

China spacecraft collects moon samples to take back to Earth

December 2 2020, by Joe McDonald



In this image taken by camera aboard Chang'e 5 spacecraft provided by China National Space Administration, its shadow is reflected on the surface of the moon during its landing process on Tuesday, Dec. 1, 2020. The Chinese spacecraft landed on the moon Tuesday to bring back lunar rocks to Earth for the first time since the 1970s, the government announced. (China National Space Administration via AP)

A Chinese spacecraft took samples of the moon's surface Wednesday as part of a mission to bring lunar rocks back to Earth for the first time since the 1970s, the government said, adding to a string of successes for Beijing's increasingly ambitious space program.

The Chang'e 5 probe touched down Tuesday on the Sea of Storms on the moon's near side after descending from an orbiter, the China National Space Administration said. It released images of the barren landing site showing the lander's shadow.

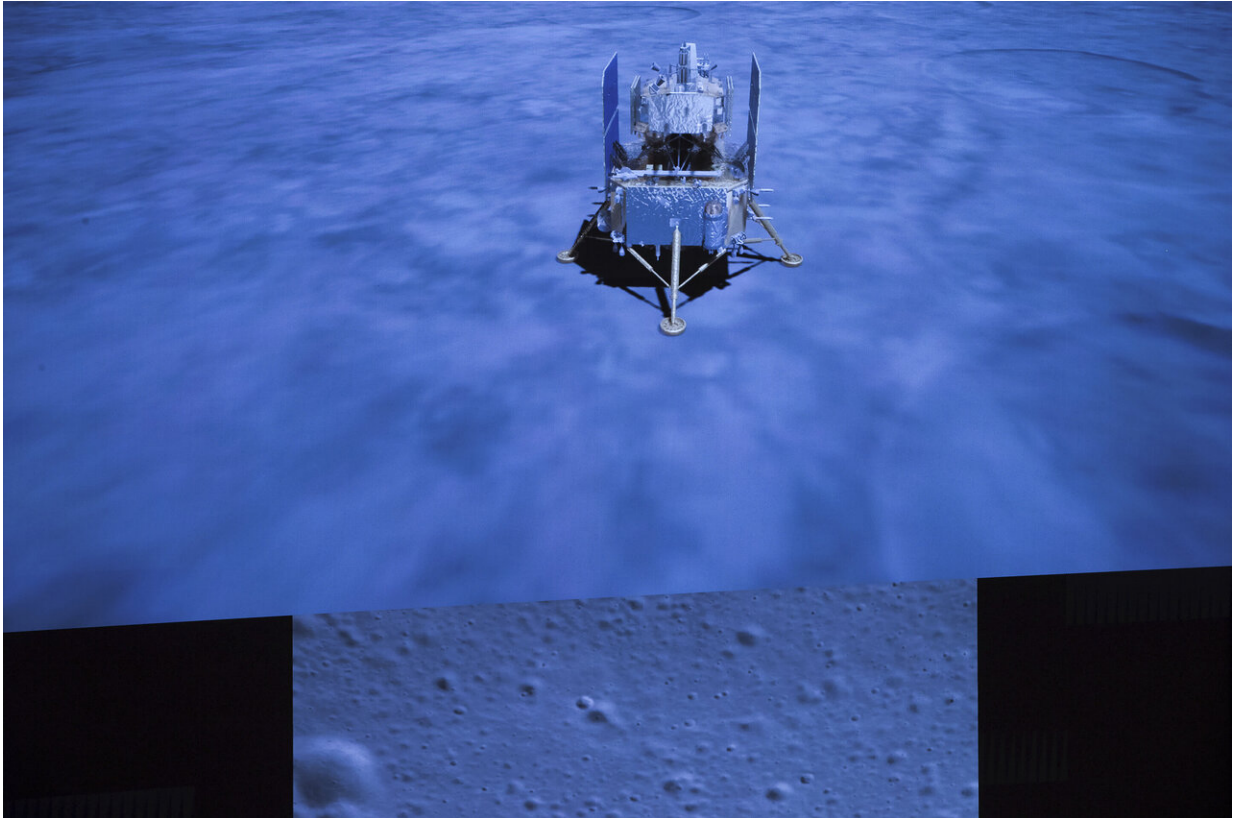
"Chang'e has collected moon samples," the agency said in a statement.

