



NASA HISTORY NEWS & NOTES

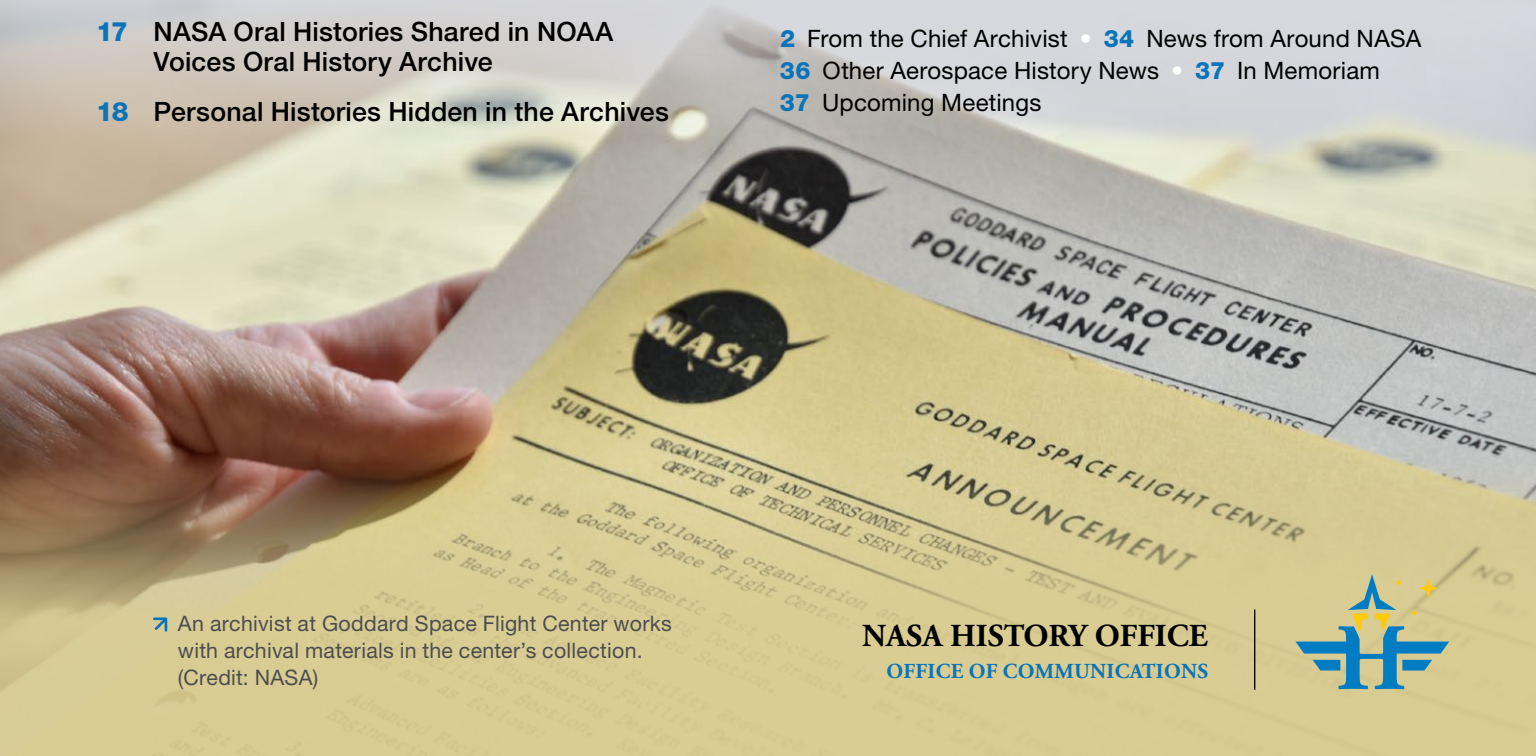
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PRESERVE & PROVIDE ACCESS

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➔ An archivist at Goddard Space Flight Center works with archival materials in the center's collection. (Credit: NASA)





From the Chief Archivist

OCTOBER is American Archives Month—a time to highlight the importance of historical records and the archivists who preserve them. For NASA, this month offers a unique opportunity to showcase the role that archives play in shaping our understanding of the agency's activities in exploration and discovery.

The NASA Archives program's mission is to preserve and provide access to materials relating to NASA's history, organization, and institutional knowledge to promote understanding and exploration of NASA's mission across time and space. Our collections hold a variety of textual records, photographic prints, oral histories, and more. These records provide valuable insight into the agency's history, including the development of new technology and scientific advancement. Our collections span from 1917, when the first National Advisory Committee for Aeronautics (NACA) research centers were established, through the creation of NASA in 1958, to the present day.

NASA archivists work at NASA centers across the country preserving historically significant records. They perform a wide range of archival functions, including appraisal, accessioning, processing, describing, digitizing, and reference, using archival theory and principles as their guide. These functions help the archivists to



↑ NASA Chief Archivist Christine Shaw working in Goddard Space Flight Center's Archives (Photo credit: NASA)

properly preserve the records according to industry best practices. By properly preserving NASA's historical records, the archivists can make them available for research to NASA employees, historians, and researchers. Their research, published in books and articles, and on the web, helps to tell the story of the agency's history.

Archived records document the agency's challenges, setbacks, and triumphs. They also tell the story of the people on the ground....

The NASA Archives program is a vital function to the agency. Archived records document the agency's challenges, setbacks, and triumphs. They also tell the story of the people on the ground—the employees that NASA would not exist without. Through the records in our collections, we can gain a deeper understanding of NASA's history and the people who have spent their careers dedicated to furthering their field of study.

While records in the archives help to discover the past, they also inform the future. The NASA Archives program plays an active role in supporting ongoing research and development. Current NASA employees may consult the archives to determine how a test was run in the past or to find a report necessary for their research that they cannot find elsewhere. Through the archives,

From the Chief Archivist (continued)

NASA can ensure that scientists and engineers have access to the resources they need to best do their jobs.

Collections within the archives can also inspire younger generations to pursue a career at NASA. The use of historical photographs, video, and records on social media allows the archives to reach students from all walks of life. By highlighting records in our collection, we can teach students that there is more to NASA than astronauts and rocket scientists and that there are opportunities in many different fields.

When I was pursuing my master's degree in library and information science, I knew I wanted to be an archivist. I have been drawn to history my entire life, and I loved the idea of being a custodian of history. I assumed I would work at the National Archives and Records Administration (NARA) or in a university's archives. I had no idea that I could be an archivist at NASA. I began my NASA career at Goddard Space Flight Center in the Goddard Archives as an intern. After seeing the remarkable records in the collection and the welcoming culture of the agency, I knew I wanted to stay. I was hired as an archivist at Goddard and stayed in that role until I became Chief Archivist in early 2024. My work is unique, and no two days are the same. I adore the archivists I work with, and I am honored to help preserve the records in our collections. It is truly a privilege to be a steward of NASA's history.

The NASA Archives program has recently completed a structural reorganization. Previously, the archives at each NASA center were managed individually by that center. Now, the



↑ An archivist handles photos and documents from a collection on Goddard Space Flight Center's early history. (Photo credit: NASA)

NASA Archives program operates as an agencywide enterprise program with all archivists working together using standardized documentation, policy, and workflows. The reorganization has allowed archivists across the agency to connect and share resources.

Now, the NASA Archives program operates as an agencywide enterprise program with all archivists working together using standardized documentation, policy, and workflows.

Together with the NASA historians, we form the History and Archives Branch within the History and Information Services Division of the Office of Communications.

I hope you enjoy learning more about the NASA Archives program and our collections in this issue of *News & Notes*. For more NASA Archives content, follow NASA History on social media where records from the archives will be highlighted all month long. ■

Christine Shaw

Christine Shaw
Chief Archivist

Getting to Venus with an Assist from the Ames Research Center Archives

» By April Gage, NASA Senior Archivist

VENUS, AN EXPLORATION TARGET for decades, has often been called Earth's twin due to the similar size, age, and composition of the two planets. But with its volcanic landscapes, clouds of sulfuric acid, winds as high as 224 miles per hour, surface temperatures of nearly 900°F, and surface pressure approximately 90 times that of Earth,¹ Venus might be better characterized as Earth's evil twin. Significant modeling of evolutionary climate change on terrestrial planets in our solar system by planetary scientists such as James Pollack has shown that climate change driven by such factors as volcanic eruptions, greenhouse gas emissions, and ozone depletion could eventually turn Earth into a planet much like Venus. This has provided added impetus to learn as much as we can about our hellish twin.

The Pioneer Venus mission materials held in the Ames Research Center (ARC) Archives illustrate some of the ways that archival holdings can have relevance to ongoing research. The way these materials are used also helps to dispel a common misconception about archives as out-of-the-way deep storage warehouses for information that has either been put out to pasture or saved for posterity to display during anniversaries. In truth, repositories like the ARC Archives are vibrant spaces

that occupy physical and digital realms where the agency's knowledge and culture are constantly being sought out, described, contextualized, organized, imaged, preserved, mined, and shared. Archives are not places where information goes to die. The NASA Archives have mission relevancy.

Archives are not places where information goes to die. The NASA Archives have mission relevancy.

Thirty-nine attempts to orbit and/or probe Venus have been launched by the Soviet Union/Russia, the United States, the European Space Agency (ESA), and Japan between 1961 and 2010.² Three missions to orbit the planet and send a descent probe to its surface are in development by NASA and ESA for launch from approximately 2029 to 2031,³ with another half dozen planned for the next two decades. Key science objectives include investigating the Venusian atmosphere, climate, and surface, and searching for extremophilic organisms in the clouds.⁴

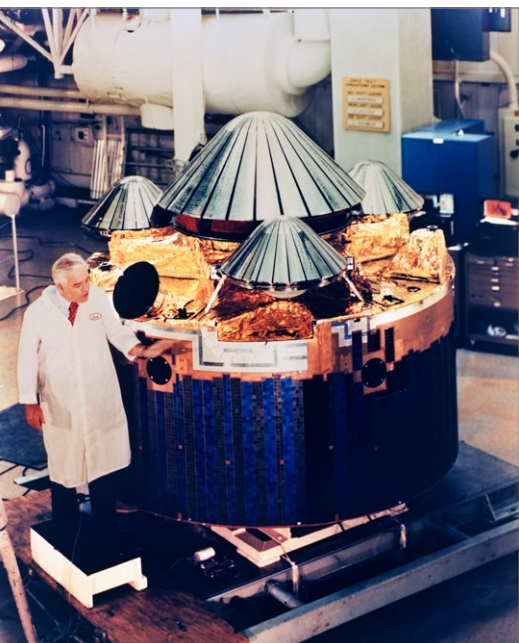


↑ A global composite of Venus centered at 270 degrees east longitude using data from the Pioneer Venus Orbiter, Magellan, and the Soviet Venera 13 and 14 spacecraft. (Credit: NASA, image number S91-50688)

For these missions returning to Venus with both an orbiter and probe, legacy documentation for the last two NASA missions to Venus (not counting flybys), Pioneer Venus (1978) and Magellan (1989), are of relevance. The only descent probes sent to Venus by the United States were the Pioneer Venus probes, so that mission provides a valuable model to follow for developing subsequent mission concepts.

Starting in spring 2008, the search for Pioneer Venus engineering documentation was afoot, and requests made their way to the ARC History Office and Archives. Ames and Goddard Space Flight Center (GSFC) were jointly developing an orbiter/probe mission concept for what would become the Deep Atmosphere Venus Investigation of Noble gases, Chemistry, and Imaging (DAVINCI) mission. Senior ARC Entry Systems and Technology Division technologist Ethiraj "Raj" Venkatapathy connected a team led by GSFC Chief Scientist of Solar System Exploration James Garvin with the ARC Archives. The team's primary

Getting to Venus with an Assist from the Ames Research Center Archives (continued)



↑ **Left:** Pioneer Project Manager Charles F. “Charlie” Hall with the Pioneer Venus multiprobe at Hughes Aircraft Company, 1 April 1977. The large probe (top center) will serve as a model for the next descent probe bound for Venus in 2029. (Credit: NASA, image number AC77-0376-8) **Right:** Pioneer Venus aperture cards contain reduced images of engineering drawings on 35mm microfilm and are punched with machine-readable information. Prior to digitization, it was necessary to sort through over 20,000 of these cards to specify punched from handwritten versions, as the metadata on the latter had to be input manually. (Credit: NASA/April Gage)

objective was to find as-built drawings and related data for the large probe, including a “build-to-print” dataset (fabrication and assembly drawings, specifications, procedures, supporting structural and thermal analyses, integration and test procedures, and logs), any lessons learned, and cost data. At that time, archives staff had almost no experience with technical records collections (and did not even know what “as-built” meant), so Raj came to the archives and gave a crash course and guidance on how to search for what his team needed. Other colleagues from ARC and GSFC camped out in the archives and helped comb through the approximately 200 cubic feet of paper-based Pioneer Project records there.

