

SIDC Space Weather Briefing

12 April 2020 - 19 April 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 2020-04-12 12:00 UT to 2020-04-19 12:00 UT

Active regions	The Sun was spotless all week
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	None
CMEs	Some CMEs observed, with maybe 1 having an earth-directed component (data gap)
Proton Events	Proton flux was at nominal levels

Solar wind and geomagnetic conditions from 2020-04-12 12:00 UT to 2020-04-19 12:00 UT

Coronal Holes	Patchy CHs, and one extension of the southern polar CH
ICME	None
SW Conditions	Mildly enhanced: SW speed up to +/- 450 km/s ; Bz: -6 nT
K-indices	max K-index (Dourbes): 3.0 max Kp-index (NOAA): 3

All Quiet Alert: ON since 20 February 2020

Solar Activity

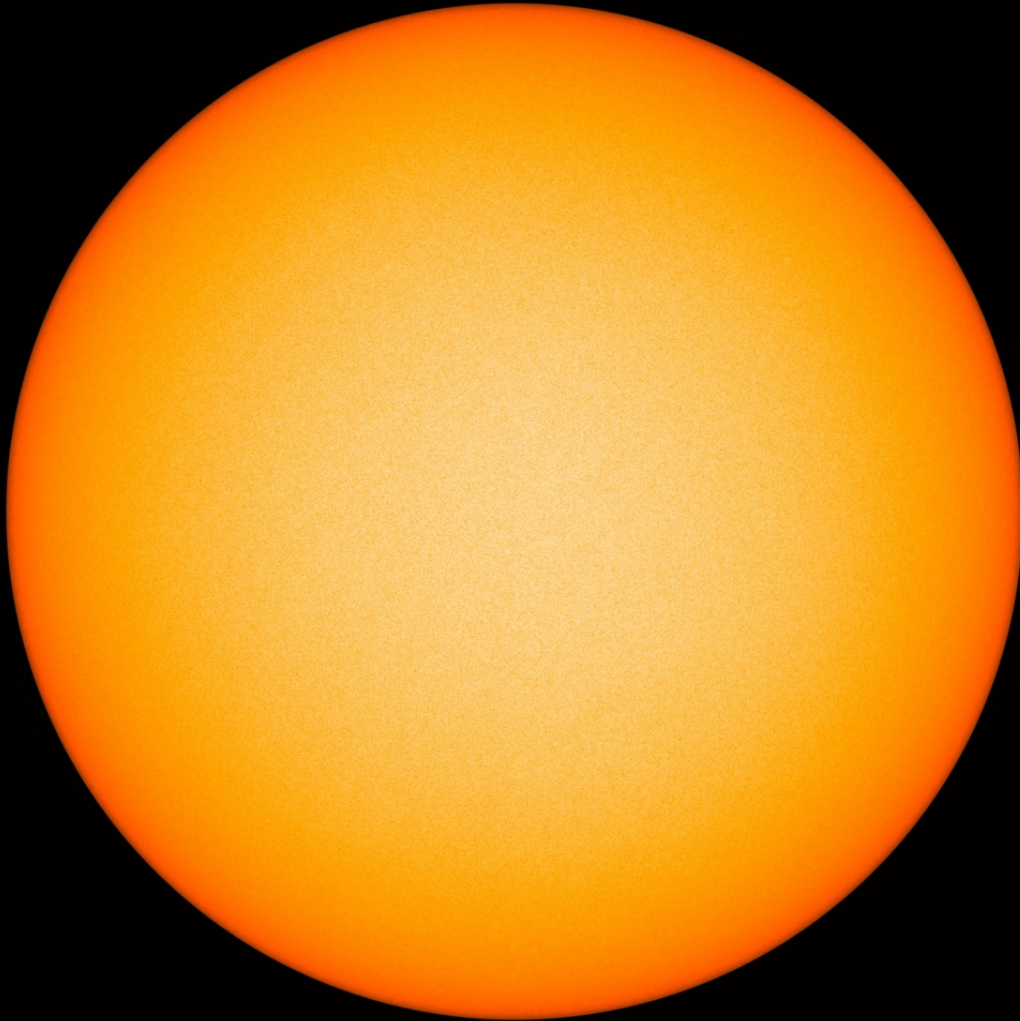


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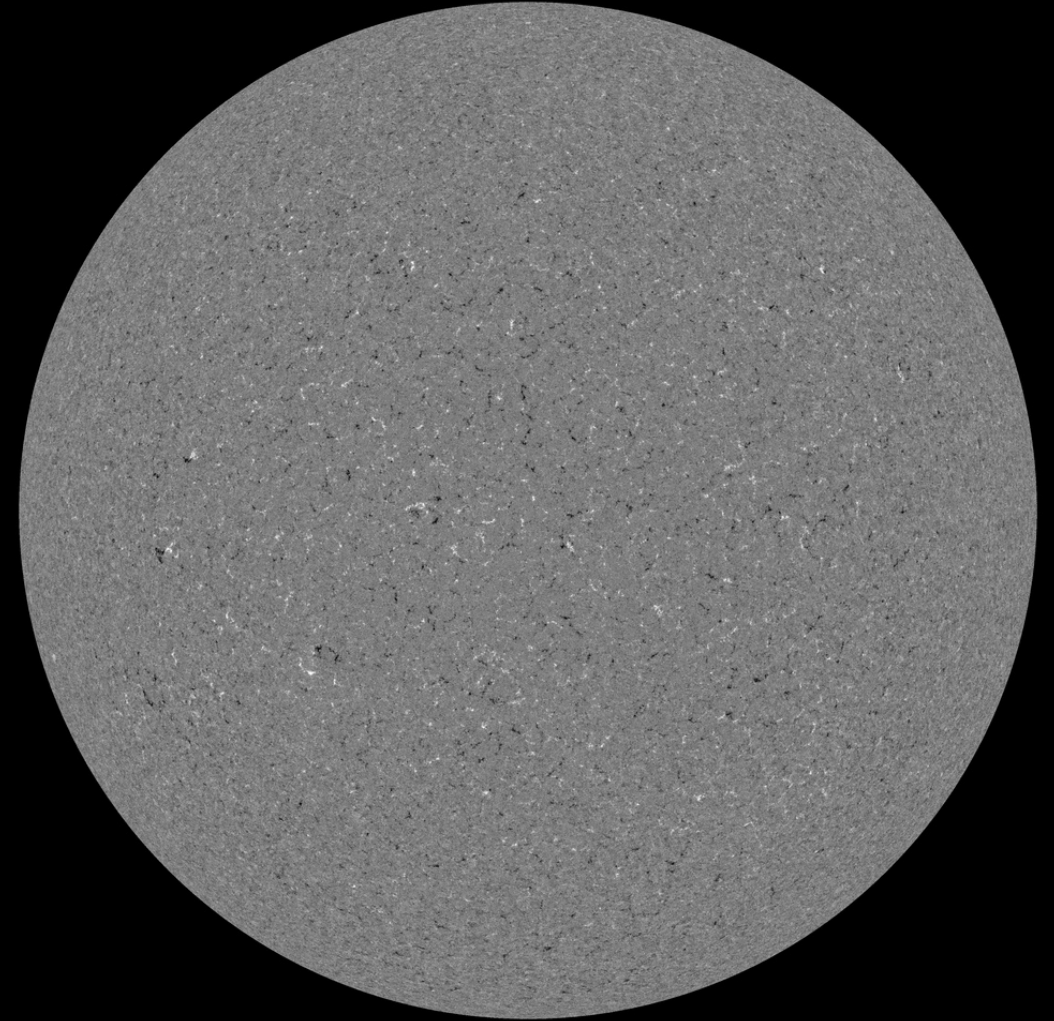
Solar active region - start of the week

