PROBA2 SWT15 ☀ 28 NOVEMBER 2017

E. D'HUYS, D. BERGHMANS, & THE P2SC TEAM

SWAP STATUS UPDATE

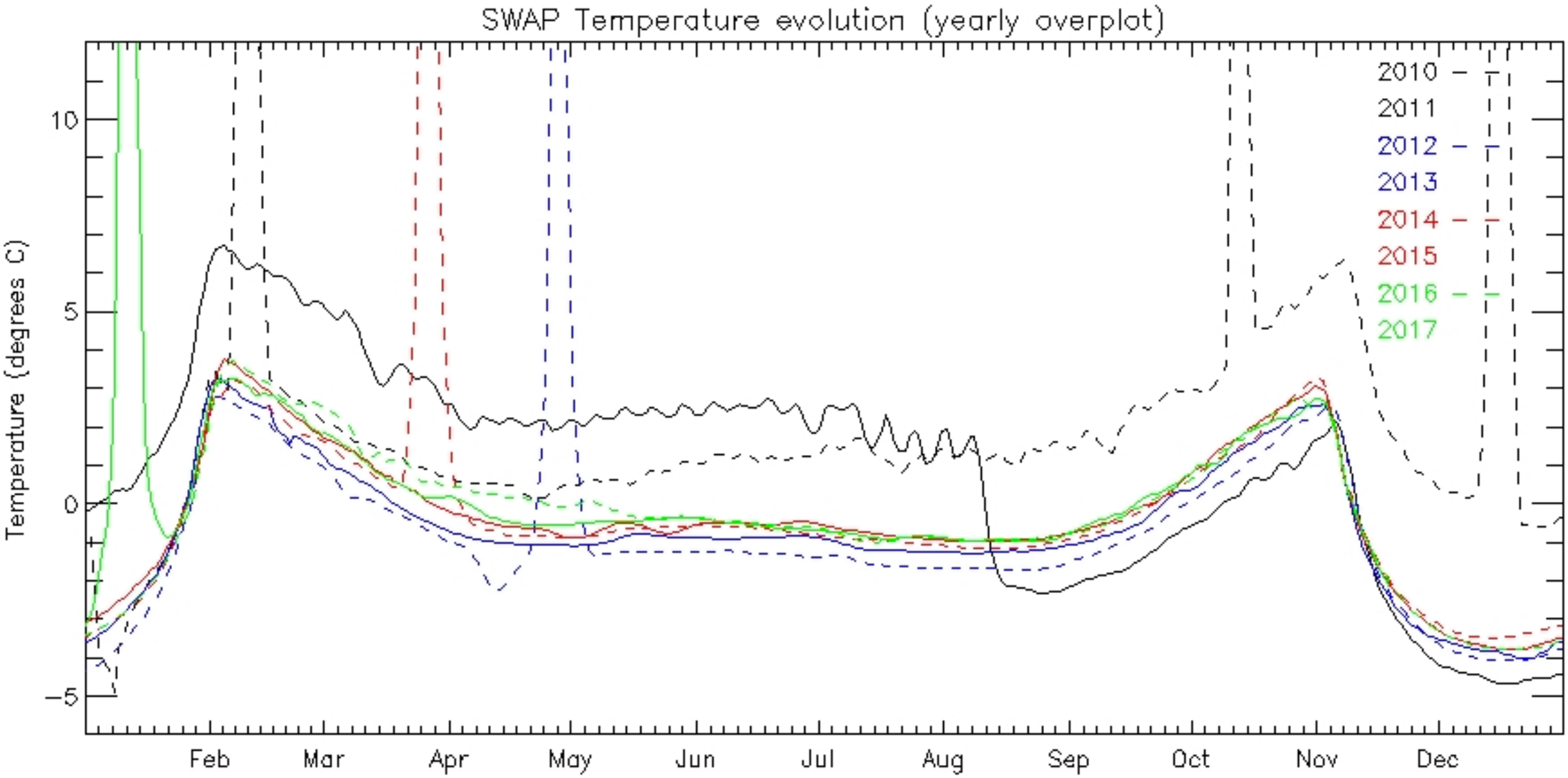
SWAP STATUS UPDATE

INSTRUMENT HEALTH AND PERFORMANCE

SWAP STATUS UPDATE

HEALTH AND PERFORMANCE

SWAP performance is nominal



SWAP STATUS UPDATE

HEALTH AND PERFORMANCE

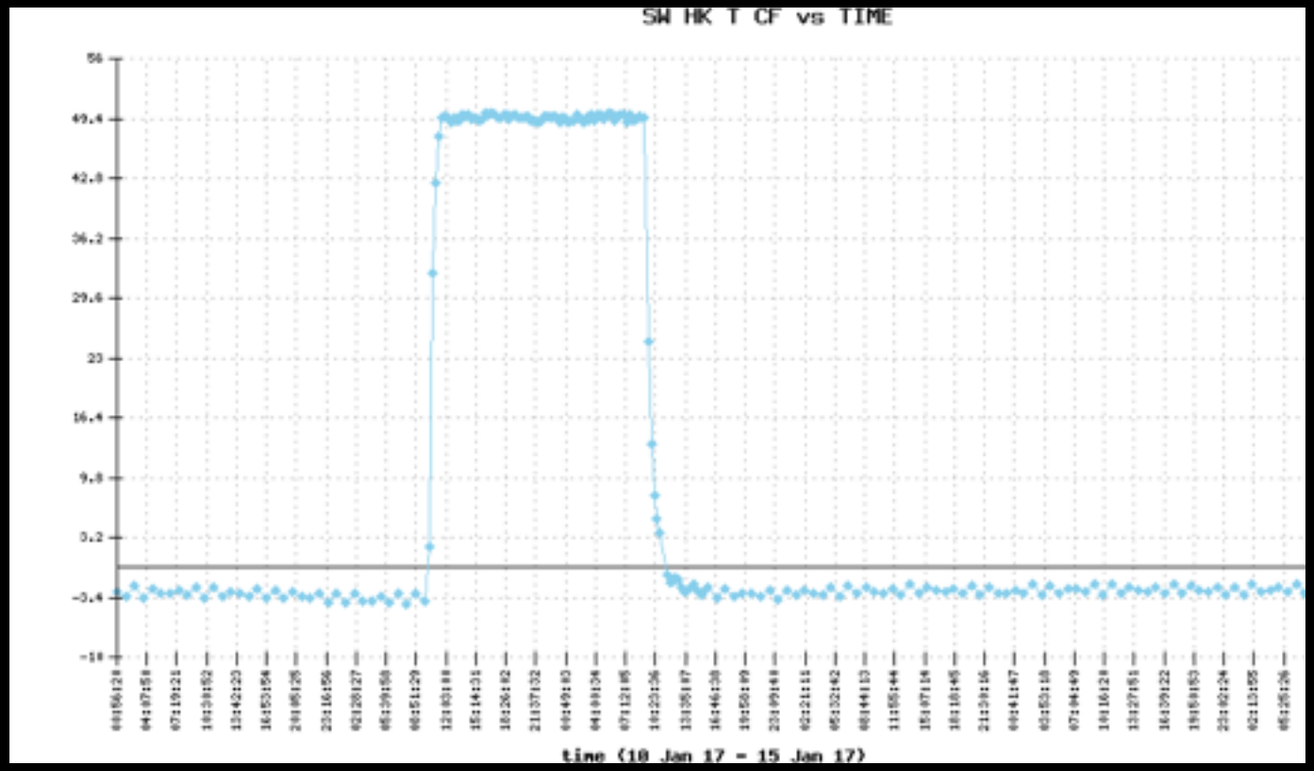
- We have ~1.8 million engineering fits files, and ~1.6 million calibrated images (Calculated on November 20)
- Total volume of SWAP data products: ~8.2T (Calculated on November 20)

