

# SIDC Space Weather Briefing

15 September 2019 - 22 September 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 2019-09-15 12:00 UT to 2019-09-22 12:00 UT

Active regions	None
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	Several filament loft-offs
CMEs	No clear signatures associated to filament eruptions.
Proton Events	None

Solar wind and geomagnetic conditions from 2019-09-15 12:00 UT to 2019-09-22 12:00 UT

Coronal Holes	Upcoming
ICME	None
SW Conditions	Near background
K-indices	max K-index (Dourbes): 4.0 max Kp-index (NOAA): 4

All Quiet Alert: All quiet since 2019-09-10

# Solar Activity

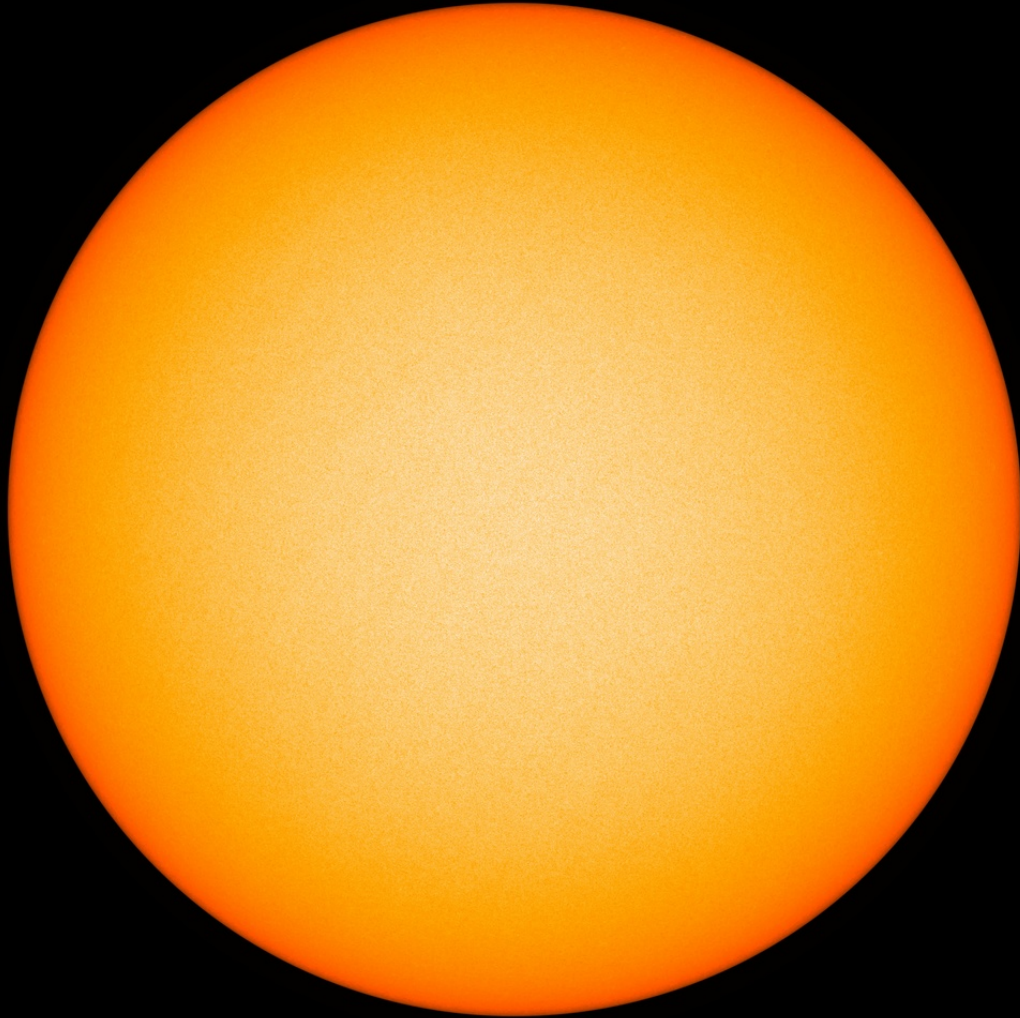


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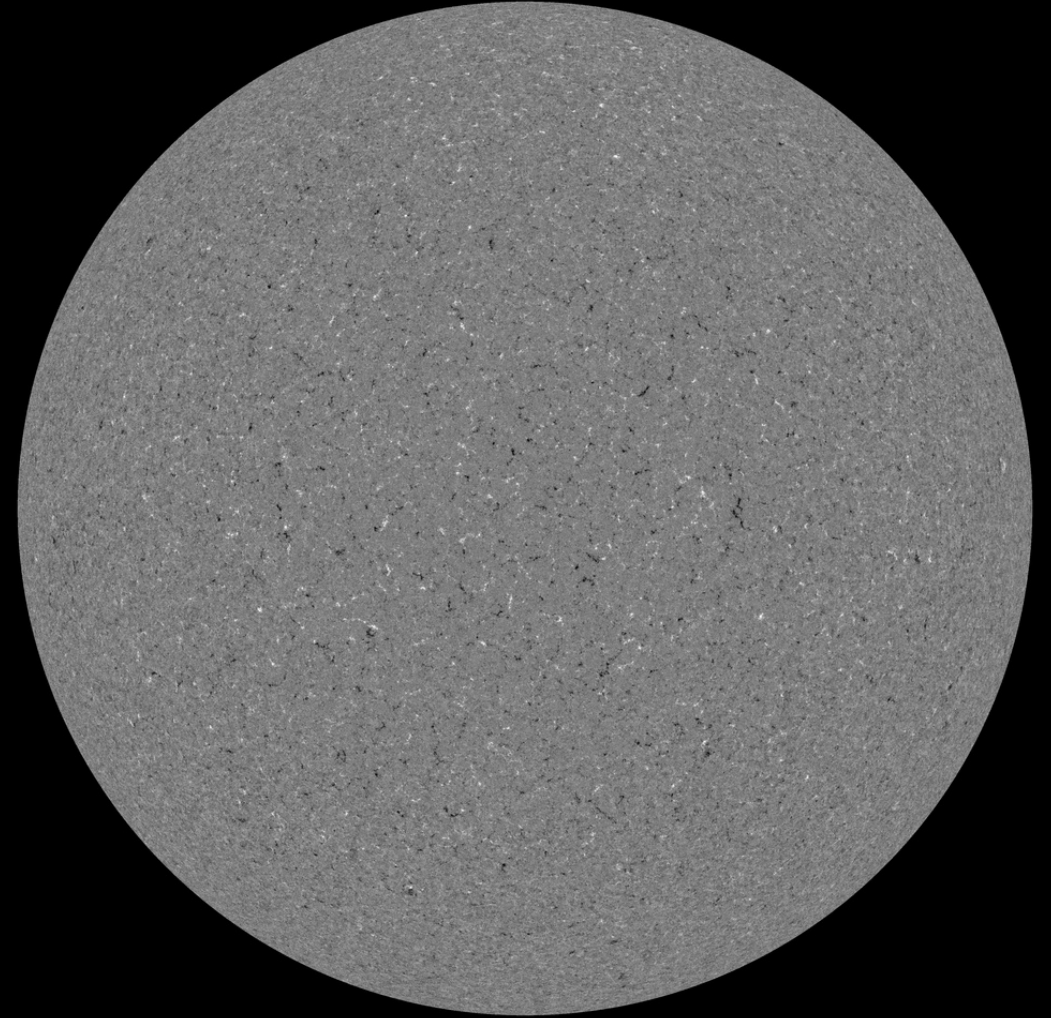
# Solar active region - start of the week