The probe, launched Nov. 24 from the tropical island of Hainan, is the latest venture by a space program that sent China's first astronaut into orbit in 2003. Beijing also has a spacecraft en route to Mars and aims eventually to land a human on the moon.

This week's landing is "a historic step in China's cooperation with the [international community](#) in the peaceful use of outer space," said a foreign ministry spokeswoman, Hua Chunying.

"China will continue to promote international cooperation and the exploration and use of outer space in the spirit of working for the benefit of all mankind," Hua said.

Plans call for the lander to spend two days drilling into the [lunar surface](#) and collecting 2 kilograms (4.4 pounds) of rocks and debris. The top stage of the probe will be launched back into lunar orbit to transfer the samples to a capsule to take back to Earth, where it is to land in China's northern grasslands in mid-December.



In this photo released by Xinhua News Agency, a screen shows the landed Chang'e-5 spacecraft and a moon surface picture, below, taken by camera aboard Chang'e-5 spacecraft during its landing process, at Beijing Aerospace Control Center (BACC) in Beijing on Tuesday, Dec. 1, 2020. A Chinese spacecraft landed on the moon Tuesday to bring back lunar rocks to Earth for the first time since the 1970s, the government announced. (Jin Liwang/Xinhua via AP)

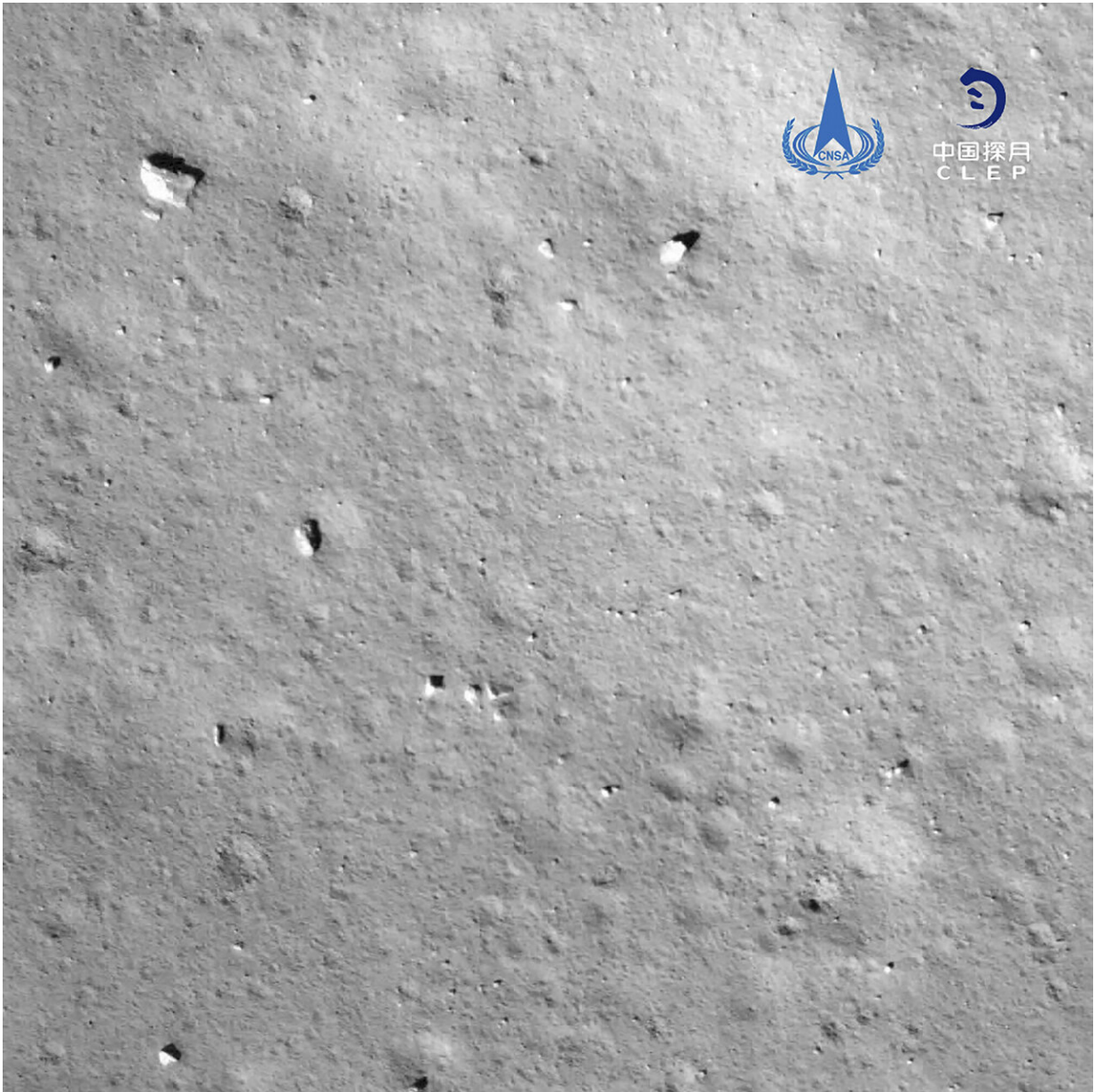
If it succeeds, it will be the first time scientists have obtained fresh samples of [lunar rocks](#) since the Soviet Union's Luna 24 probe in 1976.

