

Full Disc Mosaic

Frédéric Auchère, David Berghmans, Alessandra Giunta, Tim Grundy



2026 02 27 '4 years of SOOPs' Online Meeting

Picture taken at SWT-40 @ ROB 2025 April

TN: Solar Orbiter maneuvers for full disc mosaicing with PHI, SPICE and EUI

Written by	EUI, SPICE, PHI team
Approved by	EUI, SPICE, PHI Principal Investigators

SOL-SGS-TN-0063

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European Space Astronomy Centre
P.O. Box 78
28691 Villanueva de la Cañada
Madrid
Spain
T +34 91 8131 100
F +34 91 8131 139
www.esa.int

DOCUMENT

Solar Orbiter Full Disk Mosaic Calibration Pattern TN

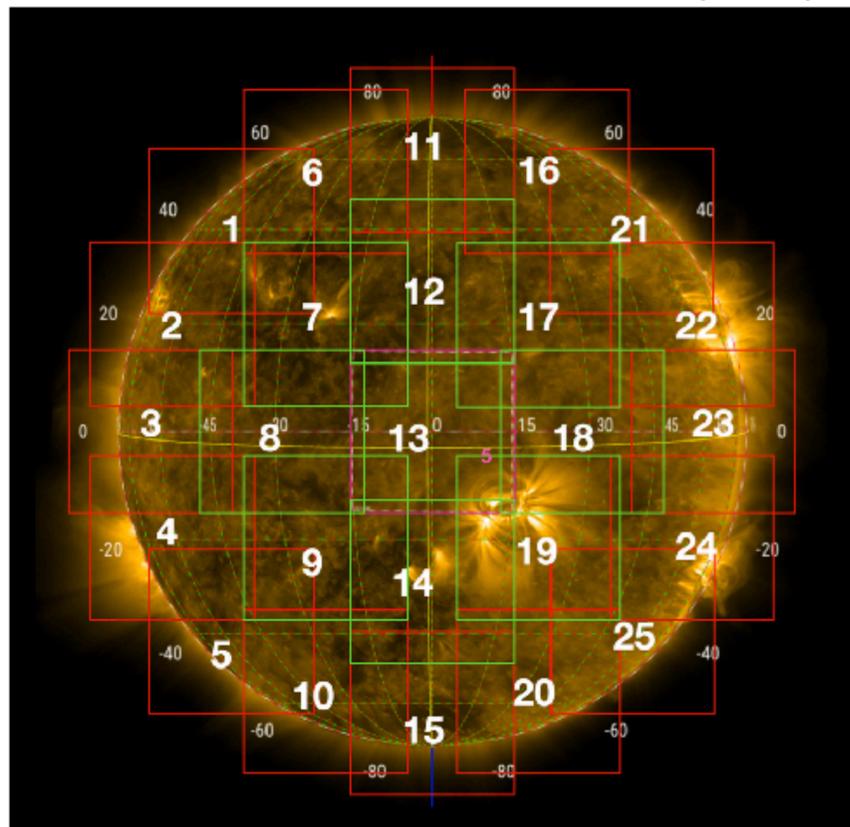
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Objectives

1. facilitate **cross-calibration** activities with Earth-based assets. No need to know ahead where to point, can be pre-programmed
2. **outreach & public relations**, comparable perhaps to the ‘Mars panoramas’ produced by NASA Mars rover cameras. The combination of PHI, EUI, and in particular SPICE, will illustrate the changes in morphology of the solar atmosphere as one scans from lower to higher plasma temperature.

