National Aeronautics and Space Administration

LAGNIAPPE

John C. Stennis Space Center

Volume 11 Issue 7 www.nasa.gov/centers/stennis July 2016

Juno spacecraft enters orbit around Jupiter

After an almost five-year journey to the solar system's largest planet, NASA's Juno spacecraft successfully entered Jupiter's orbit during a 35-minute engine burn July 4.

"Independence Day always is something to celebrate, but today we can add to America's birthday another reason to cheer – Juno is at Jupiter," said NASA administrator Charlie Bolden. "And what is more American than a NASA mission going boldly where no spacecraft has gone before?"

Juno's principal goal is to understand the origin and evolution of Jupiter. With its suite of nine science instruments, the mission also will help scientists take a giant step forward in understanding how giant planets form and the role these titans played in putting together the rest of the solar system.

The Juno spacecraft launched on Aug. 5, 2011. More on the Juno mission is available online at: www.nasa.gov/juno. Follow the Juno mission to Jupiter on Facebook and Twitter at: https://goo.gl/CMhYuC and https://goo.gl/RjFU5i.

NASA tests RS-25 engine

A team of NASA, Aerojet Rocketdyne and Syncom Space Services engineers and operations conducted a test of RS-25 engine No. 0528 on July 14 on the A-1 Test Stand at Stennis Space Center. The test fell short of its scheduled 650 seconds. Initiated at 5:57 p.m., there was a minor issue with the test stand that triggered an early shutdown 193 seconds into the test. Facility control systems in place responded properly by shutting down the test in an orderly fashion. No issues were reported with the engine, and the next test is planned for August. (See page 2 article)

If there is one thing you can count on in July in south Mississippi, it is the heat. Whew, but it can get hot. I bet the Fourth of July weekend was hot enough to make even ole Sam McGee smile. Ark!

But if it is July, another thing you can pretty much count on is Stennis making headlines. July has been a pretty eventful month through the years.

As I recall, the Great Mosquito War of 1963 was waged in July. Most folk have never heard of that fierce engagement, but it was one of the largest aerial spraying operations ever conducted in this area. With the help of two specially equipped C-123 airplanes, NASA decimated the salt marsh mosquito population that was plaguing onsite construction workers. We still have skirmishes with the little critters, of course, but the dive-bombing terror of those days is gone.

On the other hand, most folk have heard about the great July 1969 adventure that saw NASA's Apollo 11 mission deliver the first humans to the surface of the moon. The mission was powered by rocket stages tested right here. What a great day that was for Stennis – and the whole world!

There also was July 1992, when Stennis conducted the 2,000th test firing of a space shuttle main engine. Seventeen years later, in July 2009, Stennis conducted the final test of a space shuttle main engine. And just two years after that, in July 2011, space shuttle Atlantis flew on the 135th – and final – shuttle mission.

That was the same month Stennis conducted the first J-2X rocket engine test on the A-2 Test Stand. A year later almost to the day, Stennis conducted a 1,350-second test of the J-2X engine. That still stands as a record for the A Test Complex.

Two years later, in July 2014, Stennis installed RS-25 engine No. 0525 on the A-1 Test Stand, marking the start of a developmental test series and a major milestone in future space exploration. These are the engines that will launch humans deeper into space than ever before, and it probably does not surprise you that we just conducted another developmental RS-25 test this month.

Ark! Just thinking about all that July activity makes me a little tired. I think it is time to find a nice spot for a nap. I wonder if the cafeteria delivers iced tea.

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
Contact info – (phone) 228-688-3749; (email) ssc-pao@nasa.gov; (mail) NASA OFFICE OF COMMUNICATIONS, Attn: LAGNIAPPE, Mail code IA00, Building 1100 Room 304, Stennis Space Center, MS 39529
Managing Editor – Valerie Buckingham
Editor – Lacy Thompson Staff Photographer – Danny Nowlin

RS-25 test series focuses on performance details

NASA continues to gather performance data with the July 14 test fire of the RS-25 engine at NASA's Stennis Space Center in Mississippi that will provide core stage power for the agency's new Space Launch System (SLS).

Initiated at 5:57 p.m. (CST), a minor issue with the test stand triggered an early shutdown 193 seconds into the test, scheduled for 650 seconds. Facility control systems in place responded properly by shutting down the test in an orderly fashion. No issues were reported with the engine, and the next test is planned for August.

Even with the early shutdown, the test will provide valuable performance data on the new engine controller and operating parameters needed for launch of the SLS. The SLS Program, Stennis and Aerojet Rocketdyne will work to determine if missed development points can be added to one of the four future tests in the series.

The test of RS-25 developmental engine No. 0528 on the A-1 Test Stand was conducted by a team of NASA, Aerojet Rocketdyne and Syncom Space Services engineers and operators. Aerojet Rocketdyne is the prime contractor for the RS-25 engines. Syncom Space Services is the prime contractor for Stennis facilities and operations.

"The RS-25 is a proven engine, but the SLS will demand it to operate at higher levels than ever before," Stennis Space Center Director Rick Gilbrech said. "Despite the early shutdown in this instance, the testing we're doing is proving its capabilities and allowing us to move forward with confidence. Every test is a step closer to powering missions deeper into space than we've ever flown. It's exciting to be a part of that progress."

RS-25 engines are upgraded versions of the main engines used to power 135 space shuttle missions from 1981 to 2011. The RS-25 engines for initial SLS flights are flight engines remaining from the Space Shuttle Program. The engines were all built for NASA by Aerojet Rocketdyne and are among the most proven in the world, having logged more than 1 million seconds of hot fire time during ground tests and missions. In addition to the upgraded space shuttle main engines, NASA also has contracted with Aerojet Rocketdyne to produce new RS-25 engines for use on SLS missions.

For the SLS, however, the engines will operate at unprecedented levels. Four RS-25 engines will fire simultaneously to provide 2 million pounds of thrust and operate in conjunction with a pair of solid rocket boosters to power the SLS at launch.

"This test series is really a continuation of our broader objectives to certify the engine to new start and run conditions for flight on SLS. Last year's developmental engine series was our first sample to answer the question, 'Does this engine handle the new SLS condition,' " said Steve Wofford, SLS Engines Manager at Marshall Space Flight Center in Huntsville, Alabama. "And the answer from that test series was a resounding, 'Yes, no problem.' This test series is really a second sample to continue that verification and green run our new flight controllers."

NASA engineers conducted a seven-test developmental series of the new performance levels on another RS-25 engine last year, also on the A-1 Test Stand at Stennis. Earlier this year, engineers installed and tested RS-25 engine No. 2059, one of engines that will power the SLS on Exploration Mission-2, the first crewed flight of the new spacecraft. Additional flight engines also will be tested at Stennis.

