

SIDC Space Weather Briefing

02 March 2025-09 March 2025

Katsiyannis Thanassis

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2025-03-02 12:00 to 2025-03-09 23:59

Active regions	SIDC Sunspot Group 423 (NOAA 4012) and 427 (4016)
Flares	# C-class flare: 30 # M-class flare: 2 # X-class flare: 0
Coronal Holes	Large, equatorial CH with negative polarity
CMEs	7 Mar 21:00 UTC, glancing blow

Proton flux	Background levels
Electron flux	Varying quasi-periodically, reached the 1000 pfu threshold almost daily

Solar wind and geomagnetic conditions

ICMEs	Glancing blow arrived on 5 MAR
Solar wind conditions	B : 0.89 - 18.89 nT //Bz: -13.79 nT to 11.49 nT //Speed: 260 – 700 km/s
Geomagnetic conditions	max K _{Be} : 5.0, max K _p (NOAA): 6-, Moderate Storm conditions

All Quiet Alert: Not quiet

Solar Activity

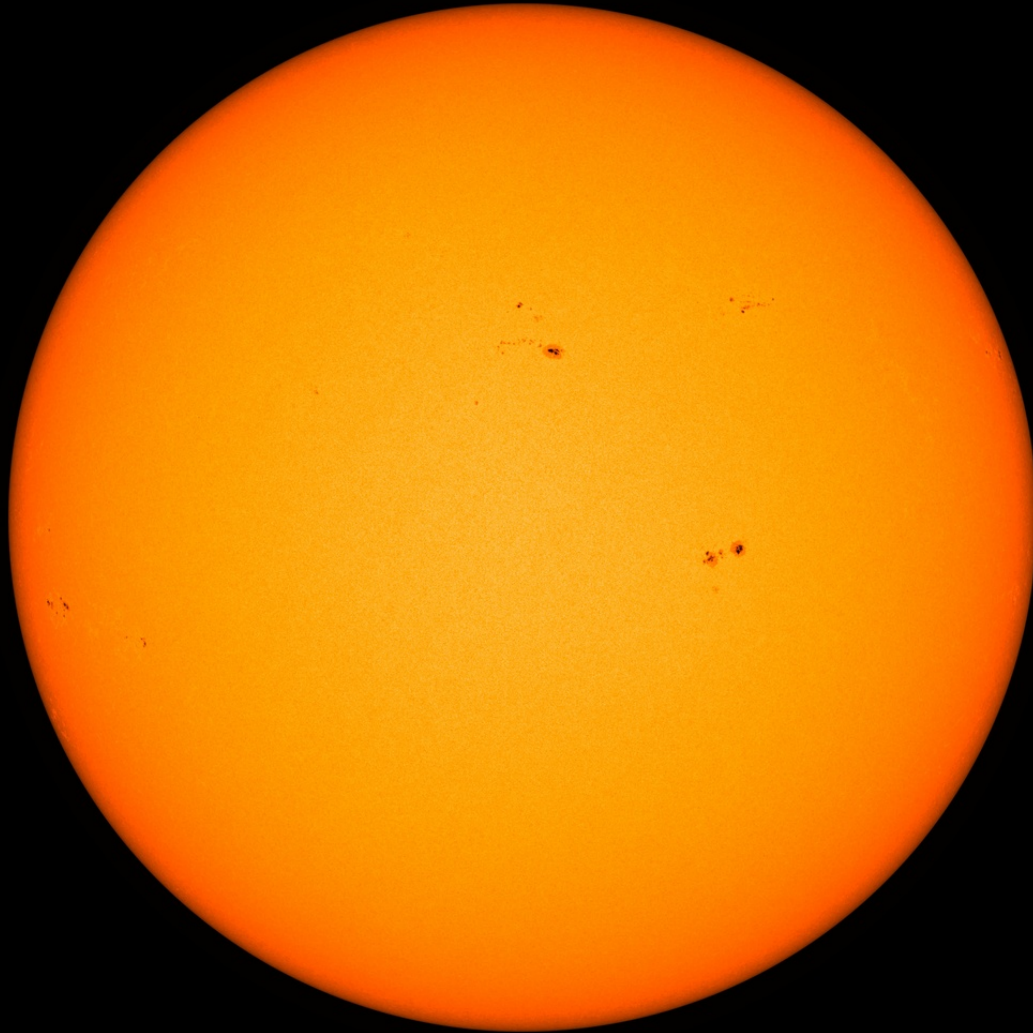


Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

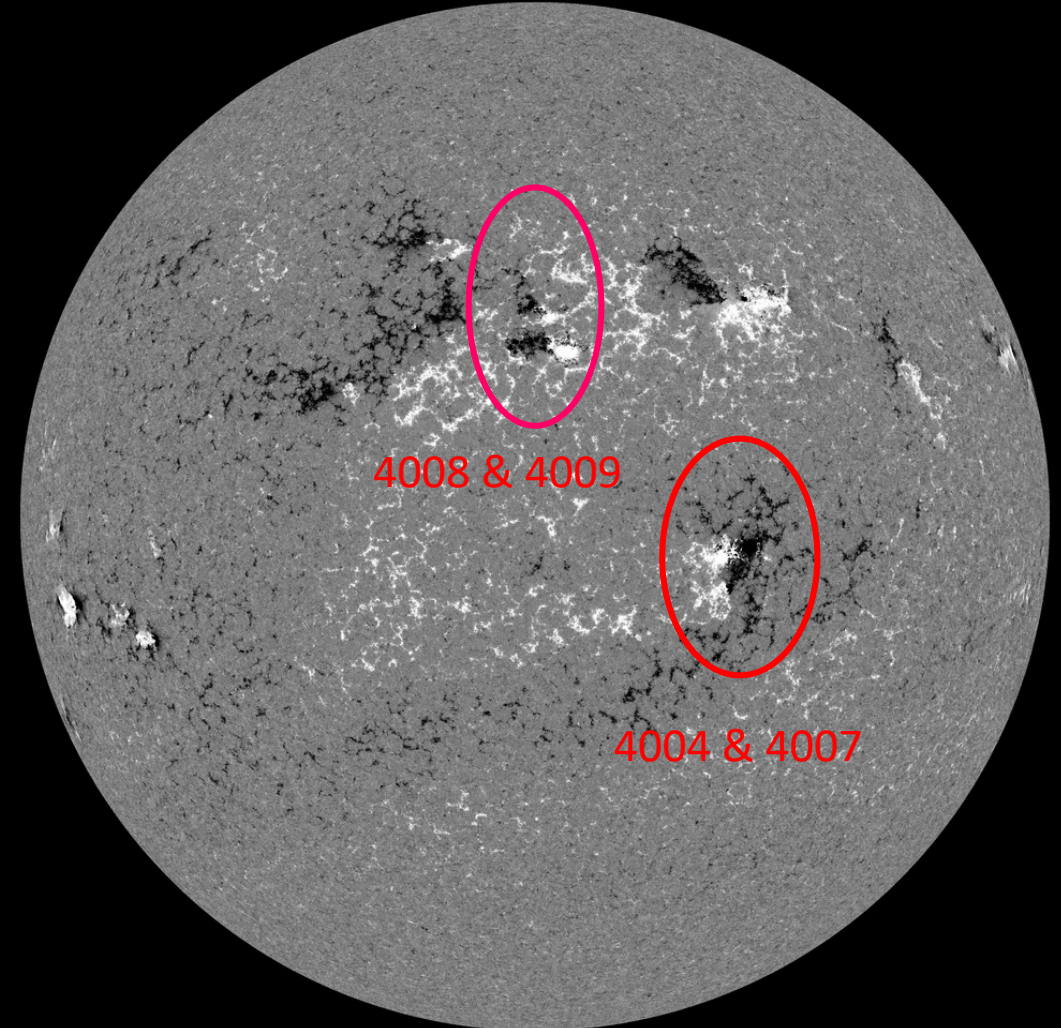
Solar active regions

SDO/HMI White Light 2025-03-02



SDO/HMI Quick-Look Continuum: 20250302_114500

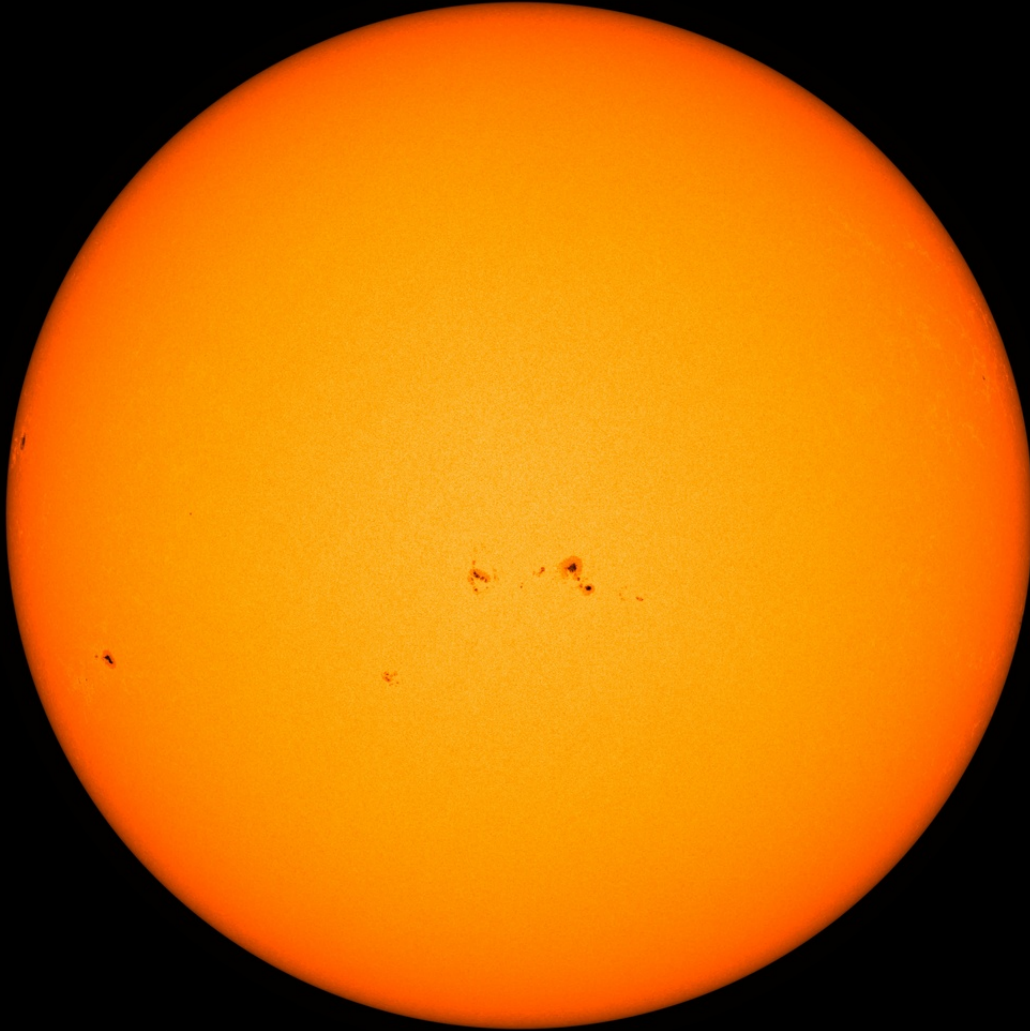
SDO/HMI Magnetogram 2025-03-02



SDO/HMI Quick-Look Magnetogram: 20250302_114500

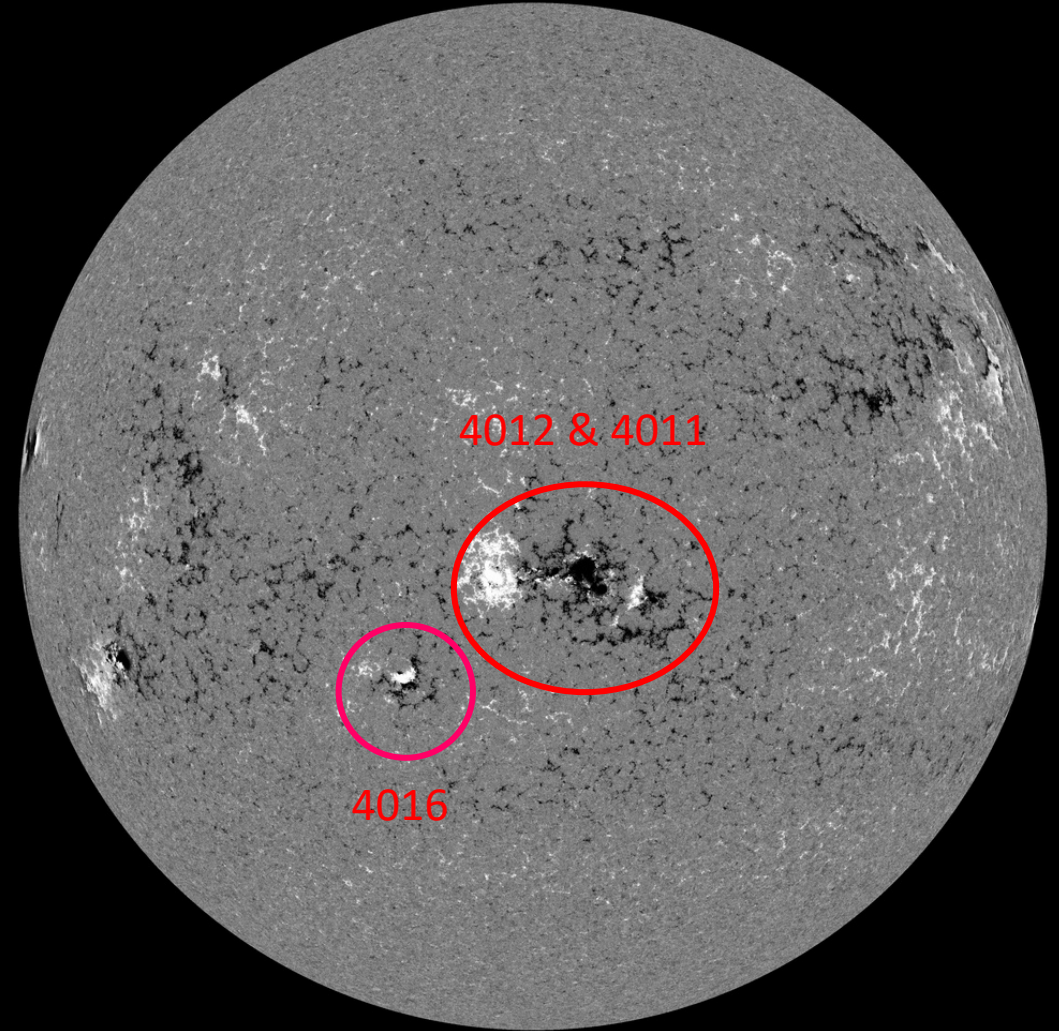
Solar active regions

SDO/HMI White Light 2025-03-07



SDO/HMI Quick-Look Continuum: 20250307_114500

