

# Herrick, Samuel, Papers

Samuel Herrick Papers

1930-1974



## Title Statement

Herrick, Samuel, Papers Samuel Herrick Papers, 1930-1974 Ms.1978.002

**Author:** Kat Zinn

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## Publication Statement

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## Profile Description

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## Revision Description

|                   |   |
|-------------------|---|
| <b>2020-08-04</b> | Finding aid notes updated to new department standards. juliags                                |
| <b>2021-02-22</b> | LM Rozema made minor updates to notes; updated inventory to group materials into some series. |
| <b>2024-03-18</b> | Kat Zinn updated inventory, introduced sub-series, and completed processing.                  |
| <b>2025-02-28</b> | Ella Winterling added Existence and Location of Copies.                                       |

## Descriptive Summary

### Unit ID

Ms.1978.002

### Unit Date

1930-1974

## Language

Most of the materials in this collection are in English. Some materials in Series VI. Professional Societies, Series VII. Publications, and Series XI. Subject Files are in French, German, Russian, Italian, Dutch, Portuguese, or Japanese.

## Abstract

Samuel Herrick was an astronomer who specialized in celestial mechanics, generally recognized as the founder of the field of astrodynamics. His papers consist of correspondence, notes, drafts of publications, files relating to students and courses, and reprints of the works of others in astronomy and space sciences. Other highlights include Herrick's consulting files for projects such as NASA's Project Mercury, the film "The Day the Earth Stood Still" (1951), and private industry. This collection is part of the Archives of American Aerospace Exploration at Virginia Tech.

## Creator

Herrick, Samuel, 1911-1974

## Extent

ca. 85 Cubic Feet 74 boxes, 1 oversize folder

## Physical Location

**Please note:** This collection is in off-site storage and requires 2-3 days notice for retrieval. Please contact Special Collections and University Archives for more information.

## Repository

Special Collections and University Archives, Virginia Tech

# Administrative Information

## Conditions Governing Access

The collection is open for research with the exception of Box 74, which is restricted for use. Items in Box 74 are restricted for use until 75 years after date of creation.

## Conditions Governing Reproduction and Use

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## Source of Acquisition

The Samuel Herrick Papers were donated to Special Collections and University Archives in 1978.

## Processing Information

Minimal description was completed prior to 1998.

Additional processing, arrangement and description of the Samuel Herrick Papers was completed as part of the project, "Piercing the Veil: Creating Access to the Archives of American Aerospace Exploration at Virginia Tech," funded by the National Historical Publications and Records Commission (NHPRC) in 2024.

## Preferred Citation

Researchers wishing to cite this collection should include the following information: [identification of item], [box], [folder], Samuel Herrick Papers, Ms1978-002, Special Collections and University Archives, Virginia Tech, Blacksburg, Va.

# Biographical Note

Samuel Herrick, generally recognized as the founder of the field of astrodynamics, was born in Madison County, Virginia, in 1911. He received a B. S. in Mathematics from Williams College in 1932 and a Ph.D. in Astronomy from the University of California at Berkeley in 1936. Most of his teaching career was spent at the University of California at Los Angeles (UCLA). Herrick served as an instructor in the Astronomy Department from 1937 to 1942; as an assistant professor from 1942 to 1947; as an associate professor from 1947 to 1952; and as a professor from 1952 to 1962. He was the Hunsaker Professor of Astronomy at the Massachusetts Institute of Technology during 1961-1962 and was made a professor in the Astronomy and Engineering Departments at UCLA in 1962. Herrick died in 1974.

Herrick's work applied the classic disciplines of celestial mechanics and mathematics to the special problems

of space trajectory research. His studies of the celestial mechanics aspects of space navigation date from 1931, when he received advice and encouragement from R. H. Goddard. As early as 1936, he formulated a development program for the utilization of celestial mechanics in the solution of space navigation problems destined to become real problems only two decades later. In 1946, Herrick instituted a course in Rocket Navigation, the world's first university course designed specifically for astronautics. In 1957, he founded the Astrodynamics Colloquium at UCLA to facilitate communication among scientists engaged in rocket research.

Herrick's publications number over two hundred items, culminating in his comprehensive two-volume work on *Astrodynamics*, published by Van Nostrand in 1971-1972. His principal contributions to scientific theory are in the areas of orbit determination and ephemeris integration; universal variables; perturbation theory and variation of parameters; differential correction and least squares; space navigation; and sea and air navigation. Further information on Herrick and his accomplishments can be found in the biographical files in Box 1 of the collection.

## Scope and Contents

This collection is made up of the personal and professional papers of Samuel Herrick (1911-1974), astronomer and founder of the field of astrodynamics. It contains personal materials such as biographical and bibliographical information, correspondence, and personal subject files. This collection also contains materials that document Herrick's career in astronomy, beginning with his B.S. in Mathematics from Williams College and including his time teaching at the University of California at Los Angeles (UCLA). Among these are notes, drafts of publications, files relating to astrodynamics courses, computer printouts, manuscript calculations, and reprints of the works on others in astronomy and the space sciences. These include notable materials such as correspondence with R. H. Goddard, a development program for the utilization of celestial mechanics in the solution of space navigation problems, the founding of the Astrodynamics Colloquium at UCLA, consulting files for NASA's Project Mercury and the film "The Day the Earth Stood Still," and a comprehensive two-volume work on *Astrodynamics*, published by Van Nostrand in 1971-1972. Materials are largely textual, consisting of correspondence, memoranda, reports, clippings, publications, and others. This collection also includes glass plates, Fortran computer printouts, and some drawings.

Series I. Biographical Information, 1949-1973. This series is made up of materials relating to Herrick's life, such as biographical sketches of Herrick, biographical directory files, complete and partial bibliographies, and a personal reading log. These include information about his life, professional activities, honors and memberships in societies, publications, and citations.

Series II. Academic Files, 1930-1974. This series contains materials related to Herrick's academic activities. This includes files and notes from his time as a student at Williams College, correspondence with faculty, files from his time with UCLA, course notes and materials from courses he taught, and student dissertations, theses, and comprehensive exams.

Sub-Series A. Academic Activities and Affairs, 1935-1973, includes academic affairs files (1930-1970), UCLA Astronomy Dept.; Guggenheim fellowship (1945-1951); UCLA files; Hunsaker professorship at MIT (1961-1962); reviews of others' works; Los Angeles Advisory Committee (1964-1968); and participation in "Los Angeles in Paris" trip (1967-1968).

Sub-Series B. Correspondence, 1931-1972, consists of academic correspondence, including correspondence with R. H. Goddard.

Sub-Series C. Course Materials, 1948-1974. This sub-series includes course notes, outlines, and exams for space navigation (1955) and astrodynamics courses.

Sub-Series D. S.H. Students' Dissertations, Theses, and Comprehensive Exams, 1965-1973, includes drafts and completed versions of dissertations, theses, and comprehensive exams from students Herrick taught.

Sub-Series E. Williams College, 1930-1969. This sub-series includes Williams College course notes; S.H. thesis and papers; and William College Correspondence.

Series III. Correspondence, 1930-1973. This series contains correspondence between Herrick and others ranging from 1930 to 1973.

Series IV. Consulting, 1940-1966. This series includes contracts and consultations, such as Ohio State Mapping Lab, Lockheed, North American Aviation, Army Air Force, NSF Grant G976, Western Data Processing Center, and 20th Century Fox [Consulting for "The Day the Earth Stood Still"]. It also includes materials such as monthly reports, proposals, and logs.

Series V. Presentations and Lectures, 1955-1964. This series consists of notes, outlines, slides, and other materials related to talks, presentations, and lectures given by Herrick. This includes talks and presentations given for organizations such as AIAA and IAU, covering topics such as differential correction, variation of parameters, planetary motions, and asteroids.

Series VI. Professional Societies, 1925-1973. This series includes materials related to professional societies in

the space sciences, including, but not limited to: the American Institute of Aeronautics and Astronautics, American Academy of Mechanics, American Academy of Sciences, American Rocket Society, British Interplanetary Society, and the International Academy of Astronautics. Materials include membership information, board of directors files, awards, annual meeting and conference notes, committees, reports, and journals.

Series VII. Publications, including Reprints and Drafts, 1932-1973. This series includes drafts and reprints of Herrick's many works, notably *Astrodynamics*, published in 1971-1972. The series also contains correspondence about Herrick's publications or his reviews of work published by others. There are also reprints of the works of others in astronomy and space sciences.

Series VIII. Manuscript Calculations, 1948-1972. This series consists of calculations used in Herrick's studies of minor planets and objects. It includes materials such as shock waves of Icarus calculations, Project 15, minor planets and objects, perturbations, geophysical constraints and correction methods, collection of formulae, and ephemeral calculations.

Series IX. Computer Printouts, 1965-1973. This series includes early SH printouts, calculations, and Fortran computer runs such as Betulia ephemeris, Icarus ephemerides, Geographos, planetary coordinates, and two-body problems. Much of the computer printouts were created by Gary R. Smith, who received his Ph.D. in astrodynamics at UCLA in 1972 from Herrick.

Series X. Card Files, n.d. This series contains 4 sets card files with names and addresses of Herrick's contacts and bibliographies for celestial mechanics and astrodynamics.

Series XI. Subject Files, 1924-1981. This series includes Herrick's files on a variety of subjects. These materials reflect his professional and personal interests, including early computers, minor planets, space exploration, and piano music. Notable materials include Aeronutronic Systems Division-Ford files, Technical Study #3, mathematics publications, Jet Propulsion Laboratory reports, files on Betulia, Icarus, Geographos, and Jupiter IX and XII, Minor Planet Center Notices, and notes on navigation.

Series XII. Drawings and Calculations, 1949, n.d. This series consists of oversize drawings and calculations, including rectilinear tables, the nonimal system, and navigational drawings.

## Separated Materials

The following publications have been separated to the Rare Book Collection:

Harbold, Norris B. *The Log of Air Navigation*. San Antonio: The Naylor Company, 1970.

*Mechanics*. Edited by N.C. Lind. Compiled and produced by American Academy of Mechanics, 1970.

*Mechanics*. Edited by N.C. Lind. Compiled and produced by American Academy of Mechanics, 1971.

## Keywords

Astronomers

Astronomy

Science and Technology

Astrodynamics

Archives of American Aerospace Exploration (AAAE)

Aerospace engineers

## Existence and Location of Copies

Some of this collection has been digitized and is available online.

## Rights Statement for Archival Description

The guide to the Samuel Herrick Papers by Special Collections and University Archives, Virginia Tech, is licensed under a CC0 (<https://creativecommons.org/share-your-work/public-domain/cc0/>).

## Arrangement

*Astrodynamics* The Betulia Files contain materials relating to the asteroid (1580) Betulia, named for Samuel Herrick's wife, Betulia Toro Herrick. This includes an article, calculations, correspondence, ephemerides, numerical integration, observations, elements, oppositions, and representations. The Icarus Files contain

materials relating to the near-Earth object (1566) Icarus, including ephemerides, residuals, correspondence, history and facts, observations, orbit graphs, and publications. The Geographos Files contain materials relating to the asteroid (1620) Geographos, including early Encke orbit files, elements, ellipse graphs, ephemerides, general information, publicity, variation of parameters, and possible exploration. The Jupiter IX and Jupiter XII Files contain materials relating to Jupiter IX (an irregular satellite of Jupiter now known as Sinope) and Jupiter XII (an irregular moon of Jupiter now known as Ananke). This includes Cowell integrations, ephemeris, graphs, basic calculations, history, general information, variation of constants, observations and representations, and publicity. Items not included in the above files consist of materials relating to other minor planets and objects, such as Lanzia, the Swift comet, and the Wilson object. This includes graphs and calculations, articles, observations, general information, history, ephemerides, opposition graphs, formulae, and procedures. Also included are Minor Planet Center Notices 151 through 2800, and 3535 through 3602.

## Description of Subordinate Components

### Series I. Biographical Information

**Unit Date** 1949-1973

#### Scope and Contents

This series is made up of materials relating to Herrick's life, such as biographical sketches of Herrick, biographical directory files, complete and partial bibliographies, and a personal reading log. These include information about his life, professional activities, honors and memberships in societies, publications, and citations.

#### Herrick's Condensed Biographical Sketch

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 1 (folder)

#### Biographical Data

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 2, 4 (folder)

#### Long Narrative Biography

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 3 (folder)

#### Bibliography Supplement

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 5 (folder)

#### Incomplete Bibliography & Pending Additions

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 6 (folder)

#### Bibliography and Supplemental Additions

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 7 (folder)

**Bibliography Index****Unit Date** 1973**box-folder** 1 (box)**Container** 8 (folder)**Professional Activities, Honors, Etc.****Unit Date** n.d.**box-folder** 1 (box)**Container** 9 (folder)**Honors & Memberships in Societies****Unit Date** n.d.**box-folder** 1 (box)**Container** 10 (folder)**Citations****Unit Date** n.d.**box-folder** 1 (box)**Container** 11 (folder)**Who's Who****Unit Date** n.d.**box-folder** 1 (box)**Container** 12 (folder)**Biographical Sketch****Unit Date** 1968, 1973**box-folder** 1 (box)**Container** 13 (folder)**Sources of Materials****Unit Date** 1968, 1971**box-folder** 1 (box)**Container** 14 (folder)**Summary of Experience****Unit Date** 1962-1972**box-folder** 1 (box)**Container** 15 (folder)**Copies of Current Summary Experience****Unit Date** 1968**box-folder** 1 (box)**Container** 16 (folder)**UCLA Biography and Bibliography****Unit Date** 1949-1962, 1964, 1968, 1972**box-folder** 1 (box)**Container** 17 (folder)

**Documents for Yearly Reports**

**Unit Date** 1970-1972

**box-folder** 1 (box)

**Container** 18 (folder)

**Reports**

**Unit Date** 1971-1972

**box-folder** 1 (box)

**Container** 19 (folder)

**Bibliography & Contributions**

**Unit Date** 1966

**box-folder** 1 (box)

**Container** 20 (folder)

**Materials in New Addition to Survey**

**Unit Date** 1959-1964, 1966-1967

**box-folder** 1 (box)

**Container** 21, 22 (folder)

**Questionable - Bibliography**

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 23 (folder)

**Requests & Acknowledgements**

**Unit Date** 1959-1962, 1966

**box-folder** 1 (box)

**Container** 24 (folder)

**Bibliography Addendum**

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 25 (folder)

**Bibliography Supplements**

**Unit Date** 1969-1970

**box-folder** 1 (box)

**Container** 26 (folder)

**Other Bibliographies and Related Lists**

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 27 (folder)

**Completed Bibliographies**

**Unit Date** 1951, 1964, 1967

**box-folder** 1 (box)

**Container** 28 (folder)

## **Complete Bibliography Pages 12-15**

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 29 (folder)

## **Inventories**

**Unit Date** 1964-1968

**box-folder** 1 (box)

**Container** 30 (folder)

## **Subject Index to Bibliography**

**Unit Date** 1965

**box-folder** 1 (box)

**Container** 31 (folder)

## **Selected Bibliography**

**Unit Date** n.d.

**box-folder** 1 (box)

**Container** 32 (folder)

## **Bibliography Supplement Page 1**

**Unit Date** n.d.

**box-folder** 42 (box)

**Container** 7 (folder)

## **Reading Log, Clippings, and Notes**

**Unit Date** 1952-1963

**box-folder** 42 (box)

**Container** 8 (folder)

## **Bibliography Supplement P. 2-3**

**Unit Date** n.d.

**box-folder** 60 (box)

**Container** 1 (folder)

## **Series II. Academic Files**

**Unit Date** 1930-1974

### **Scope and Contents**

This series contains materials related to Herrick's academic activities. This includes files and notes from his time as a student at Williams College, correspondence with faculty, files from his time with UCLA, course notes and materials from courses he taught, and student dissertations, theses, and comprehensive exams.

Sub-Series A. Academic Activities and Affairs, 1935-1973, includes academic affairs files (1930-1970), UCLA Astronomy Dept.; Guggenheim fellowship (1945-1951); UCLA files; Hunsaker professorship at MIT (1961-1962); reviews of others' works; Los Angeles Advisory Committee (1964-1968); and participation in "Los Angeles in Paris" trip (1967-1968).

Sub-Series B. Correspondence, 1931-1972, consists of academic correspondence, including correspondence with R. H. Goddard.

Sub-Series C. Course Materials, 1948-1974. This sub-series includes course notes, outlines, and exams for space navigation (1955) and astrodynamics courses.

Sub-Series D. S.H. Students' Dissertations, Theses, and Comprehensive Exams, 1965-1973, includes drafts and completed versions of dissertations, theses, and comprehensive exams from students Herrick taught.

Sub-Series E. Williams College, 1930-1969. This sub-series includes Williams College course notes; S.H. thesis and papers; and Williams College Correspondence.

## **Arrangement**

This series has been divided into further sub-series by subject:

Sub-Series A. Academic Activities and Affairs, includes files from Herrick's time as an instructor and professor at UCLA, including budgets, public and university service, appointment and promotional committees, and the UCLA space program. This sub-series also includes papers on the faculty senate, the Guggenheim Fellowship, letters of appreciation to Herrick, patents, and complimentary reviews of Herrick's publications.

Sub-Series B. Correspondence, consists of correspondence with faculty, university departments, and schools such as UCLA and Berkeley. It also includes correspondence with Robert H. Goddard, American professor, engineer, physicist, and inventor.

Sub-Series C. Course Materials, is made up of materials from courses Herrick taught, such as History of Astrodynamics, Fundamental Astronomy, and short courses in astrodynamics. These include notes, course outlines, syllabi, exams and exercises, flash cards and practice problems, and course evaluations.

Sub-Series D. SH Students' Dissertations, Theses, and Comprehensive Exams, includes work by students Herrick taught. Their work includes drafts and completed dissertations, theses, and comprehensive exams.

Sub-Series E. Williams College, consists of materials from Herrick's time as an undergraduate student at Williams College. This includes Herrick's course notes, papers, and outlines.

Within these sub-series the materials have remained in the order they were received.

### **Sub-Series A. Academic Activities and Affairs**

**Unit Date** 1935-1973

#### **Early Position Seeking Naval Observatory, etc.**

**Unit Date** 1935-1937

**box-folder** 2 (box)

**Container** 22 (folder)

#### **Naval Application**

**Unit Date** 1944

**box-folder** 2 (box)

**Container** 23 (folder)

#### **TR BIPS VIII A5(b) Public Service**

**Unit Date** 1960-1963

**box-folder** 2 (box)

**Container** 24 (folder)

#### **Canoga Moonwatch Dedication**

**Unit Date** 1958

**box-folder** 2 (box)

**Container** 25 (folder)

#### **Mayor Yorty's Aerospace Advisory Committee**

**Unit Date** 1964-1970

**box-folder** 2 (box)

**Container** 26 (folder)

#### **Mayor Yorty's "L.A. Goes to Paris" Comm.**

**Unit Date** 1967-1968

**box-folder** 2 (box)

**Container** 27 (folder)

#### **Newspaper & Journal Clippings**

**Unit Date** n.d.  
**box-folder** 2 (box)  
**Container** 28 (folder)

### **Goddard Rocket & Space Museum**

**Unit Date** 1970  
**box-folder** 2 (box)  
**Container** 29 (folder)

### **Misc. Personal Papers**

**Unit Date** 1958-1972  
**box-folder** 2 (box)  
**Container** 30 (folder)

### **Icarus, Betulia, 1620 Geographos Minor Planets**

**Unit Date** n.d.  
**box-folder** 2 (box)  
**Container** 31 (folder)

### **"The Big T"**

**Unit Date** 1943  
**box-folder** 2 (box)  
**Container** 32 (folder)

### **Maps to S.H. Residence**

**Unit Date** 1970  
**box-folder** 3 (box)  
**Container** 1 (folder)

### **Misc. Academic Affairs Papers**

**Unit Date** 1941-1972  
**box-folder** 3 (box)  
**Container** 3 (folder)

### **Sproul Contents**

**Unit Date** 1963  
**box-folder** 3 (box)  
**Container** 4 (folder)

### **Public & University Service**

**Unit Date** n.d.  
**box-folder** 3 (box)  
**Container** 5 (folder)

### **Newspaper Releases**

**Unit Date** n.d.  
**box-folder** 3 (box)  
**Container** 6 (folder)

**New Appointments****Unit Date** 1955**box-folder** 3 (box)**Container** 7 (folder)**Appointment & Promotion Committees****Unit Date** n.d.**box-folder** 3 (box)**Container** 8 (folder)**Budget TR****Unit Date** n.d.**box-folder** 3 (box)**Container** 9 (folder)**Budget****Unit Date** 1949-1950**box-folder** 3 (box)**Container** 10 (folder)**Budget****Unit Date** 1950-1951**box-folder** 3 (box)**Container** 11 (folder)**Budget****Unit Date** 1946-1948**box-folder** 3 (box)**Container** 12 (folder)**Budget****Unit Date** 1951-1952**box-folder** 3 (box)**Container** 13 (folder)**"Loyalty Oath"****Unit Date** 1949-1951**box-folder** 3 (box)**Container** 14 (folder)**New Engineering Dean****Unit Date** 1963**box-folder** 3 (box)**Container** 15 (folder)**Promotion Committees****Unit Date** 1951-1965**box-folder** 3 (box)**Container** 18 (folder)

**Sproul****Unit Date** 1943-1971**box-folder** 3 (box)**Container** 19 (folder)**Papers Re Guggenheim Fellowship****Unit Date** 1945-1951**box-folder** 3 (box)**Container** 20 (folder)**History of Science****Unit Date** 1933-1957**box-folder** 3 (box)**Container** 21 (folder)**Astrodynamics Colloquium****Unit Date** 1957**box-folder** 3 (box)**Container** 22 (folder)**Stanford-Durand Conference****Unit Date** 1959**box-folder** 3 (box)**Container** 24 (folder)**Faculty Special Addresses + Relations****Unit Date** n.d.**box-folder** 3 (box)**Container** 26 (folder)**Rollins College****Unit Date** 1962**box-folder** 3 (box)**Container** 27 (folder)**Hunsaker Professors****Unit Date** 1965-1970**box-folder** 3 (box)**Container** 28 (folder)**"We let Copernicus, Tyler..." S.H. Notes****Unit Date** 1964**box-folder** 3 (box)**Container** 29 (folder)**Spheroids, Ref. Materials****Unit Date** n.d.**box-folder** 3 (box)**Container** 30 (folder)

**Reports on Senate****Unit Date** 1970, 1973**box-folder** 3 (box)**Container** 34 (folder)**Academic Freedom****Unit Date** 1970**box-folder** 3 (box)**Container** 35 (folder)**Graduate Policy Committee****Unit Date** n.d.**box-folder** 3 (box)**Container** 36 (folder)**Sabbatical and Outside Employment Policies****Unit Date** n.d.**box-folder** 3 (box)**Container** 37 (folder)**Area of Excellence****Unit Date** 1967-1971**box-folder** 3 (box)**Container** 39 (folder)**Different Processes****Unit Date** n.d.**box-folder** 3 (box)**Container** 40 (folder)**John Barnes and Other Proposals****Unit Date** 1966**box-folder** 3 (box)**Container** 43 (folder)**Requirements for Ph.D. Program Recognition****Unit Date** 1969-1970**box-folder** 3 (box)**Container** 46 (folder)**American Rocket Society; Air Force****Unit Date** n.d.**box-folder** 3 (box)**Container** 47 (folder)**"R" Support****Unit Date** 1943-1945**box-folder** 3 (box)**Container** 49 (folder)

**S.H. Priority: Area of Excellence****Unit Date** n.d.**box-folder** 3 (box)**Container** 51 (folder)**Standing Committee Astrodynamics****Unit Date** 1958-1965**box-folder** 3 (box)**Container** 52 (folder)**Space Research Possible Areas****Unit Date** n.d.**box-folder** 3 (box)**Container** 53 (folder)**Space Center Program****Unit Date** n.d.**box-folder** 3 (box)**Container** 54 (folder)**Academic Innovation****Unit Date** n.d.**box-folder** 3 (box)**Container** 56 (folder)**Legislative Assembly Academic Senate****Unit Date** 1963-1964**box-folder** 3 (box)**Container** 57 (folder)**Computer Time Used****Unit Date** n.d.**box-folder** 3 (box)**Container** 58 (folder)**UCLA Space Program****Unit Date** 1963-1964**box-folder** 3 (box)**Container** 59 (folder)**UCLA Space Program****Unit Date** 1964**box-folder** 3 (box)**Container** 60 (folder)**UCLA Space Program****Unit Date** 1965**box-folder** 3 (box)**Container** 61 (folder)

**Trips - General****Unit Date** n.d.**box-folder** 3 (box)**Container** 62 (folder)**UCLA Commencement****Unit Date** 1972**box-folder** 5 (box)**Container** 14 (folder)**Public and University Service****Unit Date** 1971**box-folder** 5 (box)**Container** 17 (folder)**Editorial - S.H. Review of Others' Work****Unit Date** n.d.**box-folder** 5 (box)**Container** 18 (folder)**Editorial - S.H. Review of Others' Work****Unit Date** 1957-1964**box-folder** 5 (box)**Container** 19 (folder)**Journals & Other Sources of Publication****Unit Date** 1969-1971**box-folder** 5 (box)**Container** 21 (folder)**Requests for Future Articles to be Written****Unit Date** 1958-1969**box-folder** 5 (box)**Container** 22 (folder)**Plagiarism****Unit Date** 1972**box-folder** 5 (box)**Container** 23 (folder)**Plagiarisms & Lack of Acknowledgements****Unit Date** 1963**box-folder** 5 (box)**Container** 24 (folder)**Adm. Arrangements for ADY Setting Up Lectures or Seminars by Others****Unit Date** n.d.**box-folder** 5 (box)**Container** 25 (folder)

**Letters of Recommendation****Unit Date** 1972**box-folder** 5 (box)**Container** 26 (folder)**Requests for Materials****Unit Date** n.d.**box-folder** 5 (box)**Container** 27 (folder)**Requests for copies of S.H. Work****Unit Date** n.d.**box-folder** 5 (box)**Container** 28 (folder)**Hodge-Podge: Requests or General Information****Unit Date** n.d.**box-folder** 5 (box)**Container** 29 (folder)**Copy of Survey of Requests Made by Year****Unit Date** 1959-1970**box-folder** 5 (box)**Container** 30 (folder)**Requests for a Valid Professional Point on Science****Unit Date** n.d.**box-folder** 5 (box)**Container** 31 (folder)**Crank Mail****Unit Date** n.d.**box-folder** 5 (box)**Container** 32 (folder)**Superficial Pub. Requests for Info. Or Service****Unit Date** n.d.**box-folder** 5 (box)**Container** 33 (folder)**Temporary (To be thrown away after a year)****Unit Date** n.d.**box-folder** 5 (box)**Container** 34 (folder)**Good-Humor; Humor****Unit Date** 1959, 1963**box-folder** 5 (box)**Container** 35 (folder)

**Compliments and Criticisms****Unit Date** n.d.**box-folder** 5 (box)**Container** 36 (folder)**Reports and Opinions of Colleagues on S.H. Work****Unit Date** n.d.**box-folder** 5 (box)**Container** 37 (folder)**Complimentary Reviews of S.H. Bib Items****Unit Date** 1953-1968**box-folder** 5 (box)**Container** 38 (folder)**Letters of Appreciation from Students****Unit Date** n.d.**box-folder** 5 (box)**Container** 39 (folder)**Letters of Appreciation from Other than Students****Unit Date** n.d.**box-folder** 5 (box)**Container** 40 (folder)**Patents****Unit Date** 1967-1968**box-folder** 5 (box)**Container** 41 (folder)**Prostitution of Science****Unit Date** 1971-1972**box-folder** 5 (box)**Container** 42 (folder)**Unacceptable Consulting Schemes****Unit Date** 1969**box-folder** 5 (box)**Container** 43 (folder)**Politics in Celestial Mechanics****Unit Date** 1969**box-folder** 5 (box)**Container** 44 (folder)**Nuisances and Crosses****Unit Date** 1971**box-folder** 5 (box)**Container** 45 (folder)

**Nuisances from U.C.****Unit Date** 1967-1972**box-folder** 5 (box)**Container** 46 (folder)**Nuisances from Outside U.C.****Unit Date** n.d.**box-folder** 5 (box)**Container** 47 (folder)**Fruitful Nuisances****Unit Date** 1970**box-folder** 5 (box)**Container** 48 (folder)**RIP (Pending Civic Effort)****Unit Date** 1968**box-folder** 5 (box)**Container** 49 (folder)**Termites in Society****Unit Date** n.d.**box-folder** 5 (box)**Container** 50 (folder)**[RESTRICTED] S.H. Advisees****Unit Date** n.d.**box-folder** 74 (box)**Container** 7 (folder)**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Status of Graduate Students****box-folder** 74 (box)**Container** 8 (folder)**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] 66BIPS (XI) A1 Mailing Lists and Sources of Names****Unit Date** 1957-1972**box-folder** 74 (box)**Container** 9 (folder)**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Astrodyn. Grad. Stud. Questionn.****Unit Date** n.d.**box-folder** 74 (box)**Container** 12 (folder)**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Prospective Employee Info.**

**Unit Date** n.d.

**box-folder** 74 (box)

**Container** 13 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**Sub-Series B. Correspondence**

**Unit Date** 1931-1972

**Goddard, R.H. Correspondence**

**Unit Date** 1931-1933

**box-folder** 2 (box)

**Container** 1 (folder)

**Saint Alban's Cathedral School**

**Unit Date** 1966-1972

**box-folder** 3 (box)

**Container** 2 (folder)

**Misc. Berkeley Correspondence**

**Unit Date** 1947-1951

**box-folder** 3 (box)

**Container** 16 (folder)

**Misc. UCLA Correspondence**

**Unit Date** 1959

**box-folder** 3 (box)

**Container** 17 (folder)

**Duke, C. Martin Correspondence**

**Unit Date** 1962-1963

**box-folder** 3 (box)

**Container** 25 (folder)

**Index of S.H. Correspondence to Faculty by Subject (Re: Area of Excellence)**

**Unit Date** 1969

**box-folder** 3 (box)

**Container** 26 (folder)

**Head Mech. Division Correspondence**

**Unit Date** 1968, 1969

**box-folder** 3 (box)

**Container** 44 (folder)

**Letter to Ed**

**Unit Date** 1932

**box-folder** 3 (box)

**Container** 48 (folder)

**Correspondence Requesting/Acknowledging Appreciation for S.H. Lectures**

**Unit Date** 1959-1968

**box-folder** 5 (box)

**Container** 20 (folder)

**Sub-Series C. Course Materials**

**Unit Date** 1948-1974

**Misc. Functions (course)**

**Unit Date** 1958

**box-folder** 3 (box)

**Container** 23 (folder)

**History of Astronomy**

**Unit Date** n.d.

**box-folder** 3 (box)

**Container** 31 (folder)

**History of Astrodynamics**

**Unit Date** 1948-1970

**box-folder** 3 (box)

**Container** 32 (folder)

**History of ADY**

**Unit Date** 1959, 1961

**box-folder** 3 (box)

**Container** 33 (folder)

**History of ADY Syllabus**

**Unit Date** n.d.

**box-folder** 3 (box)

**Container** 41 (folder)

**VIP Opinion on Future of ADY**

**Unit Date** n.d.

**box-folder** 3 (box)

**Container** 42 (folder)

**Proof of Uninterrupted Functioning of ADY**

**Unit Date** n.d.

**box-folder** 3 (box)

**Container** 45 (folder)

**Instructor Evaluations**

**Unit Date** 1972

**box-folder** 3 (box)

**Container** 50 (folder)

**Syllabus: Copies for Distribution****Unit Date** 1962-1971**box-folder** 3 (box)**Container** 55 (folder)**Dittos****Unit Date** 1967**box-folder** 5 (box)**Container** 5 (folder)**Astronomy Field Exam****Unit Date** 1966**box-folder** 5 (box)**Container** 6 (folder)**Astrodynamics Comprehensive/Field Exam****Unit Date** 1967**box-folder** 5 (box)**Container** 7 (folder)**Dittoes and Exams for Distribution 261A & 292C****Unit Date** n.d.**box-folder** 5 (box)**Container** 8 (folder)**Astrodynamics 260A Final Exam Copies****Unit Date** 1966**box-folder** 5 (box)**Container** 9 (folder)**ADY Field Exam Copies****Unit Date** 1968**box-folder** 5 (box)**Container** 10 (folder)**Astrodynamics Exams****Unit Date** 1966**box-folder** 5 (box)**Container** 11 (folder)**Astrodynamics Field Exam Copies****Unit Date** 1968**box-folder** 5 (box)**Container** 12 (folder)**Field Exam with Ditto****Unit Date** 1971**box-folder** 5 (box)**Container** 13 (folder)

