

SIDC Space Weather Briefing

11 October 2020 - 18 October 2020

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& the SIDC forecaster team



Royal Observatory
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Data analysis Centre
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Summary Report

Solar activity from 2020-10-11 to 2020-10-18

Active regions	NOAA ARs 2774, 2775. 2776
Flares	# B-class flare: 20 # C-class flare: 2 # M-class flare: 0 # X-class flare: 0
Filament eruptions	Nothing large
Coronal Holes	Small negative polarity CH that reached central meridian on 18/10/2020

Proton flux	Bellow the threshold
Electron flux	Bellow the threshold

Solar wind and geomagnetic conditions from 2020-10-11T12:00:00 to 2020-10-18T12:00:00

ICME	None
SW Conditions	B : 0.21 - 9.47 nT // Bz: -5.76 nT to 7.16 nT // Speed: 257.1 - 355.3km/s
K-indices	max K-index (Dourbes): 2 max Kp-index (NOAA): 2

All Quiet Alert on during the whole week.

Solar Activity

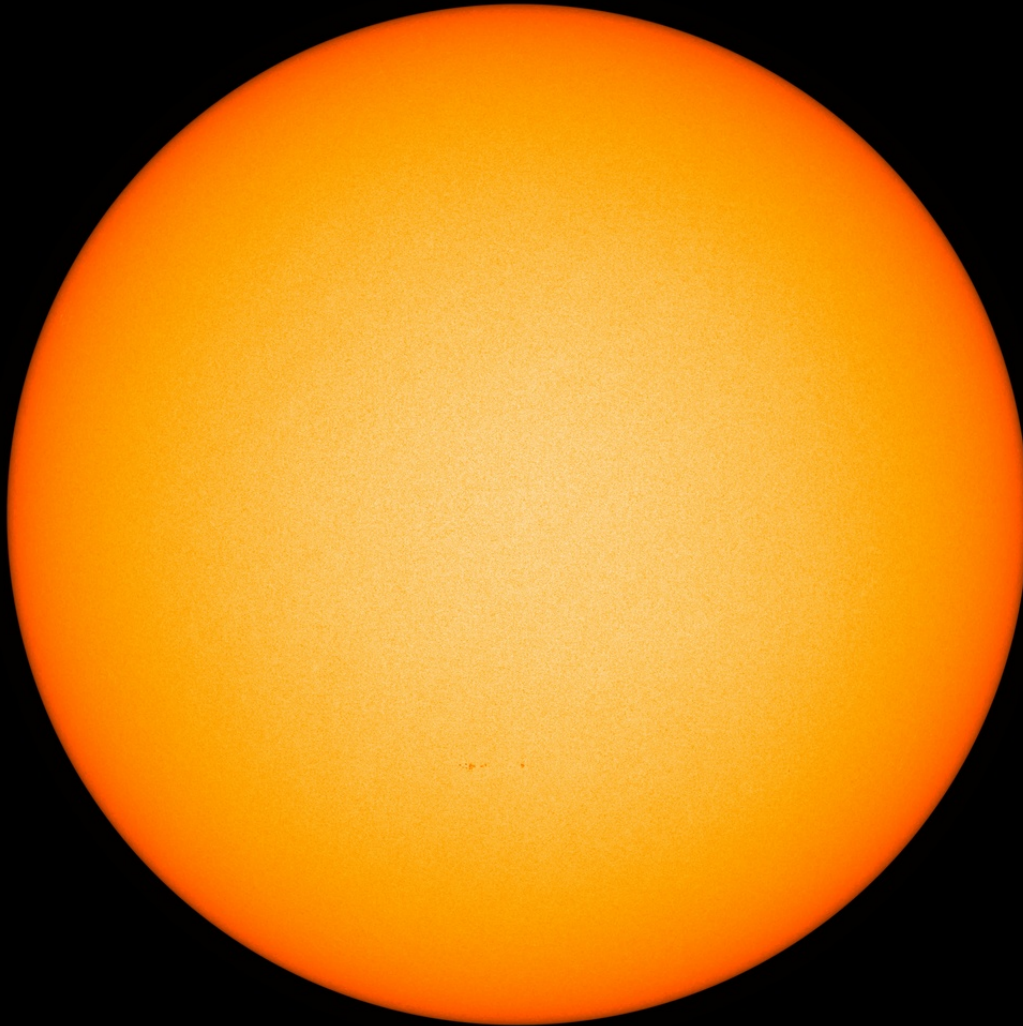


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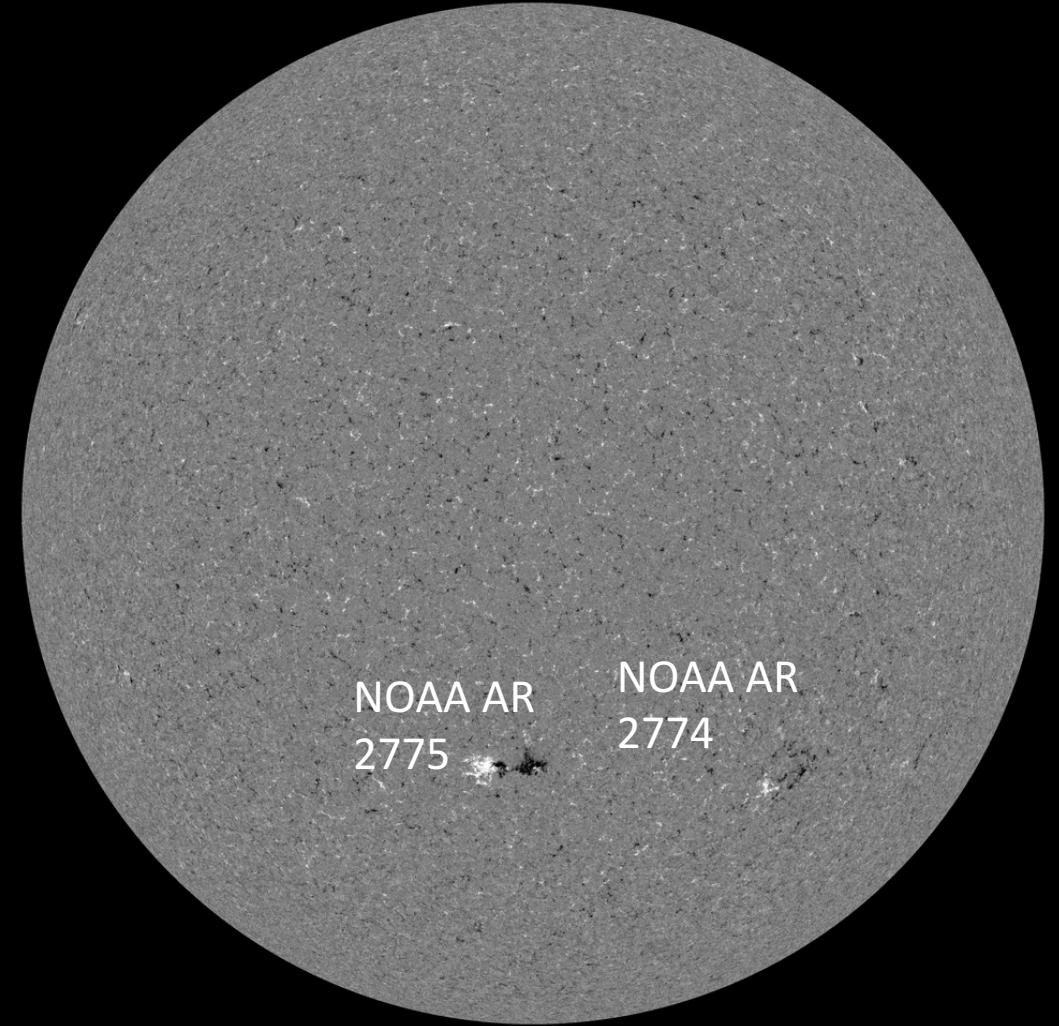
Solar active regions - Sunday

