

# SIDC Space Weather Briefing

10 March 2019 - 17 March 2019

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& the SIDC forecaster team



Royal Observatory  
of Belgium

Solar Influences  
Data analysis Centre  
[www.sidc.be](http://www.sidc.be)

# Summary Report

Solar activity from 2019-03-10 12:00 UT to 2019-03-17 12:00 UT

Active regions	Catania 9 (NOAA 2734) in decay, Catania 10 short-lived
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	None to mention
CMEs	Faint slow partial halo CME on March 12 (possibly Earthbound)
Proton Events	None to mention

Solar wind and geomagnetic conditions from 2019-03-10 12:00 UT to 2019-03-17 12:00 UT

Coronal Holes	2 equatorial coronal holes transmitted central meridian during the week
ICME	Arrival of March 9 CME
SW Conditions	Enhanced by CME arrival and coronal hole influence
K-indices	max K-index (Dourbes): 5.0 max Kp-index (NOAA): 5

All Quiet Alert: Not all quiet

# Solar Activity

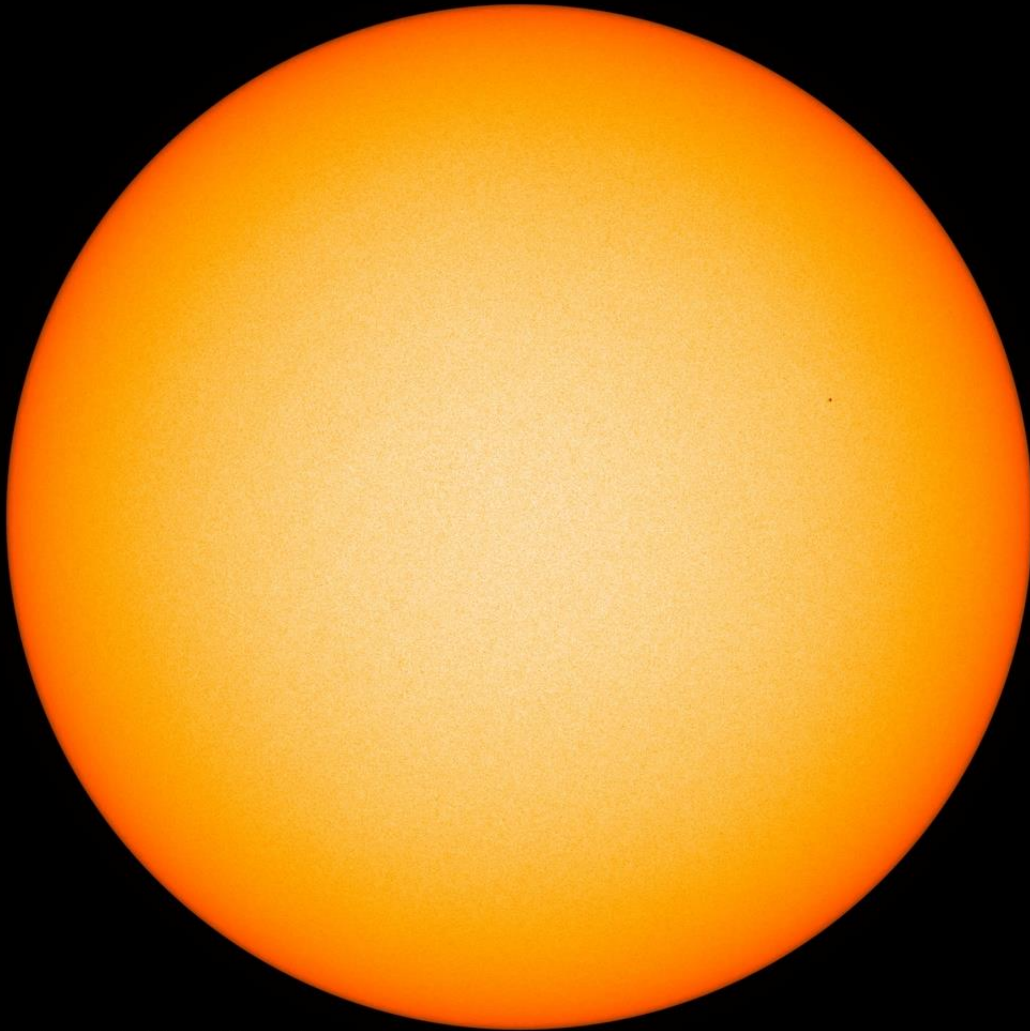


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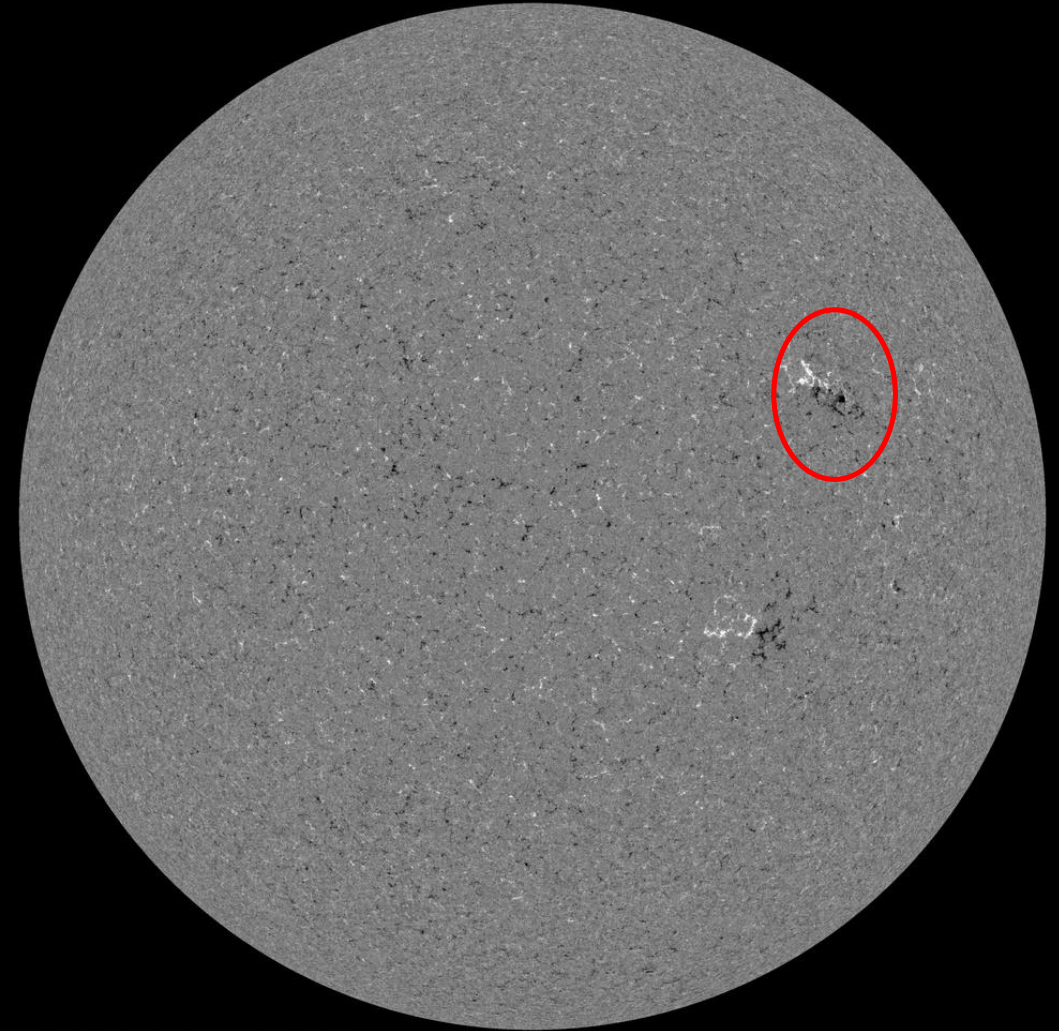
# Solar active region - start of the week

