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Guide to the Eugene Parker Papers 1948-2018



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Descriptive Summary

Identifier ICU.SPCL.PARKERE

Title Parker, Eugene. Papers

Date 1948-2018

Size 12.5 linear feet (18 boxes)

Repository Hanna Holborn Gray Special Collections Research Center
University of Chicago Library
1100 East 57th Street
Chicago, Illinois 60637 U.S.A.

Abstract Eugene Parker was an astrophysicist and University of Chicago professor best known for predicting the existence of solar wind. In addition to heliophysics, Parker also studied cosmic rays and magnetic fields. The collection includes Parker's email correspondence; scientific and personal photographs; reprints of Parker's scientific publications from 1952 to 2016; lecture notes and overhead projector slides from Parker's courses; materials related to astrophysicist Subrahmanyan Chandrasekhar; scientific publications written by others; and Parker's awards and diplomas. Materials date between 1948 and 2018, with the bulk of material dating between 1952 and 2011.

Information on Use

Access

This collection is open for research with the exception of material in Series X. This series contains Parker's letters of recommendation, which are restricted for 80 years from the date of record creation.

Citation

When quoting material from this collection, the preferred citation is: Parker, Eugene. Papers, [Box #, Folder #], Hanna Holborn Gray Special Collections Research Center, University of Chicago Library.

Biographical Note

Eugene Newman Parker was born on June 10, 1927 in Houghton, Michigan. His father, Glenn Parker, worked as an engineer at Chrysler and his mother, Helen Parker (MacNair) worked as a homemaker. Parker earned a B.S. in Physics from Michigan State University in 1948 and a PhD from the California Institute of Technology in 1951.

In 1954, Eugene married Niesje Parker. The couple had one son, Eric Parker, and one daughter, Joyce Marie Parker.

After finishing his PhD, Parker worked at the University of Utah as an instructor and assistant professor. He was hired by the University of Chicago in 1955, where he worked for the rest of his career. In 1958, Parker published his prediction of the existence of solar wind, a continuous outpouring of charged particles flowing from the sun at a million miles per hour. His idea was met with widespread skepticism from fellow physicists, including the reviewers of the paper and the editor of the publication. Parker's prediction was verified, however, when NASA's Mariner II spacecraft encountered a flow of solar particles during its flight to Venus in 1962.

In addition to heliophysics, Parker also studied cosmic rays and magnetic fields. His four books include *Interplanetary Dynamical Processes* (1963), *Cosmical Magnetic Fields: Their Origin and Their Activity* (1979), *Spontaneous Current Sheets in Magnetic Fields, with Applications to Stellar X-rays* (1994), and *Conversations on Electric and Magnetic Fields in the Cosmos* (2007). He retired in 1995 but continued to teach and publish work in the following decades.

Parker won numerous awards throughout his career, including the National Medal of Science, the Kyoto Prize, and the American Physical Society Medal for Exceptional Achievement in Research. He was member of the National Academy of Sciences and served as chair for the Academy's astronomy section. In 2017, NASA named its solar probe the Parker Solar Probe in his honor, marking the first time NASA named a spacecraft after a living person.

Eugene Parker died in Chicago on March 15, 2022 at the age of 94.

Scope Note

The Eugene Parker Papers are organized into ten series: Series I: Personal; Series II: Correspondence; Series III: Writing; Series IV: Teaching; Series V: Professional Associations and Events; Series VI: Writing by Others; Series VII: Awards, Honors, and Degrees; Series VIII: Audiovisual; Series IX: Oversize; and Series X: Restricted. The collection includes Parker's email correspondence; reprints of Parker's scientific publications from 1952 to 2016; lecture notes and overhead projector slides from Parker's courses; materials related to astrophysicist Subrahmanyan Chandrasekhar; scientific publications written by others; scientific and personal photographs; and Parker's awards and diplomas. Materials date between 1948 and 2018, with the bulk of material dating between 1952 and 2011.

Series I, Personal, contains biographical and autobiographical information on Parker and ephemera.

