bortoletto 89B
Danilov 89
Stone 89
Wagner 89B
$D^*(2010)^- \mu^+ \nu_\mu$
Sanghera 92
Albrecht 89C
Bortoletto 89B
Danilov 89
Stone 89
Wagner 89B
$\pi^+ \pi^0 \pi^-$
Albrecht 90E
Danilov 89
$K^0 \pi^+ \pi^-$
Alam 89
Albrecht 89U
$K^+ K^0 K^-$
Alam 89
Albrecht 89U
$K^*(892)^0 \pi^+ \pi^-$
Alam 89
Albrecht 89U
$K^*(892)^0 K^+ K^-$
Alam 89
Albrecht 89U
$K^*(892)^0 \overline{K}^*(892)^0 K^0$
Alam 89
$K^*(892)^0 K^*(892)^- K^+$
Alam 89
$K^*(892)^0 2\overline{K}^*(892)^0$
Alam 89

B^0

$\overline{D}^0 \pi^+ \pi^-$
Thorndike 88
$D^- \pi^+ \pi^0$
Schubert 89
Albrecht 88M
Thorndike 88
$D^*(2010)^- \pi^+ \pi^0$
Halling 89
Schubert 89
Thorndike 88
$K\ J/\psi(1S)\ \pi$
Wenzel 91
$K^-\ J/\psi(1S)\ \pi^+$
Schubert 89
$\overline{D}^0 \pi^- e^+ \nu_e$
Albrecht 89C
$\overline{D}^0 \pi^- \mu^+ \nu_\mu$
Albrecht 89C
$\pi^+ 2\pi^0 \pi^-$
Albrecht 90E
Danilov 89
$2\pi^+ 2\pi^-$
Albrecht 90E
Danilov 89
$D^*(2010)^- 2\pi^+ \pi^-$
Halling 89
Schubert 89
Thorndike 88
$p \overline{p} \pi^+ \pi^-$
Bebek 89
Schubert 89
Albrecht 88T
$2\pi^+ \pi^0 2\pi^-$
Albrecht 90E
$3\pi^+ 3\pi^-$
Albrecht 90E
Danilov 89
$3\pi^+ \pi^0 3\pi^-$
Albrecht 90E

$\overline{B}$

Abreu 92I
Albrecht 92B
Albrecht 92D
Bambade 92
Fujino 92
Albrecht 91D
Albrecht 91G
Albrecht 91J
Cronstrom 91
Lesiak 91
Rossi 91
Schafer 91
Wu 91
Fulton 89C
μ^+ X
Fujii 90
Band 89
higgs X
Alam 89
Snyder 89
D^+ X
Bortoletto 91
Cassel 90
D^0 X
Bortoletto 91
Cassel 90
$D^*(2010)^+$ X
Bortoletto 91
Cassel 90
D_S^+ X
Bortoletto 91
Cassel 90
$J/\psi(1S)$ X
Bortoletto 91
Cassel 90
$\psi(2S)$ X
Cassel 90
Λ_c^+ X
Crawford 91B
Cassel 90
$\ell^- \nu$ X
Fujii 90

$\overline{B}$

$e^- \overline{\nu}_e$ X
Artuso 89C
Henderson 91
Yanagisawa 91
$\mu^- \mu^+$ X
Alam 89
$\mu^- \overline{\nu}_\mu$ X
Henderson 91
$\overline{D} \mu^+$ X
Rossi 89
Bordalo 88

$\overline{B}^0$

Adriani 93B
Drell 92B
Albrecht 91E
Antreasyan 91
Capon 91
Colas 91
Shirai 91
Trischuk 91
Wenzel 91
Abe 90H
Albrecht 90D
Albrecht 90E
Ellis 90
Fujii 90
Geer 90
Itoh 90
Kim 90D
Tenchini 90
Albrecht 89Q
Albrecht 89U
Artuso 89C
Danilov 89
Franzini 89
Golutvin 89
Hurst 89
Pauss 89
Tao 88
ℓ^- X
Adeva 92
Albrecht 92K
e^- X
Yeh 92
Dydak 91
Song 91
Gray 90
Kroha 90
Weir 90
Porter 89
Weir 89B
e^+ X
Barbarogalti 92
Abe 91N
μ^- X
Yeh 92
Dydak 91
Song 91
Gray 90
Kroha 90
Weir 90
Porter 89
Weir 89B
μ^+ X
Barbarogalti 92
Abe 91N
Albajar 91C
Band 88
hadron (hadrons)
Buskulic 92E
Patton 91
$D^*(2010)^+$ X
Schafer 91
$D^*(2010)^-$ X
Averill 89
p X
Schubert 89
$\overline{p}$ X
Schubert 89
Λ X
Schubert 89
$\overline{\Lambda}$ X
Schubert 89

$\overline{B}^0$

Λ_c^+ X
Schubert 89
$\ell^+ \nu$ X
Schafer 91
$e^- \overline{\nu}_e$ X
Drell 89
Miller 89
$\mu^- \overline{\nu}_\mu$ X
Drell 89
Miller 89
$D^+ \ell^-$ X
Abreu 92I
$D^*(2010)^+ \ell^-$ X
Abreu 92I
$p e^+$ X
Schubert 89
$\overline{p} e^+$ X
Schubert 89
$p \mu^+$ X
Schubert 89
$\overline{p} \mu^+$ X
Schubert 89
Λe^+ X
Schubert 89
$\overline{\Lambda}$ + X
Schubert 89
$\Lambda \mu^+$ X
Schubert 89
$\overline{\Lambda} \mu^+$ X
Schubert 89
$p \overline{p}$ X
Schubert 89
$\overline{p} \Lambda$ X
Schubert 89
$p \overline{\Lambda}$ X
Schubert 89
$p \overline{p} e^+$ X
Schubert 89
$p \overline{p} \mu^+$ X
Schubert 89
B^0
Abreu 92L
Acton 92B
Adeva 92
Albrecht 92K
Buskulic 92E
Decamp 91D
Patton 91
Adeva 90R
Kroha 90
Steinberger 90
Eggert 89
Kreinick 89
Miller 89
Porter 89
Weir 89B
Band 88
Dowell 88
$e^- e^+$
Avery 89B
Halling 89
Thorndike 88
$\mu^- e^+$
Avery 89B
Thorndike 88
$\mu^- e^+ + \mu^+ e^-$
Halling 89
$\mu^+ e^-$
Avery 89B
Thorndike 88
$\mu^- \mu^+$
Avery 89B
Halling 89
Albajar 88C
Thorndike 88
$\pi^+ \pi^-$
Drell 92B
Gray 90
Miller 90
Bortoletto 89
Drell 89
Halling 89
Mistry 89

$\overline{B}^0$

Thorndike 88
$2\rho(770)^0$
Gray 90
Bortoletto 89
Drell 89
Halling 89
Mistry 89
Thorndike 88
$a_1(1260)^+ \pi^-$
Mistry 89
Thorndike 88
$a_1(1260)^+ \pi^- +$
$a_1(1260)^- \pi^+$
Gray 90
Drell 89
Halling 89
$a_1(1260)^- \pi^+$
Mistry 89
Thorndike 88
$a_1(1260)^+ a_1(1260)^-$
Gray 90
Drell 89
Halling 89
Mistry 89
$a_2(1320)^+ \pi^-$
Mistry 89
$a_2(1320)^+ \pi^- +$
$a_2(1320)^- \pi^+$
Gray 90
Drell 89
Halling 89
$a_2(1320)^- \pi^+$
Mistry 89
$\overline{K}^0$ **higgs**
Alam 89
$K^+ \pi^-$
Thorndike 88
$K^- \pi^+$
Miller 90
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
$\overline{K}^0 \rho(770)^0$
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
Thorndike 88
$\overline{K}^0 f_0(975)$
Mistry 89
$\overline{K}^0 f_2(1270)$
Avery 89B
$\overline{K}^0 f_0(1400)$
Halling 89
$\overline{K}^*(892)^0 \gamma$
Miller 90
Albrecht 89L
Avery 89B
Halling 89
Mistry 89
Albrecht 88E
$K^*(892)^0$ **higgs**
Alam 89
$\overline{K}^*(892)^0$ **higgs**
Alam 89
$K^*(892)^+ \pi^-$
Thorndike 88
$K^*(892)^- \pi^+$
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
$\overline{K}^*(892)^0 \rho(770)^0$
Albrecht 89S
Avery 89B
Halling 89
Mistry 89

$\overline{B}^0$

$\overline{K}^*(892)^0 f_0(975)$
Mistry 89
$\overline{K}^*(892)^0 f_2(1270)$
Avery 89B
$\overline{K}^*(892)^0 f_0(1400)$
Halling 89
$\overline{K}_1(1270)^0 \gamma$
Albrecht 89L
$\overline{K}_1(1400)^0 \gamma$
Albrecht 89L
Albrecht 88E
$K_1(1400)^- \pi^+$
Albrecht 89S
$\overline{K}_1(1400)^0 \rho(770)^0$
Albrecht 89S
$\overline{K}_2^*(1430)^0 \gamma$
Albrecht 89L
Albrecht 88E
$K_2^*(1430)^- \pi^+$
Albrecht 89S
$\overline{K}_2^*(1430)^0 \rho(770)^0$
Albrecht 89S
$\overline{K}^*(1680)^0 \gamma$
Albrecht 89L
$\overline{K}_3^*(1780)^0 \gamma$
Albrecht 89L
Albrecht 88E
$\overline{K}_4^*(2045)^0 \gamma$
Albrecht 89L
$\overline{K}^0 \phi(1020)$
Miller 90
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
$\overline{K}^*(892)^0 \phi(1020)$
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
$\overline{K}_1(1400)^0 \phi(1020)$
Albrecht 89S
$\overline{K}_2^*(1430)^0 \phi(1020)$
Albrecht 89S
$D^+ \pi^-$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
Albrecht 88M
Thorndike 88
$D^+ \rho(770)^-$
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Albrecht 88M
$D^0 \rho(770)^0$
Bortoletto 91
Albrecht 88M
$D^*(2010)^+ \pi^-$
Bortoletto 91
Henderson 91
Mai 91
Albrecht 90G
Cassel 90
Miller 90
Bortoletto 89
Halling 89
Kreinick 89
Miller 89
Mistry 89
Thorndike 88
$D^*(2010)^+ \rho(770)^-$
Bortoletto 91
Albrecht 90G

$\overline{B}^0$

Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89
$D^*(2010)^+ a_1(1260)^-$
Cassel 90
Miller 90
Kreinick 89
Miller 89
$D_S^- \pi^+$
Gittelman 91
Bortoletto 90
$D_S^+ K^-$
Gittelman 91
Bortoletto 90
$D_S^- D^+$
Gittelman 91
Bortoletto 90
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
$D_S^- D^*(2010)^+$
Gittelman 91
Bortoletto 90
Cassel 90
Miller 90
Kreinick 89
Miller 89
$D_S^{*-} D^+$
Gittelman 91
$D_S^{*-} D^*(2010)^+$
Gittelman 91
Albrecht 90K
Miller 90
$\overline{K}^0 J/\psi(1S)$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
$K_S J/\psi(1S)$
Drell 92B
$\overline{K}^*(892)^0 J/\psi(1S)$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
Thorndike 88
$\overline{K}^0 \psi(2S)$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Kreinick 89
Miller 89
$\overline{K}^*(892) \psi(2S)$
Albrecht 90G
$\overline{K}^*(892)^0 \psi(2S)$
Bortoletto 91
Cassel 90
Miller 90
Kreinick 89
Miller 89
$p \overline{p}$
Gray 90
Bortoletto 89
Drell 89
Halling 89
Mistry 89
Thorndike 88

$\overline{B}^0$

$\Delta(1232 P_{33})^0 \overline{\Delta}(1232 P_{33})^0$
Gray 90
Halling 89
Mistry 89
$\Delta(1232 P_{33})^{++}$
$\overline{\Delta}(1232 P_{33})^{--}$
Gray 90
Halling 89
Mistry 89
$\pi^+ \ell^- \overline{\nu}$
Albrecht 89T
$\pi^+ \mu^- \overline{\nu}_\mu$
Albrecht 91I
$\rho(770)^+ \ell^- \overline{\nu}$
Bean 92B
$\overline{K}^0 e^- e^+$
Thorndike 88
$\overline{K}^0 \mu^- \mu^+$
Thorndike 88
$\overline{K}^*(892)^0 e^- e^+$
Avery 89B
Halling 89
Mistry 89
$\overline{K}^*(892)^0 \mu^- \mu^+$
Alam 89
Avery 89B
Halling 89
Mistry 89
$D^+ \ell^- \overline{\nu}$
Albrecht 92E
Gittelman 91
Cassel 90
Fulton 90
Gray 90
Miller 90
$D^*(2010)^+ \ell^- \nu$
Buskulic 93D
$D^*(2010)^+ \ell^- \overline{\nu}$
Albrecht 92E
Albrecht 92K
Drell 92B
Gittelman 91
Schafer 91
Cassel 90
Fulton 90
$D^*(2010)^- \ell^+ \nu$
Halling 89
$D^*(2010)^+ e^- \overline{\nu}_e$
Albrecht 92P
Drell 92
Sanghera 92
Antreasyan 90
Albrecht 89C
Bortoletto 89B
Miller 89
Stone 89
Wagner 89B
$D^*(2010)^+ \mu^- \overline{\nu}_\mu$
Albrecht 92P
Drell 92
Sanghera 92
Albrecht 89C
Bortoletto 89B
Miller 89
Stone 89
Wagner 89B
$\overline{K}^0 \pi^+ \pi^-$
Alam 89
$K_S K^- \pi^+$
Bortoletto 90
$K^+ \overline{K}^0 K^-$
Alam 89
$\overline{K}^*(892)^0 \pi^+ \pi^-$
Alam 89
$\overline{K}^*(892)^0 K^+ K^-$
Alam 89
$K^*(892)^+ \overline{K}^*(892)^0 K^-$
Alam 89
$K^*(892)^0 \overline{K}^*(892)^0 \overline{K}^0$
Alam 89

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$\overline{B}^0$

$2K^*(892)^0\ \overline{K}^*(892)^0$
Alam 89

$D^+\ \pi^0\ \pi^-$
Albrecht 88M
Thorndike 88

$D^0\ \pi^+\ \pi^-$
Bortoletto 91
Thorndike 88

$D^*(2010)^+\ \pi^0\ \pi^-$
Albrecht 90G
Miller 90
Halling 89
Thorndike 88

$D_S^-\ D^0\ \pi^+$
Bortoletto 90

$K^-\ J/\psi(1S)\ \pi^+$
Bortoletto 91
Cassel 90
Miller 90
Kreinick 89
Miller 89

$K^-\ \psi(2S)\ \pi^+$
Albrecht 90G

$D^0\ \pi^+\ e^-\ \overline{\nu}_e$
Albrecht 89C

$D^0\ \pi^+\ \mu^-\ \overline{\nu}_\mu$
Albrecht 89C

$D^*(2010)^+\ \pi^0\ e^-\ \overline{\nu}_e$
Miller 89

$D^*(2010)^0\ \pi^+\ e^-\ \overline{\nu}_e$
Miller 89

$D^*(2010)^+\ \pi^0\ \mu^-\ \overline{\nu}_\mu$
Miller 89

$D^*(2010)^0\ \pi^+\ \mu^-\ \overline{\nu}_\mu$
Miller 89

$K^+\ K^-\ \pi^+\ \pi^-$
Bortoletto 90

$D^+\ \pi^+\ 2\pi^-$
Bortoletto 91
Cassel 90
Miller 90

$D^*(2010)^+\ \pi^+\ 2\pi^-$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
Thorndike 88

$p\ \overline{p}\ \pi^+\ \pi^-$
Bebek 89
Drell 89
Mistry 89
Albrecht 88T
Sugahara 88B

$D^*(2010)^+\ \pi^+\ \pi^0\ 2\pi^-$
Albrecht 90G
Miller 90

B^-

Albrecht 91E
Colas 91
Albrecht 90D
Albrecht 90E
Fujii 90
Albrecht 89Q
Albrecht 89U
Artuso 89C
Bortoletto 89B

e^- X
Kroha 90
Weir 90
Weir 89B

μ^- X
Kroha 90
Weir 90
Weir 89B

D_S^- X
Bortoletto 90

B^-

p X
Schubert 89

$\overline{p}$ X
Schubert 89

Λ X
Schubert 89

$\overline{\Lambda}$ X
Schubert 89

Λ_c^+ X
Schubert 89

$e^-\ \overline{\nu}_e$ X
Kral 90

$\mu^-\ \overline{\nu}_\mu$ X
Kral 90

$D^0\ \ell^-$ X
Abreu 92I

$p\ e^+$ X
Schubert 89

$\overline{p}\ e^+$ X
Schubert 89

$p\ \mu^+$ X
Schubert 89

$\overline{p}\ \mu^+$ X
Schubert 89

$\Lambda\ e^+$ X
Schubert 89

$\overline{\Lambda}\ e^+$ X
Schubert 89

$\Lambda\ \mu^+$ X
Schubert 89

$\overline{\Lambda}\ \mu^+$ X
Schubert 89

$p\ \overline{p}$ X
Schubert 89

$\overline{p}\ \Lambda$ X
Schubert 89

$p\ \overline{\Lambda}$ X
Schubert 89

$p\ \overline{p}\ e^+$ X
Schubert 89

$p\ \overline{p}\ \mu^+$ X
Schubert 89

$\pi^0\ \pi^-$
Miller 90
Danilov 89

$\rho(770)\ \pi^-$
Bortoletto 89

$\rho(770)^0\ \pi^-$
Danilov 89
Drell 89
Halling 89
Mistry 89

$\omega(783)\ \pi^-$
Miller 90

$f_0(975)\ \pi^-$
Gray 90
Drell 89
Mistry 89

$a_1(1260)^-\ \rho(770)^0$
Gray 90
Drell 89
Halling 89
Mistry 89
Thorndike 88

$f_2(1270)\ \pi^-$
Miller 90
Bortoletto 89
Drell 89
Halling 89
Mistry 89

$a_2(1320)^-\ \rho(770)^0$
Gray 90
Drell 89
Halling 89
Mistry 89
Thorndike 88

$f_0(1400)\ \pi^-$
Halling 89

$f_2(1430)\ \pi^-$
Gray 90

B^-

K^- higgs
Alam 89

$\overline{K}^0\ \pi^-$
Miller 90
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
Thorndike 88

$K^-\ \rho(770)^0$
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
Thorndike 88

$K^-\ f_0(975)$
Mistry 89

$K^-\ f_2(1270)$
Avery 89B

$K^-\ f_0(1400)$
Halling 89

$K^*(892)^-\ \gamma$
Miller 90
Albrecht 89L
Avery 89B
Halling 89
Mistry 89
Albrecht 88E
Thorndike 88

$K^*(892)^-$ higgs
Alam 89

$K^*(892)^0\ \pi^-$
Halling 89

$\overline{K}^*(892)^0\ \pi^-$
Albrecht 89S
Avery 89B
Mistry 89
Thorndike 88

$K^*(892)^-\ \rho(770)^0$
Albrecht 89S

$K_1(1270)^-\ \gamma$
Albrecht 89L

$K_1(1400)^-\ \gamma$
Albrecht 89L
Albrecht 88E

$\overline{K}_1(1400)^0\ \pi^-$
Albrecht 89S

$K_1(1400)^-\ \rho(770)^0$
Albrecht 89S

$K_2^*(1430)^-\ \gamma$
Albrecht 89L
Albrecht 88E

$\overline{K}_2^*(1430)^0\ \pi^-$
Albrecht 89S

$K_2^*(1430)^-\ \rho(770)^0$
Albrecht 89S

$K^*(1680)^-\ \gamma$
Albrecht 89L

$K_3^*(1780)^-\ \gamma$
Albrecht 89L
Albrecht 88E

$K_4^*(2045)^-\ \gamma$
Albrecht 89L

$K^-\ \phi(1020)$
Miller 90
Albrecht 89S
Avery 89B
Halling 89
Mistry 89
Thorndike 88

$K^*(892)^-\ \phi(1020)$
Albrecht 89S

$K_1(1400)^-\ \phi(1020)$
Albrecht 89S

$K_2^*(1430)^-\ \phi(1020)$
Albrecht 89S

$D^0\ \pi^-$
Bortoletto 91
Albrecht 90G
Cassel 90

B^-

Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
Albrecht 88M
Thorndike 88

$D^0\ \rho(770)^-$
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Albrecht 88M

$D^*(2010)^0\ \pi^-$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90

$D^*(2010)^0\ \rho(770)^-$
Albrecht 90G
Cassel 90
Miller 90

$D_S^-\ D^0$
Gittelman 91
Bortoletto 90
Cassel 90
Miller 90
Kreinick 89
Miller 89

$D_S^-\ D^*(2010)^0$
Gittelman 91
Bortoletto 90

$D_S^{*-}\ D^0$
Gittelman 91

$D_S^{*-}\ D^*(2010)^0$
Gittelman 91

$D_J(2440)^0\ \pi^-$
Cassel 90

$D_J^*(2470)^0\ \pi^-$
Cassel 90

$K^-\ J/\psi(1S)$
Abe 92
Buskulic 92H
Yeh 92
Bortoletto 91
Wenzel 91
Albrecht 90G
Cassel 90
Frisch 90
Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
Thorndike 88

$K^*(892)^-\ J/\psi(1S)$
Buskulic 92H
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Kreinick 89
Miller 89
Mistry 89
Thorndike 88

$K^-\ \chi_{c1}(1P)$
Gittelman 91

$K^-\ \psi(2S)$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89

$K^*(892)^-\ \psi(2S)$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Kreinick 89
Miller 89

B^-

$\bar{p}\ \Delta(1232\ P_{33})^0$
Gray 90
Drell 89
Halling 89
Mistry 89

$p\ \bar{\Delta}(1232\ P_{33})^{--}$
Gray 90
Drell 89
Halling 89
Mistry 89

$\bar{p}\ \Lambda$
Avery 89B
Halling 89
Mistry 89

$\pi^+\ 2e^-$
Weir 89

$\pi^0\ e^-\ \bar{\nu}_e$
Antreasyan 90

$\pi^-\ e^-\ e^+$
Weir 89

$\pi^+\ \mu^-\ e^-$
Weir 89

$\pi^-\ \mu^-\ e^+$
Weir 89

$\pi^-\ \mu^+\ e^-$
Weir 89

$\pi^+\ 2\mu^-$
Weir 89

$\pi^-\ \mu^-\ \mu^+$
Weir 89

$\rho(770)^0\ \ell^-\ \bar{\nu}$
Bean 92B
Drell 92B
Albrecht 89T

$\rho(770)^0\ \mu^-\ \bar{\nu}_\mu$
Albrecht 91I

$\omega(783)\ \ell^-\ \bar{\nu}$
Bean 92B

$\omega(783)\ \mu^-\ \bar{\nu}_\mu$
Albrecht 91I

$K^+\ 2e^-$
Weir 89

$K^-\ e^-\ e^+$
Halling 89
Weir 89
Thorndike 88

$K^+\ \mu^-\ e^-$
Weir 89

$K^-\ \mu^-\ e^+$
Weir 89

$K^-\ \mu^+\ e^-$
Weir 89

$K^+\ 2\mu^-$
Weir 89

$K^-\ \mu^-\ \mu^+$
Miller 90
Alam 89
Halling 89
Weir 89
Thorndike 88

$K^*(892)^-\ e^-\ e^+$
Avery 89B
Mistry 89

$K^*(892)^-\ \mu^-\ \mu^+$
Alam 89
Avery 89B
Mistry 89

$D^0\ \ell^-\ \nu$
Buskulic 93D
Gray 90

$D^0\ \ell^-\ \bar{\nu}$
Albrecht 92E
Gittelman 91
Cassel 90
Fulton 90
Miller 90

$D^0\ e^-\ \bar{\nu}_e$
Miller 89
Stone 89

$D^0\ \mu^-\ \bar{\nu}_\mu$
Miller 89
Stone 89

B^-

$D^*(2010)^0\ \ell^-\ \bar{\nu}$
Albrecht 92E
Gittelman 91
Cassel 90
Fulton 90

$D^*(2010)^0\ e^-\ \bar{\nu}_e$
Sanghera 92
Antreasyan 90
Miller 89
Stone 89

$D^*(2010)^0\ \mu^-\ \bar{\nu}_\mu$
Sanghera 92
Miller 89
Stone 89

$D_1(2420)^0\ e^-\ \bar{\nu}_e$
Albrecht 92P

$D_1(2420)^0\ \mu^-\ \bar{\nu}_\mu$
Albrecht 92P

$D_2^*(2460)^0\ e^-\ \bar{\nu}_e$
Albrecht 92P

$D_2^*(2460)^0\ \mu^-\ \bar{\nu}_\mu$
Albrecht 92P

$\pi^+\ 2\pi^-$
Gray 90
Miller 90
Bortoletto 89
Danilov 89
Drell 89
Halling 89
Mistry 89

nonres $< K^-\ \pi^+\ \pi^- >$
Halling 89

$K^-\ \pi^+\ \pi^-$
Alam 89
Avery 89B
Mistry 89

$K^+\ 2K^-$
Alam 89

$K^*(892)^-\ \pi^+\ \pi^-$
Alam 89

$\bar{K}^*(892)^0\ K^0\ K^-$
Alam 89

$K^*(892)^-\ K^+\ K^-$
Alam 89

$K^*(892)^0\ \bar{K}^*(892)^0\ K^-$
Alam 89

$D^+\ 2\pi^-$
Bortoletto 91
Halling 89

$D^0\ \pi^0\ \pi^-$
Albrecht 88M
Thorndike 88

$D^0\ K_S\ K^-$
Bortoletto 90

$D^*(2010)^+\ 2\pi^-$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89
Mistry 89
Thorndike 88

$D_S^-\ 2\eta$
Wilczynska 90

$p\ \bar{p}\ \pi^-$
Bebek 89
Danilov 89
Drell 89
Mistry 89
Albrecht 88T
Sugahara 88B

$D^*(2010)^0\ e^-\ \bar{\nu}_e\ \gamma$
Albrecht 92B

$D^*(2010)^0\ \mu^-\ \bar{\nu}_\mu\ \gamma$
Albrecht 92B

$\pi^+\ \pi^0\ \pi^-$
Danilov 89

$D^0\ \pi^+\ 2\pi^-$
Bortoletto 91

B^-

Cassel 90
Miller 90

$D^0\ K^+\ K^-\ \pi^-$
Bortoletto 90

$D^*(2010)^+\ \pi^0\ 2\pi^-$
Cassel 90
Miller 90
Halling 89
Thorndike 88

$K^-\ J/\psi(1S)\ \pi^+\ \pi^-$
Bortoletto 91
Albrecht 90G
Cassel 90
Miller 90
Halling 89
Kreinick 89
Miller 89

$K^-\ \psi(2S)\ \pi^+\ \pi^-$
Albrecht 90G
Cassel 90
Miller 90

$2\pi^+\ 3\pi^-$
Danilov 89

$D^*(2010)^+\ \pi^+\ 3\pi^-$
Albrecht 90G
Miller 90

B(unspec)

$e^\pm\ X$
Wachs 89
Tao 88

$e^-\ X$
Thorndike 88

$\mu^-\ X$
Thorndike 88

$K^-\ X$
Thorndike 88

$D^+\ X$
Harder 89
Thorndike 88

$D^0\ X$
Harder 89
Thorndike 88

$\bar{D}^0\ X$
Thorndike 88

$D^-\ X$
Thorndike 88

$D^*(2010)^+\ X$
Harder 89
Thorndike 88

$D^*(2010)^0\ X$
Thorndike 88

$\bar{D}^*(2010)^0\ X$
Thorndike 88

$D^*(2010)^-\ X$
Thorndike 88

$J/\psi(1S)\ X$
Maschmann 89
Thorndike 88

$p\ X$
Albrecht 89E
Thorndike 88

$\bar{p}\ X$
Thorndike 88

$\Lambda\ X$
Albrecht 89E
Thorndike 88

$\bar{\Lambda}\ X$
Thorndike 88

$\Xi\ X$
Albrecht 89E

$\Lambda_c^+\ X$
Albrecht 88G

ℓ hadron (hadrons)
Elsen 90

$\mu\ \mu^+\ X$
Albajar 91B

$K^+\ e^-\ X$
Thorndike 88

$K^-\ e^-\ X$
Thorndike 88

$K_S\ e^-\ X$
Thorndike 88

B(unspec)

$K^+\ \mu^-\ X$
Thorndike 88

$K^-\ \mu^-\ X$
Thorndike 88

$K_S\ \mu^-\ X$
Thorndike 88

$D^0\ e^-\ X$
Thorndike 88

$D^0\ e^+\ X$
Thorndike 88

$D^0\ \mu^-\ X$
Thorndike 88

$D^0\ \mu^+\ X$
Thorndike 88

$p\ K^-\ \pi^+\ X$
Albrecht 88G

charmed-meson $e^\pm\ \nu_e$
Wachs 89

$\bar{B}$(unspec)

Elsen 90
Albrecht 89E
Albrecht 88G

$e^\pm\ X$
Wachs 89
Tao 88

$\bar{D}^0\ X$
Harder 89

$D^-\ X$
Harder 89

$D^*(2010)^-\ X$
Harder 89

$J/\psi(1S)\ X$
Maschmann 89

charmed-meson $e^\pm\ \nu_e$
Wachs 89

B^*

$B\ \gamma$
Akerib 91
Wu 91
Leefranzini 90

$\bar{B}^*$

$\bar{B}\ \gamma$
Wu 91

B_S

Leefranzini 90

$\ell^+\ X$
Adeva 92

$e^-\ X$
Porter 89

$e^+\ X$
Adeva 90R

$\mu^-\ X$
Barbarogalti 92
Albajar 91C
Kroha 90
Porter 89

$\mu^+\ X$
Adeva 90R

$e^+\ \nu_e\ X$
Yanagisawa 91

$\mu^-\ \mu^+\ X$
Frisch 90

$D_S^+\ \mu^-\ X$
Abreu 92F

$\ell^-\ \bar{\nu}$ hadron (hadrons)
Buskulic 92E
Patton 91

$D_S^-\ \ell^+\ \nu\ X$
Acton 92M
Boucrot 92

$D_S^-\ e^+\ \nu_e\ X$
Buskulic 92

$D_S^-\ \mu^+\ \nu_\mu\ X$
Buskulic 92

$\bar{B}_S$
Adriani 93B
Acton 92B
Adeva 92

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

B_S

Barbarogalti 92
Buskulic 92E
Drell 92B
Albajar 91C
Capon 91
Decamp 91D
Patton 91
Adeva 90R
Kroha 90
Tenchini 90
Eggert 89
Franzini 89
Golutvin 89
Porter 89
Weir 89B
Sugahara 88B

$\mu^- \mu^+$
Frisch 90
Albajar 88C

$J/\psi(1S)$ $\phi(1020)$
Acton 92M
Buskulic 92H

$K^*(892)^0$ $\mu^- \mu^+$
Frisch 90

$\overline{B}_S$

Adriani 93B
Drell 92B
Capon 91
Tenchini 90
Franzini 89
Golutvin 89
Sugahara 88B

ℓ^- X
Adeva 92

e^+ X
Porter 89

μ^+ X
Barbarogalti 92
Albajar 91C
Kroha 90
Porter 89

hadron (hadrons)
Buskulic 92E
Patton 91

$e^- \bar{\nu}_e$ X
Yanagisawa 91

B_S
Acton 92B
Adeva 92
Buskulic 92E
Decamp 91D
Patton 91
Adeva 90R
Kroha 90
Eggert 89
Porter 89
Weir 89B

$\mu^- \mu^+$
Albajar 88C

B_S^*

B_S γ
Leefranzini 90

$\eta_b(1S)$

Narain 91

$\Upsilon(1S)$

Narain 91
Rossi 91
Spiegel 91
Freudenreich 90
Albrecht 88D
Albrow 88
Augustin 88C
Thorndike 88

γ X
Schutte 89
Schmitt 88

π^0 X
Albrecht 89G

$\Upsilon(1S)$

η X
Albrecht 89G

$\phi(1020)$ X
Albrecht 88K

charm X
Albrecht 92H

$D^*(2010)^\pm$ X
Albrecht 92H

$J/\psi(1S)$ X
Albrecht 92H
Fulton 89
Maschmann 89

$\Delta(1232\,P_{33})^{++}$ X
Albrecht 89I

Λ X
Albrecht 89B
Albrecht 88I

$\Lambda(1520\,D_{03})$ X
Albrecht 88Q

Σ^0 X
Albrecht 88I

$\Sigma(1385\,P_{13})^+$ X
Albrecht 88I

$\Sigma(1385\,P_{13})^-$ X
Albrecht 88I

Ξ^- X
Albrecht 89B
Albrecht 88I

$\Xi(1530\,P_{13})^0$ X
Albrecht 89B
Albrecht 88I

Ω^- X
Albrecht 88I

2hadron (hadrons)
Baru 92B
Jakubowski 90
Chen 89
Kaarsberg 89
Jakubowski 88

$K^+ K^-$ X
Albrecht 88K

3hadron (hadrons)
Bizzeti 91

γ 2hadron (hadrons)
Bizzeti 91

3γ (γ's)
Schutte 89
Schmitt 88

$\mu^- \mu^+$ 2hadron (hadrons)
Fulton 89

$e^- e^+$
Baru 92B
Crawford 92
Brock 91
Heintz 91

$\mu^- \mu^+$
Crawford 92
Alde 91
Baru 91
Brock 91
Heintz 91
Kobel 91
Leitch 91
Moreno 91
Freudenreich 90
Frisch 90
Geer 90
Liss 90
Mishra 90
Yeh 90
Bethke 89
Chen 89
Kaarsberg 89

γ neutral
Albrecht 89J

γ higgs
Antreasyan 90B
Albrecht 89J

γ axion
Antreasyan 90B
Fairfield 88

meson^0 γ
Schmitt 88

$\Upsilon(1S)$

$\pi^+ \pi^-$
Baru 91

$\eta \gamma$
Schmitt 88

$\rho(770)^0 \pi^0$
Blinov 90

$\eta'(958)$ γ
Schmitt 88

$f_2(1270)$ γ
Albrecht 89J
Fulton 89B
Schmitt 88

$\eta(1440)$ γ
Fulton 89B

$f_0(1525)$ γ
Albrecht 89J

$f_2'(1525)$ γ
Fulton 89B

$f_2(1720)$ γ
Albrecht 89J
Fulton 89B
Schmitt 88

$X(2200)$ γ
Baru 89

$f_4(2220)$ γ
Albrecht 89J
Baru 89

$K^+ K^-$
Baru 91

$p \bar{p}$
Baru 91

$e^- e^+ \gamma$
Fairfield 88

3jet
Bethke 89

γ 2jet
Bethke 89

3γ
Fairfield 88

3gluon
Alam 92

$\pi^+ \pi^- \gamma$
Albrecht 89J

$K^+ K^- \gamma$
Albrecht 89J

$p \bar{p} \gamma$
Albrecht 89J

$h_b(1P)$

Brock 91

$\eta_b(1S)$ γ
Narain 91

$\chi_{b0}(1P)$

$\Upsilon(1S)$ γ
Heintz 91

$\chi_{b1}(1P)$

Heintz 91

$\chi_{b2}(1P)$

Heintz 91

$\Upsilon(1D)$

$\Upsilon(1S)$ $\pi^+ \pi^-$
Brock 91

$\Upsilon(2S)$

Narain 91
Spiegel 91
Freudenreich 90
Albrecht 88D
Albrow 88

π^0 X
Albrecht 89G

η X
Albrecht 89G

$\phi(1020)$ X
Albrecht 88K

$J/\psi(1S)$ X
Maschmann 89

$\Upsilon(2S)$

Λ X
Albrecht 89B
Albrecht 88I

$\Lambda(1520\,D_{03})$ X
Albrecht 88Q

Σ^0 X
Albrecht 88I

$\Sigma(1385\,P_{13})^+$ X
Albrecht 88I

$\Sigma(1385\,P_{13})^-$ X
Albrecht 88I

Ξ^- X
Albrecht 89B
Albrecht 88I

$\Xi(1530\,P_{13})^0$ X
Albrecht 88I

Ω^- X
Albrecht 88I

2hadron (hadrons)
Jakubowski 90
Kaarsberg 89
Jakubowski 88

π^+ hadron (hadrons)
Albrecht 89H

π^- hadron (hadrons)
Albrecht 89H

K^+ hadron (hadrons)
Albrecht 89H

K^0 hadron (hadrons)
Albrecht 89H

$\overline{K}^0$ hadron (hadrons)
Albrecht 89H

K^- hadron (hadrons)
Albrecht 89H

$K^+ K^-$ X
Albrecht 88K

p hadron (hadrons)
Albrecht 89H

$\bar{p}$ hadron (hadrons)
Albrecht 89H

$e^- e^+$
Crawford 92
Brock 91
Heintz 91

$\mu^- \mu^+$
Crawford 92
Alde 91
Brock 91
Heintz 91
Kobel 91
Moreno 91
Freudenreich 90
Frisch 90
Geer 90
Yeh 90
Bethke 89
Kaarsberg 89

γ neutral
Albrecht 89J

γ higgs
Albrecht 89J

$f_2(1270)$ γ
Albrecht 89J

$f_0(1525)$ γ
Albrecht 89J

$f_2(1720)$ γ
Albrecht 89J

$f_4(2220)$ γ
Albrecht 89J

3jet
Bethke 89

γ 2jet
Bethke 89

$\pi^+ \pi^- \gamma$
Albrecht 89J

$K^+ K^- \gamma$
Albrecht 89J

$\Upsilon(1S)$ $2\pi^0$ + $\Upsilon(1S)$ 2γ
Brock 91

$\Upsilon(1S)$ $\pi^+ \pi^-$
Brock 91

$\Upsilon(2S)$

$p\,\bar{p}\,\gamma$
Albrecht 89J

$\chi_{b0}(2P)$

2gluon
Alam 92

$\Upsilon(1S)\,\gamma$
Heintz 91
Narain 91

$\Upsilon(2S)\,\gamma$
Heintz 91
Narain 91

$\chi_{b1}(2P)$

Morrison 91B

$\Upsilon(1S)\,\gamma$
Crawford 92
Heintz 91
Narain 91

$\Upsilon(2S)\,\gamma$
Crawford 92
Heintz 91
Narain 91

$q\,\bar{q}$ gluon
Alam 92

$\chi_{b2}(2P)$

2gluon
Alam 92

$\Upsilon(1S)\,\gamma$
Crawford 92
Heintz 91
Narain 91

$\Upsilon(2S)\,\gamma$
Crawford 92
Heintz 91
Narain 91

$\Upsilon(3S)$

Alexander 92
Avery 92
Spiegel 91
Freudenreich 90
Albrow 88

$D^*(2010)^+$ **X**
Crawford 91

$\Upsilon(2S)$ **X**
Brock 91

2hadron (hadrons)
Chen 89
Kaarsberg 89

$\mu^-\,\mu^+$
Alde 91
Moreno 91
Freudenreich 90
Frisch 90
Geer 90
Yeh 90
Bethke 89
Chen 89
Kaarsberg 89

$\Upsilon(1S)\,\eta$
Brock 91

$\chi_{b2}(1P)\,\gamma + \chi_{b1}(1P)\,\gamma + \chi_{b0}(1P)\,\gamma$
Heintz 91

$\Upsilon(1D)\,\gamma$
Brock 91

$\chi_{b0}(2P)\,\gamma$
Alam 92
Heintz 91
Narain 91

$\chi_{b1}(2P)\,\gamma$
Alam 92
Crawford 92
Heintz 91
Morrison 91B
Narain 91

$\chi_{b2}(2P)\,\gamma$
Alam 92
Crawford 92

$\Upsilon(3S)$

Heintz 91
Narain 91

3jet
Bethke 89

γ **2jet**
Bethke 89

$\Upsilon(1S)\,2\pi^0$
Heintz 91

$\Upsilon(1S)\,\pi^+\,\pi^-$
Brock 91
Augustin 88C

$h_b(1P)\,2\pi$
Narain 91

$h_b(1P)\,\pi^+\,\pi^-$
Brock 91

$\Upsilon(2S)\,2\pi^0$
Heintz 91

$\Upsilon(2S)\,\pi^+\,\pi^-$
Brock 91

$\Upsilon(4S)$

Alexander 92
Avery 92
Kroha 90
Albrecht 89X
Miller 89
Schubert 89
Albrecht 88D

ℓ^- **X**
Miller 90

$e^\pm$ **X**
Henderson 91

$\mu^\pm$ **X**
Henderson 91

charged X
Alexander 90

γ **X**
Narain 90

π^+ **X**
Albrecht 92Q

π^- **X**
Albrecht 92Q

K^+ **X**
Albrecht 92Q

K^- **X**
Albrecht 92Q

$\phi(1020)$ **X**
Cassel 90

$D^*(2010)^+$ **X**
Drell 92
Crawford 91
Cassel 90

$D^*(2010)^+$ **X** + $D^*(2010)^-$ **X**
Alexander 90

$D^*(2010)^0$ **X**
Drell 92

$J/\psi(1S)$ **X**
Cassel 90
Miller 90
Maschmann 89

$\psi(2S)$ **X**
Alexander 90

$\psi(3770)$ **X**
Alexander 90

$\bar{B}^0$ **X**
Albrecht 92P

B^- **X**
Albrecht 92P

p **X**
Albrecht 92Q

$\bar{p}$ **X**
Albrecht 92Q

Λ **X**
Albrecht 89B
Albrecht 88I

Σ^0 **X**
Albrecht 88I

$\Sigma(1385\,P_{13})^+$ **X**
Albrecht 88I

$\Sigma(1385\,P_{13})^-$ **X**
Albrecht 88I

$\Upsilon(4S)$

Ξ^- **X**
Albrecht 89B
Albrecht 88I

$\Xi(1530\,P_{13})^0$ **X**
Albrecht 88I

Ω^- **X**
Albrecht 88I

$2\ell^-$ **X**
Kroha 90

$\ell^+\,\ell^-$ **X**
Kroha 90

$2\ell^+$ **X**
Kroha 90

$2e^-$ **X**
Albrecht 91E
Kroha 90

$2e^-$ **X** + $2e^+$ **X**
Albrecht 92K

$e^-\,e^+$ **X**
Albrecht 92K
Albrecht 91E
Kroha 90

$2e^+$ **X**
Albrecht 91E
Kroha 90

$\mu^-\,e^-$ **X**
Albrecht 91E
Kroha 90

$\mu^-\,e^+$ **X**
Albrecht 91E
Kroha 90

$\mu^-\,e^+$ **X** + $\mu^+\,e^-$ **X**
Albrecht 92K

$\mu^+\,e^-$ **X**
Albrecht 91E
Kroha 90

$\mu^+\,e^+$ **X**
Albrecht 91E
Kroha 90

$2\mu^-$ **X**
Albrecht 91E
Kroha 90

$2\mu^-$ **X** + $2\mu^+$ **X**
Albrecht 92K

$\mu^-\,\mu^+$ **X**
Albrecht 92K
Albrecht 91E
Kroha 90

$2\mu^+$ **X**
Albrecht 91E
Kroha 90

$D^*(2010)^+\,\ell^-$ **X** + $D^*(2010)^-\,\ell^+$ **X**
Albrecht 92K

$D^*(2010)^+\,\ell^+$ **X** + $D^*(2010)^-\,\ell^-$ **X**
Albrecht 92K

$B^0\,\ell^-$ **X** + $\bar{B}^0\,\ell^+$ **X**
Albrecht 92K

$B^0\,\ell^+$ **X** + $\bar{B}^0\,\ell^-$ **X**
Albrecht 92K

$B^0\,e^+$ **X**
Albrecht 91E

$\bar{B}^0\,e^-$ **X**
Albrecht 91E

$B^0\,\mu^+$ **X**
Albrecht 91E

2hadron (hadrons)
Albrecht 89E

2gluon X
Narain 90

$\Upsilon(1S)$ hadron (hadrons)
Thorndike 88

$p\,\bar{p}\,\pi^+$ **X**
Albrecht 88T

$p\,\bar{p}\,\pi^-$ **X**
Albrecht 88T

$\mu^-\,\mu^+$ **2hadron (hadrons)**
Fulton 89

$p\,\bar{p}\,\pi^+\,\pi^-$ **X**
Albrecht 88T

$\Upsilon(4S)$

$e^\pm$ **3charged neutral (neutrals)**
Drell 92

4charged neutral (neutrals)
Drell 92

$e^\pm$ **5charged X**
Fulton 89C

$\mu^\pm$ **5charged X**
Fulton 89C

$\ell^+\,\ell^-$
Alexander 90

$\tau^-\,\tau^+$
Drell 92

bottom bottom
Albrecht 90H

$2B^0$
Albrecht 92K
Franzini 89
Golutvin 89

$B\,\bar{B}$
Albrecht 92B
Albrecht 92D
Albrecht 91G
Albrecht 91J
Bortoletto 91
Crawford 91B
Cronstrom 91
Henderson 91
Schafer 91
Yanagisawa 91
Fulton 89C

$B^0\,\bar{B}^0$
Albrecht 92E
Albrecht 92K
Drell 92
Sanghera 92
Albrecht 91E
Albrecht 91I
Henderson 91
Mai 91
Albrecht 90D
Albrecht 90E
Albrecht 90G
Albrecht 90K
Antreasyan 90
Bortoletto 90
Cassel 90
Fujii 90
Fulton 90
Gray 90
Miller 90
Weir 90
Alam 89
Albrecht 89C
Albrecht 89L
Albrecht 89Q
Albrecht 89S
Albrecht 89U
Artuso 89C
Avery 89B
Bebek 89
Bortoletto 89
Bortoletto 89B
Danilov 89
Drell 89
Halling 89
Kreinick 89
Mistry 89
Albrecht 88E
Albrecht 88M
Albrecht 88T
Thorndike 88

$B^+\,B^-$
Albrecht 92E
Sanghera 92
Albrecht 91E
Albrecht 91I
Albrecht 90D
Albrecht 90E
Albrecht 90G
Antreasyan 90
Bortoletto 90
Cassel 90
Fujii 90

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$\Upsilon(4S)$

Fulton 90
Miller 90
Weir 90
Alam 89
Albrecht 89L
Albrecht 89Q
Albrecht 89S
Albrecht 89U
Artuso 89C
Avery 89B
Bebek 89
Bortoletto 89
Bortoletto 89B
Danilov 89
Halling 89
Kreinick 89
Mistry 89
Albrecht 88E
Albrecht 88M
Albrecht 88T
Thorndike 88

$2\overline{B}^0$
Albrecht 92K
Franzini 89
Golutvin 89

B(unspec) $\overline{B}$(unspec)
Albrecht 89E
Harder 89
Maschmann 89
Wachs 89
Albrecht 88G

$\Upsilon(10860)$

γ X
Leefranzini 90

$D^*(2010)^+$ X
Crawford 91

B^* X
Leefranzini 90

B_S^* X
Leefranzini 90

$B_S\ \overline{B}_S + B\ \overline{B}$
Yanagisawa 91

Υ(unspec)

$e^-\ e^+$
Yoshida 89

$\mu^-\ \mu^+$
Madaras 92

γ axion
Ellis 90
Tao 88

top

Turner 90

Decamp 89E
Jenni 89
Weinstein 89
Dowell 88
Kichimi 88

ℓ X
Scarha 90

e^+ X
Myung 89

$\mu^\pm$ X
Maki 88B

higgs$^+$ X
Scarha 90

μ^- (jets) jet
Albajar 88G

2hadron (hadrons)
Adachi 88C
Ko 88
Son 88
Sumiyoshi 88
Yamauchi 88

$e^+\ \nu_e$ hadron (hadrons)
Shirai 88
Sugahara 88

$\mu^+\ \nu_\mu$ hadron (hadrons)
Shirai 88
Sugahara 88

$\overline{\text{top}}$

Decamp 89E
Jenni 89
Dowell 88

μ^- X
Myung 89

μ^+ (jets) jet
Albajar 88G

2hadron (hadrons)
Adachi 88C
Ko 88
Son 88
Sumiyoshi 88
Yamauchi 88

$e^-\ \overline{\nu}_e$ hadron (hadrons)
Shirai 88
Sugahara 88

$\mu^-\ \overline{\nu}_\mu$ hadron (hadrons)
Shirai 88
Sugahara 88

exotic-meson

$\pi^+\ \pi^-$
May 89

$\eta\ \pi^+$
Landsberg 89

$\eta\ \pi^0$
Landsberg 89

$\rho(770)^0\ \pi^+$
Landsberg 89

$2\rho(770)^0$
Achasov 91
Landsberg 89

$\rho(770)^+\ \rho(770)^-$
Achasov 91
Landsberg 89

$\omega(783)\ \pi$
Landsberg 89

$\omega(783)\ \rho(770)^0$
Achasov 91
Landsberg 89

$2\omega(783)$
Achasov 91
Landsberg 89

$K^*(892)^0\ \overline{K}^*(892)^0$
Achasov 91
Landsberg 89

$K^*(892)^+\ K^*(892)^-$
Achasov 91
Landsberg 89

$\phi(1020)\ \pi$
Landsberg 89

$\phi(1020)\ \pi^0$
Landsberg 89

$\phi(1020)\ \rho(770)^0$
Achasov 91
Landsberg 89

$\phi(1020)\ \omega(783)$
Achasov 91

$2\phi(1020)$
Achasov 91
Landsberg 89

$n\ \overline{\Sigma}^-$
Shoemaker 88

$\overline{p}\ \Lambda\ \pi^+$
Landsberg 89

$\overline{p}\ \Lambda\ \pi^-$
Landsberg 89

$p\ \overline{\Lambda}\ \pi^+$
Landsberg 89

$p\ \overline{\Lambda}\ \pi^-$
Landsberg 89

$n\ \overline{\Lambda}\ \pi^-$
Landsberg 89
Shoemaker 88

$p\ \overline{\Sigma}^-\ \pi^-$
Landsberg 89
Shoemaker 88

$n\ \overline{\Sigma}^-\ \pi^+$
Landsberg 89

exotic-meson

$\overline{p}\ \Lambda\ 2\pi^+$
Landsberg 89

$\overline{p}\ \Lambda\ \pi^+\ \pi^-$
Landsberg 89

$p\ \overline{\Lambda}\ \pi^+\ \pi^-$
Landsberg 89

$p\ \overline{\Lambda}\ 2\pi^-$
Landsberg 89
Shoemaker 88

$n\ \overline{\Sigma}^+\ 2\pi^-$
Landsberg 89
Shoemaker 88

$n\ \overline{\Sigma}^-\ \pi^+\ \pi^-$
Landsberg 89
Shoemaker 88

glueball

Svec 92
Jin 91
Kopke 89

$2\pi^0$
Heusch 91

$\pi^+\ \pi^-$
Heusch 91
Chan 88

2η
Amsler 92B
Heusch 91
Landsberg 89

$\rho(770)^+\ \pi^-$
Donnachie 89

$\rho(770)^0\ \pi^0$
Donnachie 89

$\rho(770)^-\ \pi^+$
Donnachie 89

$\eta'(958)\ \eta$
Landsberg 89

$2\eta'(958)$
Landsberg 89

$a_0(980)\ \pi$
Heusch 91

$K^0\ \overline{K}^0$
Heusch 91

$K^+\ K^-$
Heusch 91

$K^*(892)\ \overline{K}$
Heusch 91

$\overline{K}^*(892)\ K$
Heusch 91

$2\phi(1020)$
Heusch 91
Landsberg 90
Aston 89
Landsberg 89
Chan 88
Etkin 88

$\eta\ \pi^+\ \pi^-$
Heusch 91

$\omega(783)\ \pi^+\ \pi^-$
Donnachie 89

$K\ \overline{K}\ \pi$
Heusch 91

$K^0\ \overline{K}^0\ \pi^0$
Heusch 91

$K^+\ K^-\ \pi^0$
Heusch 91

$K^+\ K_S\ \pi^- + K_S\ K^-\ \pi^+$
Heusch 91

$2K_S\ \pi^0$
Chan 88

$4\pi^0$
Landsberg 89

$2\pi^+\ 2\pi^-$
Balestra 91

$3\pi^+\ 3\pi^-$
Balestra 90
Balestra 90B

$C(1480)$

Landsberg 90B
Dolinsky 89B

$C(1480)$

$\overline{K}^*(892)\ K + K^*(892)\ \overline{K}$
Landsberg 91

$\phi(1020)\ \pi$
Landsberg 89

$C(1480)^+$

Landsberg 90B

$\phi(1020)\ \pi^+$
Falvard 88

$C(1480)^0$

$e^-\ e^+$
Landsberg 91
Landsberg 90B

$\pi^+\ \pi^-$
Landsberg 91

$\omega(783)\ \pi^0$
Burchell 92
Kinashi 91
Landsberg 91
Landsberg 90B

$K^*(892)^+\ K^- + K^*(892)^-\ K^+$
Landsberg 90B

$\phi(1020)\ \pi^0$
Burchell 92
Donnachie 91
Landsberg 91
Landsberg 90
Landsberg 90B
Landsberg 89
Augustin 88C
Landsberg 88

$K^+\ K^-\ \pi^0$
Landsberg 90B

nonres $< K^+\ K^-\ \pi^0 >$
Landsberg 91

$C(1480)^-$

Landsberg 90B

$\phi(1020)\ \pi^-$
Landsberg 90
Falvard 88

$X(1600)$

$2\rho(770)^0$
Albrecht 90M

baryonium

Amsler 91
Chiba 91B
Chiba 90
Omori 89
Chiba 87B

$2\rho(770)^0$
Liu 88

$\rho(770)^+\ \rho(770)^-$
Liu 88

π^0 exotic-meson
May 89

$\overline{p}\ \Lambda\ K^+$
Tatishvili 92
Aleev 90E
Aleev 89
Aleev 88F

$p\ \overline{\Lambda}\ K^-$
Tatishvili 92
Aleev 90E
Aleev 89
Aleev 88F

$p\ \overline{p}\ K^+\ K_S$
Tatishvili 92
Aleev 90E
Aleev 89
Aleev 88F
Aleev 88G

$p\ \overline{p}\ K_S\ K^-$
Tatishvili 92
Aleev 90E
Aleev 89

baryonium

$\bar{p}\,\Lambda\,K^+\,\pi^+$ — Aleev 88F, Aleev 88G
$\bar{p}\,\Lambda\,K^+\,\pi^-$ — Tatishvili 92, Aleev 90E, Aleev 89, Aleev 88F, Aleev 88G
$p\,\bar{\Lambda}\,K^-\,\pi^+$ — Tatishvili 92, Aleev 90E, Aleev 89, Aleev 88F, Aleev 88G
$p\,\bar{\Lambda}\,K^-\,\pi^-$ — Tatishvili 92, Aleev 90E, Aleev 89, Aleev 88F, Aleev 88G

baryonium($S = -1$)

