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Summary Information

Repository:	Rare Book and Manuscript Library
Creator:	Columbia University. Department of Physics
Title:	Department of Physics records
ID:	5849320
ID:	UA#0021
Date [inclusive]:	1870-1983
Physical Description:	45 linear feet 45 record cartons
Language of the Material:	English .
Abstract:	This collection contains records of the Physics Department of Columbia University and several of its affiliated research laboratories: the Columbia Radiation Laboratory, the Pupin Cyclotron Laboratory, the Nevis Cyclotron Laboratory, and the Pegram Nuclear Physics Laboratory.

Preferred Citation

Identification of specific item; Date (if known); Department of Physics Records; Box and Folder; University Archives, Rare Book & Manuscript Library, Columbia University Libraries.

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Biographical / Historical

Columbia University's Graduate Department of Physics was founded in 1892, and from 1925 has been housed in Pupin Laboratory (named after Michael Idvorsky Pupin on his death in 1935). It was there, under the direction of physicists George Pegram, Isidor I. Rabi, and Enrico Fermi that the preliminary scientific investigations eventually leading to the development of the atomic bomb in America took place.

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Biographical / Historical

The Columbia Radiation Laboratory was established under the direction of I.I. Rabi and J. M. B. Kellogg (Jerome Merle Blake Kellogg, b. 1905; Library of Congress states middle name as "Blakely") in 1942 to participate in the development of radar and related research critical to the United States in the Second World War. The Radiation Laboratory continued its government-sponsored research after the war under the direction of Polykarp Kusch and Robert Novick in the 1950s and 1960s while also expanding into new areas of research. In the mid-1970s, the Radiation Laboratory was subsumed under a broader materials science program; in 2001 it was renamed the Center for Integrated Science and Engineering.

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Summary

This collection contains records of the Physics Department of Columbia University and several of its affiliated research laboratories: the Columbia Radiation Laboratory, the Pupin Cyclotron Laboratory, the Nevis Cyclotron Laboratory, and the Pegram Nuclear Physics Laboratory. The records of the Columbia Radiation Laboratory comprise more than half the collection as a whole; and more than one quarter consists of the lab notebooks kept by Columbia physicists, including Nobel laureate Polykarp Kusch, Chien-Shiung Wu, their colleagues, associates, and students. This collection includes laboratory notebooks, blueprints and diagrams, correspondence and memoranda, contracts, grant proposals, research reports, classroom materials, reprints, subject files, and miscellaneous items.

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Arrangement

This collection is arranged in 7 series.

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Administrative Information

Publication Statement

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Revision Description

Word finding aid encoded. (JR) Added Box 41 (JR) Added Box 40 (JR) Added Box 42 (JR) Added Boxes 43 and 44 (JR) Added Box 45 (JR) 2020-04-08 2020-10-19 2020-10-29 2020-11-13 2020-12-11 2021-01-15

Restrictions on Access

There are no restrictions on this collection.

Restrictions on Access

This collection is located off-site. You will need to request this material at least three business days in advance to use the collection in the Rare Book and Manuscript Library reading room.

Accrual

Additions are expected.

Immediate Source of Acquisition

Source of acquisition--The Physics Department records were administratively transferred from the Physics Department to the Rare Book and Manuscript Library (RBML) of Butler Library in four accessions: 1978, 1983, 1985, and 1997. A typed inventory was prepared and the records were placed in 126 manuscript boxes (52.5 linear feet) on the shelves of Butler Library's fifteenth floor stacks. Custody was informally conveyed from RBML to the University Archives in the 1990s but the collection remained physically in RBML's custody until 2002, when a physical transfer of these records was made (Accession #2002-057).

Other of Professor Wu's papers and materials were transferred to the custody of Southeast University of China in 2000.

Processing Information

This collection was processed by Dr. Marilyn H. Pettit; Frank Lovett (GSAS 2004). Finding aid written by Frank Lovett in February 2004. Finding aid was reformatted by Elizabeth Nolte (Graduate School of Arts and Sciences 2009) in October 2008.

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Controlled Access Headings

- Laboratory notebooks
- Wu, C. S. (Chien-shiung), 1912-1997
- Columbia University
- Columbia University. Department of Physics

Collection Inventory

Series I: Department Records

Scope and Contents

This series consists of documents and materials of the Physics Department itself, as distinct from those of its associated research laboratories. Series I is divided into two sub-series.

Subseries I.1: Subject Files

Scope and Contents

This subseries consists of assorted correspondence, memoranda, minutes, reports, and so on, organized alphabetically by subject. These records, all contained in record carton 1, are far from comprehensive. Folders 1.1–1.3 contain documents related to research done under the auspices of the Atomic Energy Commission (circa 1948–1953). Folder 1.6 contains records of graduate student fellowships awarded (university-wide) in the mid 1950s. Folders 1.7–1.15 contain John R. Dunning's records of research operations at the Cyclotron Laboratory and within the Division of War Research (circa 1940–1949).

Folders 1.22–1.24 contain drafts of papers and theses submitted to Professor Chien-Shiung Wu in the early 1950s.

Title/Description	Instances	
Atomic Energy Commission		
Correspondence, Contracts, and Papers, 1948-1958	box 1	folder 1
Progress Reports, 1950-1954	box 1	folder 2
Security Requirements, 1951-1953	box 1	folder 3
Budget and Appointments		
1940-1941	box 45	folder 1
1941-1942	box 45	folder 2
1942-1943	box 45	folder 3
1943-1944	box 45	folder 4
1944-1945	box 45	folder 5
1945-1946	box 45	folder 6
1946-1947	box 45	folder 7
1947-1948	box 45	folder 8
1948-1949	box 45	folder 9
Budget - Summer Session		
1943	box 45	folder 10
1944	box 45	folder 11
1946	box 45	folder 12
1947	box 45	folder 13
1948	box 45	folder 14
1949	box 45	folder 15
1950	box 45	folder 16
Budget Worksheets, 1942-1948	box 1	folder 4
Columbia College - Correspondence, 1953-1956	box 1	folder 5
Committee on Instruction – Fellowships, 1953-1954	box 1	folder 6
Cyclotron		
Accounts, 1943-1949	box 1	folder 7-9
<u>Physical Description:</u> 3 folders		
Contracts, 1940-1949	box 1	folder 10
Correspondence, 1944-1949	box 1	folder 11

Financial Records, 1944-1949	box 1	folder 12
Photos, 1948-1949	box 1	folder 13
Davis, Bergen - correspondence, papers, etc., 1919-1938		
Division of War Research		
Record Book, 1943-1944	box 1	folder 14
Reports and Correspondence, 1942-1948	box 1	folder 15
Graduate Committee - Records, 1950-1953	box 1	folder 16
Joint Committee on Graduate Instruction, 1953-1954	box 1	folder 17
Institute for International Education - Correspondence, 1955	box 1	folder 18
Library Committee - Records, 1953	box 1	folder 19
Pliofilm Procurement - Correspondence, 1950-1951	box 1	folder 20
Storage Battery Research (Professor William Hallock), 1902-1910	box 1	folder 21
Student Papers, Submitted to Wu		
Koerts, Leo, 1953-1955	box 1	folder 22
Shaknov, Irving, 1951	box 1	folder 23
University Council - Agendas and Minutes, 1953-1954	box 1	folder 24-25
<u>Physical Description</u> : 2 folders		

Subseries I.2: Instruction Files

Scope and Contents

Folders 2.1-10 contain classroom materials and records related to summer session classes offered mainly in the 1950s. Folders 2.11-3.9 contain sample deficiency exams, finals, master's exams, and Ph.D. qualifying exams, some dating as early as the 1920s. The most extensive portion of this sub-series, however, is the course materials within folders 3.10-7.3. Organized principally by academic year and course offered, these records provide a comprehensive view of the Physics Department's course offerings roughly from the late 1930s through the late 1950's. For each course there are syllabi, quizzes, lab assignments, exams, and so on; often there are grade distributions, and in some cases lecture notes. Included are some apparently complete lecture sets, as for example: folder 6.14: Jack Steinberger's lectures on "Meson Physics" (1957); or folder 6.1: Steven Weinberg's lectures on "Advanced Quantum Mechanics" (1958).

