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LAGNIAPPE

John C. Stennis Space Center

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NASA deputy administrator visits Stennis

NASA Deputy Administrator Lori Garver (right) and Stennis Space Center Deputy Director Rick Gilbrech address NASA employees during a Feb. 23 all hands meeting onsite. Garver visited Stennis Space Center to meet with senior managers, members of the media and NASA employees to discuss the space agency's proposed budget for fiscal year 2013 and its impact on the south Mississippi facility. NASA announced Feb. 13 a $17.7 billion budget request supporting an ambitious program of space exploration that will build on new technologies and proven capabilities to expand America's reach into the solar system. The visit marked Garver's fourth trip to Stennis since she became deputy administrator in July 2009.

Stennis hosts community leaders

Stennis Space Center Director Patrick Scheuermann addresses community leaders and area officials during a March 1 event. More than 100 people attended the gathering, which featured reports about rocket engine testing and other work under way at the federal city facility. Scheuermann emphasized to leaders that the future of Stennis is set for decades as NASA develops its new Space Launch System and undertakes missions beyond low-Earth orbit once more. He thanked community leaders for their ongoing support, saying it is essential to enabling Stennis to test engines for NASA's new rockets, continue cutting-edge Earth science work and serve as federal city host to dozens of companies and agencies. Event participants also heard reports by Capt. James C. Pettigrew, chief of staff with the Naval Meteorology and Oceanography Command, and Martin Flinders, facilities engineering manager with Rolls-Royce North America Test Facility.

"It has already been a very busy year for us, and there is much more ahead. Good things (are) on the horizon for Stennis."

From the desk of
Marina Benigno
Assistant to the Director, Stennis Space Center

Spring is in the air, the mosquitoes are buzzing and so is Stennis! It has already been a very busy year for us, and there is much more ahead. When I think of spring, I go back to my chief financial officer days and remember the dreaded Program Operating Plan. We gathered all of our information for the budget process to be ready for the summer budget reviews. Well, it's that time again, and it looks like there are good things on the horizon for Stennis.

On Feb. 23, Stennis had the honor of hosting NASA Deputy Administrator Lori Garver on her road trip to visit several centers for the "rollout" of the NASA budget. She brought good news to Stennis, noting that the budget for the center is alive and well and includes funding for such activities as ongoing testing of J-2X rocket engines, completion and activation of the A-3 Test Stand, and continuation of the testing activities to support the Commercial Orbital Transportation Services (COTS) and the Commercial Crew Development (CCDev) programs. Garver noted a flat budget is the new good. Even though the NASA budget is flat, it provides funding to continue work on the Space Launch System, COTS, CCDev and Earth science missions, and supports the International Space Station. Stennis is in a great position to support these activities, and as Engineering and Test Directorate Director Randy Galloway noted, "We have a customer in all of our test stands."

On March 1, Stennis Director Patrick Scheuermann hosted a breakfast for area community leaders. Over 100 "movers and shakers" at Stennis and in the surrounding communities came together to renew old acquaintances, establish new ones and to share all of the exciting activities happening in and around Stennis. Scheuermann began the meeting by detailing some of the current programs, as well as the many opportunities that lie ahead. Some of these included NASA engine testing, commercial testing, significant investment to revitalize Stennis' high-pressure industrial water system and continued growth/expansion of the federal city. Capt. James Pettigrew, chief of staff with the Naval Meteorology and Oceanography Command, continued with a description of the activities the Navy is engaging in at Stennis, as well as the expansion activities ahead for them. The program was rounded out by the presentation of the exciting announcement made by former Gov. Haley Barbour last year of the investment of $50 million at Stennis for the construction of a new test position for one of the center's commercial partners, Rolls-Royce North America. The morning was filled with great optimism of good things to come for Stennis.

Some of the other things buzzing at Stennis this spring include the Area III Special Olympics on March 24, the spring Open House of the NASA Exchange-sponsored Farmer's Market on April 17, and the much anticipated ribbon cutting for the INFINITY science center on April 11.

Spring is here, and Stennis is the place to be. Get out and get some fresh air, meet some of your neighbors, watch a test firing or just take the advice of Stennis Wellness Center program coordinator Scott Burks and "be safe and active this spring."

