

SIDC Space Weather Briefing

18 October 2020 - 25 October 2020

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& the SIDC forecaster team



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Data analysis Centre
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Summary Report

Solar activity from 2020-10-18 to 2020-10-25

Active regions	NOAA AR12776 (Catania group 45),AR12777, Catania 46
Flares	# B-class flare: 16 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filament eruptions	None Earth oriented
Coronal Holes	3 of positive polarity

Proton flux	Background levels
Electron flux	Enhanced from Oct 23 rd , surpassing 1000pfu Oct 26 th

Solar wind and geomagnetic conditions from 2020-10-18T12:00:00 to 2020-10-25T12:00:00

ICME	None
SW Conditions	B : 0.8 - 14.73 nT // Bz: -10.89 nT to 12.88 nT // Speed: 305.5 - 593.3km/s
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: OFF since 22/10

Solar Activity

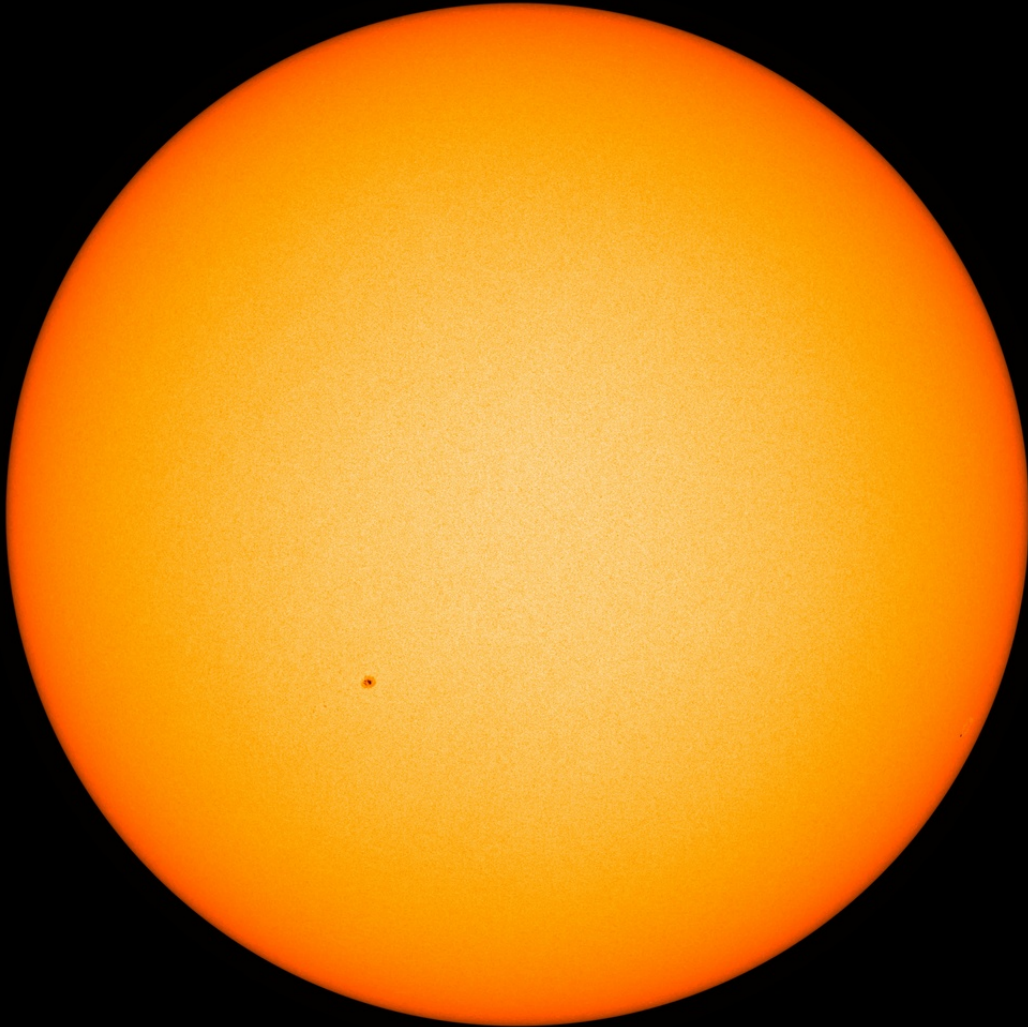


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Solar active regions - Sunday