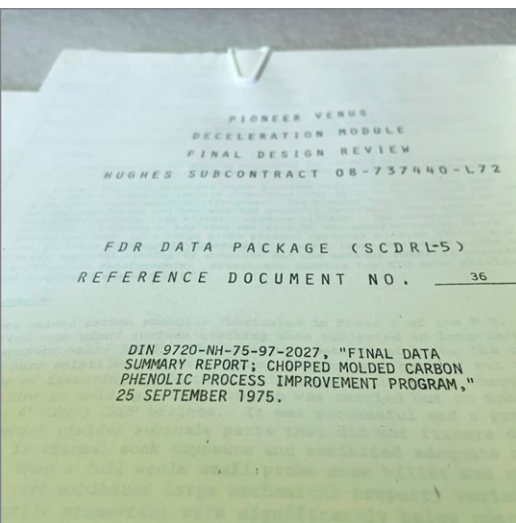
Together, the senior archivist and technical staff located a significant amount of material for the agency. The

information mined from the archives also informed the Decadal Survey and technical publications and was subsequently fed into an Entry Descent and Landing Repository based at the Jet Propulsion Laboratory (JPL). Since the retrieval of these records, additional NASA specialists from ARC, GSFC, Goddard Institute for Space Studies, Langley Research Center, JPL, and Johnson Space Center have continued to scour the archives for information about a range of topics from thermal protection systems to parachutes to support their objectives for the Venus probe design, Commercial Crew Program, and other efforts. From the Pioneer collection, more than 21,000 aperture cards were digitized by an outside vendor and hundreds of files were digitized in-house by the ARC Archives staff.

By preserving and facilitating access to our center’s knowledge base, the ARC Archives saved the agency time and money and helped to avoid the need to reinvent certain crucial wheels. With advice from subject matter experts, the ARC Archives assisted with search and discovery, handled digitization and distribution of the information, and located and redistributed some of that information to support other projects.

The convenience of having collections like the Pioneer Project records on hand at a NASA installation is just one example of the value the NASA Archives bring to the agency. If the information had been at the National Archives and Records Administration (NARA), it would have been necessary for technical staff to travel to one of NARA’s regional installations to review and digitize records there on

Getting to Venus with an Assist from the Ames Research Center Archives (continued)



↑ The ARC Archives scanned hundreds of Pioneer Venus engineering documents like these to support mission development. (Credit: NASA/April Gage)

site because, unlike libraries, archives do not lend materials. By holding information in proximity to staff with the relevant technical expertise, the various center-based archives can provide greater accessibility to the agency and ultimately reduce the time and expense of mining it. Information “trapped” on paper that is still on hand at NASA is logistically easier to digitize and distribute. In the case study of the Pioneer Venus large probe, the specialized equipment and staff time needed to digitize the design documentation stored on the thousands of aperture cards would have been cost-prohibitive if the cards had been moved to NARA.

Further, information in NASA’s center archives fills gaps in NARA’s collection scope. Not all of the records sought for the Venus mission would even have been collected by NARA. This is because only material scheduled as permanent is transferred to NARA from the Federal Records Center (FRC) for long-term preservation, while records

scheduled as temporary are destroyed by FRC in the process of routine records management activities. Though it is the official repository for federal government records, it is not feasible for NARA to capture absolutely *everything*. Retaining some types of temporary records of value to NASA is another way that center archives collections can complement those at NARA and be of benefit to the agency.

For example, the hunt for Pioneer Venus large probe documentation led to test records that were scheduled as temporary and subsequently destroyed. Because the center asked the ARC Archives to preserve these legacy data, which was outside of NARA’s scope, they remained extant at Ames. While it may have seemed unlikely that anyone was ever going to use some of those test records from the Pioneer collection, such predictions often turn out to be wrong. Ultimately, the engineers recognized their continued relevance. One noted that budgets had changed significantly since the Pioneer days of the 1960s and 1970s, and some types of testing simply are not done anymore due to cost constraints, so having access to some of those tests was of great value. Another engineer said the data helped the team specify the telecommunications system as a whole. He also found it interesting to see that staff working on Pioneer Venus encountered the same problems and failures that engineers still deal with today.

How much more could the agency benefit from investing in its archives? Archiving is labor-intensive, highly specialized work, and the public-facing archives like those at ARC, JPL, and Headquarters serve not only NASA but other institutions and the public

more generally, both domestically and internationally. Increasing the number of archivists across the agency would improve the program’s ability to collect, curate, and provide access to a much greater breadth and volume of information produced by NASA.

The need to leverage past accomplishments throughout the agency’s functional units is ongoing. Preserving previous models and methodologies in our archives is akin to saving seed corn for future crops. Archiving the blueprints that help to form our knowledge base saves resources and capital, supports planning and outreach, and enables historical analysis for decision support and insight into the reasons for past successes and failures. When agency staff seek out historical materials for future efforts, the NASA Archives are poised to deliver. ■

Endnotes

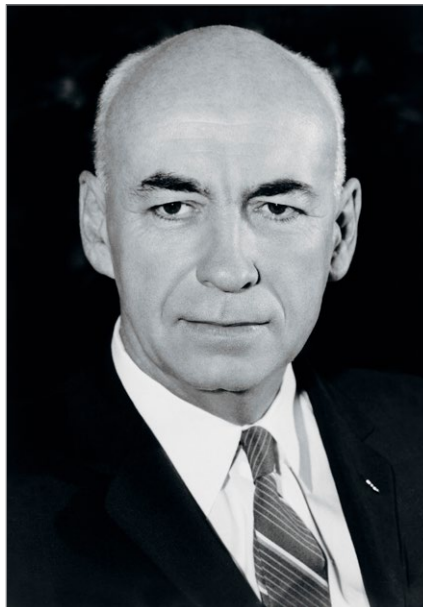
- 1 William Steigerwald, *NASA Instrument to Measure Temperature, Pressure, and Wind on Venus*, <https://www.nasa.gov/solar-system/nasa-instrument-to-measure-temperature-pressure-and-wind-on-venus/> (accessed 20 August 2024).
- 2 Asif A. Siddiqi, *Earth: A Chronicle of Deep Space Exploration, 1958–2016*, 2nd ed. (Washington, DC: NASA SP-2018-4041, 2018), p. 343.
- 3 NASA, *Venus: Exploration*, <https://science.nasa.gov/venus/exploration/> (accessed 20 August 2024).
- 4 Sanjay S. Limaya and James B. Garvin, “Exploring Venus: Next Generation Missions Beyond Those Currently Planned,” *Frontiers in Astronomy and Space Sciences* 10 (2023), <https://doi.org/10.3389/fspas.2023.1188096> (accessed 20 August 2024).

Robert R. Gilruth Papers Make Their Way Home to NASA

» By Jennifer Ross-Nazzal, NASA Historian

MORE THAN 50 YEARS AGO, only two months after the final Apollo lunar landing, NASA Historian Eugene M. Emme sent a letter to former Manned Spacecraft Center (MSC) Director Robert R. Gilruth asking if he had any personal records documenting his NACA/NASA experience. Emme identified Gilruth, then only 58, as “a key person in the history of NASA” and explained the importance of preserving his records and participating in oral history interviews to tell *his* story and that of the space agency. He recognized the notable events that stretched across Gilruth’s career, from his time at Wallops Island to the Moon landings “by way of Mercury and Gemini.” Gilruth had sat for interviews for previous history projects, but his “low profile” at NASA meant that he was “a serious historical problem to the casual student and certainly the serious historian.”¹

Gilruth was born in Nashwauk, Minnesota, in October 1913. Aviation captivated his imagination as a boy, and after writing to the NACA to learn more about airfoils, he set a personal goal of working at Langley Field. He achieved that dream when he passed an engineering exam and received a job offer. In 1937, during the Great Depression, he began working on flight research. Gilruth quickly became the



↑ January 1965 portrait of Dr. Robert R. Gilruth, Director of the Manned Spacecraft Center. (Credit: NASA; image number S65-45100)

expert in the handling characteristics of aircraft, and just as World War II was winding down, he was named director of the Wallops Island Missile Range, a new facility that the NACA had built to study high-speed flight and guided missiles. That work helped the NACA to become NASA. In 1958, he became head of the Space Task Group and oversaw Project Mercury. In 1961, he became MSC’s director, overseeing Mercury, Gemini, and Apollo, and today he is recognized as the father

of human spaceflight. Gilruth passed away in 2000 at the age of 86.

The records that Emme hoped Gilruth might donate, or at least allow NASA historians access to, remained in his hands until the early 1990s, when he began to donate materials to the Virginia Tech Archive in Blacksburg.² Another collection of his papers made its way to the Virginia Air and Space Center (VASC) in Hampton, Virginia, sometime around the year 2000. Just recently, in February 2024, Rob Wyman, Langley Research Center’s history and archives program manager, learned about these records while attending the opening exhibit of “Chris Kraft: Hampton’s Unlikely Space Hero” at the Hampton History Museum.

In early March, Wyman arranged for a team of specialists, including NASA Chief Archivist Christine Shaw and Archivist Intern Emily Goss, to go to the VASC to evaluate the historical significance of the collection. It only took but a few minutes for the team to decide to ask the center if they would be open to donating them to NASA, to which they agreed.

Fifty-two years after Emme asked Gilruth about his files, they have made their way back to the space agency, where they will be processed and preserved for researchers.

Robert R. Gilruth Papers Make Their Way Home to NASA (continued)



↑ Discussing the successful and historic rendezvous in space of the Gemini 6 and 7 spacecraft are Christopher C. Kraft Jr. (left); astronaut L. Gordon Cooper Jr. (center); and Dr. Robert R. Gilruth, Manned Spacecraft Center director. Consoles in the center were decorated with small American flags, and the traditional cigars were lit to celebrate the rendezvous. (Credit: NASA; image number S65-62719)

Fifty-two years after Emme asked Gilruth about his files, they have made their way back to the space agency, where they will be processed and preserved for researchers. The collection contains a wide variety of materials about Gilruth, including awards, correspondence, magazine and newspaper clippings, oral history transcripts, personnel records, photographs, scrapbooks, and speeches.

Among some of the notable items are artifacts from Gilruth's years as director of MSC, including his Distinguished Service Medal, which he received in February 1962 from President John F. Kennedy. This medal is the highest honor that the space agency confers. During the ceremony at Hangar S, Kennedy recognized Gilruth as the head of the team managing Project

Mercury, someone "who represents the kind of American genius for organization, particularly in the scientific field, upon which we put so much of our hopes" in space.³ A shy man, Gilruth hardly spoke when ushered to the podium by the president. Of the recognition, he simply said, "I'm very, very proud."⁴

Another item that stands out is a plaque he received from MSC employees in 1969. Gilruth, who recognized the contributions that the workforce (which included employees and their families) had made to land on the Moon, gave all the wives of MSC employees small plaques to commemorate the Apollo 11 mission. Employees believed that his heartfelt recognition of all that the wives had sacrificed should be acknowledged with a similar plaque featuring a

miniature replica of the Lunar Module plaque from that historic mission along with the engraved letter from the staff.

Gilruth's papers shed new light on a man known for his quiet demeanor and management style. Much of what we know about Gilruth is thanks in part to his colleagues, Christopher C. Kraft, Paul E. Purser, Maxime A. Faget, and George M. Low. Low, former MSC Deputy Director and Apollo Spacecraft Program Office manager, credited Gilruth's approach to running Project Mercury with the success of NASA's other human spaceflight missions.

Gilruth's papers give researchers a better understanding of this shy man and his thoughts about how best to manage people. Gilruth's childhood and his father shaped his system of management. Growing up, once he decided something, even as child, his father supported him and his ideas. "I appreciated that, and I think it's a pretty good way to manage people."⁵ Over the years, Gilruth became known as someone who respected the ideas of his colleagues, someone who was collegial, never dictatorial, and easy to get along with.

In 1961, when Kennedy committed the nation to sending a man to the Moon and returning him home safely, Gilruth was aghast because he was now

Gilruth's papers shed new light on a man known for his quiet demeanor and management style.

Robert R. Gilruth Papers Make Their Way Home to NASA (continued)



↑ In a February 1962 ceremony, President John F. Kennedy pins the NASA Distinguished Service Medal on Dr. Robert Gilruth at Hangar S, Cape Canaveral Air Force Station. (Photo credit: Cecil Stoughton. White House Photographs. John F. Kennedy Presidential Library and Museum, Boston)

responsible for achieving that goal. He recognized the burden it would place on employees and their families. This collection of records illustrates just how sensitive he was to the challenges faced by the families whose husbands and fathers worked on Mercury, Gemini, and Apollo.

On 4 July 1962, when the city of Houston welcomed employees with a barbecue and parade, Gilruth had the opportunity to address those in

attendance. He could have overlooked the families, but he chose not to. He specifically addressed the burdens he knew that they encountered. Gilruth had spent more than 50 hours on flights that month and was away from his wife about half the time, and he commended the children and wives for the “unselfish way in which you have faced these difficult days.”⁶

What stands out about Gilruth in this collection is not his technical expertise,

which historians know quite a bit about, but his management style; relationships with organizations, Congress, colleagues, and contractors; duties as a center director; and the confidence he had in NASA and their ability to achieve the extraordinary and solve social ills. For instance, Gilruth foresaw a day when the Space Shuttle, which was under development, could deliver Earth-orbiting satellites to identify and help tackle pollution problems. “Certainly much work is needed,” he admitted, “but we know how to attack this kind of problem. If we want to solve it, we can, and I believe we will.”⁷ ■

Endnotes

- 1 Eugene M. Emme to Bob Gilruth, 7 February 1972, Robert R. Gilruth Papers, NASA Archives.
- 2 A copy of the finding aid at Virginia Tech is available online: <https://aspace.lib.vt.edu/repositories/2/resources/1786> (accessed 20 September 2024).
- 3 Remarks at the Presentation of NASA’s Distinguished Service Medal to Dr. Robert R. Gilruth and Colonel John H. Glenn Jr., 23 February 1962, The American Presidency Project, <https://www.presidency.ucsb.edu/documents/remarks-the-presentation-nasas-distinguished-service-medal-dr-robert-r-gilruth-and-col> (accessed 5 September 2024).
- 4 Fred S. Hoffman, “Kennedy Pins Medal on Astronaut Glenn,” *Johnson City Press* (23 February 1962): 1.
- 5 Robert R. Gilruth, interview by Stanley Elam, July 1969, Gilruth Papers, NASA Archives.
- 6 Robert R. Gilruth, Remarks at the Houston-Manned Spacecraft Center Welcome, 4 July 1962, Gilruth Papers NASA Archives.
- 7 Commencement address by Robert R. Gilruth, 30 May 1970, New Mexico State University, Las Cruces, New Mexico, Gilruth Papers, NASA Archives.



