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Records, 1961-1973

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Collection Overview

Repository:	Smithsonian Institution Archives, Washington, D.C., osiaref@si.edu
Title:	Records
Identifier:	Record Unit 253
Date:	1961-1973
Extent:	18.5 cu. ft. (18 record storage boxes) (1 document box)
Creator:::	Smithsonian Astrophysical Observatory. Assistant Director (Science)
Language:	English

Administrative Information

Preferred Citation

Smithsonian Institution Archives, Record Unit 253, Smithsonian Astrophysical Observatory, Assistant Director (Science), Records

Historical Note

Under the administrative control of the Office of the Director, the assistant director (Science) was responsible for coordinating the Smithsonian Astrophysical Observatory's (SAO) scientific investigations. Charles A. Lundquist became assistant director (Science) when the post was created in 1962. When Lundquist resigned in 1973, the position was abolished as a part of the reorganization of SAO and the Harvard College Observatory into the Center for Astrophysics. At that time, seven associate directors were appointed to administer SAO scientific programs.

Descriptive Entry

This record unit consists of administrative records maintained by Charles A. Lundquist as assistant director (Science), which primarily concern SAO scientific projects. Projects represented in the records include the Satellite Tracking Program, Telescope Project, Gravitational Redshift Space Probe Experiment, Hydrogen Maser Program, Very Long Baseline Interferometer (VLBI), Earth Albedo Project, Meteor Research Program, Meteor Simulation Project (Wallops Island), Radio Meteor Project, Southwest Meteor Spectral Patrol, Meteorite Photography and Recovery Project (Prairie Network), Mount Hopkins Observatory, Multiple-Mirror Telescope Project, National Geodetic Satellite Program, SAO Earth Physics Satellite (Cannonball), Big Dish Radio Telescope, Central Bureau for Astronomical Telegrams, and the Star Catalog. The record unit also includes files dealing with SAO and Smithsonian administration; records concerning National Aeronautics and Space Administration (NASA) scientific projects and administration; general correspondence of Lundquist, 1962-1972; and an organizational file. A small amount of material pre-dates Lundquist's appointment as assistant director (Science) in 1962.

Names and Subject Terms

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

Subjects:

Astrophysical observatories
Astrophysics
Research

Types of Materials:

Black-and-white negatives
Black-and-white photographs
Brochures
Clippings
Color photographs
Manuscripts
Maps

Names:

Harvard College Observatory
Harvard-Smithsonian Center for Astrophysics
Lundquist, Charles A.
Mt. Hopkins Observatory
Multiple Mirror Telescope Observatory
National Geodetic Satellite Program
Radio Meteor Project (Harvard College Observatory)
Smithsonian Astrophysical Observatory Earth Albedo Project
Smithsonian Astrophysical Observatory Very Long Baseline Interferometer
Smithsonian Astrophysical Observatory. Big Dish Radio Telescope
Smithsonian Astrophysical Observatory. Central Bureau for Astronomical Telegrams
Smithsonian Astrophysical Observatory. Earth Physics Satellite
Smithsonian Astrophysical Observatory. Gravitational Redshift Space Probe Experiment
Smithsonian Astrophysical Observatory. Hydrogen Maser Program
Smithsonian Astrophysical Observatory. Meteor Research Program
Smithsonian Astrophysical Observatory. Meteor Simulation Project
Smithsonian Astrophysical Observatory. Meteorite Photography and Recovery Project (Prairie Network)
Smithsonian Astrophysical Observatory. Project Celescope
Smithsonian Astrophysical Observatory. Satellite Tracking Program
Smithsonian Astrophysical Observatory. Southwest Meteor Spectral Patrol
Smithsonian Astrophysical Observatory. Star Catalogue
United States. National Aeronautics and Space Administration

Container Listing

Series 1: SAO Project Files, 1961-1973.

This series consists of files documenting scientific projects carried out by the Smithsonian Astrophysical Observatory (SAO), 1961-1973. The files include correspondence and memoranda, TWX teletype messages, project proposals and reports, photographs, publications, and newspaper clippings. Projects represented by records include Atomic and Molecular Physics projects; Telescope Project; Comet studies; Earth Physics projects; Environmental Sciences Program; Gamma and X-Ray Astronomy projects; Historical Astronomy projects; Infrared projects; Intercomparison projects; Lunar and Planetary studies; Meteor projects; Meteorites and Cosmic Dust projects; Mount Hopkins Observatory; Multiple-Mirror Telescope Project (MMT); National Geodetic Satellite Program; Satellite Geodesy Program; Satellite Tracking Program; Theoretical Astrophysics projects; and miscellaneous projects. Specific projects are arranged alphabetically under the above-listed subject categories.

Box 1

Atomic and Molecular Physics Projects

- | | |
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| Box 1 of 19 | Atmosphere Explorer Missions C, D, and E, Theoretical Investigations, Alex Dalgarno, 1971-1973. |
| Box 1 of 19 | Carlton, Nathaniel P. Atomic and Molecular projects, 1963-1970. |
| Box 1 of 19 | Coordinated Study of the Aeronomy of the Thermosphere, Alex Dalgarno, 1969. |
| Box 1 of 19 | Electron - Accelerator Experiment, Nathaniel P. Carlton, 1967-1969. |
| Box 1 of 19 | Investigation of Carbon Dioxide Absorption on Mars and Venus, Nathaniel P. Carlton, 1966-1972. |
| Box 1 of 19 | Investigation of the Scattering and Extinction of Sunlight in the Atmosphere of Venus, Wesley A. Traub and Nathaniel P. Carlton, 1972. |
| Box 1 of 19 | Planetary Spectroscopy Project, Nathaniel P. Carlton, 1967-1969. |
| Box 1 of 19 | Study of Atomic Collisions for the Controlled Thermonuclear Fusion Research Program, Martin R. Flannery and Hiram Levy II, 1969. |
| Box 1 of 19 | Study of Helium Molecular Spectra, Alex Dalgarno, 1968-1970. |

