

NASA's New Explorers!

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NASA named crew members April 3 for the Artemis II mission. Artemis II will be the first crewed mission on the path to establishing a long-term presence at the Moon for science and exploration. The crew of Artemis II (I to r) are: NASA astronauts Christina Hammock Koch, Reid Wiseman (seated), Victor Glover, and Canadian Space Agency astronaut Jeremy Hansen.

appy April, folks! I originally came on board in 1965 when NASA Stennis leaders were searching for a mascot to boost employee morale during the early construction days of the site. I have been around a long time but still feel young at heart, primarily because I have been able to interact with great people who work at Stennis, whether it was in 1965 or in 2023.

Pride, dedication, and working with excellence are characteristics that have stood the test of time around here. The last few weeks have been busy for many. I think this month's Lagniappe has all the ingredients for a big ol' pot of inspiration. Now, you might be thinking to yourself, "How did Gator get the inside scoop on Lagniappe?"

As I mentioned earlier, I have been around since 1965, so having connections comes with its perks. Can you say VIG (Very Important Gator)? Ark!

Sometimes, the daily grind makes it difficult to remember how the work completed at NASA Stennis leads to something greater. The various articles and photos in this month's publication are a reminder of that. Take the article that pays tribute to the beginning of the main propulsion test article series for example.

This historic test series began 45 years ago this month at NASA Stennis. Its success pushed NASA forward to the space shuttle era. This opened space to more people than ever during the program's 30 years of missions, including the first American woman in space (Sally Ride) in 1983 and astronauts representing 16 different countries.

> The work completed by people at NASA Stennis welcomed this era. Now, NASA continues to inspire the world through discovery through Artemis, which will establish a sustainable presence on the Moon and also land the first woman and first person of color on the lunar surface. The work of countless individuals contributes to the Artemis missions daily.

> There is another article in this month's Lagniappe on a longtime employee who worked more than four decades at NASA. I do not want to spoil it for you, but when one is reminded about what work at NASA Stennis leads to, it is understandable why this employee enjoyed every minute of four decades with the agency.

> Moving forward with Artemis and other opportunities that will come through the commercialization of space, it recalls the importance of robotics events such as the inaugural Magnolia Regional. I venture to say that many of those participants will play an important role with future STEM-related careers, including some at NASA.

It is my hope that the following pages leave room for all to reminisce on these enjoyable

events, to be reminded of how NASA innovates for the benefit of humanity and the role NASA Stennis contributes to that, and finally, to be reinvigorated as we move ahead to future accomplishments.

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undertaken. Canada's

participation in the

Artemis program is

not only a defining

history in space, but

also a testament to

the friendship and

close partnership

between our two

The flight, set to

<u>Artemis I</u> mission completed in

December, will set

the stage for the

first woman and

build upon the successful uncrewed

nations."

chapter of our

NASA Names Astronauts to Next Moon Mission, First Crew Under Artemis

ASA and the Canadian Space Agency (CSA) recently announced the four astronauts who will venture around the Moon on Artemis II, the

astronaut will fly on this historic mission. On behalf of all Canadians, I want to congratulate Jeremy for being at the forefront of one of the most ambitious human endeavors ever

first crewed mission on NASA's path to establishing a longterm presence at the Moon for science and exploration through Artemis. The agencies revealed the crew members April 3 during an event at Ellington Field near NASA's Johnson Space Center in Houston.

"The Artemis II crew represents thousands of people working tirelessly to bring us to the



The crew of NASA's Artemis II mission (I to r) are: Canadian Space Agency astronaut Jeremy Hansen, and NASA astronauts Victor Glover, Reid Wiseman, and Christina Hammock Koch.

stars. This is their crew, this is our crew, this is humanity's crew," said NASA Administrator Bill Nelson. "NASA astronauts Reid Wiseman, Victor Glover, and Christina Hammock Koch, and CSA astronaut Jeremy Hansen, each has their own story, but, together, they represent our creed: E pluribus unum – out of many, one. Together, we are ushering in a new era of exploration for a new generation of star sailors and dreamers – the Artemis Generation."

The crew assignments are as follows: Commander <u>Reid Wiseman</u>, Pilot <u>Victor Glover</u>, Mission Specialist 1 <u>Christina Hammock Koch</u>, and Mission Specialist 2 <u>Jeremy Hansen</u>. They will work as a team to execute an ambitious set of demonstrations during the flight test.

The approximately 10-day Artemis II flight test will launch on the agency's powerful Space Launch System rocket, prove the Orion spacecraft's life-support systems, and validate the capabilities and techniques needed for humans to live and work in deep space.

"We are going back to the Moon, and Canada is at the center of this exciting journey," said the Honorable François-Philippe Champagne, the minister responsible for the Canadian Space Agency. "Thanks to our longstanding collaboration with NASA, a Canadian first person of color on the Moon through the Artemis program, paving the way for future for long-term human exploration missions to the Moon and, eventually, Mars. This is the agency's Moon to Mars exploration approach.

"For the first time in more than 50 years, these individuals – the Artemis II crew – will be the first humans to fly to the vicinity of the Moon. Among the crew are the first woman, first person of color, and first Canadian on a lunar mission, and all four astronauts will represent the best of humanity as they explore for the benefit of all," said Director Vanessa Wyche, NASA Johnson. "This mission paves the way for the expansion of human deep space exploration and presents new opportunities for scientific discoveries, commercial, industry and academic partnerships and the Artemis Generation."

Through <u>Artemis</u> missions, NASA will use innovative technologies to explore more of the lunar surface than ever before. It will collaborate with commercial and international partners and establish the first long-term presence on the Moon. Then, NASA will use what it learns on and around the Moon to take the next giant leap: sending the first astronauts to Mars.

For more information about the crew, visit here.

Click here to meet the astronauts who will fly around the Moon on Artemis II.

