National Aeronautics and Space Administration

John C. Stennis Space Center

LAGNIAPPE

Volume 2 Issue 11 www.nasa.gov/centers/stennis November 2007

Atlantis at launch pad; Discovery safely home

The Atlantic Ocean (right) is the backdrop for space shuttle Atlantis' seaside launch pad Nov. 13. After its targeted Dec. 6 launch on mission STS-122, Atlantis will deliver the Columbus module, a multifunctional, pressurized laboratory, to the International Space Station to expand the station's research facilities.

Below, space shuttle Discovery descends to a smooth landing at Kennedy Space Center, Fla., concluding a successful ISS assembly mission. With Commander Pam Melroy and Pilot George Zamka at the controls, Discovery landed around noon Nov. 7. During its stay at the station, which began Oct. 25, the STS-120 crew conducted four spacewalks, installing the Harmony Node 2 module and relocating the P6 truss.

SSC's lunar work grows

NASA's Stennis Space Center is gearing up for its new role in the country's plans to return astronauts to the moon. NASA announced Oct. 30 which agency centers will take responsibility for specific work to enable lunar exploration. The new assignments cover elements of the lunar lander and lunar surface operations. The agency also announced work assignments for Ares V, a heavy-lift rocket for lunar missions.

"Stennis is extremely proud of the role we have to play in the development of the propulsion systems that will return U.S. astronauts to the moon," said Bob Cabana, Stennis Space Center director. "With the current construction of the new A-3 Test Stand to support testing of the J2-X engine for the Ares rockets, along with the future work for the Ares V and lunar lander recently assigned to Stennis, our position as a leader

*See **CONSTELLATION,** Page 3*

From the desk of

Robert Cabana

Director,
Stennis Space Center

From the very start of my tenure as center director, I want everyone to understand how important safety is to me and how committed I am to ensuring a safe work environment for all our employees.

I will do my best to use our center resources to "buy down" the risk from hazards that are identified in my weekly safety walk-throughs and during visits to the various work sites around the center.

Among our core values of Safety, Teamwork, Integrity and Mission Success, safety ranks first. Nothing we do is so urgent that we can't do it safely. But do you really believe that, have you accepted it? As a contractor-civil service team, are we really working together to make our work environment at Stennis safer for everyone?

If we truly believe Safety, Teamwork, Integrity and Mission Success are our core values, then we are going to see improvement in our combined incident rate because safety will be ingrained in all that we do.

Teamwork will mean looking out for each other and taking care of our teammates by pointing out to them when they're doing something unsafe or correcting a problem before someone gets hurt. We will have the integrity to follow through and make things right. To ensure mission success, we will be true professionals, conducting our tasks safely, by the book, without taking shortcuts or putting people at risk.

We will never have a truly effective safety program until each of us realizes that safety is our responsibility – not management's or S&MA's, but ours. We have to own it and take responsibility for it. It has to be at our very core and part of everything we do.

I'd like you also to consider that safety doesn't begin or end as we pass through the gates at Stennis. If we're truly committed to doing things safely, we're going to take it home with us also. As the holiday season approaches, there are plenty of opportunities for an incident at home. We need everyone healthy if we're going to succeed, and more importantly, your families need you healthy to provide and care for them. Don't be that bad example at the safety brief that illustrates how not to do a job.

So take some time and step back and ask yourself if you're really committed to safety as a core value. Have you taken ownership of it, or do you feel safety is someone else's responsibility?

We've got a tremendous challenge in front of us the next few years and we can't afford to fail. We will not be successful if safety is not at our core. Think about it, take ownership of it and be safe at home and on the job.

