

SIDC Space Weather Briefing

09 May 2021 - 16 May 2021

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& the SIDC forecaster team



Royal Observatory
of Belgium

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Summary Report

Solar activity from 2021-05-09 12:00 to 2021-05-16 23:59

Active regions	NOAA AR 2822 (Catania 93) & NOAA AR 2823 (Catania 94)
Flares	# C-class flare: 3 # M-class flare: 0 # X-class flare: 0
Filament eruptions	None
Coronal Holes	Small patchy equatorial corona holes

Proton flux	At nominal level
Electron flux	Remain below the 1000 pfu threshold

Solar wind and geomagnetic conditions

ICME	05:49UT May 12 Fast Forward Shock
SW Conditions	B : 0.68 - 23.51 nT // Bz: -19.69 nT to 23.11 nT // Speed: 307.0 - 543.5km/s
K-indices	max K-index (Dourbes): 6 max Kp-index (NOAA): 7

All Quiet Alert: OFF

Solar Activity

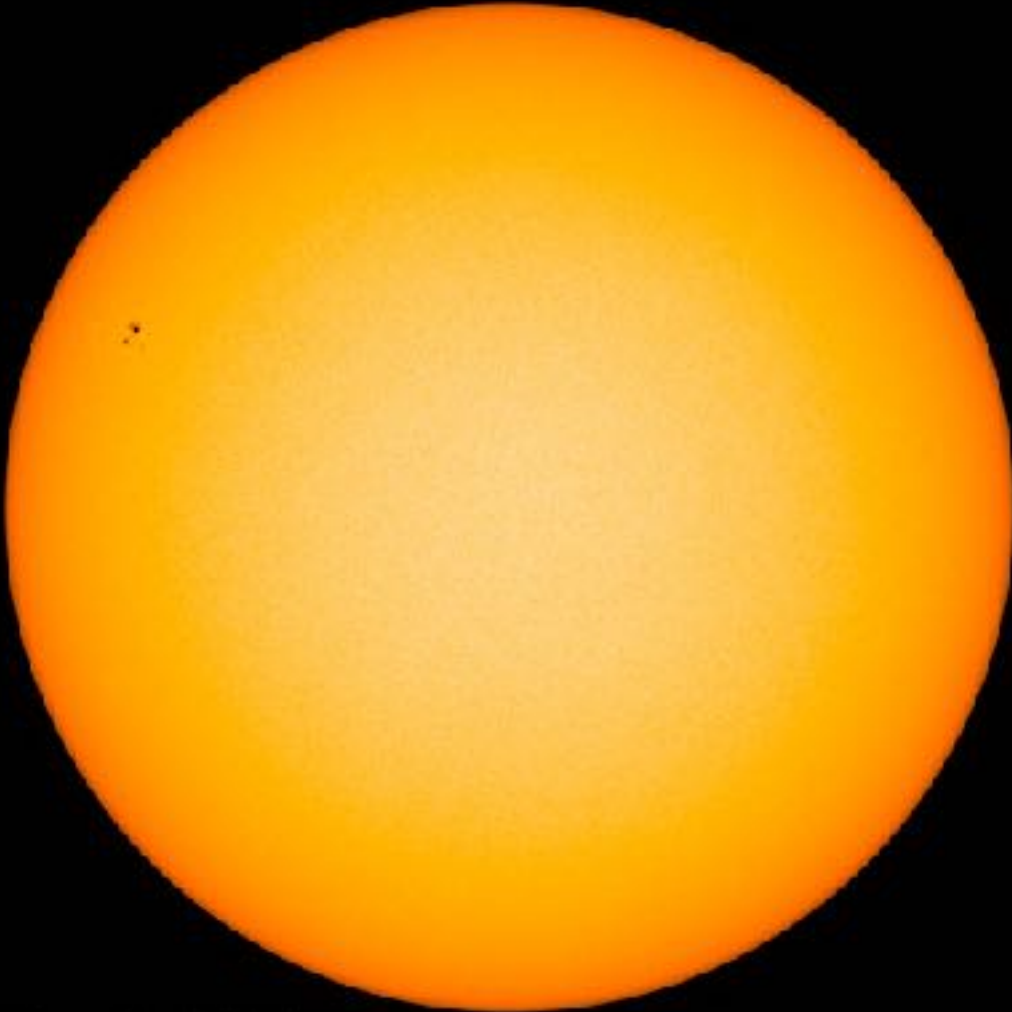


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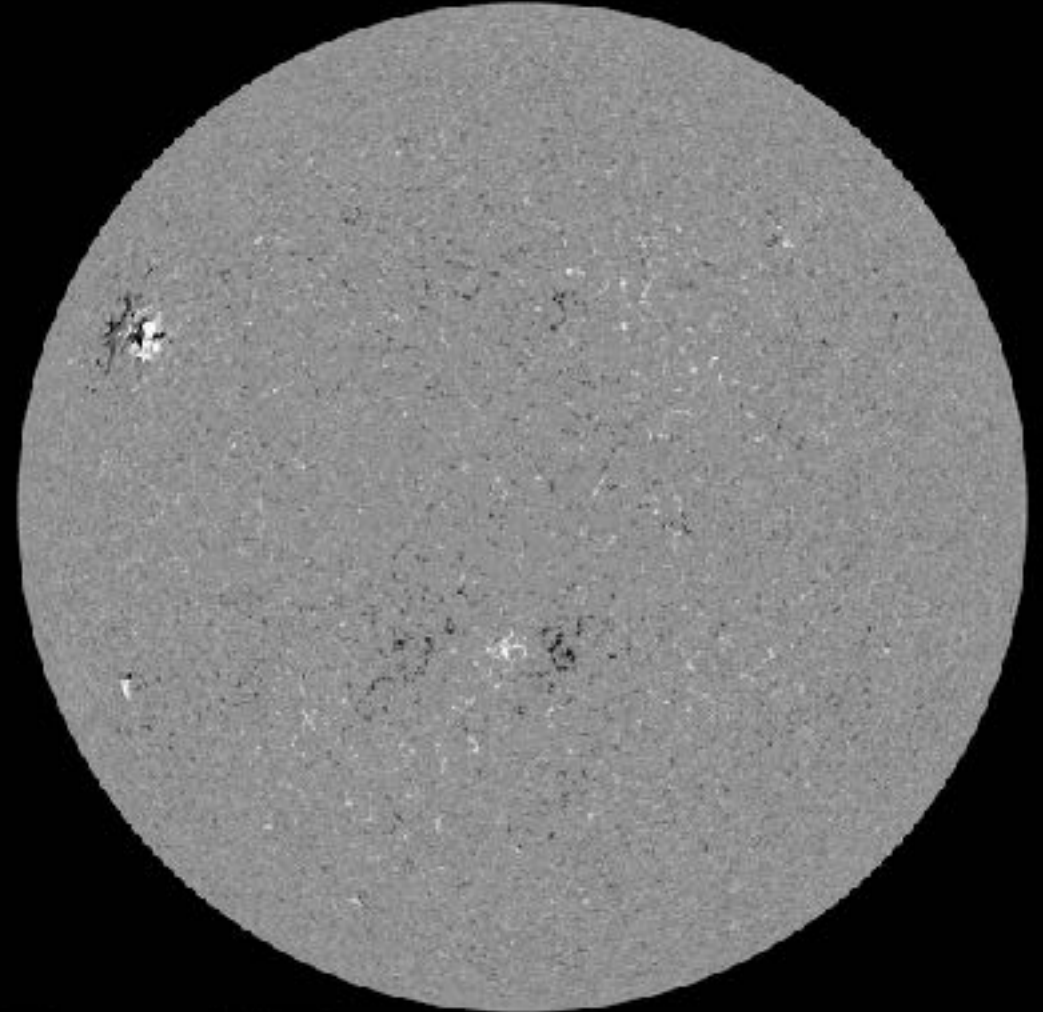
Solar active regions