## **Course Evaluations**

**Unit Date** 1972

**box-folder** 5 (box)

**Container** 15 (folder)

### **HA1. Introduction**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 1 (folder)

### **HA2. Earth and Sky**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 2 (folder)

### **HA3. Phenomena, Cycles, Chronology**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 3 (folder)

### **HA4. Planetary Systems**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 4 (folder)

### **HA5. Celestial Mechanics After Newton**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 5 (folder)

### **HA6. Telescope + Spectroscope**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 6 (folder)

### **HA7. Measurement**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 7 (folder)

### **HA8. Motions + Distances**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 8 (folder)

### **HA9. Worlds Other Than Ours**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 9 (folder)

**HA10. Comets, Meteorites****Unit Date** n.d.**box-folder** 6 (box)**Container** 10 (folder)**HA11. Sun + Stars, Astrophysics****Unit Date** n.d.**box-folder** 6 (box)**Container** 11 (folder)**HA12. Stellar Astronomy****Unit Date** n.d.**box-folder** 6 (box)**Container** 12 (folder)**HA13. Galactic + Extra-galactic Objects****Unit Date** n.d.**box-folder** 6 (box)**Container** 13 (folder)**HA14. Other Phenomena****Unit Date** n.d.**box-folder** 6 (box)**Container** 14 (folder)**HA15. Cosmology****Unit Date** n.d.**box-folder** 6 (box)**Container** 15 (folder)**Astronomy 100****Unit Date** n.d.**box-folder** 6 (box)**Container** 16 (folder)**Astronomy 100 Outline, Preface, Intro, etc.****Unit Date** 1953-1954**box-folder** 6 (box)**Container** 17 (folder)**Hist. Astr. References****Unit Date** n.d.**box-folder** 6 (box)**Container** 18 (folder)**Hist. Astr. Miscellaneous + TR****Unit Date** n.d.**box-folder** 6 (box)**Container** 19 (folder)

**Hist. Astr.: Special Subjects Subjects for Papers (Individuals + Personalities)**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 20 (folder)

**Outline for Proposed Course in Space Navigation**

**Unit Date** 1955

**box-folder** 6 (box)

**Container** 21 (folder)

**Fundamental Astrodynamics Course Feedback**

**Unit Date** 1969

**box-folder** 6 (box)

**Container** 22 (folder)

**Short Courses in Astrodynamics**

**Unit Date** 1969

**box-folder** 6 (box)

**Container** 23 (folder)

**Exams, Exercises, and Solutions (Fundamental Astronomy)**

**Unit Date** 1969

**box-folder** 6 (box)

**Container** 24 (folder)

**Exams, Exercises, and Solutions (Fundamental Astronomy)**

**Unit Date** 1969

**box-folder** 6 (box)

**Container** 25 (folder)

**Exams, Exercises, and Solutions (Fundamental Astronomy)**

**Unit Date** 1969

**box-folder** 6 (box)

**Container** 26 (folder)

**Exams, Exercises, and Solutions (Fundamental Astronomy)**

**Unit Date** 1969

**box-folder** 6 (box)

**Container** 27 (folder)

**"Grasshopper Experiment"**

**Unit Date** 1970

**box-folder** 6 (box)

**Container** 28 (folder)

**Astrodynamics Short Course**

**Unit Date** 1971

**box-folder** 6 (box)

**Container** 29 (folder)

**Astrodynamics Problems + Solutions: Herrick + Junkins Short Course**

**Unit Date** 1972

**box-folder** 6 (box)

**Container** 30 (folder)

**JIX**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 31 (folder)

**Orientation Angles 71R2**

**Unit Date** 1970

**box-folder** 6 (box)

**Container** 32 (folder)

**Change Epoch Every Step 71R3**

**Unit Date** 1967

**box-folder** 6 (box)

**Container** 33 (folder)

**Differential Correction in Orbit Determination 71R4**

**Unit Date** 1971

**box-folder** 6 (box)

**Container** 34 (folder)

**Independent Variable 71R5**

**Unit Date** 1971

**box-folder** 6 (box)

**Container** 35 (folder)

**Work Used to Make Tape Coord**

**Unit Date** n.d.

**box-folder** 6 (box)

**Container** 36 (folder)

**Lambert**

**Unit Date** 1972

**box-folder** 6 (box)

**Container** 37 (folder)

**Astrodynamical Report No. 17, Part 1 (Herrick)**

**Unit Date** 1968

**box-folder** 6 (box)

**Container** 38 (folder)

**Heilman Notes**

**Unit Date** 1974

**box-folder** 6 (box)

**Container** 39 (folder)

**160A TR****Unit Date** 1968**box-folder** 6 (box)**Container** 40 (folder)**160C****Unit Date** 1972-1974**box-folder** 6 (box)**Container** 41 (folder)**AD Courses - Permanent File****Unit Date** 1972-1973**box-folder** 6 (box)**Container** 42 (folder)**160B Records****Unit Date** 1970-1972**box-folder** 6 (box)**Container** 43 (folder)**260A Records****Unit Date** 1967-1973**box-folder** 6 (box)**Container** 44 (folder)**260B Records****Unit Date** 1969-1973**box-folder** 6 (box)**Container** 45 (folder)**Tom Goebel + Stern****Unit Date** n.d.**box-folder** 6 (box)**Container** 46 (folder)**Flash Cards/Practice Problems****Unit Date** n.d.**box-folder** 6 (box)**Container** 47 (folder)**Flash Cards/Practice Problems****Unit Date** n.d.**box-folder** 6 (box)**Container** 48 (folder)**[RESTRICTED] Student Data Sheets + Enrollment****Unit Date** 1973**box-folder** 74 (box)**Container** 2 (folder)**Contents in this folder are restricted for use until 75 years after date of creation.**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Astrodynamics 160A Final Exams**

**Unit Date** 1974

**box-folder** 74 (box)

**Container** 3 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Astrodynamics Participants + Exams**

**Unit Date** 1971

**box-folder** 74 (box)

**Container** 4 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Graded Exams, Short Course**

**Unit Date** 1969

**box-folder** 74 (box)

**Container** 5 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Astronomy 100 Quiz Grades**

**Unit Date** 1957

**box-folder** 74 (box)

**Container** 6 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] Comp. Exam**

**Unit Date** 1967

**box-folder** 74 (box)

**Container** 10 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**[RESTRICTED] List of ADY Students**

**Unit Date** n.d.

**box-folder** 74 (box)

**Container** 11 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**Sub-Series D. S.H. Students' Dissertations, Theses, and Comprehensive Exams**

**Unit Date** 1965-1973

**Junkins - On the Determination and Optimization of Powered Space Vehicle Trajectories Using Parametric Differential Correction Processes**

**Unit Date** 1969

**box-folder** 4 (box)

**Container** 1 (folder)

**Keesey - Planetary Theory with Recursive Linearization**

**Unit Date** 1970

**box-folder** 4 (box)

**Container** 2 (folder)

**Smith - Iterative Techniques for the Determination of Rendezvous Trajectories in the Presence of Perturbations**

**Unit Date** 1973

**box-folder** 4 (box)

**Container** 3 (folder)

**Dallas - Prediction of the Position and Velocity of a Satellite After Many Revolutions**

**Unit Date** 1968

**box-folder** 4 (box)

**Container** 4 (folder)

**Newnam II - Numerical Integration Techniques and Orbit Determination Applied to Jupiter's Ninth and Twelfth Satellites**

**Unit Date** 1969

**box-folder** 4 (box)

**Container** 5 (folder)

**Ondrasik - The Secular Perturbations of a Minor Planet or Comet Produced by a Relatively Closely Approaching Major Planet Moving in a Circular Orbit**

**Unit Date** 1969

**box-folder** 4 (box)

**Container** 6 (folder)

**Moyer - Relativistic Equations of Motion**

**Unit Date** 1965

**box-folder** 4 (box)

**Container** 7 (folder)

**Anderson - Determination of Masses of the Moon and Venus and the Astronomical Unit from Radio Tracking Data of the Mariner II Spacecraft**

**Unit Date** 1967

**box-folder** 4 (box)

**Container** 8 (folder)

**Anderson - Thesis Draft**

**Unit Date** n.d.

**box-folder** 4 (box)

**Container** 9 (folder)

**Kopke Comprehensive Exam - The Solution of Kepler's Equation by Use of Herrick's Unified Variables**

**Unit Date** 1970

**box-folder** 4 (box)

**Container** 10 (folder)

**Wong Draft - Some Special Perturbation Methods for the Integration of Artificial Satellite Orbits**

**Unit Date** n.d.

**box-folder** 4 (box)

**Container** 11 (folder)

**Wong - Some Special Perturbation Methods for the Integration of Artificial Satellite Orbits**

**Unit Date** 1972

**box-folder** 4 (box)

**Container** 12 (folder)

**Hanavan - Perturbations of the Sun, the Moon and the Asphericity of the Earth's Gravity Field on a Low Eccentricity, Low Inclination Synchronous Satellite**

**Unit Date** 1972

**box-folder** 4 (box)

**Container** 13 (folder)

**Jacoby - A Two Body Problem**

**Unit Date** 1969

**box-folder** 4 (box)

**Container** 14 (folder)

**Lochry - The Perturbations Effects of Diffuse Radiations from the Earth and Moon on Close Satellites**

**Unit Date** 1966

**box-folder** 4 (box)

**Container** 15 (folder)

**Stoops Dissertation**

**Unit Date** 1970

**box-folder** 5 (box)

**Container** 1 (folder)

**Murphy Comprehensive Exam**

**Unit Date** 1970

**box-folder** 5 (box)

**Container** 2 (folder)

**Glassman Dissertation**

**Unit Date** 1971

**box-folder** 5 (box)

**Container** 3 (folder)

**Kyser Thesis**

**Unit Date** 1969

**box-folder** 5 (box)

**Container** 4 (folder)

**Jonath Thesis**

**Unit Date** 1961

**box-folder** 5 (box)

**Container** 16 (folder)

**Barrios Comprehensive Exam**

**Unit Date** 1968

**box-folder** 5 (box)

**Container** 51 (folder)

**[RESTRICTED] Jacoby, Neil H. - A Two Body Problem**

**Unit Date** 1970

**box-folder** 74 (box)

**Container** 1 (folder)

**Conditions Governing Access**

Contents in this folder are restricted for use until 75 years after date of creation.

**Sub-Series E. Williams College**

**Unit Date** 1930-1969

**Statistical Astronomy**

**Unit Date** n.d.

**box-folder** 2 (box)

**Container** 3 (folder)

**Partial Differential Equations**

**Unit Date** 1933

**box-folder** 2 (box)

**Container** 4 (folder)

**Satellite Theory**

**Unit Date** 1936

**box-folder** 2 (box)

**Container** 5 (folder)

**Celestial Mechanics and Astrophysics**

**Unit Date** n.d.

**box-folder** 2 (box)

**Container** 6 (folder)

**Astronomy**

**Unit Date** n.d.

**box-folder** 2 (box)

**Container** 7 (folder)

**Math 200A Complex Variables**

**Unit Date** n.d.

**box-folder** 2 (box)

**Container** 8 (folder)

**Math 222 - Prof. Buck**

**Unit Date** n.d.

**box-folder** 2 (box)

**Container** 9 (folder)

**Perturbations****Unit Date** n.d.**box-folder** 2 (box)**Container** 10 (folder)**Differential Equations Projective Geometry****Unit Date** n.d.**box-folder** 2 (box)**Container** 11 (folder)**Geometrical and Physical Optics****Unit Date** n.d.**box-folder** 2 (box)**Container** 12 (folder)**Williams College****Unit Date** 1930-1969**box-folder** 2 (box)**Container** 13 (folder)**Williams College Correspondence****Unit Date** 1931-1932, 1967-1968**box-folder** 2 (box)**Container** 14 (folder)**Williams College 62 SC1****Unit Date** 1962**box-folder** 2 (box)**Container** 15 (folder)**Early Orbit Papers & Outline & First Draft of Thesis****Unit Date** n.d.**box-folder** 2 (box)**Container** 16 (folder)**Milham Planetarium Hopkins Observatory****Unit Date** 1962**box-folder** 2 (box)**Container** 17 (folder)**German - Course in Language****Unit Date** n.d.**box-folder** 2 (box)**Container** 18 (folder)**Special Perturbations****Unit Date** n.d.**box-folder** 2 (box)**Container** 19 (folder)

**Advanced Dynamics****Unit Date** n.d.**box-folder** 2 (box)**Container** 20 (folder)**Milham, Willis I.****Unit Date** n.d.**box-folder** 2 (box)**Container** 21 (folder)**Series III. Correspondence****Unit Date** 1930-1973**Scope and Contents**

This series contains correspondence between Herrick and others ranging from 1930 to 1973.

**Arrangement**

This series is arranged alphabetically according to who Herrick was corresponding with.

**A****Unit Date** n.d.**box-folder** 8 (box)**Container** 1 (folder)**Ageton, Arthur****Unit Date** n.d.**box-folder** 8 (box)**Container** 2 (folder)**Aitken, R.G.****Unit Date** n.d.**box-folder** 8 (box)**Container** 3 (folder)**Alfven, Dr. Hannes****Unit Date** n.d.**box-folder** 8 (box)**Container** 4 (folder)**Anderson, Dr. John D.****Unit Date** n.d.**box-folder** 8 (box)**Container** 5 (folder)**Archibald, R.C.****Unit Date** n.d.**box-folder** 8 (box)**Container** 6 (folder)**Argentina Correspondence****Unit Date** n.d.**box-folder** 8 (box)**Container** 7 (folder)

**Arias de Greiff, Jorge****Unit Date** n.d.**box-folder** 8 (box)**Container** 8 (folder)**Arlington National Cemetary, Superintendent****Unit Date** n.d.**box-folder** 8 (box)**Container** 9 (folder)**Army Draft****Unit Date** n.d.**box-folder** 8 (box)**Container** 10 (folder)**Army Map Service****Unit Date** n.d.**box-folder** 8 (box)**Container** 11 (folder)**B****Unit Date** n.d.**box-folder** 8 (box)**Container** 12 (folder)**Berkeley Dept. (Moylan, Nora)****Unit Date** n.d.**box-folder** 8 (box)**Container** 13 (folder)**Bisplinghoff, Raymond****Unit Date** n.d.**box-folder** 8 (box)**Container** 14 (folder)**Blanco, Dr. V.M.****Unit Date** n.d.**box-folder** 8 (box)**Container** 15 (folder)**Bower, E.C.****Unit Date** n.d.**box-folder** 8 (box)**Container** 16 (folder)**Brouwer, Dirk****Unit Date** n.d.**box-folder** 8 (box)**Container** 17 (folder)

**Bruwer, Dr. J.A.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 18 (folder)

**Bryan, G.S.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 19 (folder)

**Buchanan, D.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 20 (folder)

**C**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 21 (folder)

**"C" Cesco**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 22 (folder)

**California Institute of Technology**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 23 (folder)

**Chapin, Dr. Seymour L.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 24 (folder)

**Chebotarev, Dr. Gleb**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 25 (folder)

**Chichester, Sir Francis**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 26 (folder)

**Clemence, G.M.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 27 (folder)

**Chernykh, Dr. N.S.**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 28 (folder)

**Churms, Mr. J.**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 29 (folder)

**Cole, Danridge M.**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 30 (folder)

**Comrie, L.J.**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 31 (folder)

**Crawford, Dr. David F.**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 32 (folder)

**Crawford, R.T.**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 33 (folder)

**D**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 34 (folder)

**Danby, Tony**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 35 (folder)

**Deprit, A.**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 36 (folder)

**Dommanget, Dr. J. (Royal Observatory of Belgium) H. Debehogne**  
**Unit Date** n.d.  
**box-folder** 8 (box)  
**Container** 37 (folder)

**Draper, Dr. Charles S.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 38 (folder)

**Duboshin, Prof. G.N.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 39 (folder)

**Duncombe, Raynor L.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 40 (folder)

**Durant, Mr. Frederick C. III**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 41 (folder)

**E**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 42 (folder)

**Encyclopedia Americana**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 43 (folder)

**F**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 44 (folder)

**Feast, Mr. M.W. (Thackeray, Dr. A.D. Jones, Dr. D.H.P.)**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 45 (folder)

**French, Bevan M.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 46 (folder)

**Fritsch, Ludwig**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 47 (folder)

## **G**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 48 (folder)

## **Gehrels**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 49 (folder)

## **Around Moon/Venus (Gillespie, R.W.)**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 80 (folder)

## **H**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 50 (folder)

## **Harvard University**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 51 (folder)

## **Herget, Paul**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 52 (folder)

## **Satellite Ephemerides (Herget)**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 53 (folder)

## **Hilton, C.G.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 54 (folder)

## **Hirst, W.P.**

**Unit Date** n.d.

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## **I, J**

**Unit Date** n.d.

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**I.A.U. Circulars (Editor)****Unit Date** n.d.**box-folder** 8 (box)**Container** 57 (folder)**Itzigsohn + Iannini - Icarus****Unit Date** n.d.**box-folder** 8 (box)**Container** 58 (folder)**Institute of Theoretical Astronomy, Academy of Science, USSR****Unit Date** n.d.**box-folder** 8 (box)**Container** 59 (folder)**Jet Propulsion Lab (J.P.L.)****Unit Date** n.d.**box-folder** 8 (box)**Container** 60 (folder)**Junkins, Jonny Lee****Unit Date** n.d.**box-folder** 8 (box)**Container** 61 (folder)**K****Unit Date** n.d.**box-folder** 8 (box)**Container** 62 (folder)**King-Hele****Unit Date** n.d.**box-folder** 8 (box)**Container** 63 (folder)**Klare, Dr. G (State Obs. at Koenigstuhl)****Unit Date** n.d.**box-folder** 8 (box)**Container** 64 (folder)**Klepczynski, Dr. W.J.****Unit Date** n.d.**box-folder** 8 (box)**Container** 65 (folder)**Koelle, H.H.****Unit Date** n.d.**box-folder** 8 (box)**Container** 66 (folder)

**Kopal, Dr. Zdenek**

**Unit Date** n.d.

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**Kovalevsky, Jean**

**Unit Date** n.d.

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**Kuroday, Dr. Yasuhiro**

**Unit Date** n.d.

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**L**

**Unit Date** n.d.

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**Lanzano, Paolo, Dr.**

**Unit Date** n.d.

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**La Paz, Dr. Lincoln**

**Unit Date** n.d.

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**Lawden, D.F.**

**Unit Date** n.d.

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**Libby, Dr. W.H.**

**Unit Date** n.d.

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**Link Foundation**

**Unit Date** n.d.

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**Lochry, Robert Ream (Air Force, Lt. Col.)**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 76 (folder)

**Lourens, J.V.B.**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 77 (folder)

**Lovell, Sir Bernard**

**Unit Date** n.d.

**box-folder** 8 (box)

**Container** 78 (folder)

**Lyon, Mr. T.C.**

**Unit Date** n.d.

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**Container** 79 (folder)

**M**

**Unit Date** n.d.

**box-folder** 9 (box)

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**Makover, Dr. S.G.**

**Unit Date** n.d.

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**Marchal, Christian**

**Unit Date** n.d.

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**Marsden, Dr. Brian G.**

**Unit Date** n.d.

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**Martin Company**

**Unit Date** n.d.

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**Mayall, Dr. Nicholas U.**

**Unit Date** n.d.

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**Mc**

**Unit Date** n.d.

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**McMullen, Frank M.**

**Unit Date** n.d.

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**McVittie**

**Unit Date** n.d.

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**Meeus, Jean**

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**Melbourne, Wm. G.**

**Unit Date** n.d.

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**Milet, B. (Nice Observatory, France)**

**Unit Date** n.d.

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**Container** 12 (folder)

**Milwaukee Astronomical Society**

**Unit Date** n.d.

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**Mintz, Mrs. Betty F.**

**Unit Date** n.d.

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**Moe, H.H.**

**Unit Date** n.d.

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**Murchie, Guy**

**Unit Date** n.d.

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**Musen, Peter**

**Unit Date** n.d.

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### **Naef, Dr. Robert H.**

**Unit Date** n.d.

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**Container** 19 (folder)

### **U.S. Naval Weapons Laboratory**

**Unit Date** n.d.

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### **Neill, Tom**

**Unit Date** n.d.

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### **Nicholson, S.B.**

**Unit Date** n.d.

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### **Nishikawa, Yoshikazu**

**Unit Date** n.d.

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## **O**

**Unit Date** n.d.

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### **Oesterwinter, Claus**

**Unit Date** n.d.

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**Container** 25 (folder)

### **O'Keefe, Dr. John A.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 26 (folder)

## **P**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 27 (folder)

**Paige, Mr. Hillard W.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 28 (folder)

**Palomar Observatory**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 29 (folder)

**Pergammon Press**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 30 (folder)

**Perkins, Dr. Courtland D.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 31 (folder)

**Pilcher, Dr. Frederick**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 32 (folder)

**Porter, Cole**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 33 (folder)

**Porter, J.G. (Guy, husband) + Eileen (wife)**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 34 (folder)

**R**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 35 (folder)

**Radke, Franzisca**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 36 (folder)

**Rasmusen, Dr. Hans Q.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 37 (folder)

**Reaves, Dr. Gibson**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 38 (folder)

**Richey, Michael W.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 39 (folder)

**Roemer, Dr. Elizabeth**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 40 (folder)

**Ross, H.E.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 41 (folder)

**Roy, Maurice and A.E.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 42 (folder)

**Rubinstein, Dr. Moshe F.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 43 (folder)

**S**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 44 (folder)

**Sadler, D.H.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 45 (folder)

**Sandorff, Dr. Paul E.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 46 (folder)

**Karl Schwarzschild Observatory**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 47 (folder)

**Search for Earth Satellites****Unit Date** 1954**box-folder** 9 (box)**Container** 48 (folder)**Selby****Unit Date** n.d.**box-folder** 9 (box)**Container** 49 (folder)**Sellery, Harry A.****Unit Date** n.d.**box-folder** 9 (box)**Container** 50 (folder)**Shapiro, Dr. Irwin I.****Unit Date** n.d.**box-folder** 9 (box)**Container** 51 (folder)**Shields, Mr. W.H.****Unit Date** n.d.**box-folder** 9 (box)**Container** 52 (folder)**Siry, Dr. Joseph****Unit Date** n.d.**box-folder** 9 (box)**Container** 53 (folder)**Sky and Telescope (magazine)****Unit Date** n.d.**box-folder** 9 (box)**Container** 54 (folder)**Soulie, Dr. G. (Bordeaux, France, Observatory)****Unit Date** n.d.**box-folder** 9 (box)**Container** 55 (folder)**Storms, Dr. Harrison****Unit Date** n.d.**box-folder** 9 (box)**Container** 56 (folder)**Stumpff, Dr. Karl****Unit Date** n.d.**box-folder** 9 (box)**Container** 57 (folder)

**Summerfield, Dr. Martin (Astronautica Acta, also)**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 58 (folder)

**Szebehely, Victor**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 59 (folder)

**T**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 60 (folder)

**Takenouchi, Tadao**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 61 (folder)

**Television**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 62 (folder)

**Thomas, Shirley**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 63 (folder)

**Todd, David Peck (+Mrs. Bingham)**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 64 (folder)

**Torres, Dr. Carlos**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 65 (folder)

**U**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 66 (folder)

**V**

**Unit Date** n.d.

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**Container** 67 (folder)

**Van Biesbroeck, Prof. G.**

**Unit Date** n.d.

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**Container** 68 (folder)

**Vasilevskis, Dr. Stanislaus**

**Unit Date** n.d.

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**Vicente, Dr. R.O.**

**Unit Date** n.d.

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**Vlasceanu, Dr. V.I. (Bucharest, Romania)**

**Unit Date** n.d.

**box-folder** 9 (box)

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**W**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 72 (folder)

**Weems, P.V.H.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 73 (folder)

**Wild, P. (Univ. of Berne Observatory)**

**Unit Date** n.d.

**box-folder** 9 (box)

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**Wrigley, G.M.**

**Unit Date** n.d.

**box-folder** 9 (box)

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**Zadunaisky, P.E.**

**Unit Date** n.d.

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**Container** 76 (folder)

**X-Y-Z**

**Unit Date** n.d.

**box-folder** 9 (box)

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**Series IV. Consulting**

**Unit Date** 1940-1966

**Scope and Contents**

This series includes contracts and consultations, such as Ohio State Mapping Lab, Lockheed, North American Aviation, Army Air Force, NSF Grant G976, Western Data Processing Center, and 20th Century Fox [Consulting for "The Day the Earth Stood Still"]. It also includes materials such as monthly reports, proposals, and logs.

**20th Century Fox [Consulting for "The Day the Earth Stood Still"]**

**Unit Date** n.d.

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**Materiel Command AAF**

**Unit Date** 1944

**box-folder** 9 (box)

**Container** 78 (folder)

**Air Forces**

**Unit Date** 1943

**box-folder** 9 (box)

**Container** 79 (folder)

**National Science Foundation Grants**

**Unit Date** 1954-1964

**box-folder** 9 (box)

**Container** 80 (folder)

**INA - WDPC**

**Unit Date** 1954-1958

**box-folder** 9 (box)

**Container** 81 (folder)

**WDPC**

**Unit Date** 1958-1960

**box-folder** 9 (box)

**Container** 82 (folder)

**Rand Manual**

**Unit Date** 1957

**box-folder** 9 (box)

**Container** 83 (folder)

**66AFOSR (III) Office Copies**

**Unit Date** 1959-1965

**box-folder** 9 (box)

**Container** 84 (folder)

**66AFOSR (II) Original Proposals**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 85 (folder)

**66AFOSR (III) Extra Copies of Reports and Vellums of Same**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 86 (folder)

**NASA, AIAA, Misc.**

**Unit Date** n.d.

**box-folder** 9 (box)

**Container** 87 (folder)

**Ohio State**

**Unit Date** 1959

**box-folder** 10 (box)

**Container** 1 (folder)

**JPL - Use of Patched Conics to Determine Pre-Flight Interplanetary Trajectories**

**Unit Date** 1959

**box-folder** 10 (box)

**Container** 2 (folder)

**Aeronutronic - Ford Motor Co.**

**Unit Date** 1961

**box-folder** 10 (box)

**Container** 3 (folder)

**Aeronutronic - 60FB - ASD86**

**Unit Date** 1959-1960

**box-folder** 10 (box)

**Container** 4 (folder)

**Aeronutronic - 60FB - General**

**Unit Date** 1959-1961

**box-folder** 10 (box)

**Container** 5 (folder)

**Aeronutronic - 60FB - NASA Geodetic Satellite**

**Unit Date** 1960-1961

**box-folder** 10 (box)

**Container** 6 (folder)

**Aeronutronic - 60FB - PMR**

**Unit Date** 1960

**box-folder** 10 (box)

**Container** 7 (folder)

**Aeronutronic - Duncan/Herrick**

**Unit Date** 1960-1961

**box-folder** 10 (box)

**Container** 8 (folder)

**Aeronutronic - Donovan**

**Unit Date** 1960-1961

**box-folder** 10 (box)

**Container** 9 (folder)

**Lockheed - Study of Universal Variables and Range and Range Rate Orbit Determination**

**Unit Date** 1962

**box-folder** 10 (box)

**Container** 10 (folder)

**Lockheed - Analysis of Tracking Techniques for Lunar Space Vehicles**

**Unit Date** 1963

**box-folder** 10 (box)

**Container** 11 (folder)

**Lockheed - Analysis of Tracking Techniques for Lunar Space Vehicles**

**Unit Date** 1962

**box-folder** 10 (box)

**Container** 12 (folder)

**Anonymous, High Precision Orbit Determination, Monthly Progress Report (A2-13)**

**Unit Date** 1958

**box-folder** 10 (box)

**Container** 13 (folder)

**High Precision Orbit Determination, Monthly Progress Report (A2-9)**

**Unit Date** Jan. 1959

**box-folder** 10 (box)

**Container** 14 (folder)

**High Precision Orbit Determination, Monthly Progress Report (A2-15)**

**Unit Date** Feb. 1959

**box-folder** 10 (box)

**Container** 15 (folder)

**Aeronutronic - High Precision Orbit Determination, Monthly Progress Report**

**Unit Date** Dec. 1958

**box-folder** 10 (box)

**Container** 16 (folder)

**Aeronutronic - ASI High Precision Lunar Trajectory Determination Computer Program**

**Unit Date** 1959

**box-folder** 10 (box)

**Container** 17 (folder)

**Symposium on Moon Parameters**

**Unit Date** 1963

**box-folder** 10 (box)

**Container** 18 (folder)

**US Dept. of Army Brochures Re "Gimrada" (Geodesy Intelligence + Mapping R+D Agency)**

**Unit Date** 1965

**box-folder** 10 (box)

**Container** 19 (folder)

**North American Contracts #M5N4DD-825544 & Invoices**

**Unit Date** 1964-1968

**box-folder** 10 (box)

**Container** 20 (folder)

**NAA Overhead**

**Unit Date** 1965

**box-folder** 10 (box)

**Container** 21 (folder)

**H/A Contract & Invoices NAA #MAFPS-4548**

**Unit Date** 1964-1966

**box-folder** 10 (box)

**Container** 22 (folder)

**66AFOSR(VI)B1 Sources, Obs. Data**

**Unit Date** 1965-1967

**box-folder** 10 (box)

**Container** 23 (folder)

**AF Grant 2A1-67**

**Unit Date** 1966-1969

**box-folder** 10 (box)

**Container** 24 (folder)

**Techniques for Perturbation Integration and Orbit Correction**

**Unit Date** 1964-1967

**box-folder** 10 (box)

**Container** 25 (folder)

**List of Names of Possible Correspondents**

**Unit Date** n.d.

**box-folder** 10 (box)

**Container** 26 (folder)

**Aeronutronic Systems, Inc. (ASI) - Personnel**

**Unit Date** 1957

**box-folder** 10 (box)

**Container** 27 (folder)

**ASI**

**Unit Date** 1957, 1958

**box-folder** 10 (box)

**Container** 28 (folder)

**ASI - Log of Works + Days****Unit Date** 1957**box-folder** 10 (box)**Container** 29 (folder)**Aeronutronic Personnel****Unit Date** 1960**box-folder** 10 (box)**Container** 30 (folder)**ASI - Contract + Negotiations****Unit Date** 1957-1959**box-folder** 10 (box)**Container** 31 (folder)**Systems Laboratories Corporation (SLC) Memos****Unit Date** 1956**box-folder** 10 (box)**Container** 32 (folder)**Systems Labs. Corp.****Unit Date** 1956-1957**box-folder** 10 (box)**Container** 33 (folder)**SLC Formulae****Unit Date** 1956**box-folder** 10 (box)**Container** 34 (folder)**SLC****Unit Date** 1956-1957**box-folder** 10 (box)**Container** 35 (folder)**SN1 Formulae, Constants, etc.****Unit Date** 1956**box-folder** 10 (box)**Container** 36 (folder)**SN2 Families of Descending Trajectories****Unit Date** 1957**box-folder** 10 (box)**Container** 37 (folder)**SN3 Point-to-Point Trajectories****Unit Date** 1957**box-folder** 10 (box)**Container** 38 (folder)

**SN4 Point-to-Point Trajectories****Unit Date** 1957**box-folder** 10 (box)**Container** 39 (folder)**SN6 Units and Constants****Unit Date** 1957**box-folder** 10 (box)**Container** 40 (folder)**SN7 Magnavox****Unit Date** n.d.**box-folder** 10 (box)**Container** 41 (folder)**SN8 10,000 mile Rocket Trajectories and Dispersion****Unit Date** n.d.**box-folder** 10 (box)**Container** 42 (folder)**SN9 Orbits from 6 Observations****Unit Date** n.d.**box-folder** 10 (box)**Container** 43 (folder)**"SNR" Reviews****Unit Date** 1956**box-folder** 10 (box)**Container** 44 (folder)**Barnes, J.L.****Unit Date** 1957**box-folder** 10 (box)**Container** 45 (folder)**SLC Personnel Lists****Unit Date** 1956-1957**box-folder** 10 (box)**Container** 46 (folder)**"SNP" Proposals****Unit Date** 1956-1957**box-folder** 10 (box)**Container** 47 (folder)**SNP1 Satellite Orbit Determination****Unit Date** n.d.**box-folder** 10 (box)**Container** 48 (folder)

**SNP2 Satellite Orbit Problems****Unit Date** n.d.**box-folder** 10 (box)**Container** 49 (folder)**SNP3 ICBM (Constants)****Unit Date** n.d.**box-folder** 10 (box)**Container** 50 (folder)**SNP5 Moon Rocket (see SN[12])****Unit Date** 1956-1957**box-folder** 10 (box)**Container** 51 (folder)**SNP6 Geo-Meteoritic Interactions****Unit Date** n.d.**box-folder** 10 (box)**Container** 52 (folder)**SNP7 Constants from Radar Obs.****Unit Date** 1956-1957**box-folder** 10 (box)**Container** 53 (folder)**SNP8 Nat'l Geographic Society****Unit Date** 1957**box-folder** 10 (box)**Container** 54 (folder)**SNP9 Gravity Storms****Unit Date** 1957**box-folder** 10 (box)**Container** 55 (folder)**SNP10 Weems + Link****Unit Date** 1957**box-folder** 10 (box)**Container** 56 (folder)**SNP12 Guggenheim****Unit Date** 1957**box-folder** 10 (box)**Container** 57 (folder)**SNP13 Douglas****Unit Date** 1956**box-folder** 10 (box)**Container** 58 (folder)

**SN12 First Moon Rocket (See SNP5)****Unit Date** 1957**box-folder** 10 (box)**Container** 59 (folder)**FMR = SN12****Unit Date** n.d.**box-folder** 10 (box)**Container** 60 (folder)**SN12B Moon Return Orbit****Unit Date** n.d.**box-folder** 10 (box)**Container** 61 (folder)**SN13 Recon. Proposal****Unit Date** 1957**box-folder** 10 (box)**Container** 62 (folder)**SN14 Project D Report****Unit Date** 1956**box-folder** 10 (box)**Container** 63 (folder)**SN15 Project C Report****Unit Date** 1957**box-folder** 10 (box)**Container** 64 (folder)**SN16 Divisional Reports****Unit Date** 1957**box-folder** 10 (box)**Container** 65 (folder)**SN17 Radii + Velocities****Unit Date** n.d.**box-folder** 10 (box)**Container** 66 (folder)**SN18 Republic Lecture****Unit Date** 1957**box-folder** 10 (box)**Container** 67 (folder)**SN20 Moon Targets****Unit Date** 1957**box-folder** 10 (box)**Container** 68 (folder)

**SN22 WDD Visit****Unit Date** n.d.**box-folder** 10 (box)**Container** 69 (folder)**SN23 RMLB to ION + Ames****Unit Date** 1957**box-folder** 10 (box)**Container** 70 (folder)**SN25 = A5D4A****Unit Date** n.d.**box-folder** 10 (box)**Container** 71 (folder)**SN26-30 Moon Over Eniwetok, Piggy-Back, Orbit from Given Point, Azimuth + Spherical Trigonometry****Unit Date** 1958**box-folder** 10 (box)**Container** 72 (folder)**SN31-35 Correction, Plot Moon Orbits, Project D, Natural Stability of Satellite Platform, Perturbations of the Bulge****Unit Date** 1957**box-folder** 10 (box)**Container** 73 (folder)**SN37-38 Vertical Limit on National Sovereignty, Librations on Slightly Eccentric Orbit****Unit Date** 1957**box-folder** 10 (box)**Container** 74 (folder)**Library Reports****Unit Date** 1956-1957**box-folder** 10 (box)**Container** 75 (folder)**SNP14+15 AFOSR High Precision Satellite Orbits, Whipple Pert. + Anomalies****Unit Date** 1957**box-folder** 10 (box)**Container** 76 (folder)**Republic (See SN18)****Unit Date** 1957**box-folder** 10 (box)**Container** 77 (folder)**SN Projects****Unit Date** n.d.**box-folder** 10 (box)

**Container** 78 (folder)

## **Series V. Presentations and Lectures**

**Unit Date** 1955-1964

### **Scope and Contents**

This series consists of notes, outlines, slides, and other materials related to talks, presentations, and lectures given by Herrick. This includes talks and presentations given for organizations such as AIAA and IAU, covering topics such as differential correction, variation of parameters, planetary motions, and asteroids.

