

Italian researchers reach the edge of space flying aboard Virgin Galactic's rocket-powered plane

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This Thursday, June 29, 2023, image provided by Virgin Galactic shows Italian Air Force Col. Walter Villadei holding up an Italian flag as he and other Italian researchers experience a few moments of weightlessness aboard Virgin Galactic's rocket-powered spaceplane before gliding back down to Spaceport America in southern New Mexico. With the research flight complete, Virgin Galactic plans to begin commercial flights with paying ticket holders in August. Credit: Virgin Galactic via AP

A team of Italian researchers reached the edge of space Thursday morning, flying aboard a rocket-powered plane piloted by Virgin Galactic as the space tourism company prepares for monthly commercial flights.

The flight launched from Spaceport America in the New Mexico desert, with two Italian Air Force officers and an engineer with the National Research Council of Italy focusing on a series of microgravity experiments during their few minutes of weightlessness.

One wore a special suit that measured biometric data and physiological responses while another conducted tests using sensors to track heart rate, brain function and other metrics while in microgravity. The third studied how certain liquids and solids mix in that very weak gravity.

Virgin Galactic [livestreamed the flight](#) on its website, showing the moment when the ship released from its carrier plane and the rocket was ignited. The entire trip—from lifting off at Spaceport America to gliding back down to the runway—took about 90 minutes. The space plane reached a peak altitude of more than 52 miles (85 kilometers).

In all, there were six aboard—two Virgin Galactic pilots, the three Italians and another Virgin Galactic employee who oversees training for passengers.



This Thursday, June 29, 2023, image provided by Virgin Galactic shows the company's rocket-powered spaceplane feathering its wings as it prepares to glide back down to Spaceport America in southern New Mexico. With the research flight complete, Virgin Galactic plans to begin commercial flights with paying ticket holders in August. Credit: Virgin Galactic via AP

With the ship's pilot, it marked the most Italians in space at the same time. Col. Walter Villadei, a space engineer with the Italian Air Force, celebrated by unfolding an Italian flag while weightless.

For Villadei, it was even more historic as the Italian Air Force is marking its 100th year. He said he sees commercial flight as an opportunity for more researchers to access space and to foster the development of new technologies.

"It's a kind of changing of the mindset," he told The Associated Press in

an interview. "We are sharing the risk, we are growing up together, we are learning (from) each other—the private (sector) from the institutions and the institutions from the private (sector). This is amazing to me."

Next up for Virgin Galactic will be the first of hundreds of ticket holders. Many have been waiting years for their chance at weightlessness and to see the curvature of the Earth. Those commercial flights are expected to begin in August and will be scheduled monthly, the company said.

Virgin Galactic has been working for years to send paying passengers on short space trips and in 2021 finally won the federal government's approval. The company completed its final test flight in May.



This Thursday, June 29, 2023, image provided by Virgin Galactic show the rocket of the company's spaceplane igniting during a research flight that included Italian specialists who conducted a number of microgravity experiments. With

the research flight complete, Virgin Galactic plans to begin commercial flights with paying ticket holders in August. Credit: Virgin Galactic via AP

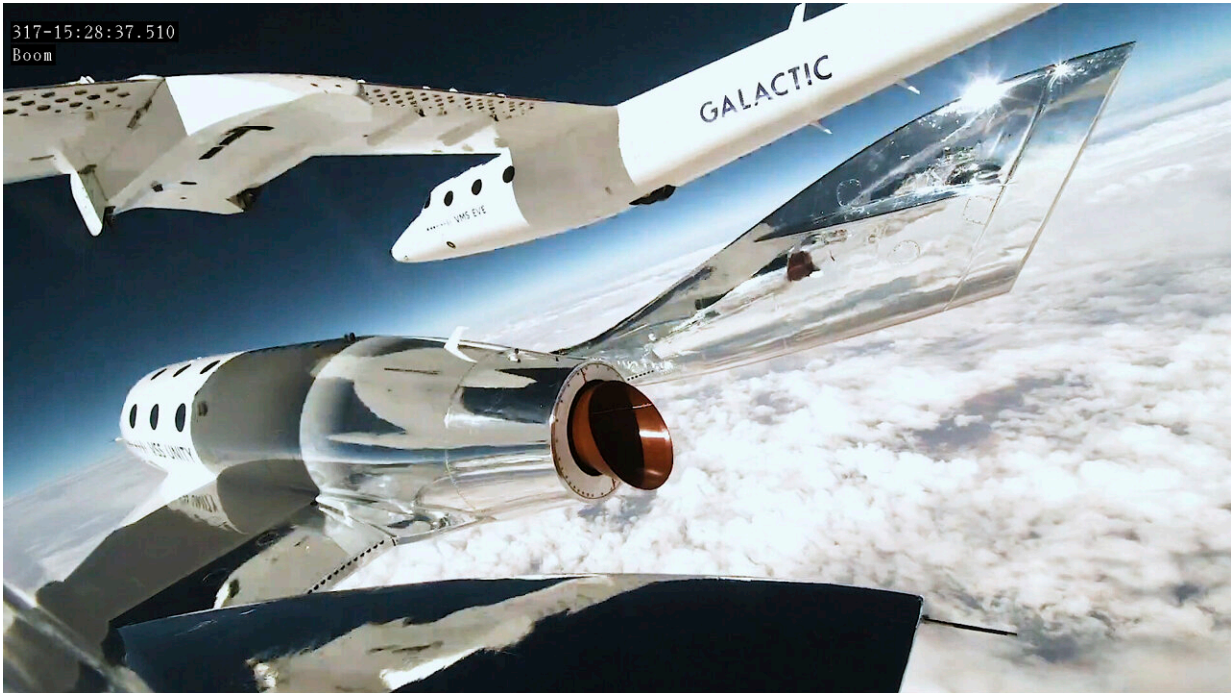
The Italian research flight was initially scheduled for the fall of 2021 but Virgin Galactic at the time said it was forced to push back its timeline due to a potential defect in a component used in its flight control system. Then the company spent months upgrading its rocket ship before resuming testing in early 2023.

After reaching a specific altitude, Virgin Galactic's space plane is released from a carrier aircraft and drops for a moment before igniting its rocket motor. The rocket shuts off once it reaches space, leaving passengers weightless before the ship then glides back to the runway at Spaceport America.

Virgin Galactic has sold about 800 tickets over the past decade, with the initial batch going for \$200,000 each. Tickets now cost \$450,000 per person.

The company said early fliers have already received their seat assignments.

Villadei said it was an honor to be among the first of Virgin Galactic's passengers, and while his focus was on running experiments, he did not miss the opportunity to look outside.



This Thursday, June 29, 2023, image provided by Virgin Galactic shows the Virgin Galactic's rocket-powered spaceplane during a research flight before gliding back down to Spaceport America in southern New Mexico. With the research flight complete, Virgin Galactic plans to begin commercial flights with paying ticket holders in August. Credit: Virgin Galactic via AP

"The boundaries between the black of the sky and the colors of the Earth beneath us was amazing," he said, noting that his expectations were surpassed even though he has years of training under his belt.

Villadei and his colleagues collected blood and urine samples before and after the flight as part of their numerous experiments. He said it will take months to analyze the data and the results will help to formulate new experiments aimed at better understanding microgravity.

"The future is definitely something that is going to deal with space.

Space is the new frontier," he said. "We are going to expand our knowledge and our capability to live and work and spend time in space."

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