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UNIVERSITY OF CALIFORNIA

Radiation Laboratory

Berkeley, California

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LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED IN THE UCRL
INFORMATION DIVISION DURING THE PERIOD OCTOBER 16-30, 1954

November 1, 1954

Printed for U. S. Atomic Energy Commission

LIST OF CODES FOR REPORT NUMBERS

ACCO -American Cyanamid Co.
AERE -Atomic Energy Research Establishment, Harwell, England
AFCRC -Air Force Cambridge Research Center
AMRL -Army Medical Research Lab., Fort Knox
ANL -Argonne National Lab.
ANP -Aircraft Nuclear Propulsion Project, Oak Ridge
APEX -General Electric Co., Aircraft Gas Turbine Div.
ASTIA -Armed Services Technical Information Agency
BM -Bureau of Mines
BM-II -Northwest Electrodevelopment Lab., Bureau of Mines,
Albany, Oregon
BMI -Battelle Memorial Institute
BNL -Brookhaven National Lab.
BRL -Ballistic Research Labs., Aberdeen Proving Grounds
CEA -Commissariat à l'Énergie Atomique, France
CEI, CRC, CRE, CRP, CRT and others
-Chalk River Project, Canada
CEPS -Commonwealth Edison Co.
CERN -European Council for Nuclear Research
CF -Oak Ridge National Lab., Central Files
CU -Columbia University
DC -General Electric Co., ANP Project
DOW -Dow Chemical Co.
DP -E. I. du Pont de Nemours and Co.
FMPC -National Lead Co. of Ohio
HW -Hanford Works, Richland, Wash.
ISC -Iowa State College
JENER -Joint Establishment for Nuclear Energy Research, Norway
K -Carbide and Carbon Chemicals Co., K-25 Plant
KAPL -Knolls Atomic Power Lab.
KLX -Vitro Corp. of America
LA, LADC, LAMS -Los Alamos Scientific Lab.
LRL, LWS -California Research and Development Co.
MIT -Massachusetts Institute of Technology
MLM -Mound Lab.
Monograph -Bell Telephone System
MTA -California Research and Development Co.
NAA -North American Aviation, Inc.
NBS -National Bureau of Standards
NM -Naval Medical Research Institute
NRL -Naval Research Lab.
ONRL -Office of Naval Research, London
ORNL -Carbide and Carbon Chemicals Co., Oak Ridge National Lab.
PR -Chalk River Project, Canada

SEP -Sylvania Electric Products, Inc.
 TEI, TEM -U. S. Dept. of Interior, Geological Survey
 TID -Technical Information Service, Oak Ridge
 UCLA -Univ. of California at Los Angeles
 UR -Univ. of Rochester
 USNRDL -U. S. Naval Radiological Defense Lab.
 WAPD -Westinghouse Electric Corp., Atomic Power Division
 Y -Carbide and Carbon Chemicals Co., Y-12 Plant

Many prefixes used for research and development reports cover a number of installations. NP("Non-Project") numbers are assigned by the Technical Information Service at Oak Ridge to those reports which it receives from sources not under contract to the Atomic Energy Commission. The UCRL Information Division gives "Misc" numbers to any others received here that do not bear an identifying number. Many reports are grouped together under numbers corresponding to an AEC division or operations office. Some of these are as follows:

CO, COO -Chicago Operations Office
 IDO -Idaho Operations Office
 NYO, NYOO -New York Operations Office
 ORO -Oak Ridge Operations Office
 RMO -Raw Materials Division
 WASH -Atomic Energy Commission, Washington

In our semimonthly "List of Reports Received" the originating installation will be placed in the author column whenever the report code number does not indicate a specific laboratory, or is obsolete or not given in this list.

Two series of translations are currently received, one sponsored by the AEC (AEC-tr), the other by the National Science Foundation (NSF-tr).

LIST OF CLASSIFIED REPORTS RECEIVED AND ISSUED IN THE UCRL
INFORMATION DIVISION DURING THE PERIOD OCTOBER 16-30, 1954

Radiation Laboratory, Department of Physics
University of California, Berkeley, California