NASA Continues Current Test Series with Hot Fires of RS-25 Certification Engine

ASA conducted two tests of the <u>RS-25</u> certification engine since the previous publication of Lagniappe, continuing a key series of testing to support future <u>Space Launch System</u> (SLS) missions to deep space, including Artemis missions as the agency continues to inspire the world through discovery.

On March 21, operators fired the engine for 10 minutes (600 seconds) on the Fred Haise Test Stand at NASA's Stennis Space Center, a longer duration than the 500 seconds engines must fire for an actual mission. Operators also fired the engine up to 113% power level, exceeding the 111% level needed during SLS launch.

Hot fires of longer duration and higher power level allow operators to test the limits of engine performance and provide a margin of safety for flight operations. The March 21 hot fire was the fourth test in a <u>series</u> that began in early February to certify production of new RS-25 engines by lead contractor Aerojet Rocketdyne. The new engines will be used to help power future Artemis missions as NASA returns humans to the lunar surface.

On April 5, operators fired the engine for about eight-and-ahalf minutes (500 seconds). The test duration mirrors the amount of time engines must fire to help launch SLS to orbit.

Four RS-25 engines fire simultaneously, producing up to 2 million pounds of combined thrust to help power each SLS launch.



(Top photo) A mounted camera inside the Fred Haise Test Stand shows the RS-25 certification engine test underway on March 21 at NASA's Stennis Space Center.

(Bottom photo) A mounted camera near the Fred Haise Test Stand shows the RS-25 certification engine test underway on April 5.



Click here to read more information about the current RS-25 test series.

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Top NASA Officials Visit Stennis Space Center, Talk Moon to Mars

op agency leaders visited NASA's Stennis Space Center March 30, participating in several activities with site personnel, including a town hall gathering to provide updates on Moon to Mars activities.

NASA Deputy Administrator Pam Melroy, Associate Administrator Bob Cabana, Director of Space Architecture Kurt Vogel, and Executive Office for the Associate Administrator for Exploration Systems Development Amelia Batcha all visited the south Mississippi site to meet with NASA Stennis leadership and personnel.

NASA Administrator Bill Nelson virtually joined a pair of town hall meetings during the day to discuss exploration plans and agency operations For Cabana, the visit was a return to the site where he served as director in 2007-8. Melroy previously visited NASA Stennis as deputy administrator in December 2021.

In addition to presenting remarks during the all hands sessions, the leaders, including Nelson, responded to various questions from site employees. They also participated in a social activity with employees at the end of the day.

NASA is detailing its process to develop a sustainable, resilient path forward for exploration. A recently released document provides information on Moon to Mars objectives and describes how the agency is establishing an objectives-driven process to ensure exploration-related activities are resilient for decades to come.

The objectives-driven strategy seeks to develop a collaborative roadmap to define overarching exploration goals to enable the agency and others to build the capabilities needed to meet those goals. The approach represents a shift from a capabilities-driven approach.

Under Artemis, NASA has set a vision to explore more of the Moon than ever. With the crew for Artemis II recently named, the agency plans to return humans to the Moon, including at the lunar south polar region. Artemis missions are designed to set up a longterm lunar presence to inform future exploration of farther destinations, including Mars, and other potential destinations in the solar system.

The Moon to Mars Strategy and Objectives Development document is available here.

New Office Leads NASA's Path Forward for Moon, Mars

ASA has established the new Moon to Mars Program Office at NASA Headquarters in Washington to carry out the agency's human exploration activities at the Moon and Mars for the benefit of humanity.

Amit Kshatriya will serve as the agency's first head of the office, effective immediately. This new office resides within the Exploration Systems Development Mission Directorate, reporting to its Associate Administrator Jim Free.

"The Moon to Mars Program Office will help prepare NASA to carry out our bold missions to the Moon and

land the first humans on Mars," said NASA Administrator Bill Nelson. "The golden age of exploration is happening right now, and this new office will help ensure that NASA successfully establishes a long-term lunar presence needed to prepare for humanity's next giant leap to the Red Planet."

The Moon to Mars Program Office focuses on hardware development, mission integration, and risk management functions for programs critical to the agency's exploration approach that uses Artemis missions at the Moon to open a new era of scientific discovery and prepare for human missions to Mars. Click here to read more about the new office.



NASA Administrator Bill Nelson joins virtually with employees at NASA's Stennis Space Center on March 30 for a town hall meeting to provide an update on NASA's Moon to Mars strategy. Deputy Administrator Pam Melroy (I to r), Associate Administrator Bob Cabana, Executive Officer for the Associate Administrator for Exploration Systems Development Amelia Batcha, Director of Space Architectures Dr. Kurt Vogel, and NASA Stennis Director Dr. Rick Gilbrech are shown on stage during Nelson's comments to employees



(Above photo) NASA Deputy Administrator Pam Melroy shares a laugh with employees as NASA Stennis Director Dr. Rick Gilbrech (I to r), Associate Administrator Bob Cabana, and Executive Officer for the Associate Administrator for Exploration Systems Development Amelia Batcha listen.



(Right photo) NASA Stennis leaders take a group photo with NASA Deputy Administrator Pam Melroy and Associate Administrator Bob Cabana during their visit March 30.

NASA Connects All Major Structures of Artemis II Moon Rocket Core Stage



Teams at NASA's Michoud Assembly Facility in New Orleans have fully integrated all five major structures of the Space Launch System (SLS) rocket's core stage for Artemis II, the first crewed Artemis mission that will send four astronauts around the Moon and return them home. Technicians joined the engine section to the rest of the rocket stage March 17. Next, teams will integrate the four RS-25 engines to the engine section to complete the stage. The engines were tested and proven flightworthy at NASA's Stennis Space Center. Located at the bottom of the 212-foot-tall core stage, the engine section is the most complex and intricate part of the rocket stage, helping to power Artemis missions to the Moon. In addition to its miles of cabling and hundreds of sensors, the engine section is a crucial attachment point for the RS-25 engines and two solid rocket boosters that produce a combined 8.8 million pounds of thrust at liftoff. It houses the engines and includes vital systems for mounting, controlling, and delivering fuel from the propellant tanks to the engines. The core stage for Artemis II is built, outfitted, and assembled at Michoud. Through Artemis missions, NASA will land the first woman and the first person of color on the surface of the Moon, paving the way for a long-term lunar presence and serving as a stepping stone for astronauts on the way to Mars as NASA explores the universe for the benefit of all.