SDO/HMI White Light 2020-04-12



SDO/HMI Quick-Look Continuum: 20200412_114500

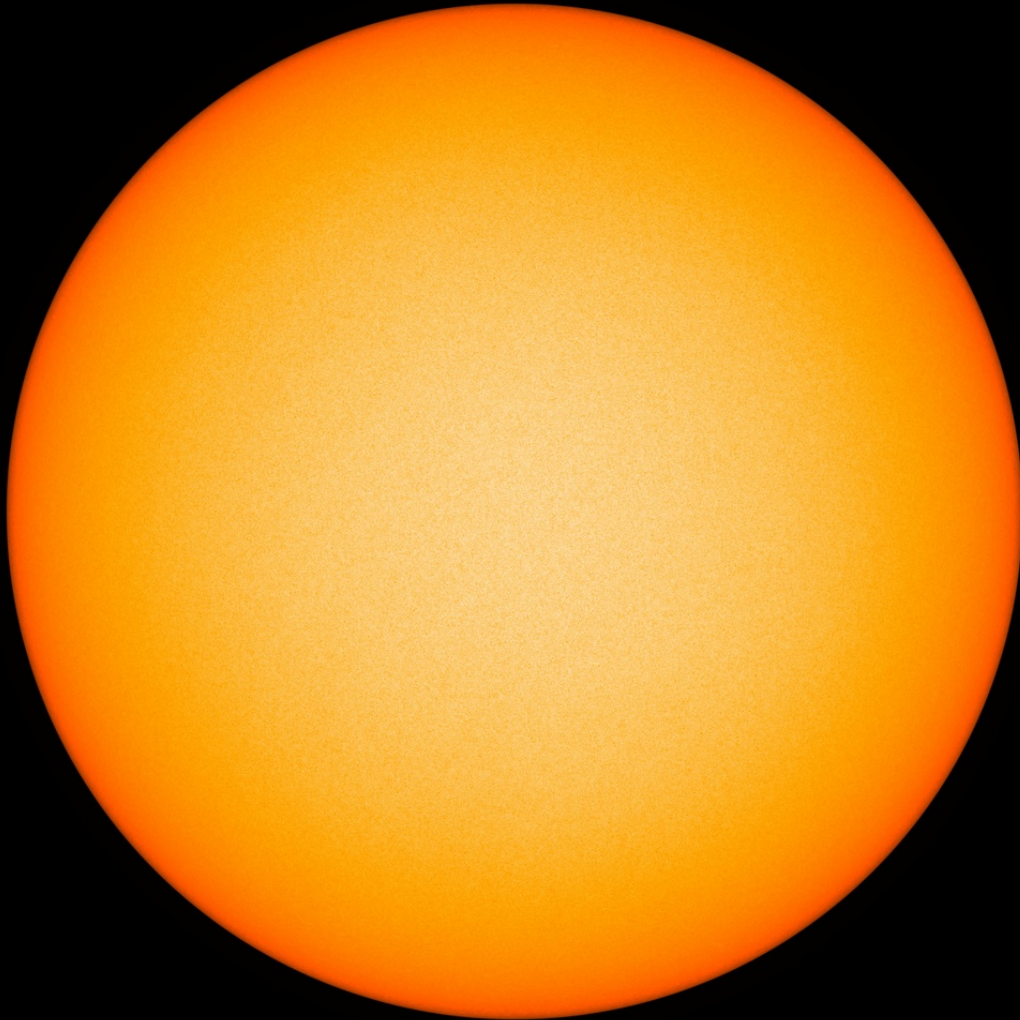
SDO/HMI Magnetogram 2020-04-12



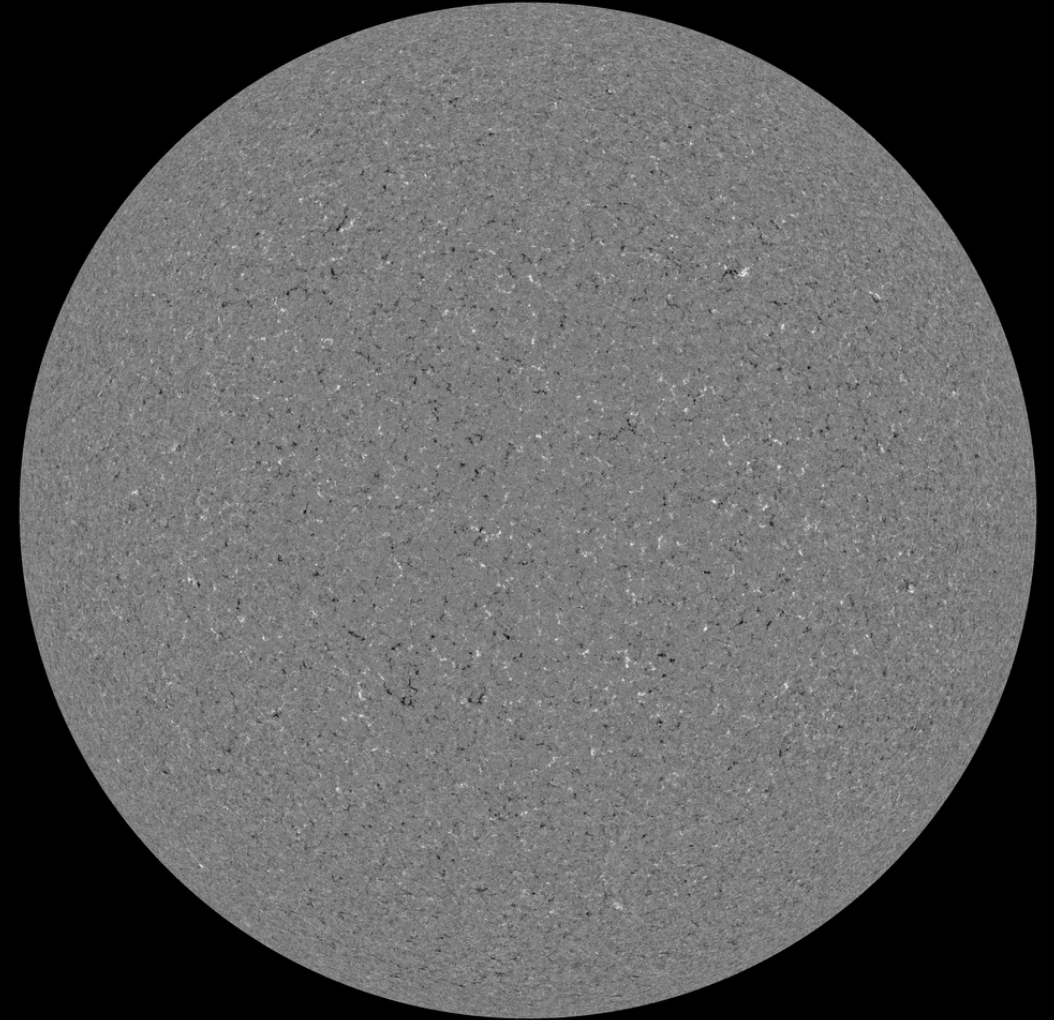
SDO/HMI Quick-Look Magnetogram: 20200412_114500

Solar active region - middle of the week

SDO/HMI White Light 2020-04-15



SDO/HMI Magnetogram 2020-04-15

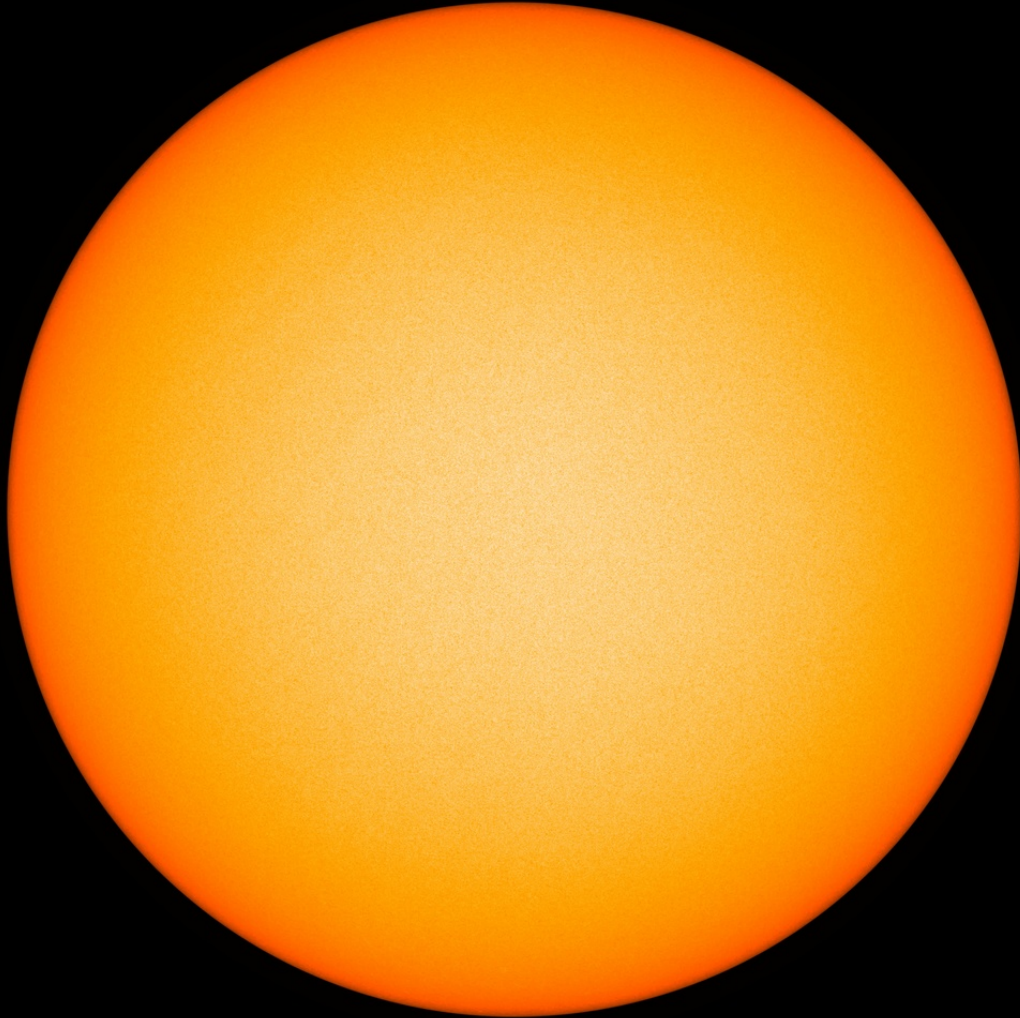


SDO/HMI Quick-Look Continuum: 20200415_114500

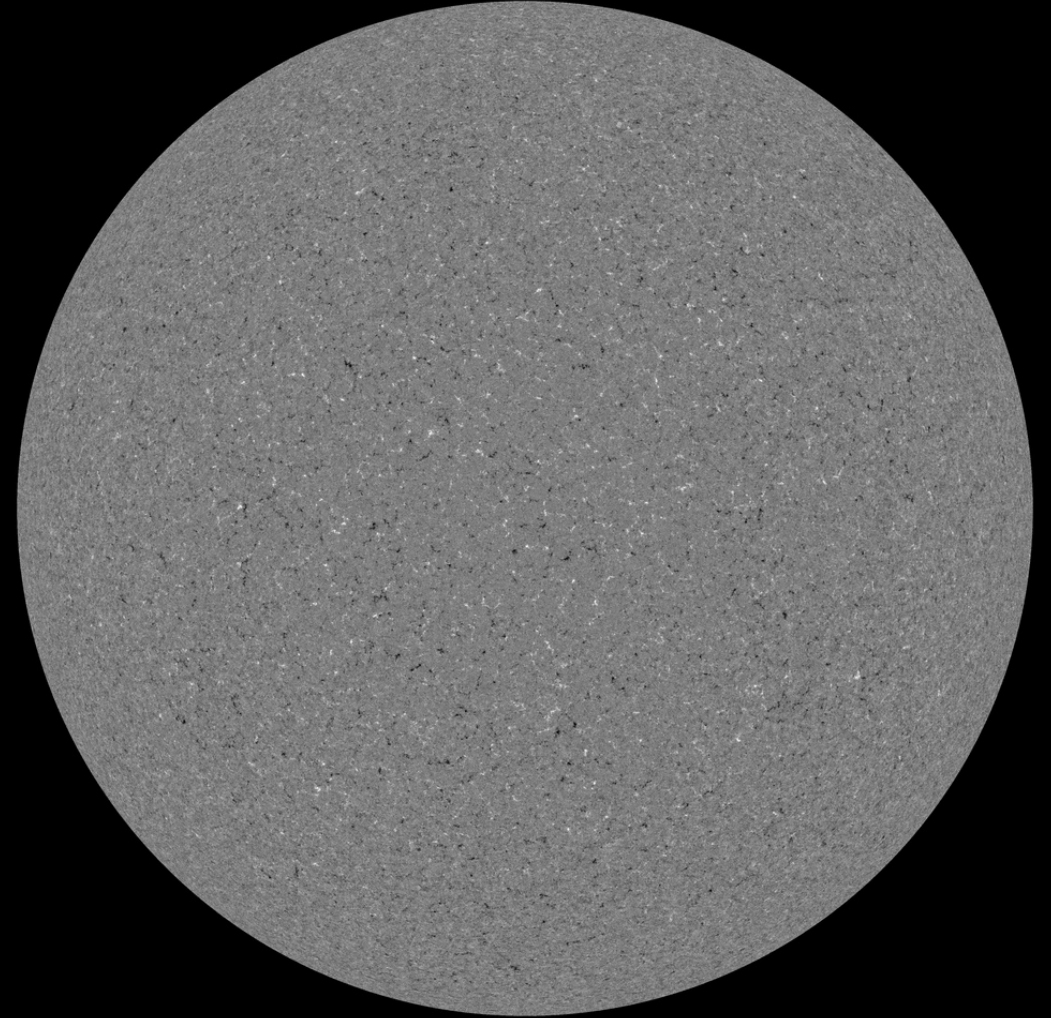
SDO/HMI Quick-Look Magnetogram: 20200415_114500