### **Differential Correction for Lagrange, Gauss-Gibbs**

**Unit Date** 1951

**box-folder** 11 (box)

**Container** 1 (folder)

### **Berkeley Talk, Variation of Parameters**

**Unit Date** 1953

**box-folder** 11 (box)

**Container** 2 (folder)

### **Planetary Motions Lecture**

**Unit Date** 1955

**box-folder** 11 (box)

**Container** 3 (folder)

### **CONVAIR Meeting**

**Unit Date** 1957

**box-folder** 11 (box)

**Container** 4 (folder)

### **Astrodynamics Colloquium**

**Unit Date** 1957

**box-folder** 11 (box)

**Container** 5 (folder)

### **Talk for Berkeley, Flagstaff, Washington, Barcelona**

**Unit Date** 1957

**box-folder** 11 (box)

**Container** 6 (folder)

### **Junior League Lecture**

**Unit Date** 1957

**box-folder** 11 (box)

**Container** 7 (folder)

### **Dr. A.R. Hall Introduction**

**Unit Date** 1958

**box-folder** 11 (box)

**Container** 8 (folder)

### **Conference of Teachers Lecture**

**Unit Date** 1958

**box-folder** 11 (box)  
**Container** 9 (folder)

#### **STL Lecture**

**Unit Date** 1960-1961  
**box-folder** 11 (box)  
**Container** 10 (folder)

#### **AIAA - Minta Martin**

**Unit Date** 1962  
**box-folder** 11 (box)  
**Container** 11 (folder)

#### **65R7 Minta Martin**

**Unit Date** n.d.  
**box-folder** 11 (box)  
**Container** 12 (folder)

#### **Braunschweig Talk**

**Unit Date** 1964  
**box-folder** 11 (box)  
**Container** 13 (folder)

#### **Slides for Lectures**

**Unit Date** n.d.  
**box-folder** 11 (box)  
**Container** 14, 15 (folder)

#### **The Exploration and Exploitation of the Asteroids**

**Unit Date** n.d.  
**box-folder** 11 (box)  
**Container** 21 (folder)

#### **I.A.U. Symposium #21 Report**

**Unit Date** 1963  
**box-folder** 11 (box)  
**Container** 22 (folder)

### **Series VI. Professional Societies**

**Unit Date** 1925-1973

#### **Scope and Contents**

This series includes materials related to professional societies in the space sciences, including, but not limited to: the American Institute of Aeronautics and Astronautics, American Academy of Mechanics, American Academy of Sciences, American Rocket Society, British Interplanetary Society, and the International Academy of Astronautics. Materials include membership information, board of directors files, awards, annual meeting and conference notes, committees, reports, and journals.

#### **Arrangement**

Materials in this series have been listed in alphabetical order for ease of use.

**66SC(III)A3**

**Unit Date** n.d.

**box-folder** 12 (box)

**Container** 31 (folder)

**A.E. Supplement**

**Unit Date** 1968

**box-folder** 12 (box)

**Container** 29 (folder)

**61 MTI - AAS - Dallas**

**Unit Date** 1961

**box-folder** 11 (box)

**Container** 17 (folder)

**AAS Celestial Mechanics Division**

**Unit Date** 1968, 1972

**box-folder** 11 (box)

**Container** 18 (folder)

**AIAA - Other Technical Committees**

**Unit Date** 1964

**box-folder** 11 (box)

**Container** 37 (folder)

**AIAA Addresses + Biographies**

**Unit Date** 1964

**box-folder** 11 (box)

**Container** 42 (folder)

**AIAA Astrodynamics Committee**

**Unit Date** 1963

**box-folder** 11 (box)

**Container** 40 (folder)

**AIAA Board of Directors**

**Unit Date** 1964

**box-folder** 11 (box)

**Container** 32 (folder)

**AIAA Fellow Grade Committee**

**Unit Date** 1971

**box-folder** 11 (box)

**Container** 30 (folder)

**AIAA International Aerospace Abstracts**

**Unit Date** 1963

**box-folder** 11 (box)

**Container** 41 (folder)

**AIAA Questions + Others**

**Unit Date** 1963-1964

**box-folder** 11 (box)

**Container** 39 (folder)

**AIAA Student + Professional Membership Information**

**Unit Date** 1970-1973

**box-folder** 11 (box)

**Container** 36 (folder)

**AIAA Tech. Comm. Hist. Aeronautic and Astronautics**

**Unit Date** 1966

**box-folder** 11 (box)

**Container** 34 (folder)

**Misc. AIAA Affairs**

**Unit Date** 1962-1970

**box-folder** 11 (box)

**Container** 43 (folder)

**Intersociety AIAA Relations SH Member**

**Unit Date** 1965-1967

**box-folder** 11 (box)

**Container** 31 (folder)

**Awards**

**Unit Date** 1972

**box-folder** 11 (box)

**Container** 38 (folder)

**Alamagordo**

**Unit Date** 1958

**box-folder** 12 (box)

**Container** 1 (folder)

**American Academy of Mechanics**

**Unit Date** n.d.

**box-folder** 11 (box)

**Container** 25 (folder)

**American Astronautical Society**

**Unit Date** 1972-1973

**box-folder** 11 (box)

**Container** 19 (folder)

**American Astronautical Society (1963 Fellow)**

**Unit Date** 1963-1972

**box-folder** 11 (box)

**Container** 24 (folder)

**American Bar Association (Re Legal Aspects of Space Travel)**

**Unit Date** 1958

**box-folder** 11 (box)

**Container** 27 (folder)

**American Rocket Society**

**Unit Date** 1959

**box-folder** 11 (box)

**Container** 53, 54 (folder)

**ARS - Origins of ADY**

**Unit Date** 1958-1968

**box-folder** 12 (box)

**Container** 4 (folder)

**ARS - Transfer**

**Unit Date** 1959

**box-folder** 12 (box)

**Container** 6 (folder)

**ARS 14th Annual Meeting, Washington D.C.**

**Unit Date** 1959

**box-folder** 12 (box)

**Container** 2 (folder)

**ARS Board of Directors Meeting**

**Unit Date** 1961

**box-folder** 12 (box)

**Container** 5 (folder)

**ARS Committees ( International Affairs, Education, Publications, Program)**

**Unit Date** 1960-1961

**box-folder** 11 (box)

**Container** 49 (folder)

**ARS Meetings**

**Unit Date** 1959

**box-folder** 11 (box)

**Container** 52 (folder)

**ARS Miscellaneous**

**Unit Date** n.d.

**box-folder** 11 (box)

**Container** 46 (folder)

**ARS Progress Series**

**Unit Date** 1960

**box-folder** 11 (box)

**Container** 50 (folder)

**ARS Reviews****Unit Date** 1961**box-folder** 11 (box)**Container** 48 (folder)**ARS Semi-Annual Meeting****Unit Date** 1958**box-folder** 12 (box)**Container** 3 (folder)**ARS Tr. + Ed. Sub-Committees****Unit Date** 1957-1958**box-folder** 11 (box)**Container** 51 (folder)**ARS, San Diego Meeting****Unit Date** 1959**box-folder** 11 (box)**Container** 56 (folder)**ARS, Southern California Section****Unit Date** 1959**box-folder** 11 (box)**Container** 55 (folder)**ARS, Sp. Fl. Com., Tr. + Ed SubCom.****Unit Date** 1958-1960**box-folder** 11 (box)**Container** 47 (folder)**Misc. ARS/IAS Affairs (Includes Agreement of Consolidation)****Unit Date** 1958-1962**box-folder** 12 (box)**Container** 7 (folder)**ASP Mtg. + Trip****Unit Date** 1957**box-folder** 11 (box)**Container** 45 (folder)**Astrodynamics in the AIAA****Unit Date** n.d.**box-folder** 11 (box)**Container** 28 (folder)**Astron. Soc. Pacific****Unit Date** 1943-1959**box-folder** 11 (box)**Container** 44 (folder)

**Astronomical Society of the Pacific Leaflets 3-510**

**Unit Date** 1925-1971

**box-folder** 42 (box)

**Container** 1-6 (folder)

**Atmospheric Flight Mech. Committee**

**Unit Date** 1964

**box-folder** 11 (box)

**Container** 26 (folder)

**BION (British Institute of Navigation)**

**Unit Date** 1954-1967

**box-folder** 13 (box)

**Container** 6 (folder)

**Reports of BIIEA Working Groups (Ephemerides, Celestial Mechanics, & Positions + Motions of Minor Planets)**

**Unit Date** 1971-1972

**box-folder** 12 (box)

**Container** 8 (folder)

**Language of Materials**

Some of the materials in this folder are in French.

**British Interplanetary Society**

**Unit Date** 1972

**box-folder** 11 (box)

**Container** 23 (folder)

**British Interplanetary Society**

**Unit Date** 1950-1959

**box-folder** 12 (box)

**Container** 9 (folder)

**Celestial Mechanics Jr.**

**Unit Date** 1968-1971

**box-folder** 13 (box)

**Container** 1 (folder)

**COSPAR Working Group #1 (Dynamics)**

**Unit Date** 1963-1972

**box-folder** 12 (box)

**Container** 10 (folder)

**European Astronomers**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 17 (folder)

**Founding of American Academy of Mechanics****Unit Date** 1971-1972**box-folder** 11 (box)**Container** 16 (folder)**History of Science Society****Unit Date** 1944-1955**box-folder** 12 (box)**Container** 11 (folder)**IAA Committees****Unit Date** 1961-1969**box-folder** 11 (box)**Container** 29 (folder)**IAA International Academy of Astronautics****Unit Date** 1963-1965**box-folder** 12 (box)**Container** 17 (folder)**IAF - IAU Travel****Unit Date** 1958**box-folder** 12 (box)**Container** 22 (folder)**IAF Congress****Unit Date** 1961**box-folder** 12 (box)**Container** 13 (folder)**IAF Transfer****Unit Date** 1961**box-folder** 12 (box)**Container** 12 (folder)**IAF Transfer****Unit Date** 1961**box-folder** 12 (box)**Container** 14 (folder)**Misc. IAF/IAS Affairs****Unit Date** 1958-1968**box-folder** 12 (box)**Container** 18 (folder)**N.Y. - IAS - AIAA Bd and TN Comm.****Unit Date** 1962-1965**box-folder** 11 (box)**Container** 35 (folder)

**IAS - ASEE**

**Unit Date** 1958

**box-folder** 12 (box)

**Container** 16 (folder)

**IAU**

**Unit Date** 1952-1954

**box-folder** 13 (box)

**Container** 15 (folder)

**IAU [Commission]**

**Unit Date** 1949-1957

**box-folder** 12 (box)

**Container** 21 (folder)

**Language of Materials**

Some materials in this folder are written in French.

**IAU Commission #4 (Ephemerides)**

**Unit Date** 1966-1970

**box-folder** 12 (box)

**Container** 25 (folder)

**IAU Commission #7 (Celestial Mechanics)**

**Unit Date** 1966-1972

**box-folder** 12 (box)

**Container** 26 (folder)

**IAU Ephemeris + Time**

**Unit Date** 1967-1969

**box-folder** 12 (box)

**Container** 19 (folder)

**IAU International Astronomical Union**

**Unit Date** 1964-1970

**box-folder** 12 (box)

**Container** 24 (folder)

**IAU Meeting in Moscow**

**Unit Date** 1958

**box-folder** 12 (box)

**Container** 23 (folder)

**IGY Conference - Satellite Orbit Computations**

**Unit Date** 1958

**box-folder** 12 (box)

**Container** 28 (folder)

**IGY Conferences**

**Unit Date** 1957

**box-folder** 12 (box)

**Container** 27 (folder)

**IGY Proposal****Unit Date** 1955**box-folder** 12 (box)**Container** 30 (folder)**International Academy of Astronautics****Unit Date** 1966-1973**box-folder** 12 (box)**Container** 15 (folder)**ION - Institute of Navigation****Unit Date** 1952-1969**box-folder** 13 (box)**Container** 4 (folder)**ION Annual Meeting****Unit Date** 1958**box-folder** 13 (box)**Container** 9 (folder)**ION Journal****Unit Date** 1950**box-folder** 13 (box)**Container** 5 (folder)**ION Meeting + Trip****Unit Date** 1957**box-folder** 13 (box)**Container** 8 (folder)**ION Space Navigation Meeting****Unit Date** 1958**box-folder** 13 (box)**Container** 7 (folder)**ION Tapes****Unit Date** 1960**box-folder** 13 (box)**Container** 2 (folder)**ION Transfer to Washington****Unit Date** 1960**box-folder** 13 (box)**Container** 3 (folder)**Misc. ION Affairs****Unit Date** 1959-1971**box-folder** 13 (box)**Container** 10 (folder)

**IUTAM Paris****Unit Date** 1968**box-folder** 13 (box)**Container** 11 (folder)**"Frontiers of Science" Symposium****Unit Date** 1959**box-folder** 12 (box)**Container** 20 (folder)**Minor Planets and Related Objects****Unit Date** 1970**box-folder** 11 (box)**Container** 33 (folder)**Misc. Society Affairs****Unit Date** 1952-1972**box-folder** 13 (box)**Container** 16 (folder)**MT NAA Lunar Explor. Colloquium****Unit Date** 1963**box-folder** 13 (box)**Container** 12 (folder)**Pacific Rocket Society****Unit Date** 1948**box-folder** 13 (box)**Container** 13 (folder)**Renaissance Society****Unit Date** 1956**box-folder** 13 (box)**Container** 14 (folder)**Royal Astronomical Society****Unit Date** 1967-1972**box-folder** 11 (box)**Container** 20 (folder)**USSR****Unit Date** 1973**box-folder** 13 (box)**Container** 18 (folder)**Series VII. Publications, including Reprints and Drafts****Unit Date** 1932-1973**Scope and Contents**

This series includes drafts and reprints of Herrick's many works, notably *Astrodynamics*, published in 1971-1972. The series also contains correspondence about Herrick's publications or his reviews of work published by others. There are also reprints of the works of others in astronomy and space sciences.

**Arrangement**

This series has been divided into sub-series according to the original arrangement of materials:

Sub-Series A. "S" series of files, chiefly reprints of articles, includes reprints of articles by others that were identified as "S" series by Herrick. These articles and papers are on topics such as comets, grid navigation, orbits, and advancements in the field of astrodynamics. The files are numbered sequentially, maintaining the original order, and there are a number of folders with an "S" number, but no title.

Sub-Series B. Article Reprints, includes reprints of articles and technical papers by others. These files are organized alphabetically by author name and include topics such as celestial mechanics, orbits, and the space sciences.

Sub-Series C. SH Publications, consists of notes, drafts, and revisions of Herrick's *Astrodynamics*. It also includes errata, vellums, research reports, and bibliography materials.

Sub-Series D. SH Numbered Publications (see also listing in Box 1), is made up of Herrick's publications numbers 1 through 233. They are numbered in accordance with his bibliography (located in Box 1) and include drafts and reprints of his work, as well as correspondence relating to it. Topics include orbit methods, comet observations, position determination, celestial navigation, planetary grids, ephemeris of minor planets and objects, rocket trajectories, space travel, lunar exploration, astronomical values, and advancements in astrodynamics.

Sub-Series E. Drafts of Articles and Book Chapters, includes additional notes and drafts of articles and book chapters, such as Herrick's Contribution to CRC "Handbook of Tables for Mathematics," 1965-1966, Gibb's Contribution to Orbit Theory, and Herrick's review of Einstein books. It also contains correspondence related to Herrick's drafts and publications.

### **Sub-Series A. "S" series of files, chiefly reprints of articles**

**Unit Date** 1939-1970

#### **#2 - IAU on Nat. Val. Trig. Tables**

**Unit Date** 1939

**box-folder** 14 (box)

**Container** 1 (folder)

#### **#9 Dilloway on Grid Navigation**

**Unit Date** 1945

**box-folder** 14 (box)

**Container** 2 (folder)

#### **S11 Maclure "Aries"**

**Unit Date** 1946

**box-folder** 14 (box)

**Container** 3 (folder)

#### **#12 Log Grid Nav. Article**

**Unit Date** 1946

**box-folder** 14 (box)

**Container** 4 (folder)

#### **#13 Navigation v.1, no. 4**

**Unit Date** 1946

**box-folder** 14 (box)

**Container** 5 (folder)

#### **#14 Storer on Dreisenstok + Ageton**

**Unit Date** 1947

**box-folder** 14 (box)

**Container** 6 (folder)

**#S17 Blackmore: GN**

**Unit Date** 1948

**box-folder** 14 (box)

**Container** 7 (folder)

**#S20 Popper, Radial Velocities**

**Unit Date** 1948

**box-folder** 14 (box)

**Container** 8 (folder)

**S21 Sadler: Astronomy + Navigation**

**Unit Date** 1949

**box-folder** 14 (box)

**Container** 9 (folder)

**S22 Merton on V of C**

**Unit Date** 1949

**box-folder** 14 (box)

**Container** 10 (folder)

**S23 Banks, Grid Navigation**

**Unit Date** 1951

**box-folder** 14 (box)

**Container** 11 (folder)

**S27 Wylie. Moon**

**Unit Date** 1951

**box-folder** 14 (box)

**Container** 12 (folder)

**S28 Nicholson, JXII**

**Unit Date** 1951

**box-folder** 14 (box)

**Container** 13 (folder)

**S31 Chapin, Ideas about Comets**

**Unit Date** 1952

**box-folder** 14 (box)

**Container** 14 (folder)

**S38 Obs. Of Icarus**

**Unit Date** 1953

**box-folder** 14 (box)

**Container** 15 (folder)

**S39 A.C. Clarke, the Rocket...**

**Unit Date** 1952

**box-folder** 14 (box)

**Container** 16 (folder)

**S40 Gilvarry on Icarus****Unit Date** 1953**box-folder** 14 (box)**Container** 17 (folder)**S43-45, 47 Hirst Review; Obs. Of Icarus; JBAA Review****Unit Date** 1953-1968**box-folder** 14 (box)**Container** 18 (folder)**S46 Belmont on Narsarssuak****Unit Date** 1954**box-folder** 14 (box)**Container** 19 (folder)**S49-50 Churms's Objects Anchises****Unit Date** 1954**box-folder** 14 (box)**Container** 20 (folder)**S51 Canada Grid****Unit Date** n.d.**box-folder** 14 (box)**Container** 21 (folder)**S53 U.S. Jet Grid****Unit Date** n.d.**box-folder** 14 (box)**Container** 22 (folder)**S54 Scott: Copernicanism, England****Unit Date** 1954**box-folder** 14 (box)**Container** 23 (folder)**S60 Measurement + Reduction RPP****Unit Date** 1950**box-folder** 14 (box)**Container** 24 (folder)**S64****Unit Date** 1955**box-folder** 14 (box)**Container** 25 (folder)**S69****Unit Date** 1956**box-folder** 14 (box)**Container** 26 (folder)

**S77 Simpson Space Law**

**Unit Date** 1957

**box-folder** 14 (box)

**Container** 27 (folder)

**S79 J.T. Petit**

**Unit Date** 1954

**box-folder** 14 (box)

**Container** 28 (folder)

**S80 Seymour Chapin**

**Unit Date** 1957

**box-folder** 14 (box)

**Container** 29 (folder)

**S81 W.K. Squires**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 30 (folder)

**S82 L.G. Walters**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 31 (folder)

**S85 Anonymous (Tech. Note on Low Eccentricity Orbit Program)**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 32 (folder)

**S86 Anonymous (Tech. Note Concerning Precision Orbit Determination)**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 33 (folder)

**S87 Lewis Larmore**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 34 (folder)

**S88 C.R. Cates and M.S. Johnson**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 35 (folder)

**S90 Igor Alexandrov**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 36 (folder)

**S91 Igor Alexandrov**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 37 (folder)

**S93 Paul Koskela**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 38 (folder)

**S94 A. Liv**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 39 (folder)

**S95 Robert M.L. Baker, Jr.**

**Unit Date** 1958

**box-folder** 14 (box)

**Container** 40 (folder)

**S96 Baker, Robert M.L.**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 41 (folder)

**S97 Baker, RLM Jr.**

**Unit Date** 1959

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**Container** 42 (folder)

**S98 Baker, Hilton, Koskela, Sokol**

**Unit Date** 1959

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**Container** 43 (folder)

**S99 Van Sant, Walters, Nicola**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 44 (folder)

**S100**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 45 (folder)

**S101**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 46 (folder)

**S102****Unit Date** 1959**box-folder** 14 (box)**Container** 47 (folder)**S102 ADY Report #3****Unit Date** 1959**box-folder** 14 (box)**Container** 48 (folder)**S103****Unit Date** 1959**box-folder** 14 (box)**Container** 49 (folder)**S104****Unit Date** 1959**box-folder** 14 (box)**Container** 50 (folder)**S105****Unit Date** 1958**box-folder** 14 (box)**Container** 51 (folder)**S108****Unit Date** 1958**box-folder** 14 (box)**Container** 52 (folder)**S110****Unit Date** 1958**box-folder** 14 (box)**Container** 53 (folder)**S111****Unit Date** 1960**box-folder** 14 (box)**Container** 54 (folder)**S112****Unit Date** 1959**box-folder** 14 (box)**Container** 55 (folder)**S114 Gravitational Constants****Unit Date** n.d.**box-folder** 14 (box)**Container** 56 (folder)

**S115 L. Nicola**

**Unit Date** 1960

**box-folder** 14 (box)

**Container** 57 (folder)

**S116 C.G. Hilton Gravitational Constants**

**Unit Date** 1959

**box-folder** 14 (box)

**Container** 58 (folder)

**S119 M.W. Makemson, R.M.L. Baker**

**Unit Date** 1961

**box-folder** 14 (box)

**Container** 59 (folder)

**S120**

**Unit Date** 1960

**box-folder** 14 (box)

**Container** 60 (folder)

**S121 R.M.L. Baker Recent Advancements in Astrodynamics**

**Unit Date** 1960

**box-folder** 15 (box)

**Container** 1 (folder)

**S122 R.M.L. Baker Recent Advancements in Astrodynamics**

**Unit Date** 1961

**box-folder** 15 (box)

**Container** 2 (folder)

**S123 R.M.L. Baker, Jr. Theory and Application of Range Radar to Air Force Systems**

**Unit Date** 1961

**box-folder** 15 (box)

**Container** 3 (folder)

**S124 Paul Wong Nonsingular Variation of Parameter Equations for Comp. for Space Traj.**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 4 (folder)

**S125 R.M.L. Baker, Jr. Note on Determination of Orbits**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 5 (folder)

**126 Recent Advances**

**Unit Date** 1958

**box-folder** 15 (box)

**Container** 6 (folder)

**S127 Maud W. Makemson**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 7 (folder)

**S128 R.M.L. Baker, Jr. Influence of Planetary Mass, Uncertainty of Interplanetary Orbits**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 8 (folder)

**S129**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 9 (folder)

**S129 D.A. Pierce**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 10 (folder)

**S130 R.M.L. Baker, Jr. Preliminary Orbit Determination**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 11 (folder)

**S131 D.N. Lascody**

**Unit Date** 1962

**box-folder** 15 (box)

**Container** 12 (folder)

**S132 P.R. Escobal**

**Unit Date** 1963

**box-folder** 15 (box)

**Container** 13 (folder)

**S133 D.M. Cole**

**Unit Date** 1963

**box-folder** 15 (box)

**Container** 14 (folder)

**S134 M.P. Francis**

**Unit Date** 1963

**box-folder** 15 (box)

**Container** 15 (folder)

**S135 M.P. Francis**

**Unit Date** 1963

**box-folder** 15 (box)

**Container** 16 (folder)

**S136 C.G. Hilton****Unit Date** 1963**box-folder** 15 (box)**Container** 17 (folder)**S137 L. Nicolo, L.G. Walters****Unit Date** 1963**box-folder** 15 (box)**Container** 18 (folder)**S140 J.U.B. Lourens****Unit Date** 1965**box-folder** 15 (box)**Container** 19 (folder)**S141****Unit Date** 1967**box-folder** 15 (box)**Container** 20 (folder)**S142****Unit Date** 1968**box-folder** 15 (box)**Container** 21 (folder)**S143****Unit Date** 1968**box-folder** 15 (box)**Container** 22 (folder)**Language** German.**S144****Unit Date** 1968**box-folder** 15 (box)**Container** 23 (folder)**S145****Unit Date** 1968**box-folder** 15 (box)**Container** 24 (folder)**S146****Unit Date** 1968**box-folder** 15 (box)**Container** 25 (folder)**S147 IAUC 2083****Unit Date** 1968**box-folder** 15 (box)**Container** 26 (folder)

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**S169****Unit Date** 1968**box-folder** 15 (box)**Container** 47 (folder)**S170****Unit Date** 1968**box-folder** 15 (box)**Container** 48 (folder)**S171****Unit Date** 1968**box-folder** 15 (box)**Container** 49 (folder)**S172****Unit Date** 1968**box-folder** 15 (box)**Container** 50 (folder)**S173****Unit Date** 1968**box-folder** 15 (box)**Container** 51 (folder)**S174****Unit Date** 1968**box-folder** 15 (box)**Container** 52 (folder)**S175****Unit Date** 1968**box-folder** 15 (box)**Container** 53 (folder)**S176****Unit Date** 1968**box-folder** 15 (box)**Container** 54 (folder)**S177****Unit Date** 1968**box-folder** 15 (box)**Container** 55 (folder)**S178****Unit Date** 1968**box-folder** 15 (box)**Container** 56 (folder)

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**S200****Unit Date** 1968**box-folder** 15 (box)**Container** 77 (folder)**S201****Unit Date** 1968**box-folder** 15 (box)**Container** 78 (folder)**Language** Japanese, English .**S202****Unit Date** 1969**box-folder** 15 (box)**Container** 79 (folder)**S203****Unit Date** 1969**box-folder** 15 (box)**Container** 80 (folder)**S204****Unit Date** 1969**box-folder** 15 (box)**Container** 81 (folder)**S205****Unit Date** 1969**box-folder** 15 (box)**Container** 82 (folder)**S206****Unit Date** 1969**box-folder** 15 (box)**Container** 83 (folder)**S207****Unit Date** 1969**box-folder** 15 (box)**Container** 84 (folder)**S208****Unit Date** 1969**box-folder** 15 (box)**Container** 85 (folder)**S209****Unit Date** 1969**box-folder** 15 (box)**Container** 86 (folder)

**S210****Unit Date** 1969**box-folder** 15 (box)**Container** 87 (folder)**S211****Unit Date** 1969**box-folder** 15 (box)**Container** 88 (folder)**S212****Unit Date** 1969**box-folder** 15 (box)**Container** 89 (folder)**S213****Unit Date** 1969**box-folder** 15 (box)**Container** 90 (folder)**S214****Unit Date** 1969**box-folder** 15 (box)**Container** 91 (folder)**S215****Unit Date** 1969**box-folder** 15 (box)**Container** 92 (folder)**S216****Unit Date** 1969**box-folder** 15 (box)**Container** 93 (folder)**Language** German.**S217****Unit Date** 1969**box-folder** 15 (box)**Container** 94 (folder)**S218****Unit Date** 1969**box-folder** 15 (box)**Container** 95 (folder)**Language** German.**S219****Unit Date** 1969**box-folder** 15 (box)**Container** 96 (folder)

**Language** German.

**S220**

**Unit Date** 1969

**box-folder** 15 (box)

**Container** 97 (folder)

**S221**

**Unit Date** 1969

**box-folder** 15 (box)

**Container** 98 (folder)

**S222**

**Unit Date** 1969

**box-folder** 15 (box)

**Container** 99 (folder)

**S223**

**Unit Date** 1969

**box-folder** 15 (box)

**Container** 100 (folder)

**S224**

**Unit Date** 1969

**box-folder** 15 (box)

**Container** 101 (folder)

**S236**

**Unit Date** 1969

**box-folder** 15 (box)

**Container** 102 (folder)

**S237**

**Unit Date** 1970

**box-folder** 15 (box)

**Container** 103 (folder)

**S238**

**Unit Date** 1970

**box-folder** 15 (box)

**Container** 104 (folder)

**S239**

**Unit Date** 1970

**box-folder** 15 (box)

**Container** 105 (folder)

**S240**

**Unit Date** 1970

**box-folder** 15 (box)

**Container** 106 (folder)

**S241****Unit Date** 1970**box-folder** 15 (box)**Container** 107 (folder)**S242****Unit Date** 1970**box-folder** 15 (box)**Container** 108 (folder)**S243****Unit Date** 1970**box-folder** 15 (box)**Container** 109 (folder)**S244****Unit Date** 1970**box-folder** 15 (box)**Container** 110 (folder)**S245****Unit Date** 1970**box-folder** 15 (box)**Container** 111 (folder)**S246****Unit Date** 1970**box-folder** 15 (box)**Container** 112 (folder)**S247****Unit Date** 1970**box-folder** 15 (box)**Container** 113 (folder)**S248****Unit Date** 1970**box-folder** 15 (box)**Container** 114 (folder)**S263****Unit Date** 1970**box-folder** 15 (box)**Container** 115 (folder)**Sub-Series B. Article Reprints****Unit Date** 1906-1973**Arrangement**

This Sub-Series is arranged in alphabetical order by author.