SDO/HMI White Light 2019-09-15



SDO/HMI Quick-Look Continuum: 20190915\_114500

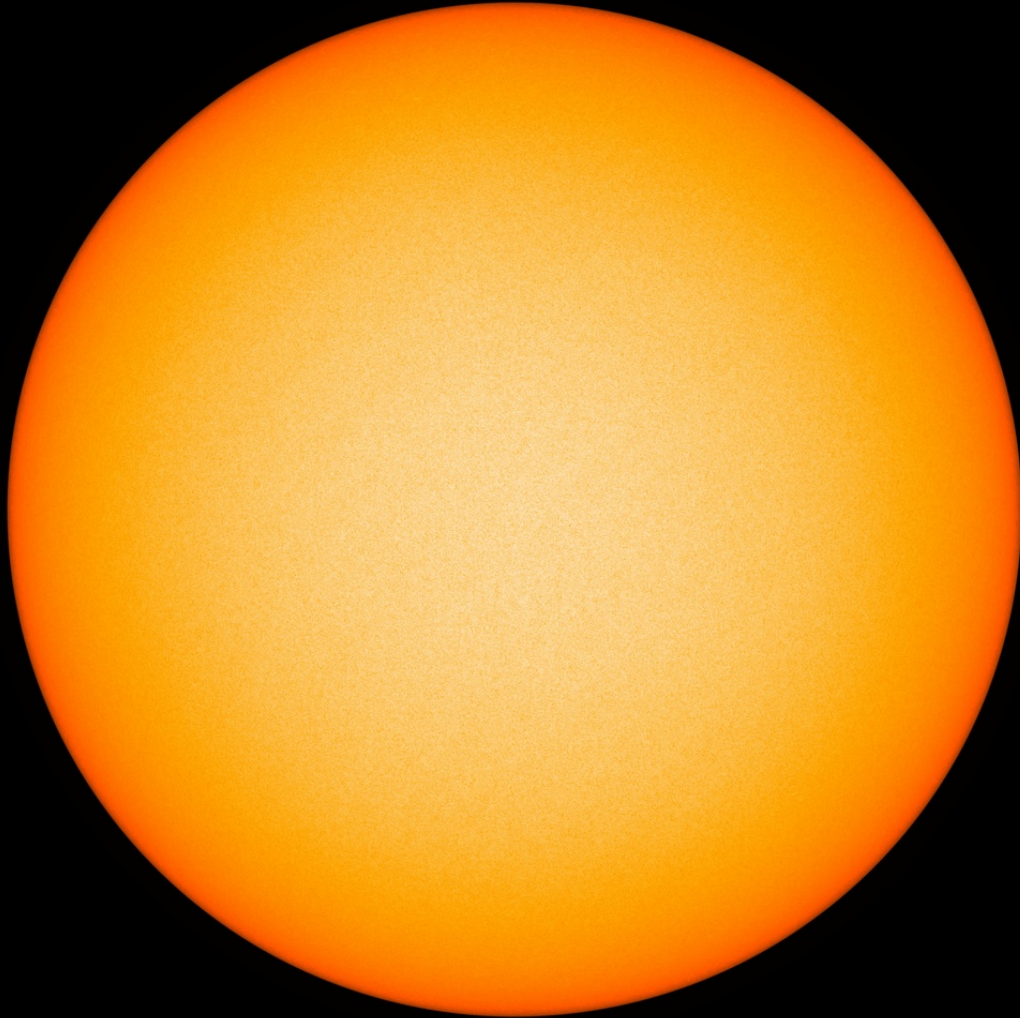
SDO/HMI Magnetogram 2019-09-15



SDO/HMI Quick-Look Magnetogram: 20190915\_114500

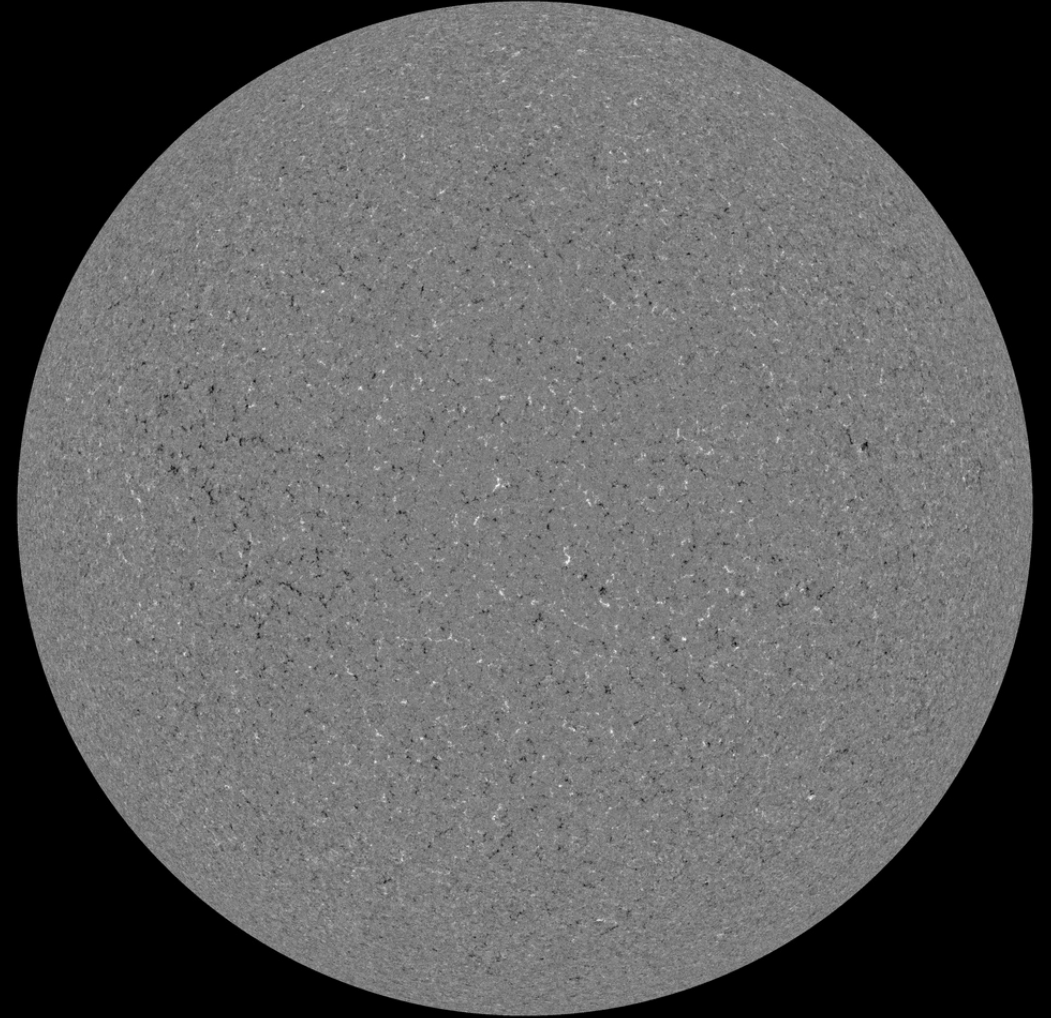
# Solar active region - middle of the week

