
Guide to the Frederick Reines papers MS.F.007

Finding aid prepared by Caitlin Jeffrey, William Landis, and Special Collections and Archives student assistants, 1998-2002; updated by Carole McEwan, Audra Eagle Yun, and Special Collections and Archives student assistants, 2011-2012; updated by Sarah Glover, 2019.

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Contributing Institution: Special Collections and Archives, University of California, Irvine Libraries

Title: Frederick Reines papers

Creator: Reines, Frederick

Identifier/Call Number: MS.F.007

Physical Description: 116 Linear Feet(179 boxes, 18 oversized folders) and 3.5 unprocessed linear feet

Date (inclusive): circa 1929-2007

Abstract: This collection documents Frederick Reines' career in nuclear physics and astrophysics as both a scientist and an academic, as well as aspects of his personal life. Material ranges from the early period of his career as a graduate student, through his early professional endeavors in the Theoretical Division at Los Alamos, to his later work as an experimentalist and academic at Case Institute of Technology and the University of California, Irvine (UCI). The collection documents his major scientific interests in the detection of the neutrino and the investigation of its properties, the detection of neutrinos from cosmic events such as a 1987 supernova, and the investigation of fundamental conservation laws of particle physics. Significant projects represented in the papers include neutrino experiments at Hanford and Savannah River, and the collaborations of Case-Witwatersrand-Irvine (CWI), Irvine-Michigan-Brookhaven (IMB), and the Deep Underwater Muon and Neutrino Detector (DUMAND). Other materials document Reines' professional and administrative positions at Case Institute of Technology and UCI, as well as his lifetime association with Los Alamos National Laboratory as a researcher, consultant, and member of the University of California committee charged with oversight of the laboratory.

Language of Material: English .

Access

The collection is open for research. Access to files containing information on University of California personnel matters is restricted for 50 years from the latest date of the materials in those files. Access to student record material is restricted for 75 years from the latest date of the materials in those files. Restrictions are noted at the file level. Access to original audio and video cassettes is restricted; copies are made for researcher use. Access to original glass slides is restricted. Unprocessed additions may contain restricted materials. Please contact the Department of Special Collections and Archives in advance to request access.

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Preferred Citation

Frederick Reines papers. MS-F007. Special Collections and Archives, The UC Irvine Libraries, Irvine, California. Date accessed.

For the benefit of current and future researchers, please cite any additional information about sources consulted in this collection, including permanent URLs, item or folder descriptions, and box/folder locations.

Acquisition Information

Gifts of Frederick and Sylvia Reines, 1992-2009. Gift of Lisa Cowden, 2019.

Processing History

Processed by Caitlin Jeffrey, William Landis, and Special Collections and Archives student assistants, 1998-2002. Processing was supported by a grant from the Friends of the Center for History of Physics, American Institute of Physics. Additions processed by Carole McEwan, Audra Eagle Yun, and Special Collections and Archives student assistants, 2011-2012. Processing was supported by the Reines family.

Historical Background

Frederick Reines was a particle physicist and educator internationally recognized for his verification of the existence of the neutrino and investigation of its properties. He was born March 16, 1918 in Paterson, New Jersey. Reines attended Stevens Institute of Technology in Hoboken, New Jersey, where he completed his Bachelor of Science degree in Mechanical Engineering in 1939, and then went on to complete a Master's Degree in Mathematical Physics two years later. He continued his graduate studies in Physics at New York University, receiving his doctorate in 1944. His dissertation was entitled *The Liquid Drop Model for Nuclear Fission*.

While writing his dissertation in 1944, Reines was recruited as a staff physicist in the Theoretical Division at Los Alamos Scientific Laboratory. Although he trained as a theoretician, Reines spent his career working as an experimentalist. During his fifteen years at Los Alamos, he worked on the Manhattan project; as director of the Operation Greenhouse experiments at Eniwetok atoll; and on various experiments testing for spontaneous fission, shock waves, and cosmic and gamma rays. Reines' early neutrino experiments at Los Alamos helped to redirect the agenda of the national laboratory towards other

research objectives, in that these experiments constituted the first attempt by the national laboratory to broaden its research programs to include applications in nuclear physics other than weapons production.

In 1953 Reines and his colleague Clyde Cowan began to explore the possibility of verifying the existence of neutrinos, which had been theorized earlier by Wolfgang Pauli and Enrico Fermi. The first experiments were conducted in 1953 in Hanford, Washington, using a nuclear reactor as a source for neutrinos. In 1956 Reines and Cowan confirmed the existence of the neutrino at the new Savannah River Plant reactor in South Carolina. In the following years the Savannah River Plant served as a site for numerous other experiments exploring the nature of neutrinos. Reines maintained his association with the Savannah River Plant throughout his career.

From 1959 to 1966 Reines was a professor and chair of the Department of Physics at Case Institute of Technology. In 1963 he formed a collaboration between Case and the University of Witwatersrand in Johannesburg, South Africa (CW); when Reines left Case for the University of California, Irvine (UCI), this collaboration became known as Case-Witwatersrand-Irvine (CWI). The primary site for this collaboration, which lasted until 1979, was the East Rand Proprietary Mine (ERPM) in South Africa, and its purpose was to investigate cosmic rays.

In 1966 Reines assumed a new position as Dean of Physical Sciences at UCI. Serving as the founding Dean, he developed the curriculum, standards, and facilities, and attracted fellow scientists to the Southern California campus. Reines also continued to cultivate productive professional associations in the physics community. He served on national and regional committees for the development of particle physics and participated in conferences and workshops promoting this nascent subfield of physics. Reines was a member of, and from 1985-1988 chaired, the Scientific and Academic Advisory Committee (SAAC), which advises the President of the University of California on the administration of the Lawrence Berkeley National Laboratory (LBNL), Lawrence Livermore National Laboratory (LLNL), and Los Alamos National Laboratory (LANL). Reines maintained his association with the LANL, as both a consultant and as advisor, throughout his career.

In the 1980s Reines initiated the formation of a new collaboration with physicists from the University of Michigan and Brookhaven National Laboratory. Known as IMB (Irvine-Michigan-Brookhaven), the primary purpose of the collaboration was to search for proton decay. Reines and Jack vander Velde of the University of Michigan initially acted as co-spokespersons for the collaboration; Reines later became the sole spokesperson. The principal site for the IMB collaboration was in a salt mine located in Painesville, Ohio. In 1987 IMB detected a burst of neutrinos from a supernova. The result of the detection of the Supernova 1987A neutrinos was the receipt in 1989 of the Rossi Prize, which the IMB collaborators shared with members of the Kamiokande collaboration in Japan.

The collaboration represented by IMB reflects Reines' scientific research priorities and also demonstrates his ability to envision future fields of investigation within physics. Reines started his proton decay research in the 1950s, when the concept was not generally accepted by the physics community as a field of inquiry. He furthered this research interest through independent proton decay experiments in the Painesville salt mine during the 1960s. When the Standard Model of Particle Physics was developed in the early 1970s, the concept of proton decay gained recognition as a valid area of scientific exploration. With the advent of this model, funding for proton decay experiments became a primary objective within the field, and IMB developed out of this interest. The time frame for Reines' earlier independent proton decay experiments in the Painesville salt mine was circa 1960 to the late 1970s, while those experiments conducted as part of the IMB collaboration occurred between the late 1970s and 1989.

Another collaboration spearheaded by Reines at UCI was the Deep Underwater Muon and Neutrino Detector (DUMAND). The primary purpose of the collaboration was to detect cosmic neutrinos. The detector was to be located on the ocean floor near Hawaii. The time period of DUMAND was the mid-1970s to 1988.

From the mid 1970s to 1998 Reines was involved in the preliminary stages of development of other collaborations such as Gamma Ray and Neutrino Detector (GRANDE); Los Alamos Meson Physics Facility (LAMPF); and Sudbury Neutrino Observatory (SNO). Most of these collaborations were not actualized in Reines' lifetime.

Throughout his career, Reines concentrated his efforts as a scientist and academic on investigating the fundamental principles of physics. His interests in the neutrino, the gravitational constant, and baryon conservation reflect his commitment to explore and verify the accepted parameters of physics. Most of the experiments represented in this collection demonstrate his capabilities as both a theorist and experimentalist.

Reines received numerous awards and honors from his colleagues and the community-at-large throughout his career. Some of the more prestigious awards were the conferment of membership in the American Academy of Arts and Sciences (1966); membership in the National Academy of Sciences (1980); J. Robert Oppenheimer Memorial Prize (1981); Franklin Medal (1992); National Medal of Science (1995); and the Nobel Prize in Physics (1995) for the detection of the neutrino.

Collection Scope and Content Summary

This collection documents Frederick Reines' career in nuclear physics and astrophysics as both a scientist and an academic, as well as aspects of his personal life. Material ranges from the early period of his career as a graduate student, through his

early professional endeavors in the Theoretical Division at Los Alamos, to his later work as an experimentalist and academic at Case Institute of Technology and the University of California, Irvine (UCI). The collection documents his major scientific interests in the detection of the neutrino and the investigation of its properties, the detection of neutrinos from cosmic events such as a 1987 supernova, and the investigation of fundamental conservation laws of particle physics. Significant projects represented in the papers include neutrino experiments at Hanford and Savannah River, and the collaborations of Case-Witwatersrand-Irvine (CWI), Irvine-Michigan-Brookhaven (IMB), and the Deep Underwater Muon and Neutrino Detector (DUMAND). Other materials document Reines' professional and administrative positions at Case Institute of Technology and UCI, as well as his lifetime association with Los Alamos National Laboratory as a researcher, consultant, and member of the University of California committee charged with oversight of the laboratory.

The material in this collection is largely textual, consisting of correspondence, data books, scientific notes and other writings, publications, clippings, meeting agendas and minutes, and course-related materials. Among other formats scattered throughout the collection are photographs, glass and film slides, audio recordings, films and video recordings, and technical drawings.

For the purposes of this collection, "experiment" denotes scientific investigations for which Reines was the principal investigator, whereas "collaboration" represents his participation in experiments with colleagues from other institutions. Collaborations normally involved a range of experiments conducted over an extended period of time with a particular scientific objective, and they may or may not involve a particular site or facility. In the scope of this collection, experiments tend to focus on the investigation of fundamental principles of physics, while collaborations concentrate on the investigation of properties or interactions of elementary particles.

Much of the collection focuses on the detection and investigation of the properties of the neutrino that took place at both the Savannah River Plant and the East Rand Proprietary Mine near Johannesburg, South Africa. The other major emphasis is Reines' interest in proton decay ("PDK"). Proton decay experiments were conducted at the Morton Salt Mine in Painesville, Ohio, which was the site for early proton decay experiments in the 1960s, as well as for the later investigations of the IMB collaborators.

Personal material in the collection includes family and personal photographs, diaries, video and audio recordings, correspondence, and related documents and mementos that provide evidence of Reines' private life and interests. Frederick Reines died on August 26, 1998 at the age of 80.

Collection Arrangement

This collection is arranged into 14 series. Unless otherwise noted in the series and subseries descriptions, the arrangement scheme for the collection was imposed during processing in the absence of a usable original order.

- Series 1. Early career, circa 1931-1996.
- Series 2. Case Institute of Technology files, 1958-1976.
- Series 3. University of California committee files, 1970-1996.
- Series 4. University of California, Irvine files, circa 1931-1999.
- Series 5. Professional activities, 1934-1999.
- Series 6. Correspondence files, 1952-2001.
- Series 7. Publications and writings, 1945-1999.
- Series 8. Data books, 1946-1991.
- Series 9. Experiments, 1943-1997.
- Series 10. Collaborations, 1952-1995.
- Series 11. Funding agency files, 1959-1994.
- Series 12. Personal and biographical, 1907-2001.
- Series 13. Audio and visual material, 1955-2000.
- Series 14. Mementos and other artifacts, 1935-1995.

The collection also contains two unprocessed additions:

- Accession 2019.034. Unprocessed addition 2019, 1937-2007. 2 linear feet
- Accession 2019.040. Unprocessed addition 2019, 1929-1998. 1.5 linear feet

Existence and Location of Originals

External media received, digital object MSF007_DIG001.

Subjects and Indexing Terms

Nobel Prize winners -- Archives

Nuclear physicists
Neutrino astrophysics
Protons -- Decay -- History -- Sources
Negatives (photographic)
Neutrinos
Motion pictures (visual works) -- 21st century.
Slides
Nuclear physics
Nuclear arms control
Nuclear weapons -- Testing
Elastic scattering
Cosmic ray muons
Sound recordings
Lantern slides
University of California, Irvine -- Faculty -- Archives
Reines, Frederick -- Archives

Early career Series 1. circa 1931-1966

Series Scope and Content Summary

This series is comprised of education files, from grade school through Reines' Ph.D. from New York University and early employment files from graduate teaching assignments through his years at Los Alamos Scientific Laboratory from 1943-1954. The education files consist of yearbooks, grades and transcripts, class notes and examinations, correspondence, and materials relating to Reines' masters thesis and doctoral dissertation. The files from Los Alamos Scientific Laboratory, where Reines was a young physicist working in the Manhattan Project, are particularly rich in documentation about the living conditions and also contemporary clippings regarding the atomic bomb. The series also includes newsletters received by Reines while he was a member of the Cleveland Orchestra Chorus.

Arrangement

The series is arranged alphabetically by topic, with materials in each topical grouping arranged chronologically whenever possible.

box 1, folder 1,
box 92, folder 1

Cleveland Orchestra Chorus, correspondence, program and newsletters 1960-1962

Education files Subseries 1.1.

box 92, folder 2

Public School, North Bergen, New Jersey, 8th grade report card and school photo 1931

High School

box 92, folder 3

Class assignments 1931-1932

box 92, folder 4

Commencement Exercises, June, 1935, program 1935

box 91, folder 1

General Notes & Impressions of Fred P. Reines, school work and personal notes 1935

box 1, folder 2

Horace Mann School (North Bergen, NJ): holograph identification tag circa 1932

box 91, folder 2

Personal diary 1934-1935

box 92, folder 5,

History notebook 1930s

box 92, folder 6

Orange and Blue, Union Hill High School annual 1935 1935

box 92, folder 6

Stevens Institute of Technology (Hoboken, NJ)

box 1, folder 3

Awards and post-graduation recognition 1966-1995

| | |
|------------------------|--|
| box 92, folder 7 | Commencement program for Master of Science 1941 June 7 |
| | Class notebooks |
| box 132 | Advanced Dynamics 1939-1940 |
| box 132 | Classical Electromagnetic Radiation 1940 |
| box 132 | Thesis |
| box 132 | Linear Integral Equations 1940-1941 |
| box 132 | Partial Differential Equations 1940-1941 |
| box 132 | Propagation of Electromagnetic Waves 1939-1940 |
| box 92, folder 10 | Class problems 1938-1949 |
| box 1, folder 4 | Correspondence 1935-1941 |
| box 92, folder 8 | Course schedules 1937-1939 |
| box 1, folder 5 | Masters thesis, "A critical review of optical diffraction theory" (partial copy) 1941 |
| box 176 | Masters thesis, "A critical review of optical diffraction theory" with handwritten notes 1941 |
| box 1, folder 6 | Mathematics examination 1940 |
| box 92, folder 9 | Theater and concert productions, programs 1936 and 1941 |
| box 91, folder 3 | Personal diary, four individual leaves 1937-1938 |
| box 157, folder 2 | Pi Lambda Phi Fraternity membership certificate 1940 |
| box 1, folder 7 | Publications 1936-1950 |
| box FB-34, folder 8 | Oversize newspaper 1938 |
| | Student work |
| box 132 | Field book 1936 |
| box 1, folder 8 | "Propagation of electromagnetic waves: oscillating doublet in free space", 1940 |
| box 92, folder 11 | Transcripts 1941 |
| box 1, folder 9 | Vocal instruction 1941 |
| | Yearbooks |
| box 140 | The 1937 Link 1937 |
| box 140 | The 1938 Link 1938 |
| box 139 | The 50th Link 1939 |
| | New York University |
| box 157, folder 3 | Doctor of Philosophy degree 1944 |
| box 92, folder 12 | Class notebooks 1941-1943 |
| box 133 | Introduction to Theoretical Physics 1941 |
| box 133 | Nuclear Physics 1941 |
| box 133 | Quantum Theory 1942 |
| box 133 | Unspecified class circa 1940 |
| box 92, folder 13 | Class problems 1942-1943 |
| box 1, folder 14 | Correspondence regarding graduate assistantship 1941-1942 |
| box 1, folder 15-19 | Dissertation notes 1942-1943 |
| box 1, folder 20-24 | Dissertation notes on fission 1942-1943 |
| box 1, folder 25 | Dissertation notes on odd harmonics and tesserals 1943 |
| box 1, folder 26 | Exams and examination certificate 1941-1942 |
| box 92, folder 14 | Transcripts 1944 |
| | NYU Alumni News |
| box 1, folder 26a | Notice about Reines 1984 |
| box FB-34, folder 8 | Oversized newspaper 1984 |
| | Los Alamos University |
| box 93, folder 5 | Introduction to Quantum Mechanics, class notes 1945 |
| box 93, folder 1 | Neutron physics, class by E. Fermi, transcribed notes 1946 |
| box 92, folder 15 | Theoretical Mechanics, Los Alamos University lecture notes 1946 |

| | |
|---|---|
| <p>box 1, folder 27 box 93, folder 2</p> | <p>1939-1941, Civil Service positions, forms and correspondence 1939-1941 1941, New York University, letter of recommendation for part-time instructorship 1941</p> |
| <p>box 93, folder 3 box 1, folder 28 box 1, folder 29</p> | <p>1946, Job searches, correspondence 1946 1946, State University of Iowa, correspondence 1946 1946-1947, New York University correspondence, notes and exams for summer session "Atomic Physics" course 1946-1947</p> |
| <p>box FB-36, folder 2 box 93, folder 4</p> | <p>Oversize exam questions circa 1947 1947, Brookhaven National Laboratory, Statement of Account for subcontracting employment 1947</p> |
| <p>box 1, folder 30</p> | <p>1948, Argonne National Laboratories correspondence 1948</p> |
| <p>box 93, folder 7</p> | <p>Los Alamos Scientific Laboratory 1943-1954 Amateur theater and singing performances, programs, scripts, and clippings 1945-1959</p> |
| <p>box 93, folder 8 box 94, folder 1-3, 9</p> | <p>Association of Los Alamos Scientists, information 1945-1946 Atomic bomb, Los Alamos and related information, clippings, books 1945-1954</p> |
| <p>box 94, folder 4 box 94, folder 5</p> | <p>Atomic Energy Act of 1954, United States, with Reines' annotations 1954 Army-Navy "E" Production Award, in recognition of research and development of the atomic bomb, Santa Fe, New Mexico 1945 October 16</p> |
| <p>box 95, folder 10</p> | <p>Balloon flight "Finder Notice" undated Scope and Content Summary Consists of two folded, stapled sheets of water-resistant paper with Reines' handwritten instructions for any individuals who might discover a grounded experiment balloon, including an offer for a reward. Instructions note "this United States Government scientific equipment was carried into the stratosphere by a giant balloon for experimental purposes."</p> |
| <p>box 96, folder 1 box 94, folder 6 box 138, folder 2-3, 10-13 box 96, folder 12 box 94, folder 7 box 95, folder 1-4 box 95, folder 5 box 13, folder 2</p> | <p>Bulletins and memoranda 1944-1945 Correspondence 1944-1950 Clippings and <i>Los Alamos Times</i> issues circa 1940s</p> |
| <p>box 95, folder 6</p> | <p>Early neutrino testing documentation and notes, potentially for publication Employee handbooks 1947-1954 General information 1949-1968 LASL news 1943-1963 Los Alamos National Laboratory, National Underground Science Facility proposal, advisory committee materials 1982-1983 Notices to residents 1944-1958 Operation Greenhouse, information and correspondence 1951</p> |
| <p>box 138, folder 1 box 86, folder 15 box 95, folder 8 box 95, folder 9 box 96, folder 2 box 1, folder 32</p> | <p><i>Doghouse</i>, oversized book 1951 Operation Greenhouse (Eniwetok Atoll) ephemera 1951 Personal matters circa 1950 Receipts, pay stubs, and other official information 1943-1952 Social events 1952, University of New Mexico Extension, "Dynamics" exercises and final examination 1952</p> |
| <p>box 1, folder 33</p> | <p>1953, Naval Research Laboratory, correspondence 1953</p> |

Case Institute of Technology files Series 2. 1958-1976**Series Scope and Content Summary**

This series consists of correspondence, memoranda, lecture notes, class assignments, exams, reports, photographs, and university publications. The material documents Reines' activities as professor and head of the Physics Department at Case Institute of Technology (now Case Western Reserve University) in Cleveland, Ohio. While at Case, Reines served as a representative to the Associated Midwest Universities' Accelerator Users Group, which coordinated the use of research facilities at the Argonne National Laboratory, near Chicago, by physicists from a number of Midwestern universities. This series also documents the activities of that group, especially regarding the installation of a Zero Gradient Synchrotron (ZGS) facility at Argonne. There are also newsletters and personnel files from his time working at the Savannah River Plant, South Carolina on neutrino experiments.

Arrangement

The series is arranged alphabetically by topic, with materials in each topical grouping arranged chronologically whenever possible. Researchers will also find correspondence regarding Reines' tenure at Case in Series 6. Correspondence file.

Processing note

Researchers interested in materials relating to the experiments that Reines conducted and the collaborations with which he was involved while at Case should also consult the following series: Series 8. Data books; Series 9. Experiments; Series 10. Collaborations; and Series 11. Funding agency files.

box 1,
folder 38-40
box 1, folder 41

Associated Midwest Universities, correspondence and proceedings 1960-1966

box 1,
folder 42-54
box 1, folder 42
box 1, folder 43

Case Western Reserve University, Case Visiting Committee, correspondence 1968-1976**Department of Physics**

box 1, folder 44
box 1, folder 45
box 1, folder 46
box 1, folder 47

Annual report 1965-1966**Correspondence regarding appointment as department head, 1958-1959 1958-1959****Correspondence and notes, 1959-1966 1959-1966****Equipment orders, 1959-1962 1959-1962****Faculty publications list, circa 1960 circa 1960****Subcommittee on Undergraduate Instruction, 1961-1962 1961-1962****Teaching materials****P-1 1962****P-2 General Physics 1962****P-3 1960****P-8 1961-1963****P-10 1962****P-122 Thermodynamics 1964-1965****P-141 Physical optics 1961-1962****P-263 Physics of the Nucleus, final exam 1962****Thermodynamics, lecture notes 1964**

box 1, folder 48
box 1, folder 49
box 1, folder 50
box 1, folder 51
box 1, folder 52
box 1, folder 53
box 1, folder 54
box 96, folder 3
box 93, folder 6
box 139
box 1, folder 55
box 1,
folder 56-57

The Differential* 1959 yearbook 1959*Personnel records 1959****Publications**

box 1, folder 56
box 1, folder 57
box 96, folder 4
box 96, folder 5
box 1, folder 58

"The Case neutrino program" 1966**Catalogs and annual reports 1958-1967****Savannah River Plant, South Carolina, clippings 1956****Social events, invitations, maps and receipts 1962****Reines publicity and photographs circa 1959-1966**

University of California committee files Series 3. 1970-1996**Series Scope and Content Summary**

This series consists of agendas, correspondence, draft and final versions of reports, meeting minutes, news clippings, and publications. The vast majority of the material documents Reines' twenty years of service as a member, and from 1985 through 1988 as chair, of the University of California's Scientific and Academic Advisory Committee (SAAC). This committee conducts oversight activities and advises the President of the University of California on the administration of the Lawrence Berkeley National Laboratory (LBNL), Lawrence Livermore National Laboratory (LLNL), and Los Alamos National Laboratory (LANL). This series is especially rich in material concerning the national debate over the Comprehensive Test Ban treaty to ban nuclear weapons testing, the University of California's Institute on Global Conflict and Cooperation (IGCC), the frequent unrest within the university concerning the propriety of its administration of national weapons laboratories and the potential conflicts between weapons research and academic freedom, and the federal government's laser programs of the 1980s (the Star Wars defense).

