

SIDC Space Weather Briefing

23 May 2021 - 30 May 2021

Cis Verbeeck
& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2021-05-23 12:00 to 2021-05-30 23:59

Active regions	Beta-gamma regions 2824 and 2826; beta region 2827
Flares	# C-class flare: 15 # M-class flare: 0 # X-class flare: 0
Filament eruptions	No filament eruptions
Coronal Holes	No coronal holes

Proton flux	Proton event on May 29: ≥ 10 MeV flux up to 16 pfu
Electron flux	Normal to moderate levels

Solar wind and geomagnetic conditions

ICME	ICME from multiple CMEs arrived on May 26
SW Conditions	B : 0.36 - 16.85 nT // Bz: -14.92 nT to 14.83 nT // Speed: 292.1 - 491.2 km/s
K-indices	max K-index (Dourbes): 5 max Kp-index (NOAA): 5

Solar Activity

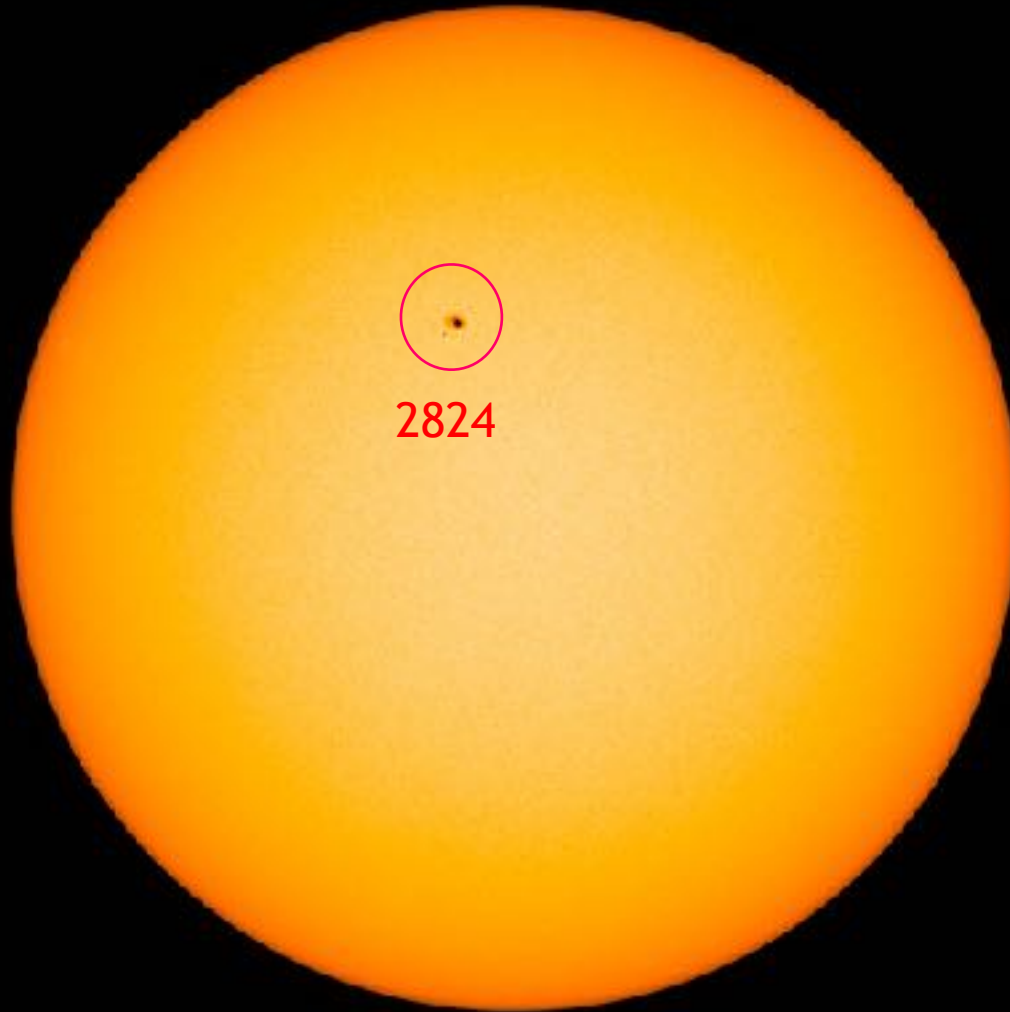


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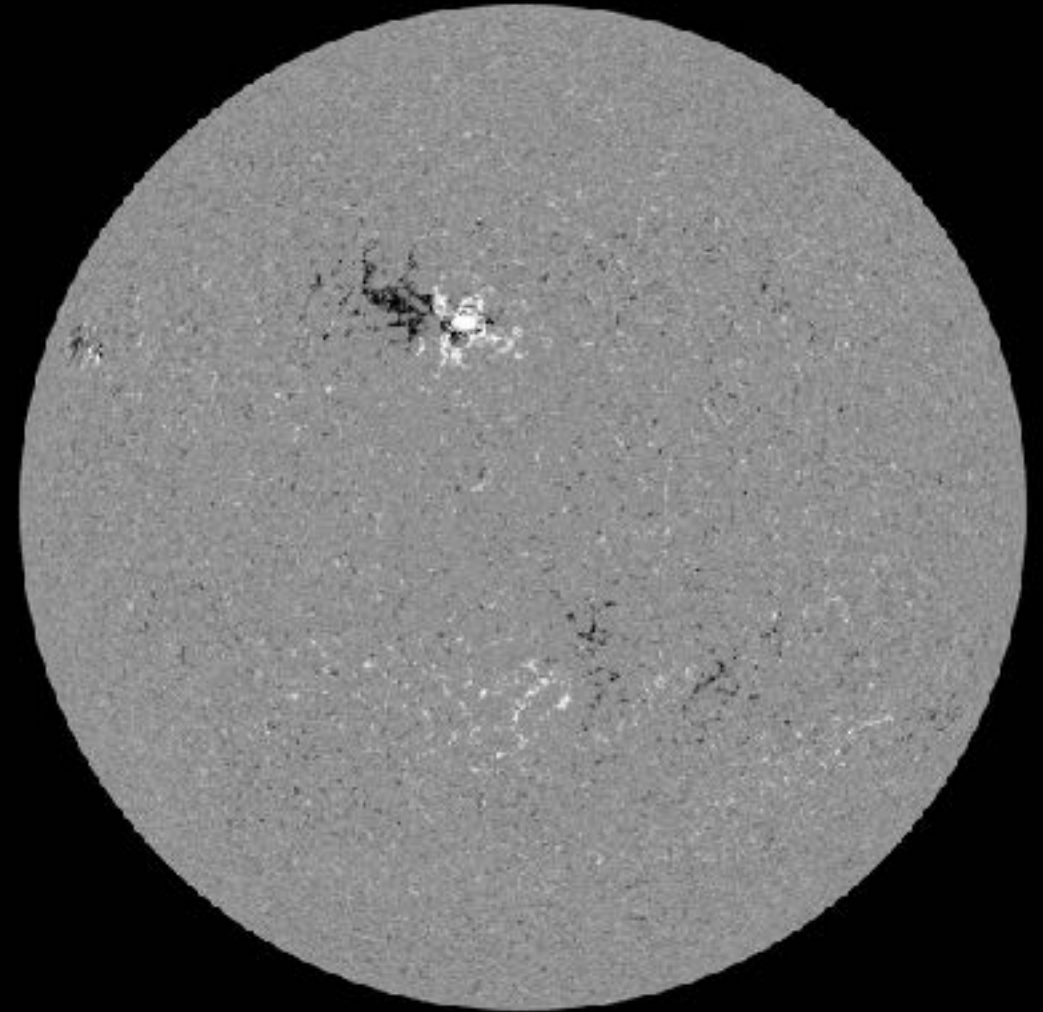
Solar active regions

