



# LAGNIAPPE

Volume 1 Issue 10

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

October 2006

## Test stand begins new chapter

# A-1 tests last SSME

NASA marked a historic moment in the life of the nation's largest rocket engine test complex. Stennis Space Center conducted the final space shuttle main engine test on its A-1 Test Stand on Sept. 29. Although this ends the stand's work on the Space Shuttle Program, it will soon be used for the rocket that will carry

America's next generation human spacecraft, Orion.

The A-1 Test Stand had the first test on a shuttle main engine in 1975. SSC will continue testing shuttle main engines on its A-2 Test Stand through the end of the Space Shuttle Program in 2010.

*See A-1, Page 3*



Gene Goldman

## Goldman named deputy director

NASA has named Arthur E. (Gene) Goldman as the new deputy center director at NASA Stennis Space Center, effective mid-October. As deputy director, Goldman will support SSC Center Director Dr. Richard Gilbrech in managing all of NASA's rocket propulsion test capabilities, SSC's roles in NASA's applied science programs and managing SSC.

Goldman replaces David Throckmorton, who announced he will retire in February 2007, after more than 40 years of federal service with NASA. Throckmorton will serve as a special assistant to

*See Goldman, Page 5*



## STS-121 crewmembers visit SSC

Astronauts Steve Lindsey (left), Stephanie Wilson, Lisa Nowak and Piers Sellers meet with employees at NASA Stennis Space Center on Sept. 25. The crewmembers on NASA's space shuttle mission STS-121, which launched July 4, also talked with Mississippi students from Aberdeen Middle School and Hattiesburg's Lillie Burney Elementary, both NASA Explorer Schools; and the FIRST Robotics teams from Choctaw Central High and Pearl River County. While at SSC, the astronauts presented eight Silver Snoopy awards to SSC employees, and thanked workers for their dedication and safe work history. All four expressed gratitude for the reliability of the space shuttle's main engines, which helped propel the STS-121 crew into orbit on the 13-day mission. 'We feel blessed that you are a part of the NASA family,' Wilson said.

*Silver Snoopy awards, Pages 4-5*

From the desk of  
**Dr. Richard Gilbrech**  
 Director,  
 Stennis Space Center



I would like to extend a sincere welcome to Gene Goldman, who takes over the duties of deputy director this month. Gene is a native Mississippian, and an accomplished engineer. He has spent most of the last 20 years with NASA at Marshall Space Flight Center in Huntsville, Ala., and has intimate knowledge of what we do here at Stennis. Gene will be a great addition to the team that will carry Stennis into our next phase of work, fulfilling the Vision for Space Exploration.

While we'll miss David Throckmorton's energy and expertise, he's had a fine, long career in NASA, and we wish him well.

This past month held several other exciting developments. Astronauts of the STS-121 crew visited SSC, and the A-1 stand tested its last space shuttle main engine Sept. 29, starting the closeout of the second generation of engines and beginning a third. A-1 was the site of SSC's first SSME test in 1975.

And work is progressing in the Applied Sciences area on tools such as Rapid Prototyping Capability that will allow SSC to integrate Earth science data to solve real-world problems. Applied scientists from locations and disciplines around the world will be linked, enabling them to conduct evaluations on data that will ultimately improve our knowledge of and response to environmental damage and natural disasters.

The development of rapid prototyping will allow SSC to play a vital role in NASA's Strategic Plan: bridging the gap between research and real-world results using NASA Earth science data.

SSC's management team is committed to supporting and securing Stennis' place in NASA's Science Mission Directorate. To do that, we must continue to capitalize on the incredible resources we have at our fingertips – in terms of the expertise of our civil servant and contractor work force, and the technical capabilities we have on site.

SSC has a vital and important role in the Applied Science program. I am committed to our success in this area and will continue to work hard to diversify the program to capitalize on our capabilities and experience.

*Richard J. Gilbrech*

## Rep. Calvert tours SSC



During a visit to NASA Stennis Space Center on Sept. 11, U.S. Rep. Ken Calvert (left, in photo at far left) watched a test-firing of a space shuttle main engine with SSC Director Dr. Richard Gilbrech. Calvert, who represents California's 44th Congressional District, toured SSC

and hurricane-damaged areas of Hancock County during his visit. Calvert also met with Partners for Stennis board members including Glade Woods (left, in photo above) and Tish Williams during a dinner hosted by the organization. Partners for Stennis is a volunteer group of key Mississippi and Louisiana leaders who work to promote SSC's economic, technical and academic growth and stability. Calvert serves the House of Representatives' Science Committee as chairman of the Space and Aeronautics Subcommittee, which focuses on space and aviation research, including oversight of NASA, the International Space Station and civilian aviation research. He recently supported the passage of House Resolution 948, introduced by Mississippi Congressman Gene Taylor and commending SSC employees for their heroic actions during and after Hurricane Katrina's strike along the Gulf Coast.

