



The Marshall Star

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Director's Corner: Day of Remembrance

Last week, those of us here at Marshall stopped for a few moments to remember and honor very special members of the NASA family. Our heartfelt focus was on our fallen astronauts.

As part of NASA's annual Day of Remembrance, we paused to remember and appreciate the lives of those extraordinary explorers who perished tragically on Apollo 1, Challenger STS-51L, and Columbia STS-107. We also remembered their families still living with those losses.

We remembered the other astronauts who have passed away. Their pictures are on a remarkable display in the lobby of Building 4200. It will be in place until Friday, February 7, and I encourage you to make time to see it.

We are thankful for former astronaut James (Jim) Halsell Jr., who joined us to commemorate those we miss, and we especially appreciate his comments reminding us that we must carry on the nation's exploration mission.

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Marshall Team Celebrates Work on Orion's First Test Flight

By Megan Davidson

On Jan. 30, NASA Marshall Space Flight Center and Orion team members, industry partners and other special guests celebrated the contributions the center has made toward Orion's first mission to space. The stage adapter that will connect the Orion spacecraft to a Delta IV rocket for Orion's maiden flight, Exploration Flight Test (EFT)-1, is complete. The Flight Programs & Partnerships Office at the Marshall



Larry Gagliano, right, shows Col. William Darby, Commander of the Fox Army Health Center, a model of the Orion Launch Abort System (LAS). The LAS, positioned on a tower atop the crew module, activates within milliseconds to propel the crew module to safety in the event of an emergency during launch or climb to orbit. (NASA/MSFC/Emmett Given)

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Marshall Center Remembers NASA's Fallen Heroes

Veteran astronaut Jim Halsell, left, and Marshall Space Flight Center Deputy Director Teresa Vanhooser light a memorial candle at the center's Day of Remembrance ceremony hosted by Center Director Patrick Scheuermann in the lobby of Building 4200. The Jan. 30 event recognized the sacrifices made by those who lost their lives while pursuing NASA's mission of space exploration. (NASA/MSFC/Fred Deaton)



Halsell, left, and Scheuermann also joined students from Challenger Elementary School -- who were attending Space Camp last week -- for a public memorial ceremony at the U.S. Space & Rocket Center. "Today we remember the lives and sacrifices of astronauts who lived for America's space program and set an example for all of us," Scheuermann said. "With gratitude we honor the passing of these heroes and friends. With humility we celebrate their lives. As we remember the sacrifices of our lost heroes, we honor them by recommitting ourselves to safety as we explore space now and in the future." (NASA/MSFC/Emmett Given)



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Our ceremony concluded with Teresa Vanhooser joining Jim in lighting a memorial candle near a wreath, and I invited the crowd to bow in a moment of silence.

Meanwhile, across the country, NASA flags were flying at half-staff, and Administrator Charlie Bolden attended a remembrance service at Arlington National Cemetery.

While the NASA family has this remembrance each year, it isn't just us who feel the impact of those losses and pause to reflect.

U.S. Space & Rocket Center CEO, Dr. Deborah Barnhart, graciously hosted a Day of Remembrance for the public at the Davidson Center, where she was joined by several area school principals: Mr.

Greg Hicks (Columbia High School), Ms. June Kalange (Grissom High School), Ms. Jo Stafford (Ed White Middle School), Mr. Bradley Scott (Chaffee Elementary School), along with Dr. Julie Finley, the U.S. Space & Rocket Center's Vice President of Educational Initiatives. Joining them were students from Challenger Elementary School. Jim Halsell and I were honored to be a part of this event, lighting a memorial candle together.

I would like to echo Jim's sentiments. We still have great things to accomplish and places to go. In 2014, we will honor all of our astronauts, living and passed, by taking ever more substantial steps toward launching our Next Great Ship.

Patrick

Celebrating Orion *Continued from page 1*

Center also has provided support to EFT-1 and the Orion program by fabricating more than 300 pieces of EFT-1 flight hardware and conducting testing of the Launch Abort System (LAS) thermal production material.