Cabana meets Hancock officials

Stennis Space Center Director Robert Cabana (second from left) presents a photographic collage to members of the Hancock County Board of Supervisors during a meeting at SSC. The collage contains a U.S. flag flown aboard space shuttle Endeavour on a milestone 1998 mission commanded by Cabana, and a Mississippi flag flown aboard Endeavour in 2002. The 1998 mission was STS-88, which began construction of the International Space Station. Hancock County leaders who met with Cabana on Nov. 7 included (from left) Chancery Clerk Tim Kellar; Jenell Tompkins, financial consultant to the board; and Hancock County Supervisors Roderick 'Rocky' Pullman, District 2 and board president; Steve Seymour, District 4; Jay Cuevas, District 5; and Ronnie Artigues, board attorney.

Subscale diffuser testing

E-3 produces first steam

Phase 2 of the A-3 Test Facility Subscale Diffuser Risk Mitigation Project at Stennis Space Center reached a milestone Oct. 25 when the E-3 Test Facility produced superheated (500+ degrees) steam for approximately 3 seconds at more than 400 psi. The test team, led by Barry Robinson of NASA's Test Projects Office, followed that success with further tests to lengthen the duration of steam production. On Nov. 1, they were able to maintain a consistent pressure and temperature of steam for 60 seonds. In December, the team will begin Phase 3 of the testing, which they hope will provide data for the design and procurement to build the full-scale version of the steam diffuser for SSC's A-3 Test Stand.

CONSTELLATION

Continued from Page 1

in rocket propulsion test and development is secure for the future. We look forward to the challenge and to being a key member of the Constellation team."

Responsibilities assigned to NASA's Stennis Space Center include:

• Lead Ares V liquid rocket systems and stage testing at sea level and altitude

• Support lunar lander descent stage propulsion testing

"NASA's Constellation Program is making real progress toward sending astronauts to the moon," said Rick Gilbrech, associate administrator for Exploration Systems, NASA Headquarters, Washington. "Work on our new fleet of rockets and spacecraft, Ares I and Orion, is already well under way. With these new assignments, NASA will launch the next phase of its exploration strategy – landing crews and cargo on the surface of the moon."

'...Our position as a leader in rocket propulsion test and development is secure for the future.'

– Bob Cabana, Stennis Space Center director

In addition to the new work assignments, Constellation Program work previously assigned to Stennis includes:

Program integration:

• Support for system engineering and test and evaluation

Ground operations:

• Support design, development, test and evaluation of propellant test and delivery systems

• Ground engine checkout facility simulation and analysis

• Engine and launch facility planning and development

Ares I:

• Focused program management and integration for rocket propulsion testing

• Lead sea-level development, certification and acceptance testing for flight upper stage assembly, upper stage engine and main propulsion test article including facility modifications and test operations

• Lead altitude development and certification testing for upper stage engine

The Ares V and lunar lander assignments will ramp up in fiscal year 2011, with surface system assignments in fiscal year 2012. While these decisions will result in budget and personnel allocations at the centers, detailed estimates will not be available until after prime contractors are formally selected for the work.

Each center will have the opportunity for additional work assignments as Constellation Program elements become further defined.

"These work assignments are helping to shape a true Constellation identity for each NASA center, which in turn will help the agency to foster the kinds of expertise needed to achieve our space exploration goals," Gilbrech said.

NASA's Constellation Program is working to send astronauts to the moon, where they plan to set up a lunar outpost to prepare for human exploration further into the solar system. The first crewed flight of the Orion spacecraft, aboard an Ares I rocket, is scheduled for no later than 2015. Astronauts will return to the moon by 2020.

Communicators gather at SSC

Members of the Communications Coordinating Committee met at NASA's Stennis Space Center on Oct. 11 as part of ongoing efforts to strategically coordinate key communications and outreach activities performed by NASA Headquarters, mission directorates and centers to increase the effectiveness of NASA communications and outreach. The CCC helps increase cooperation, coordination and resource-sharing to better leverage the agency's overall outreach mission. For information on the CCC and its activities, visit: http://communications.nasa.gov/portal/site/ccc.

