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

November 2011

# NASA conducts major J-2X test

NASA conducted a successful 500-second test of the agency's new upper-stage engine on the A-2 Test Stand at Stennis Space Center on Nov. 9. A host of NASA leaders visited Stennis for the major test of the next-generation J-2X rocket engine that will carry humans into deep space. The J-2X engine will be part of NASA's new Space Launch System and is being developed for Marshall Space Flight Center by Pratt & Whitney Rocketdyne. NASA leaders acknowledged the 500-second test as an important step in the continued development of the new spacecraft. Stennis will perform sea-level, component and simulated high-altitude testing of the J-2X engine and also is charged with testing the RS-25 rocket engines that will provide launch power for the new Space Launch System.



## Center directors' forum held at Stennis



Stennis Space Center Director Patrick Scheuermann (right) hosted directors from six other NASA centers during a forum discussion at the south Mississippi rocket engine test facility Nov. 9. The directors discussed the future of the American space program from their perspectives during an all hands session with Stennis employees. Participants were: (l to r) David McBride, director of Dryden Flight Research Center in Edwards, Calif.; Lesa Roe, director of Langley Research Center in Hampton, Va.; Ray Lugo, director of Glenn Research Center in Cleveland, Ohio; Bob Cabana, director of Kennedy Space Center in Florida; Robert Lightfoot, director of Marshall Space Flight Center in Huntsville, Ala.; Mike Coats, director of Johnson Space Center in Houston; and Scheuermann.



**Stennis' 2011  
Combined  
Federal Campaign**

**Goal**

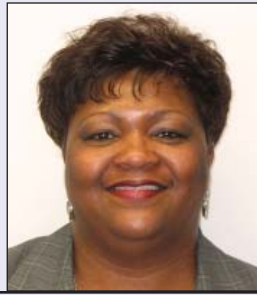
**\$190,000**

**To-date**

**\$197,772**

**(104.1% of goal)**

From the desk of  
**Pamela Covington**  
 Manager  
 Office of External Affairs  
 Stennis Space Center



**T**his year seems to have flown by. It is November, and Thanksgiving is here already! The age-old saying that time flies when you are having fun resonates with me. My team and I have had our share of fun this year. From major outreach activities like the Essence Festival and public open house to the Roy Estess dedication, time capsule ceremony and, of course, our grand 50th Gala celebration. We have been busy and, yes, it has been fun.

Thanksgiving is one of my favorite holidays. Traditions usually involve being in the company of family and friends and a big feast with all the favorite trimmings. For most, it is also a time of reflection and giving thanks for the many blessings experienced throughout the year.

I am grateful to have been part of Stennis during its 50-year history. It is rewarding to receive thanks and appreciation from the employees for the role my office played in creating the moments and experiences of our yearlong 50th celebration. It is gratifying to feel that your contributions are meaningful and that you are part of something special like Stennis Space Center.

As I interact with employees and hear stories of how their granddad, uncle, cousin and other family members were part of Stennis history back in the day, I hear gratitude in their voices for what Stennis has meant and continues to mean to their families. Over 40 per-

cent of the workforce at Stennis are direct descendants of the families who contributed their land for development of the then-Mississippi Test Facility. The promise of Sen. John C. Stennis is being fulfilled when he assured the families that their generations would reap the benefits of the jobs that the center would create.

I am thankful Stennis has a solid role in the next chapter of America's space exploration program. We are testing the J-2X rocket engine that is planned for use in the upper stage of the new rocket design that will take humans to deep space destinations. We are continuing construction on the A-3 Test stand that will support testing at simulated altitudes up to 100,000 feet. Our Applied Science Office has a pivotal role in managing the Gulf of Mexico Initiative and addressing coastal management issues on a regional level. We have increased our facility space by nearly 33 percent, and the missions of our resident agencies are stable and, in some cases, expanding.

As I celebrate Thanksgiving, among the things I reflect on is my gratitude for being a part of NASA and the broader Stennis family, the quality of life that Stennis enables for so many and the employees who contribute to the impact that Stennis has on the economic development of our communities and state. The center has a solid future ahead. I am thankful that I am part of the collective team that is charting the course for the next 50 years.

How blessed we are to be alive during such a historical time as this! Happy Thanksgiving.

