11/10/34 Engineering, Physics Peter Axel Papers 1946 - 1983

Papers of Peter Axel, M.S. '47 PhD. '49, (1923-83), professor of physics (1949-83), including correspondence (1946-82), physics course materials (1946-76), budgets, manuscripts, notes, proposals, publications (1949-82), reports, technical notes, biographical information (1955-76), conference announcements and programs (1950-83), Axel's student course notes (1940, 1946-48) and related material on teaching and research in nuclear physics, photonuclear reactions and the compound nucleus, lower energy superconducting accelerators, radioactivity, electronics and nuclear instrumentation. The papers include material on physics departmental committees and responsibilities (1946-82); University Senate, boards and committees (1960-61, 1969-83); academic staff appointments (1968-82); graduate students (1950-82); visiting researchers (1957-79); nuclear physics curriculum (1965-75); Physics Research Laboratory (1966-82); 22 MeV Betatron (1951-62); monochromator (1953-61); LINAC superconducting accelerator (1963-75); MUSL-2 accelerator (1975-81); American Physical Society, Division of Nuclear Physics (1967-82); Argonne National Laboratory (1966-72); Gordon Research Conference on Photonuclear Reactions (1959-77) and nuclear structure physics (1980-82); National Science Foundation, Nuclear Science Advisory Committee (1975-82) and grants; MIT, Radiation Laboratory (1940-46) and consulting (1946-55).

General subject access to holdings at the University of Illinois Archives is provided by combinations of 3,805 subject descriptors assigned to 3,722 record series. For this series the supplementary finding aid is maintained on machine readable disks and users may request searchers for specific names or topics. For such searches, the archives staff will use DOS 2 and Easywriter 2 programs for sequential searching.

<u>CONTENTS</u> <u>Boxes</u>

Publications, 1949-82
Student Course Notes, 1940, 1946-48
Physics Department, A-Graduate, 1946-82
Graduate-Moreh, 1949-82
National Science Foundation-Synchro, 1949-82
Teaching-Visiting, 1949-82
Physics Positions, Eisenstein-Zimmerman, 1968-82
Teaching Materials, Physics 1a-344, 1946-77
Physics 346-498, 1949-76
University Committees, 1960-61, 1969-83
Conferences, 1950-82
Professional Activities and Associations, American-Interagency, 1946-80

National Academy of Sciences-Referees' Critiques, 1949-82 Travel, 1961-78 Research Laboratories, Argonne-Stanford, 1942-82 Correspondence and Subject Files, 1948-82 Correspondence, Bussiere-Weisskopf, 1949-50, 1956-82 Subject File, Axion-Y89, 1949-78

<u>Box 1</u>:

PROFESSIONAL HISTORY FILE, 1955-83

PUBLICATIONS, 1949-82

"Classification of Nuclear Isomers," 10/1/49, The Physical Review

"Decay of Y87 and Sr87m," 11/15/50, Physical Review

"The Decay of Sr87m, Y87m and Y87," 10/15/51, "The Second Transition in the Decay of Sn119m," 12/1/51, "Decay of Te125m," 3/1/52, Physical Review

"Intensity Corrections for Iodine X-Rays Escaping From Sodium Iodide Scintillation Crystals," "Identification of Mo91 and Mo91m," "Seven New Isomers with Half-Lives Between 10-5 and 10-1 Sec," Physical Review, 1954-56

"Implications of the Photonuclear Effect in Zr90," 4/15/56, Physical Review

"Decay of Ce144," 6/1/56, Physical Review

"Plane Polarization of 15.1 Mev Bremsstrahlung from 25 Mev Electrons," 1/1/60, Physical Review

"Decay of 16-Min Ta182m," 2/15/61, Physical Review

"Recoil-Free Resonant Absorption in Au197," 8/1/61, Physical Review

"Elastic Scattering of 11.5-17.7 Mev Photons by Au Measured with a Bremsstrahlung Monochromator," 4/1/62, Physical Review

"Electric Dipole Ground-State Transition Width Strength Function and 7 Mev Photon Interactions," 4/15/62, Physical Review

"Photoproduction of a 100-microsec Isomer and its Tentative Assignment to Hg201," 10/1/62, <u>Physical</u> Review

"Interpretation of Quasi-Elastic Scattering of 11-19 Mev Monochromatic Photons by Holmium Using Zero-Point Vibrations in the Hydrodynamic Model," March 1963, <u>Physical Review</u>

"New Resonances in Photon Transition Strength Functions," 4/1/63, Physical Review Letters

"The Production and Use of High Resolution Gamma Rays," 5/15/63, <u>Physics</u> Letters (with typescript copy)

"Etude de la Deformation du Noyau d'Holmium," May/June 1966, Le Journal de Physique

"Neutron Spectra from Monoenergetic Photons on Bismuth," 9/20/67, Physical Review

"Photon Scattering by the Giant Magnetic Dipole States in 12C, 24Mg and 28Si," 11/20/67, <u>Physical</u> Review

"Evidence for the Isobaric Splitting of the Giant Resonance from the Reaction 89Y (p1, 0) 90Zr," 12/4/67, Physical Review Letters

"Simple Nuclear Excitations Distributed Among Closely Spaced Levels," July 1968, Nuclear Structure, <u>Proc. of Int. Symposium on Nuclear Structure</u>

