

What is a Solar Orbiter?

December 7, 2023 • vajiramandravi.com



About Solar Orbiter

- It is a Sun-observing satellite with 10 science instruments, all designed to provide unprecedented insight into how the sun works.
- It is conceived to perform a close-up study of our Sun and inner heliosphere-the uncharted innermost regions of our Solar System.
- It is a joint mission of the European Space Agency (ESA) and NASA.
- It is the most complex scientific laboratory ever to have been sent to the Sun.
- It will take images of the Sun from closer than any spacecraft before and, for the first time, look at its uncharted polar regions.
- The mission, launched on February 10, 2020, released its first images in June of that year.
- After multiple gravitational assist manoeuvres at Earth and Venus, it started its full science operations in December 2021.
- It follows an elliptical orbit around the sun, with the closest point, the perihelion, at about 25 million miles (40 million kilometers) from the sun, which is closer than the orbit of Mercury.
- Instruments: It carries six remote-sensing instruments to observe the Sun and the solar corona and four in-situ instruments to measure the solar wind, energetic particles, and electromagnetic fields.

- The mission is scheduled to last until at least 2027.
-

Q1) What is the Sun's Corona?

The Sun's corona is the outermost layer of its atmosphere, extending millions of kilometers into space. It is a region of extremely hot and ionized gases that surround the Sun.

Source: [Solar Orbiter snaps clearest picture of Sun. Zoom in for a surprise](#)

Source: <https://vajiramandravi.com/current-affairs/solar-orbiter/>

© Vajiram & Ravi. For personal use only.