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Radiation Laboratory  
Berkeley, California

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June 19, 1958

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Radiation Laboratory  
University of California  
Berkeley, California

June 19, 1958

BIOSCIENCES

<u>Index Number</u>	<u>Title</u>	<u>Author</u>	<u>Date</u>
ACRH-100	Proceedings of the Conference on Radioiodine Sponsored by the Argonne Cancer Research Hospital, United States Atomic Energy Commission, and the Clinics of the University of Chicago, November 5 and 6, 1956.	D. E. Clarke, ed. Argonne Cancer Res. Hos.	
AECU-3574	A Study of the Tissue Response to Sterile Deposits of Particulate Material	T. L. Chiffelle F. Shering V. C. Goldizen C. S. White Lovelace Foundation for Medical Ed. and Res., Albuquerque	10-57
AF-SAM-58-35	Concept Discrimination in Rhesus Monkeys	W. Lynn Brown John E. Overall School of Aviation Med. Randolph AFB, Texas	1-58
APAE Memo-78 (Rev. 2)	Health Physics Manual for the Army Package Power Reactor	B. James Alco Products,	4-1-58
KAPL-1832	Radiation Exposure Auditing	M. R. Kennedy G. W. Gasper	12-15-57
LA-2174	Experimental Determination of Fast- and Thermal-Neutron Tissue Dose	J. A. Sayeg P. S. Harris	5-28-58

*NARF-57-56T	Aerial Sampling of Effluent From Waste Fires	H. G. Bradbury M. J. Young Convair, Fort Worth	12-15-57
*NAVSHIPS- 250-348-1	General Principles of Ionizing Radiation.	R. G. Preston Bureau of Ships	6-1-55
*NP-6528	The Clinical Realization of the Roentgen in Australia. Technical Communication No. 70.	D. J. Stevens Australia Common- wealth X-Ray and Radium Lab.	1957
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CHEMISTRY

AD-123358	Vinyl Derivatives of the Metals. Technical Report [for the Period March 1, 1956 to January 1, 1957].	Dietmar Seyferth Harvard Univ.	2-57
AERE-C/R-2117	The Spectrographic Determination of Calcium and Zirconium in Bismuth-Uranium Alloys.	R. C. Smart M. S. W. Webb	12-57
CF-58-5-32	An Engineering Evaluation of a Magnetic Filter as a Means of Remote Control Filtration. To be presented at the Annual Meeting of the American Nuclear Society in Los Angeles, California, June 2 - 5, 1958.	R. J. McNamee L. B. Shappert Oak Ridge National Lab.	
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\*Microcard

*HW-32405 (Del.)	Radiation Stability of Carbon Tetrachloride	R. E. Olson K. L. Adler	7-12-54
*HW-35752	The Evaluation of Air Samples Containing Thorium and Daughter Products	J. W. Healy	3-14-55
*HW-38753 (Del.)	Hydrogen Production in the Calcium and Magnesium-Nitric Acid Reactions.	M. N. Myers	8-19-55
*HW-41791 (Pt. 1)	Purex Waste Storage. Part I. 241-A Waste Storage Facilities	G. L. O'Neill W. H. Swift	3-7-56
*HW-53617	Flowsheet No. 2 -- Cesium Isolation and Packaging.	R. W. Wirta	11-14-57
IDO-14434	Remote Analytical Facility Operational Experiences	G. A. Huff Phillips Petroleum Co. , Atomic Energy Div.	4-4-58
*IGR-R/CA-231	Separation of the Boron Isotopes by Fractional Distillation of Boron Trifluoride: Determination of Column Parameters.	D. K. Cartwright P. T. Nettley P. A. Trevalion United Kingdom Atomic Energy Authority, Industrial Group, Capenhurst Works, England	8-57
IGR-TN/S-731	The Thermal Decomposition of the So-Called Trichloride of Niobium	J. B. Ainscough Springfields Works, England, Lancs	12-57
ISC-855	Chemical Effects of Photonuclear Reactions in the Propyl Bromides	A. E. Richardson A. F. Voigt Ames Lab.	12-56

