

China's Spacecraft Takes off from Moon with Samples

The Change-5 probe had worked for about 19 hours on the moon. The samples were stowed in a container inside the ascender of the probe as planned.

By [Telesur](#)

Global Research, December 09, 2020

[teleSUR](#) 4 December 2020

Region: [Asia](#)

Theme: [Intelligence](#)

The China National Space Administration (CNSA) announced that Change-5 probe carrying the country's first lunar samples blasted off from the moon at 11:10 p.m. (Beijing Time) on Thursday.

Launched on Nov. 24, the Chinese spacecraft comprises an orbiter, a lander, an ascender, and a returner. Its lander-ascender combination touched down in the Ocean of Storms on Dec. 1. After the samples were collected and sealed, the ascender of Change-5 took off from the lunar surface.

"An engine, after working for about six minutes, pushed the ascender to preset lunar orbit," said Xing Zhuoyi, a designer of the Change-5 probe from the China Academy of Space Technology (CAST).

Different from the ground takeoff, the ascender could not rely on a launch tower system. The lander acted as a temporary "launching pad." The lunar liftoff conquered many challenges, including limited diversion space for the engine plume and different environments between Earth and the moon.

Without any navigation constellation around the moon, the ascender used its own special sensors to conduct self-positioning and attitude determination after the takeoff, assisted by the ground monitoring and control system.

Wonderful! From the China Moon landing yesterday!☺☺
<https://t.co/GsdoCeMTbA>

— Steve Scharmer (@SScharmer) [December 2, 2020](#)

The spacecraft had worked for about 19 hours on the moon and finished its sampling work at 10 p.m. on Dec. 2. The samples were stowed in a container inside the ascender of the probe as planned.

It adopted two methods of moon sampling, including using drills to collect subsurface samples and grabbing samples on the surface with a robotic arm. It gathered diverse samples at different sites.

The ascender is expected to complete the unmanned rendezvous and docking with the orbiter-returner in lunar orbit, an unprecedented feat, and the samples will be transferred to the returner.

When the geometric relationship between Earth and the moon is suitable, the orbiter will carry the returner back to Earth. Change-5 is the world's first moon-sample mission in more than 40 years.

*

Note to readers: please click the share buttons above or below. Forward this article to your email lists. Crosspost on your blog site, internet forums. etc.

Featured image: Photo taken at Beijing Aerospace Control Center shows the ascender of Chang'e-5 flying above the moon, Dec. 3, 2020. | Photo: Xinhua

The original source of this article is [teleSUR](#)
Copyright © [Telesur](#), [teleSUR](#), 2020

[Comment on Global Research Articles on our Facebook page](#)

[Become a Member of Global Research](#)

Articles by: [Telesur](#)

Disclaimer: The contents of this article are of sole responsibility of the author(s). The Centre for Research on Globalization will not be responsible for any inaccurate or incorrect statement in this article. The Centre of Research on Globalization grants permission to cross-post Global Research articles on community internet sites as long the source and copyright are acknowledged together with a hyperlink to the original Global Research article. For publication of Global Research articles in print or other forms including commercial internet sites, contact: publications@globalresearch.ca

www.globalresearch.ca contains copyrighted material the use of which has not always been specifically authorized by the copyright owner. We are making such material available to our readers under the provisions of "fair use" in an effort to advance a better understanding of political, economic and social issues. The material on this site is distributed without profit to those who have expressed a prior interest in receiving it for research and educational purposes. If you wish to use copyrighted material for purposes other than "fair use" you must request permission from the copyright owner.

For media inquiries: publications@globalresearch.ca