Marina L. Benigno

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FULFILLING NASA'S EXPLORATION MISSION

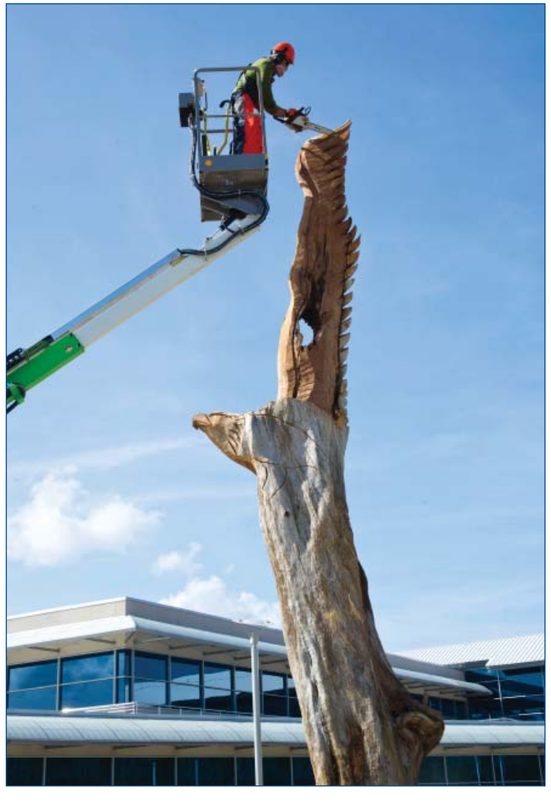
NASA prepares to resume testing of J-2X engine

J-2X engine No. 10001 is returned to the A-2 Test Stand at Stennis Space Center for its second round of tests. The developmental engine underwent an initial series of tests last year. Both the engine and test stand have been modified to begin simulated altitude testing in the coming months. The J-2X engine is designed and built by Pratt & Whitney Rocketdyne for NASA's Marshall Space Flight Center. It is the first human-rated liquid oxygen and liquid hydrogen rocket engine to be developed in 40 years. The J-2X will provide upper-stage power for NASA's Space Launch System, a new heavy-lift vehicle capable of missions beyond low-Earth orbit. In addition to full-engine tests, Stennis is conducting tests of the J-2X powerpack, a system of components on the top portion of the engine, including the gas generator, oxygen and fuel turbopumps and related ducts and valves. On the full J-2X engine, the powerpack system feeds the thrust chamber system, which produces engine thrust. Testing of the critical engine component began Feb. 15 on the A-1 Test Stand at Stennis and will continue in upcoming weeks.

Preparing for INFINITY

Preparations are under way for the April 12 opening of Stennis' new offsite visitor center and museum

INFINITY at NASA Stennis Space Center, the south Mississippi facility's new visitor center and attraction, is set to open to the public April 12. The 72,000-square-foot structure will include a Space Gallery, featuring a full-size International Space Station module (top right photo); flight-oriented displays, such as a model of the Wright Brothers first airplane (bottom left photo); and a Great Nations Dare to Explore maze that will offer visitors a walking tour of human exploration of the world, from the early days of seafaring nations to modern space travel adventures (bottom right photo). Space-related exhibits also will include a rocket engine test boom box that offers the sight and sound of a real test like those conducted at Stennis, a cutaway of the Orion crew capsule being developed to carry humans on future space adventures and the interactive Science on a Sphere exhibit popular with previous StenniSphere museum visitors. Outdoor exhibits will include rocket and jet engines, a U.S. Navy riverine training boat, a tsunami buoy, a research submarine and a unique carved tree sculpture (bottom center photo). Earth Gallery exhibits will include information on Gulf of Mexico coastal research efforts. INFINITY will be open daily, with scheduled bus tours of the nation's largest rocket engine test complex at Stennis Space Center. Admission to the new center will be $8 for adults; $6 for seniors (55+), military personnel and children ages 6-17; and $5 for students and persons in groups of 20 or more. Children ages 5 and under will be admitted free.



Stennis urges girls to get 'excited about math and science'

About 170 high school and elementary girls from area schools visited Stennis Space Center on March 8 to participate in a day of activities designed to promote studies in science and mathematics.

