

# NASA debates space station repairs or restocking (Update)

December 16 2013, by Marcia Dunn

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In this image provided by NASA the International Space Station is shown with the backdrop of Earth. The image was photographed by an STS-132 crew member on space shuttle Atlantis after the station and shuttle began their post-undocking relative separation on May 23, 2010. The astronauts aboard the International Space Station dimmed the lights, turned off unnecessary equipment and put off science work Thursday Dec. 12, 2013 as NASA scrambled to figure out what's wrong with one of two identical cooling loops that shut down Wednesday. (AP Photo/NASA)

Spacewalk or space delivery? That's the question facing NASA as space station flight controllers try to revive a crippled cooling loop.

Half of the International Space Station's cooling system shut down last Wednesday because of a bad valve that made the line too cold. NASA is using a different valve to try to control the temperature, with some success, Kenny Todd, a space station manager said Monday.

"Whether or not it will be enough ... we can't tell yet," said Todd.

The two American astronauts on board, Rick Mastracchio and Michael Hopkins, may need to make spacewalking repairs, beginning Thursday. That's the same day an unmanned rocket is supposed to hoist a space station cargo ship from Wallops Island, Virginia.

Spokesman Josh Byerly said NASA expects to decide Tuesday which should take priority—repairs or restocking.

Orbital Sciences Corp.'s Cygnus cargo ship already has been delayed a couple days because of the cooling problem in orbit.

The space station cooling system, which runs ammonia through the lines, is critical for dispelling heat generated by on-board equipment.

Nonessential equipment was turned off following the breakdown, and some science experiments were put on hold to keep the heat load down.

NASA estimates two or three spacewalks would be needed to replace the pump that holds the bad valve. If deemed necessary, the spacewalks would occur on Thursday, Saturday and, possibly, next Monday. The two U.S. astronauts checked their suits Monday, just in case, and even tried them on.

The pump replacement would be put off until early next year, Todd said,

if engineers determine that the flawed cooling line can "limp along" until then.

Six men are aboard the orbiting outpost: two Americans, three Russians and one Japanese. NASA has said from the start that the station is not in danger and the astronauts are comfortable.

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