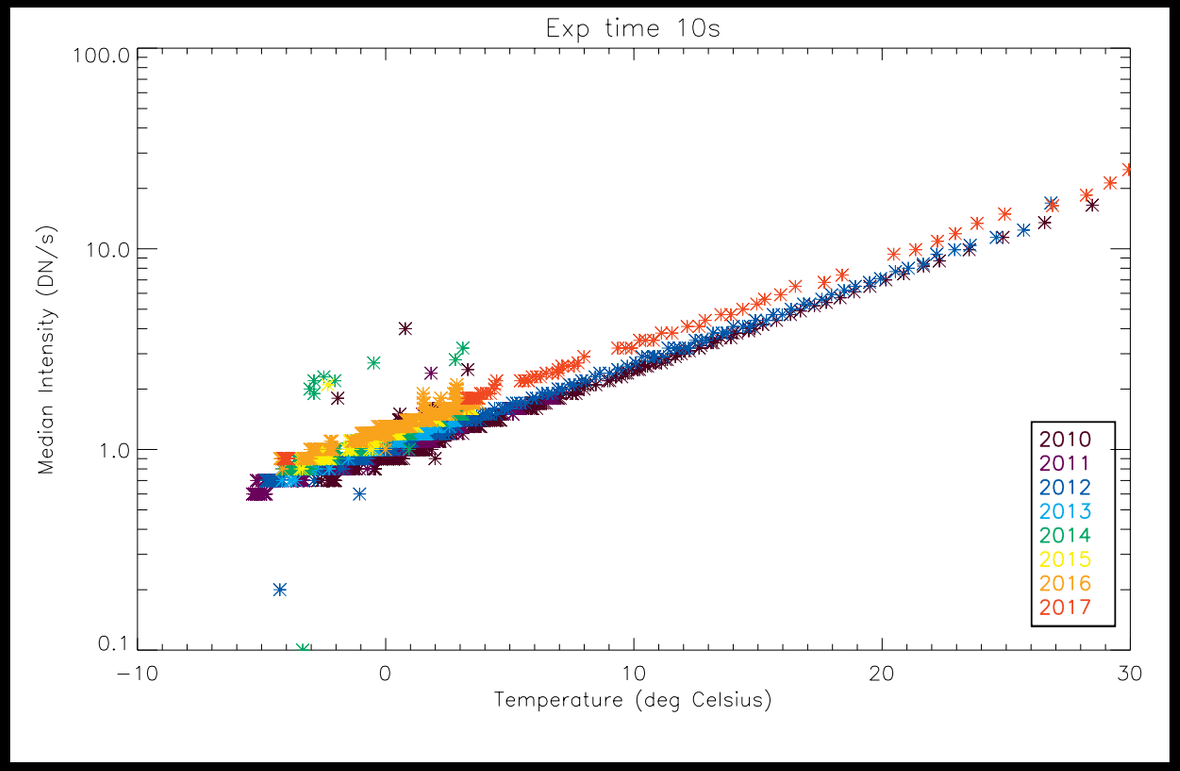
SWAP STATUS UPDATE

DATA IMPROVEMENTS

SWAP STATUS UPDATE

SWAP BAKE-OUT





- 0.16 DN/year (3.5e/year) increase in dark current
- >100 years to reach EOL of detector data sheet

SWAP STATUS UPDATE

SWAP CALIBRATION

- Using the bake-out data from January 2017 we computed a new dark current correction which is already in use since February 2017

- The despiking routine was updated in June 2017 and is now much more efficient: starting from uncalibrated lv0 files, the production of calibrated lv1 images is now twice as fast

SWAP STATUS UPDATE

RE-EXTRACTED PASSES

- The Redu ground station put in place a new extraction process combining the data of the 2 antennas at the frame level in order to maximize the number of good packets
- This leads to a gain of 40 SWAP images per week
- ROB asked to re-extract certain passes to obtain extra images for specific observation campaigns, eclipse, bake-out, etc. This data was received and processed by the P2SC in September 2017.

SWAP STATUS UPDATE

SWAP REPROCESSING

- We are performing a final reprocessing of all P2SC data since the start of the mission.

