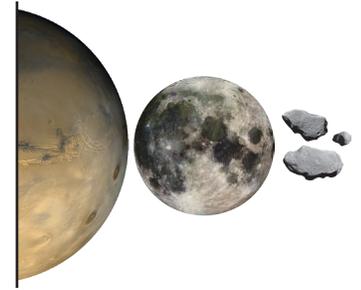


**MONTHLY
ACCOMPLISHMENTS**
July 2014

orion



Past and present space generations come together at O&C ceremony

On July 21, NASA officially renamed the Operations and Checkout (O&C) Building at Kennedy Space Center in honor of late astronaut and American hero Neil Armstrong, the first man to set foot on the moon.

Kennedy's O&C Building has played a vital role in NASA's spaceflight history. It was used during the Apollo program to process and test the command, service and lunar modules. Today, the facility is being used to process and assemble NASA's Orion spacecraft.

Following the renaming ceremony, NASA officials and Apollo astronauts had a chance to view the Orion crew

module stacked on top of the service module in the O&C. From left, are Kennedy Center Director Bob Cabana, Orion Program Manager Mark Geyer, Apollo 11 Astronaut Michael Collins, Apollo Astronaut Jim Lovell, Apollo 11 Astronaut Buzz Aldrin, Orion Production Operations Manager Scott Wilson and NASA Administrator Charles Bolden.

Watch the full ceremony at <http://bit.ly/1ofEQLM>

Media coverage prominently featured Orion: "Historic human spaceflight facility at Kennedy renamed in honor of Neil Armstrong" <http://bit.ly/1pXkQtB>

Orion tests set stage for mission

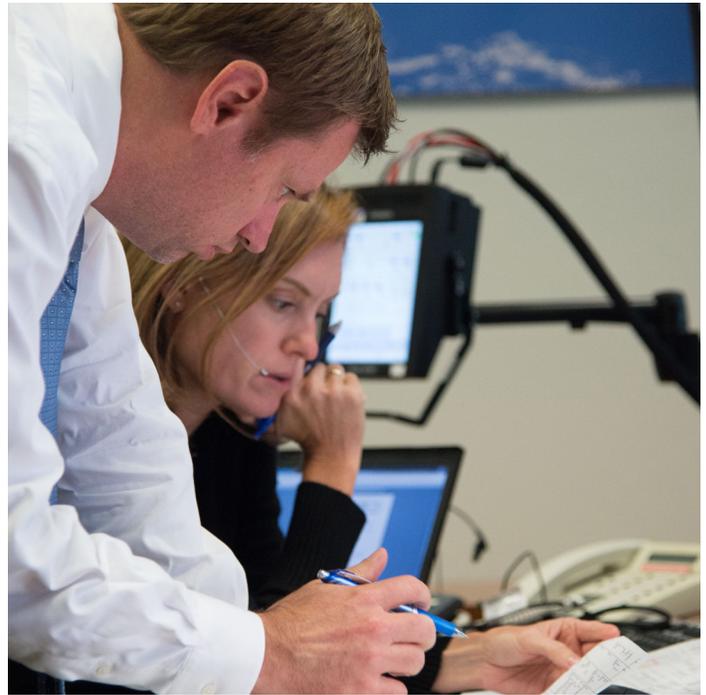


Astronauts Doug Hurley and Rex Walheim examine Orion and a section of the black back shell tiles that will be installed on the spacecraft now that the testing of the stacked crew and service module is complete.

NASA's Orion spacecraft is not quite ready for liftoff, but the spacecraft thinks it has already flown six missions.

Since Orion's crew module was stacked on top of its service module in June, the vehicle has been put through a series of tests designed to verify all the individual systems work on their own in the new configuration and that they'll work together as a functional unit during flight.

The best way to do that is to "trick" the vehicle into thinking that it is flying, so that it will perform exactly the same functions it will be called upon to perform in December, when



Flight controllers in Mission Control at NASA's Johnson Space Center work through a simulated failure in a practice run of Orion's first test flight.

Orion launches into space for the first time. The simulations are not a substitute for flying in space, but are as close as possible from the ground. These scenarios have helped the team understand not only the spacecraft itself, but also the ground component.

In all, the vehicle and its engineers, technicians and flight control team have now gone through six simulated missions together – one without challenges and five with various simulated failures. Through them all, Orion and the team performed well, which gives them the confidence to move on to the next step in Orion's construction: the back shell.

