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Radiation Laboratory
Berkeley, California

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LIST OF UNCLASSIFIED REPORTS RECEIVED AND ISSUED BY THE UCRL INFORMATION DIVISION DURING THE PERIOD OF SEPTEMBER 16-30, 1957

October 2, 1957

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MISC-1957-206	Statistical Weight of a System of Particles with Arbitrary Spins (In English)	V. S. Barashenkov, B. M. Barbashev, Ob"edinennyi Institut Iadernykh Issledovanii Laboratoriia Teoreticheskoi Fiziki, Moscow	1956
MISC-1957-207	Negative K-Meson Production Threshold (In English)	M. Danysz, B. M. Pontecorvo, Ob"edinennyi Institut Iadernykh Issledovanii (Moscow)	11-56
MISC-1957-208	Reconstruction of the Scattering Matrix of a Two-Nucleon System. (In English)	L. D. Puzikov, R. Ryndin, Ia. A. Smorodinskii, Ob"edinennyi Institut Iadernykh Issledovanii (Moscow)	1-56
MISC-1957-209	On Nuclear Matter Fluctuation. (In English)	D. I. Blokhintsev, Ob"edinennyi Institut Iadernykh Issledovanii (Moscow)	1957
MISC-1957-210	Remarks on the Role of Strangeness in Slow Elementary Particle Processes. (In English)	L. B. Okun', B. M. Pontecorvo, Ob"edinennyi Institut Iadernykh Issledovanii Laboratoriia Iadernykh Problem, Moscow	1957
MISC-1957-211	When Does Weak Interaction Become Strong? (In English and in Russian)	D. I. Blokhintsev, Ob"edinennyi Institut Iadernykh Issledovanii (Moscow)	[1957]
MISC-1957-212	Polarized Particles Reactions. (In English and in Russian)	M. I. Shirokov, Ob"edinennyi Institut Iadernykh Issledovanii Laboratoriia Teoreticheskoi Fiziki, Moscow	[1956?]

MISC-1957-213	Elastic Scattering of 307 Mev Negative Pions by Hydrogen (In English)	S. M. Korenchenko, V. G. Zinov, Ob"edinennyi Institut Iadernykh Issledovanii (Moscow)	3-57
MISC-1957-214	Mesonium and Antimesonium (In English and in Russian)	B. M. Pontecorvo, Ob"edinennyi Institut Iadernykh Issledovanii. Laboratoriia Iadernykh Problem, Moscow	[1957]
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MISC-1957-216	On a Method of Increasing the Density of an External Proton Beam from the Six-Meter Synchrocyclotron (In English and in Russian)	V. I. Danilov, V. P. Dmitrievskii, I. V. Chestnoi, Ob"edinennyi Institut Iadernykh Issledovanii. Laboratoriia Iadernykh Problem, Moscow	1956
MISC-1957-220	Search for Asymmetries From π - μ Decays in Flight	A. V. Crewe, U. E. Kruse, R. H. Miller, L. G. Pondrom, Chicago Univ. Enrico Fermi Inst. for Nuclear Studies	[1957?]
MISC-1957-221	Search for Asymmetries in the Scattering of Pions	A. V. Crewe, U. E. Kruse, R. H. Miller, L. G. Pondrom, Chicago Univ. Enrico Fermi Inst. for Nuclear Studies	[1957]

MISC-1957-222	Knocking Out of Deuterons from Nuclei of Li, Be, C and O by Protons with Energy of 675 Mev (In Russian)	L. Azhgirei, I. K. Vzorov, V. Zrelov, et al, Ob"edinennyi Institut Iadernykh Issledovanii. Laboratoriia Iadernykh Problem, Moscow	5-57
MISC-1957-223	Inverse Dispersion Relations (In Russian)	V. Z. Blank, D. V. Shirkov, Ob"edinennyi Institut Iadernykh Issledovanii Laboratoriia Teoreticheskoi Fiziki, Moscow	5-57
MISC-1957-224	General Covariant Formulation of Field Theory and General Laws of Preservation (In Russian)	Duan' I-Shi, Ob"edinennyi Institut Iadernykh Issledovanii. Laboratoriia Teoreticheskoi Fiziki, Moscow	1957
MISC-1957-225	Elastic Scattering of π^+ and π^- Mesons on Helium Nuclei with 300 Mev Energy (In Russian)	M. S. Kozodaev, R. M. Suliaev, A. I. Filippov, Iu. A. Shcherbakov, Ob"edinennyi Istitut Iadernykh Issledovanii. Laboratoriia Iadernykh Problem, Moscow	1957
MISC-1957-226	Secondary Nuclear Reactions in Bombardment of Tin by Fast Protons. (In Russian)	M. Ia. Kuznetsova, V. N. Mekhedov, V. A. Khalkin, Ob"edinennyi Institut Iadernykh Issledovanii. Laboratoriia Iadernykh Problem, Moscow.	1957

