

SIDC Space Weather Briefing

25 October 2020 - 01 November 2020

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& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
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Summary Report

Solar activity from 2020-10-25 to 2020-11-01

Active regions	NOAA AR 2778, 2779
Flares	# B-class flare: 82 # C-class flare: 18 # M-class flare: 0 # X-class flare: 0
Filament eruptions	26 October 22:00 UT
Coronal Holes	One equatorial and one polar (noth), both positive polarity

Proton flux	Bellow threshold
Electron flux	Above threshold most of the week

Solar wind and geomagnetic conditions from 2020-10-25T12:00:00 to 2020-11-01T12:00:00

ICME	One, on 1 November
SW Conditions	B : 0.52 - 9.75 nT // Bz: -7.71 nT to 8.33 nT // Speed: 366.6 - 607.7km/s
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: Off

Solar Activity

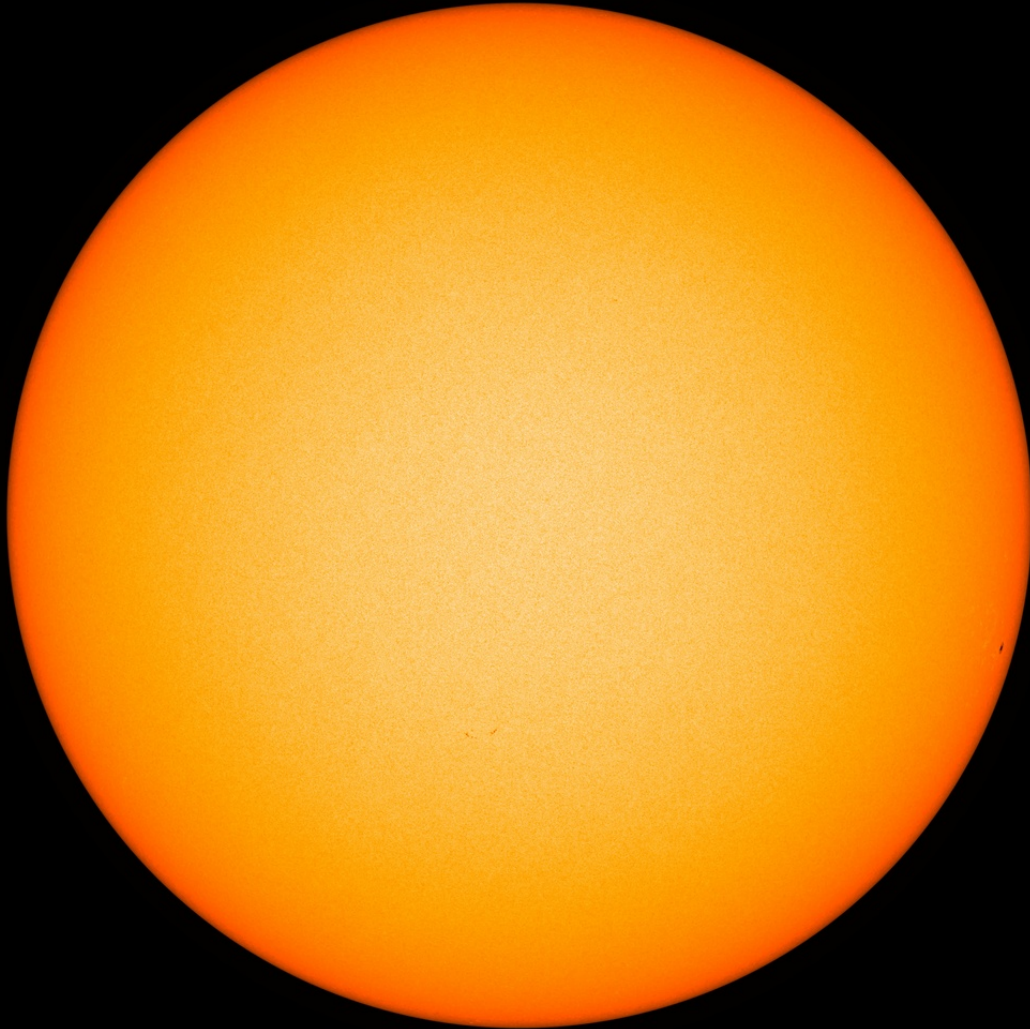


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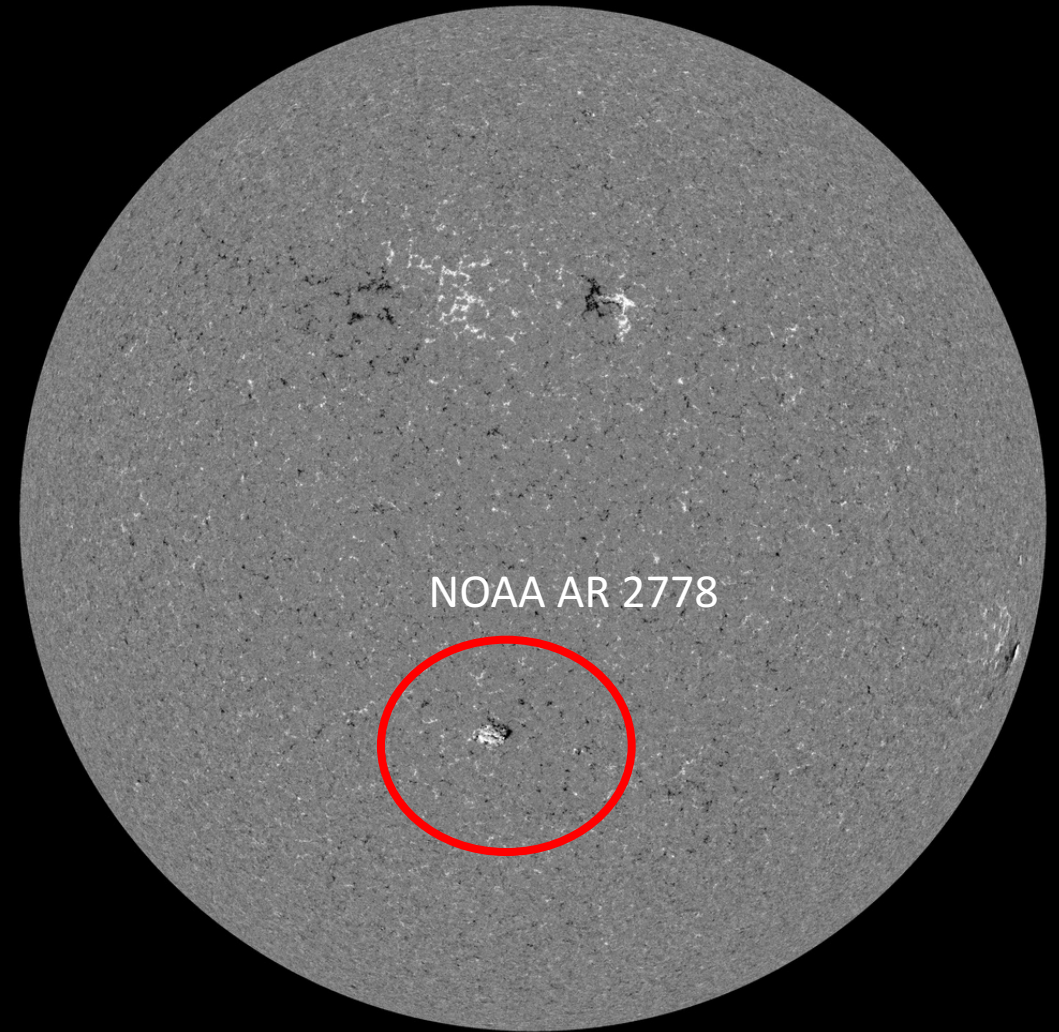
Solar active regions - Sunday