SDO/HMI White Light 2019-09-18



SDO/HMI Quick-Look Continuum: 20190918\_114500

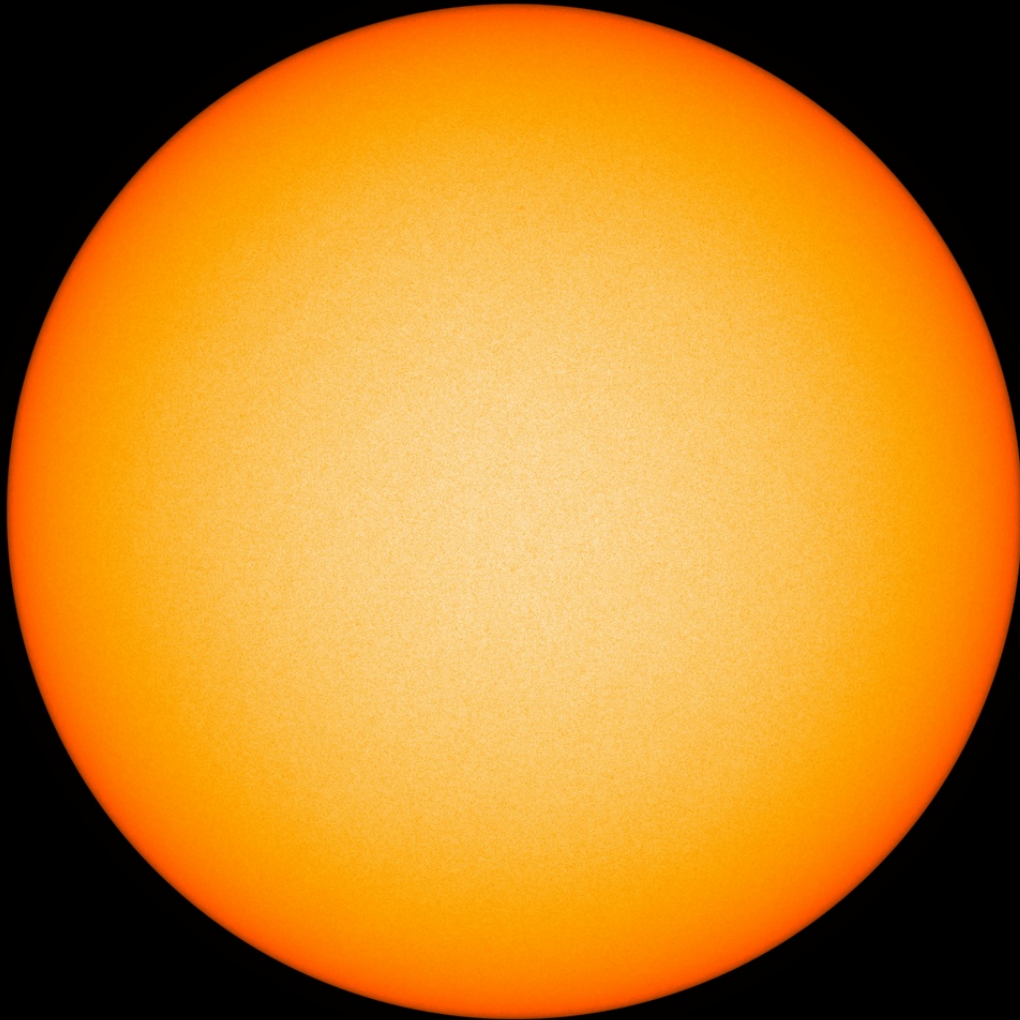
SDO/HMI Magnetogram 2019-09-18



SDO/HMI Quick-Look Magnetogram: 20190918\_114500

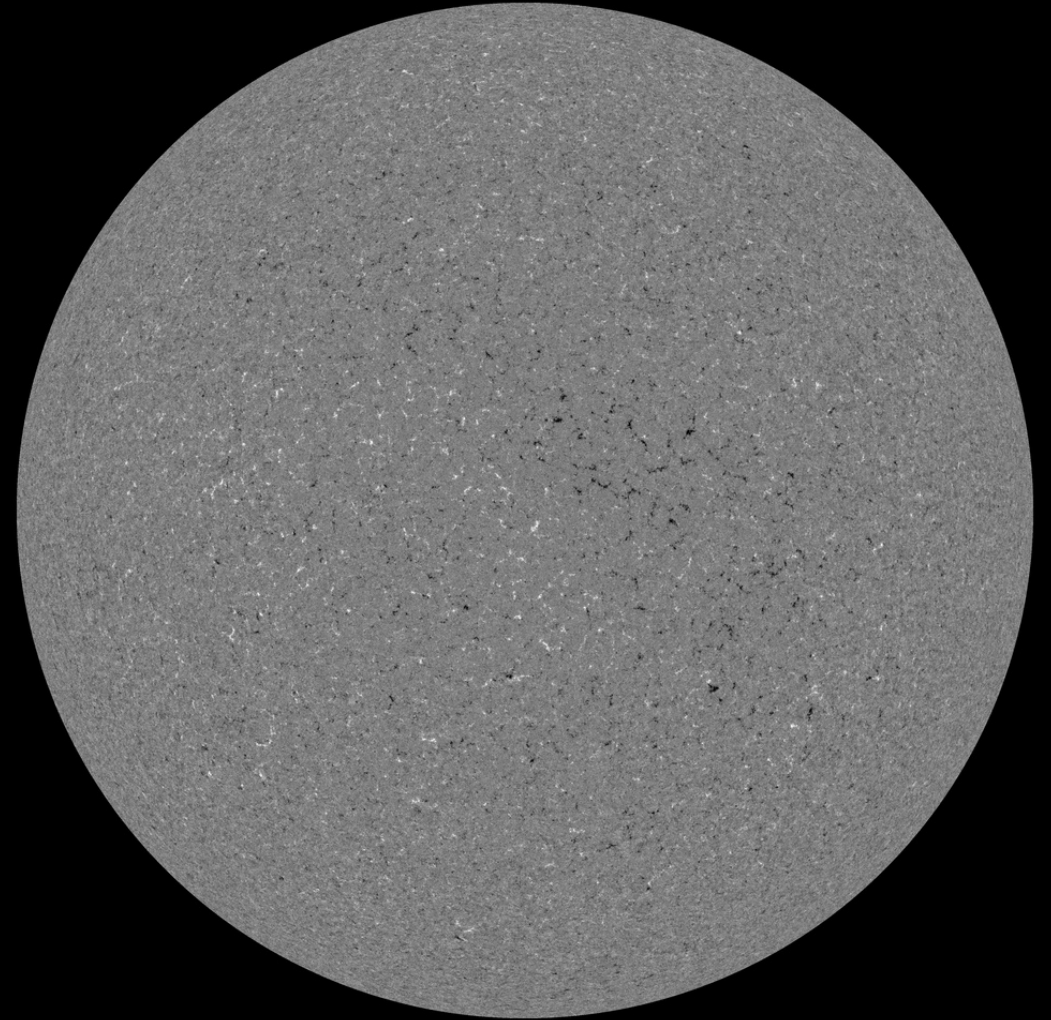
# Solar active region - end of the week

SDO/HMI White Light 2019-09-22



SDO/HMI Quick-Look Continuum: 20190922\_114500

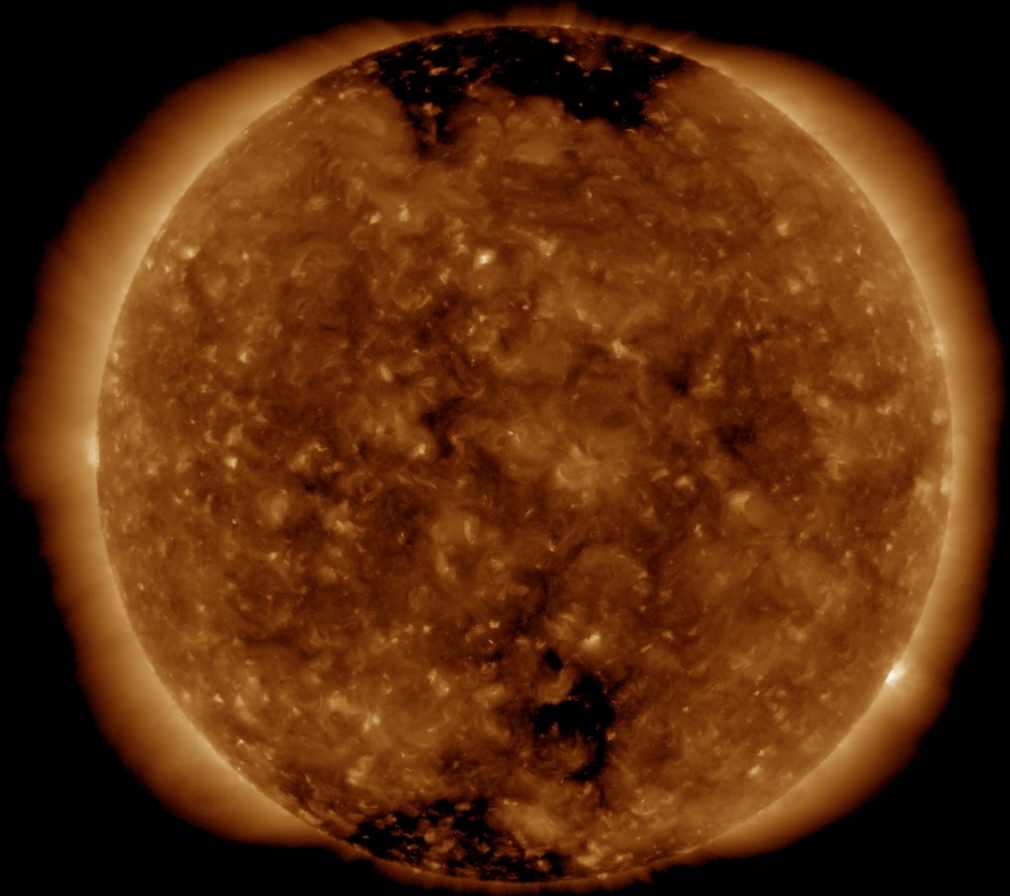
SDO/HMI Magnetogram 2019-09-22



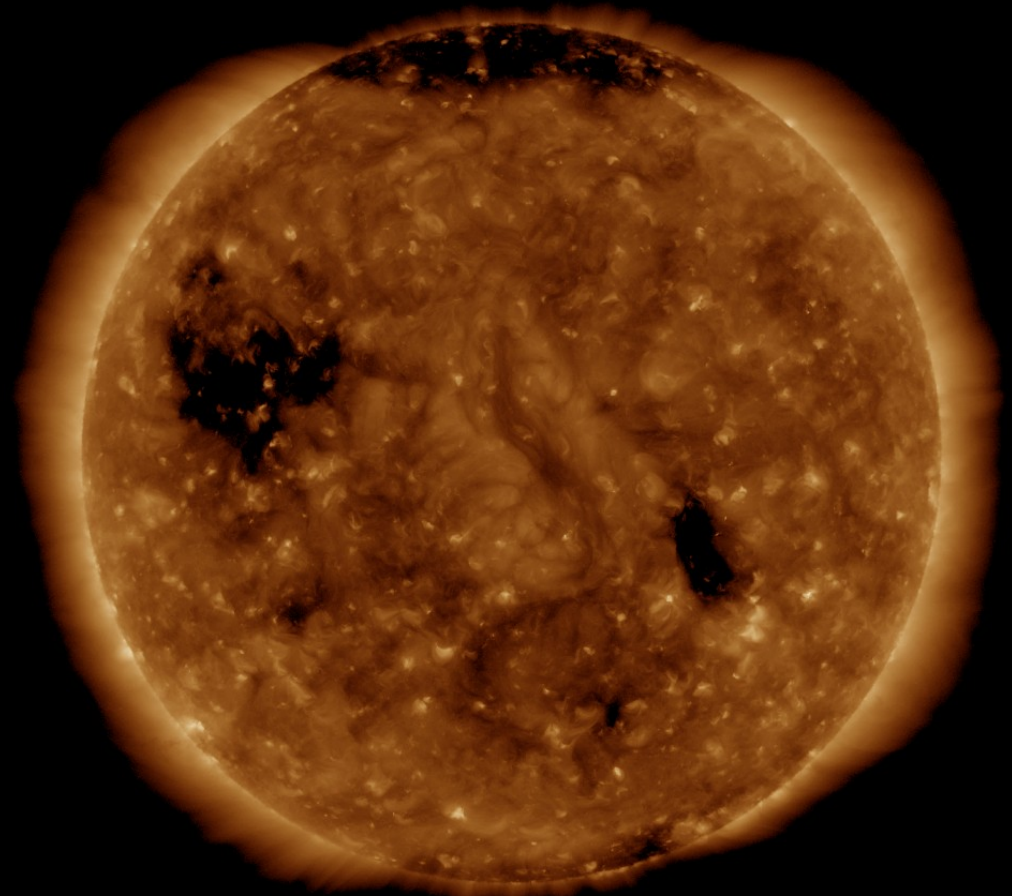
SDO/HMI Quick-Look Magnetogram: 20190922\_114500

# Solar active region & Coronal hole

SDO/AIA 19.3 nm 2019-09-15



SDO/AIA 19.3 nm 2019-09-22



SDO/AIA 193 2019-09-14 08:41:05 UT

SDO/AIA 193 2019-09-22 12:10:53 UT

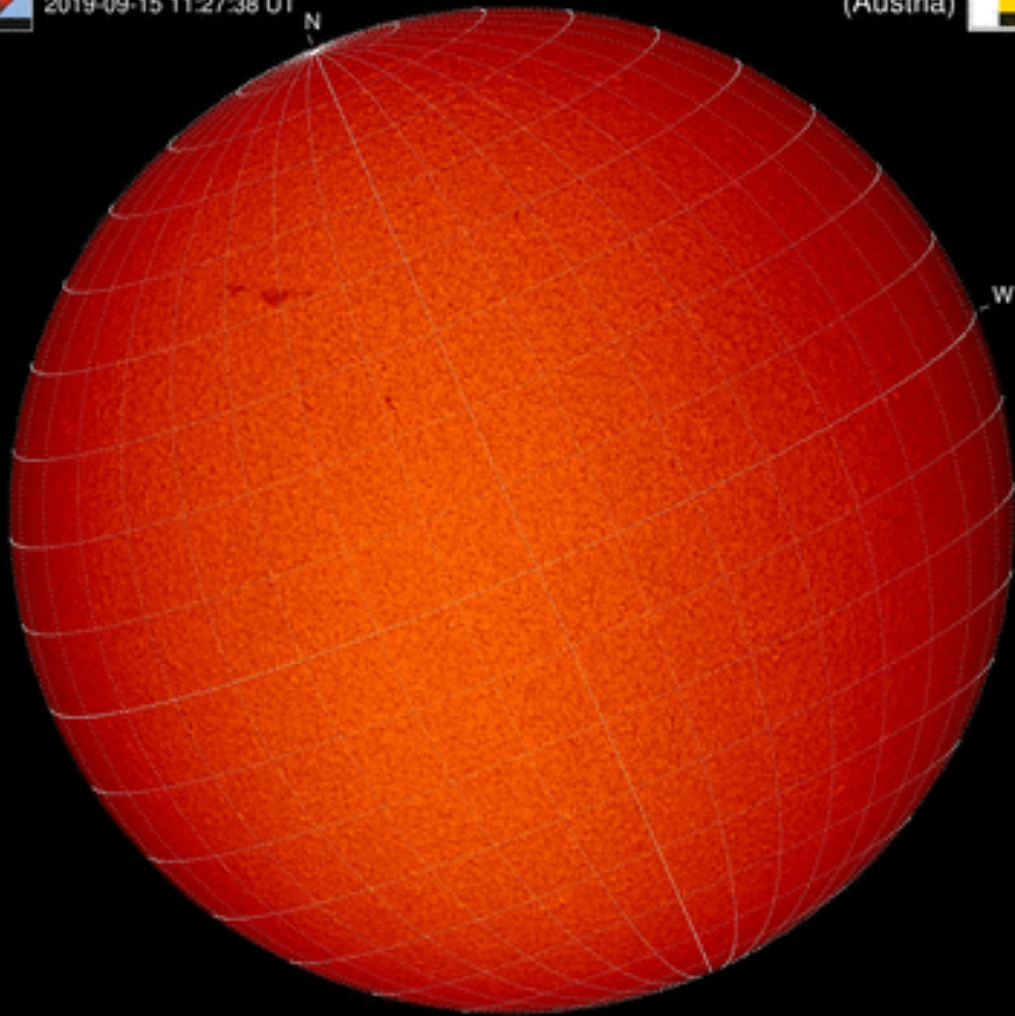
# Filament & Filament eruption

H-alpha 2019-09-15



Kanzelhöhe Observatory  
2019-09-15 11:27:38 UT

University of Graz  
(Austria)

