

Chinese mission with first civilian reaches space station

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A Long March rocket carrying a crew of Chinese astronauts in a Shenzhou-16 spaceship lifts off from the Jiuquan Satellite Launch Center in northwestern China, Tuesday, May 30, 2023. Credit: AP Photo/Mark Schiefelbein

China sent three astronauts to its Tiangong space station on Tuesday,

putting a civilian into orbit for the first time as it pursues plans to send a crewed mission to the Moon by 2030.

The world's second-largest economy has invested billions of dollars in its military-run space program in a push to catch up with the United States and Russia.

The Shenzhou-16 crew took off atop a Long March 2F rocket from the Jiuquan Satellite Launch Centre in northwest China at 9:31 am (0131 GMT), AFP journalists saw.

They docked at the [space station](#)'s Tianhe core module on Tuesday afternoon, more than six hours after taking off, state broadcaster CCTV said.

The launch was a "complete success" and the "astronauts are in good condition", said Zou Lipeng, director of the Jiuquan Satellite Launch Center.

Dozens of employees from the space program, many of whom live year-round on the huge site, attended the launch, snapping selfies with the rocket in the background.

Children played as they waited for the launch, some waving Chinese flags as they sat on their parents' shoulders.

Spectators let out a loud "wow", shouting "good luck" and waving as the rocket took off in a cloud of ochre smoke.

Leading its crew is commander Jing Haipeng on his fourth mission, as well as engineer Zhu Yangzhu and Beihang University professor Gui Haichao, the first Chinese civilian in space.

China was the third country to put humans in orbit and Tiangong is the crown jewel of its [space program](#), which has also landed robotic rovers on Mars and the Moon.

Shenzhou-16 is the first mission to Tiangong since it entered its "application and development" stage, authorities said.

The crew will meet their three colleagues from the Shenzhou-15 flight, who have been at the station for six months and who will return to Earth in the coming days.

Shenzhou-16's crew will carry out a number of experiments during the mission, including in "high-precision space time-frequency systems", [general relativity](#), and into the origin of life, China Manned Space Agency (CMSA) spokesperson Lin Xiqiang told reporters on Monday.

The space station was resupplied with drinking water, clothing, food and propellant this month in preparation for Shenzhou-16's arrival.

One expert told AFP that Tuesday's mission represented "a regular crew rotation flight", but even that was significant.

"Accumulating depth of experience in human spaceflight operations is important and doesn't involve new spectacular milestones all the time," said Jonathan McDowell, an astronomer and astrophysicist at the Harvard-Smithsonian Center for Astrophysics.

'Heavenly palace'

China's "space dream" has been put into overdrive under President Xi Jinping, and the construction of a moon base is planned.

"The overall goal is to achieve China's first crewed landing on the Moon

by 2030 and carry out lunar scientific exploration and related technological experiments," the CMSA's Lin said.

The final module of Tiangong—which means "heavenly palace"—successfully docked with the core structure last year.

The station carries several pieces of cutting-edge scientific equipment, state news agency Xinhua reported, including "the world's first space-based cold atomic clock system".

Tiangong is expected to remain in low Earth orbit at an altitude between 400 and 450 kilometers (250 and 280 miles) for at least 10 years.

It is constantly crewed by rotating teams of three astronauts.

China has been effectively excluded from the International Space Station since 2011, when the United States banned NASA from engaging with the country—pushing Beijing to develop its own orbital outpost.

China's space agency reiterated on Monday it is actively seeking international cooperation in the project.

China plans to send two crewed [space](#) missions to Tiangong every year, according to the CMSA.

The next will be Shenzhou-17, with an expected launch in October.

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