

July 20, 1969 'One giant leap for mankind'



By one estimate, only 20 percent of everyone on Earth today was alive when humans first reached the Moon 50 years ago. Though I may not look it (ark!), ole Gator was one of those fortunate souls.

One grows up with memories of various kinds. Some are consciously created, like remembering the order of the planets or practicing something enough that it becomes a rote action. Others are implicit, sensory, experiential, like remembering the exact layout of your grandparents' house because you spent summers there. I remember the smell of my grandgator's cooking so clearly it makes my stomach growl. Ark!

Then, there are so-called "dead stop" memories, those "I-will-never-forget-where-I-was/how-I-felt/whenit-happened" moments. July 20, 1969, was just such a moment. When Neil Armstrong became the first human to step foot onto the grainy-gray surface of the Moon, the world was watching. Some estimate as many as 600 million people viewed the broadcast of Armstrong's step onto the lunar surface. That translates to about one-sixth of the world population at the time – and does not include those following the mission by other means. As then-President Richard Nixon said, "For one priceless moment in the whole history of man, all the people on this Earth are truly one."

Those people included ole Gator, who still remembers watching the black-and-white screen of the small home television late into that night, still remembers the famous words spoken by Armstrong, still remembers walking outside to look up at the Moon and marvel that two humans were there at that very moment. Staring into the sky, everything suddenly was possible.

Places hold memories just like people. Stennis certainly does. It always will be the place that helped power humans to the Moon for the first time, the place that not only made that particular space dream possible but continues to enable new ones to fly farther and to new destinations. Whether you were here or even alive during Apollo matters not – as part of the Stennis family, you share in that memory because you are continuing now in the work undertaken then. It all – past, present, future – is part of you.

So, happy anniversary, Apollo 11. Regardless of the years that pass, as long as humans hold memories, you never will be forgotten.



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Crews practice core stage lift procedure, begins training for test operations





A work crew participates in an early June training session for handling and lifting the Space Launch System core stage Pathfinder replica at the B-2 Test Stand at Stennis Space Center. The Pathfinder was designed and built as a full-scale "form and fit" replica of the core stage of the new SLS rocket that will enable NASA to return astronauts to the surface of the Moon by 2024. It is the same shape, size and weight (without propellants loaded) as the actual SLS core stage, with the same center of gravity. Crew members from Stennis, Michoud Assembly Facility and Kennedy Space Center are using the Pathfinder through the summer months to train and practice handling, lifting and installation techniques that will be needed for the SLS flight core stage when it arrives for testing. In this photo, crews have placed the yellow "spider" component on the forward end of the Pathfinder. Master link and hydraset devices will connect to the "spider" on one end and to the B-2 Test Stand derrick crane cable on the other end. They will enable the crane to lift the Pathfinder from its horizontal position and "break" it over into a vertical position (as the core stage will stand during a launch) for installation onto the test stand. In addition to that work, test operators have begun training in test control center procedures that will be used for core stage testing. The training involves operators from Stennis, as well as Michoud Assembly Facility, Aerojet Rocketdyne and Boeing. The team members are spending time in the test control center, working though the same procedures that will be used during testing. The current schedule calls for NASA to test the SLS flight core stage on the B-2 stand next year prior to the initial SLS Artemis 1 launch.



July 2019



LAGNIAPPE

'A mighty fine day' – celebrating the unforgettable Apollo 11

Most remember everything about it – where they were, who was with them, what the night was like, the look of near incomprehension on the news anchor's face, the flickering ghost images on the small family television set.

They can recount it all – every detail. What is more difficult – perhaps impossible – is to state the emotion of that night, to articulate the sense of meaning, wonder and possibility contained in that single moment.

It was, after all, truly a small step for a man, a tentative move of a foot, a careful placement of a boot in powdery, grey soil that clung to one's garments and turned out to smell like spent gunpowder. Yet, descriptions of that step strain the limits of language.

National Geographic called it "the greatest achievement in the history of exploration." Then-President Richard Nixon said "the heavens have become part of man's world." One writer characterized it as "a triumph of the human spirit." Historian Arthur Schiesinger Jr. later would label it "the most significant event of the 20th century."

Superlatives notwithstanding, perhaps the best summation of the moment was the one offered by the person who actually took the memorable step, who set that careful foot in place late on the night of July 20, 1969.

"That's one small step for (a) man, one giant leap for mankind," astronaut Neil Armstrong said as

he moved one foot from the small landing pad of his Apollo lunar module ascended from the lunar surface at 12:54 p.m. on July 21 and redocked onto the Moon and became the first human being to step onto a heavenly body other than Earth.

