CHINA

Last Tianlian I satellite placed in orbit

Network used to relay signals between spacecraft and ground control stations

By ZHAO LEI
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China launched the last satellite in its Tianlian I relay spacecraft series late on Tuesday night, which also marked the finale of the country's DFH-3 satellite platform.

A Long March 3C carrier rocket blasted off from the Xichang Satellite Launch Center in Sichuan province at 11:52 pm and then placed the Tianlian I-05 satellite into a geostationary orbit, said China Aerospace Science and Technology Corp, the country's leading space contractor.

The State-owned conglomerate said in a statement that the satellite was the fifth and last member of the Tianlian I fleet, the nation's first-generation of data relay spacecraft.

It is expected to work for at least seven years. Its service will improve the country's capability to relay signals between satellites and ground control, it said.

Tianlian I-05 is the last spacecraft developed on the DFH-3 satellite platform, which was designed in the mid-1980s. The first DFH-3-based satellite was launched in September 1994 and 40 others have followed, including many in China's Beidou Navigation Satellite System.

China began to establish its space-based data relay system in April 2008 when the first satellite in the Tianlian I series was launched from Xichang. Tianlian I-01 is still operating, having significantly outlived its designed life span.

In July 2012, China became the second country, after the United States, to possess non-stop relay capability for its space-based infrastructure after Tianlian I-03 was deployed into space to join its two predecessors to form a basic system with global coverage.

In March 2019, China launched Tianlian II-01, its first second-generation data relay satellite.

The Tianlian network currently consists of six spacecraft — five of the Tianlian I series and Tianlian II-01. Sources close to the system's development said Tianlian II-02 and Tianlian II-03 will be deployed soon.

Compared with the first-generation model, Tianlian II satellites feature stronger capabilities, heavier carrying capacity and longer life spans, according to Zhao Hong, chief designer of the Tianlian II-01.

"Because of its newly developed antennas, the data transmission speed of the new-generation type is twice that of the first generation," Zhao said, adding that Tianlian II satellites can serve more spacecraft and have a larger operational range.

Wang Jiasheng, chief engineer of the Tianlian II series, said the Tianlian system has served a variety of space functions such as rendezvous and docking between spaceships and space stations, video link between astronauts and people on the ground, and data transmission for Earth observation, weather and other low-orbit satellites.

On June 23, a video call between President Xi Jinping, who is also general secretary of the Communist Party of China Central Committee, and the three Chinese astronauts on board the country's first space station was connected through Tianlian II-01, Wang said.

In addition, the system has provided long-distance tracking and data relay service to long-range air traffic, experimental hypersonic aircraft tests and scientific ocean expeditions, he said.

Eco Forum to focus on low-carbon transition

By LI HONGYANG
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An ecological protection forum in Guizhou, Guiyang province, on Monday and Tuesday will focus on low-carbon transition.

With the theme "Low-carbon Transition, Eco-Development — Building A Life Community of Human and the Natural World Together", the forum will revolve around topics including the United Nations 2030 Sustainable Development Agenda, China's goals of achieving peak carbon in 2030 and carbon neutrality in 2060, and the national development strategy for the Yangtze River Economic Belt, according to its website.

The Eco Forum Global Guiyang, first held in 2009, will highlight the green economy, trade and products this year to encourage investment in related industry, it added.

This year's forum will be jointly hosted by the ministries of foreign affairs, natural resources, and ecology and environment, and Guizhou's provincial government. Twenty-two subforums will include topics on the 14th Five-Year Plan (2021-25), green and clean energy, the development of new energy and the lithium battery industry, Sino-Swiss Dialogue 2021, green finance and low-carbon transition.

In 2015, President Xi Jinping said the forum should deepen international exchanges and cooperation on environmental protection, the response to climate change and other areas.

During a visit to Guizhou in February, Xi emphasized the forum's status as a State-level international forum on ecological civilization.

Lu Yongzheng, head of the Publicity Department of the Guizhou Committee of the Communist Party of China, told a news conference on Wednesday that Guizhou recognizes deeply that its greatest competitive advantage lies in its excellent environment.

"We have elevated big ecology as one of three major strategic actions," he said, with the other two being rural revitalization and big data.