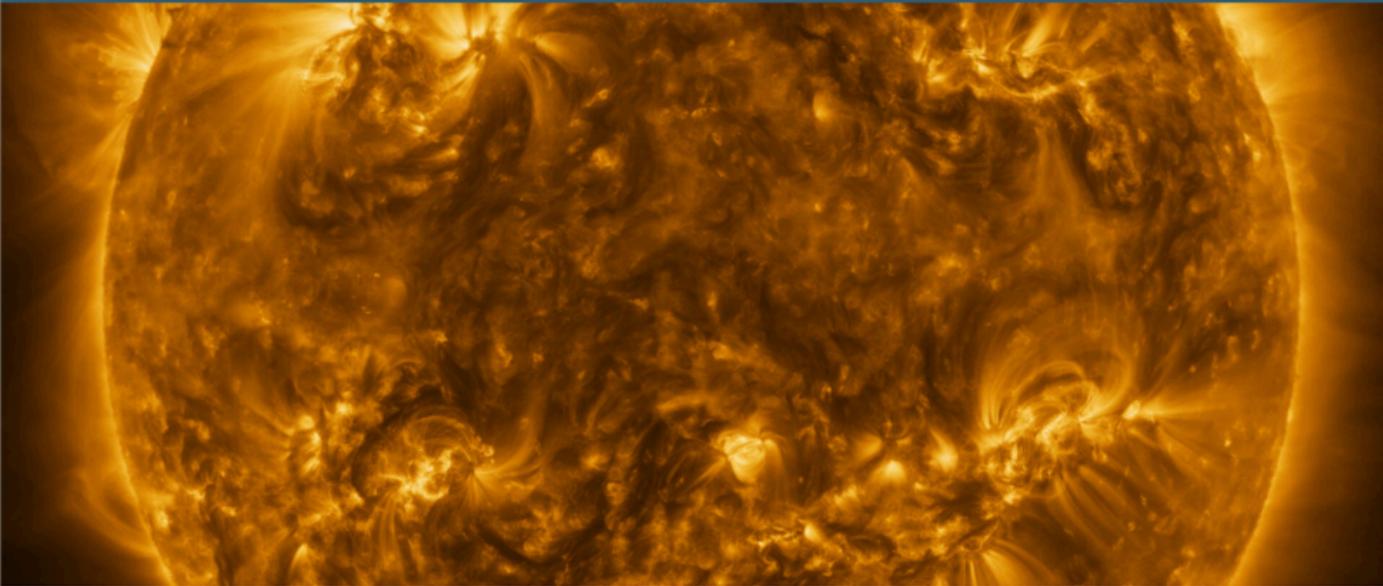


Run	Date	Variant	Instruments
1	2022 03 07	6 min dwell / 0.5 au	EUI & SPICE
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15	2026 03 25	6 min dwell / 0.5 au	EUI, SPICE, PHI

2022 03 07

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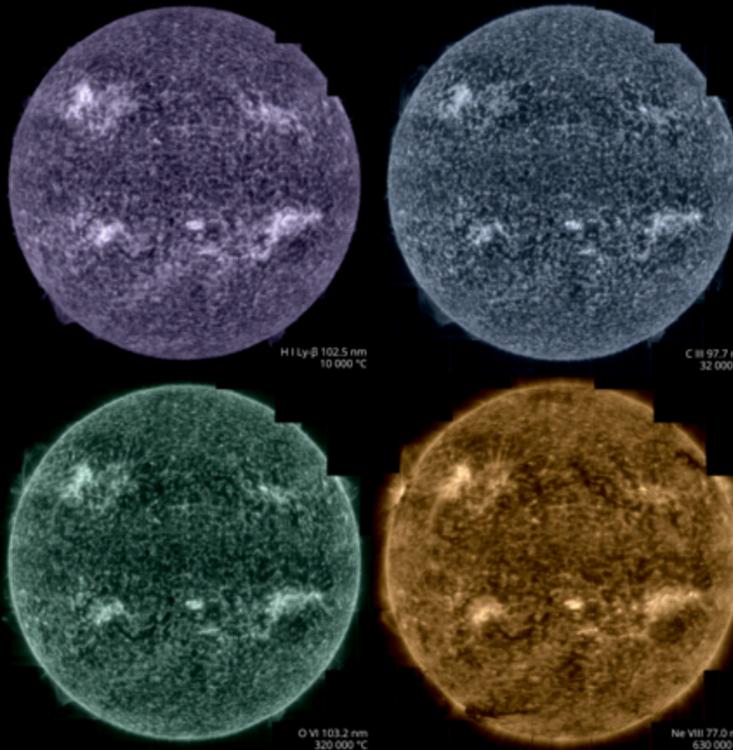
Taking the Sun's temperature

