

# Hildegard Korf Kallmann-Bijl Collection

Hank Brown

2000



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#### **Collection Overview**

Repository:	National Air and Space Museum Archives
Title:	Hildegard Korf Kallmann-Bijl Collection
Date:	1949-1980 (bulk 1949-1968)
Identifier:	NASM.1989.0042
Creator:	Kallmann-Bijl, Hildegard Korf, Dr., 1908-1968.
Extent:	2.8 Cubic feet (7 boxes)
Language:	English .
Summary:	This collection consists of Kallmann-Bijl's professional files, The material consists of correspondence, photographs, and newspaper and magazine articles, as well as research files covering her professional career (1949-68). The collection also includes copies of a number of Kallmann-Bijl's publications.

#### **Administrative Information**

Acquisition Information

Frank Korf, gift, 1989, 1989-0042

#### Other Finding Aids

http://www.nasm.si.edu/research/arch/findaids/pdf/Hildegard\_Korf\_Kallmann-Bijl\_Finding\_Aid.pdf

#### **Processing Information**

Encoded by Rebecca Morgan, 2012.

Restrictions

No restrictions on access

#### **Biographical Note**

Dr. Hildegard Gertrud Helen Korf Kallmann-Bijl (1908-1968) was one of the most active pioneers in her examination of the physics of high atmosphere for the flight calculations of satellites. Before the first satellite reached its orbit, she had calculated a theoretical extrapolation of a model of the atmosphere which gave physicists a whole year's lead. The lifespan of the satellite could be predicted with the "Kallmann Atmosphere." Dr. Kallmann then made satellite measurements in relation to this atmospheric model, again to perfection. In 1961, she published a paper on the International Reference Atmosphere. With this foundation, she was able to forecast the landing spot with accurate precision for the astronauts and cosmonauts.

Hildegard Korf was born on September 18, 1908 in Gelsenkirchen, Germany. She was raised in the Catholic faith and educated in Catholic boarding schools. By 1929, Ms. Korf had earned the equivalent of her bachelor's degree at the University of Berlin, in Philosophy. She then enrolled in classes at the Technische Hoch Schule and majored in Metallurgy. While attending school, Ms. Korf volunteered her free time to work for the Journalism Institute at the University of Berlin where she gained experience in the editorial business. She later worked three years as an editor for the Deutscher Press Publishers.

While at the university, Hildegard Korf became friends with Julie Braun. It was she who developed in Ms. Korf a sensitivity for Goethe and the worlds of science and art. However, Julie Braun was forced to leave Germany because of her Jewish faith. The Korfs were not persecuted because they were considered three quarters "Aryan" and one quarter "non-Aryan," but by the 1930's the Korfs were not allowed full political freedom. Julie Braun left her estate in Zehlendorf in the care of Ms. Korf and her attorney, Curt Kallmann. There was little Curt Kallmann could do to protect Julie's property because he too was Jewish. One evening in 1939, Kallmann called Hildegard Korf and told her that the Gestapo was on their way to arrest him. With the help of Dr. Benno Hahn, Ms. Korf was able to get herself and Curt Kallmann out of Germany and on their way to Sweden. The Dresden Zeiss Works, where Ms. Korf had worked since 1936, asked her to return and "guaranteed" that no action would be taken against her, but Hildegard Korf felt that she had burned her bridge behind her and never went back to Germany. Kallman suffered a nervous breakdown while in Sweden, and since he was unable to travel alone to the United States, the American Council suggested to Ms. Korf that she travel as his wife. Because of laws existing then, it took an intervention of a Catholic Bishop in Sweden to bring about their marriage. They made the journey to America and their marriage lasted until 1958. Dr. Hildegard Kallmann divorced Curt Kallman but continued to support him until her death.

Dr. Hildegard Kallmann later married Jan Bijl, a Dutchman who had spent several years in a German concentration camp for acting as a Dutch courier while in exile in London. At the time of their marriage, Bijl was the Vice-President of Fokker Aviation at Shiphol near Amsterdam. Unfortunately, Jan Bijl died on December 9, 1963. Dr. Hildegard Kallmann-Bijl died suddenly of a heart attack on November 7, 1968.

Between the years of 1949-1963, Dr. Kallmann-Bijl published approximately 35 papers on ionospheric research, meteor research, high altitude research, solid propellant research, national space research and international space research. Dr. Kallmann-Bijl will always be remembered for her contributions in early astrophysical studies at national and international laboratories.