SDO/HMI White Light 2020-10-18



SDO/HMI Quick-Look Continuum: 20201018_114500

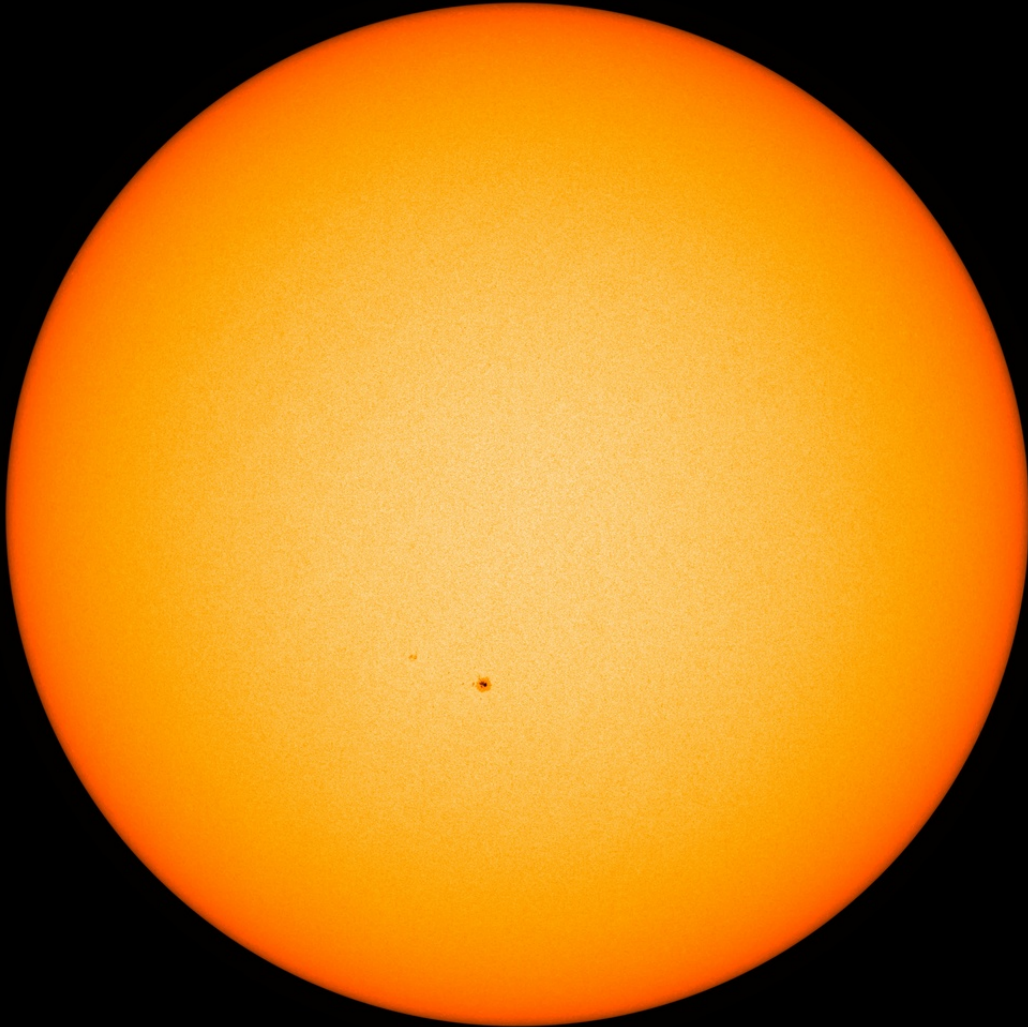
SDO/HMI Magnetogram 2020-10-18



SDO/HMI Quick-Look Magnetogram: 20201018_114500

Solar active regions - Monday

SDO/HMI White Light 2020-10-19



SDO/HMI Quick-Look Continuum: 20201019_114500

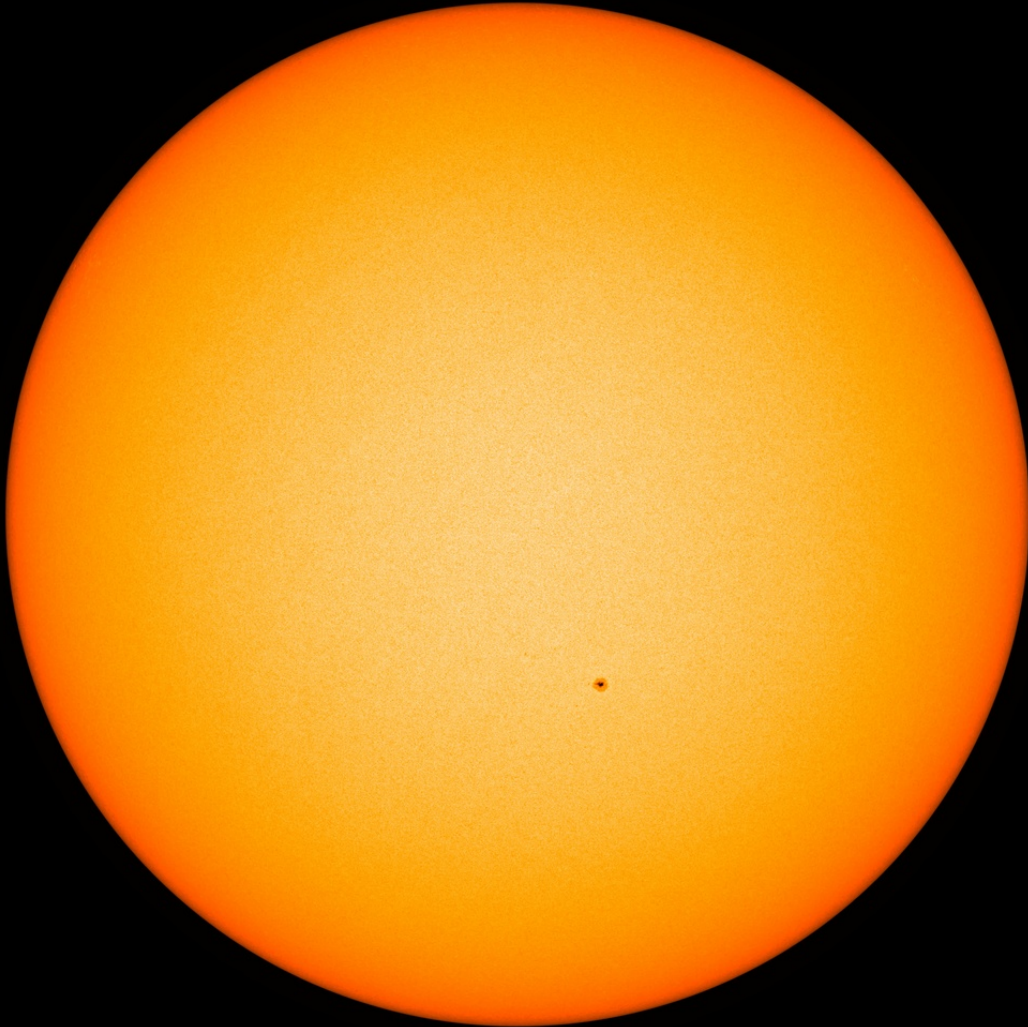
SDO/HMI Magnetogram 2020-10-19



SDO/HMI Quick-Look Magnetogram: 20201019_114500

Solar active regions - Tuesday

SDO/HMI White Light 2020-10-20



SDO/HMI Quick-Look Continuum: 20201020_114500

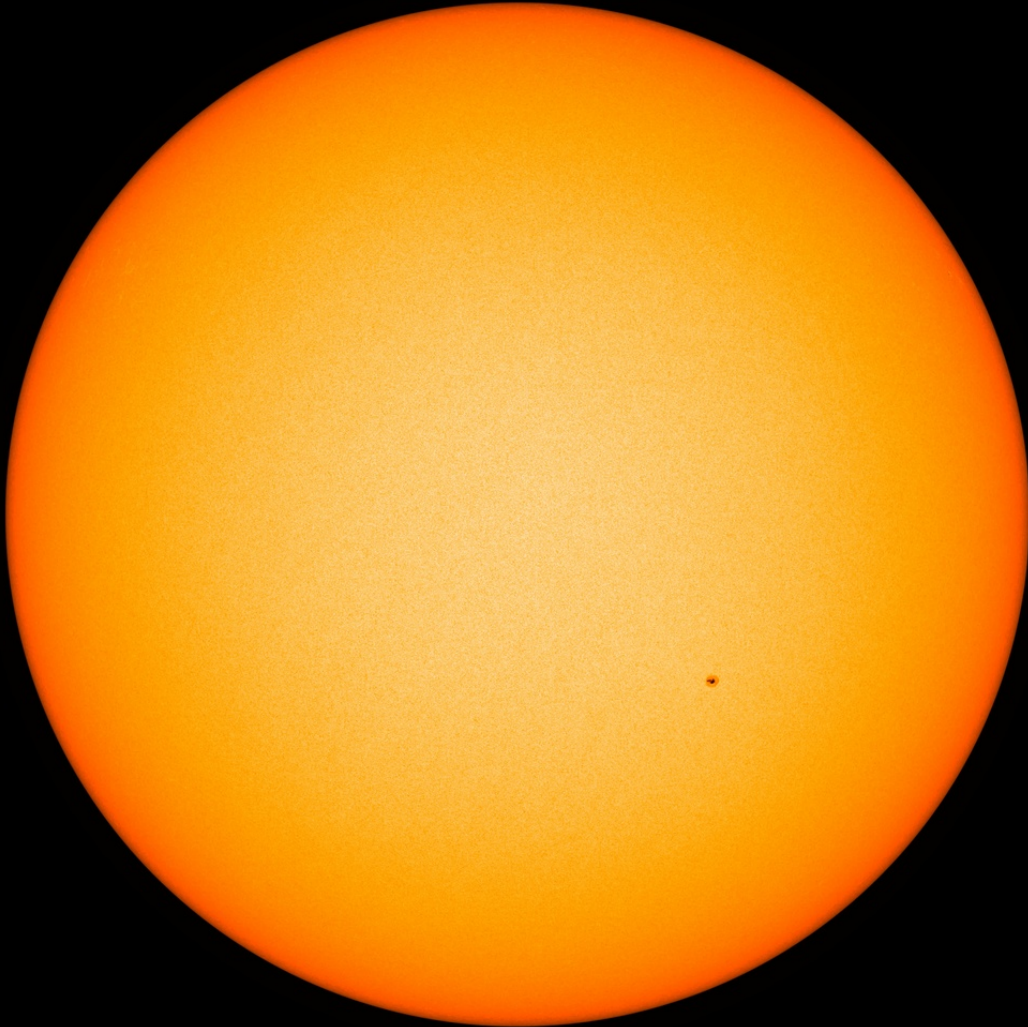
SDO/HMI Magnetogram 2020-10-20



SDO/HMI Quick-Look Magnetogram: 20201020_114500

Solar active regions - Wednesday

