

SIDC Space Weather Briefing

01 May 2022-08 May 2022

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& the SIDC forecaster team



Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2022-05-01 12:00 to 2022-05-08 23:59

Active regions	NOAA ARs 2999, 3001, 3004 , 3005, 3006 , 3007
Flares	# C-class flare: 68 # M-class flare: 8 # X-class flare: 1
Coronal Holes	Small positive CH crossed central meridian on May 07
CMEs	Two faint CMEs with possible Earth bound component – low confidence

Proton flux	Nominal Levels
Electron flux	Exceeded 1000pfu threshold everyday in the week

Solar wind and geomagnetic conditions

ICMEs	No clear ICME signatures.
SW Conditions	B : 1.19 - 8.74 nT //Bz: -5.56 nT to 5.24 nT //Speed: 244.9 - 560.8km/s
K-indices	max K-index (K_Bel): 4 max Kp-index (NOAA): 3

All Quiet Alert: Off the whole week

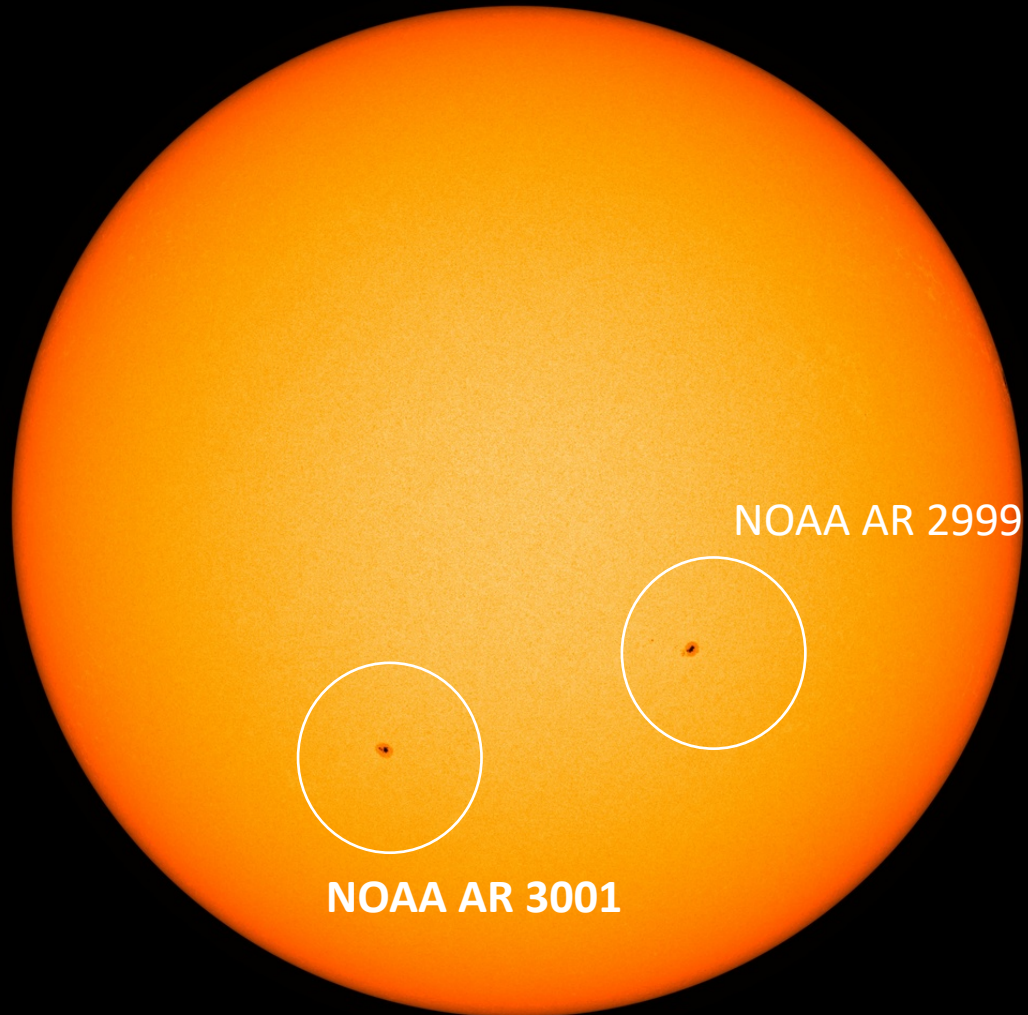
Solar Activity



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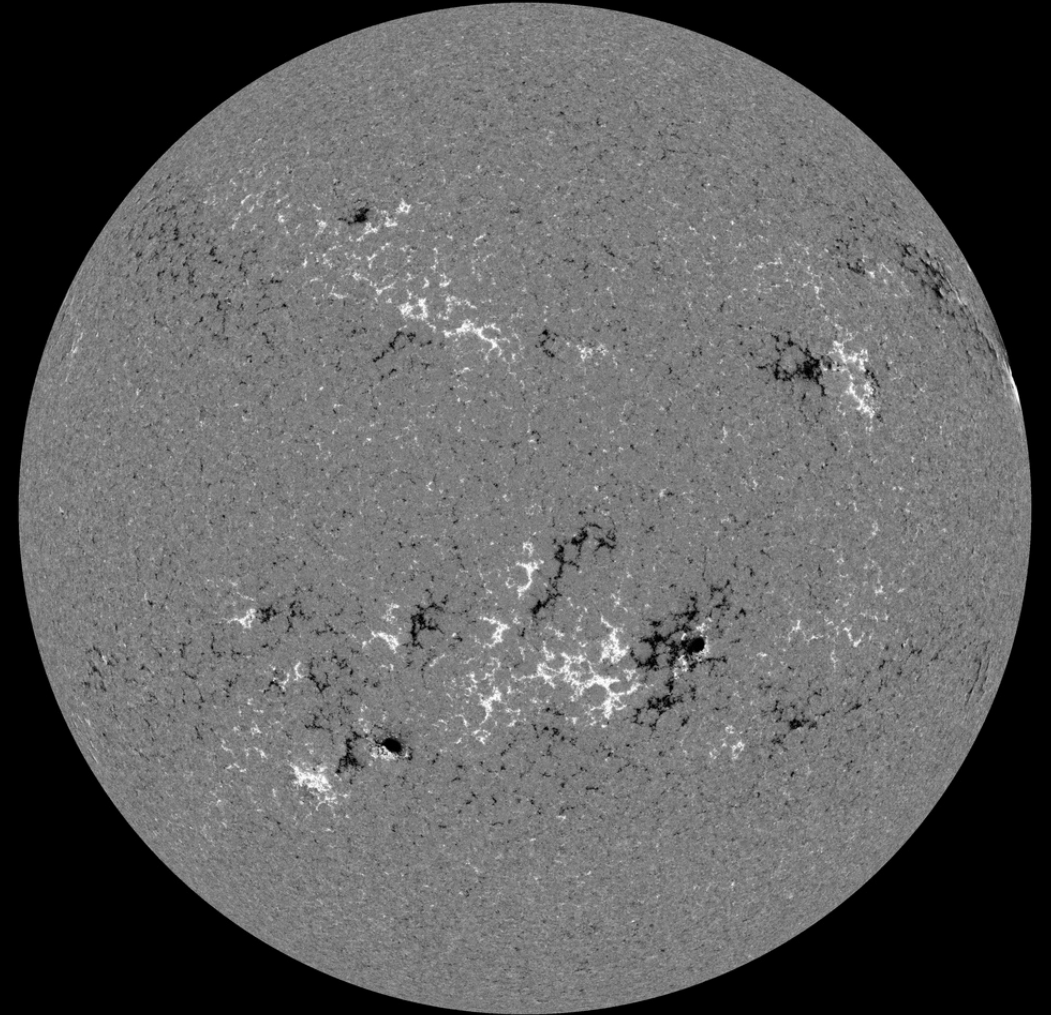
Solar active regions