NASA Deputy Administrator Pam Melrov (center) and Dr. Quincy K. Brown (front right) senior policy advisor in the White House Office of Science and Technology Policy, are shown the core stage of NASA's Space Launch System rocket by Jennifer Boland-Masterson (I), director of manufacturing and site leader at NASA's Michoud Assembly Facility for Boeing, during a March 31 visit to Michoud in New Orleans. They are accompanied by Michoud Facility Director Lonnie Dutreix (r). The 212-foot-tall core stage and its four RS-25 engines will help power NASA's Artemis II flight test, the first crewed Artemis mission that will send four astronauts around the Moon and return them home to test the spacecraft in deep space ahead of lunar surface missions. Photo credits: NASA/Michael DeMocker

NASA Leaders Attend Artemis Suppliers Event



It takes a nation to power dreams of spaceflight. NASA representatives from various centers, including John Bailey, deputy director of NASA's Stennis Space Center, attended the NASA Artemis Suppliers Conference from March 27-28 in Washington, D.C., and conducted visits with congressional members and staffers in conjunction with the conference. The 11th annual event gave attendees an opportunity to learn from industry, congressional, and government leaders about contributions to critical elements of NASA's Artemis missions. NASA Stennis tests all RS-25 engines that will help power the Space Launch System (SLS) rocket on Artemis missions. NASA Stennis is also preparing the B-2 Test Stand for future Green Run testing of the Exploration Upper Stage (EUS). During Green Run, NASA will conduct a series of tests on the EUS integrated systems to demonstrate it is ready to fly. EUS will fly on future SLS missions as NASA continues to explore

the universe for the benefit of all. EUS is being built at Michoud Assembly Facility in New Orleans as a more powerful second stage to send the Orion spacecraft to deep space. It is expected to fly on the Artemis IV mission. The B-2 Test Stand is also where the SLS core stage underwent Green Run testing, which culminated in March 2021 with a hot fire of its four RS-25 engines, prior to the successful launch of Artemis I on Nov. 16, 2022.

(Top photo) NASA Stennis Deputy Director John Bailey (front table, r) presents a report on NASA Stennis.

(Bottom photo) NASA Stennis Deputy Director John Bailey (r) meets with U.S. Rep. Dale Strong of Alabama (I), along with Marshall Space Flight Center Deputy Director Joseph Pelfrey (center) and NASA Marshall Director Jody Singer (back to camera). Photo credits: NASA/Troy Frisbie



Earth Day 2023 – April 22 Invest in Our Planet



ASA sees Earth like no one else. It explores the complex connections between air, land, sea, and more. It conducts Earth science research, monitors the changing climate, and innovates with partners to address environmental challenges. It plays an active role in improving people's lives by providing Earth science data and tools that support good agriculture practices, air quality monitoring, and responses to extreme weather and natural hazards. Photo credit: NASA/JPL

Visit <u>nasa.gov/earthday</u> to learn how NASA is investing in planet Earth!

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NASA, Stennis Leaders Deliver Annual Update to Community Leaders

The 11th annual NASA Stennis Space Center Director's Community Briefing took place March 23 at the Brownstone Center on the campus of Pearl River Community College in Poplarville, Mississippi. Stennis Director Dr. Rick Gilbrech discussed ongoing activities at NASA Stennis and the outlook for various areas of operation, including propulsion testing, autonomous systems work, business development, and growth of the federal city. Partners for Stennis and Michoud hosted the event, and Chair Mark Glorioso served as emcee.

(Top left photo) Stennis Director Dr. Rick Gilbrech delivers the annual state of NASA Stennis address to about 150 business and industry leaders from Mississippi and Louisiana.

(Top middle photo) NASA Michoud Assembly Facility Director Lonnie Dutreix speaks during the NASA Stennis Space Center Director's Community Briefing on March 23.

(Top right photo) Naval Meteorology and Oceanography Command Acting Technical Director Jennifer Hailes speaks during the NASA Stennis Space Center Director's Community Briefing on March 23.

(Bottom left photo) Participants sign in for the NASA Stennis Space Center Director's Community Briefing in Poplarville, Mississippi, on March 23.

(Bottom middle photo) Pearl River Community College President Dr. Adam Breerwood welcomes participants to the school campus in Poplarville, Mississippi, on March 23.

(Bottom right photo) NASA Stennis Director Dr. Rick Gilbrech participates in a media interview following the annual NASA Stennis community briefing on March 23.







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NASA Engineer 'Enjoyed Every Minute' of Four Decades of Service with Agency

arry Pigott's voice changes as he reflects on his NASA career, his words and tone communicating

working with contractors for supporting maintenance and research and development programs.

NASA career, his word pride, not surprising considering his career has spanned more than 59 years in the aerospace engineering field, including 42 years as a NASA engineer.

"I would not trade this experience for anything," Pigott said. "I am proud of NASA. I am proud of the people I have worked with over the years."

April marks the official retirement month for the Bogalusa, Louisiana native. No matter how much time has passed, a few things have remained constant throughout Pigott's career – the love for the people he worked with, the teamwork environment associated with



An image from 2016 shows NASA engineer Larry Pigott at NASA's Stennis Space Center. Pigott will retire in April after 59 years in the aerospace engineering field, including 42 years as a NASA engineer.

Pigott's work was a part of something bigger than himself, and the relationships formed along the way were something he valued.

"What makes NASA so special is the fact that they take care of their people," he said. "That's a highlight. That has been proven by a lot of surveys that have taken place that NASA is the best place to work."

An annual national government-wide survey has ranked NASA as the Best Place to Work in the Federal Government, among large agencies,

the job, and always completing the work in a safe manner.