Fifty years later, during the golden anniversary of that moment, as the country once again prepares to fly to the Moon in just a few years, the story of the Apollo 11 mission has been told again and again - in books, documentaries, news reports, interviews. The smallest details have been noted. Memories have been shared. Celebrations have been held. NASA itself has marked the crowning moment of the agency with a variety of events across the nation, including a three-day Apollo 50 Festival on the National Mall in Washington, D.C.

Tew of those who were alive at the time will ever forget the moment. Stennis Space Center has joined in the activity as well – and rightfully so. Early on, scientist Wernher von Braun, who led in development of the Saturn V rockets that made Apollo lunar missions possible, made clear that any path to the Moon had to go through the fledgling south Mississippi rocket stage/engine test site.

> He was correct. By the end of the Apollo Program in 1972, astronauts on every mission designed to land on the Moon had been launched on massive Saturn V rocket stages first tested at Stennis. Through its test-

> > ing expertise and careful attention to ensuring each rocket stage was flightworthy, Stennis Space Center cleared the way for the nation – and its young space agency – to achieve its greatest challenge.

> > By one estimate, one-fourth of the world's population watched or heard Armstrong and fellow astronaut Buzz Aldrin walk on the Moon that long-past July night. It is safe to say that percentage was considerably higher in communities surrounding Stennis Space Center.

The show lasted but a few hours. The Apollo 11 lunar module nicknamed *Eagle* – settled onto the surface of the Moon at 3:17 p.m. CDT on July 20. Unable to contain their eagerness, the astronauts asked to begin their lunar exploration ahead of schedule. Permission granted, Armstrong stepped onto the lunar surface at 9:56 p.m., a little more than six hours after landing.

The walk ended about two hours later – at 12:09 a.m. After muchneeded rest, Armstrong and Aldrin

with the Columbia command module three-and-a-half hours later. It had been a little more than a full day since *Eagle* first landed on the Moon.

"You're looking great," fellow astronaut Charles Duke, who was serving as the Apollo 11 capsule communicator (CAPCOM) and who would become the youngest human to walk on the Moon during the Apollo 16 mission, radioed from mission control in Houston. "It's been a mighty fine day."

"Boy, you're not kidding," Apollo 11 command module pilot Michael Collins responded, apparently feeling no need to state the obvious, that this fine day would never slip away.

Neil Armstrong's descent onto the Moon on July 20, 1969, was captured by a camera mounted on the lunar module and activated after landing. Once on the Moon, Armstrong retrieved a camera to

take additional photos. Above is the first image he captured, showing one leg of the lunar module.





The shadow of an Apollo 11 astronaut falling across the lunar landscape is captured during the Apollo 11 mission.

Glimpses of 'the most widely shared adventure in all history'



The highlights of what one 1969 account called "the most widely shared adventure in all history" includes numerous memorable moments – from the launch of Apollo 11 on July 16, 1969 (above) to the grainy television broadcast of Neil Amrstrong stepping down to the lunar surface (top center) to the safe splashdown of the three Apollo 11 astronauts on July 24, 1969 (bottom center) to the celebration of NASA mission control at the conclusion of the mission (top right) to the joyous image of the quarantined astronauts following their splashdown recovery (bottom right). Six additional Apollo missions would fly to the Moon, although one would suffer an inflight explosion that prevented it from landing on the lunar surface. All in all, by the end of the Apollo Program in 1972, 10 other astronauts had joined Neil Armstrong and Buzz Aldrin as the only humans ever to step foot on a world other than this one.









Note: The following was written by Nathan Sovik, program planning and control manager in the Stennis Engineering and Test Directorate.

fter the ticker tape parade in New York in mid-August 1969, the Apollo 11 crew A went on a whirlwind tour to meet dignitaries and heads of state around the world. After their return, the three astronauts went separate ways. Apollo 11 lunar module pilot Buzz Aldrin traveled to visit his hometown and mine - Montclair, New Jersey. The city declared Buzz Aldrin Day, with a parade through downtown, followed by Aldrin's speech at the local football field.

Summer vacation was almost over, and on Saturday afternoon, Sept. 6, 1969, I walked the half mile from my house on Christopher Street to the high school football field. This was the same field where Buzz had played in a Montclair Mounties uniform, a senior center on the 1946 undefeated state champion team. This was my chance to see one of the two men who had walked on the Moon. I was almost 12, about to enter the seventh grade - and pretty excited.

