



National Aeronautics and Space Administration

# LAGNIAPPE

John C. Stennis Space Center

Volume 19 Issue 8

[www.nasa.gov/centers/stennis](http://www.nasa.gov/centers/stennis)

August 2023

## Mission Accomplished!

See Pages 3-4



**I**t was Friday, the fourth day of August, when I ventured out for a morning ride to a local coffee shop. What? Did you not know gators sometimes need a pick-me-up, too?

Stuck in traffic, cars were lined bumper to bumper on their way. A flurry of activity was happening, but where were they all going? I followed and soon discovered many of the cars were heading to the same place.

They were going to a place where young people are inspired to grow and learn how to step into their potential. They were returning to school.

The excitement of returning to familiar places reminded me of what is happening at NASA. For example, the RS-25 engine returns to NASA Stennis and the Fred Haise Test Stand this month as crews prepare for a second certification series of hot fires throughout the remainder of the year.

There is the return of a new commercial crew to the International Space Station when NASA's SpaceX Crew-7 launch is expected to arrive this month.

They will fly on the same SpaceX Dragon spacecraft (Endurance) as Crew-3 and Crew-5.

And the biggest return of all, one that has people far and wide diligently working, is the return of NASA to the Moon with Artemis II. The Moon lights the path forward as NASA will send the first woman and first person of color to the Moon through Artemis.

Much like students in school, NASA is not exempt from having tests. Artemis II will be the first SLS (Space Launch System) and Orion test flight of a mission around the Moon with astronauts.

The very schoolchildren surrounding me in traffic – the Artemis Generation – could play a larger role in future tests and missions, a role they might not even realize yet.

Who knew one could be so encouraged while stuck in traffic? The Gator spirit in me became uplifted even before the first sip of coffee touched my mouth.

That is the power of NASA. That is the power of the Artemis Generation. Both are fuel for inspiration.



*Lagniappe* is published monthly by the Office of Communications at NASA's John C. Stennis Space Center.

Access monthly copies at: [www.nasa.gov/centers/stennis/news/publications/index.html](http://www.nasa.gov/centers/stennis/news/publications/index.html)

Contact info – (phone) 228-688-3749; (email) [ssc-office-of-communications@mail.nasa.gov](mailto:ssc-office-of-communications@mail.nasa.gov); (mail) NASA OFFICE OF COMMUNICATIONS, Attn: LAGNIAPPE, Mail code IA00, Building 1111 Room 173, Stennis Space Center, MS 39529

Managing Editor – Lacy Thompson

Editor – Bo Black

Staff Photographer – Danny Nowlin



# Crews Complete Successful Lock System Project on NASA Stennis Waterway

One of the key infrastructure features of NASA's Stennis Space Center near Bay St. Louis, Mississippi, is a Panama Canal-like lock system connecting the Pearl River (and Gulf of Mexico) to the seven-and-a-half-mile canal system that links the site's large test stands. The system has demonstrated a successful operation for nearly six decades, helping to ensure operational viability and mission success for NASA and NASA Stennis alike. A recently completed project ensures the system's continued reliability for years to come for NASA and commercial partners utilizing the south Mississippi site.

## What the project involved

(Top left photo) The renovation of the navigation lock system at NASA Stennis began last November when crews removed the miter gates for inspection and refurbishment of the structural steel. The system is critical in providing site access for large equipment and test articles that cannot be transported by land. It also maintains a constant water level for the NASA Stennis canal system that connects all large test stands on site. The refurbishment project was launched after engineers determined the lock system – built in the 1960s – needed extensive refurbishment. The first step involved placement of a temporary retaining wall, known as a stop log, on Nov. 14, 2022.

## Why a stop log was needed

(Bottom left photo) Work to install a temporary stop log at the NASA Stennis lock system was completed Nov. 14, 2022. Placement of the wall was key to help maintain water level in the NASA Stennis canal system while crews completed the extensive refurbishment project. Typically, the water level of the NASA Stennis canal system is about 16 to 18 feet higher than the Pearl River. When a vessel travels to NASA Stennis, the lock system and its miter gates allow operators to raise the watercraft from the lower river level to the higher canal level. "We have never had a situation where we were trying to get a vessel through the lock system where the gates could not operate properly, and the vessel had to hold," said NASA project manager Dale Woolridge. "However, we were beginning to experience leaking during the opening and closing of the gates, so it was time to get this project done to continue with a successful operation moving forward."

