Spacewalking astronauts finish extensive, tricky cable job

March 1 2015, byMarcia Dunn

In this image from NASA television astronaut Terry Virts is seen during the third spacewalk outside the International Space Station Sunday March 1, 2015. (AP Photo/NASA-TV)

Spacewalking astronauts successfully completed a three-day cable job outside the International Space Station on Sunday, routing several-

hundred feet of power and data lines for new crew capsules commissioned by NASA.

It was the third spacewalk in just over a week for Americans Terry Virts and Butch Wilmore, and the quickest succession of spacewalks since NASA's former shuttle days.

The advance work was needed for the manned spacecraft under development by Boeing and SpaceX. A pair of docking ports will fly up later this year, followed by the capsules themselves, with astronauts aboard, in 2017.

Once safely back inside, Virts reported a bit of water in his helmet again for the second time in as many spacewalks. He stressed it was "not a big deal" and said there was no need to hurry out of his suit.

Virts and Wilmore installed two sets of antennas Sunday, as well as 400 feet (122 meters) of cable for this new communication system. They unreeled 364 feet (111 meters) of cable on Feb. 21 and last Wednesday.

It was complicated, hand-intensive work, yet the astronauts managed to wrap up more than an hour early Sunday, for a 5 ½-hour spacewalk. Their three outings spanned 19 hours.

"You guys have done an outstanding job," Mission Control radioed, "even for two shuttle pilots."

Sunday's 260-mile (418-kilometer)-high action unfolded 50 years to the month of the world's first spacewalk.

In this image from NASA television astronaut Terry Virts exits the Quest airlock hatch beginning the third spacewalk outside the International Space Station early Sunday morning March 1, 2015. Terry Virts and Butch Wilmore have 400 feet of cable and two antennas to install. Once that's complete, the spacewalkers will have routed nearly 800 feet of power and data lines, all of it needed for future American crew capsules. (AP Photo/NASA-TV)

Soviet Alexei Leonov floated out into the vacuum of space on March 18, 1965, beating America's first spacewalker, Gemini 4's Edward White II, by just 2 1/2 months. Leonov is now 80; White died in the Apollo 1 fire on the launch pad in 1967.

"It's amazing ... to see how far we've come from the very first steps outside," Virts said.

On Sunday—just like Wednesday—a little water got into Virts' helmet once he was back in the air lock and the chamber was being repressurized.

Virts said it seemed to be about the same amount of water, maybe slightly more, but dried quickly. He didn't need any towels this time when his helmet came off.

"I couldn't feel it on my skin. I could just see the thin film on the visor," he told Mission Control.

Engineers concluded last week it was the result of condensation during the repressurization of the air lock, and a safe and well understood circumstance that had occurred several times before with the same spacesuit.

In this image from NASA television astronaut Barry "Butch" Wilmore, right, and Terry Virts are seen during their third spacewalk outside the International Space Station Sunday March 1, 2015. (AP Photo/NASA-TV)

Virts was never in danger either day, according to NASA, and no water leaked into his helmet while he was outdoors.

Wilmore's much newer suit functioned perfectly during the first two spacewalks, but on Sunday morning, a pressure sensor briefly malfunctioned before he floated out. A mechanical gauge, however, was operating fine. Mission Control instructed Wilmore to pay extra attention to how his suit was feeling.

Wilmore is due to return to Earth next week following a 5 1/2-month mission. Virts is midway through his expedition. Russian Soyuz spacecraft carried them both up, with NASA paying for the multimillion-dollar rides.

To save money and stop being so reliant on the Russian Space Agency, NASA has hired Boeing and SpaceX to develop spacecraft capable of transporting astronauts to the space station. The two contracts are worth nearly $7 billion. SpaceX already is delivering cargo under a separate agreement with NASA.

NASA expects to buy Russian Soyuz seats for its astronauts through 2018 in case the two companies miss their promised 2017 launch deadline.

As many as four more U.S. spacewalks will be conducted this year—beginning this summer—to make way for the Boeing and SpaceX capsules.

More information: NASA: www.nasa.gov/mission_pages/station/main/index.html