National Aeronautics and Space Administration

LAGNIAPPE

John C. Stennis Space Center

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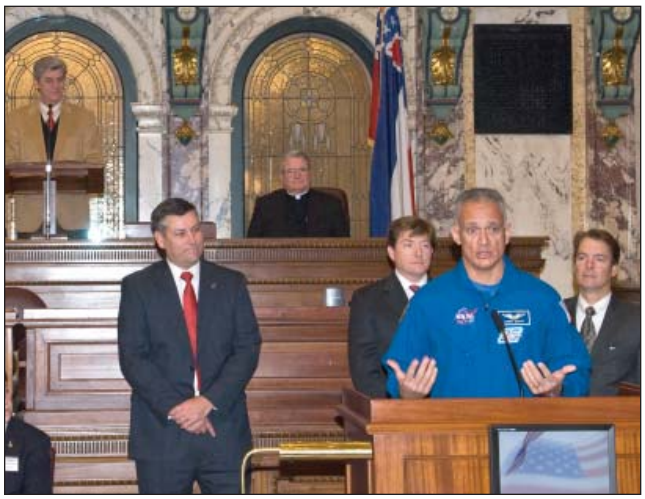
Stennis hosts NASA Day at the Capitol



Astronaut Danny Olivas addresses members of the Mississippi Senate during NASA Day at the Capitol activities Jan. 6. He is joined by Mississippi Lt. Gov. Phil Bryant (at left rear), Stennis Space Center Deputy Director Patrick Scheuermann (left) and a pair of Gulf Coast delegation members. Olivas also spoke to the Mississippi House of Representatives during Jan. 6 activities.

Representatives from John C. Stennis Space Center visited Jackson on Jan. 6, to meet with Mississippi legislators as part of NASA Day at the Capitol.

Astronaut Danny Olivas, who has logged more than 668 hours in space and 34-plus spacewalk hours during a pair of space shuttle missions, joined Stennis representatives to thank Mississippi legislators for their continued support of NASA. Highlighted during the event was Stennis' important role in the past, present and future of America's space program, and its positive effect on Mississippi's economy and quality of life.

For Mississippi lawmakers, Stennis displayed exhibits in the Rotunda, highlighting the center's role in the future of space exploration. Models of the next generation Ares I and Ares V rockets also were displayed.

"These are exciting days for NASA and Stennis Space Center," Stennis Director Gene Goldman said. "Stennis is making continued progress, readying for testing of the engines that will replace the space shuttle main engine. In addition, we are involved in science projects related to the Gulf of Mexico and beneficial to this region. These efforts are fundamental in helping prepare for the future of America's space program and are indicative of the vital role Stennis will continue to play in space travel and Earth science."

The center has a total workforce of more than 5,000 and has a consistently strong economic impact throughout the region. Within a 50-mile radius, Stennis had a direct economic impact of $668 million in 2009. The direct global economic impact of the center totaled $875 million for the year.

Stennis exceeds 2009 campaign giving goal

Stennis Space Center employees closed 2009 by exceeding their Combined Federal Campaign giving goal of $200,000 by 16.5 percent.

Employees contributed $233,016 through the 2009 campaign. In addition to exceeding the giving goal, the 2009 total also surpassed the 2008 giving total by almost $35,000 (17.3 percent).

The CFC is the largest annual workplace charity effort. Each year, its gifts support organizations providing health and human service benefits throughout the world.

For the 2009 campaign, 119 Stennis employees qualified as Bronze Eagle contributors with gifts of $480 to $1,000 for the year. Thirty-eight employees gained Silver Eagle status with gifts of $1,001 to $2,000 for the year. Nine employees were Golden Eagle contributors, giving more than $2,000 for the year through the campaign.

From the desk of

Gene Goldman
Director
Stennis Space Center

"The last sound on the worthless Earth will be two human beings trying to launch a homemade spaceship and already quarreling about where they are going next."
(William Faulkner to the UNESCO Commission, October 1959)

It's 2010 ... finally! The holiday season is over, with its paths through colored paper and gifts awaiting return. Last year is already fading from memory, but hopefully, its lessons are ingrained and fast becoming ritual. We've begun another trip 'round the sun; hang on!

