

Spacewalking astronauts replace station batteries

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In this July 20, 2009 photo provided by NASA, astronaut Dave Wolf performs his second spacewalk and the Endeavour's second also of the scheduled five overall in a little over a week's time to continue work on the International Space Station. Astronauts Wolf and Tom Marshburn (out of frame), both mission specialists, successfully transferred a spare KU-band antenna to long-term storage on the space station, along with a backup coolant system pump module and a spare drive motor for the station's robot arm transporter. (AP Photo/NASA)

(AP) -- A pair of spacewalking astronauts plugged in some big, new, fancy batteries at the international space station Wednesday, working out on a distant ledge.

It was the third spacewalk in five days for the shuttle Endeavour crew.

Veteran spaceman David Wolf and Christopher Cassidy, a newcomer to orbit, had four 9-year-old batteries to change. It was harder than it sounded.

The nickel-hydrogen batteries are bulky - about 3 feet square and 370 pounds apiece - and located on the far left end of the international [space](#) station, along the framework holding the huge solar wings.

That made for a long, hand-over-hand trek for the spacewalkers, taking them about as far as they could get from the hatch leading back into the orbiting outpost, about 150 feet. "Take your time," the [astronauts](#) urged each other.

After replacing the first battery, Cassidy observed, "I sure am glad we don't have 30 more to do." They only had three. Soon afterward, Wolf encountered a stiff bolt while removing the second new battery from its storage pallet; it took him several tries to get it off.

More than midway through the spacewalk, two new batteries were in place and checking out fine.

These batteries are critical, storing the power collected by the space station's solar wings. The old batteries were launched in 2000. NASA is uncertain how long those original batteries might last and wants new ones installed before the old ones die.

Two more batteries will be replaced during Friday's [spacewalk](#), for a total of six. Each new battery costs \$3.6 million.

All of the old batteries will be returned to Earth aboard [Endeavour](#).

Before tackling the battery work 220 miles up, the spacewalkers rearranged some space station equipment and removed four thermal

covers from communication equipment for Japan's science lab and newly installed porch, tossing three of them overboard for eventual disintegration. The fourth was to be brought back inside.

Cassidy needed a rest after rolling up all the covers, which he said was like dealing with his sleeping bag. He later paused to snap a self-portrait. "Smile, Chris," Mission Control radioed.

Two more spacewalks are planned during Endeavour's visit, for a total of five. The shuttle, in orbit for a week now, is scheduled to undock from the space station on Tuesday.

On the Net:

NASA:

[http://www.nasa.gov/mission\(underscore\)pages/shuttle/main/index.html](http://www.nasa.gov/mission(underscore)pages/shuttle/main/index.html)

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