CFC drive under way

Michelle Craft (left) talks with Julie Parks of the Mississippi Alliance for Spay and Neuter while Elaine Adair (far right) of the Spay Alliance talks with Joyce Kennedy of the Navy Human Resources Service Center Southeast during the annual Combined Federal Campaign kickoff held Oct. 18 in SSC's B1100 Atrium.

The Combined Federal Campaign at NASA's Stennis Space Center kicked off Oct. 18.

The CFC, the world's largest and most successful annual workplace charity campaign, supports organizations providing health and human service benefits throughout the world. The SSC Campaign set a goal to raise $811,900 in pledges during the 2007 season. Last year, the Southern Mississippi CFC raised nearly $774,000, earning it the 2006 Campaign Increase Award recognition from the Office of Personnel Management.

Families Helping Families

Yvonne Pendleton (fourth from left), senior adviser for research and analysis, Science Mission Directorate at NASA Headquarters, meets face-to-face for the first time with Stennis Space Center employee Gloria Otis (third from left) on Oct. 19. Pendleton 'adopted' Otis after Hurricane Katrina destroyed the Otis family's Biloxi home. After the 2005 storm slammed the Gulf Coast, Pendleton (then working at Ames Research Center) initiated the 'Families Helping Families' program to match Ames families who offered help with SSC families who needed it. Diane Sims in NASA-SSC's Office of Chief Counsel helped Pendleton set up the program. The program evolved into ongoing relationships among the nearly 100 families who enrolled, including those of (from left): Sharon Alexander, Tanya Washington and Otis, all of Jacobs Technology at SSC; Pendleton; Charlene Guin, Ron Magee and Larry DeQuay, all of NASA-SSC. With them is Max Bernstein, of Science Mission Directorate, NASA Headquarters.

Energy Awareness

Michael Desandro (left) of Jacobs Technology, and Randy Canady of NASA, watch as Henry Sanford, energy management consultant from Jackson, demonstrates new energy-efficient light bulbs at SSC's Energy Awareness Day on Oct. 25.

NASA Family Socials

New Stennis Space Center Director Robert Cabana (above, left) serves ice cream to Mark Warren of NASA's Rocket Propulsion Test Program Office at SSC. NASA managers donned toques and aprons Oct. 17 to show appreciation for their employees. At top, Robert Ross, NASA's A-3 deputy project manager in the Office of the Director, enjoys the Oct. 26 NASA BBQ with his daughters Amanda (left), 7, and Caroline, 2; and his wife Kim.

NASA taps 2 SSC innovative projects

NASA has selected 120 proposals for negotiation of Phase 2 contract awards in the Small Business Innovation Research program, known as SBIR. Two of the proposals will develop technologies for the Innovative Partnership Program at NASA's Stennis Space Center:

• "Dynamic Science Data Services for Display, Analysis and Interaction in Widely-Accessible, Web-Based Geospatial Platforms," with TerraMetrics Inc. of Littleton, Colo.; and

• "Health-Enabled Smart Sensor Fusion Technology," with Mobitrum Corp. of Silver Spring, Md.

NASA's Innovative Partnerships Program collaborates with U.S. industry to develop pioneering technologies, infuse them into agency missions and transition them into commercially available products and services.

The SBIR program supports NASA's mission directorates by working with them to competitively select ventures that address critical research and technology needs for agency programs and projects, addressing specific technology gaps in mission programs and striving to complement other agency research investments.

The SBIR program is a competitive, three-phase award system. It provides qualified small businesses opportunities to propose innovative ideas that meet specific federal government research and development needs.

Phase 1 is a feasibility study to evaluate an idea's scientific and technical merit. Phase 2 expands on the results of the Phase 1 development. Awards are for as long as two years in amounts up to $600,000. Phase 3 is for the commercialization of the results of Phase 2.

The criteria used to select the winning proposals included technical merit and innovation, Phase 1 results, value to NASA, commercial potential and company capabilities.