The LAS, positioned on a tower atop the crew module, activates within milliseconds to propel the crew module to safety in the event of an emergency during launch or climb to orbit.

“In just a little over two years, we are delivering flight hardware on schedule and on budget for Orion’s first flight. That’s a direct result of all the hard work and diligence of the teams working on this project,” Space Launch System (SLS) Program Manager Todd May told team members at the event. SLS, NASA’s new rocket, will be capable of taking humans to deep space missions, including Mars.

At the event in Building 4708, Brent Gaddes, Spacecraft & Payload Integration Adapter Subsystem manager, accepted an award on behalf of the team that worked on the adapter. Larry Gagliano, Marshall’s deputy project manager for the Orion Launch Abort System, accepted the award for his team’s work on the flight hardware.

In addition to May, also speaking at the event were John Casper, Orion special assistant for program integration and a former astronaut; Teresa Vanhooser, Marshall Center deputy director; and Paul Gilbert, deputy manager of Marshall’s Flight Programs & Partnerships Office.

During EFT-1, the spacecraft will travel to an altitude of approximately 3,600 miles above Earth’s surface before re-entering the atmosphere traveling approximately 20,000 mph at temperatures above 4,000 degrees Fahrenheit. The uncrewed flight will provide engineers with important data about Orion’s heat shield and other elements, including the adapter’s performance before it is flown in 2017 as part of the first SLS mission.

The adapter was designed and built at Marshall. The adapter’s diaphragm, which keeps hot gases away from the spacecraft, was designed by a team of engineers at NASA’s Langley Research Center, in close collaboration with Marshall. The design and fabrication were completed at Janicki Industries



From left, John Casper, Orion special assistant for program integration and a former astronaut; Larry Gagliano, Marshall’s deputy project manager for the Orion Launch Abort System; and Brent Gaddes, Spacecraft & Payload Integration Adapter Subsystem manager at Marshall, take a look at the completed adapter for Orion’s first test flight later this fall. (NASA/MSFC/Emmett Given)

in Hamilton, Wash. It was delivered to Marshall in September 2013.

The flight adapter will be shipped in mid-March from Marshall to United Launch Alliance’s (ULA) facility in Decatur. ULA is constructing the Delta IV rocket for Orion’s first flight. From there, it will travel by ship to Cape Canaveral, Fla.

To watch a video of the adapter’s journey to completion, click [here](#).

Davidson, an ASRC Federal/Analytical Services employee, supports the Office of Strategic Analysis & Communications.

SLS Goes to California

Space Launch System (SLS) Assistant Program Manager Sharon Cobb, second from left, takes a tour Jan. 29 of Southern California Braiding in Bell Gardens, Calif. The company provides cable assemblies for SLS and the Orion spacecraft. The tour was part of a Jan. 29-31 trip to the southern California area by members of the SLS and Orion programs to visit institutions and companies in the area that are providing support for the vehicles. The teams also talked to students at California State Polytechnic University about SLS. In addition to launching Orion on crewed missions to deep space, SLS also may launch robotic spacecraft on deep space scientific missions. (NASA/MSFC)



On Jan. 31, NASA hosted a Mentor Protégé signing agreement between The Boeing Co. and AMRO Fabricating Corp. of South El Monte, Calif., to work together in support of SLS. AMRO currently supports Boeing by manufacturing the aluminum alloy panels that make up the large barrels of the SLS core stage. The NASA Mentor-Protégé Program pairs large companies with eligible small businesses to enhance capabilities and enable them to successfully compete for larger, more complex prime contract and subcontract awards. Representatives from the NASA Marshall Space Flight Center taking part in the signing are SLS Assistant Program Manager Sharon Cobb, seated second from right; and David Brock, small business specialist, seated at right. (NASA/MSFC)

