

Administrator updates progress on Journey to Mars



NASA Administrator Charles Bolden (center) speaks at a press conference with area media and NASA Social participants during a Sept. 12 visit to Stennis Space Center. Bolden was joined by NASA Associate Administrator Robert Lightfoot (right) and Stennis Director Rick Gilbrech. The leaders

offered updates on work under way to enable a return to deep-space missions. NASA is preparing to test RS-25 rocket engines and the core stage of its new Space Launch System vehicle on Stennis test stands. SLS is being developed to carry humans to destinations including an asteroid and Mars.

See Page 6 for additional photos.

**Stennis
hosts live
ISS
downlink
for area
students**

See pages 18-19



*“Lots of things have changed over 31 years,
but it’s the things that have stayed the same ...
that will carry us into the future.”*



From the desk of
Dorsie Jones

Manager, Office of Human Capital, Stennis Space Center

My, my, my! Lots of things have changed over time. In the 31 years I’ve been at NASA, I’ve seen lots of changes.

When I arrived at Stennis in 1983, everybody physically came in to work to do their jobs. Computers took up all the space on your desk, were not portable and read data from floppy disks. Personnel forms were carefully aligned and filled out using rubber stamps and typewriters. (Does anybody remember Remington, the IBM Selectric or eraser tape?)

For training handouts, we used something called a ditto machine to make copies. The print was purple, and nothing else in the world smelled like a fresh, damp ditto copy.

Performance plans were painstakingly handwritten on paper and stored in cabinets. Meetings were all held face to face, and presentations were aided by nothing more glamorous than an overhead projector. Communicating by phone meant that you did not dare leave the office if you were expecting a call, and you never knew what your colleagues at other centers looked like until you met them in person.

How things have changed!

I appreciate the fact that computers are so small that they fit in pockets and store data by the terabyte, that telework has made us flexible and increased our productivity, that forms are web-based and auto-filled and that copiers not only print but sort, staple and multitask.

I love the ease of maintaining performance plans in

SPACE, the fact that meetings are routinely hosted and attended virtually from anywhere, the pleasure of seeing a presentation pop with sharp media designs and the fact that cell phones mean never having to say, “I’m sorry I missed you!” Even further, I notice that many of us will may see our colleagues from other centers in virtual meetings more often than our co-workers in other Stennis directorates. Whew!

But while I’ve witnessed these stunning advancements in our workplace, some things here at Stennis have stayed just the same. We have always known that Stennis is the best place to work within NASA – now everybody knows it!

We still test rocket engines like no one else can. We still do the coolest things in applied sciences. Our workforce is still outstanding. We still have great leadership. Thousands of us still do exciting work in every corner of our growing federal city. We still take care of one another, and we still accomplish great things for our society every day while enjoying our unique work culture.

My, my, my! Lots of things have changed over 31 years, but it’s the things that have stayed the same that I appreciate most and that will carry us into the future to do even greater things in accomplishing our long-term goal of sending humans to Mars.

Dorsie Jones

Lagniappe is published monthly by the Office of Communications at NASA’s John C. Stennis Space Center.

Access monthly copies at: www.nasa.gov/centers/stennis/news/publications/index.html

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FULFILLING NASA'S EXPLORATION MISSION

B-2 derrick crane reinstalled

The profile of the B Test Complex at Stennis Space Center continues to change as crews installed a longer derrick crane boom atop the B-2 Test Stand the week of Sept. 1. The existing boom had been removed during stand modifications in preparation for testing the core stage of NASA's new Space Launch System. The SLS core stage is taller than the Saturn stages tested on the stand during the Apollo era, necessitating derrick crane upgrades. In addition to strengthening the crane, the boom was extended an additional 50 feet. With modifications in place, crews began checkout and calibration work of the crane. Commissioning of the crane will complete the first B-2 restoration work package.



FULFILLING NASA'S EXPLORATION MISSION

Curiosity continues journey to Mount Sharp

This image, taken Aug. 19, 2014, from the front Hazard Avoidance Camera (Hazcam) on NASA's Curiosity Mars rover shows the rover's drill in place during a test of whether the rock beneath it, "Bonanza King," would be an acceptable target for drilling to collect a sample. Subsequent analysis showed that the rock budged during the procedure and did not pass the test. The rover was doing a mini-drill procedure, which is part of evaluating the target in advance of full-depth, sample-collection drilling. During the procedure, the rock moved slightly, the rover sensed that instability in the target, and protective software properly halted the procedure. After analysis of the target's instability, the rover team decided to drive Curiosity away from the site and resume the trek toward long-term destinations on the slopes of Mount Sharp. The site in this southward-looking image is at the northeastern end of sandy-floored "Hidden Valley." A map showing the Hidden Valley area is online at: <http://tinyurl.com/n7338bj>



NASA in the News

NASA selects small business projects

NASA has selected 23 proposals from small business and research institution teams to continue the development of innovative technologies that will support future agency mission needs and may also prove viable as commercial products and services. The Phase II selectees in NASA's Small Business Technology Transfer (STTR) Program are permitted to enter negotiations for possible contract awards, worth a combined total of approximately \$17.2 million. Two selected proposals involve technology being administered by the Office of the Chief Technologist at NASA's Stennis Space Center. Both projects focus on innovative means to harvest energy from various forms of "waste" energy and convert it into a different new usable form of energy. The STTR Phase II projects affiliated with Stennis are:

- "Power Generating Coverings and Casings," developed by Streamline Automation LLC in Huntsville, Alabama, and Wake Forest University in Winston-

Salem, North Carolina.

