

SIDC Space Weather Briefing

19 May 2024-26 May 2024

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& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2024-05-19 12:00 to 2024-05-26 23:59

Active regions	NOAA Ars 3672 to 3692
Flares	# C-class flare: 34 # M-class flare: 16 # X-class flare: 0
Coronal Holes	Two high latitude CHs. The one in the N (negative polarity) with low lat extension
CMEs	Only one possible Earth directed

Proton flux	Below threshold
Electron flux	Below threshold

Solar wind and geomagnetic conditions

ICMEs	None
Solar wind conditions	B : 1.09 - 10.39 nT //Bz: -8.83 nT to 8.35 nT //Speed: 277.0 - 501.5km/s
Geomagnetic conditions	max KBel: 3, max Kp(NOAA): 4, Active conditions

All Quiet Alert: Off

Solar Activity

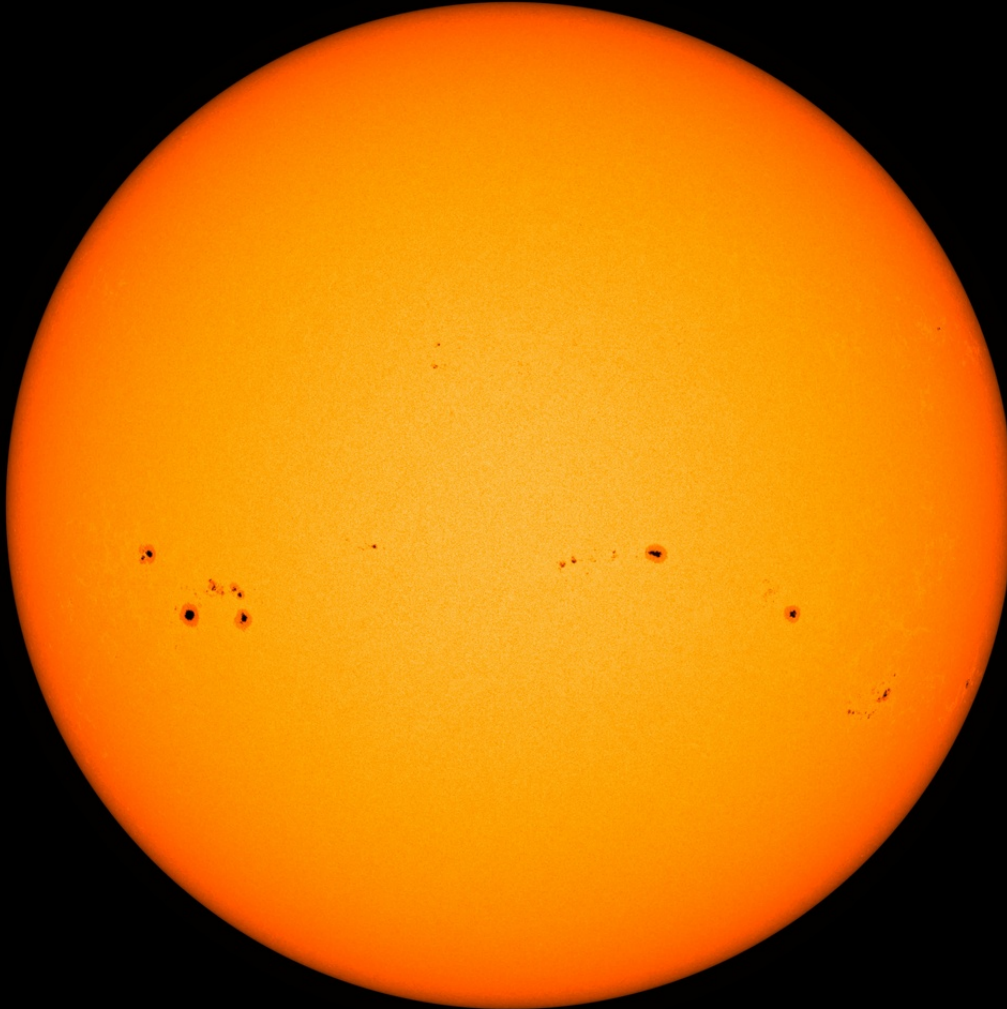


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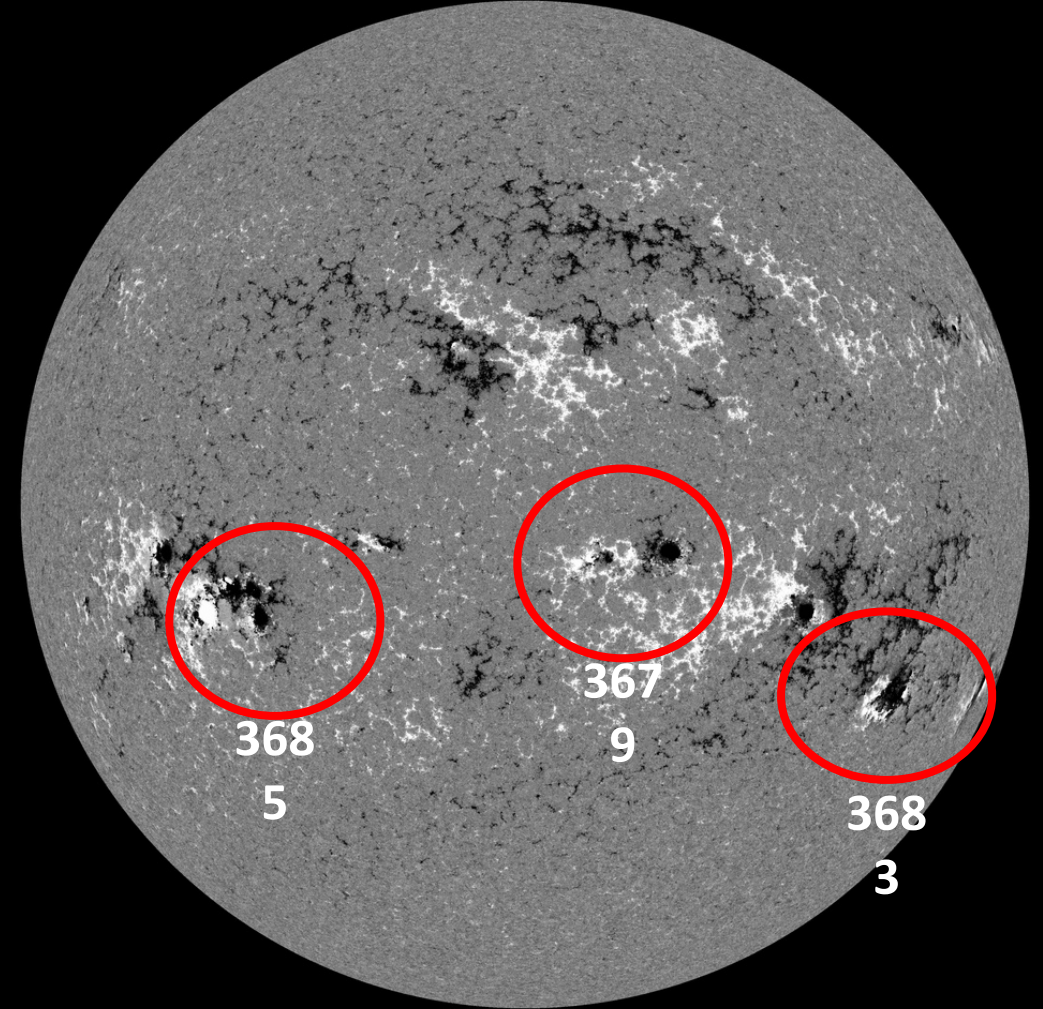
Solar active regions