## What happened next

(Top right photo) Once the stop log was installed, crews used a crane on a floating barge to lift the four miter gates of the navigation lock system at NASA Stennis, as shown in this photo from Nov. 21, 2022. The four gates, each weighing 270,000 pounds, were taken off site to undergo full inspection and refurbishment. Previous work on the lock system was performed with the gates in place, which made this project a first-of-its-kind. NASA project manager Dale Woolridge credits the original design, skilled operations, and regular maintenance of the lock system for the gates exceeding their 50-year design life.

## A sizable endeavor

(Bottom right photo) Removal of the miter gates at the NASA Stennis lock system in November 2022 was no small undertaking, as the accompanying image illustrates. The four gates are each seven feet thick and measure 60 feet by 40 feet.

[See more on Page 4](#)



***“As a civil engineer, this is what I like. Refurbishment of the structure reduces risks to the perfect operational record. We cannot have a piece of spaceflight hardware meant for the Moon trapped on Earth due to a broken lock gate.”***

**-NASA Project Manager Dale Woolridge**



# Crews Complete Successful Lock System Project

## A long refurbishment

(Top photo) The miter gates for the NASA Stennis lock system returned on site in July 2023, following a seven-month refurbishment effort. Crews move the gates using a crane and floating barge. The project was implemented through the U.S. Army Corps of Engineer and performed by contract work. “The Corps is doing a great job,” NASA project manager Dale Woolridge said in November. “The contractor did a great job (handling the gates). There is a lot of risk in lifting something that big.”

## Gate re-installation

(Middle photo) Re-installation of the four miter gates to the NASA Stennis lock system was critical to restoring operational status. The temporary retainer wall helped maintain the water level of the NASA Stennis canal system during the project. However, it was immovable, which meant access to the site and its large test stands was not possible throughout the project. The project marked the first time the gates had been removed from the system since they were originally installed almost 60 years ago. Previous maintenance was performed with the gates in place.