Telescope Project

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| Box 1 of 19 | Telescope Balloon Flight Experiment, 1965. |
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- Box 1 of 19 Telescope Catalog of Ultra-Violet Stellar Observations, William A. Deutschman, 1972.
- Box 1 of 19 Miscellaneous publications regarding Telescope Project. (2 folders)
- Comet Studies
- Box 1 of 19 Photographic Investigation of Comets [SAO program for the International Years of the Quiet Sun (IQSY)], 1962-1967.
- Box 1 of 19 Analysis of Photographic Observations of Comets [SAO program for the International Years of the Quiet Sun (IQSY)], 1962-1968. (2 folders)
- Box 1 of 19 Dynamical and Photometric Investigation of Cometary Type II Tails, Zdenek Sekanina, 1970-1972.
- Box 1 of 19 Investigation of Nongravitational Forces Acting on Comets, Brian G. Marsden, 1968.
- Earth Physics Projects
- Box 1 of 19 Earth Resources Technology Satellite (ERTS), 1971-1973. Includes correspondence and memoranda, project proposals, event notification reports, and weekly status reports. (3 folders)
- Box 2
- Box 2 of 19 Gravitational Redshift Space Probe Experiment, 1969, 1971-1973. Includes correspondence, memoranda and project proposal. (4 folders)
- Box 2 of 19 Hydrogen Maser Program, 1968-1969. Correspondence concerning the transfer history of the program.
- Box 2 of 19 Hydrogen Maser Program, 1968. Program development plan for the Hydrogen Maser Relativity Satellite.
- Box 2 of 19 Hydrogen Maser Program, 1969-1973. Proposals and reports. (5 folders)
- Box 2 of 19 Orbiting Maser Frequency Comparison/Time Synchronization Experiment for the Advanced Applications Flight Experiments Program, Robert F. C. Vessot and Martin W. Levine, 1970.
- Box 2 of 19 Very Long Baseline Interferometer (VLBI), planning history, 1967-1969.

Box 2 of 19 VLBI, general correspondence and project proposals, 1969-1973. (2 folders)

Box 2 of 19 VLBI, Backend System Experiments, 1971-1972.

Box 2 of 19 VLBI, Continental Drift Project, 1967-1969. (2 folders)

Box 3

Box 3 of 19 Very Long Baseline Interferometer (VLBI), ATS-3 Synchronous Satellite Experiment, 1972.

Environmental Sciences Program

Box 3 of 19 Correspondence, memoranda, and reports concerning SAO Environmental Science projects and SAO participation in the program of the S. I. Office of Environmental Sciences, 1969-1973. (5 folders)

Box 3 of 19 Ad Hoc Review of Smithsonian Ecology, 1968.

Box 3 of 19 Levy, Hiram II. Environmental Science projects, 1970-1972.

Box 3 of 19 SAO Environmental Science Seminar, February 1971.

Box 3 of 19 Standardized Techniques for Atmospheric Research through Astronomical Procedures (STARTAP), 1971-1972.

Gamma and X-Ray Astronomy Projects

Box 3 of 19 Absolute Time-of-Arrival Measurements of Optical Pulses from the Crab Pulsar, Costas Papaliolios, 1973.

Box 3 of 19 Cosmic X-Ray Studies from Rockets with Focusing Orbits, Paul Gorenstein and Stephen S. Murray, 1973.

Box 3 of 19 Gamma Ray Spark Chamber Experiments, 1963-1965.

Box 3 of 19 High-Energy Gamma-Ray Astronomy Experiment for High-Altitude Balloons, Giovanni G. Fazio, 1965-1968.

Box 3 of 19 India-SAO Gamma Ray Balloon Flight Experiment, 1967-1970.

Box 3 of 19 Mount Hopkins Gamma-Ray Project, 1968-1972.

Box 3 of 19 Natick Solar Furnace Experiment, 1965. Includes photographs.

- Box 3 of 19 Reduction and Analysis of Data from the S-16 High-Energy Gamma-Ray Experiment, Giovanni G. Fazio and E. M. Hafner, 1963-1966.
- Box 3 of 19 Search for Cosmic X-Ray and Gamma Radiation from the Pulsating Radio Sources (Pulsars), Giovanni G. Fazio, 1969.
- Box 3 of 19 10 - MEV Gamma-Ray Gas-Cerenkov Detector for the High-Energy Astronomy Observatory (HEAO) Program, Henry F. Helmken and Giovanni G. Fazio, 1970.
- Box 3 of 19 UHURU Advanced Studies and Guest Investigator Program, Riccardo Giacconi, 1973.
- Historical Astronomy
- Box 3 of 19 Aerial Survey of Stonehenge and Callanish, Gerald S. Hawkins, 1964-1966.
- Box 3 of 19 Investigation of the Desert Lines at Nasca, Peru, Gerald S. Hawkins, 1967-1969.
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- Box 4 of 19 An Investigation of the Temples of Karnak, Gerald S. Hawkins, 1969, 1973.
- Box 4 of 19 Stars in Prehistory, Gerald S. Hawkins, 1965.
- Infrared Projects
- Box 4 of 19 Infrared Balloon Program, 1972-1973.
- Box 4 of 19 Infrared Stellar Spectra Project, 1969-1973.
- Intercomparison Projects
- Box 4 of 19 Experiment to Set Accuracy Limits on Doppler Satellite Tracking Equipment, Edward M. Gaposchkin and Richard D. Michelini, 1968.
- Box 4 of 19 Intercomparison of Collocated Laser Optical and Grarr Radio Ranging System Tracks on GEOS-A, 1964-1968.
- Box 4 of 19 Jupiter Camera Intercomparison Experiments, 1965-1966.
- Box 4 of 19 SECOR Comparison Tests, 1964-1968.