- "Design of a 600 MeV Superconducting Microtron," 1969, Nuclear Science
- "Design of a 600 MeV Microtron Using a Superconducting Linac," 1970, Particle Accelerators
- "Intermediate Structure in the Photon Interaction Cross Sections of Sn and Zr," August 1970, Physical Review C
- "238U and 232Th Photofission and Photoneutron Emission Near Threshold," 8/25/1975, Physical Review Letters
- "Microtron Using a Superconducting Electron Linac," "Status of MUSL-2, the Second Microtron Using a Superconducting Linac," <u>IEEE Trans. Nuclear Science</u>, 1975, 1977
- "Concluding Remarks," <u>Proceedings of the Third International Symposium on Neutron Capture</u> <u>Gamma-Ray Spectroscopy and Related Topics</u>, Brookhaven National Laboratory 9/18-22/78
- "Parity of Bound J-1 Levels in 208Pb," 1/22/79, Physical Review Letters; "Interaction of Photons with 208Pb and Neighboring Isotopes at Energies Below the Neutron Emission Threshold," February 1979, Physical Review C
- "Operating Experience with MUSL-2," 1979, "Plans for a Two Stage 450 MeV Cascade Microtron," 1981, IEEE Nuclear Science Trans.
- "Giant Resonances and Some Related Gamma-Ray Decay Rates: 1979 Status Report," 1980
- "Fine Structure in the 208Pb Photoneutron Cross Section Between 9.9 and 11.2 MeV," "Elastic Photon Scattering Between 9.5 and 12 MeV in 208Pb and 206Pb," January 1982, <u>Physical Review</u>
- "Nuclear Structure at Intermediate Excitations as Indicated by the Y89 (P1, 0) Zr90 Reaction," (typescript of talk) October 1967
- "Simple Nuclear Excitations Distributed Among Closely Spaced Levels," (Dubna Talk) 1968
- "Atomic Energy," 1950, 1954-55, Collier Yearbooks
- "The Impact of Digital Computers," 1966
- "Microtron," 1981, McGraw-Hill 1982 Yearbook of Science and Technology
- "Particle Accelerator," 1982, McGraw-Hill Yearbook of Science and Technology

REPORTS, 1950-79

- "Internal Conversion Data," ca.1950, Office of Naval Research Task Contract N6ori-70
- "Escape Peak Correction to Gamma Ray Intensity Measurements Made With Sodium Iodide Crystals," September 1953, BNL Report 271, T-44
- "Bremsstrahlung Converter Considerations," 1961, Technical Report Number 22, Office of Naval Research Contract Nonr 1834 (05)
- "Counting Rate Estimates For Photo Neutrons Produced by Bremsstrahlung From Electrons With Energies Not Far Above the Photo Neutron Threshold," April 1965
- "A Six Traversal Microtron Using a Super Conducting Linac," ca.1973
- "Nuclear Studies With Tagged Photons," (2 folders) ca. 1979, 1980

11/10/34 4

Book Reviews, 1960-66

Peter Axel: Nuclear Physics Reprints, 1949-83

STUDENT COURSE NOTES, 1940, 1946-48

"Precision," (Kurrelmeyer) 1940

University of Illinois:

Math 41 Vector and Tensor Analysis Lecture Notes, 1947

Math 41 Vector and Tensor Analysis, 1947

Math 71a/72a Introduction to Higher Analysis and Higher Geometry Course Notes and Problems, 1946

Math Notes, 1946-48

Math Review Notes, 1946-48

Notes on Mathematical Physics Lectures Given by J.H. Bartlett, 1947-48

Analytical Dynamics, 1947

Physics 20b Theoretical Mechanics Course Notes, Examinations, 1946

Physics 40 Electricity and Magnetism Review and Experiments, ca.1946-48

Physics 71 Light, Geometric and Wave Optics, 1947

Physics 71 Light Optics-Problems and Examinations, 1947-48

Physics 122 Dynamics, ca.1946-48

Physics 122 Dynamics, Physics 146 Electrodynamics-Review Notes, ca.1946-48

Box 2:

STUDENT COURSE NOTES, 1946-48 (continued)

University of Illinois:

Physics 128 Statistical Mechanics-Course Notes, Examinations, 1946

Physics 146 Electrodynamics-Course Notes, Problems, Volume 1, 1947

Physics 146 Electrodynamics-Course Notes, Problems, Volume 2, 1947

Physics 163 Statistical Mechanics-Course Notes, Problems, ca.1946-48

Physics 181a Quantum Mechanics I-Course Notes, Problems, Examinations, 1947

Physics 181b Quantum Mechanics II-Course Notes, Problems, 1947

Physics 181 Quantum Mechanics-Review Summary, ca. 1947

Advanced Quantum Mechanics, 1947-48

Physics 183 Nuclear Physics, 1947

Physics 184 Line Spectra and Atomic Structure-Notes, Problems, Examinations, ca.1946-48

Physics 198 Solids Seminar, ca.1946-48

Solids, ca. 1946-48

Dirac Theory of Electrons, Notes from Dancoff Lectures, ca. 1946-48

Box 3:

PHYSICS DEPARTMENT, A-Graduate, 1946-82

Almy, Gerald, 1957, 1968

Alumni Correspondence, 1973-77, 1982

Alumni Achievement Award, William C. Wiley, 1974-75

Alumni, Departmental Survey of Alumni in Nuclear Physics, 1974-76

Alumni, Report on Careers of Nuclear Physics PhDs from U of I, 1976-77

Axel Memoranda, (4 folders) 1976-82

22 MeV Betatron, 1958-61

Description, 1940-42, 1946, 1957

Design, 1957, 1961

Maintenance and Repair, 1958-60

Modifications, 1959

Regulator Operating Instructions, 1960

Renovation, 1958-59, 1962

Staff, 1951-68

Borelli, Ray and Physical Research Laboratory (PRL) 1977-82

Budget and Policy Committee, 1979-81

Memos on budgets, salaries, Internal reallocations, guidelines, statistics, and problems