- "MEMS Based Solutions for an Integrated and Miniaturized Multi-Spectrum Energy Harvesting and Conservation System," developed by Radiance Technologies Inc. in Huntsville, Alabama, and Louisiana Tech University in Ruston, Louisiana.

A third proposal originated with Stennis but now is being administered by Kennedy Space Center in Florida. However, Stennis will still benefit from its development of ultra-high temperature refractory materials that can be used on test stand flame trenches and other components. The project is:

- "Ultra-High Temperature Refractory Materials," developed by Advanced Ceramic Marketing in Tucson, Arizona, and Villanova University in Villanova, Pennsylvania.

For a complete list of selected companies and their proposal titles, visit: <http://sbir.nasa.gov>

For NASA news releases, visit: www.nasa.gov/news/releases/latest/index.html

Stennis hosts its first-ever NASA Social



Stennis Space Center hosted its first-ever NASA Social event Sept. 12, opening its gates to two dozen social media enthusiasts from around the country (right). Event participants spent an afternoon touring Stennis facilities and learning about the rocket engine test work conducted at the site. They were joined by local media for a media availability with NASA Administrator Charles Bolden who provided updates about the B-2 Test Stand (above and bottom right) and NASA's "Journey to Mars." They learned about renovations to the Apollo-era B-2 stand from its manager, Rick Rauch (right, in middle photo), assisted by Tim Pierce (left, deputy, Facility Services and Utilization Division). The participants also visited the A-1 Test Stand. Both A-1 and B-2 are being prepared to test engines and rocket stages for NASA's new Space Launch System, which will carry humans deeper into space than ever. NASA Social participants were also given a tour of Aerojet Rocketdyne's RS-25 engine processing facility with program manager Mike McDaniel (right, photo below). The guests reported on their visit via social media. Their comments can be viewed by accessing Stennis Space Center via Twitter or Facebook. More than 300 people from across the country applied to participate in the NASA Social, which included a morning visit to NASA's Michoud Assembly Facility in New Orleans. Personnel from NASA Headquarters, Marshall Space Flight Center in Huntsville, Alabama, and Stennis selected the 26 final participants. Those chosen traveled from 15 states, from as nearby as Alabama and Tennessee and as far away as California, New Jersey and Wisconsin.



Bolden meets with retirees and media, tours B-2 stand



NASA Administrator Charles Bolden speaks with a group of Stennis Space Center retirees (bottom and below, right) about NASA's "Journey to Mars" during a visit to the site Sept. 12. Bolden traveled to Stennis after attending an event at NASA's Michoud Assembly Facility in New Orleans. In addition to discussing future missions to Mars, Bolden also met with media and visited the B-2 Test Stand, where he took a selfie (left) with Stennis Center Director Rick Gilbrech (center) and NASA Associate Administrator Robert Lightfoot (left). Bolden praised the renovation work performed by Stennis' contract workforce (below left) on B-2, which is being prepared to test the core stage of NASA's new Space Launch System (SLS). The SLS vehicle will carry humans deeper into space than ever, to such destinations including an asteroid and Mars. The Sept. 12 visit marked Bolden's sixth trip to Stennis or the Mississippi Gulf Coast since he was named NASA administrator in 2009.



2014 NASA Honor Awards

Stennis Space Center Director Rick Gilbrech and NASA Deputy Associate Administrator Lesa Roe presented annual NASA Honor Awards to center employees during an onsite ceremony Aug. 19.

In addition to presenting awards, Gilbrech also received NASA's Equal Employment Opportunity Medal

for outstanding leadership qualities in promoting diversity and inclusion at Stennis. This prestigious NASA medal is awarded to individuals for outstanding achievement and material contribution to the principles and goals of NASA's Equal Employment Opportunity, Diversity and Inclusion programs, either within the government or within community organizations or groups. Gilbrech has served as a diversity and inclusion champion in creating an inclusive work environment where employees are engaged, valued and respected and where their talents are fully utilized. This was demonstrated by Stennis receiving the highest possible ranking in the support for diversity category in the 2012 and 2013 Employee Viewpoint Survey.

Three Stennis employees received NASA's Exceptional Service Medal. This medal is awarded to a government employee for sustained performance that embodies multiple contributions to NASA projects, programs or initiatives.