Arrangement

Materials in this series are arranged alphabetically by the name of the committee and then chronologically.

Processing note

Researchers will also find correspondence regarding Reines' University of California committee work in Series 6. Correspondence file.

| | |
|--------------------|---|
| box 1, folder 59 | Advisory Committee on Astronomy, committee charge and correspondence 1976-1986 |
| box 96, folder 6 | Committee of Scholarly Honors and Awards, correspondence, minutes, and notes 1996 |
| box 1, folder 60 | Coordinating Committee on Graduate Affairs (CCGA), correspondence, notes, and photographs 1971-1974 |
| box 1, folder 61 | Joint Committee to Advise the President on the Selection of a Chancellor for the Irvine Campus, correspondence 1983 |
| box 1, folder 62 | Santa Cruz Institute for Particle Physics (SCIPP), Advisory Board, correspondence and publicity, 1980-1983 1980-1983 |
| box 96, folder 8 | Scientific and Academic Advisory Committee (SAAC) |
| box 1, folder 63 | Working file, notes, and correspondence 1987-1992 |
| box 1, folder 64 | Undated undated |
| box 1, folder 65 | 1970-1974 1970-1974 |
| box 1, folder 66 | 1975-1976 1975-1976 |
| box 2, folder 1 | 1977 1977 |
| box 2, folder 2 | 1978 1978 |
| box 2, folder 3 | 1979-1980 1979-1980 |
| | 1981 1981 |
| | Conditions Governing Access note |
| | Access to UC personnel material in this file is restricted until 2032-01-01. |
| box 2, folder 4 | 1982 1982 |
| box 2, folder 5 | 1983-1984 1983-1984 |
| box 2, folder 6-7 | 1985 1985 |
| box 2, folder 8-12 | 1986 1986 |
| | Conditions Governing Access note |
| | Access to UC personnel material in this file (folder 12) is restricted until 2037-01-01. |
| | 1987 |
| box 96, folder 7 | " Report of the Scientific and Academic Advisory Committee to President Gardner", Reines' working copy 1987 July 8 |

box 2,
folder 13-19

General 1987

Conditions Governing Access note

Access to UC personnel material in this file (folder 16; folder 18, 2 items) is restricted until 2038-01-01.

box FB-34,
folder 7
box 2,
folder 20-24
box 2,
folder 25-26

"California: the weapons master," special report of *The Sacramento Bee* 1987

1988 1988

1989 1989

Conditions Governing Access note

Access to UC personnel material in this file (folder 25, 5 items) is restricted until 2040-01-01.

box 3, folder 1-5
box 3, folder 6-10
box 3, folder 11

1990 1990

1991 1991

1992 1992

Conditions Governing Access note

Access to UC personnel material in this file is restricted until 2043-01-01.

box 3, folder 12

Steering Committee of the Institute on Global Conflict and Cooperation, correspondence 1982-1990

University of California, Irvine files Series 4. circa 1931-1996

Series Scope and Content Summary

This series consists of material pertaining to Reines' tenure as professor of Physics and Dean of Physical Sciences at UC Irvine. Very little of his Dean of Physical Sciences files are extant in this collection. Reines' general files consist of a wide range of materials including personal notebooks, Department of Physics files, correspondence and his desk files with topical information. His teaching files consist of class assignments, exams and his teaching notes for over fifteen different physics classes including Physics 15, "Rainbows and Things" for non physics majors.

Arrangement

The series is arranged in 2 subseries:

Missing Title

1. Subseries 4.1. General files, 1965-1996. 0.8 linear ft.
2. Subseries 4.2. Teaching files, circa 1931-1995. 1.3 linear ft.

Restrictions

This series includes audio and video materials. Access to originals is restricted; researchers must request viewing/listening copies of restricted materials.

Processing note

Researchers will also find correspondence regarding Reines' tenure at UCI in Series 6. Correspondence file. Researchers interested in materials relating to the experiments that Reines conducted and the collaborations with which he was involved while at UCI should also consult the following series: Series 8. Data books; Series 9. Experiments; Series 10. Collaborations; and Series 11. Funding agency files.

Subseries 4.1. General files 1965-1996

Scope and Contents note

This subseries consists of correspondence, memoranda, minutes, reports, clippings, news releases, photographs, audiocassettes, videocassettes, and notes relating to Reines' tenure as a faculty member and administrator at UC Irvine. Topical coverage in this subseries includes his campus-wide committee work, Department of Physics activities, and clippings and other publications relating to Reines and several of his colleagues. Also documented extensively is the 1988 Reinesfest event held at UCI in honor of Reines' 70th birthday.

Arrangement note

Materials in this subseries are arranged alphabetically by topic.

box 96, folder 9
box 3, folder 13

box 3,
folder 14-15
box 3, folder 16
box 96, folder 11
box 3, folder 17
box 3, folder 18
box AV-002,
cassette MS-F07-A004

box AV-003,
reel MS-F07-A004-2PM,
box AV-004,
reel MS-F07-A004-1PM

box 3, folder 19
box 3, folder 20
box 3, folder 21
box 3, folder 22

box 97, folder 1
box 97, folder 2
box 97, folder 3
box 97, folder 4
box 97, folder 5
box 97, folder 6-7
box 97, folder 8
box 98, folder 1-3
box 98, folder 4
box 98, folder 5,
box 99, folder 1-3
box 99, folder 4
box 99, folder 5
box 99, folder 6
box 99, folder 7
box 100, folder 1
box 100, folder 2
box 100, folder 3
box 100, folder 4
box 100, folder 5
box 100, folder 6
box 100, folder 7

Alphabetical notebook undated

California College of Medicine Executive Faculty Committee, memoranda and clippings 1975-1976

Chen, Herbert H., correspondence, offprints, and reports and Reines' eulogy for him 1970-1992

Clippings and publicity materials concerning Reines 1965-1996

Correspondence regarding appointment as Dean of Physical Sciences 1965-1966

Clippings and publicity materials concerning the university 1966-1994

Committee on the Performing Arts Complex, correspondence 1979

Computer allocation meeting, audiocassette circa 1970

Conditions Governing Access note

Original audiocassette restricted, use copy must be used by researchers.

Preservation copy, reel-to-reel, reproduction date: 1999 1999

Department of Physics

Faculty meeting minutes and space needs 1990

Guest speakers 1966-1991

Lab program for outstanding high school physics students, schedule 1987

Undergraduate Review Committee, course sequence revision document 1984

Desk files

circa 1980-1989

1990

1991

1992

1993

1994

1996

F.R. Talks

Math notes and soap film

Supernova 1987A

Supernova 1987A talk

Medical School - Radiology recall 1984

Honorariums, letters, etc. 1990-1994

Global Foundation 1995

Cosmic rays 1961-1992

Brain 1994

Road noise undated

Pauli principle 1981-1988

NYU - Dr. of Science 1996

Neutrinos

History of Physics 1987

| | |
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| box 100, folder 8 box 100, folder 9100 box 100, folder 10 box 100, folder 11 box 3, folder 23 | GRANDE Collaboration 1987-1988 Retirement 1988 No F.R. published papers 1965-1967 "Dr. Peltason's last day on the UCI campus," script for skit in which Reines participated undated |
| box 3, folder 24 | Environmental Health and Safety Office, radiation use and monitoring forms 1981-1988 |
| box 3, folder 25 box 3, folder 26 box 3, folder 27 box 3, folder 28 | Equipment inventories for Reines' research group 1971-1978 Event at UCI honoring Reines, includes Chancellor Aldrich, slides circa 1980 Health Sciences Planning Committee, meeting materials and notes 1976-1979 Hruschka, August A., personnel files 1967-1977 Conditions Governing Access note Access to UC personnel material in this file (entire folder) is restricted until 2027-01-01. |
| box 101, folder 1-2 box 3, folder 29 box 101, folder 3 box 3, folder 30 | Information about physics 1955-1995 Moe, Michael K., offprints and preprints 1970-1991 Notebook, general usage 1967-1969 Personnel files 1968 Conditions Governing Access note Access to UC personnel material in this file (entire folder) is restricted until 2027-01-01. |
| box 96, folder 10 box 101, folder 4 box 3, folder 31 | Research proposals 1971-1976 Physicists, biographical information 1971-1999 Program statement for physical science organized research facility 1979 Reinesfest |
| box 3, folder 32 box 3, folder 33 box 101, folder 5 box AV-005, cassette MS-F07-V009, MS-F07-V010, MS-F07-V011 | Attendee lists 1988 Collected papers volume materials 1988 Correspondence, publicity and program 1988 Daytime program 1988 General Physical Description note: 3 VHS videocassettes Conditions Governing Access note Original videocassettes restricted, use copy must be used by researchers. |
| box AV-006, cassette MS-F07-V009-1PM, MS-F07-V009-2PM, MS-F07-V010PM, MS-F07-V011-1PM, MS-F07-V011-2PM | Preservation copy, reproduction date: 1999 1999 General Physical Description note: 5 Beta SP videocassettes |
| box AV-005, cassette MS-F07-V006, MS-F07-V008 | Evening program 1988 Conditions Governing Access note 2 VHS videocassettes Conditions Governing Access note Original videocassettes restricted, use copy must be used by researchers. |
| box AV-006, cassette MS-F07-V008PM box 3, folder 35 box 4, folder 1 box 4, folder 2 | Preservation copy of 2nd videocassette only (content of 1st not substantive), Beta SP, reproduction date: 1999 1999 Guest book 1988 Invitation and pre-registration forms 1988 Photographs 1988 |

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| box 4, folder 3 box FB-34, folder 7 | Planning documents and banquet remarks 1987-1988 Posters 1988 |
| box 4, folder 4 box 101, folder 6 box 101, folder 7-8 box FB-32, folder 6 box 102, folder 1 | Publicity 1988 Social events, invitations and programs 1967-1997 Tiomno, Jayme, <i>Theories of Neutrino and the Double Beta Decay</i>, dissertation, Princeton University, 1950 1950 UC clip sheet 1976 |
| box 102, folder 2 box AV-002, cassette MS-F07-A002 | UCI University Club, thirtieth anniversary 1967-1997, booklet with wellwishes from colleagues 1997 Ultrasound circa 1970-1979 University of California/CBS Radio Network, Science Editor (radio program), audiocassette, "Tracking the elusive neutrino." Discussion of Reines' work on neutrino oscillation. circa 1973 Conditions Governing Access note Original audiocassette restricted, use copy must be used by researchers. |
| box AV-003, cassette MS-F07-A002PM box 4, folder 5 box 102, folder 3 box 102, folder 4 | Preservation copy, reel-to-reel, reproduction date: 1999 1999 UCI Summer Science Institute, brochure 1993 Weber Joseph, articles and obituary 1998-2000 Who Needs Science? article prepared for "op-ed" piece for newspapers 1992 |

Subseries 4.2. Teaching files circa 1931-1995**Scope and Contents note**

This subseries consists of lecture notes and transcriptions, assignments and exams, overhead transparencies, related course preparation materials and students' papers. Courses documented include those taught by Reines for the Department of Physics as well as courses for which he served as guest lecturer. An especially significant course, well-documented in this subseries, is "Rainbows and Things," a popular university studies course that Reines taught for many years for undergraduates who were not physics majors. The subseries also includes copies of several dissertations for which Reines served as committee chair or member.

Arrangement note

The subseries is arranged topically, with Department of Physics courses filed by their course number.

| | |
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| box 4, folder 6 box 4, folder 7 box 4, folder 9-11 box 4, folder 8 | Dissertation for which Reines was committee chair 1976 Dissertations for which Reines was committee member 1981-1995 Physics 5A, Newtonian mechanics, course materials 1983-1989 The engineer and engineering (UCI course), guest lecture on science and engineering, notes for talk 1971 Physics class, lecture on behavior of students, audiocassette circa 1972 Conditions Governing Access note Original audiocassette restricted, use copy must be used by researchers. |
| box AV-002, cassette MS-F07-A015 | |
| box 4, folder 12-13 box 103, folder 1-2 box 103, folder 3 | Physics 5B, Fundamental of Physics II, course materials 1968, 1981-1982 Physics 5B, Oscillations & waves & special relativity 1981-1982 Physics 5B, Oscillations & waves & special relativity , notes 1990-1991 |

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| box 104, folder 1-2, box 103, folder 4-5, box 4, folder 14 | Physics 5C, Electricity and magnetism, course materials 1968-1983 |
| box 104, folder 3 | Physics 5D 1991 |
| box 5, folder 7, box 104, folder 4 | Physics 10, A sense of sound, course materials and final 1976 Access Restricted access (student information) |
| box 4, folder 15-16, box 104, folder 5 | Physics 111A, Classical mechanics, course materials and evaluations 1977-1978 |
| box 104, folder 6, box 4, folder 17-18 | Physics 111B, Classical mechanics, course materials and evaluations 1978-1981 |
| box 105, folder 1, box 4, folder 19-22 | Physics 112A, Electricity and magnetism, course materials and evaluations 1975-1984 |
| box 105, folder 2, box 4, folder 23-24 | Physics 112B, Electricity and magnetism, course materials and evaluations 1975-1976 |
| box 5, folder 1 | Physics 113A, Quantum mechanics, course materials 1983-1984 |
| box 105, folder 3, box 5, folder 2 | Physics 113B, Quantum mechanics, course materials 1984-1985 |
| box 105, folder 4-6, box 5, folder 3-4 | Physics 130, Quantum mechanics, course materials 1972-1973 |
| box 5, folder 5, box 105, folder 7 | Physics 161A, Course materials and evaluations 1974 |
| box 106, folder 1-3 | Physics 211, Classical mechanics, course materials and student work 1980-1981 |
| box 106, folder 4 | Physics 211, Classical mechanics, student evaluations for winter 1980 1980 |
| box 106, folder 5 | Physics 251, student paper undated |
| box 5, folder 6 | Physics of the environment (UCI course), guest lecture on radiation hazards and radioactive wastes, notes and background materials 1971 |
| box 5, folder 7 | University extension, Humanities X406, The ascent of man, lecture notes and brochure 1976 |
| box 106, folder 6 | Unnamed class, course materials undated University Studies course (Physics 16), "Rainbows and things" |
| box 5, folder 9-10 | Course evaluations 1974-1979 |
| box 106, folder 7 | Course information 1972-1979 |
| box 5, folder 11-19 | Lecture transcriptions 1970-circa 1979 |
| box 5, folder 20-25 | Notes and related materials 1970-1986 |
| box FB-36, folder 2 | Oversize cartoon, "B.C." circa 1975 |
| box 5, folder 26 | Related materials circa 1931-1986 |
| box 5, folder 27 | Slides of rainbows 1969 |
| box 5, folder 28 | Student projects and exams 1974-1979 Conditions Governing Access note Access to UCI student records (entire file) is restricted until 2055-01-01. |
| box FB-24, folder 3 | Oversize material 1972-1974 Conditions Governing Access note Access to UCI student records (entire file) is restricted until 2055-01-01. |

Professional activities Series 5. 1934-1999

Series Scope and Content Summary

This series contains correspondence, award certificates, preprints and offprints, transparencies and drafts for lectures, photographs, conference proceedings, notes, consultant agreements, reports, audiocassettes, videocassettes, and clippings. Materials document activities--such as conferences, lectures, consulting and professional association business--that transcend the parameters of a particular experiment, collaboration or university affiliation.

Arrangement

This series is arranged topically. Within various topical groupings, arrangement may be either topical or chronological depending on the nature of the material.

Restrictions

This series includes audio and video materials. Access to originals is restricted; researchers must request viewing/listening copies of restricted materials.

Processing note

Researchers will find correspondence regarding Reines' professional activity in Series 6. Correspondence file. Materials pertaining to the dissemination at conferences and in publications of information regarding Reines' experimental and collaborative work may also be found in Series 9. Experiments and Series 10. Collaborations. Scholarly publications produced by Reines throughout his career are filed in Series 7. Publications and writings.

Subseries 5.1. Awards

American Academy of Arts and Sciences

box 157, folder 2
box 107, folder 1

American Academy of Arts and Sciences, certificate 1966

American Academy of Arts and Sciences, election as fellow, program and information 1966

box 5, folder 36

American Association for the Advancement of Science, election as fellow 1948

American Astronomical Society, Bruno Rossi Prize

box 107, folder 2

American Astronomical Society, Bruno Rossi Prize, receipt for prize money, correspondence and text of acceptance remarks 1987-1989

box FB-34,
folder 9

American Astronomical Society, Bruno Rossi Prize, award citation 1989

box 157, folder 2

American Astronomical Society, Bruno Rossi Prize, award certificate 1989

American Physical Society, Panofsky Prize 1992-1993

box 157, folder 2

Panofsky Prize certificate 1992

box 114, folder 1

Correspondence and lecture notes 1992

box 114, folder 2

Overhead projector sheets for Panofsky Award talk 1992

Physical Characteristics and Technical Requirements

5 12 X 8 inches transparencies for overhead projector

Case Western Reserve University

box 107, folder 3

Case Western Reserve University, Doctor of Science honorary degree correspondence and printed material 1996

box 157, folder 3

Case Western Reserve University, Doctor of Science honorary degree 1996

Michelson Morley Award, Case Western Reserve University

box 7, folder 21

Case Institute of Technology, Introductory remarks for Albert A. Michelson

Memorial Lecture undated

box FB-34,
folder 9

Oversize award citation, photocopy 1990

box 107,
folder 7-8

Michelson Morley Award, Case Western Reserve University, correspondence, press release, notes, clippings, photos and slides 1990

Roland Eötvös Physical Society

box 156

Roland Eötvös Physical Society medal undated

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| box 157, folder 2 | Roland Eötvös Physical Society recognition of contribution to neutrino science certificate 14 June 1982 |
| | Franklin Medal, The Franklin Institute 1992 |
| box FB-34, folder 9 | Franklin Medal oversize poster 1992 |
| box 5, folder 38, box 107, folder 4-5 | Franklin Medal, correspondence, notes, program, text of lecture and clippings 1991-1994 |
| box 153, carton 3 | Franklin Medal medal |
| box 157, folder 2 | Franklin Medal certificate 29 April 1992 |
| | Guggenheim Fellowship 1958-1959 |
| box 5, folder 39 | Guggenheim Fellowship, John Simon Guggenheim Memorial Foundation, application materials and correspondence 1956-1958 |
| box 157, folder 2 | Honorary Miners Club, Creighton, Ontario certificate 1988 |
| box 155 | International Andrei Sakharov Memorial Congress medal 1991 |
| | Los Alamos National Laboratory |
| box 156 | Los Alamos National Laboratory research honor plaque 23 August 1996 |
| box 157, folder 2 | Los Alamos National Laboratory, recognition of scientific achievement award, photograph 1987 |
| box 107, folder 6 | Massachusetts Institute of Technology, Fred Reines at 70 fest, program 1988 June 9 |
| box 107, folder 9 | National Academy of Sciences 1969-1980 |
| box AV-002, cassette MS-F07-A005 | Interview, KSBR, on election to the National Academy of Sciences, audiocassette 1980 |
| | Conditions Governing Access note |
| | Original audiocassette restricted, use copy must be used by researchers. |
| box 107, folder 9 | Correspondence and clippings |
| box 157, folder 2, box FB-36, folder 2 | University of Texas physics faculty oversize congratulatory certificate 1980 |
| box 153, carton 3 | National Academy of Sciences rosette pins |
| box 157, folder 2 | National Academy of Sciences certificate |
| | National Medal of Science 1983-1985 |
| box 143, folder 2 | National Medal of Science certificate 1983 |
| box 107, folder 10 | Correspondence and clippings 1983-1985 |
| box FB-34, folder 9 | Oversize photograph of Reines with President Reagan 1985 |
| box 153, carton 3 | National Medal of Science pin |
| box 155 | National Medal of Science medal |
| | New York University |
| box 107, folder 11 | New York University, Distinguished Alumnus Award, 1994 1994 June 1 |
| box 157, folder 3 | New York University, Distinguished Alumnus certificate 1990 |
| box 157, folder 3 | New York University, Trustees Dinner honorary degree invitation and announcement 1996 |
| box 157, folder 3 | New York University, Doctor of Science honorary degree 1996 May 16 |
| box 5, folder 43 | New York University, citation at Serge A. Korff Memorial Symposium, "Reminiscences and neutrinos," text of lecture and publicity 1991 |
| | Nobel Prize in Physics |
| | Correspondence 1995 |
| box 108, folder 2 | Nobel Prize correspondence regarding publication of his lecture 1996 |
| box 108, folder 3 | Nobel Prize correspondence filed with no reply 1995-1996 |
| box 108, folder 4 | Nobel Prize correspondence before travel 1995 |