Extraordinary times

There was a lot happening in 1969. It was all extraordinary, both the good and the bad. Three weeks before, the Woodstock music festival had ended. My 13-year-old sister had asked if she could go with older friends, but my parents would not let her – too young. The preceding year, 1968, the country had seen the assassinations of Martin Luther King Jr. and Robert F. Kennedy. The year before that, race riots had erupted in nearby Newark, New Jersey. The Vietnam War and antiwar protests were ongoing, at full rage. My 16-year-old brother would attend the Moratorium March on Washington (calling for an end to the war) in November 1969.

The Moon landing was another big news event. As a kid, I was only beginning to understand the larger world of adults. The extraordinary did not seem abnormal; I thought the world was supposed to be like that – full of drama, rage, elation, disappointment, tragedy and exultation. The Space Race was just part of it.

I had followed the nation's space programs since

I could remember – Mercury, Gemini, Apollo. I grew up with NASA and the Moon race. Rockets and astronauts were always on television, in the newspapers, in the news weeklies and in big, sharply focused pictures in Life magazine.

Greatest adventure

On Buzz Aldrin Day, I entered Woodman Field through the back gate. I knew the place well; my friends and I often would play ball behind the stands. A flatbed trailer with bunting was parked in north end zone, set as a stage for Buzz to deliver his speech. A crowd was already gathering at the main entry gate at the south end, so I joined them. I had come 45 minutes early, but several hundred people already were there, with more arriving every minute.

We waited. Buzz was late. We waited longer. He finally arrived in a motorcade. Two cops on three-wheeled Harley Davidson motorcycles led the way and pushed the crowd back. The crowd, in turn, pushed me down. I got on my feet just in time to catch a glimpse of Aldrin in the Cadillac, but it rolled quickly through us toward the stage. I ran to find a good spot to watch the speech.

The crowd was already packed close to the stage, maybe 3,000 to 4,000 in all. Some had come in from the surrounding towns. Gov. Richard Hughes was on the stage, along with U.S. Rep. Peter Rodino and Mayor Thomas Peddie. No one cared about them. Everyone was focused on the extraordinary man in front. Everyone strained to see him – one of the two human beings who had walked on the Moon less than two months earlier.

As more people crowded behind me and the speeches started, I became trapped. I was at that frustrating age to be in a crowd, too short to see over the shoulders of the adults, too big to wriggle between their legs toward the front. I tried to squeeze my way through, but the throng was so tightly packed I could not make headway. Everyone wanted to get close to Buzz. I finally gave up, backed out and went up on the stands to look over the crowd to see him. I remember just staring at him, trying to get a look at his features and expression.

I was born in 1957, a month before Sputnik flew. I do not remember a word he said. It was enough just to gawk at him. The event went on for a little

more than half an hour. There were plenty of cheers, applause and smiles. This man had put all on the line and pulled off perhaps the greatest adventure in history. We admired his skill, courage, smarts and steely calm. He had risked his life to reach the Moon and safely returned.

Universal pride

For a child, pride is vicarious. You are only a kid; you have not yet accomplished anything yourself. However, here are moments in life when you just feel good about other people's accomplishments.

This was not like the joy of winning a sports championship, though. Against the odds, "Broadway Joe" Namath and the New York Jets had won Super Bowl III in January. The New York Mets were about to win the World Series, and the New York Knicks would win the NBA championship in the spring. I remember being happy about those things, giddy even. Those were good feelings for a kid in the New York area.

But this memory of my astronaut hero is different. This was not the pride of "We beat our rivals." It was the pride of "We did it."

I had sat with my family that Sunday night of July 20 and watched two men walk on the Moon, live on our black and white RCA television. Now, a month and a half later, one of those men, Buzz Aldrin himself, was standing in front of me and the rest of the crowd, in person. He was right there! We were so proud of him; we were proud of Montclair, of NASA, of the whole country.

The feeling was universal. People around the world were proud, proud of being human beings, of what Apollo 11 astronauts Neil Armstrong, Buzz Aldrin and Michael Collins had achieved, of what humanity had achieved. We were just all so, so proud.

After the speech, I made my way the few blocks home – through the neighbor's yard, through the hole in our backyard fence, up the steps of the rear porch, and in through the mudroom to the kitchen. The room was empty. I went to the stairwell. "Mom!" I yelled up.

"MOM, I SAW BUZZ ALDRIN!"



Armstrong took the photograph with a 70mm lunar surface camera

July 2019

Astronaut Buzz Aldrin walks on the surface of the Moon on July 20, 1969, during the Apollo 11 mission. Mission commander Neil

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President John F. Kennedy calls on nation to send a human to the Moon and back by the end of the decade.

