India becomes the fourth country to land a spacecraft on the Moon



Enlarge / The first view from the Moon’s surface captured by Chandrayaan 3’s Vikram lander, showing the shadow of one of the craft’s landing legs.

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A robotic landing craft from India successfully touched down in the southern polar region of the Moon on Wednesday, making the rising space power the fourth nation to achieve a soft landing on the lunar surface.

The Vikram lander from India’s Chandrayaan 3 mission landed at approximately 8:33 am EDT (12:33 UTC) after a nail-biting final descent broadcast to the world by India’s space agency.

Confirmation of the successful landing triggered a celebration across India, both inside and outside the mission control center in Bangalore. Chandrayaan 3 ends a 47-year drought in successful lunar landings by any country outside China, which has placed three probes on the Moon’s surface, including one on the lunar far side, since 2013.

“We have achieved a soft landing on the Moon,” said Sreedhara Somanath, chairman of the Indian Space Research Organization, or ISRO. “India is on the Moon!”

The Vikram lander, measuring more than 6 feet (2 meters) high, launched from India on July 14 with a propulsion module to guide it out of Earth orbit on a course to the Moon. After entering lunar orbit on August 5, the Chandrayaan 3 lander separated from its propulsion section and lined up for its final approach on Wednesday.

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Enlarge / This graphic displayed on the official live webcast of the Chandrayaan 3 landing shows an illustration of the

spacecraft on the left and altitude and descent rate data on the right.
The lander began its powered descent to the lunar surface about 20 minutes before touchdown, initially bleeding off speed in a horizontal orientation before pitching over to start a vertical approach to the landing zone. Vikram paused its descent at 2,600 feet (800 meters) and 500 feet (150 meters) to allow on-board cameras to check for boulders or hazards.

The autonomous navigation system then commanded the lander to resume its descent, and the spacecraft settled on the ground with its four landing legs. India’s space agency released the first photo from the landing site a few hours later, showing the vehicle standing upright on the Moon’s charcoal-color surface.

“The entire mission operations from launch to landing happened flawless, right per the timeline,” said P. Veeramuthuvel, ISRO’s project director for the Chandrayaan 3 mission.

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