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| box 108, folder 5-8, box 109, folder 1-4, box 110, folder 1-4, box 111, folder 1-4 | Nobel Prize correspondence - congratulations 1995 |
| box 13, folder 4 box 112, folder 1-3 box 112, folder 4 | Ephemera donated by UCI Chancellor Dr. Laurel Wilkening 1995 Information, maps, invitations and receipts from Nobel Prize events in Stockholm 1995 <i>The Nobel Population 1901-1937: a census of the nominators and nominees for the prizes in physics and chemistry 1987</i> Nobel Prize activities in Stockholm 1995 |
| box 113, folder 1, box 112, folder 5 box 138, folder 5 box 149 box Vault box 113, folder 2 box 113, folder 3 box 113, folder 4-5 box 113, folder 6 box 5, folder 44 box 113, folder 7 box 113, folder 11 box 113, folder 8 box 113, folder 9 box 113, folder 10 | Oversize materials 1995 Nobel Prize diploma 1995 Nobel Prize medal Nobel Prize money information 1995 Nobel Prize notification in writing 1995 Nobel Prize publicity and clippings 1995 |
| box 113, folder 13 box 5, folder 46, box 113, folder 12 box 155 box 157, folder 2 box 157, folder 2 | Nobel prize speech, original text 1995 Nomination materials 1984-1985 Request for nominations for Nobel Prize in Chemistry 1998 1997 Sylvia Reines' notes regarding Nobel Prize issues 1995 UCI events 1996 UCI luncheon for Sylvia Reines 1996 White House reception 1995 J. Robert Oppenheimer Memorial Prize, University of Miami 1981 Correspondence, letters of congratulations 1981 Invitation, text of remarks, award and correspondence |
| box 157, folder 2 box 5, folder 48 | J. Robert Oppenheimer Memorial Prize medal 1981 J. Robert Oppenheimer Memorial Prize certificate 19 January 1981 Phi Beta Kappa, Foundation Member certificate 1974 Russian Academy of Science Russian Academy of Science member certificate March 1994 Russian Academy of Science, election as foreign member, award and correspondence 1994-1995 |
| box 153, carton 3 | Small medals and pins Army-Navy Production award and Manhattan Project pin |
| box 153, carton 3 | A.D. Sahkarov Conference on Physics commemorative medal May 1991 Honor society keys and pins 1935-1976 Jerusalem Einstein Centennial Symposium medal 1979 |
| box 155 box 155 box 155 | Unidentified Japanese acrylic paperweight award Unidentified Japanese pin from science event Unidentified Russian medal |
| box 108, folder 1 box 143, folder 2 box 143, folder 2 | State of California California Senate Resolution commending Reines on receiving Nobel Prize 1996 Correspondence and photographs Resolution certificate California Senate Resolution commending Reines as recipient of UCI Medal 1987 |
| box 143, folder 2 | California State Assembly Resolution commending Reines on UC Irvine Distinguished Faculty Lectureship Award 1978 |
| box 114, folder 3 | Stevens Institute of Technology Doctor of Engineering honorary degree, certificate and correspondence 1984 |

Subseries 5.1. Awards

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|---------------------|--|
| box 157, folder 3 | Doctor of Engineering honorary degree 24 May 1984 |
| box 114, folder 4 | Stevens Honor Award, publicity and nomination form, and Reines' remarks 1971 |
| box 114, folder 5 | Stevens Renaissance Engineering and Science Award, speech 1995 June 14 |
| box 153, carton 3 | Honor Award, Centennial, and Old Guard award pins and medal |
| box 155 | Stevens Honor Award medal 1971 |
| box 143, folder 2 | United States of America War Department, certificate of participation in production of the Atomic Bomb 1945 |
| box 157, folder 2 | University of California certificate of appreciation 1988 |
| | University of California, Irvine |
| | Distinguished Faculty Lecture |
| box FB-34, folder 9 | Oversize placemat circa 1979 |
| box 114, folder 7 | <i>The Neutrino: from poltergeist to particle: transparencies from lecture 1979 April 17</i> |
| box 114, folder 6 | Distinguished Faculty Lecture, correspondence, publicity, text of lecture and certificate 1978-1980 |
| box 157, folder 2 | Distinguished Faculty Lecture certificate 1978-1979 |
| box 5, folder 51 | Distinguished Professor, correspondence 1987 |
| box 114, folder 9 | UCI Medal, correspondence, notes, program, and publicity 1987 |
| box 155 | UCI Medal medal 1987 |
| box 114, folder 8 | Frederick Reines Hall dedication 1997 May 12 |
| box 5, folder 57 | Senior Fellow Emeritus, letter from University of California president 1996 August 15 |
| box 157, folder 2 | Sigma Xi Scientific Research Society distinguished member certificate undated |
| | University of the Witwatersrand, Johannesburg |
| box 5, folder 53 | University of the Witwatersrand, Doctor of Science honorary degree, correspondence 1965-1966 |
| box 157, folder 3 | University of the Witwatersrand, Doctor of Science honorary degree 1966 |
| box 155, box 156 | West Los Angeles College Distinguished Science Lecturer plaque 1991 |

Subseries 5.2. Conference materials

| | |
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| box 6, folder 5 | Undated, unknown organizations, abstracts of conference sessions and photographs undated |
| box 6, folder 6 | 1946, University Affiliations Conference (Los Alamos National Laboratory, Los Alamos, NM), discussions, photocopy 1946 |
| box 114, folder 10 | 1950, American Physical Society, Mexico City, Mexico, photos, maps, phrase books, magazines, and drawing 1950 June 21-24 |
| box 6, folder 7 | 1953, American Physical Society meeting (Albuquerque, NM), neutrino experiment papers presented by others 1953 1955 |
| box 6, folder 8 | American Association for the Advancement of Science, Atlanta meeting, correspondence 1955 |
| box 6, folder 8a | Gordon Research Conference (AAAS), Kimball Union Academy (Meriden, NH), photograph and identification of participants 1955 |
| box 114, folder 11 | 1958, Second International Conference on the Peaceful Uses of Atomic Energy (Geneva, Switzerland), conference publications, publicity, and memorabilia 1958 |
| box 6, folder 11 | 1960, Instrumentation conference (Berkeley, CA), correspondence and remarks 1960 1964 |
| box 6, folder 12 | Conference on the Interaction between Cosmic Rays and High Energy Physics (Case Institute of Technology), proceedings 1964 |
| box 6, folder 13 | International Conference on High Energy Physics in Dubna, annotated program and draft of comments 1964 |
| box 6, folder 14 | Ninth Scintillation and Semiconductor Counter Symposium (IEEE), brochure and proceedings 1964 |

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| box 115, folder 1 | Second Texas Symposium on Relativistic Astrophysics, Austin, TX, folder 1964 December 15-19 |
| box 6, folder 15 | 1965, Informal Neutrino Conference (Geneva, Switzerland), trip report, notes, and proceedings contributions 1965 |
| box 6, folder 16 | 1966, Tenth Scintillation and Semiconductor Counter Symposium (IEEE), proceedings 1966 |
| box 6, folder 17 | 1968, Discussion Meeting on Neutrino Physics (Moscow, USSR), contributions, correspondence and notes 1968 |
| box 6, folder 18 | 1969 Conference on Cosmic Rays (Budapest, Hungary), notes on detection of the quark 1969 |
| box 6, folder 19 | Neutrino meeting (CERN), notes, program, and CWI status report 1969 |
| box 6, folder 20-21 | Topical Conference on Weak Interactions (CERN), correspondence, notes, programs, and proceedings 1968-1969 |
| box FB-34, folder 9 | Oversize placemat 1969 |
| box 6, folder 22 | 1970, Conference on Astrophysics and Weak Interactions (Cortona, Italy), notes 1970 |
| box 6, folder 23 | 1972 Neutrino '72 (Budapest, Hungary), contributions 1972 |
| box 6, folder 24-28 | Solar neutrinos, status and prospects (UCI), correspondence, notes, photographs, and proceedings 1971-1973 |
| box 6, folder 29 | 1973, Eight Years of Cosmic Ray Neutrinos Underground (Atomic Energy Commission Colloquium), notes 1973 |
| box 6, folder 30 | 1974, Neutrino Physics Conference (Philadelphia, PA), correspondence and notes 1973-1974 |
| box 115, folder 2, box 6, folder 31 | 1976 VIII European Conference on Physics and Chemistry of Complex Nuclear Reactions (Höör, Sweden), conference materials 1975 |
| box 6, folder 32 | Fourth International Workshop on Weak Interactions with Very High Energy Beams, annotated program, notes, and transparencies 1976 |
| box 6, folder 33 | International Cosmic Ray Conference (Munich, Germany), correspondence 1974-1975 |
| box 138, folder 6 | American Physical Society meeting (Washington, D.C.), invited paper on and reproduction of "Velocity of Light" by Albert A. Michelson 1976 |
| box 6, folder 34 | Neutrino '76 (Aachen, Germany), notes, photograph and partial program 1976 |
| box FB-36, folder 2 | Oversize annotated conference folder 1976 |
| box 115, folder 3 | 1977, Proceedings of the La Jolla Workshop of Acoustic Detection of Neutrinos 1977 |
| box 6, folder 35 | 1978 Informal Conference on Status and Future of Solar Neutrino Research (Brookhaven National Laboratory), annotated program and notes 1977-1978 |
| box 6, folder 36 | Purdue University neutrino conference, annotated program 1978 |
| box 115, folder 4 | 1979 1979 16th International Cosmic Ray Conference, Kyoto, Japan, Participants list and photograph 1979 August 6-18 |
| box 6, folder 37 | Panel on High Energy Astrophysics (Chicago, IL), correspondence and notes 1979 |
| box 6, folder 37a | 1980, First Workshop on Grand Unification (University of New Hampshire), program 1980 |
| box 6, folder 38 | 1981, Neutrino Oscillation Workshop (Brookhaven National Laboratory), proceedings 1981 |
| box 6, folder 39 | 1984 Neutrino '84 (Nordkirchen, Germany), correspondence regarding invitees 1983-1984 |
| box 6, folder 40 | Solar Neutrinos and Neutrino Astronomy (Lead, SD), annotated conference program 1984 |

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| | 1985 |
| box 6, folder 41 | Fermi National Acceleration Laboratory, 1985 International Symposium on Particle Physics in the 1950s, annotated program 1985 |
| box 6, folder 42 | National Academy of Sciences annual meeting, registration materials 1985 |
| box 6, folder 43 | Sixth Workshop on Grand Unification (Minneapolis, MN), registration materials and agenda 1985 |
| | 1986 |
| box 6, folder 44 | 1986, Neutrino '86, scientific program 1986 |
| box 115, folder 5 | 1986 - Reines' schedule of meetings for the year 1986 |
| | 1987 |
| box 115, folder 6 | 1987 - Reines' schedule of meetings for the year 1987 |
| box 6, folder 45 | Eighth Workshop on Grand Unification (Syracuse, NY), annotated program 1987 |
| box 6, folder 46 | International Cosmic Ray Conference (Moscow, USSR), annotated program, correspondence, and notes 1986-1987 |
| box 115, folder 7 | Michelson-Morley Centennial Symposium, program 1978 September 1987 |
| | 1988 |
| box 115, folder 8 | 1988, Annual Einstein Memorial Lecture, correspondence and notes for lecture |
| drawer new, | 1988, Neutrino '88, oversize poster and photos 1988 |
| box 115, folder 9 | |
| box 6, folder 47 | 1988, Particle Astrophysics Workshop (UC Berkeley), planning documents and summary 1988-1989 |
| box 115, folder 10 | 1988, SNO Meeting, Ottawa, Ontario, minutes and two papers 1988 May 24-26 |
| box 7, folder 1 | 1989, International Centre for Theoretical Physics, Conference on Frontiers in Physics, High Technology and Mathematics, invitation 1989 |
| box 115, folder 11 | 1990, Director's Colloquium, Los Alamos Laboratory, New Mexico, program materials 1990 January 19 |
| box 115, folder 12 | 1991, 1st International A.D. Sakharov Conference on Physics, correspondence and program 1991 May 27-31 |
| | 1992 |
| box 115, folder 13 | 1992, XV International Conference on Neutrino Physics and Astrophysics, Granada, Spain, correspondence, programs and receipts 1992 June 7-12 |
| box-folder new | 1992, The Benjamin Franklin Symposium in celebration of the Discovery of the Neutrino oversize poster, 1992 |
| box 7, folder 2 | 1992, 4th International Symposium on Neutrino Telescopes (Toulouse, France), correspondence, planning documents, and program 1992 |
| box 115, folder 14 | 1992, Neutrino Astrophysical Conference, Takayama, Japan, correspondence and programs 1992 October 19-22 |
| box 115, folder 15 | 1992, Recent Advances in High Energy Astronomy, Toulouse, France, program, correspondence, financial records 1992 March 17-20 |
| | 1993 |
| box 7, folder 3, | 1993, Los Alamos National Laboratory 50th anniversary seminars on nuclear weapons, correspondence, transparencies, and materials on the history of the Trinity test 1976-1993 |
| box 116, folder 1 | VHS videocassette recording of remarks by Reines and others 1993 |
| box AV-005, | Conditions Governing Access note |
| cassette MS-F07-V002 | Original videocassette restricted, use copy must be used by researchers. |
| | 1994 |
| box 116, folder 2 | 17th Texas Symposium of Relativistic Astrophysics, Munich, Germany, emails, financial records, conference information 1994 December |
| box 116, folder 3 | 1994, Erice Conference International School of Nuclear Physics, Erice, Italy, talk on <i>The Detection of Pauli's Neutrino</i>, 1994 |
| box 7, folder 4, | Neutrino '94, correspondence and registration materials 1994 |
| box 116, folder 4 | |
| drawer new | Oversize poster |
| box 7, folder 5, | Program on unified symmetry in the small and the large (Global Foundation, Inc.), précis, correspondence, program and notes 1994 |
| box 116, folder 5 | |

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| box 7, folder 6 | Workshop on Neutrino Telescopes (Jet Propulsion Laboratory, Pasadena, CA), photograph 1994 |
| | 1996 |
| box 116, folder 6 | 1996, XVII International Conference on Neutrino Physics and Astrophysics, Helsinki, Finland, correspondence, conference information 1996 June 13-19 |
| box 116, folder 8 | 1996, Nobel Laureates Conference 1996 October 5 |
| box 116, folder 7 | 1996, UCI Fall Quarter Interdisciplinary Dialogue Luncheon 1996 October 31 |
| box 116, folder 9 | 1996, Reines Symposium, Los Alamos National Laboratory, folder, correspondence, clippings 1996 August 23 |
| box-folder new | Reines Symposium, oversized poster 1996 |
| box 116, folder 20 | 1997, National Academy of Sciences Colloquium on the Age of the Universe, Irvine, California, conference schedule 1997 March 21-23 |
| box 116, folder 11 | 1998, XVIII International Conference on Neutrino Physics and Astrophysics, Takayama, Japan, Preliminary information 1998 June 4-9 |
| box 116, folder 14 | 1999, Frederick Reines Symposium, UC Irvine 1999 |

Subseries 5.3. Consulting 1949-1995**Advisory panels**

| | |
|--------------------|---|
| box 5, folder 29 | American Institute of Physics, Physics Programs Review Committee, correspondence and reports 1993-1994 |
| box 5, folder 30 | Fulbright-Hays Advisory Screening Committee in Physics, correspondence 1964-1967 |
| box 5, folder 31 | High Energy Physics Advisory Panel, correspondence, notes and photograph 1968-1974 |
| box 5, folder 32 | NASA Research Advisory Committee on Electrophysics, correspondence 1962-1967 |
| box 5, folder 33 | National Academy of Sciences, panel on reassessment of A-bomb dosimetry 1982-1983 |
| box 5, folder 34 | National Science Foundation, proposal reviews 1965 |
| box 5, folder 35 | University of Rochester Institute of Optics, correspondence and reports 1960-1961 |
| box 116, folder 12 | California Scientist of the Year, program and photograph 1972 May 11 |
| box 7, folder 7 | Expert witness for Ohio court 1961 |
| box 7, folder 8 | Institute for Defense Analysis 1965 |
| box 7, folder 9-10 | Kerr-McGee, Correspondence and report on gamma ray calibration curve 1957-1964 |
| box 7, folder 11 | Lawrence Radiation Laboratory (Berkeley, CA), correspondence and consultant agreement 1963-1965 |
| box 7, folder 12 | Lockheed, 1959 |
| box 7, folder 13 | Los Alamos National Laboratory, correspondence and security clearance materials 1987-1995 |
| box 116, folder 13 | Los Alamos National Laboratory consult agreement 1995 |
| box 7, folder 14, | Los Alamos Scientific Laboratory, correspondence and consultant agreements 1968-1995 |
| box 117, folder 1 | Motel damage, Cleveland, OH 1961 |
| box 7, folder 15 | Physical Science Corporation 1961 |
| box 7, folder 16 | Physical Science Corporation 1961 |
| box 7, folder 17 | Plesset Associates and EG&G, Inc. 1958-1969 |
| box 7, folder 18 | RAND Corporation 1949 |
| box 7, folder 19 | Research & Science Investors, Inc. 1961-1972 |

Subseries 5.4. Lectures**Undated**

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|------------------|--|
| box 7, folder 22 | West Los Angeles College, notes for talk "From poltergeist to particle" undated |
| | Unknown organizations undated |
| box 7, folder 23 | Miscellaneous materials for lectures undated |

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| box 7, folder 24-25 box 117, folder 2 box 7, folder 26 box 7, folder 27 | Miscellaneous transparencies for lectures on the detection of the neutrino undated <i>Neutrinos from the Atmosphere and Beyond</i>, lecture undated "The trail of the neutrino," partial text of lecture undated "Some comments on the problem of funding fundamental research," text of lecture undated |
| box 7, folder 28 box 7, folder 42a box 7, folder 72 | Transparencies for lecture on detecting ultra high energy neutrinos undated Unknown organization (La Jolla, CA), "Neutrino interactions," notes 1961 1973-1993, Unknown organizations, miscellaneous transparencies for lectures on neutrino detection and properties 1973-1993 |
| box 7, folder 110 | 1979-1980, Unknown organizations, miscellaneous transparencies for lectures on proton decay and atmospheric neutrino 1979-1980 |
| box 7, folder 74 | Unknown organizations, transparencies for three lectures on conservation law (Baryon conservation) 1974 |
| box 7, folder 86 | Unknown organization, introductory notes for talk by Gurr and Sobel on the UCI neutrino program at Savannah River Plant 1976 |
| box 117, folder 3 | Unknown organization, Trieste, Opening remarks for the discussion session 1976, June |
| box 8, folder 41 box 8, folder 27 box 8, folder 44 | Unknown organization, notes for a lecture on beta decay 1990 Unknown organization, introduction for Leon Lederman 1985 Unknown organization in Helsinki, Finland, "Much ado about nothing," notes 1991 |
| box 7, folder 108-109 box 8, folder 50 | Unknown organization, transparencies for lectures on neutrino astronomy and the detection of the neutrino undated Unknown organization, set of transparencies for talk on the detection of the neutrino circa 1994 |
| box 7, folder 70 | Unknown organization, talk to stroke patients on the discovery of fission, notes for talk 1972 |
| box 8, folder 51 | Unknown organization in Texas, "40 years of neutrino physics," edited draft of lecture 1994 Unknown organization 1984 |
| box 8, folder 20 box 8, folder 21 box 117, folder 4 | "Detection of the free neutrino," transparencies 1984 Transparencies for lectures on neutrino oscillation 1984 1946, New Mexico Educational Association, Convention, <i>Social and Political Implications of Atomic Energy</i>, correspondence, program, clipping 1946 April 6 |
| box 117, folder 5 | 1952, Earthquake and Blast Effects on Structure Symposium, <i>The Air Blast Wave from a Nuclear Explosion</i> 1952 June 26-28 |
| box 7, folder 29 | 1956, University of California, Berkeley, Department of Physics, "Neutrino physics," correspondence 1956 1957 |
| box 7, folder 30 box 7, folder 31 box 117, folder 6 | American Physical Society, "Neutrino physics," notes 1957 Cal Tech, "Experimental techniques in the neutrino experiments," notes 1957 Summaries of talks to High School Science Teachers, Los Alamos, New Mexico 1957 |
| box 7, folder 32 | 1958 American Physical Society, "The electron spectrum from U235 fission fragments from 1 to 8 mev," publicity material 1958 |
| box 7, folder 33 box 7, folder 34 | Lockheed, "The neutrino," notes 1958 Los Alamos Scientific Laboratory, "The free antineutrino absorption cross section," text of oral paper 1958 |
| box 7, folder 35 | 1959 Los Alamos biology seminar, "Biological clocks and related phenomena," notes 1959 |
| box 7, folder 36 | Optical Society of America, Rochester Section, correspondence 1959 |
| box 7, folder 37 | 1960 Case Institute of Technology, Annual Research Day, "The practical neutrino," notes for talk 1960 |
| box 7, folder 38 | Greenbriar meeting, "Physics at Case," transcript 1960 |

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| box 7, folder 39 | University of New Mexico, Conference on Organic Scintillation Detector, "Application of giant scintillation detectors," notes and transcription of remarks 1960 |
| | 1961 |
| box 7, folder 40 | Carnegie Tech, "Neutrinos," notes 1961 |
| box 7, folder 41, box 117, folder 7 | Shaker Heights High School assembly, "Ruminations of a scientist," publicity, correspondence and notes 1961 |
| box 7, folder 42 | Union Carbide Corporation, "Neutrino interactions," publicity material 1961 |
| box 117, folder 8 | 1962 Regional Council of Science Teachers, Cleveland, OH, "What Makes a Creative Scientist?" 1962 June |
| | 1963 |
| box 7, folder 43 | AAAS meeting (Cleveland, OH), "Neutrino physics," notes 1963 |
| box 7, folder 43a | American Physical Society, "History of the neutrino," notes 1963 |
| box 7, folder 44 | Case Institute of Technology, Colloquium on the Neutrino, notes for talk 1963 |
| box 7, folder 45 | Cleveland Astronomy Group, "Neutrino astronomy," notes 1963 |
| box 117, folder 9 | Ohio State University. Dept. of Physics and Astronomy, Colloquium speech "Nutrinos", program 1963 February 28 |
| box 7, folder 46 | University of Virginia, Department of Physics colloquium, correspondence 1963 |
| box 7, folder 46a | Washington State College (Bellingham), notes 1963 |
| | 1964 |
| box 7, folder 47 | American Physical Society, Southeastern Section, "Low-energy neutrino reactions," notes 1964 |
| box 7, folder 48 | Case Institute of Technology, Conference on the Interaction Between Cosmic Rays and High Energy Physics, proceedings 1964 |
| box 7, folder 49 | California Institute of Technology, lectures on cosmic ray muons, correspondence 1964 |
| box 7, folder 50 | Conference on Astrophysics and Relativity (University of Texas), "Cosmic neutrinos," notes 1964 |
| box 7, folder 51 | University of Witwatersrand (South Africa), Physics Club, "Report on high energy conference, Dubna, USSR," notes and publicity 1964 |
| | 1965 |
| box 7, folder 52 | American Physical Society, Fluid Dynamics Section (Cleveland meeting), text of lecture 1965 |
| box 7, folder 53 | Australian National University (Canberra), notes for two talks 1965 |
| box 7, folder 54 | University of Witwatersrand (South Africa), Physics Club, "What makes the sun shine?" notes for talk 1965 |
| | 1966 |
| box 7, folder 55 | British Royal Society, "Search for the solar neutrino," text of lecture 1966 |
| box 7, folder 56 | Case Institute of Technology |
| | Frontiers of Knowledge Series, "Ruminations of a physicist," annotated text of lecture 1966 |
| box 7, folder 56a | Physics colloquium, "Neutrinos, etc. at Case," notes and publicity 1966 |
| box 7, folder 57 | Harvey Mudd College, lecture on neutrinos, correspondence 1966 |
| box 7, folder 58 | UCI, opening statement for roundtable on R. Carnap 1966 |
| box AV-002, cassette MS-F07-A016, MS-F07-A017 | University of Witwatersrand, talk to Physics class 1966 |
| | General Physical Description note: 2 audiocassettes. |
| | Conditions Governing Access note |
| | Original audiocassettes restricted, use copy must be used by researchers. |
| | 1967 |
| box 7, folder 59 | Douglas Advanced Research Laboratories (Huntington Beach, CA), "I wonder as I wander," publicity 1967 |
| box 7, folder 59 | UCI, Physics Dept., "Neutrino processes in stellar interiors: current observational status," notes and publicity 1967 |
| | 1968 |
| box 7, folder 60, box 117, folder 10 | NASA (Goddard Space Flight Center) Scientific Colloquium, "Neutrinos underground," program, publicity and transparencies 1968 |