*Pam*



## NASA leaders discuss future of space program

In a news conference broadcast live on NASA TV, key NASA leaders discussed the significance of the successful 500-second test of the agency's new J-2X rocket engine at Stennis Space Center on Nov. 9. The engine will provide upper-stage power for NASA's new Space Launch System (SLS) being developed to carry humans into deep space. Participating in the session were: (l to r) Dan Kanigan, public affairs specialist at NASA's Marshall Space Flight Center; Dan Dumbacher, deputy associate administrator for NASA Exploration System Development; Joan "Jody" Singer, deputy program manager for the SLS Program Office at Marshall; Patrick Scheuermann, Stennis director; and Mike Kynard, manager of the SLS Liquid Engines Element at Marshall.

## FULFILLING NASA'S EXPLORATION MISSION

(Right photo) A plume of steam signals start of a successful test of the next-generation J-2X engine at Stennis Space Center on Nov. 9.

(Bottom left photo) A wind-pushed steam plume threatens to obscure the A-2 Test Stand during the Nov. 9 test of NASA's new J-2X engine.

(Bottom right photo) Directors of seven NASA centers prepare to view the Nov. 9 test of the J-2X engine – (l to r) Ray Lugo, Glenn Research Center; David McBride, Dryden Flight Research Center; Robert Lightfoot, Marshall Space Flight Center; Patrick Scheuermann, Stennis Space Center; Bob Cabana, Kennedy Space Center; Lesa Roe, Langley Research Center; and Mike Coats, Johnson Space Center.



# J-2X test achieves 500-second mark

**N**ASA conducted a successful 500-second test firing of the J-2X rocket engine on Wednesday, Nov. 9, marking another important step in development of an upper stage for the heavy-lift Space Launch System (SLS).

SLS will carry the Orion spacecraft, its crew, cargo, equipment and science experiments to destinations in deep space. SLS will be safe, affordable and sustainable to continue America's journey of discovery from the unique vantage point of space.

"The J-2X engine is critical to the development of the Space Launch System," Dan Dumbacher, NASA's deputy associate administrator for exploration systems development, said after the test at NASA's Stennis Space Center in Mississippi. "Today's test means NASA is moving closer to developing the rocket it needs if humans are to explore beyond low-Earth orbit."

Data from the test will be analyzed as operators prepare for additional engine firings. The J-2X and the RS-25D/E engines for the SLS core stage will be tested for

flight certification at Stennis.

Both engines use liquid hydrogen and liquid oxygen propellants. The core stage engines were developed originally for the space shuttle.

"The J-2X engine team and the SLS program as a whole are extremely happy that we accomplished a good, safe and successful test today," said Mike Kynard, Space Launch System Liquid Engines Element Manager at NASA's Marshall Space Flight Center in Huntsville, Ala. "This engine test firing gives us critical data to move forward in the engine's development."

Stennis has tested engines that carried Americans to space in both the Apollo and Space Shuttle programs. The J-2X engine is being developed for Marshall by Pratt & Whitney Rocketdyne of Canoga Park, Calif.

"We look forward to adding to the legacy as we fulfill our responsibility to test engines that will power America's next launch vehicle," said Stennis Director Patrick Scheuermann.

## Stennis continues Legends Lecture Series

Stennis Space Center Director Patrick Scheuermann (right) welcomes former leaders to the fourth Legends Lecture Series presentation Oct. 13. Stennis launched the series last November as part of a yearlong 50th anniversary celebration. The recent session focused on past rocket engine test work. Visiting Stennis legends were: (l to r) Dave Geiger, former Pratt & Whitney Rocketdyne site director; Patrick Mooney, former space shuttle main engine project manager; Boyce Mix, former test and engineering director; J. Stephens Dick, former Systems Engineering Division chief; James Taylor, former propulsion test director and deputy director for operations; and Marvin Carpenter, former deputy director of the Stennis Test & Engineering Directorate.



## Mississippi creates Scenic Byway to Space network

**T**hirty miles of Mississippi roadways leading and adjacent to Stennis Space Center have been designated Scenic Byway to Space sections for their distinctive and treasured attractions and sights.

“This is a significant designation, recognizing the historical and ongoing importance of Stennis Space Center in the south Mississippi region,” said Ron Magee, assistant to the director of the NASA Center Operations Directorate at Stennis and a lead organizer of the Scenic Byway to Space effort. “Since it was established 50 years ago, Stennis Space Center has grown into a world-class rocket engine test facility and federal city.”