### Scope and Content Note

The collection contains copies of published and unpublished technical papers written by Dr. Kallmann-Bijl and other scientists dealing with the atmosphere and space exploration. There are also correspondence, awards, handwritten notes, calculations, newspaper articles, photographs, negatives and two slides. In addition, there is some material regarding Dr. Kallmann-Bijl's involvement with various professional organizations such as the Committee on Space Research (COSPAR) and the National Aeronautics and Space Administration (NASA). This material includes copies of technical papers, programs and proceedings from these organizations.

### Arrangement

The collection is arranged as follows:

Series 1:

- Dr. Kallman-Bijl's personal papers
- Biographical information

Series 2:

- Technical papers written by other scholars
- Technical papers by unknown authors Series 3:

Organizations

Series 4:

Miscellaneous materials

### Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:

Astrophysics Geophysics Periodicals

Types of Materials:

Charts Correspondence Maps Photographs Publications

Names:

Project RAND Rand Corporation

#### **Container Listing**

#### Series 1: Personal Papers

Scope and This series contains Dr. Kallman-Bijl's personal papers, biographical information and technical papers.

Arrangement: Technical papers written by Dr. Kallmann-Bijl are arranged in chronological order.

Box 1, Folder 1	H. Kallmann Biographical Data & Publications Listings, 1947-1983
Box 1, Folder 2	H. Kallmann Business & Personal Addresses, 1964
Box 1, Folder 3	H. Kallmann, 3 Passports, 1963, 1959, 1954
Box 1, Folder 4	H. Kallmann, Social Security Card, undated
Box 1, Folder 5	H. Kallmann, Contracts & Professional Services Agreement, Security Agreement & Correspondence, 1952-1955
Box 1, Folder 6	H. Kallmann, Correspondence, 1953-1978
Box 1, Folder 7	H. Kallmann, Handwritten Notes, Calculations & Equations, 1954-1965
Box 1, Folder 8	H. Kallmann, 2 Christmas Cards, Christmas Poem and Invitations, 1968, 1960
Box 1, Folder 9	H. Kallmann, Newspaper & Magazine Articles, 1955-1957
Box 1, Folder 10	H. Kallmann, Membership Certifcates of The Society of the Sigma XI & Awards, 1953-1954 [3 awards moved to OVERSIZE Box 7]
Box 1, Folder 11	Organization Sheet of the British, German and French Space Committee by H. Kallmann, June 11, 1967
Box 1, Folder 12	Trip Report to the United States, Sept Oct. 1968 by H. Kallmann, October 29, 1968
Box 1, Folder 13	"Atmospheric Electricity" by H. Kallmann, Handwritten Notes & Equations, March 7, 1952
Box 1, Folder 14	"Solar Annular Eclipse in Greece" by H. Kallmann, Handwritten Notes, undated
Box 1, Folder 15	"The Collision Frequency of Electrons in the Terrestial Atmosphere" by H. Kallmann, Handwritten Notes & Equations, undated

Box 1, Folder 16	"Spectroscopy" by H. Kallmann, Handwritten Notes & Equations, undated
Box 1, Folder 17	"Statistical Mechanics" by H. Kallmann, Handwritten Notes & Equations, undated
Box 1, Folder 18	"Report on Statistical Weight Factors "by H. Kallmann, September 21, 1947
Box 1, Folder 19	"Calculation of Heats of Formation for Different Molecules" by H. Kallmann, February 9, 1948
Box 1, Folder 20	"Heats of Formation of Carbon and Nitrogen by H. Kallmann, February 9, 1948
Box 1, Folder 21	"Data for Calculating the Electronic Contribution to the Thermodynamic Functions" by H. Kallmann, February 19, 1948
Box 1, Folder 22	"Complete List of Constants for Calculating Thermodynamics Properties of a Certain Group of Molecules" by H. Kallmann, March 2, 1948
Box 2, Folder 1	On the Thermodynamics of Solids Critical Discussion of the Debye and Raman Theories with Applications by H. Kallmann, RM-261, The RAND Corporation, Santa Monica, CA, August 12, 1949 [3 copies]
Box 2, Folder 2	Thermodynamic Properties of Real Gases for use in High Pressure Problems by H. Kallmann, RM-442, The RAND Corporation, Santa Monica, CA, May 15, 1950
Box 2, Folder 3	Calculation of Specific Impulse and other Rocket Performance Characteristics by H. Kallmann, W.B. White & C.P. Bahrman, RM-417, The RAND Corporation, Santa Monica, CA, June 1, 1950
Box 2, Folder 4	"The Application of the New Raman Theory to the Determination of the Thermodynamic Properties of Solids" by H. Kallmann, October 19, 1950
Box 2, Folder 5	Physical Properties of the Atmosphere between 80 km and 250 km By H. Kallmann, P-261, January 4, 1952 [3 copies]
Box 2, Folder 6	Physical Properties of the Upper Atmosphere by H. Kallmann, RM-841, The RAND Corporation, Santa Monica, CA, May 12, 1952
Box 2, Folder 7	"The Solar Radiation Effect upon the Layer Formation in the Atmosphere" by H. Kallmann, February 15, 1953
Box 2, Folder 8	"The Continuous Layer Formation in the Atmosphere under the Influence of Solar Radiation" by H. Kallmann, The Physical Review (Vol. 90, No. 1, pages 153-154), April 1, 1953
Box 2, Folder 9	"Methods and Results of Upper Atmosphere Research" by H. Kallmann, June 30, 1953