The Girls Excited about Math and Science (G.E.M.S.) event attracted about 130 high school girls and 40 elementary girls from 18 Louisiana and Mississippi schools (see accompanying photos). Stennis Space Center Director Patrick Scheuermann welcomed the girls to the rocket engine test facility, and NASA Deputy Administrator Lori Garver addressed the group in broadcast remarks. Participants then attended a variety of workshop and seminar presentations, including a cryogenics demonstration, a "Dress for Success" fashion show and a tour of information technology facilities.

Various NASA employees spoke with girls during the day. Retired U.S. Army Col. Sheila Varnado delivered a keynote address to the group. Varnado is executive director of R^{3}SM (Recover, Rebuild, Restore Southeast Mississippi), a long-term recovery agency designed to help families in need. Activities ended with a simulcast presentation from NASA Headquarters.

Participating schools from Louisiana were: Lake Area New Tech Early College High School in New Orleans, Patrick F. Taylor Science & Technology Academy in New Orleans, St. Scholastica Academy in Covington, Warren Easton Charter High School in New Orleans and West Jefferson High School in Harvey.

Participating schools from Mississippi were: Bay High School in Bay St. Louis, D'Iberville High School in Biloxi, Gulfport High School, Hancock High School in Kiln, Harrison Central High School in Gulfport, Oak Grove High School in Hattiesburg, Pass Christian High School, Pearl River Central High School in Carriere, Picayune Memorial High School, Poplarville High School and Lillie Burney Elementary School in Hattiesburg.

NASA in the News

Stennis employees featured in videos

Three NASA employees at Stennis Space Center are featured in Women@NASA video interviews now available online. Posted videos include Anita Douglas, human resources specialist in the Stennis Office of Human Capital; Wendy Holladay, aerospace technician in the Stennis Engineering and Test Directorate; and Diane Sims, legal assistant in the Stennis Office of the Chief Counsel. The Women@NASA website showcases women from diverse backgrounds, with careers at NASA, telling their stories in their own words. Featured women include astronauts, engineers, scientists and administrators. They discuss their accomplishments and offer encouragement to women and girls considering technical careers to become the trailblazers of tomorrow. The website also provides information about NASA internships and career opportunities. For more information or to view posted videos, visit: http://women.nasa.gov/.

NASA to co-host apps challenge

NASA, governments around the world and civil society organizations will co-host the International Space Apps Challenge April 21-22 with events across seven continents and in space. The apps competition will bring people together to exploit openly available data collected by space agencies around the world to create innovative solutions to longstanding global challenges. The challenge will showcase the impact scientists and citizens can have by working together to solve challenging problems that affect every person on Earth. Teams will compete with others around the world to use open data to design innovative solutions to a predetermined series of global challenges. Specific challenges are being compiled and will soon be available. Participants will be free to develop mobile apps, software and hardware, data visualization, and platform solutions that could contribute to space exploration missions and help improve life on Earth. To learn more, visit: http://spaceappschallenge.org.

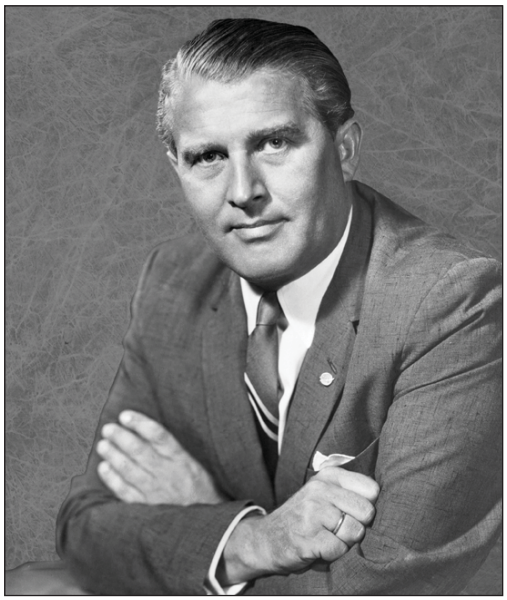
Angry Birds Space game released

For nearly three years, millions of gamers have used physics in the battle between birds and pigs in the video game *Angry Birds*. In cooperation with NASA, Rovio Entertainment, creator of the *Angry Birds* franchise, announced its newest game, *Angry Birds Space*, on March 8. NASA and Rovio are working together to teach people about physics and space exploration through the internationally successful puzzle game. Aboard the International Space Station, Flight Engineer Don Pettit of NASA created a video using *Angry Birds Space* to explain how physics works in space. The video is available on NASA's website at: www.nasa.gov. For more information on microgravity, visit: www.nasa.gov/microgravity.

