ISS Crew Repair Carbon Dioxide Removal System, Prepare For New Supplies

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The residents of the International Space Station last week unloaded cargo delivered to them last month by Discovery's astronauts, prepared for the arrival of more supplies and repaired a key component of the outpost's environmental control system.

In the fifth month of their six-month mission, Expedition 11 Commander Sergei Krikalev and NASA Flight Engineer and Science Officer John Phillips completed the unpacking of cargo bags transferred to the Station's Zarya module from the Shuttle Discovery three weeks ago.

They planned to unload other bags stowed in the Unity and Zvezda modules in the days ahead. All of the unpacked items were entered into the Station's computerized inventory system.

On Friday, the crew began to fill the ISS Progress 18 resupply craft docked at the aft end of Zvezda with trash and unneeded gear. The Progress craft will undock from the complex at 5:23 a.m. CDT Sept. 7. It will be commanded to fire its engines to enter the Earth's atmosphere and burn up over the Pacific Ocean.

That will set the stage for the 8:08 a.m. CDT Sept. 8 launch of the ISS Progress 19 cargo vehicle from the Baikonur Cosmodrome in Kazakhstan. EDT. Filled with more than 2.5 tons of food, fuel, oxygen, water and spare parts, Progress 19 will automatically dock to the Station at 9:50 a.m. CDT Sept. 10. The docking will be broadcast live on NASA

Television.

Among the items to be carried aboard Progress 19 is a new liquids unit for the Russian Elektron oxygen-generation system that failed several months ago. The liquids unit circulates water through the Elektron, separating it into hydrogen and oxygen through electrolysis. The hydrogen is then vented overboard and the oxygen is circulated into the atmosphere for breathing.

While Elektron has been inactive, oxygen from the Progress 18 tanks has been used to repressurize the cabin atmosphere. Multiple sources of oxygen are available for use by the crew with ample supplies available.

Last Tuesday, Krikalev repaired the Vozdukh carbon dioxide removal system by replacing a faulty valve. Vozdukh shut down late last week, prompting the temporary use of another air-scrubbing system, the U.S. Carbon Dioxide Removal Assembly (CDRA) in the Destiny Laboratory.

Also on Tuesday, Krikalev and Phillips took time to discuss life and work aboard the Station with students gathered at the Cincinnati Museum Center in Ohio. The educational event was broadcast to schools in the Ohio Valley.

On Wednesday, Phillips replaced a failed laptop computer used to house inventory and information about the Station's medical supplies. The computer experienced problems three weeks ago during Discovery's visit.

They also spent 90 minutes Wednesday practicing emergency procedures during an exercise that simulated the rapid depressurization of the Station's cabin. Rehearsals of this nature are conducted periodically to maintain proficiency for the crew and flight controllers.

In addition to exercise and routine maintenance, the crewmembers stowed spacewalking tools they used the week before during their excursion outside the Pirs Docking Compartment to retrieve experiments and hardware. The spacewalk was the only one planned for Expedition 11.