



LAGNIAPPE

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STS-119 crew applauds Stennis

Stennis Space Center Director Gene Goldman (r to l) presents a commemorative photo of a space shuttle main engine test firing to STS-119 Mission Commander Lee Archambault, Pilot Tony Antonelli and Mission Specialists Steve Swanson and Richard Arnold during the crew's May 5 visit to the facility. The crew members reported on their work to bring the International Space Station to full power, and thanked Stennis employees for contributing to the success of the two-week mission. "You're a part of the team..." Archambault told employees. "Thank you for your great contributions to America's space program." The astronauts thanked Stennis employees for delivering three main engines that worked to perfection in propelling space shuttle Discovery into orbit March 15. They also thanked the workers for their efforts in testing a shuttle flow control valve of concern. One of three flow control valves failed to function on a late 2008 shuttle mission, and concerns about the equipment led NASA officials to delay Discovery's launch. During the delay, Stennis engineers quickly assembled a test configuration and conducted almost 200 velocity and damage tests on the valve. The data generated from the tests were critical in leading NASA officials to clear Discovery for flight. "Anyone who participated in the flow control valve work, we really applaud your great effort," Archambault said.



STS-125 lifts off on Hubble telescope mission



Under a dry, hot Florida sky, space shuttle Atlantis roars off Launch Pad 39A at NASA's Kennedy Space Center in Florida with its crew of seven for a rendezvous with NASA's Hubble Space Telescope. The launch was on time at 1:01 p.m. on May 11. With a perfect ascent into orbit, the shuttle crew began the 11-day STS-119 telescope servicing mission that has been several years in the making. The astronauts will use five spacewalks to refurbish and upgrade the Hubble telescope with state-of-the-art science instruments. A key task is to replace an instrument command and data handling unit that stopped working early last fall. The work will expand Hubble's capabilities and is expected to extend its operational lifespan through at least 2014. As has been the case with every launch of the Shuttle Program, Atlantis was lifted into orbit by a trio of main engines tested and proven flight worthy at Stennis Space Center. Since the first shuttle launch in 1981, no mission has failed due to engine malfunction.

From the desk of

Gene Goldman

Director
Stennis Space Center



“For the times, they are a-changin’.”
(Bob Dylan)

It was 1964. Wisteria and dogwood had just faded around Rouchon House, and a muddy excavation was sprouting a test complex where the only focus was the moon. There wasn't time to dream further. Shuttle, Applied Sciences, full utilization, Stennis Space Center were all well over the horizon.

The A-3 Test Stand has just been “topped out.” Several thousand lifts of structural steel were made, raising it to about 300 feet without a mishap, a tremendous accomplishment by that team. Completing the test facility and successfully activating it are huge challenges; they're in work.

E-Complex, (do we have enough work to sustain?!), is alive with multiple programs. Orbital Sciences Corp. has requested a significant extension to our Space Act Agreement to expand their AJ-26 (once the pursued NK33) test program in E-1. The team just successfully ignited a chemical steam generator for A-3 development, a first baby step in building an unprecedented capability which “will soon shake your windows and rattle your walls.” Other A-3 subscale work and shut-

tle flow control valve testing have all been aptly handled by the “E Team.”

Our Applied Sciences group has just been awarded two proposals of 19 submitted, with 16 still in review, as of this writing. These were part of a national competition among investigators from government and academia. This is a huge win for that “small but fierce” team; congratulations to all!

Pratt & Whitney Rocketdyne and Applied Geo Technologies Inc. both received high marks in their initial Voluntary Protection Program (VPP) audits by OSHA. Kudos to them and the entire VPP team. “We're reaching for a Star.”

Safety and mission success are inextricably coupled here, as evidenced by our recent standdown emphasis. Never waver, never doubt.

Shuttle tests continue; new engine and stage testing are in planning; science work is growing; we're making continual and steady progress in many areas. “We do get a certain momentum going when we work towards something for a while... . We become more driven, more powerful in our efforts. This focused attention gives us more energy.” (Lissa Coffey)

“Deja Vu.”