SDO/HMI White Light 2020-10-21



SDO/HMI Quick-Look Continuum: 20201021_114500

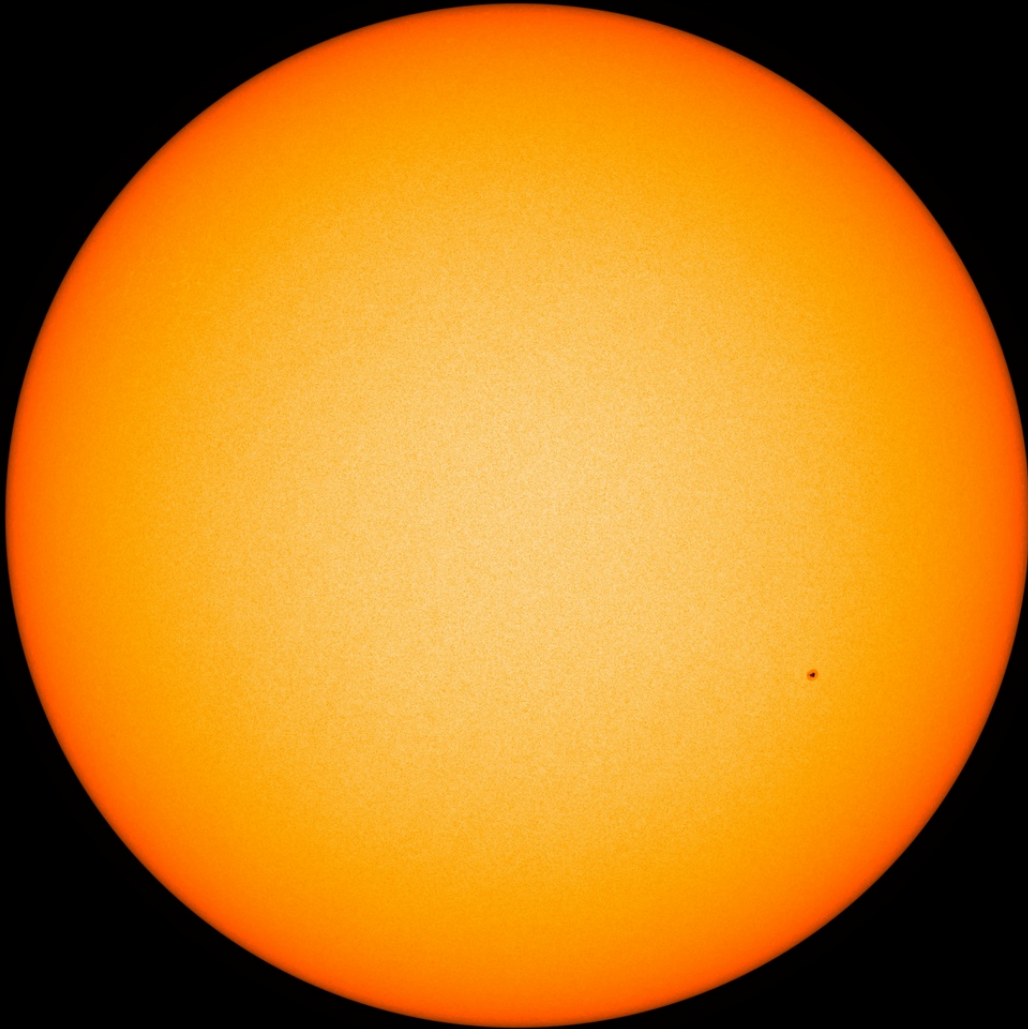
SDO/HMI Magnetogram 2020-10-21



SDO/HMI Quick-Look Magnetogram: 20201021_114500

Solar active regions - Thursday

SDO/HMI White Light 2020-10-22



SDO/HMI Quick-Look Continuum: 20201022_114500

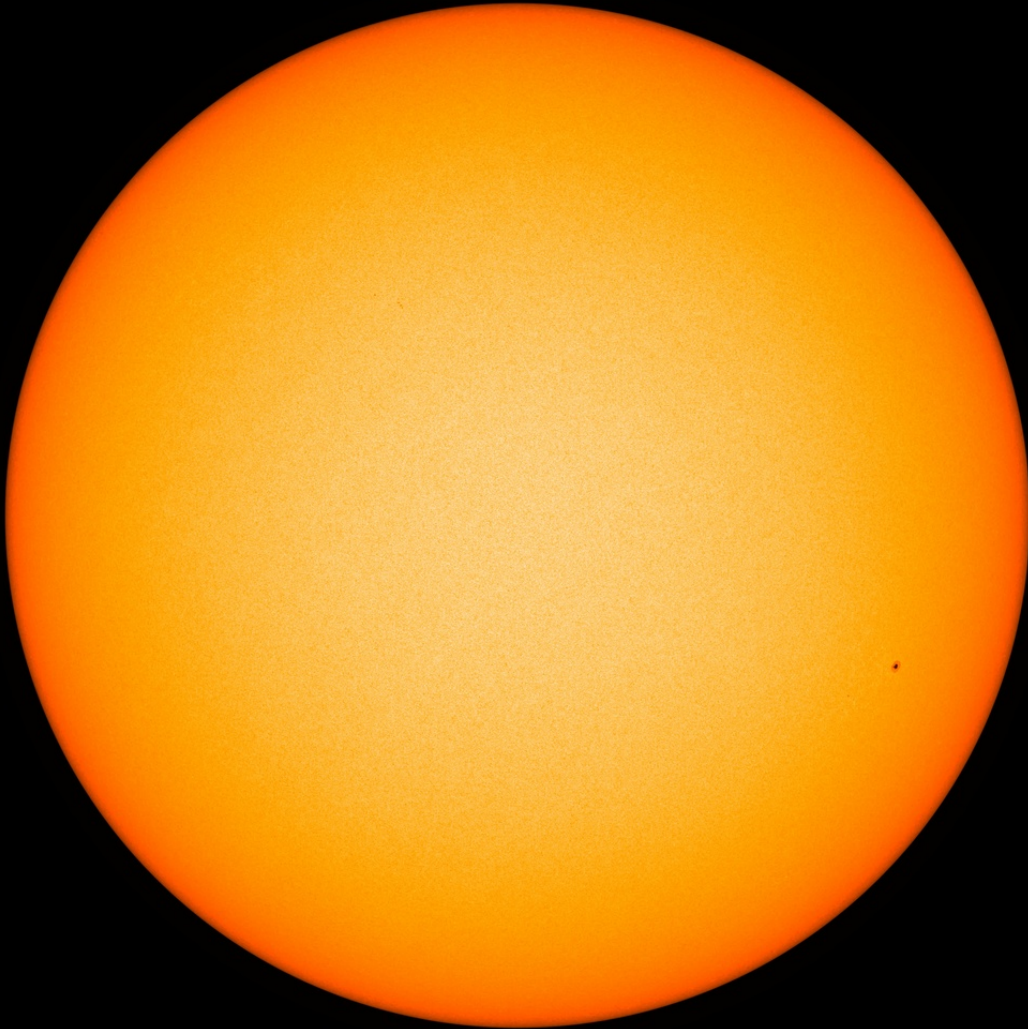
SDO/HMI Magnetogram 2020-10-22



SDO/HMI Quick-Look Magnetogram: 20201022_114500

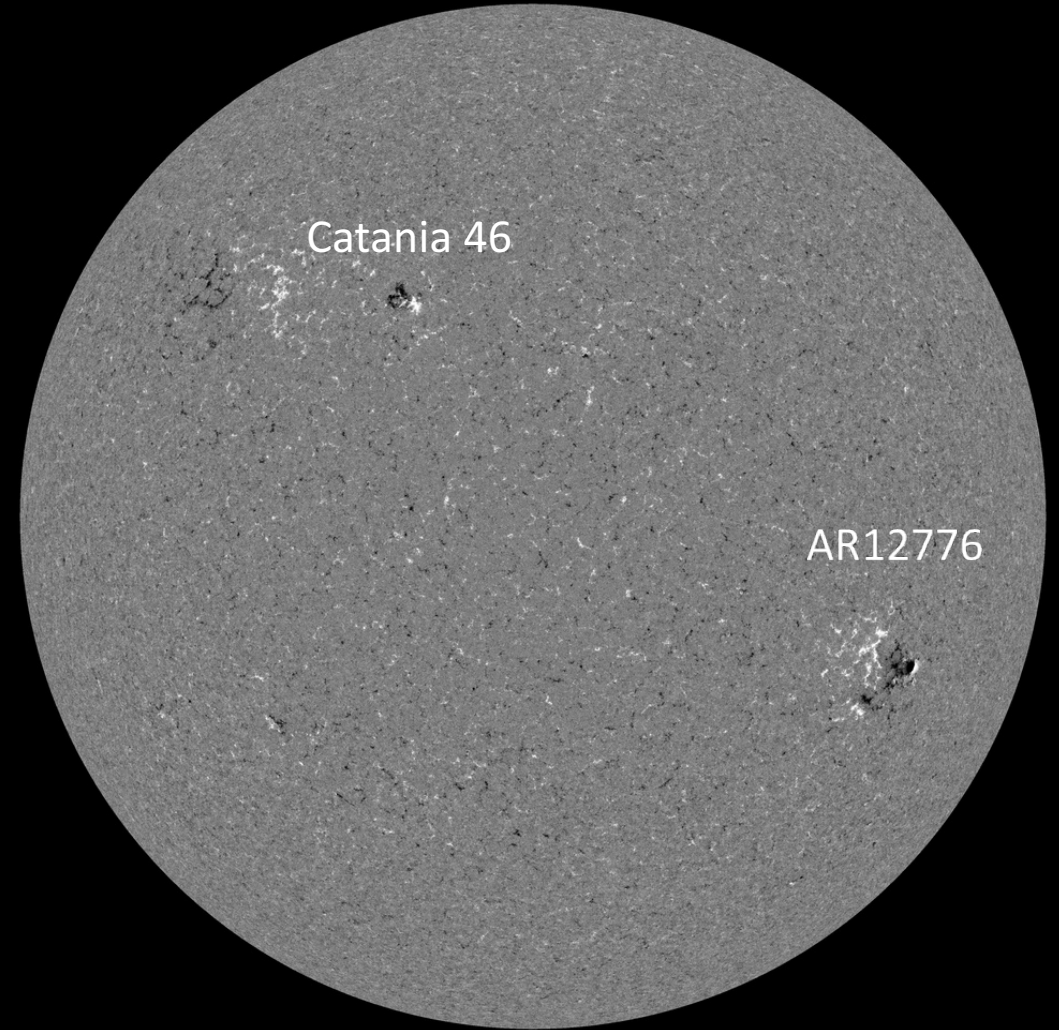
Solar active regions - Friday

SDO/HMI White Light 2020-10-23



SDO/HMI Quick-Look Continuum: 20201023_114500

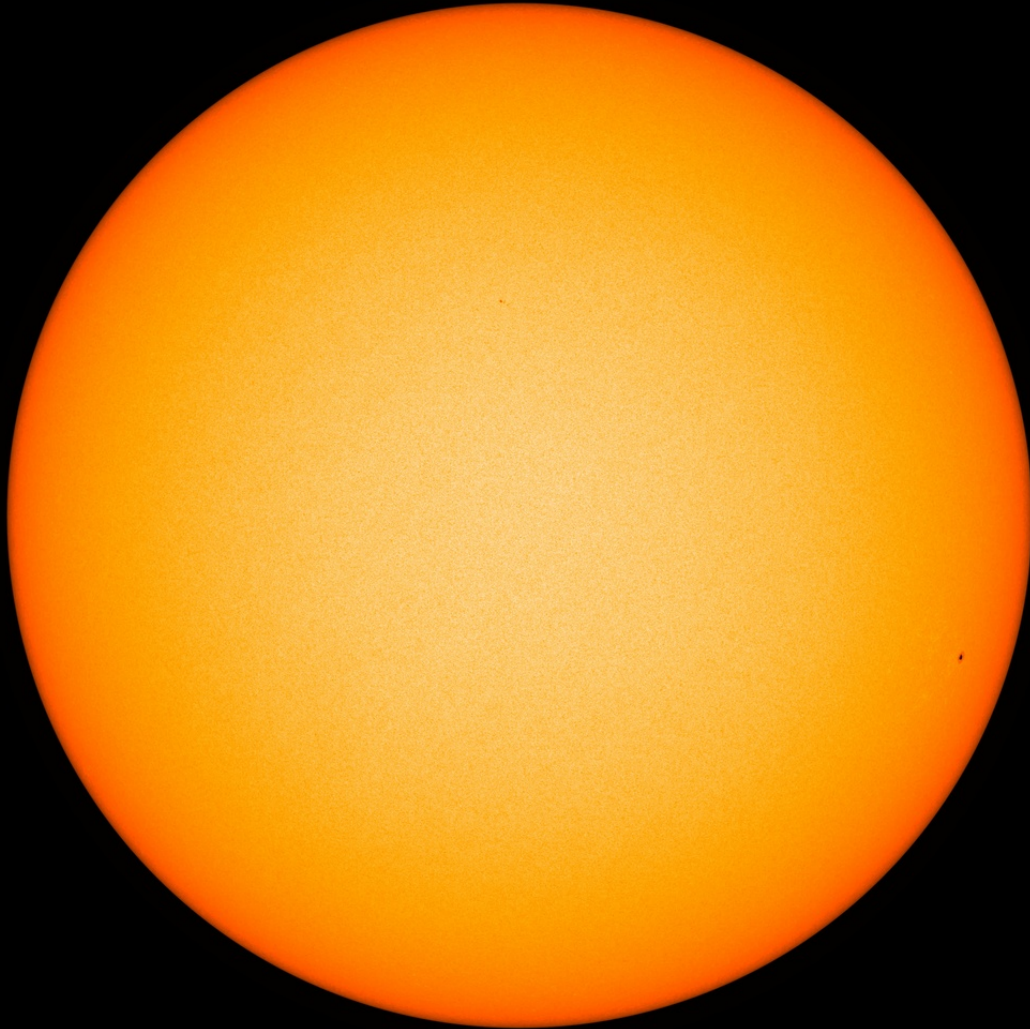
SDO/HMI Magnetogram 2020-10-23



SDO/HMI Quick-Look Magnetogram: 20201023_114500

