

SIDC Space Weather Briefing

13 September 2020 - 20 September 2020

Cis Verbeeck

& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2020-09-13 to 2020-09-20

Active regions	None
Flares	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filament eruptions	None
CMEs	No Earth-directed CMEs
Coronal Holes	None

Proton flux	Nominal, below 1 pfu
Electron flux	1000 pfu threshold exceeded on September 13

Solar wind and geomagnetic conditions from 2020-09-13T12:00:00 to 2020-09-20T12:00:00

ICME	None
SW Conditions	B : 0.28 - 10.13 nT // Bz: -8.11 nT to 7.74 nT // Speed: 272.1 - 434.7km/s
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: on all week

Solar Activity

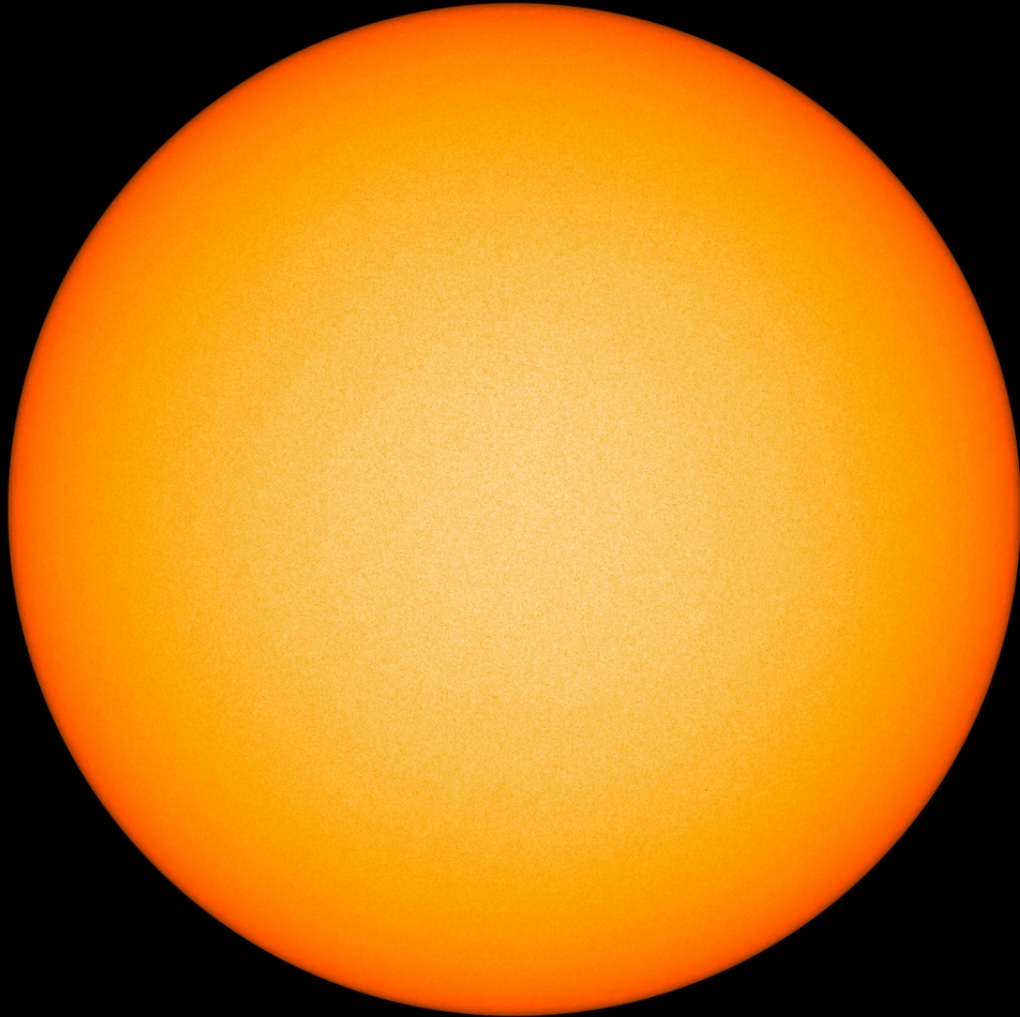


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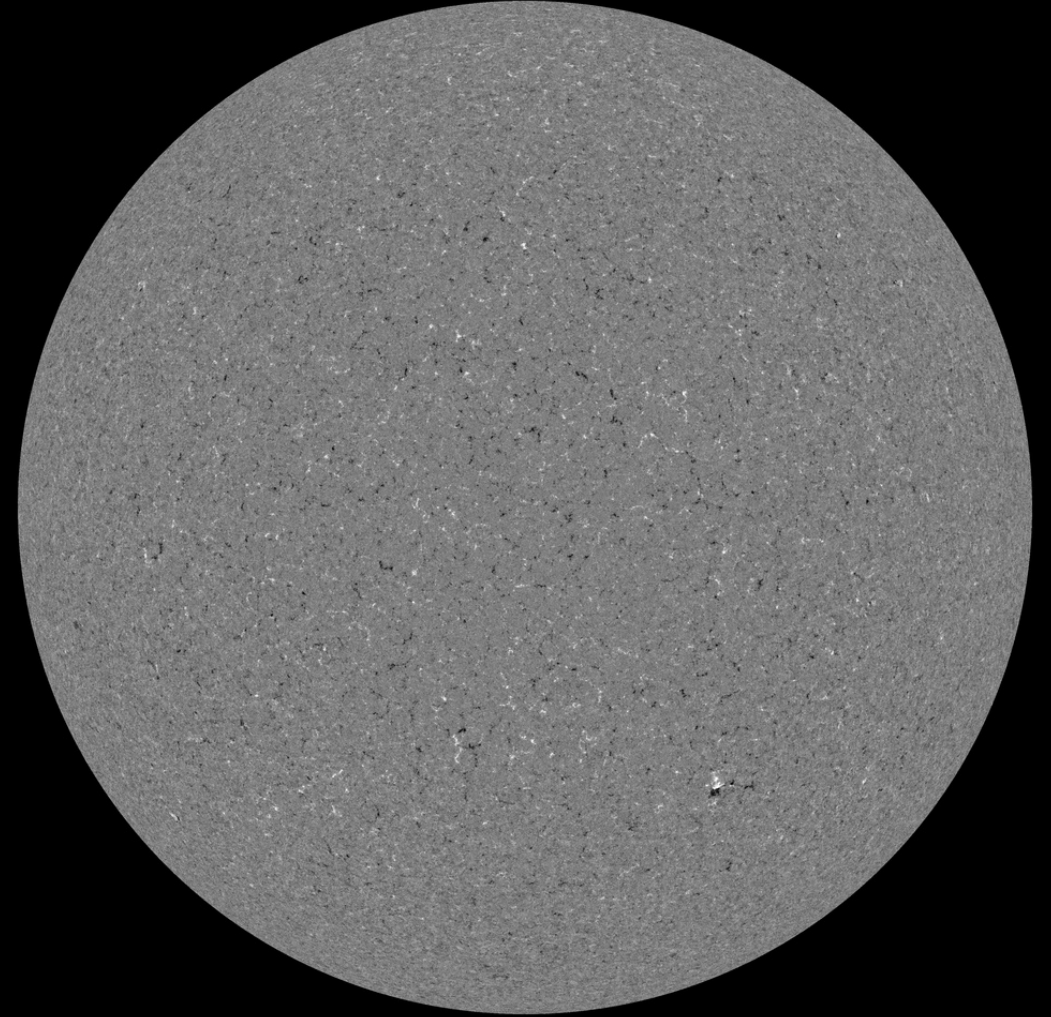
Solar active regions - Sunday