SDO/HMI White Light 2024-05-19



SDO/HMI Quick-Look Continuum: 20240519_114500

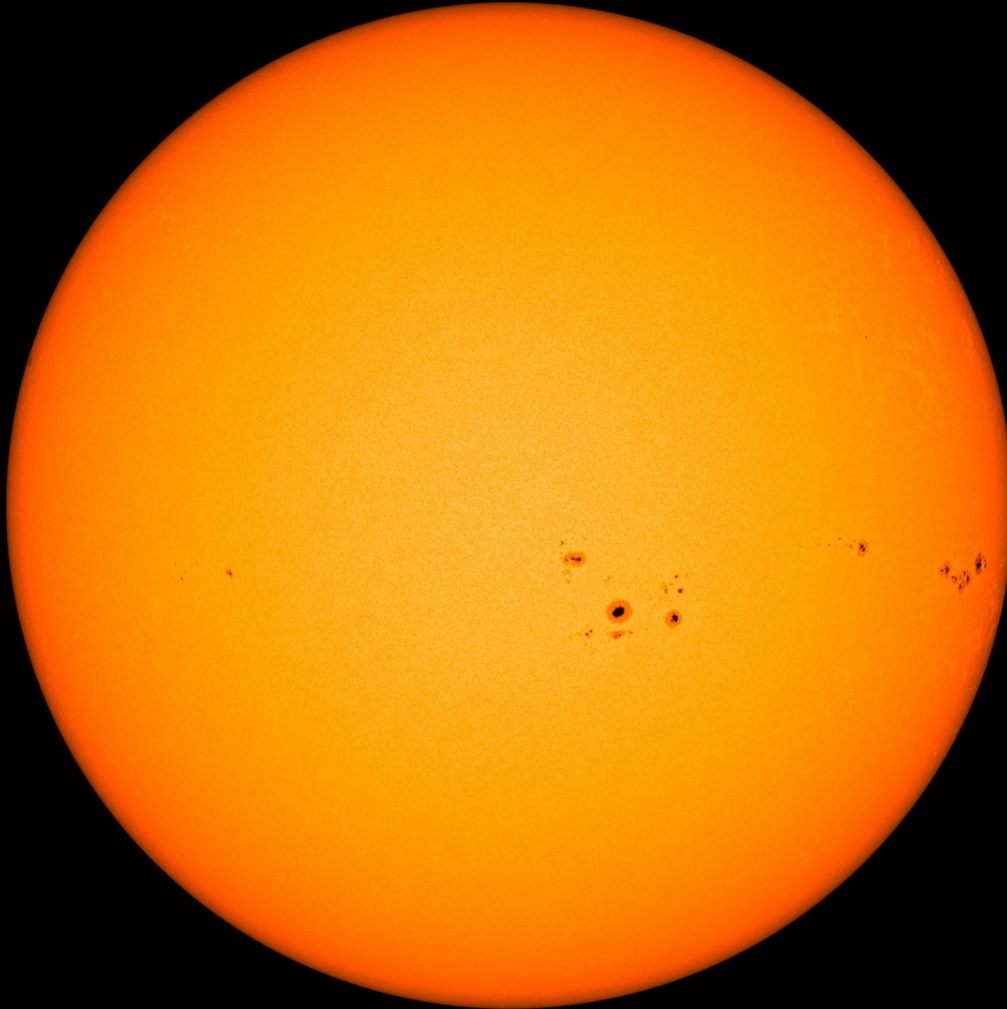
SDO/HMI Magnetogram 2024-05-19



SDO/HMI Quick-Look Magnetogram: 20240519_114500

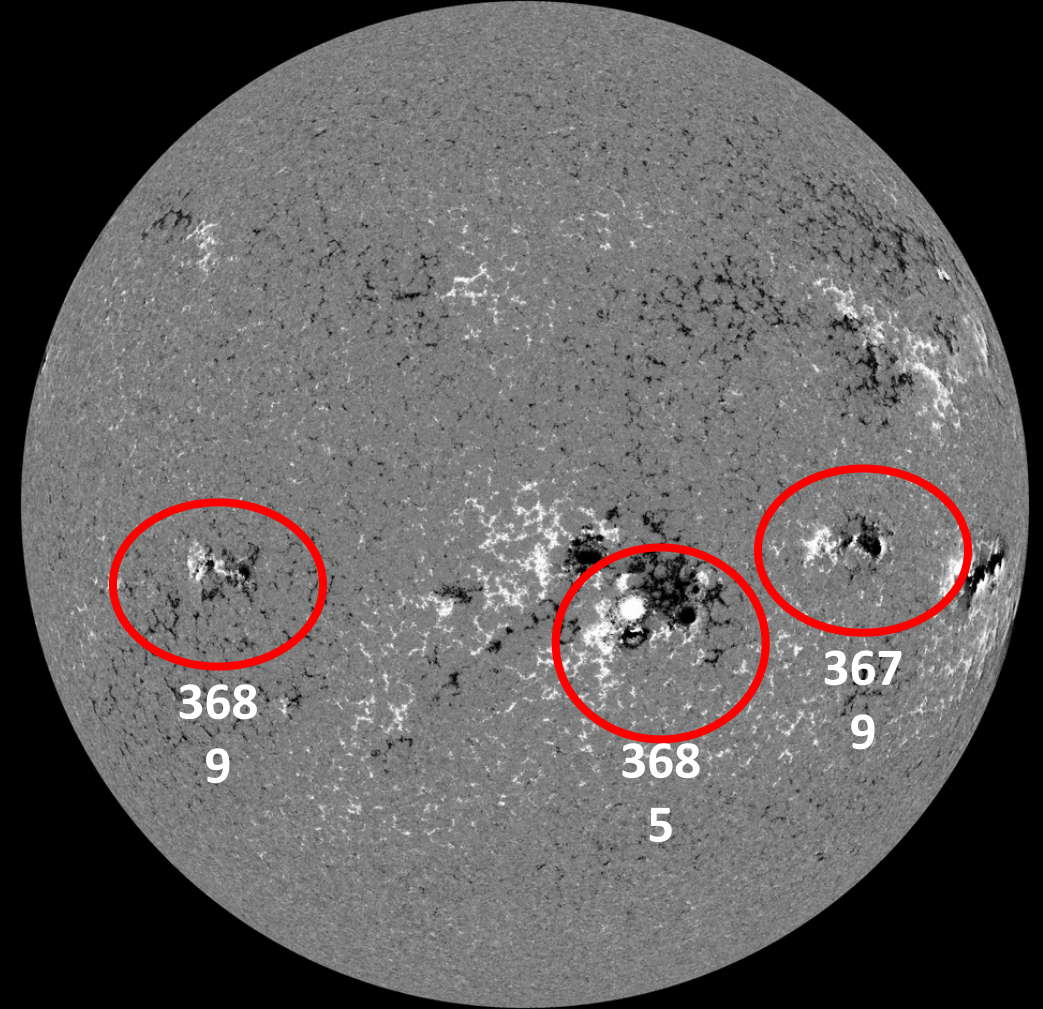
Solar active regions

SDO/HMI White Light 2024-05-23



SDO/HMI Quick-Look Continuum: 20240523_114500

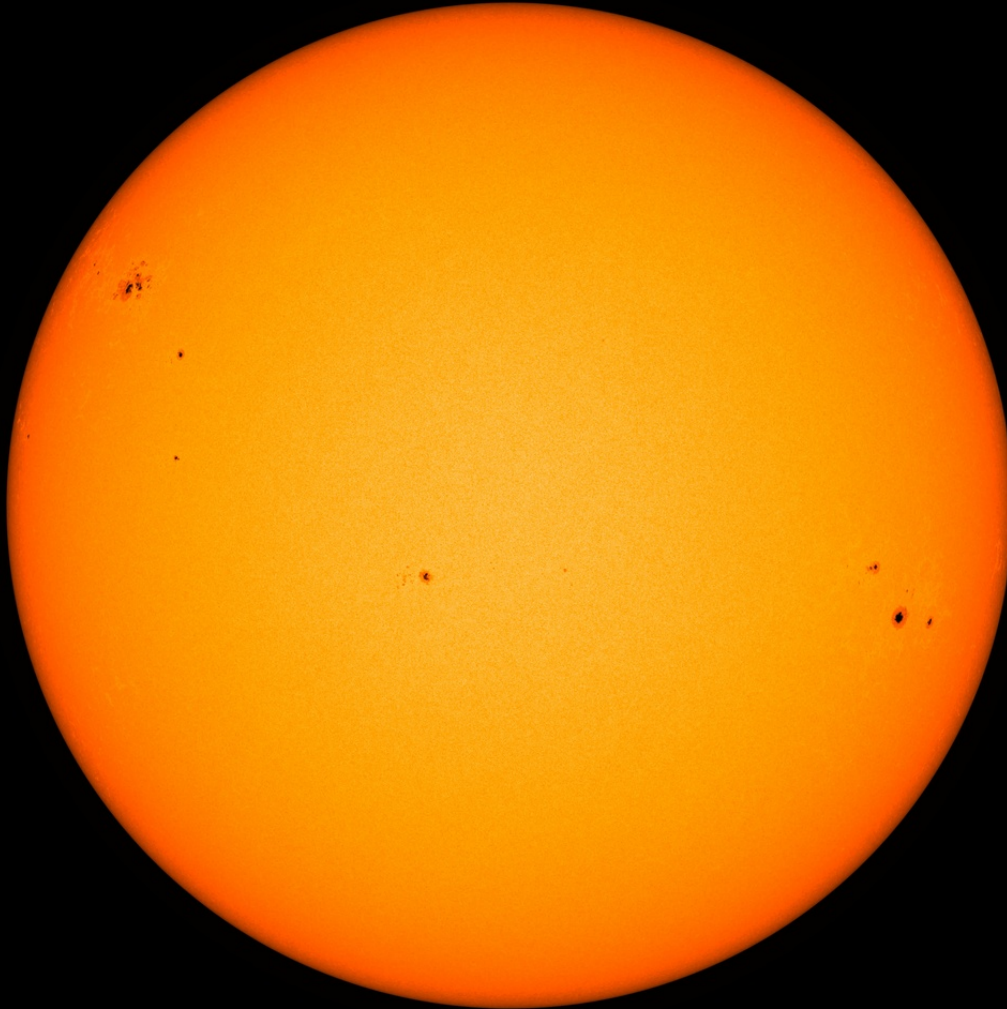
SDO/HMI Magnetogram 2024-05-23



SDO/HMI Quick-Look Magnetogram: 20240523_114500

