

SIDC Space Weather Briefing

30 March-06 April 2025

Daria Shukhobodskaia

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2025-03-30 12:00 to 2025-04-06 23:59

Active regions	15 Active Regions NOAA AR 4041, 4043 – 4056
Flares	# C-class flare: 77 # M-class flare: 9 # X-class flare: 0
Coronal Holes	CH- HSS effecting Earth since late on Apr 03
CMEs	No Earth directed CMEs

Proton flux	Proton flux above 10 pfu threshold between 02:40 UTC on March 31 and 10:35 UTC on Apr 02
Electron flux	Exceeded 1000pfu threshold

Solar wind and geomagnetic conditions

ICMEs	10:16UTC on March 31 and 17:29 UTC on Apr 01 (possible sources 15:24UTC, March 28 and 04:23UTC, March 27)
Solar wind conditions	B : 5 - 14 nT //Bz: -12.3 nT to 10.44 nT //Speed: 300 – 750 km/s
Geomagnetic conditions	max KBel: 5.0, max Kp(NOAA): 5.67, Moderate Storm conditions

All Quiet Alert: Not all quiet

Solar Activity

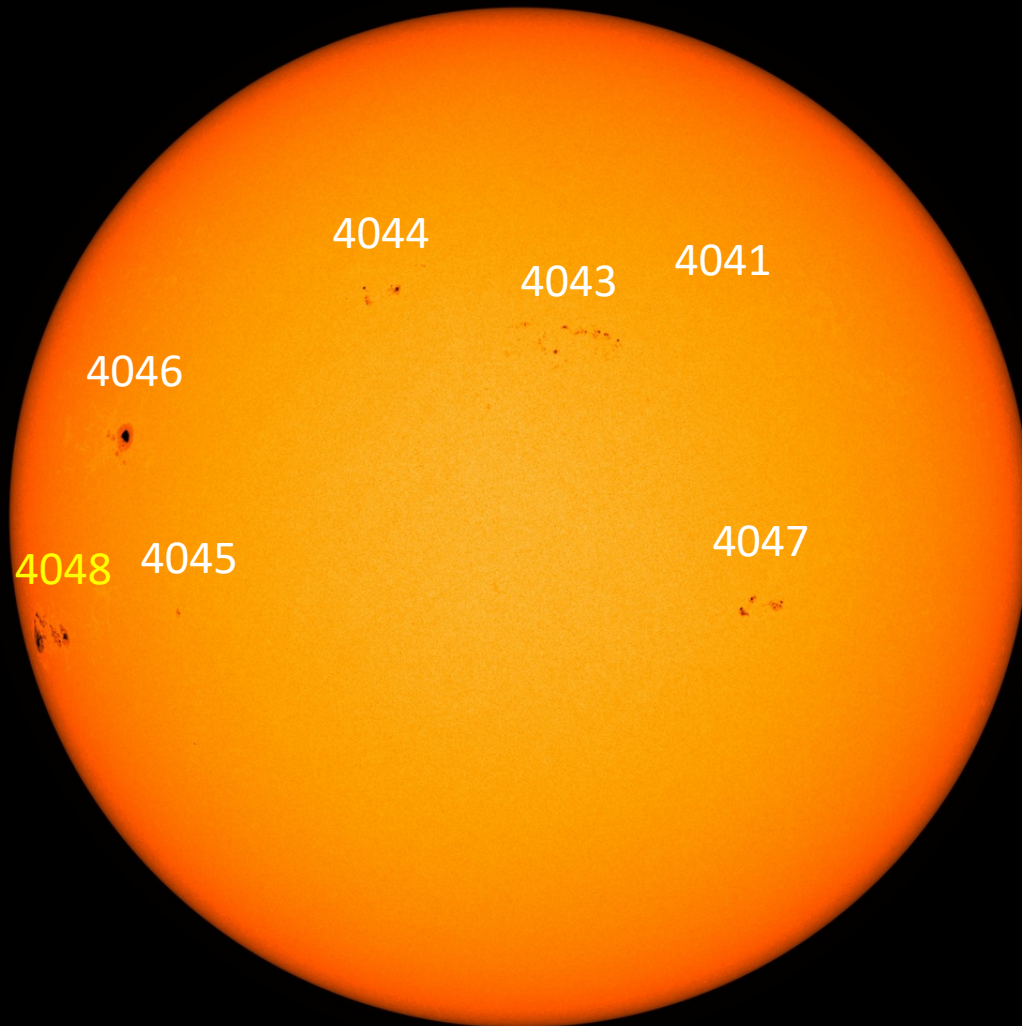


Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

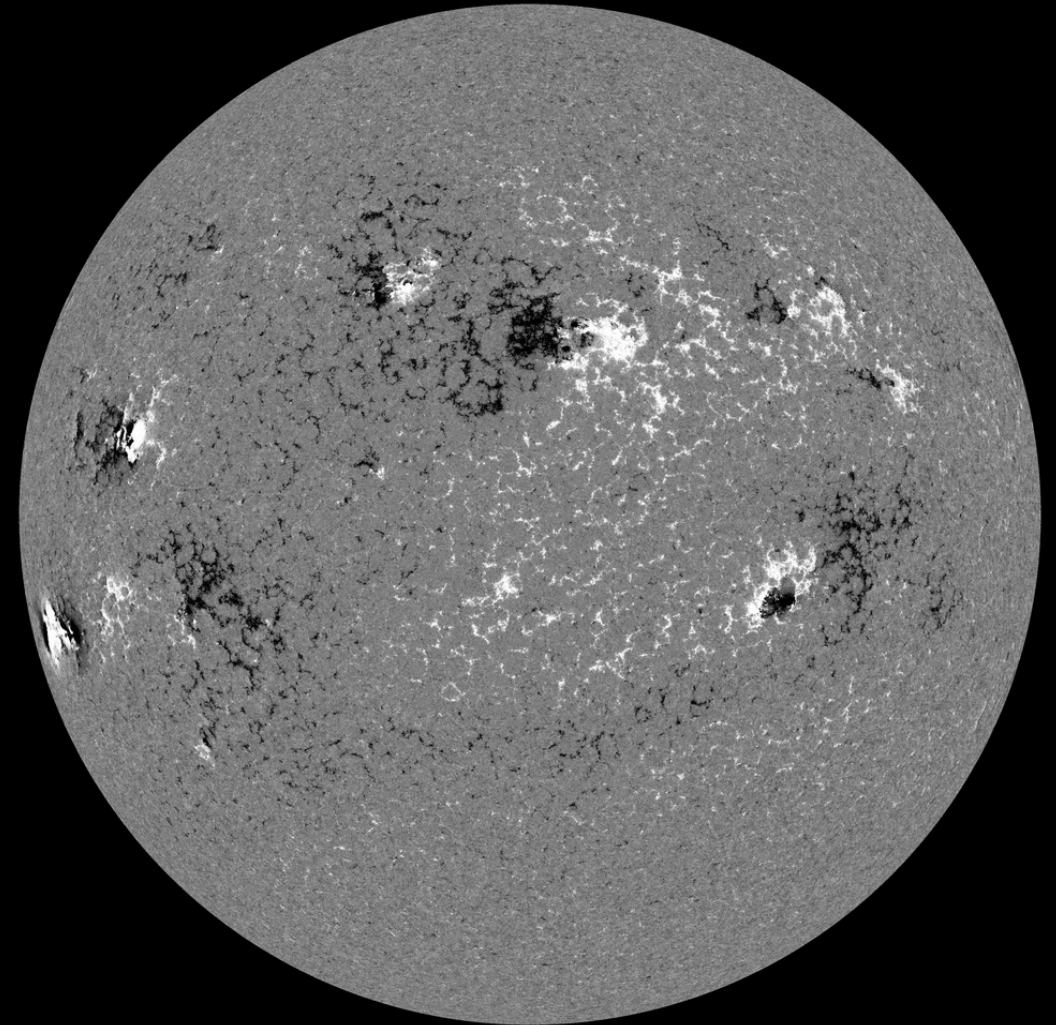
Solar active regions

SDO/HMI White Light 2025-03-30



SDO/HMI Quick-Look Continuum: 20250330_114500

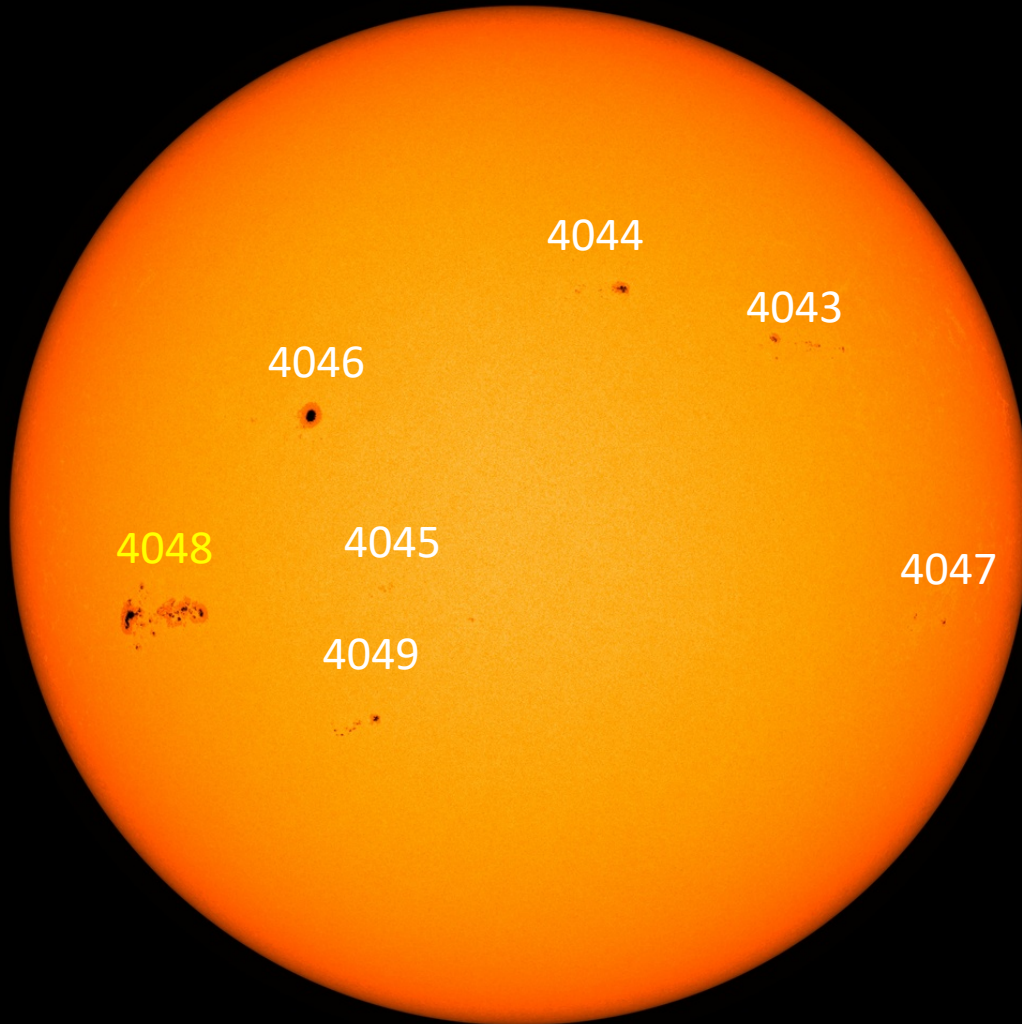
SDO/HMI Magnetogram 2025-03-30



SDO/HMI Quick-Look Magnetogram: 20250330_114500

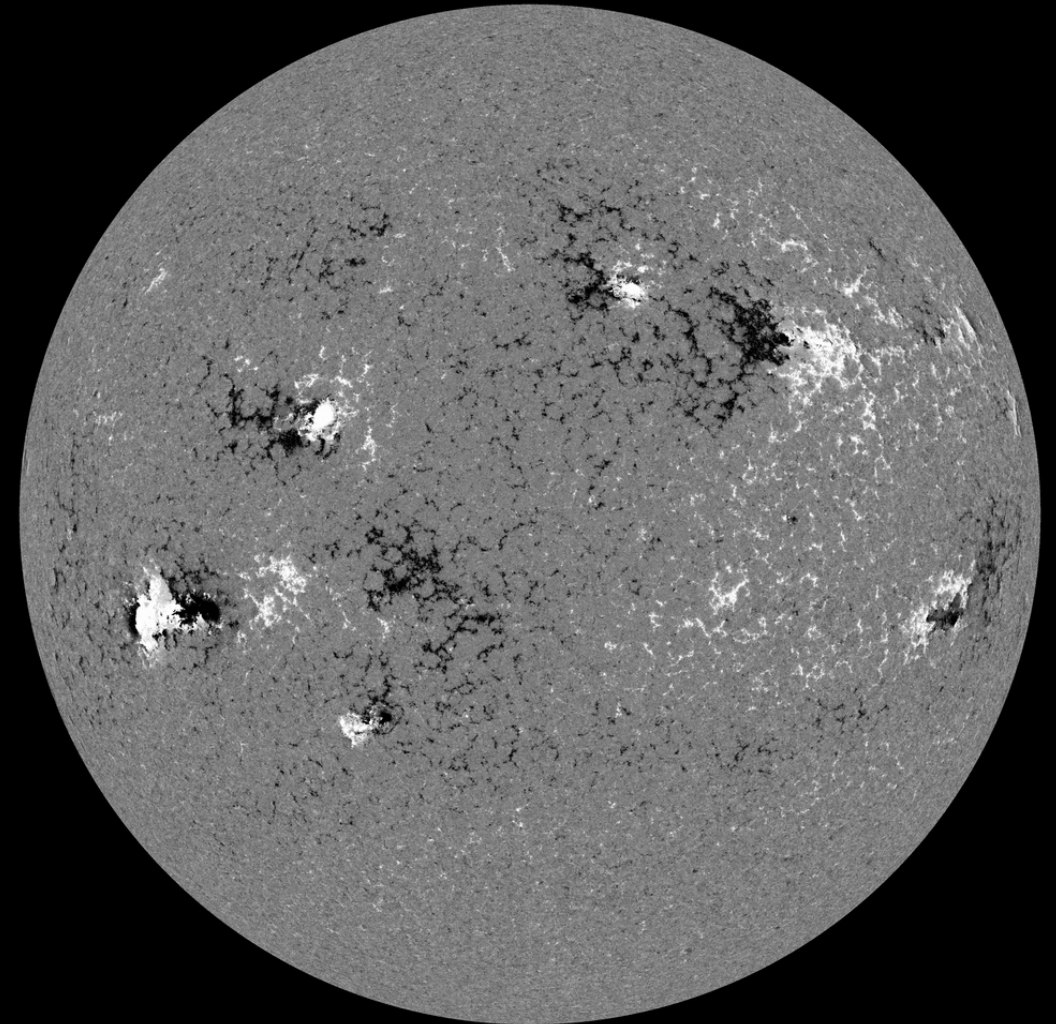
Solar active regions

SDO/HMI White Light 2025-04-01



SDO/HMI Quick-Look Continuum: 20250401_114500

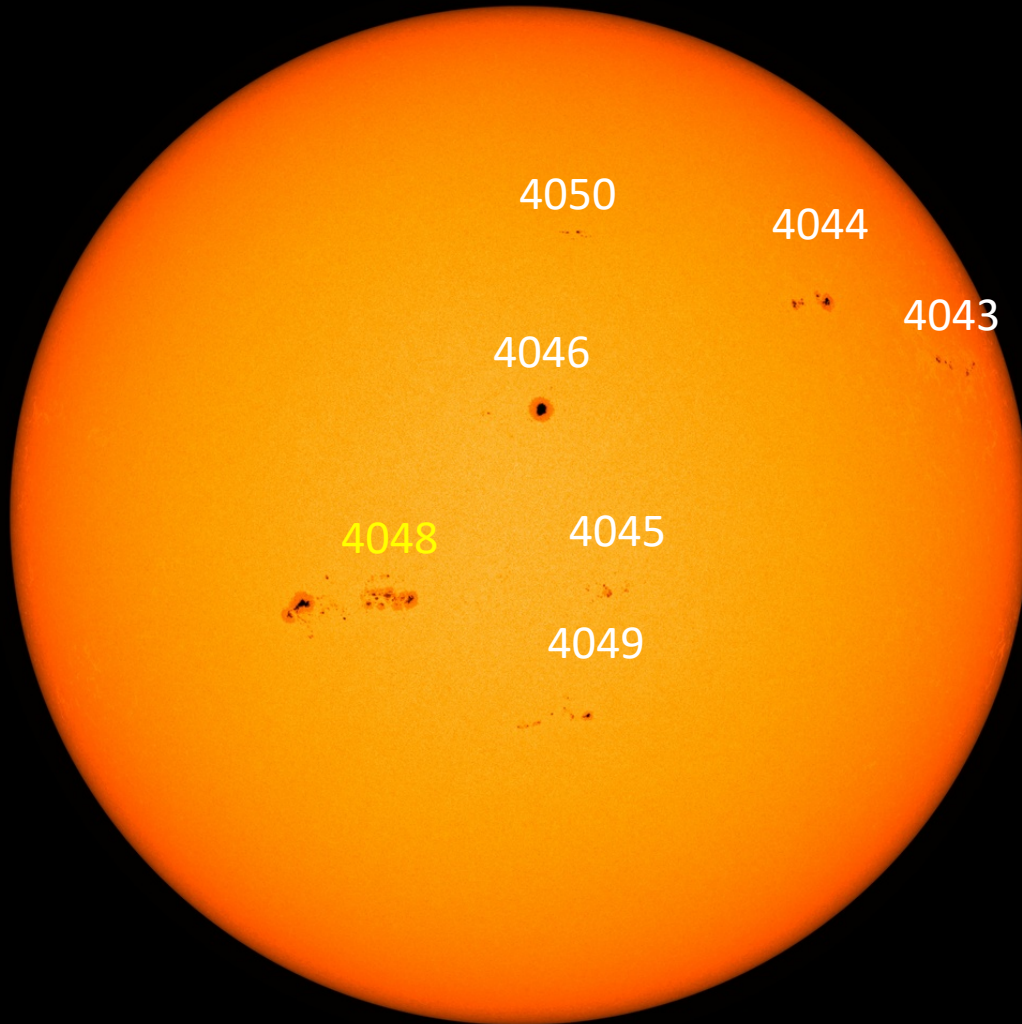
SDO/HMI Magnetogram 2025-04-01



SDO/HMI Quick-Look Magnetogram: 20250401_114500

