

SpaceX making Easter delivery of station supplies (Update 2)

April 18 2014, by Marcia Dunn



A rocket carrying the SpaceX Dragon ship lifts off from launch complex 40 at the Cape Canaveral Air Force Station in Cape Canaveral, Fla. on Friday, April 18, 2014. The mission will deliver research equipment, food and other supplies to the International Space Station. (AP Photo/John Raoux)

A SpaceX supply ship rocketed toward the International Space Station on Friday, setting the stage for an Easter morning delivery and urgent spacewalking repairs later in the week.

Following its midday launch through cloudy skies, the Dragon cargo carrier was shown drifting away in the blackness of space, against the blue backdrop of Earth.

It's transporting 2½ tons of goods, including a new spacesuit, spacesuit replacement parts, much-needed food, legs for NASA's humanoid, Robonaut, a bevy of mating flies, and germs gathered from sports arenas and historic sites across the U.S.

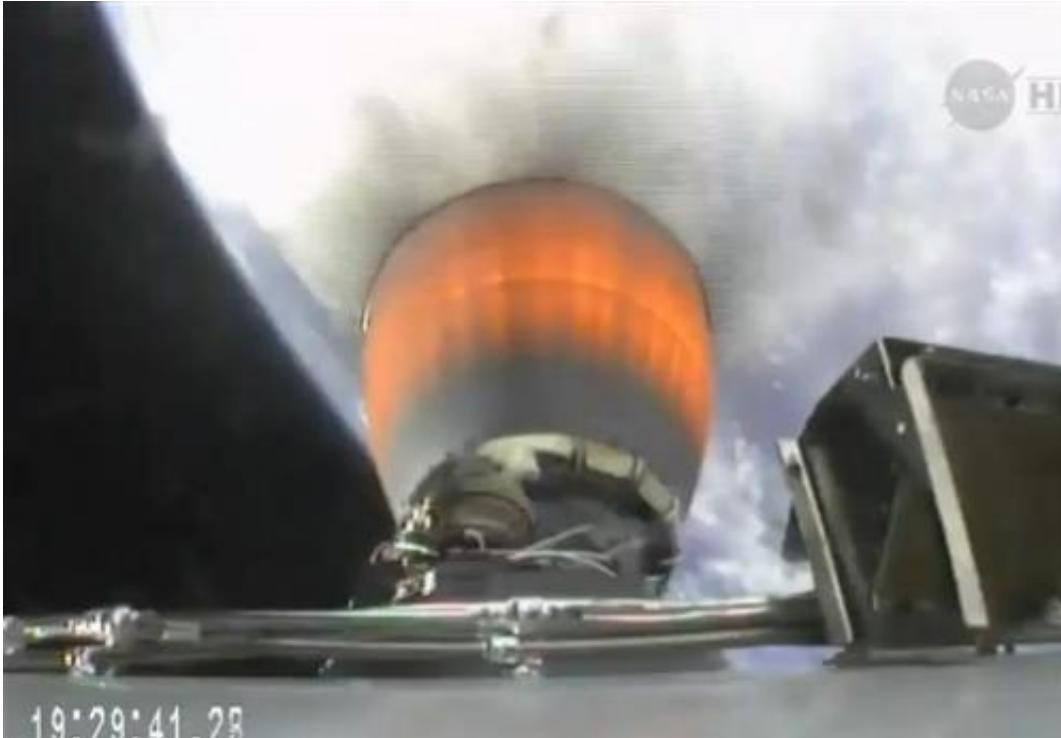
Neither NASA nor SpaceX packed any Easter goodies, but the families of the six astronauts sent private care packages.

"It will be a surprise for all of us when they open the hatch," said NASA's human exploration chief, Bill Gerstenmaier.

The Dragon will reach the orbiting lab on Sunday morning. That pushes urgent spacewalking repairs to Wednesday; NASA wants a bad backup computer replaced before something else breaks.

This was the second launch attempt this week for SpaceX after a month's delay.

On Monday, NASA's commercial supplier was foiled by a leaky rocket valve. The valve was replaced, and the company aimed for a Friday liftoff despite a dismal forecast. Storms cleared out of Cape Canaveral just in time.



This Friday, April 18, 2014 image made from video shows the engine of the second stage of the rocket carrying the SpaceX Dragon capsule. The Dragon cargo ship is scheduled to reach the orbiting lab on Sunday, April 20, 2014 - Easter morning. (AP Photo/NASA)

SpaceX's billionaire chief executive officer, Elon Musk, was delighted with the successful launch for NASA, the customer. "This was a happy day," he told reporters from company headquarters in Hawthorne, California.

Last Friday, a critical backup computer failed outside the space station, and NASA considered postponing the SpaceX flight. The primary computer is working fine, but numerous systems would be seriously compromised if it broke, too. A double failure also would hinder visits by the Dragon and other vessels.

"It's imperative that we maintain" backups for these external command-routing computer boxes, also called multiplexer-demultiplexers, or MDMs, said flight director Brian Smith said Friday. "Right now, we don't have that."

NASA decided late this week to use the gasket-like material already on board the space station for the repair, instead of waiting for the Dragon and the new, precision-cut material that NASA rushed on board for the computer swap. Astronauts trimmed their own thermal material Friday to fit the bottom of the replacement computer, and inserted a fresh circuit card.

The space station's crew watched the launch via a live TV hookup; the outpost was soaring 260 miles (418 kilometers) above Turkey at the time of ignition. Video beamed down from Dragon showed the solar wings unfurling.

The shipment is close to five weeks late. Initially set for mid-March, the launch was delayed by extra prepping, then damage to an Air Force radar and, finally on Monday, the rocket leak.

Earlier, as the countdown entered its final few hours, NASA's space station program manager Mike Suffredini said an investigation continues into the reason for last summer's spacesuit failure. The helmet worn by an Italian astronaut filled with water from the suit's cooling system, and he nearly drowned during a spacewalk.



This Friday, April 18, 2014 image made from video shows the aft of the SpaceX Dragon capsule as it separates from the second stage rocket into orbit on its own. The Dragon cargo ship is scheduled to reach the orbiting lab on Sunday, April 20, 2014 - Easter morning. (AP Photo/NASA)

Routine U.S. spacewalks are on hold until engineers are certain what caused the water leak. The upcoming spacewalk by the two Americans on board is considered an exception because of its urgent nature; it will include no unnecessary tasks, just the 2½-hour computer swap.

NASA is paying SpaceX—Space Exploration Technologies Corp.—and Virginia's Orbital Sciences Corp. to keep the orbiting lab well stocked. It was SpaceX's fourth trip to the space station. Russia, Japan and Europe also make periodic deliveries.

Unlike the other cargo carriers, the Dragon can bring items back for

analysis.

Among the science samples going up on the Dragon and slated to return with it in a month: 200 fruit flies and their expected progeny, and germs collected from stadiums and sports arenas, as well as such notables as America's Liberty Bell and Sue, the T. rex fossil skeleton at Chicago's Field Museum.

Scientists will study the hearts of the returning flies—as many as 3,000 are expected for the trip home. The germ samples, once back on Earth, will be compared with duplicate cultures on the ground.

Staying up there—for as long as the space station lives—will be new legs for NASA's humanoid, Robonaut. The indoor robot has been in orbit for three years, but only from the waist up.

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