Jet Propulsion Laboratory Publications Collection

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1999
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Collection Overview

Repository: National Air and Space Museum Archives
Title: Jet Propulsion Laboratory Publications Collection
Identifier: NASM.XXXX.0612
Date: 1947-1980
(bulk 1960-1974)
Extent: 32 Cubic feet (71 boxes)
Creator: Jet Propulsion Laboratory. University of California.
Language: English
Summary: This collection consists of publications issued by the Jet Propulsion Laboratory documenting JPL's work in jet and rocket propulsion, launch vehicle development, and planetary reconnaissance. Most of the material relates to work performed under NASA auspices, but significant material from Army- and Air Force-related research is also included.

Administrative Information

Acquisition Information
XXXX-0612, Unknown

Other Finding Aids
http://www.nasa.gov/research/arch/findaids/pdf/XXXX0612_JPL.pdf

Preferred Citation
Jet Propulsion Laboratory Publications Collection, Acc. XXXX.0612, National Air and Space Museum, Smithsonian Institution.

Restrictions
No restrictions on access

Historical Note

The Jet Propulsion Laboratory (JPL) was established at the California Institute of Technology as the Guggenheim Analytical Laboratory in 1936 to investigate a variety of aeronautics-related topics. By the end of World War II the work at JPL, as it was then known, concentrated primarily on jet and rocket propulsion research under the auspices of the United States Army. JPL was transferred from Army to National Aeronautics and Space Administration (NASA) control on the establishment of the latter in 1958.
Under NASA auspices, JPL research expanded into trajectory analysis, planetary reconnaissance, and space communications.

Scope and Content Note

This collection consists of reports published by the Jet Propulsion Laboratory and gathered by the staff of the National Air and Space Museum (NASM) from a variety of sources. The reports cover a broad range of subjects investigated at JPL over the period 1947-1980, with the bulk of the material from the NASA era, 1960-1974. This collection is in no way a complete set of all JPL publications, even for the document series represented. Following the transfer of the Bellcomm Inc. Technical Library Collection (now National Air and Space Archives Accession XXXX-0093) to the NASM in the early 1970s, Museum staff attempted to flesh out the JPL Publications Collection with materials from Bellcomm. Those items which could be positively identified as coming from the Bellcomm Collection (approximately 5½ cubic feet of material) were returned to that collection during processing.

JPL publications were numbered consecutively in series based on the contract under which the work was performed. A typical publication number would be "PR 4-112," in which "PR" is an abbreviation for "Progress Report," "4" is the contract-based numerical prefix (4- was assigned to work performed under Ordnance Dept contract W-04-200-ORD-445), and "112" indicates the 112th publication of this kind issued under this contract. With the transfer of JPL to NASA control and the large number of reports expected under NASA contract, numerical prefixes were assigned to different types of publications, for instance 32- for Technical Reports, 33- for Technical Memoranda, and so forth.

JPL compiled subject bibliographies for work done under NASA contracts (primarily contracts NASw-6 and NAS7-100) and published these in the 39- series of documents, a partial set of which is contained within this collection. Further subject reference to JPL reports is available in Aeronautical Information: Abstracts, also published by JPL. A partial set of the abstracts is contained in the Bellcomm Collection.

Series Organization

The publications in this collection are arranged by report number and type.

- Series 1: Combined Bimonthly Summaries (1947-1954; 1.35 cubic feet)
- Series 2: 1- Prefix Publications (Progress Reports; 1950-1952; 2 items)
- Series 3: 4- Prefix Publications (Summaries, Progress Reports, Reports; 1947-1949; .25 cubic feet)
- Series 4: 9- Prefix Publications (Progress Reports; 1949-1951; 4 items)
- Series 5: 20- Prefix Publications (Progress Reports, Reports; 1951-1954; 4 items)
- Series 6: 32- Prefix Publications (Technical Reports; 1960-1976; 24.75 cubic feet)
- Series 7: 33- Prefix Publications (Technical Memoranda; 1961-1976; 1.5 cubic feet)
- Series 8: 34- Prefix Publications (Technical Releases; 1960; 3 items)
- Series 9: 36- Prefix Publications (Research Summaries; 1961-1962; 5 items)
- Series 10: 37- Prefix Publications (Space Program Summaries; 1961-1970; 5.75 cubic feet)
- Series 11: 39- Prefix Publications (Bibliographies; 1964-1980; .35 cubic feet)
- Series 12: 42- Prefix Publications (Deep Space Network Progress Reports; 1977; 2 items)
- Series 13: 43- Prefix Publications (Special Publications; 1974-1976; 6 items)
- Series 14: 77- Prefix Publications (1978; 1 item)
- Series 15: External Publications (1959; 4 items)
- Series 16: Miscellaneous Publications (1973; 2 items)
Citations

All publications are listed in the format:

Number. Title (Author; Journal, Date).