As with the previous developmental tests, the new series is focused on collecting data on the new engine controller and higher operating parameters. On space shuttle missions, the engines operated at 104.5 percent of power level capability. The SLS calls for the engines to operate at 109 percent of power level capability.

In addition, due to the size and nature of the SLS, the RS-25 engines must withstand colder liquid oxygen and engine compartment temperatures, higher propellant pressure and greater exhaust nozzle heating. Engineers also must ensure a new RS-25 engine controller is operating effectively. Performance specifications, such as percentage of thrust needed, are programmed into the controller prior to engine ignition. The controller then communicates the performance needs and monitors engine conditions to ensure that needs are met, controlling such factors as propellant mixture ratio and thrust level.

It is critical that the controller communicates clearly with the engine. The new series of developmental tests will run the RS-25 engine through a range of adaptations needed for the SLS. The engine will be started at various temperatures and propellant pressures. Performance of the programmed engine controller and how it is regulating engine thrust, propellant mixture and thrust adjustments will be carefully monitored in all of the test variations.

Three separate controllers will be tested later in the test series. New engine seals also will be tested during the initial two firings. Hydraulic shutdowns of the engine will be tested, as will varied engine chill procedures that prepare the engine for firing.

"This is important," A-1 Test Director Jeff Henderson said. "We have to know all of these details in order to fly safely. The engine and test stand teams have focused on including as many objectives as possible into the test plan. We want to collect as much data as we can so we know as much as we can about how this engine will perform."

FULFILLING NASA'S EXPLORATION MISSION

Stennis concludes successful AR1 preburner testing

Stennis Space Center and Aerojet Rocketdyne completed a successful round of AR1 preburner tests on Cell 2 of the E-1 Test Stand during the last week of June. Aerojet Rocketdyne achieved full-power during the critical AR1 preburner test series. The tests successfully verified key preburner injector design parameters for the company's AR1 engine that is being designed to end use of Russian engines for national security space launches. "We remain laser focused on the delivery of an AR1 engine in 2019," said Aerojet Rocketdyne CEO and President Eileen Drake. Preburner testing is the latest AR1 program milestone achieved on the AR1 program and marks another milestone in an engine development plan that began in 2014. The Stennis testing was a continuation of earlier preburner testing at NASA's Marshall Space Flight Center and Aerojet Rocketdyne's Sacramento, Calif. location. The company plans to conduct preburner and main injector testing at Stennis later this summer.

U.S. senator visits Stennis test stand

Stennis Space Center Director Rick Gilbrech (r) points out aspects of the B-2 Test Stand renovation process to U.S. Sen. Bill Nelson of Florida, during a June 24 visit to the site. Nelson is a longtime member of Congress and a major supporter of space exploration as a member of the Senate Committee on Commerce, Science and Transportation. During his visit, Nelson was briefed on work to prepare the B-2 stand to test the core stage of NASA's new Space Launch System, which is being developed to carry humans deeper into space than ever before. The testing will involve installing the actual flight stage on the stand and firing its four RS-25 engines simutaneously, just as during a launch.

Stennis conducts flow test of new high-pressure pump

Water flows freely at the B-1 Test Stand on June 20, marking a successful test of the new high-pressure industrial pump installed to facilitate testing the core stage of NASA's new Space Launch System (SLS). The new pump was installed to increase the flow capacity of the high-pressure industrial water system that supports rocket engine testing on the center's large test stands. Hundreds of thousands of gallons of water are needed to support a single test, and the upgraded system will be able to deliver as much as 335,000 gallons a minute at 225 psi. The water primarily is needed to cool the stand's flame trench during a test, but water also will be needed for vibro-acoustic suppression during SLS core stage testing on the B-2 Test Stand, requiring more flow than the previous pump system could deliver. The new 25,000-gallon electric pump was installed and networked with the existing diesel pumps to provide the extra flow. It was tested on the B-1 stand as renovation of the B-2 stand continues. Successful installation and testing of the pump marks another milestone in preparations for SLS core stage testing.

Journey's end – Saturn V S-IC-15 booster finds new home at INFINITY

The Saturn V S-IC-15 rocket stage arrives at Stennis Space Center on June 16, 2016, for transport to the INFINITY Science Center.

Originally meant to power a mission to the moon, the Saturn V S-IC-15 rocket stage was the last of the Saturn V first stages built in the late 1960s and early 1970s. It was built at Michoud Assembly Facility in New Orleans, then transported to Stennis Space Center for testing in September 1970. It returned to Michoud and remained there after its Apollo 19 mission to the moon was canceled. Last month, the stage made a return waterway trip to Stennis, then was transported a few miles farther to the INFINITY Science Center for permanent display. Stennis employees participated in a viewing event June 20 (top right photo). The following day, NASA, community and elected leaders gathered at INFINITY for an official dedication event. Among others, speakers included Stennis Director Rick Gilbrech (top left photo) and Apollo 13 astronaut Fred Haise (bottom left photo), who was scheduled to command the canceled Apollo 19 mission. Gov. Phil Bryant (bottom right photo) also attended and addressed event participants. Guests included area school children, who had an opportunity to sign a Saturn V poster and enjoy INFINITY exhibits.

ASC
NASA

Look! It's a bird! No! It's a plane!

Actually, it is four planes. Flying a quartet of T-38 trainer jets astronauts Victor Glover, Tyler "Nick" Hague, Andrew Morgan, David Saint-Jacques, Rex Walheim and Barry Wilmore, performed a flyover of Stennis Space Center test stands July 14. The flyover was performed just hours prior to an RS-25 test on the A-1 Test Stand. In this photo, the jets are shown in the upper left corner, flying in the distance with the B-1/B-2 Test Stand in the foreground. It is a symbolic flyover, since the B-2 Test Stand is being modified to test the core stage of NASA's new Space Launch System (SLS) vehicle, being developed to carry humans deeper into space than ever before. It is possible that all or some of the astronauts performing the July 14 flyover could fly on SLS missions.

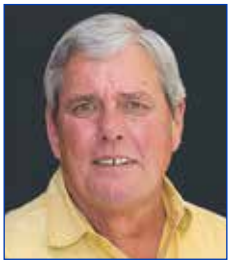
2016 NASA Honor Awards

Stennis Space Center Director Rick Gilbrech and James Free, deputy associate administrator for technical in the NASA Human Explorations and Operations Mission Directorate, presented annual NASA Honor Awards to Stennis employees during an onsite ceremony June 29.

Four 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.

David R. Keith received the NASA Exceptional Service Medal for his work as a senior procurement analyst. Keith has compiled a record of accomplishments that sets a standard for excellence. He is recognized for his expertise and influence of both direction and decisions pertaining to NASA's contract writing system. He is consistently sought out for advice on procurement issues and routinely mentors coworkers, cross-organizational personnel and procurement personnel from other NASA centers.

