



Post-flight thermography on Discovery's leading edge RCC panels proves invaluable

Expedition 12 crew on ISS prepares for December arrival of Progress 20



▲ Shuttle Update:

Technicians continue to process **Discovery** in Orbiter Processing

Facility Bay 3 for NASA's second space shuttle return to flight test mission, STS-121. Powered-up system testing continues. Waterproofing of the payload bay door hinge line and thermography of the wing leading edge reinforced carbon-carbon panels are complete. Thermography is the nondestructive technique used to search for microscopic flaws in the panels. These post-flight inspections have identified two areas that will be repaired prior to the next flight.

Atlantis processing continues on schedule in Orbiter Processing Facility Bay 1 for its mission to the International Space Station. Reaction-jet driver wire inspections and chafe protection work continue in the forward and aft areas. Thermal protection system gap filler inspections and measurements continue in the shuttle's forward and midbody areas. Currently, all zones are identified and mapping is complete in nine of the 10 zones. This work is being performed after two gap fillers were found protruding from the underside of **Discovery** on the July 26 return to flight mission, STS-114. New installation procedures are being developed to ensure the gap fillers stay in place and do not pose any

hazard on re-entry to the atmosphere.

▲ **ISS Update:** International Space Station Commander Bill McArthur and Flight Engineer Valery Tokarev enjoyed a day off Thursday to celebrate Thanksgiving. They are the sixth station crew to observe Thanksgiving on the complex. They sent holiday greetings to Earth and feasted on irradiated smoked turkey, dehydrated green beans, powdered drinks and a thermo-stabilized cranberry-apple dessert. The crew's attention now turns to the next going and coming for the complex, the jettison of the ISS Progress 19 supply ship Dec. 20, and the launch of the new ISS Progress 20 craft Dec. 21 that will dock to the complex on Dec. 23. The cargo aboard Progress 20 is expected to include holiday gifts from the crew's families. After the old Progress 19 leaves the station, it will burn up in the atmosphere.

■ **Author of Armstrong Biography To Appear at KSC for Book Signing** — The most complete account of the life and career of astronaut Neil Armstrong has been released in the first authorized biography, *FIRST MAN: The Life of Neil A. Armstrong*. Author James R. Hansen will appear at the KSC Visitor Complex at 4 p.m. on Friday and 11 a.m. Saturday to sign copies of his book, which will be available for purchase at the Visitor Complex.

Present your KSC or CCAFS badge at the will-call ticket window to receive a limited admission ticket to attend the book signing. You must present your badge at the time of admission. For more information, call 449-4400.

■ **Introducing Girls to Engineering Workshop** — The Society of Women Engineers is once again sponsoring the "Introducing Girls to Engineering Workshop" on Jan. 21 at Merritt Island High School. This full-day program of hands-on activities for girls in third through ninth grades will provide the students insight into engineering as a career while introducing engineering concepts and having fun. Full information on this program is available at www.swe-sc.org/IGEW. A two-page flyer and registration form can be downloaded at <http://www.swe-sc.org/IGEW/RegistrationForm.pdf>.

■ **Did You Know?** The Cingular Wireless representatives will be in the OSB lobby from 10 a.m. to 3 p.m. Wednesday. Stop by for upgrades to your personal cellular service, purchase a new cell phone, or ask questions regarding your monthly statement. KSC employees receive 25 percent off equipment, and 12 percent off monthly plans. For more information, contact Andra Jackson at 867-9102, Ed Bertot at 867-7995, or Laura Scott at 867-2127.