SDO/HMI White Light 2021-05-23



SDO/HMI QuickLook SunImage: 20210523_114300

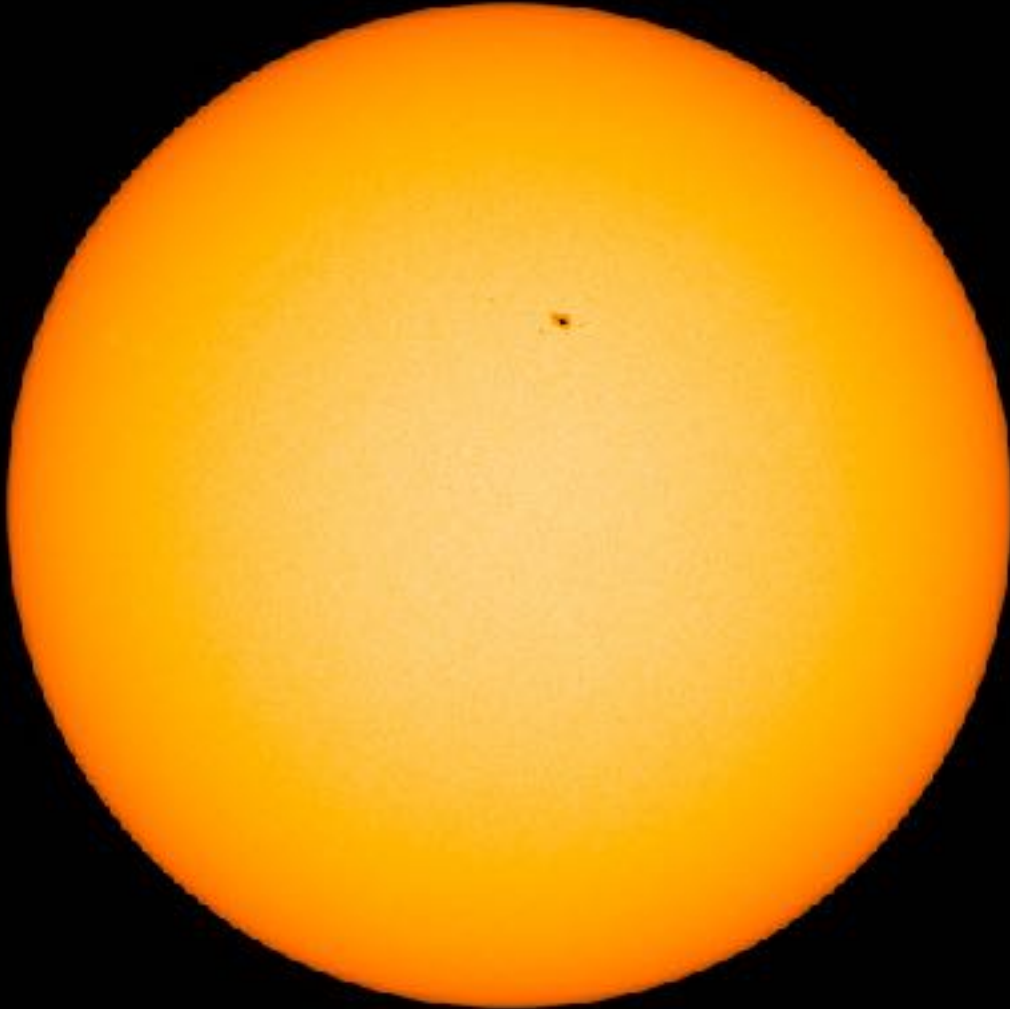
SDO/HMI Magnetogram 2021-05-23



SDO/HMI QuickLook Magnetogram: 20210523_114300

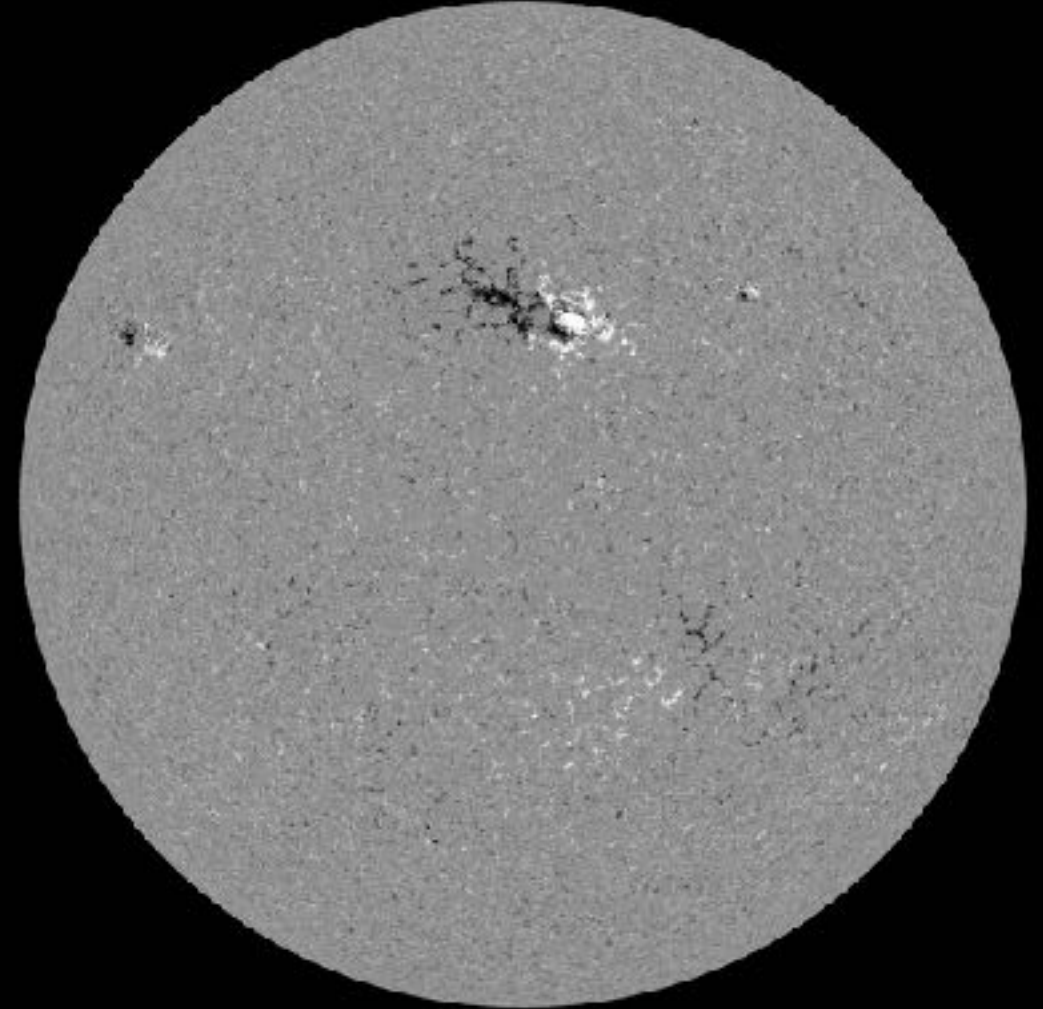
Solar active regions

SDO/HMI White Light 2021-05-24



SDO/HMI QuickLook: Sun/White, 20210524_114500

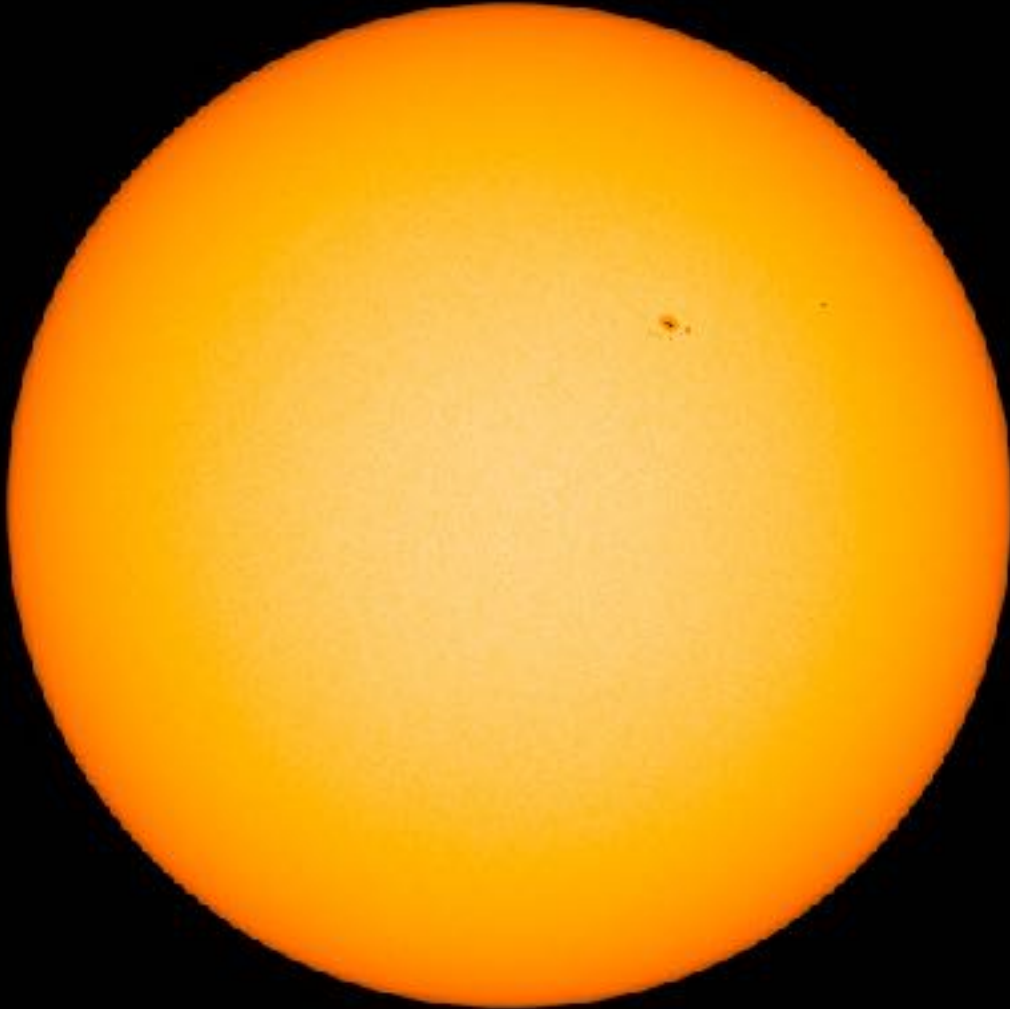
SDO/HMI Magnetogram 2021-05-24



SDO/HMI QuickLook: Sun/Magnetogram, 20210524_114500

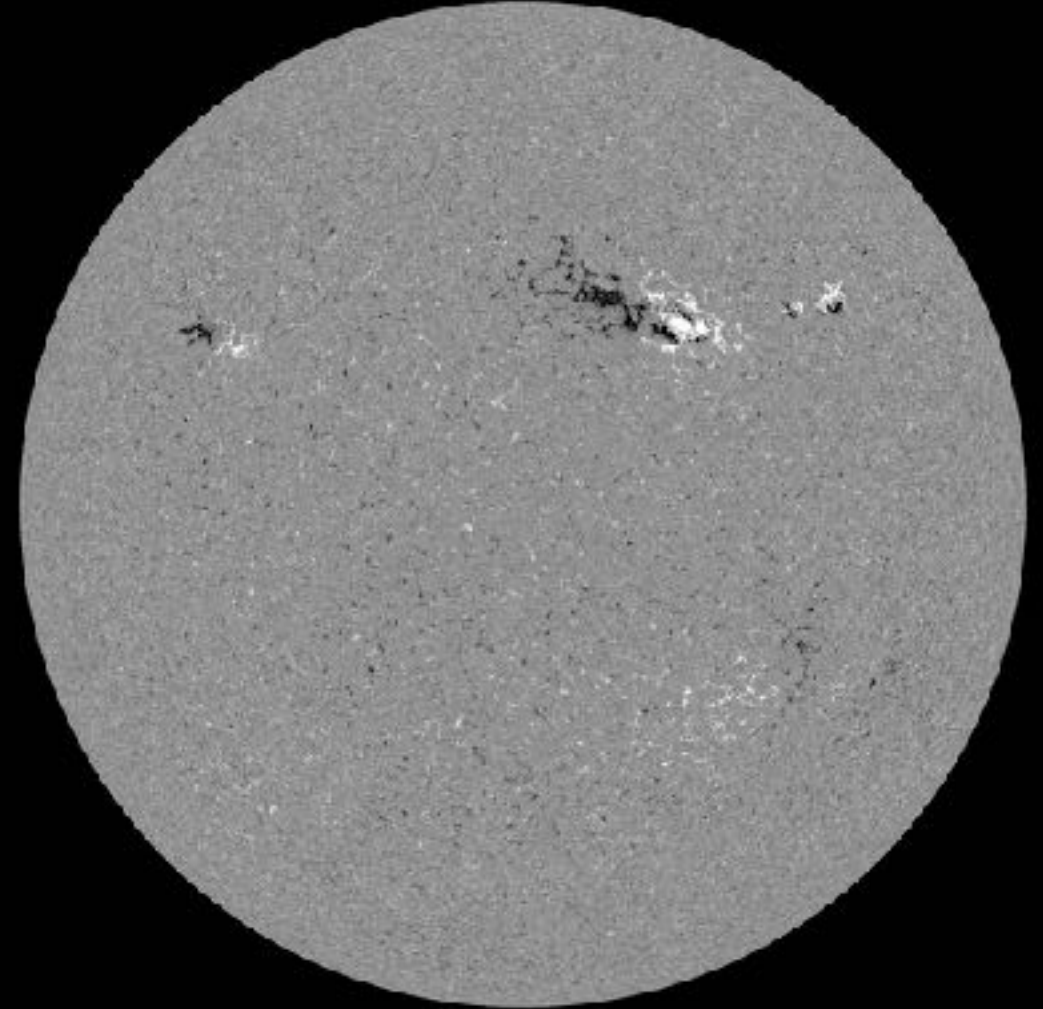
Solar active regions