Dream big; work harder – and join me in welcoming Associate Director Rick Gilbrech back into the SSC family!! He brings incredible talent to our team.

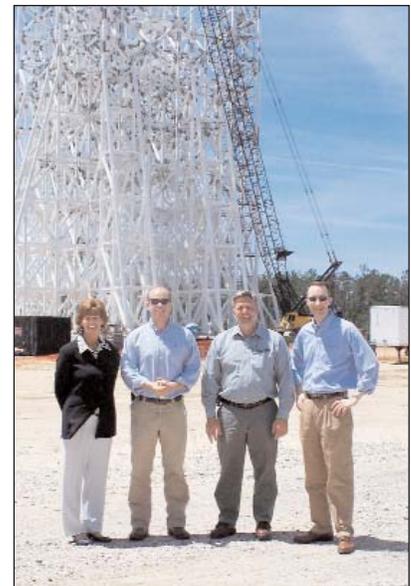


All-Hands session focuses on safety

Freddie Douglas, manager of the Office of Safety and Mission Assurance at Stennis Space Center, speaks to site employees during an April 21 All-Hands session that emphasized the importance of maintaining the focus on safety.

Sen. Cochran staff visits Stennis

Two staff members who serve as NASA and military liaisons for U.S. Sen. Thad Cochran, R-Miss., visited Stennis Space Center on April 15. Shown at the A-3 Test Stand construction site are: Myron Webb, legislative affairs officer at Stennis; staff member Adam Telle; Lonnie Dutriex, A-3 project manager; and staff member Jason Lindsey.



FULFILLING NASA'S EXPLORATION MISSION

E Complex project proceeding

Engineers at Stennis Space Center broke ground April 14 to begin construction of a flame deflector trench at the E-1 Test Stand, a key step in preparation to test rocket propulsion systems for Orbital Sciences Corp.'s Taurus II project.

Officials with NASA, NASA support contractors, Orbital Science Corp. and Aerojet participated in the ribbon-cutting ceremony, signaling the start of work to construct a 27-foot-deep deflector trench needed for testing the AJ26 engines that will power the Taurus II vehicles.

NASA Stennis entered into a contract last fall with Orbital Science to perform rocket engine testing at the E-1 test facility. The contractual agreement requires the NASA Stennis team to engineer, construct and outfit the facility prior to the actual performance of the test operations later this fall.

Orbital Science is working towards being a commercial supplier for access-to-space capability. The Taurus

Representatives from NASA, Orbital Sciences Corp. and Aerojet participate in a ribbon-cutting ceremony for construction of a flame deflector trench at Stennis Space Center's E Test Complex. Participants included Orbital CEO J.R. Thompson (center, left) and Stennis Space Center Director Gene Goldman (center, right).



II vehicle will be a significant factor in accomplishing the company's overall future objectives and plans.

Preparation work is proceeding well, and construction of the flame deflector trench is a critical step in the project, said Gary Taylor, deputy project manager. IKBI Inc. of Choctaw, Miss., is the general contractor for the flame trench project.

Dale Sewell, NASA construction manager, stated "This contractor has proven that they can respond quickly,

safely and technically to a challenging task;. The AJ26 project team feels very confident this construction task will be accomplished successfully."

Taylor said the significance of the work extends beyond the AJ26 testing. "Construction of the flame deflector trench means E Complex now will have a vertical engine test capability integrated into the existing unique high pressure rocket propulsion test systems," he explained. "That will enable the complex to provide a greater range of testing capabilities."

Work ongoing throughout A Complex

The A Test Complex at Stennis Space Center is a busy place of ongoing engine testing, construction and preparation as the summer of 2009 approaches.

At the A-2 Test Stand, engineers conduct business as usual as they continue space shuttle main engine firing. Since 1975, Stennis engineers have tested every main engine used in the Space Shuttle Program, which is set to end in 2010.

At the A-1 Test Stand, engineers are busy with maintenance and upgrade work, preparing for testing of the J-2X engine in development. The new engine is being built to help power the Ares I and Ares V rockets that will carry humans back to the moon and

possibly beyond as part of NASA's Constellation Program.