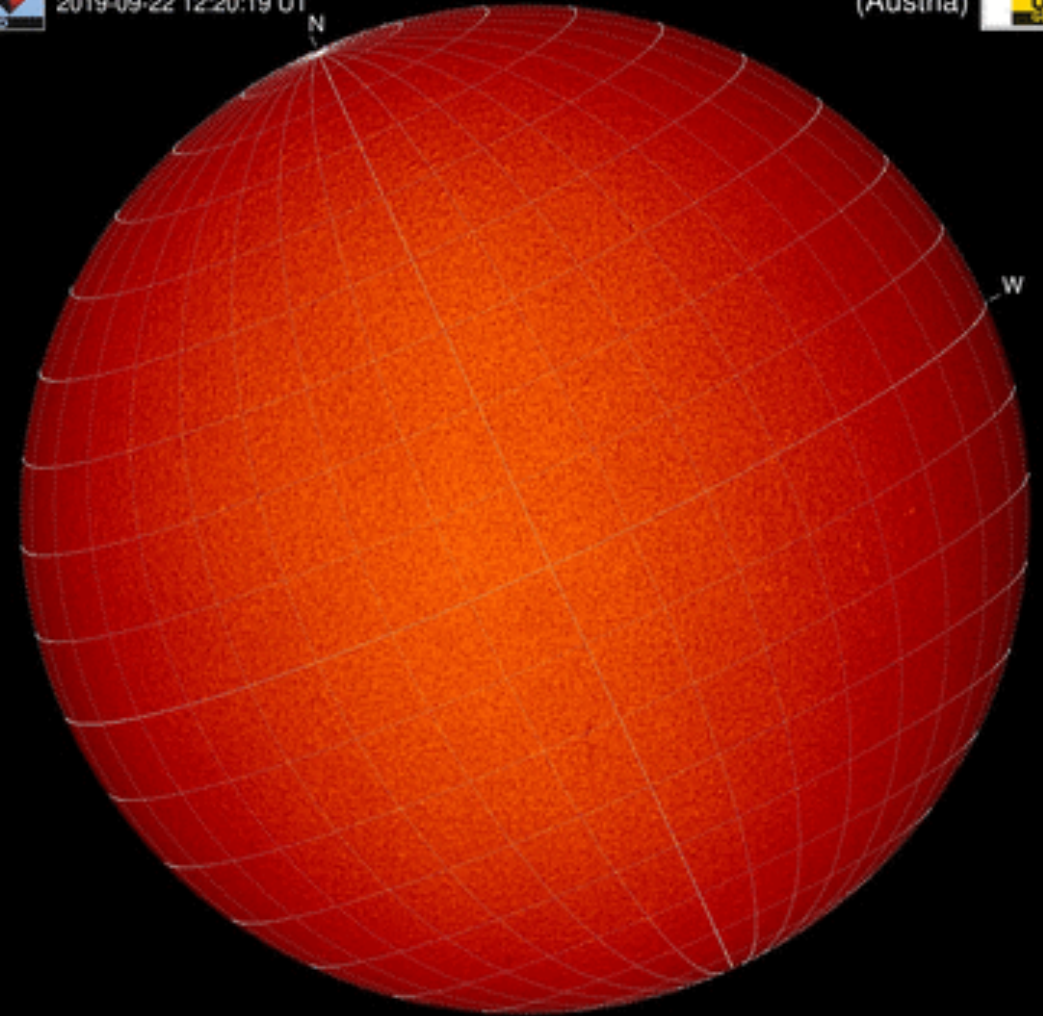


H-alpha 2019-09-22



Kanzelhöhe Observatory  
2019-09-22 12:20:19 UT

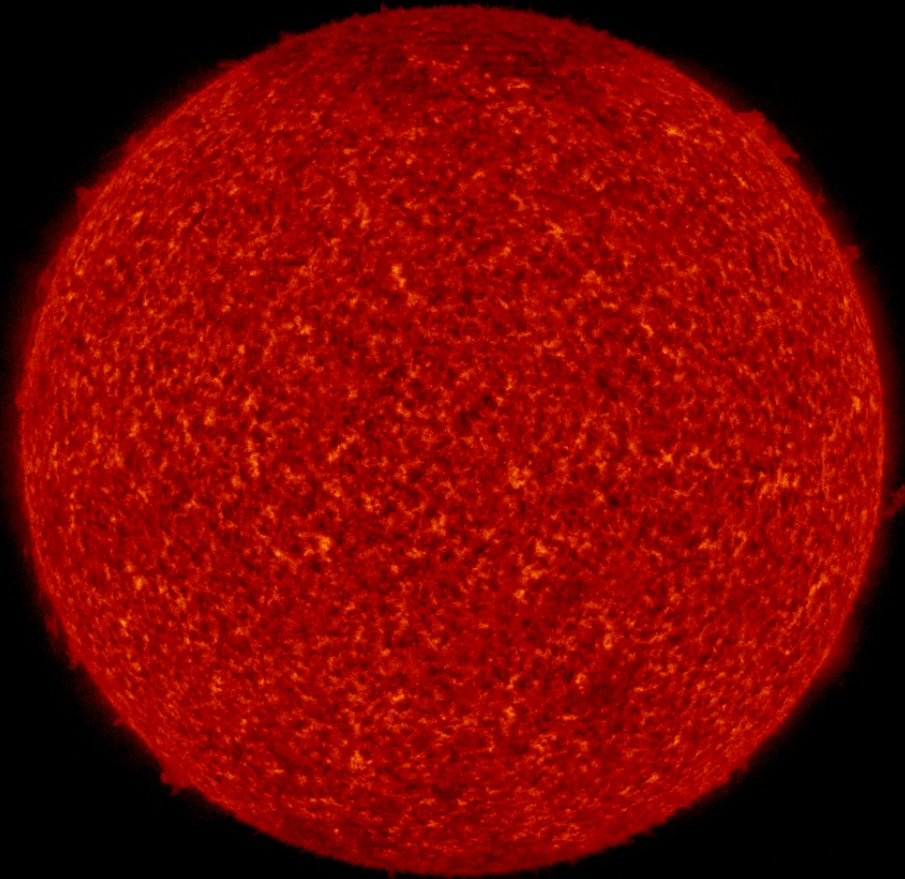
University of Graz  
(Austria)