Pigott's career with NASA began in 1981, when he spent 11 years at Michoud Assembly Facility in New Orleans. In December 1992, Pigott relocated to NASA's <u>Stennis Space Center</u>, near Bay St. Louis, Mississippi, as a Marshall Space Flight Center technical representative for space shuttle main engines.

He was part of a team that monitored activities associated with an engine testing campaign that, at times included hot fires 24 hours a day for seven days a week.

"I learned working at NASA that to have a good relationship with my fellow workers, it required we trust one another," Pigott said. "Trust is the backbone that holds the team together."

Pigott now splits time living in Pearl River, Louisiana, and Tallahassee, Florida. He describes his most recent work within the Rocket Propulsion Test Program Office at NASA Stennis as insight and oversight that included for 11 consecutive years. Pigott said the environment at NASA is different, and the work culture is something that does not happen by accident.

"You have people who enjoy working, especially working together," he said. "They have developed that environment, and they get recognized for the work that is done. Each generation has its way of how they want to run things. As long as you focus on safety, it's going to continue to grow in favorable ways."

While much of Pigott's recent work did not directly involve NASA's <u>Artemis</u> program, he said it is an exciting time in which he sees great opportunities ahead for young engineers as the agency returns humans, including the first woman and the first person of color, to the Moon to explore the lunar surface and prepare for flights to Mars.

"I enjoyed every minute of it," Pigott said about working at NASA. "I love Stennis, and I love the people who work there and look forward to their continuing careers."

Hail & Farewell

NASA bids farewell to:

Aerospace Technology

Larry Pigott

Rocket Propulsion Testing Office

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NASA Celebrates Employees During March's Women's History Month

NASA Stennis and NSSC Celebrate Women's History Month



Brittany Bouché Project Manager NASA Center Operations Directorate

What are your hopes for the future of women in the workforce?

Women are amazing superheroes who can have and balance both a family life and a career. There is no goal that is insurmountable or unachievable when you have passion and drive. I hope that, in the future, women continue to break glass ceilings in pursuit of their dreams.

As a woman in the workforce, from whom have you drawn inspiration?

My inspiration stems from the strong women and men in my family. My mother was a single parent to three children, and her incredible work ethic set the example we sought to follow. She returned to college as an adult and pursued her dreams in the face of adversity – raising children, working multiple jobs, attending college, and even battling breast cancer.

My brothers taught me how to be emotionally strong and how to not only persevere through challenges, but to use those challenges as a source of inspiration. We have been an amazing team together, driving one another to be our best selves.

Celebrating Women Who Tell Our Stories

ASA's Stennis Space Center and NSSC are proud to celebrat Women's History Month and recognize the diversity of the workforce contributing to the success of America's premier rocket propulsion test site.

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Carolyn Tolman Attorney-Advisor **NASA Office of the Chief** Counsel

What are your hopes for the future of women in the workforce?

hope that we continue to pursue our dreams, whatever they are. I hope that we continue to achieve great things because we are capable of anything and everything we set our minds to. I hope that we continue to push the boundaries of what we think is impossible today and make it possible tomorrow through science, technology, space exploration, and other disciplines.

As a woman in the workforce, from whom have you drawn inspiration?

I am fortunate that I come from a long line of inspirational women who have paved the way for my and my sisters' successes. My mother was the first person in the history of her family to attend and graduate from college. My aunt was an Aircraft Maintenance Officer in the U.S. Air

Force in the 1970s – a career field of mostly men – and went on to become the first non-flying woman Wing Commander of a flying wing. My grandmother was a teacher: her mother and aunt also were

teachers over 100 years ago. I am so lucky to have three generations of strong, independent women to look up to!

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Cecv Lewis Equal Employment Opportunity Specialist & Disability Program Manager SSC/NSSC Office of Diversity & Equal Opportunity

What are your hopes for the future of women in the workforce?

My hope for the future of women in the workforce is that the next generation will be inspired to pursue careers in which they are passionate about the work, even if that requires breaking new ground. A career may span 30 or more years, and it makes a world of difference if you love the work you do each day. I also hope that as women enter the workplace they will find mentors early in their careers to inspire and guide them.

As a woman in the workforce, from whom have you drawn inspiration?

My greatest inspiration in the workforce is my first supervisor, Marcia Miller, who was the first female director of a City of Gulfport department. When I was a young woman entering the workplace, there were very few female role models. I was fortunate to have such a great mentor who demonstrated how to navigate work and life with dignity and integrity. Marcia was my greatest encourager who saw potential in me that I did not know was there. She helped draw out that potential with encouragement and opportunities to help me advance in my career. I will be forever grateful for her.

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Elizabeth Calantoni Aerospace Engineer B Test Stand NASA Safety & Mission Assurance **Directorate**

What are your hopes for the future of women in the workforce?

In the future, I look forward to seeing more women in leadership roles, particularly in STEM fields.

As a woman in the workforce, from whom have you drawn inspiration? Early in my career, I was fortunate to have had a supervisor, physicist Dr. Karen L. Johnston, who was a terrific role model and mentor. She recognized workplace dynamics, shared her experiences, and offered guidance as to how to put challenges into perspective in the interest of moving forward. Her goals were always her own – never defined by convention - and nothing held her back.

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Gigi Savona Exchange Operations Manager **NASA Office of the Director**

What are your hopes for the future of women in the workforce?

In 1981, I entered the workforce after graduating from college with a degree in ocean engineering. I was the only female in many senior classes. As a "fresh out of college" professional in a male-dominated career field, I noticed that the companies I interviewed with were aware of the needs of women in the workforce and had some good leave and protection policies in place but there were still reproduce will protection policies in place, but there was still rampant sexual

harassment at that time. Our culture was changing, but women who started families were still expected to manage their career, childcare, and household. Teleworking was not considered an option.

So, my hope is that we do not lose the advancements that have been made in the last forty years and that the empathy and compassion women bring to the workforce is viewed as an asset instead of a minus.