Lunar and Planetary Studies

- Box 4 of 19 Aeronomy Symposium, 1964-1966.
- Box 4 of 19 Air Drag of Atmosphere Explorers AE-C and AE-D, Luigi G. Jacchia, 1969.
- Box 4 of 19 Catalog of Lunar Craters, Boston University, 1963-1966.
- Box 4 of 19 The Design of an Experiment to Study the Velocity of Gravitational Waves, Winfield W. Salisbury, 1969.
- Box 4 of 19 Earth Albedo Project, Fred A. Franklin, 1963-1968.
- Box 4 of 19 Exobiology Project, Carl Sagen, 1966-1969.
- Box 4 of 19 Investigation of Radio-Thermal Properties of the Moon, Winfield W. Salisbury, 1968.
- Box 4 of 19 Investigation of the Generation of Light by Free Electrons, Winfield W. Salisbury, 1969-1971.
- Box 4 of 19 Lunar Eclipse Photography, 1964.
- Box 4 of 19 Lunar Model Studies, Winfield W. Salisbury and Zdenek Sekanina, 1969.
- Box 4 of 19 Lunar Orbiter Selenodesy Program, 1965-1966.
- Box 4 of 19 Lunar Orbiter Tracking, 1962-1964.
- Box 4 of 19 Lunar Temperature Measurements, Winfield W. Salisbury and George W. Swenson, Jr., 1969-1970.
- Box 4 of 19 Magnetosphere Experiments, Mario D. Grossi, 1964-1970. (3 folders)

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- Box 5 of 19 Plasma Physics and Environmental Perturbation Laboratory (PPEPL), Mario D. Grossi, 1971-1973.
- Box 5 of 19 The Precise Measurement of the Earth's Rotation by Means of a Ring Laser, Winfield W. Salisbury, 1968-1969.

Box 5 of 19 Research Program in Remote Sensing of the Troposphere by Radio
Troposcatter Techniques, Mario D. Grossi and Naresh C. Mathur, 1971-1973.

Box 5 of 19 Scalar-Tensor Gravitational Theory Project, Winfield W. Salisbury, 1972.

Box 5 of 19 Search for Luminescence on Lunar Surface, 1965.

Box 5 of 19 Translunar Radio Communication Project, Winfield W. Salisbury, 1967-1969.

Meteor Projects

Box 5 of 19 Meteor Research Program, 1966-1967. Includes correspondence,
memoranda, project proposals, and reports. (2 folders)

Box 5 of 19 Meteor Research Program, 1968-1972. Includes correspondence,
memoranda, project proposals, and reports. (5 folders)

Box 5 of 19 Meteor Simulation Project (Wallops Island), 1962-1968. Includes
correspondence, memoranda, project proposals, and reports. (3 folders)

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Box 6 of 19 Operation Fireball, 1965-1967.

Box 6 of 19 Optical Meteor Program, 1966.

Box 6 of 19 Radar Meteor Wind Measurement Project, 1962-1970. (2 folders)

Box 6 of 19 Radio Meteor Project, 1961-1966. (2 folders)

Box 6 of 19 Reduction of Meteor Plates, 1965-1966.

Box 6 of 19 Southwest Meteor Spectral Patrol, 1968-1972.

Box 6 of 19 Symposium on Meteor Orbits and Dust, August 1965.

Meteorites and Cosmic Dust Projects

Box 6 of 19 Allende (Mexico) Meteorite, 1969-1970.

Box 6 of 19 Atmospheric Sampling of Meteoric Debris, 1967-1972.

Box 6 of 19 Crestone (Colorado) Crater, 1963-1965.

- Box 6 of 19 East Indies Crater Search, 1963-1966.
- Box 6 of 19 Extraterrestrial Particles and Volcanic Dust, 1963-1965.
- Box 6 of 19 Greenland Ice Sheet Project, Edward L. Fireman, 1966-1968.
- Box 6 of 19 Intrinsic Studies of Materials, Matthias F. Comerford, 1965-1970.
- Box 6 of 19 Isotopes Found in Recovered Meteorites and Satellites, 1961-1962 and undated.
- Box 6 of 19 Isotopic Analysis of Lunar Material with a Laser Microprobe, George H. Megrue, 1967-1971.
- Box 6 of 19 Laser Measurement of Dust Layers at Meteor Heights, 1970.
- Box 6 of 19 Lost City (Oklahoma) Meteorite, 1969-1970.
- Box 6 of 19 Measurement and Analysis of Argon-37 and Argon-39 in Returned Lunar Materials, Edward L. Fireman, 1967-1971.
- Box 6 of 19 Meteorites, general correspondence, 1963-1969.
- Box 6 of 19 Meteorite Discussion Group, 1962-1966.
- Box 6 of 19 Meteorite Photography and Recovery Project (Prairie Network), 1963-1968.
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- Box 7 of 19 Meteorite Photography and Recovery Project (Prairie Network), 1969-1972.
- Box 7 of 19 Micrometeoroid Experiment on the OGO 4 Satellite, Carl S. Nilsson and Frances W. Wright, 1966-1970.
- Box 7 of 19 Mineralogic and Petrologic Study of Returned Lunar Soil, John A. Wood, 1966-1973.
- Box 7 of 19 Muon-Neutrino Investigations and Geophysical Studies Involving Low-Level Counting, Devendra Lal and Edward L. Fireman, 1973.
- Box 7 of 19 Paneth Meteorite Collection, 1964-1965.
- Box 7 of 19 Pocahontas (Iowa) Meteorite, undated.