Example:

TR 32-1221. Reaction of O(1D) with H2 and the Reactions of H and OH with Ozone (DeMore; Journal of Chemical Physics, 15 Oct 1967)

Titles appear as shown on the title page of the document. The last name(s) of the author(s) are listed in the order given; the full name or initials are listed in the Author Index of this finding aid. A journal title only appears when the material was originally published as a periodical or scientific journal article and that information appears on the document. All publication dates are shown in day-month-year order. The document type is shown as an abbreviation preceding the document number:

Document Type

- Bibl: Bibliography
- BS: Bimonthly Summary
- CBS: Combined Bimonthly Summary
- EP: External Publication
- MS: Monthly Summary
- PR: Progress Report
- Rpt: Report
- RS: Research Summary
- SP: Special Publication
- SPS: Space Program Summary
- TM: Technical Memorandum
- TR: Technical Report
- TRel: Technical Release

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:
Subjects:
   Astronautics
   Jet propulsion
   Launch vehicles (Astronautics)

Types of Materials:
   Publications

Names:
   Jet Propulsion Laboratory. University of California.
   National Aeronautics and Space Administration

Geographic Names:
   Outer space -- Exploration
Container Listing

Series 1: Combined Bimonthly Summaries, 1947-1954

1.35 cubic feet

In September 1947, JPL began publication of Combined Summaries to provide an overall view of the research and development activities of the Lab, regardless of the contract under which the work was conducted.

Box 1, Folder 1    CBS 1. June 20, 1947 to August 20, 1947, 15 September 1947
Box 1, Folder 2    CBS 2. August 20, 1947 to October 20, 1947, 15 November 1947
Box 1, Folder 3    CBS 3. October 20, 1947 to December 20, 1947, 15 January 1948
Box 1, Folder 4    CBS 4. December 20, 1947 to February 20, 1948, 15 March 1948
Box 1, Folder 5    CBS 5. February 20, 1948 to April 20, 1948, 15 May 1948
Box 1, Folder 6    CBS 6. April 20, 1948 to June 20, 1948, 15 July 1948
Box 1, Folder 7    CBS 7. June 20, 1948 to August 20, 1948, 15 September 1948
Box 1, Folder 8    CBS 8. August 20, 1948 to October 20, 1948, 15 November 1948
Box 1, Folder 9    CBS 9. October 20, 1948 to December 20, 1948, 15 January 1949
Box 1, Folder 10   CBS 10. December 20, 1948 to February 20, 1949, 15 March 1949
Box 2, Folder 1    CBS 11. February 20, 1949 to April 20, 1949, 15 May 1949
Box 2, Folder 2    CBS 12. April 20, 1949 to June 20, 1949, 15 July 1949
Box 2, Folder 3    CBS 13. June 20, 1949 to August 20, 1949, 15 September 1949
Box 2, Folder 4    CBS 14. August 20, 1949 to October 20, 1949, 15 November 1949
Box 2, Folder 5    CBS 15. October 20, 1949 to December 20, 1949, 15 January 1950
Box 2, Folder 6    CBS 16. December 20, 1949 to February 20, 1950, 15 March 1950
Box 2, Folder 7    CBS 17. February 20, 1949 to April 20, 1950, 15 May 1950
Box 2, Folder 8  CBS 18. April 20, 1950 to June 20, 1950, 15 July 1950

Box 2, Folder 9  CBS 19. June 20, 1950 to August 20, 1950, 15 September 1950

Box 2, Folder 10 CBS 19A. June 20, 1950 to August 20, 1950 (Supplement to Combined Bimonthly Summary No.19), 15 September 1950

Box 2, Folder 11 CBS 20. August 20, 1950 to October 20, 1950, 15 November 1950

Box 2, Folder 12 CBS 20A. August 20, 1950 to October 20, 1950 (Supplement to Combined Bimonthly Summary No.20), 15 November 1950

Box 2, Folder 13 CBS 21. October 20, 1950 to December 20, 1950, 15 January 1951

Box 2, Folder 14 CBS 21A. October 20, 1950 to December 20, 1950 (Supplement to Combined Bimonthly Summary No.21), 15 January 1951

Box 2, Folder 15 CBS 22. December 20, 1950 to February 20, 1951, 15 March 1951

Box 2, Folder 16 CBS 22A. December 20, 1950 to February 20, 1951 (Supplement to Combined Bimonthly Summary No.22), 15 March 1951

Box 2, Folder 17 CBS 23. February 20, 1951 to April 20, 1951, 15 May 1951

Box 2, Folder 18 CBS 23A. February 20, 1951 to April 20, 1951 (Supplement to Combined Bimonthly Summary No.23), 15 May 1951

Box 2, Folder 19 CBS 24. April 20, 1951 to June 20, 1951, 15 July 1951

Box 2, Folder 20 CBS 24A. April 20, 1951 to June 20, 1951 (Supplement to Combined Bimonthly Summary No.24), 15 July 1951

Box 2, Folder 21 CBS 25. June 20, 1951 to August 20, 1951, 15 September 1951

Box 2, Folder 22 CBS 25A. June 20, 1951 to August 20, 1951 (Supplement to Combined Bimonthly Summary No.25), 15 September 1951

Box 2, Folder 23 CBS 26. August 20, 1951 to October 20, 1951, 15 November 1951

Box 2, Folder 24 CBS 26A. August 30, 1951 to October 30, 1951 (Supplement to Combined Bimonthly Summary No.26), 15 November 1951

Box 3, Folder 1 CBS 27. October 20, 1951 to December 20, 1951, 15 January 1952
Box 3, Folder 2  CBS 27A. October 30, 1951 to December 30, 1951 (Supplement to Combined Bimonthly Summary No.27), 15 January 1952

Box 3, Folder 3  CBS 28. December 20, 1951 to February 20, 1952, 30 January 1952

Box 3, Folder 4  CBS 28A. December 30, 1951 to February 29, 1952 (Supplement to Combined Bimonthly Summary No.28), 31 March 1952

