

Thaxted Astronomical Society

News

Features

NF0076

Blue Origin Recycles

Rocket For Seventh Time

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

- **Blue Origin launched its New Shepard rocket from its West Texas facility**
- **This is the seventh flight of the craft that marked new rocket recycling record**
- **New Shepard is taking a dozen payloads to and from space on this mission**
- **It is also taking sensors that will be used on a land rover set for the moon**

Jeff Bezos' Blue Origin has made a new recycling rocket record following the successfully launch and landing of its reusable New Shepard.

This is the craft's seventh consecutive flight, which took off from the firm's West Texas facility.

New Shepard launched at 9:35am ET, carrying 12 commercial payloads that it took into orbit and will bring back to Earth, and returned to for a successful landing about 10 minutes following liftoff.

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

Aboard the craft was a lunar landing sensor demonstration for its partnership with NASA that road on the exterior of the rocket instead of inside the capsule to conduct a series of tests for human's return to the moon.

There were also tens of thousands of postcards from students around the world from Blue Origin's nonprofit, Club for the Future.

Blue Origin's Caitlin Dietrich said as the booster returned to Earth: 'Touch DOWN, New Shepard here we go.'

Mission N-13 puts Blue Origin in the lead of recycling rockets, as the Elon Musk-owned SpaceX has only reused Falcon 9 six times.

But skies were clear Tuesday morning and New Shepard was seen on the launchpad coming alive minutes before

With less than one minute on the countdown clock, the rocket activated its engine and Dietrich gave a farewell: 'God speed, have a great flight!'

New Shepard was initially designed for space tourism, which aims to bring up to six passengers to the edge of space and float in orbit for 10 minutes.

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

The rocket hit Max Q about one minute and 15 seconds, where it was traveling almost 1,000 miles per hour.

And at around two minutes, there was a successful separation.

The booster fell from the sky following separation and made a targeted landing on the pad - marking the new record for New Shepard.

Along with a successful booster landing, the capsule returned to Earth some 10 minutes after launch making it a 'picture perfect launch.'

'Congratulations to Team Blue today,' Dietrich said. 'I'm a little bit out of breath, this is really exciting, but it sounds like everything went well today.'

New Shepard was initially designed for space tourism, which aims to bring up to six passengers to the edge of space and float in orbit for 10 minutes.

New Shepard has flown more than 100 payloads in to space, but mission NS-13 is different, as some of the cargo was mounted on the outside of the booster.

The lunar landing sensor, which sat outside the rocket, tested precision landing technologies for future missions to the Moon in support of the Artemis program.

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

This experiment will help Blue Origin and NASA understand how the technologies work together for determining a spacecraft's location and speed as it soars to the moon.

'The technologies could allow future missions—both crewed and robotic—to target landing sites that weren't possible during the Apollo missions, such as regions with varied terrain near craters,' Blue Origin shared in a news release.

'Achieving high accuracy landing will enable long-term lunar exploration and future Mars missions.'

As a part of NASA's Artemis Human Landing System program, Blue Origin is also leading the National Team, comprised of Lockheed Martin, Northrop Grumman, and Draper, to develop a Human Landing System to return Americans to the lunar surface.

The firm recently delivered a mockup of the crew lander vehicle that could take the first woman and next man to the moon.

The full-sized structure, although not functional, includes both the ascent and descent elements, and stands 40 feet tall.

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

The Bezos' owned-company announced its 'National Team 'and NASA installed the lander in the Space Vehicle Mockup Facility at the Johnson Space Center in Texas where the vehicle will undergo tests.

Blue Origin, along with Elon Musk's Space X and Dynetics, were chosen to develop human landing systems for the mission set for 2024 and were awarded a 10 month contract totaling \$967 million to make it happen.

However, until the Bezos-owned company gets to the moon it will continue to launch payloads to and from space

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

THE BILLIONAIRE SPACE RACE

Jeff Bezos' space tourism project with Blue Origin is competing with a similar programme in development by Space X, the rocket firm founded and run by Tesla CEO Elon Musk, and Virgin Galactic, backed by Richard Branson.

Bezos revealed in April 2017 that he finances Blue Origin with around \$1 billion (£720 million) of Amazon stock each year.

The system consists of a pressurised crew capsule atop a reusable 'New Shepard' booster rocket.

Jeff Bezos is the richest man in the world and Blue Origin has successfully used a single New Shepard Rocket six times.

At its peak, the capsule reached 65 miles (104 kilometres), just above the official threshold for space and landed vertically seven minutes after liftoff.

Crewed missions for astronauts or tourists have yet to be announced.

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

THE BILLIONAIRE SPACE RACE

SpaceX appears to be leading the way in the billionaire space race with numerous launches carrying NASA equipment to the ISS and partnerships to send tourists to space by 2021.

On February 6 2018, SpaceX sent rocket towards the orbit of Mars, 140 million miles away, with Musk's own red Tesla roadster attached.

Elon Musk with his Dragon Crew capsule

Elon Musk with his Dragon Crew capsule

NASA has already selected two astronauts who will be on-board the first manned Dragon mission.

SpaceX has also started sending batches of 60 satellites into space to help form its Starlink network.

Musk hopes this will provide an interconnected web of satellites around Earth which will beam down free internet to people all around the world.

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

THE BILLIONAIRE SPACE RACE

Richard Branson and Virgin Galactic are taking a different approach to conquering space.

It has repeatedly, and successfully, conducted test flights of the Virgin Galactic's Unity spaceplane.

The first took place in December 2018 and the latest took place on February 22nd.

The flight accelerated to over 2,000 miles per hour (Mach 2.7).

More than 600 affluent customers to date, including celebrities Brad Pitt and Katy Perry, have reserved a \$250,000 (£200,000) seat on one of Virgin's space trips,

The billionaire mogul has previously said he expects Elon Musk to win the race to Mars with his private rocket firm SpaceX.

SpaceShipTwo can carry six passengers and two pilots. Each passenger gets the same seating position with two large windows - one to the side and one overhead.

<https://www.dailymail.co.uk/sciencetech/article-8841337/Dead-Russian-satellite-discarded-Chinese-rocket-high-risk-colliding-orbit.html>

Liftoff! Jeff Bezos' Blue Origin breaks the record for rocket recycling by launching and landing its reusable New Shepard craft for the SEVENTH time

Daily Mail 13th October 2020 >

THE BILLIONAIRE SPACE RACE

The space ship is 60ft long with a 90inch diameter cabin allowing maximum room for the astronauts to float in zero gravity.

It climbs to 50,000ft before the rocket engine ignites. SpaceShipTwo separates from its carrier craft, White Knight II, once it's passed the 50-mile mark.

Passengers become 'astronauts' when they reach the Karman line, the boundary of Earth's atmosphere.

The spaceship will then make a sub-orbital journey with approximately six minutes of weightlessness, with the entire flight lasting approximately 1.5 hours.