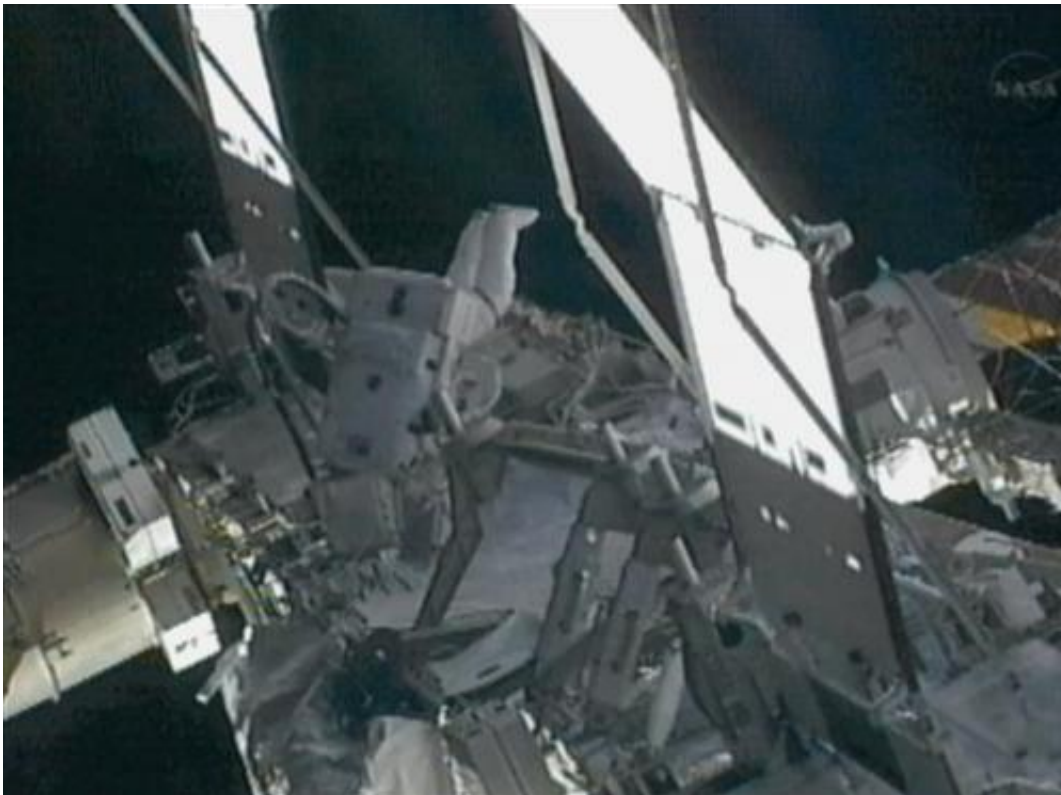


# Astronauts take spacewalk to find ammonia leak (Update 2)

November 1 2012, by Marcia Dunn

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In an image made from NASA TV, space station commander Sunita Williams, center, works on a leaky radiator system outside the International Space Station on Thursday, Nov. 1, 2012, just hours after barely dodging a menacing piece of orbiting junk. Williams and Japanese astronaut Akihiko Hoshide wasted no time installing jumper cables outside their home for the past four months. Their objective was to isolate a suspect radiator to help determine whether that is the source of the ammonia coolant leak, and deploy a spare radiator to bypass the troublesome section. (AP Photo/NASA)

(AP)—Two spacewalking astronauts worked on a leaky radiator system outside the International Space Station on Thursday, just hours after barely dodging a menacing piece of orbiting junk.

NASA ordered the space station to change position Wednesday evening to avoid a fragment from a communication satellite that was destroyed in a high-speed collision three years ago.

Thrusters on a docked Russian supply ship were fired to move the orbiting lab out of harm's way. But a computer error caused the thrusters to malfunction and the space station did not reach the desired altitude. NASA officials said the space station and its six residents were safe despite their lower-than-intended orbit.

Space station commander Sunita Williams and Japanese astronaut Akihiko Hoshide successfully rerouted ammonia coolant lines and bypassed a radiator believed to be leaking. They isolated the suspect radiator to help flight controllers determine in the coming days whether that, indeed, is the source of the ammonia seepage.

"We've got smiles all around," Mission Control radioed.

Engineers theorize that bits of space junk may have penetrated the radiator or part of its system. Another possibility is that the 12-year-old equipment simply cracked.

The radiators are needed to dissipate heat generated by electronic equipment aboard the space station. Toxic ammonia is used as the coolant, and the spacewalkers took care to avoid contamination. One or two frozen flakes of ammonia harmlessly struck Hoshide's helmet.

Thursday's spacewalk provided some déjà vu for Williams. In 2007, she retracted the spare radiator being brought into service Thursday.

"Nice to see it deployed again," she said.

A small leak was detected in this area in 2007. Spacewalking astronauts added extra ammonia last year to shore up the system, but this past summer, the leakage increased fourfold. At that rate, the affected power channel could be offline by the end of the year.

That's why Thursday's spacewalk was ordered up, even though it comes just 2½ weeks before the departure of Williams and Hoshide. The two are scheduled to return to Earth on Nov. 19, after a four-month mission.

Within 5½ hours of going out, Williams and Hoshide had accomplished the bulk of their work. Williams asked how the four guys inside were doing. Busy, but still able to catch some of the spacewalking action, replied U.S. astronaut Kevin Ford.

"We'll have tea on for you," Ford promised.

The spacewalk lasted 6½ hours and bumped Williams into the No. 5 position of most experienced spacewalkers. She has spent 50 hours and 40 minutes out in the vacuum of space over seven spacewalks, the most by a woman.

**More information:** NASA:

[www.nasa.gov/mission\\_pages/station/main/index.html](http://www.nasa.gov/mission_pages/station/main/index.html)

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