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| | UCI |
| box 7, folder 61 | History of Science course guest lecture, "Development of H-bomb," notes 1968 |
| box 7, folder 61a | Public lecture, "Apollonius, the planets, and the nucleus," notes and publicity 1968 |
| box 7, folder 62 | University of Witwatersrand, Physics Club, "Solar neutrinos and other matters," notes for talk and publicity 1968 |
| | 1969 |
| box 7, folder 63 | Unitarian Church of Orange County (Anaheim, CA), "Some remarks on the ABM," notes and program 1969 |
| box 7, folder 64 | UCI, Physics Department, "Current developments in neutrino physics," notes and publicity 1969 |
| box 7, folder 64a | Weak Interaction Conference (CERN), "Cosmic rays and weak interactions," notes 1969 |
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| box 7, folder 65 | American Physical Society (Austin, TX meeting), "Status of neutrino experiments," notes for talk 1970 |
| box 7, folder 65a | Industrial Associates Day, "Physical sciences--outlook for the '70s," text of lecture 1970 |
| box 7, folder 65b | Stevens Institute of Technology, seminar, "Neutrinos--above and below ground," notes for lecture 1970 |
| | 1971 |
| box 7, folder 66 | American Physical Society (Washington, DC meeting), correspondence, notes and transparencies 1971 |
| box 7, folder 66a | University of California, San Diego colloquium, "Neutrinos: Status of electron scattering and other experiments," notes for talk 1971 |
| box 7, folder 67 | University of Natal (South Africa), college lecture, "A physics view of eternal verities," notes 1971 |
| | 1972 |
| | UCI |
| box 7, folder 68 | Faculty Club, "Worries of a physicist, " notes 1972 |
| box 7, folder 69 | Student Parent Orientation Program (SPOP), "The future of the university - as I see it," notes for talk 1972 |
| | 1973 |
| box 7, folder 70a | Atomic Energy Commission, symposium, "Neutrinos, deep mines, and related matters," correspondence, notes for lecture, and publicity 1972-1973 |
| box 7, folder 71 | California State University, Fullerton, "Who needs physics," transparency 1973 |
| box 7, folder 71a | Irvine Conference on Lepton Reactions, "Neutral currents at reactors," notes 1973 |
| | 1974 |
| box 7, folder 73 | 7th Texas Symposium on Relativistic Astrophysics (Dallas, Texas), "Large scale neutrino projects sans accelerators," text of lecture 1974 |
| box 7, folder 73a | Neutrino Symposium (Research Institute for Fundamental Physics, Kyoto, Japan), notes for talk and on others' presentations 1974 |
| box 7, folder 75 | Women Association of the University Interfaith Foundation, "Science and religion," notes for talk 1974 |
| | 1975 |
| box 7, folder 76 | Long Beach State University, "Tests of some hallowed principles," notes for luncheon remarks 1975 |
| box 7, folder 76a | Neutrino '75 (Balatonfured, Hungary), "Baryon and Lepton conservation," annotated program, text and transparencies and notes on others' presentations 1974-1975 |
| box 7, folder 77 | Turtle Rock Elementary School (Irvine, CA), "What does a scientist do?" notes for talk 1975 |
| box 7, folder 78 | UCI Society of Physics Students, "Particle physics and the new particles," notes and transparencies 1975 |
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| box 7, folder 79 | American Physical Society meeting (Rochester, NY), "Status of search for elastic scattering and related matters," text of lecture from proceedings 1976 |
| box 7, folder 80 | California State University, Fullerton, School of Math, Science, and Engineering commencement, "Who needs science?" drafts and correspondence 1976 |
| box 7, folder 81 | Gordon Research Conference on Nuclear Chemistry, correspondence and transparencies 1976 |
| box 7, folder 82 | Los Alamos Scientific Laboratory, partial set of transparencies for a lecture on the history of neutrino detection and elastic scattering 1976 |
| box 7, folder 83 | Naval Post-Graduate School (Monterey, CA), colloquium on elastic scattering, transparencies 1976 |
| box 7, folder 84 | Neutrino '76 (Aachen, Germany), "Detection of neutrino-electron scattering," conference materials, transparencies and text of lecture 1976 |
| box 7, folder 85 | New Mexico Technical University, "Status of R. Davis solar neutrino experiments," transparencies 1976 |
| box 7, folder 87 | Workshop on Role of Weak Interactions in Gravitational Collapse of Stars (University of Chicago), transparencies 1976 |
| | 1977 |
| box 7, folder 88 | Ben Lee Memorial Conference (Fermi Lab), "Search for Baryon decay and neutrino oscillations," text and transparencies 1977 |
| box 7, folder 89 | CERN, "Status of antineutrino experiments at reactors," notes and transparencies 1977 |
| box 7, folder 90 | Istituto Nazionale di Fisica Nucleare (Milan, Italy), "Experiments with antineutrinos at a nuclear reactor," publicity 1977 |
| box 7, folder 91 | Neutrino '77 (USSR), notes and transparency 1976-1977 |
| box 117, folder 12 | Institut Laue-Langevin, Grenoble, France. "Elastic scattering of neutrinos by electrons", announcement 1977 January 26 |
| box 8, folder 5 | Brookhaven National Laboratory, Neutrino Oscillation Workshop, "Do neutrinos oscillate?", transparencies and publicity 1981 |
| | 1978 |
| box 7, folder 92 | AAPT, "What makes the neutrino detectable?", transparencies 1978 |
| box 7, folder 93-94 | International School of Cosmic Ray Astrophysics (Erice, Italy) summer program, correspondence, photographs, notes, and miscellaneous transparencies for lectures on detecting atmospheric neutrinos (includes DUMAND materials) 1978 |
| box 117, folder 13 | The Friends of UCI, Annual meeting, "Is there a solution to the energy crisis?, program 1978 October 31 |
| | University of California, Irvine |
| box 7, folder 95 | Friends of UCI, "Is there a solution to the energy problem?" notes, correspondence and transparencies 1978 |
| box 7, folder 96 | Physical sciences lecture, "The many faces of the neutrino," transparencies 1978 |
| box 7, folder 97 | Unknown organization, "High energy neutrinos from the atmosphere and beyond," transparencies 1978 |
| | 1979 |
| box 7, folder 98 | California Institute of Technology, "Baryon stability: experimental status and future prospects," transparencies 1979 |
| box 7, folder 99 | Case Western Reserve University, colloquium in honor of Professor Leslie Foldy's 60th birthday, "Is the proton stable?," poem and publicity 1979 |
| box 7, folder 100 | Langer retirement lecture, Indiana University, "Neutrino odyssey: reactors, mines, oceans," correspondence and notes 1978-1979 |
| box 7, folder 101 | Sixteenth International Cosmic Ray Conference (Kyoto, Japan), "Atmospheric neutrinos as signals and background," correspondence, text of lecture, and transparencies 1979 |
| | UCI |
| box-folder new | Fredrick Reines Symposium, UC Irvine, invitation 1979 March 13 |
| box 117, folder 14 | Fourth Annual Distinguished Faculty Lecture, program 1979 April 17 |
| box-folder new | The Friends of UC Irvine, annual meeting, program 1978 October 31 |

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| box 7, folder 102-105 | Gus Hruschka Memorial Symposium, correspondence and background information, photographs (including of balloon flight and South African mine experiments), and symposium materials 1945-1979 |
| box 7, folder 105a box 7, folder 106 | Honors day, "How to detect a particle," program and transparencies 1979 |
| box 7, folder 107 | University of Delaware and Franklin Institute joint colloquium, "Proton decay?", publicity and transparencies 1979 |
| | University of Tokyo, "Atmospheric neutrinos as signal and background," revised version of lecture 1979 |
| | 1980 |
| box 8, folder 1 | American Physical Society meeting (Washington, DC), "Experiment situation on the decay of the proton," notes and transparencies 1980 |
| box AV-002, cassette MS-F07-A009 | Audiocassette recording of press conference prior to Reines' talk 1980 |
| | Conditions Governing Access note |
| | Original audiocassette restricted, use copy must be used by researchers. |
| box AV-002, cassette MS-F07-A007 | Audiocassette recording of Reines' talk 1980 |
| | Conditions Governing Access note |
| | Original audiocassette restricted, use copy must be used by researchers. |
| box 8, folder 2 | Lawrence Livermore National Laboratory, "Are neutrinos stable?", abstract and biographical sketch 1980 |
| box 8, folder 3 | Massachusetts Institute of Technology, transparencies for several lectures on neutrino oscillation and structure 1980 |
| box 8, folder 4 | Neutrino '80 (Erice, Italy), "Fifty years of neutrino physics," correspondence, notes, and drafts 1979-1980 |
| box AV-002, cassette MS-F07-A013 | Audiocassette recording of Reines' talk 1980 |
| | Conditions Governing Access note |
| | Original audiocassette restricted, use copy must be used by researchers. |
| | 1981 |
| box 8, folder 6 | East Bluff Elementary School (Newport Beach, CA), talk to 6th graders, notes 1981 |
| box 8, folder 7 | Neutrino '81 (Hawaii), "The solar neutrino: too few SNU," text of lecture and transparencies 1981 |
| box 8, folder 8 | New Worlds All-American High School Students Awards Dinner (Orange County, CA), notes for remarks 1981 |
| box 8, folder 9 | UCI, Chancellor's Club annual dinner, "Ruminations of a physicist," publicity materials and text of lecture 1980-1981 |
| box 117, folder 15, box 8, folder 10 | University of Nevada, Reno, Samuel A. Goudsmit Memorial Lecture, "Chasing the neutrino," program, notes and publicity 1981 |
| | 1982 |
| box 8, folder 11 | Cambridge University, Conference on the Neutron and its Applications, "Reactor neutrinos," draft and handbook 1982 |
| box 8, folder 12, box 117, folder 16 | Eighth International Workshop on Weak Interactions and Neutrinos (Javea, Spain), correspondence, notes and drafts of talk on proton decay and reactor experiments 1982 |
| box 8, folder 13 | ICONS Conference (Amsterdam, Netherlands), "Does the neutrino have structure?" text of lecture 1982 |
| box 8, folder 14 | International Colloquium on the History of Particle Physics (Paris, France) |
| | International Colloquium on the History of Particle Physics (Paris, France), "Neutrinos to 1960: personal recollections," correspondence, draft and notes 1982 |
| box 157, folder 1 | International Colloquium on the History of Particle Physics (Paris, France) group photograph |
| box 8, folder 15 | Neutrino '82 (Budapest, Hungary), "UCI mobile neutrino oscillation experiment," correspondence, transparencies and photograph 1982 |

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| | UCI |
| box 8, folder 16 | Fine Arts Gallery, "Intersection between physics and art," notes 1982 |
| box 8, folder 17 | Science clinic, "What is a neutrino?" notes and transparencies 1982 |
| | 1983 |
| box 8, folder 18 | Beijing (China) lecture on neutrino oscillation (earlier versions given in Amsterdam and Tokyo), transparencies 1982-1983 |
| box 8, folder 19 | Stanford University, transparencies for a lecture, title unknown 1983 |
| | 1984 |
| box 8, folder 22 | Wingspread Conference, "Search for the free neutrino," text of lecture 1984-1985 |
| box AV-002, cassette MS-F07-A011 | Audiocassette recording of Reines' talk circa 1984 |
| | Conditions Governing Access note |
| | Original audiocassette restricted, use copy must be used by researchers. |
| box 8, folder 21 | Talk for Professor R. Newman's course, "Wartime Experiences at Los Alamos" April 1984 |
| | 1985 |
| box 8, folder 23 | Aspen Winter Physics Conference, "The UCI mobile neutrino oscillation experiment," notes and transparencies 1985 |
| box AV-002, cassette MS-F07-A010 | Fermilab History Symposium, audiocassette of Reines' remarks on the detection of the neutrino 1985 |
| | Conditions Governing Access note |
| | Original audiocassette restricted, use copy must be used by researchers. |
| box 8, folder 24 | Orange County (CA) 8th grade Academic Pentathlon, keynote speaker, program and correspondence 1985 |
| box 8, folder 25 | UCI, School of Physical Sciences, Open House keynote speaker, program 1985 |
| box 8, folder 26 | University of Witwatersrand, Southern California Alumni Club, publicity 1985 |
| box 117, folder 17 | Wits Alumni Club of Southern California, Costa Mesa, featured speaker and guest of honor, " <i>Neutrinos and Politics</i>" 1985 May 11 |
| | 1986 |
| box 8, folder 28 | California State Polytechnic University, Pomona, Campus Forum, "The work of science and the state of excellence," publicity 1986 |
| box 8, folder 29 | UCI, Society of Physics Students, "Ruminations -- or what's a heaven for?" conference schedule 1986 |
| | 1987 |
| box 8, folder 30 | American Physical Society, notes for a lecture 1987 |
| box 117, folder 18 | Astrophysics Workshop, Aspen Colorado, after dinner remarks 1987 |
| box 8, folder 31 | Case Western Reserve University, Physics Department, lecture on IMB supernova neutrino detection, correspondence and transparencies 1987 |
| box AV-002, cassette MS-F07-A001 | Audiocassette recording of lecture 1987 |
| | Conditions Governing Access note |
| | Original audiocassette restricted, use copy must be used by researchers. |
| box 8, folder 32 | Los Alamos National Laboratory technology transfer symposium, "Instrumentation and the Los Alamos spirit," correspondence, program, and text of lecture 1987 |
| box 8, folder 33, box 117, folder 19 | Modern Physics in America: Michelson-Morley Centennial Symposium, Case Western Reserve University, "Neutrinos from the atmosphere and beyond: a new astronomy," correspondence, transparencies, symposium materials, and publicity 1987 |
| box AV-005, cassette MS-F07-V001 | VHS videocassette recording of Reines' talk 1987 |
| | Conditions Governing Access note |
| | Original videocassette restricted, use copy must be used by researchers. |
| box 117, folder 20 | NOVA program "<i>Death of a Star</i>", rough draft of program 1987 April 13 |

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| | UCI |
| box 8, folder 34 | Medical School, "Ruminations--past/future," notes 1987 |
| box 8, folder 35 | Phi Beta Kappa initiation, "Stardust," annotated typescript 1987 |
| box 117, folder 21 | UCLA Workshop, after dinner remarks, <i>Some Comments on the Problem of Funding Fundamental Research</i>, text 1987 |
| | 1988 |
| box 117, folder 22 | Annual Einstein Memorial Lecture, The Israel Academy of Sciences and Humanities, " <i>The Neutrino-Poltergeist to Particle</i>", announcement, correspondence and notes 1988 April 24 |
| box 117, folder 23 | INS Symposium on Neutrino Mass and Related Topics, Tokoy, Japan, March 16-18, 1988, "Nutrino past, present and future", correspondence and program 1988-1989 |
| box 117, folder 24 | National Academy of Sciences, 9th Einstein Lecture, "From Poltergeist to Particle", lecture notes and overheads 1988 April 24 |
| box 138, folder 4 | Oversize overhead transparency |
| box 117, folder 25, box 8, folder 36 | Stanford University, Leonard I. Schiff Memorial Lecture, correspondence, notes and text of speech with overheads 1987-1988 |
| box 8, folder 37 | UCI, after dinner remarks 1988 |
| box 8, folder 38 | 1989, UCI, Philosophy of Science course lecture, correspondence and notes 1988-1989 |
| | 1990 |
| box 8, folder 39 | Conference of the Heads of the International Baccalaureate Schools, "Conservation laws: nature's invariants," correspondence, notes, and informational materials 1987-1990 |
| box 8, folder 40, box 117, folder 26 box 117, folder 27 | New York University, Korff Memorial Session, "Reminiscences," advertisements, correspondence and text of lecture 1990-1991 |
| | The Second Hubert M. James Lecture, " <i>The Neutrino : from Poltergeist to Particle</i>", Purdue University 1990 November 6 |
| | 1991 |
| box 117, folder 28 box 8, folder 42 | " <i>Environmental Consequences of Nuclear Development</i>", April 12, 1991 1991 |
| | First Sakharov Conference (Moscow, USSR), The experimental status of Baryon conservation," correspondence, notes, text of lecture, and transparencies 1991 |
| box 8, folder 43 | UCI, Bren Fellows luncheon, "Much ado about nothing," notes and publicity 1991 |
| box 8, folder 45 | West Los Angeles College, "Neutrinos: from poltergeist to particle," publicity 1991 |
| | 1992 |
| box 8, folder 46 | American Physical Society, "The neutrino: from puzzle to particle," publicity 1992 |
| box 8, folder 47 | Neutrino '92, introductory remark 1992 |
| box 117, folder 29 box 8, folder 48 | V-92, Spain, "Who needs Science? 1992 |
| | 1993, transparencies for a high school advanced physics lecture on conservation laws 1993 |
| | 1994 |
| box 8, folder 49 | International Conference on the History of Basic Discoveries and Original Ideas in Particle Physics (Erice, Italy), "The detection of Pauli's neutrino," correspondence, publicity, program, and drafts of text 1994 |
| box 117, folder 30 | Physics Colloquium at California State University Dominguez Hills, correspondence and lecture notes 1995 February 17 |
| | 1995 |
| box 8, folder 52 | California State University, Dominguez Hills, Ted Will Memorial Lecture, publicity 1995 |
| box AV-005, cassette MS-F07-V007 | VHS videocassette of Reines' lecture 1995 |
| | Conditions Governing Access note |
| | Original videocassette restricted, use copy must be used by researchers. |

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| box AV-006, cassette MS-F07-V007PM box 8, folder 53 | Preservation copy, Beta SP, reproduction date: 1999 1999 The Citadel (Charleston, SC), "The discovery of the neutrino," correspondence 1995 |
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Subseries 5.5. Professional associations

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| box 8, folder 61 | American Academy of Arts and Sciences, correspondence, directory, and nomination information 1966-1995 Scope and Contents note Includes correspondence regarding the location of the AAAS Western Center at UCI. |
| box 118, folder 1 box 118, folder 2 | Nomination materials for Douglas Mills 1994-1997 American Association for the Advancement of Science, 50 year membership certificate 1997 |
| box 8, folder 62-63 | American Institute of Physics, Visiting Scientists Program in Physics 1959-1971 |
| box 8, folder 64 box 8, folder 65 box 8, folder 66 box 7 | American Physical Society Conference materials 1962 Division of Cosmic Physics, nominating committee correspondence 1971-1972 Federation of American Scientists, correspondence and newsletter 1963, 1996 Interview conducted by staff of American Institute of Physics Study of Multi-Institutional Collaborations 1991 |
| box AV-002, cassette MS-F07-A012 | Interview on BBC radio program "Scientifically speaking," audiocassette, 1982-01-14 1982 Conditions Governing Access note Original audiocassette restricted, use copy must be used by researchers. |
| box 8, folder 67 box 8, folder 68 box 118, folder 3 box 118, folder 4 box 118, folder 5 box 9, folder 1 box 8, folder 54, box 13, folder 1 box 8, folder 60 | Membership cards from various associations 1966-1968 National Academy of Sciences, symposia and membership materials 1987-1996 Correspondence 1994-1998 Nomination materials for Michael Moe, 1995 1995 National Science Foundation, ESI Review Grants, information 1995 Phi Beta Kappa, UCI chapter, correspondence 1973-1974 Photographs, miscellaneous undated, includes photographs of Clyde Cowan, J. Robert Oppenheimer, and Reines circa 1960-circa 1998 Prize juries, California Museum of Science and Industry (Los Angeles, CA), prize brochure 1973 Biographical/Historical note Reines served as chair of the jury. |
| box 9, folder 6-7 box 9, folder 8-18 | Publications on the history of physics and neutrino research 1957-1992 Referee reports by Reines for a variety of funding agencies and physics publications 1962-1993 |
| box 118, folder 6 | Russian Academy of Sciences, Foreign Member, election as member and correspondence 1994-1999 |
| box 9, folder 2 box 9, folder 3, box 118, folder 7 | Society of the Sigma Xi, election and informational materials 1944-1968 Sigma Pi Sigma (American Institute of Physics), correspondence and certificate 1994-1996 |
| box 9, folder 4 box 157, folder 2 box 9, folder 5 | Tau Beta Pi (National Engineering Honor Society) Tau Beta Pi correspondence 1966 Tau Beta Pi member certificate 4 December 1966 Union of Concerned Scientists, correspondence and publicity 1985-1995 |

Subseries 5.6. Topical files

box 118,
folder 8-10, box 6,
folder 3-4
box FB-36,
folder 2
box FB-32,
folder 6
box 6, folder 2

Clippings concerning Reines' work and the neutrino circa 1960-1996

Oversize original publication, *Sciences et avenir* 1965

Oversize clippings 1982-1987

Clippings and other materials on or by Bethe, Bohr, Einstein, Fermi, Heisenberg, and Wheeler 1947-1991

Scope and Contents note

Includes 1987 letter from Reines to Mrs. Fermi.

box 119, folder 1,
box 9, folder 19
box 119, folder 2

Cowan, Clyde L., correspondence, obituaries and memorials, and publications 1957-1975

Committee to Review Physics Programs of the American Institute of Physics, correspondence, notes and final report 1994

***Foundations of nuclear physics* (1949), collection of essays annotated by Reines 1952**

box 9, folder 20

International Centre for Theoretical Physics (Trieste, Italy), publication circa 1968-1989

box 9, folder 21

International Neutrino Conferences, draft by Reines of rules of order 1977

box 9, folder 22

Irvine celebration of the centenary of Einstein's birth, clipping 1979

box 9, folder 23

Israel Academy of Sciences, Woolf Prize undated

box 9, folder 24

Lawrence Livermore National Laboratory, publications 1989-1990

box 9, folder 25

Panofsky Prize, 1994 Selection Committee 1993

box 119, folder 3

Preprints, offprints and drafts sent to Reines by colleagues 1934-1997

box 119, folder 4,

Processing Information note

box 8,
folder 55-59

Filed by surname of first author.