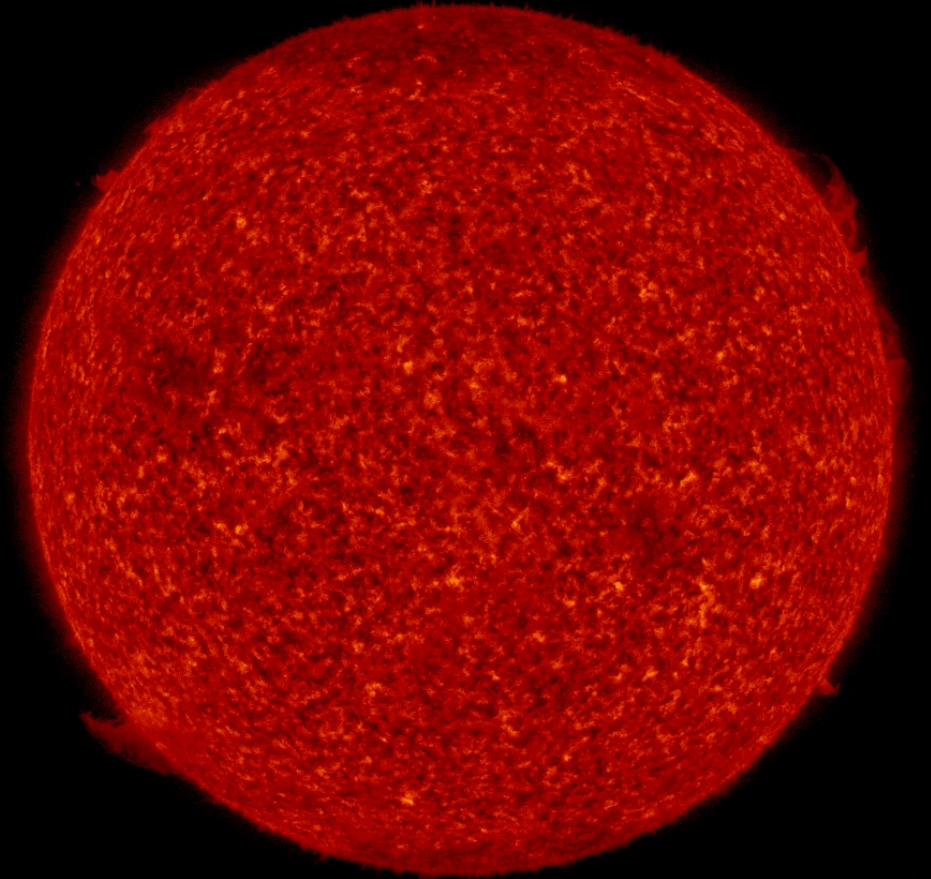


# Solar active region & Filament

SDO/AIA 30.4 nm 2019-09-15



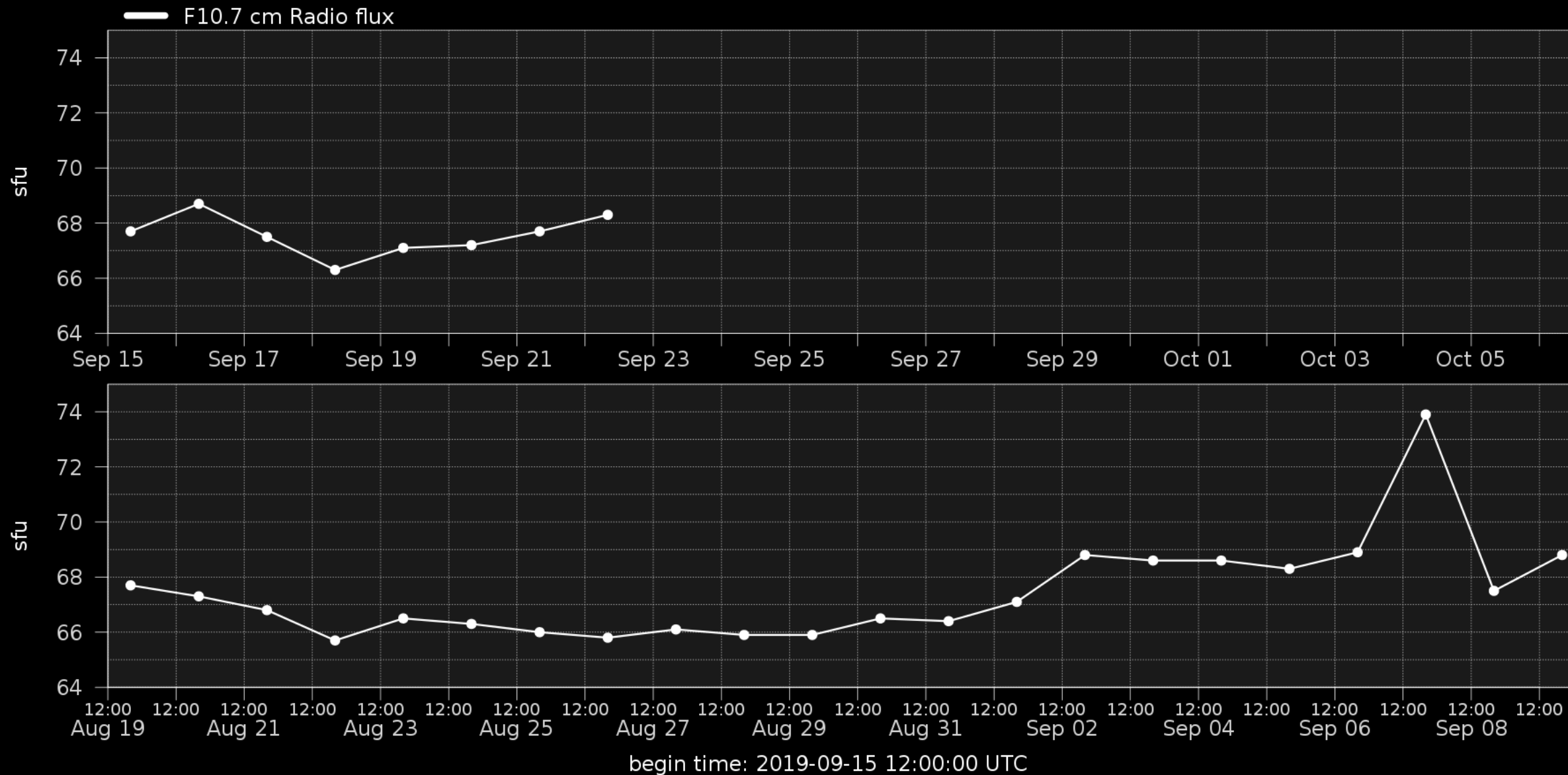
SDO/AIA 30.4 nm 2019-09-22



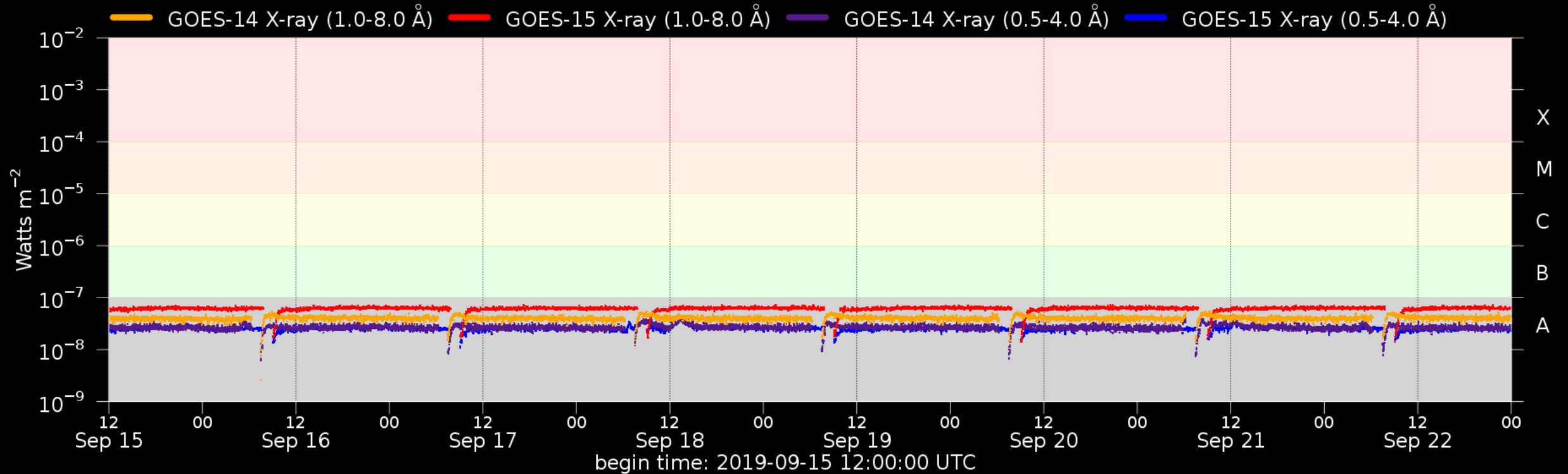
SDO/AIA 304 2019-09-15 12:14:42 UT

SDO/AIA 304 2019-09-22 12:14:18 UT

# Solar F10.7cm radio flux



# Flaring activity

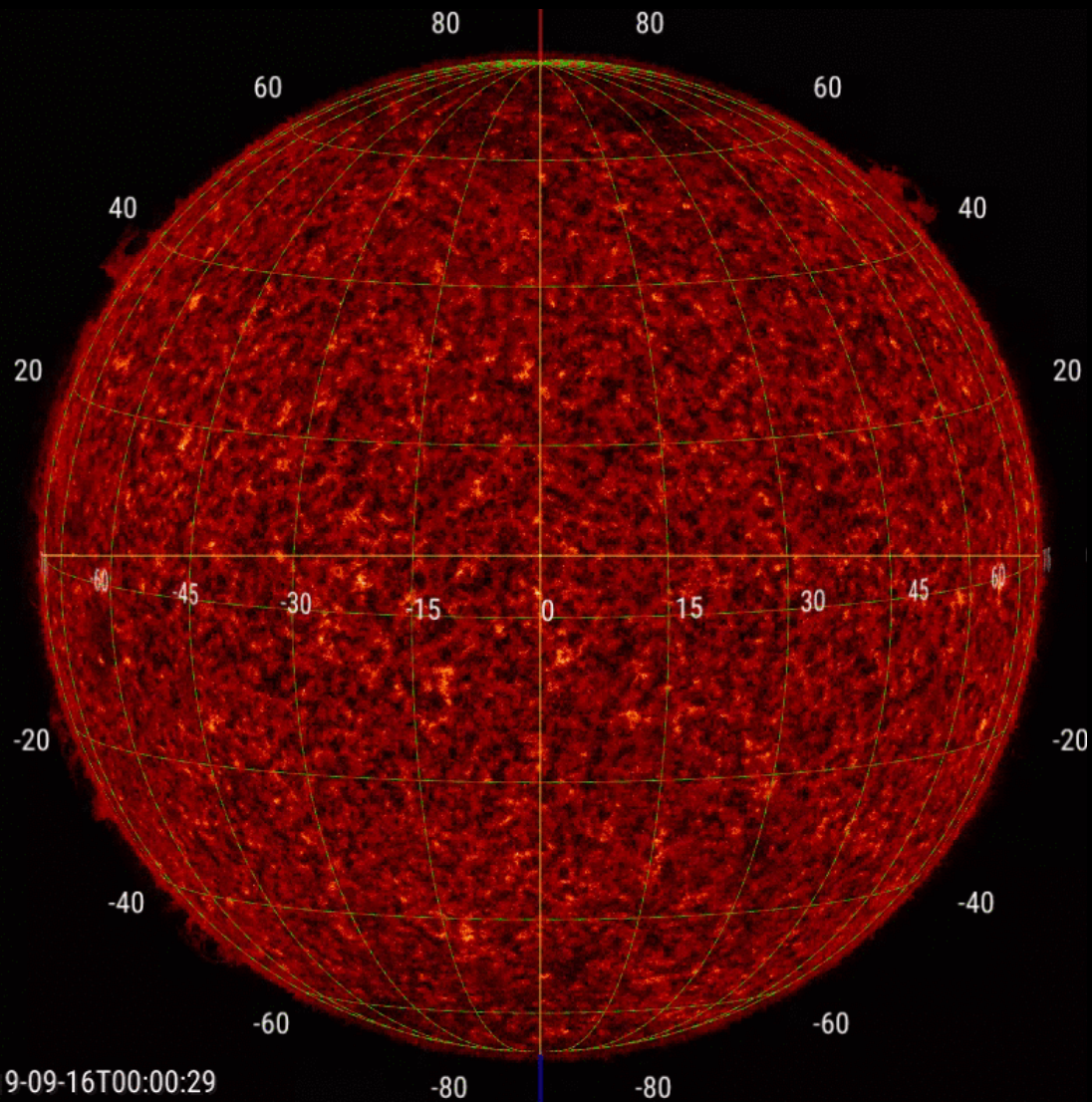


Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

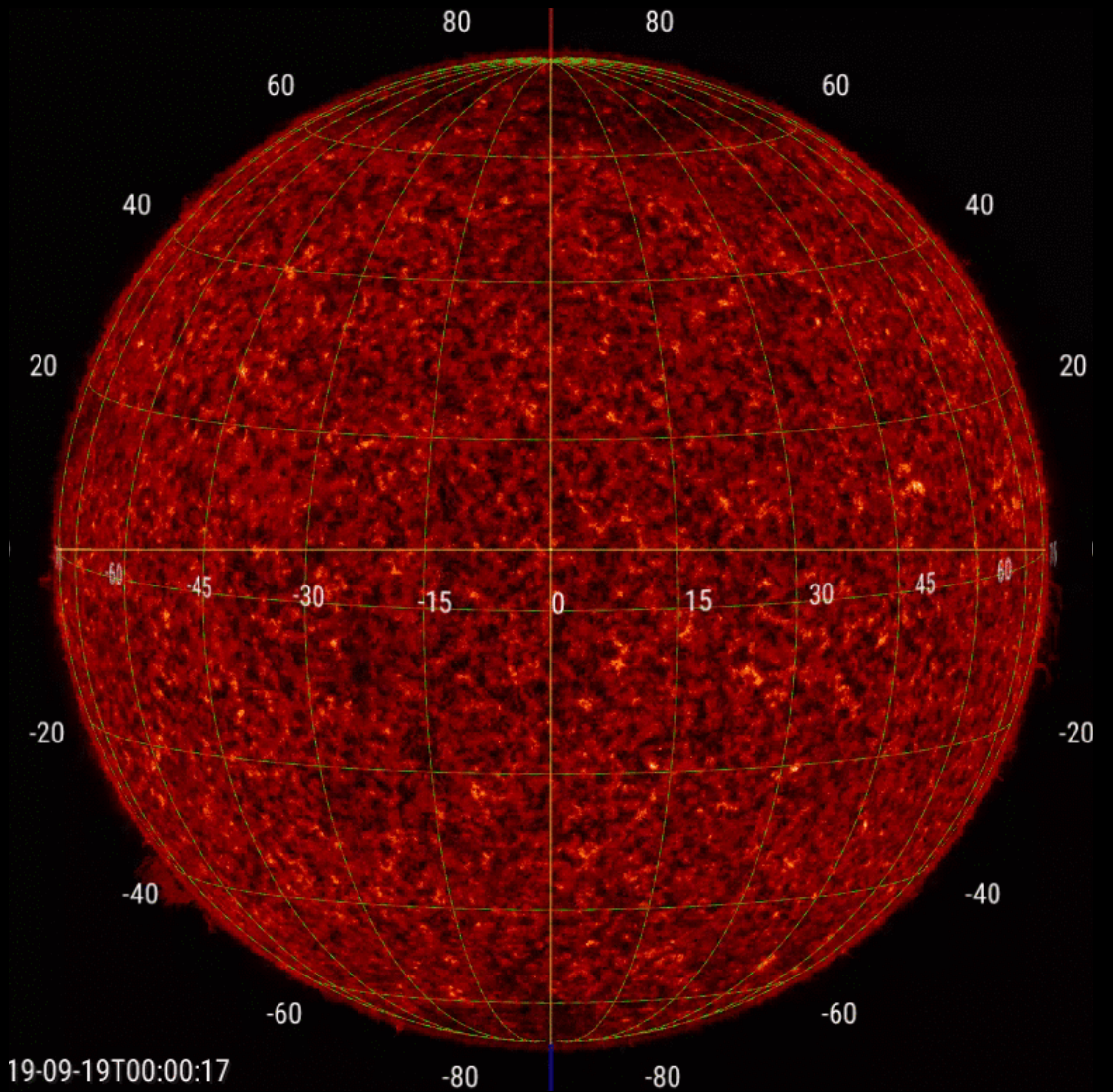
Issue date	2019-09-15	2019-09-16	2019-09-17	2019-09-18	2019-09-19	2019-09-20	2019-09-21	2019-09-22
Probability	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01
Observed	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00

# Solar active region & Filament

SDO/AIA 30.4 nm filament eruption 2019-09-16



SDO/AIA 30.4 nm filament eruption 2019-09-19



# Coronal Mass Ejection

Filament eruption early 2019-09-16:

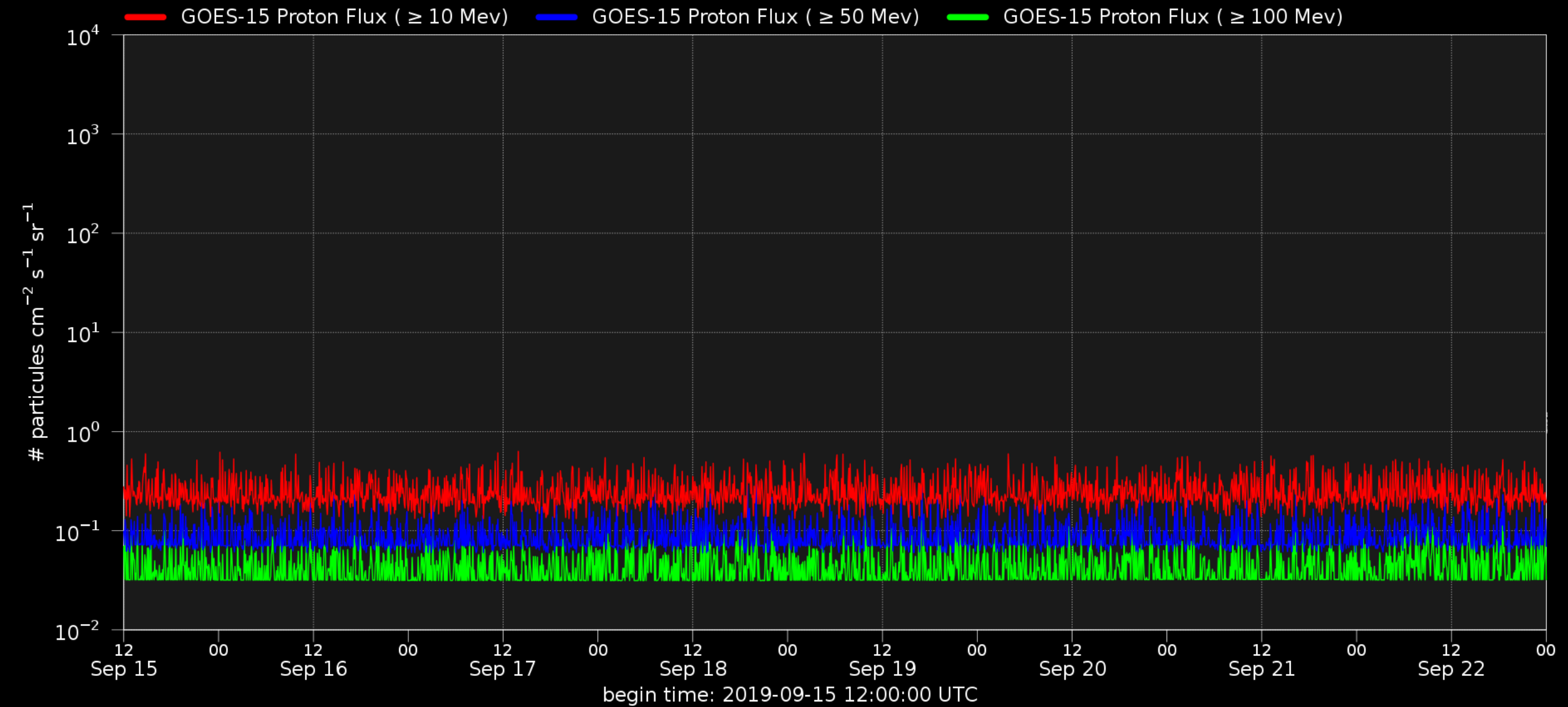
- STEREO A COR 2: narrow Westward eruption
- [SoHO/LASCO C2](#): narrow Eastward eruption
- → Expected to be off the Sun-Earth line

Filament eruption late 2019-09-19:

- STEREO A COR 2: narrow slow (300 km/s) Westward eruption
- [SoHo/LASCO C2](#): no signatures
- → Expected to be South of Earth and non-noticeable in combination with the expected High Speed Stream.