SDO/HMI White Light 2020-10-11



SDO/HMI Quick-Look Continuum: 20201011_114500

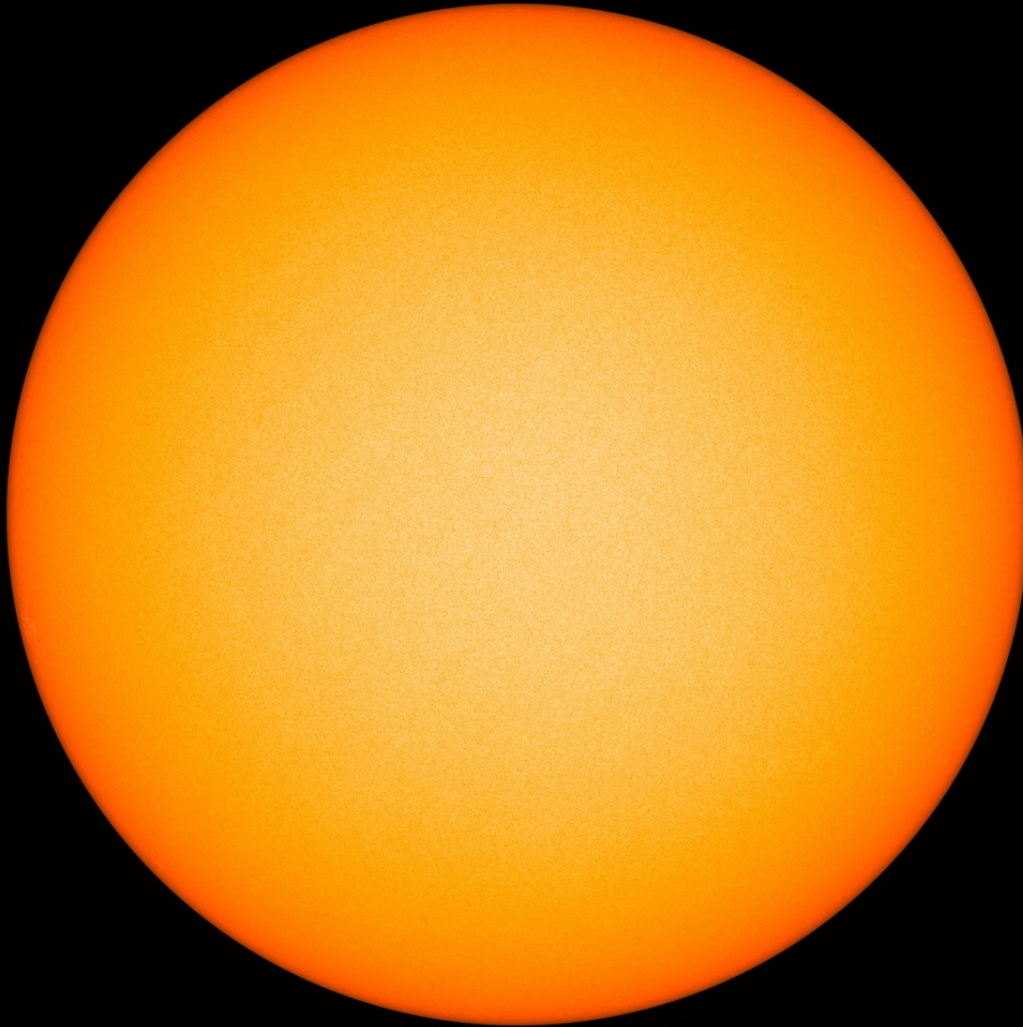
SDO/HMI Magnetogram 2020-10-11



SDO/HMI Quick-Look Magnetogram: 20201011_114500

Solar active regions - Wednesday

SDO/HMI White Light 2020-10-14



SDO/HMI Quick-Look Continuum: 20201014_114500

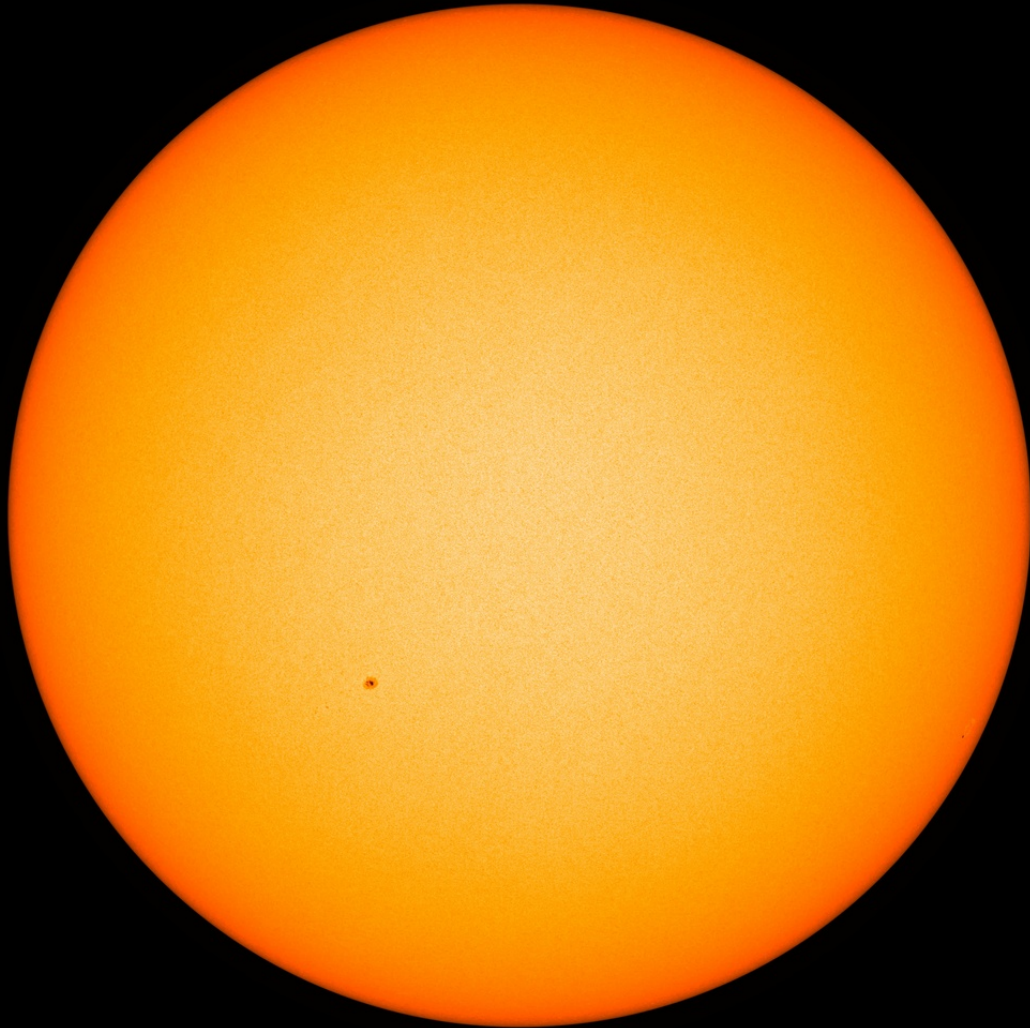
SDO/HMI Magnetogram 2020-10-14



