

SIDC Space Weather Briefing

10 May 2020 - 17 May 2020

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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 2020-05-10 12:00 UT to 2020-05-17 12:00 UT

Active regions	Two spotless ARs at east limb from late 16 May onwards.
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	Filament eruption on 13-14 May (slow and weak)
CMEs	No earth-directed CMEs observed
Proton Events	Proton flux was at nominal levels

Solar wind and geomagnetic conditions from 2020-05-10 12:00 UT to 2020-05-17 12:00 UT

Coronal Holes	Some small pos. & neg. pol. CHs were present.
ICME	None
SW Conditions	At background levels for the entire period.
K-indices	max K-index (Dourbes): 3 max Kp-index (NOAA): 3

All Quiet Alert: “ON” for the whole week.

Solar Activity

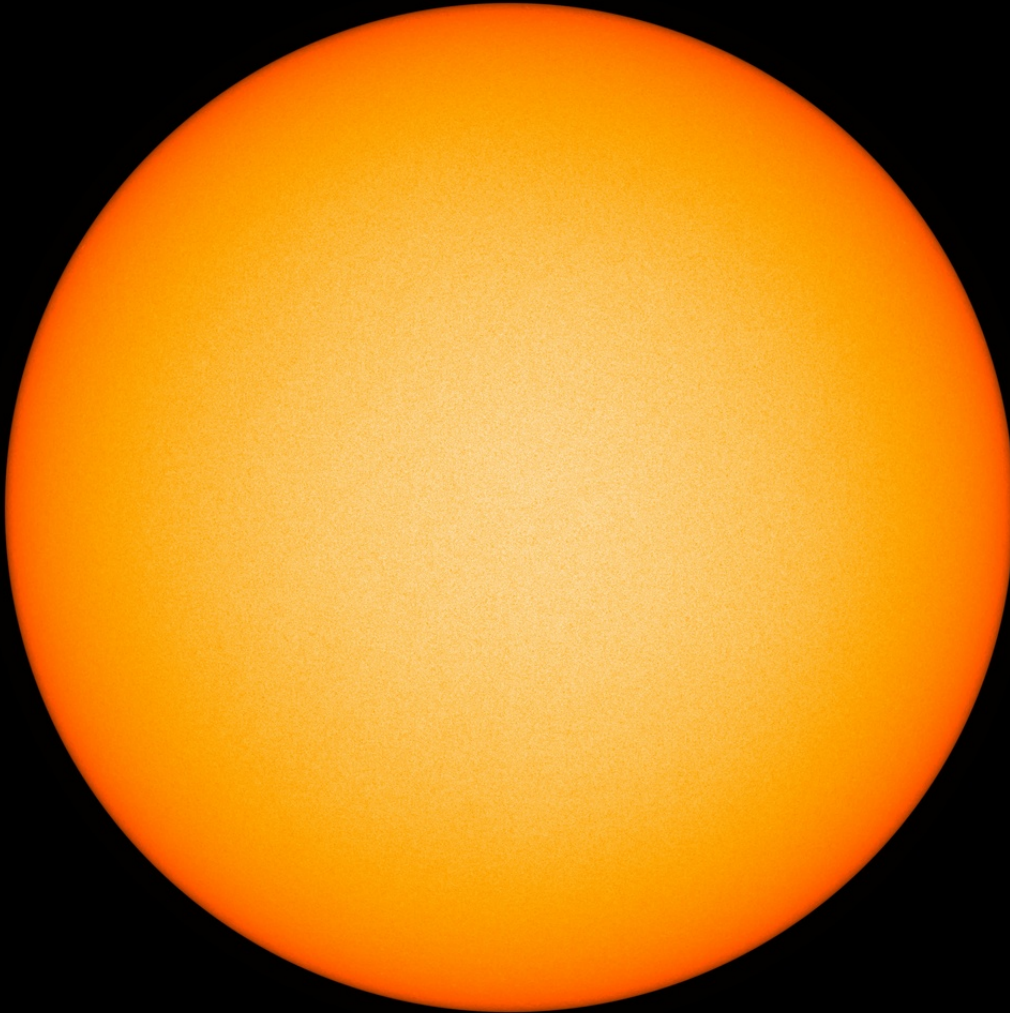


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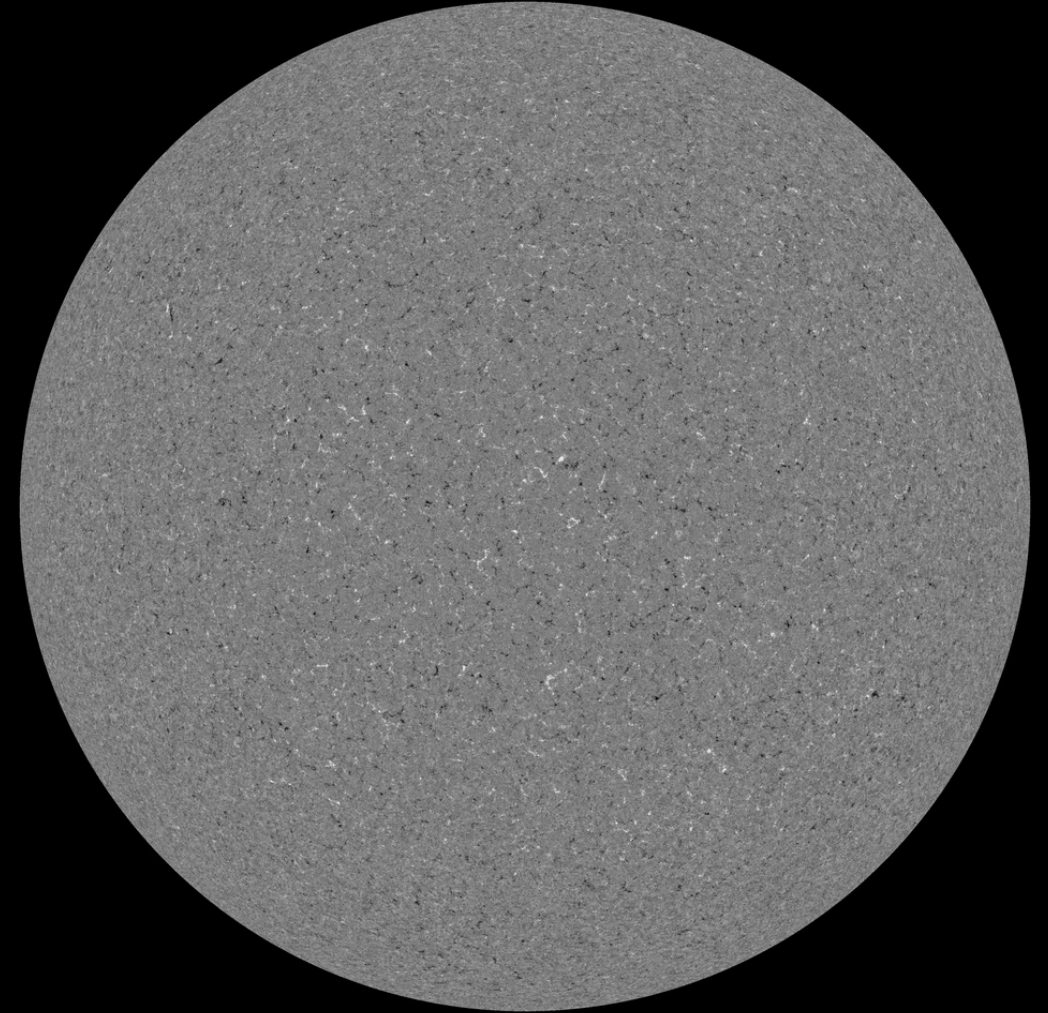
Solar active region - start of the week

SDO/HMI White Light 2020-05-10



SDO/HMI Quick-Look Continuum: 20200510_114500

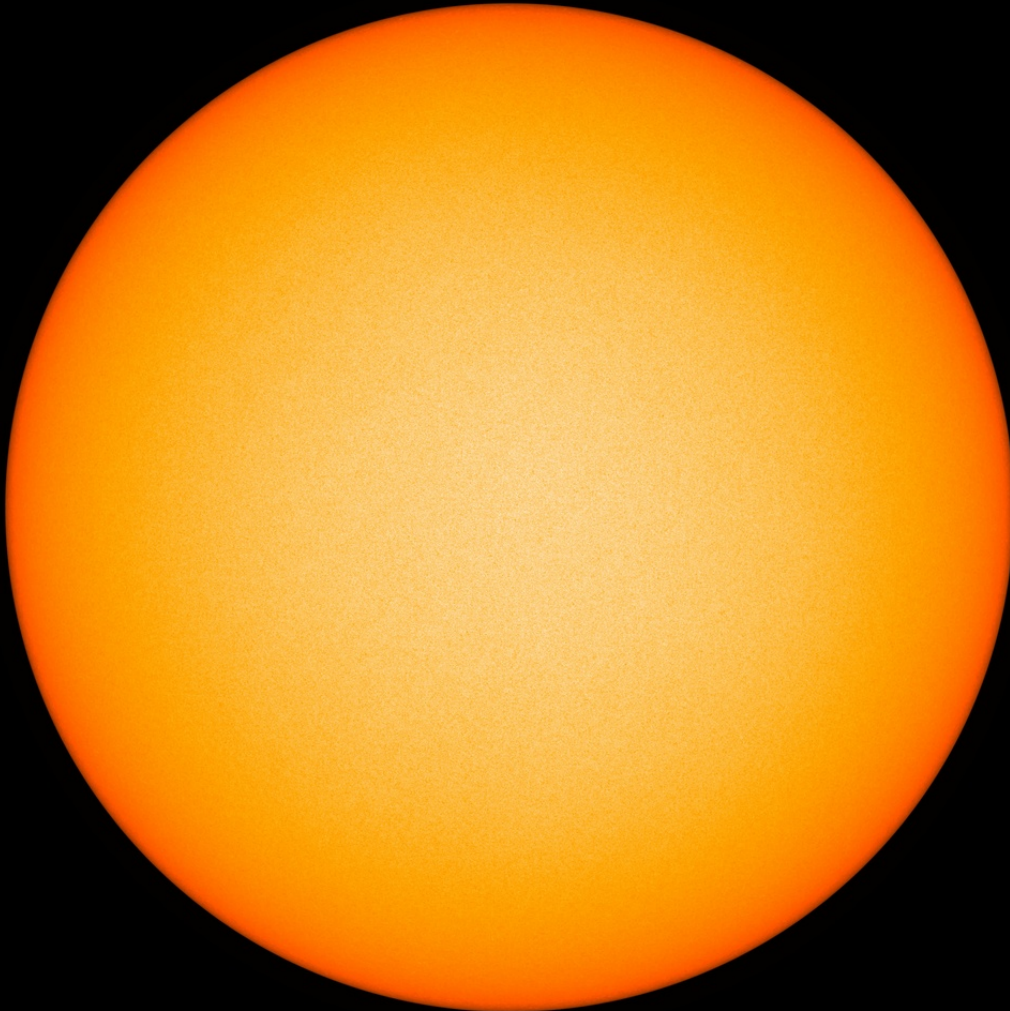
SDO/HMI Magnetogram 2020-05-10



SDO/HMI Quick-Look Magnetogram: 20200510_114500

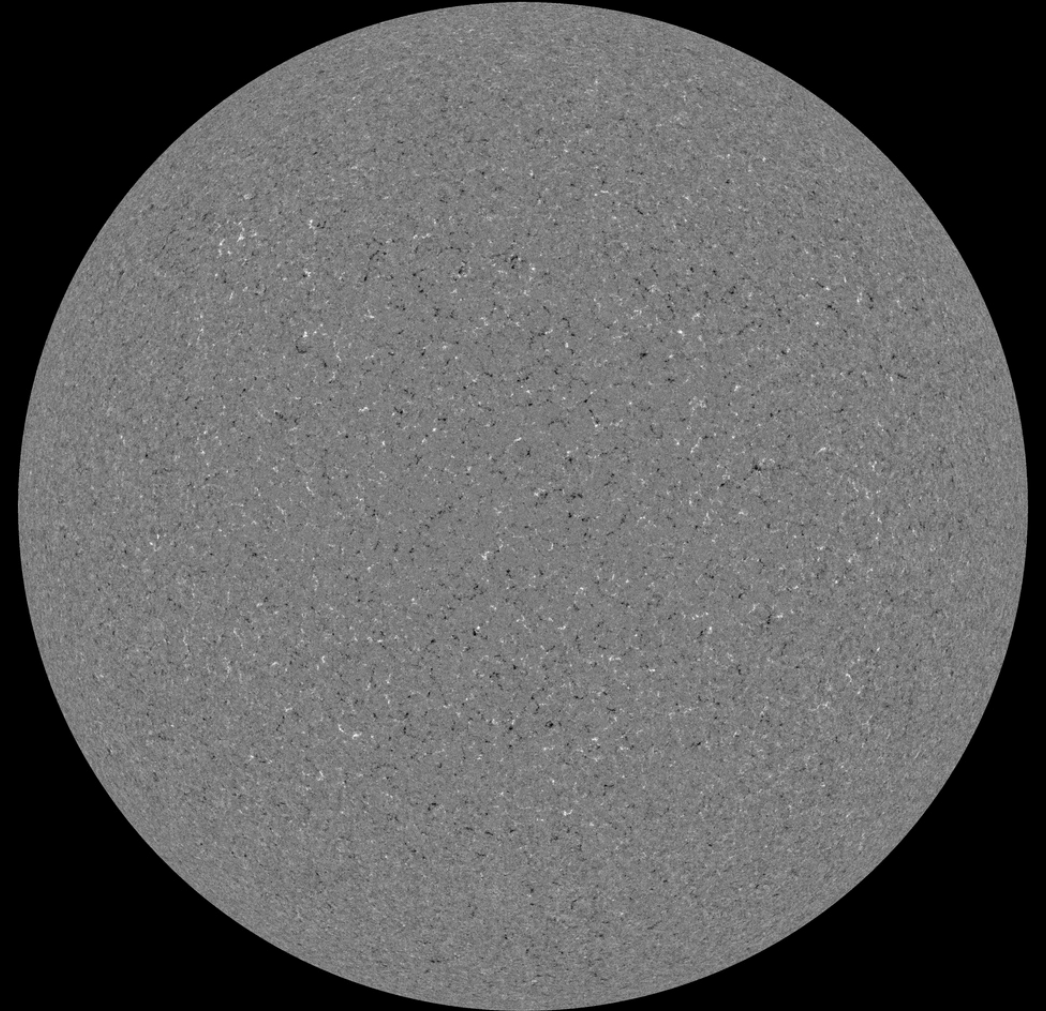
Solar active region - middle of the week