SDO/HMI White Light 2022-05-01



SDO/HMI Quick-Look Continuum: 20220501_114500

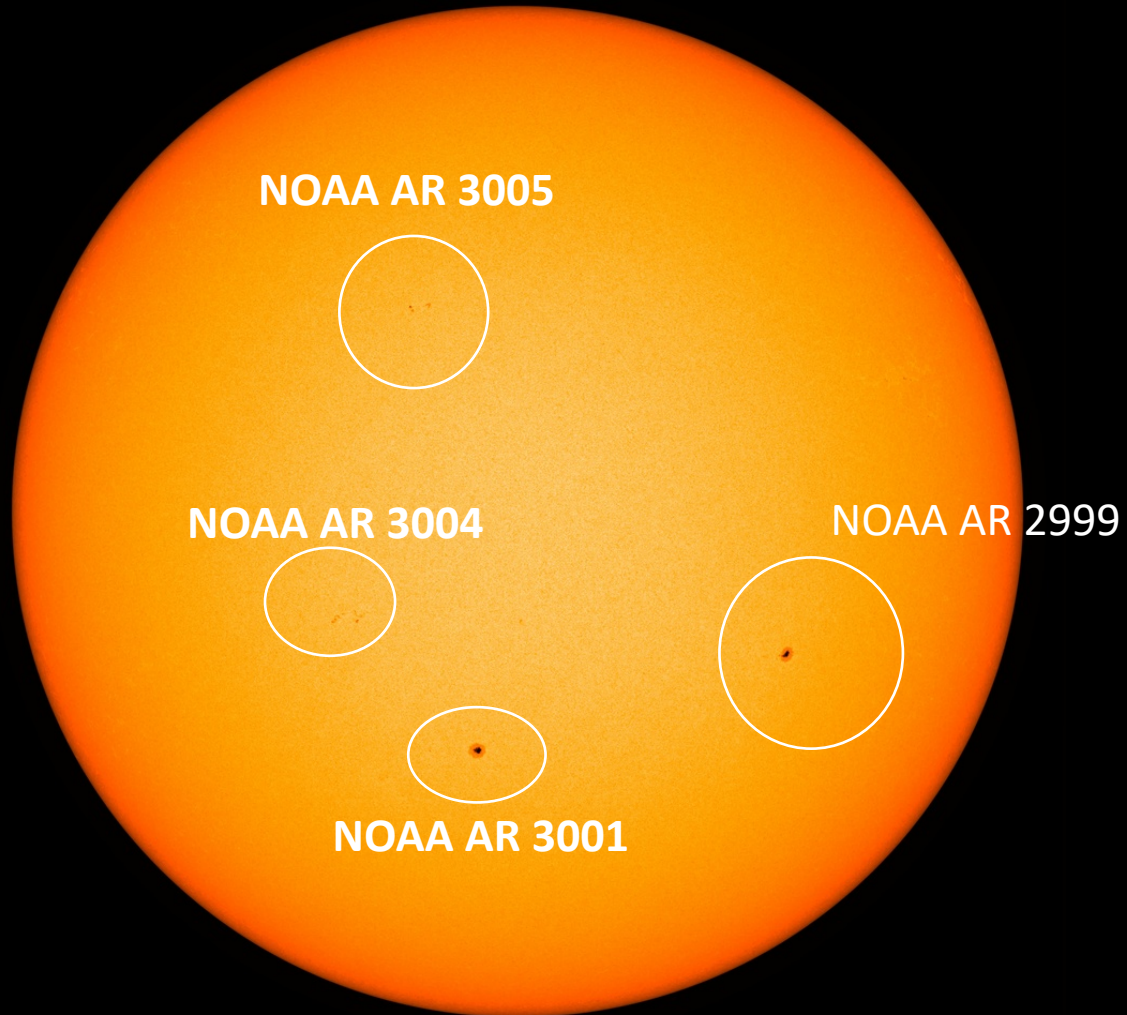
SDO/HMI Magnetogram 2022-05-01



SDO/HMI Quick-Look Magnetogram: 20220501_114500

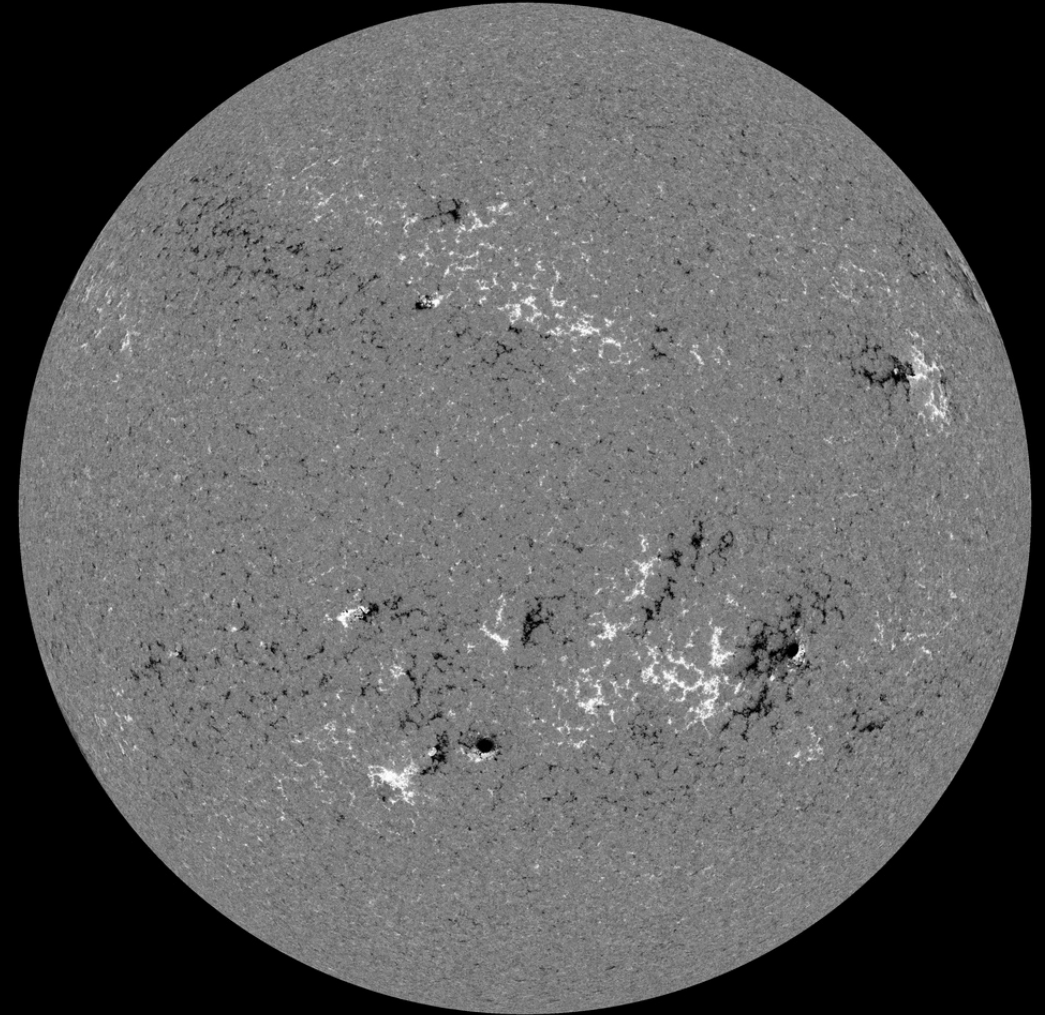
Solar active regions

SDO/HMI White Light 2022-05-02



SDO/HMI Quick-Look Continuum: 20220502_114500

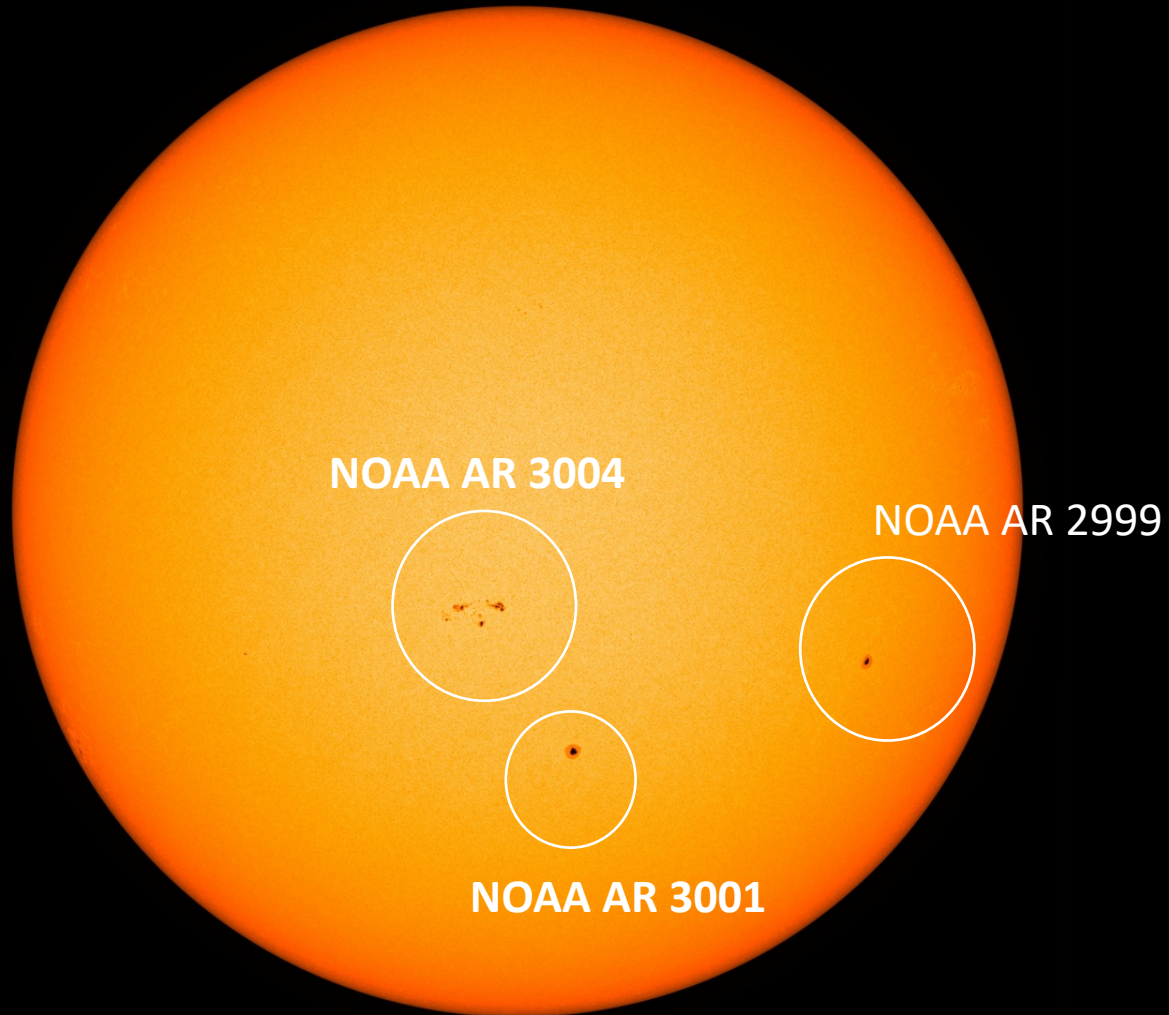
SDO/HMI Magnetogram 2022-05-02



SDO/HMI Quick-Look Magnetogram: 20220502_114500

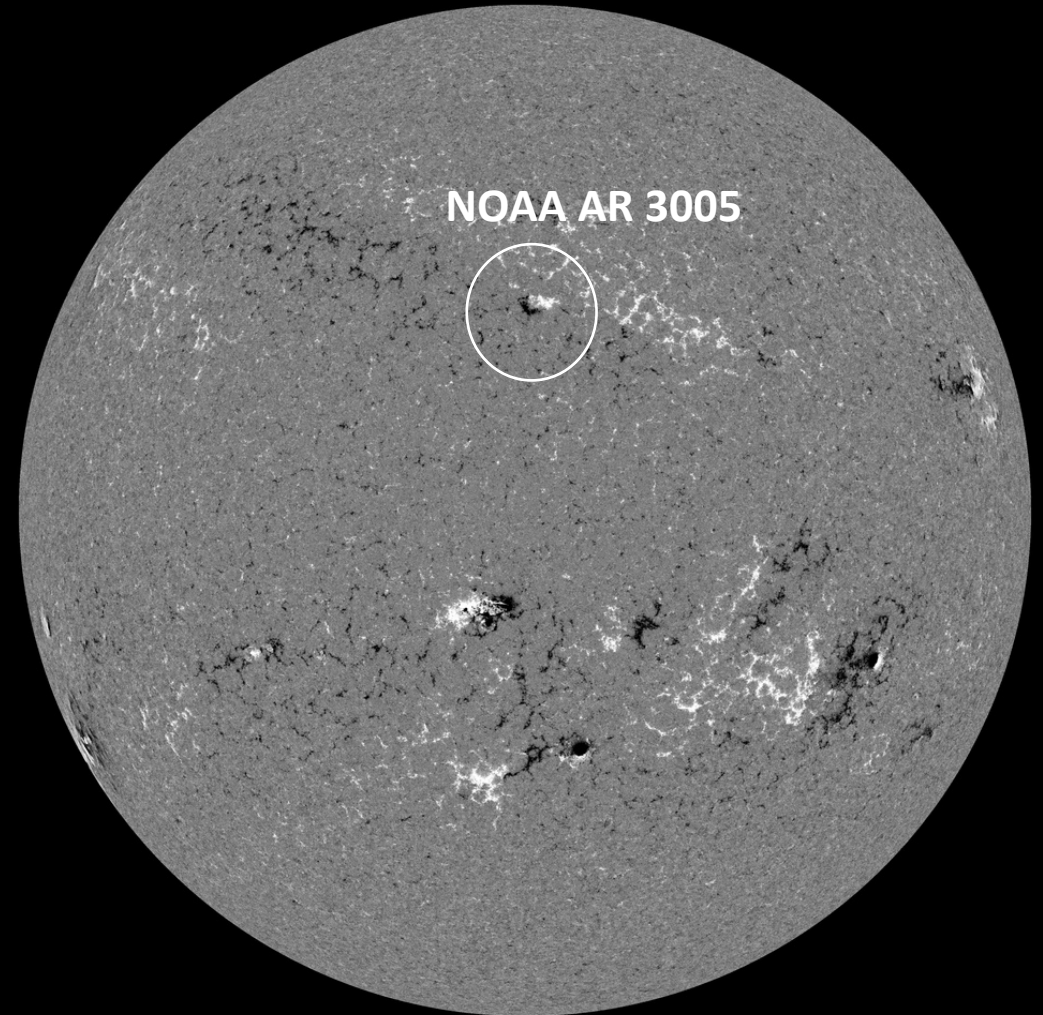
Solar active regions

SDO/HMI White Light 2022-05-03



SDO/HMI Quick-Look Continuum: 20220503_114500

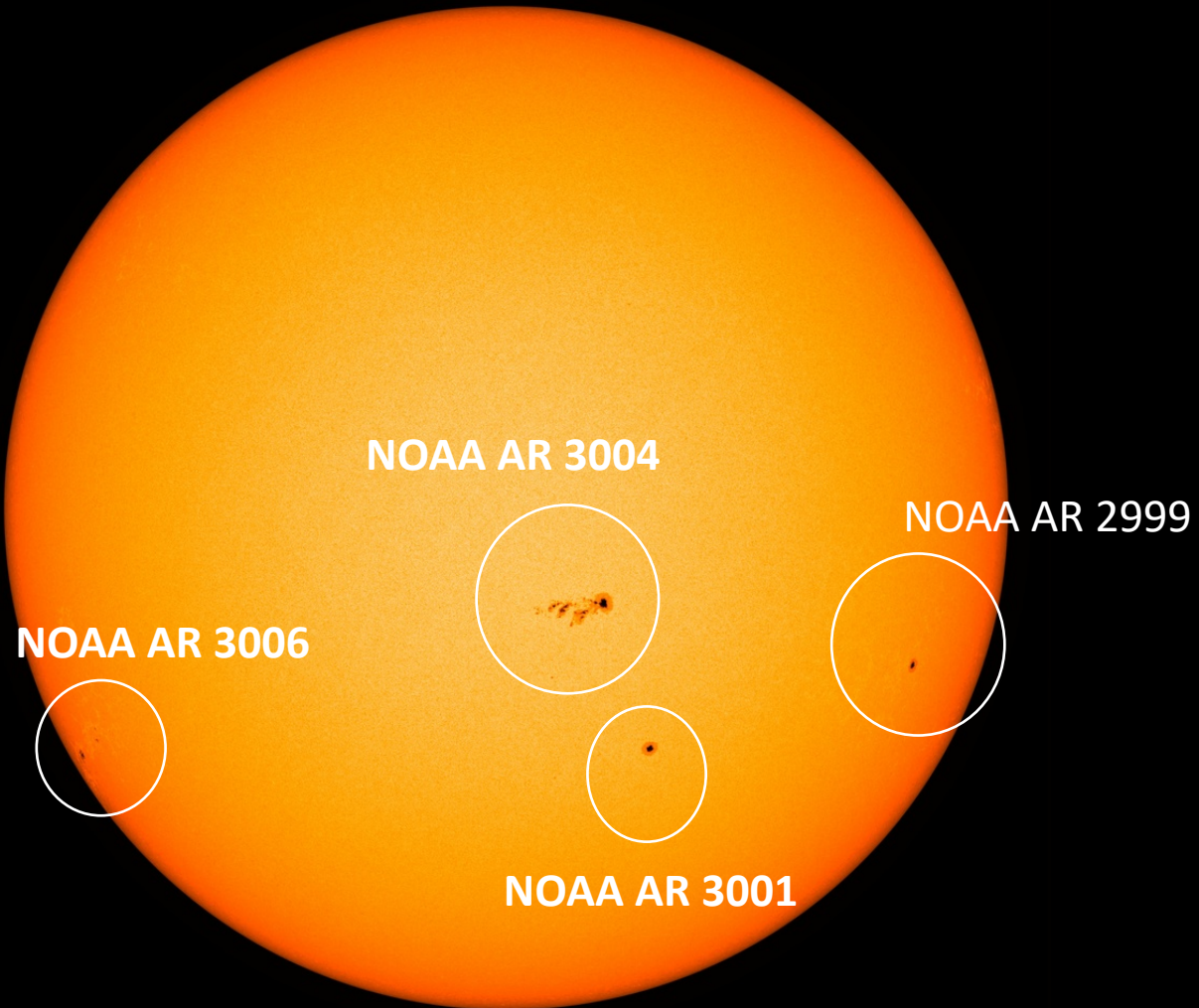
SDO/HMI Magnetogram 2022-05-03



SDO/HMI Quick-Look Magnetogram: 20220503_114500

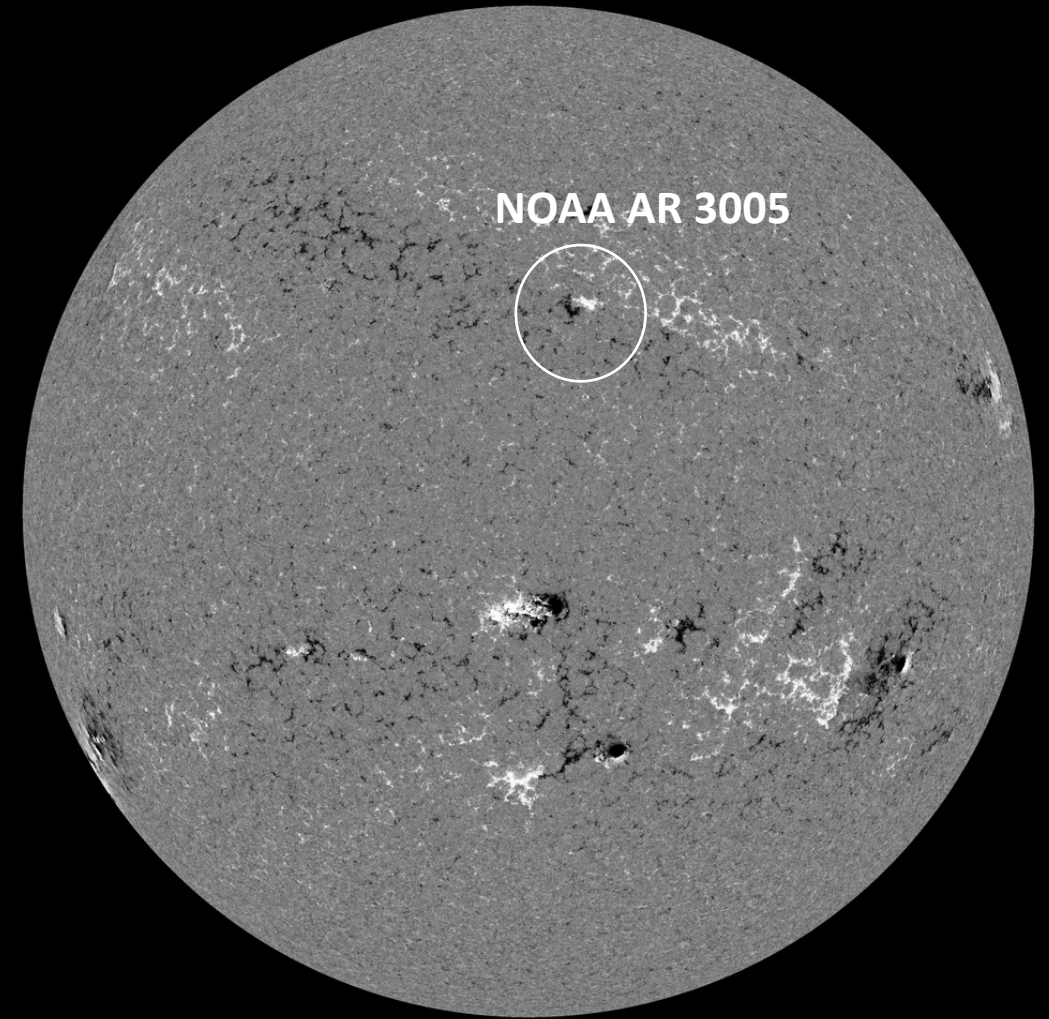
Solar active regions

SDO/HMI White Light 2022-05-04