Box 2, Folder 10	Estimate of Average Atmosphere Properties Between 500 km and 1000 km by H. Kallmann, D-1762, The RAND Corporation, Santa Monica, CA, July 16, 1953
Box 2, Folder 11	"Quantitative Analysis of the Lower Ionosphere" by H. Kallmann, September 2, 1953
Box 2, Folder 12	"Tentative Absorption and Emission Spectra of the Atmosphere" by H. Kallmann, June 30, 1954
Box 2, Folder 13	A Study of the Structure of the Ionosphere by H. Kallmann, P-638, The RAND Corporation, Santa Monica, CA, February, 1955 (1 <sup>st</sup> copy)
Box 2, Folder 14	"A Study of the Structure of the Ionosphere" by H. Kallmann, P-638, Typewritten manuscript, February, 1955 (2 <sup>nd</sup> copy)
Box 3, Folder 1	"Scientific use of an Artificial Satellite" by H. Kallmann, D-2838, April 1, 1955
Box 3, Folder 2	"Relationship between Masses and Visual Magnitudes of Meteors" by H. Kallmann, Symposium on Meteor Physics Special Supplement (Vol. 2), Journal of Atmospheric and Terrestrial Physics, 1955
Box 3, Folder 3	"Electron Distribution in a New Model of the Ionosphere" by H. Kallmann, January 31, 1956
Box 3, Folder 4	"Progress in Upper Atmosphere Physics during the Last Decade" by H. Kallmann & J. Kaplan, The Journal of Aviation Medicine (Vol. 27, pages 345-355), August, 1956
Box 3, Folder 5	"Physical Properties of the Atmosphere from 90 to 300 kilometers" by H. Kallmann, W.B. White & H.E. Newell, Jr., Journal of Geophysical Research (Vol. 61, No. 3), September, 1956
Box 3, Folder 6	"Use of an Artificial Satellite in Upper Air Reasearch" by H. Kallmann & W.W. Kellogg, Bulletin of the American Meteorological Society (Vol. 38, No. 1, pages 17-19), January, 1957
Box 3, Folder 7	Properties of the Atmosphere and Ionosphere between 90 and 300 km by H. Kallmann, P-1023, The RAND Corporation, Santa Monica, CA, April 16, 1957
Box 3, Folder 8	A New Model of the Atmosphere and Ionosphere by H. Kallmann, P-1157, The RAND Corporation, Santa Monica, CA, August 19, 1957
Box 3, Folder 9	"Properties of the High Atmosphere" by H. Kallmann, 1957
Box 3, Folder 10	"The Scientific use of an Artificial satellite during the International Geophysical Year, 1957-58", by H. Kallmann, lecture before local chapter of the American Meteorological Society at UCLA, January 18, 1958