SDO/HMI White Light 2021-05-25



SDO/HMI White Light 2021-05-25 11:45:00

SDO/HMI Magnetogram 2021-05-25



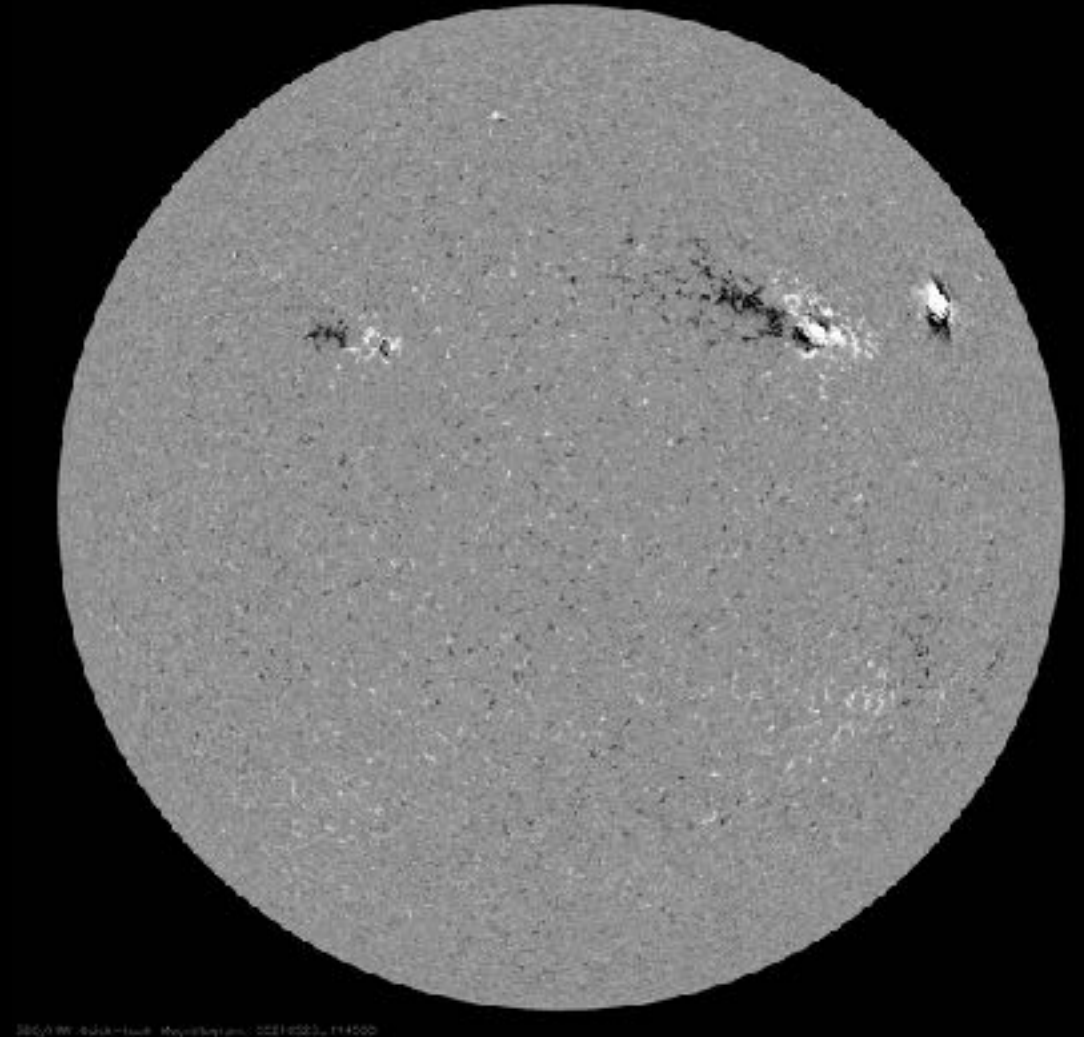
SDO/HMI Magnetogram 2021-05-25 11:45:00

Solar active regions

SDO/HMI White Light 2021-05-26

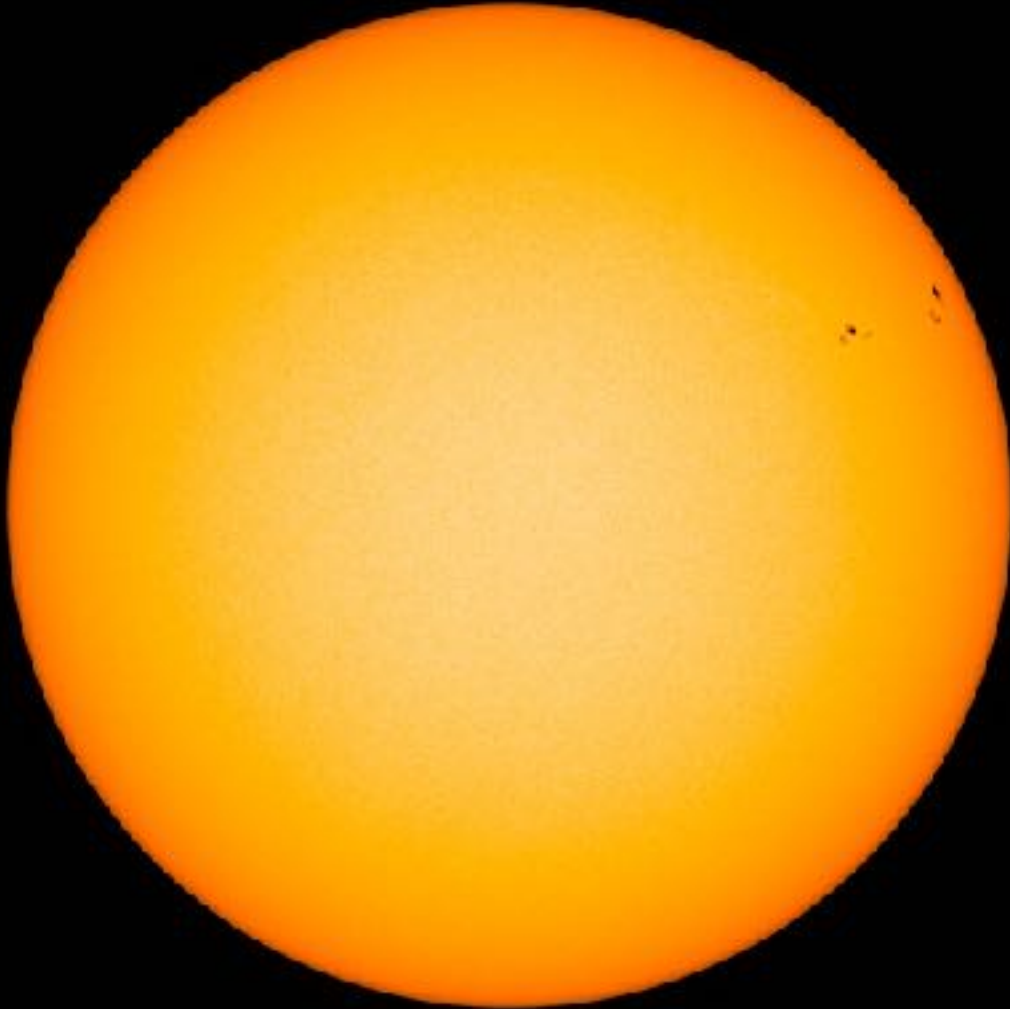


SDO/HMI Magnetogram 2021-05-26



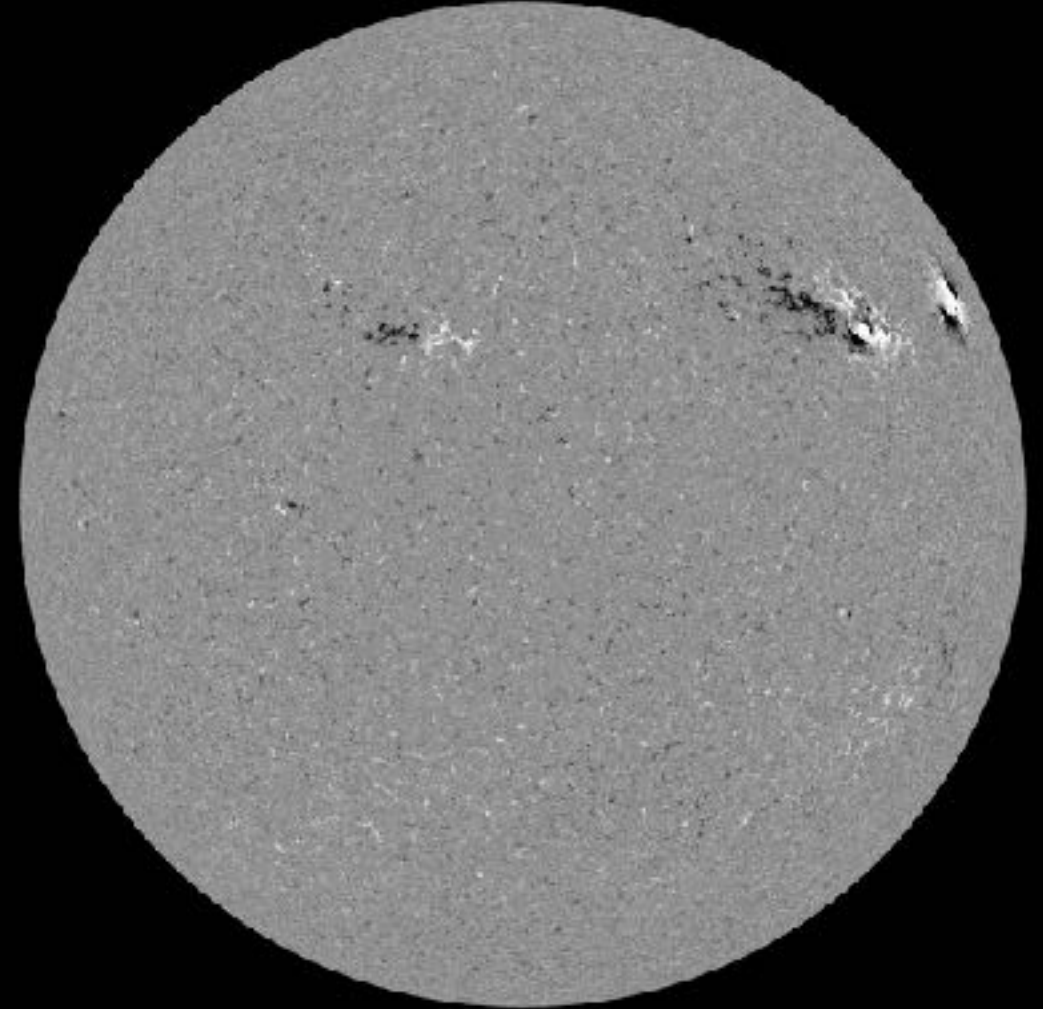
Solar active regions

SDO/HMI White Light 2021-05-27



SDO/HMI Quick-look Sunogram, 20210527_114500

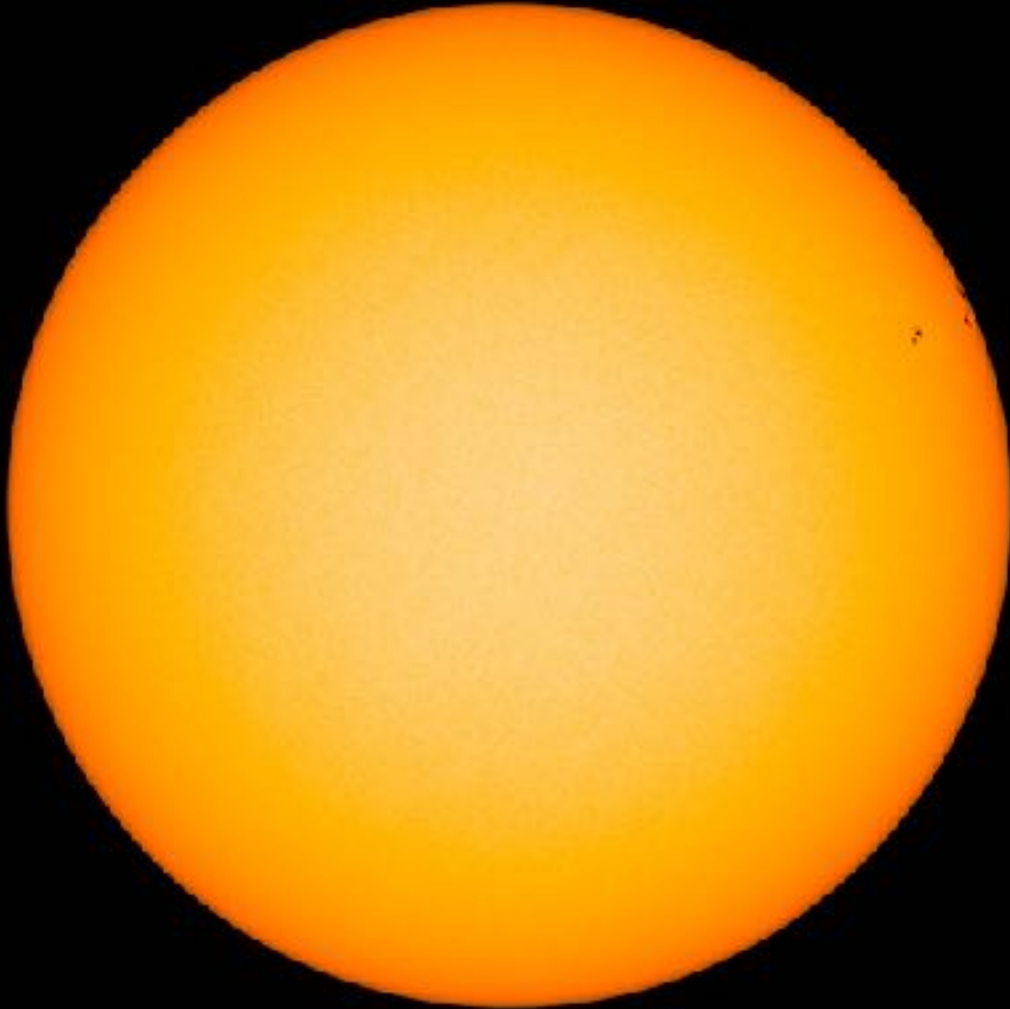
SDO/HMI Magnetogram 2021-05-27