Testing of the J-2X is scheduled to begin in 2010, and engineers are using the time to complete necessary work on the A-1 stand. This includes such projects as replacing vent lines and installing new hot and cryogenic piping for the stand. Engineers also are awaiting delivery of a new thrust measurement system, perhaps arriving in May.

"We want everything ready for J-2X testing, so we're not relaxing the schedule for the work we need to do," said Jeff Henderson, who serves as test director for Stennis' A Complex.

Engineers also are not relaxing in con-

struction of the A-3 Test Stand, being built to perform high altitude testing on the J-2X engine. Structural steel work was completed on the stand in April. Underground utilities work is progressing, and work on a pair of delivery docks is nearing completion.

Roy Anderson Corp. of Gulfport, Miss., has been awarded a \$45 million general construction contract for mechanical and electrical work on the new stand, and engineers are expecting the first of nine 35,000-gallon water storage tanks to be delivered mid-May. They also are preparing for test cell diffuser assembly, likely to begin later this year.

The A-3 Test Stand is set to be ready for activation testing by early 2011.

Stennis 'hits the g

Visitors to the Zurich Classic golf tournament at the TPC Louisiana course in Avondale on April 23-26 not only had the opportunity to view top-rate professional golf but to learn about the state of space exploration by touring the NASA exhibit tent hosted by John C. Stennis Space Center. Characterized as a kid's zone, the multi-faceted exhibit area featured information and activities for children and adults alike. The exhibit attracted thousands of visitors during the four-day tournament.

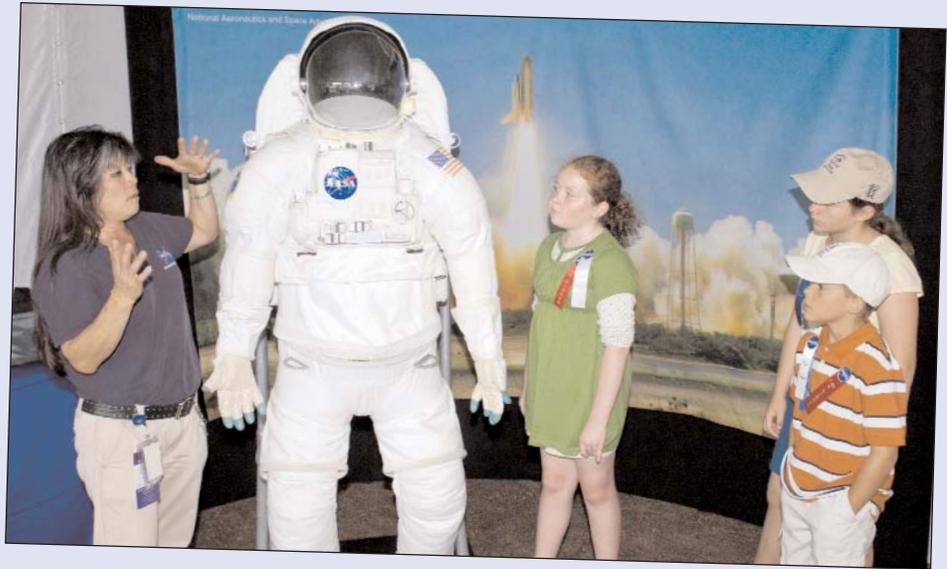


(Top photo) Kids wait their turn to attempt a putt at the space shuttle putting green.

(Above photo) Francis Carmello, 6, of New Orleans navigates a computer program that shows how space-related technology has been incorporated into everyday life.

(Right photo) Timothy Pellegrin, 6, of Houma, La., launches a balloon rocket at the NASA tent.

greens' at Zurich



(Top left photo) Chris Smith of Jacobs Technology Inc. stands with an inflatable astronaut to welcome visitors to the NASA exhibit tent at the Zurich Classic golf tournament.
 (Top right photo) StenniSphere representative Lynn Oshiro explains the astronaut experience to Jillian Landry, 9, of Thibodaux, La. (l to r); and Alexandra, 12, and Harrison Bath, 8, of St. Rose.