Building Request, 1973

Calarco, John, 1981

Cardman, Lawrence, (2 folders), 1973-82

"A Century of Physics at the University of Illinois 1868-1968," by G.M. Almy, 1973 (with P.A. Notes)

Colloquia, 1973-74

Colloquia, 1978-79

Computer, 1966-69

Bids, October 1966

DECUS, 1967

Digital Equipment Corporation Correspondence, 1967-68

PD P-9 Memoranda, 1966-68

Pascal, 1979

Proposed purchase of nuclear physics data computer

Dancoff, Family Memorial Fund, 1950-52

Departmental Notices, 1976-80

Departmental Notices, Memoranda, 1981-83

Equipment Letters, (1949-54)

Equipment Needs/Budget, 1981

Facilities Survey, 1973

Graduate Students, 1966-79

Graduate Students:

Ali, Muzaffar, 1982

Amusa, Ade, 1979

Bell, Zane, 1976-79
Bowe, Joseph, 1949-51
Cahill, Philip, 1976
Cannell, Lynell, 1977
Cary, Ted, 1962
Deady, Matthew, 1981
Dickey, Philip, 1972-77
Dowell, David, 1980
Drake, Darrell, 1962-65
Euthymiou, Paraskevi, 1957-62
Fox, John, 1958-65
Ganek, Daniel, 1969-73
Gulbranson, Roger, 1977-80
Glaubman, Michael, 1951-59
Kuchnir, Franca, 1961, 1969

<u>Box 4</u>:

PHYSICS DEPARTMENT, Graduate-Moreh, 1949-82

Graduate Students (continued):

Kuehne, Herbert, 1957-67

Laszewski, Ronald, 1973-75

Mann, Lloyd, 1950

Min, Kongki, 1962-76

Murphy, Jim, He3 and H3, 1967-68

Nagel, Michael, 1966-72

O'Connell, James, 1960-61

Pullman, Ira, 1952-53

Saur, Al, 1950-52

Schriever, William, 1951

Starr, Richard, 1975-78

Steuber, Walter, 1950

Stein, Nelson, 1960-72

Stotland, Victor, 1965

Strittmatter, Richard - Preliminary Exam, 1976

Tipler, Paul, 1958-64

Vegors, Stanley, 1955-65

Williams, Robert, 1977

Young, Lloyd, 1969-79

Graduate Students, Letters of Recommendation, 1950-77

Qualifying and Preliminary Examinations, 1948-64

Qualifying and Preliminary Examinations, 1972-82

Harlan, J. R. and PRL Memoranda, 1976

Instructional Evaluation Forms, 1973-76, 1979

Isotopes, Procurement, 1949, 1951-52

"KLRS" Committee (Kadanoff, Lazarus, Ravenhall, & Smith) on Future of Nuclear Physics Program at U of I, 1968

Kresge Foundation, 1981

LINAC Superconducting Accelerator, 1963-69

Technical Notes, Superconducting LINAC Staff, PRL, 1968-71

Technical Notes, Report No. 188, 1968-75

"U I Profs Invent Power-Savings Reactor," 3/2/74, Daily Illini

C.E.A., 1974

LINAC 2 from Stanford, 1977-78

LINACS, Stanford Loan, 1981

Low Energy Nuclear Physics Expansion, Nuclear structure appointments, 1958-62,

1966-67

Microtron, "Design of High Energy Microtrons," C.S. Robinson, 1/19/67, PRL Technical Report No. 156 Microtron Press, 1968

MUSL Memoranda, Budget, 1977-80

MUSL-2 Accelerator Equipment Needs, 1978-79

Operation, 1979

Physics, 1981

Postdoctoral Staff, 1978-79

Users, 1975-77

Monochromator, Design Proposal by P. Axel and A. O. Hanson, 1957

Electronics, 1960

Estimates of Counting Rates, 1953, 1956, 1960-61

Instrumentation, 1957, 1960

Moreh, Raymond, 1979

Box 5:

PHYSICS DEPARTMENT, National Science Foundation-Synchro, 1949-82

NSF Grants, Correspondence, 1974-80

"Proposal to Construct 30 MeV Superconducting LINAC as a Step Towards a 600 MeV Superconductnig Microtron," March 1967

NSF Site Visit, December 1977

[&]quot;Superconducting Electron Accelerator and Nuclear Structure Research," 1971-74

[&]quot;Nuclear Structure Research With Microtron Using Superconducting Linac," 1973

[&]quot;Superconducting Microtron and Nuclear Structure Research," 1973-76

[&]quot;Superconducting Microtron and Nuclear Structure Research," 1976-77

"Microtrons Using Superconducting LINACs and Nuclear Physics Research," 1978

"Microtrons Using Superconducting LINACs and Nuclear Physics Research," 1978-79 Computer Request, 1979