SDO/HMI White Light 2020-09-13



SDO/HMI Quick-Look Continuum: 20200913_114500

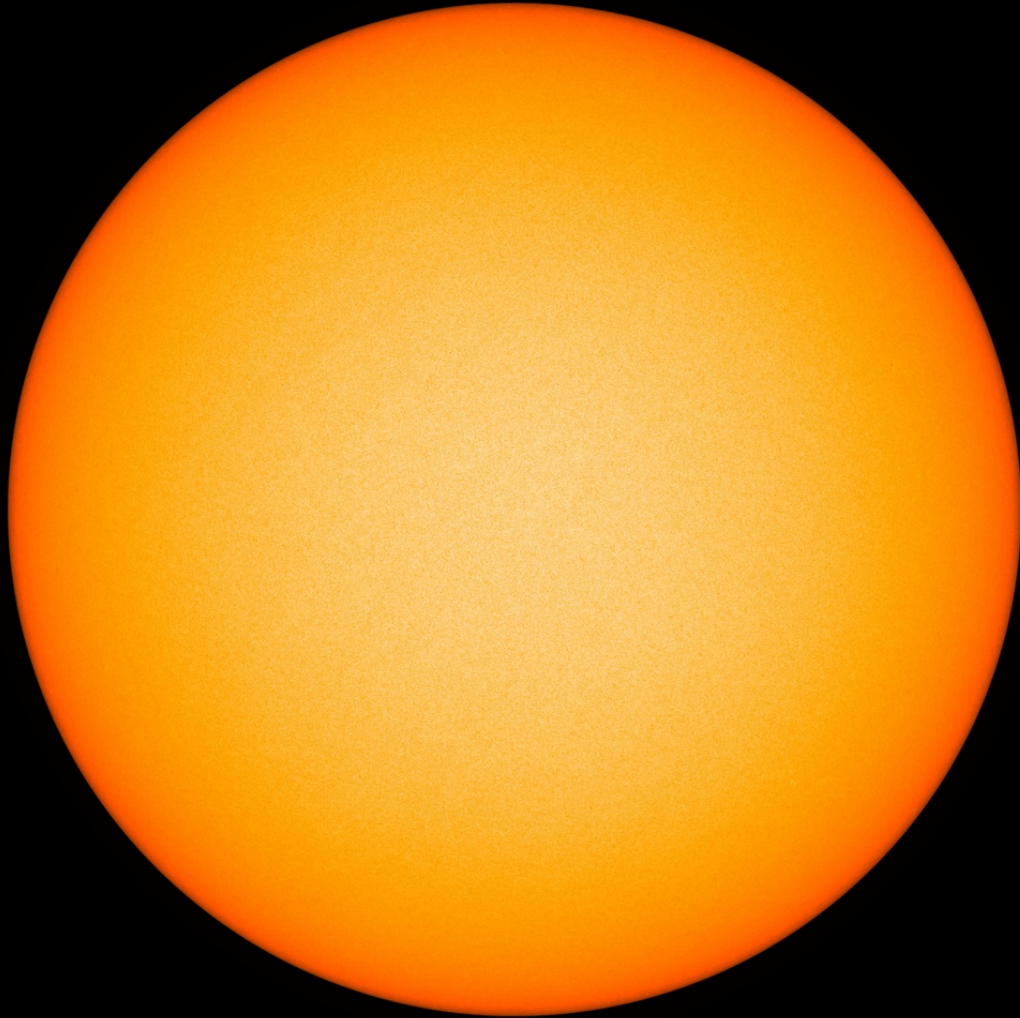
SDO/HMI Magnetogram 2020-09-13



SDO/HMI Quick-Look Magnetogram: 20200913_114500

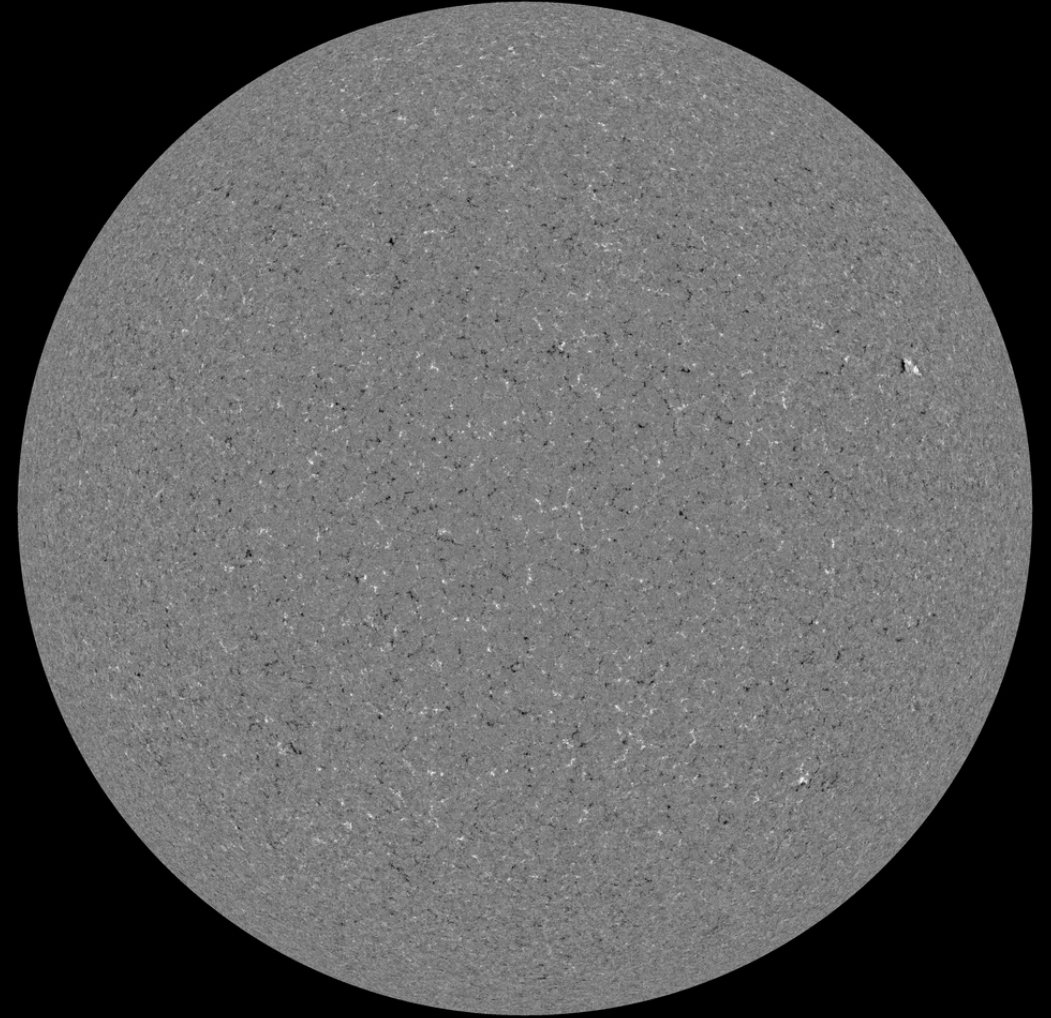
Solar active regions - Monday

SDO/HMI White Light 2020-09-14