October 21,1961 NASA announces plans to build a rocket stage/engine test site in Hancock County, Mississippi.

May 17, 1963

Following completion of land acquisition, workers cut the first tree to begin construction of the new south Mississippi rocket stage/engine test site.

April 23, 1966 NASA conducts the first-ever test at the then-Mississippi Test Facility (now Stennis Space Center).

March 3, 1967

Engineers perform an initial hot fire of the Saturn V S-IC-T first stage on the new B-2 Test Stand. A followup test fully validates the stand to conduct S-IC stage testing.

November 9, 1967

NASA launches Apollo 4 uncrewed mission, the first program flight to feature a Saturn stage tested at Stennis. Two tests were conducted on the Saturn S-II-1 second stage on the A-2 Test Stand - on Dec. 2, 1966 and on Dec. 22, 1966.

December 21, 1968

NASA launches Apollo 8, the second crewed mission and the first to travel to the Moon. The flight features the Saturn S-II-3 second stage tested at Stennis - on Sept. 19, 1967 and Sept. 27, 1967 the first stage hot fires on the A-1 Test Stand.

March 3,1969

NASA launches Apollo 9 mission. The flight is powered by the Saturn S-IC-4 first stage tested on the B-2 Test Stand on May 16, 1967 and the S-II-4 second stage tested on the A-2 Test Stand at the south Mississippi site on Feb. 10, 1968.

May 18, 1969

NASA launches Apollo 10. The flight is powered by the Saturn S-IC-5 first stage tested on the B-2 Test Stand on Aug. 25, 1967, and the S-II-5 second stage, tested on the A-1 Test Stand on Aug. 9, 1968.

July 16, 1969

NASA launches Apollo 11, to carry the first humans to the surface of the Moon. The historic flight is powered by the Saturn S-IC-6 first stage, tested on the B-2 Test Stand on Aug. 13, 1968, and the S-II-6 second stage, tested on the A-2 Test Stand on Oct. 3, 1968.

July 20,1969

Astronaut Neil Armstrong becomes the first human to set foot on the surface of the Moon.



The mission crew includes astronaut Fred Haise, a native of Biloxi, Mississippi, as lunar module pilot. The flight is powered by the Saturn S-IC-8 first stage, tested on the B-2 Test Stand on Dec. 18, 1968, and the S-II-8 second stage, tested on the A-2 Test Stand on April 4, 1969. Originally planned as a lunar mission, an oxygen tank explosion forces the Apollo 13 astronauts to conduct a perilous trip around the Moon before returning safely to Earth

NASA launches Apollo 14. The flight is powered by the Saturn S-IC-9 first stage, tested on the B-2 Test Stand on Feb. 19, 1969, and the S-II-9 second stage, tested on the A-1 Test Stand on June 20, 1969. The S-IC-9 test is viewed by some 12,000 visitors during the site's first public test.

NASA launches Apollo 15. The flight is powered by the Saturn S-IC-10 first stage, tested on the B-2 Test Stand on April 16, 1969, and the S-II-10 second stage, tested on the A-2 Test Stand on Oct. 1, 1969.

NASA launches Apollo 16. The flight is powered by the Saturn S-IC-11 first stage, tested on the B-2 Test Stand on June 25, 1970, and the S-II-11 second stage, tested on the A-1 Test Stand on Nov. 14, 1969. The S-IC-11 first stage initially was tested in June 1969, but underwent a second hot fire following a year of necessary refurbishment work.

NASA launches Apollo 17, the last human mission to the Moon. The flight is powered by the Saturn S-IC-12 first stage, tested on the B-2 Test Stand on Nov. 3, 1969. and the S-II-12 second stage, tested on the A-2 Test Stand on March 4, 1970.

Additional S-IC first stages tested on the B-2 Test Stand S-IC-13 on Feb. 6, 1970; launched Skylab space station on May 14, 1973. S-IC-14 on April 16, 1970; on display at Johnson Space Center. S-IC-15 on Sept. 30, 1970; on display at INFINITY Science Center (located just outside Stennis Space Center).

S-II-13 on April 30, 1970; launched Skylab space station on May 14, 1973. S-II-14 on July 31, 1970; on display at Kennedy Space Center. S-IC-15 on Oct. 30, 1970; on display at Johnson Space Center.

