

Will China's moon landing launch a new space race?

January 4 2019, by Wendy Whitman Cobb



Credit: AI-generated image ([disclaimer](#))

China became the third country to land a probe on the Moon on Jan. 2. But, more importantly, it became the first to do so on the far side of the moon, often called the dark side. The ability to land on the far side of the moon is a technical achievement in its own right, one that neither Russia nor the United States has pursued.

The probe, Chang'e 4, is symbolic of the growth of the Chinese [space program](#) and the capabilities it has amassed, significant for China and for relations among the great power across the world. The consequences extend to the United States as the Trump administration considers global competition in space as well as the future of space exploration.

One of the [major drivers of U.S. space policy historically has been competition with Russia](#) particularly in the context of the Cold War. If China's successes continue to accumulate, could the United States find itself engaged in a new space race?

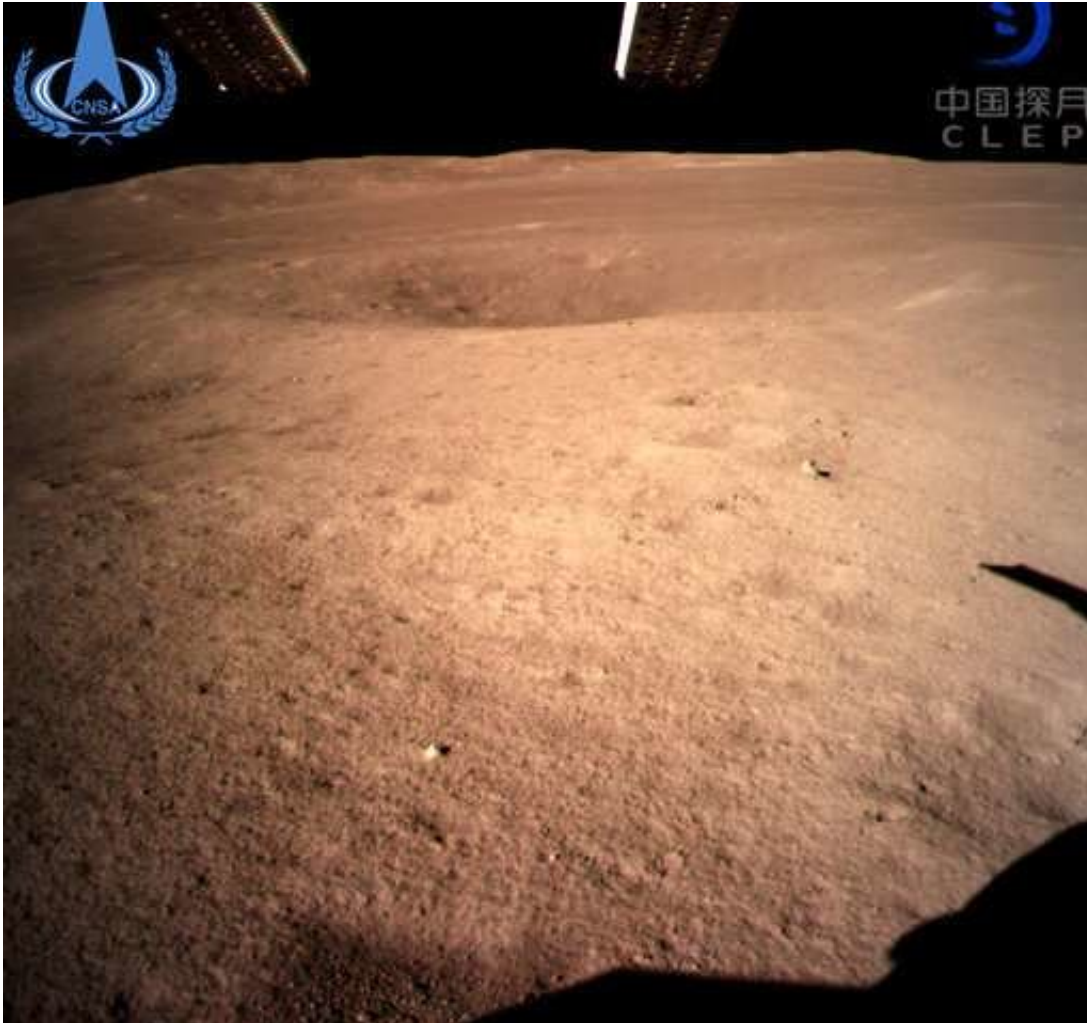
China's achievements in space

Like the U.S. and Russia, the People's Republic of China first engaged in space activities during the development of ballistic missiles in the 1950s. While they did benefit from some assistance from the Soviet Union, [China developed its space program largely on its own](#). Far from smooth sailing, Mao Zedong's Great Leap Forward and the Cultural Revolution [disrupted](#) this early programs.

The Chinese launched their first satellite in 1970. Following this, an early human spaceflight program was put on hold to focus on commercial satellite applications. In 1978, [Deng Xiaoping articulated China's space policy](#) noting that, as a developing country, China would not take part in a space race. Instead, [China's space efforts have focused](#) on both launch vehicles and satellites—including communications, remote sensing and meteorology.

This does not mean the Chinese were not concerned about the global power space efforts can generate. In 1992, they concluded that having a space station would be [a major sign and source of prestige](#) in the 21st century. As such, a human spaceflight program was re-established leading to the development of the Shenzhou spacecraft. The first

Chinese astronaut, or taikonaut, Yang Liwei, was launched in 2003. In total, six Shenzhou missions have carried 12 taikonauts into low earth orbit, including two to China's first space station, Tiangong-1.



In this photo provided Jan. 3, 2019, by China National Space Administration via Xinhua News Agency, the first image of the moon's far side taken by China's Chang'e-4 probe. A Chinese spacecraft on Thursday, Jan. 3, made the first-ever landing on the far side of the moon, state media said. The lunar explorer Chang'e 4 touched down at 10:26 a.m., China Central Television said in a brief announcement at the top of its noon news broadcast. Credit: China National Space Administration/Xinhua News Agency via AP