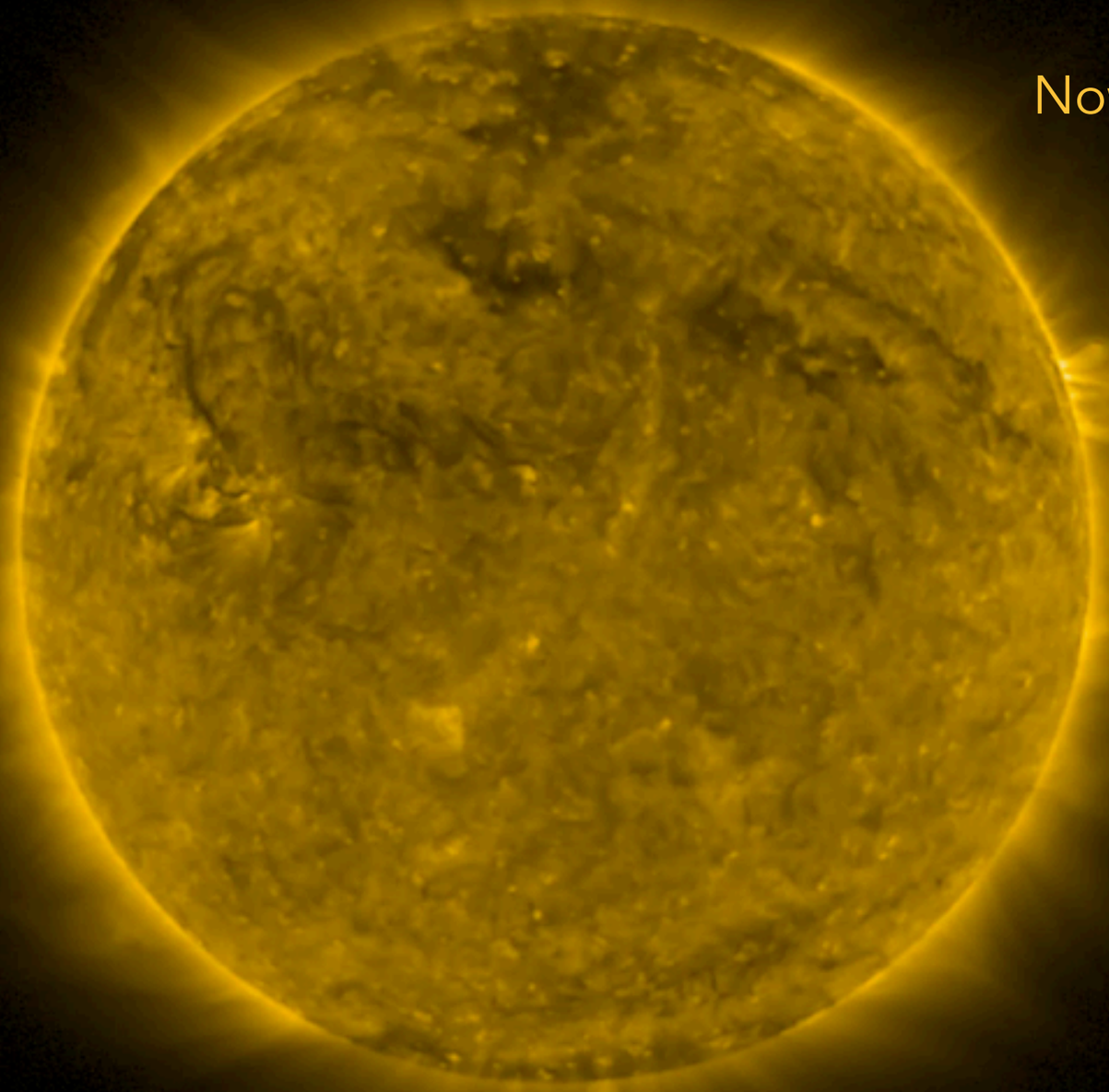
- All ancillary data have been reprocessed. Next steps: SWAP and LYRA (in parallel)

- All SWAP files will be reprocessed with the most recent calibration software to obtain a coherent and complete dataset

SWAP STATUS UPDATE

CARRINGTON MOVIES

Now with daily updates!



PROBA2/SWAP 174 2017-11-06T07:53:15

SWAP STATUS UPDATE

SCIENCE & OUTREACH

SWAP STATUS UPDATE

SPECIAL CAMPAIGNS - 1

- SWAP campaign for GI's Slemzin-Rodkin-Goryaev
- Goal: observe illumination by back-sided solar flares
- High-cadence observations during 4 orbits on 05/04/2017, 06/04/2017, 08/04/2017 and 09/04/2017, targeting two active regions
- May be repeated, depending on solar activity

SPECIAL CAMPAIGNS - 2

- Joint IRIS - SWAP - SUMER observing campaigns organised by Jean-Claude Vial from IAS Paris

- Goal: "*make the best use of SUMER's last photons before its retirement*"

- Contributions from IRIS, SOHO/SUMER, Hinode (SOT, XRT and EIS), PROBA2/SWAP and LYRA, ROB/Humain radio spectrographs, and many ground-based observatories including ROB/USET

SWAP STATUS UPDATE

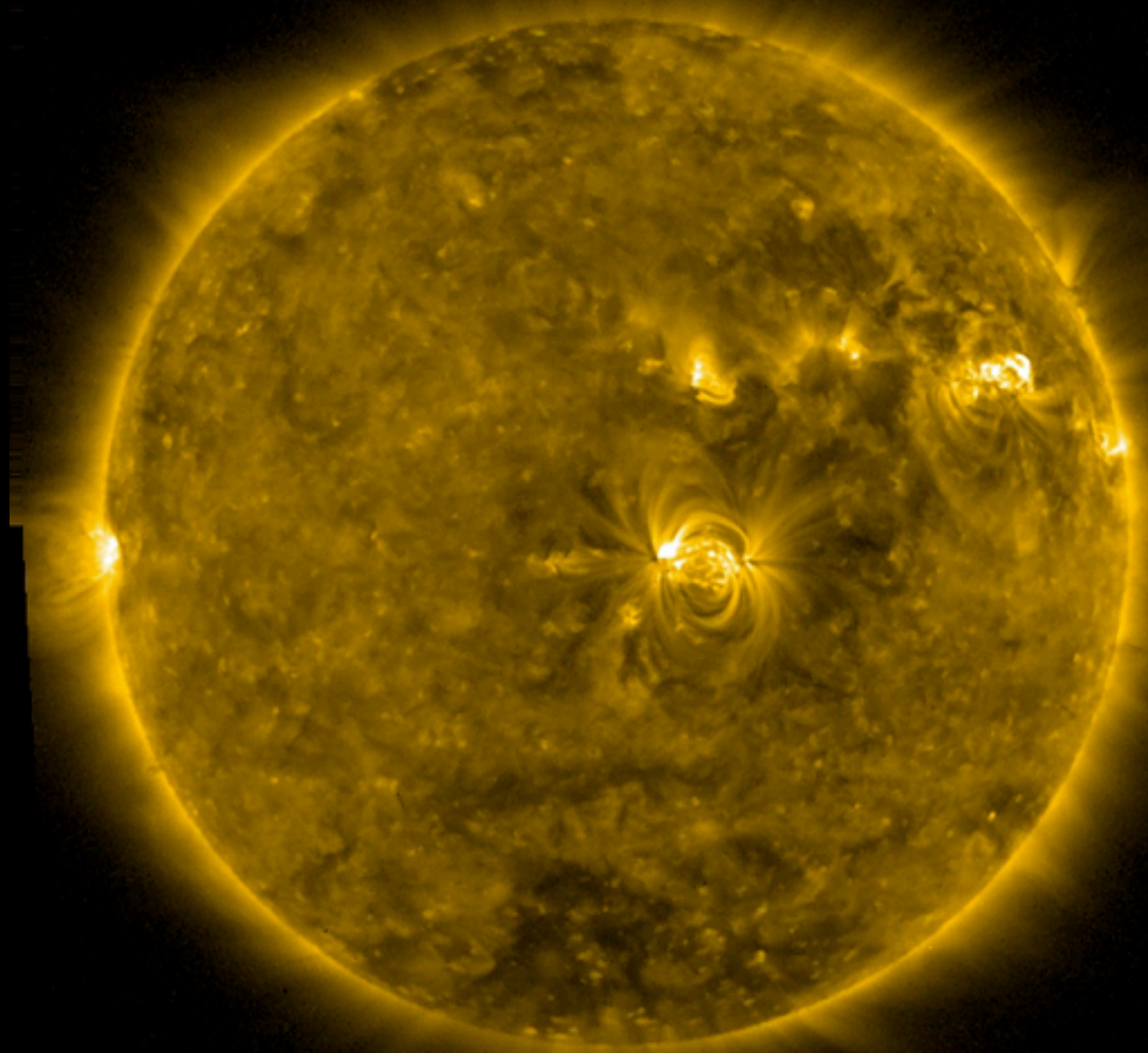
SPECIAL CAMPAIGNS - 2

- Several periods of high-cadence observations from 2017-Mar-28 until 2017-Apr-04
- Several M-flares observed while PROBA2 was offpointed!

