

SpaceX launches 3rd crew with recycled rocket and capsule

April 23 2021, by Marcia Dunn



The Crew Dragon space capsule astronauts, from front left, European Space Agency astronaut Thomas Pesquet, NASA astronaut Megan McArthur, NASA astronaut Shane Kimbrough and Japan Aerospace Exploration Agency astronaut Akihiko Hoshide leave the Operation and Checkout Building on their way to board the capsule for a mission to the International Space Station at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/John Raoux)

SpaceX launched four astronauts into orbit Friday using a recycled rocket and capsule, the third crew flight in less than a year for Elon Musk's rapidly expanding company.

The astronauts from the U.S., Japan and France should reach the International Space Station early Saturday morning, following a 23-hour ride in the same Dragon capsule used by SpaceX's debut crew last May. They'll spend six months at the orbiting lab.

It was the first time SpaceX reused a capsule and rocket to launch astronauts for NASA, after years of proving the capability on station supply runs. The rocket was used last November on the company's second astronaut flight.

Embracing the trend, spacecraft commander Shane Kimbrough and his crew weeks ago wrote their initials in the rocket's soot, hoping to start a tradition.

"If you have rapid and complete reusability, then that is the gateway to the heavens. That's what we're trying to get done, and the support of NASA makes a huge difference," Musk said after the launch.

Just a week ago, NASA awarded SpaceX a nearly \$3 billion contract to provide the lunar lander that will deliver astronauts to the surface of the moon—Musk's Starship, intended to be fully reusable to attain his ultimate prize of carrying astronauts to Mars and building a city there.



A SpaceX Falcon 9 lifts off in this time exposure from Launch Complex 39A Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew-2 mission to the International Space Station. (AP Photo/Chris O'Meara)

Flying in a recycled capsule Friday provided a bit of déjà vu for NASA astronaut Megan McArthur. She launched in the same seat in the same capsule as her husband, Bob Behnken, did during SpaceX's first crew flight. This time, it was Behnken and their 7-year-old son waving goodbye. McArthur blew kisses and offered virtual hugs.

[Also flying SpaceX on Friday:](#) Japan's Akihiko Hoshide and France's Thomas Pesquet, the first European to launch in a commercial crew capsule.

It was a stunning scene: The launch plume glowed against the dark sky, reflecting the sunlight at high altitude.

Despite the early hour, spectators lined surrounding roads to watch the Falcon take flight an hour before sunrise. Liftoff was delayed a day to take advantage of better weather along the East Coast in case of a launch abort and emergency splashdown.



A SpaceX Falcon 9 rocket with the Crew Dragon space capsule lifts off from pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/Brynn Anderson)

"You're seeing a piece of history happening here," said Lance Bryan, visiting from Burnsville, Minnesota. "It's, in this case, good history versus some other things that can happen that have been in our backyard practically."

A masked Musk met briefly with the astronauts at NASA's Kennedy Space Center before they boarded white gull-winged Teslas from his electric car company. The astronauts' spouses and children huddled around the cars for one last "love you" before the caravan pulled away and headed to the pad in the predawn darkness.

"From now on, I'll see you on a screen!" tweeted Pesquet's partner, Anne Mottet.

Visibly weary, Musk later said he doesn't sleep the night before a crew launch and this one was no exception.

"It gets a little bit easier, but still pretty intense, I have to say," said Musk, who started his space company in 2002.



Japan Aerospace Exploration Agency astronaut Akihiko Hoshide smiles as he talks to family and friends after leaving the operations and checkout building before a launch attempt Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew mission to the International Space Station scheduled for launch on April 23, 2021. (AP Photo/John Raoux)

NASA limited the number of launch guests because of COVID-19, but passengers for SpaceX's first privately purchased flight made the cut. Tech billionaire Jared Isaacman, who's bought a three-day flight, watched the Falcon soar with the three people who will accompany him. Their capsule is still at the space station and due back on Earth with four astronauts next Wednesday. It will be refurbished in time for a September liftoff. Another crew flight for NASA will follow in October.

For Friday's automated flight, SpaceX replaced some valves and thermal shielding, and installed new parachutes on the capsule, named Endeavour after NASA's retired space shuttle. Otherwise, the spacecraft is the same vehicle that flew before.

"We're thrilled to have a crew on board Endeavour once again," SpaceX Launch Control radioed just before liftoff.



In this image made from NASA video, astronauts are seen in the cockpit of the SpaceX Crew Dragon spacecraft after lift off for the Crew-2 mission from Launch Complex 39A, Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. (NASA via AP)

All four astronauts clasped hands as Kimbrough noted it was the first time in more than 20 years that U.S., European and Japanese astronauts

had launched together.

The first-stage booster touched down on an ocean platform nine minutes after liftoff.

SpaceX picked up the station slack for NASA after the space agency's shuttles retired in 2011, starting with supply runs the following year. The big draw was last year's return of astronaut launches to Florida, after years of relying on Russia for rides.

"It's awesome to have this regular cadence again," said Kennedy's director Robert Cabana, a former shuttle commander.

