

## Countdown is on for return to space station: Mission STS-101/2A.2a

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More than 3,000 pounds of hardware and supplies will accompany Space Shuttle *Atlantis* when it begins its journey to the International Space Station (ISS) April 24 to make final preparations for the Russian service module *Zvezda* ("Star").

"This is an exciting year for the ISS team with two logistics missions, docking with the Russian service module, two major U.S. assembly missions, and arrival of the first crew," said Brewster Shaw, Boeing vice president and general manager for the International Space Station. "STS-101 is the first step in a big development year for Station."

Postponement to this summer of the Russian module *Zvezda's* launch led to the decision in February to split *Atlantis'* flight STS-101/2A.2 into two separate missions (2A.2a and 2A.2b). This will allow planned maintenance, repair, logistics and supply tasks to be carried out prior to *Zvezda's* arrival while providing for completion of the initial work required soon after the module's addition to the ISS.

*Atlantis* will carry the tonnage in its mid-deck lockers and cargo bay. The shuttle is expected to dock to the ISS on flight day three.

The mission's only space walk will be conducted on flight day four and will entail assembly of a Russian crane, re-seating of a U.S. crane, and other tasks to set the stage for future ISS assembly missions.

Other crew members will be preparing to move some 3,000 pounds of equipment and supplies from the shuttle into the ISS. One of the first tasks will be to test ISS air quality and to improve air circulation with the installation of new filters in the *Zarya* module, before addressing the power system issues in the Russian component.

"Our goal is to restore *Zarya's* electrical power system to full capacity and get ISS in optimum operational condition for the service module docking," said Shaw.

Problems with performance of *Zarya's* six storage batteries led NASA to a decision to replace the batteries during *Atlantis'* flight. The crew members will replace four suspect, 163-pound batteries as well as three of their 34-pound current converters and two of their 10-pound current converter controllers.

Boeing team members will follow the mission closely watching the many systems that are affected during the mission.

"We'll be monitoring the ISS systems as items are replaced, repaired and as transfer activities occur," said Bruce Fiske, Boeing Russian Integration Lead. "We will watch the battery change-out activity and make sure the power system is working as we anticipated. The transfer activities will be monitored and analyzed by the ground team as equipment is brought from the shuttle and stowed on ISS."

*Atlantis'* crew will begin wrapping up the ISS part of the mission on flight day eight. Logistics transfers will be completed, all personnel will return to the shuttle, the hatches between *Atlantis* and ISS will be closed, and the shuttle will boost the ISS into the orbit planned for *Zvezda*. The Russian service module is scheduled for launch between July 8 and July 14.

*Atlantis* will undock and fly around ISS on flight day nine. A crew news conference will be held on flight day 10, followed by a landing at the Kennedy Space Center on flight day 11.

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