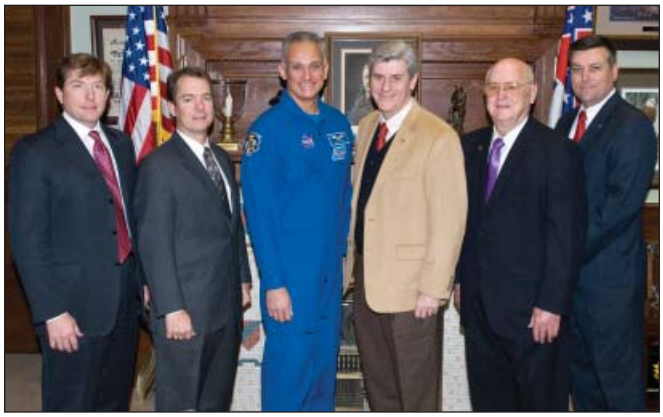
We are in the last year of planned shuttle flights, with only a handful left. The space shuttle has been an incredible program, enabling a continuous presence in space, now approaching a decade on the truly International Space Station. It provided for deployment, repair and maintenance of the Hubble Space Telescope, keeping a view of our universe's past into the future. It's given us an incredible volume of "hard things" accomplished, adding to the history of human spaceflight and exploration. That story includes many memorable chapters of Stennis achievements, all of which we will build upon.

We are continuing our preparations for next-generation engine testing as we await final decisions on the future course. That work includes completion of the unique A-3 Test Stand and continued E Test Complex testing. It includes test support for development of commercial ISS supply capability to fill the gap left by shuttle retirement. B Test Complex maintenance and refurbishment for further RS-68 work and eventual stage testing are in the early planning phase. The Source Evaluation Board for a follow-on Test Operations Contract is being staffed for an extremely important center procurement. Our Applied Science group is initiating work on recent research proposal awards. In addition, they are seeking areas of collaboration with resident and regional agencies to further knowledge and improve quality of our environment and our lives. All these represent steps along "the crossroads of science" envisioned by our center forebears. It is also indicative of our incredible potential as the heading evolves.

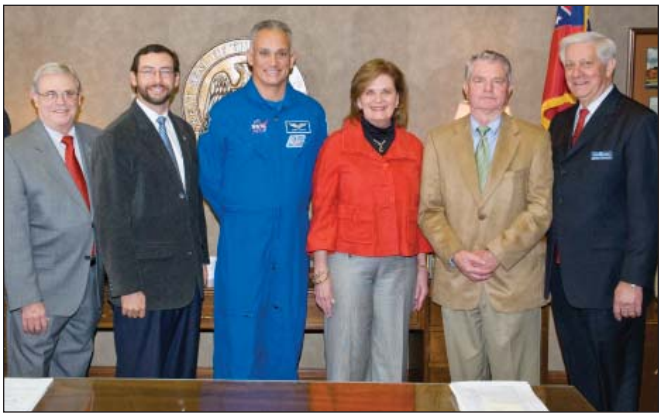
Dr. Martin Luther King Jr. once said there was no other time in history he would have preferred to live. I believe that to be true in the realm of human spaceflight. We live and work in a unique era and endeavor. Let's make the best of it in 2010, and beyond. "Where we go next" should be quite a journey!

Dream big; work harder!

State leaders welcome astronaut



Mississippi leaders welcomed astronaut Danny Olivas (center) and Stennis Space Center Deputy Director Patrick Scheuermann (far right) during NASA Day at the Capitol activities Jan. 6. In addition to other activities, Olivas visited with (l to r): Sen. David Baria, D-Bay St. Louis; President Pro-Tempore Sen. Billy Hewes, R-Gulfport; Lt. Gov. Phil Bryant; and Sen. Ezell Lee, D-Picayune.



