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Record set as rocket blasts off

Modified Long March 8 deploys 22 small satellites in orbit in one go

By ZHAO LEI
zhaolei@chinadaily.com.cn

A modified version of China's Long March 8 carrier rocket transported 22 satellites into orbit on Sunday morning in its debut flight, setting a record for the most spacecraft launched by a single Chinese rocket.

The rocket blasted off at 11:06 am from a coastal launch tower at the Wenchang Space Launch Center in southern China's Hainan province and flew more than 15 minutes before deploying all 22 of the small satellites, which were built by seven institutes and private companies, according to a statement from the China National Space Administration, organizer of the launch mission.

Most of the satellites are tasked with conducting remote-sensing operations using optical instruments.

Changguang Satellite Technology, a State-owned enterprise in Northeast China's Jilin province, manufactured and will manage 10 of the satellites.

Before the mission, the domestic record for the most satellites launched by a single rocket was held by the first flight of the Long March 6 model in September 2015, which deployed 20 satellites.

The world record is held by SpaceX's Falcon 9. Based in the United States, it lifted 143 satellites in January last year.

Like the original Long March 8 model, the variant used on Sunday was 50.3 meters long and had a diameter of 3.35 meters. It was propelled by four engines – two on the first stage and two on the second – and had a liftoff weight of nearly 198 metric tons. The rocket is capable of transporting satellites with a combined weight of 3 tons to sun-syn-



People watch the Long March 8 carrier rocket lift off in Wenchang, Hainan province, on Sunday. SHI XIAOFENG / FOR CHINA DAILY

chronous orbits, according to China Aerospace Science and Technology Corp, a leading State-owned space contractor that made the rocket.

The Long March 8's original model performed its debut mission in December 2020 at the Wenchang center. Sunday's mission by the modified carrier was the second flight of the Long March 8 series.

Chen Xiaofei, one of the rocket's head designers from the China Academy of Launch Vehicle Technology in Beijing, said the major difference between the two models is that the new one doesn't have side boosters. Its fairing is also shorter than that of the original, he added.

Duan Baocheng, deputy project manager of the Long March 8 family, said the major technical challenge to Sunday's flight was to make sure that the satellites would be

safely and smoothly deployed to their positions without colliding during their separation from the rocket.

"Our designers developed a three-stage distributor and a 12-step placement procedure," he said.

Duan said mission planners have estimated the market will demand at least 18 Long March 8 rockets during the 14th Five-Year Plan (2021-25) period.

"Currently, we are constructing a new production complex for Long March 8 series rockets outside the Wenchang launch center," he said. "It will have an annual manufacturing capacity of 25 rockets. A new launch tower specifically designed for the Long March 8 family is also being built at the center."

Earlier on Sunday, a Long March 4C rocket was launched at the Ju-

quan Satellite Launch Center in northwestern China's Gobi Desert to deploy an Earth-observation radar satellite.

The Land Surveyor 1-01B satellite soon entered a quasi-sun-synchronous orbit about 607 kilometers above the ground and will team up with its predecessor – Land Surveyor 1-01A, launched on Jan 26 – to use their L-band synthetic aperture radars to carry out round-the-clock, all-weather observation of ground areas.

The two-satellite system is tasked with providing data and images to land resources and mapping personnel, disaster prevention and relief crews and forestry authorities. It will also significantly strengthen the nation's rapid response capability during major natural disasters, according to the space administration.