**Gravimeter Problem****Unit Date** 1950**box-folder** 16 (box)**Container** 1 (folder)**I Cannocchiali****Unit Date** n.d.**box-folder** 13 (box)**Container** 51 (folder)**Language** Italian.**Naval Institute Proceed's****Unit Date** 1944**box-folder** 16 (box)**Container** 2 (folder)**OSP (Otto) Struve Problem****Unit Date** 1951-1954**box-folder** 16 (box)**Container** 3 (folder)**Aksnes****Unit Date** 1970**box-folder** 16 (box)**Container** 4 (folder)**Alfven, Arrhenius****Unit Date** 1970**box-folder** 16 (box)**Container** 5 (folder)**Anderle + Greeleyetal****Unit Date** 1965-1972**box-folder** 16 (box)**Container** 6 (folder)**Anderson, J.D.****Unit Date** 1970-1971**box-folder** 16 (box)**Container** 7 (folder)**Arend****Unit Date** 1948**box-folder** 16 (box)**Container** 8 (folder)**Language** French.**Arnold****Unit Date** 1964**box-folder** 16 (box)

**Container** 9 (folder)

**Astronomical Journal**

**Unit Date** 1946

**box-folder** 16 (box)

**Container** 10 (folder)

**Baker, Robert M.L.**

**Unit Date** 1960-1968

**box-folder** 16 (box)

**Container** 11 (folder)

**Baker, Bob Publ.**

**Unit Date** 1954-1958

**box-folder** 16 (box)

**Container** 12 (folder)

**Baker, Bob Publ.**

**Unit Date** 1956-1959

**box-folder** 16 (box)

**Container** 13 (folder)

**Birge, DuMond**

**Unit Date** 1953-1954

**box-folder** 16 (box)

**Container** 14 (folder)

**Brouwer, D.**

**Unit Date** 1937-1967

**box-folder** 16 (box)

**Container** 15 (folder)

**Brouwer, D.**

**Unit Date** 1927-1947

**box-folder** 16 (box)

**Container** 16 (folder)

**Language** Dutch; Flemish, English .

**Brown, E.W.**

**Unit Date** 1912-1932

**box-folder** 16 (box)

**Container** 17 (folder)

**Burdet, Flury**

**Unit Date** 1968-1969

**box-folder** 16 (box)

**Container** 18 (folder)

**Language** German, French .

**Caputo**

**Unit Date** 1963

**box-folder** 16 (box)  
**Container** 19 (folder)

### **Chapin**

**Unit Date** 1952  
**box-folder** 16 (box)  
**Container** 20 (folder)

### **Charlier**

**Unit Date** n.d.  
**box-folder** 16 (box)  
**Container** 21 (folder)

### **Chebotarev et al**

**Unit Date** 1964-1968  
**box-folder** 16 (box)  
**Container** 22 (folder)  
**Language** Russian, English .

### **Clemence, G.M.**

**Unit Date** 1947-1956  
**box-folder** 16 (box)  
**Container** 23 (folder)

### **Cohen, C.J., Hubbard**

**Unit Date** 1957, 1964, 1972  
**box-folder** 16 (box)  
**Container** 24 (folder)

### **Cole, Dan**

**Unit Date** 1961-1964  
**box-folder** 16 (box)  
**Container** 25 (folder)

### **Colombo**

**Unit Date** 1966  
**box-folder** 16 (box)  
**Container** 26 (folder)

### **Comrie, L.J.**

**Unit Date** 1925, 1926, 1928  
**box-folder** 16 (box)  
**Container** 27 (folder)

### **Crawford, R.T.**

**Unit Date** n.d.  
**box-folder** 16 (box)  
**Container** 28 (folder)

### **Danby**

**Unit Date** 1965

**box-folder** 16 (box)  
**Container** 29 (folder)

### **Deprit**

**Unit Date** 1965-1971  
**box-folder** 16 (box)  
**Container** 30-32 (folder)

### **de Sitter, W.**

**Unit Date** 1913-1953  
**box-folder** 17 (box)  
**Container** 1 (folder)  
**Language** Dutch; Flemish, English .

### **Doubochine**

**Unit Date** 1969-1970  
**box-folder** 17 (box)  
**Container** 2 (folder)  
**Language** French, Russian .

### **Duncombe et al**

**Unit Date** 1973  
**box-folder** 17 (box)  
**Container** 3 (folder)

### **Eckert**

**Unit Date** 1965  
**box-folder** 17 (box)  
**Container** 4 (folder)

### **Ehrlich**

**Unit Date** 1964, 1966, 1969  
**box-folder** 17 (box)  
**Container** 5 (folder)

### **Eichhorn**

**Unit Date** 1968, 1973  
**box-folder** 17 (box)  
**Container** 6 (folder)

### **Eisenhart**

**Unit Date** 1968  
**box-folder** 17 (box)  
**Container** 7 (folder)

### **Escobal, P.R.**

**Unit Date** 1962  
**box-folder** 17 (box)  
**Container** 8 (folder)

**Fischer, Chovitz****Unit Date** 1956-1962**box-folder** 17 (box)**Container** 9 (folder)**Fotheringham, J. K.****Unit Date** 1924**box-folder** 42 (box)**Container** 13 (folder)**Francis, M.P.****Unit Date** 1962-1963**box-folder** 17 (box)**Container** 10 (folder)**French, Bevan****Unit Date** 1966-1970**box-folder** 17 (box)**Container** 11 (folder)**Fricke****Unit Date** n.d.**box-folder** 17 (box)**Container** 12 (folder)**Garfinkel****Unit Date** 1957-1971**box-folder** 17 (box)**Container** 13 (folder)**Gehrels****Unit Date** 1970-1971**box-folder** 17 (box)**Container** 14 (folder)**Giacaglia****Unit Date** 1968, 1969**box-folder** 17 (box)**Container** 15 (folder)**Gibbs****Unit Date** n.d.**box-folder** 17 (box)**Container** 16 (folder)**Gilvarry****Unit Date** 1953**box-folder** 17 (box)**Container** 17 (folder)

**Godal, Dr. Thore****Unit Date** 1962-1968**box-folder** 17 (box)**Container** 18 (folder)**Goodyear****Unit Date** 1964-1966**box-folder** 17 (box)**Container** 19 (folder)**Guggenheim****Unit Date** 1939-1950**box-folder** 17 (box)**Container** 20 (folder)**Language** French, English .**Hamid****Unit Date** 1968, 1969**box-folder** 17 (box)**Container** 21 (folder)**Herget****Unit Date** 1936**box-folder** 17 (box)**Container** 22 (folder)**Hilton, C.G.****Unit Date** 1960**box-folder** 17 (box)**Container** 23 (folder)**Hirst, W.P.****Unit Date** n.d.**box-folder** 17 (box)**Container** 24 (folder)**Hunt, M.S.****Unit Date** 1962**box-folder** 17 (box)**Container** 25 (folder)**Izsak****Unit Date** 1960-1966**box-folder** 17 (box)**Container** 26 (folder)**Jacchia****Unit Date** 1961-1971**box-folder** 17 (box)**Container** 27 (folder)

**Jeffreys****Unit Date** 1948-1961**box-folder** 17 (box)**Container** 28 (folder)**Kaula****Unit Date** 1960-1969**box-folder** 17 (box)**Container** 29 (folder)**Kevorkian****Unit Date** 1962-1968**box-folder** 17 (box)**Container** 30 (folder)**King-Hele****Unit Date** 1958-1972**box-folder** 17 (box)**Container** 31 (folder)**Kirkwood****Unit Date** 1953, 1954, 1962**box-folder** 17 (box)**Container** 32 (folder)**Kissell****Unit Date** 1969-1971**box-folder** 17 (box)**Container** 33 (folder)**Kopal****Unit Date** 1965-1969**box-folder** 18 (box)**Container** 1-2 (folder)**Kovalevsky****Unit Date** 1966, 1967, 1970**box-folder** 18 (box)**Container** 3 (folder)**Kozai****Unit Date** 1959-1970**box-folder** 18 (box)**Container** 4 (folder)**Krause****Unit Date** 1961**box-folder** 18 (box)**Container** 5 (folder)

**Krogh****Unit Date** 1970, 1971**box-folder** 18 (box)**Container** 6 (folder)**Kustaanheimo + Finnish Associates****Unit Date** 1961-1967**box-folder** 18 (box)**Container** 7 (folder)**Kyner****Unit Date** 1963-1966**box-folder** 18 (box)**Container** 8 (folder)**Lambeck****Unit Date** n.d.**box-folder** 18 (box)**Container** 9 (folder)**Lancaster + Blanchard****Unit Date** 1968, 1969**box-folder** 18 (box)**Container** 10 (folder)**LaPaz****Unit Date** 1954**box-folder** 18 (box)**Container** 11 (folder)**LaPlace****Unit Date** n.d.**box-folder** 18 (box)**Container** 12 (folder)**Leushner, A.O.****Unit Date** 1910-1949**box-folder** 18 (box)**Container** 13 (folder)**Likins****Unit Date** 1968**box-folder** 18 (box)**Container** 14 (folder)**Liu****Unit Date** 1970, 1971**box-folder** 18 (box)**Container** 15 (folder)

**Long, R.S.****Unit Date** 1963**box-folder** 18 (box)**Container** 16 (folder)**Lundquist****Unit Date** 1970, 1971**box-folder** 18 (box)**Container** 17 (folder)**Makemson, M.W.****Unit Date** 1961, 1970**box-folder** 18 (box)**Container** 18 (folder)**Markowitz****Unit Date** 1958-1962**box-folder** 18 (box)**Container** 19 (folder)**Meeus****Unit Date** 1971**box-folder** 18 (box)**Container** 20 (folder)**Language** French.**Melchior****Unit Date** 1968**box-folder** 18 (box)**Container** 21 (folder)**Language** French, English .**Merson****Unit Date** 1972**box-folder** 18 (box)**Container** 22 (folder)**Message****Unit Date** 1966**box-folder** 18 (box)**Container** 23 (folder)**Mikhailov****Unit Date** 1960, 1963**box-folder** 18 (box)**Container** 24 (folder)**Language** Russian, English .

**Milankovitch "and Serbs"**

**Unit Date** 1947, 1954, 1958

**box-folder** 18 (box)

**Container** 25 (folder)

**Language** Russian, English .

**Milham**

**Unit Date** 1938, 1953

**box-folder** 18 (box)

**Container** 26 (folder)

**Milne**

**Unit Date** 1933, 1949, 1950

**box-folder** 18 (box)

**Container** 27 (folder)

**Morando**

**Unit Date** n.d.

**box-folder** 18 (box)

**Container** 28 (folder)

**Language** French.

**Moulton's Celestial Mechanics**

**Unit Date** 1906, 1912

**box-folder** 18 (box)

**Container** 29 (folder)

**Language** German, English .

**Mulholland**

**Unit Date** 1967-1973

**box-folder** 18 (box)

**Container** 30 (folder)

**Language** French, English .

**Musen**

**Unit Date** 1954-1971

**box-folder** 18 (box)

**Container** 31 (folder)

**Nicholson**

**Unit Date** 1944

**box-folder** 18 (box)

**Container** 32 (folder)

**O'Keefe**

**Unit Date** 1952, 1959, 1970

**box-folder** 18 (box)

**Container** 33 (folder)

**Olmstead, John W.****Unit Date** 1942**box-folder** 18 (box)**Container** 34 (folder)**Pierce, Dave****Unit Date** 1963**box-folder** 18 (box)**Container** 35 (folder)**Pitkin****Unit Date** 1968**box-folder** 18 (box)**Container** 36 (folder)**Prince****Unit Date** 1953**box-folder** 18 (box)**Container** 37 (folder)**Rabe****Unit Date** 1944-1962**box-folder** 18 (box)**Container** 38 (folder)**Language** German, English .**Rademacher, H.****Unit Date** n.d.**box-folder** 18 (box)**Container** 39 (folder)**Rasmusen, Hans Q.****Unit Date** 1948-1967**box-folder** 18 (box)**Container** 40 (folder)**Reigber****Unit Date** 1969**box-folder** 18 (box)**Container** 41 (folder)**Language** German, English .**Sadler****Unit Date** n.d.**box-folder** 13 (box)**Container** 19 (folder)**Sandorff****Unit Date** n.d.**box-folder** 13 (box)

**Container** 20 (folder)

**Schneider**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 21 (folder)

**Schubart**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 22 (folder)

**Sehnal**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 23 (folder)

**Shapiro**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 24 (folder)

**Sjogren + Muller**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 25 (folder)

**Sochilina + Myachin**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 26 (folder)

**Spencer - Jones**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 27 (folder)

**Spivak**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 28 (folder)

**Sterne**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 29 (folder)

**Stumpff**

**Unit Date** n.d.

**box-folder** 13 (box)

**Container** 30 (folder)

**Sundman****Unit Date** n.d.**box-folder** 13 (box)**Container** 31 (folder)**Sugai, Mr. Iwao****Unit Date** n.d.**box-folder** 13 (box)**Container** 32 (folder)**Taylor, E.G.R.****Unit Date** n.d.**box-folder** 13 (box)**Container** 33 (folder)**Uotila****Unit Date** n.d.**box-folder** 13 (box)**Container** 34 (folder)**Vaisala****Unit Date** n.d.**box-folder** 13 (box)**Container** 35 (folder)**Van Flandern****Unit Date** n.d.**box-folder** 13 (box)**Container** 36 (folder)**Veis****Unit Date** n.d.**box-folder** 13 (box)**Container** 37 (folder)**Vinti****Unit Date** n.d.**box-folder** 13 (box)**Container** 38 (folder)**Von Zeipel****Unit Date** n.d.**box-folder** 13 (box)**Container** 39 (folder)**Watson****Unit Date** n.d.**box-folder** 13 (box)**Container** 40 (folder)

**Wetherill, Williams****Unit Date** n.d.**box-folder** 13 (box)**Container** 41 (folder)**Whipple, F.L.****Unit Date** n.d.**box-folder** 13 (box)**Container** 42 (folder)**Whittaker's Analytical Dynamics****Unit Date** n.d.**box-folder** 13 (box)**Container** 43 (folder)**Wilkins****Unit Date** n.d.**box-folder** 13 (box)**Container** 44 (folder)**Williams, Donald D.****Unit Date** n.d.**box-folder** 13 (box)**Container** 45 (folder)**Wolaver****Unit Date** n.d.**box-folder** 13 (box)**Container** 46 (folder)**Wong, Paul****Unit Date** n.d.**box-folder** 13 (box)**Container** 47 (folder)**Yaplee, Shapiro****Unit Date** n.d.**box-folder** 13 (box)**Container** 48 (folder)**Yeomans****Unit Date** n.d.**box-folder** 13 (box)**Container** 49 (folder)**Zinner, Ernst****Unit Date** n.d.**box-folder** 13 (box)**Container** 50 (folder)

**Unit Date** 1957-1972

**Astrodynamics Revision E1**

**Unit Date** 1958

**box-folder** 19 (box)

**Container** 1-2 (folder)

**Astrodynamics Revision E1**

**Unit Date** 1959

**box-folder** 19 (box)

**Container** 3 (folder)

**Notes on Astrodynamics Copy #13**

**Unit Date** 1958

**box-folder** 19 (box)

**Container** 4 (folder)

**Notes on Astrodynamics Copy #2**

**Unit Date** 1958

**box-folder** 19 (box)

**Container** 5 (folder)

**Notes for Ch. 2+3 [Astrodynamics]**

**Unit Date** n.d.

**box-folder** 19 (box)

**Container** 6 (folder)

**Ms Rev. Ch. 3 + 14 of Astrodynamics**

**Unit Date** n.d.

**box-folder** 19 (box)

**Container** 7 (folder)

**Notes on Ch. 6 Units + Constants**

**Unit Date** n.d.

**box-folder** 19 (box)

**Container** 8 (folder)

**Astrodynamics Revisions N7-L11**

**Unit Date** 1957-1960

**box-folder** 19 (box)

**Container** 9 (folder)

**Astrodynamics Ch. 9**

**Unit Date** 1967

**box-folder** 19 (box)

**Container** 10 (folder)

**Preliminary Version of Ch. 14 (Astrodynamics)**

**Unit Date** 1964

**box-folder** 19 (box)

**Container** 11 (folder)

**Astrodynamics Ch. 17**

**Unit Date** 1967-1968

**box-folder** 19 (box)

**Container** 12 (folder)

**Astrodynamics Ch. 12 Revision Q12**

**Unit Date** 1966

**box-folder** 19 (box)

**Container** 13 (folder)

**Q12 Vellums**

**Unit Date** 1966

**box-folder** 19 (box)

**Container** 14 (folder)

**Hamiltonian Mech. N16-Q12 MS + TR File**

**Unit Date** 1964-1969

**box-folder** 19 (box)

**Container** 15 (folder)

**Hamiltonian Mechanics (Ch. 17) #2**

**Unit Date** 1970

**box-folder** 19 (box)

**Container** 16 (folder)

**Hamiltonian Mechanics Q17 TR**

**Unit Date** 1969

**box-folder** 19 (box)

**Container** 17 (folder)

**Hamiltonian Mechanics Q17**

**Unit Date** 1970

**box-folder** 19 (box)

**Container** 18 (folder)

**Astrodynamics Ch. 16**

**Unit Date** 1964-1970

**box-folder** 19 (box)

**Container** 19 (folder)

**Astrodynamics Appendix 1 GA1 Drafts**

**Unit Date** 1969

**box-folder** 20 (box)

**Container** 1-2 (folder)

**Astrodynamics Appendix 1 FA1 Drafts**

**Unit Date** 1966

**box-folder** 20 (box)

**Container** 3-6 (folder)

**Astrodynamics Appendix 2 DA2 Drafts****Unit Date** 1967**box-folder** 20 (box)**Container** 7-8 (folder)**Astrodynamics Appendix 2 EA2 Drafts****Unit Date** 1968**box-folder** 20 (box)**Container** 9 (folder)**Astrodynamics Appendix 2 FA2 Drafts****Unit Date** 1970**box-folder** 20 (box)**Container** 10 (folder)**Astrodynamics Appendix 3 CA3 Drafts****Unit Date** 1966**box-folder** 20 (box)**Container** 11 (folder)**Astrodynamics Appendix 3 DA3 Drafts****Unit Date** 1967**box-folder** 20 (box)**Container** 12-14 (folder)**Astrodynamics Appendix 3 EA3 Draft****Unit Date** 1969**box-folder** 20 (box)**Container** 15 (folder)**Astrodynamics Appendix 4 DA4 Drafts****Unit Date** 1967**box-folder** 20 (box)**Container** 16 (folder)**Astrodynamics Appendix 4/Astrodynamical Report #10 Drafts****Unit Date** 1967**box-folder** 20 (box)**Container** 17-19 (folder)**S2. Conics N+E****Unit Date** n.d.**box-folder** 21 (box)**Container** 1 (folder)**T9. Perturbation Theory N+E****Unit Date** n.d.**box-folder** 21 (box)**Container** 2 (folder)

**H15 Notes + Exercises****Unit Date** 1966**box-folder** 21 (box)**Container** 3 (folder)**U8 Notes + Exercises****Unit Date** 1968, 1971, 1972**box-folder** 21 (box)**Container** 4 (folder)**U7 Marsden et al****Unit Date** 1964-1971**box-folder** 21 (box)**Container** 5 (folder)**7 N+E****Unit Date** n.d.**box-folder** 21 (box)**Container** 6 (folder)**Q6 Units + Constants Notes + Exercises****Unit Date** n.d.**box-folder** 21 (box)**Container** 7 (folder)**R6 Constants TR****Unit Date** n.d.**box-folder** 21 (box)**Container** 8 (folder)**A4 J-K Starters****Unit Date** 1972**box-folder** 21 (box)**Container** 9 (folder)**A Universal, Singularity-Free Determination of an Orbit for Two Positions and Time Interval****Unit Date** 1970**box-folder** 21 (box)**Container** 10 (folder)**Astrodynamics Ch. 1****Unit Date** 1968**box-folder** 21 (box)**Container** 11 (folder)**Astrodynamics Ch. 2****Unit Date** 1968**box-folder** 21 (box)**Container** 12 (folder)

**Astrodynamics Ch. 3****Unit Date** 1968**box-folder** 21 (box)**Container** 13 (folder)**Astrodynamics Ch. 4****Unit Date** 1970**box-folder** 21 (box)**Container** 14 (folder)**Astrodynamics Ch. 5****Unit Date** 1969**box-folder** 21 (box)**Container** 15 (folder)**Astrodynamics Ch. 6****Unit Date** 1968-1970**box-folder** 21 (box)**Container** 16 (folder)**Astrodynamics Ch. 7****Unit Date** 1970-1971**box-folder** 21 (box)**Container** 17 (folder)**Astrodynamics Ch. 8****Unit Date** 1970**box-folder** 21 (box)**Container** 18 (folder)**Astrodynamics Ch. 9****Unit Date** 1968-1970**box-folder** 21 (box)**Container** 19 (folder)**Astrodynamics 10****Unit Date** 1967**box-folder** 21 (box)**Container** 20 (folder)**Astrodynamics Ch. 11****Unit Date** 1969**box-folder** 21 (box)**Container** 21 (folder)**Astrodynamics Ch. 12****Unit Date** 1969**box-folder** 21 (box)**Container** 22 (folder)

**Astrodynamics Ch. 13****Unit Date** 1969-1970**box-folder** 21 (box)**Container** 23 (folder)**Astrodynamics Ch. 14****Unit Date** 1969**box-folder** 21 (box)**Container** 24 (folder)**Astrodynamics Ch. 15****Unit Date** 1970**box-folder** 21 (box)**Container** 25 (folder)**Astrodynamics Ch. 16****Unit Date** 1969-1971**box-folder** 21 (box)**Container** 26 (folder)**Astrodynamics Ch. 17****Unit Date** 1970-1971**box-folder** 21 (box)**Container** 27 (folder)**Astrodynamics Ch. 18****Unit Date** 1970**box-folder** 21 (box)**Container** 28 (folder)**Astrodynamics Ch. 19****Unit Date** 1970-1971**box-folder** 21 (box)**Container** 29 (folder)**Astrodynamics Appendix 1****Unit Date** 1966-1969**box-folder** 21 (box)**Container** 30 (folder)**Astrodynamics Appendix 2****Unit Date** 1970**box-folder** 21 (box)**Container** 31 (folder)**Astrodynamics Appendix 3****Unit Date** 1969-1970**box-folder** 21 (box)**Container** 32 (folder)

**Astrodynamics Appendix 4**

**Unit Date** 1967-1971

**box-folder** 21 (box)

**Container** 33 (folder)

**Astrodynamics Appendix 5**

**Unit Date** 1970-1971

**box-folder** 21 (box)

**Container** 34 (folder)

**Astrodynamics Bibliography for Volume 2**

**Unit Date** 1971

**box-folder** 21 (box)

**Container** 35 (folder)

**Astrodynamics Appendix 4 Copy #40**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 1 (folder)

**Astrodynamics Appendix 4 Copy #37**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 2 (folder)

**Astrodynamics Appendix 4 Copy #44**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 3 (folder)

**Astrodynamics Appendix 4 Copy #43**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 4 (folder)

**Astrodynamics Appendix 4 Copy #42**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 5 (folder)

**Astrodynamics Appendix 4 Copy #41**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 6 (folder)

**Astrodynamics Appendix 4 Copy #48**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 7 (folder)

**Astrodynamics Appendix 4 Copy #47**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 8 (folder)

**Astrodynamics Appendix 4 Copy #46**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 9 (folder)

**Astrodynamics Appendix 4 Copy #45**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 10 (folder)

**Astrodynamics Appendix 4 Copy #51**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 11 (folder)

**Astrodynamics Appendix 4 Copy #50**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 12 (folder)

**Astrodynamics Appendix 4 Copy #75**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 13 (folder)

**Astrodynamics Appendix 4 Copy #62**

**Unit Date** 1967

**box-folder** 22 (box)

**Container** 14 (folder)

**TS6H4 BA3**

**Unit Date** 1966

**box-folder** 22 (box)

**Container** 15 (folder)

**DA5**

**Unit Date** 1970

**box-folder** 22 (box)

**Container** 16 (folder)

**Astrodynamics Handwritten Drafts + Corrections**

**Unit Date** 1965-1970

**box-folder** 22 (box)

**Container** 17 (folder)

**Errata, Herrick's Astrodynamics**

**Unit Date** 1971-1972

**box-folder** 22 (box)

**Container** 18 (folder)

**Republic Aviation Meetings re: Astrodynamics**

**Unit Date** 1958-1959

**box-folder** 22 (box)

**Container** 19 (folder)

**Astrodynamical Report No. 1**

**Unit Date** 1959

**box-folder** 22 (box)

**Container** 20 (folder)

**Astrodynamical Report No. 2**

**Unit Date** 1959

**box-folder** 22 (box)

**Container** 21 (folder)

**Astrodynamical Reports No. 3 + 4**

**Unit Date** 1959

**box-folder** 22 (box)

**Container** 22 (folder)

**Astrodynamical Report No. 5**

**Unit Date** 1959

**box-folder** 22 (box)

**Container** 23 (folder)

**Astrodynamical Report No. 6**

**Unit Date** 1959

**box-folder** 22 (box)

**Container** 24 (folder)

**Astrodynamical Reports No. 7 + 8**

**Unit Date** 1960

**box-folder** 22 (box)

**Container** 25 (folder)

**Astrodynamical Report No. 9**

**Unit Date** 1960

**box-folder** 22 (box)

**Container** 26 (folder)

**Astrodynamical Reports No. 13-15, 17**

**Unit Date** 1961-1963, 1968

**box-folder** 22 (box)

**Container** 27 (folder)

**Astrodynamical Report No. 10**

**Unit Date** 1960

**box-folder** 22 (box)

**Container** 28 (folder)

**Astrodynamical Report No. 16**

**Unit Date** 1965

**box-folder** 22 (box)

**Container** 29 (folder)

**Lockheed Astrodynamics Research Reports**

**Unit Date** 1962, 1963

**box-folder** 22 (box)

**Container** 30 (folder)

**"Only Copy" Appendix A, Astrodynamic Report #1**

**Unit Date** n.d.

**box-folder** 22 (box)

**Container** 31 (folder)

**Sub-Series D. SH Numbered Publications (see also listing in Box 1)**

**Unit Date** 1932-1972

**#1 Preliminary Orbit of Comet 1932n (Dodwell-Forbes) Harvard Announcement Card**

**Unit Date** 1932

**box-folder** 24 (box)

**Container** 1 (folder)

**#2 Tables for the Reduction of Radial Velocities to the Sun**

**Unit Date** 1935

**box-folder** 24 (box)

**Container** 2 (folder)

**#3 Peltier (1936a) Observations**

**Unit Date** 1936

**box-folder** 24 (box)

**Container** 3 (folder)

**#4 Observations of Comet Kako (1936b) Harvard Announcement Card**

**Unit Date** 1936

**box-folder** 24 (box)

**Container** 4 (folder)

**#5 Comet Peltier (1936a)**

**Unit Date** 1936

**box-folder** 24 (box)

**Container** 5 (folder)

**#6 Preliminary Orbit of Comet Jackson (1936c) Harvard Announcement Card**

**Unit Date** 1936

**box-folder** 24 (box)

**Container** 6 (folder)

**#7 Second Orbit of Jackson Comet (1936c) Harvard Announcement**

**Unit Date** 1936

**box-folder** 24 (box)

**Container** 7 (folder)

**#8 Programme of the Final Examination for the Degree of Doctor of Philosophy**

**Unit Date** 1936

**box-folder** 24 (box)

**Container** 8 (folder)

**#9 On the Laplacian + Gaussian Orbit Methods**

**Unit Date** 1936

**box-folder** 24 (box)

**Container** 9 (folder)

**#10 Laplacian + Gaussian Orbit Methods Abstract**

**Unit Date** 1937

**box-folder** 24 (box)

**Container** 10 (folder)

**#11 The New Wipple Comet**

**Unit Date** 1937

**box-folder** 24 (box)

**Container** 11 (folder)

**#12 Positions of Comet 1936b (Kaho-Kozik-Lis)**

**Unit Date** 1937

**box-folder** 24 (box)

**Container** 12 (folder)

**#13 Leuschner's Method Formulae**

**Unit Date** 1937

**box-folder** 24 (box)

**Container** 13 (folder)

**box-folder** 42 (box)

**Container** 9 (folder)

**#14 Natural-Value Trigonometric Tables**

**Unit Date** 1938

**box-folder** 24 (box)

**Container** 14 (folder)

**#15 Meteoritical Proofs of the Earth's Motions**

**Unit Date** 1938

**box-folder** 24 (box)

**Container** 15 (folder)

**#16 A Proposal for the Use of "Standard Equatorial Coordinates"**

**Unit Date** 1939

**box-folder** 24 (box)

**Container** 16 (folder)

**box-folder** 42 (box)

**Container** 10-11 (folder)

**#17 Smoothing (Abstract)**

**Unit Date** 1939

**box-folder** 24 (box)

**Container** 17 (folder)

**#18 Laplacian + Gaussian Orbit Methods**

**Unit Date** 1939-1940

**box-folder** 24 (box)

**Container** 18-19 (folder)

**box-folder** 42 (box)

**Container** 12 (folder)

**#19 Jupiter-Saturn Triple Conjunction**

**Unit Date** 1941

**box-folder** 24 (box)

**Container** 20 (folder)

**#20 The "Phantom Bertha" Mystery**

**Unit Date** 1941

**box-folder** 24 (box)

**Container** 21 (folder)

**#21 Determination of Position from a Photographic Plate**

**Unit Date** 1941

**box-folder** 24 (box)

**Container** 22 (folder)

**#22 Position Line Graphs**

**Unit Date** 1942

**box-folder** 24 (box)

**Container** 23 (folder)

**#23 Position Line Graph No. 3**

**Unit Date** 1942

**box-folder** 24 (box)

**Container** 24 (folder)

**#24 Navigation Chart No. 3, for Celestial Navigation, Dead Reckoning, and Position Line Graphs**

**Unit Date** 1942

**box-folder** 24 (box)

**Container** 25 (folder)

### **#25 Review of C.C. Wylie**

**Unit Date** 1943

**box-folder** 24 (box)

**Container** 26 (folder)

### **#26 Emergency Determination of a Fix & the Index Correction of a Bubble Sextant**

**Unit Date** 1943

**box-folder** 24 (box)

**Container** 27 (folder)

### **#27 Position Line Graphs**

**Unit Date** 1943

**box-folder** 25 (box)

**Container** 1 (folder)

### **#28 Navigational Precomputation without an Altitude Graph**

**Unit Date** 1943

**box-folder** 25 (box)

**Container** 2 (folder)

### **#'s 29, 30, 31 Grid Navigation**

**Unit Date** 1943

**box-folder** 25 (box)

**Container** 3 (folder)

### **#32 The Accuracy of Ageton's Method**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 4 (folder)

### **#33 The Air Almanac Refraction Tables**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 5 (folder)

### **#34 Astronomy 12: Introduction**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 6 (folder)

### **#35 Provisional Sunrise and Sunset Refraction Tables**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 7 (folder)

### **#36 Grid Navigation. Geographical Review**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 8 (folder)

**#37 Grid Variation, 1945. California-Hawaii Area**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 9 (folder)

**#38 Grid Variation, 1945. United States**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 10 (folder)

**#39 Accuracy of Ageton's Method in Celestial Navigation**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 11 (folder)

