Arno A. Penzias Papers

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Manuscript Division, Library of Congress
Washington, D.C.
2009
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Contact information:
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http://hdl.loc.gov/loc.mss/eadmss.ms011223

LC Online Catalog record:
http://lccn.loc.gov/mm2006085338

Prepared by Joseph K. Brooks with the assistance of Dan Oleksiw and Chanté R. Wilson-Flowers

Collection Summary

Title: Arno A. Penzias Papers
Span Dates: 1931-2006
Bulk Dates: (bulk 1963-1998)
ID No.: MSS85338
Creator: Penzias, Arno A.
Extent: 9,500 items ; 27 containers plus 2 oversize and 1 artifact ; 10.8 linear feet ; 1,006 digital files (442.70 MB)
Language: Collection material in English, with German, Chinese, French, Swedish, Japanese, Spanish, Portugese, Italian, and Russian
Location: Manuscript Division, Library of Congress, Washington, D.C.
Summary: Scientist, corporate executive, and author. Correspondence, drafts of books, articles, and speeches, interviews, scientific articles, photographs, topical files, printed matter, digital files, and miscellaneous material.

Selected Search Terms

The following terms have been used to index the description of this collection in the Library's online catalog. They are grouped by name of person or organization, by subject or location, and by occupation and listed alphabetically therein.

People
Alpher, Ralph--Correspondence.
Ash, E. A.--Correspondence.
Block, David--Correspondence.
Dicke, Robert H. (Robert Henry)--Correspondence.
Encrenaz, Pierre J.--Correspondence.
Fleury, Paul A.--Correspondence.
Gamow, George, 1904-1968--Correspondence.
Gazalé, Midhat J., 1929- --Correspondence.
Gilder, George F., 1939- --Correspondence.
Herman, Robert, 1914- --Correspondence.
Inose, Hiroshi, 1927- --Correspondence.
Julesz, Bela--Correspondence.
Morrison, Philip--Correspondence.
Nachtigall, Dieter, 1927- --Correspondence.
Peebles, P. J. E. (Phillip James Edwin)--Correspondence.
Penzias, Arno A.
Queisser, Hans J., 1931- --Correspondence.
Radner, Roy, 1927- --Correspondence.
Shoji, Masakazu, 1936- --Correspondence.
Spitzer, Lyman, 1914-1997--Correspondence.
Stibitz, George R. (George Robert), 1904-1995--Correspondence.
Townes, Charles H.--Correspondence.
Uenohara, Michiyuki, 1925-2007--Correspondence.
Weinberg, Steven, 1933- --Correspondence.
Wilson, Robert Woodrow, 1936-

Organizations
Bell Telephone Laboratories.
Lucent Technologies (Firm)
New Enterprise Associates.

Subjects
Astrophysics.
Big bang theory.
Cosmic background radiation.

Cosmology.
Deuterium.

Occupations
Astrophysicists.
Authors.
Executives.

Administrative Information

Provenance

The papers of Arno A. Penzias, scientist, corporate executive, author, and venture capitalist, were given to the Library of Congress by Penzias in 2006.

Processing History

Paper records in Arno A. Penzias collection were processed in 2009. Digital files were organized and described in 2015.

Transfers

Items have been transferred from the Manuscript Division to other custodial divisions of the Library. Some audiocassettes and videotapes have been transferred to the Motion Picture, Broadcasting, and Recorded Sound Division. A drawing has been transferred to the Prints and Photographs Division. All transfers are identified in these divisions as part of the Arno A. Penzias Papers.

Copyright Status

The status of copyright in the unpublished writings of Arno A. Penzias is governed by the Copyright Law of the United States (Title 17, U.S.C.).

Access and Restrictions

The papers of Arno A. Penzias are open to research. Researchers are advised to contact the Manuscript Reading Room prior to visiting. Many collections are stored off-site and advance notice is needed to retrieve these items for research use.

Security Classified Documents

Government regulations control the use of security classified material in this collection. Manuscript Division staff can furnish information concerning access to and use of classified materials.