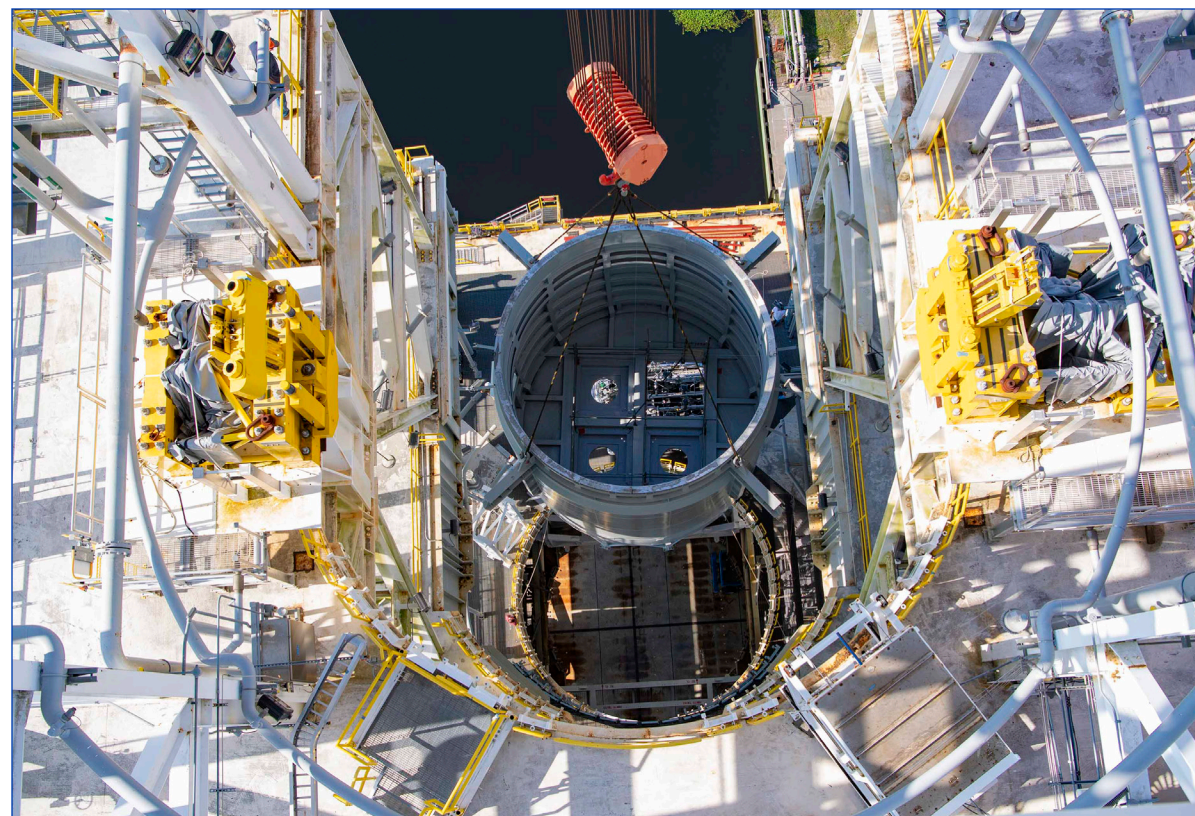
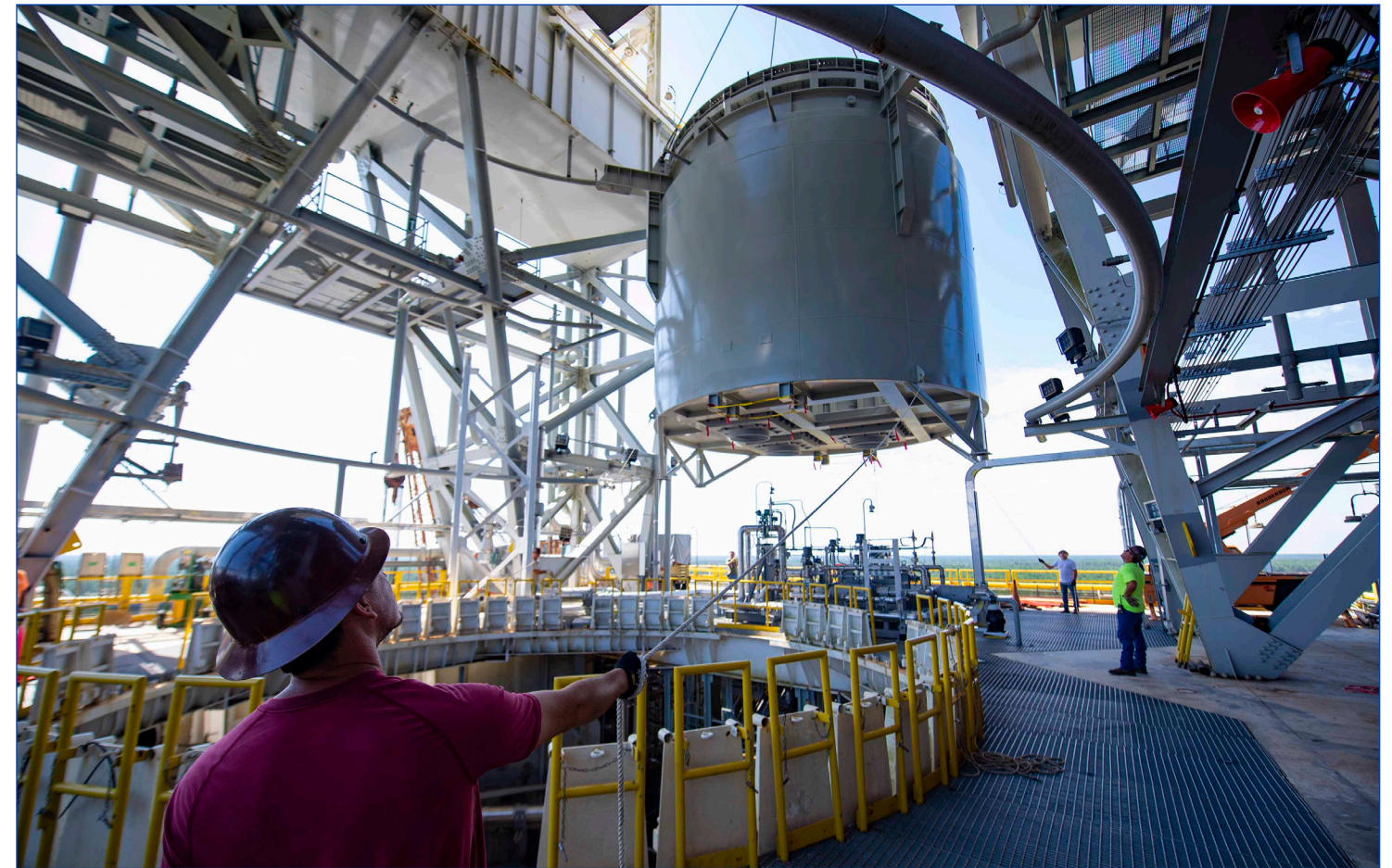
## A successful end

(Bottom photo) Crews conducted a test of the navigation lock system Aug. 3, following successful installation of the four refurbished gates. Final testing of the refurbished gates culminated months of hard work and restored the lock system to full working status. “The project is just one of many that ensures the ability of Stennis to maintain future test operations,” NASA project manager Dale Woolridge said.