**#40 Grid Variation, 1945. North Atlantic**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 12 (folder)

**#41 Grid Variation, 1945. Alaska**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 13 (folder)

**#42 Air Almanac Refraction Tables**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 14 (folder)

**#43 Ephemeris of Jupiter's Ninth Satellite**

**Unit Date** 1944

**box-folder** 25 (box)

**Container** 15 (folder)

**#44 "Nearly" and "Nearly Rectilinear" Orbits**

**Unit Date** 1945

**box-folder** 25 (box)

**Container** 16 (folder)

**#45 Rounding-Off Notation**

**Unit Date** 1945

**box-folder** 25 (box)

**Container** 17 (folder)

**#46 Accuracy of Ageton. Log of Navigation, v. 3**

**Unit Date** 1945

**box-folder** 25 (box)

**Container** 18 (folder)

**#47 Ephemeris of Jupiter's Ninth Satellite**

**Unit Date** 1945

**box-folder** 25 (box)

**Container** 19 (folder)

**#48 Instrumental Solutions in Celestial Navigation**

**Unit Date** 1946

**box-folder** 25 (box)

**Container** 20 (folder)

**#49 Revising the Nautical Almanac**

**Unit Date** 1946

**box-folder** 25 (box)

**Container** 21 (folder)

**#50 As Tabuas de Refracao do Almanaque Americano do Ar. Revista Maritima Brasileira**

**Unit Date** 1946

**box-folder** 25 (box)

**Container** 22 (folder)

**Language** Portuguese.

**#51 Ephemeris of Jupiter's Ninth Satellite**

**Unit Date** 1947

**box-folder** 25 (box)

**Container** 23 (folder)

**#52 Review of W. Myerscough and W. Hamilton, Rapid Navigation Tables**

**Unit Date** 1947

**box-folder** 25 (box)

**Container** 24 (folder)

**#53 Ephemeris of Jupiter's Ninth Satellite**

**Unit Date** 1948

**box-folder** 25 (box)

**Container** 25 (folder)

**#54 Rocket Navigation (1st Draft of Portions of a Text)**

**Unit Date** 1948

**box-folder** 25 (box)

**Container** 26 (folder)

**#55 "Variation of Constants" Method for Special Perturbations**

**Unit Date** 1948

**box-folder** 25 (box)

**Container** 27 (folder)

**#56 1949 Ephemeris of Jupiter's Ninth Satellite**

**Unit Date** 1949

**box-folder** 25 (box)

**Container** 28 (folder)

**#57 Tables for Nearly Parabolic + Rectilinear Orbits**

**Unit Date** 1949

**box-folder** 25 (box)

**Container** 29 (folder)

**#58 Chapters from Rocket Navigation - 2, 5, 6, 8, 9, 11**

**Unit Date** 1949

**box-folder** 25 (box)

**Container** 30 (folder)

**#59 1950 Ephemeris of Jupiter's Ninth Satellite**

**Unit Date** 1950

**box-folder** 25 (box)

**Container** 31 (folder)

**#60 Measurement and Reduction of Photographic Positions**

**Unit Date** 1950

**box-folder** 25 (box)

**Container** 32 (folder)

**#61 Space Rocket Trajectories**

**Unit Date** 1950

**box-folder** 25 (box)

**Container** 33 (folder)

**#62 Interplanetary Navigation**

**Unit Date** 1950

**box-folder** 26 (box)

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**#63 Rocket Navigation**

**Unit Date** 1950

**box-folder** 26 (box)

**Container** 2-3 (folder)

**#64 A Short Method for Precomputation**

**Unit Date** 1951

**box-folder** 26 (box)

**Container** 4 (folder)

**#65 1951 Ephemeris of Jupiter's Ninth Satellite**

**Unit Date** 1951

**box-folder** 26 (box)

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**#66 Ephemeris of 1566 Icarus**

**Unit Date** 1951

**box-folder** 26 (box)

**Container** 6 (folder)

**#67 Step-by-Step Integration without a "Corrector"**

**Unit Date** 1951

**box-folder** 26 (box)

**Container** 7 (folder)

**#68 Differential Correction for the Methods of Lagrange + Gauss-Gibbs**

**Unit Date** 1951

**box-folder** 26 (box)

**Container** 8 (folder)

**#69 Jupiter XII**

**Unit Date** 1952

**box-folder** 26 (box)

**Container** 9 (folder)

**#70 Interplanetary Navigation**

**Unit Date** 1951

**box-folder** 26 (box)

**Container** 10 (folder)

**#71 More Chapters from Rocket Navigation - 10, 12, 13, 15, in part**

**Unit Date** 1951

**box-folder** 26 (box)

**Container** 11 (folder)

**#72 Review of Ley's Rocket, Missiles, and Space Travel**

**Unit Date** 1952

**box-folder** 26 (box)

**Container** 12 (folder)

**#73 Mean Longitude or Mean Anomaly in Perturbations by Variation of Constants**

**Unit Date** 1952

**box-folder** 26 (box)

**Container** 13 (folder)

**#74 Orbit + Ephemeris of Minor Planet 1950CJ**

**Unit Date** 1952

**box-folder** 26 (box)

**Container** 14 (folder)

**#75 Elements + Ephemeris of 1950BW**

**Unit Date** 1952

**box-folder** 26 (box)

**Container** 15 (folder)

**#76 Ephemeris of 1566 Icarus**

**Unit Date** 1952

**box-folder** 26 (box)

**Container** 16 (folder)

**#77 Tycho Brahe****Unit Date** 1952**box-folder** 26 (box)**Container** 17 (folder)**#78 Jupiter IX and Jupiter XII****Unit Date** 1952**box-folder** 26 (box)**Container** 18 (folder)**#79 Minor Planet Icarus****Unit Date** 1953**box-folder** 26 (box)**Container** 19 (folder)**#80 Tables for Rocket + Comet Orbits****Unit Date** 1953**box-folder** 26 (box)**Container** 20-21 (folder)**#81 Observation Residuals for Icarus****Unit Date** 1953**box-folder** 26 (box)**Container** 22 (folder)**#82 Ephemeris of (1566) Icarus****Unit Date** 1953**box-folder** 26 (box)**Container** 23 (folder)**#83 Icarus and the Variation of Parameters****Unit Date** 1953**box-folder** 26 (box)**Container** 24 (folder)**#84 Space Navigation****Unit Date** 1953**box-folder** 26 (box)**Container** 25 (folder)**#85 Ephemeris of Jupiter's Ninth Satellite****Unit Date** 1953**box-folder** 26 (box)**Container** 26 (folder)**#86 Jupiter XII****Unit Date** 1954**box-folder** 26 (box)**Container** 27 (folder)

**#87 Observation Residuals of Icarus**

**Unit Date** 1954

**box-folder** 26 (box)

**Container** 28 (folder)

**#88 1945 Ephemeris of (1566) Icarus**

**Unit Date** 1954

**box-folder** 26 (box)

**Container** 29 (folder)

**#89 1954 Ephemeris of (1580) Betulia**

**Unit Date** 1954

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**Container** 30 (folder)

**#90, 91 (1951RA Wilson-Minkowski, 1948EA Wirtanen)**

**Unit Date** 1954

**box-folder** 26 (box)

**Container** 31 (folder)

**#92, 93 Icarus Elements (1955) Ephemeris**

**Unit Date** 1954

**box-folder** 26 (box)

**Container** 32 (folder)

**#94 Armin Otto Leuschner**

**Unit Date** 1954

**box-folder** 26 (box)

**Container** 33 (folder)

**#95 1954-55 Ephemerides of JIX & JXII**

**Unit Date** 1954

**box-folder** 26 (box)

**Container** 34 (folder)

**#96 Observation Residual of Icarus**

**Unit Date** 1955

**box-folder** 26 (box)

**Container** 35 (folder)

**#97 1955 Ephemeris of (1566) Icarus**

**Unit Date** 1955

**box-folder** 26 (box)

**Container** 36 (folder)

**#98 New Elements & 1955 Ephemeris of (1580) Betulia**

**Unit Date** 1955

**box-folder** 26 (box)

**Container** 37 (folder)

**#99 Ephemeris of Object Wilson-Minkowski 1951RA**

**Unit Date** 1955

**box-folder** 26 (box)

**Container** 38 (folder)

**#100 Ephemerides of JIX and JXII**

**Unit Date** 1955-1956

**box-folder** 26 (box)

**Container** 39 (folder)

**#101 10-Day Ephemeris of (1566) Icarus**

**Unit Date** 1956

**box-folder** 26 (box)

**Container** 40 (folder)

**#102 Comet Haro-Chavira (1954K)**

**Unit Date** 1956

**box-folder** 26 (box)

**Container** 41 (folder)

**#103 1956 Ephemeris of (1566) Icarus**

**Unit Date** 1956

**box-folder** 26 (box)

**Container** 42 (folder)

**#104 Elements & 1957 10-Day Ephemerides of (1566) Icarus and (1580) Betulia**

**Unit Date** n.d.

**box-folder** 26 (box)

**Container** 43 (folder)

**#105 Object Wirtanen (1948OA)**

**Unit Date** 1957

**box-folder** 26 (box)

**Container** 44 (folder)

**#106 Units & Constants for Geocentric Orbits**

**Unit Date** 1957

**box-folder** 26 (box)

**Container** 45 (folder)

**#107 1957 Ephemerides of JIX & JXII**

**Unit Date** 1957

**box-folder** 26 (box)

**Container** 46 (folder)

**#108 Final Report on Project D**

**Unit Date** 1957

**box-folder** 26 (box)

**Container** 47 (folder)

**#109 Ephemeris of (1566) Icarus**

**Unit Date** 1957

**box-folder** 26 (box)

**Container** 48 (folder)

**#110 Formulae, Constants, Definitions, Notations for Geocentric and Heliocentric Orbits**

**Unit Date** 1957

**box-folder** 26 (box)

**Container** 49 (folder)

**#111 Gravitational and Related Constants for Accurate Space Navigation**

**Unit Date** 1957

**box-folder** 27 (box)

**Container** 1-4 (folder)

**#112 Elements and 1958 10-Day Ephemerides of (1566) Icarus, (1580) Betulia**

**Unit Date** 1958

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**Container** 5 (folder)

**#113 1957 Ephemeris of (1580) Betulia**

**Unit Date** 1957

**box-folder** 27 (box)

**Container** 6 (folder)

**#114 Early 1958 Ephemeris of (1620) Geographos**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 7 (folder)

**#115 Space Technology Series**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 8 (folder)

**#116 1958 Ephemerides of JIX & JXII**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 9 (folder)

**#117 Icarus**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 10 (folder)

**#118 Trajectory Fundamentals, Rand**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 11 (folder)

**#119 2 Day Ephemeris of (1566) Icarus**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 12 (folder)

**#120 Orbits**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 13 (folder)

**#121 Space Navigation and the Institute**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 14 (folder)

**#122 Late 1958 Ephemeris of (1620) Geographos**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 15 (folder)

**#123 Some Aspects of Astronautics, RAND Corporation**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 16 (folder)

**#124 Astrodynamics and Notes on ADY & Rocket Navigation**

**Unit Date** 1958-1960

**box-folder** 27 (box)

**Container** 17 (folder)

**#125 Coordinate Systems for Lunar Vehicle Orbits**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 18 (folder)

**#126 Recent Advances in Astrodynamics**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 19 (folder)

**#126 Jet Propulsion; Recent Advances in Astrodynamics JP Correspondence + Anjelo Miele**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 20 (folder)

**#127 A Brief Summary of Orbit Theory**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 21 (folder)

**#128 Ephemerides, Representations, Observational Reference Systems and Data**

**Unit Date** 1959

**box-folder** 27 (box)

**Container** 22 (folder)

**#129 Status and Improvement of Physical Constraints Needed for Precision Trajectories**

**Unit Date** 1958

**box-folder** 27 (box)

**Container** 23 (folder)

**#130 Influence of the Earth's Potential Field on a Nearly Circular Satellite**

**Unit Date** 1959

**box-folder** 25 (box)

**Container** 34 (folder)

**#131 Space Handbook, Astronautics and its Applications**

**Unit Date** 1959

**box-folder** 25 (box)

**Container** 35 (folder)

**#132 Precision Orbits & Observation Reductions**

**Unit Date** 1959

**box-folder** 25 (box)

**Container** 36 (folder)

**#133 Ephemerides of JIX & JXII**

**Unit Date** 1959

**box-folder** 25 (box)

**Container** 37 (folder)

**#134 Differential Expressions for Low Eccentricity Geocentric Orbits**

**Unit Date** 1959

**box-folder** 26 (box)

**Container** 50-51 (folder)

**#135 Earth Satellites + Related Orbit + Perturbation Theory**

**Unit Date** 1959

**box-folder** 26 (box)

**Container** 52 (folder)

**#136 Differential Processes**

**Unit Date** 1959

**box-folder** 26 (box)

**Container** 53 (folder)

**#137 Variation of Parameters**

**Unit Date** 1960

**box-folder** 26 (box)

**Container** 54 (folder)

**#138 Proceedings. Lunar and Planetary Exploration Colloquium**

**Unit Date** 1959

**box-folder** 26 (box)

**Container** 55 (folder)

**#139 "The Astronomical Unit" + the Solar Parallax**

**Unit Date** 1959

**box-folder** 29 (box)

**Container** 1 (folder)

**#140 Astrodynamics: State of the Art**

**Unit Date** 1959

**box-folder** 29 (box)

**Container** 2 (folder)

**#141 Elements of (1566) Icarus, (1580) Betulia, (1620) Geographos**

**Unit Date** 1959

**box-folder** 29 (box)

**Container** 3 (folder)

**#142 1960 Ephemerides of Jupiter's Ninth and Twelfth Satellites**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 4 (folder)

**#143 Position-and-Velocity Orbits from Incomplete Observations**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 5 (folder)

**#144 Orbits from Several Incomplete Position Observations**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 6 (folder)

**#145 Ephemeris of (1580) Betulia**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 7 (folder)

**#146 Ephemeris of (1566) Icarus**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 8 (folder)

**#147 Positions, Velocities, Ephemerides Referred to the Dynamical Center**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 9 (folder)

**#148 Orbit from Position and Velocity**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 10 (folder)

**#149 Astrodynamical Notation + Usage**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 11 (folder)

**#150 Observation Requirements for Precision Orbit Determination**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 12 (folder)

**#152 Ephemerides of JIX + JXII**

**Unit Date** 1961

**box-folder** 29 (box)

**Container** 13 (folder)

**#153 Two-Body Precision Aspects of Rendezvous**

**Unit Date** 1963

**box-folder** 29 (box)

**Container** 14 (folder)

**#154 Lunar and Planetary Exploration Colloquium**

**Unit Date** 1961

**box-folder** 29 (box)

**Container** 15 (folder)

**#155 1962 Four Day Ephemeris of (1566) Icarus**

**Unit Date** 1962

**box-folder** 29 (box)

**Container** 16 (folder)

**#156 Space Vehicle Ephemeris and Differential Correction Program Unified Theory**

**Unit Date** 1960

**box-folder** 29 (box)

**Container** 17 (folder)

**#157 Scale and Mass in the Solar System**

**Unit Date** 1962

**box-folder** 29 (box)

**Container** 18 (folder)

**#158 A Comparison of Astronomical and Ballistic Traditions in Orbit Computation**

**Unit Date** 1962

**box-folder** 29 (box)

**Container** 19 (folder)

**#159 Handbook, British Astronomical Association (1580) Betulia**

**Unit Date** 1962

**box-folder** 29 (box)

**Container** 20 (folder)

**#160 Encke's Method Using  $r_0$ ,  $r_1$  as Parameters Together with Both Elliptic and Universal Variables**

**Unit Date** 1962

**box-folder** 29 (box)

**Container** 21 (folder)

**#161 Universal Variables, Parameters and Equations**

**Unit Date** 1962

**box-folder** 29 (box)

**Container** 22 (folder)

**#163 2-Day + 4-Day Ephemeris of 1580 Betulia**

**Unit Date** 1963

**box-folder** 29 (box)

**Container** 23 (folder)

**#164 Astronomical and "Astrodynamical" Values of Constants and Ephemeral Data**

**Unit Date** 1963

**box-folder** 29 (box)

**Container** 24-25 (folder)

**#165 The Fixing of the Gaussian Gravitational Constant and the Corresponding Geocentric Gravitational Constant**

**Unit Date** 1965

**box-folder** 29 (box)

**Container** 26 (folder)

**#166 Variation of Parameters Using  $r_0$ ,  $r_1$ , and "Universal Variables"**

**Unit Date** 1963

**box-folder** 29 (box)

**Container** 27 (folder)

**#167 Rendezvous and Mid-Course Guidance and Control**

**Unit Date** 1963

**box-folder** 29 (box)

**Container** 28 (folder)

**#168 Several Formulations of Encke's Method**

**Unit Date** 1963

**box-folder** 29 (box)

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**#169 Kalman Filter**

**Unit Date** 1963

**box-folder** 29 (box)

**Container** 30 (folder)

**#170 The Geocentric Gravitational Constant from Radar and Angular Observations of the Moon**

**Unit Date** 1963

**box-folder** 30 (box)

**Container** 1 (folder)

**#171 Elements and 1964 Ten-Day Ephemeris of 1580 Betulia**

**Unit Date** 1963

**box-folder** 30 (box)

**Container** 2 (folder)

**#172 1965 Ten-Day Ephemeris of 1566 Icarus**

**Unit Date** 1964

**box-folder** 30 (box)

**Container** 3 (folder)

**#173 Close-Approach Ephemeris of 1620 Geographos**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 4 (folder)

**#174 1965 en-Day Ephemeris of 1620 Geographos**

**Unit Date** 1964

**box-folder** 30 (box)

**Container** 5 (folder)

**#175 Elements, Ephemeris, + Opposition of 1948OA**

**Unit Date** 1964

**box-folder** 30 (box)

**Container** 6 (folder)

**#176 Ephemeris of 1566 Icarus**

**Unit Date** 1964

**box-folder** 30 (box)

**Container** 7 (folder)

**#177 1966 Ephemeris of 1566 Icarus**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 8 (folder)

**#178 Elements of 1560 Icarus, 1580 Betulia, and 1620 Geographos**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 9 (folder)

**#179 1965 Ephemeris of 1580 Betulia**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 10 (folder)

**#180 1965 Close-Approach Ephemeris of 1620 Geographos**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 11 (folder)

**#181 1965 Ephemeris of 1948OA**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 12 (folder)

**#182 1965 Ephemeris of 1948EA**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 13 (folder)

**#183 1965 Ephemeris of 1566 Icarus**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 14 (folder)

**#184 Universal Variables**

**Unit Date** 1965

**box-folder** 30 (box)

**Container** 15 (folder)

**#185 Single and Double Integration in the Method of Variation of Parameters**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 16 (folder)

**#186 Elements and Residuals of (1685) 1948OA**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 17 (folder)

**#187 1966 Ephemeris of (1566) Icarus**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 18 (folder)

**#188 Differential Representations in Observational Differential Corrections of Orbits**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 19 (folder)

**#189 Improved 1966 Ephemeris of (1566) Icarus**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 20 (folder)

**#190 Elements of (1566) Icarus, (1580) Betulia, (1620) Geographos, (1685) Toro**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 21 (folder)

**#191 1967 Ephemerides of (1566) Icarus, (1580) Betulia, (1685) Toro**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 22 (folder)

**#192 Astrodynamic Constants Analysis**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 23-24 (folder)

**#193 Universal Variables**

**Unit Date** 1966

**box-folder** 30 (box)

**Container** 25 (folder)

**#195 1968 Ephemeris of (1566) Icarus**

**Unit Date** 1967

**box-folder** 30 (box)

**Container** 26 (folder)

**#196 Variations of Parameters for Trajectory Integrations by Modern Perturbed-Variation Methods**

**Unit Date** 1967, 1968

**box-folder** 30 (box)

**Container** 27 (folder)

**#197 Close Approach Ephemeris for (1620) Geographos**

**Unit Date** 1967

**box-folder** 30 (box)

**Container** 28 (folder)

**#198 1968 Ephemeris of (1566) Icarus**

**Unit Date** 1967

**box-folder** 30 (box)

**Container** 29 (folder)

**#199 One-Day + Two-Hour Ephemerides of (1566) Icarus**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 30 (folder)

**#200 E.M.P. 1969**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 31 (folder)

**#201 Opposition Ephemeris of (1580) Betulia**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 32 (folder)

**#202 Elements and Residuals of (1580) Betulia**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 33 (folder)

**#203 1968 10-Day Opposition Ephemeris of (1580) Betulia**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 34 (folder)

**#204 1970 10-Day Opposition Ephemeris of (1580) Betulia**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 35 (folder)

**#205 Elements and Residuals of (1620) Geographos**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 36 (folder)

**#206 1970 Favorable-elongation Ephemeris for (1566) Icarus**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 37 (folder)

**#207 1970 10-Day Opposition Ephemeris for (1685) Toro**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 38 (folder)

**#208 Elements and Residuals of (1685) Toro**

**Unit Date** 1968

**box-folder** 30 (box)

**Container** 39 (folder)

**#209 1969 Favorable-elongation Ephemeris for (1685) Toro**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 40 (folder)

**#210 1968-69 Ephemerides of JIX and JXII**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 41 (folder)

**#211 Close Approach Ephemeris for (1620) Geographos**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 42 (folder)

**#212 Favorable-elongation Ephemeris of (1566) Icarus**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 43 (folder)

**#213 1969 Favorable-elongation Ephemeris for (1566) Icarus**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 44 (folder)

**#214 2-day and Half-day Ephemeris of (1620) Geographos**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 45 (folder)

**#215 Continuation of Close Approach Ephemeris for (1620) Geographos**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 46 (folder)

**#216 MPE 1970**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 47 (folder)

**Language** Russian.

**#217=196A HAD Techniques for Perturbation Integration and Orbit Correction**

**Unit Date** 1967

**box-folder** 30 (box)

**Container** 48 (folder)

**#218 1969 One-day Ephemeris of (1620) Geographos**

**Unit Date** 1969

**box-folder** 30 (box)

**Container** 49 (folder)

**#219 1970 Ephemerides of JIX and JXII**

**Unit Date** 1970

**box-folder** 30 (box)

**Container** 50 (folder)

**#220 Astrodynamics: Basic Orbital Equations**

**Unit Date** 1970

**box-folder** 30 (box)

**Container** 51 (folder)

**#221 Astrodynamical Terminology, Notation, and Usage**

**Unit Date** 1970

**box-folder** 30 (box)

**Container** 52 (folder)

**#225, 226 Ephemerides**

**Unit Date** 1970

**box-folder** 30 (box)

**Container** 53 (folder)

**#227 Jupiter IX and XII Ephemerides**

**Unit Date** 1971

**box-folder** 30 (box)

**Container** 54 (folder)

**#228 Astrodynamics, Vol. 1: Orbit Determination, Space Navigation, Celestial Mechanics**

**Unit Date** 1971

**box-folder** 30 (box)

**Container** 55 (folder)

**#229=208A Grosse Annherung des Planetoiden Geographos an die Erde**

**Unit Date** n.d.

**box-folder** 30 (box)

**Container** 56 (folder)

**Language** German.

**#231 General Relativity and the Orbit of Icarus**

**Unit Date** 1971

**box-folder** 30 (box)

**Container** 57 (folder)

**#233 Argentine Paper**

**Unit Date** 1968, 1972

**box-folder** 30 (box)

**Container** 58 (folder)

**Sub-Series E. Drafts of Articles and Book Chapters**

**Unit Date** 1944-1971

**Chapter 15, Celestial Mechanics Problems**

**Unit Date** n.d.

**box-folder** 30 (box)

**Container** 59 (folder)

**Chapter 104, DROEA 1 [Differential Representation in Observational Error Analyses and Differential Correction of Orbits in Space Guidance and Space Geodesy]**

**Unit Date** 1964

**box-folder** 30 (box)

**Container** 60 (folder)

**Astronomical and "Astrodynamical" Values of Constants and Ephemeral Data**

**Unit Date** 1965  
**box-folder** 30 (box)  
**Container** 61 (folder)

**Astrodynamics: Part II, More Detailed Analyses, Lockheed**

**Unit Date** 1964  
**box-folder** 30 (box)  
**Container** 62 (folder)

**SH Contribution to CRC "Handbook of Tables for Mathematics"**

**Unit Date** 1965-1966  
**box-folder** 30 (box)  
**Container** 63 (folder)

**"Gravitational Constants and Selection of Units"**

**Unit Date** 1966  
**box-folder** 30 (box)  
**Container** 64 (folder)

**"Astrodynamics Constants Analysis"**

**Unit Date** 1966  
**box-folder** 30 (box)  
**Container** 65 (folder)

**Drafts and Manuscripts of "The Foundations of Astrodynamics" and correspondence**

**Unit Date** 1969  
**box-folder** 30 (box)  
**Container** 66 (folder)

**Working Papers and Final Manuscript for "Accuracy of Ageton's Method"**

**Unit Date** n.d.  
**box-folder** 30 (box)  
**Container** 67 (folder)

**Draft Chapters of EU Condon "Handbook of Physics"**

**Unit Date** n.d.  
**box-folder** 30 (box)  
**Container** 68 (folder)

**Chemical Rubber Co. Correspondence re: "Critical Reviews Journal"**

**Unit Date** 1969, 1971  
**box-folder** 30 (box)  
**Container** 69 (folder)

**Reviews of Einstein Books "Theory of Relativity" and "The Principle of Relativity"**

**Unit Date** n.d.  
**box-folder** 30 (box)  
**Container** 70 (folder)

### **The Determination of a Position from a Photographic Plate**

**Unit Date** n.d.

**box-folder** 30 (box)

**Container** 71 (folder)

### **Reprint, "The Step by Step Integration of $x=f(x, y, z, t)$ without a 'Corrector'"**

**Unit Date** 1951

**box-folder** 30 (box)

**Container** 72 (folder)

### **SH Notes on "Fly-By" Planetary Encounters**

**Unit Date** n.d.

**box-folder** 30 (box)

**Container** 73 (folder)

### **Worksheets for "Herrick's Problem #1, Elliptic," and Instruction Sheet for Naval Observatory on "Herrick's Table"**

**oversize** 71 (box)

### **Coding: SH Contributions to INA**

**Unit Date** 1949

**box-folder** 31 (box)

**Container** 19 (folder)

### **"Nonimal System"**

**Unit Date** 1949

**box-folder** 31 (box)

**Container** 20 (folder)

### **Navigation v.3, no 1-2**

**Unit Date** 1951

**box-folder** 31 (box)

**Container** 21 (folder)

### **Gibbs Paper: 4th Edition**

**Unit Date** 1953

**box-folder** 31 (box)

**Container** 22 (folder)

### **Gibbs Paper: 5th Edition**

**Unit Date** 1953

**box-folder** 31 (box)

**Container** 23 (folder)

### **Gibb's Contribution to Orbit Theory**

**Unit Date** 1944

**box-folder** 31 (box)

**Container** 24 (folder)

**Gibb's Paper: "Contributions" 3rd Edition****Unit Date** n.d.**box-folder** 31 (box)**Container** 25 (folder)**Gibb's Paper: "Modification" 3rd Edition****Unit Date** 1945**box-folder** 31 (box)**Container** 26 (folder)**Gibb's Paper: 2nd Edition****Unit Date** 1945**box-folder** 31 (box)**Container** 27 (folder)**Gibb's Paper: Correspondence and Biographical****Unit Date** 1889-1949**box-folder** 31 (box)**Container** 28 (folder)**Gibb's Paper: 1st Edition****Unit Date** 1945**box-folder** 31 (box)**Container** 29 (folder)**Orbits: Gibb's Memoir****Unit Date** n.d.**box-folder** 31 (box)**Container** 30 (folder)**Gibb's Paper: Miscellaneous****Unit Date** n.d.**box-folder** 31 (box)**Container** 31 (folder)**Series VIII. Manuscript Calculations****Unit Date** 1948-1972**Scope and Contents**

This series consists of calculations used in Herrick's studies of minor planets and objects. It includes materials such as shock waves of Icarus calculations, Project 15, minor planets and objects, perturbations, geophysical constraints and correction methods, collection of formulae, and ephemeral calculations.

**Arrangement**

This series largely maintains the order it was received. Materials relating to Halley's Comet and (1566) Icarus have been grouped together for ease of use.

**Ellipse Graphs, 1566, 1580, and 1620****Unit Date** 1956**box-folder** 23 (box)**Container** 1 (folder)**Ephemeris 1948EA****Unit Date** 1957

**box-folder** 23 (box)  
**Container** 2 (folder)

**(1566) Icarus**

**Ephemeris of Icarus**

**Unit Date** 1968  
**box-folder** 23 (box)  
**Container** 3 (folder)

**2-day Ephemeris of Icarus**

**Unit Date** 1956-1959  
**box-folder** 23 (box)  
**Container** 4 (folder)

**10-day Ephemeris of Icarus**

**Unit Date** 1956-1959  
**box-folder** 23 (box)  
**Container** 5 (folder)

**Icarus**

**Unit Date** n.d.  
**box-folder** 23 (box)  
**Container** 6 (folder)

**Shock Waves of Icarus**

**Unit Date** 1969  
**box-folder** 28 (box)  
**Container** 1 (folder)

**Icarus Table**

**Unit Date** 1968  
**box-folder** 28 (box)  
**Container** 10 (folder)

**V - 5b Relativity**

**Unit Date** 1968, 1969  
**box-folder** 28 (box)  
**Container** 11 (folder)

**(1566) Icarus Correspondence**

**Unit Date** 1950-1961  
**box-folder** 28 (box)  
**Container** 12 (folder)

**Icarus Tables**

**Unit Date** n.d.  
**box-folder** 28 (box)  
**Container** 13 (folder)

**(1566) Icarus Ephemeris**

**Unit Date** 1953-1963  
**box-folder** 28 (box)  
**Container** 14 (folder)

**(1566) Icarus Misc.**  
**Unit Date** n.d.  
**box-folder** 28 (box)  
**Container** 15 (folder)

**(1566) Icarus MPC's**  
**Unit Date** n.d.  
**box-folder** 28 (box)  
**Container** 16 (folder)

**(1566) Icarus Stellar Form**  
**Unit Date** n.d.  
**box-folder** 28 (box)  
**Container** 17 (folder)

**(1566) Icarus Mercury Perturbations**  
**Unit Date** n.d.  
**box-folder** 28 (box)  
**Container** 18 (folder)

**(1566) Icarus**  
**Unit Date** n.d.  
**box-folder** 28 (box)  
**Container** 19 (folder)

**(1566) Icarus Notes**  
**Unit Date** 1953  
**box-folder** 28 (box)  
**Container** 20 (folder)

**(1566) Icarus Mercury by V of P**  
**Unit Date** 1968  
**box-folder** 28 (box)  
**Container** 21 (folder)

**Icarus Runs**  
**Unit Date** n.d.  
**box-folder** 28 (box)  
**Container** 22 (folder)

**Icarus Runs Which Bombed due to System Error**  
**Unit Date** 1967  
**box-folder** 28 (box)  
**Container** 23 (folder)

**Icarus Runs****Unit Date** 1967**box-folder** 28 (box)**Container** 24 (folder)**Recent Runs on Ephem. Gone Sour****Unit Date** 1967**box-folder** 28 (box)**Container** 25 (folder)**MPS (IV) Y. Articles****Unit Date** 1967**box-folder** 28 (box)**Container** 26 (folder)**MP (IV) 2(a) Ephem. For Distribution****Unit Date** 1967, 1968**box-folder** 28 (box)**Container** 27 (folder)**IV - 5c Mass of Mercury****Unit Date** 1968**box-folder** 28 (box)**Container** 28 (folder)**IV - Icarus 2 and 10-Day Difference Tables****Unit Date** n.d.**box-folder** 28 (box)**Container** 29 (folder)**(IV - 68)D 1566****Unit Date** 1968**box-folder** 28 (box)**Container** 30 (folder)**72MPS (IV) E. Observations****Unit Date** 1970**box-folder** 28 (box)**Container** 31 (folder)**72MPS (IV) D. Ephemerides****Unit Date** 1972**box-folder** 28 (box)**Container** 32 (folder)**Icarus Experiment Hilton****Unit Date** 1951**box-folder** 28 (box)**Container** 33 (folder)

**Icarus****Unit Date** 1968**box-folder** 28 (box)**Container** 34 (folder)**Icarus Nature Article + Popular****Unit Date** 1967, 1968**box-folder** 28 (box)**Container** 35 (folder)**Projects: Potential****Unit Date** 1954**box-folder** 23 (box)**Container** 7 (folder)**Minor Planet Criteria****Unit Date** n.d.**box-folder** 23 (box)**Container** 8 (folder)**Trojans****Unit Date** n.d.**box-folder** 23 (box)**Container** 9 (folder)**Tauri General Perturbations****Unit Date** n.d.**box-folder** 23 (box)**Container** 10 (folder)**Trojan Group****Unit Date** n.d.**box-folder** 23 (box)**Container** 11 (folder)**Uranus V = Miranda****Unit Date** 1948**box-folder** 23 (box)**Container** 12 (folder)**1235 Shorria****Unit Date** n.d.**box-folder** 23 (box)**Container** 13 (folder)**Armida (514)****Unit Date** n.d.**box-folder** 23 (box)**Container** 14 (folder)

**Pertrb 500 Stevens****Unit Date** 1966-1967**box-folder** 23 (box)**Container** 15 (folder)**Explanation of Program****Unit Date** n.d.**box-folder** 23 (box)**Container** 16 (folder)**RBAR 400 Stevens****Unit Date** n.d.**box-folder** 23 (box)**Container** 17 (folder)**Planets****Unit Date** n.d.**box-folder** 23 (box)**Container** 18 (folder)**DIFFCOR 900****Unit Date** 1967**box-folder** 23 (box)**Container** 19 (folder)**INPUT 1700****Unit Date** 1967**box-folder** 23 (box)**Container** 20 (folder)**Churms Objects: 1953LG, 1953NH, 1953NJ****Unit Date** n.d.**box-folder** 23 (box)**Container** 21 (folder)**Planetary Coordinates, Including Pluto Calculations and Sun & Moon Corrections****Unit Date** 1948-1951**box-folder** 23 (box)**Container** 22 (folder)**Diff. Tables of Coordinates of Planets and Sun****Unit Date** n.d.**box-folder** 23 (box)**Container** 23 (folder)**1953RA****Unit Date** 1953**box-folder** 23 (box)**Container** 24 (folder)

## **Comet Padjusakova 1948n**

**Unit Date** 1954

**box-folder** 23 (box)

**Container** 25 (folder)

## **REP 800**

**Unit Date** 1967

**box-folder** 23 (box)

**Container** 26 (folder)

## **Halley's Comet**

### **Attractions on Halley's Comet Diff. Tables**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 27 (folder)

### **Orbit of Halley's Comet from Position and Velocity**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 28 (folder)

### **Integration**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 29 (folder)

### **Difference Tables for A's + B's, a's, b's, T**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 30 (folder)

### **Coordinates 256 Halley**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 31 (folder)

### **Velocity of Coordinates of Halley's Comet**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 32 (folder)

### **Coordinates Halley**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 33 (folder)

### **Coordinates of Halley's Comet with Difference Table**

**Unit Date** n.d.

**box-folder** 23 (box)

**Container** 34 (folder)

**Problem 443: Halley's Comet****Unit Date** n.d.**box-folder** 23 (box)**Container** 35 (folder)**Halley's Comet Misc.****Unit Date** 1949, 1960**box-folder** 23 (box)**Container** 36 (folder)**Halley's Correspondence and References****Unit Date** 1948**box-folder** 23 (box)**Container** 37 (folder)**Code for V of P [Variations of Parameters]****Unit Date** n.d.**box-folder** 23 (box)**Container** 38 (folder)**Perturbations Halley's Comet****Unit Date** n.d.**box-folder** 23 (box)**Container** 39 (folder)**Plot of Orbit****Unit Date** n.d.**box-folder** 23 (box)**Container** 40 (folder)**Observations****Unit Date** 1949-1955**box-folder** 23 (box)**Container** 41 (folder)**Comet Swift 1880V Lagrange and Gibbs****Unit Date** n.d.**box-folder** 23 (box)**Container** 42 (folder)**Control Sheets****Unit Date** n.d.**box-folder** 23 (box)**Container** 43 (folder)**Development of Universal Variables****Unit Date** 1965-1966**box-folder** 28 (box)**Container** 2 (folder)

## **Project 15**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 3 (folder)

## **A = 1 [Ephemeral Calculations]**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 4 (folder)

## **A = 5 [Ephemeral Calculations]**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 5 (folder)

## **A = 25 [Ephemeral Calculations] and Results**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 6 (folder)

## **OSP 16 [Ephemeral Calculations]**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 7 (folder)

## **Problem 1 - Elliptic**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 8 (folder)

## **"End-Point Comp. Ellipt. + Hyper" Problem 1**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 9 (folder)

## **Project 2**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 36 (folder)

## **Project 3**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 37 (folder)

## **15 Spec. Pert. Rocket to Venus RV**

**Unit Date** n.d.

**box-folder** 28 (box)

**Container** 38 (folder)

### **Ephemeral Calculations Unknown Object**

**Unit Date** n.d.

**box-folder** 32 (box)

**Container** 1-7 (folder)

### **Sperm - Mace**

**Unit Date** n.d.

**box-folder** 32 (box)

**Container** 8 (folder)

### **Sperm Collection of Formulae**

**Unit Date** n.d.

**box-folder** 32 (box)

**Container** 9 (folder)

### **Sperm - Elster**

**Unit Date** 1957, 1962

**box-folder** 32 (box)

**Container** 10 (folder)

### **Manual Calculations Uranus-Pluto Coordinates**

**Unit Date** n.d.

**box-folder** 32 (box)

**Container** 11 (folder)

### **Astronomical and "Astrodynamical" Values of Constants and Ephemeral Data**

**Unit Date** 1965

**box-folder** 32 (box)

**Container** 12 (folder)

### **Series IX. Computer Printouts**

**Unit Date** 1965-1973

#### **Scope and Contents**

This series includes early SH printouts, calculations, and Fortran computer runs such as Betulia ephemeris, Icarus ephemerides, Geographos, planetary coordinates, and two-body problems.