SDO/HMI Quick-Look Magnetogram: 20201014_114500

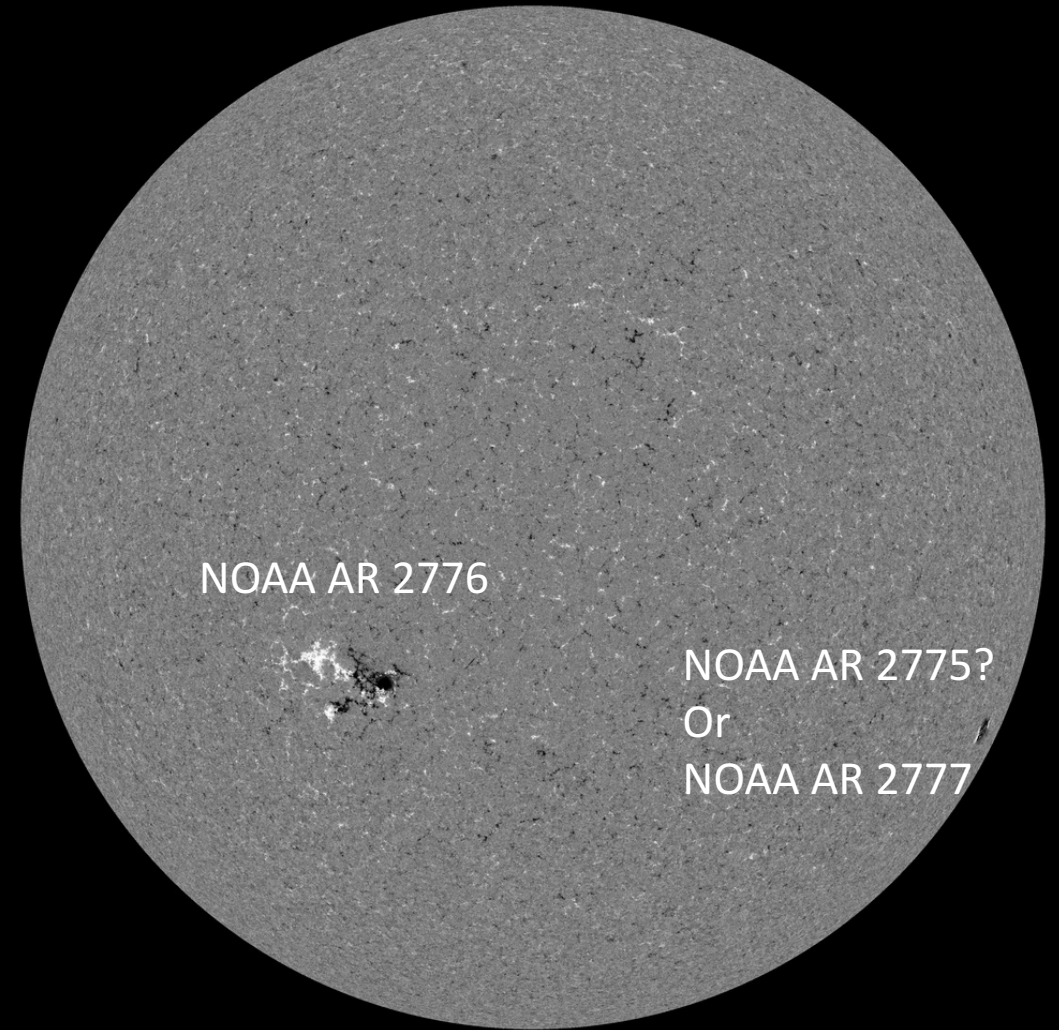
Solar active regions - Sunday

SDO/HMI White Light 2020-10-18



SDO/HMI Quick-Look Continuum: 20201018_114500

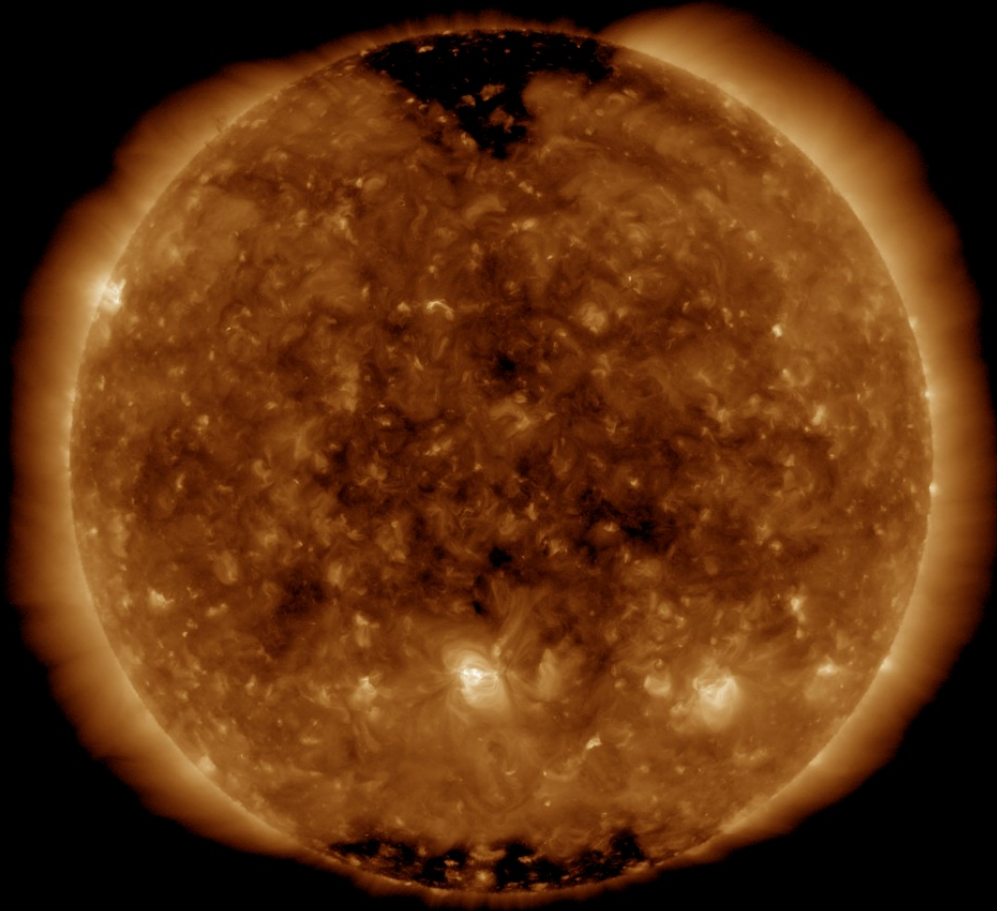
SDO/HMI Magnetogram 2020-10-18



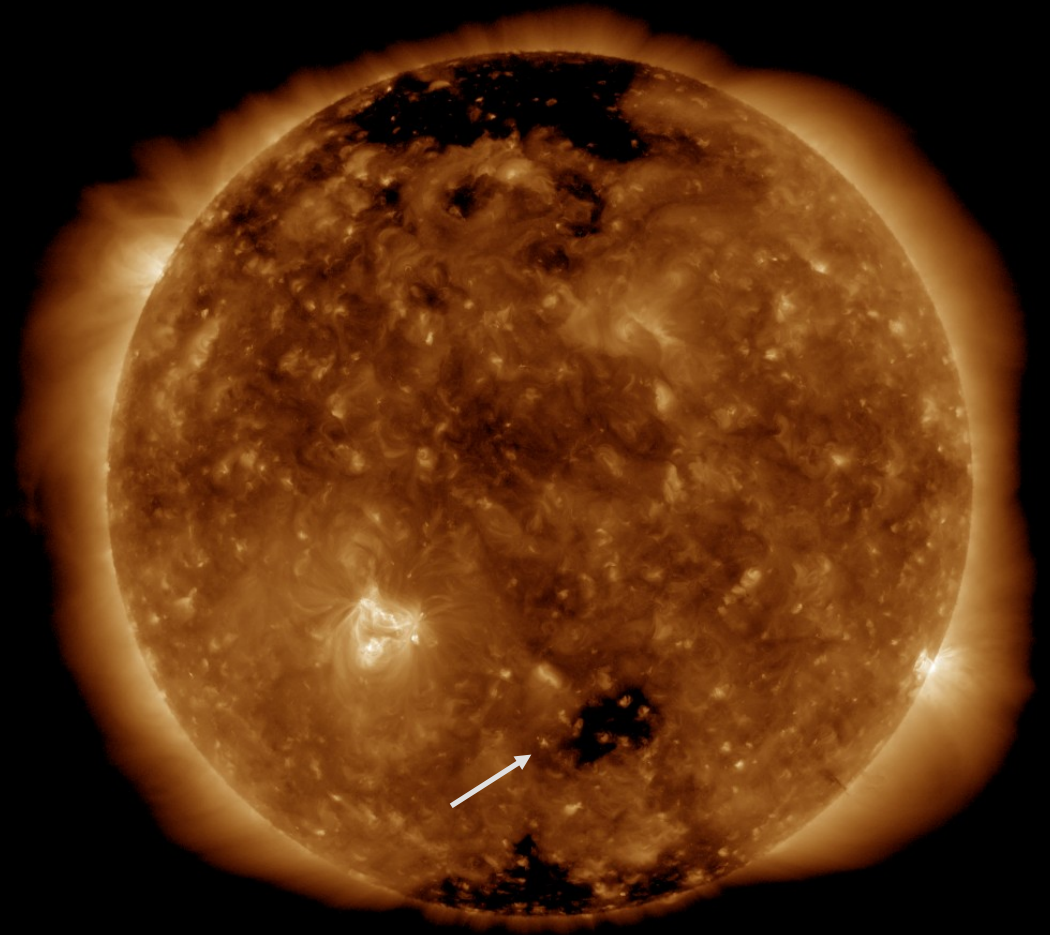
SDO/HMI Quick-Look Magnetogram: 20201018_114500