(Middle right photo) A young visitor tests his skill at an interactive lunar landing exhibit.

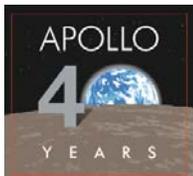
Bottom right photo) NASA representatives help a young exhibit visitor prepare for a rocket "launch."



Stennis – helping to reach the moon

“First, I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to the earth. No single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space.”

President John F. Kennedy – May 25, 1961



With these words, spoken before a joint session of Congress, President John F. Kennedy set the United States on a course for space exploration that would lead directly through south Mississippi.

To fulfill the president’s lofty goal, NASA needed a place to test the engines for the huge Saturn V rockets that would propel astronauts to the moon. Officials soon discovered an area of land in rural Hancock County, Miss. fit the bill. With its sparse population and proximity to the Pearl River, the area that would become NASA’s Mississippi Test Operations was the perfect site for a rocket engine test facility.

On May 17, 1963, almost two years to the day after President Kennedy’s speech, a chain saw felled the first tree in Gainesville, Miss. The downing of that tree, in an area known as Devil’s Swamp, signaled the beginning of one of the country’s largest construction projects at that time.

Nearly six years later, men and women of south Mississippi would follow the first lunar landing with pride and special interest as engines tested by their neighbors propelled Apollo astronauts to the moon.



Work crews saw down one of the first trees on May 17, 1963, signaling the beginning of construction on the Mississippi Test Operations in Hancock County, Miss. The tree was cut in Devil’s Swamp near the site where the construction dock was built on the turn basin of the man-made canal system.



Medical clinic opens in new building

Jessica Necaie, a nurse practitioner at Stennis Space Center, applies a bandage to the arm of Paul Bourgeois of Jacobs Technology Inc. in one of the examination rooms of the new on-site medical clinic. The clinic recently moved to the new Emergency Operations Center building, which will be dedicated June 2. The center will house a variety of security and safety offices.

Stennis marks Earth Day

Clyde Dease of NASA (right) receives gardening advice from Mississippi Public Broadcasting radio personality Felder Rushing during Earth Day activities at Stennis Space Center on April 22. During the day, Stennis employees were able to tour various exhibits featuring environmentally-friendly items and information.



Stennis group receives NESC award

The NASA Engineering & Safety Center recently presented its Group Achievement Award to a Stennis team in recognition of technical excellence in evaluating the operational anomalies and reliability improvements associated with the space shuttle engine cut-off system. Stennis employees receiving the award were: (standing, l to r) Freddie Douglas (NASA), George Drouant (Jacobs Technology Inc.), Fred Abell (Jacobs), Robert Drackett (Jacobs) and Mike Smiles (NASA); (seated, l to r): Binh Nguyen (Jacobs), Stennis Director Gene Goldman and Joseph Lacker (NASA). Phillip Hebert of NASA is not pictured.

Celebrate Stennis multiculturalism

May is Asian/Pacific American Heritage Month – a celebration of Asians and Pacific Islanders in the United States. A rather extensive term, “Asian/Pacific” includes all of the Asian continent and the Pacific islands of Melanesia (New Guinea, New Caledonia, Vanuatu, Fiji and the Solomon Islands), Micronesia (Marianas, Guam, Wake Island, Palau, Marshall Islands, Kiribati, Nauru and the Federated States of Micronesia) and Polynesia (New Zealand, Hawaiian Islands, Rotuma, Midway Islands, Samoa, American Samoa, Tonga, Tuvalu, Cook Islands, French Polynesia and Easter Island).

Like most commemorative months, Asian/Pacific Heritage Month originated with a congressional bill. In June 1977, a House resolution was introduced that called on the president to proclaim the first 10 days

From the
**Office of
Diversity
and Equal
Opportunity**

of May as Asian/Pacific Heritage Week. The following month, a similar bill was introduced in the Senate. Both measures passed.

In 1978, President Jimmy Carter signed a Joint Resolution designating the annual celebration. Twelve years later, President George W. Bush signed an extension, turning the week-long celebration into a month-long observance.