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JENER-54	Separation of U and Pu From Zr, Nb, Ru and Cs On A Column of Manganese Dioxide	D. Cvjeticanin N. Cvjeticanin Joint Est. for Nuclear Energy Research	4-58
*JPL-PR-20-324	A Method of Determining the Thermal Conductivity Electrical Resistivity, and Total and Spectral Emissivity of a Conducting Material at High Temperature from Electrical and Thermo-Optical Measurements on a Heated Tube in a Vacuum. Progress Report.	W. B. Powell Calif. Inst. of Tech.	7-5-57
*KAPL-M-DOD-1	Radiochemistry of the KAPL-30, Run 5 Fuel Element Test.	D. Dutina W. C. Judd	1-8-58
*KAPL-M-FGH-2	Evaluation of Mercury Vapor Removal Methods for Confined Compartments	F. G. Haag	2-1-56
*KAPL-M-MEJ-1	The pH of Pure Water, and of Ammonium, Lithium, and Potassium Hydroxide Solutions	M. E. Jones	2-28-58
*KAPL-M-SMS-89	Corrosion Product Transport Study in the KAPL-37 Loop.	F. C. Steiner F. J. Witt	12-23-57
*KLX-10021 (Del.)	Electrokinetic Processes--Nuclear Aspects. Quarterly Progress Report for November 1, 1955 - January 31, 1956	H. F. Reichard K. J. Shyne H. G. Scheible Et. Al.	2-15-56
*LA-1350	The Determination of Oxygen in Plutonium by the Capillary Trap Method	W. G. Smiley	2-2-53
MISC-1958-192	The Formation of Surface Pits by the Condensation of Vacancies	P. E. Doherty R. S. Davis Harvard Univ.	5-5-58
MISC-1958-193	[Elastic Properties of Glass] Technical Report No. 12.	H. T. Smyth Wing C. Lo New Jersey Ceramic Research Station	11-1-67

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*NBS-5663	The Vapor Pressures of Some Boron Compounds.	W. H. Evans, D. D. Wagman E. J. Prosen	12-3-57
*NEI-77 (Rev. 1)	Tables of Properties of Heavy Water (D <sub>2</sub> O) at Saturation Temperatures	J. Howieson Chalk River Project.	8-57
*NEI-79	A Consideration of the Factors Involved in Theoretical Prediction of Steam Bubble Slip.	S. E. Hopkins Same	9-1-57
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WADC-TR-57-581	Research and Development of the Synthesis of Tetraalkyl Silanes	E. E. Harris F. J. Milnes R. J. Rayner R. Dombshewsky Olin Mathieson Chem. Corp.	3-58

ENGINEERING

*KAPL-M-RES-49	Mixing in Plenums.	H. F. Larkin	9-57
*MND-1062-1	Nucleate Boiling Literature Search	J. J. Jicha E. J. Lemanski Martin Co.	4-57
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METALLURGY and CERAMICS

BMI-1261	The Compatibility of a Number of Metals and Alloys with Graphite	A. F. Gerds M. W. Mallett	4-14-58
BMI-1264	A Study of the Liquidus in Aluminum-Uranium Alloys	V. W. Storhok A. Bauer R. F. Dickerson	5-1-58
CRMET-752 (AECL-572)	Determination of the Density of Active Uranium	G. R. Piercy Chalk River Proj.	3-58
*HW-50230	Pilot Plant for Anodizing of Aluminum	W. B. Kerr	1-15-58