Coronal holes

SDO/AIA 19.3 nm 2020-10-11



SDO/AIA 19.3 nm 2020-10-18



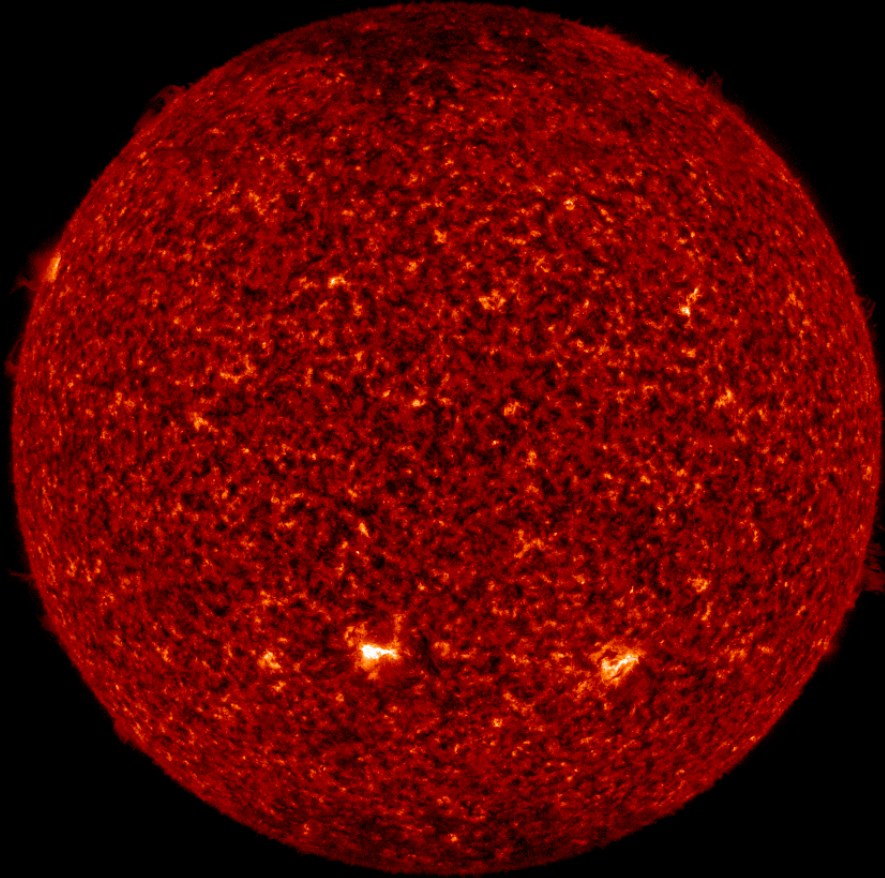
SDO/AIA 193 2020-10-11 12:18:17 UT

SDO/AIA 193 2020-10-18 12:17:53 UT

Filaments

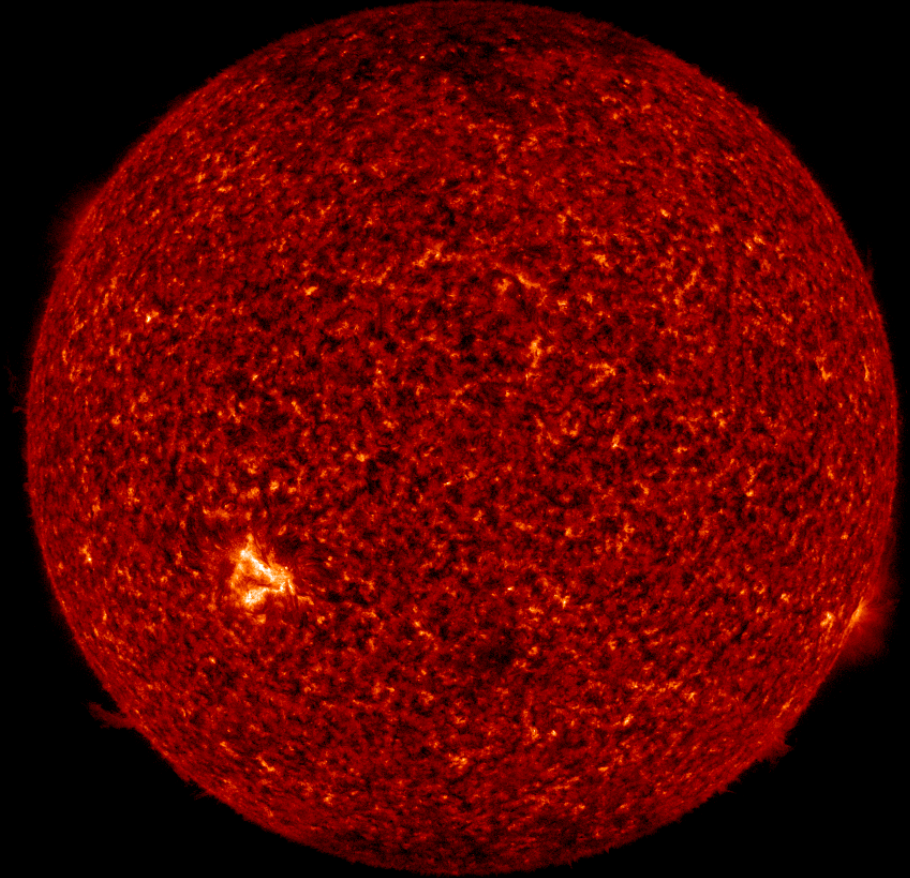
SDO/AIA 30.4 nm 2020-10-11

SDO/AIA AIA 304Å 2020-10-11T00:00:06.58

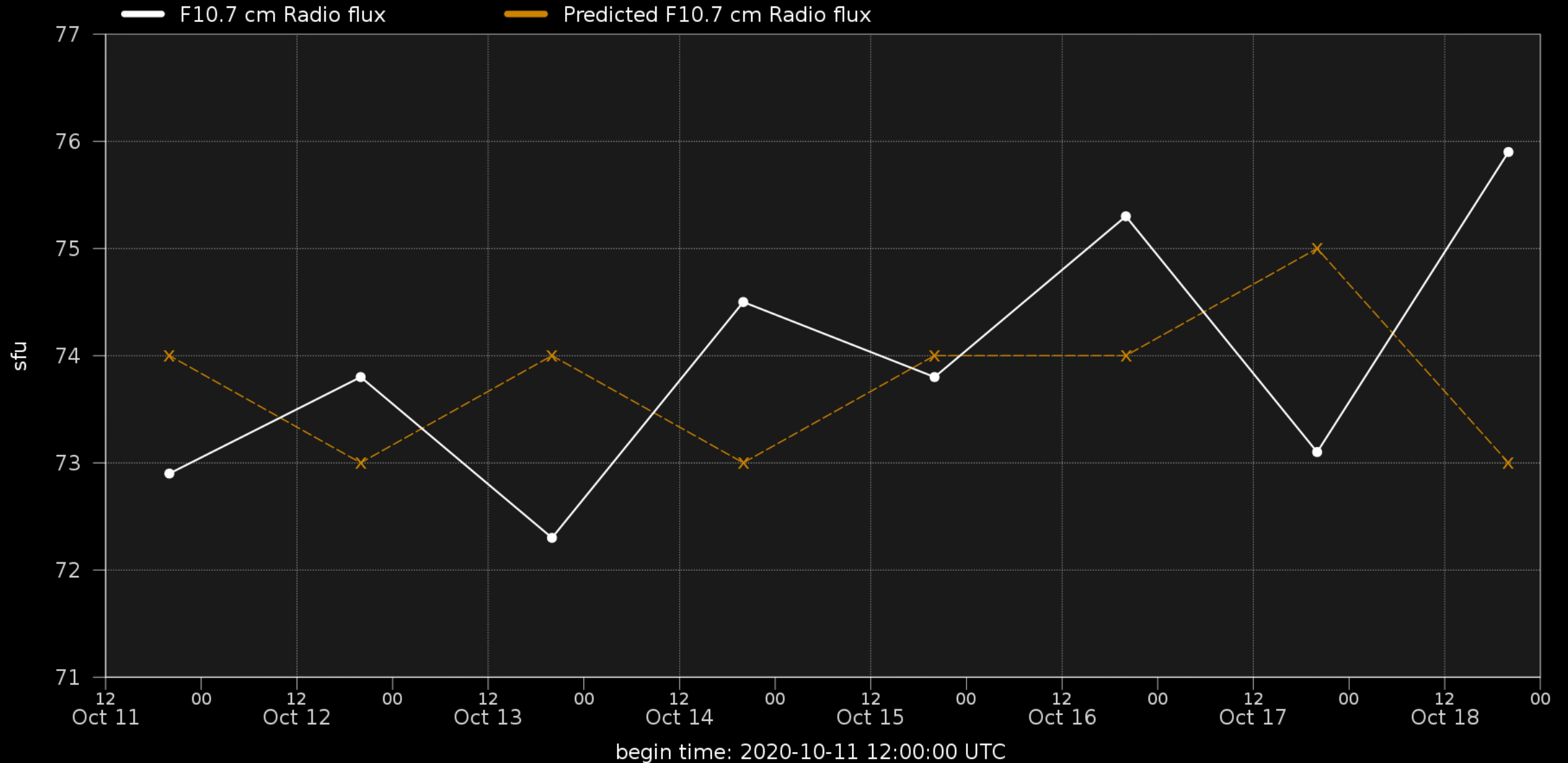


SDO/AIA 30.4 nm 2020-10-18

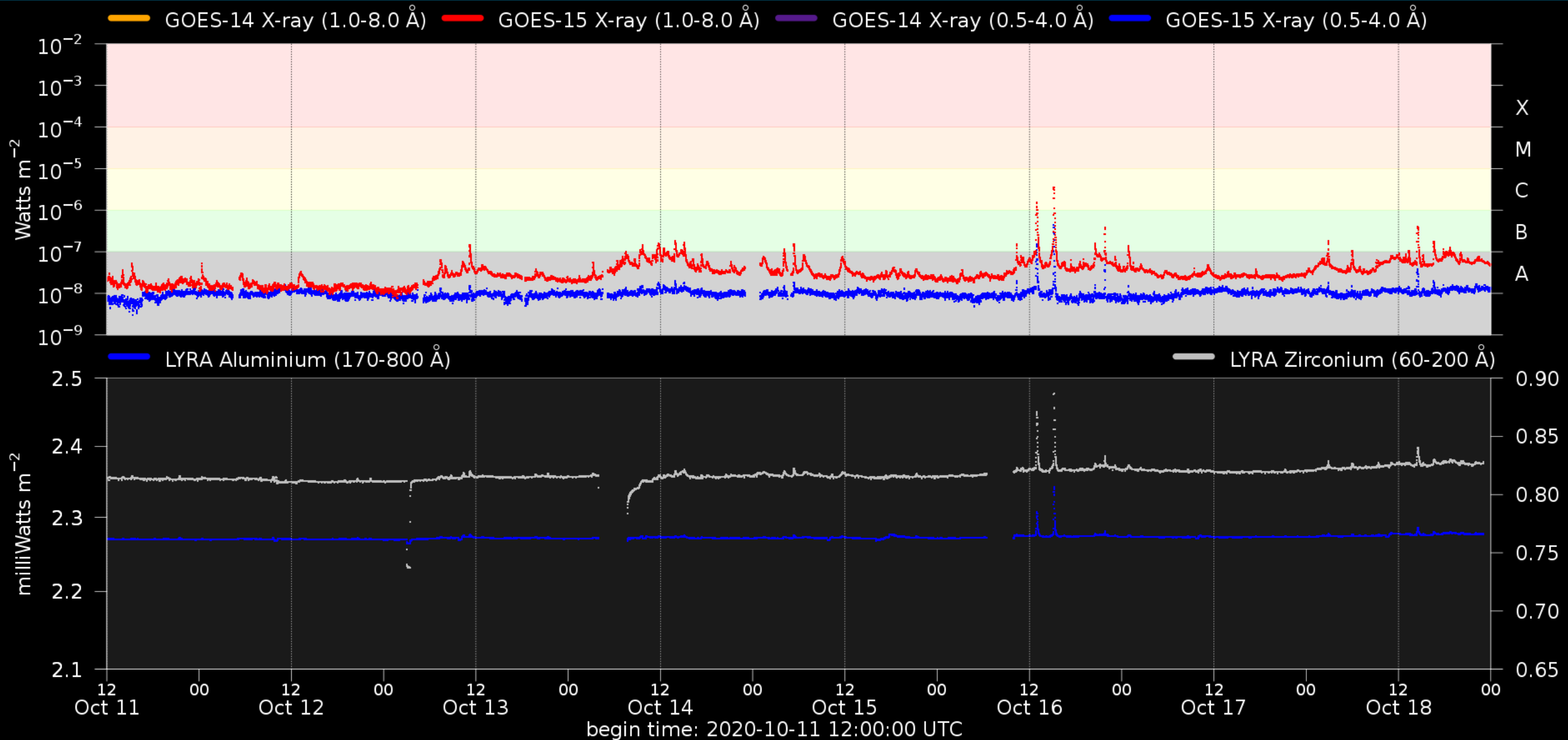
SDO/AIA AIA 304Å 2020-10-18T00:00:06.57



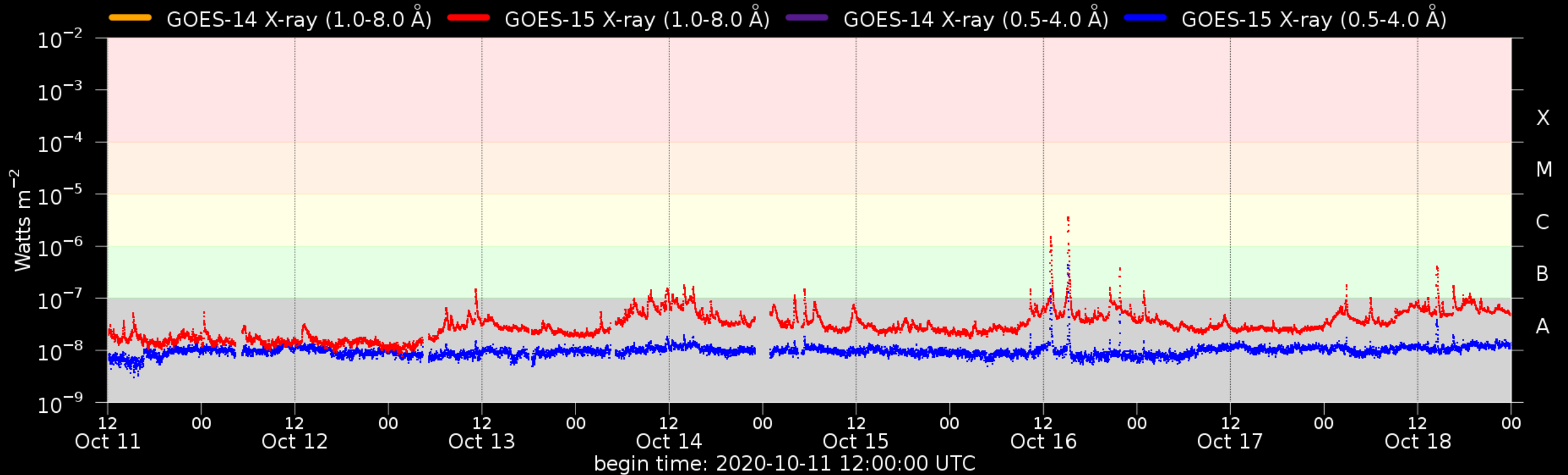
Solar F10.7cm radio flux