SDO/HMI Quick-Look Continuum: 20200914_114500

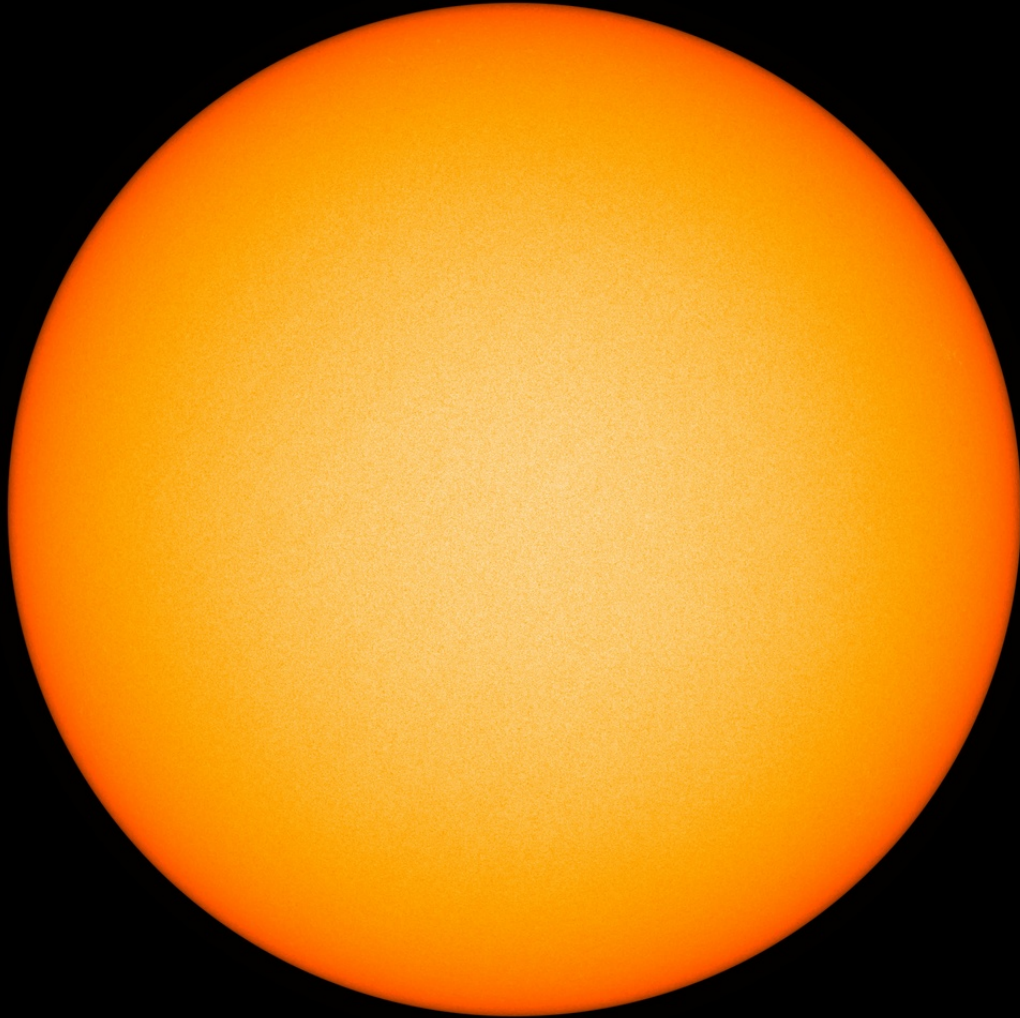
SDO/HMI Magnetogram 2020-09-14



SDO/HMI Quick-Look Magnetogram: 20200914_114500

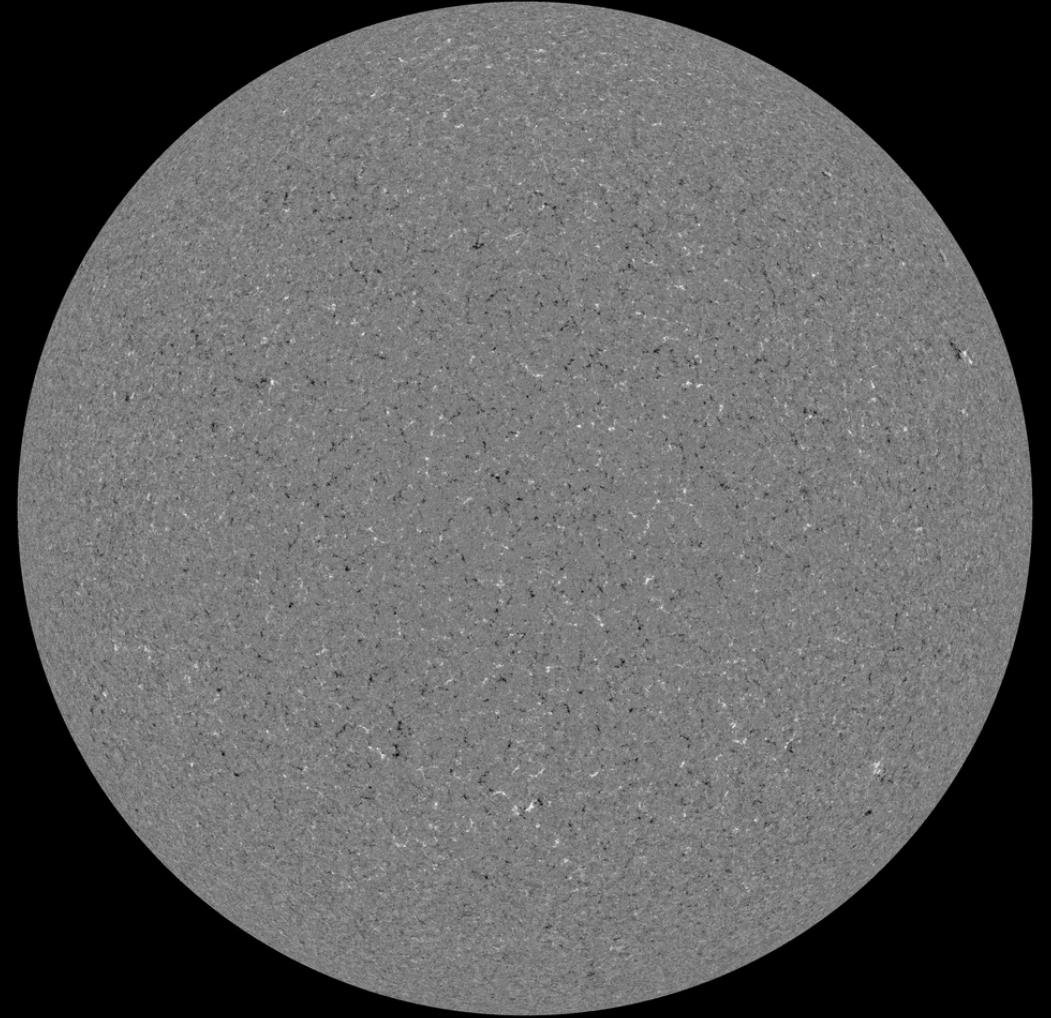
Solar active regions - Tuesday

SDO/HMI White Light 2020-09-15



SDO/HMI Quick-Look Continuum: 20200915_114500

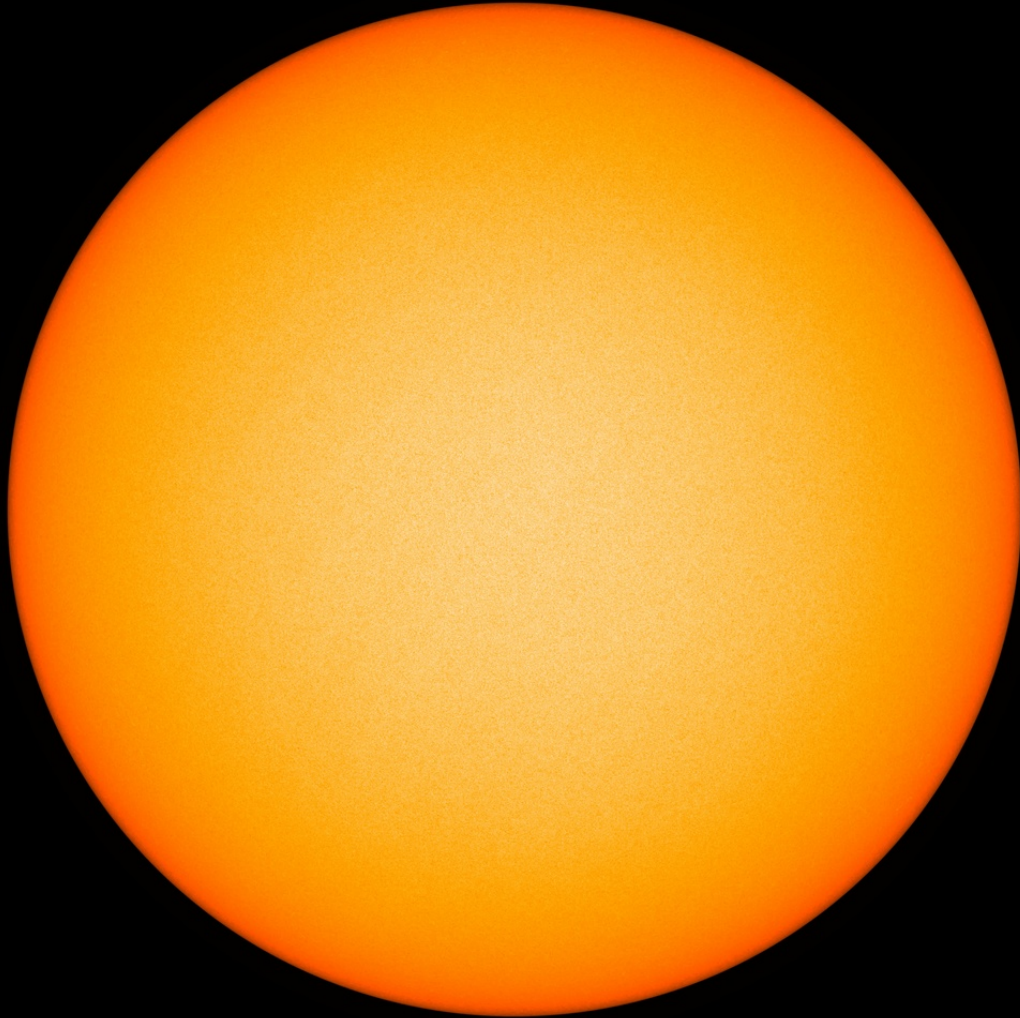
