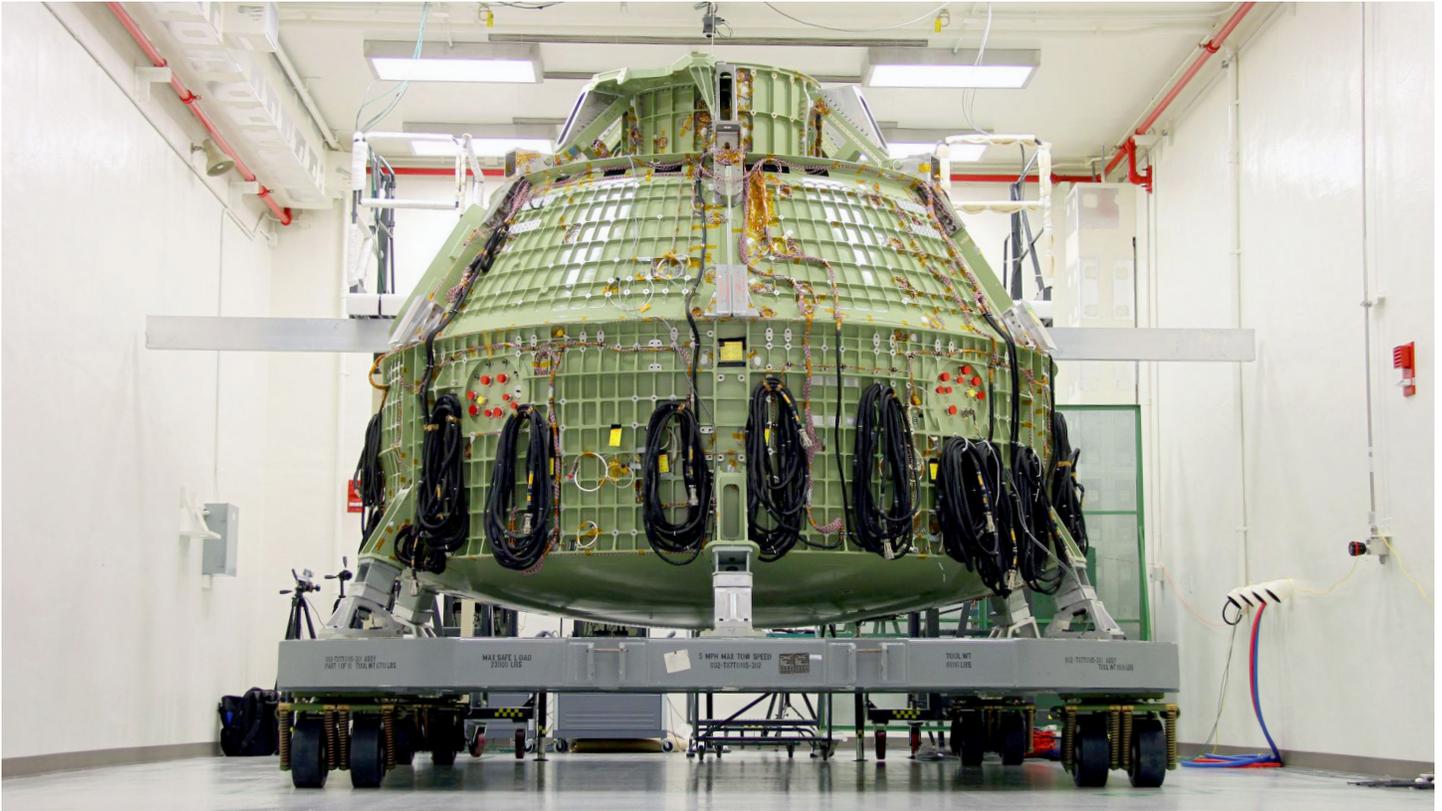
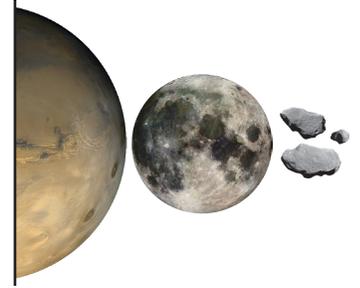