SWAP STATUS UPDATE

SPECIAL CAMPAIGNS - 2

M4.4

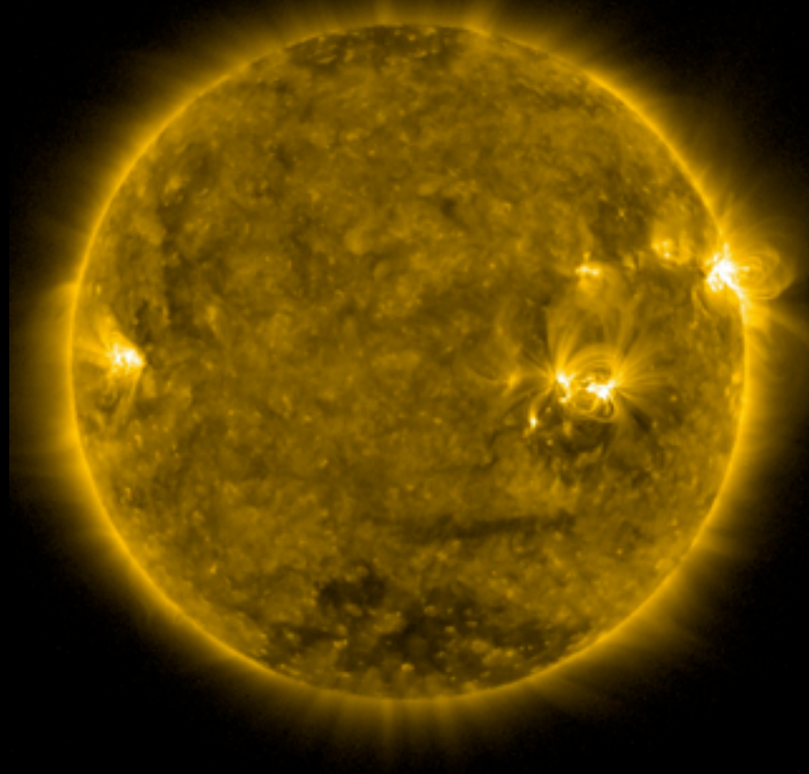


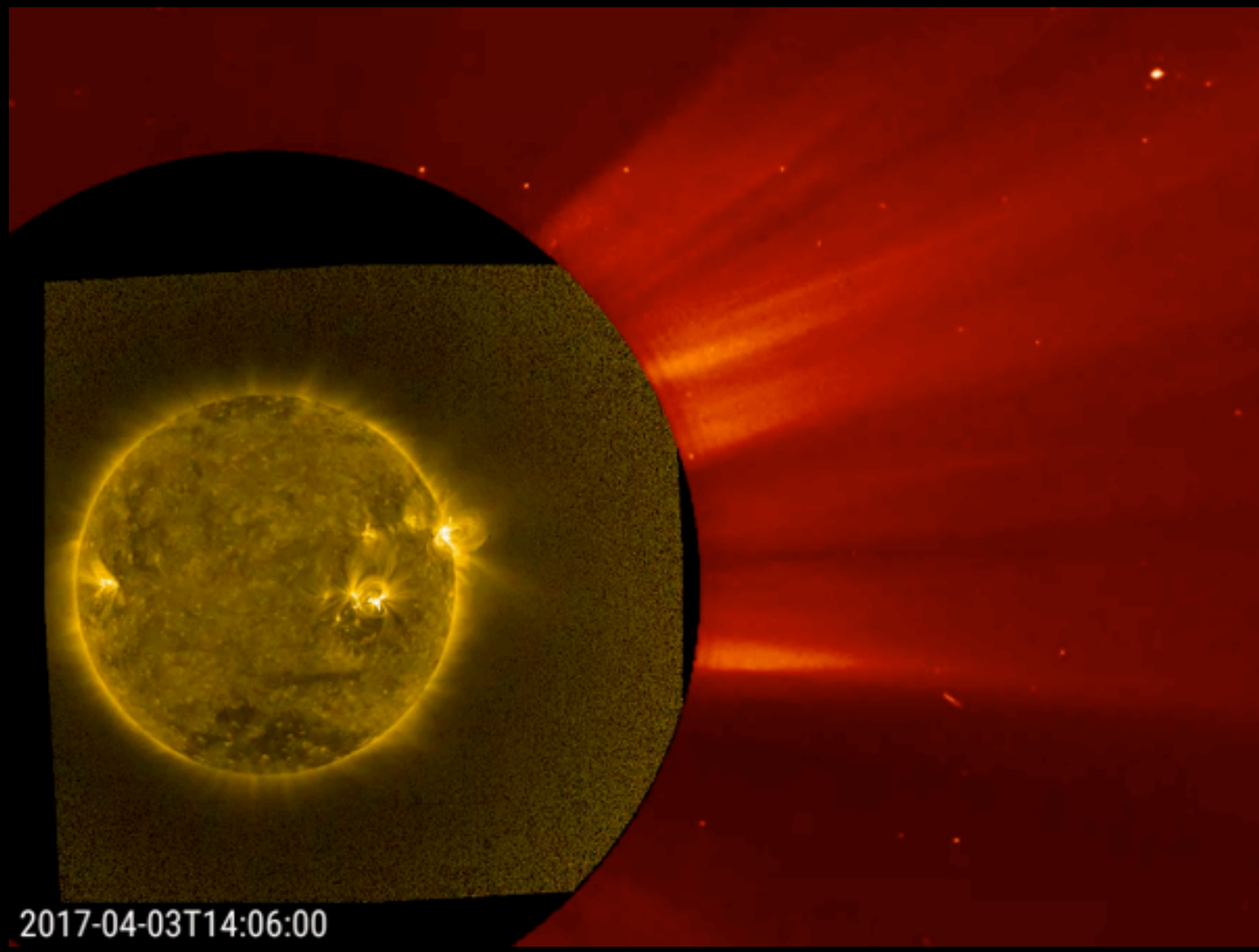
PROBA2/SWAP 17.4nm 2017-04-01 21:01:57

SWAP STATUS UPDATE

SPECIAL CAMPAIGNS - 2

M5.8





SWAP STATUS UPDATE

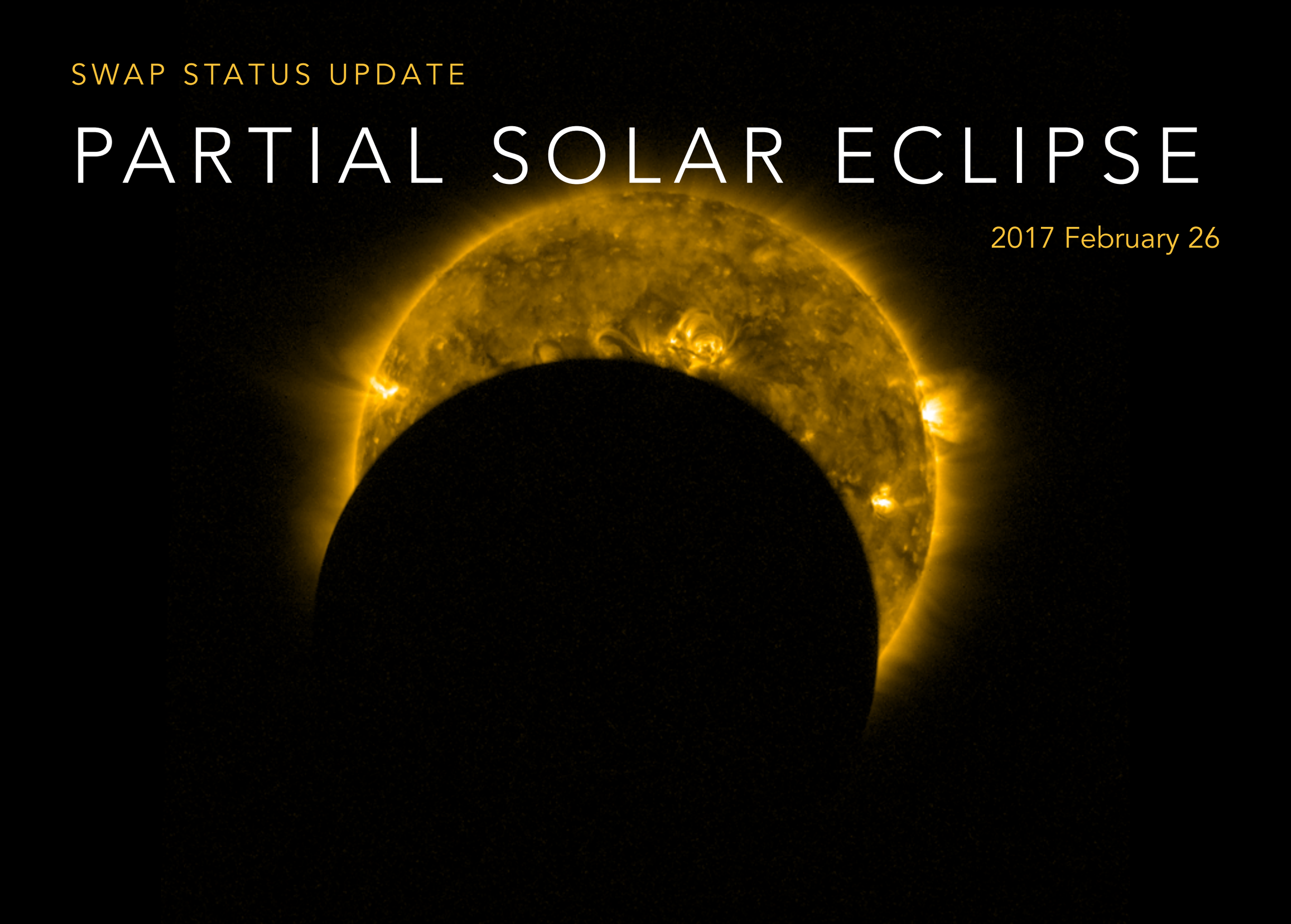
UPCOMING CAMPAIGNS?

- Science mission until end of 2018, then transitioning to operational satellite
- Any requests for special campaigns?