Solar active regions - Saturday

SDO/HMI White Light 2020-10-24



SDO/HMI Quick-Look Continuum: 20201024_114500

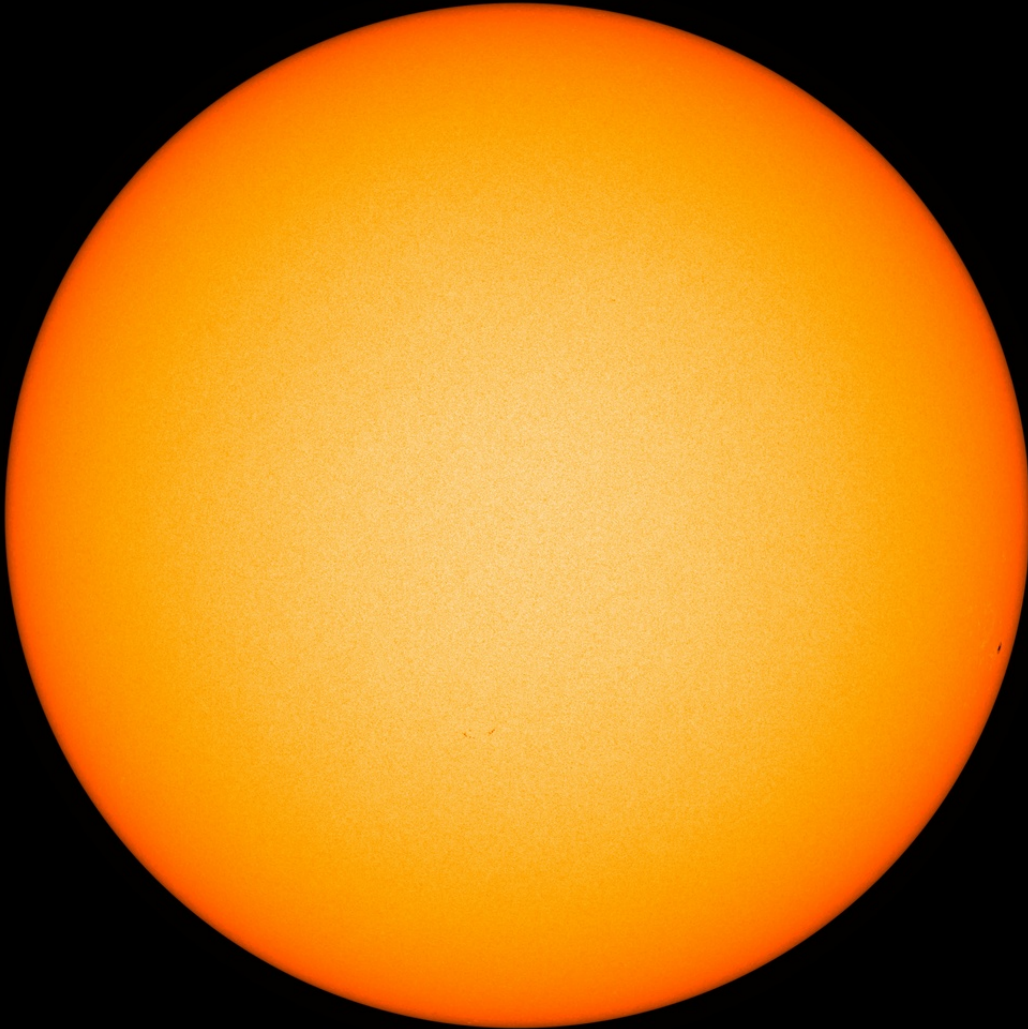
SDO/HMI Magnetogram 2020-10-24



SDO/HMI Quick-Look Magnetogram: 20201024_114500

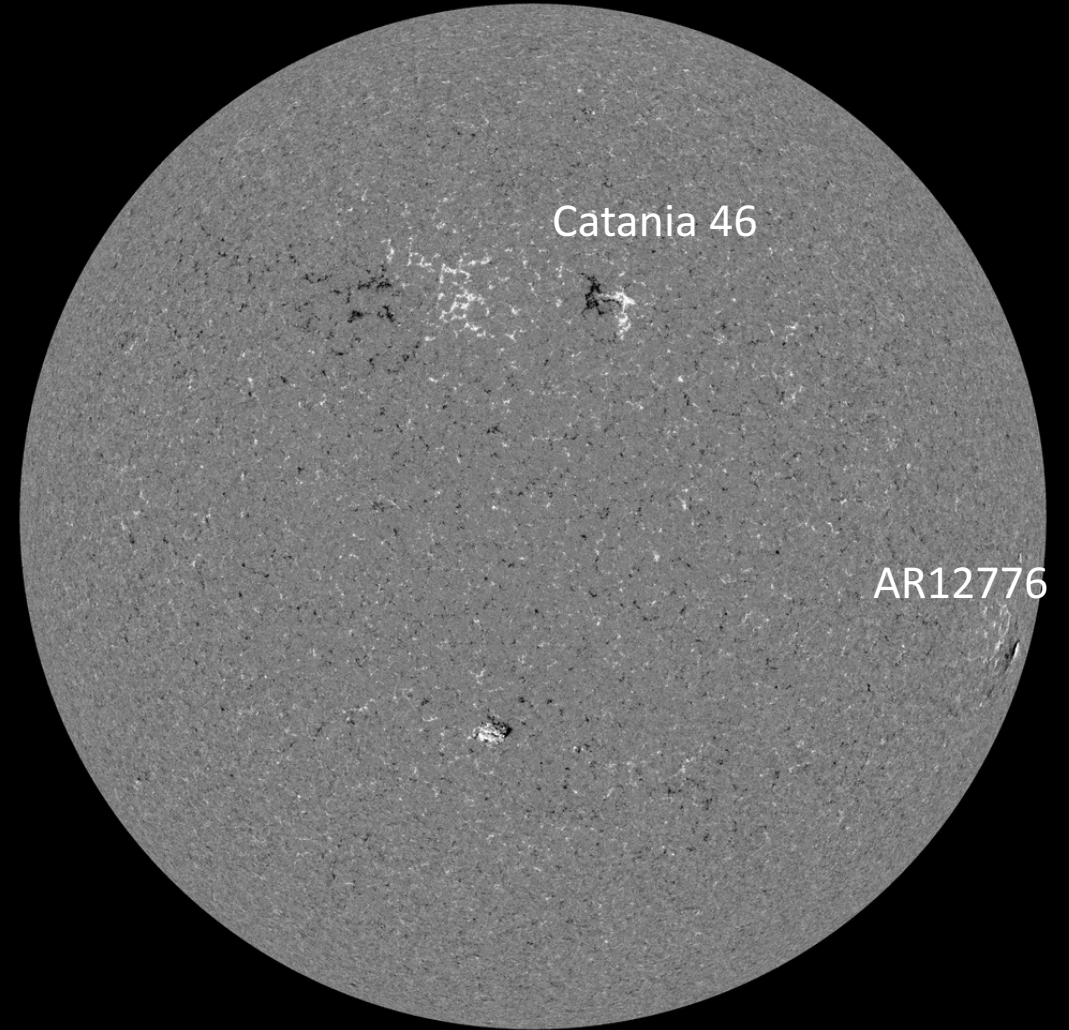
Solar active regions - Sunday

SDO/HMI White Light 2020-10-25



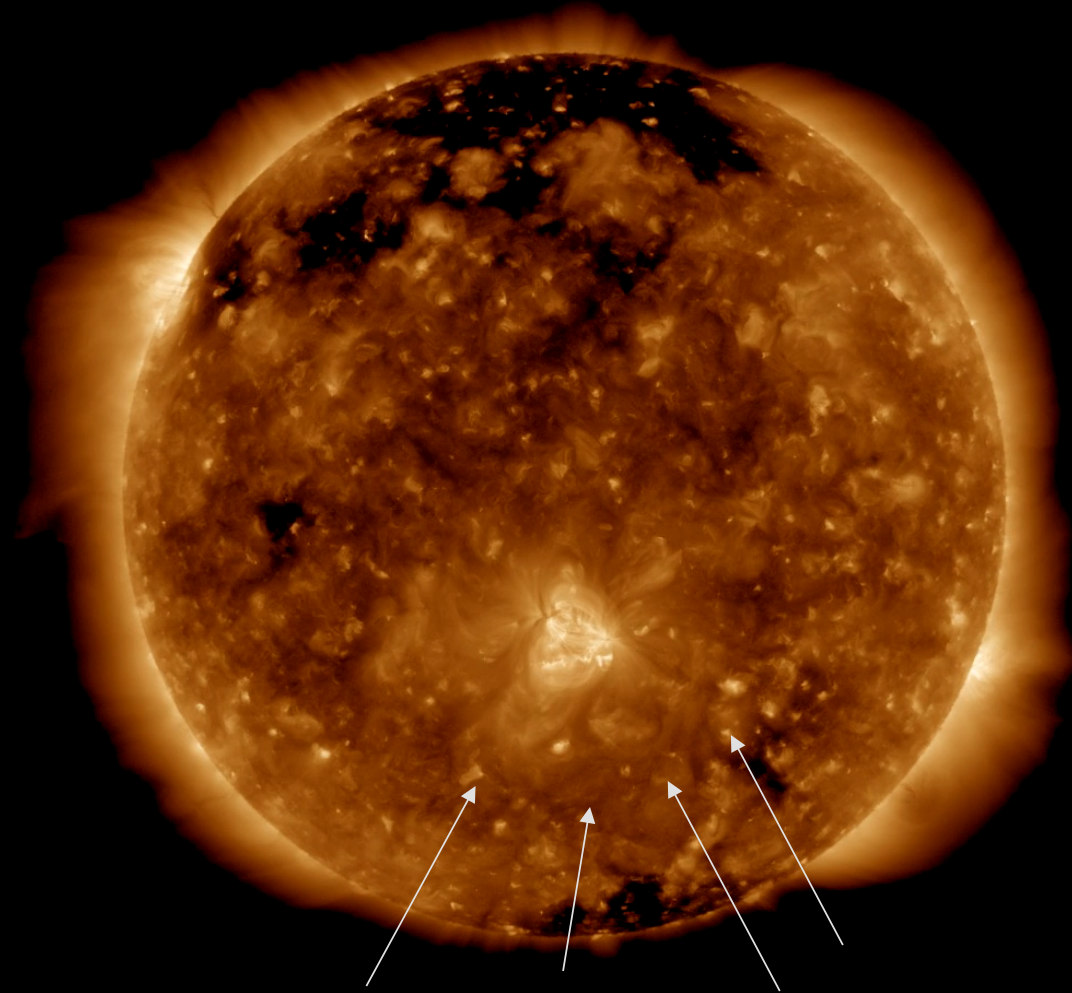
SDO/HMI Quick-Look Continuum: 20201025_114500

SDO/HMI Magnetogram 2020-10-25



SDO/HMI Quick-Look Magnetogram: 20201025_114500

B1.3-class solar flare from AR12776

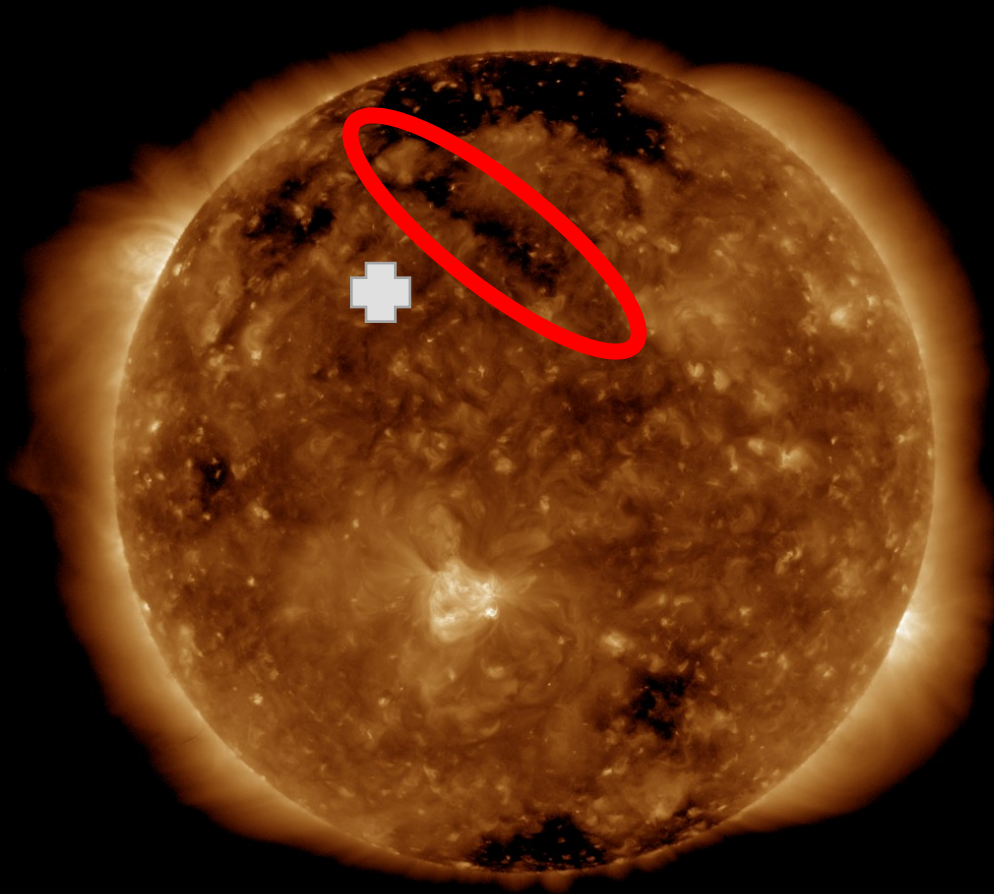


SDO/AIA 193 2020-10-20 04:58:29 UT

B1.3-class flare
20/10/2020
13:18UT.
Associated with
radio burst
detected in
Humaïn station