SDO/HMI White Light 2020-10-25



SDO/HMI Quick-Look Continuum: 20201025_114500

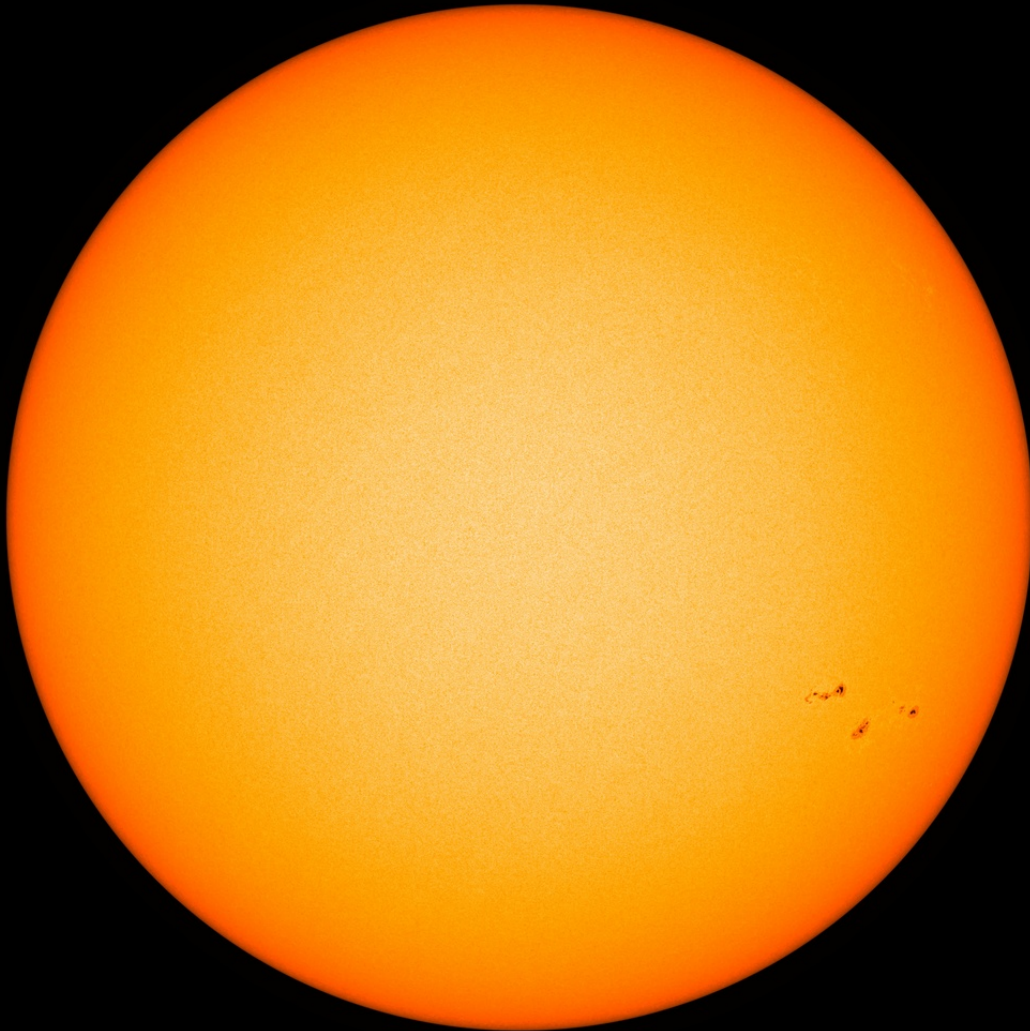
SDO/HMI Magnetogram 2020-10-25



SDO/HMI Quick-Look Magnetogram: 20201025_114500

Solar active regions - Thursday

SDO/HMI White Light 2020-10-29



SDO/HMI Quick-Look Continuum: 20201029_114500

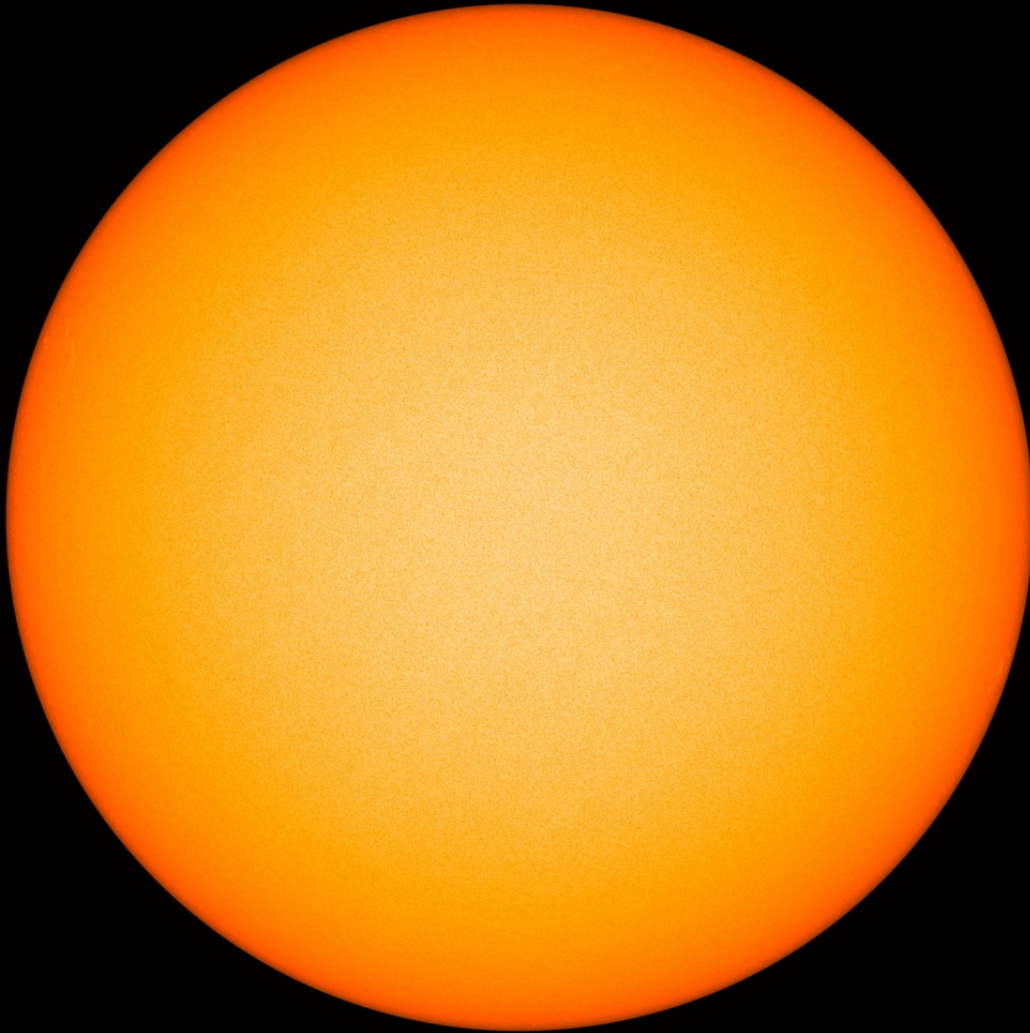
SDO/HMI Magnetogram 2020-10-29



SDO/HMI Quick-Look Magnetogram: 20201029_114500

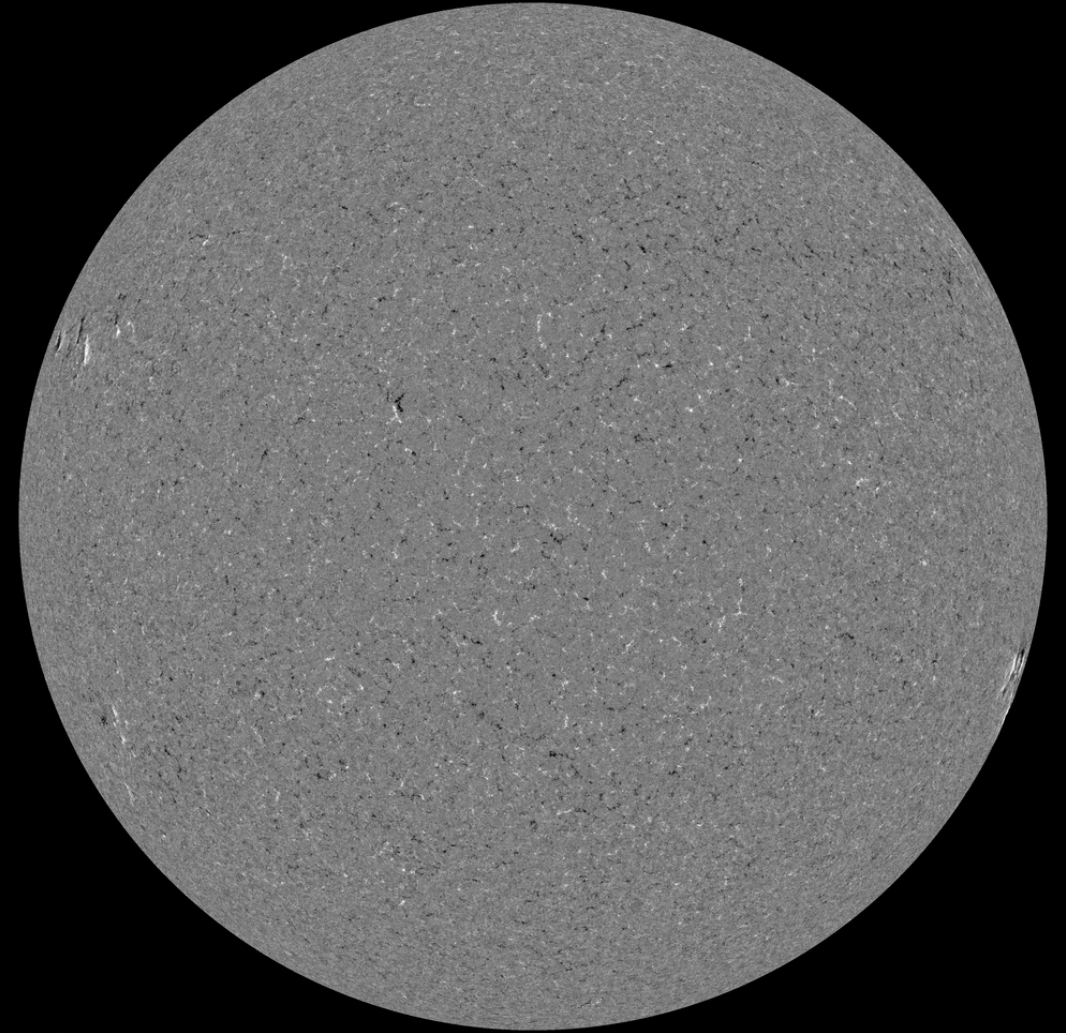
Solar active regions - Sunday

SDO/HMI White Light 2020-11-01



SDO/HMI Quick-Look Continuum: 20201101_114500

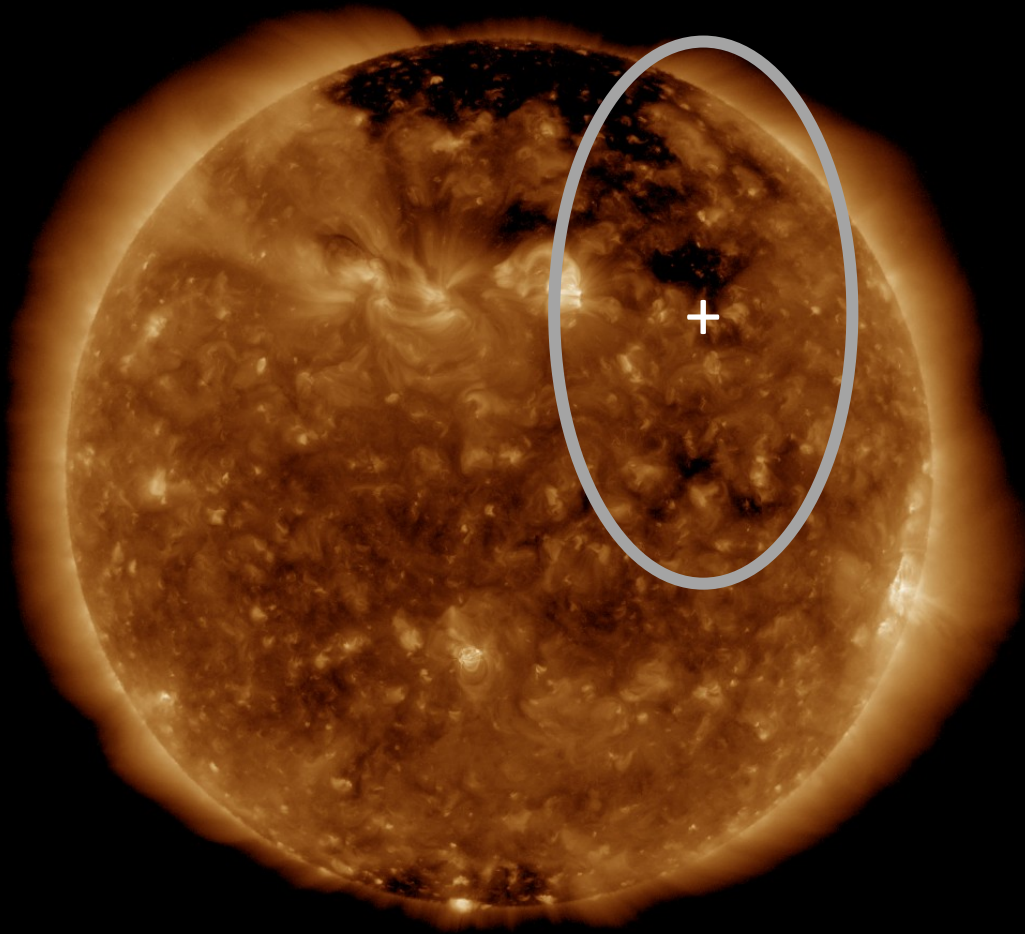
SDO/HMI Magnetogram 2020-11-01



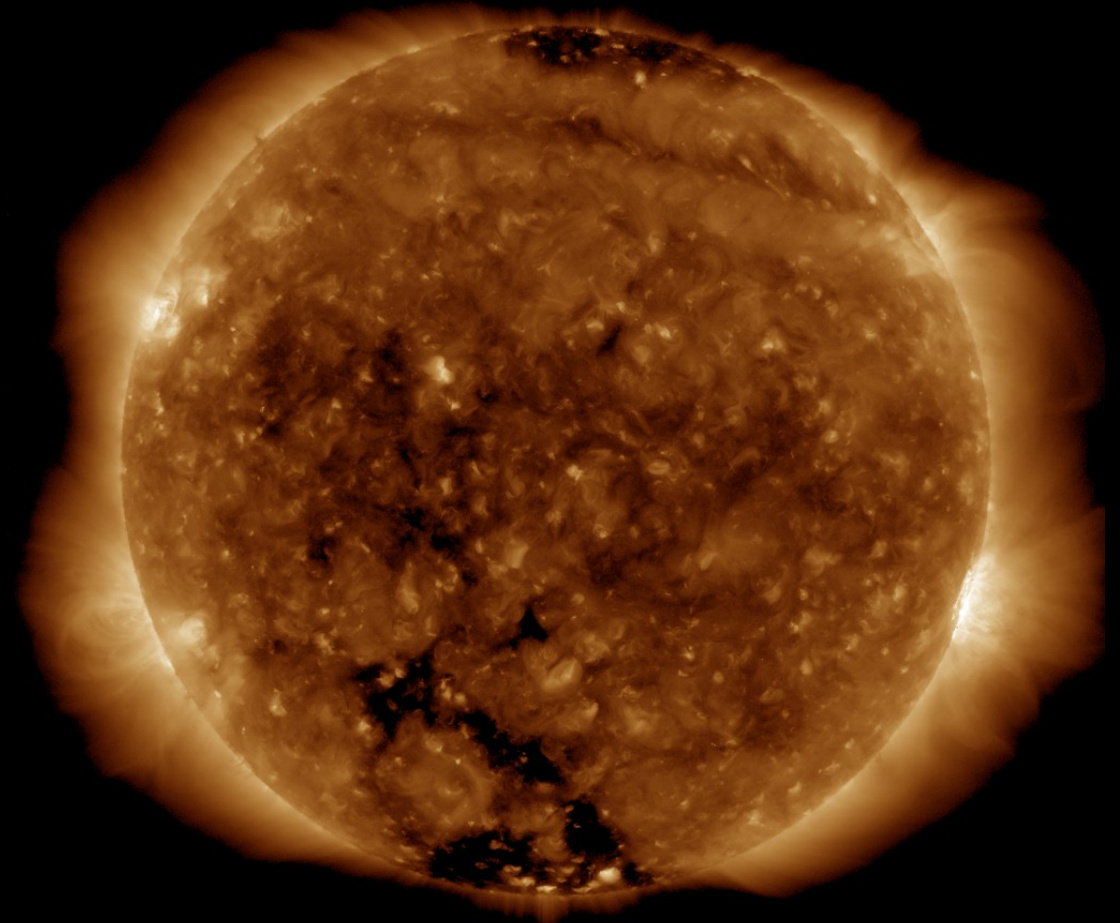
SDO/HMI Quick-Look Magnetogram: 20201101_114500

