

STCE Newsletter

6 Apr 2026 - 12 Apr 2026



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The Solar-Terrestrial Centre of Excellence (STCE) is a collaborative network of the Belgian Institute for Space Aeronomy, the Royal Observatory of Belgium and the Royal Meteorological Institute of Belgium.

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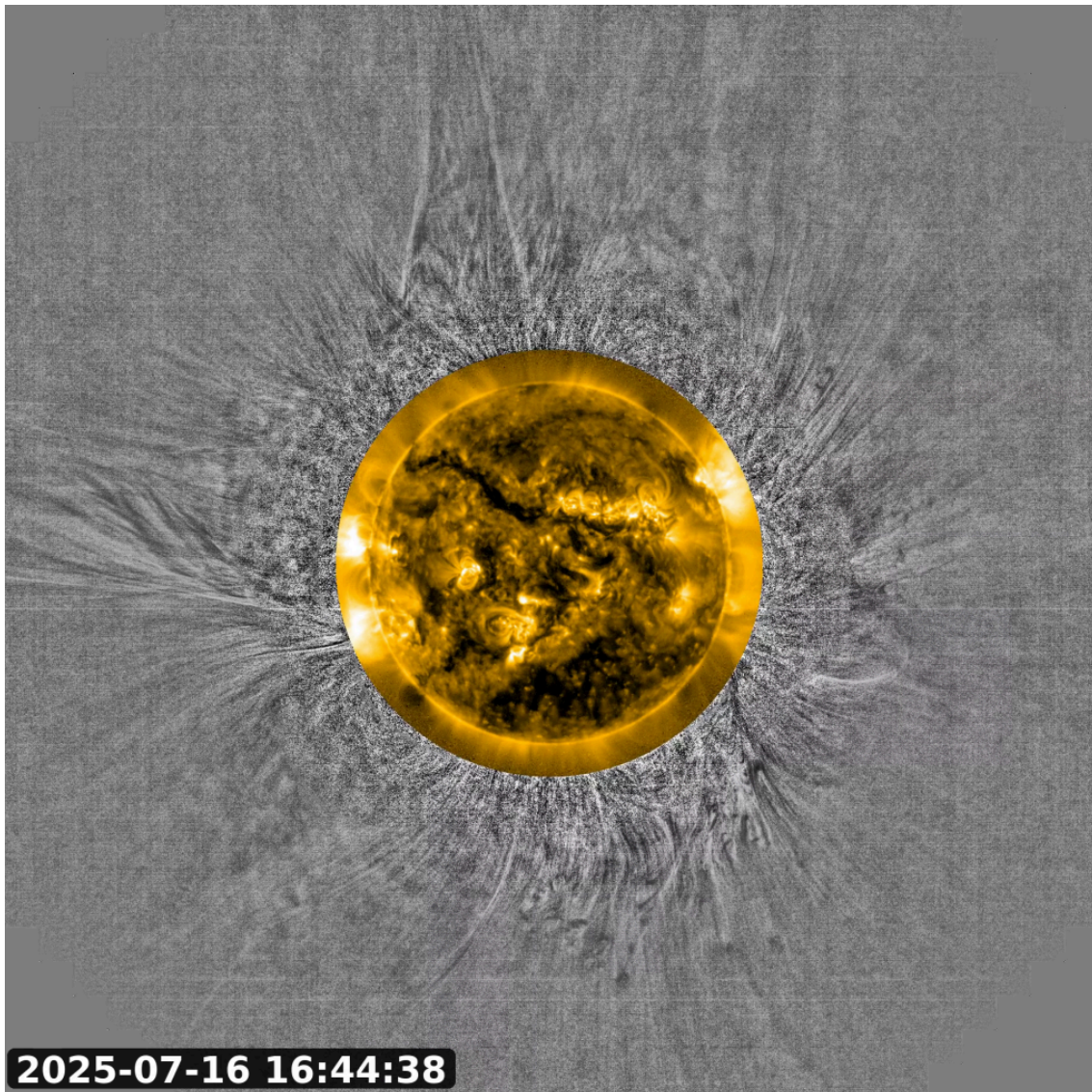
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1. A New View of the Sun's Corona

The Belgian-led ASPIICS coronagraph aboard ESA's Proba-3 mission reveals a dynamic birthplace of the solar wind. Observations made by the ASPIICS coronagraph reveal a world of small-scale activity in the Sun's inner corona.

