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LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED BY THE UCRL INFORMATION DIVISION DURING THE PERIOD OF MARCH 1-15, 1957

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Radiation Laboratory
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March 18, 1957

Index Number	Title	Author	Date
	BIOSCIENCES		
*AD-88913	Radiation Sensitivity of Meat Spoilage Microorganisms. Report No. 9 (Termination) [for] June 15, 1954-January 14, 1956	C. F. Niven, Jr. Am. Meat Inst. Foundation, Chicago	
*AD-93752	Development of a Method of Radiation Sterilization of Foods without Adverse Flavor and Chemical Changes. Progress Report No. 5 [for] December 1, 1954-March 31, 1955.	B. E. Proctor Mass. Inst. of Tech. Cambridge	
AERE-HP/R-2017	The Radiological Dose to Persons in the U. K. due to Debris from Nuclear Test Explosions prior to January 1956	N. G. Stewart R. N. Crooks E. M. R. Fisher	9-56
*AF-SAM-55-110	An Attempt to Demonstrate a Lethal Toxin in the Blood of Irradiated Rats	J. R. Lott J. L. Wilding Texas Univ. Radiobio. Lab.	5-4-55
*AF-SAM-55-135	Urinary Coproporphyrin Excretion of Rats Following Gamma Irradiation	E. H. LaBrosse J. E. Smith same	6-8-55
*AF-SAM-56-18	The Effect of Reduced Food Intake on the Hyperlipoproteinemia of Local Radiation Injury	N. Weiner L. J. Milch G. E. Shults School of Aviation Medicine, Randolph AFB, Texas	5-56
*AF-SAM-56-51	Susceptibility to Oral Infection in Mice as a Function of Post-irradiation Time	E. H. Perkins D. M. Donaldson S. Marcus Utah Univ.	11-28-55

*Microcard

*AF-SAM-56-65	Survival of Altitude-Acclimatized Rats Following 800 R Whole-Body X-Irradiation	E.B. Konecci D. Criscuolo M.B. Danford Sch. of Aviation Medicine Randolph AFB Texas	1-13-56
*AF-SAM-56-85	Effects of High Intensity X-Irradiation on the Retina. A Histological, Histochemical, and Chemical Study in the Rabbit.	S.P. Kent A.A. Swanson same	3-5-56
*AMRL-251	Thallium 204 Beta-Excited X-Radiography	J.G. Kereiakes G.R. Kraft Army Med. Res. Lab. Fort Knox	5-15-56
ANL-5655	Biological and Medical Research Division Quarterly Report [for] July, August, September, 1956		12-56
*AWRE-0-35/56(X)	Dose Rates from Ground Contaminated with Residual Radioactive Materials from an Atomic Explosion	G.C. Dale J.C. Bomyer Gt. Brit. Atomic Weapons Res. Es. Aldermaston Berks, England	8-31-56
BNL-396	Genetics in Plant Breeding. Report of Symposium Held May 21 to 23, 1956		12-56
BNL-425	The Design and Calibration of the Instrument Tunnel for Irradiations of Biological Material	H. J. Curtis N Delihas	12-56
KAPL-1689	Health Physics Report for July, August, September 1956		
MISC-1957-41, H.R. 4820	85th Congress, 1st Session, House of Representatives. A Bill to Produce for Research, Study, and Prevention and Treatment of Effects of Atomic and Nuclear Radiation on Human Health, Development, and Living Conditions, and for other Purposes, Introduced February 14, 1957, by Mr. Porter, and Referred to the Committee on Interstate and Foreign Commerce.	U.S. Congress	
MISC-1957-41, S. 1228	85th Congress, 1st Session, Senate. A Bill to Amend the Public Health Service Act to Establish as One of the National Institutes of Health a National Radiation Health Institute, and for Other Purposes, Introduced by Mr. Neuberger (for Himself, Mrs. Smith of Maine, Mr. Morse, Mr. Murray, Mr. Mansfield, Mr. Humphrey, Mr. Jackson, Mr. McNamara, and Mr. Magnuson) February 14, 1957, Read Twice, and Referred to the Committee on Labor and Public Welfare	same	

MLM-961	The Effects of Repeated Polonium Injections on Rats. I. Gross Effects and Metabolism of 2 μC/Kg Doses	R. K. Davis W. T. Rockhold D. S. Anthony	4-9-54
UCLA-391	Healing Bone Fractures, Studied by Simultaneous Administration of Radioisotopes of Sulfur, Calcium and Yttrium	N. S. MacDonald P. C. Lorick L. I. Petriello	2-25-57
UCSF-14	Semiannual Report for Period Ending December 31, 1956	Calif. Univ. S. F. Sch. of Med. Radiological Lab.	2-57
USNRDL-TR-122	Bacteriological Studies on Mice Exposed to Supralethal Doses of Ionizing Radiations. I. Radiation from a Nuclear Source., II. Fast Neutron and X Radiation from Laboratory Sources	M. S. Silverman V. P. Bond	11-20-56
USNRDL-TR-128	The Effect of Dose Rate Upon Iron Incorporation into Newly Formed Erythrocytes of Rats Exposed to Gamma Radiation	S. J. Baum D. J. Kimeldorf	12-20-56

