

SIDC Space Weather Briefing

29 September - 06 October 2019

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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 2019-09-29 12:00 UT to 2019-10-06 12:00 UT

Active regions	Small sunspot region NOAA 2749
Flaring	# B-class flare: 1 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	Some small filaments; Weak filament eruption early on 3 October (no CME)
CMEs	No earth-directed CMEs were observed
Proton Events	Proton flux was at nominal levels

Solar wind and geomagnetic conditions from 2019-09-29 12:00 UT to 2019-10-06 12:00 UT

Coronal Holes	Patchy negative polarity CH
ICME	None
SW Conditions	Wind speed between 360 and 520 km/s ; Bz between -8 and +7 nT
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: On since 2 October 2019

Solar Activity

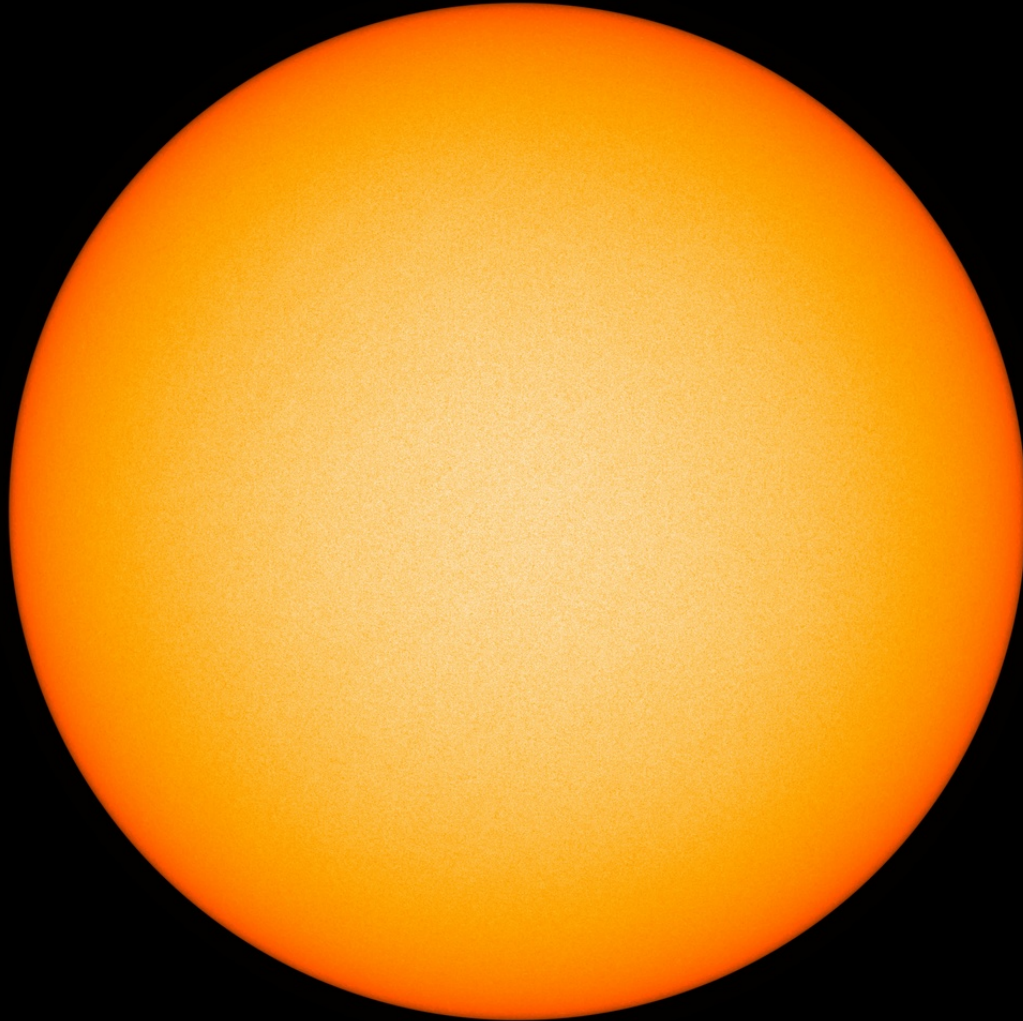


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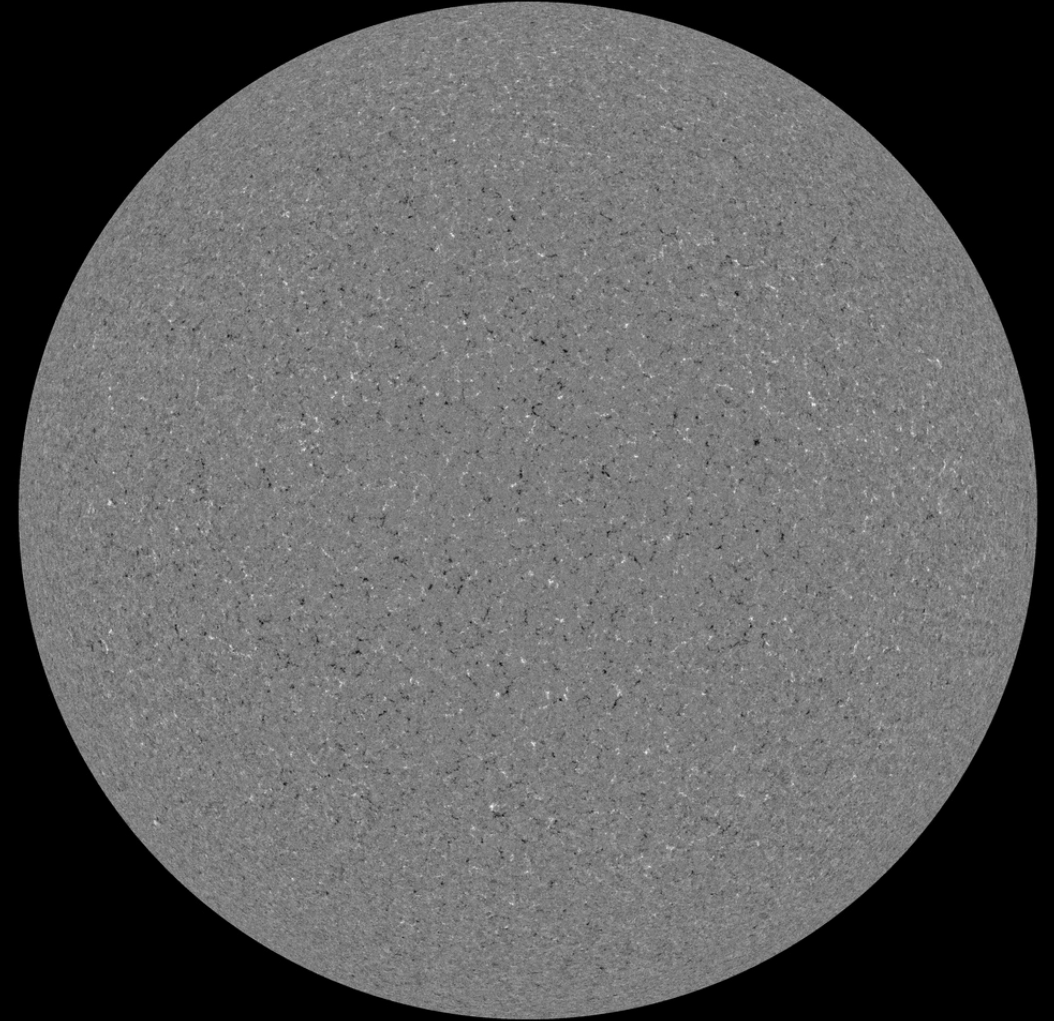
Solar active region - start of the week

