

## Earth's richest man Bezos to blast off into space

July 18 2021, by Issam Ahmed



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Jeff Bezos, the richest person in the world, is set to join the astronaut club Tuesday on the first crewed launch by Blue Origin, another key moment in a big month for the fledgling space tourism industry.



The mission comes days after Virgin Galactic founder Richard Branson crossed the final frontier, narrowly besting the Amazon magnate in their battle of the billionaires.

Blue Origin's sights are, however, set higher: both literally in terms of the altitude to which its reusable New Shepard craft will ascend compared to Virgin's spaceplane, but also in its future ambitions.

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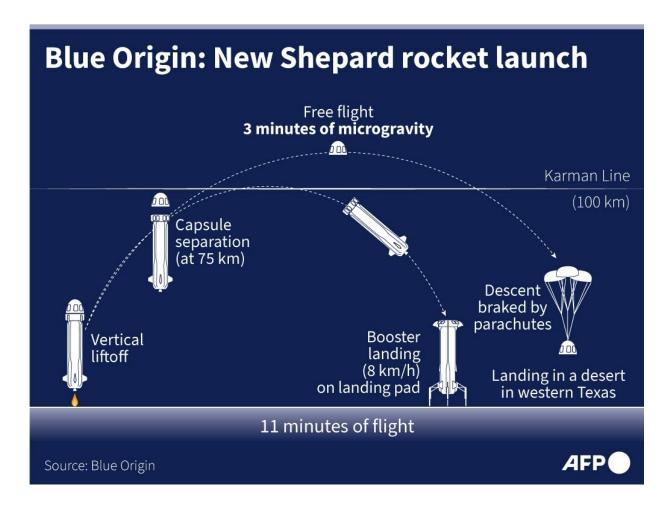
Today, the company is developing a heavy-lift orbital rocket called New Glenn and also a Moon lander it is hoping to contract to NASA under the Artemis program.

"They've had 15 successful New Shepard uncrewed flights and we've been waiting years to see when they're going to start flying people," Laura Forczyk, founder of space consulting firm Astralytical, told AFP, calling it an "exciting time" for enthusiasts.

New Shepard will blast off at 8:00 am Central Time (1300 GMT) on July 20 from a remote facility in the west Texas desert called Launch Site One, some 25 miles (40 kilometers) north of the nearest town, Van Horn.

The event will be live streamed on BlueOrigin.com beginning an hour and a half before.





Graphic explaining the different flight stages of the Blue Origin New Shepard rocket.

## Richest, oldest and youngest

Joining Bezos on the fully autonomous flight will be barrier-breaking female aviator Wally Funk, who at 82 is set to be the oldest ever astronaut, Dutch teenager Oliver Daemen, the company's first paying customer, who will become the youngest astronaut.

Rounding out the four-member crew is Jeff Bezos' brother Mark, a financier who directs the Bezos Family Foundation and works as a



volunteer firefighter.

The pair are best friends, and Jeff shared the moment he asked his younger sibling to join him in a viral video on Instagram last month.

Notably absent is the mysterious winner of a \$28 million auction for a seat, who had "scheduling conflicts" and will take part in a future flight, and has asked to remain anonymous, the company said.

After lift-off, New Shepard will accelerate towards space at speeds exceeding Mach 3 using a <u>liquid hydrogen</u>/liquid oxygen engine with no carbon emissions.



This undated handout photo obtained on July 1, 2021 courtesy of Blue Origin shows the interior of the Blue Origin crew capsule.



The capsule soon separates from its booster, and the astronauts unbuckle and begin to experience weightlessness.

The crew will spend a few minutes beyond the Karman line—the internationally recognized boundary between Earth's atmosphere and space, at 62 miles altitude (100 kilometers), as the spacecraft peaks at 65 miles high (106 kilometers).

They will be able to admire the curvature of the planet—and the inky black of the rest of the universe—from large windows that comprise a third of the cabin's surface area.

The booster returns autonomously to a landing pad just north of its launch site, while the capsule freefalls back to Earth before deploying three giant parachutes, and finally a thruster, to land gently in the west Texas desert.

## **Bigger prizes**

Beyond the first flight, relatively little is known about Blue Origin's future tourism plans.





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The company has a history of secrecy, its existence only becoming public knowledge three years after its creation. It then pursued a policy of "self-imposed silence" until 2015.

Unlike Virgin Galactic, Blue Origin hasn't officially started selling tickets—Daemen won his spot through the auction process. The company wants two more flights this year, then "many more" in 2022, it told AFP.



Forczyk, the analyst, said it will all depend on the level of demand that is generated by these early flights, and how well the industry recovers from accidents "which there inevitably will be, because spaceflight is inherently risky."

Elon Musk's SpaceX will enter the fray in September with an all-civilian orbital expedition on its Crew Dragon, and is tying up with another company, Axiom, for visits to the International Space Station.

Beyond tourism, Blue Origin would like to supplant SpaceX as NASA's leading private sector partner, and sees New Shepard as "sort of the stepping stone and also the way to make money along the way for the greater ambition," said Forczyk.

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