NASA Day at the Capitol activities included visits by astronaut Danny Olivas (center) with Mississippi leaders (l to r): Speaker Pro-Tempore Rep. J.P. Compretta, D-Bay St. Louis; Rep. Dirk Dedeaux, D-Perkinston; first lady Marsha Barbour; Speaker of the House Rep. William McCoy, D-Rienzi; and Gulfport Mayor George Schloegel, who also is chair of the INFINITY Science Center board of directors.

FULFILLING NASA'S EXPLORATION MISSION

A-3 Test Stand to mark 2010 milestones

The A-3 Test Stand being built to test the next generation of rocket engines at NASA's John C. Stennis Space Center will mark several construction milestones in 2010.

"Some deadlines related to the stand are tentative as the future of America's space exploration program is decided," A-3 Project Manager Lonnie Dutreix said. "However, we remain on schedule with the main construction work."

The A-3 Test Stand site at NASA's John C. Stennis Space Center is a busy place as work progresses on several fronts. Installation of liquid oxygen, isopropyl alcohol and water tanks (to the left of the stand) continues, as does work to install water delivery system piping (to the right of the stand) and general work on the structure.

The A-3 Test Stand will provide simulated high-altitude testing of the J-2X rocket engine being developed to carry humans beyond low-Earth orbit once more as part of NASA's Constellation Program.

In 2010, construction work on the new stand will proceed on several fronts as workers:

- Begin installing the test cell and diffuser.
- Install the liquid oxygen (LOX) and liquid hydrogen tanks atop the test stand.
- Receive and install five remaining chemical steam generator water tanks.
- Start installing the gaseous nitrogen bottles for use with the chemical steam generator.
- Install a 66-inch water valve and piping between the delivery system connection and the existing water system.
- Construct the lower Signal Conditioning Building (SCB).
- Construct the test stand's shop building.

Installation of the test cell and diffuser is the next major task to complete. The test cell and diffuser will enable operators to simulate altitudes of up to 100,000 feet, using a series of chemical steam generators to create a vacuum.

The test cell and diffuser is being manufactured by American Tank and Vessel Inc. in nearby Lucedale.

LOX and liquid hydrogen tanks will be installed atop the stand to provide fuel for tests. Other LOX, isopropyl alcohol and water tanks are located on the ground for use by the chemical steam generators. Four of the tanks have been installed. In 2010, the remaining five water tanks will be installed.

Installation of gaseous nitrogen bottles to be used by the chemical steam generators will begin in 2010. The 32 bottles will provide the pressurization gas needed by the generators.

Work on piping to connect the existing water system to the A-3 Test Stand will be completed in 2010.

Construction of the test stand's lower SCB will proceed in 2010. Another SCB will be located at the top of the stand. Together, these will contain all the data acquisition and control capabilities needed by stand operators.

Finally, 2010 will see construction of the shop building next to the stand.

"This will be a unique test structure – and one pretty important to the space program," Dutreix said. "If we're going beyond low-Earth orbit, we're going to need upper stage engines. Stennis is where those engines will be tested."

2010 launch schedule

STS-130
Shuttle Endeavour
Target: Feb. 7, 2010

GOES-P satellite (Delta IV)
Target: March 4, 2010

STS-131
Shuttle Discovery
Target: March 18, 2010

STS-132
Shuttle Atlantis
Target: May 14, 2010

STS-134
Shuttle Endeavour
Target: July 29, 2010

STS-133
Shuttle Discovery
Target: Sept. 16, 2010

Stennis 2009 - a convergenc

For NASA's John C. Stennis Space Center, 2009 marked a convergence of the past, present and future of American space exploration as the rocket engine testing facility celebrated a key anniversary, marked the end of a decades-long testing project and focused squarely on enabling humans to explore space objects beyond low-Earth orbit.

Looking back. In July, Stennis Space Center employees joined the nation in marking the 40th anniversary of the Apollo 11 moon mission. The Stennis celebration carried special significance. The Apollo 11 astronauts traveled on their historic mission to the moon on engines proven flight worthy at the Mississippi facility.