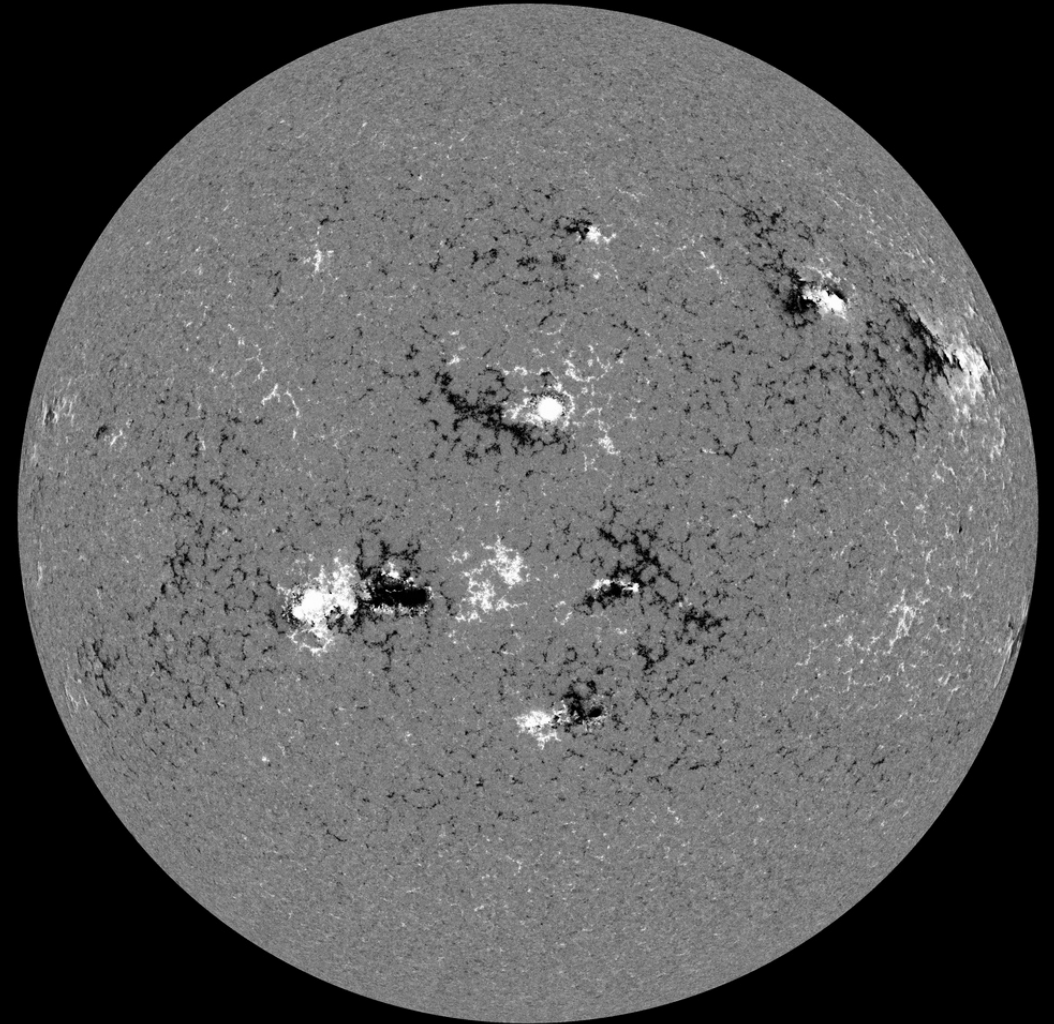
Solar active regions

SDO/HMI White Light 2025-04-03



SDO/HMI Quick-Look Continuum: 20250403_114500

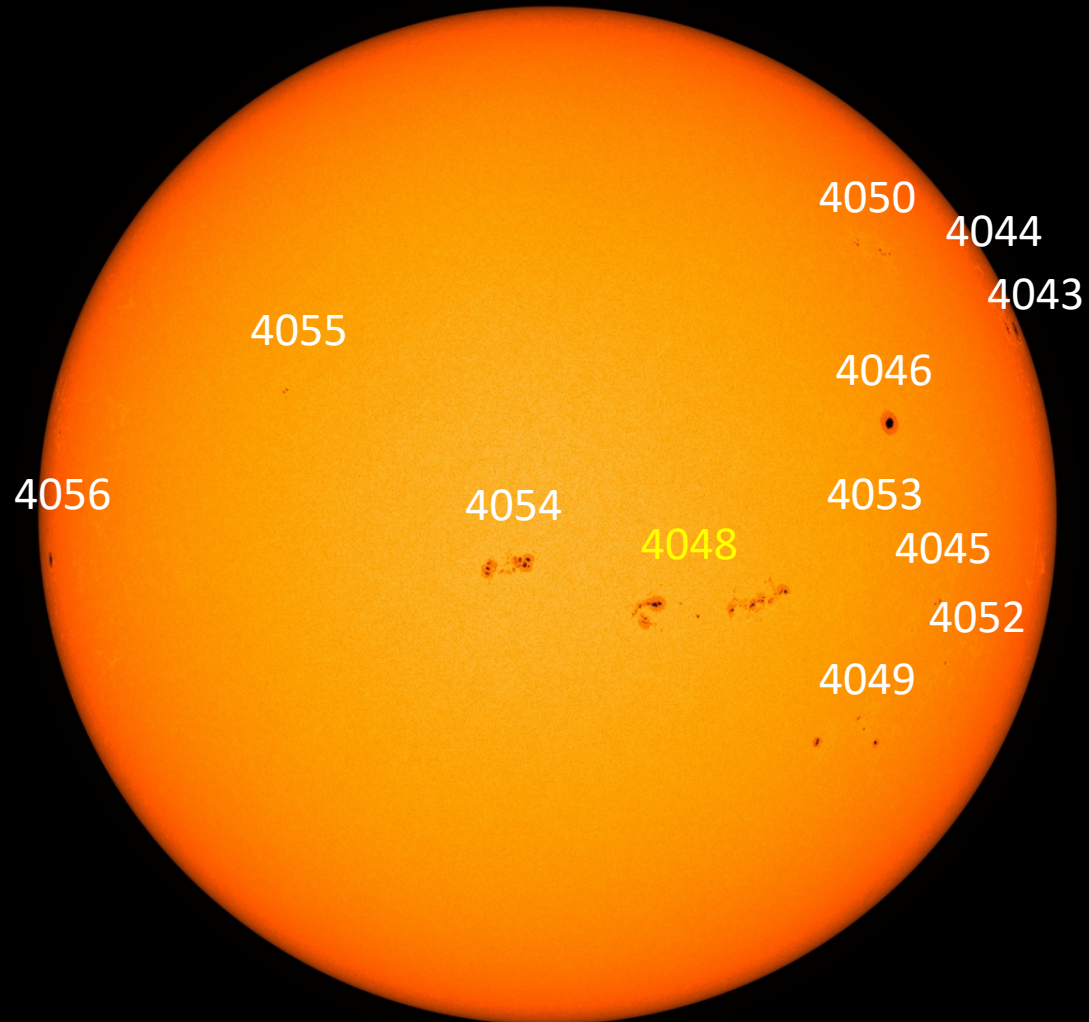
SDO/HMI Magnetogram 2025-04-03



SDO/HMI Quick-Look Magnetogram: 20250403_114500

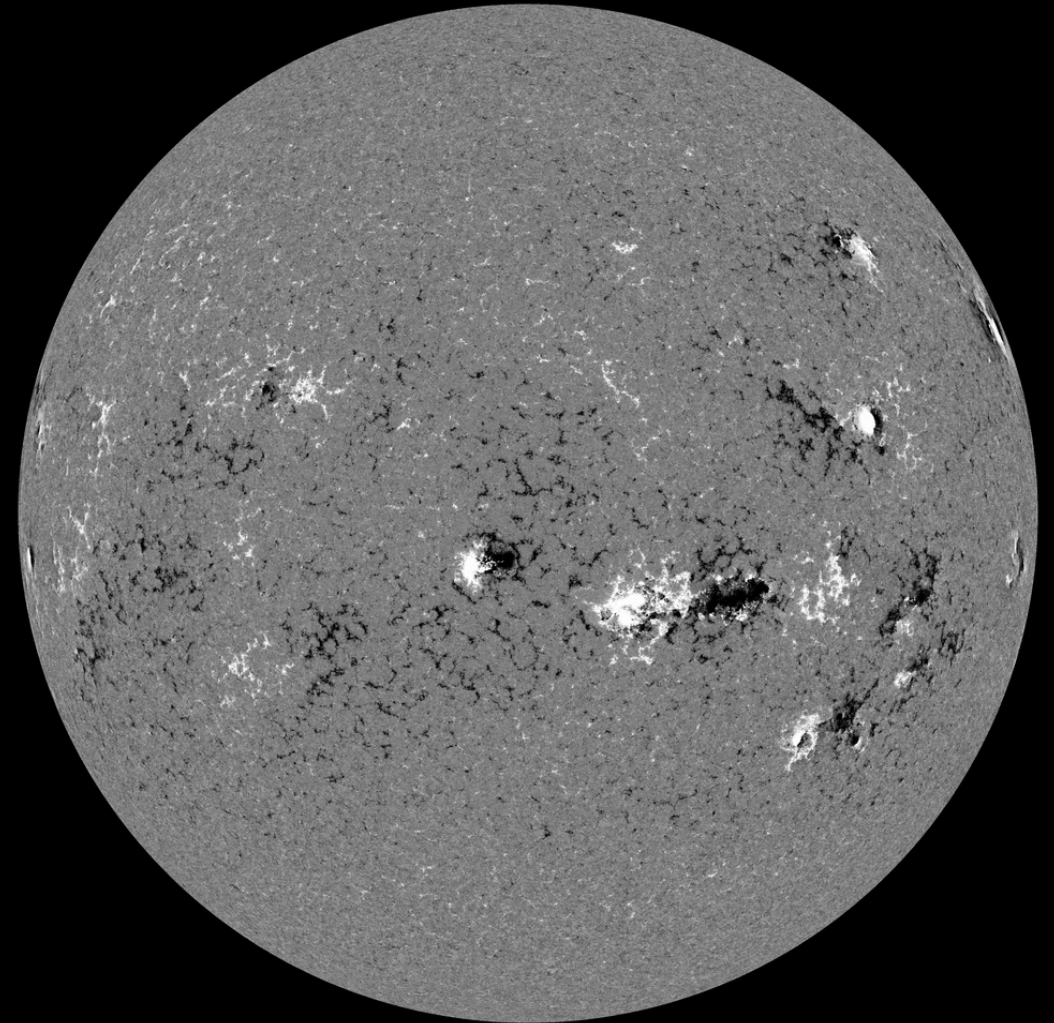
Solar active regions

SDO/HMI White Light 2025-04-06



SDO/HMI Quick-Look Continuum: 20250406_114500

SDO/HMI Magnetogram 2025-04-06

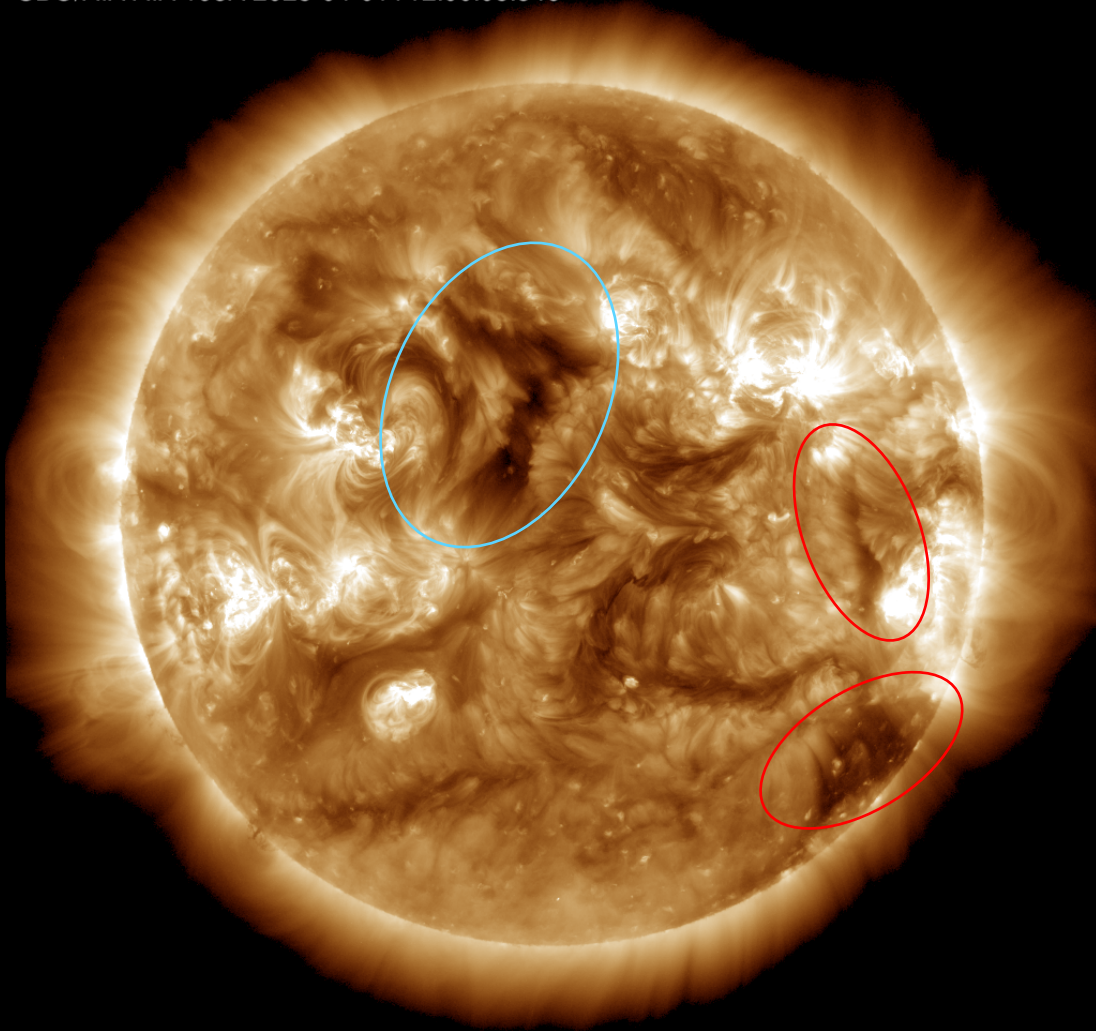


SDO/HMI Quick-Look Magnetogram: 20250406_114500

Coronal holes

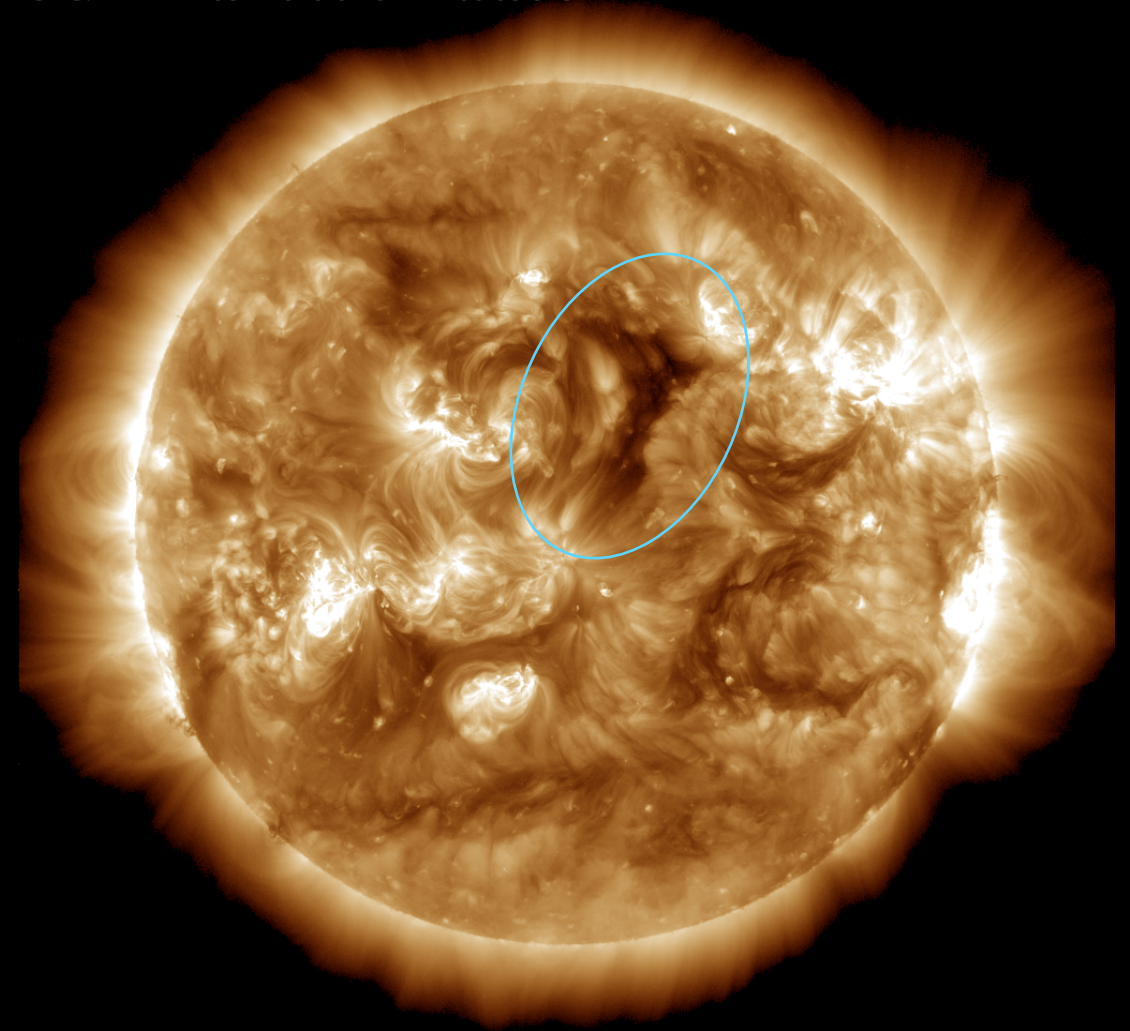
SDO/AIA 19.3 nm 2025-04-01

SDO/AIA AIA 193Å 2025-04-01T12:00:05.846



SDO/AIA 19.3 nm 2025-04-02

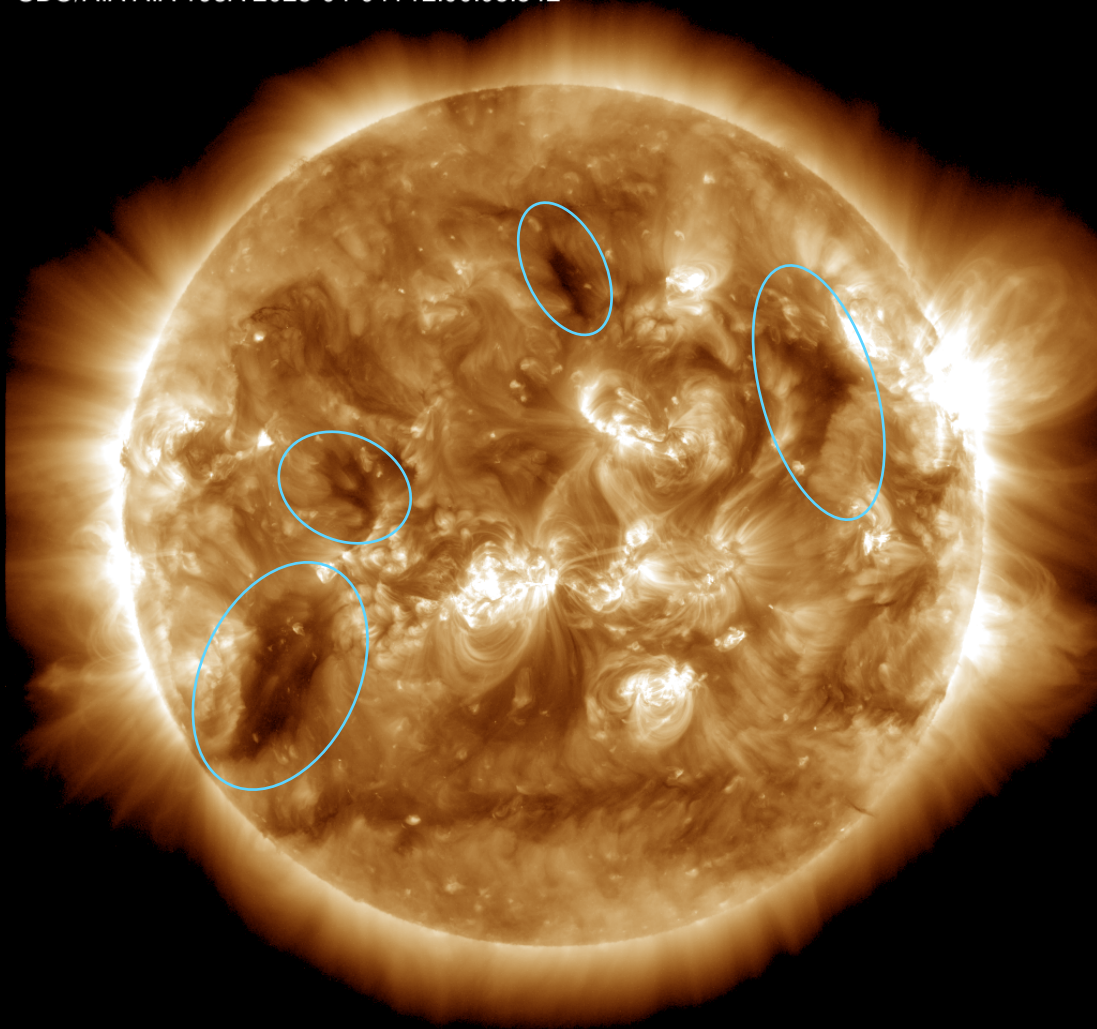
SDO/AIA AIA 193Å 2025-04-02T12:00:05.843