\*Microcard

*HW-52494	Status of Hapo Creep Testing of Reactor Structural Materials	A. B. Burgess	9-16-57
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*HW-53963	Corrosion of Aluminum in Deionized Water. Progress Report [for] September 1957 - December 1957.	J. A. Ayres R. L. Dillon	12-6-57
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*KAPL-M-ABR-3	Comparison of 680°F Water and 750°F Steam As An Acceptance Test for Zircaloy.	A. B. Riedinger	2-58
*KAPL-M-EDL-11	Survey and Tests of Bolts.	J. H. Germer	4-10-54
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*KAPL-M-KOK-6	Low-Cobalt Hard Facing Alloys	K. H. Koopman	2-18-58
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*KAPL-M-WLF-4	Effectiveness of Various Temperatures for Stress Relieving Welded Type 347 Stainless Steel.	W. L. Fleischmann	1-5-53
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NAA-SR-2046	Dynamic Corrosion in Polyphenyls Under Irradiation	H. E. Kline N. J. Gioseffi W. N. Bley	5-15-58
NAA-SR-2458	Creep of Polycrystalline BeO At High Temperatures and Low Stresses	Roger Chang	5-1-58
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*NACA-TN-3990	Effect of Crystal Orientation on Fatigue-Crack Initiation in Polycrystalline Aluminum Alloys	J. G. Weinberg J. A. Bennett National Bureau of Standards	8-57
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\*Microcard

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NRL-5124	Iron-Chromium-Aluminum Alloys	J. E. Srawley	4-18-58
NYO-7929	Feasibility Study on Ultrasonic Dispersion of Uranium Dioxide in Molten Metals. Interim Report	M. L. Bromberg W. B. Tarpley Aeroprojects, Inc.	5-58
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CRP-755	Finite Geometry Corrections to Gamma-Ray Angular Correlations Measured with 5 In. Diameter by 4 In. Long NaI (Tl) Crystals.	H. E. Gove A. R. Rutledge Chalk River Proj.	2-58

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CRT-754 (AECL-576)	Polynomial Approximations in Neutron Transport Theory. I. Application to the One-Group Transport Equation with Plane Symmetry.	W. R. Conkie Chalk River Proj.	3-58
CU-171	Progress Report for October, November, December 1957 to The United States Atomic Energy Commission	Columbia Univ. Pupin Cyclotron Lab and Columbia Univ., Pegram Lab.	
CU-173	A Critical Examination of the He <sup>6</sup> Recoil Experiment of Rustad and Ruby	C. S. Wu A. Schwarzschild Same	4-21-58
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*INSJ-3	A Measurement of Energy Flow in the Extensive Air Shower	T. Matano I. Miura M. Oda Et. Al. Same	6-13-57



INSJ-9	Total Absorption Cerenkov Detectors and a Measurement of Energy Flow in the Extensive Air Shower	Tsuneo Matano Isao Miura Minoru Oda Et. Al. Tokyo Univ. Inst. for Nuclear Study	4-10-58
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*KAPL-M- FTB-1	Special Physics Instrumentation for S3G	F. T. Burkett	1-16-58
*KAPL-M- OAC-1	Trixy, A Three-Dimensional Multigroup Code: Input Preparation.	O. A. Clendinning	1-29-58
*KAPL-M-PB- 3	A Generalized Application of the Digital Computer to the Reactor Radioactive Accessibility Problem	A. P. Bray	12-6-57
*KAPL-M- RM-1	The Age of Neutrons in Water From an Anisotropic Shell Source	C. R. Mullin	2-25-58
*LA-618(Del.)	Critical Masses of Enriched Uranium Hydrides and Some Related Measurements	C. P. Baker M. G. Holloway	2-3-47
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MISC-1958-189	Bayes Estimation of Radar Signal Parameters. Technical Report No. 35.	J. E. Keigler Same	4-21-58
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*MURA-380	Non-Hamiltonian Dynamical Systems.	F. T. Cole Same	12-22-57
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*NARF-57-59T	Monte Carlo Calculation of Energy Absorption from Neutrons and Gammas by Disk-Shaped Samples.	R. L. Johnston Same	12-9-57
*NARF-57-60T	Co <sup>60</sup> Gamma Dose Measurements Inside Cylindrical Shields	D. G. Anderson Same	12-16-57