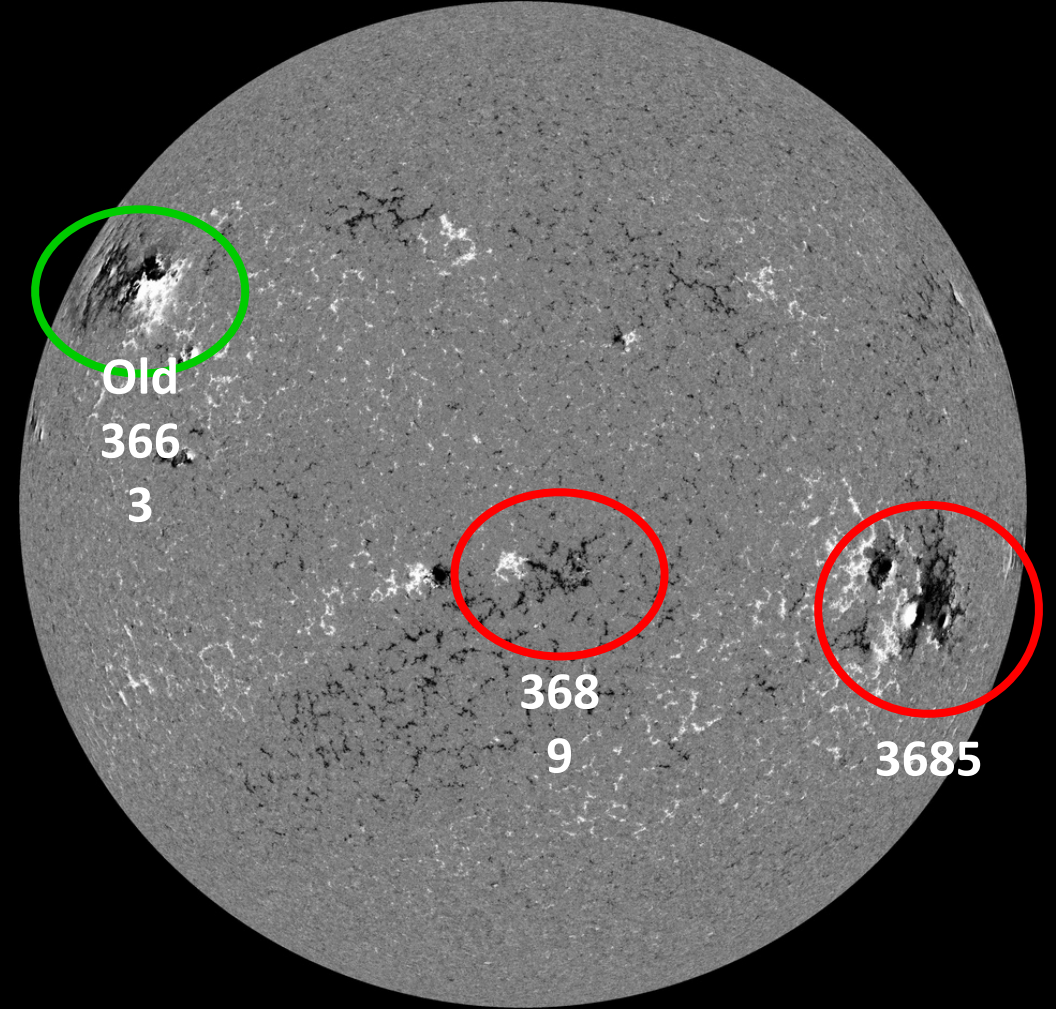
Solar active regions

SDO/HMI White Light 2024-05-26



SDO/HMI Quick-Look Continuum: 20240526_114500

SDO/HMI Magnetogram 2024-05-26

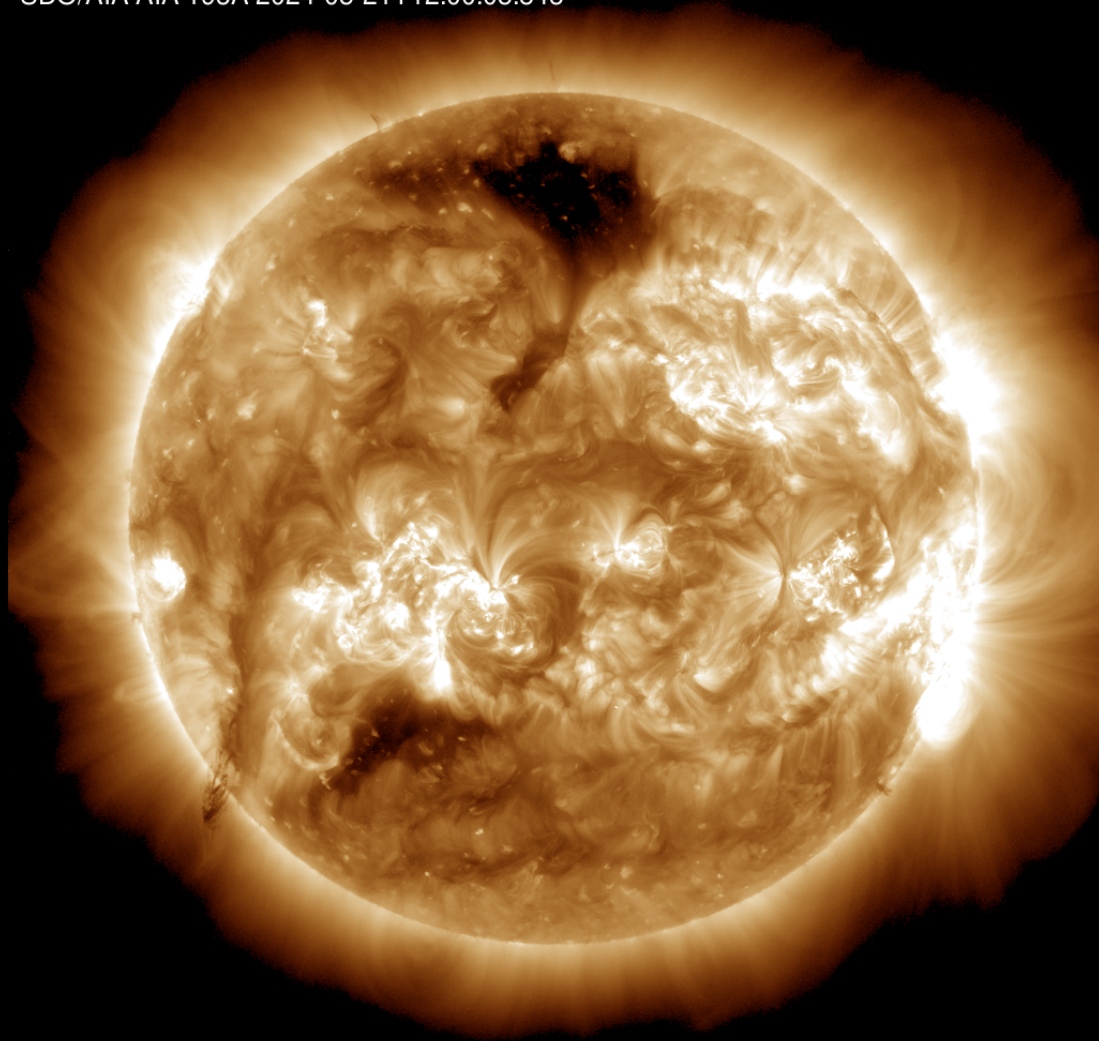


SDO/HMI Quick-Look Magnetogram: 20240526_114500

Coronal holes

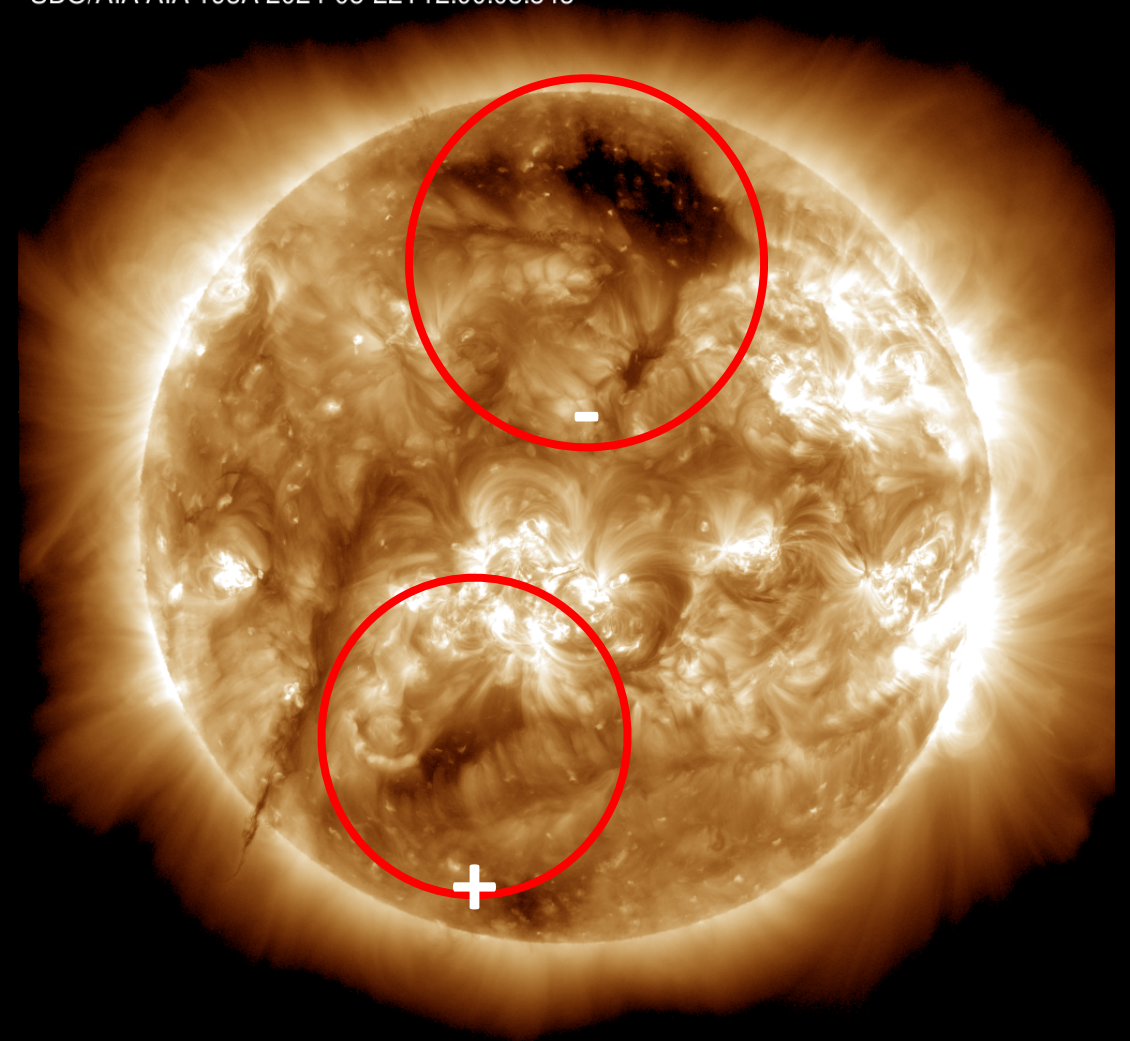
SDO/AIA 19.3 nm 2024-05-21

SDO/AIA AIA 193Å 2024-05-21T12:00:05.843



SDO/AIA 19.3 nm 2024-05-22

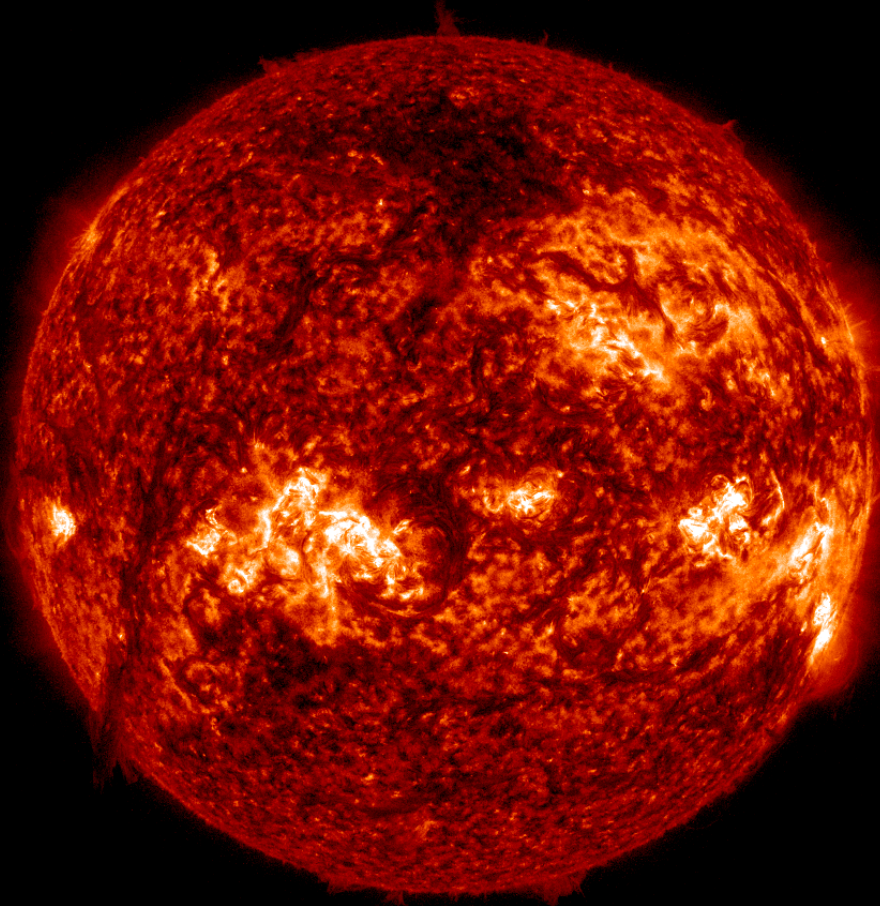
SDO/AIA AIA 193Å 2024-05-22T12:00:05.843



