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Radiation Laboratory

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LIST OF UNCLASSIFIED REPORTS RECEIVED IN THE UCRL INFORMATION  
DIVISION DURING THE PERIOD OF NOVEMBER 1-15, 1953

November 16, 1953

Berkeley, California

## LIST OF CODES FOR REPORT NUMBERS

ACCO	- American Cyanamid Co.	NAA	- North American Aviation, Inc.
AERE	- Atomic Energy Research Establishment, Harwell, England	NBS	- National Bureau of Standards
ANL	- Argonne National Lab.	NM	- Naval Medical Research Institute
{ ANP	- Aircraft Nuclear Propulsion Project	NRL	- Naval Research Lab.
{ APEX		NYO	- New York Operations Office
ASTIA	- Armed Services Technical Information Agency	ONRL	- Office of Naval Research, London
BMI	- Battelle Memorial Institute	ORNL	- Carbide and Carbon Chemicals Co. (ORNL)
BNL	- Brookhaven National Lab.	ORO	- Oak Ridge Operations Office
CO	- Chicago Operations Office	RMO	- Division of Raw Materials
{ CRC	- Chalk River Project, Canada	SEP	- Sylvania Electric Products, Inc.
{ CRE		SO	- Schenectady Operations Office
{ CRP		TEI(M)	- U. S. Geological Survey
CU	- Columbia University	TID	- Technical Information Service
DOW	- Dow Chemical Company	UCLA	- University of California Medical Research Lab.
DP	- du Pont, Wilmington	UR	- University of Rochester
FMPC	- Feed Materials Production Center at Fernald	USNRDL	- U. S. Naval Radiological Defense Lab.
GEL	- General Electric Co., General Engineering Lab.	WAPD	- Westinghouse Electric Corp., Atomic Power Division
HW	- Hanford Works, Richland	WASH	- Atomic Energy Commission, Washington
IDO	- Idaho Operations Office	Y	- Carbide and Carbon Chemicals Co. (Y-12 Plant)
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		
{ LAMS	- Los Alamos Scientific Lab.		
{ LA			
{ LRL	- California Research and Development Co.		
{ LWS			
MIT	- Massachusetts Institute of Technology		
MLM	- Mound Laboratory		
MTA	- California Research and Development Co.		

The Technical Information Service assigns NP ("Non-Project") numbers to university research and development reports received from outside sources, e. g., government agencies, universities, industry and foreign countries.

Index Number	Title	Author	Classification	Date
AECD-3556	A Study Of The Separation Of H And D During Endosmotic Solvent Transfer Across Cation-Exchange Membranes	J. Marinsky W. Katz	U	3/10/53
AEC-tr-2055	Electron Theory Of Metals-II. Electrons In The Periodic Potential Field	A. Sommerfeld H. Bethe	U	10/15/53
AERE CE/R-906	Liquid-Liquid Extraction Part VII Flooding Rates And Performance Data For Rotary Annular Liquid-Liquid Contactors	J. Thornton R. Pratt	U	7/15/53
AERE CE/R-1219	A Further Study Of The Hydraulic Cyclone	D. Kellsall	U	8/53
AERE C/R-1233	The Determination By Radioactivation Of The Oxygen Content Of Powdered Metals With Particular Reference To Beryllium	R. Osmond A. Smales	U	8/17/53
AERE C/R-1237	The Infra-Red Spectra And Molecular Structure Of Some Inorganic Hexafluorides Part 5 Calculation Of Force Constants And Bond Lengths	J. Gaunt	U	8/13/53
AERE GP/R-1161	Linear Electron Accelerator With A Dielectric Loaded Waveguide	R. Hadden	U	7/16/53
AERE GP/R-1215	Optimum And Limiting Operating Conditions For Downward Diffusion Cloud Chambers	A. Bevan	U	7/21/53
AERE M/R-1238	The Climb Of Edge Dislocations In Face-Centred Cubic Lattices	R. Barnes	U	8/19/53
AERE T/R-1221	Some Approximate Formulae For Use In Neutron Shielding	K. Spinney	U	7/53
AFCRC-53-23	Geophysical Research Papers No. 21 Absorption Coefficients Of Several Atmospheric Gases	K. Watanabe et al	U	6/53
AFCRC-53-27	Asymptotic Approximation For The Elastic Normal Modes In A Stratified Solid Medium	N. Haskell	U	8/53