SDO/HMI Magnetogram 2020-09-15



SDO/HMI Quick-Look Magnetogram: 20200915_114500

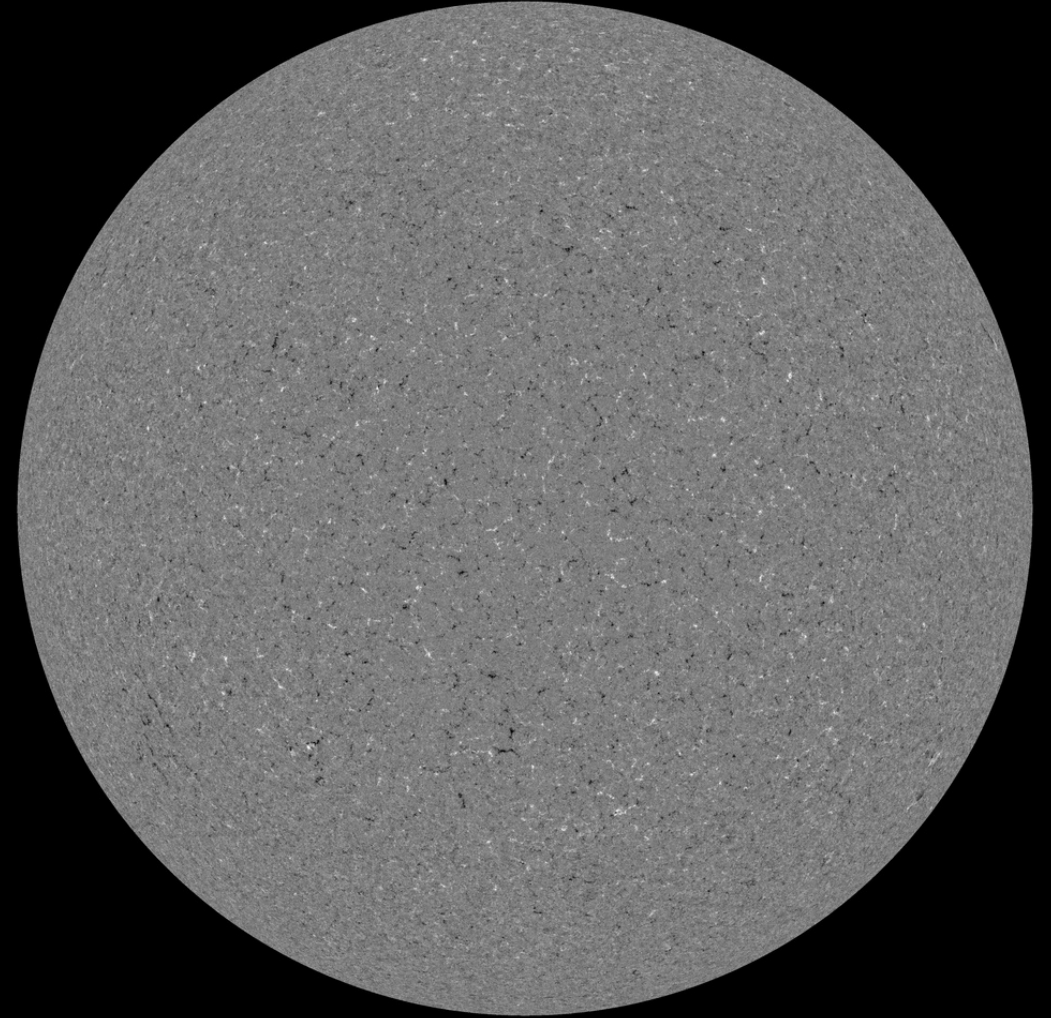
Solar active regions - Wednesday

SDO/HMI White Light 2020-09-16



SDO/HMI Quick-Look Continuum: 20200916_114500

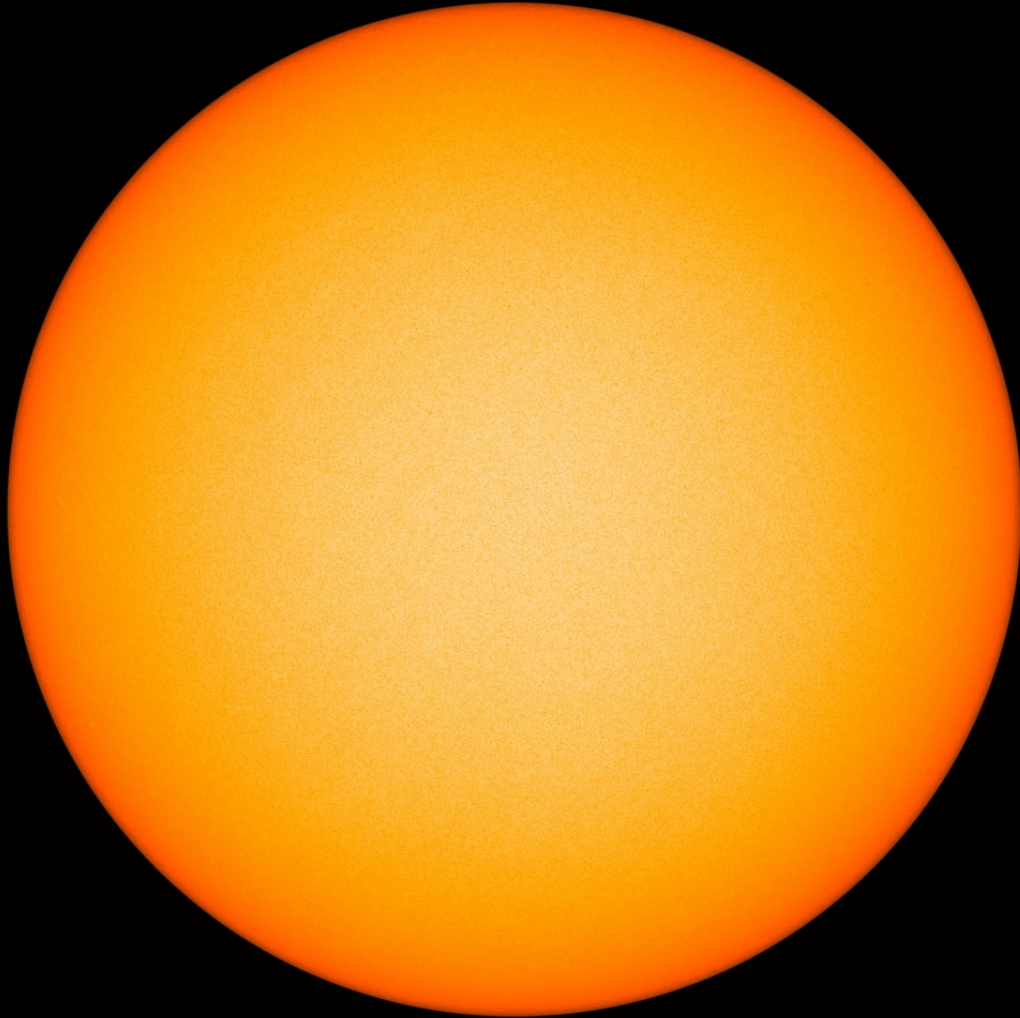
SDO/HMI Magnetogram 2020-09-16