Filaments

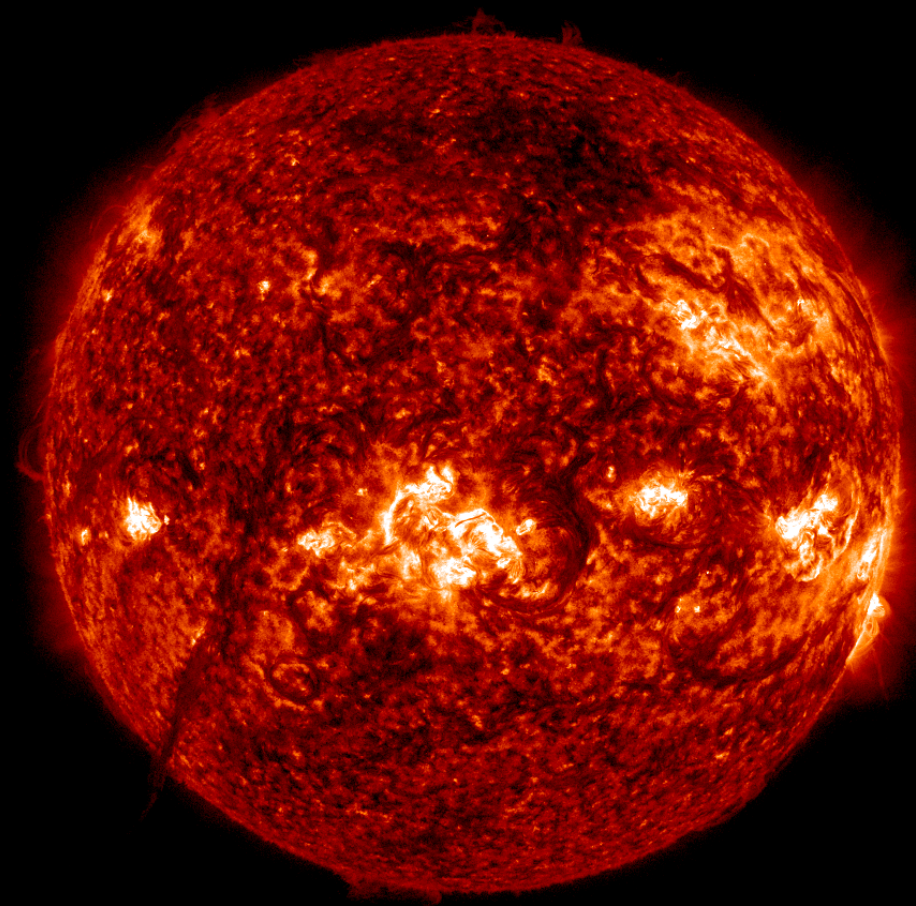
SDO/AIA 30.4 nm 2024-05-21

SDO/AIA AIA 304Å 2024-05-21T12:00:06.604



SDO/AIA 30.4 nm 2024-05-22

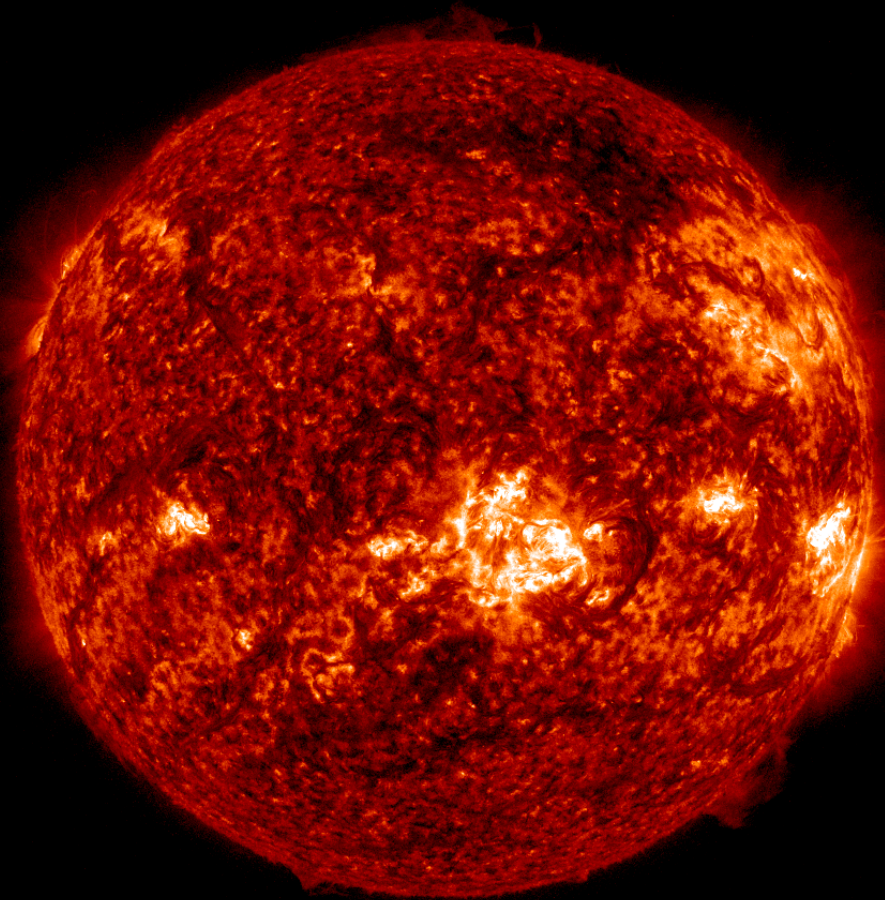
SDO/AIA AIA 304Å 2024-05-22T12:00:06.580



