University of Houston Clear Lake

Archives and Special Collections

HSF-62
Warren L. Brasher Papers

[Human Space Flight Collection]

Collection Number: HSF-62

Title: Warren L. Brasher Papers

Dates: 1962-2006

Creator: Warren L. Brasher

Abstract

The Warren L. Brasher Papers is composed of memorandums, operating manuals, handbooks, professional papers, publications, articles, presentations, books, technical reports, and miscellaneous materials, created, used, or collected by Warren L. Brasher during his career working at NASA. He worked at Johnson Space Center from 1966 through at least the late 2000s. The bulk of the collection is composed of professional papers Brasher authored or co-authored reports relating to Apollo and Space Shuttle programs; technical reports on NASA programs; and official NASA reports. There are also a number of handbooks and other records on the Apollo Lunar Module propulsion system, on which Brasher worked between 1966 and the early 1970s. A good amount of official NASA records exist on the testing and selection of propellants for the Space Shuttle Main Engine (SSME) during the 1970s and early 1980s, as the Space Shuttle Orbiter was being developed.

Extent: approximately 3.15 linear feet

Language(s): English

Repository

University of Houston-Clear Lake Archives and Special Collections, Alfred R. Neumann Library, 2700 Bay Area Blvd., Houston, TX 77058-1002

Restrictions on Access: There are no known restrictions on accessing this collection.

Restrictions on Use

A number of materials in this collection was produced for NASA by contractors on work for-hire contracts. Many of the contractors copyrighted or patented the information or designs or content included in the publications in this collection. As such, the University of Houston-Clear Lake

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Preferred Citation

[Item name or title], [Box Numbers], [Folder Numbers], Warren L. Brasher Papers, HSF-62, University of Houston-Clear Lake Archives and Special Collections, Alfred R. Neumann Library, 2700 Bay Area Blvd., Houston, TX 77058-1002

Acquisition

The collection was donated to the University of Houston-Clear Lake Archives and Special Collections by Warren L. Brasher in November 2014.

Related Material

Charles W. Yodzis Papers, HSF-71, University of Houston-Clear Lake Archives and Special Collections, Alfred R. Neumann Library, 2700 Bay Area Blvd., Houston, TX 77058-1002 [a large amount of records from Warren L. Brasher are housed in his supervisor Yodzis' papers]

Processing Information

The collection had a general order when it was received from the donor, with materials grouped in individual folders. The collection was in the middle of being arranged and described between 2019 and 2021, when staffing issues and the COVD-19 pandemic interrupted the work. With the implementation of a new collection policy and processing manual for the UHCL Archives, the Brasher Papers' initial arrangement done by previous archives' staff was re-worked in order to better match the new professional description and preservation standards. Basic preservation was conducted by the processing archivist, including removing rusting bindings from documents where necessary. In keeping with the Archives' processing policies, duplicate materials were removed from the collection.

Processed by: Tamatha Brumley, June 2023.

Arrangement: Materials were arranged according to the original layout as stored by the donor.

Biographical Note

Warren L. Brasher joined the NASA Manned Spacecraft Center (later Johnson Space Center) in coastal Houston, Texas, in 1966. He went to work under branch chief Charles Yodzis in the Primary Propulsion Branch of the Propulsion and Power Division in the late 1960s and early 1970s. There is not much information on his work in the 1970s. In 1986, Brasher was serving as part of the Advanced Programs Office at Johnson Space Center. He became assistant to the Director of Engineering for the Space Shuttle later. In 1993, Acting Engineering Director Leonard Nicholson named Brasher as the new Chief of the Propulsion and Power Division. Brasher would become Head of Propulsion in 2006.

Brasher received a NASA Certificate of Appreciation in 1981, a Certificate of Commendation in 1995, and an Outstanding Leadership Medal in 2001. He was a member of the Johnson Space Center's Mission Operations "Pirates" team which received the "Hammer Award" from Vice President Al Gore for designs used in developing the new Johnson Space Center Mission Control Center.

Scope and Content

The collection is composed of memorandums, operating manuals, handbooks, professional papers, publications, articles, presentations, books, technical reports, and miscellaneous materials, created, used, or collected by Warren L. Brasher during his career working at NASA. He worked at Johnson Space Center from 1966 through at least the late 2000s. Most of his area of focus was in space vehicle propulsion and propellants, having contributed to the Apollo and Space Shuttle Programs.

The bulk of the collection is composed of professional papers Brasher authored or co-authored reports relating to Apollo and Space Shuttle programs; technical reports on NASA programs; and official NASA reports. There are also a number of handbooks and other records on the Apollo Lunar Module propulsion system, on which Brasher worked between 1966 and the early 1970s. A good amount of official NASA records exist on the testing and selection of propellants for the Space Shuttle Main Engine (SSME) during the 1970s and early 1980s, as the Space Shuttle Orbiter was being developed.