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DETAILS RELATED



HI Lyβ 102.5 nm 10 000 °C
C III 97.7 nm 32 000 °C
O VI 103.2 nm 320 000 °C
Ne VIII 77.0 nm 630 000 °C

Solar Orbiter took images of the Sun on 7 March, from a distance of roughly 75 million kilometres, using its Spectral Imaging of the Coronal Environment (SPICE) instrument. SPICE takes simultaneous "spectral images" at several different wavelengths of the extreme ultraviolet spectrum by scanning its spectrometer slit across a region on the Sun. The different wavelengths recorded correspond to different layers in the Sun's lower atmosphere. Purple corresponds to hydrogen gas at a temperature of 10 000 °C, blue to carbon at 32 000 °C, green to oxygen at 320 000 °C, yellow to neon at 630 000 °C. Each full-Sun image is made up of a mosaic of 25 individual scans. It represents the best full Sun image taken at the Lyman beta wavelength of ultraviolet light that is emitted by hydrogen gas.

[Read more](#)

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Solar Orbiter's widest high-res view of the Sun



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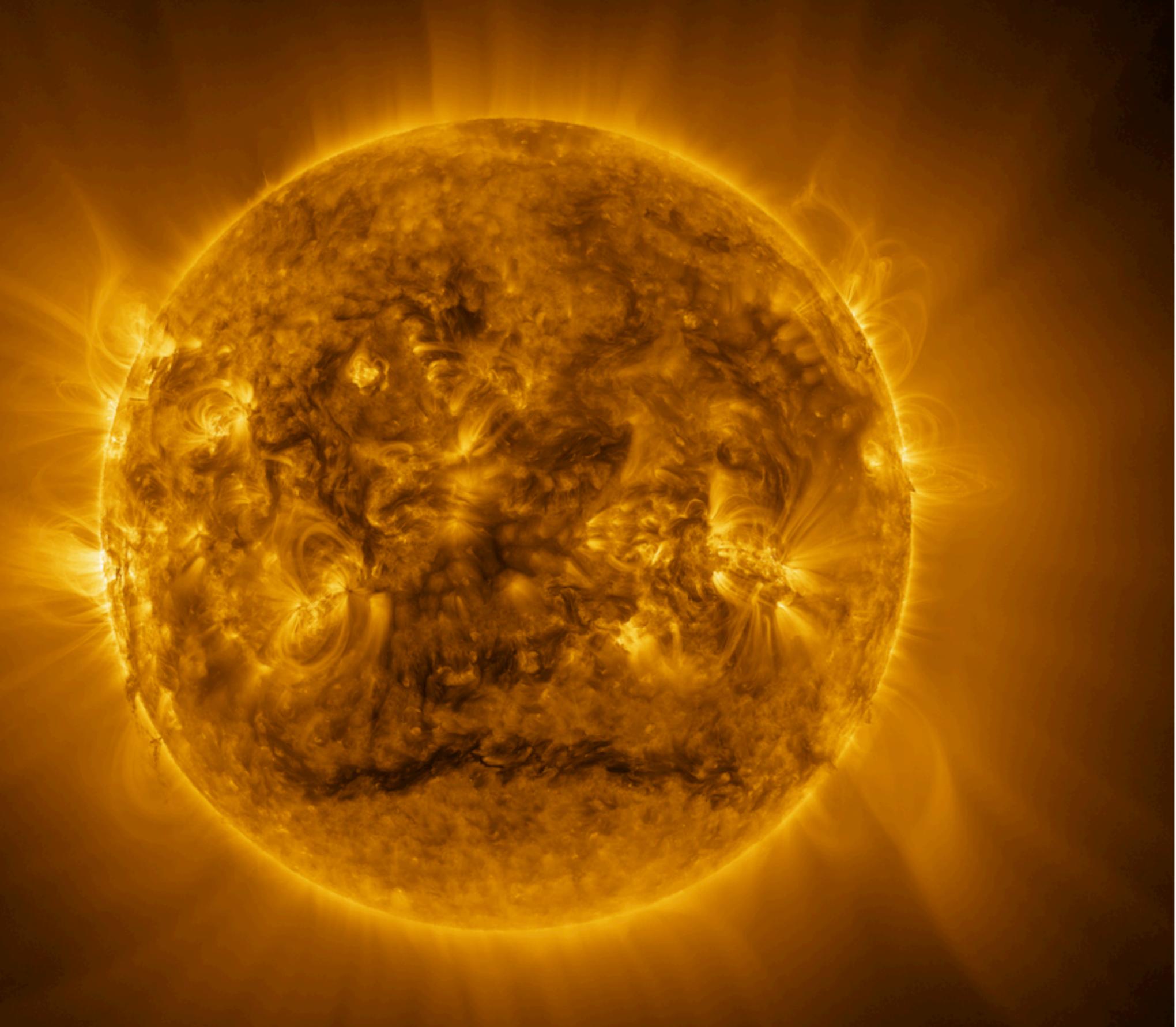
DETAILS