Coronal holes

SDO/AIA 19.3 nm 2020-10-25



SDO/AIA 19.3 nm 2020-11-01



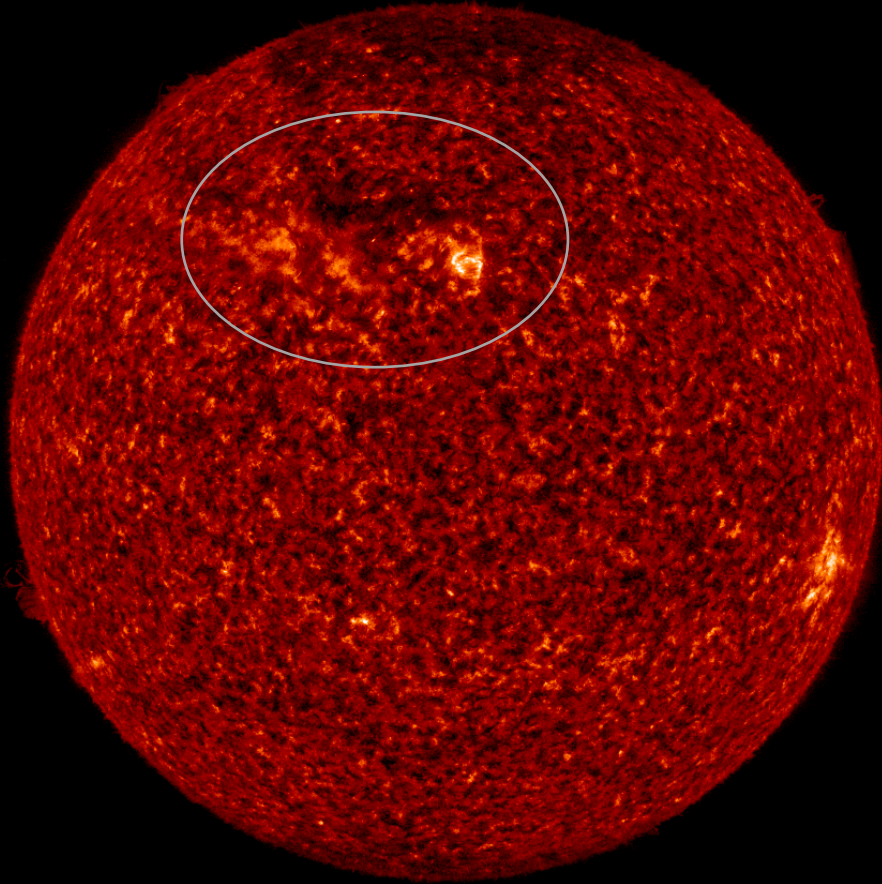
SDO/AIA 193 2020-10-25 12:18:05 UT

SDO/AIA 193 2020-11-01 12:18:05 UT

Filaments

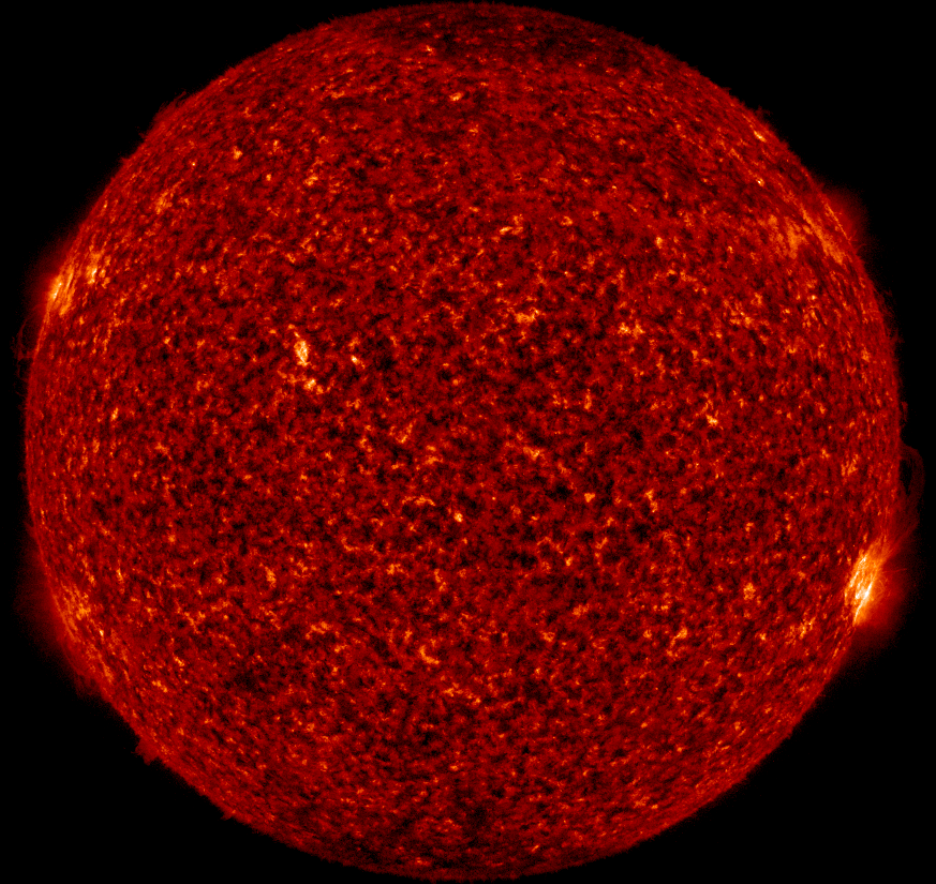
SDO/AIA 30.4 nm 2020-10-25

SDO/AIA AIA 304Å 2020-10-25T00:00:06.58



SDO/AIA 30.4 nm 2020-11-01

SDO/AIA AIA 304Å 2020-11-01T00:00:06.58



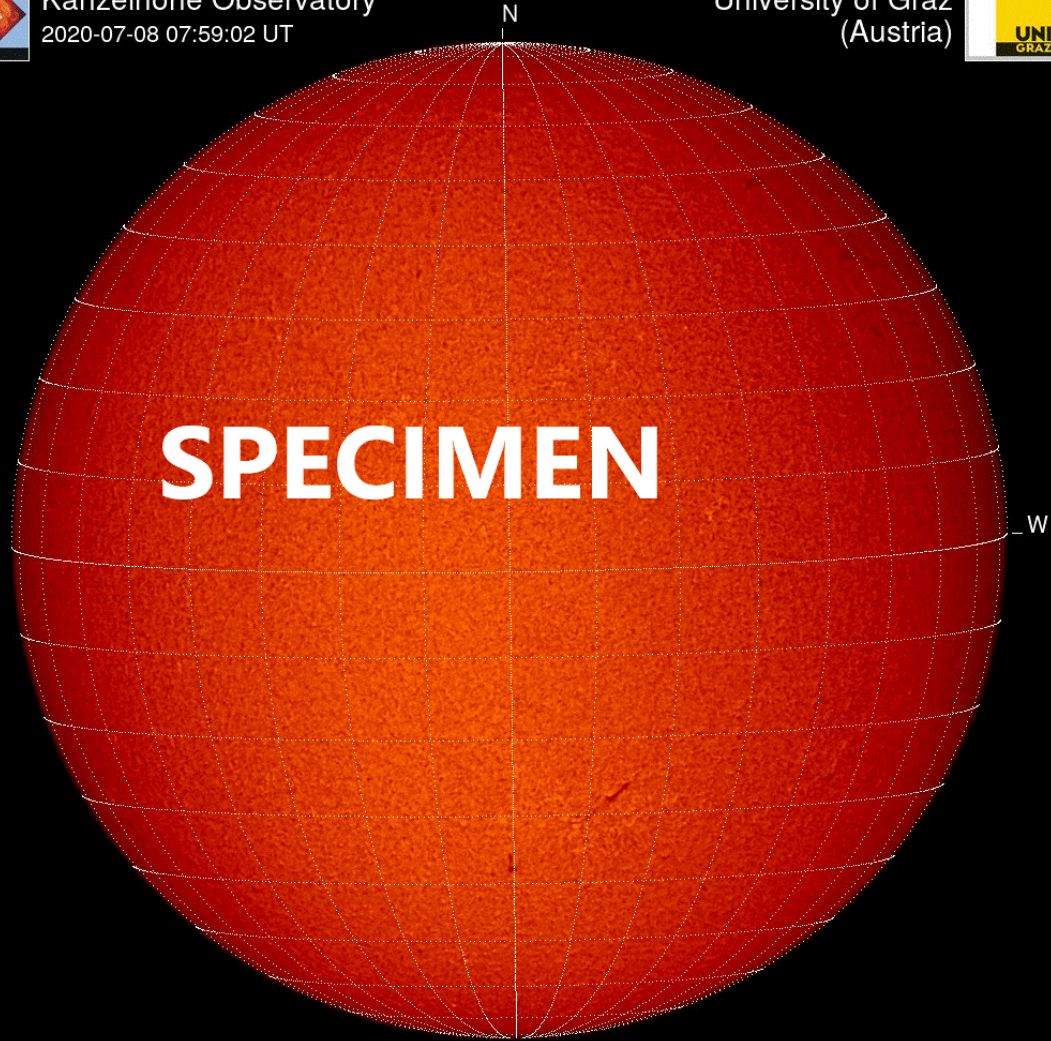
Filaments & Filament eruptions

H-alpha 2020-10-25



Kanzelhöhe Observatory
2020-07-08 07:59:02 UT

University of Graz
(Austria)