SDO/HMI White Light 2019-03-10



SDO/HMI Quick-Look Continuum: 20190310\_114500

SDO/HMI Magnetogram 2019-03-10

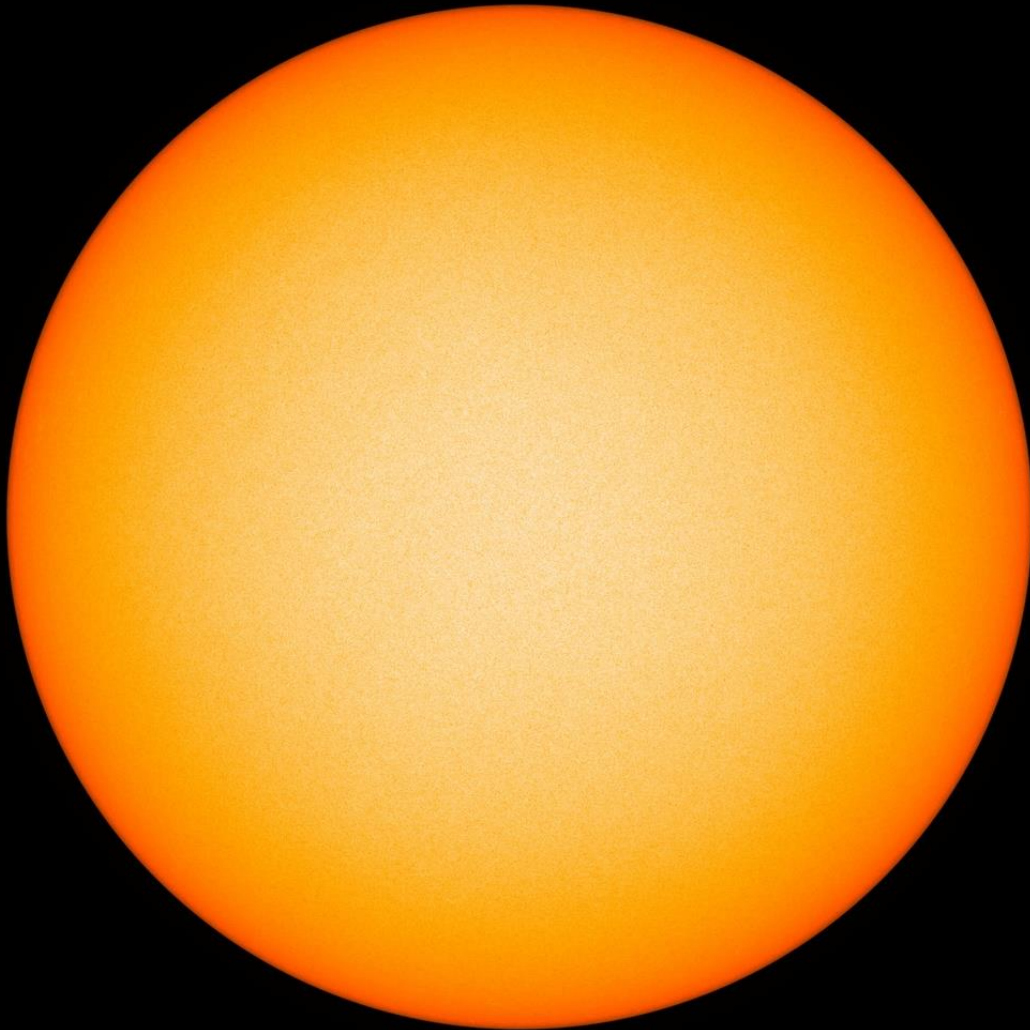


SDO/HMI Quick-Look Magnetogram: 20190310\_114500



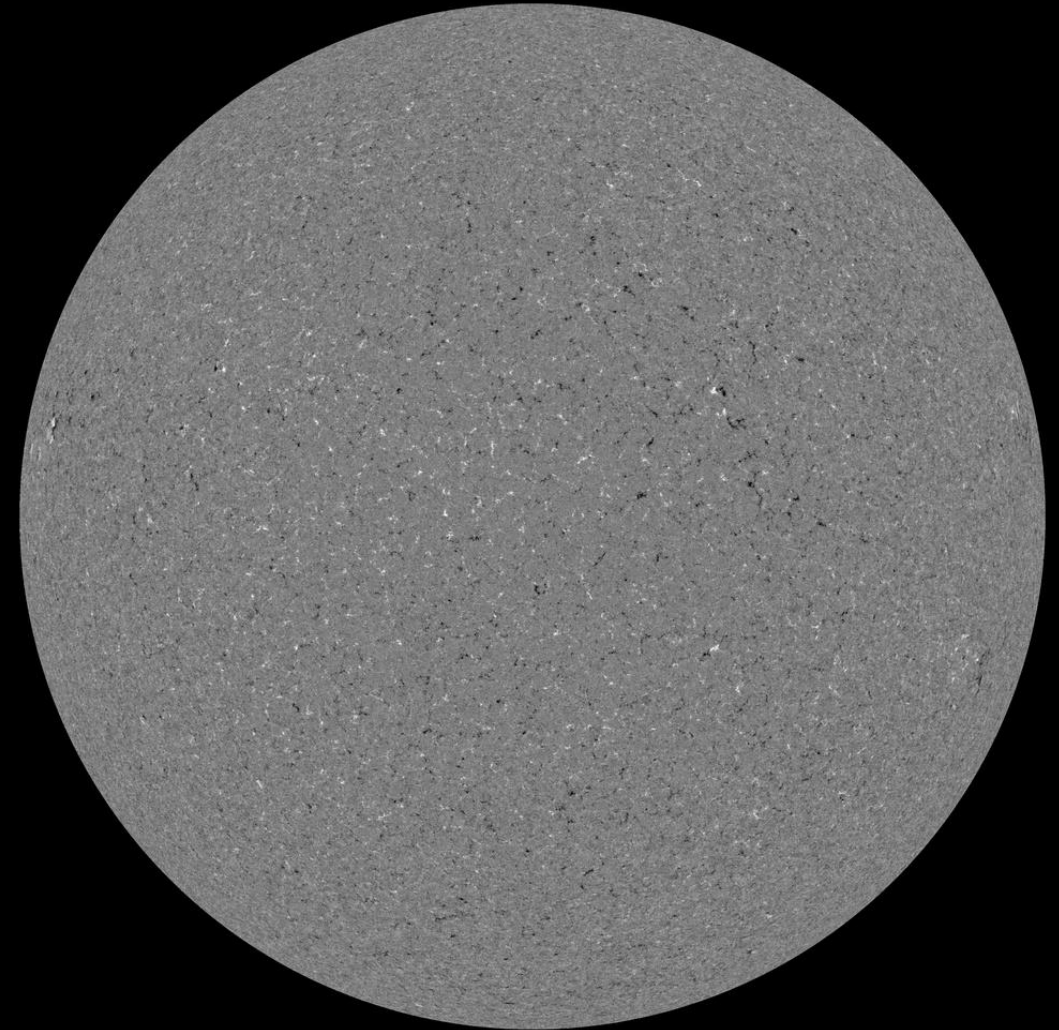
# Solar active region - middle of the week

