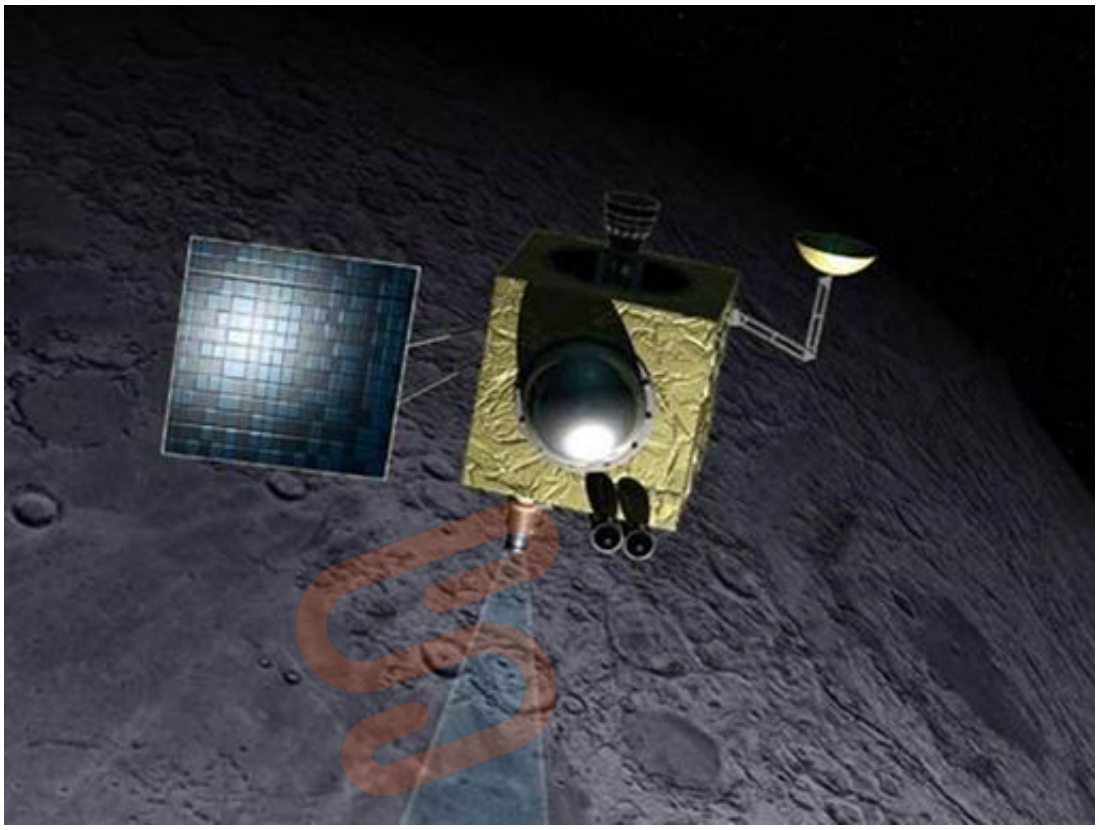
《消失了8年的印度首艘月球太空船，NASA找到了！》

导读:作为印度首次发射的月球飞船1号，曾在2009年最后一次与地面联系之后失联。然而8年之后，美国宇航局通过最新的雷达定位技术，最终搜寻到该飞行器。



US space agency NASA has successfully located India’s first lunar spacecraft Chandrayaan-1 that lost contact with ground controllers on Earth eight years ago.

?????NASA???????????8???????????????

NASA found the spacecraft by using a new technological application of ground-based interplanetary radar and said it’s still circling some 200 kilometers above the lunar surface.

NASA??????????????????????????????????????200??????

This new technique also discovered an active spacecraft orbiting the moon, NASA’s Lunar Reconnaissance Orbiter (LRO).

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LRO was launched on June 18, 2009, while India’s Chandrayaan-1 was launched on October 22, 2008.

???????LRO????2009?6?18????????1????2008?10?22??

Finding LRO was relatively easy, as we were working with the mission’s navigators and had precise orbit data where it was located, Marina Brozovic, a radar scientist at NASA’s Jet Propulsion Laboratory and principal investigator for the test project, said in a statement this week.

??“???????LRO????????????????????????????????????”

Finding India’s Chandrayaan-1 required a bit more detective work because the last contact with the spacecraft was in August of 2009.

“??????????2009?????????????1???????????”

More troubling was that the Chandrayaan-1 spacecraft is very small, about half the size of a smart car, and about 380,000 kilometers away.

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To find the spacecraft, the team used NASA’s 70-meter antenna at the agency’s Goldstone Deep Space Communications Complex in California to send out a powerful beam of microwaves directed toward the moon.

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Radar echoes bounced back from lunar orbit were received by the 100-meter Green Bank Telescope in West Virginia.

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NASA said these large radar antennas demonstrated that they can detect and track small spacecraft in lunar orbit.

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"Ground-based radars could possibly play a part in future robotic and human missions to the moon, both for a collisional hazard assessment tool and as a safety mechanism for spacecraft that encounter navigation or communication issues," the agency added.

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