SDO/HMI White Light 2021-05-09



SDO/HMI White Light 2021-05-09

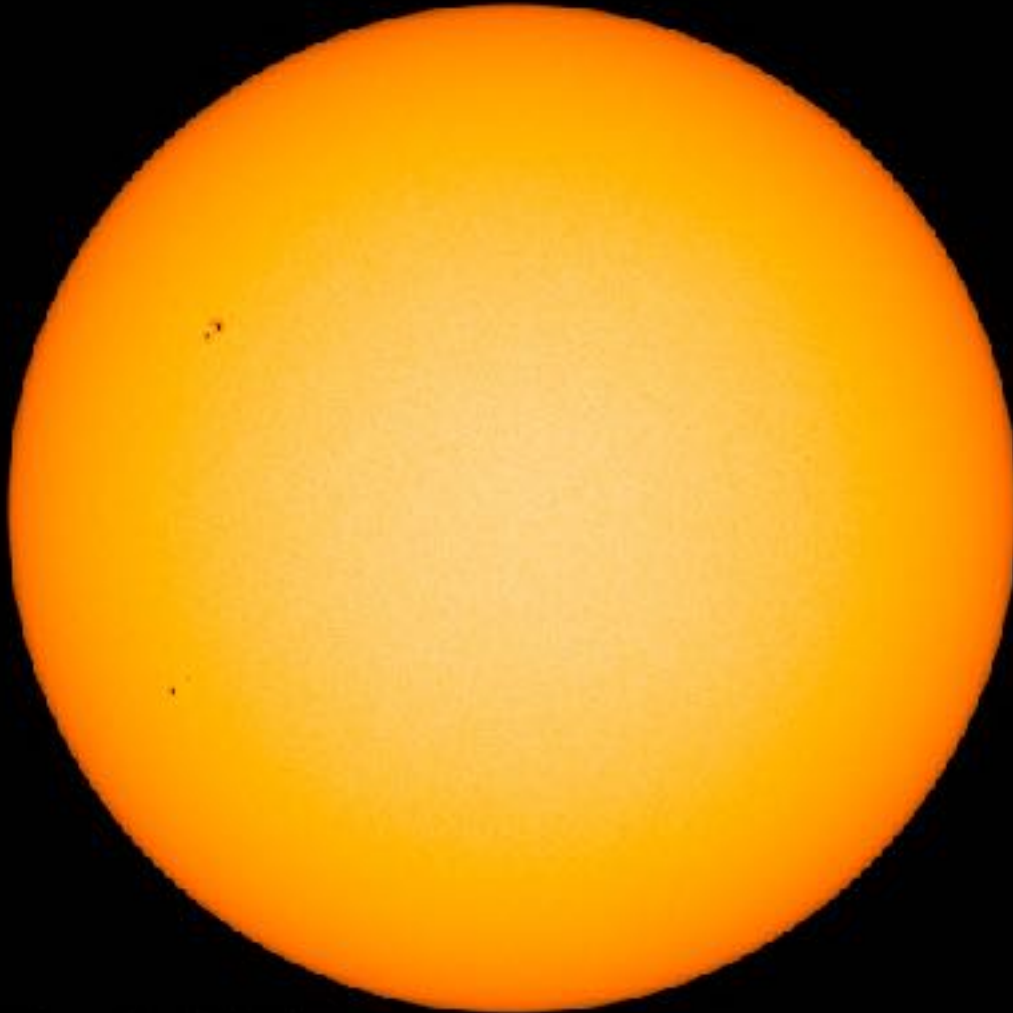
SDO/HMI Magnetogram 2021-05-09



SDO/HMI Magnetogram 2021-05-09

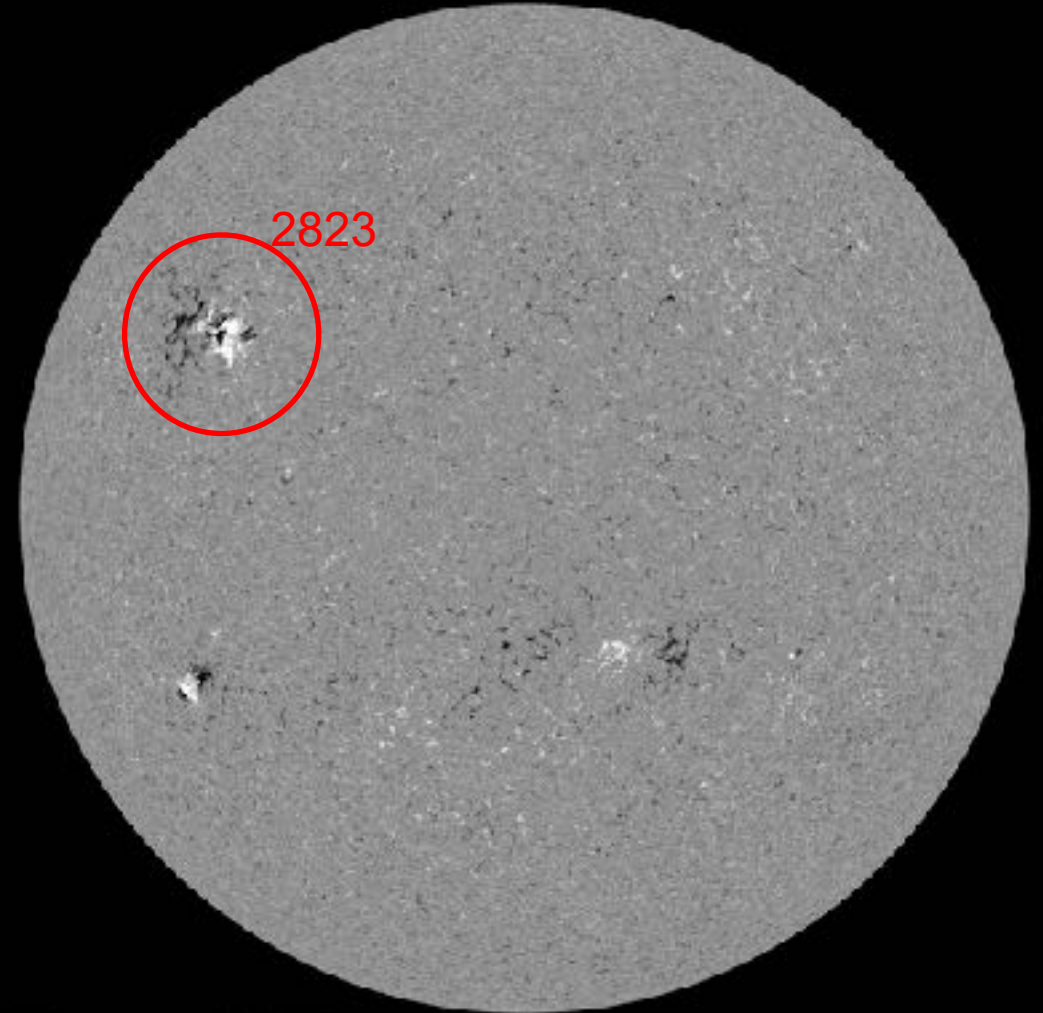
Solar active regions

SDO/HMI White Light 2021-05-10



SDO/HMI White Light 2021-05-10_14500

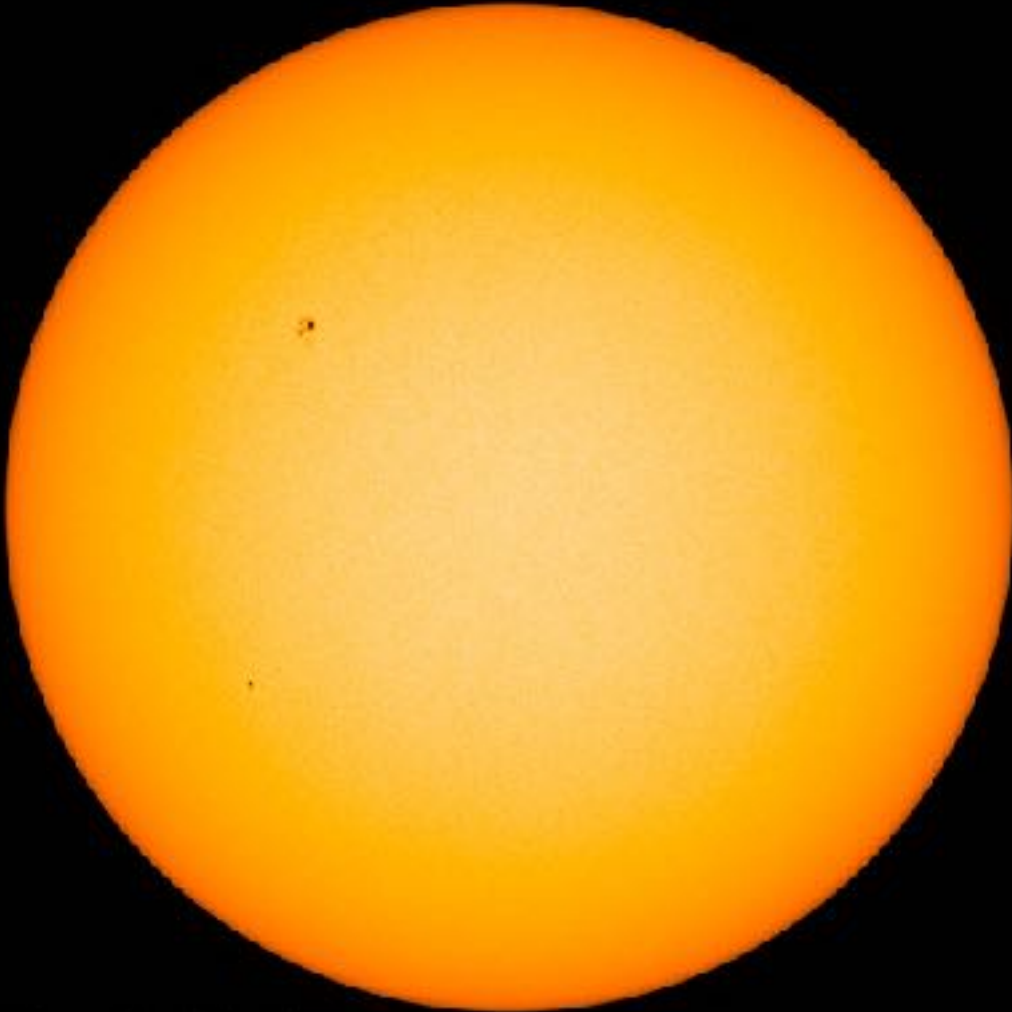
SDO/HMI Magnetogram 2021-05-10



SDO/HMI Magnetogram 2021-05-10_14500

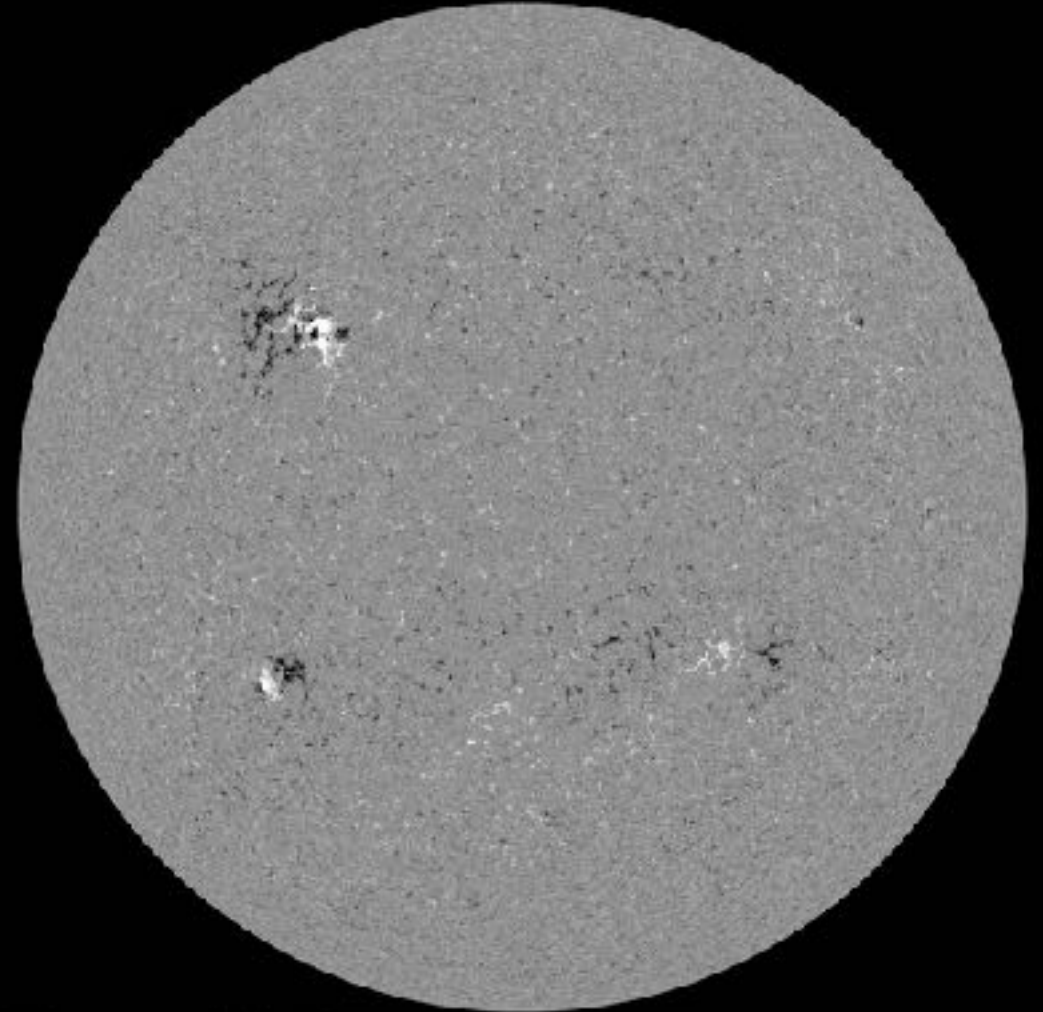
Solar active regions

SDO/HMI White Light 2021-05-11