Solar X-Ray and UV flux



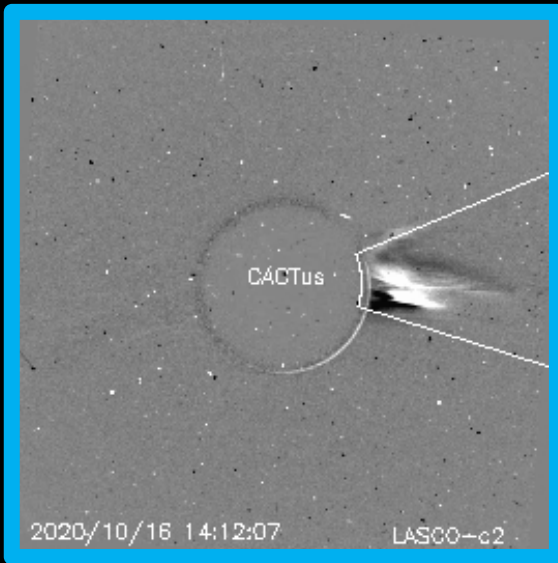
Flaring activity



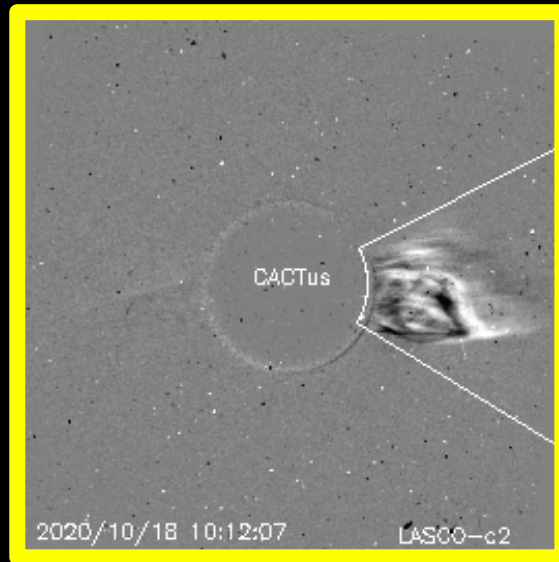
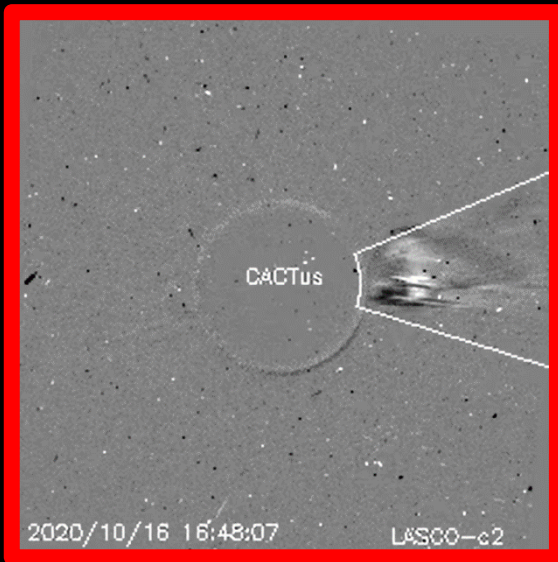
Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2020-10-11	2020-10-12	2020-10-13	2020-10-14	2020-10-15	2020-10-16	2020-10-17	2020-10-18
Probability	-- 05 01 01	-- 07 01 01	-- 05 01 01	-- 03 01 01	-- 05 01 01	-- 05 01 01	-- 05 01 01	-- 05 01 01
Observed	00 00 00 0 0	00 00 00 0 0	02 00 00 0 0	07 00 00 0 0	00 00 00 0 0	08 03 00 0 0	02 00 00 0 0	04 00 00 0 0