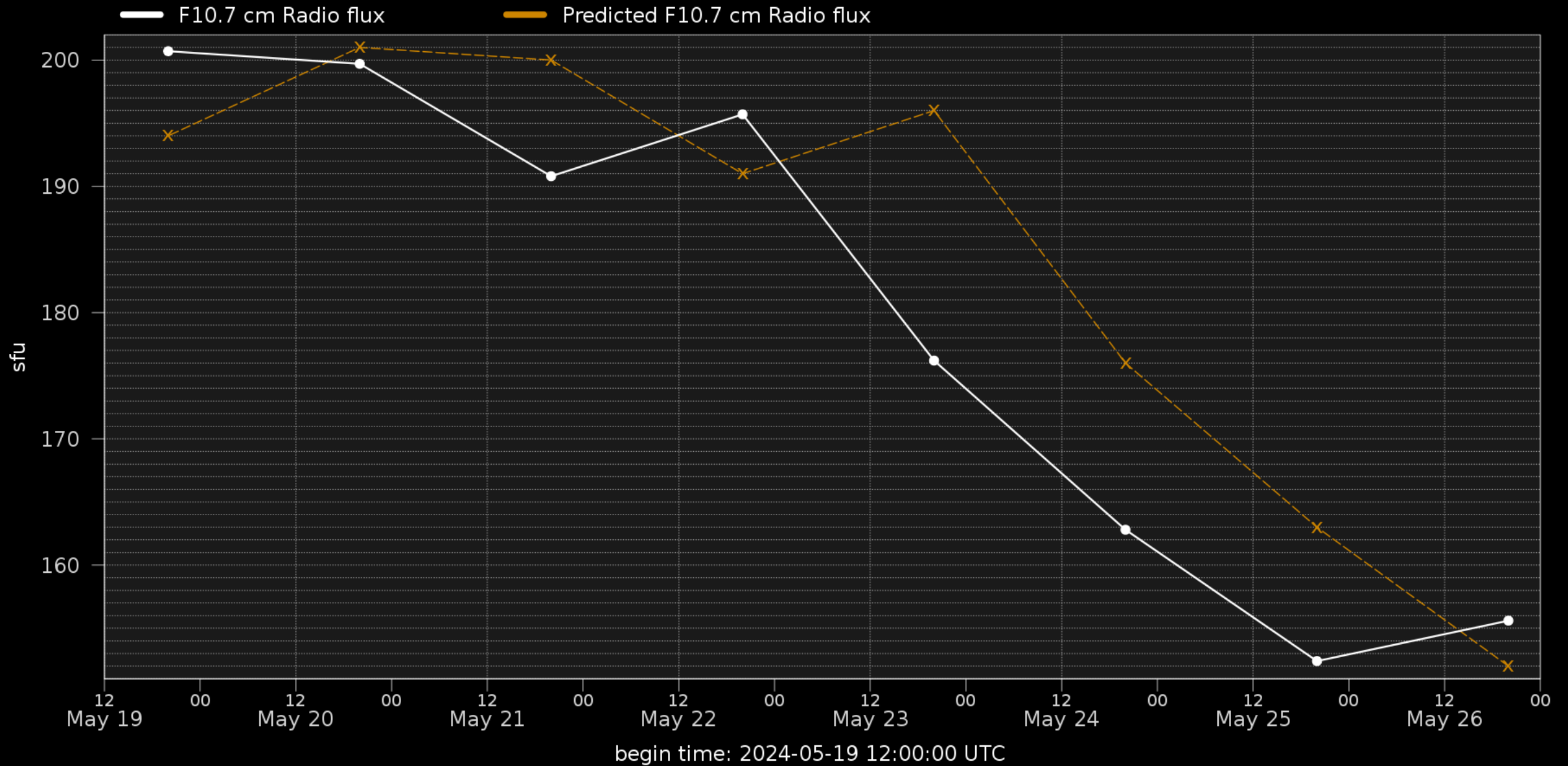
Filaments

SDO/AIA 30.4 nm 2024-05-23

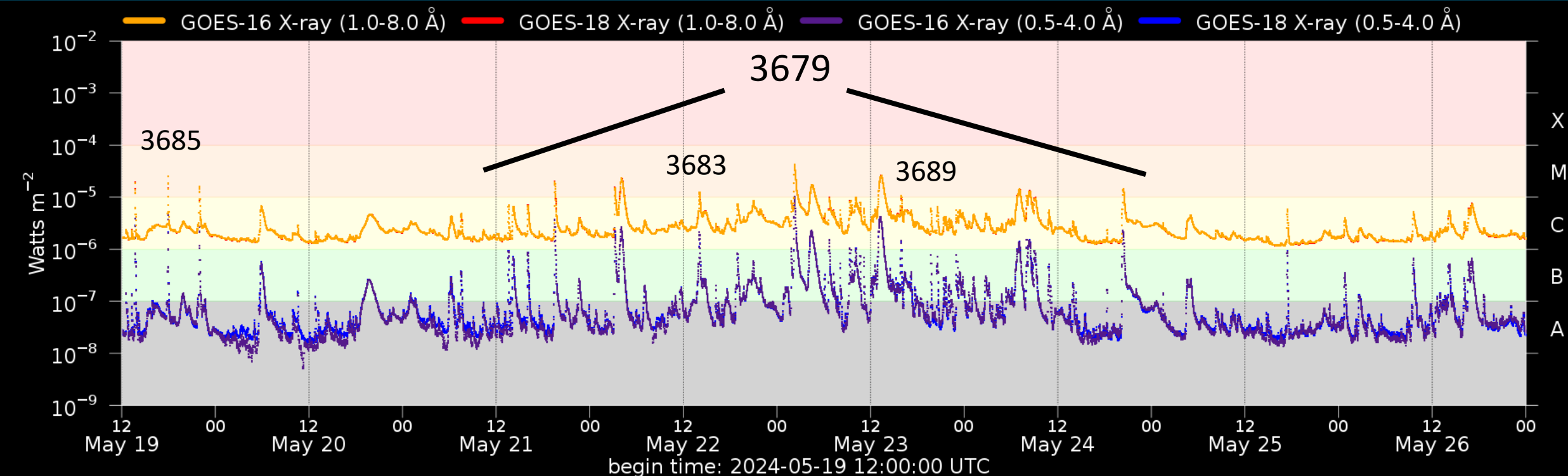
SDO/AIA AIA 304Å 2024-05-23T12:00:06.583



Solar F10.7cm radio flux



Flaring activity



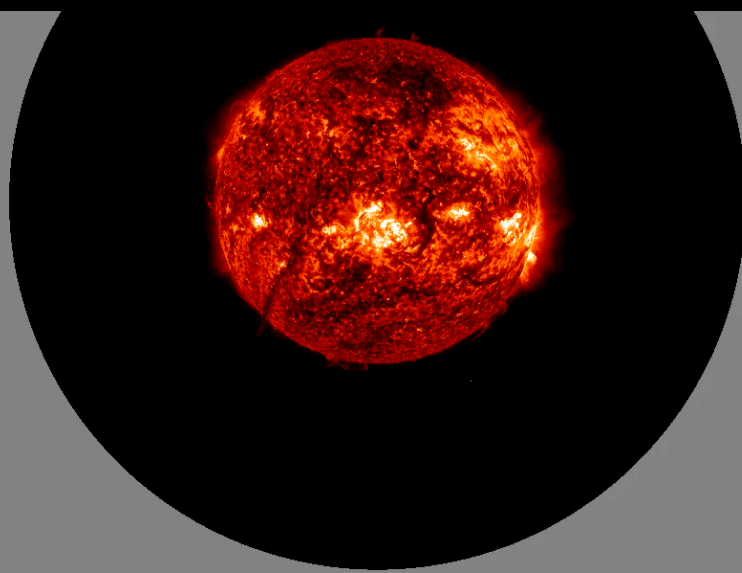
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2024-05-19	2024-05-20	2024-05-21	2024-05-22	2024-05-23	2024-05-24	2024-05-25	2024-05-26
Probability (%)	99 75 30	95 60 15	95 55 15	95 70 30	95 70 30	95 70 30	95 50 05	90 20 05
Observed (#)	02 03 00	03 00 00	03 03 00	09 04 00	09 05 00	02 01 00	03 00 00	03 00 00

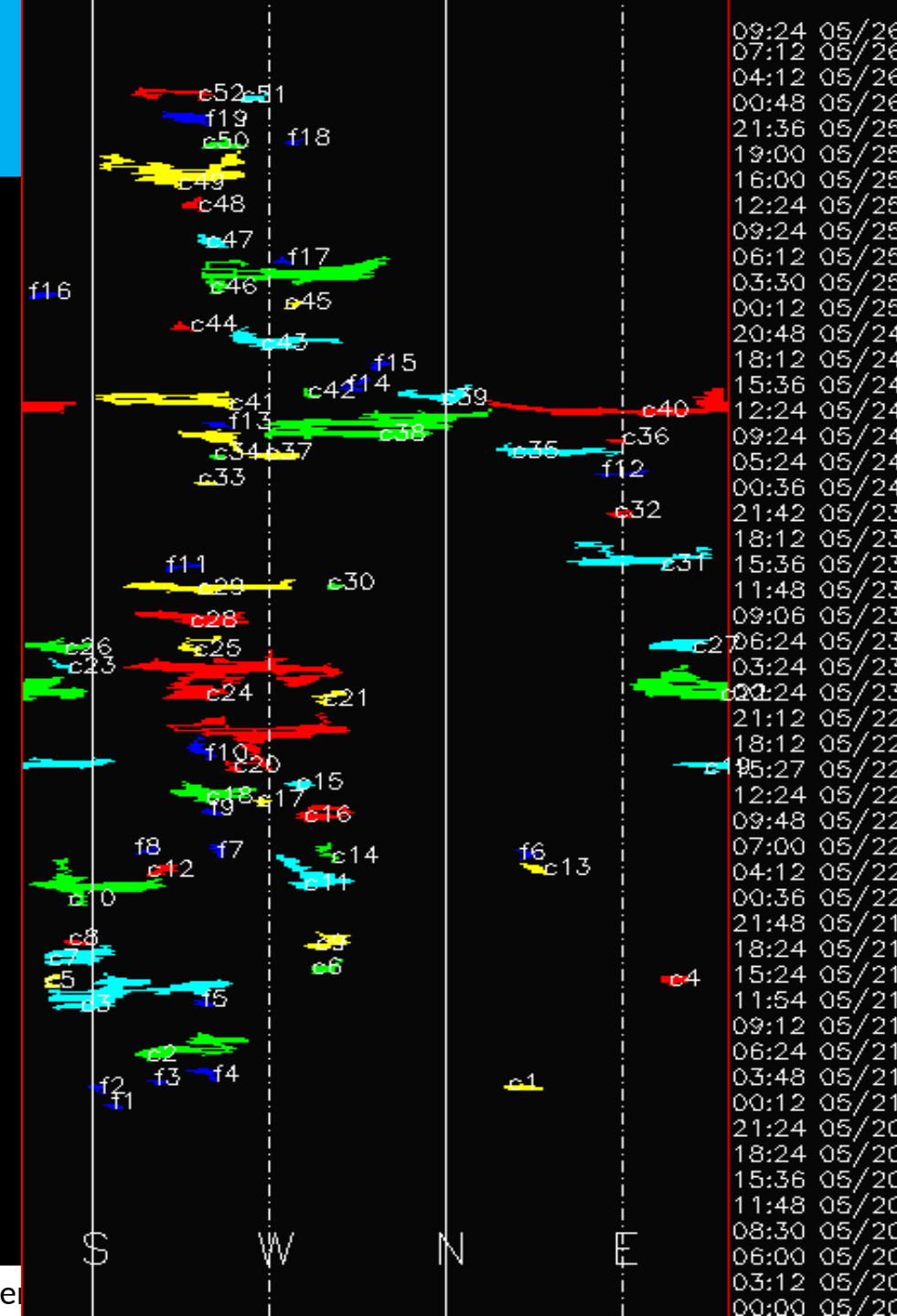
Coronal Mass Ejections

Only one with a possible Earth component:

- CME on 23 May
- Low chances of arrival on 27 May

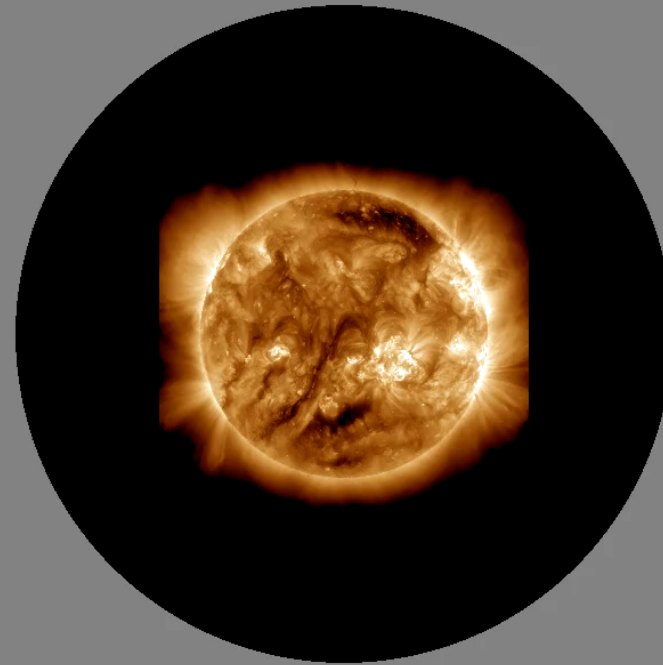


2024-05-22T19:12:07.602



Coronal Mass Ejections

CMEs on 24 May: not Earth directed



2024-05-24T08:48:28.985

Solar Wind and

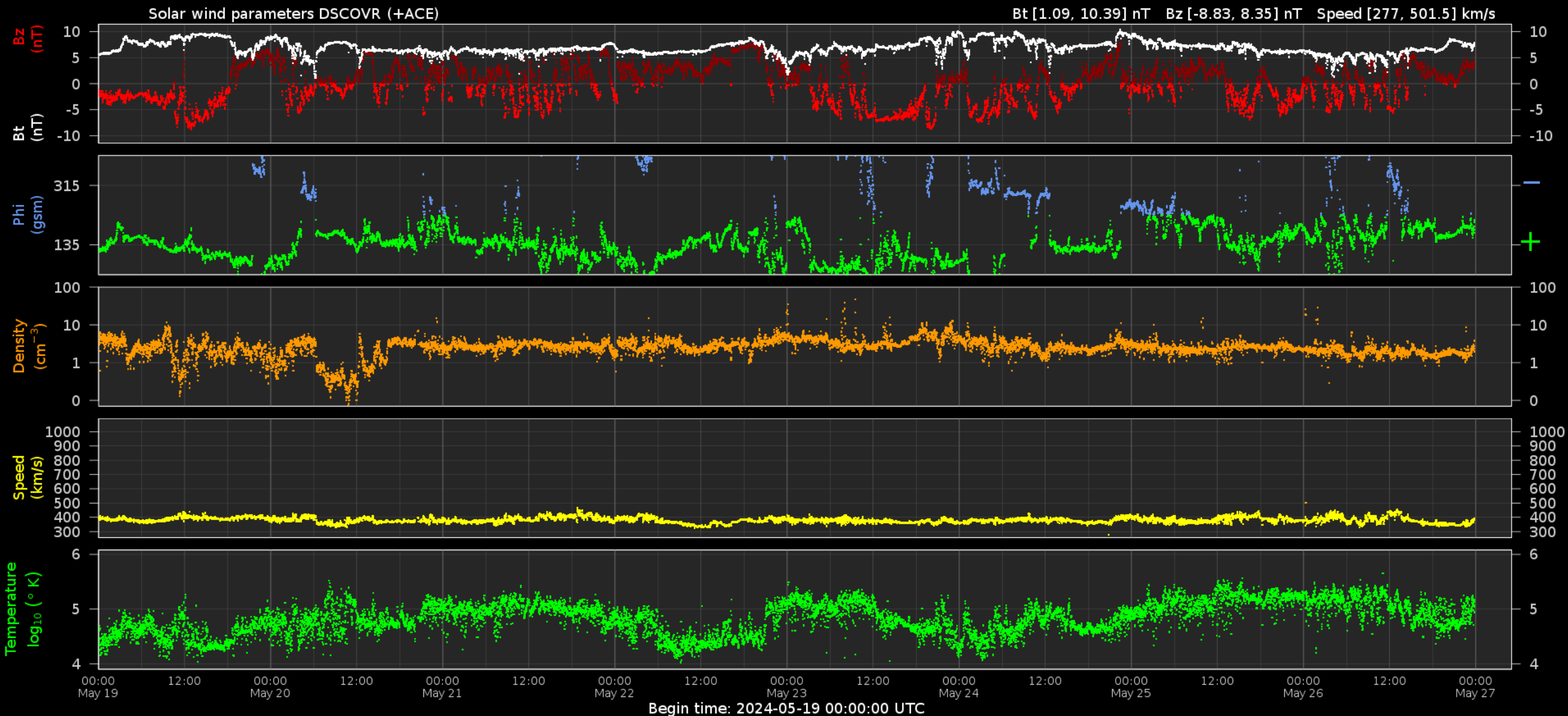
Geomagnetic Activity



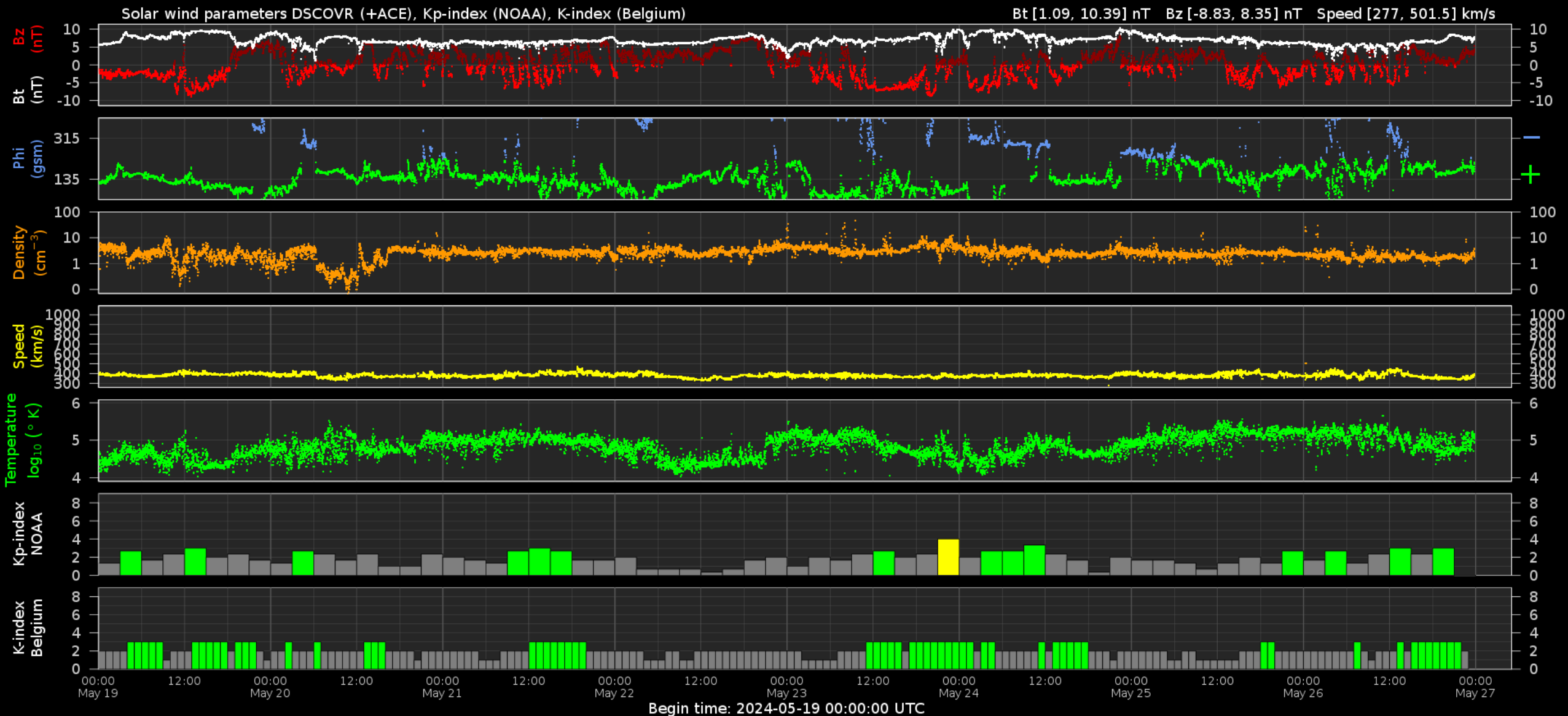
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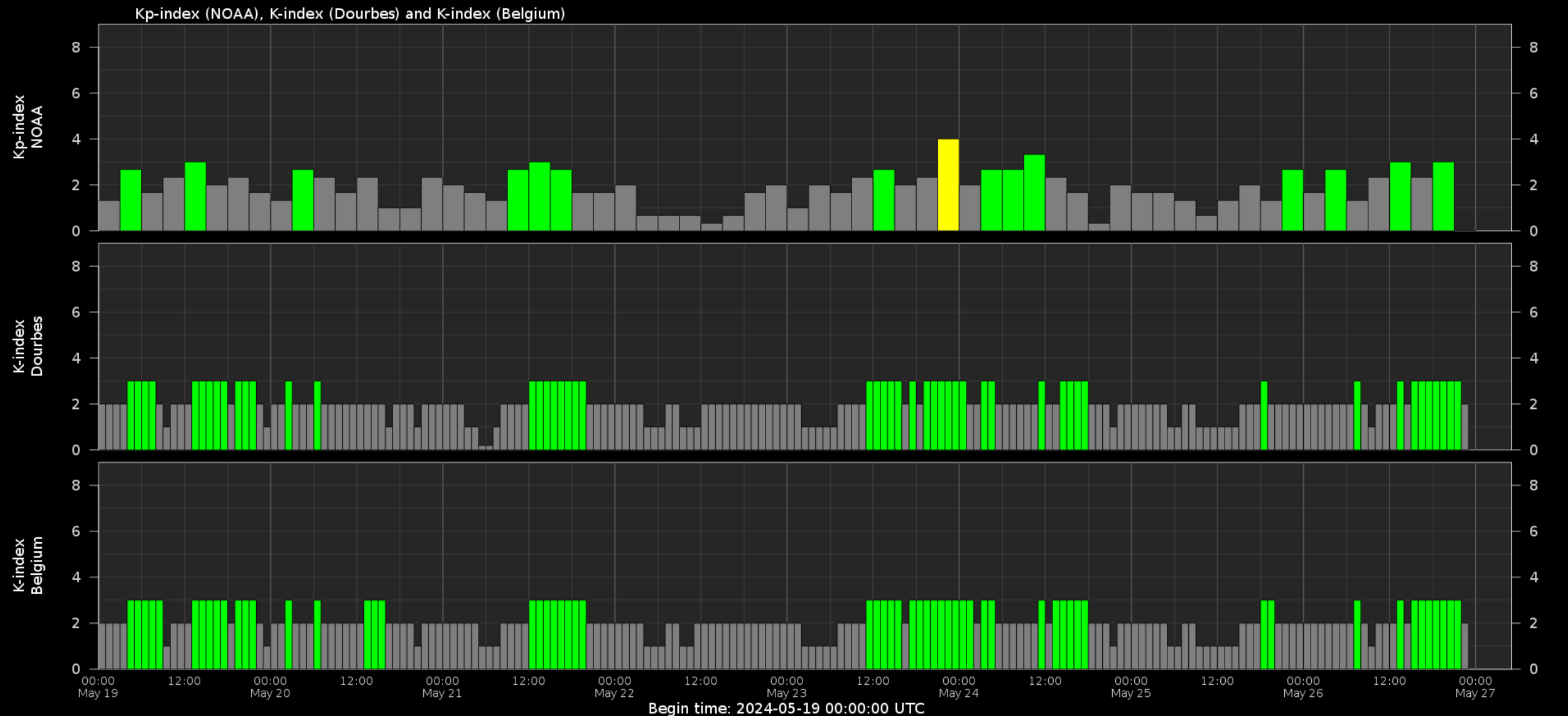
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