Digital Format

Digital files were received as part of the Arno A. Penzias Papers. Reference copies were created from the original digital media. Advanced notice is required to access the digital content; Consult reference staff in the Manuscript Division for more information.

Preferred Citation

Researchers wishing to cite this collection should include the following information: Container number or digital ID number, Arno A. Penzias Papers, Manuscript Division, Library of Congress, Washington, D.C.

Biographical Note

Date	*Event*
1933, April 26	Born, Munich, Germany
1939	Fled with family from Germany to England

1940	Immigrated to the United States with his family and settled in New York, N.Y.
1946	Became a naturalized citizen of the United States
1954	B.S., College of the City of New York, New York, N.Y. Married Anne Pearl Barras. Divorced 1996.
1954-1956	Radar officer, Army Signal Corps
1956-1958	Research assistant, Columbia Radiation Laboratory, Columbia University, New York, N.Y.
1958	M.A., Columbia University, New York, N.Y.
1961	Started thirty-seven year career at Bell Laboratories and its successor Lucent Technologies
1962	Ph.D. in physics, Columbia University, New York, N.Y.
1964	Discovered with Robert W. Wilson uniform microwave radiation emanating from all directions in the universe, documenting the Big Bang theory of the origin of the universe
1972-1976	Director, Radio Research Laboratories, Bell Laboratories
1978	Awarded with Robert W. Wilson the Nobel Prize for Physics
1981-1995	Vice president for research, Bell Laboratories and Lucent Technologies
1989	Published *Ideas and Information: Managing in a High-Tech World*. New York: Norton
1995	Published *Harmony: Business, Technology & Life after Paperwork*. New York: HarperBusiness
1995-1998	Vice president and chief scientist, AT &T Bell Laboratories and Lucent Technologies, Bell Laboratories Innovations
1996	Married Sherry Levit
1998-	Venture partner, New Enterprise Associates

Scope and Content Note

The papers of Arno Allan Penzias (1933-) span 1931-2006, with the bulk of the collection dating from 1963 to 1998. Penzias enjoyed a thirty-seven year career with Bell Laboratories and its successor Lucent Technologies, serving these organizations as an astrophysicist and eventually as chief scientist and vice president directing the corporate laboratory's research and product development. Penzias with his colleague Robert Woodrow Wilson discovered a uniform microwave radiation emanating from beyond our galaxy the charting of which documented the Big Bang theory of the origins of the universe. For this achievement Penzias and Wilson shared a Nobel Prize for Physics in 1978.

Most of the collection is in English but includes material in German, Chinese, French, Swedish, Japanese, Spanish, Portugese, Italian, and Russian. The papers are organized into six series: General Correspondence, Speeches and Writings, Subject File, Oversize, Artifact, and Digital Files.

The General Correspondence contains letters exchanged with colleagues and friends including David Block, Paul A. Fleury, George Gamow, Hiroshi Inose, Roy Radner, and Charles H. Townes.

The Speeches and Writings include files on Penzias's two books about information technology, *Ideas and Information: Managing in a High-Tech World and Harmony: Business, Technology & Life after Paperwork*, published in 1989 and 1995 respectively. Correspondence relating to the books is extensive and correspondents include E. A. Ash, Pierre J. Encrenaz, Midhat J. Gazalé, George F. Gilder, Hiroshi Inose, Bela Julesz, Philip Morrison, Dieter Nachtigall, Hans J. Queisser, Masakazu Shoji, Lyman Spitzer, George R. Stibitz, and Michiyuki Uenohara.

Penzias took on his duties directing Bell Laboratories in 1981, the year its parent company, AT & T, was ordered by court order to divest. The Subject File documents Penzias's leadership during the period when Bell Laboratories became Lucent Technologies. It also sheds light on his earlier research career, such as his discovery of the cosmic background radiation for which he won the Nobel Prize, and his work on another indicator of a Big Bang, the abundance in the universe of deuterium, a stable isotope of hydrogen. A file relating to Penzias's work on the origin of the elements includes correspondence with Big Bang theorists Ralph Alpher, Robert H. Dicke, Robert Herman (1914), P. J. E. Peebles, and Steven Weinberg (1933). Documentation obtained from Bell Laboratory's Horn Antenna, with which Penzias and Wilson made their discovery on Crawford Hill in Holmdel, New Jersey, is available in photographs and a rolled, scroll-like "chart record" dating from 1964.