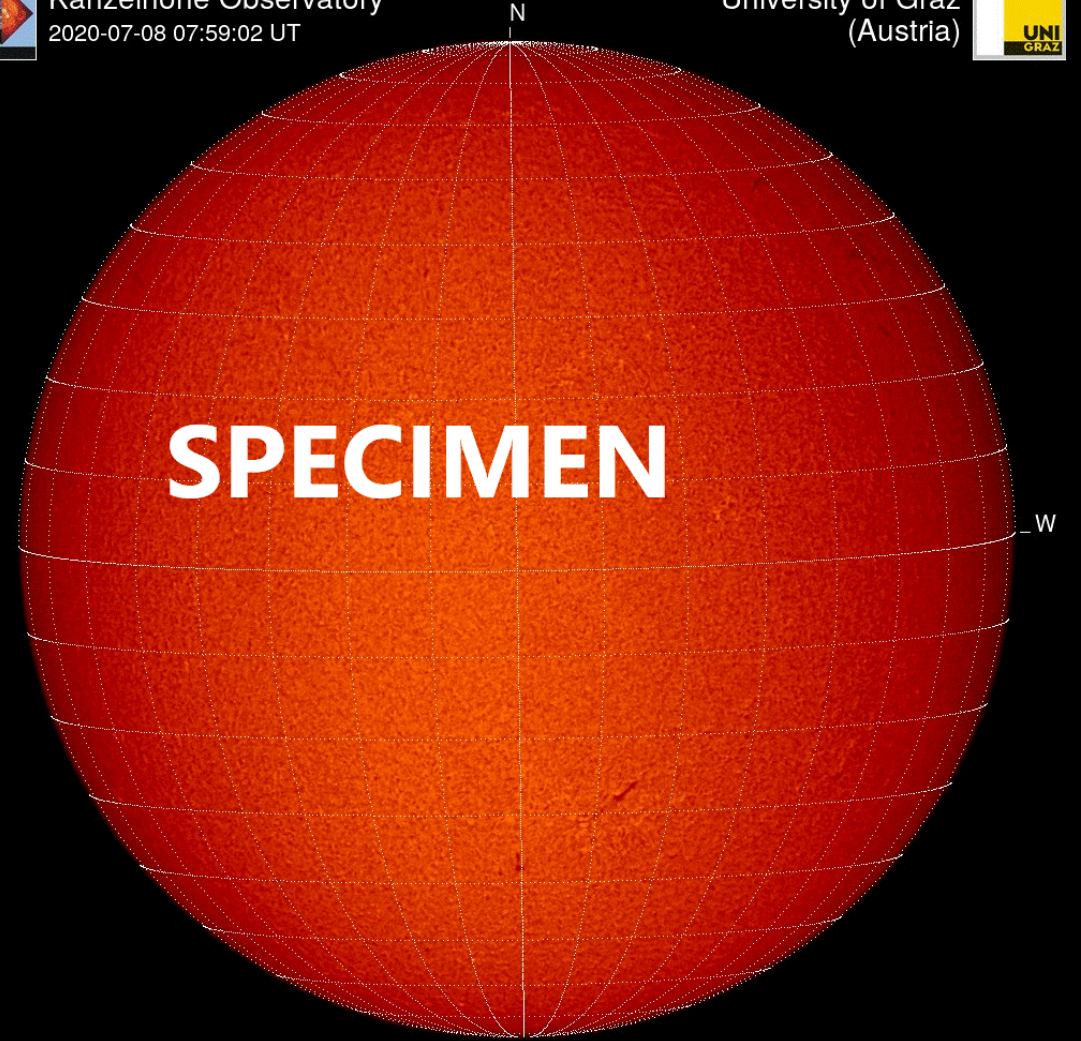


H-alpha 2020-11-01

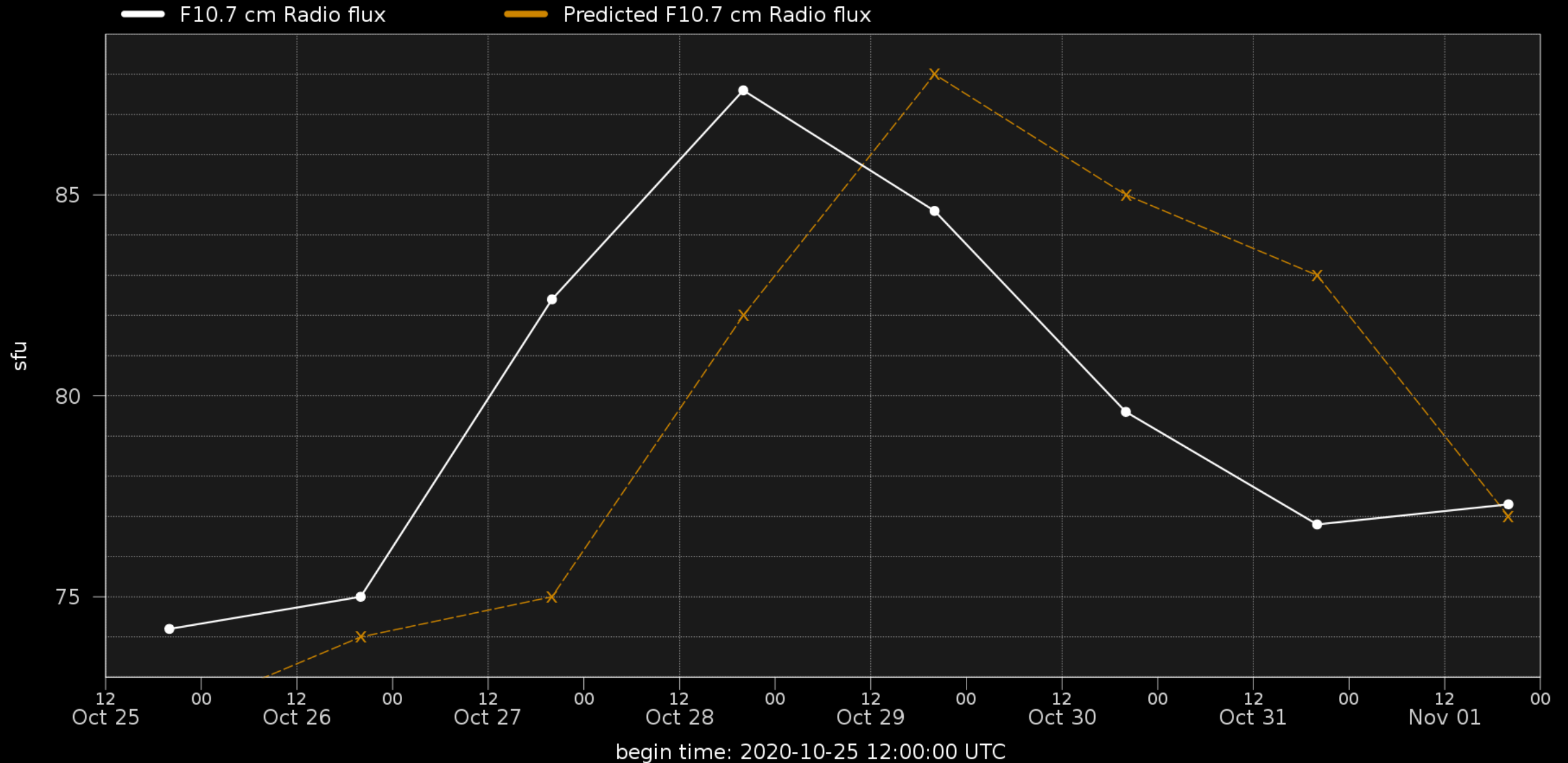


Kanzelhöhe Observatory
2020-07-08 07:59:02 UT

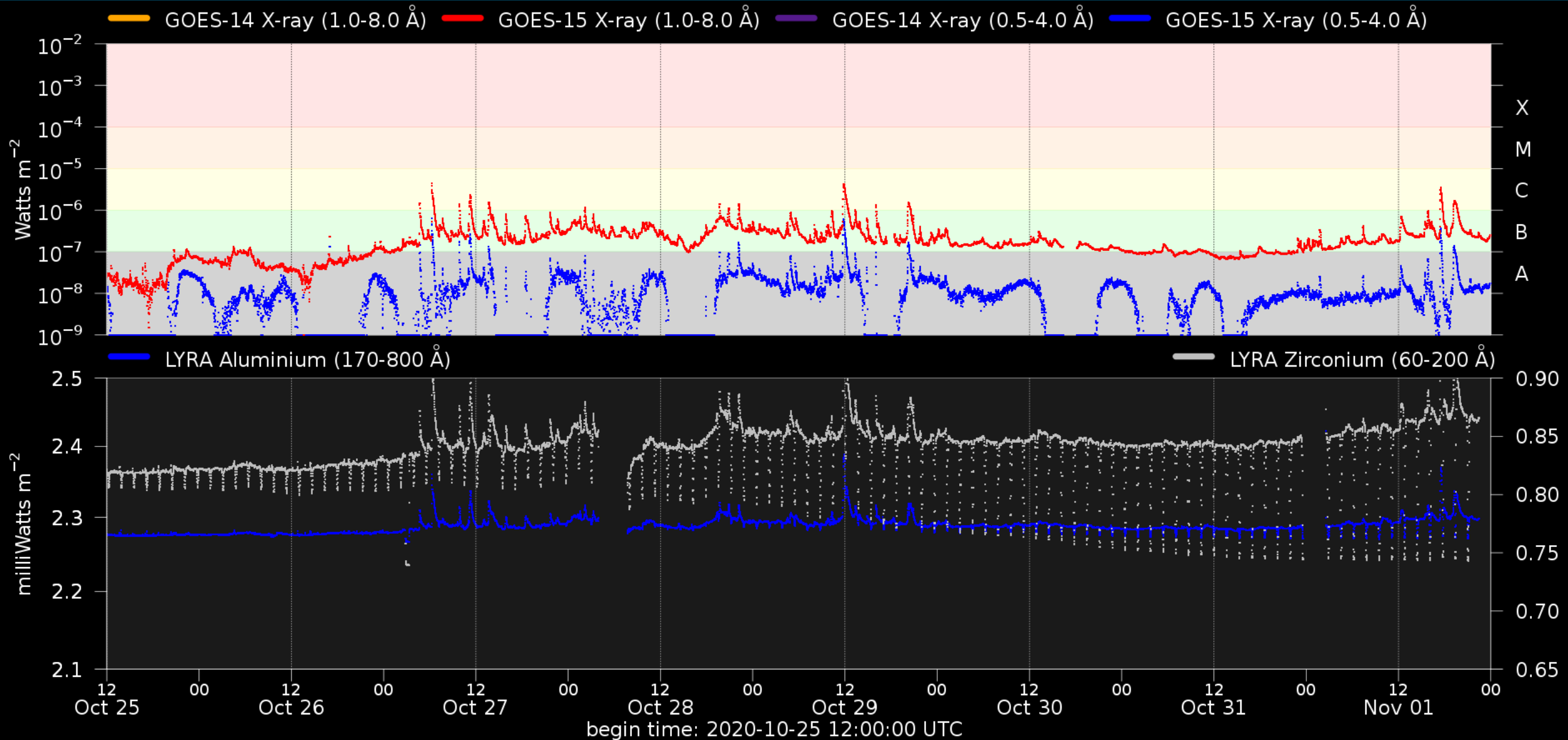
University of Graz