SDO/HMI White Light 2020-05-13



SDO/HMI Quick-Look Continuum: 20200513_114500

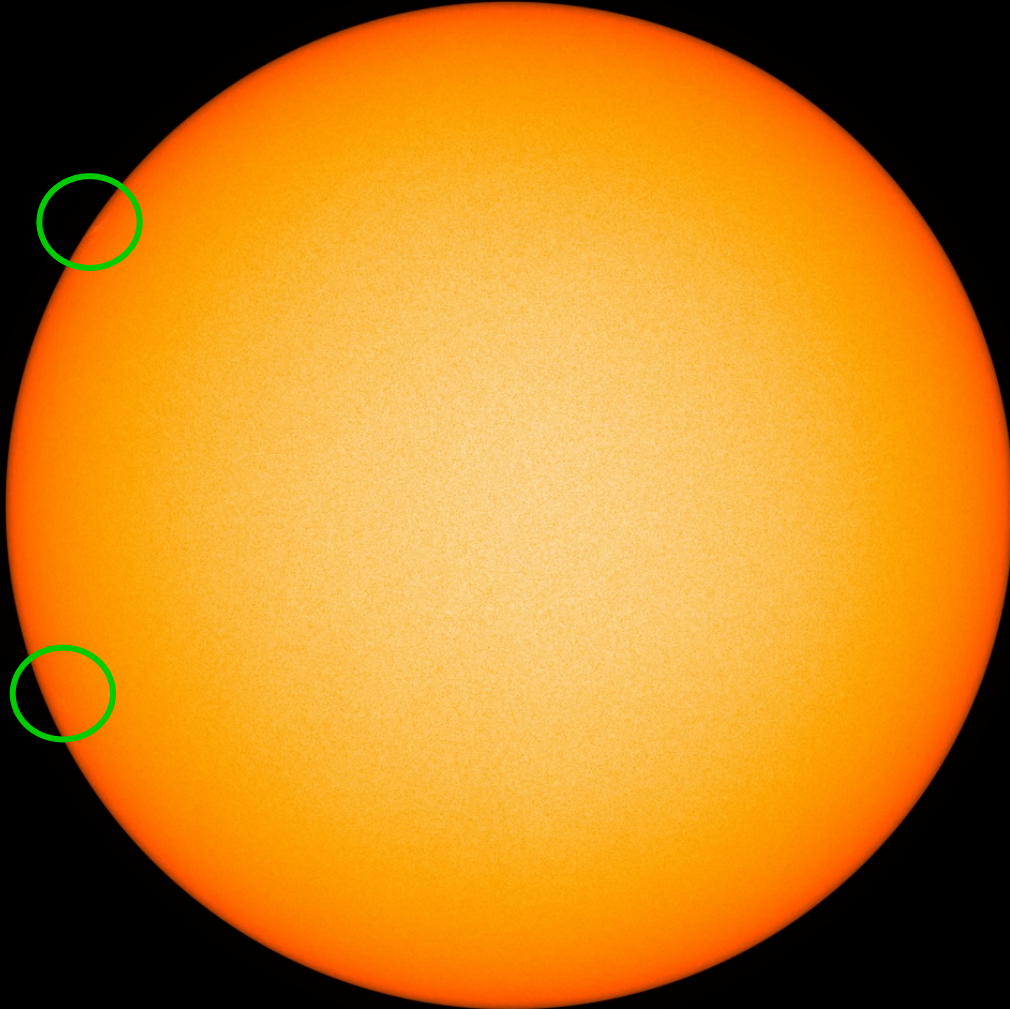
SDO/HMI Magnetogram 2020-05-13



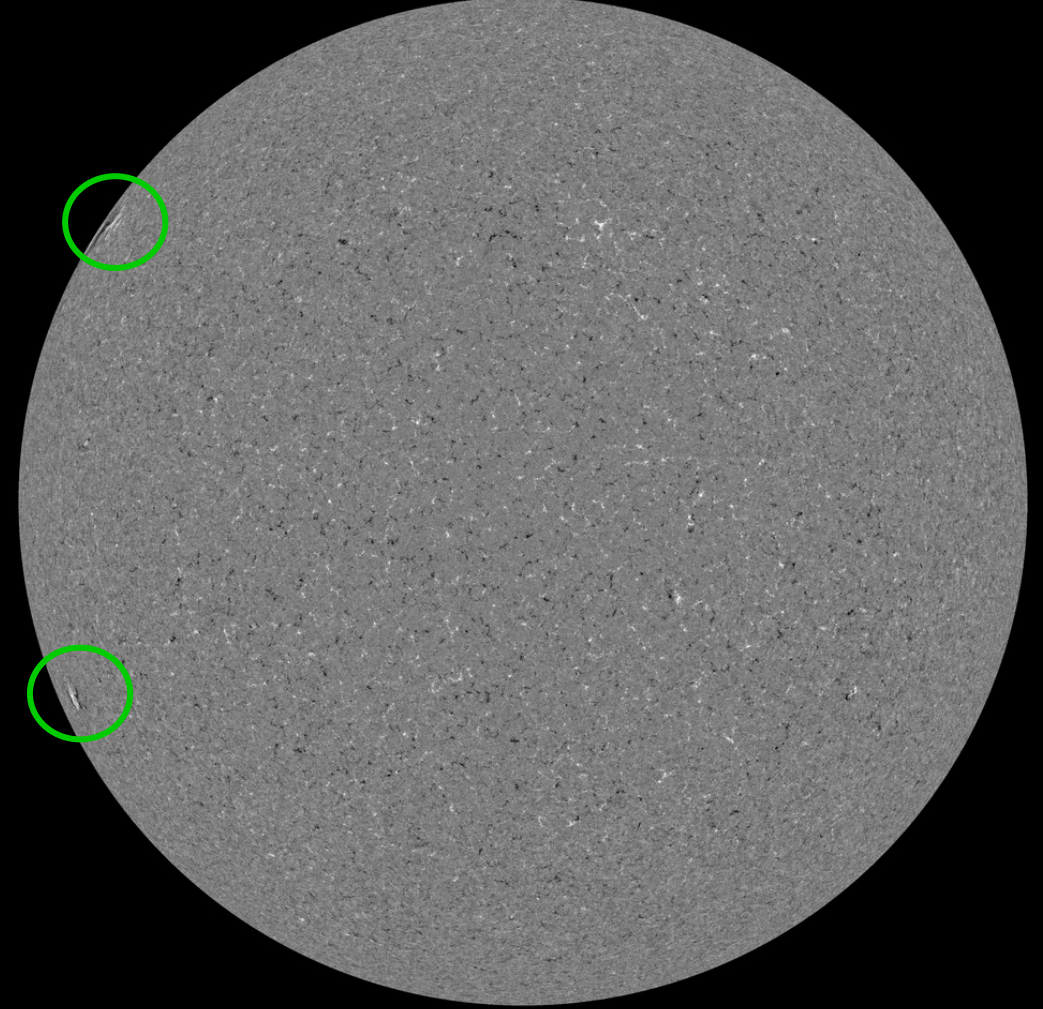
SDO/HMI Quick-Look Magnetogram: 20200513_114500

Solar active region - end of the week

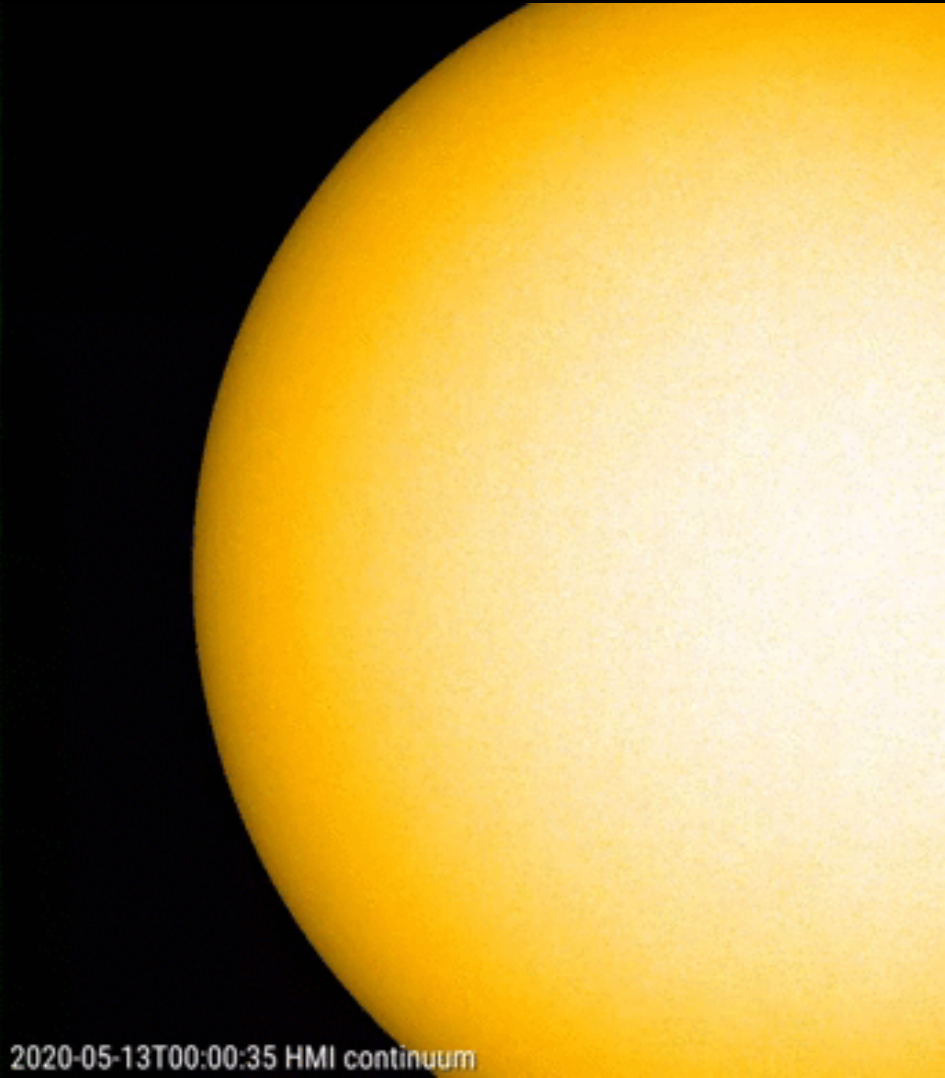
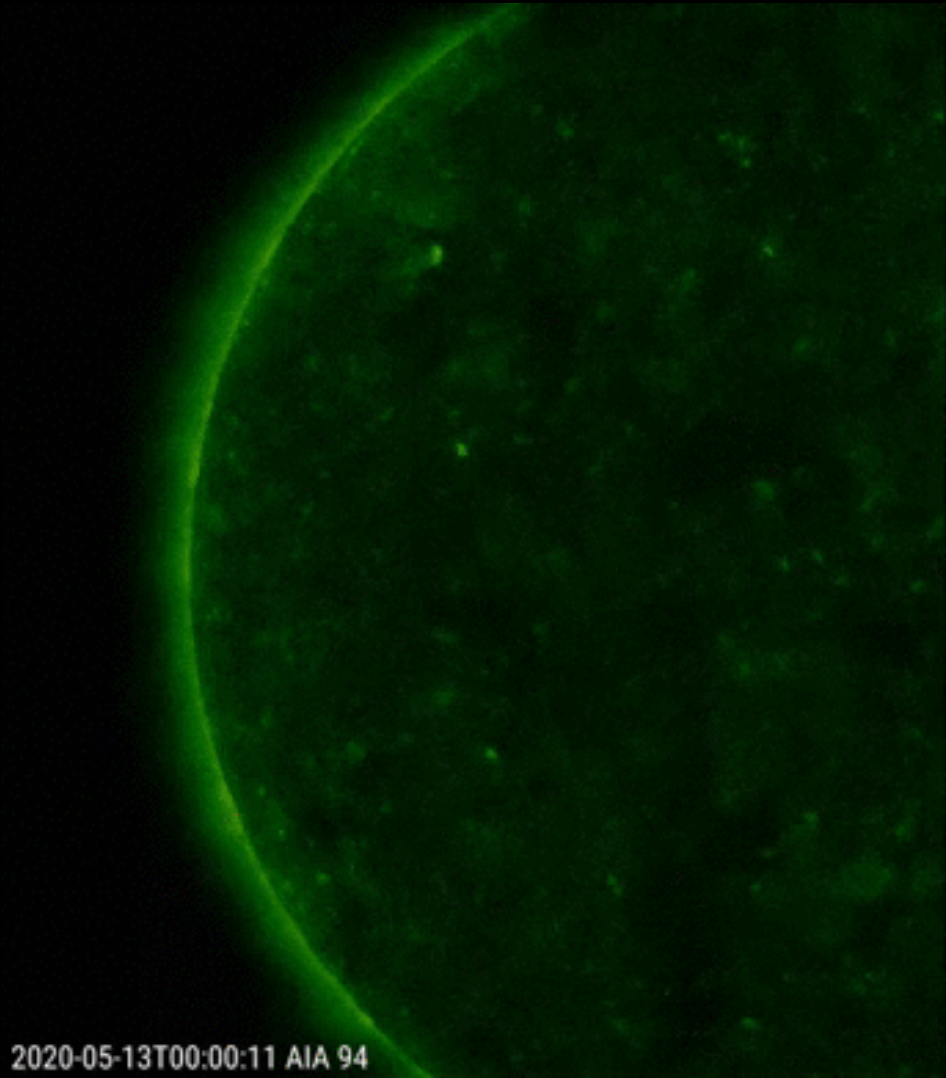
SDO/HMI White Light 2020-05-17