SDO/HMI White Light 2019-03-13



SDO/HMI Quick-Look Continuum: 20190313\_114500

SDO/HMI Magnetogram 2019-03-13

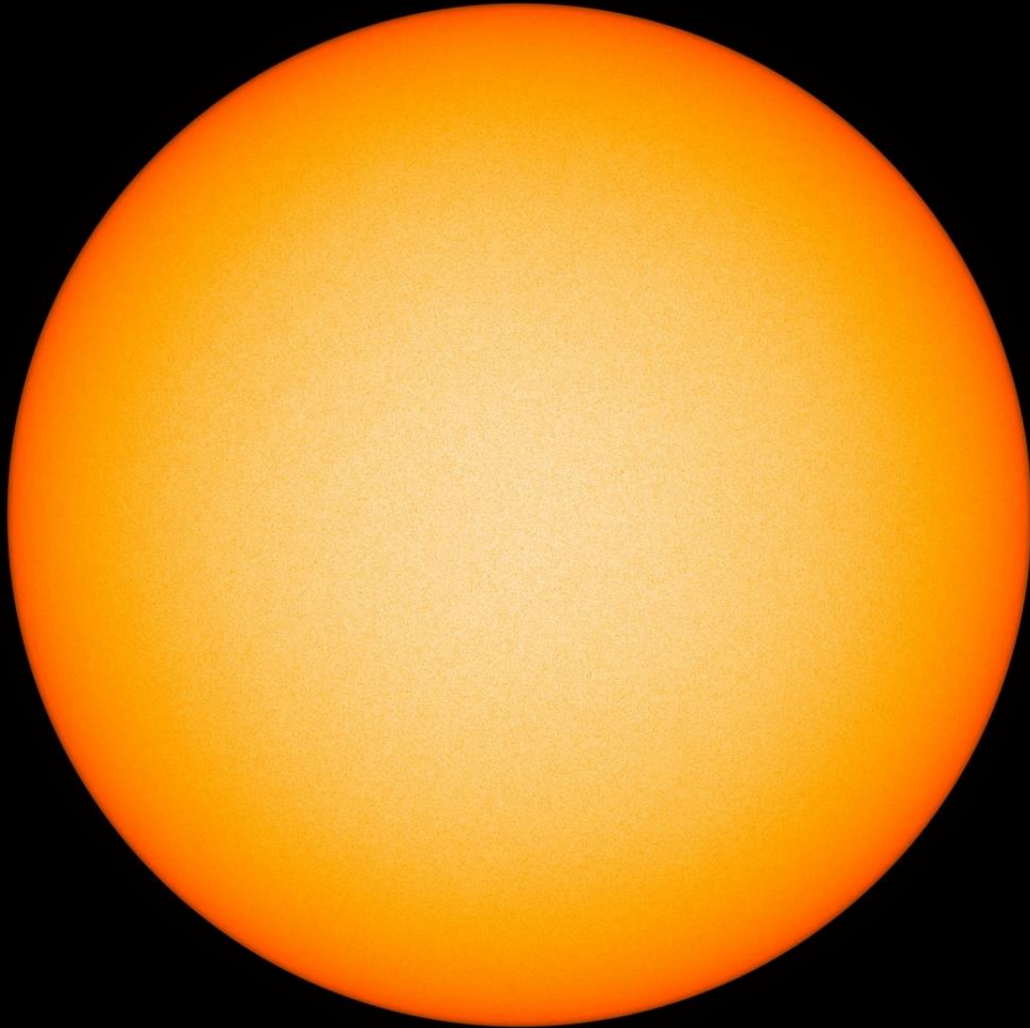


SDO/HMI Quick-Look Magnetogram: 20190313\_114500



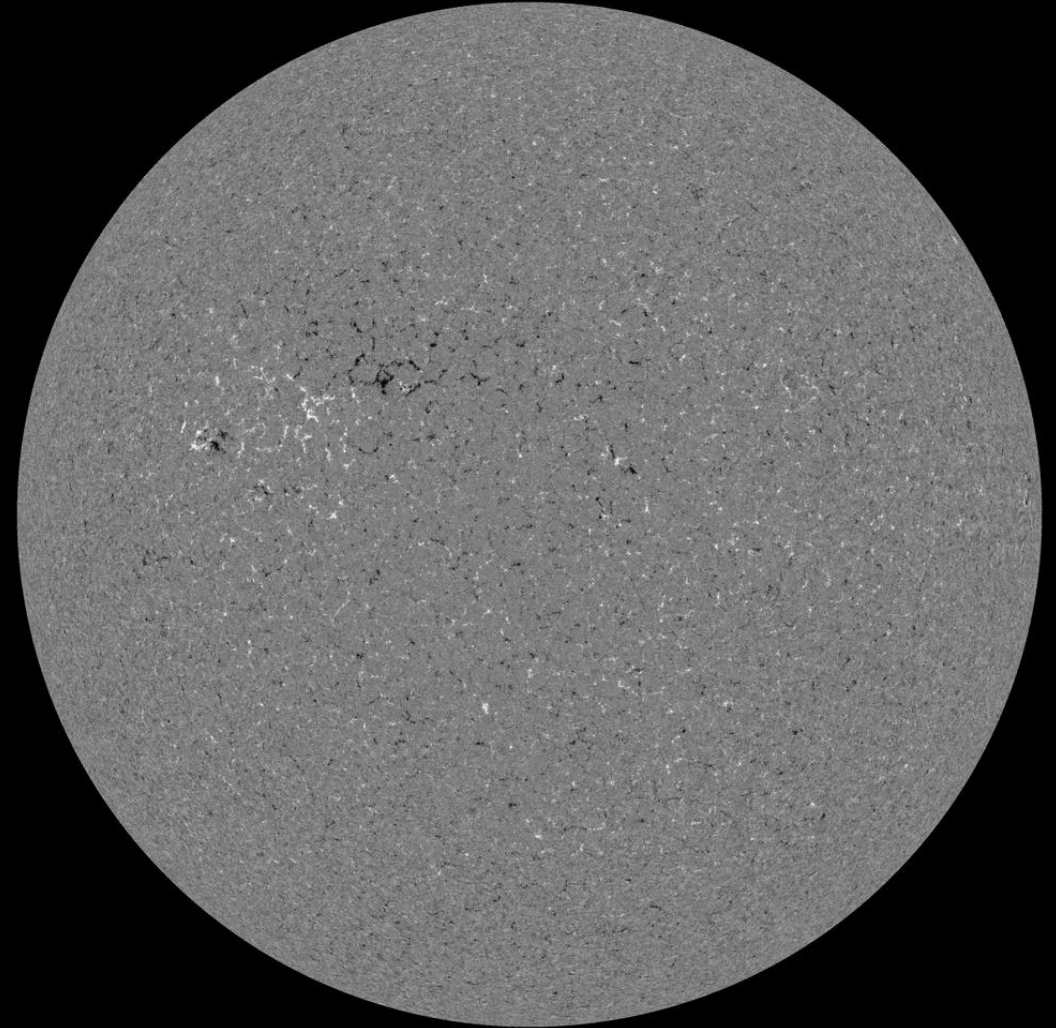
# Solar active region - end of the week

SDO/HMI White Light 2019-03-17



SDO/HMI Quick-Look Continuum: 20190317\_114500

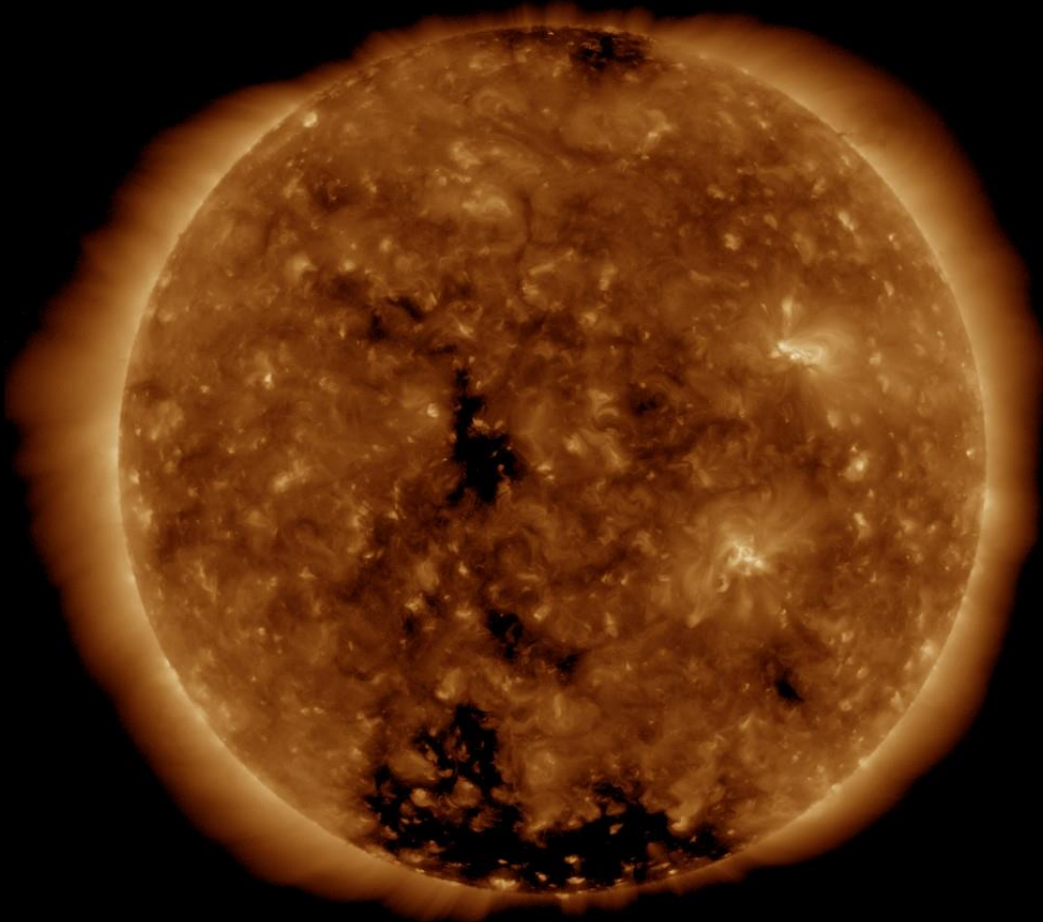
SDO/HMI Magnetogram 2019-03-17



SDO/HMI Quick-Look Magnetogram: 20190317\_114500

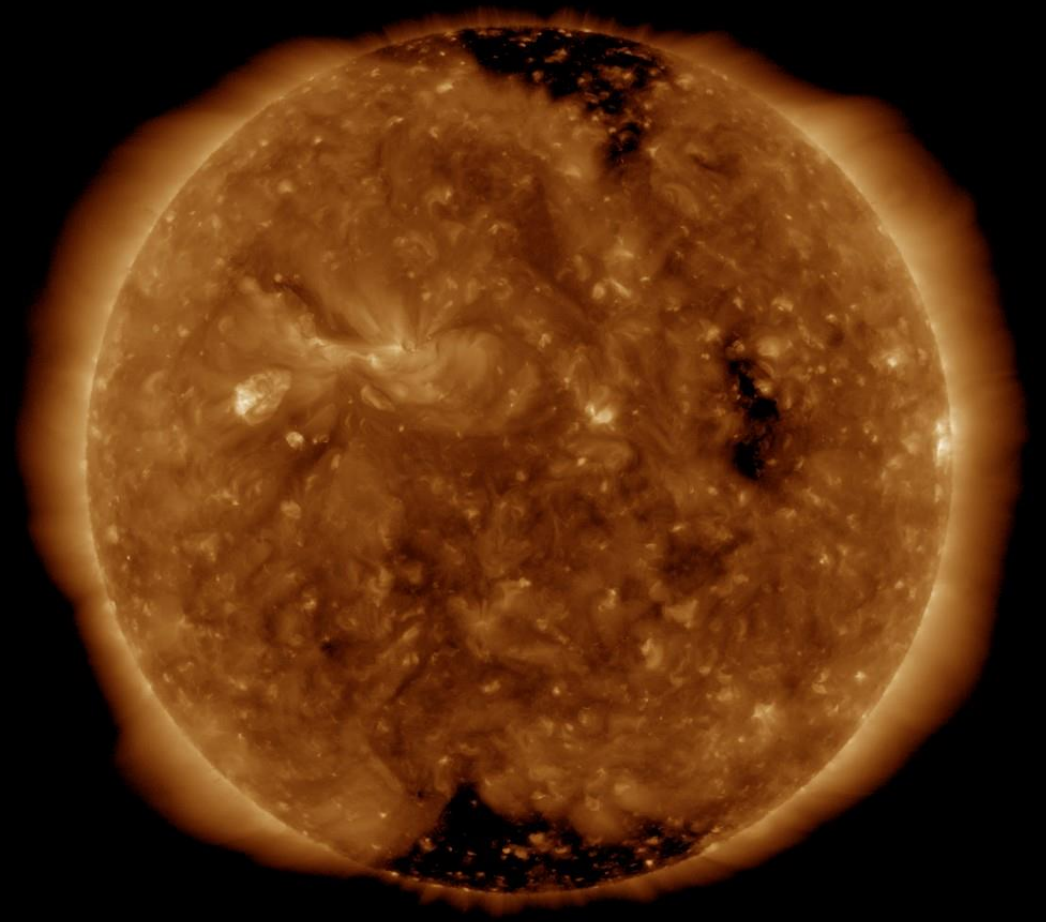