(Austria)



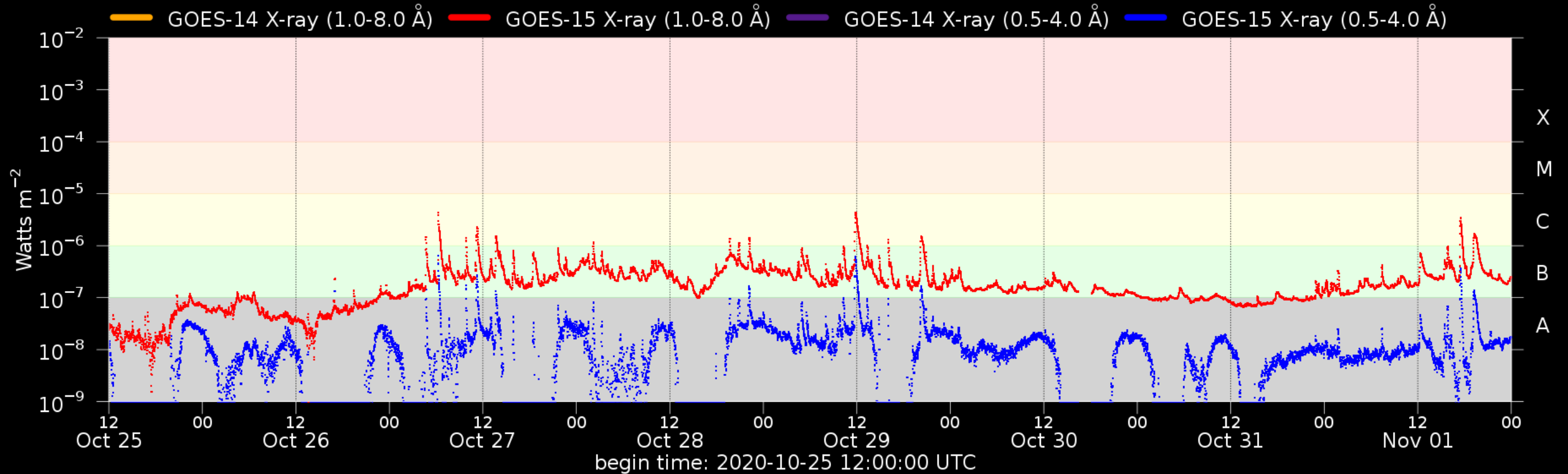
Solar F10.7cm radio flux



Solar X-Ray and UV flux



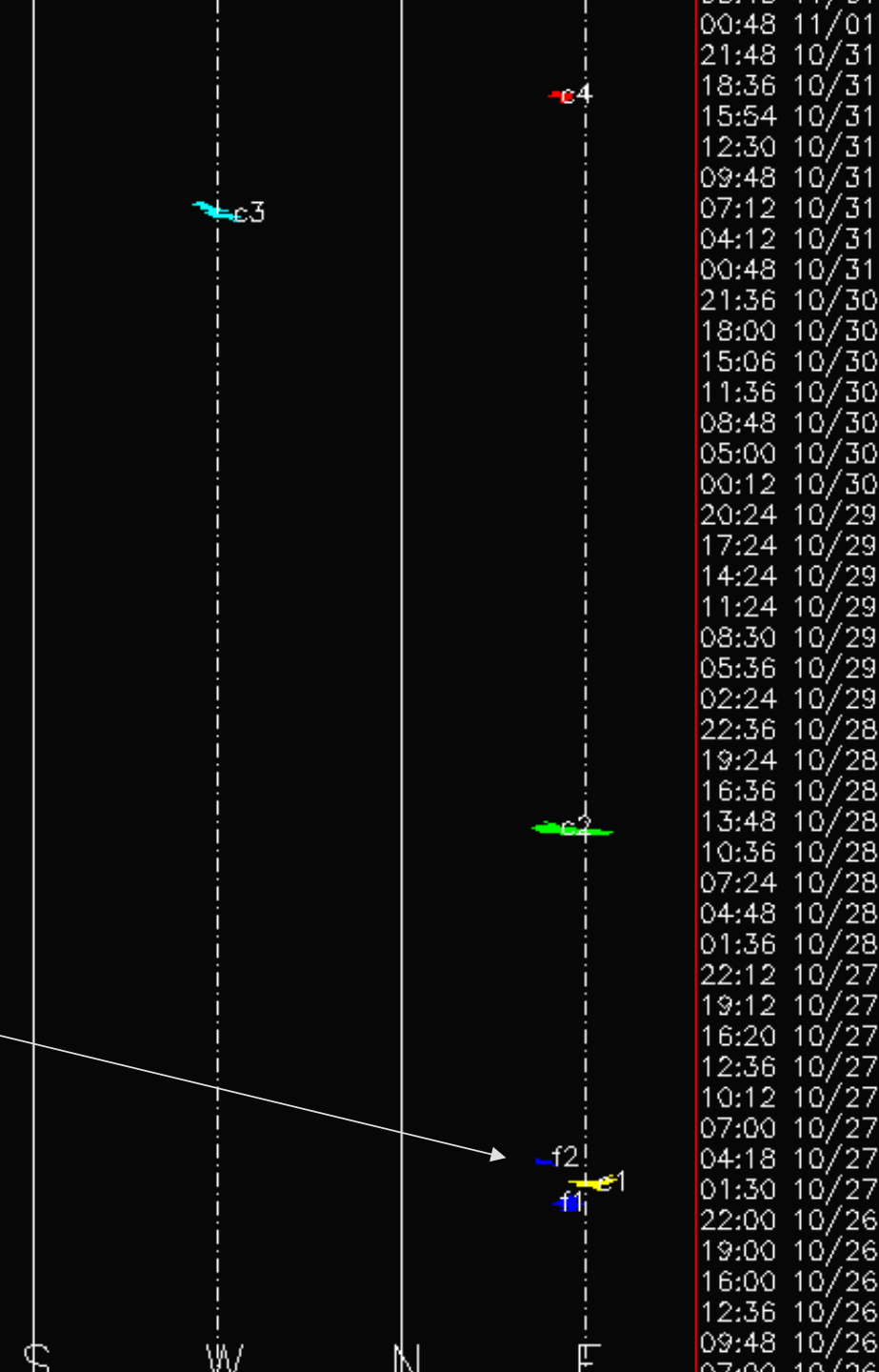
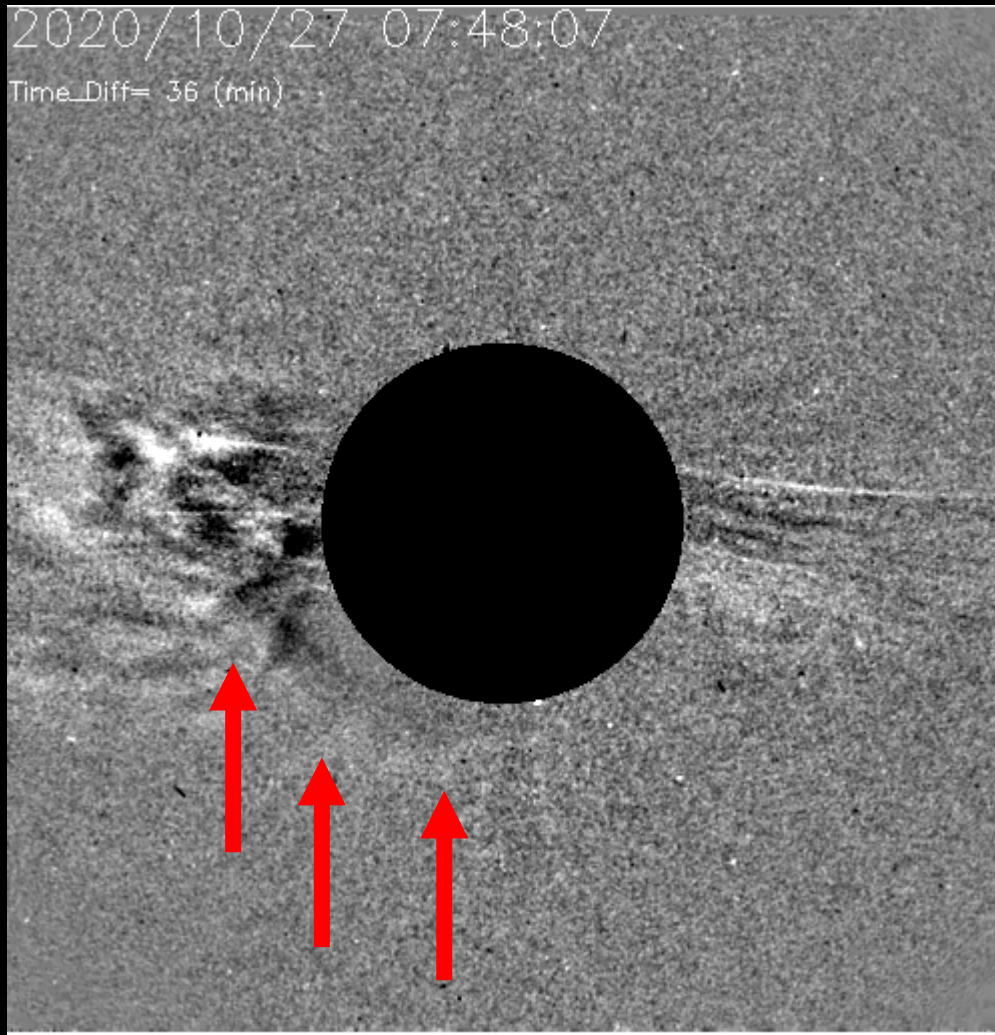
Flaring activity