$\bar{p}\,\Lambda\,\pi^+\,X$ — Aleev 90
$\bar{p}\,\Lambda\,\pi^-\,X$ — Aleev 90
$\bar{p}\,\Lambda\,2\pi^+\,X$ — Aleev 90
$\bar{p}\,\Lambda\,\pi^+\,\pi^-\,X$ — Aleev 90
$\bar{p}\,\Lambda\,\pi^+$ — Tatishvili 92, Aleev 90E, Aleev 88D
$\bar{p}\,\Lambda\,\pi^-$ — Tatishvili 92, Aleev 90E, Aleev 88D
$\bar{p}\,\Lambda\,2\pi^+$ — Tatishvili 92, Aleev 90E, Aleev 88D
$\bar{p}\,\Lambda\,\pi^+\,\pi^-$ — Tatishvili 92, Aleev 90E, Aleev 88D

baryonium($S = +1$)

$p\,\bar{\Lambda}\,\pi^+\,X$ — Aleev 90
$p\,\bar{\Lambda}\,\pi^-\,X$ — Aleev 90
$p\,\bar{\Lambda}\,\pi^+\,\pi^-\,X$ — Aleev 90
$p\,\bar{\Lambda}\,2\pi^-\,X$ — Aleev 90
$p\,\bar{\Lambda}\,\pi^+$ — Tatishvili 92, Aleev 90E, Aleev 88D
$p\,\bar{\Lambda}\,\pi^-$ — Tatishvili 92, Aleev 90E, Aleev 88D
$p\,\bar{\Lambda}\,\pi^+\,\pi^-$ — Tatishvili 92, Aleev 90E, Aleev 88D
$p\,\bar{\Lambda}\,2\pi^-$ — Tatishvili 92, Aleev 90E, Aleev 88D

$X(3100)$

$\bar{p}\,\Lambda\,2\pi\ (\pi\text{'s})$ — Augustin 88C

$X(3100)^+$

$\bar{p}\,\Lambda\,2\pi^+$ — Augustin 88C

$X(3100)^0$

$\bar{p}\,\Lambda\,\pi^+$ — Augustin 88C
$\bar{p}\,\Lambda\,2\pi^+\,\pi^-$ — Augustin 88C

$X(3100)^-$

$\bar{p}\,\Lambda\,\pi^+\,\pi^-$ — Augustin 88C

$X(3100)^{--}$

$\bar{p}\,\Lambda\,\pi^-$ — Augustin 88C

baryon

$p\,K^+\,\bar{K}^0\,2\pi^-$ — Albrecht 92D, Kampert 92, Albrecht 90C, Drutskoy 89, Bogolyubsky 88B, Schmidt 88, Schmidt 87, Karnaukhov 92

nucleon

X — Nakamura 88

p

$e^-\,X$ — Berger 91
$e^+\,\gamma$ — Monch 91, Berger 90B, Seidel 88
$\mu^+\,\gamma$ — Monch 91, Berger 90B, Seidel 88
$\pi^0\,\nu$ — Berger 88D
$\pi^+\,\bar{\nu}$ — Monch 91, Berger 89, Hirata 89B, Barloutaud 88, Bourdarios 88
$\pi^0\,e^+$ — Monch 91, Beckerszendy 90, Berger 90B, Hirata 89B, Totsuka 89B, Barloutaud 88, Berger 88D, Bourdarios 88, Hirata 88D, Seidel 88
$\pi^0\,\mu^+$ — Monch 91, Berger 90B, Hirata 89B, Barloutaud 88, Berger 88D, Bourdarios 88, Seidel 88
$\eta\,e^+$ — Monch 91, Berger 90B, Hirata 89B, Barloutaud 88, Bourdarios 88, Seidel 88
$\eta\,\mu^+$ — Monch 91, Berger 90B, Hirata 89B, Phillips 89, Barloutaud 88, Seidel 88
$\rho(770)^+\,\nu$ — Berger 88D, Seidel 88
$\rho(770)^+\,\bar{\nu}$ — Monch 91, Berger 89, Barloutaud 88, Bourdarios 88
$\rho(770)^0\,e^+$ — Monch 91, Berger 90B, Barloutaud 88, Bourdarios 88
$\rho(770)^0\,\mu^+$ — Monch 91, Berger 90B, Phillips 89, Barloutaud 88, Bourdarios 88, Seidel 88
$\omega(783)\,e^+$ — Monch 91, Berger 90B, Hirata 89B, Barloutaud 88, Seidel 88
$\omega(783)\,\mu^+$ — Monch 91, Berger 90B, Hirata 89B, Phillips 89, Barloutaud 88, Seidel 88
$K^+\,\nu$ — Phillips 89, Berger 88D
$K^+\,\bar{\nu}$ — Monch 91, Berger 89, Hirata 89B, Totsuka 89, Totsuka 89B, Barloutaud 88, Bourdarios 88, Hirata 88D
$K^0\,e^+$ — Monch 91, Berger 90B, Hirata 89B, Barloutaud 88, Bourdarios 88, Seidel 88
$K_S\,e^+$ — Berger 90B
$K_L\,e^+$ — Berger 90B
$K^0\,\mu^+$ — Monch 91, Berger 90B, Hirata 89B, Totsuka 89B, Barloutaud 88, Berger 88D, Bourdarios 88, Seidel 88
$K_S\,\mu^+$ — Berger 90B, Phillips 89
$K_L\,\mu^+$ — Berger 90B
$K^*(892)^+\,\bar{\nu}$ — Monch 91, Berger 89, Hirata 89B, Barloutaud 88, Bourdarios 88
$K^*(892)^0\,e^+$ — Monch 91, Berger 90B, Hirata 89B, Barloutaud 88

p

$e^+\,2\gamma$ — Monch 91, Berger 90B
$e^+\,2\nu$ — Berger 91
$e^-\,2e^+$ — Monch 91, Berger 90B, Barloutaud 88, Bourdarios 88
$\mu^+\,2\nu$ — Berger 91
$\mu^+\,e^-\,e^+$ — Berger 90B
$\mu^-\,\mu^+\,e^+$ — Berger 90B, Phillips 89
$\mu^-\,2\mu^+$ — Monch 91, Berger 90B, Phillips 89, Barloutaud 88, Berger 88D, Bourdarios 88
$2\pi^+\,e^-$ — Berger 91
$2\pi^0\,e^+$ — Monch 91, Berger 90B
$\pi^+\,\pi^-\,e^+$ — Monch 91, Berger 90B, Phillips 89
$2\pi^+\,\mu^-$ — Berger 91, Phillips 89
$2\pi^0\,\mu^+$ — Berger 90B
$\pi^+\,\pi^-\,\mu^+$ — Monch 91, Berger 90B, Phillips 89
$K^+\,\pi^+\,e^-$ — Berger 91
$K^+\,\pi^+\,\mu^-$ — Berger 91

n

$e^-\,X$ — Hime 92, Berger 91
$\bar{n}$ — Bressi 90, Berger 89C, Bitter 89, Bressi 89, Dubbers 88, Nakamura 88
$\nu\,\gamma$ — Berger 91
$\pi^0\,\bar{\nu}$ — Monch 91, Berger 89, Hirata 89B, Totsuka 89B, Barloutaud 88, Bourdarios 88
$\pi^+\,e^-$ — Berger 91, Seidel 88
$\pi^-\,e^+$ — Monch 91, Berger 90B, Hirata 89B, Totsuka 89B, Barloutaud 88, Bourdarios 88, Seidel 88
$\pi^+\,\mu^-$ — Berger 91, Phillips 89, Seidel 88

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

n

$\pi^- \mu^+$
Monch 91
Berger 90B
Hirata 89B
Barloutaud 88
Berger 88D
Bourdarios 88
Seidel 88

$\eta\ \nu$
Berger 88D
Seidel 88

$\eta\ \bar{\nu}$
Monch 91
Berger 89
Hirata 89B
Barloutaud 88
Bourdarios 88

$\rho(770)^0\ \nu$
Seidel 88

$\rho(770)^0\ \bar{\nu}$
Monch 91
Berger 89
Hirata 89B
Barloutaud 88
Bourdarios 88

$\rho(770)^+\ e^-$
Seidel 88

$\rho(770)^-\ e^+$
Monch 91
Berger 90B
Barloutaud 88
Bourdarios 88
Seidel 88

$\rho(770)^+\ \mu^-$
Phillips 89
Seidel 88

$\rho(770)^-\ \mu^+$
Monch 91
Berger 90B
Barloutaud 88
Bourdarios 88
Seidel 88

$\omega(783)\ \nu$
Seidel 88

$\omega(783)\ \bar{\nu}$
Monch 91
Berger 89
Hirata 89B
Barloutaud 88
Bourdarios 88

$K^0\ \bar{\nu}$
Monch 91
Hirata 89B
Totsuka 89B
Barloutaud 88
Hirata 88D

$K_S\ \bar{\nu}$
Berger 89
Bourdarios 88

$K^+\ e^-$
Berger 91
Phillips 89

$K^+\ \mu^-$
Berger 91
Phillips 89

$K^*(892)^0\ \bar{\nu}$
Monch 91
Berger 89
Hirata 89B
Barloutaud 88
Bourdarios 88

$e^-\ e^+\ \nu$
Berger 91

$2\nu_e\ \bar{\nu}_e$
Berger 91

$\mu^+\ e^-\ \nu$
Berger 91

$\mu^-\ \mu^+\ \nu$
Berger 91
Phillips 89

$2\nu_\mu\ \bar{\nu}_\mu$
Berger 91

n

$\pi^+\ \pi^0\ e^-$
Berger 91

$\pi^0\ \pi^-\ e^+$
Monch 91
Berger 90B

$\pi^+\ \pi^0\ \mu^-$
Berger 91

$\pi^0\ \pi^-\ \mu^+$
Monch 91
Berger 90B

$K^0\ \pi^-\ e^+$
Monch 91
Berger 90B

$p\ e^-\ \bar{\nu}_e$
Hime 92
Erozolimskii 91
Woolcock 91
Alfimenkov 90
Byrne 90
Dubbers 90
Erozolimskii 90
Erozolimskii 90B
Dohner 89
Kossakowski 89
Mampe 89
Paul 89
Alfimenkov 88
Belomyttsev 88
Dubbers 88
Klemt 88
Last 88
Spivak 88

nucleon
Crawford 91B

$\bar{n}$
Dallatorreco 92
Amsler 91
Birsa 91
Bradamante 91
Bruckner 91B
Bruckner 91C
Gazdzicki 91
Timmermans 91
Birsa 90
Bisello 90
Bressi 90
Chiba 90
Berger 89C
Bitter 89
Boos 89
Bressi 89
Geichgimbel 89
Kanazirski 89
Kopke 89
Castro 88
Dubbers 88
Mutchler 88
Nakamura 88
Batyunya 87G
Batyunya 86

$N(1440\,P_{11})^+$
Morsch 92

$\Delta(1232\,P_{33})^{++}\ \pi^-$
Boos 90B

$N(1440\,P_{11})^0$
Yuldashev 90D

$p\ \pi^-$
Yuldashev 90

$\overline{N}(1440\,P_{11})^-$

$\overline{\Delta}(1232\,P_{33})^{--}\ \pi^+$
Boos 90B

$N(1440\,B)^+$
Azhgirey 88

$p\ \pi^+\ \pi^-$
Brovkin 91B

$N(1440\,B)^0$
Alimov 88

$p\ \pi^-$
Brovkin 91B

$n\ \pi^+\ \pi^-$
Brovkin 90

$N(1520\,D_{13})^0$

$p\ \pi^-$
Weinstein 93

$N(1520\,B)^+$
Azhgirey 88

$N(1520\,B)^0$

$p\ \pi^-$
Guzhavin 90

$N(1535\,S_{11})^0$
Weinstein 93

$N(1680\,F_{15})^+$
Azhgirey 88

$N(1680\,F_{15})^0$
Zhokin 89

$N(1700\,B)^+$

$p\ \eta$
Aleshin 92
Aleshin 92B

$\Delta(1232\,P_{33})^{++}\ \pi^0\ \pi^-$
Aleshin 92B

$\Delta(1232\,P_{33})^0\ \pi^+\ \pi^0$
Aleshin 92B

$\Delta(\text{unspec})^{++}\ \pi^0\ \pi^-$ + $\Delta(\text{unspec})^0\ \pi^+\ \pi^0$
Aleshin 92

$p\ \pi^+\ \pi^0\ \pi^-$
Aleshin 92B

$N(1700\,B)^0$

$p\ \pi^-$
Brovkin 91B
Guzhavin 90

$\Delta(1232\,P_{33})$
Baturin 91
Sealock 89

$\Delta(1232\,P_{33})^{++}$
Ammosov 92B
Ableev 91D
Abramov 91
Brovkin 91B
Brovkin 91C
Gulamov 91
Abdullin 90
Allasia 90
Condo 90
Degtyarenko 90
Meissner 90
Perepelitsa 90
Vorobiev 90
Yuldashev 90D
Armstrong 89C
Armstrong 89E
Ellegaard 89
Halling 89
Klein 89C
Kopke 89
Mattig 89
Mistry 89
Alimov 88
Barlag 88C
Okusawa 88
Pancella 88
Bogolyubsky 86E

$p\ \pi^+$
Aleshin 92B
Aguilarbenit 91
Condo 91

$\Delta(1232\,P_{33})^{++}$
Trzaska 91C
Arefiev 90B
Boos 90B
Gray 90
Guzhavin 90
Kitagaki 90
Yuldashev 90
Abdullin 89E
Aihara 89
Ajinenko 89B
Ajinenko 89E
Albrecht 89I
Asai 89
Boos 89
Zhokin 89
Abdullin 88C
Abdullin 88D
Albrecht 88R
Ammosov 88B
Antos 88
Batyunya 88B
Batyunya 87E

$\Delta(1232\,P_{33})^+$
Appel 91
Berger 91
Allasia 90
Kopke 89

$p\ \pi^0$
Aguilarbenit 91
Guzhavin 90

$n\ \pi^+$
Guzhavin 90
Baller 88

$\Delta(1232\,P_{33})^0$
Berger 91
Brovkin 91B
Allasia 90
Degtyarenko 90
Yuldashev 90D
Armstrong 89E
Drell 89
Halling 89
Mistry 89
Zhokin 89
Alimov 88
Arkhipov 88

$p\ \pi^-$
Aleshin 92B
Aguilarbenit 91
Trzaska 91C
Gray 90
Guzhavin 90
Yuldashev 90
Aihara 89
Albrecht 88R
Batyunya 88B
Tsuboyama 88

$n\ \pi^0$
Alde 91B
Alde 91F

$\Delta(1232\,P_{33})^-$
Appel 91
Berger 91
Allasia 90
Zhokin 89
Baller 88

$n\ \pi^-$
Guzhavin 90

$\overline{\Delta}(1232\,P_{33})^0$
Aguilarbenit 91
Halling 89
Mistry 89

$\bar{p}\ \pi^+$
Gray 90
Aihara 89
Albrecht 88R
Batyunya 88B

$\overline{\Delta}(1232\,P_{33})^{--}$

Aguilarbenit 91
Drell 89
Halling 89
Kopke 89
Mistry 89
Barlag 88C
Bogolyubsky 86E

$\bar{p}\,\pi^-$

Boos 90B
Gray 90
Aihara 89
Albrecht 89I
Bogolyubsky 89D
Albrecht 88R
Batyunya 88B
Batyunya 87E

$\Delta(1700\,D_{33})^+$

$p\,\pi^+\,\pi^-$

Brovkin 91B

Δ(unspec)$^{++}$

Aleshin 92

Δ(unspec)^0

Aleshin 92

hyperon

Landsberg 90B
Bogolyubsky 88F
Bolonkin 88
Bityukov 87

hyperon

Bogolyubsky 88F

Λ

$p\,\pi^-\,X$

Abatzis 91

$n\,\gamma$

Noble 92

$p\,\pi^-$

Abe 92E
Acton 92D
Acton 92T
Adams 92
Albrecht 92C
Albrecht 92D
Alexopoulos 92
Andryakov 92
Botterweck 92
Brick 92
Buskulic 92G
Buskulic 92H
Coc 92
Dolgolenko 92
Duryea 92
Eiseman 92B
Evans 92
Frabetti 92C
Geld 92
Tatishvili 92
Abreu 91O
Albajar 91D
Baker 91
Crawford 91B
Decamp 91Q
Degtyarenko 91
Diehl 91
Duryea 91
Henderson 91B
Ho 91
Kinson 91
Odyniec 91
Procario 91
Ronan 91
Schukraft 91
Vorobiev 91
Willocq 91
Albrecht 90J
Aleev 90E
Alekseev 90
Andryakov 90

Λ

Barmin 90D
Barnes 90
Barnes 90B
Bartke 90
Bloomer 90
Derado 90B
Eiseman 90
Fordham 90
Ho 90
Turkot 90
Yuldashev 90B
Ajinenko 89E
Albrecht 89B
Avery 89C
Bamberger 89
Barlag 89
Barlag 89C
Bolonkin 89
Braunschweig 89I
Brunner 89B
Trost 89
Vecko 89
Albrecht 88I
Aleev 88B
Aleev 88G
Alekseev 88
Aston 88C
Baller 88
Barwolff 88
Bensinger 88
Bonner 88
Klein 88
Luk 88
Tixier 88
Turkot 88
Vesztergombi 88
Vorobiev 88E
Bogolyubsky 87C

$p\,e^-\,\bar{\nu}_e$

Dworkin 90

$\bar{\Lambda}$

$\bar{p}\,\pi^+\,X$

Abatzis 91

$\bar{p}\,\pi^+$

Alexopoulos 92
Brick 92
Coc 92
Evans 92
Tatishvili 92
Abreu 91O
Ho 91
Kinson 91
Odyniec 91
Schukraft 91
Willocq 91
Yokosawa 91
Aleev 90E
Barnes 90
Barnes 90B
Bartke 90
Ho 90
Turkot 90
Yuldashev 90B
Ajinenko 89E
Albrecht 89B
Avery 89C
Bamberger 89
Bolonkin 89
Aleev 88G
Barwolff 88
Klein 88
Tixier 88
Turkot 88
Vesztergombi 88
Bogolyubsky 87C

$\Lambda(1520\,D_{03})$

$p\,K^-$

Aguilarbenit 91
Albrecht 89B
Albrecht 88Q

$\Lambda\,\pi^+\,\pi^-$

Krastev 88

$\Lambda(1670\,S_{01})$

Bienz 90

Σ

$n\,\pi^-$

Shakhbasyan 92

Σ^+

Andryakov 92
Barlag 92B
Chen 92B
Dolgolenko 92
Appel 91
Andryakov 90
Dalitz 90
Yokosawa 90B
Barlag 89
Geichgimbel 89
Klein 89C
Kopke 89
Marshall 89
Baller 88
Barlag 88C
Candlin 88
Haba 88
Okusawa 88

$p\,\gamma$

Foucher 92
Foucher 91
Hessey 89

$p\,\pi^0$

Barlag 89C
Hessey 89

$n\,\pi^+$

Batusov 90C

Σ^0

Alexopoulos 92
Buenerd 92
Amsler 91
Balestra 91B
Gazdzicki 91
Yokosawa 91
Aleev 90F
Bisello 90
Dalitz 90
Johansson 90
Yokosawa 90B
Bonner 89
Geichgimbel 89
Klein 89C
Kopke 89
Mattig 89
Vonfrankenbe 89
Whitehouse 89
Bogolyubsky 88F
Bolonkin 88
Castro 88

$\Lambda\,\gamma$

Albrecht 92C
Andryakov 92
Dolgolenko 92
Procario 91
Willocq 91
Andryakov 90
Barnes 90
Ohlsson 90
Yuldashev 90B
Albrecht 88I
Baller 88
Bensinger 88

Σ^-

Andryakov 92
Buenerd 92
Dolgolenko 92
Shakhbasyan 92
Appel 91
Andryakov 90
Dalitz 90
Shakhbazyan 90
Victorov 90
Geichgimbel 89
Kopke 89
Marshall 89

Σ^-

Baller 88
Gall 88
Hertzog 88
Okusawa 88
Shakhbazyan 88
Tang 88

$n\,\pi^-$

Shakhbasyan 92B
Shakhbazyan 91

$n\,e^-\,\bar{\nu}_e$

Hsueh 88

$\overline{\Sigma}^+$

Geichgimbel 89
Kopke 89
Landsberg 89
Shoemaker 88

$\overline{\Sigma}^0$

Alexopoulos 92
Amsler 91
Gazdzicki 91
Bisello 90
Johansson 90
Geichgimbel 89
Kopke 89
Albrecht 88I
Castro 88

$\bar{\Lambda}\,\gamma$

Barnes 90
Ohlsson 90

$\overline{\Sigma}^-$

Geichgimbel 89
Kopke 89
Landsberg 89
Barlag 88C
Shoemaker 88

$\Sigma(1385\,P_{13})^+$

Aguilarbenit 91
Frascaria 89
Klein 89C
Kopke 89
Mattig 89
Bogolyubsky 88F

$\Lambda\,\pi^+$

Acton 92D
Bienz 90
Ajinenko 89E
Braunschweig 89I
Drutskoy 89
Albrecht 88I

$\Sigma(1385\,P_{13})^0$

Frascaria 89
Kopke 89

$\Sigma(1385\,P_{13})^-$

Aguilarbenit 91
Landsberg 90
Kopke 89
Bogolyubsky 88F

$\Lambda\,\pi^-$

Acton 92D
Bienz 90
Braunschweig 89I
Albrecht 88I

$\overline{\Sigma}(1385\,P_{13})^+$

Kopke 89
Albrecht 88I

$\overline{\Sigma}(1385\,P_{13})^0$

Kopke 89

$\overline{\Sigma}(1385\,P_{13})^-$

Kopke 89
Albrecht 88I

Y^*(unspec)

Bolonkin 89

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

Y^*(unspec)

$\Xi\ K$	Landsberg 90
$\Lambda\ K\ \overline{K}$	Landsberg 90
$\Sigma\ K\ \overline{K}$	Landsberg 90

$Y^*(\text{unspec})^0$

	Barkov 90
	Bolonkin 88

Ξ

	Abe 90H
	Landsberg 90
	Mattig 89

Ξ^0

	Alexopoulos 92
	Buenerd 92
	Geist 91
	Schneider 90
	Geichgimbel 89
	Pelzer 89
$\Lambda\ \gamma$	James 90
$\Lambda\ \pi^0$	Bensinger 88
$\Sigma^0\ \gamma$	Bensinger 88

Ξ^-

	Albrecht 92J
	Buenerd 92
	Iijima 92
	Schmidt 92B
	Aoki 91
	Aoki 91D
	Aoki 91E
	Deangelis 91B
	Hebbeker 91B
	Odyniec 91
	Odyniec 91B
	Schukraft 91
	Abatzis 90B
	Abe 90H
	Avery 90B
	Schneider 90
	Alam 89B
	Albrecht 89B
	Albrecht 89E
	Ansorge 89B
	Geichgimbel 89
	Klein 89C
	Kopke 89
	Marshall 89
	May 89B
	Klein 88
$\Lambda\ \pi^-\ X$	Abatzis 91
$\Lambda\ \pi^-$	Acton 92D
	Acton 92T
	Albrecht 92R
	Alexopoulos 92
	Duryea 92
	Evans 92
	Frabetti 92
	Frabetti 92C
	Abatzis 91B
	Abreu 91O
	Crawford 91B
	Duryea 91
	Henderson 91B
	Ho 91
	Kinson 91
	Odyniec 91
	Procario 91
	Ronan 91
	Schukraft 91
	Yokosawa 91
	Albrecht 90J
	Gemesy 90
	Ho 90
	Aston 89C

Ξ^-

	Avery 89C
	Barlag 89
	Barlag 89C
	Braunschweig 89I
	Trost 89
	Albrecht 88I

$\overline{\Xi}^+$

	Acton 92T
	Schmidt 92B
	Hebbeker 91B
	Odyniec 91
	Odyniec 91B
	Schukraft 91
	Abatzis 90B
	Alam 89B
	Geichgimbel 89
	Kopke 89
	Marshall 89
	Albrecht 88I
	Klein 88
$\overline{\Lambda}\ \pi^+\ X$	Abatzis 91
$\overline{\Lambda}\ \pi^+$	Alexopoulos 92
	Evans 92
	Abatzis 91B
	Abreu 91O
	Ho 91
	Kinson 91
	Odyniec 91
	Schukraft 91
	Yokosawa 91
	Gemesy 90
	Ho 90
	Avery 89C

$\overline{\Xi}^0$

	Alexopoulos 92
	Geichgimbel 89
	Kopke 89
	Pelzer 89

$\Xi(1530\ P_{13})^0$

	Albrecht 89B
	Kopke 89
	Mattig 89
$\Xi^-\ \pi^+$	Acton 92D
	Schneider 90
	Aston 89C
	Albrecht 88I
	Klein 88

$\Xi(1530\ P_{13})^-$

	Iijima 92
	Kopke 89
$\Xi^0\ \pi^-$	Schneider 90

$\overline{\Xi}(1530\ P_{13})^+$

	Kopke 89

$\overline{\Xi}(1530\ P_{13})^0$

	Albrecht 88I

Ω^-

	Buenerd 92
	Abe 90H
	Klein 89C
	Marshall 89
	Mattig 89
$\Lambda\ K^-$	Luk 93
	Acton 92D
	Frabetti 92
	Diehl 91
	Henderson 91B
	Procario 91
	Ronan 91
	Yokosawa 91
	Aston 89C
	Albrecht 88I

Ω^-

	Aston 88E
	Klein 88
	Luk 88

$\overline{\Omega}^+$

	Marshall 89
	Albrecht 88I
$\overline{\Lambda}\ K^+$	Klein 88

$\Omega(2250)^-$

$\Xi(1530\ P_{13})^0\ K^-$	Aston 89C

$\Omega(2470)^-$

$\Omega^-\ \pi^+\ \pi^-$	Aston 89C

$\Omega^*(\text{unspec})^-$

	Aston 88E

Λ_c

	Appel 92
	Ronan 91
	Avery 90B

Λ_c^+

	Ammosov 92B
	Spiegel 91
	Abe 90H
	Cassel 90
	Miller 89
	Wormser 89
	Aguilarbenit 88B
	Albrecht 88G
	Roudeau 88
	Ushida 88
	Ushida 88B
	Aguilarbenit 87H
$\nu_e\ X$	Duffy 88
$e^+\ X$	Klein 89C
$\nu_\mu\ X$	Duffy 88
$\mu^+\ X$	Sviridov 88
$p\ X$	Crawford 91B
$p\ X\ -\ \Lambda\ X$	Crawford 91B
$n\ X\ -\ \Lambda\ X$	Crawford 91B
$n\ X$	Crawford 91B
$\Lambda\ X$	Boucrot 92
	Buskulic 92G
	Settles 92
	Crawford 91B
	Decamp 91Q
$p\ e^+\ X$	Klein 89C
$\Lambda\ e^+\ X$	Albrecht 91F
	Baker 91
	Klein 89
	Klein 89C
	Klein 88
$\Lambda\ \mu^+\ X$	Albrecht 91F
	Klein 89
	Klein 89C
	Klein 88
3charged (neutrals)	Aguilarbenit 87
p **2charged (neutrals)**	Aguilarbenit 87
$p\ f_0(975)$	Barlag 90C
$p\ \overline{K}^0$	Avery 90B

Λ_c^+

	Anjos 89C
	Klein 89C
	Albrecht 88D
	Albrecht 88H
$p\ K_S$	Bowcock 89
	Klein 88
$p\ \overline{K}^*(892)^0$	Klein 89C
	Barlag 88C
$p\ \phi(1020)$	Barlag 90C
	Barlag 90F
	Klein 89C
	Barlag 88C
$\Delta(1232\ P_{33})^{++}\ K^-$	Klein 89C
	Barlag 88C
$\Lambda\ \pi^+$	Albrecht 92C
	Procario 91
	Avery 90B
	Avery 90C
	Anjos 89C
	Klein 89C
	Albrecht 88D
	Klein 88
$\Sigma^0\ \pi^+$	Albrecht 92C
	Procario 91
$p\ \pi^+\ \pi^-$	Barlag 90C
	Barlag 90F
$p\ K^-\ \pi^+$	Alvarez 92
	Barlag 92B
	Boucrot 92
	Buskulic 92
	Frabetti 92E
	Bari 91
	Bari 91B
	Barlag 91
	Crawford 91B
	Ronan 91
	Spiegel 91
	Alvarez 90
	Alvarez 90B
	Avery 90B
	Barlag 90
	Barlag 90B
	Barlag 90C
	Barlag 90D
	Barlag 90F
	Batusov 90C
	Buchholz 90
	Frabetti 90
	Shephard 90
	Aleev 89B
	Anjos 89
	Bowcock 89
	Klein 89C
	Rossi 89
	Schubert 89
	Albrecht 88D
	Albrecht 88H
	Albrow 88
	Anjos 88C
	Barlag 88B
	Barlag 88C
	Barlag 88D
	Bortoletto 88
	Klein 88
	Witherell 88
	Aguilarbenit 87
	Anjos 87B
	Batusov 87
$p\ K^+\ K^-$	Barlag 90C
	Barlag 90F
$\Lambda\ \pi^+\ \pi^0$	Procario 91
$\Sigma^+\ \pi^+\ \pi^-$	Barlag 92B

Λ_c^+

	Batusov 90C, Klein 89C, Barlag 88C
$\Sigma^0 \pi^+ \pi^0$	Klein 89C
$\Sigma^+ K^+ \pi^-$	Barlag 92B
$\Sigma^+ K^+ K^-$	Barlag 92B
$\Xi^- K^+ \pi^+$	Avery 90B, Klein 89C
$p \pi^+ \pi^0 \pi^-$	Barlag 90C, Barlag 90F
$p \overline{K}^0 \pi^+ \pi^-$	Avery 90B, Barlag 90C, Barlag 90F, Anjos 89C, Aleev 88C
$p K^- \pi^+ \pi^0$	Barlag 90C, Barlag 90F, Klein 89C
$n K^- 2\pi^+$	Batusov 90C, Klein 89C
$p K_S \pi^+ \pi^-$	Klein 89C
$p \overline{K}^*(892)^0 \pi^+ \pi^-$	Barlag 88C
$\Lambda 2\pi^+ \pi^-$	Avery 90B, Barlag 90C, Barlag 90F, Anjos 89C, Bowcock 89, Klein 89C, Vecko 89, Albrecht 88D, Albrecht 88H, Aleev 88C, Klein 88
$\Sigma^0 2\pi^+ \pi^-$	Aleev 90F
$p 2\pi^+ 2\pi^-$	Barlag 90C, Barlag 90F
$p \overline{K}^0 \pi^+ \pi^0 \pi^-$	Barlag 90C, Barlag 90F
$p K^- \pi^+ 2\pi^0$	Barlag 90C, Barlag 90F
$p K^- 2\pi^+ \pi^-$	Barlag 90C, Barlag 90F, Klein 89C, Barlag 88C
$\Sigma^+ 2\pi^+ 2\pi^-$	Barlag 92B

$\overline{\Lambda}_c^-$

	Spiegel 91, Barlag 90C, Barlag 90D, Aguilarbenit 88B, Aguilarbenit 87H
$\overline{\nu}_e$ X	Duffy 88
$\overline{\nu}_\mu$ X	Duffy 88
$\overline{\Lambda} e^-$ X	Klein 89, Klein 88
$\overline{\Lambda} \mu^-$ X	Klein 89, Klein 88
3charged (neutrals)	Aguilarbenit 87

$\overline{\Lambda}_c^-$

$\overline{p} K^0$	Anjos 89C, Albrecht 88D, Albrecht 88H
$\overline{p} K_S$	Klein 88
$\overline{p} K^*(892)^0$	Barlag 88C
$\overline{p} \phi(1020)$	Barlag 88C
$\overline{\Delta}(1232 P_{33})^{--} K^+$	Barlag 88C
$\overline{\Lambda} \pi^-$	Anjos 89C, Albrecht 88D, Klein 88
$\overline{p} K^+ \pi^-$	Alvarez 92, Barlag 91, Alvarez 90B, Albrecht 88D, Albrecht 88H, Anjos 88C, Barlag 88C, Barlag 88D, Bortoletto 88, Klein 88, Witherell 88
$\overline{\Sigma}^- \pi^+ \pi^-$	Barlag 88C
$\overline{p} K^0 \pi^+ \pi^-$	Anjos 89C
$\overline{p} K^*(892)^0 \pi^+ \pi^-$	Barlag 88C
$\overline{\Lambda} \pi^+ 2\pi^-$	Anjos 89C, Albrecht 88D, Albrecht 88H, Klein 88
$\overline{p} K^+ \pi^+ 2\pi^-$	Barlag 88C

$\Sigma_c(2455)^{++}$

$\Lambda_c^+ \pi^+$	Batusov 90C, Aleev 89B, Anjos 89, Bowcock 89, Klein 89C, Albrecht 88H, Klein 88, Batusov 87

$\Sigma_c(2455)^+$

	Klein 89C

$\Sigma_c(2455)^0$

$\Lambda_c^+ \pi^-$	Batusov 90C, Aleev 89B, Anjos 89, Bowcock 89, Klein 89C, Albrecht 88H, Klein 88

$\overline{\Sigma}_c(2455)^0$

$\overline{\Lambda}_c^- \pi^+$	Albrecht 88H, Klein 88

$\overline{\Sigma}_c(2455)^{--}$

$\overline{\Lambda}_c^- \pi^-$	Albrecht 88H, Klein 88

$\Sigma_c(2510)^{++}$

$\Lambda_c^+ \pi^+$	Batusov 90C

$\Xi_c(2460)$

Ξ^- X	Klein 89C, Crawford 91B

$\Xi_c(2460)^+$

	Appel 92, Alam 89B
$\Lambda \overline{K}^*(892)^0 \pi^+$	Klein 89C
$\Sigma^+ K^- \pi^+$	Barlag 89, Barlag 89C
$\Sigma(1385 P_{13})^+ K^- \pi^+$	Klein 89C
$\Xi^- 2\pi^+$	Frabetti 92C, Albrecht 90J, Barlag 89, Barlag 89C, Klein 89C
$\Omega^- K^+ \pi^+$	Klein 89C
$p \overline{K}^0 K^- \pi^+$	Klein 89C
$\Lambda K^- 2\pi^+$	Klein 89C
$p 2K^- 2\pi^+$	Klein 89C

$\Xi_c(2460)^0$

	Appel 92, Alam 89B
$\Xi^- \pi^+$ X	Klein 89C, Klein 88
$\Xi^- K^+$ X	Klein 89C, Klein 88
$\Omega^- \pi^+$ X	Klein 89C, Klein 88
$\Xi^- \pi^+$	Henderson 91B, Procario 91, Albrecht 90J, Avery 89C, Klein 89C
$\Omega^- K^+$	Henderson 91B, Procario 91, Klein 89C
$\Xi^- e^+$ neutral	Albrecht 92R
$\Xi^- \mu^+$ neutral +	
$\Xi^- e^+$ neutral	Albrecht 92R
$\Xi^- \mu^+$ neutral	Albrecht 92R
$p \overline{K}^0 K^-$	Klein 89C
$p \overline{K}^*(892)^0 K^-$	Spiegel 91, Barlag 90
$p 2K^- \pi^+$	Klein 89C
$\Lambda K^- \pi^+ \pi^0$	Klein 89C
$\Xi^- 2\pi^+ \pi^-$	Albrecht 90J

$\overline{\Xi}_c(2460)^0$

	Henderson 91B, Alam 89B
$\overline{\Xi}^+ \pi^-$	Avery 89C

$\overline{\Xi}_c(2460)^-$

	Appel 92, Alam 89B

Ω_c

$\Omega^- \pi^+$	Frabetti 92

Ω_c

$\Xi^- K^- 2\pi^+$	Albrecht 92J, Frabetti 92, Klein 89C
$\Omega^- 2\pi^+ \pi^-$	Frabetti 92

Λ_b

Λe^- X	Acton 92I
$\Lambda \mu^-$ X	Acton 92I
$\Lambda \ell^- \overline{\nu}$ X	Abreu 93C
$\Lambda_c^+ e^- \overline{\nu}_e$ X	Buskulic 92
$\Lambda_c^+ \mu^- \overline{\nu}_\mu$ X	Buskulic 92
$\Lambda J/\psi(1S)$	Abe 92E, Boucrot 92, Buskulic 92H, Gauthier 92, Maeshima 92, Albajar 91D
$\Lambda_c^+ \ell^- \overline{\nu}$	Boucrot 92, Buskulic 92G, Settles 92, Decamp 91Q
$p D^0 \pi^-$	Bari 91
$\Lambda_c^+ \pi^+ 2\pi^-$	Bari 91

$\overline{\Lambda}_b$

$\overline{\Lambda} e^+$ X	Abreu 93C
$\overline{\Lambda} \mu^+$ X	Acton 92I
	Acton 92I

exotic-nucleon

$p 3\pi^+ \pi^-$	Chiba 91B, Brovkin 89

$N^*_{5/2}(1380)^{+++}$

$p 2\pi^+$	Drutskoy 88

$N^*_{5/2}(1480)^{+++}$

	Arefiev 90B, Bogolyubsky 86E

$N^*_{5/2}(1650)^{+++}$

$p 2\pi^+$	Drutskoy 88

$N^*_{5/2}(1760)^{+++}$

	Drutskoy 88

$N^*_{5/2}(1760)^+$

$p \omega(783)$	Brovkin 92

$N^*_{5/2}(2070)^{+++}$

$p 2\pi^+$	Drutskoy 88

$N^*_{5/2}(\text{unspec})$

$n 2\pi^-$	Brovkin 90

$N^*_{5/2}(\text{unspec})^{+++}$

$\Delta(1232 P_{33})^{++} \pi^+$	Brovkin 91C

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

$N^*_{5/2}(\text{unspec})^{+++}$

$p\ 2\pi^+$
Abramov 91
Abramov 89C

$N^*_{5/2}(\text{unspec})^{--}$

Brovkin 90

$N\phi(1950)^0$

$\Sigma(1385\ P_{13})^-\ K^+$
Landsberg 90

$\Xi^*(\text{unspec})^0$

$\Xi^-\ \pi^+$
Ronan 91

anomalon

Alekseeva 88
Karev 88

fireball

Ameeva 92

mult[charged] X

Shivpuri 88

centauro

Ren 88B

nuclearite

Barrette 90B
Polikanov 90

positronium

Afanasyev 90
Afanasyev 90B

0γ neutral (neutrals)

Atoyan 89

γ neutral

Akopyan 91
Atoyan 90
Gninenko 89
Orito 89

2γ

Akopyan 91

γ axion

Akopyan 92
Atoyan 90
Gninenko 89
Orito 89

3γ

Skalsey 92B
Akopyan 91
Atoyan 90
Tsuchiaki 90
Atoyan 89
Gninenko 89

positronium*

2γ

Borzakov 90

muonium

Janissen 89

muonium

Matthias 91
Poutissou 89
Huber 88
Marshall 88

muonium

Matthias 91
Poutissou 89
Huber 88
Marshall 88

$(pp)_{atom}$

Amsler 91

γ 2charged (neutrals)

Schaefer 89

H(atom)

H(atom) γ

Weitz 92
Bouchiat 90

^{50}Ti(atom)

Zdesenko 92

^{50}Ti(atom)*

Zdesenko 92

^{42}Cr(atom)

^{50}Ti(atom)*

Zdesenko 92

^{50}Ti(atom) $2\nu_e$

Zdesenko 92

^{55}Mn(atom)

Hime 91B
Logan 91

^{55}Fe(atom)

^{55}Mn(atom) $\nu_e\ \gamma$

Logan 91

^{55}Mn(atom) heavy-$\nu_e\ \gamma$

Hime 91B

^{58}Fe(atom)

Zdesenko 92

^{58}Fe(atom)*

Zdesenko 92

^{58}Ni(atom)

^{58}Fe(atom)*

Zdesenko 92

^{58}Fe(atom) $2\nu_e$

Zdesenko 92

^{64}Ni(atom)

Zdesenko 92

^{64}Ni(atom)*

Zdesenko 92

^{64}Zn(atom)

^{64}Ni(atom)*

Zdesenko 92

^{64}Ni(atom) $2\nu_e$

Zdesenko 92

^{71}Ga(atom)

Hime 91B
Logan 91
Morrison 91
Zlimen 91

^{71}Ge(atom)

^{71}Ga(atom) $\nu\ \gamma$

Zlimen 91

^{71}Ga(atom) $\nu_e\ \gamma$

Logan 91

^{71}Ga(atom) heavy-$\nu_e\ \gamma$

Hime 91B
Morrison 91

^{92}Zr(atom)

Zdesenko 92

^{92}Zr(atom)*

Zdesenko 92

^{92}Mo(atom)

^{92}Zr(atom)*

Zdesenko 92

^{92}Zr(atom) $2\nu_e$

Zdesenko 92

^{106}Pd(atom)

Zdesenko 92

^{108}Pd(atom)*

Zdesenko 92

^{106}Cd(atom)

^{106}Pd(atom)*

Zdesenko 92

^{106}Pd(atom) $2\nu_e$

Zdesenko 92

^{108}Cd(atom)

^{108}Pd(atom)*

Zdesenko 92

^{125}Te(atom)

Hime 91B
Logan 91
Morrison 91

^{125}I(atom)

^{125}Te(atom) $\nu_e\ \gamma$

Logan 91

^{125}Te(atom) heavy-$\nu_e\ \gamma$

Hime 91B
Morrison 91

Cs(atom)

Bouchiat 90
Noecker 88
Bouchiat 86B

^{180}Hf(atom)*

Zdesenko 92

^{180}Wt(atom)

^{180}Hf(atom)*

Zdesenko 92

^{196}Pt(atom)*

Zdesenko 92

^{196}Hg(atom)

^{196}Pt(atom)*

Zdesenko 92

Tl(atom)

Bouchiat 90
Bouchiat 86B

Tl(atom) γ

Abdullah 90

Bi(atom)

Bouchiat 90
Khriplovich 88

nucleus

Ammosov 92B
Baroni 92
Hsiung 92
Leeb 92
Ramberg 92B
Schmidt 92B
Yokosawa 92
Barker 91
Berdnikov 91
Bini 91
Kleinknecht 91
Winstein 91
Baroni 90
Geiregat 90
Miljanic 90
Polikanov 90
Singh 90
Yokosawa 90B
Akchurin 89
Davier 89
Efendiev 89
Gulkanyan 89
Joyner 89
Nagy 89
Nurushev 89
Romano 89
Baskov 88
Cassata 88
Dubovy 88
Moskowitz 88
Schmiedmayer 88

nucleus

Ardito 87

nucleus $2e^-$

Ejiri 91B
Kirpichnikov 89
Rosen 88
Totsuka 88

nucleus $2e^-$ majoron

Ejiri 91B
Kirpichnikov 89
Totsuka 88

nucleus $2e^-\ 2\bar{\nu}_e$

Ejiri 91B
Kirpichnikov 89
Rosen 88
Totsuka 88

hypernucleus

Armstrong 92B
Bartke 89
Campagnolle 89
Hayano 89
Hayano 88

$2n$ X

Aoki 91E

^{6}He Σ^-

Tang 88

^{11}Bor Σ^-

Tang 88

charmed-nucleus

Bunyatov 92
Lyukov 89

deuteron

dibaryon($S=-1$) $e^+\ \nu_e$

Ejiri 89

dibaryon

Tatishcheff 92
Auer 88
Kawai 88

γ X

Stanislaus 89

2nucleon

Strakovskii 91

$2p$

Abramov 92
Didenko 91B
Kobayashi 91
Antipov 90
Antipov 90E
Glagolev 90
Vorobiev 90B
Abdullin 89E
Glagolev 89B
Shimizu 89
Abdullin 88B
Abdullin 88C
Andreev 88
Balgansuren 88
Troyan 88

$p\ n$

Aleshin 91
Glagolev 90
Glagolev 89B
Abdullin 88D
Andreev 88
Balgansuren 88

$2n$

Glagolev 90
Abdullin 89E
Glagolev 89B
Parker 89
Abdullin 88C
Balgansuren 88

$p\ \Delta(1232\ P_{33})^{++}$

Abdullin 89E
Abdullin 88C

$n\ \Delta(1232\ P_{33})^{++}$

Abdullin 88D

deuteron π

Strakovskii 91

deuteron π^+

Antipov 90

dibaryon

Abdullin 88D
Bertini 88
deuteron π^-
Antipov 90
2p γ
Abdinov 88
2p π^+
Abdullin 89E
Abdullin 88C
Ashery 88
2p π^-
Abdullin 90B
Antipov 90E
Troyan 90
$p\ n\ \pi^+$
Abdullin 88D
$p\ n\ \pi^-$
Abdullin 90B
2n π^+
Abdullin 89E
2n π^-
Ashery 88
2p $\pi^0\ \pi^-$
Troyan 90

dineutron

Seth 91

dibaryon($S = -1$)

Siebert 91
Ejiri 89

Entries in order of particle name, then decay. A few chemical symbols for nuclei have been changed to avoid ambiguity with particle names (see the Particle Vocabulary). See the legend on page 329.

This index lists papers by the accelerator, the experiment number, and the detector used, ordered alphabetically. The Accelerator Vocabulary and the Detector Vocabulary list all the facilities used by papers indexed in this book.

A question mark indicates that the information is missing, usually because it was not given in the paper. A dash mark indicates that the position cannot be filled in.

Illustrative Key

Accelerator: see the *Accelerator Vocabulary* for definitions.

Detector: see the *Detector Vocabulary* for definitions.

Document ID: see the *ID/Reference/Title Index* for the full reference.

Experiment: the experiment's number, where known.

ANL	
ANL-E-412	
DBC-12FT	Mann 86
ANL-E-435	
CNTR	Auer 86
SPEC	Auer 86B
WIRE	Auer 86
ANL-E-441	
EMS	Finley 85
ANL-E-447	
SPEC	Auer 88
ANL-E-451	
EMS	Wicklund 85
	Wicklund 87
BNL	
BNL-673-593	
MPS	Bensinger 85
BNL-701	
COMB	Franklin 87
BNL-702	
COMB	Snow 85
BNL-723	
SPEC	Gall 88
	Hertzog 88
BNL-726	
WIRE	Christenson 85
BNL-732	
CALO	Chiang 86

AERE-HELIOS-NS

—
CNTR — Schmiedmayer 89, Schmiedmayer 88

ANIK-MEA

—
SPEC — Welch 92, Wesseling 92

ANL

?
CNTR — Yokosawa 90B
COMB — Yokosawa 90B
DAS — Yokosawa 90B
HEBC-50CM — Dalitz 90
WIRE — Yokosawa 90B
ANL-E-395
CNTR — Yokosawa 90B
ANL-E-412
DBC-12FT — Merenyi 92
ANL-E-416
COMB — Yokosawa 90B
ANL-E-431
CNTR — Yokosawa 90B
ANL-E-447
SPEC — Yokosawa 90B, Auer 88
ANL-E-449
CNTR — Yokosawa 90B

BHEP-BEPC

—
BES — Rolandi 92, Jin 91

BNL

?
CALO — Silvestrov 89
DBC-30IN — Gaspero 92, Gaspero 92B
HBC-30IN — Littenberg 91
PLASTIC — Hirzebruch 92
BNL-420
SPEC — Freudenreich 90
BNL-564
HBC-30IN — Fukuhisa 92
BNL-598
SPEC — Freudenreich 90
BNL-686
MPS — Silvestrov 89
BNL-723
SPEC — Gall 88, Hertzog 88
BNL-734
CALO — Ahrens 90, Abe 89E, Ahrens 88
BNL-737
DBC-7FT — Kitagaki 90
BNL-744
COMB — Yokosawa 91, Yokosawa 90B
BNL-747
MPS — Landsberg 90, Etkin 88
BNL-751
MPS-II — Bensinger 88
BNL-755
DAS — Baller 88
BNL-758
SPEC — Pile 91
BNL-759
SPEC — Tang 88
BNL-766
SPEC — Wiencke 92
BNL-769
MPS-II — Cason 89, Rath 89, Rath 88
BNL-771
MPS-II — Birman 88
BNL-776
COMB — Borodovsky 92

BNL

Pierre 90, Blumenfeld 89, Krizmanic 89, Lile 89
BNL-777
SPEC — Alliegro 92, Kuno 90, Lee 90, Lubatti 89, Campagnari 88
BNL-778
SPEC — Porile 89, Mahi 88
BNL-780
WIRE — Schaffner 89, Greenlee 88, Jastrzembski 88
BNL-782
DAS — Khiari 89
BNL-785
SAS — Yokosawa 91, Saroff 90
BNL-787
SPEC — Atiya 92, Atiya 92B, Kuno 92, Atiya 91, Atiya 91B, Atiya 90, Atiya 90B, Kuno 90, Poutissou 90, Atiya 89, Numao 89, Selen 89
BNL-791
SPEC — Drell 92B, Heinson 91, Kuno 90, Geng 89, Mathiazhagan 89, Mathiazhagan 89B, Cousins 88
BNL-794
DAS — Krisch 91, Crabb 90, Yokosawa 90B, Crabb 88
BNL-795
CNTR — Mutchler 88
BNL-811
CNTR — Hessey 89, Whitehouse 89
CRYS-BOX — Noble 92
BNL-816
CALO — Astier 89, Astier 89B
BNL-817
MPS — Yokosawa 91, Bonner 90, Yokosawa 90B, Bonner 89, Bonner 88
BNL-828
SPEC — Chrien 88
BNL-834
SPEC — Heppelmann 89, Carroll 88
BNL-835
CNTR — Mardor 90
BNL-838
DAS — Appel 91
BNL-845
PHOTON — Morse 91, Winstein 91, Morse 90, Ohl 90
SPEC — Morse 91, Winstein 91, Kuno 90, Morse 90, Ohl 90, Ohl 90B
BNL-851
SPEC — Drell 92B

BNL-ION

?
EMUL — Ghosh 89B
PLASTIC — Hoffmann 88
BNL-793
PLASTIC — He 90
BNL-801
SFSU-MILLIKAN — Matis 90B
BNL-802
SAS — Abbott 92, Abbott 92B, Abbott 92C, Abbott 91, Abbott 91B, Abbott 91C, Abbott 91D, Odyniec 91, Schukraft 91, Abbott 90, Bloomer 90, Winger 90, Miake 88, Remsberg 88, Tannenbaum 88
BNL-806
PLASTIC — Brechtmann 89
BNL-808
EMUL — Vongersdorff 89, Barbier 88C
BNL-810
MPS — Adams 92, Ahmad 92B, Eiseman 92, Eiseman 92B, Odyniec 91, Bloomer 90, Eiseman 90, Foley 90
BNL-814
CALO — Barrette 92, Barrette 92B, Barrette 92C, Barrette 91, Barrette 90, Barrette 90B, Barrette 90C, Bloomer 90, Braunmunzing 88
SPEC — Barrette 92, Barrette 92B, Barrette 92C, Barrette 91, Barrette 90, Barrette 90B, Barrette 90C, Braunmunzing 88
BNL-815
EMUL — Adamovich 92B, Adamovich 92C, Adamovich 92D, Adamovich 91, Adamovich 91C, Stenlund 91, Adamovich 90C, Stenlund 90, Stenlund 90C, Adamovich 89F, Adamovich 88B, Adamovich 88C, Adamovich 88D
BNL-825
PHOTON — Bronikowski 91, Loveland 88
BNL-847
EMUL — Jain 92B, Jain 92C, Jain 92D, Jain 91B, Jain 91C
BNL-858
CNTR — Aoki 92B

BONN

—
CNTR — Eversheim 91

BONN

MANY	Meyer 88B
PLASTIC	Delima 90B
	Delima 89
SAS	Yokosawa 90B
	Althoff 89
SPEC	Boden 91
	Schablitzky 89

BONN-500

—	
SPEC	Arends 91

BONN-ELSA

—	
AMADEUS	Anton 92
ELAN	Leiendecker 92
PHOENICS	Buchler 91
SPEC	Boden 92

CERN-ISR

CERN-R-110	
SPEC	Angelis 91
	Angelis 89
	Angelis 88
CERN-R-209	
COMB	Antreasyan 86B
CERN-R-419	
SFM	Breakstone 91B
	Breakstone 90
	Geist 89
	Breakstone 88
	Breakstone 88D
CERN-R-420	
SFM	Breakstone 91
	Breakstone 90B
	Breakstone 90C
	Breakstone 89
	Breakstone 89B
	Breakstone 88B
	Breakstone 88C
	Fabbri 88
CERN-R-422	
SFM	Bari 91
	Bari 91B
CERN-R-608	
SPEC	Smith 92
CERN-R-704	
COMB	Baglin 92
	Baglin 89B
	Baglin 89C
CERN-R-807	
AFS	Anassontzis 90
	Akesson 89
	Akesson 88D
	Kvatadze 88
—	
MANY	Kundrat 92
	Fischer 88

CERN-LEAR

CERN-PS-170	
APPLE	Bardin 92
	Bardin 91
	Bardin 91B
	Gastaldi 91
CERN-PS-171	
ASTERIX	Hertzog 92
	Gastaldi 91
	May 90
	May 90B
	Weidenauer 90
	Duch 89
	May 89
	Riedlberger 89
	Schaefer 89
	Doser 88
	Doser 88B
	Ziegler 88
CERN-PS-172	
WIRE	Hasan 92
	Kunne 91
	Yokosawa 90B
	Schiavon 89
	Kunne 88

CERN-LEAR

	Kunne 88B
	Kunne 88C
	Martin 88
CERN-PS-173	
COMB	Bruckner 91B
	Bruckner 91C
	Bruckner 90
CERN-PS-174	
PHOTON	Baker 88
CERN-PS-177	
WIRE	Armstrong 92B
	Chen 92
	Campagnolle 89
CERN-PS-178	
CALO	Agnello 90
CERN-PS-179	
EMUL	Batusov 92
	Batusov 90
STRC	Zenoni 92
	Balestra 91
	Balestra 91B
	Balestra 90
	Balestra 90B
	Batusov 90B
	Batusov 90D
	Bendiscioli 90
	Balestra 89
	Balestra 89B
	Balestra 89C
	Balestra 89D
	Batusov 89C
	Balestra 88
	Batusov 88
	Batusov 88B
CERN-PS-182	
SPEC	Adiels 88
CERN-PS-183	
SPEC	Minor 92
	Usher 92
	Armstrong 89H
	Angelopoulos 88
	Angelopoulos 88B
CERN-PS-184	
SPES-II	Yavin 89
CERN-PS-185	
WIRE	Hertzog 92
	Barnes 90
	Barnes 90B
	Johansson 90
	Ohlsson 90
	Barnes 89
	Barnes 89B
	Vonfrankenbe 89
CERN-PS-186	
PHOTON	Hofmann 90
	Markiel 88
CERN-PS-195	
CPLEAR	Angelopoulos 92
	Guyot 92
	Ruf 92
	Adler 91
	Holder 90B
CERN-PS-196	
OTHER	Kalinowsky 92
	Gabrielse 90
CERN-PS-197	
CRYS-BARREL	Amsler 92B
	Amsler 92C
	Amsler 92D
	Peters 92
	Aker 91
	Amsler 91B
	Gastaldi 91
CERN-PS-198	
SPES-II	Perrotkunne 91
	Bertini 89
	Bertini 88C
CERN-PS-199	
CNTR	Dallatorreco 92
	Birsa 91
	Birsa 90
CERN-PS-201	
OBELIX	Adamo 92
	Adamo 92B

