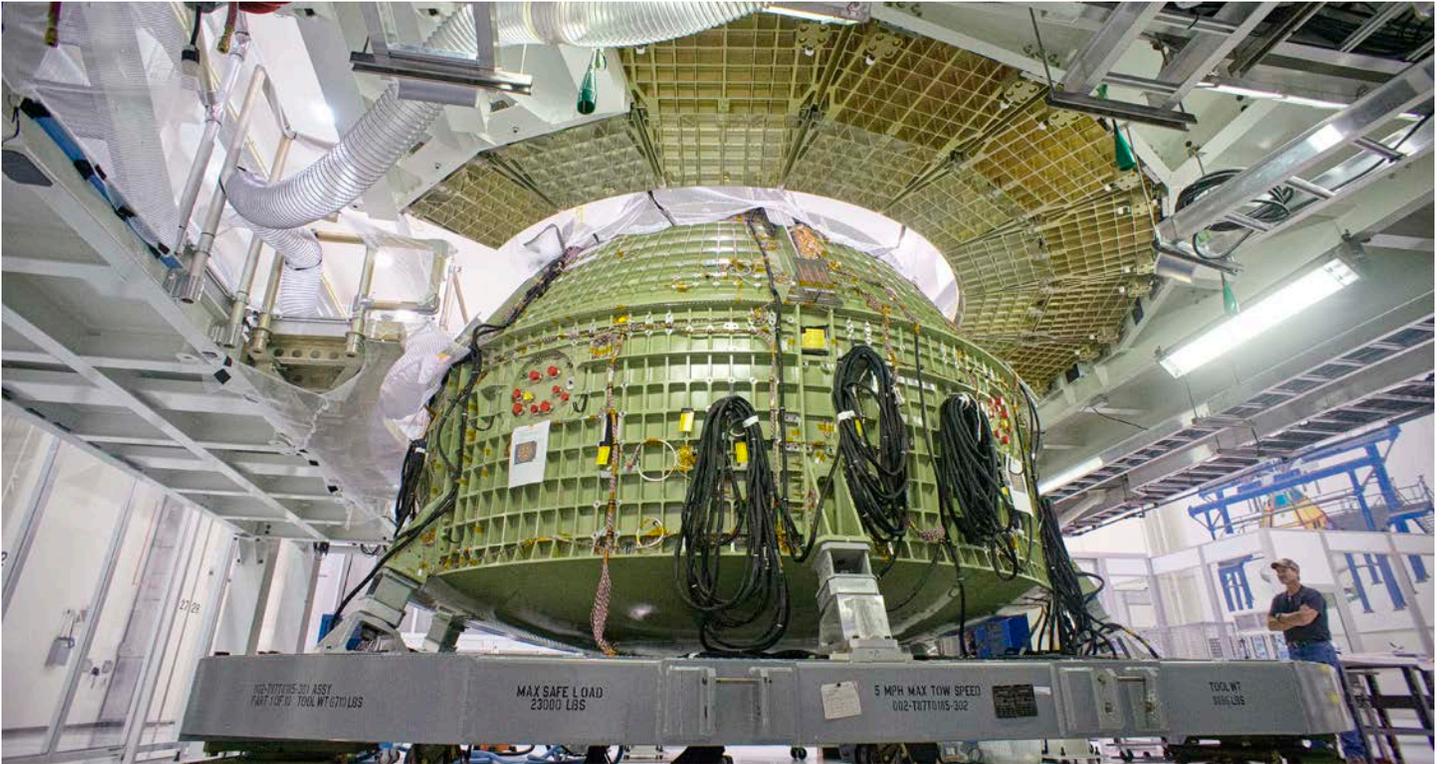
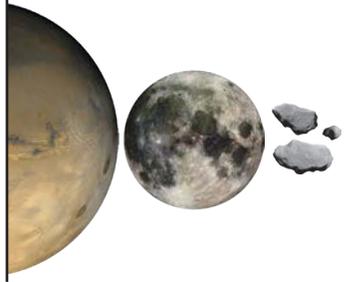


**MONTHLY  
ACCOMPLISHMENTS**  
Nov. 2012

# orion



## Team analyzing results from pressure test

The Exploration Flight Test (EFT-1) Crew Module was moved into the work station for additional assembly operations following a proof pressure test at Kennedy Space Center's (KSC) Operations and Checkout Building.

Air was pumped into the vehicle during testing to check the structure's ability to hold pressure. As the vehicle was being brought to full pressure, three cracks appeared, three cracks appeared in aft bulkhead on the lower half of the vehicle. The team is finishing their analysis and tooling development. The installation of the repair will support the loads test in January.

## Arc jet testing at JSC

The second phase of the Johnson Space Center arc jet thermal tests for the Avcoat model validation has been completed. The 3-D woven thermal protection system models will be tested next, followed by the felt reusables surface insulation material qualification/model validation tests and then the Avcoat low-E coating/tape tests.

## EFT-1 flight roll thruster work

Approval was received to modify the four EFT-1 flight roll thrusters to incorporate a nozzle insert in order to increase sea-level thrust to meet EFT-1 mission needs. Aerojet in Redmond, Calif. has successfully welded the nozzle inserts into all four EFT-1 flight roll thrusters. Hot-fire testing of the first modified flight thruster at Aerojet in Sacramento, Calif., took place this month.



# ORION HEATSHIELD

## Skin machining complete

The Orion team in Denver finished machining of the heatshield skin structure. The last six splice plates also arrived in Denver for the heatshield skeleton assembly tool.

## Mate tool arrives in Denver

NASA's Super Guppy transported the heatshield mating tool for the Orion spacecraft from March Air Reserve Base near Moreno Valley, Calif., to Buckley Air Force Base in Denver to offload the device. The Super Guppy, which is based in Houston, can carry oversized payloads that won't fit into a normal size plane.

## EFT-1 Service Module progressing at MAF and KSC

Six EFT-1 Service Module composite shear panels are at Michoud Assembly Facility (MAF) for non-destructive evaluation, trimming and drilling tooling holes prior to shipping to KSC. The four diamond panels are undergoing trimming and drilling tooling holes with the first panel having undergone laser measurement. The panels will ship to KSC in December.

At KSC's Operations and Checkout building, the shear web structural assembly frame is complete (pictured right) and waiting on the four diamond panels to arrive from MAF. All six inboard wall panels have been loaded on the service module assembly tool and varying stages of drilling and fastening are in progress.



KNBC-TV in Los Angeles aired the first in a series of four videos on the Orion program.

<http://bit.ly/UuJQtR>