SDO/HMI White Light 2019-09-29



SDO/HMI Quick-Look Continuum: 20190929_114500

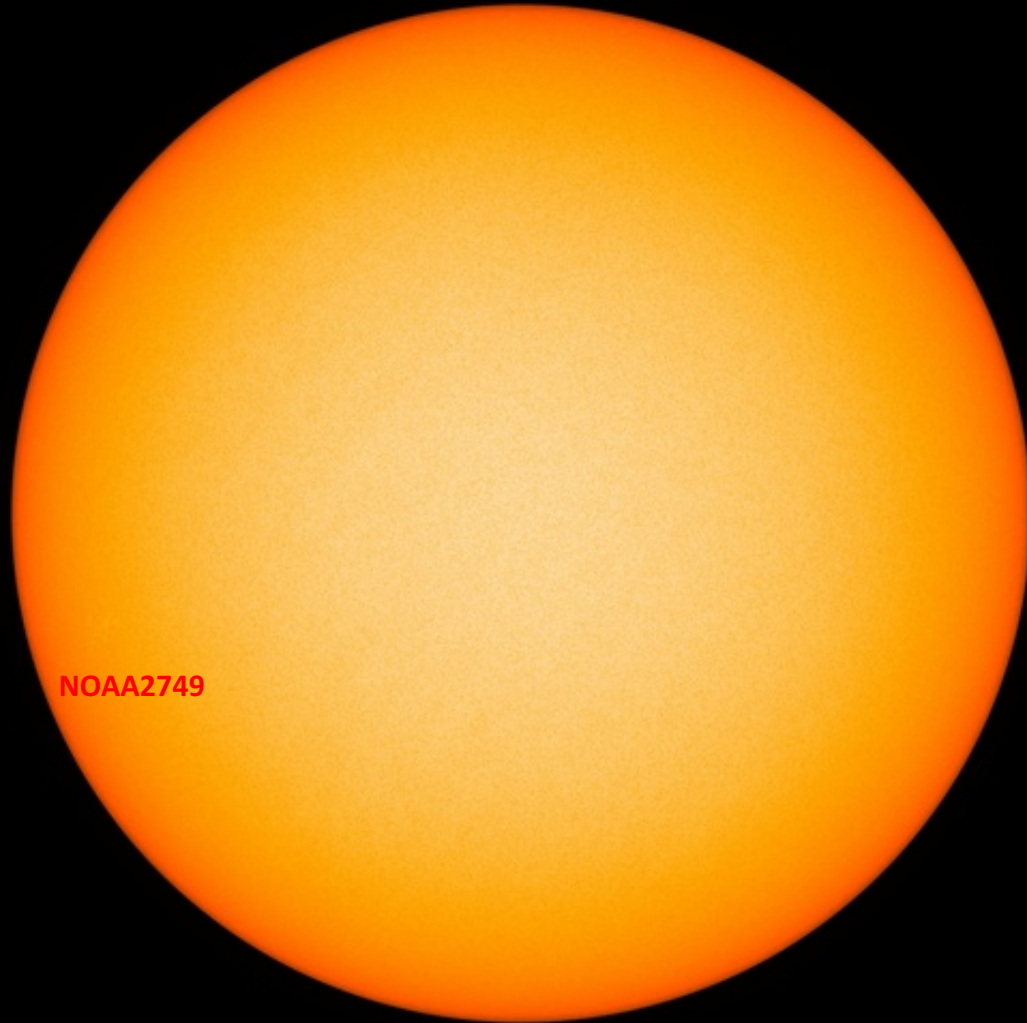
SDO/HMI Magnetogram 2019-09-29



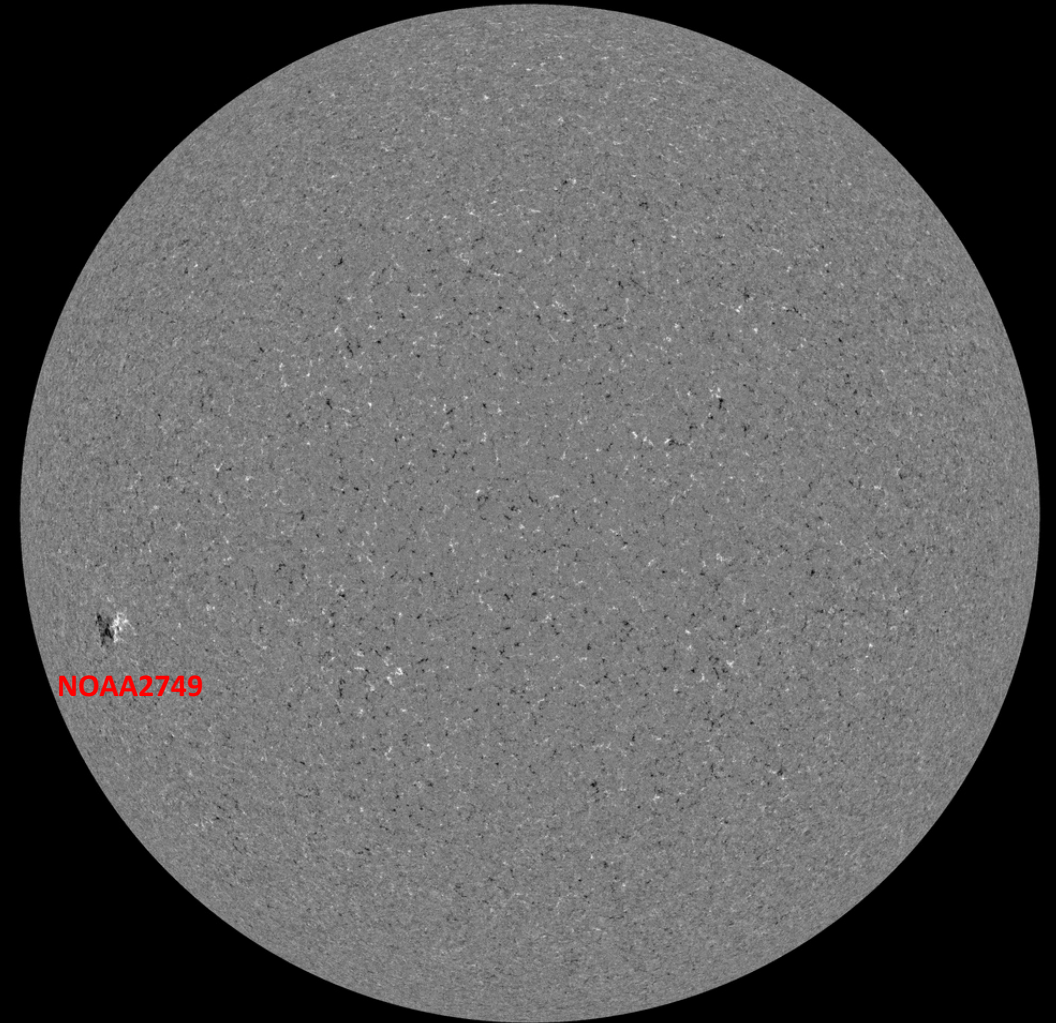
SDO/HMI Quick-Look Magnetogram: 20190929_114500