November 1, 1954

<u>Index Number</u>	<u>Title</u>	<u>Author</u>	<u>Date</u>
<u>BIOSCIENCES</u>			
COO-1014	Technical Report No. 13 Deposition of Suspended Particles from Turbulent Gas Streams	S. Friendlander Ill. Univ.	9-15-54
NM 005 048. 14.01	Studies on Pathogenesis and Immunity in Lymphocytic Choriomeningitis Infection of the Mouse	W. Rowe	5-27-54
ONRL-89-54	International Congress of Photobiology, Amsterdam Technical Report	T. Ruebush	10-11-54
UCLA-309	Initial Development of a Semi-Conductor Fast Neutron Dosimeter	B. Cassen, Ph. D., T. Crough, H. Gass	
UCLA-310	A Small Radiation Monitor Telemeter with Transistor Circuit Elements	F. Strebe, W. Kennedy, Ph. D.	10-14-54
UCLA-311	Effect of Beef Embryo Extract on Survival Time in Irradiated Mice	T. Haley, W. McCormick, E. McCulloh	10-19-54
UR-280	The Relation of Particle Size of Uranium Tritaoxide Dust to Toxicity Following Inhalation by Animals	H. Wilson, G. Sylvester, S. Laskin, et al.	9-30-54
UR-327	The Effects of Irradiation with Phosphorus-32 in the Viability and Growth of Rat Embryos	M. Sikov, T. Noonan	10-8-54

CHEMISTRY

AERE CE/R 906 (2nd Issue) Amended Version	Liquid-Liquid Extraction Part VI Flooding Rates and Performance Data for Rotary Annular Liquid-Liquid Contactors	J. Thornton, H. Pratt, TIS OR	1954
AERE C/R 1466	The Determination of Alumina in Silicates (Rocks and Refractories)	G. Milner, J. Woodhead, TIS OR	7-8-54
AERE M/R 1408	The Determination of Specific Heats and Heats of Reaction of Clay Minerals by Thermal Analysis	E. Allison, TIS OR	4-5-54
GR-174	Dynamics of Noble Gas Ions. Period Covered October 1, 1952 - September 30, 1953 Final Report	M. Biondi, L. Chanin, Westinghouse Res. Lab.	
ISC-524	Analytical Applications of the Reaction of Thorium with Benzenephosphonic Acid	C. Banks, R. Davis, Ames Lab.	9-22-54
K-1147	The Heat of Dissociation of Nitrogen and the Appearance Potential of Some Ions Formed in Fluorine and Hydrogen Fluoride by Electron Impact	J. Burns, TIS OR	10-8-54
MISC 1954- 101	Technical Report 1953 - 1954 Part One (For the Period 1 October, 1953 to 31 March, 1954)	Laboratory of Molecular Structure and Spectra University of Chicago	
MISC 1954- 103	Rate Theory and Irreversible Thermodynamics--The Nonlinear Approximation Tech. Rpt. No. XV	R. Marcus, R. Parlin, H. Eyring, Institute for the Study of Rate Processes Univ. of Utah	7-30-54
NYO-3957	A Survey Report on Lithium Hydride	T. Gibb, Jr. E. Messer, Tufts College	5-2-54

NYO-4508	Photofluorimeters for Determination of Uranium and Beryllium Concentrations	H. Digiovanni, R. Gravenson, B. Dwork, TIS OR	8-18-54
TID-3036 (Rev.)	Isotope Separation and Isotope Exchange A Bibliography of Unclassified Literature	G. Gegun, R. Allen, TIS OR	6-54

ENGINEERING

NACA RM No. E8G23	Generalized Charts for Determination of Pressure Drop of a High-Speed Compressible Fluid in Heat-Exchanger Passages I-Air Heated in Smooth Passages of Constant Area with Constant Wall Temperature	M. Valerino, TIS OR	
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METALLURGY AND CERAMICS

MISC 1954-99	Effect of Stress on Creep at High Temperatures Thirty-Seventh Tech. Report	H. Laks, C. Wiseman, O. Sherby, et al. Institute of Eng. Res. Univ. of Cal.	10-1-54
MISC 1954-105	Annual Progress Report of the Metals Research Laboratory and of Graduate Work in Metallurgical Engineering 1953 - 1954	Carnegie Inst. of Tech.	7-1-54
NYO-3966	The Study of Diffusionless Phase Changes in Solid Metals and Alloys Progress Report for the Period March 1, to May 31, 1954	T. Read, D. Lieberman, M. Wechsler, Columbia Univ., TIS OR	8-16-54
NYO-3967	The Study of Diffusionless Phase Changes in Solid Metals and Alloys Progress Report for the Period June 1, to August 31, 1954	T. Read, D. Lieberman, R. Balluffi, et al., Columbia Univ., TIS OR	8-23-54
NYO-7041	Solid Solutions and Grain Boundaries Progress Report No. 22	B. Averbach, M. Cohen, et al., Metallurgy Lab., TIS OR	6-30-54