Title/Description	Instances	
Summer Session		
General, 1948-1964	box 2	folder 1-3
<u>Physical Description</u> : 3 folders		
Physics s5 (Sloan Grant), 1960-1967	box 2	folder 4-6

Physical Description: 3 folders

1961 Institute for High School Teachers, 1959-1962	box 2	folder 7-8
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Physical Description: 2 folders

1962 Institute for High School Teachers, 1961-1963	box 2	folder 9-10
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Physical Description: 2 folders

Exam Samples

Deficiency Exams, 1947-1957	box 2	folder 11-13
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Physical Description: 3 folders

Final Course Exams, 1947-1962	box 2	folder 14-17
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Physical Description: 4 folders

Masters Exams, 1921-1949	box 2	folder 18-19
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Physical Description: 2 folders

Masters Exams, 1950-1962	box 3	folder 1
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Midterm Exams, 1954-1962	box 3	folder 2
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Special Exams and Solution Sheets, 1958-1960	box 3	folder 3
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PhD Qualifying Exams, 1926-1962	box 3	folder 4-9
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Physical Description: 6 folders

Prof. Devon's Final Exams, 1961-1966	box 43	folder 21
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Scope and Contents

(Elementary Physics 2 / Physics C1002y)

Course Materials

Lab Manual, undated	box 3	folder 10
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Summer 1927, Summer 1934, Summer 1935, 1927-1935	box 3	folder 11
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Spring/Summer, 1936-1939	box 3	folder 12-14
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Physical Description: 3 folders

Summer/Fall, 1939	box 3	folder 15
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Miscellaneous, 1940-1948	box 3	folder 16
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Electromagnetics, 1948 Spring	box 3	folder 17
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Scope and Contents

(based on Lamb lectures)

Academic Years, 1948-1950	box 3	folder 18-19
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Physical Description: 2 folders

Academic Years, 1949-1955	box 4	folder 1-13
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Physical Description: 13 folders

Electromagnetics - based on Kroll lectures, 1955 Spring <u>Physical Description</u> : 2 folders	box 4	folder 14-15
Electromagnetics - notes and PhD qualifying exams, 1955 Spring	box 5	folder 1
Quantum Mechanics - based on Serber lectures, 1955-1956	box 5	folder 2
Quantum Mechanics - based on Pais lectures, 1955-1956	box 5	folder 3
Academic Year, 1955-1956 <u>Physical Description</u> : 4 folders	box 5	folder 4-7
Quantum Mechanics - based on Lee lectures, 1956 Fall	box 5	folder 8
Academic Years, 1956-1958 <u>Physical Description</u> : 8 folders	box 5	folder 9-16
Quantum Mechanics - based on Weinberg lectures, 1958 Fall	box 6	folder 1
Academic Years, 1958-1959 <u>Physical Description</u> : 4 folders	box 6	folder 2-5
Elementary Particles - based on Weinberg lectures, 1959 Spring	box 6	folder 6
Miscellaneous, 1959-1962	box 6	folder 7
Loose class notes, 1964-1966	box 6	folder 8
Rainwater on Optics (incomplete), undated	box 6	folder 9
Steinberger Lectures		
Unknown topic (handwritten), 1939	box 6	folder 10
Electrodynamics (handwritten), 1939 <u>Physical Description</u> : 2 folders	box 6	folder 11-12
Unknown topic (handwritten), 1954	box 6	folder 13
Meson Physics, 1957	box 6	folder 14
Strange Particles, 1958	box 6	folder 15
Nuclear Models (handwritten), 1958	box 6	folder 16
Unknown topic (handwritten), 1964	box 6	folder 17
Experiments on Beta-decay, undated	box 6	folder 18
Low Energy Physics, undated	box 6	folder 19
Miscellaneous, 1959	box 6	folder 20
Fermi Lectures on Electrodynamics (handwritten), 1939		

	box 6	folder 21
Oppenheimer Notes on Electrodynamics, 1947	box 6	folder 22
Anderson Lectures on Meson Physics, 1953	box 6	folder 23
Lee Lectures on Quantum Mechanics, 1954	box 6	folder 24
Feld Lectures on Meson Physics, 1955	box 7	folder 1
Salam Lectures on Dispersion Theory, 1956	box 7	folder 2
Feld Lectures on Meson Physics, 1956	box 7	folder 3
Laboratory Manuals		
Experiments in Physics for students, 1976 January	box 41	folder 1
Scope and Contents		
(Lab manuals for multiple courses)		
Physics C1004, F1004 and Pharmacy 22, undated	box 41	folder 2
Scope and Contents		
(Magnetic and electrical fields experiments)		
Lecture Notes		
Lecture Series on Nuclear Physics, 1943-1944	box 41	folder 3
Scope and Contents		
(Dunning's set of lecture notes; LA report 24. includes lecture on Terminology (E.M. McMillan), Radioactivity (E. Segre, E. Teller, F. Bloch), Neutron Physics (J.H. Williams), etc.)		
Devons, Samuel. Logarithmic Notation, undated	box 45	folder 21
Eden, R.J. - Introduction to the Structure Analysis of Collision Amplitudes, 1962 January	box 41	folder 4
Scope and Contents		
(Dept. of Applied Mathematics and Theoretical Physics, University of Cambridge)		
Luttinger, J.M. - Solid State / Many Body Theory, 1965-1966	box 45	folder 22
Scope and Contents		
(Lectures presented at Bell Telephone Laboratories. Notes by Gary A. Pearson.)		
Nordsieck, A. - Quantum Mechanics Lectures, 1945-1946	box 41	folder 5

Peierls, R.E. - Complex Eigenvalues in Scattering Theory, 1959 Winter	box 41	folder 6
Scope and Contents		
(Department of Mathematical Physics, University of Birmingham; Visiting Professor in the Department of Physics, Columbia University, February to May 1959)		
Von Karman, Theodore		
Aerothermodynamics lectures, 1947	box 43	folder 26
Scope and Contents		
(Notes prepared by William Perl. 12 lectures given at Columbia in the Spring Session 1947)		
Developments in the Statistical Theory of Turbulence, 1948	box 44	folder 1
Scope and Contents		
(Notes prepared by William Perl. 3 lectures given at Columbia in November-December 1948)		
Weinstein - Mathematical Foundations of Relativity, 1964 October	box 41	folder 7
Scope and Contents		
(Handwritten notes)		
Wentzel, Gregor - Strong Coupling Meson Theory, 1954 Spring	box 41	folder 8
Scope and Contents		
(Lecture notes compiled by B.F. Nigam and A.E. Woodruff)		
Yukawa, Hideki - Quantum Theory of Nonlocal Fields, 1949 October	box 45	folder 18
Class Notes		
Bernardini, Gilberto		
Physics R268 - Cosmic Rays, 1948-1949 Winter	box 40	folder 3
Chiu, Hong-Yee		
Physics G8045x - Stellar Physics, undated	box 40	folder 4
Scope and Contents		
(Notes of the course in the Spring Term.)		
Feinberg, Gerald		

Physics G8070 - Particle Physics, 1963 Spring	box 44	folder 3
<p>Scope and Contents</p> <p>(Notes by Costa Tsipis)</p>		
Foley, H.M.		
Physics 119 - Mathematical Methods in Physics, undated	box 44	folder 4
Physics 120 - Mathematical Methods in Physics, undated	box 44	folder 7
Fuller, Robert W.		
Physics G6019x - Mathematical Methods of Physics, 1961 Fall	box 40	folder 5
<p>Scope and Contents</p> <p>(Formerly Physics 119. Certain sections of these notes are based on the 119 notes of Professor Feinberg, Foley and Lee.)</p>		
Physics G6019x (formerly 119) - Mathematical Methods in Physics, 1961 Fall	box 44	folder 5
Gell-Mann, Murray		
Physics 247 - Advanced Quantum Mechanics, 1954-1955	box 44	folder 6
<p>Scope and Contents</p> <p>(Notes by Gerald Feinberg and Leon F. Landovitz)</p>		
Greenberg, Daniel		
Physics G4013x - Heat and Thermodynamics, 1962 Fall	box 44	folder 2
<p>Scope and Contents</p> <p>(Notes prepared by Professor Daniel Greenberg)</p>		
Lee, Tsung-Dao		
Physics 119 - Mathematical Methods in Physics, 1954 Winter (Revised 1958)	box 40	folder 11
<p>Scope and Contents</p> <p>(Notes by Menasha J. Tausner. These notes have not been checked by Professor Lee.)</p>		
Physics 120 - Mathematical Methods in Physics, 1959 Spring	box 42	folder 1

Scope and Contents

(Bob Eisenstein and Uriel Nauenberg)

Physics 236 - Statistical Mechanics, 1957 Spring	box 43	folder 23
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Scope and Contents

(Notes by Karl Eklund)

Physics 236 - Statistical Mechanics, 1957-1958	box 42	folder 2
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Physics 247 - Advanced Quantum Mechanics, 1956 Fall	box 43	folder 24
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Scope and Contents

(Notes by Sigurd Larsen and Elihu Lubkin)

Kroll, N.M.