↓ Joanne Aaronson (right) with her professor, Dr. Roederer, who encouraged her to apply for a NASA internship. This photograph is included in a collection Aaronson donated to the Goddard Archives.

A NASA Internship in the Summer of 1969 Becomes Part of the Goddard Archives

» By **Christine Shaw**, NASA Chief Archivist

IN THE SUMMER OF 1969, Joanne Aaronson found herself in the midst of history. During one of the most exciting times of the Apollo program, she was working as an intern at NASA's Goddard Space Flight Center in Code 641, part of the Laboratory for Theoretical Studies.

Growing up in Baltimore, Maryland, Joanne dreamt of being an astronaut. As time went by, she changed gears and decided she wanted to work in astrophysics. While Joanne attended the University of Denver and studied physics, she was enamored with the space program. She wanted to intern

at NASA but wasn't sure how to get there. One of her professors, Dr. Juan Roederer, encouraged her to apply for an internship at NASA Goddard, and she was accepted. Throughout the summer, Joanne worked on a variety of projects, but the highlight of her time at NASA was seeing the Apollo 11 mission come to life.

Joanne donated a small collection of materials related to her internship to the NASA Archives at Goddard Space Flight Center. Included in the collection are photos from Goddard during the summer of 1969, first-day-of-issue Apollo stamps, a scrapbook, and a written recollection of her time as an intern. In her recollection, Joanne mentions how excited everyone at Goddard was about the Apollo 11 mission. She was especially excited because she was able to spend some time as a spectator in the mission control room! She even has the card to prove she was at Goddard during Apollo 11.



↑ Joanne Aaronson's card indicating that she was present at Goddard Space Flight Center during the Apollo 11 mission, now part of the Goddard Archives. (Photo credit: NASA/GSFC)

This summer, NASA celebrated the 55th anniversary of the Apollo 11 mission, and the Goddard Archives is grateful Joanne donated her records so we can relive the memories of her unique Goddard experience! ■

Building an Archive

The Complicated Archival History at NASA Headquarters

» By Julie Pramis, NASA Archivist

THE FIRST—and longest-reigning—NASA Chief Archivist, Lee Saegesser, started the archives at NASA Headquarters in 1967. At the time (and for decades after), it was not called an archives; it was the Historical Reference Collection (HRC). The distinction is not just semantic. What records were collected and how they were collected was very different from the current process. Like everything in an archive, context will help to explain.

Upon his retirement in 1997, *News & Notes* lauded Saegesser for building the collection from “two filing cabinets” of material when he started up to “2,000 linear feet of primary and secondary historical materials” 30 years later.¹ Aside from the “primary” manuscript documents typically found in

an archive, the HRC contained a few hundred published books on NASA and space in general: published both by NASA and by other sources. Books are useful to historians and others researching NASA and space history, but they are more of a reference library than an archive. The difference between this quasi-library and NASA’s actual library is that the books in the HRC cannot be checked out. The books are for on-site reference only.

Other secondary material includes the artificial collections we hold. Typically, an archive receives a transfer or donation of records from a person or office, and the entire group of records is one collection, for example, the Gordon Johnston Papers. Everything in that collection belonged to the donor, was

↓ An old sign for NASA’s Washington, DC, offices now hangs in the Headquarters Archives next to a photo of the first meeting of the NACA on 23 April 1915. (Photo courtesy of Julie Pramis)



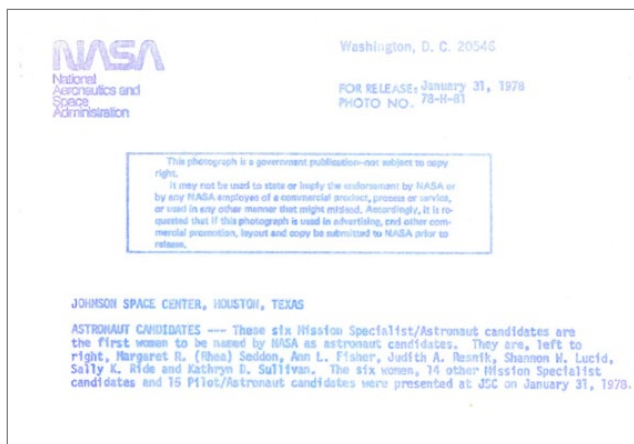
transferred at the same time (although archives can and do accept supplementary acquisitions to the same collection), and is maintained as a whole. This is an organic collection. Artificial collections are records that are collected from various sources on a specific subject or person and may be added to at any time—what you might call a reference collection.

Artificial collections are records that are collected from various sources on a specific subject or person and may be added to at any time....

When starting the collection from scratch, Lee Saegesser found, copied, and saved records from many sources to provide researchers with a coherent, centrally located resource for information on the people and projects of NASA. This setup worked well for a long time. These artificial collections are still a valuable part of the Headquarters archival collection that researchers continue to use. The Biographies series is a great example.

Still, the difference between organic and artificial collections is important. Artificial collections like the ones at Headquarters are often high in content for which NASA does not hold the copyright. That puts the onus on researchers using this material to track down the copyright owner and request permission if they want to quote it or use a scanned image of the record in

Building an Archive (continued)



← An example of one of the records in the Headquarters Archives. The caption on the reverse reads “Astronaut Candidates --- These six Mission Specialist/Astronaut candidates are the first women to be named by NASA as astronaut candidates. They are, left to right, Margaret R. (Rhea) Seddon, Ann L. Fisher, Judith A. Resnik, Shannon W. Lucid, Sally K. Ride and Kathryn D. Sullivan. The six women, 14 other Mission Specialist candidates and 15 Pilot/Astronaut candidates were presented at JSC on January 31, 1978.” NASA Photograph, 31 January 1978, 19.1.4 Women In Space, Space Flight—Human Space Flight, Box 26, Record Number 8995, NASA Headquarters Archives, Washington, DC.

tell us something about how they were used. Seemingly disparate files stored side-by-side might indicate two projects being worked on simultaneously or using information from an older project to help guide decisions in a newer one. This information is difficult to discover when records are separated and organized by subject. This is also

Archivist (17 years), Jane Odom, put all this in order. Her own farewell *News & Notes* article in 2016 described a “wildly eclectic conglomeration of items...without a systematic finding aid” that was set right by Odom into a “fully functional, professionally staffed, neat, and modern HRC.”³ It was still a reference collection, not an archive, but there were now finding aids!

Robyn Rodgers picked up in 2018 and started sorting out the documentation on the archives itself. Most importantly, it was Rodgers who in 2019 officially transformed the HRC, in name and in practice, to the NASA Headquarters Archives. The collection scope and arrangement reflect this important distinction today.

Also during Rodgers’s leadership, NASA began to bring the Headquarters Archives together with all the center archives into one Enterprise program. Holly McIntyre continued the effort as acting Chief Archivist in 2020. Before the Enterprise, each NASA center, including Headquarters, did their archives their own way. There was not much collaboration or coordination of collections based on what records other centers already had. Now all the center archives across the agency work closely together and can better support researchers, drawing on information from multiple repositories.

their work. In pre-search engine days, it was valuable to have a collection of information from different sources all in one place, even if that left work to do in tracking down copyright. But in the internet age, the need that there once was no longer exists. It is for this reason that the archivists at NASA Headquarters are not adding to these collections anymore.

There is also a significant difference in what you can find in an archival collection versus a reference collection, as well as how you find it. Context is everything in an archive, which is why—as much as possible—archivists keep records in their original order. How someone kept their papers together can

why archivists prefer to receive all the records from a donor. Archivists want everything—yes, *everything*—because whole collections provide context.

The NASA Headquarters collection includes artificial collections, organic collections, and a lot of books living together in a single repository. The 1997 edition of *Research in NASA History: A Guide to the NASA History Program* essentially said that if you need to find something, ask Lee.² (It was unfortunate that this monograph was published just months before he retired.) After Saegesser’s retirement, the collections needed an updated organization for the digital age. His successor and runner-up for longest serving Chief

Building an Archive (continued)

The books on NASA and space history mentioned earlier are now a separate collection in the Headquarters Archives—appropriately called the Historical Reference Collection. The artificial archival collections live side-by-side with the organic collections. Now the NASA Archives focus on acquiring more organic collections, like the records of employees, projects, and offices that reflect the history of NASA.

This makes it sound like the work is all done, but of course there is always more to do. Aside from acquiring and processing new collections, we continuously make improvements in describing collections, organizing them, and making them available. Even if NASA had had the same Chief Archivist for its entire existence, the collections and their organization would have changed over time with the influence of changes in technology, researcher needs and interests, and advancements in the archival profession. ■

Endnotes

- 1 NASA History Office, “Farewell to a NASA Institution,” *NASA History News & Notes* 14, no. 4 (1997): 1.
- 2 Stephen J. Garber and NASA History Office, *Research in NASA History: A Guide to the NASA History Program*, (Washington, DC: NASA, 1997), p. 19.
- 3 NASA History Office, “Farewell Chief Archivist Jane Odom,” *NASA History News & Notes* 33, no. 2 (2016): 1–3.

NOTE: The NASA Headquarters Archives will be closed for research appointments from 1 October 2024–13 January 2025.



↑ The Historical Reference Collection (HRC) (top) vs. the archival collections (bottom). Note that these photos do not show the entire collections. (Photos courtesy of Julie Pramis)

A Deep Space Network of History

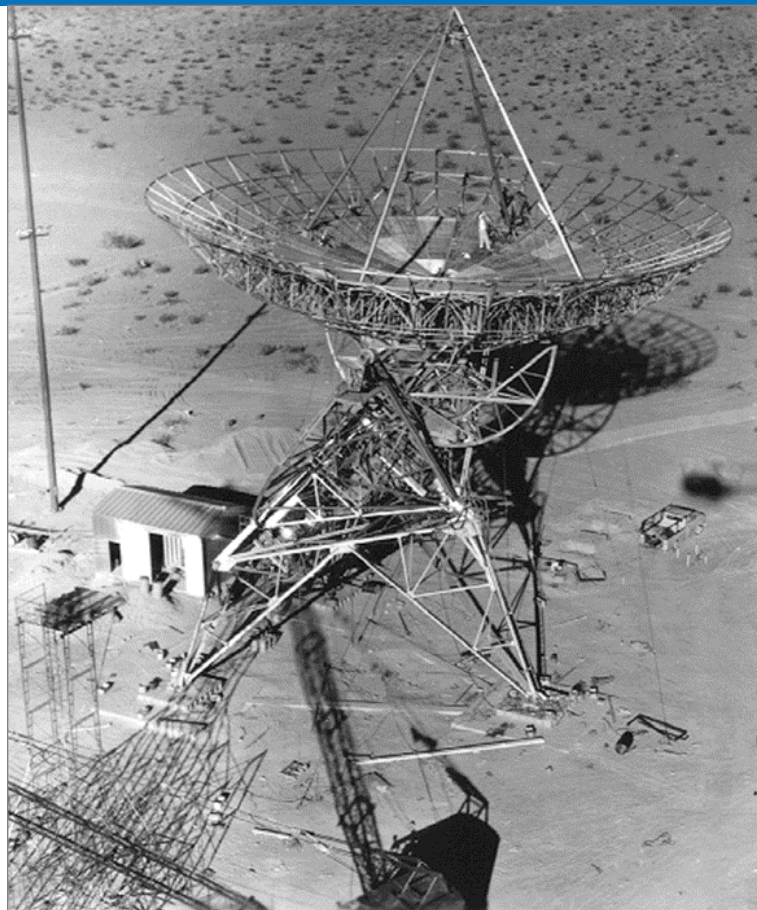
The Jet Propulsion Laboratory Archives

» By Victoria R. Castañeda, Kylie Neal, and Madison Teodo, Records and Archives, Jet Propulsion Laboratory, California Institute of Technology

THE JET PROPULSION LABORATORY (JPL) is a federally funded research and development center that focuses on the construction and operation of planetary robotic spacecraft and Earth-orbit and astronomy missions, as well as the operation of the NASA Deep Space Network (DSN), which has field sites in Goldstone, California; Madrid, Spain; and Canberra, Australia.

The JPL Archives reflect these diverse tasks, with collections representing high-level projects and instruments, Executive Council and JPL leadership through the years, and JPL's organization. These collections showcase the work of JPL projects and include resources such as paper-based documents that represent the decision-making processes for missions; photo negatives that document testing and other project phases; aperture cards, which house schematics and engineering drawings; and memorabilia that illustrate JPL's rich cultural history.