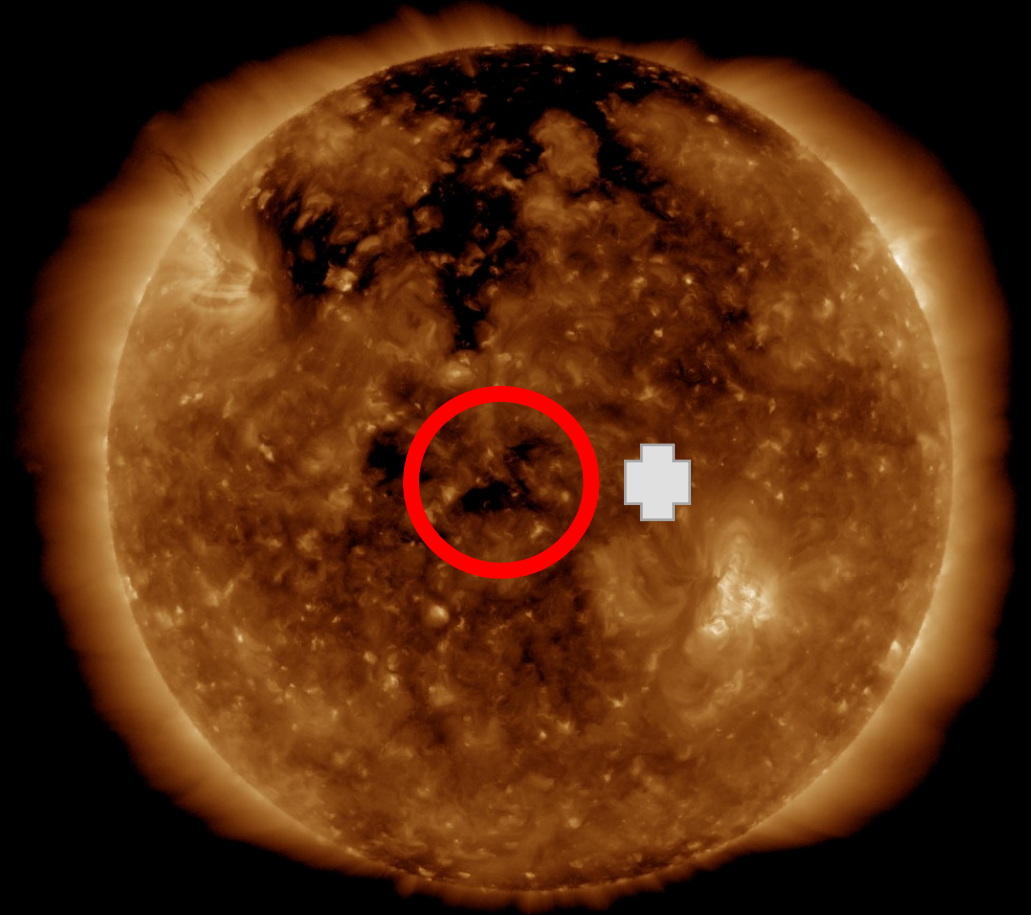
Coronal holes

SDO/AIA 19.3 nm 2020-10-19



SDO/AIA 193 2020-10-19 10:58:17 UT

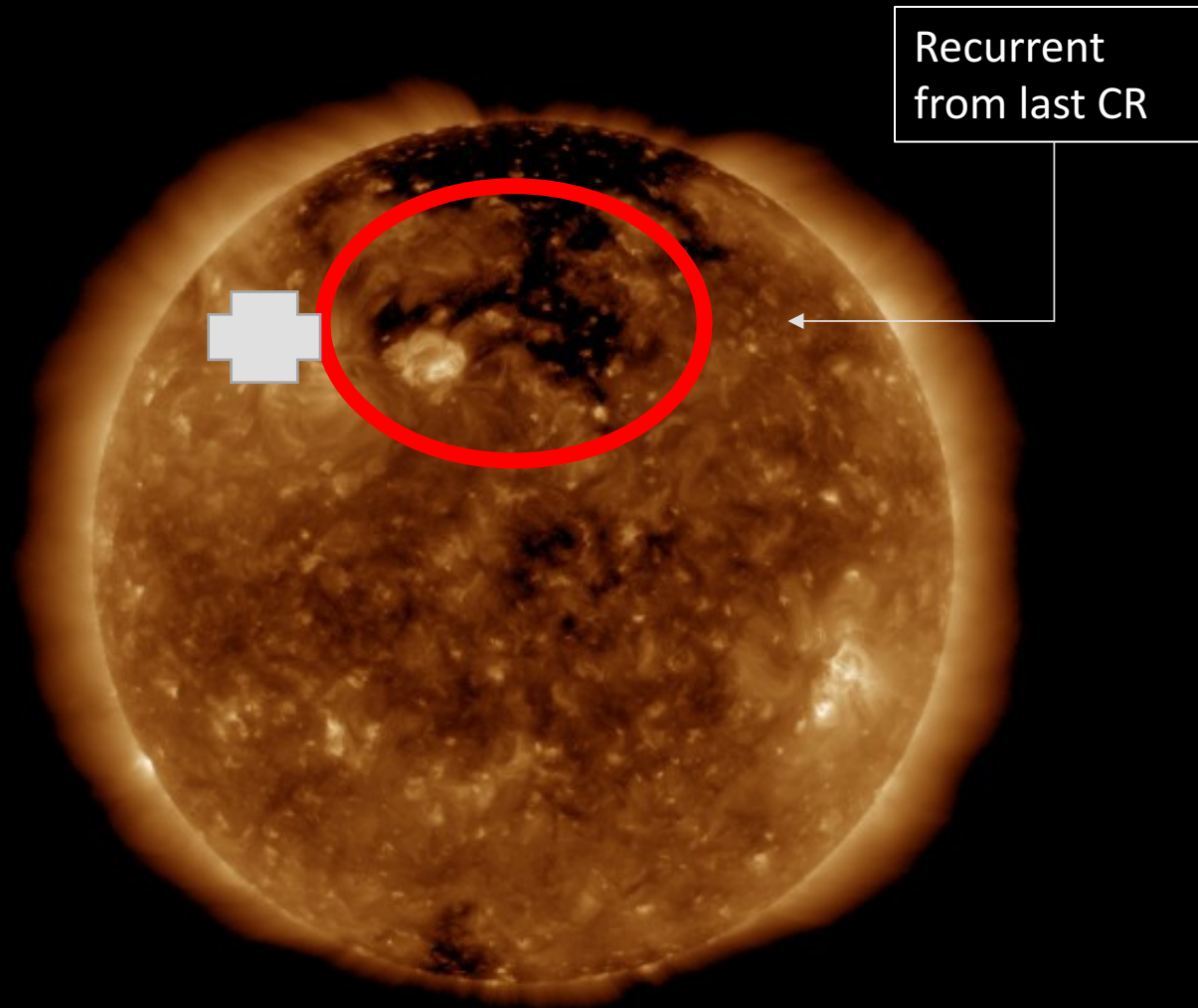
SDO/AIA 19.3 nm 2020-10-22



SDO/AIA 193 2020-10-22 09:07:29 UT

Coronal holes

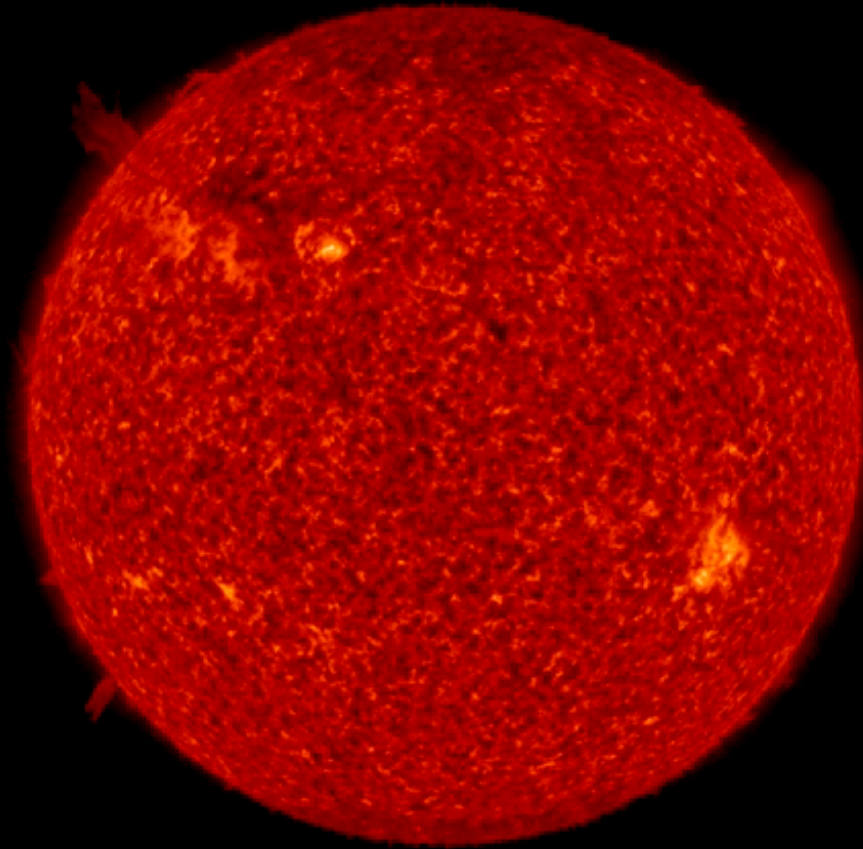
SDO/AIA 19.3 nm 2020-10-23



SDO/AIA 193 2020-10-23 19:56:53 UT

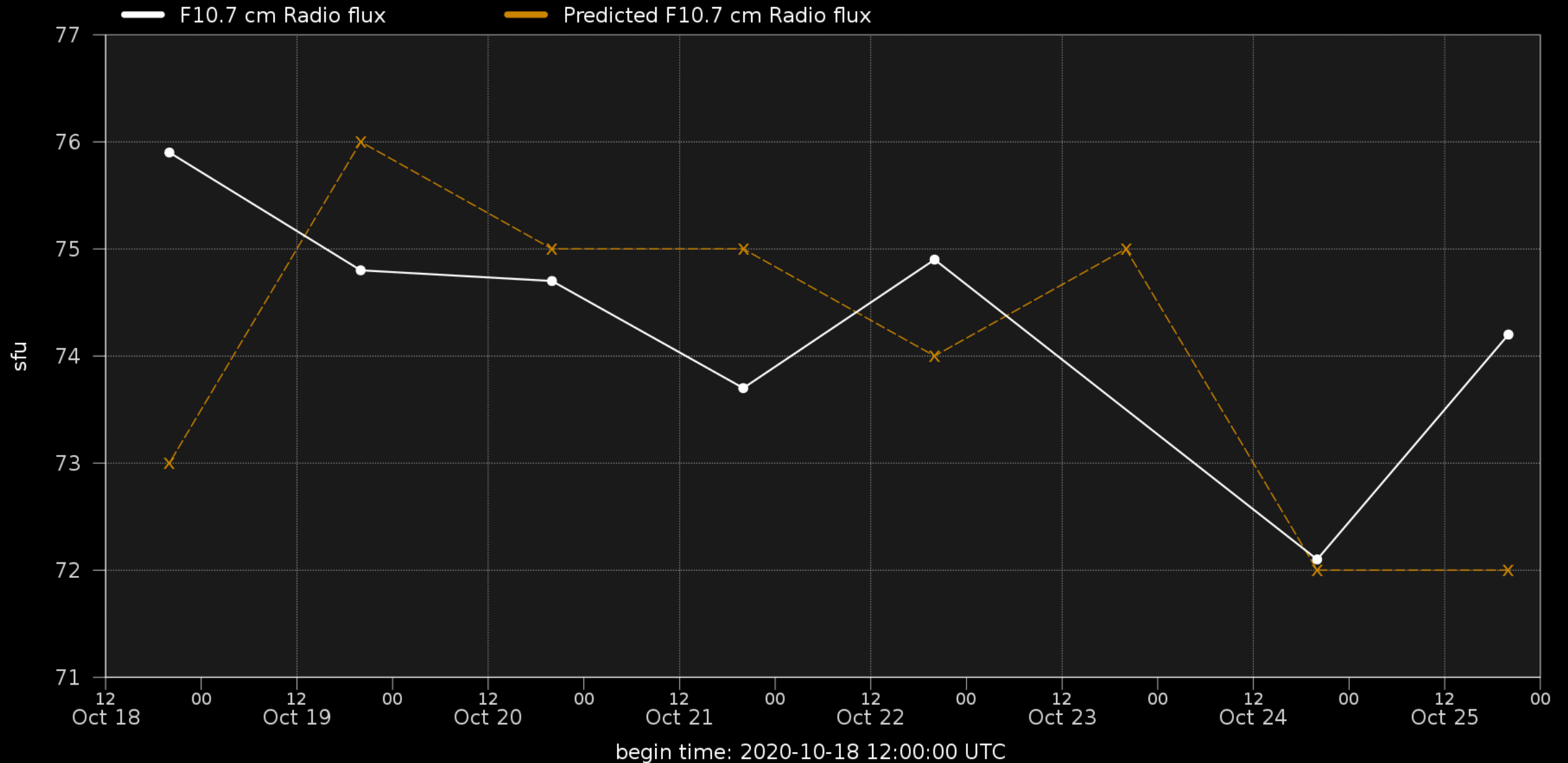
Filament eruption

About N37E60
Oct 23rd 14:47UT

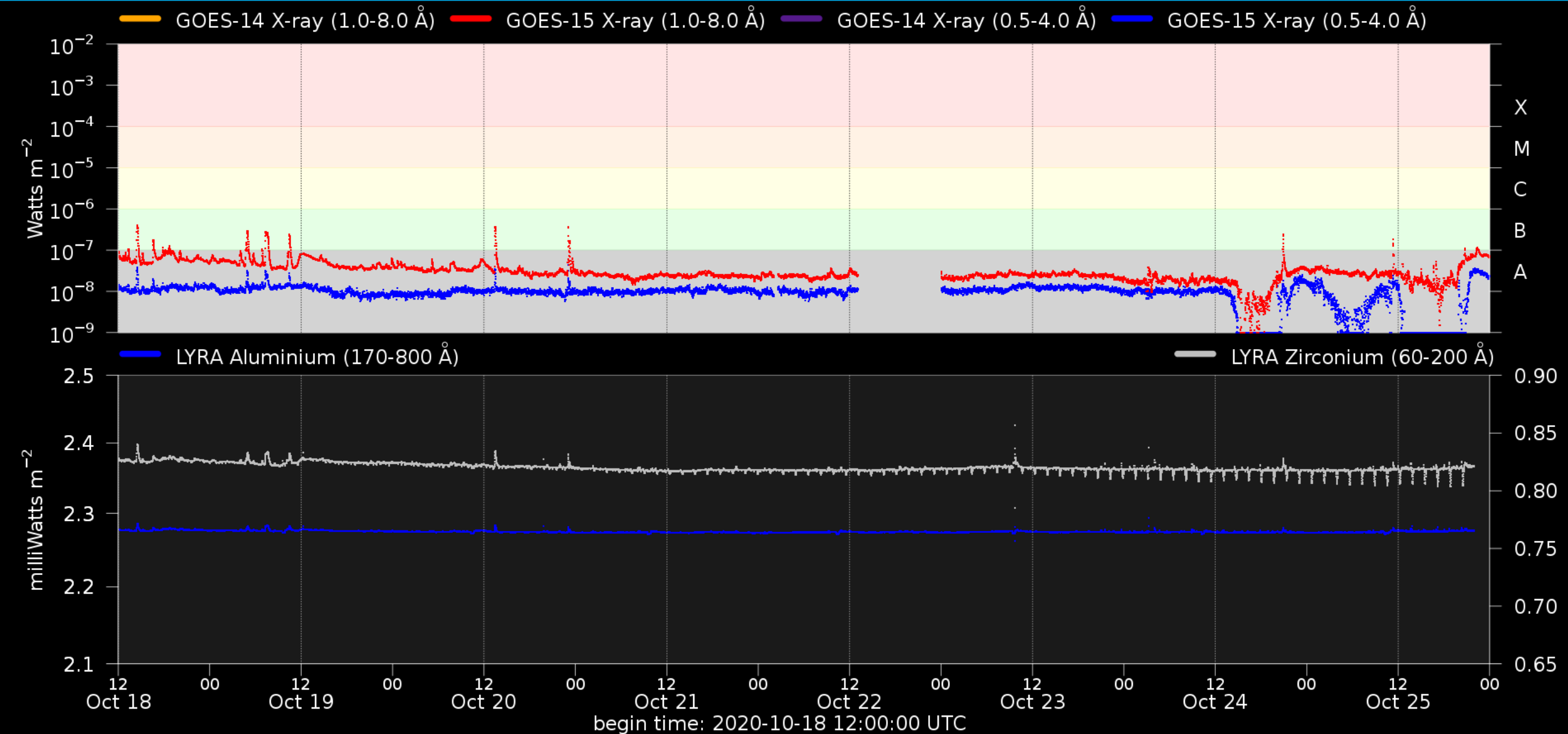


SDO/AIA 304 2020-10-23 08:57:54 UT