Box 3, Folder 11	"A New Model of the Atmosphere and Ionosphere" by H. Kallmann, Extrait des ANNALES DE GEOPHYSIQUE, Tome 14, 1958
Box 3, Folder 12	"The Structure of the lonosphere" by H. Kallmann, lecture for Meteorology 141, May, 1959
Box 3, Folder 13	Meteors: Frequency, Size and Depth of Penetration by H. Kallmann, P-1712, The RAND Corporation, Santa Monica, CA, June 3, 1959
Box 3, Folder 14	"A Preliminary Model Atmosphere Based on Rocket and Satellite Data" by H. Kallmann, Journal of Geophysical Research (Vol. 64, No. 6), June, 1959
Box 3, Folder 15	"Upper Atmosphere Properties Based on Rocket and satellite Data" by H. Kallmann, 1960
Box 3, Folder 16	"Daytime and Nighttime Atmospheric Properties Derived from Rocket and Satellite Observations" by H. Kallmann, Journal of Geophysical Research (Vol. 66, No. 3), March, 1961
Box 3, Folder 17	"The Role of Major and Minor Constituents between 90 km and 120 km" by H. Kallmann, October, 1962
Box 3, Folder 18	"Variations of Atmospheric and Terrestrial Physics" by H. Kallmann, Journal of Atmospheric and Terrestrial Physics (Vol. 24, pages 831-841), October, 1962
Box 3, Folder 19	"Structure and Composition of the Atmosphere" by H. Kallmann, P-2666, November, 1962
Box 3, Folder 20	"The Atmosphere between the Earth and the Sun" by H. Kallmann, November 6, 1966
Box 3, Folder 21	"Study of Aerial Photography" by H. Kallmann, Division of Physics, National Research Council, Ottawa, Canada, and correspondence, April 10, 1952
Box 3, Folder 22	"Problems concerning the Satellite" by H. Kallmann, and correspondence, June 2, 1952
Box 3, Folder 23	"Summary Report of High Altitude Research" by H. Kallmann, March – April, 1959
Box 3, Folder 24	"Some Comments on the International Standard Atmosphere" by H. Kallmann, March 28, 1960
Box 3, Folder 25	"COSPAR International Reference Atmosphere" by H. Kallmann, 1961
Box 3, Folder 26	"Corroboration of Diurnal Temperature Variations in the Ionosphere" by H. Kallmann, November 12, 1963

Box 3, Folder 27	"Preliminary Outline of Future Satellite Activity in the Netherlands" by H. Kallmann, February, 1967
Box 3, Folder 28	"Covered Wagon to the Stars" by H. Kallmann, Speech before the American Protestant Women's Guild in the Hague, Netherlands, February 1, 1968
Box 3, Folder 29	"Atmospheric Densities" by H. Kallmann, handwritten notes and calculations, undated
Box 3, Folder 30	"Electricity" by H. Kallmann, handwritten notes and calculations, undated
Box 3, Folder 31	"Electron Density Calculations" by H. Kallmann, handwritten notes, undated
Box 3, Folder 32	"The International Geophysical Year" by H. Kallmann, undated
Box 3, Folder 33	"Thermodynamic Properties on Real Gases for Performance Study of Solid & Liquid Propellants" by H. Kallmann, handwritten notes & calculations, undated

#### Series 2: Other Authors' Technical Papers

Scope and These are technical papers written by scientists and vairous authors.

Contents:

- Arrangement: This series is arranged in alphabetical order by the author's last name. Please note that folders 34 through 38 in box 4 are arranged in chronological order because no author's name was given. Also folders 39 through 42 in box 4 are arranged in alphabetical order by title because neither the author's name nor the date was given for the paper.
  - Box 3, Folder 34"Theoretical Consideration Regarding the Formation of the Ionized Layers" by D.R.<br/>Bates & M.J. Seaton, The Physical Society, September 1, 1949
  - Box 3, Folder 35 "The Negative Ion Concentration in the Lower Ionosphere" by D.R. Bates & H.S.W. Massey, F.R.S., Journal of Atmospheric and Terrestrial Physics (Vol. 2, pages 1 to 13), May 3, 1951
  - Box 3, Folder 36 "Absorption of Radiation by an Atmosphere of H, H+ and H2+ Semi-Classical Treatment" by D.R. Bates, Monthly Notices of the Royal Astronomical Society (Vol. 112, No. I), September 28, 1951
  - Box 3, Folder 37 "The Photo-Chemistry of some Minor Constituents of the Earth's Atmosphere" (CO2, CO, CH4, N2O) by D.R. Bates & Agnes E. Witherspoon, Monthly Notices of the Royal Astronomical Society (Vol. 112, No. I), October 3, 1951
  - Box 3, Folder 38 "Some Reactions Occurring in the Earth's Upper Atmosphere" by D.R. Bates, Extrait des Annales de Geophysique, Avril-Juin, 1952, April-June, 1952
  - Box 3, Folder 39Detailed Behavior of the Midlatitude Ionosphere from the Explorer XVII Satellite by<br/>L.H. Brace, N.W. Spencer & A. Dalgarno, X-651-64-358, NASA Goddard Space<br/>Flight Center, November, 1964
  - Box 3, Folder 40"OH in the Airglow at High Latitudes" by Joseph W. Chamberland & Norman J.<br/>Oliver, The Physical Review (Vol. 90, 1118-1119), April 21, 1953
  - Box 4, Folder 1"Ionosphere Absorption by N2 and O2 of Certain Extreme Ultraviolet Solar<br/>Wavelengths" by K.C. Clark, The Physical Review (Vol. 87, No. 2, 271-276), March<br/>24, 1952
  - Box 4, Folder 2"Note on the Expansion of High Speed Gas Jet into Vacuum by J.D. Cole, undatedBox 4, Folder 3"Theory of X-Ray Emission of the Sun" by G. Elwert, Journal of Geophysical<br/>Research (Vol. 66, No. 2), February, 1961
  - Box 4, Folder 4 "Collective Electron Contribution to Plasma-Electromagnetic Wave Interaction and its Role in Ionospheric Propagation" by Louis Gold, undated