"Superconducting Electron Accelerators and Nuclear Physics Research", 1979-82

"Superconducting Electron Accelerators and Nuclear Physics Research," 1980

"Superconducting Electron Accelerators and Nuclear Physics Research," 1981-82

Construction of a 450 MeV Cascade Microtron Facility, 1982

Construction of a Research Facility Including a 750 MeV Cascade Microtron, 1982

Newsletter, 1975-77

Nuclear Astrophysics, 1974

J. W. Truran

Nuclear Course Revision, Physics 483, 1965-66

Nuclear Courses, 1965, 1974-75

Nuclear Physics, Questionnaires, 1969-70

Nuclear Structure Research Program Reports, 1959-60, 1966, 1970, 1975-76

Oil Tanks, 1970

Pandharipande, Vijay, 1981

Physics 100 Level, 1973

Physics 106 Administration, Ravenhall, 1972

Grade Complaints, 1971-73

Memoranda, 1971-72

Physics Research Lab (PRL) Administration, 1976-78

Directory, 1980

Memoranda, 1966, 1977, 1979, 1981

NPL Memoranda, 1981

Proposed Name Change to Nuclear Physics Research Lab. 1978-80

Photos and Slides, MUSL-I, MUSL-II, Physics 106 Classroom Demonstrations,

Workshop on Nuclear and Dense Matter, 1972-79

PLATO, 1970-72

Promotions and Tenure Committee, 1981-83

Radioactive Standards, 1947-48, 1950-51

Radiation Hazard, 1959-61

Radioactivity and Safety, 1959, 1967

Radiation Monitor, 1961

Radioactive Waste, PRL, 1979

Research Board Requests, 1978

Safety, 1972, 1981

Silicon Detectors, 1965-66

Si Detector, 1967-68

Simmons, Ralph O. (2 folders), 1971-77, 1978-83

Spectrometer Magnet, 1961

Spectrometer, Yale, 1973

Staff, Current, 1981-82 Status of Research Memorandum, 1/24/78

Synchro Operated Differential Analyser Operating Manual by Arnold Nordsieck, 1953

Box 6:

PHYSICS DEPARTMENT, Teaching-Visiting, 1949-82

Teaching Assignments, 1972-77
Technical Reports Mailing Lists, Requests for Copies, 1961-62, 1979
Van de Graaf Accelerator (2 folders), 1960, 1973
Visiting Researchers, Glazkov, Anatoly, (IREX), 1976
Jamnik, Darko, 1957-58, 1976
LeConte, Philippe, 1978
Sellyey, William 1979

Shkoda-Uljanow, Vladimir, (IUCTG Exchange) 1969

Veyssiere, Andre-Saclay visitor 1979

Visiting Researchers, 1978, 1980-83

PHYSICS POSITIONS, 1968-83

Advertisements & Inquiries, Adams-Dyer Positions Open, Other Institutions, 1977-83 Recruitment, 1970 Candidates/Recommendations for Position, 1970 Job Applications (Answered), 1970 Letter to Research Associate Candidates, 1970 Theory Applicants, 1970 Applicants Through Simmons, 1970-71 Job Inquiries, 1971 Job Inquiry Replies, 1971 Job Inquiries, 1972-73 Summer Appointments, 1974 Job Inquiries (A-Z), 1975-77 (three folders) Professional Physicist, 1976 Recruiting, 1976 Job Inquiries (A-Z), 1977-82 (three folders) Summer Appointment, 1979 Job Advertisement Response, 1979-80 Job Inquiries, 1980

Nuclear Applicants, 1981

Staff Positions, 1981-82

Job Applicants:

Adams, Gary, 1981

Ahrens, Jurgen 1974, 1976

Artz, Jerry, 1976

Baker, Todd, 1970

Barnes, B.K., 1969

Barnes, Peter D. 1967

Beckerman, Martin, September 1977

Bennett, Bruce B., 1979

Bennett, Charles, L., 1977

Bergstrom, Jack, 1970

Bertin, Michael, 1970

Bieszk, John, 1979

Bigler, Rodney, 1970

Brooks, Stephen, 1979

Brown, Doug, 1974

Buchanan, Ronnie, 1980

Calarco, John, 1975

Cheng, Stephen, 1976-77

Clarkson, Robert, 1970

Cobern, Martin, 1977

Cochavi, Saadia, 1975

Cole, George, 1970

Cooper, Martin, 1973

Cue, Nelson, 1970

Daniels, Rod, 1978

Davids, Cary, 1974

Davis, Jay 1970

Debenham, Philip, 1978

Debevec, Paul, 1977

Dickey, Philip, 1977

Drake, Tom, 1970

Dwarakanath, Mirmira, 1973

Dyer, Peggy, 1973

Box 7:

PHYSICS POSITIONS, Eisenstein-Zimmerman, 1968-82

Eisenstein, Bob, 1976-77

Finn, Mike, 1978

Flanz, Jacob, 1978-79

Fleming, Don, 1970

Gillespie, William, 1976

Goldemberg, Dr. (São Paulo), 1958

Graef, Hans-Dieter, 1977-78

Hark, Sui, 1980

Hasinoff, Michael, 1970

Heffner, Robert, 1976-77

Hicks, Ross, 1976

Hiddleston, Hoyt, 1970

Hirsch, Andrew, 1977

Horoshko, Roger, 1970

Ingham, David, 1977, 1979-80

Itoh, Kohei, 1977, 1980

Izumo, Ko, 1965

Jamnik, Darko, 1981

Johnson, Ronald, 1970

Jolly, Raj, 1971

Khan, Tasheem, 1976

King, George, 1977

Kline, Francis, 1977

Koike, Masahiro, 1970

Kolata, James, 1970

Kowalski, Stanley, 1975-76

Kulleck, James, 1970

Laszewski, Ronald, 1977-78

Leich, Douglas, 1973

Leonhardt, Rod, 1980

Lewis, David, 1977

Liebert, Revel, 1970

Lindgren, Kurt, 1977

Little, Andrew, 1977

Liu, K. F., 1981

Lumpkin, Alexander, 1976-77

Mann, David, 1971

Marsh, Charles, 1979

McCarthy, James, 1970

Min, Dong, 1979

Miracle, Douglas, 1977

Mistry, Vitthalbhai, 1970

Moore, Garry, 1976-77

Moreh, Raymond, 1981

Morgan, James, 1970

Murphy, James, 1975-76

Nadasen, Aruna, 1977

Nebel, Henry, 1980

Niiler, Andrus, 1969

Overway, David, 1977

Page, Howard, 1979

Papanicolas, Costas, 1978

Pekar, James, 1979

Peterson, Roy, 1970

Pitthan, Rainer, 1977

Rad, Farhad, 1976-77

Romberg, Edgar, 1970

Rothhaas, Hans, 1980-81

Russo, Phyllis, 1973

Rutledge, Lloyd, 1976-77

Samuelson, Lawrence, 1976-77

Shapiro, Mark, 1969-70

Sherwood, Jesse, 1976

Shoup, Robert, 1970

Shreve, David, 1970

Singhal, Ravi, 1976

Skopik, Dennis, 1969

Slater, Donald, 1974

Smith, Hastings, 1969-70

Stephenson, Edward, 1976-77

Suzuki, Arata, 1970

Tribble, Robert, 1977

Truran, James, 1973

Turneaure, John, 1981

Wambach, Jochen, 1982

Wu, Jar, R. 1976

Wu, Chung, Pao-, 1970

Yen, Richard, 1976

Yu, David, 1968-69

Zimmerman, Peter, 1969

TEACHING MATERIALS, Physics 1a-344, 1946-77

Nuclear Engineering 398, 1971

Physics 1a General Physics (Mechanics, Heat and Sound) Examinations, 1946-47

Physics 1a and 1b General Physics Problems, 1938-41

Physics 60 (360) Heat and Thermodynamics, 1948-49

Physics 101 General Physics (Mechanics, Heat and Sound) Examinatinos, 1958-61

Physics 104 General Physics (Electricity, Magnetism, Light and Modern Physics), 1949-50

Physics 104 General Physics (Electricity, Magnetism, Light and Modern Physics), 1953

Physics 106 General Physics (Mechanics), 1953-54

Box 8:

TEACHING MATERIALS, Physics 346-498, 1949-76

Physics 106 General Physics (Mechanics) Examinations, 1964-65 to 1972-73

Physics 106 General Physics (Mechanics) Laboratory Experiments, 1971

Physics 106 General Physics (Mechanics), 1971-72

Physics 106 General Physics (Mechanics), 1972-73

Physics 106 General Physics (Mechanics), 1973-74

Physics 106 General Physics (Mechanics), 1975-76

Physics 107 General Physics (Electricity, Magnetism and Modern Physics), 1948-49, 1953-55

Physics 107 General Physics (Electricity, Magnetism and Modern Physics), 1954-55

Physics 108 General Physics (Heat, Sound, Light and Modern Physics), 1957-58

Physics 108 General Physics (Wave Motion, Sound, Light and Modern Physics), 1967-69

Physics 108 General Physics (Wave Motion, Sound, Light and Modern Physics), 1970-71

Physics 108 General Physics (Wave Motion, Sound, Light and Modern Physics), 1976-77

Physics 108 General Physics (Wave Motion, Sound, Light and Modern Physics), 1977

Physics 232 Physics of Music, 1952

Physics 330 Sound, 1948-49

Physics 330 Sound, 1949-50

Physics 343 Vacuum Tube Circuits, 1950-51

Physics 343 Vacuum Tube Circuits, 1951-53

Physics 343 Vacuum Tube Circuits Lecture Notes, 1952-53

Physics 344 Vacuum Tube Circuits Lecture Notes, 1950-53

Physics 344 Vacuum Tube Circuits Experiments and Examinations, 1950-55

Physics 344 Vacuum Tube Circuits Experiments and Examinations, 1952-53

Box 9:

TEACHING MATERIALS, Physics 346-498, 1949-76

Physics 346 Modern Physics for Nuclear Engineers, 1975

Physics 381 Atomic Physics, 1958

Physics 382 Radioactivity and Nuclear Physics, 1951-52

Physics 382 Nuclear Physics, 1957

Physics 382 Subatomic Physics, 1970

Physics 382 Subatomic Physics Examinations, 1973, 1975

Physics 470 (483) Nuclear Physics, 1965-66

Physics 470 Nuclear Physics Extra Problem Set, Fall 1965

Physics 470 Nuclear Physics Frauenfelder Problems, 1966

Physics 470 Introduction to Nuclear and Particle Physics, 1967-69

Physics 470 Introduction to Nuclear and Particle Physics Examinations, 1970

Physics 471 Nuclear Physics I, 1966-68

Physics 480 Quantum Mechanics Final Examination

Physics 481-484 Line Spectra and Atomic Spectra/Nuclear Physics, 1949-54

Physics 481 Quantum Mechanics II Frauenfelder Course Notes, 1960

Physics 483 Nuclear Physics, 1957-58

Physics 483-4 Nuclear Physics Lecture Notes, 1959-60

Physics 483 (470) Nuclear Physics Problem Sets, 1965

Physics 483-484 "Notes on Nuclear Physics," Chapters 1, 4, 6, 8, 10, A-IV, A-VI, A-VIII, 1966

