Orbital to attempt launch to space station Thursday (Update 2)

January 8 2014, by Kerry Sheridan

An Orbital Sciences Corporation Antares rocket is rolled out to a launchpad at NASA's Wallops Flight Facility on January 5, 2014

Orbital Sciences Corporation is aiming to launch its unmanned Cygnus cargo ship Thursday on the company's first regular supply mission to the International Space Station.

The decision to go ahead with a launch—its third attempt—was

confirmed late Wednesday, hours after turbulent space weather caused by potent solar flares forced the delay of a planned liftoff.

The postponement was made over fears that high levels of space radiation from the solar flares might interfere with the Antares rocket's electronics, but those concerns have since been allayed, company officials said.

"Orbital Sciences has confirmed it will proceed with a 1:07 pm (1807 GMT) launch attempt of the Orbital-1 cargo resupply mission to the International Space Station (ISS) on Thursday, Jan. 9, pending closeout of all remaining pre-launch reviews and tests," said a statement.

"Upon a deeper examination of the current space weather environment, Orbital's engineering team, in consultation with NASA, has determined that the risk to launch success is within acceptable limits established at the outset of the Antares program."

Solar flares are bursts of magnetic energy that originate on the Sun, unleashing radiation that can briefly disrupt radio signals, GPS and satellite communications.

However, the radiation from a flare is unable to pass through Earth's atmosphere and therefore cannot harm humans on the ground.

An Orbital Sciences Corporation Antares rocket on the launchpad at NASA's Wallops Flight Facility on January 6, 2014

A Thursday liftoff from Wallops Island, Virginia, would allow the cargo ship to reach the ISS by January 12.

Orbital's attempt was previously delayed in December due to a cooling system breakdown at the ISS which required American astronauts to make two spacewalks to replace an ammonia cooling pump.

When the launch finally goes ahead, it will mark the company's first regularly contracted mission and its second trip to the orbiting outpost,

coming on the heels of a successful demonstration launch in September.

That mission proved "that the company can reliably carry out regularly scheduled operational missions to the ISS for NASA," said David Thompson, Orbital's chairman and chief executive officer.

Orbital has a contract with NASA worth $1.9 billion for eight cargo resupply missions to the global space lab.

Orbital and SpaceX are two private companies that have stepped in to ensure the United States' ability to reach the ISS, after the retirement of the 30-year space shuttle program in 2011.

SpaceX, owned by Internet entrepreneur Elon Musk, became the first commercial entity to reach the space station with its Dragon cargo ship in 2012, and has a $1.6 billion contract with NASA.

Unlike SpaceX's Dragon capsule, Cygnus cannot return to Earth intact, but will burn up on re-entry into Earth's atmosphere, disposing of any unwanted cargo.

This time around, the Cygnus is saddled with 2,780 pounds (1,260 kilograms) of gear including science experiments, supplies and hardware.

It is ferrying some unusual science experiments for the astronauts aboard the station in cooperation with students back on Earth.

One is an experiment called "Ants in Space" that aims to help students compare the behavior of ants in orbit—recorded by video cameras at the ISS—to ants on Earth.

Another is an experiment aimed at helping understand drug-resistant

superbugs. It includes 128 test tubes that will measure 38 different concentrations of antibiotic on E. coli bacteria.