Box 3, Folder 5  CBS 29. February 20, 1952 to April 20, 1952, 20 May 1952

Box 3, Folder 6  CBS 29A. February 29, 1952 to April 30, 1952 (Supplement to Combined Bimonthly Summary No.29), 31 May 1952

Box 3, Folder 7  CBS 30. April 20, 1952 to June 20, 1952, 20 July 1952

Box 3, Folder 8  CBS 31. June 20, 1952 to August 20, 1952, 20 September 1952

Box 3, Folder 9  CBS 32. August 20, 1952 to October 20, 1952, 20 November 1952

Box 3, Folder 10  CBS 33. October 20, 1952 to December 20, 1952, 20 January 1953

Box 3, Folder 11  CBS 34. December 20, 1952 to February 20, 1953, 20 March 1953

Box 3, Folder 12  CBS 35. February 20, 1952 to April 20, 1953, 20 May 1953

Box 3, Folder 13  CBS 36. April 20, 1953 to June 20, 1953, 20 July 1953

Box 3, Folder 14  CBS 37. June 20, 1953 to August 20, 1953, 20 September 1953

Box 3, Folder 15  CBS 38. August 20, 1953 to October 20, 1953, 20 November 1953

Box 3, Folder 16  CBS 39. October 20, 1953 to December 20, 1953, 20 January 1954


Box 3, Folder 19  CBS 42. April 20, 1954 to June 20, 1954, 20 July 1954

Box 3, Folder 20  CBS 43. June 20, 1954 to August 20, 1954, 20 September 1954

Box 3, Folder 21  CBS 44. August 20, 1954 to October 20, 1954, 20 November 1954

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2 items

1- prefix publications resulted from work primarily performed for the Air Materiel Command, United States Air Force under contract W-535-ac-20260.

Box 3, Folder 22  PR 1-69. An Exploratory Investigation of Mixtures of Hydrazine and Ammonia as Rocket Fuels (Thackery, Canright, and Typaldos), 12 July 1950

Box 3, Folder 23  PR 1-80. A Preliminary Investigation of the Liquid Fluorine-Liquid Ammonia System (Hatcher), 14 April 1952

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Series 3: 4- Prefix Publications, 1947-1949

.25 cubic feet

4- prefix publications resulted from work primarily performed for the Ordnance Department, United States Army, under contract W-04-200-ORD-455.

Box 4, Folder 1
MS 4-32. ORDCIT Project, January 25, 1947 to February 25, 1947, 1 March 1947

Box 4, Folder 2
MS 4-33. ORDCIT Project, February 25, 1947 to March 25, 1947, 1 April 1947

Box 4, Folder 3
MS 4-34. ORDCIT Project, March 25, 1947 to April 25, 1947, 1 May 1947

Box 4, Folder 4
BS 4-35. ORDCIT Project, April 25, 1947 to June 25, 1947, 1 July 1947

Box 4, Folder 5
PR 4-67. An Investigation of the White Fuming Nitric Acid-Furfuryl Alcohol Rocket Propellant (Boden and Briglio), 11 May 1948

Box 4, Folder 6
PR 4-78. An Investigation of the RFNA-Hydrazine Rocket Propellant Combination (Briglio), 18 August 1948

Box 4, Folder 7
PR 4-112. The Design of the Axial-Cooled Rocket Motor for the Corporal E (Denison and Hamlin), 29 August 1949

Box 4, Folder 8
Rpt 4-29. The Relative Importance of Specific Impulse and Propellant Density for Large Rockets (Canright), 7 January 1947

Box 4, Folder 9
Rpt 4-33. Experimental Study of Nitromethane Rocket Motors with Varying Fineness Ratio, Characteristic Length, and Chamber Pressure (Foster), 27 May 1947

Box 4, Folder 10
Rpt 4-48. Experimental Investigation of Gaseous Hydrogen and Liquid Oxygen in a Rocket Motor of 100-Pound Thrust (Baker), 14 January 1949

Box 4, Folder 11
Rpt 4-53. Regenerative Cooling Tests of Rocket Motors Using Liquid Hydrogen and Liquid Oxygen (Baker), 11 August 1949

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Series 4: 9- Prefix Publications, 1949-1951

4 items

9- prefix publications resulted from work primarily performed for the Ordnance Department, United States Army under contract W-04-200-ORD-1482.

Box 4, Folder 12  PR 9-25. An Initial Investigation of Liquid Fluorine as a Rocket Propellant Oxidizer (Zima and Doescher), 25 January 1949

Box 4, Folder 13  PR 9-27. Some Performance Characteristics of the Liquid Fluorine-Hydrazine Propellant System (Doescher and Zima), 1 March 1950

Box 4, Folder 14  PR 9-50. The Reduction of Heat Transfer to Rocket Motors by Motor-Wall-Coating Techniques (Thomas and Cole), 15 December 1950

Box 4, Folder 15  PR 9-52. Apparatus for Laboratory-Scale Determination of Ignition Lag of Spontaneous Liquid Rocket Propellants (Adelman), 23 February 1951

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Series 5: 20- Prefix Publications, 1951-1954

4 items

20- prefix publications resulted from work primarily performed for the Ordnance Department, United States Army under contract DA-04-495-Ord-18.