JPL's administrative and organizational histories are documented through collections featuring JPL leadership, including materials on William Pickering, Bruce Murray, Lew Allen Jr., Edward Stone, Charles Elachi, Michael Watkins, Charles Terhune Jr., Arden Albee, Robert Parks, Harris Schurmeier, Fred Felberg, John Casani, and others. Project- and mission-based collections include Ranger, Mariner, Magellan, Voyager, Viking, Galileo, Surveyor, Mars Pathfinder, Mars Exploration Rovers, Ulysses, and the Deep Space Network. Materials that explore JPL's cultural history are most evident in the extensive still-image collection, which visually represents JPL's transformation through the decades.



↑ Aerial view of the Pioneer tracking station under construction in California's Mojave Desert on 20 October 1958. (Photo credit: NASA/JPL-Caltech; image number JB-2105E)



↑ A 10 October 1936 image taken in a moment of downtime during an early rocket motor test. (Credit: NASA/JPL-Caltech; image number P-9007A)

A Deep Space Network of History (continued)



↑ Voyager Project Manager John Casani poses on 4 August 1977 with an American flag that was later sewn into the thermal blankets of the Voyager spacecraft visible behind him, as well as its Golden Record. (Credit: NASA/JPL-Caltech; image number P-19403Bc)

Some of our most-referenced collections include those of prominent JPL projects, such as Voyager and Viking, as well as those of former managers, including William Pickering and Bruce Murray. The still-image collection is one of the most requested collections, which encompasses these topics, as well as JPL staff and cultural events, spacecraft tests, facilities, and visitors.

Unexpected highlights of the JPL archival holdings include a compilation of the reference papers of JPL's first historian, the Voyager Golden Record master, and an artwork collection including original paintings!

A number of analog collections have been partially digitized, but no collection has been completely digitized for web access. As digital facsimiles become available for public use, they can be viewed online on the [JPL Archives' public-facing library of materials](#).

Unexpected highlights of the JPL archival holdings include a compilation of the reference papers of JPL's first historian, the Voyager Golden Record master, and an artwork collection including original paintings!

The JPL Archives performs in-house and ad hoc digitization efforts for paper-based materials and photo negatives—for both reference and preservation needs. A significant portion of the digitization efforts the JPL Archives staff completes are in response to reference requests—on-the-spot digitization is performed for each request addressed.

Since 2018, the JPL Archives has been performing a large-scale digitization project with an outside vendor to create a complete catalog of digital surrogates for the still-image collection, which contains over 350,000 images. Making these assets accessible is a major goal, as they are one of the most-requested media types. Work toward completing this effort is constant, as post-digitization processing is time- and labor-consuming.



↑ Ken Hodges's rendering of the Infrared Astronomical Satellite after deployment. (Credit: NASA/JPL-Caltech; image number P-20703)

A Deep Space Network of History (continued)

Over the past few years, other digitization projects handled in conjunction with JPL's Records Management team include complete digitization of the microfilm collection and the aperture card collection, which includes more than 1.2 million individual drawings.



↑ Actor Sidney Poitier (center) with JPL Director Bruce Murray (far right) and others with Voyager model on 6 March 1979. (Photo credit: NASA/JPL-Caltech; image number P-21268Bc)

Projects that are currently a high priority for the JPL Archives staff include the JPL pin documentation project, a reevaluation of the JPL History Collection, the acquisition of the former JPL Regional Planetary Image Facility (RPIF), and ongoing post-processing work for recently digitized materials. ■

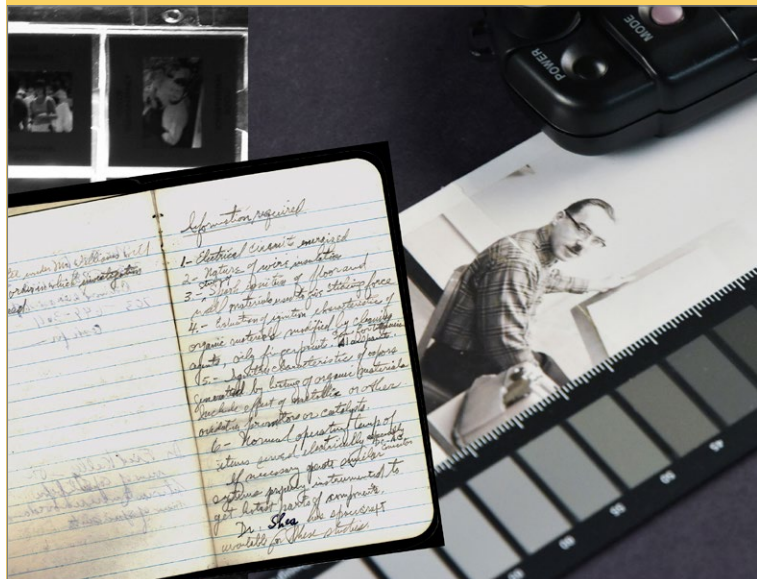
Visit the [JPL Archives website](https://www.nasa.gov/archives/) for more information!

Discover Over 100 Years of NASA History on the Archives Program Website

More than a century's worth of materials documenting the origins, people, culture, achievements, and know-how of NASA are waiting to be explored. The NASA Archives Program website provides a roadmap to a universe of documentation and imagery that is open to all.

<https://www.nasa.gov/archives/>

- ➔ Review the program's mission and scope of the collections
- ➔ Explore NASA's public-facing repositories: Ames Research Center, Headquarters, and the Jet Propulsion Laboratory Archives
- ➔ Use the Research Guide as a discovery portal to historical information about NASA



↑ An array of items are collected in the NASA Archives. (Image credit: NASA/April Gage)

NASA ORAL HISTORY

NASA Oral Histories Shared in NOAA Voices Oral History Archive

» By **Sandra Johnson**, Oral History Lead

NASA'S STATED MISSION is to “explore the unknown in air and space, innovate for the benefit of humanity, and inspire the world through discovery.” Part of that mission of discovery is to “understand the Earth system and its climate” and to “ensure that the data collected are accessible to all.” Similarly, part of the mission statement for the National Oceanic and Atmospheric Administration (NOAA) is to “understand and predict changes in climate, weather, ocean and coasts,” and to “share that knowledge and information with others.”

NASA historians collect oral histories to capture the accomplishments, lessons learned, and methods used for satisfying the agency’s mission requirements. The transcripts are available in NASA’s archives and online to share that gathered knowledge with the world. NOAA collects and disseminates oral histories from their archives and creates partnerships with other agencies and individuals to capture the human dimensions of environmental change. With over 2,400 oral histories on their NOAA Voices Oral History Archives site, it is an important resource for research and education.

The NASA History Office recently entered into an agreement to cooperate and share a selection of our oral histories with NOAA. According to the NOAA Voices project manager and oral historian, Molly Graham, “We’re excited to connect our collections by co-locating

↓ Four NASA oral history interviews with former NASA astronaut and NOAA Administrator Kathryn Sullivan are now included in the NOAA Voices Oral History Archive. (Photo credit: U.S. Department of Energy)

relevant NASA oral history testimonies within the NOAA Voices archive to enhance interdisciplinary research opportunities and provide complementary qualitative data that enriches our understanding of the interactions between human experiences and environmental phenomena.” ■

- Explore the interviews that NASA has shared with NOAA.
- Visit the entire NOAA Voices collection.
- Visit NASA’s collection of oral histories.



Personal Histories Hidden in the Archives

» By **Kylie Taffer**, NASA Archivist

FOR MOST OF MY LIFE, Kennedy Space Center (KSC) has been kept a secret from me. When I saw my dad get out of his car after a long day in the office, the badge around his neck would swing back and forth, taunting me. It was his key to another dimension, a world that I was not allowed to be part of. My younger sister used to hide in the back seat of my dad's car, hoping for a chance to sneak into KSC and see beyond the guards at its entry gates. My mother felt the same with her father as she watched him be swallowed by the gates that kept this part of our fathers' lives a mystery.

As the current archivist at KSC, I am constantly surrounded by history: the history of Kennedy Space Center and

↓ Fred Harper, my maternal grandfather, appears in the pages of a 1987 edition of *Spaceport News*. (Photo credit: NASA/Kylie Taffer)

SPC Supervisor, Employee of the Month

By John Glass

Fred Harper and Tom Westcott have been named as SPC Supervisor and Employee of the Month, respectively, at the Kennedy Space Center for the month of August 1986.

As supervisor for Reliability Engineering, Harper is responsible for overseeing System Assurance Analyses, Failure Modes and Effects Analyses and Single Failure Point Analyses for Kennedy Space Center designed support equipment and facilities.

Harper was commended for organizational skills and for a major role he played in the Ground Support Equipment (GSE) Audit and Review Project as a member of the Management Committee and Procedures/Standard Practices Review Team following the accident. He was also



Fred Harper



Tom Westcott

in support of the Orbiter Processing Facility Bridge and Personnel Access Platform modifications.

Westcott, who is a Shuttle Systems inspector, performs pre-flight inspections of the orbiter, the external tank, the solid rocket booster and all

tions, validations, flight servicing and recovery operations.

Prior to this latest assignment, Westcott was a supervisor of the Year at the American Society of Mechanical Engineers Control and Honor annual convention

the history of my own family. I drive down the roads that my father and my grandfather did, I enter buildings that they once entered, and I watch as rockets soar past my windows, shaking the glass just as they did during the Space Shuttle and Apollo programs. Because of the nature of my job, the secrets of my father's and grandfather's professional lives are suddenly at my fingertips. I touch my father's library card that he registered for in 1988, and I see my grandfather's face smiling up at me from the pages of KSC's newsletter, *Spaceport News*.

When we think of the NASA Archives, we think of the important records of NASA's big missions like the Apollo 11 mission report or a copy of Voyager's Golden Record. The NASA Archives keeps some of the most momentous records of NASA's history, but it also keeps records that illustrate the lives of employees whose behind-the-scenes work helped propel NASA's mission forward over the years.

My father's work as an environmental health manager and my grandfather's work as an electrical engineer overseeing launch vehicle reliability are illuminated by the records kept in the KSC

↓ My father, James Taffer, posing in front of Space Shuttle Atlantis in 1988. (Photo courtesy of James Taffer)



Archives. My job allows me to find reports from the Quality Assurance office where my grandfather worked, such as the Atlas Launch Vehicle Liquid Oxygen Tank accident or a survey on the White Room at Complex 19. They show me blueprints of the building where he worked, indicate which room he worked in, and what his office

As I follow in their footsteps as a KSC employee, I get the unique benefit of having the job that places me the closest to their histories.

(continued on page 21) »

The Kennedy Space Center Archives

A Peek Inside

» By Kylie Taffer, NASA Archivist

Beginnings of the Kennedy Space Center Archives

FIVE YEARS AFTER the inception of Kennedy Space Center (KSC) in 1962, Frank Jarrett became the center's first historian/archivist, working from 1967 through 1980. It was during his tenure that the KSC Archives was created in 1976 during the celebration of the American Bicentennial. Following Jarrett, Ken Nail became

the center historian, working alongside esteemed archivist Elaine Liston, from 1982 to 1997. There was no KSC historian from 1997 onward.

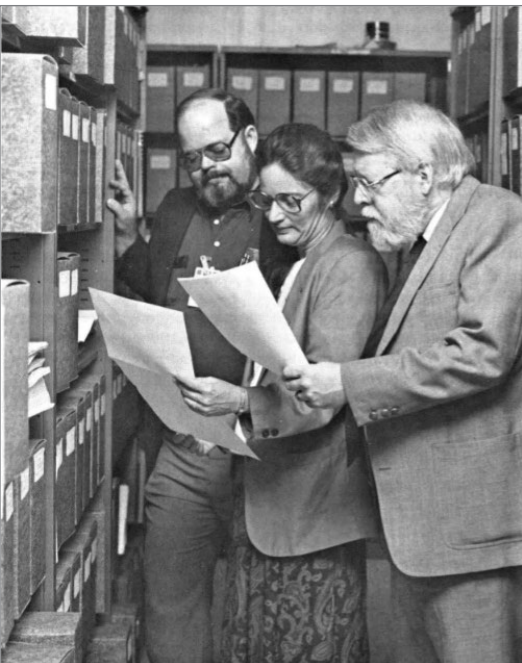
Elaine Liston worked at KSC, primarily as its archivist, from 1982 through 2022. Although her background was in library science, she served as the KSC history point of contact for both internal and public requests. Barbara Green, a library technician/archive

aide, worked intimately with the KSC Archives from 2000 to 2001. The current KSC archivist is Kylie Taffer, who is working on the migration of KSC's archival records to a digital database.

Collections Overview

The KSC Archives holds in trust over 3 million pages of documents and more than 55,000 photographs. The archive holdings provide historical evidence of the growth and development of KSC from 1958 to the present. Highlights include a large photo collection, a document collection, and the ever-popular collection of *Spaceport News*. A backlog of records that have yet to be catalogued exists in an offsite warehouse. Looking forward, some of the center's collections will be redescribed in more detail, giving a more in-depth look into their contents.

