

China's Chang'e 4 on Moon's far side

China's Chang'e 4 lander has produced fantastic, 1st-time surface views of the far side of the moon. Now a NASA orbiter has caught images of the landing site.

The first-ever successful landing on the far side of the moon took place just last month – January 3, 2019 – when the the Chinese National Space Administration (CNSA) safely set down its Chang'e 4 spacecraft.

One month later, NASA's Lunar Reconnaissance Orbiter (LRO) passed over the spot where the Chinese spacecraft and rover rested on the lunar surface.

Image of the moon's far side, taken January 30, 2019, via NASA's Lunar Reconnaissance Orbiter (LRO). At the time of this image, LRO was 205 miles (330 km) east of the landing site. Thus the Chang'e 4 lander is only about two pixels across (bright spot between the two arrows), and the smaller Yutu-2 rover is not detectable.

The images were released at the website of the LROC, which stands for Lunar Reconnaissance Orbiter Camera. It's a system of three cameras mounted on the orbiter that capture high resolution black-and-white images – and moderate resolution multi-spectral images – of the moon's surface.

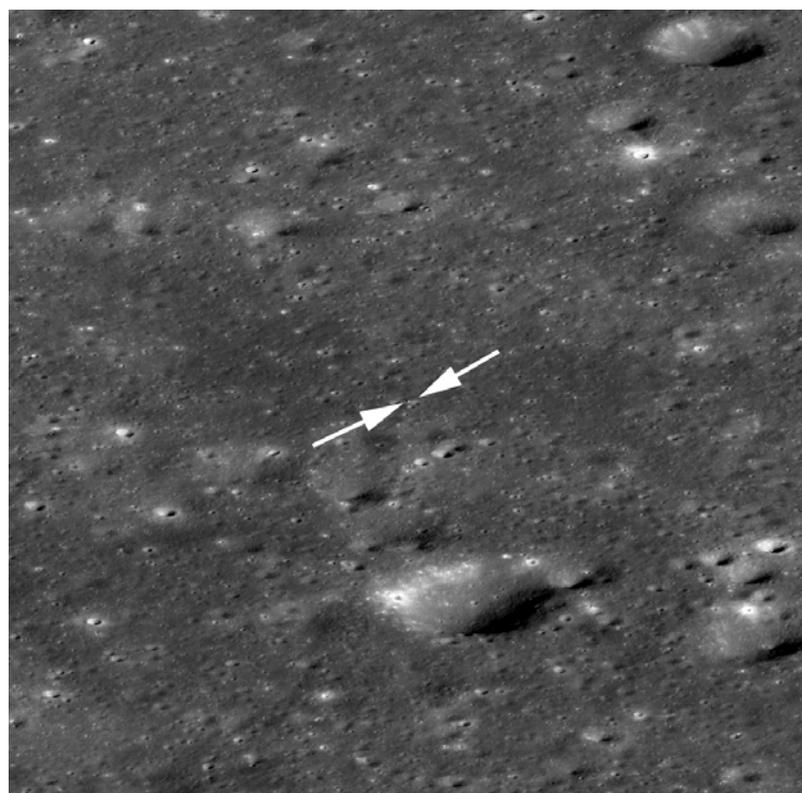
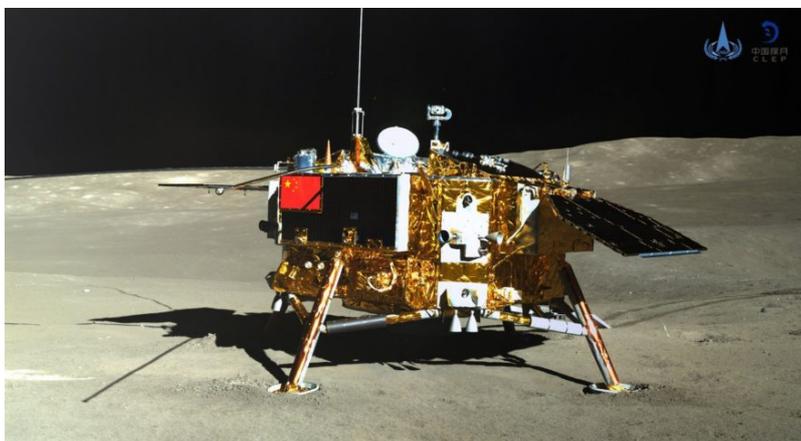
Chang'e 4 landed on January 3 at 02:26 UTC (10:26 a.m. Beijing time; January 2 at 10:26 p.m. U.S. East Coast time). The event was covered extensively on Chinese media and by some media in the West.

Jason Davis at the Planetary Society said: Chang'e 4 itself launched on December 8, 2018. It entered lunar orbit four days later,

where mission controllers spent 22 days testing the spacecraft's systems, waiting for the Sun to rise at the landing site. Chang'e 4 successfully de-orbited and landed.

The Chinese Chang'e 4 lander touched down in the Von Kármán crater on the Moon's far side. The Von Kármán crater is about 180 km in diameter on the far side of the Moon. After the crater first formed, its floor was covered by eruptions of basaltic lava, similar to the eruptions in Hawaii last summer. Scientists are wondering those basaltic rocks are any different from the basaltic rocks on the near near of the Moon. Chang'e 4 should be able to help answer that question.

Since the crater is so large, it contains many much smaller craters inside it. Most of those are less than 200 meters in diameter, dating back more than 3 billion years. Interestingly, because of the high density of small craters, when a new crater would form, it would not increase the total number of crater much, if at all, since any new crater would tend to erase an older crater below it.



The Yutu 2 rover, shortly after deployment