SDO/HMI Magnetogram 2020-05-17

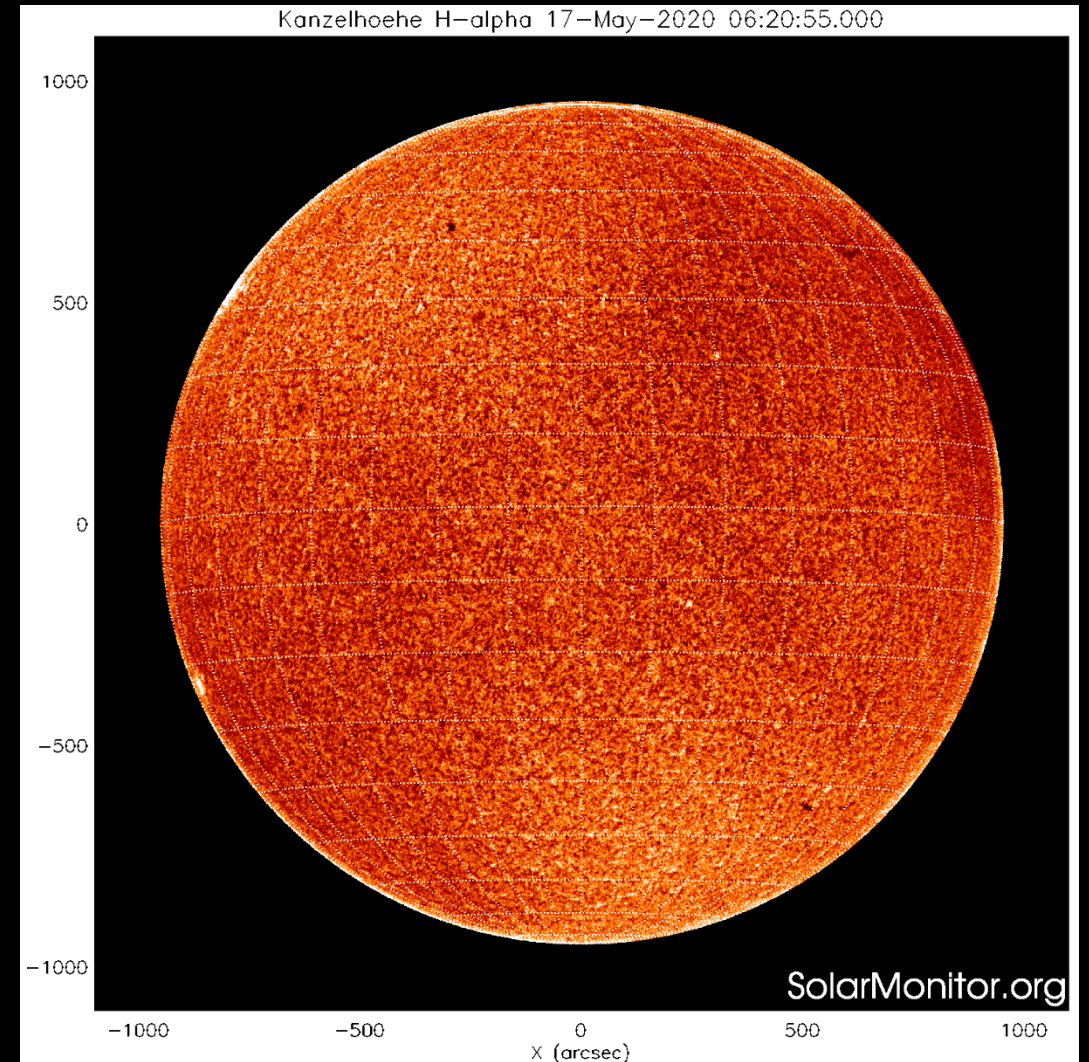
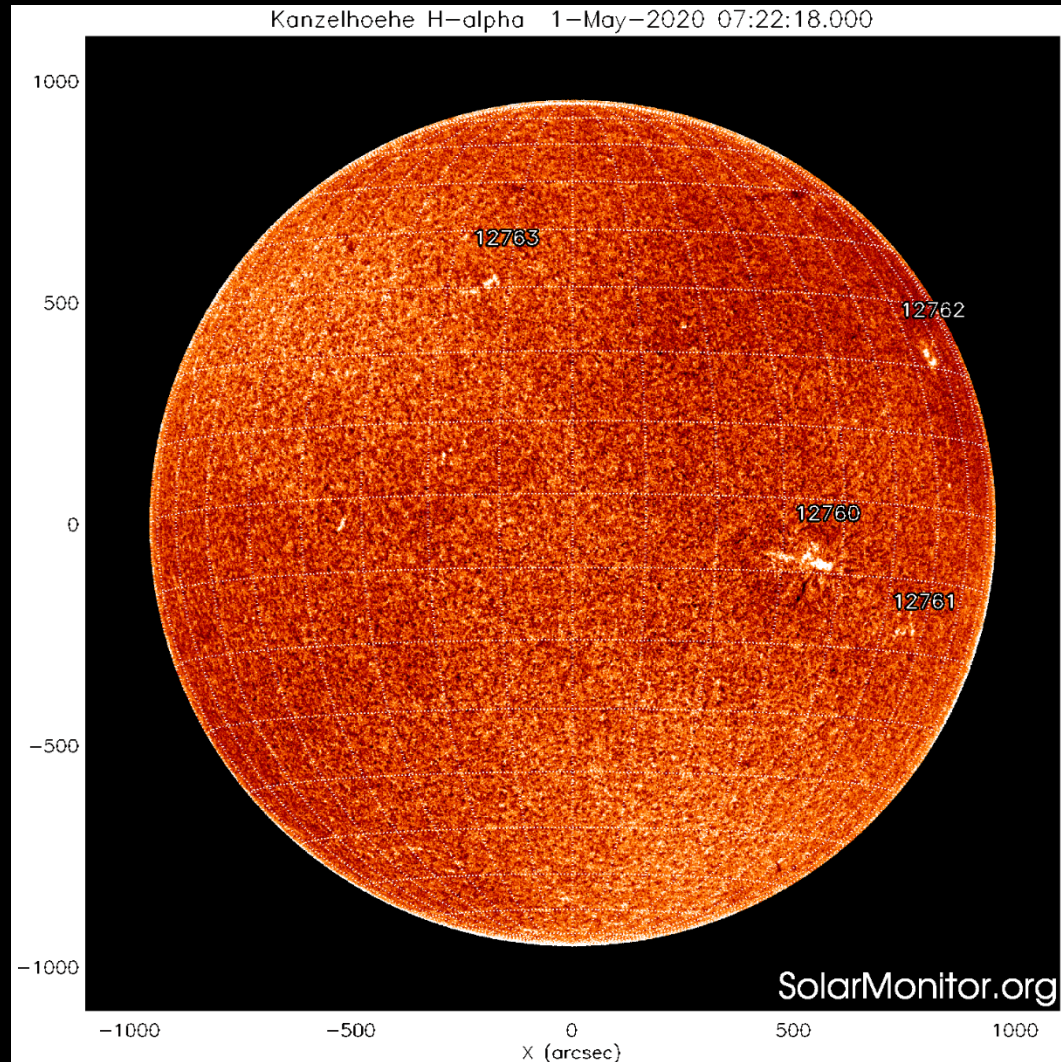


