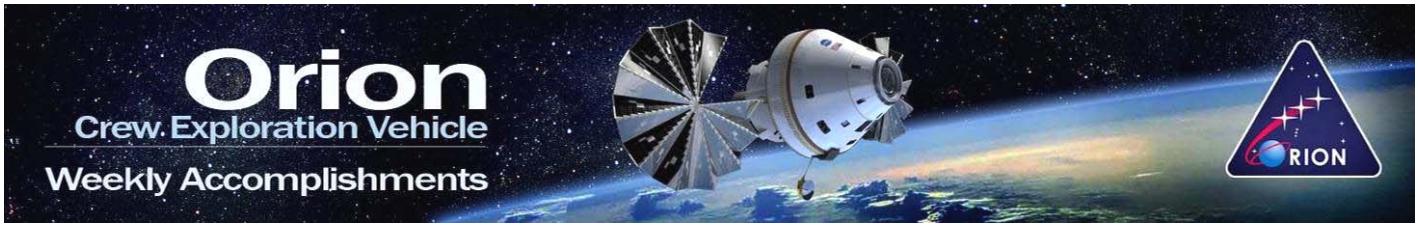


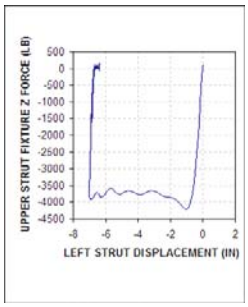
Week ending October 3, 2008

Pad Abort-1 Progress

The Pad Abort Crew Module (CM) pathfinder was transported to the Shuttle Hangar at Dryden Flight Research Center for completion of the weight check (Photo left) and the vertical center of gravity test (Photo top right).

The Vehicle Integration Van (VIV) is on dock at Dryden Flight Research Center. Lockheed Martin began initial Command Control and Monitor System (CCMS) integration and checkout. The VIV contains the electronics required for interface to vehicle systems. The vehicle umbilical plugs into the “front-end” Electrical Ground Support Equipment in the VIV. The VIV is connected to the Mobile Operations Facility (MOF). The VIV connects to the MOF where NASA flight controllers command and monitor the vehicle during Pad Abort-1.

Crew Module dynamic tests of the seat pallet energy absorbing struts were completed at the Air Force Research Laboratory at Wright-Patterson Air Force Base. A total of 27 drop tests were conducted on the Vertical Deceleration Tower with impact velocities of 24 and 33 ft/sec and various tests to represent a range of energy inputs. Struts with loading rates of 8500 lb and 4250 lb were tested. The results show consistent results with the quasi-static tests conducted at Langley Research Center previously. A complete assessment is underway. A 4250 lb strut configured for a compression test and a typical stroke vs. load plot is shown at right.



Service Module (SM)

Power - Yardney batteries

Three of eight cells in the Yardney battery cell balance test article were discharged to create a 25mV imbalance in the cell voltages between the highest and lowest cells and the battery was returned to a LEO cycling regime. The battery response and Monitoring and Equalization Electronics (MEQ) board performance has been normal and meets project expectations. Yardney batteries provide power when there is no sunlight for the solar panels to convert to electricity, such as when the spacecraft is behind the Earth, Moon or International Space Station. They also supply Crew Module power during the critical period from jettisoning the SM until crew recovery after return to Earth.

Propulsion

Tests of the Orion Service Module (SM) Propulsion Dynamic Interaction Simulation Test (DIST) valve characterization test bed took place across a range of operating pressure conditions. These tests, the first tests conducted under the DIST effort, are critical to the overall DIST test program. Since the purpose of the DIST testing is to understand the dynamic interactions associated with operating the propulsion subsystem, each valve has to be understood before integration onto the simulation test bed.

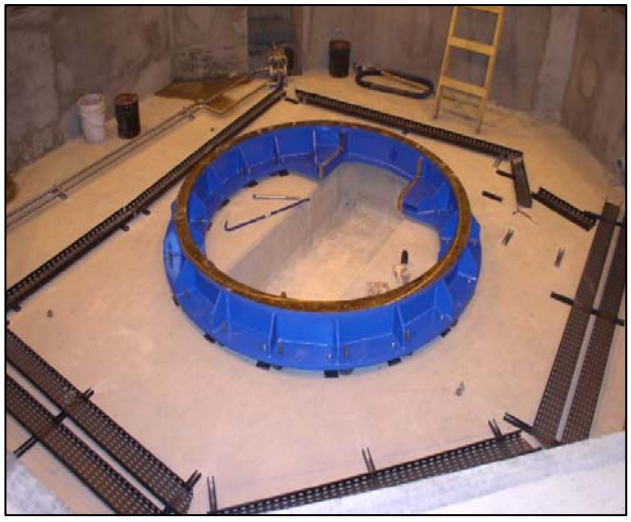
Facilities

Kennedy Space Center

Lockheed Martin completed the low bay ceiling repairs and high bay roof underlayment resulting from Tropical Storm Fay. The door seals for the east and west vertical doors were installed. The east and west door controls were installed.

Michoud Assembly Facility

The Universal Weld System #2 turntable base and Y-Column X-Rails were installed (Photos below).



Communications and Public Engagement

A video shoot took place at the Exploration Development Lab for the production of a series of *Next Generation of Explorers* public service announcements to encourage Gen Y to pursue careers in science and engineering. Lockheed Martin engineers Mike Wells and Amber Gell will be featured in the PSA scheduled to air in early 2009.

Lockheed Martin Orion program senior executives and team members participated in a variety of HENAAC (Hispanic Engineers National Achievement Awards Conference) events including an Orion panel discussion, Career and Graduate School Fair and Exhibit, Lockheed Martin reception hosted by Bob Stevens to honor Lockheed Martin HENAAC awardees and the 20th Anniversary Awards Show.

Mark Geyer, NASA Project Manager for Orion, and Cleon Lacefield, Lockheed Martin Vice President and Orion Program Manager, hosted an Orion team all-hands meeting emphasizing program progress in hardware development and testing, overall program status and responding to questions. In addition, presentations on areas of significant project accomplishments were presented by technical/team leads from the Orion team, which included: Crew Module/Service Module Thruster Risk Reduction Testing, PA-1 & EDL Avionics Testing & Verification, WSMR – Launch Complex Construction, and vehicle integration for Crew Module/Pad Abort-1 flight test.