South Africa information

Neutrino experiments in South Africa controversy 1963-1967

box 119, folder 5

General information, pamphlets and maps circa 1970s

box 119, folder 6

Virginia Trimble material to support her nomination as Editor of *Science* magazine 1994

box 119, folder 7

Correspondence Series 6. 1952-2001 and undated

Series Scope and Content Summary

This series is comprised chiefly of correspondence, but also includes a variety of materials sent to Reines along with correspondence, including preprints, photographs, brochures, conference materials, and publications. The series represents the correspondence file maintained for Reines by office staff at UCI and, as such, is a particularly rich source of information on all of the activities and research projects in which he was engaged during his career.

Arrangement

This series is arranged chronologically except for several files of correspondence with physicists that Reines maintained separately from the chronological files.

Processing note

The original chronological arrangement of the series was maintained during processing. Exceptions to this arrangement are several files of correspondence with physicists that Reines maintained separately from the chronological files and that are filed at the end of the series. Included is correspondence with John Wheeler, who served as a mentor and sounding board for Reines throughout his career. Researchers will also find correspondence in almost all other series.

box 10, folder 1,
box 119, folder 8

Undated correspondence circa 1952-circa 1995

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| box 119, folder 9 | 1944-1946 1944-1946 |
| box 119, folder 10 | 1945, on the Atomic Bomb 1945 |
| box 119, folder 11 | 1951 1951 |
| box 119, | 1952-1953 1952-1953 |
| folder 12, box 10, | Scope and Content Summary |
| folder 2 | Includes correspondence with Carey Williams of Metro-Goldwyn-Mayer Pictures regarding film technology. |
| | |
| box 119, folder 13 | 1955-1956 1956 |
| | Scope and Content Summary |
| | Includes letter from Edward Teller of the University of California Radiation Laboratory; telegram to W. Pauli confirming detection of the neutrino. |
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| box 119, | 1957-1958 1957-1958 |
| folder 14, box 10, | |
| folder 3 | |
| box 1, folder 34 | 1958, Franklin Institute, correspondence 1958 |
| box 10, folder 4, | 1959 1959 |
| box 119, folder 15 | |
| box 10, folder 5 | 1960 1960 |
| box 119, | 1961 1961 |
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| box 119, | 1964-1965 1964-1965 |
| folder 18, box 10, | |
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| box 10, folder 10, | 1966 1966 |
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| box FB-50, | Oversize item 1966 |
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| box 120, folder 3 | |
| box 10, | 1971 1971 |
| folder 19-20 | |
| box 10, | 1972 1972 |
| folder 21-23, | Scope and Content Summary |
| box 120, folder 4 | Includes correspondence with Warren E. Fetty of the Wham-O Manufacturing Company, regarding Frisbees behind the Iron Curtain; correspondence with Charles Hillinger of the <i>Los Angeles Times</i> regarding Reines' idea for a paperclip cartoon called "Klipwits." |
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| box 11, folder 1-3, | 1973 1973 |
| box 120, folder 5 | |
| box 11, folder 4-6, | 1974 1974 |
| box 120, folder 6 | |
| box 11, folder 7, | 1975 1975 |
| box 120, folder 7 | |

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| box 11, folder 8-9, box 120, folder 8 | 1976 1976 |
| box 11, folder 10, box 120, folder 9 | 1977 1977 |
| box 120, folder 10, box 11, folder 11 | 1978 1978 |
| box 120, folder 11, box 11, folder 12-14 | 1979 1979 |
| box 120, folder 12, box 11, folder 15-17 | 1980 1980 |
| box FB-50, folder 5 | Oversize item 1980 |
| box 11, folder 18, box 120, folder 13 | 1981 1981 |
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| | Includes birthday letter from President Ronald Reagan. |
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1995 1995**1996 1996****1996-2000, correspondence handled by Dr. Reines' secretary 1996-2000****1997-2001 1997-2001****Correspondence filed by Reines by correspondent****Bahcall, John 1964-1978****Davis, Raymond 1967-1975****Fermi, Enrico 1952****Mark, Hans 1964-1981****Marx, George 1968-1976****Wheeler, John 1954-1991****Books sent to Reines: *Frontiers of Time* and *Beyond the Black Hole*, 1978-1979****Publications and writings Series 7. 1945-1999****General Physical Description note:** no content**Series Scope and Content Summary**

This series contains reprints, correspondence, drafts, and notes relevant to Reines' published and unpublished writings. The reprint and publications files concern his scientific work, while the unpublished writings contain a mixture of written material of both a scientific and a literary nature.

Arrangement

The series has been arranged in 3 subseries: Subseries 7.1. Numbered reprint file, 1945-1999. 1.3 linear ft. Subseries 7.2. Publications files, 1950-circa 1994. 1.0 linear ft. Subseries 7.3. Unpublished writings, circa 1950-circa 1995. 0.4 linear ft.

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Subseries 7.1. Numbered reprint file**Scope and Contents note**

This subseries contains reprints of Reines' scientific publications, organized according to the numbered "Publications list" maintained by his research group at UCI. Numbers missing from the contents list below indicate reprints for which a copy is not in the collection. Information in square brackets in the publication titles represents symbols or formulas that appear in the original titles on Reines' publications list. Drafts and correspondence associated with these publications are filed in Subseries 7.2. Publications files.

Arrangement note

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| box 15, folder 115 | 318. The neutrino: from poltergeist to particle. 1996 Biographical/Historical note Nobel lecture. |

Subseries 7.2. Publications 1950-circa 1994**Scope and Contents note**

This subseries contains correspondence and drafts related to Reines' journal and book publications. Original journal issues in which Reines' publications appeared are also filed here. Reprints of the publications that appear on the "Publications list" maintained by Reines' research group are filed in Subseries 7.1. Numbered reprint file. Drafts and some reprints of publications associated with a particular experiment or collaboration may also be found filed under "Dissemination" in Series 9. Experiments and Series 10. Collaborations.

Arrangement note

This subseries is arranged alphabetically by title of publication; where necessary, files concerning an individual title are arranged topically.

| | |
|--------------------|--|
| box 15, folder 116 | 40 years of neutrino physics, draft undated |
| box 123, folder 5 | "After dinner remarks", in <i>Observational Neutrino Astronomy</i> 1987 |
| box 15, folder 117 | Are there peaceful engineering uses of atomic explosives, original publication 1950 |
| | Articles published in other languages |
| | In Finnish undated |
| | In Hebrew 1980 |
| box 123, folder 6 | L'astronomie des neutrinos, original publication 1967 |
| box 123, folder 7 | The Case neutrino program, original publication 1966 |
| box 15, folder 118 | Chen (Herbert) obituary 1988 |
| box 15, folder 119 | Color scheme for spatial resolution using liquid scintillators, typescript circa 1963 |
| box 15, folder 120 | Conservation of the number of nucleons, typescript 1959 |
| box 15, folder 121 | <i>Cosmology, fusion and other matters: George Gamow memorial volume</i> |
| box 15, folder 122 | Biographical materials on Gamow 1968-1970 |
| | Correspondence with Colorado Associated University Press |
| | Advertising 1971-1973 |
| | Contracts and royalties 1970-1974 |
| | General 1969-1972 |
| | Correspondence and notes 1968-1974 |
| | Correspondence and notes regarding potential publishers 1968-1969 |
| | Correspondence regarding permission to quote 1971 |
| | Correspondence with contributors, includes drafts and notes 1968-1973 |
| box 15, folder 123 | Database printout of citations for Reines' publications undated |
| | Deep mines & outer space 1965 |
| | Deep underground measurements of cosmic ray muons and neutrinos, typescript circa 1970 |
| | Detection of electron antineutrino, electron scattering, drafts 1976 |
| | The detection of neutrons with a large liquid scintillation counter, draft 1954 |
| | Detection of neutrons with a large liquid scintillation counter, in <i>The review of scientific instruments</i>, v. 25, no. 11, November, 1954 1954 |
| | The detection of Pauli's neutrino, drafts circa 1994 |
| | Detection of the elastic scattering of electron antineutrinos by electrons, draft 1969 |
| box 15, folder 124 | |
| box 15, folder 125 | |
| box 15, folder 126 | |
| box 15, folder 127 | |
| box 15, folder 128 | |
| box 15, folder 129 | |
| box 15, | |
| folder 130-138 | |
| box 15, folder 139 | |
| box 123, folder 8 | |
| box 15, folder 140 | |
| | |
| box 15, folder 141 | |
| box 15, folder 142 | |
| box 123, folder 9 | |
| | |
| box 15, folder 143 | |
| box 15, folder 144 | |

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|------------------------|--|
| box 15, folder 145 | Detection of the free antineutrino, draft and final copy 1959 |
| | Detection of the Free Neutrino, first paper 1953 |
| box 15, folder 146 | Detection of the free neutrino -- a confirmation, draft 1956 |
| box 123, folder 10 | Detection of the free neutrino, reprint from <i>The Physical Review</i>, Vol. 92, no. 3, 830-831 (first paper on neutrinos) 1953 November 1 |
| box 15, folder 147 | Detection of the neutrino, edited draft 1988 |
| box 15, folder 148 | The determination of total body radioactivity using liquid scintillation detectors, typescript with original photographs circa 1953 |
| box 15, folder 149 | A discussion on neutrinos, containing reprints of two Reines articles (High energy neutrinos underground: status of the Case-Wits-Irvine experiment and future prospect, and The search for the solar neutrino) from <i>Proceedings of the Royal Society A</i>, original publication 1967 |
| box 16, folder 1 | Electron antineutrino interaction with deuterons, draft and original figures circa 1969 |
| box 123, folder 11 | <i>Energy needs debate</i>, article in the Daily Pilot 1976 June 6 |
| box 16, folder 2 | <i>Encyclopedia of Physics</i> contributions on the neutrino 1972-1979 |
| box 16, folder 3 | Evidence for neutrino instability, edited drafts 1980 |
| box 16, folder 4 | The experimental status of baryon conservation, draft and reprint 1979 |
| box 16, folder 5 | Experimental test of baryon conservation, correspondence, draft and final copy 1966-1967 |
| box 16, folder 6 | Focused ultrasound modifies evoked responses from the brain as demonstrated in an <i>in vitro</i> hippocampal preparation, drafts and correspondence 1990 |
| box 16, folder 7 | The free antineutrino absorption cross section, United Nations publication 1958 |
| box 16, folder 8 | High energy neutrinos underground: status of the Case-Wits-Irvine experiment and future prospects, draft 1966 |
| box 16, folder 9 | Instrumentation and the Los Alamos spirit, draft, notes and correspondence 1992 |
| box 16, folder 10 | Inverse beta decay, draft 1963 |
| box 16, folder 11 | Large-area liquid scintillation detector slab, draft 1964 |
| box 16, folder 12 | A large Cerenkov detector, reprint and figures and Reines' copy with annotations 1961 |
| box 16, folder 13 | A large liquid scintillator for the detection of antineutrino reactions, draft 1964 |
| box 16, folder 14 | Large-volume liquid scintillators: their applications, original publication 1954 |
| box 16, folder 15 | Limits on nonconservation of baryon number, original publication 1979 |
| box 16, folder 16 | Limits on solar neutrino flux and elastic scattering, draft 1964 |
| box 16, folder 17 | <i>Methods of experimental physics</i>, typescripts of contributed chapters and illustrations circa 1961 |
| box 16, folder 18 | Neutral-current limit and future prospect at a fission reactor, annotated offprint 1974 |
| box 16, folder 19 | Neutrino, proofs 1961-1965 |
| box 16, folder 20 | Neutrino astronomy, annotated reprint and photocopy 1966 |
| box 16, folder 21 | Neutrino instability, draft 1980 |
| box 16, folder 22 | Neutrino instability -- inverse square test, annotated drafts 1976 |
| box 16, folder 23 | Neutrino interactions, reviews 1961 |
| box 16, folder 24 | Neutrino physics, original publication 1957 |
| box 16, folder 25 | Neutrinos from the atmosphere and beyond, annotated draft and original publication 1965-1966 |
| box FB-36, folder 2 | Oversize material circa 1965 |
| box 16, folder 26 | Neutrinos, old and new, original publication 1963 |
| box 16, folder 27 | Neutrinos: past, present and future, final draft 1988 |
| box 16, folder 28 | Observation of SN1987A by neutrino light, original publication 1988 |
| box 16, folder 29 | On the conservation of baryon, notes 1970 |
| box 123, folder 12 | The Peaceful Atom 1947 |
| box 123, folder 13 | A photoelectric hygrometer 1945 |
| box 16, folder 30 | The poorly known gravitational constant, drafts 1973 |
| box 16, folder 31 | Publication lists circa 1969-circa 1974 |
| box 16, folder 32 | Remarks for B. Kuchowicz memorial volume, edited draft 1980 |
| box 16, folder 33 | Remarks on the design of neutrino experiments 1960 |

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|------------------------|---|
| box 16, folder 34 | Reminiscences: the early days of experimental neutrino physics, correspondence and drafts 1978 |
| box 16, folder 35 | Reprints in English of 2 Reines articles from a Japanese periodical 1974 |
| box 16, folder 36 | Science, a bridge of life, photocopy of article 1973 |
| box FB-34, folder 9 | Original publication, Seed: UCI alumni monthly 1973 |
| box 16, folder 37 | Scintillation counters and luminescent chambers, proofs 1961 |
| box 16, folder 38 | Search for antineutrino electron scattering, photocopy of handwritten draft and final copy 1972 |
| box 16, folder 39 | The search for proton decay, correspondence and photographs 1983-1986 |
| box 16, folder 40 | Second shock in liquid helium II?, reprint 1951 |
| box 16, folder 41 | Strategic communication with neutrino beams, annotated draft 1978 |
| box 16, folder 42 | System for recording signal amplitudes and waveforms from a large-area scintillation counter hodoscope, draft 1964 |
| box 16, folder 43 | Tests of some conservation laws, correspondence, edited draft and original publication 1979-1980 |
| box 16, folder 44 | Too many Ph.D.s?, typescript and handwritten draft 1971 |
| box 16, folder 45 | Translation into Polish of an unidentified article by Reines, original publication 1962 |
| box 16, folder 46 | Underground experiments on cosmic rays, correspondence and edited draft 1984-1985 |
| box 16, folder 47 | Upper limit for elastic scattering of electron antineutrinos by electrons, annotated offprint 1970 |
| box 16, folder 48 | Who needs science?, correspondence and original publication 1993 |

Subseries 7.3. Unpublished writings circa 1950-circa-1995

Scope and Contents note

This subseries contains primarily handwritten and typescript drafts of creative writing by Reines, who frequently jotted poems, stories, toasts, song lyrics, and other short pieces on scrap paper. Also included are several drafts for a collection of these creative writings that was gathered and edited for publication but never published.

Arrangement note

The subseries is arranged largely as it was found, since much of the material is undated.

| | |
|--|---|
| box 123, folder 14 | <i>Air blast from atomic bombs, 1949, classified Secret, unclassified 1959 1949</i> |
| box 16, folder 49-51, box 123, folder 15 | Poetry, prose, lyrics, toasts, and fragments circa 1950-circa 1990 |
| box FB-36, folder 2 | Oversize item 1950 |
| box 16, folder 52-54 | <i>Rainbows and things: a pot pourri</i> <i>Rainbows and things: a pot pourri, drafts and fragments circa 1995</i> |
| box 151, folder 3-4 | <i>Rainbows and things: a pot pourri, manuscript circa 1995</i> |
| box 151, folder 1-2 | <i>Rainbows and things: a pot pourri, draft circa 1988</i> |
| box 123, folder 16 | Rainbows and things: a pot pourri, returned manuacript from Writers' Representatives 1995 December 4 |

Data books Series 8. 1946-1991**General Physical Description note:** no content**Series Scope and Content Summary**

This series contains data books by Reines and other collaborators, students, and staff in his laboratories throughout his research career. The data books contain primarily data, analysis, protocols for data gathering, instructions for operating experimental machinery, and various notes. They represent the entire sweep of Reines' career as an experimentalist, from his work at Los Alamos Scientific Laboratory in the late 1940s to his involvement in the late 1980s with large multi-institutional collaborations such as Irvine-Michigan-Brookhaven (IMB) and Gamma Ray and Neutrino Detector (GRANDE).

Arrangement

This series is arranged roughly chronologically, although many of the data books were created and used at the same time and span multiple years.

Processing note

Researchers interested in specific experiments or collaborations will find additional information relating to research goals, data, and data analysis in Series 9. Experiments and Series 10. Collaborations. Analyzed and published data relating to these data books can be found in Series 7. Publications and writings, and filed under "Dissemination" in Series 9. Experiments and Series 10. Collaborations

box 17
box 17
box 17
box 18
box 150
box 151, folder 5
box 150
box 18
box 19
box 19
box 20, box 21,
box 22

Chemistry (Reines) 1946-1953**Book 7, film readings (Reines/Cowan) 1954-1955****Survey detector (Reines) 1954****R-18 (Reines) 1953****Notebook 2, personal (Reines) 1953-1956****Notebook 2, personal (Reines), loose sheets****Notebook 3, personal (Reines) 1956-1957****Beckman data and glow rite (Harrison) 1954-1957****Detector mock-up (Reines) 1954-1955****Log book, book 8, R-94 (Reines/Cowan) 1954-1955****Project Poltergeist, books 1-5 1952-1954****General Physical Description note:** 5 items.

box 22
box 23
box 23
box 24
box 24
box 25
folder XOS 1
box 125
box 25
box 26

box 26
box 27
box 27
box 28
box 28
box 29
box 29
box 30
box 30
box 31
box 31
box 32

Book 6, anti-proton data continued from book 5 (Reines) 1954-1955**Tank farm log (Reines/Cowan) 1955-1957****Neutrino experiment detector tank log, SRP (Reines/Cowan) 1956****Double beta decay, notebook 9 (Reines) 1955****SRP-3, film readings (Reines/Cowan) 1956****SRP-1, physical data (Reines/Cowan) 1956****Oversize item circa 1956****SRP-2, calibration data (Reines/Cowan) 1956****SRP-4, film reading (Reines/Cowan) circa 1956****SRP-5, graphs, curves, etc. derived mainly from film reading (Reines/Cowan) circa 1956****SRP-6, film reading (Reines/Cowan) circa 1956****SRP-7, physical data, follows SRP-1 (Reines/Cowan) 1956****SRP-8, graphs, follows SRP-5 (Reines/Cowan) circa 1956****Master notebook (Reines/Cowan) 1955-1956****Equipment (Reines/Cowan) 1955-1956****Los Alamos data calibrations, R-98 (Reines) 1954-1955****R-168, unlabeled film readings (Reines/Cowan) circa 1956****SRP-10, film reading (Reines/Cowan) circa 1956****SRP-11, film reading (Reines/Cowan) circa 1956****R-149 (Reines/Cowan) 1955-1958****R-169 (Reines/Cowan) 1956-1957****R-172 (Reines/Frye) 1958-1959**

| | |
|------------------|---|
| box 32 | R-339 (Reines/Frye) 1959 |
| box 33 | R-324 (Reines/Frye) 1958-1959 |
| box 33 | R-325 (Reines/Frye) 1958 |
| box 34 | R-340 (Reines/Frye), continued from R-325 1958-1959 |
| box 125 | Particle detector notebook, Case Institute of Technology 1959-1966 |
| box 115 | Loose sheets from notebook 1959-1966 |
| box 34 | SRP-1 (Reines/Jenkins), Case Neutrino Group 1962 |
| box 34 | SRP-2 (Reines/Jenkins), Case Neutrino Group 1962-1963 |
| box 35 | Charles Giamati notebook 1959-1961 |
| box 35 | SRP-4 (Reines/Jenkins/Kinard) 1965-1966 |
| box 126 | R-14 Los Alamos (Reines) 1950s |
| box 36 | Book no. I-1 (Reines) 1963 |
| box 36 | Reines/Brooks notebook 1967 |
| box 36 | Data notebook with note from M. Moe circa 1965 |
| box 37 | SRP-3 (Reines/Jenkins), Case Neutrino Group 1963-1965 |
| box 37 | Frank Nezrick thesis notebook and copy of thesis 1959-1962 |
| box 124 | Frank Nezrick's record of graduate thesis record 1961-1963 |
| box 38 | Data notebook 1963 |
| box 38 | Case-Wits ERPM neutrino experiment, book 1 1964-1965 |
| box 38 | Case-Wits neutrino experiment, surface station N.P.R.U. 1966-1968 |
| box 39 | Trigger record book, vol. V 1966-1967 |
| box 39 | Book 2 1965 |
| box 124 | Solar neutrinos, University of California, Irvine 1968-1976 |
| box 40 | Case-Wits neutrino experiment, book 4 1965-1967 |
| box 40 | Data book 6 1970-1971 |
| box 41 | Accelerameter data 1986 |
| box 41 | Neutrino telescope, vol. I (Price) 1986-1988 |
| box 41 | Calculations and data analysis 1970 |
| box 42 | Procedures manual (Crofoot) 1982-1986 |
| box 42 | Muon telescope users manual 1989 |
| box 42 | GRANDE, vol. II (Price) 1988-1989 |
| | Irvine-Michigan-Brookhaven (IMB) data books |
| box 43 | Data acquisition No. 5 1981-1982 |
| box 43, box 44 | No. 6-No. 10 1982 |
| | General Physical Description note: 5 items. |
| box 45 | No. 11 1982-1983 |
| box 45, box 46, | No. 12-No. 18 1983 |
| box 47, box 48 | General Physical Description note: 7 items. |
| box 48 | No. 19 1983-1984 |
| box 49, box 50, | No. 20-No. 24 1984 |
| box 51 | General Physical Description note: 5 items. |
| box 51 | No. 25 1984-1985 |
| box 52 | No. 26-No. 27 1985 |
| | General Physical Description note: 2 items. |
| box 52 | No. 28 1985-1986 |
| box 53, box 54, | No. 29-No. 34 1986 |
| box 55 | General Physical Description note: 6 items. |
| box 55 | No. 35 1986-1987 |
| box 56, box 57, | No. 36-No. 42 1987 |
| folder 1-3 | General Physical Description note: 7 items. |
| box 57, folder 4 | No. 43 1987-1988 |

box 58, folder 1
 box 58, folder 2
 box 58, folder 3
 box 58, folder 4

No. 44 1988-1989
No. 45 1989-1991
No. 46, 1991
Proton decay *in situ* experimental log 1980-1982

General Physical Description note: 2 data books.

box 58, folder 5-6,
 box 59, folder 1

Control room log books 1-3 1980-1981

General Physical Description note: 3 data books.

box 59, folder 2
 box 59, folder 3
 box 59, folder 4
 box 59, folder 5
 box 59, folder 6

CSU tape copy log 1982-1984
Auxiliary event monitor 1983
PMT receiving log 1984-1985
Electronics log book 1983-circa 1985
Tube text logs 1-2 1983-1985

General Physical Description note: 2 data books.

box 59, folder 7

Tube repair log book 1984-1985
Experiments Series 9. 1943-1997

General Physical Description note: no content

Series Scope and Content Summary

This series includes correspondence, proposals, publications, photographs and slides, notes and notebooks, technical drawings, and reports relating to experiments conducted by Reines and members of his neutrino group throughout his career. The series includes information on Reines' well-known experiments verifying the existence of the neutrino and exploring its properties, which utilized neutrinos produced by nuclear reactors. The primary sites for these experiments were Los Alamos National Laboratory (New Mexico), Hanford (Washington), and the Savannah River Plant (South Carolina). Also included are materials relating to experiments that did not have to do with verification of the neutrino, such as the Eniwetok atoll nuclear tests, photoelectric hygrometer, nuclear emulsions, beta decay and double beta decay, conservation of baryon number, charge conservation and the stability of the electron, gravitational constant, tactile vision experiments, and ultrasound and brainwave experiments. Most of these experiments took place at Los Alamos National Laboratory, Case Institute of Technology, or UCI.