NYO-7071	Fundamentals of Cold Working and Recrystallization Progress Report No. 15	B. Averbach, M. Cohen, S. Allen, et al., Metallurgy Div., TIS OR	6-30-54
SO-2517	Twentieth Quarterly Report (Progress Report Number 21) Development of Zirconium-Base Alloys	J. Keeler General Electric Research Lab.	10-5-54

PHYSICS

AERE C/R 1463	The Intensity of Beta Activity from Thick Sources Part II	B. Bowles, G. Walton, TIS OR	6-21-54
AERE T/M108	The Direct Conversion of Beta-Irradiation Energy Into Low-Voltage Electrical Energy	W. Lomer, TIS OR	4-54
AERE T/R1429	A Method for Solving the Velocity-Dependent Boltzmann Equation	J. Elliott, TIS OR	5-54
BNL-278 (T-46)	A Microsecond Shutter for Use in Separating Neutrons of Various Speeds	F. Seidl	7-54
CERN-PS/GL-12	On the Correction of Magnetic Field Plots for Finite Permeability	European Council of Nuclear Research	9-54
CERN/PS GL-13	On the Description of the Dynamic Behaviour of Laminated Magnets by Means of Effective Fields and an Effective Permeability	European Council of Nuclear Research TIS OR	9-54
CERN-PS/MM5	Measures du Champ et du Gradient du Champ Dans Une Section Droite de Modele Ac III B	European Council of Nuclear Research	Juillet, 1954
COO-176	Basic Research with High Energy Electrons and X-rays Produced by a 300 Mev Synchrotron Progress Report	Purdue Research Foundation, TIS OR	6-30-54
DP-79	A Tester for Pile Flux Monitors	L. Cathey	9-54

IDO-16128	Average Thermal Neutron Flux from Bismuth Monitor	C. Hogg, Phillips Petroleum TIS OR	10-21-54
ISC-522	The Beta Spectrum of C ¹⁴	A. Pohm, R. Waddell, J. Powers, Ames Lab.	9-16-54
K-1146	The Thermal Properties of Two-Dimensional Phases	W. DeMarcus, J. Dyer, E. Hopper, TIS OR	10-11-54
MISC 1954-18 No. 8	Development of a Mercury Jet Switch for the University of California Radiation Laboratory. Monthly Progress Report No. 8, September 1954 RU-24	E. Wilson, Jr., H. Hulett, Detroit Controls Corp. Res. Div.	
MISC 1954-100	The Thermodynamics Temperature Scale Below 90°K. The Normal Boiling Point of Normal Hydrogen	J. Aston, Pennsylvania State College	9-7-54
ML-149	Space Charge Effects in Gridless Klystrons	L. Zitelli, Microwave Lab. Stanford Univ.	10-51
NM-006 012. 04.71	The Calibration of Gamma Emitting Radioisotopes in Terms of Ionization Produced I. A Technique for Controlled Scatter Conditions	J. Duckworth	6-16-54
NYO-3604	Low Energy Photofission Yields for U ²³⁸	H. Richter, C. Coryell, Lab. for Nuclear Science, TIS OR	
NYO-4577 (Rev.)	Mathematical Evaluation of Airborne Radiological Survey Data	O. Pedersen, TIS OR	8-12-54

ORNL-1785	On Solving Linear Algebraic Systems	A. Householder, Carbide and Carbon Chems. Co. (X-10) TIS OR	10-13-54
ORNL-1789	Coulomb Excitation of Nuclear Levels	L. Biedenharn, M. Rose, Carbide and Carbon Chem. Co. (X-10) TIS OR	10-14-54
USNRDL-417	The Production of Intense Beams of Thermal Radiation by Means of a High Current Carbon Arc and Relay- Condenser Optical System	T. Broida	11-24-53

REACTOR SCIENCE

ANL-5311 Part I	Reactor Engineering Lectures	S. McLain	9-54
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MISCELLANEOUS

ASTIA-U-58	Title Announcement Bulletin	TIS OR	9-24-54
ASTIA-U-59	Title Announcement Bulletin	TIS OR	10-6-54
LA-1677	Sample Collector and Counter	J. Beal, Jr.	7-27-54
MISC 1954-30	Nuclear Notes for Industry	TIS OR	
MISC 1954-102	The Breaking of Single Cotton Fibers Under Various Conditions Tech. Rpt. No. XLV	R. Learson, A. Funk, H. Eyring Institute for the Study of Rate Processes Univ. of Utah	9-15-54
TID-3043 (Suppl. 1)	Unclassified Bibliographies of Interest to the Atomic Energy Commission Supplement 1	H. Voress, TIS OR	7-20-54