23:24 09/21  
20:00 09/21  
17:12 09/21  
14:00 09/21  
11:18 09/21  
08:00 09/21  
05:36 09/21  
02:36 09/21  
23:24 09/20  
20:00 09/20  
17:24 09/20  
14:12 09/20  
10:48 09/20  
07:36 09/20  
03:12 09/20  
23:24 09/19  
19:36 09/19  
17:00 09/19  
13:48 09/19  
10:36 09/19  
07:48 09/19  
05:12 09/19  
02:24 09/19  
23:12 09/18  
19:24 09/18  
16:54 09/18  
13:54 09/18  
10:24 09/18  
07:36 09/18  
05:12 09/18  
02:24 09/18  
23:24 09/17  
20:00 09/17  
17:24 09/17  
14:24 09/17  
11:30 09/17  
08:24 09/17  
05:24 09/17  
02:36 09/17  
23:24 09/16  
19:48 09/16  
17:12 09/16  
14:00 09/16  
11:00 09/16  
08:18 09/16

# Solar proton flux

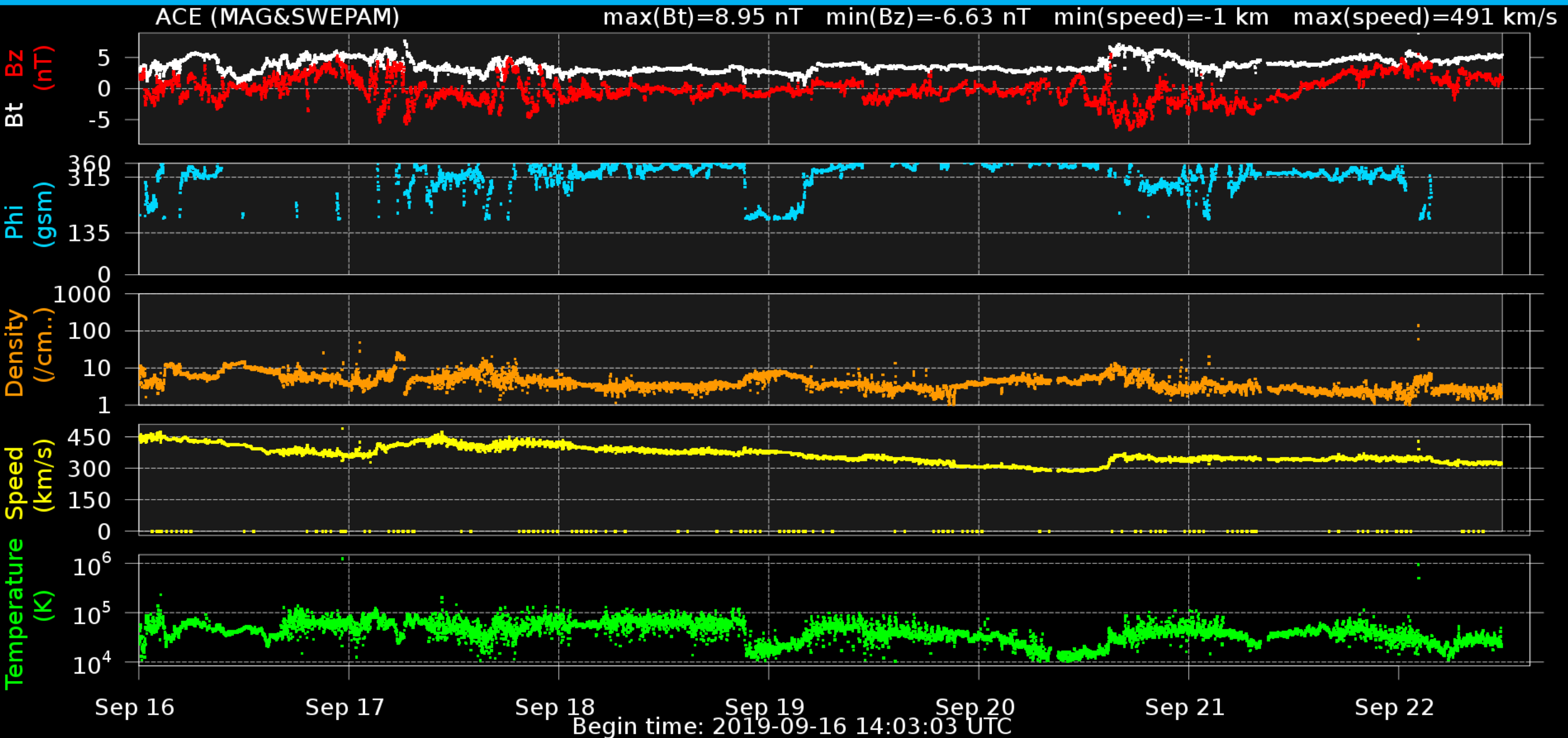


# Solar Wind and Geomagnetic Activity



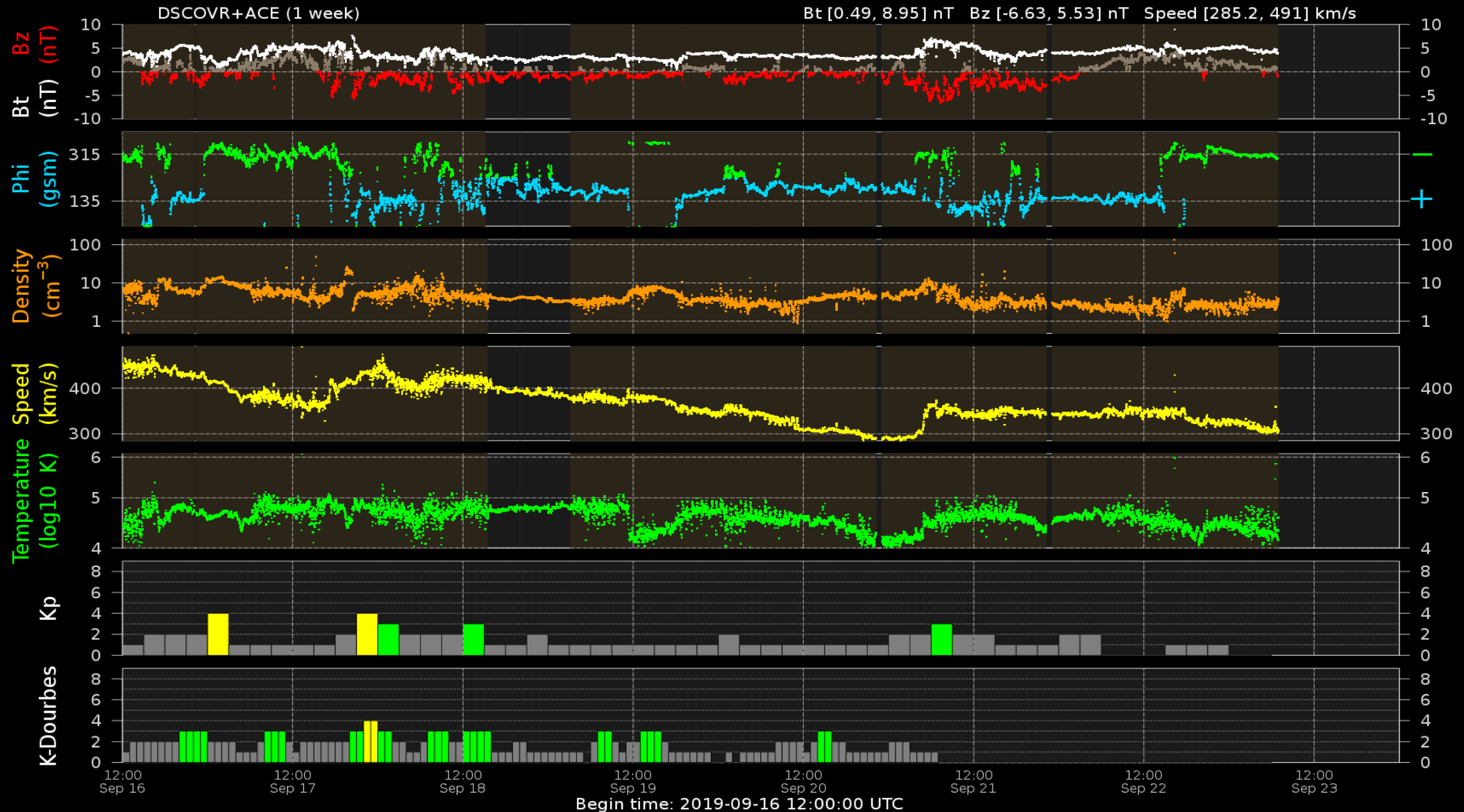
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# Solar wind parameters (ACE data)