Solar active regions - Spotless



Solar active regions – NOT the return of NOAA 2762 & 2761

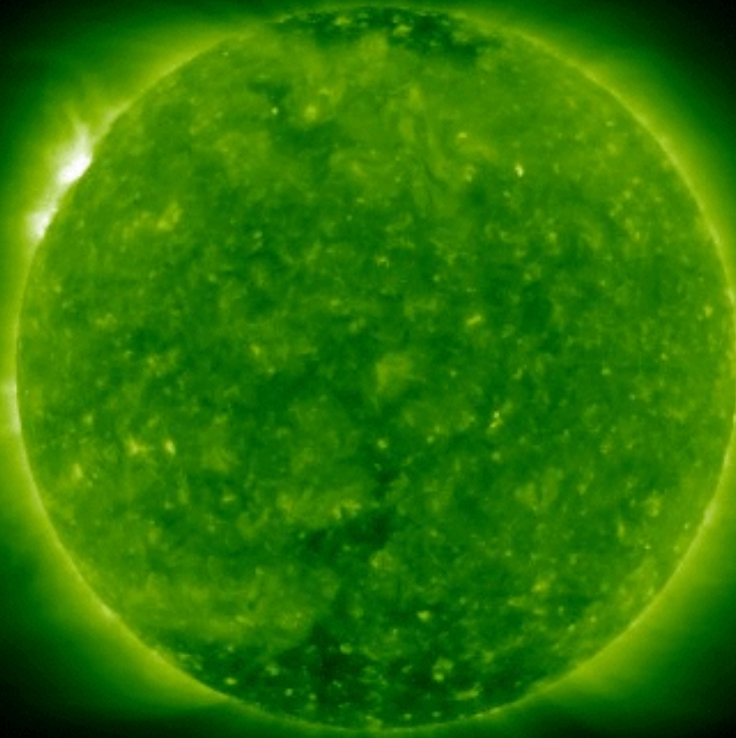
(a) 5° - 10° latitude difference



Solar active regions – NOT the return of NOAA 2762 & 2761

(b) Evolution in STEREO-A/EUVI imagery

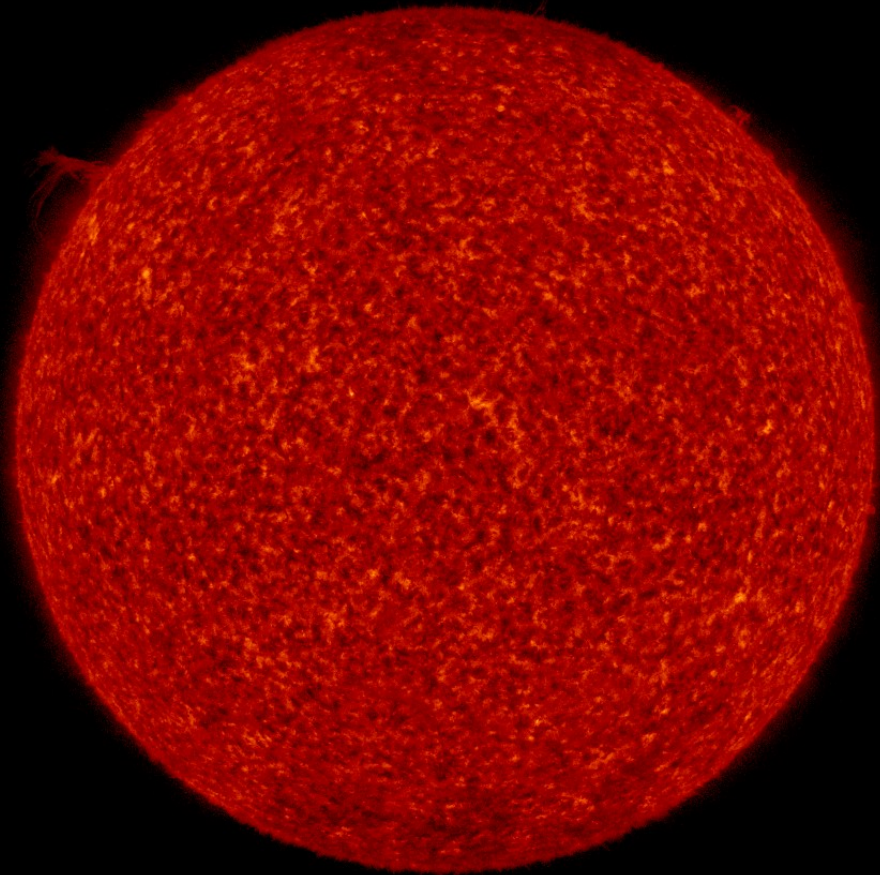
STEREO Ahead EUVI 195



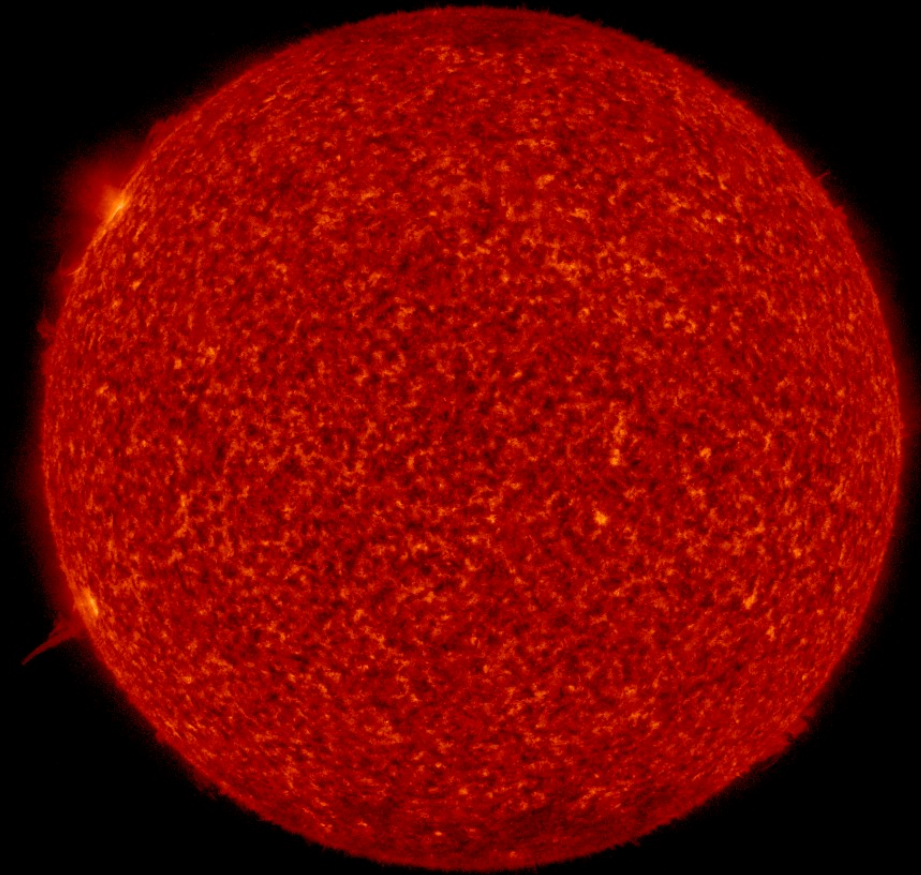
2020-05-12 00:05:30

Solar active region & Filament

SDO/AIA 30.4 nm 2020-05-10



SDO/AIA 30.4 nm 2020-05-17



SDO/AIA 304 2020-05-10 12:13:30 UT

SDO/AIA 304 2020-05-17 12:13:42 UT

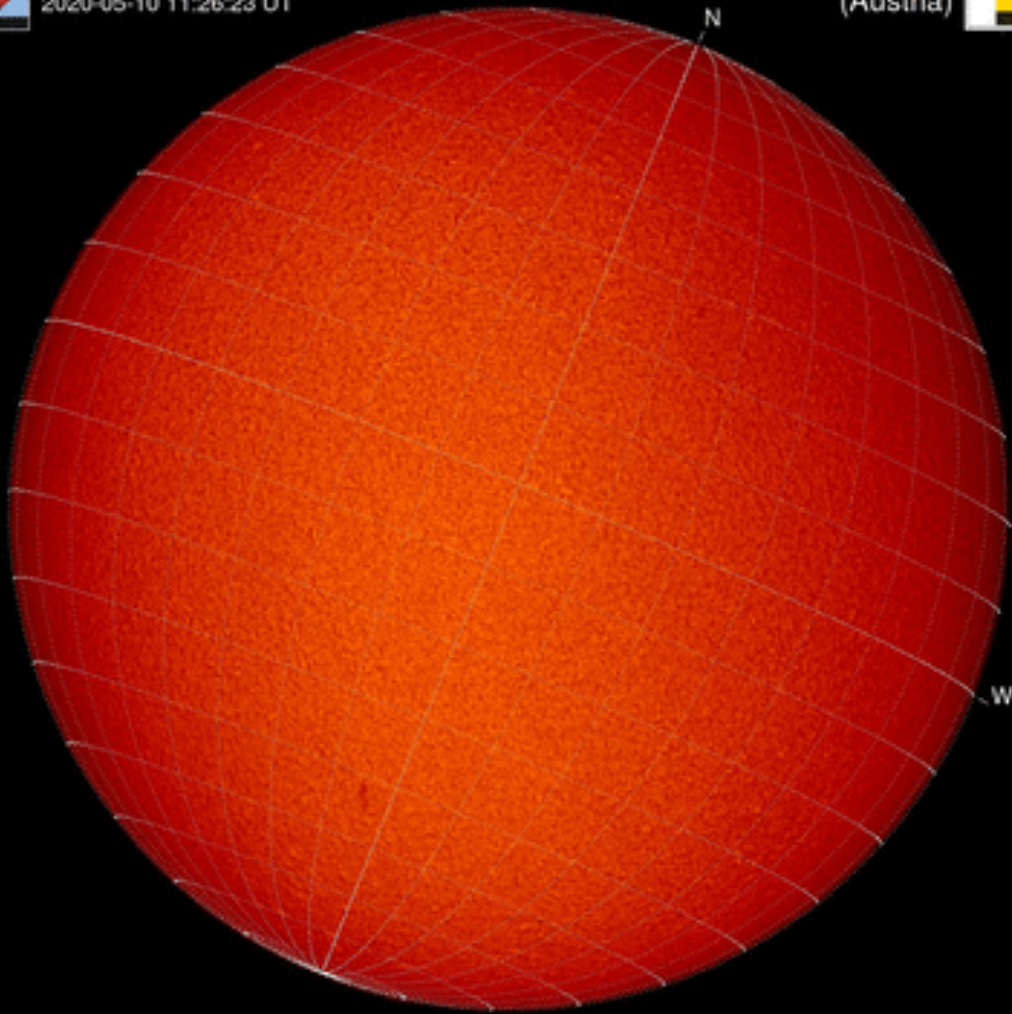
Filament & Filament eruption

H-alpha 2020-05-10



Kanzelhöhe Observatory
2020-05-10 11:26:23 UT

University of Graz
(Austria)

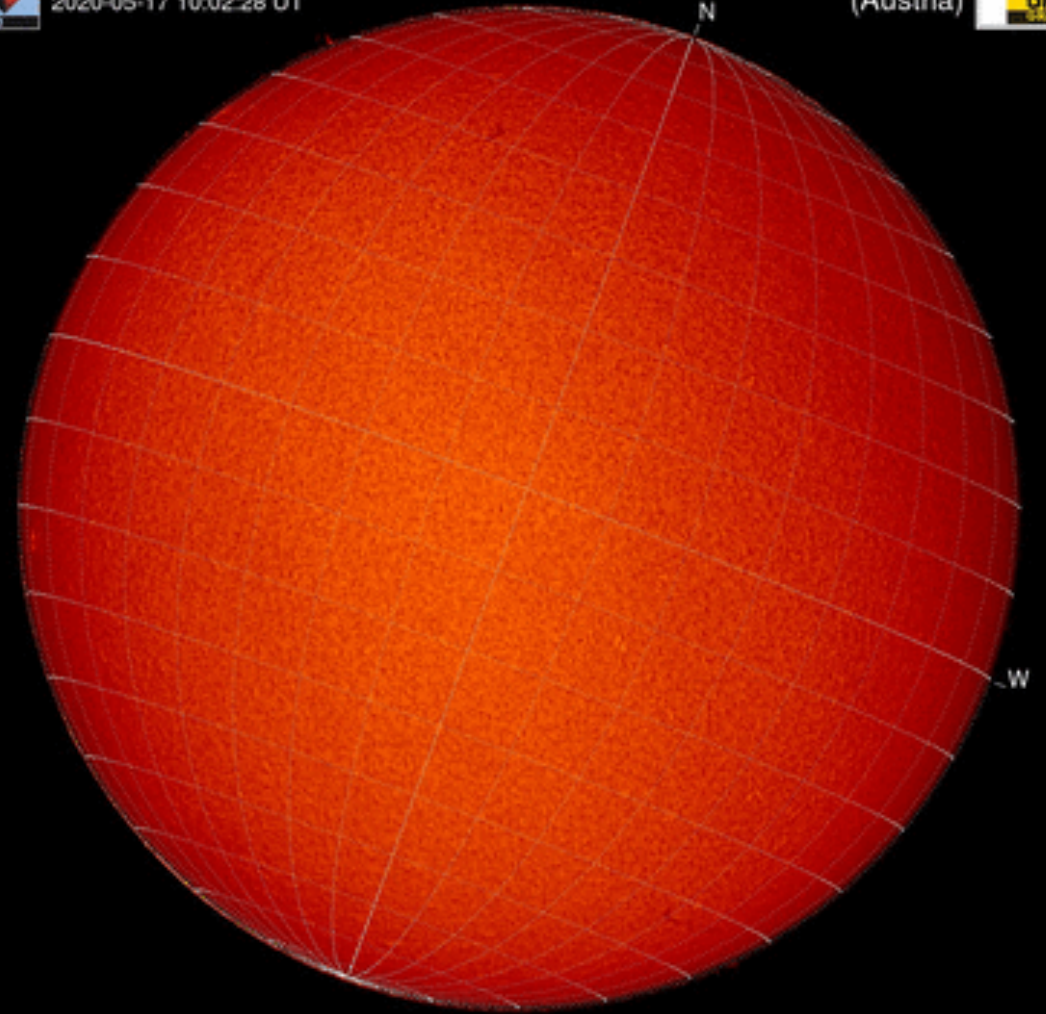


H-alpha 2020-05-17



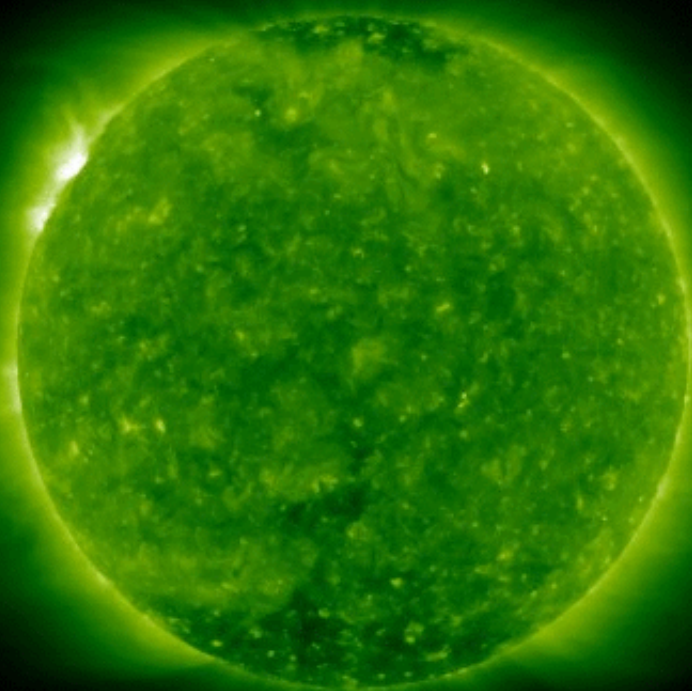
Kanzelhöhe Observatory
2020-05-17 10:02:28 UT