Box 4, Folder 16  PR 20-130. A Preliminary Experimental Evaluation of the Liquid Fluorine-Gaseous Hydrogen Propellant System (Zima and Doescher), 21 March 1951

Box 4, Folder 17  PR 20-167. The Logistic Comparison of Some Wide-Temperature-Range Rocket Fuels and the Performance Characteristics with Oxides of Nitrogen (Cole and Elverum), 19 March 1952

Box 4, Folder 18  PR 20-240. Dual Generated-Gas System for Pumping Propellants (Densmore), 30 September 1954

Box 4, Folder 19  Rpt 20-77. Basic Factors Involved in the Design and Operation of Catalytic Monopropellant-Hydrazine Reaction Chambers (Grant), 31 December 1954

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24.75 cubic feet

Box 5, Folder 1  TR 32-30 (Rev.1). Design of Lunar and Interplanetary Ascent Trajectories (Clarke), 15 March 1962

Box 5, Folder 2  TR 32-39 (Rev.1). Properties of Welded High-Strength Titanium Alloy Sheet (Brothers, Martens, and Wood), 1963

Box 5, Folder 3  TR 32-59. The Goldstone Station Communications and Tracking System for Project Echo (Stevens and Victor, ed.), 1 December 1960 [2 copies]

Box 5, Folder 4  TR 32-68. Interplanetary Trajectories and Payload Capabilities of Advanced Propulsion Vehicles (Melbourne), 31 March 1961

Box 5, Folder 5  TR 32-77. Design Parameters for Ballistic Interplanetary Trajectories — Part I. One-way Transfers to Mars and Venus (Clarke, Bollman, Roth, and Scholey), 16 January 1963

Box 5, Folder 6  TR 32-77. Design Parameters for Ballistic Interplanetary Trajectories — Part II. One-way Transfers to Mercury and Jupiter (Clarke, Bollman, Feitis, and Roth), 15 January 1966

Box 5, Folder 7  TR 32-84. The U.S. Planetary Exploration Program (Parks; Astronautics), May 1961

Box 5, Folder 8  TR 32-94. Gaseous Fission Reactors for Booster Propulsion (Meghreblian), 31 March 1961

Box 5, Folder 9  TR 32-103. A Maser System for Radar Astronomy (Higa), 15 June 1961

Box 5, Folder 10  TR 32-108. Thermal History of the Moon and of the Terrestrial Planets (Kopal), 1 May 1961

Box 5, Folder 11  TR 32-112. Theoretical and Practical Aspects of Correlating Percent Shear-Lip to Relative Plastic Zone Size in Brittle Fracture (Gerberich), 20 September 1962


Box 5, Folder 13  TR 32-117. Thrust-Unit Requirements for Electrically Propelled Spacecraft (Elliott and Molitor), 10 June 1961

Box 5, Folder 15  TR 32-119. Sound Radiation from a Turbulent Boundary Layer (Laufer), 1 November 1961

Box 5, Folder 16  TR 32-124. A Statistical Problem Related to the Launching of a Missile (Lass and Solloway), 20 July 1961

Box 6, Folder 1  TR 32-125. Experimental Investigation of the Forced-Convection and Nucleate-Boiling Heat-Transfer Characteristics of Liquid Ammonia (Noel), 19 July 1961

Box 6, Folder 2  TR 32-126. The Expansion of a Plasma Column in a Longitudinal Magnetic Field (Wu), 30 June 1961

Box 6, Folder 3  TR 32-127. Numerical Determination of Radiation Configuration Factors for Some Common Geometrical Situations (Plamondon), 7 July 1961

Box 6, Folder 4  TR 32-131. The Perturbations of a Hyperbolic Orbit by an Oblate Planet (Sauer), 15 January 1963


Box 6, Folder 6  TR 32-133. Optimization of Condensing Temperature for Nuclear Turboelectric Space Power Plant (Davis), 1 August 1961

Box 6, Folder 7  TR 32-134. Regularity and Positional Games (Hales and Jewett), 31 January 1962

Box 6, Folder 8  TR 32-136. Investigation of a Pulse-Torqued System (Johnston and Szirmay), 19 April 1961

Box 6, Folder 9  TR 32-141. The Ranger Program (Astronautics), September 1961 [2 copies]

Box 6, Folder 10  TR 32-147. Cosmic Radiation and the K40—A40 "Ages" of Iron Meteorites (Marshall), 10 August 1961

Box 6, Folder 11  TR 32-150. Behavior of Materials in Space Environments (Jaffe and Rittenhouse), 1 November 1961

Box 6, Folder 12  TR 32-151. Observations of Mars Made in 1961 at the Pic du Midi Observatory (Focas), 30 January 1962