Box 4, Folder 5	"A Theory of the Temporal and Latitudinal Distribution of Temperature" by Seymour L. Hess & Robert M. Frank, Journal of Meteorology (Vol. 10, No. 2, pages 135-142), October 29, 1952
Box 4, Folder 6	"Space Law Bibliography" by John C. Hogan, The Journal of Air Law and Commerce (Vol. 23, No. 3), Summer, 1956
Box 4, Folder 7	"Legal Terminology for the Upper Regions of the Atmosphere and for the Space the Atmosphere and for the Space Beyond the Atmosphere" by John C. Hogan, The American Journal of International Law (Vol. 51, No. 2), April, 1957
Box 4, Folder 8	"A Guide to the Study of Space Law" by John C. Hogan, Saint Louis University Law Journal, Spring, 1958
Box 4, Folder 9	"Variations in the Earth's Upper Atmosphere as revealed by Satellite Drag" by Luigi G. Jacchia, Reviews of Modern Physics, Vol. 35, No. 4, October, 1963
Box 4, Folder 10	"The Earth's Atmosphere" by Joseph Kaplan, undated
Box 4, Folder 11	"Meteorological Investigations from Manned Space Vehicles" by K.Y. Kondratyev, undated
Box 4, Folder 12	"Meteorological Investigations from Manned Space Vehicles" by K.Y. Kondratyev and 4" x 6" photos of clouds, undated
Box 4, Folder 13	"Nature of the Intensity Variations of the Terrestrial Atmosphere Emission" by V.I. Krassovsky, Institute for Atmosphere Physics, undated
Box 4, Folder 14	"Translations of Two Soviet Articles on Law and Order in Outer Space" by F.J. Krieger & J.R. Thomas, T-98, September 25, 1958
Box 4, Folder 15	"A Constant Intensity Vacuum Spectroscopic Light Source" by Po Lee & G.L. Weissler, Journal of the Optical Society of America (Vol. 42, No. 2, 80-84), August 13, 1951
Box 4, Folder 16	"Absolute Absorption Coefficients of Nitrogen in the Vacuum Ultraviolet" by Po Lee, G.L. Weissler & E.I. Mohr, Journal of the Optical Society of America (Vol. 42, No. 2, 84-90), August 28, 1951
Box 4, Folder 17	"Absorption Coefficients of Oxygen in the Vacuum Ultraviolet" by Po Lee & G.L. Weissler, Journal of the Optical Society of America (Vol. 42, No. 3, 200-203), October 1, 1951
Box 4, Folder 18	"Cross Section of the Neon Absorption Continuum" by Po Lee & G.L. Weissler, Journal of the Optical Society of America (Vol. 42, No. 3, 214-215), December 10, 1951