Physics 483-4 "Notes on Nuclear Physics," with Notations/Revisions, 1967

Physics 483-4 "Notes on Nuclear Physics," with Notations/Revisions, 1968

Physics 484 Nuclear Physics, 1953-54

Physics 484 Nuclear Physics, 1961

Physics 484 (471) Nuclear Physics, 1965-66

Physics 488-b, Physics of Elementary Particles, 1964

Physics 498-d/e/f Special Topics Seminars in Nuclear Physics, 1972, 1974, 1976

Box 10:

UNIVERSITY COMMITTEE, 1960-61, 1969-83

Ad Hoc Committee on the Future of International Programs, 1981-82

Committee on the Future of International Programs, Questionnaire Responses, 1981

Levis Center, 1973

Phi Kappa Phi, 1974-76

University Club, 1960-61

University Club, 1969-70

University Research Board, 1980-81

Graphics Terminals, 1980-81

1981-82

Revision of University Patent Policy, 1981-82

1982-83

Urbana-Champaign Senate, 1981-82

U-C Senate, Senate Council, (3 folders), 1969, 1975-77

U-C Senate, Committee on University Statutes and Senate Procedures, 1969 1968-70

Sub-Committee on Reconstitution of the Senate, Final Report, 1/2/70

Correspondence, 1975-76

Proposed Amendments to the Statutes, 1975-76 University of Illinois Statutes, 7/18/79

Box 11:

CONFERENCES, 1950-82

Conference Notices, 1972-82

High Speed Phospor Counters, University of Rochester, July 22-23, 1950

Photonuclear Physics, MIT, May 4-5, 1953

Photonuclear Conference, University of Pennsylvania, May 3-4, 1954

Photonuclear Conference, Case Institute of Technology, Cleveland, OH, May 2-3, 1955

Conferences on Photonuclear Physics, Programs, 1956, 1958

Congres International de Physique Nucleaire, Paris, July 2-8, 1964

International Symposium on Nuclear Structure, Dubna, USSR, July 4-11, 1968

International Conference on Photonuclear Reactions and Applications, Asilomar Conference Grounds, Pacific Grove, CA, March 26-30, 1973

4 x 50 Symposium, Niels Bohr Institute, May 31 - June 3, 1976

International Conference on Nuclear Structure, Tokyo, September 5-10, 1977

Electron Facilities, 1978

Conference on Future Possibilities for Electron Accelerators, Charlottesville, VA, 1978

Neutron Capture Gamma Ray Spectroscopy, 3rd International Symposium, Brookhaven, September 18-22, 1978

Symposium on Nuclear Physics with Electron Accelerators, Mainz, 1978

Giant Multiple Resonance Topical Conference, Oak Ridge, TN, 1979

International Conference on Nuclear Structure Physics, Berkeley, CA, 1980

50th Anniversary, W.K. Kellogg Radiation Laboratory, 1981

Gordon Research Conference on Photonuclear Reactions, Meriden, NH,

August 24-28, 1959

General Information, Administrative Correspondence, 1959

Program and Photograph, 1959

State Department Correspondence re: Soviet Participants, itineraries, reciprocity, 1959-60

Follow-up Reports, 1959, 1961

Meriden, NH, August 21-25, 1961

Tilton, NH, August 5-9, 1963

August 9-13, 1965

Gordon Conference on Nuclear Structure Physics, Andover, NH, June 13-17, 1966

Gordon Research Conference on Photonuclear Reactions,

Tilton, NH, August 4-8, 1969

August 5-9, 1974

Plymouth, NH, August 9-13, 1976 Gordon Conferences, June - August 1977 Gordon Research Conferences Information, Program, 1979-80 Gordon Research Conferences Nuclear Structure Physics, Tilton, NH, July 7-11, 1980 Plymouth, NH, August 10-14, 1981 Proposal, Correspondence with Director, 1980-81 Solicitation of Programming Suggestions, Responses, 1980-81 Correspondence with Participants, 1981 Accepted Attendees, 1981 Financial Requests, 1981 Programs, Participant List, Photo, 1981 Gordon Research Conferences, 1982 Box 12: PROFESSIONAL ACTIVITIES AND ASSOCIATIONS, American-Interagency, 1946-80 Professional Activities, 1969-81 American Chemical Society Nuclear Facilities Survey, 1968, AEC Report on High Energy Accelerator Physics, 1963 American Institute of Physics News, 1977-78 American Physical Society (APS), Notes on Meetings, 1947-49 APS, 1974-78 Division of Nuclear Physics (DNP), Newsletters & Memoranda, 1967-73 Notices & Reports, 1972-76 Newsletter, 1973, 1976-81 1977 Program Committee, 1977 Correspondence, 1977 Asilomar 1978 Meeting, 1977-78 Correspondence, 1978 Peter Axel, Chairman, (2 folders), 1978-79 Nuclear Resources Committee, 1979-80 Hearings on Research Funds for DOE & NSF 1980-82 Atomic Energy Control Board (AECB)/National Research Council (NRC), Joint Visiting Committee on Storage Rings (Canada), 1972 University of Saskatchewan, 1972 University of Toronto, 1972 Bell Labs Transistor Teachers' Summer School, 1952

Colloquia and Seminars, Notes, (3 Folders) 1965, 1975, 1979-80 (3 folders)

Consulting Activities:

Bendix Aviation Corporation (BAC), Contract and Invoices, 1953-55

Mass Spectrometer, Correspondence, 1953-58

Electrometer, 1953-55

Mass Spectrometer/Electron Optics, Correspondence and Reports, 1953-55

Mass Spectrometer Reports, 1953-55

General Precision Laboratory, Video Amplifier Project, Contract and Reports, 1946