Ramona E. Travis received the NASA Exceptional Service Medal for her record of service over the course of 34 years. Trained as an environmental scientist and field technologist, Travis has conducted a range of field work and remote sensing missions, and served as university affairs officer for the Office of Education and as Stennis Technology Transfer Officer. She now works as the first Stennis chief technologist. In every role, Travis has worked to be a catalyst for educational and technological excellence.



Donald Griffith received the NASA Exceptional Service Medal for his 37 years of federal service, which included serving NASA as the Stennis supply and equipment management officer, transportation officer, property disposal officer, emergency preparedness coordinator, as well as other roles, including human resources specialist. Griffith's career is characterized by integrity and deliberate action. His legacy includes a tested and proven example of superb leadership.

Cynthia P. Canady received the NASA Exceptional Service Medal for 41 years of service to the agency. Since 2014, Canady has served as the first full-time manager of the center's NASA Exchange branch, directing and managing an unprecedented period of growth and expansion. Canady previously served in a range of roles at Stennis, including as the RS-68 project manager, a Project Directorate technical assistant, the center export representative and deputy chief of the Systems Integration Office.

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

Meredith K. Blasingame received the NASA Exceptional Achievement Medal for her work as an attorney and for instrumental contributions to the Stennis Office of Procurement during the Synergy Achieving Consolidated Operations and Maintenance process. As lead attorney for the SACOM effort, Blasingame provided stellar support, culminating in her successful defense of the agency's award decision. Blasingame also has passed the patent bar exam, providing Stennis with specialized capability for the future.

Jennifer C. Franzo received the NASA Exceptional Achievement Medal for her work as technical manager in the Office of the Chief Safety Officer. From 2012-15, she was instrumental to the Stennis performance of Resident Management Office responsibilities, negotiating several agreements to define critical operational and institutional policies. Franzo's leadership also was key in developing the Risk Based Assessment technique, a new model for performing propulsion testing at Stennis.

Carol Kellar received the NASA Exceptional Achievement Medal for her work as a senior contracting officer in the Stennis Program Management Support Division. Her proficiency and experience have been

See **AWARDS,** Page 14

AWARDS
Continued from Page 13

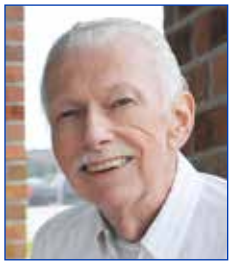
instrumental in the accomplishment of Stennis' propulsion test mission. Kellar has played a key role in the B-2 Test Stand restoration process and also provided critical support to the recent Synergy Achieving Consolidated Operations and Maintenance procurement team.

Stephen D. Rawls received the NASA Exceptional Achievement Medal for his service as a mechanical operations engineer and as mechanical lead for the E-2 test facility. Among other thing, Rawls led a successful chemical steam generator test campaign and SpaceX Raptor engine component test project. In addition to his E-2 work, Rawls also has been instrumental to the success of numerous other test programs at Stennis since his arrival to the center in 2008.

One Stennis employee received NASA's Exceptional Engineering Achievement Medal. This medal is awarded to government and non-government persons for exceptional engineering contributions toward achievement of the NASA mission.

Daniel C. Allgood received the NASA Exceptional Engineering Achievement Medal for his work as a computational fluid dynamics (CFD) subject matter expert. In that role, Allgood has compiled a record of enhancing the center's capabilities and in the application of state-of-the-art CFD techniques to support critical propulsion test projects. Specifically, Allgood has enhanced the center's CFD capabilities by incorporating computational code that addresses important physical phenomena.

Two individuals received NASA's Exceptional Public Service Medal. This medal is awarded to a person who is not a government employee but has made exceptional contributions to the mission of NASA.



Clifford Randy Holland Sr. received NASA's Exceptional Public Service Medal for his work as a consummate ambassador for Stennis. Since his retirement from U.S. Navy roles at Stennis in 1994, Holland has spent countless hours informing decision makers and the public about the center and the prominent role Mississippi has in the nation's space program. Through various efforts, he has proven himself a dedicated supporter of NASA, Stennis and its surrounding communities.

William G. Davis received NASA's Exceptional Public Service Medal for his 27-year career and his work as senior manager of systems development and test engineering for Aerojet Rocketdyne at Stennis. He has been instrumental in developing and mentoring personnel. He is also an avid supporter of local youth organizations and engages in educating and mentoring students. He provides guidance to local FIRST Robotics teams and is an active member of the University of New Orleans College of Engineering Advisory Council.

One Stennis employee received NASA's Exceptional Public Achievement Medal. This medal is awarded to government and non-government individuals for exceptional engineering contributions toward achievement of the NASA mission.

Kelly A. Boyd received the NASA Exceptional Public Achievement Medal for her innovative accomplishments as the A^{2}Research project leader for facilities Geographic Information Systems (GIS) at Stennis. Boyd led in the creation and implementation of the Facility Infrastructure Real Estate system, resulting in cost savings and improved facilities support. Her expertise and successful system strategy led to Stennis being designated as the principal NASA center for GIS activities.

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

Samone Faulkner received the NASA Early Career Achievement Medal for her work in the NASA Office of Communications. Faulkner is recognized for contributions to various center and agency programs. As the Stennis social media and internal communications manager, she has built a social media program that engages thousands of followers around the world. Faulkner also led in creation on the annual Girls Excited about Math and Science (G.E.M.S.) program, which has become one of Stennis' signature events.

See **AWARDS,** Page 15

AWARDS
Continued from Page 14

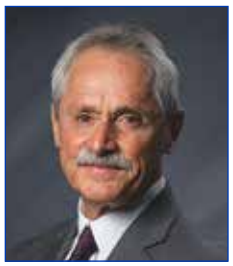
Aaron P. Head received the NASA Early Career Achievement Medal for his major contributions to the success of multiple propulsion test programs at Stennis. Head has worked as an instrumentation engineer on the J-2X test project, as well as the RS-25 rocket engine test project. He also led an upgrade of data acquisition and control systems at the E-3 Test Stand in support of the Morpheus engine test project. In all instances, Head has demonstrated a strong work ethic and ability to develop needed skills.

Adrianne P. Ragan received the NASA Early Career Achievement Medal for her record of achievement and critical support as a contracting officer in the Center Management Support Division. Ragan has demonstrated outstanding leadership and professionalism while providing sound analytical advice. Since 2009, she has contributed to the success of a broad spectrum of procurements, including the National Center for Critical Information Processing and Storage and the Facility Operations Services Contract.

Robert L. Southers received the NASA Early Career Achievement Medal for his high-level contributions ensuring safe operations at Stennis. As the E-1 Test Stand facility quality and safety engineer, he performs facility walkdowns to ensure safety compliance and works closely with the test director to ensure adherence to Stennis policies. Southers also has played a key role in other areas of safety, such as facilitating the center director's monthly Safety Management Review.

