



# countdown

May 24, 2007

Vol. 12, No. 39

## Endeavour, Discovery serviced for flight



### ◆ Shuttle Update:

Members of the STS-118 flight crew recently completed the crew equipment interface test, reviewing equipment in **Endeavour's** crew cabin and payload bay.

Leak checks have been completed between the crew module, airlock and tunnel adapter. The orbiter docking system centerline cameras, used during rendezvous and docking with the International Space Station, have been aligned. Technicians continue working to close out the orbiter aft, the midbody and the left and right wings. Hydraulic operations are under way for aerosurface and landing gear positioning.

On **Discovery**, servicing of the ammonia boiler system, a heat exchanger that helps cool the hydraulic system, is complete. The drag chute, which helps slow the orbiter after landing on the runway, has been installed. Functional testing of the atmospheric revitalization pressure control system, part of the orbiter's life support system, continued last week. The orbiter docking system mechanism has been tested and stowed for flight. Modifications to Discovery's engine cutoff sensor wiring continue.

◆ **ISS Update:** Last week the crew on the International Space Station prepared for the arrival of Space Shuttle

**Reminder** — Due to the Memorial Day holiday on Monday, there will be no issue of *Countdown* on Tuesday. Publication will resume on Thursday.

Atlantis, targeted to launch on June 8. Commander Fyodor Yurchikhin and Flight Engineer Oleg Kotov practiced digital photography techniques for their role in the inspection of the shuttle's heat shield as it approaches the station for the joint STS-117 mission. Flight Engineer Suni Williams assembled a spacewalk tool and wrapped it in protective tape to be used if spacewalkers need help with retracting the P6 starboard solar array.

Williams completed an additional run of the Elastic Memory Composite Hinge experiment to study a new type of composite hinge for use in space.

The crew is also preparing for two spacewalks, on May 30 and June 6. For the spacewalks, Yurchikhin and Kotov will wear Russian Orlan spacesuits. They will install orbital debris protection panels on the Zvezda Service Module and replace experiments on the hull of Zvezda. Williams will remain inside and monitor station systems. The May 30 spacewalk will begin at 1:20 p.m. NASA TV coverage will begin at 12:30 p.m.

■ **Reminder** — On Friday, Dr. Marc D. Rayman, project system engineer, will talk about the Dawn mission in a presentation at 11:30 a.m. in the O&C Mission Briefing Room. Dawn is scheduled to launch June 30 from Cape Canaveral Air Force Station.

■ **NASA Science News** — In the folklore of physics, no story is better known than the tale of Galileo dropping balls from the Leaning Tower of Pisa and proving that gravity accelerates all objects equally regardless of their masses or composition. This is called the "equiva-

## Expedition 15 crew prepares for May 30 spacewalk

lence principle," and it is a cornerstone of modern physics. But was Galileo correct? Fantastically small violations of the equivalence principle may in fact exist, providing a test of string theory and pointing the way to an all-encompassing "theory of everything." To read the full story, go to the Web site

[http://science.nasa.gov/headlines/y2007/18may\\_equivalenceprinciple.htm?list29875](http://science.nasa.gov/headlines/y2007/18may_equivalenceprinciple.htm?list29875).

■ **Help KSC/CCAFS Save Energy Dollars This Upcoming Holiday** — Before your last day of work this week, be sure to:

- Turn off your computer, monitor and printer (if not required to remain on).
- Turn off the lights in your office when you are the last person to leave.
- Turn off the hall and hall closet lights on your way out if you are the last person to leave your area in the building.
- Turn off displays and decorative lights.
- Turn off or unplug any appliances in the office, such as coffee makers, desk lamps, fans, radios, etc.
- Turn off the copier machines (including those in hallways) and scanners.
- Close the blinds on all windows.

*Countdown* is published every Tuesday and Thursday (except on holidays) for NASA KSC employees. Deadlines are 10 a.m. Mondays and Wednesdays. You can e-mail your news to [anita.barrett@jpsc.nasa.gov](mailto:anita.barrett@jpsc.nasa.gov). For questions or information, please e-mail or call 321-867-2815. You can also find *Countdown* on the Web at [nasa.gov/centers/kennedy/news/countdown/countdown-toc.html](http://nasa.gov/centers/kennedy/news/countdown/countdown-toc.html).