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Radiation Laboratory
Berkeley, California

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LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED BY
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OF DECEMBER 1 - 15, 1956

December 17, 1956

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December 17, 1956

<u>Number</u>	<u>Title</u>	<u>Author</u>	<u>Date</u>
<u>BIOSCIENCES</u>			
1956-268	Radiostrontium Fallout in Biological Materials in Britain	R. J. Bryant A. C. Chamberlain A. Morgan et al.	9-5-56
1956-269	Medical Survey of Marshallese two Years After Exposure to Fallout Radiation	R. A. Conard Bradford Cannon C. E. Huggins et al. Brookhaven and Naval Med. Res. Inst. Bethesda, Md.	3-56
1956-270	Plutonium Retention in Chalk River Soil	E. J. Evans Chalk River Project Ontario	7-56
1956-269	Global Distribution of Radioactivity from Nuclear Detonations, with Special Reference to Strontium-90.	M. Eisenbud At. Eng. Commission Washington, D. C. and N. Y. Opr. Office, AEC	11-15-56
1956-3320(pt. II)	Termination Report. Part II. Food Irradiation and Associated Studies	Columbia Univ.	4-15-56
1956-4656	Operation Troll	J. H. Harley, ed. N. Y. Opr. Office Health and Safety Lab AEC and Office of Naval Research	3-56

AEC-tr-2640	Biological Effects of External X and Gamma Radiation. Part 2	R. E. Zirkle, ed. AEC Wash. D. C.	8-56
AEC-tr-2642	The Transport of Fatty Acid as Mono- and Diglyceride	D. L. Fillerup J. F. Mead Calif. Univ. L. A.	11-30-56
AEC-tr-2643	The Hazard of Using the Government Issue Cream for Protection Against Flash Burns	H. W. Bales J. R. Hinshaw H. E. Pearse et al. Rochester N. Y. Univ.	10-18-56
AEC-tr-2644	Pathologic Effects of Orally Administered Polonium	G. W. Casarett	11-30-56

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AEC-tr-2485	Deposition of Finely-Divided Materials on the Walls of Conduits, by H. Rumpf. Trans. from <i>Chemie-Ingenieur-Technik</i> <u>25</u> , 317-27 (1953).		
AEC-tr-2486	On Investigating Unstable Complex Compounds in Solution by their Absorption Spectra, by S. A. Shchukarev and O. A. Lobaneva. Trans. from <i>Akademiia Nauk, SSSR. Doklady</i> <u>105</u> , 741-3 (1955)		
AEC-tr-2638	Influence of Elastic Stresses on Recrystallization Textures, by Hans Stadelmaier and B. F. Brown. Trans. from <i>Zeitschrift für Metallkunde</i> <u>47</u> , 1-8 (1956).		
AEC-tr-2640	An Introduction into Methods of Investigation of the Kinetics of Electrode Processes, by Heinz Gerischer. Trans. from <i>Zeitschrift für Elektrochemie und angewandte physikalische Chemie</i> <u>59</u> , 604-12 (1955)		
AEC-tr-2643	Thermodynamic Properties of Solutions of Molten Salts, by B. F. Markov. Trans. from <i>Ukrainskii Khimicheskii Zhurnal</i> <u>21</u> , 703-9 (1955)		
AEC-tr-2645	An Investigation of the Mechanism of the Action of Anti-Corrosion Admixtures on Oils by the Method of Radioactive Indicators, by Iu. S. Zaslavskii, S. E. Krein, and R. N. Shcherova. Trans. from <i>Zhurnal Fizicheskoi Khimii</i> <u>29</u> , 1815-21 (1955)		

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AEC-tr-2646 An Isomer of Rhodium-106, by G. B. Baro, W. Seelmann-Eggebert, and I. Zabala. Trans. from Argentina. Comision Nacional de la Energia Atomica, Buenos Aires. Serie de Quimica 1, no. 4, 29-41 (1955)

AEC-tr-2647 Two New Isotopes of Ruthenium and Rhodium, by G. B. Baro, P. Rey, and W. Seelmann-Eggebert. Trans. from Argentina. Comision Nacional de la Energia Atomica, Buenos Aires. Serie de Quimica 1, no. 3, 19-28 (1955)

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AECU-3299 Saturation Composition of Steam-Helium-Water Mixtures PVT Data and Heat Capacity of Superheated Steam-Helium Mixtures. Final Report J. A. Luker 7-29-55
T. Gniewek
Syracuse Univ.