Richard F. Wear received the NASA Early Career Achievement Medal for his exceptional contributions to numerous commercial propulsion test projects. As an aerospace technologist in the Mechanical Design and Analysis Branch at Stennis, his work has impacted highly visible, relevant, commercial spaceflight propulsion projects. Head has excelled at providing critical, accurate thermal and fluid computational analyses on the highest-priority commercial propulsion test projects.

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



William J. Camus received the NASA Silver Achievement Medal for innovative contributions to various high-profile propulsion test projects and for his record of exceptional leadership and achievement. During his 15-year career, Camus has supported several commercial test projects on the E-2 and E-3 test stands, as well as the chemical steam generator test effort and the J-2X test project. Since 2014, he has worked as the lead electrical engineer for the SpaceX Raptor subscale injector test series at the E-2 Test Stand.

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

45 years
Larry Pigott

35 years
Laurence De Quay
Melissa Ferguson

30 years
Monica Allison-Ceruti
Clifton Arnold, Jr.
Cheryl Cuevas
Diana Heberling
Michael Killam
Mark Warren

25 years
David Keith
Douglas McNair
Bradley Messer
Vincent Pachel
Christine Powell
Carmen Ramirez-Pagan
Michael Rewis
Paul Rieder III
Ronald Rigney
Gary Taylor
Robert Traill

Group Achievement Awards

Advance Exploration Systems Team
NASA
Jorge Figueroa
Randolph Holland
Justin Junell
Ke Nguyen
Harry Ryan
Mark Turowski
Mark Walker
Kim Wilkins

E-3 Project Team
NASA
Daniel Allgood
Robert Bruce
Craig Chandler

See **AWARDS,** Page 16

AWARDS
Continued from Page 15

Jared Grover
Andrew Guymon
Melba Harris
Aaron Head
Jason Hopper
Melissa Huggins
Bridget Jones
Daniel Jones
Truc Le
Raymond Nichols
Aster Pastoral
Stephen Rawls
Gary Taylor
Peter Tran
Derek Zacher

Contractor Support
Alan Alderman
Glen Beech
Gary Bennett
Jeffrey Blevins
Byron Bordelon
Brian Corr
Mark Corr
James Cuevas
Richard Ferrill
Anthony Fleming
Dale Green
Patrick Guidry
Charles Hariel
Scott Hariel
Rubin Herrin
Robin Jones

Group Achievement Award – Advance Exploration Systems Team

Chadwick Ladner
Jackie Ladner
Jody Ladner
Dion Lee
Joseph Lizana
Jacob McKinley
Jimmy Meitzler
Kenneth Morgan
Dennis Necaise
Chad Northrop
Kevin Parker
Grady Saunders
John Searles
Raymond Seymour
Therman Smith
Timothy Smith
Adam Spiers
Thomas Wolfe

Group Achievement Award – E-3 Project Team

E-2 SpaceX Raptor Team
NASA
Wendy Bateman
Robert Bruce
William Camus
Craig Chandler
Andrew Guymon
James Hamilton
Bartt Hebert
Paula Hensarling
Randolph Holland
Melissa Huggins
Justin Junell
Truc Le
Travis Martin
Thomas Meredith
Christopher Mulkey
Stephen Rawls
Steven Taylor
Richard Wear
Derek Zacher
Christine Zeringue

Contractor Support
Alan Alderman
David Alston
Kelly Austin
Glen Beech
Gary Bennett
Jesse Bilbo
David Blansett
Jeffrey Blevins
Van Bolden
Byron Bordelon
Raymond Breault

See **AWARDS,** Page 17

AWARDS
Continued from Page 16

Terrence Burrell
Samuel Clay
Nicholas Coleman
Brian Corr
Mark Corr
Steven Costello
James Cuevas
Billy Davis
Tony Dilorenzo
Jonile Dumas
Willie Ellis
Jimmy Everett
Richard Ferrill
Adam Fulks
Dwayne Garcia
Rogers Gipson
Dale Green
Patrick Guidry
Kenneth Hancock
Charles Hariel
Scott Hariel
Lawrence Haselmaier
Kenneth Hawkins
Wilmon Henderson
Benjamin Hendrick
Rubin Herrin
Petter Hobgood
David Hodge
Michael Hodge
Alan Hornke
Gerald Howard
Curtis Hyatt
William Ivey

Group Achievement Award – E-2 SpaceX Raptor Team

Kurt Jarrell
Timothy Jarrell
Nathaniel Jewell
Daniel Jocks
Edward Johnson
Willie Johnson
Micah Jones
Robert Jones
Philip Kopfinger
Chadwick Ladner
Gregory Ladner
Jackie Ladner
Jody Ladner
Daniel Lambert
Dion Lee
Harlie Lee
Joseph Lesieur
Joseph Lizana
Steven Lossett
Judy Lumpkin

Joey Malley
Bruce Matthews
Kenneth McCormack
Paul McKean
Jacob McKinely
Jimmy Meitzler
Robbie Miller
Timothy Miller
Laurie Mills
Mark Mills
Marlon Mitchell
Timothy Mitchell
Kenneth Morgan
Dennis Necaise
James Necaise
Dean Newell
Chad Northrop
Randy Overton
Kevin Parker
Christopher Quinn
Haley Quinn
Bobby Rodriguez
Harold Ross
John Searles
Raymond Seymour
David Slavinsky
Paul Smith
Therman Smith
Timothy Smith
Darrin Spansel
William Spansel
Billy Spence
Joshua Spence
Adam Spiers
Jonathan Strickland

Group Achievement Award – B-2 Test Stand Lead Exposure Assessment Team

See **AWARDS,** Page 18

AWARDS
Continued from Page 17

Michael Theriot
David Thomas
Terry Wactor
Gregory Walls
Roger Walters
Rodney Wilkinson
Anita Wilson
Thomas Wolfe
Robert Zar
Rickie Zerkus

B-2 Test Stand Lead Exposure Assessment Team
NASA
Sallie Bilbo
Valerie Buckingham
Mary Byrd
Christopher Carmichael
Pamela Covington
Freddie Douglas
Earnest Foerman
Robert Gargiulo
Sandra Jones
David Lorance
Claude Sanders
Robert Southers
Grant Tregre
Katrina Wright

Contractor Support
Barry Autin
Arnold Baldwin
Joshua Craft
Rachel Cranford

Group Achievement Award – Audit Kaizan and Implementation Team

Latoya Dean
Cheryl Nelson
Tuyet-Anh Nguyen
Marcia Stewart
Brian Walters

Audit Kaizan and Implementation Team
NASA
Rae Anderson
Kathy Cooper
Ralph Gonzalez
Rachel Harrison-Woodard
Son Le
Karen Patton
Carmen Ramirez-Pagan
Kamili Shaw
Robert Southers
Neil Toupin
Karen Vander