In a new study led by the Royal Observatory of Belgium and published in the *Astrophysical Journal Letters*, researchers present the first scientific results from Proba-3/ASPIICS. 'The observations reveal that the region where the slow solar wind originates is filled with ubiquitous small-scale dynamics: tiny, faint, rapidly evolving plasma structures flowing outward, but also sometimes inward, through the corona,' says Andrei Zhukov, the Principal Investigator of ASPIICS and the lead author of the study. These motions indicate that the solar corona is far more dynamic at small scales than previously observed. Such dynamics may be linked to magnetic reconnection, the rearrangement of magnetic fields that may heat and accelerate plasma. Tracking these tiny structures provides new clues about how the slow solar wind forms and how the Sun releases mass and energy into the interplanetary space.

Read all about it here: <https://stce.be/content/new-view-suns-corona>



2. Review of Solar and Geomagnetic Activity

WEEK 1319 from 2026 Apr 06

Solar Active Regions and flares

Solar flaring activity was low for most of the week and reached moderate levels briefly on 9 April. One M-class flare and twenty-five C-class flares were recorded during the week. In total, eighteen active regions (ARs) were observed on the visible solar disc over the course of the week. The largest flare was an M1.0 flare (SIDC Flare 7388), peaking at 08:45 UTC on 9 April, associated with SIDC Sunspot Group 838 (NOAA AR 4409). This region was the main driver of the flaring activity at the beginning of the week, together with SIDC Sunspot Group 842 (NOAA AR 4414). Towards the end of the week, the newly emerged SIDC Sunspot Group 845 (NOAA AR 4417) also contributed to low-level flaring activity.

Coronal mass ejections

No Earth-directed coronal mass ejections (CMEs) were detected in the available coronagraph imagery over the past week.

Coronal Holes

A recurrent positive polarity coronal hole (SIDC Coronal Hole 154) began crossing the central meridian on 7 April. A mid-latitude positive polarity coronal hole in the southern hemisphere (SIDC Coronal Hole 159) started crossing the central meridian late on 11 April.

Proton flux levels

The greater than 10 MeV proton flux, as measured by GOES-18, remained below the 10 pfu threshold throughout the week.

Electron fluxes at GEO

The greater than 2 MeV electron flux, as measured by GOES-19, exceeded the 1000 pfu alert threshold during the first part of the week, with peak values above 10,000 pfu on April 9, before decreasing to mostly below threshold levels toward the end of the week. The 24-hour electron fluence was at moderate to high levels early in the week and decreased to normal to moderate levels by the end of the period.

