Boeing Technicians "Flip the Switch," Begin Powered Testing of New Features of Shuttle Atlantis

The Space Shuttle Atlantis awoke from its six-month hibernation last week as technicians at the Boeing Orbiter Major Modification Facility in Palmdale, Calif., began testing the nearly $68 million in modifications to the vehicle, designed to reduce program maintenance costs and improve operations, safety and reliability.

The "power-on" process, as it is known, began June 3 and will continue until mid-August. In a nutshell, it tests the integrity of the modifications performed to date on Atlantis at the Boeing Palmdale facility, ranging from wiring, control panels and black boxes to gaseous and fluid systems tubing and components. The orbiter's air, water and freon cooling systems will also be brought back on-line. These systems were deserviced, disassembled, inspected, modified, reassembled, checked out and reserviced, as were most other systems onboard Atlantis.

"'Power-on' verifies that the work done at Palmdale has been performed correctly and ensures that all systems are working together properly," said Al Hoffman, director, Orbiter Major Modifications/ Production Assembly and Test. "Each system that was inspected, modified, or upgraded, or that integrates with another system affected by these changes, will be thoroughly tested to ensure optimum performance."

Atlantis, which has flown 20 successful missions and more than 60 million miles, arrived in Palmdale last November for a makeover expected to cost approximately $68 million. The work is performed under contract to United Space Alliance, Houston.

The work includes the installation of the Multifunction Electronic Display Subsystem (MEDS) -- a state-of-the-art "glass cockpit" -- and a cutting-edge satellite-based navigation system. Also included are upgrades that will enable Atlantis to support construction of the International Space Station, which is scheduled to begin this fall.

The overall orbiter major modifications period is the most extensive yet performed in the program's history.

Shuttle orbiters undergo major modifications approximately every three years. During this period, each orbiter receives a comprehensive structural inspection and undergoes a series of modifications.

The Atlantis is expected to return to NASA's Kennedy Space Center in Cape Canaveral, Fla., via a specially modified Boeing 747 Shuttle Carrier Aircraft shortly after it is rolled out at Palmdale in early September. Its next scheduled mission will be in the Spring of 1999, an ISS assembly mission to deliver station hardware.

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