Solar active region - middle of the week

SDO/HMI White Light 2019-10-02



SDO/HMI Magnetogram 2019-10-02

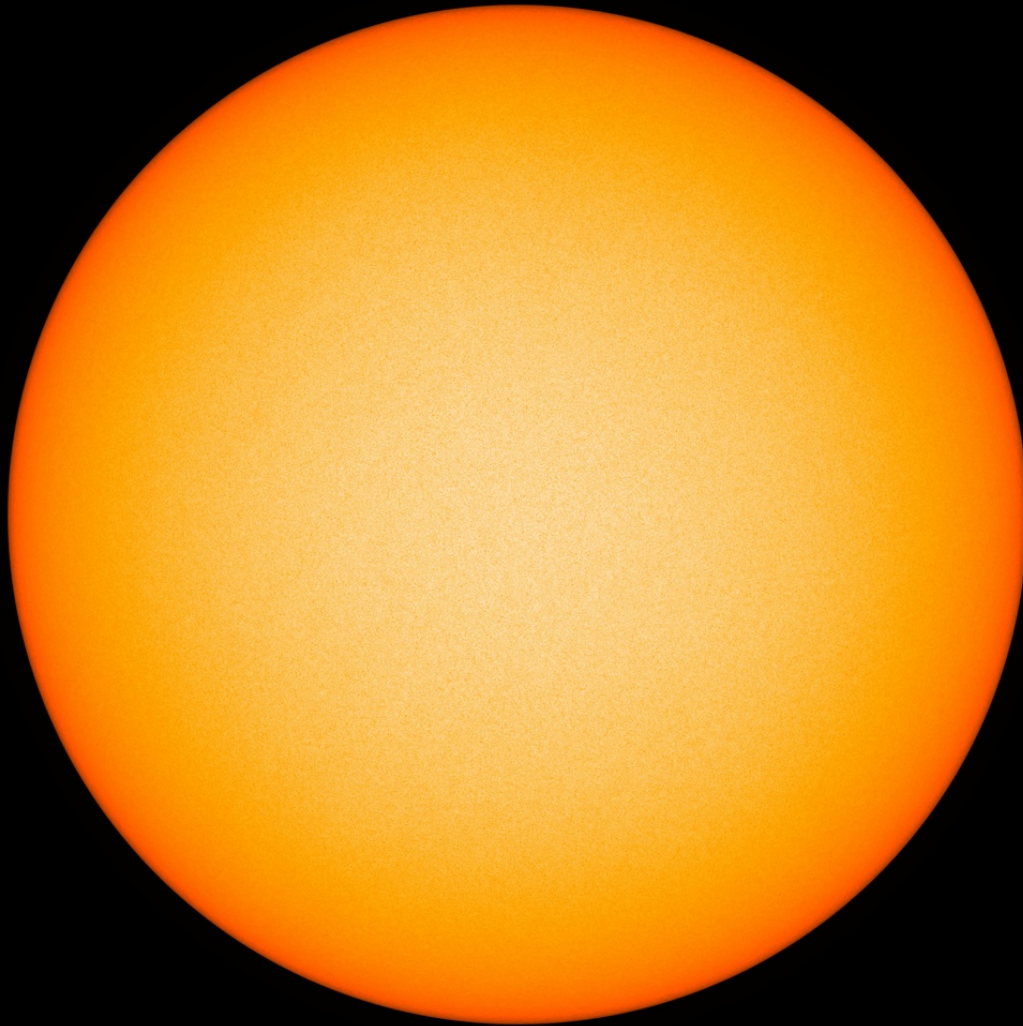


SDO/HMI Quick-Look Continuum: 20191002_114500

SDO/HMI Quick-Look Magnetogram: 20191002_114500

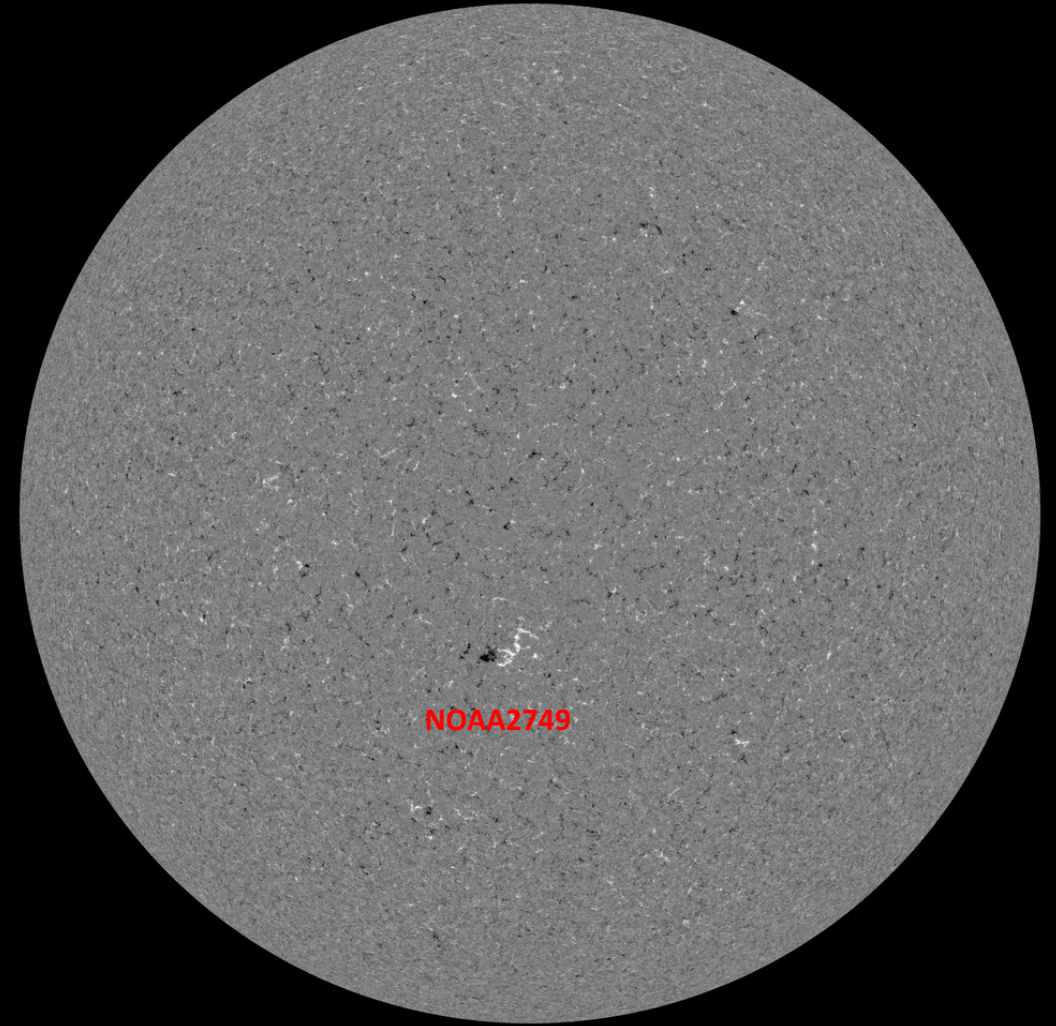
Solar active region - end of the week

SDO/HMI White Light 2019-10-06



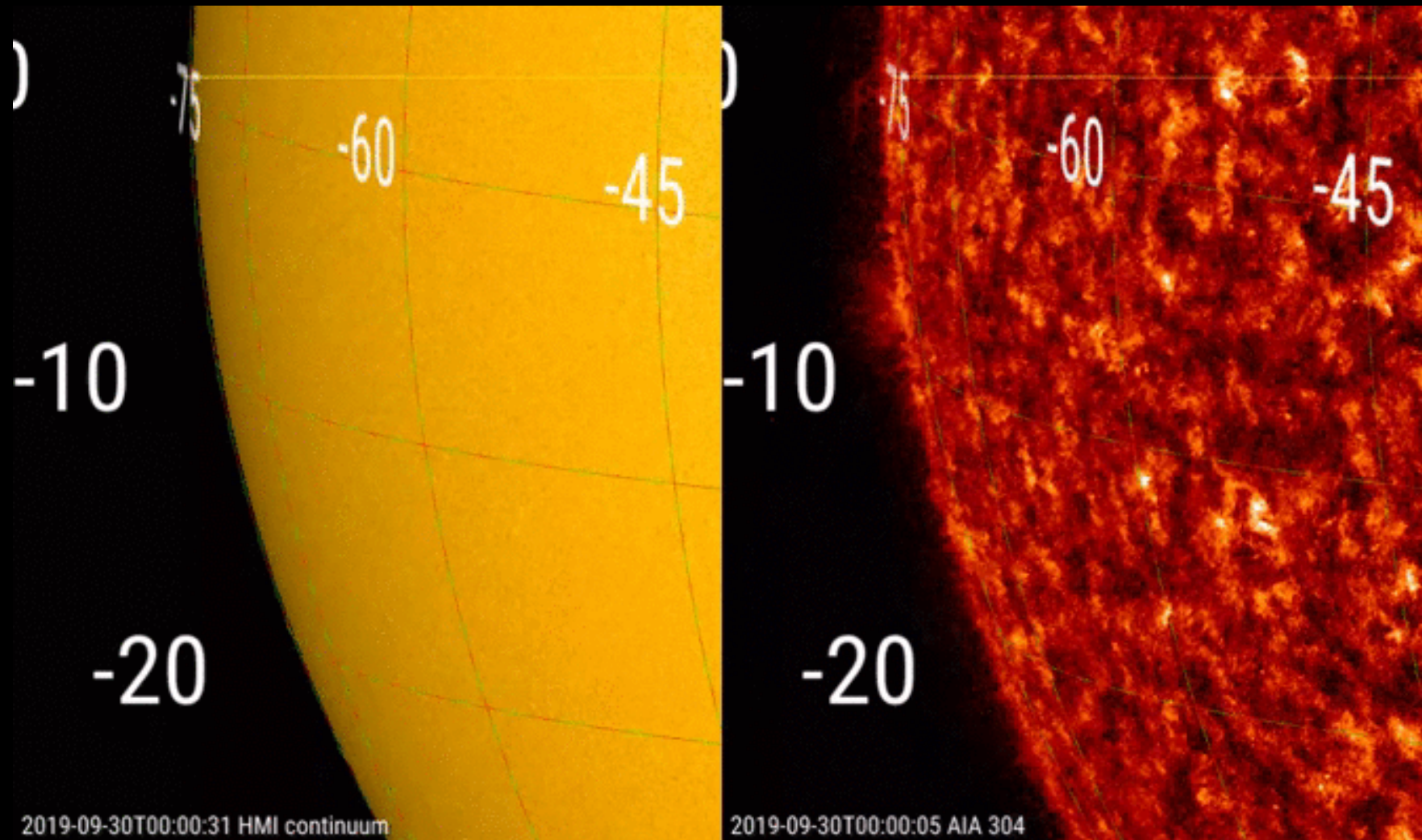
SDO/HMI Quick-Look Continuum: 20191006_114500

SDO/HMI Magnetogram 2019-10-06



SDO/HMI Quick-Look Magnetogram: 20191006_114500

Solar active region of the week: NOAA 2749



<http://www.jhelioviewer.org/>

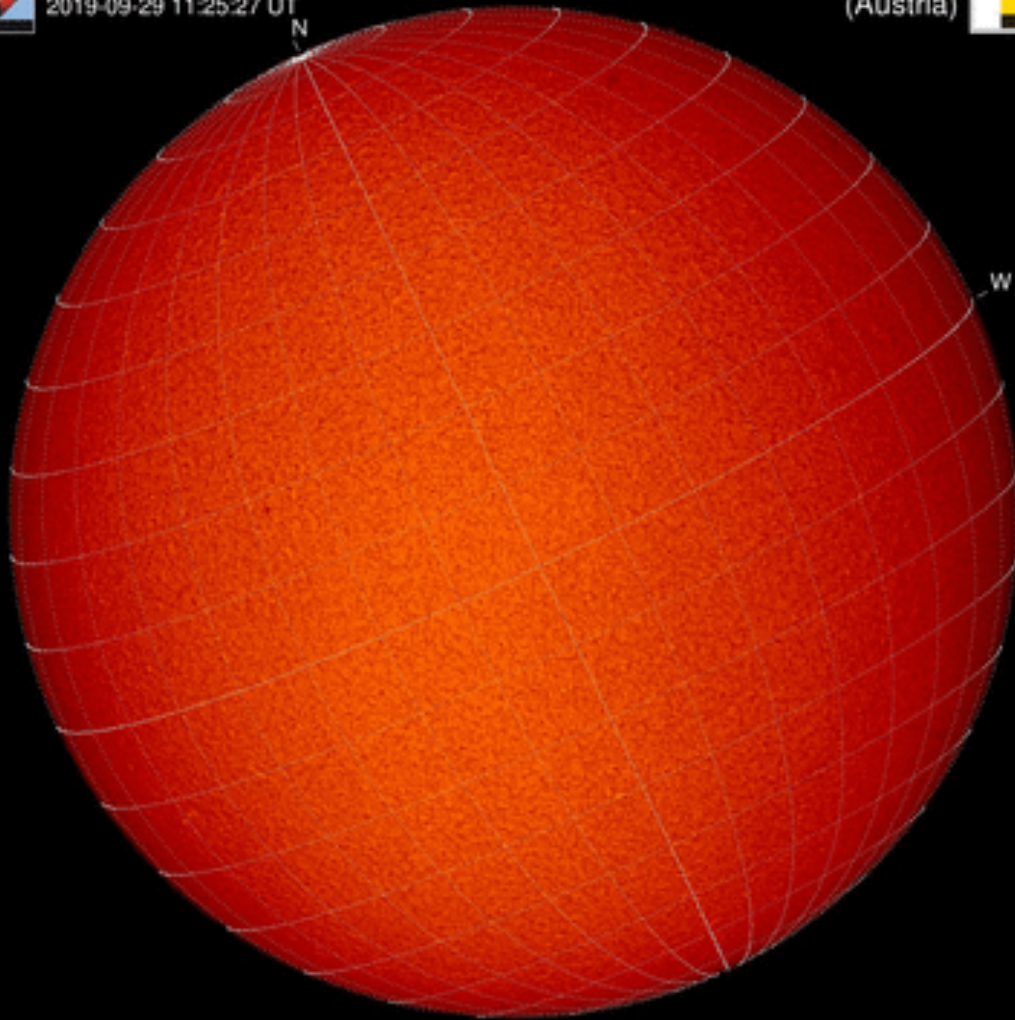
Filament & Filament eruption

H-alpha 2019-09-29



Kanzelhöhe Observatory
2019-09-29 11:25:27 UT

University of Graz
(Austria)