SDO/HMI Magnetogram 2025-03-07

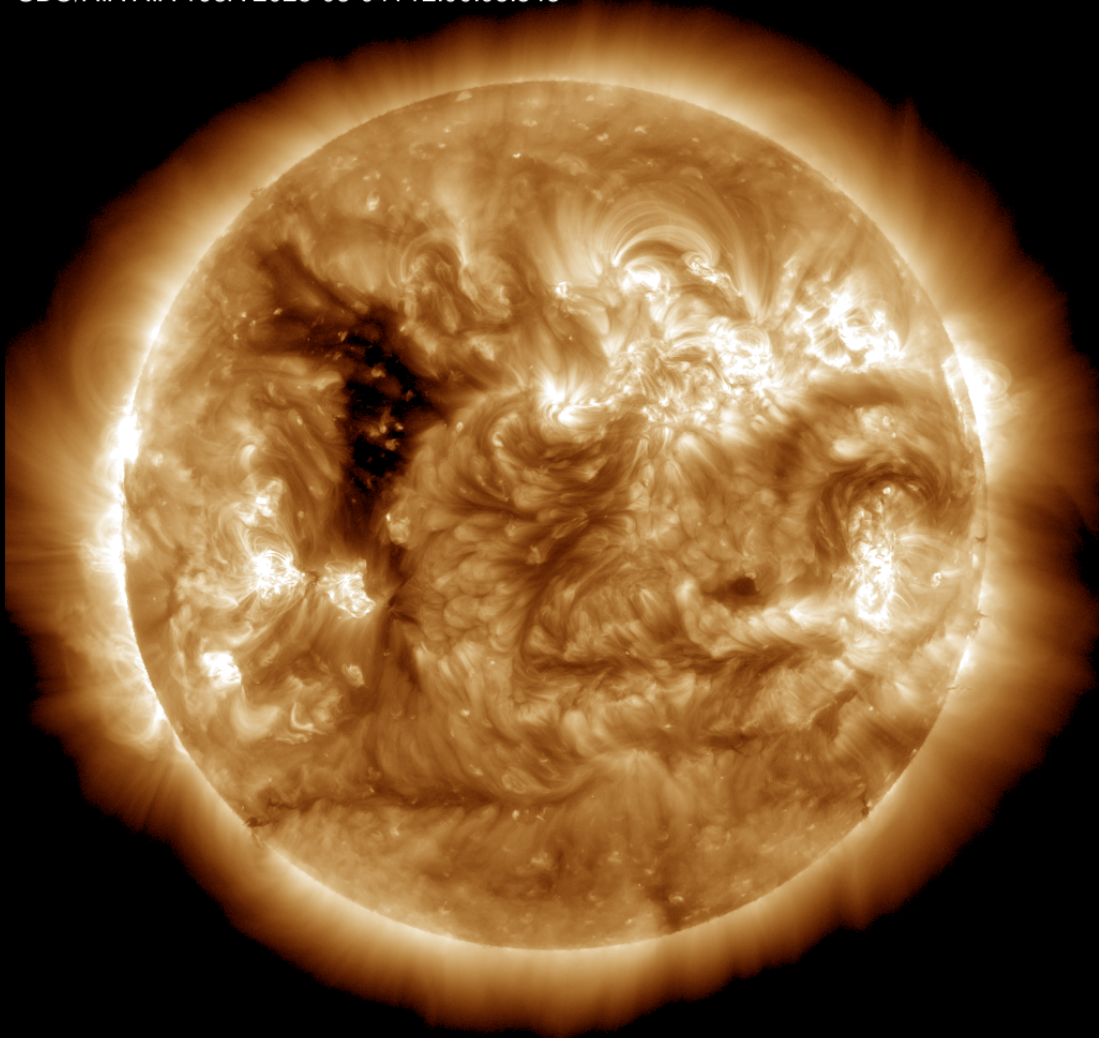


SDO/HMI Quick-Look Magnetogram: 20250307_114500

Coronal holes

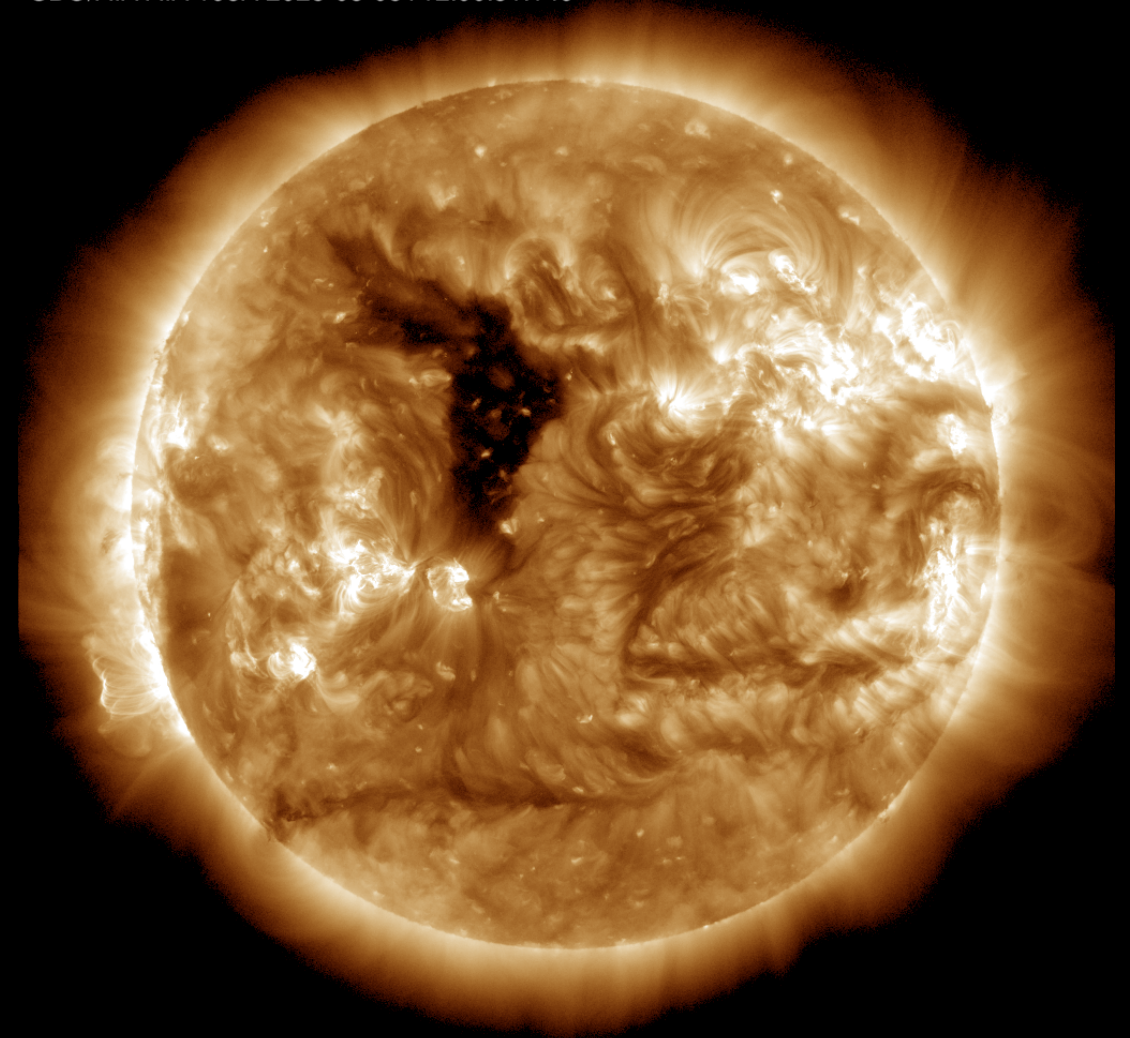
SDO/AIA 19.3 nm 2025-03-04

SDO/AIA AIA 193Å 2025-03-04T12:00:05.843



SDO/AIA 19.3 nm 2025-03-05

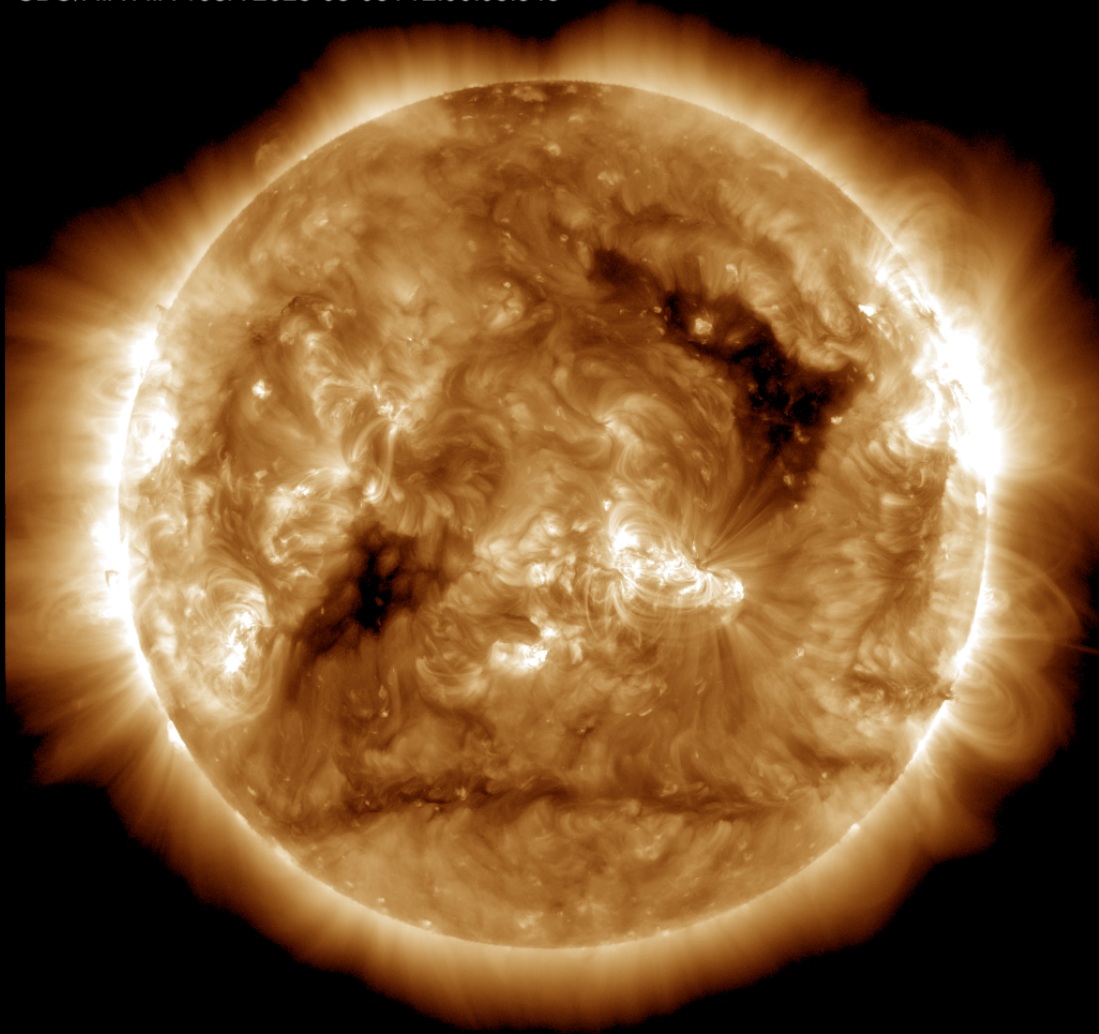
SDO/AIA AIA 193Å 2025-03-05T12:00:31.149



Coronal holes

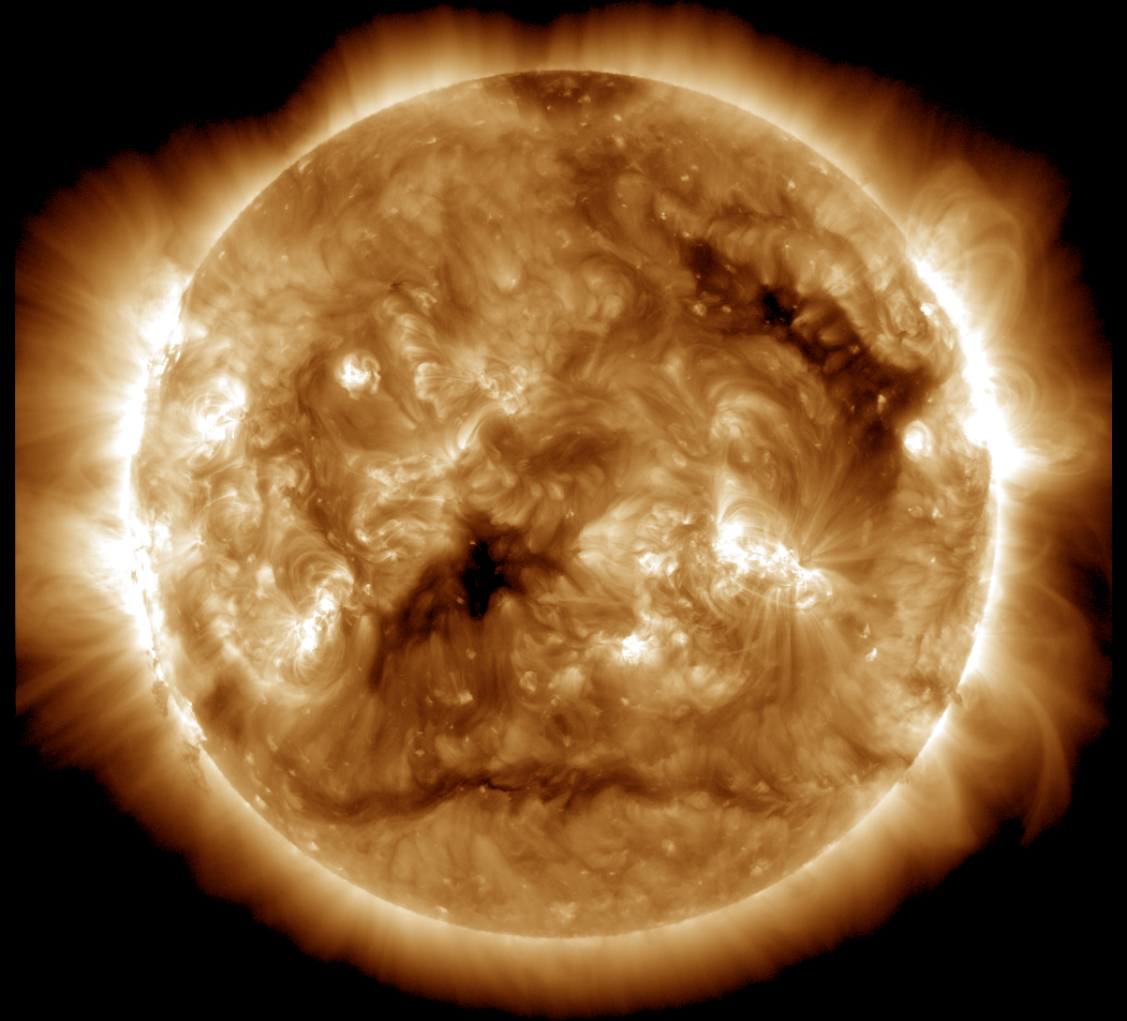
SDO/AIA 19.3 nm 2025-03-08

SDO/AIA AIA 193Å 2025-03-08T12:00:05.843



SDO/AIA 19.3 nm 2025-03-09

SDO/AIA AIA 193Å 2025-03-09T12:00:05.847



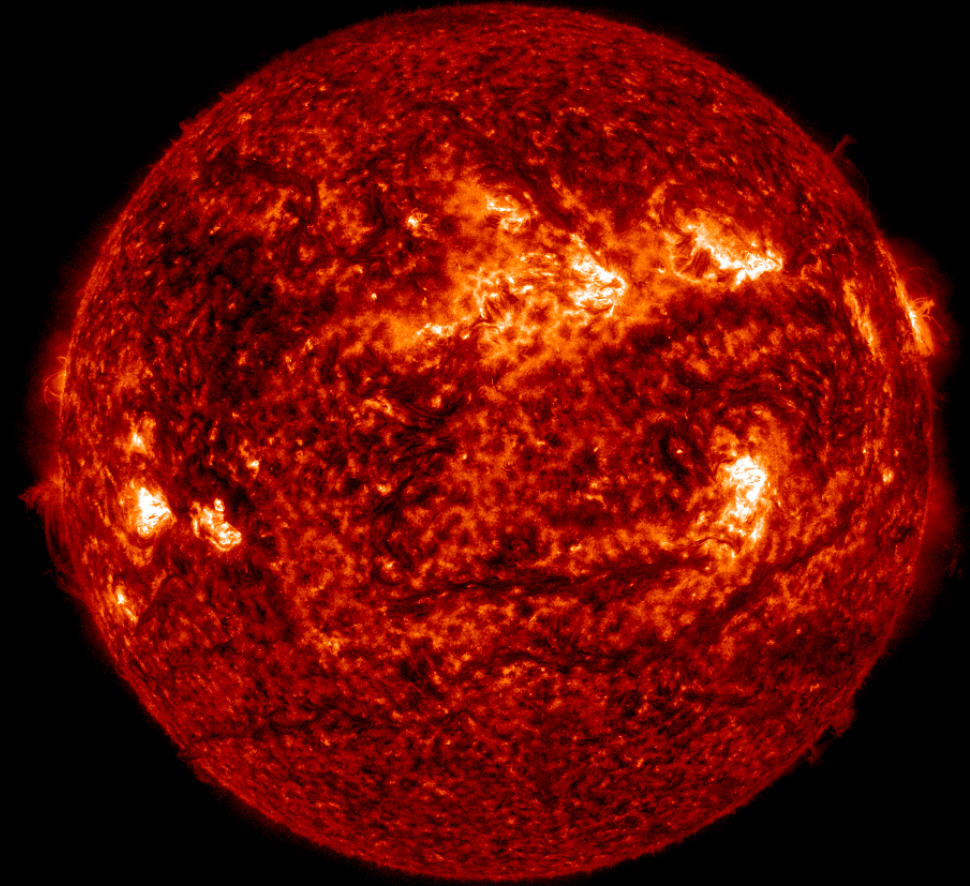
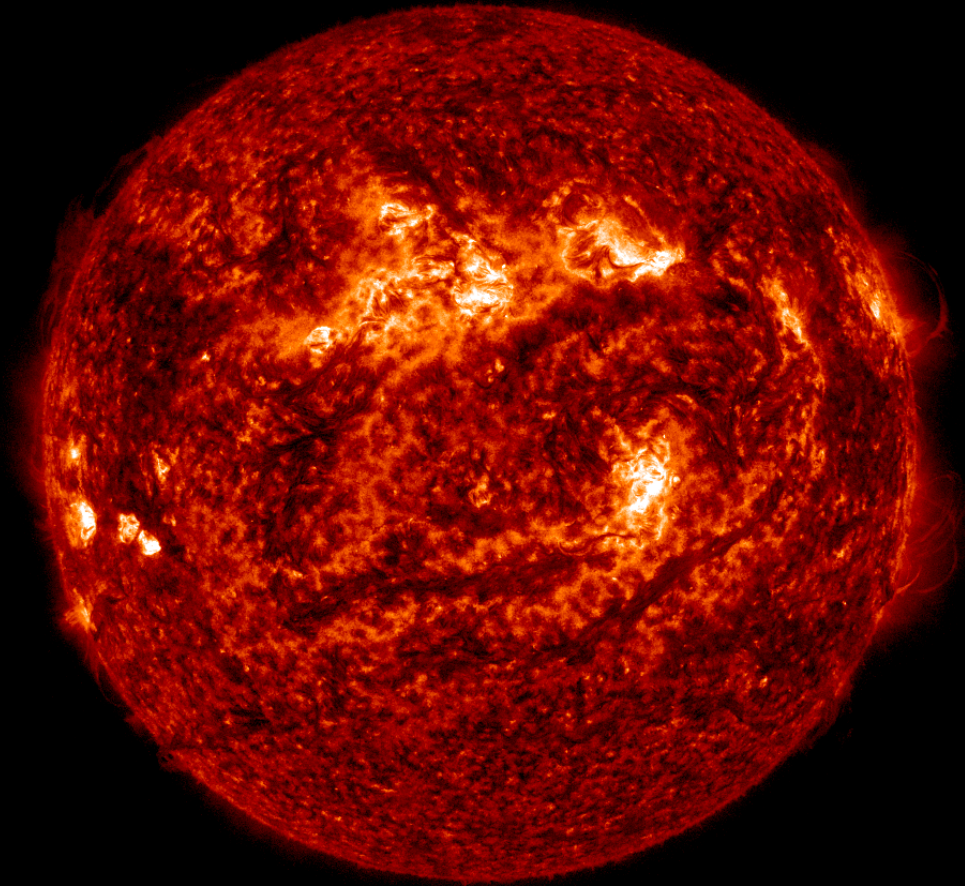
Filaments