Series II, Correspondence, contains Parker's letters, handwritten notes, and printed emails, including correspondence related to the Parker Solar Probe.

Series III, Writing, contains Parker's thesis manuscript, reprinted papers, reports, articles, publications, and pamphlets. Reprinted papers are ordered roughly chronologically. All other writing is organized chronologically following the reprinted papers.

Series IV, Teaching, contains Parker's lecture notes and overhead projector slides from the 2000s and 2010s. Materials are organized alphabetically according to the lecture title.

Series V, Professional Associations and Events, contains materials related to Parker's professional life, such as newsletters, bulletins, dinner lists and menus, and symposium programs. Organizations include but are not limited to the Instrument Society of America, the American Academy of Arts and Sciences, and the NATO Advanced Study Institute on Solar and Astrophysical Magnetohydrodynamic Flows. Materials are arranged chronologically.

Series VI, Writing by Others, contains materials concerning other astrophysicists and scientific publications not written by Eugene Parker. Materials are divided into two subseries:

Subseries 1, Materials Related to Other Astrophysicists, contains reprints by and memorials to Subrahmanyan Chandrasekhar, reprints and correspondence with Joseph Lemaire, and reprints by Sydney Chapman. Materials are arranged alphabetically according to the last name of the astrophysicist.

Subseries 2, Scientific Publications, contains copies of the publication *The Planetary Report* (1983-1985) and other scientific articles and pamphlets, including materials published by NASA. Materials are arranged roughly chronologically.

Series VII, Awards, Honors, and Degrees, contains awards, medals, and degrees granted to Parker, as well as his university degrees, diplomas, certificates, and acceptance speeches. Material are arranged chronologically according to the award date.

Series VIII, Audiovisual, contains Parker's scientific and personal photographs from 1965 to 2000 and a DVD recording of a workshop.

Series IX, Oversize, contains oversized materials such as framed awards, diplomas, and honorary degrees. Materials are organized according to size.

Series X, Restricted, contains Parker's letters of recommendation, which are restricted for 80 years from the date of record creation. Materials are organized chronologically.

Related Resources

Subrahmanyan Chandrasekhar Papers

Peter Meyer Papers

David N. Schramm Papers

Lalitha Chandrasekhar Papers

Edwin B. Frost Papers

George Ellery Hale Papers

George van Biesbroeck Papers

Henry Gordon Gale Papers

University of Chicago Division of the Physical Sciences Records

University of Chicago Yerkes Observatory Logbooks and Notebooks

Subject Headings

- Parker, E.N. (Eugene Newman), 1927-2022
- Chandrasekhar, S. (Subrahmanyan), 1910-1995
-
- National Aeronautics and Space Administration (NASA)
- University of Chicago. Department of Astronomy and Astrophysics
- American Physical Society
- National Academy of Sciences (U.S.)
- Astrophysics
- Astrophysicists
- Solar wind

INVENTORY

Series I: Personal

This series contains biographical and autobiographical information on Parker and ephemera.

Box 1

Folder 1

Biographical Information, CV, and Correspondence, 1997-2013

Box 1

Folder 2

Solar Eclipse Viewers, 1991

Box 1

Folder 3

Images from the Chandra X-Ray Observatory Calendar, 2001

Series II: Correspondence

This series contains Parker's letters, handwritten notes, and printed emails, including correspondence related to the Parker Solar Probe.

Box 1

Folder 4

Correspondence, 1990-2016

Box 1

Folder 5

Correspondence Related to Parker Solar Probe, 2009

Series III: Writing

This series contains Parker's thesis manuscript, reprinted papers, reports, articles, publications, and pamphlets. Reprinted papers are ordered roughly chronologically. All other writing is organized chronologically following the reprinted papers.