- Box 7 of 19 Radioactivities in Returned Lunar Materials, Edward L. Fireman, 1968-1973.
- Box 7 of 19 Rare Gases in Meteorites, Edward L. Fireman, 1964-1965.
- Box 7 of 19 Revelstoke (Canada) Meteorite, 1969.
- Box 7 of 19 Study of Lunar Samples Collected by the Soviet Automatic Station, Luna 16, 1970-1971.
- Mount Hopkins Observatory
- Box 7 of 19 General correspondence, 1965-1973. Includes material documenting the early history of the Observatory, particularly the selection of Mount Hopkins as the site. (9 folders)
- Box 7 of 19 Annual Science Review, 1969-1972.
- Box 7 of 19 Electronics Research Center, 1967-1969.
- Box 7 of 19 Fire 36" Telescope, 1965-1966.
- Box 7 of 19 48-inch Mirror/Atlas Mount Telescope, 1967-1973.
- Box 7 of 19 Land withdrawal request, 1968.
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- Box 8 of 19 Large Optical Reflector, 1964-1973.
- Box 8 of 19 Major Optical Reflector (MOR), 1966-1970.
- Box 8 of 19 Master Plan Study, 1967.
- Box 8 of 19 Miscellaneous Publications, 1970-1971.
- Box 8 of 19 NASA-SAO Laser Collocation Experiment, 1969-1970.
- Box 8 of 19 Optical Space Communications Research, Martin W. Levine and Richard E. McCrosky, 1971.
- Box 8 of 19 Photographs, undated.
- Box 8 of 19 Satellite Tracking Projects, 1968-1969.

- Box 8 of 19 Seeing Experiments, Michael R. Pearlman, 1967-1971.
- Box 8 of 19 60-inch Telescope, 1967-1971.
- Box 8 of 19 12-inch Telescope, 1969. Includes photographs.
- Box 8 of 19 24-inch Telescope, 1973.
- Multiple-Mirror Telescope (SAO-University of Arizona)
- Box 8 of 19 General correspondence, plans, reports, photographs, and publications, 1970-1973. (3 folders)
- Box 8 of 19 Memorandum of Agreement between SAO and the University of Arizona, September 20, 1971.
- National Geodetic Satellite Program
- Box 8 of 19 General correspondence and reports, 1963-1972. (2 folders)
- Box 8 of 19 Proposal to Develop Alternate Functions for Geopotential Expansions, Benno Benima, 1968.
- Box 8 of 19 Proposal for an ATS-G Satellite-to-Satellite Tracking System Experiment, George C. Weiffenback, 1969.
- Box 9
- Box 9 of 19 Contracts and progress reports on data analysis by SAO for the National Geodetic Satellite Program, 1965-1969. (2 folders)
- Box 9 of 19 Department of Defense briefing, 1968.
- Box 9 of 19 The Evaluation of Resonant Orbital Elements for Geodetic Investigations, Edward M. Gaposchkin, 1968.
- Box 9 of 19 Geodetic Orbital Predictions, Michael R. Pearlman and Beatrice R. Miller, 1973.
- Box 9 of 19 Geodetic Research Studies, Edward M. Gaposchkin, Charles A. Lundquist, and George Veis, 1967-1969.
- Box 9 of 19 Geopotential Model Tests, 1968.

- Box 9 of 19 Investigation of Balloon Satellite Dynamics, Edward M. Gaposchkin and Kurt Lambeck, 1968.
- Box 9 of 19 Investigation of Earth Dynamics from Satellite Observations, Edward M. Gaposchkin, 1969-1973.
- Box 9 of 19 Investigation of Pageos Dynamics, Edward M. Gaposchkin and Kurt Lambeck, 1968.
- Box 9 of 19 Proposal to Investigate Ship-Based Tracking of Satellites for Geoscience Applications, Charles A. Lundquist and Richard D. Michelini, 1968.
- Box 9 of 19 Mueller, Ivan I. Proposed Optical Network for the National Geodetic Satellite Program, 1966.
- Box 9 of 19 Proposal for the Rationalization of Reference Systems and the Determination of Motion of the Earth's Pole by Use of the ATS-G Satellite, Edward M. Gaposchkin and Kurt Lambeck, 1969-1970.
- Box 9 of 19 A Study Program for Geodetic Satellite Applications, Michael R. Pearlman, 1971-1972.
- Box 9 of 19 Wolf Research and Development Corporation, reports, 1965.
- Satellite Geodesy Program
- Box 9 of 19 General correspondence and memoranda, 1963-1968. (5 folders)
- Box 9 of 19 ATS-G Laser Communications Experiment, Martin W. Levine and Richard E. McCrosky, 1971.
- Box 9 of 19 Cannonball (SAO Earth Physics Satellite), 1970-1973.
- Box 9 of 19 European Participation in the Geodetic Earth Orbiting Satellite (GEOS) Project, 1965-1966.
- Box 9 of 19 Geodesy Colloquium, 1965.
- Box 9 of 19 Geodetic Earth Orbiting Satellite-A (GEOS-A). General correspondence and reports, 1965-1968.
- Box 9 of 19 GEOS-A. Operations plan, 1965.

Box 9 of 19 Geodetic Earth Orbiting Satellite-B (GEOS-B). General correspondence, memoranda, and reports, 1967-1970.

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Box 10 of 19 GEOS-B. Plan of Operation, Project Development Plan, and Performance Specifications, 1966-1967.

Box 10 of 19 GEOS-B. C-Band System Project, 1967-1969.

Box 10 of 19 Geodetic Earth Orbiting Satellite-C (GEOS-C). General correspondence, memoranda, and reports, 1968-1972.

