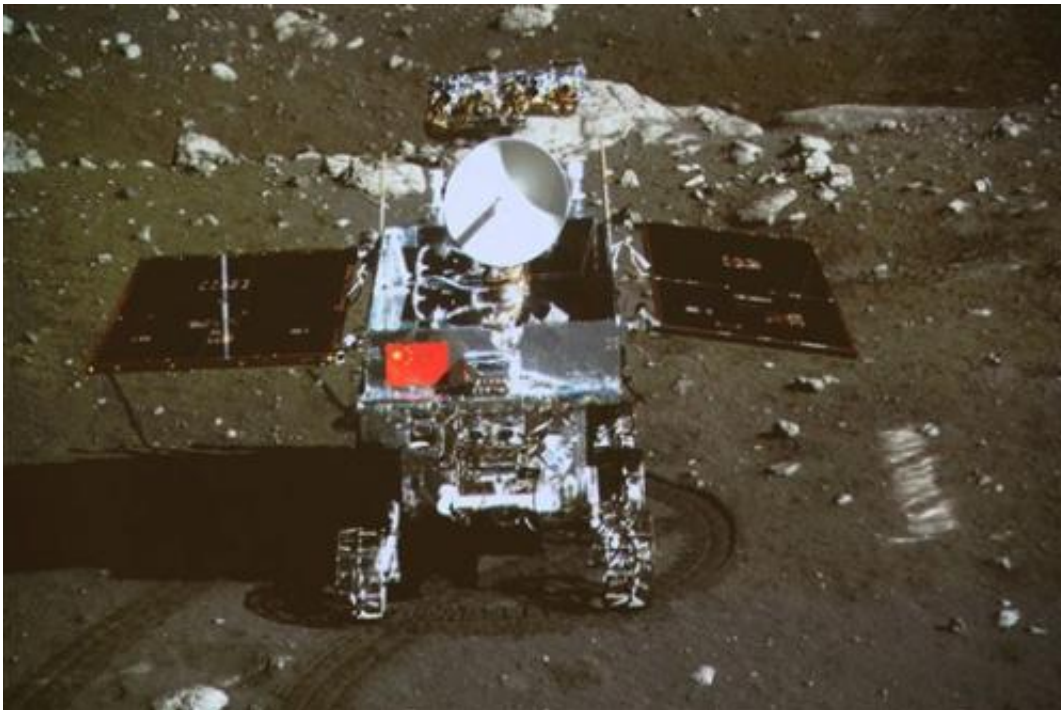


China to launch moon rock-collecting probe in 2017 (Update)

December 16 2013, by Louise Watt



In this image taken by the on-board camera of the lunar probe Chang'e-3 and made off the screen of the Beijing Aerospace Control Center in Beijing, China's first moon rover 'Yutu' - or Jade Rabbit - is on the lunar surface in the area known as Sinus Iridum (Bay of Rainbows) Sunday, Dec. 15, 2013. Yutu touched down on the moon and left deep traces on its loose soil, state media reported Sunday, several hours after the country successfully carried out the world's first soft landing of a space probe on the moon in nearly four decades. (AP Photo / Xinhua)

China said Monday it was on track to launch a fifth lunar probe with the aim of bringing back lunar soil and rock samples following the successful moon landing of a space probe.

The new mission planned for 2017 would mark the third and final phase of China's robotic lunar exploration program and pave the way for possibly landing an astronaut on the moon after 2020.

On Saturday, Chang'e 3 set down on the moon, marking the first soft landing of a space probe on the lunar surface in 37 years. The landing vehicle will conduct scientific research for a year and its accompanying rover will survey the moon's structure and probe for natural resources.

A challenge for both is to withstand temperatures ranging from 120 degrees Celsius (248 Fahrenheit) to minus 180 C (minus 184 F), said Wu Zhijian, spokesman for the State Administration of Science, Technology and Industry for National Defense.