Arrangement

This series is arranged chronologically within broad topical groupings of material. Researchers interested in determining chronological periods for various significant groupings of experiments in which Reines engaged should consult the table of contents for the volume of collected papers entitled *Neutrinos and other matters: selected works of Frederick Reines* (World Scientific, 1991), which is available in the cataloged book collections of the UC Irvine Libraries.

Restrictions

This series includes audio-visual materials and glass slides that are restricted.

Processing note

Researchers will find information about multi-institutional scientific collaborations in which Reines was involved in Series 10. Collaborations. Additional materials relating to Reines' experiments can be found in Series 6. Correspondence file, Series 7. Publications and writings, and Series 8. Data books.

box AV-002,
 cassette MS-F07-A008

Audio-visual materials, discussion by Reines and others of neutron electron scattering, audiocassette 1969

Conditions Governing Access note

Original audiocassette restricted, use copy must be used by researchers.

box 127, folder 1

Balloon flight experiment, Los Alamos, New Mexico, photographs and new report 1959 March 16

box 83, folder 1
 box 83,
 folder 2-28
 box 83, folder 29,
 box 84, folder 1-7

Consultant files 1983**Correspondence and memoranda concerning experiments 1946-1996****Data and analysis 1949-1982****Scope and Contents note**

File includes graphs, tables, notes, and reports.

box FB-60,
 folder 1
 box 84, folder 8,
 box 85 , folder 1-9

Oversize material 1949-circa 1971**Dissemination 1945-1997****Scope and Contents note**

File includes drafts, clippings, transparencies and other illustrations, articles, dissertations, and handwritten notes.

box FB-60,
 folder 1,
 box FB-61 ,
 folder 1
 box 85 ,
 folder 10-12

Oversize material 1946-1980**Engineering and equipment files 1953-1988****Scope and Contents note**

File includes correspondence, drawings, manuals, procedures, and brochures.

folder XOS 1
 box 85 , folder 13
 box 88, box 89,
 box 90

Oversize technical drawings 1953-1976**Financial records, includes budgets, correspondence, and invoices 1954-1987****Glass slides circa 1950-circa 1965****Scope and Contents note**

Glass slides substantially duplicate images available in photographs and slides in the Experiments and Collaborations series (Series 9 and 10).

Conditions Governing Access note

Access to glass slides is restricted. Researchers who require the use of these slides should consult with the Head of Special Collections and Archives or the Manuscripts Librarian.

box 85 , folder 14

Los Alamos Scientific Laboratory file 1946-1957**Scope and Contents note**

File includes discussion and recommendations of the Committee on Loyalty and Security of the Federation of American Scientists in response to the Wright Commission report.

box 85 , folder 15

Meeting minutes and notes 1952-1987**Notebooks****Brain research 1980****Cosmic ray experiments underground (Reines and Frye) 1957-1959**

box 85 , folder 16
 box 85 ,
 folder 17-18
 box 85 , folder 19
 box 86, folder 1
 box 86, folder 2
 box 86,
 folder 3-13,
 box 127, folder 3

High-altitude experiments at Los Alamos 1958-1959**Journal documenting trip from Hanford to Savannah River Plant 1955****Ultrasound 1986-1988****Notes, uncategorized, primarily handwritten by Reines on a variety of topics 1948-1995****Scope and Contents note**

File includes information on solar neutrinos, neutrino physics, baryon conservation, elastic scattering, proton decay, neutrino oscillations, and other topics.

box FB-60,
 folder 1
 box 127, folder 2

Oversize material circa 1950-1969**Graphs, experiment unnamed undated**

box 86, folder 14
box 86,
folder 16-19

Notes on spontaneous fission 1943-1947
Personnel files 1946-1981

Conditions Governing Access note

Access to UC personnel material in this file (4 folders) is restricted until 2010-01-01, 2027-01-01, 2029-01-01, and 2032-01-01.

box 86, folder 20,
box 87 ,
folder 1-6,
box 157, folder 1
box 87 ,
folder 7-12
box 127, folder 4
box 87 ,
folder 13-15

Photographs and slides circa 1950-circa 1990

Proposals and reports relating to research programs and funding 1954-1995

Proton disintegration experiment in salt mine in Ohio 1960s

Publications and other materials by others relating to experiment research objectives 1953-1990

Reports

Hanford daily reports and transcripts 1952-1953

Savannah River Plant monthly progress reports 1954-1957

Collaborations Series 10. 1952-1995

General Physical Description note: no content

Series Scope and Content Summary

This series includes correspondence, notes, publications, photographs and other materials relating to the multi-institutional collaborations in which Reines participated during the latter part of his career, either as a scientist or spokesperson. Collaborations denote a group of scientists from various institutions working together for a particular scientific objective, and in some cases may be centered around a particular research facility or site.

Arrangement

This series is arranged into the following 6 subseries: Subseries 10.1.

Case-Witwatersrand-Irvine (CWI), 1952-1989. 6.7 linear ft. Subseries 10.2.

Irvine-Michigan-Brookhaven (IMB), 1960-1995. 7.6 linear ft. Subseries 10.3. Deep Underwater Muon and Neutrino Detector (DUMAND), 1957-1994. 4.2 linear ft. Subseries 10.4. Los Alamos Meson Physics Facility (LAMPF), 1968-1990. 0.6 linear ft. Subseries 10.5. Gamma Ray and Neutrino Detector (GRANDE), 1986-1991. 0.8 linear ft. Subseries 10.6. Sudbury Neutrino Observatory (SNO), 1984-1994. 0.3 linear ft.

Restrictions

This series includes audio and video materials. Access to originals is restricted; researchers must request viewing/listening copies of restricted materials.

Processing note

Researchers will find information about experiments conducted by Reines and his colleagues and students throughout his career in Series 9. Experiments. Additional materials relating to multi-institutional collaborations in which Reines was involved can be found in Series 6. Correspondence file, Series 7. Publications and writings, and Series 8. Data books.

Subseries 10.1. Case-Witwatersrand-Irvine (CWI) 1952-1989**Scope and Contents note**

This subseries includes correspondence, telex printouts, proposals, publications, lectures and transparencies, data files, photographs and slides, notes and notebooks, technical drawings, and reports relating to Reines' first major collaboration--initiated while he was at Case Institute of Technology and continued after his move to UCI--with the University of Witwatersrand near Johannesburg, South Africa. The purpose of the collaboration was to pursue underground detection of neutrinos produced by cosmic ray interactions in the atmosphere using a large-area liquid scintillation detector located in a gold mine approximately 2 miles below the Earth's surface near Johannesburg on the property of the East Rand Proprietary Mine (ERPM). This collaboration resulted in 1965 in the first detection of neutrinos produced in the atmosphere and was the clear antecedent of several later massive underground experiments that dramatically increased scientific knowledge about the properties of neutrinos.

Arrangement note

This subseries is arranged chronologically within broad topical groupings of material.

box 60, folder 1-7

Correspondence 1962-1978**Scope and Contents note**

File includes correspondence relating to the possible location of Reines' underground neutrino detection experiments in the Kolar Gold Fields in India, as well as correspondence and clippings relating to the US Atomic Energy Commission's reluctance to fund research in South Africa

box 60, folder 8-9
box 60, folder 10,
box 61, folder 1-5
box FB-50,
folder 1
box 61, folder 6-9
box FB-50,
folder 2-3
box FB-50,
folder 1
box AV-002,
cassette MS-F07-A006

Data, analysis 1965-1977**Data, events 1966-1971****Oversize material circa 1968****Data, notebooks and accompanying documents 1964-circa 1980****Oversize data notebook photocopies 1964-1966****Oversize material circa 1968****Discussion of external water shield measurements (Kropp, Gurr, and Reines), audiocassette circa 1965****Conditions Governing Access note**

Original audiocassette restricted, use copy must be used by researchers.

box 61,
folder 10-14

Dissemination 1962-1989**Scope and Contents note**

File includes drafts, clippings, transparencies and other illustrations, articles, and handwritten notes.

box FB-50,
folder 1

Oversize matted watercolors illustrating underground neutrino detector concept circa 1962-circa 1965

General Physical Description note: 4 items.

box 61,
folder 15-17

East Rand Proprietary Mine (ERPM; Johannesburg, South Africa), brochures, maps, technical pamphlets, and photographs and other materials from a dedication ceremony for a plaque commemorating the discovery of natural neutrinos 1952-1967**Oversize maps 1952, 1966**

box FB-50,
folder 1,
folder XOS 1
box 61, folder 18

Engineering and equipment files 1962-1967

| | |
|--|---|
| <p>box FB-32, folder 8, box FB-50, folder 1 box FB-32, folder 8 box 62, folder 1a box 127, folder 5, box 62, folder 1 box FB-32, folder 8 box 62, folder 2 box 62, folder 3, box 63, folder 1-10</p> | <p>Oversize material 1963-1967</p> <p>Plans for solar detector 1964</p> <p>Financial records, includes budgets, correspondence, and invoices 1966-1979 Ephemera relating to South Africa circa 1963-1971</p> <p>Oversize material circa 1966-1971</p> <p>Neutrino group meeting minutes 1964-1969 Notebook I-XII 1963-1967</p> <p>Scope and Contents note File includes primarily correspondence, data and analysis, notes, and daily reports from ERPM. Notebook II is primarily dictaphone transcriptions of daily reports.</p> |
| <p>box FB-32, folder 8, box FB-50, folder 1 box 63, folder 11-14</p> | <p>Oversize material 1965-1966</p> <p>Notebooks, unnumbered 1968</p> <p>Scope and Contents note File is a continuation of numbered notebooks.</p> |
| <p>box 63, folder 15, box 64, box 65, folder 1-7</p> | <p>Notebooks, telex chronological file 1963-1971</p> <p>Scope and Contents note File contains telex printouts of almost daily discussions between various members of the collaboration team spread out between Ohio, California, and South Africa. Significant gaps for which no telex printouts exist include Aug. 1967-Feb. 1968.</p> |
| <p>box 65, folder 8</p> | <p>Notes, uncategorized, primarily handwritten by Reines on a variety of topics 1961-1982</p> |
| <p>box 13, folder 3 box 65, folder 9-10 box 65, folder 11, box 66, folder 1-2 box FB-50, folder 1 box 66, folder 3 box 66, folder 4 box 66, folder 5-6</p> | <p>Notes on baryon stability 1976-1981 Photograph album created for Reines by Gus Hruschka 1967</p> <p>Photographs and slides 1963-1970</p> <p>Oversize photographs 1963-1970</p> <p>Proposals 1967-1972 "Dr. Reines' cosmic ray neutrino experiment" 1963-1971 Publications by others on topics related to CWI research goals 1963-circa 1964</p> <p>Scope and Contents note File includes information on Kolar Gold Field (India) underground experiments.</p> |

Subseries 10.2. Irvine-Michigan-Brookhaven (IMB) 1960-1995**Scope and Contents note**

This subseries includes correspondence, research memoranda, proposals, publications, lectures and transparencies, photographs, notes and notebooks, and operations manuals relating to the Irvine-Michigan-Brookhaven collaboration, which grew out of Reines' growing interest in baryon number violation in the 1970s following the advent of the Grand Unified Theories. This interest led to the establishment of a very large collaborative effort to search for proton decay. The site for this experiment was an 8,000-metric-ton water Čerenkov detector in a salt mine near Cleveland, Ohio, a location at which Reines and colleagues from Case had conducted experiments during the 1960s. By the time the collaborative work was completed in 1991 this effort had set the lowest limits on proton lifetime at the time, obtained preliminary evidence for neutrino oscillation, and made the serendipitous discovery of a neutrino burst from Supernova 1987A. Observations from the IMB detector helped to confirm the role of neutrinos in stellar collapse and set in motion the field of neutrino astronomy.

Arrangement note

This subseries is arranged chronologically within broad topical groupings of material.

box 67, folder 1-8

Agreements between University of California and University of Michigan and with IMB contractors, includes correspondence 1975-1986**Conditions Governing Access note**

Access to UC personnel material in this file (folder 2, entire folder) is restricted until 2037-01-01.

box 67, folder 9,
box 68, folder 1-8
box 68, folder 9
box FB-50,
folder 4
box 68, folder 10
box 68,
folder 11-23
box FB-50,
folder 4
box 68, folder 24,
box 69,
folder 1-11
box 69, folder 12,
box 70, box 71,
folder 1-6

Collaboration meeting materials, includes minutes, exhibits, and discussion notes 1979-1993**Construction documents 1974-1982****Oversize materials 1974****Consultant report on civil engineering aspects of detector design 1980
Correspondence 1960-1994****Oversize materials 1979****Data and analysis, includes plot graphs, deleted scan sheets, and tape logs 1974-1991****Dissemination 1978-1995****Scope and Contents note**

File includes drafts, clippings, transparencies and other illustrations, articles, theses and dissertations, and handwritten notes.

Oversize materials 1982

box FB-32,
folder 8,
box FB-50,
folder 4
box AV-002,
cassette MS-F07-A003

DOSCO phone conversation with Reines and others, audiocassettes 1979**Conditions Governing Access note**

Original audiocassette restricted, use copy must be used by researchers.

box AV-004,
reel MS-F07-A003MP
box 71, folder 7-8

Preservation copy, reel-to-reel, reproduction date: 1999 1999**Financial records, includes budget proposals, financial reports, correspondence, and invoices 1975-1988**

| | |
|---|---|
| box 71, folder 9, box 72, folder 1-16 box FB-32, folder 8 box 127, folder 6 box 72, folder 17-18 box 72, folder 19-21 box 73, folder 1-16 box 73, folder 17 box 73, folder 18-22 box FB-50, folder 4 box FB-51 box 127, folder 8 box 73, folder 23-25 box 74, folder 1-3 box 74, folder 4-8 | <p>Memoranda regarding research development and policies 1979-1991</p> <p>Oversize materials 1985</p> <p>Message to Larry Sulak, drafts 1987</p> <p>Mine personnel information and safety training materials 1980-1989</p> <p>Notes, uncategorized, primarily handwritten by Reines on a variety of topics 1960-1990</p> <p>Notebooks on baryon (in)stability and proton decay 1978-1980</p> <p>Personnel files, collaborator lists 1980-1990</p> <p>Photographs, slides, and other visual materials circa 1979-circa 1985</p> <p>Oversize photographs circa 1985</p> <p>Photomultiplier tube (PMT) cover circa 1984</p> <p>Proposal for a Nucleon Decay Detector 1979</p> <p>Proposals for the Department of Energy 1979-1981</p> <p>Proton decay, detector file and manual 1979-1991</p> <p>Publications and other materials by others relating to proton decay and IMB research objectives 1970-1993</p> |
|---|---|

Subseries 10.3. Deep Underwater Muon and Neutrino Detector (DUMAND) 1957-1994

Scope and Contents note

This subseries includes correspondence, research memoranda, proposals, publications, lectures and transparencies, photographs, notes and notebooks, and operations manuals relating to a collaboration involving UCI, University of Hawaii and many other academic institutions. The DUMAND Collaboration designed and tested a series of prototype high-energy neutrino astronomy detectors for the open ocean floor in the Hawaiian Islands that were primarily intended to utilize the ocean to eliminate as much as possible cosmic ray interference in the study of the neutrino. Reines was instrumental in providing long-term guidance for the endeavor and shepherding it through long years of initial groping to sort out the research potential. The DUMAND collaboration was guided by a steering committee, of which Reines was a member, which solicited and reviewed research proposals from collaborating institutions and hosted numerous workshops on issues and instrumentation relating to the collaboration's research goals.

Arrangement note

This subseries is arranged chronologically within broad topical groupings of material.

| | |
|---|---|
| box 74, folder 9-12 box 74, folder 13, box 75, folder 1-6 box FB-50, folder 4 box 127, folder 7 | <p>Collaboration and steering committee meeting files, includes agendas and minutes 1975-1988</p> <p>Correspondence and memoranda 1966-1994</p> <p>Oversize material 1986</p> <p>Deep Underwater Muon and Nutrino Detection, copy of transparencies and report 1979</p> <p>Dissemination 1974-1994</p> |
| box 75, folder 7, box 76, folder 1-15 | <p>Scope and Contents note</p> <p>File includes reports, articles, proceedings, news clippings, press releases, and presentation transparencies.</p> |

| | |
|--|---|
| <p>box FB-32, folder 8 box 127, folder 10-11 box AV-005, cassette MS-F07-V005</p> | <p>DUMAND array validation schematics circa 1981</p> <p>DUMAND master copy of funding proposal 1975</p> <p>Engineering discussion for DUMAND components, SRP move, and neutral current components, VHS videocassette 1986</p> <p>Conditions Governing Access note</p> <p>Original videocassette restricted, use copy must be used by researchers.</p> |
| <p>box 76, folder 16 box FB-51</p> | <p>Financial files, includes primarily UCI budget materials 1976-1983</p> <p>Integrated circuit, design of which was a major UCI contribution to DUMAND circa 1978</p> |
| <p>box 76, folder 17</p> | <p>Learned, John, file maintained by Reines includes correspondence, personnel files, and draft writings 1976-1977</p> <p>Conditions Governing Access note</p> <p>Access to UC personnel material in this file (entire folder) is restricted until 2028-01-01.</p> |
| <p>box 77, folder 1 box 77, folder 2 box 77, folder 3-4</p> | <p>Newsletters 1974-1985</p> <p>Notebook, "Project description," extensively annotated by Reines 1981-1982</p> <p>Notes, uncategorized, primarily handwritten by Reines on a variety of topics 1970-1984</p> |
| <p>box 77, folder 5 box 127, folder 9 box 77, folder 6, box 78, folder 1 box 78, folder 2-6, box 127, folder 12 box 78, folder 7-8 box FB-32, folder 8 box AV-005, cassette MS-F07-V003, MS-F07-V004</p> | <p>Photographs circa 1975-circa 1985</p> <p>Proposal for a HEXAGONAL ARRAY, by John Learned 1986</p> <p>Proposals for DUMAND funding and research projects 1973-1988</p> <p>Publications by others relating to DUMAND research objectives 1957-1988</p> <p>RUWS (Remote Unmanned Work System) files 1968-1976</p> <p>Oversize material 1976</p> <p>Short Prototype String (SPS) deployment at sea 1987</p> <p>General Physical Description note: 2 VHS videocassettes.</p> <p>Conditions Governing Access note</p> <p>Original videocassette restricted, use copy must be used by researchers.</p> |
| <p>box 78, folder 9-14 box 78, folder 15</p> | <p>Workshop files, includes correspondence, planning documents, photographs, and presentations 1975-1984</p> <p>DUMAND symposium, Khabarovsk, USSR 1978-1979</p> |

Subseries 10.4. Los Alamos Meson Physics Facility (LAMPF) 1968-1990

Scope and Contents note

This subseries includes advisory committee materials, budget information proposals, notes, slides, and correspondence relating to a collaboration that proposed and constructed a small experimental facility at Los Alamos National Laboratory in order to facilitate intermediate energy physics research. Reines was involved in this project in its preliminary stages, but the impetus for this project came from his physics group, primarily Henry Chen. Reines' physics group was particularly involved in conducting neutrino electron elastic scattering experiments at LAMPF.

Arrangement note

This subseries is arranged chronologically within broad topical groupings of material.

box 78, folder 16
box 78, folder 17

Advisory committee and users group meeting materials 1971-1984

Budget and financial materials, primarily concerns UCI projects at LAMPF 1974-1980

| | |
|--|---|
| box 78, folder 18 | Correspondence 1971-circa 1990 |
| box 78, folder 19 | Dissemination 1976-1982 |
| | Scope and Contents note |
| | File includes press releases and transparencies. |
| box 78, folder 20 | Hunsaker Building (Santa Ana, CA) lease for UCI LAMPF team, correspondence 1978-1981 |
| box 78, folder 21 | National Underground Physics Laboratory advisory committee, site evaluation and correspondence 1981-1982 |
| box 78, folder 22 | Notes, uncategorized, primarily handwritten by Reines on a variety of topics 1970-1974 |
| box 78, folder 23, box 79, folder 1-3 | Proposal applications for UCI project funding 1971-1979 |
| box 79, folder 4 | Proposal drafts and preliminary information 1968-1979 |
| box 79, folder 5 | Slides, cosmic ray muon tracks E148 circa 1970-1979 |

Subseries 10.5. Gamma Ray and Neutrino Detector (GRANDE) 1986-1991**Scope and Contents note**

This subseries includes correspondence, meeting materials, publications and transparencies, proposals, progress reports, and slides documenting a collaborative effort arising out of Reines' UC Irvine physics group to situate a detector to study solar neutrinos in an Arkansas lake. The GRANDE proposal arose from Reines' frustration with the slow rate of progress being made with DUMAND and owes much of its origins to work done in both the IMB and DUMAND collaborations. GRANDE was never actualized and the majority of the materials in this subseries document the conceptualization and planning effort, including detailed responses to issues raised by reviewers of GRANDE funding proposals.