CHEMISTRY

*A-718	The Operation of a Dual-Temperature Single Stage Tower for Deuterium Concentration	M. L. Eidinoff C. F. Hiskey Columbia Univ.	5-28-43
*A-740	Production of Fluorinated Lube Oil. Problem Report	R. G. Benner DuPont de Nemours (E. I.) and Co. Jackson Lab., Wilmington, Del.	5-7-43
*A-1241	The Oxidation of Uranium Oxide-Water Slurries by Hydrogen Peroxide	C. A. Hutchison J. S. Smith A. M. Lyon Columbia Univ.	2-15-44
*A-3626	Quantitative Electroplating of Uranium for Isotopic Analysis Using Nickel and Monel as Base Metals. Includes Supplement No. 1.	C. McAuliffe J. A. Klacsmann J. S. Fox Carbide and Carbon Chem. Co. K-25	2-27-46 and 4-1-46
*A-3648(Del.)	A Spectrographic Method for the Determination of Molybdenum in UF_6	E. H. Leslie S. J. Kiehl, Jr. same	3-1-46

*Microcard

*AD-86432	Ferroelectric and High Dielectric Crystals: Dielectric Properties and Phase Transitions of $NaNbO_3$ and $(Na, K)NbO_3$	G. Shirane R. Newnham R. Pepinsky Penn. State Univ.	11-1-54
*AD-89082	Effect of Irradiation on Solids. A Bibliography	H. H. Hausner H. C. Friedemann Sylvania Electric Products, Inc.	
*AD-95105	The Chemistry of Boron Hydrides and Related Hydrides.	R. W. Parry G. Kodama S. G. Shore, et al Michigan Univ.	5-56
*AD-95183	Determination of Oxygen in Titanium, Zirconium, Chromium, Vanadium and Steels by the Bromination-Carbon Reduction Method. Technical Report.	M. Codell G. Norwitz Frankford Arsenal	3-9-56
*AEDC-TN-56-12	Tables of Thermodynamic Properties of Argon-Free Air to 15,000° K	J. Hilsenrath C. W. Beckett National Bureau of Standards	9-56
*AERE-C/M-119	An Attempt to Determine "Butex Soluble" Ruthenium in Nitric Acid Solutions of Irradiated Uranium, Using Partition Chromatography.	G. W. C. Milner L. Salmon	8-1-51
*AERE-C/M-160	A Low Pressure Micro-Combustion Apparatus for the Determination of Carbon in Plutonium. Preliminary Report.	J. A. W. Dalziel J. N. Gregory D. Mapper	9-29-52
AERE-C/M-283	The Preparation of Pure Zirconia for Use as a Spectrographic Standard	D. L. G. Smith F. E. Wild United Kingdom At. Energy Auth. Res. Group. Chem. Div. Woolwich Outstation, Eng.	8-56
*AERE-C/M-286	The Isolation of Protactinium From Springfields Ethereal Sludge An Appreciation	H. A. C. McKay	7-20-56
*AERE-C/M-288	The Emission of Active Rare Gases from Uranium-Bismuth Systems during Neutron Irradiation	F. J. Stubbs G. N. Walton P. J. Wilver	9-20-56
*AERE-C/R-453	The Estimation of Nitric Acid in the Presence of Uranyl Nitrate and Ammonium Nitrate. "The Oxalate Method."	L. Airey E. Furby J. A. Woodward	12-49

*Microcard

*AERE-C/R-1391	Outline of a Solvent Extraction Process for the Separation of Niobium from Ores or from Ferroniobium	D.F.C. Morris A.G. Wain J.M. Fletcher	3-54
AERE-C/R-2034	Alpha-Emitters in Fission Product Wastes	H.A.C. McKay	9-56
AERE-C/R-2041	Orthophosphoric Acid as a Solvent and Base Electrolyte in Direct Inorganic Polarographic Analysis	G.W.C. Milner L.J. Slee	9-2-56
AERE-C/R-2042	Integrated Current Source for Automatic Coulometric Titrations	L.E. Smythe	9-56
AERE-C/R-2049	Polonium Monosulphide	K.W. Bagnall D.S. Robertson	9-18-56
*AERE-CE/M-175	The Dewatering of Thoria Slurries with a Sharples P-4 Continuous Solids Discharging Centrifuge	D. Pepper D. Bradley	7-20-56
*AERE-CE/R-1473	Heavy Water: A Review of Some Possible Methods of Production	D.R. Augood	6-54
AERE-CE/R-1698	A Contribution to the Study of Comminution. A Modified form of Kick's Law	J.A. Holmes	7-56
AERE-CE/R-1820	Liquid-Liquid Extraction. Part X. Overall Mass Transfer Coefficients on an Area Basis for the Extraction of Acetone in Packed Columns	R. Gayler H.R.C. Pratt	7-56
AERE-CE/R-2025	The Colorimetric Determination of Traces of Iron in Bismuth	D.G. Holmes J. Smith H.M. Coombes	11-56
*AERE-HP/M-106	The Response of a G.M. Tube to the Radiation from a Uniformly Distributed Radioactive Source in Air	H.J. Gale R.N. Crooks J.E. Richards	6-5-56
AERE-HP/M-110	Air Sampling with the Annular Impactor	D.C. Stevens	8-28-56
*AERE-HP/R-1905	A Low Background Counting Equipment with Anticoincidence Array	S.J. Cocking H.J. Delafield J.W. Smith	1-55
AERE-Inf/Bib-104	Methods of Measuring the Thermal Conductivity of Solids. A Bibliography	G.L. Cooper	7-56
AERE-Lib/Trans-821	On the Polymorphism of Beryllium Fluoride, by D.F. Kirkin, A.V. Novoselova, and Yu. (i.e., Iu.) P. Simanov. Trans. from Akademiia Nauk, SSSR. Doklady 107, 837-8 (1956)		
AERE-M/M-130	Neutron Induced Nuclear Reactions in Solids Resulting in Gas Formation	G.B. Redding R.S. Barnes	10-4-56