RELATED

Five years into its mission, [Solar Orbiter](#) stuns again with this detailed view of the Sun. What you see is the Sun's million-degree hot atmosphere, called the [corona](#), as it looks in ultraviolet light.

Dive in and explore the hot plasma (charged particles) caught in the Sun's messy magnetic field. Can you spot the glowing coronal loops around active regions, and the darker, cooler filaments and prominences?

Obtaining such a detailed image is no easy feat. On 9 March 2025, at around 77 million km from the Sun, the Solar Orbiter spacecraft was oriented to point to different regions across the Sun in a [5 x 5 grid](#). At each pointing direction, the Extreme Ultraviolet Imager (EUI) instrument captured



Processing: Emil Kraaikamp (ROB/EUI)

ISRO-ESA HELIOPHYSICS WORKSHOP ON ADITYA-L1, SOLAR ORBITER AND PROBA-3
 19TH - 23RD JANUARY, 2026
 THIRUVANANTHAPURAM, INDIA



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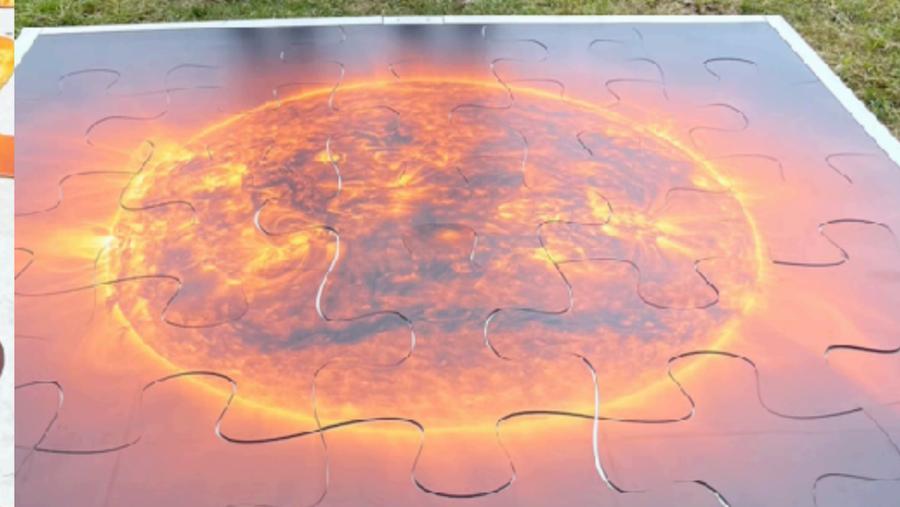
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6	2024 02 26	22 min / 0.7 au	EUI, SPICE, PHI, Metis
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