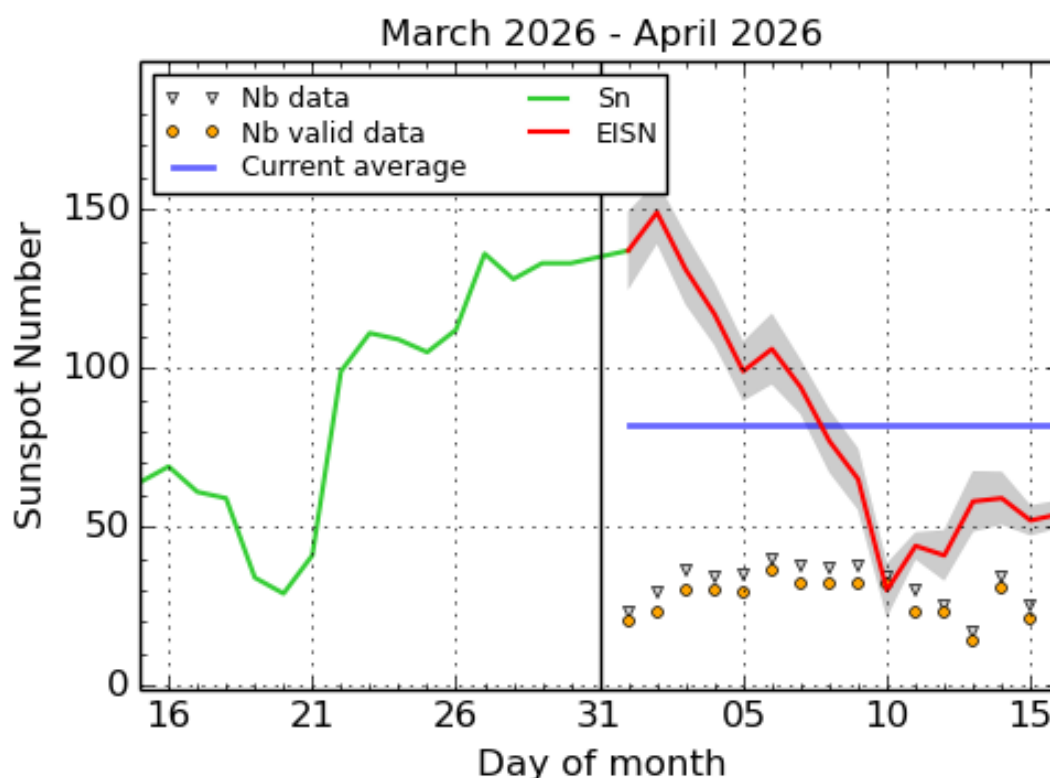
Solar wind

Solar wind conditions at the beginning of the week reflected the waning influence of a high-speed stream from SIDC Coronal Hole 149, with solar wind speeds between 500 and 570 km/s on 6 April. From 7 to 9 April, solar wind parameters gradually returned to a slow solar wind regime, with speeds decreasing to around 350 km/s and the interplanetary magnetic field remaining weak, below 6 nT. From late on 9 April, solar wind conditions became slightly enhanced again with the arrival of a compression region, followed by a high-speed stream associated with a recurrent positive polarity coronal hole. The solar wind speed increased from about 380 km/s to around 700 km/s by 11 April, while the interplanetary magnetic field reached up to 14 nT and the Bz component fluctuated between -8 nT and +12 nT. By 12 April, the high-speed stream influence was waning, with the solar wind speed decreasing to around 500 km/s.

Geomagnetism

Geomagnetic conditions were mostly quiet to unsettled at the beginning of the week. From 00:00 UTC on 10 April through the first half of 11 April, geomagnetic activity increased under the influence of a high-speed stream associated with positive polarity SIDC Coronal Hole 154. During this period, active conditions were observed both globally (NOAA Kp = 4 to 4+) and locally over Belgium (K-Bel = 4). For the remainder of the week, geomagnetic conditions were at quiet to unsettled levels (Kp 1 to 3; K-Bel 1 to 3), as the influence of the high-speed stream waned.

3. International Sunspot Number by SILSO



SILSO graphics (<http://sidc.be/silso>) Royal Observatory of Belgium, 2026 April 16

The daily Estimated International Sunspot Number (EISN, red curve with shaded error) derived by a simplified method from real-time data from the worldwide SILSO network. It extends the official Sunspot Number from the full processing of the preceding month (green line), a few days more than one solar rotation. The horizontal blue line shows the current monthly average. The yellow dots give the number of stations that provided valid data. Valid data are used to calculate the EISN. The triangle gives the number of stations providing data. When a triangle and a yellow dot coincide, it means that all the data is used to calculate the EISN of that day.

4. PROBA2 Observations

Solar Activity

Solar flare activity fluctuated from very low to moderate during the week.