[Click here to watch video of the lock system project.](#)

# Crews Prepare for Exploration Upper Stage Testing with Lift Exercise



NASA Stennis continues preparing for testing NASA's new Exploration Upper Stage (EUS) on the B-2 Test Stand. Teams lifted an interstage simulator – 31 feet in diameter and 176,000 pounds – onto the stand July 17. The component, which will help house the EUS for testing, remained on the stand a few weeks to complete needed checks, measurements, and machining and welding work. EUS will enable NASA to fly larger, heavier payloads to lunar orbit than the Interim Cryogenic Propulsion Stage being used on initial Artemis flights. Prior to its use on SLS (Space Launch System), the stage will undergo a full series of tests at NASA Stennis to ensure it is ready to fly. The so-called Green Run test series will represent the first full power-up of the stage and its systems. It will culminate with a firing of the stage's four Aerojet Rocketdyne RL10 engines, just as must occur during an actual mission. NASA conducted a similar campaign with the first SLS core stage in 2020-21. The 216-foot-tall SLS core stage also was anchored on the B-2 Test Stand for its own Green Run series. Once the core stage was removed for use on the Artemis I flight, teams began modifying the B-2 Test Stand to house the smaller EUS, which stands 54.5 feet tall. The SLS rocket is powering Artemis missions to return humans, including the first woman and the first person of color to the Moon, in preparation for a future journey to Mars. In addition to stage testing, NASA Stennis also is testing engines that will help launch SLS on its Artemis missions.



# NASA Stennis Welcomes Crew-5 Astronauts



NASA's SpaceX Crew-5 astronauts Nicole Mann of NASA and Koichi Wakata of JAXA (Japan Aerospace Exploration Agency) are welcomed to NASA's Stennis Space Center by NASA Stennis Director Rick Gilbrech and NASA Stennis Deputy Director John Bailey on July 26 (right photo).

The crew members visited with NASA Stennis and NASA Shared Services Center employees to share details of their mission to the International Space Station (top photo). Mann and Wakata flew aboard the SpaceX Crew Dragon spacecraft as part of NASA's Commercial Crew Program.

Mann commanded the mission and became the first indigenous woman from NASA to fly in space; Wakata served as a mission specialist in his fifth trip to space. The Crew-5 mission launched from NASA's Kennedy Space Center in Florida on Oct. 5, 2022, and safely splashed down off the coast of Tampa, Florida, on March 11, 2023, following 157 days in orbit.

Throughout their mission, the Crew-5 team contributed to a host of science and maintenance activities and technology demonstrations. Mann and Wakata teamed up for two spacewalks, also outfitting the orbiting laboratory for solar array augmentation.

The goal of NASA's Commercial Crew Program is safe, reliable, and cost-effective transportation to and from the International Space Station and low-Earth orbit. This already is providing additional research time and has increased the opportunity for discovery aboard humanity's microgravity testbed for exploration, including helping NASA prepare for human exploration of the Moon and Mars.



Click [here](#) to watch NASA's SpaceX Crew-5 talk with media following mission.

