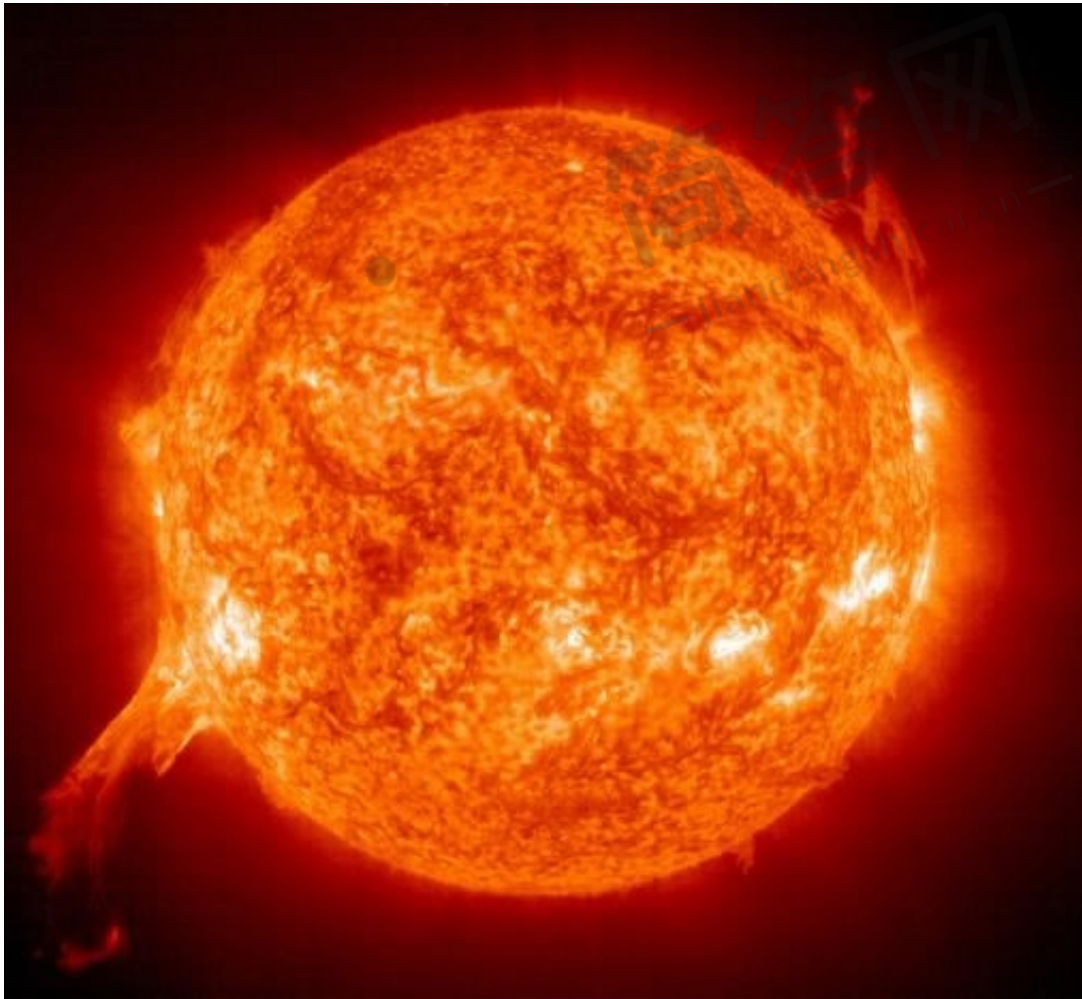


《美国将开启首次探日任务 是要“征服”太阳？》

A US spacecraft set to launch next year will make a series of unprecedented dives into the sun ' s scorching atmosphere to see how the star works and what can be done to better predict space weather events on Earth, scientists said this week.

The Parker Solar Probe will have to survive temperatures as high as 2,500 Fahrenheit (1,371 Celsius), impacts by supersonic particles and powerful radiation as it circles as close as 4 million miles (7 million km) to the sun.

Data sent back to Earth some 89 million miles (140 million km) away will help scientists figure out why the sun's atmosphere, or corona, is hotter than its surface.



A massive solar eruption, more than 30 times the length of Earth's diameter, blasts away from the Sun. /Reuters Photo

“We’re going to be seven times closer (to the sun) than any other mission has ever been,” project scientist Nicola Fox, with Johns Hopkins University Applied Physics Laboratory in Maryland, said during a broadcast on NASA TV.

The mission, formerly known as the Solar Probe Plus, was approved in 2014. On Wednesday, the spacecraft was renamed to honor University of Chicago physicist Eugene Parker, who in 1958 correctly predicted the existence of the solar wind, a continuous stream of charged particles that come off the sun and permeate the solar system.



Dr. Eugene Parker (L) receives a first scale model of Parker Solar Probe from Dr. Nicola Fox (R), project scientist for the Solar Probe Plus, during the NASA announcement on its first mission to fly directly into the sun's atmosphere at the University of Chicago in Chicago, Illinois, US on May 31, 2017. /Reuters Photo

“It was a fundamental insight that forever changed the way in which we understood the sun, the heliosphere and in general interplanetary space,” said Eric Isaacs, executive vice president for research, innovation and national laboratories at the University of Chicago.

The spacecraft, designed and built by the Johns Hopkins University laboratory, is scheduled to launch in July 2018

and fly around Venus seven times to get itself into orbit around the sun in December 2024. NASA is paying about 1.5 billion US dollars to build and launch the spacecraft.



Dr. Thomas Zurbuchen , Associate Administrator for the Science Mission Directorate at NASA (R), speaks as Dr. Eugene Parker (L), Dr. Nicola Fox (2nd L) and Dr. Rocky Kolb (2nd R), listen during the NASA announcement at the University of Chicago, May 31, 2017. /Reuters Photo

The probe is expected to orbit the sun 24 times, edging closer on each pass. The size of a small car, it will be outfitted with five science instruments to measure and sample the sun's corona.

In addition to expanding knowledge of stellar physics, the information is expected to help engineers design better instruments and techniques for predicting solar storms and other events that can cripple satellites, disrupt power grids and affect aircraft travel on Earth.

"We want to measure the environment there and find what the heating processes really are that make the corona hot and accelerate the solar wind," said NASA chief scientist Thomas Zurbuchen.