SDO/AIA 30.4 nm 2025-03-02

SDO/AIA AIA 304Å 2025-03-02T12:00:06.597

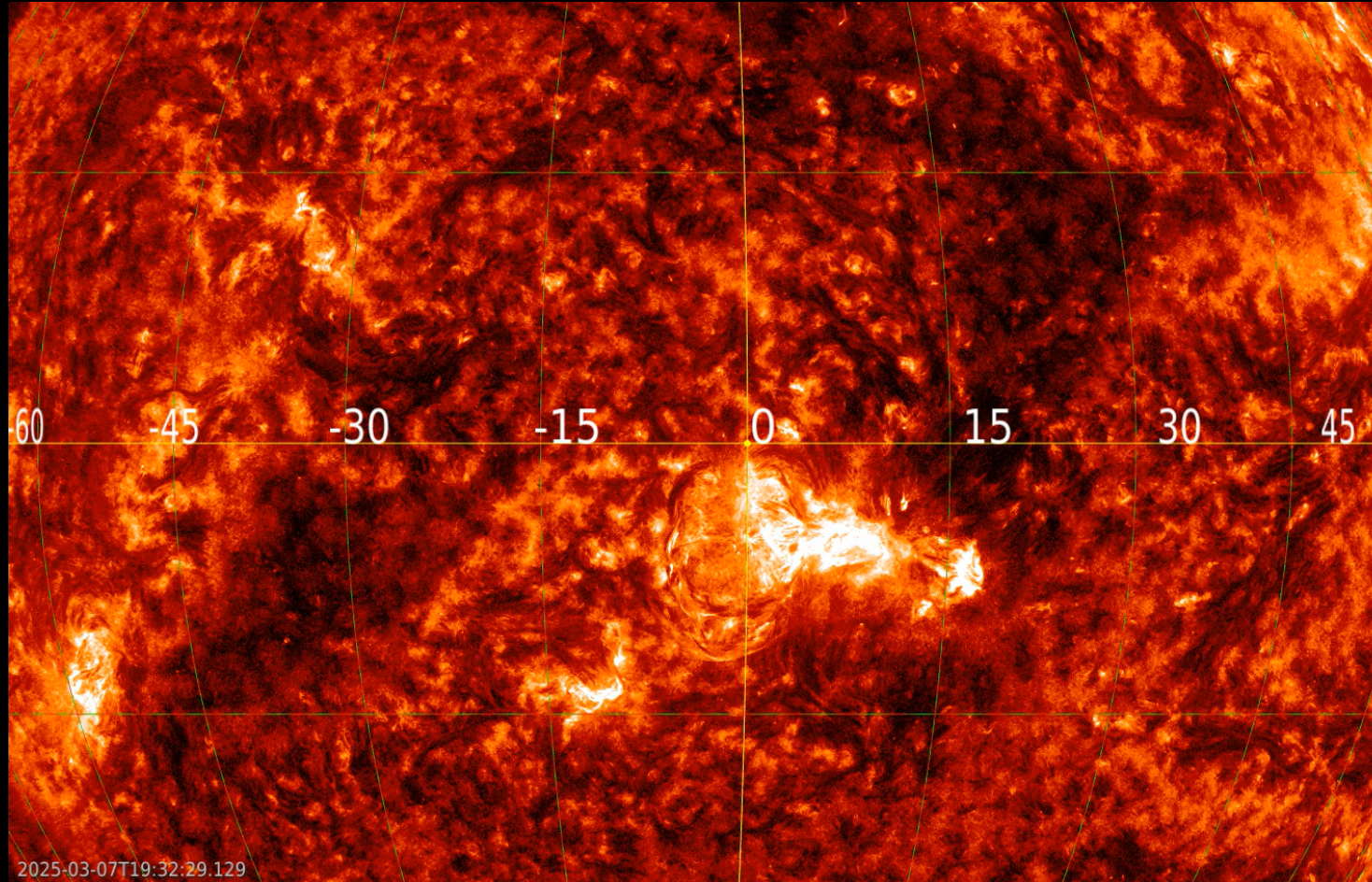
SDO/AIA 30.4 nm 2025-03-03

SDO/AIA AIA 304Å 2025-03-03T12:00:06.580



SIDC flare 4785 M1.6 (7 Mar 21:00 UTC)