Solar active region - end of the week

SDO/HMI White Light 2020-04-19



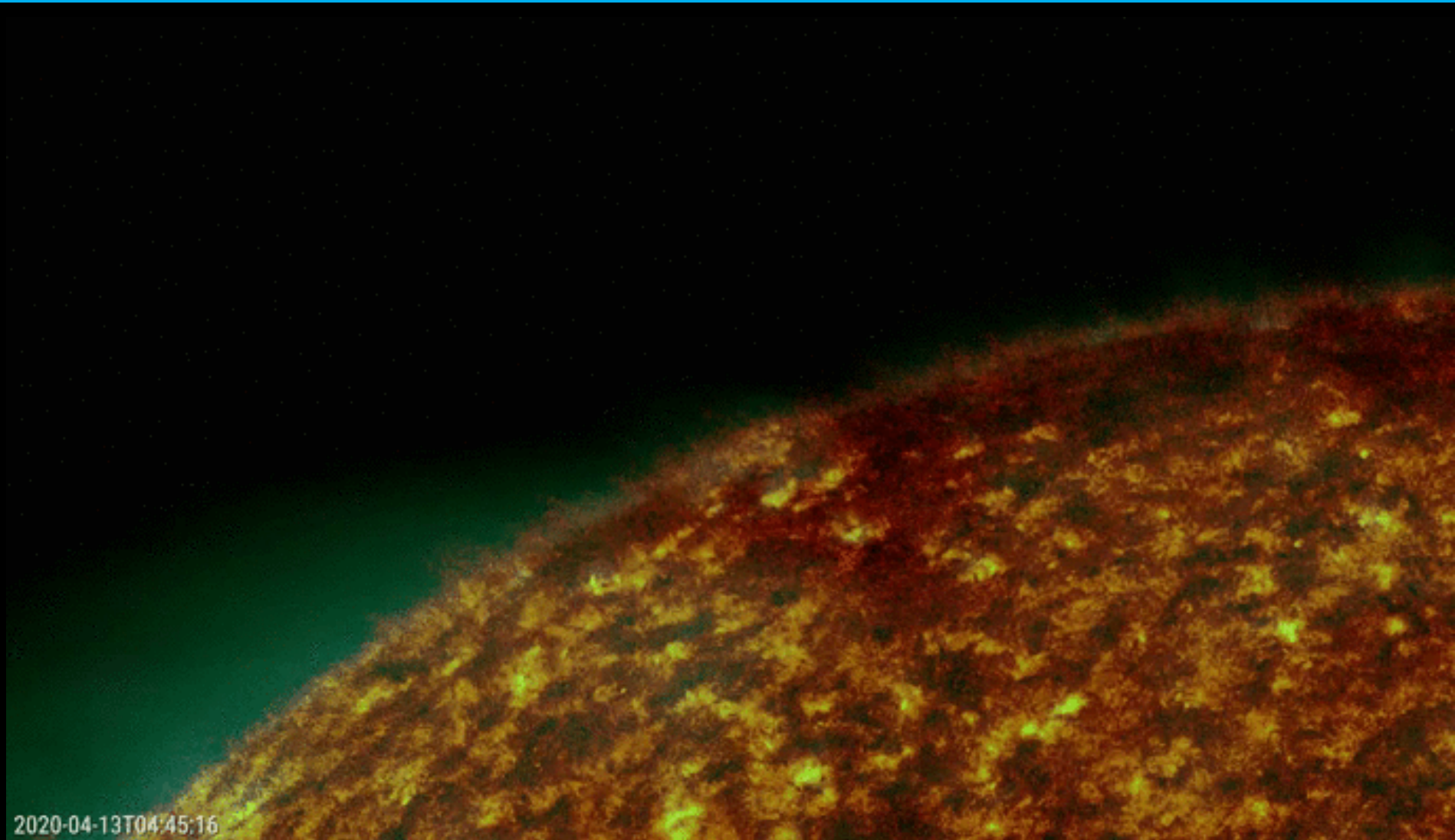
SDO/HMI Magnetogram 2020-04-19



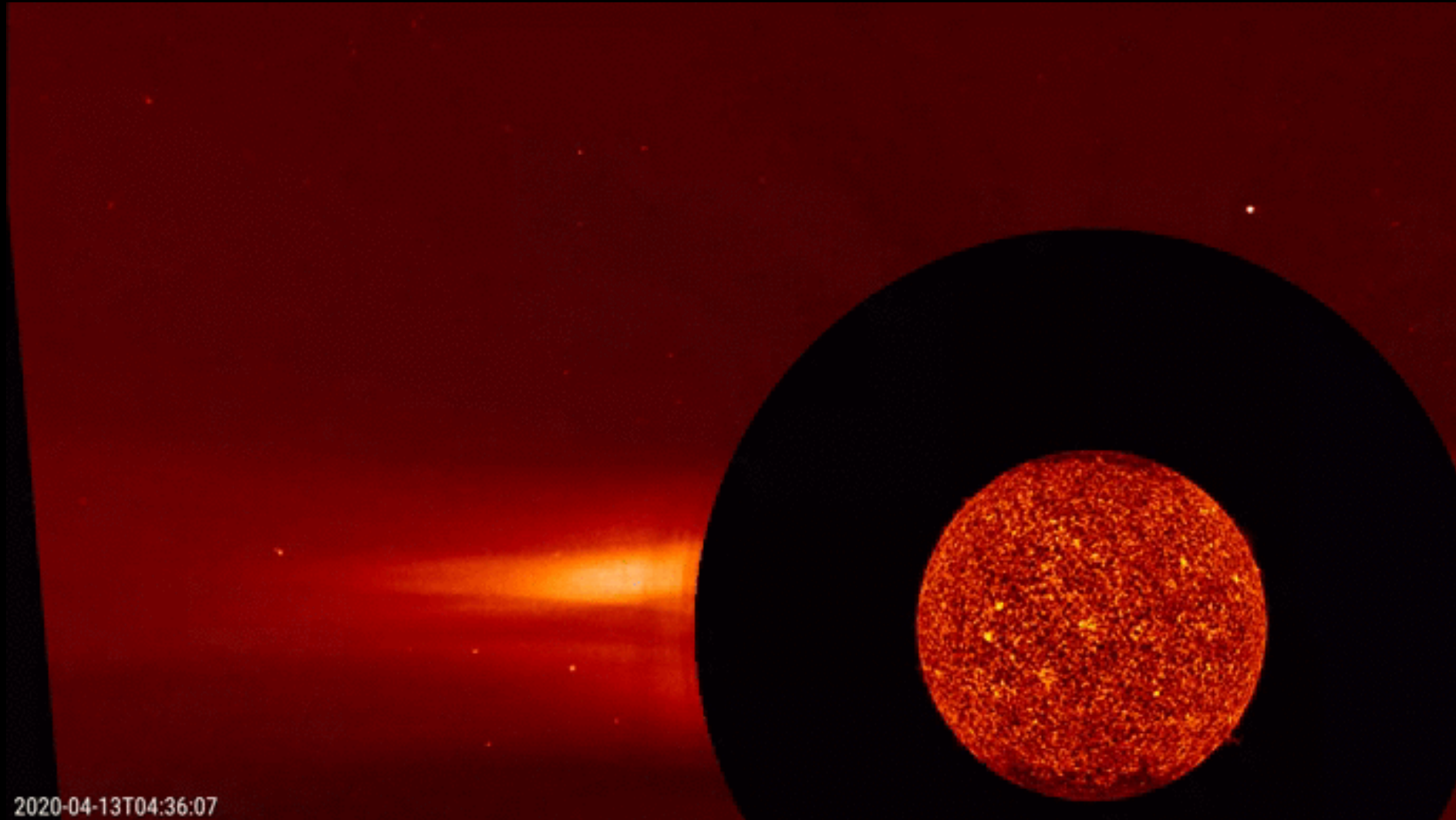
SDO/HMI Quick-Look Continuum: 20200419_114500

SDO/HMI Quick-Look Magnetogram: 20200419_114500

Small eruption on 13 April



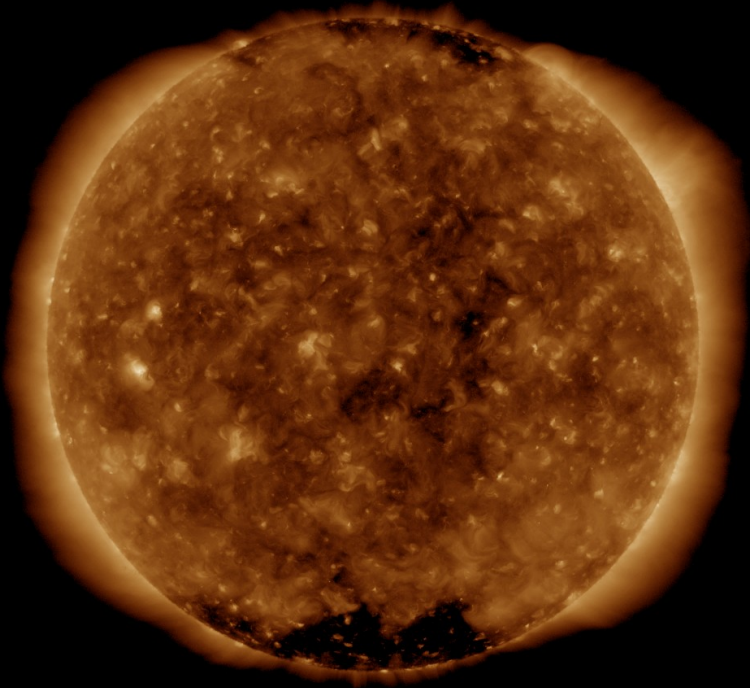
Small eruption on 13 April – Fast, narrow CME