*Microcard

AERE-M/R-2006	An Optical Method of Studying the Diffraction from Imperfect Crystals. Part I. Modulated Structures. Part II. Crystals with Dislocations	B. T. M. Willis	7-56
*AF-SAM-56-59	A Direct Determination of the Gamma Emission from a Po-Be Source	H. M. Borella S. C. Sigoloff L. C. Logie School of Av. Medicine, Randolph AFB, Texas	12-16-55
*BM-RI-5213	Effect of Temperature on the Electrostatic Separation of Minerals	F. Fraas Bureau of Mines	8-55
*BM-RI-5239	Separation of Tantalum-Columbium by Solvent Extraction	K. B. Higbie J. R. Werning same	12-55
*BM-RI-5256	Spectrochemical Analysis of Titanium and Titanium Alloys by a Porous Cup-Spark Method	M. J. Peterson same	1-56
*BMI-1115	Investigation of Ammonium Uranates	R. A. Ewing S. J. Kiehl, Jr. A. E. Bearse	7-19-56
BMI-1154	Studies Relating to the Reaction Between Zirconium and Water at High Temperatures	A. W. Lemmon, Jr	1-3-57
BNL-429	Ionization Chamber Radioisotope Comparator	R. I. Weller	11-56
CF-56-7-95	Raw Materials Process Testing Engineering Section Progress Report for April 1956	A. D. Ryon K. O. Johnsson Oak Ridge Nat'l Lab.	7-17-56
CF-57-1-93	Estimation of the Thermal Conductivity and the Viscosity of Gases at High Pressure	R. N. Lyon same	1-17-57
CRDC-653	Irradiations of Uranium Trioxide-Water Slurries in the NRX Reactor	A. W. Boyd J. L. Whitton At. Energy of Canada Chalk River Project	6-56
DOW-154	Progress Report [for] January, February, 1957	R. H. Bailes	
HW-43541	Automatic Sample Changer	M. O. Rankin R. A. Harvey	1-3-57
IDO-14393	Determination of Uranium in Solution by X-Ray Spectrometry	H. M. Wilson G. V. Wheeler	2-10-57

*Microcard

*IGR-R/CA-180	A Special Mass Spectrometer for the Isotopic Analysis of Lithium	P.G. Bentley J. Bishop D. Davidson Gt. Brit. Capenhurst Works, England	7-13-56
IGR-TN/C-418	Reactions of the Alkali Metals with Gases. Part VII. The Reaction of Sodium with Water Vapour	P.B. Longton Gt. Brit. Culcheth Labs., Culcheth Lancs, England	12-56
ISC-672	The Absolute Infrared Absorption Band Intensities of the Methylene Group Vibrations of Some Methylene Halides	Richard Hedges H. Shull Ames Lab	8-55
ISC-714	Electrical Properties of Magnesium Silicide and Magnesium Germanide	C.R. Whitsett G.C. Danielson same	7-55
ISC-757	Semi-Annual Summary Research Report in Chemistry for Jan.-June, 1956	Ames Lab	10-12-56
Misc-1957-58	Isotopic Exchange and Evolution of Metal Surfaces in Electrolytic Solutions. Notas de Física, Vol. 3, No. 8	U. Camerini, J. Danon, M. Malagolowkin Rio de Janeiro. Centro Brasileiro de Pesquisas Físicas	12-26-56
MLM-1031	The Coprecipitation of Rare Earth Iodates with Thorium Iodate Precipitated from Homogeneous Solution	K. Shaver	1-5-55
Monograph 2682	The Use of an Interference Microscope for Measurement of Extremely Thin Surface Layers. Reprinted from Bell System Technical Journal 35, 1209-22 (1956)	W. L. Bond F. M. Smits Bell Telephone	1-57
Monograph 2698	Refined Theory of Ion Pairing. I. Equilibrium Aspects. II. Irreversible Aspects. Reprinted from Journal of Chemical Physics 25, 400-13 (1956)	H. Reiss same	1-57
Monograph 2700	Theory of the Ionization of Hydrogen and Lithium in Silicon and Germanium. Reprinted from Journal of Chemical Physics 25, 681-6 (1956)	H. Reiss same	1-57
Monograph 2702	Solubility of Lithium in Doped and Undoped Silicon; Evidence for Compound Formation. Reprinted from Journal of Chemical Physics 25 650-5 (1956)	H. Reiss C. S. Fuller A. J. Pietruszkiewicz same	1-57