von Braun was early leader in shaping Stennis

Note: For more than 50 years, NASA's John C. Stennis Space Center has played a pivotal role in the success of the nation's space program. This month's issue of Lagniappe highlights a person in the history of the south Mississippi rocket engine test center.

In observance of Dr. Wernher von Braun's (pronounced *vernner fonn brown*) upcoming 100th birthday on March 23, the Stennis Space Center History Office reflects on his leadership role in developing the center into the nation's largest rocket engine test complex.



In 1962, von Braun was present at the center's first flag-raising ceremony. In the Nov. 22, 1962, edition of the *Picayune Item* newspaper, von Braun said, "Where we are standing, there will rise a great complex of buildings, testing operations, locks, canals, a harbor, storage facilities for oxygen and other fuel, and many auxiliary buildings. We will learn much here in the years to come, and we know that the men who work here will live up and honor their trust and purpose."

Known as the foremost rocket scientist of the 20th century, von Braun was born in Germany on March 23, 1912. He came to the United States in September 1945 under a contract to the U.S. Army. He and about 80 of his associates and their families received American citizenship in Huntsville, Ala., on April 14, 1955.

(Top photo) Wernher von Braun portrait photograph

(Bottom photo) Wernher von Braun (center) reviews construction plans with site personnel during a visit to south Mississippi on Sept. 26, 1963.

In the early years, the then-Mississippi Test Operations (now Stennis Space Center) functioned under the direction of Marshall Space Flight Center in Huntsville, where von Braun was director. As an integral part of the Apollo Program, von Braun advocated the need for a permanent national test site to serve the nation into the indefinite future. The first mission of the rocket propulsion test center was to static-test and flight certify first- and second-stage boosters of the giant Apollo/Saturn V space vehicle. In 1966, von Braun pointed out that the center was built not only to accommodate the Apollo Program, but also "to provide sufficient room and capability for expansion to meet future needs."

From the earliest days of construction in 1963, von Braun was a frequent visitor to Stennis and an ardent defender and supporter of the center's potential. During his visits, von Braun would frequently roll up his sleeves, don a hard hat and visit work areas. He particularly liked to talk with workers and see first-hand how a technical problem was being resolved.

The famed scientist viewed test firings at Stennis from a tower named in his honor. The 90-foot von Braun Tower at Stennis resembles a ship's conning tower and still stands.

He also liked to "show off" the south Mississippi installation that he called "his baby." He often escorted space notables such as John Glenn to the center. On another occasion, he brought his family from Germany to the center on a vacation, arriving by boat after an excursion from Bay St. Louis, along the coastline and up the East Pearl River. On one of his last visits to Stennis in 1970, von Braun presented awards and thanked center employees for their contributions to the Apollo Program.

Von Braun served NASA as director at Marshall from 1960-70 and resigned in 1972 after a two-year stint as headquarters deputy associate administrator. He continued to work in the private sector for five years before dying in June 1977 at age 65.

Office of Diversity and Equal Opportunity

Celebrate National Women's History Month

Courage doesn't always roar.
Sometimes courage is the quiet voice at the end of the day saying,
"I will try again tomorrow."
- Mary Anne Radmacher

Women have played a pivotal role throughout the history of this great nation. Many are well known, but there are far more who worked behind the scenes and were never given credit for the changes that came.

The purpose of Women's History Month is to increase awareness and knowledge of the many contributions women have brought forth in the shaping of our culture and environment as we know it today. The month of March is set aside each year to recognize and remember these brave and sometimes heroic women.

Some of the women remembered were quite notable, while others made small steps during their lives that culminated in huge differences over time. While some of those historical individuals may seem ordinary to us, all left their mark. It is impossible to teach or learn history without remembering their many contributions.