Physics 192 - Electromagnetic Theory I, 1955 Spring	box 40	folder 6
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Scope and Contents

(Notes by Alfred Landman)

Physics 194 - Electromagnetic Theory III, 1959 February	box 40	folder 7
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Scope and Contents

(Lecture notes prepared by Martin L. Teiger)

Physics 249 - Quantum Electrodynamics, 1949-1950 Winter	box 40	folder 8
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Kusch, P. (Polykarp)

A Course in Molecular Beams, undated	box 40	folder 9
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Lamb, Willis E.

Physics 215-216 - Electromagnetic Theory, 1946-1947 Spring	box 40	folder 10
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Scope and Contents

(Physics 227 in Winter 1948)

Physics 226 - Electromagnetic Theory, 1948 Spring	box 41	folder 9
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Luttinger, Joaquin M.

Physics 6036 - Statistical Mechanics, undated <u>Physical Description</u> : 2 folder	box 45	folder 23-24
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Nauenberg, Michael

Physics 247 - Dispersion Relations, 1961 Winter	box 40	folder 12
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Scope and Contents

(Notes prepared by H.S. Mani and James Nearing)

Novick, R.

Physics G4015x - Atomic Physics, 1964 Winter	box 41	folder 10
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Scope and Contents

(Notes prepared by Jack Hahn)

Pais, A.

Physics 247 - Advanced Quantum Mechanics (Field Theory), 1955-1956	box 42	folder 3
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Scope and Contents

(Notes prepared by G. Feinberg and L. Landovitz)

Peaslee, D.C.

Physics S135 - Atomic Physics, 1953 Summer	box 42	folder 4
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Quate, C.F.

Physics s229 - Microwave Electronics, 1952 Summer	box 44	folder 8
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Scope and Contents

(Notes by Seymour Koenig)

Quimby, S.L.

Physics 125 - Vector Analysis, 1949	box 44	folder 9
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Physics 202 - Dynamics of Particles, 1957	box 44	folder 10
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Physics 203 - Vibration Theory and Dynamics of Rigid Bodies, 1958	box 44	folder 11
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Physics R202 and R203 - Analytical Dynamics, 1960	box 44	folder 12
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Physics R266 - The Theory of Solids, 1952	box 44	folder 13
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Rabi, I.I.

Physics 235 - Statistical Mechanics, undated	box 44	folder 14
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Rainwater, James

Physics 59-109 - Supplementary Notes on Optics, undated	box 44	folder 17
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Physics 257-258 - Nuclear Physics, 1959	box 42	folder 5
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Physics 257-258 - Nuclear Physics, 1959	box 44	folder 16
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Physics 257-258 - Slow Neutron Scattering by Systems of Atoms, 1953	box 44	folder 15
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Physics G4009 - Optics, 1969 <u>Physical Description</u> : 2 Volumes Scope and Contents (Part I: Introductory material and mainly geometric optics, chapters 1-7 (there is no chapter 8); Part II: chapters 9-15)	box 42	folder 6-7
Ramsey, Norman Foster		
Physics 125 - Introduction to Theoretical Physics, 1946-1947	box 45	folder 17
Serber, Robert		
Physics 238 - Quantum Mechanics, 1956 Scope and Contents (Notes by L. Landovitz (Spring 1954) and Elliot Auerback (Spring 1955))	box 43	folder 25
Serber Says: About Mesotrons, undated	box 45	folder 20
Thomas, Llewellyn		
Physics 240 - Special and General Theories of Relativity, undated	box 42	folder 8
Townes, Charles H.		
Physics 252 - Notes on Microwave Physics, 1949	box 43	folder 22
Microwave Spectroscopy, undated	box 42	folder 9
Weinberg, Steven		
Physics 260 - Elementary Particles: Weak Interactions, 1959 March Scope and Contents (Notes prepared by Hector Rubinstein and Arthur Bierman)	box 41	folder 11
Physics 257 - Advanced Quantum Mechanics, 1958-1959	box 41	folder 12
Wu, C.S. (Chien-Shiung)		
Physics 257-258 - The Neutrino: A Contribution to the Memorial Volume to Wolfgang Pauli, 1959 June Scope and Contents (Pupin Cyclotron Laboratory and George B. Pegram Laboratory, CU-197)	box 41	folder 13
Physics 234 - Theoretical Nuclear Physics, 1961-1962	box 41	folder 14-15

Scope and Contents

(2 volumes; on spine "Dr. Wu's Course" ; on front page "A course given by Dr. H. A. Weidenmuller at Caltech during 1961-1962. Lecture notes by Fernando B. Morinigo and Yvon R. Cusson.")

Physics 8057x - Advanced Nuclear Physics, 1964	box 42	folder 11
Physics 8057x - Advanced Nuclear Physics, undated	box 41	folder 16

Scope and Contents

(Notes by Weidenmuller)

Physics G4040 - Nuclear Physics, 1963	box 42	folder 10
Physics F1001x - Concepts of Science		

The Concepts of Space and Time (Chapter 2), undated	box 40	folder 1
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Scope and Contents

(Metz)

Newton's Law of Gravity (Chapter 7) and the Conservation of Angular Momentum (Chapter 8), undated	box 45	folder 19
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Physics 135 - Atomic Physics, 1955-1956 Winter	box 40	folder 2
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Scope and Contents

(Book list, course outline, lecture notes)

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Series II: Columbia Radiation Laboratory

Scope and Contents

This is by far the largest series in the collection, comprising more than half of the total. It is also the most comprehensive, in that it broadly covers many aspects of the Columbia Radiation Laboratory's operations. Series II is divided into five sub-series.

Subseries II.1: Subject Files

Scope and Contents

Folders 7.4–7.52 consists of a wide variety of publications, contractor bids, correspondence, news releases and various other general office records dating from the late 1940s to the early 1970s. For the most part, these documents relate only relatively mundane office minutiae, such as the procurement of a "Glass Annealing Oven" (folder 7.18). Of greater interest, perhaps, are folders 7.26–28, which

cover the distribution of the lab's research results to a long list of U.S. Military officials under the "Joint Services Electronics Program" (JSEP).

Title/Description	Instances	
Air Force Research Proposal, 1960-1961	box 7	folder 4
Air Raids, 1954	box 7	folder 5
Alterations - 1106 Pupin, 1960	box 7	folder 6
Beryllium Poisoning 1957, 1957	box 7	folder 7
Brookhaven National Laboratory, 1952-1953	box 7	folder 8
Committee on Government Aided Research, 1958	box 7	folder 9
Classification of Documents in Safe, undated	box 7	folder 10
Computing Facilities, 1951-1958	box 7	folder 11
Draft Deferments, 1948-1951	box 7	folder 12
Employee Recognition, 1954	box 7	folder 13
Equipment Grants, 1958-1960	box 7	folder 14
Equipment Loans from Physics Department, 1950-1955	box 7	folder 15
Frequency Control Symposium, 1960-1961	box 7	folder 16
Glass Changeover, 1954	box 7	folder 17
Glass Annealing Oven, 1956	box 7	folder 18
Glass Lecture, by McCellan, 1959	box 7	folder 19
Graduate Student Employees, 1952-1958	box 7	folder 20
Instructions and Forms, 1943-1945	box 7	folder 21
Interdepartmental Work, 1950-1958	box 7	folder 22
Inventory of Air Reduction Sales Co., 1954	box 7	folder 23
International Radio Consultative Committee, 1959	box 7	folder 24
ISRP Proposals, 1973	box 7	folder 25
JSEP		
Distribution Lists, 1969-1974	box 7	folder 26
Lab Directors' Meeting, 1974	box 7	folder 27
Proposals, 1969-1971	box 7	folder 28
MIT Radiation Lab, news release, 1945	box 7	folder 29
Modification 13, 1969-1974	box 7	folder 30
Molecular Beams, 1953	box 7	folder 31
National Bureau of Standards, 1957-1958	box 7	folder 32

Notices from Bulletin Board, 1947-1958	box 7	folder 33
Optical Maser Research, 1961	box 7	folder 34
Organization and Procedures, 1943-1954	box 7	folder 35
Personnel Directories, 1950-1960	box 7	folder 36
Pittsburgh Plate Glass Co., 1954-1955	box 7	folder 37
Property on Loan, 1950-1961	box 7	folder 38
Publication, 1954-1958	box 7	folder 39
Pupin Facilities, 1950-1956	box 7	folder 40
Radiation and Health, 1955-1956	box 7	folder 41
Reprints, 1954-1960	box 7	folder 42
Researcher Classifications, 1957	box 7	folder 43
Signal Corps, research contract, 1960	box 7	folder 44
Signature Authorizations, 1952-1960	box 7	folder 45
Slide Rule Registration, 1945-1954	box 7	folder 46
Summer Work, 1959	box 7	folder 47
Travel Expenses, 1958-1960	box 7	folder 48
Tritium License, 1954-1958	box 7	folder 49
Tungsten Wire, from General Electric, 1959-1960	box 7	folder 50
V Belts, 1947	box 7	folder 51
Watson Labs, 1952-1958	box 7	folder 52