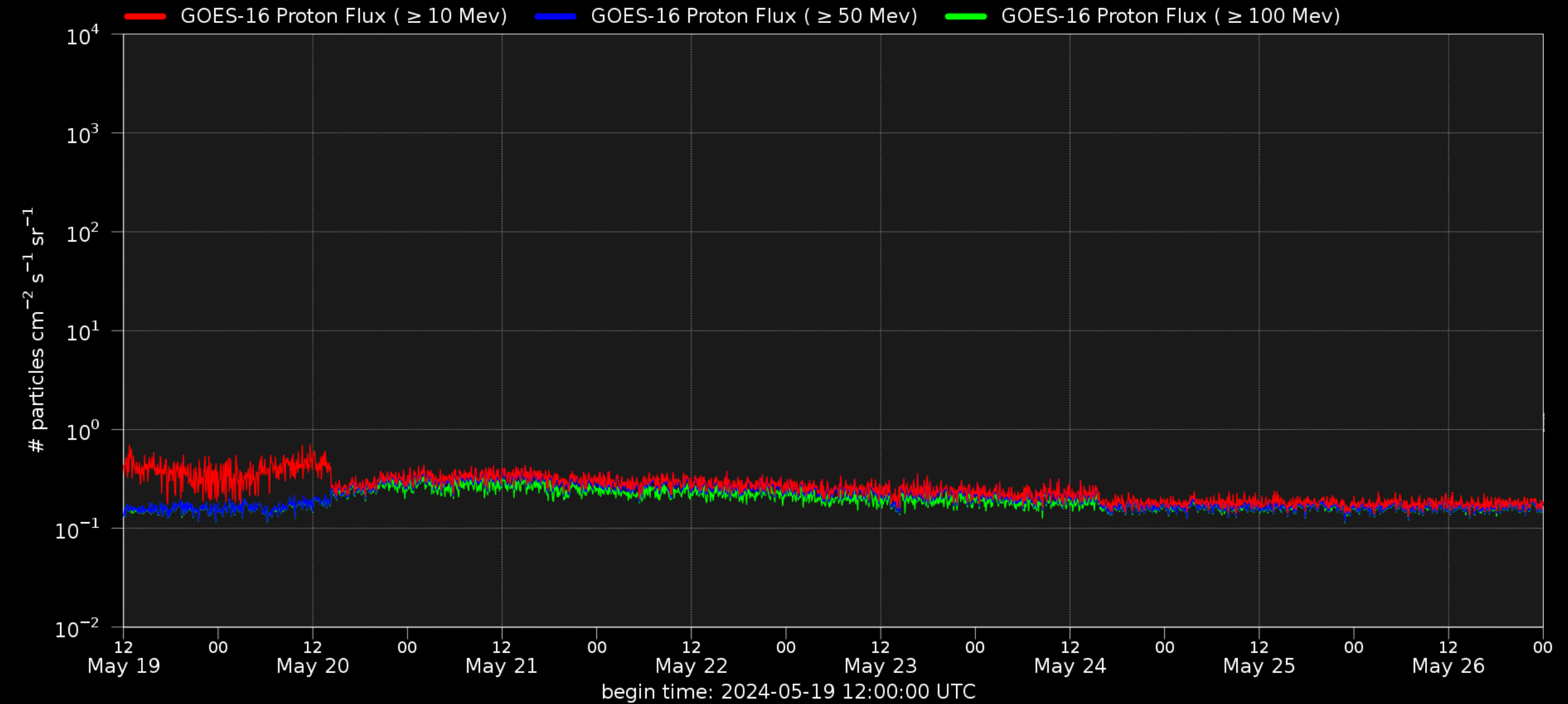
Energetic Particles



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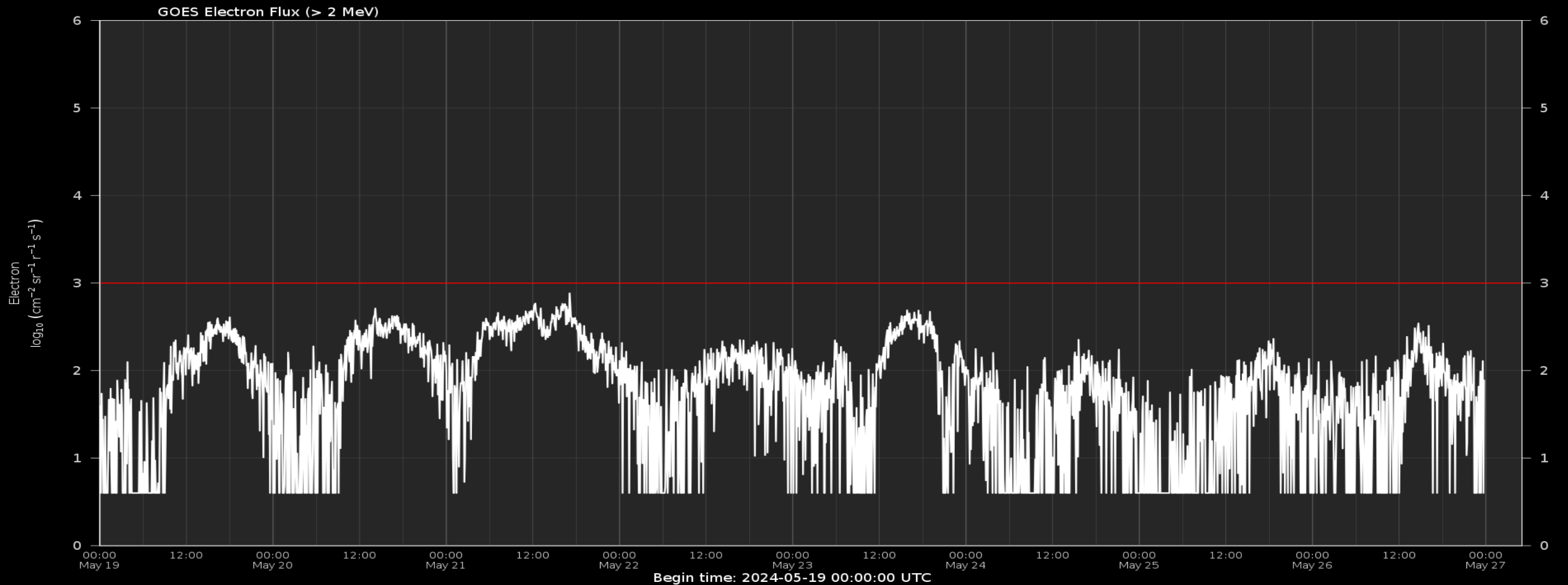
Solar proton flux