SDO/HMI Quick-look Magnetogram, 20210527_114500

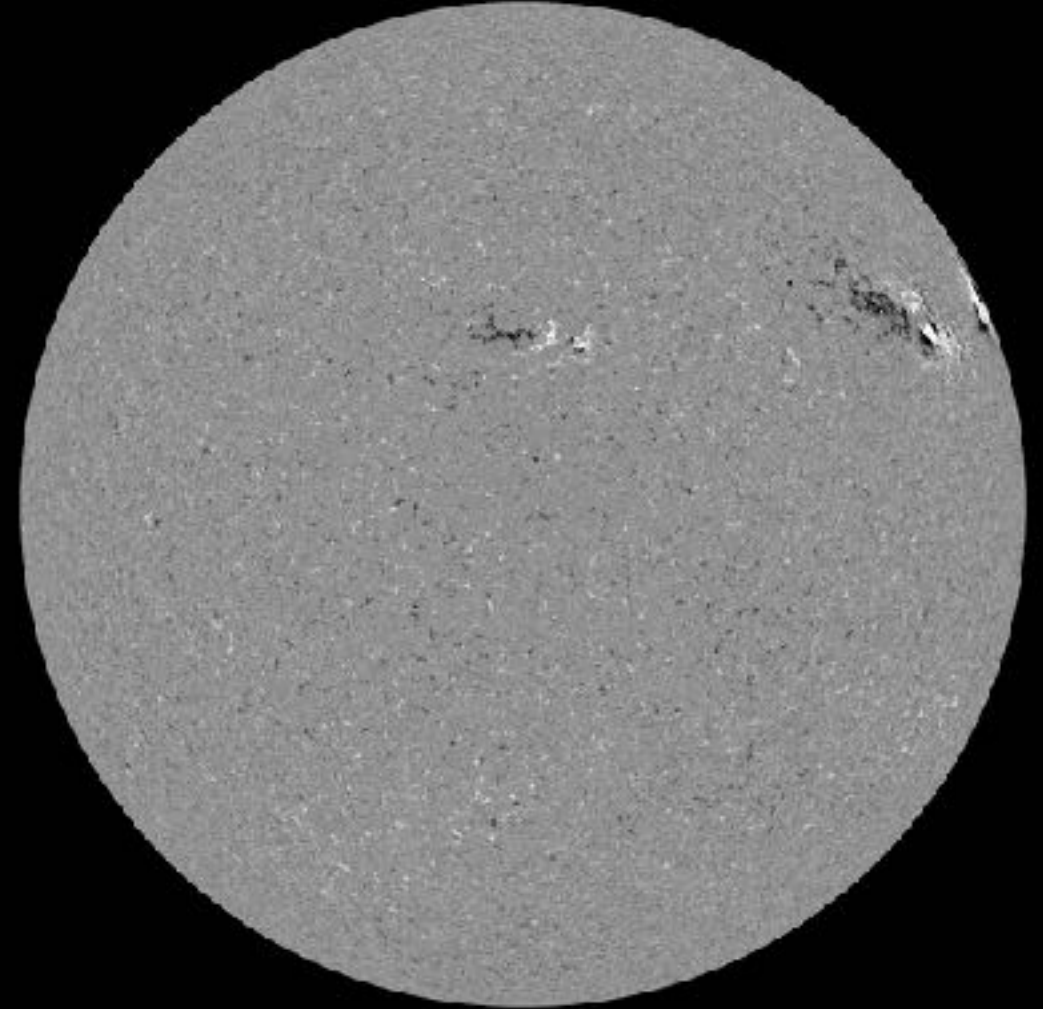
Solar active regions

SDO/HMI White Light 2021-05-28



SDO/HMI Quick-Look SunImage: 20210528_114500

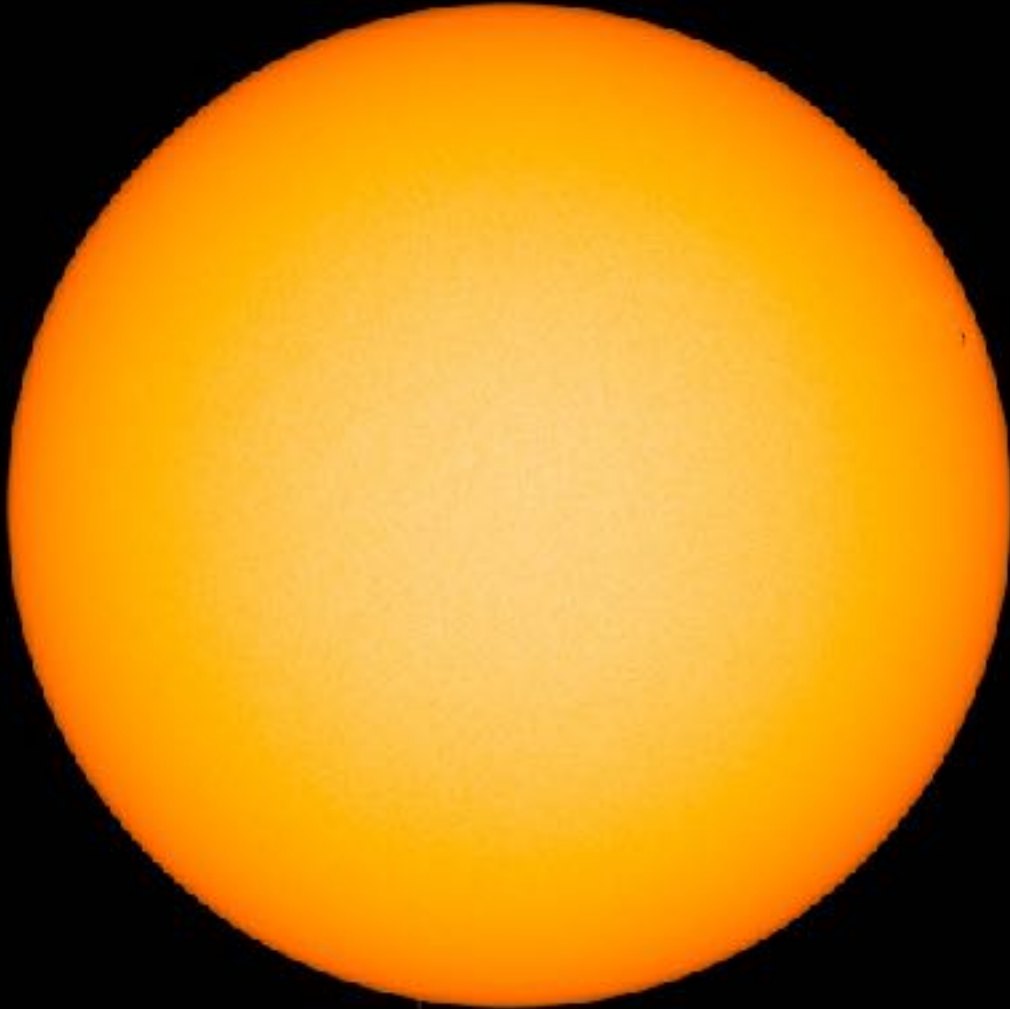
SDO/HMI Magnetogram 2021-05-28



SDO/HMI Quick-Look Magnetogram: 20210528_114500

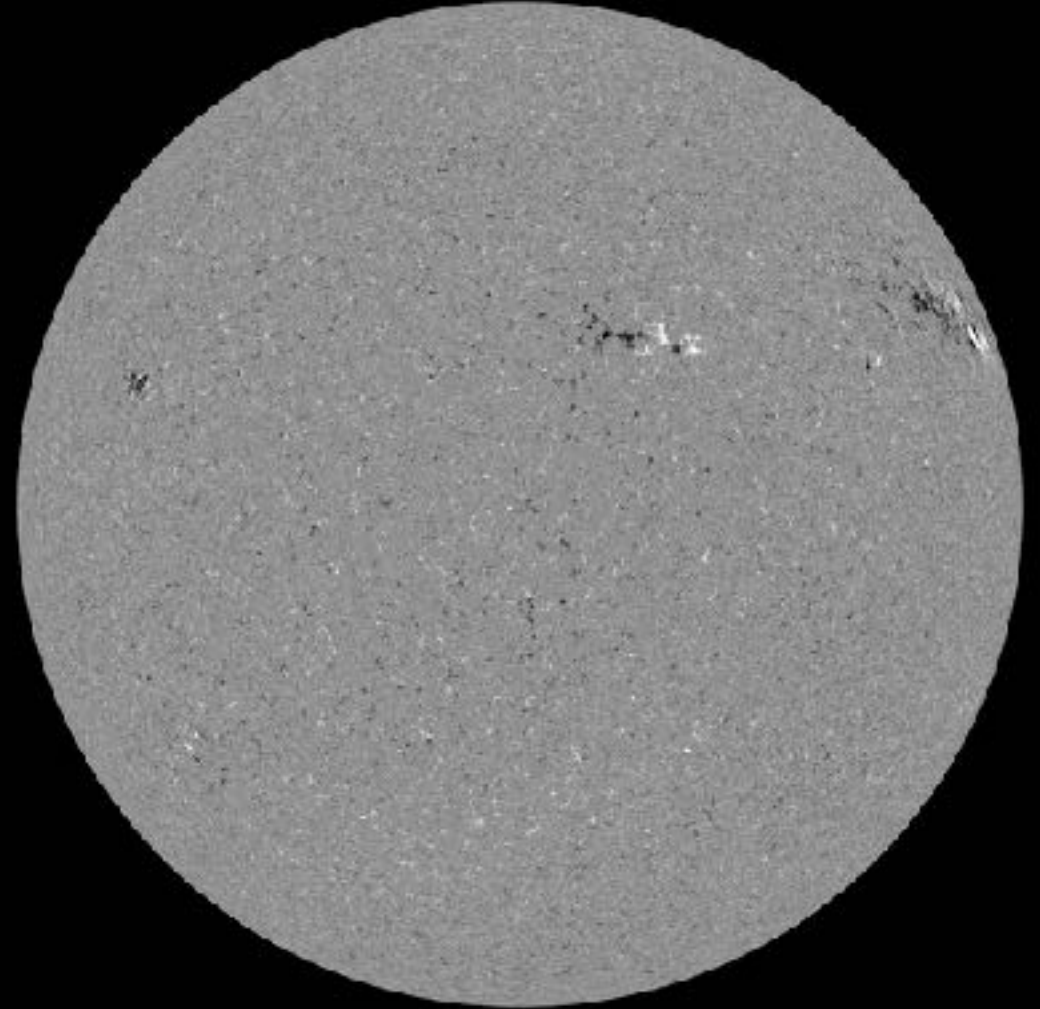
Solar active regions

SDO/HMI White Light 2021-05-29



SDO/HMI White Light 2021-05-29 11:45:00

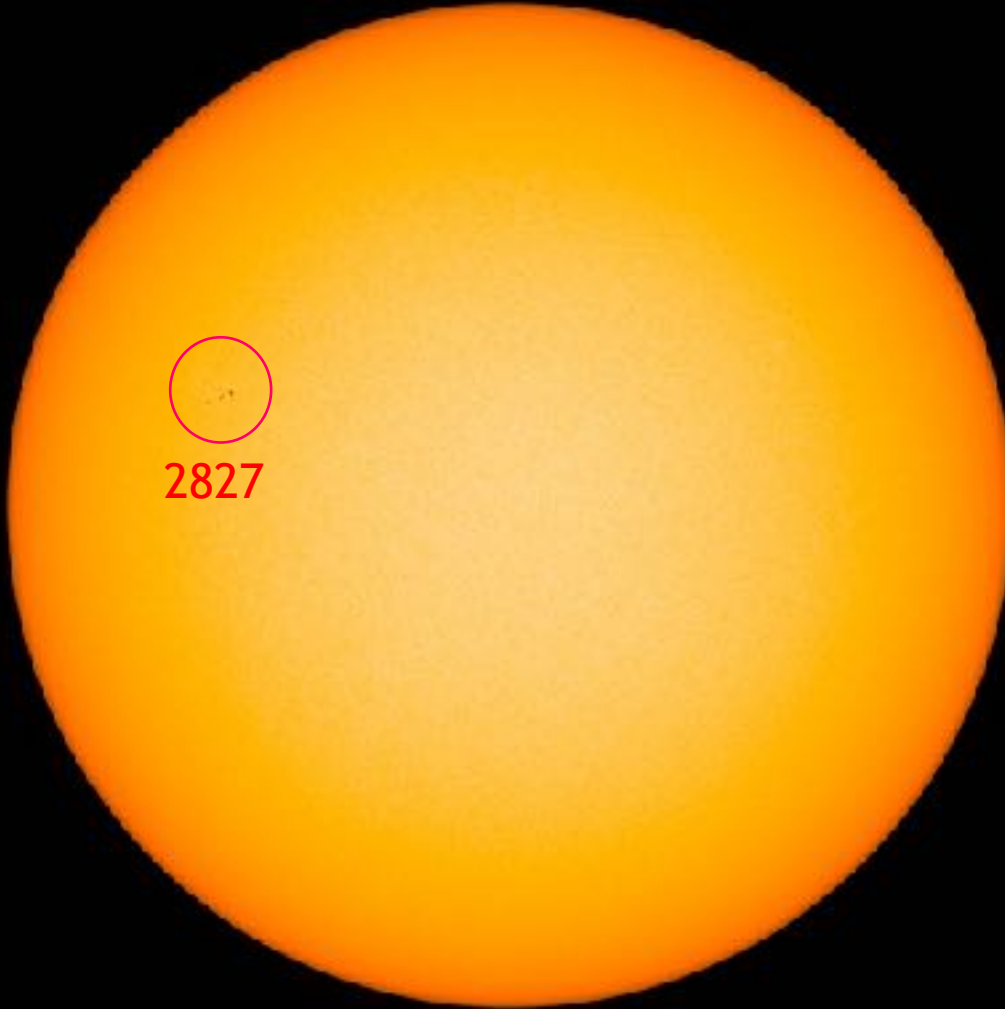
SDO/HMI Magnetogram 2021-05-29



