

Piece of history

Exhibition of Silk Road artifacts in Japan links past with future [CULTURE, PAGE 17](#)

Sweden's bid to join NATO hangs in air
[WORLD, PAGE 12](#)



Ready for space

Shenzhou XVII crew show confidence, determination
[CHINA, PAGE 8](#)



CHINA DAILY

香港版
HONG KONG

THURSDAY, October 26, 2023

中國日報

www.chinadailyhk.com HK \$10

CHINA



Crew members (from left) Tang Shengjie, Tang Hongbo and Jiang Xinlin take part in a simulation training for the Shenzhou XVII space mission in September. WANG XIAYANG / FOR CHINA DAILY

Shenzhou XVII crew confident

Mission scheduled to launch from Jiuquan site in Gobi Desert on Thursday

By ZHAO LEI
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The crew members of the Shenzhou XVII space mission have spoken of their intense training, preparedness and confidence ahead of Thursday's scheduled launch from the Jiuquan Satellite Launch Center in northwestern China's Gobi Desert.

Speaking to the media on Wednesday, Senior Colonel Tang Hongbo, commander of the Shenzhou XVII mission, told reporters that as his team will be only the second crew to stay inside the Tianqiang space station after it was completed at the end of last year, they are tasked with conducting a large number of scientific experiments and technological tests.

"Hard training on the ground is the only way for the success of our mission in space. To prepare for our tasks, we have spared no efforts to study theories, practical procedures and maneuvers, and improve our skills."

"We've focused on science and technology tasks in fields such as space-based materials research, fundamental physics in a microgravity environment, and life science and biotechnology," he said.

The crew members have spent a lot of time and energy familiarizing

The Shenzhou XVII mission's three crew members

Tang Hongbo

Senior Colonel Tang Hongbo, 47, a native of Hunan province, joined a People's Liberation Army Air Force flight school in September 1995 and was assigned to a fighter jet regiment after graduation.

He became a first-grade pilot at the combat unit and was gradually promoted to the post of group commander.

In May 2010, Tang was selected as a member of the second group of astronauts for the PLA Astronaut Division and six years later he was a reserve for the two-member crew of the Shenzhou XI mission.

He made his first journey into space in June 2021 on the three-month Shenzhou XII mission.

themselves with space station management, spacewalk and healthcare skills, especially procedures involved in emergency response and handling malfunctions, according to the mission commander.

"It is in consideration of the fact that there are always risks and hazards in space, which requires astronauts to be able to take measures in a rapid, accurate manner," Tang explained.

The senior colonel added that during the past two years since he returned from the three-month Shenzhou XII mission, he has raced against the clock to learn new knowl-

becoming one of the first inhabitants of China's Tianqiang space station.

In November 2021, he was given the honorary title "Heroic Astronaut" and awarded the Third-grade Space Service Medal.

Tang, a first-grade astronaut, is the mission commander of the Shenzhou XVII spaceflight.

Tang Shengjie

Lieutenant Colonel Tang Shengjie, 33, a native of Gansu province, joined the PLA Air Force in September 2008.

He was a first-grade pilot and squadron commander at an Air Force fighter jet brigade before being selected as one of the PLA Astronaut Division's third group of astronauts in September 2020.

edge and hone his skills to be ready for his next flight.

"As mission commander, I am responsible for making this flight successful. I have the confidence, determination and ability to work with my two colleagues to complete our mission," he noted.

Lieutenant Colonel Jiang Xinlin, who will fly with Tang, told reporters that he and his teammates have been exposed to a professional training system with experienced trainers and well-designed facilities.

"The training is safe and efficient and has turned me from a fighter jet aviator into an astronaut," he said.

He is now a fourth-grade astronaut.

Jiang Xinlin

Lieutenant Colonel Jiang Xinlin, 35, a native of Henan province, enlisted in the PLA Ground Force as a cadet in September 2006.

After graduation, he was selected by the PLA Air Force for fighter jet training.

Before joining the PLA Astronaut Division in September 2020 as one of the third generation of Chinese astronauts, he was a first-grade pilot and deputy group commander of an Air Force fighter jet brigade.

Jiang is now a fourth-grade astronaut.

ZHAO LEI

12th crewed mission to focus on space debris

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China will launch its 12th manned spaceflight, the Shenzhou XVII, on Thursday morning to transport a three-member crew to the Tianqiang space station, according to the China Manned Space Agency.

The spacecraft — with mission commander Senior Colonel Tang Hongbo, Lieutenant Colonel Tang Shengjie and Lieutenant Colonel Jiang Xinlin on board — is scheduled to be lifted by a Long March 2F carrier rocket at 11:14 am from the Jiuquan Satellite Launch Center in northwestern China's Gobi Desert, said Lin Xiqiang, deputy director of the space agency, at a news conference on Wednesday.

"After the spacecraft enters its preset orbital position, it will activate the rapid rendezvous-docking mode and take about six and a half hours to approach and connect with the front port of the Tianhe core module," Lin said.

The Tianqiang space station, orbiting about 400 kilometers above Earth, has three major components — the Tianhe core module and the Wentian and Mengtian science lab modules. It is currently connected with visiting Shenzhou XVI crew ship and the Tianzhou cargo ship, and is one of the largest and most sophisticated space stations ever placed in orbit.