*Microcard

NAA-SR-1793	Equilibrium Considerations on Uranium Dioxide Drossing of Irradiated Uranium	A. G. Buyers E. W. Murbach	3-1-57
NAA-SR-1797	Basic Chemistry of High Temperature Inorganic Systems. Semiannual Progress Report [for] January - June, 1956	S. J. Yosim T. A. Milne	3-1-57
NBS-5046	Ortho-Para Catalysis in Liquid-Hydrogen Production	D. H. Weitzel J. W. Draper W. V. Loebenstein et al	2-15-57
NYO-4611	Air Cleaning Studies. Progress Report for July 1, 1954 to June 30, 1955	R. Dennis L. Silverman C. E. Billings et al Harvard Univ.	10-15-56
UR-475	Charging and Precipitation Characteristics of Sub-Micron Particles in the Rohmann Electrostatic Particle Separator	T. T. Mercer Rochester, N. Y. Univ.	2-14-57
* WADC-TR-55-351	Testing of Silicone Rubber at Elevated Temperatures	A. J. DeFrancesco Conn. Hard Rubber Co.	1/56
*WADC-TR-56-168	Silicone Fluid Research for the Development of High Temperature Hydraulic Fluid and Engine Oils	E. D. Brown N. G. Holdstock J. M. McGuire Gen. Elec. Co. Silicone Products Dept.	3/56
*WADC-TR-56-188	Studies of the Chemical-Physical Nature of Adhesion	P. E. Berghausen R. J. Good W. Sollen Cinn. Univ. Applied Science Res. Lab.	7/56
* WADC-TR-56-203	Coordination Polymers	W. C. Fernelius Penn. State Univ.	4/56.
* WADC-TR-56-370	Research in High Temperature Bearing Lubrication in the Absence of Liquid Lubricants	C. H. Bailey S. S. Sorem Shell Dev. Co.	5/56
*WAPD-PWR-CP-1717	Stripping of Trace Amounts of Xe^{133} from Aqueous Solution	A. S. Kesten	1/18/56
*Y-361	Progress Report on Shale Studies for the Month of February 1949	K. B. Brown W. R. Grimes C. D. Susano	3/14/49
*Y-379	Progress Report on Shale Studies for the Month of March 1949	same	4/11/49

*Microcard

*Y-404	Progress report on Shale Studies for the Month of April 1949	K.B.Brown W.R.Grimes C.D.Susano	5-11-49
*Y-464	Recovery from Shale Leach Liquors as Uranous Phosphate	W.R.Grimes G.H.Clewett	8-9-49
*Y-B20-81	Fundamentals Conferences--December 1948 to September 1949	F.T.Howard	11/50
*Y-B22-18	Collection of Ions in Cyclorator	R.Murray	1 /29/48
*Y-B22-27	Mathematical Discussion of Collection Properties in Cyclorator Considering Magnetic Field Effect	M. Rankin	3-14-49

ENGINEERING

*A-3344	Thread Investigation. Closing Report on Hawley Development Project No. 74. Includes Supplement on Project 74-A and B	G.S.Fritsch Allis-Chalmers Mfg. Co.	7-25-44
*A-3784	Magnetic Thrust Bearing	W.D Williams Gen.Elec.Co.	6-27-44
*AD-63661	Investigations on Utilization of Radioactive Energy as a Source of Battery Power. Quarterly Report No. 2 (No. 10 in the Series) [for] November 1, 1954 to January 31, 1955	A.Thomas Tracerlab, Inc.	3-4-57
*AD-63670	Investigations on Utilization of Radioactive Energy as a Source of Battery Power. Quarterly Report No. 1 (No. 9 in the Series)[for] August 1, 1954 to October 31, 1954	same	
*AD-69290	Investigations on Utilization of Radioactive Energy as a Source of Battery Power. Quarterly Report No. 3 (No. 11 in the Series) [for] February 1, 1955 to April 30, 1955	A.Thomas I.DiBello same	
*AD-79731	Investigations on Utilization of Radioactive Energy as a Source of Battery Power. Final Report (No. 12 in the Series)[for] August 1, 1954 to October 31, 1955	same	
*AD-92461	A Selective Bibliography Applying to Heat Transfer in Oscillating Flow. Literature Search No. 7	M.H.Smith J.P.Layton Princeton Univ.	3-9-55
*AD-94819	Tabulation of Fatigue Test Data Using IBM Computing Techniques Summary of Phase I.	A.J.Belfour Parsons Corp. Traverse City, Mich.	4-27-56
*AD-94820	Instructions for Tabulating Fatigue Test Data for Entry of IBM Punch Cards.	same	4-27-56

*Microcard

*AD-95121	Heat Transfer and Friction Characteristics of Screen Matrices at High Reynolds Numbers. Technical Report No. 28	L. S. Tong Stanford Univ.	4-56
*AD-106844	Proceedings of the First Annual Statistical Engineering Symposium April 28-29, 1955	D. R. Howes T. M. Vining Chem. Corp Army Chem Center, Md.	9-2-55
*AEDC-TR-55-11	Analysis of Gas Flow Systems for Dynamic Control Purposes	W. K. McGregor, Jr. D. W. Russell R. W. Messick, et al Arnold Eng. Dev. Center Tullahoma, Tenn.	4-56
*AERE-9ER/3	Heat Transfer Problems in Uranium Rods	J. Woodrow	5-1-47
* AERE-ED/M-23	Summary of Known Performance of E. M. Pump Types	R. J. O'Connor	9-55
AERE-ED/M-26	Effect of Eccentricity on Temperature Distribution in Liquid Metal Double-Annulus Heat-Exchanger	J. Woodrow	8-31-55
AERE-Inf/Bib-108	Bibliography on Pressure Die-Casting Equipment	G. L. Cooper	10-56
AERE-R/R-1977	Rig for the Measurement of Radial Load on Small Centrifugal Pump Inpellers	A. P. Coggon	4-56
*AERE-X/M-163	A Preliminary Investigation of the Drag caused by a Mercury Jet on a High Speed Surface	P. L. Read Cambridge Univ.	3-25-56
*AGARD-2	Thermal Problems in Aircraft Structures	N. J. Hoff No. Atlantic Treaty Org. Paris. Adv. Grp for Aeronautical Res. and Dev.	6-55
*AGARD-3	Aircraft Structures Research at Elevated Temperatures	J. E. Duberg same	9-55
Monograph 2686	A Sixty-Foot Diameter Parabolic Antenna for Propagation Studies. Reprinted from Bell System Tech. Journal 35, 1199-1208 (1956)	A. B. Crawford H. T. Friis W. C. Jakes, Jr. Bell telephone	1-57
ORNL-2110	Analysis and Design of the Frozen Seal	J. F. Bailey	3-8-57
*WADC-TR-55-348 (Vol. 1)	Three-Dimensional Flow in Axial-Flow Turbo-Machinery	L. H. Smith, Jr. John Hopkins Univ.	8-55
*WAPD-CTA)CE)-47	Photoelastic Tests of Pressure Vessel Closures	B. F. Langer	11-16-55