SDO/HMI Magnetogram 2021-05-29 11:45:00

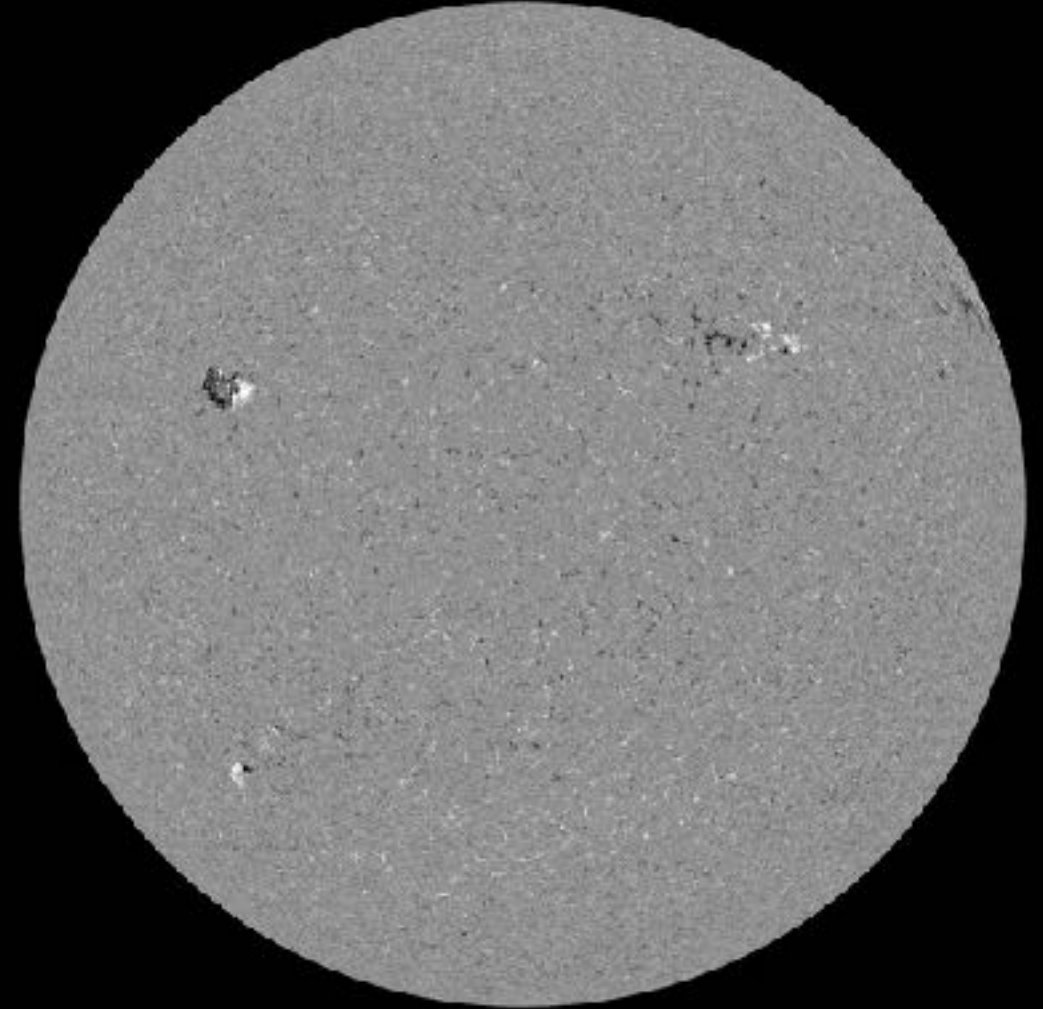
Solar active regions

SDO/HMI White Light 2021-05-30



SDO/HMI Quick-look SunImage: 20210530_114300

SDO/HMI Magnetogram 2021-05-30

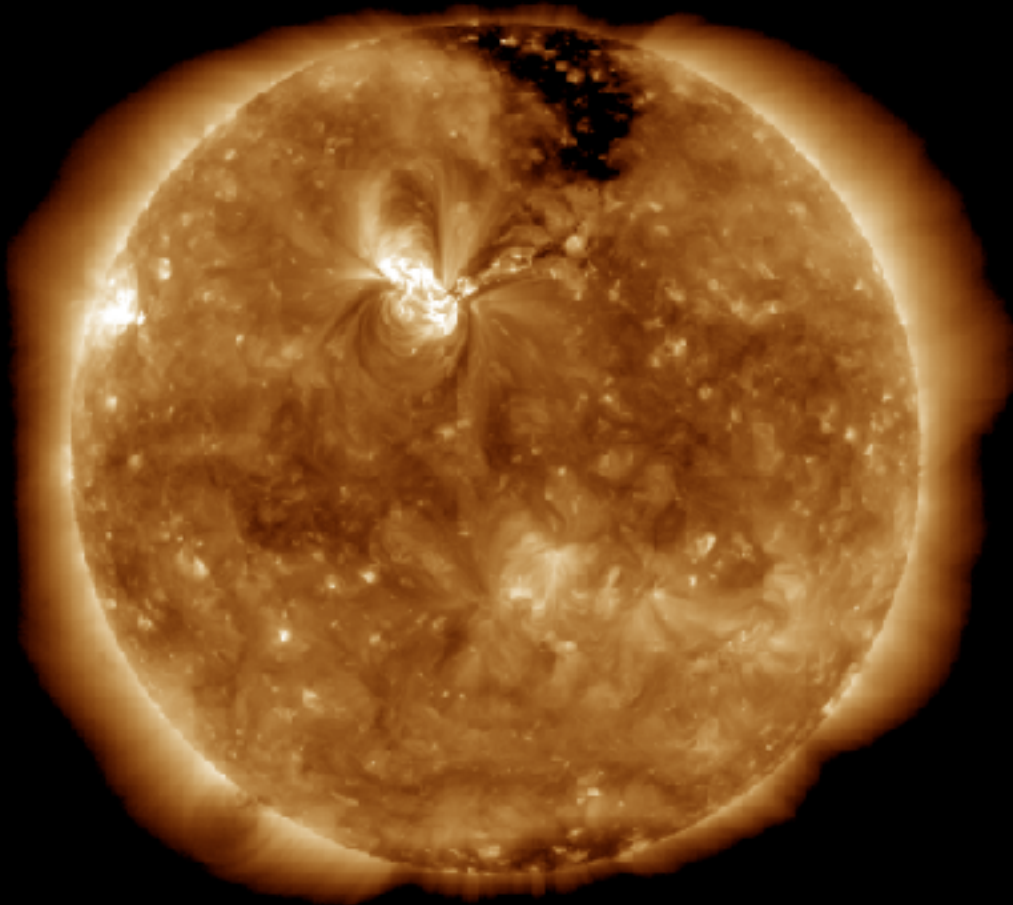


SDO/HMI Quick-look Magnetogram: 20210530_114300

Coronal holes

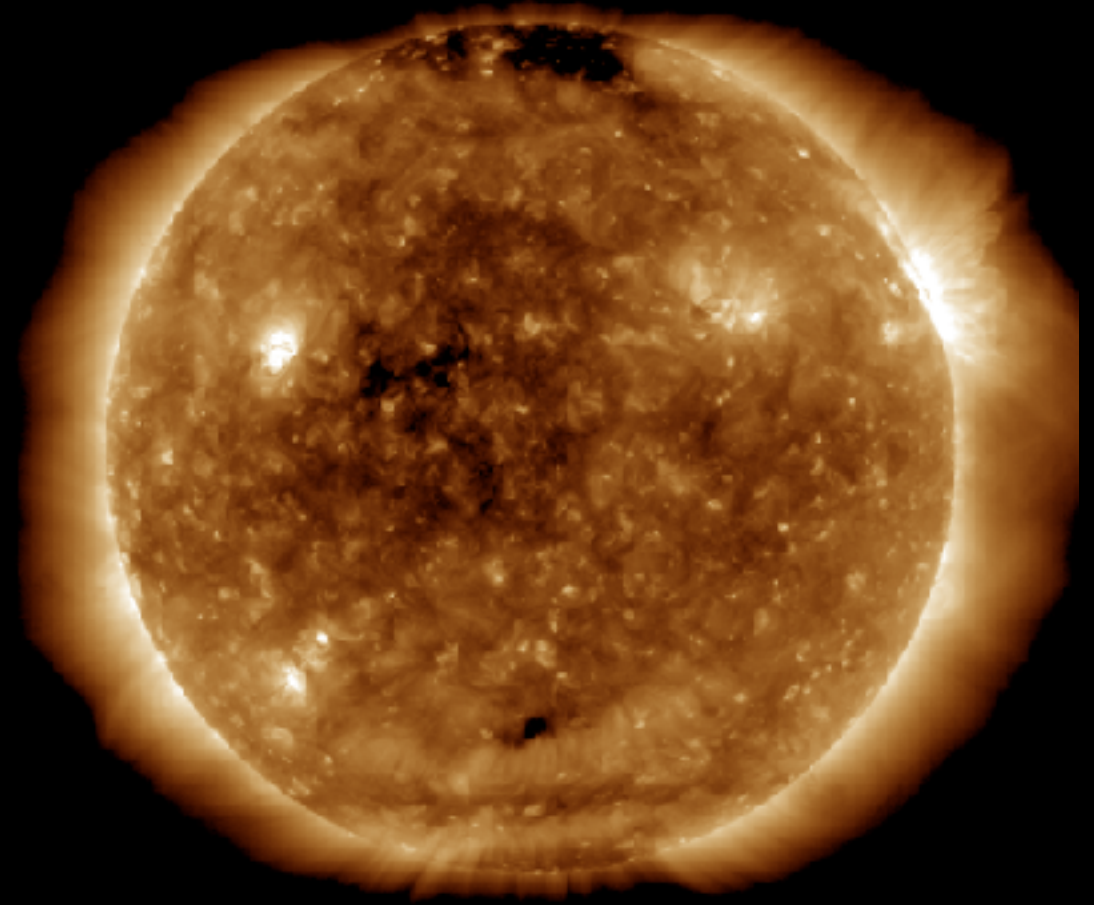
SDO/AIA 19.3 nm 2021-05-23

SDO/AIA AIA 193Å 2021-05-23T12:00:05.843



SDO/AIA 19.3 nm 2021-05-30

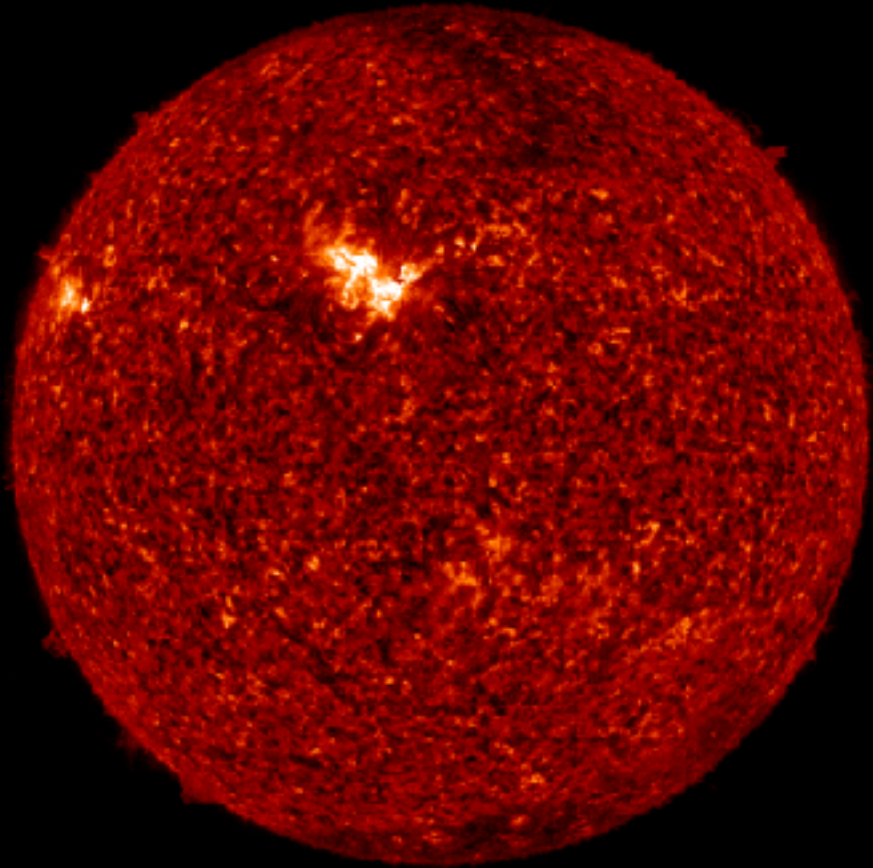
SDO/AIA AIA 193Å 2021-05-30T12:00:05.843