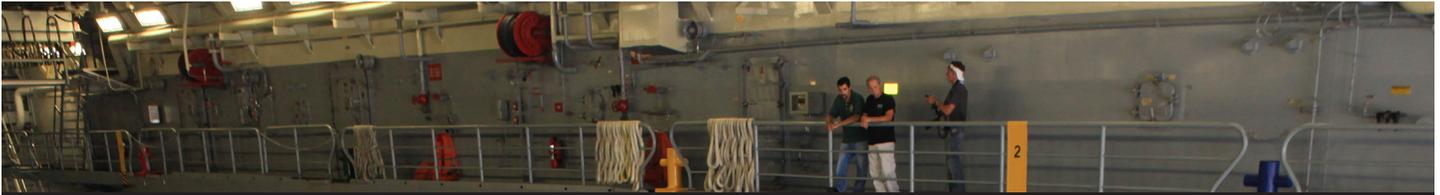
Read the full story at <http://1.usa.gov/1mmtpwV>



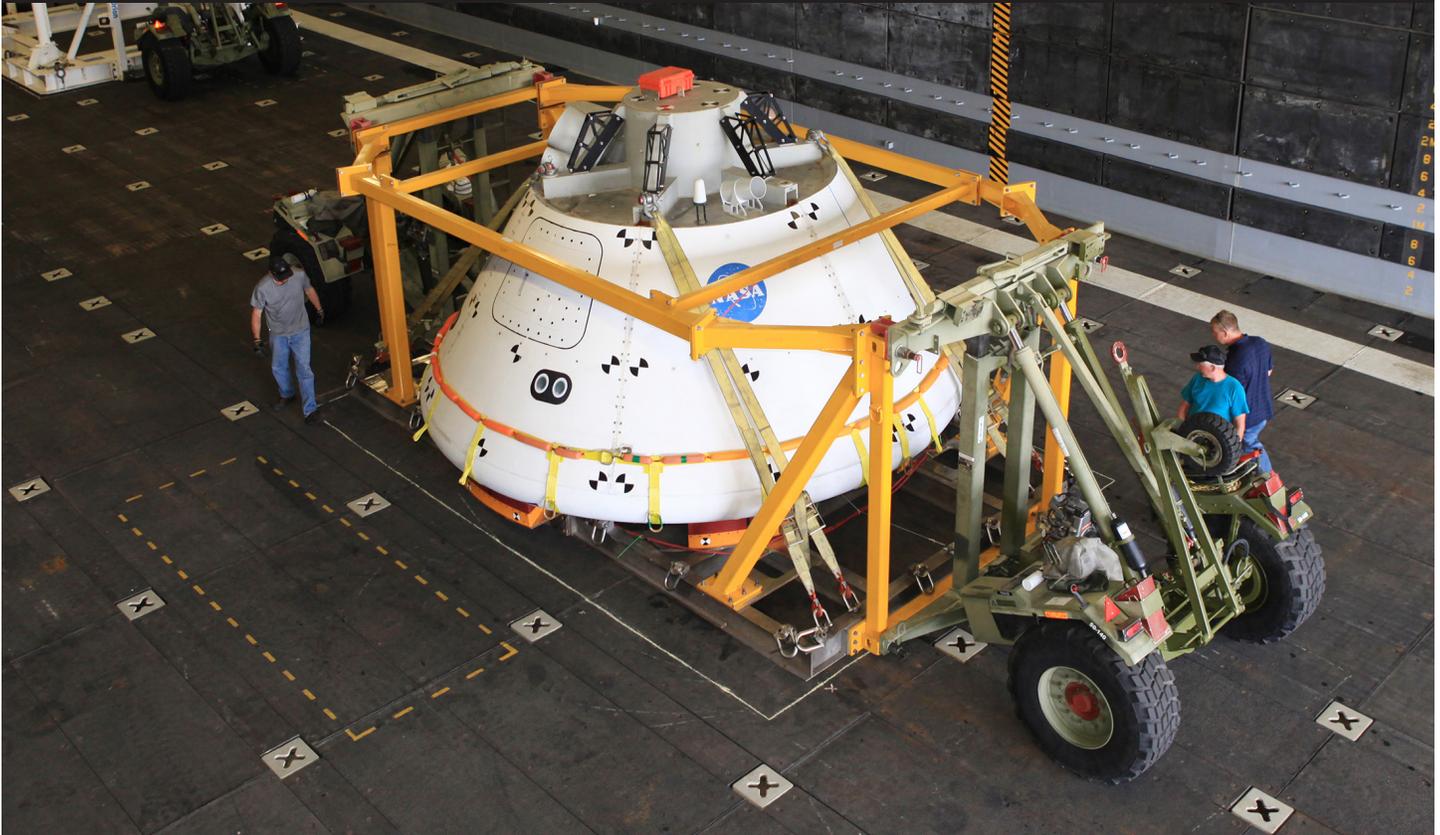
Orion recovery operations training on Space Station Live

NASA Public Affairs Officer Brandi Dean talks with Tim Goddard, Neutral Buoyancy Lab dive manager, about the Orion recovery training taking place in NASA's 6.2 million-gallon facility.

