

SpaceX launches futuristic pop-up room, lands rocket at sea

April 8 2016, by By Marcia Dunn



The SpaceX Falcon 9 rocket lifts off from launch complex 40 at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 8, 2016. The rocket will deliver almost 7,000 pounds of science research, crew supplies, and hardware to the International Space Station. (AP Photo/John Raoux)

SpaceX resumed station deliveries for NASA on Friday, and in a double triumph, successfully landed its booster rocket on an ocean platform for

the first time.

The unmanned Falcon rocket soared into a clear afternoon sky, carrying a full load of supplies for the International Space Station as well as a futuristic pop-up room.

After sending the Dragon capsule on its way, the first-stage booster peeled away. Instead of dropping into the Atlantic like leftover junk, the 15-story booster steered to a vertical touchdown on the barge, named "Of Course I Still Love You."

Hundreds of SpaceX employees gathered outside the company's glassed-in mission control in Hawthorne, California, cheered wildly, jumped up and down, and chanted, "USA, USA, USA!"

"Absolutely incredible," said a SpaceX commentator. "The crowd is going a little nuts here, as expected."

Although the company managed to land a spent [booster rocket](#) at Cape Canaveral in December, touchdowns at sea had proven elusive, with several attempts ending in explosions on the floating barge. SpaceX's founder Elon Musk wants to ultimately reuse rocket parts to shave launch costs.

This marks SpaceX's first shipment for the [space station](#) in a year. A launch accident halted cargo flights last June.



In this image made from video provided by SpaceX, the unmanned Falcon rocket lands on a barge in the Atlantic Ocean on Friday, April 8, 2016. SpaceX resumed station deliveries for NASA on Friday, and in a double triumph, successfully landed its booster rocket on an ocean platform for the first time. (SpaceX via AP)

The Dragon and its 7,000 pounds of freight—including the attention-grabbing payload—should reach the space station Sunday.

Bigelow Aerospace is providing the expandable compartment, which swells to the size of a small bedroom. It's a testbed for orbiting rental property that the Nevada company hopes to launch in four years, and also for moon and Mars habitats.

Traffic has been heavy lately at the 260-mile-high complex. NASA's other commercial shipper, Orbital ATK, made a delivery at the end of March, then Russia just last weekend. SpaceX's Dragon will join three

cargo carriers and two crew capsules already parked there.



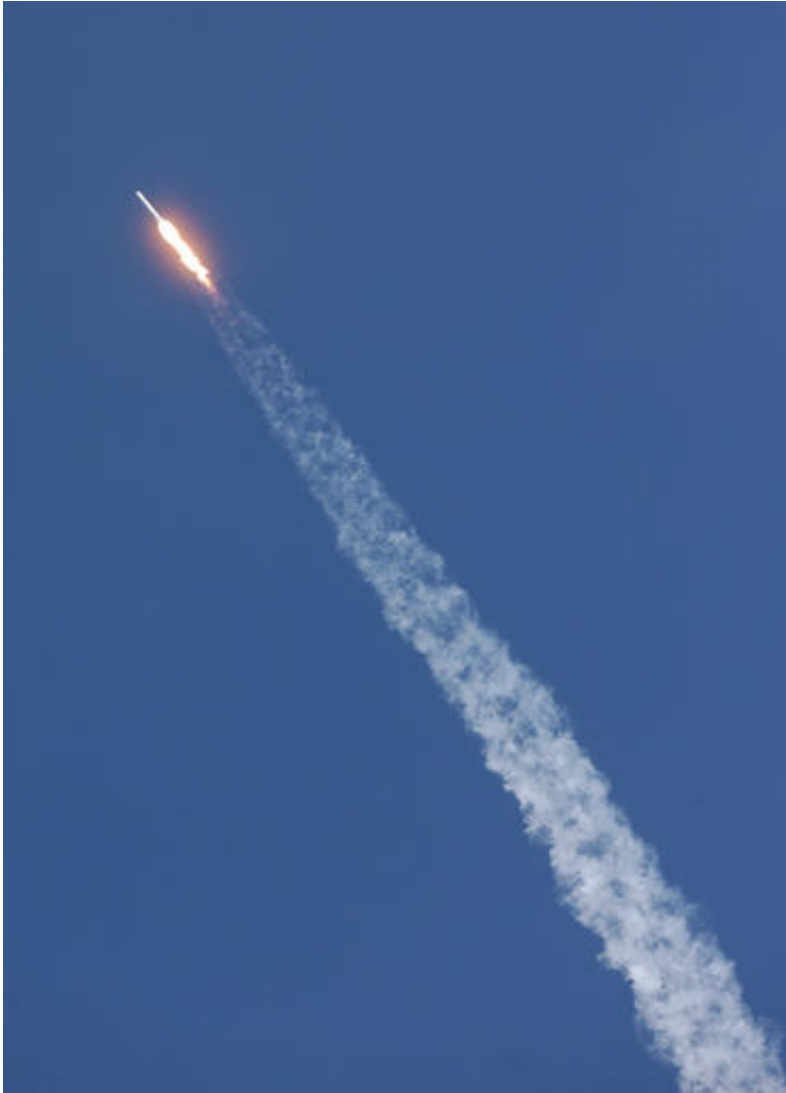
The SpaceX Falcon 9 rocket lifts off from launch complex 40 at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 8, 2016. The rocket will deliver almost 7,000 pounds of science research, crew supplies, and hardware to the International Space Station. (AP Photo/John Raoux)

Besides a bevy of biological experiments—including 20 mice for a muscle study, and cabbage and lettuce plants for research as well as crew consumption—the Dragon capsule holds the pioneering pod.

The Bigelow Expandable Activity Module, or BEAM, is a 21st-century reincarnation of NASA's TransHab, which never got beyond blueprints and ground mock-ups in the 1990s. Hotel entrepreneur Robert Bigelow bought rights to TransHab, then persuaded NASA to host BEAM at the

space station.

Empty except for sensors, the experimental BEAM is Bigelow's first soft-sided space structure meant for people. Astronauts will enter periodically during the two years it's at the station.



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Bigelow hopes to have two station-size inflatables ready to launch around 2020 for commercial use, potentially followed by inflatable moon bases. NASA, meanwhile, envisions using inflatable habitats during 2030s Mars expeditions.

On the eve of the launch, Bigelow said the mission promises to "change the entire dynamic for human habitation."

"It is the future ... the next logical step in humans getting off the planet," NASA's space station program manager, Kirk Shireman, told reporters Thursday.



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SpaceX's last delivery attempt, in June, ended in flames after just two minutes, doomed by a snapped strut in the oxygen tank of the upper stage. The company successfully resumed Falcon launches late last year with satellites.

Besides Falcon repairs and upgrades, SpaceX activated the Dragon's parachute system this time. That way, in case of a launch accident, the Dragon could parachute into the Atlantic and hopefully be salvaged. The Dragon is the only station cargo ship capable of returning items to Earth and thus equipped with parachutes.

NASA is anxious to get back blood and other samples collected by one-year spaceman Scott Kelly, who returned to Earth in March, as well as a defective spacesuit that cut short a spacewalk in January.

More information: SpaceX: www.spacex.com/

Bigelow Aerospace: bigelowaerospace.com/

NASA: www.nasa.gov/mission_pages/station/main/index.html

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