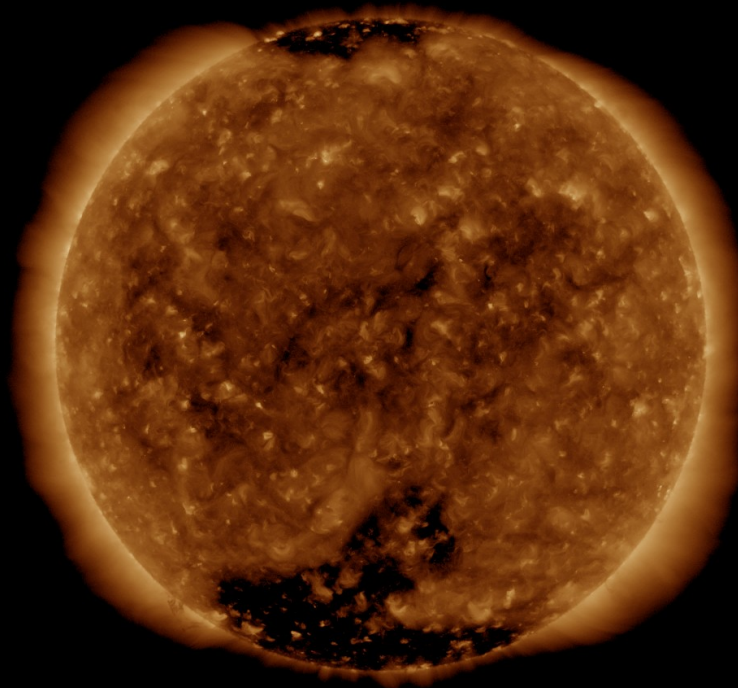
2020-04-13T04:36:07

Solar active region & Coronal hole

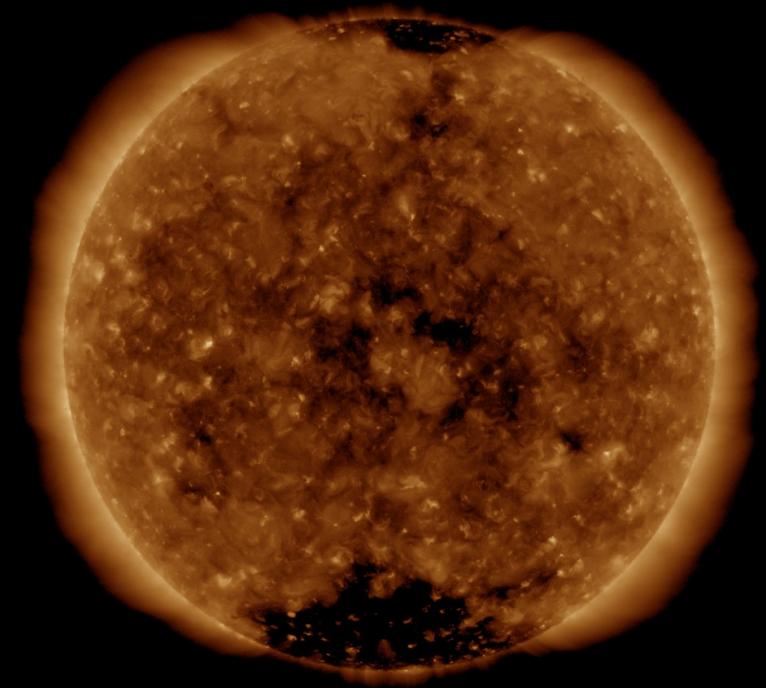
SDO/AIA 19.3 nm 2020-04-12



SDO/AIA 19.3 nm 2020-04-16



SDO/AIA 19.3 nm 2020-04-19



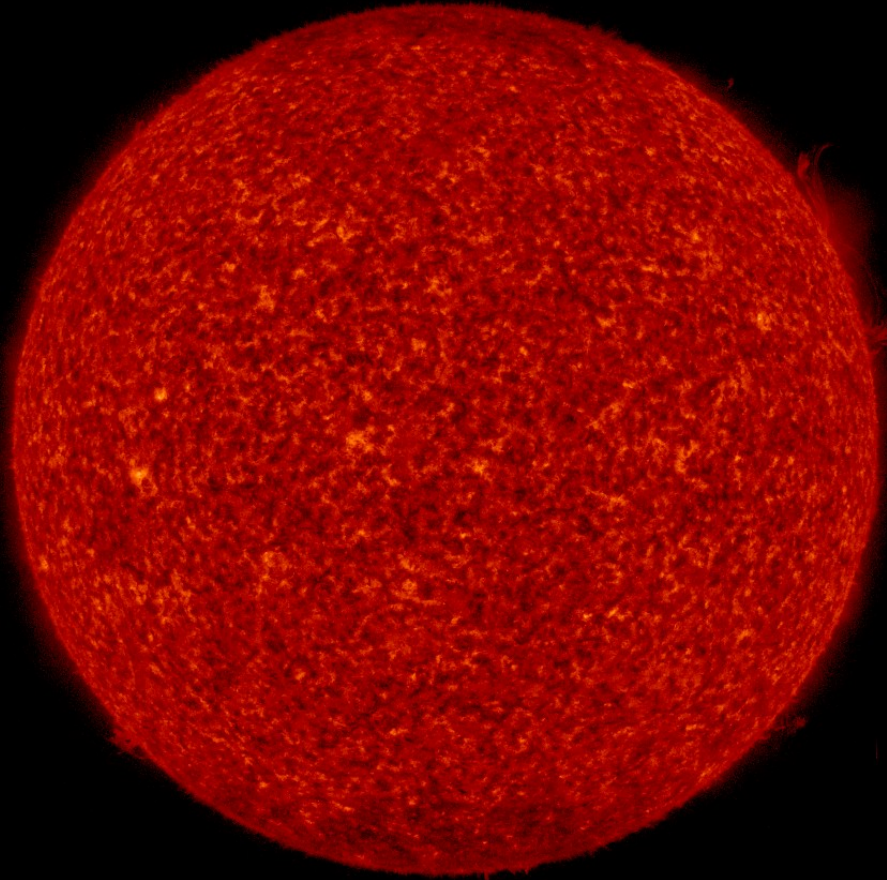
SDO/AIA 193 2020-04-12 12:10:29 UT

SDO/AIA 193 2020-04-16 12:10:29 UT

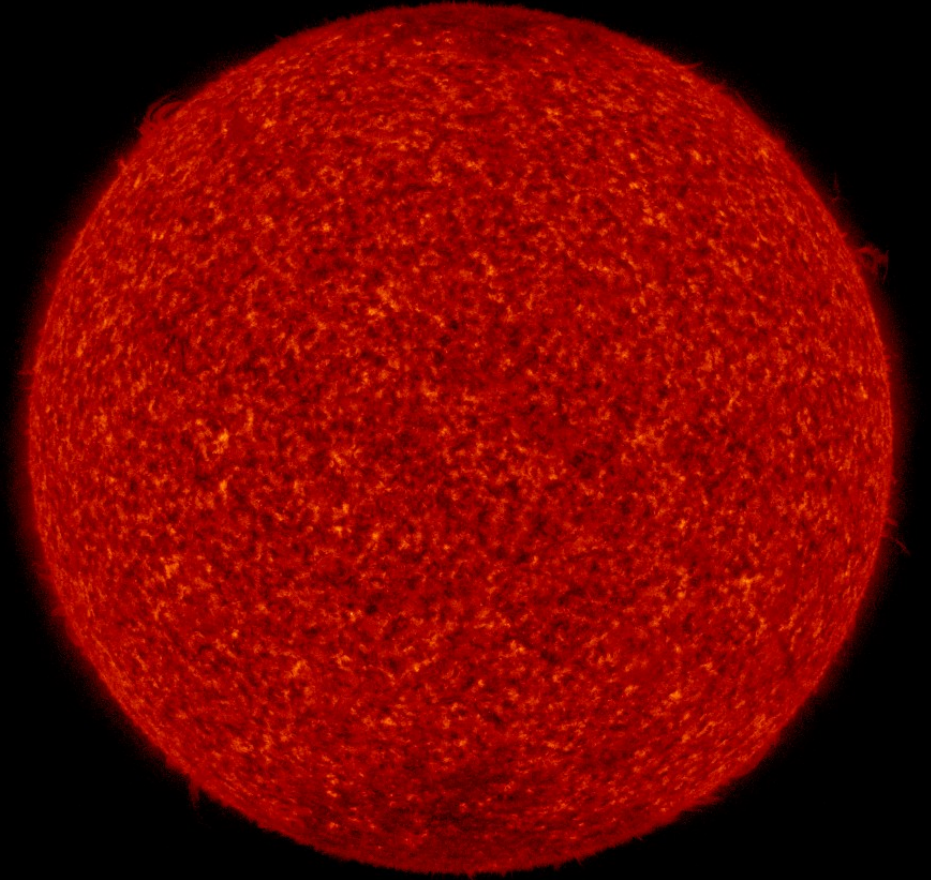
SDO/AIA 193 2020-04-19 12:10:29 UT

Solar active region & Filament

SDO/AIA 30.4 nm 2020-04-12



SDO/AIA 30.4 nm 2020-04-19



SDO/AIA 304 2020-04-12 12:13:30 UT

SDO/AIA 304 2020-04-19 12:13:06 UT

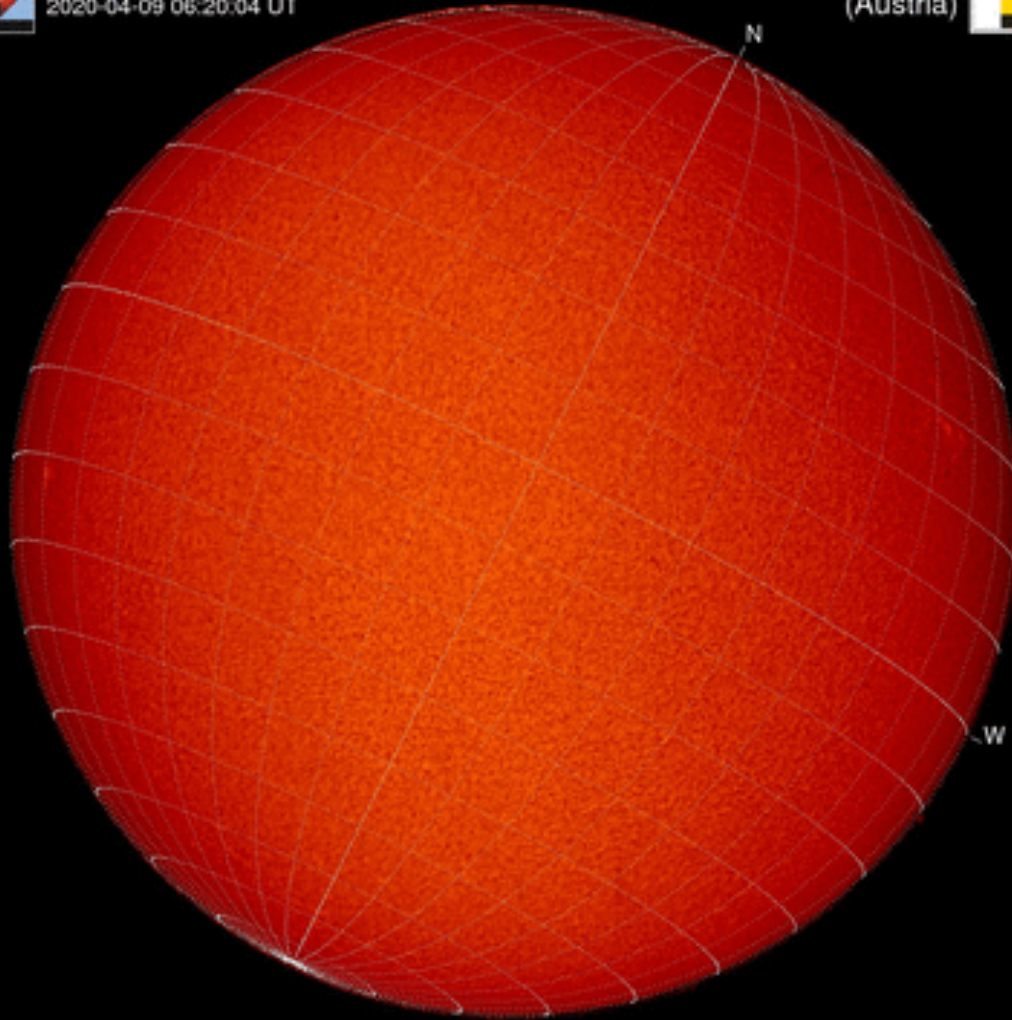
Filament & Filament eruption

H-alpha 2020-04-12



Kanzelhöhe Observatory
2020-04-09 06:20:04 UT

University of Graz
(Austria)