CERN-LEAR

	Adamo 92C
	Hertzog 92
	Zenoni 92B
	Agnello 91
	Gastaldi 91
CERN-PS-202	
JETSET	Hamann 92
	Hertzog 92
	Harris 91B
	Hamann 90
CERN-PS-203	
SEMI	Jastrzebski 93
	Hofmann 92
—	
MANY	Bradamante 91

CERN-LEP

CERN-LEP-05	
CALO	Bini 91
CERN-LEP-06	
PLASTIC	Kinoshita 92
CERN-LEP-ALEPH	
ALEPH	Arnaudon 93
	Buskulic 93
	Buskulic 93B
	Buskulic 93C
	Buskulic 93D
	Giacomelli 93
	Bardadinotwi 92
	Bardadinotwi 92B
	Barklow 92
	Boucrot 92
	Brandl 92
	Bryman 92
	Buskulic 92
	Buskulic 92B
	Buskulic 92C
	Buskulic 92D
	Buskulic 92E
	Buskulic 92F
	Buskulic 92G
	Buskulic 92H
	Buskulic 92I
	Buskulic 92J
	Buskulic 92K
	Buskulic 92L
	Buskulic 92M
	Decamp 92
	Decamp 92B
	Decamp 92C
	Dittmar 92
	Drell 92B
	Feindt 92B
	Felcini 92
	Gross 92
	Nuttall 92
	Riles 92
	Rolandi 92
	Settles 92
	Seywerd 92
	Sopczak 92
	Trischuk 92
	Banerjee 91
	Bertin 91
	Bethke 91
	Bethke 91B
	Boyle 91
	Burkhardt 91
	Capon 91
	Colas 91
	Deangelis 91
	Deangelis 91B
	Decamp 91
	Decamp 91B
	Decamp 91C
	Decamp 91D
	Decamp 91E
	Decamp 91F
	Decamp 91G
	Decamp 91H
	Decamp 91I
	Decamp 91J
	Decamp 91K
	Decamp 91L
	Decamp 91M

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

CERN-LEP

Decamp 91N
Decamp 91O
Decamp 91P
Decamp 91Q
Decamp 91R
Decamp 91S
Dydak 91
Ellis 91
Fabbri 91
Halley 91
Hebbeker 91B
Hidaka 91
Mattig 91
Meinhard 91
Patton 91
Perez 91
Pieri 91
Pietrzyk 91
Roehn 91
Sawyer 91
Stahl 91
Trischuk 91
Wachsmuth 91
Yepes 91
Zomer 91
Zomer 91B
Augustin 90D
Cowen 90
Decamp 90
Decamp 90B
Decamp 90C
Decamp 90D
Decamp 90E
Decamp 90F
Decamp 90G
Decamp 90H
Decamp 90I
Decamp 90J
Decamp 90K
Decamp 90M
Decamp 90N
Decamp 90O
Haissinski 90
Hilgart 90
Janot 90
Moller 90
Richard 90
Steinberger 90
Tenchini 90
Decamp 89
Decamp 89B
Decamp 89C
Decamp 89D
Decamp 89E
Decamp 89G
Decamp 89H
Steinberger 89

CERN-LEP-DELPHI
DELPHI

Abreu 93
Abreu 93B
Abreu 93C
Arnaudon 93
Giacomelli 93
Abreu 92
Abreu 92B
Abreu 92C
Abreu 92D
Abreu 92E
Abreu 92F
Abreu 92G
Abreu 92H
Abreu 92I
Abreu 92J
Abreu 92K
Abreu 92L
Bambade 92
Bardadinotwi 92
Bardadinotwi 92B
Benedic 92
Bryman 92
Chrin 92
Cosmo 92
Dittmar 92
Drell 92B
Eerola 92

CERN-LEP

Feindt 92B
Felcini 92
Gross 92
Riles 92
Rolandi 92
Seywerd 92
Sopczak 92
Trischuk 92
Abreu 91
Abreu 91B
Abreu 91C
Abreu 91D
Abreu 91F
Abreu 91G
Abreu 91H
Abreu 91I
Abreu 91J
Abreu 91K
Abreu 91L
Abreu 91M
Abreu 91N
Abreu 91O
Abreu 91P
Abreu 91Q
Abreu 91R
Banerjee 91
Bethke 91
Bethke 91B
Bortolotto 91
Burkhardt 91
Campion 91
Capon 91
Colas 91
Crosland 91
Deangelis 91
Deangelis 91B
Deangelis 91C
Decamp 91S
Dydak 91
Ellis 91
Fabbri 91
Goobar 91
Hebbeker 91B
Keranen 91
Mattig 91
Pieri 91
Pietrzyk 91
Trischuk 91
Wachsmuth 91
Yepes 91
Aarnio 90
Aarnio 90C
Abreu 90
Abreu 90B
Abreu 90C
Abreu 90D
Abreu 90E
Abreu 90F
Abreu 90G
Abreu 90H
Abreu 90I
Abreu 90J
Abreu 90K
Abreu 90L
Abreu 90M
Abreu 90N
Abreu 90O
Abreu 90P
Abreu 90Q
Abreu 90R
Abreu 90S
Augustin 90D
Haissinski 90
Moller 90
Pinsent 90
Renton 90
Richard 90
Steinberger 90
Tenchini 90
Wormser 90B
Aarnio 89

CERN-LEP-L3
L3

Adriani 93
Adriani 93B
Arnaudon 93

CERN-LEP

Giacomelli 93
Adeva 92
Adeva 92B
Adeva 92D
Adriani 92
Adriani 92B
Adriani 92C
Adriani 92D
Adriani 92E
Adriani 92F
Adriani 92G
Adriani 92H
Adriani 92I
Adriani 92J
Adriani 92K
Adriani 92L
Adriani 92M
Adriani 92N
Bardadinotwi 92
Bardadinotwi 92B
Bryman 92
Dittmar 92
Drell 92B
Felcini 92
Gross 92
Riles 92
Rolandi 92
Seywerd 92
Sopczak 92
Sopczak 92B
Sopczak 92C
Trischuk 92
Wenninger 92
Adeva 91
Adeva 91B
Adeva 91C
Adeva 91D
Adeva 91E
Adeva 91F
Adeva 91G
Adeva 91H
Adeva 91I
Adeva 91J
Adeva 91K
Banerjee 91
Bethke 91
Bethke 91B
Burkhardt 91
Capon 91
Colas 91
Deangelis 91B
Decamp 91S
Dydak 91
Ellis 91
Fabbri 91
Hebbeker 91B
Mattig 91
Pieri 91
Pietrzyk 91
Trischuk 91
Wachsmuth 91
Yepes 91
Adeva 90
Adeva 90B
Adeva 90C
Adeva 90D
Adeva 90E
Adeva 90F
Adeva 90G
Adeva 90H
Adeva 90I
Adeva 90J
Adeva 90K
Adeva 90L
Adeva 90M
Adeva 90N
Adeva 90O
Adeva 90P
Adeva 90Q
Adeva 90R
Adeva 90S
Adeva 90T
Adeva 90U
Adeva 90V
Augustin 90D

CERN-LEP

	Chen 90
	Haissinski 90
	Moller 90
	Newman 90
	Richard 90
	Steinberger 90
	Tenchini 90
	Adeva 89
	Adeva 89B
CERN-LEP-OPAL	
OPAL	Acton 93
	Acton 93B
	Acton 93C
	Acton 93D
	Acton 93E
	Acton 93F
	Arnaudon 93
	Giacomelli 93
	Acton 92
	Acton 92B
	Acton 92C
	Acton 92D
	Acton 92E
	Acton 92F
	Acton 92G
	Acton 92H
	Acton 92I
	Acton 92J
	Acton 92K
	Acton 92L
	Acton 92M
	Acton 92N
	Acton 92O
	Acton 92P
	Acton 92Q
	Acton 92R
	Acton 92T
	Bardadinotwi 92
	Bardadinotwi 92B
	Bryman 92
	Dittmar 92
	Drell 92B
	Felcini 92
	Gross 92
	Maringer 92
	Riles 92
	Rolandi 92
	Rollnik 92
	Seywerd 92
	Sopczak 92
	Trischuk 92
	Acton 91
	Acton 91B
	Acton 91C
	Acton 91D
	Acton 91E
	Acton 91F
	Acton 91H
	Acton 91I
	Acton 91J
	Akrawy 91
	Akrawy 91B
	Akrawy 91C
	Akrawy 91D
	Alexander 91
	Alexander 91B
	Alexander 91C
	Alexander 91D
	Alexander 91E
	Alexander 91F
	Alexander 91G
	Alexander 91H
	Alexander 91I
	Banerjee 91
	Bethke 91
	Bethke 91B
	Burkhardt 91
	Capon 91
	Colas 91
	Deangelis 91
	Deangelis 91B
	Decamp 91S
	Dydak 91
	Ellis 91
	Fabbri 91

CERN-LEP

	Geerts 91
	Hebbeker 91B
	Hidaka 91
	Kreutzmann 91
	Mattig 91
	Pieri 91
	Pietrzyk 91
	Schwiening 91
	Simon 91
	Tesch 91
	Trischuk 91
	Turner 91
	Wachsmuth 91
	Yepes 91
	Akrawy 90
	Akrawy 90B
	Akrawy 90C
	Akrawy 90D
	Akrawy 90E
	Akrawy 90F
	Akrawy 90G
	Akrawy 90H
	Akrawy 90I
	Akrawy 90J
	Akrawy 90K
	Akrawy 90L
	Akrawy 90M
	Akrawy 90N
	Akrawy 90O
	Akrawy 90P
	Akrawy 90Q
	Akrawy 90R
	Akrawy 90S
	Akrawy 90T
	Akrawy 90U
	Akrawy 90V
	Augustin 90D
	Banks 90
	Haissinski 90
	Moller 90
	Odowd 90
	Richard 90
	Roach 90
	Steinberger 90
	Watson 90
	Wood 90
	Akrawy 89
	Akrawy 89B
	Akrawy 89C
	Akrawy 89D
	Akrawy 89E
	Bethke 89
—	
ALEPH	Dam 92
	Gross 92B
	Janssen 92
	Bhattacharyy 91
	Hebbeker 91
	Privitera 91
DELPHI	Dam 92
	Gross 92B
	Janssen 92
	Bhattacharyy 91
	Hebbeker 91
	Privitera 91
L3	Dam 92
	Gross 92B
	Janssen 92
	Bhattacharyy 91
	Hebbeker 91
	Privitera 91
OPAL	Dam 92
	Gross 92B
	Janssen 92
	Bhattacharyy 91
	Hebbeker 91
	Privitera 91
PHOTON	Dehning 90

CERN-MSR

—	
CNTR	Farley 89

CERN-MSR-2

—	
CNTR	Farley 89

CERN-PBAR/P

CERN-UA-001	
UA1	Albajar 92
	Barbarogalti 92
	Bryman 92
	Gauthier 92
	Lindgren 92
	Albajar 91
	Albajar 91B
	Albajar 91C
	Albajar 91D
	Felcini 91
	Joyce 91
	Lipa 91
	Neumeister 91
	Plothowbesch 91
	Albajar 90
	Albajar 90B
	Albajar 90C
	Albajar 90D
	Albajar 90E
	Albajar 90F
	Albajar 90G
	Albajar 90H
	Contreras 90
	Dibon 90
	Ellis 90
	Frisch 90
	Geer 90
	Kroha 90
	Nikitas 90
	Scarha 90
	Taylor 90
	Albajar 89
	Albajar 89B
	Albajar 89C
	Felcini 89
	Geichgimbel 89
	Pauss 89
	Stubenrauch 89
	Albajar 88
	Albajar 88B
	Albajar 88C
	Albajar 88D
	Albajar 88E
	Albajar 88F
	Albajar 88G
	Albajar 88H
	Dowell 88
	Loverre 88
	Sphicas 88
	Tao 88
CERN-UA-002	
UA2	Alitti 92
	Alitti 92B
	Alitti 92C
	Barbarogalti 92
	Bryman 92
	Rolandi 92
	Alitti 91
	Alitti 91B
	Alitti 91C
	Alitti 91D
	Alitti 91E
	Alitti 91F
	Alitti 91G
	Alitti 91H
	Alitti 91I
	Alitti 91J
	Bethke 91
	Hidaka 91
	Plothowbesch 91
	Unal 91
	Akesson 90B
	Akesson 90C
	Alitti 90
	Alitti 90B
	Alitti 90C
	Alitti 90D
	Alitti 90E
	Contreras 90
	Flaugher 90
	Fransson 90
	Frisch 90
	Geer 90

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

CERN-PBAR/P

	Kurz 90
	Scarha 90
	Unal 90
	Alitti 89
	Botner 89
	Geichgimbel 89
	Meier 89
	Pauss 89
	Ansari 88
	Ansari 88B
	Loverre 88
	Mandelli 88
	Plothowbesch 88
	Ruhlmann 88
CERN-UA-003	
EMUL	Geichgimbel 89
CERN-UA-004	
IONIZATION	Pumplin 92
	Geichgimbel 89
CERN-UA-005	
STRC	Ansorge 89
	Ansorge 89B
	Ansorge 89C
	Geichgimbel 89
	Pelzer 89
	Ansorge 88
	Asman 88
	Eckart 88
CERN-UA-006	
DAS	Freudenreich 90
	Morel 90
	Morel 90B
	Breedon 89
	Bernasconi 88
	Breedon 88
CERN-UA-007	
CALO	Pare 90
CERN-UA-008	
SPEC	Bonino 88
UA2	Bonino 88

CERN-PS

?	
CNTR	Bertin 88
EMUL	Gulamov 91
	Aggarwal 90
	Shukla 89
HBC-2M	Danielsen 92
	Karnaukhov 92
	Andryakov 91
	Batyunya 90
CERN-EMU-001	
EMUL	Adamovich 90D
CERN-PS-136	
CERN-MUNICH	Svec 92
	Svec 90
CERN-PS-137	
DAS	Svec 92
	Svec 91
	Svec 91B
	Svec 90
	Delesquen 89
	Fujisaki 88
CERN-PS-141	
CNTR	Yokosawa 91
SPEC	Yokosawa 91
CERN-PS-160	
RMS	Candlin 88
CERN-PS-180	
HLBC-BEBC	Merenyi 92
CERN-PS-181	
CHARM	Bergsma 88
CERN-PS-191	
CALO	Bernardi 88
CERN-PS-197	
CRYS-BARREL	Hertzog 92
CERN-T-209	
HBC-2M	Landsberg 90
	Yokosawa 90B
CERN-T-237	
HBC-2M	Markytan 89
ITEP-763	
HBC-2M	Andryakov 88

CERN-PS

HBC-UNSPEC	Andryakov 88

CERN-SC

?	
CNTR	Farley 89
CERN-IS-010	
SPEC	Reesager 90
CERN-SC-094	
OMICRON	Kernel 91
	Kernel 90
	Kernel 90B
	Felipcic 89
	Kernel 89
	Kernel 89B
	Kernel 89C

CERN-SPS

?	
DAS	Vane 92
DBC-BEBC	Banerjee 88
EMUL	Nasr 92
	Tufail 92
	Tufail 91
	Ahmad 90
	Tariq 90
	Tufail 90
	Tufail 90B
	Ahmad 89
CERN-EMU-001	
EMUL	Adamovich 93
	Adamovich 92B
	Adamovich 92C
	Adamovich 92D
	Adamovich 91
	Adamovich 91C
	Stenlund 91
	Wilkes 91
	Adamovich 90C
	Stenlund 90
	Stenlund 90C
	Adamovich 89
	Adamovich 89C
	Adamovich 89D
	Adamovich 89F
	Adamovich 88
	Adamovich 88B
	Adamovich 88C
	Adamovich 88D
	Stenlund 88
	Tretyakova 88
CERN-EMU-002	
PLASTIC	Price 88
CERN-EMU-005	
MAGIC	Takahashi 91
CERN-EMU-007	
EMUL	Holynski 89
	Holynski 89B
	Vongersdorff 89
	Barbier 88C
CERN-EMU-008	
EMUL	Jain 92C
	Jain 92D
	Jain 92E
	Jain 91
	Jain 91B
	Jain 91C
	Sengupta 91
	Jain 90
	Jain 90B
	Sengupta 90
	Sengupta 90B
	Singh 90
	Sengupta 89
	Sengupta 89B
	Singh 89
	Sengupta 88
	Singh 88
	Singh 88B
CERN-EMU-009	
EMUL	Baroni 92
	Baroni 91
	Baroni 90
	Ardito 87
CERN-NA-001	
SPEC	Amendolia 87

CERN-SPS

CERN-NA-002	
EMC	Arneodo 92
	Virchaux 92
	Ashman 91
	Roberts 91
	Virchaux 90
	Aubert 89
CERN-NA-003	
SPEC	Freudenreich 90
CERN-NA-004	
SPEC	Arneodo 92
	Virchaux 92
	Bethke 91
	Roberts 91
	Virchaux 90
	Benvenuti 89
	Benvenuti 89B
	Benvenuti 89C
CERN-NA-005	
STRC	Derado 90B
	Allday 88
	Derado 88
CERN-NA-009	
EMC	Derado 92
	Derado 91
	Derado 90
	Arneodo 89
	Arneodo 88B
CERN-NA-010	
SPEC	Freudenreich 90
	Bordalo 88
	Guanziroli 88
CERN-NA-012	
GAMS-4000	Alde 92
	Landsberg 92
	Alde 91E
	Alde 91G
	Boutemeur 89
	Boutemeur 89B
	Boutemeur 88
	Alde 87D
CERN-NA-012-2	
GAMS-4000	Landsberg 90
	Prokoshkin 90
	Alde 88B
	Alde 88E
	Iddir 88
	Alde 87
	Alde 87C
CERN-NA-014	
SPEC	Alvarez 92
	Alvarez 91
	Alvarez 90
	Alvarez 90B
	Alvarez 90C
	Wormser 90
	Wormser 89B
CERN-NA-014-2	
SPEC	Alvarez 91B
	Spiegel 91
	Alvarez 90D
	Calvino 90
	Wormser 89
	Roudeau 88
	Witherell 88
CERN-NA-017	
EMUL	Ghosh 92
	Ghosh 92C
CERN-NA-022	
EHS	Ajinenko 92
	Begalli 92
	Botterweck 92
	Agababyan 91
	Agababyan 91B
	Aivazyan 91
	Aivazyan 91B
	Atayan 91
	Botterweck 91
	Agababyan 90
	Agababyan 90B
	Agababyan 90C
	Ajinenko 90
	Ajinenko 90B
	Ajinenko 90C

CERN-SPS

Ajinenko 90D
Atayan 90
Botterweck 90
Agababyan 89
Aivazyan 89
Ajinenko 89
Ajinenko 89B
Ajinenko 89C
Ajinenko 89D
Ajinenko 89E
Adamus 88
Adamus 88B
Adamus 88C
Adamus 88F
Adamus 88G
Aivazyan 88
Grassler 88
Adamus 87B
Adamus 86C

HBC-RCBC
Agababyan 91
Atayan 91
Ajinenko 90C
Atayan 90

CERN-NA-023
EHS
Singh 91
Singh 91B
Dremin 90
Gemesy 90
Asai 89C
Aziz 88
Bailly 88
Bailly 88B
Bailly 88E
Bailly 87F

HBC-RCBC
Singh 91
Singh 91B
Gemesy 90

CERN-NA-024
CNTR
Demarzo 90

CERN-NA-027
HBC-LEBC-HYB
Appel 92
Aguilarbenit 91
Aguilarbenit 91B
Aguilarbenit 89
Aguilarbenit 88
Aguilarbenit 88B
Aguilarbenit 88C
Bailly 88C
Aguilarbenit 87
Aguilarbenit 87C
Aguilarbenit 87F
Aguilarbenit 87H
Bailly 87C
Bailly 87H

CERN-NA-028
EMC
Arneodo 92
Ashman 92
Ashman 92B
Virchaux 92
Ashman 91B
Roberts 91
Arneodo 89B
Nagy 89
Arneodo 88
Ashman 88

CERN-NA-031
CALO
Hsiung 92
Perdereau 92
Barr 91
Iconomidoufa 91
Kleinknecht 91
Serin 91B
Winstein 91
Barr 90
Barr 90C
Barr 90D
Carosi 90
Holder 90B
Kuno 90
Auge 89B
Barr 88

WIRE
Perdereau 92
Barr 91
Serin 91B
Barr 90

CERN-SPS

Barr 90C
Barr 90D
Carosi 90
Holder 90B
Kuno 90
Auge 89B
Barr 88

CERN-NA-031-2
CALO
Barr 92
Drell 92B
Serin 91
Barr 90B
Auge 89
Gibson 89
Burkhardt 88
Schaffer 88

WIRE
Barr 92
Drell 92B
Serin 91
Barr 90B
Auge 89
Gibson 89
Burkhardt 88
Schaffer 88

CERN-NA-032
ACCMOR
Appel 92
Barlag 92
Barlag 92B
Barlag 91
Spiegel 91
Barlag 90
Barlag 90B
Barlag 90C
Barlag 90D
Barlag 90E
Barlag 90F
Fawcett 90
Fawcett 90B
Barlag 89
Barlag 89B
Barlag 89C
Barlag 88
Barlag 88B
Barlag 88C
Barlag 88D

CERN-NA-034
HELIOS
Akesson 92B
Odyniec 91
Schukraft 91
Akesson 90G
Johansson 90B
Akesson 88B
Kluberg 88

CERN-NA-034-2
HELIOS
Akesson 92
Akesson 91
Vanhecke 91
Akesson 90
Akesson 90D
Akesson 90E
Akesson 90F
Akesson 89B
Akesson 89D
Akesson 89E
Akesson 88
Akesson 88C
Corriveau 88
Ramello 88
Schukraft 88
Schukraft 88B

CERN-NA-035
CALO
Bachler 92
Bachler 91
Bachler 91B
Baechler 91
Baechler 91B
Baechler 91C
Karabarbouni 91
Odyniec 91
Odyniec 91B
Schukraft 91
Bartke 90
Harris 90B
Bamberger 89
Odyniec 89

CERN-SPS

Pugh 89
Bamberger 88
Bamberger 88B
Bartels 88
Heck 88
Humanic 88
Pugh 88
Strobele 88
Vesztergombi 88

STRC
Bachler 92
Bachler 91
Bachler 91B
Baechler 91
Baechler 91B
Baechler 91C
Karabarbouni 91
Odyniec 91
Odyniec 91B
Schukraft 91
Bartke 90
Harris 90B
Bamberger 89
Odyniec 89
Pugh 89
Bamberger 88
Bamberger 88B
Bartels 88
Heck 88
Humanic 88
Pugh 88
Strobele 88
Vesztergombi 88

CERN-NA-036
CALO
Andersen 92
Odyniec 91B
Andersen 89
Barnes 88

WIRE
Andersen 92
Odyniec 91B
Andersen 89
Barnes 88

CERN-NA-037
EMC
Amaudruz 92
Amaudruz 92B
Arneodo 92
Botje 92
Milsztajn 92
Virchaux 92
Amaudruz 91
Amaudruz 91B
Amaudruz 91C
Amaudruz 91D
Amaudruz 91E
Amaudruz 91F
Roberts 91
Allasia 90B
Allasia 90C
Virchaux 90
Yokosawa 90B
Ashman 89
Ashman 88B
Ashman 88C

CERN-NA-038
SPEC
Abreu 91E
Baglin 91
Baglin 91B
Baglin 91C
Baglin 91D
Baglin 91E
Fredj 91
Odyniec 91
Odyniec 91B
Peralta 91
Schukraft 91
Baglin 90
Baglin 90B
Baldisseri 90
Abreu 89
Baglin 89
Sonderegger 89
Bussiere 88
Kluberg 88
Sonderegger 88

CERN-NA-039
SFSU-MILLIKAN
Matis 90B

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

CERN-SPS

	Calloway 89
CERN-NA-041	
SPEC	Boisgard 91
CERN-NA-044	
SPEC	Boggild 92
CERN-WA-001	
CDHS	Virchaux 92
	Choban 91
	Roberts 91
	Berge 89
CERN-WA-001-2	
CDHS	Rolandi 92
	Blondel 90
	Virchaux 90
	Loverre 88
CERN-WA-011	
GOLIATH	Antoniazzi 92
	Freudenreich 90
CERN-WA-018	
CHARM	Virchaux 92
	Dorenbosch 89
	Dorenbosch 87
CERN-WA-018-2	
CHARM	Rolandi 92
	Geiregat 90
	Geiregat 90B
	Allaby 89
	Allaby 88
	Allaby 88C
	Loverre 88
CERN-WA-021	
HBC-BEBC-HYB	Asratyan 92
	Virchaux 92
	Jones 91
	Jones 91B
	Jones 91C
	Borner 90
	Bosetti 90
	Jones 90
	Jones 89B
	Jones 89C
CERN-WA-025	
DBC-BEBC	Arneodo 92
	Asratyan 92
	Virchaux 92
	Roberts 91
	Tenner 91
	Allasia 90
	Jongejans 89
	Allasia 88
	Allasia 88B
	Tenner 88
DBC-BEBC-HYB	Verluyten 91
	Allasia 88C
CERN-WA-038	
OTHER	Virodov 89
CERN-WA-039	
OMEGA	Freudenreich 90
CERN-WA-042	
SPEC	Schneider 90
CERN-WA-056	
OMEGAPRIME	Perepelitsa 91
	Perepelitsa 90
CERN-WA-057	
OMEGAPRIME	Landsberg 90
	Atkinson 88
CERN-WA-059	
HLBC-15FT-HYB	Asratyan 90
HLBC-BEBC	Arneodo 92
	Asratyan 92
	Choban 91
	Marage 91
	Roberts 91
	Willocq 91
	Asratyan 90
	Berggren 90
	Allport 89
	Guy 89
	Marage 89
	Matsinos 89
	Wittek 89
	Wittek 88
HLBC-BEBC-HYB	Verluyten 91
CERN-WA-066	
HLBC-BEBC-HYB	Coopersarkar 91

CERN-SPS

CERN-WA-069	
OMEGA	Apsimon 92
	Apsimon 92B
	Gebert 92
	Apsimon 91
	Apsimon 91B
	Fiedler 91
	Hofmann 91
	Apsimon 90
	Apsimon 90B
	Apsimon 90C
	Hoeger 90
	Apsimon 89
	Dieter 89
	Holzkamp 88
	Korsgen 88
	Rotscheidt 88
CERN-WA-070	
OMEGA	Durieux 91
	Bonvin 90
	Bonvin 90B
	Bonesini 89
	Bonesini 89B
	Bonvin 89
	Bonesini 88
	Bonesini 88B
CERN-WA-074	
OMEGA	Yokosawa 90B
CERN-WA-075	
EMUL	Aoki 92
	Appel 92
	Aoki 91B
	Aoki 91C
	Aoki 89
	Romano 89
	Aoki 88
CERN-WA-076	
OMEGA	Armstrong 92
	Armstrong 91
	Armstrong 91C
	Armstrong 91E
	Armstrong 90
	Armstrong 90B
	Prokoshkin 90
	Armstrong 89
	Armstrong 89B
	Armstrong 89C
	Armstrong 89D
	Armstrong 89E
	Armstrong 89F
	Armstrong 88
CERN-WA-078	
SPEC	Appel 92
	Catanesi 89
	Catanesi 88
	Cobbaert 88
	Cobbaert 88B
CERN-WA-079	
CHARM-II	Vilain 93
	Rolandi 92
	Vilain 92
	Geiregat 91
	Lippich 90
	Geiregat 89
CERN-WA-080	
PLASTIC-BALL	Albrecht 92L
	Eklund 92
	Kampert 92
	Schmidt 92
	Albrecht 91
	Albrecht 91H
	Albrecht 91O
	Eklund 91
	Odyniec 91B
	Albrecht 90C
	Albrecht 90F
	Albrecht 89D
	Albrecht 89M
	Lund 89
	Albrecht 88
	Albrecht 88B
	Franz 88B
	Kluberg 88
	Lohner 88
	Lund 88

CERN-SPS

	Otterlund 88B
	Schmidt 88
	Sorensen 88
	Schmidt 87
CERN-WA-082	
OMEGA	Adamovich 92
	Appel 92
	Adamovich 91D
	Adamovich 91E
CERN-WA-085	
OMEGAPRIME	Evans 92
	Abatzis 91
	Abatzis 91B
	Kinson 91
	Odyniec 91
	Odyniec 91B
	Schukraft 91
	Abatzis 90
	Abatzis 90B
CERN-WA-087	
PLASTIC	Brechtmann 88
	Brechtmann 88B
	Hoffmann 88
CERN-WA-089	
OMEGA	Buenerd 92
—	
MANY	Jacob 91
	Ritter 88

CESR

CESR-CLEO	
CLEO	Aleem 92
	Crawford 92
	Drell 92
	Drell 92B
	Rolandi 92
	Trischuk 92
	Akerib 91
	Ammar 91
	Ammar 91B
	Bortoletto 91
	Brock 91
	Crawford 91
	Crawford 91B
	Daoudi 91
	Gittelman 91
	Henderson 91
	Henderson 91B
	Kubota 91
	Morrison 91B
	Procario 91
	Abe 90H
	Alexander 90
	Alexander 90B
	Alexander 90C
	Avery 90
	Avery 90B
	Avery 90C
	Bortoletto 90
	Bowcock 90
	Cassel 90
	Fujii 90
	Fulton 90
	Gan 90
	Goldberg 90
	Gray 90
	Kinoshita 90
	Kroha 90
	Miller 90
	Alam 89
	Alam 89B
	Alexander 89
	Artuso 89C
	Avery 89B
	Avery 89C
	Bebek 89
	Bethke 89
	Bortoletto 89
	Bortoletto 89B
	Bowcock 89
	Bowcock 89B
	Chen 89
	Chen 89B
	Chen 89C
	Drell 89

CESR

	Fulton 89
	Fulton 89B
	Fulton 89C
	Halling 89
	Jensen 89
	Kreinick 89
	Miller 89
	Mistry 89
	Schubert 89
	Bortoletto 88
	Bowcock 88
	Haas 88
CLEO-II	Akerib 92
	Alam 92
	Alexander 92
	Artuso 92
	Avery 92
	Battle 92
	Bean 92
	Bean 92B
	Bortoletto 92
	Butler 92
	Drell 92
	Heltsley 92
	Procario 92
	Procario 92B
	Sanghera 92
CESR-CUSB	
CUSB	Bethke 89
CESR-CUSB-II	
CUSB-II	Heintz 91
	Narain 91
	Wu 91
	Yanagisawa 91
	Leefranzini 90
	Narain 90
	Bethke 89
	Kaarsberg 89

CIT-PELLETRON

—	
PLASTIC	Savage 88C

COLU-CYC

—	
CNTR	Farley 89

COSM

FNAL-770	
LAB-E	Sakumoto 92
UNDERGROUND-FREJUS	
FREJUS	Beier 92
	Monch 91
	Perdereau 91
	Berger 90
	Berger 90C
	Pierre 90
	Berger 89B
	Longuemare 89
	Perdereau 89
	Perdereau 89B
	Berger 88D
	Longuemare 88
UNDERGROUND-IMB	
IMB	Beckerszendy 92
	Enqvist 92
	Pierre 90
	Gajewski 89
	Losecco 89
	Bionta 88
UNDERGROUND-IMB-3	
IMB-III	Beier 92
	Totsuka 92
	Beckerszendy 91
	Casper 90
UNDERGROUND-KAMIOKANDE-I	
KAMIOKANDE-I	Beier 92
	Hirata 91C
UNDERGROUND-KAMIOKANDE-II	
KAMIOKANDE-II	Beier 92
	Hirata 92
	Totsuka 92
	Hirata 91
	Hirata 91C

COSM

	Mori 91B
	Mori 91C
	Munakata 91
	Yamada 91
	Hirata 90
	Hirata 90B
	Kajita 90
	Mori 90
	Pierre 90
	Suzuki 90
	Totsuka 90
	Hirata 89
	Hirata 89B
	Hirata 89C
	Hirata 89D
	Suzuki 89
	Takita 89B
	Totsuka 89B
	Hirata 88B
	Hirata 88C
	Hirata 88D
	Hirata 88E
	Zhang 88
UNDERGROUND-KGF	
KGF	Adarkar 91
UNDERGROUND-MACRO	
EAS-TOP	Aglietta 90
	Bellotti 89E
MACRO	Ahlen 92
	Ahlen 92B
	Aglietta 90
	Ahlen 90
	Bellotti 90
	Bellotti 89C
	Bellotti 89E
	Bellotti 89F
	Bellotti 89H
	Klein 89B
UNDERGROUND-MATSHUSHIRO	
MATSUSHIRO	Munakata 91
UNDERGROUND-NUSEX	
NUSEX	Aglietta 91
	Aglietta 89
	Aglietta 89B
	Aglietta 89C
UNDERGROUND-SOUDAN-I	
SOUDAN-I	Dasgupta 90
	Bartelt 87
UNDERGROUND-SOUDAN-II	
SOUDAN-II	Thron 92
	Thomson 91
	Allison 90
	Allison 89
	Allison 89B
	Kochocki 89
—	
ANI	Avakyan 91D
BAKSAN	Bakatanov 92
	Bakatanov 88
CALO	Ashitkov 91
	Melku 91
CNTR	Amenomori 92
	Bacci 92
	Bacci 92B
	Baillon 92
	Enomoto 92
	Enomoto 92B
	Bacci 91
	Enomoto 91
	Enomoto 91B
	Tonwar 91
	Bezrukov 90
	Buckland 90
	Cutler 90
	Freudenreich 90B
	Gerbier 90
	Saito 90
	Domogatsky 89
	Efimov 89
	Enomoto 89
	Zatsepin 89
COMB	Nikolsky 92
	Arabkin 90
	Dzhaoshvili 90
	Dzhaoshvili 88

COSM

	Dzhaoshvili 88B
CYGNUS	Dingus 88
EMUL	Apanasenko 92
	Ivanenko 92
	Wilczynska 90
	Gagarin 89
	Kawamura 89
	Chilingarian 88
	Gladyszdziad 88
	Navia 88
	Ren 88
	Ren 88B
	Ren 88C
FLYSEYE	Baltrusaitis 88
IMB	Dodelson 92
KAMIOKANDE-II	Dodelson 92
MANY	Danilova 92
	Sokolsky 92
	Barish 91
	Totsuka 91
	Basdevant 90
	Fayet 89
	Totsuka 89
	Caldwell 88C
	Suzuki 88
OSPK	Efimov 89
OTHER	Gardner 91
	Huber 91
	Bermon 90
	Bershady 90
	Ghosh 90C
	Hagmann 90
	Huber 90
	Wuensch 89
	Liu 88B
	Moskowitz 88
PION	Avakyan 91B
	Avakyan 91C
	Avakyan 90D
	Avakyan 89B
	Avakyan 89C
PLASTIC	Nakamura 91
	Orito 91
SEMI	Ahlen 88
SMM	Vonfeilitzsc 88
SOKOL	Grigorov 90
	Grigorov 89B
	Grigorov 89C
	Ivanenko 89
	Ivanenko 88B
SPEC	Melku 91
	Dyakonov 89
	Dubovy 88
	Vashkevich 88

COSM-CYGNUS-X-3

UNDERGROUND-KAMIOKANDE-II	
KAMIOKANDE-II	Oyama 88
UNDERGROUND-MACRO	
MACRO	Bellotti 89G
UNDERGROUND-NUSEX	
NUSEX	Aglietta 89C
UNDERGROUND-SOUDAN-I	
SOUDAN-I	Johns 89
UNDERGROUND-SOUDAN-II	
SOUDAN-II	Kochocki 90
—	
CALO	Muraki 90
CNTR	Amenomori 92
	Lawrence 89
	Teshima 89
FLYSEYE	Ciampa 90
	Cassiday 89
	Cassiday 89B
MANY	Arpesella 88B
	Bonnetbidaud 88
PION	Avakyan 88B

COSM-HERCULES-X-1

—	
CNTR	Amenomori 92
CYGNUS	Haines 90
	Dingus 88B

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

COSM-LMC-X-4
UNDERGROUND-KAMIOKANDE-II
KAMIOKANDE-II Oyama 88

COSM-PULSAR
—
CASA-MIA Cronin 92
OTHER Cocconi 88

COSM-SN1987A
UNDERGROUND-IMB
IMB Mayle 92
Mukhopadhyay 91
Haines 88
UNDERGROUND-KAMIOKANDE-II
IMB Raffelt 90
KAMIOKANDE-II Hirata 92
Mayle 92
Mukhopadhyay 91
Raffelt 90
Hirata 88F
Oyama 88B
—
BAKSAN Alekseev 88C
BBR Bond 89
Tanimori 89
Bond 88B
MANY Schaeffer 90
Vandervelde 89
Anada 88
Barbieri 88B
Lattimer 88
Turner 88
Goldman 87C
Mayle 87
SMM Vonfeilitzsc 88
SMM-GRS Chupp 89
Kolb 89
SPASE Gaisser 89

COSM-SUN
BNL-805
OTHER Lazarus 92
Nezrick 92
WIRE Lazarus 92
Nezrick 92
UNDERGROUND-FREJUS
FREJUS Berger 88D
UNDERGROUND-GALLEX
GALLEX Anselmann 92
Anselmann 92B
Spiro 92
UNDERGROUND-HOMESTAKE
HOMESTAKE Pierre 90
Suzuki 90B
UNDERGROUND-KAMIOKANDE
KAMIOKANDE-I Sato 90
UNDERGROUND-KAMIOKANDE-II
IMB Enqvist 92
KAMIOKANDE-II Anselmann 92B
Enqvist 92
Hirata 92
Kihara 92
Spiro 92
Totsuka 92
Hirata 91B
Mori 91
Raychaudhuri 91
Suzuki 91B
Suzuki 91C
Hirata 90
Hirata 90B
Hirata 90C
Kajita 90
Lim 90
Nakahata 90
Pierre 90
Sato 90
Suzuki 90
Suzuki 90B
Totsuka 90
Hirata 89
Hirata 89B
Hirata 89C
Hirata 89D

COSM-SUN
Suzuki 89
Totsuka 89B
Hirata 88C
Hirata 88E
UNDERGROUND-SAGE
SAGE Spiro 92
Abazov 91
Pierre 90
—
BNL-SND Anselmann 92B
Davis 90
Fukugita 90
Nakahata 90
Davis 88B
CNTR Spiro 92
Huo 90
KAMIOKANDE-II Fukugita 90
MANY Gates 91
Caldwell 88B

DARE-NINA
—
SAS Arneodo 92
SPEC Vapenikova 88

DARM-LINAC
—
SPEC Blagus 91

DESY
?
SAS Arneodo 92

DESY-DORIS
DESY-DORIS-ARGUS
ARGUS Rolandi 92
DESY-DORIS-DASP
DASP Perl 90
DESY-DORIS-PLUTO
PLUTO Gan 90

DESY-DORIS-II
DESY-DORIS-ARGUS
ARGUS Albrecht 93
Albrecht 92
Albrecht 92B
Albrecht 92C
Albrecht 92D
Albrecht 92E
Albrecht 92F
Albrecht 92G
Albrecht 92H
Albrecht 92I
Albrecht 92J
Albrecht 92K
Albrecht 92M
Albrecht 92N
Albrecht 92O
Albrecht 92P
Albrecht 92Q
Albrecht 92R
Albrecht 92S
Aleem 92
Bryman 92
Drell 92B
Albrecht 91B
Albrecht 91C
Albrecht 91D
Albrecht 91E
Albrecht 91F
Albrecht 91G
Albrecht 91I
Albrecht 91J
Albrecht 91K
Albrecht 91L
Albrecht 91M
Albrecht 91N
Albrecht 91P
Cronstrom 91
Gittelman 91
Herrera 91
Mai 91
Schafer 91
Albrecht 90

DESY-DORIS-II
Albrecht 90B
Albrecht 90D
Albrecht 90E
Albrecht 90G
Albrecht 90H
Albrecht 90I
Albrecht 90J
Albrecht 90K
Albrecht 90L
Albrecht 90M
Cassel 90
Degtyarenko 90
Fujii 90
Gan 90
Kroha 90
Miller 90
Tsipolitis 90
Albrecht 89
Albrecht 89B
Albrecht 89C
Albrecht 89E
Albrecht 89F
Albrecht 89G
Albrecht 89H
Albrecht 89I
Albrecht 89J
Albrecht 89K
Albrecht 89L
Albrecht 89N
Albrecht 89O
Albrecht 89P
Albrecht 89Q
Albrecht 89R
Albrecht 89S
Albrecht 89T
Albrecht 89U
Albrecht 89V
Albrecht 89W
Albrecht 89X
Bethke 89
Danilov 89
Degtyarenko 89
Harder 89
Schubert 89
Albrecht 88C
Albrecht 88D
Albrecht 88E
Albrecht 88F
Albrecht 88G
Albrecht 88H
Albrecht 88I
Albrecht 88J
Albrecht 88K
Albrecht 88L
Albrecht 88M
Albrecht 88N
Albrecht 88O
Albrecht 88P
Albrecht 88Q
Albrecht 88R
Albrecht 88S
Albrecht 88T
Albrecht 87N
DESY-DORIS-CRYSTAL-BALL
CRYS-BALL Bienlein 92
Antreasyan 91
Antreasyan 91B
Bienlein 91
Bizzeti 91
Karch 91
Karch 91B
Karch 91C
Kobel 91
Lesiak 91
Antreasyan 90
Antreasyan 90B
Antreasyan 90C
Bieler 90
Bienlein 90
Feindt 90B
Jakubowski 90
Janssen 90
Karch 90
Karch 90B
Marsiske 90

DESY-DORIS-II

	Morgan 90
	Bethke 89
	Janssen 89
	Maschmann 89
	Schutte 89
	Wachs 89
	Bienlein 88
	Fairfield 88
	Jakubowski 88
	Keh 88B
	Schmitt 88
	Williams 88
DESY-DORIS-LENA	
LENA	Abe 90H

DESY-HERA

DESY-HERA-H1	
H1	Deroeck 93
	Ahmed 92B
	Ahmed 92C
	Ahmed 92D
	Ahmed 92E
	Eisele 92
	Wolf 92
DESY-HERA-ZEUS	
ZEUS	Deroeck 93
	Derrick 93
	Derrick 92
	Derrick 92B
	Derrick 92C
	Wolf 92

DESY-PETRA

DESY-PETRA-CELLO	
CELLO	Aleem 92
	Bryman 92
	Kroha 92
	Behrend 91
	Bethke 91
	Harjes 91
	Harjes 91B
	Podobrin 91
	Behrend 90
	Behrend 90B
	Behrend 90C
	Behrend 90D
	Behrend 90E
	Behrend 90F
	Feindt 90B
	Fujii 90
	Gan 90
	Kroha 90
	Kroha 90B
	Kroha 90C
	Lumsdon 90
	Perl 90
	Peters 90
	Behrend 89
	Behrend 89B
	Behrend 89C
	Behrend 89D
	Behrend 89E
	Behrend 89F
	Behrend 89G
	Behrend 89H
	Behrend 89I
	Behrend 89J
	Bethke 89
	Deboer 89
	Feindt 89
	Kroha 89B
	Behrend 88
	Behrend 88B
	Behrend 88C
	Behrend 88D
	Behrend 88E
	Behrend 88F
	Behrend 88G
	Feindt 88
DESY-PETRA-JADE	
JADE	Aleem 92
	Kroha 92
	Bethke 91
	Magnussen 91
	Pust 91

DESY-PETRA

	Elsen 90
	Fujii 90
	Hagemann 90
	Kroha 90
	Kroha 90B
	Kroha 90C
	Oest 90
	Oest 90B
	Wegner 90
	Bethke 89
	Deboer 89
	Greenshaw 89
	Hegner 89
	Hill 89
	Kleinwort 89
	Ouldsaada 89
	Pitzl 89
	Bethke 88
	Feindt 88
	Ouldsaada 88
DESY-PETRA-MARK-J	
MARK-J	Bethke 91
	Kroha 90
	Deboer 89
	Adeva 88
DESY-PETRA-PLUTO	
PLUTO	Aleem 92
	Kroha 92
	Bethke 91
	Kroha 90
	Kroha 90B
	Kroha 90C
	Deboer 89
	Berger 88
	Berger 88B
	Feindt 88
	Ferrarotto 88
DESY-PETRA-TASSO	
TASSO	Aleem 92
	Kroha 92
	Bethke 91
	Braunschweig 90
	Braunschweig 90B
	Braunschweig 90C
	Fujii 90
	Kroha 90
	Kroha 90B
	Kroha 90C
	Bethke 89
	Braunschweig 89
	Braunschweig 89B
	Braunschweig 89C
	Braunschweig 89D
	Braunschweig 89E
	Braunschweig 89F
	Braunschweig 89G
	Braunschweig 89H
	Braunschweig 89I
	Braunschweig 89J
	Braunschweig 89K
	Braunschweig 89L
	Braunschweig 89M
	Deboer 89
	Genser 89
	Jocksch 89
	Braunschweig 88
	Braunschweig 88B
	Braunschweig 88C
	Braunschweig 88D
	Braunschweig 88E
	Braunschweig 88F
	Braunschweig 88G
	Braunschweig 88H
—	
CELLO	Odaka 90
JADE	Odaka 90
MANY	Abe 90H
	Ouldsaada 88B
MARK-J	Odaka 90
PLUTO	Odaka 90
TASSO	Odaka 90

DGSI

—	
ALADIN	Hubele 91

DGSI

	Kienle 90
LAND	Kienle 90
PLASTIC	Kienle 90
TAPS	Berg 91
	Kienle 90

DGSI-UNILAC

—	
EPOS	Pokotilovsky 93
	Bokemeyer 91
	Bokemeyer 90
	Salabura 90
	Salabura 90B
	Bokemeyer 89
	Bokemeyer 88
ORANGE	Pokotilovsky 93
	Bokemeyer 91
	Tsertos 91B
	Bokemeyer 90
	Bokemeyer 88
SPEC	Oberstedt 92
	Charity 90
	Kramer 90
	Koenig 89
	Rosch 89
	Charity 88B
	Stege 88
TORI	Pokotilovsky 93
WIRE	Polikanov 90

DUOPLASMATRON

ATOMIC-PNC-MICHIGAN	
PHOTON	Bouchiat 90

ETHZ

—	
SPEC	Elsener 88

FNAL

?	
DBC-30IN	Bhattacharje 90
	Bhattacharje 89B
	Bhattacharje 89C
EMUL	Bunyatov 92
	Nasr 92
	Abduzhamilov 91
	Aggarwal 91
	Bobodjanov 91
	Gorichev 91
	Lyukov 89
	Abduzhamilov 88
	Boos 88B
	Jain 88
	Shivpuri 88
	Shivpuri 88B
	Takibaev 88
HLBC-30IN	Edgorov 92
	Artykov 90
	Artykov 90B
	Yuldashev 90
	Yuldashev 90B
	Yuldashev 90C
	Yuldashev 90D
	Alimov 89
	Alimov 89B
	Alimov 88
FNAL-021A	
CITF	Choban 91
FNAL-053A	
HLBC-15FT	Baker 89
FNAL-053B	
HLBC-15FT	Baker 91
	Baker 90
FNAL-069A	
SAS	Pumplin 92
FNAL-138	
HBC-30IN	Okusawa 88
FNAL-141	
HBC-30IN	Dremin 90
	Baldin 88B
FNAL-180	
HLBC-15FT	Asratyan 92
	Ammosov 88
	Ammosov 88C
	Asratyan 87C

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

FNAL

FNAL-203A
MMS — Virchaux 92
FNAL-288
DAS — Freudenreich 90
FNAL-299
HBC-30IN-HYB — Arena 92, Boca 92
FNAL-310
HPWF — Choban 91
FNAL-326
COMB — Freudenreich 90
FNAL-398
CCS — Virchaux 92
FNAL-401
SPEC — Busennitz 89
FNAL-444
CCS — Freudenreich 90
FNAL-448
CCS — Arneodo 92
FNAL-466
CNTR — Klingensmith 88
FNAL-497
WIRE — Lach 90
FNAL-515
SPEC — Mooney 89
FNAL-531
COMB — Pierre 90, Ushida 88, Ushida 88B
FNAL-537
SPEC — Freudenreich 90, Tzamarias 90, Anassontzis 87
FNAL-545
DBC-15FT — Cole 88
FNAL-546
HLBC-15FT-HYB — Ballagh 89, Ballagh 86
FNAL-555
SPEC — Yokosawa 90B, Lundberg 89, Luk 88
FNAL-564
HLBC-15FT-HYB — Ammosov 92, Batusov 90C, Batusov 90E, Pierre 90, Ammar 89, Ammar 89B, Batusov 89B, Ammar 88, Batusov 88C, Batusov 87
FNAL-565
HBC-30IN-HYB — Abe 88
FNAL-570
HBC-30IN-HYB — Brick 92, Brick 90, Brick 89
FNAL-580
FMPS — Joyner 89
FNAL-584
SPEC — Bernstein 88
FNAL-594
FMM — Mattison 90, Mukherjee 86
FNAL-597
HBC-30IN-HYB — Walker 91
FNAL-605
SPEC — Moreno 91, Jaffe 89
FNAL-609
CALO — Corcoran 91, Moore 90, Miettinen 88
FNAL-613
CALO — Duffy 88
FNAL-615
SPEC — Freudenreich 90, Conway 89, Heinrich 89
FNAL-616
LAB-E — Virchaux 92

FNAL

FNAL-619
SPEC — Dworkin 90, James 90
FNAL-620
SPEC — Lach 90
FNAL-663
SPEC — Yokosawa 90B
FNAL-701
LAB-E — Roberts 91, Auchincloss 90, Reutens 90
FNAL-715
COMB — Lach 90, Trost 89, Hsueh 88
FNAL-733
CALO — Strongin 91
FNAL-744
LAB-E — Mishra 89
FNAL-756
SPEC — Duryea 91, Ho 91
FNAL-769
TPS — Alves 92, Alves 92B, Appel 92, Thorne 92, Spiegel 91, Errede 90

FNAL-AA

FNAL-760
CALO — Armstrong 92C, Armstrong 92D, Armstrong 92E, Armstrong 92G, Lipton 92, Ray 92, Smith 92C, Armstrong 91B, Armstrong 91D, Spiegel 91
CNTR — Armstrong 92C, Armstrong 92D, Armstrong 92E, Armstrong 92G, Lipton 92, Ray 92, Smith 92C, Armstrong 91B, Armstrong 91D, Spiegel 91

FNAL-COLLIDER

?
PLASTIC — Bertani 90
FNAL-710
CNTR — Amos 92, Amos 92B, Pumplin 92, Amos 91, Amos 91B, Rubinstein 91, Shukla 91, Shukla 91B, Amos 90, Amos 90B, Rubinstein 90, Amos 89, Nodulman 89, Amos 88
DRIFT — Amos 92, Amos 92B, Pumplin 92, Amos 91, Amos 91B, Rubinstein 91, Shukla 91, Shukla 91B, Amos 90, Amos 90B, Rubinstein 90, Amos 89, Nodulman 89

FNAL-COLLIDER

Amos 88
FNAL-713
PLASTIC — Price 90
FNAL-735
SPEC — Alexopoulos 92, Lindsey 91, Odyniec 91B, Alexopoulos 90B, Turkot 90, Banerjee 89, Nodulman 89, Alexopoulos 88B, Turkot 88
FNAL-740
D0 — Gobbi 92, Madaras 92
FNAL-741
CDF — Abe 92, Abe 92B, Abe 92C, Abe 92D, Abe 92E, Abe 92F, Abe 92G, Abe 92H, Abe 92I, Abe 92J, Abe 92K, Barbarogalti 92, Behrends 92, Boswell 92, Flaugher 92, Flaugher 92B, Fuess 92, Gauthier 92, Gold 92, Grassmann 92, Harris 92, Harris 92B, Huffman 92, Incagli 92, Keeble 92, Keeble 92B, Leone 92, Lipton 92, Maeshima 92, Markeloff 92, Moulding 92, Papadimitrio 92, Rimondi 92, Rimondi 92B, Rodrigo 92, Rolandi 92, Sinervo 92, Vejcik 92, Yeh 92, Abe 91, Abe 91B, Abe 91C, Abe 91D, Abe 91E, Abe 91F, Abe 91G, Abe 91H, Abe 91I, Abe 91J, Abe 91K, Abe 91L, Abe 91M, Abe 91N, Abe 91O, Barbarogalti 91, Bethke 91, Buckleygeer 91, Campagnari 91, Contreras 91, Flauger 91, Fuess 91, Giannetti 91, Gold 91, Harris 91, Hidaka 91, Kuhlmann 91, Laasanen 91, Leone 91

FNAL-COLLIDER

Liss 91
Plothowbesch 91
Plunkett 91
Sansoni 91
Sliwa 91
Song 91
Wainer 91
Wainer 91B
Wenzel 91
White 91
Winer 91B
Winer 91C
Abe 90B
Abe 90G
Abe 90I
Abe 90J
Abe 90K
Abe 90L
Barbarogalti 90
Beretvas 90
Binkley 90
Contreras 90
Dellorso 90
Dellorso 90B
Flaugher 90
Frisch 90
Geer 90
Giannetti 90
Gladney 90
Gonzalezgarc 90
Harris 90
Hauser 90
Hessing 90
Hurst 90
Leone 90
Liss 90
Rimondi 90
Scarha 90
Sliwa 90
Watts 90
Yeh 90
Yun 90
Abe 89
Abe 89B
Abe 89C
Abe 89D
Abe 89G
Abe 89H
Abe 89L
Abe 89M
Abe 89N
Abe 89O
Abe 89Q
Abe 89R
Abe 89S
Abe 89T
Blair 89
Freeman 89
Geer 89
Hubbard 89B
Kamon 89
Kuhlmann 89
Nodulman 89
Paoletti 89
Pauss 89
Plunkett 89
Rimondi 89
Sinervo 89
Skarha 89
Smith 89
Tonelli 89
Wagner 89
Abe 88C
Tonelli 88

