



Work continues on two orbiters for future missions



▲ **Shuttle Update:** **Discovery** processing is under way for the second return to flight test mission, STS-121.

Hinge installation for the right-hand payload bay door is complete. The door was closed and opened Oct. 27 to support inspections of the radiator retract mechanism. Right-hand door inspections continue. The forward reaction control system was removed on Oct. 26. The system will be sent back to the Hypergol Maintenance Facility for work and inspections prior to returning to the bay for reinstallation on the vehicle.

Technicians continue to process the orbiter **Atlantis** for its mission to the International Space Station. Preparations are under way to remove a cold plate in an avionics bay. To perform the removal, water coolant loop No. 2 will be drained. The payload for Atlantis is the P3/P4 truss segment being prepared in the Space Station Processing Facility. The P3/P4 cargo element ammonia testing to verify functionality for on-orbit operations is complete. The P3/P4 cargo element will attach to the P1 truss on the port side of the integrated truss segment of the space station. With its two large solar arrays, P3/P4 will provide one-fourth of the total power generation capability of the station.

In the Orbiter Processing Facility

bay 2, **Endeavour** continues processing following a nearly two-year major modification period. Main landing gear rigging is scheduled to begin this week. During the modification period, the body flap was removed from the vehicle and extensive work was performed. The body flap thermal protection system blankets were removed. Technicians bead-blasted the flap to remove any microscopic corrosion and painted it with corrosion control paint. Reinstallation of the body flap hardware is under way on the vehicle.

▲ **ISS Update:** Last week, Commander Bill McArthur and Flight Engineer Valery Tokarev devoted most of their attention to spacewalk preparations. On Oct. 25, they performed a checkout of the spacesuits they will wear Nov. 7. The spacewalk will be the first from the space station to use U.S. spacesuits and to originate from the Quest Airlock since April 2003. During their work outside, they will install a television camera that is important for future assembly work on the station's port side truss. They also plan to remove an experiment from the station's highest point, the top of the P6 truss, that measured the electrical environment around the exterior of the station. The spacewalk is scheduled to begin about 9:30 a.m., with coverage on NASA TV beginning at 8:30 a.m.

ISS crew preparing for spacewalk Nov. 7

■ **Mars Robot Expert Talks About Current And Future Rovers** —

Julie Townsend, a Mars robot expert at NASA's Jet Propulsion Laboratory, will present a free public lecture especially for Brevard-area families and school-age children at 7 p.m. Nov. 19 at the Brevard Community College Astronaut Memorial Planetarium & Observatory. Townsend was a key engineer on NASA's Mars Exploration Rover mission and is currently working on future robot missions to Mars and other planets. Her multimedia presentation focuses on the technical challenges of operating robot rovers on other planets. She'll describe her personal experiences, frustrations and triumphs in commanding rovers Spirit and Opportunity, still operating on Mars today. This is the third in a series of public lectures called "Florida: Gateway to Mars," which features scientists and engineers from NASA's Mars Exploration Program. The BCC Planetarium & Observatory is located on the Cocoa Campus. For more information, call 433-7372 or visit the Web site at

<http://www.brevardcc.edu/planet>.

■ **Did You Know?** The average person can save approximately \$1,500 per year by carpooling three days a week. For more information, contact Space Coast Area Transit at 952-4563, [www.ridescat](http://www.ridescat.com) or visit www.commuterservices.com.