MISC-1957-227	Formation of π^+ Mesons in /p-p/ Collisions in the Region 480-660 Mev. (In Russian)	B. S. Neganov, O. V. Savchenko, Ob"edinennyi Institut Iadernykh Issledovanii. Laboratoriia Iadernykh Problem, Moscow	5-56
MISC-1957-228	Possible Experiments in the Study of Processes of NonElastic Scattering of Nucleons. I. (In Russian)	L. M. Soroko, Ob"edinennyi Institut Iadernykh Issledovanii Laboratoriia Iadernykh Problem, Moscow.	5-57
MISC-1957-229	Perfecting of a Median Surface of Magnetic Field of a Six-Meter Synchrocyclotron (In Russian)	V. I. Danilov, V. P. Dmitrievskii, B. I. Zamolodchikov, et al., Ob"edinennyi Institut Iadernykh Issledovanii. Laboratoriia Iadernykh Problem, Moscow	1956
MISC-1957-232	Note on the Gamma Decay of Neutral Pions. Notas de Física, Vol. 3, No. 16.	J. Tiomno, Rio de Janeiro. Centro Brasileiro de Pesquisas Físicas	5-10-57
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MISC-1957-235	The Formation of ^{22}Na from Atmospheric Argon by Cosmic Rays. Notas de Física, Vol. 3, No. 19	L. Marquez, N. L. Costa, Ivone G. Almeida, Rio de Janeiro. Centro Brasileiro de Pesquisas Físicas	7-4-57

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MISC-1957-241	Space Properties of the π Meson	R. L. Garwin, G. Gidal, L. M. Lederman, M. Weinrich, Columbia Univ., Irvington-on-Hudson. [Nevis Cyclotron Labs.]	8-57
MISC-1957-242	Photoproduction of Pion Pairs in Hydrogen	M. Bloch, M. Sands, California Inst. of Tech., Pasadena	8-26-57
MISC-1957-244	Transistor Measurements Using the Indefinite Admittance Matrix. Technical Report No. 20.	J. P. Paddock, Stanford Univ., Calif. Stanford Electronics Labs.	8-20-57
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NYO-2094	Angular Distribution of K^+ Mesons in Reaction $\gamma + p \rightarrow K^+ + \Lambda^0$	A. Fujii, Rochester, N. Y. Univ.	8-30-57
NYO-4847	Angular Momentum Coupling in Odd-Odd Nuclei.	S. P. Pandya, Rochester, N. Y. Univ.	8-8-57
NYO-4848	Effect of the Spin-Orbit Potential on the Magnetic Moment of the Deuteron	J. J. de Swart, R. E. Marshak, P. S. Signell, Rochester, N. Y. Univ.	8-26-57
NYO-6634	Cosmic-Ray-Induced Radioactivities in Meteorites and Tektites (thesis)	W. D. Ehmann, Carnegie Inst. of Tech., Pittsburgh	6-3-57
NYO-7693	On the Structure of a Steady Hydromagnetic Shock. One-Fluid Theory	M. H. Rose, New York Univ., New York, Atomic Energy Commission, Computing Facility	10-56
NYO-7896	An Energy Principle for Hydromagnetic Stability Problems	I. B. Bernstein, E. A. Frieman, M. D. Kruskal, R. M. Kulsrud, Princeton Univ., N. J. Project Matterhorn	3-21-57
SCDC-665 (TM-188-57-52)	A Wide-Band Microwave Link for Telemetering	R. E. Glass, Sandia Corp., Albuquerque, N. Mex.	3-25-57

ORNL-2196	Energy and Angular Distribution of Gamma Radiation From a Co^{60} Source After Diffusion Through Many Mean Free Paths of Water	R. W. Peelle, F. C. Maienschein, T. A. Love	9-6-57
*WAPD-RM-222	Numerical Computations for the Determination of Temperature Distribution in Sperical Pellets.	R. E. Goodman, Westinghouse Electric Corp. Atomic Power Div., Pittsburgh	2-54
WAPD-TM-68	Logic; A Flux Data Processing Code for the IBM-650	B. L. Anderson, Westinghouse Electric Corp. Bettis Plant, Pittsburgh	6-57