Beth Bradley received NASA's Exceptional Service Medal for her work as chief of the Center Management Sup-



port Division in the Stennis Office of Procurement. Bradley leads a division of contract specialists with active/inactive contracts valued at more than \$1.4 billion. Her leadership and expertise have proven instrumental across a broad spectrum of procurements. She also is a strong advocate of NASA's Small Business Program, contributing to Stennis receiving the NASA Administrator's Cup for the best small business program agency-wide in 2012.

Wendy Houser received NASA's Exceptional Service Medal for her work as an attorney and mentor in the Stennis

Office of the Chief Counsel. Houser demonstrates outstanding and sustained leadership qualities, providing sound analytical advice to subordinates, peers and superiors on a broad spectrum of issues and programs. NASA recently recognized Houser as its 2014 Attorney of the Year for exhibiting performance at the highest levels of excellence and achievement.

Ronald Rigney received NASA's Exceptional Service Medal for his contributions to propulsion testing at

Stennis. Rigney previously served as manager of the space shuttle main engine test project at Stennis and now is chief of the Propulsion Test Project Office in the Stennis Project Directorate. Throughout his tenure, Rigney's leadership and contributions to propulsion testing have been instrumental in the successful execution of numerous test projects.



Six Stennis employees received NASA's Exceptional Achievement Medal. This medal is awarded to a government employee for a significant achievement or substantial improvement in operations, efficiency, service, financial savings, science or technology that contributes to the mission of NASA.

Dinna Cottrell received NASA's Exceptional Achievement Medal for her leadership as chief information officer at

Stennis and during her stint as acting deputy director for the Stennis Center Operations Directorate. Cottrell provided exceptional performance on a number of critical projects, including implementation of a project funding priority system and various information technology advancements. Her expertise has produced lasting benefits for both NASA and Stennis.

Sallie Bilbo received NASA's Exceptional Achievement Medal for significant contributions to NASA and Stennis mis-

sions as a public affairs specialist in the Stennis Office of Communications. Bilbo is recognized as the "go-to person" for support of various Stennis activities, including VIP meetings, conferences, tours and historical activities. She serves as Space Flight Awareness manager for all NASA research centers, the Defense Contract Management Agency and the NASA Engineering and Safety Center. Her contributions and expertise impact NASA's and Stennis' mission success.



AWARDS

Continued from Page 7

Thomas Jacks received NASA's Exceptional Achievement Medal for engineering and technical leadership contributions to the B-2 Project Team at Stennis. Jacks serves as design lead for the project and has made critical contributions in the effort to restore and prepare the stand for testing of NASA's Space Launch System core stage. His leadership has led directly to project savings and has been instrumental in managing a diverse group of designers and engineers.



Bryon Maynard received NASA's Exceptional Achievement Medal for his knowledge, engineering skills and leadership as part of the project team working to restore and prepare the B-2 Test Stand at Stennis for stage testing. Maynard led in development of restoration requirements and continues to make critical contributions to the ongoing project. His encyclopedic knowledge of the B-2 test facility has been an invaluable asset to the project.



Sonia Rushing received NASA's Exceptional Achievement Medal for her work as a contract specialist in the Stennis Office of Procurement. Stennis is the largest consumer of rocket propellants in the U.S., and Rushing is responsible for all aspects of the center's five propellant contracts. She played an integral role in Stennis



exceeding four of its five business goal categories in fiscal year 2013. Her commitment to uninterrupted delivery of propellants has been critical in enabling NASA to meet its engine-testing goals at Stennis.

Katrina Wright received NASA's Exceptional Achievement Medal for her work as industrial hygiene manager at Stennis. Wright's leadership of the industrial hygiene and health physics programs at Stennis has been critical in ensuring worker health and safety. This was demonstrated in her work to implement the new Globally Harmonized System Hazard Communication standards required by the Occupational Safety and Health Administration. Wright's efforts ensure safe work precautions are known and used efficiently, resulting in key improvements in the Stennis safety culture.



One Stennis employee received NASA's Exceptional Public Service Medal. This medal is awarded to any nongovernment individual for sustained performance that embodies multiple contributions on NASA projects, programs or initiatives.

William Turner received NASA's Exceptional Public Service Medal for his work as project manager for ISS



Action Inc. on the Stennis Protective Services Contract. Turner leads more than 80 personnel to manage and properly badge hundreds of visitors per week, provide 24-hour emergency response, conduct employee vetting and site entry control, conduct random vehicle inspections, enforce traffic regulations and provide general investigative services.

One Stennis employee received NASA's Exceptional Public Achievement Medal. This medal is awarded to any nongovernment individual for a significant specific achievement or substantial improvement in operations, efficiency, service, financial savings, science or technology that contributes to the mission of NASA.

Andrew Martin received NASA's Exceptional Public Achievement Medal for his work as the lead structural design engineer on the B-2 Test Stand restoration project. Martin conducted a comprehensive, hands-on structural assessment of the B-2 facility from the sub-basement to ground level to the highest structures. Martin's design team developed the initial structural restoration assessment report and initial cost and schedule estimates that ultimately were adapted to become the project's facility restoration requirements and cost and schedule estimates.