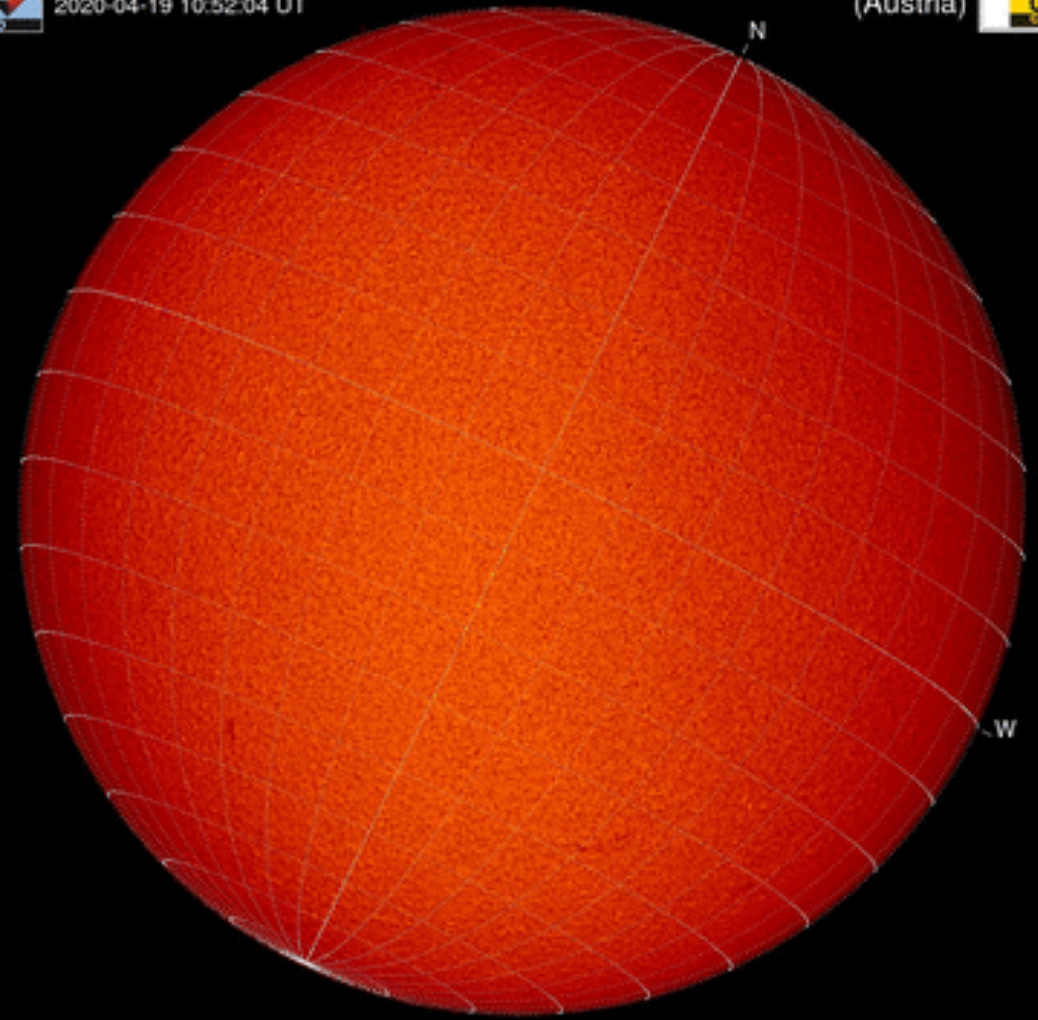


H-alpha 2020-04-19

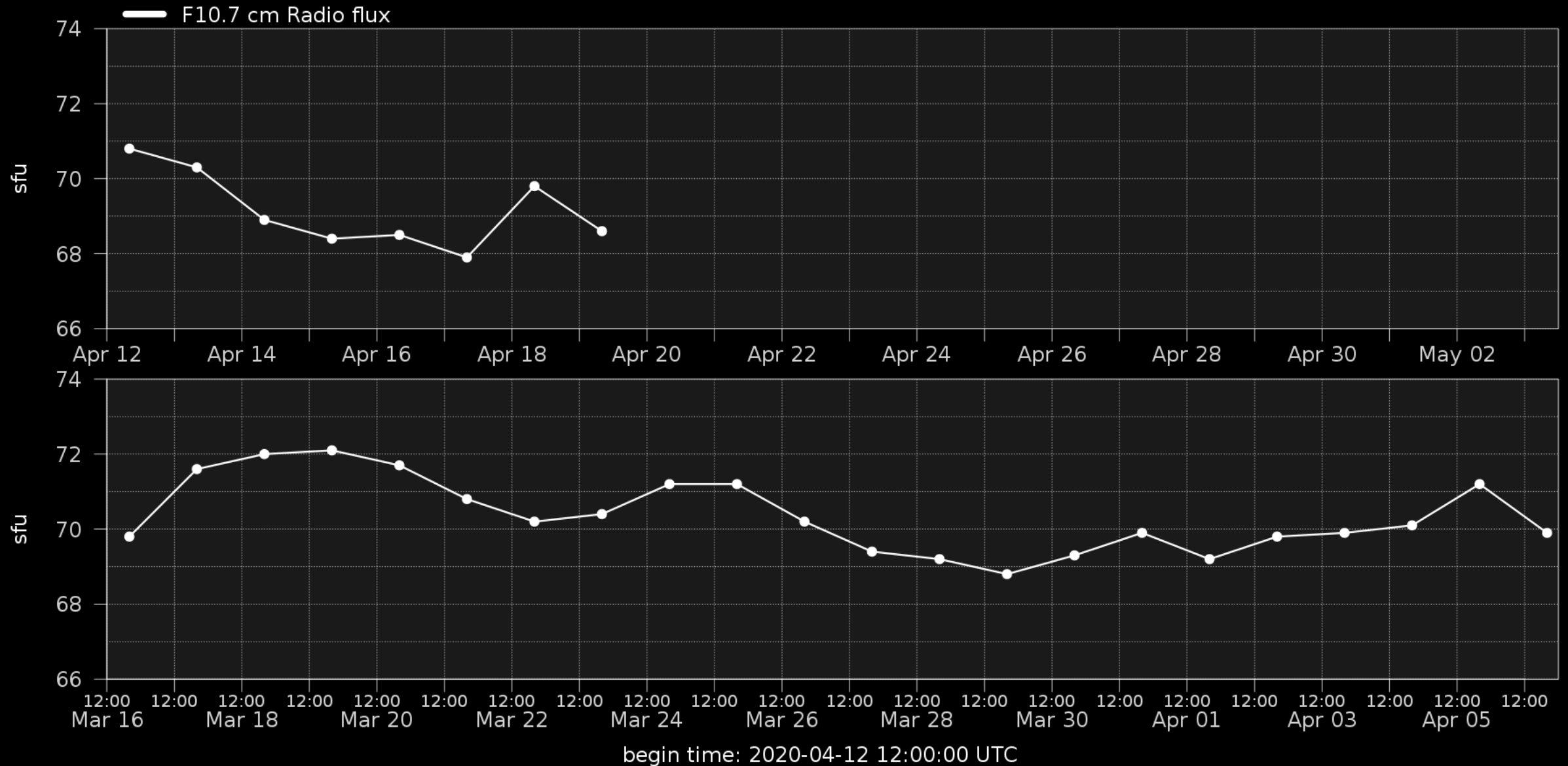


Kanzelhöhe Observatory
2020-04-19 10:52:04 UT

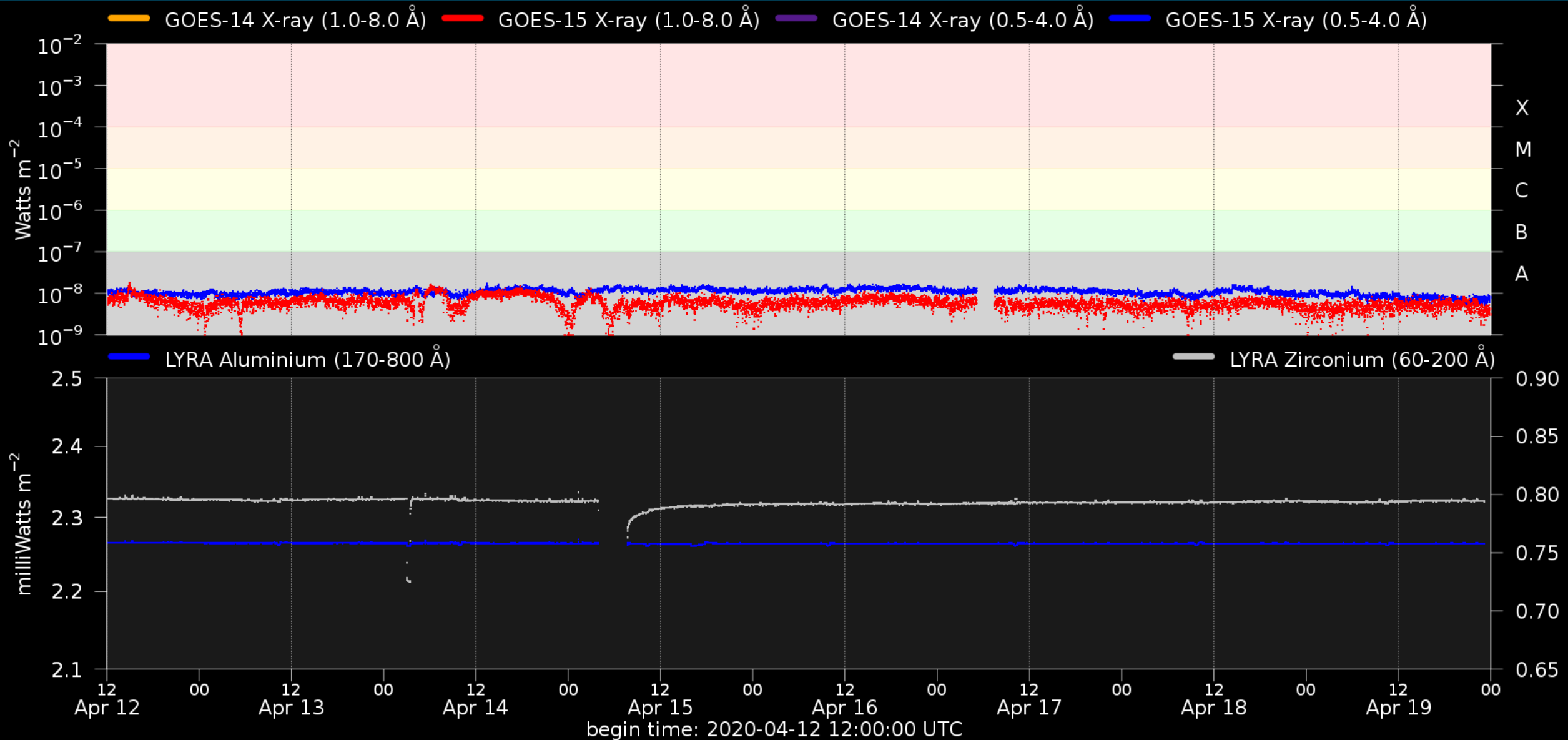
University of Graz
(Austria)



