

Astronauts install fresh batteries on spacewalk 4

July 24 2009, By MARCIA DUNN , AP Aerospace Writer



In this July 24, 2009 television image from NASA TV astronaut Chris Cassidy works to replace batteries on the international space station. (AP Photo/NSAS TV)

(AP) -- Astronauts outfitted the international space station with fresh batteries in an extra-long spacewalk Friday, moving slowly to avoid a repeat of the suit trouble that cut short the previous outing.

At Mission Control's request, Christopher Cassidy and Thomas Marshburn took their time heading out to the far end of the space station, where a series of critical battery changes awaited them. It was difficult dealing with all the stiff bolts, and the men paced themselves accordingly as they pulled out 9-year-old batteries and plugged in new

ones.

By midafternoon, five hours into their [spacewalk](#), the two had installed three fresh batteries. One more remained.

The last time Cassidy went out, on Wednesday, he was so gung-ho and moved so fast that the air-cleansing canister in his suit could not keep up. That resulted in rising carbon dioxide levels that forced an early end to the spacewalk.

"He's a Navy SEAL, he's in great shape, and so we really needed to tell him, 'Hey, we know you can do this really well and really fast ... just slow down a little and take your time,'" explained flight director Holly Ridings.

The spacewalkers took the advice to heart. But despite Cassidy's effort to stay relaxed, his metabolic rate was a little high at one point and Mission Control gave some of the early battery tasks to Marshburn. That gave Cassidy, a 39-year-old Navy commander, a bit of a break.

"I'm just going to sit here," Cassidy said. He noted that he wanted the lithium hydrogen canister in his suit - for removing his exhaled carbon dioxide - to operate at its maximum efficiency.

Two of the four new batteries assigned to Cassidy and Marshburn should have been installed Wednesday. Only two fresh batteries were hooked up during that shortened spacewalk.

The extra work pushed the planned length of Friday's spacewalk to 7 1/2 hours, an hour longer than usual. It was the fourth spacewalk, over the past week, for shuttle Endeavour's visiting crew.

The batteries - 3-foot-square bundles weighing about 370 pounds each -

are designed to store power collected by the solar wings on the far left end of the space station. Each one costs \$3.6 million.

The old batteries will be returned to Earth aboard Endeavour at the end of next week.

Cassidy - an explosives and combat expert who went into Afghanistan two weeks after the Sept. 11, 2001, terrorist attacks - said in a series of TV interviews Thursday that he experienced no symptoms of carbon dioxide buildup during Wednesday's spacewalk and was never worried.

One more spacewalk is planned, on Monday.

Back at the launch site, meanwhile, NASA conducted more testing on the fuel tank that will be used for Discovery's launch at the end of August. Shuttle managers want to be absolutely certain that the foam insulation on the central area of the tank was attached properly.

During Endeavour's liftoff on July 15, an unusually large amount of foam broke off and a few pieces struck the shuttle, causing minor damage.

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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