FNAL-TEV

CERN-WA-078
- ACCMOR — Rossi 89
- HBC-LEBC-HYB — Rossi 89
- SPEC — Rossi 89
- TPS — Rossi 89

FNAL-400
- SPEC — Shipbaugh 88B, Cumalat 87

FNAL-TEV

FNAL-508
- EMUL — Abduzhamilov 89, Holynski 89B, Abduzhamilov 88B, Abduzhamilov 88C, Barbier 88

FNAL-581-704
- CALO — Yokosawa 92, Adams 91, Adams 91B, Adams 91C, Adams 91D, Yokosawa 91, Yokosawa 90B, Akchurin 89, Nurushev 89, Underwood 89
- PHOTON SPEC — Yokosawa 91, Yokosawa 92, Adams 91, Adams 91B, Adams 91C, Adams 91D, Yokosawa 91, Yokosawa 90B, Akchurin 89, Nurushev 89, Underwood 89

FNAL-605
- SPEC — Straub 92, Straub 92B, Freudenreich 90, Brown 89, Jaffe 89, Yoshida 89, Jaffe 88

FNAL-615
- SPEC — Freudenreich 90

FNAL-632
- HLBC-15FT-HYB — Willocq 92, Willocq 92B, Jain 90C, Aderholz 89

FNAL-653
- EMUL — Appel 92, Drell 92B, Kodama 92, Kodama 92B, Kodama 92C, Kodama 92D, Kodama 91, Kodama 91B, Kodama 91C, Spiegel 91
- SPEC — Appel 92, Drell 92B, Kodama 92, Kodama 92B, Kodama 92C, Kodama 92D, Kodama 91, Kodama 91B, Kodama 91C, Spiegel 91

FNAL-665
- CCM — Adams 92B, Adams 92C, Adams 92D, Arneodo 92, Morfin 92, Salgado 92, Adams 91E, Salgado 91, Schellman 91B, Aid 90, Halliwell 90, Lubatti 90, Magill 90, Schmitt 90, Wolbers 90

FNAL-672
- FMPS — Spiegel 91, Kartik 90, Sambamurti 90, Stewart 90

FNAL-TEV

FNAL-687
- SPEC — Drell 92B, Frabetti 92, Frabetti 92B, Frabetti 92C, Frabetti 92D, Frabetti 92E, Shukla 92, Shukla 92B, Frabetti 91, Spiegel 91, Buchholz 90, Buchholz 90B, Frabetti 90, Ratti 90, Shephard 90

FNAL-691
- TPS — Anjos 92, Anjos 92B, Anjos 91, Anjos 91B, Anjos 91C, Anjos 91D, Spiegel 91, Anjos 90, Anjos 90B, Anjos 90C, Anjos 90D, Anjos 90E, Anjos 89, Anjos 89B, Anjos 89C, Anjos 88, Anjos 88B, Anjos 88C, Anjos 88D, Anjos 88E, Anjos 88F, Anjos 88G, Witherell 88, Anjos 87B, Raab 87

FNAL-704
- SPEC — Adams 92E, Adams 91F, Yokosawa 91, Carey 90, Yokosawa 90, Yokosawa 90B, Bonner 88B

FNAL-705
- SPEC — Antoniazzi 92, Antoniazzi 92B

FNAL-706
- FMPS — Abramov 91B, Alverson 91, Alverson 91B, Engels 90, De 89

FNAL-711
- CALO — Boca 90, Streets 89
- SPEC — Boca 90, Streets 89

FNAL-731
- SPEC — Graham 92, Hsiung 92, Ramberg 92, Ramberg 92B, Somalwar 92, Barker 91, Kleinknecht 91, Papadimitrio 91, Ramberg 91, Winstein 91, Barker 90, Hsiung 90, Hsiung 90B, Karlsson 90, Kuno 90, Patterson 90, Yamanaka 90, Papadimitrio 89, Winstein 89, Yamanaka 89

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

FNAL-TEV

	Gibbons 88
	Hsiung 88
	Woods 88
FNAL-743	
FMPS	Appel 92
	Ammar 88B
HBC-LEBC-HYB	Appel 92
	Ammar 88B
FNAL-744	
LAB-E	Foudas 88
	Foudas 88B
	Schumm 88
FNAL-745	
HLBC-1M	Kitagaki 88
FNAL-747	
SFSU-MILLIKAN	Matis 88
FNAL-750	
EMUL	Shivpuri 91
FNAL-751	
EMUL	Sengupta 90
FNAL-756	
SPEC	Luk 93
	Duryea 92
	Diehl 91
	Ho 90
	Lach 90
FNAL-761	
SPEC	Chen 92B
	Foucher 92
	Foucher 91
TRAD	Chen 92B
	Foucher 92
	Foucher 91
FNAL-770	
LAB-E	Rabinowitz 93
	Bodek 92
	Mishra 92
	Sandler 92
	Smith 92B
	Mishra 91
	Debarbaro 90
	Debarbaro 90B
	Foudas 90
	Mishra 90B
	Mishra 89B
FNAL-772	
SPEC	Arneodo 92
	Mcgaughey 92
	Alde 91
	Alde 91D
	Leitch 91
	Spiegel 91
	Alde 90B
	Alde 90C
	Guo 89
	Kaplan 89
FNAL-774	
SPEC	Bross 89
FNAL-789	
SPEC	Peng 92
	Mishra 90
FNAL-792	
PHOTON	Sihver 92
FNAL-799	
CALO	Drell 92B
SPEC	Drell 92B
FNAL-800	
SPEC	Yokosawa 91
—	
MANY	Lipton 92

GANIL

—	
CNTR	Julien 91
	Erazmus 88
COMB	Bougault 90
EMUL	Jakobsson 90
LISE	Bazin 90
	Guillemaudmu 90
PHOTON	Kwatonjock 88
PLASTIC	Sullivan 90
SCINT	Erazmus 90
	Jiang 89
	Erazmus 88

GANIL

	Kwatonjock 88
SPEC	Moisan 92
	Riisager 92
	Stuttge 92
	Morjean 91
	Villari 91
	Ardouin 90
	Barbera 90
	Durand 90
	Jacoquet 90
	Peter 90
	Steckmeyer 89
	Granier 88
	Rousselchoma 88
SPEG	Beene 90
	Braeunig 90
	Suomijarvi 90
	Suomijarvi 89

GIES-LINAC

—	
SEMI	Gobel 92

GRON-CYC

—	
CNTR	Klinken 88

ILL

—	
CNTR	Debevec 92
WIRE	Debevec 92

IND-CYC

—	
CNTR	Klomp 91
	Knutson 91
	Meyer 90
PHOTON	Clauton 92
	Clauton 92B
SPEC	Homolka 92
	Meyer 92
	Przewoski 92
	Zhang 92
WIRE	Meyer 90

INRU-240

—	
CNTR	Dubar 89

ISTU-PELLETRON

—	
CNTR	Widmann 91

ITEP

?	
EMUL	Berdnikov 92
	Berdnikov 91
	Berdnikov 91B
	Berdnikov 91C
HLBC-180LIT	Bekmirzaev 91
	Strugalski 91
	Strugalski 91B
	Strugalski 91C
	Zielinska 91
	Grishin 90B
	Strugalski 90
	Abdurakhimov 88B
	Grishin 88
	Pluta 88
	Pluta 88B
	Strugalski 88B
	Strugalski 88C
HLBC-DIANA	Barmin 90D
SPEC	Abramov 92
	Abramov 91F
ITEP-761	
HLBC-180LIT	Barmin 88B
	Barmin 87
ITEP-762	
MTS	Abramov 90B
	Abramov 89B
	Abramov 88
ITEP-763	
HBC-2M	Aleshin 92
	Aleshin 92B

ITEP

	Amelin 92
	Brovkin 92
	Brovkin 91B
	Brovkin 91C
	Brovkin 90
	Andryakov 89
	Brovkin 89
	Drutskoy 89
	Drutskoy 88
	Perepelitsa 88
	Aleshin 87D
	Andryakov 87
HLBC-2M	Kiselevich 92
	Kiselevich 92B
	Amelin 91
ITEP-764	
MTS	Abramov 91E
ITEP-771	
NHS	Gavrilov 89
	Vorobiev 89B
	Vorobiev 88D
ITEP-782	
HBC-80CM	Abdullin 90
	Abdullin 90B
	Abdullin 90C
	Abdullin 90D
	Blinov 90B
	Abdullin 89
	Abdullin 89B
	Abdullin 89C
	Abdullin 89D
	Abdullin 89E
	Abdullin 89F
	Abdullin 89G
	Abdullin 89H
	Abdullin 88
	Abdullin 88B
	Abdullin 88C
	Abdullin 88D
	Blinov 88
ITEP-784	
MTS	Abramov 91
	Abramov 89C
ITEP-801	
SPIN	Alekseev 91
	Alekseev 89
	Alekseev 88B
	Kanavets 88
ITEP-802	
HLBC-DIANA	Andryakov 92
	Dolgolenko 92
	Matveev 92
	Andryakov 90
	Demidov 89
ITEP-804	
TISS-3	Arefiev 90
	Arefiev 90B
	Zhokin 88
ITEP-811	
SPEC	Balats 87
ITEP-812	
FOCUS	Bayukov 91
ITEP-813	
NHS	Bayukov 92
	Vlasov 92
	Vorobiev 91
	Vlasov 90
	Vorobiev 90
	Vorobiev 90B
	Bayukov 89
	Bayukov 89B
	Bayukov 89C
	Vlasov 89
	Vlasov 89B
	Vorobiev 89C
	Bayukov 88
	Vlasov 88
	Vorobiev 88E
ITEP-814	
HLBC-180LIT	Barmin 91
	Barmin 90
	Barmin 89B
ITEP-822	
SPEC	Alekseev 90

ITEP

ITEP-823	
CNTR	Afanasyev 88
ITEP-828	
HBC-50CM	Andryakov 91
	Guzhavin 90
ITEP-831	
SPEC	Sibirtsev 91
	Sibirtsev 90
	Safronov 88
	Safronov 88B
	Sibirtsev 88
	Sibirtsev 88B
	Voronin 88
	Vorontsov 88B
ITEP-842	
FHS-1	Boyarinov 90
	Boyarinov 89
	Boyarinov 88
	Boyarinov 88B
	Boyarinov 88C
FHS-2	Boyarinov 92
	Boyarinov 92B
	Boyarinov 92C
	Gavrilov 92
	Boyarinov 91
ITEP-851	
HLBC-180LIT	Barmin 89
ITEP-862	
SPEC	Alekseev 91B
	Alekseev 88
ITEP-864	
MTS	Abramov 91C
ITEP-865	
CNTR	Kuzichev 92
	Kuzichev 92B
	Kuzichev 89
	Kuzichev 88
WIRE	Kuzichev 92
	Kuzichev 92B
	Kuzichev 89
	Kuzichev 88
ITEP-871	
HLBC-DIANA	Demidov 90
ITEP-874	
MTS	Dukhovskoy 87
ITEP-875	
MTS	Abramov 91D
ITEP-892	
HBC-2M	Abdullin 92
ITEP-894	
NHS	Vlasov 90B
ITEP-895	
LAMBDAMETER	Degtyarenko 91
	Smirnitsky 91

IUPU-CYC

—	
WIRE	Korkmaz 90

JINR

JINR-86-01	
MASPIC	Azhgirey 91
	Azhgirey 91B
	Azhgirey 88
JINR-86-02	
SPHERE	Afanasiev 91
	Afanasiev 90B
JINR-86-03	
ALPHA-POLIS	Ableev 91
	Ableev 91B
	Ableev 91D
	Ableev 89
	Ableev 88
	Ableev 87C
JINR-86-04	
GIBS	Avramenko 92
	Avramenko 92B
	Abdurakhimov 91
	Avramenko 91
	Avramenko 91B
	Avramenko 91C
	Abdurakhimov 89C
—	
CNTR	Belzer 92

JINR

	Beznogikh 91
	Beznogikh 91B
	Avramenko 90
	Belzer 90
	Adyasevich 89
	Adyasevich 88B
	Avdejchikov 88
	Avramenko 88
	Beznogikh 88
	Golovin 88
	Karev 88
	Lebedev 88
	Voronko 88
	Avdejchikov 87B
	Avdejchikov 87H
DAS	Budilov 90
DISC-3	Averichev 89
EMUL	Adamovich 92C
	Adamovich 92D
	Ahmad 92
	Ameeva 92
	Andreeva 92
	Bondarenko 92
	Elnadi 92
	Tauseef 92
	Ahmad 91
	Ahmad 91B
	Ahmad 91C
	Bobodjanov 91
	Bogdanov 91
	Bondarenko 91
	Ghosh 91
	Lantsev 91
	Vokal 91
	Babaev 90
	Ghosh 90
	Ghosh 90B
	Lantsev 90
	Lantsev 90B
	Lantsev 90C
	Ahmad 89B
	Ahmad 89C
	Ameeva 89
	Andreeva 89
	Ghosh 89
	Ghosh 89C
	Ghosh 89D
	Ghosh 89E
	Ghosh 89F
	Khan 89
	Lepekhin 89
	Abdurazakova 88
	Alekseeva 88
	Andreeva 88
	Andreeva 88B
	Andreeva 88C
	Bogdanov 88
	Dubinina 88
	Elnadi 88
	Khan 88
	Krasnov 88
	Krasnov 88B
	Vokal 88
	Bannik 87
	Elnaghy 87B
	Krasnov 87
HBC-1M	Botvina 91
	Botvina 91B
	Glagolev 91
	Glagolev 90
	Glagolev 90B
	Glagolev 90C
	Glagolev 90D
	Semyarchuk 90
	Troyan 90
	Braun 89
	Glagolev 89
	Glagolev 89B
	Glagolev 89C
	Antos 88
	Balgansuren 88
	Glagolev 88
	Glagolev 88B
	Shimansky 88
	Sobchak 88

JINR

	Troyan 88
	Zelinski 88
HLBC-180LIT	Strugalski 88
HLBC-1M	Arakelyan 91B
	Arakelyan 90B
	Bajramov 89
	Abdinov 88
HLBC-26LIT	Strugalski 91
	Strugalski 88
	Strugalski 88B
	Strugalski 88C
HLBC-2M	Angelov 92
	Angelov 92B
	Backovic 92
	Backovic 92B
	Backovic 92C
	Gulkanyan 92
	Shakhbasyan 92
	Shakhbasyan 92B
	Simic 92
	Strugalski 92B
	Viryasov 92
	Agakishiev 91
	Angelov 91
	Armutlijsky 91
	Baatar 91
	Backovic 91
	Batskovich 91
	Didenko 91B
	Gulkanyan 91
	Gulkanyan 91B
	Pawlyak 91
	Shakhbazyan 91
	Vinitsky 91
	Viryasov 91B
	Angelov 90
	Angelov 90B
	Baatar 90
	Baldin 90C
	Grishin 90
	Iovchev 90
	Kechechyan 90B
	Shakhbazyan 90
	Simic 90
	Viryasov 90
	Agakishiev 89B
	Agakishiev 89C
	Angelov 89
	Armutlijsky 89
	Baatar 89
	Bajramov 89
	Bekmirzaev 89
	Gulkanyan 89
	Viryasov 89
	Agakishiev 88
	Angelov 88
	Armutlijsky 88
	Baatar 88
	Baldin 88C
	Batskovich 88
	Bekmirzaev 88
	Bekmirzaev 88B
	Bekmirzaev 88C
	Grigalashvil 88
	Grishin 88B
	Gulkanyan 88
	Gulkanyan 88B
	Gulkanyan 88C
	Gulkanyan 88D
	Kanarek 88
	Lyubimov 88
	Mekhtiev 88
	Pluta 88B
	Shakhbazyan 88
	Simic 88B
	Agakishiev 87
	Armutlijsky 87
	Armutlijsky 87B
	Bekmirzaev 87C
	Iovchev 87
	Grishin 86B
HLBC-55CM	Kechechyan 90
	Kechechyan 90B
	Shakhbazyan 90
	Kechechyan 89

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

JINR

	Shakhbazyan 88
KASPIY	Baldin 92
	Baldin 90B
	Golubeva 90
	Golubeva 89
	Baldin 88
	Kurepin 88
PHOTON	Brandt 92
	Kozma 91
	Kozma 91B
	Kozma 90
	Kozma 90B
	Kozma 90C
	Kozma 90D
	Damdinsuren 89
	Damdinsuren 89B
	Kozma 89
	Kozma 89B
	Kozma 89C
	Damdinsuren 88
	Damdinsuren 88B
	Kozma 88
	Kozma 88B
	Kozma 86
PHOTON-MASSER	Abraamyan 92
	Abraamyan 91
	Abraamyan 90
	Abraamyan 89
	Abraamyan 88
	Arkhipov 88
PLASTIC	Hirzebruch 92
	Grabez 88
SAS	Belzer 92
	Belzer 90
SEMI	Beznogikh 91C
	Troyan 90B
SKM-200	Chkhaidze 92
	Gelovani 92
	Sarkisyan 92
	Sarkisyan 92B
	Sarkisyan 91
	Iovchev 90
	Taran 90
	Abdurakhimov 89
	Agakishiev 89
	Anikina 89
	Abdurakhimov 88
	Okonov 88
SPEC	Daniel 92
STRC	Angelescu 90
WIRE	Ableev 91C

JINR-600

CNTR	Akimov 89
SPEC	Baranov 91B
	Baranov 91C
	Baranov 90
	Akimov 89
WIRE	Budyashov 92B
	Budyashov 92C
	Budyashov 92D
	Budyashov 91B

KEK-KENS

?	
CNTR	Masuda 90B
KEK-231	
CNTR	Masuda 92
	Masuda 92B
	Shimizu 92
	Masuda 90
	Masuda 90B

KEK-PS

KEK-010	
WIRE	Imazato 92B
KEK-062	
HBC-1M	Miyano 88B
KEK-068	
SAS	Chiba 91B
	Chiba 90
	Chiba 89
	Omori 89
	Chiba 88

KEK-PS

	Chiba 87B
KEK-075	
TELAS	Yokosawa 90B
KEK-080	
HBC-1M	Tsuboyama 88
KEK-082	
CNTR	Asano 88
	Noguchi 88
KEK-089	
WIRE	Imazato 92B
KEK-092	
TELAS	Haba 88
	Kawai 88
KEK-099	
SAS	Imazato 92B
KEK-104	
SAS	Imazato 92B
KEK-110	
CNTR	Yokota 89
KEK-117	
DAS	Hayano 91
	Sakaguchi 90
	Sakaguchi 89
	Tamura 88
KEK-121	
SUPERBENKEI	Ando 90
KEK-125	
CNTR	Kishida 92
	Kishida 89
WIRE	Kishida 92
	Kishida 89
KEK-131	
SPEC	Tanimori 89B
	Sugimoto 88
KEK-132	
FANCY	Yagi 90
	Manabe 89
KEK-133	
FANCY	Nakai 91
	Tokushuku 90
	Nakai 89
	Chiba 88B
KEK-135	
SUPERBENKEI	Fukui 91
	Kinashi 91
	Inagaki 89B
	Takamatsu 89
	Fukui 88
KEK-136	
SPEC	Nakamura 89
KEK-137	
DAS	Akagi 92
	Imazato 92B
	Inagaki 91
	Inagaki 91B
	Kuno 90
	Geng 89
	Inagaki 89
	Inagaki 89C
	Inagaki 88
KEK-150	
SPEC	Akei 89
KEK-157	
FANCY	Kobayashi 88B
KEK-159	
SAS	Yokosawa 90B
	Ohmori 89
	Ohmori 88
KEK-160	
PIK	Ajimura 92
	Akei 91
	Olin 91
KEK-162	
TOKIWA	Imazato 92B
KEK-167B	
DAS	Iwasaki 91
	Hayano 89
	Yamazaki 89
KEK-173	
SPEC	Chiba 91
KEK-174	
IONIZATION	Kobayashi 91
	Yoshida 91

KEK-PS

	Yokosawa 90B
	Shimizu 89
KEK-176	
EMUL	Iijima 92
	Aoki 91
	Aoki 91D
	Aoki 91E
	Aoki 90
SPEC	Iijima 92
	Aoki 91
	Aoki 91D
	Aoki 91E
	Aoki 90
KEK-177B	
DAS	Hayano 88
KEK-179	
BENKEI	Matsuda 91
KEK-187	
BENKEI	Fukui 90
KEK-195	
SPEC	Imazato 92
	Imazato 92B
KEK-246	
SPEC	Imazato 92B

KEK-TRISTAN

KEK-TE-001	
VENUS	Abe 93
	Hinode 93
	Li 93
	Takaki 93
	Kroha 92
	Tsuboyama 92
	Bethke 91
	Kanzaki 91
	Maki 91
	Okamoto 91
	Shirai 91
	Shirakata 91
	Uehara 91
	Yonezawa 91
	Yuzuki 91
	Abe 90
	Abe 90C
	Abe 90D
	Abe 90E
	Abe 90F
	Fujii 90
	Itoh 90
	Kim 90D
	Miyamoto 90
	Taketani 90
	Unno 90
	Yamauchi 90
	Abe 89F
	Abe 89I
	Abe 89J
	Abe 89P
	Deboer 89
	Iwata 89
	Odaka 89
	Ogawa 89
	Abe 88B
	Abe 88D
	Abe 88E
	Abe 88F
	Sumiyoshi 88
	Unno 88
KEK-TE-002	
TOPAZ	Abe 93B
	Li 93
	Howell 92
	Shimozawa 92
	Tsuboyama 92
	Adachi 91
	Adachi 91B
	Hayashii 91
	Kanzaki 91
	Maki 91
	Nagai 91
	Shimonaka 91
	Shirai 91
	Abe 90E
	Adachi 90
	Adachi 90B

KEK-TRISTAN

Adachi 90C
Adachi 90D
Adachi 90E
Fujii 90
Itoh 90
Kim 90D
Miyamoto 90
Yamauchi 90
Abe 89K
Adachi 89
Adachi 89B
Adachi 89C
Adachi 89D
Adachi 89E
Bethke 89
Deboer 89
Iwata 89
Adachi 88
Adachi 88B
Adachi 88C
Adachi 88D
Masuda 88
Sugahara 88
Takahashi 88
Yamauchi 88

KEK-TE-003
AMY
Li 93
Nozaki 92
Tanaka 92
Tsuboyama 92
Bethke 91
Kanzaki 91
Maki 91
Olsen 91
Shirai 91
Tanaka 91
Abe 90E
Fujii 90
Ho
Itoh 90
Kang 90
Kim 90B
Kim 90C
Kim 90D
Kroha 90
Lim 90B
Miyamoto 90
Myung 90
Sagawa 90
Sakai 90
Sasaki 90
Smith 90
Stuart 90
Vinson 90
Walker 90
Yamauchi 90
Zheng 90
Bethke 89
Bodek 89
Deboer 89
Eno 89
Eno 89B
Eno 89C
Ho 89
Iwata 89
Kim 89B
Kim 89C
Kim 89E
Kim 89F
Kim 89G
Kumita 89
Kumita 89B
Kurihara 89
Li 89
Li
Low 89
Mori 89
Mori 89B
Myung 89
Park 89
Park 89B
Sagawa 89
Sakai 89
Sasaki 89
Shaw 89

KEK-TRISTAN

Bacala 88
Bacala 88B
Eno 88
Kim 88
Kim 88C
Kim 88D
Ko 88
Maki 88
Mori 88
Myung 88
Park 88
Rosenfeld 88
Sagawa 88
Sasaki 88
Son 88
Igarashi 87

KEK-TE-004
SHIP
Miyamoto 90
Kinoshita 89B
Kinoshita 88B
Kinoshita 88C

—
AMY
Odaka 90
MANY
Abe 90H
Fry 89
Iwasaki 89
Maki 89
Metcalf 89
Nozaki 89
Kichimi 88
Kim 88B
Maki 88B
Mcneil 88
Olsen 88
Sakuda 88
Shirai 88
Tauchi 88
TOPAZ
Odaka 90
VENUS
Odaka 90

KHAR

—
COMB
Zybalov 91
Zybalov 90
Zybalov 90B
Zybalov 88
SPEC
Ganenko 92
Kuplennikov 92
Ganenko 91
Kuplennikov 91
Kuplennikov 90
Kuplennikov 90B
Ganenko 89
Dementy 88
Ganenko 88

LAMPF

?
CNTR
Brooks 92
Jones 92
Schutt 88
EPICS
Langenbrunne 92
Seth 91
Parker 90
Burlein 89
FPP
Bimbot 90
Hoffmann 90B
HRSF
Barlow 92
Sterbenz 92
Bimbot 90
Hoffmann 90B
Moshi 90
Adams 89
Barlow 88
LAHRS
Blanpied 88
Blanpied 88B
Blanpied 88C
Bleszynski 88
Fergerson 88
Hintz 88
Hoffmann 88C
LAS
Gorgen 91
Yen 91B
Williams 89B
NEUTRONSPEC
Finlay 93

LAMPF

PHOTON
Feng 90
PIOSPEC
Rokni 88
PLASTIC
Lyndon 92
SPEC
Hoffmann 90
Ransome 90
Gram 89

LAMPF-1035
JANUS
Mcnaughton 90
SPEC
Mcnaughton 90
LAMPF-1073
SPEC
Matthias 91
WIRE
Matthias 91
LAMPF-1085
CNTR
Ritchie 91
Hutcheon 90

LAMPF-1135
PIOSPEC
Peng 89
LAMPF-1178
LAS
Gorgen 90
LAMPF-1234
JANUS
Mcnaughton 92
Mcnaughton 92B

LAMPF-225
CNTR
Allen 93
Allen 91
Burman 91
Krakauer 91
Krakauer 91B
Krakauer 91C
Krakauer 90
Allen 89

LAMPF-388
CNTR
Yokosawa 90B
SPEC
Yokosawa 90B
WIRE
Yokosawa 90B
LAMPF-400-445
CRYS-BOX
Bolton 88
Mcdonough 88

LAMPF-462
LAHRS
Yokosawa 90B
LAMPF-504
CNTR
Yokosawa 90B
LAMPF-508
LAHRS
Yokosawa 90B
LAMPF-518
CNTR
Barlow 88B
SPEC
Yokosawa 90B
LAMPF-546
EPICS
Pillai 88
LAMPF-563
LAHRS
Barlett 91
Hoffmann 88B

LAMPF-585
LAHRS
Yokosawa 90B
Pauletta 87

LAMPF-635
JANUS
Yokosawa 90B
LAMPF-645
COMB
Freedman 93
Durkin 88

LAMPF-664
SPEC
Yokosawa 90B
LAMPF-764
CNTR
Koetke 92
LAMPF-770
WAS
Ditzler 92
Shima 92
Beddo 91
Yokosawa 90B
Garnett 89

LAMPF-783
SPEC
Ashery 88
LAMPF-790
WIRE
Tanaka 88
LAMPF-804
COMB
Kim 91
Kim 90
Kim 89
Kim 89D

LAMPF-806
LAS
Barlow 89
Seftor 89
Wightman 88

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

LAMPF

LAMPF-815
- CNTR: Yokosawa 90B, Shypit 89, Shypit 88, Shypit 88B
- IONIZATION: Yokosawa 90B, Shypit 89, Shypit 88, Shypit 88B

LAMPF-818
- JANUS: Adams 88

LAMPF-825
- SPEC: Pancella 88

LAMPF-960
- WAS: Newsom 89

LAMPF-961
- WIRE: Mcnaughton 91, Yokosawa 90B, Nath 89

LAMPF-973
- LAHRS: Santi 88

LAMPF-981
- SPEC: Parker 89

LASER

ATOMIC-PNC-BERKELEY
- CIRCULAR DICHROISM: Bouchiat 90
- OPTICAL ROTATION: Bouchiat 86B

ATOMIC-PNC-BOULDER
- CIRCULAR DICHROISM: Bouchiat 90, Noecker 88, Bouchiat 86B

ATOMIC-PNC-OXFORD
- OPTICAL ROTATION: Bouchiat 90, Khriplovich 88

ATOMIC-PNC-PARIS
- CIRCULAR DICHROISM: Bouchiat 90, Bouchiat 86B

- COMB: Blanpied 92, Caracappa 91
- OPTICAL ROTATION: Semertzidis 90
- PHOTON: Ruoso 92, Abdullah 90

LBL

- SPEC: Silvestrov 89

LBL-BEVALAC

- CNTR: Carroll 89, Danzmann 89, Shor 89, Carroll 88B, Hayashi 88
- DAS: Claesson 90
- DLS: Huang 92, Huang 91, Seidl 91, Matis 90, Schroeder 90, Letessiersel 89, Letessiersel 89B, Roche 89, Naudet 88, Naudet 88B, Naudet 88C, Roche 88, Roche 88B, Roche 88C
- EMUL: Ghosh 92B, Jain 92, Singh 92, Dudkin 91, Ghosh 91, Gill 91, Palsania 91, Antonchik 90, Antonchik 90B, Dudkin 90, Gill 90

LBL-BEVALAC

- Jakobsson J0, Arora 89, Aleklett 88
- HISS: Christie 93, Christie 92, Christie 91, Brady 88
- PHOTON: Hill 91, Aleklett 88, Hill 88, Hill 88B
- PLASTIC: Baldwin 92, Dreute 91, Lewenkopf 91, Westphal 91, Brechtmann 88, Madey 88
- PLASTIC-BALL: Schmidt 92, Bock 89, Bock 89B, Gutbrod 89, Doss 88, Gustafsson 88
- SEMI: Silk 88
- SPEC: Bossy 91, Bowman 91, Chacon 91, Deboer 91, Webber 90, Webber 90B, Webber 90C, Han 89, Kobayashi 89, Kobayashi 89B, Kobayashi 89C, Schnetzer 89, Chacon 88, Charity 88, Kobayashi 88, Tanihata 88
- STRC: Beavis 92, Jiang 92, Danielewicz 88

LBL-CYC-184IN

- CNTR: Farley 89

LBL-CYC-88IN

- CNTR: Weller 88
- SPEC: Weller 88

LEBD-650

- DAS: Belousov 91, Belousov 88

LUND

- PHOTON: Fuhrberg 92

MANY

BNL-815
- EMUL: Otterlund 91

CERN-EMU-001
- EMUL: Adamovich 91B, Adamovich 90, Adamovich 90B

- EMUL: Stenlund 90B, Stenlund 90D, Takibaev 90, Adamovich 89B, Adamovich 89E, Kumar 89, May 89B, Atageldieva 88, Jain 88B, Otterlund 88
- MANY: Pokotilovsky 93, Abaev 92, Anton 92, Arndt 92, Battiston 92

MANY

Benayoun 92, Branchina 92, Buenerd 92, Burchell 92, Chliapnikov 92, Feindt 92C, Hsueh 92, Hyslop 92, Leeb 92, Luk 92, Schmidt 92B, Stoks 92, Achasov 91, Amsler 91, Arndt 91, Barit 91, Batkin 91, Bhattacharje 91, Buschbeck 91, Donnachie 91, Gazdzicki 91, Geist 91, Gerbier 91, Heusch 91, Kiesling 91, Landsberg 91, Perl 91, Poblaguev 91, Raha 91, Rossi 91, Schmitz 91, Stoker 91, Strakovskii 91, Timmermans 91, Woolcock 91, Zylberajch 91, Arndt 90, Bagdasaryan 90, Bando 90, Boos 90, Branchina 90, Bryman 90, Chliapnikov 90, Denegri 90, Fayard 90, Feindt 90, Freudenreich 90, Giacomelli 90, Holder 90, Landsberg 90B, Meissner 90, Otterlund 90, Spiro 90, Tuominiemi 90, Turner 90, Aliev 89, Artuso 89B, Atiya 89B, Barbarogalti 89, Bartke 89, Bethke 89B, Buschbeck 89, Donnachie 89, Eggert 89, Fayard 89, Franzini 89, Gilman 89, Golutvin 89, Guaraldo 89, Guaraldo 89B, Hayes 89, Hayes 89B, Hohler 89, Holder 89, Jenni 89, Kass 89, Klein 89C, Kopke 89, Krauss 89, Lach 89, Landsberg 89, Lhote 89, Littenberg 89, London 89, Marshall 89

MANY

	Maruyama 89
	Mattig 89
	Murtagh 89
	Panagiotou 89
	Peyaud 89
	Piccolo 89
	Schindler 89
	Schmiedmayer 89
	Schmiedmayer 89B
	Stone 89
	Tannenbaum 89
	Tosello 89
	Zhokin 89
	Albrow 88
	Arends 88
	Augustin 88C
	Barish 88
	Bertini 88B
	Bethke 88B
	Chan 88
	Desantics 88
	Franklin 88
	Gan 88
	Gan 88B
	Gidal 88C
	Govorkov 88
	Grivaz 88
	Hitlin 88
	Hoffman 88
	Kamae 88
	Levy 88
	Liu 88
	Purohit 88
	Salvini 88
	Schmitz 88
	Sedlak 88
	Sugahara 88B
	Sulyaev 88
	Thorndike 88
	Toki 88B
	Totsuka 88
	Zielinsky 88
	Shklyarevsky 86

MANZ-LINAC

CNTR	Hiel 89
	Spahn 89
SPEC	Zieger 92
	Zieger 92B
	Koch 89

MANZ-MAMI

CNTR	Frommhold 92
NEUTRONSPEC	Rose 90
	Rose 90B
PHOTON	Rose 90
	Rose 90B
	Schelhaas 90
SPEC	Krause 92
	Macgregor 91
	Wallace 91
	Beck 90B
	Liesenfeld 88

MINR-MMF

CALO	Dementiev 92

MIT-BLA

AHEAD	The 91
	Garcon 89
CNTR	Beise 89
ELSSY	The 91
	Vonreden 90
	Kalantarnaye 89
MEPS	Distelbrink 91
	Ghedira 90
SPEC	Weinstein 93
	Thompson 92
	Lourie 90
	Souder 90
	Geesaman 89
WIRE	Beise 89

MSU-CYC

EMUL	Barz 92
MINIBALL	Phair 92
SPEC	Etchegoyen 90
	Kiss 89
	Pruneau 89

MUNT

SPEC	Novikov 90
	Novikov 90B

MUSL-2

CNTR	Federspiel 91

NONE

ITEP-783	
SPEC	Boris 87B
ITEP-833	
SPEC	Artemiev 91
	Artemiev 91B
	Barabash 90
	Artemiev 89B
	Barabash 89
	Ajnutdinov 88
ITEP-861	
SEMI	Kirpichnikov 91
	Vasenko 89
	Vasenko 88
ITEP-876	
EMUL	Barabash 90C
	Barabash 88
ITEP-891	
SEMI	Barabash 90B
	Barabash 89C
	Barabash 89D
UNDERGROUND-2BETA-GS	
2BETA-GS	Bellotti 91
	Bellotti 89
UNDERGROUND-FREJUS	
FREJUS	Berger 91
	Berger 90B
	Berger 89
	Berger 89C
	Bourdarios 88
UNDERGROUND-HPW	
HPW	Phillips 89
	Schwartz 88
UNDERGROUND-IMB	
IMB	Seidel 88
UNDERGROUND-IMB-3	
IMB-III	Beckerszendy 90
UNDERGROUND-KAMIOKANDE-I	
KAMIOKANDE-I	Ejiri 89
UNDERGROUND-KAMIOKANDE-II	
KAMIOKANDE-II	Mori 92
	Hirata 89B
	Totsuka 89B
UNDERGROUND-SOUDAN-II	
SOUDAN-II	Allison 89
?	Khriplovich 88
CALO	Akopyan 92
	Cosulich 92
	Akopyan 91
	You 91
	Atoyan 90
	Atoyan 89
	You 89
CLOUD	Baldin 90
CNTR	Blum 92
	Cline 92
	Henderson 92
	Hicks 92
	Hime 92
	Kuzminov 92
	Pokotilovsky 92
	Wu 92
	Budick 91
	Budick 91B
	Dassie 91
	Morrison 91

NONE

	Norman 91
	Sur 91
	Turkevich 91
	Asanuma 90
	Dubbers 90
	Inzhechik 90
	Ramberg 90
	Tsuchiaki 90
	Melnikov 89
	Minowa 89
	Norman 89
	Orito 89
	Ogawa 88
	Rosen 88
DELOS	Lorenz 88
ELEGANTS-V	Ejiri 91
	Ejiri 91B
FREJUS	Barloutaud 91
	Berger 88D
HPW	Barloutaud 91
IMB	Barloutaud 91
KAMIOKANDE	Barloutaud 91
KGF	Barloutaud 91
MANY	Bonvicini 92
	Bonvicini 92B
	Chine 92
	Morrison 92
	Zdesenko 92
	Ejiri 91B
	Klapdorklein 91
	Barabash 89B
	Kirpichnikov 89
	Barloutaud 88
	Caldwell 88
	Caldwell 88C
NESTOR	Acton 89
NUSEX	Barloutaud 91
OTHER	Moody 93
	Perera 93
	Smith 93
	Stubbs 93
	Alfimenkov 92
	Carusotto 92
	Chernikov 92
	Hagberg 92
	Pan 92
	Venema 92
	Weitz 92
	Astone 91
	Bobrakov 91
	Zumberge 91
	Adelberger 90
	Alfimenkov 90
	Cowsik 90
	Jekeli 90
	Nelson 90
	Ritter 90
	Smith 90B
	Speake 90
	Ander 89
	Bizzeti 89
	Byrne 89
	Hardy 89
	Hughes 89
	Jones 89
	Kharitonov 89
	Koslowsky 89
	Lamoreaux 89
	Mampe 89B
	Morozov 89
	Muller 89
	Nieto 89
	Stubbs 89
	Thomas 89
	Vorobiev 89
	Wuensch 89B
	Cowsik 88
	Eckhardt 88
	Fitch 88
	Lin 88
	Ogawa 88
	Phillips 88
	Vorobiev 88B
PERKEO	Dohner 89
PHOTON	Hime 92

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

NONE

	Skalsey 92
	Skalsey 92B
	Hime 91B
	Logan 91
	Morrison 91
	Zlimen 91
	Adachi 90F
	Busto 90
SEMI	Balysh 92
	Cline 92
	Hime 92
	Avignone 91
	Hime 91
	Hime 91B
	Logan 91
	Morrison 91
	Reusser 91
	Borzakov 90
	Miley 90
	Fisher 89
	Simpson 89
	Simpson 89B
	Avignone 88
	Dougherty 88
	Krivicich 88
SOUDAN-II	Barloutaud 91
SPEC	Mortara 93
	Ohshima 93
	Cline 92
	Hime 92
	Holzschuh 92
	Kawakami 92
	Ohshima 92
	Pokotilovsky 92
	Shirai 92
	Hime 91B
	Kawakami 91
	Logan 91
	Morrison 91
	Robertson 91
	Verkerk 91
	Caldwell 90
	Caldwell 90B
	Carnoy 90
	Alstongarnjo 89
	Danevich 89
	Gninenko 89
	Kawakami 89
	Alstongarnjo 88
	Connell 88
	Morales 88
SYSTEMA-I	Klimenko 89
SYSTEMA-II	Wasiliev 90
THERMAL	Alessandrell 92
TPC	Kossakowski 89
	Schreckenbac 89
WIRE	Blum 92
	Sakai 92
	Dassie 91
	Wong 91

NOVO-VEPP-2M

NOVO-CMD	
CMD	Barkov 89
	Barkov 88
NOVO-ND	
ND	Bukin 89
	Dolinsky 89
	Dolinsky 89B
	Dolinsky 88
	Dolinsky 88B
	Druzhinin 88
	Vasserman 88
	Vorobiev 88C
	Vasserman 87B
OLYA	Kurdadze 88

NOVO-VEPP-3

CNTR	Voitsekhovsk 92
	Gilman 90B
SPEC	Ivanov 92
WIRE	Voitsekhovsk 92

NOVO-VEPP-4

NOVO-MD-1	
MD-1	Baru 92
	Baru 92B
	Baru 91
	Blinov 91
	Blinov 91B
	Baru 90
	Blinov 90
	Baru 89
	Blinov 88B

ORNL-ORELA

CNTR	Schmiedmayer 91

ORSA

CNTR	Davier 89

ORSA-CYC

EMUL	Bellini 89
SPEC	Pinston 92
	Pinston 90
	Pinston 89

ORSA-DCI

DM2	Antonelli 92
	Bisello 91
	Bisello 91B
	Bisello 91C
	Augustin 90B
	Augustin 90C
	Bisello 90
	Bisello 90B
	Bisello 90C
	Bisello 90D
	Bisello 90E
	Augustin 89
	Bisello 89
	Bisello 89B
	Szklarz 89
	Ajaltouni 88
	Ajaltouni 88B
	Antonelli 88
	Augustin 88
	Augustin 88B
	Bisello 88
	Bisello 88B
	Castro 88
	Falvard 88
	Jousset 88
	Stanco 88
	Tixier 88

OSAK-CYC

NIM	Ieiri 89
SPEC	Ieiri 89
	Motobayashi 88

PIYF

LENI-SC-021	
SPEC	Vorobiev 92
LENI-SC-052	
DAS	Aleshin 91
	Aleshin 90
LENI-SC-056	
CNTR	Vovchenko 89
	Bazhanov 88
LENI-SC-063	
WIRE	Abaev 88B
LENI-SC-066	
WAS	Baturin 91
LENI-SC-086	
CNTR	Vovchenko 89B
	Bazhanov 88B
LENI-SC-088	
IKAR	Grebenjuk 89
	Velichko 88
LENI-SC-097	
CNTR	Koptyev 88

PIYF

LENI-SC-108	
DBC-35CM	Andreev 88
	Andreev 88B
	Andreev 88C
SACLAY-078	
IKAR	Dobrovolsky 88
CNTR	Bazhanov 93
	Akimov 92
	Akimov 91
	Bazhanov 91
	Gavrin 89
	Baturin 88
EMUL	Zhdanov 91
	Zhdanov 91B
	Zhdanov 91C
	Filatov 88
PHOTON	Domkin 92
	Alexandrov 90
	Belyaev 90B
SPEC	Gornov 91
	Amelin 90
	Amelin 90B
	Gridnev 90
	Aleksandrov 89
	Gornov 88

PPA

DAS	Winstein 91
	Littenberg 89B

PRIN-CYC

SEMI	Hallin 92

PSI

?	
CNTR	Bosshard 90
	Yokosawa 90B
	Binz 89
	Binz 89B
	Meyer 88
COMB	Klomp 91
	Nammans 91
EMUL	Belovitsky 92
	Belovitsky 91
SCINT	Kistryn 92
	Ruhl 91
SPEC	Yokosawa 90B
	Ahumacher 88
	Vuaridel 88
SUSI	Hyman 92
	Hyman 90
WIRE	Bosshard 90
	Meyer 88
PSI-87-03	
SINDRUM-II	Drell 92B
PSI-R-78-18	
CNTR	List 88
	List 88B
SPEC	List 88
	List 88B
PSI-R-79-07	
CNTR	Ottermann 88
	Ottermann 88B
PSI-R-82-04	
CALO	Numao 92C
CNTR	Numao 92C
PSI-R-85-11	
CNTR	Weber 89B
PSI-R-87-01	
SPEC	Daum 91
PSI-R-89-07	
SPEC	Brogligysin 92
SIN-R-71-07	
WIRE	Hausammann 89
	Onel 89
SIN-R-72-02	
SPEC	Bannwarth 92
	Franz 88
SIN-R-78-02	
CNTR	Crawford 91C
	Crawford 88

PSI

SIN-R-79-05	
CNTR	Salvisberg 92
SIN-R-80-06	
SINDRUM	Bellgardt 88
SIN-R-80-10	
CNTR	Buchle 89
	Franz 89
	Buchle 88
SIN-R-81-06	
OSPK	Faissner 89
	Faissner 88
SIN-R-82-01	
SPEC	Deleenerrosi 91
SIN-R-82-04	
CALO	Rolandi 92
	Czapek 91
CNTR	Rolandi 92
	Czapek 91
SIN-R-82-17	
WIRE	Wiedner 89
SIN-R-85-14	
SINDRUM-I	Meijerdrees 92
	Meijerdrees 92B
	Niebuhr 89
SIN-R-85-16	
SINDRUM	Egli 89
SIN-R-86-02	
SPEC	Ortner 90
SIN-Z-75-02	
WIRE	Yokosawa 90B
SIN-Z-80-01	
SPEC	Kistryn 89
—	
MANY	Locher 90

REACTOR

—	
CNTR	Bazhenov 92
	Vidyakin 92
	Alfimenkov 91
	Erozolimskii 91
	Mikaelyan 91
	Tsertos 91
	Vidyakin 91
	Bressi 90
	Erozolimskii 90
	Erozolimskii 90B
	Judge 90
	Pierre 90
	Vidyakin 90
	Vidyakin 90B
	Alexandrov 89
	Avenier 89
	Bitter 89
	Bressi 89
	Mampe 89
	Paul 89
	Tsertos 89B
	Tsertos 89C
	Vidyakin 89
	Vidyakin 89B
	Alfimenkov 88
	Belomyttsev 88
	Kozhuharov 88
	Spivak 88
	Tsertos 88
	Tsertos 88B
COMB	Abov 89
MANY	Derbin 92B
	Boehm 88
	Bouchez 88
	Dubbers 88
	Mikaelyan 88
	Nakamura 88
OTHER	Kruger 89
	Thompson 89
RONS	Klimov 90
	Kopeikin 90
	Vershinsky 90
	Afonin 88
	Afonin 88B
	Ketov 88
SEMI	Derbin 92
	Byrne 90

REACTOR

SPEC	Altarev 92
	Freedman 89
	Baumann 88
	Boucher 88
	Damdinsuren 88
	Klemt 88
	Last 88
STRC	Bitter 89
WIND	Ketov 92
	Skorokhvatov 92
	Kuvshinnikov 91
	Mikaelyan 91
	Kuvshinnikov 90
WIRE	Vesna 90
	Vesna 89

RHEL-ISIS

—	
KARMEN	Bodmann 92

ROCH-TANDEM

—	
SPEC	Hemmick 90

SAAC-CYC

—	
CNTR	Cowley 91
	Cowley 90
	Cowley 88

SACL

—	
CNTR	Jammes 89
	Argan 88
OSPK	Yokosawa 90B

SACL-LINAC

—	
CNTR	Audit 89
DAS	Fonvieille 89
	Fonvieille 89B
SAC-600	Gilman 90
SAC-900	Gilman 90
	Platchkov 90
	Platchkov 89

SACL-SATURNE-II

?	
CNTR	Yennello 90
DPHN	Julien 88
PHOTON	Malek 91
	Summerer 90
SPEC	Klotzengmann 89
SPES-IV	Morsch 92
SACLAY-052	
COMB	Yokosawa 90B
SACLAY-052-2	
COMB	Dalla reco 89
SACLAY-078	
IKAR	Silverman 89
SACLAY-085	
SPES-IV	Brockstedt 91
	Ellegaard 89
SACLAY-088	
COMB	Yokosawa 90B
	Fontaine 89
	Lac 89
	Lac 89B
	Lac 88
SACLAY-095	
SPES-IV	Mayer 89
SACLAY-097	
SPES-IV	Yokosawa 90B
	Bertini 88
SACLAY-104	
COMB	Yokosawa 90B
	Lac 89C
	Lac 89D
	Lehar 88
	Perrot 88
SACLAY-105	
SPES-IV	Goldzahl 91
SACLAY-113	
SPES-III	Tatishcheff 92
	Aslanides 91

SACL-SATURNE-II

	Willis 89
SACLAY-117	
SPES-IV	Boudard 88
SACLAY-121	
SPES-IV	Siebert 91
	Frascaria 89
SACLAY-138	
SPES-IV	Yokosawa 90B
	Ball 88
	Berger 88C
	Delesquen 88
SACLAY-144	
COMB	Yokosawa 90B
SACLAY-157	
SPES-IV	Plouin 92
SACLAY-166	
EMRIC	Kox 91
	Motobayashi 89
SACLAY-174	
SPES-III	Comets 89
SACLAY-177	
SPES-IV	Yonnet 90
SACLAY-192	
DIOGENE	Poitou 92
	Dupieux 91
	Lemaire 91
	Lemaire 91B
	Trzaska 91C
	Bastid 89
	Gosset 89
SACLAY-202	
SPES-IV	Cheung 92
	Punjabi 89
SACLAY-209	
SPES-0	Didenlez 91
SACLAY-233	
SPES-IV	Punjabi 92

SAIP-RIKEN

—	
CNTR	Fukuda 91
PLASTIC	Suzuki 91
WIRE	Suzuki 91

SARA

—	
?	Julien 88
AMPHORA	Wada 92
	Wada 92B
SPEC	Westenius 90

SASK-LINAC

—	
DAS	Sarty 93
PLASTIC	Sarty 93

SERP

?	
EMUL	Bobodjanov 91
	Bhattacharje 89
	Lyukov 89
	Rabin 88
	Takibaev 88
SERP-E-003	
EMUL	Bunyatov 92
SERP-E-017	
HLBC-2M	Angelov 92B
	Strugalski 92
	Strugalski 92C
	Armutlijsky 91
	Angelov 90
	Angelov 90B
	Artykov 90
	Baatar 90B
	Baatar 90C
	Grishin 90
	Baatar 89
	Baatar 89B
	Baatar 88
	Baatar 88B
	Baldin 88B
	Baldin 88C
SERP-E-044	
HBC-MIRA	Boos 88C

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

SERP

SERP-E-070
BIS — Silvestrov 89

SERP-E-080
MIS — Ananieva 92, Antipov 89C, Efendiev 89

SERP-E-083
HBC-LUDMILA — Batyunya 90, Batyunya 89, Boos 89, Kanazirski 89, Zlatanov 89, Batyunya 87E, Batyunya 86

SERP-E-100
FODS — Abramov 90

SERP-E-102
HYPERON — Akimenko 92, Akimenko 91, Akimenko 90B, Akimenko 90C, Akimenko 89

SERP-E-105
RISK — Gabunia 90, Bannikov 89, Gabunia 89, Bannikov 88, Barwolff 88, Boos 88

SERP-E-107
HLBC-SKAT — Ammosov 92B, Ammosov 90, Ammosov 89, Brunner 89, Brunner 89B, Grabosch 89, Ammosov 88B, Ammosov 88D, Ammosov 88E, Ammosov 88G

SERP-E-112
PROZA — Yokosawa 90B, Apokin 89B, Apokin 88, Apokin 86B

SERP-E-115
ISTRA — Bolotov 90, Bolotov 88

SERP-E-119
SPEC — Afanasyev 90, Afanasyev 90B, Afanasyev 90C

SERP-E-120
SFINKS — Victorov 90

SERP-E-133
HBC-MIRA — Garutchava 87, Garutchava 87B

SERP-E-134
LEPTON-G — Landsberg 90B

SERP-E-135
SIGMA — Landsberg 90

SERP-E-136
CALO — Barabash 92, Blumlein 92, Blumlein 92B, Bozhko 92, Anikeyev 91, Blumlein 91, Belikov 90, Blumlein 90, Sviridov 88

SERP-E-138
HBC-MIRA — Boos 90B, Bogolyubsky 89B, Bogolyubsky 89D, Bravina 89, Babintsev 88, Bogolyubsky 88, Bogolyubsky 88B, Bogolyubsky 88C, Bogolyubsky 88E, Bogolyubsky 88F, Bogolyubsky 88G, Chekulaev 88B, Smirnova 88, Bogolyubsky 87B, Bogolyubsky 87C, Bogolyubsky 86E

SERP-E-139
HBC-LUDMILA — Coc 92, Batyunya 90B, Batyunya 88, Batyunya 88B, Batyunya 87, Batyunya 87G, Batyunya 86B
HBC-LUDMILA-TST — Andreev 92, Andreev 90B

SERP-E-140
GAMS-2000 — Alde 92, Landsberg 92, Alde 91B, Alde 91C, Alde 91E, Alde 91F, Alde 91G, Samoylenko 91, Alde 90, Kulik 90, Landsberg 90, Alde 89, Alde 88C, Alde 88D, Alde 87B

SERP-E-142
LEPTON-F — Bityukov 91B, Landsberg 91, Bityukov 90, Landsberg 90, Landsberg 90B, Bityukov 89, Bityukov 88, Landsberg 88, Bityukov 87

SERP-E-146
BIS-2 — Tatishvili 92, Aleev 90, Aleev 90C, Aleev 90D, Aleev 90E, Aleev 90F, Landsberg 90, Aleev 89, Aleev 88D, Aleev 88F, Aleev 88G
BIS-2M — Smizanska 90

SERP-E-147
MIS — Barkov 90, Bolonkin 89, Bolonkin 88, Baloshin 87

SERP-E-148
SIGMA — Antipov 92, Antipov 90, Antipov 90B, Antipov 90C, Antipov 90D, Antipov 90E, Antipov 89, Antipov 89B, Antipov 88, Antipov 88B, Antipov 87, Antipov 87B

SERP-E-149
PROZA-M — Apokin 92, Yokosawa 91, Apokin 90, Amaglobeli 89, Apokin 89, Nurushev 89, Apokin 88B, Apokin 88C

SERP-E-150
HBC-MIRA — Bravina 92, Bogolyubsky 90, Bogolyubsky 89C

SERP-E-151
RISK — Bannikov 90, Bannikov 89B

SERP-E-153
SPEC — Gavrishchuk 92, Gavrishchuk 91, Gavrishchuk 91B, Gavrishchuk 91C, Belyaev 90, Belyaev 89, Belyaev 89B, Belyaev 89C, Belyaev 88, Belyaev 88B, Belyaev 88C, Belyaev 88D

SERP-E-155
FODS — Volkov 92

SERP-E-157
MIS — Cassata 88

SERP-E-159
BIS-2 — Aleev 90B, Aleev 89B, Aleev 89C, Vecko 89, Aleev 88, Aleev 88B, Aleev 88C, Krastev 88
BIS-2M

SERP-E-163
GAMS-2000 — Boutemeur 89B

SERP-E-164
VES — Beladidze 92, Berdnikov 92B, Bityukov 91, Bityukov 91C, Bityukov 91D

SERP-E-167
HYPERON — Budagov 91

SERP-E-168
QUARTZ — Denisov 91

SERP-E-169
SFINKS — Balats 92

SERP-E-170
CASCADE — Baskov 88

SERP-P-156
HLBC-SKAT — Ammosov 90B, Belikov 89

SLAC

?
? — Arneodo 92
COMB — Yokosawa 90B
SLACKLSF — Silvestrov 89
SPEC — Sealock 89
SSF — Yokosawa 90B