<http://bit.ly/1vb3rpH>



NASA prepares for second Orion underway recovery test



For NASA's new Orion spacecraft, part of getting ready for its first launch is getting ready for its first splashdown.

NASA and Orion prime contractor Lockheed Martin are teaming up with the U.S. Navy and Department of Defense's Human Space Flight Support Detachment 3 to test techniques for recovering Orion from the water during Underway Recovery Test (URT) 2, Aug. 1-4, off the coast of San Diego, California.

URT 2 will pick up where URT 1 left off. During that first underway recovery test in February, dynamic conditions caused activities to conclude before all of the test objectives were met. Since then, the team has been working on

concepts that would allow them to safely recover Orion despite such conditions.

For URT 2, the Orion test vehicle will be loaded into the well deck of the USS Anchorage (LPD 23), and the team will head out to sea in search of sea conditions to support test needs. New support equipment developed for URT 2 will accompany the test vehicle.

One of the goals of the test is to have a primary and alternate means of recovering the Orion crew module for Exploration Flight Test-1 later this year.

Read the full story at <http://1.usa.gov/1ocy620>

NASA joins an out-of-this-world rally



On July 25, the launch abort system was successfully uprighted from a horizontal to a vertical position on the assembly integration trailer and then transferred to the vertical support pallet in the Launch Abort System Facility at Kennedy Space Center in Florida.



The Orion team at Kennedy Space Center's Operations & Checkout Building successfully completed the fit check on the back shell panels for the Orion vehicle prior to final installations in August.



Orion Program Avionics, Power and Wiring Manager Paul Anderson, of Lockheed Martin, provided an Orion presentation to attendees at the Winnebago Grand National Rally held in Forest City, Iowa, June 17-20. Anderson was also featured on the local news on KIMT-TV with a look at NASA's Orion Project

<http://bit.ly/UWmTpw>

This year's rally was entitled "Out of This World" and incorporated a space theme for the event, which attracted more than 2,000 attendees.



Lockheed Martin and NASA program reps visited Orion supplier Multek Flexible Circuits in Northfield, Minnesota on July 17. Multek is the provider of the silver surface aluminized polyimide tape used on the bottom of the Orion heat shield.

Mike Hawes takes helm as Lockheed Martin Orion Program Manager

On August 1, 2014, Orion prime contractor Lockheed Martin welcomed Dr. Michael Hawes as its new vice president and program manager for the Orion Program. He replaced Cleon Lacefield, who retired in July after a long and distinguished career with Lockheed Martin.

Hawes joined Lockheed Martin in 2011 as director of Human Spaceflight Programs within the company's Washington Operations organization. Prior to that, he spent 33 years with NASA working his way up to serving as the deputy associate administrator for International Programs and as associate administrator of Program Analysis and Evaluation reporting to the NASA administrator.

Hawes is well-versed in Orion's goals, technology and schedule. His engineering background, mission knowledge and customer relationships will support the continuation of a successful Orion Program. He holds a bachelor's degree in Aerospace Engineering from Notre Dame and master's and doctorate degrees in Engineering Management from George Washington University.

Hawes' predecessor, Cleon Lacefield, joined Lockheed Martin 17 years ago and spent more than nine years supporting the Orion Program. Prior to joining Lockheed Martin, Lacefield was a Navy pilot and held many positions with NASA. Most notably, he served as a NASA flight director in Mission Control at the Johnson Space Center in Houston. During the course of his 43 years in the aerospace industry,



he won the NASA Distinguished Public Service Medal, AAS Industrial Leadership Award, Rotary Space Achievement Stellar Award, NASA Exceptional Service Medal and Eagle Manned Space Flight awards.

