

# Virgin Galactic tourism rocket ship reaches space in test

December 13 2018, by John Antczak

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Virgin Galactic reaches space for the first time during its 4th powered flight from Mojave, Calif. The aircraft called VSS Unity reached an altitude of 271,268 feet reaching the lower altitudes of space. (AP Photo/Matt Hartman)

Virgin Galactic's tourism spaceship climbed more than 50 miles high above California's Mojave Desert on Thursday, reaching for the first time what the company considers the boundary of space.

The rocket ship hit an altitude of 51 miles (82 kilometers) before beginning its gliding descent, said mission official Enrico Palermo. It landed on a runway minutes later.

"We made it to space!" Palermo exclaimed.

The supersonic flight takes Virgin Galactic closer to turning the long-delayed dream of commercial space tourism into reality. The company aims to take paying customers on the six-passenger rocket, which is about the size of an executive jet.

Virgin Galactic founder Richard Branson said there will be more test flights and if all goes well he will take a ride before the public gets its chance.

"I believe that sometime in the second half of next year that we will start being able to put regular people up into space," he said, describing Thursday as one of the best days of his life.

Virgin Galactic considers 50 miles (80 kilometers) the boundary of space because that is the distance used by the U.S. Air Force and other U.S. agencies. That's different from a long-held view that the boundary is at 62 miles (100 kilometers). Virgin Galactic CEO George Whitesides noted that recent research favors the lower altitude.



Virgin Galactic reaches space for the first time during its 4th powered flight from Mojave, Calif. The aircraft called VSS Unity reached an altitude of 271,268 feet reaching the lower altitudes of space. (AP Photo/Matt Hartman)

Whitesides said a review of the data from the test flight will last into the new year.

"This is a huge step forward and once we look at the data we'll see what that pathway is," he said.

At the start of the test flight, a special jet carrying the Virgin Space Ship Unity flew to an altitude near 43,000 feet (13,100 meters) before releasing the craft. The spaceship ignited its rocket engine and it quickly hurtled upward and out of sight of viewers on the ground. The spaceship reached Mach 2.9, nearly three times the speed of sound.

The two test pilots—Mark "Forger" Stucky and former NASA astronaut Rick "CJ" Sturckow—will be awarded commercial astronaut wings, Federal Aviation Administration official Bailey Edwards said.

"It was a great flight and I can't wait to do it again," said Sturckow, who flew on the space shuttle four times.



Richard Branson center celebrates with pilots Rick "CJ" Sturckow, left, and Mark "Forger" Stucky, right, after Virgin Galactic's tourism spaceship climbed more than 50 miles high above California's Mojave Desert on Thursday, Dec. 13, 2018. The rocket ship reached an altitude of 51 miles (82 kilometers) before beginning its gliding descent, said mission official Enrico Palermo. The craft landed on a runway minutes later. (AP Photo/John Antczak)

Virgin Galactic's development of its spaceship took far longer than expected and endured a setback when the first experimental craft broke apart during a 2014 test flight, killing the co-pilot.

"People have literally put their lives on the line to get us here," Branson said. "This day is as much for them as it is for all of us."

More than 600 people have committed up to \$250,000 for rides that include several minutes of weightlessness and a view of the Earth far below. The spaceship will also be used for research: NASA had science

experiments on the test flight.

The endeavor began in 2004 when Branson announced the founding of Virgin Galactic in the heady days after the flights of SpaceShipOne, the first privately financed manned spacecraft that made three flights into space.

Funded by the late billionaire Paul G. Allen and created by maverick aerospace designer Burt Rutan, SpaceShipOne won the \$10 million Ansari X Prize. The prize was created to kick-start private development of rocket ships that would make spaceflight available to the public.



A jet carrying Virgin Galactic's tourism spaceship has taken off from Mojave Air and Space Port on Thursday, Dec. 13, 2018 in Mojave, Calif. The jet will climb to an altitude near 43,000 feet and then release Virgin Space Ship Unity. The pilots hope to fly the rocket ship to an altitude exceeding 50 miles (80 kilometers), which Virgin Galactic considers the boundary of space.

When Branson licensed the SpaceShipOne technology, he envisioned a

fleet carrying paying passengers by 2007, launching them from a facility in southern New Mexico called Spaceport America.

But there were significant setbacks. Three technicians were killed in 2007 by an explosion while testing a propellant system at Scaled Composites LLC, which built SpaceShipOne and was building the first SpaceShipTwo for Virgin Galactic.

Then, in 2014, SpaceShipTwo broke apart during a test flight by Scaled Composites when the co-pilot prematurely unlocked its unique "feathering" braking system and it began to deploy. The co-pilot was killed but the injured pilot managed to survive a fall from high altitude with a parachute.



Virgin Galactic's tourism spaceship sits on the runway after climbing more than 50 miles high above California's Mojave Desert on Thursday, Dec. 13, 2018. The rocket ship reached an altitude of 51 miles (82 kilometers) before beginning its gliding descent, said mission official Enrico Palermo. The craft landed on a



runway minutes later. (AP Photo/John Antczak)

During descent, the craft's twin tails are designed to rotate upward to slow it down then return to a normal flying configuration before the craft glides to a landing on a runway.

New versions of SpaceShipTwo are built by a Virgin Galactic sister company and flight testing is now in-house. Its previous test flight reached 32 miles (52 kilometers).

Branson isn't alone in the space tourism business: Jeff Bezos' Blue Origin is planning to take space tourists on trips, using the more traditional method of a capsule atop a rocket that blasts off from a launch pad. SpaceX's Elon Musk recently announced plans to take a wealthy Japanese entrepreneur and his friends on a trip around the moon.



Virgin Galactic lands after the spaceship climbed more than 50 miles high above California's Mojave Desert on Thursday, Dec. 13, 2018. The rocket ship reached

an altitude of 51 miles (82 kilometers) before beginning its gliding descent, said mission official Enrico Palermo. (AP Photo/Matt Hartman)

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