Box 6, Folder 13  TR 32-152. Application of Static-Test Vibration Data (Trummel), 20 August 1961
| Box 6, Folder 14 | TR 32-154. Determination of Radiation Configuration Factors (Hickman), 21 December 1961 |
| Box 6, Folder 15 | TR 32-156. Objectives of the *Mariner* Venus Microwave Radiometer Experiment (Barrett, Copeland, Jones, and Lilley), 22 August 1961 |
| Box 6, Folder 16 | TR 32-158. Systems Engineering of a Nuclear-Electric Spacecraft (Beale), 31 October 1961 |
| Box 6, Folder 18 | TR 32-163. The Use of a Proton-Proton Spin Decoupling Method for the Determination of Nuclear Magnetic Resonance Chemical Shifts (Manatt and Elleman; *Journal of the American Chemical Society*), 5 October 1961 |
| Box 6, Folder 19 | TR 32-166. Control and Guidance of Electrically Propelled Spacecraft (Hirrel), 15 September 1960 |
| Box 6, Folder 20 | TR 32-171. A 500-Electrical-Watt Solar Energy Thermionic Conversion System for a Mars Spacecraft (A. Smith), 15 April 1962 |
| Box 6, Folder 22 | TR 32-178. Solution of a Circular Ring Structural Problem (McGinness), 1 November 1961 |
| Box 6, Folder 23 | TR 32-179. An Experimental 960-mc Maser Amplifier System Applicable to Space Communications (Stelzried, Schuster, and Sato), 15 November 1961 |
| Box 6, Folder 24 | TR 32-182. Strain Measurement on a Pressurized Solid Propellant Grain (Miguel), 15 March 1962 |
| Box 6, Folder 25 | TR 32-188. Fission-Fragment Energy Loss From Vortex Tubes (Stumpf), 12 March 1962 |
| Box 7, Folder 1 | TR 32-189. Thermal and Criticality Analysis of the Plasma Core Reactor (Spencer), 1 January 1962 |
Box 7, Folder 4  TR 32-199. Scientific Experiments for Ranger 3, 4, and 5, 5 December 1961 [2 copies]

Box 7, Folder 5  TR 32-205. Development of a Trajectory-Correction Propulsion System for Spacecraft (W. Smith), 8 December 1961

Box 7, Folder 6  TR 32-220. Alkoxychlorosilanes and Alkoxysilanes Containing Silane Hydrogen (Klejnot; Inorganic Chemistry), August 1963

Box 7, Folder 7  TR 32-222. Tensile Properties of Five Low-Alloy and Stainless Steels Under High-Heating-Rate and Constant-Temperature Conditions (Gerberich, Martens, and Boundy), 1 June 1962

Box 6, Folder 8  TR 32-230. Diffraction Telescope for Astronomy in Space (Wells), 15 April 1962

Box 7, Folder 9  TR 32-231. A Nuclear-Electric Spacebus for Planetary Landing Missions (Beale and Speiser), 1 May 1962

Box 7, Folder 10  TR 32-233. Feasibility of Interstellar Travel (Spencer and Jaffe), 15 March 1962


   Part I. The Application of Nonreactive-Spray Properties to Rocket-Motor Design (Rupe); Part II. Instrumentation, Experimental Apparatus, and Experimental Techniques (Clayton, Rupe, and Gerbracht); Part V. On the Influence of Vanes on Combustion and Combustion Stability (Rupe); Part VI. The Relation Between the Starting Transient and Injection Hydraulics (Clayton and Rupe)

Box 7, Folder 16  TR 32-256. A Search for Water Vapor and Trace Constituents in the Venus Atmosphere (Spinrad), 1 October 1962

Box 7, Folder 17  TR 32-266. NMR Double Resonance Techniques for the Determination of Spin Spin Coupling Constants (Elleman and Manatt; Magnetic and Electric Resonance and Relaxation), October 1963

Box 7, Folder 18  TR 32-269. Heat and Momentum Transfer in Smooth and Rough Tubes at Various Prandtl Numbers (Dipprey and Sabersky), 6 June 1962

Box 7, Folder 19  TR 32-270. Landau Damping and Resonant Energy Absorption (Wu; The Physical Review), September 1962
Box 7, Folder 20  TR 32-272. The Lunar Seismograph Experiment: *Ranger 3, 4, 5* (Adamski), 1 June 1962

Box 7, Folder 21  TR 32-274. The Application of Optical Sensors for Lunar and Planetary Space Vehicles (Scull), 31 May 1962


Box 7, Folder 23  TR 32-293. Part II. The Effect on the Lunar Orbit of Meteoric Accretion (Lytleton; *ICARUS: International Journal of the Solar System*), March 1966

Box 7, Folder 24  TR 32-296. The Effect of a Strong Magnetic Field on Two-dimensional Flows of a Conducting Fluid (Childress; *Journal of Fluid Mechanics*), March 1963

Box 7, Folder 25  TR 32-299. Structural and High-Tensile Properties of Boron Pyrolytic Graphite (Kotlensky and Martens), 16 December 1963

Box 7, Folder 26  TR 32-301. Potentialities of Electron Bombardment Ion Engines for Electric Propulsion (Kerrisk; *IRE Transactions on Space Electronics and Telemetry*), 15 May 1963


Box 7, Folder 28  TR 32-311. A Design Solution to the Spacecraft Look-Angle Problem (Wilson and Coyle), 6 August 1962

Box 8, Folder 1  TR 32-315. Scientific Experiments for *Mariner R-1* and *R-2* (Wyckoff, ed.), 15 July 1962

Box 8, Folder 2  TR 32-317. Flow Separation in a Contour Nozzle (Roschke and Massier; *ARS Journal*), October 1962

Box 8, Folder 3  TR 32-325 (Rev.). Sterilization of Unmanned Planetary and Lunar Space Vehicles — An Engineering Examination (Jaffe; rev.), 25 March 1963

Box 8, Folder 4  TR 32-326. The Bearing Capacity of Simulated Lunar Surfaces in Vacuum (Bennett, Scott, Jaffe, Frink, and Martens), 15 August 1963

Box 8, Folder 5  TR 32-327. The Structure of Strong Shock Waves in the Krook Collision Model (Chahine; *3rd International Rarefied Gas Dynamics Symposium*), August 1963

