

Cygnus space capsule departs International Space Station

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This June 14, 2016 NASA TV image shows the Orbital ATK Cygnus spacecraft as it departs the International Space Station

Orbital ATK's unmanned Cygnus space capsule departed from the International Space Station on schedule Tuesday, three months after delivering 7,500 pounds (3,400 kilos) of supplies, material for scientific experiments and equipment to the orbiting outpost.

Cygnus, loaded with two tons of trash, was released by the space station's robotic arm at 1330 GMT, NASA said.

Once the spacecraft is far enough from the station, some five hours after its release, NASA engineers will light a fire inside a special onboard module to study the flame's propagation and oxygen consumption in microgravity.

Experiments with fire have been rarely conducted on orbiting spacecraft because of the risk to crews on [manned missions](#).

But scientists hope "Saffire 1," as the experiment is dubbed, will yield valuable data for developing better fire detection and control systems and equipment.

"NASA's objective is to reduce the risk of long-duration exploration missions, and a spacecraft fire is one of the biggest concerns for NASA and the international space exploration community," said Jason Crusan, director of NASA's advanced exploration systems director.

Cygnus also is to release five nano satellites known as "LEMUR CubeSats" that will form part of a constellation of satellites tracking maritime traffic and weather.

Cygnus will remain in orbit until Wednesday June 22, when its orbital engines will be activated in a series of maneuvers to cause it to plunge into the atmosphere and disintegrate over the Pacific.

The material and equipment that Cygnus delivered in March were used in experiments by NASA and other research entities in biology, biotechnology, physics and Earth sciences.

The research in microgravity will be relayed back to Earth where the findings will help in preparing a manned mission to Mars.

Cygnus was launched March 22 aboard an Atlas V rocket from Cape

Canaveral by the company United Launch Alliance.

It was Orbital ATK's fifth resupply mission to ISS for NASA.

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