SLAC-BC-070
DBC-40IN-HYB — Shoemaker 88

SLAC-BC-072
HBC-40IN-HYB — Condo 91

SLAC-BC-072-073
HBC-40IN-HYB — Condo 90, Ackleh 89

SLAC-BC-075
HBC-40IN-HYB — Brau 88

SLAC-E-061
20-GEV — Arneodo 92

SLAC-E-087
SSF — Arneodo 92

SLAC-E-123A
COMB — Silvestrov 89

SLAC-E-127
LASS — Silvestrov 89

SLAC-E-130
COMB — Yokosawa 90B

SLAC-E-132
LASS — Aston 91, Dunwoodie 91, Aston 90, Fujii 90, Aston 88C, Aston 88D, Aston 88E

SLAC

SLAC-E-135	
LASS	Aston 92
	Aston 92B
	Aston 91B
	Aston 91C
	Aston 90B
	Aston 90C
	Bienz 90
	Aston 89
	Aston 89B
	Aston 89C
	Aston 88
	Aston 88B
	Aston 88F
	Aston 88G
	Aston 88H
	Aston 88I
	Aston 88J
	Bird 88
SLAC-E-137	
CALO	Bjorken 88
SLAC-E-139	
8-GEV	Arneodo 92
SLAC-E-140	
8-GEV	Arneodo 92
	Roberts 91
	Rock 91
	Whitlow 90
	Arnold 89
	Walker 89
	Dasu 88
	Dasu 87
SSF	Roberts 91
	Whitlow 91
	Whitlow 90B
—	
SSF	Virchaux 92
	Virchaux 90

SLAC-NPI

SLAC-NE-01	
SPEC	Baran 88B
	Napolitano 88
SLAC-NE-04	
DAS	Bosted 89
	Arnold 88
SLAC-NE-09	
8-GEV	Mezani 92
	Chen 91B
SLAC-NE-11	
8-GEV	Lung 93
	Bosted 92
	Bosted 92B

SLAC-PEP

SLAC-PEP-04	
TPC	Grishin 90
SLAC-PEP-04-09	
2-GAMMA	Aleem 92
	Drell 92B
	Aihara 91
	Bethke 91
	Ronan 91
	Alstongarnjo 90
	Eastman 90
	Gan 90
	Kroha 90
	Aihara 89
	Aihara 89B
	Aihara 89C
	Aihara 89D
	Avery 89
	Deboer 89
	Aihara 88
	Aihara 88B
	Aihara 88C
	Aihara 88D
	Aihara 88E
	Aihara 88F
	Cowan 88
	Edberg 88
	Mathis 88
TPC	Aleem 92
	Drell 92B

SLAC-PEP

	Aihara 91
	Bethke 91
	Ronan 91
	Alstongarnjo 90
	Eastman 90
	Gan 90
	Kroha 90
	Aihara 89
	Aihara 89B
	Aihara 89C
	Aihara 89D
	Avery 89
	Deboer 89
	Aihara 88
	Aihara 88B
	Aihara 88C
	Aihara 88D
	Aihara 88E
	Aihara 88F
	Cowan 88
	Edberg 88
	Mathis 88
SLAC-PEP-05	
MARK-II	Aleem 92
	Barklow 92
	Bethke 91
	Boyer 90
	Butler 90
	Cassel 90
	Fordham 90
	Fujii 90
	Gan 90
	Gomezcadenas 90
	Heusch 90B
	Kroha 90
	Morgan 90
	Perl 90
	Petradza 90
	Vonzanthier 90
	Weir 90
	Bethke 89
	Bethke 89C
	Hawkins 89B
	Klein 89
	Komamiya 89
	Komamiya 89B
	Ong 89
	Petradza 89
	Porter 89
	Riles 89
	Riles 89B
	Snyder 89
	Stoker 89
	Wagner 89B
	Weir 89
	Weir 89B
	Wu 89
	Amidei 88
	Gidal 88B
	Karlen 88B
	Karlen 88C
	Klein 88
	Ong 88
	Ong 88B
	Petersen 88
	Riles 88
	Wood 88
	Wormser 88
	Wormser 88B
	Gan 87B
SLAC-PEP-06	
MAC	Kroha 92
	Fujii 90
	Gan 90
	Kroha 90
	Kroha 90B
	Kroha 90C
	Perl 90
	Band 89
	Bethke 89
	Deboer 89
	Ford 89
	Band 88
SLAC-PEP-12	
HRS	Aleem 92

SLAC-PEP

	Geld 92
	Kroha 92
	Abachi 90
	Fujii 90
	Gan 90
	Kroha 90
	Kroha 90B
	Kroha 90C
	Petradza 90B
	Abachi 89
	Abachi 89B
	Abachi 89C
	Abachi 89D
	Averill 89
	Deboer 89
	Petradza 89
	Abachi 88
	Abachi 88B
	Abachi 88C
	Akerlof 88
	Baringer 88
	Ng 88
	Tschirhart 88
SLAC-PEP-20	
DELCO	Gan 90
	Klem 86
SLAC-PEP-21	
ASP	Fujii 90
	Hawkins 89
	Roe 89
	Roe 89B
	Steele 89
	Hearty 88
SLAC-SLC-6	
MARK-II	Komamiya 90
—	
HRS	Odaka 90
MAC	Odaka 90
MANY	Abe 90H
	Hurst 89
MARK-II	Odaka 90

SLAC-SLC

SLAC-SLC-6	
MARK-II	Fujino 92
	Schumm 92
	Bethke 91
	Deangelis 91B
	Dydak 91
	Hebbeker 91
	Hebbeker 91B
	Jacobsen 91
	Jacobsen 91B
	Koetke 91
	Yepes 91
	Barklow 90
	Burchat 90
	Coupal 90
	Fordham 90
	Goldhaber 90
	Gonzalezgarc 90
	Innes 90
	Komamiya 90B
	Kral 90
	Kuhlen 90
	Nash 90
	Oshaughnessy 90
	Oshaughnessy 90B
	Richard 90
	Soderstrom 90
	Swartz 90
	Vankooten 90
	Vankooten 90B
	Abrams 89
	Abrams 89B
	Abrams 89C
	Abrams 89D
	Abrams 89E
	Abrams 89F
	Bethke 89
	Burchat 89
	Deboer 89
	Feldman 89
	Feldman 89B
	Hearty 89

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

SLAC-SLC

	Jung 89
	Komamiya 89C
	Kral 89
	Nash 89
	Weinstein 89
SLAC-SLC-SLD	
SLD	Burrows 92

SLAC-SPEAR

SLAC-SP-017	
SMAG	Bethke 91
	Perl 90
SLAC-SP-019	
SAS	Perl 90
SLAC-SP-025	
DELCO	Perl 90
SLAC-SP-026	
SMAG-LGW	Perl 90
SLAC-SP-029	
MARK-II	Juricic 88
SLAC-SP-030	
CRYS-BALL	Edwards 89
SLAC-SP-032	
MARK-III	Bolton 92
	Coffman 92
	Coffman 92B
	Bolton 91
	Chen 91
	Coffman 91
	Dunwoodie 91
	Bai 90
	Bai 90B
	Bai 90C
	Bai 90D
	Chen 90B
	Dejongh 90
	Drinkard 90
	Eigen 90
	Gan 90
	Labs 90
	Lockman 90
	Schindler 90
	Adler 89
	Adler 89B
	Adler 89C
	Adler 89D
	Adler 89E
	Alder 89
	Browder 89
	Coffman 89
	Dejongh 89
	Lockman 89
	Mallik 89B
	Mir 89
	Pitman 89
	Toki 89
	Toki 89B
	Wasserbaech 89
	Wasserbaech 89B
	Adler 88
	Adler 88B
	Adler 88C
	Adler 88D
	Adler 88F
	Coffman 88
	Grab 88
	Izen 88
	Mir 88
	Schindler 88
	Toki 88
	Coffman 87

TAIU-CYC

—	
SPEC	Trzaska 91B

TMSK

—	
CNTR	Naumenko 89
DAS	Ananien 90
SPEC	Glavanakov 89

TOHO

—	
SPEC	Kagaya 89

TOHO

	Shoda 88
	Shoda 88B

TOKY

—	
CNTR	Yokosawa 90B
SPEC	Imanishi 88
TAGX	Emura 91
	Emura 91B
	Emura 90
	Asai 89
	Endo 88

TRID

—	
CNTR	Tornow 91

TRIUMF

?	
CALO	Stanislaus 89
CHARGEX	Watson 89
CNTR	Cummings 92
FPP	Chan 90
MANY	Davis 88
MRS	Hicks 93
	Celler 90
	Chan 90
	Hausser 90
	Chen 89D
	Lee 89
	Hausser 88
	Hutcheon 88
	Lee 88
SPEC	Bonutti 93
	Kortelling 90
	Grion 89
	Hicks 88
	Huber 88B
WIRE	Cummings 92
	Alford 89
	Cebra 89
TRIUMF-009	
PHOTON	Bagheri 88
	Bagheri 88B
TRIUMF-104	
TRIUMF-TPC	Armstrong 89G
	Ahmad 88
TRIUMF-121	
CNTR	Abegg 89
	Abegg 89B
	Abegg 89C
IONIZATION	Abegg 89
	Abegg 89B
	Abegg 89C
TRIUMF-134	
SPEC	Bossingham 89
TRIUMF-174	
WIRE	Yokosawa 90B
TRIUMF-182	
CNTR	Klomp 91
IONIZATION	Klomp 91
TRIUMF-205	
COMB	Yokosawa 90B
TRIUMF-208	
SPEC	Michaelian 90
TRIUMF-247	
CNTR	Balke 88
	Jodidio 86
TRIUMF-248	
PHOTON	Britton 92
	Britton 92B
	Bryman 92
	Numao 92
	Numao 92B
	Numao 92C
	Rolandi 92
	Numao 89
	Britton 88
	Picciotto 88
TRIUMF-249	
IONIZATION	Virtue 90
	Hasinoff 89
	Hasinoff 88
TRIUMF-298	
MRS	Yen 91

TRIUMF

	Mildenberger 90
TRIUMF-300	
MRS	Abegg 91
	Hutcheon 89B
TRIUMF-304	
CNTR	Huber 89
	Janissen 89
	Huber 88
	Marshall 88
IONIZATION	Huber 89
	Janissen 89
	Huber 88
	Marshall 88
TRIUMF-332	
MRS	Epstein 90
	Abegg 88
	Punjabi 88
	Punjabi 88B
TRIUMF-337	
SPEC	Yokosawa 90B
TRIUMF-369	
CNTR	Abegg 92
	Abegg 92B
IONIZATION	Abegg 92
	Abegg 92B
TRIUMF-377	
CNTR	Smith 88
	Smith 88B
TRIUMF-394	
CNTR	Sevior 91
	Brack 89
	Brack 88
	Brack 88B
TRIUMF-399	
CNTR	Kohler 91
TRIUMF-443	
CNTR	Sossi 92
	Sossi 91
	Rui 90
SPEC	Sossi 92
	Sossi 91
	Rui 90
TRIUMF-452	
DRIFT	Armstrong 92F
	Hasinoff 92
	Hasinoff 92B
	Wright 91
	Armstrong 90C
TRIUMF-460	
CNTR	Ponting 88
SPEC	Ponting 88
TRIUMF-466	
MRS	Edwards 92
	Hutcheon 91
	Hutcheon 90
	Hutcheon 89
TRIUMF-478	
SPEC	Huber 88C
	Huber 88D
TRIUMF-502	
SPEC	Brack 91
	Stevenson 90
	Stevenson 90C
TRIUMF-530	
CNTR	Friedman 91
	Friedman 91B
	Friedman 90
	Friedman 89
TRIUMF-541	
CNTR	Rahav 92B
	Rahav 92C
	Hausser 91
SPEC	Rahav 92B
	Rahav 92C
	Hausser 91
TRIUMF-552	
MRS	Korkmaz 91
	Hutcheon 90
TRIUMF-556	
SPEC	Maytalbeck 92
	Vetterli 92
	Weber 90
	Weber 89
	Gorringe 88

TRIUMF

TRIUMF-557	
SPEC	Hausser 91
WIRE	Hausser 91
TRIUMF-561	
WIRE	Feltman 91
—	
MANY	Poutissou 89

VAN-DE-GRAAFF

—	
CNTR	Miljanic 90
PLASTIC	Gokhberg 91
	Shigin 91
WIRE	Bini 89B

YERE-ARUS

—	
CNTR	Astabatyan 90
COMB	Avakyan 91
	Arakelyan 90C
	Arakelyan 90D
	Arakelyan 90E
	Avakyan 90
	Avakyan 90B
	Avakyan 90C
	Agababyan 89B
	Amroyan 89
	Arakelyan 89
	Arakelyan 89C
	Arakelyan 89D
	Arakelyan 89E
	Avakyan 89
	Amroyan 88
	Avakyan 88C
	Sirunyan 88
DAS	Adamyan 89
	Adamyan 88
	Galumyan 88
DEUTRON-2	Alanakyan 91
	Alanakyan 90
	Alanakyan 88
EMUL	Zakharov 90
SEMI	Arakelyan 91
	Arakelyan 90
	Arakelyan 90F
SPEC	Mkrtchyan 90
	Vartapetyan 90
	Vartapetyan 89
	Bagdasaryan 88

Entries in order of accelerator code, then experiment number, then detector code, as given in Accelerator and Detector Vocabularies. See the legend on page 395.

We list here all particle names used to describe decays and reactions. Most of the names are obvious. The first column gives the usual particle symbol, the second gives the English spelling, and the third gives a brief definition. The English spelling is the "computer name," the version to be typed in searching our computer databases.

Particle names follow the ordering in the Particle Vocabulary of this compilation. The particle ordering is: gauge bosons, leptons, mesons, baryons, atoms, and nuclei, and within each group the ordering is mainly by increasing mass. However, within mesons and baryons, ordering is nonstrange, strange, charmed, bottom . . . .

In the indices, the order of the charge states is $^{++}, ^{+}, ^{0}, ^{-}, ^{--}$. For antiparticles, we use the actual charge of the antiparticle, as in $\bar{\Delta}^{--}$. Unless an antiparticle has a common name of its own, as in K^+, all antiparticles are spelled with the suffix "BAR" appended to the English portion of the names, as PBAR for $\bar{p}$, DELTABAR(1900S31)0 for $\bar{\Delta}(1900S_{31})^0$, and CHARMBAR for $\bar{\text{charm}}$.

We use the chemical symbols for nuclei except in a few cases where an ambiguity with a particle name exists. For example, we use KK for potassium to avoid confusion with the K meson, and Nit for nitrogen to avoid confusion with the neutron, nucleon or nickel.

The names we use in writing any reaction are based on those used by the authors of the paper. For example, one paper might refer to π^+, π^-, and π^0, while another just uses π to mean all three.

Some of the "particle names" represent a group of particles whose exact number is unknown or is varied in some limited range; for example MULT[PI+] means a limited number of π^+ particles or a multiplicity distribution on the number of π^+ particles. Names like these are treated as a single particle in the Reaction/Momentum Index, where the reaction final states are ordered by increasing multiplicity. We do give the exact number of particles when known, *e.g.*, "$3\pi^+$" or "2charm," and these forms are treated as the stated number of particles.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
		GAUGE AND HIGGS BOSONS
γ	GAMMA	Photon
γ^*	GAMMA*	Virtual γ, predominantely used for static fields
$W^\pm$	W+-	Positive- or negative-charge weak gauge boson
W^+	W+	Positive-charge weak gauge boson
W^-	W-	Negative-charge weak gauge boson
Z^0	Z	Neutral-charge weak gauge boson
gluon	GLUON	
higgs	HIGGS	Higgs boson
axion	AXION	Hypothesized light Higgs scalar boson
graviton	GRAVITON	Particle carrying gravitational force
		HYPOTHETICAL GAUGE AND SCALAR NON-SUSY BOSONS
W_R	WR	Right intermediate vector boson
$W'^\pm$	WPRIME+-	Additional positive- or negative-charge W boson
W'^+	WPRIME+	Additional positive-charge W boson
W'^-	WPRIME-	Additional negative-charge W boson
Z'	ZPRIME	Additional Z boson
goldstone	GOLDSTONE	Goldstone boson
majoron	MAJORON	Hypothetical neutral, spinless, light or massless, penetrating particle. Predicted in some models in which lepton charge conservation is spontaneously broken
familon	FAMILON	Massless axion-like Nambu-Goldstone boson
arion	ARION	Massless pseudo-goldstone boson
axigluon	AXIGLUON	
baryoboson	BARYOBOSON	Hypothetical very light or massless particle coupled with baryon charge and responsible for intermediate range interactions
fifth-force	FIFTH-FORCE	General particle responsible for additional scalar long-range interaction
higgs^{++}	HIGGS++	Doubly-positive-charge Higgs boson
higgs^{--}	HIGGS--	Doubly-negative-charge Higgs boson
S^+	S+	Positive intermediate scalar boson
S^0	S0	Intermediate scalar boson
S^-	S-	Negative intermediate scalar boson
		LEPTONS
ℓ	LEPTON	Unspecified lepton
ν	NU	Unspecified neutrino or antineutrino
$\bar{\nu}$	NUBAR	Unspecified antineutrino
ν_e	NUE	Electron neutrino
$\bar{\nu}_e$	NUEBAR	Antielectron neutrino
ν_μ	NUMU	Muon neutrino
$\bar{\nu}_\mu$	NUMUBAR	Antimuon neutrino
ν_τ	NUTAU	τ neutrino
$\bar{\nu}_\tau$	NUTAUBAR	Anti-τ neutrino
$\ell^\pm$	LEPTON+-	Unspecified positive- or negative-charge lepton
ℓ^-	LEPTON-	Unspecified negative-charge lepton
ℓ^+	LEPTON+	Unspecified positive-charge lepton
$e^\pm$	E+-	Positron or electron
e^-	E-	Electron
e^+	E+	Positron
$\mu^\pm$	MU+-	Positive- or negative-charge muon
μ^-	MU-	Negative-charge muon
μ^+	MU+	Positive-charge muon
$\tau^\pm$	TAU+-	Positive- or negative-charge τ
τ^-	TAU-	Negative-charge τ^-
τ^+	TAU+	Positive-charge τ^+
		HYPOTHETICAL HEAVY LEPTONS
heavy-lepton	HEAVY-LEPTON	Unspecified heavy lepton
heavy-ν	HEAVY-NU	Unspecified heavy neutrino
heavy-$\bar{\nu}$	HEAVY-NUBAR	Unspecified heavy antineutrino
heavy-ν_e	HEAVY-NUE	Unspecified heavy electron neutrino
heavy-$\bar{\nu}_e$	HEAVY-NUEBAR	Unspecified heavy electron antineutrino
heavy-ν_μ	HEAVY-NUMU	Unspecified heavy muon neutrino
heavy-$\bar{\nu}_\mu$	HEAVY-NUMUBAR	Unspecified heavy muon antineutrino
heavy-ν_τ	HEAVY-NUTAU	Unspecified heavy τ antineutrino
heavy-$\bar{\nu}_\tau$	HEAVY-NUTAUBAR	Unspecified heavy τ antineutrino
heavy-lepton^0	HEAVY-LEPTON0	Unspecified neutral heavy lepton
heavy-$\overline{\text{lepton}}^0$	HEAVY-LEPTONBAR0	Unspecified neutral-charge heavy antilepton
heavy-lepton$^\pm$	HEAVY-LEPTON+-	Unspecified positive- or negative-charge heavy lepton
heavy-lepton$^-$	HEAVY-LEPTON-	Unspecified negative-charge heavy lepton
heavy-lepton$^+$	HEAVY-LEPTON+	Unspecified positive-charge heavy lepton
heavy-e	HEAVY-E	Unspecified heavy electron
heavy-e^0	HEAVY-E0	Unspecified neutral heavy electron
heavy-μ	HEAVY-MU	Unspecified heavy muon
heavy-μ^0	HEAVY-MU0	Unspecified neutral heavy muon
heavy-τ	HEAVY-TAU	Heavy τ lepton
		QUARKS & DIQUARKS
q	QUARK	Quark of charge 2/3

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\bar{q}$	QUARKBAR	Antiquark of charge 2/3
u	UQ	Up quark
$\bar{u}$	UQBAR	Antiup quark
d	DQ	Down quark
$\bar{d}$	DQBAR	Antidown quark
s	SQ	Strange quark
$\bar{s}$	SQBAR	Antistrange quark
c	CQ	Charmed quark
$\bar{c}$	CQBAR	Anticharmed quark
b	BQ	Bottom quark
$\bar{b}$	BQBAR	Antibottom quark
t	TQ	Top quark
$\bar{t}$	TQBAR	Antitop quark
diquark	DIQUARK	Diquark of unspecified charge and flavor
	HYPOTHETICAL QUARKS	
b'	BQPRIME	Bottom quark of fourth generation
$\bar{b}'$	BQPRIMEBAR	Antibottom quark of fourth generation
	SUSY PARTICLES: FERMIONS	
s-particle	SPARTICLE	Supersymmetric partner of any ordinary particle
gaugino	GAUGINO	Spin-1/2 supersymmetric partner of any gauge boson
neutralino	NEUTRALINO	Any supersymmetric partner of an ordinary neutral particle
chargino	CHARGINO	Mixture of wino and charged higgsino
chargino$^+$	CHARGINO+	Mixture of wino and positive-charge higgsino
chargino$^-$	CHARGINO-	Mixture of wino and negative-charge higgsino
photino	PHOTINO	Spin-1/2 supersymmetric partner of the photon
$\overline{\text{photino}}$	PHOTINOBAR	Spin-0 supersymmetric partner of the antiphoton
wino	WINO	Spin-1/2 supersymmetric partner of the $W^{\pm}$
wino$^+$	WINO+	Spin-1/2 supersymmetric partner of the W^+
wino$^-$	WINO-	Spin-1/2 supersymmetric partner of the W^-
zino	ZINO	Spin-1/2 supersymmetric partner of the Z^0
gluino	GLUINO	Spin-1/2 supersymmetric partner of the gluon
axino	AXINO	Spin-1/2 supersymmetric partner of the axion
gravitino	GRAVITINO	Spin-3/2 supersymmetric partner of graviton
$\overline{\text{gravitino}}$	GRAVITINOBAR	Antigravitino
higgsino	HIGGSINO	Spin-1/2 supersymmetric partner of any Higgs boson
higgsino(CP $= -1)^0$	HIGGSINO(CP=-1)0	Spin-1/2 supersymmetric partner of neutral *CP*-odd Higgs boson
higgsino$^+$	HIGGSINO+	Spin-1/2 supersymmetric partner of positive-charge Higgs boson
higgsino^0	HIGGSINO0	Spin-1/2 supersymmetric partner of any neutral-charge *CP*-even Higgs boson
higgsino$^-$	HIGGSINO-	Spin-1/2 supersymmetric partner of negative-charge Higgs boson
goldstino	GOLDSTINO	Supersymmetric partner of the Goldstone boson
$\overline{\text{goldstino}}$	GOLDSTINOBAR	Spin-0 supersymmetric partner of the antigoldstino
	SUSY PARTICLES: BOSONS	
higgs($CP = -1$)	HIGGS(CP=-1)	Minimal supersymmetric model *CP*-odd Higgs boson
higgs($CP = +1$)	HIGGS(CP=+1)	Minimal supersymmetric model *CP*-even Higgs boson
higgs$^{\pm}$	HIGGS+-	Positive- or negative-charge Higgs boson
higgs$^+$	HIGGS+	Positive-charge Higgs boson
higgs$^-$	HIGGS-	Negative-charge Higgs boson
$\tilde{\ell}$	SLEPTON	Spin-0 supersymmetric lepton partner
$\tilde{\ell}^-$	SLEPTON-	Negative-charge spin-0 supersymmetric lepton partner
$\tilde{\ell}^+$	SLEPTON+	Positive-charge spin-0 supersymmetric lepton partner
$\tilde{\ell}^0$	SLEPTONO	Neutral-charge spin-0 supersymmetric lepton partner
$\tilde{\nu}$	SNU	Spin-0 supersymmetric partner of the neutrino
$\bar{\tilde{\nu}}$	SNUBAR	Spin-0 supersymmetric partner of the antineutrino
$\tilde{\nu}_e$	SNUE	Spin-0 supersymmetric partner of the ν_e
$\bar{\tilde{\nu}}_e$	SNUEBAR	Spin-0 supersymmetric partner of the $\bar{\nu}_e$
$\tilde{\nu}_\mu$	SNUMU	Spin-0 supersymmetric partner of ν_μ
$\bar{\tilde{\nu}}_\mu$	SNUMUBAR	Spin-0 supersymmetric partner of the $\bar{\nu}_\mu$
$\tilde{\nu}_\tau$	SNUTAU	Spin-0 supersymmetric partner of the ν_τ
$\bar{\tilde{\nu}}_\tau$	SNUTAUBAR	Spin-0 supersymmetric partner of the $\bar{\nu}_\tau$
$\tilde{e}$	SELECTRON	Spin-0 supersymmetric partner of the positron or electron
$\tilde{e}^-$	SELECTRON-	Spin-0 supersymmetric partner of the electron
$\tilde{e}^+$	SELECTRON+	Spin-0 supersymmetric partner of the positron
$\tilde{\mu}$	SMUON	Spin-0 supersymmetric partner of muon
$\tilde{\mu}^-$	SMUON-	Spin-0 supersymmetric partner of μ^-
$\tilde{\mu}^+$	SMUON+	Spin-0 supersymmetric partner of μ^+
$\tilde{\tau}$	STAU	Spin-0 supersymmetric partner of τ lepton
$\tilde{\tau}^-$	STAU-	Spin-0 supersymmetric partner of τ^- lepton
$\tilde{\tau}^+$	STAU+	Spin-0 supersymmetric partner of τ^+ lepton
$\tilde{q}$	SQUARK	Spin-0 supersymmetric quark partner
$\bar{\tilde{q}}$	SQUARKBAR	Spin-0 supersymmetric antiquark partner
$\tilde{u}$	S-UQ	Spin-0 supersymmetric partner of the up quark
$\tilde{d}$	S-DQ	Spin-0 supersymmetric partner of the down quark

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\tilde{s}$	S-SQ	Spin-0 supersymmetric partner of the strange quark
$\tilde{c}$	S-CQ	Spin-0 supersymmetric partner of the charm quark
$\tilde{b}$	S-BQ	Spin-0 supersymmetric partner of the bottom quark
$\tilde{t}$	S-TQ	Spin-0 supersymmetric partner of the top quark
gluinium	GLUINIUM	Bound state of gluinos
	COMPOSITE LEPTONS & QUARKS	
ν^*	NU*	Excited unspecified neutrino. Different from heavy-lepton^0
$\bar{\nu}^*$	NU*BAR	Excited unspecified anti-neutrino. Different with heavy-lepton^0
$e^{*\pm}$	E*+-	Excited positron or electron
e^{*-}	E*-	Excited electron
e^{*+}	E*+	Excited positron
$\mu^{*\pm}$	MU*+-	Excited positive- or negative-charge muon
μ^{*-}	MU*-	Excited negative-charge muon
μ^{*+}	MU*+	Excited positive-charge muon
τ^*	TAU*	Excited τ of unspecified charge
τ^{*-}	TAU*-	Excited negative-charge τ
τ^{*+}	TAU*+	Excited positive-charge τ
q^*	QUARK*	Excited quark
$\bar{q}^*$	QUARK*BAR	Excited antiquark
	MISCELLANEOUS HYPOTHETICAL PARTICLES	
cosmion	COSMION	Weakly interacting massive particle (WIMP), having been proposed to solve simultaneously the problems of dark matter and the deficit of B8 neutrinos from the Sun
dark	DARK	Dark is a generic name for the dark matter in the galactic halo. Dark may be weakly interacting particles: neutrino, axion, stable sparticles or strongly interacting particles — quark nugget
monopole	MONOPOLE	Magnetic monopole
technipion	TECHNIPION	Technicolor pion
technipion$^+$	TECHNIPION+	Positive-charge technicolor pion
technipion$^-$	TECHNIPION-	Negative-charge technicolor pion
color	COLOR	Unspecified particle carrying color
lepton-colored	LEPTON-COLOR	Unspecified lepton carrying color
$\overline{\text{lepton-colored}}$	LEPTON-COLORBAR	Unspecified antilepton carrying anticolor
e-color$^\pm$	E-COLOR+-	Posiive- or negative- charge colored electron
lepton-quark	LEPTO-QUARK	
$\overline{\text{lepton-quark}}$	LEPTO-QUARKBAR	
ℓ^{++}	LEPTON++	Doubly-positive-charge lepton
wquark	WQUARK	Hypothesized, fractionally-charged particle interacting only weakly
$\overline{\text{wquark}}$	WQUARKBAR	Weak antiquark
tachyon	TACHYON	
tachyon$^+$	TACHYON+	
tachyon$^-$	TACHYON-	
e-nonpauli	NONPAULI(E-)	Electron-like, nonfermionic particle, used to encode experiments on sear ches for Pauli principle violation in exotic atoms
p-nonpauli	NONPAULI(P)	Proton-like, nonfermionic particle, used to encode experiments on searches for Pauli principle violation in exotic nuclei
	HADRONS: LIGHT QUARK MESONS	
meson	MESON	Unspecified meson of unspecified charge
meson$^+$	MESON+	Unspecified positive-charge meson
meson^0	MESONO	Unspecified neutral-charge meson
meson$^-$	MESON-	Unspecified negative-charge meson
π	PI	Pion of unspecified charge
$\pi^\pm$	PI+-	Positive- or negative-charge meson
η	ETA	$\eta(549)$ meson
meson(600)	MESON(600)	Neutral meson
$\rho(770)$	RHO(770)	
$\rho(770)^\pm$	RHO(770)+-	
$\omega(783)$	OMEGA(783)	
$\eta'(958)$	ETAPRIME(958)	
$f_0(700)$	FO(700)	Was $\epsilon(700)$. $(\pi\pi)_{S\text{-wave}}$ (near 700 MeV)
$M(940)$	M(940)	Nonstrange, $I = 0$ meson resonance
$M(953)$	M(953)	Nonstrange, $I = 0$ meson resonance
$f_0(975)$	FO(975)	$I = 1$, S-wave $K\bar{K}$ enhancement
$a_0(980)$	AO(980)	
$h(990)$	H(990)	
$M(1033)$	M(1033)	Nonstrange, $I = 0$ meson resonance
$\eta(1080)$	ETA(1080)	
$M(1150)$	M(1150)	Nonstrange, $I = 0$ meson resonance
$\omega\pi(1160)$	OMEGAPI(1160)	Reported meson state decaying to $\omega\pi$
$h_1(1170)$	H1(1170)	
$b_1(1235)$	B1(1235)	"Buddha" meson
$f_0(1240)$	FO(1240)	Was $g_S(1240)$
$a_1(1260)$	A1(1260)	
$a_1(1260)^\pm$	A1(1260)+-	
$f_2(1270)$	F2(1270)	

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$f_1(1285)$	F1(1285)	Was $D(1285)$
$\eta(1295)$	ETA(1295)	
$\pi(1300)$	PI(1300)	
$a_0(1320)$	A0(1320)	
$a_2(1320)$	A2(1320)	
$a_2(1320)^{\pm}$	A2(1320)+-	
$h_1(1380)$	H1(1380)	
$\omega(1390)$	OMEGA(1390)	Meson resonance
$f_0(1400)$	F0(1400)	Was $\epsilon(1300)$. $(\pi\pi)_{S-\text{wave}}$ (near 1300 MeV)
$\hat{\rho}(1405)$	RHOHAT(1405)	
$f_1(1420)$	F1(1420)	Was $E(1420)$
$f_2(1430)$	F2(1430)	
$\eta(1440)$	ETA(1440)	Was $\iota(1440)$. Glueball candidate
$\rho(1450)$	RHO(1450)	
$\eta(1490)$	ETA(1490)	
$f_1(1510)$	F1(1510)	Was $D(1530)$
$f_2(1520)$	F2(1520)	
$f_0(1525)$	F0(1525)	
$f_2'(1525)$	F2PRIME(1525)	
$f_0(1590)$	F0(1590)	
$\omega(1600)$	OMEGA(1600)	Meson resonance
$f_2(1640)$	F2(1640)	
$X(1650)$	X(1650)	
$\omega_3(1670)$	OMEGA3(1670)	
$\pi_2(1670)$	PI2(1670)	Was $A(1680)$
$\rho_3(1690)$	RHO3(1690)	
$\rho(1700)$	RHO(1700)	
$X(1700)$	X(1700)	
$f_2(1720)$	F0(1710)	Was $\theta(1690)$. Glueball candidate
$X(1740)$	X(1740)	
$f_0(1750)$	F0(1750)	Was $S(1730)$
$\eta(1760)$	ETA(1760)	
$\pi(1770)$	PI(1770)	
$\pi(1775)$	PI(1775)	
$f_2(1810)$	F2(1810)	
$X(1814)$	X(1814)	
$\eta_2(1870)$	ETA2(1870)	
$X(1910)$	X(1910)	
$f_2(1920)$	F2(1920)	
$X(1935)$	X(1935)	Was $S(1935)$
$X(1935)^+$	X(1935)+	Was $S(1935)^+$
$X(1935)^0$	X(1935)0	Was $S(1935)^0$
$X(1935)^-$	X(1935)-	Was $S(1935)^-$
$X(1950)$	X(1950)	
$f_2(2010)$	F2(2010)	Glueball candidate
$a_4(2040)$	A4(2040)	Was $\delta(2040)$
$a_3(2050)$	A3(2050)	3π state
$f_4(2050)$	F4(2050)	Was $h(2030)$. $I = 0$, $J^P = 4^+$ meson resonance
$\eta(2100)$	ETA(2100)	
$\pi_2(2100)$	PI2(2100)	
$\rho(2110)$	RHO(2110)	
$f_2(2150)$	F2(2150)	Was $\epsilon(2150)$
$\rho(2150)$	RHO(2150)	2190 MeV $I = 1$ meson observed in $\bar{p}p$ and $\bar{p}d$ total CS
$f_2(2175)$	F2(2175)	
meson(2200)	MESON(2200)	
$X(2200)$	X(2200)	
$f_4(2220)$	F4(2220)	Was $\xi(2220)$. Meson seen in $J/\psi(1S)$ decays
$\rho_3(2250)$	RHO3(2250)	
$f_2(2300)$	F2(2300)	Was $g_T(2320)$
$f_4(2300)$	F4(2300)	Was $\epsilon(2300)$
$f_2(2340)$	F2(2340)	
$\rho_5(2350)$	RHO5(2350)	
$a_6(2450)$	A6(2450)	Was $\delta(2450)$
$f_6(2510)$	F6(2510)	Was $R(2510)$
meson(2950)	MESON(2950)	Bump seen in $p\bar{p}\pi$
$X(3250)$	X(3250)	
	OTHER LIGHT UNFLAVORED MESONS	
$(e^+e^-(1100-2200))$	E+E-(1100-2200)	Vector meson
$X(1900-3600)$	X(1900-3600)	Any meson bump seen in production experiments in the mass region 1900 - 3600 MeV
	MESONS WITH HEAVIEST QUARK STRANGE	
strange	STRANGE	Unspecified strange particle
$\overline{\text{strange}}$	STRANGEBAR	Unspecified strangeness +1 particle
kaon	KAON	Kaon or antikaon of unspecified charge
K	K	K meson
$K^{\pm}$	K+-	Ordinary K^+ or K^- meson

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\overline{K}$	KBAR	K^- or $\overline{K}^0$ meson
K_S	KS	K_{short}, neutral K meson
K_L	KL	K_{long}, neutral K meson
$K^*(892)$	K*(892)	
$K^*(892)^{\pm}$	K*(892)+-	
$\overline{K}^*(892)$	K*BAR(892)	
$K_1(1270)$	K1(1270)	Was $Q(1280)$
$\overline{K}_1(1270)$	K1BAR(1270)	
$K_1(1400)$	K1(1400)	Was $Q(1400)$
$\overline{K}_1(1400)$	K1BAR(1400)	
$K^*(1410)$	K*(1410)	
$\overline{K}^*(1410)$	K*BAR(1410)	
$K_0^*(1430)$	K0*(1430)	Was $\kappa(1350)$
$\overline{K}_0^*(1430)$	K0*BAR(1430)	
$K_2^*(1430)$	K2*(1430)	
$\overline{K}_2^*(1430)$	K2*BAR(1430)	
$K(1460)$	K(1460)	$J^P = 0^-$ state seen in PWA decaying predominantly into $f_0(700)K$
$\overline{K}(1460)$	KBAR(1460)	$J^P = 0^-$ state seen in PWA decaying predominantly into $f_0(700)\overline{K}$
$K_2(1580)$	K2(1580)	Was $L(1580)$
$\overline{K}_2(1580)$	K2BAR(1580)	
$K_1(1650)$	K1(1650)	Possible $K\omega$ state
$\overline{K}_1(1650)$	K1BAR(1650)	Possible $K\omega$ state
$K^*(1680)$	K*(1680)	
$\overline{K}^*(1680)$	K*BAR(1680)	
$K_2(1770)$	K2(1770)	
$\overline{K}_2(1770)$	K2BAR(1770)	
$K_3^*(1780)$	K3*(1780)	
$\overline{K}_3^*(1780)$	K3*BAR(1780)	
$K(1830)^+$	K(1830)	
$\overline{K}(1830)$	KBAR(1830)	
$K_0^*(1950)$	K0*(1950)	
$\overline{K}_0^*(1950)$	K0*BAR(1950)	
$K_2^*(1980)$	K2*(1980)	
$\overline{K}_2^*(1980)$	K2*BAR(1980)	
$K_4^*(2045)$	K4*(2045)	
$\overline{K}_4^*(2045)$	K4*BAR(2045)	
$K_2(2250)$	K2(2250)	Enhancement seen in the antihyperon-nucleon system, either in the mass spectra or in the $J^P = 2^-$ wave
$\overline{K}_2(2250)$	K2BAR(2250)	
$K_3(2320)$	K3(2320)	
$\overline{K}_3(2320)$	K3BAR(2320)	
$K_5^*(2380)$	K5*(2380)	
$\overline{K}_5^*(2380)$	K5*BAR(2380)	
$K_4(2500)$	K4(2500)	
$\overline{K}_4(2500)$	K4BAR(2500)	
$I(2600)$	I(2600)	Strange meson
$K^*(\text{unspec})$	K*(UNSPEC)	Unspecified K^*
$\overline{K}^*(\text{unspec})$	K*BAR(UNSPEC)	Unspecified $\overline{K}^*$
strangeonium	STRANGEONIUM	Unspecified meson whose quark content is predominantly $s\bar{s}$, such as the $\phi(1020)$
$\phi(1020)$	PHI(1020)	
$\phi(1680)$	PHI(1680)	
$\phi_3(1850)$	PHI3(1850)	Bump in K^+K^- mass
$K\overline{K}(2200)^0$	KKBAR(2200)0	Reported spin-5 boson resonance
$\phi_5(2400)$	PHI5(2400)	
	MESONS WITH HEAVIEST QUARK CHARMED	
charm	CHARM	Unspecified charmed particle
$\overline{\text{charm}}$	CHARMBAR	Unspecified anticharmed particle
$\text{charm}^{\pm}$	CHARM+-	Unspecified positive- or negative-charge charmed particle
charm^0	CHARM0	Unspecified neutral-charge charmed particle
charm^+	CHARM+	Unspecified positive-charge charmed particle
charm^-	CHARM-	Unspecified negative-charge charmed particle
charmed-meson	CHARMED-MESON	Unspecified charmed meson
$\overline{\text{charmed-meson}}$	CHARMED-MESONBAR	Unspecified anticharmed meson
DC	DC	D or $\overline{D}$ charmed meson
$D^{\pm}$	D+-	Positive- or negative-charge $D(1869)$ charmed nonstrange meson
D	D	D^+ or D^0 charmed meson
$\overline{D}$	DBAR	D^- or $\overline{D}^0$ charmed meson
$D(\text{unspec})$	D(UNSPEC)	Unspecified charmed nonstrange meson
$\overline{D}(\text{unspec})$	DBAR(UNSPEC)	Unspecified anticharmed nonstrange meson
$D^*(2010)^{\pm}$	D*(2010)+-	Excited charmed nonstrange meson

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$D^*(2010)$	D*(2010)	Excited charmed nonstrange meson
$\overline{D}^*(2010)$	D*BAR(2010)	
$D_S^\pm$	D/S+-	Was F. $D_S(1971)^+$ or $D_S(1971)^-$ charmed strange meson
D_S^+	D/S+	Was F. $D_S(1971)^+$ charmed strange meson
D_S^-	D/S-	Was F. $D_S(1971)^-$ charmed strange meson
D_S^*	D/S*	Was $F^*(2140)$. Excited charmed strange meson
D_S^{*+}	D/S*+	Was $F^*(2140)$. Excited charmed strange meson
$\overline{D}_S^*$	D/S*BAR	
D_S^{*-}	D/S*-	Was $F^*(2140)$. Excited charmed strange meson
$D_1(2420)$	D1(2420)	
$\overline{D}_1(2460)$	D1BAR(2420)	
$D_J(2440)$	D/J(2440)	Excited charmed nonstrange meson
$\overline{D}_J(2440)$	D/JBAR(2440)	
$D_2^*(2460)$	D2*(2460)	
$\overline{D}_2^*(2460)$	D2*BAR(2460)	
$D_J^*(2470)$	D/J*(2470)	
$\overline{D}_J^*(2470)$	D/J*BAR(2470)	
$D_{S1}(2536)^\pm$	D/S1(2536)+-	
$D_{S1}(2536)^+$	D/S1(2536)+	
$D_{S1}(2536)^-$	D/S1(2536)-	
$D_S^*(2547)^+$	D/S*(2547)+	
$D_S^*(2547)^-$	D/S*(2547)-	
$D_{SJ}(2564)^+$	D/S/J(2564)+	
$D_{SJ}(2564)^-$	D/S/J(2564)-	
$D_S^*(2790)^+$	D/S*(2790)+	
$D_S^*(2790)^-$	D/S*(2790)-	
D_S(unspec)	D/S(UNSPEC)	Unspecified charmed strange meson
$D_S(\text{unspec})^+$	D/S(UNSPEC)+	Unspecified positive-charge charmed strange meson
charmonium	CHARMONIUM	Unspecified charm-anticharm state
$X(2830)$	X(2830)	$J^P = 0^-$ charmonium state
$\chi(2850)$	CHI(2850)	
$\eta_c(1S)$	ETA/C(1S)	Charmonium meson
$\psi(3040)$	PSI(3040)	
$J/\psi(1S)$	J/PSI(1S)	
$\chi(3180)$	CHI(3180)	
$\chi_{c0}(1P)$	CHI/C0(1P)	Particle observed in $e^+e^- \to \mu^+\mu^-2\gamma$
$\chi(3300-3500)$	CHI(3300-3500)	Generic name for charmonium χ states in the 3270 – 3500 MeV mass region
$\chi_c(3455)$	CHI/C(3455)	Radiative decay product of $\psi(2S)$
$\chi_{c1}(1P)$	CHI/C1(1P)	Observed in $e^+e^-2\gamma$ final state
$\chi_{c2}(1P)$	CHI/C2(1P)	Charmonium meson
$\eta_c(2S)$	ETA/C(2S)	Charmonium meson
$\psi(2S)$	PSI(2S)	
$\psi(3770)$	PSI(3770)	
$\psi(4040)$	PSI(4040)	
$\psi(4160)$	PSI(4160)	
$\psi(4415)$	PSI(4415)	
χ_c(unspec)	CHI/C(UNSPEC)	Unspecified radiative decay product of any ψ meson
ψ(unspec)	PSI(UNSPEC)	Unspecified ψ meson
	MESONS WITH HEAVIEST QUARK BOTTOM	
bottom	BOTTOM	Unspecified particle with naked bottom
$\overline{\text{bottom}}$	BOTTOMBAR	Unspecified particle with naked antibottom
$B^\pm$	B+-	Beauty meson
B	B	$B(5270)$ bottom meson
$\overline{B}$	BBAR	$\overline{B}(5270)$ antibottom meson
B(unspec)	B(UNSPEC)	Meson of unspecified mass with antibeauty quark
$\overline{B}$(unspec)	BBAR(UNSPEC)	Meson of unspecified mass with beauty quark
B^*	B*	Excited bottom meson
$\overline{B}^*$	B*BAR	
B^* (unspec)	B*(UNSPEC)	Vector beauty meson
$\overline{B}^*$(unspec)	B*BAR(UNSPEC)	
B_S	B/S	Beauty-antistrange meson
$\overline{B}_S$	B/SBAR	Antibeauty-strange meson
B_S^*	B/S*	Beauty-antistrange excited meson
$\overline{B}_S^*$	B/S*BAR	Antibeauty-strange excited meson
bottomonium	BOTTOMONIUM	Unspecified bottom-antibottom state
$\zeta(8300)$	ZETA(8300)	
$\eta_b(1S)$	ETA/B(1S)	Lowest mass $J^P = 0^-$ $b\bar{b}$ state
$\Upsilon(1S)$	UPSI(1S)	
$h_b(1P)$	H/B(1P)	Lowest mass $J^P = 1^+$ $b\bar{b}$ state
$\chi_{b0}(1P)$	CHI/B0(1P)	Bottomonium meson

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\chi_{b1}(1P)$	CHI/B1(1P)	Bottomonium meson
$\chi_{b2}(1P)$	CHI/B2(1P)	Bottomonium meson
$\Upsilon(1D)$	UPSI(1D)	$J^P = 1^-$ $b\bar{b}$ state
$\Upsilon(2S)$	UPSI(2S)	
$\chi_{b0}(2P)$	CHI/B0(2P)	Bottomonium meson
$\chi_{b1}(2P)$	CHI/B1(2P)	Bottomonium meson
$\chi_{b2}(2P)$	CHI/B2(2P)	Bottomonium meson
$\Upsilon(3S)$	UPSI(3S)	
$\Upsilon(4S)$	UPSI(4S)	
$\Upsilon(10860)$	UPSI(10860)	
$\Upsilon(11020)$	UPSI(11020)	
χ_b(unspec)	CHI/B(UNSPEC)	Bottomonium meson
Υ(unspec)	UPSI(UNSPEC)	Unspecified Υ particle
	MESONS WITH HEAVIEST QUARK TOP	
top	TOP	Unspecified particle with naked top
$\overline{\text{top}}$	TOPBAR	Unspecified particle with naked antitop
toponium	TOPONIUM	Unspecified top-antitop state
	EXOTIC MESONS AND MESON-LIKE OBJECTS	
exotic	EXOTIC	Unspecified particle which cannot be fit into $q\bar{q}$ or qqq model
exotic-meson	EXOTIC-MESON	Reported manifestly exotic $\bar{\Lambda}\Delta$ meson
glueball	GLUEBALL	Unspecified glueball
pomeron	POMERON	
$C(1480)$	C(1480)	Meson decaying into $\phi\pi$
$C(1480)^+$	C(1480)+	Meson decaying into $\phi\pi^+$
$C(1480)^0$	C(1480)0	Meson decaying into $\phi\pi^0$
$C(1480)^-$	C(1480)-	Meson decaying into $\phi\pi^-$
$X(1600)$	X(1600)	
$X(1600)^0$	X(1600)0	
meson^{--}	MESON--	Unspecified doubly-negative-charge meson
baryonium	BARYONIUM	Unspecified nucleon-antinucleon particle
baryonium($S=-1$)	BARYONIUM(S=-1)	$S=-1$ strange meson that couple predominately to baryon-antibaryon
baryonium($S=+1$)	BARYONIUM(S=+1)	$S=+1$ strange meson that couple predominately to baryon-antibaryon
$\overline{N}N(1100-3600)$	NBARN(1100-3600)	Resonance seen in $N\overline{N}$
$X(3100)$	X(3100)	Exotic meson possibly seen in $\Lambda\bar{p}$ plus pions
$X(3100)^+$	X(3100)+	Exotic meson possibly seen in $\Lambda\bar{p}$ plus pions
$X(3100)^0$	X(3100)0	Exotic meson possibly seen in $\Lambda\bar{p}$ plus pions
$X(3100)^-$	X(3100)-	Exotic meson possibly seen in $\Lambda\bar{p}$ plus pions
$X(3100)^{--}$	X(3100)--	Exotic meson possibly seen in $\Lambda\bar{p}$ plus pions
	HADRONS: LIGHT QUARK BARYONS	
baryon	BARYON	Unspecified baryon
$\overline{\text{baryon}}$	BARYONBAR	Unspecified antibaryon
$p^\pm$	P+-	Proton or antiproton
nucleon	NUCLEON	Unspecified nucleon
p	P	Proton
n	N	Neutron
$\overline{\text{nucleon}}$	NUCLEONBAR	Unspecified antinucleon
$\bar{n}$	NBAR	Antineutron
$\bar{p}$	PBAR	Antiproton
p(spect)	P(SPECT)	Spectator proton
n(spect)	N(SPECT)	Spectator neutron
$\bar{n}$(spect)	NBAR(SPECT)	Spectator antineutron
$\bar{p}$(spect)	PBAR(SPECT)	Spectator antiproton
$N(1440\,P_{11})$	N(1440P11)	
$\overline{N}(1440\,P_{11})$	NBAR(1440P11)	
$N(1520\,D_{13})$	N(1520D13)	
$\overline{N}(1520\,D_{13})$	NBAR(1520D13)	
$N(1535\,S_{11})$	N(1535S11)	
$\overline{N}(1535\,S_{11})$	NBAR(1535S11)	
$N(1540\,P_{13})$	N(1540P13)	
$N(1650\,S_{11})$	N(1650S11)	
$\overline{N}(1650\,S_{11})$	NBAR(1650S11)	
$N(1675\,D_{15})$	N(1675D15)	
$\overline{N}(1675\,D_{15})$	NBAR(1675D15)	
$N(1680\,F_{15})$	N(1680F15)	
$\overline{N}(1680\,F_{15})$	NBAR(1680F15)	
$N(1700\,D_{13})$	N(1700D13)	
$\overline{N}(1700\,D_{13})$	NBAR(1700D13)	
$N(1700\,B)$	N(1700B)	Bump in production experiment
$N(1710\,P_{11})$	N(1710P11)	
$\overline{N}(1710\,P_{11})$	NBAR(1710P11)	
$N(1720\,P_{13})$	N(1720P13)	
$\overline{N}(1720\,P_{13})$	NBAR(1720P13)	

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$N(1890\,B)$	N(1890B)	
$\overline{N}(1890\,B)$	NBAR(1890B)	
$N(1900\,P_{13})$	N(1900P13)	
$\overline{N}(1900\,P_{13})$	NBAR(1900P13)	
$N(1990\,F_{17})$	N(1990F17)	
$\overline{N}(1990\,F_{17})$	NBAR(1990F17)	
$N(2000\,F_{15})$	N(2000F15)	
$\overline{N}(2000\,F_{15})$	NBAR(2000F15)	
$N(2080\,D_{13})$	N(2080D13)	
$\overline{N}(2080\,D_{13})$	NBAR(2080D13)	
$N(2090\,S_{11})$	N(2090S11)	
$\overline{N}(2090\,S_{11})$	NBAR(2090S11)	
$N(2100\,P_{11})$	N(2100P11)	
$\overline{N}(2100\,P_{11})$	NBAR(2100P11)	
$N(2190\,G_{17})$	N(2190G17)	
$\overline{N}(2190\,G_{17})$	NBAR(2190G17)	
$N(2200\,D_{15})$	N(2200D15)	
$\overline{N}(2200\,D_{15})$	NBAR(2200D15)	
$N(2220\,H_{19})$	N(2220H19)	
$\overline{N}(2220\,H_{19})$	NBAR(2220H19)	
$N(2250\,G_{19})$	N(2250G19)	
$\overline{N}(2250\,G_{19})$	NBAR(2250G19)	
$N(2600\,I_{1\,11})$	N(2600I111)	
$\overline{N}(2600\,I_{1\,11})$	NBAR(2600I111)	
$N(2700\,K_{1\,13})$	N(2700K113)	
$\overline{N}(2700\,K_{1\,13})$	NBAR(2700K113)	
N(unspec)	N(UNSPEC)	Unspecified $I = 1/2$, $S = 0$ baryon
$\Delta(1232\,P_{33})$	DELTA(1232P33)	
$\overline{\Delta}(1232\,P_{33})$	DELTABAR(1232P33)	
$\Delta(1550\,P_{31})$	DELTA(1550P31)	
$\overline{\Delta}(1550\,P_{31})$	DELTABAR(1550P31)	
$\Delta(1600\,P_{33})$	DELTA(1600P33)	
$\overline{\Delta}(1600\,P_{33})$	DELTABAR(1600P33)	
$\Delta(1620\,S_{31})$	DELTA(1620S31)	
$\overline{\Delta}(1620\,S_{31})$	DELTABAR(1620S31)	
$\Delta(1700\,D_{33})$	DELTA(1700D33)	
$\overline{\Delta}(1700\,D_{33})$	DELTABAR(1700D33)	
$\Delta(1750\,P_{31})$	DELTA(1750P31)	
$\Delta(1900\,S_{31})$	DELTA(1900S31)	
$\overline{\Delta}(1900\,S_{31})$	DELTABAR(1900S31)	
$\Delta(1905\,F_{35})$	DELTA(1905F35)	
$\overline{\Delta}(1905\,F_{35})$	DELTABAR(1905F35)	
$\Delta(1910\,P_{31})$	DELTA(1910P31)	
$\overline{\Delta}(1910\,P_{31})$	DELTABAR(1910P31)	
$\Delta(1920\,P_{33})$	DELTA(1920P33)	
$\overline{\Delta}(1920\,P_{33})$	DELTABAR(1920P33)	
$\Delta(1930\,D_{35})$	DELTA(1930D35)	
$\overline{\Delta}(1930\,D_{35})$	DELTABAR(1930D35)	
$\Delta(1940\,D_{33})$	DELTA(1940D33)	
$\overline{\Delta}(1940\,D_{33})$	DELTABAR(1940D33)	
$\Delta(1950\,F_{37})$	DELTA(1950F37)	
$\overline{\Delta}(1950\,F_{37})$	DELTABAR(1950F37)	
$\Delta(2000\,F_{35})$	DELTA(2000F35)	
$\overline{\Delta}(2000\,F_{35})$	DELTABAR(2000F35)	
$\Delta(2150\,S_{31})$	DELTA(2150S31)	
$\overline{\Delta}(2150\,S_{31})$	DELTABAR(2150S31)	
$\Delta(2200\,G_{37})$	DELTA(2200G37)	
$\overline{\Delta}(2200\,G_{37})$	DELTABAR(2200G37)	
$\Delta(2300\,H_{39})$	DELTA(2300H39)	
$\overline{\Delta}(2300\,H_{39})$	DELTABAR(2300H39)	
$\Delta(2350\,D_{35})$	DELTA(2350D35)	
$\overline{\Delta}(2350\,D_{35})$	DELTABAR(2350D35)	
$\Delta(2390\,F_{37})$	DELTA(2390F37)	
$\overline{\Delta}(2390\,F_{37})$	DELTABAR(2390F37)	
$\Delta(2400\,G_{39})$	DELTA(2400G39)	
$\overline{\Delta}(2400\,G_{39})$	DELTABAR(2400G39)	
$\Delta(2420\,H_{3\,11})$	DELTA(2420H311)	
$\overline{\Delta}(2420\,H_{3\,11})$	DELTABAR(2420H311)	
$\Delta(2750\,I_{3\,13})$	DELTA(2750I313)	
$\overline{\Delta}(2750\,I_{3\,13})$	DELTABAR(2750I313)	
$\Delta(2950\,K_{3\,15})$	DELTA(2950K315)	