Four Stennis employees received NASA's Early Career Achievement Medal. This prestigious NASA medal is awarded to any government employee for unusual and significant performance during the first 10 years of an individual's early career in support of the agency.

Justin Junell received NASA's Early Career Achievement Medal for his critical, accurate analyses and test operations expertise on high-priority propulsion test projects and his contributions to numerous propulsion



See AWARDS, Page 9

AWARDS

Continued from Page 8

test projects across nearly all of the Stennis test stands. His technical and leadership abilities also have enabled him to serve as the test conductor for several engine tests. The test conductor is responsible for running a successful engine test, a role reserved for the most seasoned and capable operations engineers.

Nicholas

Nugent received NASA's Early Career Achievement Medal for his contributions as mechanical design lead for the B-2 Test Stand restoration and adaptation project. Nugent coordinated a multi-contractor mechanical systems/process piping design team, developing four major design packages to restore the B-2 Test Stand mechanical systems, including the water systems, cryogenic propellant system and high-pressure gas system.



Michael

Perotti received NASA's Early Career Achievement Medal for his contributions to safety and mission assurance (SMA) for test operations at Stennis. Perotti is one of the youngest engineers to achieve SMA console operations for propulsion testing. Since 2011, he also has assumed lead responsibility for the center's Mishap Interim Response Team. He currently is responsible for all SMA aspects for the A-1 Test Stand.



Rebecca Strecker received NASA's Early Career Achievement Medal for contributions in key NASA public affairs positions at Stennis, Kennedy Space Center and the NASA Shared Services Center. Strecker also served

an assignment at NASA Headquarters. As NASA news chief at Stennis, Strecker managed numerous high-profile media events onsite and provided key support for the success of Stennis' 50th anniversary celebration in 2011, including production of the anniversary video.



Two Stennis employees received the NASA Silver Achievement Medal. This medal is awarded to individuals or teams by NASA center directors for a stellar achievement that supports one or more of NASA's core values.

Andrew Guy-

mon received NASA's Silver Achievement Medal for outstanding support to NASA's Morpheus



Program to develop an innovative takeoff and landing vehicle in direct support of the agency's goal to expand the frontiers of knowledge, capability and opportunity in space. Guymon is the lead mechanical operations engineer and primary test conductor for the Morpheus engine test project at Stennis. He also has provided valuable support to the AJ26 engine test project at Stennis.

Steven Rath-

bun received NASA's Silver Achievement Medal for outstanding contributions to the Pressure Vessel and Pressurized System (PVS) Program at Stennis. As pressure systems administrator for the Jacobs Technology Facility Operating Services Contract,



Rathbun's work consistently exceeds expectations. Rathbun has led in implementing several proactive changes to enhance the excellence and safety of the Stennis PVS Program.

Several additional Stennis Space Center individuals and groups were recognized for service and contributions during the NASA Honor Awards ceremony. Those honors included:

Length of Service Awards

40 years

Rosalind Baker
Gregory Fletcher

35 years

James Bevis
Jo Ann Larson

30 years

John Cecconi
Nicholas Cenci
Thomas Galloway
Theodore Mason
Eric Ross

25 years

John Bailey, Jr.
Gary Benton
Keith Brock
Mark Carley
Stanley Gill
Anthony Goretski Jr.
Melba Harris
Joseph Lacher
Amy Langdale
Debra Metzler
Anne Peek
Steven Taylor

Group Achievement Awards

J-2X Engine Test Team

NASA

Daniel Allgood
Gary Benton
William Camus
Gregory Carmouche
Thomas Carroll
David Carver

See AWARDS, Page 10

AWARDS

Continued from Page 9

Jack Conley
 Howard Conyers
 Robert Drackett
 Donna Dubuisson
 Robert Ek
 Alex Elliot
 David Failla
 Jennifer Franzo
 Daniel Goad
 Juan Gomez
 Jared Grover
 Aaron Head
 Jeffery Henderson
 Paula Hensarling
 Michael Holmes
 Jason Hopper
 Melissa Huggins
 Bridget Jones
 Justin Junell
 Rebecca Junell
 Nathan Laborde
 Lester Langford
 Ryan McKibben
 Christopher Mulkey
 Vincent Pachel
 Michael Perotti
 Paul Reider
 David Roberts
 Harry Ryan
 Marc Shoemaker
 Amanda Stein
 Dwayne Stockstill
 Nyla Trumbach



Group Achievement Award – J-2X Engine Test Team

Mark Turowski

Contractor Support

Matthew Adams
 Chad Albritton
 William Averill
 Christoffer Barnett-Woods
 Cory Beckmeyer
 David Caldarelli
 Christopher Coogan
 Buford Cooper
 Clifton Cox
 Robert Delcuze
 Bradley Denmark
 George Drago
 Leland English
 Glenn Faciane