SDO/HMI White Light 2021-05-11 14:00

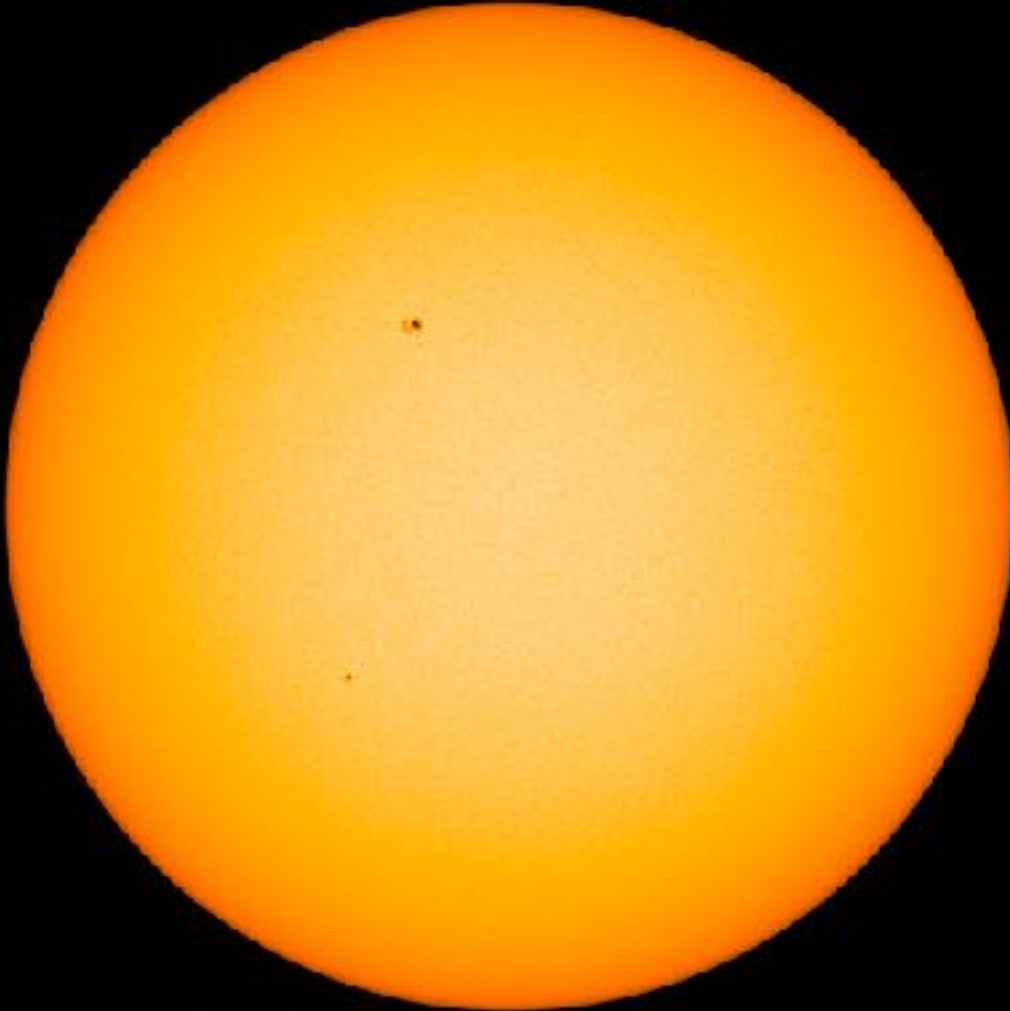
SDO/HMI Magnetogram 2021-05-11



SDO/HMI Magnetogram 2021-05-11 14:00

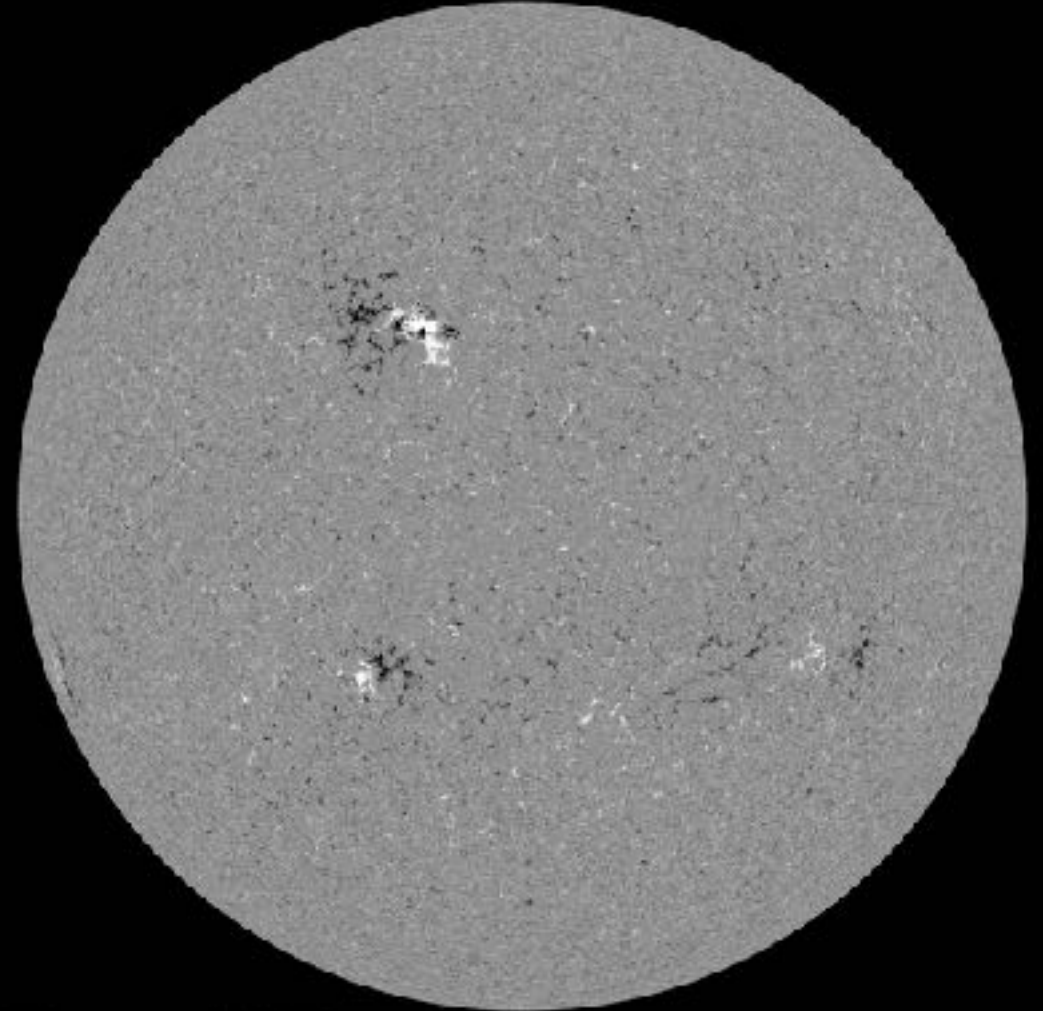
Solar active regions

SDO/HMI White Light 2021-05-12



SDO/HMI White Light 2021-05-12 14:00

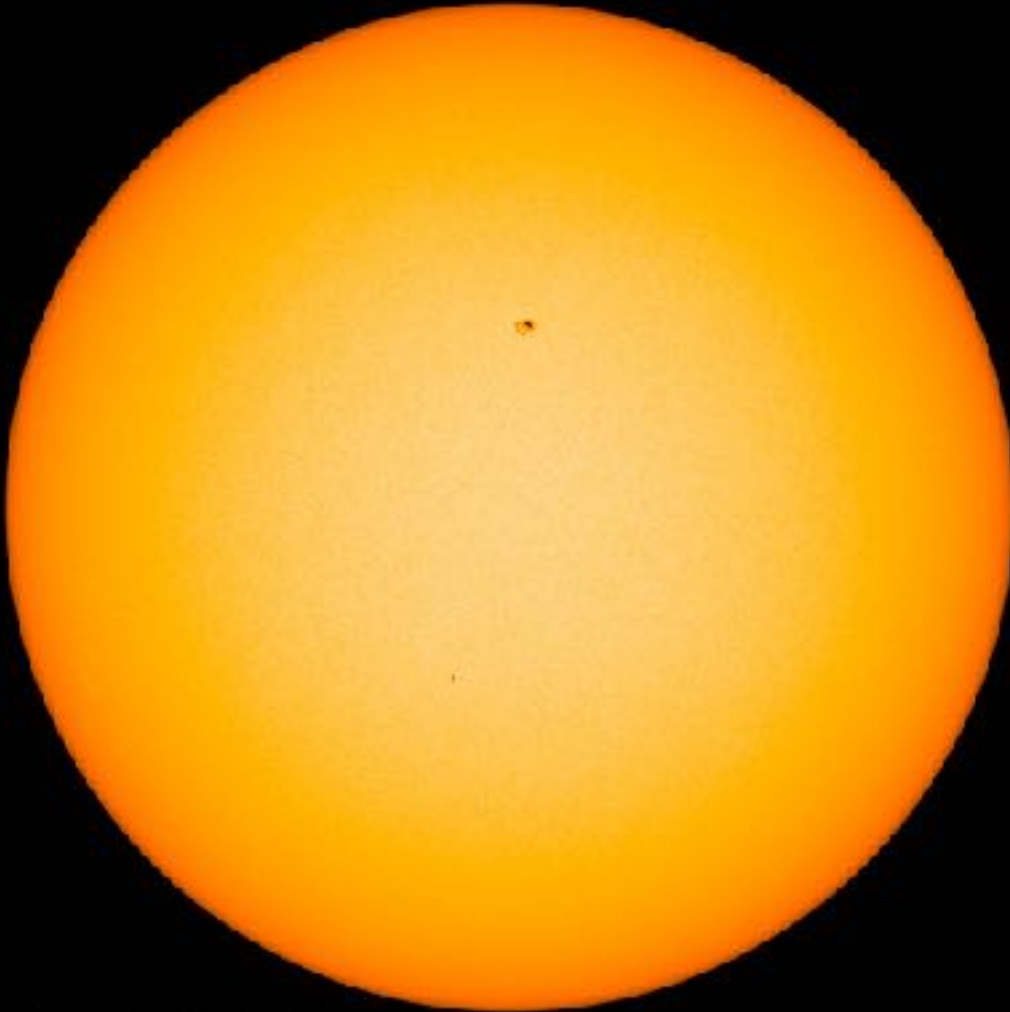
SDO/HMI Magnetogram 2021-05-12



SDO/HMI Magnetogram 2021-05-12 14:00

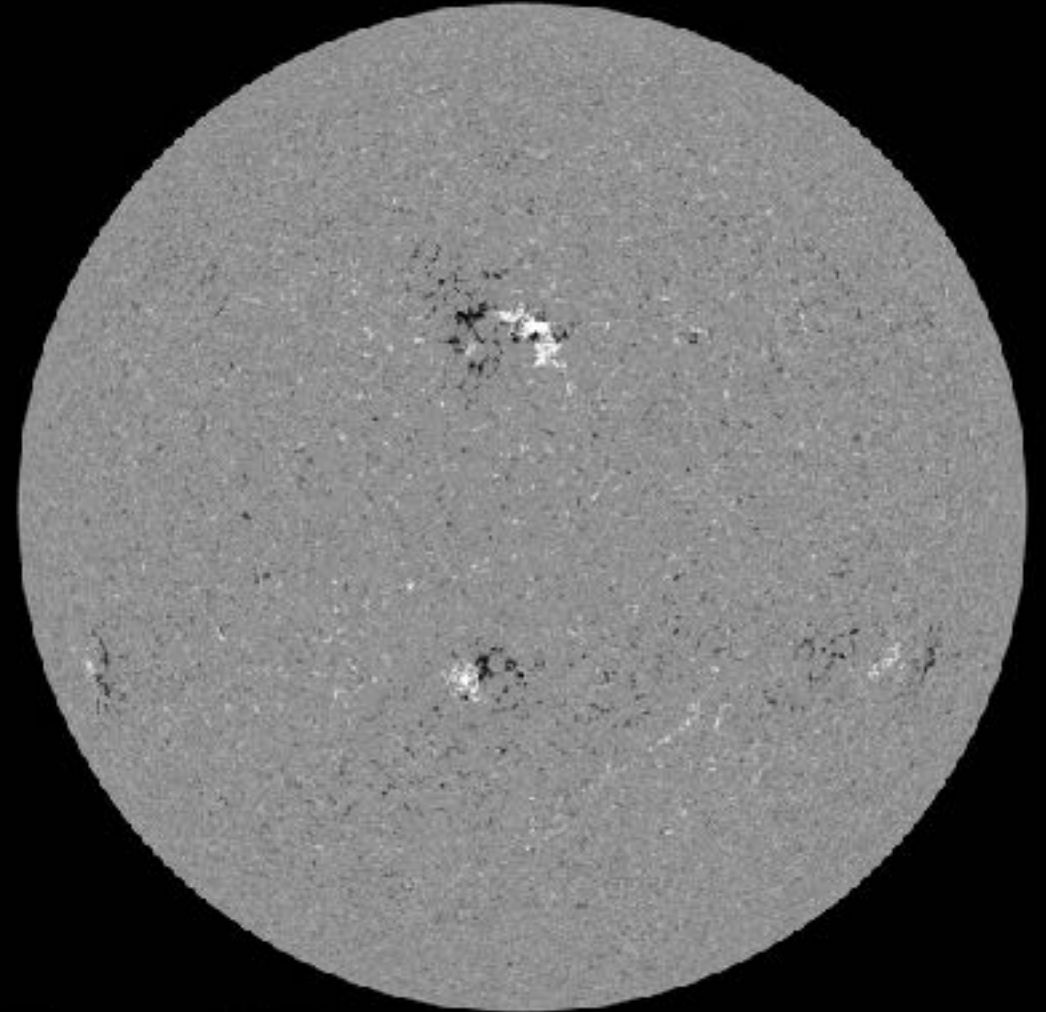
Solar active regions

SDO/HMI White Light 2021-05-13



SDO/HMI White Light 2021-05-13_14500