Box 8, Folder 6  TR 32-328. Lunar Seismology (Kovach and Press), 10 August 1962
Box 8, Folder 7  TR 32-329. An Electromagnetic Flowmeter for Low Conductivity Fluids (Balling and Connor), 30 August 1962

Box 8, Folder 8  TR 32-332. Theoretical and Experimental Aspects of Ring Currents (E. Smith), 1 November 1962

Box 8, Folder 9  TR 32-333. Analysis of Heterogeneous Reactors Containing Moderating Fuel Elements (Tesnière), 28 February 1963

Box 8, Folder 10  TR 32-334. Homogeneity of Diisocyanate-Linked Elastomers (Havlik), 15 September 1962

Box 8, Folder 10  TR 32-335. Development of the Midcourse Trajectory-Correction Propulsion System for the Ranger Spacecraft (Lee), 15 March 1963

Box 8, Folder 12  TR 32-343. Lunar Surface and Subsurface Magnetic Susceptibility Instrumentation (Bollin; IRE Transactions on Instrumentation), December 1962

Box 8, Folder 13  TR 32-345. The Ranger 4 Flight Path and Its Determination from Tracking Data (Hamilton, Sjogren, Kirhofer, Fearay, and Cain), September 1962

Box 8, Folder 14  TR 32-347. Photography of the Moon from Space Probes (Eimer), 15 January 1963

Box 8, Folder 15  TR 32-348. Performance Calculations for Monopropellant Hydrazine and Monopropellant Hydrazine—Hydrazine Nitrate Mixtures (Lee), December 1962

Box 8, Folder 16  TR 32-349. Comparison of Calculated with Measured Boundary-Layer Thicknesses on the Curved Walls of the JPL 20-in. Supersonic Wind Tunnel Two-Dimensional Nozzle (Dayman), 18 March 1963


Box 8, Folder 18  TR 32-352
All-Solid-Propellant Injection Vehicles for Large-Payload Space Missions (Special Staff Report; Astronautics); Applicability of Solid Propellants to High-Performance Rocket Vehicles (Summerfield, Shafer, Thackwell, and Bartley; Astronautics)

Box 8, Folder 19  TR 32-354. A New Horn Antenna with Suppressed Sidelobes and Equal Beamwidths (Potter), 25 February 1963

Box 8, Folder 20  TR 32-356. A Cometary Mechanism for the Formation of Tektites (Lyttleton), 15 November 1962
Box 8, Folder 21  TR 32-358. Apparatus for Tensile Testing to 5400°F in Vacuum (Taylor; *The Review of Scientific Instruments*), May 1963

Box 8, Folder 22  TR 32-359. Tensile Properties of Tungsten from 2500 to 5400 F (Taylor and Boone; *Transactions Quarterly*), September 1963

Box 8, Folder 23  TR 32-361. Planet Illuminance (Meisenholder), 10 November 1962

Box 8, Folder 24  TR 32-362. Determination of Water in Hydrazine by gas Chromatography (Kuwada), 15 November 1962

Box 8, Folder 25  TR 32-365. An Experimental Method to Measure the Strain Energy Function W (Miguel), 20 December 1962

Box 8, Folder 26  TR 32-368. Thermal Properties of a Simulated Lunar Material in Air and in Vacuum (Bernet, Wood, Jaffe, Martens), 25 November 1962

Box 8, Folder 27  TR 32-371. Primitive Lead from Iron Meteorites (Marshall and Feitknecht), 4 February 1963

Box 8, Folder 28  TR 32-374. Review of Techniques for Measuring Rock and Soil Strength Properties at the Surface of the Moon (Thorman; *Automotive Engineering Congress, Society of Automotive Engineers, Inc*), January 1963

Box 9, Folder 1  TR 32-375. The Development of a Heated-Hybrid Generated Gas Pressurization System for Propellant Tanks (Lee and Evans), 15 February 1963


Box 9, Folder 3  TR 32-379. A Preliminary Model of the Venus Atmosphere (Kaplan), 12 December 1962

Box 9, Folder 4  TR 32-380. The Influence of Shape on Aerodynamic Damping of Oscillatory Motion during Mars Atmosphere Entry and Measurement of Pitch Damping at Large Oscillatory Amplitudes (Dayman, Brayshaw, Nelson, Jaffe, and Babineaux), 28 February 1963


Box 9, Folder 6  TR 32-385. A Nuclear Propulsion Reactor Concept for Electric Propulsion Application (Davis), 4 March 1963

Box 9, Folder 7  TR 32-386. Partial Mathematical Solution of the Three-Dimensional Four-Bar Linkage (Chamberlain), 16 September 1963
Box 9, Folder 8  TR 32-387. Calculation of Turbulent Boundary-Layer Growth and Heat Transfer in Axi-Symmetric Nozzles (Elliott, Bartz, and Silver), 15 February 1963

Box 9, Folder 9  TR 32-388. Correlation Properties of Cyclic Sequences (Titsworth), 1 July 1963

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Series 8: 34- Prefix Publications: Technical Releases (TRel), 1960

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Box 57, Folder 9  TRel 34-12. Explorer Satellite Electronics (Victor, Richter, and Eyraud), 29 January 1960

Box 57, Folder 10  TRel 34-26. Evaluation of the Pioneer IV Orbit-Determination Program (Eimer and Hiroshige), 22 February 1960

Box 57, Folder 11  TRel 34-57. A Possible Method of Dating the Lunar Surface Features (Kreiter), 11 April 1960

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Series 9: 36- Prefix Publications: Research Summaries (RS), 1961-1962

5 items

These bimonthly reports detail supporting research and development activities at JPL. Research Summaries were planned to be issued in two volumes depending on the security classification of the material included: Volume I unclassified programs and Volume II programs classified "Confidential." The series was discontinued after RS 36-14, with material that would have been included in a 36- prefix Research Summary included instead as Volumes IV and V of the 37- prefix Space Program Summaries.