Coronal holes

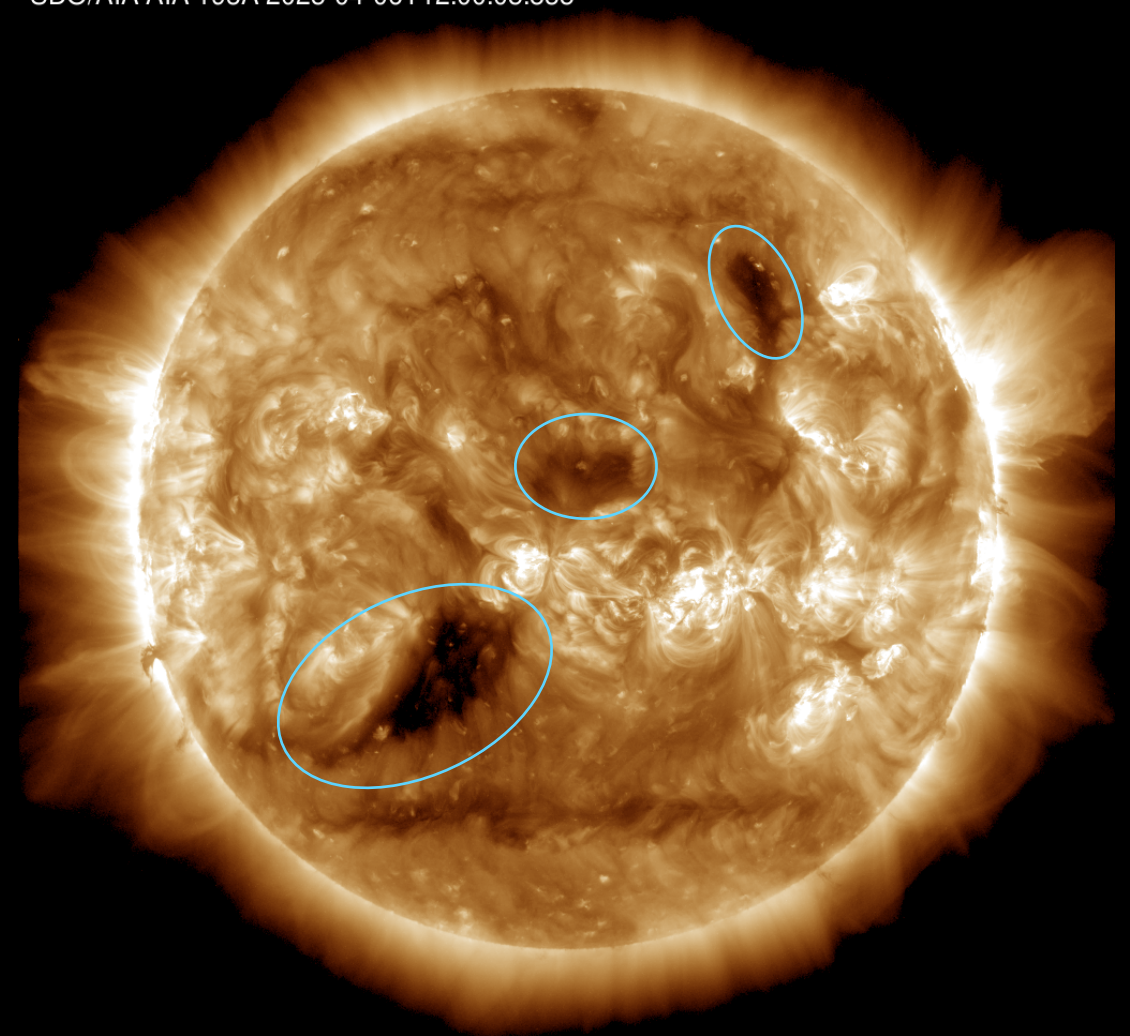
SDO/AIA 19.3 nm 2025-04-04

SDO/AIA AIA 193Å 2025-04-04T12:00:05.842



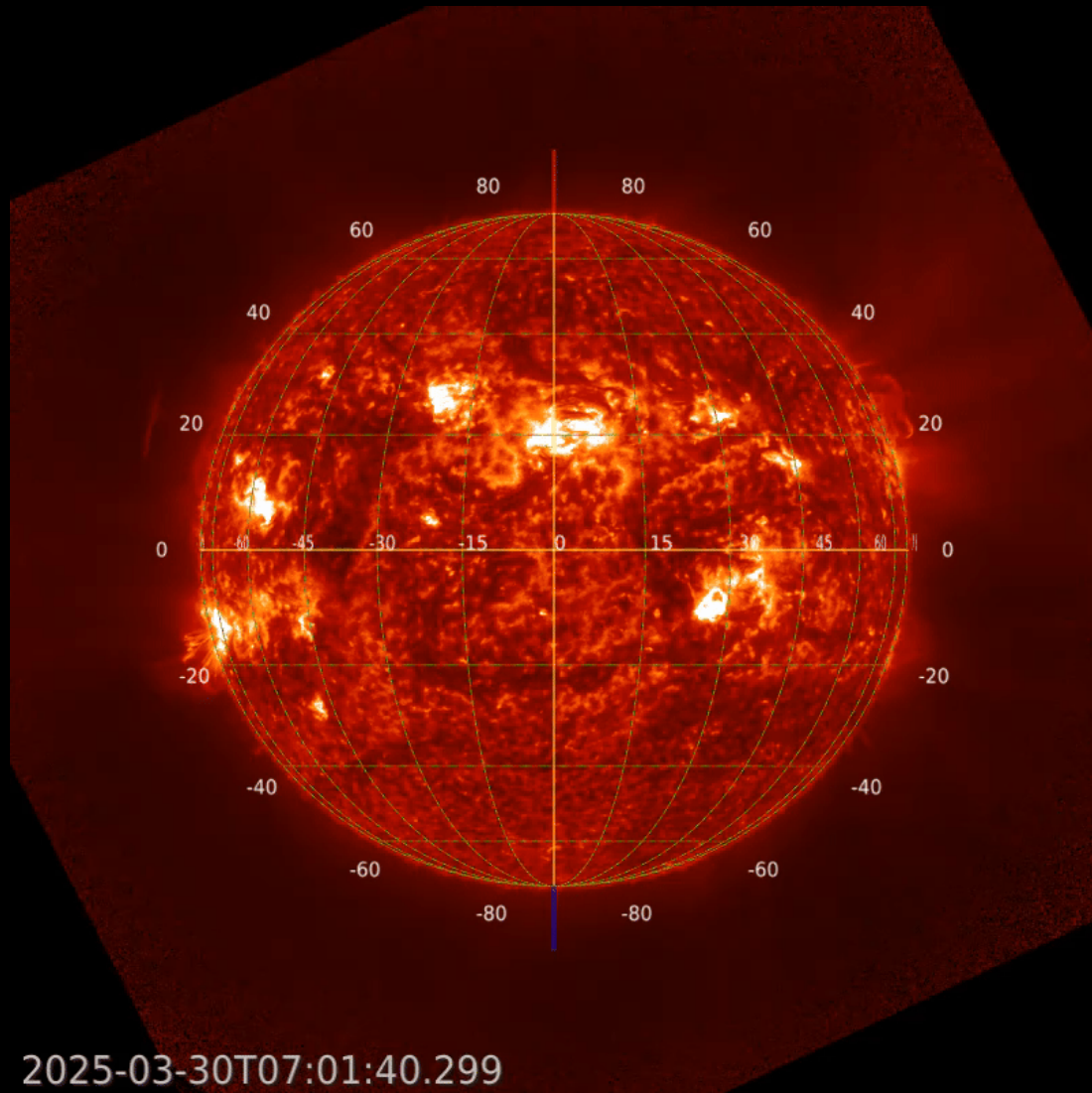
SDO/AIA 19.3 nm 2025-04-06

SDO/AIA AIA 193Å 2025-04-06T12:00:05.835

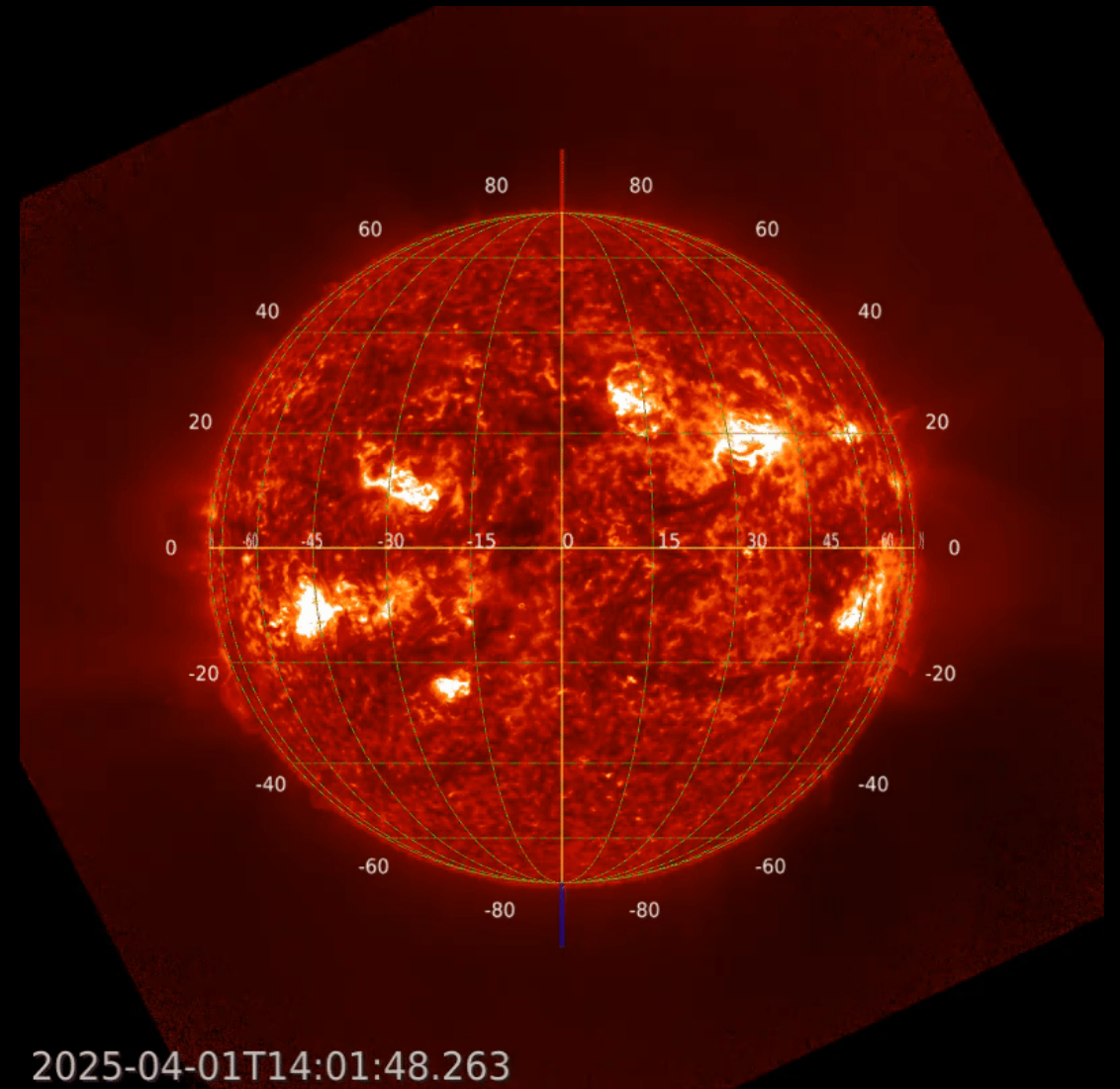


Filaments

GOES/SUVI 30.4 nm 2025-03-30

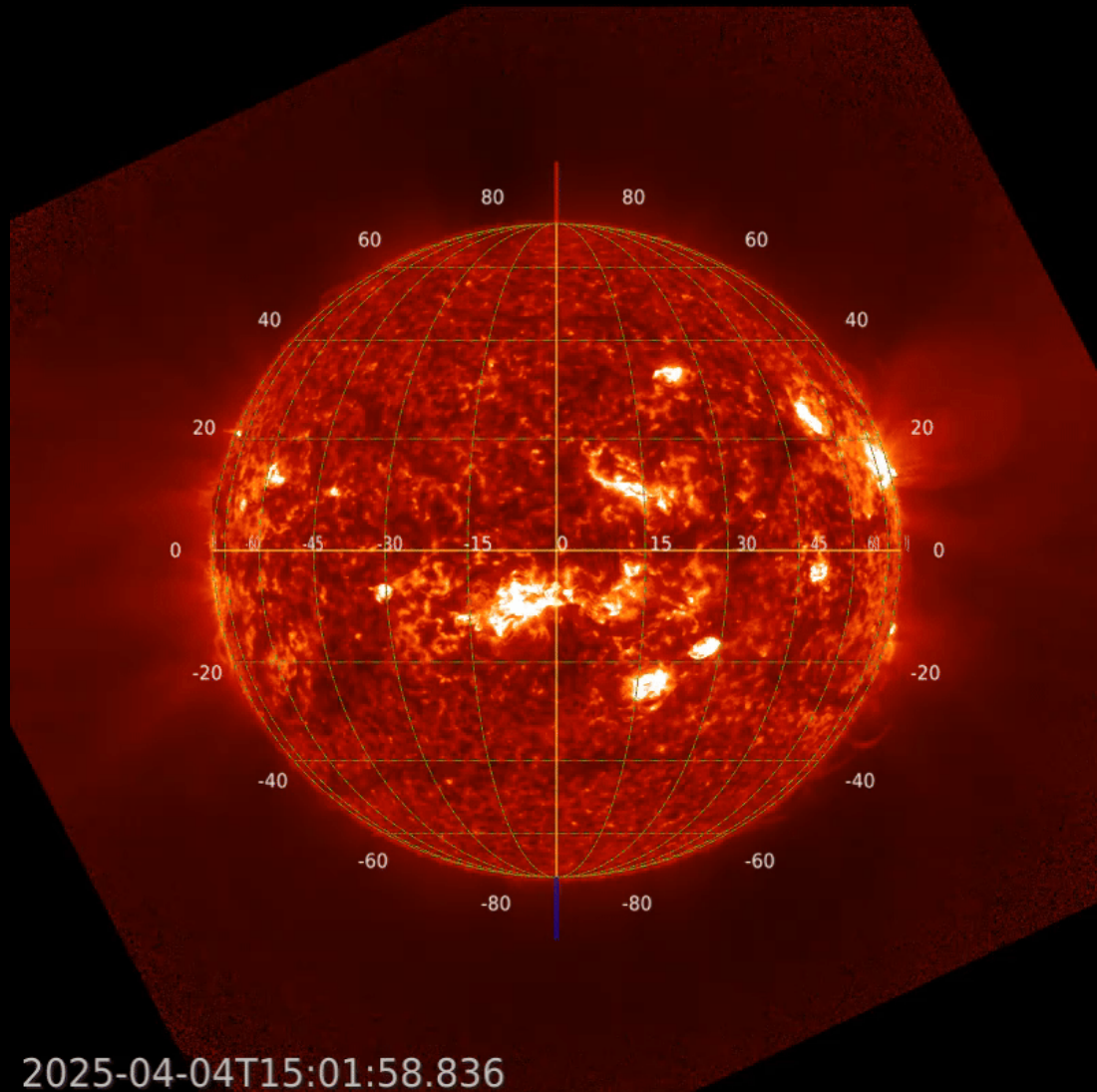


GOES/SUVI 30.4 nm 2025-04-01

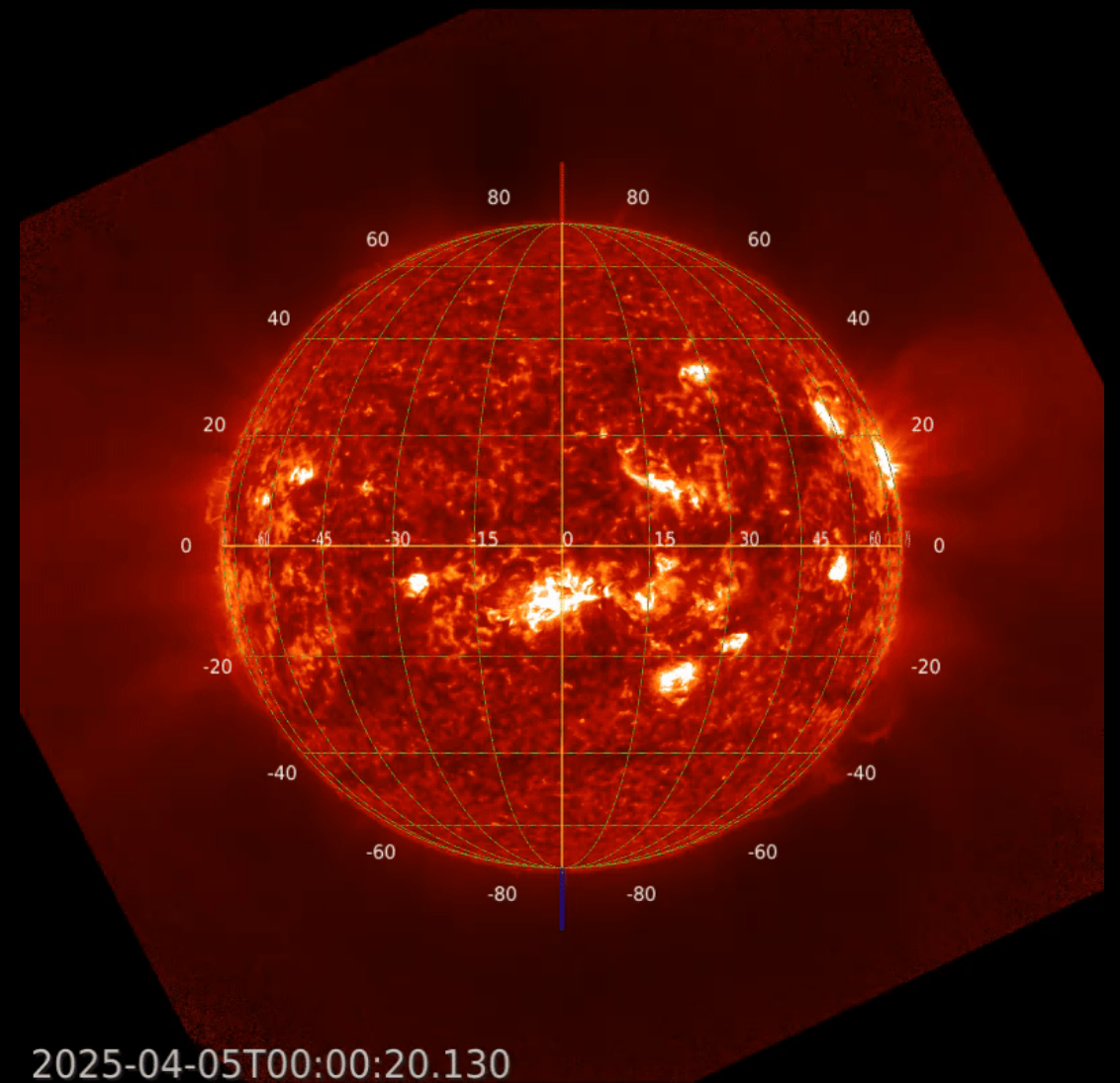


Filaments

GOES/SUVI 30.4 nm 2025-04-04