Index Number	Title	Author	Classification	Date
AFCRC-53-28	Geophysical Research Papers No. 23-Forecasting Relationships Between Upper Level Flow And Surface Meteorological Processes	R. Roche et al	U	8/53
ANL-4986	Electron Distribution Functions And Thermodynamic Properties At High Temperatures	M. Brachman R. Meyerott	U	5/53
ANL-5104	Part I. (Experimental) Separation Of Cations By An Electrogravitational Method Part II (Theoretical) A. Equivalent Circuit Model Of The Transference Cell B. The Transference Cell: Thermodynamics Of The Steady State	G. Murphy	U	1/53
ANL-5115	Resistivity Of NaK	P. Drugas et al	U	10/10/47
ANL-5121	Engineering Properties Of Diphenyl	K. Anderson	U	8/11/53
BNL-254 (L-97)	Russian Translations Aquired January-June, 1953	Brookhaven Nat'l Lab.	U	
CIRC-301	Stratigraphic Sections Of The Phosporia Formation In Idaho, 1947-48, Part 2	V. McKelvey et al	U	
CIRC-306	Stratigraphic Sections Of The Phosphoria Formation In Utah, 1949-51	T. Cheney et al	U	
COO-104	Radiation Damage Research-Second Quarterly Report-October 1 To December 31, 1952	Purdue University	U	3/31/53
DC-53-10-100	Test Of Aerodyne Dust Collector-A Report To The Los Alamos Air Cleaning Meeting September 21, 1953.	W. Smith	U	
HE-150-114	Cone Drag In A Rarefied Gas Flow	D. Ipsen	U	8/10/53
HE-150-115	Heat Transfer To A Cylinder For The Free Molecule Flow Of A Non-Uniform Gas	S. Bell	U	9/14/53

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HW-26502	Facilities For Decontamination Of Laboratory Equipment	O. Olson J. Gifford	U	6/30/53
HW-29193	Metabolism Of Hydrogen Isotopes By Rapidly Growing Chlorella Pyrenoidosa Cells	D. Weinberger J. Porter	U	9/1/53
ISC-228	The Titanium-Vanadium System	R. Powers H. Wilhelm	U	9/52
ISC-342	Structure Of The Rare Earth Metals At Low Temperatures	J. Banister et al	U	3/53
ISC-356	Correlation Of Vickers Hardness Number, Modulus Of Elasticity, And The Yield Strength For Ductile Metals	E. Arbtin, Jr. G. Murphy	U	6/53
LRL-64	Static Corrosion Of Aluminum Alloys At 350°F And 480°F In Distilled Water	P. Strom M. Boyer	U	10/53
Misc 1953-29 No. 55	Translated Contents Lists Of Russian Periodicals No. 55 October 1953	Dept. of Industrial Res. London	U	
Misc 1953-58 Vol. 3 No 1	Isotopics--Announcements Of The Isotopes Division	AEC OR	U	1/53
Misc 1953-58 Vol 3 No 2	Isotopics--Announcements Of The Isotopes Division	AEC OR	U	4/53
Misc 1953-58 Vol 3 No 3	Isotopics--Announcements Of The Isotopes Division	AEC OR	U	7/53
Misc 1953-126 No. 24	Microcard Availability List No. 24	AEC TIS OR	U	
Misc 1953-126 No. 25	Microcard Availability List No. 25	TIS OR	U	
Misc 1953-197	The Production Of Fast Lithium, Beryllium, Boron Fragments From Interactions Of Primary Cosmic Ray Nuclei	J. Noon et al	U	
MIT-ELEC-TEC-Rpt. 125	An Induction Method Of Measuring Electrical Resistivity	H. Rorschach, Jr. M. Herlin	U	10/12/52