Subseries II.2: Contracts and Grants

Scope and Contents

This subseries, now mostly in record cartons 8-10, was compiled from two originally separate, but substantively overlapping groups of materials. The records have been organized by contracting agency first, and document type second. For example, the materials in folders 7.53-8.13 all relate to a series of research contracts and grants from the U.S. Air Force in the late 1950s and early 1960s. Within this group, folders 7.55-56 contain contract documents, folder 8.5 contains funding proposals submitted to the Air Force, folders 8.7-8.8 contain technical reports on the research done under the contracts, and so on. Nearly all the records in this sub-series were coded by a contract or grant number. For example, a code beginning "DA-ARO(D)-31-124-G__" refers to a grant from the Army Research Office; as the grant was renewed over the years, each iteration was assigned a unique I.D. (G170, G380, G477, etc.). These codes appear on nearly every piece of correspondence, every form, contractual document, every report, and so on. Taken as a whole, the documents in this sub-series comprehensively reflect the nature and extent of U.S. Military funding, through a wide variety of agencies, of research undertaken at the Radiation Laboratory from the early 1950s through the early 1970s.

Title/Description	Instances
Air Force Contracts	

Department of Physics records5849320

Account and Financial Documents, 1958-1963	box 7	folder 53
Annual Reports, undated	box 7	folder 54
Contract Documents, 1957-1965 <u>Physical Description</u> : 2 folders	box 7	folder 55-56
Correspondence, 1952-1965 <u>Physical Description</u> : 4 folders	box 8	folder 1-4
Proposals, 1959-1965	box 8	folder 5
Publications, 1958-1964	box 8	folder 6
Technical Reports, 1956-1964 <u>Physical Description</u> : 2 folders	box 8	folder 7-8
Air Force Grants		
Account and Financial Documents, 1961-1964	box 8	folder 9
Contract Documents, 1961-1963	box 8	folder 10
Correspondence, 1957-1967	box 8	folder 11
Proposals, 1961-1963	box 8	folder 12
Publications, 1963-1967	box 8	folder 13
Technical Reports, 1961-1966	box 8	folder 14
Army Research Office Grants		
Account and Financial Documents, 1961-1966	box 8	folder 15
Contract Documents, 1961-1966	box 8	folder 16
Correspondence, 1957-1973 <u>Physical Description</u> : 2 folders	box 8	folder 17-18
Proposals, 1961-1970 <u>Physical Description</u> : 2 folders	box 8	folder 19-20
Publications, 1963-1969	box 9	folder 1
Technical Reports, 1962-1972 <u>Physical Description</u> : 2 folders	box 9	folder 2-3
Army Signal Corp Contracts		
Account and Financial Documents, 1959-1963	box 9	folder 4
Approval Requests, 1959-1962	box 9	folder 5
Contract Documents, 1950-1964 <u>Physical Description</u> : 3 folders	box 9	folder 6-8
Correspondence, 1951-1964	box 9	folder 9-10

<u>Physical Description</u> : 2 folders		
Inventory Records, 1947-1959	box 9	folder 11-16
<u>Physical Description</u> : 6 folders		
Inventory Records, 1959-1961	box 10	folder 1
Proposals, 1958-1961	box 10	folder 2
Publications, 1959-1963	box 10	folder 3
NASA Grants		
Inventory Records, 1963-1968	box 10	folder 4
Proposals, 1961-1963	box 10	folder 5
NSF Grants		
Account and Financial Documents, 1957-1966	box 10	folder 6
Contract Documents, 1960-1966	box 10	folder 7
Correspondence, 1960-1968	box 10	folder 8
Inventory Records, 1962-1965	box 10	folder 9
Proposals, 1960-1966	box 10	folder 10-11
<u>Physical Description</u> : 2 folders		
Publications, 1962-1977	box 10	folder 12-13
<u>Physical Description</u> : 2 folders		
Technical Reports, 1963-1969	box 10	folder 14
Office of Naval Research Contract		
Account and Financial Documents, 1970-1974	box 10	folder 15
Approval Requests, 1969-1974	box 10	folder 16-18
<u>Physical Description</u> : 3 folders		
Contract Documents, 1968-1974	box 10	folder 19-20
<u>Physical Description</u> : 2 folders		
Correspondence, 1969-1975	box 11	folder 1
Proposals, 1971-1974	box 11	folder 2
Reprints, 1970-1974	box 11	folder 3
Army Electronics Lab Contract		
Proposals, 1968	box 11	folder 4
Reprints, 1965-1971	box 11	folder 5-6
<u>Physical Description</u> : 2 folders		
O.E.M. Contract - Inventory Records, 1946-1959	box 11	folder 7

Subseries II.3: General

Scope and Contents

This subseries consists of the remaining materials related to the Radiation Laboratory located primarily in record cartons 11–13 and 27. These materials are something of a hodge-podge: for example, 11.9 contains three large envelopes of photo prints and negatives; 11.10 contains two film reels, labeled 'Music A Laude' and 'Selby Narration' respectively; and so on. Three sizeable groups of records in this sub-series, however, are as follows: The first (folders 11.13–11.20) consists of various invention reports made to contracting or granting agencies from the mid-1940s through the early 1970s. Sample "inventions" reported (from folder 11.13) include a "Coaxial Cathode Lead," "Coaxial Line to Wave Guide Coupler," and a "Rapidly Tunable K-band magnetron." A second large group (folders 12.5–14.0) constitute a nearly complete series of Quarterly Progress Reports of the Radiation Laboratory from 1946 through 1983. The third large group (folders 26.21–27.18) consists of carbon copies of all staff correspondence from 1959 through 1966.

Title/Description	Instances	
Inventory Procedure log, 1960-1961	box 11	folder 8
Photo prints and negatives, undated	box 11	folder 9
"Music A Laude" and "Selby Narration", undated <u>Physical Description</u> : 2 film reels	box 11	folder 10
National Defense Research Committee - Interim Report, 1946	box 11	folder 11
Statistical Survey of Research Activity, R. Novick, 1965	box 11	folder 12
Invention Reports		
Division of War Research, 1943-1950 <u>Physical Description</u> : 2 folders	box 11	folder 13-14
Naval Research Contract, 1969-1973	box 11	folder 15
Photon Echo Generator, 1964-1971	box 11	folder 16
Laser Homodyne Spectrometer, 1963-1965	box 11	folder 17
Matrix Detector, 1967-1968	box 11	folder 18
Off-Resonant Light Probe, 1967-1969	box 11	folder 19
Atomic Frequency Converter, 1968-1972	box 11	folder 20
Reports on Production, 1923-1947 <u>Physical Description</u> : 2 folders	box 11	folder 21-22
Notes on 'Rising Sun' Decision, 1944	box 11	folder 23
Centimeter Magnetrons Report, 1946	box 11	folder 24
Calibration and Operating Specs, 1942-1947 <u>Physical Description</u> : 2 folders	box 12	folder 1-2
Travel and Meeting Reports, 1942-1953	box 12	folder 3-4

Physical Description: 2 folders

Quarterly Progress Reports		
1946-1960 <u>Physical Description</u> : 13 folders	box 12	folder 5-17
1960-1982 <u>Physical Description</u> : 16 folders	box 13	folder 1-16
1982-1983	box 14	folder 1
Staff Correspondence		
General, 1960-1963 <u>Physical Description</u> : 5 folders	box 26	folder 21-25
General, 1964-1966 <u>Physical Description</u> : 6 folders	box 27	folder 1-6
Guy Castle, 1963-1966 <u>Physical Description</u> : 5 folders	box 27	folder 7-11
Thomas Fountain, 1966	box 27	folder 12
D.I. Harrow, 1959-1963 <u>Physical Description</u> : 6 folders	box 27	folder 13-18
Progress Report for OSRD Contract OEMsr-485 - Experiments on the Design of Magnetrons at 1.25 cm wavelengths, 1943 January	box 43	folder 1
Scope and Contents		
(J.M.B. Kellogg)		
National Defense Research Committee Division 14: 22 to 38 Vane Rising Sun Magnetrons, 1946 May 10	box 43	folder 20
Scope and Contents		
(Rising Sun Magnetrons with large number of anode cavities for centimeter and millimeter wavelengths. OSRD Contract OEMsr-485. Report by A.V. Hollenberg, N. Kroll and S. Millman)		