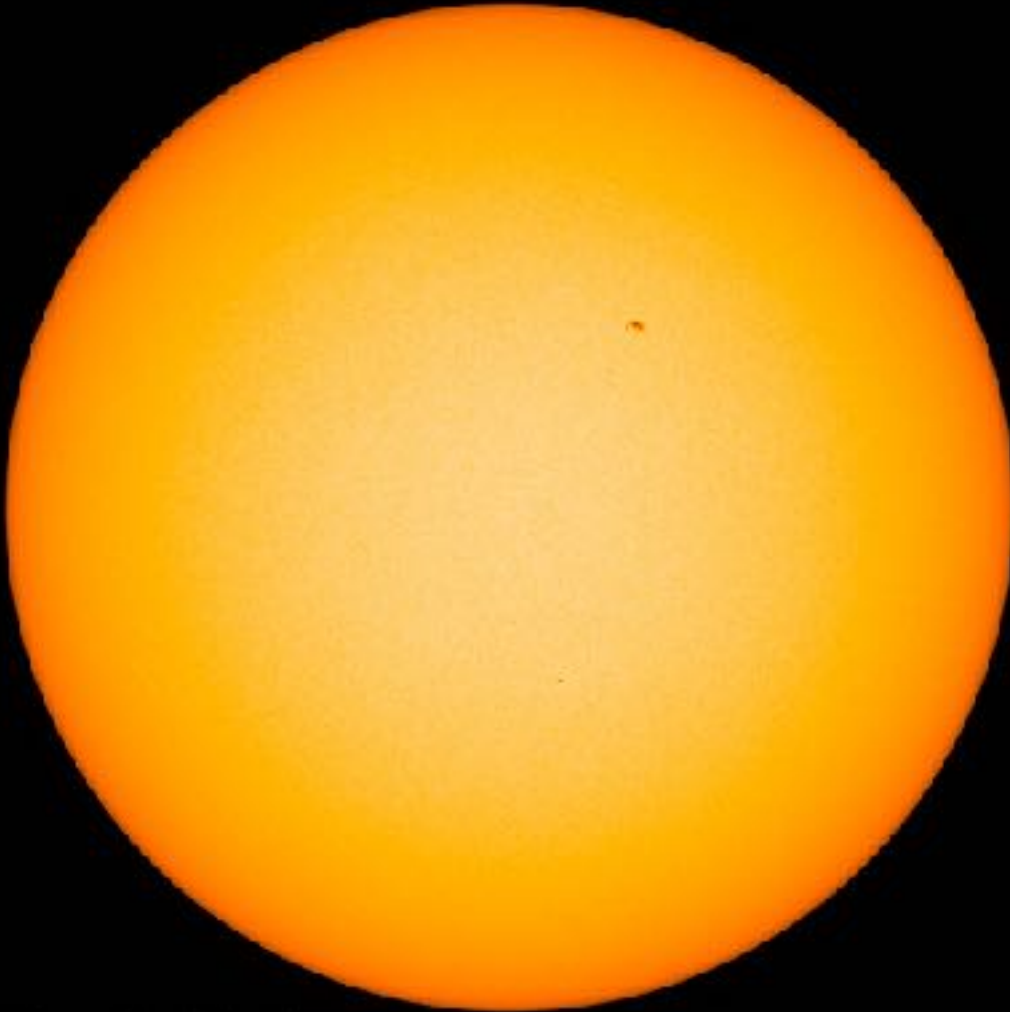
SDO/HMI Magnetogram 2021-05-13



SDO/HMI Magnetogram 2021-05-13_14500

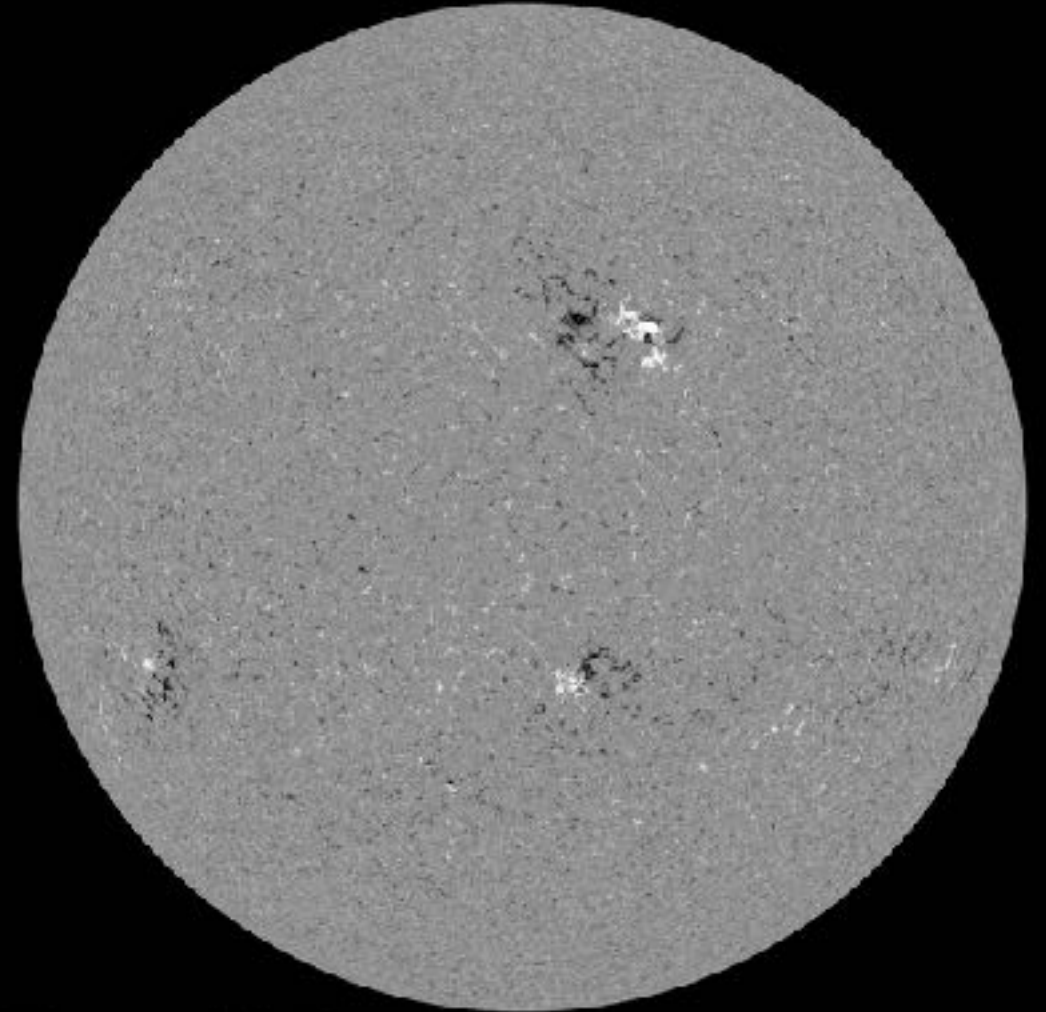
Solar active regions

SDO/HMI White Light 2021-05-14



SDO/HMI White Light 2021-05-14

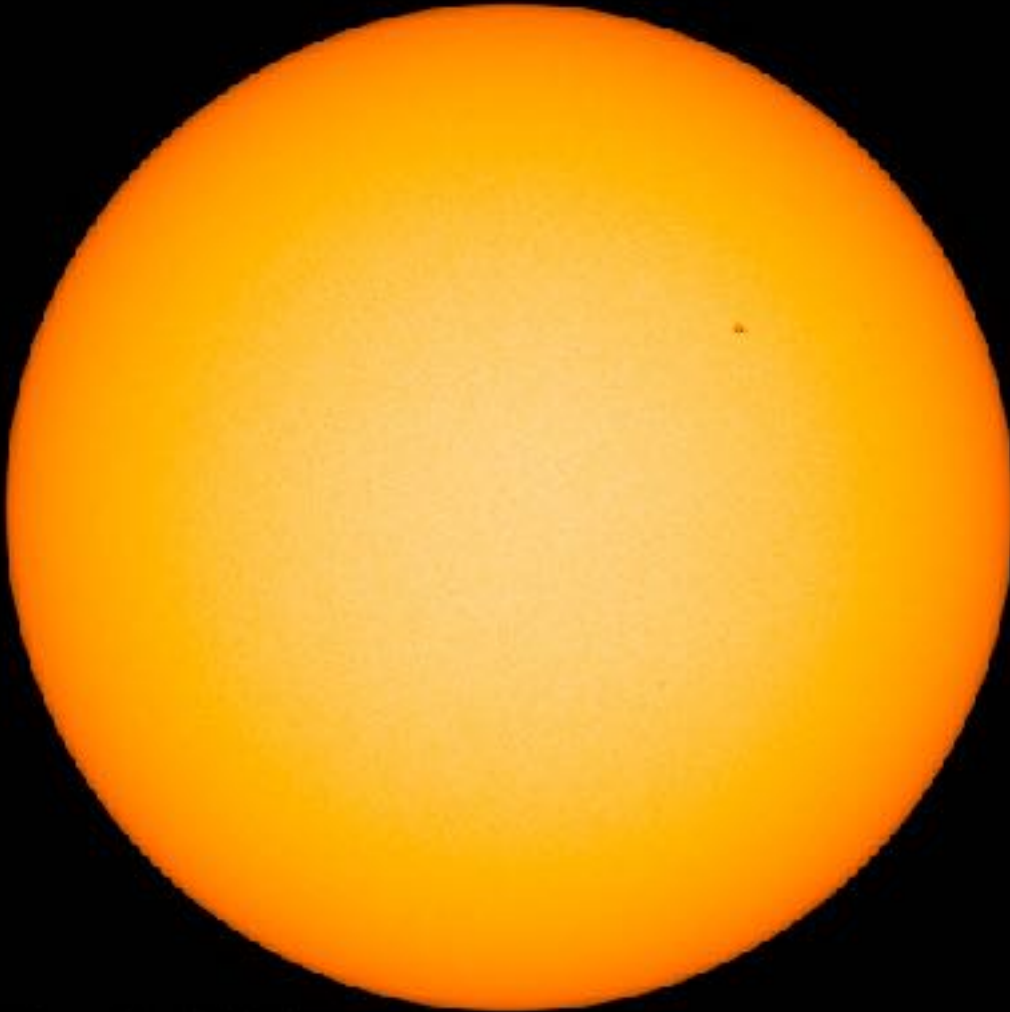
SDO/HMI Magnetogram 2021-05-14



SDO/HMI Magnetogram 2021-05-14

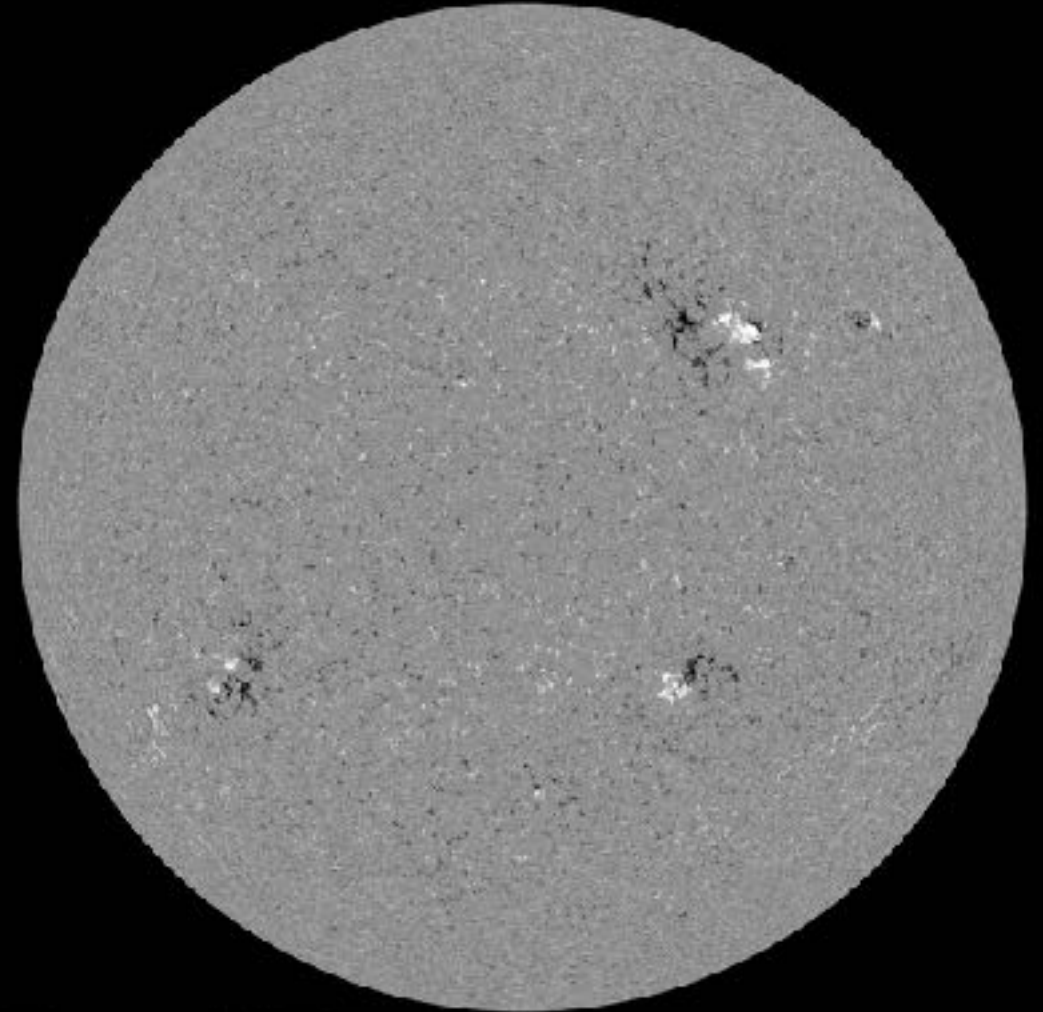
Solar active regions

SDO/HMI White Light 2021-05-15



SDO/HMI White Light 2021-05-15

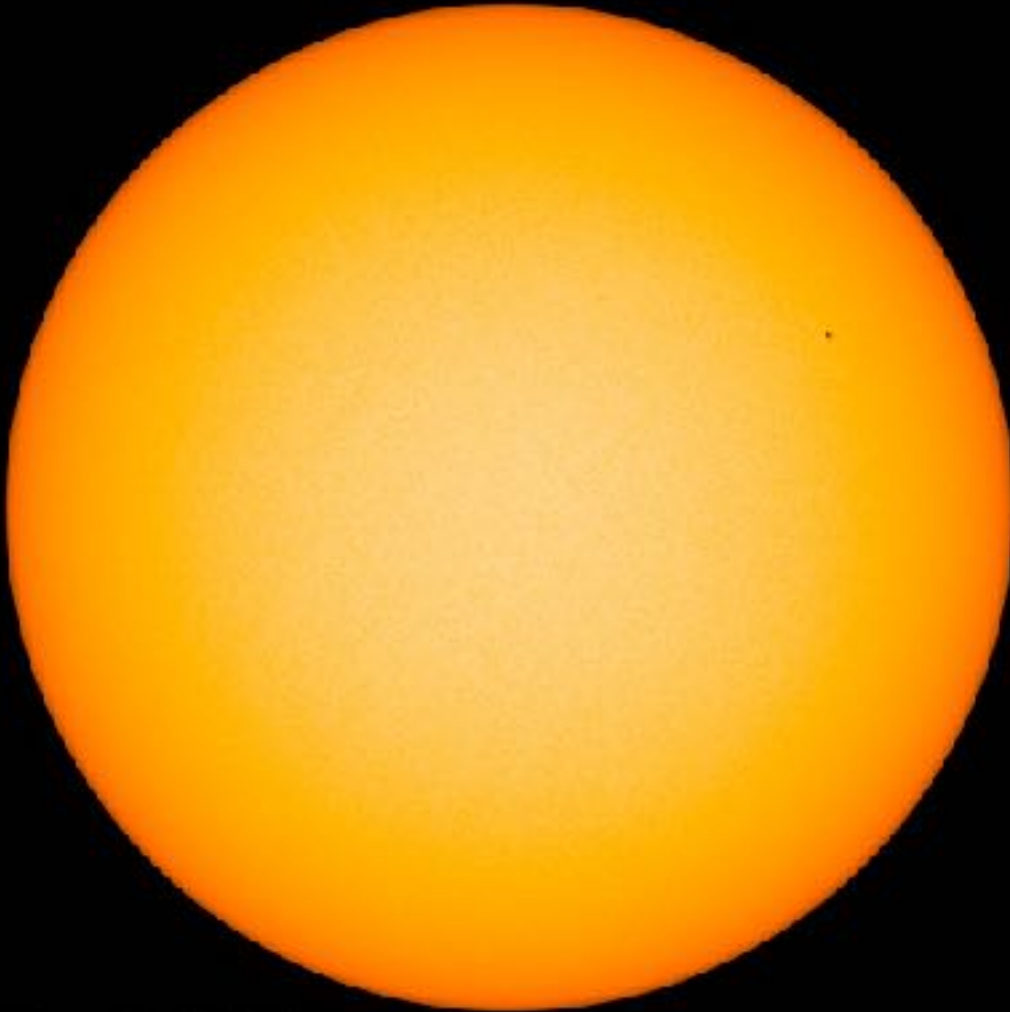