The samples are expected to be made available to scientists from other nations, although it is unclear how much access NASA will have due to U.S. government restrictions on cooperation with China's military-linked program.

From the rocks and debris, scientists hope to learn more about the moon, including its precise age, as well as increased knowledge about other bodies in our solar system. Collecting samples, including from asteroids, is an increasing focus of many space programs.

American and Russian space officials congratulated the Chinese program.

"Congratulations to China on the successful landing of Chang'e 5. This is no easy task," NASA's science mission chief, Thomas Zurbuchen, wrote on Twitter.



This image taken by camera aboard Chang'e-5 spacecraft provided by China National Space Administration shows a moon surface during its landing process Tuesday, Dec. 1, 2020. The Chinese spacecraft landed on the moon Tuesday to bring back lunar rocks to Earth for the first time since the 1970s, the government announced. (China National Space Administration via AP)

"When the samples collected on the Moon are returned to Earth, we hope everyone will benefit from being able to study this precious cargo that could advance the international science community."

U.S. astronauts brought back 842 pounds (382 kilograms) of lunar samples from 1969 to 1972, some of which is still being analyzed and experimented on.

The Chang'e 5 flight is China's third successful lunar landing. Its predecessor, Chang'e 4, was the first probe to land on the moon's little-explored far side.

Chinese space program officials have said they envision future crewed missions along with robotic ones, including possibly a permanent research base. No timeline or other details have been announced.

The latest flight includes collaboration with the European Space Agency, which is helping to monitor the mission from Earth.



Flames and exhaust trail behind a Long March-5 rocket carrying the Chang'e 5 lunar mission after it lifted off at the Wenchang Space Launch Center in Wenchang in southern China's Hainan Province, early Tuesday, Nov. 24, 2020. China launched an ambitious mission on Tuesday to bring back material from the moon's surface for the first time in more than 40 years—an undertaking that could boost human understanding of the moon and of the solar system more generally. (AP Photo/Mark Schiefelbein)

China's [space program](#) has proceeded more cautiously than the U.S.-Soviet space race of the 1960s, which was marked by fatalities and launch failures.

In 2003, China became the third country to send an astronaut into orbit on its own after the Soviet Union and the United States. It launched a

temporary crewed [space](#) station in 2011 and a second in 2016.

China, along with neighbors Japan and India, also has joined the growing race to explore Mars. The Tianwen 1 probe launched in July is on its way to the red planet carrying a lander and a rover to search for water.

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