Space Station Investigators from Around the World Visit Marshall Center

Investigators from around the world attended the Payload Operations Investigators Working Group at NASA's Marshall Space Flight Center Jan. 28-30 to plan for experiments scheduled to fly on upcoming expeditions on the International Space Station. During their tour of the Payload Operations Integration Center (POIC), astronaut TJ Creamer, right, talks to investigators about how experiments unfold in space. Creamer, who now works in the control room as a payload operations director, served as a crew member on space station Expeditions 22 and 23. Marshall engineers and payload controllers worked with the scientists who attended the event to help them understand the best way to develop their investigations for smooth operations in space. When their experiments reach the station, they will work with Marshall controllers in the POIC who can send commands to the experiments, monitor data and assist the crew if they have questions about experiment operations. (NASA/MSFC/Fred Deaton)



Marshall Meteor Experts to Participate in 'I Am a NASA Meteor Expert, Ask Me Anything' Reddit Event Online Feb. 13

Meteor and fireball expert Dr. Bill Cooke and colleagues Danielle Moser and Rhiannon Blaauw will host Marshall's first Reddit Ask Me Anything event. They will answer questions on Reddit.com on Feb. 13 beginning at 1 p.m.

Reddit, a popular online community where users vote on content they find interesting, has a sub-forum for interviews with volunteers who answer questions about their specific experiences.

Those interested in asking questions or checking out the conversation during "I Am a NASA Meteor Expert, Ask Me Anything," may visit: <http://www.reddit.com/r/IAmA/>.



Centennial Challenges' Sam Ortega Seeks New Ideas at Partnership Forum

By Janet Sudnik

Sam Ortega, program manager for NASA's Centennial Challenges Program, managed by the Marshall Space Flight Center, was the guest presenter at the quarterly gathering of the Marshall Partnership Forum on Jan. 30 at the Jackson Center in Huntsville.

Facilitated by the Marshall Partnerships Office, the meetings serve as a forum to support and enhance partnership goals for industry and academia to work alongside Marshall.

Stacy Counts, manager of the Partnerships Office, kicked off the event, which drew more than 120 local business people, students and partners. Counts stressed that the Partnerships Office is committed to helping small businesses pursue partnerships with Marshall, offering facilities, labs, capabilities and personnel to accommodate their needs. The office also is working on solutions to make these relationships more affordable by creating phased approaches, flexible milestones and fine tuned goals.

Ortega presented the Centennial Challenges Program's newest initiative — accepting public challenge [submissions](#). Through the end of 2014, the agency's leading prize competition program is seeking new challenge ideas and partnerships to solve technology problems through competition. "It's your space program," he said. "Take your space program and use it to your advantage."

Centennial Challenges was established in 2005 and has awarded more than \$6 million in prize money to more than 20 teams. The competitions seek to engage citizen inventors, academia and small businesses to solve problems and advance technology that benefits NASA and the nation.

Ortega encouraged local businesses to engage with the program as competitors, sponsors, allied organizations or to simply have an awareness of potential opportunities. He cited several past winners who had no aerospace background and still managed to take home several million dollars in prize money, and parlay their winnings into creating small businesses.

The next Partnership Forum meeting is tentatively scheduled for mid-April. Future topics will include technology advancements and additional opportunities for academia and industry to partner with the center.

To learn more about the Centennial Challenges program, visit www.nasa.gov/challenges. For more information about partnering with Marshall, visit <http://www.nasa.gov/centers/marshall/partners/>.

Sudnik, an ASRC Federal/Analytical Services employee, supports the Office of Strategic Analysis & Communications.

Army Exchange Martin Road Express Opens

The Army recently opened the Martin Road Express at the interchange of Mills Road and Martin Road next to the Redstone Federal Credit Union. It includes a Burger King and Subway, which are open to everyone.

The Express also includes an Army Exchange Shopette and a gas station that are open only to Department of Defense authorized patrons, such as active military, retired military, active and retired military family members.

