SIDC Space Weather Briefing

01 June 2026-07 June 2026

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& the SIDC forecaster team

Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
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Summary Report

Solar activity from 2026-06-01 00:00 to 2026-06-07 23:59

Active regions	Most active was SIDC sunspot group 860 (NOAA AR 4455)
Flares	# C-class flare: 44 # M-class flare: 6 # X-class flare: 1
Coronal Holes	Two small Coronal holes crossed central meridian
CMEs	4 CMEs with possible Earth directed components

Proton flux	Below 10 pfu threshold
Electron flux	Above 1000 pfu threshold in second half of the week

Solar wind and geomagnetic conditions

ICMEs	ICME arrival(s) on June 05
Solar wind conditions	|B|: 0.46 - 20.02 nT //Bz: -17.42 nT to 16.32 nT //Speed: 351.7 - 722.4km/s
Geomagnetic conditions	max KBel: 6.0, max Kp(NOAA): 6.33, Moderate Storm conditions

All Quiet Alert: Not quiet

Solar Activity

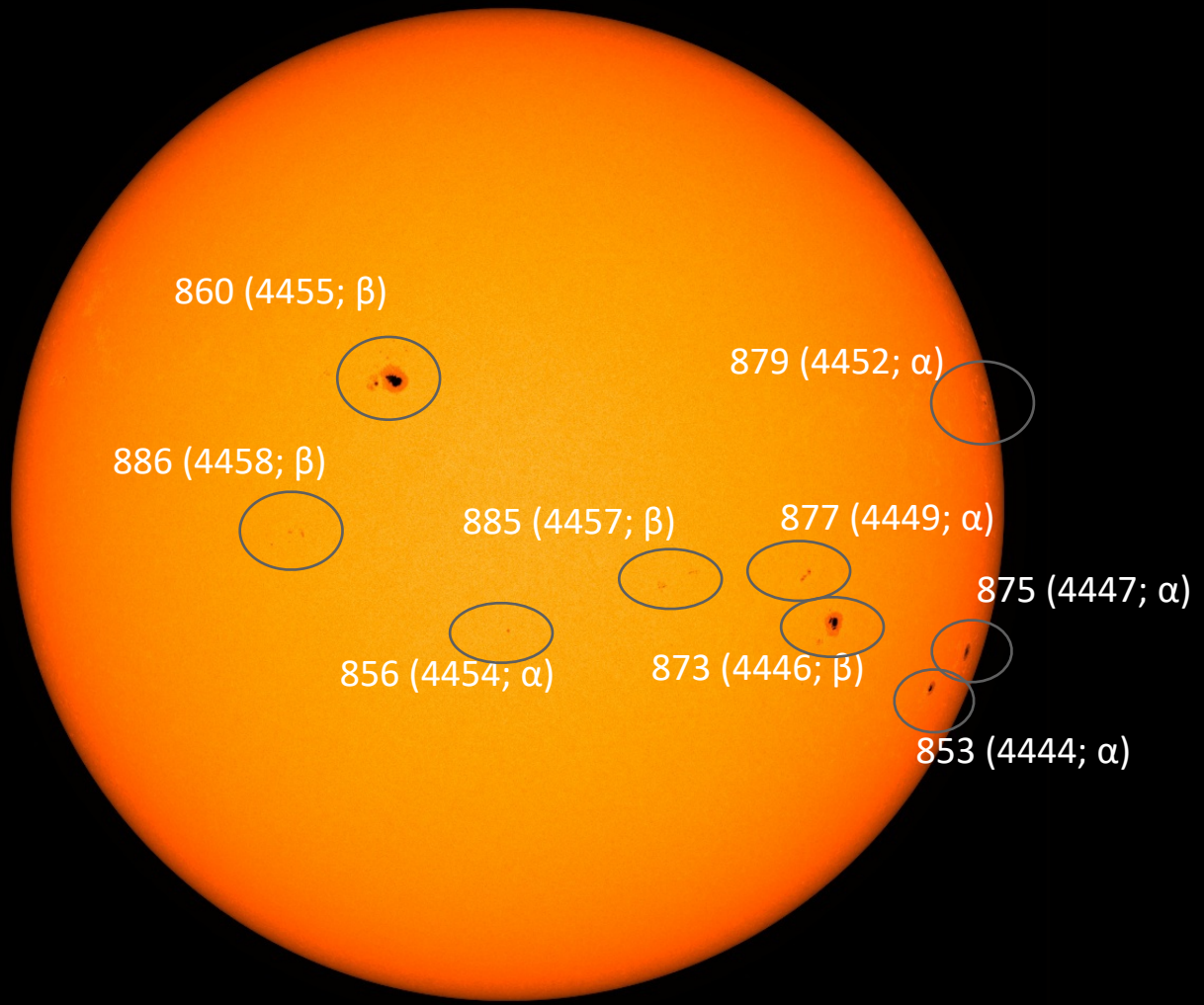


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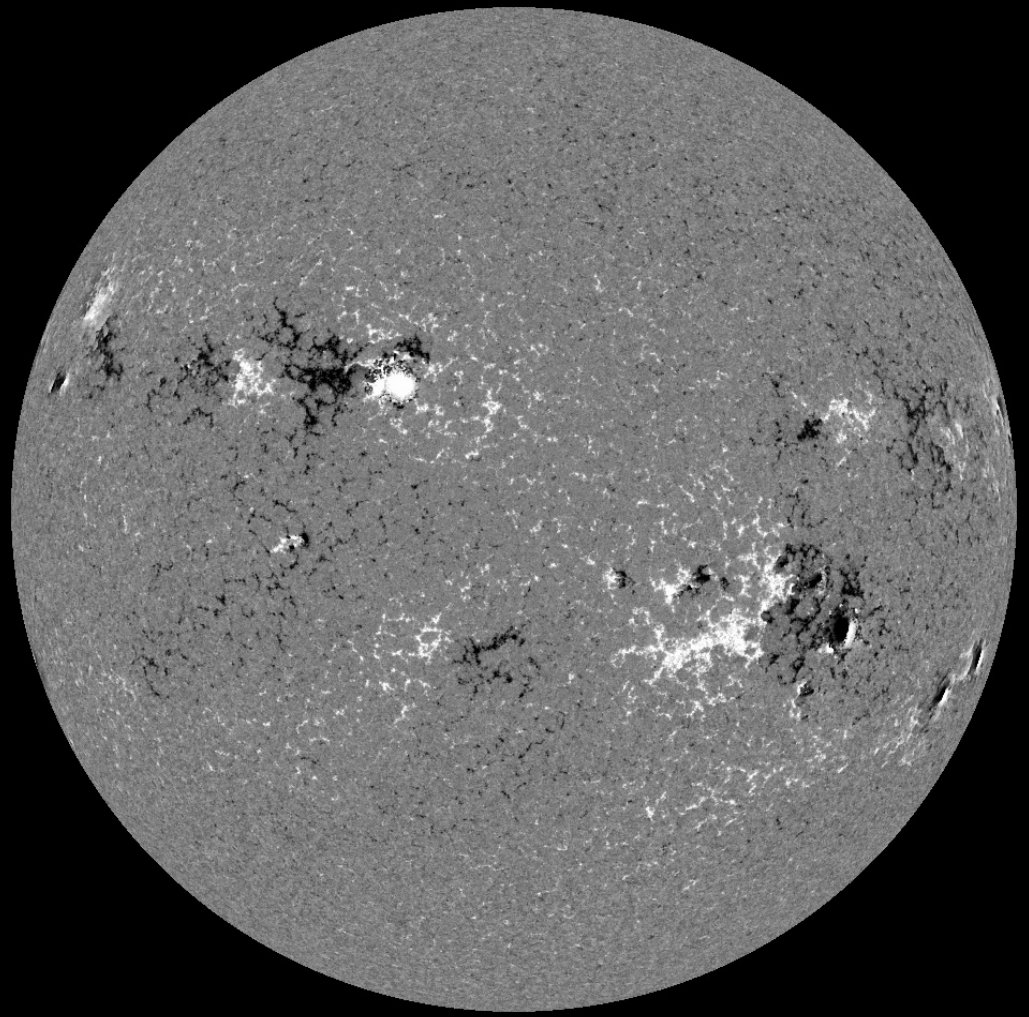
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Solar active regions