The month of May was chosen to commemorate the immigration of the first Japanese to the United States on May 7, 1843, and to mark the anniversary of the completion of the transcontinental railroad on May 10, 1869. The majority of the workers who laid the tracks were Chinese immigrants.

Additional information regarding Asian/Pacific American contributions can be found on the Office of Diversity and Equal Opportunity display next to the Building 1100 atrium.

“I hear and I forget. I see and I remember. I do and I understand.”

Confucius

Holocaust remembrance

Stennis Space Center Director Gene Goldman (right) stands with Holocaust survivors Alfred and Josiane Traun following their presentation at the Holocaust Days of Remembrance program held in the StenniSphere Auditorium on April 15.



Hail & Farewell

NASA welcomes the following:

Dr. Richard Gilbrech

Associate Director
Office of the Director

@ Stennis

When you think about the Apollo 11 lunar mission, what amazes you about it?

Editor’s Note: @ Stennis is a monthly feature highlighting the views and opinions of Stennis Space Center employees.



“It was amazing to me, as a little girl in Biloxi, that a street adjacent to mine was named for Fred Haise, one of the Apollo astronauts who grew up there.”

Glenda Morgan, MEI Technologies

“I was a young girl and amazed that we had actually accomplished something that was thought to be impossible; our nation’s dream had been realized.”

Judy Trowbridge, CSC



“The design of the suit worn by the astronauts had to be amazing. No one could be sure beforehand, but once on the moon, the suits worked perfectly.”

Jennifer Rolison, Computer Sciences Corp.

“It was amazing just to see. I remember staying up late to watch. I fell asleep but woke up seconds before Neil Armstrong stepped onto the moon.”

Karl Wilcox, CSC



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NASA students present project results

The DEVELOP team from NASA's John C. Stennis Space Center traveled to Mobile, Ala., last month to present results of their current project to the Mobile Area Water and Sewer Systems (MAWSS) board.

This is the third Stennis DEVELOP team project that has investigated issues in the Big Creek Lake Watershed, located northwest of Mobile. The lake is the primary drinking water source for Mobile and adjacent communities. Management of the area is of vital importance to MAWSS and the community at large.

DEVELOP is a student-led, student-run program that focuses on developing projects to help communities. Working with science advisers from NASA and related agencies, high school and college students spend internships developing and demonstrating possible responses to community-related problems.

In fall 2008, two DEVELOP projects focused on water quality and forest health in Big Creek Lake and the surrounding watershed. At the conclusion of those projects,

MAWSS expressed an interest in DEVELOP students continuing to study the Big Creek Lake Watershed in the spring of 2009.

Earlier this year, Jason Jones and Marco Allain worked on a project titled "Big Creek Lake: Non-Point Source Pollution Risk Mapping." The project identified areas that pose the largest threat of storm water runoff into the lake, using various factors. Their final maps combined land use type, soil erodibility and soil total organic content to identify areas most susceptible to erosion and runoff.

Jones and Allain were invited to present the findings at the April 6 meeting of the MAWSS board. The students also met with the MAWSS staff members to walk through the technical steps of their project to enable MAWSS to use and update the data, as needed. MAWSS now is able to increase watershed management through the methodology created in the project, as well as to identify areas for future runoff mitigation. The DEVELOP program hopes to continue working with both MAWSS and the Alabama Coastal Foundation in those efforts.

Area teams compete in national robotics

Stennis Space Center and surrounding communities were well represented at the FIRST (For Inspiration and Recognition of Science and Technology) National Robotics Championship held in Atlanta, Ga., on April 16-18. Five teams in the Stennis area competed in the annual championship tournament – St. Stanislaus College high school in Bay St. Louis, Miss.; Gulfport (Miss.) High School; St. Patrick's Catholic High School in Biloxi, Miss.; Mandeville (La.) High School; and Picayune and Pearl River Central High schools in Picayune, Miss. All five teams gained the right to compete on the national level during regional competitions, which were supported by Stennis grants, volunteers and mentors. The trip marked the highest number of area teams ever to earn their way to the annual national competition. At right, teammates from Gulfport High School (Team 364) focus on guiding their robot on the competition playing field.

