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PEOPLE

PAUL R. HILL COLLECTION, 1936-1996

A COLLECTION IN
SPECIAL COLLECTIONS
COLLECTION NUMBER MS2010-068



Special Collections, Virginia Polytechnic Institute and State University

Special Collections
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Processed by: Kimberly Staub, Graduate Assistant, Special Collections

Repository	Special Collections, Virginia Polytechnic Institute and State University, Blacksburg, Va.
Collection Number	Ms2010-068
Title	Paul R. Hill Collection, 1936-1996
Physical Characteristics	5.6 cu. ft. 6 boxes, 2 oversize folders

Creator	Hill, Paul R., 1909-1990
Language	English
Abstract	The Paul R. Hill Collection contains material relating to the NASA career of Paul R. Hill. Materials include books, papers, newspapers, lantern slides, NASA publications and memos, overhead sheets, and notes from presentations and talks.

ADMINISTRATIVE INFORMATION

Access Restrictions

Collection is open for research.

Use Restrictions

Permission to publish material from Paul R. Hill Collection must be obtained from Special Collections, Virginia Tech.

Preferred Citation

Researchers wishing to cite this collection should include the following information: Paul R. Hill Collection, Ms2010-068, Special Collections, Virginia Polytechnic Institute and State University, Blacksburg, Va.

Acquisition Information

The Paul R. Hill Collection was donated to Special Collections in 2010 by Julie M. Hill of Norfolk, Virginia.

Processing Information

The processing, arrangement, and description of the Paul R. Hill Collection commenced in 2010 and was completed in January 2011.

BIOGRAPHICAL NOTE

Paul R. Hill (1909-1990) was a renowned NASA engineer and UFO enthusiast. He received his B.S. in mechanical engineering from University of California, Berkeley in 1936. After teaching at the Polytechnic College of Engineering in Oakland, California, Hill began his career with the National Advisory Committee of Aeronautics (NACA) in 1939, which became the National Aeronautics and Space Administration (NASA) in 1958. He worked at NASA until 1970, where he published numerous scientific and technical reports.

Hill was also an adamant UFO enthusiast. Based on his own personal sightings in 1952, Mr. Hill tried to use his scientific and engineering knowledge to understand how UFOs worked and eventually built his own flying platform. His book on the topic, *Unconventional Flying Objects: A Scientific Analysis*, was published post-humously in 1995.

Mr. Hill was married to Frances Hoback Hill (d. 1999) and had one daughter, Julie M. Hill. Hill died in 1990 at the age of 81.

SCOPE AND CONTENT NOTE

The Paul R. Hill Collection contains material relating to the NACA/NASA/Langely career of Paul R. Hill from 1939-1970. Materials include books, papers, newspapers, lantern slides, NASA publications and memos, overhead sheets, and notes from presentations and talks.

Many photographs portray Hill's design for a personal flight device. Other drawings reflect planetary orbits or space station models. Presentation notes accompany a few slide folders.

The collection also consists of various publications and papers written by Hill and other authors. Many of these publications are declassified official NASA reports, and others are NASA publications from award ceremonies and department memorandums. Wherever possible, bibliographies at the folder-level are included in the "Contents List" below. Other publications include drafts of papers reviewed by Hill. A number of books were removed from the collection to be catalogued (see "Separated Materials" below).

Also included in this collection are personal papers of Paul R. Hill. Some of these items include his 1936 voter registration, work evaluations, and correspondence regarding his personal projects. Newspaper and magazine clippings kept by Hill are also included in the collection.

ARRANGEMENT

The collection is arranged in 5 series. In addition, there are two folders of magazine and newspaper clippings. Where possible, collection materials have been kept in original groupings. Other items, such as publications and clippings, have been grouped and arranged chronologically. Undated material is arranged alphabetically, where possible.

Series I: Paul R. Hill Materials Contains personal materials of Paul R. Hill, including correspondence, work evaluations, and his talks and lecture notes. It also contains papers written by Paul R. Hill.

Series II: Subject Files The files in this series have been kept in original groupings by Hill. Contains, papers, notes, correspondence.

Series III: NASA Reports and Publications This series contains official publications from NASA, memorandums and meeting agendas from Hill's time at NACA/NASA.

