

# US space station delivery on tap after 8-month stoppage

December 2 2015, by Marcia Dunn

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In this photo provided by the United Launch Alliance, an Atlas V rocket carrying the Orbital ATK Cygnus spacecraft, is rolled from the Vertical Integration Facility to a launch pad at the Cape Canaveral Air Force Station in Cape

Canaveral, Fla., on Wednesday, Dec. 2, 2015. Orbital's Antares rocket is still grounded following a 2014 launch explosion that damaged a Virginia launch pad. (United Launch Alliance via AP)

NASA hopes to resume commercial shipments this week to the International Space Station, following months of frustrating delay.

The last successful U.S. supply run was in April. Russia and Japan have managed to fill the gap, but the 250-mile-high pantry isn't as full as it should be.

An unmanned Atlas V rocket arrived at its launch pad Wednesday. It's due to lift off early Thursday evening with 7,400 pounds of space station supplies packed into a capsule named Cygnus after the swan constellation.

The six space station astronauts are the ultimate customers, said Frank Culbertson of shipper Orbital ATK Inc., "so we want to take them what they need."

"I'm guessing that Santa's sleigh is somewhere inside the Cygnus, and they're probably excited about their stockings coming up, too," Culbertson, president of the company's space systems group, said at a news conference Wednesday.

Orbital is launching the Cygnus from Cape Canaveral this time. Its Antares rocket is still grounded following a 2014 launch explosion that damaged the Virginia launch pad. The rocket and the company's cargo ship were destroyed.

The Virginia-based Orbital purchased two United Launch Alliance

rockets to fulfill its shipment obligations to NASA.



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NASA's other contracted shipper, SpaceX, has been grounded since a failed launch in June. The California company expects to resume deliveries in January. It had the last U.S. resupply success, back in April.

Orbital plans another shipment via an Atlas in March, followed by the return of Antares in May with a new type of Russian-built engine. A fire and explosion in the old Russian rocket engines doomed the October

2014 flight, the company's fourth resupply mission.

Orbital's latest cargo ship contains food, clothes, equipment, science experiments and even storybooks, part of an astronaut-reading project for children. Some of the experiments represent redo's by schoolchildren who lost their original tests on the failed launches.

NASA briefly considered squeezing in a spare part to restore the space station to full power. A short circuit knocked out one of eight power channels in mid-November. Space station program manager Kirk Shireman told reporters that the astronauts first will test an old and possibly radiation-degraded spare already on board, before a replacement is put on a SpaceX Dragon capsule sometime next year.

Orbital's rocket men acknowledge being a little nervous about the upcoming launch, even though the Atlas has been around for decades and is a tried and true workhorse. It typically hoists satellites for the Air Force and other customers; this will be its first crack at a space station run.

"You're always a little nervous, but highly confident," Mike Pinkston, general manager for the Antares, said on the eve of the launch.



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Culbertson noted it's been a challenge to get to this point, "but return-to-flight became the company's very, very sharp focus" following the launch accident.

Commercial space is inevitable, NASA's Shireman stressed, failures and all. He called them "growing pains" in what still is a transition period. SpaceX opened the commercial pipeline to the space station in 2012, a year after NASA's shuttles retired.

Russia, which also experienced a failed supply mission last April before getting back on track, will launch another load of cargo in late December.

Forecasters put the odds of good weather at 60 percent for Thursday's 5:55 p.m. EST launch attempt. The outlook worsens Friday.

The Cygnus capsule is named after Mercury astronaut Deke Slayton, a commercial space pioneer. So was the one that was lost; this one is S.S. Deke Slayton II.

**More information:** Orbital ATK: [www.orbitalatk.com](http://www.orbitalatk.com)

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