Blake Ford
 Robert Herrin
 Yancey Jordan
 Adam Knight
 Byron Ladner
 Chase Ladner
 Roger Ladner
 Lavigne Hopper
 Ira Lossett
 Alan Mayne
 Todd Mason
 Kevin McCaleb
 Vincent Moran
 Darlon Necaie
 Don Necaie
 April Paige
 Todd Pearson
 Thomas Piff
 Timothy Richmond
 Stephen Rose
 Rodney Sampson
 Alva Scieneaux
 Michael Slade
 Stephen Steelman
 William Vaughn
 Averill William



Group Achievement Award – Stennis Data Center Relocation Team

Stennis Data Center Relocation Team

NASA
 Daniel Allgood
 Bradley Brown
 William Dribergen
 Scot Gressaffa
 Peter Gruzinskas

See **AWARDS**, Page 11

AWARDS

Continued from Page 10

Lester Langford
 Mansour Muhsin
 Teenia Perry
 Debra Rushing
 Jody Woods

Contractor Support

Mark Ashley
 Patrick Balof
 Keith Bennett
 Michael Bounds
 William Brumfield
 Mark Collins
 James Conner
 Fredelyn Crowder
 Ernest Crowe
 Sandra Cuevas
 Michael Dedeaux
 Jeena Drummond
 Traci Frizzell
 David Glasenapp
 Brianne Guillot
 Ronald Hensarling
 Wilbert Johnson
 Artie Johnston
 Christopher Kinney
 William Mitchell
 Christopher Mitros
 Matthew Muir
 Caroline Necaise
 Lamar Nicholson
 David Oakes



Group Achievement Award – Antares Launch Facilities Hydraulic Cart Mule Repair Team

Carolyn Owen
 Laura Pair
 John Pitalo
 Stephen Rao
 Robert Seymour
 Victor Tyler

Rosa Obregon
 David Roberts

Contractor Support

David Blansett
 Susan Fendley
 Adam Fulks
 Petter Hobgood
 Gerald Howard
 Bruce Matthews
 Terry Wactor

**Antares Launch Facilities
 Hydraulic Cart Mule Repair Team**

NASA
 Randolph Holland
 Wendy Houser
 Christopher Mulkey

**NASA Data Acquisition
 Software Team**

NASA
 Rae Anderson
 Thomas Carroll
 Dawn Davis
 Alex Elliot
 Juan Gomez
 Phillip Hebert
 Wendy Holladay
 Jason Hopper
 Mark Hughes
 Joseph Lacher
 Thomas Nicolaides
 Robert Reis
 Neil Toupin

Contractor Support

Cory Beckmeyer
 Christopher Coogan
 Shane Cravens
 Richard Franzl



Group Achievement Award – NASA Data Acquisition Software Team

See **AWARDS**, Page 12

AWARDS

Continued from Page 11

Andrew Graves
 Brianne Guillot
 Cynthia Howell
 Philip Kuper
 Gerald Ladner
 Louise Locatto
 Peggi Marshall
 Gregory McVay
 William Mitchell
 Jonathan Morris
 Richard Smith

B-2 Project Design Construction and Management Team

NASA

Daniel Allgood
 Dawn Davis
 Jonathan Dickey
 Jason Edge
 Chuck Heim
 Thomas Jacks
 Anthony Jackson
 Nathan Laborde
 Matthew Ladner
 Aaron Mannion
 Travis Martin
 Bryon Maynard
 Mark Mick
 Gerald Norris
 Nicholas Nugent
 Richard Rauch
 Michael Rewis
 Eric Ross
 Claude Sanders
 Dale Sewell

Contractor Support

Dorothy Acker
 Joshua Ankeny
 Lorna Ammond
 Christine Anderson
 Anita Anthony
 Roger Blake
 Thomas Boblenz
 Byron Bordelon
 Jason Brooks
 John Byrnes
 Deborah Case
 Joe Cooper
 Brian Corr
 Mark Corr
 Jamie Ellis



Group Achievement Award – B-2 Project Design Construction and Management Team

Richard Fauth
 Carl Flettrich
 Erin Glomski
 Eric Goller
 Mark Hancock
 Louis Hathcock
 Nathaniel Jewel
 Jennifer Johnston
 Betty Kellar
 Edward Kenney
 Lisa Ladner
 Joi Lott
 Michael Marodis
 Andrew Martin
 Benjamin McGrath
 Timothy Miller
 Jeffrey Mitchell
 Bridget Moody
 Eugene Necaise
 Tuan Ngo
 Halela Nguyen
 Chad Nicholas
 Robert Perkins
 Sandra Piernas
 Ty Proffitt
 Steven Rathbun
 Fred Roberts
 Benjamin Robertson
 Mark Robinson
 Wendy Robinson
 Nikhil Sharoff
 Cynthia Simpkins
 Billy Smith
 Donald Smith
 George Smith

Robert Smith
 Ronald Snyder
 Richard Spooner
 James Thorington
 Rodney Valdes
 Sutha Vallipuran