University of Graz
(Austria)



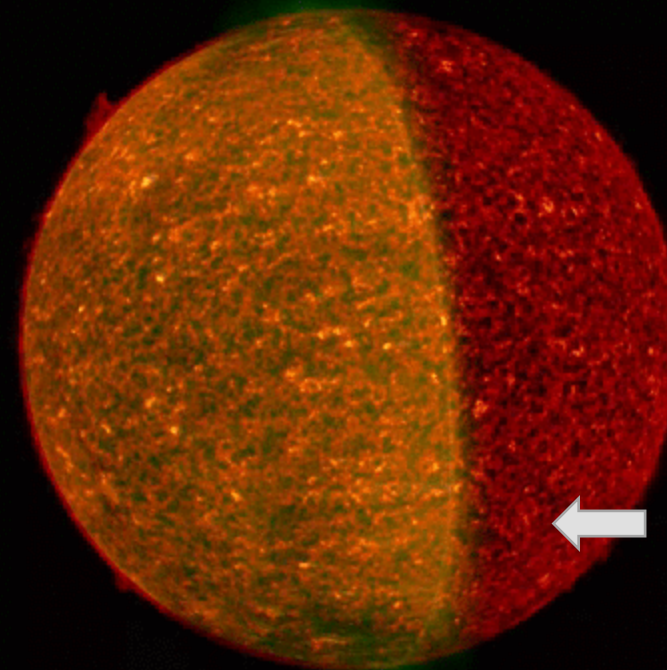
Filament eruption on 13-14 May

STEREO Ahead EUVI 195

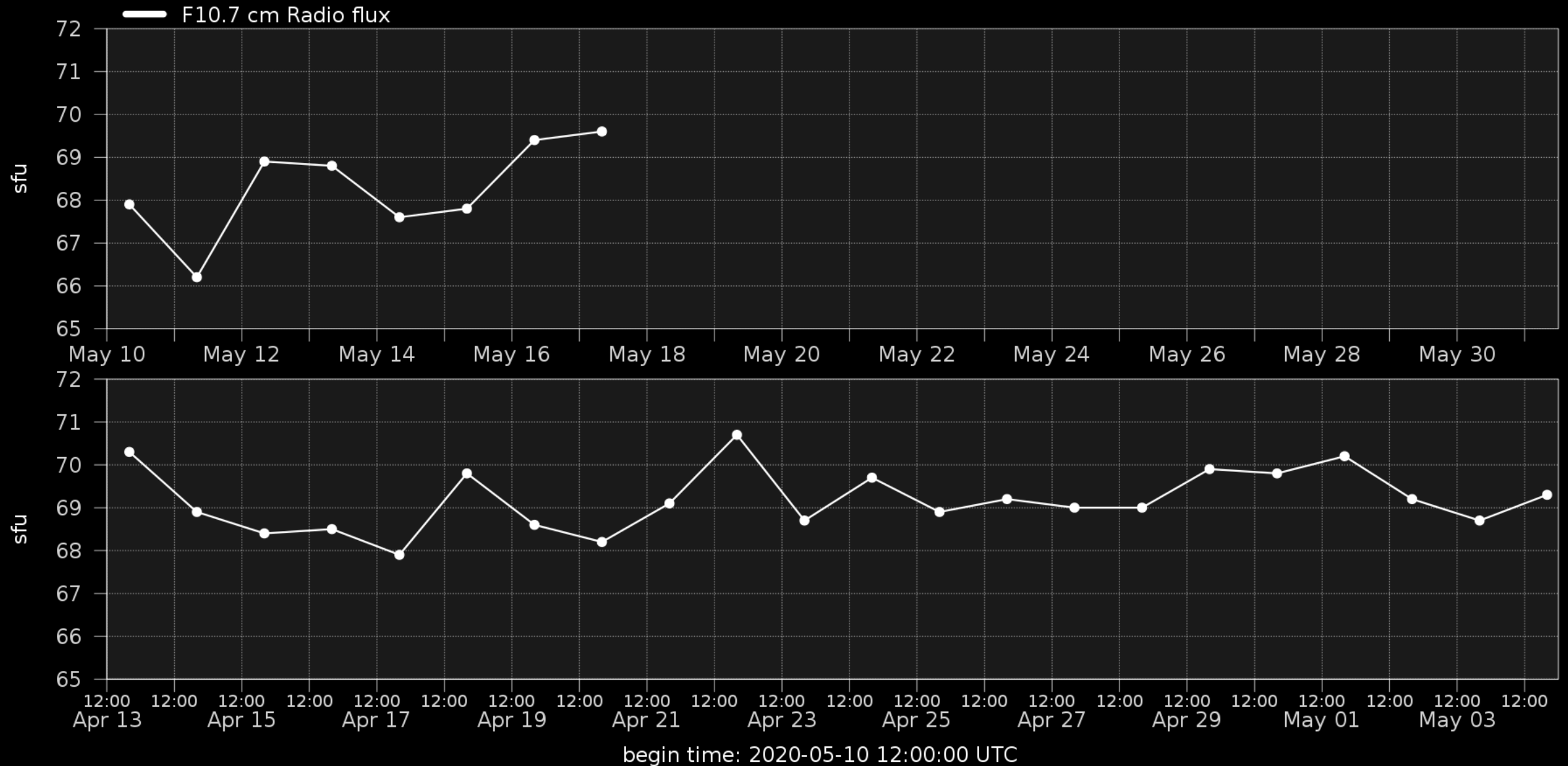


2020-05-12 00:05:30

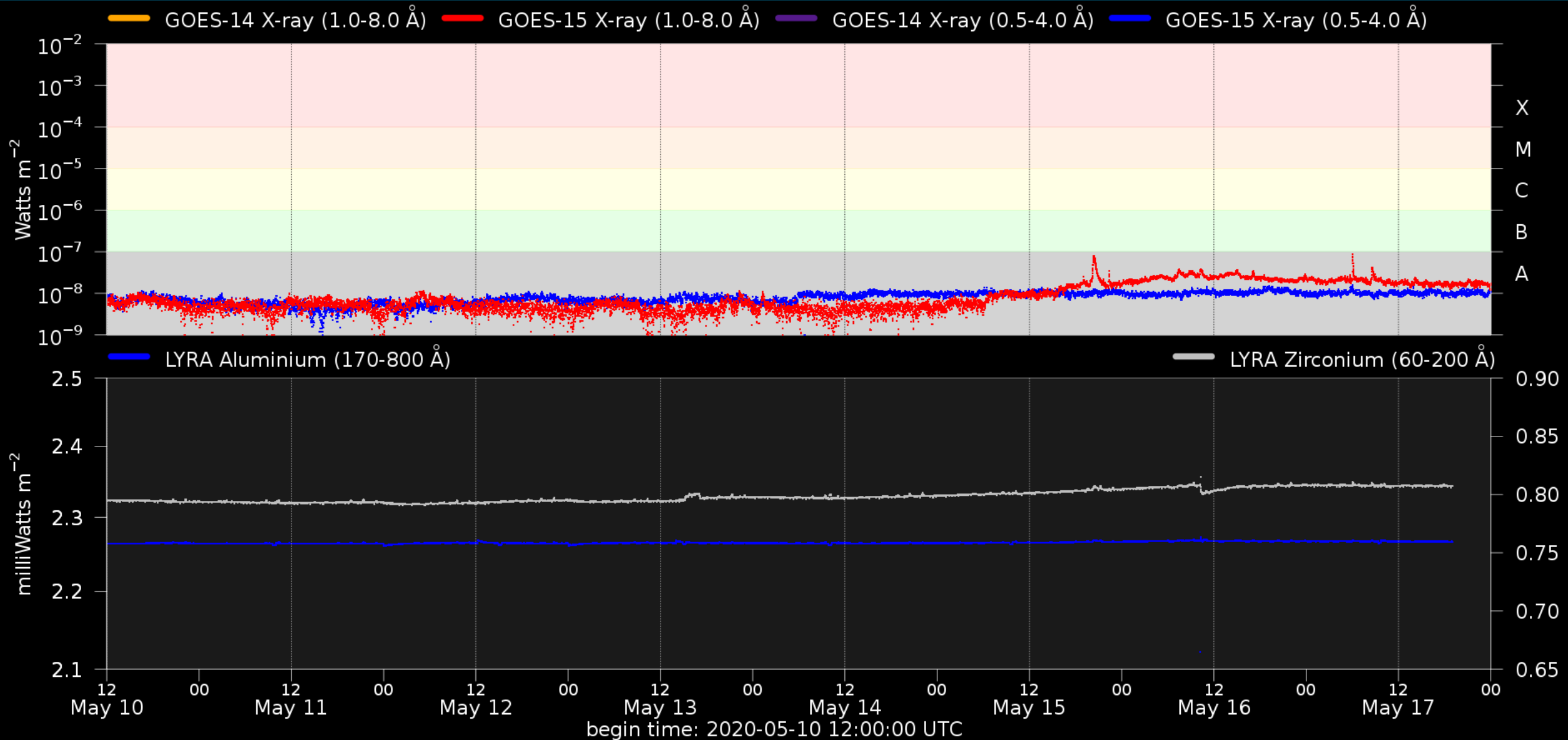
2020-05-13T00:00:29



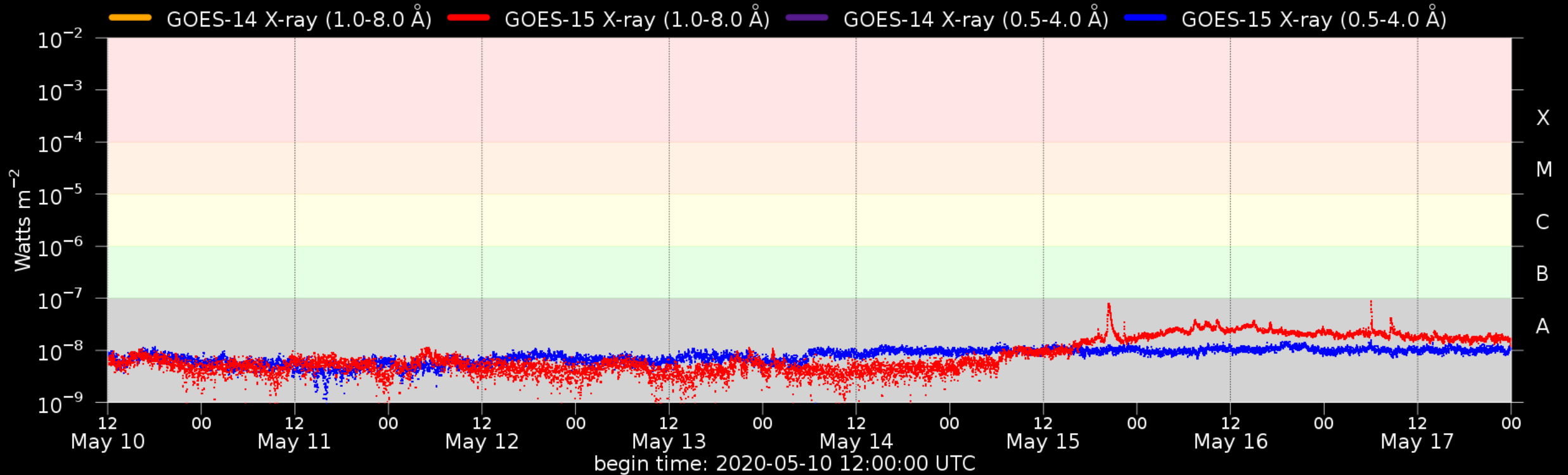
Solar F10.7cm radio flux



Solar X-Ray and UV flux



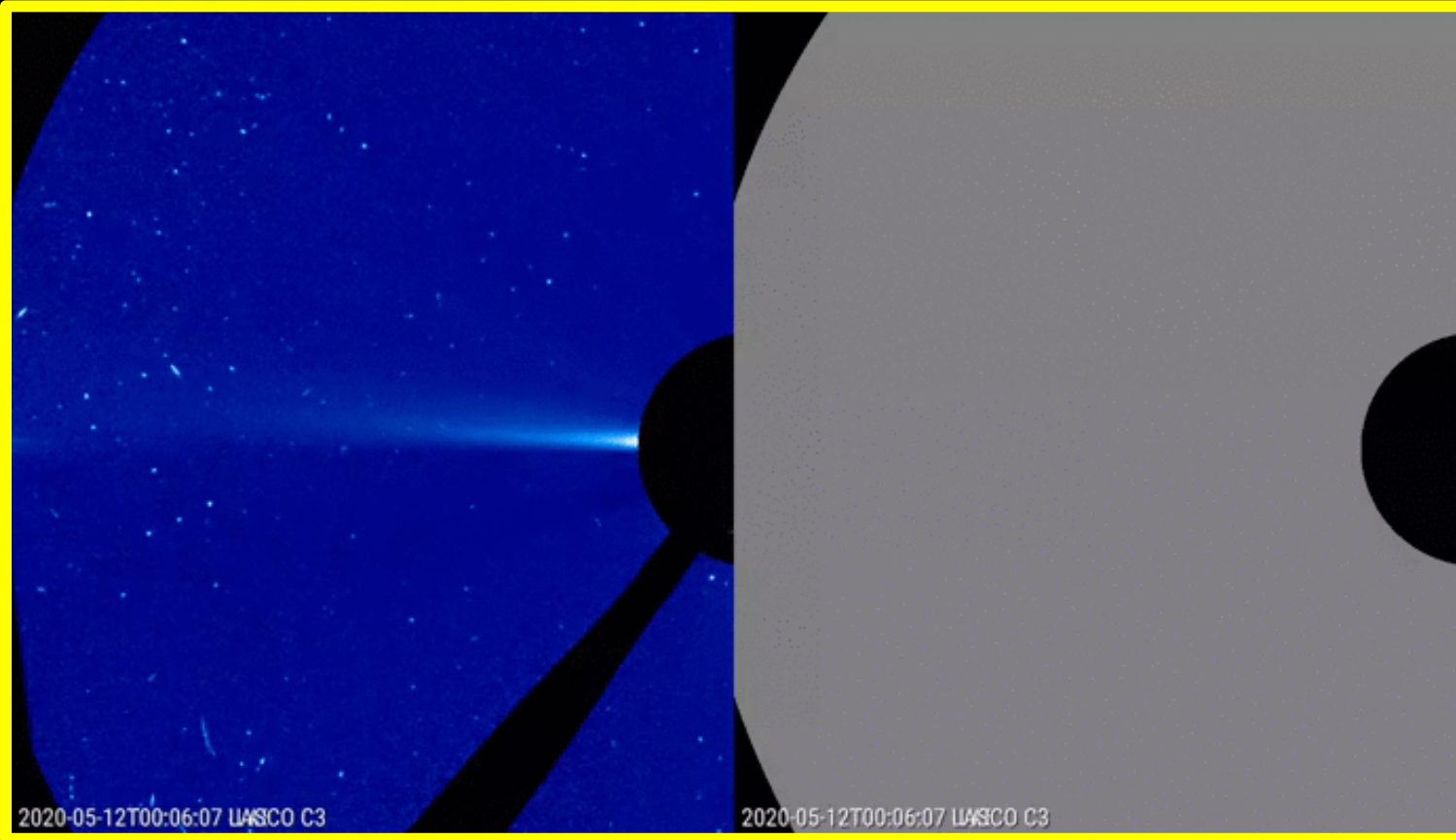
Flaring activity



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

Issue date	2020-05-10	2020-05-11	2020-05-12	2020-05-13	2020-05-14	2020-05-15	2020-05-16	2020-05-17
Probability	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 15 01 01	--- 10 01 01
