

Space station cooling system suddenly shuts down

August 1 2010, By MARCIA DUNN , AP Aerospace Writer



This Feb. 19, 2010 file photo provided by NASA shows the International Space Station with Earth's horizon as a backdrop. Several power systems have been shut down aboard the International Space Station after a cooling system malfunctioned. NASA says in a posting on its website that one of two cooling loops aboard the space station was shut down Saturday, July 31, 2010. A module that pumps ammonia coolant to prevent equipment from overheating was still shut down early Sunday, Aug. 1. (AP Photo/NASA, File)

(AP) -- Half of the International Space Station's cooling system suddenly shut down during the weekend, forcing the astronauts to power down equipment and face the likelihood of urgent spacewalking repairs.

After huddling Sunday, [NASA](#) managers gave preliminary approval for a pair of spacewalks, the first of which would take place later this week. Two of the Americans on board were already scheduled to conduct a

spacewalk Thursday for routine maintenance, though the repairs would supersede the original chores.

Officials stressed that the six occupants were in no danger, and that the orbiting complex was in a stable situation. Much of the station is operating on a single string, however, with no safeguard in case of further [cooling system](#) failures.

The trouble arose Saturday night, when one of the two ammonia-fed cooling loops shut down. Alarms sounded throughout the sprawling outpost as the circuit breaker for the pump in that line tripped, causing the pump to stop working.

The cooling system is critical for on-board operations. The two ammonia lines ensure that all the station's electronic equipment does not overheat.

Astronaut Tracy Caldwell Dyson hustled through the equipment shutdown procedures and, with crewmate Douglas Wheelock, installed a jumper cable to keep all the rooms cool.

Flight controllers tried to restart the disabled ammonia pump early Sunday, but the circuit breaker tripped again. No further repair attempts were planned, at least for now. In fact, the [astronauts](#) were allowed to sleep in because of all the late-night disruptions.

Any repairs later this week will involve replacing that ammonia pump, a difficult job that would require two spacewalks. Two spare pumps are stored on the outside of the station.

The first repair spacewalk likely would occur Thursday at the earliest, with the second excursion two or three days later. A final decision on whether to proceed with the task will be made following additional engineering review.

Among the equipment powered off for now: the Global Positioning System circuit, several power converters and a set of devices that route commands to various equipment.

Two of the four gyroscopes initially were shut down - part of the space station's pointing and navigating system. But the crew installed a jumper cable to bring up a third gyroscope, leaving the station in a much more stable position.

On board are three Americans and three Russians.

No space shuttle visits are planned before November. Only two U.S. shuttle missions remain before the fleet is retired; a third and final flight for next summer is under consideration.

More information: NASA:

<http://www.nasa.gov/mission-pages/station/main/index.html>

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