# Solar active region & Coronal hole

SDO/AIA 19.3 nm 2019-03-10



SDO/AIA 193 2019-03-10 12:10:05 UT

SDO/AIA 19.3 nm 2019-03-17



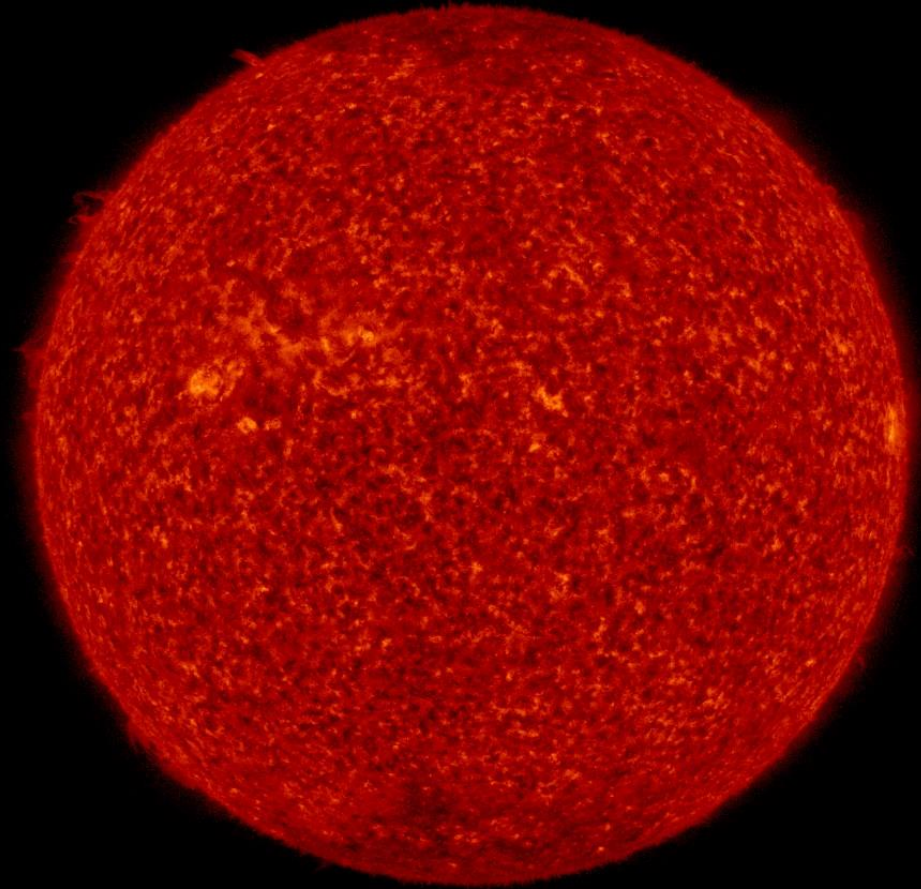
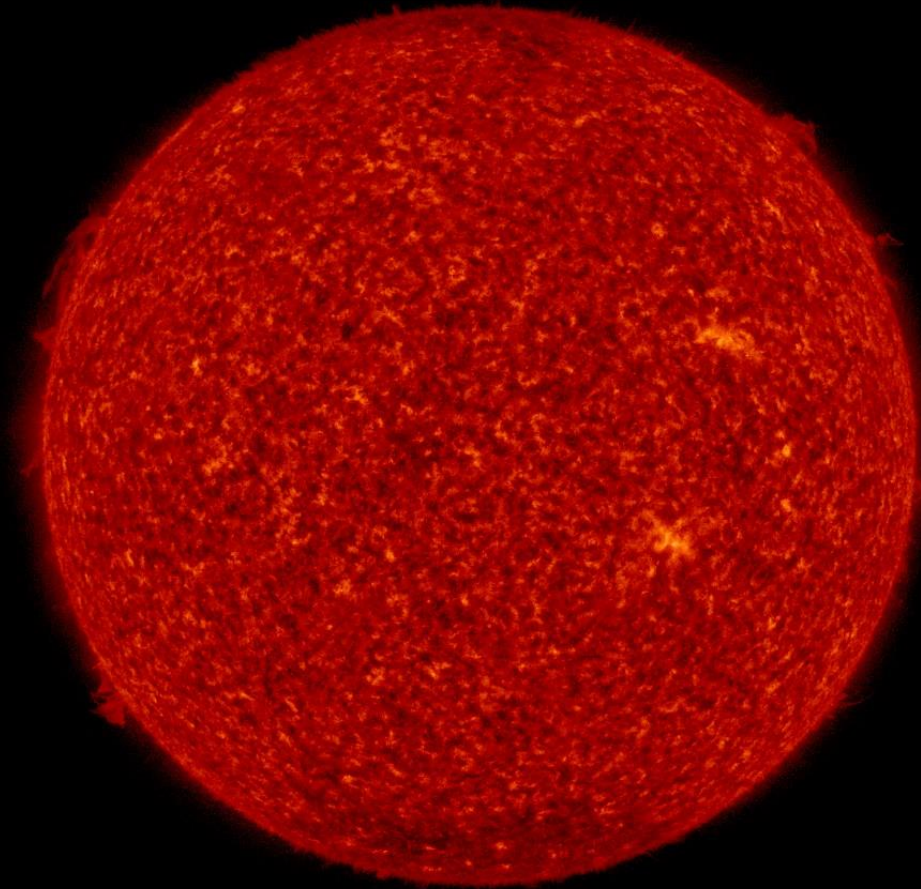
SDO/AIA 193 2019-03-17 12:09:41 UT



# Solar active region & Filament

SDO/AIA 30.4 nm 2019-03-10

SDO/AIA 30.4 nm 2019-03-17



SDO/AIA 304 2019-03-10 12:13:18 UT

SDO/AIA 304 2019-03-17 12:14:30 UT



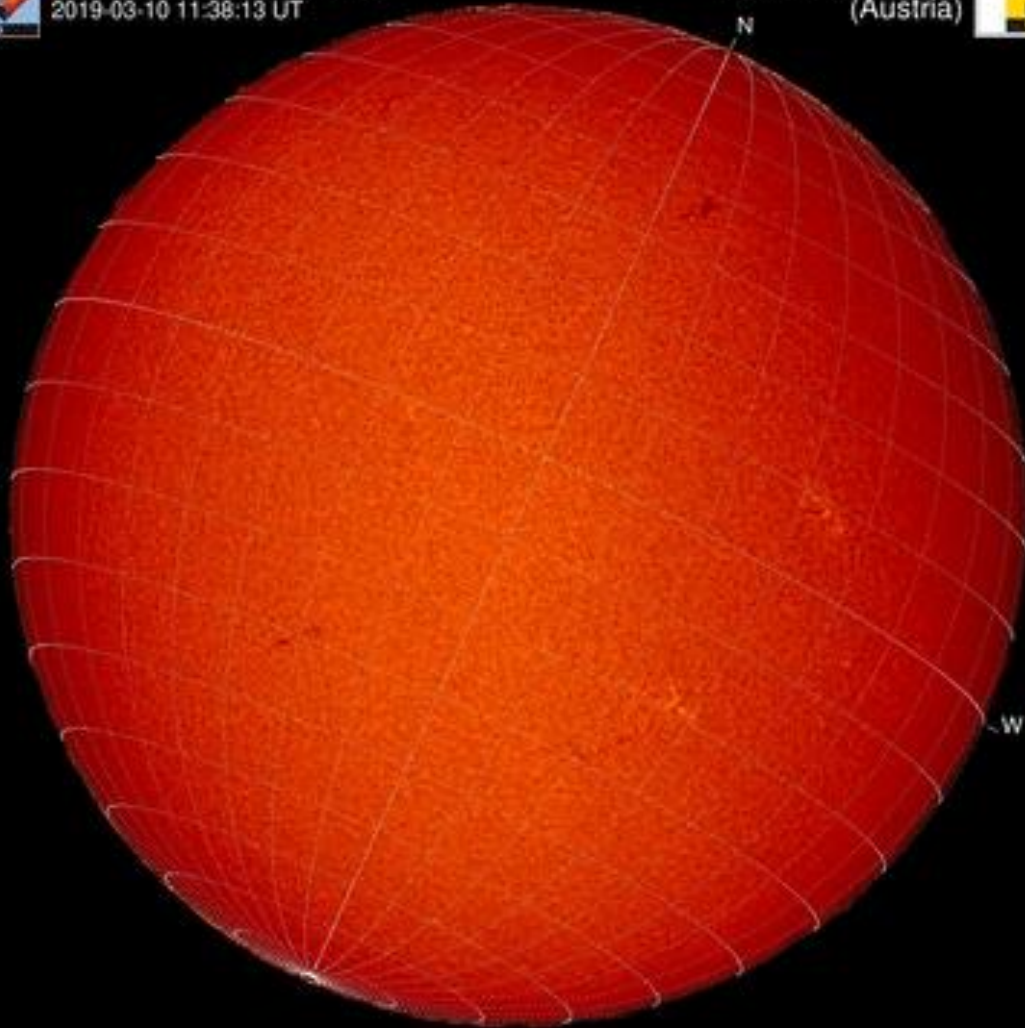
# Filament & Filament eruption

H-alpha 2019-03-10



Kanzelhöhe Observatory  
2019-03-10 11:38:13 UT

University of Graz  
(Austria)