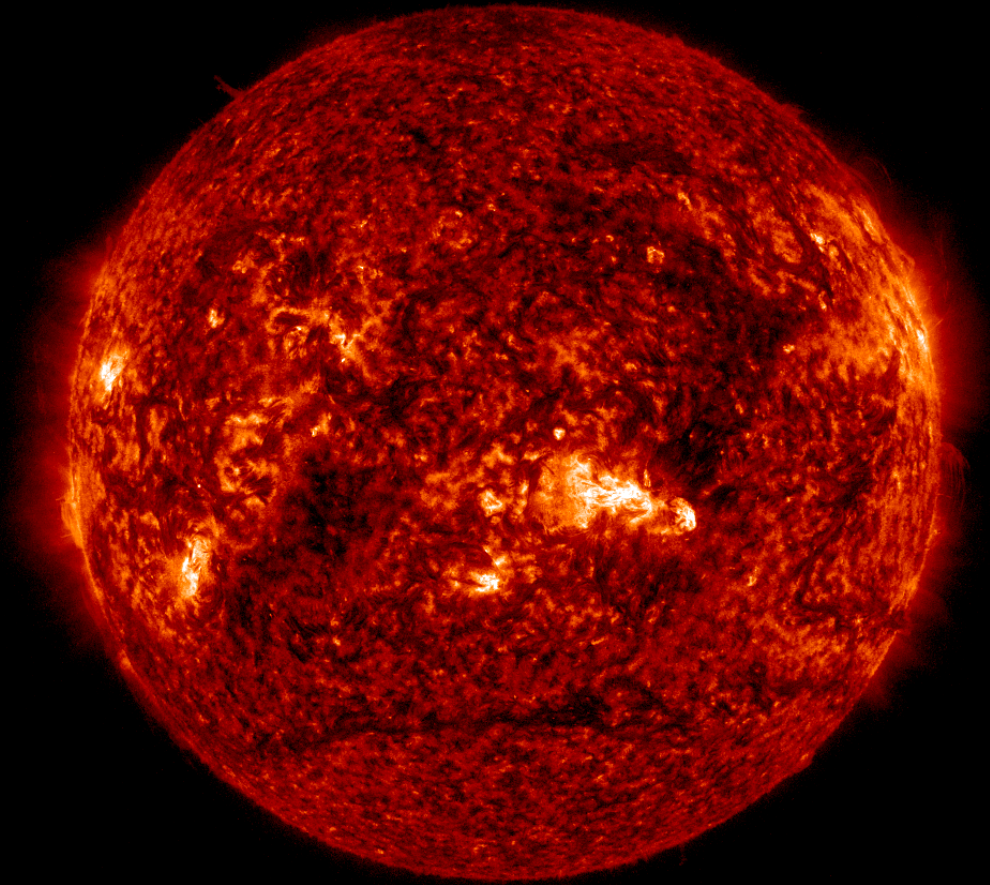
SDO/AIA 30.4 nm



Filaments

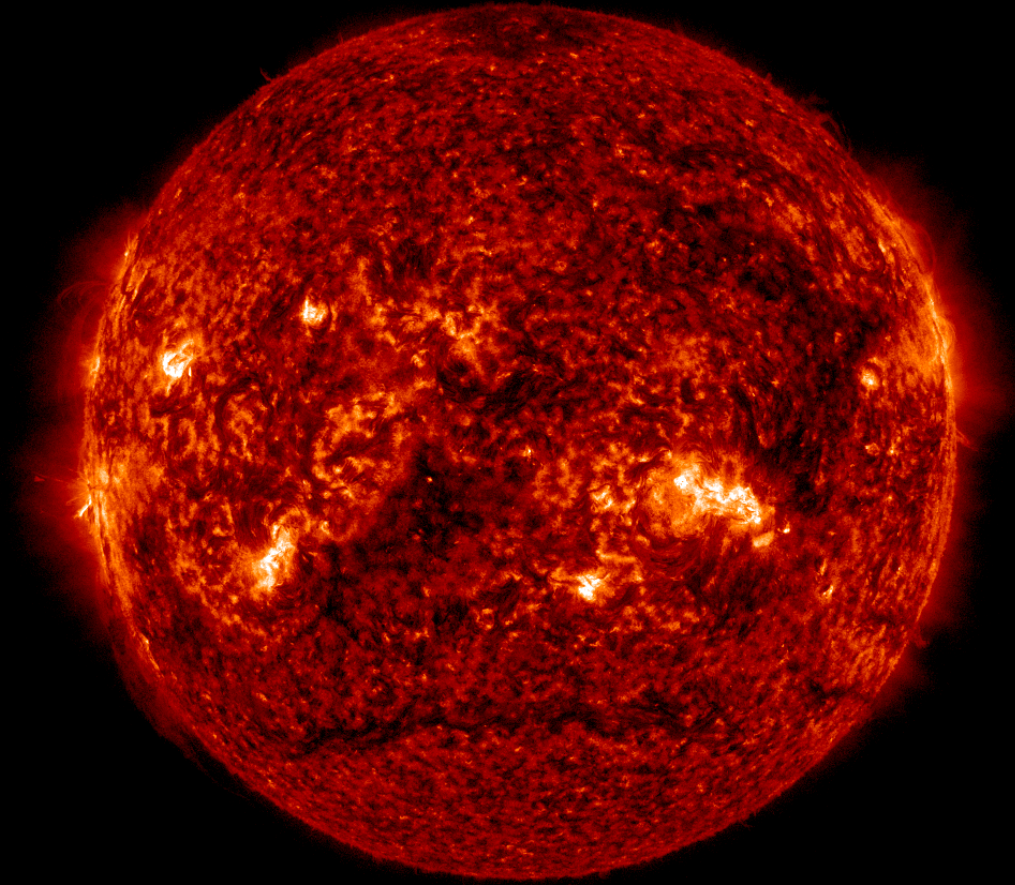
SDO/AIA 30.4 nm 2025-03-08

SDO/AIA AIA 304Å 2025-03-08T12:00:06.580



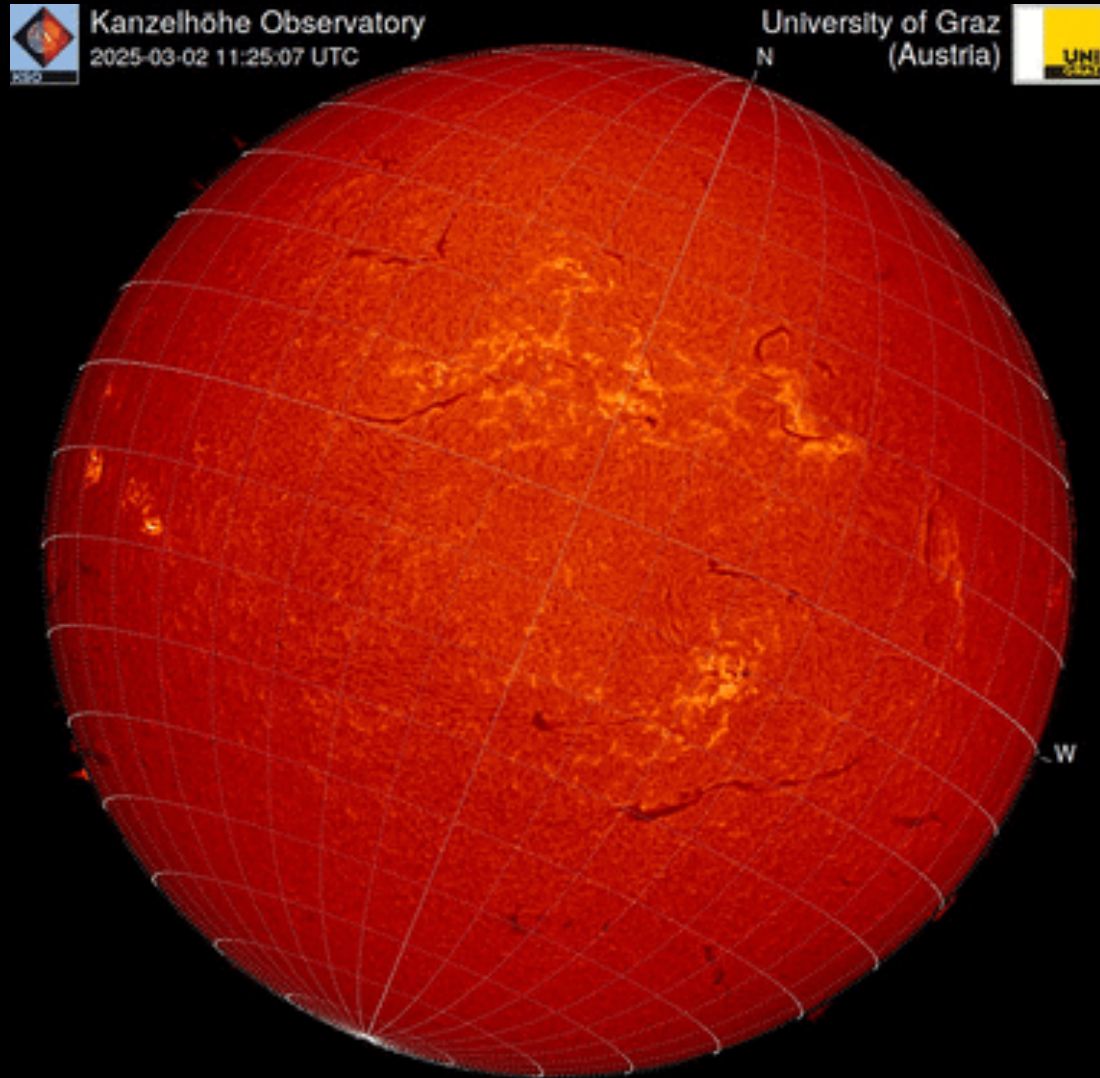
SDO/AIA 30.4 nm 2025-03-09

SDO/AIA AIA 304Å 2025-03-09T12:00:06.597

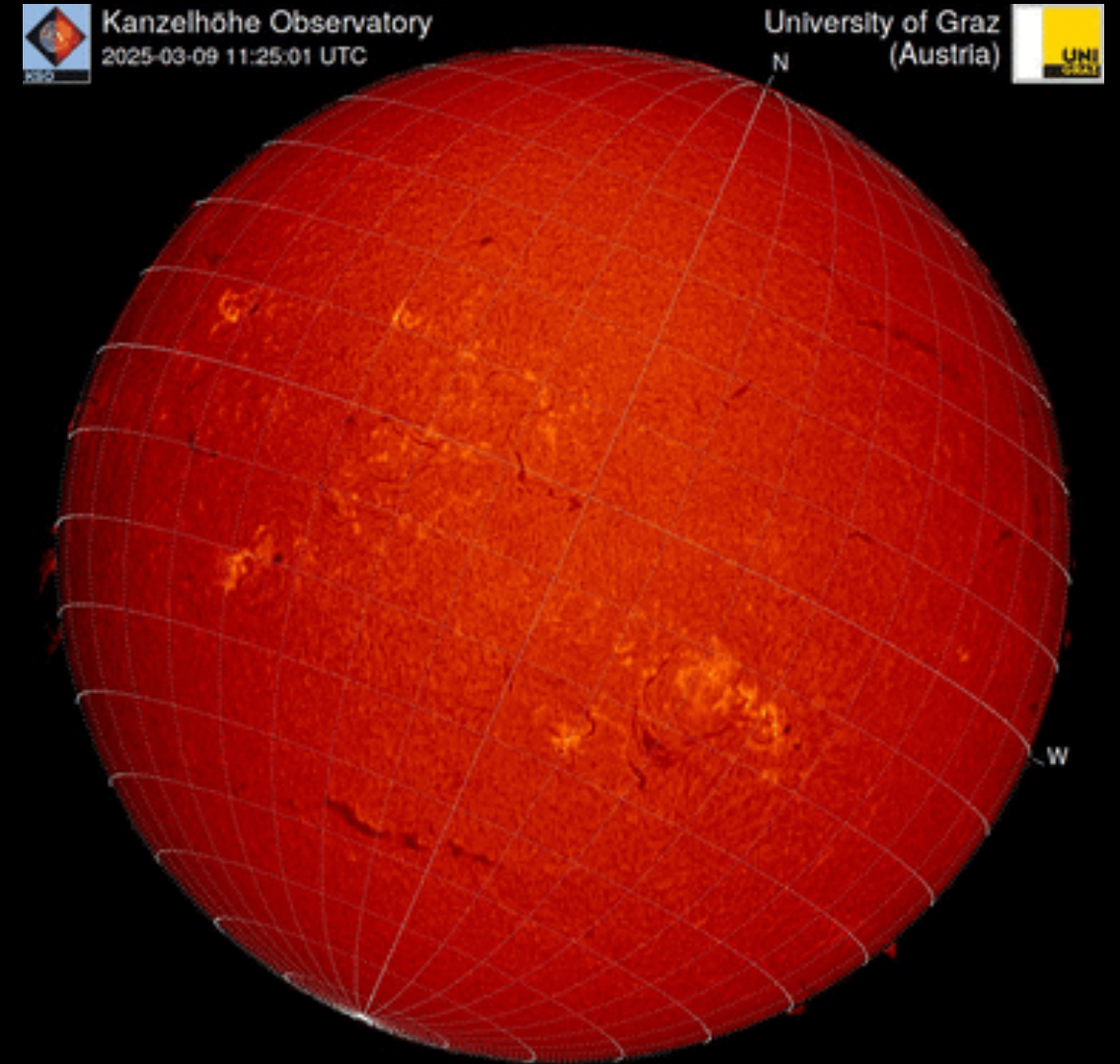


Filaments & Filament eruptions

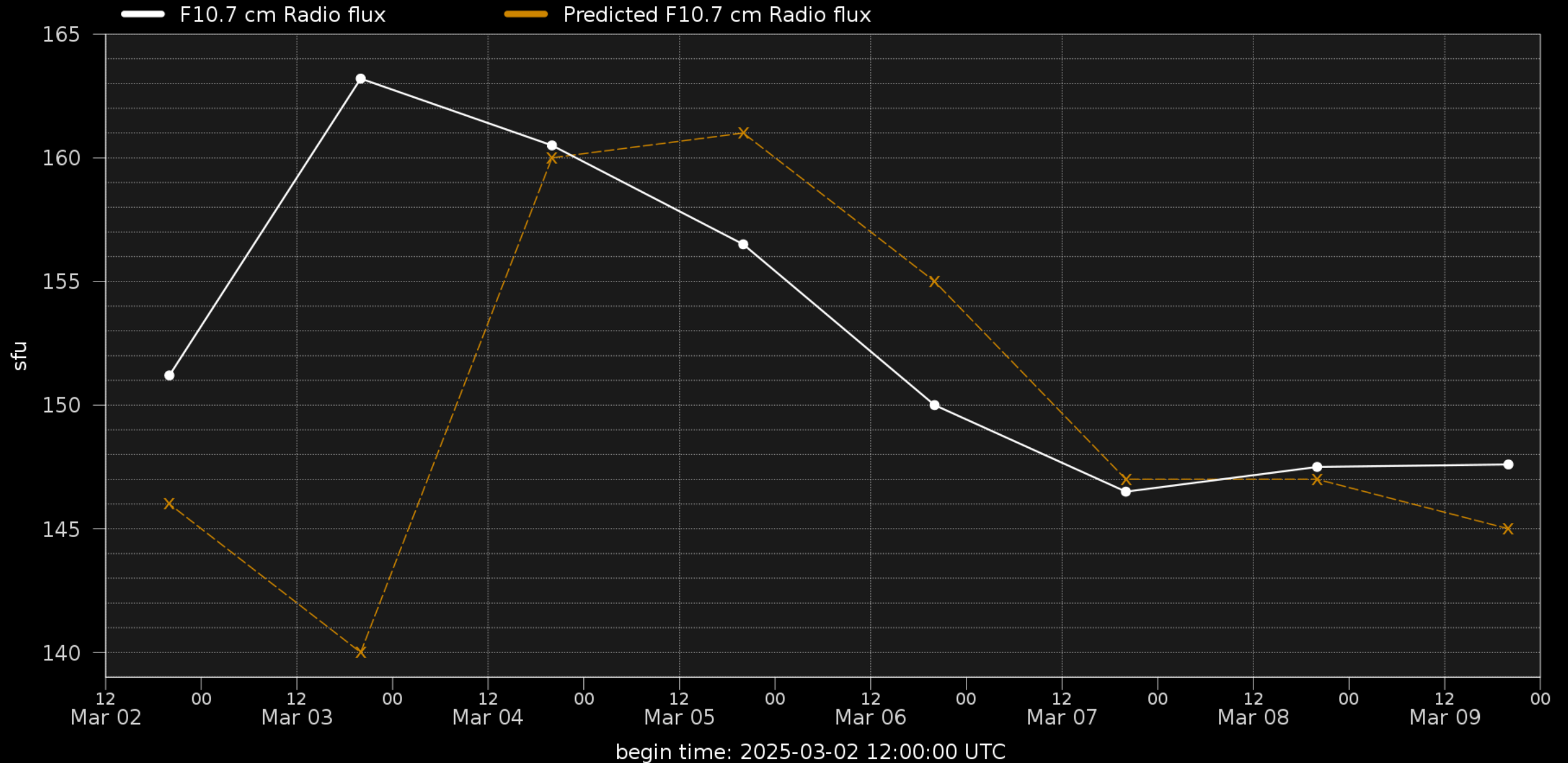
H-alpha 2025-03-02



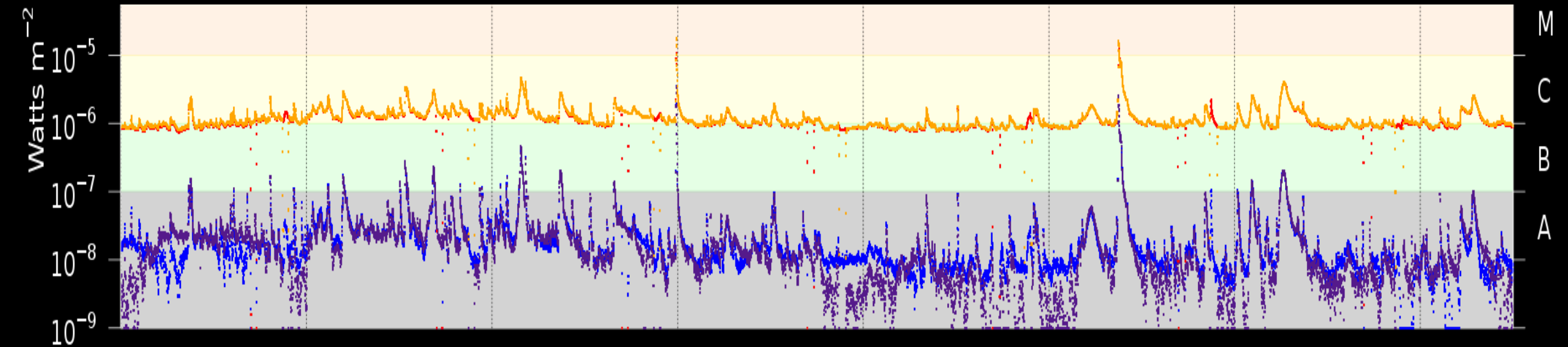
H-alpha 2025-03-09



Solar F10.7cm radio flux