Contractor Support
Daryl Kosturock
James Mirandy
Steven Martin
Paul McKean
Sheila Sullivan
Sheila Wilson

Laboratory Services Contract Acquisition Buying Team
NASA
Kimberly Driebergen
Bruce Farner
Eugene Flores (MAF)
Marguerite Jones
Jeanne Koger
Gerald Norris
Leanne Olson
Barry Robinson
Burnley Wigley

Group Achievement Award – Laboratory Services Contract Acquisition Buying Team

Synergy Achieving Consolidated Operations and Maintenance Source Evaluation Board
NASA
Michael Allen (MSFC)
Monica Allison-Ceruti
Karen Andres (HQ)
Alec Banks
Meredith Blasingame
Keith Brock
Christopher Carmichael
Christi Dame (MSFC)
Stanley Gill
Chiquita Goodloe-Suggs (MSFC)

See **AWARDS,** Page 19

AWARDS
Continued from Page 18

Robert Gravolet (MAF)
Robert Harris
Marvin Horne
James Huk
David Iosco (MSFC)
Michael Kersanac
Amy Langdale
Deborah Lyon (HQ)
Richard McCarthy (HQ)
Bradley Messer
Deborah Norton
Kimberly O'Donnell (MSFC)
Keith Savoy (MAF)
Jerry Seeman (MSFC)
Vanessa Turner (MSFC)
Karen Vander
Robert Watts
Patricia White
Kim Whitson (MSFC)

Group Achievement Award – Synergy Achieving Consolidated Operations and Maintenance Source Evaluation Board

High Pressure Industrial Water Modernization Team
NASA
Henry Baker
Andrew Bracey
Randall Canady
Gregory Carmouche
Laurence De Quay
Jason Edge
David Failla
Robert Gargiulo
Jenette Gordon
Bartt Hebert
Charles Heim
Jeffrey Henderson
Carolyn Kennedy
Kanokwan Kooamphorn
Son Le
David Lorance
Aaron Mannion
Megan Martinez
Raymond Nichols
Scott Olive
John Pazos
Michael Rewis
Thomas Rich
Ronald Rigney
Ryan Roberts
Debra Rushing
Joseph Schuyler
Karma Snyder
Gary Taylor
Steven Taylor
Casey Wheeler
Katrina Wright
Christine Zeringue

Contractor Support
Richard Aguillard
Alan Alderman
David Alston
Glen Beech
James Bennett
Marvis Burkett
Brian Byrd
Russell Cameron
Kirby Campbell
Cheley Carpenter
Anna Carver
Steven Costello
Eric Cranford
Rachel Cranford
Timothy Critzer
Billy Davis
John Davis
Douglas Dike
William Dunhurst
Barry Edgecombe
Daniel Ezell
Glenn Faciane
Leon Faciane
Justin Fairley
Bradley Favre
Kristie Foster
William Fowler
Kerry Gallagher

Group Achievement Award – High Pressure Industrial Water Modernization Team

See **AWARDS,** Page 20

AWARDS

Continued from Page 19

Philip Geraci
Eric Goller
Patrick Guidry
Shannon Hariel
Andrew Hill
Hans Holzinger
Jeret Howard
Robert Hoyt
William Ivey
Anthony Jackson
Nathaniel Jewell
Bill Jones
Micah Jones
Robert Jones
Jordan James
Yancey Jordan
Travis Kennedy
Daryl Kosturock
Dustin Ladner
Jackie Ladner
Rinty Ladner
Daniel Lambert
John Lindsay
Curtis Lockwood
Frank Lorusso
Ira Lossett
Daniel Manieri
Michael Marodis
Keith Marx
Richard Mayer
Julia McGinnis
Benjamin McGrath
Robbie Miller
William Moran
Nicole Narvaez
Tuan Ngo
Halela Nguyen
Chad Nicholas
Chad Northrop
Carley Odom
Ryan Olsen
Randall Pigott
Haley Quinn
Ral Raboteau
Edward Renz
Kenneth Robinson
Rodney Sampson
Craig Shaw
Michael Shaw
Michael Sheffield

Group Achievement Award – Facility Maintenance and Modernization Project Team

John Shupe
John Simon
Cynthia Simpkins
Billy Smith
John Smith
Timothy Smith
Teresa Sodaro
Frances Songy
Charles Spiers
Joshua Stevens
Daniel Tarter
David Thomas
Rodney Valdes
Brian Walters
Ryan Weir
Benjamin Weisel
Mark Wittorf
John Wolverton
Robert Zar

Facility Maintenance and Modernization Project Team
NASA

Henry Bakker
Christoffer Barnett-Woods
Andrew Bracey
Thomas Carroll
David Carver
Jack Conley
Daniel Goad
Andrew Guymon
Roderick Haley
Aaron Head
Wendy Holladay
Scott Jensen
Bridget Jones
Joseph Lacher
Megan Martinez
Ryan McKibben
Aster Pastoral
Harry Ryan
Marc Shoemaker
Dwayne Stockstill
Janice Tasin
Mark Turowski
Derek Zacher

Contractor Support

Chad Albritton
Byron Bordelon
James Cain
Brian Corr
Mark Corr
Ronald Dartez
Billy Davis
Leland English
Bradley Favre
Adam Fulks
Dustin Hariel
Robert Herrin
Peter Hobgood
Curtis Hyatt
William Ivey
Rickey Jones
Travis Kennedy
Gregory Ladner
Jody Ladner
Lavell Ladner
Lisa Ladner
Rinty Ladner
Hooper Lavigne

See **AWARDS,** Page 21

AWARDS

Continued from Page 20

Carl Lee
Harlie Lee
Joseph Lesieur
Dell Loveless
Bruce Matthews
Jacob McKinley
Jimmy Meitzler
Marlon Mitchell
Valerie Naquin
Eugene Necaise
Chad Parker
Alvin Pittman
Christopher Quinn
John Searles
Robert Sheaffer
John Simon
Michael Slade
Stacey Smith
Joseph Spiers
Roberto Van Peski
Terry Wactor
Ryan Weir
Roland Wheat
Raymond Williams
Thomas Wolfe

RS-25 Engine Test Activities Team

NASA

Kenneth Albright (NSSC)
Sharon Beard (NSSC)
Sallie Bilbo
Nicole Borchert
Valerie Buckingham
Chris Carmichael
Gregory Carmouche
Craig Chandler
Pam Covington
Dawn Davis
Donna Dubuisson
Robert Ek (KSC)
Pat Fairley
Samone Faulkner
Joshua Finch (KSC)
Earnest Foerman
Robert Gargiulo
Andrew Guymon
Glen Guzik
Rachel Harrison-Woodard
Maguerite Jones