↓ **Left:** Ken Nail, left, KSC historian and archivist, shows some of the vast collection of documents he has received, archived, and stored to Dr. Ruth Cowan and Dr. W. David Lewis. (Photo credit: NASA/KSC) **Right:** Elaine Liston [sitting] assists professors Dr. Henry Dethloff (left) and Dr. Lee Snaples (right) with their studies of KSC history. Standing is Barbara Green, library technician. (Photo credit: NASA/KSC)



The Kennedy Space Center Archives (continued)



↑ A look inside an archival box. This particular collection focuses on STS-105 and includes a “NASA Facts” sheet, a photo of the crew, a magazine cover, a couple of brochures, and a mission patch. (Photo credit: NASA/Kylie Taffer)

The Photo Collection

Over 50,000 photos make up the KSC Photo Collection. This collection portrays all the center’s major historical events, including every mission launched from the center, and sometimes from the adjacent Cape Canaveral Air Force Station (now Space Force Station), as well as many photographs of launch preparation, crawler transport, and the stacking of different space vehicles. Of special interest are photos from the early days of KSC, what the land looked like before the establishment of the center, artist spacecraft renderings, KSC events, and award ceremonies.

Photos in this collection come from a variety of sources, including the press site, the public affairs office, and donations from past center directors and other individuals. The earliest catalogued photo is from 1953.

The Document Database

The largest component of the KSC Archives is the documents database, consisting of items that take up 69 ranges in the Kennedy Space Center Headquarters Building.

The earliest record from this database is a set of newspaper clippings dating from 1943 to 1951, reporting on the pioneering rocket and space work of Edmund Sawyer and his employees. Another notable collection is the NACA documents collection, which includes news releases, reports, and documents detailing the planning and processes behind the formation of the national space program.

Some of the database’s largest collections detail uncrewed launches and the Apollo and Space Shuttle Programs. Other large collections include press kits (1963–2003); KSC news releases

(1959–2005); telephone directories (1961–present); and collections that highlight the origin, construction, and importance of facilities such as the Vehicle Assembly Building, the Launch Umbilical Tower, and the Crawler-Transporter.

Some of the major players who impacted the center have collections that highlight their background and achievements and detail their decision-making. Well-known figures include Wernher von Braun, Kurt Debus, Andrew Pickett, and Rocco Petrone, each of whom has a collection made up of news releases, memoranda, personal notes, and correspondence.

Other collections are donations from long-time employees of KSC who wanted to share and preserve their firsthand knowledge. Angelo Taiani, a test support engineer who worked for KSC during the Apollo program, donated an extensive set of photos, background material on early tests with balloons, and documentation on smoke and wind tests. Annie Taylor, the manager of the Administrative Operations Branch of Project Management, donated facility construction photographs. Richard Sweetsir, a former high school science teacher and president of the Northeast

Other collections are donations from long-time employees of KSC who wanted to share and preserve their firsthand knowledge.

The Kennedy Space Center Archives (continued)



Florida Astronomical Society, donated a diverse and extensive collection of material including scrapbooks and newspaper clippings.

Spaceport News

Spaceport News was a monthly publication for KSC employees, founded in December 1962. Each issue featured news relevant to the KSC community, including the upcoming launch schedule, important center-wide news and decisions, events at the center and in Brevard County, and featured employee awards, along with photographs. *Spaceport News* continued until 2010, when it was replaced by *Spaceport Magazine*, last published in 2020. The center now uses the “KSC Daily News” email blasts to publish news to employees.

How to Research in the KSC Archives

Kennedy Space Center is a restricted government installation, and the Archives are not available for the public to research in person. Reference requests can be sent by email to the center archivist. ■

↑ An issue of *Spaceport News* from January 1989 features preparations for the STS-29 mission. (Photo credit: NASA)

Personal Histories Hidden in the Archives (continued)

phone number was. They show me awards he won and who his boss was. My job allows me to see my father’s STS-109 Launch Honoree award in *Spaceport News*, where his desk was, and the handbook my father used as an industrial hygienist in 1990.

As I follow in their footsteps as a KSC employee, I get the unique benefit of having the job that places me the closest to their histories. Within the documents and photos in the archives,

I see slivers of my bloodline and begin to understand the work that my father and my grandfather did. Although they weren’t astronauts, center directors, or in the control room, the projects and missions they supported are illustrated and kept safe for generations to come in the archives.

Not all employees at NASA are always celebrated, but, in the archives, their records are kept the same as any other, although not at the same volume of,

say, Sally Ride’s or Buzz Aldrin’s. This is true of any employee at NASA; the tiny, mundane details that make up our daily lives, like our desk location or our work email address, could someday be buried treasures for our future relatives to find. When the time comes and portions of the NASA Archives are available to be searched by the public, think of all the small details that make up a life that will be remarkable to those searching. ■

Houston, We Have an Archive

Real Use Cases of the Johnson Space Center Archives

» By Jessica Kelly, NASA Archivist

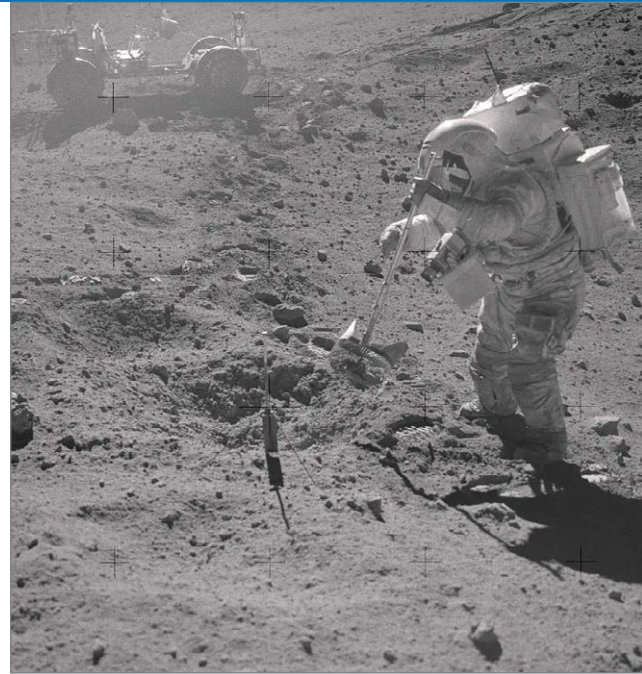
FOR MANY PEOPLE, “archives” conjures an image of a windowless concrete basement of collapsible shelving you manually crank apart, shuffling through gray acid-free boxes for treasure like an information archaeologist. While it is easy to picture an archive with boxes neatly in rows, it is harder to picture the actual contents, and many might wonder: what is in an archive? Let’s take a look at the archive at Johnson Space Center (JSC) as an illustration of what one can find inside.

The Lyndon B. Johnson Space Center, located in the fondly nicknamed “Space City” Houston, Texas, has long been known as the home of NASA’s Mission Control and all things related to human spaceflight. Belonging to a fiercely proud community, it is no wonder that the inception of the Johnson Space Center Archives traces back to 1962, soon after the center was established, making it now one of the agency’s largest and most mature collections of historical primary source material. The collection grew as the History Office gathered primary source materials to write and publish chronologies and histories of each human spaceflight program. The evidence of these programs and “firsts” now makes up the bulk of the archival collections formerly known as the JSC History

Collection, providing insight into human spaceflight programs like Apollo and Space Shuttle, JSC’s projects, and its people. NASA historians reference the collection to prepare talks and write about our history. The JSC community also relies upon the archival collection to find answers to questions.

As a new generation of scientists and engineers works toward the impressive feat of returning humans to the Moon for the first time in more than 50 years, they look back to Apollo records for guidance. During

As a new generation of scientists and engineers works toward the impressive feat of returning humans to the Moon for the first time in more than 50 years, they look back to Apollo records for guidance.



↑ Apollo 16 astronaut John Young collects a lunar sample with a rake at Station 5 of the Descartes Highlands landing site. The project manager for Artemis Geology Tools consulted the Johnson Archives to guide the work in developing sampling tools for the Artemis missions. (Photo credit: NASA; Image number AS16-110-18020)

the height of the COVID pandemic, the project manager for Artemis Geology Tools requested help from JSC’s History Office to support their work “designing the next generation of lunar sampling tools and [ensuring they] took into account lessons learned from Apollo,” specifically starting with Requirements Documents and Design Review Milestones. While NASA does have records and information like this at the National Archives and Records Administration (NARA), the Artemis office preferred to work with NASA’s internal History and Archives Branch, citing easier and faster access. Jennifer Ross-Nazzal, the historian at JSC, assisted with the request and recalls months of back-and-forth communication with the researchers, searching the archives for documentation on different hand tools such as rakes and shovels, looking for requirements

Houston, We Have an Archive (continued)

and milestone reviews, and locating additional documentation by finding memos, letters, and reports authored by the people designing and overseeing the manufacture of the Apollo lunar hand tools. After the team received all the digitized items pulled from the JSC Archives, they sent a note of thanks: “We carefully reviewed each document, wrote up summaries of information that was relevant to us, and created a repository of these documents if we ever need to reread them. Having this insight has provided our team a thorough understanding of what was done in Apollo, why decisions were made. It has put us in a really good position as we start designing geology tools for the Artemis Program and has motivated us to keep good records for those who come after us.”

When looking to begin a brand-new program, or open and organize a new office, NASA does not want to start from scratch.

When looking to begin a brand-new program, or open and organize a new office, NASA does not want to start from scratch. As the Constellation program was about to kick off in 2005, the JSC Engineering Directorate contacted the History Office to learn how their directorate was organized to support the Apollo and Space Shuttle programs. The History Office was able to provide

them with organizational charts created during those programs, along with important contextual information about how and why Engineering reorganized the office. Providing these details ensures NASA does not waste any time or effort and saves money by building on the successes of the past. Historian Jennifer Ross-Nazzal points out, “So many people [want] to build on the foundational success of these programs and not just start from square one,” so they look to history for answers.

NASA is known for spaceflight and aeronautics, but the agency is much more than its hardware. When children draw rockets in crayon, they do so with a helmeted human in the window. People are inspired by and fascinated with the real people behind the technological innovation and inside the spacesuits. NASA has always been filled with brilliant minds and passionate people who spent their careers furthering the agency’s mission of discovery, and that is reflected by some of the more personal items in our collections. While some NASA center archives preserve scrapbooks from clubs or photos and paraphernalia from center parties and activities, the JSC Archives captures the humanity of spaceflight primarily through its extensive Oral Histories collection. The JSC Oral Histories Program began in 1996, capturing hundreds of firsthand stories and, in some cases, personal photographs that feature the “humans” behind all aspects of spaceflight.

It is no secret that NASA’s human spaceflight effort is on a Moon-to-Mars

trajectory; a crewed Mars mission has been in the agency’s sights since the early days of NASA. In preparation for future human exploration through a better understanding of the Red Planet, the Mars Sample Receiving Project (SRP) is preparing to bring back the first Martian samples to Earth. To assist in the planning of SRP, the Systems Engineering team reached out to the JSC Archives for documents from the Lunar Receiving Laboratory (LRL) during the Apollo program. Documents such as safety manuals, requirements for proposals, operations descriptions, readiness inspections, job descriptions, equipment lists, organization and staffing information, and different versions of processes and policies were useful references to plan a new program to preserve Martian samples and keep humanity safe. At the time, most of these carefully collected materials on the LRL were considered temporary records by NARA and would have been destroyed instead of being accessible today. Thankfully, the JSC Archives preserved these records, and the office has them available to answer reference requests for the SRP and many future projects.

The JSC Archives continues to grow as projects conclude, organizational changes occur, employees retire, and history continues to be made. Through it all, the mission holds steady. As a new generation at NASA works diligently to return to the Moon and go beyond, the JSC Archives stands ready to provide insight into our past and capture our current work for future generations. ■



← Historical documents from the NASA Glenn Archives. (Photo credit: NASA/Bob Arrighi)

Glenn Archives Marks 25th Anniversary

» By Robert Arrighi, NASA Historian and Archivist

IN DECEMBER 1986, historian Virginia Dawson wrote to NASA management, “As a professional historian and contractor for a book-length history of Lewis Research Center [today, NASA Glenn], I would like to bring to your attention the need for a Lewis Archives. It is extremely important that documentation concerning the center’s contributions to the history of aircraft and space propulsion not be lost.”¹ Subsequently, historian Michael Gorn noted that the center’s lack of an archives forced him to omit most of its extensive flight research activities from his book *Expanding the Envelope: Flight Research at NACA and NASA*.

At the time, the center’s only dedicated history presence was a point of contact for the Headquarters History program. When that person requested to be relieved of his history duties in early

1991, center management decided to elevate the role and selected technical editor Sheree Sievert for the new History Coordinator position. She had no formal background in the field but had recently written a 20-page overview of Lewis’s history to mark the center’s 50th anniversary.

Under the guidance of NASA’s new chief historian, Roger Launius, Sievert became the first center employee to take an active role in the agency’s history program. While maintaining her primary duties as an editor, Sievert attended the annual NASA History meeting, wrote articles on historical topics for the center newsletter, and began informally acquiring historical materials for preservation. Her office became home for historical newsletters, directories, biographies, and photographs.

When Sievert left the agency in 1993, the position was filled by another editor, Charles Perich. Perich maintained and added to what was referred to as “the Historical Documents Collection” before retiring in 1996. He was succeeded by the center’s records manager, Kevin Coleman.