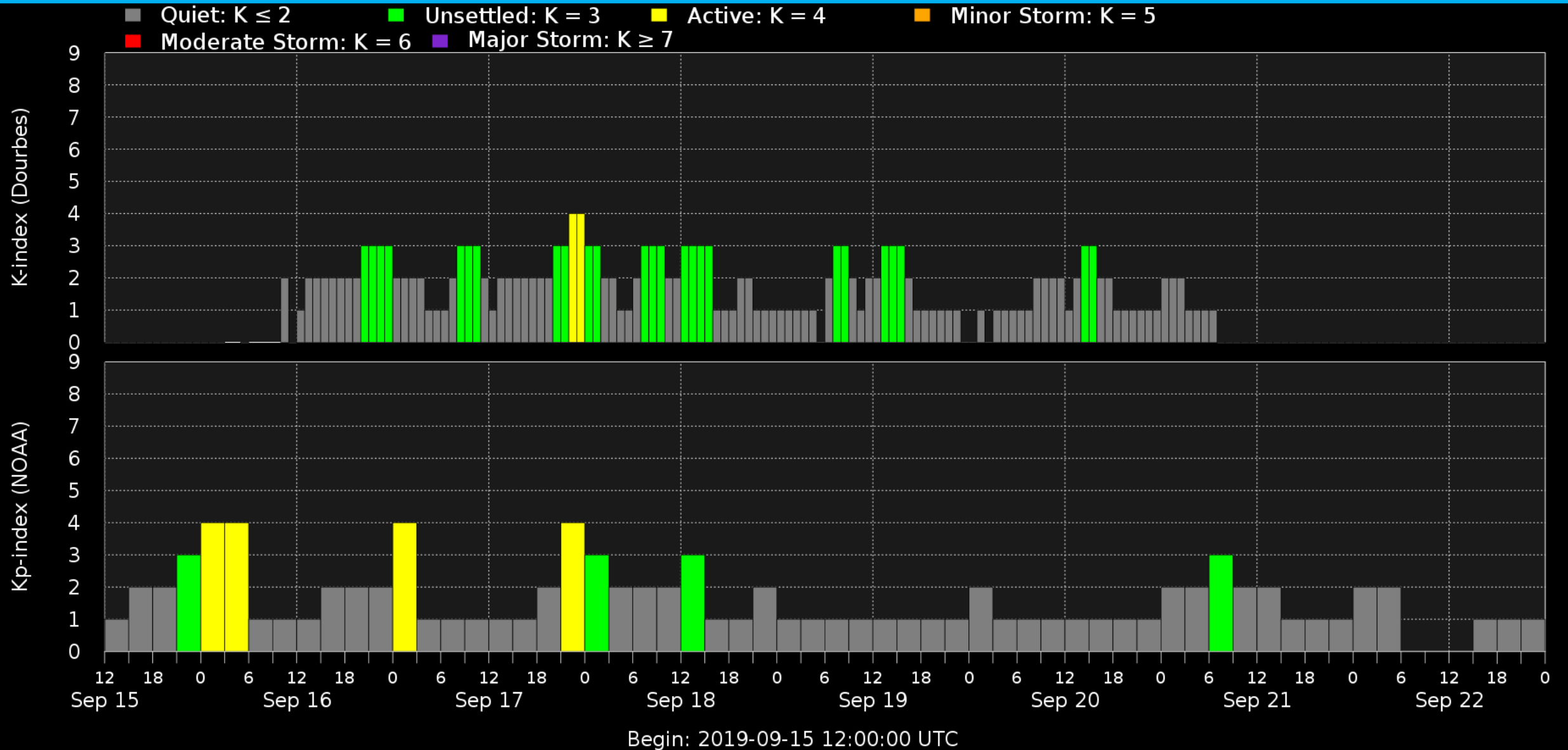




# Solar wind parameters (ACE data)



# Geomagnetic activity (K-indexes)



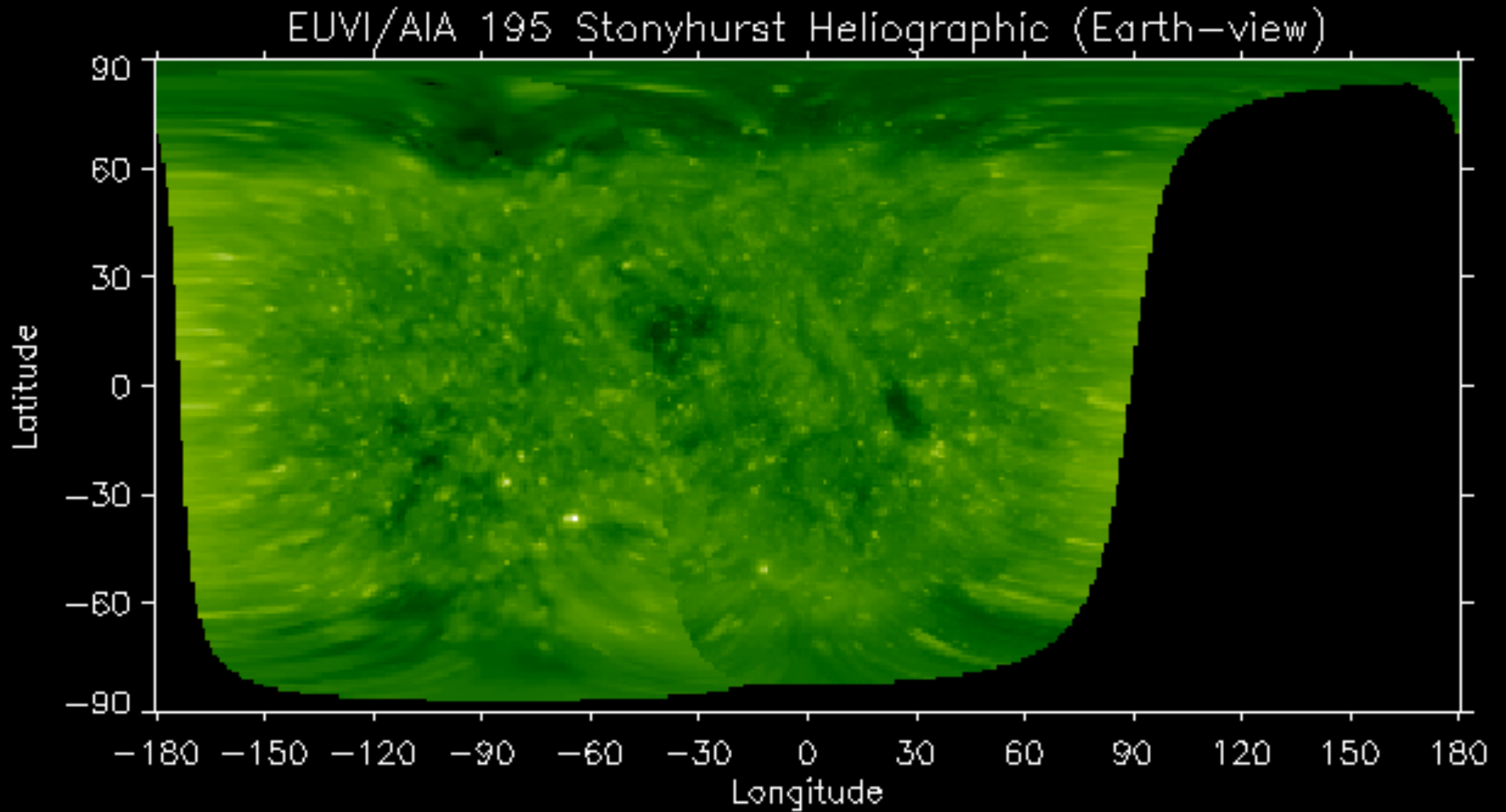
# Outlook



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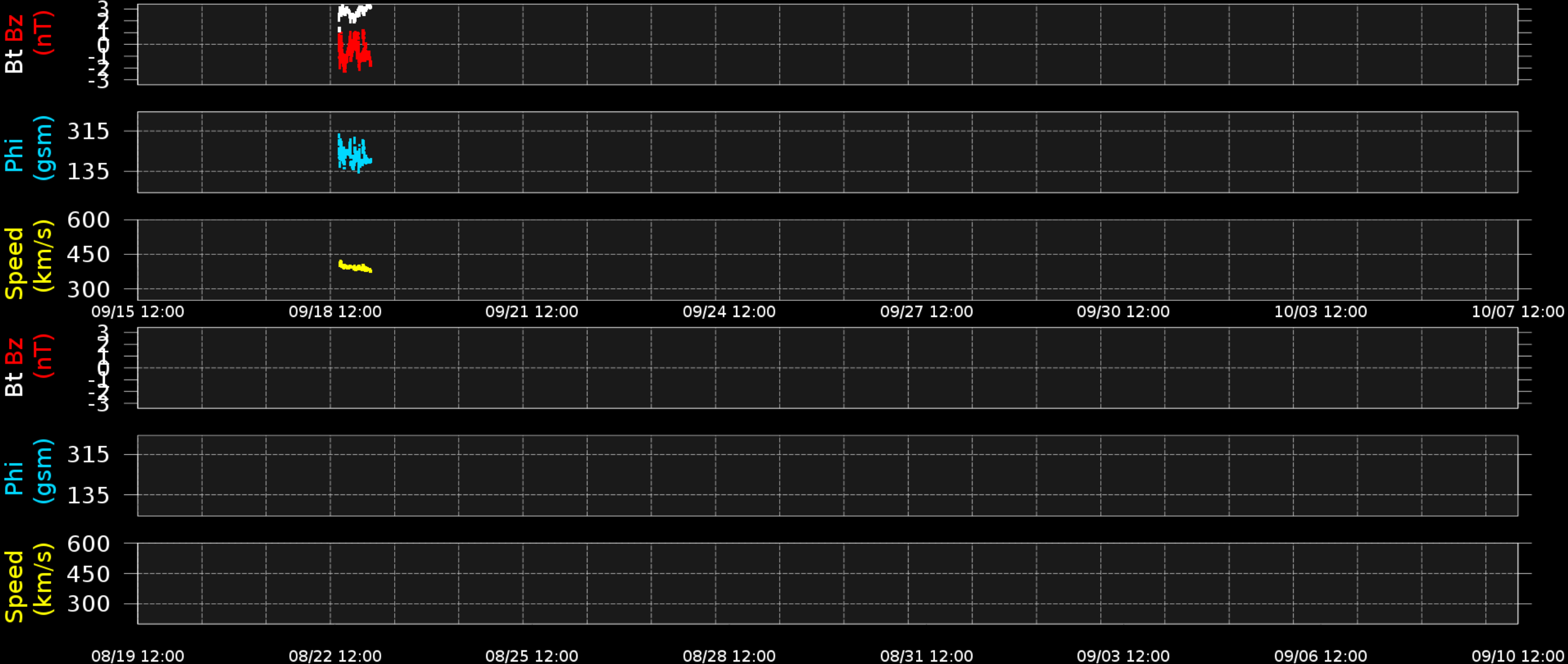
Solar Influences  
Data analysis Centre  
[www.sidc.be](http://www.sidc.be)

# Outlook: Solar activity



# Outlook: Solar wind

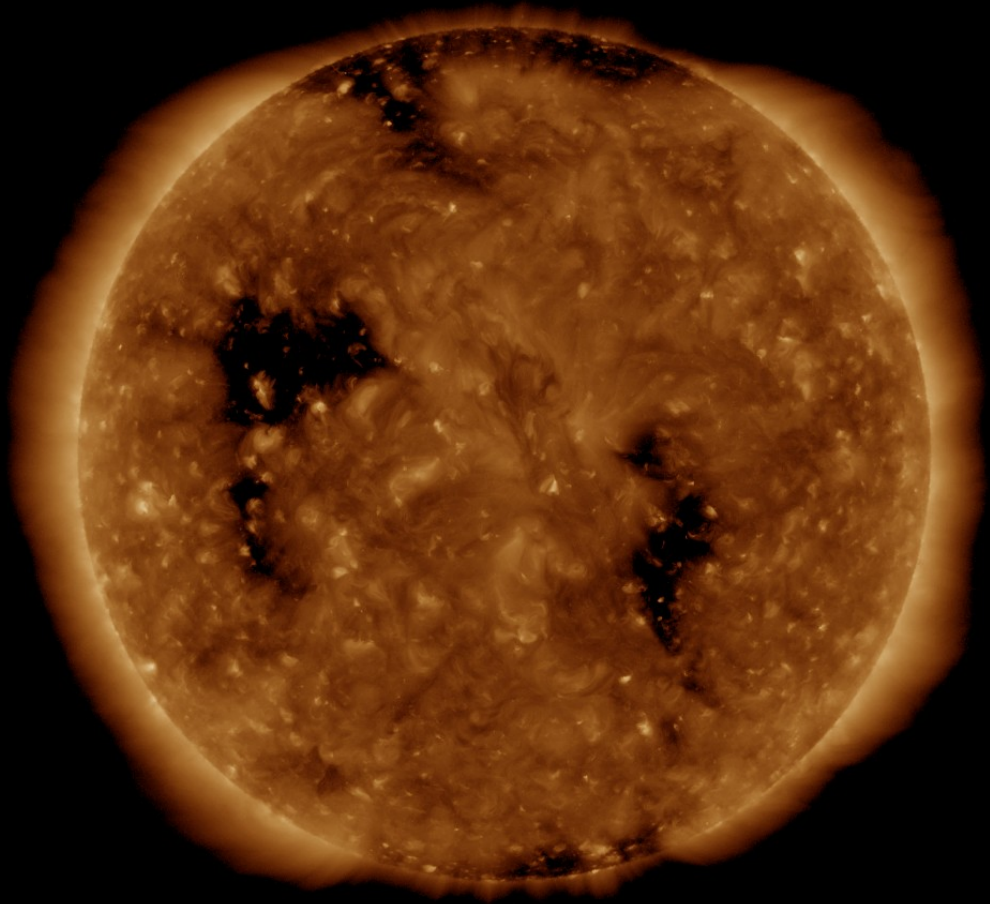
DSCOVR (ngdc.noaa.gov/dscovr)



