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Breakthroughs marked



A journalist checks out a model of China's first satellite, Dongfanghong-1, which was launched into space on April 24, 1970, during an exhibition at the National Museum of China in Beijing on Wednesday. The exhibition, which marks China's technological breakthroughs in missiles, nuclear bombs and satellites more than five decades ago, opened to the public on Thursday. JIANG DONG / CHINA DAILY

Fengyun 3E weather satellite captures first images of sun

Pictures will help forecasters predict interruption of communication on Earth

By LI HONGYANG
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The Fengyun 3E weather satellite has captured its first test pictures of the sun, offering improved assistance in predicting solar activities and their impact on Earth and space weather.

"With the images, we will better forecast and instantly warn people and authorities of impacts on Earth from solar activities, including interruption of communications, navigation and large-scale power outages," Zhang Peng, deputy director of the National Satellite Meteorological Center, told a news conference on Thursday at which the pictures were released.

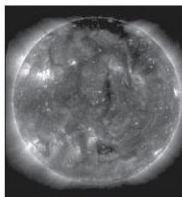
Solar activities including solar flares — explosive events that release energy from the sun's sur-

face — disrupt the functions of infrastructure by altering the Earth's magnetic field and ionosphere.

As the sun is the major energy source for Earth, its activities also affect weather and climate systems, Zhang said, adding that people need to always pay attention to solar activities.

The images can also provide more accurate data for space weather forecasts to ensure the safety of manned spacecraft operations and of astronauts who conduct spacewalks, Zhang said.

Zhang said that facilities on Earth can only see light from the sun through unfavorable atmospheric and weather conditions, while the satellite can detect other light that directly affects Earth's environment.



An extreme ultraviolet image of the sun taken by China's Fengyun 3E weather satellite. PROVIDED TO CHINA DAILY

"Like a CT scan for a body check, the satellite's imager can 'check' the sun all the time," he said.

The imager, the first of its kind, can capture images of hot gases in the Sun's outer atmosphere with X-rays, while extreme ultraviolet

images show the Sun's dark bars at a lower temperature. Combining the two images can predict solar eruptions more effectively, the China Meteorological Administration said.

By the end of this year, the administration will release an album of photos taken by the satellite.

Data from the Fengyun series of satellites has served 118 countries, the administration said.

China launched Fengyun 3E, the world's first early morning weather satellite for civil use, from the Jiuquan Satellite Launch Center on July 5.

It belongs to the polar-orbiting satellite group, which pass over the north and south poles in a north-south ellipse synchronous with the sun, passing places on Earth at the same local time.

One of the satellite's sides faces the sun all the time, making it suitable for monitoring solar activities, Zhang said.