AECU-3300 Determination of PVT Relationships and Heat Capacity of Steam-Oxygen Mixtures. Final Report same 8-2-55

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AECU-3302 Detonation, Explosion, and Reaction Limits of Saturated Stoichiometric Hydrogen-Oxygen-Water Mixtures. Final Report I. M. Macafee, Jr 7-1-55
same

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AERE-C/R-993	The Determination of Uranium in Alloy Systems	G. W. C. Milner J. W. Edwards	7-56
AERE-CE/R-991	Conversion of Uranyl Nitrate to Uranyl Sulphate in a Membrane Cell	R. K. Warner	5-24-56
AERE-Lib/Trans-69	Investigations on Quartz Fibres, by E. Eberhardt, H. Kern and H. Klumb. Trans. from Zeitschrift für angewandte Physik <u>3</u> , 209-12 (1951)		
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AERE-Lib/Trans-754	The Influence of the Electrokinetic Properties of the Surface of Minerals on Their Flotation, by V. M. Borisov. Trans. from Akademiia Nauk, SSSR. Doklady <u>99</u> , 427-30 (1954)		
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AERE-N/R-814	The Spontaneous Fission Rate of Pu^{240}	W. Galbraith K. M. Glover G. R. Hall et al	10-29-

Microcard

	Number Experiments on the Spontaneous Fission Rate of Pu ²⁴⁰	F. R. Barclay W. Galbraith K. M. Glover et al	1-27-55
4-56-15	A Solid Particle Activity Detector	A. E. Herriott	8-4-54
4-56-15	The Measurement of the Neutron Spectrum of Zephyr by Means of a He ³ Counter	F. Mandl	7-53
4-56-15	Effect of Reactor Flux on Boiling Water	W. M. Lomer	4-50
4-56-15	A Hologenated Hydrocarbon-Dye Water Equivalent Method for Measuring X- and Gamma Radiation	S. C. Sigoloff Texas Univ.	3-56
4-56-15	The X-Ray Spectrometric Determination of Uranium in Solution	D. S. Flikkema R. P. Larsen R. V. Schablaske	11-56
4-56-15	Slide Rule for Computation of Air Sampling Results	P. A. Carter Gt. Brit. Atomic Wea. Res. Est. Aldermaston, Berks England	8-54
4-56-15	Progress Report on Fission Products Utilization. IX. Studies on Radiation-Induced Graft Copolymerization and Solid State Polymerization	D. S. Ballantine P. Colombo A. Glines et al	10-56
4-56-15	A Preliminary Cost Estimate for Aluminum Distillation From Irradiated Plutonium-Aluminum Fuel	R. E. Hollies Chalk River Project	5-50
4-56-15	Rapid Spectrophotometric Determination of Submilligram Quantities of Uranium	C. A. Francois	11-56
4-44989	An Evaluation of the Zirconium Hazard	W. R. DeHollander	8-55
4-14387	Determination of Free Acid in the Presence of Hydrolyzable Ions	G. L. Booman M. C. Elliott R. B. Kimball et al	9-28-50

DO-14388	A Statistically Designed Training and Testing Program for an Analytical Control Laboratory	G. A. Huff F. H. Tingey	10-2-56
SC-695	Separations of Yttrium and Some Rare Earths by Liquid-Liquid Extraction	R. A. Foos H. A. Wilhelm	7-54
NER-44	Anion Exchange Studies of Plutonium	T. Sikkeland J. Juul Jt. Est. for Nuclear Energy Research Kjeller, Norway	9-56
NER-45	On the Isolation of Plutonium by a Solvent Extraction Method	D. H. W. Den Boer Z. I. Dizdar same	10-56
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10-1097	The Palladium-Tritium System at Low Temperature	R. M. Haag F. J. Shipko	6-1-56
2043	The Properties of Phosphoric Acid Solutions of Uranium as Fuels for Homogeneous Reactors	B. J. Thamer	11-27-56
2045	Separation and Determination of Tantalum in Uranium	G. R. Waterbury C. E. Bricker	11-27-56
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NBL-133	Semiannual Progress Report for the Period, January 1956 Through June 1956		10