Much of the computer printouts were created by Gary R. Smith, who received his Ph.D. in astrodynamics at UCLA in 1972 from Herrick.

#### **Arrangement**

This series largely maintains the order in which it was received. Oversized materials have been separated into additional boxes.

### **EEI364 Gary R. Smith Fortran**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 1 (folder)

### **EEI36402 Fortran**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 2 (folder)

### **Testing Gauss Integration Fortran Run 104**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 3 (folder)

### **Testing Gauss Integration Run 103**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 4 (folder)

### **Testing Gauss Integration Run 105**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 5 (folder)

### **Testing Gauss Integration Runs 106-107**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 6 (folder)

### **Testing Gauss Integration Runs 91, 108**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 7 (folder)

### **Testing Gauss Integration Runs 93, 95**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 8 (folder)

### **Testing Gauss Integration Runs 97-98**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 9 (folder)

### **Testing Gauss Integration Runs 99-100**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 10 (folder)

### **Testing Gauss Integration Runs 101-102**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 11 (folder)

### **Testing Gauss Integration Run 109**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 12 (folder)

**Testing Gauss Integration Runs 110-111**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 13 (folder)

**Gary R. Smith Two-Body Problems and Betulia Ephemeris Runs 255, 257**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 14 (folder)

**Gary R. Smith Two-Body Problems and Betulia Ephemeris Runs 260, 265, 266**

**Unit Date** 1973

**box-folder** 40 (box)

**Container** 15 (folder)

**Gary R. Smith Two-Body Problems and Betulia Ephemeris Runs 271-273**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 1 (folder)

**Gary R. Smith Two-Body Problems and Betulia Ephemeris Runs 334, 369-173**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 2 (folder)

**Gary R. Smith Two-Body Problems and Betulia Ephemeris Runs 375, 377, 380-382**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 3 (folder)

**Gary R. Smith Two-Body Problems and Betulia Ephemeris Unnumbered Runs**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 4 (folder)

**EEI364 Gary R. Smith Fortran Runs 9-20**

**Unit Date** 1972

**box-folder** 41 (box)

**Container** 5 (folder)

**EEI364PM Gary R. Smith Fortran Runs 20-22**

**Unit Date** 1972

**box-folder** 41 (box)

**Container** 6 (folder)

**EEI364 Gary R. Smith Fortran Runs 25-30**

**Unit Date** 1972

**box-folder** 41 (box)

**Container** 7 (folder)

**EEI364 Gary R. Smith Fortran Runs 31-38, 41**

**Unit Date** 1972

**box-folder** 41 (box)

**Container** 8 (folder)

**EEI364AL Gary R. Smith Fortran Runs 39-40**

**Unit Date** 1972

**box-folder** 41 (box)

**Container** 9 (folder)

**Convergence Test EEI364GS Fortran Run 42**

**Unit Date** 1972

**box-folder** 41 (box)

**Container** 10 (folder)

**Kepler EEI364 Gary R. Smith Fortran Runs 44-49**

**Unit Date** 1972

**box-folder** 41 (box)

**Container** 11 (folder)

**Kepler EEI364 Gary R. Smith Fortran Runs 50-55**

**Unit Date** 1972-1973

**box-folder** 41 (box)

**Container** 12 (folder)

**EEI364GS Fortran Runs 56-60**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 13 (folder)

**EEI364 Gary R. Smith Fortran Runs 61-69**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 14 (folder)

**EEI364G2 Fortran 70**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 15 (folder)

**Kepler EEI364 Gary R. Smith Fortran Runs 79-86**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 16 (folder)

**Listings EEI364 Gary R. Smith Fortran Runs 112-113**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 17 (folder)

**EEI364 Gary R. Smith Fortran Runs 114, 116-117, 119**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 18 (folder)

**EEI364PC Fortran 115**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 19 (folder)

**DE19A9 -> D19ABC EEI364PC Gary R. Smith Fortran Runs 118, 120**

**Unit Date** 1973

**box-folder** 41 (box)

**Container** 20 (folder)

**DE19B9 -> D19ABC EEI364PC Gary R. Smith Fortran Run 121**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 1 (folder)

**EEI364 Gary R. Smith Fortran Runs 122, 124**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 2 (folder)

**DE19C9 -> D19ABC EEI364PC Gary R. Smith Fortran Run 123**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 3 (folder)

**EEI364 Gary R. Smith Fortran Runs 125-126, 128**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 4 (folder)

**EEI364DS Gary R. Smith Fortran Runs 127, 129**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 5 (folder)

**EEI364TS Gary R. Smith Fortran Runs 130-132**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 6 (folder)

**EEI364AA Gary R. Smith Fortran Run 133**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 7 (folder)

**EEI364G0 Gary R. Smith Fortran Run 134**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 8 (folder)

**EEI364 Gary R. Smith Fortran Runs 135-139**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 9 (folder)

**EEI364IN Gary R. Smith Runs 140-141**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 10 (folder)

**EEI364 Gary R. Smith Fortran Rus 142-143**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 11 (folder)

**EEI364AO Gary R. Smith Fortran Runs 144-145**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 12 (folder)

**EEI364IN Gary R. Smith Fortran Runs 146-151**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 13 (folder)

**EEI364TP Gary R. Smith Fortran Run 152**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 14 (folder)

**EEI364 Gary R. Smith Fortran Runs 154-157**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 15 (folder)

**GEO Plot Quantities EEI364PL Gary R. Smith Fortran Runs 158-161, 163**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 16 (folder)

**EEI364 Gary R. Smith Fortran Runs 162, 164-165**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 17 (folder)

**EEI364TB Gary R. Smith Fortran Runs 166-170**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 18 (folder)

**Fortran Coding Sheets and Results**

**Unit Date** n.d.

**box-folder** 43 (box)

**Container** 19 (folder)

**EEI364GS Gary R. Smith Fortran Runs 267-268**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 20 (folder)

**EEI364A1 Gary R. Smith Fortran Run 270**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 21 (folder)

**EEI364 Gary R. Smith Fortran Runs 280-281**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 22 (folder)

**EEI364OR Gary R. Smith Fortran Runs 282-283**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 23 (folder)

**EEI364 Gary R. Smith Fortran Run 284**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 24 (folder)

**Herrick Direct Rendezvous EEI36400 Gary R. Smith Fortran Run 285**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 25 (folder)

**Indirect Rendezvous Numerical Partial EEI36401 Gary R. Smith Fortran Run 286**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 26 (folder)

**Indirect Rendezvous: 2 Body Partial EEI36402 Gary R. Smith Fortran Run 287**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 27 (folder)

**EEI364XT Gary R. Smith Fortran Run 289**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 28 (folder)

**EEI364 Gary R. Smith Fortran Run 400**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 29 (folder)

**Herrick Direct Rendezvous EEI36400 Gary R. Smith Fortran Run 288**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 30 (folder)

**Convergence EEI364G1-G4 Gary R. Smith Fortran Runs 73-76**

**Unit Date** 1973

**box-folder** 43 (box)

**Container** 31 (folder)

**Convergence EEI364G5-G7 Gary R. Smith Fortran Runs 77-78, 87**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 1 (folder)

**R-K EEI364G2, G6 Gary R. Smith Fortran Runs 72, 88**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 2 (folder)

**EEI364OR Gary R. Smith Fortran Runs 224**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 3 (folder)

**EEI364 Gary R. Smith Fortran Runs 225-226**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 4 (folder)

**EEI364OR Gary R. Smith Fortran Run 227**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 5 (folder)

**EEI364O1 Gary R. Smith Fortran Run 228**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 6 (folder)

**EEI364A1 Gary R. Smith Fortran Run 232**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 7 (folder)

**EEI364 Gary R. Smith Fortran Runs 234-236**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 8 (folder)

**EEI364A1 Gary R. Smith Fortran Runs 237-238**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 9 (folder)

**EEI364 Gary R. Smith Fortran Runs 239, 241-248**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 10 (folder)

**EEI364OR Gary R. Smith Fortran Run 240**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 11 (folder)

**EEI364TP Gary R. Smith Fortran Runs 249, 251**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 12 (folder)

**HAFANG, HERRIK, ANGLE, RIABAR, CALJUL EEI364 Gary R. Smith Fortran Run 250**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 13 (folder)

**EEI364HR Gary R. Smith Fortran Runs 252-254**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 14 (folder)

**EEI364 Gary R. Smith Fortran Runs 256, 258-259, 261, 263-264**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 15 (folder)

**EEI36400 Gary R. Smith Fortran Run 262**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 16 (folder)

**Hard Copy of URSA HELP EEI364HC Gary Smith Fortran Run 43**

**Unit Date** 1972

**box-folder** 44 (box)

**Container** 17 (folder)

**2-Body Rendezvous: Herrick Direct Solution for an Orbit EEI64HR Gary R. Smith Fortran Run 274**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 18 (folder)

**Integrate Geo. By 1969 Close Approach EEI364TS Gary R. Smith Fortran Run 275**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 19 (folder)

**Integrate Geo. By 1969 Close Approach EEI364TS Gary R. Smith Fortran Run 276**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 20 (folder)

**EEI364 Gary R. Smith Fortran Runs 277-279**

**Unit Date** 1973

**box-folder** 44 (box)

**Container** 21 (folder)

**Generate Wgeo for various...EEI364 Gary R. Smith Fortran Run 320**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 1 (folder)

**EEI364PL Gary R. Smith Fortran Runs 350-352**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 2 (folder)

**Geo -> node EEI36401-02 Gary R. Smith Fortran Runs 394-395**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 3 (folder)

**EEI364IN Gary R. Smith Fortran Run 153**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 4 (folder)

**EEI364A1 Gary R. Smith Fortran Run 269**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 5 (folder)

**Near 180 Rendezvous EEI36401 Gary R. Smith Fortran Run 328**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 6 (folder)

**Geo. EEI364 Gary R. Smith Fortran Runs 354-358**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 7 (folder)

**Interpolate EEI364N1 Gary R. Smith Fortran Runs 359-360**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 8 (folder)

**Geo. EEI364 Gary R. Smith Fortran Runs 361, 363**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 9 (folder)

**Interpolate EEI364N1 Gary R. Smith Fortran Run 362**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 10 (folder)

**Integrate Geo: 11/13/93 - 9/15/94 EEI364TS Gary R. Smith Fortran Run 364**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 11 (folder)

**Geo to node EEI364HR Gary R. Smith Fortran Run 365**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 12 (folder)

**Geo to Close Approach EEI364H0-H2 Gary R. Smith Fortran Runs 366-368**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 13 (folder)

**1/2 n = -1.00 to 0.48 1/2 n = 0.01 EEI364SH Gary R. Smith Fortran Run 200**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 14 (folder)

**EEI364 Gary R. Smith Fortran Runs 204-212**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 15 (folder)

**EEI364OR Gary R. Smith Fortran Runs 213-214**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 16 (folder)

**EEI364 Gary R. Smith Fortran Runs 215-217**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 17 (folder)

**Comparison of S<sup>h</sup> Guesses EEI364OR Gary R. Smith Fortran Run 218**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 18 (folder)

**EEI364 Gary R. Smith Fortran 219-223, 229**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 19 (folder)

**EEI364O1 Gary R. Smith Fortran Run 230**

**Unit Date** 1973

**box-folder** 45 (box)

**Container** 20 (folder)

**EEI364OR Gary R. Smith Fortran Run 231**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 1 (folder)

**Plot of GEOTAP EEI364PL Gary R. Smith Fortran Run 330**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 2 (folder)

**EEI364TS Gary R. Smith Fortran Run 344**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 3 (folder)

**Herrick Direct Rendezvous EEI364O1 Gary R. Smith Fortran Run 374**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 4 (folder)

**2-Body Partialis EEI364O2 Gary R. Smith Fortran Run 376**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 5 (folder)

**180 Degree Rendezvous EEI36403, 01 Gary R. Smith Fortran Runs 278-279**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 6 (folder)

**ICI225, ICI225AL, ICI225BR Gary R. Smith Fortran Runs, unnumbered**

**Unit Date** 1972

**box-folder** 46 (box)

**Container** 7 (folder)

**EEI364XT Gary R. Smith Fortran Runs 290-291**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 8 (folder)

**EEI364 Gary R. Smith Fortran Runs 292-297**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 9 (folder)

**Interpolate Geo. EEI364ND Gary R. Smith Fortran Runs 299-301**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 10 (folder)

**Geo. EEI364 Gary R. Smith Fortran Runs 302-303, 305**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 11 (folder)

**EEI364ND Gary R. Smith Fortran Run 306**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 12 (folder)

**Geo. EEI364N1 Gary R. Smith Fortran Runs 307-308, 310, 312-315, 317**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 13 (folder)

**Geo. EEI364 Gary R. Smith Fortran Runs 309, 311, 316**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 14 (folder)

**EEI364 Gary R. Smith Fortran Runs 318-319, 321**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 15 (folder)

**180 Degree Rendezvous: WGEO EEI364HR Gary R. Smith Fortran Runs 322-323**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 16 (folder)

**180 Degree Rendezvous: Herrick Direct Method EEI36400 Gary R. Smith Fortran Runs 324-325**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 17 (folder)

**180 Degree HERRIK Direct Rendezvous EEI36400 Gary R. Smith Fortran Run 326**

**Unit Date** 1973

**box-folder** 46 (box)

**Container** 18 (folder)

**EEI364TS (Includes perturbations of Mercury, Venus, and Mars) Gary R. Smith Fortran Runs 327, 332**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 1 (folder)

**EEI364 Gary R. Smith Fortran Run 329**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 2 (folder)

**Geo. Close Approach (including perturbations from Mercury, Venus, Mars) Gary R. Smith Fortran Runs 333, 335-336**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 3 (folder)

**EEI364TS Gary R. Smith Fortran Runs 337-339**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 4 (folder)

**Geo. Close Approach (Merc., Venus, Mars, Jupiter, Saturn, Earth + Moon) EEI364TS Gary R. Smith Fortran Runs 340, 342, 345**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 5 (folder)

**EEI364 Gary R. Smith Fortran Run 346**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 6 (folder)

**EEI364PL Gary R. Smith Fortran Run 347**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 7 (folder)

**EEI364T1 Gary R. Smith Fortran Runs Unnumbered**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 8 (folder)

**EEI364T7 Gary R. Smith Fortran Run**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 9 (folder)

**EEI364B1 Gary R. Smith Fortran Run**

**Unit Date** 1973

**box-folder** 47 (box)

**Container** 10 (folder)

**Fortran Coding Forms**

**Unit Date** n.d.

**box-folder** 47 (box)

**Container** 11 (folder)

**Computer Card Decks**

**Unit Date** n.d.

**box-folder** 47 (box)

**Container** 12-14 (folder)

**Computer Card Decks: Orient (Elements), [Ephe AA]**

**Unit Date** n.d.

**box-folder** 47 (box)

**Container** 15 (folder)

**Computer Card Decks: Stats**

**Unit Date** n.d.

**box-folder** 47 (box)

**Container** 16 (folder)

**Notes**

**Unit Date** 1971, 1972

**box-folder** 47 (box)

**Container** 17 (folder)

**MR321 Tapes**

**Unit Date** n.d.

**oversize** 48 (box)

**Cards 15, 16, 17 Final Listing of Herrick's Table**

**Unit Date** n.d.

**oversize** 48 (box)

**Stevens & Tezak**

**Unit Date** n.d.

**oversize** 48 (box)

**Samples of Computations and Early Programs**

**Unit Date** n.d.

**oversize** 49 (box)

**1965 Fly-By of 1948EA**

**Unit Date** 1965

**oversize** 49 (box)

**Table 1011 sin x and cos x with 1st & 2nd differences to 15 decimals**

**Unit Date** n.d.

**oversize** 49 (box)

**First and second differences Sun (+4 inner planets)'s attractions on Jupiter**

**Unit Date** 1914-1960

**oversize** 49 (box)

**Sun (+ 4 inner planets)'s attractions on Jupiter with first difference**

**Unit Date** 1914-1960

**oversize** 50 (box)

**Coordinates of Venus, Earth, Jupiter, and Saturn**

**Unit Date** n.d.

**oversize** 50 (box)

**Herrick's Fable Book 2**

**Unit Date** n.d.

**oversize** 50 (box)

**Rectilinear Calculations**

**Unit Date** n.d.

**oversize** 50 (box)

**Betulia Computer Runs**

**Unit Date** 1969

**oversize** 50 (box)

**Betulia Computer Runs**

**Unit Date** 1969

**oversize** 51 (box)

**Betulia Ephemeris Gary R. Smith**

**Unit Date** 1972

**oversize** 51 (box)

**R.G. Totten Programs**

**Unit Date** 1966

**oversize** 52 (box)

**Ford Icarus 1965 2-Day Ephem**

**Unit Date** n.d.

**oversize** 52 (box)

**Icarus Close Approach Calculations June 1968-**

**Unit Date** 1966

**oversize** 52 (box)

**Icarus Close Approach Calculations June 1968-**

**Unit Date** 1966

**oversize** 53 (box)

**Ford Geographos 2-Day Ephem 1965**

**Unit Date** n.d.

**oversize** 54 (box)

**Ford 19480A Toro 2-Day Ephem 1965**

**Unit Date** n.d.

**oversize** 54 (box)

**M602GS00 Gary R. Smith Fortran Run 11**

**Unit Date** 1971

**oversize** 54 (box)

**M602GS00 Gary R. Smith Fortran Runs 1-10, 12-13**

**Unit Date** 1971

**oversize** 55 (box)

**MER111 2-Body Ephemera Geo., Betulia, Icarus, Toro Gary R. Smith Fortran Runs 43-48**

**Unit Date** 1971

**oversize** 56 (box)

**MER111 DIFCHK Gary R. Smith Fortran Runs 52-57**

**Unit Date** 1972

**oversize** 56 (box)

**MER111 Gary R. Smith Fortran Runs 65-66**

**Unit Date** 1972

**oversize** 56 (box)

**MER111GS Gary R. Smith Fortran Run 70**

**Unit Date** 1972

**oversize** 56 (box)

**Kepler Tests MER111 Gary R. Smith Fortran Runs 1-9, 12-15, 17-20, 23**

**Unit Date** 1971

**oversize** 57 (box)

**Test STRTVP: Betulia Example Gary R. Smith Fortran Run 25**

**Unit Date** 1971

**oversize** 57 (box)

**Test CALJUL 1941-1979 Gary R. Smith Fortran Run 32**

**Unit Date** 1971

**oversize** 57 (box)

**MER111 Gary R. Smith Fortran Runs 33, 37-38, 41**

**Unit Date** 1971

**oversize** 57 (box)

**Starting Procedure: Geographos Gary R. Smith Fortran Run 35**

**Unit Date** 1971

**oversize** 57 (box)

**MER111GS Gary R. Smith Fortran Runs 71-75**

**Unit Date** 1972

**oversize** 58 (box)

**Toro Ephem. MER111TO Gary R. Smith Fortran Runs 76-77**

**Unit Date** 1972

**oversize** 58 (box)

**MER545 RBR SVDMAT MER545MA Gary R. Smith Fortran Run**

**Unit Date** 1971

**oversize** 58 (box)

**Geographos Ephem. MER111GE Gary R. Smith Runs 78-79**

**Unit Date** 1972

**oversize** 59 (box)

**Icarus 1965 II**

**Unit Date** 1965

**oversize** 59 (box)

**Bullock 1963RH 1965BA**

**Unit Date** n.d.

**oversize** 59 (box)

**Icarus Ephemerides (1968 Encounter)**

**Unit Date** n.d.

**oversize** 59 (box)

**Test Program for 2+3 Series MET865PT Gary R. Smith Fortran Run**

**Unit Date** 1970

**oversize** 61 (box)

**MER545 RBR Series (Member 3) MET865GA Gary R. Smith Fortran Run**

**Unit Date** 1970

**oversize** 61 (box)

**MER545 RBR Series (Member 1) MER545MA Gary R. Smith Fortran Run**

**Unit Date** 1970

**oversize** 61 (box)

**MER545 RBR SER5P6 (Member 1) MER545MA Gary R. Smith Fortran Run**

**Unit Date** 1970

**oversize** 61 (box)

**Geographos Runs Gary R. Smith**

**Unit Date** 1970

**oversize** 61 (box)

**MER111 Gary R. Smith Fortran Runs 6-8, 10-11**

**Unit Date** 1971

**oversize** 61 (box)

**MER111 Gary R. Smith Fortran Runs 16, 21-22, 24, 27-28**

**Unit Date** 1971

**oversize** 62 (box)

**Test CALJUL MER111 Gary R. Smith Fortran Run 29**

**Unit Date** 1971

**oversize** 62 (box)

**MER111 Gary R. Smith Fortran Runs 30-31, 34, 36, 39-42, 50-51, 63-64, 67-69**

**Unit Date** 1971-1972

**oversize** 62 (box)

**MER111 Gary R. Smith Fortran Runs 82-83, 91-92**

**Unit Date** 1972

**oversize** 62 (box)

**MER111DE Gary R. Smith Fortran Runs 94-95**

**Unit Date** 1972

**oversize** 62 (box)

**MER111T7 Gary R. Smith Fortran Run 96**

**Unit Date** 1972

**oversize** 62 (box)

**IBM Sheets**

**Unit Date** 1971

**oversize** 62 (box)

**MER111DE Gary R. Smith Fortran Run 97**

**Unit Date** 1972

**oversize** 62 (box)

**MER111TB Gary R. Smith Fortran Run 98**

**Unit Date** 1972

**oversize** 64 (box)

**MER111BB Gary R. Smith Fortran Run 99**

**Unit Date** 1972

**oversize** 64 (box)

**MER111TC Gary R. Smith Fortran Run 100**

**Unit Date** 1972

**oversize** 64 (box)

**MER111CC Gary R. Smith Fortran Run 101**

**Unit Date** 1972

**oversize** 64 (box)

**MER111AS Gary R. Smith Fortran Runs 102-103**

**Unit Date** 1972

**oversize** 64 (box)

**MER111A0-A9 Gary R. Smith Fortran Runs 104-113**

**Unit Date** 1972

**oversize** 64 (box)

**MER1111A Gary R. Smith Fortran Run 114**

**Unit Date** 1972

**oversize** 64 (box)

**MER1112A Gary R. Smith Fortran Run 115**

**Unit Date** 1972

**oversize** 64 (box)

**MER111DE Gary R. Smith Fortran Runs 116-117**

**Unit Date** 1972

**oversize** 64 (box)

**MER111A2-C2 Gary R. Smith Fortran Runs 118-120**

**Unit Date** 1972

**oversize** 64 (box)

**MER111A1, C1 Gary R. Smith Fortran Runs 121-122**

**Unit Date** 1972

**oversize** 64 (box)

**MER111DB Gary R. Smith Fortran Run 123**

**Unit Date** 1972

**oversize** 64 (box)

**Tape Conversion 7-track 7094 to 9-track 360 MER111DB Gary R. Smith Fortran Run 124**

**Unit Date** 1972

**oversize** 64 (box)

**Tape Conversion 7-track 7094 to 9-track 360 MER111DA Gary R. Smith Fortran Run 125**

**Unit Date** 1972

**oversize** 65 (box)

**MER111DC Gary R. Smith Fortran Run 126**

**Unit Date** 1972

**oversize** 65 (box)

**Tape Conversion 7-track 7094 to 9-track 360 MER111DC Gary R. Smith Run 127**

**Unit Date** 1972

**oversize** 65 (box)

**Planetary Coordinates**

**Unit Date** n.d.

**oversize** 65 (box)

**EEI364 Gary R. Smith Fortran Run 1**

**Unit Date** 1972

**oversize** 65 (box)

**EEI364GS Gary R. Smith Fortran Run 2**

**Unit Date** 1972

**oversize** 65 (box)

**Betulia Ephemeris: July 3, 1968 - Jan. 8, 1975 EEI364BE Gary R. Smith Fortran Run 3**

**Unit Date** 1972

**oversize** 65 (box)

**Icarus 6-day Trial Calculations Fortran IV Run 1**

**Unit Date** 1967

**oversize** 65 (box)

**Icarus 6-day Trial Calculations Fortran IV Runs 2-5**

**Unit Date** 1967

**oversize** 66 (box)

**Planetary Coordinates ZIGRSO06 A Box 142 Fortran Printout**

**Unit Date** 1968

**oversize** 66 (box)

**MER111 Gary R. Smith Fortran Run 49**

**Unit Date** 1972

**oversize** 67 (box)

**Herrick Universal Method 133 Cases M602GS00 Gary R. Smith Fortran**

**Unit Date** 1971

**oversize** 67 (box)

**Herrick Universal Method 133 Cases M602GS00 Gary R. Smith Fortran**

**Unit Date** 1971

**oversize** 68 (box)

**Totten, Icarus 2-day Ephemeris 1966-I**

**Unit Date** n.d.

**oversize** 68 (box)

**Icarus Indirect Terms 2-8**

**Unit Date** 1950-1960

**oversize** 68 (box)

**Icarus Close Approach 1968**

**Unit Date** n.d.

**oversize** 69 (box)

**Icarus Close Approach 1968**

**Unit Date** n.d.

**oversize** 70 (box)

**Totten, Icarus (1566) 1966-II**

**Unit Date** 1966

**oversize** 70 (box)

**Dup #1 & #2**

**Unit Date** 1971

**oversize** 70 (box)

**Betulia MER321BS Tiffany Reichert**

**Unit Date** 1969

**oversize** 71 (box)

**IBM Sheets**

**Unit Date** n.d.

**oversize** 71 (box)

**Test on Hilbert Matrix**

**Unit Date** n.d.

**oversize** 71 (box)

**MER545MA Gary R. Smith Fortran Run**

**Unit Date** 1971

**oversize** 71 (box)

**M602H111 IC-PREP Hanavan Fortran Run**

**Unit Date** 1971

**oversize** 71 (box)

**Initial Conditions: Master Deck**

**Unit Date** 1971

**oversize** 71 (box)

**Extended Precision Multiplication of Integers MMC012 Gary R. Smith Fortran Run**

**Unit Date** 1972

**oversize** 72 (box)

**Continued Fraction Expansions of various Mathematical Constants MMC012 Gary R. Smith Fortran**

**Unit Date** 1972

**oversize** 72 (box)

**Comparison of Chebyshev Series Evaluation Methods MMC012 Gary R. Smith Fortran**

**Unit Date** 1972

**oversize** 72 (box)

**MMC012 Gary R. Smith Fortran Runs 2-4, 7-9, 12-15, 17-25**

**Unit Date** 1972

**oversize** 72 (box)

**MMC012 Gary R. Smith Fortran Runs Unnumbered**

**Unit Date** 1972

**oversize** 72 (box)

**Sh, 1/2 n, 1/2 T graph M602GS00 MEC044 Gary R. Smith Fortran Runs 1-6**

**Unit Date** 1971

**oversize** 73 (box)

**Sh, 1/2 n, 1/2 T graph M602GS01 MEC044 Gary R. Smith Fortran Runs 7-9, unnumbered**

**Unit Date** 1971

**oversize** 73 (box)

**Series X. Card Files**

**Unit Date** n.d.

**Scope and Contents**

This series contains 4 sets card files with names and addresses of Herrick's contacts and bibliographies for celestial mechanics and astrodynamics.

**Arrangement**

This series has been separated into four parts to maintain the original order and separation of materials.

**Card Files 1**

**Contacts A-M**

**Unit Date** n.d.

**box-folder** 5 (box)

**Container** 52 (folder)

**Contacts N-Z****Unit Date** n.d.**box-folder** 5 (box)**Container** 53 (folder)**Bibliographies A-M****Unit Date** n.d.**box-folder** 5 (box)**Container** 54 (folder)**Bibliographies N-Z****Unit Date** n.d.**box-folder** 5 (box)**Container** 55 (folder)**Card Files 2****Index and TR A-Z****Unit Date** n.d.**box-folder** 38 (box)**Container** 53 (folder)**Bibliographies A-F****Unit Date** n.d.**box-folder** 38 (box)**Container** 54 (folder)**Bibliographies G-N****Unit Date** n.d.**box-folder** 38 (box)**Container** 55 (folder)**Bibliographies O-Z****Unit Date** n.d.**box-folder** 38 (box)**Container** 56 (folder)**Card Files 3: Celestial Mechanics****Bibliographies A-H****Unit Date** n.d.**folder** 33 (box)**Container** 40 (folder)**Bibliographies I-P****Unit Date** n.d.**folder** 33 (box)**Container** 41 (folder)**Bibliographies Q-Z****Unit Date** n.d.