In an effort to raise local awareness of the NASA history program, the agency decided to hold its History Advisory Panel meeting at Glenn in October 1998. The meeting covered an array of topics, including new Glenn-related book projects. Afterward, Associate Administrator of the Office of Policy and Plans Lori Garver thanked Center Director Donald Campbell for his support. “I am pleased that the success of this meeting encouraged you to give history a higher profile at Lewis.” That fall, Coleman was named history officer, and the center began a search for a full-time archivist.

The Glenn History Collection formally began in February 1999 with the hiring of Bonita Smith as archivist. Smith began cataloging the 200 boxes of historical materials that had been previously collected, networking with retirees, and conducting oral histories. She actively acquired materials from various center organizations, records management, and retirees. In November 2000, the historical materials were relocated from lektriers in a warehouse to a dedicated archival area in the basement of the Library Services Building.

Glenn Archives Marks 25th Anniversary (continued)

During this period, Coleman facilitated the acquisition of key collections, including former Center Director Abe Silverstein’s personal papers and NACA-era Director’s Office correspondence. He also oversaw several contract history projects, a centennial-of-flight symposium, and a series of documentation projects to mitigate the loss of historic facilities. In 2005, Coleman received the very first NASA History Award for his contributions.

A series of personnel changes ensued. Bob Arrighi, who had spent the previous two years as a Glenn subcontractor, was hired as a second archivist in 2003 but was soon tasked with the historic mitigation projects. Smith left the agency in early 2004 and was replaced by Eleanor Blackman. Anne Mills began as a co-op student in 2004 and took over as records manager and history officer following Coleman’s retirement in 2008. In this role, Mills has steadfastly provided the History Office with the opportunity to review documents under the Records Management purview.

↓ Boxes of documents from former Glenn Director Edward R. Sharp. (Photo credit: NASA/Bob Arrighi)



The History Collection continued to grow in the late 2000s, including the acquisition of a large 16-millimeter film collection. In 2008, the processed History Collection was relocated to the Glenn Science and Engineering Library’s new modern location in the Research Analysis Center, while the unprocessed materials and films were moved into empty test cells in the Engine Research Building.

Following Blackman’s departure in early 2008, Arrighi began balancing archival work with his historical documentation and research activities. It was around this time that the History Office obtained a scanner, and the digital collection began expanding exponentially. The majority of the processed collections have subsequently been digitized and large quantities of born-digital records have been acquired.

Today, the Glenn History Collection is known as the Glenn Archives and contains documents from the Director’s Office; center newsletters; press releases; NACA Inspection books; materials regarding the Centaur, space station power system, and various aer propulsion programs; oral histories; and the personal papers of Abe Silverstein, John Sloop, Bruce Lundin, Irving Pinkel, and others. The Glenn Archives also includes films, audio recordings, three-dimensional objects, and artwork. A number of collections have recently been incorporated into NASA’s Virtual Archives, available to the agency’s employees.

As a result of the agency’s transition to an enterprise-based organization, the Glenn History Office became part of the new History and Archives Division



↑ Archived records held in Building 142 at NASA Glenn. (Photo credit: NASA/Bob Arrighi)

in NASA’s Office of Communications in October 2022.

Since its establishment 25 years ago, the Glenn Archives has grown dramatically. Its materials have supported the creation of an array of books, articles, and websites; provided information that has influenced center decision-making; and furnished answers to countless reference requests. ■

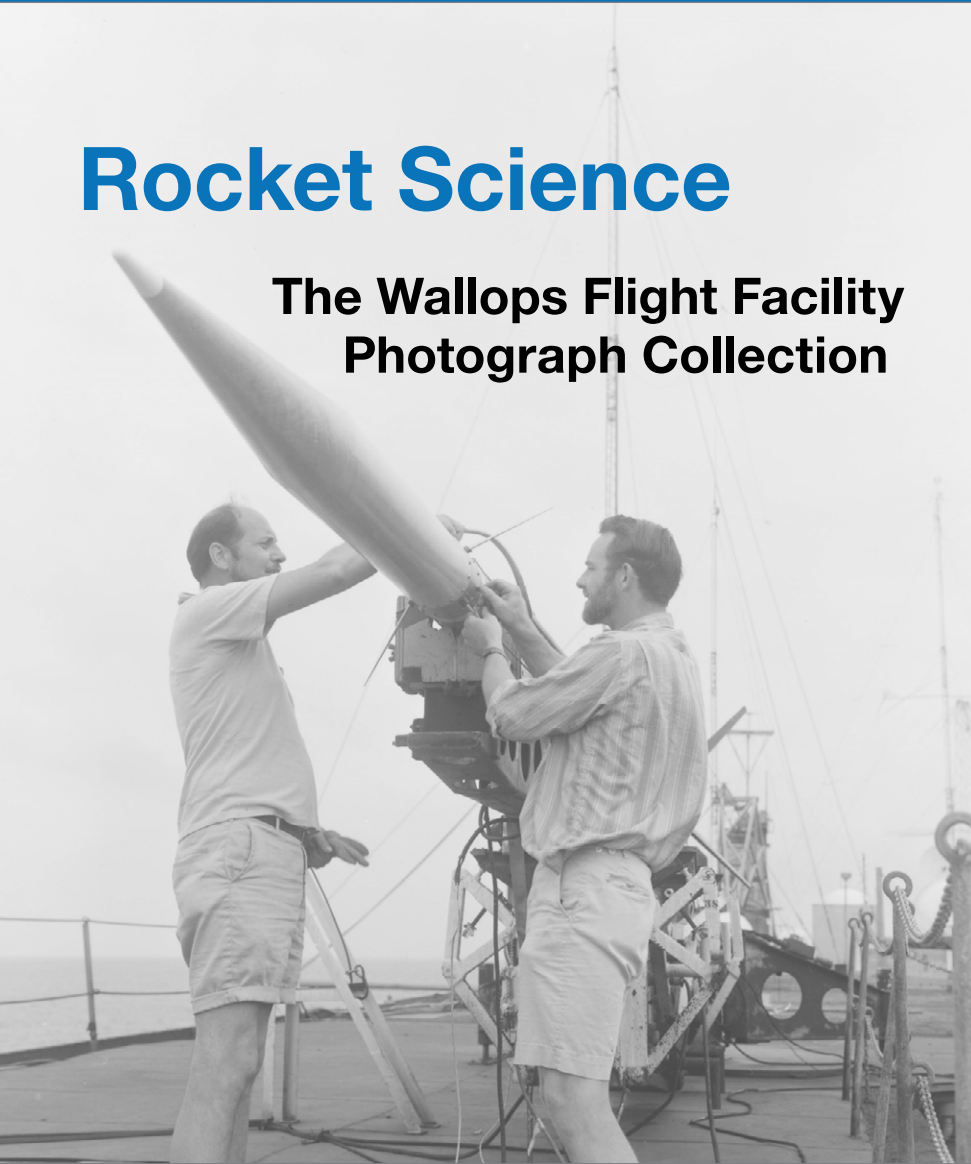
Visit the [Glenn History website](#)

Endnote

- 1 Virginia Dawson to Lynn Bondurant, “Archives for Lewis Research Center,” 3 December 1986, NASA Glenn Archives. Dawson’s NASA Lewis center history, *Engines and Innovation: Lewis Laboratory and American Propulsion Technology*, was published in 1991.

Rocket Science

The Wallops Flight Facility Photograph Collection



» By **Zoe Costanza**, NASA Project Archivist

THE WALLOPS FLIGHT FACILITY was founded on 7 May 1945 on Wallops Island on the Eastern Shore of Virginia. Wallops Island was originally known as Kegotank Island and Accocomson Island, home to the Native American Pocomoke-Assateague and Chincoteague people. Originally established for suborbital and atmospheric research, Wallops first operated under the name “Auxiliary Flight

Research Station,” and then “Pilotless Aircraft Research Station.” The Langley Laboratory in Hampton, Virginia, the first of the National Advisory Committee for Aeronautics (NACA) centers, initially managed operations at Wallops. Once NASA was established in 1958, it took over direction of the former NACA centers and facilities, including Wallops Station. With nearly 80 years of providing flight and launch

← WI-65-0539. Title: Assembly Payloads Launcher (w/Vehicle) Mobile Range (Croatan). Date: 1965. Photographer: Howard.

services, the Wallops facility has a massive photographic record of its activities. The island was also home to the Naval Auxiliary Air Station Chincoteague for a number of years, before it was closed and operations transferred to NASA in 1958.

In 2015, a team of Wallops Flight Facility and Goddard Space Flight Center personnel performed a holdings review of a significant analog photograph collection, deeming it necessary (for purposes of preservation, risk reduction, accessibility, and information gathering) for these photos to be digitized and transferred to the National Archives and Records Administration (NARA). To accomplish this, the NASA Archives Program created a project to digitize the photographs and brought on Zoe Costanza as a project archivist to perform archival and logistical support for the process.

The Wallops photo collection is vast, with an estimated 50–60 thousand photographs to process. Metadata, including unique identifier numbers, photo titles, dates, and photographers, must be captured, and the photographs must be temporarily rehoused in preparation for digitization. The actual

The Wallops photo collection is vast, with an estimated 50–60 thousand photographs to process.

Rocket Science (continued)



↑ **Left:** WI-65-1026. Title: Weather Balloon Launching. Date: 13 July 1965. Photographer: Hansen. **Right top:** WI-65-1304. Title: Chinco Ponies and Colt. Date: 1964. Photographer: Carson. **Right bottom:** WI-65-0037. Title: Point Barrow Equipment being loaded at Wallops. Date: 7 January 1965. Photographers: Ewert, Hansen.

digitization process will take place at Johnson Space Center in Texas, after which the records will be sent to NARA and the digital images preserved and made accessible through the NASA Archives Program.

Among the incredible quantity of images (both prints and negatives) are gems from Wallops’s past. Photographers focused on rockets, sounding balloons,

building construction, and launches, but they also captured more mundane moments, like groups of students visiting the campus, or personnel award ceremonies. There are some surprisingly intense photos, like rocket launch mishaps and evacuees sheltering at Wallops after a hurricane. Then there are photos that amaze, like the image of a rocket launching with a total solar eclipse visible in the background.

Once the Wallops photo collection is digitized and made accessible, curious minds will be able to peruse these photographs that capture the Wallops Flight Facility’s long, rich history. ■

 [Learn more about the history of Wallops Flight Facility](#)

Marshall's History Preserved for Generations to Come

» By Jordan Whetstone, NASA Archivist

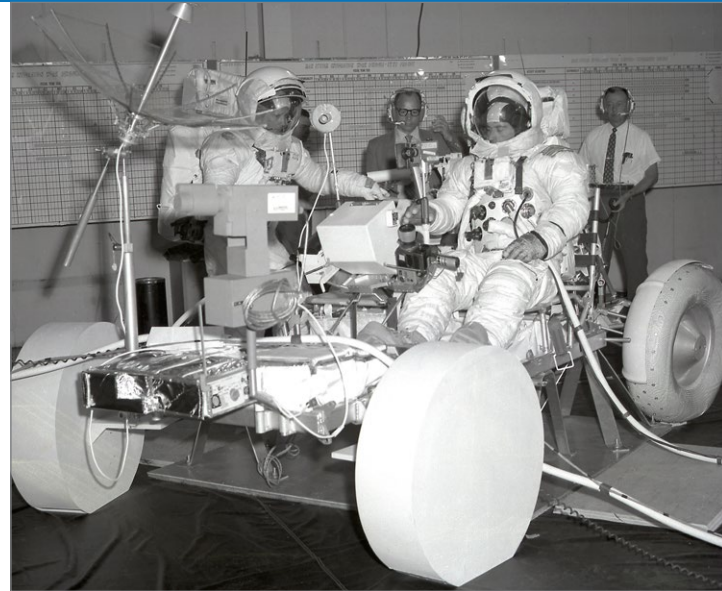
LOCATED ON REDSTONE ARSENAL in Huntsville, Alabama, the George C. Marshall Space Flight Center was founded 1 July 1960. Both the facilities and the majority of the employees were transferred from the U.S. Army Ballistic Missile Agency. Oral history interviews with early employees indicate it was a smooth transition: desks stayed the same; just the letterhead changed. A formal dedication ceremony was held 8 September 1960, with remarks given by President Dwight D. Eisenhower.

Marshall had a highly prolific History Office from its inception, though it was closed in the early 1970s for budgetary reasons. It was not until the 1990s that it was reopened to aid in the research of the center's history book, [*Power to Explore: A History of Marshall Space*](#)

[*Flight Center, 1960–1990*](#). The first collection of the Marshall Archives was the research and oral histories gathered during that project. Over the years, the collections have grown to include more than 2,000 linear feet of documents, audiovisual materials, photographs, and oral history interviews that chronicle Marshall's many contributions to science, engineering, and spaceflight over the course of its almost 65 years of history.

Materials related to the design, development, and testing of programs such as Apollo, the Lunar Roving Vehicle, Skylab, the Space Shuttle, and the International Space Station (ISS) can be found in the Marshall Archives. While Marshall is often referred to as a propulsion center, it engages in scientific programs such as the Hubble Space Telescope, the Chandra X-ray Observatory, and the Environmental Control and Life Support System used on the ISS. These programs and projects make up the Marshall Archives foundational collections.