Group Achievement Award – RS-25 Engine Test Activities Team

Tessa Keating
Sandra Jones
Jessie Lamont
Truc Le
Doug LeMere (NSSC)
Jeffrey Lott
Ronald Magee
Travis Martin
Byron Maynard
Thomas Meredith
Rochelle Necaise (NSSC)
Rosa Obregon
Vince Pachel
Stephen Rawls
Ronald Rigney
Ryan Roberts
Karen Robinson Patton
Delton Rodriguez
Eric Ross
Harry Ryan
James Ryan
Joe Schuyler
Kamili Shaw
Justin Smith
Theresa Smith
Robert Southers
Kelly Sullivan
Gary Taylor
Peter Tran
Grant Tregre
Nyla Trumbach
Maury Vander
Darrell Varner
Kenneth Volante
Lavaniel Ward
Derek Zacher
Christina Zeringue

Contractor Support

Dale Acker
Jack Allen
Mike Badon
Jeffrey Barros
Robert Cales
Mickey Carr
Michael Carter
Robert Cash
Shane Corr
Sandra Dedeaux
Greg Garrett
Lisa Goins
Lance Grogg
Adrian Hart
Carl Henry
Curtis Hyatt
Bertha Jackson
Ronald Jackson
Curtis Johnson
Manning Jones
Paul Krause
Gregory Ladner
Angela Lane
Gary Lee
Harlie Lee
Randall Lee
Joe Lesieur
Samuel Lockhart
Robert McCord
Rodney McDonald
Donna Mellott
Jennifer Melton
James Mirandy
Danny Nowlin

See **AWARDS,** Page 22

AWARDS

Continued from Page 21

Nell Pickett
Robert Porter
Shelby Russell
Selwyn Rutherford
Taryn Sciambra
Clyde Sellers
Donald Smith
Dustin Smith
Chadwich Spence
Johnie Spence
Marcus Spiers
William T. Stewart
William H. Stewart
Jonathan Strickland
Stacy Tarter
Calvin Thompson
Sheila Sullivan
Edgar Waguespack
Ramon Walker
Essie Washington
Karl Wilcox
Danny Woods
Denise Woods
Daniel Zinc

NASA ESSENCE Festival Staff

NASA

Monica Allison-Ceruti
Clifton Arnold
Sallie Bilbo
Gamaliel Cherry (LARC)
Valerie Buckingham
Howard Conyers
Pamela Covington
Dawn Davis
Anita Douglas
Freddie Douglas
Alex Elliot
Katrina Emery
Ladarian Faulkner
Mark Femminineo (KSC)
Joshua Finch
Earnest Foerman
Lou Garcia (KSC)
Daniel Goad
Venetie Gonzales (NSSC)
Joseph Grant (HQ)
Corey Harrell (MSFC)

Group Achievement Award – NASA ESSENCE Festival Staff

Phillip Hebert
Wendy Holladay
James Hull (HQ)
Melinda Jackson (NSSC)
Tessa Keating
Allecia Kimble
Kathryn Lambert
Kimberly Lewis-Bias (AFRC)
Angela Lovelady (MSFC)
Zachary Lucas (GRC)
Thomas Mack (GRC)
Stanley McCaulley (MSFC)
Ola Metcalfe (MSFC)
Troy Miller (NSSC)
Priscilla Moore (KSC)
Rosa Obregon
Bonita Oliver
Kevin Poe (NSSC)
Robert Reid (GRC)
James Ryan
Joy Smith
Robert Southers
Angela Storey (MSFC)
Thomas Mack (GRC)
Orlando Thompson (GRC)
Janet Washington (MSFC)
Bobby Watkins (MSFC)
Danny Woodard (HQ)

Contractor Support

Michael Brandon (GRC)
Mera Burton (AFRC)
Antoine Butler (HQ)
Stephen Culivan
Kevin Durham (HQ)
Breeana Forternberry
Jade Grimes
Brandon Hargis
Mary Harness (AFRC)
Kristina Hendrix (MSFC)
Tyler Huse
Kenta Janet
Abbie Johnson (MSFC)
Roosevelt Johnson (HQ)
Marcia Joseph (HQ)
Joseph Lesieur
Wendy Lesieur
Darryl Ladner
Donna Lew
Chris Lew
Marla Lew
Alex Lew
Corey Orr
Claire Picou
Brian Remond
Diego Rodriguez (KSC)
Carla Rosenberg (MSFC)
Ben Rowley
Clark Rowley
Taryn Sciambra
Allen Sorrell
Jonathan Strickland
Dara Touma (KSC)
Joe Weems
Mary Wilson
James Wood (KSC)
Carla Rosenberg
John Yu

See **AWARDS,** Page 23

AWARDS

Continued from Page 22

Special Center Recognition Awards

Director's Certificate of Appreciation
Ryan E. Roberts
Charles Swan
Sheila Wilson

Peer Award
Sarah M. Maine

NASA Space Flight Awareness Management Award
Steven A. Taylor

Special Agency Recognition Awards

Agency Capability Leadership Team
Daniel Allgood
James Cockrell
David Coote
Freddie Douglas
Rachel Harrison-Woodard
Phillip Hebert
Wendy Holladay
Son Le
Harry Ryan

Order to Pay ESRS Release Project
Kim Avery

NCCIPS Transition
Monica Ceruti
Wendy Bateman
Greg De Felicibus
Patricia Fairley
Arlen Griffey
Charles Hallal
Dorsie Jones
Mansour Muhsin
Timothy Pierce
Debra Rushing
Kelly Sullivan
Edward Toomey

The Environmental and Energy Funcational Review Stars
Adam Murrah

Space Flight Awareness Award for the Desified Propellant Tiger Team
David Coote

NASA honors Stennis employees

Astronaut James Kelly (front row, l) stands with several recipients of NASA's 2016 Space Flight Awareness Awards following a June 27 ceremony in Ogden, Utah. In recognition of their flight program contributions, honorees traveled to Utah to tour Orbital ATK facilities and view the Qualification Motor-2 static test firing of the rocket booster being developed for NASA's new Space Launch System. Honorees included three Stennis Space Center employees and one Michoud Assembly Facility employee. Honorees are listed below with their NASA center and company designation: (Front row, l to r) Kelly, David Pletcher (Ames Research Center, NASA), Tamora Blaue (Defense Contract Management Agency, ATK Launch Services), Lise Crowe (NASA Engineering and Safety Center, NASA), Julie Schonfeld (Ames, NASA); (Back row, l to r) Andy Guymon (Stennis Space Center, NASA), Dr. Keith Ponchot (Michoud Assembly Facility, A^{2}Research), Andy Jones (Stennis, Aerojet Rocketdyne), Dave Smith (Stennis, Syncom Space Services) and Schonfeld's husband, Brian.

