

# Astronauts enter space station's newest room

February 13 2010, By MARCIA DUNN , AP Aerospace Writer

---



In this Feb. 11, 2010 photo provided by NASA, astronaut Nicholas Patrick participates in the first session of extravehicular activity as construction and maintenance continue on the International Space Station. (AP Photo/NASA)

(AP) -- Astronauts swung open the door to the International Space Station's newest room Friday night, using flashlights to illuminate the shadowy chamber and wearing goggles and masks to keep themselves safe from any floating debris.

The two skippers were the first to enter Tranquility, Europe's \$380 million contribution.

Station commander Jeffrey Williams floated in first, followed closely by shuttle Endeavour's George Zamka and then several other members of the combined crews. Williams looked around the empty, virtually powerless 23-foot-long chamber for two minutes as colleagues

documented the event with cameras, then came back out to report to Mission Control.

"The module is beautiful," he radioed, "and the atmosphere is very clean."

As a precaution, the astronauts kept on their goggles and masks as they began setting up temporary ventilation ducts between Tranquility and the rest of the orbiting complex. The air flow was unexpectedly sluggish, and Mission Control told the astronauts to hold the Tranquility crowd to four until the situation could be resolved. They complied as they outfitted the room with a fire extinguisher, emergency breathing apparatus, water lines and various cables.

Later Friday night, the hatch between Tranquility and its \$27 million [observation deck](#) was opened briefly so astronauts could cap a valve and hang a cover in preparation for next week's relocation of the lookout. The dome has seven windows, one of them the biggest ever flown in space. For now, they remained shuttered.

The astronauts hooked up Tranquility early Friday during the first [spacewalk](#) of shuttle Endeavour's visit.

During the next spacewalk Saturday night, the [astronauts](#) will connect Tranquility's plumbing. The hoses for ammonia coolant had to be refashioned from spares, after the originals failed testing last month.

Tranquility needs to have those cooling lines in place before any heat-generating machinery can operate inside. The room eventually will house exercise and life-support equipment, as well as a toilet.

Just a few hours before the excitement unfolded 220 miles up, NASA concluded that a cracked tile and protruding ring on Endeavour are too

small to pose any danger during next week's trip home.

In fact, the space shuttle's entire heat shield is solid for re-entry based on five days of intensive photo and data reviews, said LeRoy Cain, chairman of the mission management team.

The tile and ring damage to Endeavour's cockpit was discovered Wednesday. The thermal tile was fixed before the flight, but the repair failed and the original 2-inch crack reappeared. As for the 1-inch-diameter ceramic spacer ring, it's sticking out slightly near one of the commander's windows.

The defective pieces are so small that even if they managed to break off during re-entry and strike Endeavour - a big if - no serious damage would result, Cain said.

One end of a long metal seal also is sticking up 2 inches to 3 inches on Endeavour's left wing, but it, too, is of no concern.

As for the fuel-tank foam insulation lost during Monday's liftoff, a fair amount broke off a central area that had experienced trouble on previous flights. Platforms used to inspect this so-called intertank region are positioned in such a way that makes it difficult to properly clean there, and that's causing all the trouble, Cain said.

NASA will conduct extra checks of the fuel tank that will be used to launch Discovery next month. The mid-March liftoff could end up being delayed for another reason: Cold weather at Kennedy Space Center is stalling launch preparations.

Foam loss has been a major focus at NASA ever since a large chunk crippled Columbia in 2003 and led to its destruction during re-entry. NASA plans to keep up its foam vigilance, even though just four shuttle

launches remain.

©2010 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed.

Citation: Astronauts enter space station's newest room (2010, February 13) retrieved 22 May 2024 from <https://phys.org/news/2010-02-astronauts-space-station-room.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.