



## STS-114 crew arrives Sunday for launch preparations

## Space Station crew prepares “house” for STS-114 arrival



### ▲ Return to Flight Update:

The seven STS-114 crew members, led by Commander Eileen Collins, are scheduled to arrive

at KSC no earlier than 11 a.m. on Sunday. Part of the preparation for launch for Collins and Pilot Jim Kelly is practice landing the orbiter using the Shuttle Training Aircraft (STA). The STA is a modified Grumman American Aviation-built Gulfstream II executive jet that was modified to simulate an orbiter's cockpit, motion and visual cues, and handling qualities. In flight, the STA duplicates the orbiter's atmospheric descent trajectory from approximately 35,000 feet altitude to landing on a runway. Because the orbiter is unpowered during re-entry and landing, its high-speed glide must be perfectly executed the first time.

▲ ISS Update: The Space Station's Expedition 11 Commander Sergei Krikalev and Flight Engineer John Phillips spent time last week preparing the outpost for the first joint Shuttle and Station mission since Endeavour departed in December 2002.

In preparation for docking, Phillips continued installation of a camera used to align the Shuttle and Station during the linkup.

Krikalev and Phillips also

### Six days and counting to launch of Return to Flight STS-114.

practiced taking photographs from windows in the Zvezda living quarters module in preparation for Discovery's arrival. Next week, they will use two digital cameras with high-powered lenses to shoot the thermal tiles on the orbiter during its approach. The pictures will be sent to Mission Control to help engineers assess the health of Discovery's heat shield.

The crew also operated the Station's robotic arm, Canadarm2, as a checkout before Discovery arrives. In addition to verifying the system's operation, the activity served as training for Krikalev and Phillips. The arm was commanded to walk off the Destiny lab's operating base to the Mobile Base System (MBS) on the truss Wednesday, and then back again Thursday. A similar procedure will be done during the Shuttle mission.

The arm will be positioned on Destiny's base to observe the arrival of Discovery, for installation of the Multi-Purpose Logistics Module Raffaello, and to support three spacewalks by the Shuttle crew. From the MBS operating position, cameras on the arm will be used for situational awareness during potential protective tile inspections the day after docking.

Last week Krikalev installed and

tested equipment for another visiting vehicle. When the European Space Agency's Automated Transfer Vehicle (ATV) arrives next year, it will use Proximity Communications Equipment (PCE), or space-to-space communications, to rendezvous and dock to the Station's Russian segment. The ATV is capable of bringing more than eight tons of equipment and supplies to the crew.

■ Skill Training Opportunity — The Central Brevard Chapter International Association of Administrative Professionals® and Brevard Community College are offering preparation classes for the *Certified Professional Secretary (CPS)*® and *Certified Administrative Professional (CAP)*® for all levels of administrative support personnel. Classes are from 5:30 to 8:30 p.m. on Monday evenings beginning Aug. 15 at the BCC Cocoa campus, Building #14, Room #185. The registration deadline is Aug. 5. Contact Patty Boatman at 433-7500 or visit the Central Brevard Chapter – IAAP Web site at <http://iaapcentralbrevard.homestead.com/>.

■ Did You Know? The Space Shuttle does zero to 17,000 mph in 8.5 minutes. The speed of the gases exiting the Solid Rocket Booster motor is 6,000 mph – three times the speed of a high-powered rifle.