SDO/HMI Quick-Look Continuum: 20220504_103000

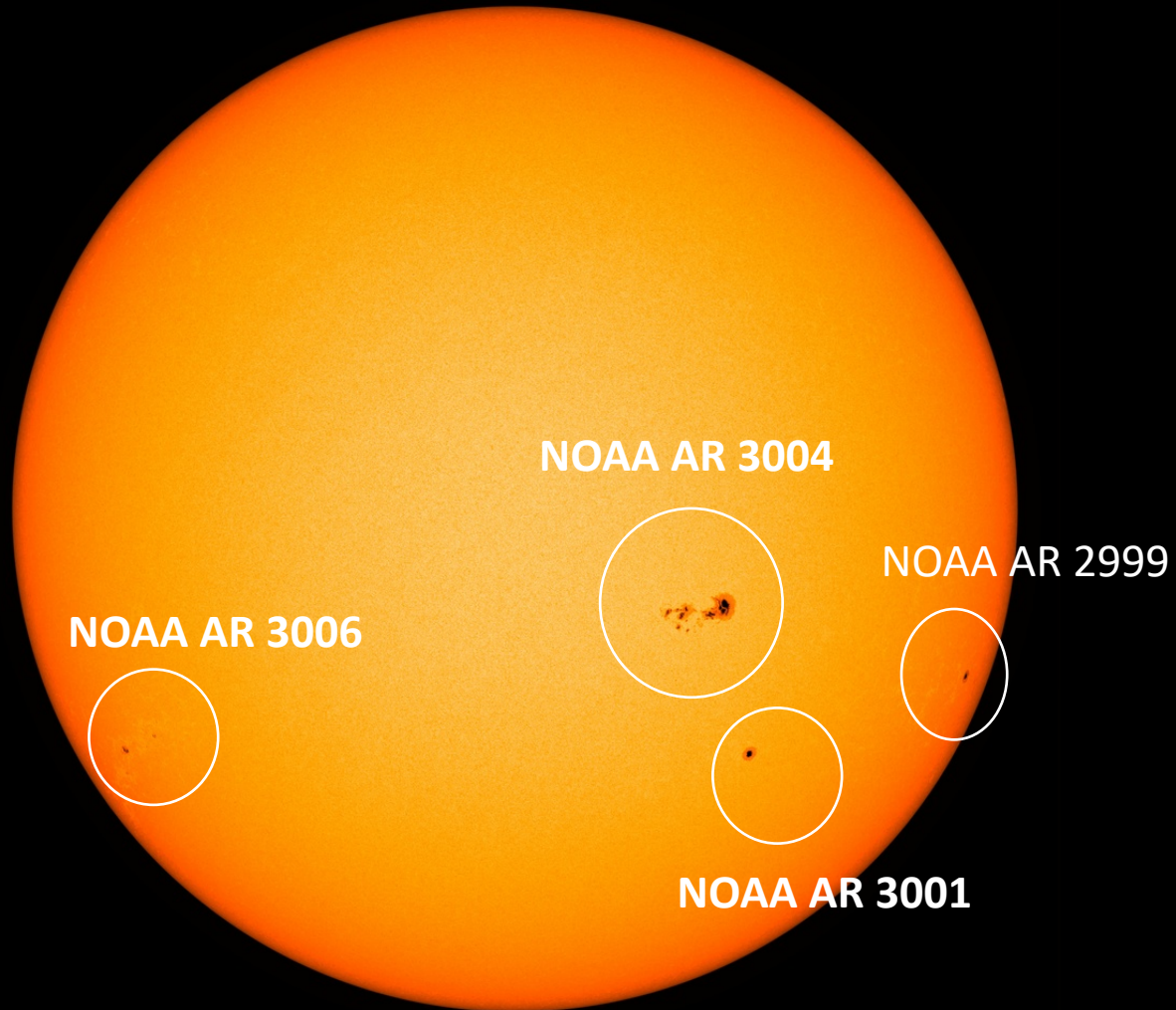
SDO/HMI Magnetogram 2022-05-04



SDO/HMI Quick-Look Magnetogram: 20220503_201500

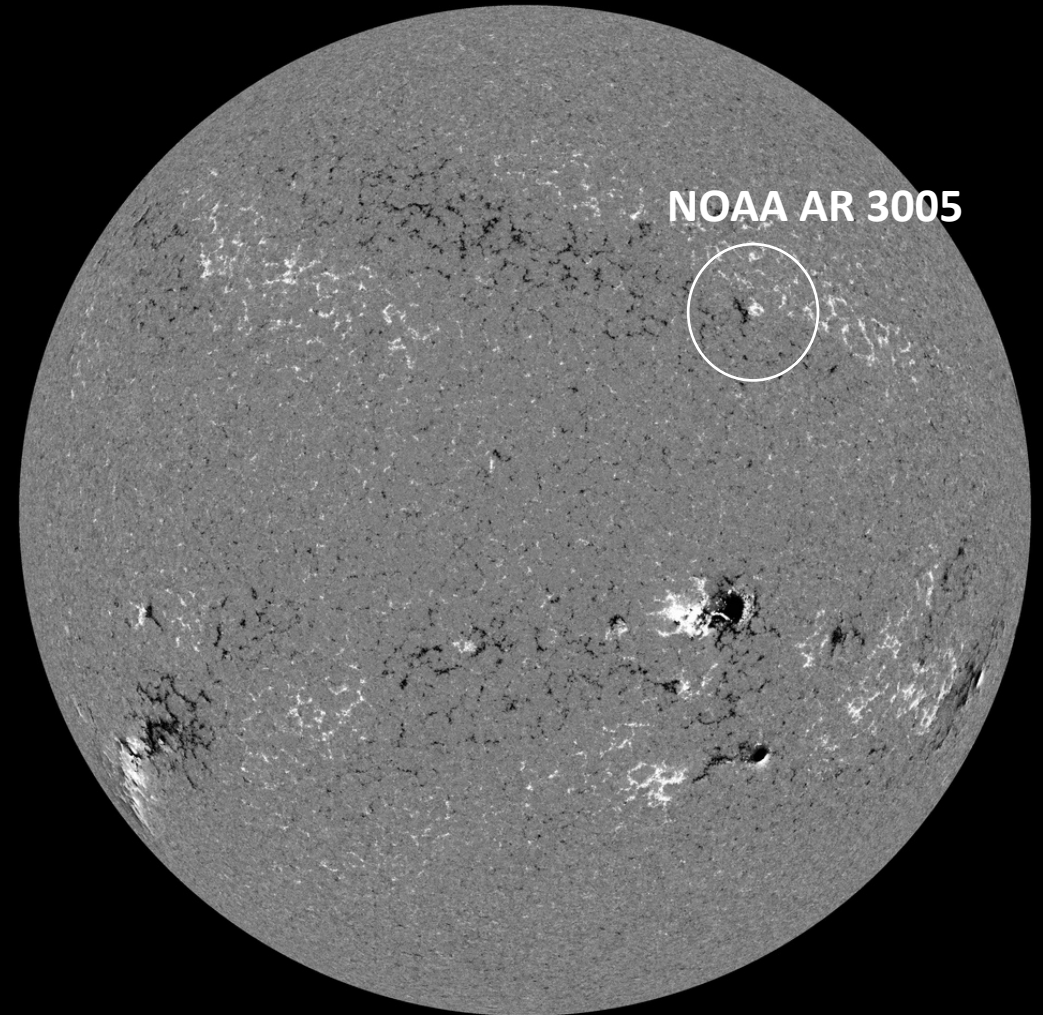
Solar active regions

SDO/HMI White Light 2022-05-05



SDO/HMI Quick-Look Continuum: 20220505_114500

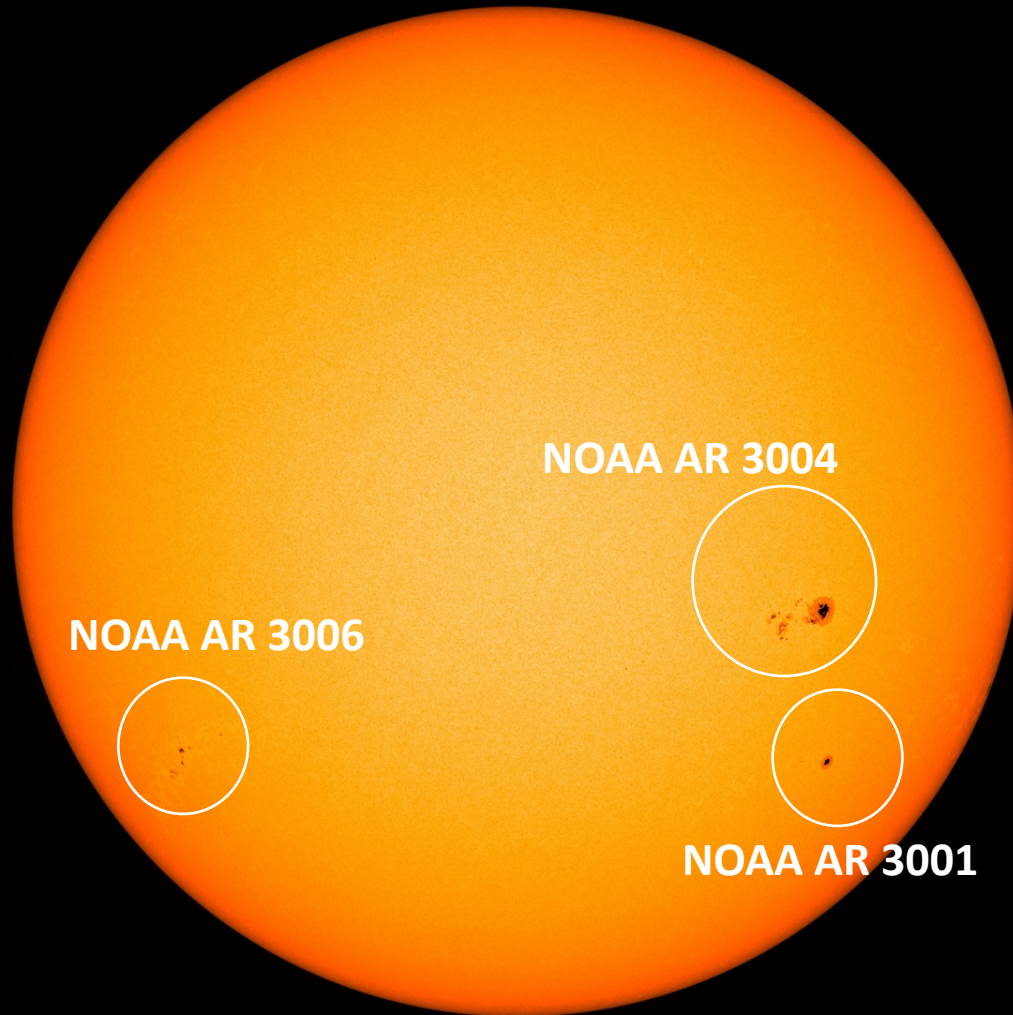
SDO/HMI Magnetogram 2022-05-05



SDO/HMI Quick-Look Magnetogram: 20220505_114500

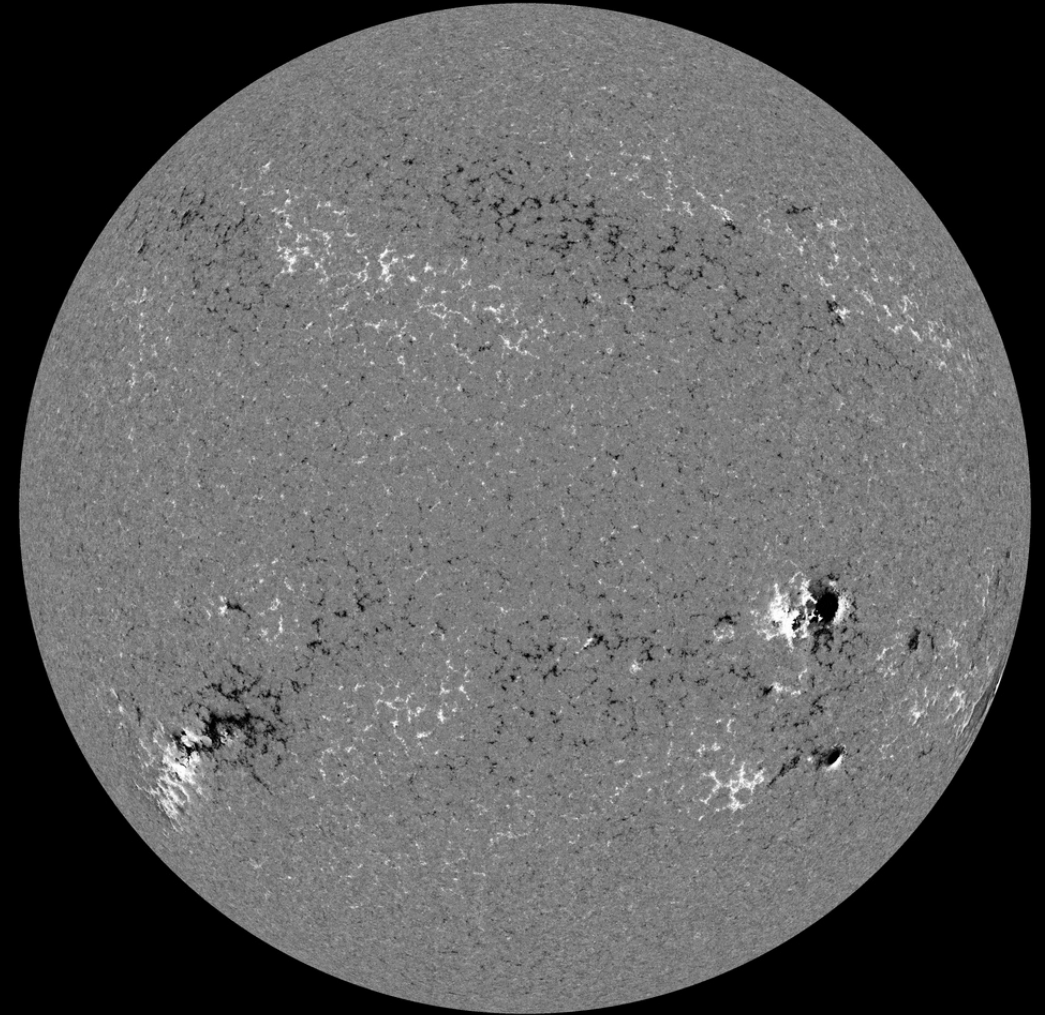
Solar active regions

SDO/HMI White Light 2022-05-06



SDO/HMI Quick-Look Continuum: 20220506_114500

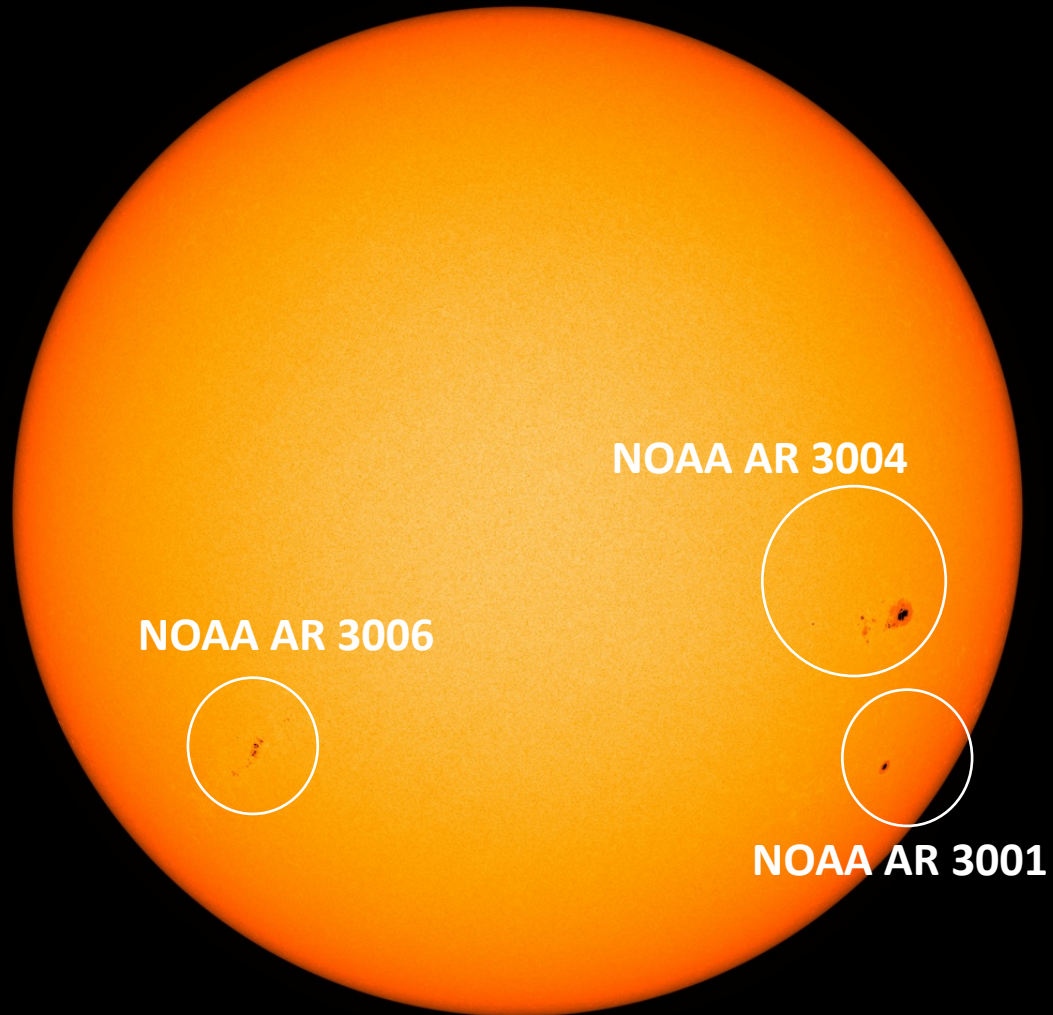
SDO/HMI Magnetogram 2022-05-06



SDO/HMI Quick-Look Magnetogram: 20220506_114500

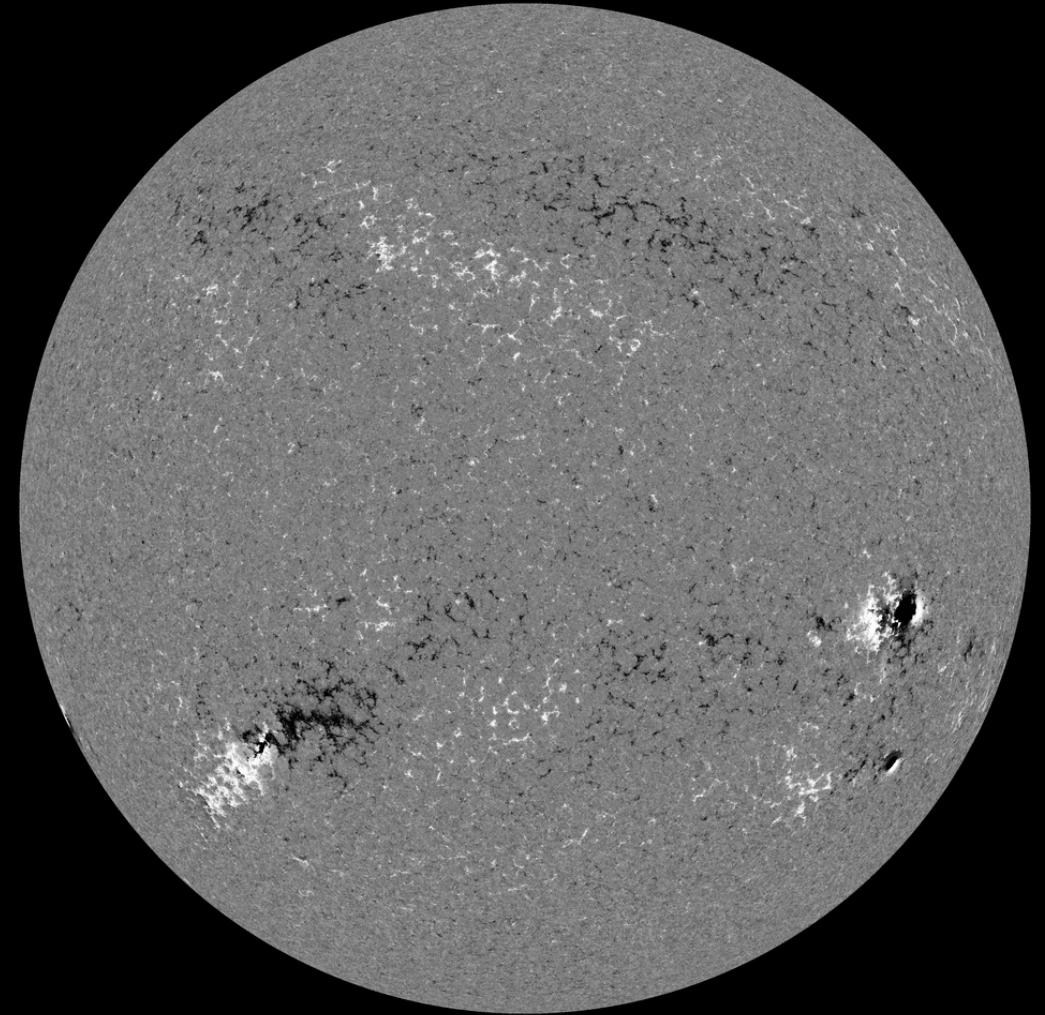
Solar active regions

SDO/HMI White Light 2022-05-07



SDO/HMI Quick-Look Continuum: 20220507_114500