Box 10 of 19 Orbiting Geophysical Observatory (OGO), 1965-1968.

Box 10 of 19 Passive Geodetic Satellite (PAGEOS), 1965-1968.

Box 10 of 19 "Satellite Geodesy and Related Geophysics." Lecture by Charles A. Lundquist, April 3, 1968.

Box 10 of 19 SECOR Data Analysis, Edward M. Gaposchkin and Geraldine Mendes, 1969.

Box 10 of 19 Simultaneous Observation Program, 1963-1967.

Box 10 of 19 SAO - International Geodetic Satellite Laser Tracking Program, 1967-1968.

Box 10 of 19 SAO Summer Seminar on Geodesy, 1966, 1968-1969. (3 folders)

Box 10 of 19 "Standard Earth," 1964-1970.

Box 10 of 19 Timation Project, 1972.

Box 10 of 19 Tracking Moving Platforms Project, 1970.

Box 10 of 19 TRIAD Proposal, 1971.

Satellite Tracking Program

Box 10 of 19 Able Series (Air Force Burst Experiment), 1963-1964.

Box 10 of 19 Air-Density Explorer Satellite (S-56B), 1963.

Box 10 of 19 Project ANNA, 1962-1964.

- Box 10 of 19 Animal Tracking by Satellite, James C. Maxwell and Helmut K. Buechner, 1967-1972.
- Box 10 of 19 Applications Technology Satellite-B, 1967.
- Box 10 of 19 Argentine Satellite Fragment, 1965.
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- Box 11 of 19 Ariel III, 1969.
- Box 11 of 19 Barium Ion Cloud Experiment, 1966-1972. (2 folders)
- Box 11 of 19 Centaur, 1963-1964.
- Box 11 of 19 Cochise Chief, 1965-1966.
- Box 11 of 19 Discoverer, 1962.
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- Box 11 of 19 Gemini Series, 1964-1966.
- Box 11 of 19 Goldflash Project, 1965-1966.
- Box 11 of 19 Grid Sphere Drag Experiment, 1968.
- Box 11 of 19 Imp III, 1968.
- Box 11 of 19 Intelsat, 1966-1969.
- Box 11 of 19 Launch photographs from Mount Hopkins Baker-Nunn Camera, 1968.
- Box 11 of 19 LES-6, 1968.
- Box 11 of 19 LORAN-C Experiment, 1969.
- Box 11 of 19 Mercury-Atlas 9 (MA-9) Booster, 1963.
- Box 11 of 19 Missile Trail Photography (AFCRL), 1964-1967.
- Box 11 of 19 OV4-1, 1967-1968.

- Box 11 of 19 Predictions for Satellite Tracking Program (STP), 1965.
- Box 11 of 19 Proposal for Extension of Satellite Optical Observations in the Western Pacific Area, 1965-1966.
- Box 11 of 19 Satellite to Satellite Experiment, 1966-1967.
- Box 11 of 19 STP. Monthly reports, 1967, 1970-1973.
- Box 11 of 19 STP. Semi-Annual Progress Reports, no. 1-21, 1959-1969. (21 folders)

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- Box 12 of 19 STP. Semi-Annual Progress Reports, no. 22-26, 1970-1972. (5 folders)
- Box 12 of 19 Saturn 5 (SA-5) Tracking Project, 1963-1966.
- Box 12 of 19 Saturn 6 (SA-6) Tracking Project, 1964.
- Box 12 of 19 Saturn 7 (SA-7) Tracking Project, 1964.
- Box 12 of 19 Sodium Vapor Experiments, Argentina, 1963.
- Box 12 of 19 Southern Ontario Satellite Fragment, 1963.
- Box 12 of 19 Star Flash Project, 1964-1965.
- Box 12 of 19 Telstar Flash Tracking, 1962-1964.
- Box 12 of 19 Timing for Baker-Nunn Camera, 1963-1970.
- Box 12 of 19 UK-E, 1967-1969.
- Box 12 of 19 Voltz-Solar Intensity and Twilight Measurements, 1968-1969.
- Box 12 of 19 Yorke, Bob. Space fragment photographs, 1969.
- Theoretical Astrophysics Projects
- Box 12 of 19 Active Sun UV Solar Models, Eugene H. Avrett, 1971-1972.

- Box 12 of 19 Analysis of OSO Data to Determine the Structure and Energy Balance of the Solar Chromosphere, Eugene H. Avrett and Wolfgang Kalkofen, 1972-1973.
- Box 12 of 19 Analysis of Solar Rocket and Satellite Data, Eugene H. Avrett, 1971-1972.
- Box 12 of 19 Calculation and Publication of a Grid of Line-Blanketed Model Stellar Atmospheres, Eugene H. Avrett, 1971-1972.
- Box 12 of 19 Calculations of a Grid of Line-Blanketed Model Atmospheres for Early-Type Stars, Eugene H. Avrett, Robert L. Kurucz, and Eric Peytremann, 1971.
- Box 12 of 19 Calculation of Theoretical Chromospheric Models and Predicted OSO I Spectra, Eugene H. Avrett, 1973.
- Box 12 of 19 Harvard-Smithsonian Conference on Stellar Atmospheres, 1964, 1968.
- Box 12 of 19 Helium Abundance Projects, Stephen E. Strom, 1967-1969.
- Box 12 of 19 Investigation of Ultraviolet Fluxes of Normal and Peculiar Stars, William A. Deutschman and Rudolph E. Schild, 1972-1973.
- Box 12 of 19 Post Doctoral Fellowship Program for Astrophysical Computations, 1967-1968.
- Box 12 of 19 Study of Abundance Analysis of Stars in the Spectral Range B5 through G2, Stephen E. Strom, 1966-1970.
- Box 12 of 19 The Study of the Structure of the Solar Chromosphere, Wolfgang Kalkofen, 1969.
- Box 12 of 19 The Study of Super-Metal-Rich K Giants, Stephen E. Strom, 1969.
- Box 12 of 19 Theoretical Research on Stellar Atmospheres, Charles A. Whitney, 1965-1969.
- Box 12 of 19 Theoretical Study of Nonequilibrium Flow in Shock Fronts, Charles A. Whitney and Charles T. Bartlett, 1967.
- Box 12 of 19 Ultraviolet Interstellar Extinction and Unusual Objects Observed by the Telescope Experiment, Cecilia Payne-Gaposchkin, 1972-1973.
- Miscellaneous Projects
- Box 12 of 19 Big Dish Radio Telescope, 1968-1971.