SDO/HMI White Light 2026-06-01

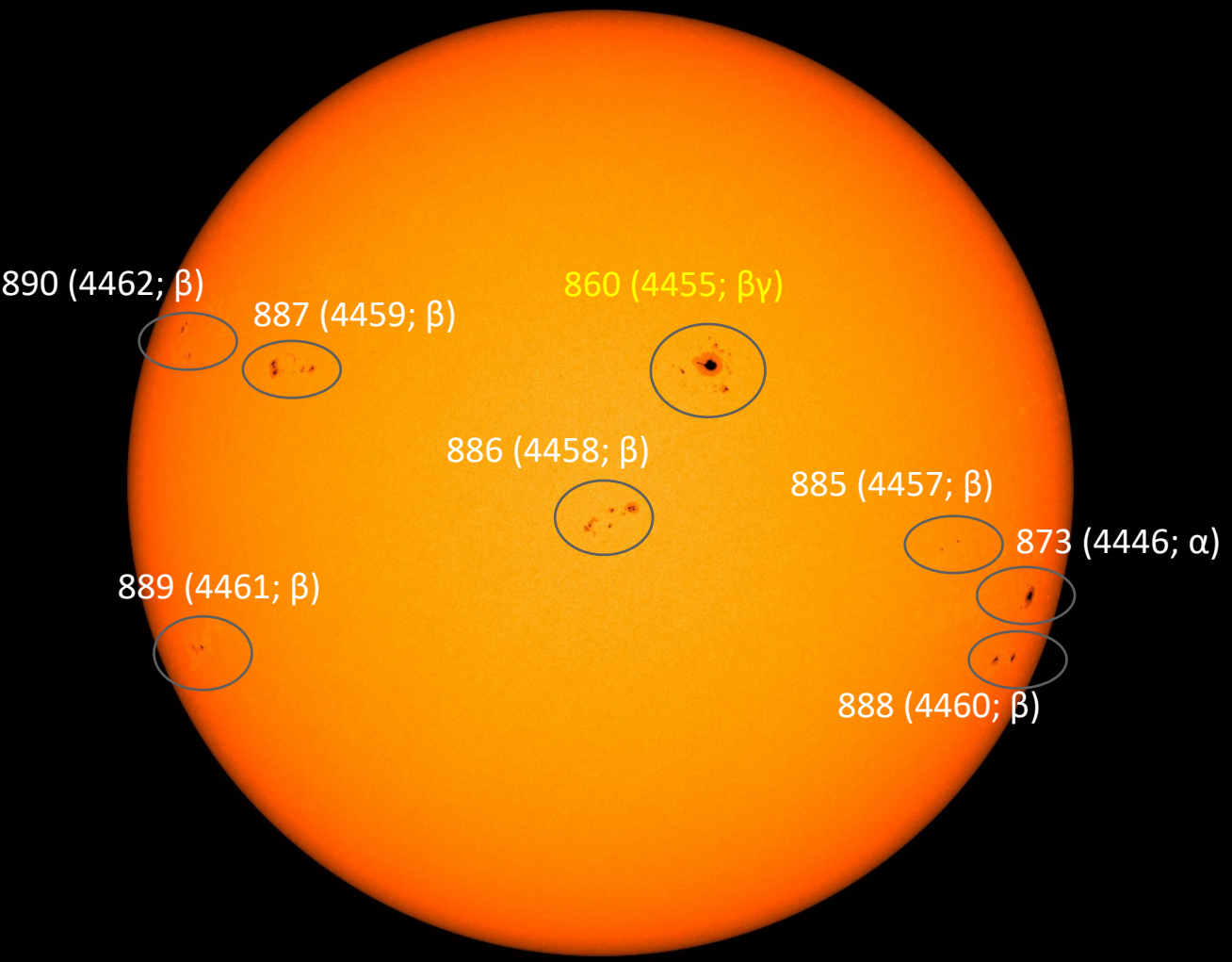


SDO/HMI Magnetogram 2026-06-01

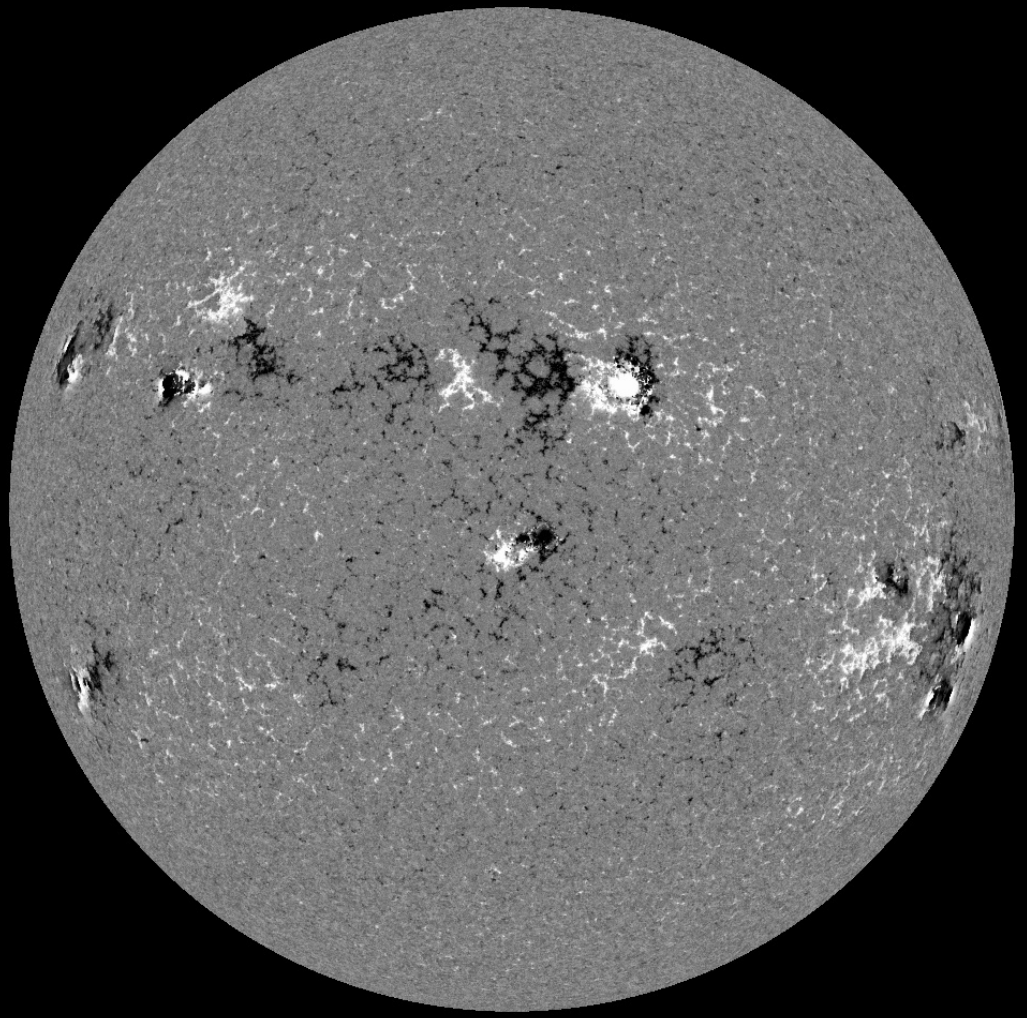


Solar active regions

SDO/HMI White Light 2026-06-03

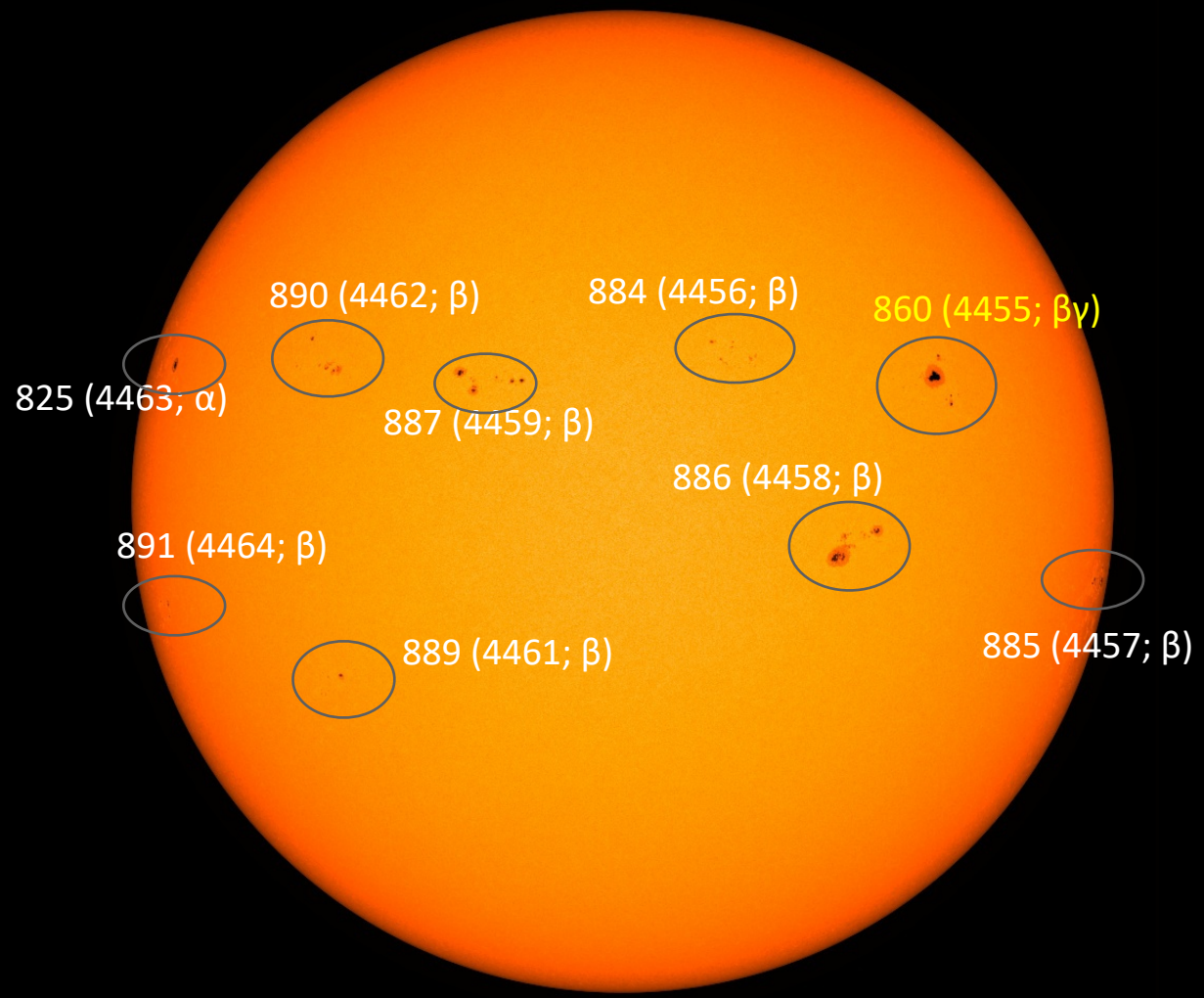


SDO/HMI Magnetogram 2026-06-03

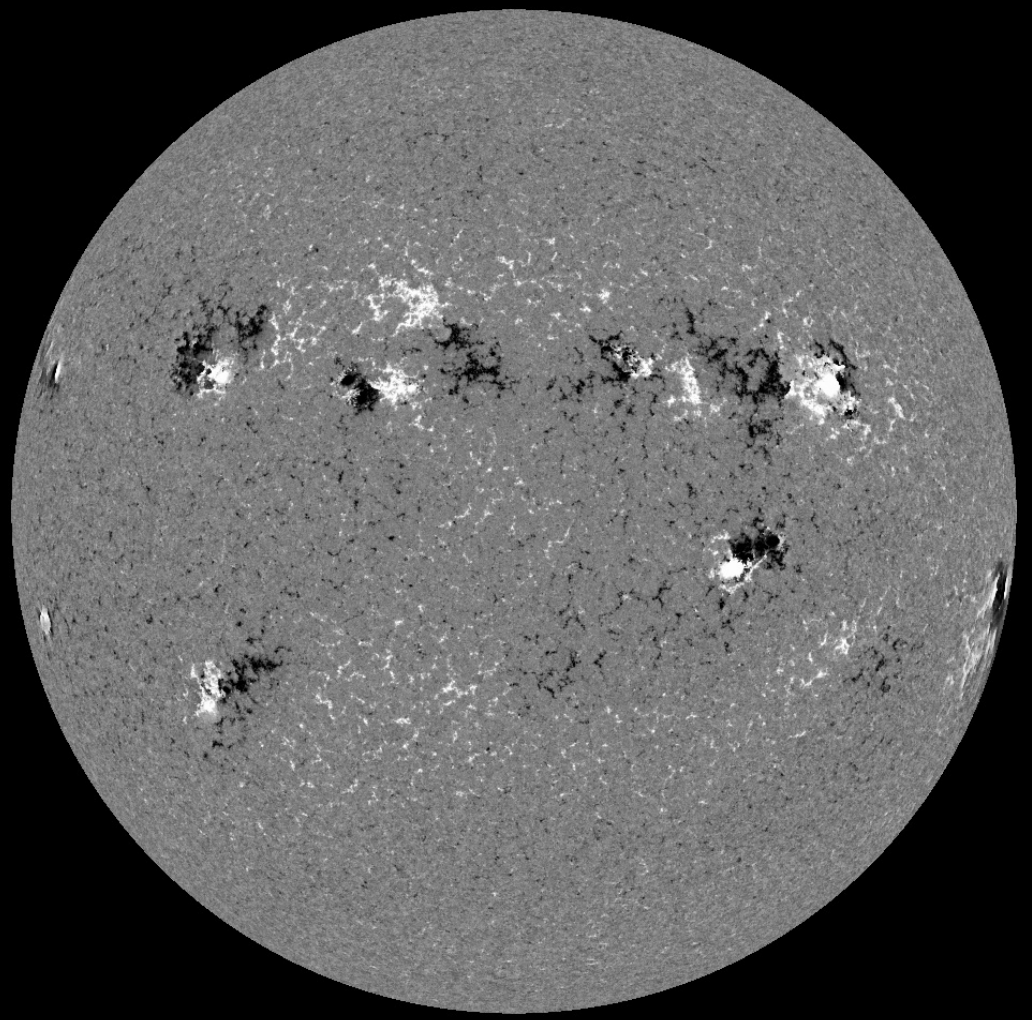


Solar active regions

SDO/HMI White Light 2026-06-05

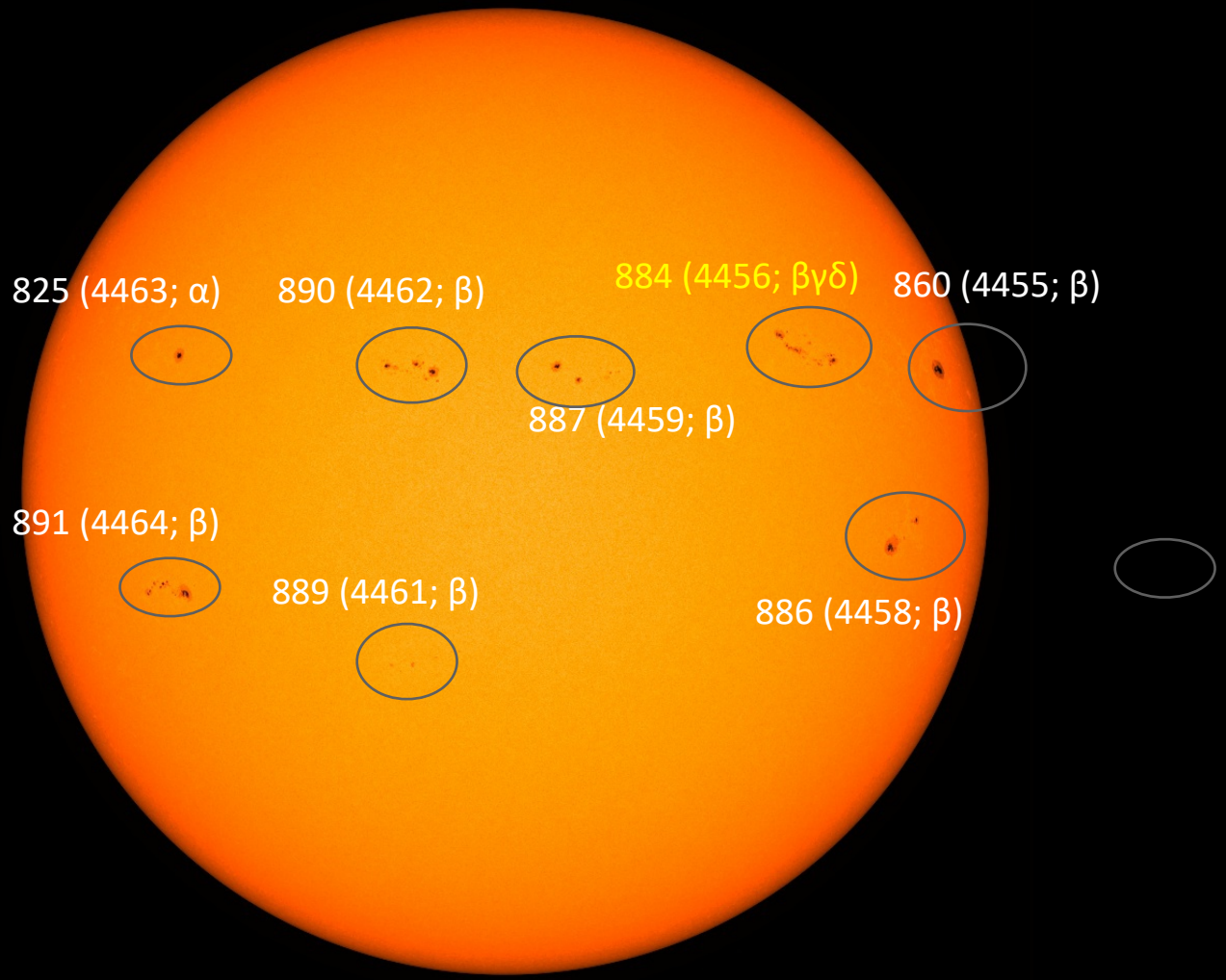


SDO/HMI Magnetogram 2026-06-05

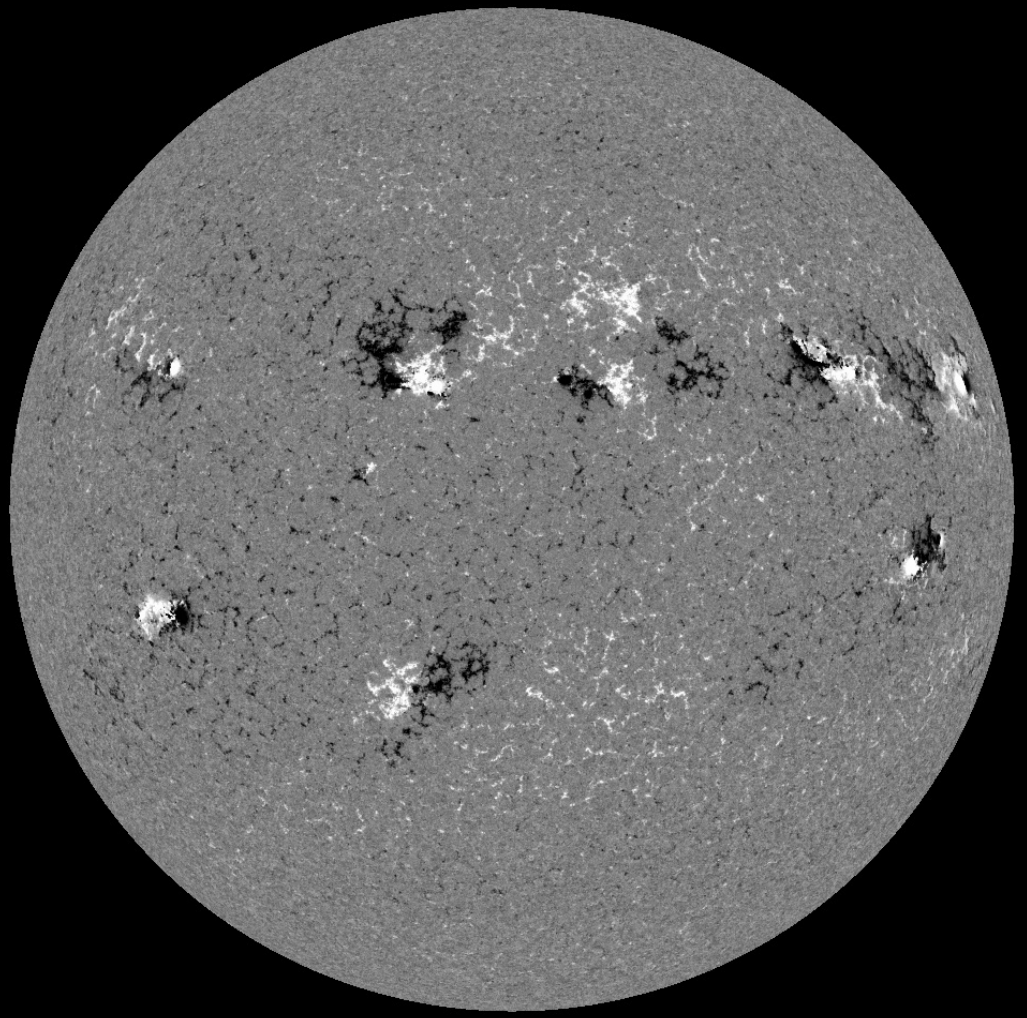


Solar active regions

SDO/HMI White Light 2026-06-07