Box 1

Folder 6

Reprinted Papers 1-44, 1952-1961

Box 1

Folder 7

Reprinted Papers 45-75, 1960-1964

Box 1

Folder 8

Reprinted Papers 76-97, 1963-1966

Box 2

Folder 1

Reprinted Papers 98-124, 1965-1968

Box 2

Folder 2

Reprinted Papers 125-142, 1968-1970

Box 2

Folder 3

Reprinted Papers 143-184, 1969-1975

Box 2

Folder 4

Reprinted Papers 185-201, 1974-1977

Box 3

Folder 1

Reprinted Papers 202-228, 1978-1982

Box 3

Folder 2

Reprinted Papers 229-259, 1981-1985

Box 3

Folder 3

Reprinted Papers 260-276, 1985-1987

Box 3

Folder 4

Reprinted Papers 277-291, 1987-1989

Box 3

Folder 5

Reprinted Papers 292-301, 1989-1990

Box 4

Folder 1

Reprinted Papers 302-319, 1990-1993

Box 4

Folder 2

Reprinted Papers 320-336, 1992-1996

Box 4

Folder 3

Reprinted Papers 337-340, 1996

Box 4

Folder 4

Reprinted Papers 341-349, 1994-1996

Box 4

Folder 5

Reprinted Papers 350-354, 1995-1997

Box 4

Folder 6

Reprinted Papers 355-361, 1996-1997

Box 4

Folder 7

Reprinted Papers 361-376, 1997-2000

Box 5

Folder 1

Reprinted Papers 377-389, 1999-2002

Box 5

Folder 2

Reprinted Papers 390-392, 2001-2004

Box 5

Folder 3

Reprinted Papers 391-396, 2002-2006

Box 5

Folder 4

Reprinted Papers 394-408, 2006-2012

Box 5

Folder 5

Reprinted Papers 410, 2013

Box 5

Folder 6

Reprinted Papers 411-412, 2016

Box 6

Folder 1

Thesis Manuscript — Interstellar Dust and Gas Clouds, 1951

Box 6

Folder 2

Research on Global Warming, circa 1990s [1/2]

Box 6

Folder 3

Research on Global Warming, circa 1990s [2/2]

Box 6

Folder 4

Assessing the Changing Moods of the Sun and the Climate of Earth, 1999

Box 6

Folder 5

A History of the Solar Wind Concept, 2001

Box 6

Folder 6

Parker Wind, 2008

Box 6

Folder 7

Hydrodynamics and the Kinetic Treatment of a Collisionless Atmosphere, 2008

Box 6

Folder 8

Solar Activity: From Galileo's Sunspots to the Heliosphere, 2009

Box 6

Folder 9

The Legacy of Jack Eddy, 2010

Box 6

Folder 10

Wherefore Physics? 2011

Box 6

Folder 11

Physics and the World, circa 2011

Box 6

Folder 12

Diverse Scientific Contributions, undated

Box 6

Folder 13

Citations and Notes, undated

Series IV: Teaching

This series contains Parker's lecture notes and overhead projector slides from the 2000s and 2010s. Materials are organized alphabetically according to the lecture title.

Box 7

Folder 1

The Applicability of Hydrodynamics — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 2

A Brief History of the Dynamo Concept — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 3

Cosmic Rays and Space Travelers — Lecture Notes and Overhead Projector, circa 2006

Box 7

Folder 4

Discovery and Investigation of Solar Magnetism — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 5

Electromagnetic Preliminaries and Ongoing Developments in Plasma Physics — Lecture Notes and Overhead Projector Slides, circa 2010s

Box 7

Folder 6

Fifty Years of Galactic Magnetic Field — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 7

Galileo and the Physics of the Heliosphere — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 8

History of the Solar Wind — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 9

The Legacy of Jack Eddy — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 10

The Microworld of the Solar Corona — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 11

Pathological Science in Physics Today — Article and Lecture Notes, circa 2000s

Box 7

Folder 12

Poynting Theorem and Introduction to Plasma Physics and Sociology — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 13

The Secret Life of Magnetic Fields — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 14

Solar Magnetism — Book Outline, Lecture Notes, and Overhead Projector Slides, 2008 [1/2]

Box 7

Folder 15

Solar Magnetism — Book Outline, Lecture Notes, and Overhead Projector Slides, 2008 [2/2]