- Box 12 of 19 Central Bureau for Astronomical Telegrams, 1965-1968.
- Box 12 of 19 Scanner Project, 1964-1969.
- Box 12 of 19 Solar Flare Observation Project, 1963, 1966.
- Box 12 of 19 Star Catalog, 1963-1971.

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Series 2: National Aeronautics and Space Administration (NASA) Files, 1962-1973.

This series consists of files, maintained by Charles A. Lundquist, primarily concerning scientific projects of the National Aeronautics and Space Administration (NASA). Much of the material concerns SAO involvement in these projects, particularly SAO tracking of satellites launched by NASA. A smaller amount of records concern NASA administrative activities. The files include correspondence and memoranda, news releases, newspaper clippings, publications, and project proposals and reports. The files are arranged alphabetically.

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- Box 13 of 19 Air Density Explorer, 1964.
- Box 13 of 19 Air Density-Injun Explorer C, 1968.
- Box 13 of 19 Alouette. US-Canada Space Project. 1962.
- Box 13 of 19 Anchored Interplanetary Monitoring Probe (AIMP-4), 1966.
- Box 13 of 19 Anchored Interplanetary Monitoring Probe (AIMP-E), 1967.
- Box 13 of 19 Applications Technology Satellite-1 (ATS-1), 1966-1968.
- Box 13 of 19 Applications Technology Satellite-D (ATS-D), 1968.
- Box 13 of 19 Asteroid/Jupiter Mission, proposals, 1968.
- Box 13 of 19 Astrodynamics at NASA, September 4, 1969.
- Box 13 of 19 Biosatellite D, 1966-1968.
- Box 13 of 19 Computer Programs, 1969.
- Box 13 of 19 Earth Physics and Geodesy Program, 1970-1971.
- Box 13 of 19 Earth Resources Technology Satellite (ERTS), 1972.
- Box 13 of 19 EGRS Satellites, 1963-1968.
- Box 13 of 19 European Space Research Organization Satellites I and II (ESRO),
1967-1968.
- Box 13 of 19 Explorer Satellites, 1966-1968.

- Box 13 of 19 Fixed Frequency Topside Sounder (IE-A), 1964.
- Box 13 of 19 Gemini 1-11, 1964-1967.
- Box 13 of 19 Grand Tour Mission, 1970-1971.
- Box 13 of 19 High Energy Astronomical Observatory (HEAO), 1970.
- Box 13 of 19 Highly Eccentric Orbit Satellite A (HEOS-A), 1968.
- Box 13 of 19 International Programs, 1967, 1971.
- Box 13 of 19 Interplanetary Monitoring Platform (IMP), 1964-1968.
- Box 13 of 19 Interplanetary Monitoring Platform (IMP-1). Magnetic Field Experiment, 1964-1965.
- Box 13 of 19 Invitations to propose experiments, 1962-1966.
- Box 13 of 19 ISIS-A, 1969.
- Box 13 of 19 Lamp Objects, 1963-1964.
- Box 13 of 19 Laser Systems, 1967-1969.
- Box 13 of 19 Lunar Orbiters, 1966-1968.
- Box 13 of 19 Lunar Orbiter Photographic Data, 1969.
- Box 13 of 19 Lunar Science Institute, 1968-1969.
- Box 13 of 19 Manned Orbital Laboratory (MOL), 1964-1965.
- Box 13 of 19 Manned Spacecraft Center, 1963-1967.
- Box 13 of 19 Mariner Projects, 1962-1972. (2 folders)
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- Box 13 of 19 Marshall Space Flight Center, 1961-1969.

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- Box 14 of 19 Memoranda, press releases, and newspaper clippings, 1962-1971. (2 folders)
- Box 14 of 19 Mercury-Atlas 9 (MA-9), 1963.
- Box 14 of 19 Micrometeoroid Satellite (Explorer XVI), 1962-1964.
- Box 14 of 19 Minitrack Optical Tracking System (MOTS), 1963-1964.
- Box 14 of 19 Mobil Launcher, 1965.
- Box 14 of 19 Natural Resources Program, 1966.
- Box 14 of 19 Needles Project, 1963.
- Box 14 of 19 Nimbus Weather Satellite, 1964-1968.
- Box 14 of 19 Orbiting Laboratory, 1967.
- Box 14 of 19 Orbiting Astronomical Observatory (OAO), 1965-1972.
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- Box 14 of 19 Orbiting Solar Observatory (OSO), 1963-1972.
- Box 14 of 19 Pegasus, 1964-1969.
- Box 14 of 19 Pioneer Satellites, 1966-1967.
- Box 14 of 19 Planetary Explorer Mission to Venus, 1971.
- Box 14 of 19 Polar Ionosphere Beacon Satellite (S-66), 1963-1964.
- Box 14 of 19 Ranger Project, 1964-1965.
- Box 14 of 19 San Marco, 1964-1968.
- Box 14 of 19 Satellite Situation Reports, 1972-1973.
- Box 14 of 19 Skylab, 1970.
- Box 14 of 19 Small Astronomy Satellite Program (SAS), 1967-1972.

