

China launches first moon rover mission (Update)

December 1 2013, by Carol Huang



The Chang'e-3 rocket carrying the Jade Rabbit rover blasts off, from the Xichang Satellite Launch Center in the southwest province of Sichuan on December 2, 2013

China launched its first moon rover mission early Monday, the latest step in an ambitious space programme seen as a symbol of its rising global stature.

The Chang'e-3 mission is named for the goddess of the moon in Chinese mythology and the rover vehicle is called Yutu, or Jade Rabbit, after her pet.

The Long March-3B carrier rocket—China's largest such vehicle—blasted off around 1:30 am (Sunday 1730 GMT), live coverage on state broadcaster CCTV showed.

As it shot into the night sky, mission observers could be heard reporting at regular intervals that events were proceeding "normally".

Within an hour the launch centre's director Zhang Zhenzhong appeared before staff and declared the mission a "success", CCTV showed.

The probe is due to land on the moon in mid-December to explore its surface and look for natural resources. It is the world's third lunar rover mission following the United States and former Soviet Union decades ago.

China sees its space programme as a symbol of its growing international status and technological advancement, as well as of the Communist Party's success in reversing the fortunes of the once impoverished nation.

It aims to establish a permanent space station by 2020 and eventually send a human to the moon.

Users of Sina Weibo, a Chinese version of Twitter, expressed pride and excitement in the hours after the launch.

"This makes Chinese people get excited and forget their own bad situation," one poster wrote.

"Every time they launch a rocket, it's very moving," said another. "Soon, Chinese people will be able to go to the moon."

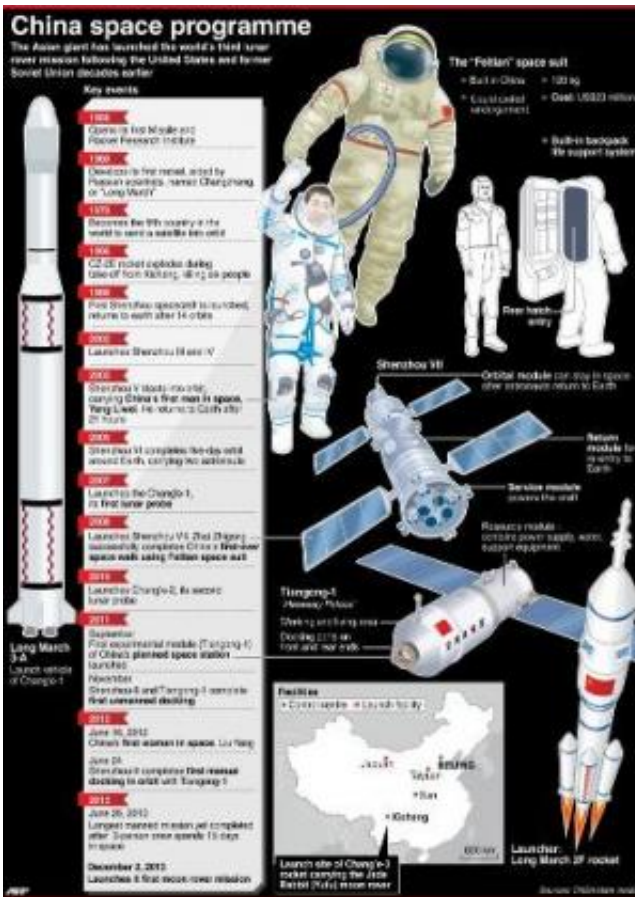
The mission will bolster scientific knowledge as well as national pride, said Morris Jones, an independent space analyst based in Australia.

"The Chinese are making rapid advances in spaceflight," he said.

"They're going to get a lot of prestige out of this mission."

The moon remains "largely unexplored", Jones added, so "I expect that the Chinese rover will probably throw a few surprises our way scientifically".

Since 2003 China has sent 10 astronauts into space and launched an orbiting space module, Tiangong-1. It also sent probes to orbit the moon in 2007 and 2010, the first of which intentionally crashed into the lunar surface at the end of its mission.



Graphic chronology of China's space programme. The country launched its first moon rover mission Monday.

The second probe was sent to "verify key technology", orbit the moon and take pictures of the landing site in preparation for *Chang'e-3*, before being sent into deep space to monitor an asteroid, said the official news agency Xinhua.

The *Yutu* rover can climb slopes of up to 30 degrees and travel at 200 metres (660 feet) per hour, according to the Shanghai Aerospace Systems Engineering Research Institute.

China has been able to improve on earlier rovers by incorporating

technology developed in recent decades, said Jones, including optical navigation systems which could provide pictures to warn of unsafe landing spots.

The rover's name was chosen in an online poll of 3.4 million voters.

The moon is a recurring theme in Chinese poetry and shortly before the launch Xinhua released a series of renowned verses referencing the heavenly body, including a lament by Mao Zedong to a friend for their late spouses.

"The lonely moon goddess spreads her ample sleeves/To dance for these loyal souls in infinite space," it runs.

The story of Chang'e, a lunar goddess who swallowed an immortality pill, and Yutu was passed on in 1969 by mission control to the crew of Apollo 11, the American spacecraft that sent astronauts Neil Armstrong and Buzz Aldrin to become the first men on the moon.

"Watch out for a lovely girl with a big rabbit," Houston told the American astronauts.

"We'll keep a close eye out for the bunny girl," the spacecraft's pilot, Michael Collins, responded.

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