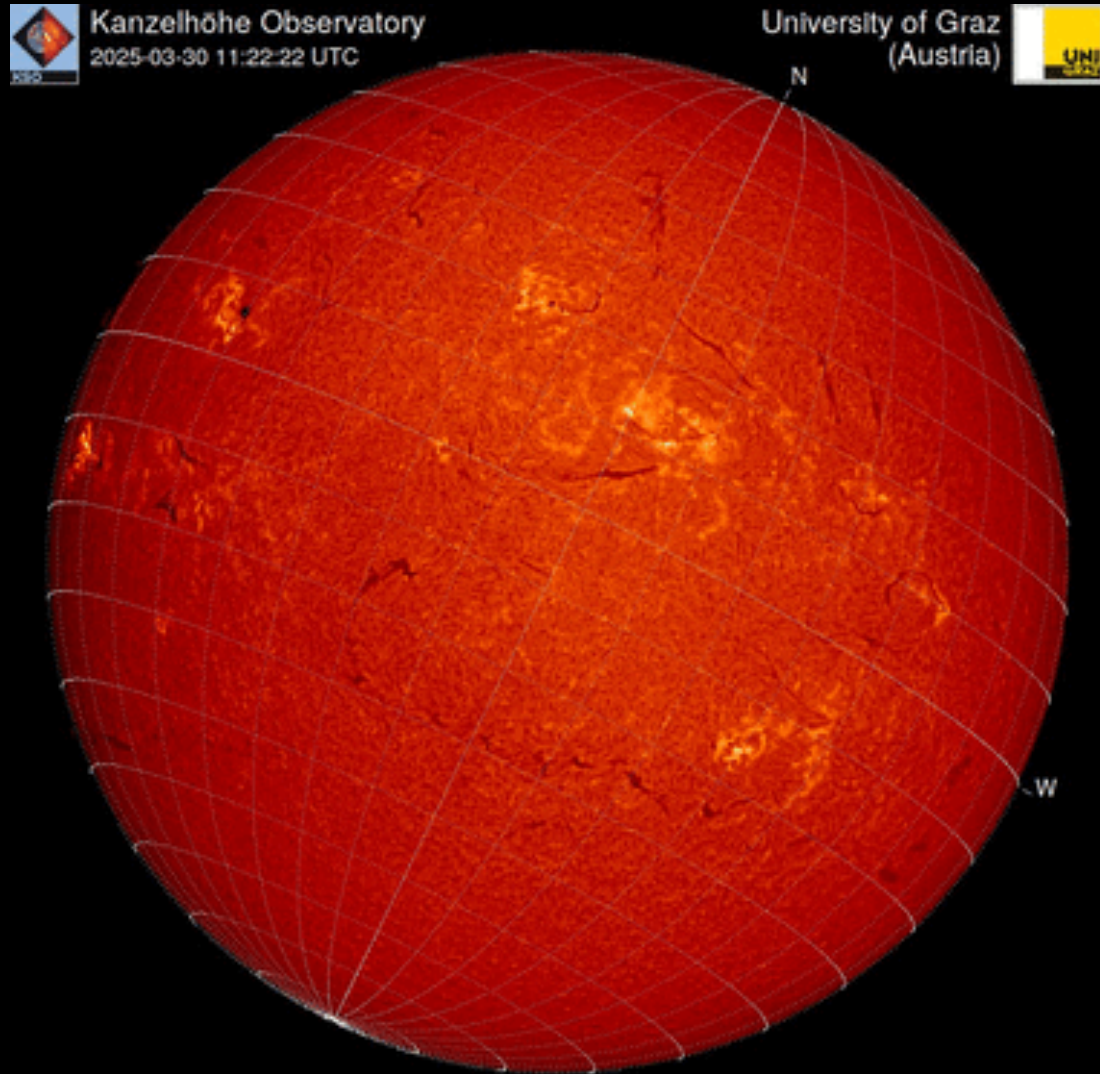


GOES/SUVI 30.4 nm 2025-04-05

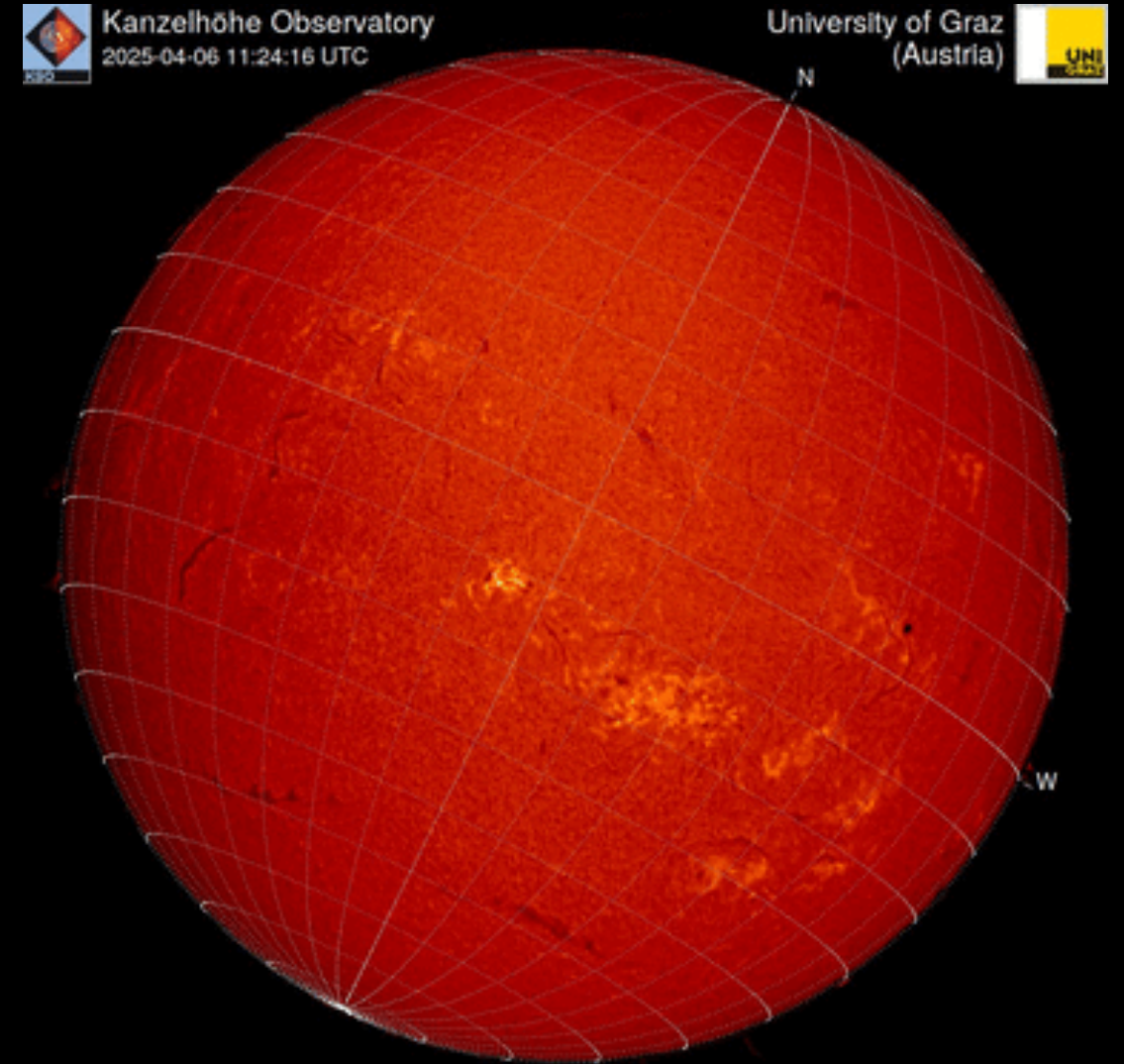


Filaments & Filament eruptions

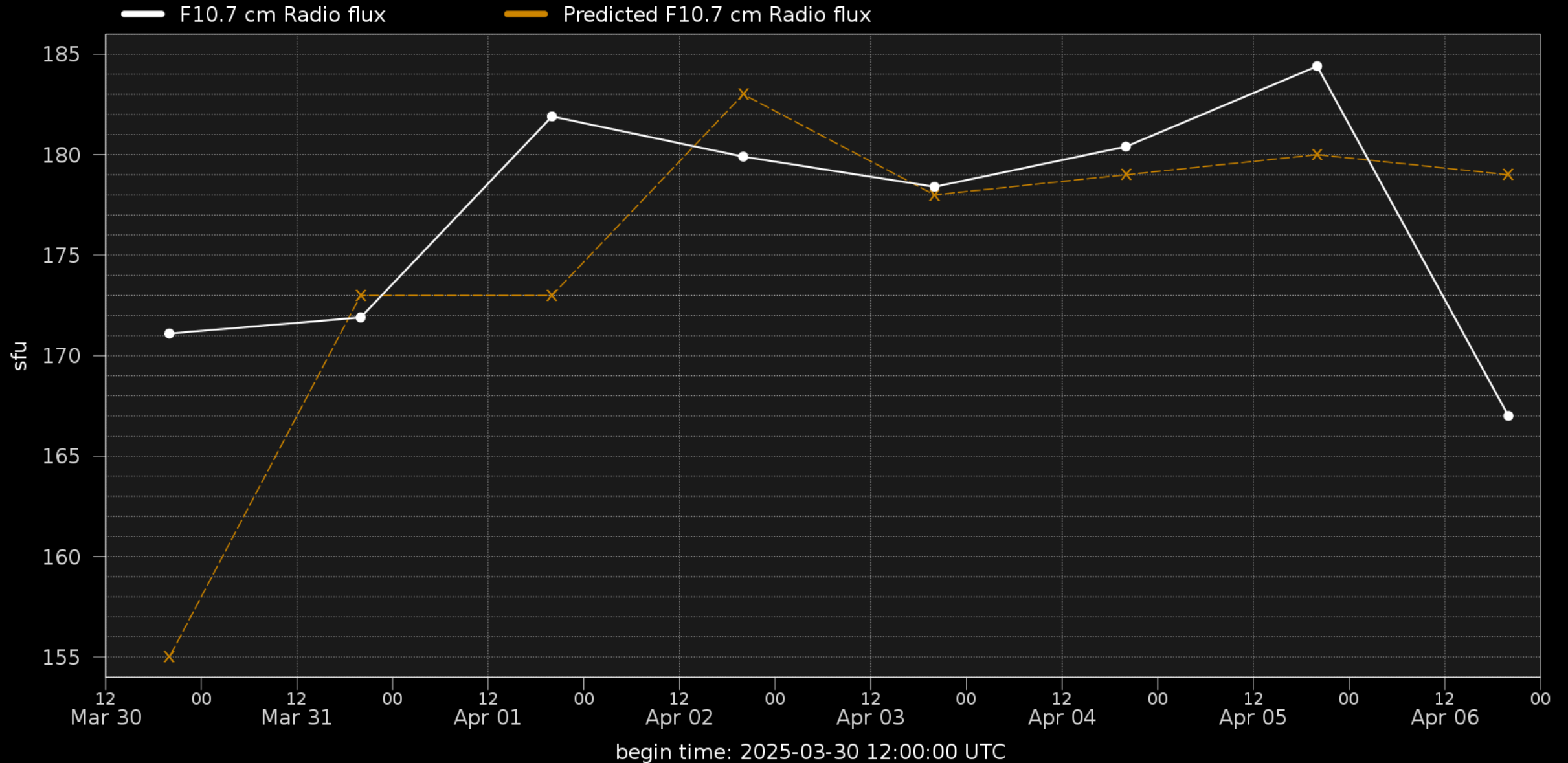
H-alpha 2025-03-30



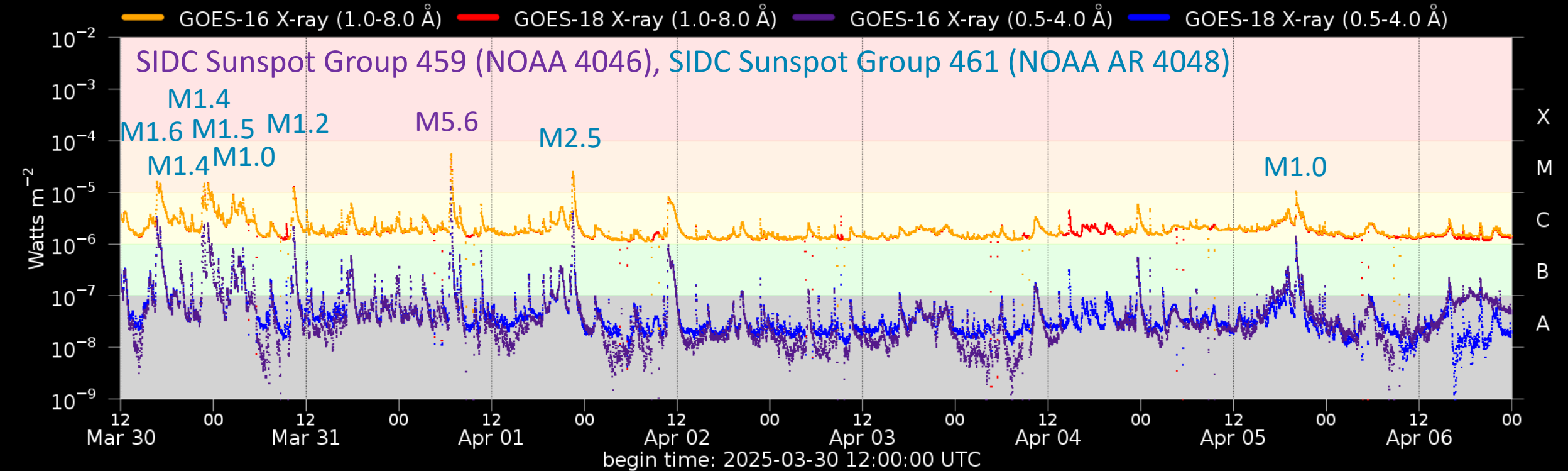
H-alpha 2025-04-06



Solar F10.7cm radio flux



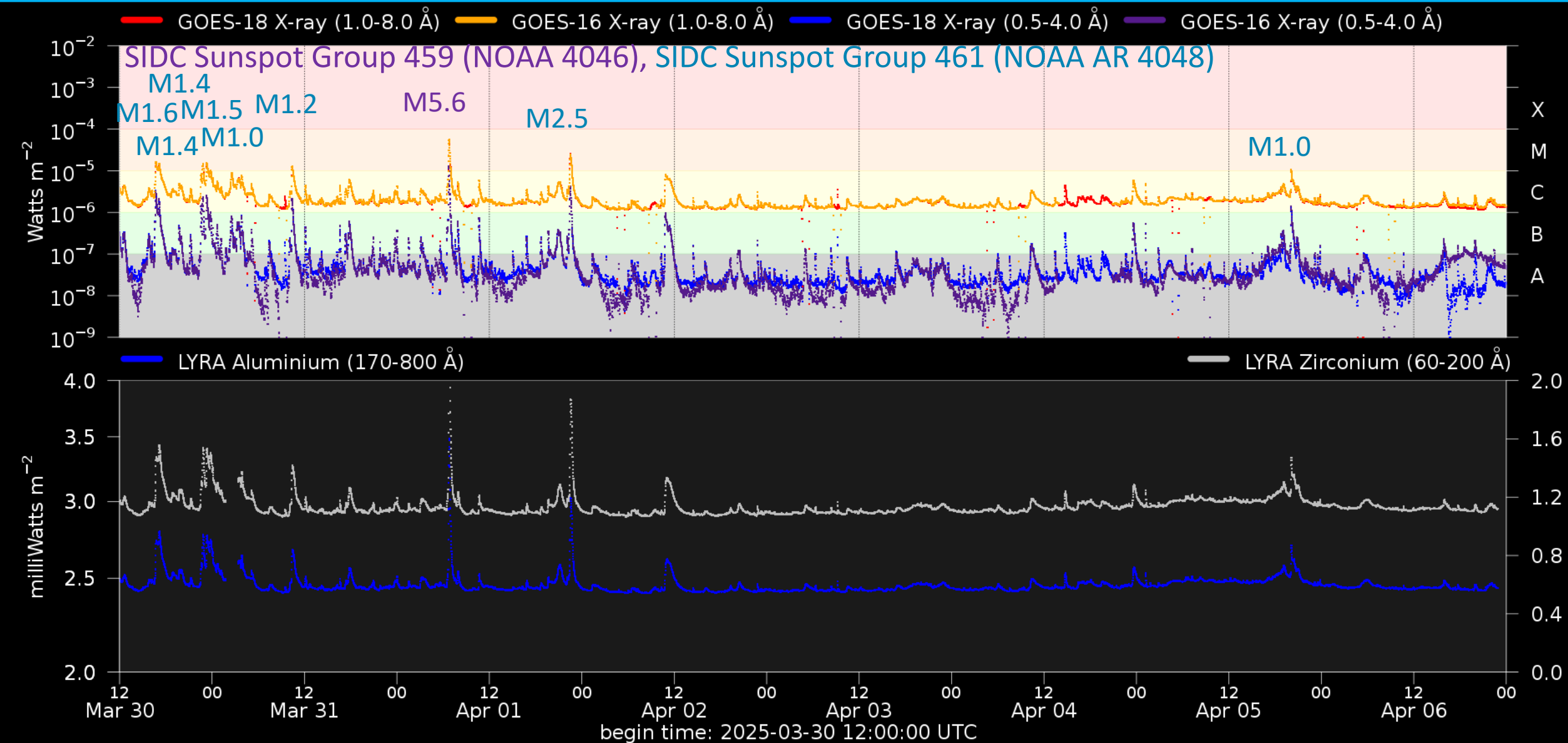
Flaring activity



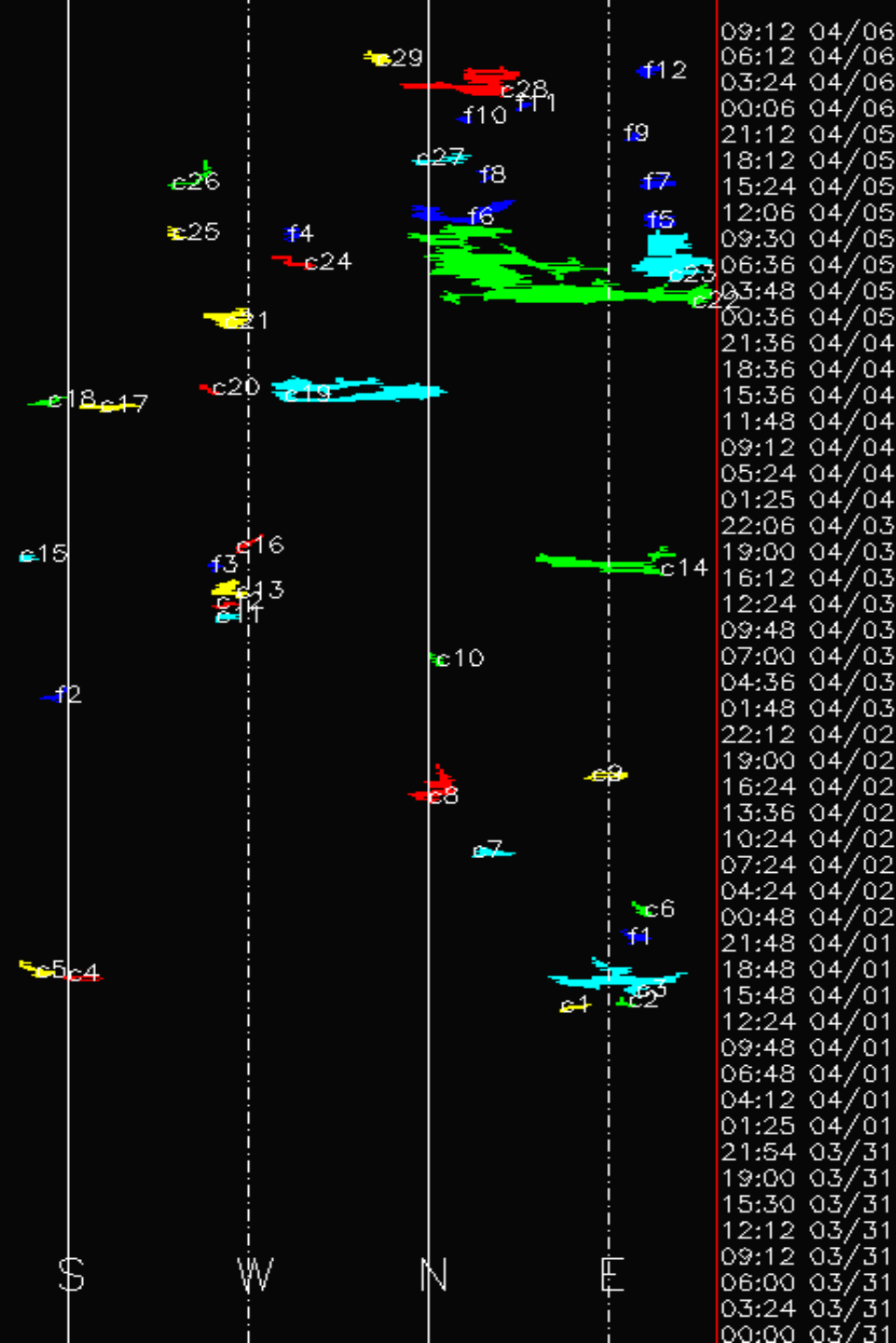
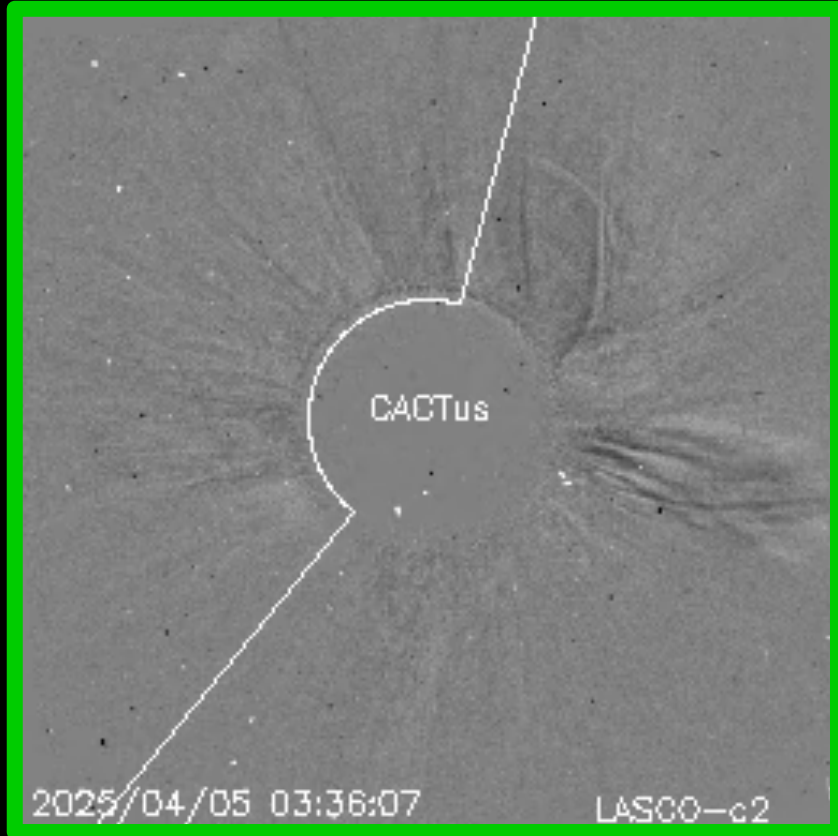