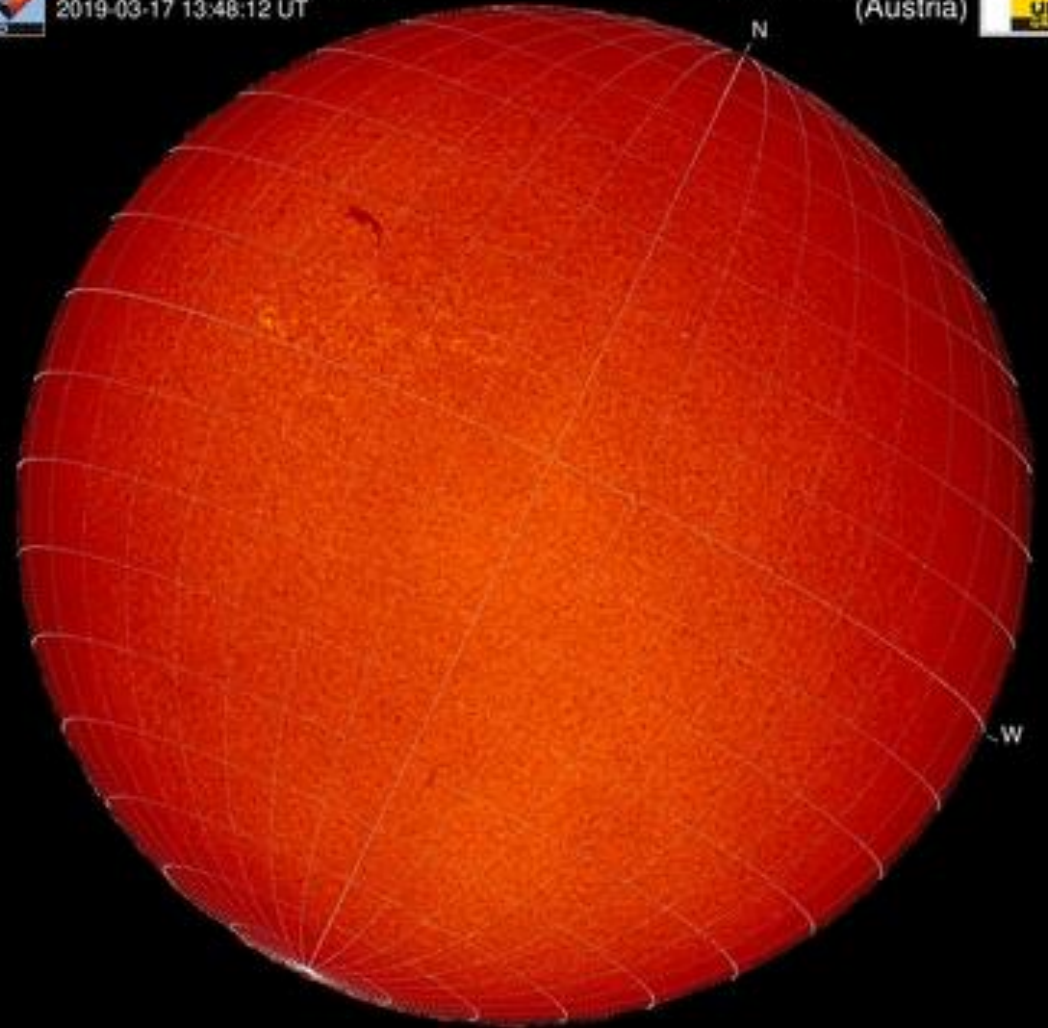


H-alpha 2019-03-17

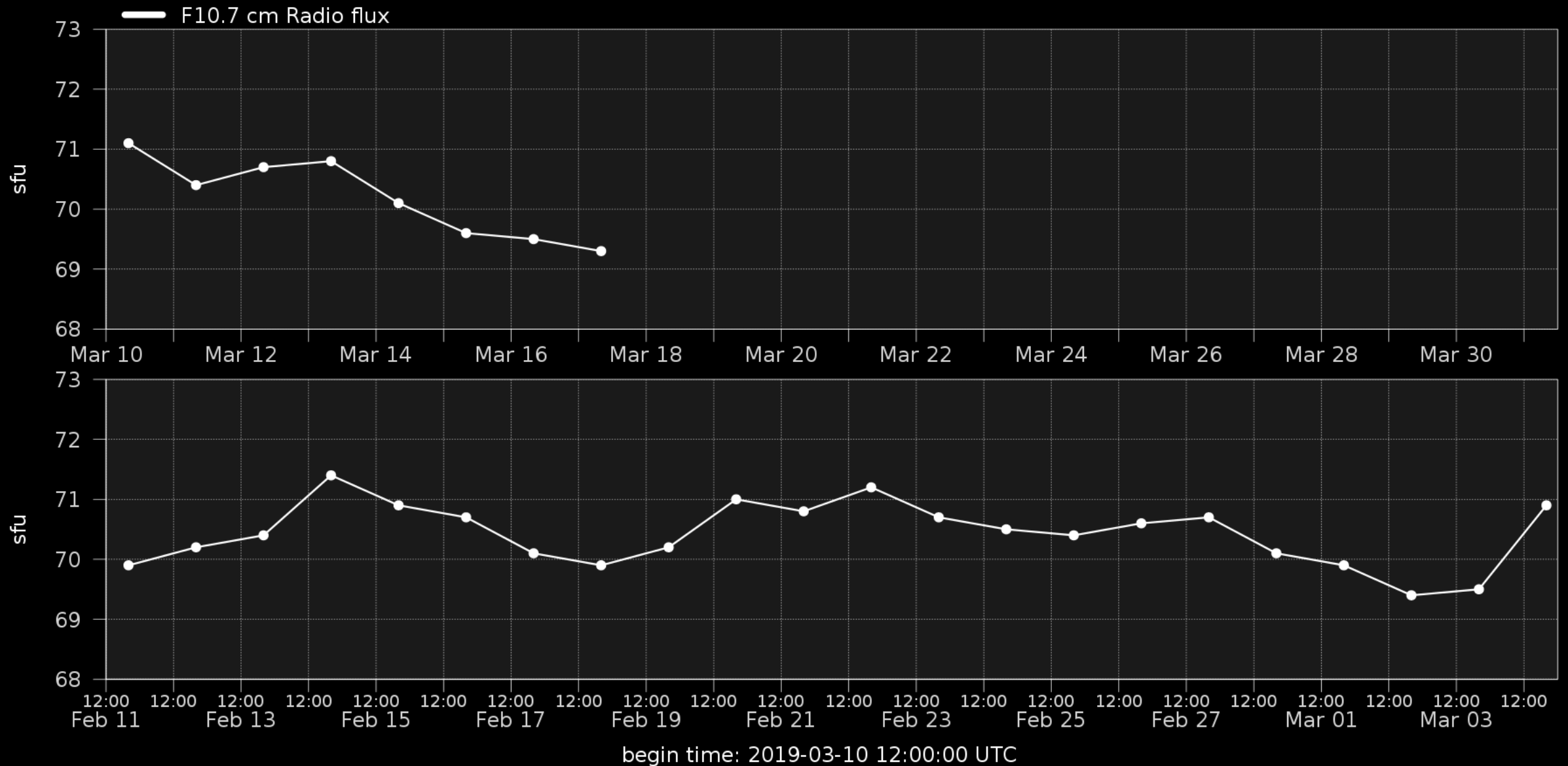


Kanzelhöhe Observatory  
2019-03-17 13:48:12 UT

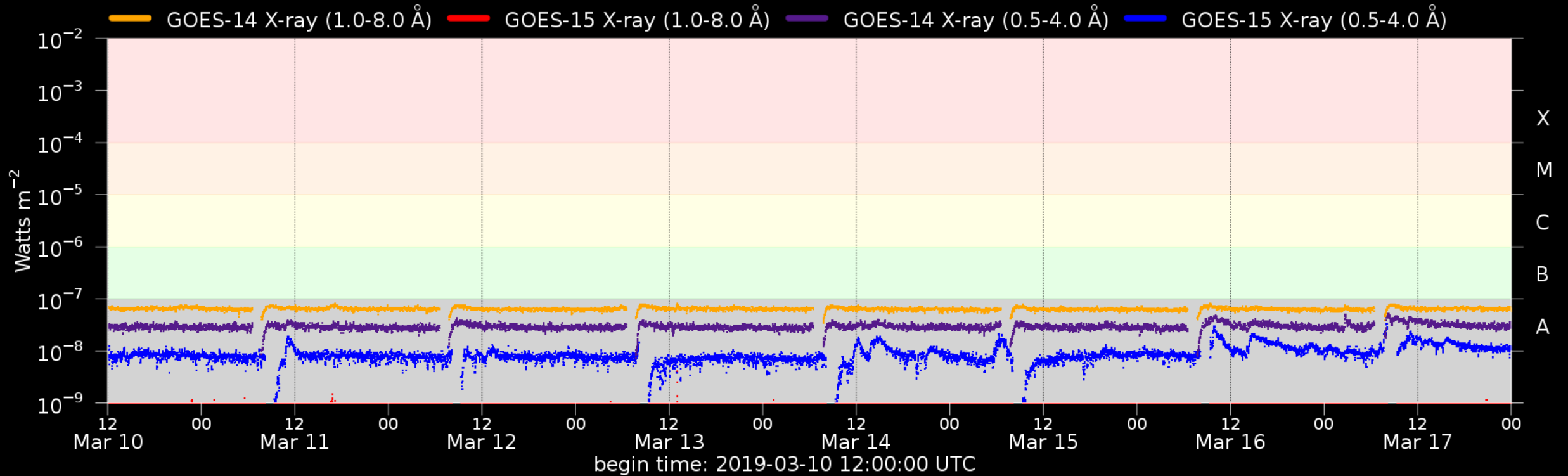
University of Graz  
(Austria)



# Solar F10.7cm radio flux



# Flaring activity



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

Issue date	2019-03-10	2019-03-11	2019-03-12	2019-03-13	2019-03-14	2019-03-15	2019-03-16	2019-03-17
Probability	--- 05 01 01	--- 05 01 01	--- 05 01 01	--- 01 01 01	--- 05 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

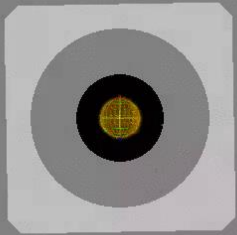
Morning of March 12.

Partial Halo in SoHO/LASCO and West in STEREO.

Speed hard to measure estimated not to exceed background solar wind.

Small possibility of arrival late March 16 or March 17 with minimal effects.

SoHO/LASCO C2+C3



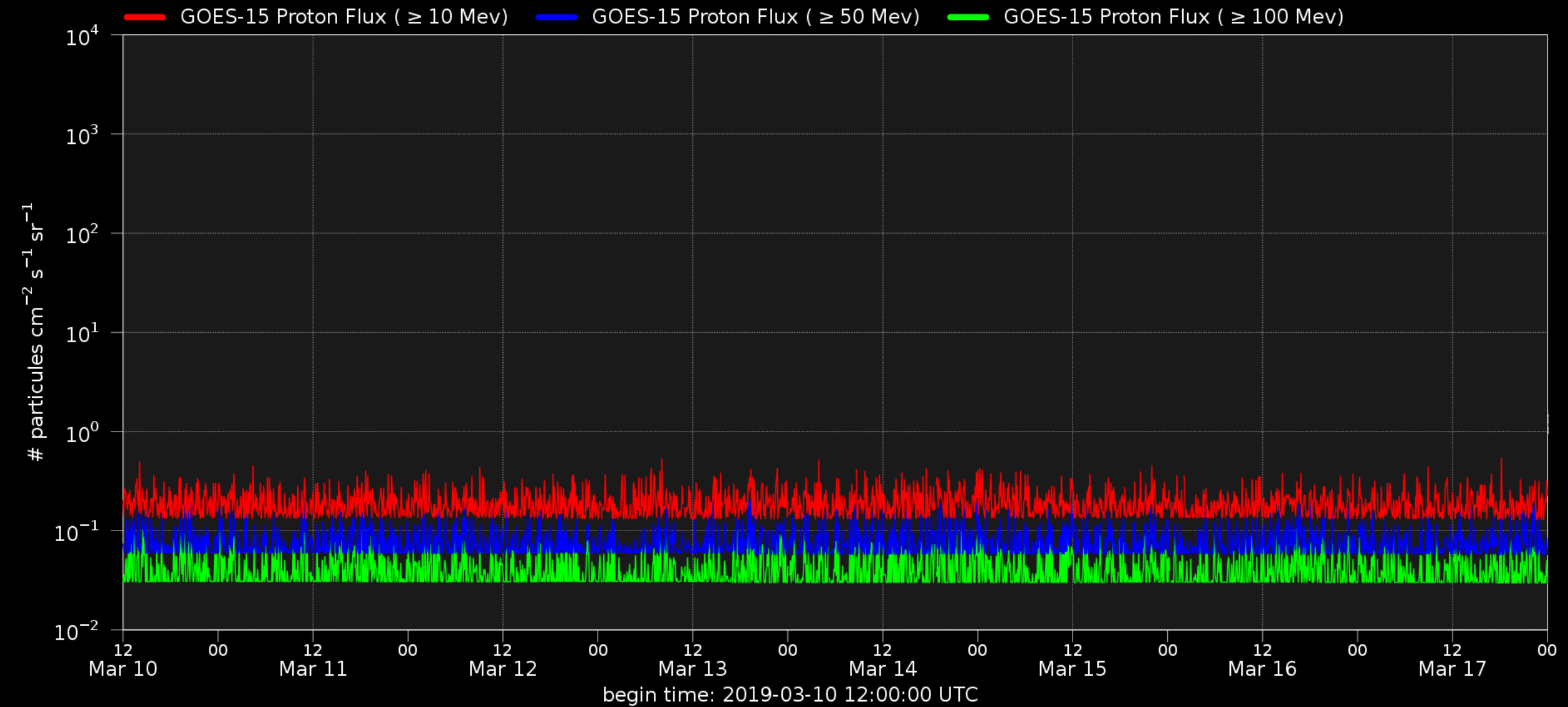
STEREO A COR2



04:24 03/17  
00:48 03/17  
21:48 03/16  
19:00 03/16  
16:24 03/16  
13:36 03/16  
10:12 03/16  
07:12 03/16  
04:12 03/16  
01:30 03/16  
22:00 03/15  
18:48 03/15  
15:48 03/15  
12:24 03/15  
09:24 03/15  
05:36 03/15  
00:48 03/15  
21:36 03/14  
18:54 03/14  
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17:48 03/12  
14:36 03/12  
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05:00 03/12  
01:48 03/12  
22:12 03/11  
18:36 03/11  
16:00 03/11  
12:48 03/11  
09:48 03/11