Boeing, NASA's other contracted crew transporter, isn't expected to start launching NASA astronauts until early next year. First, it needs to repeat a test flight of an empty Starliner capsule, possibly in late summer, to make up for its software-plagued debut in December 2019.



NASA astronaut Megan McArthur, right, and NASA astronaut Shane Kimbrough greet family members after leaving the operations and checkout building before a launch attempt Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew mission to the International Space Station scheduled for launch on April 23, 2021. (AP Photo/John Raoux)



A SpaceX Falcon 9 rocket with the Crew Dragon space capsule lifts off from pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/John Raoux)



European Space Agency astronaut Thomas Pesquet, of France, left, and Japan Aerospace Exploration Agency astronaut Akihiko Hoshide wave as they leave the operations and checkout building before a launch attempt Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew mission to the International Space Station scheduled for launch on April 23, 2021. (AP Photo/John Raoux)



European Space Agency astronaut Thomas Pesquet of France, adjusts his glove as he talks to family and friends before a launch attempt Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew mission to the International Space Station scheduled for launch on April 23, 2021. (AP Photo/John Raoux)



NASA astronaut Shane Kimbrough waves as he leaves the operations and checkout building before a launch attempt Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew mission to the International Space Station scheduled for launch on April 23, 2021. (AP Photo/John Raoux)



NASA astronaut Megan McArthur waves to family and friends after leaving the operations and checkout building before a launch attempt Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew mission to the International Space Station scheduled for launch on April 23, 2021. (AP Photo/John Raoux)



A SpaceX Falcon 9 rocket with the Crew Dragon space capsule lifts off from pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/John Raoux)



The Crew Dragon space capsule astronauts, from front left; NASA astronaut Megan McArthur, NASA astronaut Shane Kimbrough and back row European Space Agency astronaut Thomas Pesquet and Japan Aerospace Exploration Agency astronaut Akihiko Hoshide leave the Operation and Checkout Building on their way to board the capsule for a mission to the International Space Station at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/John Raoux)



In this long exposure photo, photographers watch a SpaceX Falcon 9 rocket with the Crew Dragon space capsule lifts off from pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/Brynn Anderson)



In this image made from NASA video, the SpaceX Crew Dragon spacecraft lifts off for the Crew-2 mission carrying NASA astronauts Shane Kimbrough, Megan McArthur, ESA (European Space Agency) astronaut Thomas Pesquet, and Japan Aerospace Exploration Agency (JAXA) astronaut Akihiko Hoshide from Launch Complex 39A, Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. (NASA via AP)



A SpaceX Falcon 9 rocket carrying the company's Crew Dragon spacecraft is launched on NASA's SpaceX Crew-2 mission to the International Space Station with NASA astronauts Shane Kimbrough and Megan McArthur, ESA (European Space Agency) astronaut Thomas Pesquet, and Japan Aerospace Exploration Agency (JAXA) astronaut Akihiko Hoshide onboard, Friday, April 23, 2021, at NASA's Kennedy Space Center in Florida. (Aubrey Gemignani/NASA via AP)



A SpaceX Falcon 9 rocket with the Crew Dragon space capsule leaves a trail of smoke as it lifts off from pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/John Raoux)



Photographers watch SpaceX Falcon 9 rocket with the Crew Dragon space capsule lift off from pad 39A at the Kennedy Space Center in Cape Canaveral, Fla., Friday, April 23, 2021. (AP Photo/Brynn Anderson)



A SpaceX rocket with the company's Dragon capsule is illuminated by spotlights on the launch pad, early Friday, April 23, 2021, at NASA's Kennedy Space Center in Cape Canaveral, Fla. SpaceX aimed to launch its third crew a little before sunrise Friday, this time using a recycled capsule and rocket. The four astronauts, representing the U.S., Japan and France, were supposed to fly to the International Space Station on Thursday. But liftoff was delayed because of poor weather offshore. (Joel Kowsky/NASA via AP)



NASA acting administrator Steve Jurczyk, left and SpaceX founder and CEO Elon Musk arrive for the walkout of the SpaceX crew before a launch attempt Friday, April 23, 2021, at the Kennedy Space Center in Cape Canaveral, Fla. Four astronauts will fly on the SpaceX Crew mission to the International Space Station scheduled for launch on April 23, 2021. (AP Photo/John Raoux)

Last Friday, SpaceX beat out two other companies, including Jeff Bezos' Blue Origin, to land astronauts on the moon for NASA in three or more years. They'll descend to the lunar surface in Starship, the shiny, bullet-shaped rocketship that Musk is testing in the skies over southeast Texas, near the Mexican border.

Musk said Starship should be ready to carry people in a couple years, although he expects to smash more of them before getting there. The

2024 deadline for putting astronauts on the moon, which was set by the Trump administration, is doable, he added.

"It's a great time to be here, and we're very excited," said the European Space Agency's Frank De Winne, an astronaut turned manager. The space station eventually will come to an end, he noted, but the partnership will continue amid hopes of "European astronauts one day walking on the surface of the moon."

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