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

Issue date	2020-10-25	2020-10-26	2020-10-27	2020-10-28	2020-10-29	2020-10-30	2020-10-31	2020-11-01
Probability	-- 01 01 01	-- 15 03 01	-- 55 10 01	-- 60 15 05	-- 85 55 15	-- 60 25 01	-- 45 15 01	-- 35 10 01
Observed	05 00 00 0 0	12 04 00 0 0	19 03 00 0 0	18 03 00 0 0	15 06 00 0 0	02 00 00 0 0	06 00 00 0 0	05 02 00 0 0

Coronal Mass Ejections



Solar Wind and

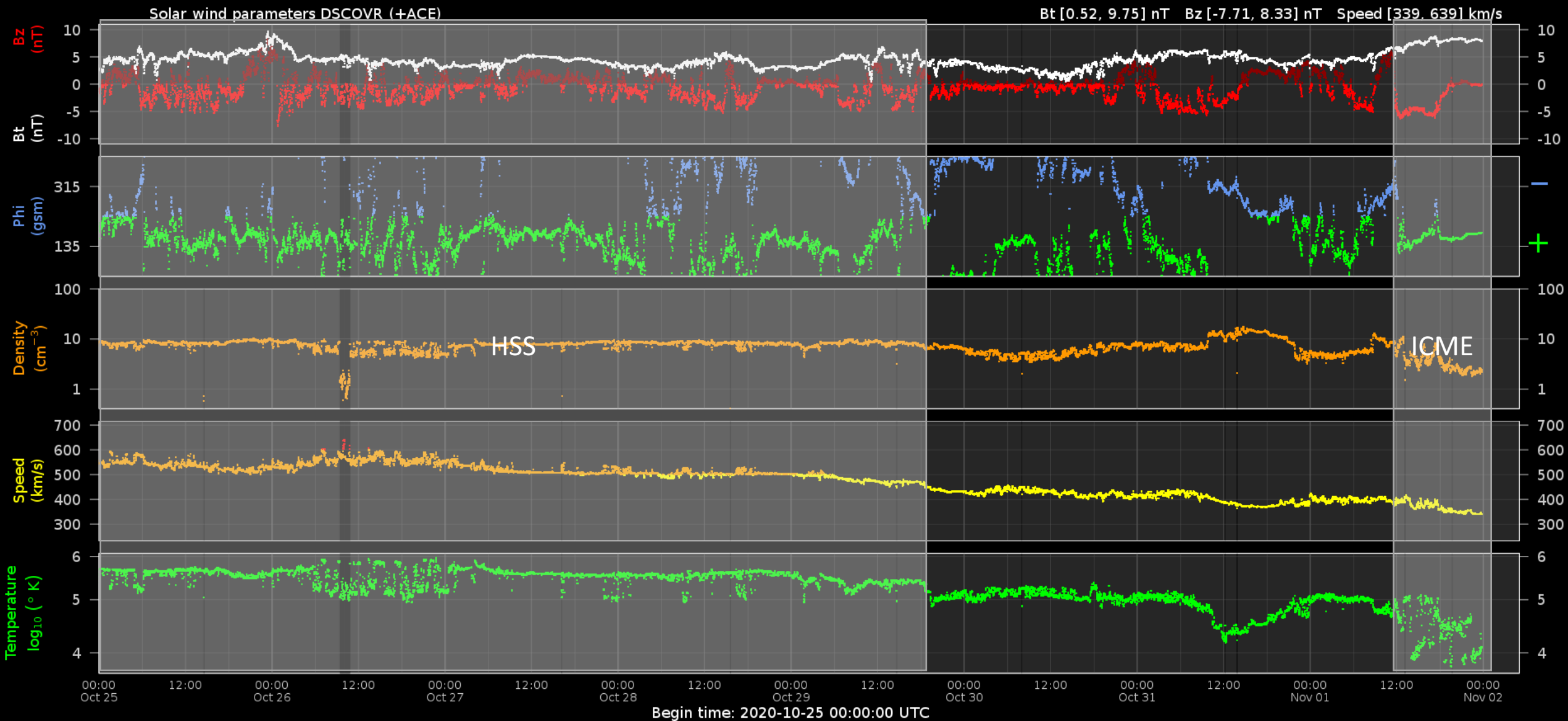
Geomagnetic Activity



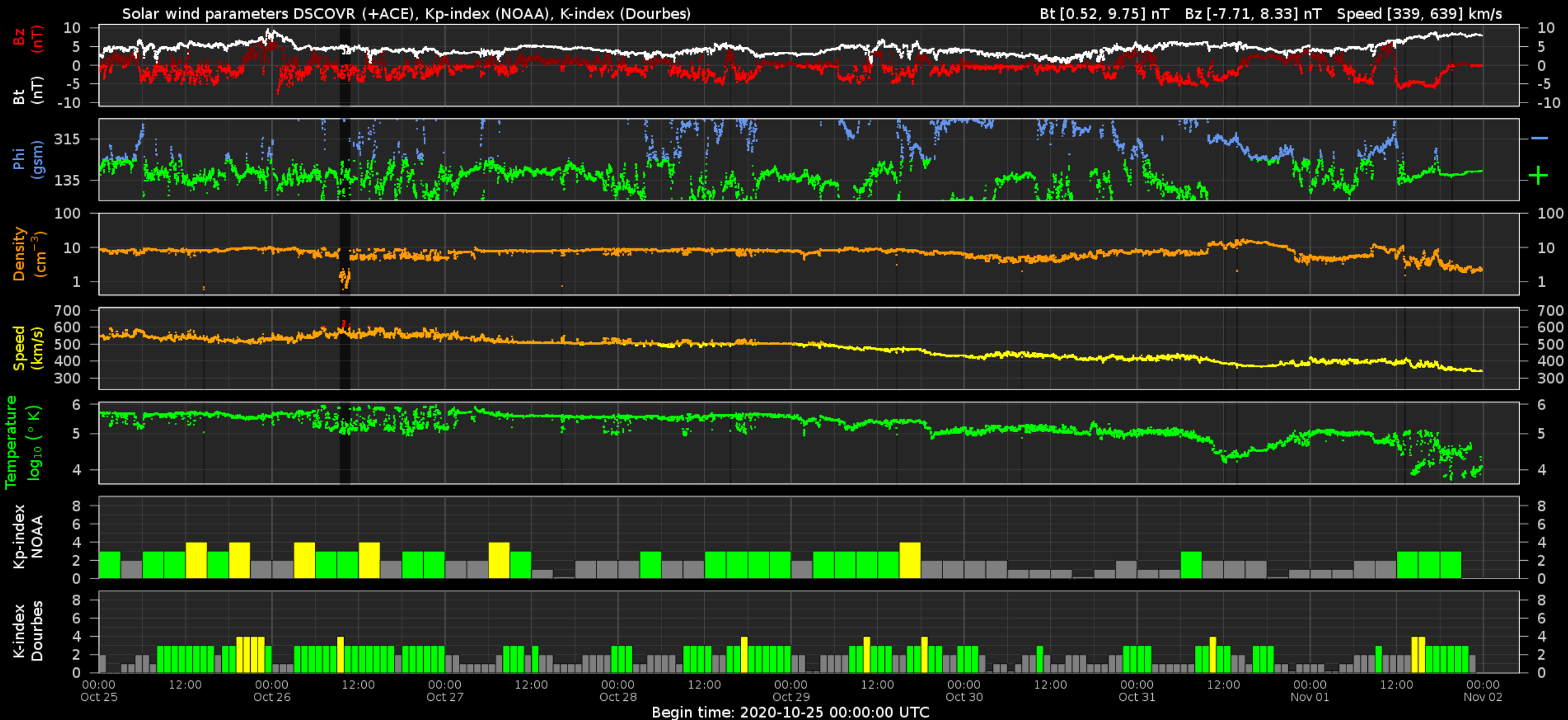
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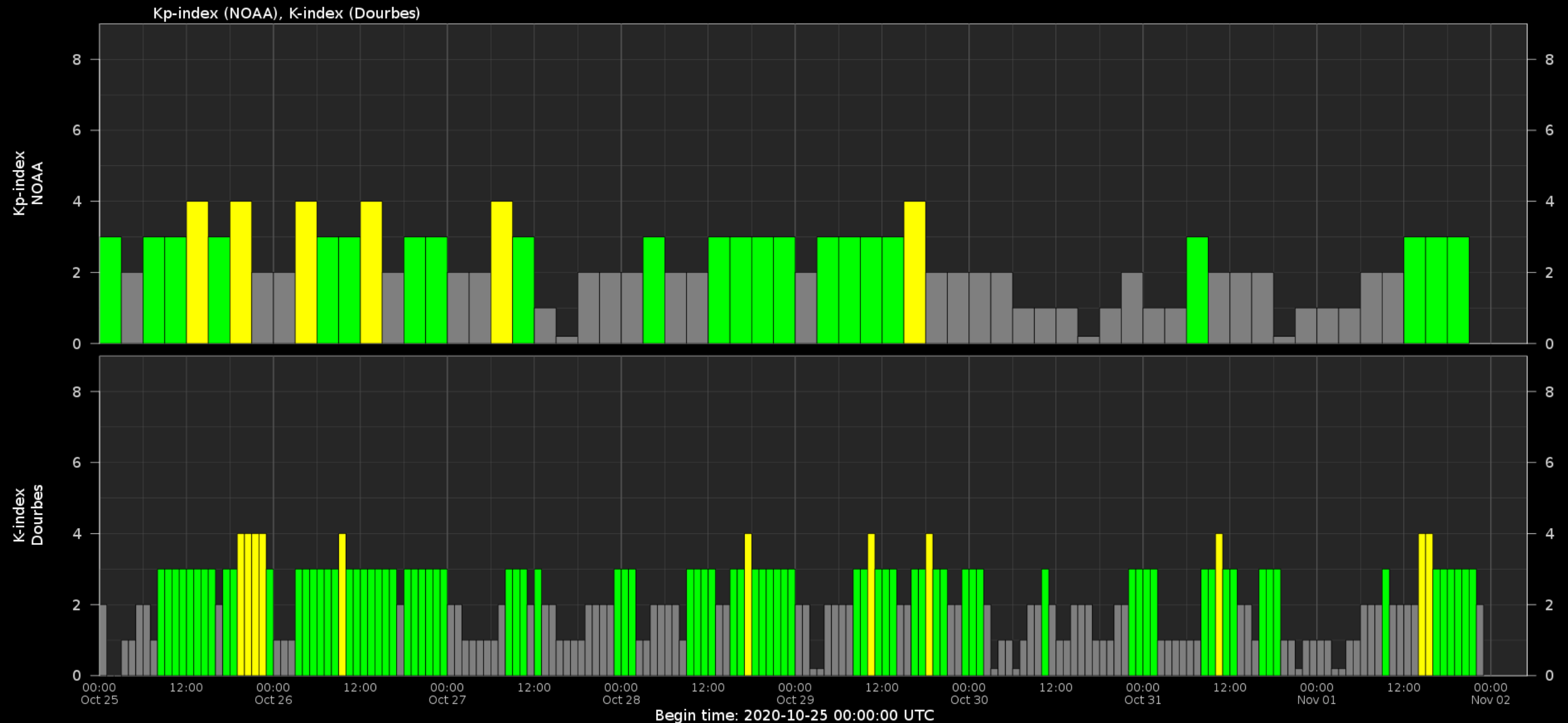
Solar wind parameters (DSCOVR data)