# Solar proton flux



# Solar Wind and Geomagnetic Activity

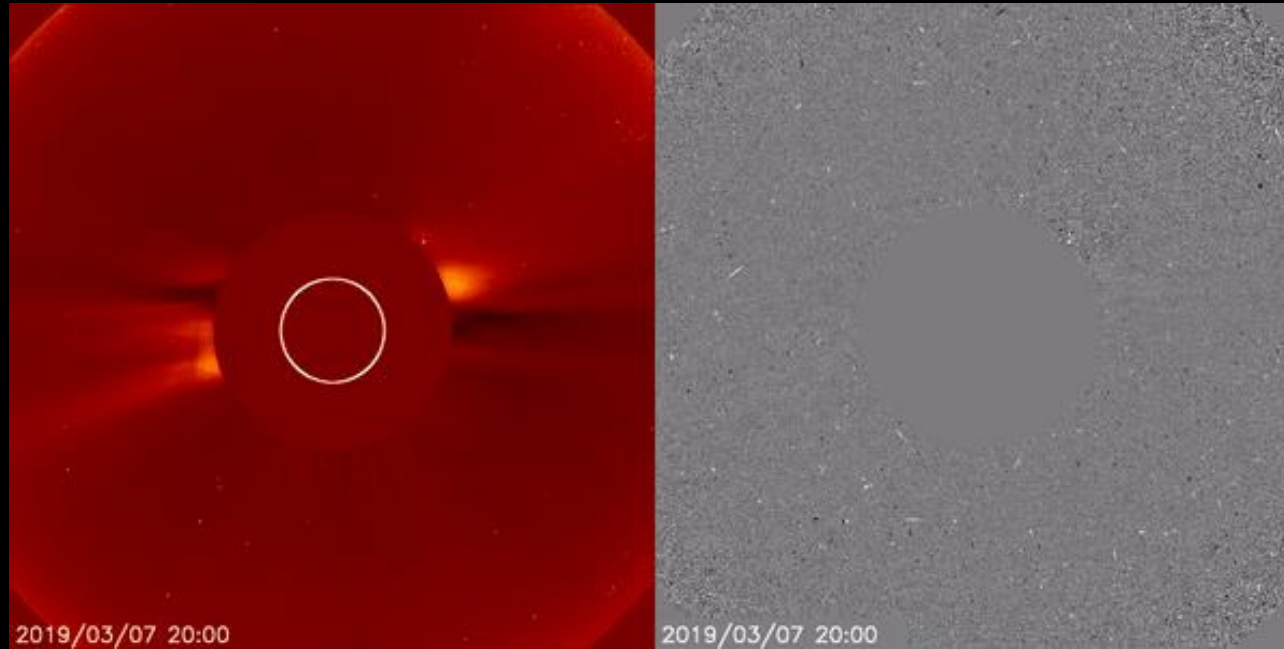


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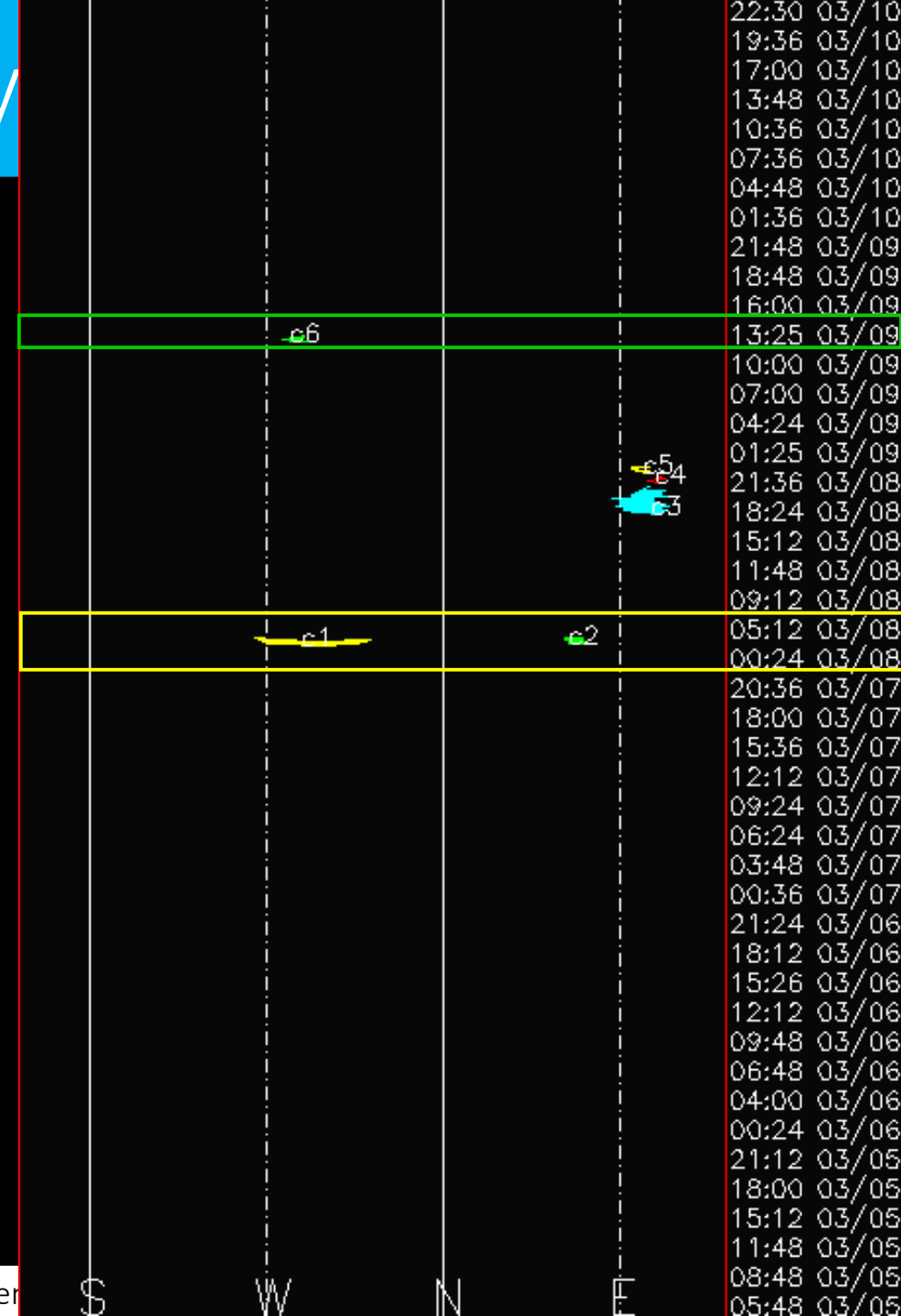


# Coronal Mass Ejections on their way

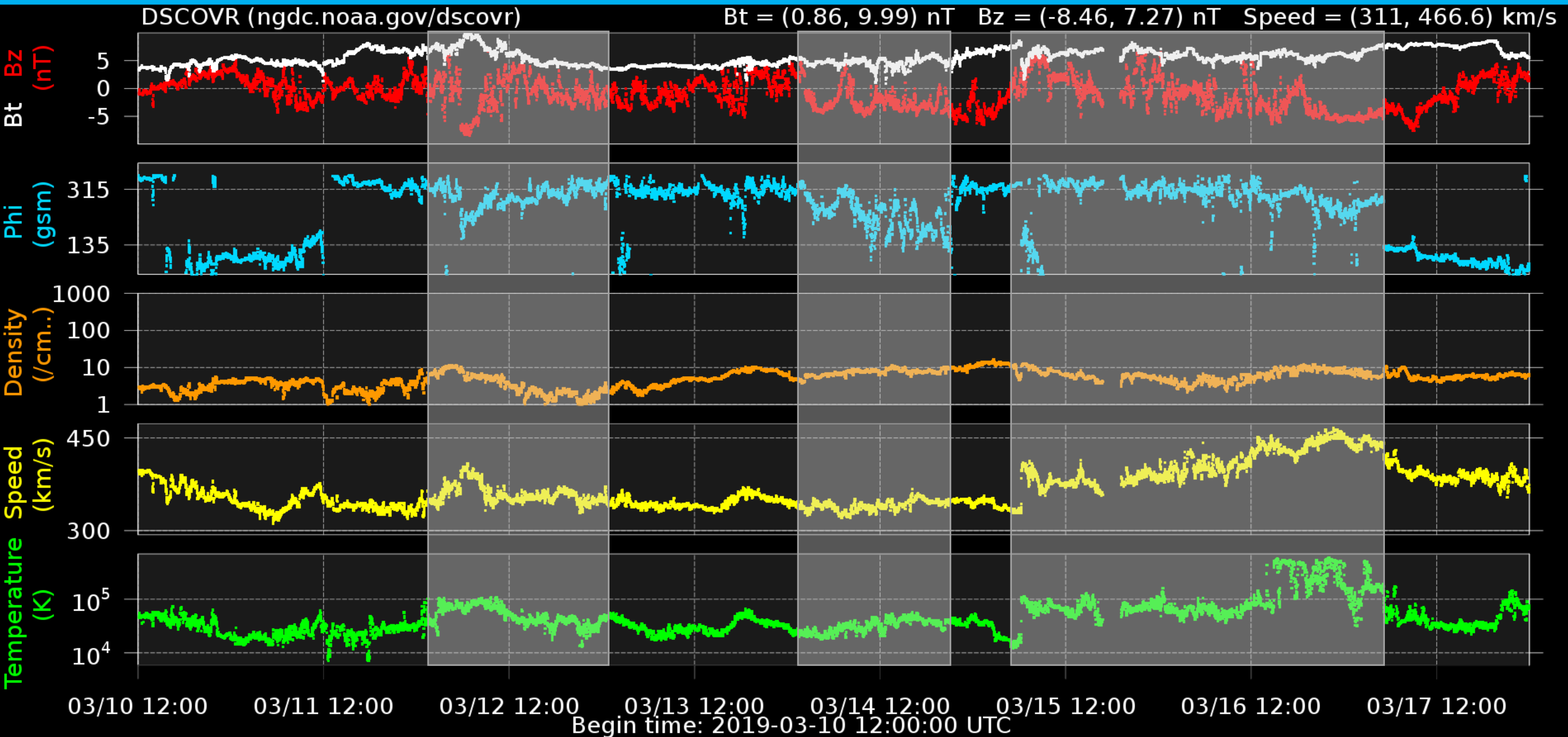


**PRESTO-1**  
 C1.3-class flare (March 08 at 03:19 UT, AR 2734) + coronal dimming  
 SOHO/LASCO-C2 images at 05:00 UT (no STEREO-COR2 data are available).  
 Projected speed ~ 288-331 km/s, Corrected speed ~ 440 km/s  
 Expected to reach Earth on March 12 midday.