## FULFILLING THE VISION FOR SPACE EXPLORATION



The Stennis Space Center conducted the final space shuttle main engine test on its A-1 Test Stand on Sept. 29. The A-1 Test Stand was the site of the first test on a shuttle main engine in 1975. Stennis will continue testing shuttle main engines on its A-2 Test Stand through the end of the Space

Shuttle Program in 2010. The A-1 stand begins a new chapter in its operational history this month. It will be temporarily decommissioned to convert it for testing the J-2X engine, which will power the upper stage of NASA's new crew launch vehicle, the Ares I.

### A-1's LAST SSME

*Continued from Page 1*

The A-1 stand begins a new chapter in its operational history this month. It will be temporarily decommissioned to convert it for testing the J-2X engine, which will power the upper stage of NASA's new crew launch vehicle, the Ares I. The J-2X will also power the Earth departure stage of the Ares V new cargo launch vehicle. The Ares I and V vehicles will provide the thrust, while the Orion crew capsule will be future astronauts' home in space.

"This is truly an important milestone for Stennis," said Don Beckmeyer, space shuttle main engine project manager in the Test Projects Office of Stennis' Project Directorate. "As we transition the A-1 Test Stand from testing shuttle main engines to testing J-2X engines, we are entering into some exciting years ahead where our work force and the center as a whole will be key in the development of this new engine. Until the shuttle engines are retired in 2010, we will have two critical test programs running side by side."

Beckmeyer and other engineers have praised the foresight of NASA's early management, whose vision still allows the rugged structures to meet current and future rocket engine testing needs.

"Reaching these milestones is really a testament to the designers and builders of the test stands back in the 1960s," Beckmeyer said. "They were built to last, and their longevity and flexibility are key assets to the agency. We are about to embark on the third generation of rocket engines to be tested on A-1, and we fully expect this test stand to be instrumental in developing and certifying these engines for years to come."

A-1 and its sister stand A-2 were built in the 1960s to test the stages of the Apollo Program's rocket engines, then modified in the 1970s to test-fire and prove flight-worthy all main engines for NASA's space shuttle fleet.

According to Beckmeyer and Gary Benton, SSC's J-2X engine project manager, A-1 is set to be reactivated in the spring of 2007.

The J-2X is a modification of the Apollo Program's J-2 engine, which helped send the first Americans to the moon. The original J-2s were also tested at Stennis.

As the A-1 Test Stand moved into the shuttle era, it handled more than 1,000 shuttle main engine tests, which have been crucial to the flight record of the orbiter's powerful engines. In the 116 launches logged by the shuttle fleet, no main engine has ever experienced a major problem.



# 8 Silver Snoopys presented

Eight employees at NASA Stennis Space Center were honored on Sept. 25 with a “Silver Snoopy,” the personal achievement award given to space program workers by NASA’s Astronaut Corps.

Each recipient was given a Silver Snoopy pin flown on a space shuttle mission, along with a letter of commendation and certificate, both signed by the astronaut who presented them.

Four crewmembers of NASA’s STS-121 space shuttle mission, Commander Steve Lindsey, Mission Specialist Piers Sellers, Mission Specialist Stephanie Wilson and Mission Specialist Lisa Nowak, simultaneously presented the awards in surprise visits to the employees’ workplaces. Astronauts always personally present the Silver Snoopy because it is the astronaut corps’ own award for outstanding performance and contributions to flight safety and mission success.

The recipients were:

- Haynes Haselmaier of Picayune, Miss., component engineer, NASA’s Engineering & Science Directorate
- Jim Huk of Pass Christian, Miss., team lead for Program Management Support in NASA’s Business Management Directorate
- Nicholina Tubbs of Diamondhead, Miss., cost accountant for NASA’s Shared Services Center
- David Armbruster of Carriere, Miss., quality assurance inspector for Pratt & Whitney Rocketdyne
- Delton Bales of Picayune, Miss., mechanical technician lead for Pratt & Whitney Rocketdyne
- Bobby Robbins of Nicholson, Miss., space shuttle main engine mechanical technician for Pratt &



**Haynes Haselmaier**  
Component engineer, IPA  
NASA



**Jim Huk**  
Business Management Directorate  
NASA



**Nicholina Tubbs**  
Cost accountant  
NASA Shared Services Center



**David Armbruster**  
Quality assurance inspector  
Pratt & Whitney Rocketdyne



**Delton Bales**  
Mechanical technician lead  
Pratt & Whitney Rocketdyne



**Bobby Robbins**  
SSME mechanical technician  
Pratt & Whitney Rocketdyne

Whitney Rocketdyne

- Oliver Swanier of DeLisle, Miss., space shuttle main engine mechanical technician for Pratt & Whitney Rocketdyne
- Rufus Outley of Hattiesburg, Miss., quality engineer and team lead for NASA Test Operations Group-Safety and Mission Assurance.