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2025-03-30	2025-03-31	2025-04-01	2025-04-02	2025-04-03	2025-04-04	2025-04-05	2025-04-06
Probability (%)	90 55 49	99 70 10	99 80 25	99 75 15	99 65 20	99 60 15	99 60 10	99 75 20
Observed (#)	19 06 00	16 01 00	15 01 00	09 00 00	02 00 00	07 00 00	05 01 00	04 00 00

Solar X-Ray and UV flux



Coronal Mass Ejections



Solar Wind and

Geomagnetic Activity



Royal Observatory
of Belgium

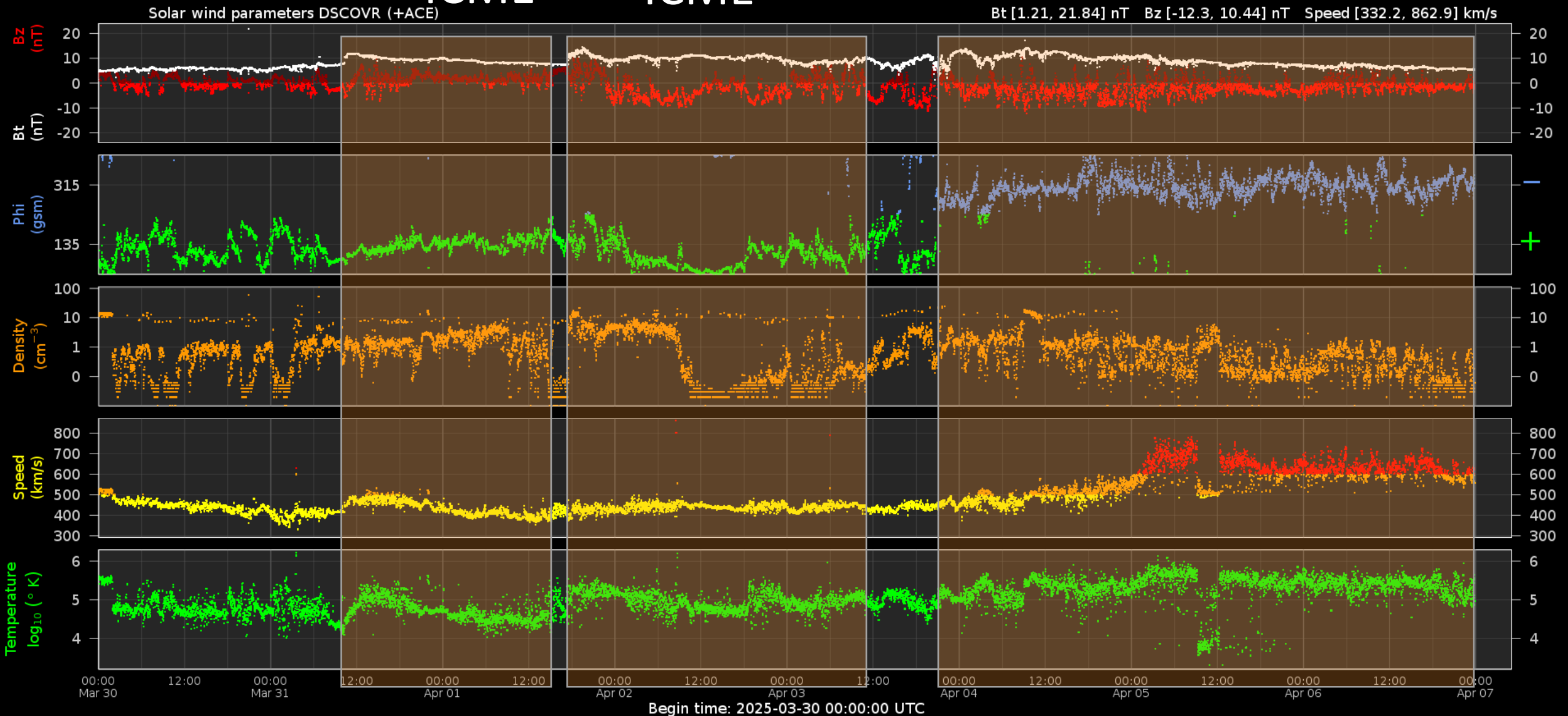
Solar Influences
Data analysis Centre
www.sidc.be