\*Microcard

*NARF-57-61T	Analysis of Air Scattering of Co <sup>60</sup> Gamma Radiation	J. W. Keller G. Gonzalez Convair	12-28-57
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*NARF-58-12T	Modified Multichannel Electrometer System	B. M. Lasater Same	3-5-58
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NARF-58-20T (MR-N-200)	Radiation Protection Characteristics of Partial Shields for Nuclear Aircraft Servicing.	P. L. Marjon Same	4-21-58
*NAVORD-5756	A Combined Simple and Electro-Mechanical R. M. S. Line-Voltage Regulator	A. D. Krall G. Schohan W. H. Raskin Naval Ordnance Lab.	11-4-57
NBS-5863	Test of One Universal Atomics Corporation Model-511 Scintillation Counter Transistorized "Cutie Pie"-Type Survey Meter	Paul V. Barrans	4-16-58
*NDA-2-66	A Description of Mis, A Monte Carlo Inelastic Scattering Code for the Datatron Computer	F. J. Oswald R. Schaffer Nuclear Development Corp. of America	6-30-57
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*NDC-12	Nuclear Data Committee--Minutes of Meeting Held on September 23, 1955.	C. H. Westcott Chalk River Proj. Canada	9-28-55
*NP-2056	Radioactivity Induced by Neutron Bombardment. Part VI. (Translation from Ricerca Scientifica <u>5</u> , II, 381-2 (1934).)	E. Amaldi O. D'Agostino E. Segrè	1934
*NP-6468	Nuclear Codes Group Newsletter No. 1	Nuclear Codes Group	9-25-56
*NP-6469	Nuclear Codes Group Newsletter No. 2	Same	12-1-56
*NP-6505	Interaction of Antiprotons with Complex Nuclei. Technical Report No. 9	A. E. Glassgold Univ. of Cal.	[1957]
*NP-6526	Charge Transfer Cross Sections for Protons in H <sub>2</sub> . Technical Report No. 3 [on] Capture-Loss and Ionization Cross-Sections of Ions and Neutral Particles.	W. H. Kasner T. M. Donahue Pittsburgh Univ.	11-57
NRL-5122	A Standardized X-Ray Field Range	H. M. Childers A. Brodsky A. E. Nash	4-16-58
NRL-5131	The Energy Distribution of Neutrons Produced by a Thermonuclear Reaction	W. R. Faust E. G. Harris	5-13-58
NYO-7117	Experimental Study of the Method of Bubble Formation in Bubble Chambers	W. I. Goldberg Carnegie Inst. of Tech.	4-58
NYO-7697	Basic Notions of Relativistic Hydromagnetics	Paul Reichel Computing and Applied Math Center New York Univ.	4-15-58

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ORNL-2260	An Investigation of the Resonant Properties of Short Exponentially and Linearly Tapered Lines	M. R. Donaldson Oak Ridge Nat. Lab.	5-26-58
ORNL-2452	Radiation Excursions at the ORNL Critical Experiments Laboratory. I. May 26, 1954. II. February 1, 1956	J. T. Thomas D. Callihan Same	5-27-58
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WADC-TR-56-281 (AD-110431)	Design Methods for Magnetic Amplifiers and Saturable Reactors	J. R. Walker Max Frank Wayne Engineering Research Inst.	7-31-56
WAPD-TM-54 (Add.)	Polyphemus. A Monte Carlo Study of Neutron Penetrations Through Finite Water Slabs.	H. G. Kuehn	2-58
WAPD-TM-100	Critical Experiments in a Uranium-Zirconium Water-Moderated Core with Plate Fuel Elements and Slab Geometry.	W. F. Vogelsang R. G. Serenka	12-57

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AECL-561	A Statement of the Nuclear Power Development Program.	J. L. Gray Chalk River Proj. Canada	2-58
AECU-3589 (Rev.)	Reactor Safety Bibliography. Selected Unclassified References.	Div. of Reactor Development AEC	5-57
BNL-440	Design Criteria for Gamma Irradiation Devices Using Fluids Flowing Through Reactor Loops.	B. Manowitz D. J. Metz D. M. Richman Et. Al.	7-58
BNL-503	Reactor Operations Monthly Report.	R. W. Powell C. L. Osborne	2-58