## NASA's MOON to MARS MISSION

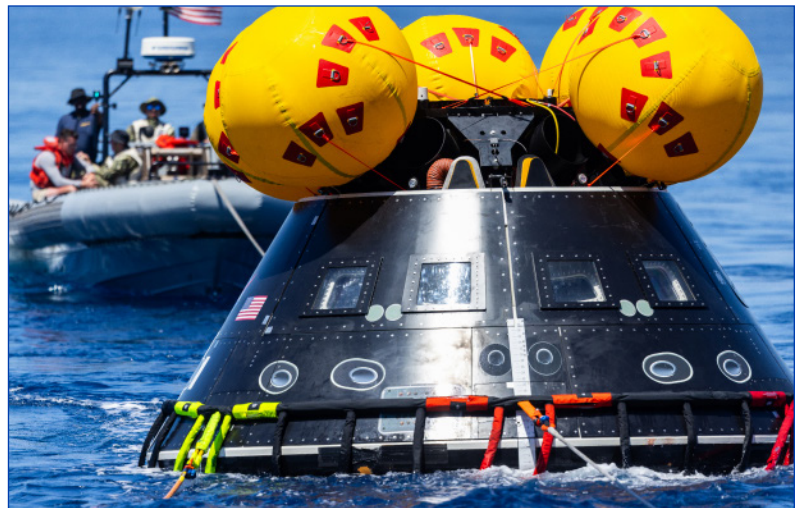
# Artemis II Crew Visits Their Ride Around the Moon

Inside the high bay of the Neil Armstrong Operations and Checkout Building at NASA's Kennedy Space Center in Florida, Artemis II NASA astronauts Christian Koch (r to l), Reid Wiseman, and Victor Glover, and CSA (Canadian Space Agency) astronaut Jeremy Hansen visit the Orion spacecraft on Aug. 8 that will take them on a 10-day journey around the Moon as the first Artemis crew. The spacecraft is undergoing acoustic testing prior to integration with its service module, the next major step in the assembly process. Training is underway for the Artemis II astronauts in preparation for their lunar mission. The approximately 10-day Artemis II flight will test NASA's foundational human deep space exploration capabilities, the Space Launch System rocket and Orion spacecraft, for the first time with astronauts and will pave the way for lunar surface missions, including landing the first woman and first person of color on the Moon. Photo Credit: NASA/Kim Shiflett



## A View of Practicing Orion's Second Return, Future Orion Modules

(Right photo) The Crew Module Test Article, a full-scale mockup of NASA's Orion spacecraft, is seen in the waters of the Pacific Ocean on July 26, 2023, during the first in a series of tests conducted by NASA and the Department of Defense to demonstrate and evaluate the processes, procedures, and hardware for recovery operations for crewed Artemis missions. This test is the first specifically in support of the Artemis II mission and allowed the team to practice what it will be like to recover astronauts and get them back to the recovery ship safely. Photo Credit: NASA/Frank Michaux



(Bottom right photo) The Orion spacecraft for NASA's crewed Artemis II (right), Artemis III (left) and Artemis IV (center) missions are stationed next to each other inside the high bay of the Neil Armstrong Operations and Checkout Building at NASA's Kennedy Space Center in Florida on June 22. Each capsule is in a different stage of production as technicians and engineers prepare the spacecraft to carry astronauts to and around the Moon on their upcoming flights. Technicians recently installed the heat shield on the Artemis II crew module, and teams are preparing to conduct acoustic testing. Once complete, the crew module will be joined with its service module in preparation to fly four astronauts around the Moon. The Artemis III crew module, which will carry the next astronauts to step foot on the lunar surface from Earth to their human landing system and return them home, was removed from the clean room inside the high bay to complete a series of pressure and leak tests. The Artemis IV crew module arrived at the spaceport in February and is in the early stages of the assembly process. Photo Credit: NASA/Marie Reed



# NASA in the News

## Webb Reveals Colors of Earendel, Most Distant Star Ever Detected



NASA's James Webb Space Telescope has followed up on observations by the Hubble Space Telescope of the farthest star ever detected in the very distant universe, within the first billion years after the big bang. Webb's NIRCam (Near-Infrared Camera) instrument reveals the star to be a massive B-type star more than twice as hot as the Sun, and about a million times more luminous. The star, which the research team has dubbed Earendel, is located in the Sunrise Arc galaxy and is detectable only due to the combined power of human technology and nature via an effect called gravitational lensing. Both Hubble and Webb were able to detect Earendel due to its lucky alignment behind a wrinkle in space-time created by the massive galaxy cluster WHL0137-08. The galaxy cluster, located between Earth and Earendel, is so massive that it warps the fabric of space itself, which produces a magnifying effect, allowing astronomers to look through the cluster like a magnifying glass. This image from Webb of a massive galaxy cluster called WHL0137-08 contains the most strongly magnified galaxy known in the universe's first billion years: the Sunrise Arc, and within that galaxy, the most distant star ever detected. In this image, the Sunrise Arc appears as a red streak just below the diffraction spike at the 5 o'clock position. Read more [here](#).