NBS-5027	On the Thermal Design of Large Storage Vessels for Liquid Hydrogen and Helium. Technical Memorandum No. 43 on Research and Development	R. B. Scott	11-9-56
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40	Ethylenediaminetetraacetate Separation of Calcium from Uranium for Flame Photometric Analysis	J. H. Stewart, Jr. R. C. McIlhenny	11-29-56

ENGINEERING

3150	Load Capacity and Dry Friction Tests of a Water-Lubricated Thrust Bearing. Final Report for February 19, 1954 to August 31, 1954	S. Abramovitz Franklin Inst. Labs	10-56
3183	The Effect of Chemical Nature of Heating Surfaces on the Heat Transfer Coefficients of Pool Boiling Liquids. Final Report for February 1, 1952 - June 15, 1955	G. W. Preckshot Minn. Univ.	12-30-56
3374	Dynamic Loading of Rupture Discs. Final Report	M. J. Leibson Syracuse Univ.	7-31-56
AERE-E/R- 603	Critical Speeds of Rotor in Gas Journal Bearing	J. Woodrow	3-5-56
AERE-L/M-21	Detection of Leaking Joints in Water Pipes Under Construction	S. Jefferson J. F. Cameron J. L. Putman	2-3-56
GC-AE-25	Experimental Studies on Heat Transfer and Fluid-Flow Systems Period Covered: 22 June through 30 September 1956	L. Green, Jr Aerojet Gen. Corp.	10-56

