



Week ending January 24, 2009



Photo courtesy of Michael R. Brown/Florida Today.



Kennedy Space Center Operations and Checkout Facility Activation

More than 200 people including elected officials and community leaders gathered today to mark the activation of the High Bay Facility of the Operations and Checkout Building at Kennedy Space Center. The event celebrated the culmination of a two-year renovation led by Lockheed Martin to prepare the building to support the new Orion crew exploration vehicle, the flagship of NASA's Constellation program. Guests included U.S. congressional and Florida state representatives as well as Florida Lt. Governor Jeff Kottkamp and Brevard County commissioners. The state of Florida, NASA and Lockheed Martin partnered to invest more than \$55 million to create a state-of-the-art facility to support NASA's future exploration endeavors. About a dozen states across the country will contribute to the Orion assembly and integration work at the O&C facility. Alabama, Arizona, California, Colorado, Connecticut, Florida, Louisiana, Maryland, New Mexico, Ohio, Texas, Utah and Virginia are among those states contributing to this effort. Additional photo is shown on bottom of Page 2.

The Operations and Checkout Facility Use Permit was signed. The Facility Use Permit defines the terms under which the Johnson Space Center (JSC) will use a portion of the Operations & Checkout (O&C) Facility at the Kennedy Space Center (KSC) in support of the Orion Project.



White Sands Missile Range (WSMR) Test Facilities conducted the final inspection of the grounding portion of the Final Integration and Test Facility (FITF) Lightning Protection System (LPS).

Full certification of the LPS system is expected by January 28. WSMR has previously indicated that the ordnance operations permit will be reissued for the FITF within 1-2 days of full certification of the LPS system. Launch Abort System motors cannot be delivered placed in the FITF until the LPS are fully certified and the ordnance operations permit reissued.



The Pad Abort-1 Launch Abort System retention and release mechanism verification is complete.

Preliminary data surveys indicated no unresolved issues. This clears the way for the mechanism acceptance review and DD250 in February.



The Low Impact Docking System (LIDS) motor controller prototype was successfully tested this week.

Printed Circuit Board (PCB) layout for a circuit board with 6 of these controllers can begin. This board will be used during the Soft Capture System (SCS) testing scheduled this summer at the Johnson Space Center. The SCS is the portion of the mechanism that is extended on shafts like shock absorbers and 'captures' the other vehicle.

The third crew module pallet calibration test of the Crew Impact Attenuation System (CIAS) of Struts Test Fixture was completed. The 20,000-pound test fixture was dropped at 35 fps onto blocks of paper honeycomb sized to yield an 8g acceleration pulse. In the 35 fps test, the approximately five foot tall stacks of crush material experienced some buckling and crushed more than expected. Data from 35 fps test is under assessment in order to redesign the shape of the paper honeycomb stacks to avoid the buckling and better control the deceleration pulse.

The Thermal Protection System (TPS) hybrid barrier test rig has completed the preliminary checkout testing. The hybrid thermal test results will be used in the TPS seal arc jet test planning tentatively scheduled in April.

The new Androgynous Peripheral Docking Assemble (APDA) Pro-E model from RSC-Energia was received during the APDA Preliminary Design Review in December. It is being incorporated in the ATLAS top assembly model, which will be used in the ongoing design of the ATLAS hardware. The Johnson Space Center and RSC-Energia engineering teams are verifying that the models have integrated properly and there are no discrepancies.

Fabrication of the abort flight test Separation Ring Transportation Fixture (SRTF), the device used to transport a SepRing and to integrate the SepRing to a flight test crew module is near completion (Photo below).

A two-week window over February 9-20 has been scheduled for the SRTF proof load test and crew module/sep ring integration fit check utilizing the Crew Module/SepRing Integration Fixture. This effort is in support of Pad Abort-1 integration preparations.



Photo courtesy of Michael R. Brown/Florida Today