SDO/HMI Quick-Look Magnetogram: 20200916_114500

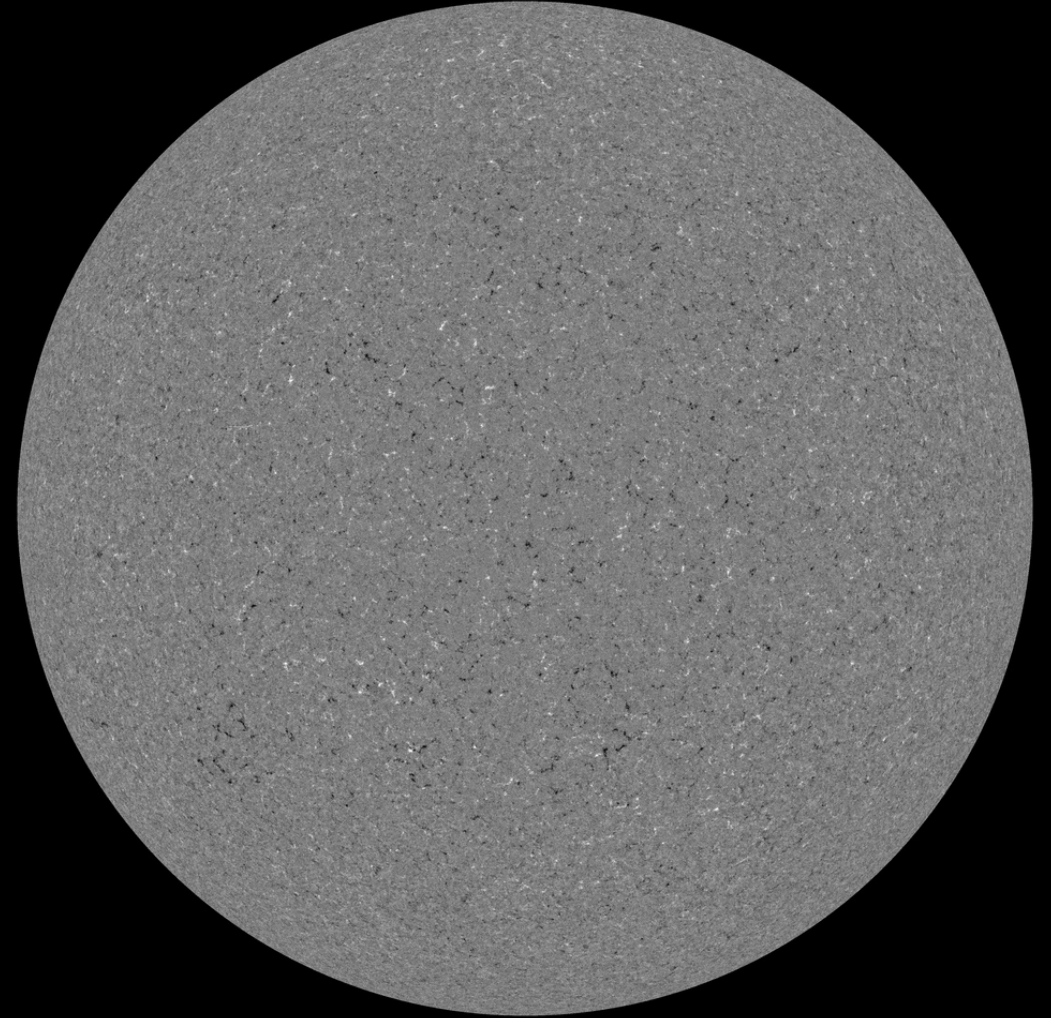
Solar active regions - Thursday

SDO/HMI White Light 2020-09-17



SDO/HMI Quick-Look Continuum: 20200917_114500

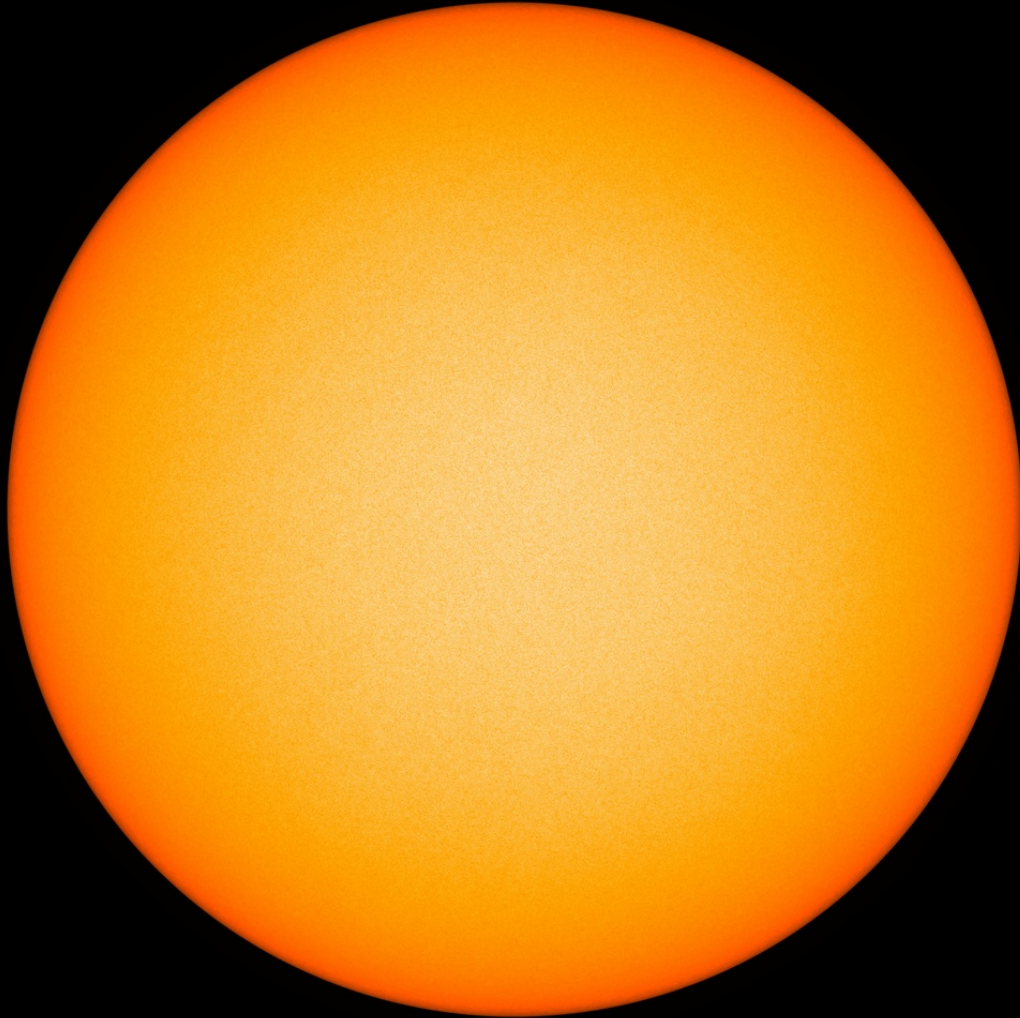
SDO/HMI Magnetogram 2020-09-17



SDO/HMI Quick-Look Magnetogram: 20200917_114500