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AECU-3478	A Selection Study for an Advanced Engineering Test Reactor.	Aeronutronic Systems, Inc., Glendale, Cal.	3-29-57
ANL-5761	Preliminary Design Requirements, Argonne Boiling Reactor (Arbor) Facility. Revision I.	L. W. Fromm, S. A. Bernsen, C. F. Bullinger, J. F. Matousek	7-15-57
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BNL-460	Reactor Operations Division Monthly Report	R. W. Powell	6-57
CEA-562	Atomistic and Automatic. (In French) Reprinted from Automatisme 1, 50-4 (1956).	P. Braffort, France. Commissariat à L'Energie Atomique, Paris	1956

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DP-200	Xenon Tables.	H. K. Clark, J. C. English, du Pont de Nemours, Savannah River Lab.	5-57
HW-51175	Re-Evaluation of Graphite Diffusion Lengths.	M. T. Lee	6-5-57
IDO-16378	Plutonium Fuel Requirements for Operation of the MTR.	H. L. McMurry, B. W. Johnson, Phillips Petroleum Co., Atomic Energy Div., Idaho Falls, Idaho	6-11-57
IDO-16384	Comparison of Flux and Power Distributions, and Void and Temperature Coefficients of the MTR with U^{235} and Pu^{239} Fuel.	B. W. Johnson, H. L. McMurry, Phillips Petroleum Co. Atomic Energy Div., Idaho Falls, Idaho	7-26-57
IDO-16391	Relative Neutron Lifetimes in the MTR Fueled with U^{235} and Pu^{239}.	H. L. McMurry, B. W. Johnson, Phillips Petroleum Co. Atomic Energy Div., Idaho Falls, Idaho	8-8-57
IDO-16394	Quarterly Progress Report for MTR Technical Branches. Second Quarter - 1957	J. E. Evans, ed. Phillips Petroleum Co. Atomic Energy Div., Idaho Falls, Idaho	8-22-57
IDO-16398	Reactivity Effects of Xe^{135} and Sm^{149} for the MTR with U^{235} and Pu^{239} Fuels.	B. W. Johnson, H. L. McMurry, Phillips Petroleum Co. Atomic Energy Div., Idaho Falls, Idaho	8-8-57

JENER-50	Shut-Down Decay Characteristics of Jeep	M. Y. El-Ibiary, Joint Establishment for Nuclear Energy Research, Kjeller, Norway	5-57
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NAA-SR-1936	Organic Moderated Reactor. Research and Development Program Quarterly Progress Report [for] January - March, 1957	E. F. Weisner, ed. Atomics Int. Div., N. Am. Aviatio Canoga Park, Calif.	9-1-57
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*NAA-SR-Memo-153	Preliminary Design Study of D_2O Moderated Pb-Bi Cooled Natural Uranium Power Reactor	J. De Felice, North American Aviation, Inc., Downey, Calif.	12-10-51
*NAA-SR-Memo-178	Preliminary Report on the Control of the Converter Reactor	L. B. Robinson, North American Aviation, Inc., Downey, Calif.	1-10-52
*NAA-SR-Memo-188	Heat Transfer of Pressurized Water PuP	C. H. Robbins, North American Aviation, Inc., Downey, Calif.	1-24-52
*NAA-SR-Memo-194	Control Analysis of the PuP No. 30C Reactor	C. Roderick, North American Aviation, Inc., Downey, Calif.	2-7-52