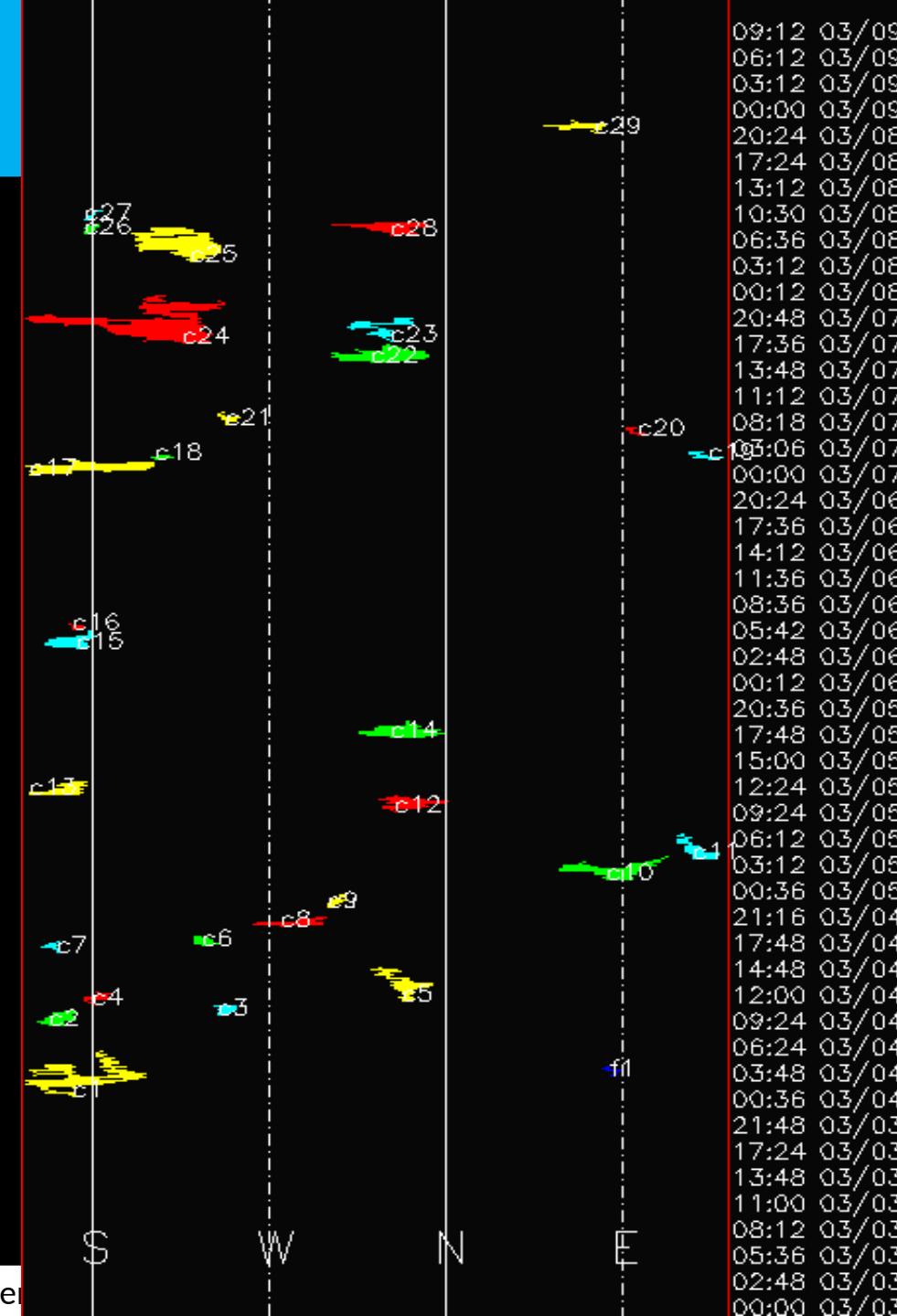
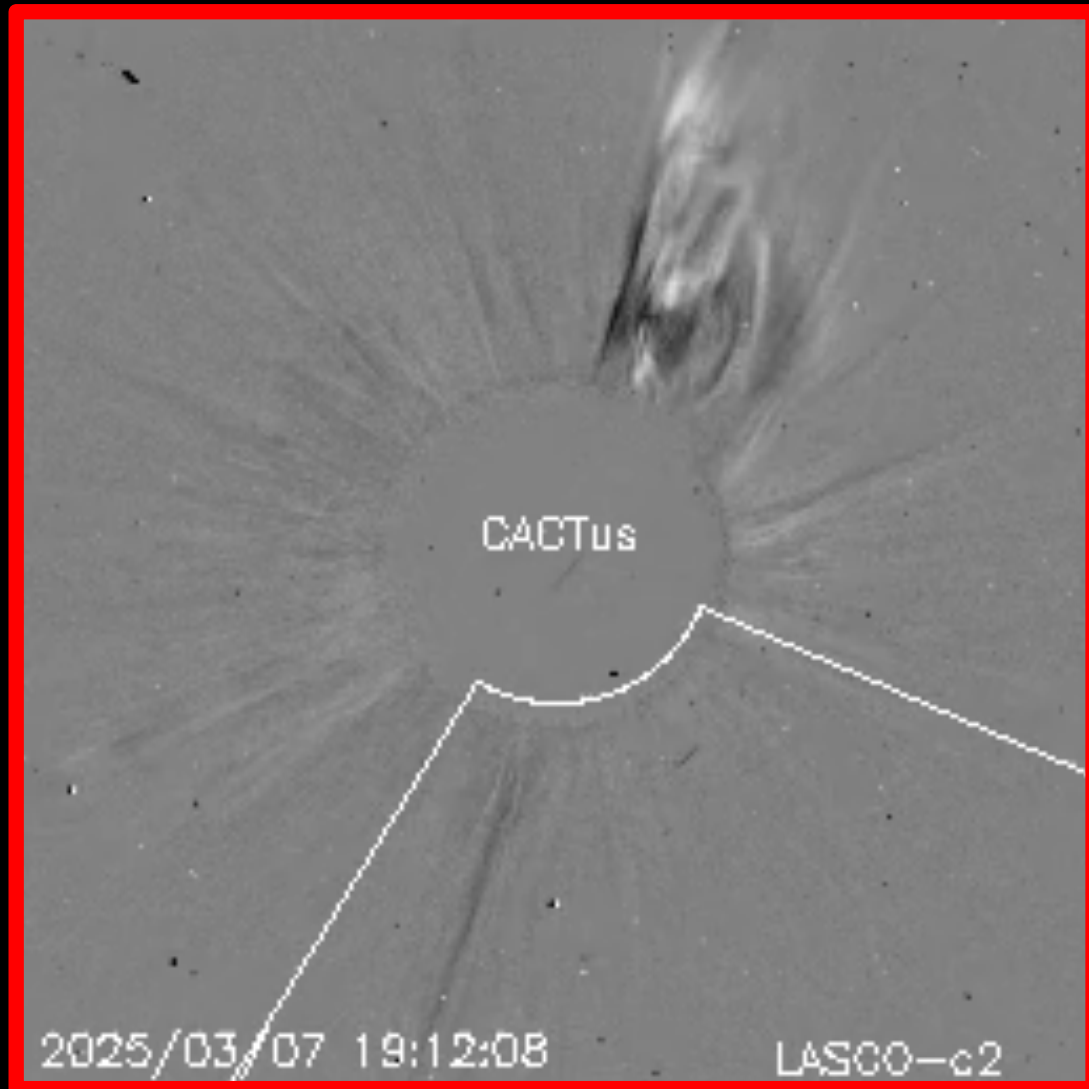
Flaring activity



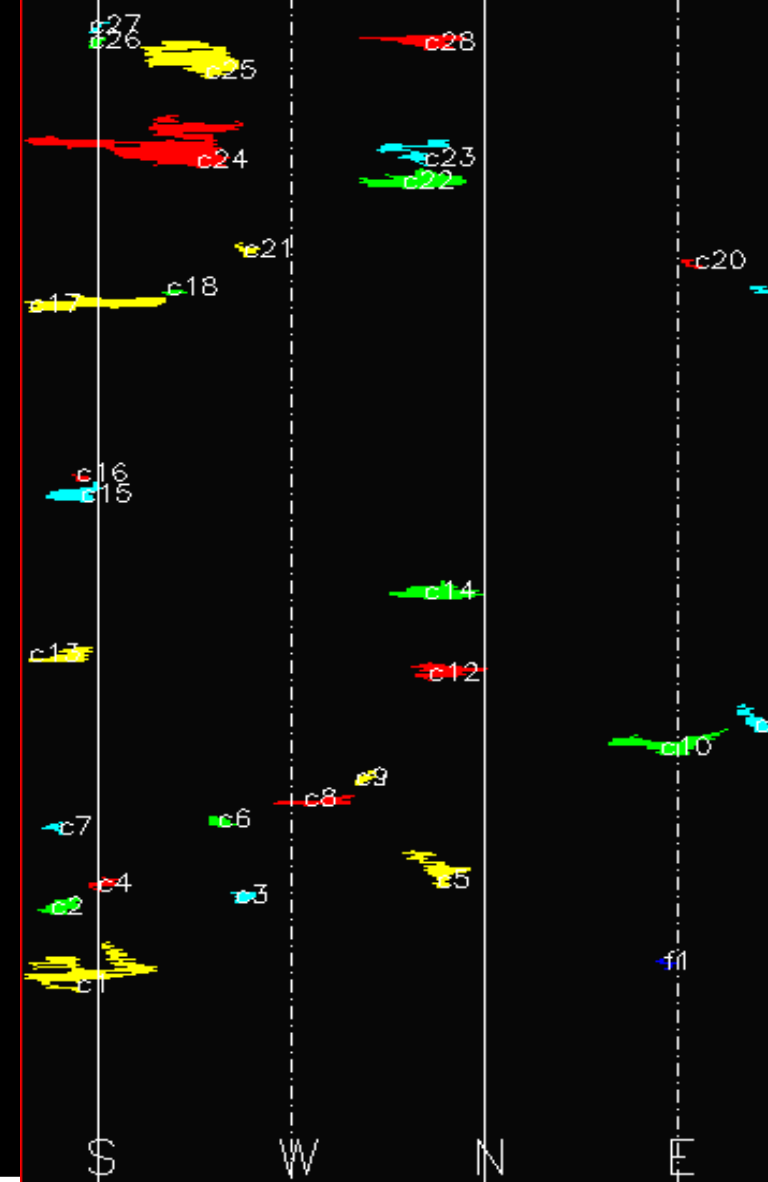
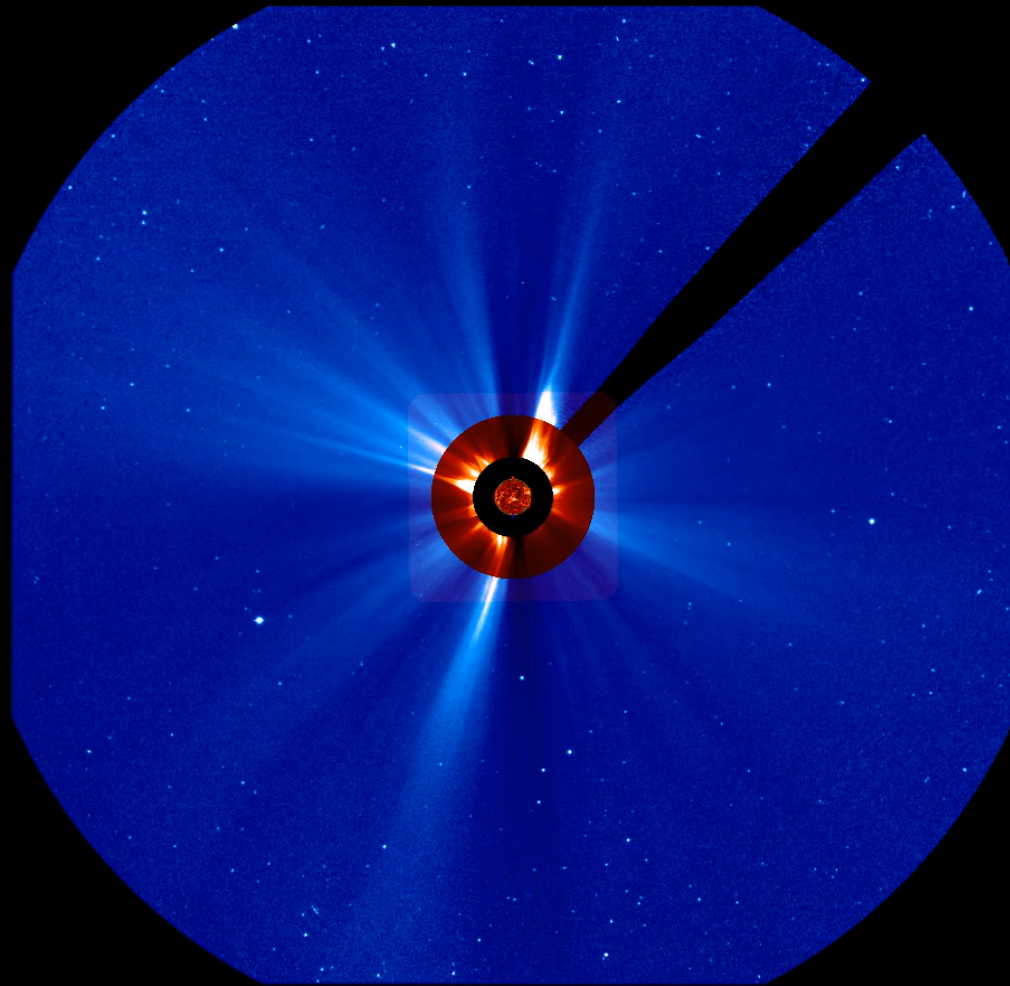
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2025-03-02	2025-03-03	2025-03-04	2025-03-05	2025-03-06	2025-03-07	2025-03-08	2025-03-09
Probability (%)	95 30 05	99 33 01	99 47 10	97 60 01	99 66 20	99 47 05	95 36 10	99 32 05
Observed (#)	09 00 00	06 00 00	04 01 00	01 00 00	02 00 00	02 01 00	04 00 00	02 00 00