SWAP STATUS UPDATE

PARTIAL SOLAR ECLIPSE

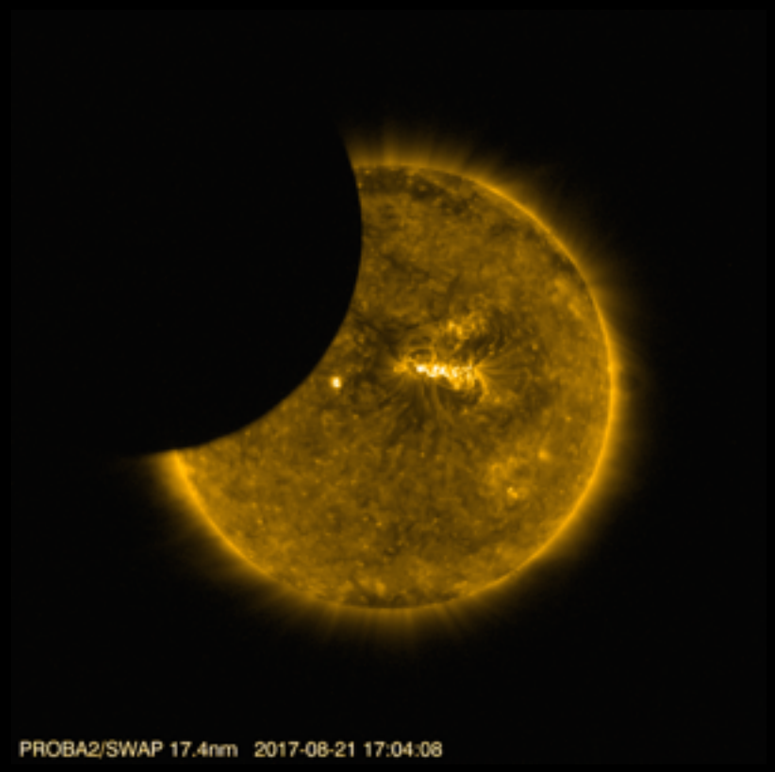
2017 February 26

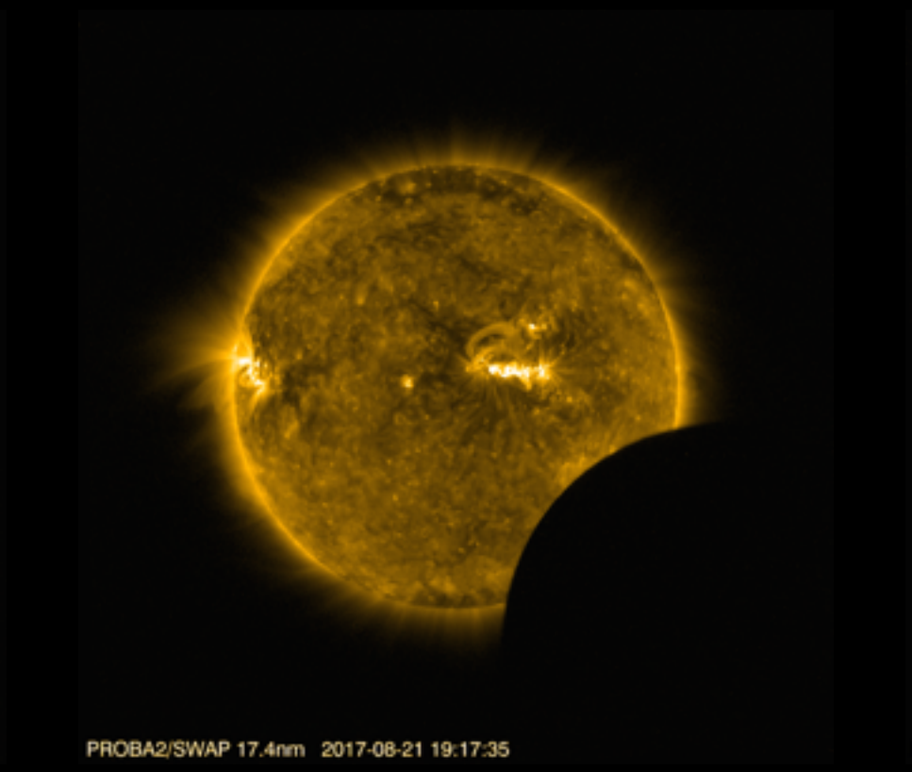


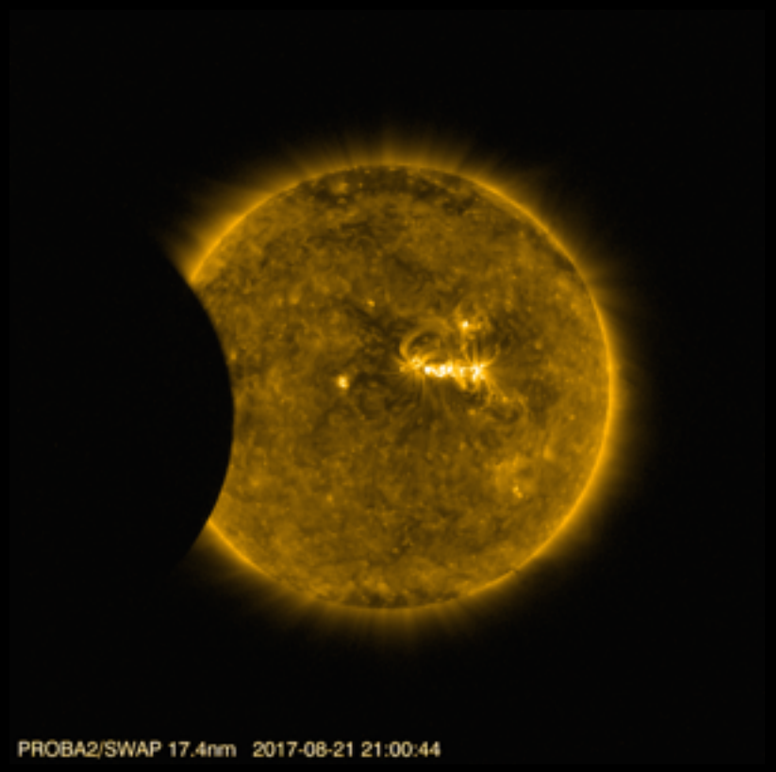
SWAP STATUS UPDATE

PARTIAL SOLAR ECLIPSE

2017 August 21







SWAP STATUS UPDATE

ECLIPSE PUBLICITY

PHYS.ORG Nanotechnology Physics Earth Astronomy & Space Technology Chemistry Biology Other Sciences

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Home » Astronomy & Space » Space Exploration » August 14, 2017

Image: A partial solar e

August 14, 2017

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Stargazing: Getting Starte

Amazing Views of the Solar Eclipse From

By: **David Dickinson** | August 22, 2017

Satellites, aircraft, and the International Space Station pr
eclipse, near and far.