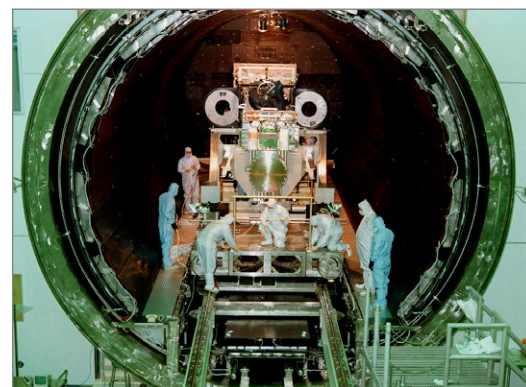
← President Dwight D. Eisenhower and Mrs. George C. Marshall unveil the bronze bust of General George C. Marshall during the dedication of Marshall Space Flight Center. (Photo credit: NASA)



↑ Apollo 16 astronauts John Young (right) and Charles Duke (left) participate in a final crew training on the Lunar Roving Vehicle (LRV) at Marshall in 1970. (Photo credit: NASA)

Marshall's historic facilities, such as the Neutral Buoyancy Simulator, Dynamic Test Stand, S-IC Test Stand, and X-Ray and Cryogenic Facility, are also represented within the archives' holdings. Notable Apollo-era rocket testing was performed in the S-IC Test Stand at Marshall prior the creation of Stennis Space Center, with locals claiming the testing shattered glass in

↓ In this 1997 photo, the High Resolution Camera for the Chandra X-ray Observatory is being integrated with the High Resolution Mirror Assembly in Marshall's 24-foot Vacuum Chamber at the X-Ray Calibration Facility. (Photo credit: NASA)



Marshall's History Preserved for Generations to Come (continued)

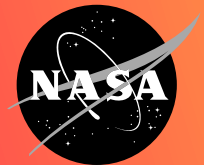
downtown Huntsville on an overcast day. The S-IC Stand and its corresponding blockhouse were updated and are currently being used by Blue Origin for engine testing in the Rocket City once more.

While gaps inherently exist within any archival collection, the Marshall Archives strives to work with retirees, program and project offices, and Center Records Management to continuously collect materials pertaining to Marshall's unique history. As NASA endeavors to explore our planet, our solar system, and our universe, and send humans back to the Moon and then on to Mars, the archives program at Marshall will be preserving the records of these activities along the way. ■



↑ All five F-1 engines for the Saturn V S-IC stage are tested at Marshall's S-IC Static Test Stand in 1965. (Photo credit: NASA)

NEW from the NASA HISTORY OFFICE



Going Beyond

The Space Exploration Initiative and the Challenges of Organizational Change at NASA

John M. Logsdon describes the steps George H. W. Bush's administration took to try to reform NASA, the conflicts that arose, and the lasting impacts.

COMING SOON TO
<https://www.nasa.gov/history/>





← An aerial view of early construction of Launch Pad 39A. (Photo credit: NASA)

veiled historic treasures that await discovery in the NASA archives.²

Rockets Need Space

NASA established KSC in the early 1960s after U.S. President John F. Kennedy and the space agency aspired to land an astronaut on the Moon. During the spaceport’s first years, construction crews built Launch Complex 39A and 39B, dredged a 12.5-mile access canal, laid Alabama River pebble on the famous crawlerway, and erected the Vehicle Assembly Building (VAB). All of these were critical components of NASA’s land-and-development-intensive Saturn V launch system that would take NASA astronauts to the Moon.

↓ This map of KSC’s northern boundary was made shortly after NASA’s acquisition of Ross Hammock. (Photo credit: NASA/KSC)

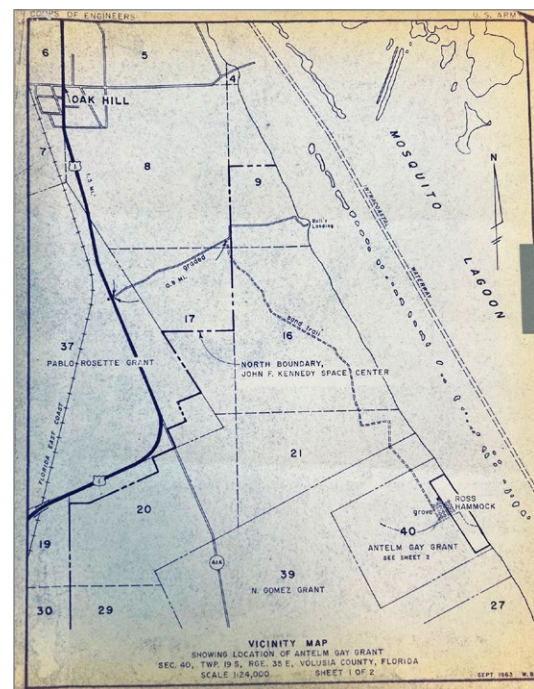
A Dig into the Archives Reveals Archaeological History at NASA’s Kennedy Space Center

» By Brad Massey, NASA Historian

THIS SEPTEMBER, the NASA History Office held a symposium in honor of NASA archaeologist Thomas L. Sever. A pioneer in the field of space archaeology, Sever used Landsat satellite images to identify ancient Mayan sites and more. In the process, he demonstrated how archaeology, long centered on slow and systematic digging in the field, could be revolutionized by space technologies.¹ Sever’s work highlighted how NASA’s space technologies sometimes have unexpected, and serendipitous, applications and ramifications.

This is a fact I was reminded of when I came across Box 8 in the “Community Relations Collection” in the Kennedy Space Center (KSC) Archives.

The documents in Box 8—which include letters from the Brevard County Mosquito Control Board, National Park Service, and KSC leadership—reveal a complex story of the intersection of Saturn V rocket technology, ancient Indian burial mounds, and the ruins of a British plantation. It is a unique Florida space tale that highlights the



A Dig into the Archives Reveals Archaeological History at NASA's Kennedy Space Center (continued)

The three-stage Saturn V was the most powerful rocket ever built, and launch officials feared it might also be the noisiest and most dangerous. In addition to the deafening roar it blasted at liftoff, KSC leaders worried about potential accidents. How big and loud might an explosion be on the pad? Where would debris land if an accident occurred shortly after liftoff? To alleviate these fears, NASA leaders decided that the most prudent course of action was to create a large land buffer between launch operations and Florida residents.⁴

So NASA expanded its landholdings on Merritt Island. By the end of 1963, the agency controlled over 140,000 acres of land. NASA leaders knew much of this land would likely never be developed. The sprawling acreage, however, both created the buffer they craved and gave KSC room to grow. It also made the agency the steward of one of the most important prehistoric archaeological sites on Florida's east coast: Ross Hammock.

Indian Burial Mounds

Ross Hammock is just southeast of the small town of Oak Hill, Florida. The site is home to two large Indian burial mounds, one of which is roughly 23 feet tall. Ross Hammock is also the location of an Indian village midden (garbage dump) and ruins of what researchers thought, in 1963, was a Civil War–era salt manufacturing operation.

In the early 1960s, archaeologist unearthed pottery sherds from the site that were roughly 2,000 years old, and studies suggested that the site's population reached its apex 1,200 years ago. These Floridians, the evidence suggested, did not practice agriculture, but

were hunter-gatherers who subsisted on shellfish and other foods from their natural environment. Around the time of the NASA acquisition, one archaeologist claimed the Ross Hammock area was the most important ancient Indian archaeological site on Florida's east coast south of St. Augustine.⁶

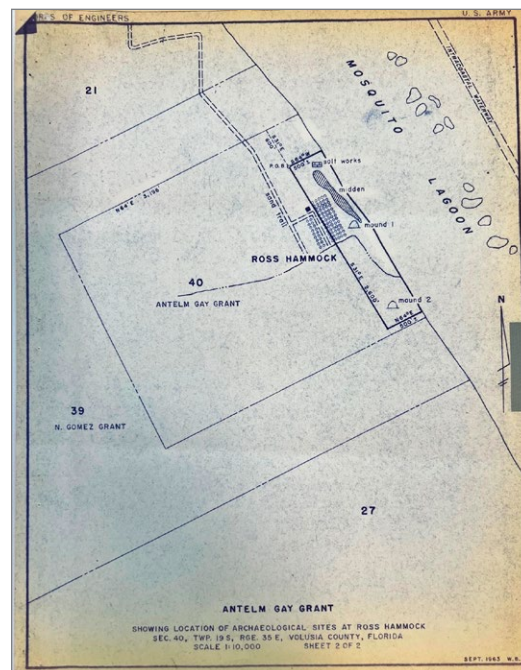
Shortly after NASA's plan to acquire Ross Hammock went public, the agency received a letter from Elbert Cox, an official with the U.S. Department of the Interior's National Park Service. This letter, which is housed in Box 8 in the KSC Archive, is one of the earliest documents that provides a window into NASA's archaeological stewardship on Florida's coast.

In the letter, Cox wrote that “through the Florida State Museum we have learned that proposed land acquisition by NASA southeast of Oak Hill, Florida, will encompass several archeological sites at Ross Hammock.” Several of the sites, Cox pointed out, were largely undisturbed. What did NASA plan to do with the area?⁷

Archaeological Stewardship at the Spaceport

Cox, of course, knew that NASA was not in the business of Florida ground-based archaeology. The agency, however, was in the business of building public support for its missions and being intentional about the lands it acquired in Florida. Agency officials, therefore, did not leave Cox's query unanswered.

The KSC Archives reveal that KSC officials, National Park Service employees, a University of Florida professor, a local archaeology group, and more exchanged a flurry of correspondence beginning in early 1963. A. H. Bagnulo,



↑ Map of Ross Hammock. Note the mounds, midden, and “salt works.” (Photo credit: NASA/KSC)

Director of the Facilities Engineering and Construction Division at KSC, was an author of some of these letters. On 16 December 1963, Bagnulo wrote to the U.S. Army Corps of Engineers, the entity responsible for coordinating KSC land acquisition and development. Bagnulo told the Corps about the historic significance of the Ross Hammock site and informed the group that NASA did not plan to develop the area. The agency's policy, Bagnulo wrote, was to protect mounds, ruins, and middens on NASA property whenever possible.⁹

And Ross Hammock did, in fact, need protecting. Before NASA acquired the parcel, two archaeologists conducted a brief dig of the Indian mounds. In their report they noted that treasure hunters had dug into the tops of the mounds. The site area had also been inadvertently disturbed by mosquito control officials. The Brevard County

A Dig into the Archives Reveals Archaeological History at NASA's Kennedy Space Center (continued)



↑ John Corbett and John Griffin of the National Park Service examine relics found at Kennedy Space Center. (Photo credit: NASA/KSC)

...treasure hunters had dug into the tops of the mounds. The site area had also been inadvertently disturbed by mosquito control officials.

Mosquito Control District, not knowing of the area's significance, had dug mosquito control canals in the area. In a letter to Bagnulo dated 20 December 1963, Brevard Mosquito Control District Director Jack Salmela told the KSC official about the digging and expressed that care would be taken by the Control District to ensure it did not again disturb the area.¹¹

Studies and Signs

As correspondence was sent back and forth to various agencies, NASA took other actions to help protect the site. To dissuade treasure hunters from unlawful digging, NASA erected signs stating that any person without authorization who injured or destroyed a designated historic area would be subject to arrest. Officials also closed roads leading to Ross Hammock with a cable and padlock.¹³

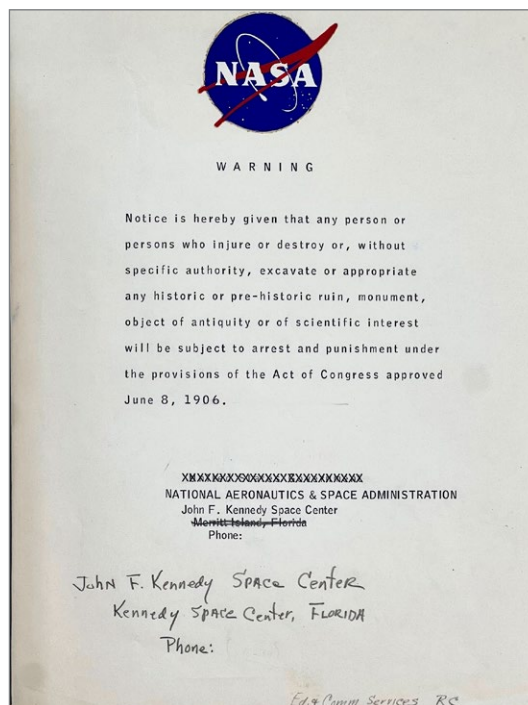
The agency also granted access to the site to archaeologists in 1964 and, later, sponsored the work of Florida archaeologist George Long. Florence Andrews wrote a letter to NASA Community Development Officer Paul O. Siebeneichen on 1 July 1964, thanking him for allowing her research

→ Draft for the signs NASA installed at Ross Hammock. (Image credit: NASA)

team to continue to explore the site. In 1966, George Long mapped the locations of archaeological sites at KSC, collected artifacts, and helped prepare museum exhibits for KSC's planned Visitor Information Center. In all, NASA supported the efforts of local archaeologists wanting to research the area and preserve its history.¹⁵

Undisturbed but Not Untouched

NASA has protected and preserved the Ross Hammock site for the last six decades. Along the way, the agency has occasionally welcomed trained specialists to the site. In 1967, archaeologists Ripley P. Bullen and Adelaide K. Bullen published *Archaeological Investigations at the Ross Hammock Site, Florida*. In the book, the archaeologists bemoaned the fact that evidence of prehistoric life throughout Florida was being "destroyed by construction due to population explosion, greater



A Dig into the Archives Reveals Archaeological History at NASA's Kennedy Space Center (continued)



↑ What researchers thought was a Civil War-era salt works was actually a British plantation, the primary residents of which were enslaved. (Photo credit: National Park Service)

suburbanization, and increased industrialization.” The archaeologists celebrated, however, that the Ross Hammock site was protected by NASA and the Federal Antiquities Act.