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*NAA-SR-Memo-203	Flattened vs Uniformly Loaded Core	A. Benton, North American Aviation, Inc., Downey, Calif.	1-30-52
*NAA-SR-Memo-225	Buckling of Flat Fuel Plates Caused by Thermal Expansion, with Application to the Converter Reactor	W. C. Cooley, North American Aviation, Inc., Downey, Calif.	2-14-52
*NAA-SR-Memo-266	Additional Preliminary Calculations of Flux Distributions in Converter Reactor Cells	A. Benton, North American Aviation, Inc., Downey, Calif.	3-24-52
*NAA-SR-Memo-277	Geometry of the Converter Reactor	R. Balent, North American Aviation, Inc., Downey, Calif.	3-28-52
*NAA-SR-Memo-306	Mock-Up for Converter Reactor	A. Benton, North American Aviation, Inc., Downey, Calif.	4-24-52
*NAA-SR-Memo-324	Additional Flux Distributions for Converter Reactor	A. Benton, North American Aviation, Inc., Downey, Calif.	6-2-52
*NAA-SR-Memo-347	Flattened vs Uniformly Loaded Core	R. Balent, North American Aviation, Inc., Downey, Cal.	6-11-52
*NAA-SR-Memo-488	The Use of Thorium for Flux Measurements in the Converter Reactor Mock-Up	D. H. Martin, North American Aviation, Inc., Downey, Calif.	10-27-52

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*NAA-SR-Memo-716	Results of Two-Group Three-Region Criticality Calculations Done by the National Bureau of Standards on SWAC	R. Balent, North American Aviation, Inc., Downey, Calif.	6-15-53
NYO-4849	Conceptual Design of an Advanced Engineering Test Reactor	R. G. Mallon, J. Saldick, R. E. Gibbons, Advanced Scientific Techniques Research Associates, Milford, Conn.	3-1-57
*ORNL-731	A Report on the Saftey Aspects of the Homogeneous Reactor Experiment	A. M. Weinberg, C. E. Winters,	8-29-50
*TID-10000	The Annealing of the Graphite Moderator Structure in the BNL Reactor	M. Fox, R. W. Powell, Brookhaven National Lab, Upton, N. Y.	1-54
*TID-10014	Sodium-Graphite Reactor -- Upflow Design	Atomic Electric Project, St. Louis	9-20-53
*TID-10027	Pressurized Water Reactor Program. Technical Progress Report for the Period August 26, 1954 to October 7, 1954	Westinghouse Electric Corp. Atomic Power Div., Pittsburgh	
*TID-10031	Report of Industrial Reactor Study	Pacific Gas and Electric Co., San Francisco	1952
*TID-10037	Elementary Study of the Neutron Cycle in Homogeneous Epithermal Reactors.	R. Balent, C. Roderick, North American Aviation Inc., Downey, Calif.	11-12-51
*TID-10048	The Los Alamos Fast Plutonium Reactor	E. T. Jurney, J. H. Hall, D. B. Hall, et al Los Alamos Scientific Lab., N. Mex.	5-54

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*TID-10052	Summary Report on the Reactor Hazards Associated with the Danger Coefficient Test Facility (DCTF)	Westinghouse Electric Corp. Atomic Power Div., Pittsburgh	4-20-51
*TID-10055	A Procedure for Xenon Calculations	P. L. Hofmann, H. Hurwitz, Jr., E. Wachspress, Knolls Atomic Power Lab., Schenectady, N. Y.	9-30-53
*TID-10058	A 37,500 KW Power Reactor with Competitive Possibilities	W. I. Thompson, K. Cohen, Kidde (Walter) Nuclear Labs., Inc., Garden City, N. Y.	2-26-54
*TID-10066	Long Term Irradiation of Nuclear Fuels	E. R. Cohen, R. H. Sehnert, North American Aviation, Inc., Downey, Calif.	9-15-54
*TID-10086	Fuel Rod Cooling in Natural Uranium Reactors	C. A. Trilling, North American Aviation, Inc., Downey, Calif.	1-28-52
TID-10094(Del.)	Standardization of Industrial Nuclear Power Plant Components and of Low Power Reactor Systems Report for 1954.	American Machine and Foundry Co. General Engineering Lab., Greenwich, Conn.	2-55
*WAPD-ReC(A)-35	Pressure Drop for Short Flat Plate Fuel Elements	J. E. Zerbe, H. S. Jacket, Westinghouse Electric Corp. Atomic Power Div., Pittsburgh	11-23-53

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*WAPD-RM-86	Reactor Tests of Mark I STR Prototype Nuclear Instruments	W. Baer, R. T. Bayard, O. F. Swift, Westinghouse Electric Corp. Atomic Power Div., Pittsburgh	7-51
*WAPD-TH-40	Proposal for In-Pile Burnout Test at MTR	H. Dobel, S. J. Green, Westinghouse Electric Corp. Atomic Power Div., Pittsburgh	3-11-55
*WAPD-TH-217	Preliminary Determination of Forced Convection Heat Transfer Coefficients for Rectangular Channels at 2000 PSIA	J. D. Roarty, N. C. Sher, Westinghouse Electric Corp. Atomic Power Div., Pittsburgh	7-17-56