In order to view the activity of this week in more detail, we suggest to go to the following website from which all the daily (normal and difference) movies can be accessed: <https://proba2.oma.be/ssa>

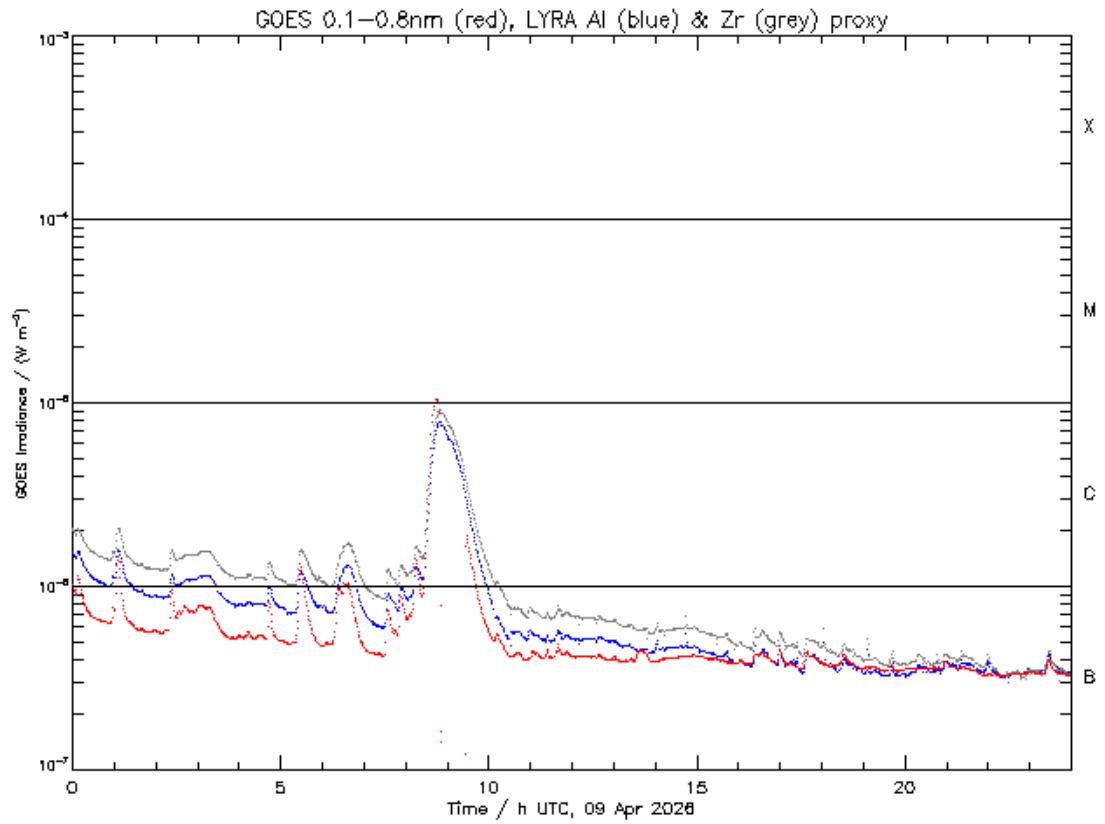
This page also lists the recorded flaring events.

A weekly overview movie can be found here (SWAP week 837): https://proba2.sidc.be/swap/data/mpg/movies/weekly_movies/weekly_movie_2026_04_06.mp4