The Digital Files document Penzias's career as a venture capital partner with New Enterprises Associates after his retirement from Lucent Technologies and also include personal correspondence, family photographs and biographical material.

Arrangement of the Papers

This collection is arranged in six series:

- General Correspondence, 1963-2002
- Speeches and Writings, 1947-2005
- Subject File, 1931-1998
- Oversize, 1978-1983
- Artifact, 1964
- Digital Files, 1997-2006

Description of Series

Container	*Series*
BOX 1	**General Correspondence, 1963-2002** Correspondence with friends and colleagues with attached material. Arranged chronologically.
BOX 1-19	**Speeches and Writings, 1947-2005** Drafts of books, articles, and speeches; interviews; poems; correspondence; background information; research files; and promotional and miscellaneous material.. Arranged alphabetically by format, title, or type of material and therein chronologically or sequentially
BOX 19-27	**Subject File, 1931-1998** Awards and honors, photographs, scientific papers, including research and articles, and other miscellaneous subject files. Arranged alphabetically by topic or type of material.
BOX OV 1-2	**Oversize, 1978-1983** Commemorative T-shirt and posters. Arranged and described according to the series, containers, and folders from which the items were removed.
BOX VA 1	**Artifact, 1964** "Chart record," Horn Antenna, Holmdel, N.J. Described according to the series, container, and folder from which the item was removed.
BOX DF	**Digital Files, 1997-2006** Correspondence, photographs, presentations, writings, biographical information, business records, and miscellaneous material in many formats including Microsoft Word, Microsoft Powerpoint, HTML Adobe Acrobat, JPEG, and GIF. The series is comprised of 1,006 files.

Container List

Container	*Contents*
BOX 1	**General Correspondence, 1963-2002**
	Correspondence with friends and colleagues with attached material.
	Arranged chronologically.
BOX 1	1963-2002
	(6 folders)
BOX 1-19	**Speeches and Writings, 1947-2005**
	Drafts of books, articles, and speeches; interviews; poems; correspondence; background information; research files; and promotional and miscellaneous material..
	Arranged alphabetically by format, title, or type of material and therein chronologically or sequentially
BOX 1	Articles *See also Containers 23-25*, Science file
BOX 1	By Penzias
BOX 1	"2020," 1990-1991
BOX 1	Miscellaneous
BOX 1	Drafts
BOX 1	1989-1993
BOX 2	Undated
BOX 2	Published versions, 1971-1991, undated
	(4 folders)
BOX 2	Miscellaneous authors
BOX 2	1948, 1965-1981
	(4 folders)
BOX 3	1982-1993
	(7 folders)
BOX 4	1994-2005, undated
	(5 folders)
BOX 4	Books
BOX 4	*Harmony: Business, Technology & Life after Paperwork*
BOX 4	Background information, 1981, 1991-1995
BOX 4	Correspondence, 1993-1995
	(2 folders)
BOX 5	Drafts
BOX 5	No.1, chapters 1-10, 1994
	(6 folders)
BOX 5	No. 2
BOX 5	Introduction, dedication, and table of contents, 1994
BOX 6	Chapters 1-7, 1994
	(7 folders)
BOX 7	Chapters 8-10
	(3 folders)