*Microcard

METALLURGY AND CERAMICS

*AD-85559	Research on Peltier Effect Cooling. Final Report	E. Miller I. Cadoff M. Telkes New York Univ.	8-31-55
*AD-89650	Evaluation of New High Temperature Materials. Progress Report No. 2 [for] December 1, 1955-February 29, 1956	R. D. Grinthal Schwarzkopf Dev. Corp Yonkers, N. Y.	
*AD-89698	Development of a High Temperature Impregnant. Final Report	A. G. Metcalfe C. H. Sump Illinois Inst. of Tech. Chicago. Armour Res. Fd.	11-1-55
*AD-90140	Oxidation-Resistant Coatings for Molybdenum. Progress Report for the Period October 1, 1955-December 30, 1955	J. R. Blanchard Climax Molyd.Co. Detroit	
*AD-90747	Titanium Project. Progress Report for the Period January 1-February 29, 1956. Report No. 4	C. B. Dittmar G. W. Bauer Mallory-Sharon Titanium Corp., Niles, Ohio	3-6-56
*AD-94417	The Construction of a Furnace Calorimeter and the Evaluation of a Method of Thermal Analysis for Obtaining the Specific Heat of Solids at High Temperatures (thesis)	J. A. Rea Okla. Agr. and Mec. Coll. Stillwater	5-56
AECU-3381	Measurement of Thermal Conductivity of Uranium Oxide. Final Report	J. C. Hedge Ill. Inst. of Tech.	9-20-56
*AERE-C/M-115	Electron Diffraction in the Study of Surface Corrosion Reactions	B. A. J. Lister	7-2-51
*AERE-CE/M-178	The Preparation of Uranium-Cerium Alloy on the 500g. Scale	F. Roberts R. F. Taylor	8-56
AERE-Lib/Trans-672	Theory of Plastic Deformation of Metals, by N. S. Akulov and P. P. Galenko. Trans. from Akademiia Nauk, SSSR. Doklady 103, 387-90 (1955)		
*AERE-M/M-9	Memorandum on Columbium and Tantalum	A. Blainey	5-9-49
*AERE-M/M-92	An Assessment of the Stability of Niobium Containing Oxygen, Nitrogen or Carbon	H. J. Hedger	7-55
AERE-M/M-127	The Spontaneous Fragmentation of Thorianite on Heating	R. S. Barnes D. J. Mazey	8-56

*Microcard

AERE-M/R-1934	A Preliminary Study of Three Cermets Based on Uranium Oxide	L. S. Williams D. T. Livey E. Barnes et al	5-4-56
*AERE-M/R-2038	The Preparation of Bismuth for Use in a Liquid Metal Fuelled Reactor	G. W. Horsley	8-27-56
AERE-M/R-2045	The Annealing of Point Defects in Cold Worked Molybdenum	D. G. Martin	9-3-56
AERE-M/R-2062	The Effect of Neutron Irradiation on the Mechanical Properties of Metals. Part II. Molybdenum and Tungsten	J. J. Makin E. Gillies	9-56
*AERE-X/M-87	Sintering of Zirconium	Y. C. Chuang Liverpool Univ.	12-51
*AGC-AE-16	The Reaction of Molten Metal with Water. Monthly Progress Report [for] February 1 through February 29, 1956	Aerojet Gen. Corp Azusa, Calif.	3-29-56
*ARDE(M)-2/56	An Exposure Calculator for Gamma-Radiography	R. S. Morgan Gt. Brit. Arm. Res. and Dev. Es., Fort Halstead, Kent, England	2-56
BMI-1160	Corrosion Studies in Organic Heat-Exchange Media	W. K. Boyd G. L. Ericson O. M. Stewart, et al	1-28-57
CF-57-1-143	Stress-Corrosion Cracking Problems in the Homogeneous Reactor Test	E. G. Bohlmann G. M. Adamson Oak Ridge Nat'l Lab	1-31-57
COO-310	Brazing Beryllium Tubing to High-Temperature Alloy Collars	K. G. Wikle R. Magalski Brush Beryllium Co.	6-56
HW-40778	A Rechargeable Pressurized Fuel Element Irradiation Facility	D. C. Kaulitz T. W. Evans	1-18-57
IGR-R/R-198	Plastic Flow and the Swelling of Gas Bubbles in Uranium	J. A. Enderby Gt. Brit. Dept. of At. En. Industrial Group H. Q., Risley, Lancs, England	11-56
Misc-1957-62	Preliminary Investigation of Surface Effects in Flow and Fracture. Technical Report No. 16	T. L. Johnston E. R. Parker Calif. Univ. Berk. Minerals Res. Lab	1-57