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\bar{\Delta}(2950\,K_{3\,15})$	DELTABAR(2950K315)	
$\Delta(3230\,B)$	DELTA(3230B)	
$\bar{\Delta}(3230\,B)$	DELTABAR(3230B)	
Δ(unspec)	DELTA(UNSPEC)	Unspecified $I = 3/2$, $S = 0$ baryon
N^*(unspec)	N*(UNSPEC)	I = unspecified, $S = 0$ baryon of unspecified mass
$\bar{N}^*$(unspec)	N*BAR(UNSPEC)	
	BARYONS WITH HEAVIEST QUARK STRANGE	
hyperon	HYPERON	Unspecified hyperon
$\bar{\text{hyperon}}$	HYPERONBAR	Unspecified antihyperon
Λ	LAMBDA	Ordinary Λ hyperon
$\bar{\Lambda}$	LAMBDABAR	Ordinary $\bar{\Lambda}$ antihyperon
$\Lambda(1330\,B)$	LAMBDA(1330B)	Bump in production experiment
$\bar{\Lambda}(1330\,B)$	LAMBDABAR(1330B)	Bump in production experiment
$\Lambda(1405\,S_{01})$	LAMBDA(1405S01)	
$\bar{\Lambda}(1405\,S_{01})$	LAMBDABAR(1405S01)	
$\Lambda(1520\,D_{03})$	LAMBDA(1520D03)	
$\bar{\Lambda}(1520\,D_{03})$	LAMBDABAR(1520D03)	
$\Lambda(1600\,P_{01})$	LAMBDA(1600P01)	
$\bar{\Lambda}(1600\,P_{01})$	LAMBDABAR(1600P01)	
$\Lambda(1670\,S_{01})$	LAMBDA(1670S01)	
$\bar{\Lambda}(1670\,S_{01})$	LAMBDABAR(1670S01)	
$\Lambda(1690\,D_{03})$	LAMBDA(1690D03)	
$\bar{\Lambda}(1690\,D_{03})$	LAMBDABAR(1690D03)	
$\Lambda(1690\,B)$	LAMBDA(1690B)	
$\Lambda(1800\,S_{01})$	LAMBDA(1800S01)	
$\bar{\Lambda}(1800\,S_{01})$	LAMBDABAR(1800S01)	
$\Lambda(1800\,G_{09})$	LAMBDA(1800G09)	
$\bar{\Lambda}(1800\,G_{09})$	LAMBDABAR(1800G09)	
$\Lambda(1800\,B)$	LAMBDA(1800B)	
$\bar{\Lambda}(1800\,B)$	LAMBDABAR(1800B)	
$\Lambda(1810\,P_{01})$	LAMBDA(1810P01)	
$\bar{\Lambda}(1810\,P_{01})$	LAMBDABAR(1810P01)	
$\Lambda(1820\,F_{05})$	LAMBDA(1820F05)	
$\bar{\Lambda}(1820\,F_{05})$	LAMBDABAR(1820F05)	
$\Lambda(1830\,D_{05})$	LAMBDA(1830D05)	
$\bar{\Lambda}(1830\,D_{05})$	LAMBDABAR(1830D05)	
$\Lambda(1890\,P_{03})$	LAMBDA(1890P03)	
$\bar{\Lambda}(1890\,P_{03})$	LAMBDABAR(1890P03)	
$\Lambda(2000)$	LAMBDA(2000)	
$\bar{\Lambda}(2000)$	LAMBDABAR(2000)	
$\Lambda(2020\,F_{07})$	LAMBDA(2020F07)	
$\bar{\Lambda}(2020\,F_{07})$	LAMBDABAR(2020F07)	
$\Lambda(2100\,G_{07})$	LAMBDA(2100G07)	
$\bar{\Lambda}(2100\,G_{07})$	LAMBDABAR(2100G07)	
$\Lambda(2100\,B)$	LAMBDA(2100B)	Bump in production experiment
$\bar{\Lambda}(2100\,B)$	LAMBDABAR(2100B)	Bump in production experiment
$\Lambda(2110\,F_{05})$	LAMBDA(2110F05)	
$\bar{\Lambda}(2110\,F_{05})$	LAMBDABAR(2110F05)	
$\Lambda(2325\,D_{03})$	LAMBDA(2325D03)	
$\bar{\Lambda}(2325\,D_{03})$	LAMBDABAR(2325D03)	
$\Lambda(2350\,H_{09})$	LAMBDA(2350H09)	
$\bar{\Lambda}(2350\,H_{09})$	LAMBDABAR(2350H09)	
$\Lambda(2350\,B)$	LAMBDA(2350B)	Bump in production experiment
$\bar{\Lambda}(2350\,B)$	LAMBDABAR(2350B)	Bump in production experiment
$\Lambda(2585\,B)$	LAMBDA(2585B)	Bump in production experiment
$\bar{\Lambda}(2585\,B)$	LAMBDABAR(2585B)	Bump in production experiment
Λ(unspec)	LAMBDA(UNSPEC)	Unspecified $I = 0$, $S = -1$ baryon
Σ	SIGMA	Ordinary Σ hyperon
$\Sigma^{\pm}$	SIGMA+-	
$\bar{\Sigma}$	SIGMABAR	
$\Sigma(1385\,P_{13})$	SIGMA(1385P13)	
$\Sigma(1385\,P_{13})^{\pm}$	SIGMA(1385P13)+-	
$\bar{\Sigma}(1385\,P_{13})$	SIGMABAR(1385P13)	
$\Sigma(1480\,B)$	SIGMA(1480B)	Bump in production experiment
$\bar{\Sigma}(1480\,B)$	SIGMABAR(1480B)	
$\Sigma(1560\,B)$	SIGMA(1560B)	
$\bar{\Sigma}(1560\,B)$	SIGMABAR(1560B)	
$\Sigma(1580\,D_{13})$	SIGMA(1580D13)	
$\bar{\Sigma}(1580\,D_{13})$	SIGMABAR(1580D13)	
$\Sigma(1620\,S_{11})$	SIGMA(1620S11)	
$\bar{\Sigma}(1620\,S_{11})$	SIGMABAR(1620S11)	

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\Sigma(1660\,P_{11})$	SIGMA(1660P11)	
$\overline{\Sigma}(1660\,P_{11})$	SIGMABAR(1660P11)	
$\Sigma(1670\,D_{13})$	SIGMA(1670D13)	
$\overline{\Sigma}(1670\,D_{13})$	SIGMABAR(1670D13)	
$\Sigma(1690\,B)$	SIGMA(1690B)	Bump in production experiment
$\overline{\Sigma}(1690\,B)$	SIGMABAR(1690B)	Bump in production experiment
$\Sigma(1750\,S_{11})$	SIGMA(1750S11)	
$\overline{\Sigma}(1750\,S_{11})$	SIGMABAR(1750S11)	
$\Sigma(1770\,B)$	SIGMA(1770B)	Bump in production experiment
$\overline{\Sigma}(1770\,B)$	SIGMABAR(1770B)	Bump in production experiment
$\Sigma(1775\,D_{15})$	SIGMA(1775D15)	
$\overline{\Sigma}(1775\,D_{15})$	SIGMABAR(1775D15)	
$\Sigma(1840\,P_{13})$	SIGMA(1840P13)	
$\overline{\Sigma}(1840\,P_{13})$	SIGMABAR(1840P13)	
$\Sigma(1880\,P_{11})$	SIGMA(1880P11)	
$\overline{\Sigma}(1880\,P_{11})$	SIGMABAR(1880P11)	
$\Sigma(1915\,F_{15})$	SIGMA(1915F15)	
$\overline{\Sigma}(1915\,F_{15})$	SIGMABAR(1915F15)	
$\Sigma(1940\,D_{13})$	SIGMA(1940D13)	
$\overline{\Sigma}(1940\,D_{13})$	SIGMABAR(1940D13)	
$\Sigma(2000\,S_{11})$	SIGMA(2000S11)	
$\overline{\Sigma}(2000\,S_{11})$	SIGMABAR(2000S11)	
$\Sigma(2030\,F_{17})$	SIGMA(2030F17)	
$\overline{\Sigma}(2030\,F_{17})$	SIGMABAR(2030F17)	
$\Sigma(2070\,F_{15})$	SIGMA(2070F15)	
$\overline{\Sigma}(2070\,F_{15})$	SIGMABAR(2070F15)	
$\Sigma(2080\,P_{13})$	SIGMA(2080P13)	
$\overline{\Sigma}(2080\,P_{13})$	SIGMABAR(2080P13)	
$\Sigma(2100\,G_{17})$	SIGMA(2100G17)	
$\Sigma(2250\,B)$	SIGMA(2250B)	Bump in production experiment
$\overline{\Sigma}(2250\,B)$	SIGMABAR(2250B)	Bump in production experiment
$\Sigma(2455\,B)$	SIGMA(2455B)	Bump in production experiment
$\overline{\Sigma}(2455\,B)$	SIGMABAR(2455B)	Bump in production experiment
$\Sigma(2620\,B)^+$	SIGMA(2620B)	Bump in production experiment
$\overline{\Sigma}(2620\,B)$	SIGMABAR(2620B)	Bump in production experiment
$\Sigma(3170\,B)$	SIGMA(3170B)	Bump in production experiment
$\overline{\Sigma}(3170\,B)$	SIGMABAR(3170B)	
Σ(unspec)	SIGMA(UNSPEC)	Unspecified $I = 1$, $S = -1$ baryon
Y^*(unspec)	Y*(UNSPEC)	I = unspecified, $S = -1$ baryon of unspecified mass
Ξ	XI	Ordinary Ξ hyperon
$\overline{\Xi}$	XIBAR	
$\Xi(1530\,P_{13})$	XI(1530P13)	
$\overline{\Xi}(1530\,P_{13})$	XIBAR(1530P13)	
$\Xi(1620)$	XI(1620)	
$\overline{\Xi}(1620)$	XIBAR(1620)	
$\Xi(1690)$	XI(1690)	
$\overline{\Xi}(1690)$	XIBAR(1690)	
$\Xi(1820\,D_{13})$	XI(1820D13)	
$\overline{\Xi}(1820\,D_{13})$	XIBAR(1820D13)	
$\Xi(1950)$	XI(1950)	
$\overline{\Xi}(1950)$	XIBAR(1950)	
$\Xi(2030)$	XI(2030)	
$\overline{\Xi}(2030)$	XIBAR(2030)	
$\Xi(2120)$	XI(2120)	
$\overline{\Xi}(2120)$	XIBAR(2120)	
$\Xi(2250)$	XI(2250)	
$\overline{\Xi}(2250)$	XIBAR(2250)	
$\Xi(2370)$	XI(2370)	
$\overline{\Xi}(2370)$	XIBAR(2370)	
$\Xi(2500)$	XI(2500)	
$\overline{\Xi}(2500)$	XIBAR(2500)	
$\Xi(2600)$	XI(2600)	
$\overline{\Xi}(2600)$	XIBAR(2600)	
Ξ(unspec)	XI(UNSPEC)	Unspecified $I = 1/2$, $S = -2$ baryon
$\Omega^{\pm}$	OMEGA+-	
Ω^-	OMEGA-	Ordinary Ω^- hyperon
$\overline{\Omega}^+$	OMEGABAR+	Ordinary $\overline{\Omega}^+$ antihyperon
$\Omega(2250)^-$	OMEGA(2250)-	
$\overline{\Omega}(2250)^+$	OMEGABAR(2250)+	
$\Omega(2380)^-$	OMEGA(2380)-	
$\overline{\Omega}(2380)^+$	OMEGABAR(2380)+	

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\Omega(2470)^-$	OMEGA(2470)-	
$\overline{\Omega}(2470)^+$	OMEGABAR(2470)+	
$\Omega^*(\text{unspec})^-$	OMEGA*(UNSPEC)-	I = unspecified, $S = -3$ baryon of unspecified mass
	BARYONS WITH HEAVIEST QUARK CHARMED	
charmed-baryon	CHARMED-BARYON	Unspecified charmed baryon
$\overline{\text{charmed}}$-baryon	CHARMED-BARYONBAR	Unspecified anticharmed baryon
$\Lambda_c^\pm$	LAMBDA/C+-	
Λ_c^+	LAMBDA/C+	$\Lambda_c(2281)^+$ $I = 0$ charmed baryon
$\overline{\Lambda}_c^-$	LAMBDA/CBAR-	$\overline{\Lambda}_c(2281)$ $I = 0$ charmed antibaryon
$\Sigma_c(2455)$	SIGMA/C(2455)	$I = 1$ charmed baryon
$\Sigma_c(2455)^{++}$	SIGMA/C(2455)++	$I = 1$ charmed baryon
$\Sigma_c(2455)^+$	SIGMA/C(2455)+	$I = 1$ charmed baryon
$\Sigma_c(2455)^0$	SIGMA/C(2455)0	$I = 1$ charmed baryon
$\overline{\Sigma}_c(2455)$	SIGMA/CBAR(2455)	
$\overline{\Sigma}_c(2455)^0$	SIGMA/CBAR(2455)0	$I = 1$ charmed antibaryon
$\overline{\Sigma}_c(2455)^-$	SIGMA/CBAR(2455)-	$I = 1$ charmed antibaryon
$\overline{\Sigma}_c(2455)^{--}$	SIGMA/CBAR(2455)--	$I = 1$ charmed antibaryon
$\Sigma_c(2510)^{++}$	SIGMA/C(2510)++	Charmed baryon
$\Xi_c(2460)$	XI/C(2460)	Baryon with quark content usc
$\Xi_c(2460)^+$	XI/C(2460)+	Charmed strange baryon
$\Xi_c(2460)^0$	XI/C(2460)0	Charmed strange baryon
$\overline{\Xi}_c(2460)$	XI/CBAR(2460)	Baryon with quark content usc
$\overline{\Xi}_c(2460)^0$	XI/CBAR(2460)0	Charmed strange antibaryon
$\overline{\Xi}_c(2460)^-$	XI/CBAR(2460)-	Baryon with quark content usc
Ω_c	OMEGA/C	$\Omega_c(2740)^0$ $I = 0$ charmed doubly strange baryon
$\overline{\Omega}_c$	OMEGA/CBAR	Baryon with quark content ssc
Ω_{ccc}^{++}	OMEGA/CCC++	Baryon with quark content ccc
	BARYONS WITH HEAVIEST QUARK BOTTOM	
Λ_b	LAMBDA/B	$\Lambda_b(5500)^0$ $I = 0$ bottom baryon
$\overline{\Lambda}_b$	LAMBDA/BBAR	
Σ_b	SIGMA/B	Ground state $I = 1$ bottom baryon
$\Sigma_b^\pm$	SIGMA/B+-	Ground state $I = 1$ bottom baryon
Σ_b^+	SIGMA/B+	Ground state $I = 1$ bottom baryon
Σ_b^-	SIGMA/B-	Ground state $I = 1$ bottom baryon
Ξ_b	XI/B	
Ξ_b^0	XI/B0	
Ξ_b^-	XI/B-	
Ω_b^-	OMEGA/B-	
Ω_{cb}^0	OMEGA/CB0	
Ω_{bb}^-	OMEGA/BB-	
	EXOTIC BARYONS	
exotic-nucleon	EXOTIC-NUCLEON	Cannot be formed of qqq
$N_{5/2}^*(1380)^{+++}$	N*5/2(1380)+++	Exotic baryon
$N_{5/2}^*(1390)^{+++}$	N*5/2(1390)+++	$I = 5/2$ nonstrange baryon (exotic)
$N_{5/2}^*(1480)^{+++}$	N*5/2(1480)+++	$I = 5/2$ nonstrange baryon (exotic)
$N_{5/2}^*(1650)$	N*5/2(1650)	$I = 5/2$, $Y = 1$ baryon of unspecified charge
$N_{5/2}^*(1650)^{+++}$	N*5/2(1650)+++	$I = 5/2$, $S = 0$ baryon (exotic)
$N_{5/2}^*(1650)^{++}$	N*5/2(1650)++	$I = 5/2$, $S = 0$ baryon (exotic)
$N_{5/2}^*(1650)^+$	N*5/2(1650)+	$I = 5/2$, $S = 0$ baryon (exotic)
$N_{5/2}^*(1650)^0$	N*5/2(1650)0	$I = 5/2$, $S = 0$ baryon (exotic)
$N_{5/2}^*(1650)^-$	N*5/2(1650)-	$I = 5/2$, $S = 0$ baryon (exotic)
$N_{5/2}^*(1650)^{--}$	N*5/2(1650)--	$I = 5/2$, $S = 0$ baryon (exotic)
$N_{5/2}^*(1760)^{+++}$	N*5/2(1760)+++	Exotic baryon
$N_{5/2}^*(1760)^+$	N*5/2(1760)+	Exotic baryon
$N_{5/2}^*(2070)^{+++}$	N*5/2(2070)+++	Exotic baryon
$N_{5/2}^*(\text{unspec})$	N*5/2(UNSPEC)	Unspecified $I = 5/2$, $S = 0$ baryon
$N_{5/2}^*(\text{unspec})^{+++}$	N*5/2(UNSPEC)+++	Unspecified $I = 5/2$, $S = 0$ baryon
$N_{5/2}^*(\text{unspec})^{--}$	N*5/2(UNSPEC)--	Unspecified $I = 5/2$, $S = 0$ baryon
$N\phi(1950)^0$	NPHI(1950)0	Reported baryon with $s\bar{s}$ and 3 other quarks
$Z_0(1780\,P_{01})$	Z0(1780P01)	
$\overline{Z}_0(1780\,P_{01})$	ZOBAR(1780P01)	

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$\overline{Z}_0(1780\,P_{01})^+$	Z0BAR(1780P01)+	Exotic $I = 0$, $S = +1$ baryon
$\overline{Z}_0(1780\,P_{01})^-$	Z0BAR(1780P01)-	
$Z_0(1865\,D_{03})$	Z0(1865D03)	
$Z_0(1865\,D_{03})^+$	Z0(1865D03)+	Exotic $I = 0$, $S = +1$ baryon
$\overline{Z}_0(1865\,D_{03})$	Z0BAR(1865D03)	
$\overline{Z}_0(1865\,D_{03})^-$	Z0BAR(1865D03)-	
Z_0(unspec)	Z0(UNSPEC)	Exotic $I = 0$, $S = +1$ baryon of unspecified mass
$Z_1(1725\,P_{11})^{++}$	Z1(1725P11)++	
$Z_1(1725\,P_{11})^+$	Z1(1725P11)+	
$Z_1(1725\,P_{11})^0$	Z1(1725P11)0	
$\overline{Z}_1(1725\,P_{11})^0$	Z1BAR(1725P11)0	
$\overline{Z}_1(1725\,P_{11})^-$	Z1BAR(1725P11)-	
$\overline{Z}_1(1725\,P_{11})^{--}$	Z1BAR(1725P11)--	
$Z_1(1900\,P_{13})$	Z1(1900P13)	
$Z_1(1900\,P_{13})^{++}$	Z1(1900P13)++	Exotic $I = 1$, $S = +1$ baryon
$Z_1(1900\,P_{13})^+$	Z1(1900P13)+	Exotic $I = 1$, $S = +1$ baryon
$Z_1(1900\,P_{13})^0$	Z1(1900P13)0	Exotic $I = 1$, $S = +1$ baryon
$\overline{Z}_1(1900\,P_{13})$	Z1BAR(1900P13)	
$\overline{Z}_1(1900\,P_{13})^0$	Z1BAR(1900P13)0	
$\overline{Z}_1(1900\,P_{13})^-$	Z1BAR(1900P13)-	
$\overline{Z}_1(1900\,P_{13})^{--}$	Z1BAR(1900P13)--	
$Z_1(2150)$	Z1(2150)	
$Z_1(2150)^{++}$	Z1(2150)++	Exotic $I = 1$, $S = +1$ baryon
$Z_1(2150)^+$	Z1(2150)+	Exotic $I = 1$, $S = +1$ baryon
$Z_1(2150)^0$	Z1(2150)0	Exotic $I = 1$, $S = +1$ baryon
$\overline{Z}_1(2150)$	Z1BAR(2150)	
$\overline{Z}_1(2150)^0$	Z1BAR(2150)0	
$\overline{Z}_1(2150)^-$	Z1BAR(2150)-	
$\overline{Z}_1(2150)^{--}$	Z1BAR(2150)--	
$Z_1(2500)$	Z1(2500)	
$Z_1(2500)^{++}$	Z1(2500)++	Exotic $I = 1$, $S = +1$ baryon
$Z_1(2500)^+$	Z1(2500)+	Exotic $I = 1$, $S = +1$ baryon
$Z_1(2500)^0$	Z1(2500)0	Exotic $I = 1$, $S = +1$ baryon
$\overline{Z}_1(2500)$	Z1BAR(2500)	
$\overline{Z}_1(2500)^0$	Z1BAR(2500)0	
$\overline{Z}_1(2500)^-$	Z1BAR(2500)-	
$\overline{Z}_1(2500)^{--}$	Z1BAR(2500)--	
Z_1(unspec)	Z1(UNSPEC)	Exotic $I = 1$, $S = +1$ baryon of unspecified mass
$Z_1(\text{unspec})^{++}$	Z1(UNSPEC)++	Exotic $I = 1$, $S = +1$ baryon of unspecified mass
$Z_1(\text{unspec})^+$	Z1(UNSPEC)+	Exotic $I = 1$, $S = +1$ baryon of unspecified mass
$Z_1(\text{unspec})^0$	Z1(UNSPEC)0	Exotic $I = 1$, $S = +1$ baryon of unspecified mass
Z^*(unspec)	Z*(UNSPEC)	Exotic I = unspecified, $S = +1$ baryon of unspecified mass
$Z^*(\text{unspec})^{++}$	Z*(UNSPEC)++	Exotic I = unspecified, $S = +1$ baryon of unspecified mass
$Z^*(\text{unspec})^+$	Z*(UNSPEC)+	Exotic I = unspecified, $S = +1$ baryon of unspecified mass
$Z^*(\text{unspec})^0$	Z*(UNSPEC)0	Exotic I = unspecified, $S = +1$ baryon of unspecified mass
Y_2^*(unspec)	Y*2(UNSPEC)	Unspecified $I = 2$, $S = -1$ baryon
$Y_2^*(\text{unspec})^{++}$	Y*2(UNSPEC)++	Unspecified $I = 2$, $S = -1$ baryon
Ξ^*(unspec)	XI*(UNSPEC)	I = unspecified, $S = -2$ baryon of unspecified mass
$\Xi^*(\text{unspec})^{--}$	XI*(UNSPEC)--	I = unspecified, $S = -2$ baryon of unspecified mass
$\Xi^*(\text{unspec})^-$	XI*(UNSPEC)-	I = unspecified, $S = -2$ baryon of unspecified mass
$\Xi^*(\text{unspec})^0$	XI*(UNSPEC)0	I = unspecified, $S = -2$ baryon of unspecified mass
$\Xi^*(\text{unspec})^+$	XI*(UNSPEC)+	I = unspecified, $S = -2$ baryon of unspecified mass
$\Xi^*_{3/2}$(unspec)	XI*3/2(UNSPEC)	Unspecified $I = 3/2$, $S = -2$ baryon
$\Xi^*_{3/2}(\text{unspec})^{--}$	XI*3/2(UNSPEC)--	Unspecified $I = 3/2$, $S = -2$ baryon
$\Xi^*_{3/2}(\text{unspec})^-$	XI*3/2(UNSPEC)-	Unspecified $I = 3/2$, $S = -2$ baryon
$\Xi^*_{3/2}(\text{unspec})^0$	XI*3/2(UNSPEC)0	Unspecified $I = 3/2$, $S = -2$ baryon
$\Xi^*_{3/2}(\text{unspec})^+$	XI*3/2(UNSPEC)+	Unspecified $I = 3/2$, $S = -2$ baryon
R-Δ^{++}	R-DEL++	Hadron containing one gluino
	EXOTIC MATTER	
anomalon	ANOMALON	Anomalous nuclear fragment
fireball	FIREBALL	
centauro	CENTAURO	Final state with 50 or more charged particles and no π^0's
mini-centauro	MINI-CENTAURO	New type of final state with 20 or less charged particles and no π^0's
chiron	CHIRON	
geminion	GEMINION	Hypothetical particle
nuclearite	NUCLEARITE	Proposed new form of strange hadronic matter. Quark nuggets.

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
nuclearite		
	ELECTROMAGNETIC COMPOSITES	
positronium	POSITRONIUM	
positronium*	POSITRONIUM*	Excited positronium
positronium$^-$	POSITRONIUM-	Bound system of ($e^-e^+e^-$), "positronium negative ion"
muonium	MUEATOM	μ^+e^- atom
$\overline{\text{muonium}}$	MUEATOMBAR	μ^-e^+ atom
$(\pi\mu)_{atom}$	PIMUATOM	π-μ coulomb bound state
$(\pi\pi)_{atom}$	PIPIATOM	π-π coulomb bound state
taonium	TAONIUM	Bound state of $\tau^+\ \tau^-$
$(\bar{p}p)_{atom}$	PBARPATOM	
$(\bar{p}\,\text{deuteron})_{atom}$	PBARDEUTATOM	
atom	ATOM	Unspecified conventional atom
H(atom)	ATOM(P)	Hydrogen atom
^{2}H(atom)	ATOM(DEUT)	Deuteron atom
C(atom)	ATOM(C)	Carbon atom
^{19}Fl(atom)	ATOM(FL19)	Fluorine-19 atom. Note name is not same as chemical symbol
Nit(atom)	ATOM(NIT)	Nitrogen atom
Al(atom)	ATOM(AL)	Aluminum atom
^{50}Ti(atom)	ATOM(TI50)	
^{50}Ti(atom)*	ATOM(TI50)*	
^{42}Cr(atom)	ATOM(CR50)	
^{55}Mn(atom)	ATOM(MN55)	Manganese-55 atom
^{55}Fe(atom)	ATOM(FE55)	Iron-55 atom
^{58}Fe(atom)	ATOM(FE58)	
^{58}Fe(atom)*	ATOM(FE58)*	
Fe(atom)	ATOM(FE)	Iron atom
^{58}Ni(atom)	ATOM(NI58)	
^{64}Ni(atom)	ATOM(NI64)	
^{64}Ni(atom)*	ATOM(NI64)*	
Cu(atom)	ATOM(CU)	Copper atom
^{64}Zn(atom)	ATOM(ZN64)	
^{67}Zn(atom)	ATOM(ZN67)	Zinc-67 atom
^{67}Ga(atom)	ATOM(GA67)	Gallium-67 atom
^{71}Ga(atom)	ATOM(GA71)	
^{71}Ge(atom)	ATOM(GE71)	
^{92}Zr(atom)	ATOM(ZR92)	
^{92}Zr(atom)*	ATOM(ZR92)*	
^{92}Mo(atom)	ATOM(MO92)	
^{106}Pd(atom)	ATOM(PD106)	
^{106}Pd(atom)*	ATOM(PD106)*	
^{108}Pd(atom)	ATOM(PD108)	
^{108}Pd(atom)*	ATOM(PD108)*	
Ag(atom)	ATOM(AG)	Silver atom
^{106}Cd(atom)	ATOM(CD106)	
^{108}Cd(atom)	ATOM(CD108)	
Sn(atom)	ATOM(SN)	Tin atom
^{124}Te(atom)	ATOM(TE124)	Tellur-124 radioactive isotope atom
^{124}Xe(atom)	ATOM(XE124)	Xenon-124 radioactive isotope atom
^{125}Te(atom)	ATOM(TE125)	Tellurium-125 atom
^{125}I(atom)	ATOM(I125)	Iodine-125 radioactive isotope atom
Cs(atom)	ATOM(CS)	Cesium atom
^{180}Hf(atom)*	ATOM(HF180)*	
^{180}Wt(atom)	ATOM(WT180)	
Pt(atom)	ATOM(PT)	Platinum atom
^{196}Pt(atom)	ATOM(PT196)	Platinum-196 atom
^{196}Pt(atom)*	ATOM(PT196)*	
Au(atom)	ATOM(AU)	Gold atom
^{196}Hg(atom)	ATOM(HG196)	Mercury-196 atom
^{199}Hg(atom)	ATOM(HG199)	Mercury-199 atom
Hg(atom)	ATOM(HG)	Mercury atom
Tl(atom)	ATOM(TL)	
Pb(atom)	ATOM(PB)	
Bi(atom)	ATOM(BI)	Bismuth atom
^{238}U(ion 90^+)	ION(U238)90+	Helium-like uranium ion having electric charge = 90^+
	NUCLEI, MULTIBARYONS, HYPER- AND SUPERNUCLEI	
nucleus	NUCLEUS	Unspecified nucleus
frag	FRAG	Nuclear fragment

PARTICLE NAME	COMPUTER NAME	EXPLANATION
frag$^+$	FRAG+	Positive-charge nuclear fragment
frag$^-$	FRAG-	Negative-charge nuclear fragment
fragb	FRAGB	Fragment of beam
fragt	FRAGT	Fragment of target
hypernucleus	HYPERNUCLEUS	Unspecified hypernucleus, generally containing more than two baryons
charmed-nucleus	CHARMED-NUCLEUS	Unspecified charmed nucleus
$\overline{\text{nucleus}}$	NUCLEUSBAR	Unspecified antinucleus
deuteron	DEUT	Deuteron
$\overline{\text{deuteron}}$	DEUTBAR	Antideuteron
deut*	DEUT*	Excited deuteron
deut$^*(2170)^0$	DEUT*(2170)0	
deut$^*(2170)^+$	DEUT*(2170)+	
deut$^*(2170)^{++}$	DEUT*(2170)++	
$\overline{\text{deut}}^*(2170)^{--}$	DEUT*BAR(2170)--	
$\overline{\text{deut}}^*(2170)^-$	DEUT*BAR(2170)-	
$\overline{\text{deut}}^*(2170)^0$	DEUT*BAR(2170)0	
deut$^{**}(2500)^+$	DEUT**(2500)+	Low-mass *deuteron*$\pi\pi$ bump
$\overline{\text{deut}}^{**}(2500)^-$	DEUT**BAR(2500)-	Low-mass $\overline{\textit{deuteron}}\pi\pi$ bump
demon	DEMON	Exotic 6-quark deuteron-like state
dibaryon	DIBARYON	Dibaryon resonance
dineutron	DINEUTRON	Dineutron resonance
$NN(2170\,^1D_2)$	NN(2170/1D2)	Dibaryon resonance
$NN(2170\,^1D_2)^{++}$	NN(2170/1D2)++	Dibaryon resonance
$NN(2170\,^1D_2)^+$	NN(2170/1D2)+	Dibaryon resonance
$NN(2170\,^1D_2)^0$	NN(2170/1D2)0	Dibaryon resonance
$NN(2250\,^3F_3)$	NN(2250/3F3)	Dibaryon resonance
$NN(2250\,^3F_3)^{++}$	NN(2250/3F3)++	Dibaryon resonance
$NN(2250\,^3F_3)^+$	NN(2250/3F3)+	Dibaryon resonance
$NN(2250\,^3F_3)^0$	NN(2250/3F3)0	Dibaryon resonance
$NN(2900\,^1H_6)$	NN(2900/1H6)	Dibaryon resonance
$NN(2900\,^1H_6)^{++}$	NN(2900/1H6)++	Dibaryon resonance
$NN(2900\,^1H_6)^0$	NN(2900/1H6)0	Dibaryon resonance
dibaryon($S=-1$)	DIBARYON(S=-1)	Unspecified $S=-1$ dibaryon resonance
$\Lambda N(2130\,^3S_1)^+$	LAMBDAN(2130/3S1)+	$S=-1$ dibaryon resonance
hypernucleus(S $=-2$)	HYPERNUCLEUS(S=-2)	Unspecified hypernucleus with double starngeness
dibaryon($S=-2$)	DIBARYON(S=-2)	Unspecified $S=-2$ dibaryon resonance
$(\Xi N)^+$	XIN+	Dibaryon with $S=-2$
$(\Xi N)^0$	XIN0	Dibaryon with $S=-2$
dibaryon($S=-3$)	DIBARYON(S=-3)	Unspecified $S=-3$ dibaryon resonance
^{3}H	TRITIUM	Tritium nucleus
$^3\overline{\text{H}}$	TRITIUMBAR	Antitritium nucleus
$^3\text{H}_S$	H3/S	Hypernucleus with Λ instead of neutron
tetraneutron	TETRANEUTRON	Tetraneutron resonance
tribaryon	TRIBARYON	Reported 3-baryon state
^{4}H	H4	Hydrogen-4 nucleus
$^4\text{H}_S$	H4/S	Hypernucleus with Λ instead of neutron
$^3\overline{\text{He}}$	HE3BAR	Antihelium-3 nucleus
$^3\text{He}_S$	HE3/S	Helium hypernucleus with strangeness $=-1$
$^3\text{He}^*$	HE3*	Excited helium-3 nucleus
He	HE	Helium nucleus
$^4\text{He}_S$	HE4/S	Helium hypernucleus with strangeness $=-1$
He*	HE*	Excited helium nucleus
$\overline{\text{He}}$	HEBAR	Antihelium-4 nucleus
$^5\text{He}_S$	HE5/S	Helium-5 hypernucleus with strangeness $=-1$
$^6\text{He}_{SS}$	HE6/SS	Helium-6 hypernucleus with strangeness $=-2$
Li	LI	Lithium nucleus
$^7\text{Li}_S$	LI7/S	Hypernucleus with Λ instead of neutron
$^8\text{Li}_S$	LI8/S	
$^9\text{Li}_S$	LI9/S	Hypernucleus with Λ instead of neutron
Be	BE	Beryllium nucleus
$^9\text{Be}_S$	BE9/S	Beryllium-9 hypernucleus with strangeness $=-1$
$^{10}\text{Be}_{SS}$	BE10/SS	Beryllium-10 hypernucleus with strangeness $=-2$
$^{11}\text{Be}_{SS}$	BE11/SS	Beryllium-11 hypernucleus with strangeness $=-2$
Bor	BOR	Boron nucleus. Note name is not same as chemical symbol
Bor_S	BOR/S	Boron hypernucleus
$^{11}\text{Bor}_S$	BOR11/S	Boron-11 hypernucleus
C	C	Carbon nucleus
$^{12}\text{C}_S$	C12/S	Carbon-12 hypernucleus
C*(4.44 keV)	C*(4.44)	4.44-keV excited carbon nucleus
Nit	NIT	Nitrogen nucleus. Note name is not same as chemical symbol
O	O	Oxygen nucleus
$^{16}\text{O}_S$	O16/S	Oxygen-16 hypernucleus
Fl	FL	Fluorine nucleus. Note name is not same as chemical symbol
Ne	NE	Neon nucleus

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
Na	NA	Sodium nucleus
Mg	MG	Magnesium nucleus
Al	AL	Aluminum nucleus
Si	SI	Silicon nucleus
Ph	PH	Phosphorus nucleus. Note name is not same as chemical symbol
S	S	Sulfur nucleus
S_S	S/S	Sulfur hypernucleus
Cl	CL	Chlorine nucleus
Ar	AR	Argon nucleus
KK	KK	Potassium nucleus. Note name is not same as chemical symbol
Ca	CA	Calcium nucleus
$^{40}Ca_S$	CA40/S	Calcium-40 hypernucleus
Sc	SC	Scandium nucleus
Ti	TI	Titanium nucleus
Va	VA	Vanadium nucleus. Note name is not same as chemical symbol
$^{51}Va_S$	VA51/S	Vanadium-51 hypernucleus
Cr	CR	Chromium nucleus
Mn	MN	Manganese nucleus
$^{56}Fe_S$	FE56/S	Iron-56 hypernucleus with strangeness = −1
Fe	FE	Iron nucleus
Co	CO	Cobalt nucleus
Ni	NI	Nickel nucleus
Cu	CU	Copper nucleus
Zn	ZN	Zinc nucleus
Ga	GA	Gallium nucleus
Ge	GE	Germanium nucleus
As	AS	Arsenic nucleus
Se	SE	Selenium nucleus
Br	BR	Bromine nucleus
Kr	KR	Krypton nucleus
Rb	RB	Rubidium nucleus
Sr	SR	Strontium nucleus
Yt	YT	Yttrium nucleus. Note name is not same as chemical symbol
$^{89}Yt_S$	YT89/S	Yttrium-89 hypernucleus
Zr	ZR	Zirconium nucleus
Nb	NB	Niobium nucleus
Mo	MO	Molybdenum nucleus
Tc	TC	Technetium nucleus
Ru	RU	Ruthenium nucleus
Rh	RH	Rhodium nucleus
Pd	PD	Palladium nucleus
Ag	AG	Silver nucleus
Cd	CD	Cadmium nucleus
In	IN	Indium nucleus
Sn	SN	Tin nucleus
Sb	SB	Antimony nucleus
Te	TE	Tellurium nucleus
I	I	Iodine nucleus
Xe	XE	Xenon nucleus
Cs	CS	Cesium nucleus
Ba	BA	Barium nucleus
La	LA	Lanthanum nucleus
Ce	CE	Cerium nucleus
Pr	PR	Praseodymium nucleus
Nd	ND	Neodymium nucleus
Pm	PM	Promethium nucleus
Sm	SM	Samarium nucleus
Eu	EU	Europium nucleus
Gd	GD	Gadolinium nucleus
Tb	TB	Terbium nucleus
Dy	DY	Dysprosium nucleus
Ho	HO	Holmium nucleus
Er	ER	Erbium nucleus
Tm	TM	Thulium nucleus
Yb	YB	Ytterbium nucleus
Lu	LU	Lutetium nucleus
Hf	HF	Hafnium nucleus
Ta	TA	Tantalum nucleus
Wt	WT	Tungsten nucleus. Note name is not same as chemical symbol
Re	RE	Rhenium nucleus
Os	OS	Osmium nucleus
Ir	IR	Iridium nucleus
Pt	PT	Platinum nucleus
Au	AU	Gold nucleus
Hg	HG	Mercury nucleus
Tl	TL	Thallium nucleus
Pb	PB	Lead nucleus
Bi	BI	Bismuth nucleus
Po	PO	Polonium nucleus
At	AST	Astatine nucleus. Note name is not same as chemical symbol

PARTICLE NAME	COMPUTER NAME	EXPLANATION
Rn	RN	Radon nucleus
Fr	FR	Francium nucleus
Ra	RA	Radium nucleus
Ac	AC	Actinium nucleus
Th	TH	Thorium nucleus
Pa	PA	Protactinium nucleus
U	U	Uranium nucleus
Np	NP	Neptunium nucleus
Pu	PU	Plutonium nucleus
Cm	CM	Curium nucleus
supernucleus	SUPERNUCLEUS	Super heavy nucleus
	GLOBAL ATTRIBUTES OF INCLUSIVE REACTIONS	
X	X	
inelastic	INELASTIC	Same as X, (ANYTHING), except elastic excluded
annihil	ANNIHIL	Pure annihilation final state in nucleon-antinucleon scattering
	ATTRIBUTES OF SEMIINCLUSIVE REACTIONS	
(neutrals)	(NEUTRALS)	Zero or more neutral particles
(chargeds)	(CHARGEDS)	Zero or more charged particles plus possible neutrals
(vees)	(VEES)	Zero or more unspecified neutral strange particle decays
(γ's)	(GAMMAS)	Zero or more γ's
(gluons)	(GLUONS)	
(leptons)	(LEPTONS)	Zero or more unspecified leptons
(ν's)	(NUS)	Zero or more unspecified neutrinos
($e^{\pm}$'s)	(E+-S)	Zero or more electrons or positrons
(e^-'s)	(E-S)	Zero or more electrons
(e^+'s)	(E+S)	Zero or more positrons
($\mu^{\pm}$'s)	(MU+-S)	Zero or more muons
(jets)	(JETS)	Zero or more jets
(hadrons)	(HADRONS)	Zero or more hadrons
(hadron^0's)	(HADRONOS)	Zero or more neutral hadrons
(charged-hadrons)	(CHARGED-HADRONS)	Zero or more charged hadrons
(mesons)	(MESONS)	Zero or more mesons
(charged-mesons)	(CHARGED-MESONS)	Zero or more charged mesons
(π's)	(PIONS)	Zero or more pions
($\pi^{\pm}$'s)	(PI+-S)	Zero or more $\pi^{\pm}$'s
(π^+'s)	(PI+S)	Zero or more π^+'s
(π^0's)	(PIOS)	Zero or more π^0's
(π^-'s)	(PI-S)	Zero or more π^-'s
(η's)	(ETAS)	Zero or more η's
(ρ^+'s)	(RHO+S)	Zero or more ρ^+'s
(ρ^0's)	(RHOOS)	Zero or more ρ^0's
(ρ^-'s)	(RHO-S)	Zero or more ρ^-'s
(stranges)	(STRANGES)	Zero or more unspecified strange particles
(kaons)	(KAONS)	Zero or more unspecified kaons
($K^{\pm}$'s)	(K+-S)	Zero or more $K^{\pm}$'s
(K_S's)	(KSS)	Zero or more K_s's
(D(unspec)'s)	(D(UNSPEC)S)	Zero or more unspecified charmed nonstrange mesons
(nucleons)	(NUCLEONS)	Zero or more unspecified nucleons
(p's)	(PROTONS)	Zero or more protons
(n's)	(NS)	Zero or more neutrons
(Λ's)	(LAMBDAS)	Zero or more Λ's
(He's)	(HES)	Zero or more He nuclei
(frags)	(FRAGS)	Zero or more nuclear fragments
(fragbs)	(FRAGBS)	Zero or more beam fragments
(fragts)	(FRAGTS)	Zero or more target fragments
(showers)	(SHOWERS)	Zero or more shower tracks, usually in emulsions
(greys)	(GREYS)	Zero or more grey tracks, usually in emulsions
(htracks)	(HTRACKS)	Zero or more heavy tracks, usually in emulsions
(blacks)	(BLACKS)	Zero or more black tracks, usually in emulsions
	ATTRIBUTES OF TOPOLOGICAL REACTIONS	
mult[charged]	MULT(CHARGED)	Multiplicity distribution for unspecified charged particle
mult[charged$^+$]	MULT(CHARGED+)	Multiplicity distribution for unspecified positive-charge particle
mult[charged$^-$]	MULT(CHARGED-)	Multiplicity distribution for unspecified negative-charge particle
mult[neutral]	MULT(NEUTRAL)	Multiplicity distribution for unspecified neutral-charge particle
mult[vee]	MULT(VEE)	Multiplicity distribution for strange visible neutral-charge vee (not γ conversions)
mult[γ]	MULT(GAMMA)	Multiplicity distribution for γ
mult[lepton]	MULT(LEPTON)	Multiplicity distribution for unspecified lepton
mult[ν]	MULT(NU)	Multiplicity distribution for unspecified ν
mult[$e^{\pm}$]	MULT(E+-)	Multiplicity distribution for positron or electron
mult[e^-]	MULT(E-)	Multiplicity distribution for electron
mult[e^+]	MULT(E+)	Multiplicity distribution for positron

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
mult[μ^-]	MULT(MU-)	Multiplicity distribution for μ^-
mult[μ^+]	MULT(MU+)	Multiplicity distribution for μ^+
mult[μ]	MULT(MUON)	Multiplicity distribution for muon of unspecified charge
mult[jet]	MULT(JET)	Multiplicity distribution for jet
mult[hadron]	MULT(HADRON)	Multiplicity distribution for unspecified hadron
mult[charged-hadron]	MULT(CHARGED-HADRON)	Multiplicity distribution for unspecified charged hadron
mult[hadron$^+$]	MULT(HADRON+)	Multiplicity distribution for unspecified positive-charge hadron
mult[hadron^0]	MULT(HADRON0)	Multiplicity distribution for unspecified neutral-charge hadron
mult[hadron$^-$]	MULT(HADRON-)	Multiplicity distribution for unspecified negative-charge hadron
mult[meson]	MULT(MESON)	Multiplicity distribution for unspecified meson
mult[charged-meson]	MULT(CHARGED-MESON)	Multiplicity distribution for unspecified charged meson
mult[π]	MULT(PION)	Multiplicity distribution for pion of unspecified charge
mult[$\pi^\pm$]	MULT(PI+-)	Multiplicity distribution for π^+ or π^-
mult[π^+]	MULT(PI+)	Multiplicity distribution for π^+
mult[π^0]	MULT(PI0)	Multiplicity distribution for π^0
mult[π^-]	MULT(PI-)	Multiplicity distribution for π^-
mult[η]	MULT(ETA)	Multiplicity distribution for $\eta(549)$
mult[$\rho(770)$]	MULT(RHO)	Multiplicity distribution for $\rho(770)$
mult[$\rho(770)^+$]	MULT(RHO+)	Multiplicity distribution for $\rho(770)^+$
mult[$\rho(770)^0$]	MULT(RHO0)	Multiplicity distribution for $\rho(770)^0$
mult[$\rho(770)^-$]	MULT(RHO-)	Multiplicity distribution for $\rho(770)^-$
mult[$\omega(783)$]	MULT(OMEGA(783))	Multiplicity distribution for $\omega(783)$
mult[$f_2(1270)$]	MULT(F2(1270))	Multiplicity distribution for $f_2(1270)$
mult[$\rho_3(1690)^0$]	MULT(RHO3(1690)0)	Multiplicity distribution for $\rho_3(1690)^0$
mult[strange]	MULT(STRANGE)	Multiplicity distribution for unspecified strange particle
mult[kaon]	MULT(KAON)	Multiplicity distribution for kaon of unspecified charge
mult[$K^\pm$]	MULT(K+-)	Multiplicity distribution for K^+ or K^-
mult[K^+]	MULT(K+)	Multiplicity distribution for K^+
mult[K^0]	MULT(K0)	Multiplicity distribution for K^0
mult[K_L]	MULT(KL)	Multiplicity distribution for K_L
mult[K_S]	MULT(KS)	Multiplicity distribution for K_S
mult[$\bar{K}^0$]	MULT(KBAR0)	Multiplicity distribution for $\bar{K}^0$
mult[K^-]	MULT(K-)	Multiplicity distribution for K^-
mult[$K^*(892)^+$]	MULT(K*(892)+)	Multiplicity distribution for $K^*(892)^+$
mult[$K^*(892)^0$]	MULT(K*(892)0)	Multiplicity distribution for $K^*(892)^0$
mult[$\bar{K}^*(892)^0$]	MULT(K*BAR(892)0)	Multiplicity distribution for $\bar{K}^*(892)^0$
mult[$K^*(892)^-$]	MULT(K*(892)-)	Multiplicity distribution for $K^*(892)^-$
mult[$K_2^*(1430)^+$]	MULT(K2*(1430)+)	Multiplicity distribution for $K_2^*(1430)^+$
mult[$K_2^*(1430)^0$]	MULT(K2*(1430)0)	Multiplicity distribution for $K_2^*(1430)^0$
mult[$\bar{K}_2^*(1430)^0$]	MULT(K2*BAR(1430)0)	Multiplicity distribution for $\bar{K}_2^*(1430)^0$
mult[$K_2^*(1430)^-$]	MULT(K2*(1430)-)	Multiplicity distribution for $K_2^*(1430)^-$
mult[$\phi(1020)$]	MULT(PHI)	Multiplicity distribution for $\phi(1020)$
mult[$D^\pm$]	MULT(D+-)	Multiplicity distribution for D^+ or D^-
mult[D(unspec)]	MULT(D(UNSPEC))	Multiplicity distribution for unspecified charmed nonstrange meson
mult[$p^\pm$]	MULT(P+-)	Multiplicity distribution of proton or antiproton
mult[nucleon]	MULT(NUCLEON)	Multiplicity distribution for unspecified nucleon
mult[p]	MULT(P)	Multiplicity distribution for proton
mult[n]	MULT(N)	Multiplicity distribution for neutron
mult[$\bar{n}$]	MULT(NBAR)	Multiplicity distribution for antineutron
mult[$\bar{p}$]	MULT(PBAR)	Multiplicity distribution for antiproton
mult[Δ^{++}]	MULT(DELTA++)	Multiplicity distribution of $\Delta(1232\,P_{33})^{++}$
mult[Δ^+]	MULT(DELTA+)	Multiplicity distribution for $\Delta(1232\,P_{33})^+$
mult[Δ^0]	MULT(DELTA0)	Multiplicity distribution for $\Delta(1232\,P_{33})^0$
mult[Δ^-]	MULT(DELTA-)	Multiplicity distribution for $\Delta(1232\,P_{33})^-$
mult[$\bar{\Delta}^+$]	MULT(DELTABAR+)	Multiplicity distribution for $\bar{\Delta}(1232\,P_{33})^+$
mult[$\bar{\Delta}^0$]	MULT(DELTABAR0)	Multiplicity distribution for $\bar{\Delta}(1232\,P_{33})^0$
mult[$\bar{\Delta}^-$]	MULT(DELTABAR-)	Multiplicity distribution for $\bar{\Delta}(1232\,P_{33})^-$
mult[$\bar{\Delta}^{--}$]	MULT(DELTABAR--)	Multiplicity distribution for $\bar{\Delta}(1232\,P_{33})^{--}$
mult[Λ]	MULT(LAMBDA)	Multiplicity distribution for Λ
mult[$\bar{\Lambda}$]	MULT(LAMBDABAR)	Multiplicity distribution for $\bar{\Lambda}$
mult[Σ^+]	MULT(SIGMA+)	Multiplicity distribution for Σ^+
mult[Σ^0]	MULT(SIGMA0)	Multiplicity distribution for Σ^0
mult[Σ^-]	MULT(SIGMA-)	Multiplicity distribution for Σ^-
mult[$\bar{\Sigma}^+$]	MULT(SIGMABAR+)	Multiplicity distribution for $\bar{\Sigma}^+$
mult[$\bar{\Sigma}^0$]	MULT(SIGMABAR0)	Multiplicity distribution for $\bar{\Sigma}^0$
mult[$\bar{\Sigma}^-$]	MULT(SIGMABAR-)	Multiplicity distribution for $\bar{\Sigma}^-$
mult[$\Sigma(1385)^+$]	MULT(SIGMA(1385)+)	Multiplicity distribution for $\Sigma(1385\,P_{13})^+$
mult[$\Sigma(1385)^-$]	MULT(SIGMA(1385)-)	Multiplicity distribution for $\Sigma(1385\,P_{13})^-$

PARTICLE NAME	COMPUTER NAME	EXPLANATION
mult[Ξ^-]	MULT(XI-)	Multiplicity distribution for Ξ^-
mult[$\bar{\Xi}^+$]	MULT(XIBAR+)	Multiplicity distribution for $\bar{\Xi}^+$
mult[deuteron]	MULT(DEUTERON)	Multiplicity distribution for deuteron
mult[trit]	MULT(TRIT)	Multiplicity distribution for triton
mult[He]	MULT(HE)	Multiplicity distribution for helium nucleus
mult[frag]	MULT(FRAG)	Multiplicity distribution for nuclear fragment
mult[fragb]	MULT(FRAGB)	Multiplicity distribution for beam fragment
mult[fragt]	MULT(FRAGT)	Multiplicity distribution for target fragment
mult[star]	MULT(STAR)	Multiplicity distribution for star
mult[shower]	MULT(SHOWER)	Multiplicity distribution for shower track
mult[grey]	MULT(GREY)	Multiplicity distribution for grey track
mult[htrack]	MULT(HTRACK)	Multiplicity distribution for heavy tracks (black or grey) in emulsion
mult[black]	MULT(BLACK)	Multiplicity distribution for black track
mult[heavy]	MULT(HEAVY)	
	GENERIC PARTICLE NAMES	
unspec	UNSPEC	Particle of unspecified type
neutral	NEUTRAL	Unspecified neutral-charge particle
charged	CHARGED	Unspecified charged particle
charged^{++}	CHARGED++	Unspecified doubly-positive-charge particle
charged^{+}	CHARGED+	Unspecified positive-charge particle
charged^{-}	CHARGED-	Unspecified negative-charge particle
charged^{--}	CHARGED--	Unspecified doubly-negative-charge particle
multicharged	MULTICHARGED	Stable particle with electric charge greater than 1
even-charged	EVEN-CHARGED	An even number of charged particles
odd-charged	ODD-CHARGED	An odd number of charged particles
parton	PARTON	Hypothesized particle
jet	JET	Jet detected as a whole
jet^{+}	JET+	Jet with positive net charge
jet^{-}	JET-	Jet with negative net charge
hadron	HADRON	Unspecified hadron
hadron^{0}	HADRONO	Unspecified neutral-charge hadron
charged-hadron	CHARGED-HADRON	Unspecified charged hadron
hadron^{+}	HADRON+	Unspecified positive-charge hadron
hadron^{-}	HADRON-	Unspecified negative-charge hadron
charged-meson	CHARGED-MESON	Unspecified charged meson
vmeson	VMESON	Unspecified neutral-charge vector meson
heavy	HEAVY	Unspecified stable particle with mass > proton's mass
heavy-flavor	HEAVY-FLAVOR	Any unspecified particle carrying a flavor heavier than strange
longlived	LONGLIVED	Unspecified particle stable under strong and electromagnetic decay
longlived^{+}	LONGLIVED+	Unspecified positive-charge particle stable under strong and electromagnetic decay
longlived^{0}	LONGLIVEDO	Unspecified neutral-charge particle stable under strong and electromagnetic decay
longlived^{-}	LONGLIVED-	Unspecified negative-charge particle stable under strong and electromagnetic decay
narrow	NARROW	Unspecified narrow resonance
vee	VEE	Unspecified neutral-charge strange particle decay
kink^{+}	KINK+	Positive-charge kinking track observed in track detector
kink^{-}	KINK-	Negative-charge kinking track observed in track detector
star	STAR	High charged multiplicity final state
shower	SHOWER	Shower track
shower^{+}	SHOWER+	Positive-charge shower track
shower^{-}	SHOWER-	Negative-charge shower track
grey	GREY	Emulsion track reported as grey (mostly protons in the range 30 - 400 MeV/c)
htrack	HTRACK	Heavy tracks (black or grey) in emulsion
black	BLACK	Heavily ionizing track in emulsions
	QUALIFIERS DESCRIBING ABSENCE OF PARTICLE IN THE FINAL STATE	
0 charged	OCHARGED	Exactly zero charged particles
0 charged^{+}	OCHARGED+	Exactly zero positive-charge particles
0 charged^{-}	OCHARGED-	Exactly zero negative-charge particles
0 charged-hadron	OCHARGED-HADRON	Exactly zero charged hadrons
0 jet	OJET	Exactly zero jets
0 vee	OVEE	Exactly zero neutral-charge strange particle decays
0 γ	OGAMMA	Exactly zero γ's
0 lepton	OLEPTON	Exactly zero leptons
0 ν_e	ONUE	Exactly zero ν_e's
0 $e^{\pm}$	OE+-	Exactly zero electrons and positrons
0 e^{-}	OE-	Exactly zero electrons
0 e^{+}	OE+	Exactly zero positrons
0 $\bar{\nu}_e$	ONUEBAR	Exactly zero $\bar{\nu}_e$'s
0 ν_μ	ONUMU	Exactly zero ν_μ's
0 $\mu^{\pm}$	OMU+-	Exactly zero muons
0 μ^{-}	OMU-	Exactly zero μ^-'s
0 μ^{+}	OMU+	Exactly zero μ^+'s
0 $\bar{\nu}_\mu$	ONUMUBAR	Exactly zero $\bar{\nu}_\mu$'s
0 π	OPI	Exactly zero pions

See the legend on page 421.