Did you see it? Millions of viewers stood in the path of totality yesterday, as the shadow of the the Moon rolled over the United States from coast to coast for the first time in nearly a century. But while eclipse pilgrims and casual observers alike across the Americas were turning solar-viewing gear skyward to watch the eclipse, eyes in space — both human and electronic — were watching the spectacle unfold from above.

SPACE.com NEWS TECH SPACEFLIGHT SCIENCE & ASTRONOMY SEARCH FOR LIFE SKYWATCHING VIDEO ENTERTAINMENT

The Most Amazing 2017 Total Solar Eclipse Photos Taken From Space

By Joseph Castro | August 21, 2017 06:45pm ET

9 of 15 PREVIOUS | NEXT

PROBA-2 PARTIAL ECLIPSE

Credit: ESA

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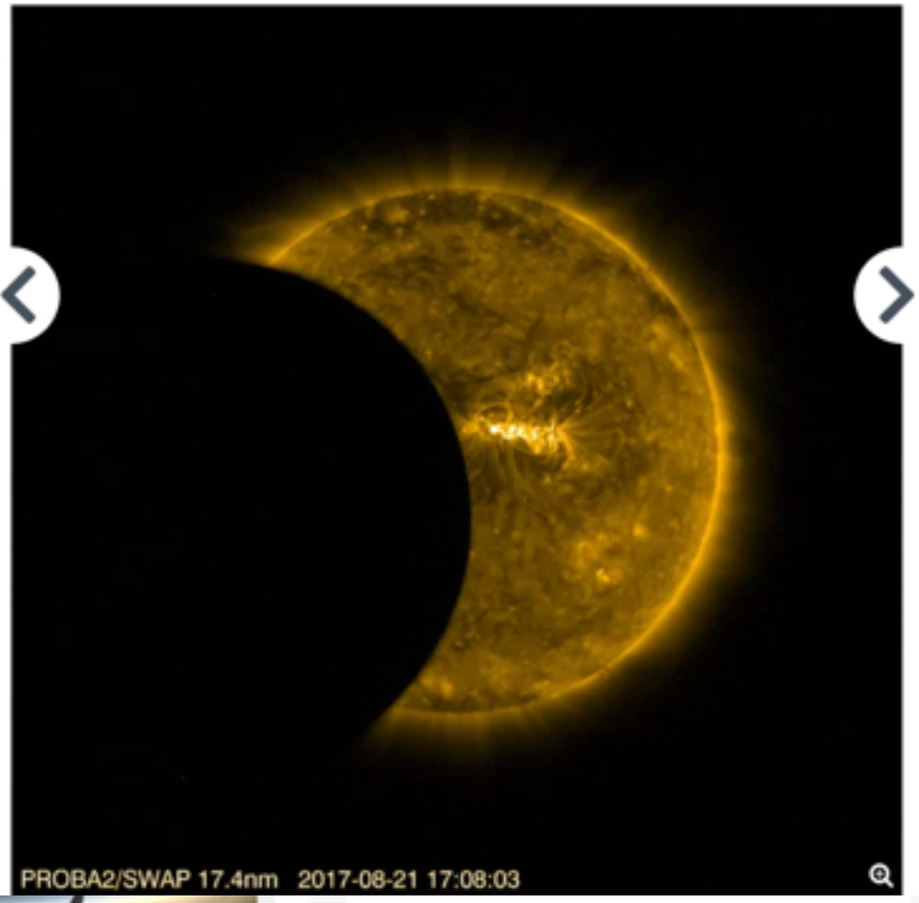
MORE



