

International Space Station status report: SS07-21

by Bend_Weekly_News_Sources

HOUSTON - The crew members aboard the International Space Station spent this week finalizing handover operations, conducting experiments and preparing for the departure of the Expedition 14 crew. Expedition 14 Commander Michael Lopez-Alegria and Flight Engineer Mikhail Tyurin, accompanied by Spaceflight Participant Charles Simonyi, are targeted to touch down in central Kazakhstan in their Soyuz spacecraft at 7:30 a.m. CDT Saturday, April 21, one day later than originally planned. The primary landing site is too wet for landing operations due to the spring thaw. The one-day delay in departure from the station will allow for touchdown in a landing zone further to the south. The landing will conclude a 215-day flight for Lopez-Alegria and Tyurin and mark the longest single flight by an American astronaut. Live coverage of the landing operations will begin on NASA TV on Saturday at 12:30 a.m. for hatch closing, will return at 3:45 a.m. for undocking, and will resume at 6:15 a.m. for the deorbit burn and landing. Crew members held a ceremony Tuesday afternoon marking the change of command of the station from Lopez-Alegria to Expedition 15 Commander Fyodor Yurchikhin. Yurchikhin and flight engineers Oleg Kotov and Suni Williams are now officially established on board the station. Williams, who served as an Expedition 14 crew member since December, will provide Expedition 15 with an experienced flight engineer for the early part of its mission. On Monday, Williams became the first person to run a marathon in space. Williams, an accomplished marathoner, was an official entrant in the Boston Marathon and ran the 26.2 mile race on a station treadmill in the Zvezda module, circling Earth at least twice in the process. Williams' run coincided with the tens of thousands of people running on the ground. She completed her marathon with an official time of 4:23:10. Russian specialists are preparing plans to repair the Condensate Feed Unit in the Russian system that processes condensate recovered in the U.S. segment of the station into potable water. Since the unit failed over the weekend, the supply of drinking water has been decreasing faster than the replenishment rate. Even if they are unable to repair the unit, enough water already is onboard to last until the ISS Progress 25 cargo vehicle docks in mid-May, providing a new supply of water. Also this week, Lopez-Alegria completed his final session with the Anomalous Long-Term Effects in Astronauts' Center Nervous System (ALTEA) experiment, which investigates the phenomenon of crew members seeing flashes of light while in orbit. Using an instrumented helmet, the experiment measures the cosmic radiation that passes through a crew member's head, brain activity and visual perception. ALTEA should help researchers better understand what levels of cosmic radiation crew members are exposed to and develop countermeasures for future long-duration spaceflights. Lopez-Alegria and Williams also worked on an Education Payload Operations activity linked to the International Polar Year. The crew members videotaped their Earth photography activities and their observations of sea ice and auroras. These images will be used later in NASA education videos sent to classrooms around the world. Education Payload Operations include curriculum-based activities that demonstrate basic principles of science, mathematics, technology, engineering and geography. They are designed to support the NASA mission of inspiring the next generation of explorers. The next station status report will be issued Saturday after Expedition 14's landing, or earlier if events warrant.

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