PARTICLE NAME	COMPUTER NAME	EXPLANATION
$0\pi^{\pm}$	OPI+-	Exactly zero π^+'s and π^-'s
$0\pi^{+}$	OPI+	Exactly zero π^+'s
$0\pi^{0}$	OPI0	Exactly zero π^0's
$0\pi^{-}$	OPI-	Exactly zero π^-'s
0 strange	OSTRANGE	Exactly zero strange particles
$0K_S$	OKS	Exactly zero K_S's
$0K_0$	OK0	Exactly zero K^0's
$0p$	OP	Exactly zero protons
0Λ	OLAMBDA	Exactly zero Λ's
$0\bar{\Lambda}$	OLAMBDABAR	Exactly zero $\bar{\Lambda}$'s
0 charm	OCHARM	Exactly zero charmed particles
0 fragb	OFRAGB	Exactly zero beam fragments
0 shower	OSHOWER	Exactly zero showers
0 grey	OGREY	Exactly zero grey tracks in an emulsion
0 htrack	OHTRACK	Exactly zero heavy tracks
0 He	OHE	Exactly zero helium nuclei
	QUALIFIERS OF PARTICLE GROUPS IN A FINAL STATE	
nonres	NONRES	Unspecified nonresonant state
CC	CC	Charge conjugate final state
DD	DD	Unspecified diffraction dissociation final state
	MISCELLANEOUS TERMS	
unlinked	UNLINKED	Pseudo-particle used as a complete reaction by itself
crystal	CRYSTAL	General target for channeling experiments. Target is not individual particles
$(\pi\pi)_{L=0}$	PIPI(L=0)	$\pi\pi$ S-wave state
$(\bar{N}N)_{I=0}$	NBARN(I=0)	$\bar{N}N$ $I=0$ initial state (and elastic final state)
$(\bar{N}N)_{I=1}$	NBARN(I=1)	$\bar{N}N$ $I=1$ initial state (and elastic final state)
$(\pi\pi)_{I=0}$	PIPI(I=0)	$\pi\pi$ $I=0$ state
$(\pi\pi)_{I=1}$	PIPI(I=1)	$\pi\pi$ $I=1$ state
$(\pi\pi)_{I=2}$	PIPI(I=2)	$\pi\pi$ $I=2$ state
$(\pi\pi)^0_{L=0}$	PIPI(L=0)0	$\pi\pi$ $L=0$ state
$(K\ K)_{L=0}$	KK(L=0)	KK $L=0$ state
$(K^*\pi)_{I=1/2}$	K*PI(I=1/2)	$K^*\pi$ $I=1/2$ state
$(K^*\pi)_{I=3/2}$	K*PI(I=3/2)	$K^*\pi$ $I=3/2$ state
$(K\ \pi)_{I=1/2}$	KPI(I=1/2)	$K\pi$ $I=1/2$ state
$(K\ \pi)_{I=3/2}$	KPI(I=3/2)	$K\pi$ $I=3/2$ state
$(K\ N)_{I=0}$	KN(I=0)	KN $I=0$ initial state (and elastic final state)
$(K\ N)_{I=1}$	KN(I=1)	KN $I=1$ initial state (and elastic final state)
$(\bar{K}\ N)_{I=0}$	KBARN(I=0)	$\bar{K}N$ $I=0$ initial state (and elastic final state)
$(\bar{K}\ N)_{I=1}$	KBARN(I=1)	$\bar{K}N$ $I=1$ initial state (and elastic final state)
$(\pi\Lambda)_{I=1}$	PILAMBDA(I=1)	$\pi\Lambda$ $I=1$ system of unspecified mass, for PWA
$(\pi\Lambda)^+_{I=1}$	PILAMBDA(I=1)+	$\pi\Lambda$ $I=1$ system of unspecified mass, for PWA
$(\pi\Lambda)^0_{I=1}$	PILAMBDA(I=1)0	$\pi\Lambda$ $I=1$ system of unspecified mass, for PWA
$(\pi\Lambda)^-_{I=1}$	PILAMBDA(I=1)-	$\pi\Lambda$ $I=1$ system of unspecified mass, for PWA
$(\pi\Sigma)_{I=0}$	PISIGMA(I=0)	$\pi\Sigma$ $I=0$ system of unspecified mass, for PWA
$(\pi\Sigma)_{I=1}$	PISIGMA(I=1)	$\pi\Sigma$ $I=1$ system of unspecified mass, for PWA
$(\pi\Sigma)^+_{I=1}$	PISIGMA(I=1)+	$\pi\Sigma$ $I=1$ system of unspecified mass, for PWA
$(\pi\Sigma)^0_{I=1}$	PISIGMA(I=1)0	$\pi\Sigma$ $I=1$ system of unspecified mass, for PWA
$(\pi\Sigma)^-_{I=1}$	PISIGMA(I=1)-	$\pi\Sigma$ $I=1$ system of unspecified mass, for PWA
$(\pi N)_{I=1/2}$	PIN(I=1/2)	πN $I=1/2$ initial state (and elastic final state)
$(\pi N)_{I=3/2}$	PIN(I=3/2)	πN $I=3/2$ initial state (and elastic final state)
$(N\rho)_{I=1/2}$	NRHO(I=1/2)	$N\rho$ $I=1/2$ final state
$(N\rho)_{I=3/2}$	NRHO(I=3/2)	$N\rho$ $I=3/2$ final state
$(N\ \pi\ \pi)_{I=1/2}$	NEPSILON(I=1/2)	Nucleon and S-wave dipion $I=1/2$ final state
$(\pi\Delta)_{I=1/2}$	PIDELTA(I=1/2)	$\pi\Delta$ $I=1/2$ final state
$(\pi\Delta)_{I=3/2}$	PIDELTA(I=3/2)	$\pi\Delta$ $I=3/2$ final state
$(K\Sigma)_{I=1/2}$	KSIGMA(I=1/2)	$K\Sigma$ $I=3/2$ state
$(K\Sigma)_{I=3/2}$	KSIGMA(I=3/2)	$K\Sigma$ $I=3/2$ state
$(NN)_{I=0}$	NN(I=0)	NN $I=0$ initial state (and elastic final state)
$(NN)_{I=1}$	NN(I=1)	NN $I=1$ initial state (and elastic final state)

Our names for accelerators are collected below. Usually the name is simply an abbreviation of the name of the institution at which the accelerator is located. Where there is more than one accelerator at an institution, an appropriate modifier is appended, as in CERN-SPS.

For a cosmic ray experiment, we use COSM as the accelerator name, sometimes combined with a specification of the source of the rays.

We use NONE for certain cases, such as proton decay experiments, in which no particle beam is used. We use MANY for certain rapporteur talks or other papers surveying a number of experiments at several (often unspecified) accelerators.

Energies listed are the approximate maximum energies of the circulating beams.

ACCELERATOR	EXPLANATION
AERE-HELIOS-NS	Harwell HELIOS neutron source
ANIK-MEA	NIKHEF MEA e^- linac
ANL	Argonne (ZGS) proton synchrotron (12.7 GeV/c $p_{lab.}$)
BHEP-BEPC	Beijing electron-positron colliding ring (5.6 GeV E_{cm})
BNL	Brookhaven (AGS) proton synchrotron (33 GeV/c $p_{lab.}$)
BNL-ION	BNL heavy ion accelerator
BONN	Bonn electron synchrotron (2.5 GeV/c $p_{lab.}$)
BONN-500	Bonn electron synchrotron (500 MeV/c $p_{lab.}$)
BONN-ELSA	Electron-Stretcher-Accelerator (2 – 3.5 Gev/c $p_{lab.}$)
CERN-ISR	CERN proton-proton collider (62 GeV E_{cm})
CERN-LEAR	CERN low-energy antiproton ring
CERN-LEP	CERN large electron-positron collider (100 GeV E_{cm})
CERN-MSR	CERN muon storage ring
CERN-MSR-2	CERN muon storage ring (weak-focusing, orbit diameter 14 metres)
CERN-PBAR/P	CERN pp collider (540 GeV E_{cm})
CERN-PS	CERN proton synchrotron (28 GeV/c $p_{lab.}$)
CERN-SC	CERN synchrocyclotron (600 MeV $T_{lab.}$)
CERN-SPS	CERN super proton synchrotron (450 GeV/c $p_{lab.}$)
CESR	Cornell electron-positron storage ring (12 GeV E_{cm})
CIT-PELLETRON	California Institute of Technology 3-MeV Pelletron accelerator
COLU-CYC	Columbia cyclotron
COSM	Cosmic rays
COSM-CYGNUS-X-3	Local source of cosmic ray particles from direction of Cygnus X-3
COSM-HERCULES-X-1	Local source of cosmic ray particles from direction of Hercules X-1
COSM-LMC-X-4	Local source of cosmic ray particles from direction of LMC-X-4
COSM-PULSAR	Pulsar cosmic object
COSM-SN1987A	Local source of cosmic ray particles from direction of SN 1987A
COSM-SUN	Local source of cosmic ray particles from direction of the Sun
DARE-NINA	Daresbury electron synchrotron (5.2 GeV/c $p_{lab.}$)
DARM-LINAC	Darmstadt 65 MeV/c $p_{lab.}$ linac
DESY	Hamburg Deutches electron synchrotron (7.5 GeV/c $p_{lab.}$)
DESY-DORIS	DESY DOppel RIng Speicher (2 – 6 Gev E_{cm})
DESY-DORIS-II	DESY DORIS upgraded in 1977 (11.2 GeV E_{cm})
DESY-HERA	DESY e-p machine
DESY-PETRA	DESY electron-positron collider (40 GeV E_{cm})
DGSI	Darmstadt heavy ion facility (SIS/ESR)
DGSI-UNILAC	GSI heavy-ion accelerator
DUOPLASMATRON	Intense low-energy accelerator used to prepare atomic hydrogen beam
ETHZ	Eidg. Technische Hochschule in Zurich proton accelerator
FNAL	FNAL proton synchrotron (500 GeV/c $p_{lab.}$)
FNAL-AA	Antiproton accumulator for collider
FNAL COLLIDER	FNAL pp collider (2000 GeV E_{cm})
FNAL-TEV	FNAL fixed target machine (1000 GeV)
GANIL	Two coupled isochronous cyclotrons for heavy ions
GIES-LINAC	Giessen University 65 MeV electron linear accelerator
GRON-CYC	Groningen KVI Cyclotron
ILL	Univ. of Illinois electron synchrotron (300 MeV/c $p_{lab.}$)
IND-CYC	Indiana University cyclotron facility
INRU-240	Institute for Nuclear Research, Ukrainian Academy of Science cyclotron
ISTU-PELLETRON	Stuttgart pelletron
ITEP	ITEP Moscow proton synchrotron (7 GeV/c $p_{lab.}$)
IUPU-CYC	Indiana University cyclotron
JINR	JINR Dubna proton synchrotron (10 GeV/c $p_{lab.}$)
JINR-600	JINR Dubna synchrocyclotron (600 MeV $T_{lab.}$)
KEK-KENS	KEK Spallation Neutron Source
KEK-PS	KEK proton synchrotron (12 GeV $p_{lab.}$)
KEK-TRISTAN	KEK electron-positron collider (64 GeV E_{cm})
KHAR	Kharkiv Inst. of Physics and Tech., Ukranian Academy of Science electron linear accelerator (2 GeV $p_{lab.}$)
LAMPF	Los Alamos meson/proton factory
LASER	Laser as a source of γ's
LBL	Lawrence Berkeley Lab (Bevatron) proton synchrotron (6.2 GeV/c $p_{lab.}$)
LBL-BEVALAC	LBL tandem combination of HILAC and Bevatron. Accelerates ions up to Fe (2.1 GeV/nucleon for charge/mass = 0.5, 4.9 for protons). Shut down in 1993
LBL-CYC-184IN	LBL 184-inch cyclotron (934 MeV for ^{4}He). Shut down in 1987
LBL-CYC-88IN	LBL 88-inch cyclotron (160 MeV for alphas)
LEBD-650	Lebedev Physics Inst. synchrotron (650 MeV/c $p_{lab.}$)
LUND	Lund Electron synchrotron (1.1 GeV/c $p_{lab.}$)
MANY	Used (rarely) for reviews and compilations
MANZ-LINAC	Mainz electron LINAC (300 MeV/c $p_{lab.}$)
MANZ-MAMI	Mainz electron Microtron on energy up to 855 MeV and 100 microamps current
MINR-MMF	Moscow Meson Factory, proton and H-ion accelerator with energy of 600 MeV
MIT-BLA	MIT electron LINAC (780 MeV $E_{lab.}$)
MSU-CYC	Michigan State Univ. superconducting cyclotron to 40 MeV
MUNT	Munich Technical University (Munich, FRG) accelerator
MUSL-2	
NONE	No accelerator used
NOVO-VEPP-2M	Novosibirsk electron-positron storage ring (1.4 GeV E_{cm})
NOVO-VEPP-3	Novosibirsk (VEPP-3) electron-positron storage ring, used primarily as synchrotron radiation source, will be used as intermediate storage for VEPP-4 (2.2 GeV E_{cm})
NOVO-VEPP-4	Novosibirsk electron-positron ring, also a synchrotron radiation source (7 – 10.4 GeV E_{cm})

ACCELERATOR	EXPLANATION
ORNL-ORELA	
ORSA	Orsay electron linear accelerator (2 GeV/c p_{lab})
ORSA-CYC	Orsay synchrocyclotron (150 MeV/c p_{lab})
ORSA-DCI	Orsay electron-positron storage ring (3.4 GeV E_{cm})
OSAK-CYC	230 cm AVF cyclotron
PIYF	Petersburg Nuclear Physics Inst. synchrocyclotron (1 GeV T_{lab})
PPA	Princeton-pennsylvania (PPA) proton synchrotron (3 GeV/c p_{lab})
PRIN-CYC	Princeton cyclotron
PSI	Schweizerische Inst. für Nuklearforschung (590 MeV T_{lab})
REACTOR	General nuclear reactor
RHEL-ISIS	RAL pulsed neutron source (1 – 1000 MeV energy)
ROCH-TANDEM	Univ. of Rochester's Nuclear Structure Research Laboratory Tandem Electrostatic accelerator
SAAC-CYC	South Africa National Accelerator Center Cyclotron
SACL	Saclay (Saturne) proton synchrotron (3 GeV/c p_{lab})
SACL-LINAC	Saclay electron LINAC
SACL-SATURNE-II	Saclay proton, deuteron, alpha accelerator (2.55 GeV T_{lab})
SAIP-RIKEN	Saitama Inst. of Phys. and Chem. Res. ring ciclotron
SARA	Coupled cyclotron accelerator system in CEN, Grenoble
SASK-LINAC	University of Saskatewan LINAC
SERP	IHEP Serpukhov proton synchrotron (76 GeV/c p_{lab})
SLAC	Stanford electron linear accelerator (40 GeV/c p_{lab})
SLAC-NPI	Stanford nuclear physics injector
SLAC-PEP	Stanford electron-positron ring (30 GeV E_{cm})
SLAC-SLC	Stanford linear electron-positron collider (100 GeV E_{cm})
SLAC-SPEAR	Stanford electron-positron ring (8.4 GeV E_{cm})
TAIU-CYC	
TMSK	Tomsk electron synchrotron (1.5 GeV/c p_{lab})
TOHO	Tohoku University low energy electron linear accelerator
TOKY	INS Tokyo electron synchrotron (1.3 GeV/c p_{lab})
TRID	Durham Triangle Universities Nuclear Laboratory
TRIUMF	Canadian TRIangle University Meson Facility (520 MeV T_{lab})
VAN-DE-GRAAFF	General Van-de-Graaff accelerator
YERE-ARUS	Yerevan (ARUS) electron synchrotron (6.1 GeV/c p_{lab})

We list here detectors and the laboratories at which they are used.

Bubble chamber detector names give the fill — hydrogen (HBC), deuterium (DBC), helium (HEBC) or heavy liquid (HLBC) — then the chamber name (which is usually simply its size), and finally any qualifiers. The qualifiers are HYB for a predominantly hybrid mode of operation, RAP for a rapid-cycling chamber, and TST for a chamber containing a track-sensitive target. When more than one qualifier is appropriate, we use the one most important to the data at hand.

DETECTOR	ACCELERATOR	EXPLANATION
20-GEV	SLAC	Spectrometer
2BETA-GS	UNDERGROUND	Underground experiment on double β decay at the Gran Sasso National Laboratory, L'Aquila, Italy
8-GEV	SLAC	Spectrometer
?	?	Unknown detector
ACCMOR	CERN-SPS	Large aperture forward magnetic spectrometer
AFS	CERN-ISR	Axial field spectrometer
AHEAD	MIT-BLA	Alberta high efficiency analyzer for deuterons
ALADIN	DGSI	Forward spectrometer
ALEPH	CERN-LEP	LEP detector
ALPHA-POLIS	JINR	
AMY	KEK-TRISTAN	High resolution lepton detector
ANI	COSM	Compex of detectors on Aragatz mountain
APPLE	CERN-LEAR	Apparatus for precision measurements of the proton electromagnetic form factors in the time-like region and vector meson spectroscopy
ARGUS	DESY-DORIS	
ASP	SLAC-PEP	Anomalous single photon detector
ASTERIX	CERN-LEAR	Antiproton stop experiment with trigger on initial x rays
BAKSAN	UNDERGROUND	
BBR	COSM	Cosmic-ray facility at the Black Birch Range in New Zealand
BENKEI	KEK-PS	
BES	BHEP-BEPC	BEijing Spectrometer
BIS	SERP	JINR spectrometer, now at IHEP, Serpukhov
BIS-2	SERP	Upgrade of BIS
BIS-2M	SERP	Modification of BIS-2
BNL-SND	UNDERGROUND	Homestake gold mine, Brookhaven solar neutrino detector at Lead, South Dakota
CALO	many	Calorimeter
CASA-MIA	COSM	Chicago Air Shower Array with Michigan Muon Array
CASCADE	SERP	Single crystal target, goniometer, magnetic spectrometer
CCM	FNAL-TEV	Chicago cyclotron magnet spectrometer
CCS	FNAL	Chicago cyclotron spectrometer
CDF	FNAL-COLLIDER	Collider detector
CDHS	CERN-SPS	CERN-Dortmund-Heidelberg-Saclay-Bologna neutrino detector at SPS (135 tons)
CELLO	DESY-PETRA	Spectrometer system
CERN-MUNICH	CERN-PS	CERN-Max Planck I (Munich) spectrometer
CHARM	CERN-SPS	CERN-Hamburg-Amsterdam-Rome-Moscow neutrino detector
CHARM-II	CERN-SPS	Upgraded charm detector
CITF	FNAL	CIT-FNAL neutrino event spectrometer
CLEO	CESR	Solenoidal magnetic spectrometer
CLEO-II	CESR	Upgraded CLEO detector
CLOUD	many	Cloud chamber
CMD	NOVO-VEPP-2M	Cryogenic magnetic detector
CNTR	many	Counters (no chambers)
COMB	many	Combinations of different types of detectors. Can include a hybrid system involving a bubble chamber, if the bubble chamber is a minor part of the system
CPLEAR	CERN-LEAR	Apparatus for precision measurements of CP violation and CPT tests with $K^0\overline{K}^0$
CRYS-BALL	SLAC-PEP	Crystal ball
CRYS-BARREL	CERN-LEAR	Crystal Barrel large-solid-angle detector
CRYS-BOX	LAMPF	Crystal array detector
CUSB	CESR	High resolution calorimeter
CUSB-II	CESR	Upgraded CUSB detector
CYGNUS	COSM	An air-shower array located around the end station of the LAMPF accelerator in Los Alamos. Uses the LAMPF-225 neutrino detector as a muon de tector, with an effective area for muon detection of about 44 m^2.
D0	FNAL-COLLIDER	Collider detector
DAS	many	Double arm spectrometer
DASP	DESY-DORIS	Double arm spectrometer system
DBC-12FT	ANL	Deuterium bubble chamber
DBC-15FT	FNAL	Deuterium bubble chamber
DBC-30IN	FNAL	Deuterium bubble chamber
DBC-30IN	LBL	Deuterium bubble chamber
DBC-30IN	ANL	Deuterium bubble chamber
DBC-30IN	BNL	Deuterium bubble chamber
DBC-35CM	SACL	Deuterium bubble chamber
DBC-40IN-HYB	SLAC	Deuterium bubble chamber
DBC-7FT	BNL	Deuterium bubble chamber
DBC-BEBC	CERN-PS	Deuterium bubble chamber
DBC-BEBC-HYB	CERN-SPS	BEBC HYBrid system with deuterium fill
DELCO	SLAC-PEP	
DELOS	PSI	DEtector for LOw mass Searches
DELPHI	CERN-LEP	LEP detector
DEUTRON-2	YERE-ARUS	Modification of DEUTRON detector
DIOGENE	SACL-SATURNE-II	Pictorial drift chamber
DISC-3	JINR	Double-arm magnetic spectrometer
DLS	LBL-BEVALAC	Double arm spectrometer
DM2	ORSA-DCI	Detecteur magnetique no. 2
DPHN	SACL-SATURNE-II	
DRIFT	ORSA-DCI	Generic drift chamber detector
EAS-TOP	COSM	Extended air shower detector on top of the Gran Sasso Mt., at the Gran Sasso National Laboratory, L'Aquila, Italy

DETECTOR	ACCELERATOR	EXPLANATION
EHS	CERN-SPS	European hybrid spectrometer
ELAN	BONN-ELSA	
ELEGANTS-V	UNDERGROUND	ELEectron GAmma-ray NeuTrino Spectrometer V at Kamioka underground laboratory
ELSSY	MIT-BLA	Electron spectrometer system
EMC	CERN-SPS	European muon collaboration
EMRIC	SLAC	
EMUL	many	Emulsion. Also used for detectors like PLASTIC where tracks are "frozen" in a solid medium
EPICS	LAMPF	Energetic pion spectrometer and detection system
EPOS	DGSI-UNILAC	Electron-positron solenoid spectrometer
FANCY	KEK-PS	Forward and cylindrical detector system, large acceptance spectrometer covering both projectile and target regions
FHS-1	ITEP	Focusing Hadron Spectrometer
FHS-2	ITEP	Second arm of FHS-1
FLYSEYE	COSM	FLY'S EYE cosmic ray detector
FMM	FNAL	Neutrino calorimeter at FNAL
FMPS	FNAL	Multiparticle spectrometer at Fermilab
FOCUS	ITEP	FOrward particle and CUmulative particle Spectrometer
FODS	SERP	Double-arm spectrometer
FPP	GANIL	Focal-Plane Polarimeter
FREJUS	UNDERGROUND	Proton decay experiment, tracking calorimeter in the Alps
GALLEX	UNDERGROUND	Solar neutrino detector in hall A of the Gran Sasso National Laboratory, L'Aquila, Italy. Uses 30 tons of Gallium in the form of GaCl3
GAMS-2000	SERP	Hodoscope gamma-spectrometer
GAMS-4000	CERN-SPS	Hodoscope gamma-spectrometer
GIBS	JINR	Combination of scintillator counters and streamer chamber
GOLIATH	CERN-SPS	
H1	DESY-HERA	
HBC-1M	KEK-PS	Hydrogen bubble chamber
HBC-1M	JINR	Hydrogen bubble chamber
HBC-2M	ITEP	Hydrogen bubble chamber
HBC-2M	CERN-PS	Hydrogen bubble chamber
HBC-30IN	ANL	Hydrogen bubble chamber
HBC-30IN	BNL	Hydrogen bubble chamber
HBC-30IN	FNAL	Hydrogen bubble chamber
HBC-30IN	LBL	Hydrogen bubble chamber
HBC-301N-HYB	FNAL	Hydrogen bubble chamber
HBC-35CM	SACL	Hydrogen bubble chamber
HBC-40IN-HYB	RHEL	Hydrogen bubble chamber
HBC-40IN-HYB	SLAC	SLAC hybrid facility rapid cycling HBC (retired)
HBC-50CM	JINR	Hydrogen bubble chamber
HBC-50CM	ITEP	Ceased running around 1975
HBC-80CM	ITEP	Hydrogen bubble chamber
HBC-80CM	DESY	Hydrogen bubble chamber
HBC-80CM	CERN-PS	Hydrogen bubble chamber
HBC-BEBC-HYB	CERN-PS	Big European buble chamber with hybrid system
HBC-LEBC-HYB	CERN-SPS	Little European bubble chamber with hybrid system
HBC-LUDMILA	SERP	Also known as DUBNA chamber, but at Serpukhov
HBC-LUDMILA-TST	SERP	Also known as DUBNA chamber, but at Serpukhov
HBC-MIRA	SERP	4.5m × 1.6m × 1.1m cold chamber
HBC-RCBC	CERN-SPS	
HBC-UNSPEC	CERN-SPS	
HEBC-50CM	ANL	Northwestern 50-cm helium bubble chamber at ANL
HEBC-50CM	ANL	
HELIOS	CERN-SPS	CERN-SPS detector
HISS	LBL-BEVALAC	Heavy Ion Spectrometer System
HLBC-15FT	FNAL	Heavy-liquid bubble chamber
HLBC-15FT-HYB	FNAL	Heavy-liquid bubble chamber
HLBC-180LIT	ITEP	Heavy-liquid bubble chamber
HLBC-1M	JINR	Heavy-liquid bubble chamber
HLBC-26LIT	JINR	Heavy-liquid bubble chamber
HLBC-2M	SERP	180-liter propane chamber
HLBC-2M	JINR	180-liter propane chamber built by Dubna
HLBC-30IN	FNAL	Heavy-liquid bubble chamber
HLBC-55CM	JINR	Propane or xenon chamber
HLBC-BEBC	CERN-PS	Heavy-liquid bubble chamber
HLBC-BEBC-HYB	CERN-PS	Heavy-liquid bubble chamber
HLBC-DIANA	ITEP	Heavy-liquid bubble chamber
HLBC-SKAT	SERP	4.5m × 1.6m warm chambers
HOMESTAKE	UNDERGROUND	Homestake gold mine nucleon decay detector, South Dakota
HPW	BNL	Harvard-Penn-Wisconsin neutrino detector at BNL
HPWF	FNAL	Harvard-Penn-Wisconsin-Fermilab calorimeter-magnetic spectrometer. NEULAND is reincarnated HPWF
HRS	SLAC-PEP	High resolution spectrometer
HRSF	LAMPF	High resolution spectrometer facility
HYPERON	SERP	Single arm magnetic spectrometer with big spark and proportional chambers and gas hodoscope counter
IKAR	SACL-SATURNE-II	Many electrodes ionization chamber
IMB	UNDERGROUND	Irvine-Michigan-Brookhaven nucleon decay detector, Ohio
IMB-III	UNDERGROUND	Upgraded IMB detector
IONIZATION	FNAL	Generic detector looking for ionization

DETECTOR	ACCELERATOR	EXPLANATION
ISTRA	SERP	
JADE	DESY-PETRA	
JANUS	LAMPF	Proton polarimeter
JETSET	CERN-LEAR	Compact general purpose detector
KAMIOKANDE	UNDERGROUND	Kamioka nucleon decay experiment detector, Japan
KAMIOKANDE-I	UNDERGROUND	Kamioka nucleon decay detector
KAMIOKANDE-II	UNDERGROUND	Kamioka nucleon decay detector, stage-2
KARMEN	DGSI-UNILAC	56-t liquid scintillator calorimeter
KASPIY	JINR	Channel and π-meson spectrometer with final particle energy up to 1 GeV
KGF	UNDERGROUND	
L3	CERN-LEP	LEP detector
LAB-E	FNAL	1100-ton target-calorimeter muon-spectrometer detector for neutrino physics
LAHRS	LAMPF	High resolution proton spectrometer
LAMBDAMETER	ITEP	3-arm spectrometer
LAND	DGSI	Large area neutron detector
LAS	LAMPF	
LASS	SLAC	Large aperture solenoid spectrometer
LENA	COSM	Water Cerenkov detector
LENA	DESY-DORIS	DESY-LENA Collaboration. Nonmagnetic sodium iodide and lead-glass detector at DESY-DORIS-II. Renamed previous DHHM-DESY-HEID detector used i n DESY-147 experiment
LEPTON-F	SERP	Spectrometer
LEPTON-G	SERP	Spectrometer
LISE	GANIL	Magnetic recoil spectrometer
MAC	SLAC-PEP	Magnetic calorimeter
MACRO	UNDERGROUND	Large area detector
MAGIC	CERN-SPS	MAGnetic Interferometer emulsion Chamber
MANY	many	Many different detectors
MARK-II	SLAC-PEP	
MARK-III	SLAC-SPEAR	Spectrometer system (not related to MARK-II)
MARK-J	DESY-PETRA	
MASPIC	JINR	Magnetic spectrometer
MATSUSHIRO	UNDERGROUND	Matsushiro underground muon laboratory, 220 meter of water equivalent underground in Nagano city, Japan
MD-1	NOVO-VEPP-4	Magnetic detector
MEPS	MIT-BLA	Medium energy pion spectrometer
MIS	SERP	Multiparticle spectrometer
MMS	FNAL	Multimuon spectrometer with hadron calorimeter
MPS	BNL	Multiparticle spectrometer
MPS-II	BNL	Updated BNL MPS
MRS	TRIUMF	Medium resolution spectrometer
MTS	ITEP	3-m magnetic spectrometer with spark chambers
ND	NOVO-VEPP-2M	Neutral detector at VEPP-2M
NESTOR	DGSI-UNILAC	Neutron magnetic storage ring
NEUTRONSPEC	SERP-UNK-F	Neutron spectrometer
NHS	ITEP	Spectrometer without magnetic field
NIM	OSAK-CYC	Musashi polarimeter
NUSEX	UNDERGROUND	NUSEX nucleon decay detector, Mont Blanc tunnel
OBELIX	CERN-LEAR	A large acceptance and high resolution detector based on the Open Axial Field Spectrometer to study of $\bar{p}$ and $\bar{n}$ annihilation
OLYA	NOVO-VEPP-4	
OMEGA	CERN-SPS	Spectrometer system
OMEGAPRIME	CERN-SPS	Spectrometer system
OMICRON	CERN-SC	
OPAL	CERN-LEP	LEP detector
ORANGE	DGSI-UNILAC	β spectrometer
OSPK	many	Optical spark chamber
OTHER	many	Rare nonelectronic detectors (e.g. moon, ocean floor)
PERKEO	DGSI-UNILAC	Solenoidal electron spectrometer
PHOENICS	BONN-ELSA	
PHOTON	many	Photon spectrometer
PHOTON-MASSER	JINR	Lead Glass Photon Spectrometer
PIOSPEC	LAMPF	Los Alamos π^0 spectrometer
PIK	KEK-PS	Medium resolution spectrometer for (π, K) nuclear spectroscopy
PION	COSM	Hadronic calorimeter with pion-proton identification
PLASTIC	many	Lexan or other such material in which tracks are frozen (except emulsion)
PLASTIC-BALL	LBL-BEVALAC	Plastic ball detector
PLUTO	DESY-PETRA	Superconducting solenoid spectrometer
PROZA	SERP	Polarized proton target with frozen polarization, gamma spectrometer, neutron detector
PROZA-M	SERP	Modified PROZA
QUARTZ	SERP	crystal-diffraction spectrometer
RISK	SERP	$4.7\times0.9\times0.8$ m^3 streamer chamber in magnetic field
RMS	RHEL	Magnetic spectrometer facility
RONS	REACTOR	Rovno neutrino spectrometer at Rovno AES
SAC-600	SACL-LINAC	High resolution electron scattering detector
SAC-900	SACLAY-LINAC	High resolution electron scattering detector
SAGE	UNDERGROUND	US-Russian gallium detector in the Baksan Neutrino Observatory
SAS	many	Single arm spectrometer
SCINT	GANIL	
SEMI	many	Semiconductor detector
SFINKS	SERP	Spectrometer

SFM

DETECTOR	ACCELERATOR	EXPLANATION
SFM	CERN-PS	Split field magnet
SFSU-MILLIKAN	SFSU	San Francisco State University automated Millikan drop apparatus provides a well established method for testing bulk Hg for free quarks
SHIP	KEK-TRISTAN	Detector for search for highly ionizing particles
SIGMA	SERP	CERN-IHEP magnetic spectrometer at Serpukhov
SINDRUM	PSI	Large-solid-angle magnetic detector
SINDRUM-I	PSI	Upgraded large-solid-angle detector
SINDRUM-II	PSI	Upgraded large-angle solenoid detector
SKM-200	JINR	2-m neon filled streamer chamber
SLACKLSF	SLAC	SLAC K_L spectrometer facility
SLD	SLAC-SLC	SLac Detector
SMAG	SLAC-SPEAR	Magnetic detector
SMAG-LGW	SLAC-SPEAR	SLAC-LBL SMAG with lead glass wall
SMM	COSM	SMM — Solar Maximum Mission satellite facility to investigate solar and cosmic particle fluxes (D.J. Forrest *et al.* Solar Phys. 65(1980) 15,G.H. Share *et al.*, Adv. Space Res. 6, 15 (1986)
SMM-GRS	COSM	Gamma ray spectrometer of the solar maximum mission satellite facility
SOKOL	COSM	
SOUDAN-I	UNDERGROUND	Upgraded nucleon decay detector at Minnesota
SOUDAN-II	UNDERGROUND	Detector with drift calorimeter modules, 1030 tons, at Minnesota
SPASE	COSM	South Pole air shower experiment
SPEC	many	General spectrometer system
SPEG	GANIL	The energy loss magnetic spectrometer
SPES-0	SACL-SATURNE-II	Modular lead-glass Cerenkov detector
SPES-II	CERN-LEAR	High resolution spectrometer
SPES-III	SACL-SATURNE-II	Saclay Saturne spectrometer
SPES-IV	SACL-SATURNE-II	High resolution spectrometer
SPHERE	JINR	4-pi detector
SPIN	UNDERGROUND	Magnetic superconducting spectrometer with horizontal magnetic field
SPIN	ITEP	
SSF	SLAC	SLAC spectrometer facility — 1.6, 8, and/or 20 GeV spectrometers
STAC	CERN-SPS	Calorimeter at SPS
STRC	many	Streamer chamber
SUPERBENKEI	KEK-PS	Superconducting spectrometer system
SUSI	PSI	Pion spectrometer
SYSTEMA-I	COSM	Scintillator-ionization spectrometer of two electrons with multidimensional analysis
SYSTEMA-II	COSM	Upgraded SYSTEMA-I spectrometer
TAGX	TOKY	Large-aperture spectrometer system
TAPS	DGSI	Two arm photon spectrometer
TASSO	DESY-PETRA	
TELAS	KEK-PS	KEK target-embodied large-aperture spectrometer
THERMAL	TRIUMF	General detector based on measuring of temerature increase after particle passing
TISS-3	ITEP	Spark Chamber of 1.5 m lenght
TOKIWA	KEK-PS	Spectrometer
TOPAZ	KEK-TRISTAN	Solenoidal spectrometer with time projection chamber
TORI	DGSI-UNILAC	Magnetic β-spectrometer
TPC	SLAC-PEP	Time projection chamber
TPS	FNAL	Tagged photon spectrometer
TRAD	many	A general transition radiation detector
TRIUMF-TPC	TRIUMF	Time projection chamber
UA1	CERN-PBAR/P	
UA2	CERN-PBAR/P	
VENUS	KEK-TRISTAN	Versatile, Economical and Novel Universal Spectrometer
VES	SERP	Cerenkov counter combined with gamma spectrometer
WAS	many	Wide angle spectrometer
WIND	REACTOR	Water Integral Neutrino Detector
WIRE	many	Wire chambers (proportional wire chambers, drift chambers). Includes all nonoptical spark chambers
ZEUS	DESY-HERA	

We give here the symbols used in the Reaction/Momentum/Data Descriptor Index to indicate what quantities are measured in an experiment.

A-DEP

DATA DESCRIPTOR	EXPLANATION
A-DEP	Atomic number dependence
AMP	Amplitudes not decomposed into states of definite angular momentum: Re/Im ratio, helicity amplitude, *etc.*
ANG	Angular distributions between particles in the final state. Includes also angular distributions involving decay products of particles listed in the reaction, even though those decay products are not themselves explicitly listed. Includes angles used to study the decay of a system in the final state, even though the coordinate system axes may be defined with respect to the incident particles (*e.g.*, Jackson angles, *etc.*). Also the equivalent, expressed as moments, *etc.*
ANGP	Production angular distributions of one or more of the outgoing particles relative to one of the incident particles. Also the equivalent, expressed as moments or polynomial expansion coefficients. Also invariant cross sections as a function of production angle or t. By convention, does not include rapidity or its approximation (see P)
ASYM	Asymmetry in scattering off a polarized target and/or with a polarized beam (with exception of special case noted under POL)
COL	Collective variables (sphericity, thrust, *etc.*)
CONST	Physical constant (Fermi constant, Weinberg angle, *etc.*). Used to express that model parameters are extracted from data
COR	General correlator (on momentum, rapidity, *etc.*)
CS	Cross section, cross-section ratio, or cross-section upper limit. Can also be listed for very rare reactions whose existence is being established, even though the number of events has not been converted to a cross section. Does not include parametrizations of the cross section, *e.g.* as a function of energy
DME	Density matrix elements, including joint density matrix elements
ET	Transverse energy
FLUX	Cosmic-ray particle flux
MANY	For rare cases when there are many types of data measured
MASS	Mass spectrum, or invariant cross section as a function of mass
MULT	Multiplicity distribution, its average, ratio or moments
P	Any function of outgoing momentum or energy not included in any others. Includes rapidity and Feynman scaling variables
POL	Final state spin polarization measurement, including Wolfenstein spin rotation parameters, and measurements of the asymmetry off a polarized target when it is equal to the final state polarization
PT	Transverse momentum spectrum or invariant cross section as a function of above. Does not include a momentum transfer spectrum (see ANGP). Includes transverse mass, unless the particle mass is also variable
PWA	Partial wave amplitudes, including formation partial waves and production partial waves. Any attempt to measure amplitudes of definite angular momentum. Includes scattering length and effective range
QNC	Test of quantum-number conservation

In this section, we present (1) a few figures illustrating the development of experimental particle physics as a whole and a historical perspective of accelerator usage, and (2) a chronological bibliography of discoveries of new phenomena in particle physics.

Figure 1 shows the total publication rate in worldwide particle physics from the very beginning, as reflected in the *DOCUMENTS* database. Figure 2 shows a break-down of the total publication rate in three branches: accelerator particle physics, cosmic-ray particle physics, and nonaccelerator particle physics.

The bibliography of discoveries in particle physics comes mainly from the *DOCUMENTS* database, in which "discovery papers" are marked as such. In addition, early data related to the birth of particle physics were compiled through citations and using historical works and recollections,[1-5] anthologies,[6,7] and chronologies.[8]

We have tried in this list to give credit to all relevant stages in the sequence *prediction, first evidence, confirmation* for a discovery. This list is a first try and will no doubt be found to have omissions. We apologize in advance if we have omitted any major discoveries. Please send us a note pointing out our errors.

REFERENCES

1. E. Rutherford, "Forty years of Physics. I. The history of radioactivity. II. The development of the theory of atomic structure," in *Background to Modern Science*, Cambridge, 1940, p. 47-74.
2. V.F. Weisskopf, *Physics in the Twentieth Century: Selected Essays*, The MIT Press, Cambridge, Massachusetts and London, England, 1972.
3. G.L. Trigg, *Landmark Experiments in Twentieth Century Physics*, Crane, Russak & Company, Inc., New York, 1975.
4. S. Weinberg, *The Discovery of Subatomic Particles*, Scientific American Library, W.H.Freeman & Company, New York - San Francisco, 1983.
5. A. Pais, *Inward Bound. On Matter and Forces in the Physical World*, Clarendon Press, Oxford, New York, 1986.
6. *Great Experiments in Physics*, Edited by M.H. Shamos, Henry Holt and Company, New York, 1960.
7. R.N. Cahn and G. Goldhaber, *The Experimental Foundations of Particle Physics*, Cambridge University Press, 1989.
8. J. Six and X. Artru, "An Essay of Chronology of Particle Physics Until 1965," Journal de Physique T. 43, p. C8-465, 1982.

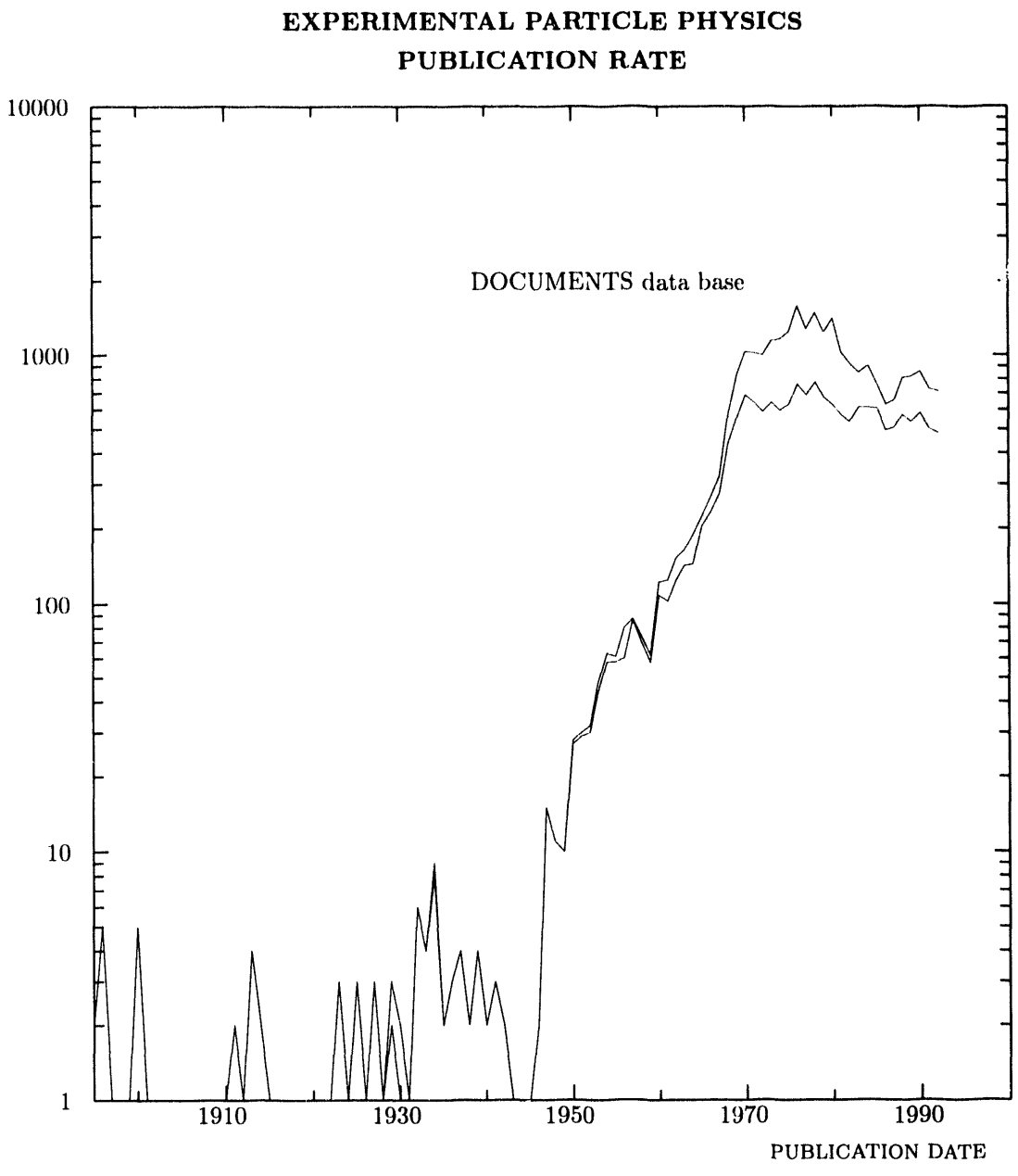

Fig. 1. The number of experimental papers produced each year. The lower curve gives the number of journal papers, and thus doesn't include unpublished preprints.

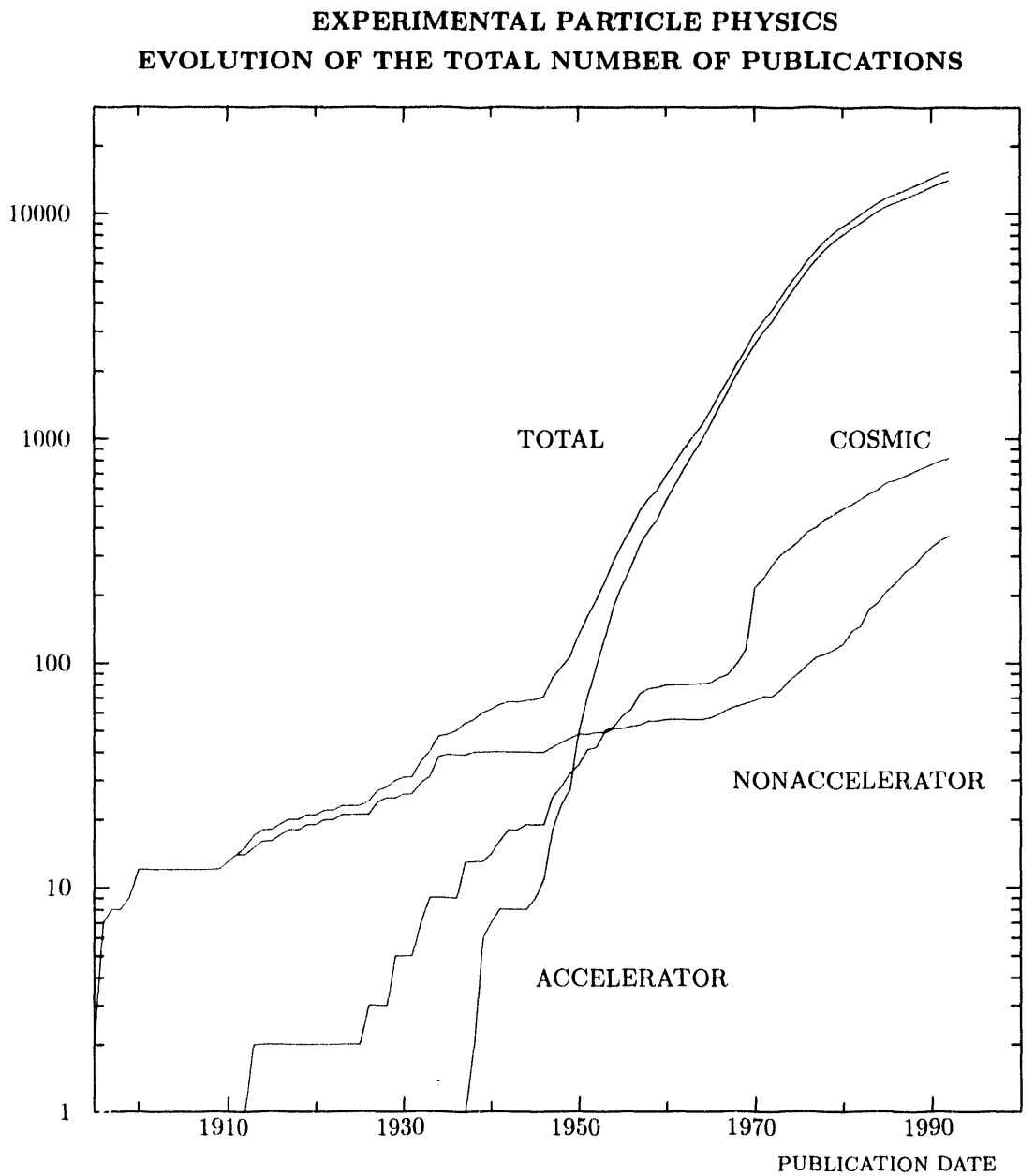

Fig. 2. The cumulative number of publications, total and in three branches: accelerator particle physics, cosmic-ray particle physics and nonaccelerator particle physics.

1895 Perrin	Compt. Ren. 121:1130, 1895; **Nouvelles Proprietes des Rayons Cathodique** — Cathode rays are the flow of negatively charged particles
1895 Roentgen	Sitzber. Physik. Med. Ges. 137:?, 1895; **Uber eine neue Art von Strahlen. Vorlaufige Mitteilung** — First evidence of X rays
1896 Becquerel	Compt. Ren. 122:501, 1896; **Sur les Radiations Invisibles Emises par les Corps Phosphorescents** — First evidence of radioactivity
1896 Becquerel	Compt. Ren. 122:559, 1896; **Sur Quelques Proprietes Nouvelles des Radiations Invisibles Emises par Divers Corps Phosphorescents** — Confirmation of radioactivity
1896 Becquerel	Compt. Ren. 122:762, 1896; **Sur les Proprietes Differentes des Radiations Invisibles Emises par les Sels d'Uranium, et du Rayonnement de la Paroi Anticathodique d'un Tube de Crookes** — Confirmation of radioactivity, uranium radiation is not identical to Roentgen X rays
1896 Becquerel	Compt. Ren. 122:1086, 1896; **Emission de Radiations Nouvelles par l'Uranium Metallique** — Firm establishment of radioactivity
1897 Thomson	Phil. Mag. 44:293, 1897; Nature 55:453, 1897; **Cathode Rays** — First evidence of the electron as an elementary particle
1899 Rutherford	Phil. Mag. 47:109, 1899; **Uranium Radiation and the Electrical Conduction Produced by it** — Evidence of the α and β components of uranium radiation
1900 Villard	Compt. Ren. 130:1010, 1900; **Sur la Reflexion et la Refraction des Rayons Cathodiques et des Rayons Deviables du Radium** — γ radioactivity
1900 Becquerel	Compt. Ren. 130:1154, 1900; **Sur la Transparence de l'Aluminium pour la Rayonnement du Radium** — Confirmation of γ radioactivity
1900 Villard	Compt. Ren. 130:1178, 1900; **Sur le Rayonnement du Radium** — Confirmation of γ radioactivity
1900 Planck	Verhandl. Dtsch. phys. Ges. 2:202, 1900; **Uber eine Verbesserung der Wienschen Spectralgleichung** — New formula for the energy spectrum of black-body radiation
1900 Planck	Verhandl. Dtsch. phys. Ges. 2:237, 1900; **Zur Theorie des Gesetzes der Energieverteilung im Normalspectrum** — Quantum hypothesis and explanation of black-body radiation spectrum
1901 Planck	Annalen der Physik. Leipzig 4:553, 1901; **Uber des Gesetz der Energieverteilung in Normalspectrum** — Quantum hypothesis and explanation of black-body radiation spectrum
1905 Einstein	Annalen der Physik. Leipzig 17:132, 1905; **Über einen die Erzeugung und Verwandlung des Lichtes betreffenden heuristischen Gesichtspunkt** — Explanation of the photoelectric effect using quantum hypothesis of Planck. Light is a flow of corpuscular objects with definite energies — Planck's quanta of energy
1906 Einstein	Annalen der Physik. Leipzig 20:199, 1906; **Zur Theorie der Lichterzeugung und Lichtabsorption** — Corpuscular-wave dualism for photons. Explanation of the photoelectric effect using quantum hypothesis of Planck
1911 Millikan	Phys. Rev. 32:349, 1911; **The Isolation of an Ion, a Precision Measurement of its Charge, and the Correction of Stokes's Law** — First conclusive measurement of electron charge
1911 Rutherford	Phil. Mag. 21:669, 1911; **The Scattering of α- and β- Particles by Matter and the Structure of the Atom** — First introduction of atomic nucleus notion
1912 Hess	Phys.Zeitschr. 13:1084, 1912; **Uber Beobachtungen der durchdringenden Strahlung bei sieben Freiballonfahrten** — First conclusive evidence of cosmic rays
1913 Hess	Phys.Zeitschr. 14:610, 1913; **Uber den Ursprung der durchdringenden Strahlung** — Confirmation of cosmic rays
1913 Millikan	Phys. Rev. 2:109, 1913; **On the Elementary Electrical Charge and the Avogadro Constant** — First precise measurement of electron charge and Avogadro constant
1913 Bohr	Phil. Mag. 26:1, 1913; **On the Constitution of Atoms and Molecules. I.** — Quantum theory of atomic spectra based on Rutherford model of atomic structure
1913 Bohr	Phil. Mag. 26:476, 1913; **On the Constitution of Atoms and Molecules. II.** — Quantum theory of atomic spectra based on Rutherford model of atomic structure — Evidence that radioactivity is a nuclear property
1913 Rutherford	Nature 92:423, 1913; Phil. Mag. 27:488, 1914; **The Structure of the Atom** — Confirmation of the existence of atomic nuclei — First indication of the existence of the proton
1914 Chadwick	Verhandl. Dtsch. phys. Ges. 16:383, 1914; **Intensitatsverteilung im magnetischen Spectrum der beta-Strahlen von Radium $B+C$** — First observation that β spectrum is continuous
1916 Millikan	Phys. Rev. 7:18, 1916; **Einstein's Photoelectric Equation and Contact Electromotive Force** — First conclusive measurement of the energy quantization in photoelectric effect

PROTOTYPE

We welcome your comments.