The Shenzhou XVII team will take over Tangong from the Shenzhou XVI crew, comprising mission commander Major General Jing Haipeng, Colonel Zhu Yangzhu and Professor Gui Haichao, who arrived at the space station on May 30. The two teams will be stationed together for about four days for handover work, after which the Shenzhou XVI crew will fly back to Earth.

The Shenzhou XVII crew members are scheduled to stay inside Tianqiang for around six months and return to Earth around April. Their tasks will include carrying out scientific experiments and technological demonstrations, conducting

spacewalks, and installing, maintaining and the massive orbital outpost, checking the space station's operational performance and obtaining relevant data, and helping to review the support capabilities of ground facilities, Lin said.

In addition to these routine tasks, there will be a new assignment for the Shenzhou XVII crew members — they will perform experimental repairing operations during spacewalks, the official said.

"As the amount of space debris keeps rising, it is inevitable for any long-working space station to be hit by small or micro debris. We have found that the solar arrays on Tangong have been slightly damaged by debris," he said.

Lin said that such scenario was taken into account when plans for the Tianqiang project were made, and the space station is still in good condition.

"However, to ensure Tangong's long-term operation and to verify our technical capabilities, we have arranged the Shenzhou XVII crew to make experimental repairing operations during their extravehicular activities, which will be very challenging," he added.

If such experimental maneuvers are successful, they will mark a significant advance in China's capability to make and support spacewalks, Lin said.

Tang, the Shenzhou XVII mission commander, is one of the nation's second-generation astronauts. He

Our projects are meant to enrich human knowledge about the universe, expand the range of human presence and activities, and push forward the sustainable development of civilizations."

Lin Xiqiang, deputy director of the space agency

is set to become the first Chinese astronaut making two spaceflights within the shortest interval. Tang's first space journey was on the three-month-long Shenzhou XII mission, which concluded two years and one month ago. He will also be the first young Chinese crew member.

Tang Shengjie and Jiang are from China's third generation of astronauts and the Shenzhou XVII mission will be their first journey to the Earth's orbit. With an average age of 38, the three-member team will be the youngest Chinese crew in space.

Speaking about the next steps in the Tianqiang program, Lin said that China will deploy a large space telescope in the near future to fly alongside the space station, and it also plans to launch more science modules to connect with the station.

China is open to international cooperation and communication in regard with the space station, ranging from joint flights to payload development, Lin said.

"We would like to invite all countries and regions to participate in the peaceful use of outer space to work with us in the Tianqiang program," he said, adding that China will also invite foreign astronauts to take part in its manned lunar expeditions.

The country's manned space program has always been open, peaceful nature and China has never sought "space hegemony," according to Lin.

He said the country's manned space program is an important part of mankind's exploration and use of outer space, and is totally intended for peaceful purposes.

"Our projects are meant to enrich human knowledge about the universe, expand the range of human presence and activities, and push forward the sustainable development of civilizations," he said.

Lin made the remarks when responding to a question on China's plans as the United States-led International Space Station is expected to retire around 2030.

Since the Chinese program's establishment in 1992, it has grown based on predetermined strategies and plans, and has gradually led to the completion of the Tianqiang space station, the official said.

"Over this course, we have never pursued 'space hegemony' and have rather consistently upheld the peaceful use of outer space," Lin said.

When China's first astronaut Yang Liwei reached orbit, he greeted people around the world and wrote in his work log that "the Chinese people have now entered outer space for the peace and advancement of mankind," Lin said. "Jiang also held a United Nations flag, making China the first country to carry a UN flag in its first manned mission," he added.

Astronaut selection includes HK, Macao candidates

By ZHAO LEI
at Jiuquan Satellite Launch Center

More than 20 candidates have been shortlisted for the final round of selection for the nation's fourth generation of astronauts, including several from the Hong Kong and Macao special administrative regions, according to a space official.

Lin Xiqiang, deputy director of the China Manned Space Agency, said at a news conference on Wednesday at the Jiuquan Satellite Launch Center, that the candidates include members of

the military, researchers and engineers and they will compete for up to 14 places at the Astronaut Center of China.

The final selection process is scheduled to be finished before the end of this year, he added.

China started selecting the country's fourth generation of astronauts in October last year.

Experts will pick 12 to 14 candidates for the new generation of astronauts. Among them, seven to eight will be pilots, three to four will be spaceflight engineers and two will be

science payload specialists.

The spacecraft pilots will be chosen from aviators now serving in the Chinese armed forces. The spaceflight engineers will be selected from researchers and technicians in aerospace or related industries. The science payload specialists will be chosen from scientists working on space science and technology, according to Lin's agency.

The selection of the fourth generation is the first time that people from Hong Kong and Macao have had an opportunity to join the country's

astronaut group.

"Several from Hong Kong and Macao have entered the final round for the posts of science payload specialists, and if some of them could pass that round, they will be sent to the Astronaut Center of China at the beginning of 2024 to start their training," Lin said.

Generally speaking, an astronaut will be chosen for his or her first spaceflight after about two-and-a-half years of training, but that is subject to mission plans and developments, according to the official.



Crew members of Shenzhou XVII — mission commander Senior Colonel Tang Hongbo (center), Lieutenant Colonel Jiang Xinlin (left) and Lieutenant Colonel Tang Shengjie — meet with the media at Jiuquan Satellite Launch Center on Wednesday. ZHU XINXIN / CHINA DAILY