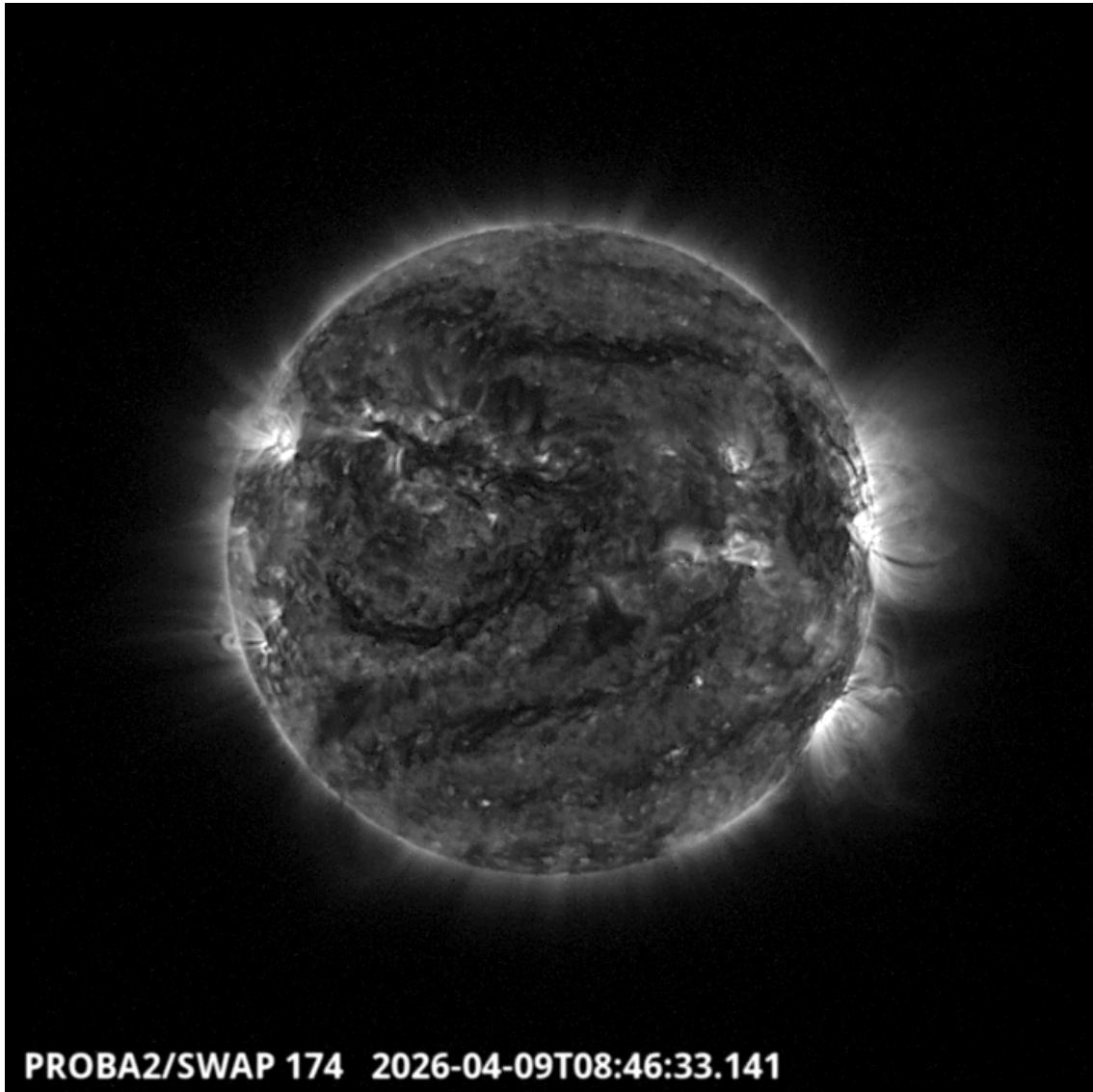
Details about some of this week's events can be found further below.

If any of the linked movies are unavailable they can be found in the P2SC movie repository here: <http://proba2.oma.be/swap/data/mpg/movies/>

Thursday Apr 09



ROB/SIDC, Brussels, Belgium



The largest flare of this week was an M1.0 flare, and was observed by LYRA (top panel) and SWAP (bottom panel). The flare peaked on 2026-Apr-09 at 08:45 UT and occurred on the North-West part of the solar disc, originating from active region NOAA AR 4409 (SIDC 838). Find a SWAP movie of the event here: https://proba2.sidc.be/swap/movies/20260409_swap_movie.mp4