Coronal Mass Ejections



Coronal Mass Ejections



09:12	03/09
06:12	03/09
03:12	03/09
00:00	03/09
20:24	03/08
17:24	03/08
13:12	03/08
10:30	03/08
06:36	03/08
03:12	03/08
00:12	03/08
20:48	03/07
17:36	03/07
13:48	03/07
11:12	03/07
08:18	03/07
05:06	03/07
00:00	03/07
20:24	03/06
17:36	03/06
14:12	03/06
11:36	03/06
08:36	03/06
05:42	03/06
02:48	03/06
00:12	03/06
20:36	03/05
17:48	03/05
15:00	03/05
12:24	03/05
09:24	03/05
06:12	03/05
03:12	03/05
00:36	03/05
21:16	03/04
17:48	03/04
14:48	03/04
12:00	03/04
09:24	03/04
06:24	03/04
03:48	03/04
00:36	03/04
21:48	03/03
17:24	03/03
13:48	03/03
11:00	03/03
08:12	03/03
05:36	03/03
02:48	03/03
00:00	03/03

Solar Wind and

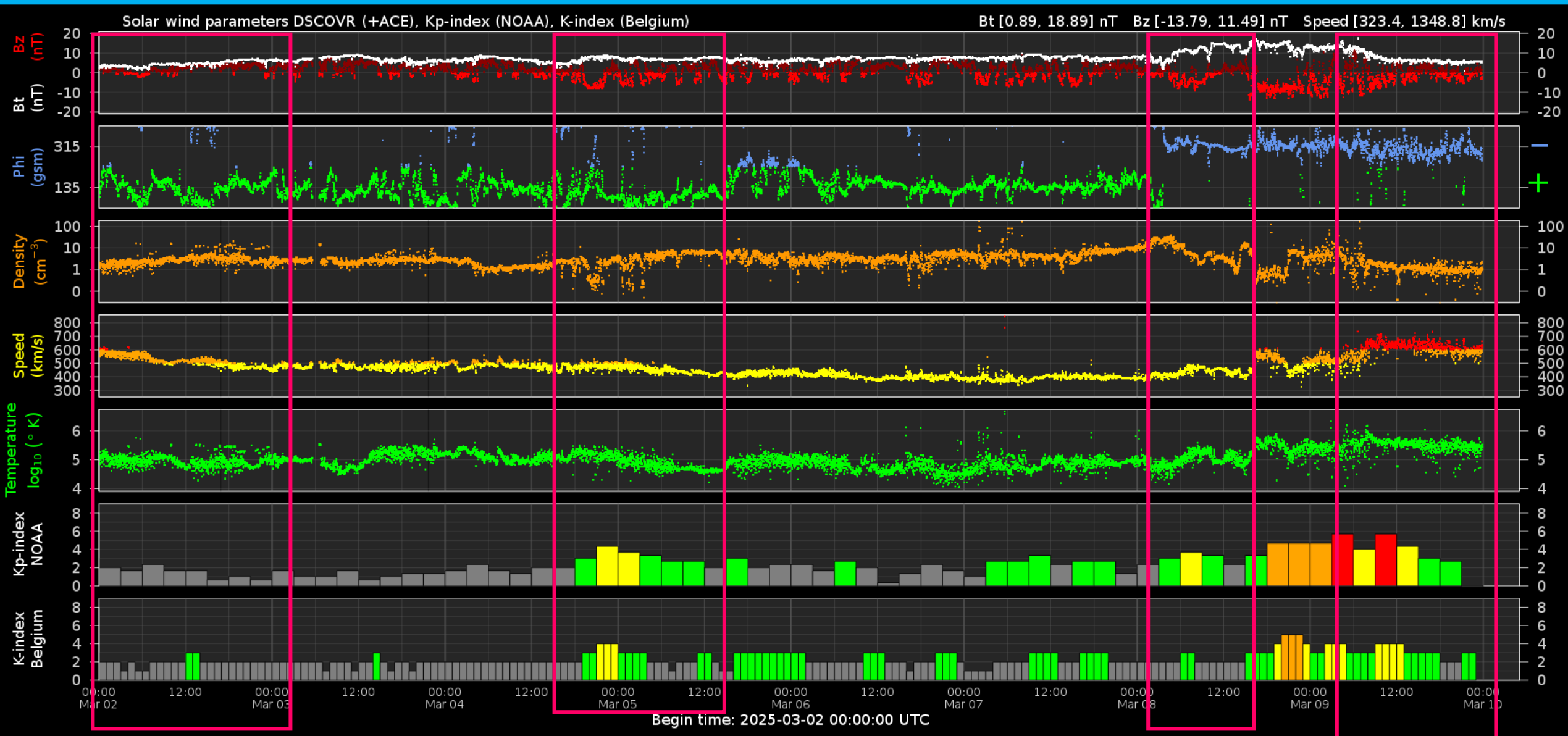
Geomagnetic Activity



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Solar wind parameters & K-indices



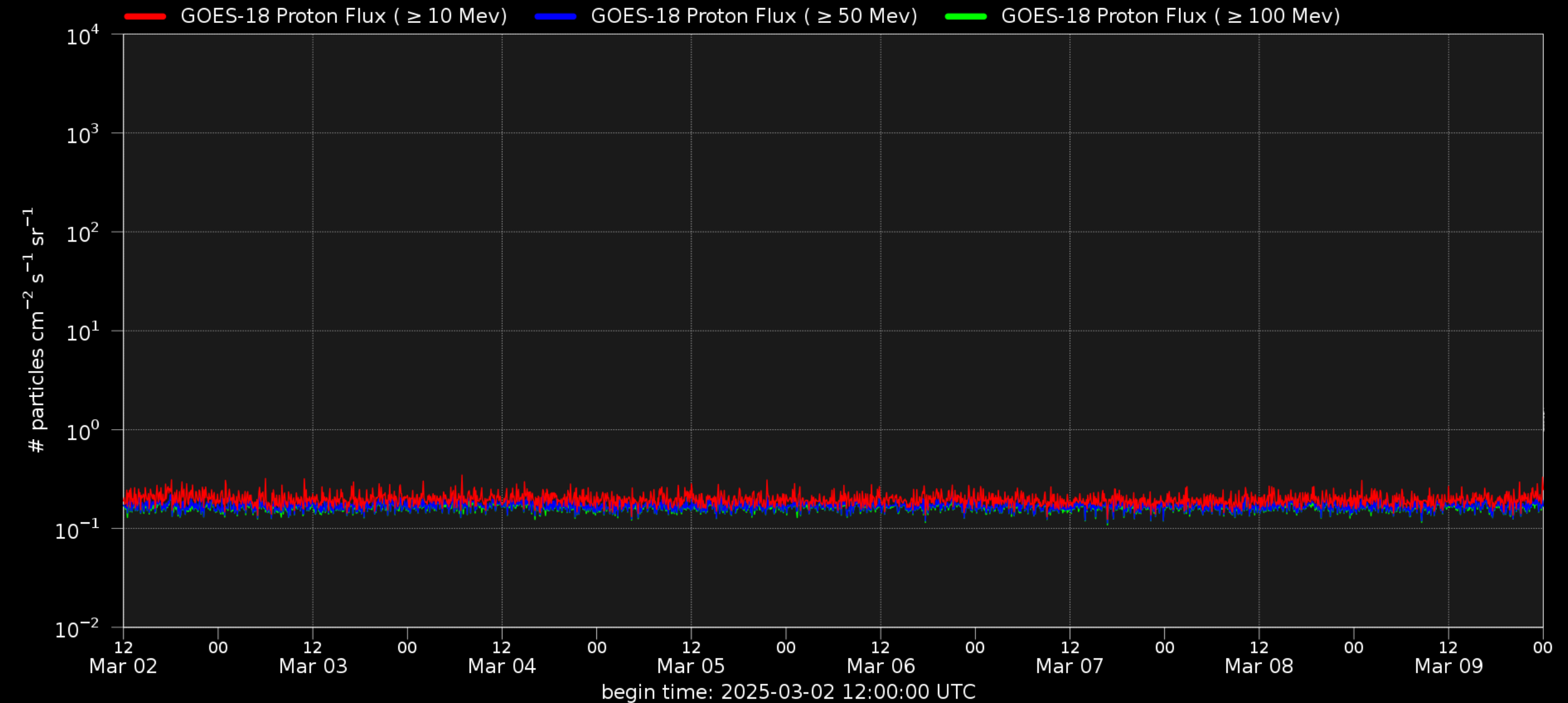
Energetic Particles



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

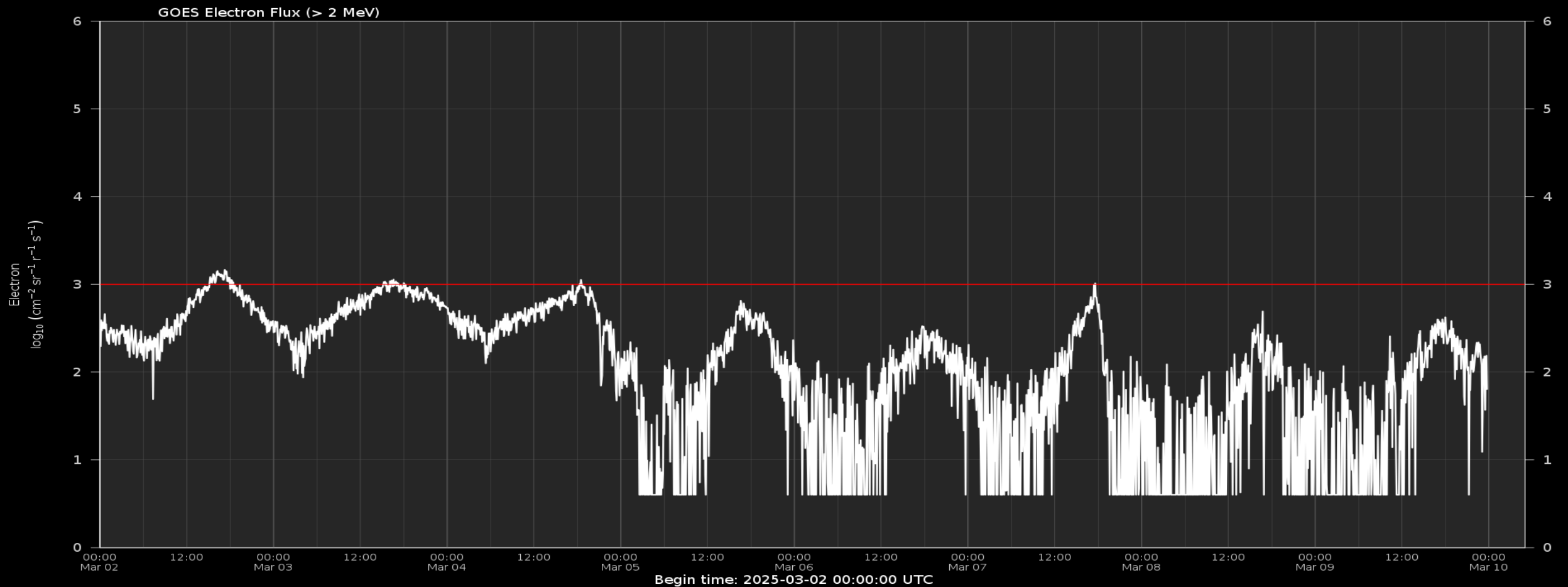
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