Filaments

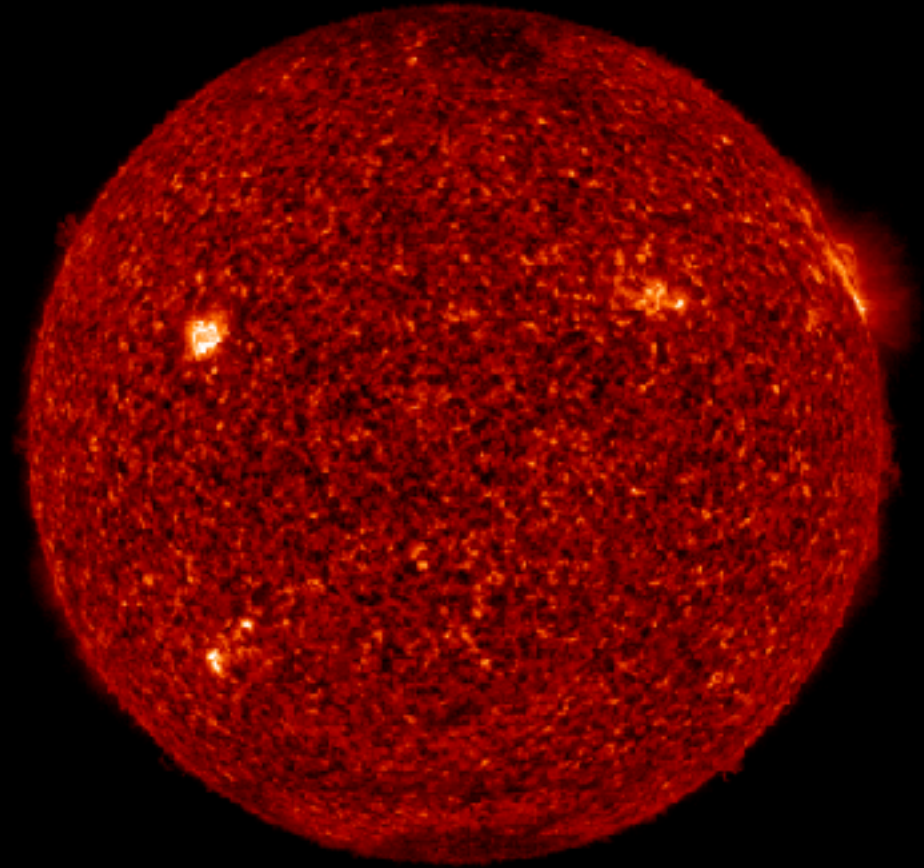
SDO/AIA 30.4 nm 2021-05-23

SDO/AIA AIA 304Å 2021-05-23T12:00:06.532

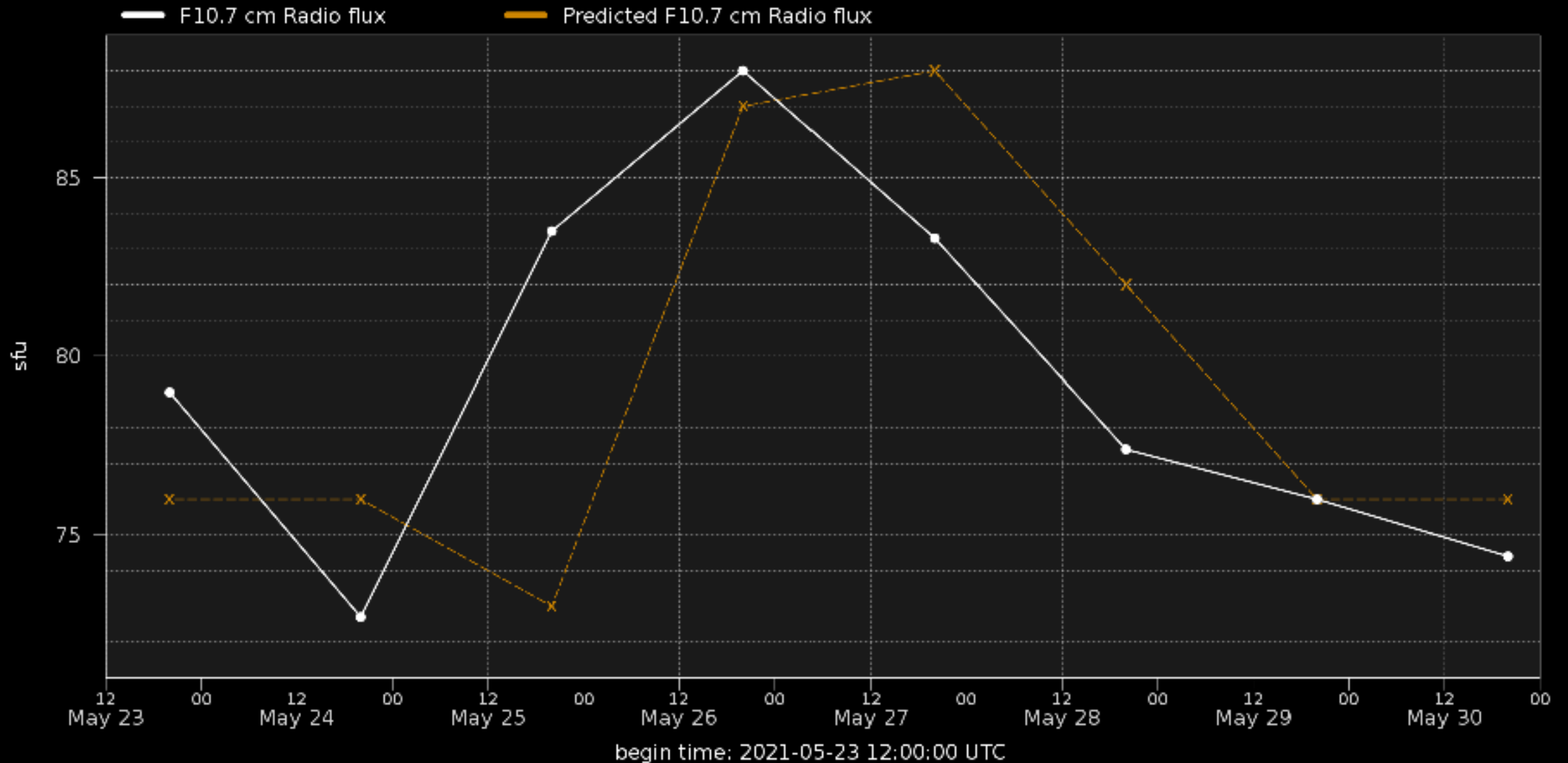


SDO/AIA 30.4 nm 2021-05-30

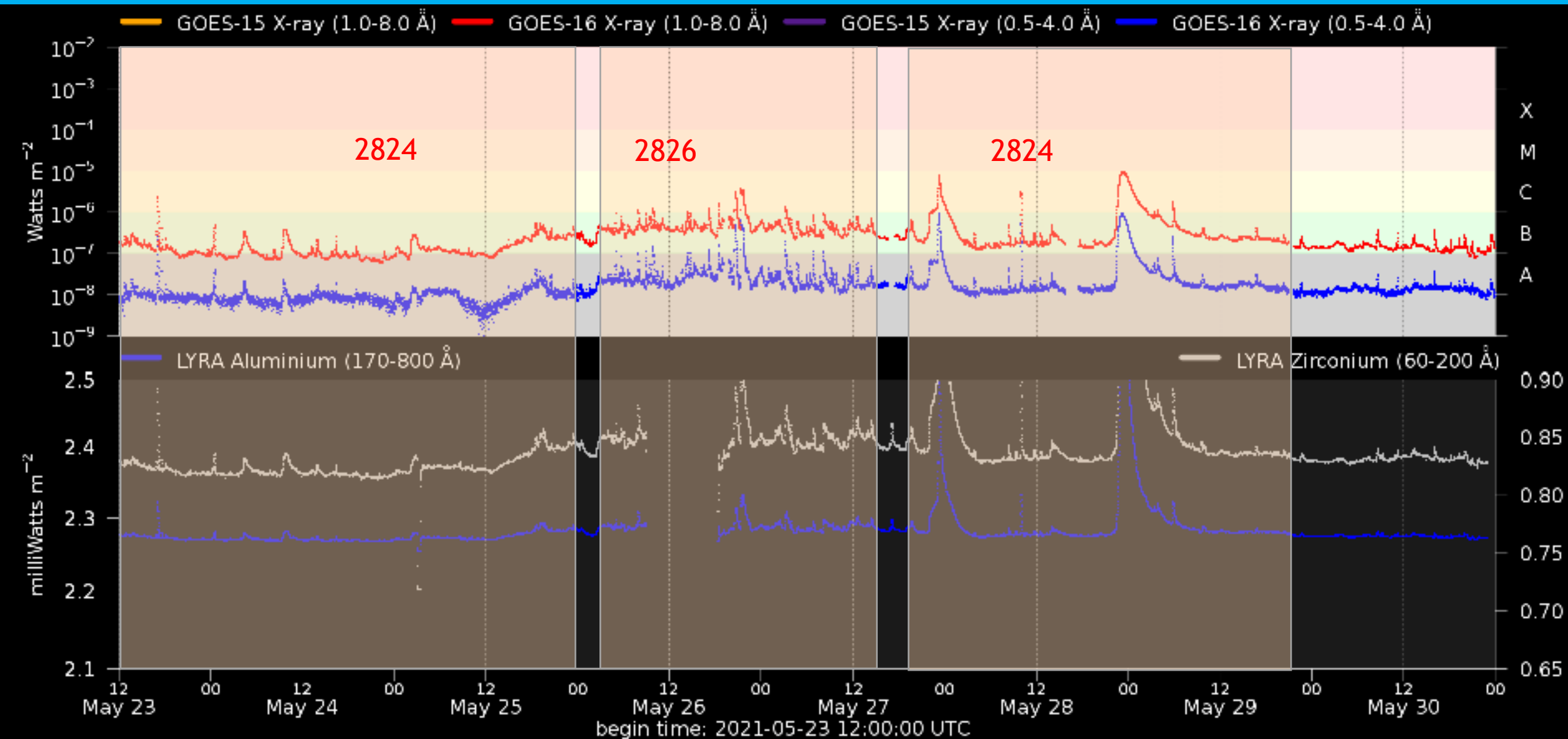
SDO/AIA AIA 304Å 2021-05-30T12:00:06.572



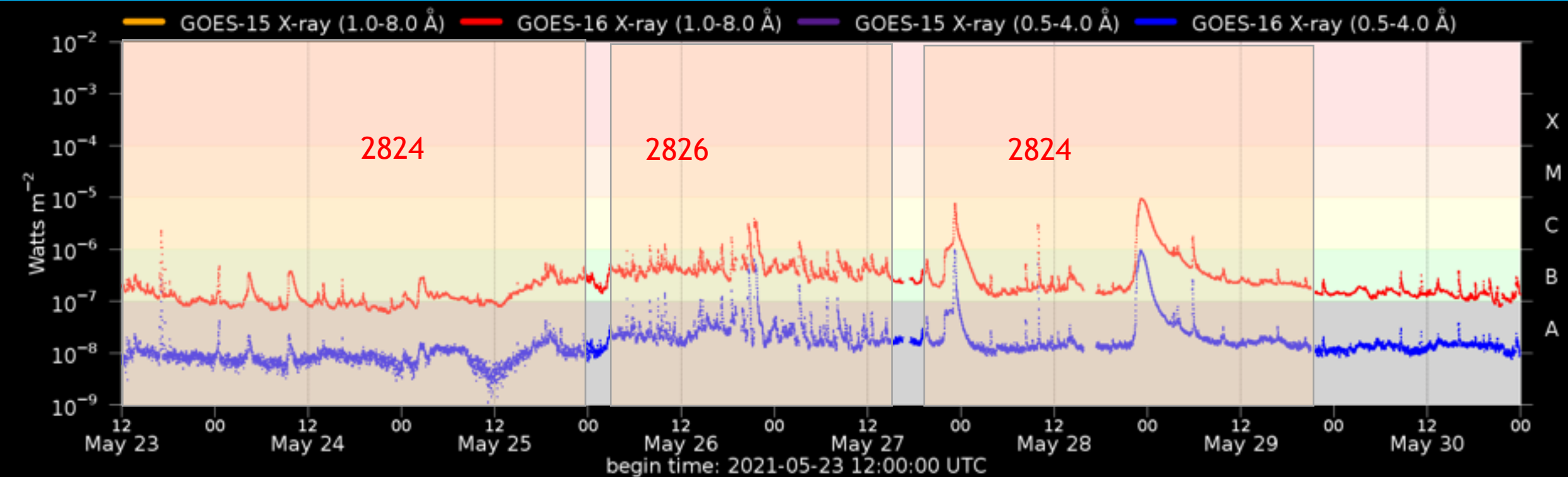
Solar F10.7cm radio flux



Solar X-Ray and UV flux



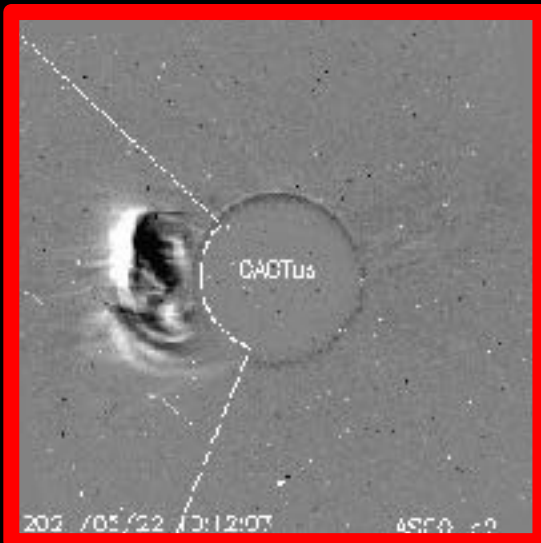
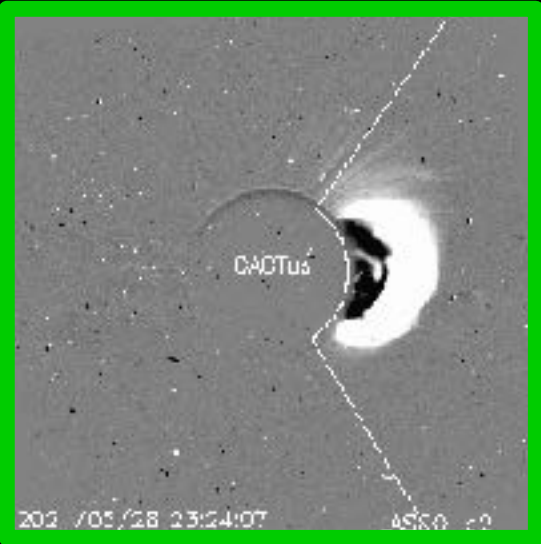
Flaring activity



Probabilities (%) and occurrences (#) of C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2021-05-23	2021-05-24	2021-05-25	2021-05-26	2021-05-27	2021-05-28	2021-05-29	2021-05-30
Probability (%)	80 50 15	75 25 01	40 05 01	90 10 01	90 10 01	80 15 01	85 35 01	50 15 01
Observed (#)	00 00 00	00 00 00	02 00 00	06 00 00	02 00 00	02 00 00	00 00 00	00 00 00

Coronal Mass Ejections



Solar Wind and Geomagnetic Activity



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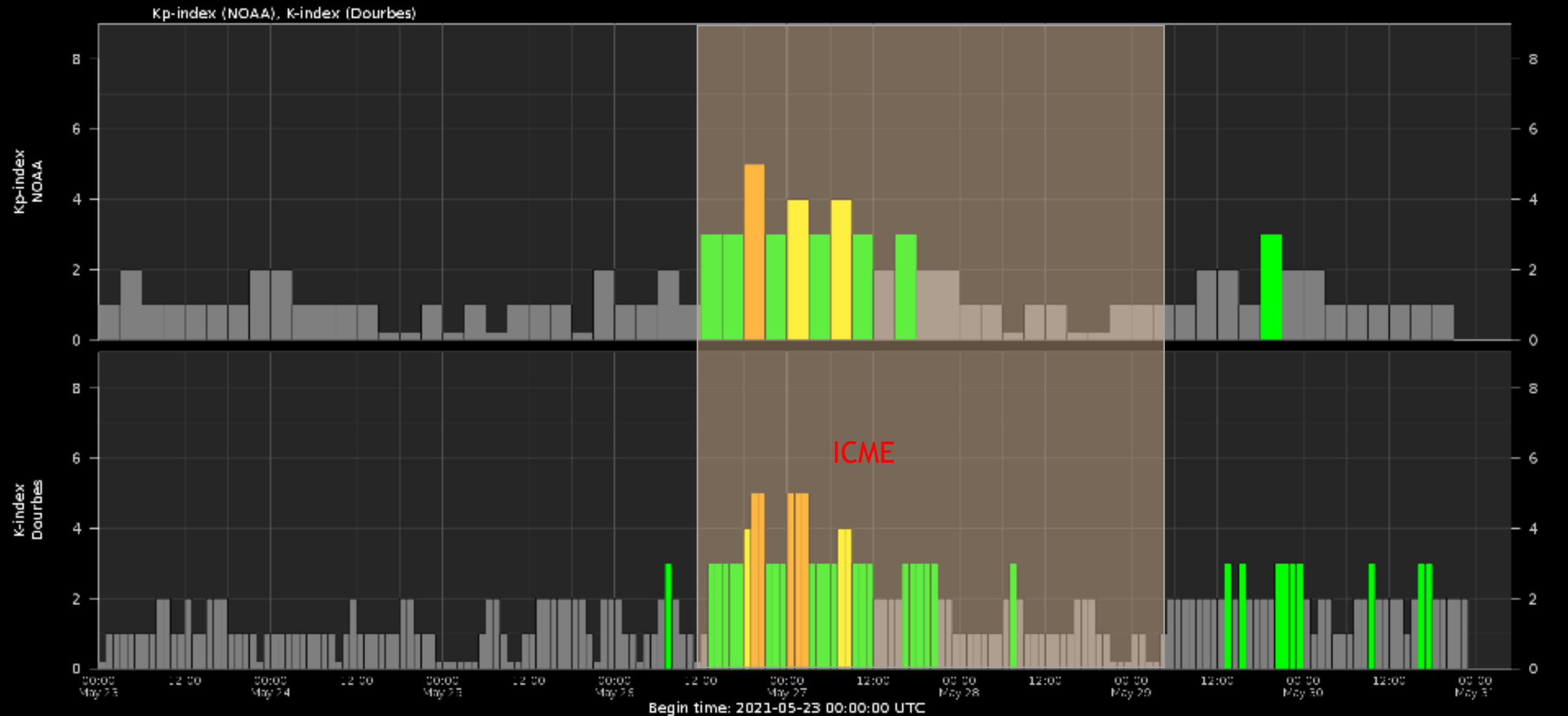
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