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*AEC-tr-2651	On the Statistical Theory of Brittle Strength, by B. B. Chechulin. Trans. from Zhurnal Tekhnicheskoi Fiziki 24, 292-8 (1954)		
*AERE-E/R-514	The Axial Contraction of Irradiated Uranium Rods (Bars)	J. Woodrow	4-50
*AERE-G/R-998	Dimensional Changes in Beryllia on Neutron Irradiation	G. E. Bacon S. A. Wilson	8-22-52
AERE-Lib/ Trans-771	The Positional Correlation of the Outer Electrons in the Structural Types CuAu(L10), PdCu(L20) and Cu ₃ Au(L12), by K. Schubert. Trans. from Zeitschrift für Metallkunde 46, 43-51(1955)		
*AERE-M/R-1746	The Wetting Properties of Solid Oxides and Carbides by Liquid Metals	D. T. Livey P. Murray	9-16-55
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MISC-1956-272	A Chemical Engineering Approach to Metallurgical Engineering. Reprinted from Engineering and Mining Journal <u>157</u> , (1956)	R. E. Vener Catalytic Const. Co.	1956
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NRL-4838	Aluminum Coatings on Stainless Steel	J. E. Srawley	10-17-56
SEP-207	A Continuous Electrolytic Process for the Production of Beryllium Metal	M. C. Kells R. B. Holden C. Whitman	4-23-56
SO-2525	Creep Rupture of Zirconium Binary Alloys	J. H. Keeler	11-56
TID-3310	Production of Thorium Metal. A Bibliography of Unclassified Report Literature		10-56
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*AERE-R/M-22	Radiation Damage Studies with Reference to Cyclotron Irradiations	G. H. Kinchin	6-30-53
AERE-R/R- 2036	The Energy Dependence of the Fission Neutron Yield per Neutron Absorbed in U^{233} over the Range 0.025- 2.2 eV	J. E. Sanders H. M. Skarsgard C. J. Kenward	9-3-56
*AERE-RP/M-38	The Possibility and Detection of a Metastable State in the U^{239} - Pu^{239} and Th^{233} - U^{233} Series	V. S. Crocker	9-1-54
*AERE-RP/M-62	Criticality Calculations for Fast Reactors. Part I	J. Codd J. Egerton A. L. Pope	4-18-55
*AERE-T/M-53	A Problem in the Slowing Down and Diffusion of Neutrons in Hydro- geneous Media with Complex Geometry	K. T. Spinney	12-10-51
BNL-407	Accumulation of Fission Products from U^{235}	A. K. Booth D. Schweitzer	7-56
CERN-56-21	The Design of the Foundations for the Magnet of the CERN Alternating Gradient Proton Cynchrotron	J. B. Adams	10-1-56
CERN-PS/MM- 27	Mesures Sur Le Modele IX		10-56
CERN-PS/RH- 11	Explicit Example for the Calculation of Two-Dimensional Invariants	R. Hagedorn	10-56
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DP-172	IBM 650 Routine I. Polynomial Fit by Least Squares	R. R. Haefner	9-56
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HW-44525	Physics Research Quarterly Report for April, May, June 1956		7-25-56
KAPL-1549	Trixy; A Computer Program for Multigroup Nuclear Reactor Calculations in Three-Space Dimensions	P. Greebler	8-1-56
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NRL-4821	Proton Resonances in Na ²³	J. W. Teener L. A. Beach	10-30-56
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NYO-7692	The NYU Omnifax Compiler and Library of Subroutines	F. F. Ragusa S. Zucker N. Y. Univ	10-15-56
ONRL-106-56	The Turin Conference on the Fundamental Constants of Physics	J. R. Richardson Office of Naval Research	11-5-56
ORNL-2170	Tables of Solid Angles and Activations. I. Solid Angle Subtended by a Circular Disc. II. Solid Angle Subtended by a Cylinder. III. Activation of a Cylinder by a Point Source	A. V. H. Masket R. L. Macklin H. W. Schmitt	11-56
RIB-12	Electronic Devices for Nuclear Physics. Quarterly Report No. 22 for November 1, 1955 - January 31, 1956	R. H. Anderson G. O. Fowler M. H. Greenblatt et al David Sarnoff Res. Center Princeton, N. J.	2-17-56
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RIB-15	Development of Dumont Photomultiplier Tubes. Report No. 20 for December 1, 1955 to February 28, 1956	B. R. Linden P. A. Snell F. W. Schenkel DuMont(Allen B.) Labs	9-56
RIB-17	Electronic Devices for Nuclear Physics; A Report on Photomultiplier Tube Development. Quarterly Report No. 24 for May 1, 1956--July 31, 1956	M. H. Greenblatt R. M. Matheson A. H. Sommer et al David Sarnoff Res. Center Princeton, N. J.	11-56
RM-1823-AEC	The Specific Heat of a Degenerate Electron Gas at High Density	M. Gell-Mann Rand Corp	11-30-56
RPI-9	An Improved Control Board for Card-Programming the IBM 602A Calculating Punch	L. Pease Chalk River Project	6-55
WAPD-TM-3	A Few Group One-Dimensional Code for IBM-650	H. Bohl, Jr. E. Gelbard R. Suarez	7-56

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*AERE-E/M-31	Viscosity-Plates Flow and Loading	J. Woodrow	12-22-49
*AERE-E/R-388	Temperature of Air Cooled Pile in Initial States of Divergence	same	8-10-49
*AERE-ED/M-24	Pippa Eccentric Can Experiment	L. A. Hussin	7-6-55
*AERE-ED/R-1590	Xenon Poisoning Transients Following Changes in Reactor Power, and Their Effect on Reactivity	W. MacRae R. Parr	1-19-54
*AERE-R/M-3	The Excess Reactivity Controlled by a Single, Central Control Rod	J. D. McCullen	
*AERE-R/M-6	Beryllia Moderated Systems	same	4-16-51
*AERE-R/R-1955	Natural Uranium Power Reactor (Project "Pippa") 1951-1952 Design Study. Summary Report	B. L. Goodlet R. V. Moore	1-13-53
*AERE-T/M-48	Preliminary Estimate of the Critical Radius of a Bare Pu-Be Intermediate Reactor with Pb Coolant	M. E. Mandl	6-8-51