Chang'e 4 is intended to be an improved version of the Chang'e 3 that will pave the way for the fifth probe.

First explored by the former Soviet Union and the United States in the 1960s and 70s, the moon has become the subject of renewed interest, even as the focus shifts to Mars exploration.



This image taken by the on-board camera of the "Yutu" or "Jade Rabbit" rover, and made off the screen of the Beijing Aerospace Control Center in Beijing on Sunday, Dec. 15, 2013, shows a photo of the Chang'e-3 lander during the mutual-photograph process. The rover and the lander took photos of each other Sunday night, marking the success of the Chang'e-3 lunar probe mission. (AP Photo/Xinhua, Ding Lin)

The U.S. Lunar Reconnaissance Orbiter is currently circling the moon to detail its features and resources as a prelude to building a lunar outpost. In 2009, India's lunar orbiter, the Chandrayaan-1, detected water on the moon. Two years earlier, Japan sent a spacecraft to orbit it.

"People have started saying we're looking for water and we're looking for minerals and it's becoming a much more interesting place to go to," said Peter Bond, consultant editor for Jane's Space Systems and Industry. "Especially for new countries like China and India who are testing out

new technologies—it's an ideal place to practice these before they go to Mars and beyond."



This Saturday Dec. 14, 2013 photo released by China's Xinhua News Agency, shows a picture of the moon surface taken by the on-board camera of the lunar probe Chang'e-3 on the screen of the Beijing Aerospace Control Center in Beijing, capital of China. China on Saturday successfully carried out the world's first soft landing of a space probe on the moon in nearly four decades, the next stage in an ambitious space program that aims to eventually put a Chinese astronaut on the moon. (AP Photo/Xinhua, Wang Jianmin)

China says its moon exploration program is about gaining a scientific understanding of the moon and developing space engineering and other technologies to prepare it for deep space exploration in the future. It is also a source of national pride.

President Xi Jinping and Premier Li Keqiang were at the Beijing Aerospace Control Center to hear lunar program chief commander Ma Xingrui declare the Chang'e 3 mission a success, the official Xinhua News agency reported.

"China's moon probe is a way to exhibit to the world that we have acquired advanced space technology, which is more sophisticated than nuclear technology, and it is also a way to win international recognition as a big power," said He Qisong, a space expert at the Shanghai University of Political Science and Law.



This image taken from video, shows China's first moon rover touching the lunar surface and leaving deep traces on its loose soil on Sunday, Dec. 15, 2013, several hours after the country successfully carried out the world's first soft landing of a space probe on the moon in nearly four decades. The 300-pound "Jade Rabbit" rover separated from the much larger landing vehicle early Sunday, around seven hours after the unmanned Chang'e 3 space probe touched down on a fairly flat, Earth-facing part of the moon. The writing at the top of the image reads "Surveillance camera C image." (AP Photo/CCTV VNR via AP video)

He said that finding and developing mineral resources on the moon could help solve future problems on Earth.

China sent its first astronaut into space in 2003, becoming the third nation after Russia and the United States to achieve manned space travel independently. It launched the Tiangong 1 prototype space station in 2011 and plans to replace it with a larger permanent station seven years from now.



In this photo released by China's Xinhua News Agency, Chinese President Xi Jinping and Chinese Premier Li Keqiang shake hands with scientists to congratulate them on the success of the Chang'e 3 mission at the Beijing Aerospace Control Center in Beijing, China, Sunday, Dec. 15, 2013. China's first moon rover touched the lunar surface and left deep traces on its loose soil, state media reported Sunday, several hours after the country successfully carried out the world's first soft landing of a space probe on the moon in nearly four decades. (AP Photo/Xinhua, Ding Lin)

The space program's close military links have raised questions about its ultimate intentions and dissuaded other countries from cooperating too closely with it. In 2007, the military shot down a defunct weather satellite in an apparent show of force that created a large amount of debris imperiling other spacecraft.

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