

## Astronaut completes spacewalk without helmet camera, lights (Update)

January 15 2020, by Marcia Dunn



In this image taken from NASA video NASA astronaut Jessica Meir works to finish upgrading the International Space Station's power grid, Wednesday, Jan. 15, 2020. NASA is in the midst of replacing decades-old nickel-hydrogen batteries outside the sprawling space station with more powerful, longer-lasting lithium-ion batteries. The batteries are part of the station's solar power network, keeping everything running when the outpost is on the night side of Earth. It was the second pairing of Meir and Christina Koch outside the orbiting lab. (NASA via AP)



Spacewalking astronauts had to make do with fewer lights and camera views from one helmet Wednesday while performing critical battery work outside the International Space Station.

It was the second pairing of NASA's Jessica Meir and Christina Koch outside the orbiting lab. Last October, they teamed up for the world's first all-female spacewalk.

The women were just getting started on battery replacements when Koch's camera and light unit came loose and they couldn't get it back on her helmet. Mission Control told them to just take it off, rather than waste any more time, and continue the spacewalk.

"Just be careful," Mission Control urged Koch. "You're missing that additional protection."

Koch later assured flight controllers that she had enough good light. The astronauts ended up completing all their tasks and even jumped ahead, putting two new batteries in and pulling four old ones out. The spacewalk lasted 7 1/2 hours.

"It was truly amazing for Christina and me to be back out here today," said Meir.

She also welcomed the 13 new astronauts who graduated last week, reading out their first names.

Meir and Koch have one last spacewalk next Monday. That would make a total of five spacewalks for this latest effort to install six new batteries and remove 12 old ones.





In this image taken from NASA video NASA astronaut Jessica Meir, hand seen at right, holds the helmet of fellow astronaut Christina Koch in place as they work to finish upgrades to the International Space Station's power grid, Wednesday, Jan. 15, 2020. The women were barely a half-hour into their latest spacewalk when Koch's helmet camera and lights came loose. Meir tried to get the camera and light attachment back onto Koch's helmet, but could not get it into the proper grooves. It was the second pairing of Meir and Koch outside the orbiting lab. (NASA via AP)

NASA is in the midst of replacing 48 decades-old nickel-hydrogen batteries outside the sprawling space station with more powerful, longerlasting lithium-ion batteries, of which only half as many are needed. The batteries are part of the station's solar power network, keeping everything running when the outpost is on the night side of Earth. The final batch of new batteries should be launched this spring.

Koch went out with a male colleague twice last October to install three



new batteries. But a charging unit then failed, prompting the need that month for unexpected repairs by Koch and Meir.



In this image taken from NASA video NASA astronauts Jessica Meir and Christina Koch work to finish upgrades to the International Space Station's power grid, Wednesday, Jan. 15, 2020. It was the second pairing of Meir and Koch outside the orbiting lab. (NASA via AP)

Engineers now believe the charger got too cold in the extreme temperatures of space. The solution: exposing the chargers to the sun as much as possible during the battery work.

Koch is just three weeks away from ending an 11-month space mission, the longest ever by a woman. She's been living 250 miles (400 kilometers) above Earth since last March. Meir arrived at the space



## station in September.

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