

SpaceX Dragon capsule detaches from ISS (Update)

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The Dragon capsule nears the International Space Station (ISS) on May 25. US company SpaceX's Dragon cargo capsule was successfully detached from the ISS early Thursday at the start of its fiery return to Earth after a landmark mission, NASA said.

The US company SpaceX's Dragon cargo vessel was released by the robotic arm of the International Space Station early Thursday at the start of its return to Earth from an historic mission.

"Dragon is free from the International Space Station," a NASA TV spokesman announced at 0949 GMT, as a live video feed showed the white capsule floating against the backdrop of the blue planet.

The unmanned cargo vessel then fired up its engines in three departure "burns" to power it towards the Earth's atmosphere, where it is set to splashdown intact in the Pacific Ocean off California at 1544 GMT.

The capsule has already made history as the first commercial cargo ship to successfully travel to the orbiting research lab, a step hailed by US officials as heralding a new era of privatized space flight.

"An extremely successful joint mission between the space station and Dragon... is coming to a close now," the NASA spokesman said as the two spacecraft drifted away from one another. "Everything looks good."

Dragon will come streaking back to earth "like a burning comet," protected from the extreme reentry temperatures with a sophisticated heat shield and directed to the landing spot with powerful thrusters, NASA said.

"We have a lot ahead of us on the SpaceX side," said the company's mission director John Couloris in a briefing with reporters Wednesday, on the eve of the spacecraft's return after a seven-day mission to the orbiting outpost.

"We have done it once," he said, referring to the Dragon's test flight in December 2010, when the capsule entered and returned safely from orbit for the first time.

"But it is still a very challenging phase of flight," he added. "We are not taking this lightly at all."

The capsule is set to land 490 nautical miles (907 kilometers) off the coast of Los Angeles, where three recovery boats are standing by.

It will then be transported to Texas so that the cargo it is bringing back can be returned to NASA, though the US space agency cautioned that if anything goes wrong, there is nothing crucial on board.

"There is not anything coming home that we couldn't afford to not get back," NASA flight director Holly Ridings said Wednesday.

The cargo ship was launched on May 22 with 521 kilograms (1,148 pounds) of gear for the space lab, including food, supplies, computers, utilities and science experiments. It plans to return a 660-kilogram load to Earth.

The United States retired its space shuttle fleet last year, leaving cargo missions up to the space agencies of Russia, Japan and Europe.

Until private US ventures come up with a replacement vehicle that can carry humans to the \$100 billion orbiting lab, the world's astronauts must rely on Russia's Soyuz capsules, at \$63 million a ticket.

US astronaut Don Pettit, who is part of the six-member crew at the ISS and helped unload and restock the capsule, described it as "roomier than a Soyuz" and said it boasts about as much space for cargo as his pickup truck.

The white Dragon capsule stands 4.4 meters (14.4 feet) high and is 3.66 meters in diameter. It could carry as much as 3,310 kilograms, split between pressurized cargo in the capsule and unpressurized cargo in the trunk.

SpaceX, owned by billionaire Internet entrepreneur Elon Musk, says it

aims to begin taking people to the space station by 2015.

SpaceX and its competitor Orbital Sciences Corporation, both of which have received funding from NASA, will likely become the chief cargo servicers of the space station, which is set to remain operational until 2020, NASA has said.

SpaceX has a \$1.6 billion contract with NASA to supply the station over the coming years, and Orbital Sciences has a \$1.9 billion contract to do the same. Orbital's first test flight is scheduled for later this year.

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