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MIT-ELEC-TEC-Rpt 259	The Use Of Frequency Modulation For Television Transmission	R. Stuart et al	U	7/6/53
MIT-SSMT-Rpt. No. 2 5/1/52	Technical Report No. 2-Determination Of The Dielectric Constant And Conductivity Of Germanium By Microwave Methods	H. Hsieh	U	5/1/52
MIT-SSMT-QPR-Rpt. 10 10/15/53	Quarterly Progress Report No. 10	MIT	U	10/15/53
Monograph-2083	Vitreous Silica For Ultrasonic Delay Line Applications	E. Pennell	U	9/52
Monograph-2098	A Simplified Universal Turing Machine	E. Moore	U	9/8/53
Monograph-2103	The Properties Of Germanium Photo-Transistors	J. Shive	U	4/7/53
Monograph-2108	Properties Of Junction Transistors	K. Smith	U	1/53
Monograph-2110	Component Unreliability In Military Equipment	O. Eliason	U	10/1/52
Monograph-2111	Outdoor Exposure Testing Of Racks And Test Fences	K. Compton	U	2/52
Monograph-2112	Calibration Of The Rolling Ball Viscometer	H. Lewis	U	3/53
Monograph-2115	A Study Of Non-Blocking Switching Networks	C. Clos	U	3/53
Monograph-2116	Ferrite Core Inductors	H. Stone, Jr.	U	3/53
Monograph-2120	Transmission-Properties Of Clogston Type Conductors	E. Vaage	U	5/53
Monograph-2121	An Improved Circuit For The Telephone Set	A. Bennett	U	5/53
Monograph-2122	A Coupled Resonator Reflex Klystron	E. Reed	U	5/53

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Monograph-2123	Theory Of Magnetic Effects On The Noise In Germanium Filament	H. Suhl	U	5/53
Monograph-2125	Use Of Polyethylene As A Capacitor Dielectric	M. Wooley et al	U	1/22/53
Monograph-2127	Electron Ejection From MO By $\text{He}^+$ , $\text{He}^{++}$ , And $\text{He}_2^+$	H. Hagstrum	U	1/53
Monograph-2130	The First Five Years Of The Transistor	M. Kelly	U	
MTA-39	An Automatic Sweep Unit For Single Channel Pulse Height Analyzers	G. O'Kelley	U	10/53
NACA-Abstract No. 51	Current NACA Reports	Committee for Aeronautics	U	10/23/53
NAA-SR-253	Circulation Of Lead-Bismuth Eutectic At Intermediate Temperatures	R. Cygan	U	6/8/53
NBS-1164	Thermal Properties Of Fluorine Compounds; Heat Capacity, Entropy, Heat Content And Free Energy Functions Of Carbon Monofluoride In The Ideal Gaseous State	L. Haar C. Beckett	U	10/1/51
NBS-1439	Thermal Properties Of Fluorine Compounds: Heat Capacity, Entropy, Heat Content And Free Energy Functions Of Carbon Difluoride, Carbon Trifluoride, Carbon Tetrafluoride And Difluoroacetylene In The Ideal Gaseous State	R. Potocki D. Mann	U	2/15/52
NBS-2352	Calibration Studies Of Landsverk 5-R-50-R And 0.2-R-2-R Dual-Range Pocket Chambers And Nuclear Instrument And Chemical Corporation 0.2-R Pocket Chambers	R. Elmendorf	U	9/30/53
NBS-2681	Photographic Dosimetry-Annual Progress Report 1 July 1952 To 1 July 1953	M. Ehrlich W. McLaughlin	U	10/15/53
NM 000 018. 01.07	The Mechanism Of Local Cold Injury	H. Meryman	U	6/2/53