The area sat largely undisturbed for decades after the publication of *Archaeological Investigations*, but the research of University of North Florida professor Daniel Schafer revived interest in the site in 2008. Through archival research, Schafer discovered that the alleged Civil War salt ruins at Ross Hammock were instead the ruins of a British Period (1763–84) sugar and indigo plantation. The industrial farm, controlled by absentee owner William Elliot, was the southernmost plantation in Florida during British colonial rule. Its primary occupants were enslaved people of African descent.¹⁷

Serendipity and Space Technologies

In his brief history of NASA remote sensing and archaeology, Marco J. Giardino wrote that as early as the 1970s, “NASA was beginning to appreciate the ‘serendipitous’ benefit of the developing space technology for studying ancient culture.”¹⁸ Although the formula was different, space technology–derived serendipity also played a role at the Ross Hammock site at KSC. The land demands of the mobile launch concept and the Saturn V led NASA to acquire Ross Hammock, an important archaeological site, and, ultimately, protect it. ■

Endnotes

- 1 For a brief overview of NASA remote sensing and archaeology, see Marco J. Giardino, “A History of NASA Remote Sensing Contributions to Archaeology,” Document No. 20100021219, NASA Archives, 21 January 2010.
- 2 The documents this article is based on are in the KSC Archive: “Community Relations Collection” (hereafter CRC), Box 8, Location 18A.2.
- 3 For a brief discussion of the KSC land buffer, see Kenneth Lipartito and Orville R. Butler, *A History of the Kennedy Space Center* (Gainesville: University Press of Florida, 2007), pp. 87, 199, 201.
- 4 Susan Parker, *Canaveral National Seashore Historic Resource Study*, National Park Service Cultural Resources Division, September 2008, pp. 10–11.
- 5 Letter from Elbert Cox of the National Park Service to Paul O. Siebeneichen, 18 May 1963, CRC, Box 8.
- 6 Letter from A. H. Bagnulo to U.S. Army Engineer District, Titusville, 23 August 1963, CRC, Box 8.
- 7 Letter from Jack Salmela, Brevard Mosquito Control District Director, to A. H. Bagnulo, 20 December 1963, CRC, Box 8.
- 8 Drafts of NASA signs and Memorandum from Deputy Chief, Education and Community Services Office, RC, to Paul O. Siebeneichen, RC, CRC, Box 8.
- 9 Letter from Mrs. William H. Andrews to Mr. Paul Siebeneichen, 1 July 1964, CRC, Box 8; Nick White, “Merritt Island’s Soil Links ‘Space’ and ‘Stone’ Ages,” *Today* (27 March 1966).
- 10 Parker, *Canaveral National Seashore Historic Resource Study*, pp. 30–33.
- 11 Giardino, “A History of NASA Remote Sensing Contributions to Archaeology,” p. 3.

News from Around NASA

Welcoming New NASA Historian Jillian Rael



↑ (Photo courtesy of Jillian Rael)

Jillian Rael comes to the NASA History Office with a varied background and career, transitioning most recently from working as a senior historian and architectural historian at a cultural resources management firm. Earlier in her career, she spent years as a public library director and as assistant director within the Tennessee State Library and Archives regional library system. Jillian holds degrees in art history and history from the University of Alabama in Huntsville, where she previously taught history part-time, as well as certificates in public library and archives management. In addition to her master's thesis, which focused on the relationship between architectural expression and class identity in the Old South, she published a photographic history of her hometown of Lynchburg, Tennessee, entitled *Around Lynchburg*,

Jillian continues to reside in rural Middle Tennessee with her husband Travis, their son, and their farm animals. Stationed at Marshall Space Flight Center, Jillian's current work centers on documenting the history of the Neutral Buoyancy Space Simulator, as well as assisting in the compilation of the annual Aeronautics and Space Report of the President.

Four Interns Join the NASA Archives Team for the Fall Semester



↑ (Photo courtesy of Lindy Baudendistel)

Lindy Baudendistel is a graduate student at the University of Missouri–Columbia, working toward a master of library and information science (MLIS) degree with an archival emphasis, and will hopefully be graduating in December 2025. Originally from Corinth, Texas, Lindy lived in St. Louis, Missouri, before relocating to Houston for the internship, and she



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9 October, noon ET

Jeffrey S. Nesbit
Tyler School of Art and Architecture,
Temple University

**Architecture and the
Space Complex**

worked in public libraries for eight years. Before that, she lived in Orlando, Florida, and was a cast member at Walt Disney World for three years working main entrance operations at Disney's Hollywood Studios theme park. This semester, she will be working on processing collections at Johnson Space Center, as well as collaborating with an intern in knowledge management to produce a guide to help those with NASA records determine which department—knowledge management, the archives, or records management—should receive the records when the time comes.

News from Around NASA (continued)



↑ (Photo courtesy of Emily Goss)

Emily Goss is excited to have the opportunity to work as an intern at Langley Research Center for a second term after her very productive first term in spring 2024. This spring, she processed the physical collections in the Langley Archives and added archival descriptions for processed collections to the NASA Archives Catalog. She is now in her second year of the MLIS program through the University of Oklahoma. For her fall 2024 internship, she will be continuing her spring project by working on the remaining unprocessed physical collections and creating descriptions for the processed collections in the NASA Archives Catalog.



↑ (Photo courtesy of Taylor Lyons)

Taylor Lyons joins us at Langley Research Center and will be providing invaluable assistance in processing the archival collection and adding new and updated descriptions to the agency’s web-based archive database. He is currently enrolled in a Graduate Certificate Program in archives and records management at Indiana University Purdue University of Indianapolis after completing his master’s degree in museum administration at St. John’s University. Taylor grew up in Williamsburg, Virginia, surrounded by the rich history of the region, and grew a great appreciation for it. He looks forward to exploring more of the Langley Archives collections and being a steward of the history of the NACA and NASA at the center.



↑ (Photo courtesy of Rebecca Massey)

Rebecca Massey is a graduate student at the University of Maryland studying library and information science. She is passionate about preserving cultural memory for future generations. Originally from Pennsylvania, she moved to Maryland to attend Towson University, where she earned her bachelor’s degree in English with a focus on writing. This fall, she is serving as the archives intern for Goddard Space Flight Center in Greenbelt, Maryland. Her work consists of processing archival collections relating to the culture and history of GSFC, as well as digitizing textual records.

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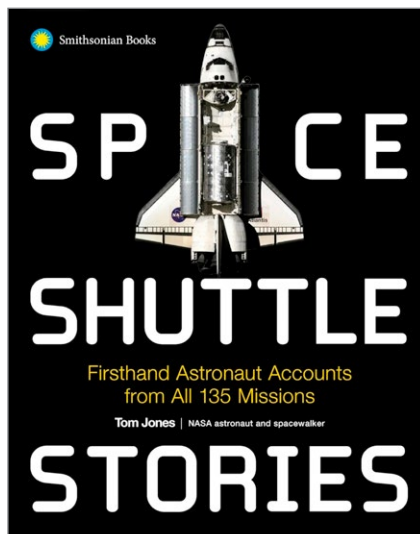
Other Aerospace History News

American Astronautical Society (AAS) History Committee

2023 Emme Award for Astronautical Literature

The Eugene M. Emme Award, named for NASA's first historian, recognizes outstanding books that advance public understanding of astronautics based on originality, scholarship, and readability. The Emme Award Panel has selected *Space Shuttle Stories: Firsthand Astronaut Accounts from All 135 Missions*, written by former NASA astronaut Tom Jones and published by the Smithsonian Press, as the recipient of the 2023 Eugene M. Emme Award. Jones combined exemplary scholarship with an engaging writing style to create a significant contribution to the field of astronautics.

↓ *Space Shuttle Stories: Firsthand Astronaut Accounts from All 135 Missions* by Tom Jones is the recipient of the 2023 Emme Award.



The Sacknoff Prize for Space History

Awarded since 2011, the Sacknoff Prize is designed to encourage original research by university students in the field of space history. Undergraduate and graduate students are encouraged to submit their original manuscript by 2 December 2024 for consideration! The winner will have their submission published in *Quest: The History of Spaceflight Quarterly*, receive a cash prize, and more. For details on how to submit a manuscript, visit <https://spacehistory101.com/space-history-resources/sacknoff-prize/>.

Baruch S. Blumberg NASA/Library of Congress Chair in Astrobiology, Exploration, and Scientific Innovation

As a partnership between NASA's Astrobiology Program and the Library of Congress, the Blumberg Chair, an annually selected position, supports an established scholar in the sciences, humanities, or social sciences to take up residence in the Library's John W. Kluge Center. The Blumberg Chair creates an opportunity to use the Library's extensive collections to research the range and complexity of societal issues related to how life begins and evolves and to examine philosophical, religious, literary, ethical, legal, cultural, and other concerns arising from scientific research on the origin, evolution, and nature of life. Within the parameters of NASA's mission, a chair might also seek to investigate how innovative quests for fundamental understanding may lead to major developments for the betterment of society. Using methodologies from the history and sociology of science; the philosophy of science; legal, political, and cultural history; and other disciplines, a Chair might study and tell the story of how a basic research initiative led to completely unexpected discoveries and applications.

Applications for the next Blumberg Chair are open. Applicants should supply their CV, a brief statement of proposed research, a description of proposed outreach activities, and a signed Assurance of Compliance form. Applications are evaluated based on three criteria: intellectual accomplishment, the ability to communicate ideas to a broad audience, and their relevance to the challenges faced by democracies in the 21st century.

Completed applications are due by 1 December 2024. For further information about the position and application details, visit the Kluge Center's web page: <https://www.loc.gov/programs/john-w-kluge-center/chairs-fellowships/chairs/blumberg-nasa-chair-in-astrobiology/>. ■

In Memoriam



Joe Engle

*Pilot, Aeronautical Engineer, and
NASA Astronaut*

26 August 1932–10 July 2024



Jon McBride

*Test Pilot and
Shuttle Astronaut*

14 August 1943–7 August 2024

Upcoming Meetings

14–18 OCTOBER 2024

International Astronautical Congress
Milan, Italy

[https://www.iafastro.org/
events/iac/international-
astronautical-congress-2024/](https://www.iafastro.org/events/iac/international-astronautical-congress-2024/)

24–25 OCTOBER 2024

**Contributions of the DC-8 to Earth
System Science at NASA: A Workshop**
Washington, DC

[https://www.nasa.gov/history/
contributions-of-the-dc-8-to-earth-
system-science-at-nasa-a-workshop/](https://www.nasa.gov/history/contributions-of-the-dc-8-to-earth-system-science-at-nasa-a-workshop/)

28–30 OCTOBER 2024

**Von Braun Space Exploration
Symposium**

Huntsville, Alabama

<https://astronautical.org/events/vbs/>

30 OCTOBER–2 NOVEMBER 2024

**Oral History Association
(OHA) Annual Meeting**
Cincinnati, Ohio

[https://oralhistory.org/
annual-meeting/](https://oralhistory.org/annual-meeting/)

7–10 NOVEMBER 2024

**History of Science Society
(HSS) Annual Meeting**
Mérida, Mexico

<https://hssonline.org/page/HSS24>

3–6 JANUARY 2025

**American Historical Association
Annual Meeting**
New York, New York

[https://www.historians.
org/annual-meeting](https://www.historians.org/annual-meeting)

6–10 JANUARY 2025

**American Institute of Aeronautics and
Astronautics (AIAA) SciTech Forum**
Orlando, Florida

<https://www.aiaa.org/SciTech>

20–22 MARCH 2025

**Annual Robert H. Goddard
Space Science Symposium**
College Park, Maryland

[https://astronautical.org/
events/goddard/](https://astronautical.org/events/goddard/)

26–29 MARCH 2025

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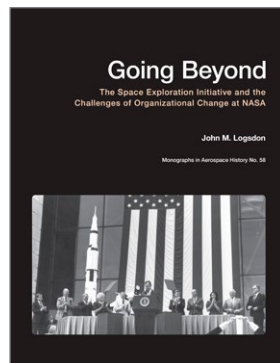
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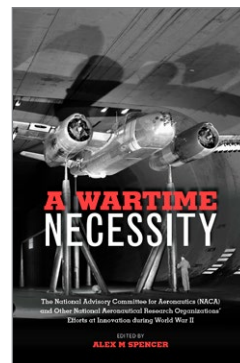
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↑ The NASA Headquarters Archives in Washington, DC.
(Photo credit: Catherine Baldwin)

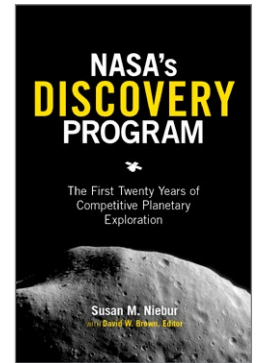
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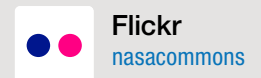
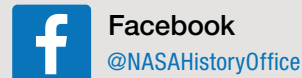


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