NASA Blue Marble Award

Stennis Energy Management Control Enhancements Team

NASA

Missy Ferguson

Contractor Support

Luke Scianna
 Michael McKinion
 Donald Thompson
 Skip Marsh
 Damon Saul
 Michael Lott
 John Davenport

Special Recognition Awards

NASA Space Flight Awareness Management Award

Randolph Holland

Peer Recognition Award

Meredith Blasingame

See **AWARDS**, Page 13

AWARDS

Continued from Page 12

**Special Agency
Recognition Awards
NASA Honor Awards**

**2013 Wallops Launch
Support Team**

David Coote
Laurence de Quay
Randolph Holland
Melissa Huggins
Justin Junell
Son Le
Jeffrey Lott
David Liberto
Thomas Meredith
Ke Nguyen
Rosa Obregon
Vincent Pachel
John Pazos
David Roberts
Dwayne Stockstill
Maury Vander
Richard Wear

Orbiter Home Team

Jerry Cook
Paul Foerman
Rebecca Strecker

**Technical Capabilities
Assessment Team Phase I**

Richard Gilbrech

**Enterprise Physical Access
Control System Refresh Team**

Justin Smith

Financial Audit Team

Patricia Fairley
Mary Kennedy
Edward Toomey

**Nanosat Launch Adapter
System Team**

Eric Ross

**NASA Communities
of Practice Team**

Christy Ladner
Deborah Norton
Rena Perwien

**NASA Performance
Management Team**

Cecile Saltzman

**NASA Engineering
Standards Panel Team**

Clifton Arnold
Laurence de Quay

NASA Shutdown Team

James Bevis
Michele Campbell
Craig Chandler
David Del Santo
Anita Douglas
Jason Edge
Donald Griffith
Peter Gruzinskas
Robert Harris
Richard Harris
Wendy Houser

Dorsie Jones
Joseph Lacher
Jeffrey Lott
Amy Rice

NASA Small Business Council

Robert Watts

**Systems Engineering Working
Group Training Team**

James Ryan
Joseph Schuyler

**NASA/United States Department
of Education Pilot**

Christopher Copelan
Samone Faulkner
Joshua Finch

**Web Services – Taking
NASA into the Cloud**

Paul Foerman



Stennis completes Feds Feed Families effort

Stennis Space Center employees concluded their 2014 Feds Feed Families effort at the end of August with a collection of 10,272 pounds of nonperishable food items. Shown with some of the donated items are NASA Office of Human Capital Manager Dorsie Jones (right) and employees Jeanie Frederick (center) and Cabrina Bell. Stennis donations exceeded the 2014 goal by more than 2,100 pounds. The donations will support four area charities – the Hancock County Food Pantry, the Mount Olive Food Kitchen, Grace Memorial Baptist Church and Pentecostals of the Gulf Coast Church. Notable participants included the NASA Office of Communications (highest per capita donations with 86 pounds per person), the NASA Office of Procurement (highest total donations with 1,492 pounds) and Gregory Fletcher and Jason Edge (highest individual donation with a combined 1,279 pounds). Campaign organizers also voiced thanks for the combined efforts of Stennis contractors.

NASA chief technologist visits Stennis

NASA Chief Technologist David Miller visited Stennis Space Center on Aug. 21 to participate in briefings, tour site facilities and honor several employees, including recognition of two NASA engineers awarded patents through the U.S. Patent and Trademark Office (USPTO) for technologies they developed at Stennis.

Miller first participated in a tour of several technology-focused facilities, including the test complexes and Area 9. Following a face-to-face with Center Director Rick Gilbrech, Miller spoke at a Stennis Engineering and Test Directorate all hands meeting. During his talk, he expressed the importance that both technology development and technology transfer have to the agency.

Based on having toured the Stennis test complex earlier in the day, Miller was also able to put aspects of his talk in context from an operational perspective and mentioned that it is important to “find opportunities to rigorously mature promising technology in an operationally authentic environment,” such as Stennis provides. He went on to share his understanding of the importance of the testing mission done at Stennis as having a valuable role in the bigger scheme of technology development and use in the agency.

After his presentation, Miller participated with Stennis Chief Technologist Ramona Travis and Intellectual Property Manager Gigi Savona in presenting patent award trophies, as well as a certificate of recognition for a provisional patent.

Mechanical engineer Bruce Farner was recognized for U.S. Patent No. 8,336,849 for Conical Seat Shut Off Valve, a low-maintenance actuatorless valve. Electrical engineer Scott Jensen was recognized for U.S. Patent



NASA Chief Technologist David Miller speaks to members of the Stennis Engineering and Test Directorate during his visit to the rocket engine test site Aug. 21. Miller toured center facilities, met with leaders and participated in presentations to Stennis engineers for patent and technology achievements.

No. 8,401,820-B2 for In Situ Health Monitoring of Piezoelectric Sensors, which monitors, tests and identifies degraded piezoelectric sensors without having to remove them. Jensen was also recognized for U.S. Patent No. 8,618,933-B2 for Monitoring Method and Apparatus using Asynchronous, One-Way Transmission from Sensor to Base Station, which improves the monitoring of high-g geared and linearly-actuated ball valves used in rocket propulsion testing to more accurately predict valve life span and premature failure.