Box 58, Folder 1  RS 36-8. For the Period February 1, 1961 to April 1, 1961, 1 May 1961

Box 58, Folder 2  RS 36-11. For the Period August 1, 1961 to October 1, 1961, 1 November 1961

Box 58, Folder 3  RS 36-12. For the Period October 1, 1961 to December 1, 1961. Vol.1. (Unclassified), 2 January 1962

Box 58, Folder 4  RS 36-13. For the Period December 1, 1961 to February 1, 1962, 1 March 1962

Box 58, Folder 5  RS 36-14. For the Period February 1, 1962 to April 1, 1962, 1 May 1962

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5.75 cubic feet

These bimonthly reports detail research and development activities at JPL having specific application to NASA's space program. Space Program Summaries were issued in two volumes depending on the security classification of the programs: Volume I contained unclassified programs and Volume II programs classified "Confidential."

In April 1962 (beginning with SPS 37-15) material that would have been included in a 36- prefix Research Summary was instead published as Volumes IV and V of the reorganized six-volume 37- prefix Space Program Summary. In the new scheme summaries were organized by subject:

- **Volume I**
  - The Lunar Program (Confidential)
- **Volume II**
  - The Planetary-Interplanetary Program (Confidential)
- **Volume III**
  - The Deep Space Instrumentation Facility/The Deep Space Network (unclassified)
- **Volume IV**
  - Supporting Research and Advanced Development (unclassified)
- **Volume V**
  - Supporting Research and Advanced Development (Confidential)
- **Volume VI**
  - Space Exploration and Space Sciences (unclassified)

Beginning with SPS 37-47 (covering mid-1967) the report format was revised. Specifically unclassified programs previously reported in Volumes I and II were combined into one volume while Confidential material from Volumes I, II, and V were also combined, leaving a total of four volumes:

- **Volume I**
  - Flight Projects (unclassified)
- **Volume II**
  - The Deep Space Network (unclassified)
- **Volume III**
  - Supporting Research and Advanced Development (unclassified)
- **Volume IV**
  - Flight Programs and Supporting Research and Advanced Development (Confidential)

Box 58, Folder 6  
[2 copies]

Box 58, Folder 7  

Box 58, Folder 8  
SPS 37-10. Vol.I. (Unclassified) For the Period May 1, 1961 to July 1, 1961, 1 August 1961

Box 58, Folder 9  
Box 58, Folder 10  

Box 59, Folder 1-2  
SPS 37-15. Vol.IV. Supporting Research and Advanced Development For the Period April 1, 1962 to June 1, 1962; Vol.VI. Space Exploration Programs and Space Sciences For the Period March 1, 1962 to June 1, 1962, 30 June 1962

Box 59, Folder 3  

Box 59, Folder 4  
SPS 37-17. Vol.IV. Supporting Research and Advanced Development For the Period August 1, 1962 to October 1, 1962, 30 October 1962

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Box 60, Folder 3-4  

Box 60, Folder 5-6  

Box 60, Folder 7  

Box 60, Folder 8  

Box 60, Folder 9-10  

Box 61, Folder 1-2  
SPS 37-27. Vol.III. The Deep Space Network For the Period March 1, 1964 to April 30, 1964 (31 May 1964); Vol.VI. Space Exploration Programs and Space Sciences For the Period March 1, 1964 to April 30, 1964
Box 61, Folder 3-4  SPS 37-28. Vol.III. The Deep Space Network For the Period May 1, 1964 to June 30, 1964; Vol.IV. Supporting Research and Advanced Development For the Period June 1, 1964 to July 31, 1964

Box 61, Folder 5  SPS 37-29. Vol.III. The Deep Space Network For the Period July 1, 1964 to August 31, 1964; Vol.VI. Space Exploration Programs and Space Sciences For the Period July 1, 1964 to August 31, 1964

Box 61, Folder 6  SPS 37-30. Vol.III. The Deep Space Network For the Period September 1, 1964 to October 31, 1964, 30 November 1964


Box 61, Folder 10  SPS 37-34. Vol.III. The Deep Space Network For the Period May 1, 1965 to June 30, 1965, 31 July 1965

Box 61, Folder 11  SPS 37-35. Vol.III. The Deep Space Network For the Period July 1, 1965 to August 31, 1965, 30 September 1965

Box 62, Folder 1  SPS 37-36. Vol.III. The Deep Space Network For the Period September 1, 1965 to October 31, 1965, 30 November 1965


Box 62, Folder 5  SPS 37-40. Vol.III. The Deep Space Network For the Period May 1, 1966 to June 30, 1966; Vol.VI. Space Exploration Programs and Space Sciences For the Period May 1, 1966 to June 30, 1966