NASA business leader visits Stennis

NASA Associate Administrator Glenn Delgado (r) visited Stennis Space Center on May 17 to participate in the 2016 High-Tech Small Business Forum. The forum is a collaborative effort involving Stennis, the Mississippi Enterprise for Technology and members of the Stennis Business Consortium. It focuses on providing federal agencies, local institutions and businesses to exchange information about small business issues, news and procurement opportunities. During the forum, several local small business representatives had an opportunity to visit with Delgado and present their capabilities. Delgado also had a chance to tour various Stennis and resident agency facilities. Shown above with Delgado is (l to r): Lance Nowacki of Healtheon, Robert Ingram of Mississippi Enterprise for Technology and Jas Walia of Healtheon.

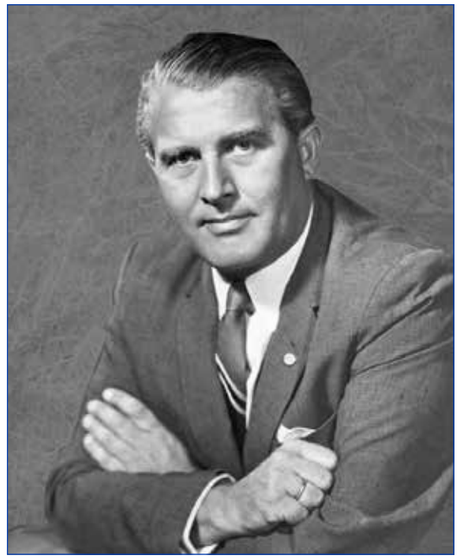
1970s: Dr. (Wernher) von Braun discusses the future in space (part II)

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.

In the History Office collection is a copy of an undated Q&A titled, *Dr. von Braun Discusses the Next Decade in Space*. Dr. von Braun, a German rocket scientist, served as the first director of Marshall Space Flight Center in Huntsville, Alabama, and retired as NASA's deputy associate administrator in 1972. The first part of this interview was presented last month. The second – and concluding – part of the interview appears in this month's issue.

Q. You specifically said a manned Mars landing. How about flights to the vicinity of Mars?

A. It takes quite a while to get close to Mars for even a few hours. And I don't think that man could find out in a short fly-by a lot more than automatic instrumentation could. The men would probably be busy taking pictures all the time in order to preserve the records. And, if that's all they're doing, then we might as well take the pictures automatically. I think men on Mars, just like men on the moon, will really become very important once they're down there on the surface as explorers.



Wernher von Braun

Q. What technological developments are needed for the second decade in space?

A. Well, the shuttle, of course, requires many advances in the field of aerodynamics, in the design of reusable vehicles that can fly to orbit 100 times and return and go through the heating/pressurization cycles of the cabin 100 times without fatigue problems. It is loaded with technological challenges of this kind, none of which I think is insurmountable. But all require that a lot of homework be done before we have assurance that the thing will hang together after 100 flights. It's a pretty challenging thing. In the shuttle, we will try to utilize the next plateau of technology all the way through.

Q. What do you consider to be the most critical items, the ones that will determine the pace of the program?

A. The booster element, or first stage of the shuttle, is probably the most straightforward. It doesn't reach the very high orbital velocity that the upper stages reach. It is more forgiving with respect to overweight of the structure and under-performance of the engines. The orbiting element is the more demanding of the two. Other than that, I would say the shuttle probably has as many difficulties as the Apollo program had in 1961, but 1 don't think I could single out any one thing that will make or break it.

Q. You must be putting great stress on testing this time. Won't contractors have to guarantee that parts will operate for an extended period rather than a relatively short time?

A. Yes, I think there will be quite a bit of sample testing. For example, before you build a wing of the orbiter, you may want to build a full scale test panel of the wing, and subject this test panel through 100 cycles of the typical reentry environment to make sure that it holds together. There will be lots of that.

Q. Isn't there a requirement on the contractors that the shuttle must be ready to refly within two weeks? Are you stipulating how much replacement of parts, if any, they can make?

A. The desire to reduce the turn-around time to something like two weeks reflects pretty clearly that if you have too much rebuilding to do, you haven't gotten a viable package. It's in the nature of the shuttle – just like an airliner – that it loses money while sitting on the ground. And the more you fly it, the more cost-effective it will be. To make the shuttle cost-effective, superior to the throw-away systems we have today, you have to insist on short turnaround times. And this means simply that, with the exception of a few replacements in critical areas, you had better give the thing more life.

In a normal airplane, for example, a tire must be exchanged after 20 landings or so. So, here you have a part where the industry accepts refurbishing of some equipment. In the shuttle, we may accept ablative leading edges or some such a thing that we would replace like tires in an airplane. But if we go way beyond that, then it would really defeat its own purpose.

Q. What kind of a lifetime do you see for the shuttle? A decade? Or two? Or three?

A. Oh, I think the shuttle can be very useful for 20 years.

Q. Do you see any developments in the next decade in the area of booster rockets?

A. Well, of course, the shuttle and its booster will have the most modern type rocket propulsion that we could think of. Most stages of the shuttle will be powered with liquid hydrogen and liquid oxygen.

Q. Aren't you looking forward to the nuclear engine yet?

A. Yea. But we are not planning to fly any nuclear engines from the surface of the Earth at all. The Nerva nuclear rocket is planned to be lit up only in orbit. Its main field will be deep space transportation.

Q. Can you estimate the cost of some of these things that you think you'll be doing in space during the next decade?

A. Well, the greatest uncertainty is probably the question of continued inflations. I'd be much more comfortable if I could answer your question in terms of percentage of the gross national product rather than in terms of dollars, because when I see what the dollar buys today, compared to what it bought when we started the Apollo program, it's just two different worlds. But the shuttle should only cost a small fraction of the $23 billion it cost to build Apollo.

Q. Could you put a specific figure on it? There have been estimates of $6 billion.

A. I'm not saying that this is entirely off, but I can't confirm it either. I guess it's probably as good a guess as anyone can make today.

Aerojet Rocketdyne to expand operations at Stennis Space Center

Aerojet Rocketdyne announced July 11 that assembly and testing of its AR1 advanced liquid rocket engine will take place at Stennis Space Center in Mississippi. As a result, the company is expanding its Center of Excellence for Large Liquid Rocket Engine Assembly and Test there. The AR1 is being developed to support the country's mandate to eliminate U.S. reliance on the Russian RD-180 engine for national security space launches by 2019.

Aerojet Rocketdyne's facility at Stennis is already home for assembly and testing of the RS-68 engine that powers the Delta IV family of launch vehicles, and the RS-25 engine that will power NASA's Space Launch System – America's newest heavy-lift launch vehicle in development, set to be the most powerful rocket in the world. As part of the buildup for RS-25 assembly and testing, Aerojet Rocketdyne is locating its RS-25 low-pressure turbopump assembly to Stennis.