As a woman in the workforce, from whom have you drawn inspiration?

was influenced by my mother and grandmother, women who survived a World War II labor camp and who always told me that, in this country, I could be anything I wanted if I studied and worked hard. They were always encouraging and positive when I felt like school was too hard and I wanted to quit. I will always cherish the support and love they gave me to get through those times.

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Kelly McCarthy **Education Program Specialist NASA Office of STEM** Engagement

What are your hopes for the future of women in the workforce? I am excited to see women continuing to make strides in their respective fields, fostering collaboration and innovation. My hope is that women continue to build community, prioritize mentorship, and promote development of the next generation in support of an inclusive future workforce

As a woman in the workforce, from whom have you drawn inspiration?

Inspiration? There are so many strong women in my life from whom I have drawn inspiration! As I grew up, I remember seeing my mom spend hours at our kitchen table to learn new skills to make a career change to provide a better future to my siblings and me – all while raising a family in strong partnership with my dad and working long hours at her job. Her work ethic and drive pushed me to strive for success, as I graduated as a first-generation college student and later worked up to four concurrent jobs to build my skills. My mom inspired me to pursue a future that would fulfill my dreams of making a positive global impact while also being able to support and prioritize family. In my work. I have had incredibly strong female mentors and supervisors In my work, I have had incredibly strong female mentors and supervisors, om non-profit CEOs to federal government leaders. A common thread I tru value is the ability to balance compassion with leadership and putting our humanity first in the workplace. I continue to be surrounded by strong non thread I truly

nen who, even when up against incredible challenges, face every day with nacity. Women at NASA are my sisters, friends, peers, teachers, and leaders.

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Dawn Davis **Chief, Office of Technology** Development **NASA Engineering & Test** Directorate

What are your hopes for the future of women in the workforce?

hope women continue to pursue careers in STEM. Women are still underrepresented, but I am encouraged by seeing more women pursuing degrees in engineering than when I was in college.

As a woman in the workforce, from whom have you drawn inspiration?

Over my career, I have drawn inspiration from several people. My aunt has always served as an inspiration. She was a high school math teacher and shared my love of solving problems. She continued to encourage me throughout my career, especially early on when being the only female in some places was new and difficult for me.

Lorna Jackson – who was my supervisor and mentor while I was serving a detail at NASA's Marshall Space Flight Center – also was an eadership role that I worked with at the agency, and she challenged me to step outside of my comfort zone. Closer to home at NASA Stennis, there have been other women, including Pam Covington Monica Ceruti, and Mary Byrd, who have offered me advice and encouragement.

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Laura Pair **Senior System Administrator** SaiTech

What are your hopes for the future of women in the workforce? While I firmly believe that respect and opportunity for women in the workforce has grown exponentially in recent years, my hope is that we continue that momentum through hard work and perseverance. As a woman in the workforce, from whom

have you drawn inspiration? was very fortunate to be born into a very loving and supportive family. My parents have always been my nspiration in life. They taught me to respect myself as would others, never sell myself short, and, above all, never let anyone else define me.

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Lynn Heberling Management Support Assistant NASA Rocket Propulsion Test Program Office

What are your hopes for the future of women in the workforce?

I hope that women in the workforce continue to work hard to accomplish their dreams. Life has a way of changing our direction, and we need to remember that it is okay and keep moving forward.

As a woman in the workforce, from whom have you drawn inspiration?

My inspiration comes from the women that have worked hard and excelled in the workplace but have also cared for and supported their families.

I was told by a coworker many, many years ago, "If you are going to do something, do the best job that you can and always try to improve, no matter the job." That has always been my motto, and that is what I have always told my children.

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Tessa Keating Public Affairs Specialist NASA Office of Communications

What are your hopes for the future of women in the workforce?

I hope women continue to reach for the stars and break boundaries in all areas of the workforce. As a woman in the workforce, from whom have you drawn inspiration?

It is impossible to choose one single woman who has given me the most inspiration. I have been privileged to be raised by, be mentored by, and work alongside strong women who have guided me with love and respect. These women have inspired me to continue to strive toward goals that seem unachievable. If I can be half the leader that they each are, I would count that as one of my greatest blessings.

ູ Celebrating Women Who Tell Our Stories ຊິ

NASA's Stennis Space Center and NSSC are proud to celebrate Women's History Month and recognize the diversity of the workforce contributing to the success of America's premier rocket propulsion test site. NASA Stennis and NSSC Celebrate Women's History Month



Tammy Vaughn Chief Accountant NASA Office of the Chief Financial Officer

What are your hopes for the future of women in the workforce?

My hope for future women in the workforce is that they do not hold themselves back due to societal and social media influences. I have watched women come a long way over the years, and I hope they continue to be brave, independent, and at ease with themselves.

As a woman in the workforce, from whom have you drawn inspiration?

I do not believe there is just one woman who has given me inspiration over the years. There has been a multitude of inspirational women in every single aspect of my life. Women who support each other, believe in themselves, and pursue non-traditional careers and goals continue to inspire me.

Celebrating Women Who Tell Our Stories

NASA's Stennis Space Center and NSSC are proud to celebrate Women's History Month and recognize the diversity of the workforce contributing to the success of America's premier rocket propulsion test site.

NASA Stennis and NSSC Celebrate Women's History Month



Wanda Williams Metrology Technician III Alutiiq Essential Services

What are your hopes for the future of women in the workforce? My hope for the future of women in the workforce is that they – no matter their profession or industry – will receive equal compensation as men who perform the same job and have equitable access to opportunities for career advancement.

As a woman in the workforce, from whom have you drawn inspiration? By the grace of God, I was the first female electronics technician at NASA Stennis. By May, I will have served at the center for 45 years, and I hope my career can be an inspiration to others to pursue their dreams.