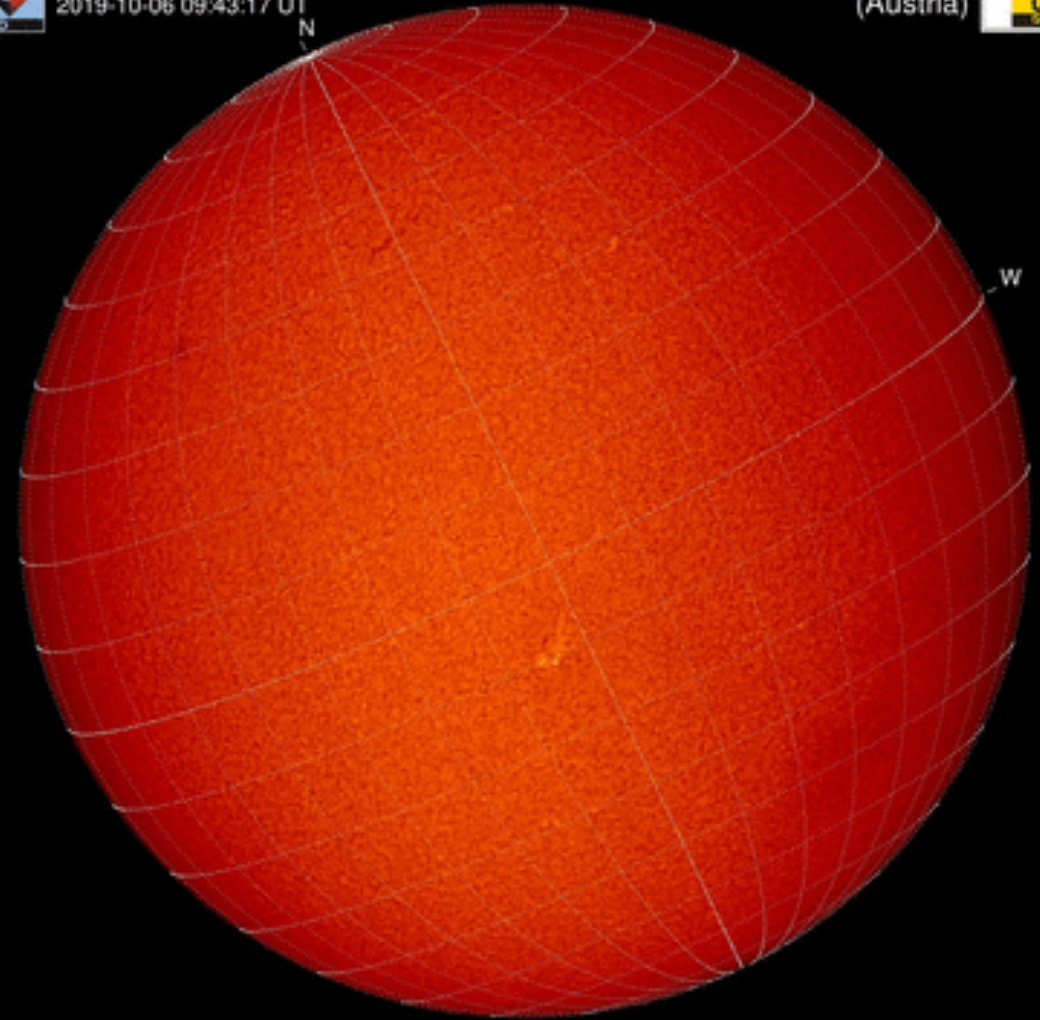


H-alpha 2019-10-06



Kanzelhöhe Observatory
2019-10-06 09:43:17 UT

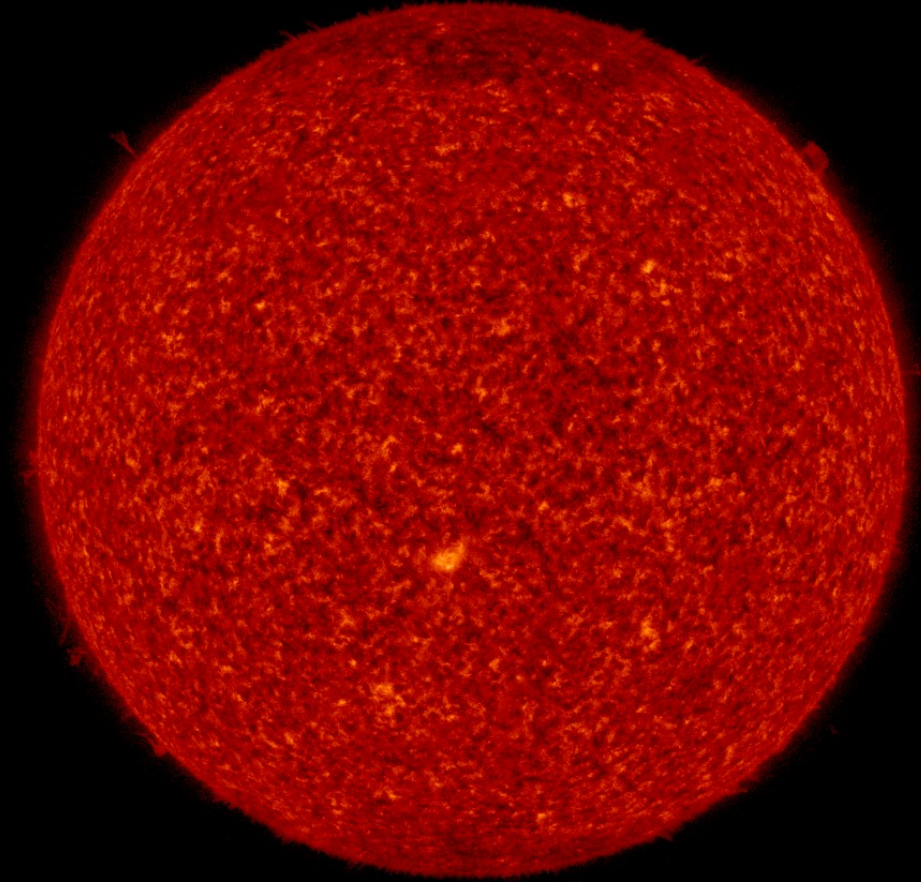
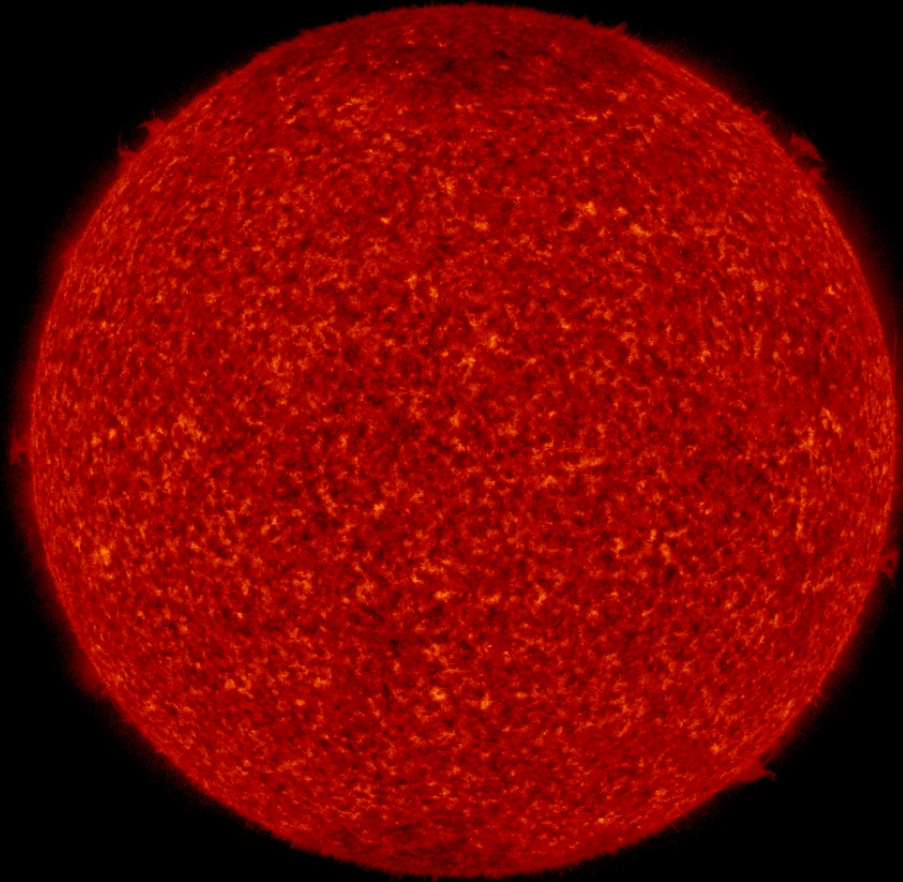
University of Graz
(Austria)