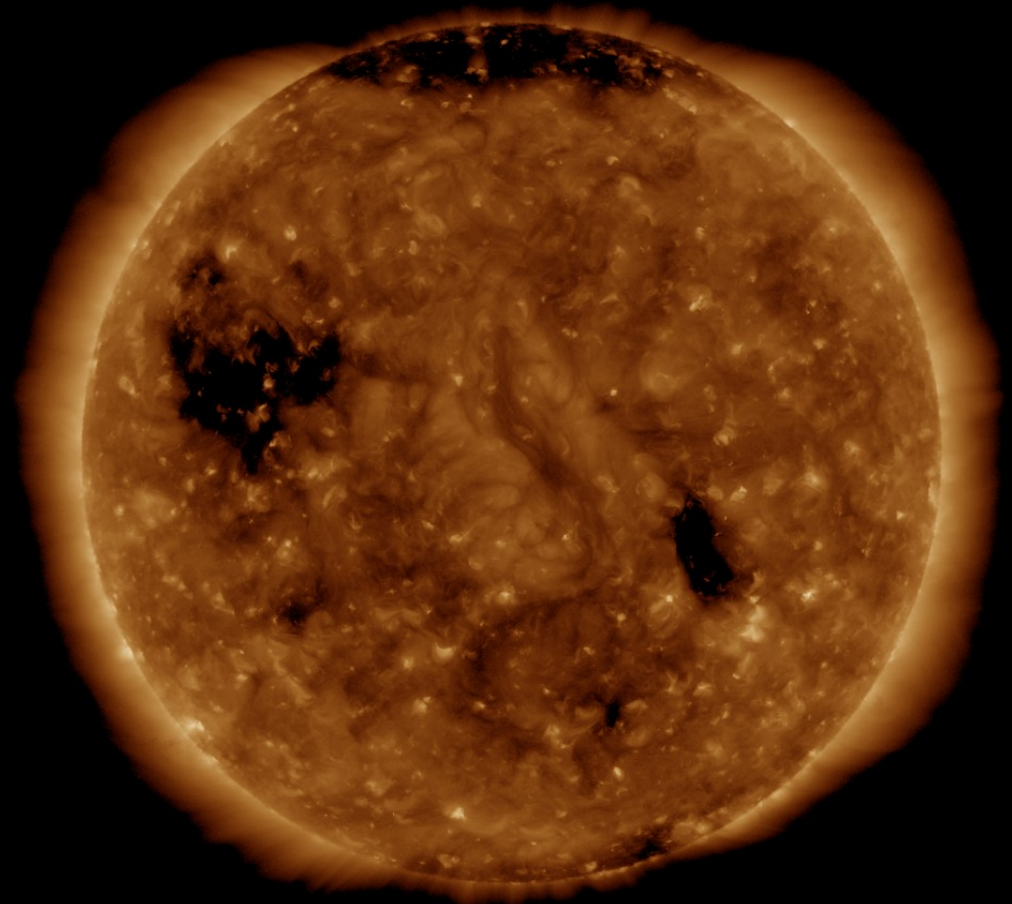
Begin time: 2019-08-19 12:00:00 UTC

# Solar active region & Coronal hole

SDO/AIA 19.3 nm 2019-08-26



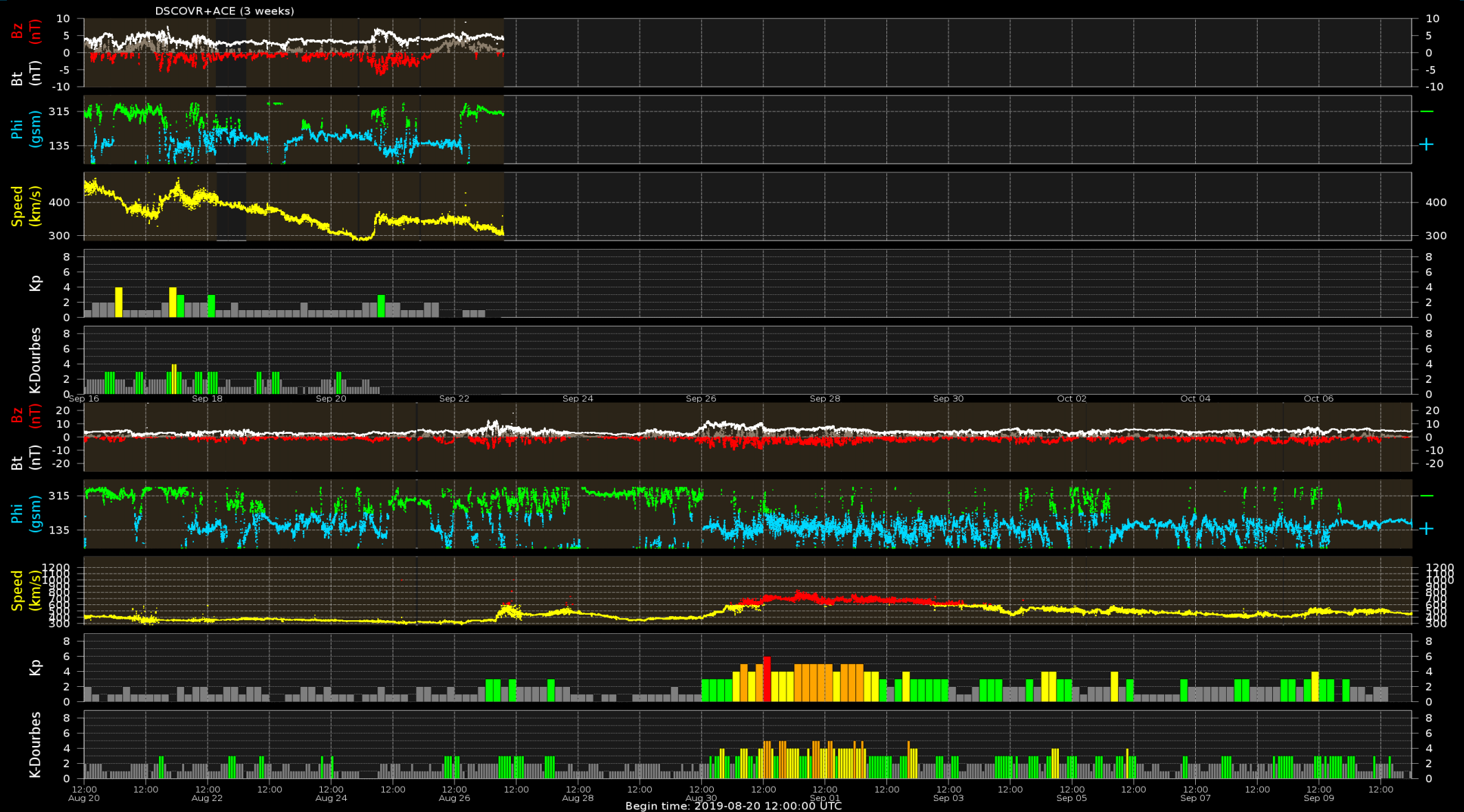
SDO/AIA 19.3 nm 2019-09-22



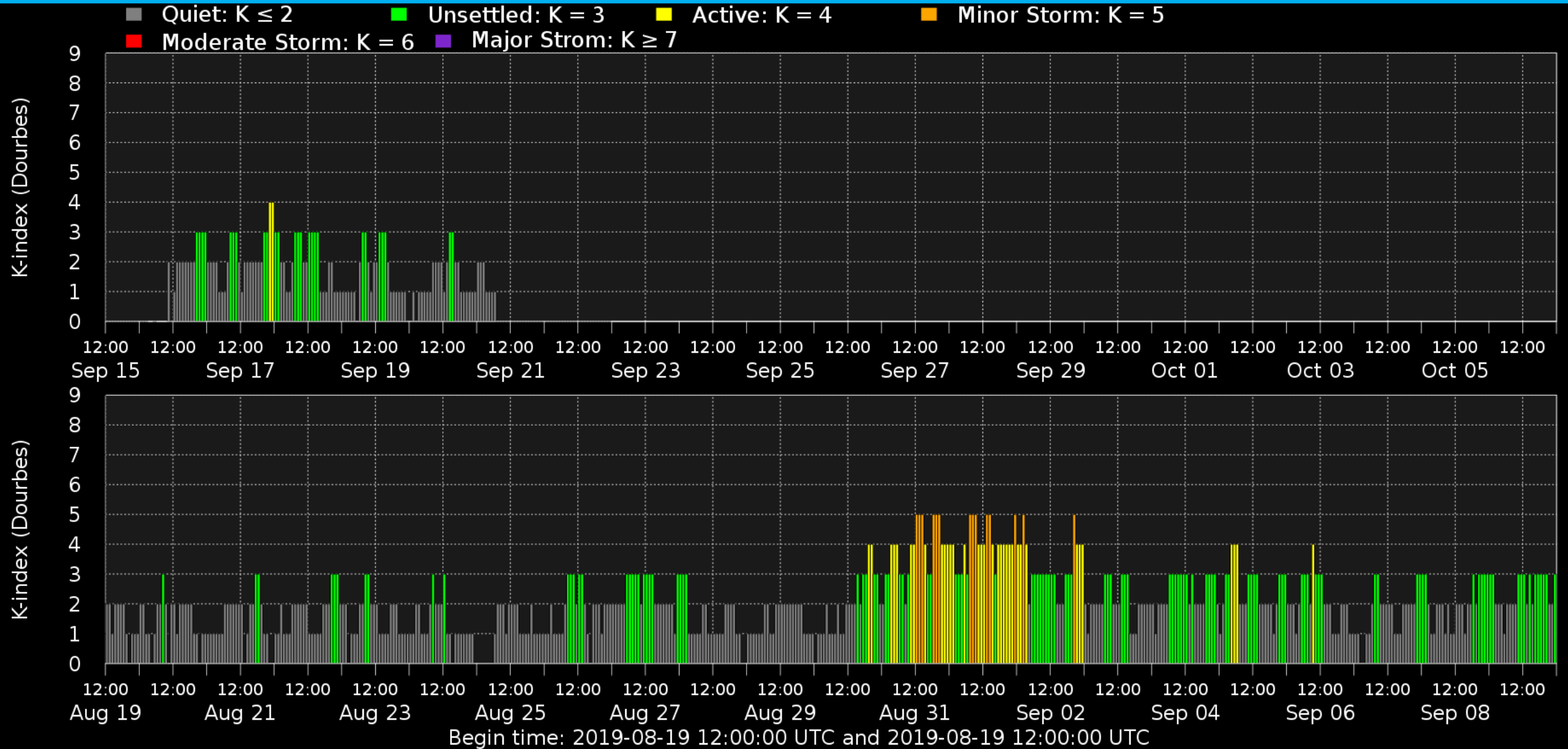
SDO/AIA 193 2019-08-26 12:10:41 UT

SDO/AIA 193 2019-09-22 12:10:53 UT

# Outlook: Solar wind



# Outlook: Geomagnetic activity





# SIDC Space Weather Briefing

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