



Progress cargo ship delivers vital supplies to ISS crew



▲ **ISS Update:** An uncrewed Russian cargo ship linked up to the International Space Station Saturday, delivering almost three tons of food, fuel, oxygen, water and supplies to the residents onboard. The docking was flawless. Flight Engineer and NASA Science Officer Mike Fincke collected video and still imagery of the arrival of the new cargo craft.

The ship, named Progress, was loaded with 1,521 pounds of propellant, 110 pounds of oxygen and air to replenish the Station's atmosphere, 926 pounds of water and more than 3,000 pounds of spare parts, life support system components and experiment hardware.

Among the spare parts that arrived at the Station are new pumps for the U.S. space suits onboard that experienced cooling problems in early June while being prepared for a spacewalk to repair a failed power controller. The suits are undergoing

troubleshooting in the hope they can be placed back into service in the near future.

▲ **Shuttle Update:** Freon coolant loop No. 2 was serviced on **Discovery** last week, and leak checks were successfully completed. The final stage of Rudder Speed Brake panel installation continues. Due to the impending arrival of Hurricane Charley, much of the normal workflow was inhibited on Wednesday and Thursday while employees prepared the vehicles, equipment and buildings for the storm.

On **Atlantis**, the right-hand Orbital Maneuvering System main engine was installed. Water coolant loop No. 1 was drained and X-rays completed. The main landing gear was lowered for technicians to perform checks and optical measurements to ensure the landing gear will perform properly during the mission. Workers also began checkout of the nose cap, including temperature and impact sensor instrumentation.

Electrical modifications on **Endeavour** continue in the crew module. The Flash Evaporator System, which helps to cool the vehicle while in flight, was installed in the aft of the orbiter.

Three String Global Positioning System wire routing in the avionics bay and flight deck continues. The temporary installation of the nose cap

Work on orbiters returns to normal after hurricane

is complete. The chin panel, which is the semicircle-shaped piece of Reinforced Carbon-Carbon insulation under the nose cap, is undergoing a fit-check.



■ **Reminder** — Florida's Blood Centers' *Blood Drive and Bone Marrow Registry* is being held 8 a.m. –

4 p.m. Thursday at the Headquarters building. Please e-mail rwilburn@floridasbloodcenters.org for an appointment. To be a part of the National Bone Marrow Registry, please pick up information and paperwork in the Occupational Health Facility or in the O&C Fitness Center. If you have any questions, please call Stephen Pilkenton at 867-4662 or Kris Calderon at 867-3414.

■ **NASA Science** — Scientists have discovered irregular lumps beneath the icy surface of Jupiter's largest moon, Ganymede. For more information, go to the Web site <http://www.jpl.nasa.gov/news/news.cfm?release=2004-200>.

■ **Did You Know?** As of last Friday, KSC employees traveling to KSC from Titusville via north S.R. 3 (Gate 4) must show their badges at the new, staffed security gate.