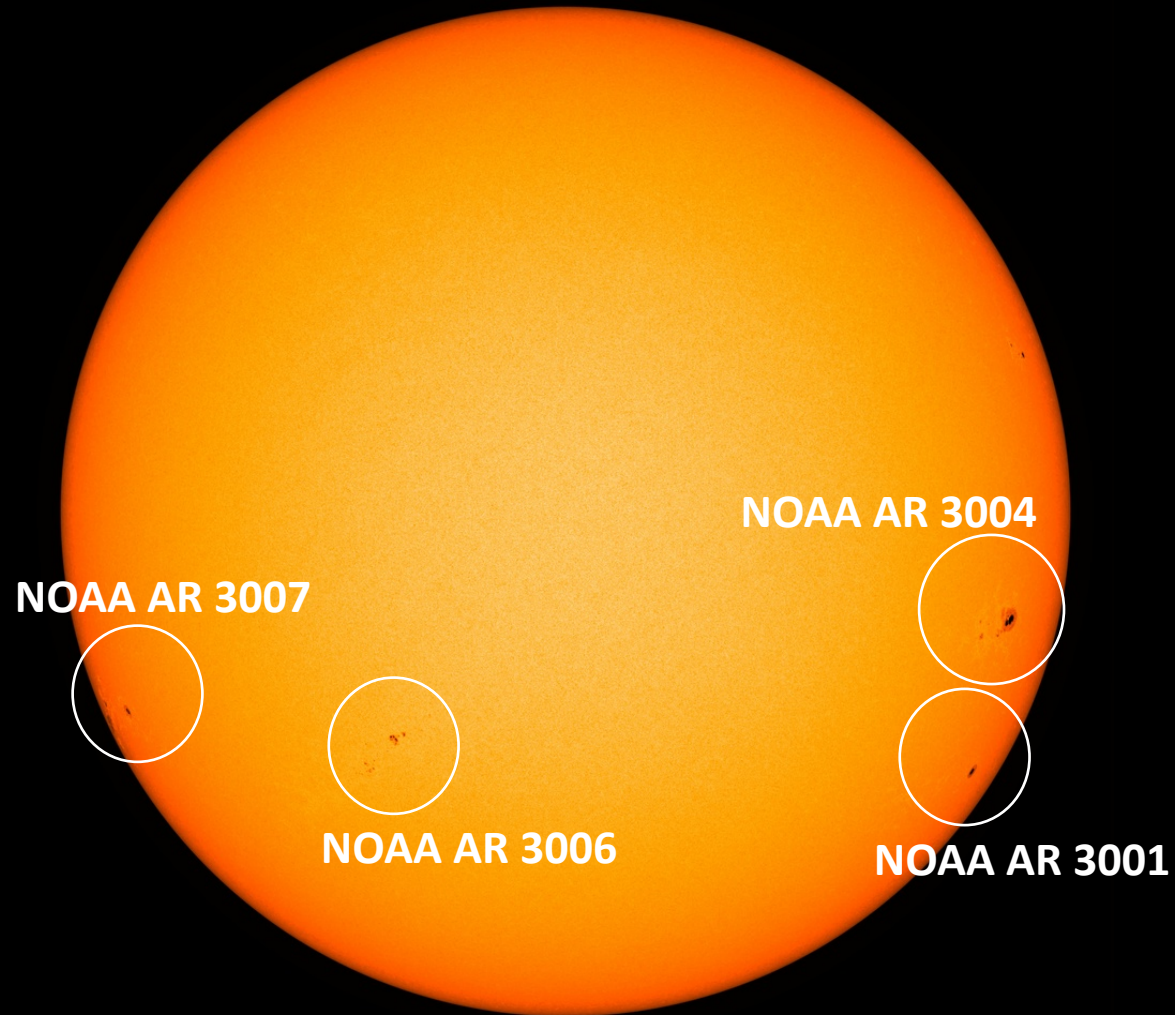
SDO/HMI Magnetogram 2022-05-07



SDO/HMI Quick-Look Magnetogram: 20220507_114500

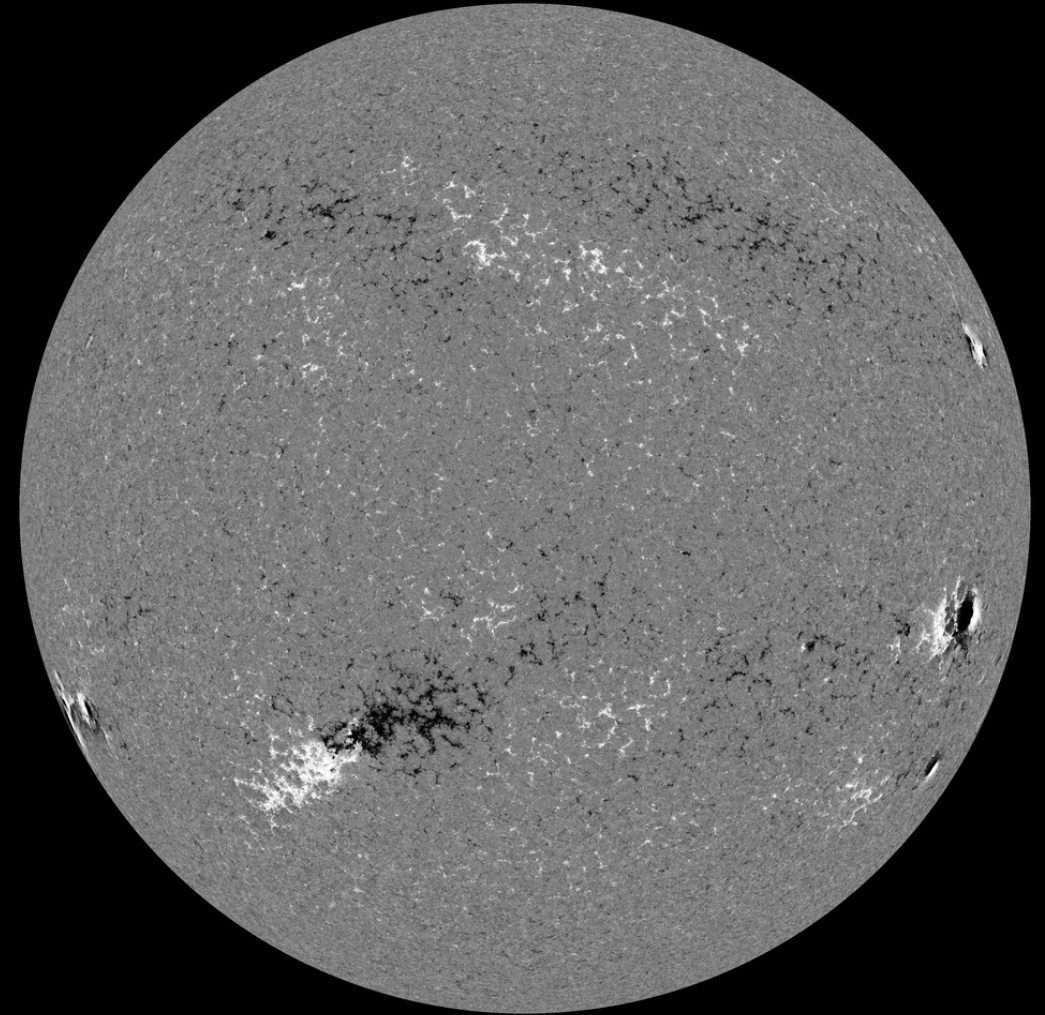
Solar active regions

SDO/HMI White Light 2022-05-08



SDO/HMI Quick-Look Continuum: 20220508_114500

SDO/HMI Magnetogram 2022-05-08

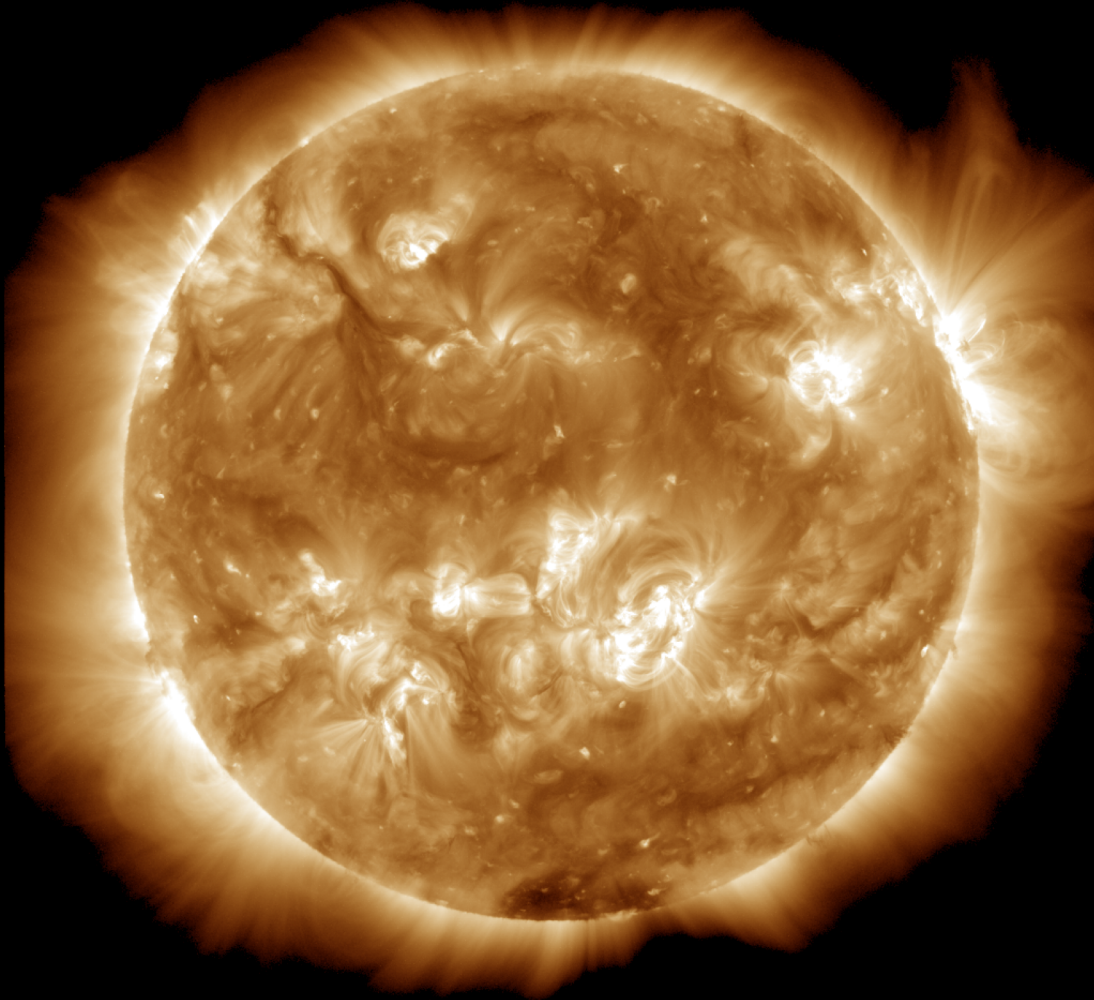


SDO/HMI Quick-Look Magnetogram: 20220508_114500

Coronal holes

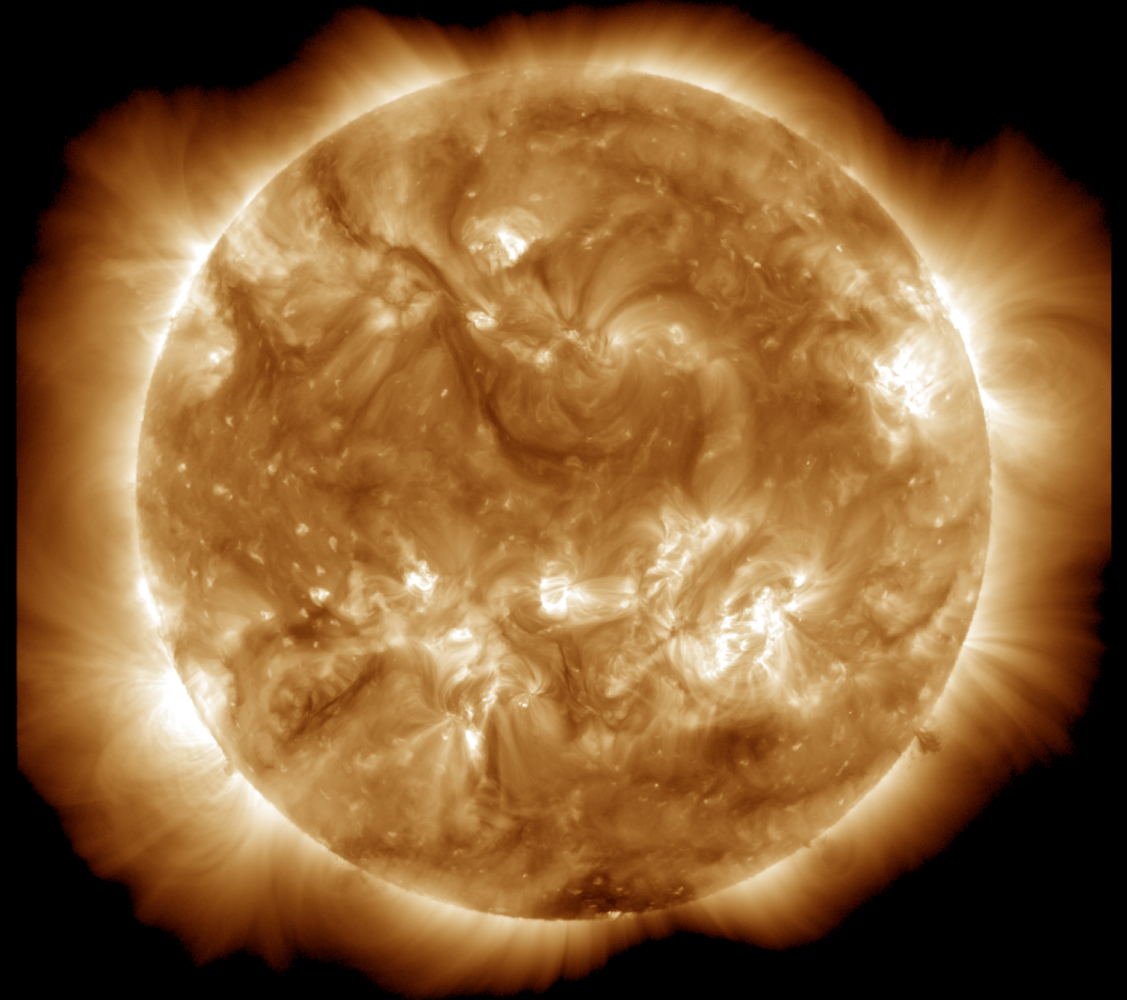
SDO/AIA 19.3 nm 2022-05-01

SDO/AIA AIA 193Å 2022-05-01T12:00:05.843



SDO/AIA 19.3 nm 2022-05-02

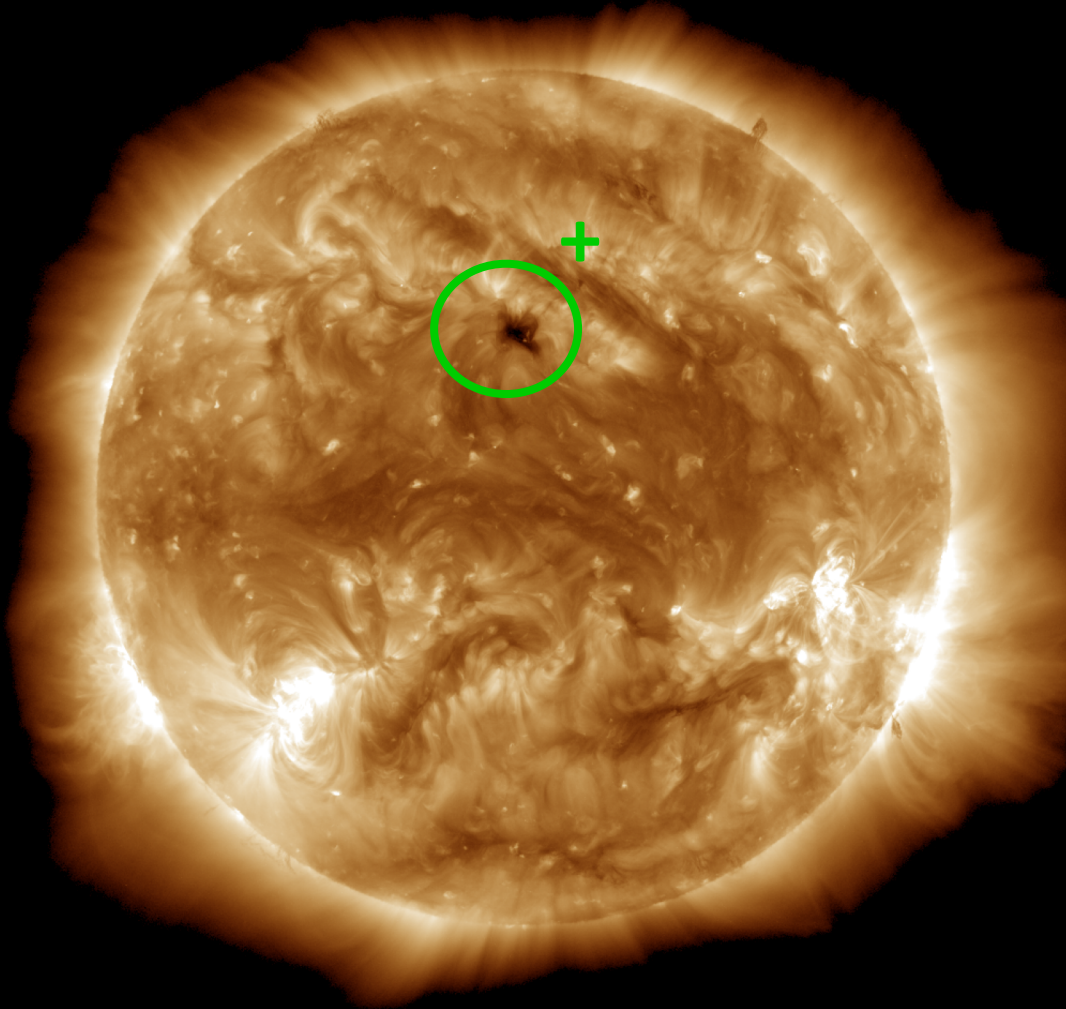
SDO/AIA AIA 193Å 2022-05-02T12:00:05.842



Coronal holes

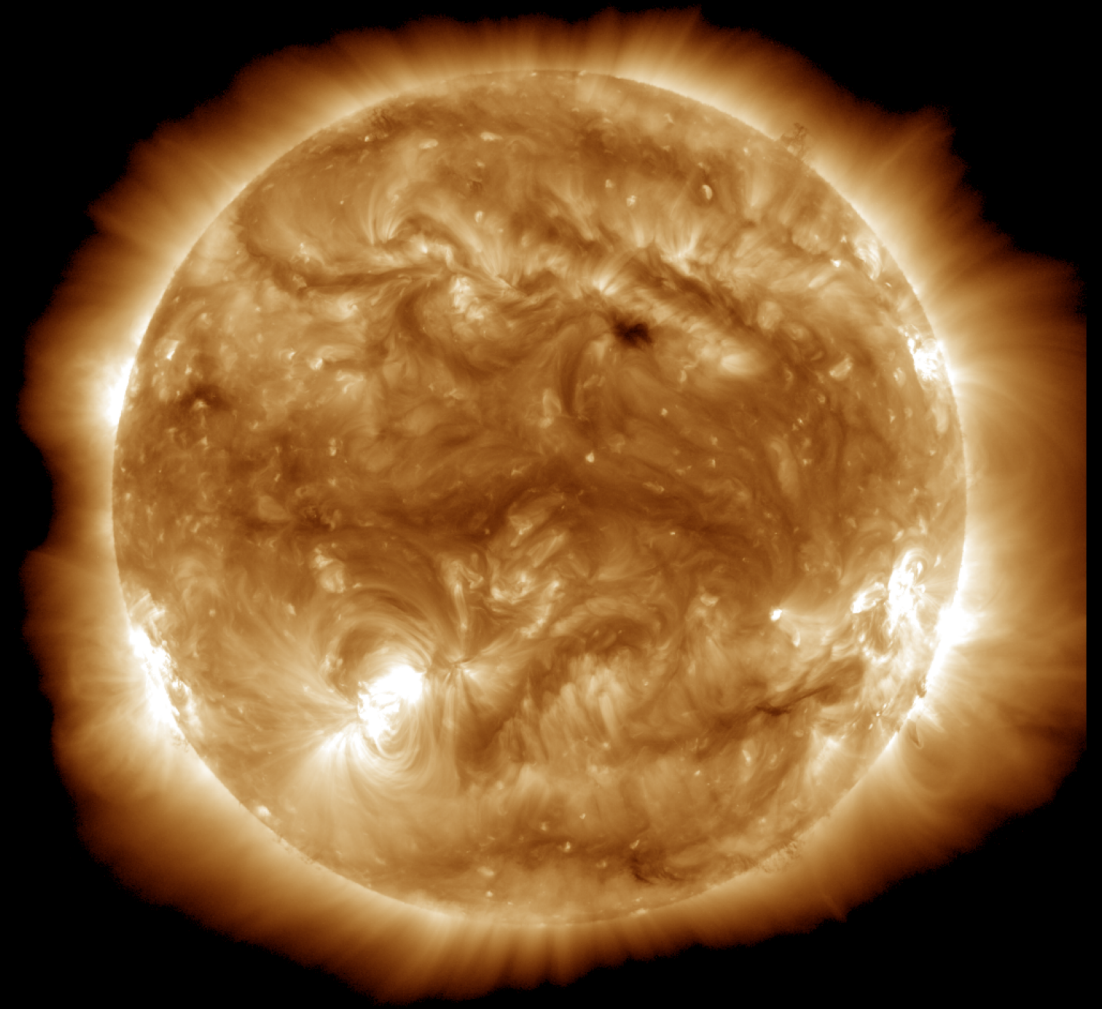
SDO/AIA 19.3 nm 2022-05-07

SDO/AIA AIA 193Å 2022-05-07T12:00:05.835



SDO/AIA 19.3 nm 2022-05-08

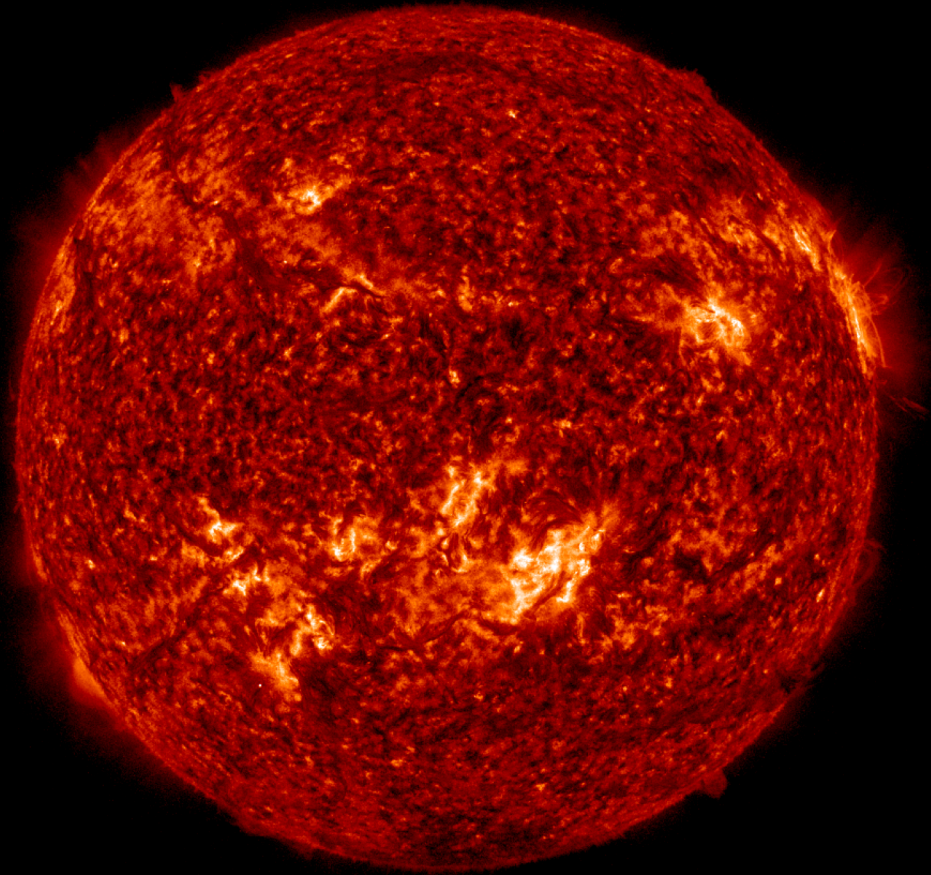
SDO/AIA AIA 193Å 2022-05-08T12:00:05.843