Series IV: Other Papers and Publications These files contain other publications that were part of the collection. Some of these publications were copies from other sources. Arranged chronologically.

Series V: Images This series contains slides, slide negatives, drawings, photographs, and photograph negatives.

The Magazine Clippings and Newspaper Clippings files contain clippings from various sources.

RELATED MATERIAL

SEPARATED MATERIAL

The following items have been removed and cataloged for the Special Collections Rare Book Collection:

- A Class of Unified Explicit Methods for Steering Throttleable and Fixed-Thrust Rockets*, 1964
- A Course in Electrical Engineering/Vol II: Alternating Currents*, 1934
- A New Dimension: Wallops Island The First Fifteen Years*, 1978
- A Short Table of Integrals*, 1956
- A Superposition Principle for a System of Analytic Ordinary Differential Equations*, 1963
- A Trajectory Optimization Technique Based on the Theory of Second Variation*, 1964
- Accounting Principles*, 1935
- Analytical Mechanics for Engineers*, 1933
- Air-Age Education Series: Science of Pre-Flight Aeronautics*, 1944
- Airplane Dynamics*, 1951
- Airplane Structures, Volume I*, 1938
- Astronautics Magazine*, September 1962
- Bacteriology Illustrated*, 1965
- Bacteriology: Principles and Practice*, 1962
- Computation Curves for Compressible Fluid Problems*, 1949
- Design of Machine Elements*, 1935
- Development of Large Solid Propellant Boosters*, 1962
- Elementary Pile Theory*, 1950
- Elements of Chemistry, Volume II*, 1853
- Elements of the Differential and integral Calculus*, 1929
- Elements of Heat Power Engineering*, 1915
- Elements of Heat-Power Engineering, Part I: Thermodynamics and Prime Movers*, 1926
- Elements of Heat-Power Engineering, Part II: Steam-Generating Apparatus and Prime Movers, Fuels, Combustion, and Heat Transmission*, 1933
- Engineering Applications of Fluid Mechanics*, 1947
- Explosions and Combustion Processes in Gases*, 1946
- Gas Sterilants (Linde)*, n.d.
- Geometry of Engineering Drawing*, 1926
- History of Wallops Station Part III Volume 1*, 1971
- History of Wallops Station Part III Volume 2*, 1971
- Hydraulics: A Text on Practical Fluid Mechanics*, 1937
- Internal-Combustion Engines*, 1933
- Kinetics of Machines*, 1928
- Lunar Flying Unit Status Review*, 1968
- Magnethydrodynamics*, 1957
- Mathematical Theory of Rocket Flight*, 1947
- Mechanical Engineers' Handbook*, 1941
- Millipore scopecontent*, 1968
- Modern Operational Mathematics in Engineering*, 1944
- NACA Reunion II*, 1982
- NASA Sounding Rockets, 1958-1968: A Historical Summary*, 1971
- On The Two Point Boundary Value Problem, with Application to Celestial Mechanics*, 1964
- Pocket companion: information and tables for engineers and designers and other data pertaining to structural steel*, 1934
- Practical Exporting*, 1949
- Principles and Practices of Electrical Engineering*, 1933
- Progressive Plane Geometry*, 1935
- Resistance of Materials*, 1925
- Reusable Orbital Transport*, 1965
- Sampling Microbiological Aerosols*, 1959

Scientific Results of the Viking Project, 1977
Spaceflight Revolution: NASA Langley Research Center from Sputnik to Apollo, 1995
Steam, Air, and Gas Power, 1933
Sterilization with Ethylene Oxide Gas Mixtures, 1966
The Internal Combustion Engine, 1938
Technical Aerodynamics, 1935
Techniques for Microbiological Analysis, 1967
Theory of Modern Steel Structures, Volume I: Statically Determinate Structures, 1936
Threshold Limit Values for 1967, 1967
Treatise on Hydraulics, 1934
Winds of Change: Expanding the Frontiers of Flight, 1992

INDEX TERMS

Subjects:

United States. National Advisory Committee for Aeronautics
United States. National Aeronautics and Space Administration

Local Subjects:

Archives of American Aerospace Exploration (AAAE)
Science and Technology

ADJUNCT DESCRIPTIVE DATA

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	Manuscripts and Publications, 1944-1970, n.d.
Box-folder 1-1	<i>The Effect of Operational Parameters of Speed, Power, and Altitude on the Range of a Heavy Bomber</i> , 1944.
Box-folder 1-2	<i>Cost Optimization of Multistage Rockets</i> , 1967.
Box-folder 1-3	<i>Appraisal of Studies in the Area of Design Integration</i> , 1970.
Box-folder 1-4	<i>High Speed Vector Physics</i> , 1983.
Box-folder 1-5	<i>A Criticism of the Special Theory of Relativity</i> , n.d.
Box-folder 1-6	<i>The Optimization of Multistage Rockets with Respect to Cost</i> , n.d.
Box-folder 1-7	<i>A Simulator Study of the Control of Lunar Flyers by Pilot Body Motions</i> , n.d.
Box-folder 1-8	<i>The Time Required for Interstellar Travel</i> , n.d.
Box-folder 1-9	<i>Vector Relativity</i> , n.d.
Box-folder 1-10	Paul R. Hill Correspondence, 1936-1992.
Box-folder 1-11	Other Correspondence, 1955-1995.
Box-folder 1-12	Talks and Speeches, 1962, n.d.

Box-folder 1-13	"Cowling and Cooling" Lecture Notes, 1942.
Box-folder 1-14	Notification of Personnel Actions and Efficiency Ratings, 1944-1970.
Box-folder 1-15	Authorizations for Travel, 1947-1970.
Box-folder 1-16	Ephemera Personal Items, 1938-1964, n.d.
Box-folder 1-17	Ephemera Notes, Figures, and Calculations, n.d.

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Series II: Subject Files, 1953-1970, n.d.

Box-folder 2-1	Helicopter WT Breakdown, 1953-1954.
Box-folder 2-2	Nelson Engine Information, 1954.
Box-folder 2-3	Spin Stabalization, 1958-1966.
Box-folder 2-4	Partial Record MORL Technology Steering Committee, 1964.
Box-folder 2-5	Peter Payne Materials, 1966-1968.
Box-folder 2-6	SS History Talk and Figures for June 1, 1967, 1967.
Box-folder 2-7	Preparations for Second Subcommittee Meeting, 1967-1968.
Box-folder 2-8	Lunar Jet Transport, 1968.
Box-folder 2-9	Space Station Review Group Correspondence, 1969-1970.
Box-folder 2-10	Meteor Reentry Life Support, n.d.
Box-folder 2-11	Shockwave Pattern in 3-Dimensional Nozzles, n.d.
Box-folder 2-12	Space Station Information, n.d.
Box-folder 2-13	Space Station Information II, n.d.

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Series III: NASA Reports and Publications, 1941-1972

Official Publications, 1941-1970

Box-folder 3-1	Publications, 1941-1948.
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Bibliography

The Effect of External Shape Upon the Drag of a Scoop, 1941
Generalized Selection Charts for Bombers with Four 2000-Horsepower Engines, 1942
Effect of Airplane Design Efficiency and Engine Economy on Range, 1942
Parameters Determining Performance of Supersonic Pilotless Airplanes Powered by Ram-Compression Power Plants, 1946
An Analysis of Ducted-

Box-folder 3-2

*Airfoil Ram Jets for
Supersonic Aircraft, 1948*

Publications, 1953-1962.

Bibliography

*Equations, Tables, and
Charts for Compressible
Flow, 1953*
*Preliminary Experimental
Investigation of the Flight of
a Person Supported by a
Jet Thrust Device Attached
to his Feet, 1953*
*Flight Tests of Man
Standing on a Platform
Supported by a Teetering
Rotor, 1954*
*Flight Investigation at Mach
Numbers from 0.8 to 1.5 to
Determine the Effects of
Nose Bluntness on the
Total Drag of Two Fin-
Stabilized Bodies of
Revolution, 1955*
*High Temperature Oxidation
and Ignition of Metals, 1956*
*A Method of Computing the
Transient Temperature of
Thick Walls from Arbitrary
Variation of Adiabatic-Wall
Temperature and Heat-
Transfer Coefficient, 1957*
*An Analysis of Ablation-
Shield Requirements for
Manned Reentry Vehicles,
1960*
*NASA Reports - A
Discussion for Prospective
Authors, 1962*
*Perigee Propulsion for
Orbital Launch of Nuclear
Rockets, 1962*

Box-folder 3-3

Publications, 1963-1968.