Observed	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00

Coronal Mass Ejection



S

W

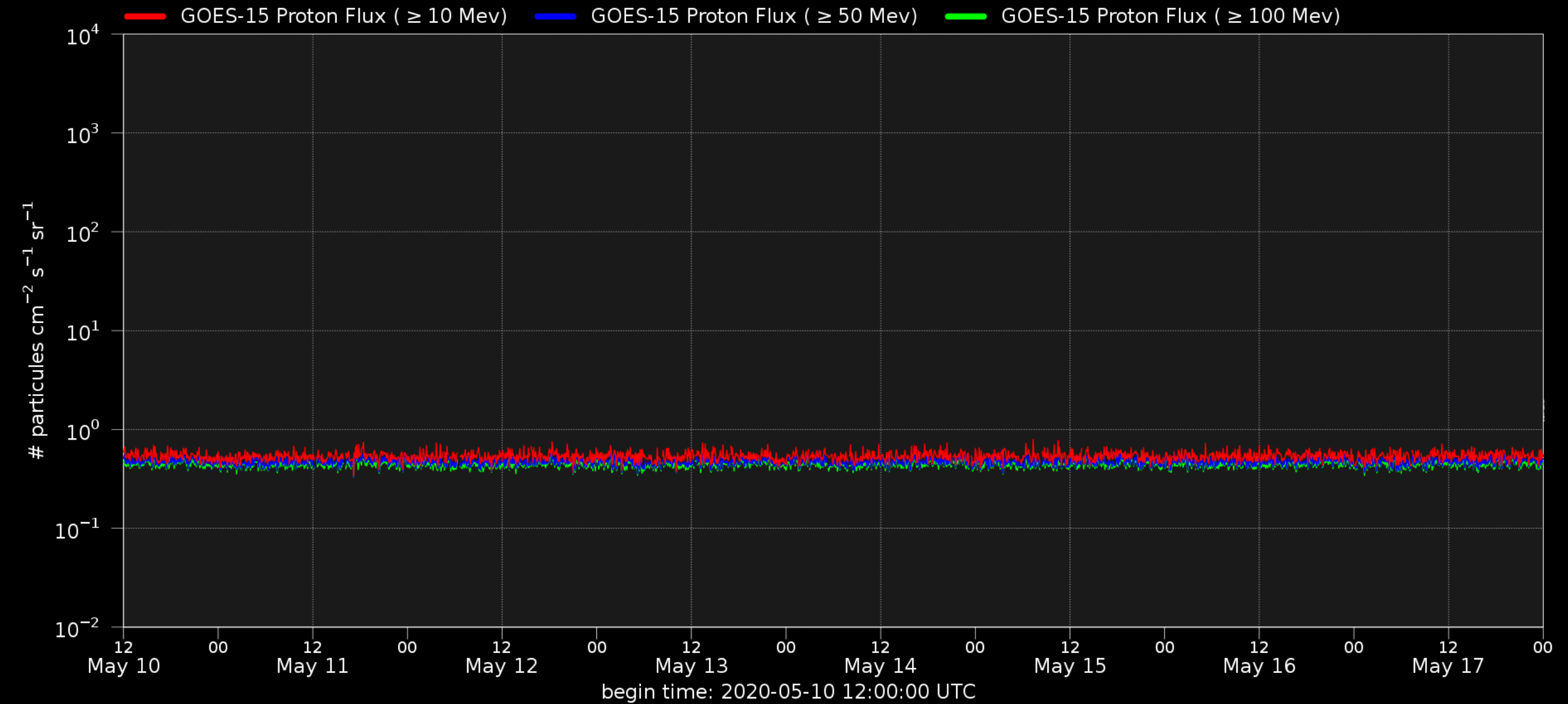
N

FF

A

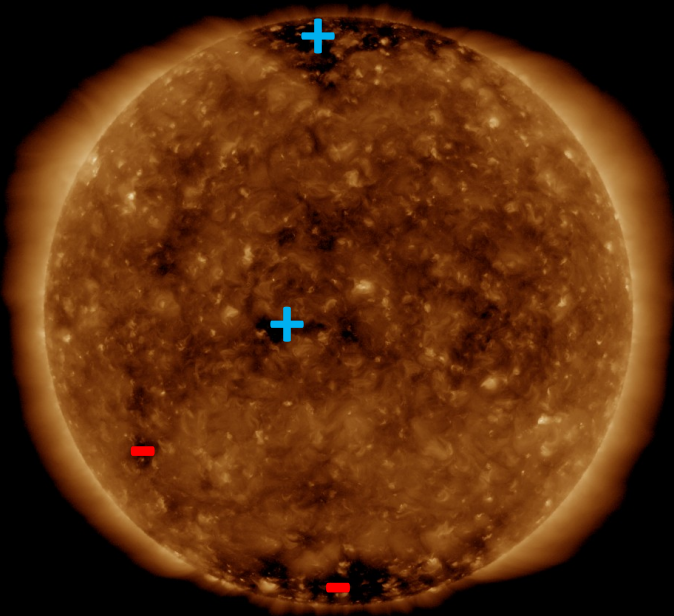
05:12 05/17
00:24 05/17
20:48 05/16
22:00 05/15
17:36 05/15
14:48 05/15
11:54 05/15
09:12 05/15
05:36 05/15
00:48 05/15
21:48 05/14
18:24 05/14
15:36 05/14
12:48 05/14
09:48 05/14
06:48 05/14
04:00 05/14
00:36 05/14
21:12 05/13
18:00 05/13
15:16 05/13
11:48 05/13
08:24 05/13
05:36 05/13
02:36 05/13
23:24 05/12
20:00 05/12
17:00 05/12
13:36 05/12
10:36 05/12
06:48 05/12
04:00 05/12
23:48 05/11
20:24 05/11
17:36 05/11
14:36 05/11
11:12 05/11
08:24 05/11
05:42 05/11
02:48 05/11
00:00 05/11

