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Expedition 9 Crew Prepares for Final Spacewalk

by [Tariq Malik](#), Staff Writer | August 27, 2004 05:00pm ET

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Space Station Crew Ready for Next Spacewalk

Expedition 9 flight engineer Mike Fincke (left) and commander Gennady Padalka with their Russian Orlan spacesuits in the Pirs Docking Compartment of the International Space Station (ISS).

Credit: NASA/JSC.

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The two astronauts aboard the International Space Station (ISS) will step outside their orbital home one more time next week during the fourth and final spacewalk of their mission.

Clad in Russian spacesuits, ISS Expedition 9 commander Gennady Padalka and flight engineer Michael Fincke will spend nearly six hours in space on Sept. 3 to perform station maintenance and install communications equipment for a European cargo pod.

While the fourth spacewalk for the Expedition 9 crew, it is the astronauts' second planned extravehicular activity (EVA). Expedition 9's [previous](#) spacewalk on Aug. 3 was also a scheduled EVA. Two additional spacewalks conducted in June were unplanned repair jobs.

"Each of the spacewalks are risky," said Paul Boehm, Expedition 9 lead EVA officer at NASA's Johnson Space Center (JSC) during a press briefing today. "This is a preplanned spacewalk, and Expedition 9 did train for it before launch."

Working in space

The upcoming spacewalk is scheduled to begin at 12:50 p.m. EDT (1650 GMT), with the astronauts stepping outside the Russian Pirs docking compartment in Orlan spacesuits with three primary tasks ahead of them.

First, Padalka and Fincke will replace a thermal flow control panel on the station's Zarya control module.

Matt Abbott, Expedition 9's lead flight director at JSC, said the panel is part of an air conditioning system for Zarya systems. The panel does contain coolant that is somewhat toxic, though shouldn't pose any harm to the crew if any is tracked into the ISS on the crew's spacesuits, ISS controllers added.

Once that task is complete, Padalka and Fincke are expected to install a series of tether leads on Zarya module handrails then make their way down to the end of the station's Zvezda service module. There, they will install three new antennas on a docking port that will be used by the European automated transfer vehicle (ATV) Jules Verne next year.

"The ATV is not going to be there any earlier than October of next year," said Mark Geyer, ISS manager for integration and operations, adding that at least one more EVA will be required to complete preparations for that vehicle.

The spacewalk should conclude with hatch closure at about 6:45 p.m. EDT (2245 GMT).

Space station adrift

ISS controllers said they have learned from a torque situation that prompted loss of communications with the Expedition 9 crew during their last spacewalk.

In the Aug. 3 EVA, the space station's control moment gyroscopes - which control the attitude of the space station - were unable to keep the ISS oriented properly due to heavy momentum loads and the station began to drift slightly.

"We were not actually drifting in space, just in orientation," Abbott said. "We got 80 degrees out of attitude, and the station pitched upwards."

The attitude change took about 30 minutes to reach its 80-degree maximum, and led to power conservation procedures that shut down primary S-band communications between the astronauts and the flight controllers.

With that experience in mind, mission controllers will not issue such large power conservation measures during the upcoming spacewalk. The space station will also be able to alternate between Russian thrusters and U.S. gyroscopes to maintain orientation throughout the EVA.

"As always, we take what we can learn from this experience and throw them into the next mission," Abbott said.

The Sept. 3 spacewalk will be the sixth EVA for Padalka and the fourth for Fincke. It also marks the 13th spacewalk staged from the Pirs docking compartment and the 56th in support of the ISS. NASA TV will broadcast live coverage of the spacewalk beginning at 11:30 a.m. EDT (1530 GMT).

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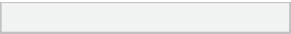
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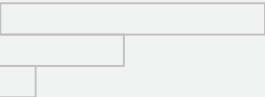
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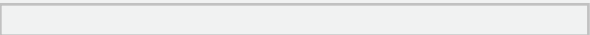
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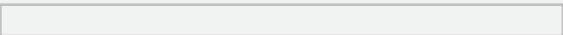
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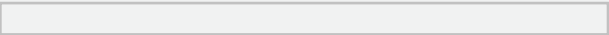
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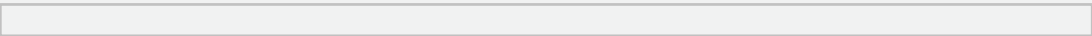
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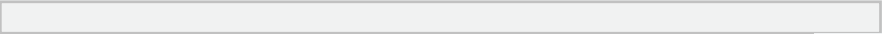
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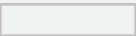
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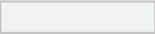
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