**folder** 33 (box)  
**Container** 42 (folder)

### **GEO Bibliography A-Z**

**Unit Date** n.d.  
**folder** 33 (box)  
**Container** 43 (folder)

## **Card Files 4: Astrodynamics**

### **Astrodynamics Bibliography 1-25**

**Unit Date** n.d.  
**box-folder** 33 (box)  
**Container** 44 (folder)

### **Bibliographies A-F**

**Unit Date** n.d.  
**box-folder** 33 (box)  
**Container** 45 (folder)

### **Bibliographies G-L**

**Unit Date** n.d.  
**box-folder** 33 (box)  
**Container** 46 (folder)

### **Bibliographies M-Z**

**Unit Date** n.d.  
**box-folder** 33 (box)  
**Container** 47 (folder)

## **Series XI. Subject Files**

**Unit Date** 1924-1981

### **Scope and Contents**

This series includes Herrick's files on a variety of subjects. These materials reflect his professional and personal interests, including early computers, minor planets, space exploration, and piano music. Notable materials include Aeronutronic Systems Division-Ford files, Technical Study #3, mathematics publications, Jet Propulsion Laboratory reports, files on Betulia, Icarus, Geographos, and Jupiter IX and XII, Minor Planet Center Notices, and notes on navigation.

### **Arrangement**

The Betulia Files contain materials relating to the asteroid (1580) Betulia, named for Samuel Herrick's wife, Betulia Toro Herrick. This includes an article, calculations, correspondence, ephemerides, numerical integration, observations, elements, oppositions, and representations. The Icarus Files contain materials relating to the near-Earth object (1566) Icarus, including ephemerides, residuals, correspondence, history and facts, observations, orbit graphs, and publications. The Geographos Files contain materials relating to the asteroid (1620) Geographos, including early Encke orbit files, elements, ellipse graphs, ephemerides, general information, publicity, variation of parameters, and possible exploration. The Jupiter IX and Jupiter XII Files contain materials relating to Jupiter IX (an irregular satellite of Jupiter now known as Sinope) and Jupiter XII (an irregular moon of Jupiter now known as Ananke). This includes Cowell integrations, ephemeris, graphs, basic calculations, history, general information, variation of constants, observations and representations, and publicity. Items not included in the above files consist of materials relating to other minor planets and objects, such as Lanzia, the Swift comet, and the Wilson object. This includes graphs and calculations, articles, observations, general information, history, ephemerides, opposition graphs, formulae, and procedures. Also included are Minor Planet Center Notices 151 through 2800, and 3535 through 3602.

## **Sub-Series A. Aeronutronics Systems Division (ASD)**

**Unit Date** 1956-1960

### **ABMA**

**Unit Date** 1958

**box-folder** 7 (box)

**Container** 35 (folder)

### **AFCRC Proposal**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 55 (folder)

### **AS1 - Organization**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 51 (folder)

### **ASD 33**

**Unit Date** 1957

**box-folder** 7 (box)

**Container** 29 (folder)

### **Astromechanics**

**Unit Date** 1959

**box-folder** 7 (box)

**Container** 58 (folder)

### **Aviation Age**

**Unit Date** 1958

**box-folder** 7 (box)

**Container** 31 (folder)

### **Baker BMD**

**Unit Date** 1959

**box-folder** 7 (box)

**Container** 68 (folder)

### **Barcelona, London, Washington, Denver**

**Unit Date** 1957

**box-folder** 7 (box)

**Container** 20 (folder)

### **Basic Thrust, Drag, Gravity, Formulae and Developments**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 14 (folder)

**Bibliographies****Unit Date** n.d.**box-folder** 7 (box)**Container** 10 (folder)**BMD****Unit Date** 1958**box-folder** 7 (box)**Container** 38 (folder)**Candidates for Astrodynamics****Unit Date** 1960**box-folder** 7 (box)**Container** 76 (folder)**Capabilities in Astrodynamics****Unit Date** n.d.**box-folder** 7 (box)**Container** 78 (folder)**Contract Suggestions + Proposals****Unit Date** 1957**box-folder** 7 (box)**Container** 6 (folder)**Descending Trajectories (Lew Walters)****Unit Date** 1957**box-folder** 7 (box)**Container** 19 (folder)**Differential Correction and V. of P.****Unit Date** n.d.**box-folder** 7 (box)**Container** 72 (folder)**Differential Effects****Unit Date** n.d.**box-folder** 7 (box)**Container** 17 (folder)**Differential Expressions for Low-Eccentricity****Unit Date** 1959**box-folder** 7 (box)**Container** 46 (folder)**Dissipative Forces****Unit Date** n.d.**box-folder** 7 (box)**Container** 34 (folder)

**Durand Centennial Conference****Unit Date** 1959-1960**box-folder** 7 (box)**Container** 61 (folder)**Encke****Unit Date** n.d.**box-folder** 7 (box)**Container** 43 (folder)**Errors Affecting P, n, a****Unit Date** n.d.**box-folder** 7 (box)**Container** 39 (folder)**Errors in Lunar Trajectory from Constants (and Velocity)****Unit Date** n.d.**box-folder** 7 (box)**Container** 23 (folder)**Farside****Unit Date** n.d.**box-folder** 7 (box)**Container** 3 (folder)**Fence: Competition from Navy****Unit Date** 1959-1960**box-folder** 7 (box)**Container** 75 (folder)**Flying Saucers****Unit Date** 1957**box-folder** 7 (box)**Container** 15 (folder)**Four Bodies****Unit Date** 1957**box-folder** 7 (box)**Container** 2 (folder)**General Perturbations of Lunar Satellite by the Earth****Unit Date** n.d.**box-folder** 7 (box)**Container** 26 (folder)**Geodetic Position Determination****Unit Date** 1959**box-folder** 7 (box)**Container** 74 (folder)

**Hawker Siddeley****Unit Date** 1956-1958**box-folder** 7 (box)**Container** 21 (folder)**High Precision in Geocentric Orbits****Unit Date** 1957**box-folder** 7 (box)**Container** 12 (folder)**IAS Frontiers Symposium****Unit Date** 1959**box-folder** 7 (box)**Container** 59 (folder)**Integration****Unit Date** 1959**box-folder** 7 (box)**Container** 8 (folder)**Intercontinental Tie****Unit Date** n.d.**box-folder** 7 (box)**Container** 18 (folder)**JPL Report****Unit Date** n.d.**box-folder** 7 (box)**Container** 52 (folder)**L + PE Colloquium****Unit Date** 1959**box-folder** 7 (box)**Container** 60 (folder)**"Leaders of Space" (Annis and Thomas)"****Unit Date** 1959-1960**box-folder** 7 (box)**Container** 69 (folder)**Leaves of Radar Fence - Enright****Unit Date** 1960**box-folder** 7 (box)**Container** 71 (folder)**Lunar Atmosphere****Unit Date** n.d.**box-folder** 7 (box)**Container** 16 (folder)

**Lunar Impact 4-6 Months**

**Unit Date** 1957

**box-folder** 7 (box)

**Container** 27 (folder)

**Lunar Tables**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 4 (folder)

**Lunar Trajectory Mechanics, Walters**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 33 (folder)

**Magnitude + Visibility**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 5 (folder)

**Man-In-Space**

**Unit Date** 1959

**box-folder** 7 (box)

**Container** 53 (folder)

**Mercury Station Location - Wylie**

**Unit Date** 1959

**box-folder** 7 (box)

**Container** 47 (folder)

**Meteorite Pert. + Prob.**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 11 (folder)

**Miscellaneous Contacts**

**Unit Date** n.d.

**box-folder** 7 (box)

**Container** 49 (folder)

**Moffet Field Trip (NASA)**

**Unit Date** 1959

**box-folder** 7 (box)

**Container** 70 (folder)

**NASA - Mercury Negotiations**

**Unit Date** 1959

**box-folder** 7 (box)

**Container** 54 (folder)

**Navy Direction Presentation****Unit Date** 1959**box-folder** 7 (box)**Container** 44 (folder)**Notation & Usage****Unit Date** 1960**box-folder** 7 (box)**Container** 65 (folder)**Orange County Campus of U.C.****Unit Date** 1959-1960**box-folder** 7 (box)**Container** 50 (folder)**Orbit Determination****Unit Date** n.d.**box-folder** 7 (box)**Container** 41 (folder)**Orbit Error Analysis****Unit Date** 1959**box-folder** 7 (box)**Container** 45 (folder)**Orbit Formulae****Unit Date** 1957**box-folder** 7 (box)**Container** 7 (folder)**Orbit Low E.****Unit Date** n.d.**box-folder** 7 (box)**Container** 73 (folder)**Orbits for Vargo-Boeing****Unit Date** 1959**box-folder** 7 (box)**Container** 40 (folder)**PMR Operations Research Grp. (Gumbel)****Unit Date** 1959**box-folder** 7 (box)**Container** 56 (folder)**Possible Proposals****Unit Date** 1959**box-folder** 7 (box)**Container** 77 (folder)

**Precision Orbits and Observation Reducation****Unit Date** 1959**box-folder** 7 (box)**Container** 42 (folder)**Product Planning Comm.****Unit Date** 1957**box-folder** 7 (box)**Container** 13 (folder)**Radiation - Helvey****Unit Date** n.d.**box-folder** 7 (box)**Container** 66 (folder)**Rome Contract****Unit Date** 1957**box-folder** 7 (box)**Container** 9 (folder)**Scientific Satellite****Unit Date** 1958**box-folder** 7 (box)**Container** 30 (folder)**SIRY - JPL Mtg. on NASA****Unit Date** 1959-1960**box-folder** 7 (box)**Container** 67 (folder)**Smithsonian****Unit Date** 1958**box-folder** 7 (box)**Container** 37 (folder)**Solar Parallax and Astronomical Unit****Unit Date** 1959**box-folder** 7 (box)**Container** 57 (folder)**Some Basic Constants****Unit Date** n.d.**box-folder** 7 (box)**Container** 24 (folder)**Space Tech. Course****Unit Date** 1959**box-folder** 7 (box)**Container** 32 (folder)

**Space vs. Sea and Air in Navigation****Unit Date** 1959**box-folder** 7 (box)**Container** 64 (folder)**Spacing of Trajectories****Unit Date** n.d.**box-folder** 7 (box)**Container** 25 (folder)**State of the Art in Astro.****Unit Date** 1959**box-folder** 7 (box)**Container** 63 (folder)**The Geodetic Implications of Artificial Satellites****Unit Date** 1960**box-folder** 7 (box)**Container** 62 (folder)**The Interception Problem****Unit Date** n.d.**box-folder** 7 (box)**Container** 48 (folder)**The Martin Co.****Unit Date** 1957-1959**box-folder** 7 (box)**Container** 22 (folder)**TR + Durano Lunar Impact****Unit Date** 1957**box-folder** 7 (box)**Container** 28 (folder)**WADC****Unit Date** 1958**box-folder** 7 (box)**Container** 36 (folder)**Sub-Series B. Computers and Electronic Calculations****Unit Date** 1947-1967**Differential Analyzer: Formulae & Diagrams for Perturbations on a Rocket in Trip to Moon****Unit Date** c. 1947**box-folder** 33 (box)**Container** 1 (folder)

## **Application and Operation of Differential Analyzer**

**Unit Date** c. 1947

**box-folder** 33 (box)

**Container** 2 (folder)

## **Differential Analyzer: Reference Material**

**Unit Date** 1947

**box-folder** 33 (box)

**Container** 3 (folder)

## **Differential Analyzer: Problems**

**Unit Date** c. 1947

**box-folder** 33 (box)

**Container** 4 (folder)

## **3-Body Problem**

**Unit Date** n.d.

**box-folder** 33 (box)

**Container** 5 (folder)

## **Monroe Calculating Machine Manuals**

**Unit Date** 1955-1964

**box-folder** 33 (box)

**Container** 6 (folder)

## **EDVAC Manual**

**Unit Date** 1947

**box-folder** 33 (box)

**Container** 7 (folder)

## **Early Computer Development**

**Unit Date** 1947

**box-folder** 33 (box)

**Container** 8 (folder)

## **ZEPHYR Development Report**

**Unit Date** 1949

**box-folder** 33 (box)

**Container** 9 (folder)

## **SWAC Memoranda**

**Unit Date** 1953-1958

**box-folder** 33 (box)

**Container** 10 (folder)

## **NAR, Relations with**

**Unit Date** 1953-1956

**box-folder** 33 (box)

**Container** 11 (folder)

**Cowell for SWAC****Unit Date** n.d.**box-folder** 33 (box)**Container** 12 (folder)**Floating & Arcsin****Unit Date** 1956**box-folder** 33 (box)**Container** 13 (folder)**Conversion of Eckert Cards to Binary****Unit Date** n.d.**box-folder** 33 (box)**Container** 14 (folder)**SWAC Coding Sheets (empty)****Unit Date** n.d.**box-folder** 33 (box)**Container** 15 (folder)**SWAC Eng.****Unit Date** n.d.**box-folder** 33 (box)**Container** 16 (folder)**Main (+)****Unit Date** n.d.**box-folder** 33 (box)**Container** 17 (folder)**SPADATS Runs****Unit Date** 1967**box-folder** 33 (box)**Container** 18 (folder)**Technical Study #3****T.S. #3 - Correspondence & Worksheets****Unit Date** 1965-1967**box-folder** 33 (box)**Container** 24 (folder)**T.S. #3 - Current File****Unit Date** n.d.**box-folder** 33 (box)**Container** 25 (folder)**T.S. #3 - Dr. Herrick's Tech. Report and Prior Theoretical Work****Unit Date** 1967**box-folder** 33 (box)**Container** 23 (folder)

**T.S. #3 - Ken Ford's Program + Elon Diagrams**

**Unit Date** n.d.

**box-folder** 33 (box)

**Container** 19 (folder)

**T.S. #3 - Observational Data**

**Unit Date** 1967

**box-folder** 33 (box)

**Container** 22 (folder)

**T.S. #3 - Paul Tiffany's Modified Ford Program**

**Unit Date** n.d.

**box-folder** 33 (box)

**Container** 21 (folder)

**T.S. #3 - Station Coordinates**

**Unit Date** n.d.

**box-folder** 33 (box)

**Container** 26 (folder)

**Tiffany - Icarus**

**Unit Date** 1967

**box-folder** 33 (box)

**Container** 20 (folder)

**Memo to P. Thompson from Stevens and Tezak Regarding Future Work on Icarus**

**Unit Date** n.d.

**box-folder** 33 (box)

**Container** 27 (folder)

**Variation of Parameters Program: Tezak and Stevens**

**Unit Date** 1967

**box-folder** 33 (box)

**Container** 28 (folder)

**Tezak Tape Inventory**

**Unit Date** 1967

**box-folder** 33 (box)

**Container** 29 (folder)

**Integ. - Stevens**

**Unit Date** 1966

**box-folder** 33 (box)

**Container** 30 (folder)

**Variation of Parameters Computer Program**

**Unit Date** 1966

**box-folder** 33 (box)

**Container** 31 (folder)

**Diag. - Stevens & Tezak****Unit Date** n.d.**box-folder** 33 (box)**Container** 32 (folder)**Differential Computer Program****Unit Date** 1966**box-folder** 33 (box)**Container** 33 (folder)**Variation of Parameters Start Computer Program****Unit Date** 1966**box-folder** 33 (box)**Container** 34 (folder)**Worksheets, Timesheets****Unit Date** n.d.**box-folder** 33 (box)**Container** 35 (folder)**Sub-Series C. Mathematics****Unit Date** 1931-1975**Mathematics Publications****Unit Date** n.d.**box-folder** 34 (box)**Container** 1 (folder)**Language** German, English .**Notes on Least Squares****Unit Date** n.d.**box-folder** 34 (box)**Container** 2 (folder)**Wilkinson - Curve Fitting with Chebyshev Polynomials****Unit Date** n.d.**box-folder** 34 (box)**Container** 3 (folder)**Lecture Notes on Hansen's Method of General Perturbations****Unit Date** n.d.**box-folder** 34 (box)**Container** 4 (folder)**Lecture Notes on Hansen's Method of General Perturbations****Unit Date** n.d.**box-folder** 34 (box)**Container** 5 (folder)

**Projective Geometry****Unit Date** n.d.**box-folder** 34 (box)**Container** 6 (folder)**Astronomy 108 Transfer****Unit Date** 1948-1950**box-folder** 34 (box)**Container** 7 (folder)**Coding: Lecture Notes****Unit Date** 1953**box-folder** 34 (box)**Container** 8 (folder)**Mechanics & Vectors Useful Formulas****Unit Date** n.d.**box-folder** 34 (box)**Container** 9 (folder)**Numerical Analysis****Unit Date** n.d.**box-folder** 34 (box)**Container** 10 (folder)**Double Integration****Unit Date** n.d.**box-folder** 34 (box)**Container** 11 (folder)**Integration Problem Singularities and Systematic Terms****Unit Date** n.d.**box-folder** 34 (box)**Container** 12 (folder)**Single Integration****Unit Date** n.d.**box-folder** 34 (box)**Container** 13 (folder)**Numerical Integration: TR****Unit Date** n.d.**box-folder** 34 (box)**Container** 14 (folder)**Interpolation****Unit Date** n.d.**box-folder** 34 (box)**Container** 15 (folder)

## **Numerical Integration: Errors, Interval**

**Unit Date** 1950

**box-folder** 34 (box)

**Container** 16 (folder)

## **Subtabulation**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 17 (folder)

## **Elliptic Integrals**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 18 (folder)

## **Fourier Series and Bessel's Functions**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 19 (folder)

## **Astronomical Experience In Computation Problems**

**Unit Date** 1948

**box-folder** 34 (box)

**Container** 20 (folder)

## **Relativity**

**Unit Date** 1950

**box-folder** 34 (box)

**Container** 21 (folder)

## **Least Squares Alternatives**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 22 (folder)

## **Tables**

**Unit Date** 1936, 1948

**box-folder** 34 (box)

**Container** 23 (folder)

## **Numerical Analysis, Integration, and the Tchakaloff Cone**

**Unit Date** 1959, 1966, 1968-1970

**box-folder** 34 (box)

**Container** 24 (folder)

**Language** Italian, English .

## **Atmospheric Analysis**

**Unit Date** 1958, 1969

**box-folder** 34 (box)

**Container** 25 (folder)

## **Variable Order Inegrators for Ordinary Differential Equations**

**Unit Date** 1969

**box-folder** 34 (box)

**Container** 26 (folder)

## **Smoothing**

**Unit Date** 1962, 1968, 1970

**box-folder** 34 (box)

**Container** 27 (folder)

## **Quasilinearization**

**Unit Date** 1965

**box-folder** 34 (box)

**Container** 28 (folder)

## **Langrangian & Hamiltonian Mech. Notes**

**Unit Date** 1974

**box-folder** 34 (box)

**Container** 29 (folder)

## **Bomford - Geodesy**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 30 (folder)

## **Lawden, D.F.**

**Unit Date** 1953-1955

**box-folder** 34 (box)

**Container** 31 (folder)

## **Rosser, Newton, Gross - Math Theory of Rocket Fit**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 32 (folder)

## **R.S. Richardson**

**Unit Date** 1947

**box-folder** 34 (box)

**Container** 33 (folder)

## **Ballistics of the Future**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 34 (folder)

## **G.F. Forbes - Powered Trajectory**

**Unit Date** 1950

**box-folder** 34 (box)

**Container** 35 (folder)

## **Books on Rockets and Related Subjects**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 36 (folder)

## **Gilvarry**

**Unit Date** 1950

**box-folder** 34 (box)

**Container** 37 (folder)

## **W.D. Lambert - Physics of the Earth**

**Unit Date** 1948

**box-folder** 34 (box)

**Container** 38 (folder)

## **Kinsey: Theoretical Mechanics I**

**Unit Date** 1946

**box-folder** 34 (box)

**Container** 39 (folder)

## **Kinsey: Theoretical Mechanics II**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 40 (folder)

## **Star Chart**

**Unit Date** 1942-1943

**box-folder** 34 (box)

**Container** 41 (folder)

## **Wind Drift Problem**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 42 (folder)

## **Refraction Table**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 43 (folder)

## **Polar Navigation**

**Unit Date** 1945

**box-folder** 34 (box)

**Container** 44 (folder)

## **Position Line Graph Hydrographic Off. & Fortune**

**Unit Date** 1943

**box-folder** 34 (box)

**Container** 45 (folder)

### **Tables for Rocket and Comet Orbits**

**Unit Date** 1951-1952

**box-folder** 34 (box)

**Container** 46 (folder)

### **Kepler's Equation Solution and Arrangement**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 47 (folder)

### **Kepler's Equation Argument & Tables**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 48 (folder)

### **Kepler's Equation Manuscripts & Experiments**

**Unit Date** 1946

**box-folder** 34 (box)

**Container** 49 (folder)

### **TFR + Co Parabola and $n > 5$ for Ellipse, Hyperbola**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 50 (folder)

### **TFR + Co Ellipse**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 51 (folder)

### **TFR + Co Hyperbola**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 52 (folder)

### **Kepler's Equation References**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 53 (folder)

### **X vs. P as Independent Variable in First Approximation**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 54 (folder)

### **Leuschner Differential Correction**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 55 (folder)

**Orbits: Draper's Paper****Unit Date** 1946**box-folder** 34 (box)**Container** 56 (folder)**Orbits: First Approximation****Unit Date** n.d.**box-folder** 34 (box)**Container** 57 (folder)**Adaptation to Electronic Computing****Unit Date** n.d.**box-folder** 34 (box)**Container** 58 (folder)**"Satellite" Methods****Unit Date** n.d.**box-folder** 34 (box)**Container** 59 (folder)**"fg" Method, Precursor to Lagrangian****Unit Date** n.d.**box-folder** 34 (box)**Container** 60 (folder)**Langrangian Method TR****Unit Date** n.d.**box-folder** 34 (box)**Container** 61 (folder)**Orbits: Gibbsian and Gaussian (Residuals)****Unit Date** n.d.**box-folder** 34 (box)**Container** 62 (folder)**Parabola****Unit Date** n.d.**box-folder** 34 (box)**Container** 63 (folder)**Solar Coordinates and Velocities****Unit Date** n.d.**box-folder** 34 (box)**Container** 64 (folder)**TFR + Co Rectilinear & NP Orbits****Unit Date** n.d.**box-folder** 34 (box)**Container** 65 (folder)

## **Orbit Formulae and Tables**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 66 (folder)

## **Comparison**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 67 (folder)

## **Orbits**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 68 (folder)

## **Cartography**

**Unit Date** 1943

**box-folder** 34 (box)

**Container** 69 (folder)

## **Grid Navigation**

**Unit Date** 1947-1953

**box-folder** 34 (box)

**Container** 70 (folder)

## **Encke's Method Parabolic & Rectilinear Cases**

**Unit Date** n.d.

**box-folder** 34 (box)

**Container** 71 (folder)

## **Perturbations - Uranus**

**Unit Date** 1948

**box-folder** 34 (box)

**Container** 72 (folder)

## **Uranus**

**Unit Date** 1931-1948

**box-folder** 34 (box)

**Container** 73 (folder)

## **#36. Grid Navigation**

**Unit Date** 1946

**box-folder** 34 (box)

**Container** 74 (folder)

## **Orbits: Gibbsian Differential Correction (+Gaussian)**

**Unit Date** 1948

**box-folder** 34 (box)

**Container** 75 (folder)

## **Geodetic Applications of Artificial Satellites**

**Unit Date** 1958

**box-folder** 34 (box)

**Container** 76 (folder)

## **Astronomical Journals & Data**

**Unit Date** 1966-1967, 1970

**box-folder** 35 (box)

**Container** 1 (folder)

## **International Units**

**Unit Date** 1964, 1965

**box-folder** 35 (box)

**Container** 2 (folder)

## **Astronomical Consonants**

**Unit Date** 1958, 1963, 1970

**box-folder** 35 (box)

**Container** 3 (folder)

## **Jet Propulsion Laboratory Reports**

**Unit Date** 1964, 1966-1968

**box-folder** 35 (box)

**Container** 4-5 (folder)

## **Astronomical & Gravitational Constants**

**Unit Date** 1950-1971

**box-folder** 35 (box)

**Container** 6 (folder)

**Language** French, English .

## **Planetary Mass, Navigation, and Orbits**

**Unit Date** 1965, 1967-1970

**box-folder** 35 (box)

**Container** 7 (folder)

**Language** French, Russian , English .

## **Jet Propulsion Laboratory - Khatib**

**Unit Date** 1968-1970

**box-folder** 35 (box)

**Container** 8 (folder)

## **FORTTRAN IV Astrodynamic Modules**

**Unit Date** 1967

**box-folder** 35 (box)

**Container** 9 (folder)

## **Publications of Dr. Hugh Dryden**

**Unit Date** 1966

**box-folder** 35 (box)

**Container** 10 (folder)

**Escobal - Two Body Position and Velocity Prediction Subroutine (Lockheed Technical Memo)**

**Unit Date** 1962

**box-folder** 35 (box)

**Container** 11 (folder)

**Francis - Summary of Current Values of Astrodynamic Constants (Lockheed Technical Memo)**

**Unit Date** 1963

**box-folder** 35 (box)

**Container** 12 (folder)

**Francis - Constants for an Earth-Moon Transit (Lockheed Technical Memo)**

**Unit Date** 1963

**box-folder** 35 (box)

**Container** 13 (folder)

**E. C. Bower - Pluto & Numeric Integration**

**Unit Date** 1931, 1951, 1957

**box-folder** 35 (box)

**Container** 14 (folder)

**Matas - Stability of Libration Points in Three-Body Problem**

**Unit Date** 1965

**box-folder** 35 (box)

**Container** 15 (folder)

**Space Vehicles Launched During 1973 and 1974**

**Unit Date** 1975

**box-folder** 35 (box)

**Container** 16 (folder)

**Reports of the Ohio State University Department of Geodetic Science**

**Unit Date** 1974

**box-folder** 35 (box)

**Container** 17 (folder)

**Jackson Comet and Nicholson Object**

**Unit Date** n.d.

**box-folder** 35 (box)

**Container** 18 (folder)

**Misc. Technical Papers**

**Unit Date** n.d.

**box-folder** 35 (box)

**Container** 19 (folder)

**Musen and Hansen**

**Unit Date** n.d.

**box-folder** 35 (box)

**Container** 20 (folder)

**Language** German, English .

**Universal Variables****Unit Date** 1965**box-folder** 35 (box)**Container** 21 (folder)**Dahlgren, VA, Short Course on Fundamental Astrodynamics****Unit Date** 1972**box-folder** 35 (box)**Container** 22 (folder)**Benedict Problem****Unit Date** 1965**box-folder** 35 (box)**Container** 23 (folder)**Smoothing #1****Unit Date** 1965-1967**box-folder** 35 (box)**Container** 24 (folder)**Smoothing #2****Unit Date** 1965**box-folder** 35 (box)**Container** 25 (folder)**Calculus of Finite Numbers****Unit Date** n.d.**box-folder** 35 (box)**Container** 26 (folder)**Dynamical Equations****Unit Date** 1963**box-folder** 35 (box)**Container** 27 (folder)**Universal Variables****Unit Date** 1964**box-folder** 35 (box)**Container** 28 (folder)**Reprints of Universal Variables & Letter to Everhart****Unit Date** 1965, 1970**box-folder** 35 (box)**Container** 29 (folder)**Nearly Circular Variables****Unit Date** 1965, 1969**box-folder** 35 (box)**Container** 30 (folder)

## **Universal Variables Notes & Vellums**

**Unit Date** n.d.

**box-folder** 35 (box)

**Container** 31 (folder)

## **Universal Variables**

**Unit Date** 1964-1967

**box-folder** 35 (box)

**Container** 32 (folder)

## **Fragments of 2 Papers (Constants and Calc. Methods)**

**Unit Date** 1958

**box-folder** 60 (box)

**Container** 38 (folder)

## **Chebyshev Polynomials**

**Unit Date** 1953

**box-folder** 60 (box)

**Container** 39 (folder)

## **Numeration**

**Unit Date** n.d.

**box-folder** 60 (box)

**Container** 40 (folder)

## **Two Stationary Centers**

**Unit Date** n.d.

**box-folder** 60 (box)

**Container** 41 (folder)

## **Center of Attraction**

**Unit Date** n.d.

**box-folder** 60 (box)

**Container** 42 (folder)

## **Combination of Orbits**

**Unit Date** n.d.

**box-folder** 60 (box)

**Container** 43 (folder)

## **General Perturbation**

**Unit Date** 1966

**box-folder** 60 (box)

**Container** 44 (folder)

## **Perturbations**

**Unit Date** 1964

**box-folder** 60 (box)

**Container** 45 (folder)

**Aberrations****Unit Date** 1968, 1969**box-folder** 60 (box)**Container** 46 (folder)**Propagation of Gravity****Unit Date** 1953-1968**box-folder** 60 (box)**Container** 47 (folder)**Jeff Projects****Unit Date** 1957-1958**box-folder** 60 (box)**Container** 48 (folder)**New Origin****Unit Date** 1964**box-folder** 60 (box)**Container** 49 (folder)**Sub-Series D. Minor Planets and Objects****Unit Date** 1929-1983**Betulia Files****Unit Date** 1950-1971**(1580) Betulia Article****Unit Date** 1963**box-folder** 37 (box)**Container** 13 (folder)**(1580) Betulia Correction****Unit Date** 1963**box-folder** 37 (box)**Container** 9 (folder)**(1580) Betulia Correspondence****Unit Date** 1967**box-folder** 37 (box)**Container** 8 (folder)**(1580) Betulia Ephemerides****Unit Date** 1958-1969**box-folder** 37 (box)**Container** 5 (folder)**(1580) Betulia Ephemerides Calculations****Unit Date** 1958-1963**box-folder** 37 (box)**Container** 6 (folder)

**(1580) Betulia Indirect Pertura Terms**

**Unit Date** n.d.

**box-folder** 37 (box)

**Container** 11 (folder)

**(1580) Betulia Numerical Integration**

**Unit Date** 1950-1952

**box-folder** 37 (box)

**Container** 2 (folder)

**(1580) Betulia Numerical Integration**

**Unit Date** 1952-1962

**box-folder** 37 (box)

**Container** 3 (folder)

**(1580) Betulia Observations and Calculations**

**Unit Date** 1958-1968

**box-folder** 37 (box)

**Container** 4 (folder)

**(1580) Betulia Observations, Unrepresented**

**Unit Date** n.d.

**box-folder** 38 (box)

**Container** 29 (folder)

**(1580) Betulia Plate Reductions**

**Unit Date** 1955

**box-folder** 37 (box)

**Container** 10 (folder)

**(1580) Betulia Representations**

**Unit Date** 1950-1968

**box-folder** 37 (box)

**Container** 7 (folder)

**Betulia**

**Unit Date** 1968, 1971

**box-folder** 38 (box)

**Container** 50 (folder)

**Betulia**

**Unit Date** 1959-1969

**box-folder** 39 (box)

**Container** 34 (folder)

**Betulia Elements**

**Unit Date** 1968

**box-folder** 38 (box)

**Container** 51 (folder)

## **Betulia Oppositions, Graphs, and Close Approaches**

**Unit Date** 1968

**box-folder** 38 (box)

**Container** 52 (folder)

## **Betulia Tottens Starting Values**

**Unit Date** n.d.

**box-folder** 37 (box)

**Container** 12 (folder)

## **Icarus Files**

**Unit Date** 1961-1971

### **(1566) Icarus Encke Perturbations Due to Mercury**

**Unit Date** n.d.

**box-folder** 37 (box)

**Container** 44 (folder)

### **(1566) Icarus Ephemerides**

**Unit Date** n.d.

**box-folder** 37 (box)

**Container** 46 (folder)

### **(1566) Icarus Ephemeris**

**Unit Date** 1964-1968

**box-folder** 37 (box)

**Container** 43 (folder)

### **(1566) Icarus Ephemeris**

**Unit Date** 1969-1971

**box-folder** 37 (box)

**Container** 49 (folder)

### **(1566) Icarus Integration of the Mean Anomaly**

**Unit Date** n.d.

**box-folder** 37 (box)

**Container** 45 (folder)

### **(1566) Icarus Residuals**

**Unit Date** n.d.

**box-folder** 37 (box)

**Container** 48 (folder)

## **Erros & Current Icarus Work**

**Unit Date** n.d.

**box-folder** 33 (box)

**Container** 37 (folder)

**Icarus (Correspondence)**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 4 (folder)

**Icarus (Ephemerides, Elements, IAU Circular)**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 11 (folder)

**Icarus (Non-Technical Info)**

**Unit Date** 1967

**box-folder** 39 (box)

**Container** 6 (folder)

**Icarus Ephem**

**Unit Date** 1968

**box-folder** 33 (box)

**Container** 38 (folder)

**Icarus General Profile**

**Unit Date** 1961, 1967-1978

**box-folder** 39 (box)

**Container** 10 (folder)

**Icarus History and Facts**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 5 (folder)

**Icarus Observations**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 49 (folder)

**Icarus Orbit Graphs**

**Unit Date** n.d.

**box-folder** 39 (box)

**Container** 7 (folder)

**Icarus Projects**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 8 (folder)

**Icarus Publications**

**Unit Date** 1962, 1968

**box-folder** 39 (box)

**Container** 9 (folder)

**Job Assignment Info - Icarus****Unit Date** 1968**box-folder** 33 (box)**Container** 36 (folder)**Geographos Files****Unit Date** 1950-1973**(1620) Geographos Article****Unit Date** 1969**box-folder** 37 (box)**Container** 36 (folder)**(1620) Geographos Contract & Reports****Unit Date** 1968**box-folder** 37 (box)**Container** 39 (folder)**(1620) Geographos Early Encke Orbit File 1****Unit Date** n.d.**box-folder** 37 (box)**Container** 17 (folder)**(1620) Geographos Early Encke Orbit File 2****Unit Date** n.d.**box-folder** 37 (box)**Container** 18 (folder)**(1620) Geographos Elements****Unit Date** 1968-1973**box-folder** 37 (box)**Container** 30 (folder)**(1620) Geographos Ellipse Graphs****Unit Date** 1959-1960**box-folder** 37 (box)**Container** 23 (folder)**(1620) Geographos Ephemerides****Unit Date** 1957-1969**box-folder** 37 (box)**Container** 21 (folder)**(1620) Geographos General Information****Unit Date** 1965-1968**box-folder** 37 (box)**Container** 26 (folder)

**(1620) Geographos Matters of Capture**

**Unit Date** 1967

**box-folder** 37 (box)

**Container** 37 (folder)

**(1620) Geographos Observation Residual**

**Unit Date** 1951-1970

**box-folder** 37 (box)

**Container** 22 (folder)

**(1620) Geographos Oppositions and Close Approaches**

**Unit Date** 1958-1968

**box-folder** 37 (box)

**Container** 31 (folder)

**(1620) Geographos Plate Measures**

**Unit Date** 1954

**box-folder** 37 (box)

**Container** 24 (folder)

**Caution**

This folder contains glass plates, some of which have broken. Please use caution when handling the materials.

