

# Indian lunar landing mission enters moon's orbit

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An Indian Space Research Organisation (ISRO) rocket carrying the Chandrayaan-3 lifts off on July 14, 2023.

India's latest space mission entered the moon's orbit on Saturday ahead of the country's second attempted lunar landing, as its cut-price space

program seeks to reach new heights.

The world's most populous nation has a comparatively low-budget aerospace program that is rapidly closing in on the milestones set by global space powers.

Only Russia, the United States and China have previously achieved a controlled landing on the [lunar surface](#).

The Indian Space Research Organisation (ISRO) confirmed that Chandrayaan-3, which means "Mooncraft" in Sanskrit, had been "successfully inserted into the [lunar orbit](#)", more than three weeks after its launch.

If the rest of the current mission goes to plan, the mission will safely touch down near the moon's little-explored south pole between August 23 and 24.

India's last attempt to do so ended in failure four years ago, when [ground control](#) lost contact moments before landing.

Developed by ISRO, Chandrayaan-3 includes a lander module named Vikram, which means "valor" in Sanskrit, and a rover named Pragyan, the Sanskrit word for wisdom.

The mission comes with a [price tag](#) of \$74.6 million—far smaller than those of other countries, and a testament to India's frugal space engineering.

Experts say India can keep costs low by copying and adapting existing [space technology](#), and thanks to an abundance of highly skilled engineers who earn a fraction of their foreign counterparts' wages.



India's space program has grown considerably in size and momentum since it first sent a probe to orbit the Moon in 2008.

### **'A moment of glory'**

The Chandrayaan-3 spacecraft has taken much longer to reach the moon than the manned Apollo missions of the 1960s and 1970s, which arrived in a matter of days.

The Indian rocket used is much less powerful than the United States' Saturn V and instead the probe orbited the earth five or six times elliptically to gain speed, before being sent on a month-long lunar trajectory.

If the landing is successful the rover will roll off Vikram and explore the nearby lunar area, gathering images to be sent back to Earth for analysis.

The rover has a mission life of one lunar day or 14 Earth days.

ISRO chief S. Somanath has said his engineers carefully studied data from the last failed mission and tried their best to fix the glitches.

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In 2014, it became the first Asian nation to put a satellite into orbit around Mars, and three years later, the ISRO launched 104 satellites in a single mission.

The ISRO's Gaganyaan ("Skycraft") program is slated to launch a three-day manned [mission](#) into Earth's orbit by next year.

India is also working to boost its two percent share of the global commercial space market by sending private payloads into orbit for a fraction of the cost of competitors.

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