SDO/HMI Magnetogram 2021-05-15



SDO/HMI Magnetogram 2021-05-15

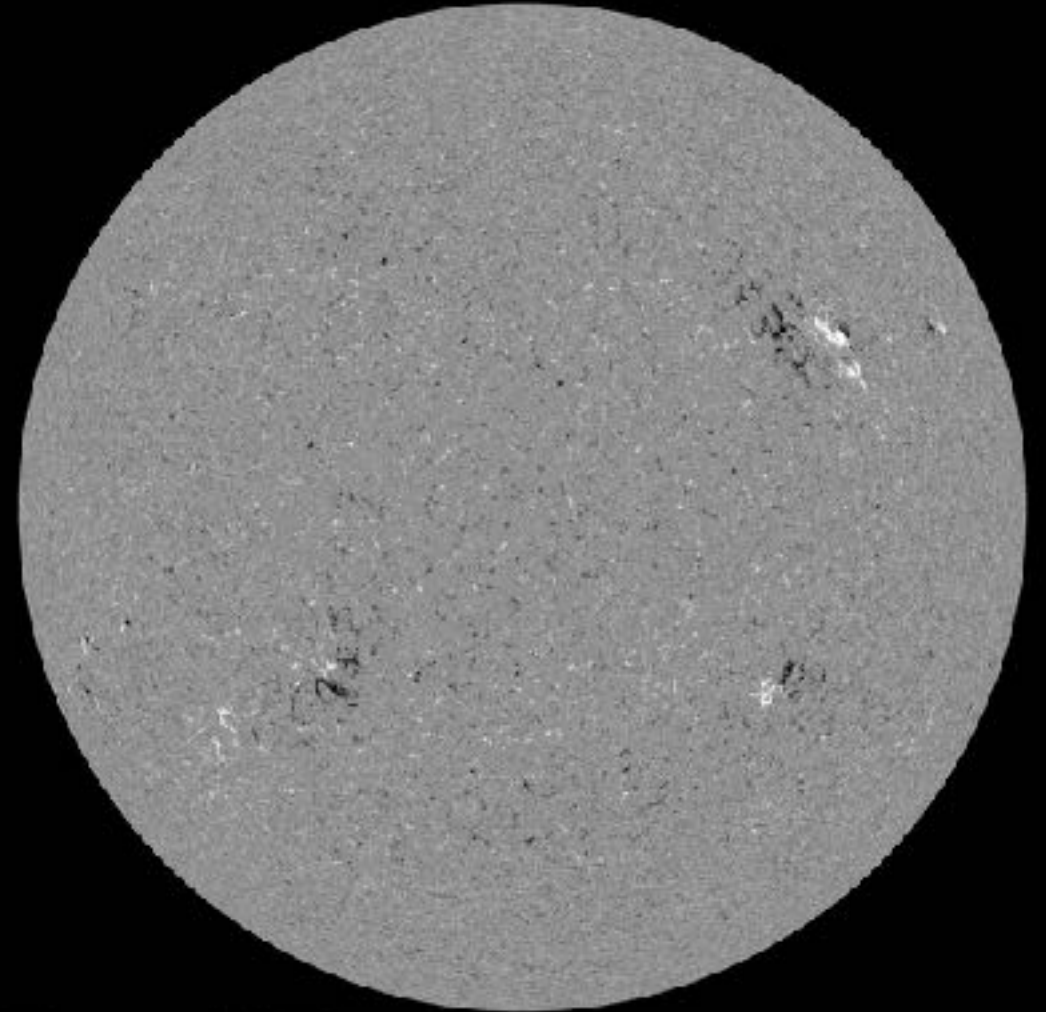
Solar active regions

SDO/HMI White Light 2021-05-16



SDO/HMI White Light 2021-05-16

SDO/HMI Magnetogram 2021-05-16

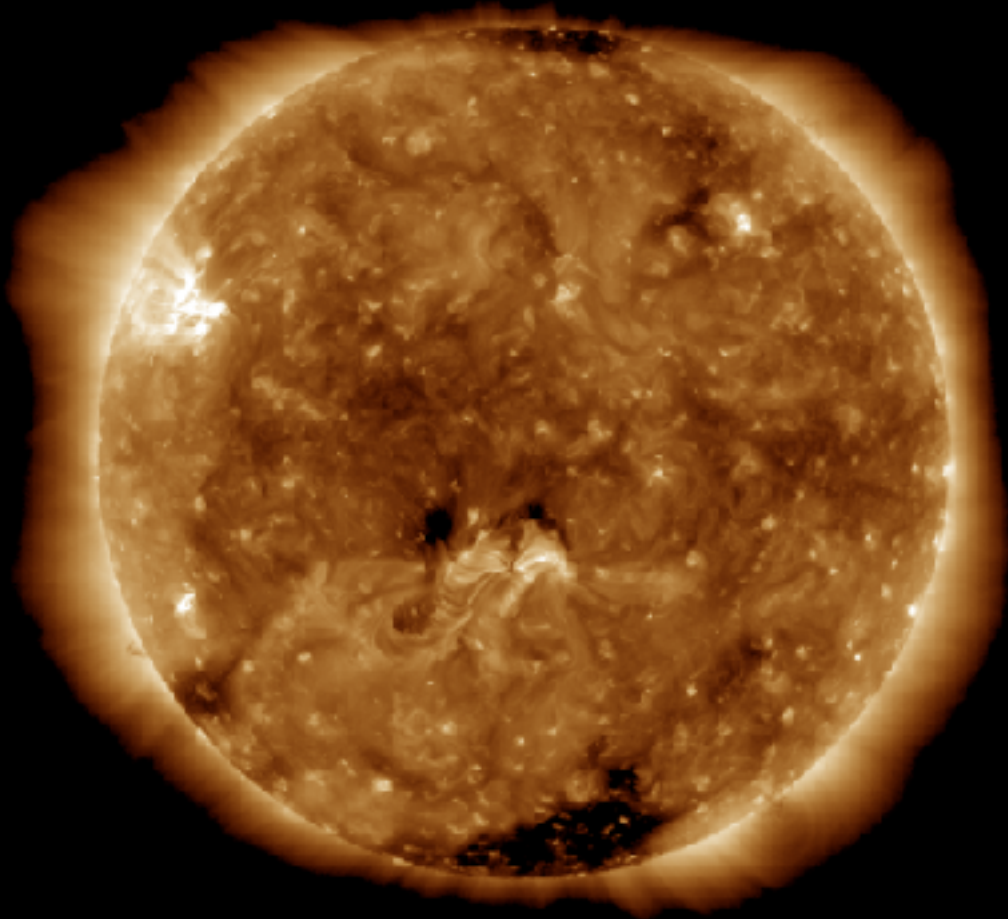


SDO/HMI Magnetogram 2021-05-16

Coronal holes

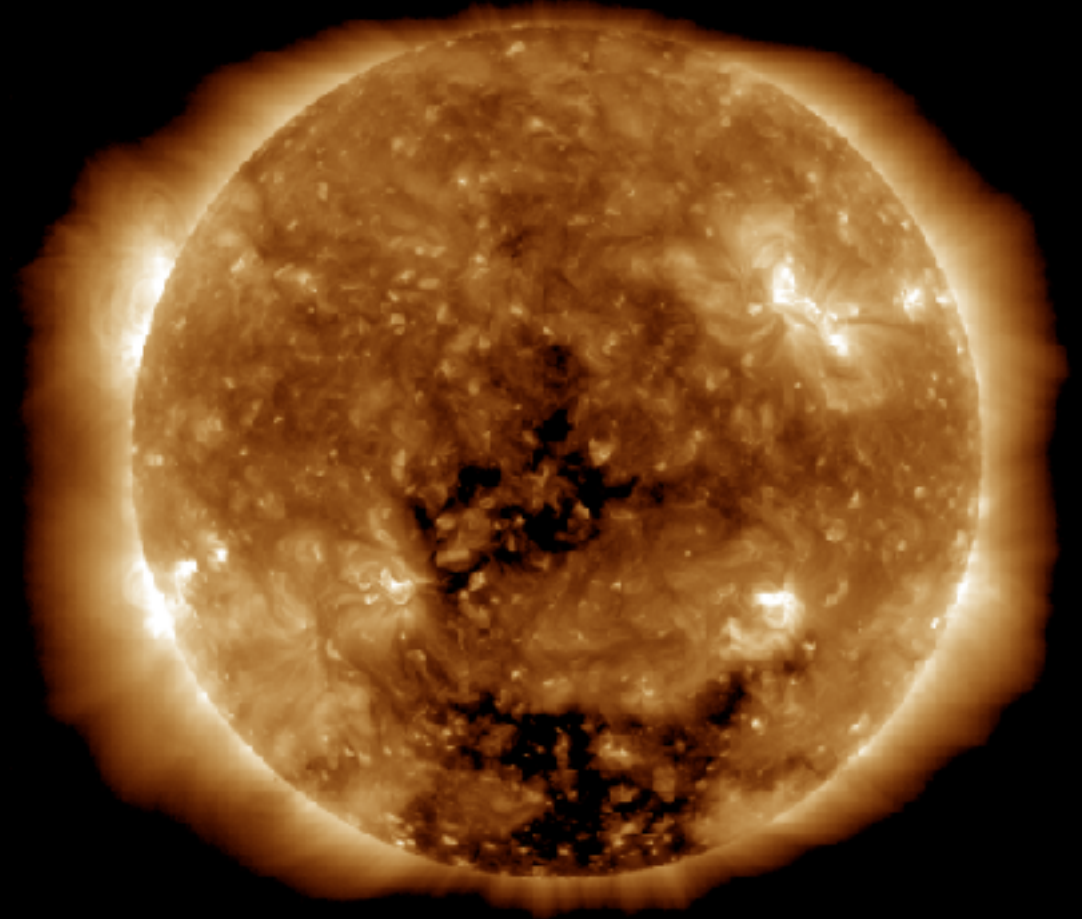
SDO/AIA 19.3 nm 2021-05-09

SDO/AIA AIA_193Å 2021-05-09T12:00:05.843



SDO/AIA 19.3 nm 2021-05-16

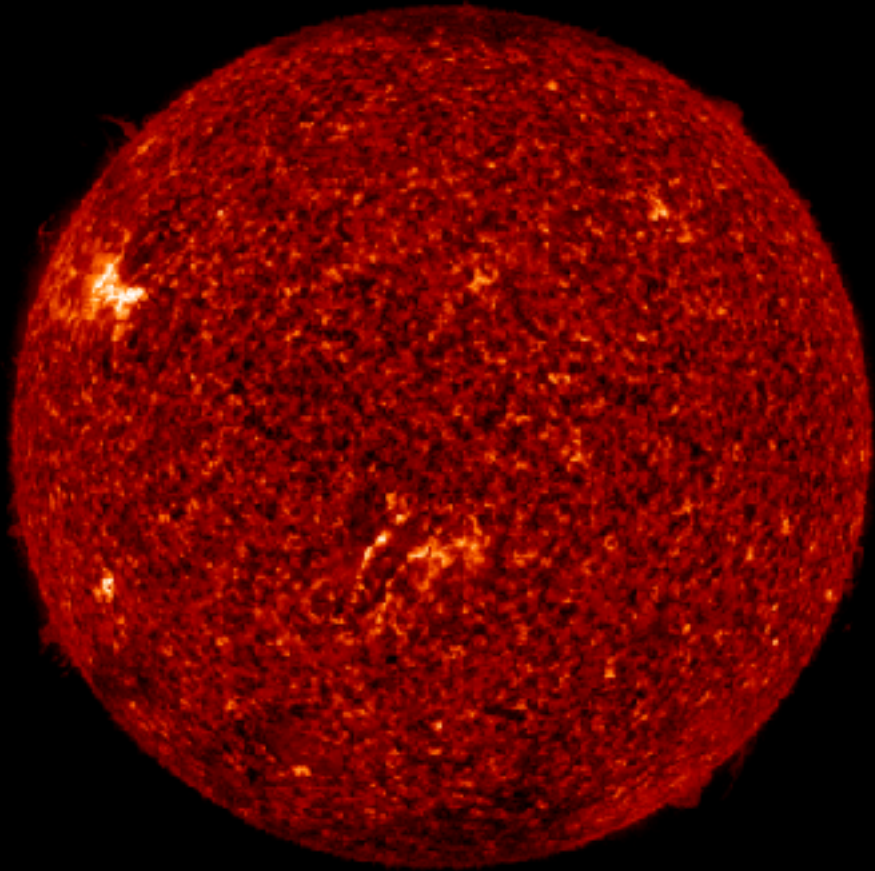
SDO/AIA AIA_193Å 2021-05-16T12:00:05.842