Box 7

Folder 16

Solar Wind — Lecture Notes and Overhead Projector Slides, circa 2008

Box 7

Folder 17

Space Exploration and Cosmic Rays — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 7

Folder 18

Sun, Earth, and Magnetic Fields — Lecture Notes and Overhead Projector Slides, circa 2000s

Box 8

Folder 1

Untitled — Lecture Notes and Overhead Projector Slides on Solar Wind, circa 2000s

Box 8

Folder 2

What are Stellar and Galactic Dynamos to do Without Turbulent Diffusion of Magnetic Fields? — Lecture Notes and Overhead Projector Slides, circa 2005

Series V: Professional Associations and Events

This series contains materials related to professional association and events, such as newsletters, bulletins, dinner lists and menus, and symposium programs. Organizations include but are not limited to the Instrument Society of America, the American Academy of Arts and Sciences, and the NATO Advanced Study Institute on Solar and Astrophysical Magnetohydrodynamic Flows. Materials are arranged chronologically.

Box 8

Folder 3

The Instrument Society of America Events Newsletter, 1963

Box 8

Folder 4

Ryerson Astronomical Society Club Dinner Lists, 1979

Box 8

Folder 5

The American Academy of Arts and Sciences Bulletin, 1989

Box 8

Folder 6

University of Oslo Annual Report and Annual Party Materials, 1990

Box 8

Folder 7

NATO Advanced Study Institute on Solar and Astrophysical Magnetohydrodynamic Flows Dinner Menu, 1995

Box 8

Folder 8

Nobel Laureates from the Chicago Physics Department and the Research Institutes Booklet, 1995

Box 8

Folder 9

Challenging the Paradigm: The Legacy of Galileo Symposium Program, 2009

Series VI: Writing by Others

This series contains materials concerning other astrophysicists and scientific publications not written by Eugene Parker. The first subseries contains reprints by and memorials to Subrahmanyan Chandrasekhar, reprints and correspondence with Joseph Lemaire, and reprints by Sydney Chapman. Materials are arranged alphabetically according to the last name of the astrophysicist. The second subseries contains copies of the publication *The Planetary Report* (1983-1985) and other scientific articles and pamphlets, including materials published by NASA. Materials are arranged roughly chronologically.

Subseries 1: Materials Related to Other Astrophysicists

Box 8

Folder 10

Subrahmanyan Chandrasekhar Reprints and Memorials, 1975-2010 [1/6]

Box 8

Folder 11

Subrahmanyan Chandrasekhar Reprints and Memorials, 1975-2010 [2/6]

Box 8

Folder 12

Subrahmanyan Chandrasekhar Reprints and Memorials, 1975-2010 [3/6]

Box 8

Folder 13

Subrahmanyan Chandrasekhar Reprints and Memorials, 1975-2010 [4/6]

Box 8

Folder 14

Subrahmanyan Chandrasekhar Reprints and Memorials, 1975-2010 [5/6]

Box 8

Folder 15

Subrahmanyan Chandrasekhar Reprints and Memorials, 1975-2010 [6/6]

Box 9

Folder 1

Sydney Chapman Reprints, 1971

Box 9

Folder 2

Joseph Lemaire Reprints and Correspondence, 1973-2008

Subseries 2: Scientific Publications

Box 9

Folder 3

Scientific Reprints and Articles, 1952-2009 [1/2]

Box 9

Folder 4

Scientific Reprints and Articles, 1952-2009 [2/2]

Box 9

Folder 5

Advertising Pamphlet for Fourth Edition of Exploration of the Universe, 1982

Box 9

Folder 6

Science and Creationism: A View from the National Academy of Sciences, 1984

Box 9

Folder 7

The Planetary Report Magazine, 1983-1984

Box 9

Folder 8

Physics World with Survey Thank You Note sent to Eugene Parker, 1999

Box 9

Folder 9

Ian Lerche — Cosmic Connections: A Scientific Autobiography, 2005

Box 9

Folder 10

NASA Publications, 1979-2018

Series VII: Awards, Honors, and Degrees

This series contains awards, medals, and degrees granted to Parker, as well as his university degrees, diplomas, certificates, and acceptance speeches. Material are arranged chronologically according to the award date.