Subseries II.4: Laboratory Notes

Scope and Contents

This subseries, spanning record cartons 14–23, represents the single largest component of the entire physics collection, alone accounting for more than one-quarter of the total. There are two main groups of laboratory notes. The first group (mostly found in record cartons 14–17) is a set of "electron tube books," largely dating from 1943 to 1945. Each tube book consists of detailed records of experimental data found testing electron tubes under various conditions; little more than the raw data are recorded, without narrative details in explanation of what exactly was being done or why. Each folder in this group contains documents originally collected in a single three-ring binder; the ordering of documents

in their original binders has been preserved in each corresponding folder, but the binder itself has been discarded to save space. Each of the binders was labeled. One set of binders (now folders 14.1–15.5) was simply numbered "Electron Tube Book no. 1" through "Electron Tube Book no. 24." A second set of binders (now folders 15.6–17.6) was labeled according to the type of tubes being experimented with: for example, "Electron Tube Book—A1 Tubes." A third set of binders (now folders 17.10–17.24) was labeled as belonging to Nobel laureate Polykarp Kusch, as for example, "Kusch Notebook no. 4—L3 Tubes." The second and larger main group of laboratory notes (mostly found in record cartons 18–23) is a set of paper-bound notebooks, in which Columbia researchers and students at the Radiation Laboratory recorded class notes, experimental data, formal math and physics problems, and so on. As in the case of the tube books, these are raw notes, lacking contextual narrative. Most are dated from the late 1950s through the 1960s. Each notebook, with a few exceptions, was labeled with the name of its owner. Most of the notebooks were stamped "Property of Columbia Radiation Laboratory" and given a reference number (e.g., "CRL#337"); the reference numbers are loosely chronological, and may represent the order in which the notebooks were either distributed or collected by the Laboratory. A few of the notebooks have additionally been given a topical title (e.g., "Maser Spectroscopy" or "Alkali Hyperfine Structure"). In some cases, photos, photo negatives, or blueprints were kept in the notebooks.

Title/Description	Instances	
Electron Tube Book		
Nos. 1-19a, 1942-1945 <u>Physical Description:</u> 17 folders	box 14	folder 2-18
Nos. 20-24, 1944-1945 <u>Physical Description:</u> 5 folders	box 15	folder 1-5
A1 Tube (early types) Drawings, 1944	box 15	folder 6
A1GK Tube Drawings, 1944	box 15	folder 7
A1 Tubes, G214-G527, G536-G797, G802-G870, 1944-1945 <u>Physical Description:</u> 5 folders	box 15	folder 8-13
G6 Tubes, Dr. Hollemberg's, 1944-1945	box 15	folder 14
C Tubes, 1943	box 15	folder 15
Assorted Tube Life Tests 1943-1945	box 16	folder 1
Miscellaneous Tube Performance Charts 1943	box 16	folder 2
Electron Tube Book		
E5 Tubes, G16-G343, Dr. Hollemberg's, 1943-1944 <u>Physical Description:</u> 4 folders	box 16	folder 3-6
Manufacturers' E5 tubes, 1944	box 16	folder 7
AX Tube Performance Chart, 1944	box 16	folder 8
K4 Tube Drawings, 1944-1945 <u>Physical Description:</u> 2 folders	box 16	folder 9-10
L Tubes, 1944	box 16	folder 11

RCA Tubes, nos. 1-3, 1944 <u>Physical Description</u> : 3 folders	box 16	folder 12-14
RA Tunables, 1944-1945	box 16	folder 15
Sylvania Tubes (CRL Test), 1945	box 16	folder 16
XV Tube Drawings, 1944	box 16	folder 17
Harmonic Generator and Magnetron, no. 3, undated	box 16	folder 18
Nos. 4-7, undated <u>Physical Description</u> : 4 folders	box 17	folder 1-4
Loose notes, 1949	box 17	folder 5
Summaries, 1944	box 17	folder 6
AB Graphs, G545-G960 - J.M.B. Kellogg's Prints, 1944-1945	box 17	folder 7
J.M.B. Kellogg's "Susie-Q Notebook", 1945	box 17	folder 8
Spectra Notebook, undated	box 17	folder 9
Kusch Notebook		
No. 1 - Cold Test Anodes and Output Loops, 1942-1943	box 17	folder 10
No. 2-6 - L1 Tubes-L7 Tubes, 1943 <u>Physical Description</u> : 5 folders	box 17	folder 11-15
No. 7 - Bell Telephone Lab Drawings, 1943	box 17	folder 16
No. 8 - L8 Design Data Drawings, 1943-1944	box 17	folder 17
No. 10 - L9 Tubes, 1943-1944	box 17	folder 18
No. 11 - "Related Experiments", 1944	box 17	folder 19
No. 12 - Magnetic Measurements, 1944	box 17	folder 20
Calculations and Notes, undated	box 17	folder 21
Bell Telephone Lab Drawings and Notes, 1944	box 17	folder 22
Westinghouse Magnetron, 1941-1942	box 17	folder 23
Blueprints, Sketches, Notes, 1944	box 17	folder 24
Abella, Isaac - Notebooks nos. 1-3 (CRL#379, CRL#402, CRL#440), 1959-1962 <u>Physical Description</u> : 3 folders	box 17	folder 25-27
Abella, Isaac, & Kurnit - Notebook no. 4 (CRL#467) "Optical Spin-Echoes", 1962-1963	box 18	folder 1
Bakhru, K. - Notebook (CRL#447), undated	box 18	folder 2
Barash, Lee - Notebook (CRL#388), 1959-1960	box 18	folder 3

Block, B. - Notebook (CRL#342), 1957	box 18	folder 4
Bonbright, Daniel - Notebook (CRL#419), 1961-1962	box 18	folder 5
Buenafe, Ofelia - Notebook, 1968	box 18	folder 6
Carter, David - Notebooks no. 1-4 (CRL#365, CRL#377, CRL#390, CRL#414), 1958-1961 <u>Physical Description:</u> 4 folders	box 18	folder 7-10
Chiu, L.Y. Chow - Notebook (CRL#410), 1961	box 18	folder 11
Clark, Eleanor		
Binders nos. 1-5, 1963-1966 <u>Physical Description:</u> 8 folders	box 18	folder 12-19
Binder no. 5 continued, 1965-1966	box 19	folder 1
U.C. Index file, 1967	box 19	folder 2
Loose notes, 1968-1969	box 19	folder 3
Commins, Eugene - Notebooks nos. 1-3 (CRL#314, CRL#323, CRL#331), "He 3 + Hyperfine Structure", 1955-1957 <u>Physical Description:</u> 3 folders	box 19	folder 4-6
Notebooks nos. 4-7 (CRL#356, CRL#370, CRL#375, CRL#396), 1958-1960 <u>Physical Description:</u> 4 folders	box 19	folder 7-10
Cummins, Herman - Notebooks nos. 1-4 (CRL#367, CRL#382, CRL#400, CRL#416), "I.R. Maser", 1958-1962 <u>Physical Description:</u> 4 folders	box 19	folder 11-14
Notebook no. 5 (CRL#464), "Debye-Sears", 1962	box 19	folder 15
Notebook no. 6 (CRL#481), "Light Scattering", 1962-1964	box 19	folder 16
Dakss, Mark - Notebook (CRL#453), "H. Cummins", 1962	box 19	folder 17
DeZafra, Robert - Notebook (CRL#436), 1961-1963	box 19	folder 18
Ehrenstein, Gerald - Notebooks nos. 1-2 (CRL#343, CRL#413), 1957-1962 <u>Physical Description:</u> 2 folders	box 19	folder 19-20
Eisenstadt - Notebook (CRL#295), 1954-1955	box 19	folder 21
Faust, Walter		
Notebook no. 1 (CRL#374), "Xenon Expt. . . .", 1959	box 19	folder 22
Notebook no. 2 (CRL#386), "Xe129, 131", 1959	box 19	folder 23
Notebook no. 3 (CRL#392), 1959-1961	box 19	folder 24