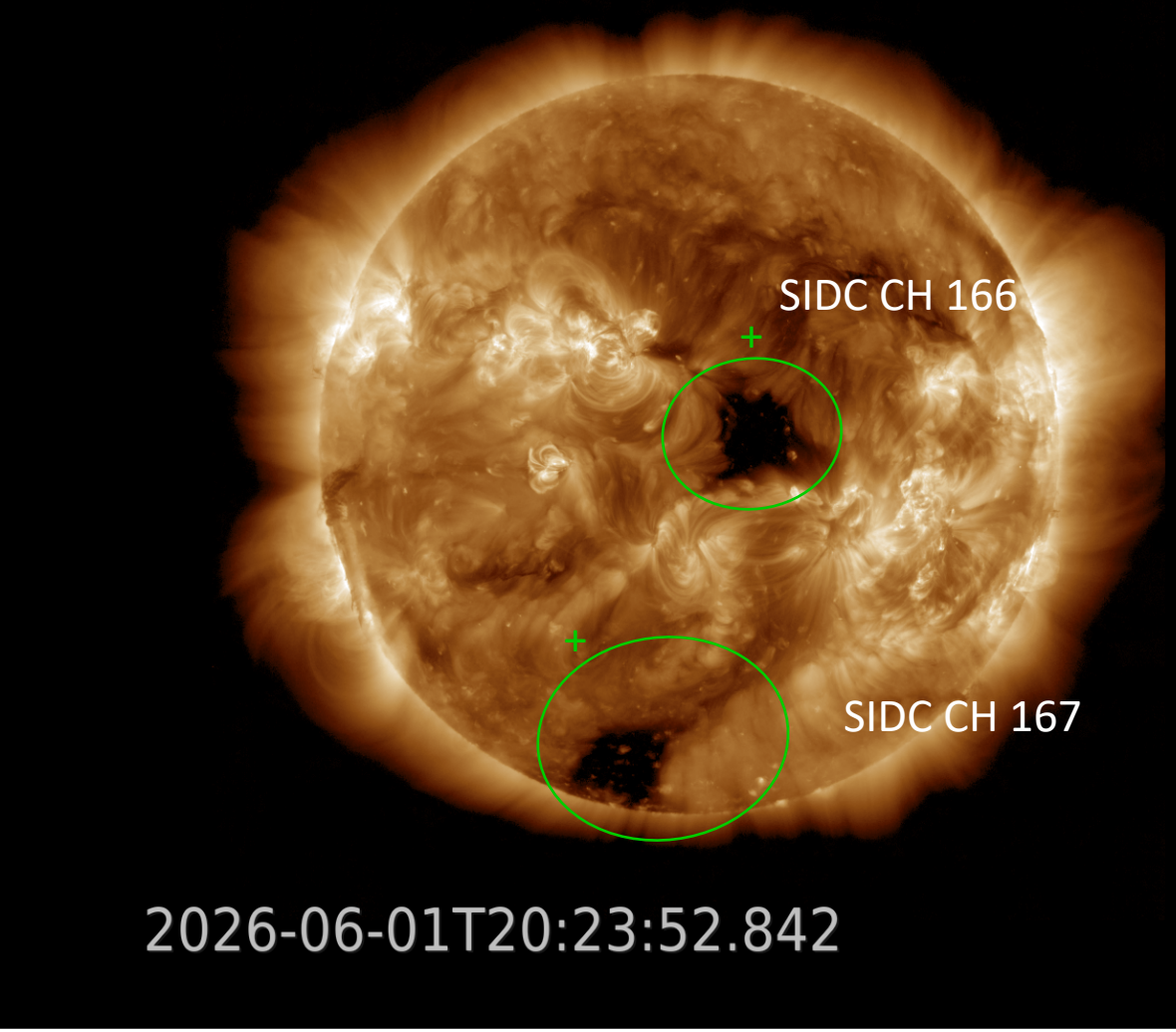


SDO/HMI Magnetogram 2026-06-07

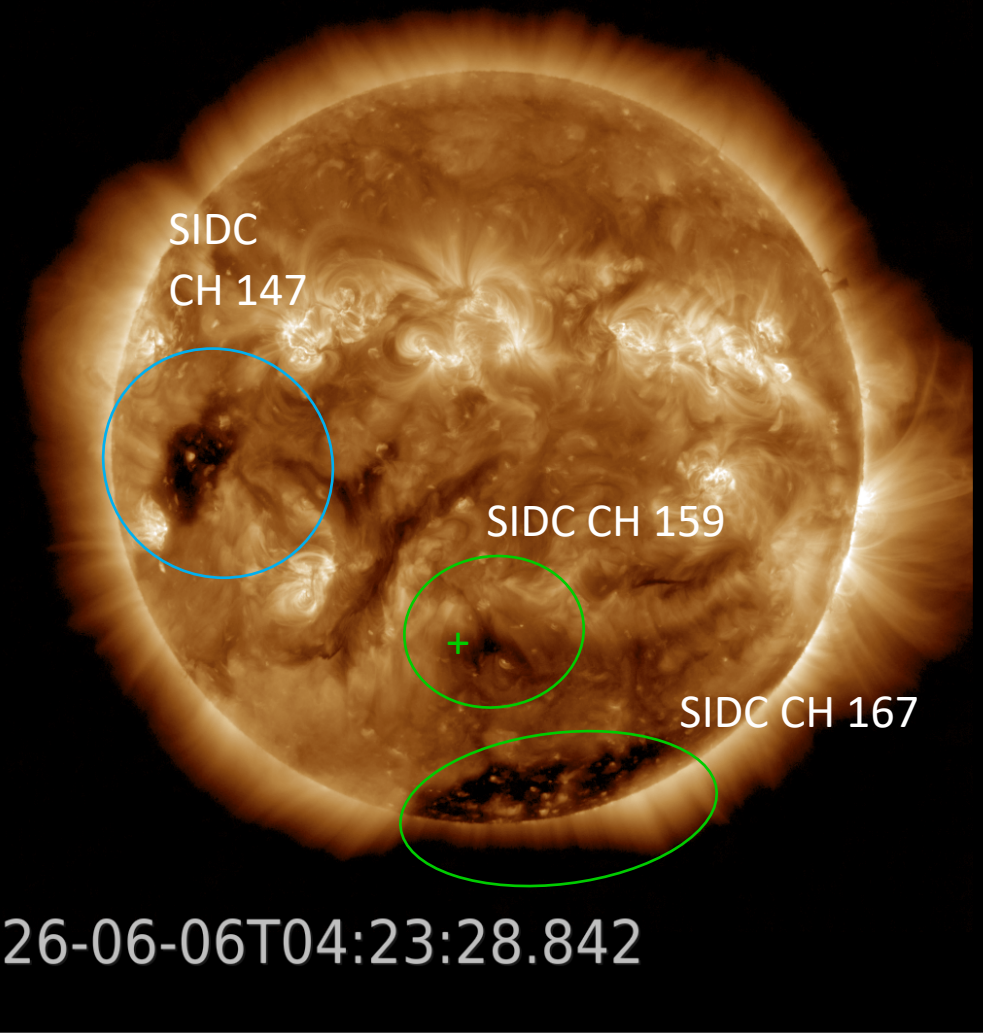


Coronal holes

SDO/AIA 19.3 nm 2026-06-01

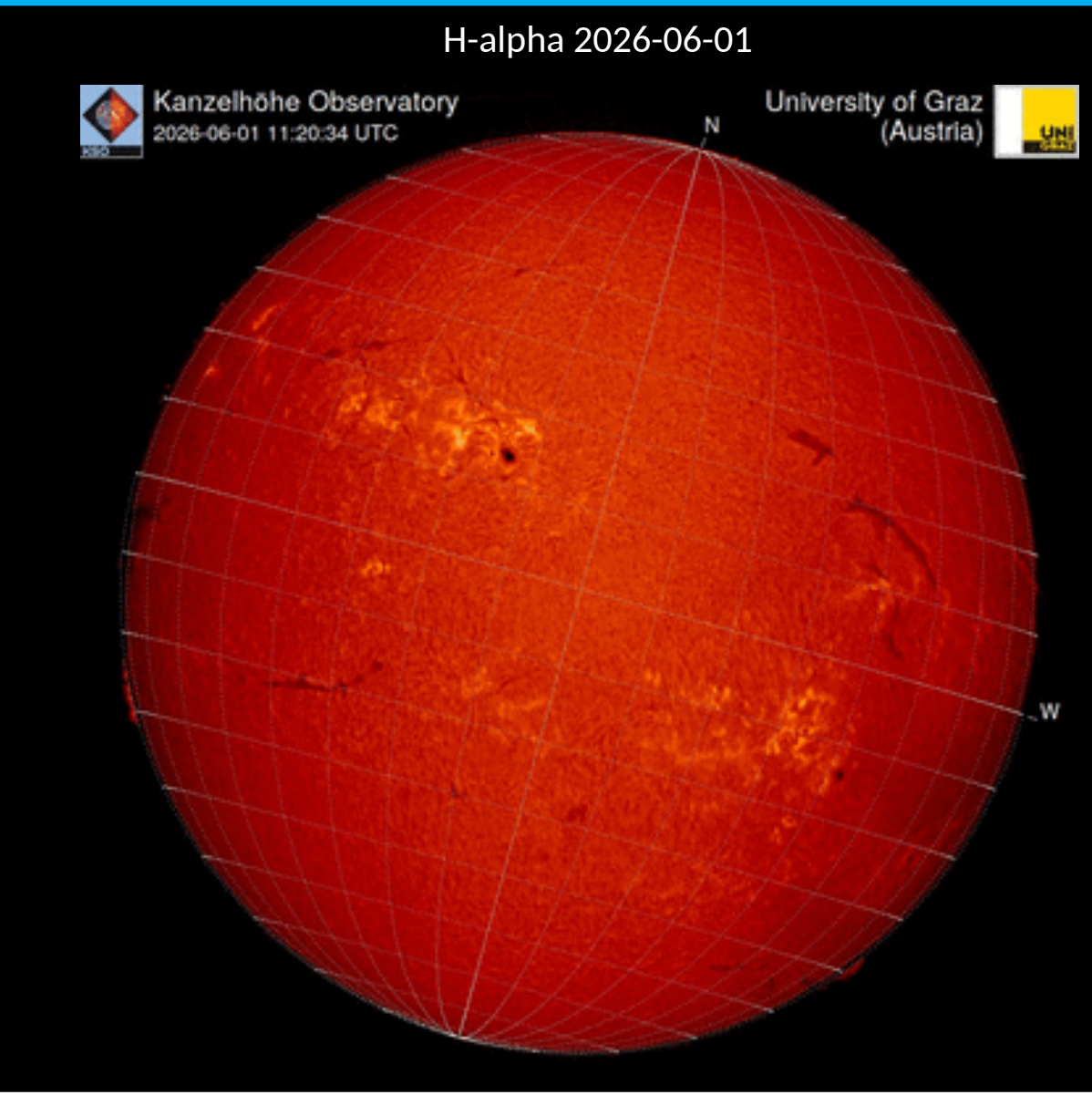


SDO/AIA 19.3 nm 2026-06-06

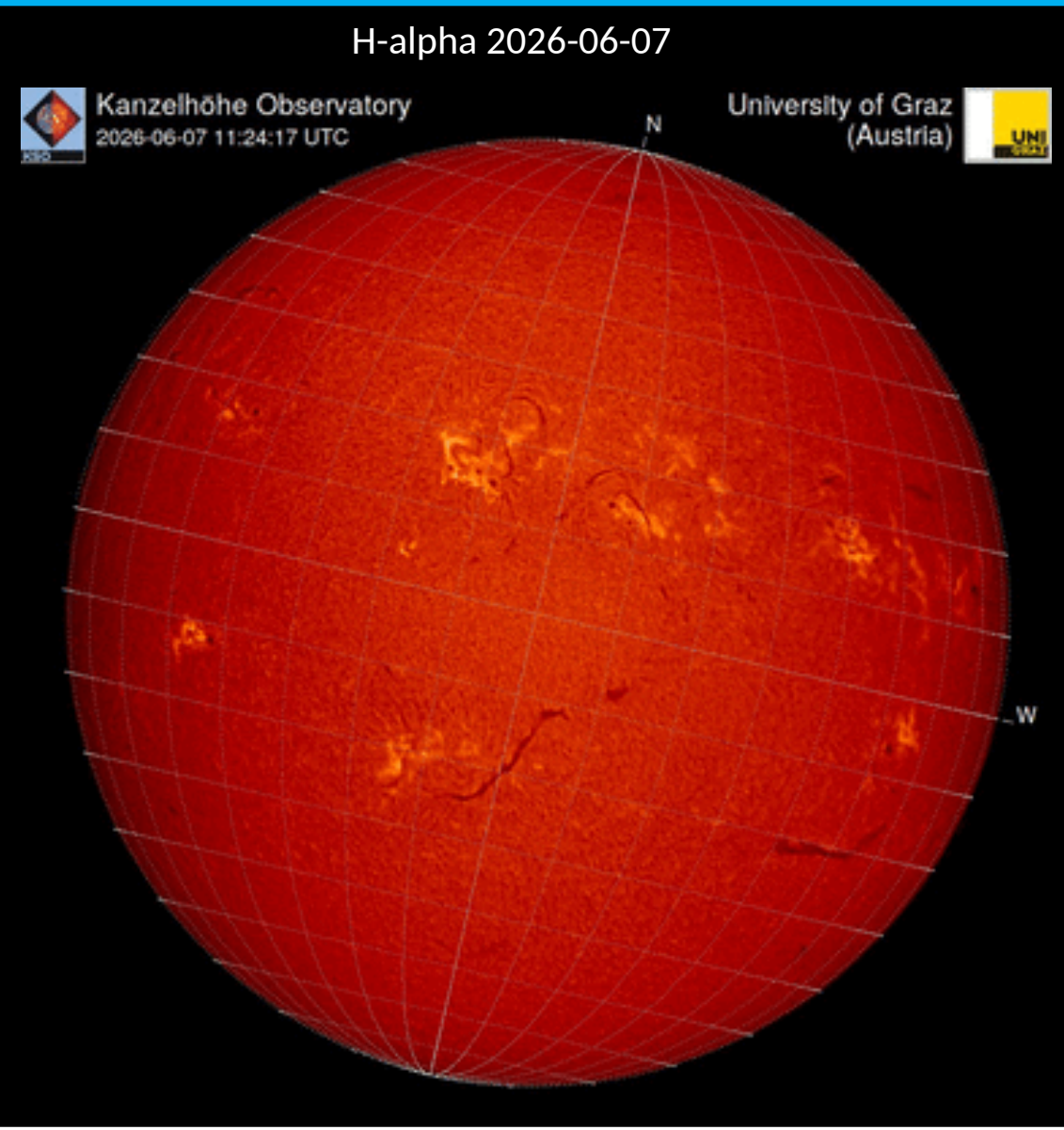


Filaments & Filament eruptions

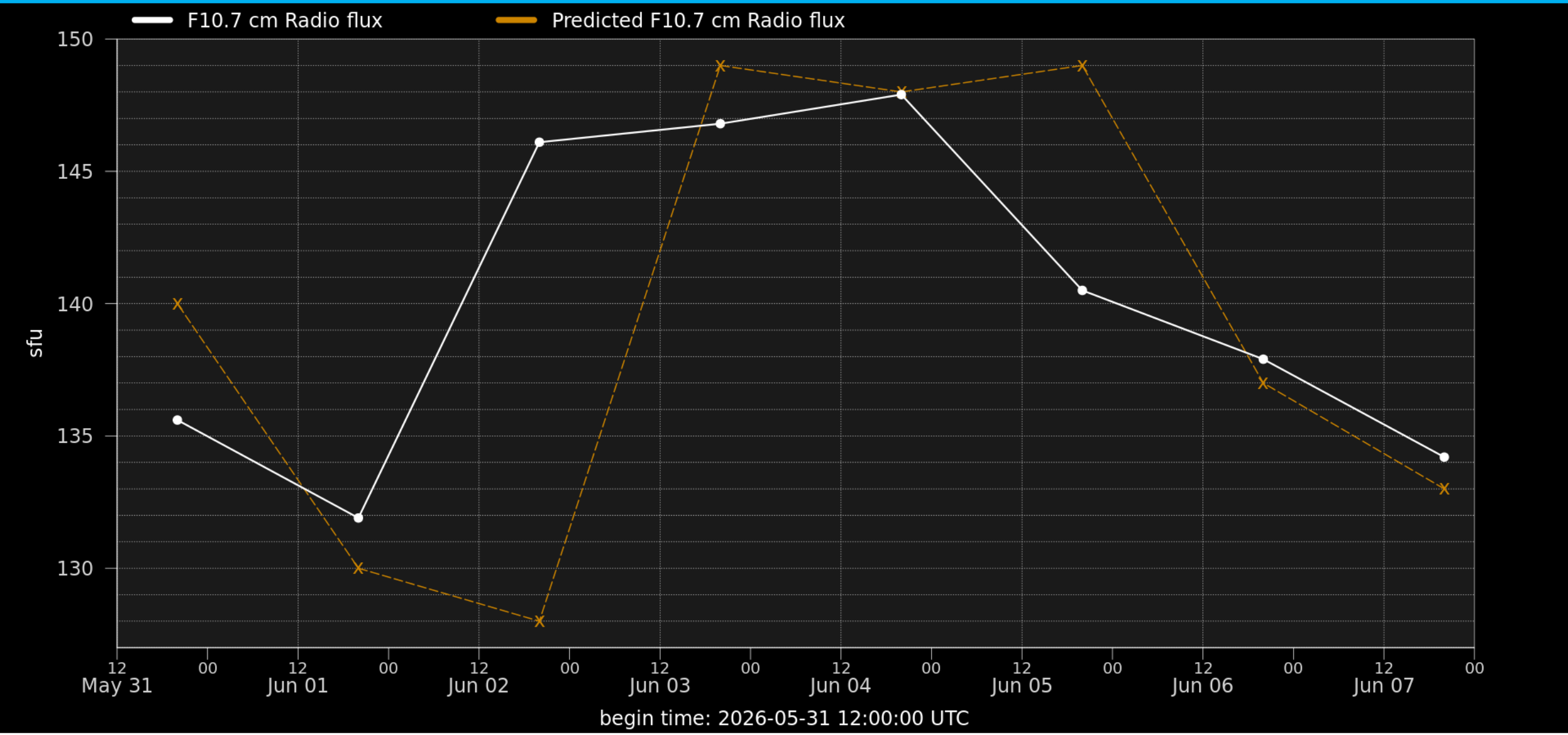
H-alpha 2026-06-01



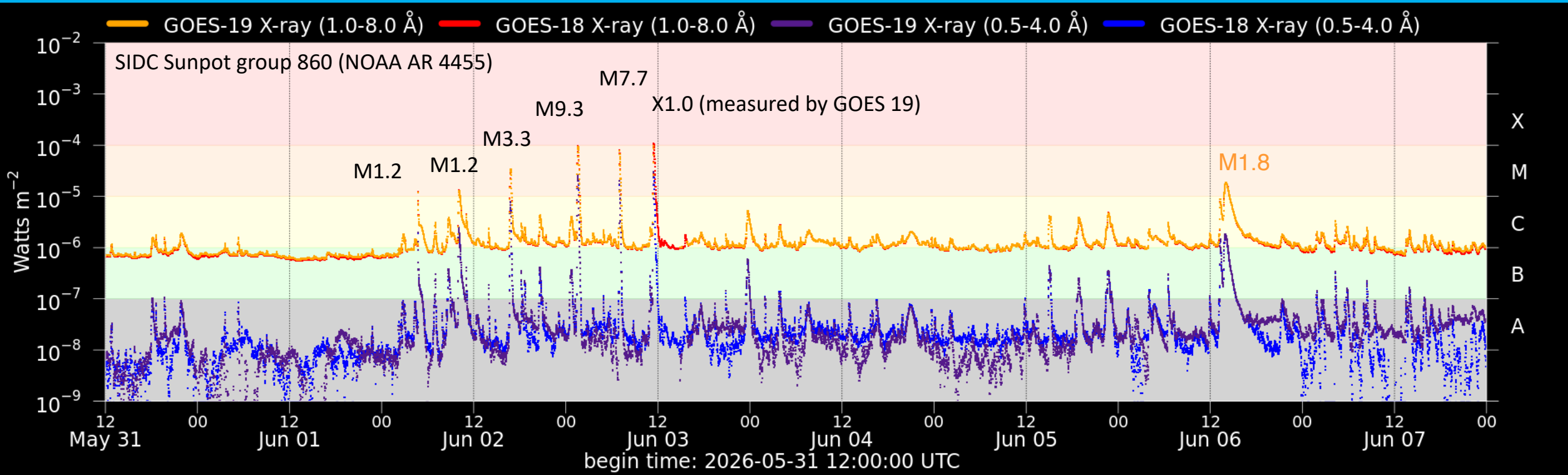
H-alpha 2026-06-07



Solar F10.7cm radio flux



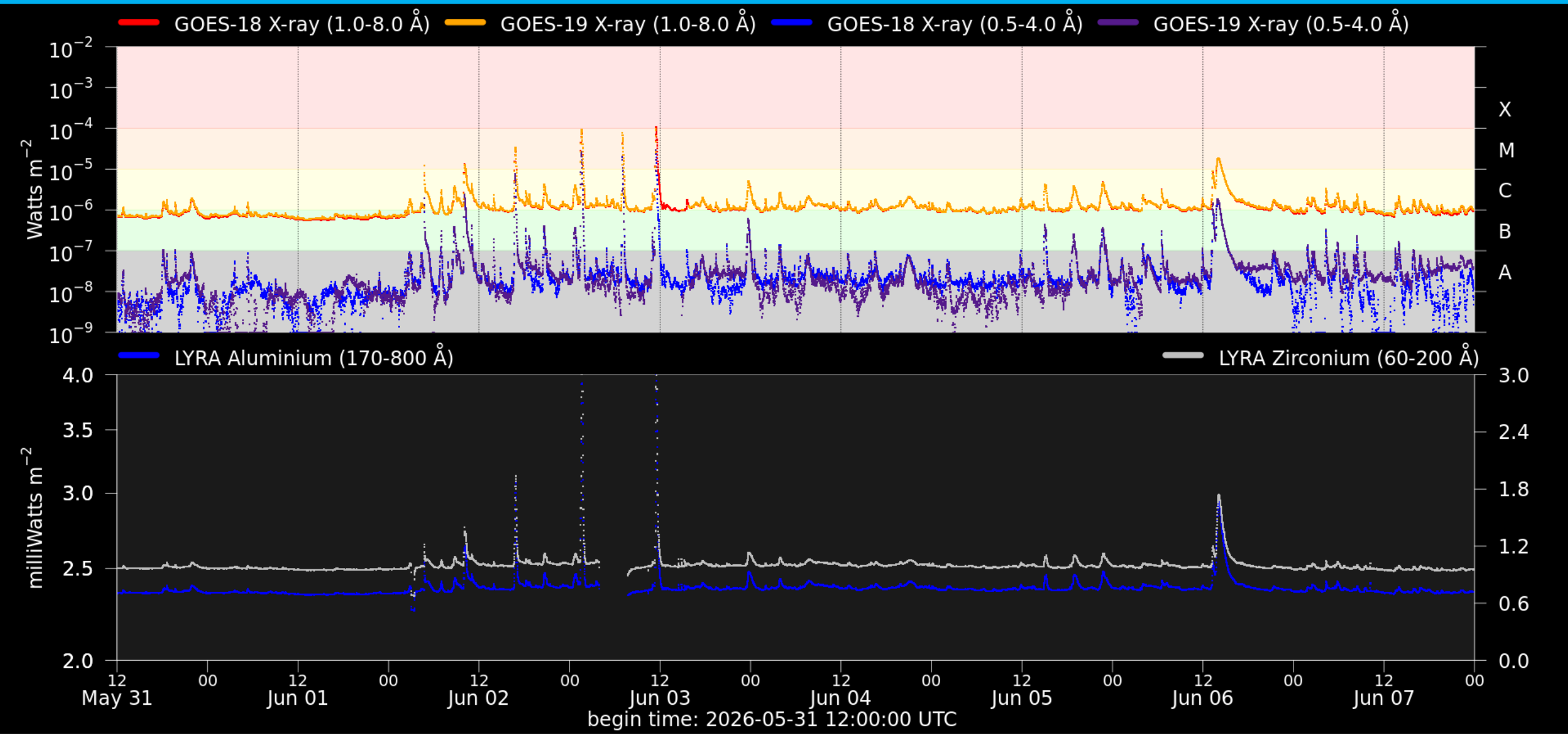
Flaring activity



Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2026-05-31	2026-06-01	2026-06-02	2026-06-03	2026-06-04	2026-06-05	2026-06-06	2026-06-07
Probability (%)	82|25|01	90|40|05	98|45|01	99|73|09	99|75|08	99|77|09	99|71|04	99|63|02
Observed (#)	06|00|00	05|02|00	08|04|01	07|00|00	02|00|00	06|00|00	07|01|00	03|00|00

Solar X-Ray and UV flux



Coronal Mass Ejections

CME 4: Halo CME on June 06

4 CMEs with Earth Directed components: observed from SOHO/LASCO-C2 and STEREO-A/COR2

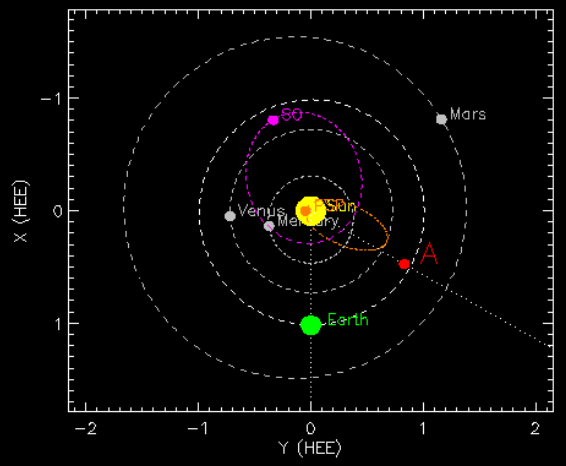
(Back-sided halo CME on June 05)