**(1620) Geographos Publicity**

**Unit Date** 1969

**box-folder** 37 (box)

**Container** 34 (folder)

**(1620) Geographos Variation of Parameters**

**Unit Date** 1950-1952

**box-folder** 37 (box)

**Container** 19 (folder)

**(1620) Geographos Variation of Parameters Integration**

**Unit Date** 1953

**box-folder** 37 (box)

**Container** 20 (folder)

**Exploration and Exploitation of Geographos**

**Unit Date** 1971

**box-folder** 37 (box)

**Container** 32 (folder)

**GEO - Future**

**Unit Date** 1971

**box-folder** 37 (box)

**Container** 38 (folder)

**GEO Splash Telephone Correspondence, Visits****Unit Date** 1970-1971**box-folder** 37 (box)**Container** 33 (folder)**GEO Splash: Facts + Figures****Unit Date** 1971**box-folder** 37 (box)**Container** 40 (folder)**GEO Splash: Ideas to Review and Calculations****Unit Date** 1970-1971**box-folder** 37 (box)**Container** 35 (folder)**Geo. Minor Planet Justification References****Unit Date** 1955, 1970**box-folder** 37 (box)**Container** 29 (folder)**Geographos (1620)****Unit Date** 1960-1969**box-folder** 37 (box)**Container** 16 (folder)**Geographos Mission****Unit Date** 1971**box-folder** 37 (box)**Container** 41 (folder)**Report on Geographos Accomplishments****Unit Date** 1972**box-folder** 37 (box)**Container** 27 (folder)**Jupiter IX and Jupiter XII Files****Unit Date** 1939-1971**Cowell Integration****Unit Date** 1967**box-folder** 39 (box)**Container** 46 (folder)**Cowell Integration of JIX & JXII****Unit Date** 1967**box-folder** 39 (box)**Container** 44 (folder)

**Ephemeris for JIX & JXII****Unit Date** 1967**box-folder** 39 (box)**Container** 45 (folder)**Graph and Error Analysis****Unit Date** 1966**box-folder** 39 (box)**Container** 48 (folder)**Herget on JIX & JXII****Unit Date** 1953**box-folder** 38 (box)**Container** 21 (folder)**History of JIX and JXII****Unit Date** 1939, 1946, 1967**box-folder** 38 (box)**Container** 7 (folder)**JIX & JXII****Unit Date** 1966**box-folder** 38 (box)**Container** 24 (folder)**JIX & JXII Formulae****Unit Date** n.d.**box-folder** 38 (box)**Container** 18 (folder)**JIX and JXII****Unit Date** 1962**box-folder** 39 (box)**Container** 47 (folder)**JIX Basic Calculations****Unit Date** 1940-1961**box-folder** 38 (box)**Container** 10 (folder)**JIX Elements Orbit 2****Unit Date** 1969**box-folder** 39 (box)**Container** 27 (folder)**JIX Ephemerides****Unit Date** 1949-1960**box-folder** 38 (box)**Container** 16 (folder)

**JIX Observations**

**Unit Date** 1945-1967

**box-folder** 39 (box)

**Container** 26 (folder)

**JIX Observations and Representations**

**Unit Date** 1938-1959

**box-folder** 38 (box)

**Container** 15 (folder)

**JIX Residuals Orbit 2**

**Unit Date** 1968-1969

**box-folder** 39 (box)

**Container** 28 (folder)

**JIX Tables**

**Unit Date** 1937-1952

**box-folder** 38 (box)

**Container** 14 (folder)

**JIX, JXII Collection of Formula**

**Unit Date** 1968, 1969

**box-folder** 38 (box)

**Container** 5 (folder)

**JIX, JXII Ephemerides**

**Unit Date** 1968-1971

**box-folder** 38 (box)

**Container** 4 (folder)

**JIX, JXII General Information**

**Unit Date** 1970

**box-folder** 37 (box)

**Container** 28 (folder)

**JIX, SWAC Correction**

**Unit Date** 1914, 1938, 1955

**box-folder** 38 (box)

**Container** 12 (folder)

**Jupiter Coordinates**

**Unit Date** 1944-1946, 1951

**box-folder** 38 (box)

**Container** 9 (folder)

**Jupiter IX - Variation of Constants**

**Unit Date** 1945-1946

**box-folder** 38 (box)

**Container** 11 (folder)

## **Jupiter, JIX, and JXII Correspondence**

**Unit Date** 1959-1960, 1966

**box-folder** 38 (box)

**Container** 8 (folder)

## **JX**

**Unit Date** 1951

**box-folder** 38 (box)

**Container** 25 (folder)

## **JXII Corrections**

**Unit Date** 1951-1954

**box-folder** 38 (box)

**Container** 17 (folder)

## **JXII Cowell Perturbation Computations**

**Unit Date** 1961

**box-folder** 38 (box)

**Container** 23 (folder)

## **JXII Elements Orbit 20**

**Unit Date** 1969

**box-folder** 39 (box)

**Container** 30 (folder)

## **JXII Ephemerides**

**Unit Date** 1942-1958, 1960-1963

**box-folder** 38 (box)

**Container** 19 (folder)

## **JXII Observations**

**Unit Date** 1951-1968

**box-folder** 39 (box)

**Container** 29 (folder)

## **JXII Observations and Representations**

**Unit Date** 1951-1952

**box-folder** 38 (box)

**Container** 13 (folder)

## **JXII Orbits I-IV**

**Unit Date** 1951-1952

**box-folder** 38 (box)

**Container** 20 (folder)

## **JXII Residuals Orbit 20**

**Unit Date** 1968-1969

**box-folder** 39 (box)

**Container** 31 (folder)

**JXII UNIVAC****Unit Date** 1951-1954**box-folder** 38 (box)**Container** 22 (folder)**Peng's Program****Unit Date** 1967**box-folder** 39 (box)**Container** 43 (folder)**Publicity on JIX and JXII****Unit Date** 1967, 1969**box-folder** 38 (box)**Container** 6 (folder)**1880V Swift Lagrange - Gibbs - Leuschner****Unit Date** n.d.**box-folder** 31 (box)**Container** 13 (folder)**1924 TD (BAADE)****Unit Date** n.d.**box-folder** 38 (box)**Container** 31 (folder)**1925C Orkisz Gibbs-Olbers Parabolic Method****Unit Date** n.d.**box-folder** 38 (box)**Container** 47 (folder)**1932K - Peltier, Whipple, Sasa****Unit Date** 1932**box-folder** 38 (box)**Container** 32 (folder)**1942f Oterma II Gibbs-Olbers Parabolic Method****Unit Date** n.d.**box-folder** 38 (box)**Container** 48 (folder)**1948 EA (Plates Article)****Unit Date** n.d.**box-folder** 39 (box)**Container** 72 (folder)**1950 DA****Unit Date** 1950**box-folder** 39 (box)**Container** 70 (folder)

**1950BW****Unit Date** n.d.**box-folder** 38 (box)**Container** 45 (folder)**1951SD****Unit Date** 1952**box-folder** 38 (box)**Container** 41 (folder)**1953 EA****Unit Date** n.d.**box-folder** 39 (box)**Container** 69 (folder)**1953E Wilson Object****Unit Date** 1953**box-folder** 39 (box)**Container** 66 (folder)**1957MK Ellipses****Unit Date** 1957-1959**box-folder** 39 (box)**Container** 68 (folder)**1957MK Observations****Unit Date** 1957-1959**box-folder** 39 (box)**Container** 65 (folder)**1963 RH****Unit Date** 1966**box-folder** 39 (box)**Container** 74 (folder)**66 MPS (I) EI(6) Orig. for Repro Elements****Unit Date** 1968**box-folder** 39 (box)**Container** 12 (folder)**66 MPS (I) EI(c) XCC Elements for Distrib.****Unit Date** 1968**box-folder** 39 (box)**Container** 13 (folder)**68 MPS (II) CI - Controls and Branch Points****Unit Date** n.d.**box-folder** 39 (box)**Container** 3 (folder)

**683, Lanzia, 1909HC**

**Unit Date** n.d.

**box-folder** 38 (box)

**Container** 1 (folder)

**68MPS (1) A3(h) - Range Rate**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 36 (folder)

**68MPS (1) A5 - Restart**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 37 (folder)

**68MPS (II) B2 - Program for Close Approach (Explanation)**

**Unit Date** 1968

**box-folder** 39 (box)

**Container** 39 (folder)

**68MPS (II) B4 - Graphs and Calculations (Close Approach)**

**Unit Date** 1968, 1969

**box-folder** 39 (box)

**Container** 40 (folder)

**72 MPS (0) T. Tapes**

**Unit Date** 1970

**box-folder** 39 (box)

**Container** 50 (folder)

**72 MPS (III) Observations**

**Unit Date** 1970

**box-folder** 31 (box)

**Container** 7 (folder)

**72 MPS (V) Articles**

**Unit Date** n.d.

**box-folder** 39 (box)

**Container** 55 (folder)

**72 MPS (V) E. Observations**

**Unit Date** n.d.

**box-folder** 39 (box)

**Container** 52 (folder)

**72 MPS (V) E1**

**Unit Date** n.d.

**box-folder** 39 (box)

**Container** 53 (folder)

**72 MPS (V) F2****Unit Date** n.d.**box-folder** 39 (box)**Container** 54 (folder)**Alpha One 1959****Unit Date** 1959**box-folder** 39 (box)**Container** 71 (folder)**Amor****Unit Date** n.d.**box-folder** 39 (box)**Container** 14 (folder)**Language** French.**Asteroids General Info.****Unit Date** 1969-1970**box-folder** 31 (box)**Container** 1 (folder)**Boyer Object****Unit Date** 1934**box-folder** 38 (box)**Container** 33 (folder)**Bright Minor Planets****Unit Date** 1950-1961**box-folder** 36 (box)**Container** 4 (folder)**Comet - Mrkos 1957d****Unit Date** 1957**box-folder** 38 (box)**Container** 42 (folder)**Comet - Rigollet****Unit Date** 1939**box-folder** 38 (box)**Container** 39 (folder)**Comet 1880V****Unit Date** 1949**box-folder** 31 (box)**Container** 15 (folder)**Comet 1880V Swift (Student's Calculations)****Unit Date** 1949**box-folder** 31 (box)**Container** 14 (folder)

**Comet 1943a****Unit Date** 1943**box-folder** 38 (box)**Container** 40 (folder)**Comet 1954k - Haro, Chavira****Unit Date** 1956**box-folder** 38 (box)**Container** 43 (folder)**Comet Arend-Roland****Unit Date** 1957**box-folder** 38 (box)**Container** 44 (folder)**Comet List and Notes on Orbits****Unit Date** n.d.**box-folder** 31 (box)**Container** 12 (folder)**Correspondence & Reprints Re. Toro, Icarus, and Geographos****Unit Date** 1970, 1972**box-folder** 38 (box)**Container** 49 (folder)**Language** French, English .**d'Arrest 1851 II - Recht****Unit Date** 1939**box-folder** 38 (box)**Container** 41 (folder)**EA****Unit Date** 1953**box-folder** 38 (box)**Container** 26 (folder)**Ephemerides Correspondence****Unit Date** 1959**box-folder** 39 (box)**Container** 41 (folder)**Ephemeris Dates + [Technical] Index****Unit Date** 1968-1973**box-folder** 37 (box)**Container** 14 (folder)**Gibb's Comet 1880V Lagranian and Laplacian Calculation****Unit Date** n.d.**box-folder** 31 (box)**Container** 16 (folder)

**Gibb's Paper: Original Calculations 1880V, Swift****Unit Date** n.d.**box-folder** 31 (box)**Container** 17 (folder)**Hard to File Items****Unit Date** n.d.**box-folder** 39 (box)**Container** 21 (folder)**Histories of the Minor Planets****Unit Date** 1964, 1968**box-folder** 39 (box)**Container** 24 (folder)**History of Astrodynamics Publicity****Unit Date** 1937-1963**box-folder** 31 (box)**Container** 18 (folder)**Hoffmeister Object****Unit Date** 1959-1960**box-folder** 39 (box)**Container** 73 (folder)**IV - 1a Variant Orbits (Correction to Ephem.)****Unit Date** n.d.**box-folder** 31 (box)**Container** 4 (folder)**James, George S. (Rocket Research Institute)****Unit Date** 1971**box-folder** 37 (box)**Container** 42 (folder)**K8. Orbits Notes and Exercises****Unit Date** n.d.**box-folder** 38 (box)**Container** 46 (folder)**L16 Eph. and Ref. Data Notes & Exercises****Unit Date** n.d.**box-folder** 39 (box)**Container** 35 (folder)**Language** French, English .**Lanzia****Unit Date** n.d.**box-folder** 38 (box)**Container** 3 (folder)

**Lanzia Thesis Calculations**

**Unit Date** n.d.

**box-folder** 38 (box)

**Container** 2 (folder)

**Minor Planet Center and Solar Coordinates**

**Unit Date** 1952-1953

**box-folder** 37 (box)

**Container** 1 (folder)

**Minor Planet Center Notices 1101-1400**

**Unit Date** 1954-1956

**box-folder** 36 (box)

**Container** 6 (folder)

**Minor Planet Center Notices 1401-1700**

**Unit Date** 1956-1958

**box-folder** 36 (box)

**Container** 7 (folder)

**Minor Planet Center Notices 151-300**

**Unit Date** 1944-1949

**box-folder** 36 (box)

**Container** 1 (folder)

**Minor Planet Center Notices 1701-2240**

**Unit Date** 1958-1963

**box-folder** 36 (box)

**Container** 8 (folder)

**Minor Planet Center Notices 2241-2600**

**Unit Date** 1963-1966

**box-folder** 36 (box)

**Container** 9 (folder)

**Minor Planet Center Notices 2601-2800**

**Unit Date** 1966-1967

**box-folder** 36 (box)

**Container** 10 (folder)

**Minor Planet Center Notices 301-500**

**Unit Date** 1949-1951

**box-folder** 36 (box)

**Container** 2 (folder)

**Minor Planet Center Notices 3535-3602 & Minor Bright Planets**

**Unit Date** 1974

**box-folder** 36 (box)

**Container** 11 (folder)

**Minor Planet Center Notices 501-800****Unit Date** 1951-1952**box-folder** 36 (box)**Container** 3 (folder)**Minor Planet Center Notices 801-1100****Unit Date** 1952-1954**box-folder** 36 (box)**Container** 5 (folder)**Minor Planet Conversations****Unit Date** n.d.**box-folder** 37 (box)**Container** 25 (folder)**Minor Planet Eph.****Unit Date** n.d.**box-folder** 37 (box)**Container** 47 (folder)**Minor Planets****Unit Date** 1956-1965**box-folder** 39 (box)**Container** 20 (folder)**Minor Planets BA****Unit Date** 1965**box-folder** 31 (box)**Container** 5 (folder)**Minor Planets for 1951****Unit Date** 1950**box-folder** 36 (box)**Container** 21 (folder)**Minor Planets General Info.****Unit Date** 1973**box-folder** 31 (box)**Container** 2 (folder)**Minor Planets Index****Unit Date** 1968**box-folder** 7 (box)**Container** 1 (folder)**Minor Planets RH 1963****Unit Date** 1963-1965**box-folder** 31 (box)**Container** 3 (folder)

**Minor Planets: Formulae and Procedures**

**Unit Date** 1951-1955

**box-folder** 39 (box)

**Container** 22 (folder)

**Minor Planets: Published Ephemerides**

**Unit Date** 1961

**box-folder** 39 (box)

**Container** 38 (folder)

**MK Trojan Orbit N7-C13**

**Unit Date** 1957

**box-folder** 38 (box)

**Container** 28 (folder)

**MPS (I) Ephemerides**

**Unit Date** 1972

**box-folder** 31 (box)

**Container** 6 (folder)

**MPS (V) 1B1(b) Toro - Observations**

**Unit Date** 1968, 1970

**box-folder** 39 (box)

**Container** 63 (folder)

**MPS (V) E1 Elements & Residuals**

**Unit Date** 1965-1968

**box-folder** 39 (box)

**Container** 58 (folder)

**MPS (V) F2 - Dates of Oppositions + Close-Approach + Graphs**

**Unit Date** 1967-1971

**box-folder** 39 (box)

**Container** 59 (folder)

**MPS (V) M2 Recent Articles**

**Unit Date** 1971

**box-folder** 39 (box)

**Container** 60 (folder)

**MPS (V) M5 Articles by Others**

**Unit Date** 1972

**box-folder** 39 (box)

**Container** 62 (folder)

**MPS (V) P1 - History & Publicity**

**Unit Date** 1964-1971

**box-folder** 39 (box)

**Container** 61 (folder)

**MPS IV F Publications****Unit Date** n.d.**box-folder** 39 (box)**Container** 1 (folder)**MPS V 2(b) Ephem. Toro****Unit Date** n.d.**box-folder** 39 (box)**Container** 57 (folder)**MPS V A1 TR Toro Numerical Integration****Unit Date** n.d.**box-folder** 39 (box)**Container** 56 (folder)**MPS V P2 Profile Technical + Procedures****Unit Date** n.d.**box-folder** 39 (box)**Container** 64 (folder)**Names of Minor Planets****Unit Date** 1955, 1957**box-folder** 39 (box)**Container** 2 (folder)**Neujmin****Unit Date** 1929**box-folder** 38 (box)**Container** 34 (folder)**Nicholson Asteroids****Unit Date** 1955**box-folder** 39 (box)**Container** 17 (folder)**Nicholson Asteroids****Unit Date** 1955**box-folder** 39 (box)**Container** 18 (folder)**Nicholson Object****Unit Date** 1939**box-folder** 39 (box)**Container** 16 (folder)**Nicholson Object Lagrange - Leuschner Diff. Corr.****Unit Date** 1939**box-folder** 39 (box)**Container** 19 (folder)

**Nicholson Object Laplace - Poincare 1st Approx.****Unit Date** 1939**box-folder** 39 (box)**Container** 32 (folder)**Nicholson Object Laplace Rep. and Diff Corr.****Unit Date** 1939**box-folder** 39 (box)**Container** 33 (folder)**Notes on 11****Unit Date** n.d.**box-folder** 39 (box)**Container** 67 (folder)**Numerical Integration Assignment****Unit Date** 1967**box-folder** 37 (box)**Container** 15 (folder)**Opposition Graphs & Literature****Unit Date** 1957**box-folder** 39 (box)**Container** 25 (folder)**Language** Spanish; Castilian.**Photos of Astron. Objects****Unit Date** 1961**box-folder** 38 (box)**Container** 27 (folder)**Program Format****Unit Date** n.d.**box-folder** 39 (box)**Container** 23 (folder)**Schwassmann, Wachmann****Unit Date** 1930**box-folder** 38 (box)**Container** 35 (folder)**Soviet Ephemerides for Minor Planets****Unit Date** 1976**box-folder** 31 (box)**Container** 8 (folder)**Language** Russian.

**Soviet Ephemerides for Minor Planets****Unit Date** 1978**box-folder** 31 (box)**Container** 9 (folder)**Language** Russian.**Soviet Ephemerides for Minor Planets****Unit Date** 1983**box-folder** 31 (box)**Container** 10 (folder)**Language** Russian.**Starting Diagonal****Unit Date** 1966**box-folder** 39 (box)**Container** 42 (folder)**Tapes: Minor Planets****Unit Date** 1967**box-folder** 39 (box)**Container** 51 (folder)**U, Dodwell - Forbes****Unit Date** 1932**box-folder** 38 (box)**Container** 30 (folder)**Unnamed & Unnumbered Minor Planets****Unit Date** 1955, 1961**box-folder** 31 (box)**Container** 11 (folder)**USSR - Ephemerides of Minor Planets****Unit Date** 1950-1967**box-folder** 36 (box)**Container** 12-20 (folder)**Language** Russian.**V of P Program****Unit Date** n.d.**box-folder** 39 (box)**Container** 15 (folder)**Variation of Parameters - Notebook****Unit Date** n.d.**box-folder** 33 (box)**Container** 39 (folder)

**Whipple****Unit Date** 1937**box-folder** 38 (box)**Container** 37 (folder)**Whipple, Bernasconi, Kulin****Unit Date** 1942**box-folder** 38 (box)**Container** 38 (folder)**Wilk****Unit Date** 1937**box-folder** 38 (box)**Container** 36 (folder)**Sub-Series E. Space Exploration****Unit Date** 1924-1975**Foreign Journal Articles on Orbit Determination****Unit Date** n.d.**box-folder** 60 (box)**Container** 2 (folder)**Language** French, German .**Velocity of Light****Unit Date** 1949-1958**box-folder** 60 (box)**Container** 3 (folder)**Other Celestial Mechanics****Unit Date** n.d.**box-folder** 60 (box)**Container** 4 (folder)**Language** French, English .**Foreign Journal Articles on Earth's Rotation****Unit Date** n.d.**box-folder** 60 (box)**Container** 5 (folder)**Language** French, German .**Central Bureau for Astronomic Telegrams, International Astronomic Union****Unit Date** 1974**box-folder** 60 (box)**Container** 6 (folder)**Astronautische Nachrichten****Unit Date** 1952**box-folder** 60 (box)**Container** 7 (folder)**Language** German.

**Minutes of Meeting of NASA Earth Model****Unit Date** 1961**box-folder** 60 (box)**Container** 14 (folder)**Minta Martin Lecture: Applications of Optimal Control Theory in Aerospace Engineering****Unit Date** 1966**box-folder** 60 (box)**Container** 15 (folder)**Oblateness Reports****Unit Date** 1960-1961**box-folder** 60 (box)**Container** 16 (folder)**Bundesministerium fur Bildung und Wissenschaft****Unit Date** 1970**box-folder** 60 (box)**Container** 17 (folder)**Language** German.**Numerical Methods - German****Unit Date** 1965**box-folder** 60 (box)**Container** 18 (folder)**Trajectories, Motion, and Velocities****Unit Date** n.d.**box-folder** 60 (box)**Container** 19 (folder)**Notes on "Fly-By" Orbits****Unit Date** 1965**box-folder** 60 (box)**Container** 20 (folder)**Effect of Takeoff Angle on Maximum Velocity****Unit Date** n.d.**box-folder** 60 (box)**Container** 21 (folder)**Satellites****Unit Date** n.d.**box-folder** 60 (box)**Container** 22 (folder)**Language** French, German , English .**Min. Transverse Landing Component Notes****Unit Date** n.d.**box-folder** 60 (box)**Container** 23 (folder)

## **Solution to the Optimum Orbital Escape Problem**

**Unit Date** 1961

**box-folder** 60 (box)

**Container** 24 (folder)

## **Numerical Integration Universal Variables**

**Unit Date** 1970

**box-folder** 60 (box)

**Container** 25 (folder)

## **Orbit Determination by Triangulation**

**Unit Date** 1961

**box-folder** 60 (box)

**Container** 26 (folder)

## **Astronomical Journals**

**Unit Date** 1963-1968

**box-folder** 60 (box)

**Container** 27 (folder)

## **Artificial Satellites and Atmospheres**

**Unit Date** 1958-1961

**box-folder** 60 (box)

**Container** 28 (folder)

## **Time Dependent Structure of the Upper Atmosphere**

**Unit Date** n.d.

**box-folder** 60 (box)

**Container** 29 (folder)

## **Northrop - Orbit Determination**

**Unit Date** 1962, 1963

**box-folder** 60 (box)

**Container** 30 (folder)

## **Analysis of the Orbit of Cosmos 387**

**Unit Date** 1974

**box-folder** 60 (box)

**Container** 31 (folder)

## **Artificial Satellites**

**Unit Date** 1966, 1970-1975

**box-folder** 60 (box)

**Container** 32 (folder)

## **Artificial Earth Satellite Tables**

**Unit Date** 1971-1972

**box-folder** 60 (box)

**Container** 33 (folder)

**Table of Earth Satellites Vol. 2****Unit Date** 1969-1972**box-folder** 60 (box)**Container** 34 (folder)**International Satellite Geodesy Experiment****Unit Date** 1970**box-folder** 60 (box)**Container** 35 (folder)**Lifetimes of Satellites****Unit Date** 1964**box-folder** 60 (box)**Container** 36 (folder)**Communications Satellite****Unit Date** 1965**box-folder** 60 (box)**Container** 37 (folder)**"The Mechanical Ellipticities of the Moon from Luna 10"****Unit Date** 1967**box-folder** 63 (box)**Container** 1 (folder)**"Optimum Soft Landing Trajectories Part 2: Numerical Results"****Unit Date** 1962**box-folder** 63 (box)**Container** 2 (folder)**Space Colonies****Unit Date** 1974**box-folder** 63 (box)**Container** 3 (folder)**Simplified Version of a Rocket****Unit Date** 1966**box-folder** 63 (box)**Container** 4 (folder)**Proceedings of Lunar and Planetary Exploration Colloquium****Unit Date** 1959**box-folder** 63 (box)**Container** 5 (folder)**UCLA Moon Base Study****Unit Date** 1964-1965**box-folder** 63 (box)**Container** 6 (folder)

## **Outline on Space Technology for use in articles**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 7 (folder)

## **Grid Navigation**

**Unit Date** 1937, 1944

**box-folder** 63 (box)

**Container** 8 (folder)

## **Grid Variation Charts**

**Unit Date** 1944

**box-folder** 63 (box)

**Container** 9 (folder)

## **Transatlantic Grid; Right Spherical Triangle**

**Unit Date** 1945

**box-folder** 63 (box)

**Container** 10 (folder)

## **Revising the Nautical Almanac**

**Unit Date** 1945

**box-folder** 63 (box)

**Container** 11 (folder)

## **Field of Action**

**Unit Date** 1943

**box-folder** 63 (box)

**Container** 12 (folder)

## **Future of Air Navigation**

**Unit Date** 1945

**box-folder** 63 (box)

**Container** 13 (folder)

## **Graphical Navigation Table**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 14 (folder)

## **Most Probable Position, Index Correction**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 15 (folder)

## **Report on Graphs Used in Celestial Navigation**

**Unit Date** 1943, 1944

**box-folder** 63 (box)

**Container** 16 (folder)

**Navigation: Misc. Research**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 17 (folder)

**Navigation Text**

**Unit Date** 1943, 1944

**box-folder** 63 (box)

**Container** 18 (folder)

**Navigation Instruments**

**Unit Date** 1927, 1945, 1946

**box-folder** 63 (box)

**Container** 19 (folder)

**Navigation Text: Drawings**

**Unit Date** 1945

**box-folder** 63 (box)

**Container** 20 (folder)

**Precomputation**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 21 (folder)

**Navigation Methods**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 22 (folder)

**Position Line Graphs**

**Unit Date** 1943

**box-folder** 63 (box)

**Container** 23 (folder)

**Celestial Navigation Text**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 24 (folder)

**P L Projector**

**Unit Date** n.d.

**box-folder** 63 (box)

**Container** 25 (folder)

**Position Line Graphs: Articles**

**Unit Date** 1942, 1943, 1947

**box-folder** 63 (box)

**Container** 26 (folder)

**P L G Patent**

**Unit Date** 1924, 1942-1945

**box-folder** 63 (box)

**Container** 27 (folder)

**Apollo Navigation and Guidelines**

**Unit Date** 1963, 1964

**box-folder** 63 (box)

**Container** 28 (folder)

**Navigation for Manned Space Flight**

**Unit Date** 1965

**box-folder** 63 (box)

**Container** 29 (folder)

**Voyager Navigation**

**Unit Date** 1965

**box-folder** 63 (box)

**Container** 30 (folder)

**Some Chapters from Rocket Navigation**

**Unit Date** 1949

**box-folder** 63 (box)

**Container** 31 (folder)

**Space Navigation**

**Unit Date** 1958, 1960

**box-folder** 63 (box)

**Container** 32 (folder)

**Space Navigation**

**Unit Date** 1958, 1963

**box-folder** 63 (box)

**Container** 33 (folder)

**Handbook of Astronautical Engineering**

**Unit Date** 1960

**box-folder** 63 (box)

**Container** 34 (folder)

**Interplanetary Navigation Proposal**

**Unit Date** 1958

**box-folder** 63 (box)

**Container** 35 (folder)

**Dissipative Forces on Satellites**

**Unit Date** 1958

**box-folder** 63 (box)

**Container** 36 (folder)

**Generalized Interplanetary Trajectory Study****Unit Date** 1958**box-folder** 63 (box)**Container** 37 (folder)**High-Precision Orbit Determination Proposal****Unit Date** 1958**box-folder** 63 (box)**Container** 38 (folder)**Project Mercury****Unit Date** 1959**box-folder** 63 (box)**Container** 39 (folder)**Geocentric Orbits****Unit Date** 1957**box-folder** 63 (box)**Container** 40 (folder)**Satellite Survey System and Determination of Definitive Orbits Proposal****Unit Date** 1958, 1959**box-folder** 63 (box)**Container** 41 (folder)**Project Mercury: Range Planning****Unit Date** 1959**box-folder** 63 (box)**Container** 42 (folder)**Definitive Orbit for Satellite 1957 Beta****Unit Date** 1959**box-folder** 63 (box)**Container** 43 (folder)**Precision Satellite Orbit Correction****Unit Date** 1959**box-folder** 63 (box)**Container** 44 (folder)**Planetary Position Data Requirements for Space Vehicle Trajectory Computations****Unit Date** 1959**box-folder** 63 (box)**Container** 45 (folder)**16 Favorite Waltzes****Unit Date** n.d.**box-folder** 60 (box)**Container** 8 (folder)

**Marna Lang, Chem. Course Notes****Unit Date** 1981**box-folder** 60 (box)**Container** 9 (folder)**Brahms Piano Music****Unit Date** n.d.**box-folder** 60 (box)**Container** 10 (folder)**Chemistry 1C Notes****Unit Date** n.d.**box-folder** 60 (box)**Container** 11 (folder)**Bill of Sale, Triumph Spitfire****Unit Date** 1965**box-folder** 60 (box)**Container** 12 (folder)**History 271 Notes****Unit Date** 1980**box-folder** 60 (box)**Container** 13 (folder)**Series XII. Drawings and Calculations****Unit Date** 1949, n.d.**Scope and Contents**

This series consists of oversize drawings and calculations, including rectilinear tables, the nonimal system, and navigational drawings.

**Navigational Drawings and Calculations****Unit Date** n.d.**oversize** 1 (folder)**The Nonimal System****Unit Date** n.d.**oversize** 1 (folder)**Rectilinear Tables****Unit Date** n.d.**oversize** 1 (folder)**Instructions for Naval Observatory on Herrick's Table****Unit Date** n.d.**oversize** 1 (folder)**The Conic Sections****Unit Date** 1949**oversize** 1 (folder)