

SpaceX on verge of 3rd supply run to space station (Update)

February 28 2013, by Marcia Dunn

The International Space Station is about to get another commercial shipment.

The California company known as SpaceX is set to launch its unmanned Falcon rocket on Friday morning, hoisting a Dragon capsule containing more than a ton of food, tools, computer hardware and science experiments.

There won't be any ice cream, though, for the six-man station crew. The freezers going up are filled with mouse stem cells, protein crystals and other research items. On the previous Dragon delivery in October, chocolate-vanilla swirl was tucked inside.

SpaceX President Gwynne Shotwell said snacks straight from the orchard of an employee's father are on board—and not just apples.

"It's a little bit healthier, I think, than the one that NASA sent last time," she told reporters on the eve of the flight.

Forecasters put the odds of good weather at 80 percent. Launch time is 10:10 a.m.

This will be the third space station visit for SpaceX, or more formally Space Exploration Technologies Corp., the creation of Elon Musk of PayPal and Tesla electric carmaker fame.

NASA is paying the company to supply the orbiting lab; the contract is worth \$1.6 billion for 12 delivery runs.

If launched Friday, the Dragon should arrive at the space station on Saturday morning. Astronauts will use the station's robot arm to grab the Dragon and attach it to the orbiting complex.

A variety of plant life is going up, including 640 seeds of mouse-ear cress, a small flowering weed used in research. Other experiments involve paint; high school students want to see how it will adhere and dry in space.

Russia, Europe and Japan also provide delivery services to the space station, but none of those cargo craft can return goods like the SpaceX Dragon. This latest Dragon will spend more than three weeks at the space station before departing and parachuting into the Pacific with a full load of medical specimens, fish, plants and old equipment.

NASA's shuttles used to be the main haulers up and down, but retired two years ago.

Orbital Sciences Corp., a cargo-flying competitor, hopes to launch its first orbital test flight from Wallops Island, Virginia, in April, followed by an actual demo mission to the space station in early summer.

SpaceX, based in Hawthorne, California, is working to modify its Dragon capsules to transport astronauts to the station in another few years. A handful of U.S. companies are vying for the job.

Until then, NASA is buying seats for its astronauts on Russian Soyuz rockets to get to the station.

As is his custom, Musk will monitor the launch from SpaceX Mission

Control in California.

The company said it has resolved the problem that caused one of the nine first-stage engines to shut down prematurely shortly after liftoff last October. A private Orbcomm satellite that was also on the rocket ended up in a lower-than-desired orbit and burned up upon re-entry.

A flaw in the engine jacket was to blame, Shotwell said, declining to provide further details.

The main payload, the Dragon capsule, had no trouble reaching the space station; it was even a little early.

Shotwell stressed that the rocket is built to withstand an engine loss, "and though you never necessarily want to see it happen, it's nice that we've demonstrated the vehicle as it was designed."

NASA space station program manager Mike Suffredini said he's satisfied with the engineering analysis by SpaceX.

This Falcon is not carrying a commercial satellite.

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