CF-58-4-63	Review of HRT Feedwater Control System.	R. L. Moore Oak Ridge Nat. Lab.	4-9-58
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DP-271	Stresses in Rings. Part II.	J. W. Joseph, Jr.	2-58
*HW-31385 (Del.)	RDS-10 and 11 -- A Proposed Overall Water System for a Dual-Purpose Reactor.	W. L. Pearl J. C. Whipple K. L. Harms	4-19-54
*HW-35489	Feasibility Report -- 100-DR WAPD Test Loop.		3-15-55
*HW-45548	Preliminary Investigation of D <sub>2</sub> O Moderated Demonstration Reactor.	H. S. Davis D. Marinos G. A. Newell	9-13-56
*HW-49799 (Del.)	The Parameters of Some Large Process Tube Lattices Determined from PCTR Measurements.	D. D. Lanning D. J. Donahue R. A. Bennett	4-24-57
*HW-51249	Irradiation Testing Facilities at the Hanford Atomic Products Operation.	A. G. Blasewitz	5-22-57
*HW-54759	Nuclear Safety in the Processing of Slightly Enriched Uranium Fuels.	N. Ketzlach R. D. Cahoon R. L. Stevenson	1-29-58
IDO-16446 (ERL-109)	Theory of Power Transients in the SPERT I Reactor. Final Report.	W. A. Horning H. C. Corben Ramo-Wooldrige Corp.	3-17-58
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*KAPL-M- ER-2	Dose Rates on the S3G/S4G Boiler and Primary Coolant Piping After Shutdown	E. J. Romesberg	2-18-58
*KAPL-M- FJM-1	Summary of Duplex Tube Analyses	F. J. Mehninger	9-28-56
*KAPL-M- JS-2	Theory of the Neutron-Amplifier Reactor	J. C. Stewart	10-25-57
*KAPL-M- JTD-1	Comparison of Reactivity Changes in Fe-H <sub>2</sub> O and Zr-H <sub>2</sub> O Cores.	J. T. Daley, Jr.	8-28-57
*KAPL-M- RES-34	S3G Steady State Thermal Analysis Programmed for the IBM-650 (Tac Code).	T. A. Conway J. H. Helve	2-5-57
*KAPL-M- SMS-30 (Rev. 1)	Proposed S3G Hull Isolation Safeguards Requirements	L. A. Savastio H. E. Stone	12-10-56
*KAPL-M- SMS-43	Emergency Cooling Condenser Performance as a Function of Ship's Attitude.	L. N. Rib	[10-56]
*KAPL-M- SMS-48	Procedure for Decontamination of Primary Coolant Systems.	F. C. Steiner	12-7-56
*KAPL-M- SMS-54.	Evaluation of Hydroclones for Purification Service in the SAR Power Plant	W. W. Goodwin	1-11-57
*KAPL-M- SMS-86	S4G Air-Borne Fission Product Activity in the Event of a Primary to Secondary Leak.	E. Nordgren	1-13-58
*KAPL-M- SSD-14 (Rev. 1)	S3G/S4G Chemical Shutdown System Design Description	A. P. Walsh	3-14-56
*KAPL-M- SSD-23 (Rev. 2)	S3G/S4G Nuclear Instrumentation System.	V. B. Scoville	5-22-56
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*KAPL-M-SSD-24 (Rev. 1)	Preliminary System Description -- S3G Special Instrumentation System.	F. E. Ackley R. E. Duncklee R. K. Van Schaack	10-24-56
*KAPL-M-SSD-35 (Rev. 1)	S3G/S4G In-Hull Reactor Refueling and Service System Description.	B. B. Scott	8-3-56
*KAPL-M-SSD-43 (Rev. 1)	S3G/S4G Primary Shield Water System; Design Description.	G. V. Krauss	9-27-57
*KAPL-M-SWK-6	Measurement of Migration Area and Infinite Multiplication in Highly Enriched, Critical Reactors.	S. W. Ketchen D. R. Bach	6-14-56
*KAPL-M-WAN-6	A Reactor Physics Parameter Survey of Zirconium-Water, Rod-Controlled, Reactors.	W. A. Northrop S. Pearlstein T. F. Ruane, Et. Al.	5-6-55
*KAPL-M-WBW-4	Two-Group Calculation of the Rectifier Reactor.	W. B. Wright	10-10-57
*KAPL-M-WEC-8 and Add. 1 and Waiver 1	Modified Structural Design Basis, SAR Reactor Components.	W. E. Cooper	8-30-56
*KAPL-M-WJD-2	A Survey of Burnable Poisons to be Used in the Structural Material of a Core.	W. J. Dodson	5-5-54
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*MT-36	The Prediction of Pipeline Pressure Losses with Uranium Trioxide Suspensions.	E. H. Dudgeon W. C. Michie National Research Council of Canada	11-57