Notebook no. 4 (CRL#408) 1961	box 20	folder 1
Feldman, Henry - Notebooks nos. 1-5 (CRL#358, CRL#401, CRL#405, CRL#449, CRL#457), 1958-1963 <u>Physical Description:</u> 5 folders	box 20	folder 2-6
Feldman, Paul - Notebook (CRL#431), "Li +, Li Metastable", 1961-1963	box 20	folder 7
Ferguson, Robert - Notebook (CRL#363), 1958-1959	box 20	folder 8
Fleishman, Herman - Notebook (CRL#415), 1961-1962	box 20	folder 9
Gampel, Leonard - Notebook (CRL#462), "Debye-Sears", 1962-1964	box 20	folder 10
Giordmaine, Joseph		
Notebook no. 2 (CRL#338), "Maser", 1956-1957	box 20	folder 11
Notebook no. 3 (CRL#350), "Maser Amplifier", 1957-1958	box 20	folder 12
Notebook no. 4 (CRL#359), "Radio Astronomy . . .", 1958-1958	box 20	folder 13
Gold, Peter - Notebook (CRL#443), 1962-1965	box 20	folder 14
Golestane, A.A. - Notebook (CRL#417), "Super Conductivity Inv.", 1961	box 20	folder 15
Gordon, Linda - Notebook (CRL#428), 1961-1962	box 20	folder 16
Goshen, Robert		
Notebooks nos. 1-2 (CRL#403, CRL#432), 1960-1962 <u>Physical Description:</u> 2 folders	box 20	folder 17-18
Notebook no. 3 (CRL#452), "Li Fine and Hyperfine Structure", 1962-1963	box 20	folder 19
Hayashi, Teru – Notebook on Instrumentation, Physiology, 1959-1961	box 20	folder 20
Hessel, Merrill		
Notebook no. 1 (CRL#474), 1963-1964	box 20	folder 21
Notebooks nos. 2-3 (CRL#531), 1964-1966 <u>Physical Description:</u> 2 folders	box 21	folder 1-2
Ho, William		
Notebook no. 1 (CRL#424), "High Pressure Absorption of Gases", 1961-1962	box 21	folder 3
Notebooks nos. 2-3 (CRL#473, CRL#488), "Models of Planetary Atmosphere", 1963-1964	box 21	folder 4-5

Physical Description: 2 folders

Notebooks nos. 4-5 (CRL#490, CRL#524), 1963-1965	box 21	folder 6-7
<u>Physical Description: 2 folders</u>		
Isler, Ralph - Notebooks nos. 1-2 (CRL#517), 1963-1965	box 21	folder 8-9
<u>Physical Description: 2 folders</u>		
Javan, Ali		
Notebook no. 4 (CRL#300), 1954	box 21	folder 10
Notebook no. 6 (CRL#327), "Maser Calculations", undated	box 21	folder 11
Notebook no. 7 (CRL#333), undated	box 21	folder 12
Kahan, William - Notebook (CRL#353), 1957-1961	box 21	folder 13
Kahane, Joseph - Notebook (CRL#337), 1956-1957	box 21	folder 14
Korn, Abe - Notebook (#387), 1959-1960	box 21	folder 15
Landman, Alfred - Notebook (CRL#426), "Zinc Chromium", 1961-1962	box 21	folder 16
Lashinsky, Herbert - Notebooks nos. 2-3 (CRL#347, CRL#360), 1957-1961	box 21	folder 17-18
<u>Physical Description: 2 folders</u>		
Lecar, Harold		
Notebook no.1 (CRL#384), "Maser Spectroscopy", 1959-1962	box 21	folder 19
Notebook no. 2 (CRL#445), 1961-1962	box 21	folder 20
Lepworth, Edgar, Notebook (CRL#516), 1964-1965	box 22	folder 1
McDermott, Mark		
Notebook no. 1, "Nitrogen + Hg", undated	box 22	folder 2
Notebooks nos. 2-3 (CRL#349, CRL#364), "Mercury #2, #3", 1957-1959	box 22	folder 3-4
<u>Physical Description: 2 folders</u>		
McNichols - Notebook (CRL#330), 1956	box 22	folder 5
Miller, R.C.		
Notebook no. 1 (CRL#225), "Molecular Beam Velocity Selector", 1952-1953	box 22	folder 6
Notebooks nos. 2-3 (CRL#302, CRL#293), "Dimerization of Alkali Halides", 1953-1954	box 22	folder 7-8
<u>Physical Description: 2 folders</u>		
Morrone, Terry - Notebook (CRL#372), 1959	box 22	folder 9

Morzle, Robert - Notebook (CRL#469), 1964-1965	box 22	folder 10
Nafe-Nelson, Zuger		
Notebooks nos. 1-2, 1947 <u>Physical Description</u> : 2 folders	box 22	folder 11-12
Notebooks nos. 3-4, "Hydrogen and Deuterium", 1947 <u>Physical Description</u> : 2 folders	box 22	folder 13-14
Notebook no. 5, "Gj Hydrogen and Deuterium", 1947-1948	box 22	folder 15
Notebook no. 6, "H3", 1948	box 22	folder 16
Okaya, Akira - Notebook no. 1 (CRL#352), 1957-1960	box 22	folder 17
Oselka, Janet		
Notebook no. 1, 1965-1966	box 22	folder 18
Notebook no. 2, 1966-1967	box 23	folder 1
Ozer, V - Notebook 1966	box 23	folder 2
Peiora, Robert - Notebook (CRL#510) 1964	box 23	folder 3
Penzias, Arno		
Notebook no. 1 (CRL#335), 1956-1957	box 23	folder 4
Notebook no. 2 (CRL#362), "Maser", 1958	box 23	folder 5
Perry, Bradley - Notebook (CRL#435), 1962-1963	box 23	folder 6
Roach, Janet - Notebook (CRL#506), 1964	box 23	folder 7
Rustin, Randall - Notebook (CRL#368), 1958-1959	box 23	folder 8
Saloman, Edward - Notebook (CRL#475), 1963-1965	box 23	folder 9
Schoonmaker, Richard - Notebook (CRL#391), 1959	box 23	folder 10
Schultz, Sheldon - Notebook (CRL#336), 1956-1957	box 23	folder 11
Spratt, G.F.		
Notebook no. 1 (CRL#541), "Alkali Hyperfine Structure", 1965-1967	box 23	folder 12
Notebook no. 2 (CRL#570), "R.Spectroscopy . . .", 1968-1969	box 23	folder 13
Strauss, Walter - Notebooks nos. 8-10 (CRL#329, CRL#344, CRL#361), 1956-1960 <u>Physical Description</u> : 3 folders	box 23	folder 14-16
Summers, Charles - Notebook (CRL#409), 1961	box 23	folder 17
Swagel, Michael Wayne - Notebooks nos. 1-3 (CRL#484, CRL#539, CRL#550), 1963-1967	box 23	folder 18-20

Physical Description: 3 folders

Tolk, Norman - Notebook (CRL#419), 1961	box 36	folder 7
Wing, Thomas - Notebooks, nos. 1-3 (CRL#525, CRL#547, CRL#563), 1964-1967	box 36	folder 8-10
<u>Physical Description</u> : 3 folders		
Winsbert, Suzanne - Notebook (CRL#357), 1958-1959	box 36	folder 11
Zacharias, L.		
Notebook no. 1, "Physics Lab", undated	box 36	folder 12
Notebook no. 2, "Organic Chemistry", undated	box 36	folder 13
Old Hyperfine Structure Data, vols. 1-3, 1953-1956	box 36	folder 14-16
<u>Physical Description</u> : 3 folders		
Experiments with A Rb87 Maser, P. Davidovtis, undated	box 36	folder 17

Subseries II.5: Blueprints**Scope and Contents**

This subseries, found in record cartons 24–26, consists primarily of the blueprints of equipment either developed or employed at the Radiation Laboratory between 1941 and 1950. Most of the prints were drawn up by or for the Radiation Laboratory itself, but not all: others are from MIT's Radiation Laboratory, private research companies, and so on. The blueprints are organized in three main groups. The first and smallest group (folders 24.3–24.10) were originally identified as "classified prints." These are blueprints of various circuits, magnets, magnetrons, and so on. They were originally sorted into groups (A through E), and this ordering has been preserved. The second and largest group (folders 24.11–26.5) consists of "equipment prints" organized by an "equipment type" code. Although this original ordering by code has been kept, its basis or logic is by no means clear from the blueprints themselves. For example, a set of "LC Type" blueprints includes a blueprint titled "A-N Type Plug UG-154/U High Voltage Type for RG-18/U RF Cable." About half of these "equipment prints" were originally identified as "RG-Types;" these have been sorted into separate folders by equipment type. For example, folders 25.8–25.9 contain blueprints for "RG Types—Standing Wave Indicators." Finally, a third group of blueprints (folders 26.6–26.20) were simply organized alphabetically by the name of the equipment in question. Their generally later date than the previous group may explain the fact that they were not originally organized in the same manner. The blueprints are for cables, K-bands, waveguides, and so on.