Celebrating Women Who Tell Our Stories

NASA's Stennis Space Center and NSSC are proud to celebrate Women's History Month and recognize the diversity of the workforce contributing to the success of America's premier rocket propulsion test site. Page 13

Teams Compete in NASA Sponsored Inaugural FIRST Robotics Competition

The inaugural FIRST (For the Inspiration and Recognition of Science and Technology) Robotics Magnolia Regional Competition featured 29 teams from six states competing on March 15-18 at the Magnolia Center in Laurel, Mississippi. Five of the nine teams from Mississippi competed in playoff matches as NASA's Stennis Space Center joined with NASA's Robotics Alliance Project and co-sponsor Mississippi Power to bring to life all aspects of science, technology, engineering, and mathematics (STEM) in the Magnolia state. The regional competition served as a championship-qualifying event for teams to compete in Houston in the world championship event in April. The goal is to have the Magnolia Regional expose more students in rural areas to STEM and become an annual FIRST Robotics Competition. Full information about the Magnolia Regional and the event outcomes is available <u>here</u>.

(Top left photo) FIRST (For the Inspiration and Recognition of Science and Technology) combines the excitement of sport with the rigors of science and technology during the inaugural FIRST Robotics Magnolia Regional Competition in Laurel, Mississippi, on March 17.

(Top right photo) The Chahta Warriors, a NASA Stennis house team from Choctaw, Mississippi, compete during the FIRST Robotics Magnolia Regional Competition on March 17. As a house team, the Chahta Warriors have an ongoing relationship with NASA Stennis. The team earned the Judges' Award during the Magnolia Regional event, which recognizes a team's unique efforts and performance.

(Bottom left photo) JXN United from Jackson, Mississippi, competes during the FIRST Robotics Magnolia Regional Competition on March 17.

(Bottom middle photo) Alpha Omega, a NASA Stennis house team from Our Lady Academy in Bay St. Louis, Mississippi, competes during the inaugural FIRST Robotics Magnolia Regional Competition. The team is the only all-girls FIRST Robotics Competition team in Mississippi.

(Bottom right photo) Team Hero from Petal High School in Petal, Mississippi, competes during the inaugural FIRST Robotics Magnolia Regional Competition on March 17.







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Artemis II Crew Appears on "The Late Show"



Astronauts Jeremy Hansen (I to r), Victor Glover, Reid Wiseman, and Christina Hammock Koch talk with television host Stephen Colbert on "The Late Show with Stephen Colbert" on April 5. The astronauts, who will orbit the Moon aboard Artemis II in late 2024, appeared on the show after being named by NASA and the Canadian Space Agency on April 3. NASA astronauts Wiseman, Glover and Hammock Koch will serve as mission commander, pilot and mission specialists, respectively. Hansen, a Canadian astronaut, will serve as a mission specialist. Photo credit: "The Late Show with Stephen Colbert"/Scott Kowalchyk

NASA in the News

Houston, We Have a Podcast: The Artemis II Astronauts

rom Earth orbit to the Moon and Mars, explore the world of human spaceflight with NASA each week on the official podcast of the Johnson Space Center in Houston, Texas. Listen to in-depth conversations with the astronauts, scientists and engineers who make it possible. On Episode 283, the Artemis II astronauts discuss their past, present, and what they are looking forward to on their future mission to the Moon. These interviews were recorded in March 2023. Host Gary Jordan introduces the segment, noting: "On this podcast we're bringing the experts, scientists, engineers, astronauts, all to let you know what's going on in the world of human spaceflight and more. NASA just named the crew that will be flying to the Moon as part of the Artemis II mission. ... And let me tell you, these are some exceptional people." Click here to read the transcript or listen to the podcast with the Artemis II astronauts.

NASA Receives Nine 2023 Webby Award Nominations

ASA recently received nine nominations for the 2023 Webby Awards, designed by the International Academy of Digital Arts and Sciences to recognize "excellence in digital creativity, establishing best practices on a yearly basis continually pushing the standards of web development higher." The NASA nominees include the "29 Days on the Edge" program highlighting deployment of the James Webb Space Telescope. The last time NASA sent a spacecraft to the Moon that was built to carry people, the internet did not exist. Fifty years later, NASA took the world's online population to the Moon virtually as the Artemis I mission sent the Orion spacecraft around the Moon in preparation for landing humans there later this decade. NASA's social media spread the news far and wide. Click here to read more about the NASA nominees and to learn how to vote for nominees online.

NASA Stennis News



Agency Occupational Safety and Health Team Visits NASA Stennis

Members of the NASA Occupational Safety and Health Team stand in front of the Roy S. Estess Building as part of a March 23 tour of NASA's Stennis Space Center. Occupational Safety and Health oversees the safety aspects of a series of subdisciplines, subdisciplines, such as construction and laboratory safety, personal protective quipment, and safety training, to ensure safety for NASA and its workforce.



Hancock County Leadership Class Members Visit NASA Stennis

Members of the Hancock County Leadership class stand at the base of the A-2 Test Stand during a tour of NASA's Stennis Space Center March 23. The class learned about the role NASA Stennis plays in the Artemis mission as NASA returns to the Moon.

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NASA Stennis News

NASA Fabrication Alliance Team Visits Stennis Space Center

(Right photo) The NASA Fabrication Alliance Team stands in front of the B Test Stand at NASA's Stennis Space Center during a March 29 tour of Stennis. The team includes personnel from across the agency. Team members from the following NASA centers and facilities visited NASA Stennis: Ames Research Center in Silicon Valley, California; Armstrong Flight Research Center in Sandusky, Ohio; Glenn Research Center in Cleveland; Jet Propulsion Lab in Southern California; Johnson Space Center in Houston; Langley Research Center in Hampton, Virginia; and White Sands Test Facility in Las Cruces, New Mexico. The group works together, creating more efficiency and cost savings among NASA centers and facilities.





NASA Space Technology Mission Directorate Team Visits Stennis

The NASA Space Technology Mission Directorate (STMD) Team stands in front of the B Test Stand at NASA's Stennis Space Center during a March 29 tour of the site. The team aims to transform future missions while ensuring American leadership in aerospace. As NASA embarks on the next era of space exploration with Artemis, STMD is advancing technologies and testing new capabilities at the Moon.