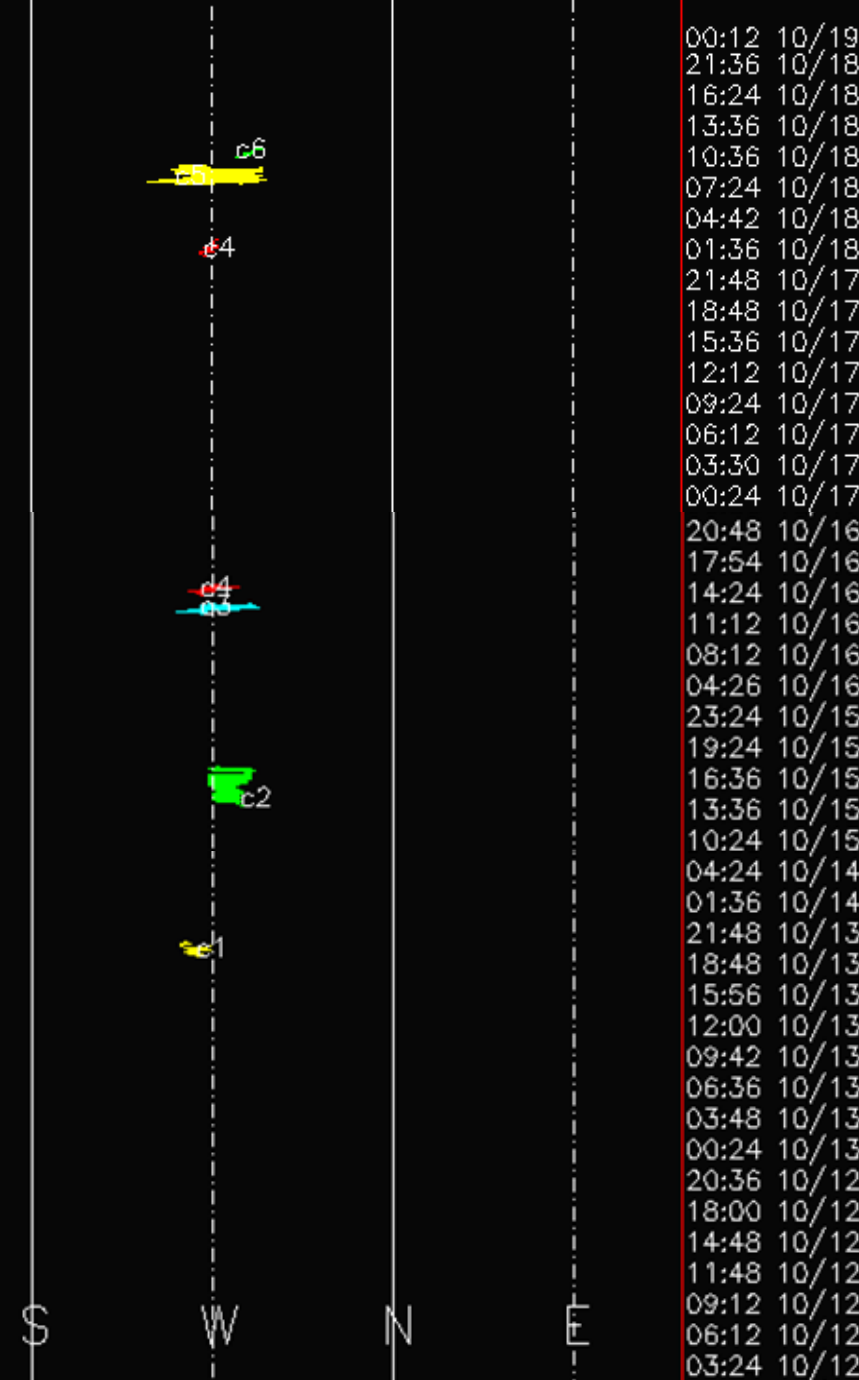
Coronal Mass Ejections



2 CMEs ($v \sim 600$ km/s) associated with C-class flares from the west solar limb



associated with C-class flare from behind of the west solar limb



Solar Wind and

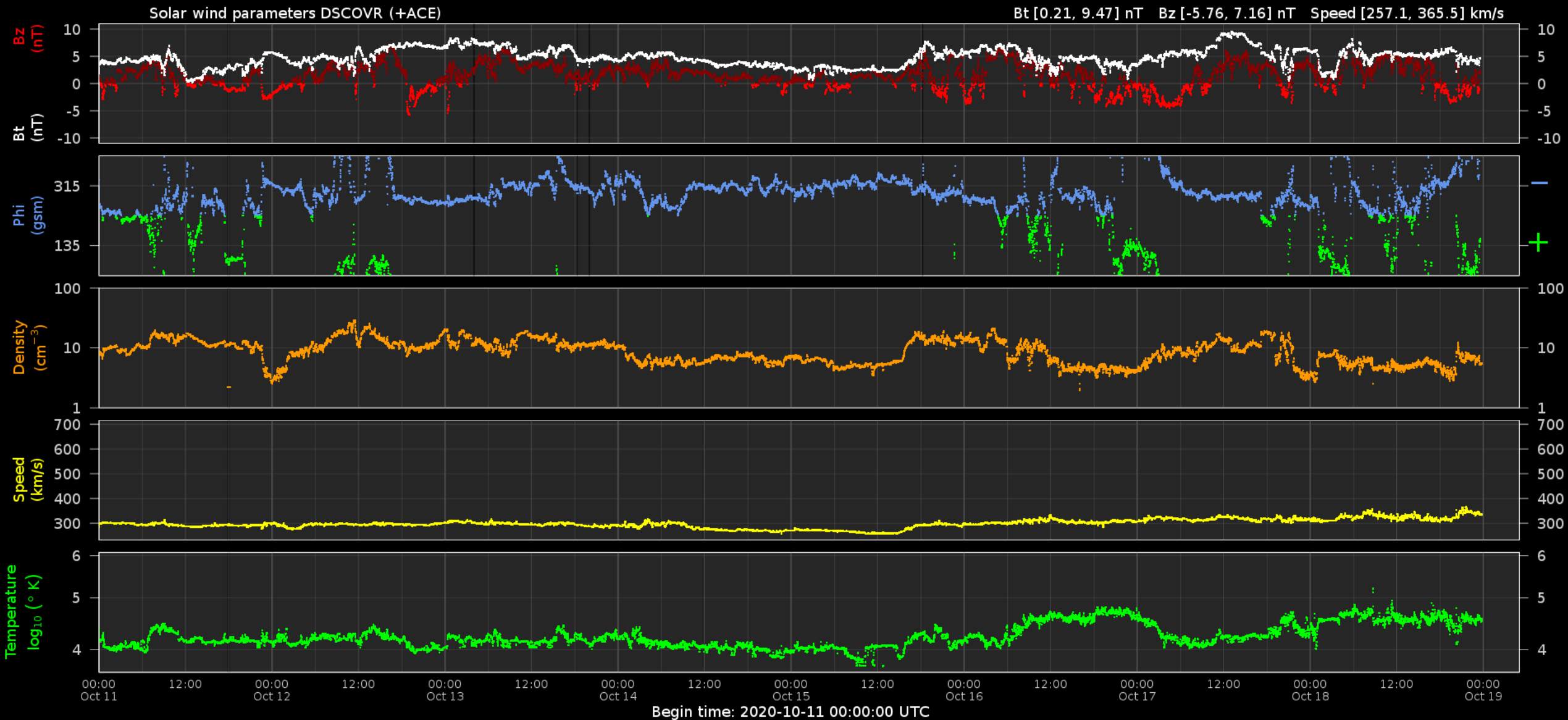
Geomagnetic Activity



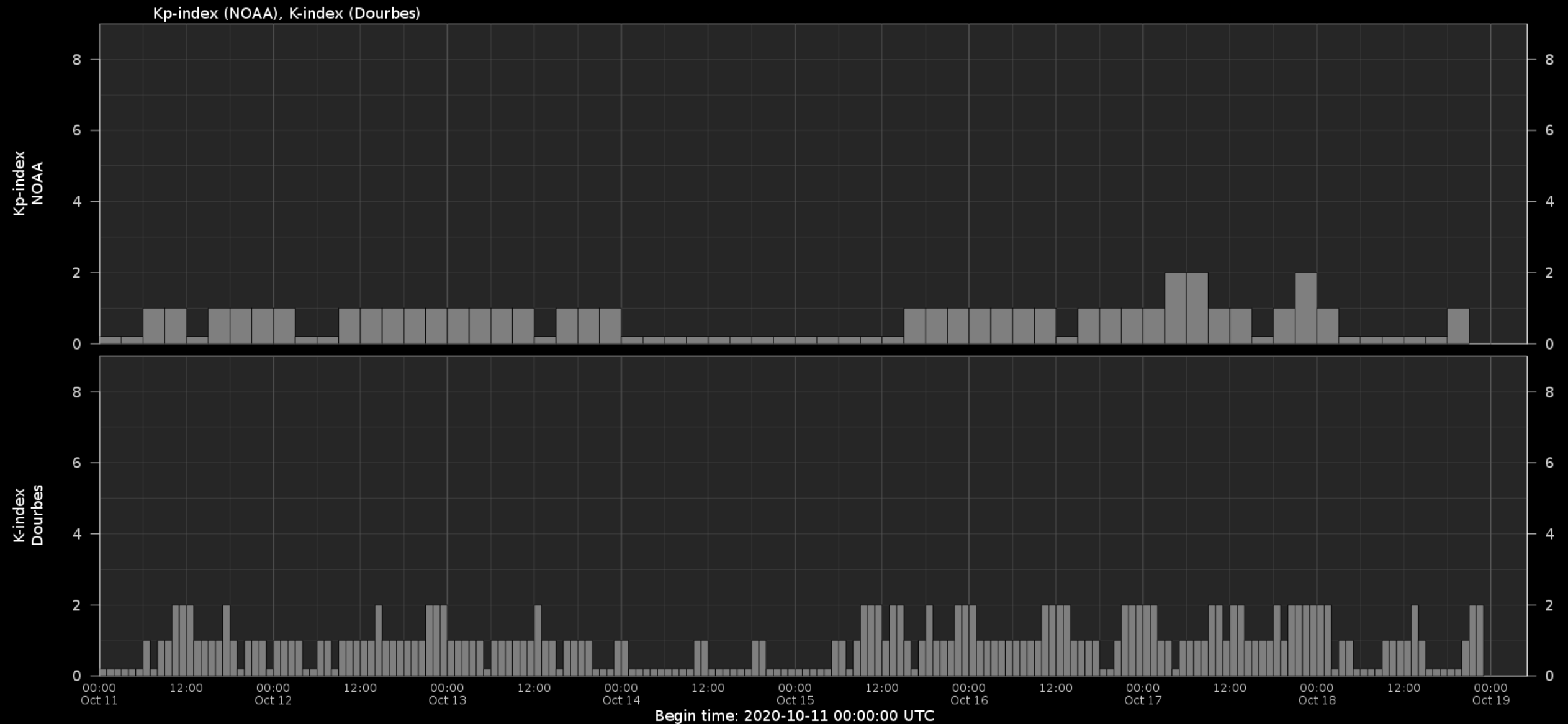