2 technologies get help from IPP Seed Fund

NASA's Innovative Partnerships Program Seed Fund recently announced the selection of 38 partnerships that will advance key technologies to meet critical needs for NASA's mission. NASA's Stennis Space Center will lead two of the projects:

• "Glass Bubble Insulation For Cryogenic Tanks: A Field Demonstration," in partnership with Kennedy Space Center, Fla.; 3M Energy and Advanced Material Division of St. Paul, Minn.; and Technology Applications Inc., Boulder, Colo.

• "Integrated Systems Health Management Implementation And Validation For A-1 Test Stand And J-2X Power Pack," in partnership with Pratt & Whitney Rocketdyne Inc., Canoga Park, Calif.

The one-year projects involve collaboration among a NASA field center; a NASA program or project office; and the private sector, academia or other government laboratory. NASA's Innovative Partnership Program at NASA Headquarters in Washington is contributing $9 million from its Technology Transfer Partnerships budget; $13 million from NASA sources in programs, projects, or field centers; and $12 million from external partners, a total combined financial commitment of $34 million.

SSC-based company named to Top 20 spinoff list

A set of geographic information systems applications built by NVision Solutions Inc. has been listed as one of the Top 20 NASA Spinoff technologies produced during the past five years.

NASA's Innovative Partnerships Program tapped the geospatial information systems company, located at NASA's Stennis Space Center in South Mississippi, for its Top 20 list based on the applications' contributions to quality of life, economic benefit and value back to NASA.

"This honor is recognition of our passion for using geospatial technology to help the communities where we live and work," said Craig Harvey, Senior Business Development staffer and a corporate founder of NVision Solutions. "But it is also a reflection of the unique, cooperative environment at NASA's Stennis Space Center which fosters the technological innovation and partnerships that have allowed our company to grow."

NVision has harnessed NASA's rich store of remote-sensing satellite information to provide innovative geospatial solutions for applications including a crop prescription service for farmers; a disaster management networking tool for local, state and federal governments; and an educational service for young farmers.

Jason Jones prepares for a ride in the airplane in which he earned his pilot's license. He recently was awarded a $2,000 Science Systems and Applications Inc. scholarship to further his education.

DEVELOP's Jason Jones earns SSAI scholarship

Jason Jones, DEVELOP assistant team leader at NASA's Stennis Space Center, was awarded a $2,000 scholarship by Science Systems and Applications Inc., a contractor for NASA's Applied Research and Technology Project Office at SSC.

DEVELOP is a student-led, student-run program that provides a framework for initiating projects to help communities. Under the guidance of science advisers, students demonstrate prototype applications using NASA remote sensing data.

A junior geography major at the University of Southern Mississippi, Jones was presented a one-time scholarship and plaque Sept. 26 by SSAI Vice President and Chief Financial Officer Anoop Mehta and SSAI-SSC DEVELOP Science Adviser Dr. Kenton Ross. Jones earned the scholarship, awarded for the first time to a student, for demonstrating merit, work and leadership with DEVELOP.

"I am honored," said Jones, who joined DEVELOP in fall 2004. "This gift will finance my pilot instrument training, the next step I must take before becoming a professional pilot. It was an answer to my prayers."

Jones' recent participation in a DEVELOP presentation at NASA Headquarters in Washington, D.C., led to the scholarship. DEVELOP teams at each of the NASA centers as well as around the world briefed Applied Sciences program managers about DEVELOP's projects. The SSC team's five-minute presentation, "Applied Sciences Related to Gulf Coast Disaster Management," presented research using instruments on NASA's ICESat satellite to indicate forest canopy damage after Hurricane Katrina in 2005.

"Jason is passionate about everything he does," said NASA's Cheri Miller, DEVELOP's Southern Regional Office Manager. "I have seen how his enthusiasm becomes contagious. Through his dedication to the program, Jason has earned the respect of not only his fellow students but the mentors, research scientists and advisers, and is very deserving of this award."