Solar active region & Filament

SDO/AIA 30.4 nm 2019-09-29

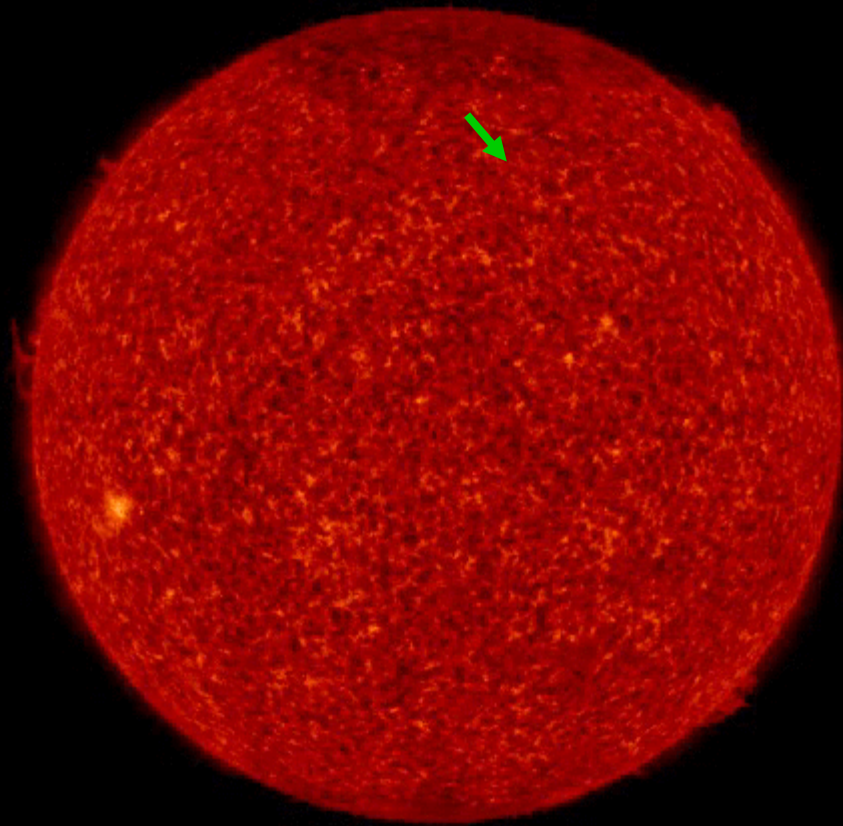
SDO/AIA 30.4 nm 2019-10-06



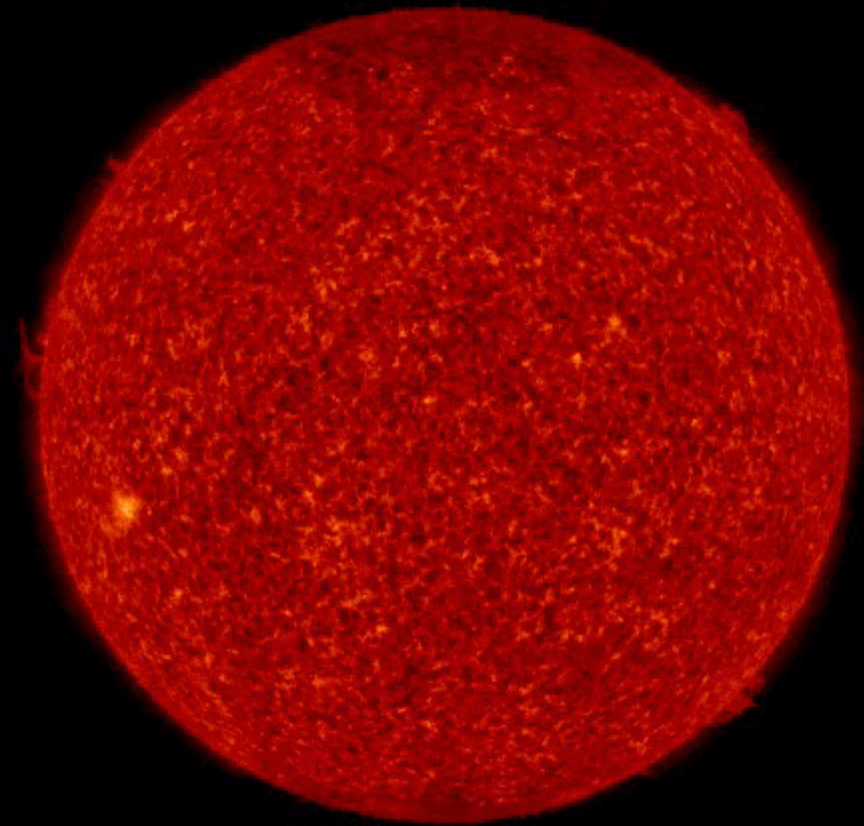
SDO/AIA 304 2019-09-29 12:14:42 UT

SDO/AIA 304 2019-10-06 12:13:42 UT

Weak filament eruption – 3 October

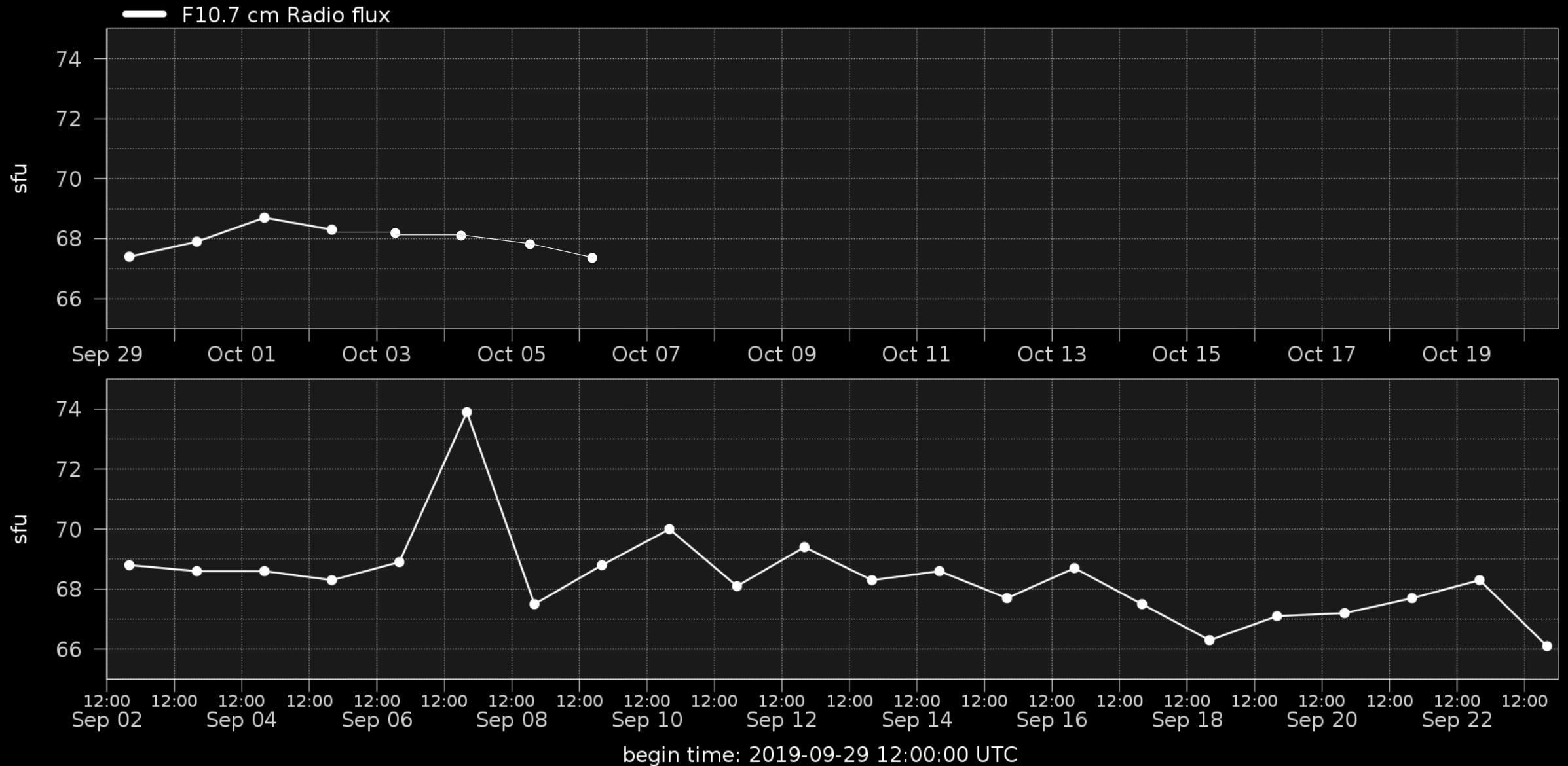


SDO/AIA 304 2019-10-02 18:13:30 UT

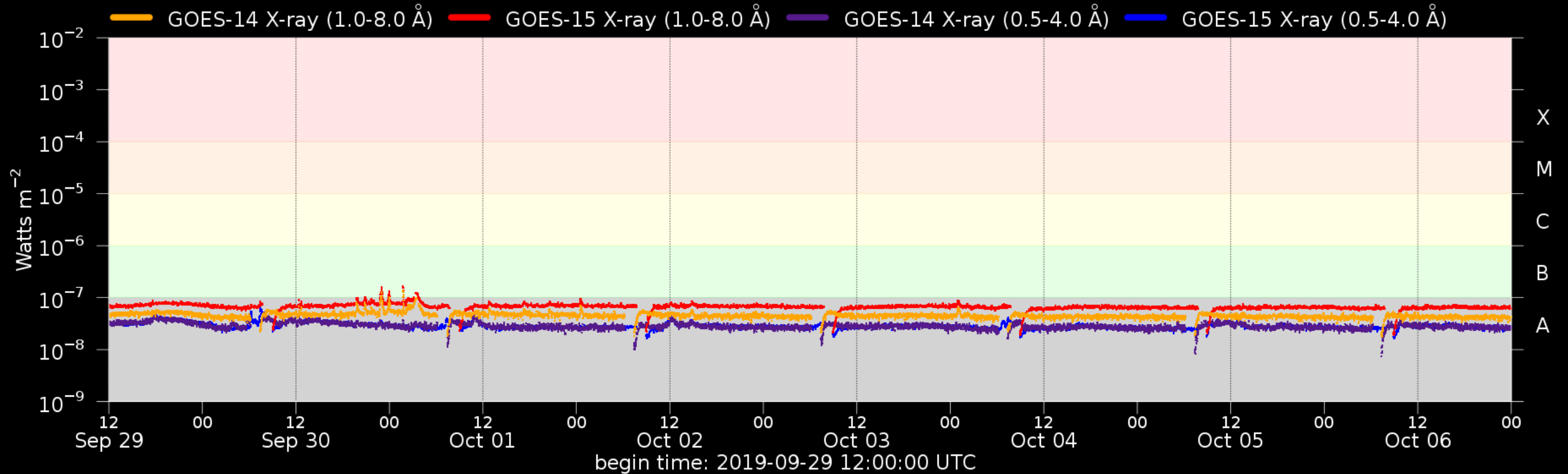


SDO/AIA 304 2019-10-02 18:13:30 UT

Solar F10.7cm radio flux



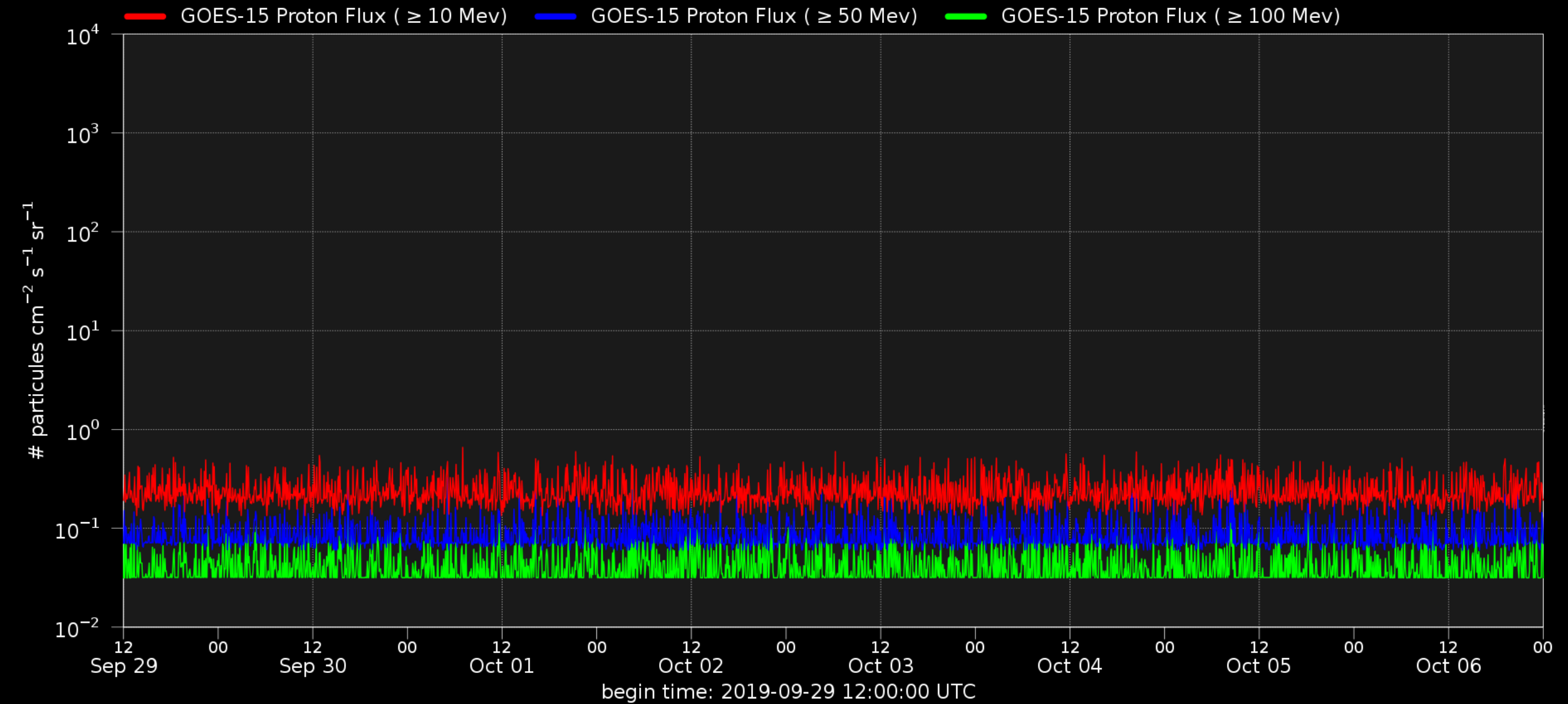
Flaring activity



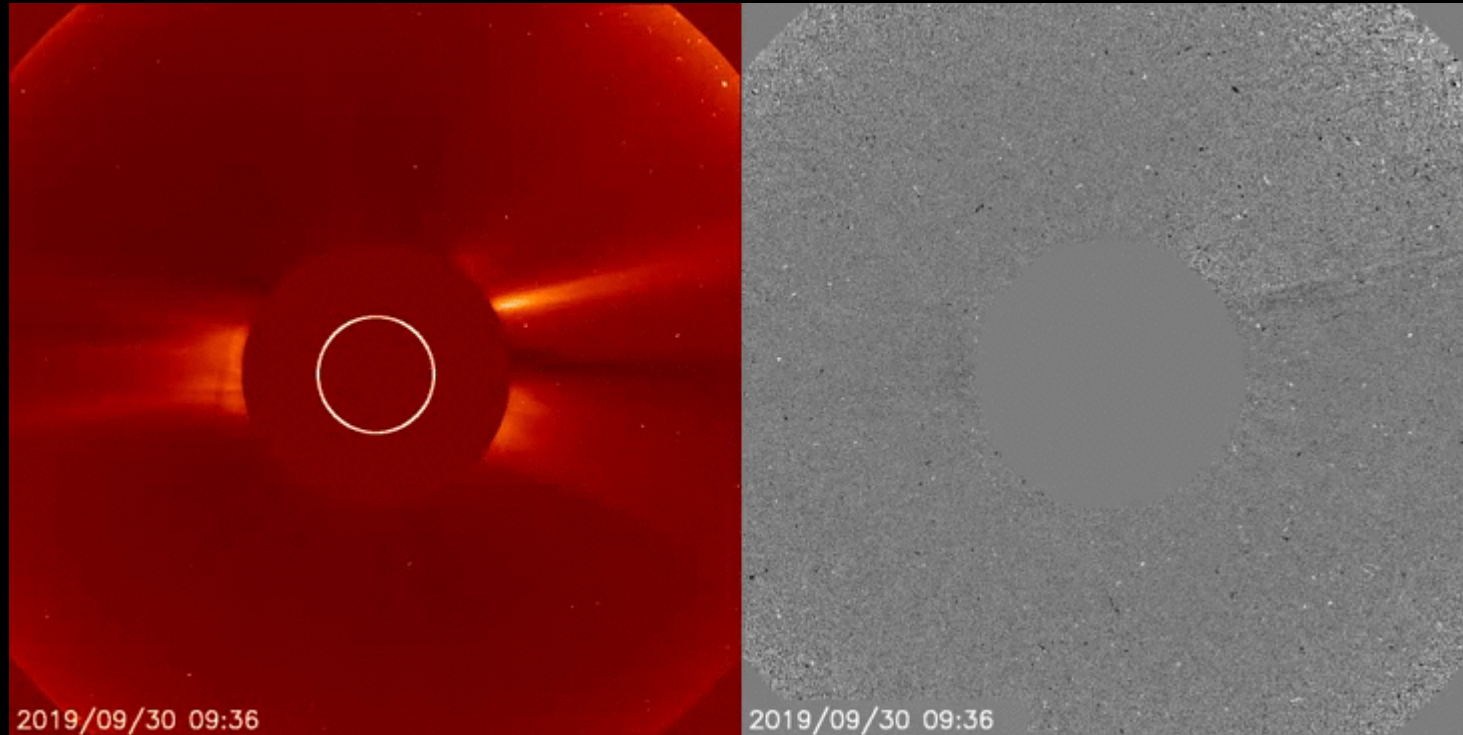
Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2019-09-29	2019-09-30	2019-10-01	2019-10-02	2019-10-03	2019-10-04	2019-10-05	2019-10-06