November 14, 1969

NASA launches Apollo 12. The flight is powered by the Saturn S-IC-7 first stage, tested on the B-2 Test Stand on Oct. 30, 1968, and the S-II-6 second stage, tested on the A-1 Test Stand on Jan. 22, 1969.

April 11, 1970

NASA launches Apollo 13.

January 31, 1971

July 26, 1971

April 16, 1972

December 7, 1972

Additional S-II first stages tested on the A-2 Test Stand

Stennis hosts various activities to commemorate Apollo 11













July 2019

50 Years later – the nation relives the success of Apollo 11



Five decades have done nothing to dim the wonder and success of the Apollo 11 mission that landed the first humans on the surface of the Moon in July 1969. A week of celebration of the historic event extended across the country and encompassed a variety of activities. At Stennis Space Center, employees marked the occasion by joining in a rocket launch record by setting "stomp" rockets to flight July 16 (left photos). Numerous exhibits/ activities allowed visitors, young and old alike, to the National Mall in Washington, D.C., to commemorate Apollo 11 the week of July 15 (center photos). In New Orleans, the Baby Cakes baseball team hosted a space-themed night July 20 with NASA activities. Stennis Associate Director John Bailey threw out the first pitch and spent time in the announcer booth discussing Apollo (right photos).







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A launch abort system (LAS) with a test version of Orion attached soars upward on NASA's Ascent Abort-2 flight test atop a Northrop Grumman booster on July 2, 2019. With the test, NASA successfully demonstrated the Orion spacecraft's launch abort system can outrun a speeding rocket and pull astronauts to safety in the event of an emergency during launch. The test is another milestone in the agency's preparation for Artemis missions to the Moon that will lead to astronaut missions to Mars. Following launch, the Orion test spacecraft traveled to an altitude of about six miles, at which point it experienced high-stress aerodynamic conditions expected during ascent. The abort sequence triggered and, within milliseconds, the abort motor fired to pull the crew module away from the rocket. Its attitude control motor flipped the capsule end-over-end to properly orient it, and then the jettison motor fired, releasing the crew module for splashdown in the Atlantic Ocean.

NASA in the News

NASA plans mission to Saturn moon

NASA announced June 27 that the next destination in the solar system is the richly organic world Titan. Continuing the search for the building blocks of life, the Dragonfly mission will fly multiple sorties to sample and examine sites around Saturn's icy moon. Dragonfly is set to launch in 2026 and arrive at Titan in 2034. The rotorcraft will fly to dozens of locations, looking for prebiotic chemical processes common on both Titan and Earth. Dragonfly marks the first time NASA will fly a multi-rotor vehicle for science on another planet; it has eight rotors and flies like a large drone. It will take advantage of Titan's dense atmosphere - four times denser than Earth's - to become the first vehicle ever to fly its entire payload to new places for targeted access to surface materials. Titan is an analog to a very early Earth and may provide clues to how life arose on this planet. "Visiting this mysterious ocean world could revolutionize what we know about life in the universe," NASA Administrator Jim Bridenstine said. For more on Titan, visit: https://go.usa.gov/xyPhc.

NASA plans to keep Voyagers going

With careful planning and dashes of creativity, engineers have been able to keep NASA's Voyager 1 and 2 spacecraft flying for nearly 42 years - longer than any other spacecraft in history. To ensure these vintage robots continue to return the best science data possible from the frontiers of space, mission engineers are implementing a new plan to manage them. Launched separately in 1977, the two Voyagers are now over 11 billion miles from the Sun and far from its warmth. To control the temperature of the crafts and keep their instruments operating, engineers have developed a new power management plan. The new plan should ensure that both Voyager 1 and Voyager 2 can continue to collect - and transmit - data from interstellar space for several years to come. Data from the Voyagers continue to provide scientists with neverbefore-seen observations of the solar system's boundary with interstellar space. For more information about the Voyager missions, visit at: https://www.nasa.gov/voyager or https://voyager.jpl.nasa.gov.

July 2019

Governor announces Mississippi Space Initiative

ov. Phil Bryant announced a new economic development Space Initiative and the formation of the Mississippi National Guard Space Directorate during a July 1 event at INFINITY Science Center.

"I am extremely excited about the two initiatives an-

National Guard's 186th Air Operations Group. He will integrate with current space commands, NASA, higher education institutions and aerospace industry partners. Murphy will also develop a Space Task Force that will be responsible for conducting space operations. The task force will work to help ensure Mississippi's and the Unit-

nounced today," Bryant said. "Mississippi has been a leader in the field of space for many years and I believe that we have the capabilities to attract other space companies to invest in the state and the ability through our National Guard to use space technology to aid in defense and disaster response."