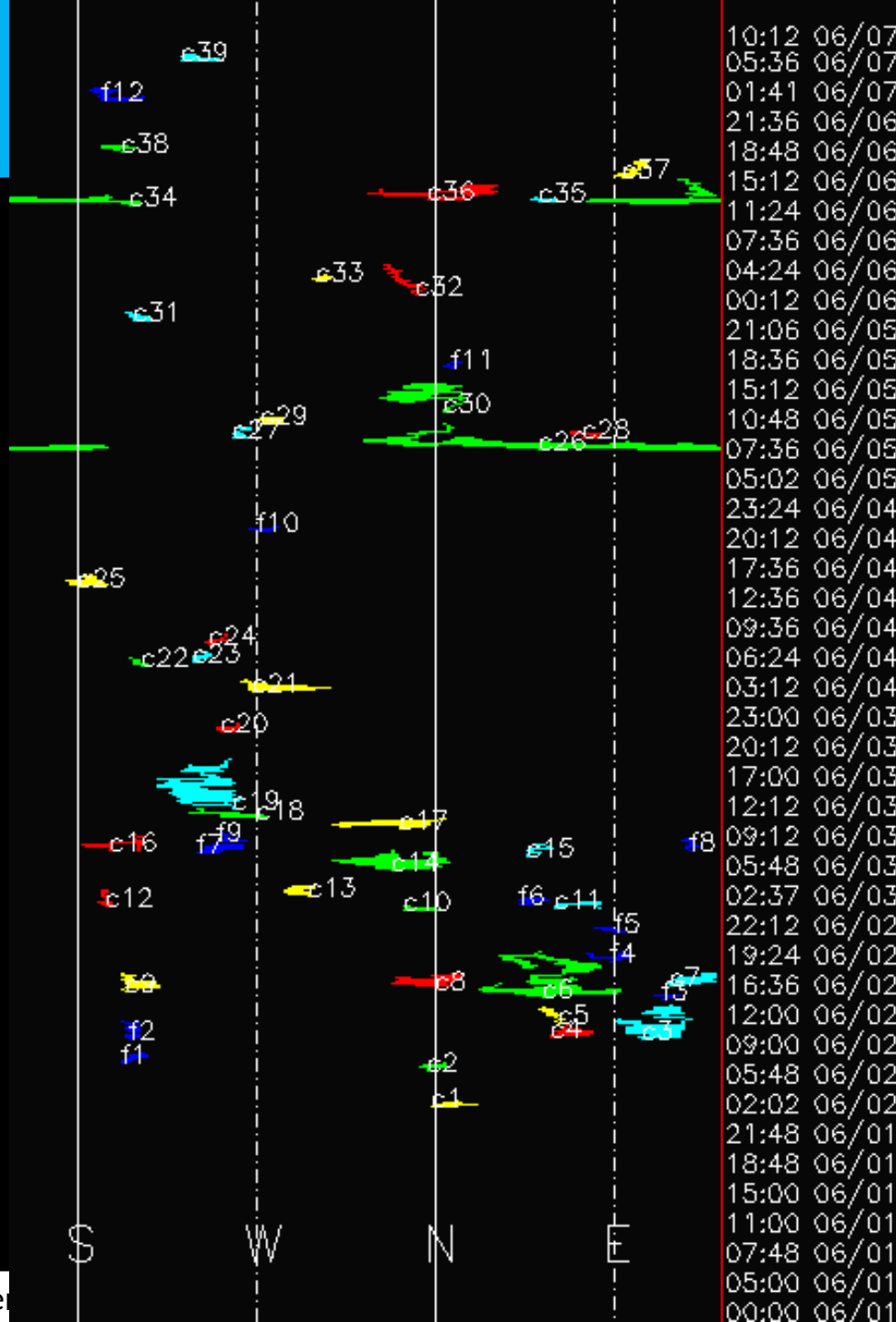
CME 3: Partial halo on June 03

CME 2: Partial halo on June 03

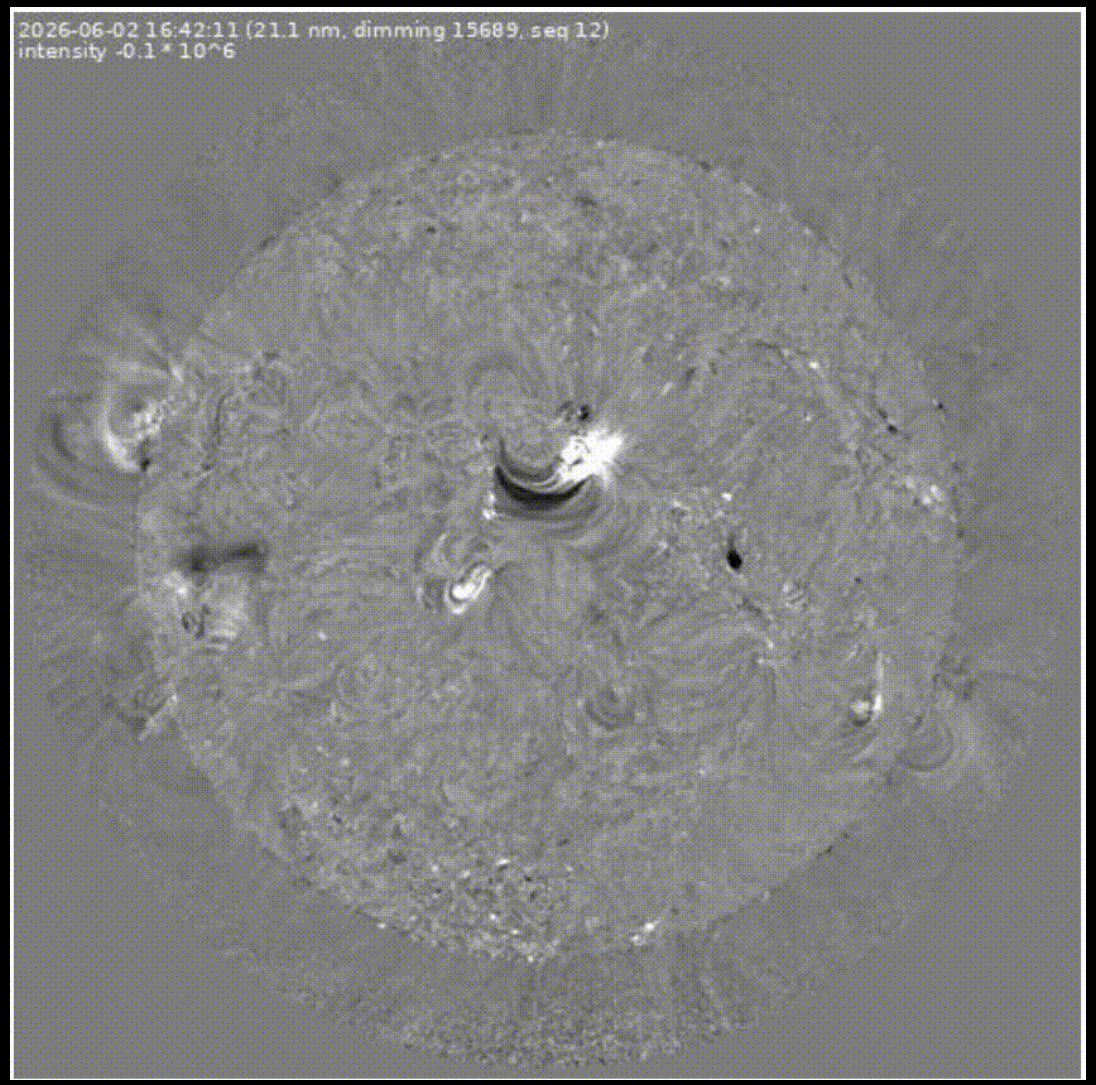
CME 1: Faint halo on June 03

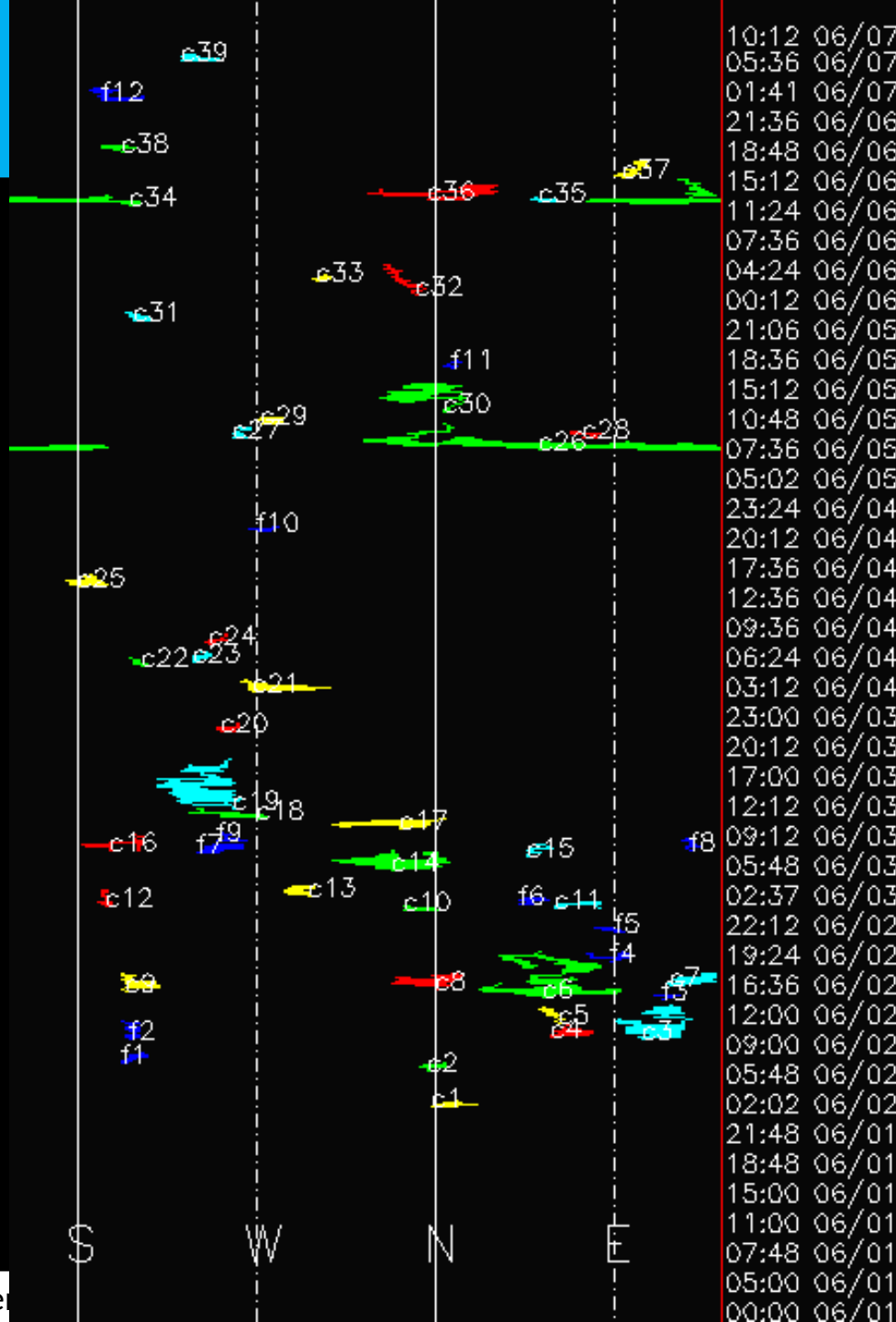
Eruptions on June 02 with unclear CMEs





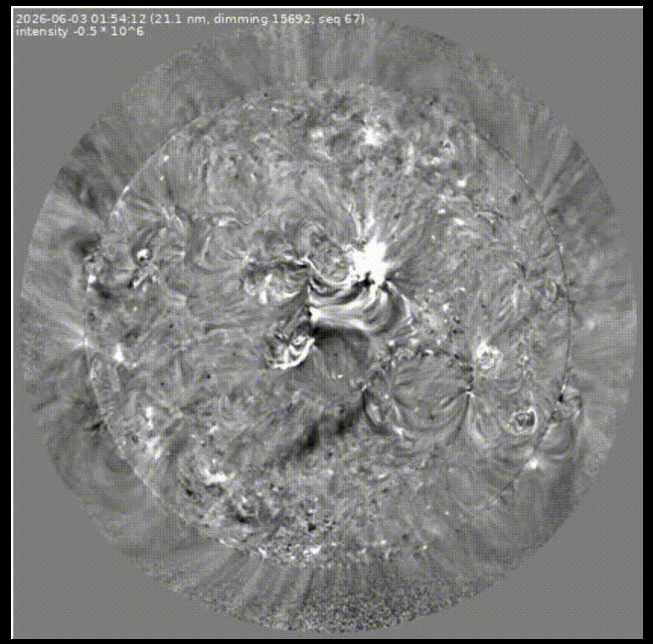
Coronal Mass Ejections on June 02





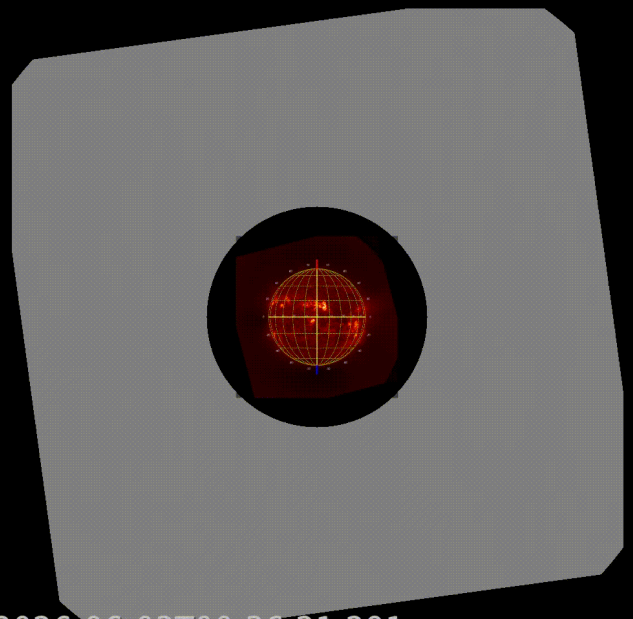
Coronal Mass Ejections CME 1 June 03:

Solar Demon Dimming SDO/AIA



- Associated with an M9.3 flare, peak time 2026-06-03 at 01:36 UTC)
- SIDC Sunspot Group 860 (NOAA Active Region 4455).
- Type II and Type IV radio emission

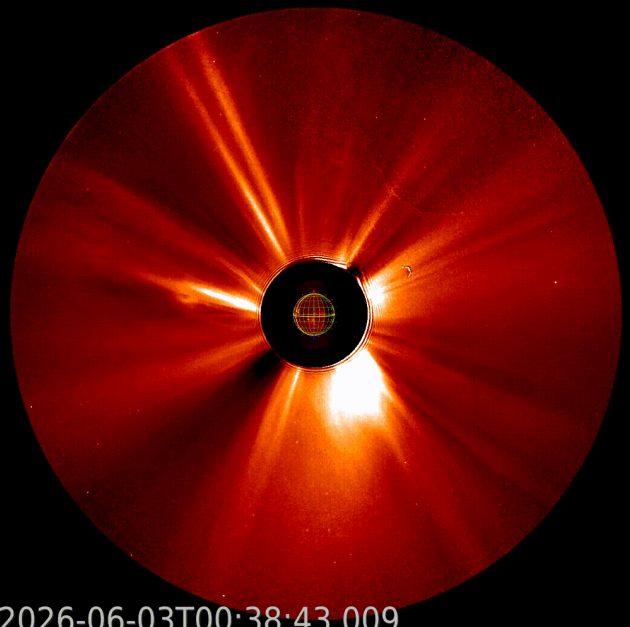
SOHO/LASCO-C2



2026-06-03T00:36:21.291

- Faint halo in LASCO-C2 data starting at June 03 at 01:53 UTC
- To the north-east.
- Estimated speed 1400 km/s

STEREO-A/COR2



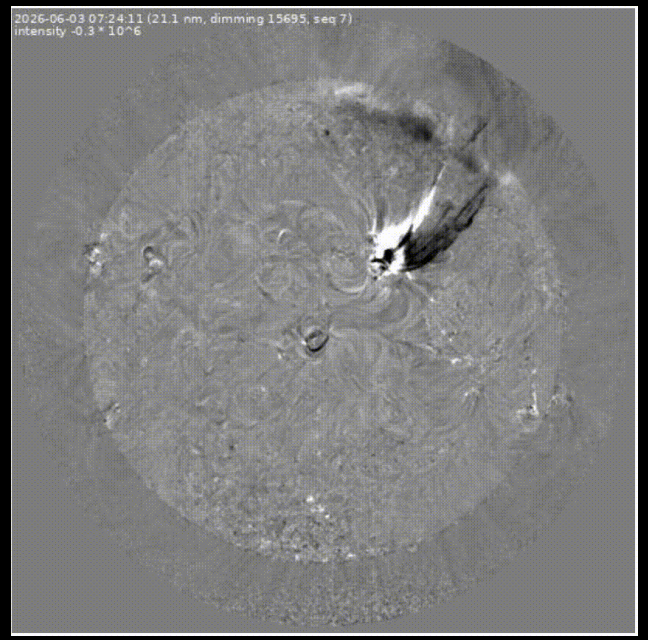
2026-06-03T00:38:43.009

- CME to the east in STEREO-A COR2 data.

Predicted arrival time late on June 04 (2026-06-04 22:00 UTC)

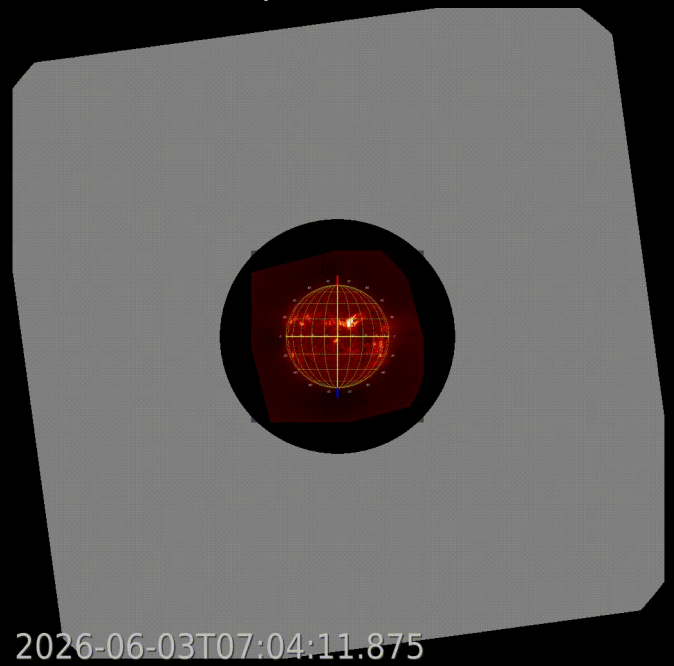
Coronal Mass Ejections CME 2 June 03:

Solar Demon Dimming SDO/AIA



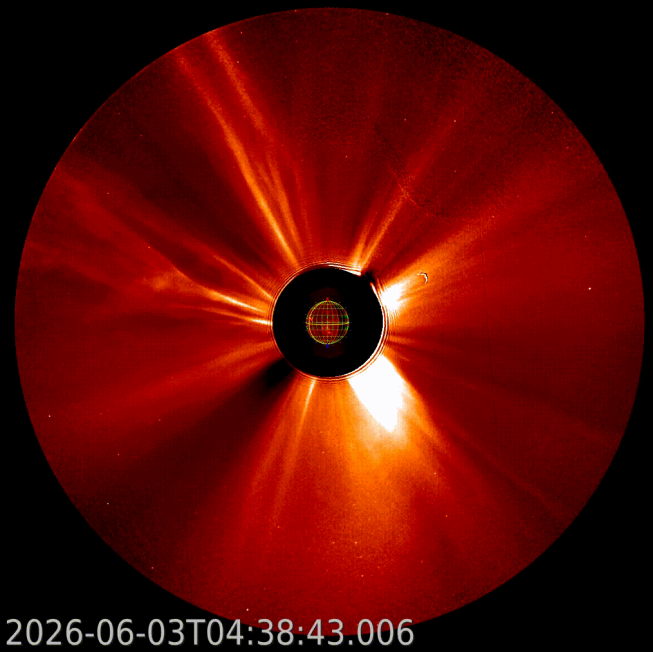
- Associated with an M7.7 flare, peak time 07:00 UTC on June 03,
- SIDC Sunspot Group 860 (NOAA Active Region 4455).
- Type II radio emission

SOHO/LASCO-C2



- A partial halo CME in LASCO-C2 from 07:58 UTC on June 03.
- Directed to the north-west was
- Estimated speed around 1400 km/s

STEREO-A/COR2

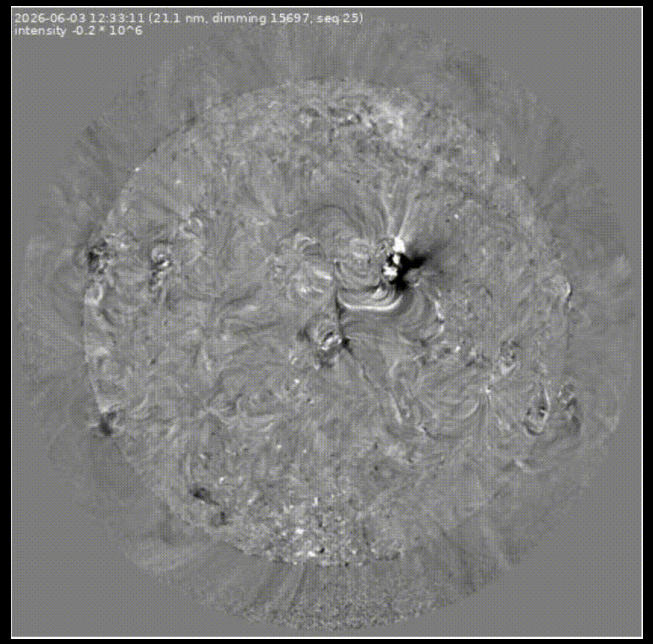


- CME to the north east in STEREO A.

Mostly directed to the north of the Sun-Earth line but predicted to arrive June 05 (2026-06-05 03:00 UTC)

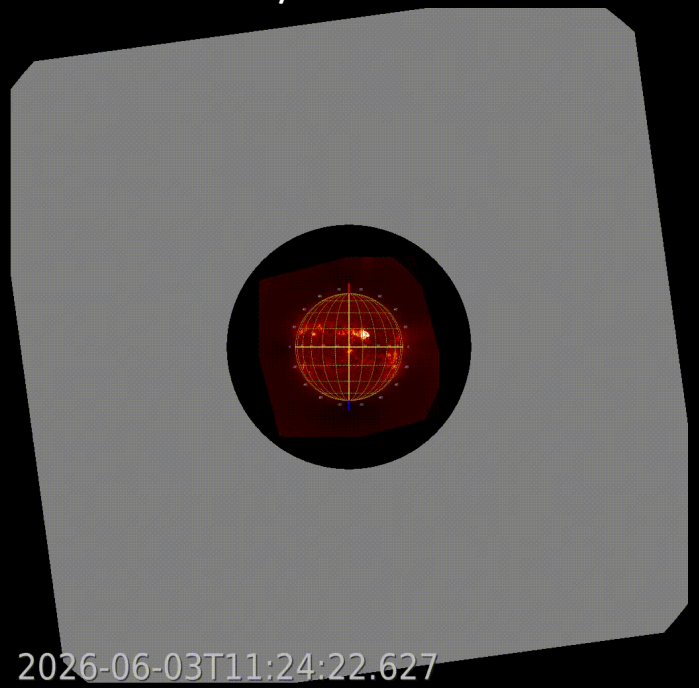
Coronal Mass Ejections CME 3 June 03:

Solar Demon Dimming SDO/AIA



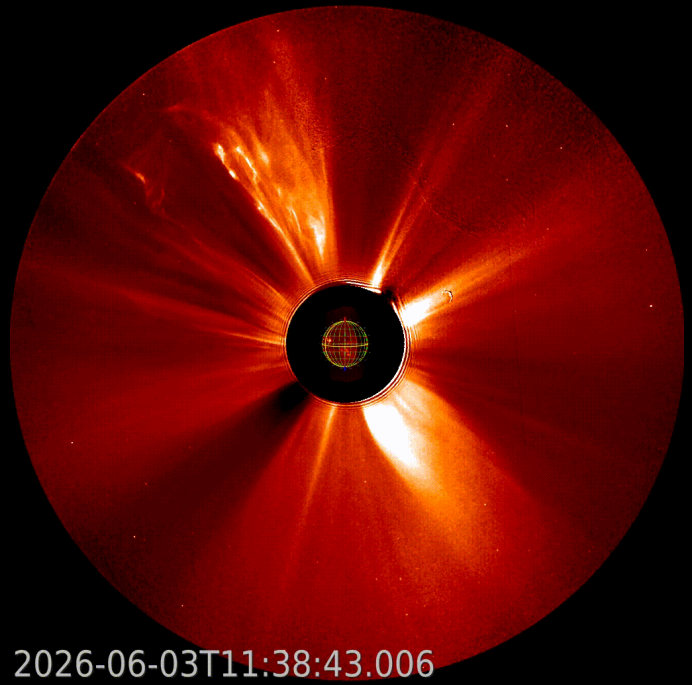
- Associated with an X1.0 flare (recorded by GOES-19), with peak time on June 03 at 11:28 UTC,
- SIDC Sunspot Group 860 (NOAA Active Region 4455).