Probability	--- 01 00 00	--- 01 01 01	--- 05 01 01	--- 05 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 proton flux



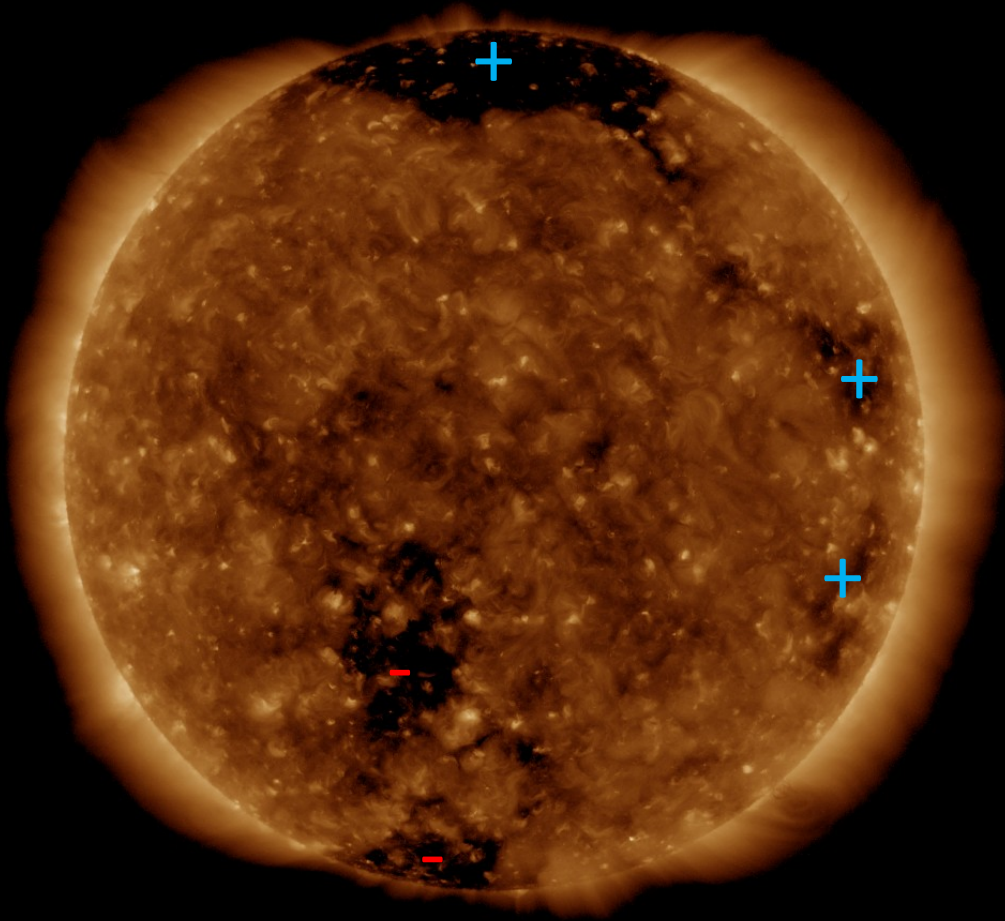
Coronal Mass Ejection



21:48 10/05
18:48 10/05
16:00 10/05
12:24 10/05
09:48 10/05
06:42 10/05
04:12 10/05
01:25 10/05
21:54 10/04
19:12 10/04
16:12 10/04
13:25 10/04
10:12 10/04
06:36 10/04
02:24 10/04
21:48 10/03
18:48 10/03
15:36 10/03
12:12 10/03
07:12 10/03
04:12 10/03
00:54 10/03
22:00 10/02
19:00 10/02
16:24 10/02
13:30 10/02
10:24 10/02
07:24 10/02
05:00 10/02
02:00 10/02
22:30 10/01
19:12 10/01
16:24 10/01
13:36 10/01
10:12 10/01
07:00 10/01
04:12 10/01
00:36 10/01
21:36 09/30
18:30 09/30
14:42 09/30
11:54 09/30
09:24 09/30
06:00 09/30
03:12 09/30