Index Number	Title	Author	Classification	Date
NM 005 048. 10.01	The Effect Of X-Irradiation On The Immunity Of Mosquitoes To Malarial Infection	L. Terzian	U	5/26/53
NM 007 081. 02.11	Plasma Potassium Curves In The Rabbit, Following Single And Repeated Injections Of Potassium Chloride	R. Truscoe R. Zwemer	U	5/18/53
NP-4650	Scintillation Counters For Radiation Instrumentation-Final Report For The Period July 1, 1948 To December 15, 1951	P. Davison et al	U	12/15/51
NP-4860	A Proposed Approach To The "Chelate Effect"	A. Adamson	U	
NP-4875	Properties Of Solutions In The Neighborhood Of The Critical Temperature Of The Solvent-Third Technical Report-Period Covered: 1 February 1951--31 July 1953	S. Benson et al	U	8/15/53
NP-4902	Technical Report No. 28-The Effect Of Prestraining Under Different Stress States On The Fracture And Flow Properties Of 2S-O Aluminum	I. Rozalsky	U	10/53
NP-4912	Technical Report-Covering The Period January 1, 1953 To July 1, 1953	R. Carpenter et al	U	
NRL-4217	A Radio-Frequency Circuit For Use In The 300 To 1000 Mc Range	F. Isely	U	8/7/53
NSF-tr- 90	The Electrical Conductivity Of Cuprous Oxide	A. Andriyev- sky et al	U	10/53
NSF-tr- 91	Kinetics Of The Destruction Of Superconductivity By A High Frequency Field	I. Lifshits M. Kaganov	U	10/53
NSF-tr- 93	The Transition Effect For Slow Mesons	A. Vaisenberg	U	10/53
NSF-tr- 94	Atomic Interaction At Distances Smaller Than $5 \times 10^{-9}$ Centimeters	O. Firsov	U	10/53

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NS F-tr-95	The Effect Of Plastic Deformation Arising During Decomposition Of A Solid Solution On The Rate Of Growth Of A Nucleus Of The New Phase	L. Aleksandrov B. Lyubov	U	10/53
NYO-1588	Performance Of Commercial Dust Collectors (Report Of Field Tests)	R. Dennis et al	U	11/2/53
NYO-3763	Technical Progress Report "Graphitization Of Carbon"	V. Frechette Y. Tao	U	9/30/53
NYO-3822	Shorting And Field Corrections In Hall Measurements Technical Report-Contract AT-(30-1)-1002 Scope II D. I. C. 6832	W. Flanagan et al	U	8/1/53
ORNL-1493	The General Methods Of Reactor Analysis Used By The ANP Physics Group	C. Mills	U	11/4/53
RME-3050	Fracture Pattern Of The Zuni Uplift	A. Gilkey	U	6/53
RME-3054	Petrographical Investigations Of The Salt Wash Sediments Progress Report, March 1 To June 1, 1953	J. Griffiths et al	U	6/53
RME-3057	Interpretation And Valuation Of Uranium Occurrences In The Bird Spring And Adjacent Mining Districts, Nevada-Progress Report	C. Behre, Jr. P. Bargon, Jr.	U	8/31/53
RME-4032	Preliminary Drilling At The Nash Car Area, White Canyon District, San Juan County, Utah	P. deVergie	U	3/10/53
SEP-132	Solid State Bonding Of Aluminum And Nickel	S. Storchheim et al	U	7/8/53
U26000-U26099 U26100-U26199 U26200-U26300	Technical Information Pilot	Library of Congress	U	6/2/53
UCLA-270	An External Condenser Aperture Centering And Interchanging Device For The RCA Emu Electron Microscope	F. Bishop	U	10/28/53

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UCLA-271	Influence Of Water Soluble Vitamin E On Survival Time In Radiated Mice	T. Haley et al	U	11/2/53
UR-279	The Effect Of A Protein Free Diet On Recovery From X-Irradiation Injury In The Rat	M. Schlesinger, Jr.	U	9/11/53
UR-285	Some Errors In The Determination Of Calcium In Blood Serum	P. Chen, Jr. T. Toribara	U	10/12/53
USAF- Rpt. No. 5	The Effect Of Rapid Freezing And Thawing On Human Newborn And Adult Skin	C. Pomerat R. Lewis	U	8/53

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Index Number	Title	Author	Classifi- cation	Date
UCRL-2345	Medical And Health Physics Quarterly Report April, May, June, 1953		U	9/21/53
UCRL-2392	List Of Unclassified Reports Re- ceived In The UCRL Information Division During The Period Of October 16-31, 1953		U	11/2/53