Title/Description	Instances	
External Prints		
Index, circa 1944	box 24	folder 1
Records, 1946	box 24	folder 2
Classified Prints		
Circuits 1A-37A, 38A-46A, 1941-1948	box 24	folder 3-4
<u>Physical Description</u> : 2 folders		
Magnets 1B-11B, 1942-1943	box 24	folder 5
Magnetrons 1C-31C, 1942-1945		

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<u>Physical Description</u> : 3 folders	box 24	folder 6-8
Plumbing 8D, 18D, 1944	box 24	folder 9
Miscellaneous 2E-13E, 1940-1945	box 24	folder 10
Equipment Prints		
A Types, 1945-1947	box 24	folder 11
AN Types, 1942-1948	box 24	folder 12-13
<u>Physical Description</u> : 2 folders		
BN Types, 1944-1948	box 24	folder 14
BNC Types, 1944-1949	box 24	folder 15-16
<u>Physical Description</u> : 2 folders		
C Types, 1949	box 24	folder 17
HN Types, 1944-1948	box 24	folder 18
LC Types, 1944-1949	box 24	folder 19-20
<u>Physical Description</u> : 2 folders		
LN Types, 1944-1949	box 24	folder 21
N Types, 1942-1948	box 24	folder 22-23
<u>Physical Description</u> : 2 folders		
N Types, 1948-1950	box 25	folder 1-3
<u>Physical Description</u> : 3 folders		
RG Types		
Attenuators, 1942-1948	box 25	folder 4-5
<u>Physical Description</u> : 2 folders		
Crystal Mounts and Holders, 1942-1950	box 25	folder 6
Plumbing, 1944	box 25	folder 7
Standing Wave Indicators, 1943-1950	box 25	folder 8-10
<u>Physical Description</u> : 3 folders		
Waterload Parts, 1942-1947	box 25	folder 11
Waveguide Parts, 1942-1950	box 25	folder 12-16
<u>Physical Description</u> : 5 folders		
Wavemeters, 1947-1948	box 25	folder 17
Wavemeters, 1948-1950	box 26	folder 1
Other, 1942-1950	box 26	folder 2-5

Physical Description: 4 folders

Cable Adaptors, 1944-1948	box 26	folder 6
Cable Assembly, 1944	box 26	folder 7
E5 and K-Band Tubes, 1943-1944	box 26	folder 8
Microwave Apparatus, 1944-1948	box 26	folder 9
Neher's K-Band, 1942	box 26	folder 10
Pulse Equipment, 1944-1946	box 26	folder 11
Quick Disconnect Plug and Jack, 1949	box 26	folder 12
Radio Frequency Cable, 1945-1949	box 26	folder 13
Shorting Cup, 1947	box 26	folder 14
Standing Wave Indicator, 1946	box 26	folder 15
Twinax Jack and Plug, 1942-1949	box 26	folder 16
UHF Binding Post-plug, 1949	box 26	folder 17
Waveguides, standards and characteristics, 1944-1950	box 26	folder 18
Wavemeter, 1947	box 26	folder 19
X6050 Instruction Sheet, 1943	box 26	folder 20

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Series III: Pupin Cyclotron Laboratory

Scope and Contents

This short series, contained in record carton 28, is organized alphabetically by subject. Most of these materials relate to infrastructural problems relating to the laboratory. For example, folder 28.26 relates contracting work done in the mid-1950s to supply the laboratory with sufficient electrical power; folder 28.31 relates efforts to procure a spectrometer for the lab around the same time. These subject files include correspondence, notes, blueprints, diagrams, and other office records.

Title/Description	Instances	
Air Conditioning, 1951-1955	box 28	folder 1
Alternating Current Supply, 1939-1953	box 28	folder 2
Chemistry Lab Floorplans, 1955	box 28	folder 3
Coils, new, 1940	box 28	folder 4
Console, 1948	box 28	folder 5
Control Room/Counting Room, 1955-1959	box 28	folder 6
Cranes, 2, 5, and 20 ton, 1954-1955	box 28	folder 7

Cryogenic Laboratory, 1937-1947	box 28	folder 8
Cyclotron Maintenance and Repair - Miscellaneous, 1939-1944	box 28	folder 9
Cylinder Record Book, 1947-1952	box 28	folder 10
Dees, Spinning, 1935-1955	box 28	folder 11
Diesel Connection MD, 1936-1937	box 28	folder 12
Gas Handling, 1953-1956	box 28	folder 13
Grout Plate, 1952-1954	box 28	folder 14
H. Lines, 1936	box 28	folder 15
Humidity Control, 1954-1955	box 28	folder 16
Inventory, of materials transferred to Dunning, 1945	box 28	folder 17
Lecture Room Shade Circuits, 1927-1940	box 28	folder 18
Magnets - Coils, Photostats, Carriage, 1927-1940	box 28	folder 19
Modification Program Correspondence (radiation safety), 1954-1955	box 28	folder 20
Motor Generator Set, 1939-1952	box 28	folder 21
One Hundred Channel PH Analyzer, 1955	box 28	folder 22
Oscillator, 1936	box 28	folder 23
Plates for Console, 1937	box 28	folder 24
Plumbing for Labs, 1926-1932	box 28	folder 25
Power, 1953-1955	box 28	folder 26
Pressure Piping, 1955	box 28	folder 27
Rectifiers, 1928-1936	box 28	folder 28
Rigging, for tank installation, 1953-1956	box 28	folder 29
Scheduling and Shipping, 1928-1955	box 28	folder 30
Spectrometer Procurement, 1954-1956	box 28	folder 31
Stockroom Reorganization, undated	box 28	folder 32
Water Barrier Tanks, 1939	box 28	folder 33

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Series IV: Nevis Cyclotron Laboratory

Scope and Contents

This short series, in record cartons 28–29, contains primarily of blueprints, photos, and photo negatives. These are organized in three groups. A first group, folders 28.34–29.11, consists of undated photos and photo negatives, organized by the physics researcher who ordered them. They are, for example, charts and diagrams prepared as figures in published research papers; in no case, however, is a record of their intended use preserved. A second group, folders 29.12–29.21, consists of blueprints organized by subject. Representative is a blueprint for "Plunger Assembly, H2 Bubble Chamber." The third group, folders 29.22–29.25, consists of blueprints, together with related correspondence, reports, and notes, related to the construction of a neutron velocity spectrometer at Nevis Laboratory, Irvington-on-Hudson, in the late 1950s.

Title/Description	Instances	
Diagram Files		
Baliga, undated	box 28	folder 34
Des Jardins, undated	box 28	folder 35
Fischer, undated	box 28	folder 36
Gallagher, undated	box 28	folder 37
Havens/Safford/Melkonian, undated	box 28	folder 38
Kruse, undated	box 28	folder 39
Michell/Weinberg, 1964	box 28	folder 40
Namenson, undated	box 29	folder 1
Nessin/Engleke, undated	box 29	folder 2
Nikolic, undated	box 29	folder 3
Padawer, undated	box 29	folder 4
Rosen, undated	box 29	folder 5
Sayres, undated	box 29	folder 6
Smotrich/McDermott, undated	box 29	folder 7
Tatcher, undated	box 29	folder 8
Wu, Chien-Shiung, undated	box 29	folder 9
Wu, Mo Lee, undated	box 29	folder 10
Ying, Lee, 1963	box 29	folder 11
Chamber Drawings, 1957-1958	box 29	folder 12
Counters, 1953	box 29	folder 13
Electronics, undated	box 29	folder 14
Equipment Tags, 1964	box 29	folder 15
Double-Delay Line Amplifier, undated	box 29	folder 16
Meyer's Chamber, 1956-1958		

	box 29	folder 17
Miscellaneous Diagrams, undated	box 29	folder 18
Miscellaneous Spectra, 1953	box 29	folder 19
Neutron Choppers, 1953	box 29	folder 20
Ten Channel Pulse Height Analyzer, 1950	box 29	folder 21
Neutron Velocity Spectrometer		
Architectural Plans, 1958-1959	box 29	folder 22
Architectural Specifications, 1958-1961	box 29	folder 23
Preliminary Planning, 1958	box 29	folder 24
Construction and Design, 1959	box 29	folder 25
Contract Progress Reports		
Scope and Contents		
(Atomic Energy Commission contract AT(30-1)-1932 and Contract N6-ori-110-Task Order #1)		
Progress Reports Nos. 41-51, 1949 November-1950 September	box 43	folder 2
Quarterly Progress Reports		
1950 December	box 43	folder 3
1951 September	box 43	folder 4
Scope and Contents		
(James Rainwater, Director)		
1951 December	box 43	folder 5
Scope and Contents		
(James Rainwater, Director)		
1953 July	box 43	folder 6
Scope and Contents		
(Under the joint program of the Office of Naval Research and Atomic Energy Commission. James Rainwater, Executive Director)		
1954 January	box 43	folder 7
Scope and Contents		
(E.T. Booth, Director)		
1955 April	box 43	folder 8

Scope and Contents

(E.T. Booth, Director)

1955 July	box 43	folder 9
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Scope and Contents

(James Rainwater, Director)

1957 May	box 43	folder 10
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Scope and Contents

(James Rainwater, Director)

1957 July	box 43	folder 11
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1957 October	box 43	folder 12
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1958 January	box 43	folder 13
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1958 April	box 43	folder 14
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1958 July	box 43	folder 15
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1958 October	box 43	folder 16
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1959 March	box 43	folder 17
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1959 September	box 43	folder 18
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Scope and Contents

(Warren F. Goodell, Jr.)