In 2016, the central government made Guizhou one of the country's first ecological civilization experimental zones.

Lu said that the province has been transforming energy structures, with clean energy accounting for 52.9 percent of energy production, 8.1 percentage points above the national average.

Energy consumption per unit of GDP dropped by 24.3 percent during the past five years, among the best performances in the country, he said.

By 2025, Guizhou plans to increase its forest coverage rate from 61 percent to 63 percent, Lu said.

"More efforts will be made to restore the ecology of the Chishui and Wujiang rivers and other important river basins as well as concentrated zones with mineral resources," he said.

"We will try our best to create demonstration areas of green barriers in the upper reaches of the Yangtze and the Pearl rivers, green development in the west, ecological poverty alleviation, legal construction of ecological civilization, and international exchanges and cooperation for ecological civilization."

Male elephant sent back to home reserve

By YANG WANLI
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A male Asian elephant that strayed from its wild herd a month ago was returned to Xishuangbanna National Nature Reserve in southwestern China's Yunnan province on Wednesday afternoon.

It left Xishuangbanna last year with 16 other elephants and the herd headed north. Two of the elephants returned to the nature reserve early this year.

After traveling more than 500 kilometers, the male elephant left the herd on June 6. The other 14 are still roaming in Xinping county, according to the command office in charge of monitoring their movement.

The male elephant had stayed alone on the outskirts of Kunming, the provincial capital, and the neighboring city Yuxi for 32 days, and had been about 72 km from the herd.

On July 5, it entered Yuxi's Zanbatang community, only 300 meters from an expressway and 200 meters from the Kunming-Yuxi High-speed Railway.

"Due to safety concerns and to prevent the risk of conflicts between the elephant and people, we decided to capture the elephant early on Wednesday morning," said Xie Yi, a professor from Beijing Forestry University.

He said that after long-term observation, an expert team concluded the elephant was unlikely to reunite with the herd, and that limited natural food resources in the area increased the risks of the animal coming into conflict with people.

Chen Mingyong, a science professor at Yunnan University who has studied wild Asian elephants for years, said the 10-year-old male elephant would have faced great challenges far from its habitat and alone.

"The constant rain and low temperatures, together with the limited natural food resources, would make it very difficult for him to find a proper habitat for a long-term stay," he said. "Although we've been feeding it, the method is not good for its health in the long run."

He said transferring the elephant was necessary and an internationally recognized practice.

The elephant was sedated with a blow dart, lifted in a cage onto the back of a truck and returned to the nature reserve at 3 pm. The command office said it was in good physical condition under general anesthetic administered by a staff member from the Xishuangbanna Asian Elephant Rescue and Breeding Center.

The center, established in 2002, has saved 24 wild elephants.

"It's common for a subadult male elephant to leave the herd. We gave it comprehensive consideration and agreed that the best place for him is his original habitat in Xishuangbanna," said Shen Qingzhong, an engineer from the nature reserve's management office.

During the elephant's journey back to Xishuangbanna, Shen said its safety was guaranteed by police officers and veterinarians. "Before it was released to the wild, we conducted a health exam and made sure it was healthy," Shen said.

The Asian elephant, which is included on the International Union for Conservation of Nature's Red List of Threatened Species as "endangered", enjoys Class-A protection in China, the same level afforded the giant panda.

Yunnan is the sole habitat of wild Asian elephants in China. Before the 1970s, the species was threatened due to a number of factors, including a surge in the human population, shrinking forest areas and illegal hunting. The number of elephants dropped significantly.

However, due to determined protection efforts in recent decades, the Asian elephant population in China has risen to 300 from 170 in the 1970s.

Hou Liqiang and Li Yingqing contributed to this story.

Online
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Back to nature

Animal workers release a Tibetan antelope into the wild at a wildlife protection center in Hoh Xil, Qinghai province, on Wednesday. They also released four others. The Tibetan antelope population in the area has risen to around 70,000 after decades of protection. ZHANG LONG / XINHUA

Parents of Henan quadruplets could face fine for policy breach

By SHI BAOYIN in Zhengzhou and YE ZIZHEN

The birth of rare all-male quadruplets into a Henan family that already had two girls has sparked discussion on whether the large family should be fined, given that the national third-child policy has not yet been implemented.