In addition to human spaceflight, the Chinese have also undertaken scientific missions like Chang'e 4. Its first lunar mission, Chang'e 1, orbited the moon in October 2007 and a rover landed on the moon in 2013. [China's future plans](#) include a new space station, a lunar base and possible sample return missions from Mars.

A new space race?

The most notable feature of the Chinese space program, especially compared to the early American and Russian programs, is its slow and steady pace. Because of the secrecy that surrounds many aspects of the Chinese space program, its exact capabilities are unknown. However, the program is likely on par with its counterparts.

In terms of military applications, China has also demonstrated significant skills. In 2007, it undertook an anti-satellite test, launching a ground-based missile to destroy a failed weather satellite. While successful, the test created a cloud of [orbital debris that continues to threaten](#) other satellites. The movie "Gravity" illustrated the dangers space debris poses to both satellites and humans. In its [2018 report on the Chinese military](#), the Department of Defense reported that China's military space [program](#) "continues to mature rapidly."

Despite its capabilities, the U.S., unlike other countries, has not engaged in any substantial cooperation with China because of national security concerns. In fact, [a 2011 law](#) bans official contact with Chinese space officials. Does this signal a new space race between the U.S. and China?

As a space policy researcher, I can say the answer is yes and no. Some U.S. officials, including Scott Pace, the executive secretary for the National Space Council, [is cautiously optimistic](#) about the potential for cooperation and does not see the beginning of a new space race. NASA Administrator [Jim Brindennine recently met with the head of the](#)

[Chinese space program](#) at the International Astronautical Conference in Germany and discussed areas where China and the U.S. can work together. However, increased military presence in space might spark increased competition. The [Trump administration has used the threat posed by China](#) and Russia to support their argument for a new independent military branch, a Space Force.

Regardless, China's abilities in space are growing to the extent that is reflected in popular culture. In Andy Weir's 2011 novel "The Martian" and its later film version, NASA turns to China to help rescue their stranded astronaut. While competition can lead to advances in technology, as the first space race demonstrated, a greater global capacity for space exploration can also be beneficial not only for saving stranded astronauts but increasing knowledge about the universe where we all live. Even if China's rise heralds a new [space](#) race, not all consequences will be negative.

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