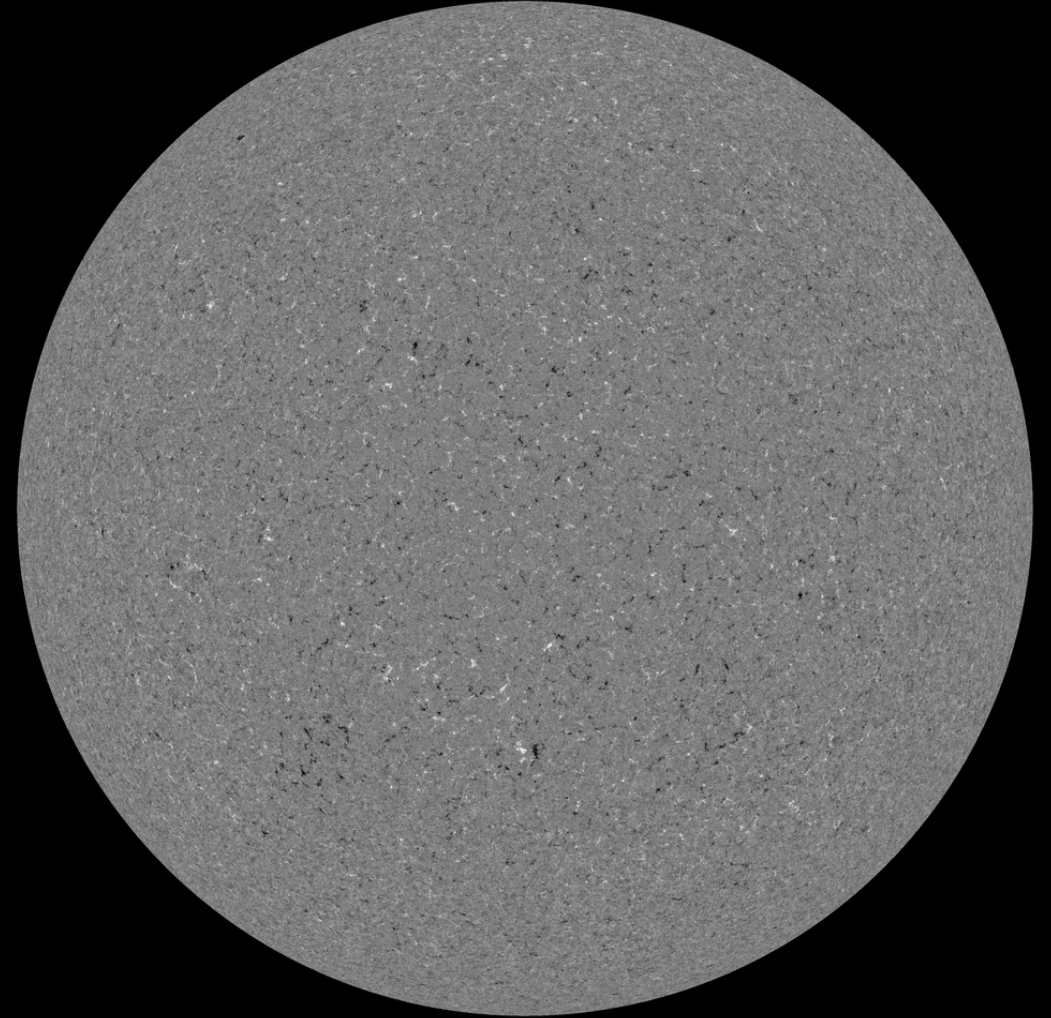
Solar active regions - Friday

SDO/HMI White Light 2020-09-18



SDO/HMI Quick-Look Continuum: 20200918_114500

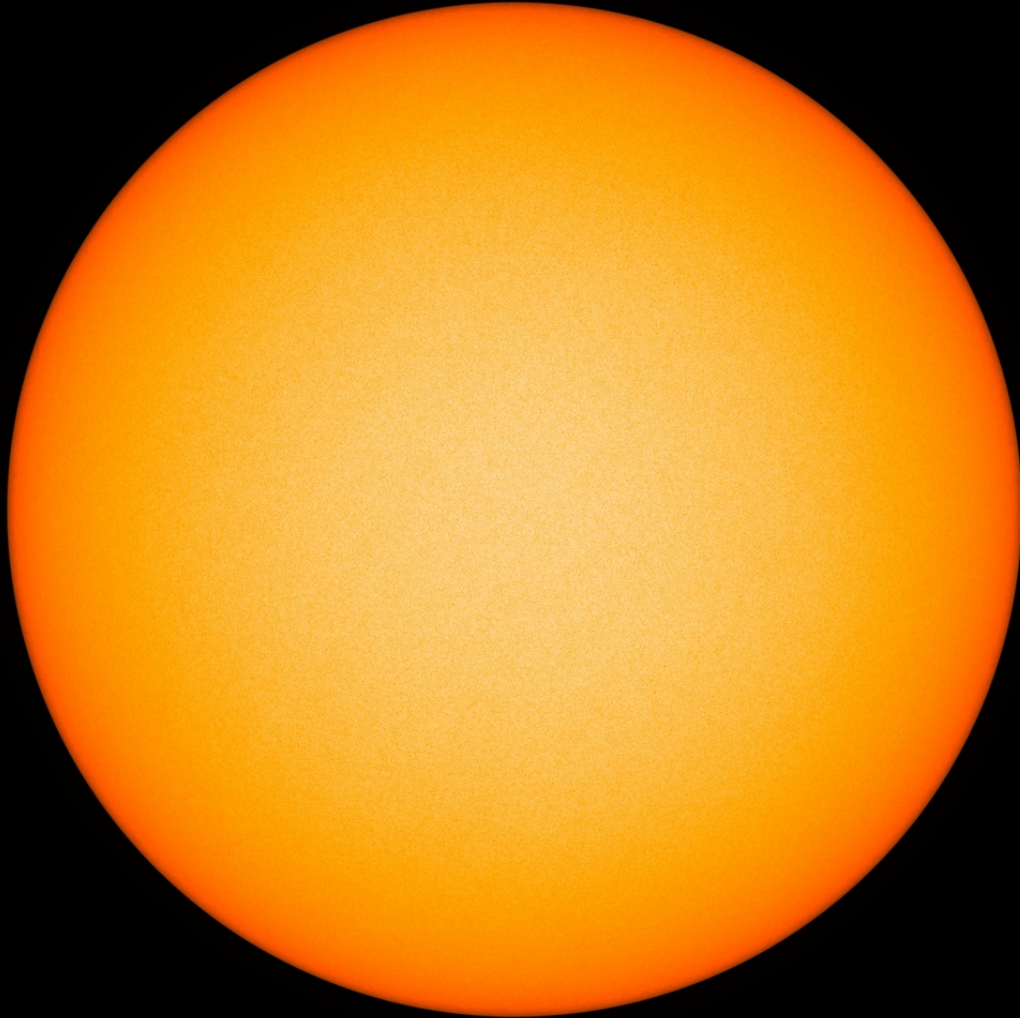
SDO/HMI Magnetogram 2020-09-18



SDO/HMI Quick-Look Magnetogram: 20200918_114500

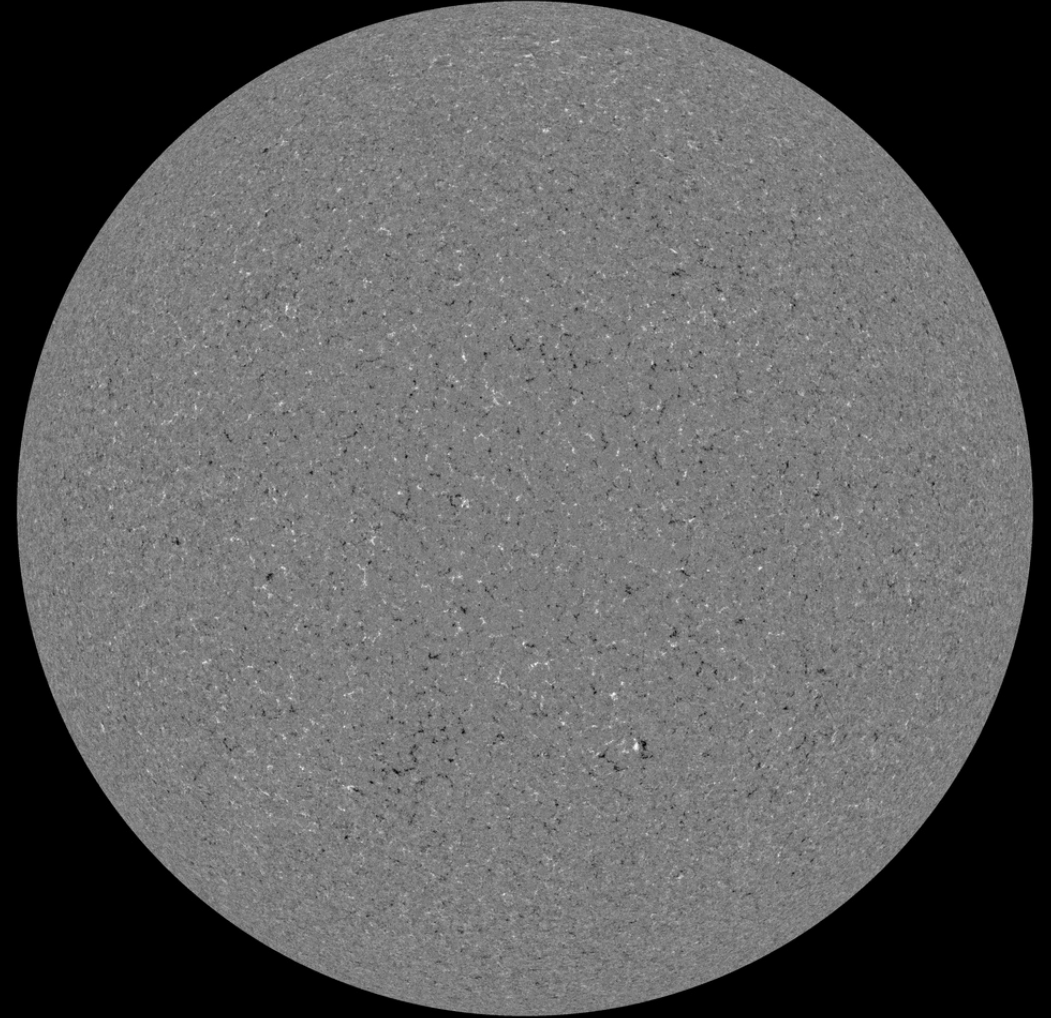