Scenic Byway to Space is a network of roadway sections that pay homage to Stennis Space Center, as well as past and present communities surrounding the rocket engine test facility. Two sections of Miss. Hwy. 607 leading into Stennis Space Center from Interstate 59 and Interstate 10 are designated as the NASA Scenic Byway to Space. Four sections of roadways – Napoleon, Westonia, Logtown and Santa Rosa byways – are named for communities

that relocated in the 1960s to make way for Stennis. The Pearlinton Scenic Byway to Space travels through that existing community adjacent to Stennis.

The byway sections were designated by the state of Mississippi. Work is now under way to place “way-finding” signs and outdoor exhibits along the byways. Once that work is completed, organizers will seek recognition through the National Scenic Byways Program, which seeks “to create a distinctive collection of American roads, their stories and treasured places.”

The byway sections feature a range of attractions and sights, including picturesque vistas, historic cemeteries, biking and hiking trails, area parks, waterfront facilities and the INFINITY science and education center, set to open in 2012.

“These designations are an important way of reminding us not only of the history of Stennis Space Center and its surrounding communities but of the rich scenic and historical attractions that surround us,” Magee said.

## Stennis promotes energy awareness

Clay Sweet, residential energy representative from Coast Electric Power Association, demonstrates the comparative efficiency of several commercial light bulbs to Stennis Space Center employees during Energy Awareness Day activities Oct. 18. During the daylong event, employees had the opportunity to visit various exhibits focused on energy and energy conservation. Visiting with Sweet at his exhibit were: (l to r) Vickie Garner of the Jacobs Technology Facility Operating Services Contract Group, Jeff Smith of the Naval Oceanographic Office, Jaci Mize of the National Oceanic & Atmospheric Administration and Rachel Kard of NOAA.



# Happy 50th, Stennis!



(Above photo) Stennis Space Center Director Patrick Scheuermann welcomes guests to the 50th Anniversary Gala on Oct. 15. The dinner was a culminating event in Stennis' yearlong celebration of its 50th anniversary. NASA publicly announced plans to build the rocket engine test site on Oct. 25, 1961.



(Top left photo) NASA Administrator Charles Bolden (at podium) speaks to 50th Anniversary Gala guests. The event was attended by more than 300 NASA employees and guests and featured various program presentations and speakers.



(Middle left photo) Stennis Space Center Director Patrick Scheuermann (second from left) stands at the historical marker erected by the state of Mississippi in honor of the 50th anniversary of the NASA facility. The marker recounts the decision to build Stennis in 1961 to test the rocket engines and stages needed to carry humans to the moon. Joining Scheuermann at the Oct. 25 unveiling ceremony were: (l to r) Ron Magee, assistant to the director of the Stennis Center Operations Directorate; Al Watkins and Tish Williams, representing the Partners for Stennis support organization; and Ken P'Pool, deputy state historic preservation officer with the Mississippi Department of Archives and History.

(Bottom left photo) Stennis Space Center Director Patrick Scheuermann (right) and Naval Meteorology and Oceanography Command Chief of Staff James Pettigrew drop the first shovelfuls of dirt on a time capsule to be opened on the rocket engine test facility's 100th anniversary in 2061. The time capsule was placed in front of the Roy S. Estess Building on Oct. 25 as Stennis concluded celebrations of its 50th anniversary.

# Trio of early leaders shaped Stennis facility



*Note: For 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 three early leaders at the south Mississippi rocket engine test center.*

The children of Leo Seal Sr., Capt. William C. Fortune and Jackson Balch Sr. all share a common bond: Their fathers played vital roles during the formative years of Stennis Space Center.

During oral history interviews conducted by Stennis' History Office, Virginia Seal Wagner, Wealtha Fortune Weaver and Jackson "Jack" Balch Jr. reflected on memories of their fathers in conjunction with the center's 50th anniversary.

On Oct. 25, 1961, NASA and Sen. John C. Stennis of Mississippi publicly announced plans to locate a "National Test Site" to test large launch vehicle rocket stages in Hancock County, Mississippi. A week later, Stennis informed 1,500 Logtown residents of NASA's plans to buy their property to build the test site, along with land in the surrounding towns of Gainesville, Santa Rosa, Napoleon and Westonia. Leo Seal Sr. was a well-respected banker for the area's Hancock Bank, and he supported the NASA cause.