1919 Rutherford	Phil. Mag. 37:581, 1919; **Collision of α – Particles with Light Atoms IV. An Anomalous Effect in Nitrogen** — Evidence of the proton — Evidence of the proton as a constituent of the nucleus
1921 Chadwick	Phil. Mag. 42:923, 1921; **Collisions of α Particles with Hydrogen Nuclei** — First evidence of the strong interaction
1923 Compton	Phys. Rev. 22:409, 1923; **The Spectrum of Scattered X – Rays** — Direct experimental confirmation that the photon is an elementary particle, Compton effect
1923 Debroglie	Compt. Ren. 177:507, 1923; **Ondes et Quanta** — Suggestion of the corpuscular-wave dualism for electrons
1923 Debroglie	Compt. Ren. 177:548, 1923; **Quanta de Lumiere, Diffraction et Interferences** — Suggestion of the corpuscular-wave dualism for electrons. Prediction of diffraction phenomena for electrons
1925 Pauli	Z. Phys. 31:373, 1925; **Überden Einfluss der Geschwindigkeitsabhängigkeit der Electronenmasse auf den Zeemaneffekt** — Exclusion principle, introduction of an additional two-valued degree of freedom for the atomic electron
1925 Pauli	Z. Phys. 31:765, 1925; **Über den Zusamenhang des Abschlusses der Electronengruppen in Atom mit der Komplexstruktur der Spektren** — Exclusion principle, introduction of an additional two-valued degree of freedom for the atomic electron
1925 Uhlenbeck	Naturw. 13:953, 1925; **Ersetzung der Hypothese vom unmechanischen Zwang durch eine Forderung bezuglich des inneren Verhaltens jedes einzelnen Elektrons** — Electron spin hypothesis, elementary spin notion
1926 Hess	Phys.Zeitschr. 27:159, 1926; **Uber den Ursprung der Hohenstrahlung** — Firm establishment of cosmic rays
1927 Davisson	Nature 119:558, 1927; **The Scattering of Electrons by a Single Crystal of Nickel** — Experimental evidence that the electron moves as a group of de Broglie waves
1927 Ellis	Nature 119:563, 1927; **The Continuous Spectrum of β–Rays** — Confirmation that β spectrum is continuous
1927 Ellis	Proc. Roy. Soc. A117:109, 1927; **The Average Energy of Disintegration of Radium E** — Confirmation that β spectrum is continuous
1928 Thomson	Proc. Roy. Soc. A117:600, 1928; **Experiments on Diffraction of Cathode Rays** — Experimental evidence that the electron moves as a group of de Broglie waves
1929 Skobelzyn	Z. Phys. 54:686, 1929; **Uber eine neue Art sehr schneller β–Strahlen** — Observation of energetic cosmic electrons — First observation of shower produced by cosmic ray particle
1929 Bothe	Z. Phys. 56:751, 1929; **Das Wessen der Hohenstrahlung** — Cosmic rays at sea-level consist mainly of ionizing particles
1930 Meitner	Z. Phys. 60:143, 1930; **Uber eine absolute Bestimmung der Energie der primaren β–Strahlen von Radium *E*** — Firm establishment that β spectrum is continuous
1930 Pauli	Letter; **Open Letter to Radioactive Persons** — Proposal for the neutral fermion (neutron) as a constituent of a nucleus that must be emitted in β decay (neutrino)
1932 Anderson	Science 76:238, 1932; **The Apparent Existence of Easily Deflectable Positives** — First evidence of the positron
1932 Chadwick	Nature 129:312, 1932; **Possible Existence of a Neutron** — First evidence of the neutron
1932 Chadwick	Proc. Roy. Soc. A136:692, 1932; **The Existence of a Neutron** — Confirmation of the existence of the neutron
1932 Urey	Phys. Rev. 39:164, 1932; **A Hydrogen Isotop of Mass 2** — First evidence of the deuteron
1932 Heisenberg	Z. Phys. 77:1, 1932; **On the Structure of Atomic Nuclei. I.** — Suggestion that atomic nuclei are composed of protons and neutrons
1932 Blackett	Nature 130:363, 1932; **Photography of Penetrating Corpuscular Radiation** — Confirmation of fast penetrating charged particles in cosmic rays
1933 Anderson	Phys. Rev. 43:491, 1933; **The Positive Electron** — Confirmation of the existence of positron
1933 Blackett	Proc. Roy. Soc. A139:699, 1933; **Some Photographs of the Tracks of Penetrating Radiation** — Confirmation of e^+ and showers — First evidence of e^+ e^- pair production
1933 Frisch	Z. Phys. 85:4, 1933; **Uber die magnetische Ablenkung von Wasserstoffmolekulen und das magnetische moment des Protons. I.** — First measurement of the proton magnetic moment

PROTOTYPE

We welcome your comments.

See the legend on page 453.

1933 Esterman	Z. Phys. 85:17, 1933; **Uber die magnetische Ablenkung von Wasserstoffmolekulen und das magnetische moment des Protons. II** — First measurement of the proton magnetic moment
1934 Chadwick	Nature 134:237, 1934; **A "Nuclear Photoefect": Disintegration of the Diplon by γ-rays** — First evidence of deuteron photodisintegration — First precise measurements of the neutron mass
1934 Pauli	PARIS-34 p. 24; **Structure et proprietes des Noyaux Atomique** — Explanation of the continuity of the electron spectrum in β decays. Proposal for neutrino
1934 Fermi	Z. Phys. 88:161, 1934; **Versuch einer Theorie der β–Strahlen.I** — Hamiltonian for β decay, first estimation of neutrino mass
1934 Cerenkov	Doklady Akad. Nauk SSSR 2:451, 1934; **Visible Radiation of the Pure Liquids Irradiated by γ-Rays** — First evidence of Cerenkov radiation
1934 Murphy	Phys. Rev. 45:761, 1934; **The Nuclear Spin of the Deuterium** — First evidence of deuteron spin = 1
1934 Esterman	Phys. Rev. 45:761, 1934; **Magnetic Moment of the Deuton** — First measurements of the magnetic moments of the deuteron and neutron
1935 Yukawa	Proc.Phys.Math.Soc.Jap. 17:48, 1935; **On the Interaction of Elementary Particles** — First field theory of nuclear forces. Prediction of the heavy quanta as mediator of strong interactions, the pion particles
1936 Breit	Phys. Rev. 50:825, 1936; **Theory of Scattering of Protons by Protons** — Hypothesis of charge independence of nuclear forces
1937 Anderson	Phys. Rev. 51:884, 1937; **Note on the Nature of Cosmic-Ray Particles** — First evidence of the muon
1937 Street	Phys. Rev. 51:1005, 1937; **New Evidence for the Existence of a Particle of Mass Intermediate Between the Proton and Electron** — Confirmation of the existence of the muon
1937 Street	Phys. Rev. 52:1003, 1937; **New Evidence for the Existence of a Particle of Mass Intermediate Between the Proton and Electron** — Confirmation of muon existence
1937 Nishina	Phys. Rev. 52:1198, 1937; **On the Nature of Cosmic-Ray Particles** — Confirmation of the existence of the muon
1938 Alvarez	Phys. Rev. 54:486, 1938; **The Capture of Orbital Electrons by Nuclei** — First evidence of capture of the atomic electr[illegible] interaction, K-capture
1940 Williams	Nature 145:102, 1940; **Evidence for Transformation of Mesons i[illegible]** — First observation of muon decay
1940 Alvarez	Phys. Rev. 57:111, 1940; **A Quantitative Determination of the Neutro[illegible]ment in Absolute Nuclear Magnetons** — First direct measurement of the neutron magnetic moment
1941 Rasetti	Phys. Rev. 59:613, 1941; **Mean Life of Slow Mesotrons** — First measurement of the muon lifetime, preliminary result
1941 Rasetti	Phys. Rev. 60:198, 1941; **Disintegration of Slow Mesotrons** — First measurement of the muon lifetime
1942 Rossi	Phys. Rev. 62:417, 1942; **Experimental Determination of the Disintegration Curve of Mesotrons** — Evidence of the muon exponential decay rate
1942 Nereson	Phys. Rev. 64:199, 1942; **Further Measurements on Disintegration Curve of Mesotrons** — Confirmation of muon exponential decay rate
1944 Leprince-Ringuet	Compt. Ren. 219:618, 1944; **Existence probable d'une particule de masse 990m_e dans le rayonnement cosmique** — First evidence of the K^+
1947 Conversi	Phys. Rev. 71:209, 1947; **On the Disintegration of Negative Mesons** — Evidence that the muon is not a strong interaction mediator
1947 Perkins	Nature 159:126, 1947; **Nuclear Disintegration by Meson Capture** — First indication of the existence of the π^-
1947 Occhialini	Nature 159:186, 1947; **Nuclear Disintegrations Produced by Slow Charged Particles of Small Mass** — Confirmation of π^- existence
1947 Lamb	Phys. Rev. 72:241, 1947; **Fine Structure of the Hydrogen Atom by a Microwave Method** — First measurements of the fine structure of the hydrogen atom, Lamb shift
1947 Kusch	Phys. Rev. 72:1256, 1947; **Precision Measurement of the Ratio of the Atomic "g Values" in the $^2P_{3/2}$ and $^2P_{1/2}$ States of Gallium** — First measurement of $g - 2$ for electron, preliminary result

PROTOTYPE

We welcome your comments.

1947 Lattes	Nature 159:694, 1947; **Processes Involving Charged Mesons** — First indication of the existence of the π^- decay in μ^-
1947 Lattes	Nature 160:453, 1947; **Observation on the Tracks of Slow Mesons in Photographic Emulsions** — Confirmation of π^- existence — First evidence of pion decay $\pi^\pm \to \mu^\pm$ neutral
1947 Rochester	Nature 160:855, 1947; **Evidence for the Existence of New Unstable Elementary Particles** — First evidence of V-events — Confirmation of the existence of the charged unstable particle with mass between muon and proton
1948 Hincks	Phys. Rev. 73:257, 1948; **Search for γ-Radiation in 2.2-Microsecond Meson Decay Process** — Nonexistence of the $\mu^- \to e^- \gamma$ decay
1948 Folley	Phys. Rev. 73:412, 1948; **On the Intrinsic Moment of the Electron** — First measurement of $g - 2$ for electron
1948 Sard	Phys. Rev. 73:1251, 1948; **Test of the Hypothesis that the Sea-Level Cosmic-Ray Meson Disintegrates into a Photon and an Electron** — Nonexistence of the $\mu^- \to e^- \gamma$ decay
1948 Snell	Phys. Rev. 74:1217, 1948; **On the Decay of the Neutron** — First evidence of neutron β decay
1948 Piccioni	Phys. Rev. 74:1754, 1948; **Search for Photons from Meson-Capture** — Confirmation of the nonexistence of the $\mu^- \to e^- \gamma$ decay
1949 Brown	Nature 163:82, 1949; **Observations with Electron-Sensitive Plates Exposed to Cosmic Radiation** — First evidence of the three-prong kaon decay
1949 Hincks	Phys. Rev. 75:698, 1949; **The Penetration of μ-Meson Decay Electrons and Their Bremsstrahlung Radiation** — Evidence of the continuous energy distribution of e^- in the decay $\mu^- \to e^-$ X
1949 Leighton	Phys. Rev. 75:1432, 1949; Phys. Rev. 76:159, 1949; **The Energy Spectrum of the Decay Particles and the Mass and Spin of the Mesotron** — Confirmation of the continuous energy distribution of e^- in the decay $\mu^- \to e^-$ X — Muon spin = 1/2
1950 Bjorklund	Phys. Rev. 77:213, 1950; **High Energy Photons from Proton-Nucleon Collisions** — First evidence of the existence of the π^0
1950 Robson	Phys. Rev. 77:747(A), 1950; **Radioactive Decay of the Neutron** — First observation of neutron β decay
1950 Seriff	Phys. Rev. 78:290, 1950; **Cloud-Chamber Observations of the New Unstable Cosmic-Ray Particles** — First evidence of V-events
1950 Snell	Phys. Rev. 78:310, 1950; **Radioactive Decay of the Neutron** — Confirmation of the neutron β decay
1950 Robson	Phys. Rev. 78:311, 1950; **Radioactive Decay of the Neutron** — Confirmation of neutron β decay
1950 Steinberger	Phys. Rev. 78:802, 1950; **Evidence for the Production of Neutral Mesons by Photons** — First evidence of the production of π^0 — First evidence of the $\pi^0 \to \gamma\,\gamma$ decay
1950 Carlson	Phil. Mag. 41:701, 1950; **Nuclear Transmutations Produced by Cosmic-Ray Particles of Great Energy. — Part V. The Neutral Meson** — Confirmation of the existence of the π^0, first estimation of the π^0 lifetime
1950 Lord	Phys. Rev. 80:970, 1950; **Evidence for the Multiple Production of Mesons in a Single Nucleon-Nucleon Collision** — First evidence of multiple hadron production in nucleon-nucleon interactions — First evidence of the forward jet of secondary particles in hadronic interactions
1951 Panofsky	Phys. Rev. 81:565, 1951; **The Gamma-Ray Spectrum Resulting from Capture of Negative π^- Mesons in Hydrogen and Deuterium** — First direct observation of the π^0 — $\pi^0 \to \gamma\,\gamma$ decay — Direct determination of π^- parity
1951 O'Ceallaigh	Phil. Mag. 42:1032, 1951; **Masses and Modes of Decay of Heavy Mesons – Part I.** — First evidence of the $K^+ \to \mu^+$ neutral (neutrals) decay
1951 Fretter	Phys. Rev. 82:294, 1951; **Some Observations on the New Unstable Cosmic-Ray Particles** — Confirmation of the existence of heavy unstable particles
1951 Bridge	Phys. Rev. 82:445, 1951; **A Cloud-Chamber Study of The New Unstable Particles** — Confirmation of the existence of heavy unstable particles
1951 Durbin	Phys. Rev. 83:646, 1951; **The Spin of the Pion via the Reaction π^+ deuteron $\to p\,p$** — Determination of π^+ spin

PROTOTYPE

We welcome your comments.

See the legend on page 453.

1951 Clark	Phys. Rev. 83:649, 1951; **Cross Section for the Reaction π^+ deuteron $\rightarrow p\,p$ and the Spin of the π^+ Meson** — First evidence of π^+'s zero spin
1951 Leighton	Phys. Rev. 83:843, 1951; **On the Decay of Neutral V-Particles** — Evidence of the two types of the neutral V-particles, baryonic and mesonic
1951 Armenteros	Nature 167:501, 1951; **Decay of V Particles** — Evidence of the possible existence of the Λ hyperon — First evidence of the K^0 meson
1951 Armenteros	Phil. Mag. 42:1113, 1951; **The Properties of Neutral V–Particles** — Evidence of the possible existence of the Λ hyperon — First evidence of the K^0 meson
1952 Annis	Nuovo Cim. 9:624, 1952; **S-Particles** — Confirmation of the existence of heavy charged unstable particles
1952 Heisenberg	Z. Phys. 133:65, 1952; **Mesonenerzeugung als Stosswellenproblem** — Prediction of rising total hadronic cross sections
1952 Anderson	Phys. Rev. 85:934, 1952; **Total Cross Sections of Negative Pions in Hydrogen** — First indication of the $\Delta(1232\,P_{33})$ resonance
1952 Anderson	Phys. Rev. 85:936, 1952; **Total Cross Sections of Positive Pions in Hydrogen** — Further evidence of the $\Delta(1232\,P_{33})^{++}$ resonance
1953 Bonetti	Nuovo Cim. 10:345, 1953; **Observation of the Decay at Rest of a Heavy Particle** — First evidence of the charged Σ hyperon
1953 Bonetti	Nuovo Cim. 10:1736, 1953; **On the Existence of Unstable Charged Particles of Hyperonic Mass** — Confirmation of the existence of the Σ^+, Σ^- hyperons
1953 York	Phys. Rev. 90:167, 1953; **Direct Experimental Evidence for the Existence of a Heavy Positive V Particle** — Direct experimental evidence of the Σ^+
1953 Thompson	Phys. Rev. 90:329, 1953; **The Disintegration of V^0 Particles** — First evidence of the $K \rightarrow \pi\,\pi$ decay
1953 Thompson	Phys. Rev. 90:1122, 1953; **An Unusual Example of V^0 Decay** — First measurement of the K^0 mass
1953 Fowler	Phys. Rev. 91:1287, 1953; **Production of V_1^0 Particles by Negative Pions in Hydrogen** — Confirmation of the existence of the Λ hyperon — First evidence of the associative production of heavy unstable particles
1953 Reines	Phys. Rev. 92:830, 1953; **Detection of the Free Neutrino** — First evidence of the $\overline{\nu}_e$
1953 Gellmann	Phys. Rev. 92:833, 1953; **Isotopic Spin and New Unstable Particles** — Extension of isotopic multiplet structure for new unstable (strange) particles. Explanation of pairwise production of strange particles
1953 Anderson	Phys. Rev. 92:1089, 1953; **Cascade Decay of V Particles. I.** — First evidence of the Ξ^-
1953 Cowan	Phys. Rev. 92:1089, 1953; **Cascade Decay of V Particles. II.** — First evidence of the Ξ^-
1953 Lindenbaum	Phys. Rev. 92:1578, 1953; **The Interaction Cross Section of Hydrogen and Heavier Elements for 450-MeV Negative and 340-MeV Positive Pions** — Confirmation of the existence of the $\Delta(1232\,P_{33})$ resonance
1954 Gregory	Nuovo Cim. 11:292, 1954; **Etude des Mesons K Charges, au Moyen de Deux Chambres de Wilson Superposees** — Confirmation of the decay $K^\pm \rightarrow \mu^\pm$ neutral
1954 Fowler	Phys. Rev. 93:861, 1954; **Production of Heavy Unstable Particles by Negative Pions** — Confirmation of the existence of the Σ^- — Evidence of the associative production of strange particles
1954 Cowan	Phys. Rev. 94:161, 1954; **A V-Decay Event with a Heavy Negative Secondary, and Identification of the Secondary V-Decay Event in a Cascade** — Confirmation of Ξ^- cascade decay — First indication of the $\overline{\Lambda}$
1954 Dalitz	Phys. Rev. 94:1046, 1954; **Decay of τ Mesons of Known Charge** — First indication of the K meson's zero spin
1955 Walker	Phys. Rev. 98:1407, 1955; **$\Lambda - \Theta$ Production in $\pi^-\,p$ Collisions at 1 BeV** — Confirmation of the associative production of strange particles — First indication of the existence of the Σ^0 hyperon

PROTOTYPE

We welcome your comments.

1955 Chupp	Phys. Rev. 99:1042, 1955; **K Meson Mass from K-Hydrogen Scattering Event** — First precise measurement of the K^+ mass
1955 Iloff	Phys. Rev. 99:1617, 1955; **Mean Lifetime of Positive K Mesons** — K^+ lifetime measurements from decays in flight
1955 Birge	Phys. Rev. 100:430, 1955; **Mass Values of the K Mesons** — Confirmation of the mass measurements of charged kaons — Establishment of the equality of the masses of K^+, Θ, and τ mesons
1955 Chamberlain	Phys. Rev. 100:947, 1955; **Observation of Antiprotons** — Experimental evidence of the antiproton
1955 Sorrels	Phys. Rev. 100:1457, 1955; **Associated Production of Ξ^- with Two Θ^0 Particles** — Confirmation of the associative production of strange particles
1955 Chinowsky	Phys. Rev. 100:1476, 1955; **Reaction π^- deuteron *to* $2n$ π^0: Parity of the Neutral Meson** — First evidence of the π^0's odd parity
1955 Pais	Phys. Rev. 100:1487, 1955; **Note on the Decay and Absorption of the Θ^0** — Proposal for the $K_L \rightarrow K_S$ regeneration experiment
1955 Bridge	Nuovo Cim. 1:874, 1955; **Evidence for Heavy Mesons with the Decay Processes $K_{\pi 2} \rightarrow \pi^\pm \pi^0$ and $K_{\mu 2} \rightarrow \mu^\pm \nu$ from Observations with a Multiplate Cloud Chamber** — Confirmation of the existence of the K^+ and K^-
1955 Armenteros	Nuovo Cim. 1:915, 1955; **Further Discussion of the K_μ Decay Mode** — Confirmation of the existence of the K^+
1955 Alvarez	Nuovo Cim. 2:344, 1955; **The Lifetime of the τ-Meson** — First measurement of the K^+ lifetime — First evidence of the equality of the lifetimes of Θ and τ mesons
1955 Davies	Nuovo Cim. 2:1063, 1955; **On the Masses and Modes of Decay of Heavy Mesons Produced by Cosmic Radiation** G-Stack Collaboration — Measurements of the decay branchings for charged kaons
1956 Fung	Phys. Rev. 101:493, 1956; **K^+ - τ^+ Mass Difference** — Evidence of equality of the masses of K^+ and τ^+ mesons
1956 Fitch	Phys. Rev. 101:496, 1956; **Mean Life of K^+ Mesons** — Confirmation of the equality of the lifetimes of K^+ and Θ ($K^+ \rightarrow \pi^+ \pi^0$) mesons
1956 Brabant	Phys. Rev. 101:498, 1956; **Terminal Observations on "Antiprotons"** — Confirmation of the existence of the antiproton
1956 Alvarez	Phys. Rev. 101:503, 1956; **Lifetime of K Mesons** — Firm establishment of K^+ lifetime value — Establishment of equality of the lifetimes of K^+ ($K^+ \rightarrow \mu^+$ neutral), Θ ($K^+ \rightarrow \pi^+ \pi^0$), and τ^+ ($K^+ \rightarrow \pi^+ \pi^+ \pi^-$) mesons
1956 Hill	Phys. Rev. 101:907, 1956; **Nuclear Emulsion Observation of Annihilation of an Antiproton** — First indication of annihilation of the antiproton in matter
1956 Chamberlain	Phys. Rev. 101:909, 1956; **Antiproton Star Observed in Emulsion** — First evidence of the annihilation of antiproton in emulsion
1956 Lee	Phys. Rev. 102:290, 1956; **Mass Degeneracy of the Heavy Mesons** — Introduction of the CP conservation law in weak interactions and CP parity
1956 Mcallister	Phys. Rev. 102:851, 1956; **Elastic Scattering of 188-MeV Electrons from Proton and the Alpha Particle** — First measurement of the proton electromagnetic radius
1956 Chamberlain	Phys. Rev. 102:921, 1956; **Example of an Antiproton-Nucleon Annihilation** — Confirmation of antiproton-nucleon annihilation
1956 Cowan	Science 124:103, 1956; **Detection of the Free Neutrino: a Confirmation** — Confirmation of the existence of the free $\overline{\nu}_e$
1956 Reines	Nature 178:446, 1956; **The Neutrino** — First detection of the free neutrino
1956 Lande	Phys. Rev. 103:1901, 1956; **Observation of Long-Lived V Particles** — First evidence of the K_L
1956 Fry	Phys. Rev. 103:1904, 1956; **Evidence for a Long-Lived Neutral Unstable Particle** — Confirmation of the existence of the K_L
1956 Cork	Phys. Rev. 104:1193, 1956; **Antineutrons Produced from Antiprotons in Charge-Exchange Collisions** — First evidence of the antineutron

PROTOTYPE

We welcome your comments.

See the legend on page 453.

1957 Plano	Nuovo Cim. 5:216, 1957; **Demonstration of the Existence of the Σ^0 Hyperon and a Measurement of its Mass** — First measurement of the Σ^0 hyperon mass — Confirmation of the existence of the Σ^0 hyperon
1957 Barkas	Phys. Rev. 105:1037, 1957; **Antiproton-Nucleon Annihilation Process (Antiproton Collaboration Experiment)** — Confirmation of the antiproton-nucleon annihilation
1957 Wu	Phys. Rev. 105:1413, 1957; **Experimental Test of Parity Conservation in Beta Decay** — First evidence of parity nonconservation in weak decays
1957 Garwin	Phys. Rev. 105:1415, 1957; **Observation of the Failure of Conservation of Parity and Charge Conjugation in Meson Decays: The Magnetic Moment of the Free Muon** — Confirmation of parity violation in weak decays — Measurement of the μ^- magnetic moment
1957 Friedman	Phys. Rev. 105:1681, 1957; **Nuclear Emulsion Evidence for Parity Nonconservation in the Decay Chain $\pi^+ \to \mu^+ \to e^+$** — Confirmation of parity nonconservation in weak decays
1957 Landau	Zh. Eksp. Teor. Fiz. 32:405, 1957; **On the Conservation Laws in Weak Interactions** — Introduction of the CP conservation law in weak interactions and CP parity
1957 Lande	Phys. Rev. 105:1925, 1957; **Report on Long-Lived K^0 Mesons** — Confirmation of the existence of the K_L
1958 Prowse	Phys. Rev. Lett. 1:179, 1958; **Anti-Lambda Hyperon** — First evidence of the $\bar{\Lambda}$
1958 Fazzini	Phys. Rev. Lett. 1:247, 1958; **Electron Decay of the Pion** — First evidence of pion β decay
1958 Impeduglia	Phys. Rev. Lett. 1:249, 1958; **β Decay of the Pion** — Confirmation of pion β decay
1958 Crawford	Phys. Rev. Lett. 1:377, 1958; **Beta Decay of the Λ** — First evidence of Λ β decay
1958 Nordin	Phys. Rev. Lett. 1:380, 1958; **Leptonic Decays of Hyperons** — Confirmation of Λ β decay
1958 Goldhaber	Phys. Rev. 109:1015, 1958; **Helicity of Neutrinos** — First evidence of the negative ν_e helicity, ν_e is left-handed
1958 Agnew	Phys. Rev. 110:994, 1958; **Antiproton-Proton Elastic and Charge Exchange Scattering at About 120 MeV** — Confirmation of the existence of the antineutron
1959 Zeldovich	Zh. Eksp. Teor. Fiz. 36:964, 1959; **Parity Nonconservation in Electron Scattering and in other Effects in the First Order of the Weak Interaction Coupling Constant** — Prediction of the optical activity of atomic media due to possible weak neutral currents — Prediction of the anapole moments of nuclei, due to weak neutral current interactions
1959 Minakawa	Nuovo Cim. 11:125, 1959; **Observation of High Energy Jets with Emulsion Chambers. I.-Transverse Momentum of the π^0 Meson** Japan Emulsion Collaboration — Confirmation of the existence of hadronic jets in high-energy collisions — Average p_T of hadrons in jets is limited and almost independent of jet energy
1959 Plano	Phys. Rev. Lett. 3:525, 1959; **Parity of the Neutral Pion** — First direct determination of the π^0's odd parity
1959 Reines	Phys. Rev. 113:273, 1959; **Free Antineutrino Absorption Cross Section. I. Measurement of the Free Antineutrino Absorption Cross Section by Protons** — Confirmation of the detection of free $\bar{\nu}_e$
1959 Ikeda	Progr. of Theor. Phys. 22:715, 1959; **A Possible Symmetry in Sakata's Model for Bosons-Baryons System** — Introduction of SU(3) symmetry for hadrons — Prediction of the existence of the η meson
1960 Button	Phys. Rev. Lett. 4:530, 1960; **Evidence for the Reaction $\bar{p}\, p \to \bar{\Sigma}^0\, \Lambda$** — First evidence of the $\bar{\Sigma}^0$
1960 Alston	Phys. Rev. Lett. 5:520, 1960; **Resonance in the $\Lambda\, \pi$ System** — First evidence of the $\Sigma(1385\, P_{13})$
1960 Ganchan	Zh. Eksp. Teor. Fiz. 38:1356, 1960; **$\bar{\Sigma}^-$ – Hyperon Production by 8.3 BeV/c π^- – Mesons** — First evidence of the $\bar{\Sigma}^-$
1961 Glashow	Nucl. Phys. 22:579, 1961; **Partial-Symmetries of Weak Interactions** — First introduction of the neutral intermediate boson
1961 Bowcock	Nuovo Cim. 19:142, 1961; **The Effect of a Pion-Pion Interaction on Low-Energy Meson-NucleonScattering — II.** — Prediction of the spin=1, isospin=1 resonance in two pion system

PROTOTYPE

We welcome your comments.

1961 Goldstone	Nuovo Cim. 19:154, 1961; **Field Theories with "Superconductor" Solutions** — Prediction of unavoidable massless bosons if global symmetry of the lagrangian is spontaneously broken
1961 Button	Phys. Rev. 121:1788, 1961; **The Reaction $\bar{p}\,p \to \bar{\Lambda}\,\Lambda$** — Confirmation of $\bar{\Lambda}$ production
1961 Glasser	Phys. Rev. 123:1014, 1961; **Mean Lifetime of the Neutral Pion** — First conclusive measurements of π^0 lifetime
1961 Good	Phys. Rev. 124:1223, 1961; **Regeneration of Neutral K Mesons and Their Mass Difference** — First evidence of $K_L \to K_S$ regeneration
1961 Alston	Phys. Rev. Lett. 6:300, 1961; **Resonance in the K-π System** — First evidence of the $K^*(892)$ resonance
1961 Stonehill	Phys. Rev. Lett. 6:624, 1961; **Pion-Pion Interaction in Pion Production by $\pi^+\,p$ Collisions** — First evidence of the $\rho(770)$ meson resonance
1961 Erwin	Phys. Rev. Lett. 6:628, 1961; **Evidence for a π-π Resonance in the I=1, J=1 State** — First evidence of the $\rho(770)$ meson resonance
1961 Alston	Phys. Rev. Lett. 6:698, 1961; CERN HEP-62 p. 311; **Study of Resonances in the $\Sigma\,\pi$ System** — First evidence of the $\Lambda(1405\,S_{01})$ resonance
1961 Gellmann	CTSL-20; **The Eightfold Way: A Theory of Strong Interaction Symmetry** — Introduction of SU(3) octet structure of the known mesons and baryons
1961 Maglic	Phys. Rev. Lett. 7:178, 1961; **Evidence for a T=0 Three-Pion Resonance** — First evidence of the $\omega(783)$ meson resonance
1961 Neeman	Nucl. Phys. 26:222, 1961; **Derivation of Strong Interactions from a Gauge Invariance** — Introduction of SU(3) octet structure of the known meson and baryon states
1961 Xuong	Phys. Rev. Lett. 7:327, 1961; **Evidence Confirming the T = 0 Three-Pion Resonance** — Confirmation of the existence of the $\omega(783)$ meson
1961 Pevsner	Phys. Rev. Lett. 7:421, 1961; **Evidence for a Three-Pion Resonance Near 550 MeV** — First evidence of the η meson resonance — Confirmation of the $\omega(783)$ meson resonance
1962 Brown	Phys. Rev. Lett. 8:255, 1962; **Observation of Production of a $\Xi^-\,\bar{\Xi}^+$ Pair** — First evidence of $\Xi^-\,\bar{\Xi}^+$ pair production
1962 CERN	Phys. Rev. Lett. 8:257, 1962; **Example of Anticascade $\bar{\Xi}^+$ Particle Production in $\bar{p}\,p$ Interactions at 3.0 GeV/c.** CERN-Ecole Polytechnique-Saclay Collaboration — Confirmation of the existence of the $\bar{\Xi}^+$
1962 Danby	Phys. Rev. Lett. 9:36, 1962; **Observation of High-Energy Neutrino Reactions and the Existence of Two Kinds of Neutrinos** — First evidence of the ν_μ — Evidence of more than one kind of neutrino
1962 Gellmann	Phys. Rev. 125:1067, 1962; **Symmetries of Baryons and Mesons** — Introduction of SU(3) singlet-octet structure of the known mesons and octet-decuplet structure for the baryons — Prediction of the Ω^- hyperon
1962 Pjerrou	Phys. Rev. Lett. 9:114, 1962; **Resonance in the ($\Xi\,\pi$) System at 1.53 GeV** — First evidence of the $\Xi(1530\,P_{13})$ resonance
1962 Cretien	Phys. Rev. Lett. 9:127, 1962; **Evidence for Spin Zero of the η from the Two Gamma-Ray Decay Mode** — Confirmation of the existence of the η meson — Evidence of the η meson's zero spin
1962 Bertanza	Phys. Rev. Lett. 9:180, 1962; **Possible Resonances in the $\Xi\,\pi$ and $K\,\bar{K}$ Systems** — Confirmation of the existence of the $\Xi(1530\,P_{13})$ resonance — First evidence of the $\phi(1020)$ resonance
1962 Selove	Phys. Rev. Lett. 9:272, 1962; **Evidence for a T=0 $\pi^+\,\pi^-$ Resonance at 1250 MeV** — First evidence of the $f_2(1270)$ resonance
1963 Veillet	Phys. Rev. Lett. 10:29, 1963; **Existence and Spin of the Proposed $f^0 \to \pi^+\,\pi^-$ Resonance** — Confirmation of the existence of the $f_2(1270)$ — $f_2(1270)$ spin = 2
1963 Danisz	Phys. Rev. Lett. 11:29, 1963; **Observation of a Double Hyperfragment** — First evidence of double hypernucleus
1963 Connolly	Phys. Rev. Lett. 10:371, 1963; **Existence and Properties of the ϕ(1020) Meson** — Firm establishment of the $\phi(1020)$ meson
1964 Gellmann	Phys. Lett. 8:214, 1964; **A Schematic Model of Baryons and Mesons** — Introduction of quarks as the fundamental building blocks of hadrons

PROTOTYPE

We welcome your comments.

See the legend on page 453.

1964 Zweig	CERN-8182-TH-401; **An SU(3) Model for Strong Interaction Symmetry and its Breaking I** — Introduction of aces (quarks) as the fundamental building blocks of hadrons
1964 Zweig	CERN-8419-TH-412; **An SU(3) Model for Strong Interaction Symmetry and its Breaking II** — Introduction of aces (quarks) as the fundamental building blocks of hadrons
1964 Barnes	Phys. Rev. Lett. 12:204, 1964; **Observation of a Hyperon with Strangeness Minus Three** — First evidence of the hyperon with strangeness -3, the Ω^-
1964 Christenson	Phys. Rev. Lett. 13:138, 1964; **Evidence for the 2 Pion Decay of the K_L Meson** — First evidence of CP violation
1964 Barnes	Phys. Lett. 12:134, 1964; **Confirmation of the Existence of the Ω^- Hyperon** — Confirmation of the Ω^- hyperon
1964 Kalbfleisch	Phys. Rev. Lett. 12:527, 1964; **Observation of a Nonstrange Meson of Mass 959 MeV** — First evidence of the $\eta'(958)$
1964 Goldberg	Phys. Rev. Lett. 12:546, 1964; **Existence of a New Meson of Mass 960 MeV** — Confirmation of the $\eta'(958)$ meson
1964 Abrams	Phys. Rev. Lett. 13:670, 1964; **Example of Decay $\Omega^- \to \Xi^- \pi^0$** — Confirmation of the existence of the Ω^- hyperon
1964 Greenberg	Phys. Rev. Lett. 13:598, 1964; **Spin and Unitary-Spin Independence in a Paraquark Model of Baryons and Mesons** — Introduction of color quantum number and colored quarks and gluons
1965 Han	Phys. Rev. 139:B1006, 1965; **Three-Triplet Model with Double SU(3) Symmetry** — Introduction of color quantum number and colored quarks and gluons
1965 Bogolyubov	JINR-D-1968; **On the Composite Models in Theories of Elementary Particles** — Introduction of color quantum number
1965 Dorfan	Phys. Rev. Lett. 14:1003, 1965; **Observation of Antideuterons** — First evidence of the antideuteron
1965 Fitch	Phys. Rev. Lett. 15:73, 1965; **Evidence for Constructive Interference Between Coherently Regenerated and CP-nonconserving Amplitudes** — Confirmation of the $K_L \to K_S$ regeneration phenomenon
1967 Weinberg	Phys. Rev. Lett. 19:1264, 1967; **A Model of Leptons** — Lagrangian for electroweak synthesis, first estimations of the W and Z masses
1969 Bloom	Phys. Rev. Lett. 23:930, 1969; **High-Energy Inelastic $e^- p$ Scattering at 6 and 10 Degrees** — First evidence of Bjorken scaling behavior
1969 Breidenbach	Phys. Rev. Lett. 23:935, 1969; **Observed Behavior of Highly Inelastic Electron-Proton Scattering** — Confirmation of Bjorken scaling behavior
1969 Feynman	Phys. Rev. Lett. 23:1415, 1969; **Very High-Energy Collisions of Hadrons** — Proposal for scaling bahavior of the inclusive spectra of produced hadrons
1970 Antipov	Yad. Phys. 12:311, 1970; Sov. J. Nucl. Phys. 12:171, 1971; **Observation of $^3\overline{\mathrm{He}}$** — First evidence of $^3\overline{\mathrm{He}}$ production
1970 Glashow	Phys. Rev. D2:1285, 1970; **Weak Interaction with Lepton-Hadron Symmetry** — Introduction of lepton-quark symmetry, proposition of fourth (c - charmed) quark
1971 Denisov	Phys. Lett. 36B:415, 1971; **Total Cross Sections of π^+, K^+ and p on Protons and Deuterons in the Momentum Range 15–60 GeV/c** — First experimental indication of rising total hadronic cross sections
1971 Firestone	Phys. Rev. Lett. 26:410, 1971; **Observation of the $\overline{\Omega}^+$** — First evidence of the $\overline{\Omega}^+$
1973 Amaldi	Phys. Lett. 44B:112, 1973; **Energy Dependence of the Proton-Proton Total Cross-Section for Center-of-Mass Energies Between 23 and 53 GeV** — Firm establishment of rising total hadronic cross sections phenomena
1973 Amendolia	Phys. Lett. 44B:119, 1973; **Measurement of the Total Proton-Proton Cross-Section at the ISR** — Confirmation of rising total hadronic cross sections
1973 Hasert	Phys. Lett. 46B:138, 1973; **Observation of Neutrino-like Interactions Without Muon or Electron in the Gargamelle Neutrino Experiment** — First experimental evidence of weak neutral currents
1974 Benvenuti	Phys. Rev. Lett. 32:800, 1974; COO-3071-35; **Observation of Muonless Neutrino-Induced Inelastic Interactions** — Confirmation of the existence of weak neutral currents
1974 Aubert	Phys. Rev. Lett. 33:1404, 1974; COO-3069-271; **Experimental Observation of a Heavy Particle J** — First evidence of the $J/\psi(1S)$

PROTOTYPE
We welcome your comments.

1974 Augustin	Phys. Rev. Lett. 33:1406, 1974; SLAC-PUB-1504; **Discovery of a Narrow Resonance in $e^+ e^-$ Annihilation** — First evidence of the $J/\psi(1S)$
1974 Bacci	Phys. Rev. Lett. 33:1408, 1974; Phys. Rev. Lett. 33:1649, 1974; LNF-74-61-P; **Preliminary Result of Frascati (ADONE) on the Nature of a New 3.1-GeV Particle Produced in $e^+ e^-$ Annihilation** — Confirmation of the existence of the $J/\psi(1S)$
1974 Abrams	Phys. Rev. Lett. 33:1453, 1974; SLAC-PUB-1510; LBL-3605; **The Discovery of a Second Narrow Resonance in $e^+ e^-$ Annihilation** — First evidence of the $\psi(2S)$
1975 Cazzoli	Phys. Rev. Lett. 34:1125, 1975; NEUTRINO/PARIS-75 p. 155; **Evidence for $\Delta_S = -\Delta_Q$ Current or Charmed-Baryon Production by Neutrinos** — First evidence of the $\Sigma_c(2455)^{++}$ charmed baryon — First indication of the production of the Λ_c^+ charmed baryon
1975 Perl	Phys. Rev. Lett. 35:1489, 1975; SLAC-PUB-1626; LBL-4228; **Evidence for Anomalous Lepton Production in $e^+ e^-$ Annihilation** — First indication of the existence of the τ lepton
1976 Perl	Phys. Lett. 63B:466, 1976; SLAC-PUB-1781; LBL-5341; **Properties of Anomalous $e^- \mu^-$ Events produced in $e^+ e^-$ Annihilation** — Evidence of the production of the τ lepton
1976 Goldhaber	Phys. Rev. Lett. 37:255, 1976; SLAC-PUB-1762; LBL-5309; **Observation in $e^+ e^-$ Annihilation of a Narrow State at 1865-MeV/c^2 Decaying to $K\ \pi$ and $K3\pi$** — First evidence of the D^0 charmed meson
1976 Peruzzi	Phys. Rev. Lett. 37:569, 1976; SLAC-PUB-1776; LBL-5340; **Observation of a Narrow Charged State at 1876-MeV/c^2 Decaying to an Exotic Combination of $K\ \pi\ \pi$** — First evidence of the production of D^+ and D^- charmed mesons
1976 Knapp	Phys. Rev. Lett. 37:882, 1976; PRINT-76-0725; **Observation of a Narrow Anti-Baryon State at 2.26-GeV/c^2** — First evidence of the $\overline{\Lambda}_c^-$ charmed anti-baryon
1977 Blietschau	Nucl. Phys. B118:218, 1977; CERN-EP-PHYS-76-55; **Determination of the Neutral to Charged Current Inclusive Cross Section Ratio for Neutrino and Anti-Neutrino Interactios in the "Gargamelle" Experiment** GARGAMELLE-NEUTRINO Collaboration — Confirmation of the existence of weak neutral currents
1977 Perl	Phys. Lett. 70B:487, 1977; SLAC-PUB-1997; LBL-6731; **Properties of the Proposed τ Charged Lepton** — Firm establishment of τ lepton properties
1977 Herb	Phys. Rev. Lett. 39:252, 1977; PRINT-77-0640; **Observation of a Dimuon Resonance at 9.5-GeV in 400-GeV Proton – Nucleus Collisions** — First evidence of the $\Upsilon(1S)$ meson
1978 Barkov	Pisma Zh. Eksp. Teor. Fiz. 27:379, 1978; Jetp Lett. 27:357, 1978; **Observation of Parity Nonconservation in Atomic Transitions** — First evidence of weak neutral currents in atomic transitions
1978 Prescott	Phys. Lett. 77B:347, 1978; SLAC-PUB-2148; **Parity Non-conservation in Inelastic Electron Scattering** — Confirmation of weak neutral currents
1979 Ueno	Phys. Rev. Lett. 42:486, 1979; FERMILAB-PUB-78-96-EXP; **Evidence for the Υ'' and a Search for New Narrow Resonances** — First evidence of the $\Upsilon(3S)$ state — Confirmation of the $\Upsilon(1S)$ and $\Upsilon(2S)$ states
1979 Baltay	Phys. Rev. Lett. 42:1721, 1979; BNL-25958; **Confirmation of the Existence of the $\Sigma_c(2455)^{++}$ and Λ_c^+ Charmed Baryons and Observation of the Decay $\Lambda_c^+ \to \Lambda\ \pi^+$ and $\Lambda_c^+ \to p\ \overline{K}^0$** — Confirmation of the $\Sigma_c(2455)^{++}$ — Confirmation of the Λ_c^+
1979 Barber	Phys. Rev. Lett. 43:830, 1979; MIT-LNS-106; **Discovery of Three Jet Events and a Test of Quantum Chromodynamics at PETRA Energies** — First evidence of the gluon jet in $e^+ e^- \to$ 3jet annihilations
1979 Prescott	Phys. Lett. 84B:524, 1979; SLAC-PUB-2319; **Further Measurements of Parity Non-conservation in Inelastic Electron Scattering** — Confirmation of weak neutral currents
1979 Barkov	Phys. Lett. 85B:308, 1979; Zh. Eksp. Teor. Fiz. 79:713, 1980; Jetp 52:360, 1980; **Parity Violation in Atomic Bismuth** — Confirmation of parity nonconservation effects in atomic transitions
1979 Brandelik	Phys. Lett. 86B:243, 1979; DESY-79-53; **Evidence for Planar Events in $e^+ e^-$ Annihilation at High Energies** TASSO Collaboration — Confirmation of the production of gluon jets
1979 Berger	Phys. Lett. 86B:418, 1979; DESY-79-57; **Evidence for Gluon Bremsstrahlung in $e^+ e^-$ Annihilations at High Energies** PLUTO Collaboration — Confirmation of the production of gluon jets
1980 Bartel	Phys. Lett. 91B:142, 1980; DESY-79-80; **Observation of Planar Three Jet Events in $e^+ e^-$ Annihilation and Evidence for Gluon Bremsstrahlung** JADE Collaboration — Confirmation of gluon jets
1980 Brandelik	Phys. Lett. 97B:453, 1980; DESY-80-80; **Evidence for a Spin-1 Gluon in Three Jet Events** TASSO Collaboration — First experimental determination of gluon spin

PROTOTYPE

We welcome your comments.

See the legend on page 453.

1980 Reines	Phys. Rev. Lett. 45:1307, 1980; **Evidence for Neutrino Instability** — First indication of the oscillation of neutrinos
1980 Berger	Phys. Lett. 97B:459, 1980; DESY-80-93; **A Study of Multi-Jet Events in $e^+ e^-$ Annihilation** PLUTO Collaboration — Confirmation of gluon spin = 1
1980 Andrews	Phys. Rev. Lett. 44:1108, 1980; CLNS-80-445; **Observation of Three Upsilon States** — Confirmation of the $\Upsilon(3S)$
1980 Bohringer	Phys. Rev. Lett. 44:1111, 1980; **Observation of Υ, Υ' and Υ'' at the Cornell Electron Storage Ring** — Confirmation of the $\Upsilon(3S)$
1980 Calicchio	Phys. Lett. 93B:521, 1980; RL-80-019; **First Observation of the Production and Decay of the $\Sigma_c(2455)^+$** BEBC TST Neutrino Collaboration — First evidence of the $\Sigma_c(2455)^+$
1980 Andrews	Phys. Rev. Lett. 45:219, 1980; CLNS-80-452; **Observation of a Fourth Upsilon State in $e^+ e^-$ Annihilations** — First evidence of the $\Upsilon(4S)$ state
1980 Finocchiaro	Phys. Rev. Lett. 45:222, 1980; PRINT-80-0416; **Observation of the Υ''' at CESR** — First evidence of the $\Upsilon(4S)$ state
1981 Bebek	Phys. Rev. Lett. 46:84, 1981; CLNS-80-475; **Evidence for New Flavor Production at the $\Upsilon(4S)$** — First evidence of the beauty meson
1981 Basile	Lett. Nuovo Cim. 31:97, 1981; CERN-EP-81-38; INFN-AE-81-5; **Evidence for a New Particle with Naked "Beauty" and for its Associated Production in High-Energy (PP) Interactions** — First indication of existence of the Λ_b beauty baryon
1981 Mills	Phys. Rev. Lett. 46:717, 1981; **Observation of the Positronium Negative Ion** — First experimental evidence of positronium$^-$, bound $(e^- e^+ e^-)$ system
1981 Chadwick	Phys. Rev. Lett. 46:88, 1981; **Decay of B-flavored Hadrons to Single Muon and Dimuon Final States** — Confirmation of the production of the beauty meson
1983 Arnison	Phys. Lett. 122B:103, 1983; CERN-EP-83-13; **Experimental Observation of Isolated Large Transverse Energy Electrons with Associated Missing Energy at $\sqrt{(s)}$ = 540 GeV** UA1 Collaboration — First evidence of the W^+ and W^- charged intermediate bosons
1983 Biagi	Phys. Lett. 122B:455, 1983; **Observation of a Narrow State at 2.46 GeV/c^2 – A Candidate for the Charmed Strange Baryon A^+** — First evidence of the $\Xi_c(2460)^+$
1983 Banner	Phys. Lett. 122B:476, 1983; CERN-EP-83-25; **Observation of Single Isolated Electrons of High Transverse Momentum in Events with Missing Transverse Energy at the CERN $\bar{p}\,p$ Collider** UA2 Collaboration — First evidence of the production of the W^+ and W^- charged intermediate bosons
1983 Arnison	Phys. Lett. 126B:398, 1983; CERN-EP-83-73; **Experimental Observation of Lepton Pairs of Invariant Mass Around 95 Gev at the CERN SPS Collider** UA1 Collaboration — First evidence of the Z^0 neutral intermediate boson
1983 Bagnaia	Phys. Lett. 129B:130, 1983; CERN-EP-83-112; **Evidence for $Z^0 \to e^+ e^-$ at the CERN $\bar{p}\,p$ Collider** UA2 Collaboration — Confirmation of Z^0 boson production — Observation of the $Z^0 \to e^+ e^-$ decay
1984 Arnison	Phys. Lett. 134B:469, 1984; CERN-EP-83-199; **Observation of the Muonic Decay of the Charged Intermediate Vector Boson** UA1 Collaboration — Confirmation of W^+, W^- production — First observation of $W^\pm \to \mu^\pm \nu$ decays
1984 Arnison	Phys. Lett. 147B:241, 1984; CERN-EP-84-100; **Observation of Muonic Z^0 Decay at the $\bar{p}\,p$ Collider** UA1 Collaboration — Confirmation of Z^0 boson production — Observation of the $Z^0 \to \mu^+ \mu^-$ decay
1985 Biagi	Z. Phys. C28:175, 1985; CERN-EP-84-154; **Properties of the Charmed Strange Baryon $\Xi_c(2460)^+$ and Evidence for the Charmed Doubly Strange Baryon Ω_c at 2.74 GeV/c^2** — First evidence of the Ω_c
1985 Arnison	Phys. Lett. 166B:484 1986; CERN-EP-85-185; **Intermediate Vector Boson Properties at the CERN Super Proton Synchrotron Collider** UA1 Collaboration — Firm establishment of the properties of the W^+, W^-, and Z^0 bosons
1986 Voyvodic	Pisma Zh. Eksp. Teor. Fiz. 43:401, 1986; Jetp Lett. 43:515, 1986; ITEP-86-51; **Observation in Nuclear Emulsion of a Charmed $\Sigma_c(2455)^0$ Baryon Decay to $\Lambda_c^+ \pi^-$ with a Subsequent Λ_c^+ Decay to $\Sigma^+ \pi^- \pi^+$** — First evidence of the $\Sigma_c(2455)^0$

PROTOTYPE

We welcome your comments.

1987 Albajar	Phys. Lett. 186B:247, 1987; Phys. Lett. 197B:565, 1987; CERN-EP-86-209; **Search for B^0-$\overline{B}^0$ Oscillations at the CERN Proton Antiproton Collider. Paper 2** UA1 Collaboration — First indication of B_S-$\overline{B}_S$ mixing
1987 Ansari	Phys. Lett. 186B:440, 1987; CERN-EP-87-05; **Measurement of the Standard Model Parameters from a Study of $W^\pm$ and Z^0 Bosons** UA2 Collaboration — Firm establishment of the properties of the W^+, W^-, and Z^0 bosons
1987 Albrecht	Phys. Lett. 192B:245, 1987; DESY-87-029; **Observation of B^0-$\overline{B}^0$ Mixing** ARGUS Collaborations — First evidence of B^0-$\overline{B}^0$ mixing
1988 Band	Phys. Lett. 200B:221, 1988; **Additional Evidence for B^0-$\overline{B}^0$ Mixing** MAC Collaboration — Confirmation of B^0-$\overline{B}^0$ mixing
1989 Avery	Phys. Rev. Lett. 62:863, 1989; CLNS-88-872; CLEO-88-2; **Observation of the Charmed Strange Baryon $\Xi_c(2460^0$** — First evidence of the $\Xi_c(2460)^0$
1989 Artuso	Phys. Rev. Lett. 62:2233, 1989; CLNS-89-889; CLEO-89-5; **B^0 $\overline{B}^0$ Mixing at the $\Upsilon(4S)$** — Confirmation of B^0-$\overline{B}^0$ mixing
1989 Abrams	Phys. Rev. Lett. 63:2173, 1989; SLAC-PUB-5113; LBL-27857; **Measurements of Z^0-Boson Resonance Parameters in e^+ e^- Annihilation** — First evidence of the number of light neutrinos = 3
1989 Alam	Phys. Lett. 226B:401, 1989; CLNS-89-921; CLEO-89-9; **Measurement of the Isospin Mass Splitting between $\Xi_c(2460)^+$ and $\Xi_c(2460)^0$** — Confirmation of the $\Xi_c(2460)^+$, $\Xi_c(2460)^0$, $\overline{\Xi}_c(2460)^0$, and $\overline{\Xi}_c(2460)^-$ states
1989 Weir	Phys. Lett. 240B:289, 1990; SLAC-PUB-5146; CALT-68-1604; **A Reanalysis of B^0-$\overline{B}^0$ Mixing in e^+ e^- Annihilation at 29 GeV** — Confirmation of B_S-$\overline{B}_S$ mixing
1990 Adeva	Phys. Lett. 252B:703, 1990; L3-020; **A Measurement of B^0 $\overline{B}^0$ Mixing in Z^0 Decays** L3 Collaboration — Confirmation of B_S-$\overline{B}_S$ mixing
1991 Decamp	Phys. Lett. 258B:236, 1991; CERN-PPE-90-194; **Measurement of B-$\overline{B}$ Mixing at the Z^0** ALEPH Collaboration — Confirmation of B_S-$\overline{B}_S$ mixing
1991 Adeva	Z. Phys. C51:179, 1991; L3-028; **Measurement of Electroweak Parameters from Hadronic and Leptonic Decays of the Z^0** L3 Collaboration — Confirmation of the number of light neutrinos = 3
1991 Alexander	Z. Phys. C52:175, 1991; CERN-PPE-91-067; **Measurement of the Z^0 Line Shape Parameters and the Electroweak Couplings of Charged Leptons** OPAL Collaboration — Confirmation of the number of light neutrinos = 3
1991 Abreu	Nucl. Phys. B367:511, 1991; CERN-PPE-91-095; **Determination of Z^0 Resonance Parameters and Couplings from its Hadronic and Leptonic Decays** DELPHI Collaboration — Confirmation of the number of light neutrinos = 3
1991 Decamp	Z. Phys. C53:1, 1992; CERN-PPE-91-105; **Improved Measurements of Electroweak Parameters from Z^0 Decays into Fermion Pairs** ALEPH Collaboration — Confirmation of the number of light neutrinos = 3
1991 Albajar	Phys. Lett. 262B:171, 1991; CERN-PPE-91-055; **Measurement of B^0-$\overline{B}^0$ Mixing at the CERN $Sp\overline{p}S$ Collider** UA1 Collaboration — Confirmation of B_S-$\overline{B}_S$ mixing
1991 Albajar	Phys. Lett. 273B:540, 1991; CERN-PPE-91-202; **First Observation of the Beauty Baryon Λ_b in the Decay Channel $\Lambda_b \to J/\psi(1S)\ \Lambda$ at the CERN Proton-Antiproton Collider** UA1 Collaboration — Confirmation of the Λ_b beauty baryon
1991 Decamp	Phys. Lett. 276B:247, 1992; CERN-PPE-91-232; L3-036; **Electroweak Parameters of the Z^0 Resonance and the Standard Model** ALEPH Collaboration — Precise determination of the Z^0 parameters — Confirmation of the number of light neutrinos = 3
1992 Acton	Phys. Lett. 276B:379, 1992; CERN-PPE-91-212; **Measurement of B^0 – $\overline{B}^0$ Mixing in Hadronic Z^0 Decays** OPAL Collaboration — Confirmation of B_S-$\overline{B}_S$ mixing

PROTOTYPE

We welcome your comments.

See the legend on page 453.