The purpose of establishing this Space Initiative is to create a specific entity to target space companies and attract them to the state. Patrick Scheuermann, former head of Stennis Space Center and Marshall Space Flight Center, will lead the initiative.

"The state of Mississippi has a long history of making key investments at Stennis Space Center to attract government, university and commercial customers to the federal city," current Stennis Director Rick Gilbrech said. "The new initiatives the governor announced today will continue that tradition and bolster the



(Top photo) Mississippi Gov. Phil Bryant announces a new economic development Space Initiative and state National Guard Space Directorate during a July 1 event at INFINITY Science Center. Participants attending the announcement included (I to r, behind Bryant) Mike McDaniel, general manager of Aerojet Rocketdyne at Stennis; Stennis Director Rick Gilbrech; and former Stennis head Patrick Scheuermann.

(Bottom photo) Stennis Director Rick Gilbrech speaks during a July 1 event announcing a new Mississippi Space Initiative.



Gulf Coast's involvement in both civil, commercial and military space activities. These continued and future partnerships will also help NASA to achieve its objective with the Artemis mission to go forward to the Moon by 2024 and, then, on to Mars."

The Mississippi National Guard Space Directorate will be commanded by Col. Billy Murphy of the Mississippi Air ssissippi's and the United States' success in the domain of space. It aligns with President Donald Trump's Space Force initiative and will be used to create and utilize space technology to develop defense and disaster response strategies.

"The Mississippi National Guard is extremely confident that we can grow the space mission here in Mississippi to meet the needs of our nation and state," said Maj. Gen. Boyles, adjutant general of the state National Guard.

U.S. Sen. Roger Wicker of Mississippi, chair of the Senate Commerce Committee, weighed in on the announcements stating: "These new commitments will ensure that the road to space continues to go through Mississippi. I am anticipating many more great accomplishments by the talented teams at Stennis Space Center and Mississippi's Air National Guard."

U.S. Rep.Steven Palazzo of Mississippi

also praised the initiatives: "I applaud Governor Bryant for being a forward thinker on ways that Mississippi can continue playing a role in American space missions."

The July 1 event was attended by elected officials, Stennis Space Center staff, Relativity Co-Founder and Chief Technology Officer Jordan Noone, and business executives from around the state.

NASA honors Stennis employees for flight safety



Astronaut Don Pettit (center) stands with the 2019 Silver Snoopy recipients from Stennis Space Center following presentation of the awards during an onsite ceremony June 19. Silver Snoopys are astronauts' personal award, given in recognition of contributions to flight safety and mission success and presented to less than 1 percent of the total NASA workforce annually. Recipients (and their companies) of the 2019 awards were: (I to r) Miran Kapidzic (Syncom Space Services), Patrick Skrmetti (Syncom Space Services), Justin Giardina (Aerojet Rocketdyne), Thomas Mitchell (Syncom Space Services), Claude Garcia (NASA Shared Services Center), Mike McDaniel (Aerojet Rocketdyne), Jeffrey Renshaw (NASA), John Cogley (NASA Shared Services Center), Christopher Barnes (Aerojet Rocketdyne), Timothy Jones (SaiTech), Ronald Dartez (Syncom Space Services), and Adam Murrah (NASA).



Stennis hosts key guests

Stennis Space Center **Deputy Director Randy** Galloway talks with key congressional and regional stakeholders during their visit to the south Mississippi site June 28. Representatives for Louisiana Gov. John Bel Edwards and staff members for a pair of U.S. congressional representatives visited Stennis to learn about ongoing work at the site and to tour various facilities, including the B-2 Test Stand.

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NASA administrators visits Stennis



NASA Deputy Administrator James Morhard speaks to Stennis Space Center and NASA Shared Services Center employees during a NASA all hands session Juny 27. In addition to meeting with employees, Morhard toured Stennis facilities, including the B-2 Test Stand and the Aerojet Rocketdyne Engine Assembly Facility. He also met with leaders and senior staff for both Stennis and the NASA Shared Services Center.



NASA Associate Administrator Steve Jurczyk and Deputy Associate Administrator Melanie Saunders talk during a NASA all hands gathering on site June 20. During their visit, the pair of agency leaders toured the B-2 Test Stand and met with senior leaders, as well as new and early career employees from both Stennis and the **NASA Shared Services** Center. During the Stennis all hands gathering, they also presented Silver Achievement certificates to several employees for their work during the government furlough at the beginning of 2019. Those recognized included Monica Ceruti, Dinna Cottrell, Gerald Norris, Rena Perwien and Van Ward.