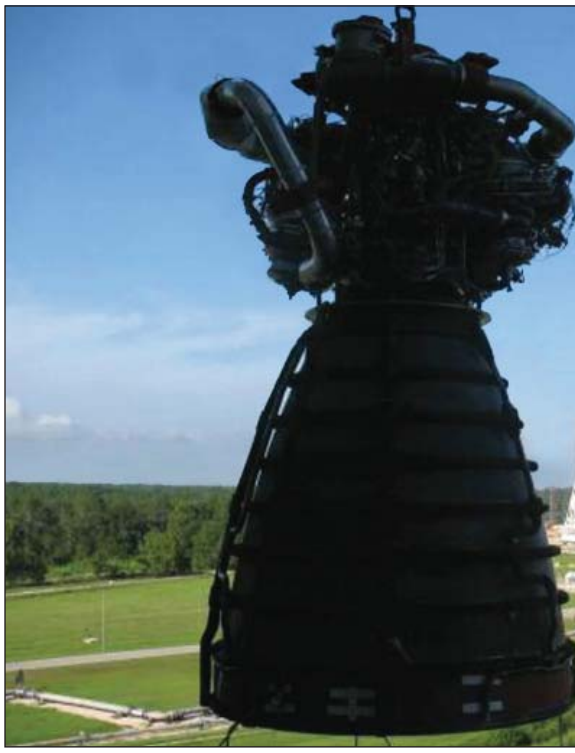
"The whole atmosphere was – we can do this," recalls Jeanne Kellar, a Stennis employee who was present in those early days of the facility. "Nothing was too big. There was nothing we could not fix. We just knew we were going to do this and show that America was first in space."

Enabling the present. Even as the achievement of Apollo was celebrated, the Stennis community marked completion of another 34-year assignment – to test engines for the nation's Space Shuttle Program. The first space shuttle main engine was tested May 19, 1975. On July 20, 2009, Stennis operators conducted the last planned main engine test on the facility's A-2 Test Stand.

During the program's 34 years, operators conducted more than 2,000 tests in development, certification, acceptance and anomaly resolution of the space shuttle main engine. Tested engines flew on 129 shuttle missions and counting – including five during 2009. Not a single mission has failed as a result of engine malfunction.

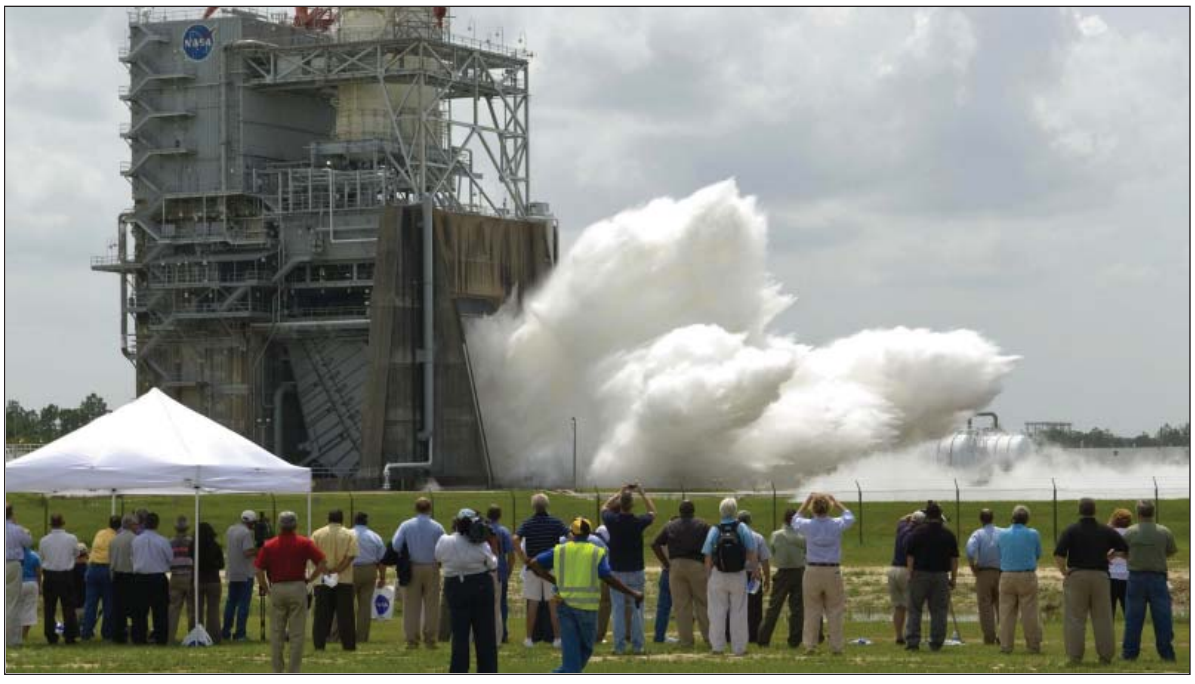
The ability of the Stennis team was demonstrated early in 2009 when concerns with a shuttle control flow valve sidelined the STS-119 mission. Members of the E Test Complex team at Stennis responded quickly to assemble the test configuration needed to address the issue. Testing began within days.