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ANL-5779	Additions to the Library. Report for the Period August 16-31, 1957. Technical Reports and Books	P. A. Schulze	
BNL-439	Quarterly Progress Report for January 1 - March 31, 1957		
MISC-1957-230	Hearings Before the Subcommittee of the Committee on Appropriations, House of Representatives, Eighty-Fifth Congress, First Session, [on] Atomic Energy Appropriations for 1958	U. S. Congress	1957
MISC-1957-231	Hearings Before the Committee on Appropriations, United States Senate, Eighty-Fifth Congress, First Session, on H.R. 9379, An Act Making Appropriations for the Atomic Energy Commission for the Fiscal Year Ending June 30, 1958, and For Other Purposes.	U. S. Congress	1957

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Monograph-2785	Reading Rates and the Information Rate of a Human Channel. Reprinted from Bell System Technical Journal 36, 497-516 (1957)	J. R. Pierce, J. E. Karlin, Bell Telephone Labs., Inc., New York	6-57
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TID-1918	Report Announcement Bulletin. Unclassified Reports for Civilian Applications.		8-28-57
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*WADC-TR-54-(Pt. II)	Unconventional Electrical Power Sources	P. A. McCollum, Oklahoma Agricultural and Mechanical Coll., Stillwater	9-55
Y-1172	An Application of Some Industrial Engineering Principles to an Electrical Maintenance Organization.	G. W. Oliphant	9-20-57

LIST OF UNCLASSIFIED REPORTS ISSUED BY THE UCRL INFORMATION DIVISION

UCRL-3779	The Electrical Aspects of the UCRL 740-Mev Synchrocylotron,	B. H. Smith, K. R. MacKenzie, J. Reidel, et al.	8-57
UCRL-3836	Chemistry Division Quarterly Report, March, April, May 1957		6-28-57
UCRL-3848	Photosynthesis	M. Calvin	7-57
UCRL-3862	Energy Stabilization of the Berkeley Proton Linear Accelerator	H. B. Knowles	7-9-57
UCRL-3879	Decay Studies of Some Neutron-Deficient Isotopes of Antimony and Tellurium (Thesis)	A. Rhodes	8-57
UCRL-3881	A New Isotope, Sulfur-38	D. R. Nethaway, A. A. Caretto, Jr.	8-57
UCRL-3884	Hyperfine Structure Measurements on Plutonium-239	J. C. Hubbs, R. Marrus, W. A. Nierenberg, J. L. Worcester	7-29-57
UCRL-3891	The Interaction of 190-Mev K^+ Mesons Incident on H, C, Al, Cu, Ag, and Pb (Abstract)	L. T. Kerth, T. F. Kycia, L. van Rossum	8-9-57
UCRL-3903	On the Pursey-Pauli Invariants in the Theory of Beta Decay	G. Luders	8-14-57
UCRL-3916	Phenomenological Analysis of μ Decay	S. Bludman, A. Klein	8-27-57
UCRL-3922	The Nucleon-Antinucleon Interaction at Intermediate Energies	J. S. Ball, G. F. Chew	8-28-57
UCRL-3923	Selection Rules for Pion Production in $\bar{N}N$ Scattering	S. Barshay	9-3-57
UCRL-3931	Diffraction of Neutrons by Imperfect Gases	R. M. Mazo, A. C. Zemach	9-5-57

UCRL-3933	Some Conclusions Based on Charge-Independence in Nucleon-Antinucleon Interactions (Abstract)	O. Chamberlain	9-9-57
UCRL-3938	List of Unclassified Reports Received and Issued by the UCRL Information Division During the Period of September 1 - 15, 1957		9-16-57
UCRL-3941	Design of Regenerative Extractor for Synchrocyclotrons (Abstract)	W. F. Stubbins	9-20-57
UCRL-Translation 322	The Equilibrium Liquid - Crystals in Systems Containing Chrysene. Trans. from Akademiia Nauk, SSSR. Doklady 111, 355-7 (1956).	V. M. Kravchenko, I. S. Pastukhova	
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UCRL-Translation 325	The Reversible Formation of Several Photoproducts in Plant Leaves. Trans. from Akademiia Nauk, SSSR. Doklady 113, 695-8 (1957)	L. N. Bell	
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