Planning is underway for a NASA Marshall Space

Flight Center retail site that will include a coffee shop and restaurant open to everyone with access to Redstone Arsenal, according to Jose Matienzo, NASA Marshall Exchange manager. Ground is expected to be broken this spring at the site on Martin Road, west of the Building 4600 complex. Opening is set for the fall.

Matienzo said plans for future development include a gas station, ATM/banking, more restaurants and other services for which there is a demand.

For more info, visit www.redstoneretail.net.

Marshall Drivers Face New Redstone Arsenal Gate Measures; 'Leave Early, Be Patient,' Says Center Director Scheuermann

NASA Marshall Space Flight Center team members are seeing the impact of gate changes put into effect Jan. 27 across Redstone Arsenal: slowed traffic, busy entry points and late arrival times.

Marshall Center Director Patrick Scheuermann reminds team members these issues affect everyone equally, and encourages patience and courtesy among drivers.

"Be mindful of safety in these long lines," said Scheuermann. "It's easy to become distracted or frustrated. Watch the cars in front of and behind you. Look out for one another."

Scheuermann particularly stressed the need for continued courtesy toward gate security personnel. "These individuals who monitor the gates and check our badges are tasked with protecting us all. Gate delays are not their fault. Be kind -- especially in cold or rainy weather when they face the added discomfort of exposure to the elements."

Col. Bill Marks, Garrison commander at Redstone Arsenal, previously said the new gate changes should be considered permanent -- the result of force reductions imposed on all military facilities by the Department of the Army.

"Changes to our gates always create inconvenience and frustration," said Marks. "It will take teamwork

and patience to work through this."

Because Gate 9 at Rideout Road remains the most heavily trafficked gate during peak hours, Marshall Center personnel are encouraged to explore other, less populated gates.

"A new routine will work itself out in time," said Scheuermann. "Try to leave a little earlier. See if different gates ease your commute. Above all, avoid becoming stressed over a situation that's beyond our control."

For those who may have missed earlier gate-change announcements, the changes include:

- Gate 8 (Patton/Goss roads) is closed Monday-Friday and open Saturdays and Sundays from 5:30 a.m. until midnight.
- Gate 3 (Redstone Road) is open for incoming and outgoing traffic from 5:30 a.m. until 1 p.m.; open only for outgoing traffic after 1 p.m.; and closed to outgoing traffic at 6 p.m. Monday-Friday.
- Gate 7 (Martin Road) is open for incoming and outgoing traffic from 5:30 a.m. until 1 p.m.; open only for outgoing traffic after 1 p.m.; and closed to outgoing traffic at 9 p.m. Monday-Friday.

Space Launch System Making Some Noise on NASA-TV

The first round of acoustic tests on a scale model of the [Space Launch System](#), or SLS, at the Marshall Space Flight Center is featured in the latest edition of “[This Week @NASA](#),” a weekly video program broadcast nationwide on NASA-TV and posted online. The tests focus on the impact sound waves have on the rocket while on the launch pad. Powerful noises from the engines and boosters can impact the rocket and crew, especially at liftoff.

During testing, a 5-percent scale mockup of the SLS will be ignited for five seconds, and microphones located on the mobile launcher, tower, exhaust duct and vehicle will collect the acoustic data. The core stage, which houses most of the vehicles’ critical pieces including the flight computer and avionics, will be tested first. The full assembly test, including



scale model solid rocket motors, will be conducted later this year.

You can watch this edition of This Week @NASA at the [NASA-TV YouTube channel](#).

Obituaries

John David “Dave” Harper Jr., 88, of Etowah, Tenn., died Jan. 21. He retired from the Marshall Center in 1991 as an aerospace engineer.

Franklin Dwight Mann, 81, of Manchester, Tenn., died Jan. 25. He retired from the Marshall Center in 1987 as an aerospace engineer. He is survived by his wife, Shirley A. Mann.

Abraham Benefield, 80, of Huntsville, died Jan. 29. He retired from the Marshall Center in 1988 as an electrical engineer. He is survived by his wife, Shirley Benefield.