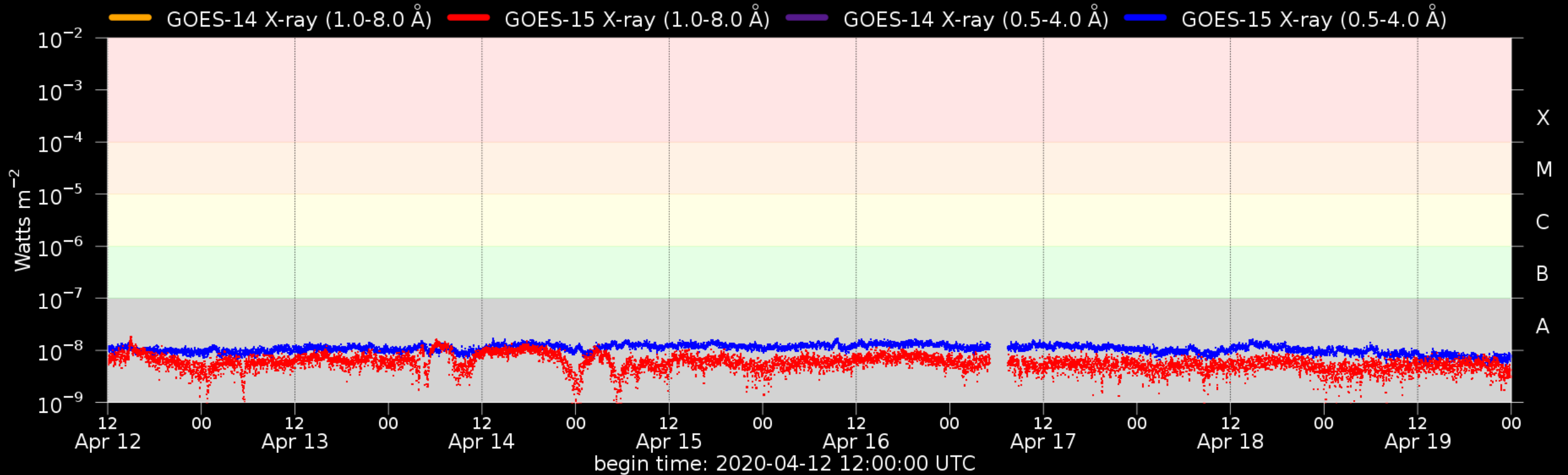
Solar F10.7cm radio flux



Solar X-Ray and UV flux



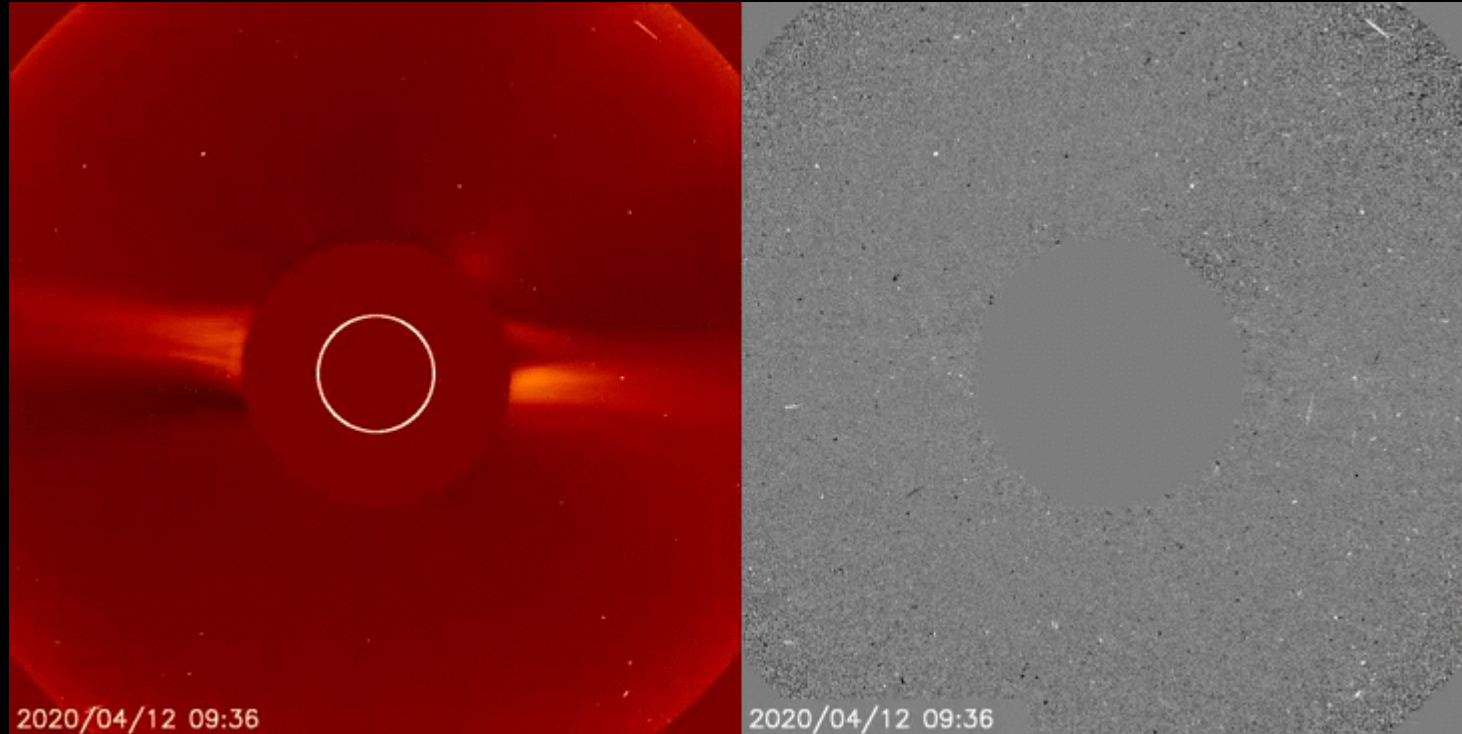
Flaring activity



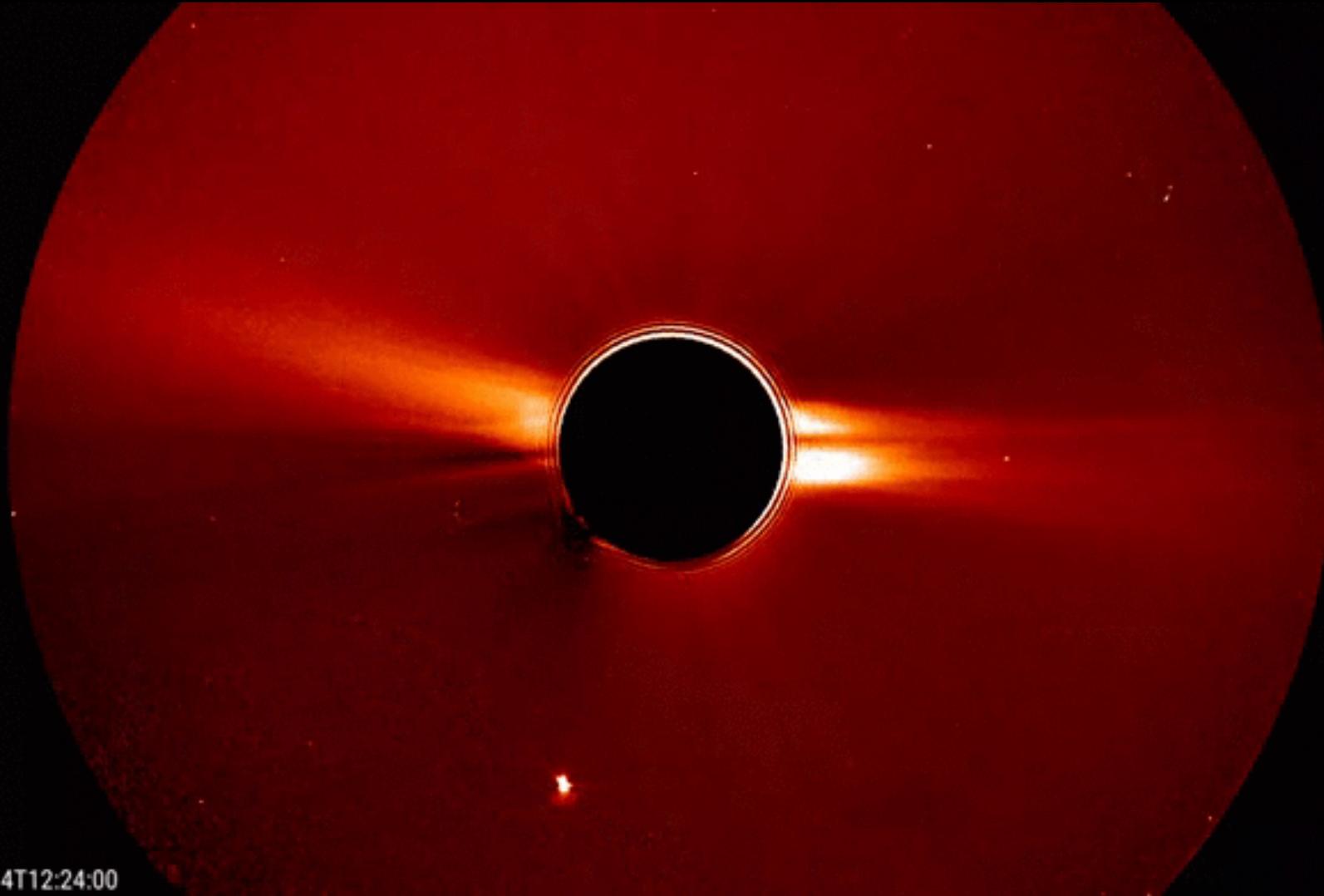
Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2020-04-12	2020-04-13	2020-04-14	2020-04-15	2020-04-16	2020-04-17	2020-04-18	2020-04-19
Probability	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 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