**MONTHLY
ACCOMPLISHMENTS**
October 2012

orion



EFT-1 Crew Module begins proof pressure test

At the Operations and Checkout (O&C) building at the Kennedy Space Center, Orion team members completed final hardware installations, including the side and docking hatches in preparation for the November pressurized proof test of the Exploration Flight Test (EFT-1) Crew Module.

Ground test instrumentation was also inserted both externally and internally on the vehicle to measure the stresses on the structure during the test. The crew module was then moved into the test cell at the O&C for pressurization.

The test incrementally pressurizes the spacecraft with breathing air and is designed to demonstrate weld strength capability and structural performance at maximum flight operating pressures. During the first test, the team successfully pressurized the vehicle to 65% of the design

limit load. The second test scheduled to reach the full proof pressure, noted an anomaly which will be inspected and receive further assessment by a joint NASA/Lockheed Martin analysis team.

The crew module has been moved into the work station for assembly operations to proceed.



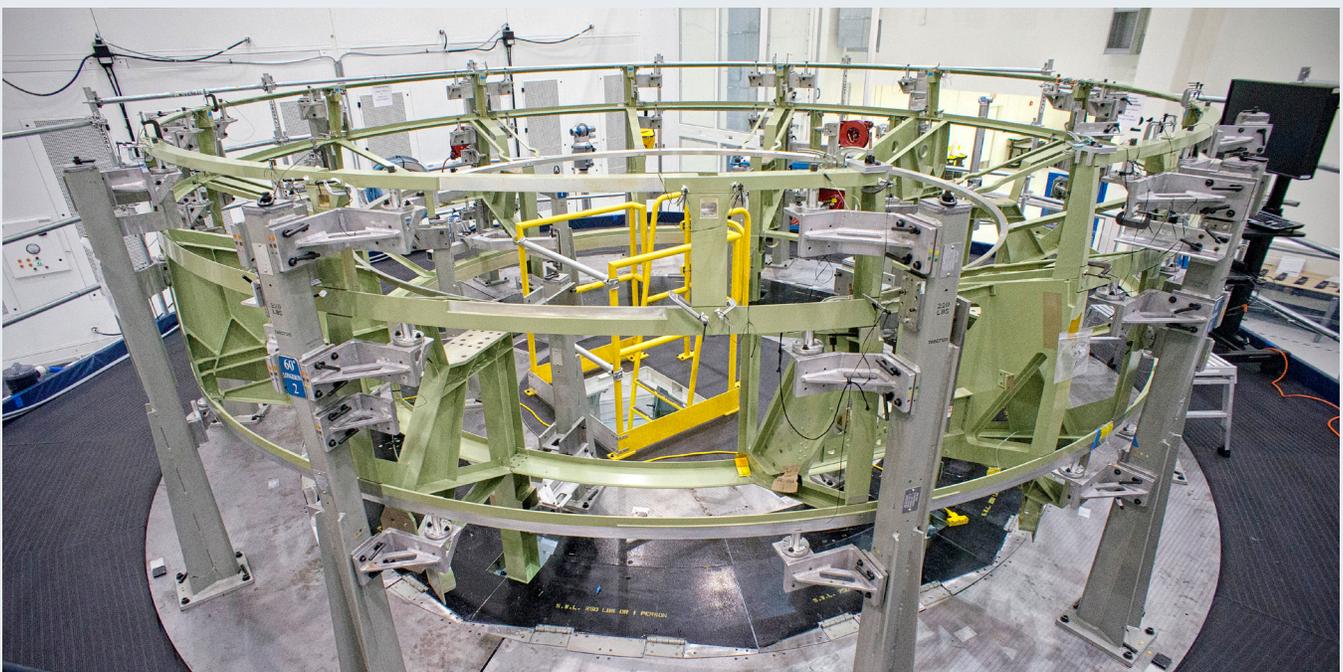
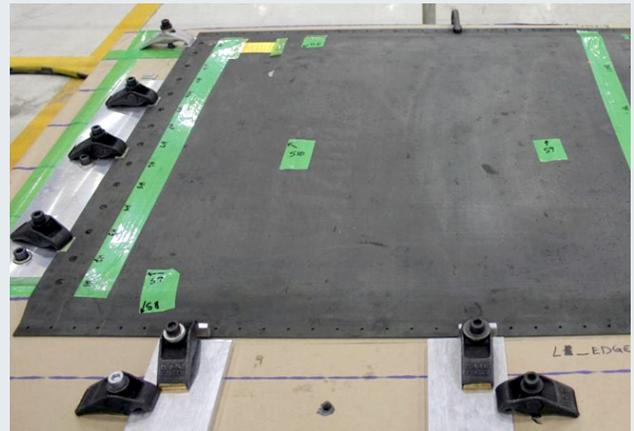


