

China set to launch bigger space programme

July 1 2012, by Boris Cambreleng



This photo of the giant screen at the Jiuquan Space Centre shows the Shenzhou-9 spacecraft preparing to link with the Tiangong-1 module on June 24. China will deploy bigger spacecraft for longer missions following the success of its Shenzhou-9 voyage, allowing it to build a manned space station and potentially put a man on the moon, experts said.

China will deploy bigger spacecraft for longer missions following the success of its Shenzhou-9 voyage, allowing it to build a manned space station and potentially put a man on the moon, experts said.

The 13-day voyage of Shenzhou-9, which returned to Earth on Friday, was China's longest-ever [space mission](#) and included the nation's first woman astronaut among its three crew members.

In another first for China's 20-year [space](#) programme, which has cost more than \$6 billion, the crew also achieved the country's first-ever manual docking with an [orbital module](#), the Tiangong-1, a high-speed and high-risk [manoeuvre](#).

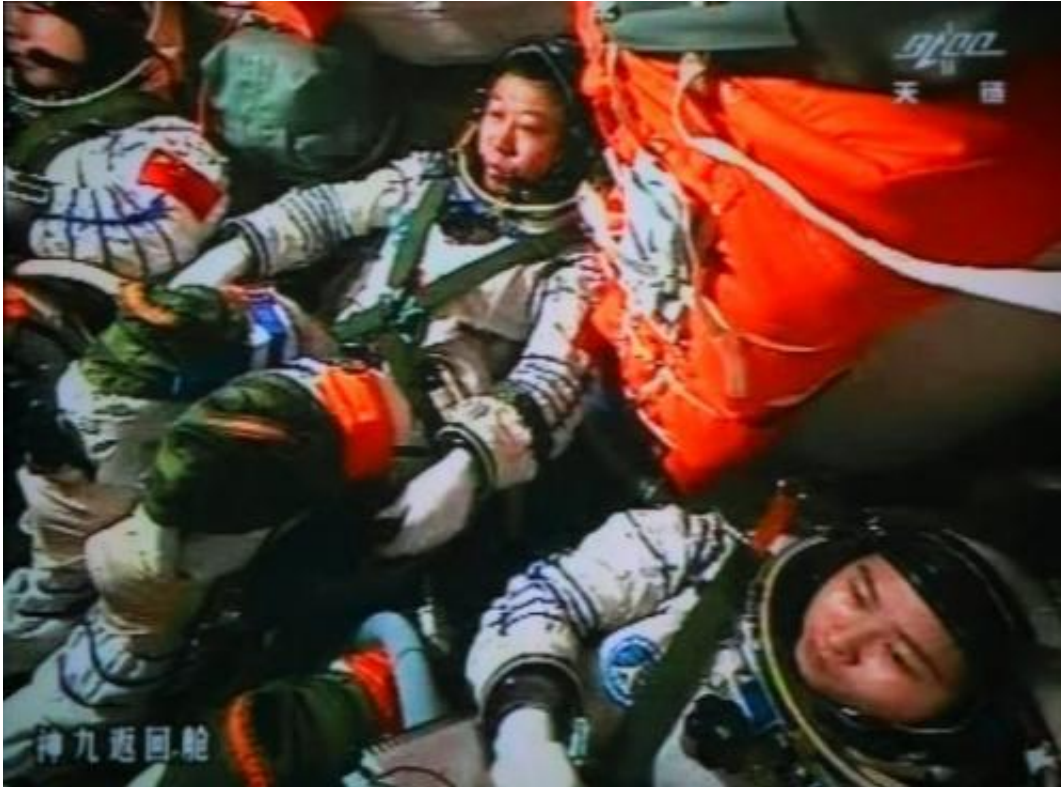
In the next mission that will occur at the end of this year or in 2013, Shenzhou-10's astronauts will link up with Tiangong-1 in a similar flight, said Morris Jones, an Australian space expert focusing on China's programme.

The mission will be the last docking with the Tiangong-1, which was put into orbit in September last year.

Morris said no more [astronauts](#) would go on Tiangong-1 after the next mission. Then, in a few years, China will launch a more sophisticated version, the Tiangong-2.

When that comes into play, the dimensions of China's space programme will grow significantly, said Isabelle Sourbes-Verger, a specialist on China's space programme at France's National Centre for Scientific Research.

She said future vehicles would allow for larger space modules, longer missions and more powerful launch vehicles,



This photo of the giant screen at the Jiuquan Space Centre shows Chinese astronauts Liu Wang (C), Jing Haipeng (L) and Liu Yang in the Shenzhou-9 spacecraft as it prepares to link with the Tiangong-1 module on June 24. The crew achieved the country's first-ever manual docking with an orbital module, the Tiangong-1, a high-speed and high-risk manoeuvre.

"Longer periods in space -- one to three months -- cannot take place unless there is a vehicle bigger than the 8.5 tonne Tiangong-1, which also did not appear to have a resupply system," she told AFP.

"Tiangong-1... will be followed by two other versions with more powerful 'life support' systems... and will possibly be capable of docking with a second vehicle."

China is also developing the Long March 5, a next-generation [booster](#)

[rocket](#) that will be needed if the nation hopes to place a bigger space station in orbit, said Joan Johnson-Freese, a professor at the US Naval War College.

"Launching that space station... depends on the successful development of a new heavy launch vehicle, the Long March 5," she told AFP.

"I would expect to see this large space station in [orbit](#) within the next 10 years -- which could make it the de facto replacement for the now orbiting International Space Station (ISS)," said Johnson-Freese.

She was referring to the life expectancy of the ISS -- run by the American, Russian, Japanese, European and Canadian space agencies -- which is likely to function only to around 2020.

China has never been invited to join the ISS.

Sourbes-Verger said further advances in China's space station programme would "guarantee" that the country plays a major role should any eventual cooperation with the ISS take place.

To realise its ambitions beyond 2020, which may include sending a man to the moon, China has also been advancing its "Chang'e" exploration programme. This entails satellite launches to explore the lunar surface.

"Likely within the next five to eight years China will also make a decision as to whether to pursue a human lunar mission," Johnson-Freese said.

Meanwhile the United States, after retiring its space shuttle fleet, is also developing a new rocket and technologies to place a man on an asteroid or on Mars, she said.

"Both countries are moving forward, but not in a competitive path," she said.

China's space programme remains far behind the Americans. This was highlighted by the fact that the manual space docking trumpeted by the Chinese on the Shenzhou-9 mission was done by the Americans in the 1960s.

"If there is a space race going on, I think it is in Asia," Johnson-Freese said, pointing out that India had also set ambitious goals.

(c) 2012 AFP

Citation: China set to launch bigger space programme (2012, July 1) retrieved 19 April 2024 from <https://phys.org/news/2012-07-china-bigger-space-programme.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--