Box 4, Folder 19	"Absolute Absorption of the H2 Continuum" by Po Lee & G.L. Weissler, The Astrophysical Journal (Vol. 115, No. 3), May, 1952
Box 4, Folder 20	Explorer XXXV First Interim Report and Explorer XXXIII Third Interim Report and the Aimp Project Bibliography by J.J. Madden & J.J. Brahm, X-724-68-45, NASA Goddard Space Flight Center, March, 1968
Box 4, Folder 21	"Lunar International Laboratory, The LIL Project of the International Academy of Astronautics" by F.J. Malina, November 18, 1964
Box 4, Folder 22	Lunar Explorer 35 by Norman F. Ness, X-616-68-166, NASA Goddard Space Flight Center, May, 1968
Box 4, Folder 23	"The Rocket and Satellite Research Panel: The First Space Scientists", Chapter 4 , by Homer E. Newell, Beyond the Atmosphere: Early Years of Space Science (NASA SP-4212), June, 1980
Box 4, Folder 24	"Continuing Harvest: The Broadening Field of Space Science", Chapter 20 by Homer E. Newell, Beyond the Atmosphere: Early Years of Space Science (NASA SP-4211), June, 1980
Box 4, Folder 25	"Neutral Composition of the Atmosphere in the 100 200 km Range" by Alfred O. Nier, March 1, 1964
Box 4, Folder 26	"Uber eine Methode zur Herstellung von Intensitatsmarken bei der photographischen Photometie" by Von Hans-Karl Paetzold, Zeitschrift fur Naturforschung, 1947
Box 4, Folder 27	"Ein Bertrag zur atmospharischen Extinktion" by Von Hans-Karl Paetzold, Weissenau, Astronimische Nachrichten, Febuary 5, 1952
Box 4, Folder 28	"Radiation from Incandescent Gases and Flames" G. Ribaud, [notes, no date], undated
Box 4, Folder 29	"Experimental Investigations Concerning the Illumination of Clouds of Reflecting Particles" by Dr. N. Richter, undated
Box 4, Folder 30	"Oxford-Reading Satellite Radiometer" by C.D. Rodgers, August 4, 1966
Box 4, Folder 31	"Recent Work on the Conductivity of the Ionosphere" by S. Fred Singer, Technical Report ONRL-30-52, Office of Naval Research, London, England, April 14, 1952
Box 4, Folder 32	"Protons Outside the Earth's Atmosphere" by Owen Storey, 1958
Box 4, Folder 33	"Zur Berechnung der Zustandsummen fur Atome und Ionen in einem teilweise ionisierten Gas" by Von A. Unsold, February 17, 1947

Box 4, Folder 34	"The Elementary Theory of Viscosity and Related Phenomena in the Higher Atmosphere" by Donald G. Yerg, Ionospheric Research Laboratory, The Pennsylvania State College, Scientific Report No. 45, April 25, 1953
Box 4, Folder 35	"Results of the Discussion about Upper Atmosphere Densities Derived from Satellite Observation", April 24, 1960
Box 4, Folder 36	"International Standard Atmosphere Above 40 km", April 27, 1960
Box 4, Folder 37	"A Code of Good Practice for Scientific Publications", United Nations Educational, Scientific and Cultural Organization, July 16, 1962
Box 4, Folder 38	U.S. Congress, House, "Mental Illness and Mental Retardation, A Message from President John F. Kennedy," 88th Congress, 1st Session, Document No. 58, and postcard, February 5, 1963
Box 4, Folder 39	"Energie", handwritten notes & calculations, undated
Box 4, Folder 40	"New Rocket Observations of X-Ray Radiation in the Earth's Atmosphere", report in German, handwritten & typed notes, equations & correspondence [1963-1965], 1963-1965
Box 4, Folder 41	"Notation of the Atmospheric Strata and Their Characteristics", Tables, undated
Box 4, Folder 42	"Polyatomic Molecules", undated
Box 4, Folder 43	Tentative Absorption Spectrum of the Atmosphere", handwritten & typed notes with charts, undated