This year's theme for Women's History Month is *Women's Education – Women's Empowerment*. The theme embodies and emphasizes the fact that the fight to learn was a valiant struggle waged by many tenacious women across years and cultures in our country. It bestows homage to women for working tirelessly to prove that education is a privilege, and performance is not based on gender.

To recognize and honor Women's History Month, the Stennis Diversity Council has invited and received confirmation of the attendance of Sally-Ann Roberts, co-anchor at WWL-TV, as speaker on March 23, 2012, at 11 a.m. in the StenniSphere Auditorium. Roberts will convey the importance of education in achieving personal and professional goals. The audience will be left with an understanding that empowerment begins with self-confidence, determination and perseverance.

On behalf of the Stennis Diversity Council and the Environmental Protection Agency, it is our hope you will join us in celebrating Women's History Month.

Stennis employee honored as Mississippi Nurse of the Year

Stennis employee Sue Smith was honored as Nurse of the Year in a non-traditional setting during the seventh annual Mississippi Nightingale Awards Banquet in Jackson, Miss., on March 5, 2012. The Mississippi Nurses Association and the Mississippi Nurses Foundation host the annual black-tie event to highlight achievements of outstanding nurses in the state who contribute significantly to the health care of citizens and those who support the work of nursing in a vital way. Smith, a registered nurse and certified occupational health nurse, has worked at Stennis for 12 years and serves as head nurse for the Stennis Occupational Health Service. She is employed by Comprehensive Occupational Resources LLC, based in Baton Rouge, La.

Rebound Rumble

Teams from six states compete in annual Bayou Regional robotics tournament

Students from 49 high school teams in six states competed for top honors during the 2012 FIRST (For Inspiration and Recognition of Science and Technology) Robotics Bayou Regional Competition March 15-17 in Kenner, La.

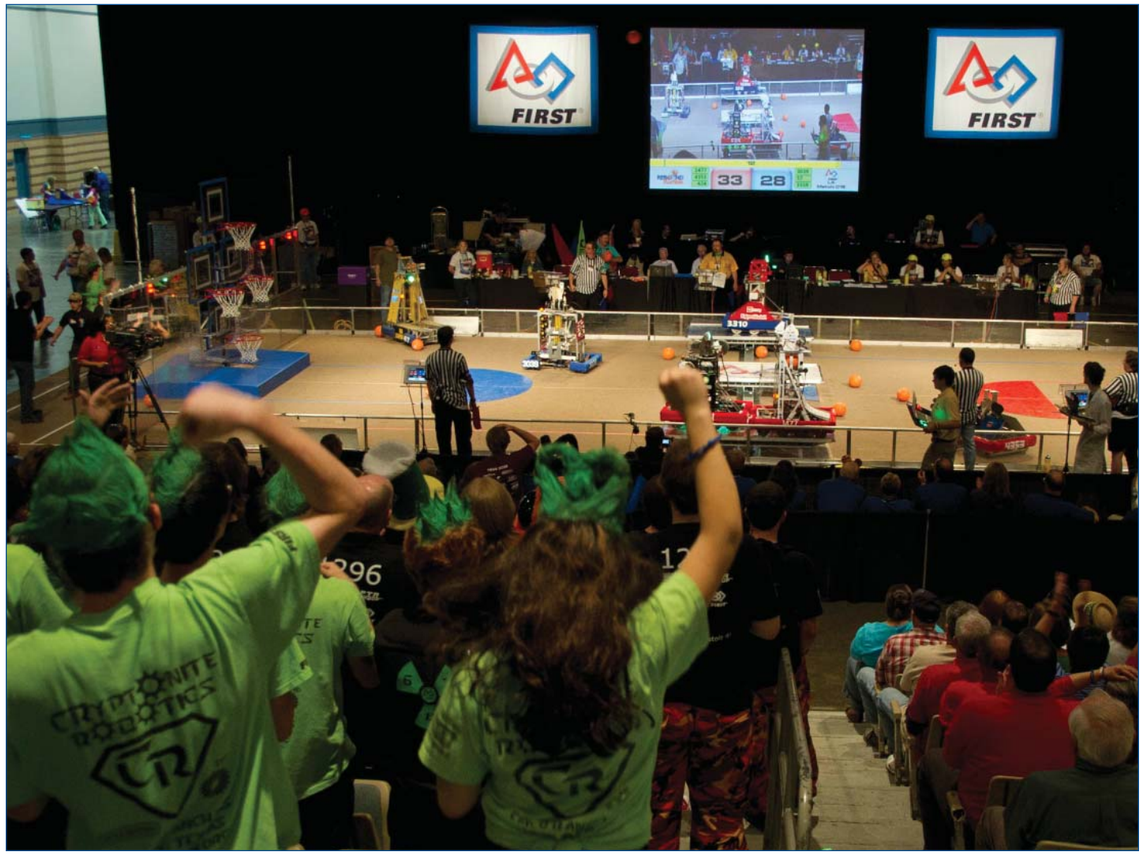
A team from David Thibodaux Career and Technical High School in Lafayette, La., teamed with a pair of teams from Texas to emerge as the champion of this year's *Rebound Rumble* game competition.