Double CME on 14-15 April



2020-04-14T12:24:00

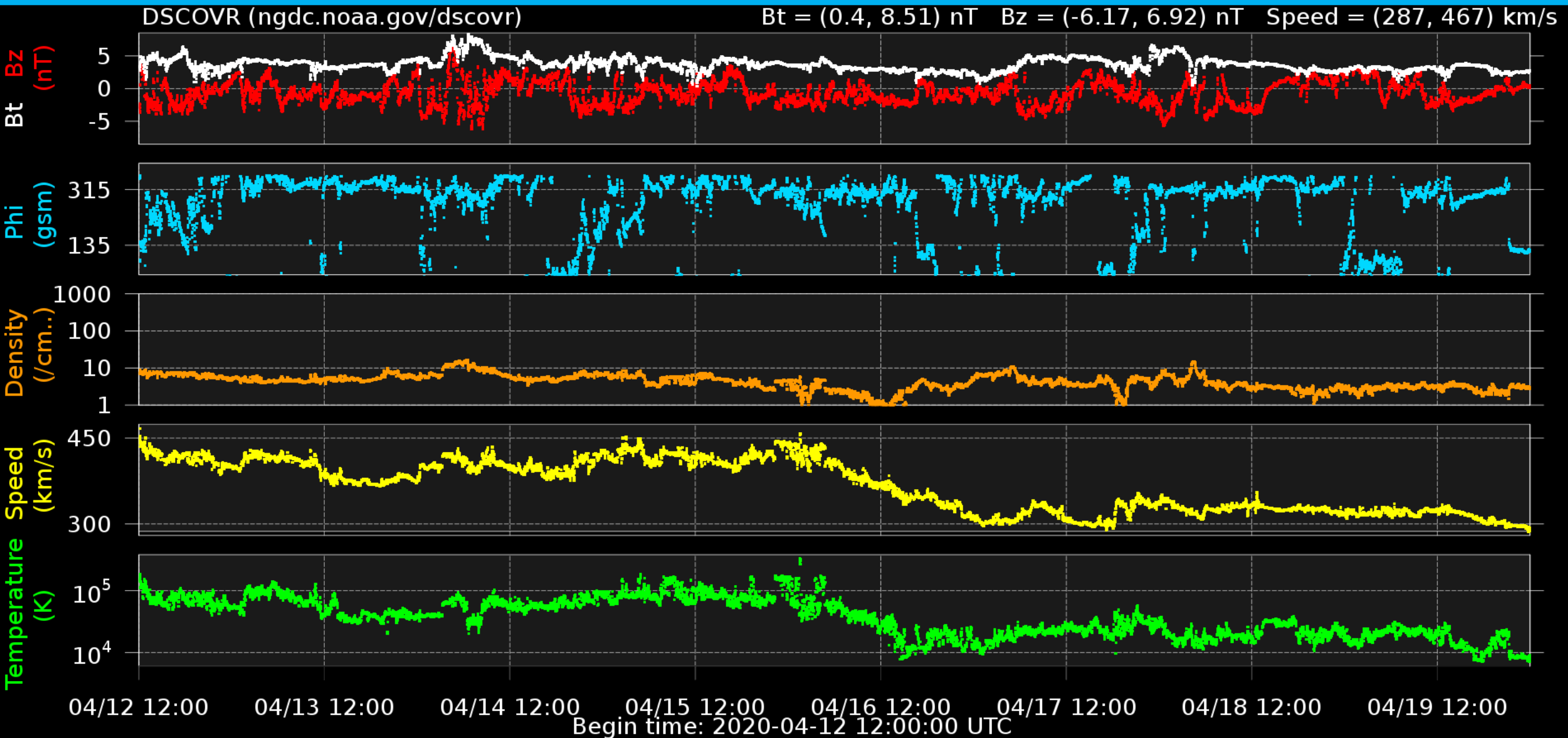
Solar Wind and Geomagnetic Activity



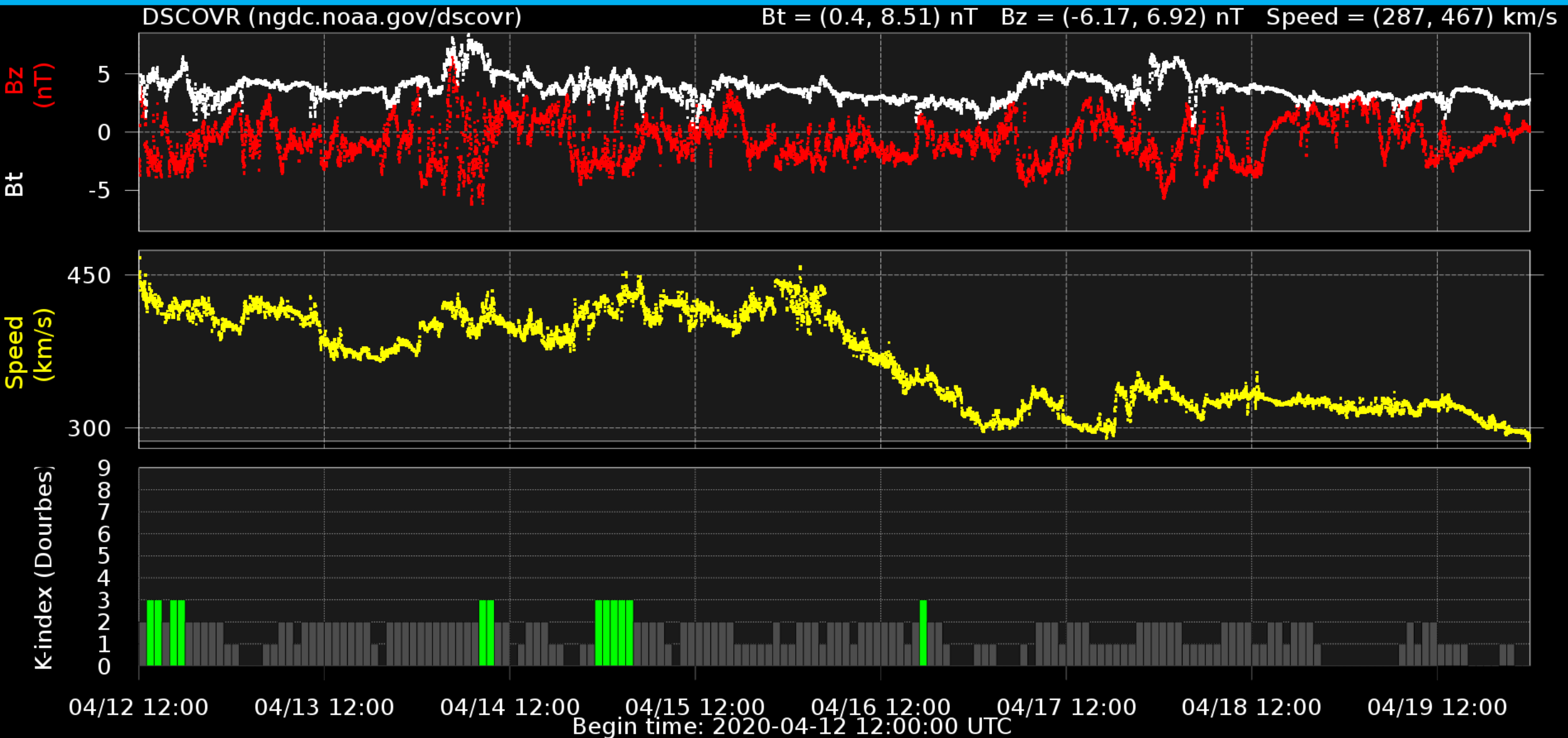
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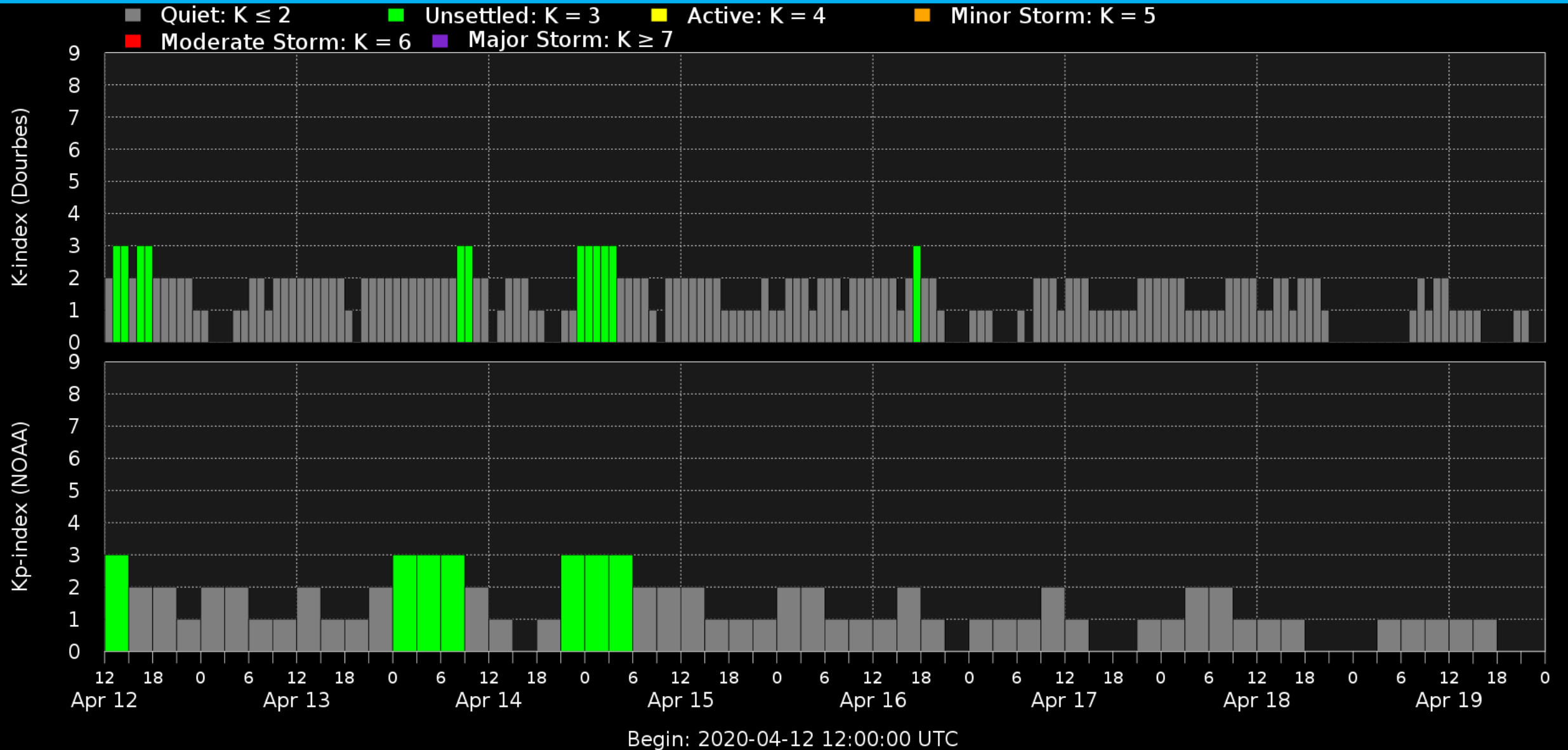
Solar wind parameters (DSCOVR data)



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



Geomagnetic activity (K-indexes)