Box 62, Folder 6  SPS 37-41. Vol.III. The Deep Space Network For the Period July 1, 1966 to August 31, 1966, 30 September 1966
Box 62, Folder 7  
SPS 37-42. Vol.III. The Deep Space Network For the Period September 1 to October 31, 1966, 30 November 1966

Box 62, Folder 8-9  

Box 62, Folder 10  

Box 63, Folder 1-2  

Box 63, Folder 3-5  
SPS 37-46. Vol.III. The Deep Space Network For the Period May 1 to June 30, 1967; Vol.IV. Supporting Research and Advanced Development For the Period June 1 to July 31, 1967; Vol.VI. Space Exploration Programs and Space Sciences For the Period May 1 to June 30, 1967

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Box 64, Folder 1-3  

Box 64, Folder 4-5  

Box 65, Folder 1;  
Box 64, Folder 6-7  

Box 65, Folder 2-3  

Box 65, Folder 4-5  
SPS 37-52. Vol.II. The Deep Space Network For the Period May 1 to June 30, 1968; Vol.III. Supporting Research and Advanced Development For the Period June 1 to July 31, 1968

Box 65, Folder 6-7;  
Box 66, Folder 1  
Supporting Research and Advanced Development For the Period August 1 to September 30, 1968

Box 66, Folder 2-4  SPS 37-54. Vol.I. Flight Projects For the Period September 1 to October 31, 1968; Vol.II. The Deep Space Network For the Period September 1 to October 31, 1968; Vol.III. Supporting Research and Advanced Development For the Period October 1 to November 30, 1968

Box 66, Folder 5-7  SPS 37-55. Vol.I. Flight Projects For the Period November 1 to December 31, 1968; Vol.II. The Deep Space Network For the Period November 1 to December 31, 1968; Vol.III. Supporting Research and Advanced Development For the Period December 1, 1968 to January 31, 1969


Box 67, Folder 4-6  SPS 37-58. Vol.I. Flight Projects For the Period May 1 to June 30, 1969; Vol.II. The Deep Space Network For the Period May 1 to June 30, 1969; Vol.III. Supporting Research and Advanced Development For the Period June 1 to July 31, 1969


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Box 69, Folder 1; Box 68, Folder 7-8  SPS 37-63. Vol.I. Flight Projects For the Period March 1 to April 30, 1970; Vol.II. The Deep Space Network For the Period March 1 to April 30, 1970; Vol.III.
Supporting Research and Advanced Development For the Period April 1, 1970 to May 31, 1970

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SPS 37-64. Vol.I. Flight Projects For the Period May 1 to June 30, 1970; Vol.II. The Deep Space Network For the Period June 1 to July 31, 1970; Vol.III. Supporting Research and Advanced Development For the Period June 1, 1970 to July 31, 1970

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The 39- prefix publications are Bibliographies of Jet Propulsion Laboratory publications completed under NASA contracts NASw-6 and NAS7-100.

Box 70, Folder 1 Bibl 39-5. Publications of the Jet Propulsion Laboratory July 1963 through June 1964, 31 August 1964

Box 70, Folder 2 Bibl 39-15. Publications of the Jet Propulsion Laboratory: January through December 1973, 1 April 1974


Box 70, Folder 4 Bibl 39-17. Publications of the Jet Propulsion Laboratory: January through December 1975, 15 September 1976


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This series continues from the DSN Progress Reports published as Technical Report 32-1526 (Volumes I-XIX), beginning with Progress Report 42-20.

Box 70, Folder 8  PR 42-37. The Deep Space Network, November and December 1976, 15 February 1977

Box 70, Folder 9  PR 42-38. The Deep Space Network, January and February 1977, 15 April 1977

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Box 71, Folder 1  SP 43-7. Microbiological Aspects of Clean Room Technology as Applied to Surgery -- with Special Reference to Unidirectional Airflow Systems (Wardle), 9 July 1974

Box 71, Folder 2  SP 43-11. Assessment of the Technology Required to Develop Photovoltaic Power Systems for Large-Scale National Energy Applications (also released as National Science Foundation Report NSF-RA-N-74-072), 15 October 1974

Box 71, Folder 3  SP 43-14. The Availability of Aerial Photography in Southern California (Allen, Sledge, Paul, and Landini), 1 December 1974

Box 71, Folder 4  SP 43-22. Results of Phase One of Land Use Information Delphi Study (Paul and Landini), 1 May 1975

Box 71, Folder 5  SP 43-27 Vol.1. Requirements and Capabilities for Planetary Missions: Mariner Encke Ballistic Flyby 1980 (Ball and Bird), November 1975

Box 71, Folder 6  SP 43-32. Proceedings of the Lectures by the Seismological Delegation of the People's Republic of China (Muller, ed., translated by Ohnuki, Ong, and Chao), 1 August 1976

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Pub 77-81. An Assessment of an F$_2$ or N$_2$O$_4$ Atmospheric Injection from an Aborted Space Shuttle Mission (Watson, Smokler, and DeMore), 15 April 1978
Series 15: External Publications (EP), 1959

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Box 71, Folder 8  

Box 71, Folder 9  
EP 649. Scientific Results from the Explorer Satellites and the Pioneer Space Probes (Hibbs), 15 May 1959

Box 71, Folder 10  
EP 685. The Elements of a Deep-Space Tracking System; The Tracking of Pioneer IV (Richter and Stevens), 13 August 1959

Box 71, Folder 11  
EP 701 Rev. Tracking the Moon Probes (Eimer, Hibbs, and Stevens), 28 December 1959

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