

Spacecraft for tourists explodes on test flight (Update)

October 31 2014, by Brian Melley



This image from video by KABC-TV Los Angeles shows wreckage of SpaceShipTwo in Southern California's Mojave Desert on Friday, Oct. 31, 2014. A Virgin Galactic space tourism rocket exploded after taking off on a test flight, a witness said Friday. (AP Photo/KABC-TV)

A winged spaceship designed to take tourists on excursions beyond Earth's atmosphere exploded during a test flight Friday over the Mojave Desert, killing a pilot in the second fiery setback for commercial space travel in less than a week.

Virgin Galactic's SpaceShipTwo blew apart after being released from a

carrier aircraft at high altitude, according to Ken Brown, a photographer who witnessed the explosion.

One pilot was found dead inside the spacecraft, which fell from the sky about 120 miles (193 kilometers) north of downtown Los Angeles. Another pilot parachuted out and was flown by helicopter to a hospital, Kern County Sheriff Donny Youngblood. Their names were not released.

The crash area is in the desert north of Mojave Air and Space Port, where the test flight originated.

British billionaire Richard Branson, founder of Virgin Galactic, has been the front-runner in the fledgling race to send large numbers of paying civilians beyond the atmosphere to give them the feeling of weightlessness and a spectacular view of Earth below. Branson was flying to Mojave and expected to arrive Saturday, as were investigators with the National Transportation Safety Board.

"Space is hard, and today was a tough day," Virgin Galactic CEO President George Whitesides said. "The future rests in many ways, on hard, hard days like this."

The accident occurred just as it seemed space flights were near, after a period of development that lasted far longer than hundreds of prospective passengers had expected.

When Virgin Group licensed the technology from Microsoft co-founder Paul Allen, who funded about \$26 million for SpaceShipOne, Branson envisioned operating flights by 2007. In interviews last month, he talked about the first flight being next spring with his son.

"It's a real setback to the idea that lots of people are going to be taking

joyrides into the fringes of outer space any time soon," said John Logsdon, retired space policy director at George Washington University. "There were a lot of people who believed that the technology to carry people is safely at hand."

Friday's flight marked the 55th for SpaceShipTwo, which was intended to be the first of a line of craft. But this was only the fourth flight to be powered by a rocket. During the other flights, the craft was either not released from its mother ship or it functioned as a glider.



In this image from video by KABC-TV Los Angeles, a rescue crew carries a person on a stretcher to a waiting helicopter near the scene of a crash of the SpaceShipTwo in Southern California's Mojave Desert on Friday, Oct. 31, 2014. A Virgin Galactic space tourism rocket exploded after taking off on a test flight, a witness said Friday. (AP Photo/KABC-TV)

SpaceShipTwo was designed to provide a suborbital thrill ride into space before returning to Earth as a glider. At 60-feet (18-meters) long, it

featured two large windows for each of up to six passengers, one on the side and one overhead.

The cause of the accident was not immediately known. One difference on this flight was the type of fuel being used.

In May, Virgin Galactic announced that SpaceShipTwo would switch to a polyimide-based fuel—a type of thermoplastic. It had been fueled with a type of rubber called HTPB.

Scaled Composites, the company that is building the spaceship for Virgin Galactic, had extensively tested the new fuel formulation on the ground, President Kevin Mickey said. He said the rocket motor configuration had not changed on this flight and characterized the new fuel as "a small nuance to the design."

Officials said they had not noticed anything wrong before the flight.



The Virgin Galactic SpaceShipTwo rocket explodes in the air during a test flight on Friday, Oct. 31, 2014. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Kenneth Brown)

"I detected nothing that appeared abnormal," said Stuart Witt, CEO of the Mojave Air and Space Port.

Virgin Galactic—owned by Branson's Virgin Group and Aabar Investments PJS of Abu Dhabi—sells seats on each prospective journey for \$250,000, with full payment due at the time of booking. The company says that "future astronauts," as it calls customers, have visited Branson's Caribbean home, Necker Island, and gone through G-force training.

Stephen Hawking, Justin Bieber, Ashton Kutcher and Russell Brand are among the celebrities to sign up for flights. Virgin Galactic reports taking deposits totaling more than \$80 million from about 700 people.

A related venture, The Spaceship Co., is responsible for building Virgin Galactic's space vehicles.



This image from video by KABC TV Los Angeles shows wreckage of what is believed to be SpaceShipTwo in Southern California's Mojave Desert on Friday, Oct. 31, 2014. A Virgin Galactic space tourism rocket exploded after taking off on a test flight, a witness said Friday. (AP Photo/KABC TV)

During testing for the development of a rocket motor for SpaceShipTwo in July 2007, an explosion at the Mojave spaceport killed three workers and critically injured three others. A California Division of Occupational Safety and Health report said the blast occurred three seconds after the start of a cold-flow test of nitrous oxide—commonly known as laughing gas—which is used in the propulsion system of SpaceShipTwo. The engine was not firing during that test.