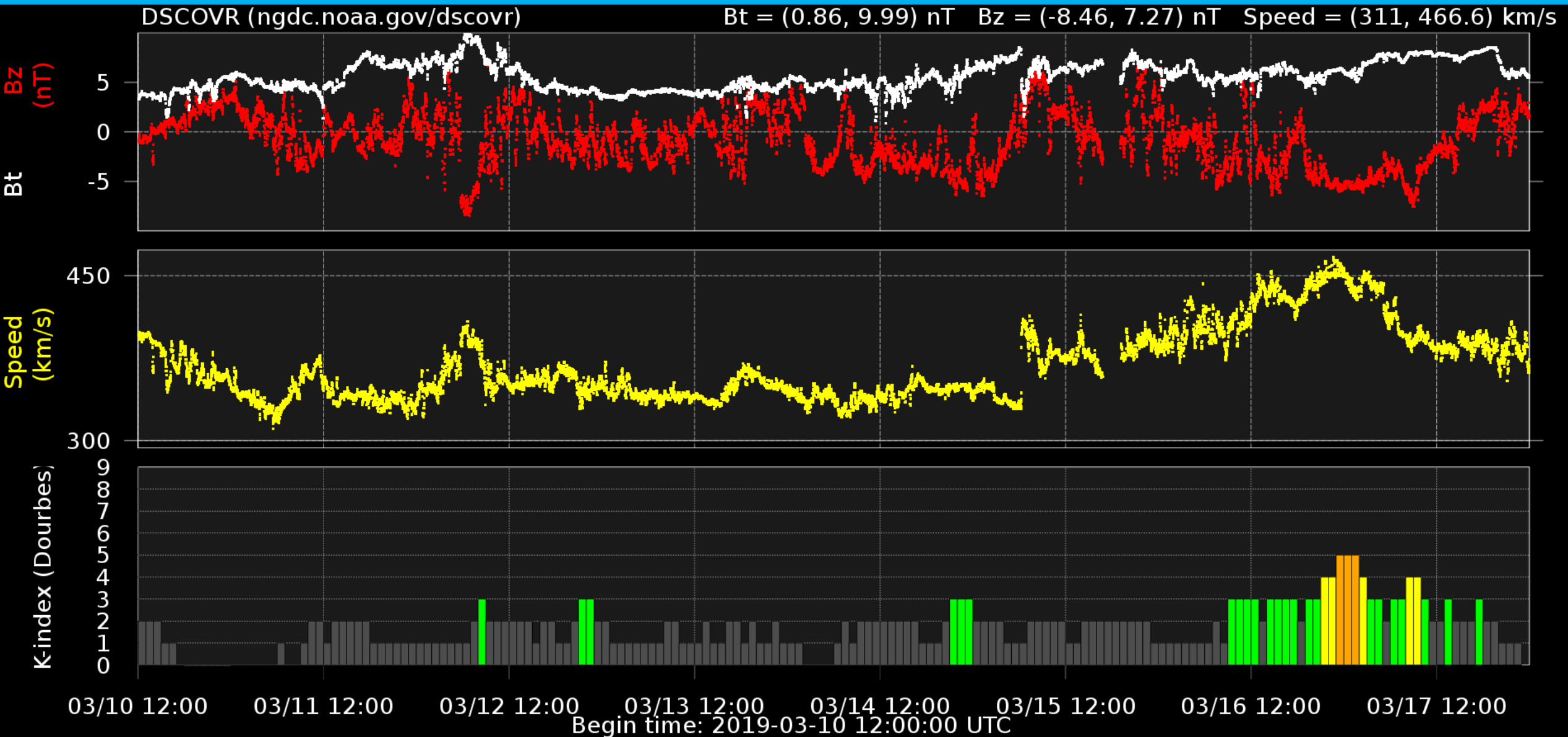
**PRESTO-2**  
 B6.1-class flare (March 09 at 12:26 UT, AR 2734)+ coronal dimming  
 SOHO/LASCO-C2 images at 15:12 UT and in STEREO-COR2 around 15:00 UT  
 Speed ~ 300 km/s (STEREO-COR2)  
 "Expected to reach Earth" on March 14.