SOHO/LASCO-C2



- A partial halo CME directed to the north-west in SOHO LASCO-C2 from 11:48 UTC June 03.
- Similar estimated speed around 1300 km/s.

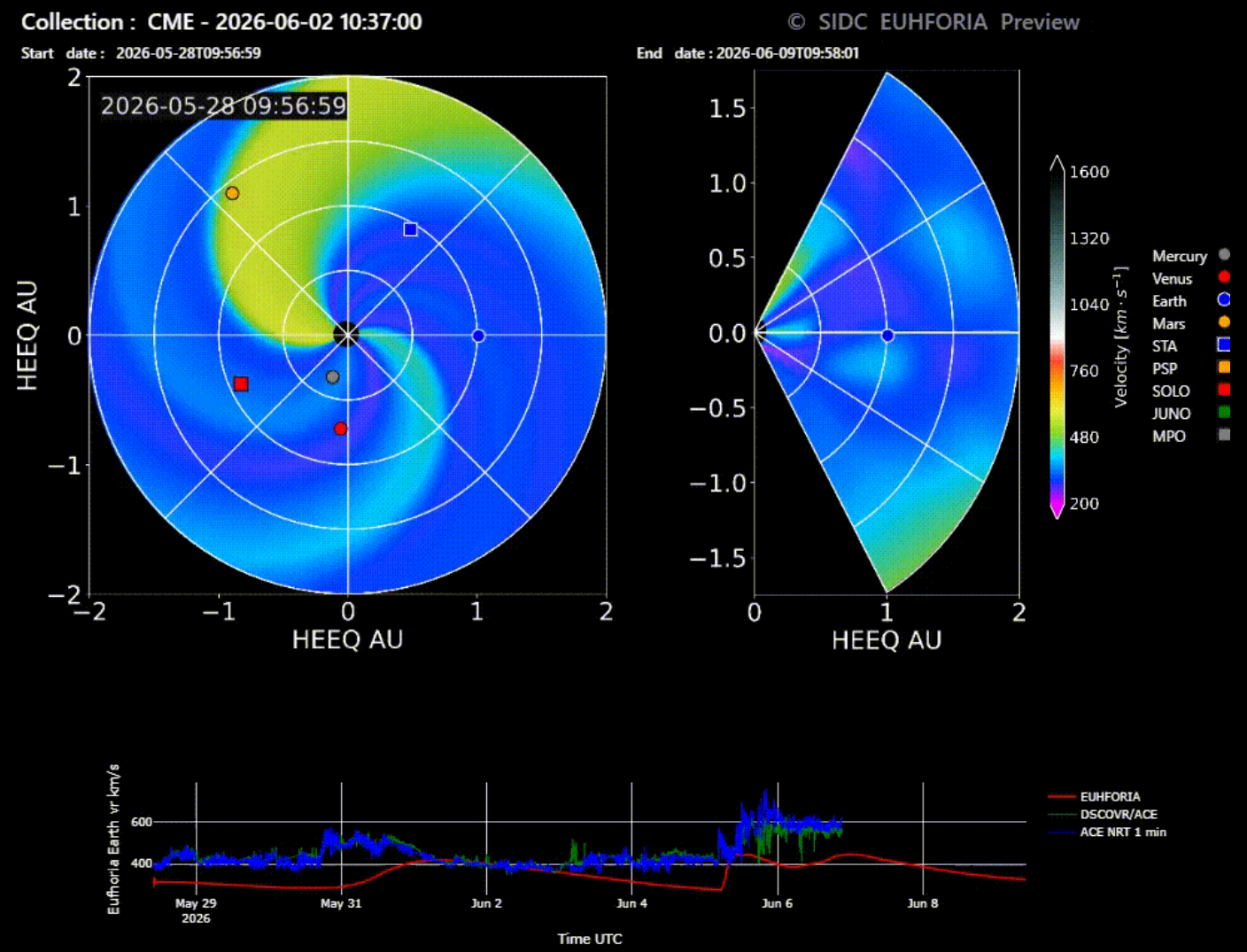
STEREO-A/COR2



- CME to the north-east in STEREO A.

Mostly directed to the north of the Sun-Earth line
Predicted arrival time on June 05 (2026-06-05 08:00 UTC)

Coronal Mass Ejections Modelling: EUHFORIA

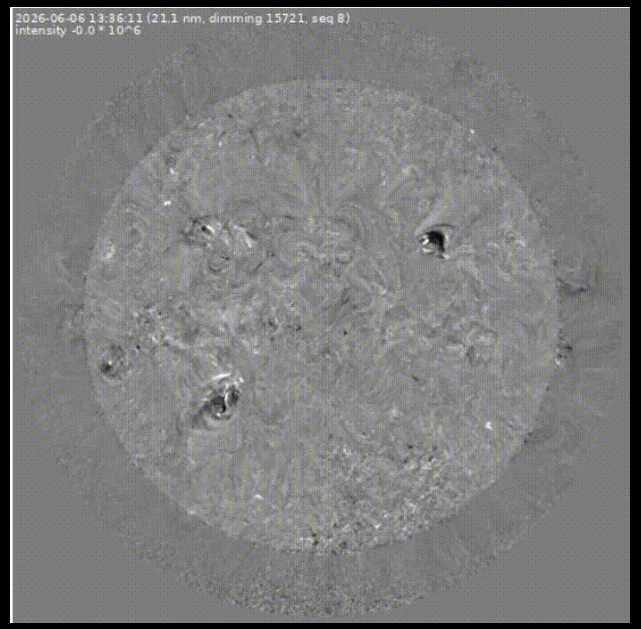


CME 1: Predicted arrival time late on June 04 / Early on June 05

CME 2 and 3: Not seen as clear separate arrivals in the modelling

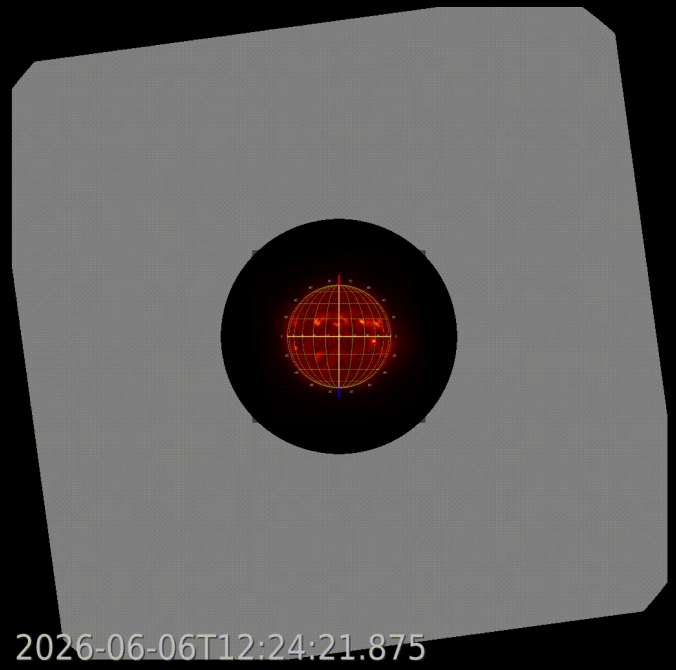
Coronal Mass Ejections CME 4 June 06:

Solar Demon Dimming SDO/AIA



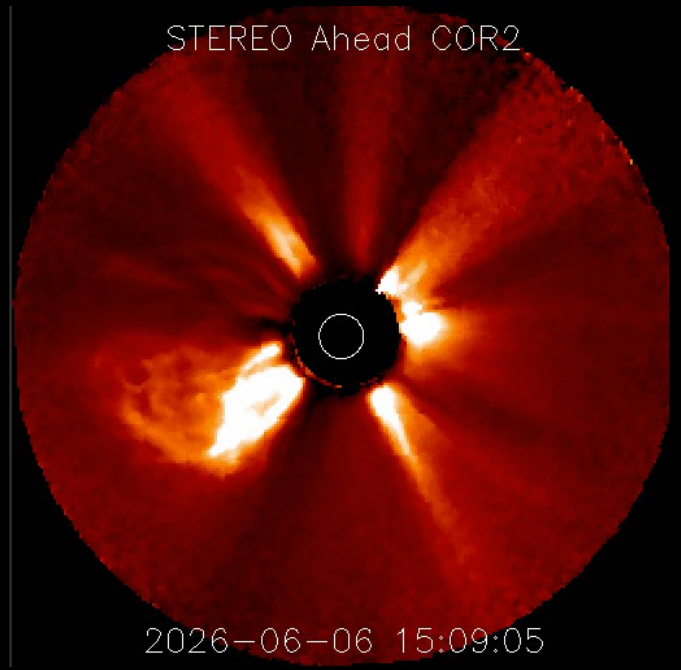
- M1.8 flare, peak time June 06 at 14:01 UTC,
- Filament near SIDC Sunspot Group 889 (NOAA Active region 4461) in the south-east quadrant.
- Large dimming and Type II radio emission

SOHO/LASCO-C2



- A partial halo Coronal Mass Ejection to the south-east in SOHO LASCO-C2 from 14:01 UTC June 06.
- Speed estimated as 1350 km/s.

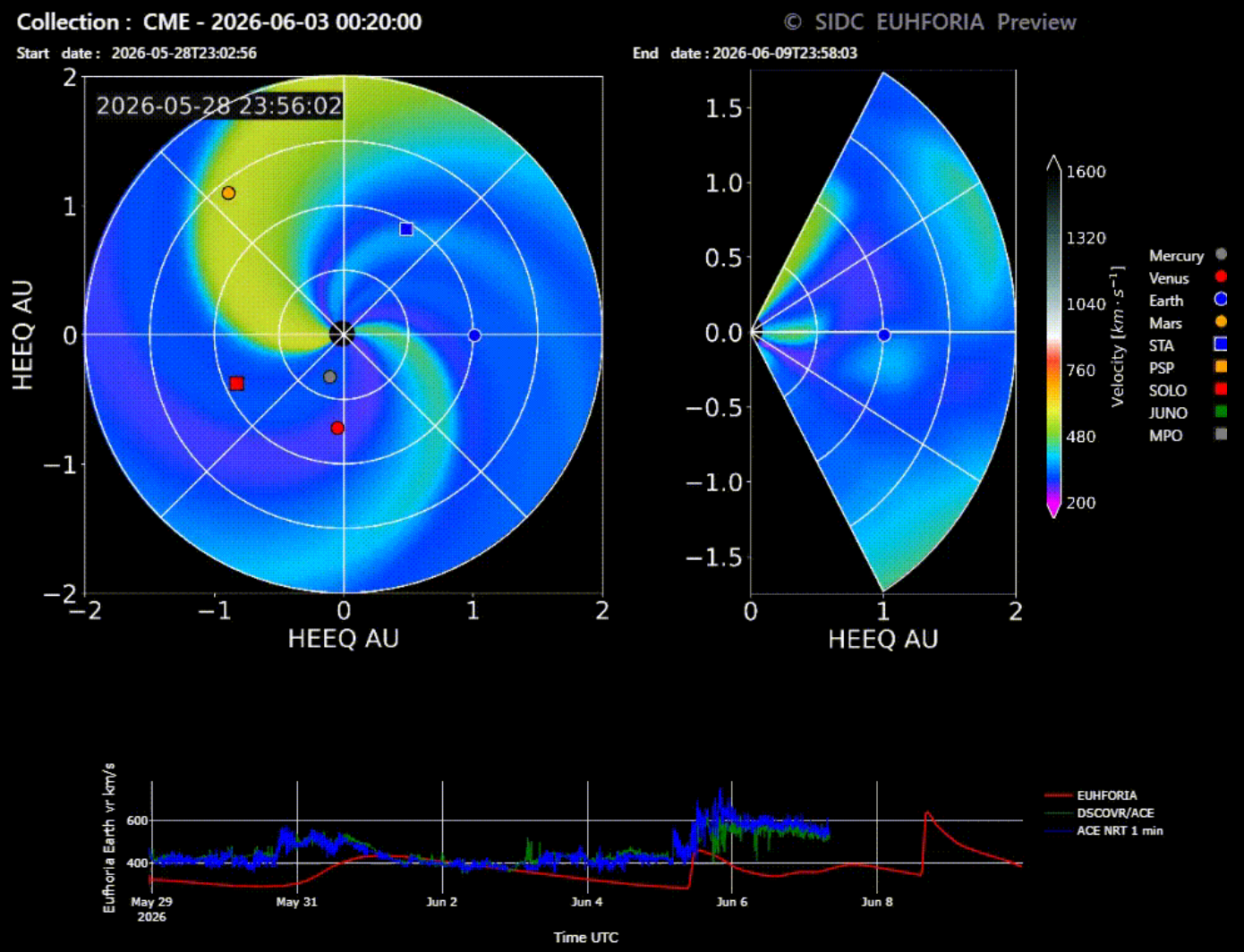
STEREO-A/COR2



- CME to the south-east in STEREO A.