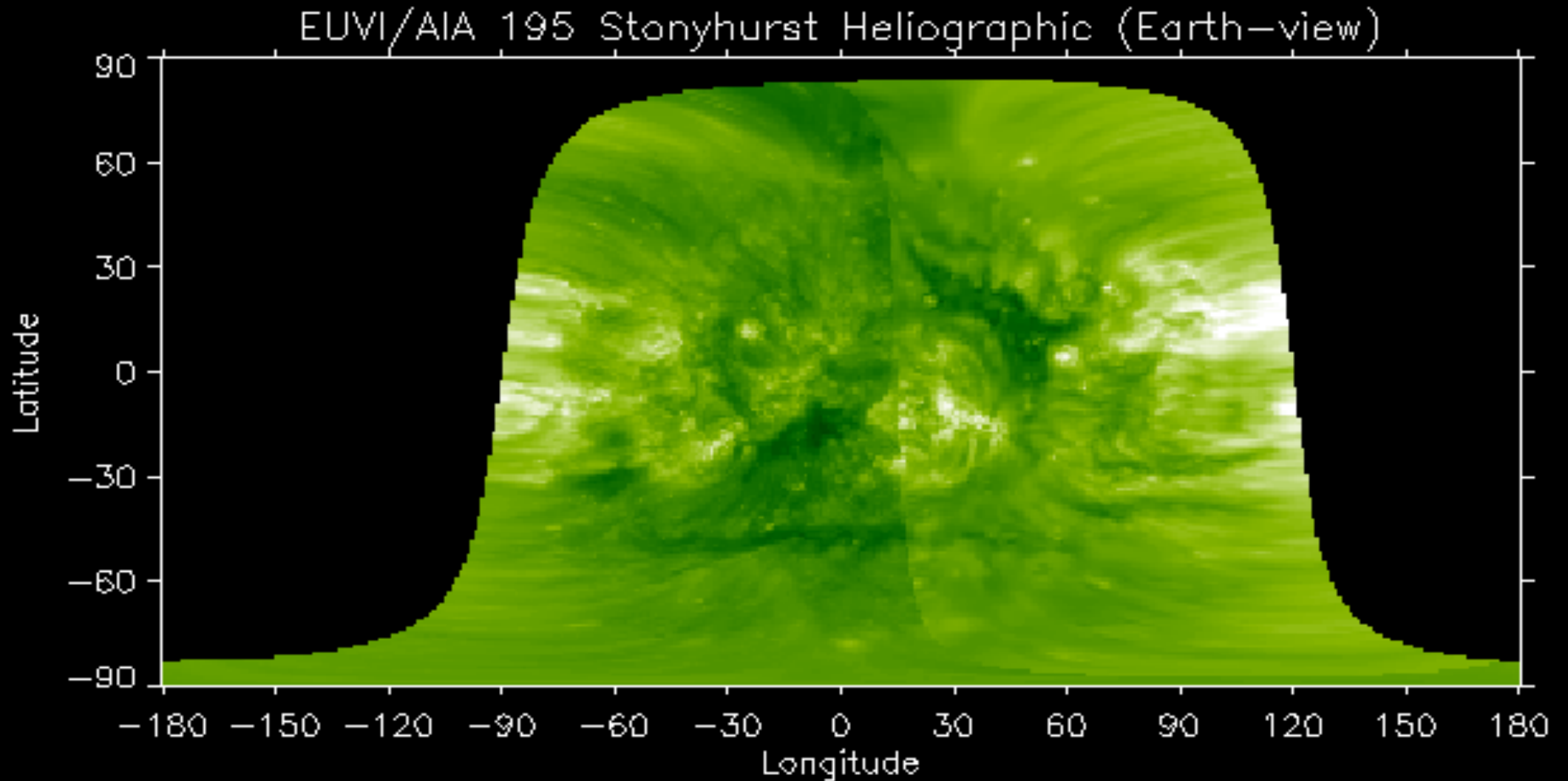
Outlook



Royal Observatory
of Belgium

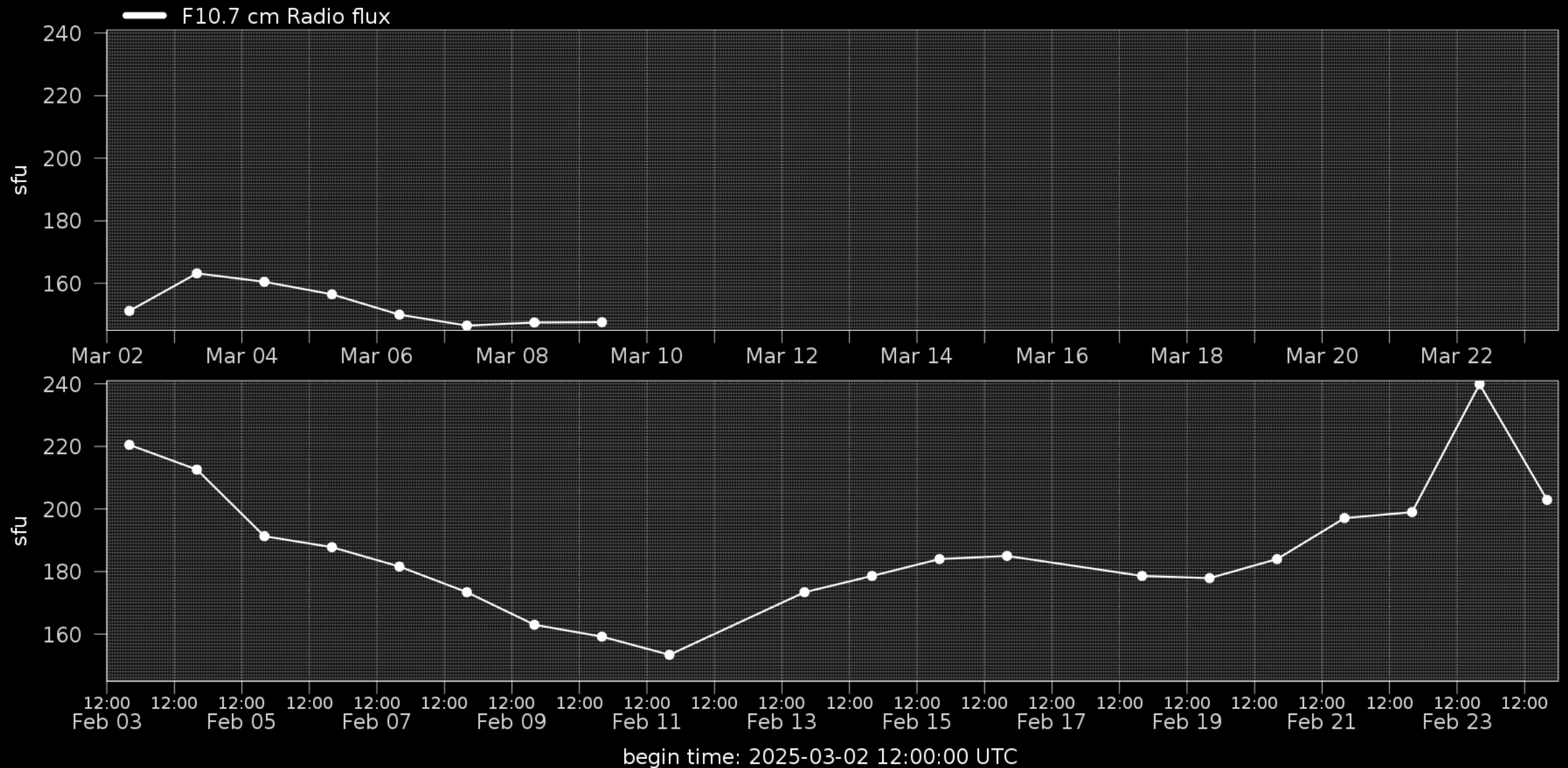
Solar Influences
Data analysis Centre
www.sidc.be

Outlook: Solar activity

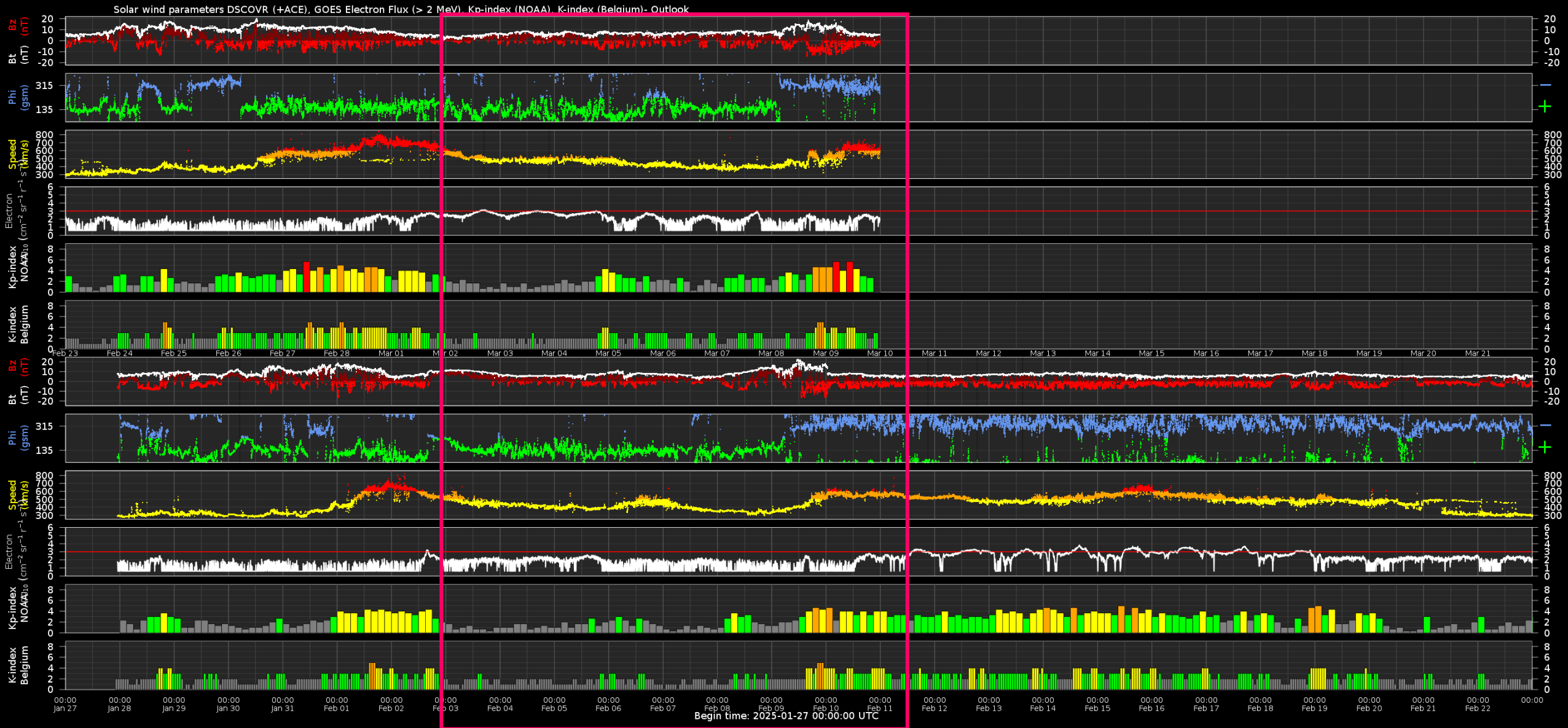


Observation date: 2025/03/09 21:35:00

Outlook: Solar F10.7cm radio flux



Outlook: Solar Wind, Electron Flux, at GEO Outlook



PECASUS



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Pegasus related events

GNSS and HF (Post Storm Depression) advisories issued

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