Filaments

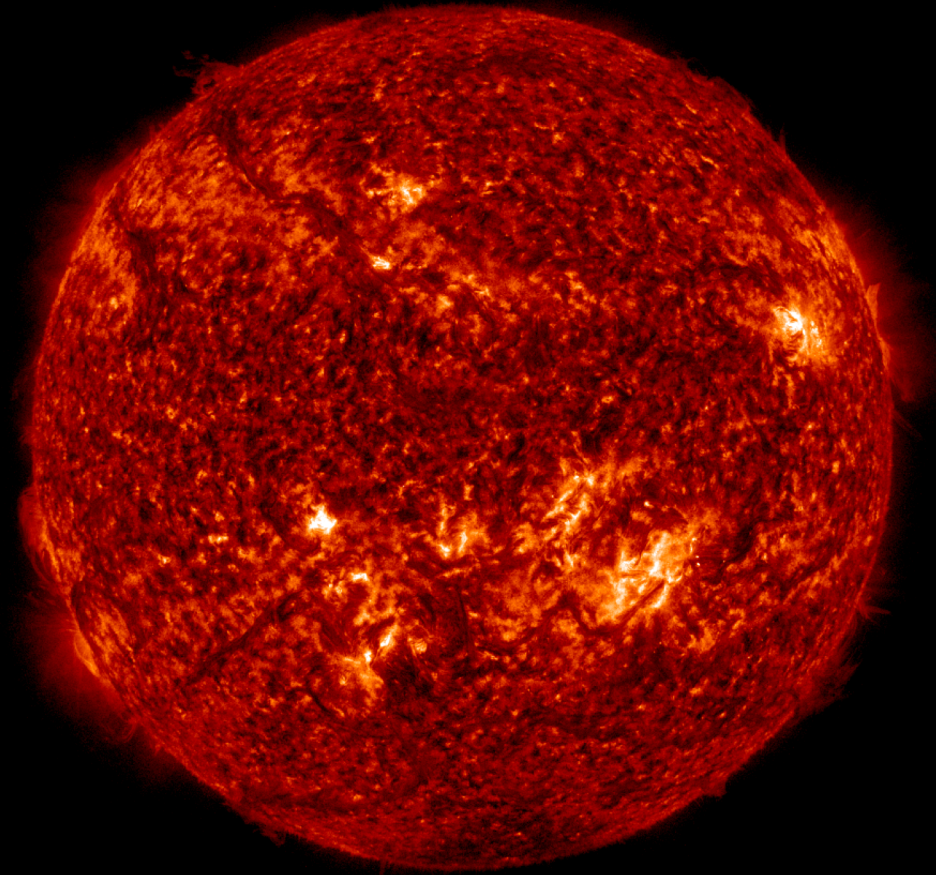
SDO/AIA 30.4 nm 2022-05-01

SDO/AIA AIA 304Å 2022-05-01T12:00:06.583



SDO/AIA 30.4 nm 2022-05-02

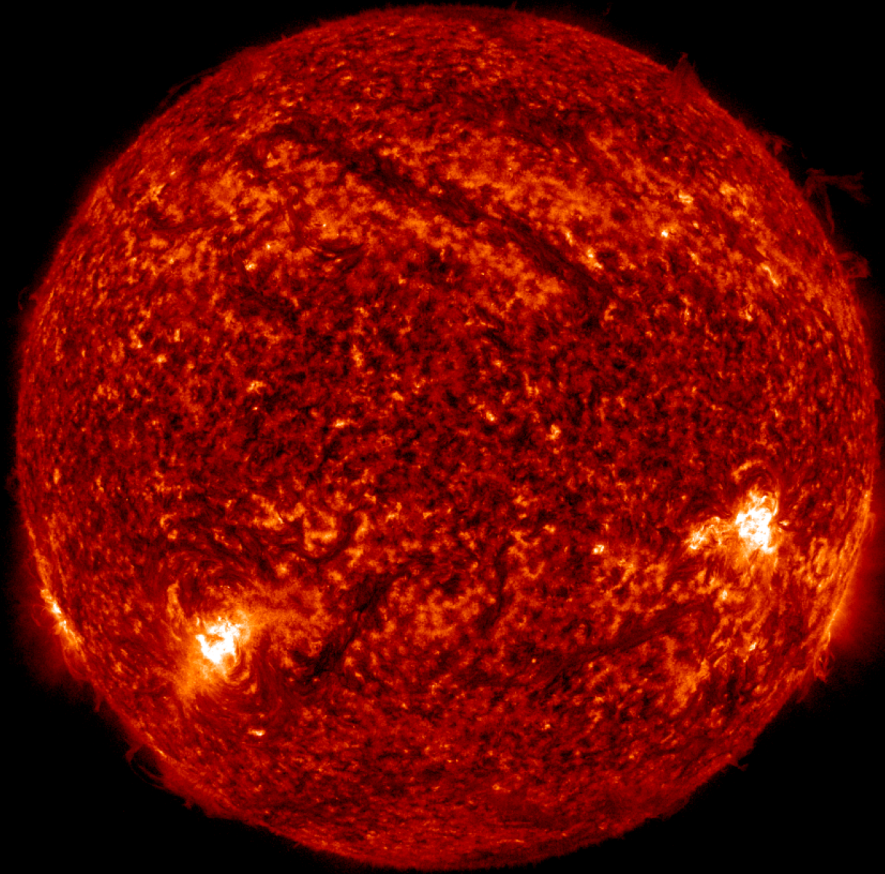
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Filaments

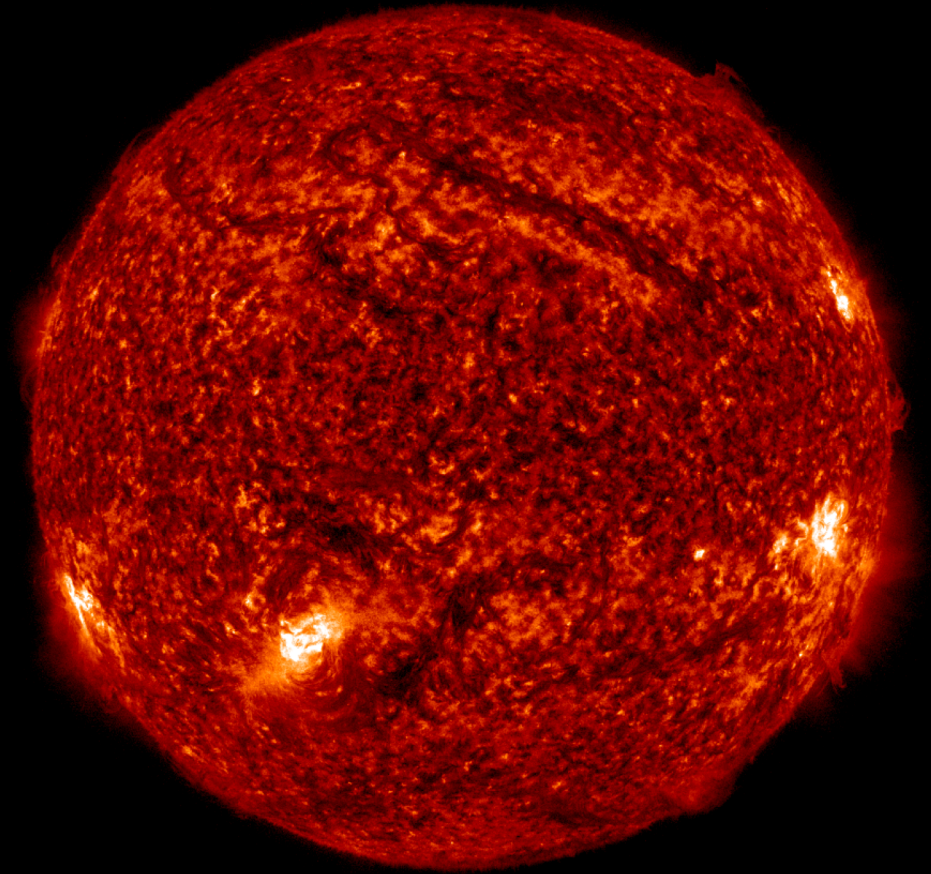
SDO/AIA 30.4 nm 2022-05-07

SDO/AIA AIA 304Å 2022-05-07T12:00:06.580



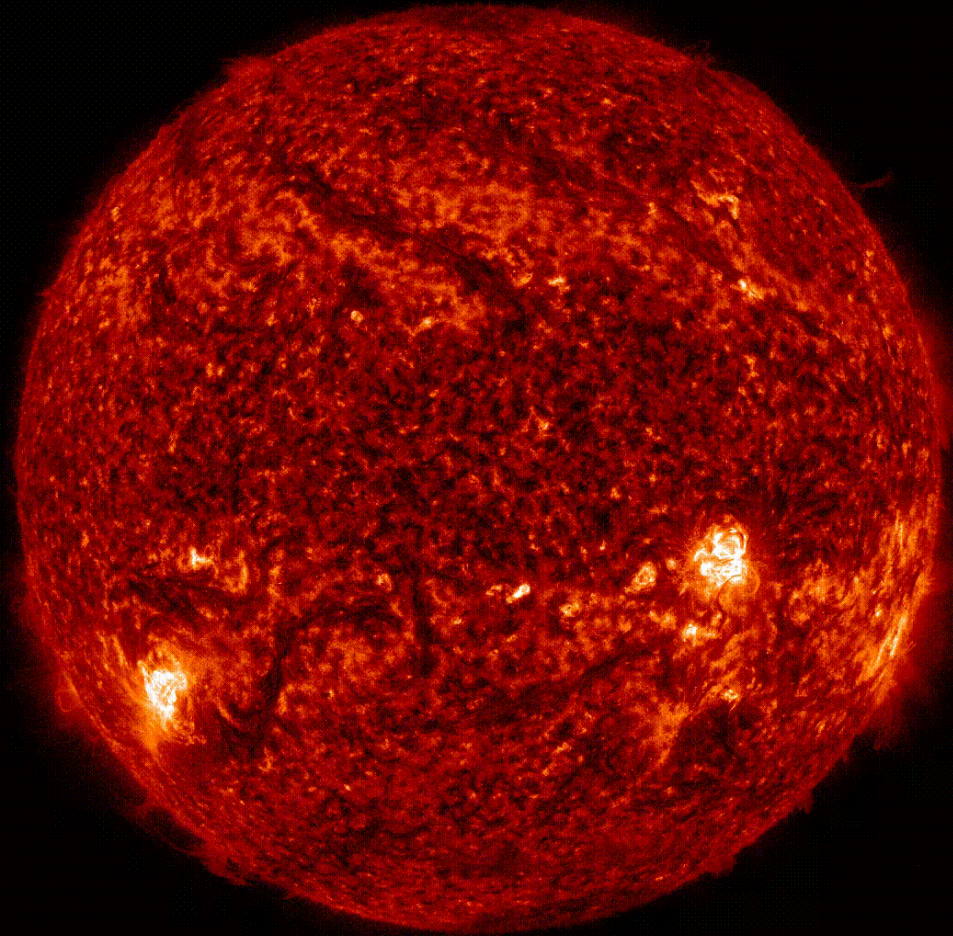
SDO/AIA 30.4 nm 2022-05-08

SDO/AIA AIA 304Å 2022-05-08T12:00:06.580



Filaments & Filament eruptions

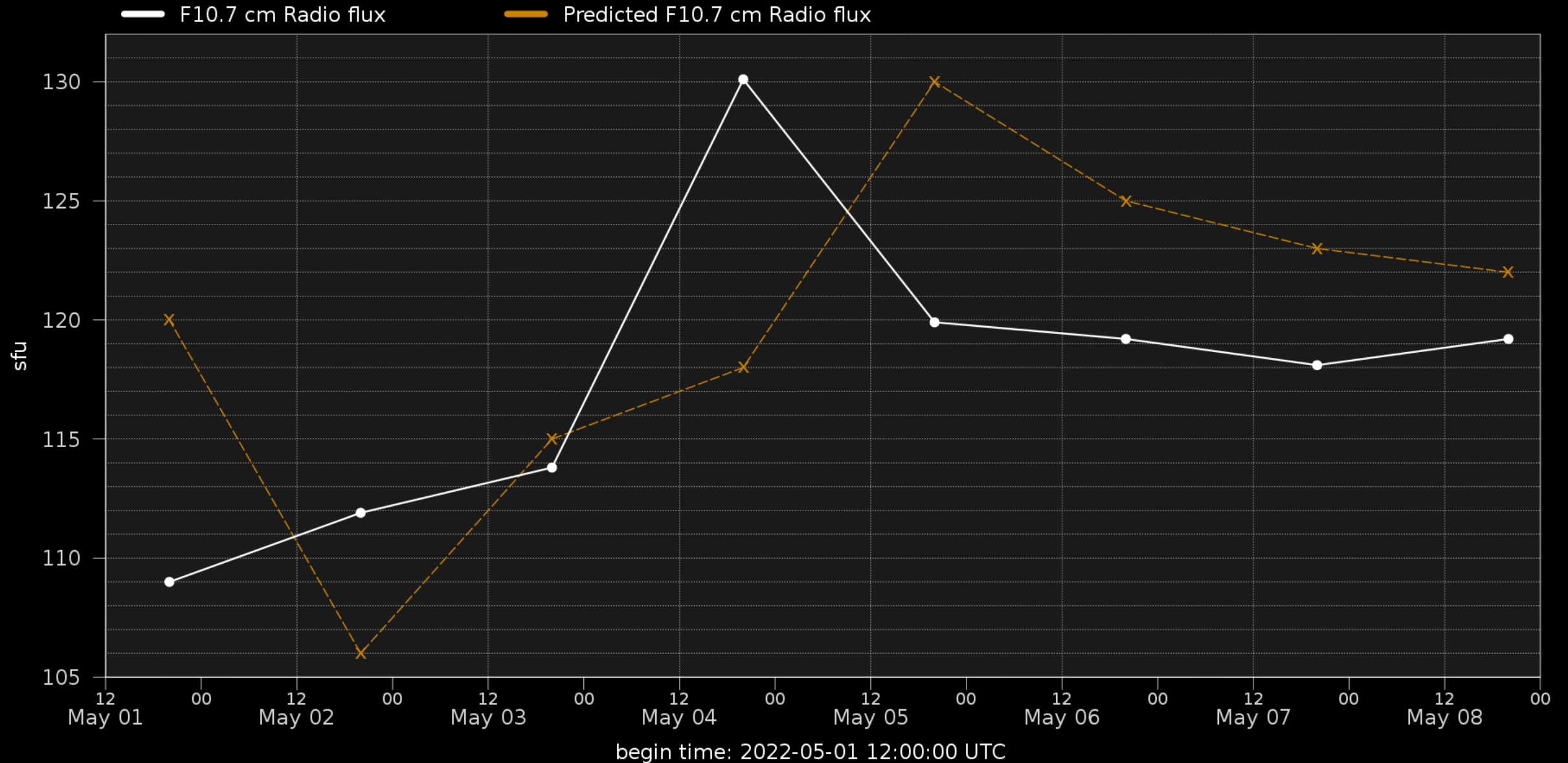
2022-05-06



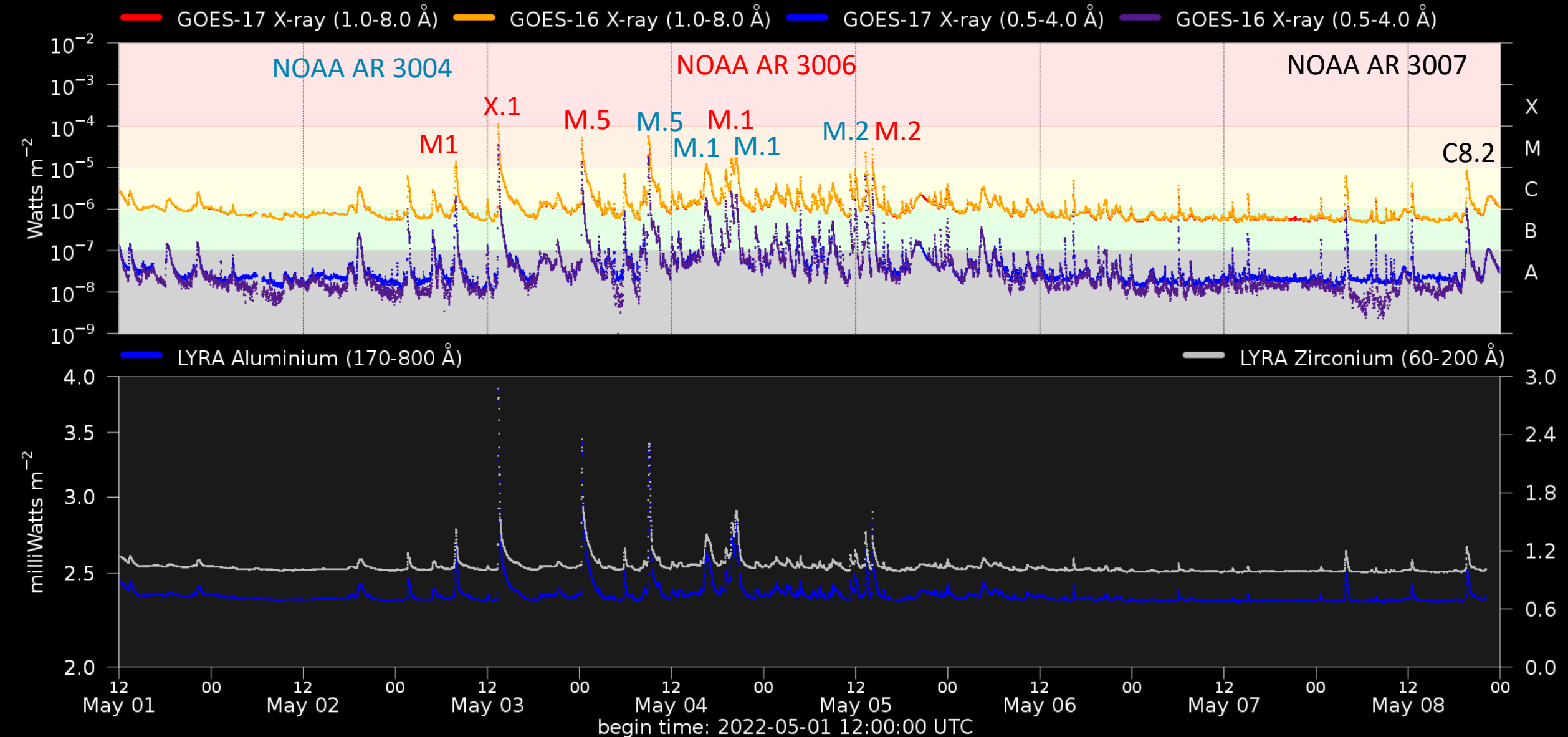
Filament eruption to NW
May 02 ~ 20 UT
(See associated CME)