1960 March	box 43	folder 19
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Scope and Contents

(Warren F. Goodell, Jr.)

[^ Return to Table of Contents](#)**Series V: Pegram Nuclear Physics Laboratory****Scope and Contents**

This short series, in record cartons 35–36 consists solely of a set of laboratory notebooks that recorded experimental results from research done at the Pegram Nuclear Physics Laboratory. All but one of the notebooks were identified by the researcher's name, the largest group being the four notebooks of Nickola Nickolic.

Title/Description**Instances**

Amoruso, Michael, nos. 1-2, 1961-1962	box 35	folder 9-10
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Physical Description: 2 folders

Gaines, A., 1962	box 35	folder 11
Kruse and Bent, "Particle-gamma #1", 1957-1958	box 35	folder 12
Namenson, A., 1960-1962	box 35	folder 13
Nickolic, Nickola, nos. 1-4, 1958-1961	box 35	folder 14-17
<u>Physical Description</u> : 4 folders		
Nissim-Sabet, Charles, "Fn Formation", 1960	box 36	folder 1
Sonnenberg, Mark Aaron, 1963	box 36	folder 2
Van de Graaff, nos. 1-2, 1956-1958	box 36	folder 3-4
<u>Physical Description</u> : 2 folders		
Yoskiki and Nickolic, 1959-1960	box 36	folder 5
Unidentified, "Particle-y", 1958	box 36	folder 6

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Series VI: Physics Research

Scope and Contents

This series, spanning record cartons 29–35, collects together research materials from the Physics Department not connected to one of the affiliated research laboratories. Many of these materials seem to have been the research files of Professor Emerita Wu and her associates.

This series contains three main groups of files. The first main group (folders 29.26–30.36) consists of loose-leaf laboratory notes foldered by research subject and organized alphabetically. For example, folder 29.38, "Cu64 Research," contains notes, charts and tables of figures related to research on Cu64.

The second main group (folders 30.37–32.13) consists of paper and cloth bound lab notebooks similar to those described in sub-series II-c. The first nine of these (all cloth bound) belonged to Professor Wu herself, and date from 1944–1954. The next fourteen belonged to named associates of Wu, and are sorted alphabetically by the name of the owner. Some of these are additionally given topical titles, as for example "Beta Ray Spectroscopy." The remaining dozen were also owned by Wu associates, but were not labeled with the owner's name. Some of these are titled, as for example "He3, d Reaction," but some are not.

The third and largest group of folders in this series (folders 32.14–35.8) consists of a lengthy set of "diagram files." These "diagrams" are blueprints, tables, graphs, flow charts, electrical schematics, and so on. The diagrams are often labeled, but only sporadically dated. Each of diagram is stamped "Columbia University Nuclear Physics Research" and assigned a "DWG. NO." The diagrams number (with some gaps) from 1197 to 5581; the number order is only very loosely chronological. Representative diagrams (from folder 33.2) are "Graph-H. Brown," "Temp'y El. Storage Sys.," "Gas Handling Schematic Layout." There is no obvious connection between the diagrams (except that they were all presumably produced for the Physics Department), and there is no general index or other supporting material for the collection of diagrams.

Title/Description

Instances

Subject Files		
As 76 Research, 1948-1949	box 29	folder 26
Au 198 Research, 1953	box 29	folder 27
Baffle System, undated	box 29	folder 28
Beta Decay and Shell Structure, 1941	box 29	folder 29
BF 3 Counters, 1945	box 29	folder 30
By 80 Research, 1948-1949	box 29	folder 31
C 14 Research, 1948-1953	box 29	folder 32
Cb 95 Research, undated	box 29	folder 33
Coincidence Spectrum Layout, undated	box 29	folder 34
Computation Sheets, New Baffle, undated	box 29	folder 35
Cr 48 Research, 1954	box 29	folder 36
Cs 137 Research, 1944-1949	box 29	folder 37
Cu 64 Research, 1942-1954	box 29	folder 38
Efficiency and Absorption Connections, undated	box 29	folder 39
Grivet-B Spectrometer, undated	box 29	folder 40
HHE Research, undated	box 29	folder 41
K 42 Research, 1953-1955	box 29	folder 42
Light Pipe Experiment, 1954	box 29	folder 43
Master Sheet, 1950	box 30	folder 1
Na 22 Research, 1949-1959	box 30	folder 2
Neutron Cross Section Table, 1945	box 30	folder 3
Nuclear Data Collection, 1948-1952	box 30	folder 4
P 32 Research, 1950-1954	box 30	folder 5
PM Tubes, 1943-1954	box 30	folder 6
Pm 147 Research, 1949-1953	box 30	folder 7
Pr 143 Research, 1949	box 30	folder 8
Parameter File, undated	box 30	folder 9
Precision Baffle Curves, 1953	box 30	folder 10
Q Energies,, undated	box 30	folder 11
Ra DEF Operators, 1934	box 30	folder 12
Ra E Calculations, 1951-1952	box 30	folder 13

Re 186 Research, undated	box 30	folder 14
Re 188 Research, undated	box 30	folder 15
References, bibliographical, undated	box 30	folder 16
Resolution and Miscellaneous, 1954	box 30	folder 17
S 35 Research, 1948-1953	box 30	folder 18
Se 75 Research, undated	box 30	folder 19
Spectrometer and Associated Parts, 1947-1951	box 30	folder 20
Split Crystal Spectrometer Studies, undated	box 30	folder 21
Tc 99 Research, undated	box 30	folder 22
Thick Sources, 1949	box 30	folder 23
Tl 204 Research, 1951-1952	box 30	folder 24
XMSN Data, 1949	box 30	folder 25
Miscellaneous Research Notes, 1948-1954	box 30	folder 26
Notebooks		
Wu, Chien-Shiung		
Nos. 1-7, 1944-1951 <u>Physical Description</u> : 7 folders	box 30	folder 27-33
Nos. 8-9, 1950-1954 <u>Physical Description</u> : 2 folders	box 31	folder 1-2
Baiker, 1956	box 31	folder 3
Harihar, P. "cyclotron work", 1959-1960	box 31	folder 4
Katz, M.S., 1959 Scope and Contents (associate of Wu)	box 31	folder 5
Kruse, T.H., 1957-1959 <u>Physical Description</u> : 2 folders Scope and Contents (associate of Wu)	box 31	folder 6-7
Lidofsky, L.J., 1950 Scope and Contents (associate of Wu)		
vacuum evaporator, 1950	box 31	folder 8

Scope and Contents

(associate of Wu)

beta ray spectroscopy, 1950	box 31	folder 9
Rainwater, James, 1948-1950	box 31	folder 10
Sheer, Charles, "neutron shattering", 1948	box 31	folder 11
Scope and Contents (associate of Wu)		
Sh__, J., 1958-1959	box 31	folder 12
Scope and Contents (associate of Wu)		
Shaknov, Irving, 1948-1949	box 31	folder 13
Scope and Contents (associate of Wu)		
Tacher, M., 1958	box 31	folder 14
Scope and Contents (associate of Wu)		
Weil, Adele, 1948-1949	box 31	folder 15
Scope and Contents (associate of Wu)		
Weindling, Fred, 1956	box 32	folder 1
Scope and Contents (associate of Wu)		
Associate of Wu		
Beta Spectra Data, 1949-1950	box 32	folder 2
He 3, d Reaction, 1960	box 32	folder 3
Q Pole Magnet/Beam Focusing,, 1959	box 32	folder 4
Time of Flight I-III, 1957-1958 <u>Physical Description</u> : 3 folders	box 32	folder 5-7
Untitled, 1950-1954 <u>Physical Description</u> : 6 folders	box 32	folder 8-13

Diagram Files

Nos. 1197-2199, undated <u>Physical Description</u> : 2 folders	box 32	folder 14-15
Nos. 2200-2289, 2383-2466, 2412-3085, 1954-1964 <u>Physical Description</u> : 14 folders	box 33	folder 1-14
Nos. 3086-4313, 4338-5007, 1958-1961 <u>Physical Description</u> : 13 folders	box 34	folder 1-13
Nos. 5008-5453, 5507-5509, 5565-5581, 1955-1962 <u>Physical Description</u> : 8 folders	box 35	folder 1-8

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Series VII: Reprints

Title/Description	Instances
Reprints, some inscribed by author, circa 1870-1905	box 37
Reprints, circa 1905-1965	box 38
Reprints, E.K. Adams Fund Master File, circa 1930-1965	box 39

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