Solar active regions - Saturday

SDO/HMI White Light 2020-09-19



SDO/HMI Quick-Look Continuum: 20200919_114500

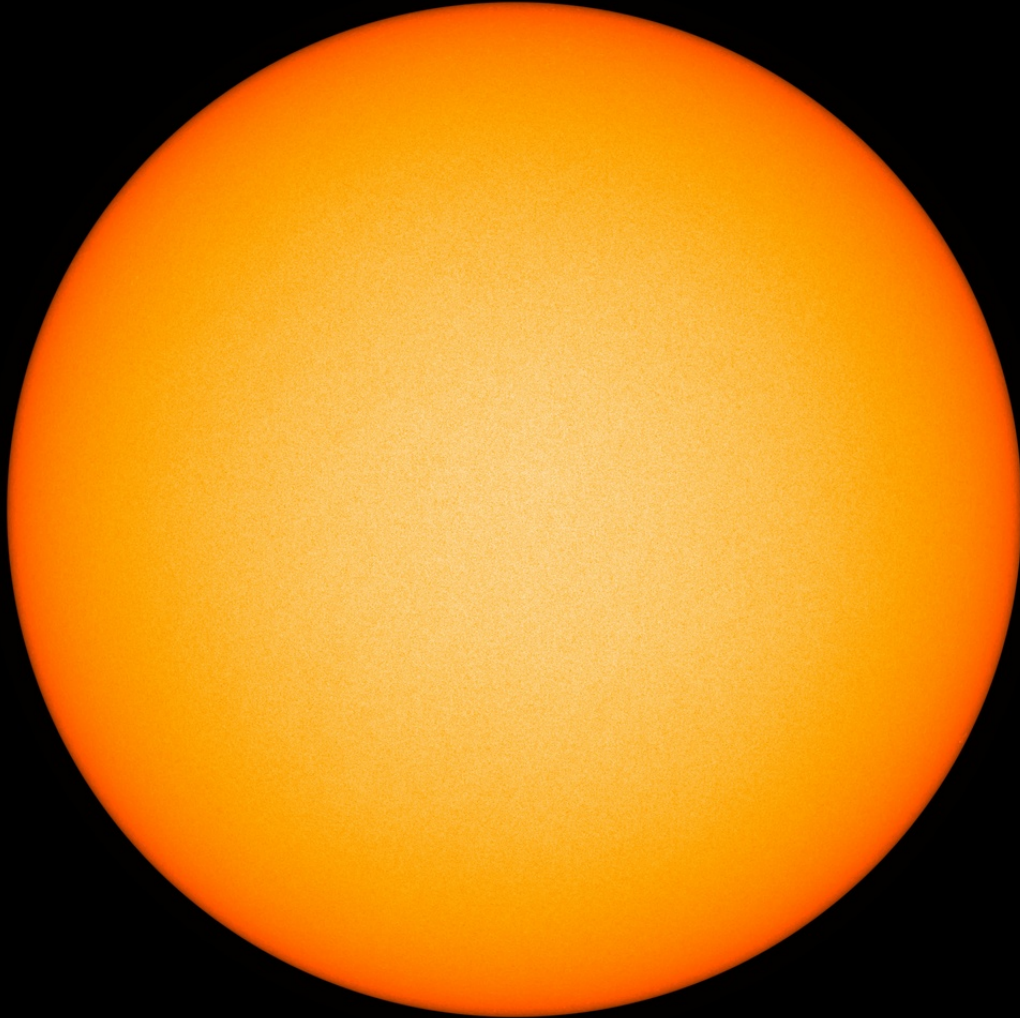
SDO/HMI Magnetogram 2020-09-19



SDO/HMI Quick-Look Magnetogram: 20200919_114500

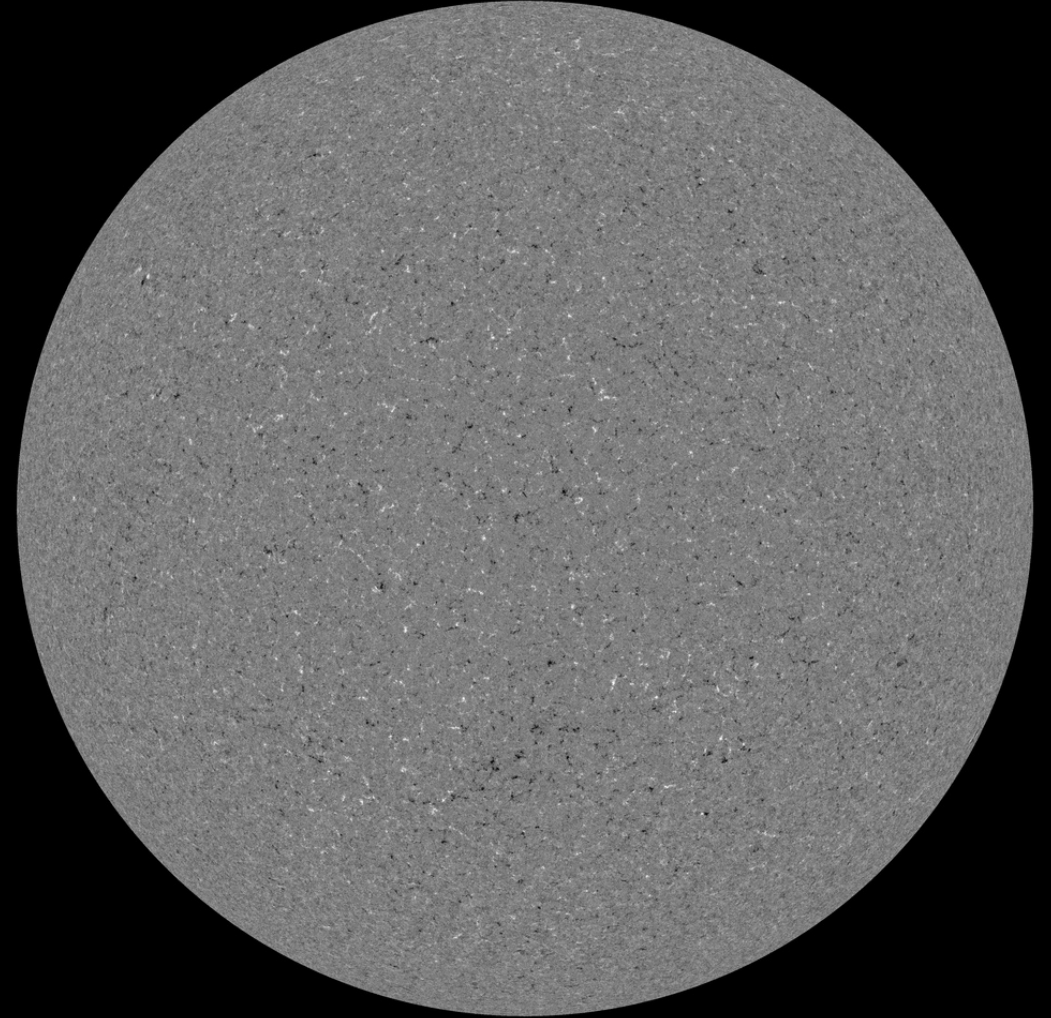
Solar active regions - Sunday

SDO/HMI White Light 2020-09-20



