

China launches powerful rocket in boost for 2020 Mars mission

December 27 2019, by Jing Xuan Teng



China's launch of its first Long March 5 rocket in November 2016 (pictured) was a leap forward for its ambitious space programme

China Friday launched one of the world's most powerful rockets in a major step forward for its planned mission to Mars in 2020.

The heavy lift Long March 5 rocket carrying a Shijian 20 test satellite payload blasted off from the Wenchang launch site on the southern island of Hainan at 8:45 pm (1245 GMT), a livestream from state broadcaster CCTV showed.

"After more than 2,000 seconds, the Shijian 20 satellite was sent into its predetermined orbit," the official Xinhua news agency reported.

The rocket launch "tests key technologies related to [future space missions](#)," Xinhua said.

The successful launch is a key part of China's ambitious plans for a mission to the Red Planet next year and hopes of having a crewed space station by 2022.

"The Long March 5 rocket is tasked with important missions," Wu Yanhua, the deputy head of China's National Space Administration, said in a video released by CCTV last week.

"It will be tasked with a series of key missions including launching China's first Mars probe, the Chang'e-5 lunar probe and a core module for the manned space station."

More than a million people watched an online livestream of the launch and crowds gathered near the island launch site cheered as the rocket blasted off into the night sky, videos posted on social media showed.

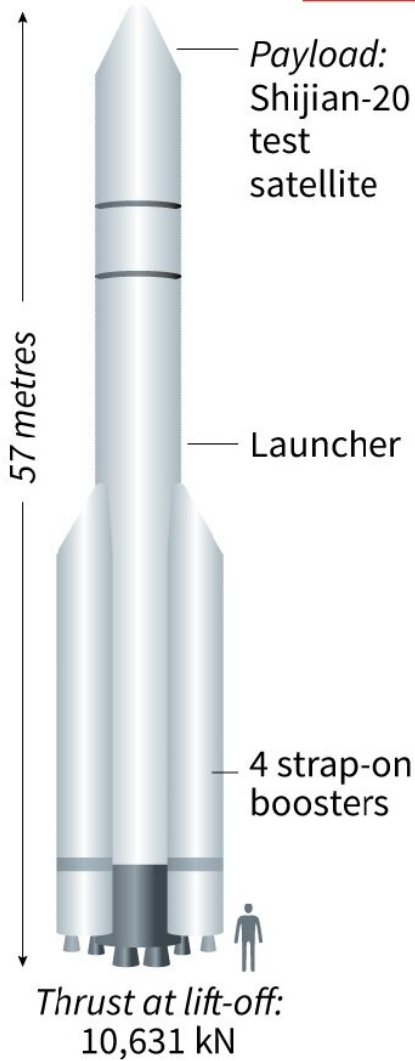
"Fat Five," the rocket's nickname, was a trending topic on the Twitter-like Weibo social media platform.

Friday's success gets the space programme back on track after a previous attempt in July 2017 failed mid-launch.

The Long March 5 Y2 was supposed to put the Shijian 18 experimental communications satellite into orbit and its failure delayed plans to use the rocket in a planned mission to collect lunar samples in the second half of 2017.

China successfully launched the first Long March 5 in November 2016, which it said at the time was the most powerful launcher it had yet developed.

Long March 5 



Chinese space launch

Crucial return-to-flight test for China's most powerful heavy-lift carrier rocket

Aim

Test rocket's capacity to perform critical launches in 2020 and beyond:

- China's 1st rover to Mars (Huoxing-1)
- Chang'e 5 probe to Moon
- Modules of China's planned space station



Wenchang launch base

- China's newest spaceport.
- Stages are jettisoned over sea rather than land

© AFP Source: Spaceflightnow.com, forbes.com, NASA

The launch of China's Long March 5 carrier rocket

The Long March 5, which is capable of carrying up to 25 tonnes, is comparable in capacity to the US-made Delta IV Heavy and Russia's Proton-M, some of the most powerful launchers in existence, according

to NASA SpaceFlight.com.

By contrast the US's Saturn V, which delivered astronauts to the Moon in 1969, was designed to deliver some 140 tonnes of payload into low Earth orbit.

Space ambitions

Beijing has invested billions of dollars in its space programme in an effort to catch up with its rival the United States and affirm its status as a major world power.

In 2003, the Asian giant, which now spends more than Russia and Japan on its civil and military space programmes, became only the third nation to put a human into orbit.

In January 2019, China became the first nation to land a probe on the far side of the Moon.

The Chang'e-4 lander—named after the Moon goddess in Chinese mythology—released a rover in the Moon's South Pole-Aitken Basin shortly after New Year.

In November China completed a test of its Mars exploration lander, ahead of its first [mission](#) to the Red Planet slated for 2020 which is planned to deploy a rover to explore the Martian surface.

China also aims to have a manned space station in orbit in 2022.

The Tiangong—or "Heavenly Palace"—is set to replace the International Space Station, which is due to be retired in 2024.

China will also seek to build an international lunar base, possibly using

3D printing technology, in the future, Wu said in January.

China's space programme has alarmed the US, which fears that Beijing will threaten its dominance in space.

The White House announced the creation of a new military arm called the Space Force earlier this month, with President Donald Trump calling [space](#) "the world's newest warfighting domain."

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Citation: China launches powerful rocket in boost for 2020 Mars mission (2019, December 27)
retrieved 25 April 2024 from
<https://phys.org/news/2019-12-china-powerful-rocket-boost-mars.html>

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