2022-05-06T08:03:29

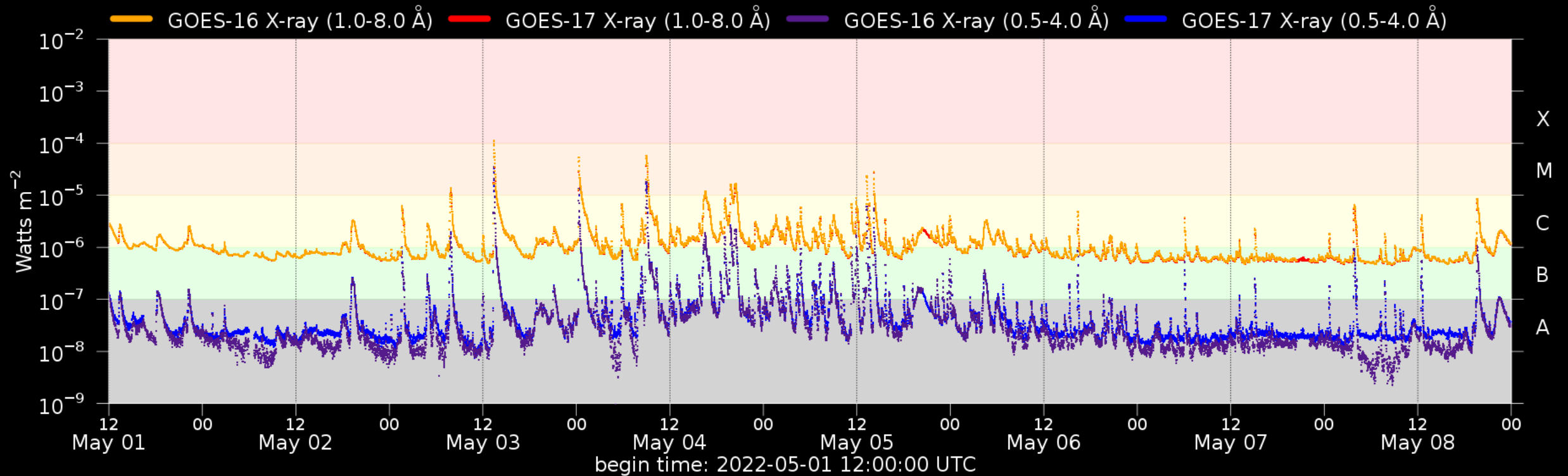
Solar F10.7cm radio flux



Solar X-Ray and UV flux



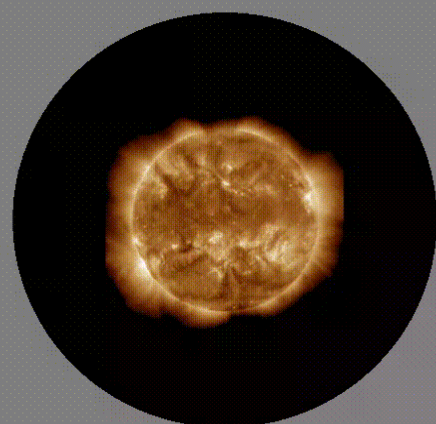
Flaring activity



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

Issue date	2022-05-01	2022-05-02	2022-05-03	2022-05-04	2022-05-05	2022-05-06	2022-05-07	2022-05-08
Probability (%)	50 05 01	45 05 01	55 10 01	75 55 15	90 30 02	95 65 25	95 50 15	95 60 15
Observed (#)	03 00 00	04 01 00	11 02 01	18 03 00	15 02 00	09 00 00	06 00 00	02 00 00

Coronal Mass Ejections

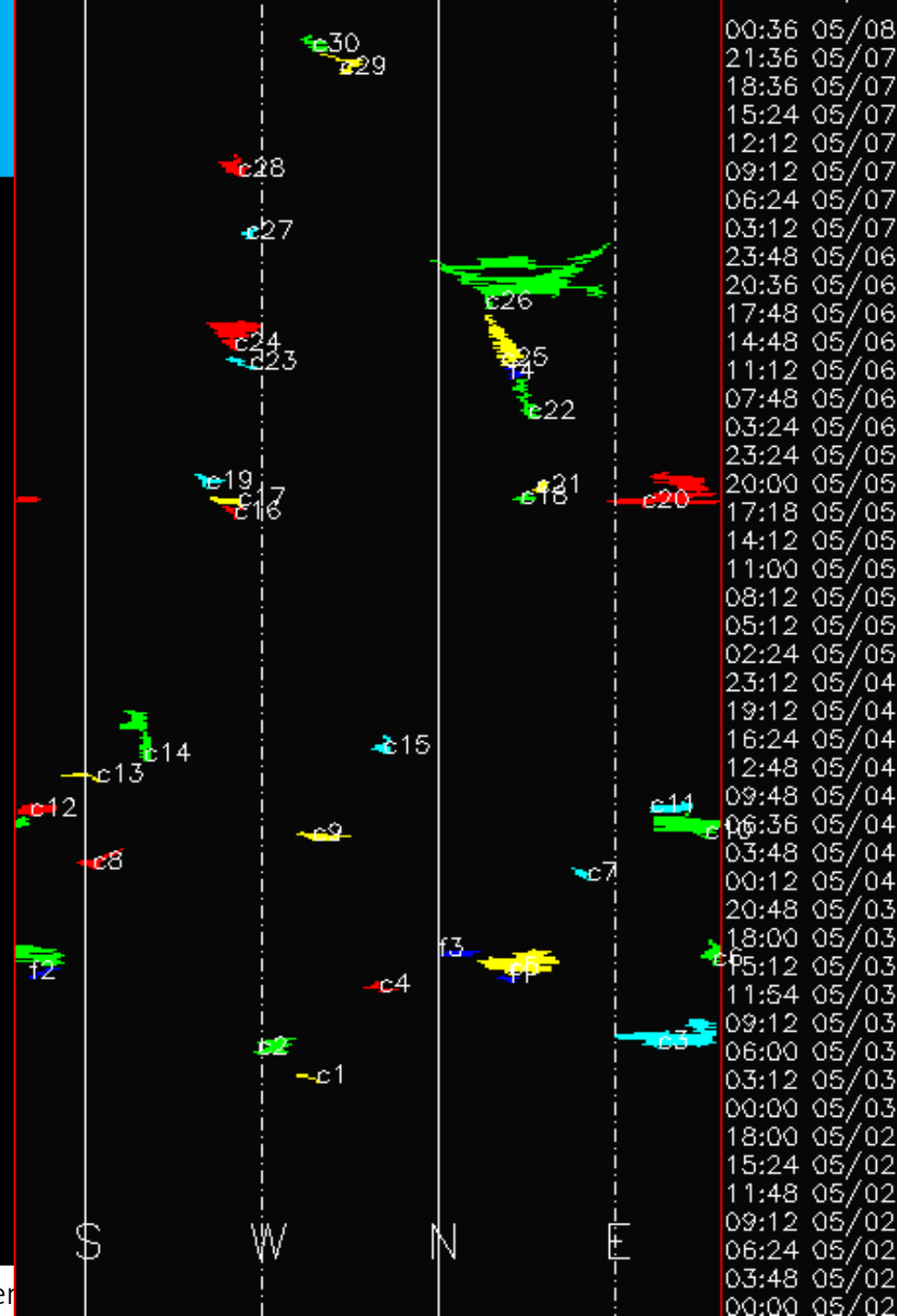


On-disk dimming seen near NOAA AR 3004 (near the central meridian) on May 03 ~17UT.

Possibly associated very faint CME seen in LASCO C2 to NE

<-

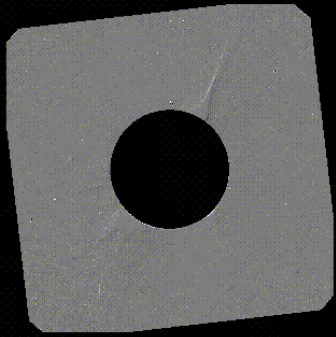
In STEREO-A COR2 in the NW



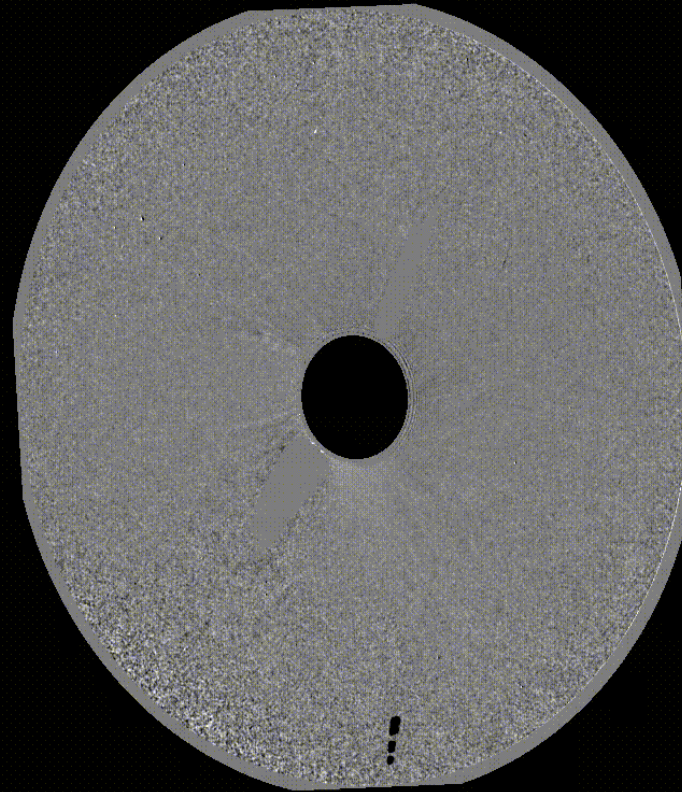
2022-05-03T10:16:04

Coronal Mass Ejections

LASCO C2



STEREO A COR2



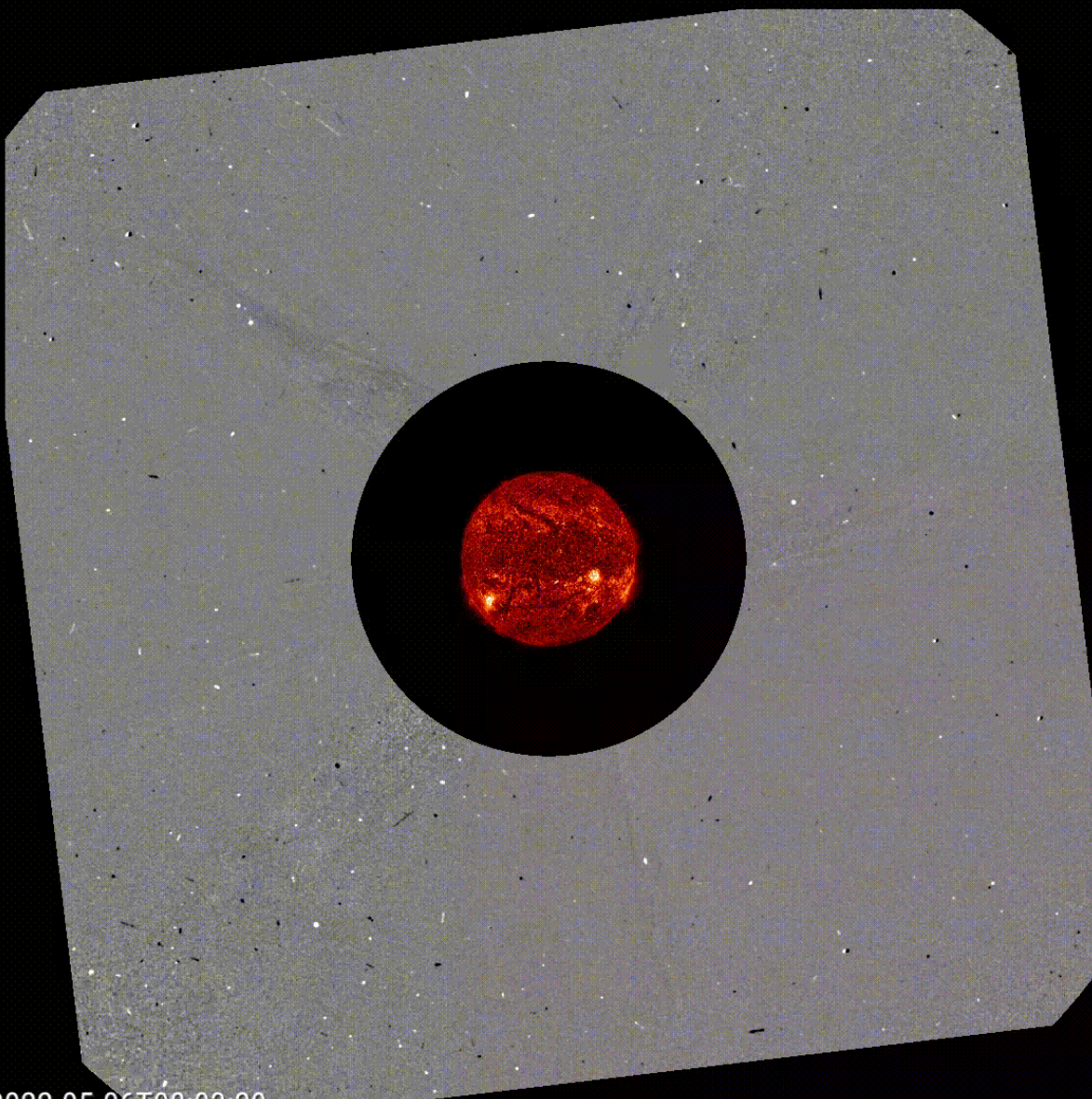
On-disk dimming seen near NOAA AR 3004 on May 03 ~17UT.

Possibly associated very faint and slow CME seen in LASCO C2 to NE

In STEREO-A COR2 in the NW.

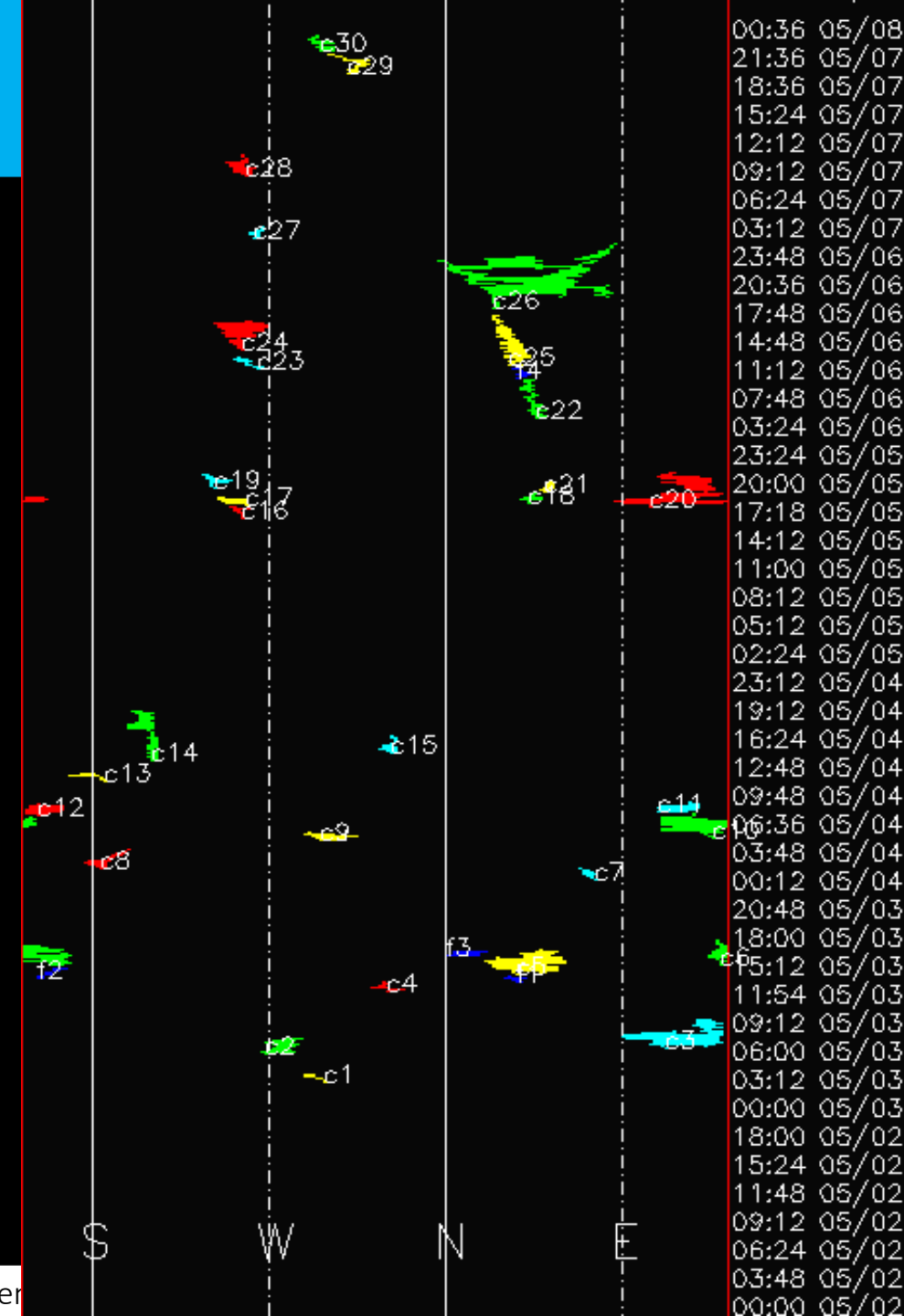
Predicted to have a glancing blow at Earth on May 07- May 08