The image was taken by the SWAP imager, and shows the solar disc in extreme-ultraviolet light to capture its turbulent surface and swirling corona corresponding to temperatures of about a million degrees.

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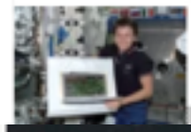
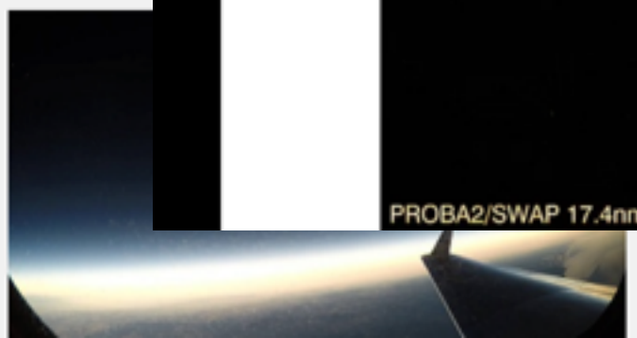
The Most Amazing Space Photos This Week!

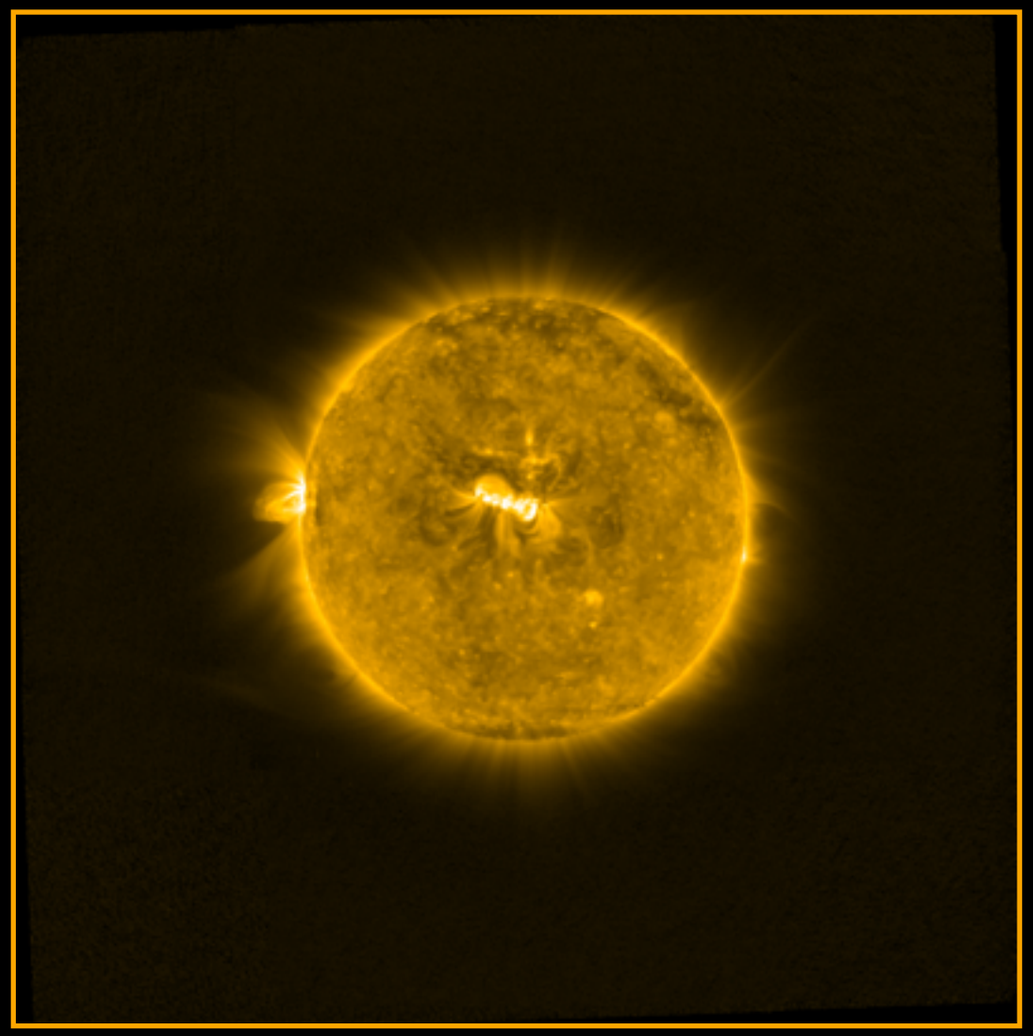

The Most Amazing Space Stories of the Week!