The quadruplets were born in Dancheng county in Zhoukou, Henan, on June 29. Their father named them Fan, Rong, Chang and Sheng, four words that when combined mean prosperous.

They were the first quadruplets to be born in the county. Both the mother and the babies, weighing from 1.7 to 1.9 kilograms, are in good health after the delivery by cesarean section.

Their father, Wang Yuxi, said doctors told him the probability of having all-male quadruplets was one in 3.52 million. He and his wife already have two daughters, one in primary school and the other only 1, and he wanted a boy on the third try.

"Actually, the family thought about an abortion when they learned the wife was carrying quadruplets. They are not wealthy, plus caesarean delivery can be dangerous for the mother," said Kang Guoliang, director of Dancheng Women and Children's Hospital.

Since the prenatal indicators were normal, the couple decided to keep the babies.

But along with the happiness of welcoming four sons into the family, Wang faces the possibility of being fined for their birth.

On May 31, China announced the third-child policy, allowing all couples to have up to three children, to cope with the problem of an aging society. It replaced the universal second-child policy, which was released in 2016.

Although the central government has released the third-child policy, the Dacheng county health department has not yet received the relevant policy document, meaning the second-child policy is still in place in the county, a department staff member surnamed Fan told Beijing News. "We are considering consulting with the Henan Provincial Health Commission on Wang's case," he added.

Wang Guangzhou, a researcher with the Institute of Population and Labor Economics at the Chinese Academy of Social Science, said that although the details of the third-child policy have not been officially implemented, theoretically speaking, it's not proper to follow the old second-child policy in local practice.

Considering the family's practical difficulties, along with the babies' growth, Mu Guangzong, a demographer at Peking University, suggested comprehensive government support was needed.

"Having quadruplets is a small-probability incident, giving birth and raising the children needs the involvement of both the household and the government," Mu said.

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Hot hands, cool feet

People play mahjong while cooling their feet in water to dodge the heat in Chengdu, Sichuan province, on Wednesday, which marked the Minor Heat, a traditional Chinese solar term.
AN YUAN / CHINA NEWS SERVICE

Study finds virus antibodies last at least 12 months

By WANG XIAOYU
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Antibodies against the novel coronavirus can last for at least 12 months in more than 70 percent of recovered COVID-19 patients, a study published by Chinese researchers on Tuesday shows.

The finding adds to growing evidence that vaccination, which elicits an immune response in a way similar to how a live virus triggers human bodies to generate antibodies, can "effectively restrict the spread of SARS-CoV-2", the study said.

The study, published online by Nature Communications, was conducted by China National Biotech Group, a Sinopharm subsidiary, and the National Research Center for Translational Medicine at Shanghai Jiao Tong University.

Researchers collected 1,782 convalescent plasma samples from 869 recovered COVID-19 patients in Wuhan, Hubei province, within 12 months of diagnosis, and tested them for the presence and amount of RBD-IgG, a type of antibody that indicates the strength of immunity against the virus.

Testing results showed that in nine months, levels of the antibody dropped to 64.3 percent of the initial level when they contracted the virus, and then stabilized into the 12th month.

"It shows that once immune responses against the novel coronavirus are induced in human bodies, antibody levels can be maintained for quite a long time," China National Biotech Group said in an article on its WeChat account on Wednesday.

The study found that the antibody response was significantly stronger in male participants than in their female counterparts in the early stages of infection, but the difference dwindled over time and nearly disappeared in 12 months.

Among participants aged 18 to 55, the older ones developed higher antibody levels, it added.

The company said the study is the longest-running research aimed at examining the persistence of antibody response in recovered COVID-19 patients.

The finding was published as mass vaccination in China proceeds smoothly, with the country stepping up vaccine donations or sales overseas.

As of Tuesday, about 1.3 billion doses of vaccines had been administered nationwide, the National Health Commission said on Wednesday.

China National Biotech Group added that the study will help improve understanding of the immunological memory elicited by the virus, and provide guidance on future research into vaccine-induced immunity and future vaccination policies in China and abroad.