# Solar wind parameters (DSCOVR data)

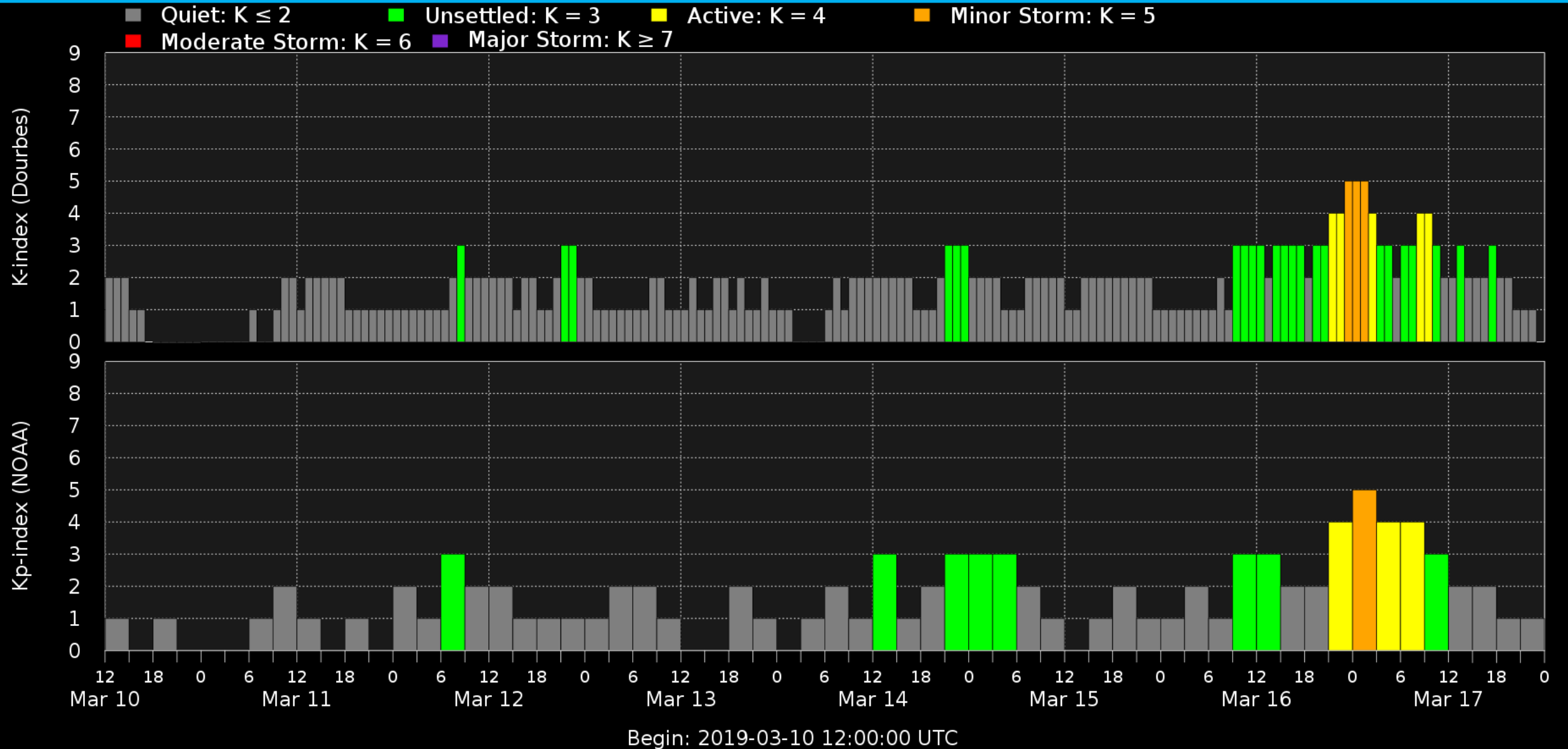


# Solar wind parameters & K-index (DSCOVR/Dourbes)





# Geomagnetic activity (K-indexes)



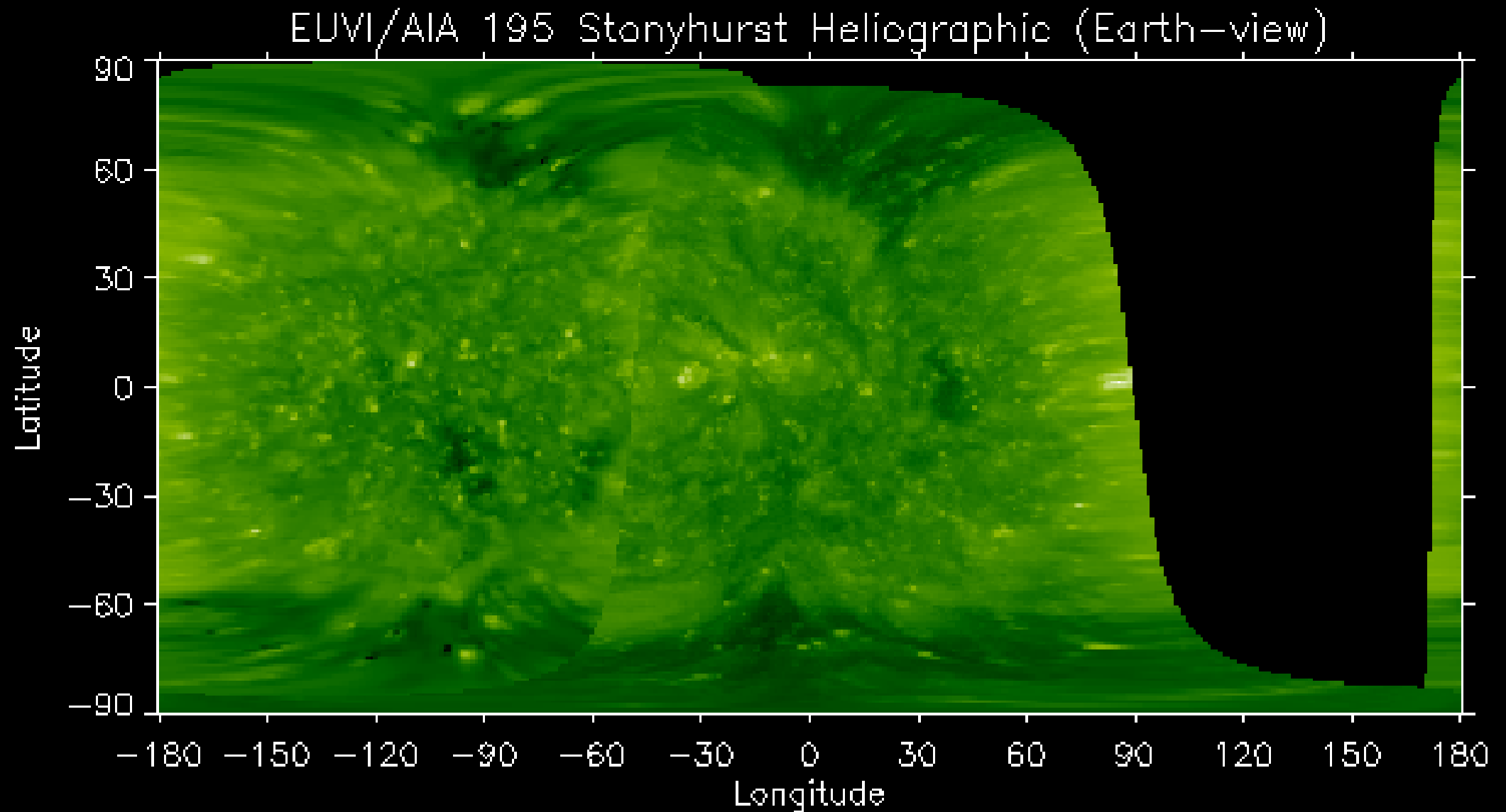
# Outlook



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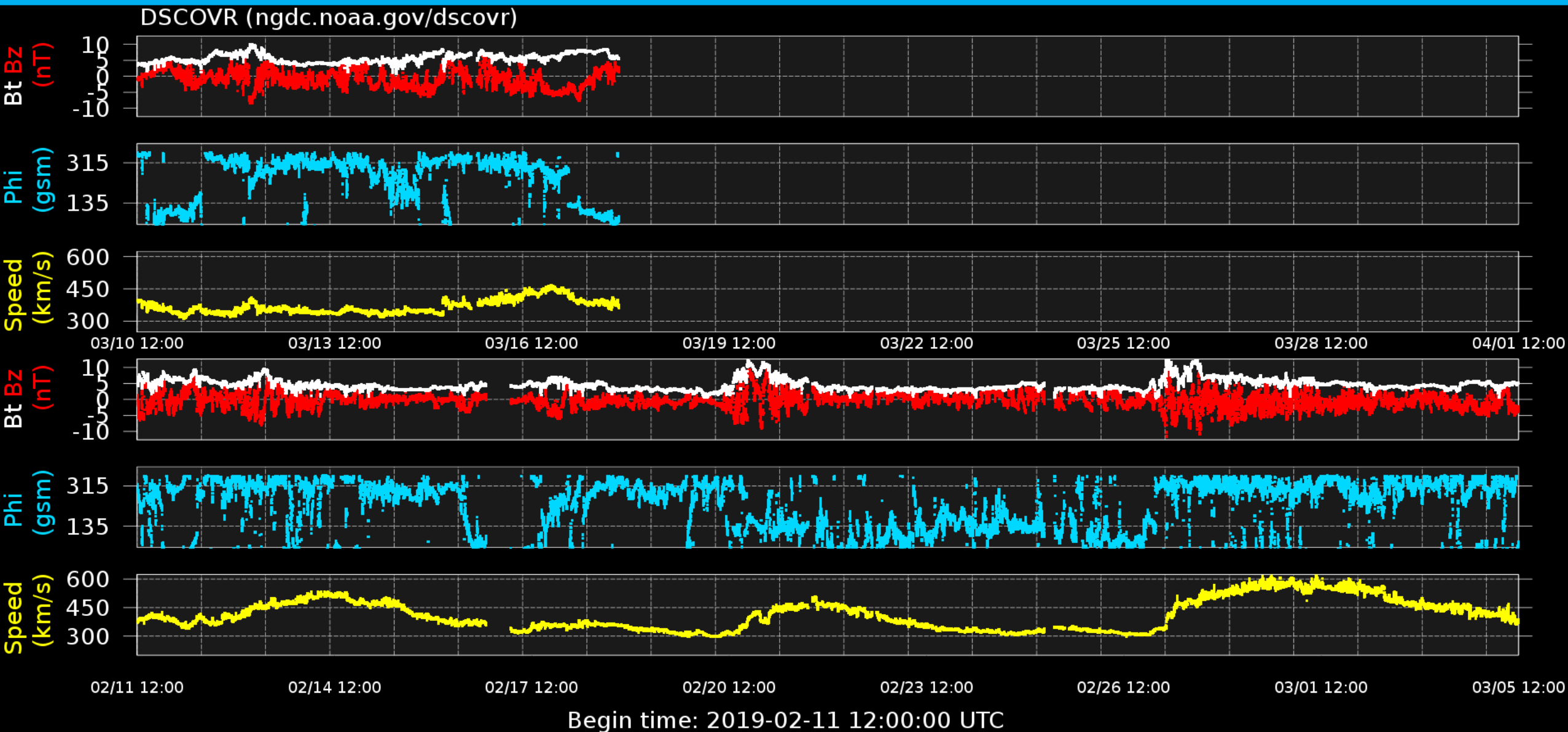
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# Outlook: Solar activity

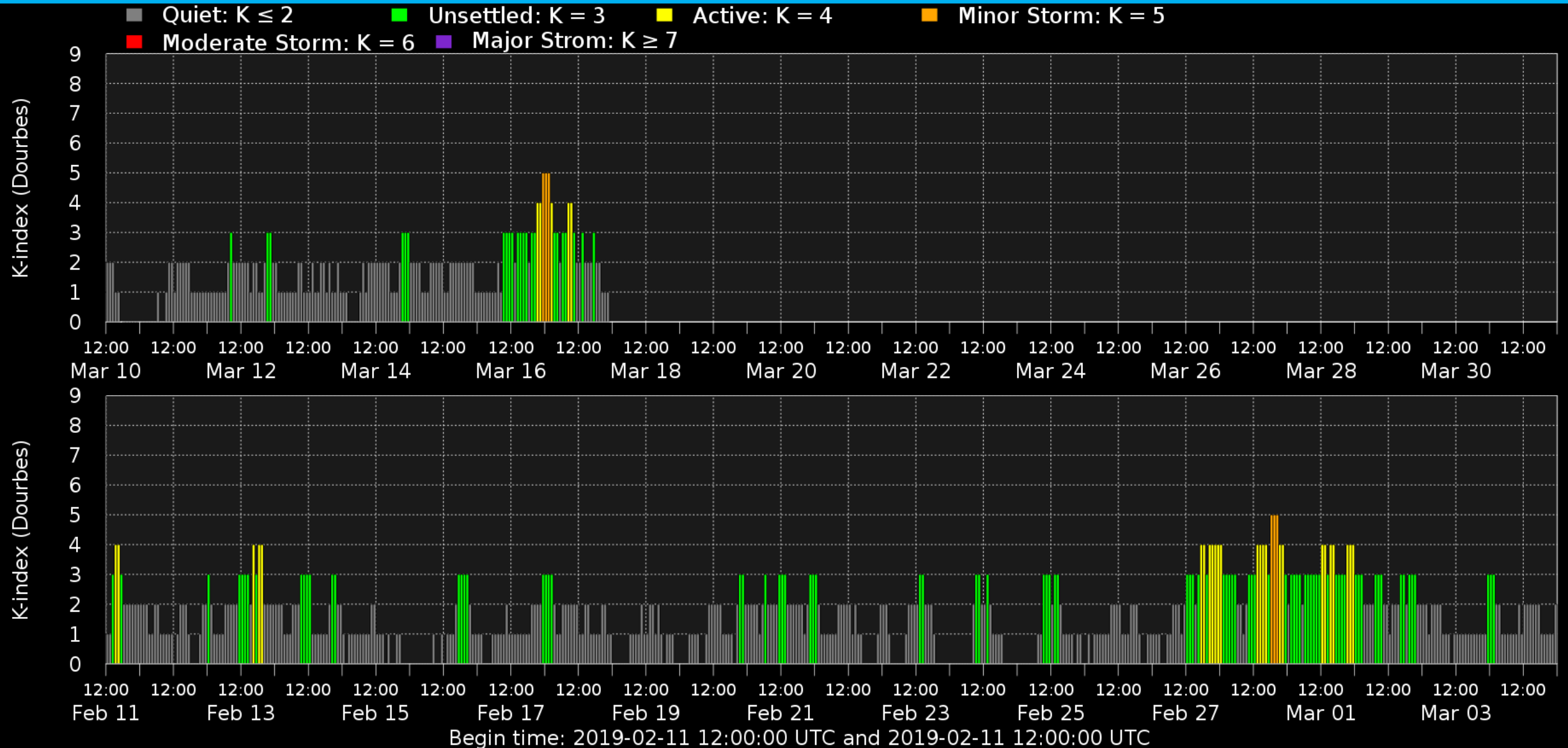




# Outlook: Solar wind



# Outlook: Geomagnetic activity



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