Stennis operators subsequently conducted more than 200 tests on the control flow valve, providing critical data that allowed NASA to OK the STS-119 mission in early March.



Space shuttle main engine No. 0525 is lifted from the A-2 Test Sta drop of the new A-3 Test Stand under construction, offering a glim

Preparing for the future. Even as space shuttle main engine testing drew to a close, Stennis prepared for



(Left photo) Steam billows from a July 29 space shuttle main en Program, which is set to end by (Middle photo) Representatives Weather Service visited the Joh site's new state-of-the-art Emer (Right photo) NASA Administrat at Stennis on Aug. 20. Bolden w

e of past, present and future

nd at NASA's John C. Stennis Space Center against the back-
pse of the past and future in the U.S. space exploration program.

the future of human space exploration. At the E Test Complex, work was under way in 2009 to prepare one stand for testing the AJ26 rocket engine for Orbital Sciences Corp. Orbital Sciences is seeking to become a commercial access-to-space supplier for NASA, filling a need for the agency once the space shuttles are retired in 2010.

At the A-1 Test Stand, work proceeded in preparation for sea-level testing of the next-generation J-2X engine that will carry humans beyond low-Earth orbit once more as part of NASA's Constellation Program. Work also progressed on the new A-3 Test Stand at Stennis, being built to provide simulated high-altitude testing of the J-2X engine. In April 2009, workers erected the last of some 4 million pounds and 16 stages of structural steel that forms the stand tower.

The stand is on schedule for completion in 2011. Then, operators will be able to test at simulated altitudes of up to 100,000 feet, a key capability to ensure the J-2X engine will fire in deep space as needed.

"It's easy to view this construction as just an engineering project," explains Lonnie Dutreix, A-3 project manager. "But we're building something pretty important to the future of space exploration and pretty special in the field of rocket engine testing. That's exciting."

Maintaining the course. Recognized as a unique federal city, Stennis focused on maintaining its course in a number of other ways during 2009.