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



Geomagnetic activity (K-indexes)



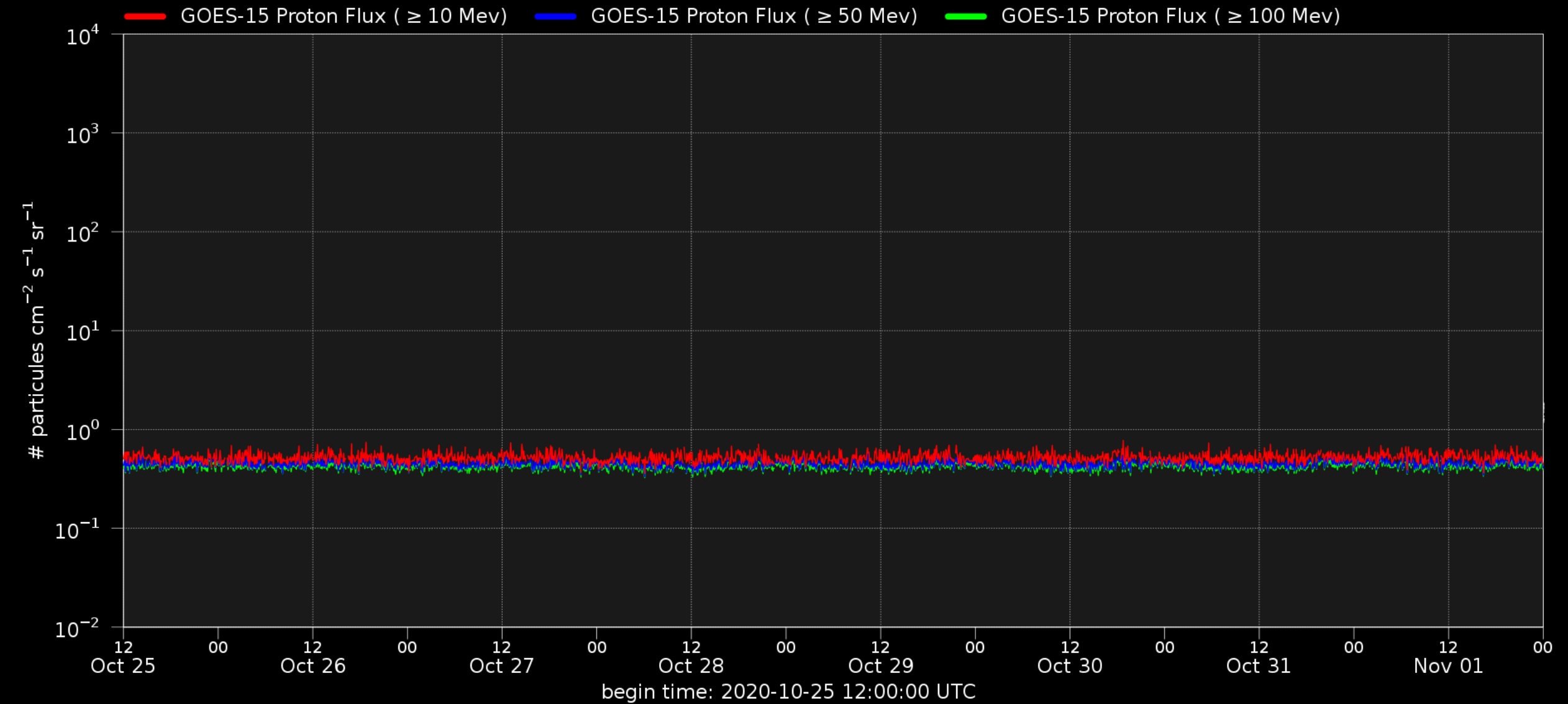
Solar Energetic Particles



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Solar proton flux



Solar electron flux



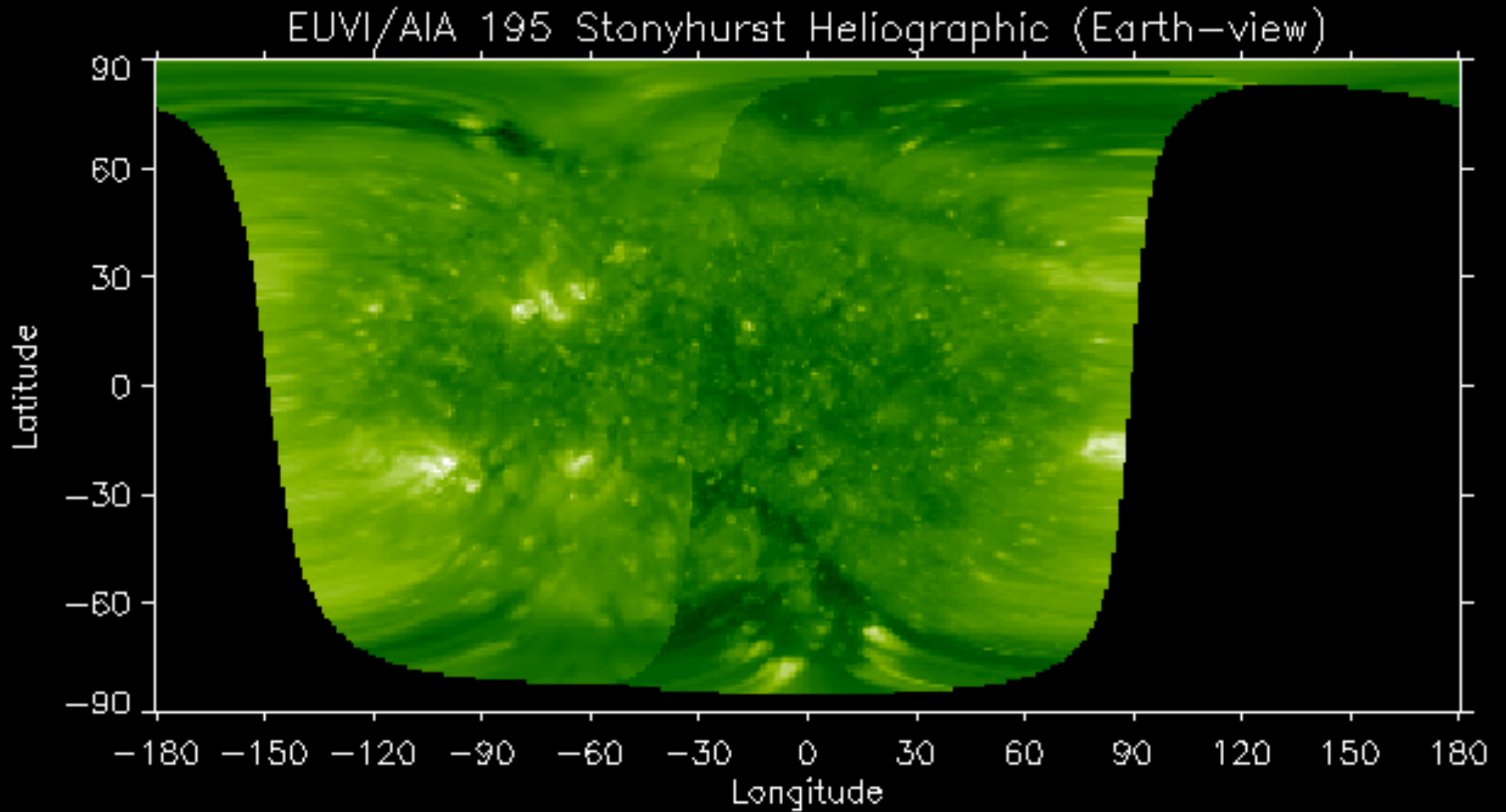
Outlook