Solar wind parameters

ICME

ICME

HSS



Solar wind parameters & K-indices

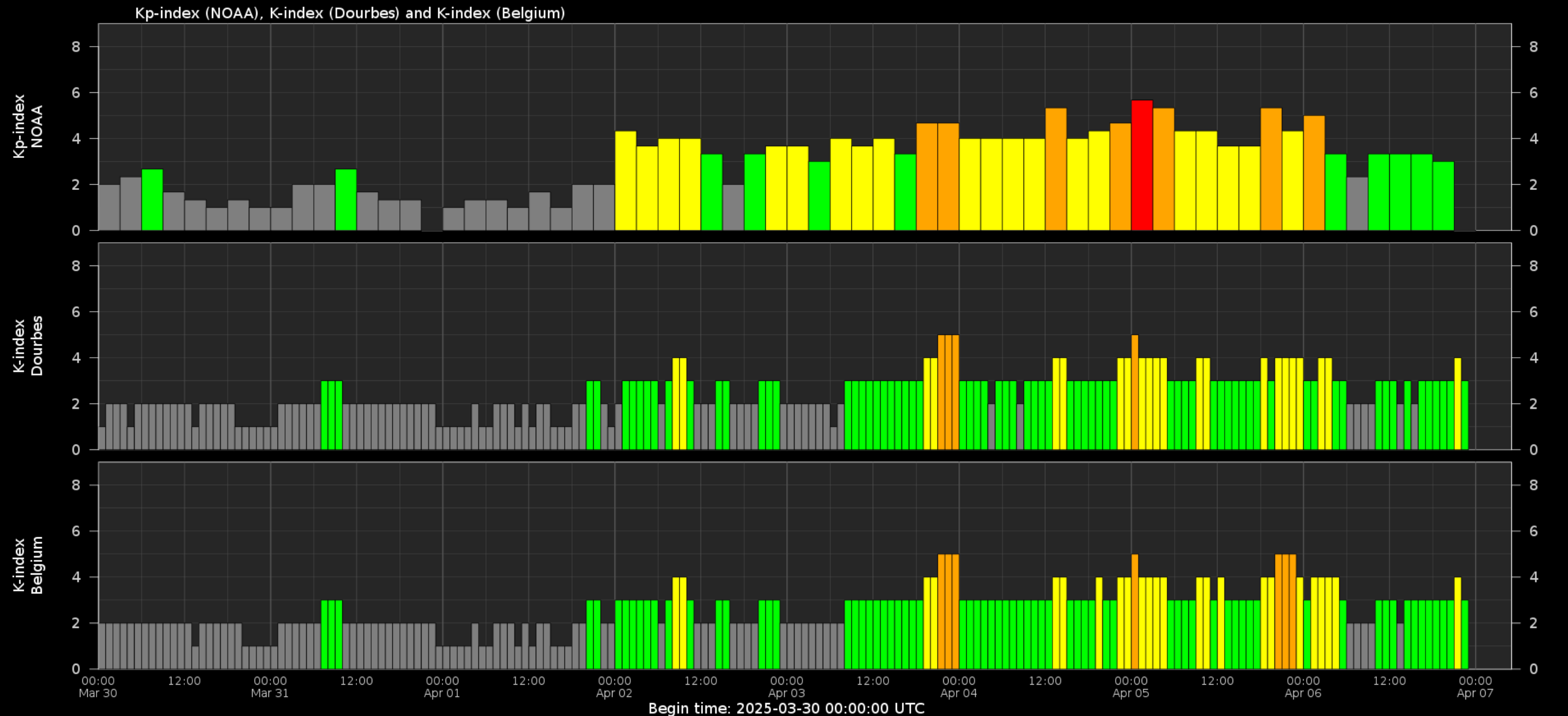
ICME

ICME

HSS



Geomagnetic activity (K-indexes)



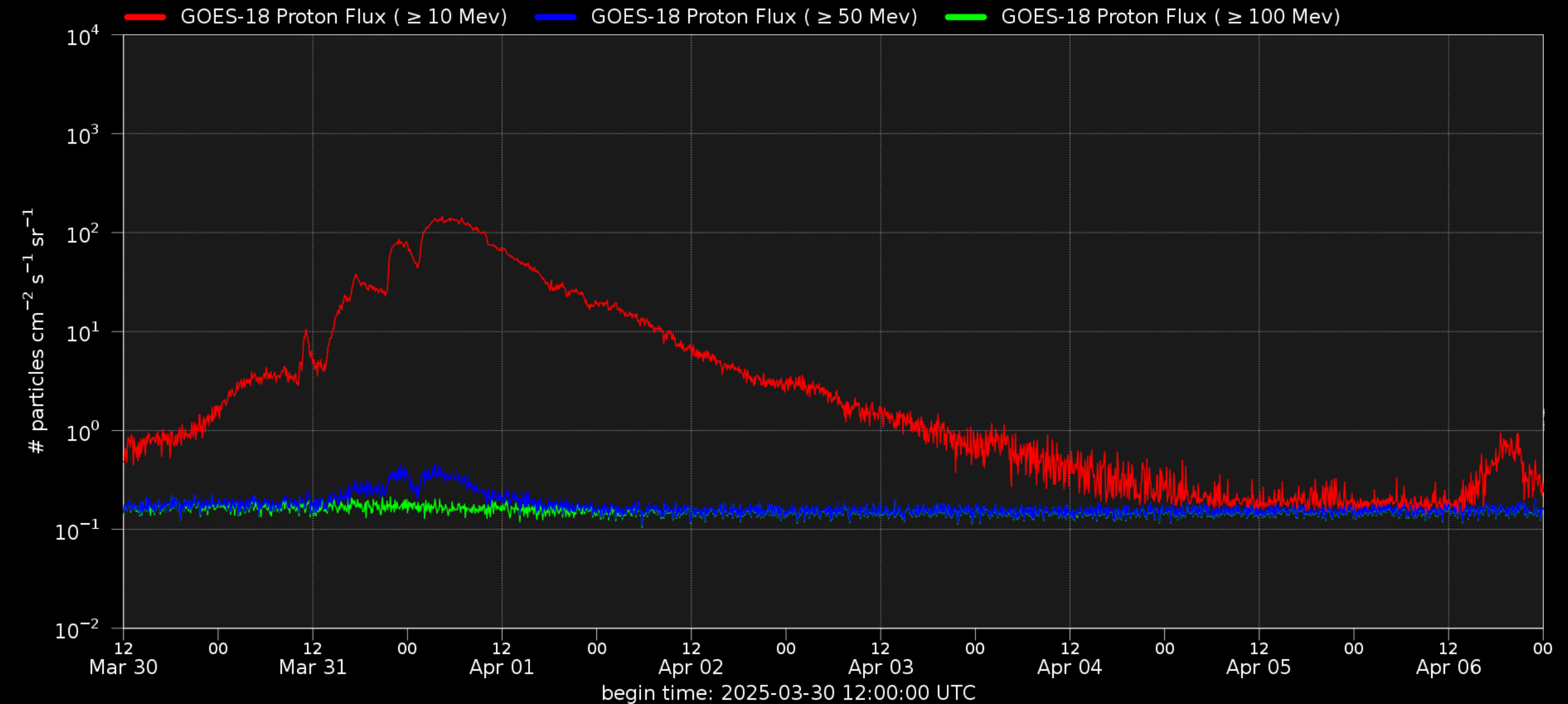
Energetic Particles



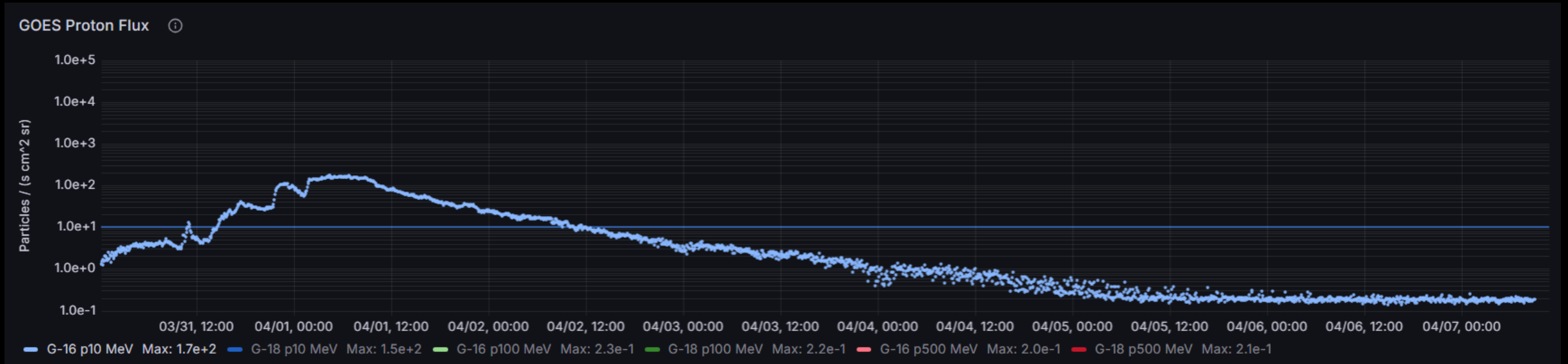
Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Solar proton flux



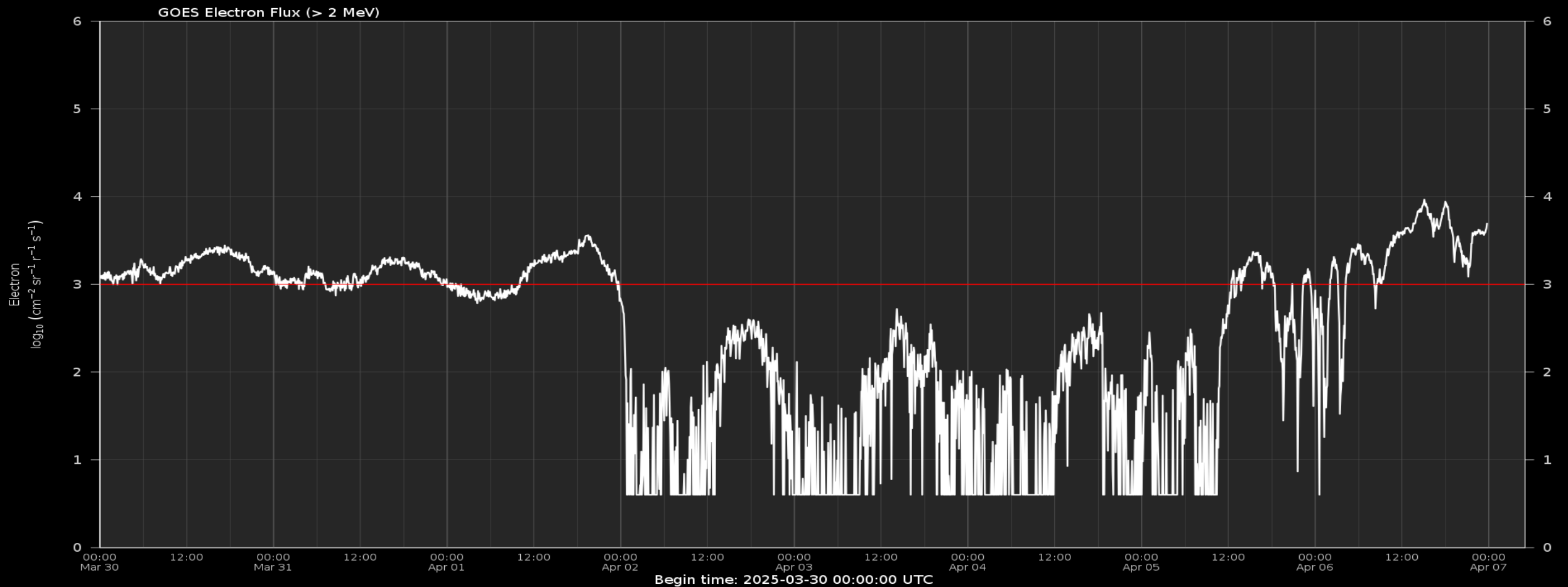
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