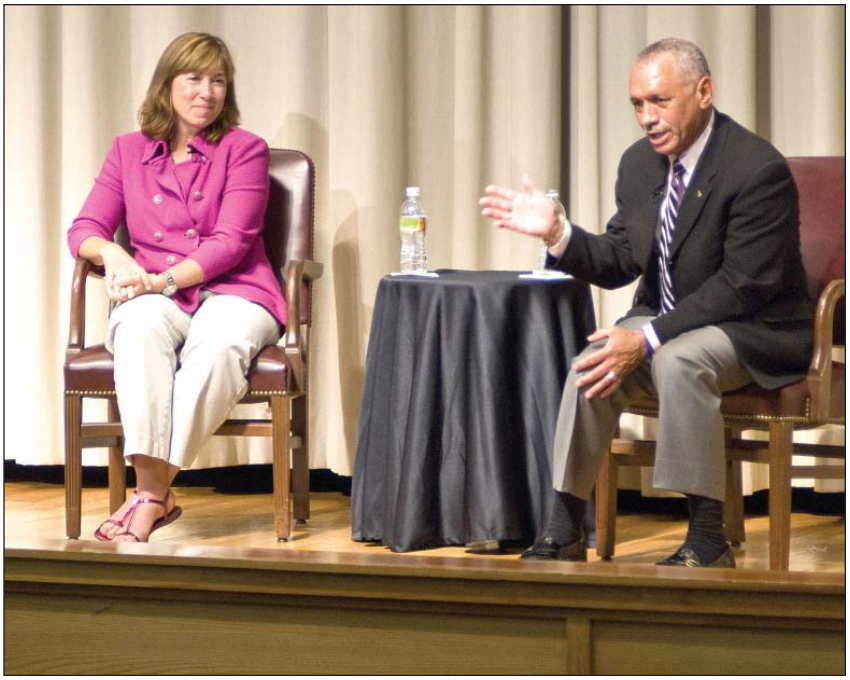
It marked two leadership changes with the promotion of associate director Patrick Scheuermann to deputy director and the addition of Rick Gilbrech as the new associate director.

Work in the Applied Science and Technology Project Office continued in support of Gulf Coast protection and restoration efforts.

In June, Stennis opened a state-of-the-art Emergency Operations Center that represents a giant leap forward in emergency operations and response capabilities.

StenniSphere, the Stennis visitor center and museum, unveiled a new interactive Science on a Sphere exhibit in 2009. The Stennis community also welcomed crew members of five shuttle missions and continued outreach to the community. The center continued its support of innovative education programs as well.

n the A-2 Test Stand at NASA's John C. Stennis Space Center during
ngine test. The test was the last planned test for the Space Shuttle
the close of 2010.
s from NASA Headquarters, the State of Mississippi and the National
nn C. Stennis Space Center on June 2 to celebrate the opening of the
rgency Operations Center.
tor Charles Bolden responds to a question during an all hands session
was joined by NASA Deputy Administrator Lori Garver.



Edge named NASA Procurement Person of the Year

NASA has recognized John C. Stennis Space Center employee Jason Edge of Perkinston as Procurement Person of the Year through the agency's Small Business Advocates Awards Program.

Sponsored by the Office of the Small Business Programs, the annual awards acknowledge the contributions made by NASA personnel and contractors throughout the agency. Awards are presented to individuals and groups based on their general impact on NASA's Small Business Program, their impact on the NASA mission and their use of innovative methodologies and processes.

A Gulfport native, Edge has served as a lead construction specialist at Stennis since 2000. In that position, he has responsibilities as the contracting officer for all NASA direct construction projects.

"Jason has always been a strong advocate of NASA's Small Business Program while effectively serving our customers," Stennis Procurement Officer Susan Dupuis said. "We are very proud he was selected for this well-deserved NASA-wide award."

Town of Gainesville makes way for Stennis

Editor's Note: John C. Stennis Space Center has played a pivotal role in the success of the nation's space program. This month, Lagniappe looks back on an important moment in the center's history.

For 150 years before the existence of John C. Stennis Space Center, the town of Gainesville was situated on land purchased by NASA on Jan. 10, 1963.

Town founder Dr. Ambrose Gaines was a businessman when he bought 500 acres of land along the Pearl River in 1810. He felt this area, later to be called Gainesville, would thrive and prosper, but never in his wildest dreams could he have thought that one day men would test rocket engines for travel to the moon in the tranquil Mississippi area, later to be known as Stennis Space Center.

The Pearl River brought many people and opportunities to the country town. Men made a living cutting and shipping wood to New Orleans, while others cut and rolled wood into the streams and floated it to the mills. Trapping was another important source of income.