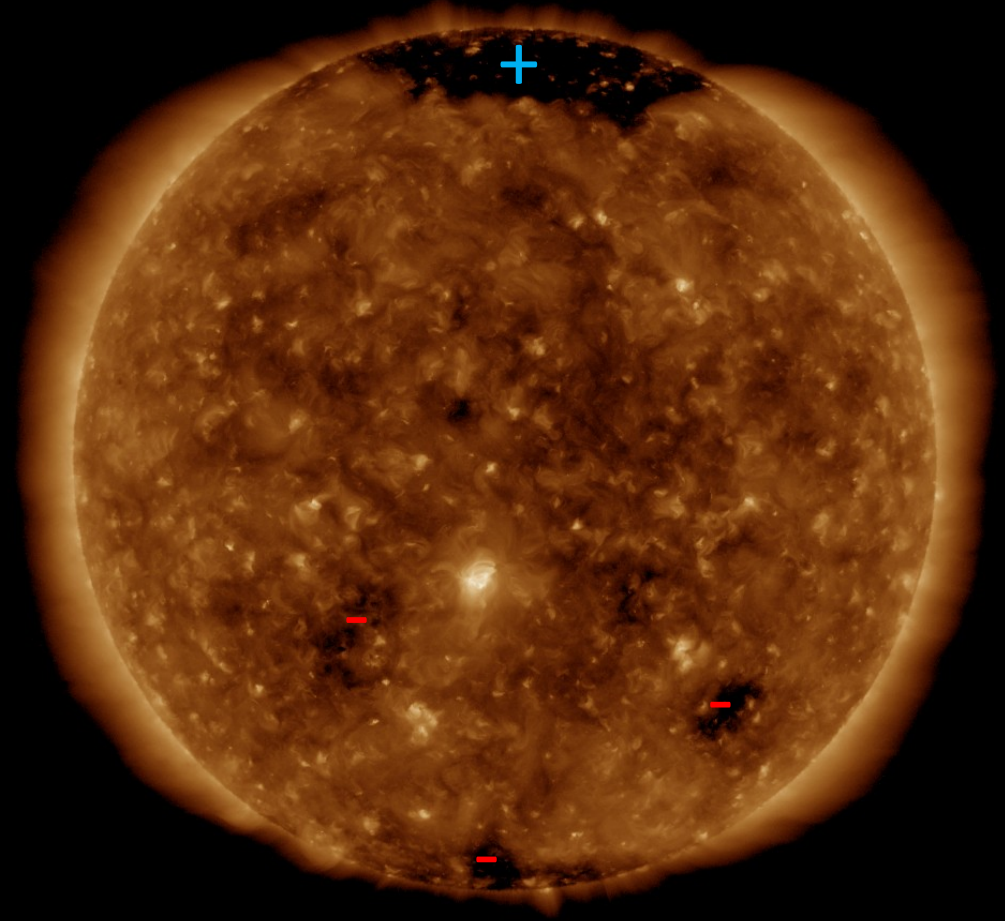
Solar active region & Coronal hole

SDO/AIA 19.3 nm 2019-09-29



SDO/AIA 193 2019-09-29 12:10:53 UT

SDO/AIA 19.3 nm 2019-10-06



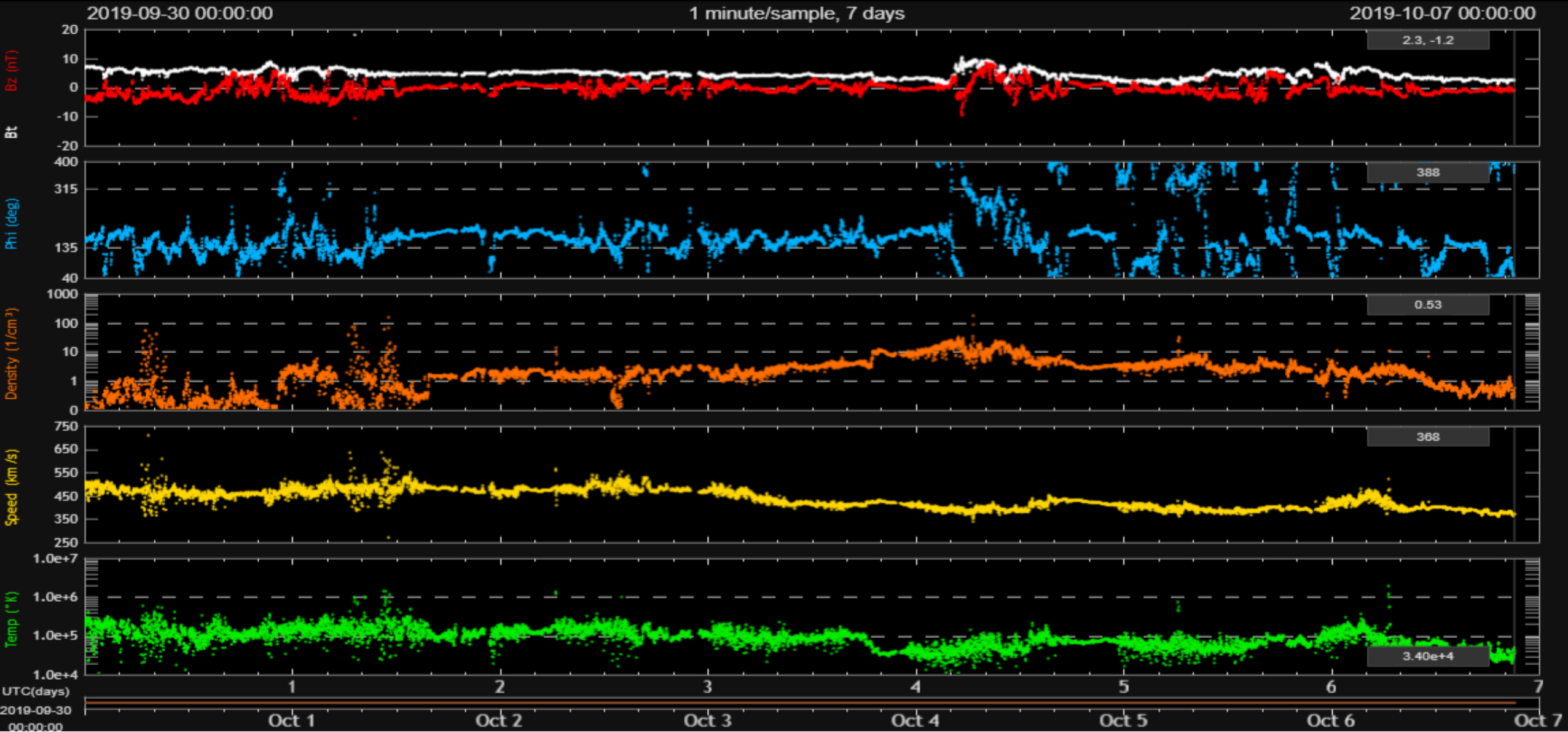
SDO/AIA 193 2019-10-06 12:10:53 UT

Solar Wind and Geomagnetic Activity

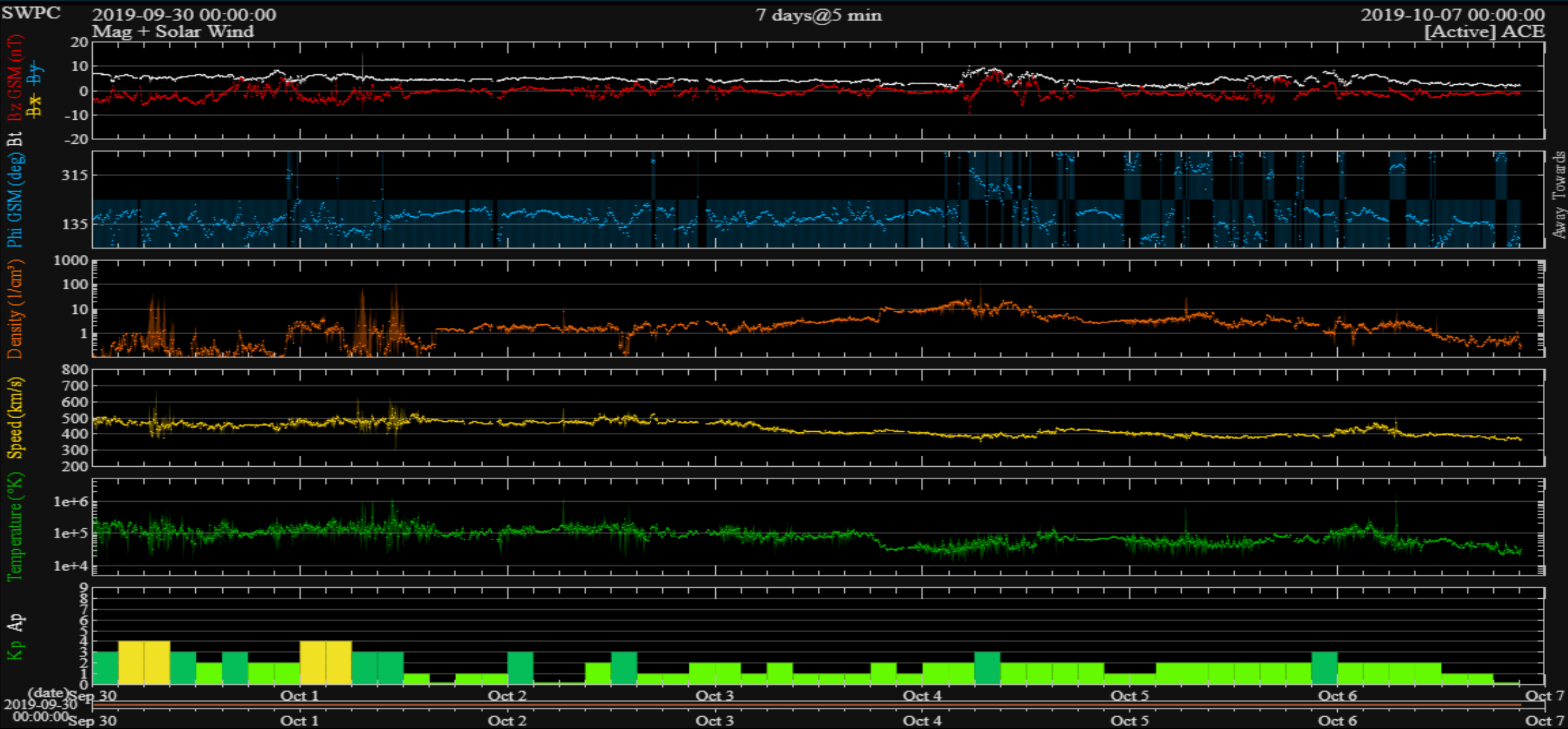


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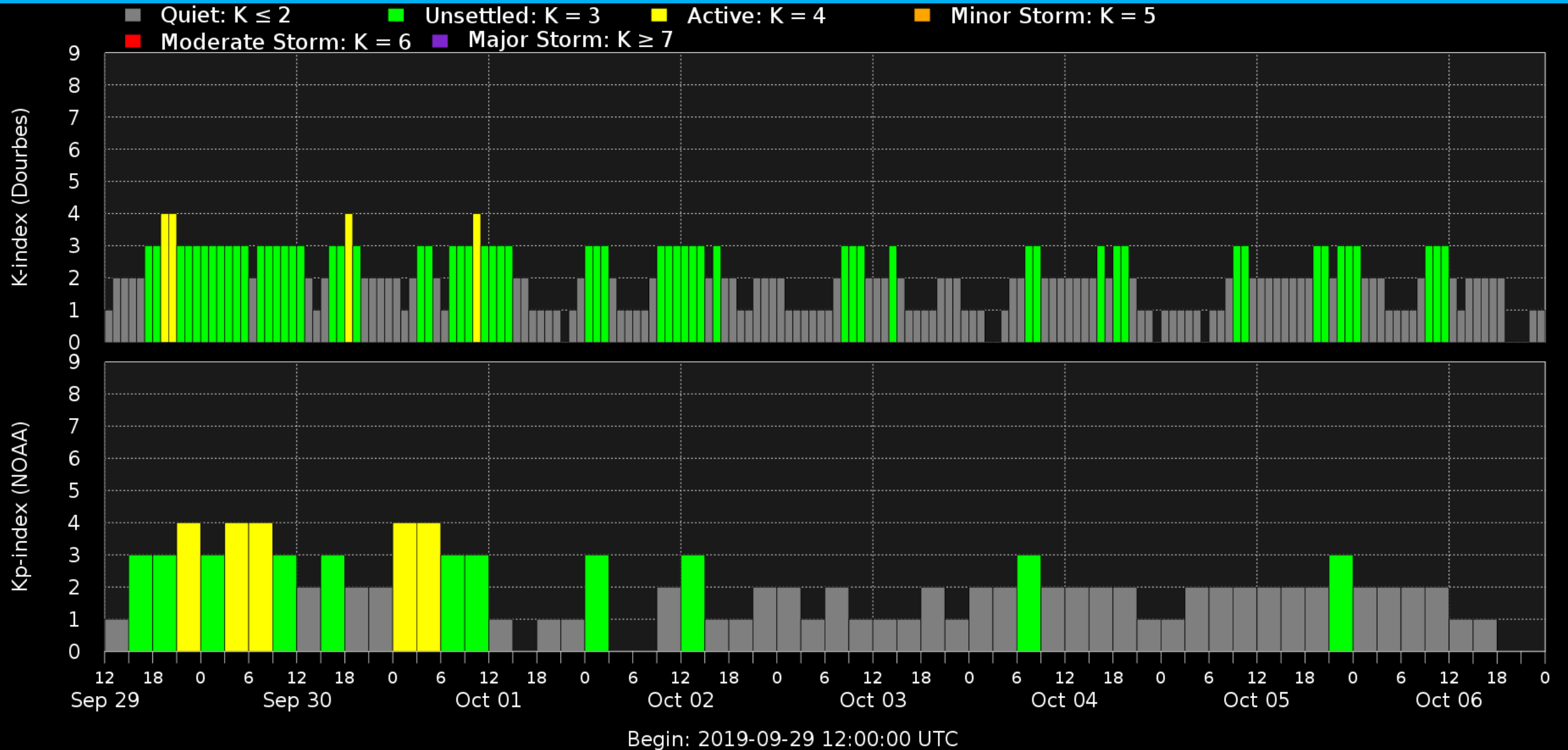
Solar wind parameters (ACE data)



Solar wind parameters & Kp-index (ACE/NOAA)



Geomagnetic activity (K-indexes)