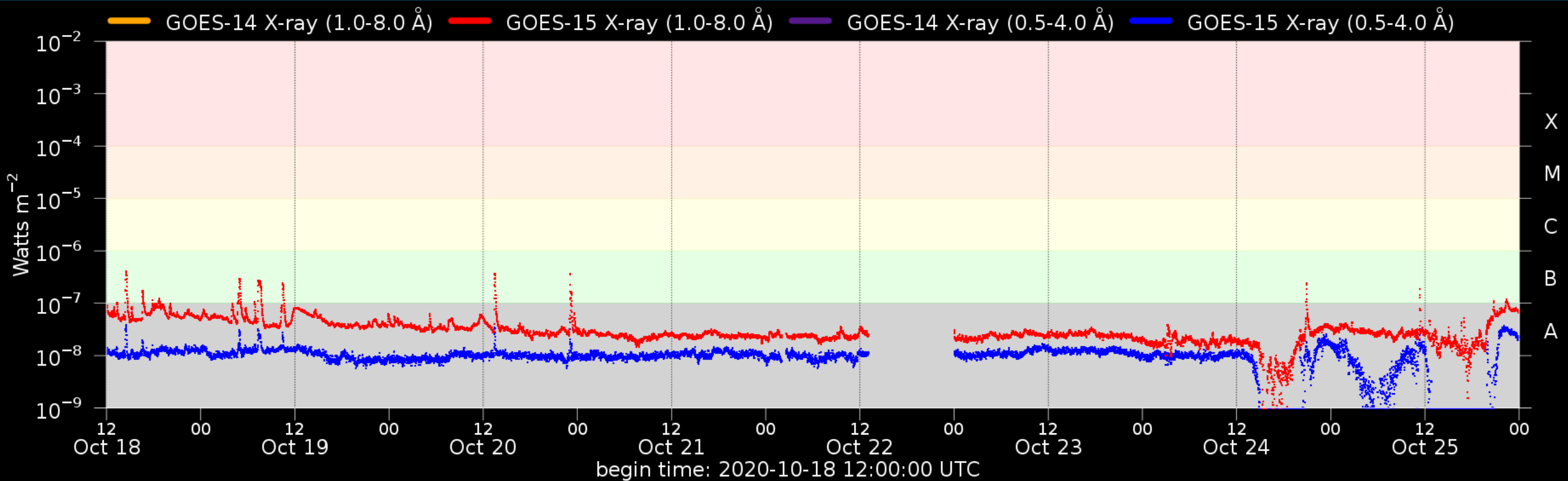
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity

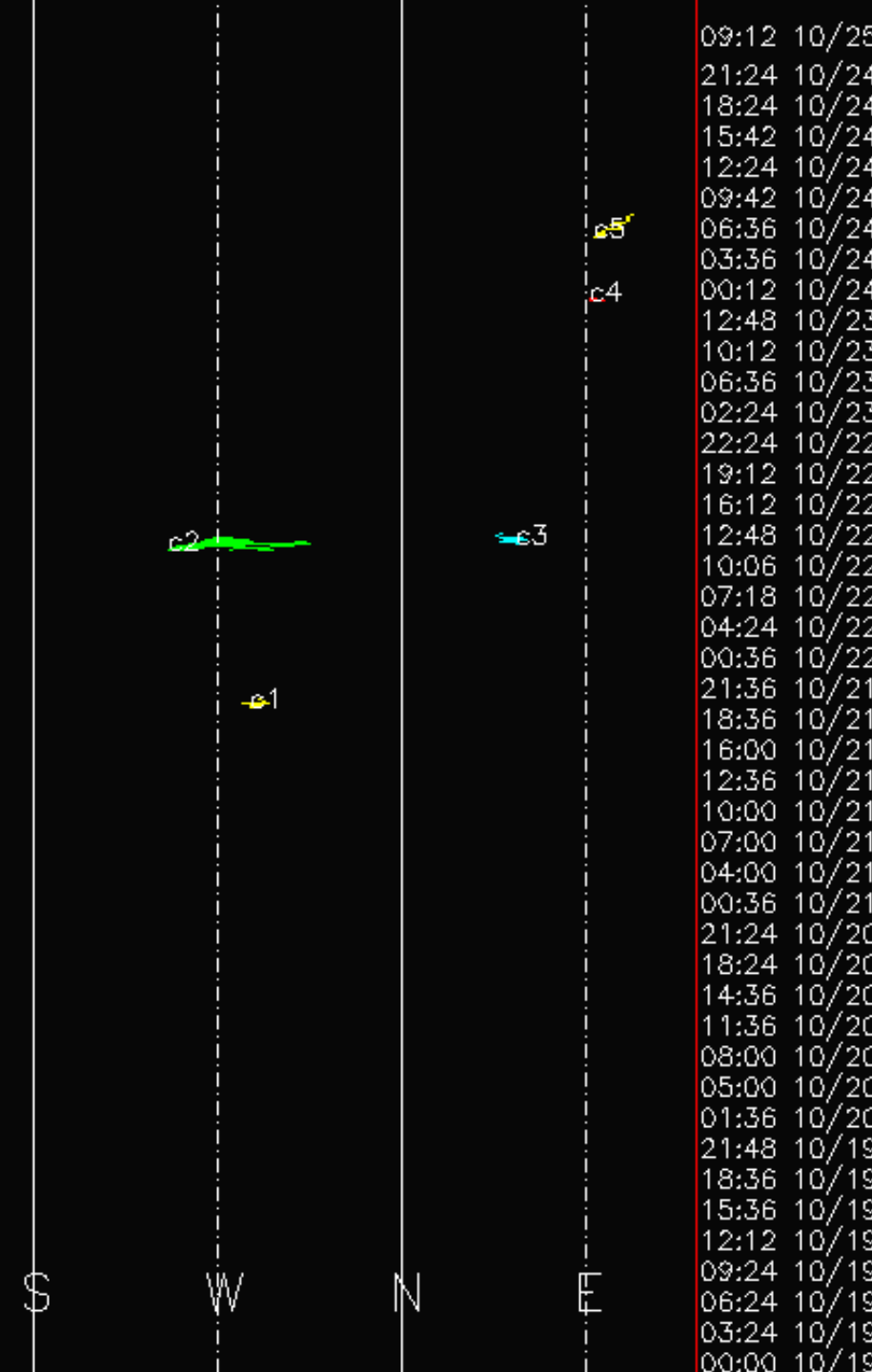


Probabilities (%) and occurrences (#) of B/C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2020-10-18	2020-10-19	2020-10-20	2020-10-21	2020-10-22	2020-10-23	2020-10-24	2020-10-25
Probability	-- 05 01 01	-- 10 04 01	-- 05 01 01	-- 05 01 01	-- 01 01 01	-- 01 01 01	-- 05 01 01	-- 01 01 01
Observed	09 00 00 0 0	01 00 00 0 0	03 00 00 0 0	00 00 00 0 0	00 00 00 0 0	00 00 00 0 0	01 00 00 0 0	02 00 00 0 0