Stevens-Arnold Company (SAC)/Transducer Corporation, Contracts, Invoices, Correspondence, Reports, 1946-49

Video Mapping Project, Correspondence, Reports, 1947-48

Report on Experimental Video Mapping Kit, 1948

Guggenheim Fellowship, Sabbatical at Cambridge and Copenhagen, 1955-61

Guggenheim Fellowship, 1976-77

Interagency Committee on Nuclear Physics, "Creativity Crisis in Nuclear Physics," 1966

Box 13:

PROFESSIONAL ACTIVITIES AND ASSOCIATIONS,

National Academy of Sciences - Referees' Critiques, 1949-82

National Academy of Sciences (NAS), Subcommittee on Nuclear Structure, Developments in Nuclear Physics (1967), 1969

NAS/National Research Council (NRC), Evaluation Panel for National Bureau of

Standards (NBS) Center for Radiation Research, 1975-77

1978-79

Draft Report, 1978-79

Friedlander Panel, Draft Report, Axel Comments, 1976-77

Report, Future of Nuclear Science, 1977

National Science Foundation (NSF) and Fulbright Fellowships, Sabbatical at Saclay (1962-63), 1961-63

NSF/Department of Energy (DOE), R. S. Livingston Study Group, Visit to U of I, 1976-77

Report, The Role of Electron Accelerators in U.S. Medium Energy

Nuclear Science, December 1977

NSF, Nuclear Science Awards, Sub-Committee, 1978

Nuclear Science Advisory Committee (NUSAC), (3 folders), 1975-79

acilities Report for 1980, April 1978

Nuclear Science Advisory Committee (NUSAC), Study Group Meeting, Orleans, MA, (3 folders), July 1979

Long Range Plan, Herman Feshbach, December 1979

Halpern-University-Based Research, Working Group on User Problems, 1979

Nominees, 1979

1980-82

Facilities Sub-Committee, 1980

Sub-Committee on Electromagnetic Interactions, 11/15/81

Office of Science and Technology Policy Working Group on Basic Research in the Department of Energy, Report, 1978

Proposal Reviews, (4 folders), 1959-82

Publishers, Book Reviews, 1949, 1964, 1970-72

Correspondence, Textbooks (Comments, Orders), 1950-54, 1958, 1963

Rand McNally, Advisory Editor, Physics texts, 1965-66

Referee Critiques for Journals, (2 folders), 1954-55, 1964-82

Box 14:

PROFESSIONAL ACTIVITIES AND ASSOCIATIONS, Referees' Critiques-Travel, 1961-78

Referees' Critiques for Journals (continued):

Nuclear Physics, 1970-78

Reviews of Modern Physics, 1973-74

Sabbatical, Saclay, Arrangements, Correspondence, Notes, 1977-78

Travel, Europe, 1961, 1968

International Symposium on Nuclear Structure at Dubna, U.S.S.R; Report on institute laboratory visits and sessions

RESEARCH LABORATORIES, Argonne-Stanford, 1942-82

Accelerators, 1970

Argonne National Laboratory, Consulting, 1966

Superconducting LINAC, 1972

Argonne Universities Association (AUA), Midwest Tandem Cyclotron Proposals, 1968-71

Physics Division Review Committee (PDRC), (2 folders), 1969-72

Report, 1972

Bates LINAC Users' Group, 1971-74, 1976, 1982

Bates Program Advisory Committee, 1982

Chalk River Nuclear Laboratories (Canada), Correspondence, Loan of Equipment, Joint Experiments, 1973-77, 1980

Instituto Superiore di Sanita', Rome, 1967, 1971

Lawrence Berkeley Laboratory, Consulting Agreements and Research Appointments, 1959-60, 1982

LINAC Facilities, Projects at Other Institutions (Stonybrook, Saclay, NBS, Argonne), 1978-82

Livermore Laboratory, 1972

Los Alamos National Laboratory Consultant Agreement, 1961-62

Visiting Staff Arrangements, (4 folders), 1964-68, 1972-74

Los Alamos National Laboratory, 1982

MIT, Circuit Theory Lectures, E.A. Guillemin, Determinants, Matrices, 1942

Radiation Laboratory, Notebook, General Circuits, ca. 1943

Graphs, 1940-42

Average Plate Characteristics Graphs, 1933-43

Notebook, Radar School Course Materials, Notes, (2 folders), 1943

Reports, 1942-44, 1946

Bi-Weekly Progress Reports, 1944-45

National Bureau of Standards (NBS), National Standard Reference Data System, 1964 U of I Collaboration, 1968-69

National Superconducting Cyclotron Laboratory, Michigan State University, 1981

Oak Ridge National Laboratory, 1981-82

Saclay, Cooperative Research Agreement with U of I, 1979-81

Stanford University High Energy Physics Laboratory, 1972, 1979

Box 15:

CORRESPONDENCE AND SUBJECT FILES, 1948-82

General Correspondence, 1948-82

Correspondence, Technical Data, 1948-57, 1960-61

Emilio Segre, Jules Halpern, Sidney Dancoff, isomers

Semi-Technical, 1950-62, 1973

Ceramic doughnuts, research equipment

Semi-Technical, 1961-64

Sherman Frankel

Correspondence, Reading File, (12 folders), 1958-64, 1967-82

Allan - Fuller, 1959, 1962-82

Gaarde - Kurath, 1959, 1962-82

Lane - Rosen, 1959, 1962-82

Parking Ticket, 1976

Correspondence, Recommendations and Evaluations of Non-Students, (2 folders),

1960-77, 1979, 1981

Saporetti - Yen, 1959, 1962-82

Students, 1963, 1967-68, 1972

U.S. Congress and Department of Defense, 1968-70, 1976

Bergere-Bohr, 1949, 1952-81

Bergere, Correspondence, 1970-78, 1981

Bethe, Hans, "The Properties of Atomic Nuclei, II. Range - Energy Curves Alpha - Particles, Protons, Mesons," Brookhaven National Laboratory, 6/1/49

Bohr, Aage, and and Mottelson, Ben, Correspondence, 1961, 1965-81

Publications, 1952-63

History by J. K. Boggild, 50th anniversary brochure, program, correspondence

Publications, 1969, 1972, 1974, 1976, 1980-81

Volume II Notes, inc. correspondence with Bohr & Mottelson & comments on book.