Interns completing summer work at Stennis



NASA summer interns are completed their 10-week summer internships in August. Since June, a total of 30 interns have been involved in real world, hands-on projects. One or more students have been placed in the following directorates/organizations: Office of the Center Director, Office of Diversity and Equal Opportunity, Office of the Chief Counsel, Engineering and Test Directorate, Office of Communications, Safety and Mission Assurance Directorate, Center Operations Directorate, Rocket Propulsion Test Program Office, and Office of STEM Engagement. Interns include: Hillary Bermudez (University of Puerto Rico Mayaguez Campus), Rebeca Bonilla (University of Maryland), Erin Campbell (Eastern Oregon University), Nathanael Cheng (Cornell University), Delenn Cooper (Paul M. Hebert Law Center), Harold Dawson (Colorado School of Mines), Aditi Desai (Lafayette College), Kelasia Edwards (Dillard University), Angelique Espinosa (Austin Community College), Chandler Frierson (University of Kentucky), Tyler Goss (Louisiana Tech University), Isaiah Gregov (University of Southern Mississippi), Corey Hannum (Mont Clair State University), Merlynn Hines (University of South Alabama), Ben Johanson (University of Maryland, College Park), Elizabeth Kibodeaux (Louisiana Tech University), Kyler Li (University of Pennsylvania), Eric Malone (Mississippi State University), Jorge Martinez, (University of Southern Mississippi), Joshua Reimonenq (Xavier University of Louisiana), Patric Reinbold (University of Nebraska-Lincoln), Vann Pflueger (University of Southern Mississippi), Joshua Reimonenq (Xavier University of Louisiana), Patric Reinbold (University of Wisconsin Law School), Lorena Rojas (Harold Washington), Alexus Smith (Rust College), Sieria Stewart (Mississippi Valley State University), Cole Striler (University of California, Berkeley), Jessica Vann (Le Moyne College) and Eric Wiggins (University of Southern Mississippi).

Hail & Farewell

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Carmen	Ramirez

NASA bids farewell to the following:

AST, Experimental Facilities Techniques

Office of Safety and Mission Assurance

NASA welcomes the following:

George Haas Stephen O'Neil Landon Tynes Student Trainee (Engineering) Industrial Hygenist AST, Flight Systems Test Engineering and Test Directorate Center Operations Directorate Engineering and Test Directorate

1961 – NASA selects Mississippi for test site



Note: NASA's John C. Stennis Space Center has played a pivotal role in the success of the nation's space program. The following offers a glimpse into the history of the rocket engine test center.

In 1955, the United States announced it would launch a satellite for the International Geophysical Year, an international scientific program to open scientific exchanges between the East and the West that had been interrupted during the Cold War. The Soviet Union responded that it would also launch a satellite "in the near

future." The Space Race began.

On Oct. 4, 1957, the Soviet Union launched Sputnik I into low-Earth orbit. They also put the first human in space, Yuri Gagarin. The United States had its eye on the big prize, though. The U.S. was going to the Moon. The Space Race morphed into the Moon Race, and the then-Mississippi Test Facility was a very important factor in the U.S. winning the race to the Moon.

NASA needed a place to test the large rocket engines and stages needed to carry humans to the Moon. In August 1961, an ad hoc committee of members from NASA Headquarters and Marshall Space Flight Center began the work SATURN S-LI TEST FACILITIES NASA PROJECT USARAN CORST OF FUNITIES USARAN CORST OF FUNITIES USARAN CORST OF FUNITIES UNARIANT WORKEL MORELEAR UNARIANT MORELEAR UNARIANT MORELEAR UNARIANT MORELEAR UNARIANT MORELEAR UNARIANT

Construction of the A-2 Test Stand reaches higher and higher in early 1965 at Stennis Space Center, then-Mississippi Test Operations.

to find the perfect location. There were several variables to consider since the rockets would be assembled at the Michoud Assembly Facility outside of New Orleans and launched from Cape Canaveral, Florida.

NASA needed a facility that, ideally, would lie between these two places, be away from a densely populated area because of the noise associated with testing rocket engines and stages, have access to both waterway and highway, have a mild climate so testing could conceivably be done year round and have supporting communities nearby. Several existing facilities were in the running, but the committee kept coming back to a marshy, pine treecovered area along the Pearl River in Mississippi.