Container	*Contents*
BOX 7	Copyediting, 1994
BOX 7	Miscellany, 1994, undated
	(4 folders)
BOX 8	Publication and promotion
BOX 8	Miscellany, 1993-1995
BOX 8	Packets, 1995
BOX 8	Reviews, 1995
BOX 8	*Ideas and Information: Managing in a High-Tech World*
BOX 8	Background information
BOX 8	Miscellany, 1982-1990, undated
	(3 folders)
BOX 8	Vail, Theodore N., undated
BOX 9	Correspondence
BOX 9	1978, 1985-1988
	(3 folders)
BOX 9	1989
BOX 9	Jan.-Oct.
	(6 folders)
BOX 10	Nov.-Dec.
BOX 10	1990-1994
BOX 10	Drafts
BOX 10	No. 1, chapters 1-9, 1987
	(3 folders)
BOX 10	No. 2, undated
BOX 10	Chapters 1-6 (2 folders)
BOX 11	Chapters 7-9
BOX 11	No. 3, meeting with editor, chapters 1-4, 1987
	(2 folders)
BOX 11	No. 4
BOX 11	Acknowledgment, preface, introduction, 1987
	(2 folders)
BOX 11	Background information, 1986-1987
BOX 11	Chapters
BOX 11	No. 1, 1987
BOX 11	No. 2
BOX 11	Background information, 1987-1988
BOX 11	Text, 1987
BOX 11	No. 3
BOX 11	Background information, 1985-1988
BOX 11	Text, 1987
BOX 12	No. 4, 1987
BOX 12	No. 5, 1988
BOX 12	Miscellany, 1958, 1984-1986, undated
	(2 folders)
BOX 12	Sejnowski, Terrence J., 1985-1986
BOX 12	Text, 1987

Container	*Contents*
BOX 12	Nos. 6-7
	(2 folders)
BOX 12	No. 8
BOX 12	Apple Computers
BOX 13	Text, 1987
	(2 folders)
BOX 13	No. 9
	(2 folders)
BOX 13	No. 5, 1988
BOX 13	“Corrected Copy,” undated
BOX 13	Fragments, 1987
BOX 14	Martin, R. L., reader, 1988
BOX 14	“Minds over Machines,” alternate title, drafts
BOX 14	No. 1, 1987-1988
BOX 14	No. 2, chapters 1-9, undated
	(2 folders)
BOX 14	Miscellany, undated
BOX 14	Penzias, David, reader, undated
BOX 14	Miscellany, undated
	(1 folder)
BOX 15	(1 folder)
BOX 15	“The Syntax Matrix,” alternate title, drafts, 1985-1986
BOX 15	No. 1
	(4 folders)
BOX 15	No. 2
	(1 folder)
BOX 16	(3 folder)
	No. 3
BOX 16	Miscellany, 1989-1990, undated
	(2 folders)
BOX 16	Publication and promotion
BOX 16	Miscellany, 1988-1989
BOX 16	Packets, 1989
BOX 16	Jan.-Mar.
BOX 17	Apr.-May
BOX 17	Photographs and printed matter, 1989-1990
BOX 17	Selma Shapiro Public Relations, 1988
BOX 17	Research material, 1947, 1959, 1968-1984, undated
	(2 folders)
BOX 17	Reviews, 1988-1992
BOX 17	Translations
BOX 17	Chinese, 1995
BOX 17	French, 1989-1990, undated
	(2 folders)
BOX 18	Poems, undated
BOX 18	Speeches and interviews

Container	*Contents*
BOX 18	Development and writing, 1989-1995
	(2 folders)
BOX 19	Events, 1979-2005, undated *See also Oversize*
	(6 folders)
BOX 19-27	**Subject File, 1931-1998**
	Awards and honors, photographs, scientific papers, including research and articles, and other miscellaneous subject files.
	Arranged alphabetically by topic or type of material.
BOX 19	Awards and honors
BOX 19	Miscellaneous, 1976-1987, 1996
BOX 19	New Jersey Literary Hall of Fame, 1991
BOX 20	Nobel Prize for Physics *See also Container 27,* Notebook
BOX 20	Photographs, 1978
BOX 20	"Day of Announcement" album
	(2 folders)
BOX 20	Sweden
BOX 20	Proclamations and miscellaneous material, 1978
BOX 20	Scrapbook, 1978
	(4 folders)
BOX 21	Bell Laboratories and Lucent Technologies
BOX 21	Career file, 1983-1987, 1995
BOX 21	Miscellany, 1981
BOX 21	Poster, undated
BOX 21	Printed matter, 1979-1989, 1995-1998
	(2 folders)
BOX 21	Retirement scrapbook, 1998
	(2 folders)
BOX 21	Biography, family history, and early education
BOX 21	Brooklyn Technical High School, New York, N.Y.
BOX 21	*Blueprint*, yearbook, 1951
BOX 21	Miscellaneous, 1947-1951
BOX 22	Student papers, 1948-1950
BOX 22	College of the City of New York, New York, N.Y.
BOX 22	Miscellany, 1951-1954
BOX 22	Student papers, 1950-1951
BOX 22	Elementary, junior high, and Hebrew school, report cards, 1940-1946
BOX 22	Germany, 1938-1939, 1979
BOX 22	Miscellany, 1985
BOX 22	Calendars, 1992-1998
	(2 folders)
BOX 22	Commemorative "3K" T-shirt, 1978 *See also Oversize*
BOX 22	Controller-dispatcher, patent, 1994
BOX 22	Levich, V. G. and Yeveny, case notebook, 1972-1974
	(3 folders)
BOX 23	Photographs