"I am very pleased to announce our plans for expansion of Aerojet Rocketdyne's presence in Mississippi," said Aerojet Rocketdyne CEO and President Eileen Drake. "We have had a long history of partnering with Stennis to power the nation into space. Assembly and testing of the AR1 at NASA Stennis adds to that legacy. This plan will establish Aerojet Rocketdyne's facility at NASA Stennis as the company's Center of Excellence for Large Liquid Rocket Engine Assembly and Test and solidify NASA's Stennis Space Center as the nation's premier rocket engine test facility. I look forward to continuing to work on this expansion with Chairman (Thad) Cochran, Senator (Roger) Wicker, Congressman (Steven) Palazzo, and the rest of Mississippi's Congressional delegation, as well as with Governor (Phil) Bryant and his team."

Currently, Aerojet Rocketdyne, located at Stennis since the center's inception, employs 130 people at its state-of-the-art facility. That number is expected to grow to more than 200 as development and production of the AR1 engine continues and as the RS-25 engine continues testing and restarts production.

Members of the Mississippi Congressional delegation welcomed Aerojet Rocketdyne's announcement. "Mississippi's long partnership with U.S. space agencies and the industry has led to advances in science, technology and national security. I am pleased that Aerojet Rocketdyne is expanding its activities at Stennis Space Center to support Defense Department space launch activities," said U.S. Sen.Thad Cochran (R-Miss.), chair of the Senate Appropriations Committee.

"Stennis Space Center is home to some of the world's most advanced rocket and engine technologies," U.S. Sen. Roger Wicker (R-Miss) said. "I am pleased that Aerojet Rocketdyne has chosen to expand its operations in Mississippi, which will strengthen our nation's aerospace industry and bring more good-paying jobs to the Gulf Coast. Establishing this new Center of Excellence is vital to reducing our reliance on foreign-made rocket engines."

Aerojet Rocketdyne is a world-recognized aerospace and defense leader that provides propulsion and energetics to the space, missile defense and strategic systems, tactical systems and armaments areas, in support of domestic and international markets. For more regarding the company, visit online at: www.Rocket.com and www.AerojetRocketdyne.com.

Office of Diversity and Equal Opportunity

Diversity of thought invaluable in the workplace

The following article was written by Monica Allison-Ceruti, Stennis Chief Counsel

I am a voracious reader (e.g., three to four books a month). As a 10-year-old child, I routinely walked 1.4 miles (yes, I Mapquested the distance) to the Thomas Crane Public Library, North Quincy Branch, North Quincy, Massachusetts, just to read and check out books. I always checked out the maximum number of books, three. Although lately, I have developed a new favorite activity, crossword puzzles. I buy the magazines that contain 120 crossword puzzles and spend hours completing the puzzles. But books are still my number one passion. So, it should not come as a surprise that shortly after arriving here at Stennis, I, along with Lonnie Dutreix, started the Stennis Book Club.

The Stennis Book Club is comprised of a diverse group of individuals who are of various backgrounds, ethnicity, gender, age, national origin, education, religion, etc. All of us have diverse perspectives, work experiences, lifestyles and cultures, which generally shape how we think and process information; we all think and process information differently. Clearly, the way we think is a reflection of our inner diversity and who we are.

There are three requirements for Book Club membership: be open to reading all genres of books, be open-minded (in other words, don't stifle conversations) and leave all of the "stuff" that gets in the way of having honest and sometimes hard or courageous discussions at the door.

Needless to say, we have robust and stimulating conversations, each of us having a unique and different perspective or interpretation of the book's subject matter or meaning. Listening to each other provides us with more insight into the subject matter and each other, which chips away at barriers, including stereotypes and biases (both conscious and unconscious) that sabotage effective communication and relationships. The real winner here, however, is diversity of thought.

According to an article written by Anesa Diaz-Uda, Carmen Medina and Beth Schill, entitled *Diversity's New Frontier, Diversity of Thought and the Future of the Workforce*, cultivating diversity of thought in the workplace can boost innovation, stimulate creativity and increase efficiency. Diversity of thought guards against groupthink and expert confidence, a tendency in groups to focus on group conformity, oftentimes at the expense of making good decisions; helps to increase the scale of new insights; and helps organizations identify employees who can best tackle the most pressing problems according to the article.

What I know for sure is that workplace diversity is here to stay. And if we want diversity of thought, which will enable NASA and Stennis Space Center to stay relevant in the 21st century and beyond, fulfill its strategic goals and objectives and continue to inspire the next generations of explorers, we have to follow the lead of the Stennis Book Club and be open-minded, encourage conversations and ensure employees who have different perspectives, experiences, lifestyles and cultures feel comfortable being themselves. We have to fully embrace all aspects of diversity and inclusion.

Office of Diversity & Equal Opportunity

Mission and Vision

Mission: *To make equal opportunity and the appreciation of diversity an integral part of all NASA SCC programs.*

Vision: *To set an example of diversity appreciation and teamwork for NASA SSC; To be an excellent resource for our customers, stakeholders, and partners; To have a sustained impact on NASA SSC and beyond.*

Hail & Farewell

NASA bids farewell to the following:

Meredith Blasingame	Attorney Advisor	Office of the Chief Counsel
Rebecca Junell	AST, Theoretical Simulation Tech	Engineering and Test Directorate

NASA welcomes the following:

Tom Gutierrez	AST, Experimental Facility Development	Center Operations Directorate
Robert Vickers	Student Trainee (Legal)	Office of the Chief Counsel

NASA Week in NOLA

NASA focuses on space and Journey to Mars at 2016 New Orleans Essence Music Festival

NASA and Stennis Space Center hosted a variety of outreach and education activities during the 2016 New Orleans ESSENCE Music Festival. Activities were conducted June 29 through July 3. Offerings included displays and information on a variety of space topics at the Morial Convention Center, site of daily ESSENCE Fest activities; hands-on exhibits at the Audubon Aquarium of the Americas; a photo-and-autograph session with astronaut Victor Glover; and workshop presentations for 4th-8th grade educators. NASA personnel also participated in panel discussion presentations during the festival, including Alotta Taylor (top center photo), director of the strategic integration and management division of the NASA Human Exploration and Operations Mission Directorate; and Sumara Thompson-King (bottom right photo), NASA general counsel.

NASA Administrator Charles Bolden (top left photo) and astronaut Victor Glover joined in a discussion of space exploration efforts during an ESSENCE Fest presentation July 2. Bolden also traveled to the INFINITY Science Center early in the day to speak with media about NASA's progress in its journey to Mars (center photo). Glover spent much of the day interacting with young festival participants, who also had a chance to enjoy interactive displays at the NASA booth.