NASA Technical Manager Encourages Future Entrepreneurs

s NASA innovates for the benefit of humanity and strives to improve life on Earth through technological advances, it needs people to help

guide the innovations through the proper channels and share the story of how the technologies ensure a better future.

Enter Tom Lipski, a technical manager at NASA's Stennis Space Center. Day in and day out, a large part of his job includes supporting contract compliance, intellectual property, and new technology reporting.

A typical

workday for the

NASA Technical Manager Tom Lipski stands in front of the Roy S. Estess Building at NASA's Stennis Space Center. The technical manager reviews new technology reports to ensure contract compliance. Additionally, he connects with university students in Mississippi and Louisiana to discuss NASA-proven technologies while encouraging entrepreneurship to use those technologies.

Long Beach, Mississippi, native and resident involves reviewing new technology reports to ensure the supporting paperwork is in order. The reports come from NASA and agency partners requesting proposals in order to establish contracts to develop various technologies.

Lipski tracks documents through the intellectual property process, which can determine if a new technology requires intellectual property protection and whether it can be patented and earn royalties for its inventor.

Another part of Lipski's job is coordinating and participating in technology transfer expansion outreach through the agency's Tech Transfer University (T2U). Through NASA's T2U program, Lipski connects with university students in Mississippi and Louisiana to discuss NASA-proven technologies while also encouraging entrepreneurship to use those technologies.

Student entrepreneurs build case studies with NASA's patent portfolio while learning about commercialization and licensing opportunities.

engineering position. Even before he arrived on site, he had fond memories of Stennis from witnessing engine tests as a teenager.

As the technical manager interacts with various aspects of the NASA community, it is through his interactions with a diverse workforce that Lipski recognizes the value of others.

"If you are able to actively listen to others and understand other perspectives, I think we all benefit," he said.

While NASA continues to provide value to all of humanity thanks, in part, to efforts such as Lipski's, the technical manager says it is the community aspect at Stennis that he prizes most about his work.

"The center is not necessarily the infrastructure (test stands and buildings); it's also the people, the community that makes things work and go," he said. "It is because of the community that is here that things go so well."

Lipski describes it as the proudest part of his job because of the ripple effect it can have.



"I think it is important because these students are the future of our country and what we are able to accomplish as a nation," Lipski said. "I think hope is what it comes down to, the hope of the things that I just mentioned will happen. The end result could be startup companies, which leads to jobs, helping the economy, improving their daily lives, and helping others."

Lipski has worked at Stennis for six years since initially applying for a systems

Stennis Flashback: NASA Test Series Leads to Bold Space Shuttle Flight

t may have been small, but the white puff of smoke exiting the B-2 Test Stand at NASA's Stennis Space Center at the end of the week on Friday, April 21, 1978, set the stage for the beginning of NASA's <u>Space Shuttle</u> era.

The stakes could not have been higher for the test series underway 45 years ago at the site then known as the National Space Technology Laboratories.

NASA employees in south Mississippi and throughout the agency were anxious to prove the critical propulsion system was ready to safely power the world's first reusable spacecraft and carry humans into orbit.



A space shuttle main propulsion test article (MPTA) component is lifted onto the B-2 Test Stand at NASA's Stennis Space Center, then known as National Space Technology Laboratories, in this 1977 photo. MPTA testing involved installing a shuttle fuel tank, a mockup of the shuttle orbiter, and the vehicle's three-engine configuration on the stand, then firing all three engines simultaneously, as would be done during an actual launch.

The initiation into the test series happened with a short duration firing of just 1.9 seconds, known as a burp test. However, that short test ensured all was ready to start the full test series.

In total, the NASA Stennis team conducted 18 MPTA firings, with the final test conducted on Jan. 17, 1981. By that time, the test version of the space shuttle's propulsion system had undergone more than one hour of firing time. Altogether, the three engines had been fired for a combined 10,813 seconds through a range of operating parameters. At the time, it came to be known as the site's finest hour.

The maiden voyage of Space Shuttle Columbia successfully launched April 12, 1981. The launch provided a sense of pride for America, and even more so for the employees in Mississippi who successfully tested the system for a safe send off.

"I think the location here in southern Mississippi has helped us be more productive than we

could have been in a more industrial area," NASA Space Shuttle Main Engine Manager Boyce Mix said just before launch. "We've got technicians, engineers, and support personnel who are very dedicated. If a job has to be done, they go out and do it."

John Young commanded the mission with Robert Crippen in the pilot seat. The astronauts and the vehicle met or exceeded all 144 test objectives throughout the more than two-day mission. It represented an achievement in aerospace technology and development never realized in the history of crewed spaceflight. Young and Crippen visited the south Mississippi test site less than a month later on May 8, 1981.

"The effort that you contributed made it possible for us to sit back and ride," Crippen told the crowd of employees.

Young followed up by saying, "I am really proud to have been associated with you people because this vehicle is built for the future."

The beginning of the shuttle era indeed became the building block for the future – a future that led to countless mission highlights, including the first American woman and person of color in space, construction of the International Space Station and launch of the Hubble Space Telescope, and a future that now advances under Artemis as NASA continues to explore the secrets of the universe for the benefit of all.





The main propulsion test article (MPTA) series would be the only testing of the shuttle propulsion system before astronauts flew on the boldest test flight in history. The space shuttle, described as taking off like a rocket and landing like a plane, required an astronaut to be at the controls to perform the last moments of flight. It could not land itself like NASA's Orion spacecraft did last December on the Artemis I mission, so the lives of two astronauts depended on all vehicle systems performing as expected.

The MPTA installed on the <u>B-2</u> Test Stand consisted of an external tank and three main engines linked together with a simulated shuttle orbiter. The test team originally scheduled a first test for April 11, 1978. However, the computer ended five countdown attempts that day, causing the first attempt to be postponed. NASA Main Propulsion Test Manager Harry Johnstone said there were problems in meeting defined engine start conditions.