- Box 14 of 19 Spacewarn, 1967.

- Box 14 of 19 "Study of NASA Programs and Research Centers of Possible Interest to
SAO," John Hsia, 1966.

- Box 14 of 19 Viking 1973 Mars Mission, 1969-1970.

- Box 14 of 19 Voyager Orbiter Mission to Mars, 1965.

- Box 14 of 19 Wallops Island Laser Collocation, 1967-1969.

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Series 3: SAO Administrative Files, 1962-1973.

This series consists of correspondence, memoranda, publications, and reports concerning SAO administrative programs. Included is material regarding SAO administrative offices, personnel, conferences and meetings, SAO computer programs, and SAO-Harvard College Observatory (HCO) relations. Of special interest is material concerning SAO involvement in the astrophysical and space programs of foreign countries. The files are arranged alphabetically.

Box 15

- Box 15 of 19 Australian Satellite Program, 1967-1969.
- Box 15 of 19 Business Office, 1963-1969.
- Box 15 of 19 Communications Center, 1963-1967.
- Box 15 of 19 Computer Center. Budget, 1968-1969.
- Box 15 of 19 Computer Center. Computer Research Awards Program, 1970-1972.
- Box 15 of 19 Computer Center. GSA Computer Center, 1968-1969.
- Box 15 of 19 Computer Center. General correspondence and memoranda, 1965-1972.
- Box 15 of 19 Computer Center. "Programming News," no. 19-28, 1967.
- Box 15 of 19 Computer Center. Project Proposals, 1970. (2 folders)
- Box 15 of 19 Computer Center. Rush Cards, 1968-1970.
- Box 15 of 19 Computer Center. Scientific Advisory Computer Committee, 1967-1972.
- Box 15 of 19 Computer Center. 6400 Programs, 1967, 1972.
- Box 15 of 19 Computer Center. "Status Report," no. 2-4, 1968.
- Box 15 of 19 Convocations, 1964, 1967.
- Box 15 of 19 Copyright laws, 1966-1967.
- Box 15 of 19 Editorial and Publications Division, 1963-1969.
- Box 15 of 19 Egyptian Satellite Program, 1964, 1968.

- Box 15 of 19 Engineering Department, 1968-1969.
- Box 15 of 19 England-SAO Relations, 1963-1970. Consists of correspondence with Royal Radar Establishment and material regarding SAO tracking of British satellites.
- Box 15 of 19 Foreign Visitors to SAO, 1964-1966, 1971.
- Box 15 of 19 French-SAO Relations, 1964, 1966-1967. Consists mostly of material concerning SAO tracking of the French satellite D-1C, 1966-1967.
- Box 15 of 19 French Space Program, 1964-1968.
- Box 15 of 19 German-SAO Relations, 1966-1970. Consists mostly of correspondence with and about the Bonn University Institute for Astrophysics and Space Research, 1966.
- Box 15 of 19 Graduate Fellowships, 1967-1973.
- Box 15 of 19 Harvard College Observatory-SAO Advisory Committee, 1971-1973.
- Box 15 of 19 Harvard College Observatory. Special services by SAO, 1965-1973.
- Box 15 of 19 Hungarian-SAO Relations, 1968.
- Box 15 of 19 Israel-SAO Relations, 1967-1969. Joint SAO-Israel project, "A Study of Collective Behavior of Self-Gravitating Systems."

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- Box 16 of 19 Israel-SAO Relations, 1969-1971. Joint SAO-Israel project, "An Astronomical Observing Program in Israel."
- Box 16 of 19 Italian-SAO Relations, 1965-1972.
- Box 16 of 19 Japan-SAO Relations, 1968-1969.
- Box 16 of 19 Library, 1968-1970.
- Box 16 of 19 National Academy of Sciences, postdoctoral fellowships, 1964-1973.
- Box 16 of 19 National Science Foundation, 1970-1972.
- Box 16 of 19 Office of the Director, 1963-1970.

Box 16 of 19 Personnel. Candidates for Staff or Visiting Positions, 1963-1973. (2 folders)

Box 16 of 19 Personnel Department. General correspondence and memoranda, 1962-1973.

Box 16 of 19 Polish-SAO Relations, 1966-1973. Mostly concerns a joint SAO-Polish program to develop a computer center in Warsaw, 1969-1970. Also included is correspondence regarding visits to SAO by Polish scientists, 1968-1973. (2 folders)

Box 16 of 19 "Science at SAO I," November 3, 1966.

Box 16 of 19 "Science at SAO II," November 5, 1970.

Box 16 of 19 SAO Organization, 1966-1969.

Box 16 of 19 "SAO Role in the Space Program of the 1970s," April 1970.

Box 16 of 19 Study Group for the Science and Technology of SAO Astrophysical Observing System, 1967-1968.

Box 16 of 19 Summer Employment, 1965-1969.

Box 17

Box 17 of 19 Swedish-SAO Relations, 1966-1970. Mostly concerns the Onsala Space Research Observatory.

Box 17 of 19 Switzerland-SAO Relations, 1969. Consists of a report on a trip to Zimmerwald Station, Switzerland, by Jan Rolff.

Box 17 of 19 USSR-SAO Relations, 1962-1972.

Box 17 of 19 Watertown Arsenal Site, 1966-1967.

Box 17 of 19 Western European Satellite Tracking Programs, 1966-1969.

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Series 4: Smithsonian Institution Administrative Files, 1963-1973.