Container	*Contents*
BOX 23	Miscellaneous, undated
BOX 23	Of Penzias, 1989, undated
	(2 folders)
BOX 23	Printed matter, 1975, 1981, 1988, 1994-1995
BOX 23	Reagan, Ronald, luncheon, 1985
BOX 23	Science file
BOX 23	Deuterium in the universe
BOX 23	Articles
BOX 23	By Penzias
BOX 23	*American Scientist*, 1962, 1976-1977
BOX 23	Miscellaneous, 1972-1977, undated
	(2 folders)
BOX 24	By others, 1969-1978, undated
	(5 folders)
BOX 24	International Astronomical Union, conference, Grenoble, France, 1976
BOX 24	Miscellany, 1976
BOX 25	Elements, origins of
BOX 25	Articles
BOX 25	By Penzias, 1972-1978
BOX 25	By others, 1931, 1948-1949, 1957, 1965-1968, 1975-1978
	(4 folders)
BOX 25	Correspondence, 1976-1979
BOX 25	Lectures, undated
BOX 25	Miscellany, undated
BOX 25	Encrenaz, Pierre J., 1969-1974
BOX 26	Horn Antenna, Holmdel, N.J., “chart record,” 1964 *See Artifact*
BOX 26	Isotope review file
BOX 26	Articles
BOX 26	By Penzias, 1973
BOX 26	By others
BOX 26	Five College Radio Astronomy Observatory, Quabbin Reservoir, Mass., undated
BOX 26	Miscellaneous, 1969-1982, undated
	(7 folders)
BOX 26	Notes, undated
BOX 27	Miscellany, undated
BOX 27	National Radio Astronomy Observatory, 1967-1975
BOX 27	Notebook, 1978 *See also Container 20,* Nobel Prize
	(4 folders)
BOX OV 1-2	**Oversize, 1978-1983**
	Commemorative T-shirt and posters.
	Arranged and described according to the series, containers, and folders from which the items were removed.
BOX OV 1	Speeches and interviews
BOX OV 1	Events

Container	*Contents*
BOX OV 1	Eighteenth Annual Karl G. Jansky Lecture, University of Virginia, Charlottesville, Va., poster, 1983 (Container 19)
BOX OV 2	Miscellany
BOX OV 2	Commemorative “3 K” T-shirt, 1978 (Container 22)
BOX VA 1	**Artifact, 1964**
	“Chart record,” Horn Antenna, Holmdel, N.J.
	Described according to the series, container, and folder from which the item was removed.
BOX VA 1	Miscellany
BOX VA 1	Science file
BOX VA 1	“Chart record,” Horn Antenna, Holmdel, N.J., 1964 (Container 26)
BOX DF	**Digital Files, 1997-2006**
	Correspondence, photographs, presentations, writings, biographical information, business records, and miscellaneous material in many formats including Microsoft Word, Microsoft Powerpoint, HTML Adobe Acrobat, JPEG, and GIF. The series is comprised of 1,006 files.
	Digital ID: mss85338_67_1_SIP