



NASA Set to Launch 'Parker Solar Probe'

National Aeronautics and Space Administration (NASA) is scheduled to launch 'Parker Space Probe' for a planned seven-year mission to study the Sun closer than any human-made object.

Key Highlights //

- The Parker Solar Probe is a robotic spacecraft the size of a small car and is named after American solar astrophysicist Eugene Newman Parker.
- It is set to fly into the sun's corona within 3.8 million miles from the solar surface, seven times closer than any other spacecraft.
- The probe is capable to endure wicked heat while zooming through the solar corona to study this outermost part of the stellar atmosphere that gives rise to the solar wind.

NOTE: Corona is a region of the Sun seen from Earth when the Moon blocks out the Sun's bright face during total solar eclipses.

- The probe is set to use seven Venus flybys over nearly seven years to steadily reduce its orbit around the sun, using instruments designed to image the solar wind and study electric and magnetic fields, coronal plasma and energetic particles.
- The probe has been outfitted with a heat shield designed to keep its instruments at a tolerable 29 degrees Celsius even as the spacecraft faces temperatures reaching nearly 21,370 degrees Celsius at its closest pass.

Importance of the Study

- The Sun is far more complex than meets the eyes as it is a dynamic and magnetically active star.
- The Sun's atmosphere constantly sends magnetised material outward, enveloping the Solar System far beyond the orbit of Pluto and influencing every world along the way.
- The corona gives rise to the solar wind, a continuous flow of charged particles that permeates the solar system.
- Unpredictable solar winds cause disturbances in our planet's magnetic field and can play havoc

with communications technology on the earth.

- The findings of the probe will enable scientists to forecast changes in the earth's space environment.

PDF Refernece URL: <https://www.drishtias.com/printpdf/nasa-set-to-launch-parker-solar-probe>