Predicted arrival time on June 08 (2026-06-06 14:00 UTC)

Coronal Mass Ejections Modelling: EUHFORIA



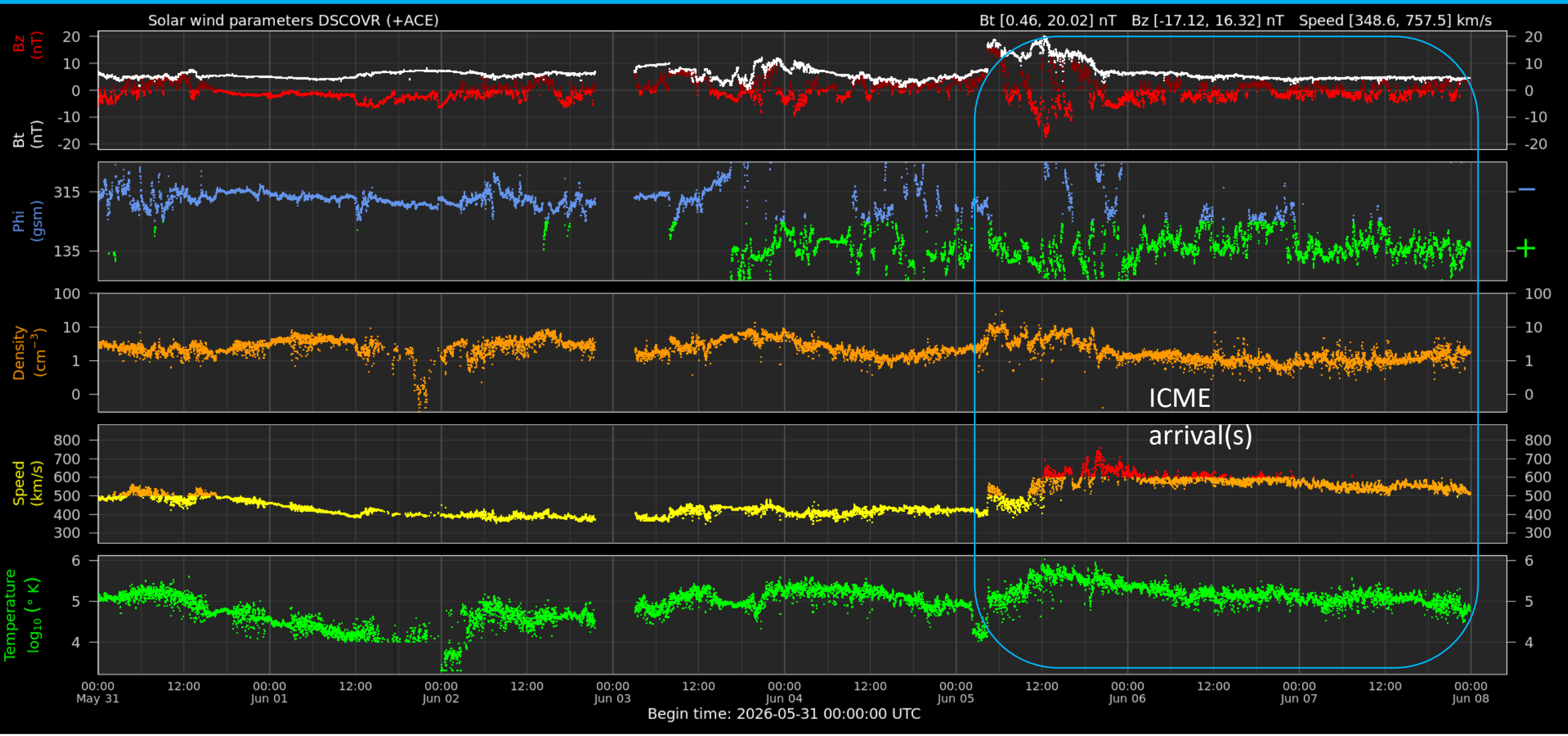
CME 4: Predicted to arrive on June 8 around 14:00 UTC

Solar Wind and Geomagnetic Activity

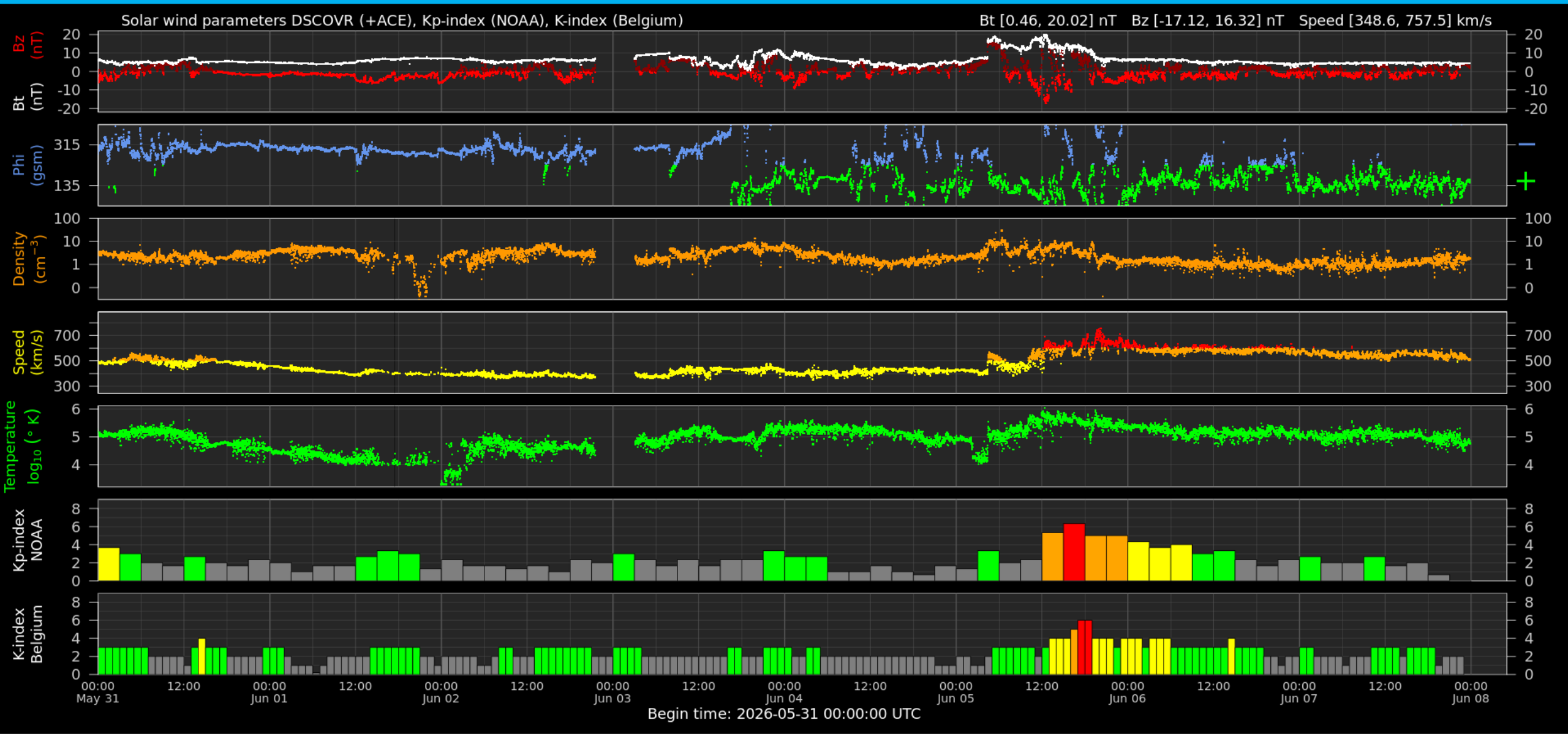
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Solar wind parameters



Solar wind parameters & K-indices



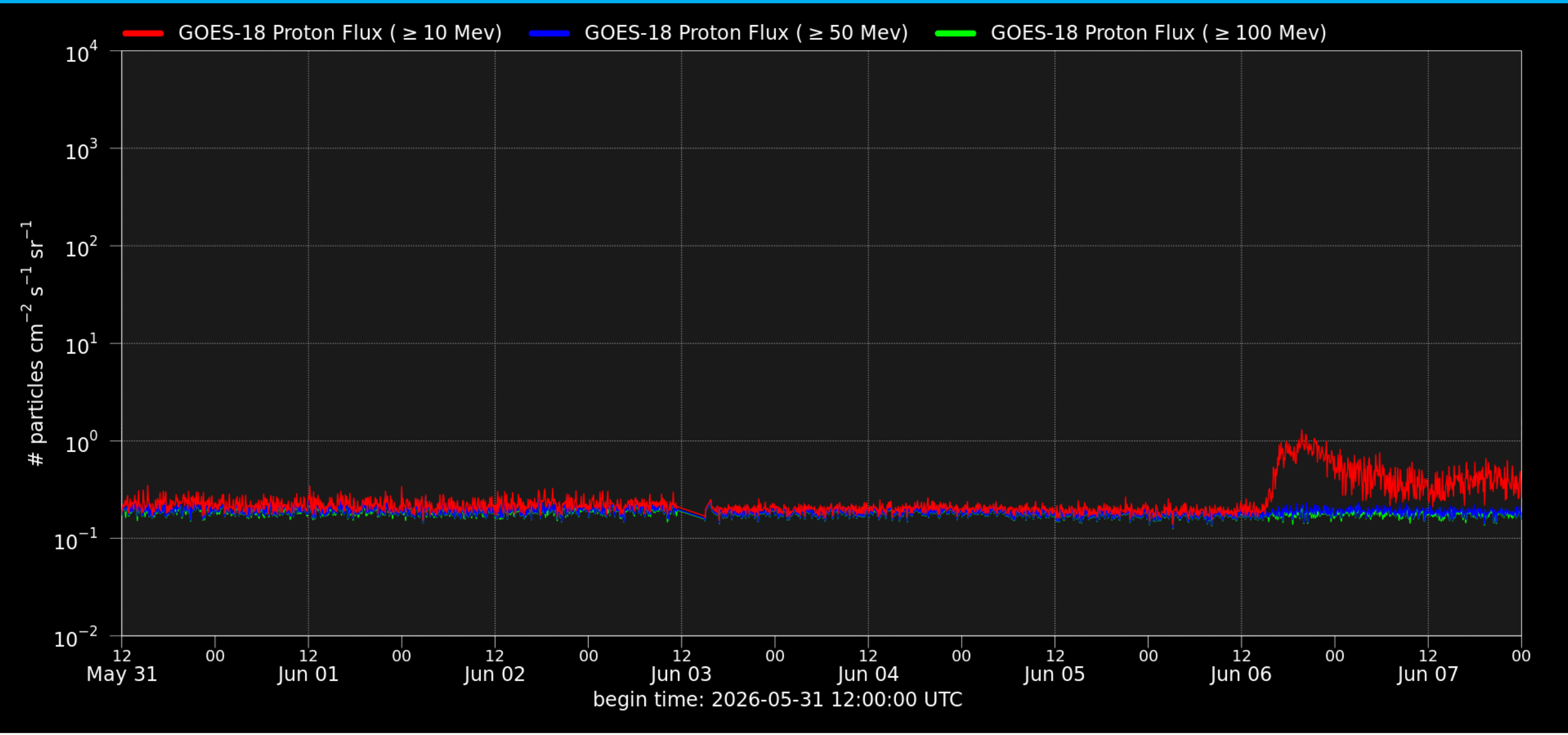
Energetic Particles



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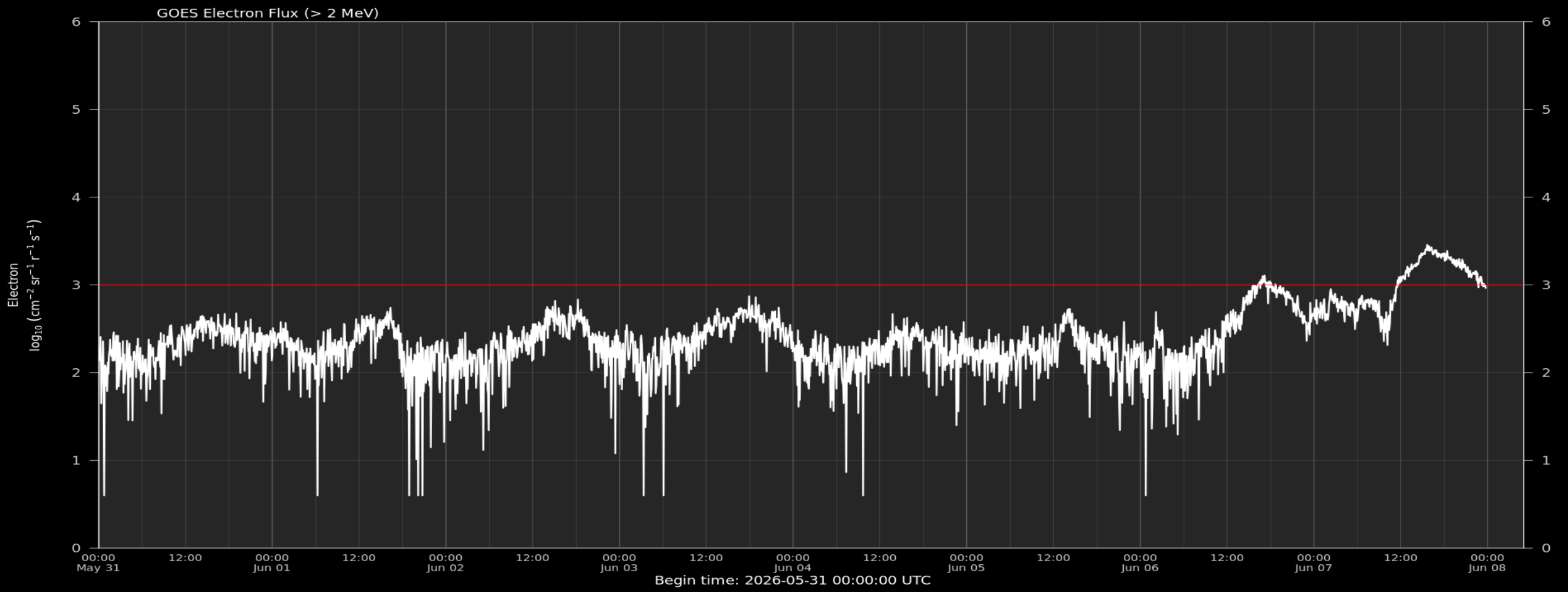
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