Credits: Image: NASA, ESA, CSA, D. Coe (STScI/AURA for ESA; Johns Hopkins University), B. Welch (NASA's Goddard Space Flight Center; University of Maryland, College Park). Image processing: Z. Levay.

## NASA Names Themes to Celebrate the Heliophysics Big Year

This October, NASA is launching the Heliophysics Big Year – a global celebration of solar science and the Sun's influence on Earth and the entire solar system. Modeled after the “Big Year” concept from citizen scientists in the bird-watching community, the Heliophysics Big Year challenges everyone to get involved with fun Sun-related activities. For each month from October 2023 to December 2024, the Heliophysics Big Year will celebrate under a theme, sharing opportunities to participate in many solar science events, from watching eclipses to joining citizen science projects. During the Heliophysics Big Year, participation is not limited to science – NASA invites everyone to celebrate the Sun with activities, including dance, fashion, sustainability, and more. Click [here](#) to read about the Heliophysics Big Year Themes starting with the annular eclipse in October.

## NASA Software Catalog Offers Free Programs for Earth Science, More

Each year, NASA scientists, engineers, and developers create software packages to manage space missions, test spacecraft, and analyze the petabytes of data produced by agency research satellites. As the agency innovates for the benefit of humanity, many of these programs are now downloadable and free of charge through NASA's Software Catalog. The 2023-2024 [Software Catalog](#) contains more than 1,000 programs, including dozens of new packages added this year. Among the 15 different categories of NASA software available through the catalog is environmental science. Whether it means helping farmers navigate crop-destroying droughts, tracking deadly storms such as hurricanes and tornadoes, or mapping floods, fires, and more, NASA's fleet of Earth-observation satellites allows an “eye-in-the-sky.” Click [here](#) to read how NASA provides benefits through the Software Catalog.



# NASA Stennis News

## NASA Awards Minority-Serving Institutions through the Minority University Research and Education Project



NASA is committed to helping Minority-Serving Institutions (MSIs) grow their research and technology capabilities, collaborate with NASA on research projects, and contribute to the agency's missions – and NASA Stennis is supporting the work. Through its Minority University Research and Education Project (MUREP), the agency recently provided nearly

\$900,000 to help selected MSIs develop new technologies for use in space exploration as well as in the commercial marketplace. NASA Stennis is proud to support this work as one of four agency centers directly involved with the selected projects and institutions. Read more about the agency's effort [here](#).

### NASA Stennis connects with small businesses at event hosted by Xavier of Louisiana

Representatives from the NASA Stennis Office of Small Business Programs and Office of Technology Development joined forces on July 21 for Connecting the Dots 2023: Creating Business Opportunities/SBA Small Business Expo at Xavier University of Louisiana in New Orleans, a noted HBCU (Historically Black Colleges and Universities). With 100 small businesses in attendance, Business Development Specialist Kay Doane (I) and Technical Manager Tom Lipski spoke with vendors on how to do business with NASA and the importance of the Technology Transfer Program. The program ensures that innovations developed for exploration and discovery are broadly available to the public, maximizing benefit to the nation.



# NASA Stennis News

## NASA's Stennis Space Center Hosts Take Our Children to Work Day

The Artemis Generation came out in full force at NASA's Stennis Space Center as children of Stennis employees had the opportunity to visit the center on July 20 during the annual Take Our Children to Work Day. They were welcomed by NASA Stennis Associate Director Rodney McKellip, received a briefing on NASA's Artemis lunar exploration program, and participated in hands-on activities to promote interest in science, technology, and engineering. As the day ended, participants watched a cryogenics demonstration led by Allen Forsman, an employee of Aerojet Rocketdyne, an L3Harris Technologies company. This year's event was the first at NASA Stennis since 2019 due to the COVID-19 pandemic.



# Engineer's Experience at NASA's Stennis Space Center Exceeds All Expectations

August 26 marks the annual celebration of Women's Equality Day, and for one supervisor at NASA's Stennis Space Center, her career shows there is a place at NASA for everyone.

"Anyone interested in a future career at NASA should pursue it," said Paula Hensarling, chief of the Mechanical Design Branch in the NASA Stennis Engineering and Test directorate. "There are many avenues, such as engineering, communications, legal, and accounting within NASA that are inclusive of all genders."

Engineering has traditionally been a male-dominated profession, yet Hensarling says young girls should not fear pursuing the profession.

