

# Progress Cargo Spacecraft On Its Way to ISS

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An unpiloted Russian cargo ship got a head start on Santa, lifting off Thursday from the Baikonur Cosmodrome in Kazakhstan with 2.5 tons of supplies, equipment and Christmas gifts for Commander Leroy Chiao and Flight Engineer Salizhan Sharipov on the International Space Station.

The Progress resupply vehicle is an automated, unpiloted version of the Soyuz spacecraft that is used to bring supplies and fuel to the International Space Station. The Progress also has the ability to raise the station's altitude and control the orientation of the station using the vehicle's thrusters.

ISS Progress 16 launched on time at 5:20 p.m. EST. It reached orbit in

less than 10 minutes. Moments later, automatic commands deployed its solar arrays and navigational antennas.

After a two-day chase, Progress 16 is slated to dock with the aft end of the Station's Zvezda Service Module . Expedition 10 Commander Leroy Chiao and Flight Engineer Salizhan Sharipov will enter the Progress for the first time just after 12 p.m. CST (1800 GMT) Sunday.

Engine firings were scheduled overnight to adjust the Progress' orbit for an automated docking Dec. 25 at 6:31 p.m. EST to the aft port of the Station's Zvezda Service Module. The Progress is loaded with 1,234 pounds of propellant, 110 pounds of oxygen and air, 926 pounds of water and more than 2,700 pounds of spare parts, life support system components and experiment hardware. The manifest also includes 69 containers of food.

Among items on the Progress are new laptop computers, replacement parts for the U.S. spacesuits and additional components to prepare for the arrival next year of the European Automated Transfer Vehicle cargo craft.

The ISS Progress 15 cargo ship, which had been at the Station since Aug. 14, was undocked and commanded to deorbit by Russian flight controllers on Wednesday, clearing the aft port of Zvezda for the new Progress. Filled with trash and discarded items, Progress 15 burned up in the Earth's atmosphere soon afterward.

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