*Microcard

Monograph 2681	Quenched-In Recombination Centers in Silicon. Reprinted from Physical Review 102, 567-9 (1956)	G. Bemski Bell Tele. Labs.	1-57
NYO-3500	The Welding of Type 347 Steels. Statistical Analysis of Effects of Various Elements on the Crack Sensitivity of Fully Austenitic Type 347 Welds	A. Hoerl T. J. Moore Arcos Corp. Philadelphia	10-29-56
SEP-213	Nucleation of Voids in Metals During Diffusion and Creep	R. Resnick L. Seigle Sylvania Elec. Products	5-24-56
TID-7526 (pt. 1)	Metallurgy Information Meeting, Ames Laboratory, Iowa State College, May 2, 3, and 4, 1956	Ames Lab.	2-57
*WADC-TR-55-352	Structural Changes in Commercial Titanium and Titanium-Base Alloys on Heat Treatment	S. A. Spachner R. F. Domagala A. W. Goldenstein et al Ill. Inst. of Tech.	2-56
*WADC-TR-56-15	The Effects of Gamma Radiation on Textile Materials	J. McGrath R. H. Johnson Wright Air Dev. Center	2/56
*WADC-TR-56-99	Mechanical Property, Corrosion and Welding Studies on 6066 Aluminum Alloy	J. D. Wood same	6/56
* WADC-TR-56-121	The Combined Effects of Carbon, Oxygen, Nitrogen and Hydrogen on the Properties of Titanium Sheet Weldments	J. F. Rudy same	6-56
* WADC-TR-56-146	Properties of Active Eutectoid Titanium Alloys	R. F. Bunshah H. Margolin New York Univ.	6-56
*WADC-TR-56-170	Metallography of Aluminum Powder Extrusions	F. V. Lenel E. C. Nelson G. S. Ansell et al Rensselaier Polytechnic Inst.	7-56
*WADC-TR-56-190	A Study of the Possibility of Reinforcing High-Temperature Alloys by Addition of Refractory Powders	J. D. Burney Mallory (p. R.) and Co., Inc. Metallurgical Res. Dept. Indianapolis	4-18-56
* WAPD-T-313	Fretting Wear of Zircaloy-2 Pellets in High Temperature Water	L. A. Waldman P. Cohen	1956

*Microcard

*WAPD-T-382	The Effect of Pre-Oxidation in Oxygen on the Steam Corrosion Behavior of Zircaloy-2	D. E. Thomas S. Kass	6-13-56
*Y-1137A	Final Report of Explosion in Oak Ridge, Tennessee, Y-12 Salvage Yard Adjacent to Building 9929-1		7-20-56

PHYSICS

AERE-C/R-1901	Radiations from Water under Beta-Particle Bombardment	E. W. T. Richards	3-56
*AERE-EL/L-7	Lecture on Error and Correction in Counter Work, Counter Efficiency, and Source Geometry	R. K. Barnes	
AERE-GP/R-2071	Phase Stability in Cyclotrons with the Fixed Frequency Field Law	L. B. Mullett	10-56
AERE-GP/R-2072	Gas Scattering in Proton Synchrotrons	L. B. Mullett	10-56
AERE-Lib/Trans 667	Energy Dependence of the Fission Width, by V. G. Nosov. Trans. of Energeticheskaia zavisimost' delitel'noi shirini'i, p. 1-3, 1956		
*AERE-NP/R-1925	The Safe Assembly and Operation of the Neutron Booster	M. J. Poole G. D. James	4-56
*AERE-R/M-8	Critical Size of Solutions of Fissile Materials in Water	J. D. McCullen	
*AERE-RP/M-42	One-Group Perturbation Theory for Spherically Symmetric Reactors	J. Codd	6-2-54
*AERE-RP/R-1826	The Fine Structure Thermal Neutron Distributions in Uranium-Natural Water Lattices. Experimental Results	J. E. C. Mills C. G. Campbell	4-25-56
*AERE-T/M-46	Calculation of the Thermal Fine Structure in a Pile with Hollow Rods by the Spherical Harmonics Method	M. E. Mandl	3-16-51
*AERE-T/R-287	Measurement of Diffusion Length in a Large Block of Graphite	M. E. Clifford	1-7-49
AERE-TP/R-2063	Preliminary Design Parameters for the 6.5 GeV S/R Synchrotron	W. Walkinshaw	11-56
*AFCRC-TN-56-200	Effects of the Primary Cosmic Radiation on Matter. Air Force Surveys in Geophysics No. 78	H. Curtis Cambridge Res. Center	1-56
*ANL-5634	Table of Sin θ and Sin^2 θ for Values of θ from 2° to 87°	H. A. Plettinger	3-56
BNL-408	Twin Channel Count Integrator (EH1-503)	W. A. Higinbotham J. Tillinger	6-56
*BNL-1575	ϵ Measurements	H. Kouts G. Price	2-19-53

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*BRL-1026	Current-Pulse Testing of Magnetic Cores for Digital Computers	L. F. Silva Ballistic Res. Lab Aberdeen Proving Ground, Md.	7-56
CERN-PS/FS-3	Pulsed Proton Source for High Current	F. Schneider	1-57
HW-47284	Neutron Energies Calculated for $Be^9(d,n)B^{10}$ for Deuterons up to 2 Mev	J. DePangher	12-17-56
ISC-701	Magnetic Properties of Holmium and Thulium	B. L. Rhodes S. Legvold F. H. Spedding	12-55
Misc-1957-57	On a Non Local Relativistic Quantum Theory of Fields. Notas de Física, Vol. 3, No. 7	G. Wataghin Rio de Janeiro. Centro Brasileiro de Pesquisas Físicas	12-20-56
Misc-1957-59	Interference Phenomena of K+ -Meson Scattering by Nuclei	D. Fournet Davis Mass. Inst. of Tech.	[1957]
Misc-1957-60	Trilinear Chart of Nuclides. (2nd Edition)	W. H. Sullivan Oak Ridge Nat'l Lab	1-57
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Monograph 2705	Avalanche Breakdown Voltage in Silicon Diffused p-n Junctions as a Function of Impurity Gradient. Reprinted from Journal of Applied Physics 27, 895-9 (1956)	H. S. Veloric M. B. Prince M. J. Eder same	1-57