Bohr Institute, 1971

Box 16:

CORRESPONDENCE, Bussiere-Weisskopf, 1949-50, 1956-82

Bussiere de Nercy, Andre, Thesis, "Contribution a L'Etude de la Diffusion Resonnante des Photon de Freinage," and Correspondence, 1962

Calarco, John, Pb Photoneutron Spectra, 1971

Dancoff, Sidney N., 1949-50

Drake, Darrell, Gamma Rays 89Y 90Zr, Paper, Figures, Correspondence, 1964, 1968

Endt, Peter, Correspondence, 1962, 1964

Feshbach, Herman, Transmission Coefficients, 1958

Fuller, E.G. and Hayward, Evans, Photon Scattering, Lead & Bismuth Isotopes, Papers and Correspondence, 1961, 1963, 1974

Gergens, Gregory, Carle Clinic, 1975

Halpern, Isaac, Nuclear Fission Publications, 1959, 1961

Hummel, John P., Articles on Photonuclear Reactions, 1959-65, 1970

Jamnik, Darko, Correspondence, 1972-73

Kerst, Donald, Recommendations for Fermi Award and National Medal of Science, Notes and Text of Talk, 1973-74, 1976-77, 1982

Knowles, J.W., Multi-Wire Counters for a Tagged Bremsstrahlung Facility, 1970, 1973

Mottelson, Ben, Talks on Deformed Nuclei, Notes, 2/22, 2/29/56

Okamoto, Kazuto, "Axial Asymmetry of the Nucleus and Triple Split Giant Resonance," "Effect of Tensor Force on Nuclear Sum-Rule," 1960-61

Polikanov, Sergei, 1977-79

Rosenzweig, Norbert, Giant Dipole Resonance Pt196, Paper and Correspondence, 1968

Russo, Phyllis, Correspondence, Recommendations, (2 folders), 1974-75

Scientists for Orlov and Shcharansky, 1978

Shirley, David A., Correspondence on Au197, 1961-62

Stein, Nelson, Photon Scattering Pb, 1964

Strutinsky, V.M., 1960, 1978

Tanner, Neil, Y89, 1968-69

Tomimasu, Takio, Publications, 1977

Uberall, Herbert, Electron Scattering, 1966

Vegors, Stanley, Crystal Efficiencies, 1957

Weisskopf Lecture, Notes, 1957

SUBJECT FILE, AXION-Y89, 1949-78

Axion, 1977

"A New Light Boson" by Steven Weinberg

Beam Blowup, 1978

Beta Decay, Notes

Bremsstrahlung, Papers by Other Physicists, 1949, 1951, 1953-54, 1962

"Bremsstrahlung Polarization and C12 Scattering," Notebook with Graphs and Pinhole Picture Plates, 1958

Bremsstrahlung Polarization, Correspondence, 1958-59

Uberall, Fronsdal Correspondence, 1958

Ce144, Correspondence and Paper, "Decay of Ce144," 1951, 1956-57

Electron Scattering, Calculations, 1977-78

Fission, Britt, H. C. 1974-75

Dickey, Philip, 1974-75

Goldstone, Phil, 1975

Huizenga, John, 1974

Knowles, J. W., 1974-75

Knowles & Drake, 1976

Vandenbosch, Robert, 1974

Gamma Rays (Variable Energy), Research Notes, Harwell, Saclay, 1963

Data Acquisition, 1975

Resonant Scattering, Correspondence, after 1963

Giant M1, Correspondence, 1963

Holmium, Saclay, S.Fultz, C.Schuhl Correspondence, Notes, Manuscripts, 1962-63, 1965

Inelastic Scattering Estimates, 1958

Isomers, Notes, 1946-50

Isomers, 1949, 1962

Isomers, Stanley H. Vegors, 1955-58, 1961

Isomers and Isotopes, Papers by Other Physicists, 1942, 1949-52, 1956, 1958

Neutron Stars, Papers by Other Physicists, 1970-72

Neutrons-Capture Therapy, 1959

Nuclear Photoeffect in Holmium, Erbium, 1962-63

Nuclei Article Reprints, 1934, 1949, 1952-53, 1965

Photonuclear Effects Article Reprints, 1955, 1957-58, 1960

Porter-Thomas Distribution

"Synchroton Radiation as a Source for the Spectroscopy of Solids," Solid State Panel Sub-Committee Report, 3/6/66

Tin Isotopes, Zr, Correspondence, Paper, 1962-63

Y89 Zr90 Reaction, Correspondence with D.M. Drake and F. Rauch, 1966-67, 1969

Research Notes

Papers by Other Physicists, 1942-43, 1945, 1948-51, 1953-57, 1960-61, 1964

11/10/34 22

Papers by Other Physicists, 1975, 1978-81