Electron flux at GEO

www.stce.be/educational/classification#electrons

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



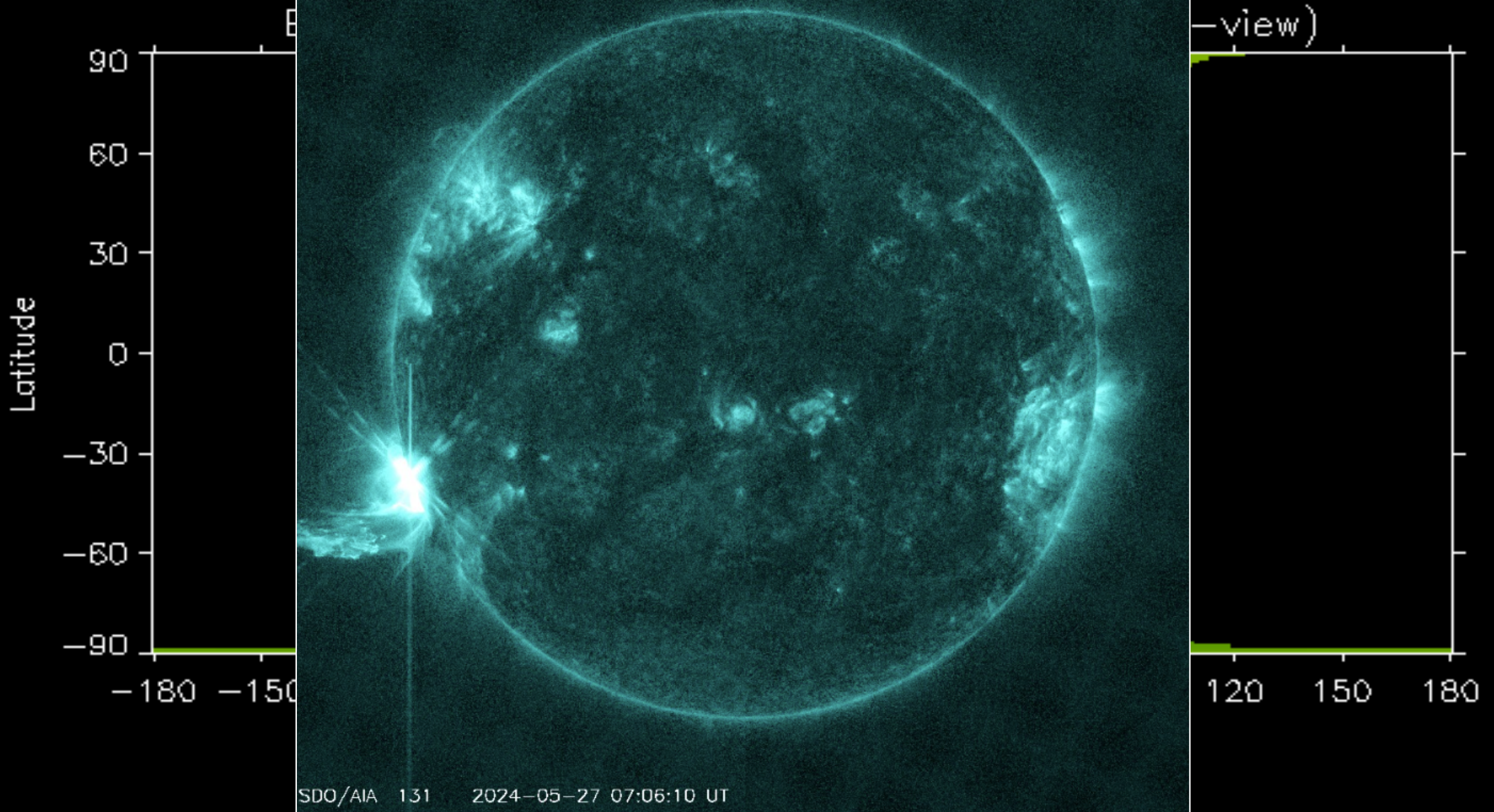
Outlook



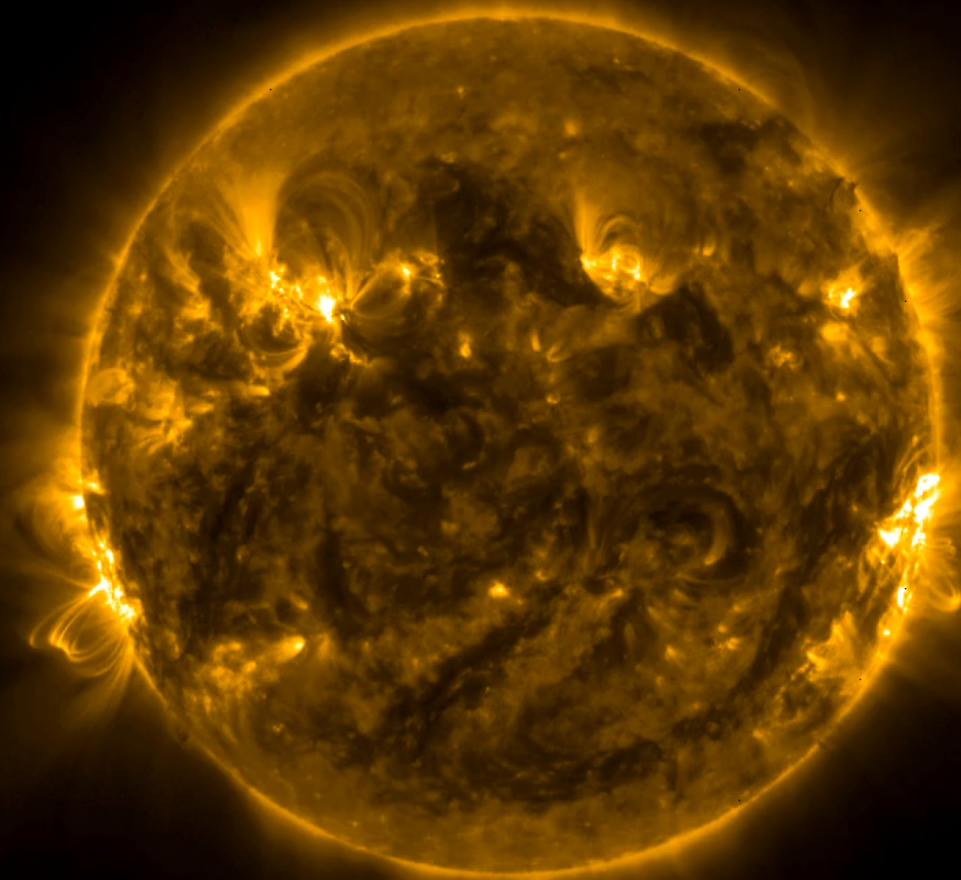
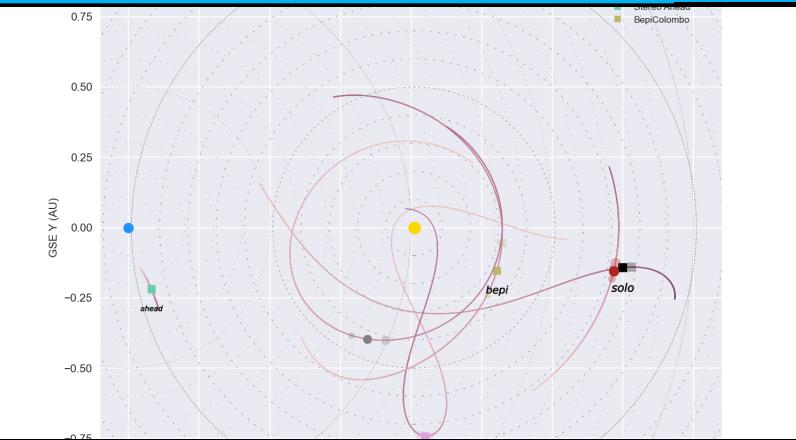
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Outlook: Solar activity

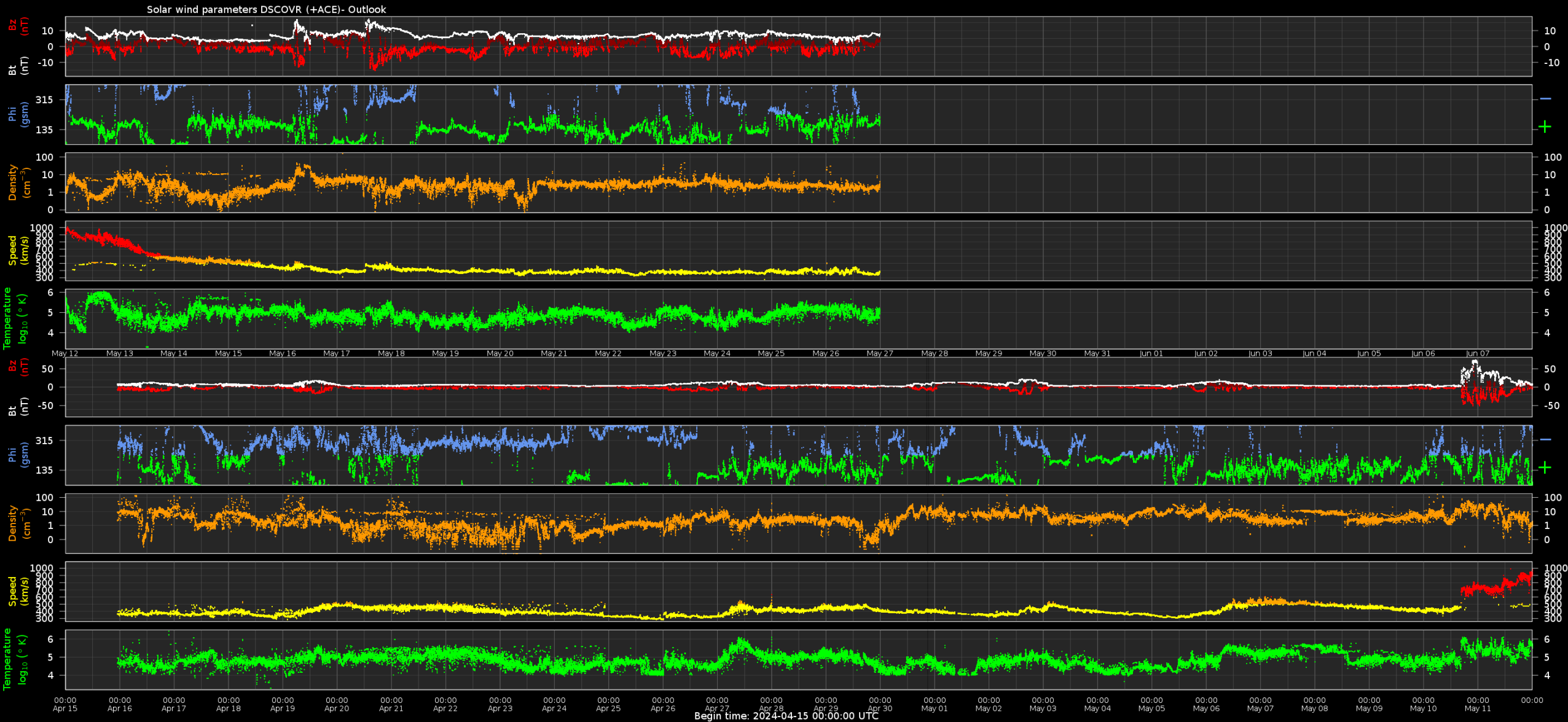


Outlook: Solar activity

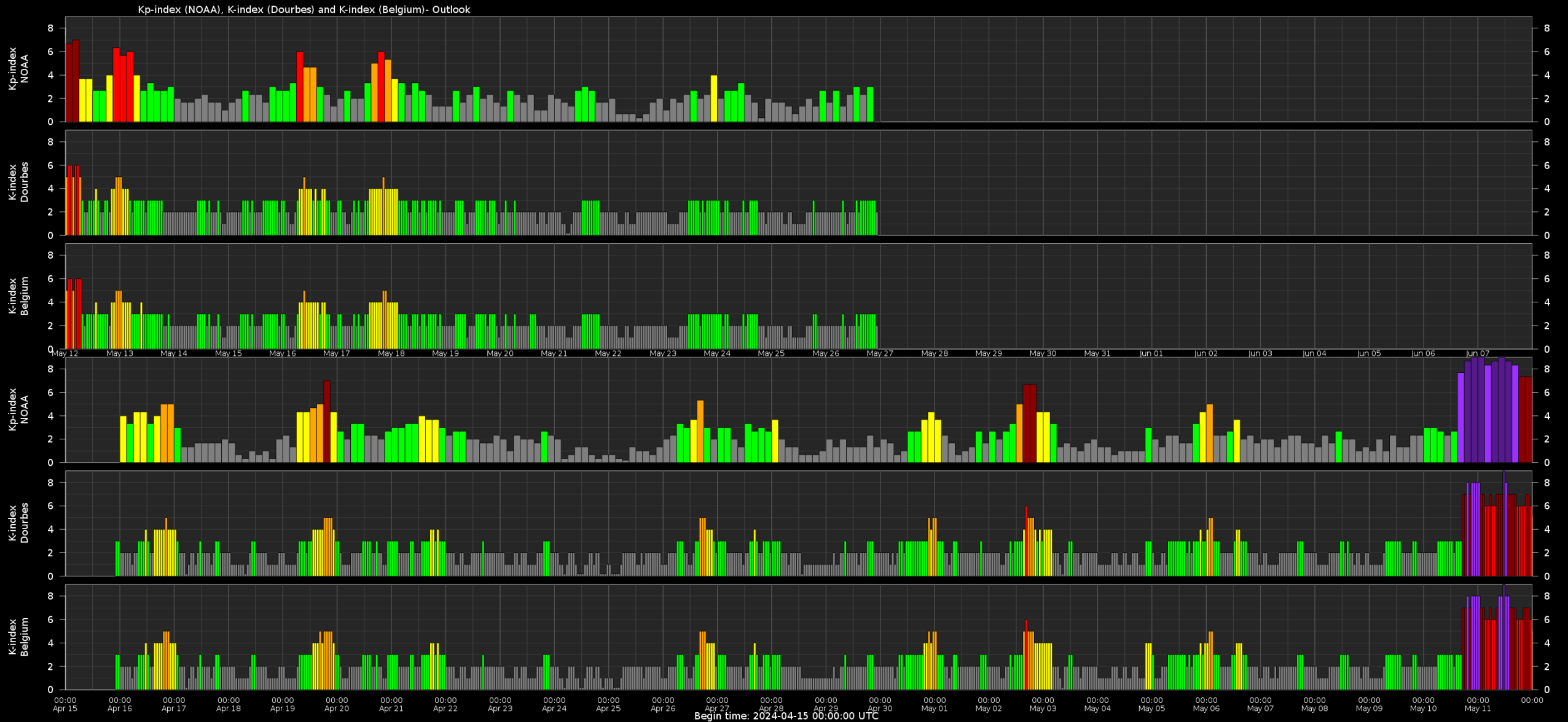


2024-05-14T00:00:50.255

Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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Pegasus related events

At the beginning of the week PSD and GNSS alerts were sent

Calm after 22 May

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