*Microcard

*AERE-T/M-59	Preliminary Estimate of the Critical Radius of a Pu-Be Intermediate Reactor with an Infinite Reflector, with and without Pb Coolant	M. E. Mandl	2-52
*AERE-T/M-65	The Effect of Na Cooling on a Bare U ²³⁵ -Be Undermoderated Thermal Reactor	same	8-52
*AERE-T/M-85	An Upper Bound to the Effect of a Slit in the Reflector Upon the Reactivity of a Nuclear Reactor	B. Davison P. D. Preston	6-53
*AERE- /R-528	Critical Radius of an Intermediate Reactor	B. Davison	5-50
*AERE-T/R-529	Preliminary Estimate of the Critical Radius of a Bare Pu-Be Intermediate Reactor	M. E. Mandl	8-2-50
*AERE-T/R-920	The Critical Radius of a Spherical Intermediate Reactor Consisting of a Homogeneous Core Surrounded by an Infinite Reflector of Heavy Material	R. T. P. Whipple	4-52
*AERE-T/R-1337	Critical Radius of An Under-Moderated Thermal Reactor with a Reflector of Light or Heavy Material	M. E. Mandl J. Howlett	2-54
*ANL-4354(Del.)	Reactor Engineering Division Report for the Period June 1, 1949 through August 31, 1949.		10-7-49
*ANL-FF-100t (Del)	Naval Reactor Materials Testing Division Program M-4--Section 5	M. F. Murphy	5-24-51
APDA-117	Reactor Safety and Oscillator Tests	H. A. Bethe At. Power De. Associates, Detroit	10-15-56
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CRRP-669	Radiation Monitoring of NRU	W. J. Henderson Chalk River Pro.	10-56
FRDC/P-32	The Concentration of Fission Products in Fast Reactor Fuel	D. G. Andrews B. Cutts E. W. Sidebotham Gt. Brit. Div. of Atomic En. Risley Lancs, England	12-52
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IGR-R/CA-188	A Fifty-Four Channel Recorder	E. Duncombe W. Jaques Gt. Brit. Capenhurst Works, Capenhurst, Chel., England	8-22-56
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ANL-5644	Additions to the Library Report for the Period November 1-15, 1956. Technical Reports and Books	P. A. Schulze	
BNL-406	Quarterly Progress Report [For] April 1-June 30, 1956		
MISC-1956-266	Hearings Before the Subcommittee on Research and Development of the Joint Committee on Atomic Energy, Congress of the United States, Eighty-Fourth Congress, Second Session, on Shortage of Scientific and Engineering Manpower, April 17, 18, 19, 25, 26, and May 1, 1956	U. S. Congress	1956
MISC-1956-267	Hearings Before a Subcommittee of the Committee on Interstate and Foreign Commerce, United States Senate, Eighty-Fourth Congress, Second Session, on S. 2643, A Bill to Promote the Common Defense and the General Welfare of the People of the United States by Encouraging Maximum Development of Low-Cost Electric Energy from all Sources of Power, Including Atomic Energy, Coal, Oil, Natural Gas, and Water, and for Other Purposes, April 17, 18, 19, 24, May 18 and 24, 1956.	same	1956
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Monograph 2644	Type-P1 Carrier System; Objectives and Circuit and Equipment Description. Reprinted from American Inst. of Electrical Engineers, New York. Transactions <u>75</u> , Pt. I, 188-213(1956)	Bell Telephone	9-56
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UCRL-3490	A Lead Glass Cerenkov Radiation Photon Spectrometer	J. M. Brabant B. J. Moyer R. Wallace	8-7-56
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UCRL-3569	On the Commutation Relations of Interacting Spinor Field	R. Spitzer	10-25-56
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UCRL-3611	Properties of Fermium-253	S. Amiel	12-5-56
UCRL-3613	List of Unclassified Reports Received and Issued by the UCRL Information Division During the Period of November 16-30, 1956		12-4-56

UCRL-3620

The Catalysis of Nuclear Reactions by μ -Mesons

L. Alvarez
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12-12-56