Bibliography

*Open House Instructions for
Self-Guided Tour, 1963*
*The International System of
Units, 1964*
*The Needs and
Requirements for a Manned
Space Station Volume I,
1966*
*A Technical Assessment of
Manned Orbiting
Laboratories, 1964*
*Sterilization and
Decontamination
Techniques for Space
Vehicles, 1967*
Planetary Quarantine, 1967

Box-folder 3-4

Publications, 1970.

Bibliography

AMPD Program Summary,
1970
*A Simulator Study of the
Control of Lunar Flying
Platforms by Pilot Body
Motions*, 1970
*Lunar Flying Platform
Simulator*, 1970

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Box-folder 3-6

Notes on Space Technology, 1958.

Box-folder 4-1

Air Scoop and Langley Researcher Publications,
1952-1970.

Box-folder 4-2

Assorted Meeting Agendas, 1951-1968.

Box-folder 4-3

Department Memorandums, 1949-1970.

Box-folder 4-4

Other Publications, 1963-1972.

Bibliography

Echo I, 1961
Honor Awards Ceremony, 1963
Honor Awards Program, 1966
Honor Awards Program, 1970
Space Station Index, 1970
Honor Awards Program, 1972
"Tips to NASA Travelers on How to
Survive When Trapped in a
Multistory Building Fire", n.d.
*The National Advisory Committee for
Aeronautics*, n.d.

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Ephemera, 1950-1969, n.d.

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Series IV: Other Papers and Publications, 1952-1988

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Papers and Publications, 1952-1963.

Bibliography

Molds and Men, 1952
The Origin of Life, 1954
*Relativistic Treatment of Rocket
Kinematics and Propulsion*, 1958
*Steering an Ascent Rocket for
Maximum Cutoff Velocity*, 1958
*A Simple Passive Method for
Predicting the Path of a Space Ship
with Respect to a Planet Which Is
Approaching*, 1958
*Techniques for Departure and
Return in Interplanetary Flight*, 1958
*A Note on the Application of Hill's
Method to Low Conductivity
Materials*, 1958
Computing Notes on Hill's Method,
1958
About the Final Velocity of Rockets,
1959
The Third Symposium on Advanced

- Box-folder 4-7 *Propulsion Concepts*, 1962
Development of a Method for Microbial Sampling of Surfaces with Special Reference to Reliability, 1963
- Box-folder 4-7 Papers and Publications, 1964-1988.
Bibliography
The Application of Modern Dynamic Optimization Techniques to Fundamental Problems Encountered in Space Programs, 1964
The Black Death, 1964
Tangent Steering, 1965
Sterilizing Space Probes, 1966
On Finding the Optimum: A New Location Technique, 1969
Public Service Company of Colorado Shareholder's Quarterly, 1988
- Box-folder 5-1 Papers and Publications, n.d.
Bibliography
Conventionality and Mach's Principle in Relativity, n.d.
A Comparison of Two Methods for Calculating Transient Temperatures Through Thick Walls, n.d.
Exact Methods in the Dynamics of Structures, n.d.
The Fundamentals of Flight-Induced and Forced Cooling, n.d.
Methods and Techniques Used by the Pilotless Aircraft Research Division in Free Flight Tests, n.d.
Notes on Quantum Theory, n.d.
Notes on Vibration Theory, n.d.
Numerical Solution for the Temperature Distribution in Some Structural Components Heated at a Constant Rate, n.d.
Objectives and a Comparison of Approaches for a Manned Orbital Laboratory, n.d.
Optimization of Satellite Boost Trajectories, n.d.
Significant Contributions of OMSF Flight Programs, n.d.
- Box-folder 5-2 Paper, n.d.
- Box-folder 5-3 Copies and Printouts from Other Sources, 1954-1968, n.d.

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- Box-folder 5-5 Space Conference Negatives, 1962.
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**SIGNIFICANT PERSONS ASSOCIATED WITH
THE COLLECTION**

Hill, Paul R., 1909-1990

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