

24120 Humans are going back to the Moon to stay, but when that will be is becoming less clear

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A 2019 Time magazine cover portrayed four astronauts running towards the Moon. Pictured alongside the headline “The Next Space Race”, one of the astronauts carried an American flag, one carried a Chinese flag and the other two belonged to space companies owned by billionaires: Elon Musk’s SpaceX and Jeff Bezos’ Blue Origin.

Until recently, it seemed as if the US and SpaceX were set to win this race to return to the Moon with Nasa’s Artemis programme. But a number of setbacks have called that into question. And Blue Origin, China and other countries and companies are continuing their own lunar efforts.

On January 9 2024, Nasa announced that it was delaying the Artemis 2 mission, the first crewed flight of the Space Launch System (SLS) and the Orion capsule – the vehicles built to send astronauts back to deep space. The flight would slip from late 2024 to no earlier than September 2025. This was due to some safety issues that need to be fixed on Orion.

Consequently, Artemis 3, which is supposed to involve the first crewed lunar landing since 1972, will take place no earlier than September 2026. Artemis 3 is to use SpaceX’s Starship orbiter as the lander for two crew members. This mission is set to put the first woman and the first person of colour on the lunar surface.

A non-American crew member could also walk on the Moon by 2030, highlighting the fact that Nasa has involved international partners in the Artemis venture. Up until now, just 12 humans have set foot on the Moon. All of them have been male and all have been American.

However, the Starship orbiter, crucial to these aims, has experienced problems. A second test launch for the rocketship-like orbiter atop its huge booster rocket back in November 2023, was spectacularly destroyed eight minutes and six seconds after lift off.

It will have to be ready to go by 2026. But, before then, SpaceX will have to demonstrate that it can refuel in orbit and then land Starship on the Moon without crew.

At the same time, however, Blue Origin is also working on a lander, called Blue Moon. Blue Moon is due to be used as the Moon landing craft for the Artemis 5 and 6 missions in 2029 and 2030.

Time will tell which lander can actually be ready for use first. But competition is always a good stimulator, and it could accelerate achievements.