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Solar wind parameters (DSCOVR data)



Geomagnetic activity (K-indexes)



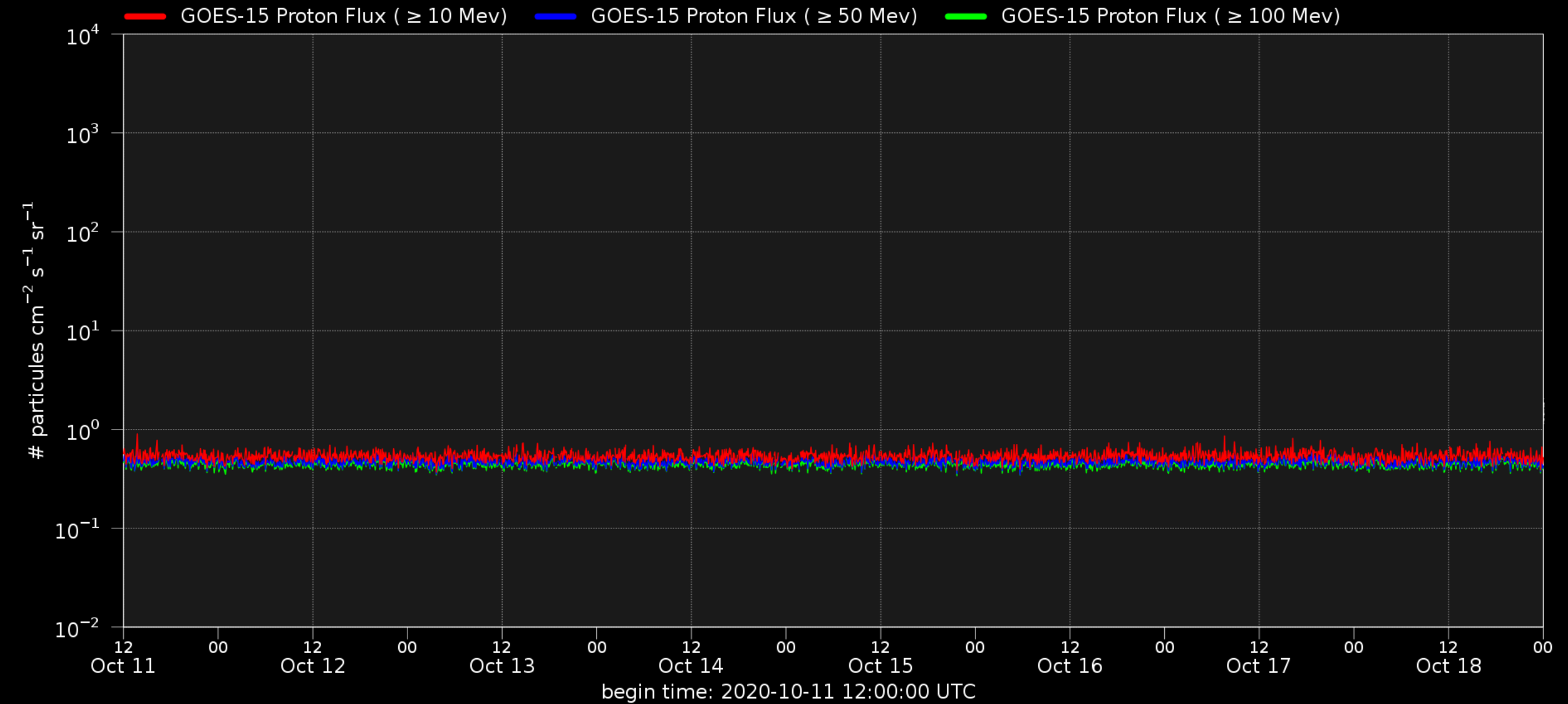
Solar Energetic Particles



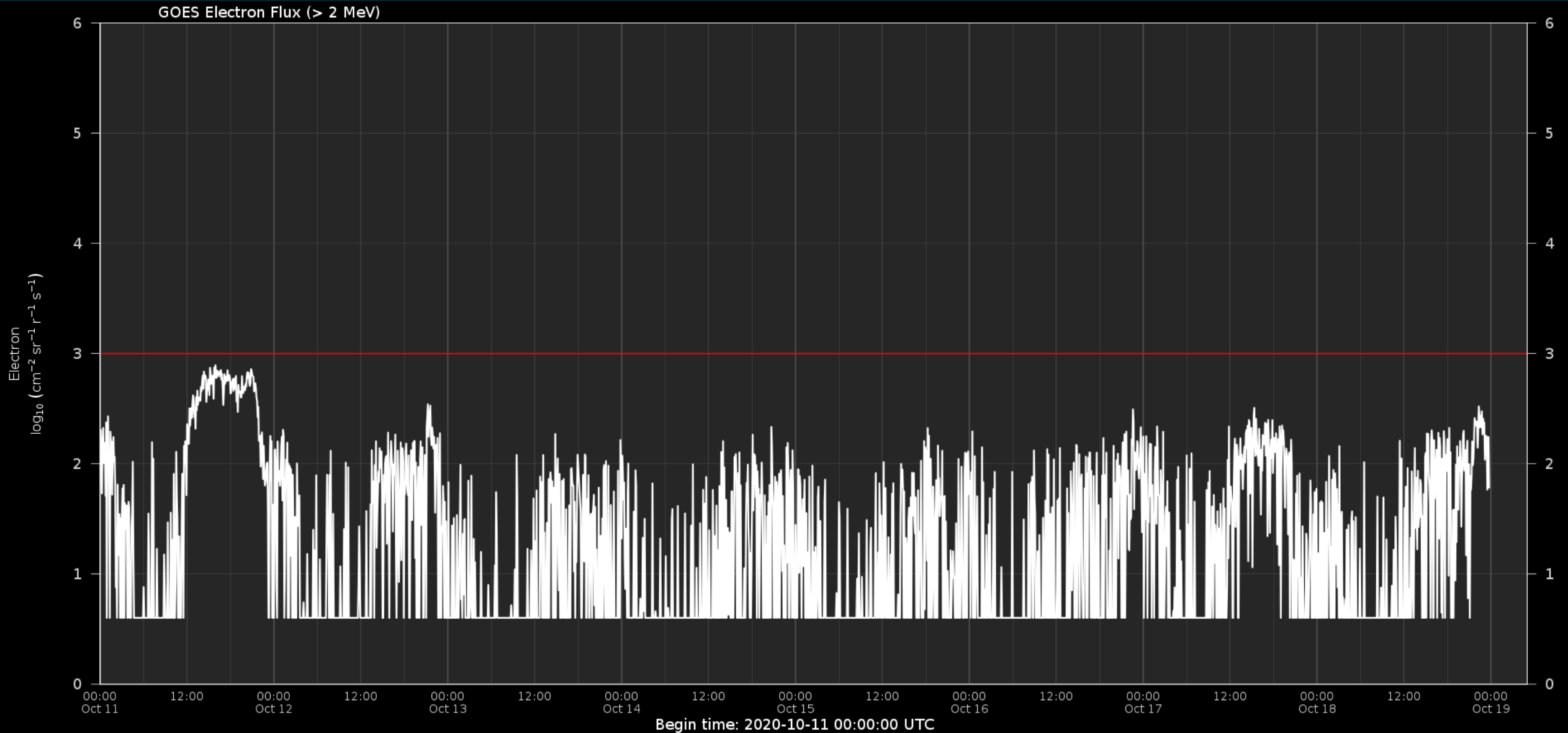
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Solar proton flux