www.spaceweather.gc.ca/forecast-prevision/space-spatiale/sffl-en.php

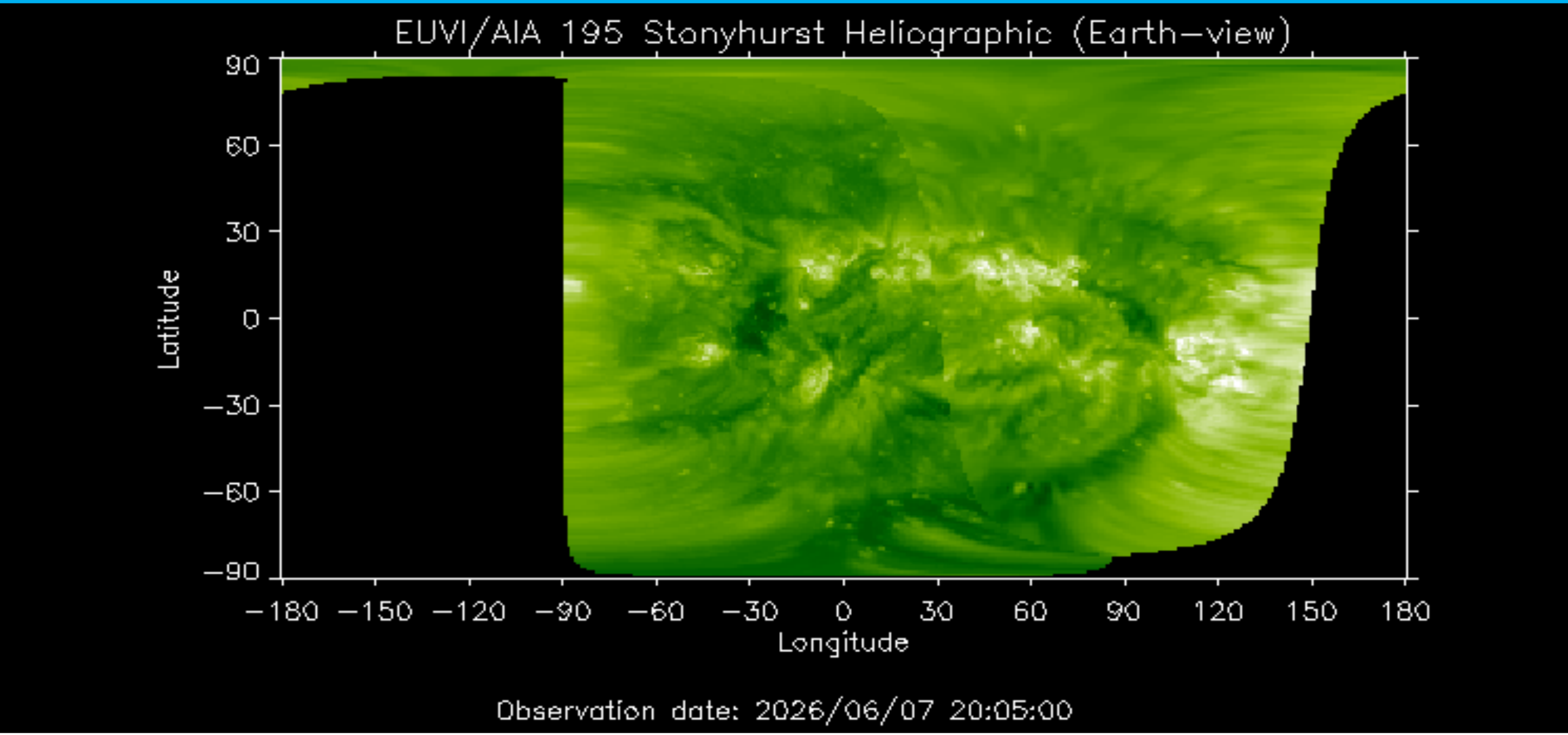


Outlook

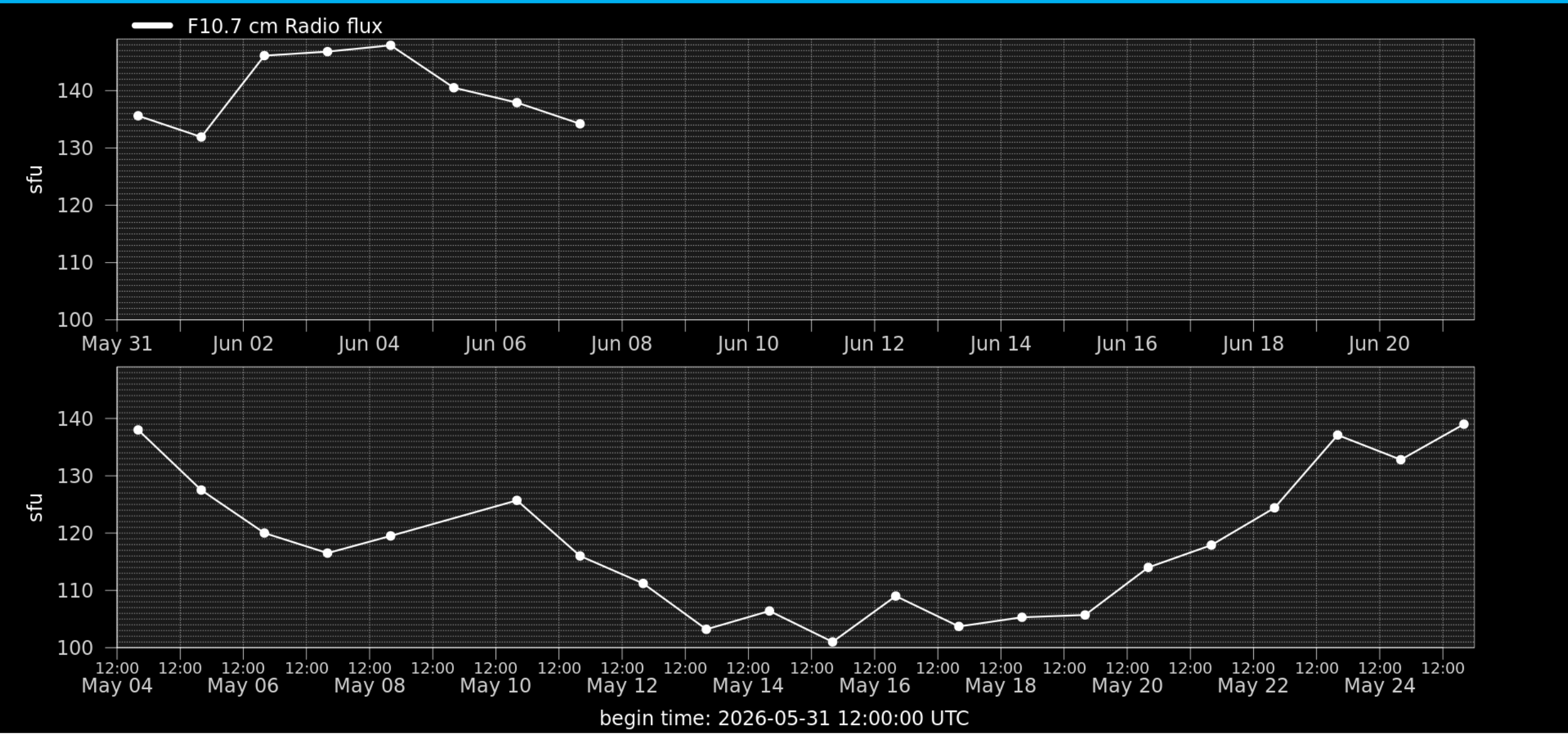
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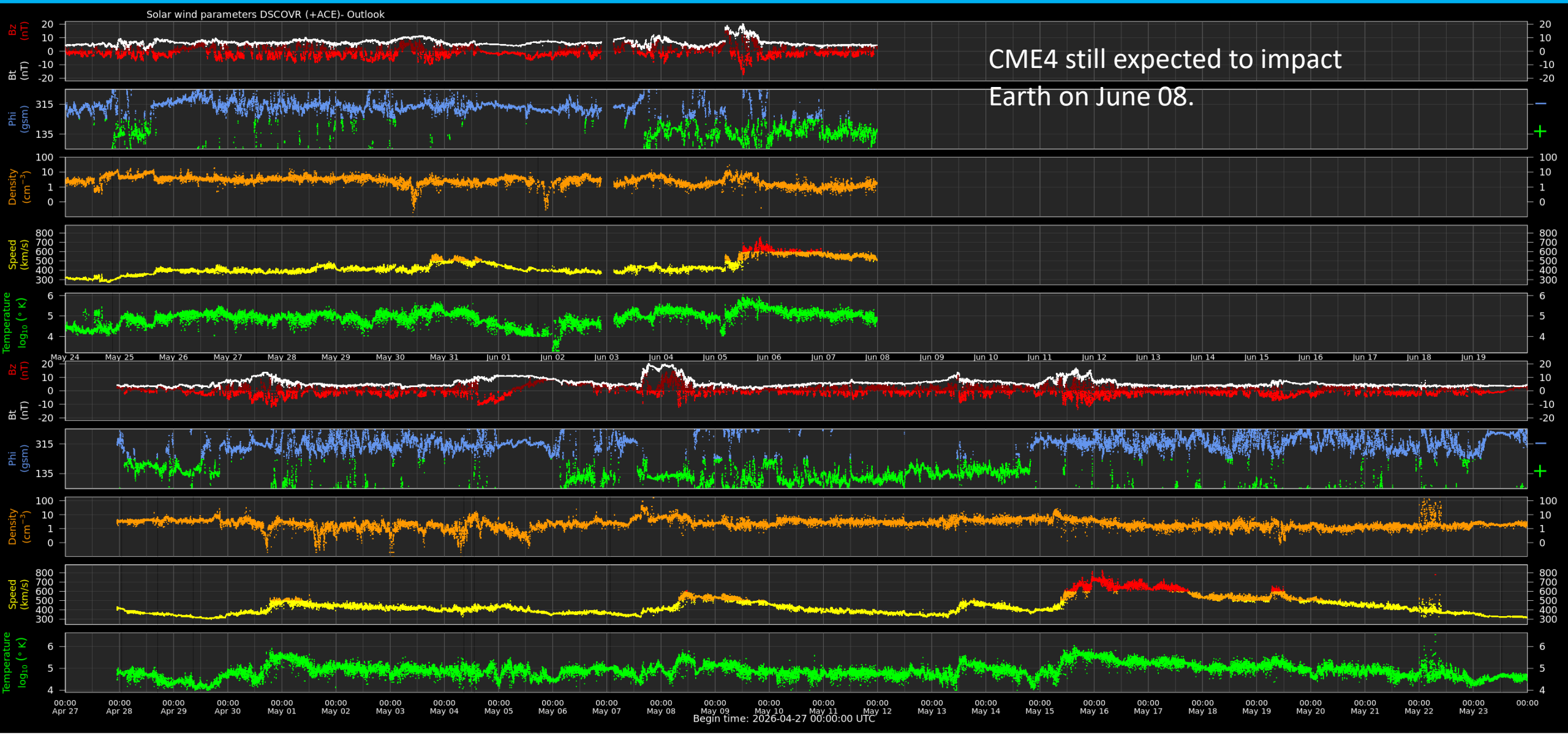
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux

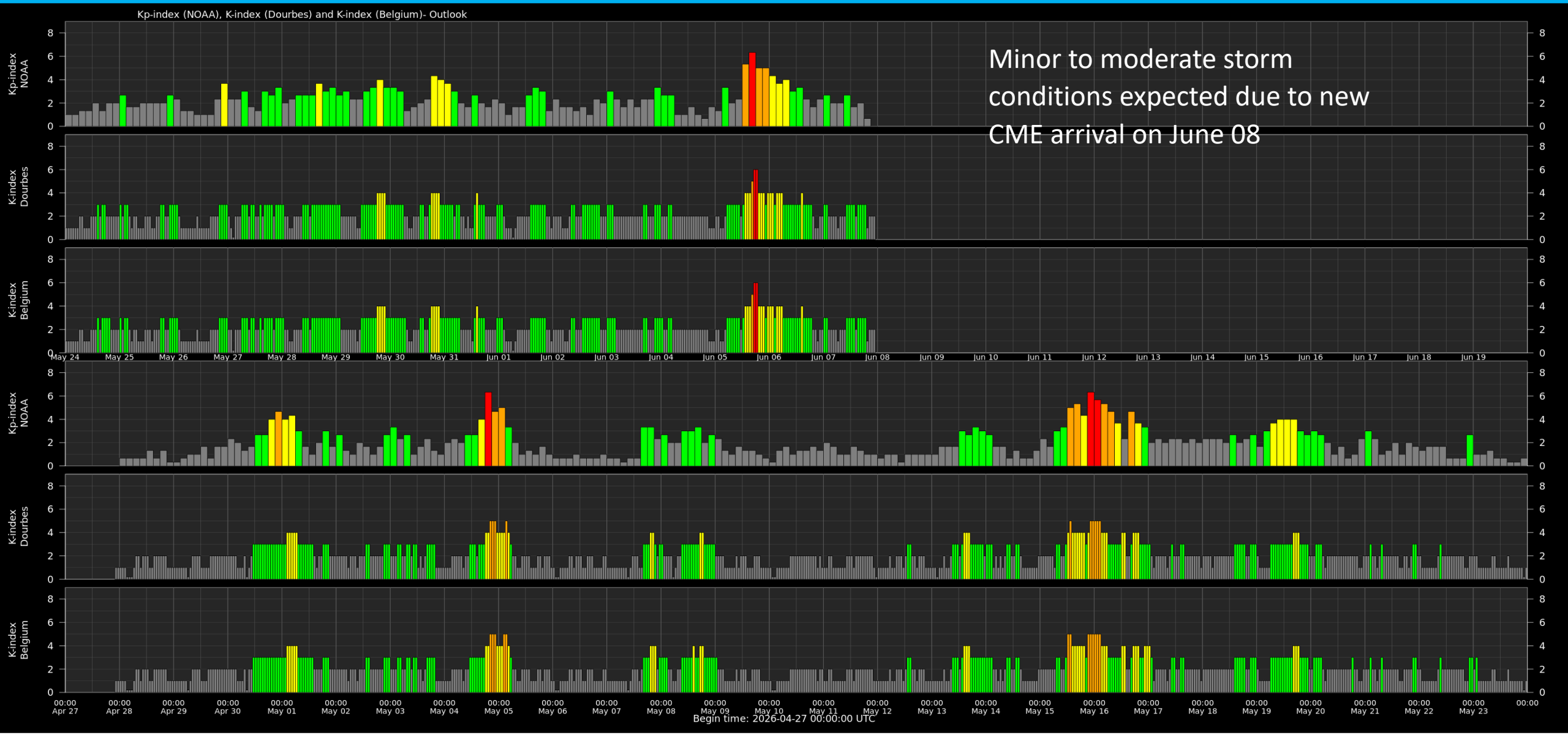


Outlook: Solar wind parameters



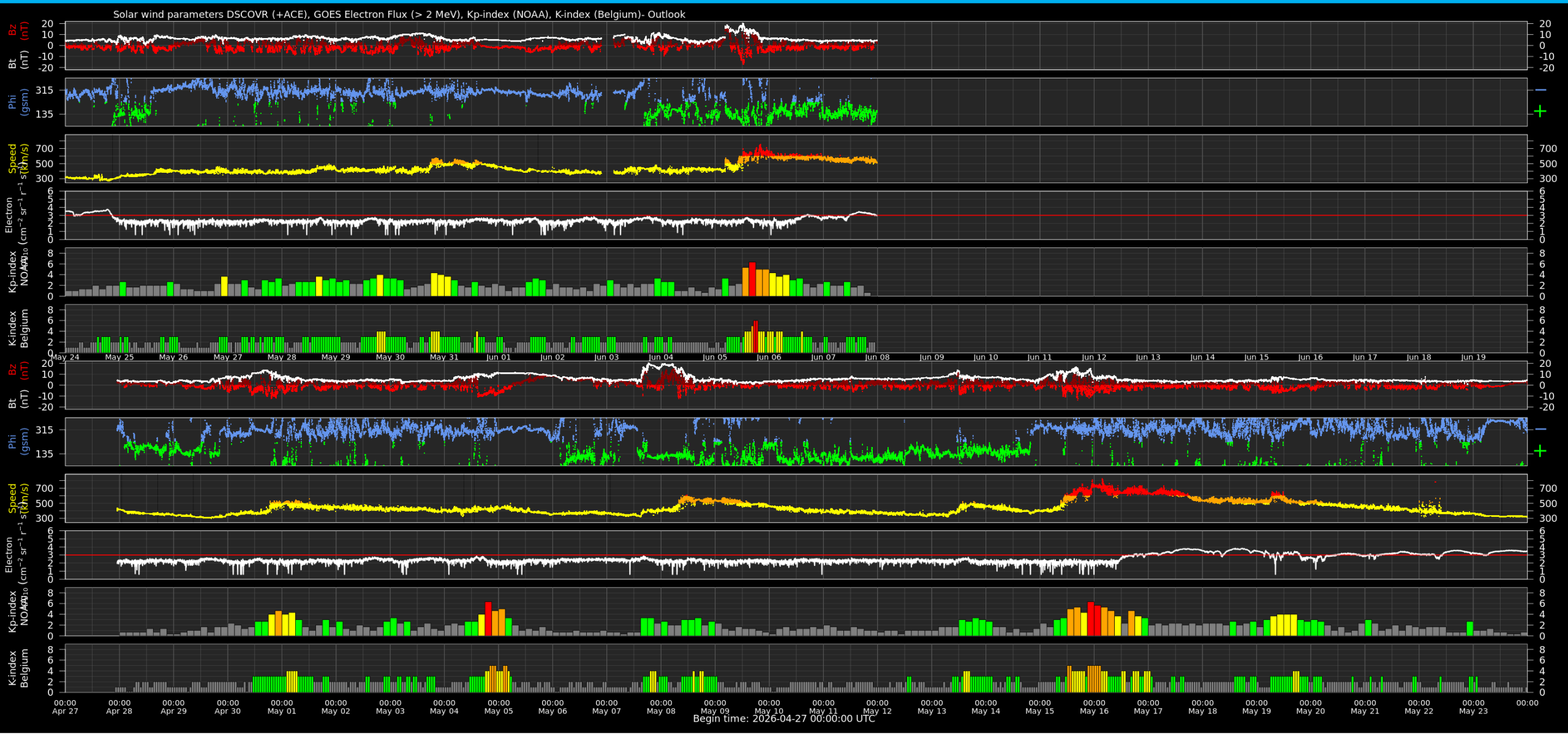
CME4 still expected to impact Earth on June 08.

Outlook: Geomagnetic activity



Minor to moderate storm conditions expected due to new CME arrival on June 08

Outlook: Electron Flux at GEO Outlook



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Pecasus related events

PECASUS is MOC (Maintenance Observation centre)

Short wave fadeout (SWF) advisory relating to X1 flare
Post storm depression (PSD) advisories after Kp 6.

SIDC Space Weather Briefing

See you at our next briefing!

Or visit us at www.sidc.be

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