Box 9

Folder 11

B.S. — Michigan State University, 1948

Box 9

Folder 12

Election to National Academy of Sciences Documents, 1967

Box 9

Folder 13

American Geophysical Union John Adam Fleming Award Programs, 1968

Box 9

Folder 14

NASA Apollo Achievement Award, 1969

Box 9

Folder 15

Michigan State University Commencement Documents, 1975

Box 9

Folder 16

Chapman Medal Presidential Address Transcript, 1979

Box 10

Folder 1

California Institute of Technology Alumni Award, 1980

Box 10

Folder 2

National Medal of Science Election Documents, 1989

Box 10

Folder 3

Bowie Medal Photograph and Announcement, 1989-1990 [1/2]

Box 10

Folder 4

Bowie Medal Photograph and Announcement, 1989-1990 [2/2]

Box 10

Folder 5

American Geographical Union Parker Lecture Certificate, 1991

Box 10

Folder 6

MIT Hannes Alfvén Lecturer Award, 1992

Box 10

Folder 7

Kyoto Prize Materials, 2003 [1/3]

Box 10

Folder 8

Kyoto Prize Materials, 2003 [2/3]

Box 10

Folder 9

Kyoto Prize Materials, 2003 [3/3]

Box 10

Folder 10

American Physical Society Exceptional Achievement Ceremony and Reception Program,
2018

Box 10

Folder 11

National Research Council Space Studies Board Certificate of Appreciation, undated

Box 11

Michigan State University Jonathan L. Snyder Society Award, 2003

Series VIII: Audiovisual

This series contains Parker's scientific and personal photographs from 1965 to 2000 and a DVD recording of a workshop.

Box 12

Folder 1

Personal and Scientific Photographs, 1965-2000

Box 12

Folder 2

DVD — Parker Workshop on Magnetic Reconnection — São Paulo, Brazil, 2014

Series IX: Oversize

This series contains oversized materials such as framed awards, diplomas, and honorary degrees. Materials are organized according to size.

Box 13

Folder 1

American Geophysical Union Recognition of Eminence, 1962

Box 13

Folder 2

American Institute of Aeronautics and Astronautics Space Science Award, 1964

Box 13

Folder 3

National Academy of Sciences Diploma, 1967

Box 13

Folder 4

American Geophysical Union John Adam Fleming Award, 1968

Box 13

Folder 5

Utrecht University Honorary Doctorate and Ceremony Photographs, 1986

Box 13

Folder 6

National Medal of Science Diploma, 1989

Box 13

Folder 7

Oslo University Honorary Doctorate, 1991

Box 13

Framed NASA Public Service Award, 2017

Box 14

Folder 1

Det Norske Videnskaps-Akademi Member Diploma, 1988

Box 14

Folder 2

American Physical Society Exceptional Achievement in Research Prize, 2018

Box 14

Framed Village of Flossmoor Commendation, 2017

Box 15

American Physical Society James Clerk Maxwell Award, 2003

Box 15

European Physical Society Hannes Alfvén Award, 2012

Box 15

National Observatory of Athens Moon Chart, 2013

Box 16

Kyoto Prize, 2003

Box 16

Kyoto Prize Album of Memories

Box 17

Seven Wise Men of the World in Cosmology Greek Award, Case, and Medal 2008

Series X: Restricted

This series contains Parker's letters of recommendation which are restricted for 80 years from the date of record creation. Materials are organized chronologically.

Box 18

Folder 1

Letters of Recommendation, 2002-2006

Box 18

Folder 2

Letters of Recommendation, 2007-2009

Box 18

Folder 3

Letters of Recommendation, 2010-2012

Box 18

Folder 4

Letters of Recommendation, 2013-2015

Box 18

Folder 5

Letters of Recommendation, 2016-2017

Box 18

Folder 6

Letters of Recommendation, circa 2010s