

Shenzhou crew setting up Tiangong station

By ZHAO LEI

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Crew members of the Shenzhou XIV mission spent a busy month inside the Tiangong space station after they arrived at the outpost, getting ready to oversee the station's in-orbit assembly, according to the China Manned Space Agency.

The agency said on Wednesday that the first assignment for the three astronauts — mission commander Senior Colonel Chen Dong, Senior Colonel Liu Yang and Senior Colonel Liu Yang and Senior Colonel Cai Xuzhe — was to establish an inhabitable environment inside the station.

They re-configured the ventilation, air purification, water recv-

cling and treatment as well as other life-support equipment and conducted sampling and testing of air, water and microorganisms inside Tiangong, it said in a news release.

In addition, the crew installed a carbon dioxide processing device that can improve the recycling of

After settling the living and work environment, the astronauts moved mission materials from the Tianzhou 3 and Tianzhou 4 cargo ships and tidied up packages inside the two robotic vehicles.

They have also started several scientific experiments, checked their spacewalk suits and examined their health conditions on a regular basis, the agency noted, adding that the astronauts had been in good health and mood over the past month.

Chen and his teammates entered

the Tiangong station's core module, Tianhe, late on June 5, several hours after their Sherzhou XIV spacecraft was launched by a Long March 2F rocket from the Jiuquan Satellite Launch Center in northwestern Chine

They are scheduled to stay in the craft, orbiting 400 kilometers above the Earth, for six months to complete the assembly in space of the colossal station.

It is the second time that Chen and Liu have gone into space, and Cai's first, making him the 14th Chi-

nese astronaut in outer space.

Around the end of this year, after
their mission to monitor the dock-

ing between the Tianhe core module and two large space lab components is completed, the Tiangong station will have become fully operational.

Wentian, the first lab component, will be lifted in July by a Long March 5B rocket from the Wenchang Space Launch Center in Hairan province, while the second lab Mengtian will be launched by the same rocket model from Wenchang in October.

After they are connected with Tiangong, the station will form a T-shaped structure.

The three astronauts' flight has inaugurated a 10-year period in which, barring unforeseen circumstances, Chinese astronauts will be in space every day.

Commercial space launch site begins construction

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China's first space launch site dedicated to commercial missions started construction in Wenchang, a coastal city in Hainan province, on Wednesday, according to the provincial government.

The Hainan Commercial Space Launch Site program is a Joint venture of the Hainan government and three State-owned space conglomentes — China Aerospace Science and Technology Corp. China Aerospace Science and Industry Corp and China Satellite Network Group, the provincial government said in a news release.

The site's construction is being undertaken by China Aerospace Construction Group, it added.

Speaking at a commencement ceremony in Wenchang, Feng Fei, the provincial governor, said that Hainan will make full use of the new launch site to establish an entire space industry chain covering carrier rokets, satellites and data processing businesses.

He said the facility will help to build Wenchang into a world-class spaceport.

There is already a launch complex in Hainan — the Wenchang Space Launch Center — but like the other three existing launch centers in China — Jiuquan, Taiyuan, and Xichang — it is administered by the central government and is primarily tasked with serving State programs such as lunar explorations

and manned spaceflight.

The provincial government intends to make the new site a leading launch system that will be fully commercially managed so it will be able to support the long-term growth of the country's commercial space industry, the release said.

In China, a commercial space mission generally refers to a space activity paid for by an entity other than a Chinese government or military department.

"The existing government-run launch centers are well developed but they are too busy to handle the increasing demands from the commercial space sector and it is not uncommon that even a government-assigned mission would have to wait for arrangement at those sites," said Hu Shengyun, a senior rocket designer at China Aerospace Science and Industry Corp.

Each of the centers has only one to two service towers capable of launching carrier rockets and important State missions like crewed flights always have priority, he said

"In addition, the management and operational methods of the existing centers were specifically designed for State-funded programs rather than commercial missions, so carrying out a lot of commercial launches will likely create problems or challenges for them." the rocket designer noted.

Ma Zhiping in Haikou contributed to this storu.