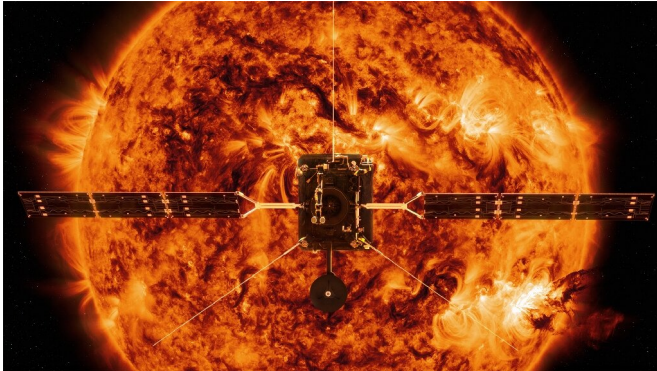


Solar Orbiter set to reveal Sun's secrets

7 February 2020, by Juliette Collen



NASA is targeting 11:03 p.m. EST on February 9, 2020 for the launch of Solar Orbiter

The European Space Agency will embark upon one of its most ambitious projects to date Sunday when its Solar Orbiter probe launches from Florida's Cape Canaveral bound for the Sun.

The craft, developed jointly with NASA, is expected to provide scientists with unprecedented insights into the Sun's atmosphere, its winds and magnetic fields.

It will also garner the first-ever images of our star's uncharted polar regions.

After a fly by of Venus and Mercury, the satellite is set to hit a maximum speed of 245,000 km/h and settle into orbit around 42 million miles from the Sun's surface.

Packed on board will be 10 state-of-the-art instruments to record myriad observations that scientists hope will unlock some clues about what drives solar winds and flares.

Anne Pacros, mission director, said the experiment was designed to "understand how the Sun creates and controls the heliosphere"—the giant bubble of plasma that surrounds the Solar System.

Solar winds and flares emit billions of highly charged particles that impact planets, including Earth. But the phenomena remain poorly understood despite decades of research.

"Solar wind may be slow or fast, and we don't know what causes this variability. Is it one wind that varies or is it several?" said Miho Janvier, from France's Institute for Space Astrophysics.

"It's one of the mysteries we hope to solve."

The results could have far reaching impacts for Earth.

APA citation: Solar Orbiter set to reveal Sun's secrets (2020, February 7) retrieved 1 December 2022 from <https://phys.org/news/2020-02-solar-orbiter-reveal-sun-secrets.html>

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