Subject Terms

Personal/Family Name

Brasher, Warren L.

Corporate Names

North American Rockwell

North American Aviation. Rocketdyne Division
United States, National Aeronautics and Space Administration

Geographic Name

Cape Canaveral (Fla.)
Houston (Tex.)

Topical Term

Project Apollo (U.S.)
Skylab Program
Space Shuttle Program (U.S.)
Space Shuttles--United States--History
Space--Social aspects--History
United States. National Aeronautics and Space Administration--History

Genre/Physical Characteristic

Articles
Handbooks
Memorandums
Operating manuals
Papers
Presentations
Publications
Technical Reports

Collection Inventory

Box/Folder	Description	Date
1/1	The Lunar Module Ascent Engine RS1801, Technical Brochure by Rockdyne North American Rockwell	Undated
1/2	Lunar Module Ascent Engine Program Review	December 4, 1967
1/3	Letter to Bell Employees Outlines Ills of Space Program from Missile/Space Daily	December 15, 1967
1/4	"Engine Problem May Delay First Apollo Trip", *Houston Chronicle* Article	1968
1/5	"Problems Spur Changes in Ascent Engine", *Aviation Week & Space Technology* Article	January 15, 1968

1/6	Lunar Module Ascent Engine Program Review	March 18, 1968
1/7	Lunar Module Ascent Engine Program Review	June 17, 1968
1/8	LM Ascent Engine Evaluation Summary Report	September 3, 1968
1/9	Weekly Activity Report Quality Assurance Office—Bethpage	September 9, 1968
1/10	Lunar Module Propulsion System Characterization Evaluation Report (Part 1)	February 20, 1969
1/10	Lunar Module Propulsion System Characterization Evaluation Report (Part 2)	February 20, 1969
2/1	Final Report Lunar Module Ascent Engine Acoustic Cavity Study	August 1, 1969
2/2	History of the Apollo Service Propulsion Subsystem	January 1970
2/3	History of the Apollo Ascent Propulsion System	June 1970
2/4	Lunar Module Ascent Engine Start and Performance Test	November 1970
2/5	Apollo Experience Report Ascent Propulsion System	May 1972
2/6	TRW Space Data	Undated
2/7	Project Apollo Spacecraft Development Statement Of Work, Part 3, Technical Approach	December 18, 1961
2/8	Apollo Briefing for Propulsion Industry	June 8, 1962
3/1	Titan 3: Propulsion Handbook by Aerojet—General Corporation	March 1964
3/2	Gemini Propulsion Handbook, Aerojet—General Corp.	December 1965
3/3	Saturn V Flight Manual	August 15, 1969
3/4	Service Propulsion System Flight Support Handbook—Apollo and Skylab	February 1, 1972
3/5	Apollo Experience Report: Command and Service Module Reaction Control Systems	November 1972

3/6	Apollo Experience Report—Descent Propulsion System	March 1973
4/1	Drawings and Descriptions: High Pressure Oxidizer Turbo Pump Seal Package	Undated
4/2	Baseline Rocket Engine Configuration for 12.5k Payload Space Shuttle	August 6, 1969
4/3	Maneuvering Propulsion System Trade-Off Study	October 1, 1969
4/4	In-House Space Shuttle Configuration Review	January 30, 1970
4/5	MSC Shuttle Ground Rules	January 30, 1970
4/6	Survey of Potential Engine Candidates for the MSC Space Shuttle	March 10, 1970
4/7	DC-3 Shuttle Boost Engine Characteristics	April 8, 1970
4/8	Thrust Uprating Potential of Space Shuttle Main Engine	June 3, 1971
4/9	Candidate Engines for Low Cost Space Shuttle Orbiter Vehicle	July 15, 1971
4/10	Study Reports: J-25 Engine Idle Mode Capacity	August 8, 1971
4/11	Telefax: Space Shuttle Study Redirection	January 1972
4/12	Release No. 72-62, Space Shuttle Decisions	March 15, 1971
4/13	GAO Denial of Pratt & Whitney's Protest of SSME Contract Award	March 31, 1972
4/14	Specific Impulse Presentation to Senior Engineering Review Board	November 8, 1971
4/15	SSME [Space Shuttle Main Engine] Propellant Mixture Ratio Control Range	April 30, 1973
4/16	Reduction in SSME Mixture Ratio Control Range	May 1, 1973
4/17	SSME Mixture Ratio Control Tolerance	September 13, 1973
4/18	Evaluation of Mixed-Made Propulsion	September 18, 1973