Arrangement note

This subseries is arranged chronologically within broad topical groupings of material.

| | |
|--|--|
| box 79, folder 6-12 | Collaboration meeting materials 1987-1989 |
| box 79, folder 13 | Correspondence 1986-1991 |
| box 79, folder 14 | Dissemination 1987-1991 |
| | Scope and Contents note |
| | File includes articles and drafts, press releases, and transparencies. |
| box 79, folder 15 | Engineering consultant materials 1989 |
| folder XOS 1 | Oversize materials circa 1986 |
| box 79, folder 16-17 | Memoranda regarding research development and policies 1987-1990 |
| box 79, folder 18, box 80, folder 1 | Proposals and progress reports 1987-1991 |
| box 80, folder 2 | Research materials from related projects, gamma ray astrophysics meeting in Hawaii 1988 |
| box 80, folder 3 | Slides 1988 |

Subseries 10.6. Sudbury Neutrino Observatory (SNO) 1984-1994**Scope and Contents note**

This subseries includes correspondence, meeting materials, publications, clippings, presentations, proposals, and financial materials documenting a proposed collaboration organized by Reines' UC Irvine colleague Henry Chen to construct a heavy water neutrino detector deep underground in a nickel mine near Sudbury, Ontario. The detector would act as a solar neutrino observatory that would facilitate the investigation of astrophysical processes. Reines reluctantly agreed to act temporarily as principal investigator following Chen's untimely death in 1987, but within a year reached the decision to withdraw UCI from the collaboration. The bulk of the material in this subseries documents preliminary development of the collaboration, site selection, and organization of the startup of the research.

Arrangement note

This subseries is arranged chronologically within broad topical groupings of material.

box 80, folder 4
box 80, folder 5

Correspondence 1987-1989**Dissemination 1986-1994****Scope and Contents note**

Files include articles, news clippings, and presentations.

box 80, folder 6
box 80, folder 7
box 80,
folder 8-10
box 80, folder 11

Financial records and related correspondence and notes 1984-1990**Meeting minutes 1988****Proposals 1985-1989****Publications by others related to solar neutrinos 1993****Funding agency files Series 11. 1959-1994**

General Physical Description note: no content

Series Scope and Content Summary

This series contains correspondence, funding applications and proposals, agreements, project status reports, trip reports, notes, and budget and financial materials relating to funding for experiments and collaborations undertaken by Reines and his neutrino group over a period of about 30 years. Funding for Reines' research came primarily from United States government agencies such as the Atomic Energy Commission (AEC), Department of Energy (DOE), National Science Foundation (NSF), Energy Research and Development Administration (ERDA), and Office of Naval Research.

Arrangement

This series is arranged chronologically.

Processing note

Additional information relating to funding from these and other agencies can be found in Series 6. Correspondence file, Series 9. Experiments, and Series 10. Collaborations.

box 80, folder 12
box 80, folder 13
box 80, folder 14
box 80, folder 15
box 80, folder 16
box 80, folder 17
box 80,
folder 18-19
box 80, folder 20
box 80, folder 21
box 80,
folder 22-23
box 80, folder 24
box 81, folder 1

Undated materials circa 1959-circa 1994**1959-1960 1959-1960****1961-1962 1961-1962****1963 1963****1964 1964****1965 1965****1966 1966****AEC basic contract and modifications, AT (11-1) GEN 10 circa 1966-circa 1972****1967 1967****1968 1968****1969 1969****1970 1970**

| | |
|-------------------------|----------------------------|
| box 81, folder 2 | 1971 1971 |
| box 81, folder 3 | 1972-1973 1972-1973 |
| box 81, folder 4 | 1974 1974 |
| box 81, folder 5 | 1975 1975 |
| box 81, folder 6-7 | 1976 1976 |
| box 81, folder 8-9 | 1977 1977 |
| box 81, folder 10-11 | 1978 1978 |
| box 81, folder 12-13 | 1979 1979 |
| box 81, folder 14 | 1980 1980 |
| box 81, folder 15-16 | 1981 1981 |
| box 82, folder 1-2 | 1982 1982 |
| box 82, folder 3-4 | 1983 1983 |
| box 82, folder 5-6 | 1984 1984 |
| box 82, folder 7-8 | 1985 1985 |
| box 82, folder 9-10 | 1986 1986 |
| box 82, folder 11-12 | 1987 1987 |
| box 82, folder 13 | 1988-1989 1988-1989 |
| box 82, folder 14 | 1990 1990 |
| box 82, folder 15 | 1991 1991 |
| box 82, folder 16 | 1992 1992 |
| box 82, folder 17 | 1994 1994 |

Personal and biographical Series 12. 1907-2001 and undated 1940-1999

Series Scope and Content Summary

This series consists of documents and books of personal or biographical significance to Reines. Included in the series are government documents, poetry, books, biographical sources, personal correspondence (including sympathy correspondence sent to Sylvia Reines upon Frederick Reines' death), personal notes, as well as material annotated by Reines' son Robert that provide evidence of the personal life and interests of Frederick Reines.

box 138, folder 7
box 128, folder 9
box 5, folder 54
box 134, box 136,
box 135

"A Limerick for Fred," by neighbors of Reines 1996

Biographical clippings 1966-1998

Biographical dictionaries, correspondence, and citations 1975-1997

Books

Annual catalog (Hoboken, NJ: Stevens institute of Technology, 1940).

Allen, James S., *The Neutrino* (Princeton, NJ: Princeton University Press, 1958). 1958

Baker, Bevan B. and Copson, E.T., *The Mathematical Theory of Huygens' Principle* (Oxford: Clarendon Press, 1939).

Barse, Horace H., *Toasts and After-Dinner Stories* (New York: Barse & Hopkins, ca. 1907).

Byerly, William Elwood, *Introduction to the Calculus of Variations*(Cambridge: Harvard University Press, 1933).

General

"From Mother and Father" written on front endpapers.

Chandler, G.H., *Elements of the Infinitesimal Calculus*, 3rd ed., (New York: John Wiley & Sons, 1907). 1907

Cline, David, ed., *Observational Neutrino Astronomy, proceedings of the Workshop on Extra Solar Neutrino Astronomy* (New Jersey: World Scientific, 1988).

- Committee on Aeronautical and Space Sciences, United States Senate, *Soviet Space Programs, 1962-65: Goals and Purposes, Achievements, Plans and International Implications* (Washington, DC: U.S. Government Printing Office, 1966). 1966
- Cowan, Clyde L., *Anatomy of an Experiment: an Account of the Discovery of the Neutrino* (Washington, DC: Smithsonian Institution).
- Doherty, Robert E. and Ernest G. Keller, *Mathematics of Modern Engineering: Vol. I* (New York: John Wiley & Sons, 1936). 1936
- Ekspong, Gosta, ed., *Physics 1991-1995: Nobel Lectures Including Presentation Speeches and Laureates' Biographies* (New Jersey: World Scientific, 1997).
- Fermi, Enrico, *Nuclear Physics: a course given by Enrico Fermi at the University of Chicago* (Chicago: University of Chicago Press, 1950). 1950
- Gamow, George, *The Birth and Death of the Sun: Stellar Evolution and Subatomic Energy* (New York: Penguin Books, 1945).
- Gamow, G. and Critchfield, C.L., *Theory of Atomic Nucleus and Nuclear Energy-Sources* (Oxford: Clarendon Press, 1949).
- Ghiradi, Alfred A., *Radio Physics Course: an Elementary Text Book on Electricity and Radio*, 2nd ed, (New York: Radio & Technical Publishing, 1933). 1933
- Glasgow, R.S., *Principles of Radio Engineering* (New York: McGraw-Hill, 1936). 1936
- Hamamard, Jacques, *An essay on the Psychoogy of Invention in the Mathematical Field* (Princeton NJ: Princeton University Press, 1945; reprint, Dover, 1954). 1954
- Hanson, Norwood Russell, *Patterns of Discovery* (Cambridge: University Press, 1958).
- [Hebrew language book] (Dorchester, Mass.: I. Pollack, 1925).
- Heitler, W., *The Quantum Theory of Radiation*, 3rd ed. (Oxford: Clarendon Press, 1954).
- Holton, Gerald and Elkana, Yehuda, ed., *Albert Einstein Historical and Cultural Perspectives: the Centennial Symposium in Jerusalem* (Princeton, NJ: Princeton University Press, 1982).
- International Science Hall* (Brussels: M. Weissenbruch, 1958).
- Jackson, J.D., *The Physics of Elementary Particles* (Princeton, NJ: Princeton University Press, 1958). 1958
- Martin Jr., Louis A., *Text-book of Mechanics: Vol.II Kinematics and Kinetics* (New York: John Wiley & Sons, 1907). 1907
- Martin Jr., Louis A., *Text-book of Mechanics: Vol.IV Applied statistics* (New York: John Wiley & Sons, 1912). 1912
- Martin Jr., Louis A., *Text-book of Mechanics: Vol.VI Thermodynamics* (New York: John Wiley & Sons, 1916). 1916
- Ne'eman, Yuval, ed., *To Fulfill a Vision: Jerusalem Einstein Centennial Symposium of Gauge Theories and Unification of Physical Forces* (Reading, Mass.: Addison-Wesley, 1981). 1981
- Pauli, W., *Theory of Relativity* (New York: Pergamon Press, 1958).
- Riegel, Emile Raymond, *Industrial Chemistry: an Elementary Reader for the Student and General Reader*, 3rd ed. (New York: Reinhold Publishing, 1937). 1937
- Reines, Frederick, *The Neutrino: from Poltergeist to Particle* (Sweden: Les Prix Nobel 1995; reprint).
- Rojansky, Vladimir, *Introductory Quantum Mechanics* (New York: Prentice-Hall, 1938). 1938
- Schiff, Leonard I., *Quantum Mechanics* (New York: McGraw-Hill, 1949). 1949
- Smyth, Henry De Wolf, *Atomic Energy for Military Purposes: the Official Report on the Development of the Atomic Bomb under the Auspices of the United States Government, 1940-1945* (Princeton, NJ: Princeton University Press, 1945).

General

"Sept '45, F. Reines, Los Alamos" written on front endpaper.

- box 128, folder 1
- United States Atomic Energy Commission, *In the matter of J. Robert Oppenheimer: Texts of Principal Documents and Letters of Personnel Security Board, General Manager, Commissioners* (Washington, DC: U.S. Government Printing Office, 1954).**
- University of California, Irvine, *General Catalog, 1979-80* (Irvine, CA: University of California, Irvine, 1979). 1979-1980**
- Wilson, W.A. and J.I. Tracey, *Analytic Geometry*, rev. ed. (Boston: D.C. Heath, 1925). 1925**
- Wood, Robert W., *Physical Optics*, 3rd ed. (New York: Macmillan,1934).**
- Brief information and photo packets for the dedication of Reines Hall, the Nobel Prize, and historic pictures of Reines 1998**
- Scope and Content Summary**
- Includes letter from Gary Chanan, Chair of the Department of Physics and Astronomy, regarding memorial held in Reines' honor.
- box 6, folder 1
- box 128, folder 4
- box 128, folder 2
- box 1, folder 35
- box 128, folder 3
- box 5, folder 55,
- box 128, folder 7
- box 1, folder 36
- box 130,
- folder 1-2,
- box 129,
- folder 1-4
- box 128, folder 8
- box 1, folder 37,
- box 130, folder 3
- box 130, folder 4
- box 130, folder 5
- box 130, folder 6
- box 130, folder 7
- box 130,
- folder 10-11,
- box 5, folder 56
- box 130, folder 8
- Certificates for travel across the equator and to Israel 1958-1965**
- Correspondence about and from family**
- Travel diary 1961**
- Family records relating to Reines' parents 1956-1958**
- "Fred Things," with annotations by his son Robert undated**
- Membership cards and IDs 1963-1980**
- MENSA IQ test and notes undated**
- Sympathy correspondence sent to Mrs. Reines 1998**
- Obituaries 1998**
- Passports 1958-1976**
- Personal notes kept in pocket undated**
- Reines Vista, pamphlet 2001**
- Selective Service correspondence and cards 1940-1947**
- Visiting Fred Reines (in the hospital) 1995 October 17**
- Vitae, lists of publications, and security questionnaires 1969-1998**
- Who's Who entries 1996-1997**
- Audio and visual material Series 13. 1955-2000 and undated**
- Series Scope and Content Summary**
- This series consists of audiorecordings, videorecordings, photographic materials, and other visual materials primarily documenting Reines' professional career, including award ceremonies, lectures, conferences, and research project documentation. Included also are personal photographs, slides, scrapbooks, and audio and video recordings of Reines' travel and family life.
- Audio**
- Conferences and news stories 1966-1982**
- Access**
- Access to archival originals is restricted; researchers must use listening copy.
- Physical Characteristics and Technical Requirements**
- Archival originals consist of 24 sound cassettes (1082 mins.): analog. Duplicating masters and listening copies consist of 24 sound discs(CD-ROM)(1082 min.): digital.
- Press conference, Washington, DC (UCI-T1) 30 April 1980**
-

box 161,
cassette T001-A

Archival originals

Physical Description: 2 audio cassettes (122 minutes).

box 168,
disk T001-M

Duplicating masters

Physical Description: 3 compact discs (CDs), 122 minutes.

box 169,
disk T001-U

Use copies

Physical Description: 3 compact discs (CDs), 122 minutes.

Frederick Reines interviews (UCI-T2) 1974, 1975

box 161,
cassette T002-A

Archival originals

Physical Description: 2 audio cassettes (114 minutes).

box 168,
disk T002-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 114 minutes.

box 169,
disk T002-U

Use copies

Physical Description: 2 compact discs (CDs), 114 minutes.

WITS meeting (UCI-T3) 2 December 1967

box 161,
cassette T003-A

Archival originals

Physical Description: 3 audio cassettes (183 minutes).

box 168,
disk T003-M

Duplicating masters

Physical Description: 3 compact discs (CDs), 183 minutes.

box 169,
disk T003-U

Use copies

Physical Description: 3 compact discs (CDs), 183 minutes.

F. Reines, UC Irvine, Dumand (UCI-T4) undated

box 161,
cassette T004-A

Archival original

Physical Description: 1 audio cassette (6 minutes).

box 168,
disk T004-M

Duplicating master

Physical Description: 1 compact disc (CD), 6 minutes.

box 169,
disk T004-U

Use copy

Physical Description: 1 compact disc (CD), 6 minutes.

Physics Club, part I and II (UCI-T5) 4 December 1966

box 161,
cassette T005-A

Archival original

Physical Description: 1 audio cassette (61 minutes).

box 168,
disk T005-M

Duplicating master

Physical Description: 1 compact disc (CD), 61 minutes.

box 169,
disk T005-U

Use copy

Physical Description: 1 compact disc (CD), 61 minutes.

Symposium on the Transfer of Technology from Wartime Los Alamos to Peacetime Research, tape 1 (UCI-T6.1) May 1987

box 161,
cassette T006.1-A

Archival original

Physical Description: 1 audio cassette (60 minutes).

box 168,
disk T006.1-M

Duplicating master

Physical Description: 1 compact disc (CD), 60 minutes.

box 169,
disk T006.1-U

Use copy

Physical Description: 1 compact disc (CD), 60 minutes.

Symposium on the Transfer of Technology from Wartime Los Alamos to Peacetime Research, tape 1 (UCI-T6.2) May 1987

box 161,
cassette T006.2-A

Archival original

Physical Description: 1 audio cassette (63 minutes).

box 168,
disk T006.2-M

Duplicating master

Physical Description: 1 compact disc (CD), 63 minutes.

box 169,
disk T006.2-U

Use copy

Physical Description: 1 compact disc (CD), 63 minutes.

Symposium on the Transfer of Technology from Wartime Los Alamos to Peacetime Research, tape 1 (UCI-T6.3) May 1987

box 161,
cassette T006.3-A

Archival original

Physical Description: 1 audio cassette (11 minutes).

box 168,
disk T006.3-M

Duplicating master

Physical Description: 1 compact disc (CD), 11 minutes.

box 169,
disk T006.3-U

Use copy

Physical Description: 1 compact disc (CD), 11 minutes.

Symposium on the Transfer of Technology from Wartime Los Alamos to Peacetime Research, tape 1 (UCI-T6.4) May 1987

box 161,
cassette T006.4-A

Archival original

Physical Description: 1 audio cassette (61 minutes).

box 168,
disk T006.4-M

Duplicating master

Physical Description: 1 compact disc (CD), 61 minutes.

box 169,
disk T006.4-U

Use copy

Physical Description: 1 compact disc (CD), 61 minutes.

Symposium on the Transfer of Technology from Wartime Los Alamos to Peacetime Research, tape 1 (UCI-T6.5) May 1987

box 161,
cassette T006.5-A

Archival original

Physical Description: 1 audio cassette (46 minutes).

box 168,
disk T006.5-M

Duplicating master

Physical Description: 1 compact disc (CD), 46 minutes.

box 169,
disk T006.5-U

Use copy

Physical Description: 1 compact disc (CD), 46 minutes.

Symposium on the Transfer of Technology from Wartime Los Alamos to Peacetime Research, tape 1 (UCI-T6.6) May 1987

box 161,
cassette T006.6-A

Archival original

Physical Description: 1 audio cassette (50 minutes).

box 161,
disk T006.6-M

Duplicating master

Physical Description: 1 compact disc (CD), 50 minutes.

box 161,
disk T006.6-U

Use copy

Physical Description: 1 compact disc (CD), 50 minutes.

Symposium on the Transfer of Technology from Wartime Los Alamos to Peacetime Research, tape 1 (UCI-T6.7) May 1987

box 161,
cassette T006.7-A

Archival original

Physical Description: 1 audio cassette (60 minutes).

box 168,
disk T006.7-M

Duplicating master

Physical Description: 1 compact disc (CD), 60 minutes.

box 169,
disk T006.7-U

Use copy

Physical Description: 1 compact disc (CD), 60 minutes.

Fragments I (UCI-T7) 1969

box 161,
cassette T007-A

Archival original

Physical Description: 1 audio cassette (10 minutes).

box 168,
disk T007-M

Duplicating master

Physical Description: 1 compact disc (CD), 10 minutes.

box 169,
disk T007-U

Use copy

Physical Description: 1 compact disc (CD), 10 minutes.

Fragments II (UCI-T8) 16 July 1972

box 161,
cassette T008-A

Archival original

Physical Description: 1 audio cassette (20 minutes).

box 168,
disk T008-M

Duplicating master

Physical Description: 1 compact disc (CD), 20 minutes.

box 169,
disk T008-U

Use copy

Physical Description: 1 compact disc (CD), 20 minutes.

Neutrino Experiments at a Savannah River Reactor (UCI-T-9) 15 September 1976

box 161,
cassette T009-A

Archival original

Physical Description: 1 audio cassette (70 minutes).

box 170,
disk T009-M

Duplicating master

Physical Description: 1 compact disc (CD), 70 minutes.

box 170,
disk T009-U

Use copy

Physical Description: 1 compact disc (CD), 70 minutes.

F. Reines (UCI-T10) undated

box 161,
cassette T010-A

Archival original

Physical Description: 1 audio cassette (33 minutes).

box 170,
disk T010-M

Duplicating master

Physical Description: 1 compact disc (CD), 33 minutes.

box 168,
disk 001.3-M

Duplicating master

Physical Description: 1 compact disc (CD), 29 minutes.

box 169,
disk 001.3-U

Use copy

Physical Description: 1 compact disc (CD), 29 minutes.

box 162,
reel 002.1-A

The Neutrino: From Poltergeist to Particle (UCI-2.1) undated

Archival original

Physical Description: 1 sound tape reel (36 minutes).

box 168,
disk 002.1-M

Duplicating master

Physical Description: 1 compact disc (CD), 36 minutes.

box 169,
disk 002.1-U

Use copy

Physical Description: 1 compact disc (CD), 36 minutes.

box 163,
reel 002.2-A

The Neutrino: From Poltergeist to Particle (UCI-2.2) undated

Archival original

Physical Description: 1 sound tape reel (37 minutes).

box 168,
disk 002.2-M

Duplicating master

Physical Description: 1 compact disc (CD), 37 minutes.

box 169,
folder 002.2-U

Use copy

Physical Description: 1 compact disc (CD), 37 minutes.

box 163,
reel 002.3-A

The Neutrino: From Poltergeist to Particle (UCI-2.3) undated

Archival original

Physical Description: 1 sound tape reel (6 minutes).

box 168,
disk 002.3-M

Duplicating master

Physical Description: 1 compact disc (CD), 6 minutes.

box 169,
disk 002.3-U

Use copy

Physical Description: 1 compact disc (CD), 6 minutes.

box 163,
reel 003-A

Neutrino Astronomy (UCI-3) undated

Archival original

Physical Description: 1 sound tape reel (70 minutes).

box 168,
disk 003-M

Duplicating master

Physical Description: 1 compact disc (CD), 70 minutes.

box 169,
disk 003-U

Use copy

Physical Description: 1 compact disc (CD), 70 minutes.

box 163,
reel 004-A

Reactor mini conference, UC Irvine (UCI-4) undated

Archival original

Physical Description: 1 sound tape reel (295 minutes).

box 168,
disk 004-M

Duplicating masters

Physical Description: 6 compact discs (CDs), 295 minutes.

box 169,
disk 004-U

Use copies

Physical Description: 6 compact discs (CDs), 295 minutes.

box 164,
reel 005-A

Lepton Symmetry Seminar with Dr. S. Meshkov (UCI-5) undated

Archival original

Physical Description: 1 sound tape reel (61 minutes).

box 168,
disk 005-M

Duplicating master

Physical Description: 1 compact disc (CD), 61 minutes.

box 169,
disk 005-U

Use copy

Physical Description: 1 compact disc (CD), 61 minutes.

box 164,
reel 006-A

Songs by Arthur Roberts (UCI-6) undated

Archival original

Physical Description: 1 sound tape reel (89 minutes).

box 168,
disk 006-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 89 minutes.

box 169,
disk 006-U

Use copies

Physical Description: 2 compact discs (CDs), 89 minutes.

box 164,
reel 007-A

Lecture on Theory of Weak Interactions (UCI-7) undated

Archival original

Physical Description: 1 sound tape reel (86 minutes).

box 168,
disk 007-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 86 minutes.

box 169,
disk 007-U

Use copies

Physical Description: 2 compact discs (CDs), 86 minutes.

box 164,
reel 008-A

Talk on Electron Situation (UCI-8) undated

Archival original

Physical Description: 1 sound tape reel (64 minutes).

box 168,
disk 008-M

Duplicating master

Physical Description: 1 compact disc (CD), 64 minutes.

box 169,
disk 008-U

Use copy

Physical Description: 1 compact disc (CD), 64 minutes.

box 165,
reel 009-A

Neutrino meeting (UCI-9) 13 January 1969

Archival original

Physical Description: 1 sound tape reel (32 minutes).

box 168,
disk 009-M

Duplicating master

Physical Description: 1 compact disc (CD), 32 minutes.

box 169,
disk 009-U

Use copy

Physical Description: 1 compact disc (CD), 32 minutes.