A team from Northshore High School and the St. Tammany School Board in Slidell, La., walked away with the most prestigious honor, earning the Regional Chairman's Award, which recognizes the team creating the best partnership effort and best exemplifying the true meaning of FIRST.

A member of the Northshore/St. Tammany team, Rachel Holladay, also was named a Dean's List finalist. The Dean's List award recognizes students who have led their teams and communities to increased awareness of FIRST and its mission. Students are selected from each regional event as finalists for the 2012 award.

FIRST competition is designed to encourage students to pursue engineering and technology careers. High school teams are given six weeks to build robots that can perform assigned tasks. They then compete in regional events across the country to earn a chance to go to the finals, set for April 26-28 in St. Louis. NASA and the Stennis Space Center are strong supporters of FIRST Robotics and the Bayou Regional event through direct monetary support and the work of judges, volunteers and team mentors.

More than half of the 2012 Bayou Regional field hailed from Louisiana (30 teams) and Mississippi (seven teams). Several of those made it past qualifying rounds to compete in the quarterfinals and seminfinals of the alliance portion of the weekend. Four of the six teams advancing to the finals were from Louisiana and Mississippi.



(Left photo) Supporters cheer their teams on during the FIRST (For Inspiration and Recognition of Science and Technology) Robotics Bayou Regional Competition in Kenner on March 15-17. The annual tournament attracted 49 high school teams from six states. Teams competed with robots built over a six-week span earlier this year, vying for a chance to advance to competition finals April 26-28 in St. Louis. NASA and Stennis Space Center are strong supporters of FIRST Robotics and the Bayou Regional event with team coaches, mentors, training, judges, referees, a machine shop and other volunteers.

(Bottom left photo) Members of a combined team from Picayune High School in Picayune, Pearl River Central High School in Carriere and Mississippi School of the Arts in Brookhaven, maneuver their robot during a round of the annual Bayou Regional tournament.

(Bottom right photo) A basket is scored (center) during a round of the FIRST Robotics tournament in Kenner. Robots competed to score baskets in this year's "Rebound Rumble" game. A team from Louisiana allied with a pair of Texas teams to emerge as tournament champion.

Stennis assists school on weather station project

Stennis Space Center employees Randall Hicks and Kelly Witherspoon recently installed a digital weather station at Quarles Elementary School in Long Beach, Miss., as part of a NASA partnership effort with students at the school. The wireless weather station, purchased by the school's gifted program with grant funds, will allow students access to the latest technology in weather data collection. Students will be able to monitor wind speed and direction, temperature, humidity, rainfall and more. The station also will allow students to report data to the NASA-supported GLOBE program, which records weather measurements taken by schools from around the world in 111 participating countries. Dozens of schools in Louisiana and Mississippi participate in the program. For details, visit: www.globe.gov.

Stennis DEVELOP students' research presented at session

Stennis Space Center intern Jason Jones presented results of Stennis DEVELOP students' summer 2011 Florida Keys research project during the 2012 Ocean Sciences Meeting in Salt Lake City on Feb. 20-24. During the meeting, Jones also spoke at a student luncheon about internship opportunities available through NASA's DEVELOP Program. DEVELOP is an internship program that allows students to gain valuable research experience at NASA facilities. For details, visit: http://develop.larc.nasa.gov/.