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*NAA-SR-2151	Preliminary Design of a Calandria Core for the Sodium Reactor Experiment.	J. E. Mahlmeister	[11-15-57]
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*NAA-SR-Memo-227	The Split Circuit Cooling System for a PuP Reactor	T. Shimazaki	2-18-52
*NAA-SR-Memo-530 (Del.)	A Sodium- Cooled, Graphite-Moderated Package Power Reactor.		12-5-52
*NAA-SR-Memo-564	Plutonium Contributions to Effective Fuel Burn-Up.	E. F. Weisner	1-6-53
*NAA-SR-Memo-748	Start-Up Incident in 30 MW SGR.	J. E. Garvey	7-29-53
*NAA-SR-Memo-797	Stability of Sodium Cooled, Graphite-Moderated Reactors.	E. R. Cohen W. E. Abbott	10-5-53
*NAA-SR-Memo-1110	SGX Lattice Constants and Reactivity	F. L. Fillmore	9-28-54
*NAA-SR-Memo-1430	Consideration of Gray Control Rods for Sodium-Graphite Reactors.	O. D. Seawell	7-12-55
*NAA-SR-Memo-1935	On Terphenyl Substitution for Diphenyl in the OMRE.		5-1-57
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*NDA-14-127	Interpretation of an Experiment to Measure Doppler Effect.	G. Goertzel C. Klahr Same	6-29-56

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WAPD-MRP-73	Pressurized Water Reactor (PWR) Project, Technical Progress Report for the Period February 24, 1958 to April 23, 1958.	

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ANL-5878	Additions to the Library. Report for the Period May 1-15, 1958. Technical Reports and Books	P. A. Schulze	
ASTIA-U-58-7	Technical Abstract Bulletin. Bulletin No. U58-7		6-1-58
MISC-1958-185 (Pt. 17)	Hearing Before a Subcommittee of the Committee on Foreign Relations, United States Senate, Eighty-fifth Congress, Second Session, [on Control and Reduction of Armaments] (Pursuant to S. Res. 93, S. Res. 185 and S. Res. 286, 84th Cong., S. Res. 61, and S. Res. 241, 85th Cong.). Part 17, April 16 and 17, 1958.	U. S. Congress	1958
MISC-1958-186 (Pt. 1)	Hearings Before the Special Committee on Space and Astronautics, United States Senate, Eight-fifth Congress, Second Session, on S. 3609, A Bill to Provide for Research into Problems of Flight within and Outside the Earth's Atmosphere, and for Other Purposes, Part 1. May 6, 7, and 8, 1958.	U. S. Congress	1958
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UCRL-3749 Rev.	Neutron Emission Following $\mu$ -Meson Capture in Silver and Lead	S. N. Kaplan B. J. Moyer R. V. Pyle	11-11-58
UCRL-8021	Bevatron Operation and Development. XIII	W. Hartsough W. Salsig	5-28-58
UCRL-8030	Data for Elementary-Particle Physics	W. H. Barkas A. H. Rosenfeld	5-5-58
UCRL-8192 (Thesis)	Nuclear Studies in the Rare Earth Region	K. S. Toth	5-19-58
UCRL-8199	The $\Sigma^0$ Mass	M. L. Stevenson	5-15-58
UCRL-8208	The Flux and Spectrum of Cosmic-Ray-Produced Neutrons as a Function of Altitude	H. W. Patterson W. N. Hess B. J. Moyer R. W. Wallace	6-6-58
UCRL-8223 (Thesis)	Spallation and Fission in Thorium-232 and the Masses of the Heaviest Elements	B. M. Foreman, Jr.	5-19-58
UCRL-8226	Alpha Decay of Even-Even Deformed Nuclei	R. R. Chasman J. O. Rasmussen	5-28-58
UCRL-8230 (Thesis)	Thermal Conductivity and Viscosity of Gas Mixtures	H. Cheung	5-21-58
UCRL-8233	Ultracentrifugal Studies of Microsomes from Starving, Non-Proliferating and Proliferating Yeast	J. K. Ashikawa	6-2-58
UCRL-8255	Dissociation of $H_2^+$ Ions by Electric Fields	J. R. Hiskes J. L. Uretsky	5-28-58
UCRL-8283	A Proposal for Determining the Pion-Nucleon Coupling Constant from Nucleon-Nucleon Scattering	G. F. Chew	6-16-58