## Series 3: Organizations

Contents: serie	Kallmann-Bijl was associated with and was a member of many professional organizations. This es contains technical papers, programs, newsclippings and correspondence relating to these inizations. At the end of the series is a list of professional publications found in the collection.
Box 4, Folder 44	AFOSR and Convair, Astronautics Symposium, San Diego, CA, 2/18 to 2/20/57, Preliminary Program, February 18 - February 22, 1957
Box 4, Folder 45	American Physical Society, University of New Mexico meeting, Albuquerque, NM, 9/2 to 9/5/53, program and newspaper articles, September 2 - September 5, 1953
Box 4, Folder 46	Ankara Observatory, Ankara, Turkey, brochure, correspondence, 1960-1965
Box 4, Folder 47	Ankara Observatory, Ankara, Turkey, photos, 1960-1965
Box 5, Folder 1	Committee on Space Research (COSPAR), The Hague, Netherlands, handwritten notes by H. Kallmann on meeting, March, 1959
Box 5, Folder 2	COSPAR, Proposal for an International Standard Atmosphere, March 5, 1960
Box 5, Folder 3	COSPAR, meeting in Florence, Italy, April, 1961
Box 5, Folder 4	U.S. Space Science Program, report to COSPAR., May, 1962
Box 5, Folder 5	COSPAR, 6th International Space Science Symposium, Buenos Aires, Argentina, 5/13 to 5/19/65, correspondence, May 13 - May 19, 1965
Box 5, Folder 6	COSPAR International Reference Atmosphere, general introduction, 1965
Box 5, Folder 7	European Space Research Co-operation Optical Tracking, correspondence, December 22, 1960
Box 5, Folder 8	European Space Research Organization, ESRO Sounding Rocket Range Esrange, July, 1966
Box 5, Folder 9	The First International Space Science Symposium, Nice, France, 1/11 to 1/15/60, booklet, January 11 - January 15, 1960
Box 5, Folder 10	Goddard Space Flight Center, Scientific Colloquia, 1968 Fall Series, Fall, 1968
Box 5, Folder 11	International Scientific Radio Union, U.S.A. National Committee, Institute of Radio Engineers, Joint Meeting, 5/22 to 5/25/57, program, May 22 - May 25, 1957
Box 5, Folder 12	Institute of the Aeronautical Sciences, 21st Annual Meeting & Honors Night Dinner, Hotel Astor, New York City, 1/26 to 1/29/53, program, January 26 - January 29, 1953

Box 5, Folder 13	Modern Physics for the Engineer, brochure, September 29, 1952
Box 5, Folder 14	Conference on Motions in the Upper Atmosphere, University of New Mexico meeting, Albuquerque, NM, 9/7 tp 9/9/53, Proceedings Edited by H. Kallmann & technical papers, September 7 - September 9, 1953
Box 5, Folder 15	National Academy of Sciences Autumn Meeting, University of California at La Jolla, CA & U. Cal. at Los Angeles, CA, 10/29 to 11/1/61, Scientific Program, October 29 - November 1, 1961
Box 5, Folder 16	NATO Science Committee, Advanced Study Institute, CORFU, 1961, agenda, 8/7 to 8/19/61, August 7 - August 19, 1961
Box 5, Folder 17	Systems Engineering and Reliability Assessment Support for European Space Programs, February, 1967
Box 5, Folder 18	Aeronautical Engineering Review, April, 1953
Box 5, Folder 19	Bibliography of RAND Publications, undated
Box 5, Folder 20	Bulletin of the American Meteorological Society, (Vol. 38), January, 1957
Box 5, Folder 21	Het Trimvlak, January, 1964
Box 5, Folder 22	Opportunities for Participation in Space Flight Investigations, NASA, January, 1965
Box 5, Folder 23	Planetary Atmospheres: A Continuing Bibliography, NASA, SP-7017, January, 1962 - February, 1965
Box 6, Folder 1	RANDom News, 8 issues of newsletters, September, 1956 - April, 1964
Box 6, Folder 2	"Space Science Reviews", Editor C. de Jager, D. Reidel Publishing Company (Vol. IV, No. 4), June, 1965
Box 6, Folder 3	Star Watch, children's publication, undated

### Series 4: Miscellaneous Materials

ous materials
Miscellaneous photographs & two slides of Dr. Kallmann-Bijl, undated
Miscellaneous photographs of graphs on Variable Densities from Rocket & Satellite Observations, undated
Miscellaneous photographs of Aerobee Launch and 8" x 10" Negatives, Photo of a typhoon from Titosi & negative of "Albert Einstein Lived Here", undated
Miscellaneous 4" x 5" negatives of graphs and 8" x 10" negative of Geodetic Measurements by H. Kallmann, graphs & equations, 1955
OVERSIZED Box: three awards and autographed photograph, undated
Humorous organizational chart, July 1964Notes:Organizational chart for the staff of Rand Corporation Department Head Hildegard Kallmann-Bijl [Hildegard Korf Kallmann], featuring photos and humorous titles for 29 staff members; dated July 1964.