Solar proton flux



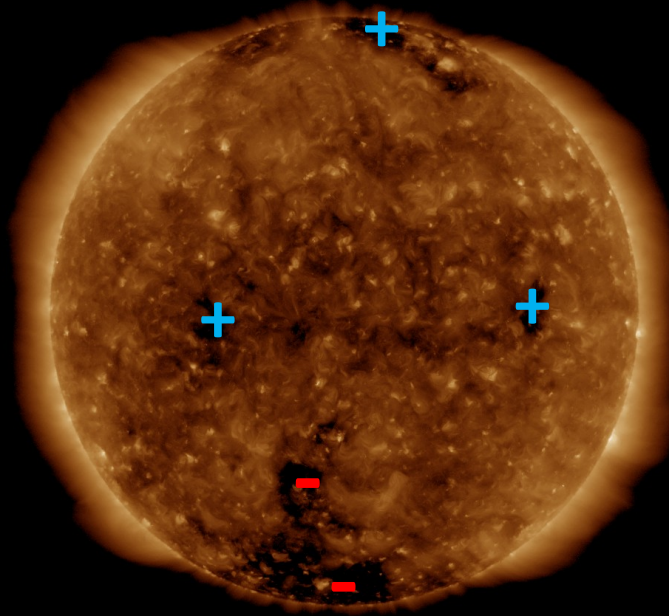
Solar active region & Coronal hole

SDO/AIA 19.3 nm 2020-05-10



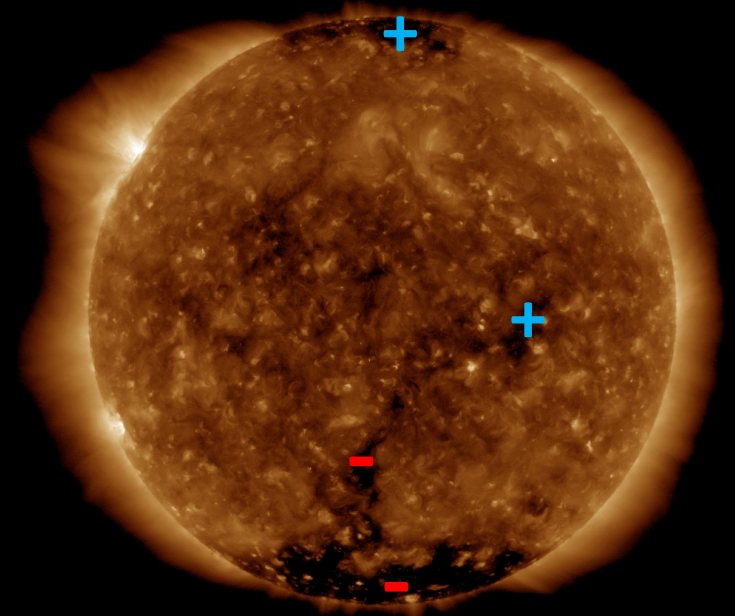
SDO/AIA 193 2020-05-10 12:10:41 UT

SDO/AIA 19.3 nm 2020-05-13



SDO/AIA 193 2020-05-13 12:10:05 UT

SDO/AIA 19.3 nm 2020-05-17



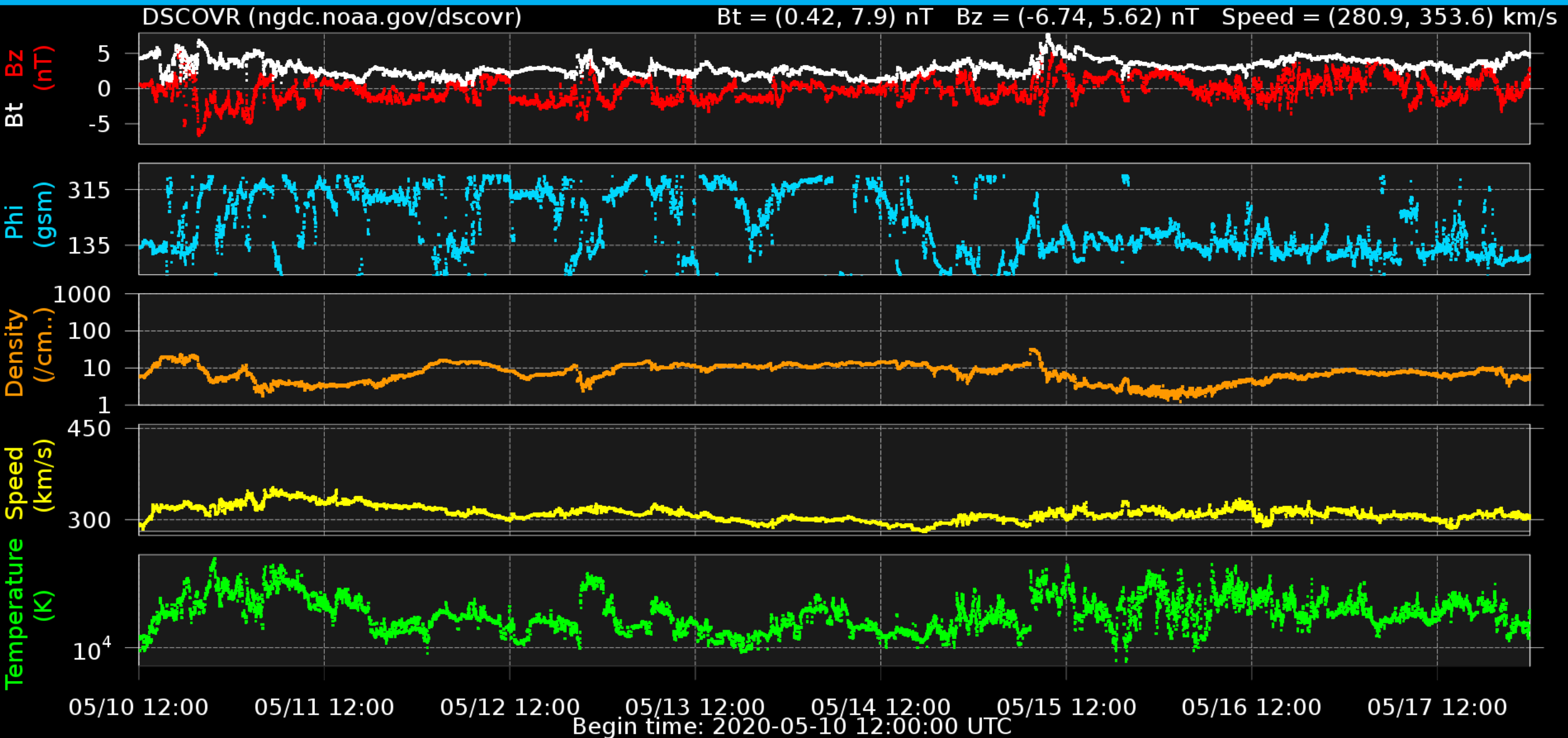
SDO/AIA 193 2020-05-17 12:10:17 UT

Solar Wind and Geomagnetic Activity

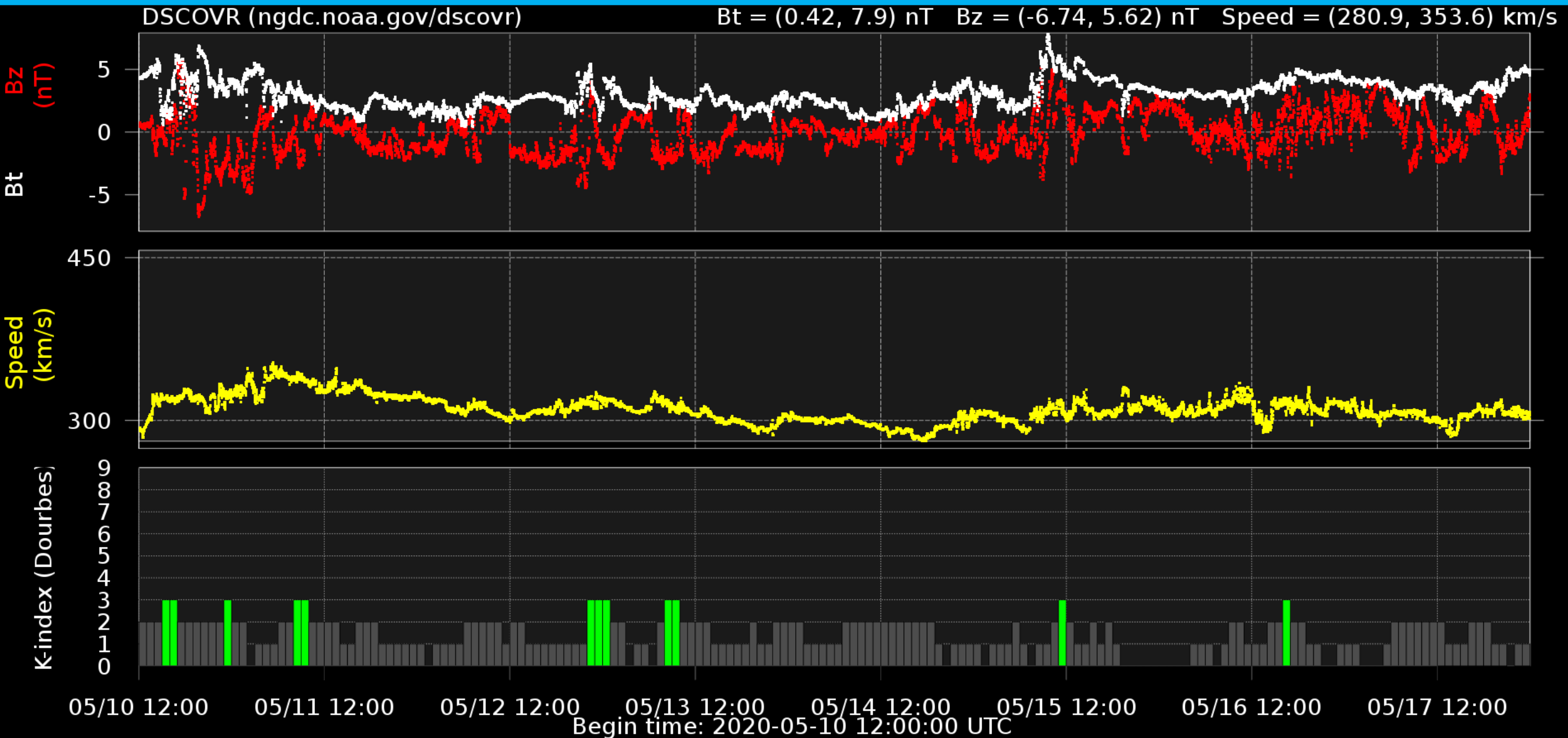


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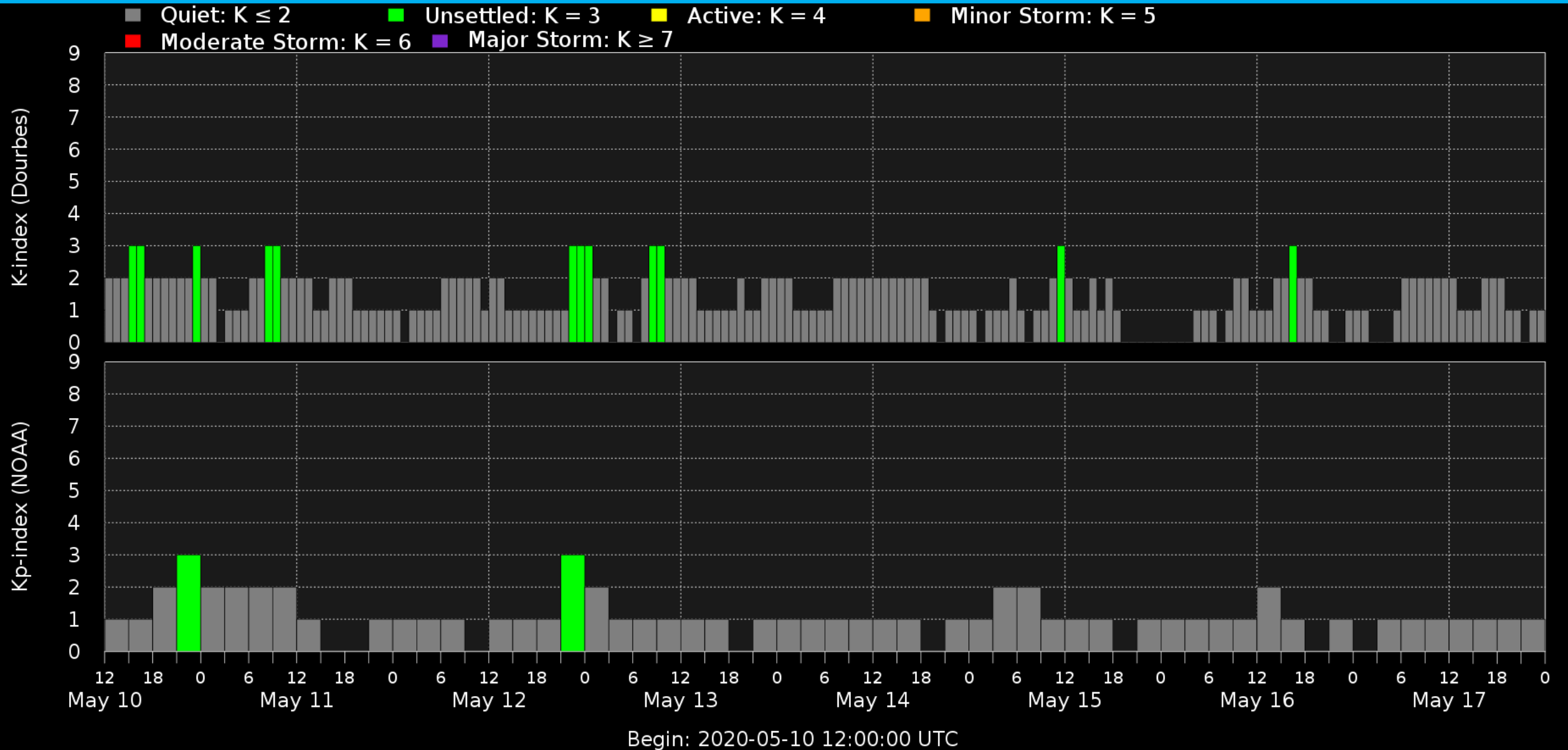
Solar wind parameters (DSCOVR data)



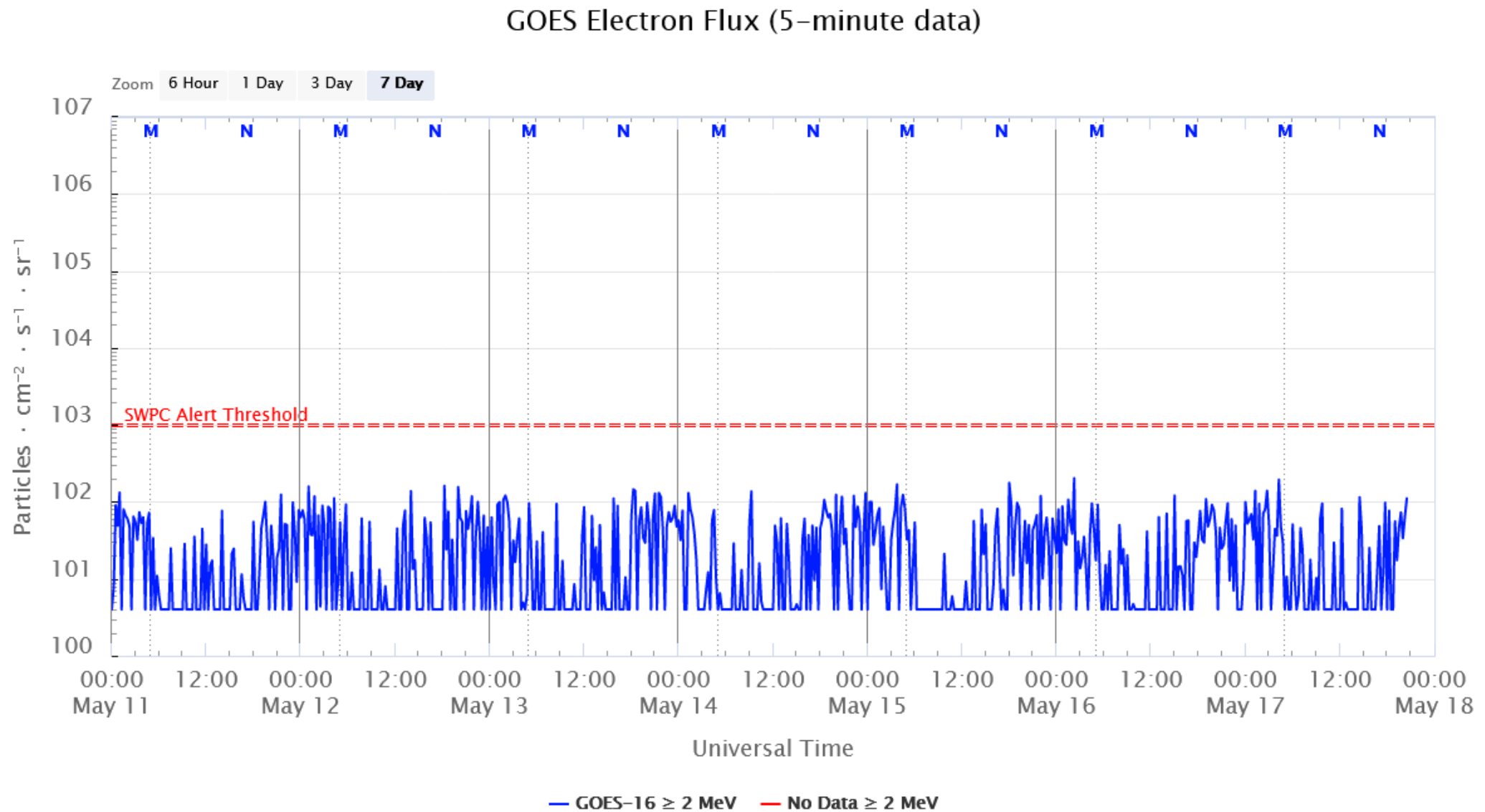
Solar wind parameters & K-index (DSCOVR/Dourbes)