"Sen. Stennis contacted my father (Seal Sr.) and asked would he come to Logtown with him to tell these people that 'we were going to take their land away,'" said the late 81-year-old Virginia Seal Wagner, who passed away about a month after her interview. "My dad and mother (Rebecca Baxter Seal) were born and raised in Logtown. So, he had some connections there, and Sen. Stennis thought that would be a friendly face."

By 1963, 660 families had given up their homes, and NASA had acquired a 13,800-acre "fee" area for its facilities, surrounded by a 125,000-acre noise buffer zone.

On Oct. 1, 1962, Navy Capt. William C. Fortune was appointed the first manager of Mississippi Test Operations, a division of Marshall Space Flight Center (MSFC). Fortune was personally selected by late German scientist Dr. Wernher von Braun. "Wernher von Braun and his fellow scientists had a vision for the space program. Part of this vision was to have the right team of pioneers," said Ocean Springs resident Wealtha Fortune Weaver, the second of Fortune's three daughters. "Dad was put on loan to NASA from the U.S. Navy."

Fortune and wife Elizabeth "Libby" and their children resided in Pass Christian and were said to have captured the hearts of the people as NASA's "first family." They became well-known as the space program's best ambassadors to Mississippi.

Another von Braun protegee, Jackson Balch Sr., was named second manager of the facility in 1965. He transferred from MSFC to complete construction and activation of the test site. During his 10-year tenure, the first-ever rocket engine test took place in 1966. By 1967, Balch was concerned about the site's future and initiated meetings on the issue. He became known as the architect of Stennis' multiagency concept and was largely responsible for transformation of the facility from a single mission of rocket engine testing into

a continuous operation that the community could benefit from in the future.

What Balch envisioned more than two scores ago remains evident today. Stennis Space Center is home to more than a dozen federal agencies that are joined with 30 or more state, academic and private organizations, as well as several technology-based companies to comprise the unique federal city. It has an economic impact that provides a quality of life to 5,400 employees.

"He would be pretty amazed that it is still here," Jack Balch Jr. said of his father. "He would feel that was a real accomplishment and a real gold star for the community."



(Clockwise, from top left) Wealtha Fortune Weaver of Ocean Springs stands next to a photo of her father, Capt. William C. Fortune. Jackson Balch (left) hurries with Sen. John C. Stennis (center) and NASA Acting Administrator George Low during a busy day at the Mississippi Test Facility (now John C. Stennis Space Center) in November 1970. Gulfport resident Jackson "Jack" Balch Jr. poses with a photograph of his father, Jackson Balch Sr. Virginia Seal Wagner (fourth from right) and others stand with Dr. Wernher von Braun and members of his family during a gathering in October 1964.

## Office of Diversity and Equal Opportunity

# Celebrate Native American Heritage Month

*“In ages past, our old ones were the storytellers.  
This was the way things were passed along to the generations  
that followed. For this reason, the aged people made it a point to  
remember every detail so they could relate it at a later time.  
They were the word and picture carriers, making history and  
spiritual values alive and important.  
In recent times, we have made our old ones  
think they are not so important.  
We spoof their stories and make them feel foolish.  
The truth is that we are ignorant of what is precious  
and how to ‘a da li he li tse di’ – appreciate age.  
Rigidity can creep in and set even the young mind if there  
are no soft memories, no laughter, no times too deep for tears.  
Age is grace – a time too valuable to waste.”*

“A Cherokee Feast of Days”

Joyce Sequichie Hiffer

The terms “legend” and “folktale” are sometimes used interchangeably with “myth.” Technically, however, these are not the same. How should we distinguish them?

A myth is a sacred story from the past. It may explain the origin of the universe and of life, or it may express its culture’s moral values in human terms. Myths concern the

powers who control the human world and the relationship between those powers and human beings. Although myths are religious in origin and function, they may also be the earliest form of history, science or philosophy.

A folktale is a story that, in its plot, is pure fiction and that has no particular location in time or space. However, despite its elements of fantasy, a folktale is actually a symbolic way of presenting the different means by which human beings cope with the world in which they live. Folktales concern people – either royalty or common folk – or animals who speak and act like people.