Filaments

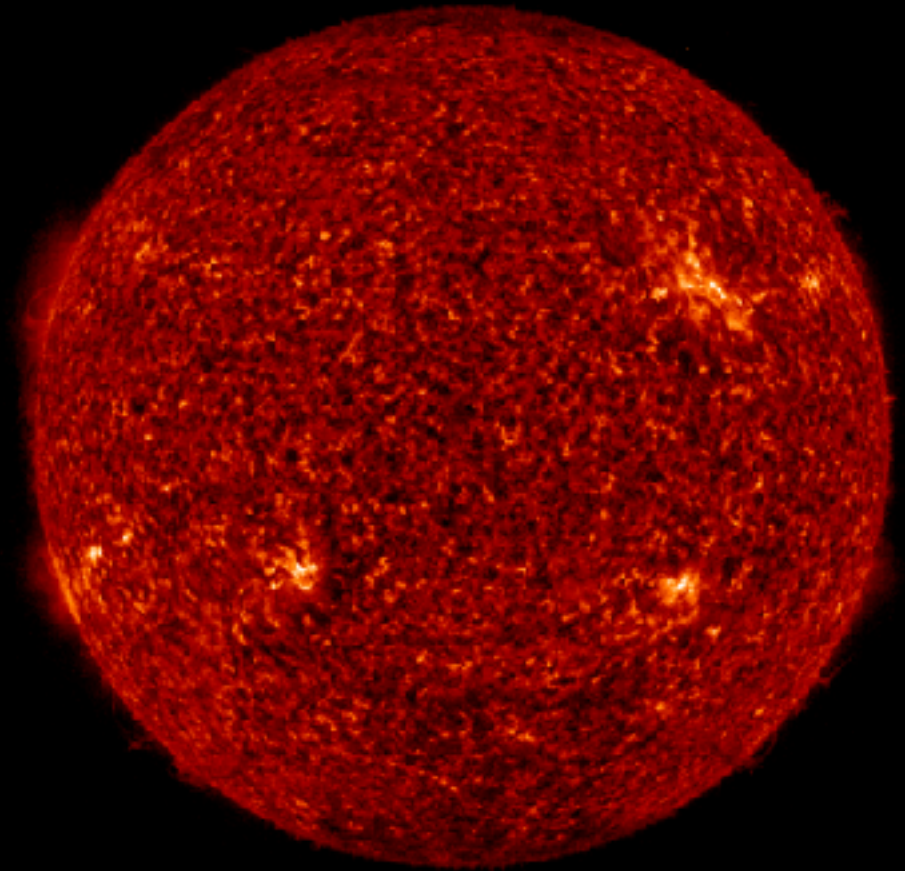
SDO/AIA 30.4 nm 2021-05-09

SDO/AIA AIA 304Å 2021-05-09T12:00:06.580

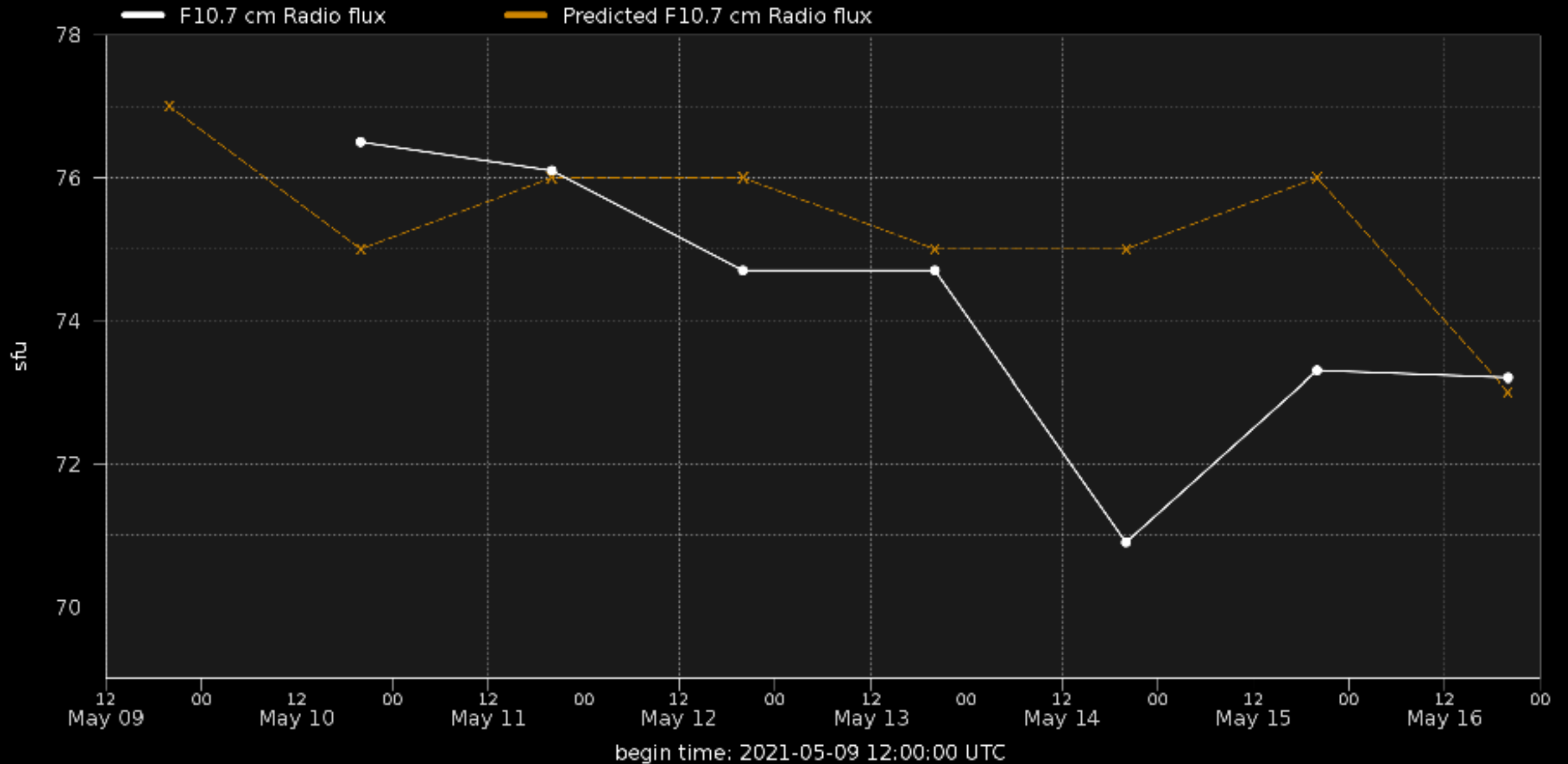


SDO/AIA 30.4 nm 2021-05-16

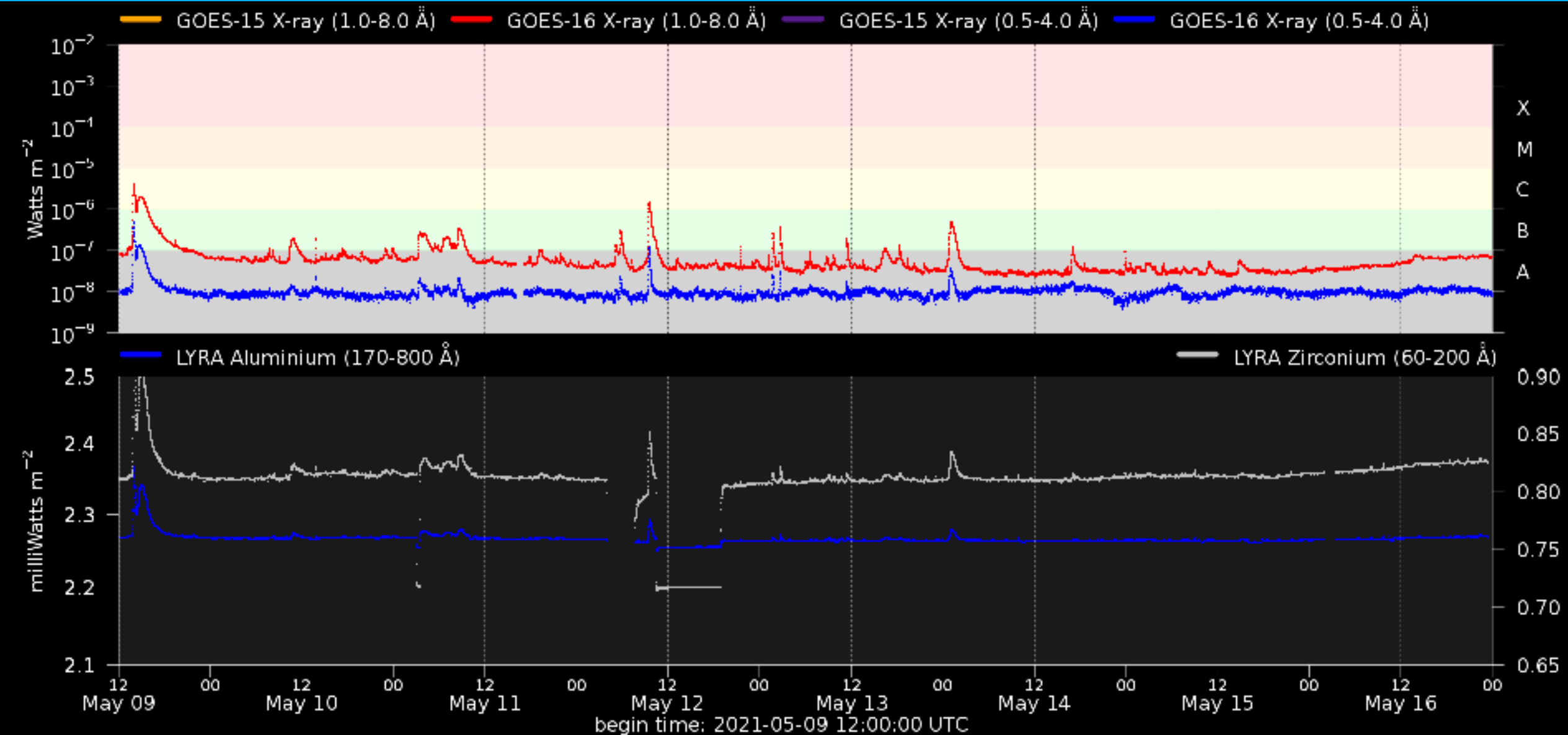
SDO/AIA AIA 304Å 2021-05-16T12:00:06.580