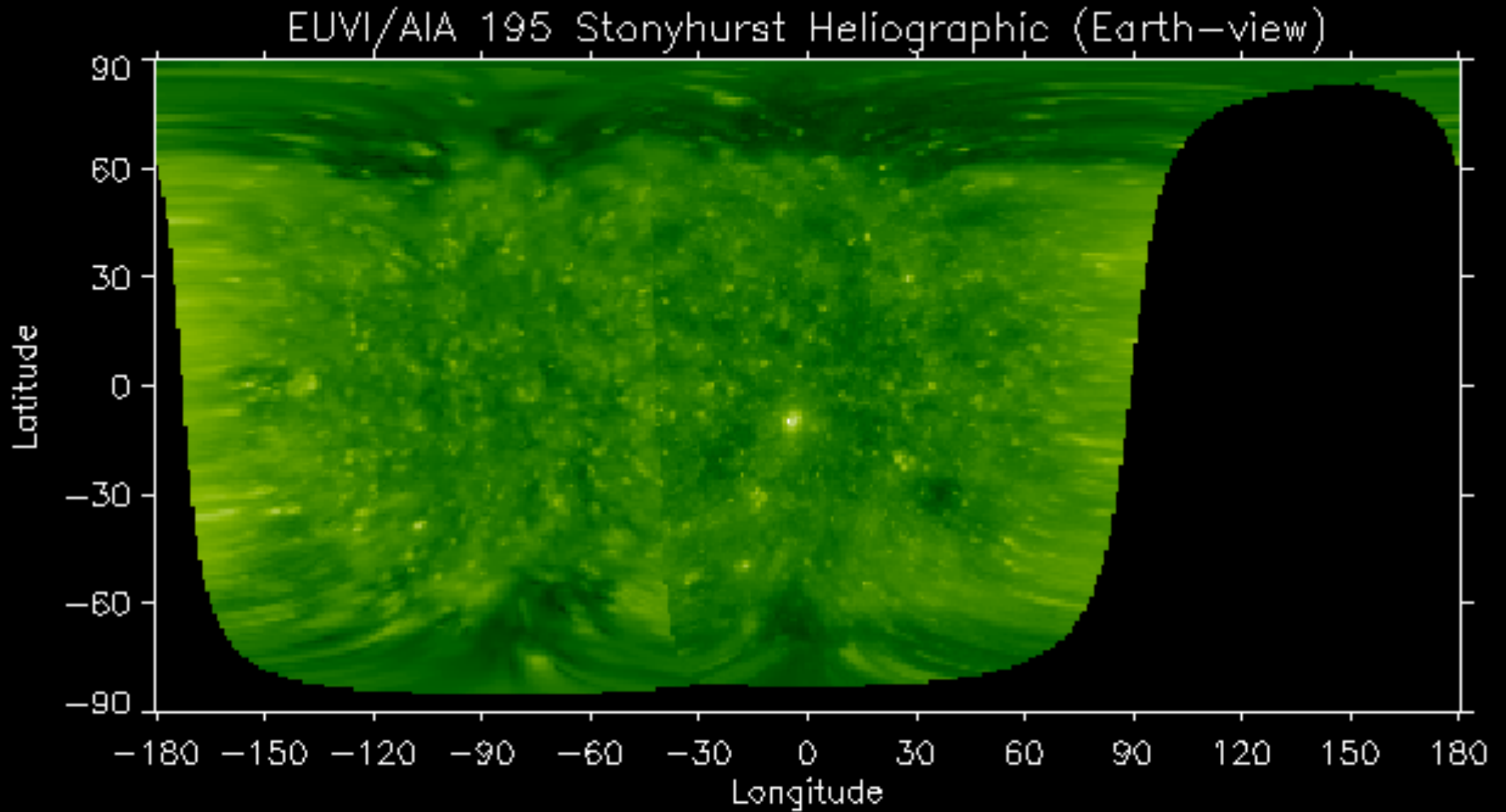
Outlook



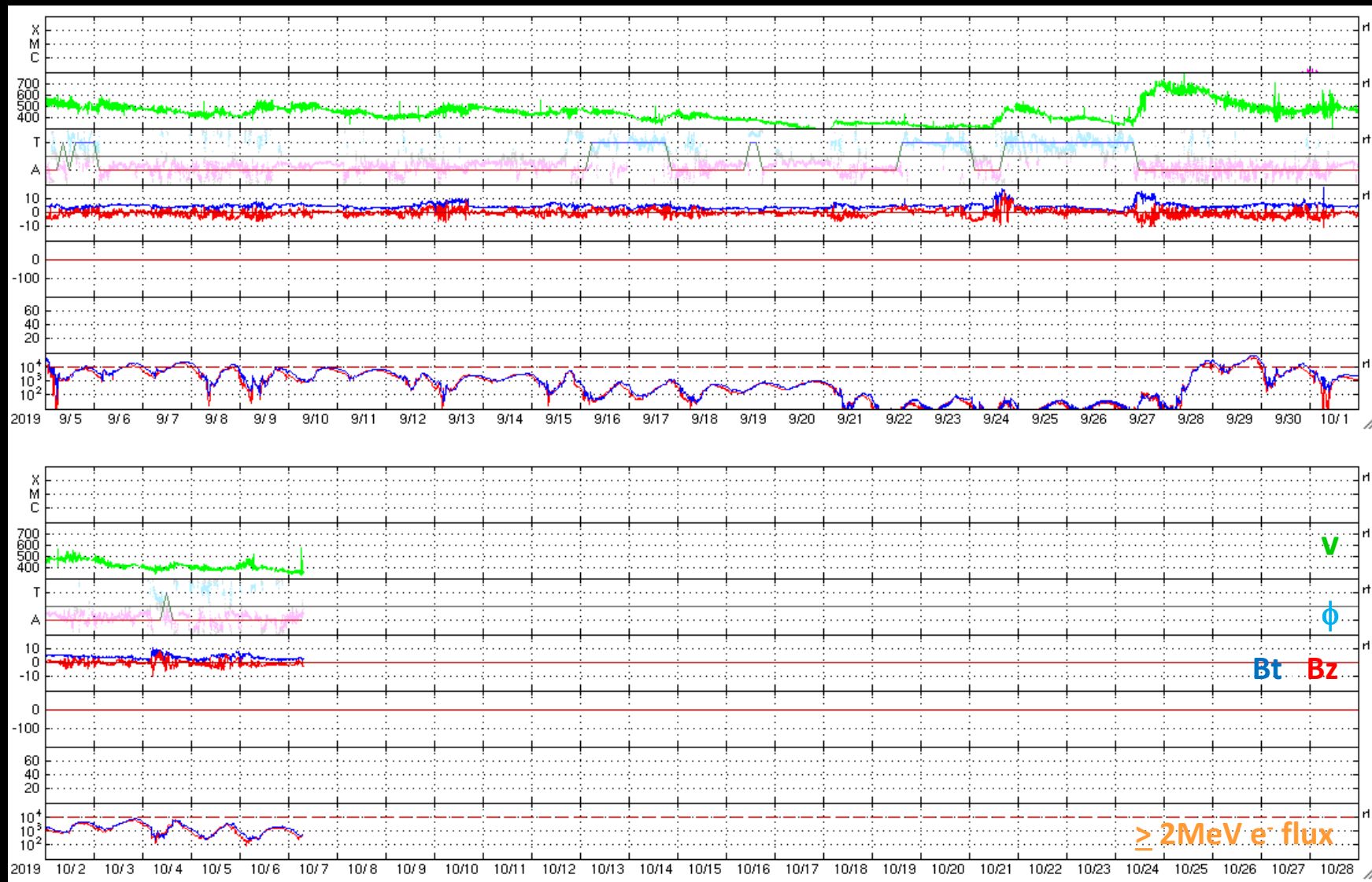
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Outlook: Solar activity

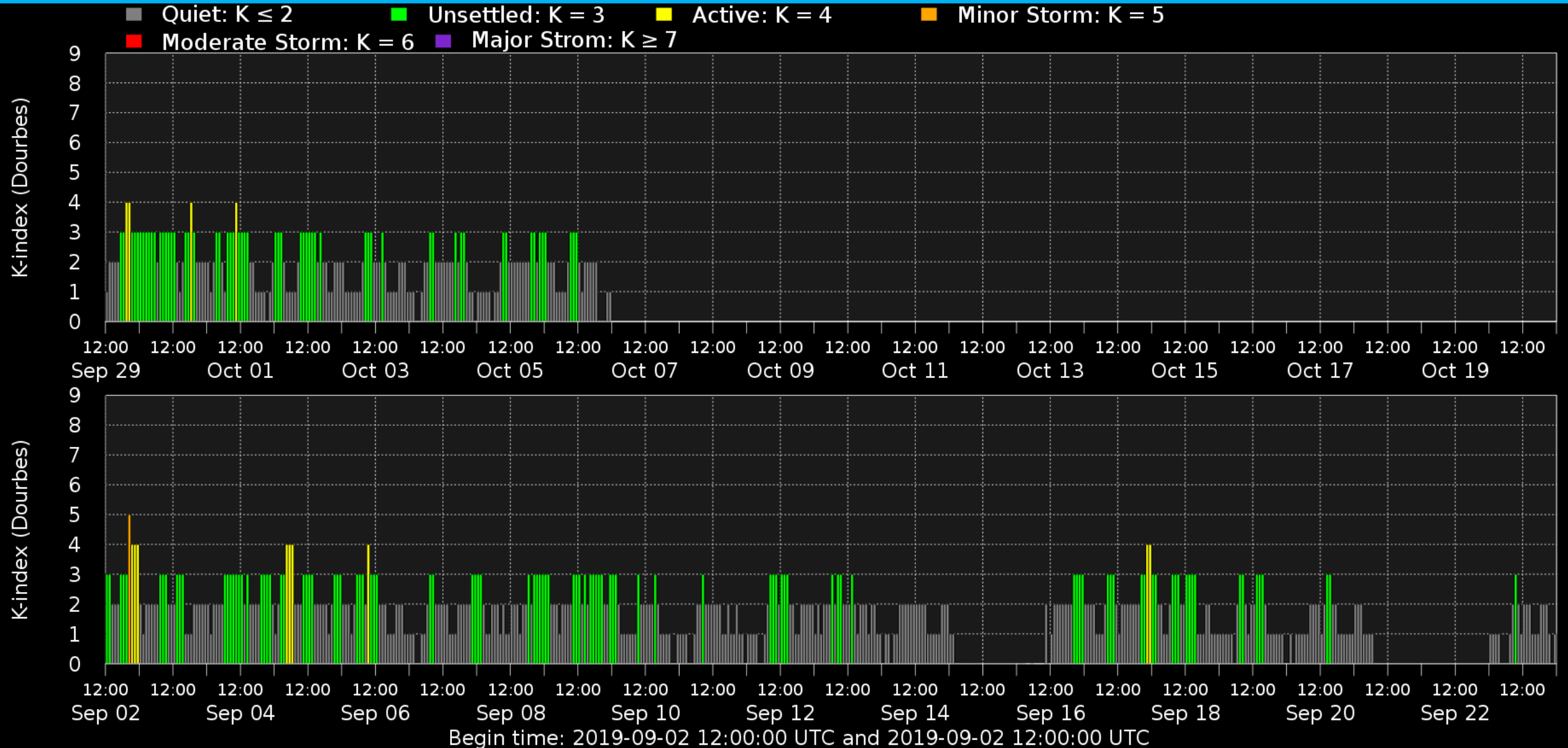


Outlook: Solar wind



http://swnews.jp/rt/27d_all_27.html

Outlook: Geomagnetic activity



SIDC Space Weather Briefing

See you at our next briefing!

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