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NAA-SR-1811	The KEWB Program. Quarterly Progress Report [for] July-September 1956		3-1-57
NEVIS-31	Lifetime of the Neutral Pion	G. Harris J. Orear S. Taylor Columbia Univ.	
NEVIS-33	Application of a Mechanical Rectifier to a Cyclotron	J. Warren same	1-57
NEVIS-35	Parity Nonconservation and a Two-Component Theory of the Neutrino.	T. D. Lee C. N. Yang same	1-57
NEVIS-36	Remarks on Noninvariance under Time Reversal and Charge Conjugation	T. D. Lee R. Oehme C. N. Yang same	1-57
NEVIS-38	Report on Long-Lived Neutral K-Mesons; the "τ^0" Particle; Mixtures	K. Lande L. M. Lederman W. Chinowsky same	2-57
NYO-7533	The Reactions O^{16}(d, p), (d, a), and (d, d) in the Energy Range 3.4 to 4.2 Mev	E. Baumgartner H. W. Fulbright Rochester, N. Y. Univ.	2-11-57
NYO-7824	Consequences of Charge Independence for the Magnetic Moments and Masses of Σ Hyperons	R. Marshak S. Okubo G. Sudarshan same	1-25-57
*WAL-842/56	An Equation for the Self Absorption of Beta and Gamma Rays	A. Kant Watertown Arsenal Labs., Mass.	6-25-56
*WAPD-PM-31	One-Dimensional Few Group Burnout Code	P. A. Ombrellaro	11-4-55
*WASH-691	Reports on International Conference on Nuclear Reactions, Amsterdam, the Netherlands, July 2-7, 1956; Tripartite Conference on Cross Sections of Fissile Nuclei, Harwell England, July 9-13, 1956; Visits to Various European Universities and Installations.	J. L. Fowler Oak Ridge Nat'l Lab.	1956

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*AERE-C/M-282	The Gross Gamma-Activity of Fission Product Gases of Short Half-Life	F. J. Stubbs G. N. Walton P. J. Silver	7-6-56
*AERE-C/M-284	Some Aspects of Non-Gaseous Fission Products in the Homogeneous Aqueous Reactor	P. C. Davidge C. J. L. Lock	7-8-56
*AERE-E/M-72	Steady State Temperature Distributions in a Type of Reactor Channel with Reversal of Coolant Flow	D. V. Wordsworth	6-22-53
*AERE-ES/M-12	Lido Research Reactor: Protection of the Concrete from the Corrosive Action of the Water	G. J. C. Nash H. Wells	6-21-56
*AERE-HP/M-109	Safe Distances in Reactor Siting	A. C. Chamberlain W. J. Megaw	4-12-56
*AERE-NURG/M-38	The Pile-Steam Turbine Combination	O. Pulley	7-24-52
*AERE-NURG/M-54	The Choice of Steam Cycle for Use with a Pile	same	3-12-53
*AERE-R/M-86	"Zues" Interim Report	R. D. Smith	8-8-56
*AERE-R/M-87	Summary of the Investigations in the Thorium Envelope of Zephyr	J. E. R. Holmes	8-30-56
*AERE-R/M-88	Temperature Coefficient of Zephyr	B. G. Chapman J. E. R. Holmes H. Rose	9-19-56
AERE-R/R-2051	Critical Assemblies of Aqueous Uranyl Fluoride Solutions. Part I. Experimental Techniques and Results	W. G. Clarke C. C. Horton M. F. Smith	9-20-56
*AERE-T/M-81	Critical Size of a Bare Homogeneous Sphere Containing Plutonium Water-Coolant and Structural Material	J. P. Elliott	4-53
ANL-5601	Reactor Engineering Division Quarterly Report, Section II, for April, May, June, 1956		12-56
ANL-5651	Design Evaluation of BER (Boiling Experimental Reactor) in Regard to Internal Explosions	F. B. Porzel Ill. Inst. of Tech. Armour Res. Foundation	1-57
*APAE-Memo-31	Calculation of Residual Activity in APPR-1 Reactor Components After Shutdown.	F. B. Fairbanks D. C. Morse Alco Products, Inc. Schenectady, N. Y.	6-27-56

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*APAE-Memo-34	Shielding of Irradiated APPR-1 Fuel Elements	F.B. Fairbanks D.C. Morse Alco Products, Inc. Schenectady, N.Y.	7-6-56
*APAE-Memo-37	Calculation of Residual Activity in APPR-1 Shielding Rings after Shutdown	same	7-16-56
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BNL-421	The Determination of Power and Temperature Overshot in the Reactor Flash Problem	K.T. Spinney	11-56
CF-57-1-88	Secondary Refrigerant for HRT Refrigeration System	R.C. Robertson H.A. McLain Oak Ridge Nat'l Lab.	1-24-57
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ORNL-1550(Del)	The Tower Shielding Facility Safeguard Report	L.S. Abbott, ed. Oak Ridge Nat'l Lab	6-9-53
*WAPD-CE-41	Thermal Stress Produced by Temperature Transients	B.F. Langer	7-29-55
*WAPD-S5W-EP-15	Irradiation of Plastic Fuel Tapes. Part V.	P.A. Nicoll	2-56
*WAPD-TH-162	Investigation of the Effect of a Parallel Channel on Flow and Burnout Flux	H.S. Jacket J.D. Roarty G. Sonnemann	12-6-55
*WAPD-TH-180	Average and Local Heat Transfer Coefficients for Parallel Flow Through A Rod Bundle	J.R. Parrette R.E. Grimble	3-13-56
*WASH-679	Visit to Arnhem, Netherlands	U.M. Staebler	7-31-56
*WASH-681	Summary of USSR-Yugoslavia Agreement and Research Reactor	Div. of Reactor same	7-17-56
*WASH-682	Visit to the United Kingdom	same	8-3-56
*WASH-689	Summary of Meeting on Halden Reactor (Norway) April 26, 1956	same	1956
YAEC-13 (Rev. 1)	Quarterly Progress Report for the Period September 30 to December 31, 1956	Yankee Atomic Elec. Co. Boston	1-22-57