Coronal Mass Ejections

None
Earth
directed

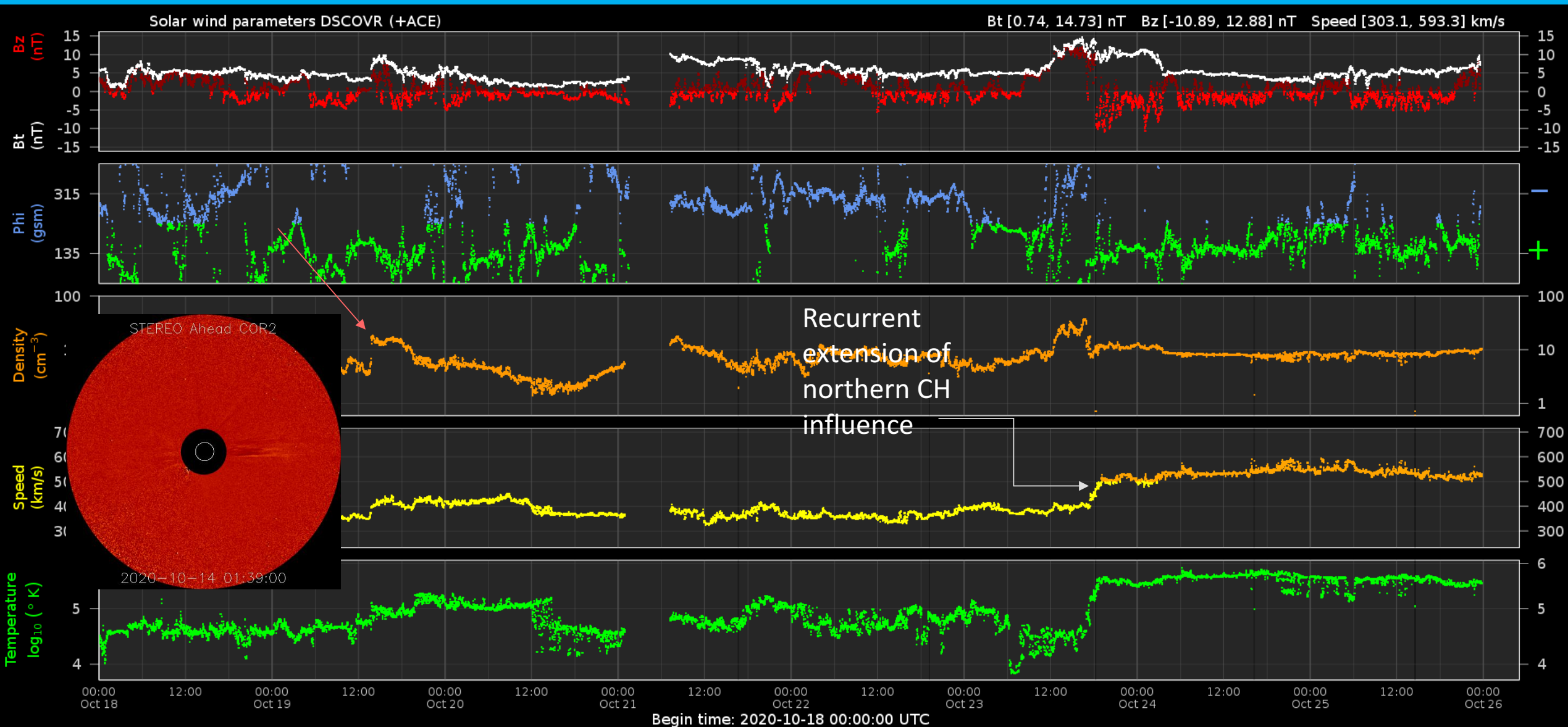


Solar Wind and Geomagnetic Activity

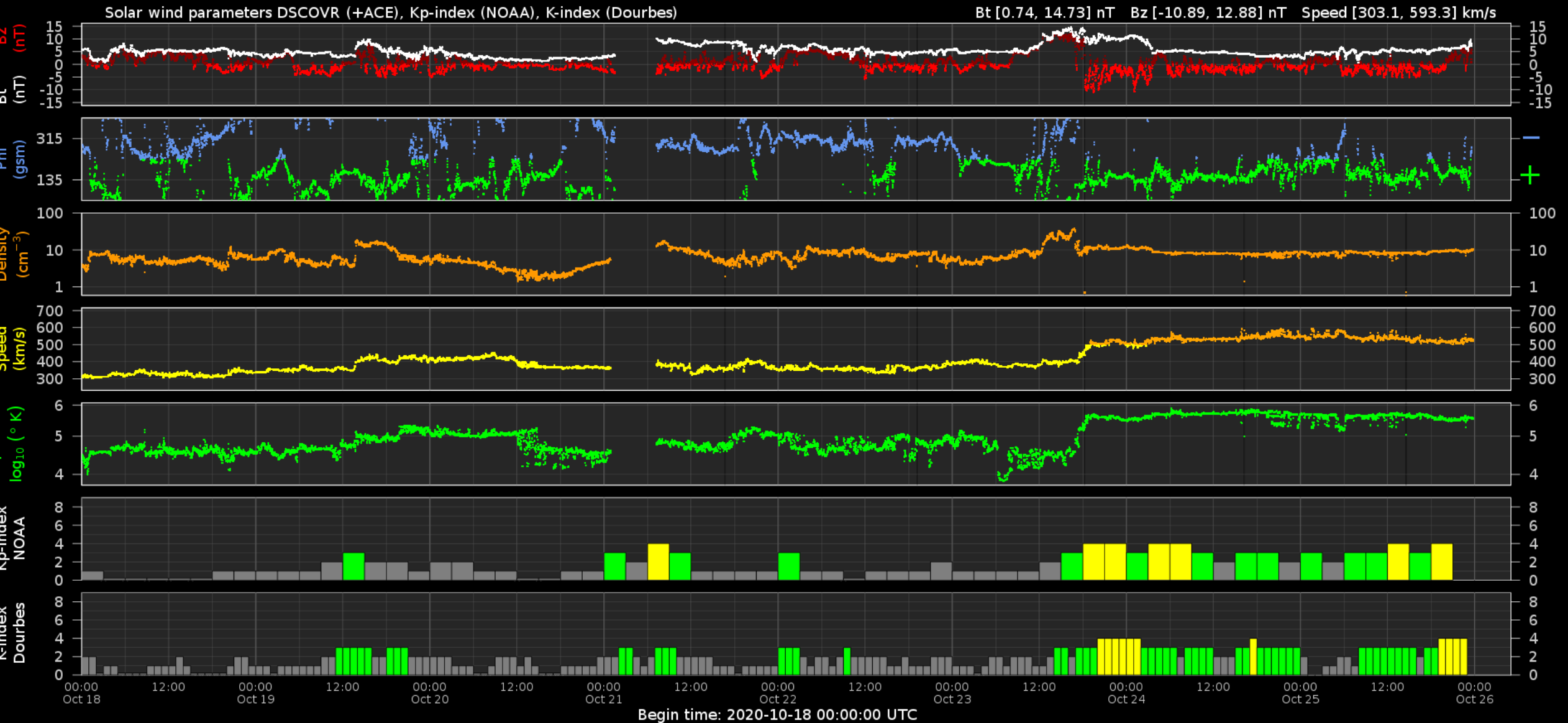


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Solar wind parameters (DSCOVR data)



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



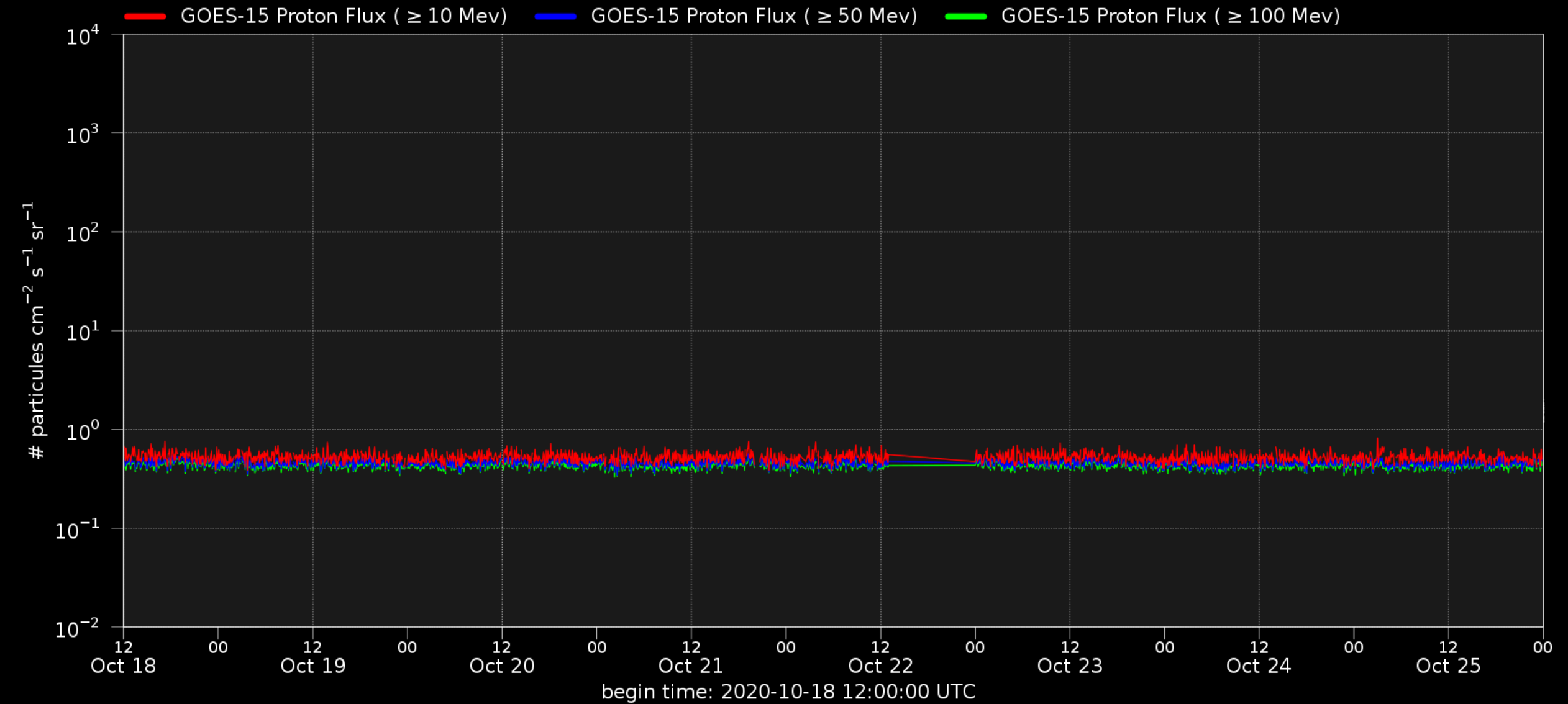
Solar Energetic Particles



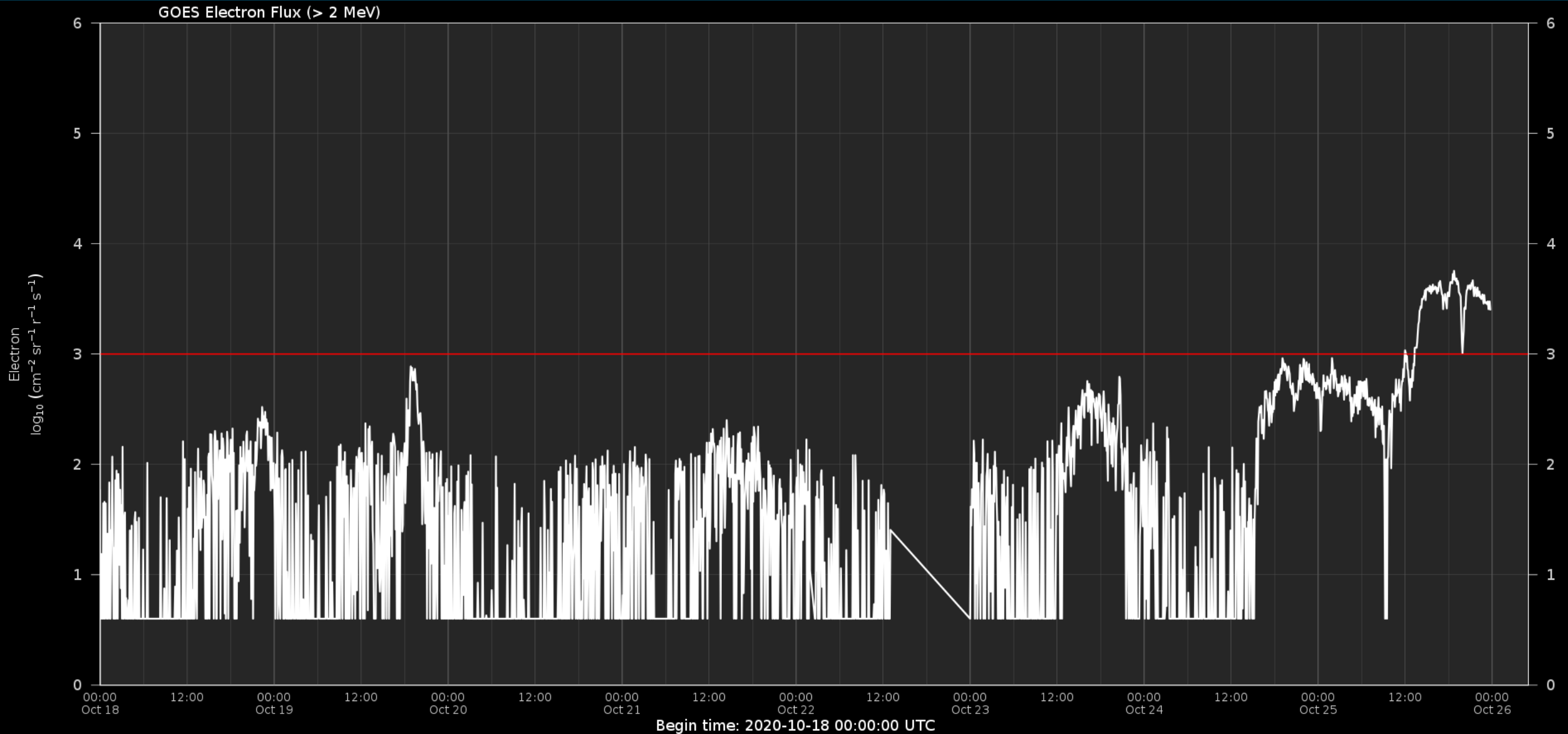
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Solar proton flux