This series consists of records concerning Smithsonian agencies and SAO involvement in Smithsonian programs. Included are records documenting Charles A. Lundquist's service on Smithsonian committees and material concerning SAO projects carried out under Smithsonian research award programs. Also included is correspondence between Lundquist and Smithsonian administrators, especially Sidney Roland Galler and Philip C. Ritterbush. The files are arranged alphabetically.

Box 17

- Box 17 of 19 Ad Hoc Committee on Higher Education, 1970.
- Box 17 of 19 Announcements, news releases, and memoranda, 1964-1973. (2 folders)
- Box 17 of 19 Bureau Directors Association. General correspondence, 1964-1972.
- Box 17 of 19 Bureau Directors Association. Meetings, 1971-1973.
- Box 17 of 19 Council of Directors, 1972.
- Box 17 of 19 Faculty-Administration Committee, 1968.
- Box 17 of 19 Fluid Research Fund, 1964-1966.
- Box 17 of 19 Fort Pierce, 1967-1972.
- Box 17 of 19 Galler, Sidney Roland. Correspondence, 1966-1967.
- Box 17 of 19 International Symposium, 1967. "What is Life."
- Box 17 of 19 International Symposium, 1973. "Nature of Scientific Discovery."
- Box 17 of 19 National Air and Space Museum, 1965-1966.
- Box 17 of 19 Research Program Council, 1967-1969.
- Box 17 of 19 Ritterbush, Philip C. Correspondence and memoranda, 1964-1970.
- Box 17 of 19 Science Information Exchange, 1963-1966.
- Box 17 of 19 Science Policy Group, 1971.
- Box 17 of 19 Smithsonian Awards, 1964-1967.

- Box 17 of 19 Smithsonian Council, 1966, 1971.
- Box 17 of 19 Smithsonian Foreign Currency Program. Correspondence, memoranda, and reports, 1966-1973.
- Box 17 of 19 Smithsonian Foreign Currency Program. Astrophysics and Earth Sciences Review Committee, 1968-1972.
- Box 17 of 19 Smithsonian Foreign Currency Program. Proposals, 1970.
- Box 17 of 19 Smithsonian Foreign Currency Program. Proposals, 1973.

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- Box 18 of 19 Smithsonian Meteorological Tables, 1964-1966.
- Box 18 of 19 Smithsonian-NASA Custody Agreement, 1967.
- Box 18 of 19 Smithsonian Research Awards Program. Correspondence and memoranda, 1965-1973.
- Box 18 of 19 Smithsonian Research Awards Program. Proposals, 1969.
- Box 18 of 19 Smithsonian Research Awards Program. Proposals, 1971. (2 folders)
- Box 18 of 19 Smithsonian Research Awards Program. Proposals, 1973.
- Box 18 of 19 Smithsonian Tropical Research Institute, 1965-1971.
- Box 18 of 19 Smithsonian-University Cooperative Program, 1965, 1970.

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Series 5: General Correspondence, 1962-1972.

This series consists of incoming and outgoing correspondence of Charles A. Lundquist in his capacity as assistant director (Science). Most of the correspondence is routine and concerns requests for information and publications; letters of recommendation; and meetings and conferences. Correspondents include astronomers and physicists; SAO and NASA officials and scientists; and personal acquaintances. The correspondence is arranged alphabetically.

Box 18

Box 18 of 19	Aldrich - Croteau
Box 18 of 19	Decher - Jordan
Box 18 of 19	Kelleher - Navy, Department of the
Box 18 of 19	Oberth - Stuhlinger
Box 18 of 19	Tapley - Ziem

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Series 6: Organizational File, 1962-1973.

This series consists of correspondence, reports, publications and related materials concerning astronomical observatories; research foundations; colleges and universities; government agencies; and corporations. The files are arranged alphabetically.

Box 18

- Box 18 of 19 Air Force Cambridge Research Laboratory (AFCRL), 1967-1968.
- Box 18 of 19 American Institute of Physics (AIP), 1964.
- Box 18 of 19 Computer Software Management and Information Center (COSMIC), 1969.
- Box 18 of 19 Department of Science and Technology, 1971. Material regarding the proposed establishment of the Department by the U.S. government.
- Box 18 of 19 Educational Expeditions International, 1971 and undated.
- Box 18 of 19 Electronics Research Center (ERC), 1962-1970.
- Box 18 of 19 European Launcher Development Organization (ELDO), 1966-1968.
- Box 18 of 19 European Space Research Organization (ESRO), 1964-1972.
- Box 18 of 19 Fund for Astrophysical Research, 1966.
- Box 18 of 19 GEO Space Corporation, 1964.
- Box 18 of 19 Goodyear Mobil Observatory, 1967.
- Box 18 of 19 Harvard College Observatory (HCO) and Department of Astronomy, 1965-1973.
- Box 18 of 19 Harvard College Observatory (HCO). Sky Patrol Program, 1967-1968.
- Box 18 of 19 International Years of the Active Sun (IASY), 1967-1969.
- Box 18 of 19 International Years of the Quiet Sun (IQSY), 1964-1968.

Box 19

- Box 19 of 19 Joint Institution for Laboratory Astrophysics, 1968-1969.

- Box 19 of 19 Kitt Peak National Observatory, 1966.
- Box 19 of 19 Mitre Corporation, 1966-1967.
- Box 19 of 19 National Academy of Sciences, 1963-1970.
- Box 19 of 19 National Science Foundation, 1963-1972.
- Box 19 of 19 Ohio State University, 1966-1968.
- Box 19 of 19 United States Army Topographic Command, 1967, 1970.
- Box 19 of 19 University of Arizona, 1967-1971.
- Box 19 of 19 University of Washington, 1970-1972. Consists of material concerning the Astronomical and Space Techniques for Research on the Atmosphere (ASTRA) Project.

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