These patented products represent, in some cases, well over a decade of research, development and technical processing through the USPTO by the inventors and the Stennis Tech Transfer Office.

During the presentations, mechanical engineer Kenneth McCormick also was recognized for a provisional patent on the technology he developed,

Cryogenic CAM Butterfly Valve, a novel valve design that provides a better seal in cryogenic environments and improved performance against seat leakage. A full patent application on this technology has recently been submitted.

Additionally, Miller participated in presenting certificates of recognition to several Stennis employees whose new technologies have recently been published in NASA TechBriefs. NASA TechBriefs publications award certificates were presented to David Coote, Harry Ryan, Justin Junell, Bartt Hebert and Scott Jensen.

At the conclusion of his visit, Miller toured the INFINITY Science Center, where he was surprised and honored by a display of his own technology development, Synchronized Position, Hold, Engage and Reorient Experimental Satellites, or SPHERES, project on the International Space Station.

Federal official visits Stennis Space Center



Office of Management & Budget Examiner Ben Roberts (right) stands with NASA officials on the A-1 Test Stand at Stennis Space Center during a visit to the site Sept. 4. The officials also toured the B-2 Test Stand (far left background) and other Stennis facilities during the day. NASA will test RS-25 rocket engines for its new Space Launch System (SLS) on the A-1

Test Stand and the SLS core stage on the B-2 Test Stand. NASA officials participating in the visit were: (l to r) Jonathan Krezel, NASA SLS program executive; Toni Mumford, resource business lead for NASA's Human Exploration and Operations Mission Directorate; and Bill Hill, director of the NASA Exploration Systems Development Division.



NASA connects with businesses during expo

Mississippi Gov. Phil Bryant addresses participants of the Launching Connections business expo held Aug. 27 in Jackson, Miss. The session was designed to help companies and industry groups connect with NASA program representatives and contractors with the goal of becoming familiar with opportunities associated with working with NASA. The event featured moderated panels and update sessions on various NASA programs, such as rocket propulsion testing.

Hail & Farewell

NASA welcomes the following:

Angela Fritz

AST, Experimental Facilities Tech

Center Operations Directorate

Engineer travels from Peru to NASA to the stars

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

The elevated Peruvian countryside offers spectacular nightscapes with views of the Southern Cross constellation and even the Milky Way.

Fernando Figueroa grew up under such skies in the town of Paucartambo in southern Peru. As a NASA aerospace technologist at Stennis Space Center, Figueroa now helps develop technologies to enable exploration of those same deep space skies.

Figueroa is highlighted this month in recognition of National Hispanic Heritage Month (Sept. 15-Oct. 15). The theme of the emphasis is "Hispanics: A Legacy of History, a Present of Action, a Future of Success."

Figueroa is an embodiment of that theme. He left Peru in the early 1980s to continue studies in mechanical engineering at the University of Hartford in Hartford, Connecticut. After completing a bachelor's degree, he earned master's and doctoral degrees in mechanical engineering from Penn State University in University Park, Pennsylvania.

Figueroa then joined the faculty at Tulane University in New Orleans. He also served two years as the Associate Chair of Advanced Instrumentation and Control at the University of New Brunswick in Canada. As a university faculty member, Figueroa participated in four NASA fellowships, three at Johnson Space Center in Houston and a fourth at Stennis. Following his summer experience at the south Mississippi rocket engine test center, Figueroa saw an opportunity to join the NASA ranks.



Fernando Figueroa (left) examines data during a test of integrated system health management (ISHM) and autonomous operations technologies at Kennedy Space Center in Florida.

"For any engineer, working for NASA is the best engineering experience, especially when it comes to technology development," he said.

Since 2000, Figueroa has been involved in various projects at Stennis, working to develop technologies for rocket testing, space systems and ground operations. He is leader of ongoing efforts to develop integrated system health management capabilities that could be used to monitor any number of complex systems, including spacecraft. The high-tech concept has been several years in development and is nearing completion of demonstration tests. "The vision for this approach has remained strong and on the right track," Figueroa said. "We're about to demonstrate that now."

In addition to his technology work, Figueroa has taken a lead in promoting science, technology, engineering and mathematics studies and careers among Hispanics. He served three years as the Hispanic Employment Program manager at Stennis and has

worked the last two years to coordinate NASA activities at the annual Great Minds in STEM Conference (formerly the Hispanic Engineer National Achievement Awards Conference). The conference plays a key role in establishing a network for Hispanic engineers and in providing scholarships to attract Hispanic students to STEM careers.

Figueroa is convinced of the importance of STEM studies for Hispanics seeking better-paying jobs and futures. "The Hispanic group probably has less representation in NASA and other professions when it comes to STEM careers," he said.

