

Station Crew Completes Spacewalk

August 4 2006

Space Station crewmen Jeff Williams and Thomas Reiter completed an almost 6.5-hour spacewalk Thursday that involved installing and replacing equipment and setting up scientific experiments outside the orbiting laboratory.

Reiter constituted the third station crew member for the first time in more than three years. Expedition 13 Commander Pavel Vinogradov coached them through their prebreathing exercise program and helped them suit up for their outing.

The station crew was reduced to two members in May 2003 in the wake of the Columbia accident. Since then, spacewalkers have had to reconfigure station systems before donning their spacesuits without help.

Williams and Reiter were coached during their spacewalk tasks by Astronaut Steve Bowen, who acted as spacewalk intravehicular officer from the International Space Station Flight Control Room in Houston's Mission Control Center.

The first and longest major task of the spacewalk was installation of the Floating Potential Measurement Unit, a device designed to measure the electrical potential of the station so ways can be verified or devised to minimize arcing hazards as the ISS grows.

Williams, designated lead spacewalker (EV1), wore the U.S. spacesuit with red stripes. Reiter, EV2, wore the all-white suit. They departed from the Quest airlock.

They first spent about half an hour setting up equipment, then moved with the FPMU to a camera mount near the upper outboard end of the S1 (starboard one) truss. The task took nearly two hours.

Next they moved back to the airlock, where they installed two Materials on International Space Station Experiment containers. They attached MISSE 3 to one of the high-pressure tanks around the crew lock, and set up MISSE 4 on Quest's outboard end.

The experiment, housed in suitcase-like containers left open, looks at the long-time effects of space on a variety of materials. The idea is to identify optimal materials for use in future spacecraft.

A little over three hours into the spacewalk, Williams installed a controller for a thermal radiator rotary joint on the S1 truss, while Reiter replaced a computer on S1.

While Reiter finished that task, Williams began installation of a starboard jumper and spool positioning device (SPD) on S1. Reiter then inspected a radiator beam valve module SPD site and then moved on to install a port jumper and SPD.

The jumpers are designed to improve the flow of ammonia through the radiators once that coolant is installed.

The last major task for Williams was to test an infrared camera designed to detect damage in a shuttle's reinforced carbon carbon thermal protection. The camera is designed to detect damage by variations in temperature between sound and damaged RCC test sections.

After and 30 minutes of cleanup, the pair re-entered the airlock and re-pressurized, with the spacewalk ending about 4:15 p.m. Eastern Time.

This was the third spacewalk for both Williams and Reiter, and it was the 69th spacewalk to support station assembly and maintenance and the 22nd from the Quest airlock.

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