Logtown family endured wartime

Editor's Note: *Dr. Marco Giardino of SSC's Engineering and Science Directorate provides this column dedicated to the history of Stennis Space Center and the surrounding area.*

Christian Koch of Logtown was Danish and did not support the Confederate cause. Yet his family and business interests during America's Civil War were severely threatened by the Union. While his eldest son, Elers, was fighting for the Confederate Army, his next oldest son, Emil was running the farm while trying desperately to avoid being conscripted by both armies.

In spring 1863, Emil had taken to the woods, causing Annette to chastise her husband: "You say you are sorry that Emil run away when the Yankees came up here, but if you had been at home, and heard how mad they were and making conscripts of all such lads as he, and all the Negro men they could catch… George [probably Annette's brother] over in the swamp… he has a miserable time of it dodgeing about and scared to death all the time." Most Yankees were nice to her, except one who asked for the room key of "Henry, living with Dorsey" while holding a cocked gun.

Stennis Space Center HISTORY

She writes to Christian that the Northern papers "don't tell all that the Yankees done to Gainsville [sic]" and adds that: "We had very little school, as all the children help in the fields." Christian read in the paper on or about May 11 that Union Gen. U.S. Grant was marching on Jackson, and he wrote Annette: "Elers may get into the fight. If they do, I hope to God they may be beat, and dispersed, so they all can run away and come home, which I suppose most of them would do."

At the time, the Union government had chartered the Kochs' schooner to carry out registered enemies. But Christian could not get a pass to go home and he did not know why. He wrote, "I wish the Yankees would take the country so we would know to whom we belong."

Native Americans showed respect for Earth, inhabitants

Editor's Note: *Patricia Johnson of SSC's Office of Diversity and Equal Opportunity provides this column in observance of November as American Indian Heritage Month.*

The environmental wisdom and spirituality of the North American Indian is legendary. Animals were respected as equal in rights to humans. Of course they were hunted, but only for food, and the hunter first asked permission of the animal's spirit. Among the hunters and gatherers, the land was owned in common: there was no concept of private land, and the idea that it could be bought and sold was repugnant. American Indians had an intense appreciation of nature's beauty.

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

Religious beliefs varied between tribes, but there was a widespread belief in a Great Spirit who created the earth, and was part of all things. It was linked to animism, which saw kindred spirits in all animals and plants.

The American Indians viewed the white man's destructive attitude to nature as the complete opposite of their own. Whites disrupted the whole natural order of the environment: using up forests, clearing land and killing animals for sport.

Many American Indians shared their beliefs that things in nature have souls or consciousness. But, when ways of life changed in America, beliefs changed to support them. Agriculture and industry brought massive shifts in attitudes to nature. Beliefs tended to change ways of life. Our present way of life is laying waste to the environment that supports us. New beliefs can help us to change that way of life, and in arriving at those beliefs, we can learn immensely from the beliefs of the North American Indians.

This quote from Chief Seattle of the Squamish tribe of the Pacific Northwest is perhaps one of the most famous citations about the environment: "This we know: the earth does not belong to man, man belongs to the earth. All things are connected like the blood that unites us all. Man did not weave the web of life; he is merely a strand in it. Whatever he does to the web, he does to himself."

AROUND NASA

■ **Thrusters nudge Phoenix toward Mars:** NASA's Phoenix Mars Lander, launched on Aug. 4 and headed to Mars, fired its four trajectory correction thrusters Oct. 30 for only the second time. The 45.9-second burn nudged the spacecraft just the right amount to put it on a course to arrive at the red planet in seven months. At Mars, Phoenix will face a challenging 7-minute descent through the atmosphere to land in the far north on May 25, 2008. After landing, it will use a robotic digging arm and other instruments during a three-month period to investigate whether icy soil of the Martian arctic ever could have been favorable to microbial life. The solar-powered lander will also look for clues about the history of the water in the ice and will monitor weather as northern Mars' summer progresses toward fall.