5. Noticeable Solar Events

DAY	BEGIN	MAX	END	LOC	XRAY	OP	10CM	TYPE	Cat	NOAA
09	0823	0845	0905	N2W77	M1.0	SF			73	4409

LOC: approximate heliographic location

XRAY: X-ray flare class

OP: optical flare class

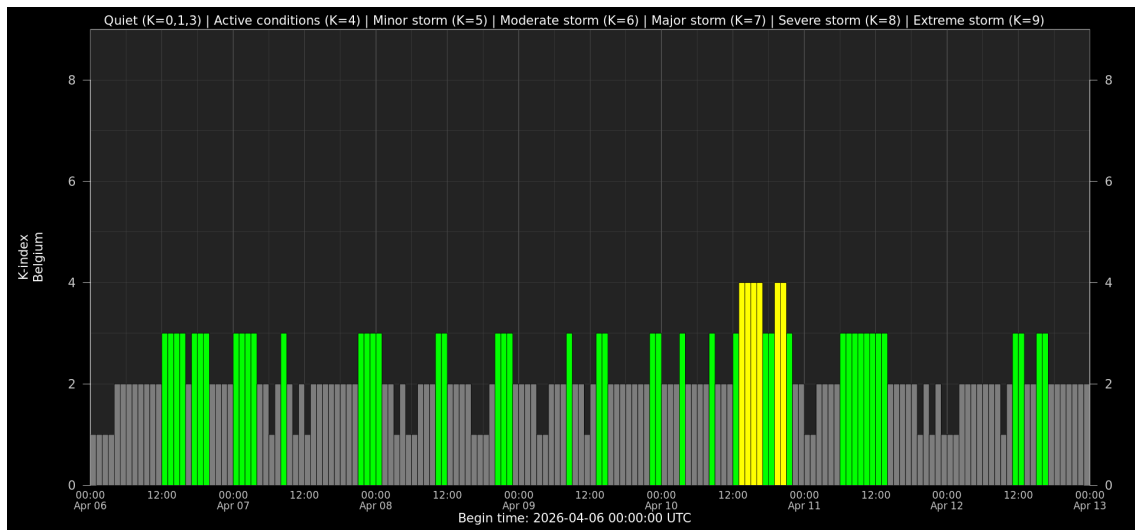
10CM: peak 10 cm radio flux

TYPE: radio burst type

Cat: Catania sunspot group number

NOAA: NOAA active region number

6. Geomagnetic Observations in Belgium



Local K-type magnetic activity index for Belgium based on data from Dourbes (DOU) and Manhay (MAB). Comparing the data from both measurement stations allows to reliably remove outliers from the magnetic data. At the same time the operational service availability is improved: whenever data from one observatory is not available, the single-station index obtained from the other can be used as a fallback system.

Both the two-station index and the single station indices are available here: http://ionosphere.meteo.be/geomagnetism/K_BEL/

7. The SIDC Space Weather Briefing

The forecaster on duty presented the SIDC briefing that gives an overview of space weather from April 6 to 12.

The pdf of the presentation: https://www.stce.be/briefings/20260413_SWbriefing.pdf

SIDC Space Weather Briefing

06 April 2026-12 April 2026

Daria Shukhobodskaja

& the SIDC forecaster team



Solar Influences
Data analysis Centre
www.sidc.be

8. Upcoming Activities

Courses, seminars and events with the Sun-Space-Earth system and Space Weather as the main theme. We provide occasions to get submerged in our world through educational, informative and instructive activities.

- * Apr 20-21, 2026, STCE cursus: inleiding tot het ruimteweer, voor leden van volkssterrenwachten, Brussels, Belgium - register: <https://events.spacepole.be/event/260/>
- * May 22-25, 2026, STCE show at Nerdland- In the eye of a solar storm (Dutch)
- * Jun 15-17, 2026, STCE Space Weather Introductory Course, Brussels, Belgium - register: <https://events.spacepole.be/event/256/>
- * Oct 12-14, 2026, STCE Space Weather Introductory Course, Brussels, Belgium - register: <https://events.spacepole.be/event/257/> - Reserved
- * Nov 2-6, 2026, European Space Weather Week, Florence, Italy, <https://esww2026.eswan.eu/>
- * Nov 23-25, 2026, STCE course: Role of the ionosphere and space weather in military communications, Brussels, Belgium - register: <https://events.spacepole.be/event/259/>
- * Dec 7-9, 2026, STCE Space Weather Introductory Course for Aviation, Brussels, Belgium - register: <https://events.spacepole.be/event/262/>

To register for a course and check the seminar details, navigate to the STCE Space Weather Education Center: <https://www.stce.be/SWEC>

If you want your event in the STCE newsletter, contact us: [stce_coordination at stce.be](mailto:stce_coordination@stce.be)



Space Weather Education Centre

Website: <https://www.stce.be/SWEC>