

Orbital cargo ship readies for Monday launch

October 26 2014



The Orbital Sciences Corporation Antares rocket, with the Cygnus spacecraft onboard, is raised at launch Pad-0A on October 25, 2014, at NASA's Wallops Flight Facility in Virginia

Orbital Sciences Corporation's unmanned Cygnus cargo ship is preparing to launch to the International Space Station Monday, aiming to carry some 1,500 pounds (680 kilograms) of materials for space experiments.

The planned supply mission, the third for the private company to the orbiting lab, is set for 6:45 pm (1045 GMT) from NASA's Wallops

Flight Facility in Virginia. It is supposed to arrive at the [space station](#) November 2.

The US [space agency](#) said on its web site there is "a 98 percent chance of favorable weather at the time of launch."

The [space](#) craft will be carrying nearly 5,000 pounds of cargo, almost a third of which will be supplies for ongoing and new experiments to be conducted on board the ISS.

New experiments include "Drain Brain," an experiment aimed at investigating how blood flows from the brain to the heart in the absence of gravity, to help scientists mitigate headaches and other neurological complaints from scientists on the space station.

The results could also have implications for treating neurological conditions, including Alzheimer's disease, on Earth.

Other experiments have been designed and built by students, ranging from one investigating the rate pea shoots grow in space to another aiming to determine the impact of microgravity on spoiling milk.

The Cygnus capsule will also be equipped with a specially designed re-entry recorder, that will be able to wirelessly transmit data as the craft breaks up as it moves back into Earth's atmosphere.



This NASA TV image shows the SpaceX Dragon private space freighter as it approaches the International Space Station on September 23, 2014

Monday's planned launch falls during a heavy traffic period for the International Space Station.

On Saturday, SpaceX's unmanned Dragon spacecraft splashed down in the Pacific Ocean, carrying a heavy load of NASA cargo and scientific samples from the International Space Station that experts hope could yield significant results.

NASA has said the haul of 1.5 tonnes of experiment results and other materials should reach the space agency by late Monday for scientists to pick apart.

Dragon is currently the only spacecraft capable of returning from the ISS with cargo.

Wednesday, the Russian cargo ship Progress is set to take off for the ISS, replacing a sister vessel due to break away from the orbiting station

and return to Earth on Monday.

Three of the six ISS crew members are also preparing to leave the lab after 165 days in orbit. They are set to ride in a Russian Soyuz craft on November 9.

Their three replacements, a Russian and two Americans, should arrive on November 23.

NASA lost its ability to reach the space station alone when the shuttle program ended in 2011 after 30 years.

The US space agency has helped fund private companies in the race to restore US access to the ISS.

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