■ **NASA opens new seed money competition:** NASA announced Oct. 18 it will conduct a new competition for $174.7 million in funding that remains in NASA's Commercial Orbital Transportation Services Project, known as COTS. The new competition follows NASA's decision to terminate its funded agreement with aerospace firm Rocketplane Kistler of Oklahoma City. NASA informed Rocketplane Kistler of its decision in a letter signed by Associate Administrator for Exploration Systems Rick Gilbrech. COTS provides seed money to companies to help them design and develop space transportation capabilities that could pave the way for private cargo deliveries to the International Space Station.

■ **Essay contest focuses on NASA technologies:** NASA's commitment to promoting science and technology has the agency looking to students to share their thoughts on how NASA technology impacts their lives. NASA's 50th anniversary essay competition for middle and junior high school students during the 2007-08 school year will close in early January 2008. The competition consists of two topics abotu NASA technology in everyday life. U.S. students enrolled in an accredited middle school, junior high school or home school are eligible to enter the competition for prizes. For information, visit: http://www.nasa.gov/audience/foreducators/5-8/features/F_Essay_Competition.html.

Hail & Farewell

NASA bids farewell to the following:

Kenneth Human	chief counsel Office of the Chief Counsel
Betty Jo Spiering	contract specialist Office of Procurement

And welcomes the following:

Charles Heim	contract specialist Office of Procurement
Sonia Rushing	contract specialist Office of Procurement

Stennis hosts Gulf Pine Council's NASA Brownie Day

Tori Williams, of Brownie Girl Scout Troop 313, builds her own 'stomp rocket' with the help of adult chaperone Pamela Cottrell. The two, of Gulfport, participated in NASA Brownie Day on Oct. 13 at Stennis Space Center. They were among nearly 200 members of Brownie Girl Scout Troops within the Gulf Pines Council who took part in the day of educational activities at SSC. Brownie Day used NASA curriculum support materials to teach about the sun and its significance in our solar system. In addition to building and launching their own model rockets, the girls toured the center's portable Starlab planetarium; viewed demonstrations about living and working in space; played games of 'Moon Phasers' that teach about the rotation of the moon around the earth; made bracelets with ultraviolet-sensitive beads; and other activities that celebrated Earth's very own star. They also toured StenniSphere and were able to earn their Earth and Sky and Space Explorer 'Try-Its.'

The NASA Explorer School-East Oktibbeha County School District team recently celebrated the start of its three-year partnership with NASA during a two-part kickoff event Nov. 7 and 8. Pictured from left are, Oktibbeha County School District Superintendent Dr. Walter Conley; NES Team Administrator James Covington; Stennis Space Center Deputy Director Gene Goldman; Sharon Bonner; NES Team Lead Yolanda Magee; Andrea Temple; Carolyn Rice; and special guest astronaut Roger Crouch.

SSC's newest Explorer School

NASA began a three-year partnership with the Oktibbeha County School District in Starkville on Nov. 7. The district's East Oktibbeha County elementary school and high school team were among 25 schools selected nationwide to be part of the NASA Explorer Schools program.

Astronaut Roger Crouch (left) signs photos Nov. 7 for some of the 900 parents and children attending family night at the MSU Sanderson Center.

NASA's Explorer Schools program addresses the nation's need to promote student achievement in mathematics and science studies through activities that use the excitement of NASA research, discoveries and missions.

The event, themed "A Place for Me at NASA," continued with a presentation by special guest astronaut Roger Crouch the morning of Nov. 8 at East Oktibbeha Elementary. The event concluded that afternoon at East Oktibbeha High School.

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:
228-688-3749

National Aeronautics and Space Administration

PRESORTED STANDARD
U.S. POSTAGE
PAID
BATON ROUGE, LA
PERMIT NO. 984

John C. Stennis Space Center
Stennis Space Center, MS 39529

Official Business
Penalty for Private Use $300