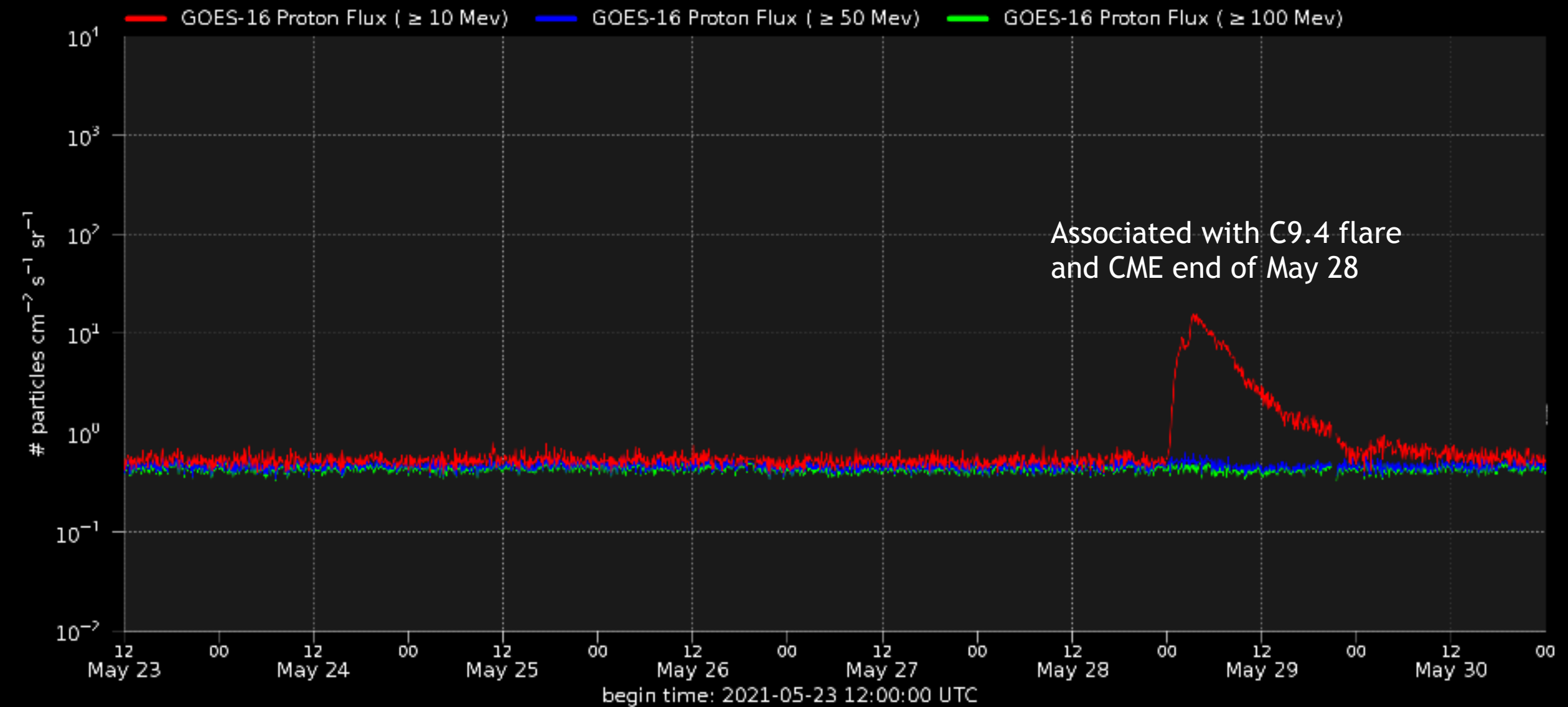
Energetic Particles



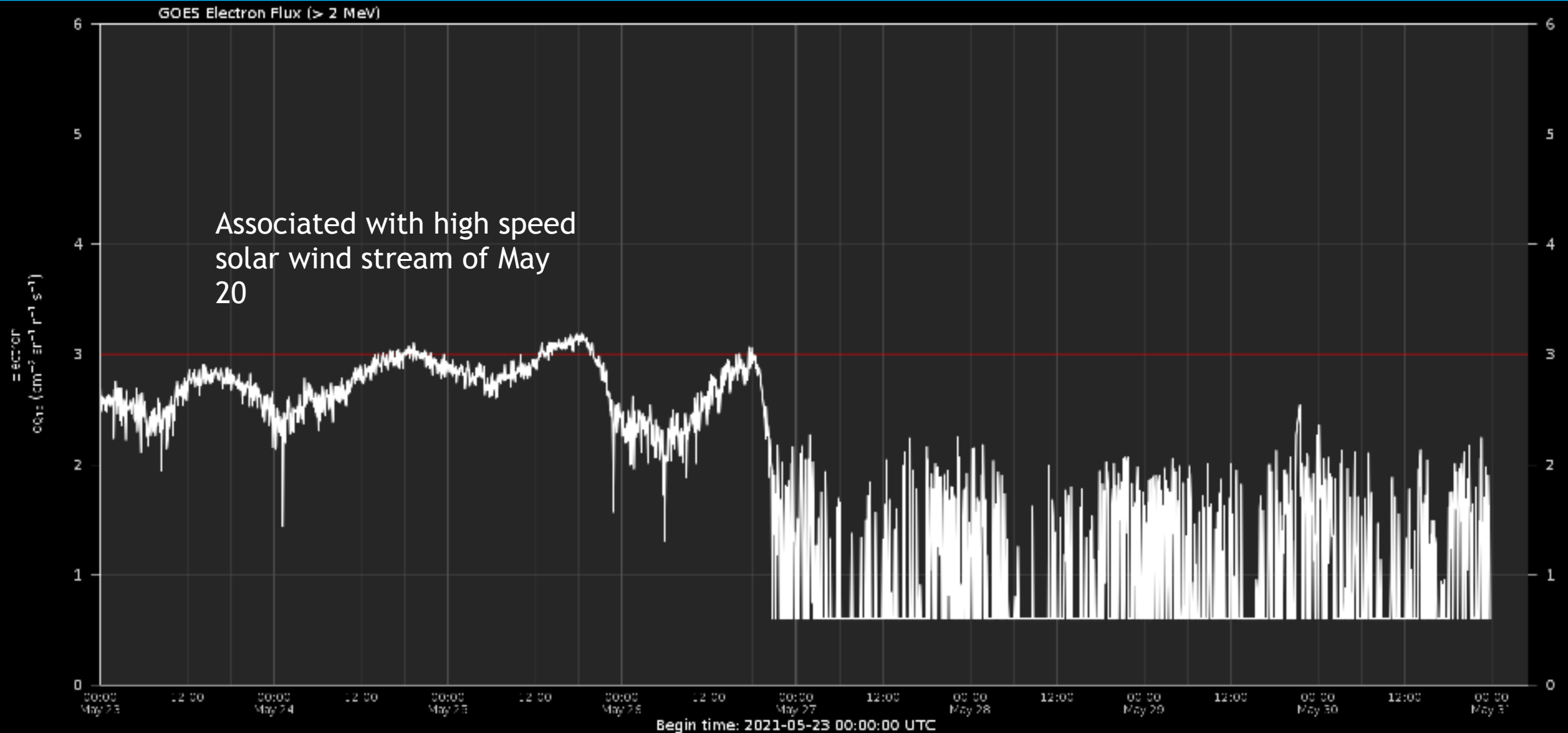
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Solar proton flux