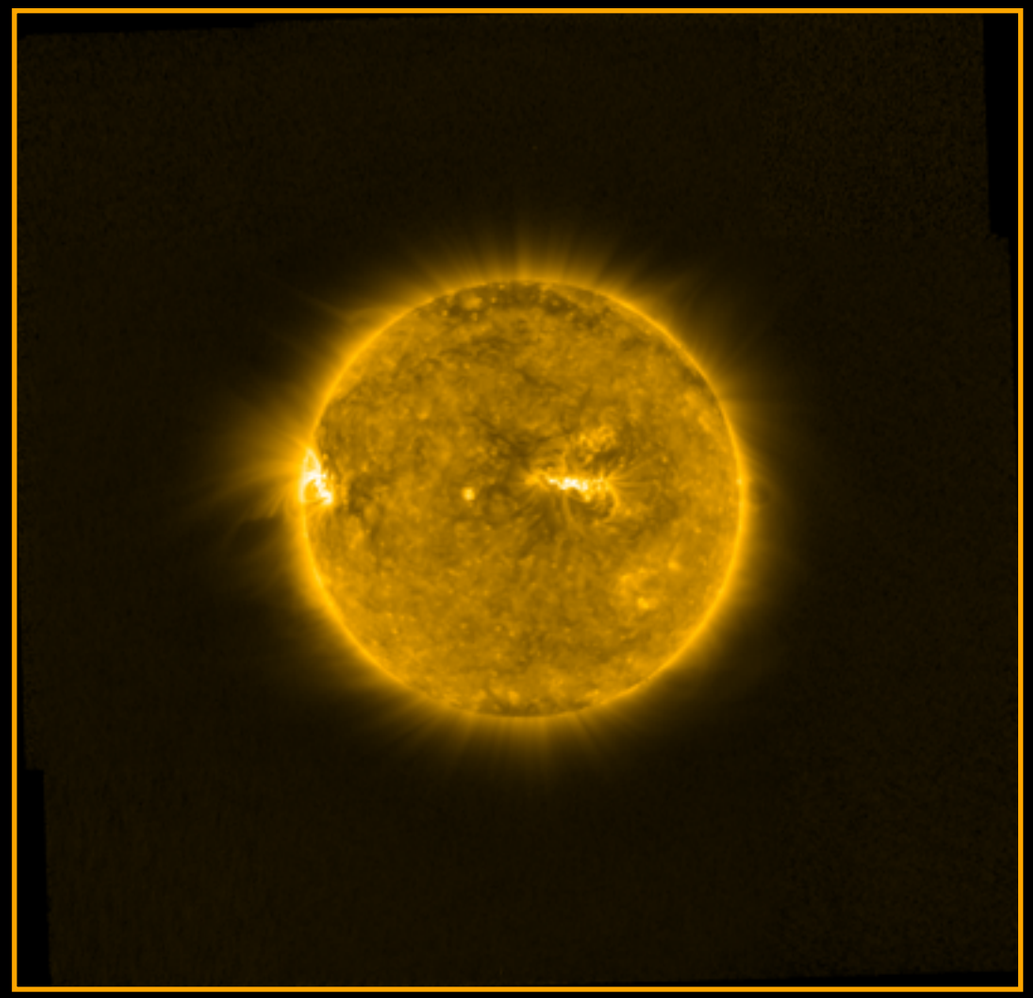


SWAP STATUS UPDATE

ECLIPSE MOSAICS

2017 August 21

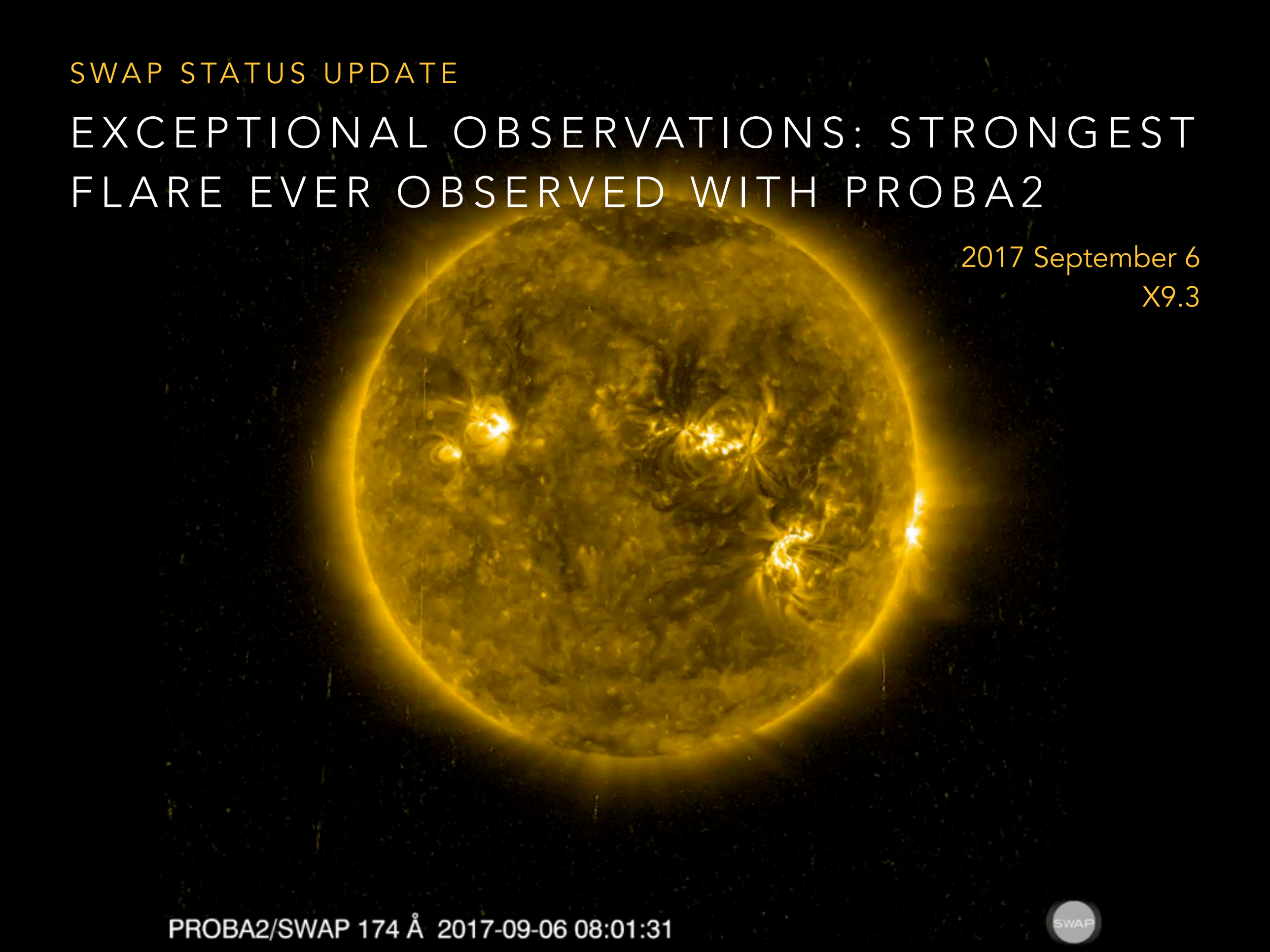




SWAP STATUS UPDATE

EXCEPTIONAL OBSERVATIONS: STRONGEST FLARE EVER OBSERVED WITH PROBA2

2017 September 6
X9.3



SWAP STATUS UPDATE

EXCEPTIONAL OBSERVATIONS: X-FLARE AND OFF-LIMB CME TO THE EDGE OF THE FOV OBSERVATIONS

2017 September 10
X8.2