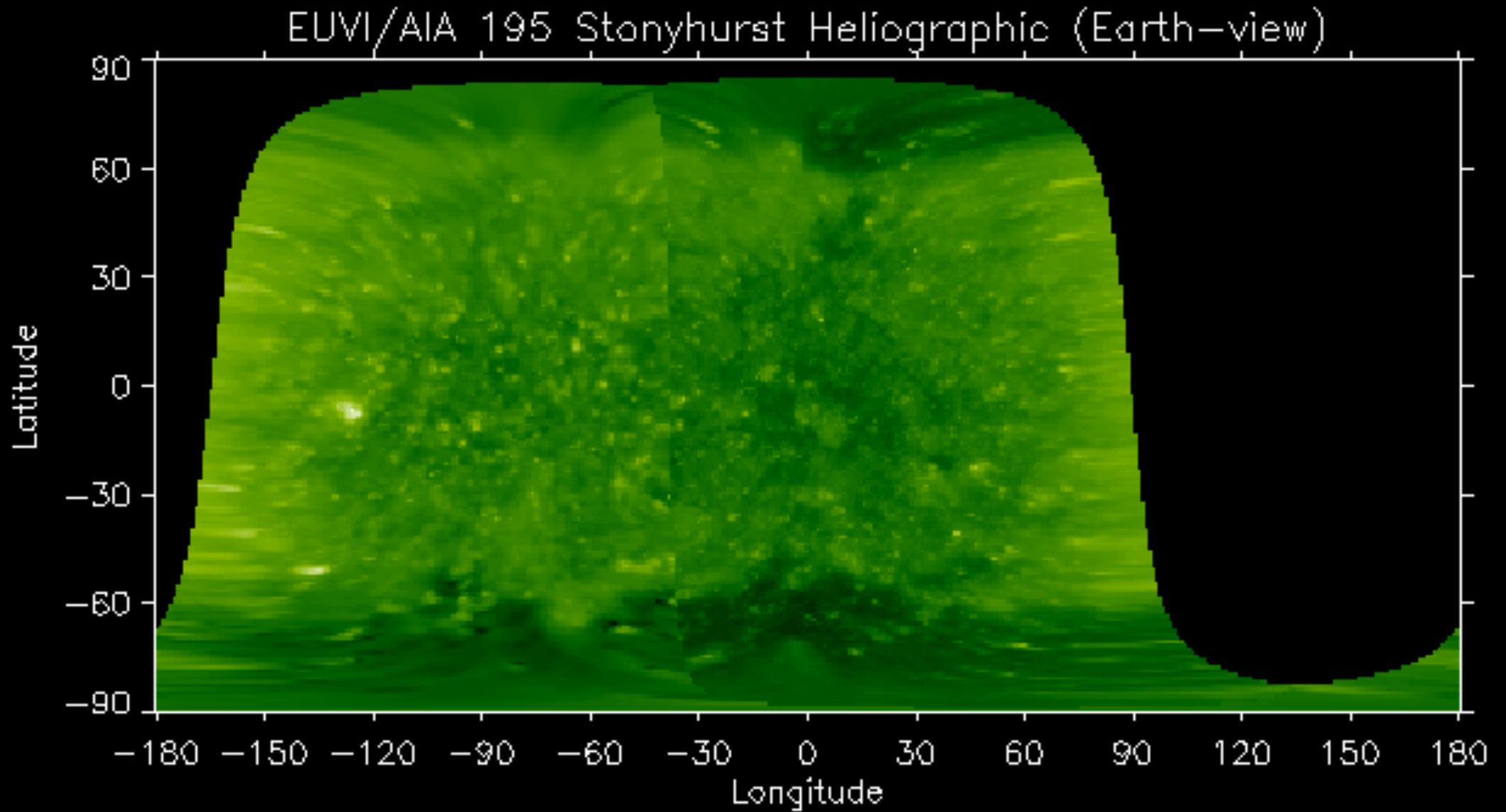
Outlook



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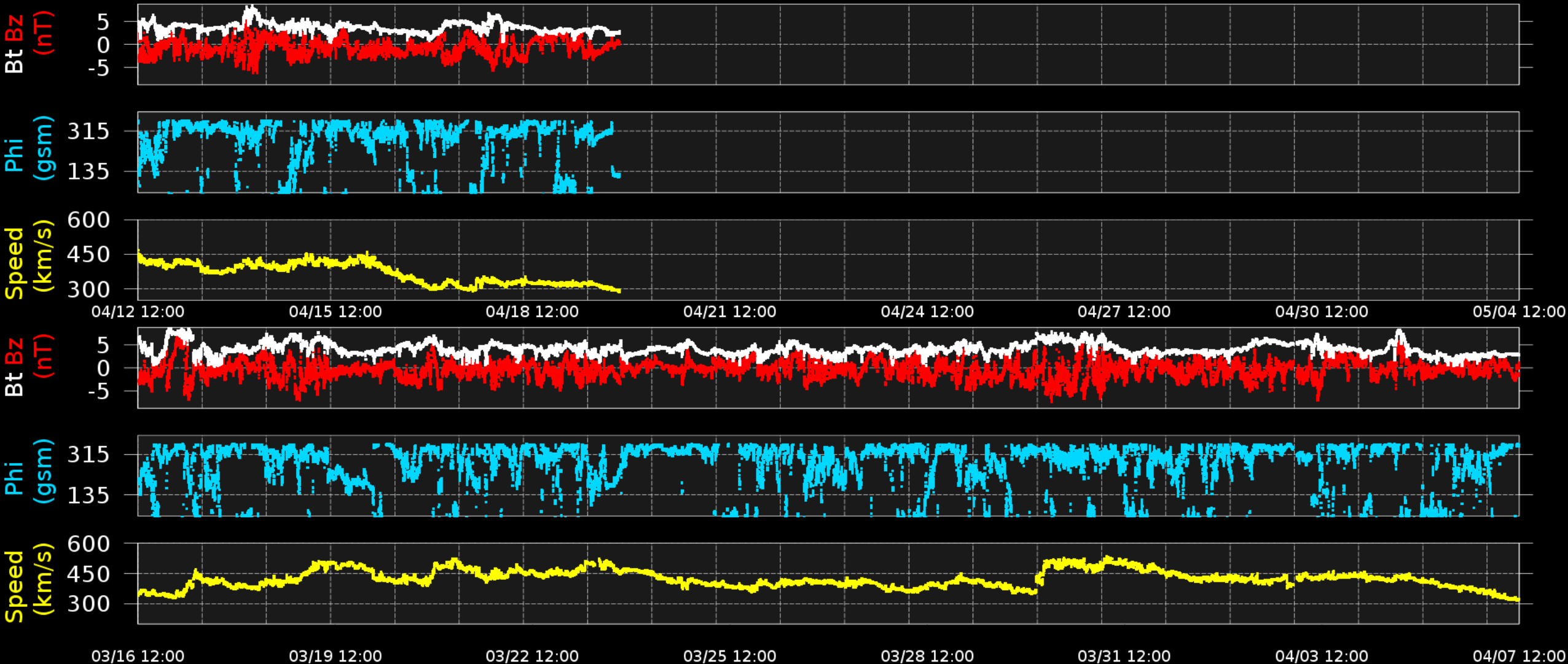
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Outlook: Solar activity



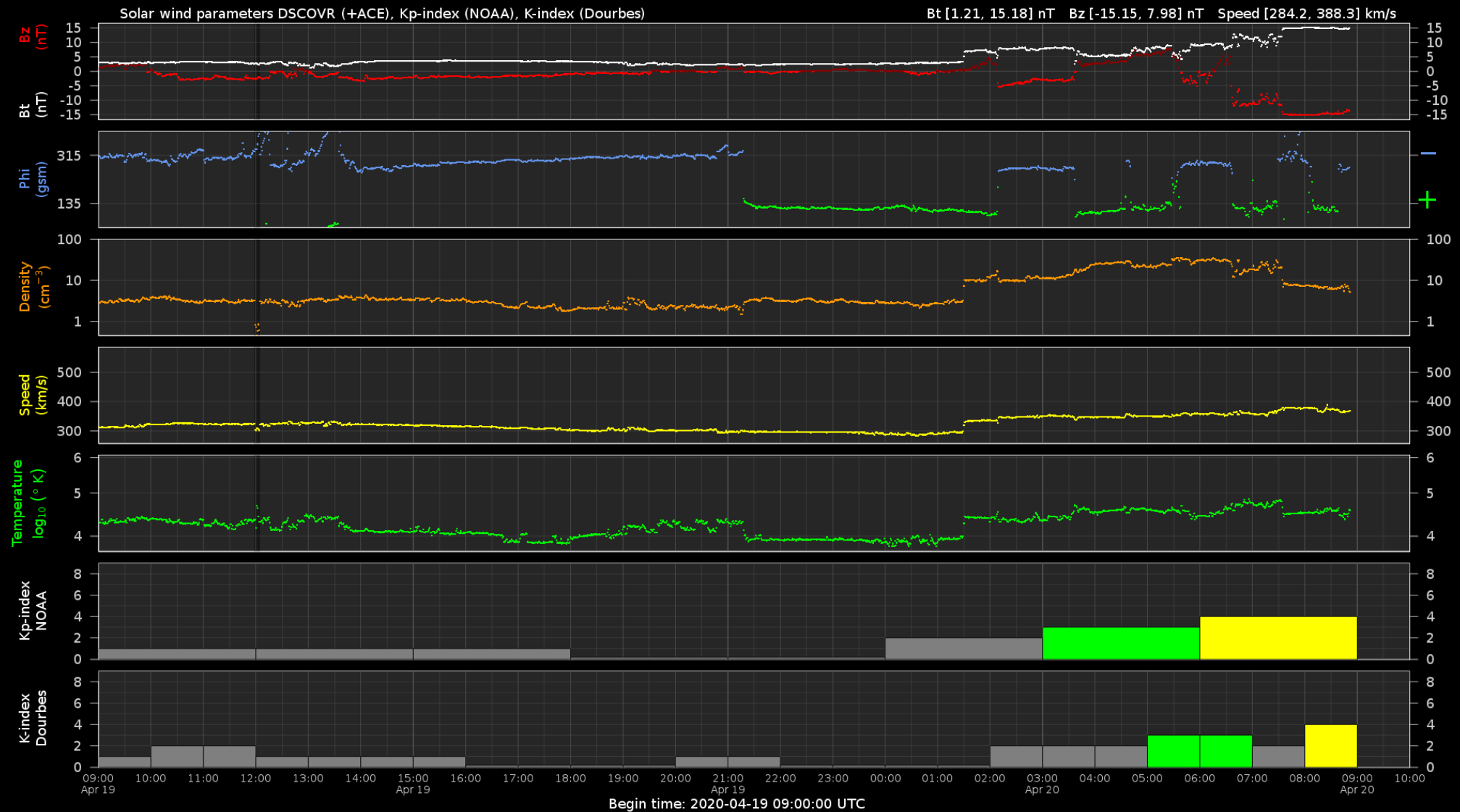
Outlook: Solar wind

DSCOVR (ngdc.noaa.gov/dscovr)

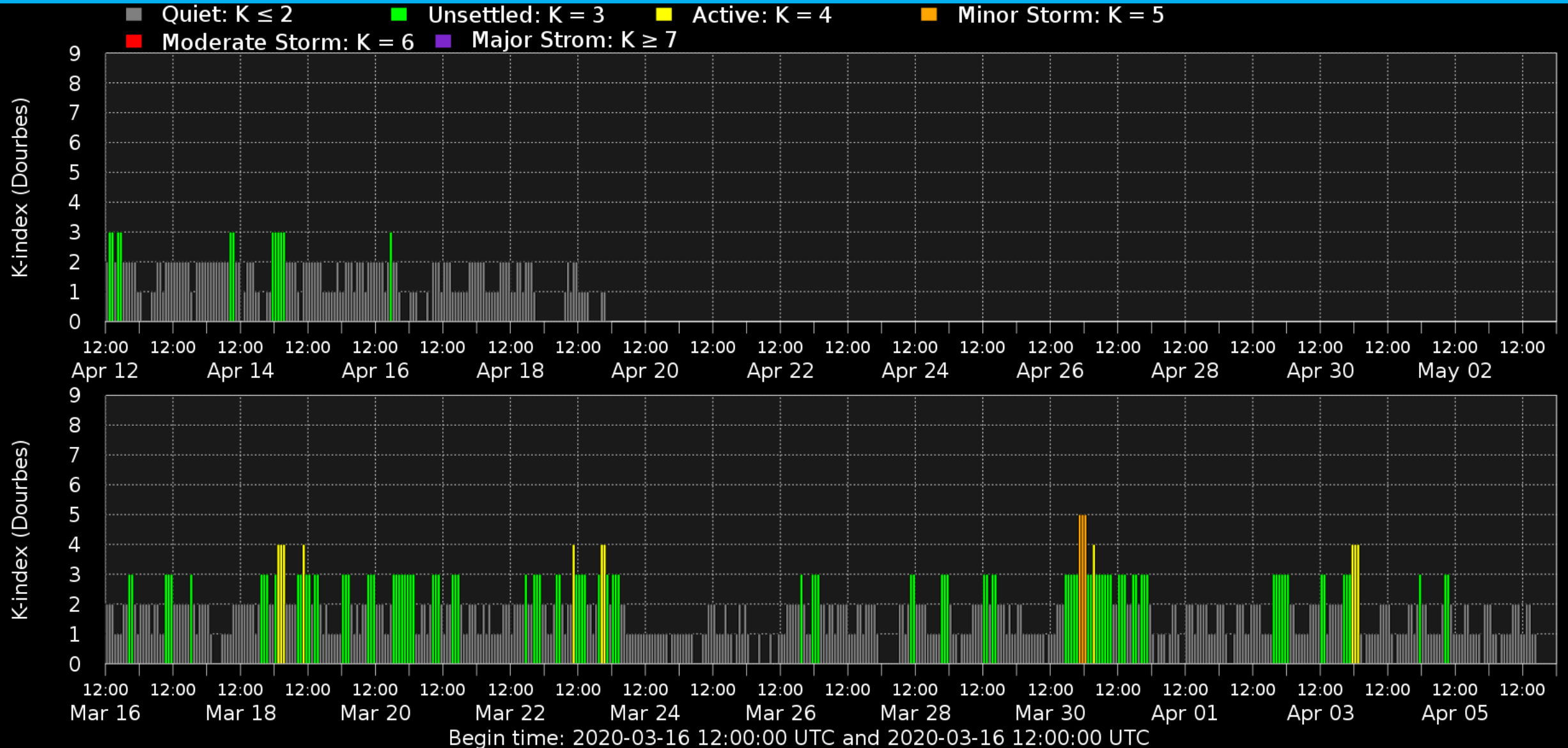


Begin time: 2020-03-16 12:00:00 UTC

Current Solar wind



Outlook: Geomagnetic activity



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See you at our next briefing!

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