Electron flux at GEO



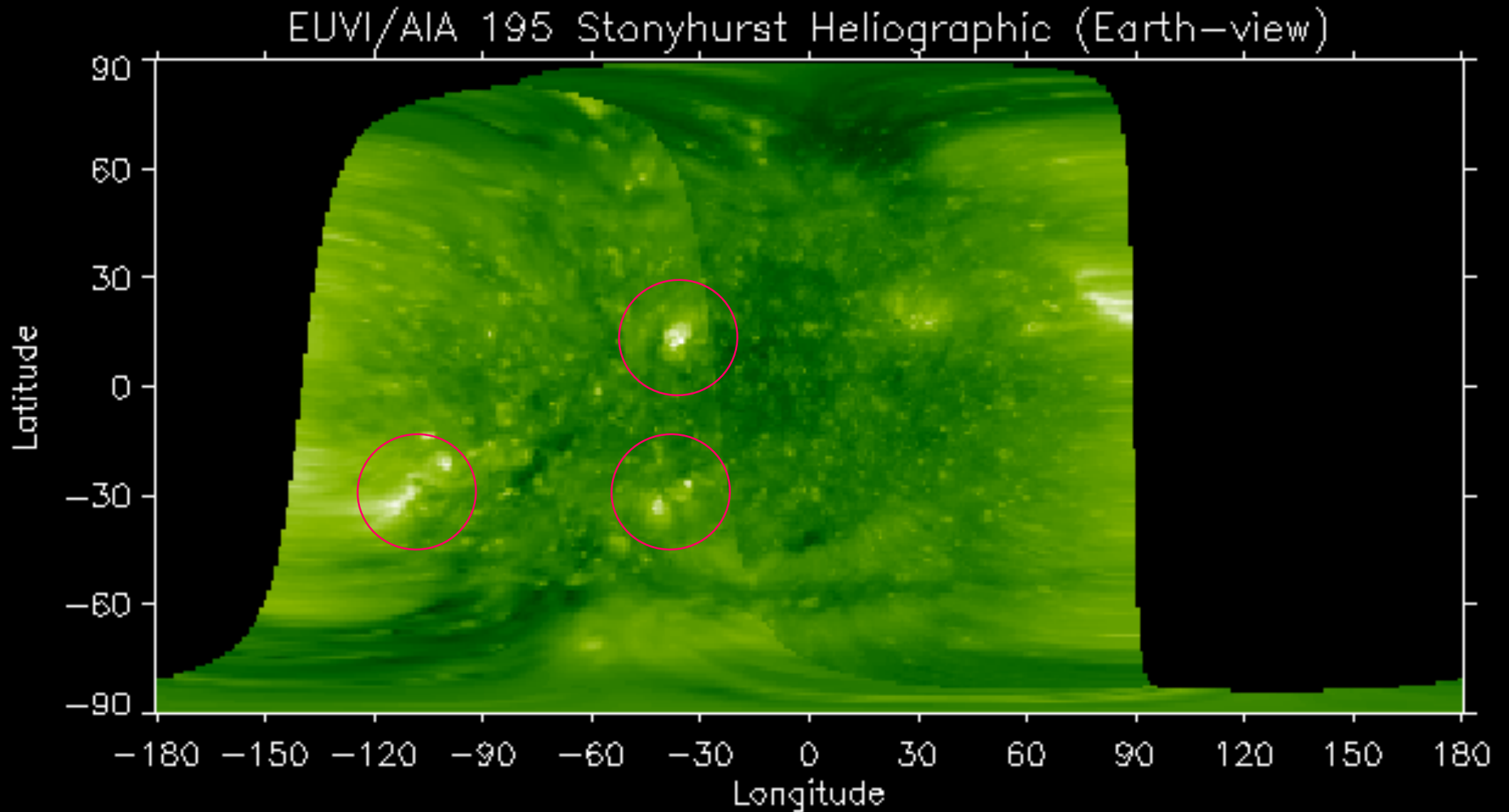
Outlook



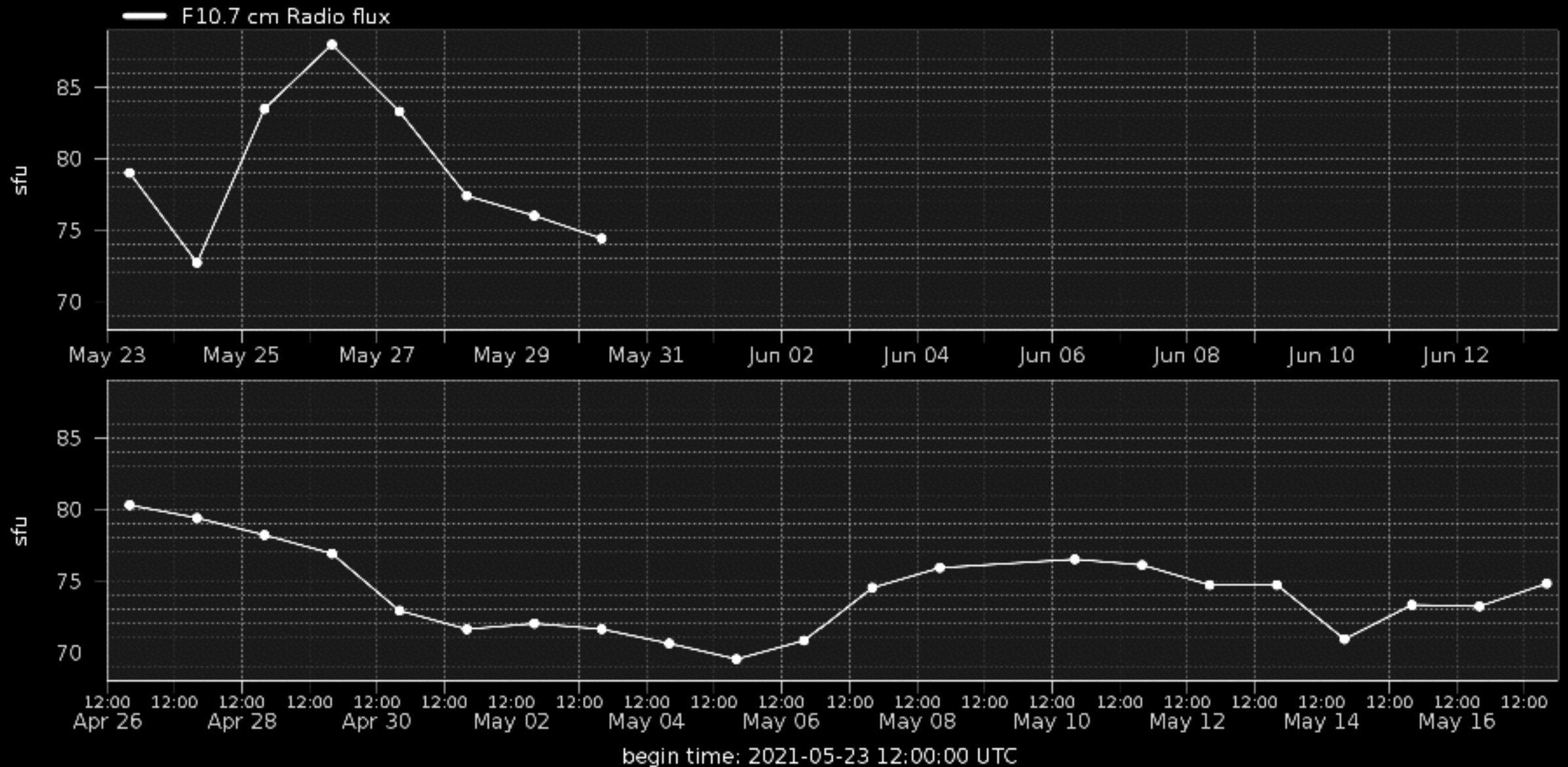
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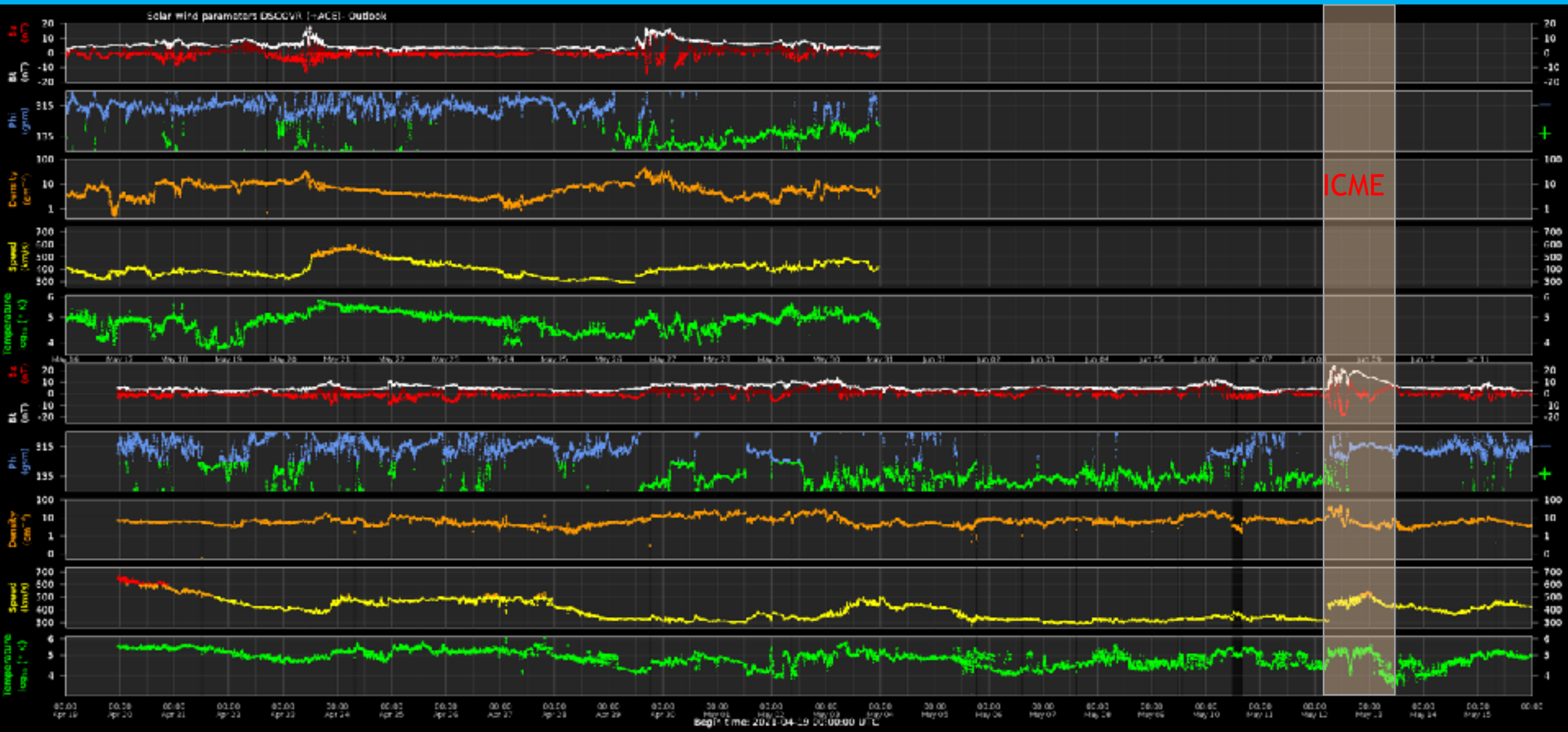
Outlook: Solar activity



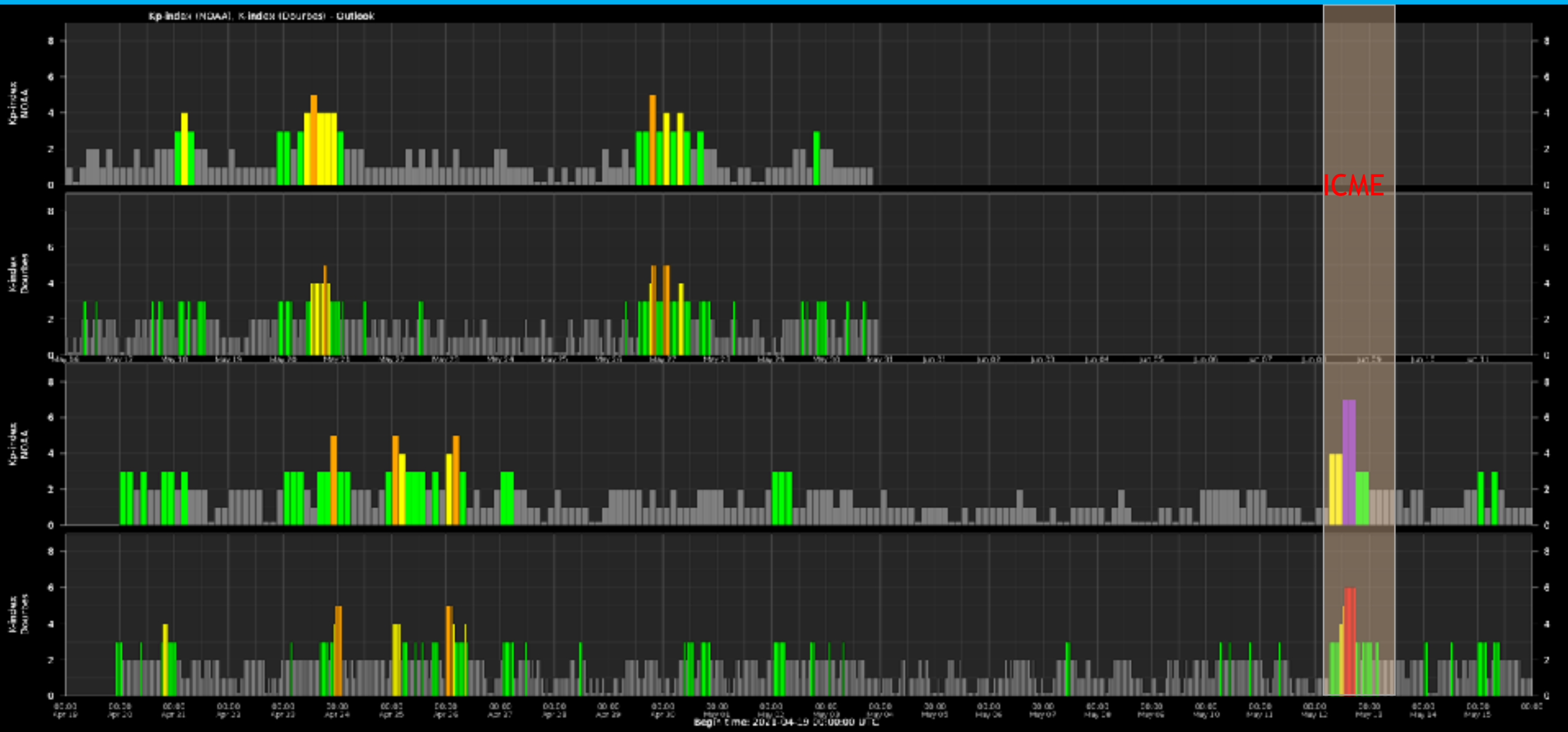
Outlook: Solar F10.7cm radio flux



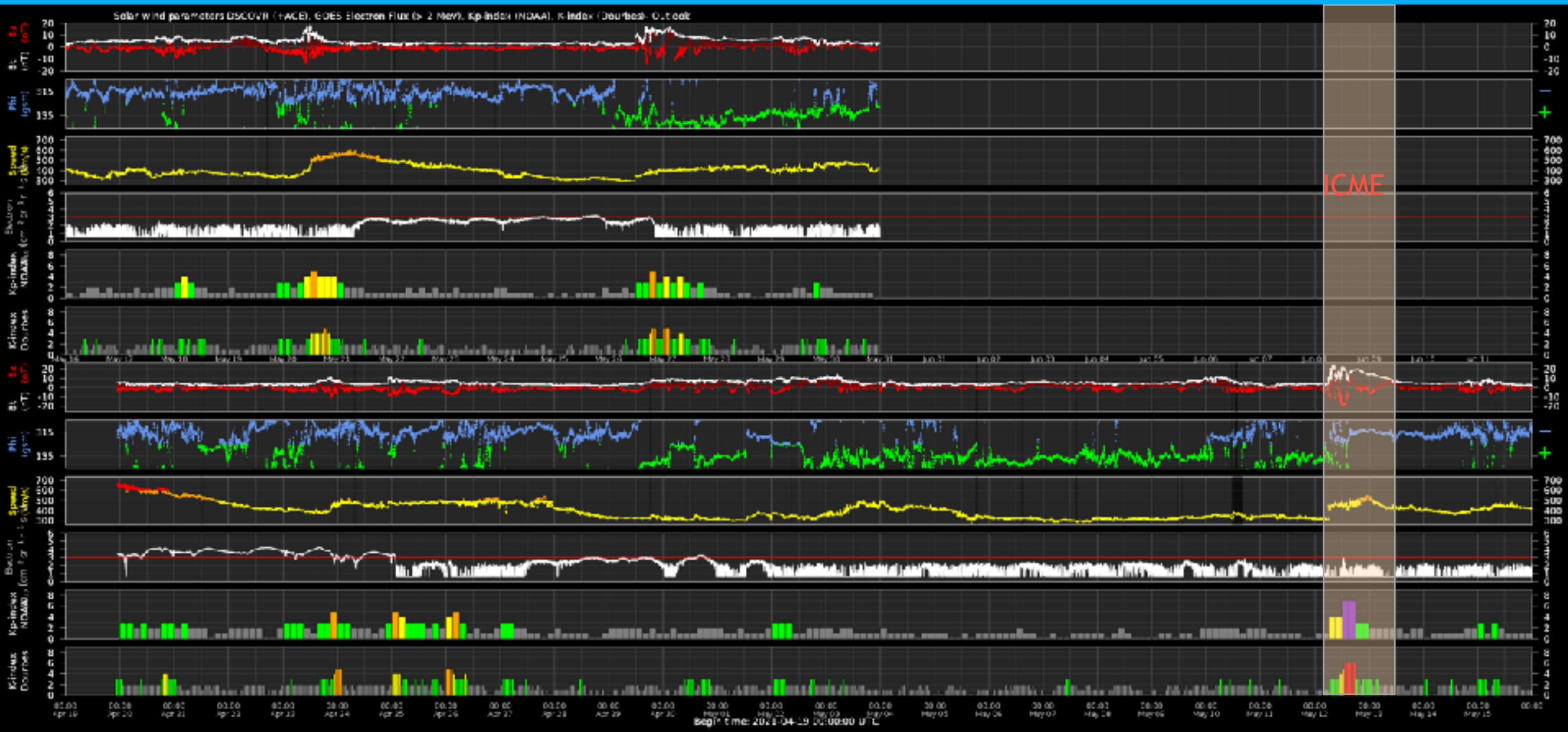
Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



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See you at our next briefing!

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