NASA Stennis Space Center is America’s largest rocket engine test complex, where every space shuttle main engine is tested and proven flight-worthy. Pratt & Whitney Rocketdyne manufactures and services the space shuttle’s main engines. NASA’s Shared Services Center provides centralized administrative pro-



**Oliver Swanier**  
SSME mechanical technician  
Pratt & Whitney Rocketdyne



**Rufus Outley**  
Quality engineer, team lead  
NTOG-Safety & Mission Assurance

cessing services and customer contact center operations for support of the entire agency’s human resources, procurement and financial service applications.

Mission STS-121 launched aboard Space Shuttle Discovery on July 4, marking the second in NASA’s

*See Silver Snoopy, Next page*

## GOLDMAN

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NASA Associate Administrator Rex Geveden until his retirement.

Goldman served in management positions for the space shuttle main engine project at Marshall Space Flight Center in Huntsville, Ala.; first as deputy project manager 1998-2004, then as project manager from March 2004 until his SSC appointment.

“Being part of the space shuttle main engine community and working with the shuttle senior management team has been the highlight of my career,” said Goldman. “I am honored by the selection to be part of Stennis Space Center and am looking forward to the exciting and challenging work in their immediate future. It is a great time to be part of NASA.”

No stranger to the area, Goldman will bring a fresh perspective to the wide range of tasks at SSC, from Earth science applications to rocket propulsion testing.

“I am pleased to welcome Gene, a native of Russell, Miss., back to his home state,” said Gilbrech. “It is indeed a pleasure having someone of his caliber join our Stennis

team. His extensive management and rocket engine experience will enhance our center’s efforts as we move forward in supporting the Vision for Space Exploration.”

Goldman began his NASA career in 1990 at MSFC as a project engineer for the space shuttle systems integration office, later becoming the supervisor in that organization 1992-94. In 1994 he moved to the space shuttle main engine project, supporting them as manufacturing engineer until 1996. He continued to support that project as technical assistant 1996-97, then as business manager 1997-98.

Goldman was appointed to the Senior Executive Service in March 2004. He has received numerous awards including: NASA’s Exceptional Achievement Medal; multiple certificates of appreciation; and the Marshall Center’s Director’s Commendation award.

Goldman is married to the former Jennifer Swearingen of Natchez, Miss., and they have one daughter. He holds a bachelor’s degree in civil engineering from Mississippi State University and is a registered professional civil engineer. He has completed the Senior Executive Fellows Program at Harvard University and the Congressional Operations program at George Washington University.

## SILVER SNOOPY

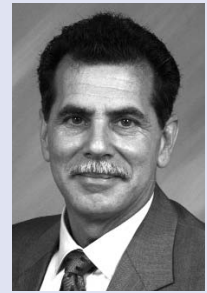
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Return to Flight sequence and the first space shuttle launch to occur on Independence Day. During their mission to the International Space Station, crewmembers tested shuttle safety improvements, including a

redesign of the external fuel tank’s foam insulation. Sellers was one of the astronauts who performed three critical extravehicular activities (spacewalks). The STS-121 mission made a key repair to the ISS and delivered equipment, supplies and a third crewmember, the European Space Agency’s Thomas Reiter of Germany.



Rahman



Rodriguez

## SSC announces senior manager change

NASA’s Shamim Rahman has been named acting manager, Rocket Propulsion Test Program Office, following the Oct. 1 reassignment of Miguel Rodriguez to the Kennedy Space Center.

In this position, Rahman will assume full authority and responsibility for managing and operating NASA’s rocket propulsion test assets and capabilities at Stennis Space Center, Marshall Space Flight Center, White Sands Test Facility and Plumbrook Station. Rahman will remain the Rocket Propulsion Test acting manager until a permanent selection is announced. He previously served as SSC’s chief engineer for the NASA Engineering and Safety Center.

Rodriguez will serve in the KSC Engineering Directorate as the director of Operational Systems Engineering Office. At SSC, he served as the director, Engineering and Science Directorate, and was recently named acting manager of the Rocket Propulsion Test Program Office.