A legend is a story from the past about a subject that was, or is believed to have been, historical. Legends concern people, places and events. Usually, the subject is a saint, a king, a hero, a famous person or a war. A legend is always associated with a particular place and time in history.

## Hail & Farewell

NASA bids farewell to the following:

Dorothy Brown

Student Trainee/Accounting  
Office of the Chief Financial Officer

## Lagniappe is changing!

Beginning January 2012, the monthly Lagniappe newsletter from Stennis Space Center will be available solely through electronic means. This will save taxpayer money and allow for a more colorful and appealing presentation.

Individuals will be able to enjoy Lagniappe each month in one of two ways – via the Stennis website or by email delivery of a PDF copy.

To receive email delivery of Lagniappe, send email address to – [ssc-pao@mail.nasa.gov](mailto:ssc-pao@mail.nasa.gov).

To access issues online, visit – [www.nasa.gov/centers/stennis/news/publications/index.html](http://www.nasa.gov/centers/stennis/news/publications/index.html).



## Stennis focuses on disability awareness

Stennis Space Center Director Patrick Scheuermann (right) stands with fellow panelists participating in a Disability Awareness Day presentation for Stennis employees Oct. 26. The panelists discussed the challenges they faced while personally experiencing disabilities for a day. Scheuermann reflected on the day he spent working while confined to a wheelchair. Other panelists and the disabilities they experienced for a day were: (l to r) Myron Brooks had his mouth covered to experience a day working as a mute; Capt. James Pettigrew had his eyes covered to experience his day blind; Marlana Lafontaine’s ears were covered to experience the challenges a deaf person encounters in the workplace; and Russ Beard had his dominant arm confined to a sling throughout the work day.

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## FLL tournament Dec. 3 – volunteers needed

The 2011 FIRST (For Inspiration and Recognition of Science and Technology) LEGO® League Mississippi Championship Tournament is scheduled for Dec. 3 in Hattiesburg, and the Stennis Education Office has issued a call for volunteers to help staff the annual event.

Each year, students ages 9 to 14 from across Mississippi compete in the high-energy, science and technology tournament, using robots built with the LEGO® Group's MINDSTORMS™ NXT system. Participation in the competition has grown this year, creating the need for additional judges, referees and general volunteers. Training for tournament duties will be provided.

To volunteer or learn more about the FIRST tournament, call Randall Hicks at 228-688-3653 or email [randall.t.hicks@nasa.gov](mailto:randall.t.hicks@nasa.gov).



### Intern receives Director's Coin

Stennis Space Center Director Patrick Scheuermann (left) presented a Director's Coin to DEVELOP intern Jason Jones on Oct. 25, in recognition of Jones' participation at the 62nd International Astronautical Congress in South Africa earlier in the month. The event provided a forum for six select students and young professionals to share their visions, ambitions and challenges for the future of Earth observation. To gain the opportunity, Jason competed in a two-round video competition hosted by the International Astronautical Federation.

## DEVELOP Program earns achievement award

The NASA DEVELOP Program has received the agency's prestigious Group Achievement Award for 13 years of Earth science training and development work with students and young professionals.

Several members of the Southern Region team at John C. Stennis Space Center and its Mobile (Ala.) County Health Department partner team were listed as award recipients. National DEVELOP Program Manager Mike Ruiz accepted the award during a Sept. 12 ceremony at NASA's Lang-

ley Research Center in Hampton, Va.

"This is a well-deserved recognition of a program that does a wonderful job of developing students into future Earth science leaders," said Cheri Miller, director of the Stennis DEVELOP Program. "Each year, the DEVELOP Program offers interns invaluable management and leadership experience as they prepare for their professional careers."

DEVELOP is a NASA Science Mission Directorate Applied Sciences training and development program

focused on enabling students and young professionals to extend the use of NASA Earth science research to benefit society. Since its inception in 1998, the program has awarded more than 2,200 internship opportunities.

The DEVELOP Program expanded to Stennis Space Center in 2004. "DEVELOP is a true win-win program," Miller said. "Students and young professionals gain invaluable experience and insight from research and NASA mentors, and the agency gains prepared, innovative, engaged leaders for the future."