Coronal Mass Ejections

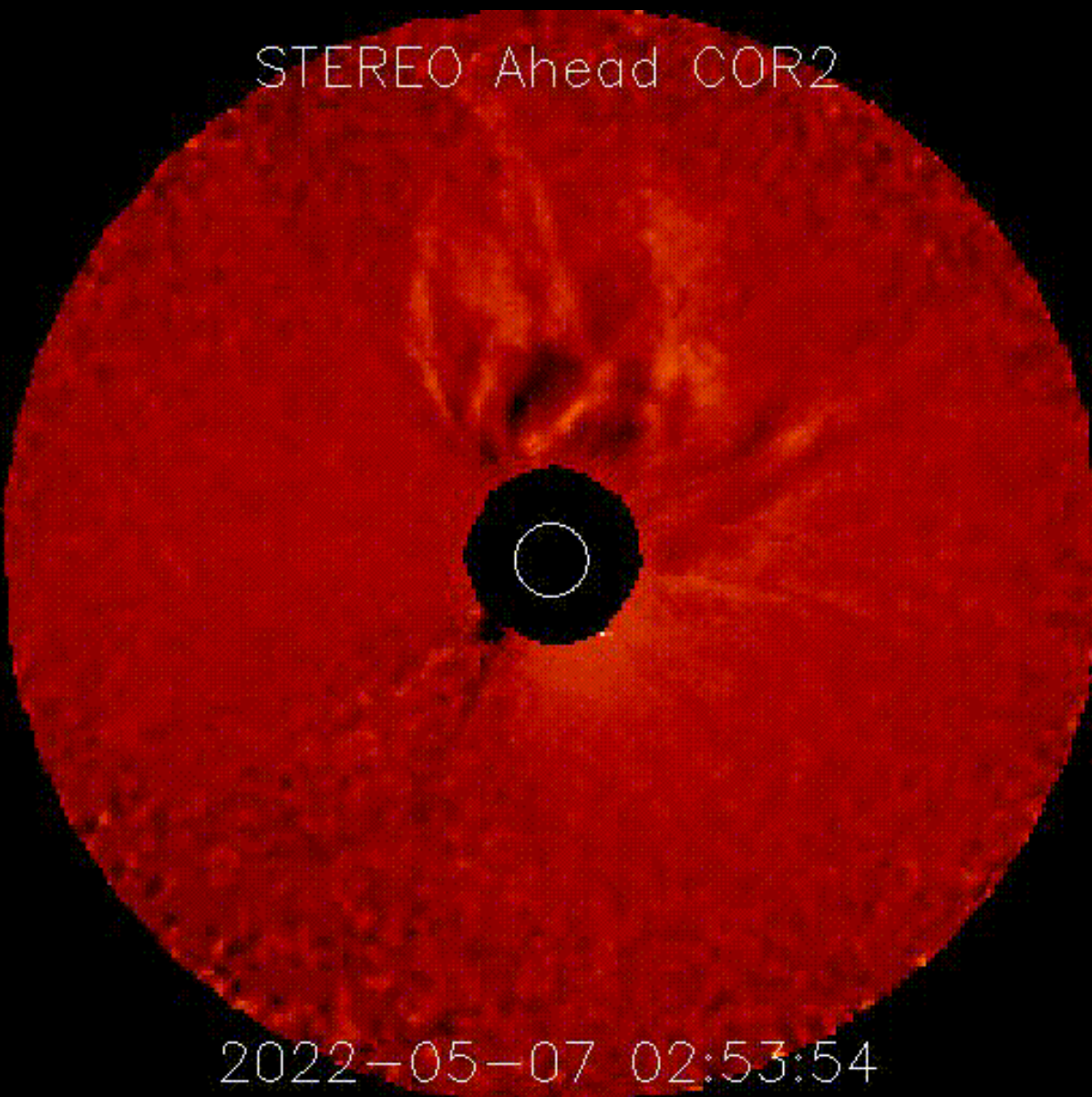


Filament
eruption on
May 06 to
NW ~ 20 UT

Associated
CME seen in
LASCO C2
~21 UT
<-



Coronal Mass Ejections



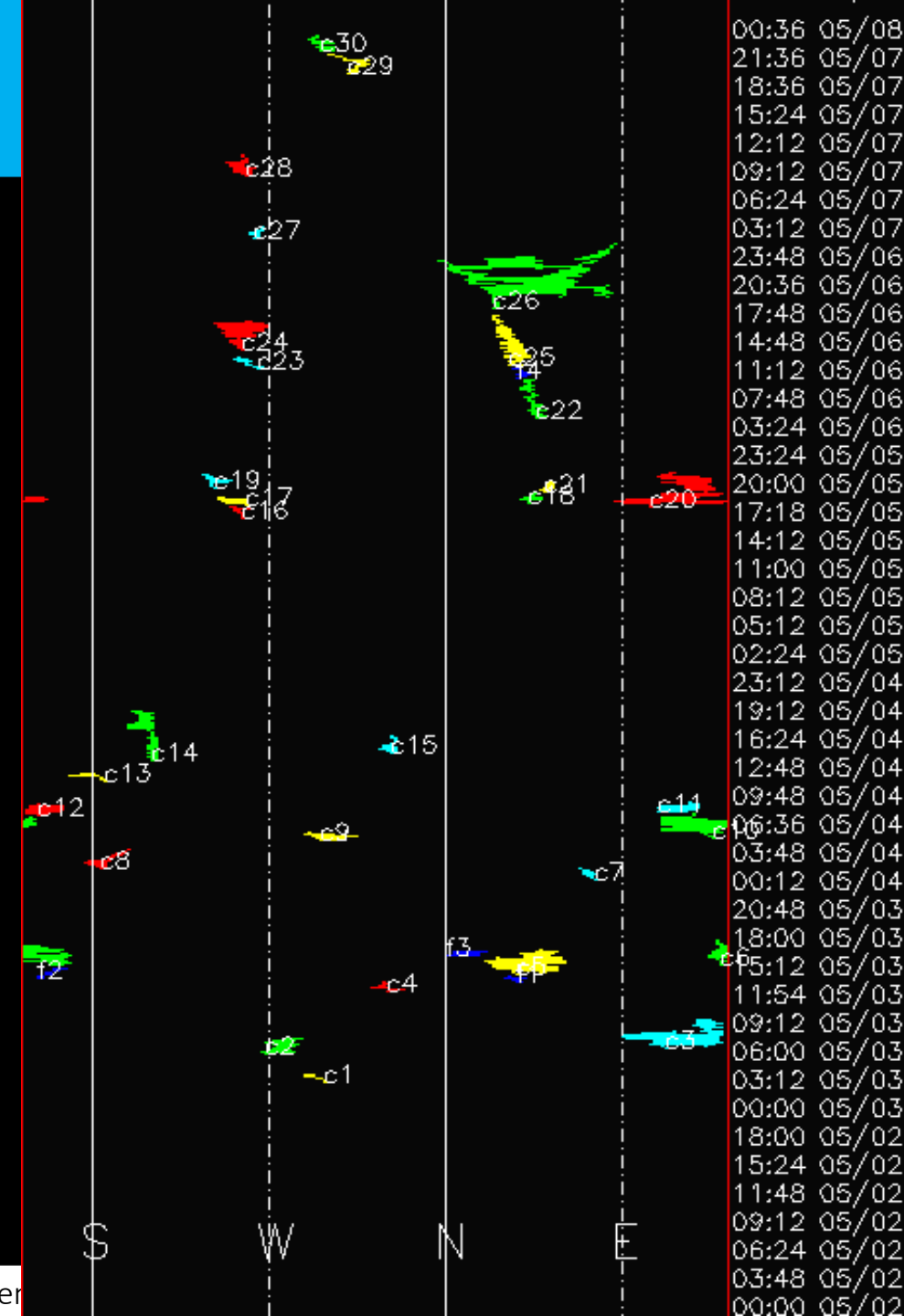
Filament
eruption on
May 06 to NW
~ 20 UT

Associated
CME seen in
LASCO C2 ~21
UT

Associated
CME seen in
STEREO-A
COR2

Possible
glancing blow
at Earth late
on May 10th

influences Data analysis Cer



Solar Wind and Geomagnetic Activity

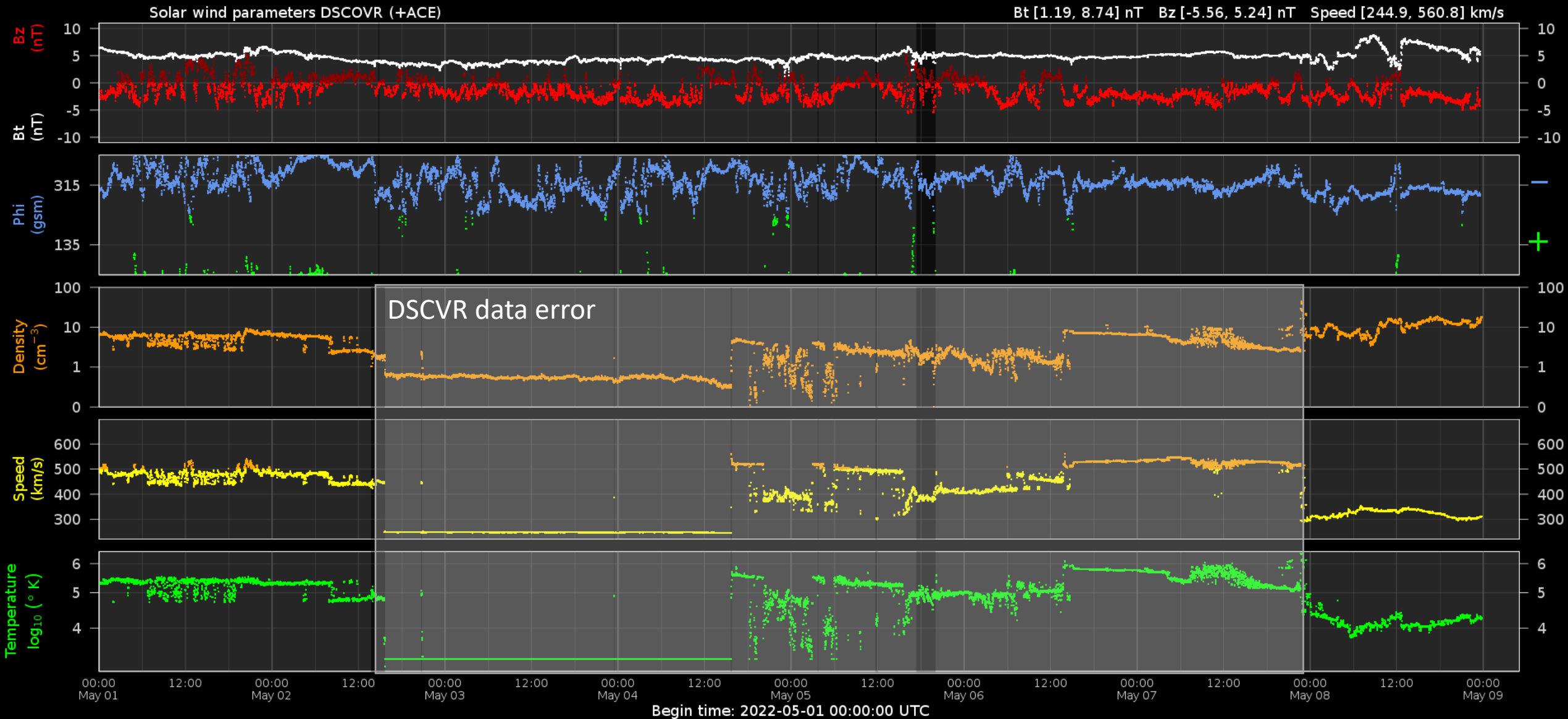


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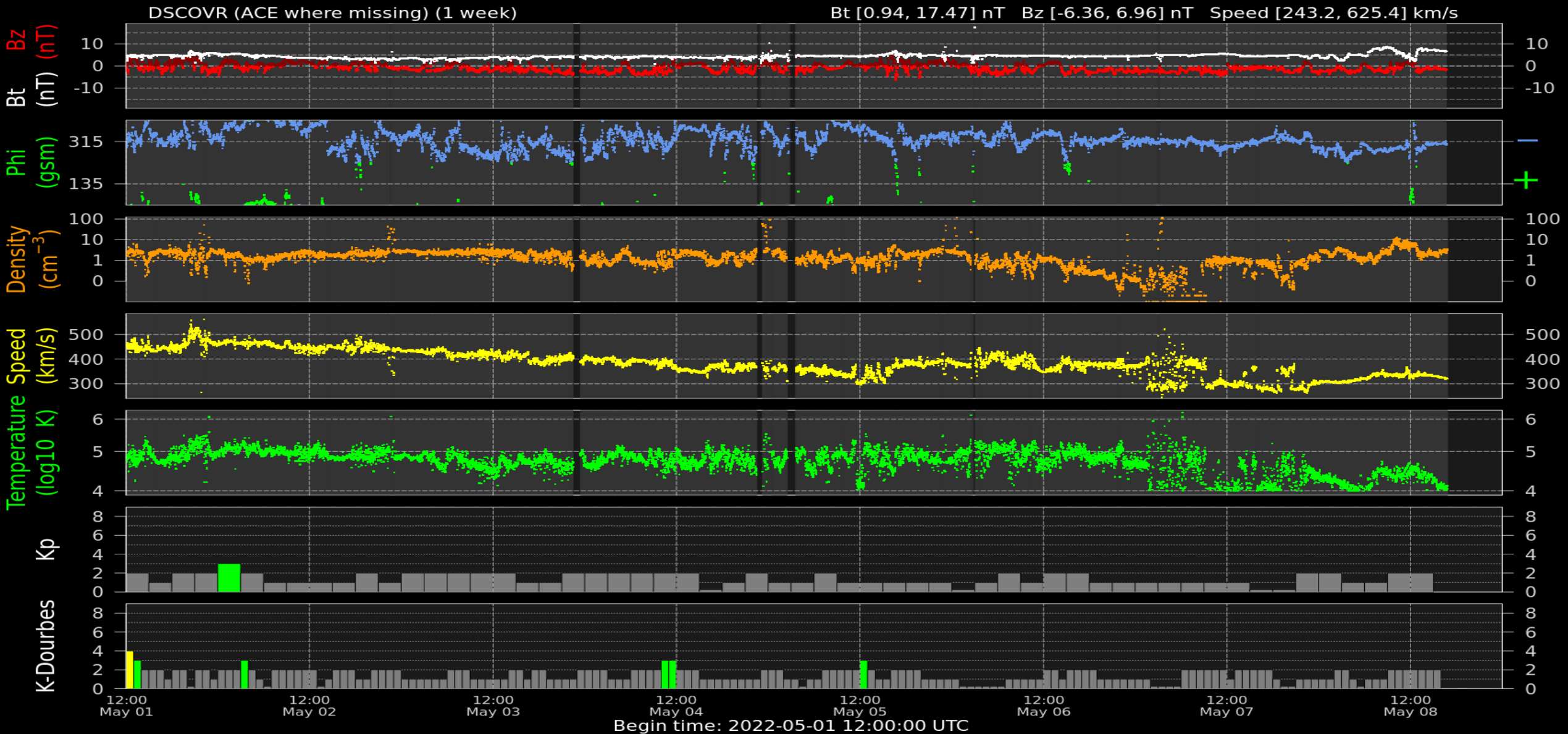
Solar wind parameters DSCOVR



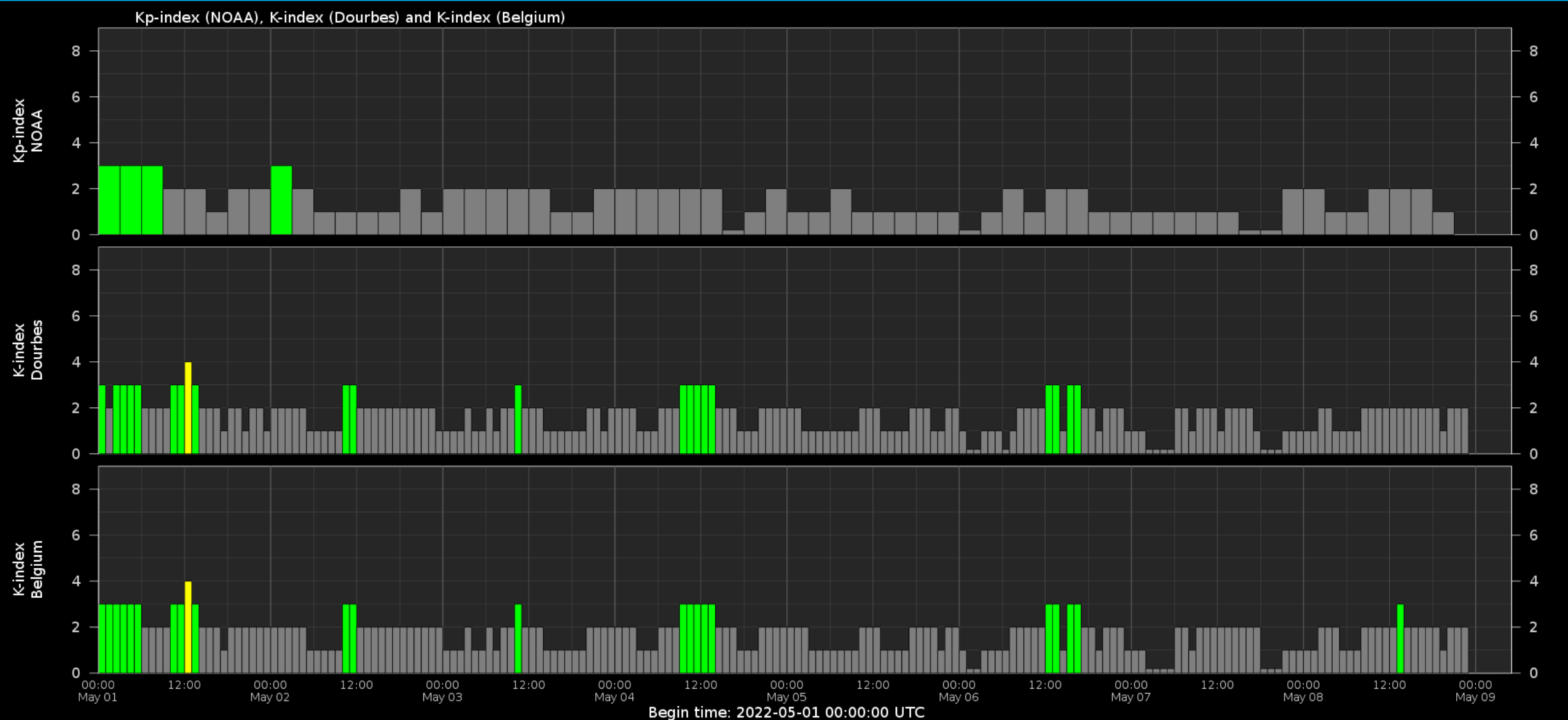
Solar wind parameters DSCOVR



Solar wind parameters ACE and K-indices



Geomagnetic activity (K-indexes)