UCRL-8285	Elastic Scattering of Antiprotons on Carbon at 30 to 200 Mev	L. E. Agnew, Jr. T. Elioff W. B. Fowler L. Gilly R. Lander L. Oswald W. M. Powell E. Segrè H. M. Steiner H. S. White C. Wiegand T. Ypsilantis	4-58
UCRL-8301	Photoproduction of Positive Pions from Protons	J. L. Uretsky R. W. Kenney E. A. Knapp V. Perez-Mendez	5-28-58
UCRL-8303 Abstract	Range and Ionization of Heavy Ions in Emulsion	H. H. Heckman F. M. Smith W. H. Barkas	6-2-58
UCRL-8304 Abstract	An Alignment System for Emulsion Stacks	W. H. Barkas	6-2-58
UCRL-8305 Abstract	Equipment for Simultaneous Automatic Tabulation of Several Measures of Particle Ionization in Emulsion	N. A. Nickols W. H. Barkas	6-2-58
UCRL-8306 Abstract	A Microscope with Automatic Coordinate Readout Adapted for Calculating Particle Ranges	C. J. Mason W. H. Barkas	6-2-58
UCRL-8307 Abstract	Keysort Card System for Emulsion Data Recording	L. M. Reynolds J. N. Dyer C. J. Mason N. A. Nickols F. M. Smith H. H. Heckman W. H. Barkas	6-2-58

UCRL-8310

List of Unclassified Reports Received and Issued by the  
UCRL Information Division During the Period of May  
16-31, 1958

6-2-58

**INFORMAL REPORTS ISSUED**

Information Division			Date No. Assigned
UCID-176 (4320-12 M7)	Data Analysis Development - Optical Systems Development - 72" Chamber - Test of FX 19 Xenon Flash Tubes	J. W. Mark	6-11-58
UCID-177 (4314-03 EE-556)	Distributed Amplifier Tests: Fleming Type 2002, Ser. No. 101	C. N. Winningstad	5-26-58
UCID-178 (7302-04 M28)	Bevatron-Magnet Power Supply - Analysis of West Generator Bottom Coil Support Bolt Failure	W. W. Salsig, Jr.	5-29-58
UCID-179 (4310-03 LA10)	Grade Program (for IBM 650)	M. L. Stevenson	5-29-58
UCID-180 (4312-07 M36)	Large Bubble Chamber Development - Data Processing and Optical Studies - Bubble Counting with the 72 Inch Chamber	H. Bradner	5-29-58
UCID-181 (4312-07 M44)	Large Bubble Chamber Development - Data Processing and Optical Studies - Method of Rough Analysis of Bubble Chamber Events Using Stereo Projectors	W. Humphrey	5-29-58
UCID-182 (3140-01 M131)	Pricing Data on Square Hollow Copper Conductor	E. F. McLaughlin	5-29-58
UCID-184 (4320-12 M6)	Data Analysis Development - Optical System Development - 72" Chamber - Xenon Flash Tubes - Test III	J. W. Mark	6-2-58
UCID-185 (7911-11 M8)	72 Hydrogen Bubble Chamber Fabrication - Magnet Coil - Conductor Joints	W. F. Eaton	6-5-58

Mechanical Engineering

7911-40 M13

72" Hydrogen Bubble Chamber Refrigeration - Nitrogen  
Vacuum Pump Bids

R. Byrns

6-9-58