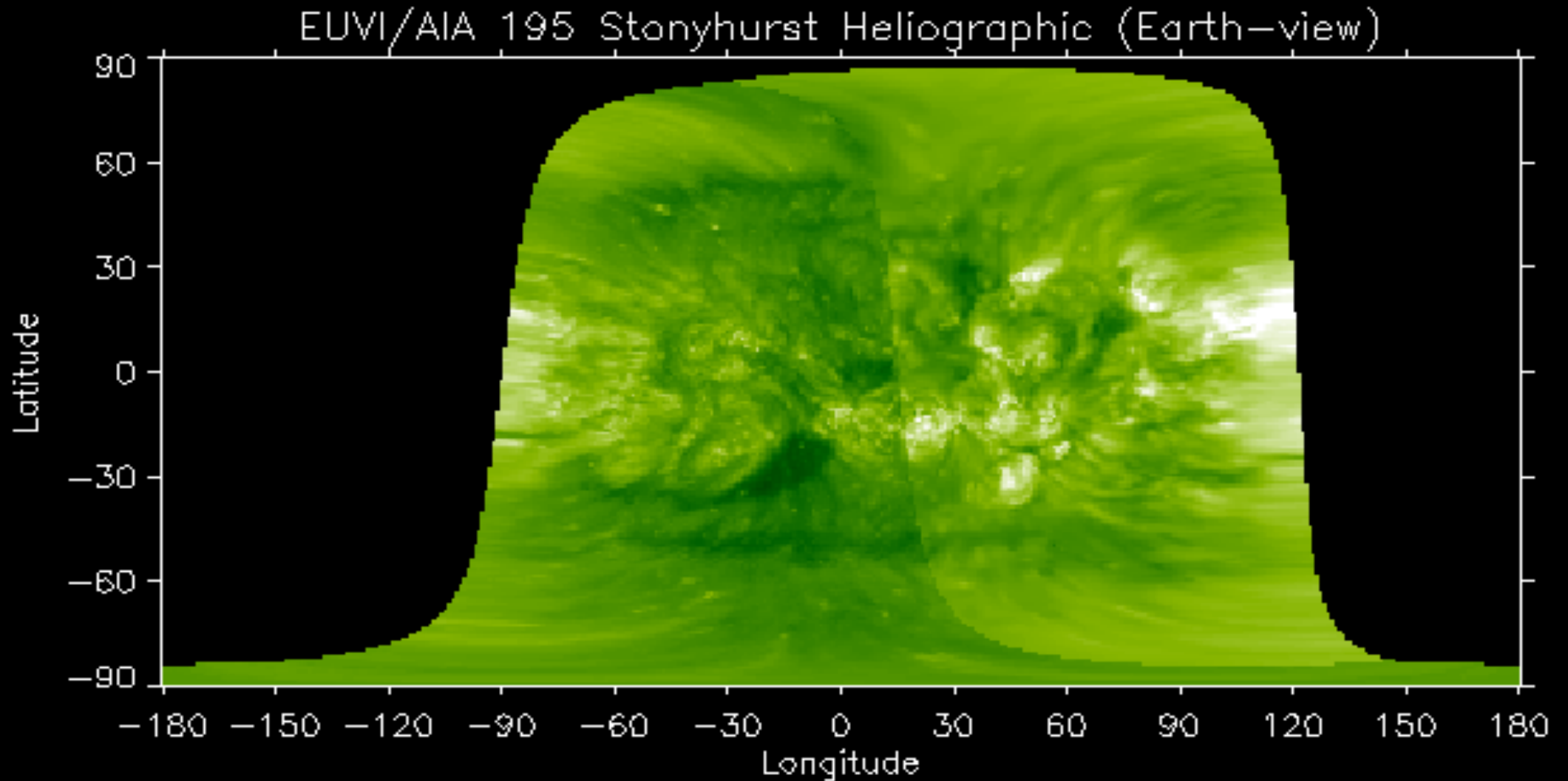
Outlook



Royal Observatory
of Belgium

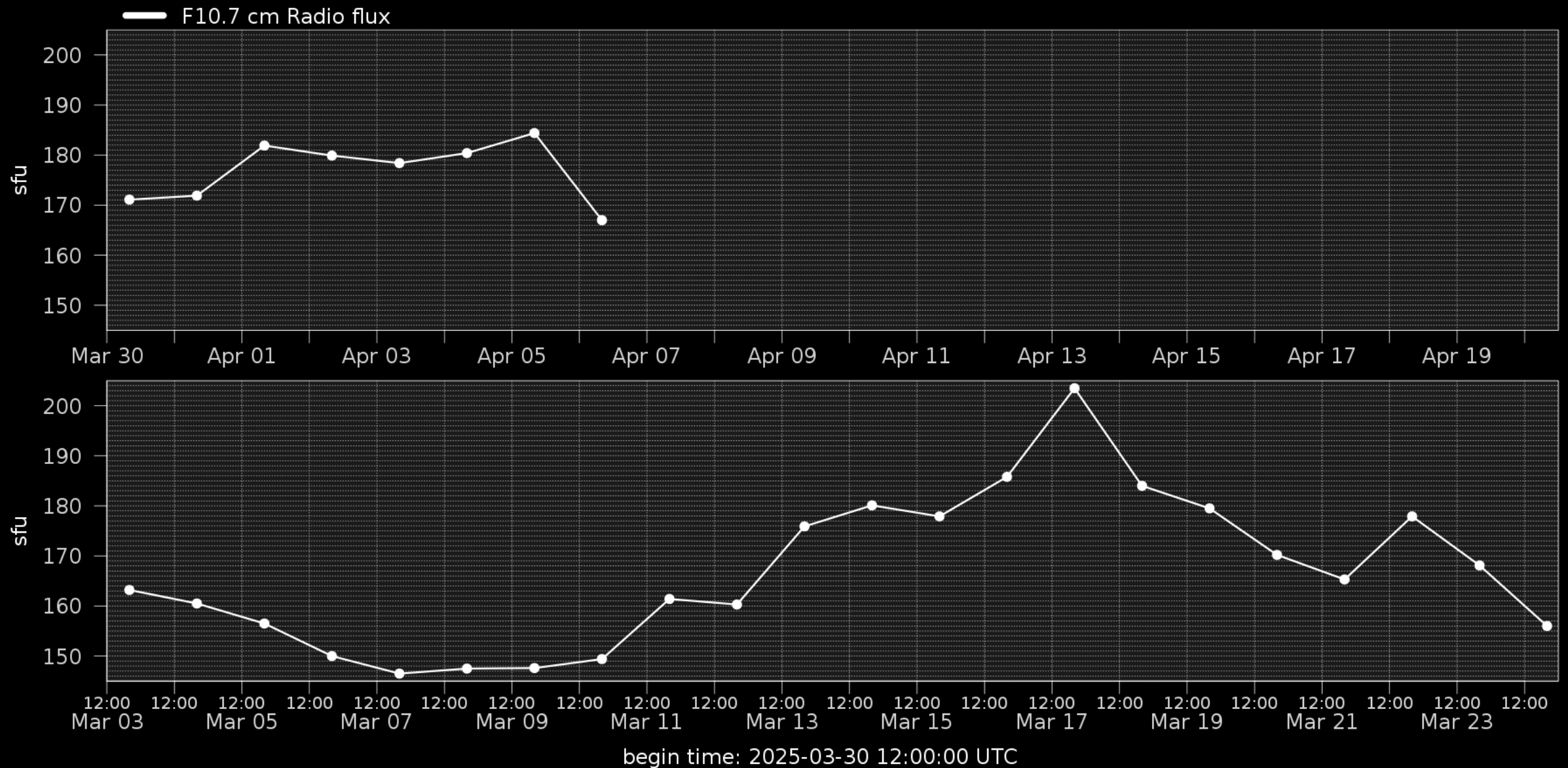
Solar Influences
Data analysis Centre
www.sidc.be

Outlook: Solar activity

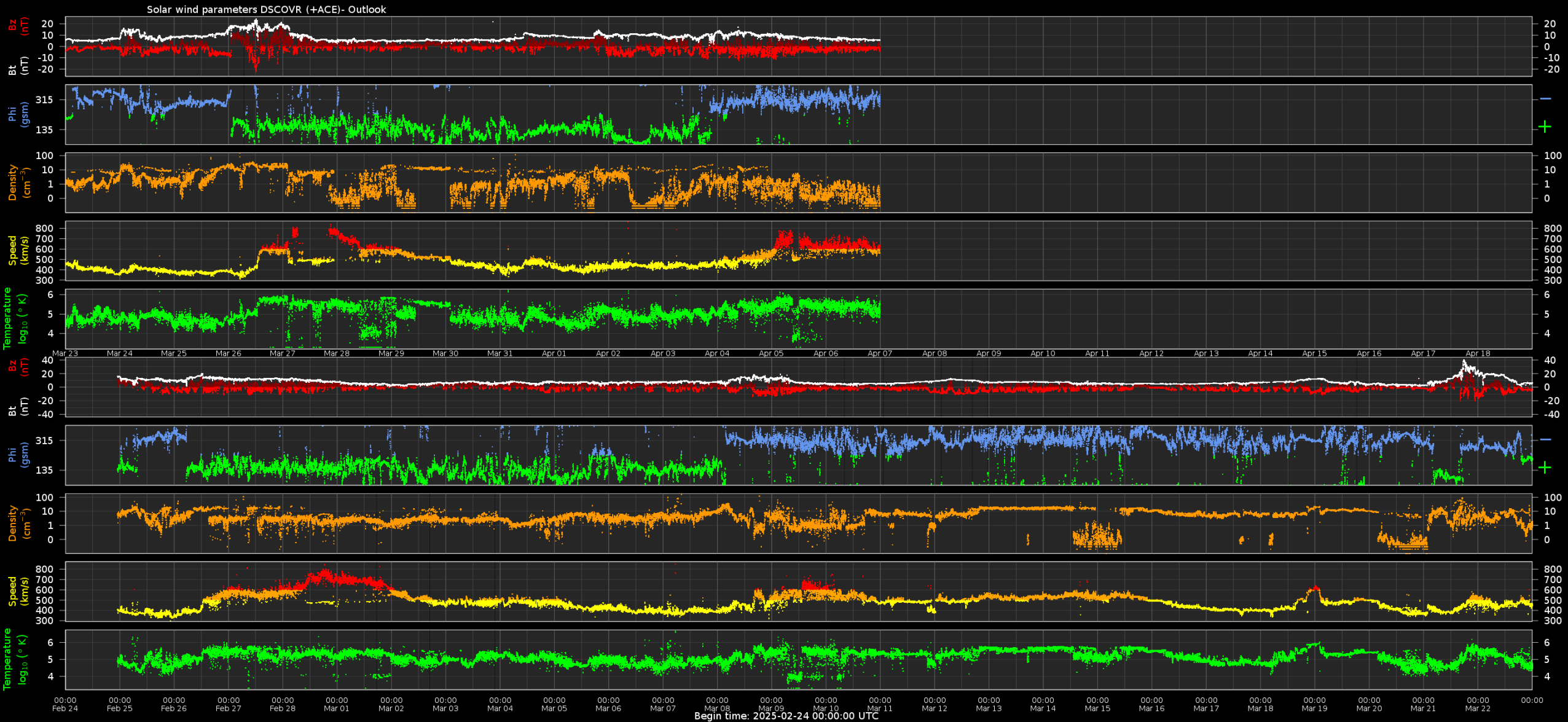


Observation date: 2025/04/06 21:05:00

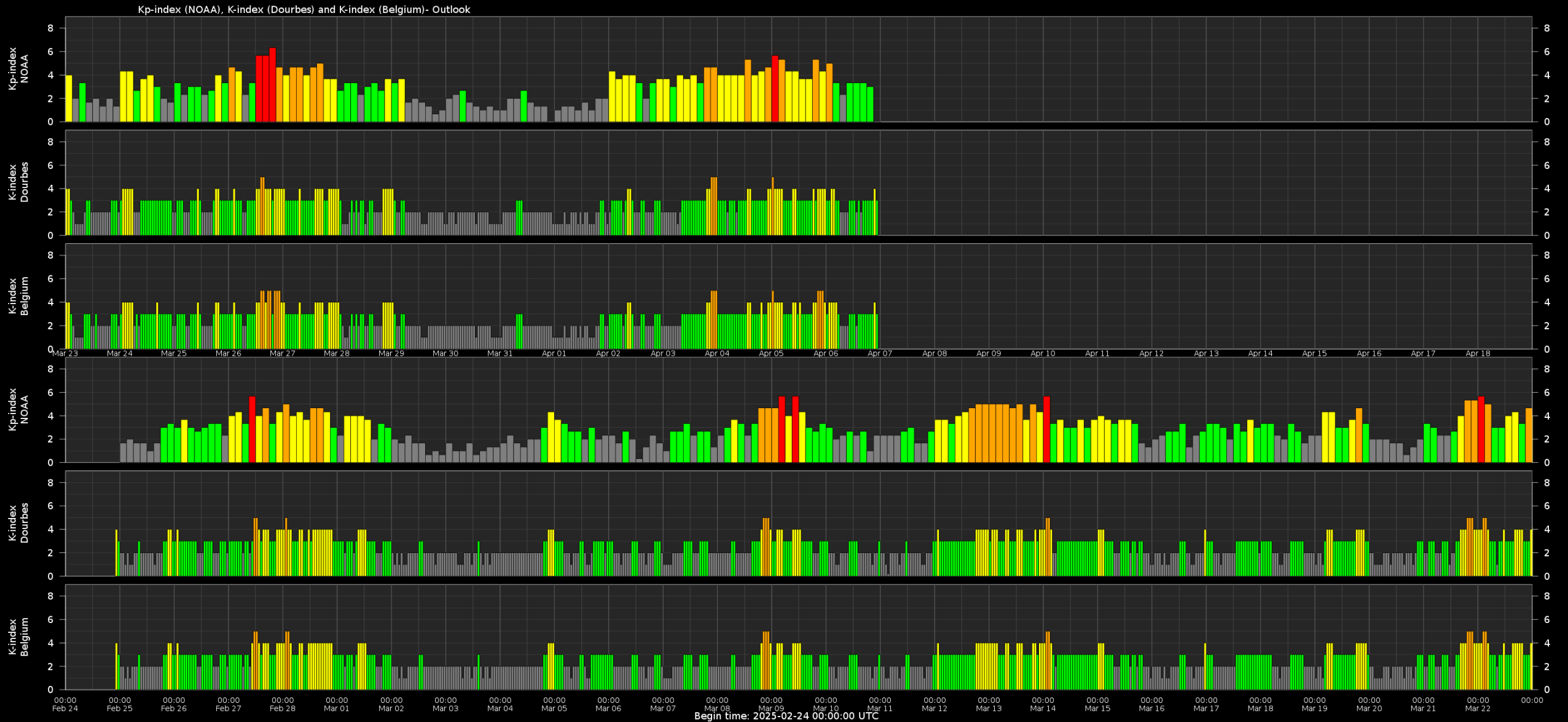
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



PECASUS



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Pegasus related events

DATE: March 31, 2025

GANDER INTERNATIONAL FLIGHT SERVICE STATION

DAILY HF CONDITIONS REPORT

NAT

ZULU TIME

HF CONDITION CODE

0000 – 0400

4

0400 – 0800

3

0800 – 1200

4

1200 – 1600

4

1600 – 2000

4

2000 – 2400

4

POLAR

ZULU TIME

HF CONDITION CODE

0000 – 0400

4

0400 – 0800

3

0800 – 1200

3

1200 – 1600

2

1600 – 2000

2

2000 – 2400

1

DTG: 20250331/2137Z

SWXC: PECASUS

ADVISORY NR: 2025/123

SWX EFFECT: HF COM MOD

OBS SWX: 31/1530Z HNH HSH W180 - E180

Subject **Skilyrði í lofti - 31.03.2025**

Actual HF condition

0-4 N: Fairly good

4-8 N: Fairly good

8-12 N: Fairly good

12-16 N: Weak

16-20 N: Weak

20-24 N: Weak

SIDC Space Weather Briefing

See you at our next briefing!

Or visit us at www.sidc.be



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be