Look no further than the Slidell, Louisiana, native's career trajectory that includes receiving the NASA Silver Achievement Medal, participation in a NASA Stennis Leadership Development Program, and promotion to branch chief in 2022.

"I have been treated equally during my career," she said. "I strive to perform every task with quality and thoroughness in mind. I believe most other employees respect hard work and dedication to the job, regardless of one's gender."

A recent survey confirms Hensarling's experience. Indeed, NASA ranks as one of the nation's best employers for women, based on a Forbes and Statista poll of more than 60,000 U.S. employees in companies with at least 1,000 employees. Respondents ranked their companies in several categories, including representation of women in upper management and pay equity. NASA ranked in the top 10% of employers on the list and was the only federal agency listed.

For Hensarling, her NASA career began working as a

NASA summer intern for three summers as she earned a bachelor's degree in mechanical engineering from Auburn (Alabama) University.



A summer internship at NASA's Stennis Space Center started Paula Hensarling on her path to becoming a NASA engineer. Hensarling is now chief of the Mechanical Design Branch in the NASA Stennis Engineering and Test directorate. [Learn more NASA internships here.](#)

She worked at NASA's Michoud Assembly Facility in New Orleans for two years following graduation. When an opportunity at NASA Stennis presented itself, she eagerly applied for it.

"I knew it was the place I wanted to work from the great experience I had as a summer student," she said.

Now a resident of Mandeville, Louisiana, Hensarling came to NASA Stennis as a mechanical design engineer contractor in 2000 and has since earned a master's degree

in engineering management from the University of New Orleans as her NASA career has taken flight.

After 12 years as a contractor, Hensarling became a NASA civil servant as mechanical design engineer, where she has worked on projects at multiple test complexes throughout the south Mississippi site. She served as deputy branch chief of the Mechanical Design Branch from 2020-22 and provided support for Green Run testing of NASA's SLS (Space Launch System) core stage at NASA Stennis prior to the successful launch of Artemis I.

Hensarling now supervises a diverse group of mechanical engineers, who provide design engineering support to propulsion test projects, including the SLS program at the B-2 Test Stand, and various special projects at NASA Stennis and across the agency.

"I knew working at NASA Stennis would be a great opportunity following my time as a college student intern, and it continues to exceed my expectations," she said.

# Aug. 30, 1983 Marks a Historic Flight for NASA



An image shows the five astronauts that were part of the STS-8 crew posing with the Challenger launch and American flag as a backdrop. Mississippi native Richard M. Truly (center) was crew commander. Daniel C. Brandenstein (left) was the pilot. Mission specialists were Dale A. Gardner, William E. Thornton (both on back row) and Guion S. Bluford (right).

Forty years ago, on Aug. 30, 1983, NASA made history once again with eighth space shuttle mission flight. The launch of STS-8 became memorable as it featured a mission of firsts. In addition to being the first shuttle mission to launch and land at night, STS-8 was the first flights of Daniel Brandenstein, Dale Gardner, and Guion (Guy) Bluford. Bluford became the first African American to fly in space with the successful flight of STS-8.

After Dr. Bluford completed a second space shuttle flight, he visited the National Space Technology Laboratories (NSTL), now known as NASA's Stennis Space Center, as part of Black History Recognition Week activities. He recounted his unique experiences of space travel to the audience and commended employees for their support of the space shuttle missions.

Bluford, born in Philadelphia, Pennsylvania, remained in the state for his degree in aerospace engineering from Pennsylvania State University. He followed up with a Master of Science degree with distinction in aerospace engineering from the Air Force Institute of Technology, as well as a Doctor of Philosophy in aerospace engineering with a minor in laser physics from the same institute. He flew 144 combat missions in the Vietnam War, 65 of which were over North Vietnam. Bluford was in the astronaut class of 1979. In total, he logged 688 hours in space.

In a previous [interview](#), Bluford said it took him awhile to recognize the historical significance of his selection to be the first African-American in space. But when his pioneering role became apparent, Bluford said he embraced it.

## Hail & Farewell

**Kirsten Hess**

**NASA welcomes the following:**

Lead Budget Analyst

Office of the Chief Financial Officer

## Office of Diversity and Equal Opportunity

# Celebrate the Role of Women in NASA History

The United States annually celebrates Women's Equality Day on Aug. 26 to commemorate the passage of women's suffrage and remember women who helped overcome gender discrimination in the U.S. The fight dates back to 1848 with the Seneca Falls Convention, the first major public political meeting in the U.S. that advocated for women's rights.