*Microcard

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*AD-25302	Outline of Research in Life and Fatigue Testing. Final Report for April 1, 1951-January 31, 1954	B. Epstein Wayne Univ.	
*AD-76224	Design of Optimum Life Test Procedures. Technical Report No. 6	same	9-30-55
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AERE-MT/N-37	Neutron Radiography	J. Thewlis R.T.P. Derbyshire	7-56
*AERE-T/M-63	Safety Factors in Plutonium Storage	M.B. Biram K.T. Spinney	
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BNL-419.	Quarterly Progress Report for July 1 - September 30, 1956		
M-6091	Reports of Limited Value	Tech. In. Service Extension AEC	
MISC-1957-41 H.R. 5010	85th Congress, 1st Session, House of Representatives. A Bill to amend Section 161 of the Atomic Energy Act of 1954, Introduced by Mr. Durham, February 19, 1957, and Referred to the Joint Committee on Atomic Energy	U.S. Congress	
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MISC-1957-50 no. 21	Twenty-First Semiannual Report of the Atomic Energy Commission for the Period July - December, 1956.	AEC Washington, D.C.	1-57
ORNL-2234	Instrumentation and Controls Division Semiannual Progress Report for Period Ending July 31, 1956		2-25-57
*WASH-672	NDA Visitors to MTR	J.R. Huffman Phillips Petroleum Co.	6-10-56
*WASH-673	Visit by NDA and Belgian National	P.D. Bush Kaiser Eng. Div.	6-15-56

*Microcard

*WASH-680	Discussions on Nuclear Energy in Austria	U.M. Staebler Div. of Reactor Dev.	7-31-56
*WASH-683	Report on Visit to Yugoslavia	same	7-31-56
*WASH-685	Visit of Belgian Representatives, July 9, 1956	S.R. Sapirie Oak Ridge Opr. Office AEC	8-8-56

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UCRL-Translation 298	Conditions of and Causes for the Depositing of Metals on the Cathode in Spongy Form, by N. T. Kurdryatsev (i.e., Kudriavtsev). Trans. from Soveshchaniia po Elektrokhimii, 1950. Trudy, 258-75 (1953).
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UCRL-3568	Absorption Spectra of Aromatic Disulfides	Antonino Fava Melvin Calvin	10-31-56
UCRL-3590	The Geneva Cloud Chamber	Wilson M. Powell Larry O. Oswald	11-30-56
UCRL-3624	The Electron Spin Resonance Spectrum of Dibenzene Chromium Cation	Robert D. Feltham Power Sogo Melvin Calvin	12-20-56
UCRL-3629	Chemistry Division Quarterly Report September, October, November 1956		1-2-57
UCRL-3633	The Stability of High-Temperature Oxides (Thesis)	Frank T. Greene	1-14-57
UCRL-3636	Relativistic Electrodynamics of Rotating Media	John Ise, Jr.	1-9-57

*Microcard

UCRL-3650	Cross Sections of Antiprotons in Hydrogen, Beryllium, Carbon, and Lead	Bruce Cork, Glen R. Lambertson Oreste Piccioni William A. Wenzel	2-1-57
UCRL-3656	Direction of Polarization Produced by Quasi-Elastic Scattering of 315-Mev Protons	Hugh Bradner William Isbell	1-30-57
UCRL-3661	Decay Properties of Pu^{235}, Pu^{237}, and a New Isotope Pu^{233}	T. Darrah Thomas Robert Vandenbosch Richard A. Glass Glenn T. Seaborg	2-28-57
UCRL-3678	The Complexing of Cerium(III), Lanthanum (III) and Gadolinium(III) by Fluoride Ions in Aqueous Solution	J. W. Kury Z. Z. Hugus, Jr. W. M. Latimer	1-31-57
UCRL-3657	Theory of High-Energy Deuteron Scattering	Henry P. Stapp	1-23-57
UCRL-3694	A Survey of the Radiation Chemistry of Some Aliphatic Ethers	Amos S. Newton	2-19-57
UCRL-3695	Energy Levels of Np^{237} Populated by the Beta Decay of U^{237}	J. O. Rasmussen F. L. Canavan J. M. Hollander	2-20-57
UCRL-3704	A Possible Test of Time Reversal in Mu-Meson Decay	T. Kotani	3-4-57
UCRL-3706	List of Unclassified Reports Received and Issued by the UCRL Information Division During the Period of February 16-28, 1957		3-5-57
UCRL-3709	A Method for Determining Approximate Magnetic Field Shapes in Small or Inaccessible Regions	Joseph B. Rechen John C. Jordan	3-6-57
UCRL-3715	A Possible Test of a Two-Component Theory of the Neutrino	Tsuneyuki Kotani	3-11-57