

《中国成功发射首颗碳卫星》

导读:12月22日,我国首颗碳卫星在甘肃酒泉卫星发射中心成功发射。



China launched its first carbon dioxide monitoring satellite early Thursday, a move that experts said will contribute to global research on climate change and also enable the nation to play a bigger role in this field.

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The satellite was launched on a Long March-2D rocket from the Jiuquan Satellite Launch Center in Northwest China's Gansu Province, the Xinhua News Agency reported.

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The 620-kilogram satellite TanSat was sent into orbit 700 kilometers above the Earth and will monitor the concentration, distribution and flow of carbon dioxide in the atmosphere, Yin Zengshan, chief designer of TanSat, was quoted as saying by Xinhua.

620????TanSat??????700????????????????????????????????TanSat????????????????

On a three-year mission, TanSat will thoroughly examine global carbon dioxide levels every 16 days, accurate to at least 4 parts per million.

????????TanSat??16????????????????4ppm?

China is the third country after Japan and the US to launch such a satellite. Japan launched one in 2009 and the US in 2014.

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The satellite sent by China has a higher accuracy than the one launched by Japan and compared with the US satellite, it carried a cloud and aerosol detectors that could minimize interference and make the detection more accurate.

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"The detectors are capable of identifying particulate matters such as PM2.5 and PM10," said Liu Yi, a scientist of the TanSat project at the Institute of Atmospheric Physics of the Chinese Academy of Sciences.

????????TanSat????????"????????PM2.5?PM10?"

"However, to what extent the detector could help monitor smog depends on the quality and processing of information," he added.

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The satellite can also monitor areas unreachable by ground monitors, such as deserts, polar regions and oceans, to provide more accurate and wider information about global carbon emissions.

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Xinhua reported that the satellite has different modes for observing oceans and land, and can constantly adjust its orientation and position. To ensure TanSat's accuracy, six ground-based observation stations will calibrate and examine the data.

????????TanSat????????

China will have a bigger role in global climate negotiations, as the satellite can provide more first-hand data about global greenhouse gas emissions.

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Though many countries are reducing greenhouse gas emissions, calculating how much they are actually reducing is difficult, and ground-based monitoring cannot collect accurate data on a global scale, satellites offer the best means of measuring CO₂, said experts.

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China's carbon dioxide emissions are expected to peak around 2030, with emissions per unit of GDP to be cut by 60 percent of 2005 levels. A national carbon trading market will open next year.

????????????????2030????????????GDP????????2005????????60????????????????????