Engineers and technicians were undeterred by the delay. After all, crews already had persevered through long working hours by the spring of 1978, performing a tanking test, simulated countdowns, and continuous checks of the electrical and mechanical systems. The adjustment of the schedule came with the process. Fast forward 10 days later to April 21.

(Top photo) A Dec. 17, 1979 photo shows a hot fire test of the main propulsion test article (MPTA) on the B-2 Test Stand at NASA's Stennis Space Center, then known as National Space Technology Laboratories. MPTA testing involved installing a shuttle fuel tank, a mockup of the shuttle orbiter, and the vehicle's three-engine configuration on the stand, then firing all three engines simultaneously, as would be done during an actual launch.

(Left photo) Employees at NASA's Stennis Space Center, then known as National Space Technology Laboratories, install a space shuttle main engine on the B-2 Test Stand in preparation for testing the space shuttle main propulsion test article (MPTA) in 1978. MPTA testing involved installing a shuttle fuel tank, a mockup of the shuttle orbiter, and the vehicle's three-engine configuration on the stand, then firing all three engines simultaneously, as would be done during an actual launch.

Office of Diversity and Equal Opportunity

Remembering the Holocaust Through the Life of Jeannine Burk

The Holocaust, also called the Shoah, was the systematic, state-sponsored murder of 6 million Jews by Nazi Germany and its collaborators during World War II. It was part of the "Final Solution" – the Nazi plan to annihilate more than 9 million Jews in Europe. The Nazis murdered millions of others as well.

In 1980, The U.S. Congress established Days of Remembrance as the nation's annual commemoration of the Holocaust. The 2023 Holocaust Days of Remembrance, observed April 16-23, is a time to honor and remember the victims of the Holocaust and their liberators.

NASA's Stennis Space Center and the NASA Shared Services Center Office of Diversity and Equal Opportunity remembers and shares the life of Jeannine Burk. She served as guest speaker for the Days of Remembrance Program at NASA Stennis in 2010, where she shared her experiences as a Holocaust survivor. View a video of the 2010 program here.

Two days before Hitler invaded Poland, Jeannine (Rasalowicz) Burk was born in Brussels, Belgium, on September 15, 1939. She was the youngest of three children born to Isaac and Sarah Rasalowicz. Her older brother, Max Rasalowicz, was born in 1930, and Augusta Rasalowicz, her older sister, was born in 1931. When Burk was 3 years old, her father took her to an ally's house where she spent the next two years in hiding.

"My father took me on a streetcar," she recalled in an oral history interview to the Holocaust survivor organization. "This memory is etched in my mind because it was the last time I ever saw my father. We rode to the end of the line. I remember getting off with him. I remember walking what appeared to me to be a long distance. He knocked on a door, and a woman answered. I went inside. That was the last time I ever saw my father."

While never mistreated, Burk shared she never felt loved or supported by the family she stayed with thereafter. She was occasionally allowed to go in the backyard to play but was never allowed to go out in the front yard. Burk remembers hiding in an outhouse from Nazi soldiers when they paraded the street.

"I was petrified," she said in the oral history interview. "An outhouse is small, and I would retreat to the farthest little corner. There was a crack in the front of the outhouse. I thought if I could see them parading outside, they would be able to see me." After liberation by Allied Forces in 1944, Burk's mother brought her home, where she learned the fate of the rest of her family. While she was in hiding, a neighbor reported the family to the Gestapo, resulting in a raid of their home. Burk's father was taken and eventually sent to Auschwitz, where he perished in the gas chamber. Burk's mother and sister were left when the Gestapo discovered her older sister in a body cast due to her bone disease, osteomyelitis. Her brother was hiding in a Christian home for boys. During the aftermath, Burk's mother took her sister to a Catholic hospital where she stayed in the isolation ward for two years. Her mother found solace in a nursing home where she worked as a practical nurse.

In 1950, Burk's mother died of breast cancer when the younger girl was only 10 years old. In the wake of her mother's death, Burk and her older sister were invited by the International Ladies' Garment Workers' Union for its 50th anniversary celebration in Atlantic City, New York. During the visit, they visited Union headquarters and connected with several people, who in Burk's words, "treated [them] like royalty."

They were featured in a news article about the trip in the *Forward Yiddish* newspaper. The article highlight helped Burk make connections with the Savage family, who were related to her father's sisters. With her brother married, and sister engaged, Burk immigrated to the United States in 1951 to live with the Savage family.

In 1971, she met Maurice Burk, who she would eventually marry. The Burkes moved to New Orleans, where they raised six children and had 14 grandchildren. In 1985, Burk traveled to the World Gathering of Holocaust Survivors in Philadelphia. At this gathering, Jeannine examined German records, which held her father's name, solidifying for her that he was never coming back.

Burk later participated in the Southern Institute's Holocaust education workshops and began participating in speaking engagements. She died in July 2020, but she remains in the hearts and minds of those who knew her and in the organizations with which she partnered.

To learn more about Jeannine Burk's life and other Holocaust survivors, follow the links below:

Holocaust Survivors

Jeannine's Biography - Teaching the Holocaust Jeannine Burk | The National WWII Museum New Orleans (nationalww2museum.org)

Online Resources



NASA Stennis Artemis Resources

Click the above photo for NASA Stennis Artemis resources.



NASA Stennis Video Shorts Click the links below to watch brief videos of NASA Stennis.

- <u>Waterway Lock System</u>
- <u>Key Testing Component</u>
- Data Acquisition System
- <u>Thrust Vector Control System</u>



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

NASA Stennis Resources and NASA Stennis In The News Click the links below for more about NASA Stennis and NASA Stennis media appearances.

- Jackson Elementary Students Learn About Space From NASA Stennis
- Penn State Engineering: Michele Beisler: "I Engineer Exploration"
- WLOX: Look Ahead to Artemis II With NASA Stennis Associate Director Rodney McKellip