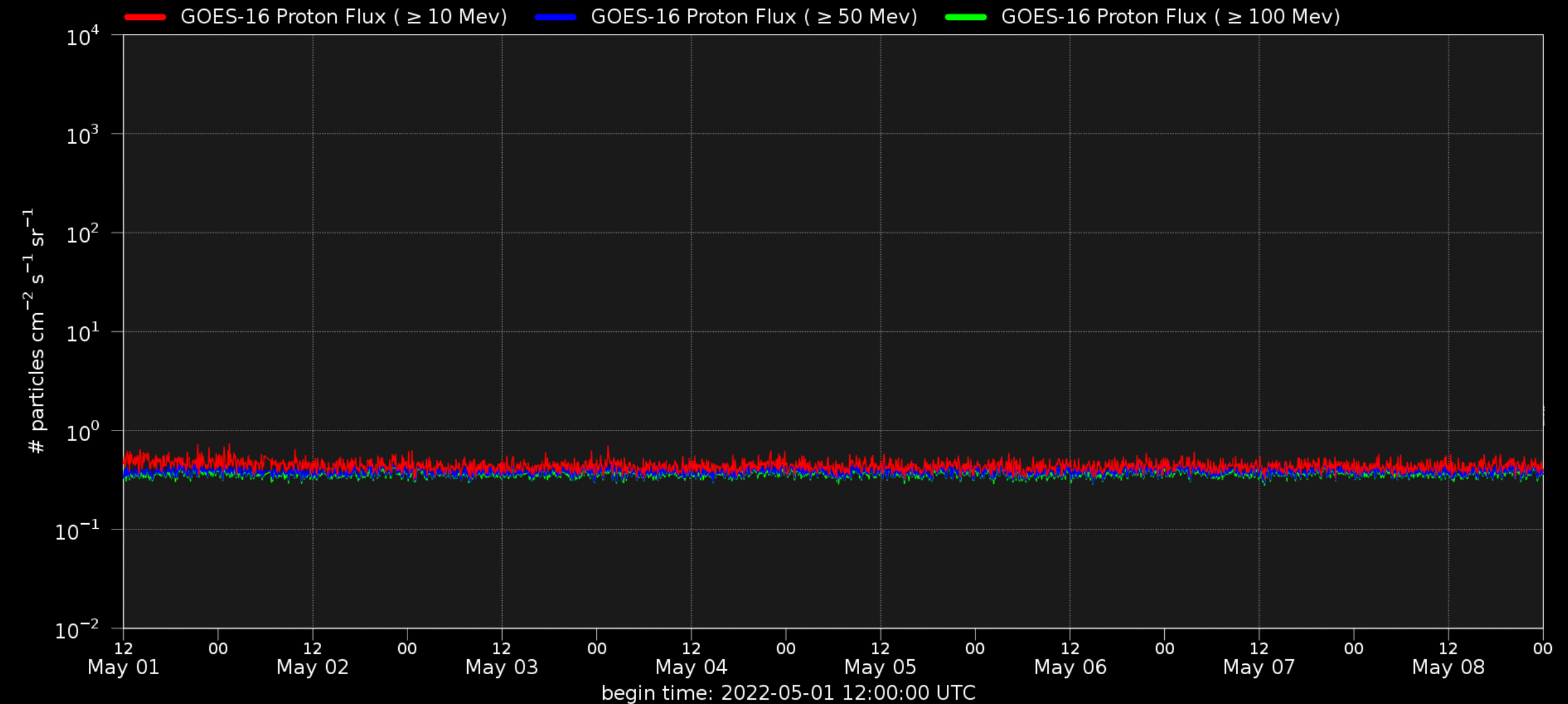


Energetic Particles

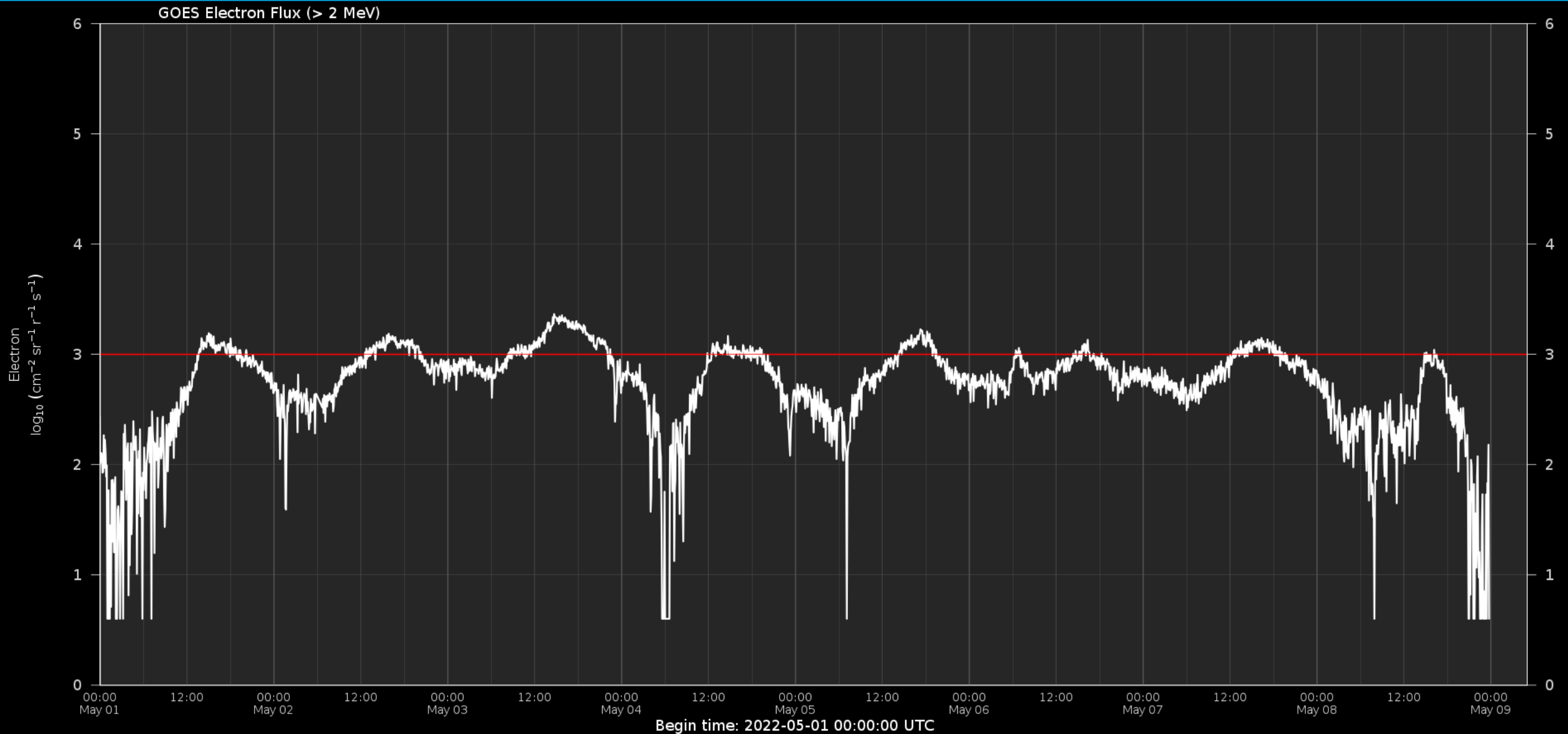


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Solar proton flux



Electron flux at GEO



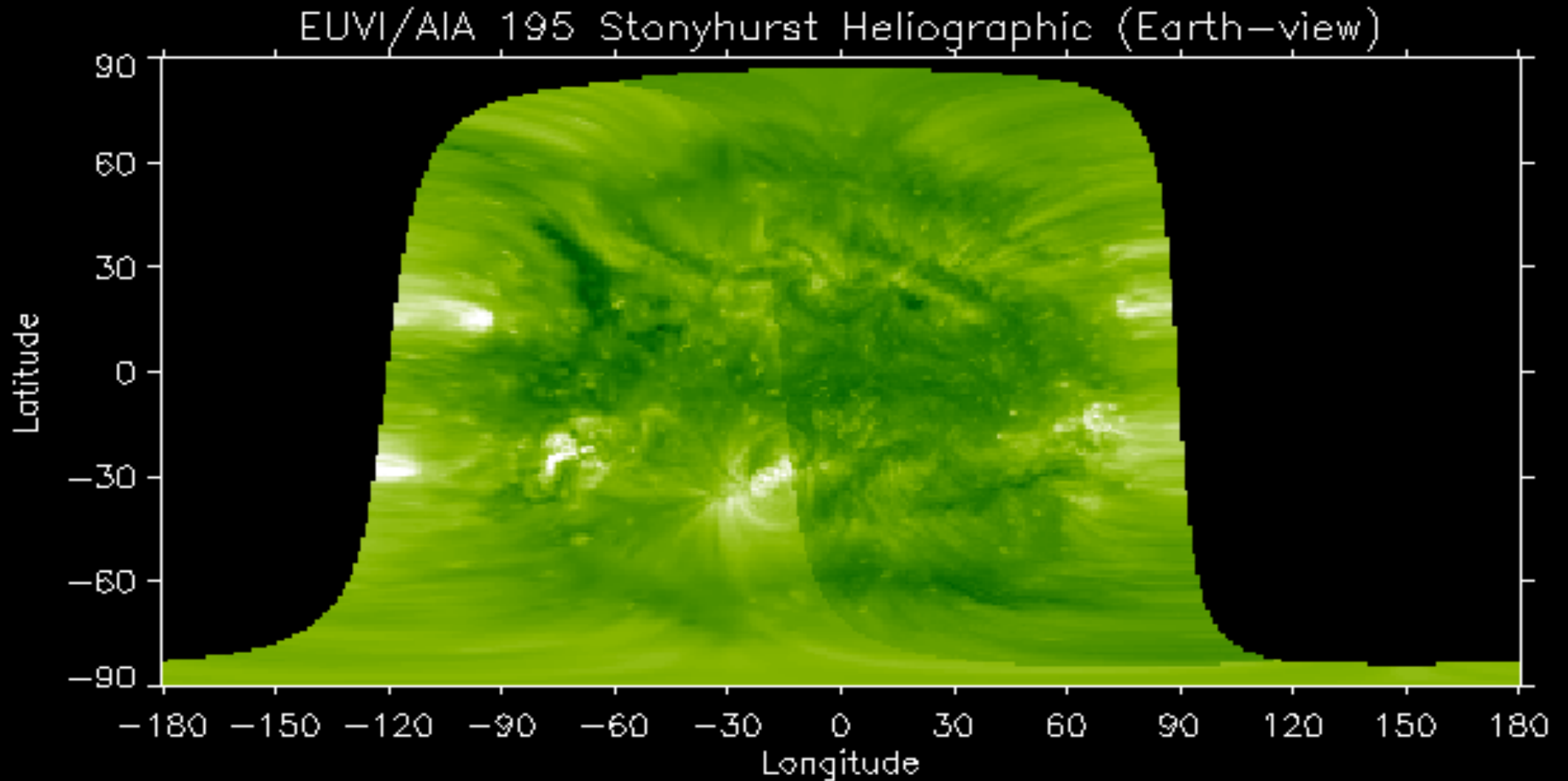
Outlook



Royal Observatory
of Belgium

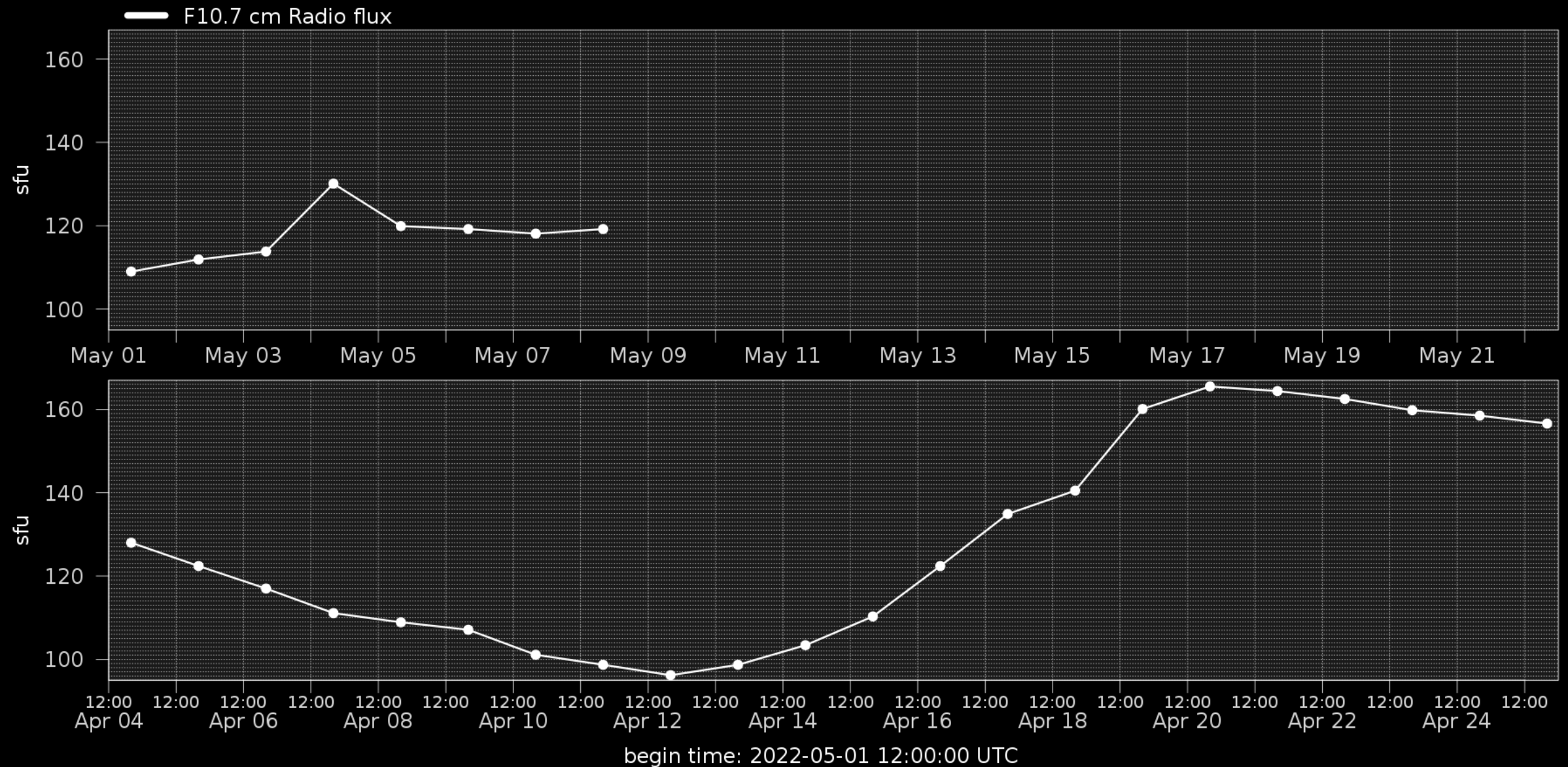
Solar Influences
Data analysis Centre
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Outlook: Solar activity



Observation date: 2022/05/08 23:15:00

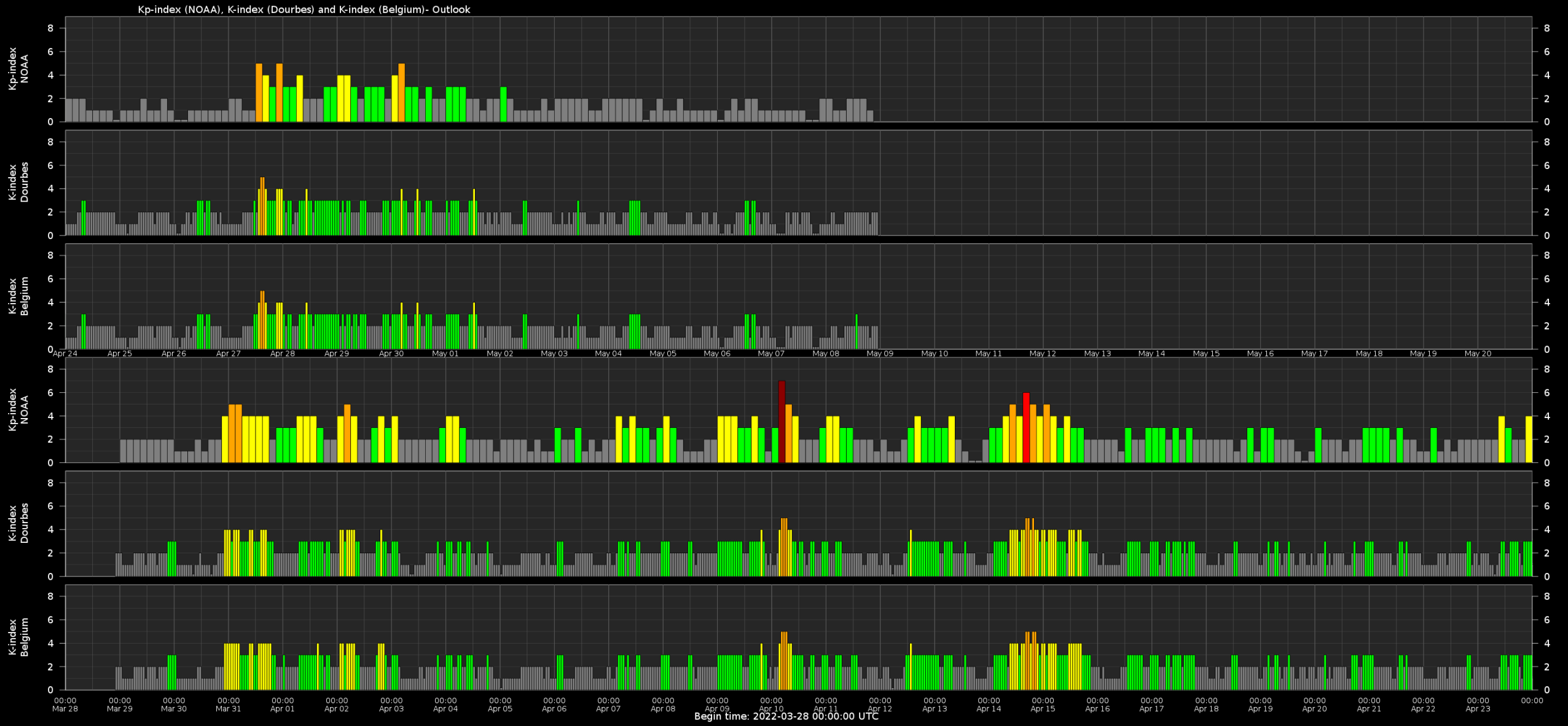
Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



Outlook: Electron Flux at GEO Outlook



SIDC Space Weather Briefing

See you at our next briefing!

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