

Latest privately-owned Moon mission ends abruptly after botched landing

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The first privately-owned mission to the surface of the Moon ended prematurely Tuesday as a result of a botched landing that has resulted in the spacecraft ending up lying on its side, unable to use its solar panels to recharge its batteries, and with several antennae pointing in the wrong direction. The lander, named *Odysseus*, continued collecting data until power failed.

Much is being made in the corporate media about the fact that this is the first-ever Moon landing with a profit-making private corporation in control. The *New York Times* gushed that the landing would “inaugurate a more revolutionary era” of more “economical” spaceflight. The *Washington Post* called it “a significant step toward NASA’s plan to eventually return astronauts” to the Moon. The *Wall Street Journal* asserted that the landing was a “milestone” for the space industry.

And NASA Administrator Bill Nelson set the tone for the nationalism and jingoism surrounding the event. “Today for the first time in the history of humanity, a commercial company—an American company—launched and led the voyage up there.”

In reality the landing was something of an exercise in reinventing the wheel. As the media and politicians themselves admit, there were landings that were far more technically challenging achieved more than half a century ago, both the famous landings of Apollo 11, 12, 14, 15, 16 and 17, and the numerous Soviet Luna landers, which achieved the first soft landing on the Moon in 1966 and the first robotic sample return in 1970.

Odysseus, in contrast, is quite limited. The spacecraft was built and launched by Intuitive Machines, an aerospace company co-founded by Stephen Altemus, Tim Crain and Iranian-American billionaire Kam Ghaffarian, and which focuses on lunar orbits and landings. It was a test bed for six experimental systems and was only slated to last nine or ten days on the lunar surface, according to Crain, which was based on how long the lander’s solar

panels were to be exposed to the Sun. There was no backup power for the lander and its instruments to operate or survive the two-week-long lunar night.

Moreover, reports that have come out since the launch indicate that the probe may have been doomed from the start. *Odysseus*, the primary component of mission IM-1, was launched on February 15 by a SpaceX Falcon 9 rocket, and descended to the Moon’s surface seven days later. The day after the launch, the company’s header of navigation, Mike Hansen, told Reuters that the lander’s laser-powered range finder wasn’t functional because Intuitive Machine’s engineers failed to unlock a safety switch during pre-flight checks. The range finder measures the time from when a light pulse is emitted from a laser to when the reflected light is detected, and is critical for measuring the craft’s distance from the Moon as it is landing. Range finders are a standard component of the vast majority of all modern landing systems.

The problem was only discovered while the spacecraft was en route to the Moon, and no software on board was able to unlock the switch remotely. As a result, the company was forced to use NASA’s Navigation Doppler Lidar for Precise Velocity and Range Sensing, one of the instruments launched as a technology demonstration, to measure the craft’s distance from the Moon as it was landing.

It’s currently unclear how much data was transmitted back to Earth from *Odysseus*. Intuitive Machines has been careful to say that “flight controllers intend to collect data” until the lander dies, but has so far provided essentially no information on the amount or quality of the data received. The most concrete bit of information revealed is that two of the lander’s antennae are pointed at the Moon, and the bandwidth between *Odysseus* and its controllers is much lower than expected.

The fact that the solution partially worked is a credit to the engineers and technicians who developed and

operated NASA's lidar system. Odysseus would have crash-landed otherwise. That the craft landed on its side is likely due to measurement errors caused by using the system in a way that it was never designed for. Intuitive Machines estimates that Odysseus touched down on the Moon at about twice the expected velocity, likely a major factor in why it ultimately tipped over.

The fact that a secondary system had to be relied on at all came from cost-cutting measures by Intuitive Machines. Hansen admitted in his interview with Reuters, "There were certainly things we could've done to test it and actually fire it. They would've been very time-consuming and very costly." He continued: "So that was a risk as a company that we acknowledged and took that risk."

Market pressures no doubt played a significant role. Stock of Intuitive Machines is traded on the NASDAQ and its value had been trending downwards since the company merged with Inflection Point Acquisition Corp. and then went public in 2023. The company's stock spiked after rumors emerged of some sort of collaboration with SpaceX, but almost immediately tanked. Stockholders were no doubt urging a successful launch as soon as possible in order to boost share values. In that regard, the mission was a success. The value of the company more than doubled in the lead-up to the launch and remains about 50 percent higher than it was at the beginning of the month, despite sharp falloffs after the company reported the poor landing.

That is not to say that the Apollo or Luna projects were themselves flawless. They suffered numerous setbacks, including the tragic loss of the Apollo 1 astronauts Virgil Grissom, Edward White and Roger Chaffee in a fire during a launch rehearsal. But they were genuinely new developments in humanity's ability to develop technology and scientific methods to understand the world in which we live. The space race itself was started by the launch of Sputnik 1, a product of the progressive impulse provided the conquest of power by the working class in Russia in October 1917, led by the Bolsheviks, and Sputnik was achieved in spite of the subsequent Stalinist degeneration of the Soviet Union.

Now, space flight is either subordinated wholly to militarism, private profit, or both. That so many companies are taking part is not a reflection of the strength of American capitalism, but of its terminal decline. Space travel is an inherently international endeavor, requiring infrastructure around the world to be successful. It cannot be done in any truly progressive

manner on the basis of rival corporations, no matter how much money a figure like Elon Musk may have.

This was again proven by the explosion of the Astrobotic Technology lander in January shortly after its launch, the crash of the Japanese company ispace's lunar lander in 2023, and the crash of Beresheet in 2019, a lunar lander developed privately by the Israeli company SpaceIL. And because the International Space Station is incapable of turning a profit, it is slated to be de-orbited and destroyed by 2030.

The drive by American capitalism to assert dominance in all aspects of geopolitics, which increasingly includes outer space, also plays a major role. Since the 1970s, Japan and India, professed allies of the US, and China, one of the main targets of imperialism, have all landed on the Moon. China launched its own space station, the Tiangong, in 2021, and several other countries have launched their own communications (and spy) satellites and sent missions to Mars. And if another country can send rockets to the Moon or Mars, so the thinking of think tanks and military minds goes, they can launch those same rockets at the US.

Real mastery of space travel will only be achieved when the resources of Earth are marshalled in a globally planned and scientifically coordinated manner. Capitalism has demonstrated time and time again it is incapable of doing this to deal with terrestrial problems—war, pandemics, climate change, social inequality—and it is no surprise that spaceflight is increasingly difficult. Like all the challenges facing modern humans, the issues are fundamentally political and will only be resolved when socialism finally buries capitalism.



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