Friday's accident was the second this week involving private space flight. On Tuesday, an unmanned commercial supply rocket bound for the International Space Station exploded moments after liftoff from a launch site in Virginia.



The Virgin Galactic SpaceShipTwo rocket explodes in the air during a test flight on Friday, Oct. 31, 2014. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Kenneth Brown)

Virgin Galactic had planned to launch space tourism flights from the quarter-billion-dollar Spaceport America in New Mexico once it finished developing its rocket ship.

Christine Anderson, executive director of the New Mexico Spaceport Authority, did not want to comment on the events unfolding Friday in the California desert or on what effect they might have on Spaceport America and the future of commercial space travel.



In this Sept. 25, 2013, file photo, shows Virgin Galactic's SpaceShipTwo at a Virgin Galactic hangar at Mojave Air and Space Port in Mojave, Calif. Virgin Galactic has reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket. The company tweeted Friday, Oct. 31, 2014, morning that SpaceShipTwo was flying under rocket power and then tweeted that it had "experienced an in-flight anomaly." The tweet said more information would be forthcoming. (AP Photo/Reed Saxon, File)

Virgin Galactic is in line to be the main tenant at the spaceport that was built specifically to launch paying customers into space, a dream of Branson's. His company has repeatedly pushed back the timetable for when the \$250,000 flights were to begin, pointing to delays in development and testing of the rocket ship.

Taxpayers footed the bill to build the state-of-the-art hangar and runway in a remote stretch of desert in New Mexico as part of a plan devised by Branson and former New Mexico Gov. Bill Richardson. Critics have

long challenged the state's investment, questioning whether flights would ever get off the ground.



In this April 29, 2013 file photo provided by Virgin Galactic shows Virgin Galactic's SpaceShipTwo under rocket power, over Mojave, Calif. Virgin Galactic has reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket. The company tweeted Friday, Oct. 31, 2014, morning that SpaceShipTwo was flying under rocket power and then tweeted that it had "experienced an in-flight anomaly." The tweet said more information would be forthcoming. (AP Photo/Virgin Galactic, Mark Greenberg, File)

SpaceShipTwo is based on aerospace design maverick Burt Rutan's award-winning SpaceShipOne prototype, which became the first privately financed manned rocket to reach space in 2004.

"It's an enormously sad day for a company," Burt Rutan told The

Associated Press in a call from his home in Idaho, where he lives since retiring.



The Virgin Galactic SpaceShipTwo rocket separates from the carrier aircraft prior to it exploding in the air during a test flight on Friday, Oct. 31, 2014. The explosion killed a pilot aboard and seriously injured another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Kenneth Brown)



From left to right, Donny Youngblood of Kern County Shirff, George Whitesides, CEO of Virgin Galactic, Kevin Mickey, President of Scaled Composite, Stuart Witt, CEO and General Manager of Mojave Air and Space, and Mike Cody of Kern County Fire Department, stand during a news conference after a Virgin Galactic space tourism rocket exploded and crashed, killing one person and seriously injuring another in Mojave, Calif., Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)



Stuart Witt, CEO and General Manager of Mojave Air and Space Port, speaks in at a news conference after a Virgin Galactic space tourism rocket exploded and crashed, killing one person and seriously injuring another in Mojave, Calif., Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)



George Whitesides, CEO of Virgin Galactic, speaks in at a news conference after a Virgin Galactic space tourism rocket exploded and crashed, killing one person and seriously injuring another in Mojave, Calif. Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)



Stuart Witt, CEO and General Manager of Mojave Air and Space Port speaks at a news conference after a Virgin Galactic space tourism rocket exploded and crashed, killing one person and seriously injuring another in Mojave, Calif. Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)



In this Sept. 25, 2013, file photo, British entrepreneur Richard Branson poses with SpaceShipTwo at a Virgin Galactic hangar at Mojave Air and Space Port in Mojave, Calif. The Virgin Galactic's SpaceShipTwo space tourism rocket exploded Friday, Oct. 31, 2014, during a test flight, killing a pilot aboard and seriously injuring another while scattering wreckage in Southern California's Mojave Desert, witnesses and officials said. (AP Photo/Reed Saxon, File)



This Sept. 25, 2013 file photo shows British entrepreneur Richard Branson at the Virgin Galactic hangar at Mojave Air and Space Port in Mojave, Calif. Branson is headed to California's Mojave Desert after a Virgin Galactic space tourism rocket exploded and crashed, killing one person and seriously injuring another. (AP Photo/Reed Saxon, File)



Staff of Virgin Galactic stand guard outside the company's facilities at Mojave Air and Space Port after the company reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket in Mojave, Calif. Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)



A Kern County Helitack crew is seen at Mojave Air and Space Port after the company reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket in Mojave, Calif. Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)



Staff of Virgin Galactic stand guard outside the company's facilities at Mojave Air and Space Port after the company has reported an unspecified problem during a test flight of its SpaceShipTwo space tourism rocket in Mojave, Calif. Friday, Oct. 31, 2014. (AP Photo/Ringo H.W. Chiu)

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