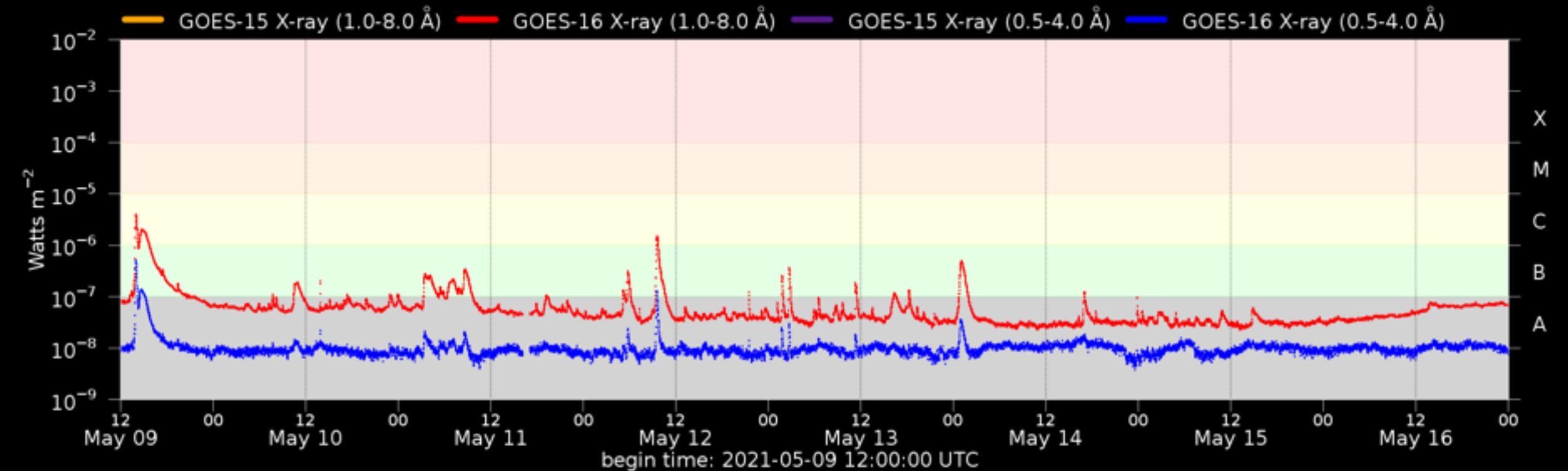
Solar F10.7cm radio flux



Solar X-Ray and UV flux



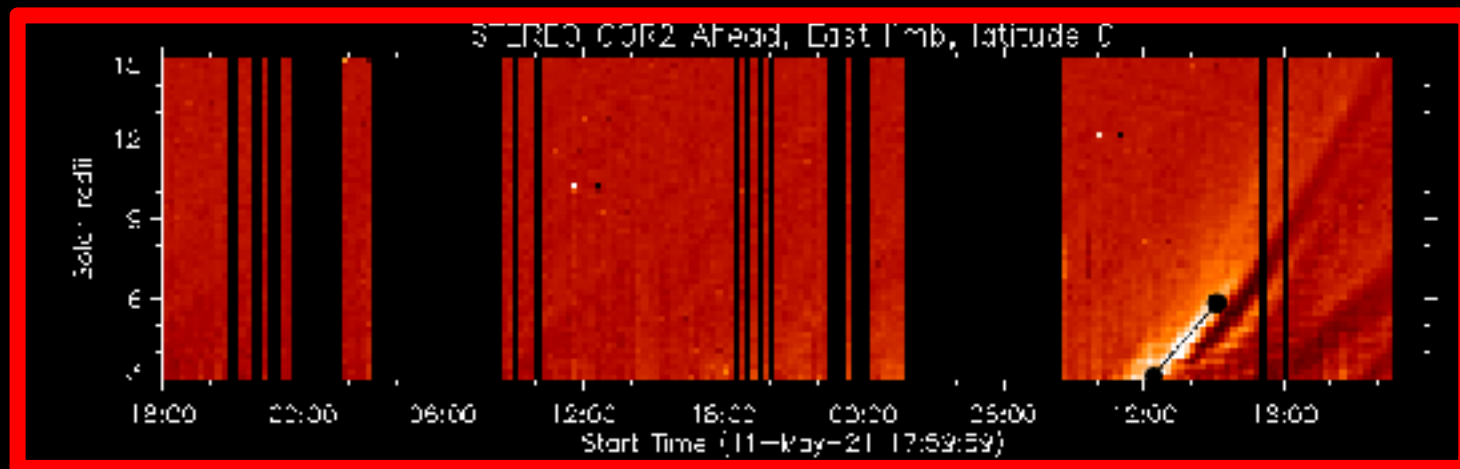
Flaring activity



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

Issue date	2021-05-09	2021-05-10	2021-05-11	2021-05-12	2021-05-13	2021-05-14	2021-05-15	2021-05-16
Probability (%)	50 10 01	70 15 05	35 05 01	70 20 01	10 01 01	10 01 01	10 01 01	05 01 01
Observed (#)	01 00 00	00 00 00	01 00 00	00 00 00	00 00 00	00 00 00	00 00 00	00 00 00

Coronal Mass Ejections



Solar Wind and

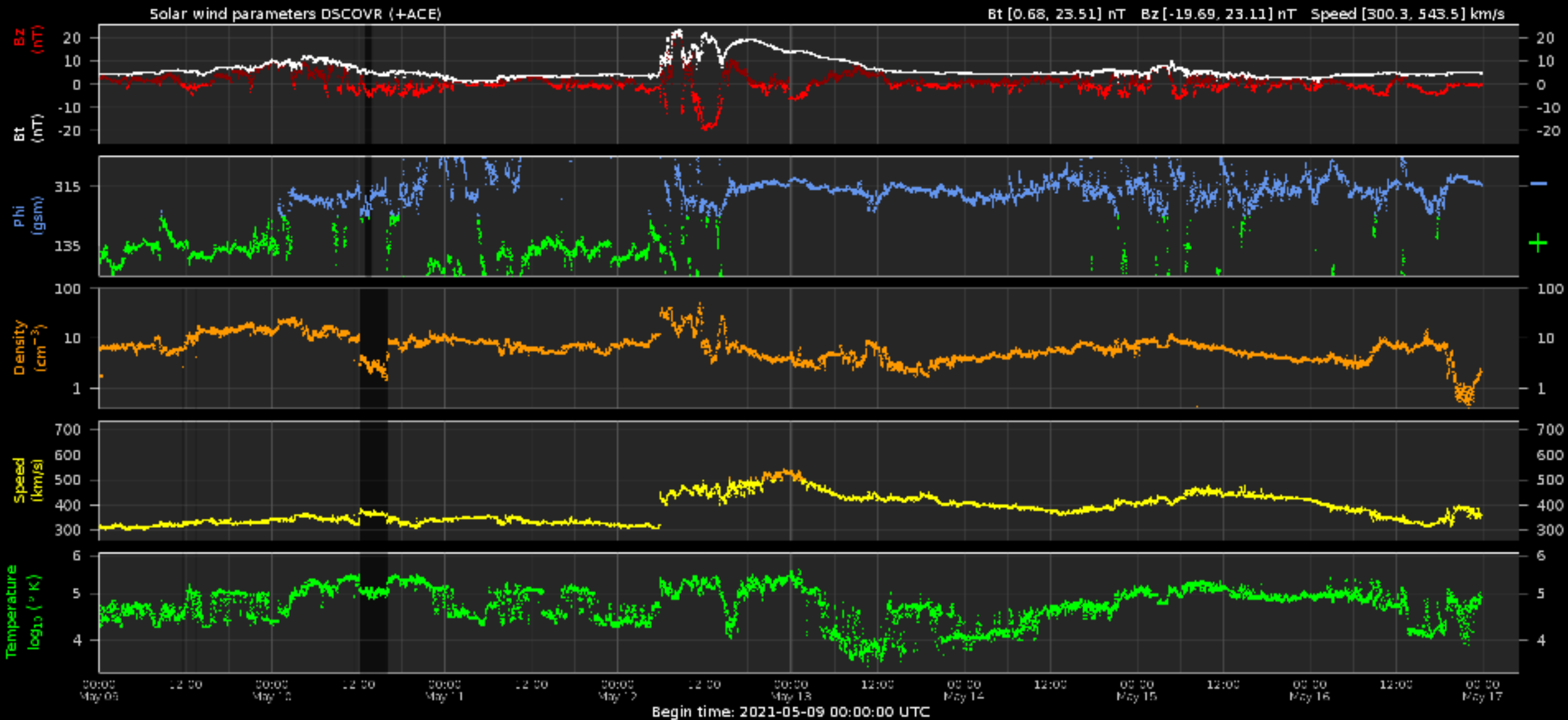
Geomagnetic Activity



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Solar wind parameters



Solar wind parameters & K-indices



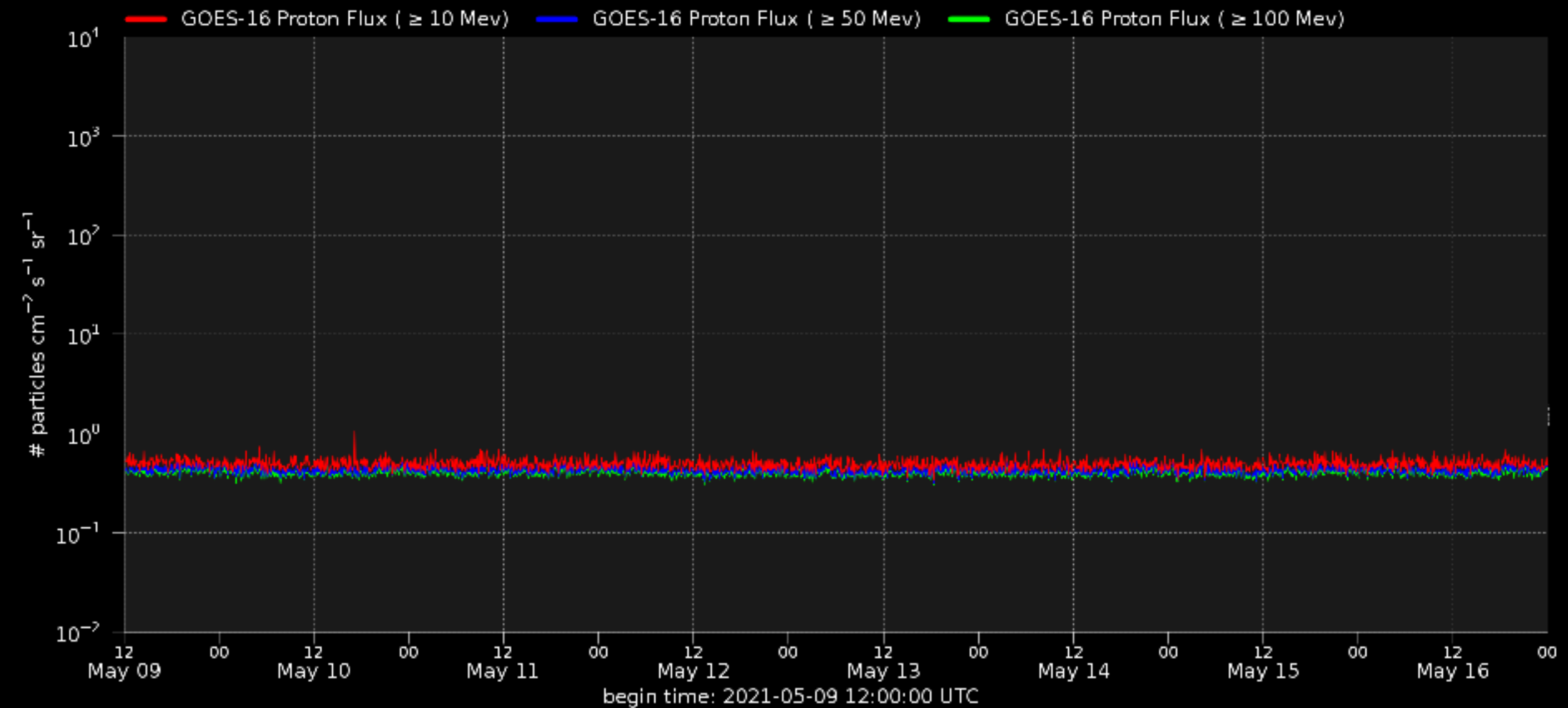
Energetic Particles



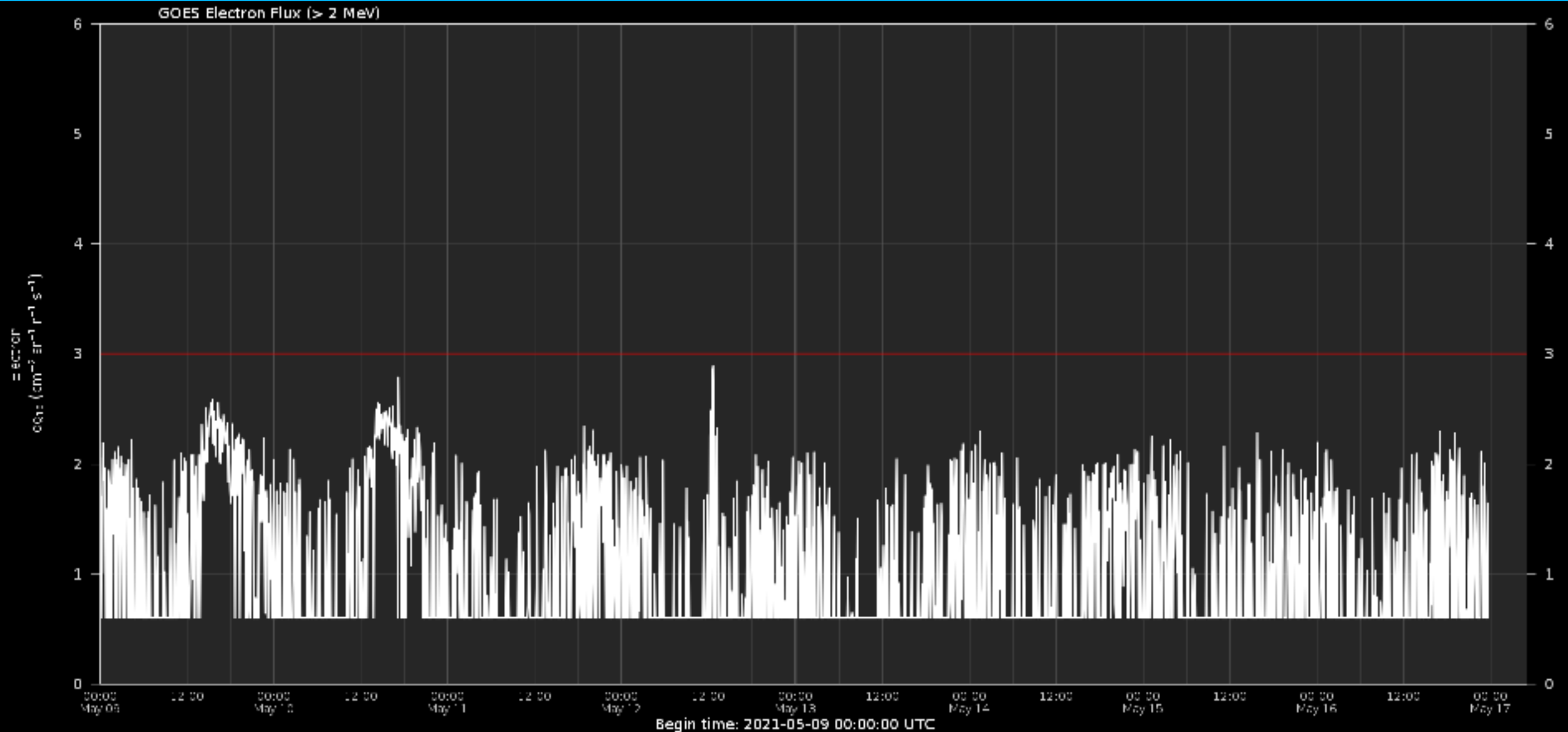
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Solar proton flux