The Pearl River site won out over the final six locations. On Oct. 25, 1961, NASA announced a rocket engine test site would be established in Hancock County, Mississippi. The site, then known as Mississippi Test Operations, would test the Saturn rockets that would launch the Apollo missions to the Moon. Construction would begin as soon as possible, but first, residents living along the Pearl River would need convincing to leave their homes in preparation for the test site.

> of the Pearl River site from the beginning, using his contacts in Washington to plant the seed of locating NASA operations in Mississippi. Following NASA's announcement, Stennis visited residents of the Pearl River communities and appealed to their patriotism in asking them to give up their land and their homes "as a sacrifice in America's crusade against the Soviets." The Soviets had already put humans in space, and America was aiming to win the race to get a person on the Moon. Stennis promised residents of the Pearl River communities that he would make sure that their sacrifice was not in vain, that they were compensated for their property, and that they

U.S. Sen. John C. Stennis had been a proponent

would never be forgotten for "taking part in greatness."

Just over 7 years later, on July 20, 1969, Neil Armstrong, followed by Buzz Aldrin, stepped onto the surface of another world, the Moon. The Apollo 11 crew did not get there on their own. It is estimated 400,000 people worked to get humans to the Moon. Hundreds of people built Mississippi Test Operations, including the test stands and control buildings that would test the rockets to take humans to the Moon. The engineers, scientists and technicians right here in Hancock County all had a part to play in that momentous historical event

Office of Diversity and Equal Opportunity Stennis/NSSC roll out Special Emphasis Program

Special Emphasis Programs (SEP) are employmentrelated programs that focus special attention on groups that have historically been absent or underrepresented in specific occupational categories or grade levels in the federal workplace. Special emphasis program managers coordinate program implementation, advise management of identified problems and potential barriers, and make recommendations to overcome barriers.

SEPs were first established by law, regulation and executive authority in the 1960s and 1970s. They were intended to be an integral part of federal agencies' equal employment opportunity (EEO) programs. SEPs remain critical to agencies' efforts to attain "Model EEO Agency" status, as required by the U.S. Equal Employment Opportunity Commission in its Management Directive 715. Today, SEPs also play an instrumental role in fulfilling a host of other ongoing planning, reporting and implementation requirements.

The Special Emphasis Program model for the 21st century NASA workplace helps to better leverage SEP synergies with the newer diversity and inclusion (D&I) model, along with the more traditional legal compliance function. The approach is fully aligned with, and supportive of, the agency's strategic plan and NASA core values, particularly as they relate to attracting and advancing a diverse workforce and enhancing inclusion in agency workplaces.

The Stennis and NASA Shared Services Center Office of Diversity and Equal Opportunity recently announced

roll out of the new Special Emphasis Program on site. Special emphasis program managers have been appointed to constituency groups as follows: Dorothy Brown, African American Program; Son Le, Asian American/Pacific Islander Program; Juan Rodriguez, Individuals with a Disability Program; Mark Moody, Disabled Veterans Program; Venetia Gonzales, Hispanic Program; Michele Beisler, Lesbian, Gay, Bisexual, Transgender Program; Cheryl Timko, American Indian/Alaska Native Program; and Linh Lam, Federal Women's Program. These individuals will manage programs for NASA employees at both Stennis and the NASA Shared Services Center.

The special emphasis program managers will evaluate agency policies and programs and analyze the workforce data of their target group to determine if there are discrepancies regarding recruitment, hiring, career development, recognition, and retention. The managers will serve as a focal point for communicating challenges, issues and concerns of their respective constituents on matters affecting employment at the center and will provide advice, guidance and recommendations to center leadership. They will be compiling information and conducting focus groups for their constituency groups, so NASA employees should watch for upcoming opportunities to provide input.

Anyone with questions regarding the new Special Emphasis Program is invited to contact one of the managers individually or the Office of Diversity & Equal Opportunity at 228-688-1037.



Program managers (and their area of focus) for the new Special **Emphasis Program** implemented for Stennis and the NASA Shared Services Center include (I to r): Mark Moody (Disabled Veterans Program), Michele Beisler, (Lesbian, Gay, Bisexual, Transgender Program), Venetia Gonzales (Hispanic Program), Linh Lam (Federal Women's Program), Son Le (Asian American/Pacific Islander Program), Juan Rodriguez (Individuals with a Disability Program), Dorothy Brown (African American Program), and Cheryl Timko (American Indian/ Alaska Native Program).

Stennis hosts Take Our Children to Work Day



Nearly 200 children of Stennis employees visited the site July 18 to take part in annual Take Our Children to Work Day activities. Participants

enjoyed presentations, toured site facilities and learned about ongoing work performed at Stennis.

