Station Crew Completes Successful Spacewalk

March 28 2005

International Space Station crewmembers wound up a successful spacewalk Monday morning, finishing preparations to welcome the Automated Transfer Vehicle (ATV). They closed the airlock hatch at 5:55 a.m. EST to end their mission's second and final planned excursion outside. Commander Leroy Chiao and Flight Engineer Salizhan Sharipov installed on the Zvezda Service Module the final three antennas of a six-antenna set for the ATV, an unpiloted European cargo carrier scheduled to make its first trip to the Station early next year.

They also installed a Global Positioning System (GPS) antenna for the ATV.

The previous Station crew, Commander Gennady Padalka and NASA ISS Science Officer Mike Fincke, installed the first three antennas of the six-antenna set.

During this spacewalk, which began at 1:25 a.m. EST, Sharipov and Chiao deployed a small Russian experiment called Nanosatellite.

The spacewalk, in Russian Orlan suits using the airlock of the Pirs Docking Compartment, lasted 4 hours, 30 minutes. Sharipov and Chiao completed all scheduled tasks about an hour earlier than planned.

Sharipov, designated EV1, or lead spacewalker, made his second spacewalk. This was the sixth spacewalk for Chiao, EV2. Both wore suits with red stripes. Chiao's suit had a U.S flag on the shoulder.

After opening the hatch and assembling equipment, Sharipov and Chiao moved from the Pirs back to the small-diameter forward end of Zvezda. There they installed the three WAL antennas, space-to-space communications antennas for the ATV.

Installation of the antennas and their associated cabling took about two hours.

Next the spacewalk deployed the Nanosatellite. It is about a foot long, weighs 11 pounds and contains a transmitter. The crew activated it before leaving the airlock and stowed it on the outside of the docking compartment. The object of the experiment is to develop small satellite control techniques, monitor satellite operations and develop new attitude system sensors.

Sharipov deployed it from the ladder at Pirs, giving it a push in the direction opposite the direction the Station is traveling, while Chiao took photos. It left the Station at a relative velocity of about one meter per

second.
Next the crew moved to the large-diameter section of the Service Module to install the GPS antenna and its cabling. Their movements to and around the rear of the Service Module were coordinated carefully with Mission Control Moscow to avoid any possibility of contamination had it become necessary to use Russian thrusters there to adjust the orientation of the Space Station.

While near the back end of the Service Module the crew inspected a remotely operated Russian communications antenna and confirmed its location for Mission Control Moscow.

The final task was to inspect and photograph a laser reflector on the Service Module's aft end-cone. The reflector helps control the ATV's final approach to the Station, and the inspection is the last ATV-related activity of the spacewalk.

Source: NASA

Citation: Station Crew Completes Successful Spacewalk (2005, March 28) retrieved 10 April 2024 from https://phys.org/news/2005-03-station-crew-successful-spacewalk.html

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