	System Concepts	
4/19	Presentation of MSFC: Engine Cleanliness Requirements	December 13, 1973
4/20	SSME Propellant Filter Briefing and Transmittal Memo	June 5, 1974
4/21	Review of Design Concepts for POGO Accumulators	November 18, 1974
4/22	SSME Thrust Throttling Assessment Briefing and Transmittal Memo	February 13, 1975
4/23	"Space Shuttle Main Engine (SSME) Derating Options" Presentation and Transmittal Memo	July 17, 1975
4/24	Memo: Assessment of Reducing SSME Thrust Throttling Requirements	January 7, 1976
4/25	Space Shuttle Main Engine Tube Heat Exchange Design Assessment Presentation and Transmittal Memo	May 27, 1976
4/26	SSME Pump Performance Status Briefing and Transmittal Memo	February 4, 1977
4/27	SSME Technical Status Presentation to Dr. Faget	May 11, 1977
4/28	Shuttle System Requirements that Design Space Shuttle Main Engine Presentation and Transmittal Memo	January 27, 1978
4/29	Open Engine Acceptance Test Issues Memo from Space Shuttle Program Manager to MSFC/ Manager, Space Shuttle Projects Office	September 17, 1979
4/30	SSME Low Power Level Thrust Oscillations Presentation	December 12, 1979
5/1	SSME Post Acceptance Test Issues Presentation to Space Shuttle Program Office	January 22, 1980
5/2	Flight SSME Post Assistance Test Issues Presentation to Space Shuttle Crew Safety Panel	February 23, 1980

5/3	SSME Post Acceptance Test Issues Special Telecon	May 13, 1980
5/4	Memo from MSFC Manager, Shuttle Projects Office to Manager, Space Shuttle Program Subj: SSME Acceptance Review Item Closure	March 26, 1980
5/5	SSME Reacceptance Test Issue Engine Performance and Integrity Concerns	March 28, 1980
5/6	Flight Engine Modifications and Acceptance Test Requirements	April 4, 1980
5/7	SSME Inflight Shutdown Issue	February 27, 1981
5/8	Main Feedline Inject/Antigeyser Line Deletion	June 25, 1981
5/9	SSME Performance Oscillation	September 9, 1983
5/10	Chemical Propulsion Systems Overview	September 9, 1987
5/11	Shuttle Storable Stage – A Unique Blend of Shuttle Heritage Components	December 1987
5/12	Presentation to American Astronautical Society by Bob Biggs, SSME Systems Analysis, Rocketdyne DW, North American Rockwell Space Shuttle Main Engine the First Ten Years	November 2, 1989
5/13	Space Shuttle Propulsion Systems Challenges and Lessons Learned	March 14, 1990
5/14	Space Shuttle Ground Rules	Undated
5/15	MSC ILRV Space Shuttle	August 16, 1969
5/16	Press Release: Space Shuttle Fact Sheet	January 5, 1971
5/17	NASA Publication JSC-20939 Space Shuttle Directions	June 1986
5/18	Technology Influence on the Space Shuttle Development	June 8, 1986
6/1	NASA Publication JSC-23309: A Shuttle Chronology 1964-1973 Abstract Concepts to Letter Contracts Vol. II, ILRV Results and the	December 1988

	Space Design Division	
6/2	NASA Publication JSC-23309: A Shuttle Chronology 1964-1973 Abstract Concepts to Letter Contracts Vol. III, The Reusability Issue	December 1988
6/3	NASA Publication JSC-23309: A Shuttle Chronology 1964-1973 Abstract Concepts to Letter Contracts Vol.IV, Technical and Programmatic Maturity	December 1988
6/4	NASA Publication JSC-23309: A Shuttle Chronology 1964-1973 Abstract Concepts to Letter Contracts Vol.V, Prime Source Selection to Letter Contract; Appendices	December 1988
6/5	Technical Presentation: A Perspective on the Use of Storable Propellants for Future Space Vehicle Propulsion	May 1989
7/1	Propulsion and Power Division, FY85 Annual Report JSC-22019	1986
7/2	The Advanced Programs Office, FY86 Annual Summary	1987
7/3	Engineering Directorate, Advanced Programs Office FY87 Annual Summary	January 1988
7/4	Advanced Programs Office, FY88 Annual Summary	March 1989
7/5	Propulsion and Power Division FY92 Annual Summary	January 1993
7/6	Propulsion and Power Division FY93 Annual Summary	1994
7/7	Propulsion and Power Division FY95 Annual Report	1996
7/8	Propulsion and Power Division FY96 Annual Report	1997
7/8	Propulsion and Power Division FY96 Annual Report	1997
7/9	Energy Systems Division Annual Report 1977	1998
7/10	Energy Systems Annual Report 1998	1999
7/11	Energy System Division FY99 EP Annual Report	2000

8/1	Hardware Testing During DDT & E	July 11, 2006
8/2	Chemical Propulsion Systems: An Overview	September 9, 1987
8/3	Combustion Stability Overview	July 8, 1981
8/4	Engine Cycles—Outline	January 1, 1981
8/5	Injector Design	May 2, 1981