



Week ending April 4, 2009



The Attitude Control Motor High Thrust 8A test data indicates test objectives were met. The hardware is intact and there is no external bluing of valve body. The valve control section appears to have operated properly, and good sensor data was collected. The post-test disassembly and dissection will allow closer examination.



The Pad Abort 1 T-0 thermal and electrical doors (flight set) were installed in the crew module. The operations team is working with the CEV Parachute Assembly System (CPAS) team to install the parachute system for the mass properties, speaker, and shaker tests. The team is installing and closing out the remaining hardware in support of the scheduled closeout of the vehicle.



The high-speed camera and bracket (Photo right) was mounted in the crew module this week. It will undergo vibration tests and be re-installed in the vehicle.



Four crew subjects completed the vibration test profile suite this week at Ames Research Center to evaluate potential impacts of thrust oscillation.

The testing consisted of the crew performing several tasks during a simulated ascent profile. Several key objective data measures are being collected along with subjective crew feedback. In addition to assessing crew performance during a simulated ascent vibration profile, a high speed camera is documenting head motion at the various vibration levels. Formal reporting and crew consensus will follow as soon as all the data are analyzed and verified.



Orion Michoud Assembly Facility (MAF) Activation Project Status:

Building 103 Main Orion Assembly Area

Saw cutting concrete control joints; final concrete #3 pour and installation of light fixtures were completed.

Universal Weld System (UWS) #2

Initial test welds utilizing the Universal Stir Weld system #2 in preparation for the upcoming first weld were completed. The system is operational and ready for first weld.

Building 404/404A Structural Test Area:

The foundation contractor completed demolition of interior booth and area cleared for construction.

The Orion Test & Verification System Baseline Review was held in Houston April 6-10. Several key action items were identified and assigned during this review, primarily focused on addressing schedule risk mitigations and detailed test configurations and plans for major test programs such as the propulsion subsystem Hot-Fire Qualification Tests, the Structural Test Article, and the Qualification Test Vehicle. Review of these key action items will occur at an Engineering Review Board in early May, at which time the recommended changes to the Orion Test & Verification baseline will be formally dispositioned.

The Lockheed Martin Exploration Development Lab-Houston (EDL-H) team is integrating the Cockpit Operators Station Mockup (COSM) to help mitigate risk for Orion's displays and controls and human engineering efforts. The team will have the mockup completed for initial checkout by the end of May. Additional upgrades to the COSM will continue throughout the year.



Congressman Pete Olson was the first VIP guest to visit the COSM and view the progress that has been made over the last two months during his tour of the lab (Photo top left). Congressman Olson said he looked forward to flying the simulation in the COSM during his next visit. Joel Turner, background, runs a COSM simulation while Congressman Olson gets briefed by Lockheed Martin's Mike Peel and Olivia Fuentes. Congressman Olson made a visit to the Johnson Space Center and Lockheed Martin Space Systems in Houston to talk with several hundred employees (Photo bottom left).

