



## Preparations under way for loading propellants in Discovery

▲ **Shuttle Update:** At Launch Pad 39B, Discovery's payload bay doors were opened Thursday in preparation for payload installation in the payload bay Friday (photo below). Following installation, payload connections and payload/orbiter interface testing took place last weekend. Preparations have begun for loading hypergolic propellants, currently scheduled for Wednesday. This process includes loading the propellants, monomethyl hydrazine and nitrogen tetroxide, into the Orbiter Maneuvering System and the Forward Reaction Control System.



Power-up system testing is nearly complete on **Atlantis** in Orbiter Processing Facility bay 1 for mission STS-121.

The payload bay has been cleaned for flight and the doors closed. Around the hinge line of the doors, technicians have completed installing the tile which makes up the Shuttle's heat shield, or Thermal Protection System. The doors were opened one more time to perform checks of those tiles, and the payload bay doors were

closed for the final time in the Orbiter Processing Facility prior to flight.

Technicians continue performing nose and main landing gear cycles to check out compression of the new thermal barrier seals that were added. The landing gear functional test is now scheduled for as early as the middle of this week.

In the Vehicle Assembly Building, the External Tank (ET-120) and Solid Rocket Boosters originally scheduled to fly with Space Shuttle Discovery are located in high bay 1. This stack will now fly with Atlantis. The liquid oxygen feedline bellows heater has been added to this tank and final foam closeouts are progressing.

▲ **ISS Update:** Commander Sergei Krikalev and NASA Science Officer John Phillips spent last week packing up and disposing of the previous cargo ship and making room for the new ISS Progress 18 spacecraft, which docked with the Station at 8:42 p.m. EDT Saturday. As the Progress approached the Station, Krikalev had to take over manual control of the docking of the Progress due to a Russian ground station problem that prevented commands to be uplinked to the cargo ship for its final approach for an automated docking. Nonetheless, Krikalev executed a flawless linkup. Phillips took video and still photos of the arrival.

## Space Station crew works on experiments, welcomes Progress

During the week, Phillips found time to work with the Fluid Merging Viscosity Measurement experiment, designed to use microgravity to provide insight into the way fluids, including molten materials, flow. Krikalev worked with several Russian experiments.



■ **NASA Science** — The lowest-hanging full moon in 18 years is going to play tricks on your brain this week. Sky watchers have known this for thousands of years: Moons hanging low in the sky look unnaturally big. Cameras don't see it, but our eyes do. It's a real illusion. Read the full story at [http://science.nasa.gov/headlines/y2005/20jun\\_moonillusion.htm?list29875](http://science.nasa.gov/headlines/y2005/20jun_moonillusion.htm?list29875).

■ **Did You Know?** You can join the New Horizons team as it unlocks the secrets of Pluto, Charon and the Kuiper Belt. Sign up to send your name on the New Horizons spacecraft! Names entered on the mission Web site will be recorded onto a special compact disc, which the team plans to mount on the spacecraft before its journey. After signing up, you can print a personalized participation certificate. Click here for the sign-up form, or visit [http://pluto.jhuapl.edu/ecard/sendName\\_ecard\\_content.html](http://pluto.jhuapl.edu/ecard/sendName_ecard_content.html).