Solar electron flux



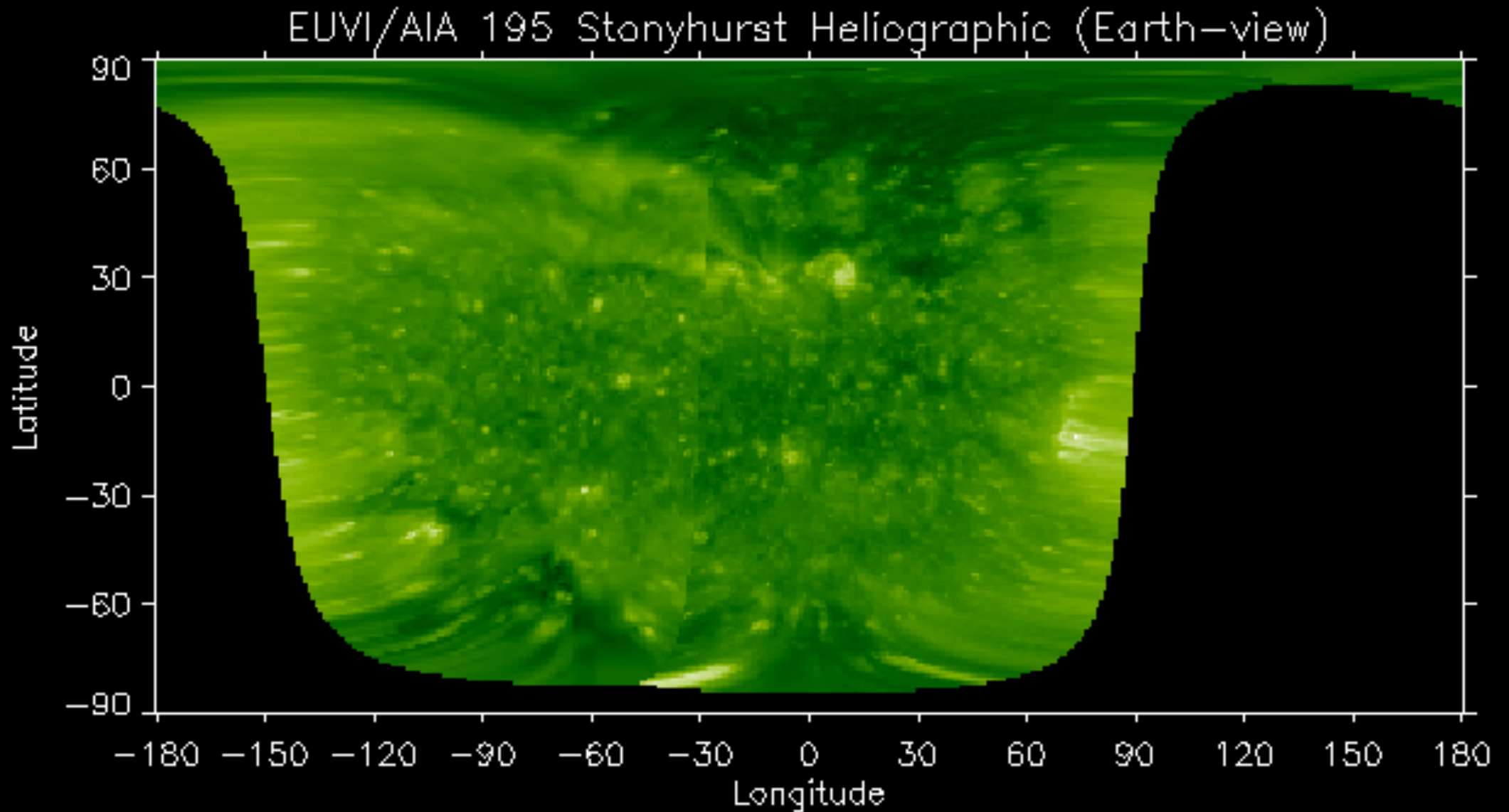
Outlook



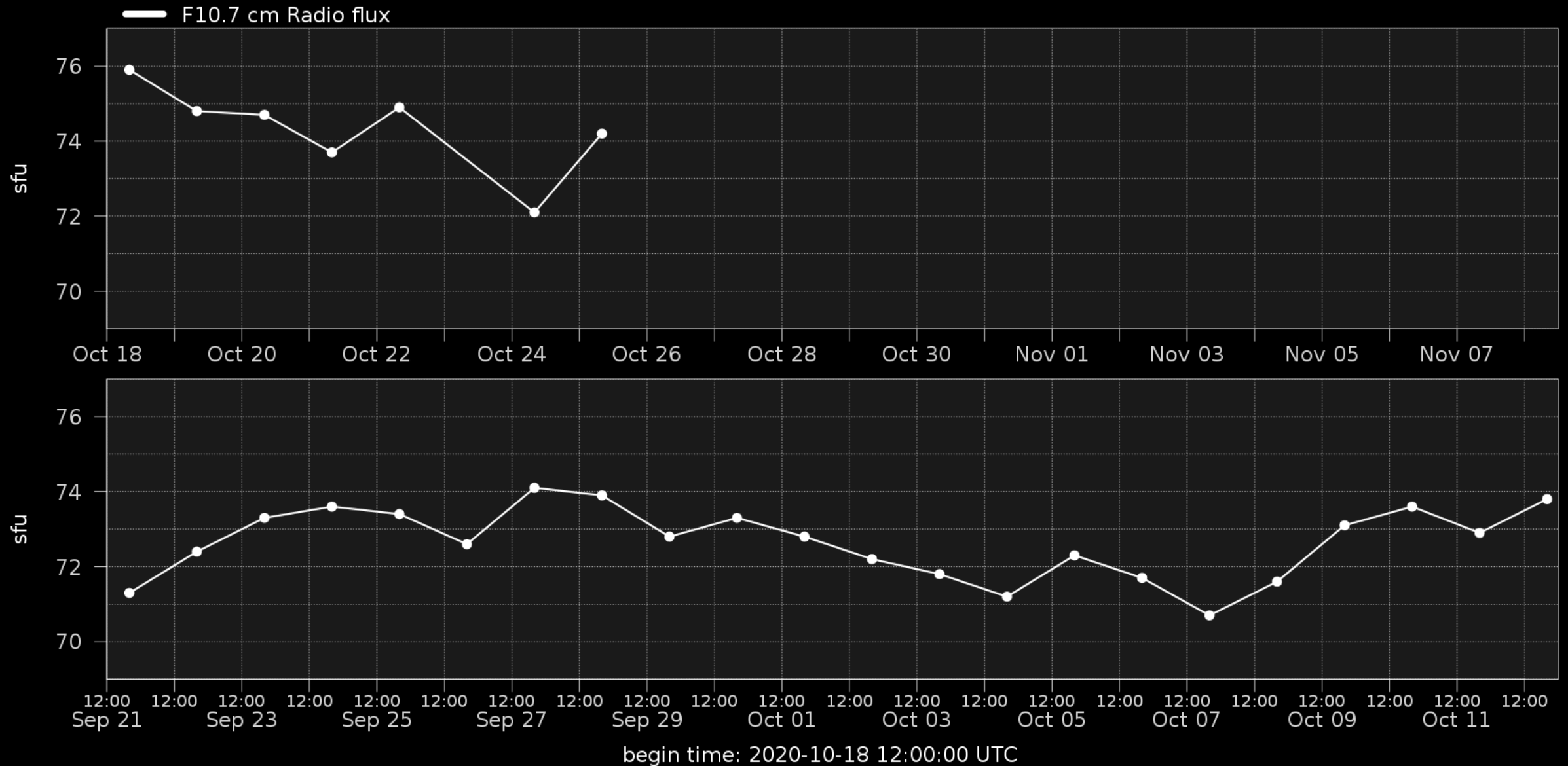
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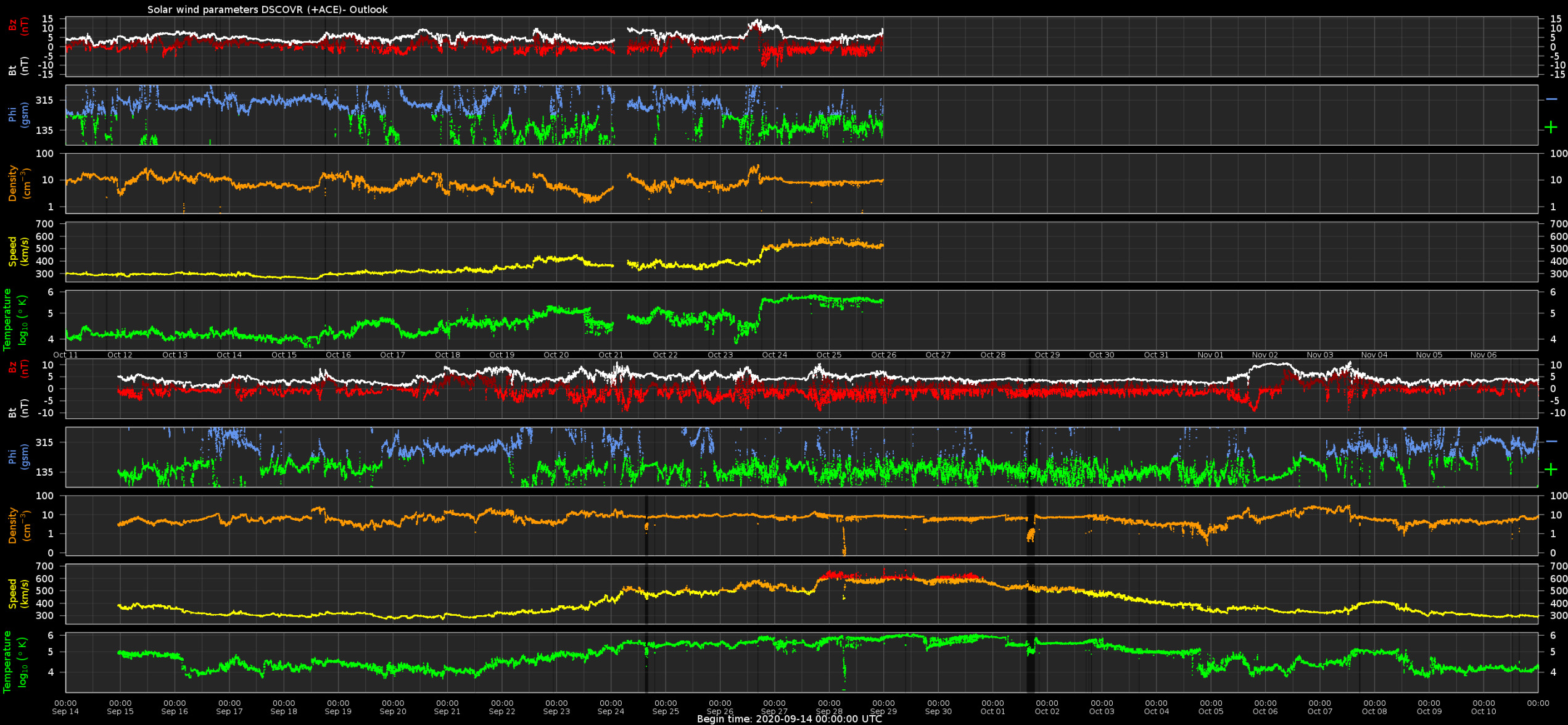
Outlook: Solar activity



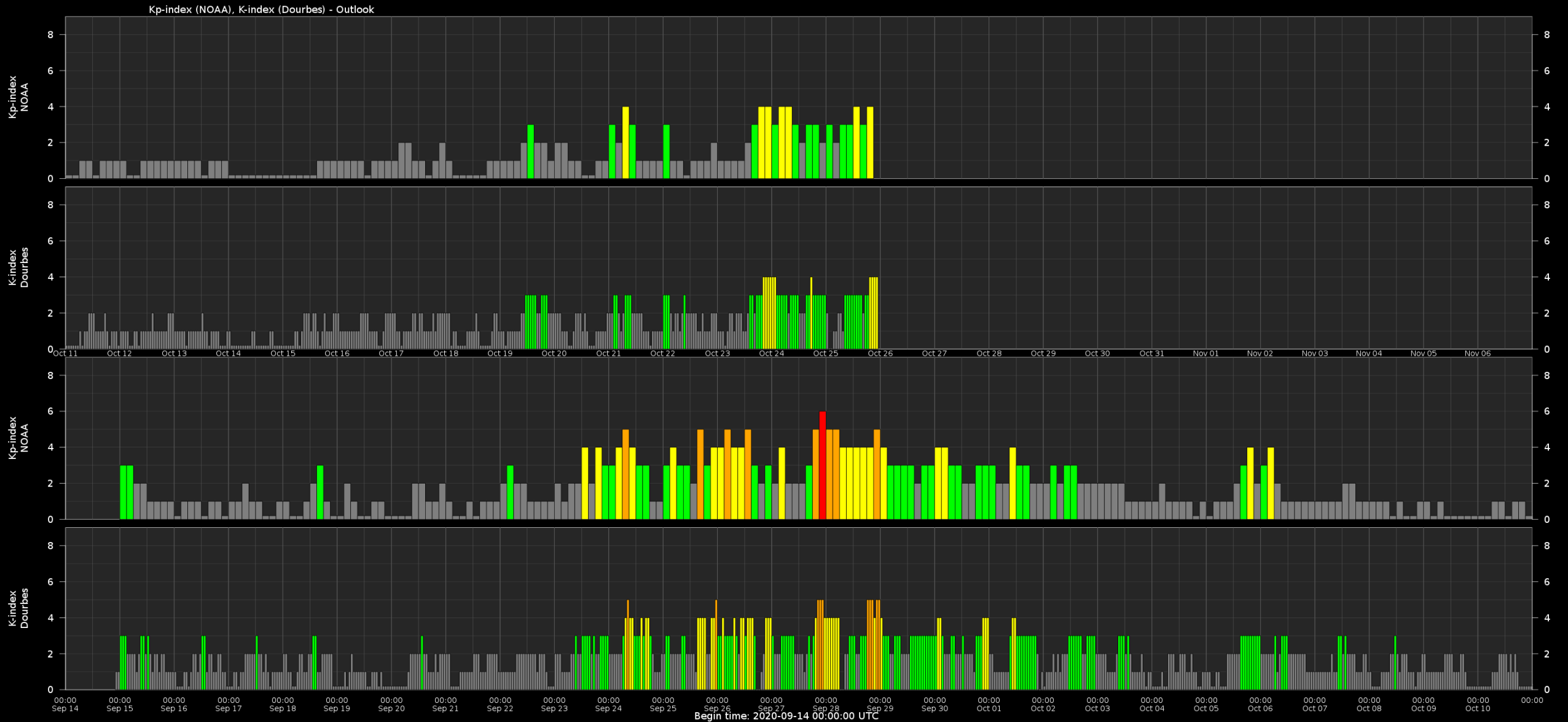
Outlook: F10 flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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