Figueroa can offer firsthand evidence of the possibilities, citing his involvement in unique and interesting projects. They even have provided him the opportunity for a couple of zero-g flight experiences. Also, by focusing on technology development, he is given a chance to watch new approaches grow and perhaps one day even fly to the stars.

Office of Diversity and Equal Opportunity

Guidance offered on pregnancy discrimination

The Equal Employment Opportunity Commission (EEOC) has issued the first comprehensive update of guidance on the subject of discrimination against pregnant workers since the 1983 publication of a Compliance Manual chapter on the subject. This guidance supersedes that document and incorporates significant developments in the law during the past 30 years.

In addition to addressing the requirements of the Pregnancy Discrimination Act (PDA), the guidance discusses the application of the Americans with Disabilities Act (ADA) as amended in 2008, to individuals who have pregnancy-related disabilities.

“Pregnancy is not a justification for excluding women from jobs that they are qualified to perform, and it cannot be a basis for denying employment or treating women less favorably than co-workers similar in their ability or inability to work,” EEOC Chair Jacqueline A. Berrien said. “Despite much progress, we continue to see a significant number of charges alleging pregnancy discrimination, and our investigations have revealed the persistence of overt pregnancy discrimination, as well as the emergence of more subtle discriminatory practices. This guidance will aid employers, job seekers and workers in complying with the Pregnancy Discrimination Act and Americans with Disabilities Act, and thus advance EEOC’s Strategic Enforcement Plan priority of addressing the emerging issue of the interaction between these two anti-discrimination statutes.”

Among other issues, the guidance discusses:

- The fact that the PDA covers not only current pregnancy but discrimination based on past pregnancy and a woman’s potential to become pregnant;
- Lactation as a covered pregnancy-related medical condition;
- The circumstances under which employers may have to provide light duty for pregnant workers;
- Issues related to leave for pregnancy and for medical conditions related to pregnancy;
- The PDA’s prohibition against requiring pregnant workers who are able to do their jobs to take leave;
- The requirement that parental leave (which is distinct from medical leave associated with childbearing or recovering from childbirth) be provided to similarly situated men and women on the same terms;
- When employers may have to provide reasonable accommodations for workers with pregnancy-related

impairments under the ADA and the types of accommodations that may be necessary; and

- Best practices for employers to avoid unlawful discrimination against pregnant workers.

Past Pregnancy: An employee may claim she was subjected to discrimination based on past pregnancy, childbirth or related medical conditions. The language of the PDA does not restrict claims to those based on current pregnancy. As one court stated, “It would make little sense to prohibit an employer from firing a woman during her pregnancy but permit the employer to terminate her the day after delivery if the reason for termination was that the woman became pregnant in the first place.”

A causal connection between a claimant’s past pregnancy and the challenged action more likely will be found if there is close timing between the two. For example, if an employee was discharged during her pregnancy-related medical leave (i.e., leave provided for pregnancy or recovery from pregnancy) or her parental leave (i.e., leave provided to bond with and/or care for a newborn or adopted child), and if the employer’s explanation for the discharge is not believable, a violation of Title VII may be found.

Discrimination Based on Intention to Become

Pregnant: Title VII similarly prohibits an employer from discriminating against an employee because of her intention to become pregnant. As one court has stated, “Discrimination against an employee because she intends to, is trying to, or simply has the potential to become pregnant is illegal discrimination.” In addition, Title VII prohibits employers from treating men and women differently based on their family status or their intention to have children.

Because Title VII prohibits discrimination based on pregnancy, employers should not make inquiries into whether an applicant or employee intends to become pregnant. The EEOC will generally regard such an inquiry as evidence of pregnancy discrimination where the employer subsequently makes an unfavorable job decision affecting a pregnant worker.

Additional information may be obtained by going to the EEOC website: <http://www.eeoc.gov/eeoc/newsroom/release/7-14-14.cfm>.

(This represents Part 1 of a two-part article, which will continue in October issue of Lagniappe.)

Louisiana-Mississippi students talk with orbiting astronauts during live event

Students from five area schools participated in a really long-distance call Sept. 2, talking with a pair of astronauts aboard the International Space Station during a live downlink at INFINITY Science Center. The NASA Office of Education hosted students from four Mississippi schools (South Hancock Elementary School in Waveland, Long Beach Middle School in Long Beach, Nicholson Elementary School in Picayune and Pearl River Central Middle School in Carriere) and one Louisiana school (Boyet Junior High School in Slidell). Selected students took turns asking questions of ISS Expedition 40 Commander Steve Swanson and Flight Engineer Reid Wiseman, who spoke on such topics as why they became astronauts, challenges of living in space, daily chores aboard the ISS, how long it takes to get dressed for a spacewalk and whether they could see the Superdome from space. Prior to the downlink, students participated in scheduled activities and presentations (bottom right photos), talked with Stennis Associate Director Ken Human (top right photo) and even enjoyed a chance to take "selfie" photos with a cutout of Apollo 13 astronaut Fred Haise (bottom left photo). More than 200 students participated in the event.