Late historian S.G. Thigpen described Gainesville as the only town in the area that had three hotels and a Western Union telegraph office. "It was quite a community," he said. As the seat of Hancock County, Gainesville had about 1,700 residents and 20 stores. Pirates also occupied the territory in and around town. Pierre Rameau was a familiar figure in Gainesville from 1800 to 1815. He and his men would hold up boats in the Gulf of Mexico, then disappear in the maze of channels in the Pearl River.

By the time NASA acquired the land, Gainesville had just 35 families, all of which were relocated. At Stennis, the Gainesville Conference Room is named in honor of the former community. The Stennis Educator Resource Center also holds workshops for schoolteachers at the Li'l Red Schoolhouse, a former landmark of Gainesville.

@ Stennis

As 2010 begins, – where do you hope to see the U.S. space program in 10 years?

Editor's Note: @ Stennis highlights the views and opinions of Stennis Space Center employees.

"I hope to see us colonizing the moon. "

Sue Cockrell
NASA

"I hope to see us doing a little bit more exploration, if not on the moon, then related to Mars."

Roland Espino
Stinger Ghaffarian Technologies

"NASA has great potential to have a workstation on the moon by 2020. I would also like to see a quicker path to safely putting astronauts on Mars"

Tim Pierce, NASA

"I really hope that there can be personal and commercial visits to the moon by then."

April Page
Pratt and Whitney Rocketdyne

Office of Diversity and Equal Opportunity

Celebrate – 'A Day On! Not a Day Off!

"Everybody can be great, because everybody can serve."

(Dr. Martin Luther King Jr.)

Dr. Martin Luther King Jr. was a vital figure of the modern era. His lectures and dialogues stirred the concern and sparked the conscience of a generation. The movements and marches he led brought significant changes in the fabric of American life as a result of his courage and selfless devotion.

King's devotion gave direction to 13 years of civil rights activities. His charismatic leadership inspired men and women, young and old, in this nation and around the world.

During his lifetime, King worked tirelessly toward a dream of equality. He believed in a nation of freedom and justice for all, and encouraged all citizens to live up to the purpose and potential of America by applying the principles of nonviolence to make this country a better place to live, creating what King characterized as the "Beloved Community."

On Jan. 18, 2010, people of all ages and backgrounds will come together to improve lives, bridge social barriers, and move our nation closer to the "Beloved Community" that King envisioned. In recognition of this year's theme, "A Day On! Not a Day Off," the Stennis Diversity Council sponsored a Stennis Day of Service.

On Jan. 12, Stennis Director Gene Goldman helped kick off the Stennis Day of Service. Volunteer organizations from both Mississippi and Louisiana visited the center with exhibits to encourage employees to register and serve as volunteers for a variety of local community activities. The day's focus was emphasized again and again – great things can happen when individuals work together toward a common goal.

It is an idea King promoted throughout his life. King's widow, the late Coretta Scott King, once said, "The greatest birthday gift my husband could receive is if people of all racial and ethnic backgrounds celebrated the holiday by performing individual acts of kindness through service to others."

Hail & Farewell

NASA bids farewell to the following:

William Kirk Miller	Program Specialist Project Directorate

And welcomes the following:

Bonita Oliver	Computer Scientist Center Operations Directorate
Tom Stockman	Student Trainee/Engineering Center Operations Directorate
Bradley Brown	Information Technology Specialist Project Directorate

Stennis companies achieve Star Demonstration status for safety

Employees of Pratt and Whitney Rocketdyne (top) and CSC Inc. (bottom) celebrated in early December as the second and third companies at Stennis to achieve Star Demonstration status through the Voluntary Protection Programs (VPP) initiative.

NASA Stennis Space Center
Shooting For A Star

VPP
Voluntary Protection Programs
An OSHA Cooperative Program

Pratt and Whitney was presented its Star Demonstration banner Dec. 8, with CSC following suit Dec. 9. The Occupational Safety and Health Administration established VPP as a proactive safety management model so organizations and their employees could be recognized for excellence in safety and health. Five companies at Stennis Space Center are seeking Star Demonstration status. Once that is attained, the center will apply to be designated as an overall VPP Star site.