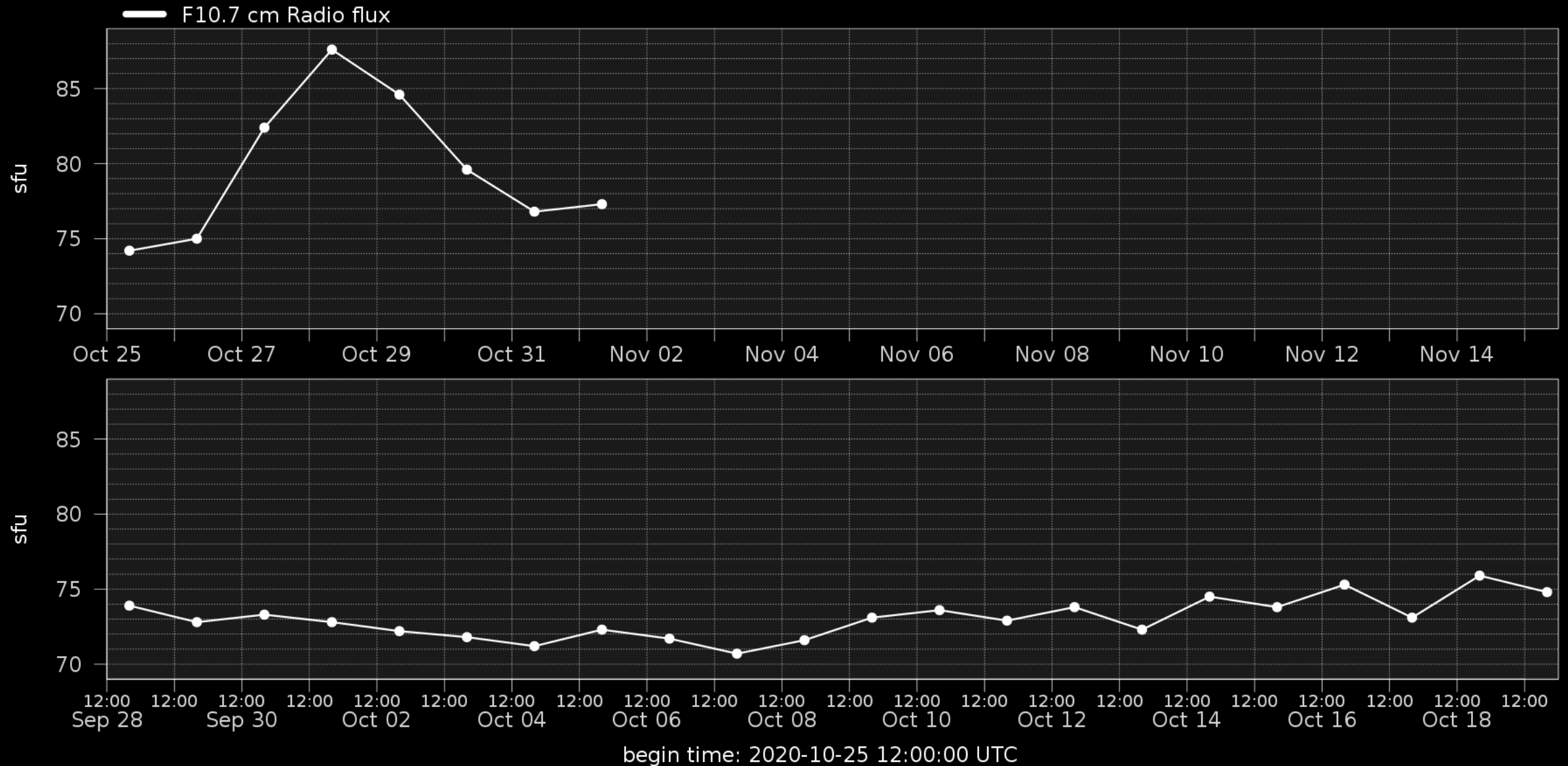
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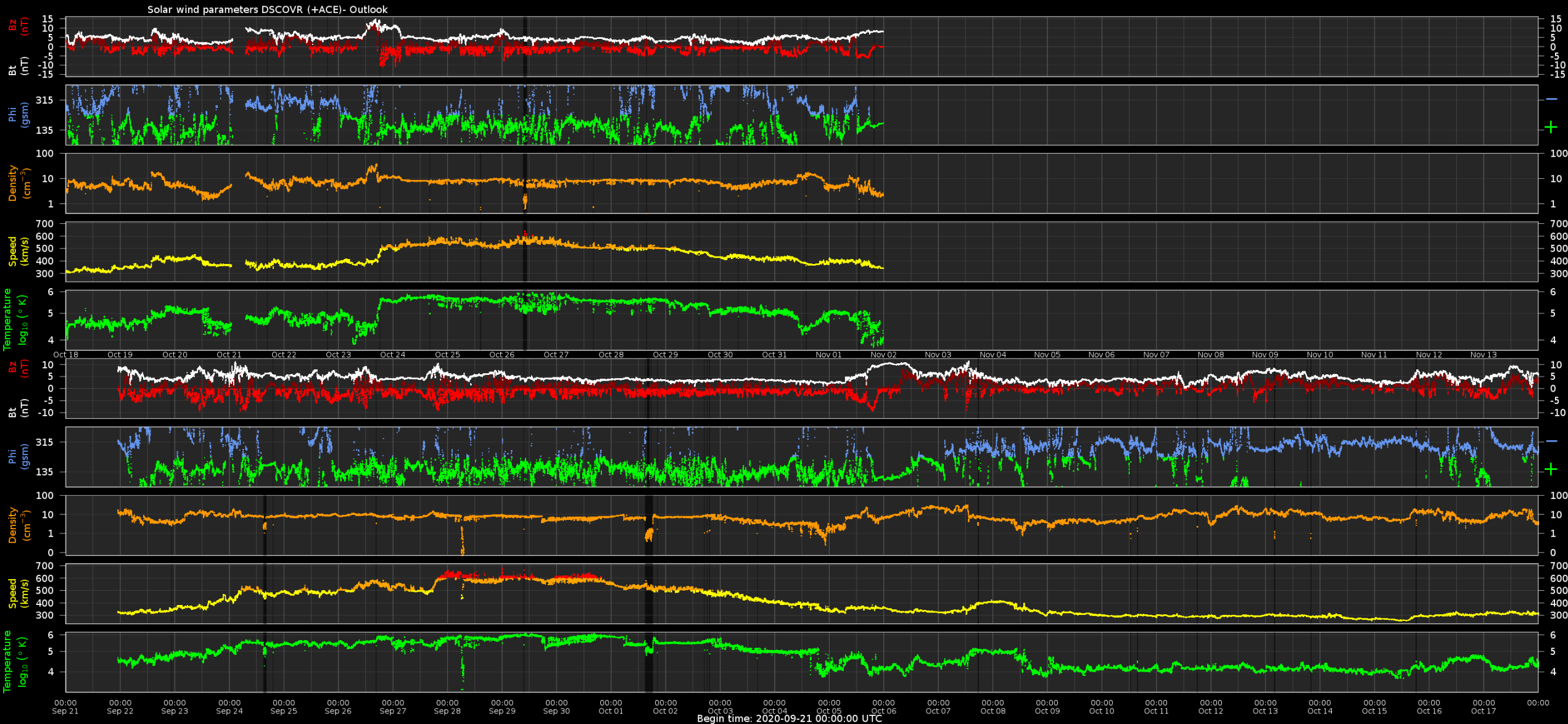
Outlook: Solar activity



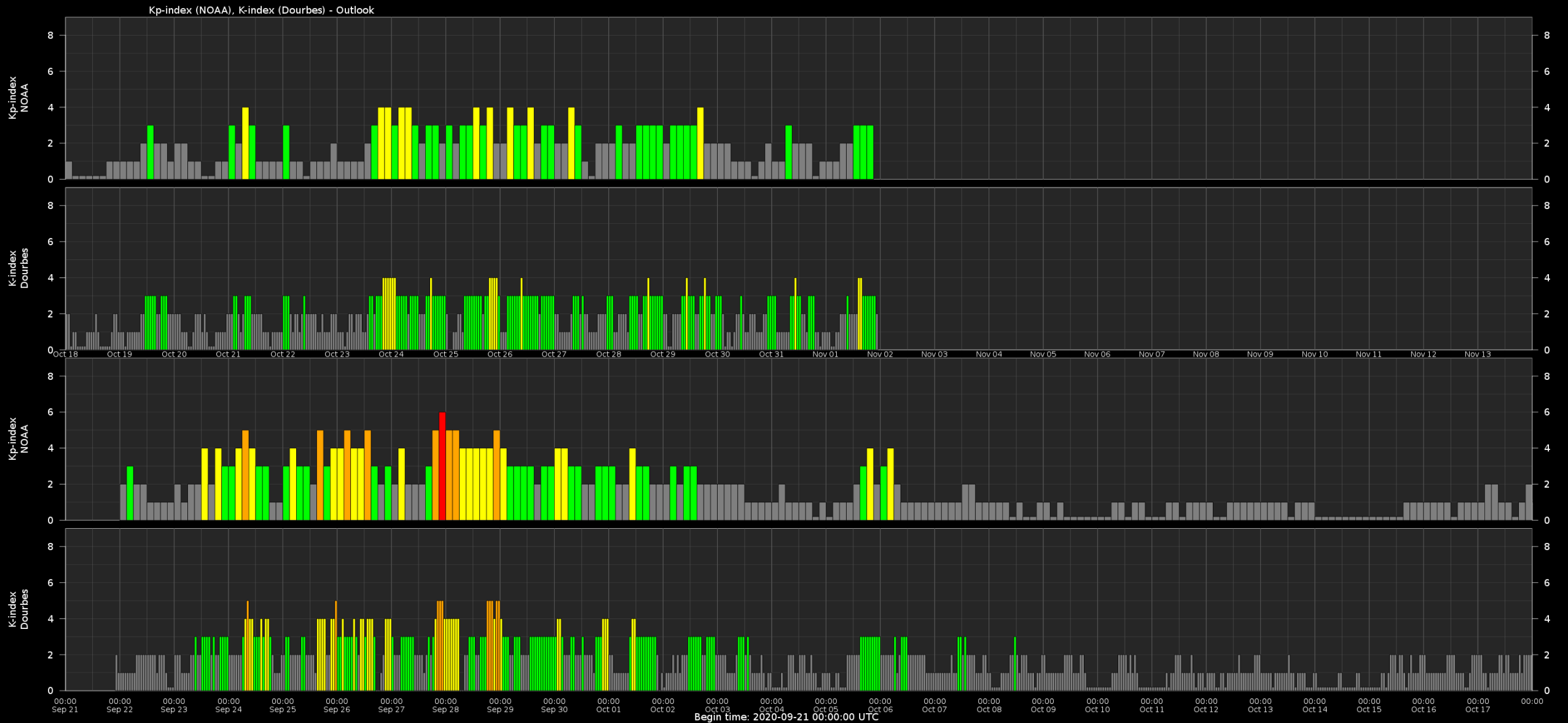
Outlook: F10 flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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