“Miguel has done an excellent job since coming to Stennis in August 2002,” said SSC Center Director Dr. Richard Gilbrech, “and we know his success will continue at the Kennedy Space Center. I solicit your support to Shamim as he assumes this critically important role at the center.”

# STS-115 returns safely to Earth

Space Shuttle Atlantis glided to a predawn landing Sept. 21 at 6:21 a.m. EDT, concluding a successful mission to resume construction of the International Space Station. Launched Sept. 9, the orbiter arrived at the station Sept. 11 to deliver and install the P3/P4 integrated truss segment during three successful spacewalks.

After a smooth landing, STS-115 Mission Commander Brent Jett reflected on the success of the flight, which delivered the new solar array truss to the International Space Station. "The mission from our standpoint went off very well," he said.

The commander continued by offering congratulatory thoughts on each of his crew members. He praised first-time astronaut and spacewalker Heidemarie Stefanyshyn-Piper, calling her a natural... she is a very clever person and came up with a lot of ideas that you don't usually get from a first-time flier."

Their mission is regarded as one of the most complex and productive space missions in history.



Safely back on Earth Sept. 21, the STS-115 crew poses at the Shuttle Landing Facility in front of Atlantis, the orbiter that carried them on their 12-day mission to the International Space Station. The mission launched Sept. 9 after several delays.

## Girl Scouts: Life lessons for NASA women

An electrical engineer, an environmental scientist, a propulsion engineer, a senior manager – four women on different career tracks share two things: they work at NASA SSC, and they are former Girl Scouts.

Bridget Jones, Carolyn Kennedy, Karma Snyder and Marina Benigno are living proof that "Girl Scouting builds girls of courage, confidence and character, who make the world a better place," according to the organization's mission statement.

NASA and the Girl Scouts of the USA are partners in a groundbreaking effort to inspire young women to pursue careers in science, technology and mathematics.

Snyder, project engineer with SSC's Center Operations Directorate-Project Management Division, learned big lessons about cooperation and teamwork as a Girl Scout in Biloxi, Miss. "We had to work together to get things done," she recalled.

Environmental scientist Kennedy said there weren't opportunities for technical badges like aerospace when she was younger. But she has good memories of friendships and campouts during her Springfield, Pa., childhood.

"The teamwork lessons really have served me well," Kennedy said. "In order to develop environmental assessments, teamwork is essential for success."



**Girl Scouts.**

Growing up in Orlando, Fla., Center Operations Director Benigno spent time on primitive camping trips with her troop. "It prepared me for adult life by being part of a team. We all had to do our part," she said.

Benigno said scouting also taught her to study hard, excel and pursue her academic interests. "I'm not an engineer, but I can help engineers do their jobs," she said. "NASA needs all kinds of people, no matter what their strengths are."

Electrical engineer Jones said through cookie sales, fund-raising efforts and earning badges, Girl Scouting in her hometown, Picayune, Miss., "taught me how to set goals and achieve them with discipline and hard work. It probably brought me out of my shell."

In an effort to inspire girls in the study of math and science (and help them earn badges), SSC conducted Astro Camp activities for nearly 1,000 girls at the Girl Scouts Gulf Pines Council "On-Time" Event on Sept. 30.



## National Disability Awareness Month

# SSC will offer Basic Sign Language

During National Disability Awareness Month, NASA Stennis Space Center will offer a Basic Sign Language class beginning the week of Oct. 16. Six two-hour sessions will be held through the week of Nov. 27. Textbooks and reference materials will be provided.

### From the Office of Diversity and Equal Opportunity

An important milestone in the history of education for deaf people was the 1864 founding of Gallaudet College in Washington, D.C. Now called Gallaudet University, it remains the only liberal arts school for deaf people in the world.

It was named after Thomas Hopkins Gallaudet, who was commissioned in 1817 to travel to Europe and learn methods to educate deaf people. In Paris, Gallaudet met a deaf student named Laurent Clerc.

Together in the U.S., Clerc and Gallaudet established the first school for the deaf. It was there that French Sign Language was combined with existing sign systems already in the U.S. to form what is now American Sign Language.

**Editor's Note:** *Archaeologist Dr. Marco Giardino of NASA's New Business Development Office at SSC provides this LAGNIAPPE column dedicated to the history of Stennis Space Center and the surrounding area.*

During the long French occupation of Hancock County (1699-1763), Native Americans were prominent inhabitants of the coast. The French maintained generally cooperative relationships with the Indians for more than 60 years, relying on local tribes – mostly Choctaw and their linguistic relatives – for directions, navigational routes, alliance in battle and sustenance.