The convention resulted in the Declaration of Sentiments and Resolutions, which listed ways American women were oppressed and relegated to inferior status by the existing male power structure and pushed for the voting rights of women.

Thirty years later, a Women's Suffrage Amendment was introduced to the U.S. Congress. The amendment was not approved by the House and the Senate until 1919, and on Aug. 26, 1920, the 19th Amendment was signed by Secretary of State Bainbridge Colby.

In recent years, women's equality has shifted its focus to the gap in gender equity, striving for the fair treatment of women and men according to their respective needs. In 1920, this meant women's right to vote. In 1970, this meant equal opportunities in employment and education. In 2023, the struggle continues for gender equity. In recognition of Women's Equality Day, NASA celebrates some of the women who have helped shaped the agency:

### **Pearl I. Young**

When Pearl Young left home at age 11 to serve as a domestic worker so she could attend high school, she had no way of knowing that she would one day have a place in women's history. Young eventually attended the University of North Dakota, where she worked her way through college as a Phi Beta Kappa with a triple major in physics, mathematics, and chemistry. In 1922, she accepted an appointment at the Langley Memorial Aeronautical Laboratory of the National Advisory Committee for Aeronautics (NACA), now NASA's Langley Research Center in Hampton, Virginia. Young was the first professional woman employee at Langley and the second female physicist working for the federal government. Young retired from NASA in 1961, having served as chief technical editor for nearly 20 years.

### **Kitty O'Brien Joyner**

Born in Charlottesville, Virginia, Kitty O'Brien became the first woman to graduate from the University of

Virginia's engineering program, where she received a Bachelor of Science in electrical engineering in 1939. She also was the recipient of Algernon Sidney Sullivan Award. That same year, she was hired by the NACA Memorial Langley Aeronautical Laboratory, becoming the first woman engineer to be hired by the laboratory. During Joyner's time with the agency, she worked with supersonic and subsonic wind tunnels. Before retiring in 1971, she had been promoted to branch head of the Facilities Cost Estimating Branch in the Office of Engineering and Technical Services.

Building on the long-standing history of women inspiring excellence at NASA, women at NASA's Stennis Space Center and NASA Shared Services Center have made their mark on the agency, such as:

### **Joyce Short**

The first African American and female senior executive at the NASA Shared Services Center, Joyce Short joined NASA in 2005 and helped stand up the center in 2006. She served in dual roles as the deputy executive director and the director of the Service Delivery Directorate. Prior to joining NASA, Short was director of the Human Resources Shared Service Center at the Defense Finance and Accounting Service where she served for 15 years, holding a variety of increasingly responsible leadership positions. She earned a bachelor's degree in business from Indiana Wesleyan University and completed advanced coursework in law and public affairs at Indiana University. Short retired from NASA in April 2010.

### **Mary Byrd**

In January 2021, when Mary Byrd was named associate director of NASA Stennis, she earned distinction as the first female member of the NASA Stennis executive leadership team. A graduate of Louisiana State University in Baton Rouge, Louisiana, Byrd provided leadership and helped coordinate NASA's rocket propulsion testing capabilities and NASA Stennis' roles in the agency's technology programs. She also helped manage a skilled workforce of more than 1,200 civil servants and contractor employees and the federal city, that includes about 40 other federal, state, academic, and private organizations. Prior to this role, Byrd was the director of the Center Operations Directorate at NASA Stennis, providing key leadership for operations and maintenance of all NASA Stennis test support facilities, and managing tenant and facility user agreements. After 26 years of service to NASA, Byrd retired in December 2021.

# Online Resources

**It's a Lock:** View the completed reburishment project of the NASA Stennis waterway lock system [here](#).

View coverage from NASA Stennis Media Day by clicking the links below.

- [AP: NASA Tests Redesigned Moon Rocket Engine](#)
- [WDAM: NASA Tests Engine for Artemis Mission](#)
- [WDSU: NASA Crews in Southern Mississippi Work on Future Space Flights](#)



## NASA Stennis Artemis Resources

*Click the above photo for NASA Stennis Artemis resources.*



## SuperTalk Mississippi Interviews NASA Engineer Bradley Tyree

*Click the above photo for the interview.*



## NASA Moon To Mars

*Click the above photo to learn more about NASA's Moon to Mars Strategy and Objectives Development.*