Low Energy Neutrino Interactions (UCI-10) undated

| | |
|--|--|
| box 165, reel 010-A | Archival original Physical Description: 1 sound tape reel (24 minutes). |
| box 168, disk 010-M | Duplicating master Physical Description: 1 compact disc (CD), 24 minutes. |
| box 169, disk 010-U | Use copy Physical Description: 1 compact disc (CD), 24 minutes. |
| Fred Reines, Grandma, and Lisa visit to Brighton (UCI-11.1) undated | |
| box 165, reel 011.1-A | Archival original Physical Description: 1 sound tape reel (39 minutes). |
| box 168, disk 011.1-M | Duplicating master Physical Description: 1 compact disc (CD), 39 minutes. |
| box 169, disk 011.1-U | Use copy Physical Description: 1 compact disc (CD), 39 minutes. |
| J.R. Oppenheimer APS meeting, New York (UCI-11.2) undated | |
| box 165, reel 011.2-A | Archival original Physical Description: 1 sound tape reel (44 minutes). |
| box 168, disk 011.2-M | Duplicating master Physical Description: 1 compact disc (CD), 44 minutes. |
| box 169, disk 011.2-U | Use copy Physical Description: 1 compact disc (CD), 44 minutes. |
| A lecture by F. Reines (UCI-11.3) circa 1960 | |
| box 165, reel 011.3-A | Archival original Physical Description: 1 sound tape reel (59 minutes). |
| box 168, disk 011.3-M | Duplicating masters Physical Description: 2 compact discs (CDs), 59 minutes. |
| box 169, disk 011.3-U | Use copies Physical Description: 2 compact discs (CDs), 59 minutes. |
| Physical Sciences dedication, Dr. Haworth (UCI-12) undated | |
| box 165, reel 012-A | Archival original Physical Description: 1 sound tape reel (49 minutes). |
| box 168, disk 012-M | Duplicating master Physical Description: 1 compact disc (CD), 49 minutes. |
| box 169, disk 012-U | Use copy Physical Description: 1 compact disc (CD), 49 minutes. |
| Lecture 3 and 4, Rainbows & Things (UCI-13) undated | |
| box 166, reel 013-A | Archival original Physical Description: 1 sound tape reel (243 minutes). |
| box 168, disk 013-M | Duplicating masters Physical Description: 4 compact discs (CDs), 243 minutes. |

box 169,
disk 013-U

Use copies

Physical Description: 4 compact discs (CDs), 243 minutes.

box 166,
reel 014-A

Lecture 5, Rainbows & Things (UCI-14) undated

Archival original

Physical Description: 1 sound tape reel (138 minutes).

box 168,
disk 014-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 138 minutes.

box 169,
disk 014-U

Use copies

Physical Description: 2 compact discs (CDs), 138 minutes.

box 166,
reel 015-A

Lecture 6, Rainbows & Things (UCI-15) undated

Archival original

Physical Description: 1 sound tape reel (136 minutes).

box 168,
disk 015-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 136 minutes.

box 169,
disk 015-U

Use copies

Physical Description: 2 compact discs (CDs), 136 minutes.

box 166,
reel 016-A

Lecture 10, Rainbows & Things (UCI-16) undated

Archival original

Physical Description: 1 sound tape reel (155 minutes).

box 168,
disk 016-M

Duplicating masters

Physical Description: 3 compact discs (CDs), 155 minutes.

box 169,
disk 016-U

Use copies

Physical Description: 3 compact discs (CDs), 155 minutes.

box 166,
reel 017-A

Lecture 7, Rainbows & Things (UCI-17) undated

Archival original

Physical Description: 1 sound tape reel (129 minutes).

box 168,
disk 017-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 129 minutes.

box 169,
disk 017-U

Use copies

Physical Description: 2 compact discs (CDs), 129 minutes.

box 166,
reel 018-A

Lecture 8, Rainbows & Things (UCI-18) undated

Archival original

Physical Description: 1 sound tape reel (134 minutes).

box 168,
disk 018-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 134 minutes.

box 169,
disk 018-U

Use copies

Physical Description: 2 compact discs (CDs), 134 minutes.

Physical Sciences reception and dance (UCI-19) October 1969

box 167,
reel 019-A

Archival original

Physical Description: 1 sound tape reel (93 minutes).

box 168,
disk 019-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 93 minutes.

box 169,
disk 019-U

Use copies

Physical Description: 2 compact discs (CDs), 93 minutes.

box 167,
reel 020-A

Social evening, graduate students (UCI-20) August 1963

Archival original

Physical Description: 1 sound tape reel (47 minutes).

box 168,
disk 020-M

Duplicating master

Physical Description: 1 compact disc (CD), 47 minutes.

box 169,
disk 020-U

Use copy

Physical Description: 1 compact disc (CD), 47 minutes.

box 167,
reel 021-A

Songs from Africa recorded from A.A. Hruschka (UCI-21) 6 October 1963

Archival original

Physical Description: 1 sound tape reel (92 minutes).

box 168,
disk 021-M

Duplicating masters

Physical Description: 2 compact discs (CDs), 92 minutes.

box 169,
disk 021-U

Use copies

Physical Description: 2 compact discs (CDs), 92 minutes.

box 158, folder 5

Search for Neutrino, notes transcribed from tape recordings 1953

Personal sound recordings undated

Scope and Content Summary

This file consists of audio recordings belonging to Reines, including music recorded from the radio, a recording of "The Weinberg theory of weak interactions" by Dr. S.Y. Lee, and a French language recording.

box 161,
cassette 022A-028A

Archival originals sound cassettes

Access

Access to archival originals is restricted; researchers must use listening copy.

Physical Characteristics and Technical Requirements

5 audio cassettes.

Visual

Photographs

Photographs of personal life

box 131, folder 7
box 131, folder 8
box 131, folder 11

General photographs of personal life

60th birthday party, UC Irvine 1978

Family photographs from Nobel Prize trip 1995

Photographs of Frederick Reines 1918-1996

box 157, folder 1
box 157, folder 1
box 131, folder 12
box 131, folder 13

Baby photograph of Reines at six months of age 1918

Undated portrait of young Reines ca. 1940

Portraits and related photographs 1918-1996

Robert Reines (son) and family in Thailand 1987

Photographs of professional life

Physical Characteristics and Technical Requirements

44 photographs

box 158,
folder 2-4

General photographs of professional life circa 1955-1990

Scope and Content Summary

Includes portraits, group photographs, images of awards and award ceremonies, and some experiment images.

box 130, folder 9
box 131, folder 2
box 131, folder 3
box 131, folder 4

Photographs from trip to Russia 1974

Photographs of "DIFTEL" 1980-1981

Photographs of Distinguished Professor Award 1987

Photographs of early experiments, Los Alamos, Reines and Cowan 1940s-1950s

box 131, folder 5

Photographs of experiments at East Rand Proprietary Mines, South Africa circa 1960-1969

box 131, folder 6
box 131, folder 10
box 131, folder 9

Photographs of neutrino oscillation experiment undated

Photographs of UCI and teaching circa 1970-1979

Photographs of UCI bar magnet

Slides and negatives

box 131, folder 14

Negatives

Physical Characteristics and Technical Requirements

Approximately 50 photographic negatives including personal and professional images of Reines as well as his colleagues, friends, and family.

Slides

box 158, folder 1

Meeting in Japan 1963

Physical Characteristics and Technical Requirements

5 2 X 2 inch color slides

box 158, folder 1

Underground experiment 1981 November

Physical Characteristics and Technical Requirements

16 2 X 2 inch color slides

box 158, folder 1

Meeting in Koshiba, Japan 1987

Physical Characteristics and Technical Requirements

13 2 X 2 inch color slides

box 158, folder 1

Experiment images

Physical Characteristics and Technical Requirements

Approximately 30 2x2" color slides.

box 159, box 160

Personal slides

Scope and Content Summary

Approximately 400 slides, including images of Reines and his family at home and while traveling.

box 160

Lantern slide cover glass

Scope and Content Summary

Two lantern slide cover glass slides, presumably used for an experiment.

Posters

box 143, folder 3

Benjamin Franklin Symposium in Celebration of the Discovery of the Neutrino, The Franklin Institute 1992

| | |
|--------------------------------|---|
| box 143, folder 1 | Frontiers of Science,"The Mysterious Particle," cartoon 1966 |
| box 143, folder 1 | "London Chronicle," lampoon of Isaac Newton's discovery of fluxions undated |
| box 143, folder 3 | The Neutrino: Poltergeist to Particle, Israel 1988 |
| box 143, folder 3 | The Neutrino: from Poltergeist to Particle, Purdue University, Indiana 1990 |
| box 143, folder 3 | Never Stop Asking "Why?": Frederick Reines, A Life in Physics, University of California, Irvine 2000 |
| box 143, folder 3 | Neutrino '88, Boston 1988 |
| box 143, folder 3 | Neutrino '94, Israel 1994 |
| box 143, folder 3 | The Nobel Prize in Physics 1995 |
| box 138, folder 8 | Photograph of the diver in the Proton decay experiment 1983 |
| box 143, folder 3 | The Reines Symposium, Los Alamos National Laboratory 1996 |
| box 143, folder 3 | Texas Symposium on Relativistic Astrophysics, Germany 1994 |
| box 143, folder 3 | UCI Reinesfest, University of California, Irvine 1988 May 5 |
| box 138, folder 9 | Underground neutrino detetction, painting undated |
| | Scrapbooks and albums |
| box 147 | Scrapbook by Reines' mother August 1945 |
| box 148 | New York University commencement scrapbook 1996 |
| box 146 | Scrapbook of travel to France, Switzerland, and visit to CERN 1985 |
| box 146 | Scrapbook of conferences and travel in London, Amsterdam, Dubai, Singapore, Taipei and Tokyo 1982 |
| box 141 | Scrapbook of sabattical travel to Europe 1976-1977 |
| box 142 | Scrapbook of travel to Italy and France 1980-1981 |
| box 144 | Scrapbook of travel to New York, Finland, Russia, and Italy 1991 |
| box 145 | Scrapbook documenting visit to Washington, D.C. for President's National Medal of Science 1985 |
| | Video recordings |
| | Physical Description: Unless otherwise indicated, all videorecordings originated as VHS video cassettes. |
| | Access |
| | Access to archival originals is restricted; researchers must use viewing copy. |
| | "Day One, A-Bomb" 5 March 1989 |
| | Physical Characteristics and Technical Requirements |
| | 1 videocassette (VHS) |
| | Archival original |
| box 174, reel 047A | |
| | DUMAND SPS deployment 1987 |
| | Archival originals |
| box 172, cassette V003-V004 | |
| | DUMAND engineering components discussion 1986 |
| | Archival original |
| box 172, cassette V005 | |
| | Richard Feynman at UCI 1987 April 16 |
| | Physical Characteristics and Technical Requirements |
| | 1 videocassette |
| | Archival original |
| box 174, cassette 054A | |
| | Horizon: Project Poltergeist |
| | Duplicating master |
| box 171, cassette 032M | |
| box 171, cassette 032U | Use copy |
| box 174, cassette 049A | JPL Computer Graphics Lab undated |

| | |
|---|--|
| <p>box 174, cassette 049A</p> | <p>Archival original</p> <p>Los Alamos National Laboratory 50th anniversary Trinity Round Table remarks April 1994</p> |
| <p>box 172, cassette V002</p> | <p>Archival original</p> <p>PBS MacNeil/Lehrer News Hour segment on Nobel Prize, second segment 11 October 1995</p> |
| <p>box 175, cassette 059A</p> | <p>Archival original</p> <p>Modern Physics in America, "Neutrinos from Atmosphere..." lecture at Case Western Reserve University 1987</p> |
| <p>box 172, cassette V001</p> | <p>Archival original</p> <p>NBC Dateline, "Music Enhances Spatial Reasoning" 1994 September 1</p> |
| <p>box 174, cassette 053A</p> | <p>Archival original</p> <p>New Explorers: Catching the Sun 1994 August 30</p> |
| <p>box 174, reel 052A</p> | <p>Archival original</p> <p>"Nobel in the Park" undated</p> |
| <p>box 175, cassette 060A</p> | <p>Archival original</p> <p>"Nobel Meeting of the Minds," Stockholm 1995</p> |
| <p>box 174, cassette 056A</p> | <p>Archival original</p> <p>"Nobel Minds: Challenges of the 21st Century" undated</p> |
| <p>box 174, cassette 048A</p> | <p>Archival original</p> <p>Nobel Prize ceremony and celebration footage</p> <p>Scope and Content Summary</p> <p>Includes video footage of ceremony and various celebrations for recipients of the Nobel Prize Medal.</p> |
| <p>box 173, cassette 037A-044A</p> | <p>Archival originals</p> <p>Nobel Prize, CNN 1995</p> |
| <p>box 173, cassette 036A</p> | <p>Archival original</p> <p>Project Poltergeist, interviews with Hank Sobel, Jonas Schultz, Steve Barwick undated</p> |
| <p>box 171, cassette 031M</p> <p>box 171, cassette 031U</p> | <p>Duplicating master</p> <p>Use copy</p> <p>ReinesFest 1988 May 5</p> <p>Physical Characteristics and Technical Requirements</p> <p>1 videocassette (VHS)</p> |
| <p>box 174, cassette 050A</p> | <p>Archival original</p> <p>ReinesFest daytime program, 1 of 3 1988</p> |
| <p>box 172, cassette V009</p> <p>box 170, cassette V009-1PM</p> | <p>Archival original</p> <p>Preservation master</p> <p>Physical Description: 1 large BetacamSP cassette.</p> |

box 171,
cassette V009-2PM

Preservation master

Physical Description: 1 small BetacamSP cassette.

box 172,
cassette V010

ReinesFest daytime program, 2 of 3

Archival original

box 171,
cassette V010PM

Preservation master

Physical Description: 1 large BetacamSP cassette.

box 173,
cassette V011

ReinesFest daytime program, 3 of 3

Archival original

box 171,
cassette V011-1PM

Preservation master

Physical Description: 1 large BetacamSP cassette.

box 171,
cassette V011-2PM

Preservation master

Physical Description: 1 large BetacamSP cassette.

box 172,
cassette V006

ReinesFest evening program, 1 of 2

Archival original

box 172,
cassette V008

ReinesFest evening program, 2 of 2 1988

Archival original

box 170,
cassette V008PM

Preservation master

Physical Description: 1 large BetacamSP cassette.

box 175,
cassette 061A-063A

Frederick Reines Hall dedication 1997

Archival originals

box 175,
item 058A

Frederick Reines Hall memorial 14 November 1998

Archival original

box 174,
cassette 046A

Frederick Reines on Neutrinos, Channel 4 undated

Archival original

Reines talk to SPS 1987 September 24

Physical Characteristics and Technical Requirements

1 videocassette

box 174,
cassette 051A

Archival original

Super-Kamiokande undated

Physical Characteristics and Technical Requirements

1 videocassette

box 174,
cassette 045A

Archival original

box 175,
cassette 057A

Stevens Institute of Technology commencement and honorary doctorate 1984

Archival original

box 161,
cassette 033A

Sylvia Reines 20 August 1992

Archival original

Physical Description: 1 Hi8 8 mm videocassette.

Ted Will Memorial Lecture, CSU Dominguez Hills 1995

Scope and Content Note

Title of lecture: "The Neutrino: From Poltergeist to Particle."

box 172,
cassette V007
box 170,
cassette V007PM

Archival original

Preservation master

Physical Description: 1 large BetacamSP cassette.

UC Irvine commencement, news clips 1996

Archival original

box 174,
cassette 055A

UC Irvine, memorial lecture (parts 1 and 2) 13 March 1999

Archival originals

box 173,
cassette 034A-035A

Personal film recordings 1949-1950 and undated

Scope and Content Summary

2 film recordings, one described as "1. May, 1949; 2. Summer, 1949; 3. August 1949, Gallup Ceremonial; 4. May 1950, New York & Los Alamos" and an unidentified recording.

box 167,
reel 029A-030A

Archival originals film reels

Physical Characteristics and Technical Requirements

Unknown sound and color characteristics; 8 mm; 2 film reels.

Access

Access to archival originals is restricted; researchers must use viewing copy.

box FB-34,
folder 7

Oversize clippings and newspapers 1968-1987

Mementos and other artifacts Series 14. 1935-1995 and undated

Series Scope and Content Summary

This series consists of a variety of memorabilia and mementos of Reines' personal and professional life. Included in this series are experiment mementos such as geological specimens and science supplies, a sizeable collection of pins from Neutrino conferences and travel to Russia, as well as childhood memorabilia from Reines' membership in the Boy Scouts of America.

box 137

Clothing

Academic regalia

Sailor cap worn by server at Nobel dinner 1995

Sweater, Stevens Institute of Technology 1939

Mementos and artifacts

Boy Scouts of America memorabilia

Scope and Content Summary

Includes Boy Scouts of America patches, pins, membership cards, and Eagle Scout medal earned by Reines.

box 153, carton 2

box 153, carton 4
box 131, folder 15

DC-AC chopper, type 258, coil 6 volts (boxed)

Embossed napkins from President Nixon's Western White, San Clemente, CA where a meeting from the First Solar Neutrino Conference at UC Irvine was held 1972 February

End of a photomultiplier tube from neutrino experiment

Physical Description: One electronic part consisting of red capacitors and burgandy resistors with one red and one black wire, all attached to a brown plastic circular part approximately 6 cm. in diameter.

box 153, carton 4

box 153, carton 1
box 153, carton 1

Lincoln "super-visibility" lens, shade no. 10
Los Alamos National Laboratory commemorative coins, 1943-1993 1993
Physical Description: 4 plastic encased copper coins ; 38 mm. diameter.

box 153, carton 1
box 153
box 153, carton 2
box 153, carton 1
box 154

Neutrino conference pins
Paper polyhedron models, inscribed by Reines
Small welded object, possibly representing a particle
Solar Neutrino Conference, UC Irvine, neutrino matchbox gag gift 1972
Russian and Soviet pin collection

Arrangement

Buttons and pins are not arranged. Each item is sleeved individually (duplicates are housed together in the same sleeve).

Scope and Content Summary

Approximately 90 unique buttons and pins collected by Reines, primarily representing the Soviet Union and Russia.

box 153
box 153, carton 1
box 128, folder 10

Russian and Soviet ship pins with note
Union Hill High School class ring 1935
Unsorted memorabilia

Scope and Content Summary

Includes drafting triangle, French curve ruler, pocket-sized atomic and nuclear properties formula card, pocket-sized atomic testing map, and name tag.

box 153, carton 2

Wallet, leather undated

Scope and Content Summary

Item includes numerous typed labels affixed, indicating what appear to be dates of significance to Reines.

box 153, carton 1

Geological specimens

Gold ore from East Rand Propriety Mine, South Africa, neutrinos first discovered in 1965 1965

box 152

Large salt crystals from Morton Mine, Painsville, Ohio from IBM experiment to set the best limits on the lifetime of the proton 1980-1990

Physical Description: 1 salt crystal : white ; 11 x 8 x 7 cm. 1 salt crystal : cream ; 10 x 9 x 5 cm.

Unprocessed addition 2019 Accession 2019-034 1937-2007

Physical Description: 2 Linear Feet(2 records cartons)

Access

This addition to the collection is not yet processed. It may contain restricted materials. Please contact the Department of Special Collections and Archives in advance to request access.

Series Scope and Content Summary

This accretion contains personal and family correspondence; personal "scrapbook" items such as cards, photographs, and notebooks; small books that were picked up on his travels or gifted by friends; some digital media and audiovisual material; a card catalog; checkbook stubs; a canvas bag; and a small metal tin.

box accn2019-034
001

Box 1 1937-2007

Scope and Content Note

This box contains a small book "The Dot and the Line" (fragile) with a note: "Fred thought this was hilarious"; a small metal can with a note: "Fred must have brought this film can back from the S. Pacific tests"; 3 reels; bundles of personal correspondence, cards, photographs, and other personal items; bundles of scrapbook and letters saved by Sylvia Reines; a Texas/Pascos '92 canvas bag; a paper Reines wrote in high school; a poetry book called Many Long Years Ago with a note: "a favorite of Fred's"; a book McGillicuddy McGotham by Leonard Wibberley, sent to him by Marshall Crouch with a letter.

box accn2019-034
002

Box 2 1937-2007

Scope and Content Note

This box contains bundles of personal correspondence and "scrapbook" items collected by Sylvia Reines; correspondence, clippings, and personal items; family letters, Los Alamos 1940s-1950s; 4 CDs: "The Nobel Prize that almost missed Fred Reines." Harris Mayer. October 2007, recorded by the Los Alamos Historical Society Disk 1 & 2, "For Robert and Lisa: Something about your parents." Harris Mayer. October 2007, and a Netgear CD; a card catalog of books in Frederick and Sylvia Reines' library before having children; The Teaching of Buddha book; Hong Kong Park Hotel book with inscription: Hong Kong, April 1963, "Around the world in 13 days", for Lisa from Daddy"; book of rhymes and songs a friend bought Lisa that Frederick loved (fragile); English-Swahili phrase book and Miners' Companion in English, Afrikaans and Fanakalo - he obtained them in S. Africa when doing experiments there; bundles of correspondence and personal items, including photographs; and 6 small checkbook stubs.

Unprocessed addition 2019 Accession 2019-040 1929-1998

Physical Description: 1.5 Linear Feet(1 records carton and 1 document box)

Access

This addition to the collection is not yet processed. It may contain restricted materials. Please contact the Department of Special Collections and Archives in advance to request access.

Series Scope and Content Summary

This accretion contains personal/family correspondence and personal items such as cards, poems, love letters, and ephemera; letters from when Frederick Reines was in the South Pacific; correspondence from the Atoms for Peace conference in Geneva 1958; financial and household records kept by Sylvia Reines; boy scout memorabilia of Frederick Reines; items from Sylvia Reines' job; personal negatives and photographs; and a bag from a 1994 conference.

box accn2019-040
001

Box 1 1929-1998

Scope and Content Note

This box contains a complimentary bag from a conference (Dark Matter of the Universe Conference, Maryland, 1994); bundle of miscellaneous letters including "singing postcards" (45 rpm record on a postcard), 1956-1970; a bundle of family letters, 1952-1982; bundle of letters and a certificate from when Frederick Reines was in the South Pacific, 1945-1955; correspondence from the Atoms for Peace conference in Geneva, 1958; a bundle of miscellaneous letters, 1934-1953; composition book of financial and household records kept by Sylvia Reines; a bundle of miscellaneous letters and ephemera, 1938-1943; record book from Sylvia Reines, some possibly from work at Cornell Hospital, 1941-1944; address book of Sylvia Reines (one of), 1940s; guestbook with entries from family and friends, and addresses at the back, 1941-1944; boy scout memorabilia, 1929-1935; items from Sylvia Reines' job, 1940-1946, 1982; negatives and photographs, undated; personal items of Frederick and Sylvia Reines, including marriage license, leases, poems, letters, and ephemera, 1939-1950; two letters of condolence (one including a thread of family history), 1998.

box accn2019-040
002

Box 2 1929-1998

Scope and Content Note

This box contains love letters between Frederick and Sylvia Reines in the box Sylvia Reines kept them in.