## Stennis Space Center HISTORY

Tribes throughout Mississippi and Alabama were generally friendly and cooperative with the early French settlers. The documented interactions with French explorers in the first half of the 18th century are numerous and vivid.

The Acolapissa, Bayougoula, Biloxi and Mobile tribes were the first people the French encountered along the northwest Gulf of Mexico. They lived in seven villages along the Pearl River. Their name in Muskogean translates to “those who hear and see.”

Archaeological research along the East Pearl River where Stennis Space

Center is located reveals a long occupation by prehistoric and historic tribes, including possibly the Acolapissa near the Logtown boat launch. The Biloxi, who for a time occupied land on the lower East Pearl (together with the Pascagoula), were the only local tribe that spoke a Siouyan language.

From the Mississippi River to the northern Gulf Coast, most of the tribes belonged to the Choctaw or Muskogean linguistic group. Other local tribes who spoke that language included the Houma, Mobile, Quinipissa or Mugulasha, Tangibahoa, Pensacola, Okelusa and Napissa. They inhabited the levees, marshes and higher terraces.

## AROUND NASA

■ **NASA scientist wins Nobel Prize:** The Nobel Prize Committee announced Oct. 3 that NASA scientist and Goddard Fellow Dr. John C. Mather is this year's recipient of the Nobel Prize for Physics. The senior project scientist for NASA's James Webb Space Telescope program shares the prize with George Smoot of the Lawrence Berkeley National Laboratory in Berkeley, Calif. They received the award for deepening our understanding of the origin of stars and galaxies.

■ **Langley measuring air quality:** Scientists at NASA Langley Research Center are successfully using LIDAR (light detection and ranging) to measure aerosol concentrations by sending out laser beam pulses, then recording interruptions to the beams' return to the instrument.

## Hail & Farewell

### NASA welcomes the following to SSC:

**Debra Metzler** – Office of Human Capital

**Leslie Ladner** – Business Management Directorate

**Bo Clarke** – Center Operations Directorate

### And bids farewell to the following:

**David Epperson** – Engineering & Science Directorate

**James Barnett** – Center Operations Directorate

**Lester Howard** – Business Management Directorate

**Chantel Smith** – Business Management Directorate

**Steve Brettel** – Center Operations Directorate

## Research shows French, tribes cooperated



## Astro Camp Goes to the Science Fair

Astro Camp Director Maria Lott shows Bradley Benton, 9, of Mandeville, La., how to compile and arrange data from scientific experimentation during Stennis Space Center's recent Astro Camp Saturday session, 'Astro Camp Goes to the Science Fair.' Children and their parents or grandparents participated in the first-ever such session of Astro Camp Saturday, which demonstrated science fair solutions using NASA technology and research. The Sept. 23 session aimed to help families with ideas and designs for building their own award-winning science projects.

## FIRST LEGO League kicks off 2006 season

FIRST LEGO League participants listen as Aerospace Education Specialist Chris Copelan explains the playing field for 'Nano Quest' during the Sept. 16 FLL season kickoff event at StenniSphere, the visitor center at NASA Stennis Space Center. Eighty-five teachers, mentors, parents and 9- to 14-year-old students from southern and central Mississippi came to SSC to hear the rules for Nano Quest.

Teams spend eight weeks building and programming robots for local and regional competitions. The Dec. 2 competition is at Mississippi Gulf Coast Community College. FIRST LEGO League, considered the 'little league' of the FIRST (For Inspiration and Recognition of Science and Technology) Robotics Competition, partners FIRST and the LEGO Group. Competitions aim to inspire and celebrate science and technology using real-world context and hands-on experimentation.



Schools represented were: Bay-Waveland Middle, Hattiesburg's Lillie Burney Elementary, Ocean Springs Middle, Pearl Upper Elementary, Long Beach Middle, Jackson Preparatory Academy, North Woolmarket Middle, D'Iberville Middle, West Wortham Middle, Picayune's Roseland Park

Baptist Academy and Nicholson Elementary, as well as two home-school groups from McComb and Brandon. Gulfport and Picayune Memorial-Pearl River high schools' FIRST Robotics teams conducted demonstrations for the FLL crowd.

# LAGNIAPPE

is published monthly by the Office of External Affairs – Public Affairs at NASA's John C. Stennis Space Center.

Comments or suggestions should be forwarded to:

NASA PUBLIC AFFAIRS OFFICE  
 Attn: LAGNIAPPE  
 Mail Code IA10  
 Building 1100, Room 306  
 Stennis Space Center, MS 39529  
 or call:  
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