Solar electron flux



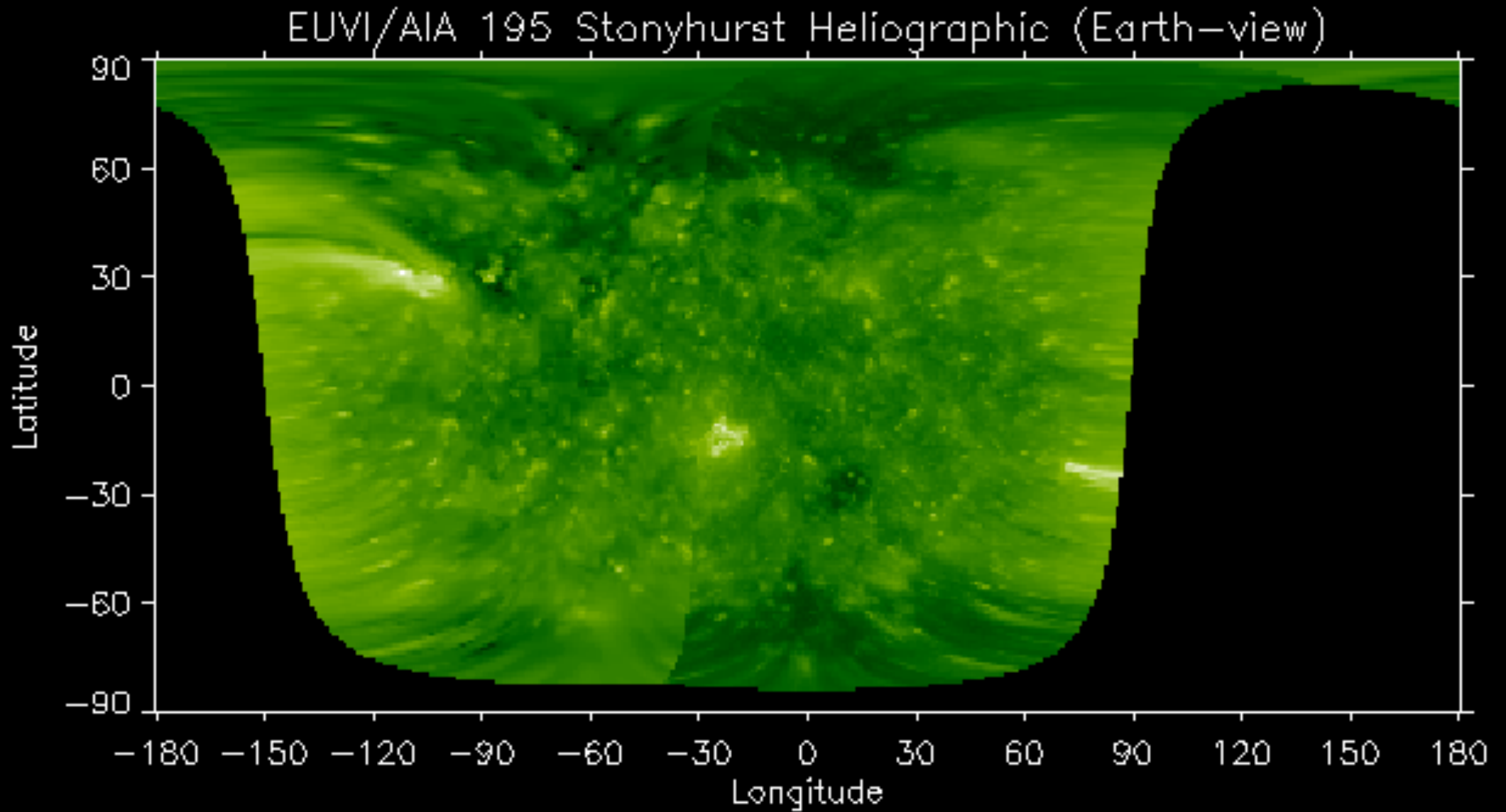
Outlook



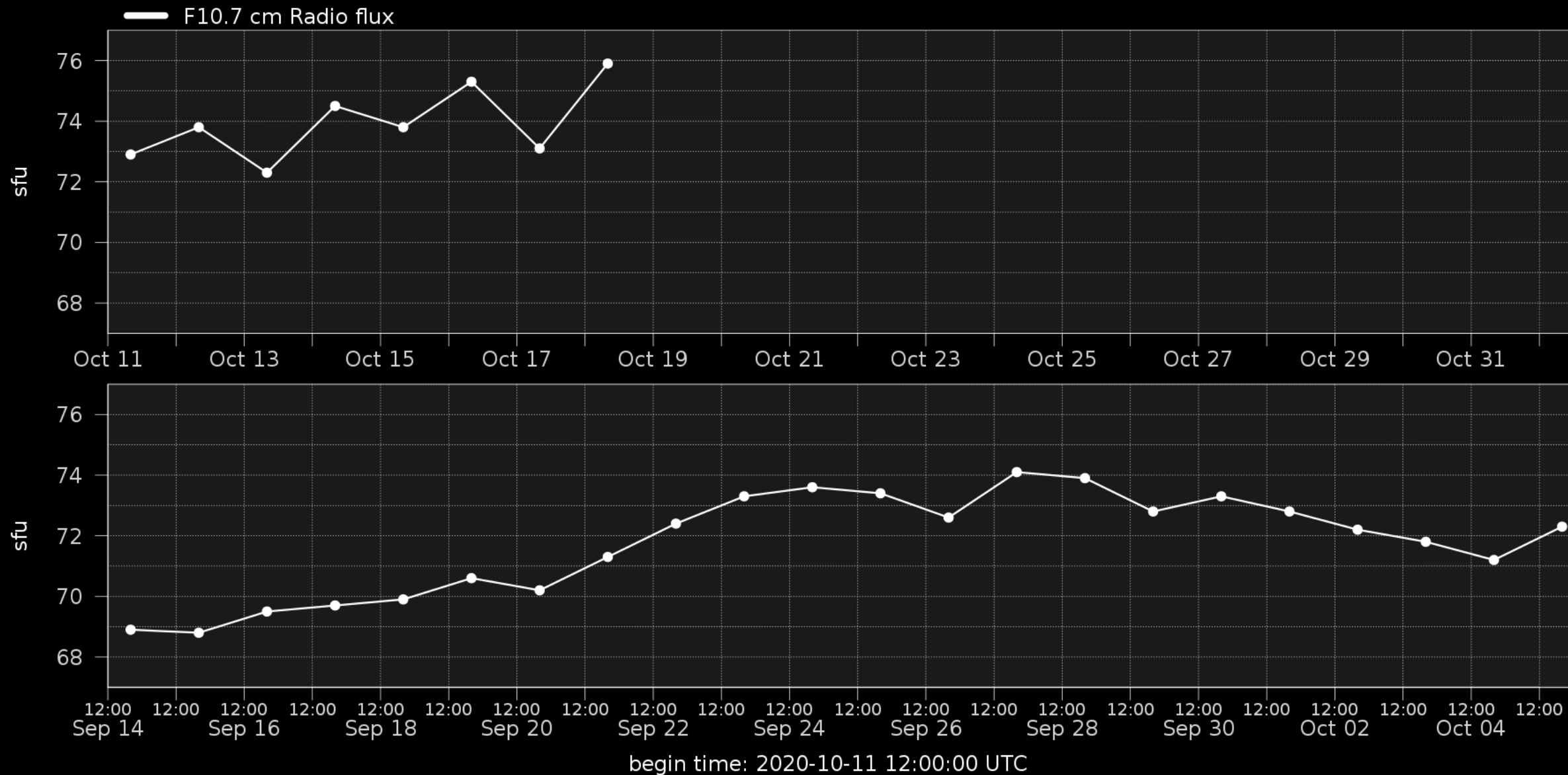
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Outlook: Solar activity



Outlook: F10 flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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