Electron flux at GEO



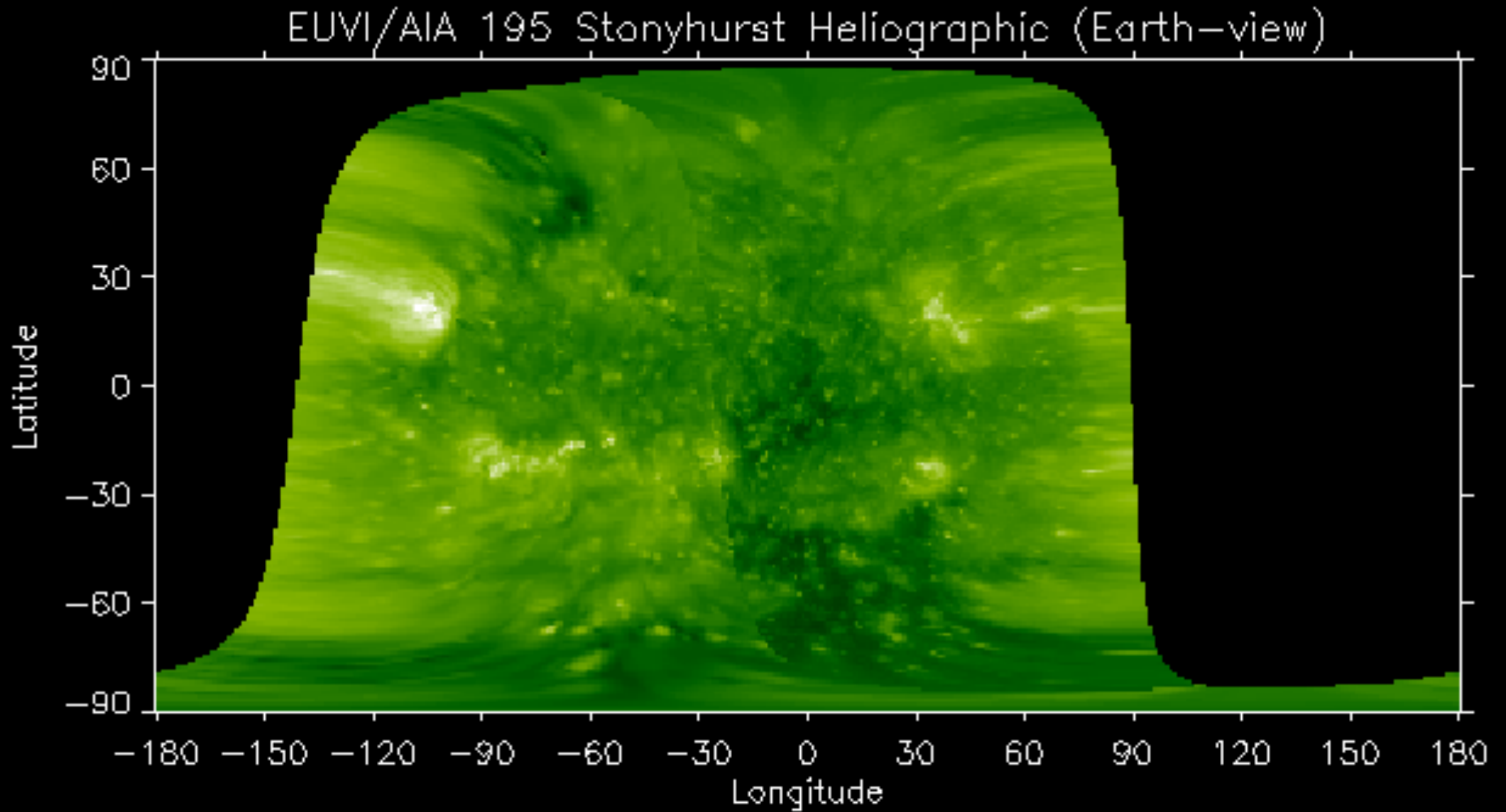
Outlook



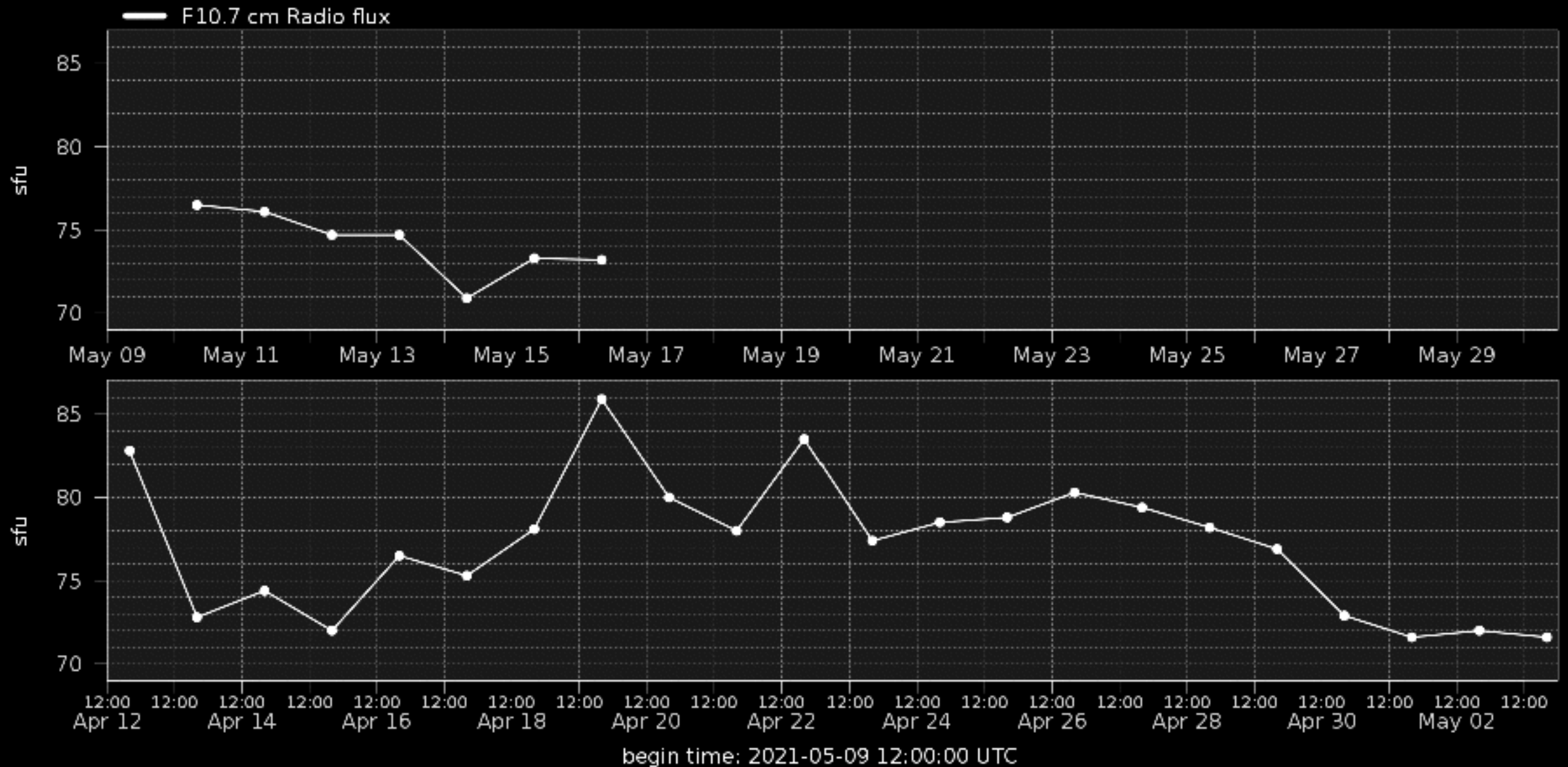
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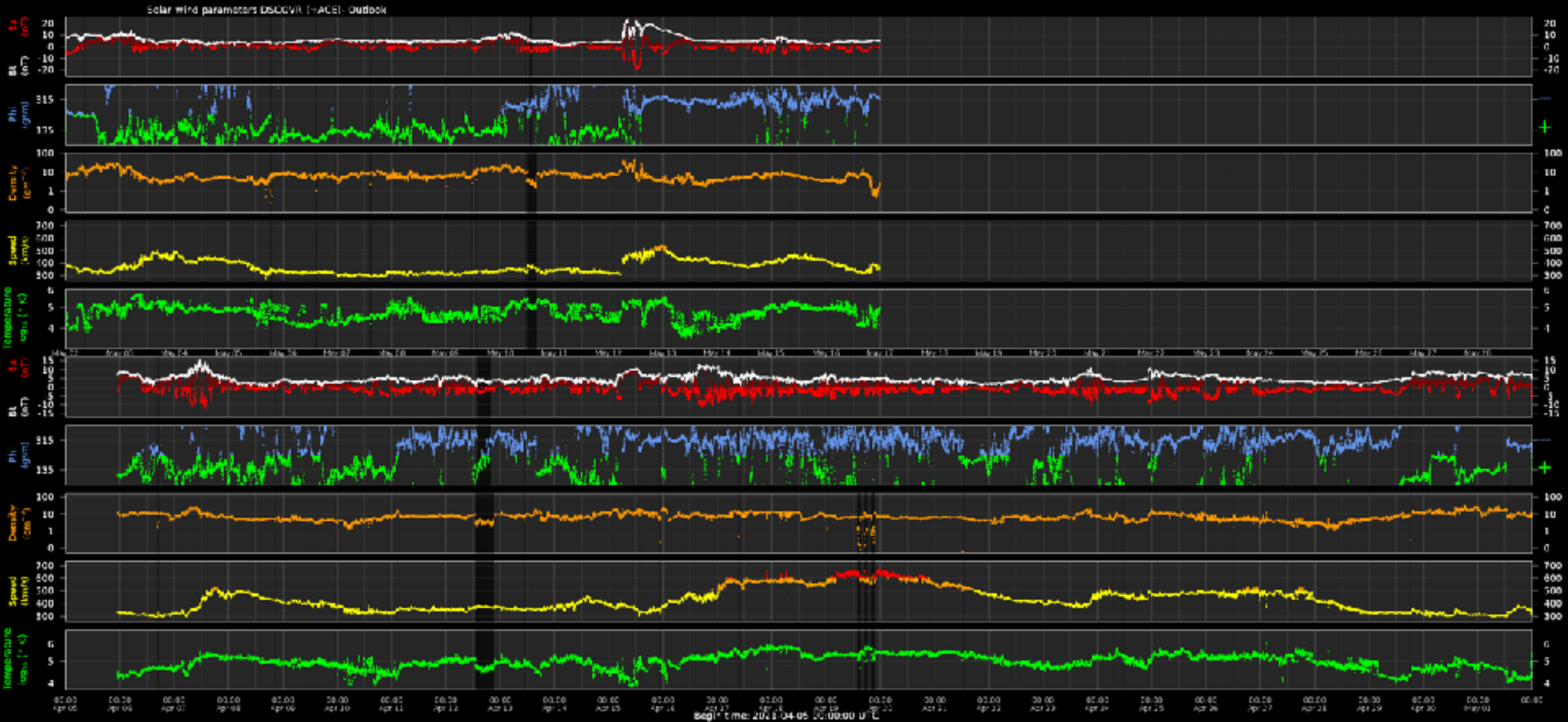
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



SIDC Space Weather Briefing

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