Geomagnetic activity (K-indexes)



Solar ≥ 2 MeV electron flux



Updated 2020-05-17 20:35 UTC

Space Weather Prediction Center

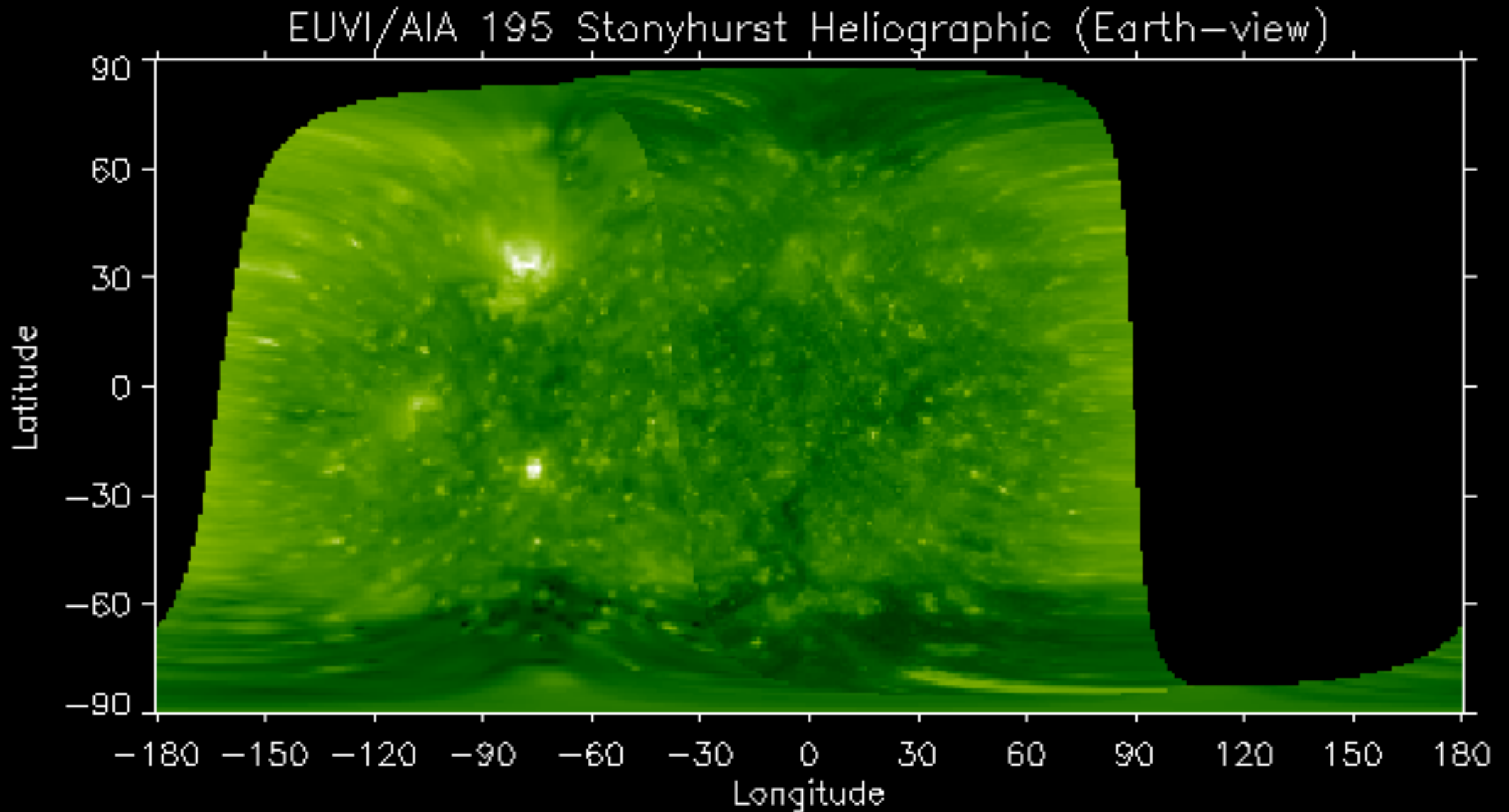
Outlook



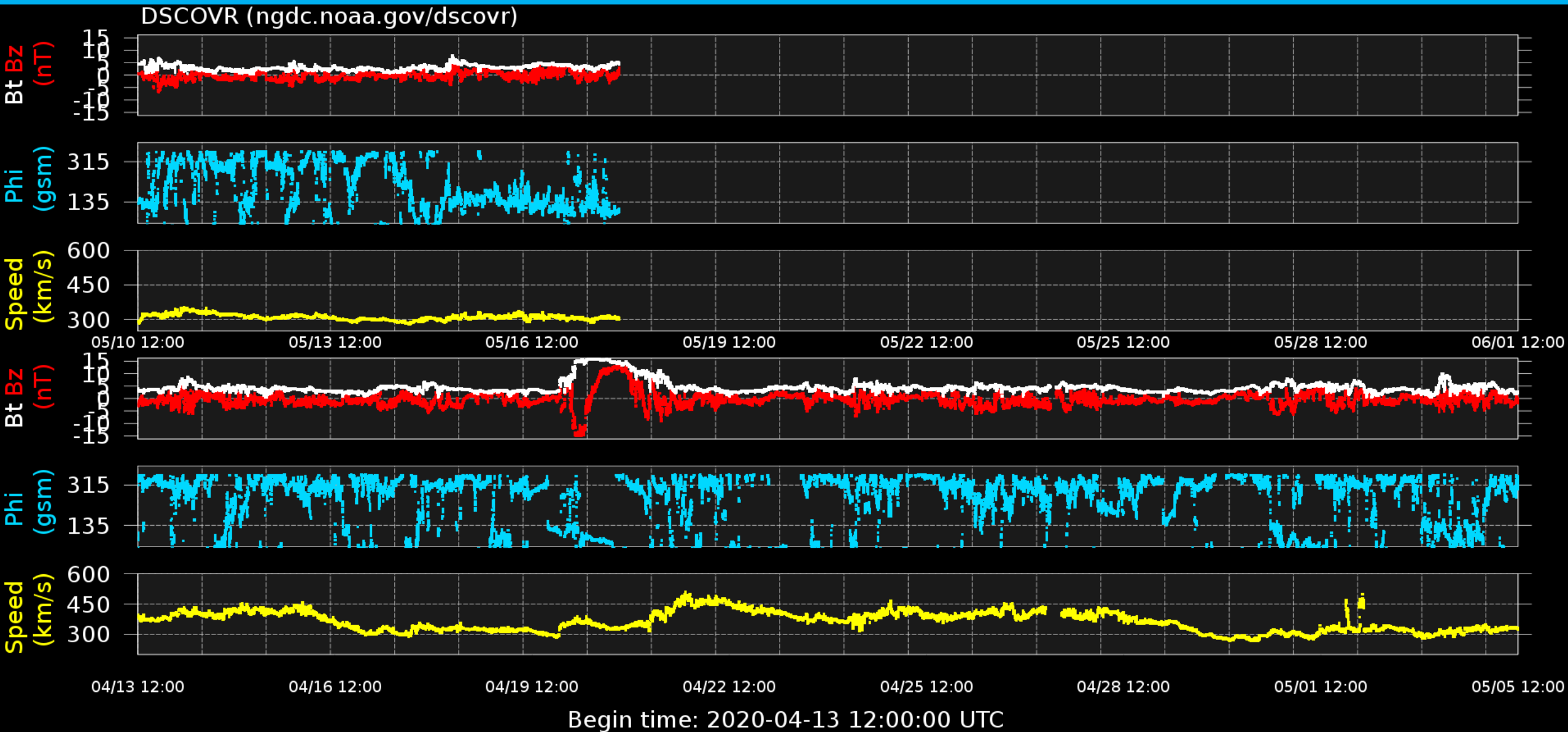
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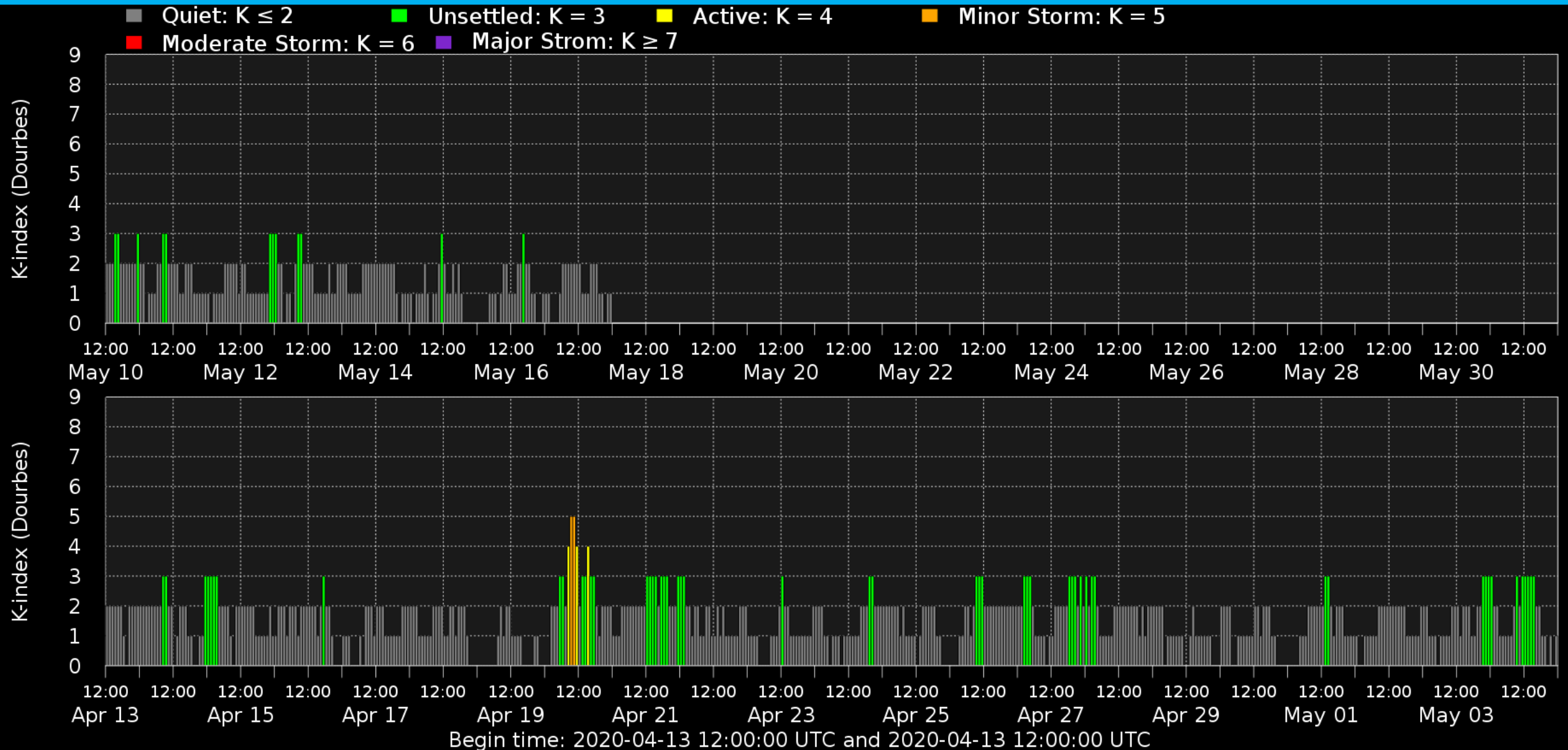
Outlook: Solar activity



Outlook: Solar wind



Outlook: Geomagnetic activity



SIDC Space Weather Briefing

See you at our next briefing!

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