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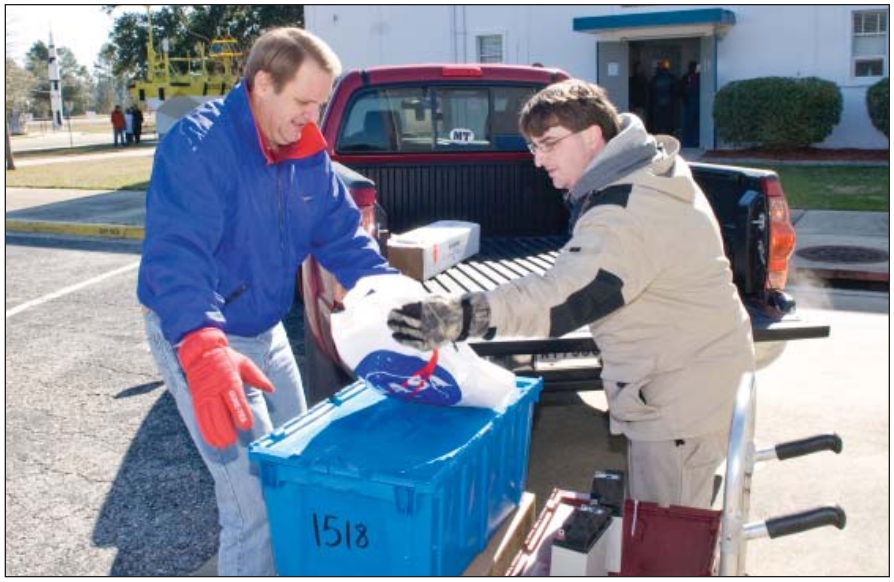
FIRST Robotics kicks off 2010 season

Twenty-seven teams from Mississippi, Louisiana and Florida high schools traveled to NASA's John C. Stennis Space Center on Jan. 9 for a rousing kick-off of the 2010 FIRST (For Inspiration and Recognition of Science and Technology) Robotics season.

During the event, team members, mentors and coaches watched a live broadcast from FIRST headquarters in Manchester, N.H., to learn their 2010 competition challenge. They also received parts kits to use in building robots to meet the challenge.

This year marks the 19th FIRST Robotics Competition season. The FIRST Robotics Competition is designed to inspire students to pursue careers in engineering, science and technology. Each year, teams across the nation are given identical parts kits and six weeks to build robots. The teams then use the robots to compete in regional events and a season-ending national tournament.

"FIRST is about giving kids the opportunity to build skill sets like analytical thinking to then develop what they may or may not use to build a robot; but they might use these skills to become a scientist, engineer, or inventor," said Dean Kamen, FIRST Founder, explaining how what students learn from FIRST Robotics is different from other sports. "Ten years from today, one of these students is going to be out in the world having done something extraordinary for a major, global problem."



Steve Griffin (left) loads a parts kit at the FIRST Robotics kickoff event Jan. 9 at Stennis Space Center, with the help of Stennis employee Chris Smith. Griffin is a mentor for the Black Panthrobotics team from Woodlawn High School in Baton Rouge. Woodlawn team members will use the parts kit to build a robot to compete in regional tournaments and perhaps the national tournament later this spring.

For this year's Breakaway theme, a pair of three-team alliances will compete on a 27-by-57-foot playing field divided into three sections by large speed bumps. Robots will earn points by collecting soccer balls and pushing or kicking them into goals at the end of the playing field. Bonus points will be earned for each robot on the dividing platforms or suspended in air from platform supports or another robot and not touching the field at the end of the match. A description of the Breakaway game and video simulation of a match can be viewed online at: www.usfirst.org/roboticsprograms/frc/content.aspx?id=16209.

NASA and Stennis support FIRST Robotics Competition through mentors, volunteers and financial contributions. Interested mentors should call Katie Wallace at 228-688-7744 or e-mail katie.v.wallace@nasa.gov.

The 2010 Bayou Regional FIRST Robotics Competition is scheduled at the Alario Center in Westwego, La., on March 4-6.