

總決賽：視聽說組視頻 字幕文本

For the first time in history, a space mission has touched down on the far side of the moon.

China's Chang'e 4 probe landed in the oldest and deepest basin on the moon's surface, making the mission a milestone for both China and space exploration as a whole. This isn't the first time China has landed on the moon. In 2013, Chang'e 3 successfully touched down on Mare Imbrium, a huge lava plain on the moon's surface. But until now China has never explored the moon's mysterious dark side — no one has. That's actually why it's called the dark side. It's not hidden from the Sun. It's hidden from our view. That's because the moon is in what's called synchronous rotation with the Earth, which means every time the moon rotates once on its axis it also completes one orbit around the Earth. As a result, we see the same face of the moon every night. In fact, we only got our first glimpse of the far side in 1959 when the Soviet Union's Luna 3 took pictures as it flew by. And while we've had numerous landings on the near side of the moon, no one's attempted to touch down on the far side before.

And for good reason, it's impossible to communicate with anything over there — any signal would get blocked by the rest of the moon. But China's team has a solution — they launched a relay satellite with a clear view of both Chang'e 4 and the Earth. And so far, the plan's working. Here are the very first images taken by Chang'e 4, the first in history ever taken from the surface on the dark side of the moon. What's more, you're looking at the oldest, largest and deepest basin the moon has. Chang'e 4 landed on Von Kármán, a flat landscape that sits inside South Pole-Aitken basin. The basin is around 2,500 kilometers across. That's about the distance from New York to Dallas. And it's a whopping 8 kilometers deep. For comparison, the deepest natural point on Earth, the Challenger Deep, is nearly 11 kilometers deep. Next, the lander will release a rover that will explore the surrounding area. One of its tasks is to study the composition of rocks and dirt in the basin. Since scientists believe this is the oldest basin on the moon, learning what it's made of might help us understand how Earth's only moon formed and evolved.

But that's only one goal of the mission. Besides cameras and spectrometers, Chang'e 4 also brought along potatoes and silkworm eggs. Researchers hope to test how well plants can grow and eggs can hatch in the moon's low gravity. It's the first mini greenhouse to ever land on another world in our solar system and might help prepare us for space colonies in the future.