Hawes was recently featured in Frank Moring's On Orbit column in AvWeek on July 14 entitled Orion design changing en route to Mars <http://bit.ly/1umlXE>

Comic fans take space exploration seriously



In honor of the 45th anniversary of the moon landing, NASA participated in this year's International ComicCon in San Diego, California, on July 25. Actor Seth Green moderated a panel discussion on NASA's Next Giant Leap with astronaut Mike Fincke, Apollo 11 astronaut Buzz Aldrin, NASA's Division Director of Planetary Science Dr. Jim Green and JPL Engineer Bobak Ferdowski, also known as "Mohawk Guy", from the Curiosity and Europa missions.

Media coverage of NASA's presence at ComicCon:

"Seth Green and Buzz Aldrin make NASA's presence known at ComicCon" <http://bit.ly/1kHvdWB>

"NASA's a hit at ComicCon" <http://bit.ly/X1Ni75>

"NASA advocates for Mars mission to a packed room at ComicCon" <http://bit.ly/1pCl4sP>



Team KM2 takes the cake....literally

The Orion Exploration Flight Test-1 patch cake took first place in the Orion cake decorating contest at Johnson Space Center. The winning cake was created by Kate Harder and Kara Pohlkamp with Team KM2. Their prize was a VIP pass to view the EFT-1 launch.

The runner-up was Team Mission Out of Control with members Ginger Kerrick, Dana Weigel, Holly Ridings and Peggy Whitson.

The People's Choice award went to Team Splashdown with Holly Dlouhy, Eden Fields, Sharon Jackson and Sara Zwart.



Jefferson Starship is on board with Orion's Exploration Flight Test-1 mission!



Lockheed Martin employees host their children for a day of STEM Activities at the Cape

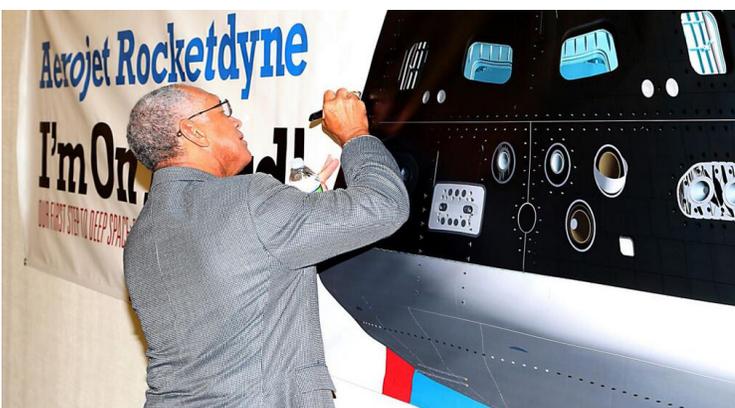


Children of Lockheed Martin employees enjoyed a day of mind-expanding activities through a program called Young Minds At Work on July 22 at Cape Canaveral Air Force Station, Florida. The event allows parents to showcase their place of work and encourages the students to explore future careers in science, engineering, math and technology (STEM). More than 100 children participated.

Activities included a 3D printing demonstration, Captain Orion and His Amazing Flying Machines, a missile transporter demo, a test of an engineering video game, a paper rocket launch and an edible car building and racing workshop.

FIRST Robotics teams from Merritt Island secondary schools and Cocoa High School gave a demonstration. The Sea Cadets posted the colors. Tours included the US Coast Guard Cutter SHRIKE and Station tour, the lighthouse and fire station.

Lockheed Martin employee groups that participated in the event included the Lockheed Martin Leadership Association, Lockheed Martin Space Coast Women's Intrinsic Network, Lockheed Martin Next Generation Leaders, Eastern Range Diversity Association and Eastern Range Employees' Association.



NASA Administrator Charles Bolden toured the Aerojet Rocketdyne facility in Rancho Cordova, California, on June 30, and signed the I'm On Board banner during his site visit and meeting with the Aerojet Rocketdyne Orion team. The site houses testing for thrusters used on the Orion spacecraft.



Astronaut Ricky Arnold provided a presentation on Orion and answered questions during an All Hands event on July 21 at NASA's Michoud Assembly Facility in New Orleans.



Visitors to the Intrepid Sea, Air and Space Museum event showed their support for Orion and deep space exploration during a One NASA event in New York on July 17-20.



Orion engineer and aviator Darrel Gaines (center) recruited aviation enthusiasts to join the Orion #ImOnBoard campaign at the Bronze Eagles' Fly-in event held in Houston on July 19. The Bronze Eagles Flying Club of Texas promotes Aviation to young people and encourages them to stay in school and learn about future careers and opportunities in Aviation and Aerospace.

Coming up in August:

- Underway recovery test 2
- Installation of thermal protection system forward bay cover
- End-to-end tracking and data relay satellite system live sky testing