Successful pyro shock test completed on GTA

Orion personnel supported the Orion Ground Test Article (GTA) Launch Abort System (LAS) Retention and Release (R&R) Mechanism Ordnance testing at the Launch Equipment Test Facility at KSC. The objective of this test was to perform the pre-installation inspections, mechanical installation, and electrical checkouts and mates of the LAS R&R mechanism ordnance and associated mechanical hardware onto the GTA, and to fire this system three times while collecting pyro-shock and high speed video data. This testing will help correlate thermal protection system model data on the Orion flight vehicle. The GTA has now been returned to the O&C following completion of the test.

Service Module activities continue at MAF and KSC

The team completed five acceptance test cases of the EFT-1 Service Module composite panels at Marshall Space Flight Center and shipped two panels back to the Michoud Assembly Facility for trimming and final assembly. All six of the composite inboard panels are now at KSC and the first panel for the inboard wall has been positioned into the assembly tool and is going through final set up checks prior to match drilling.





Heatshield progressing in Denver

The Orion team in Denver completed heatshield skin machining of the manufacturing development unit (MDU) and all tool paths have been verified (photo left). The MDU was removed from the router and the EFT-1 skin was put into place and repositioned for machining to take place.



Stringer hole machining on the skin skeleton mate tool structure was completed early along with masking, blasting and painting the tool (photo right). The structure will be transported by Guppy aircraft to Buckley Air Force Base and over to the Denver facility at the end of November.

Splice plate installations are also underway on the skeleton assembly tool with 36 of the 120 installed.



Match drilling and splicing is in process on the two EFT-1 Launch Abort System fillet panels at Michoud Assembly Facility.



The EFT-1 Launch Abort System Motor Adaptor Truss Assembly (MATA) pathfinder cone is undergoing laser inspections at Michoud Assembly Facility.



Deputy Administrator Lori Garver visited the Lockheed Martin Space Systems facility in Littleton, Colo. on Oct. 15 to see where the Orion heatshield is being manufactured and conduct media interviews in front of the heatshield.

Orion Program Manager Mark Geyer and Deputy Program Manager Mark Kirasich met with employees at Orion subcontractors, Moog, Inc., FMI and Textron to share the latest Orion progress and tour the facilities. Read more about their visit to Moog at: <http://bit.ly/SashPL>



Orion's own Charlie Lundquist (far left), Crew and Service Module Manager recently spoke at the 5th Wernher von Braun Memorial Space Symposium in Huntsville, Alabama. A theme that was repeated during all the sessions was flat budgets & affordability and how programs are continually looking for efficiencies and improvements.



Orion Program's John Casper was interviewed by the Smithsonian Channel for their upcoming series "Space: What Next?" John spoke about Orion's progress and his experience as an astronaut on four space shuttle missions.