SDO/HMI Quick-Look Continuum: 20200920_114500

SDO/HMI Magnetogram 2020-09-20

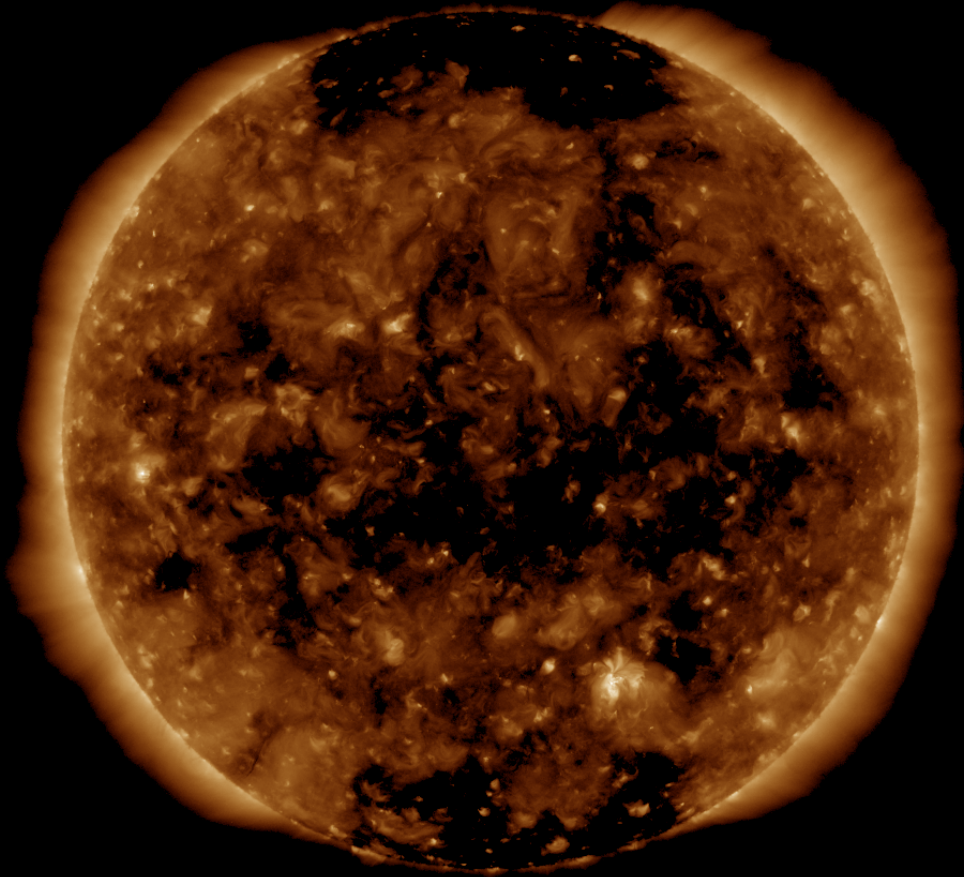


SDO/HMI Quick-Look Magnetogram: 20200920_114500

Coronal holes

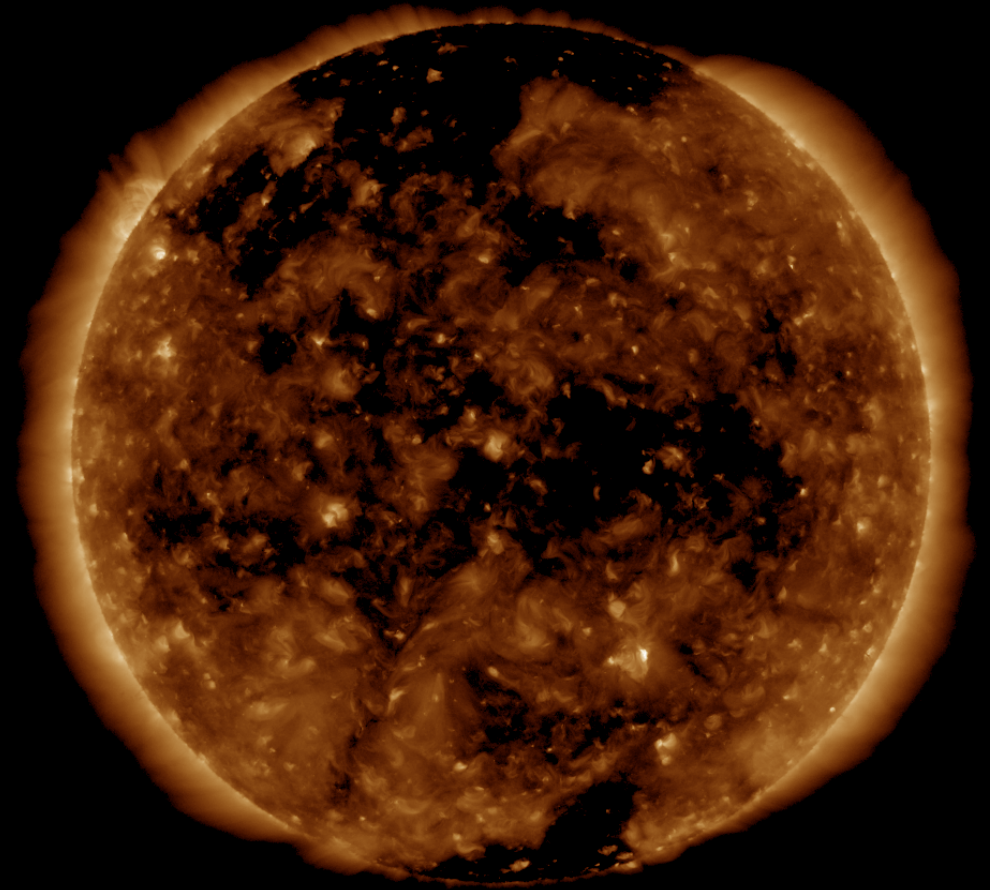
SDO/AIA 19.3 nm 2020-09-13

SDO/AIA AIA 193Å 2020-09-13T00:00:05.84



SDO/AIA 19.3 nm 2020-09-20

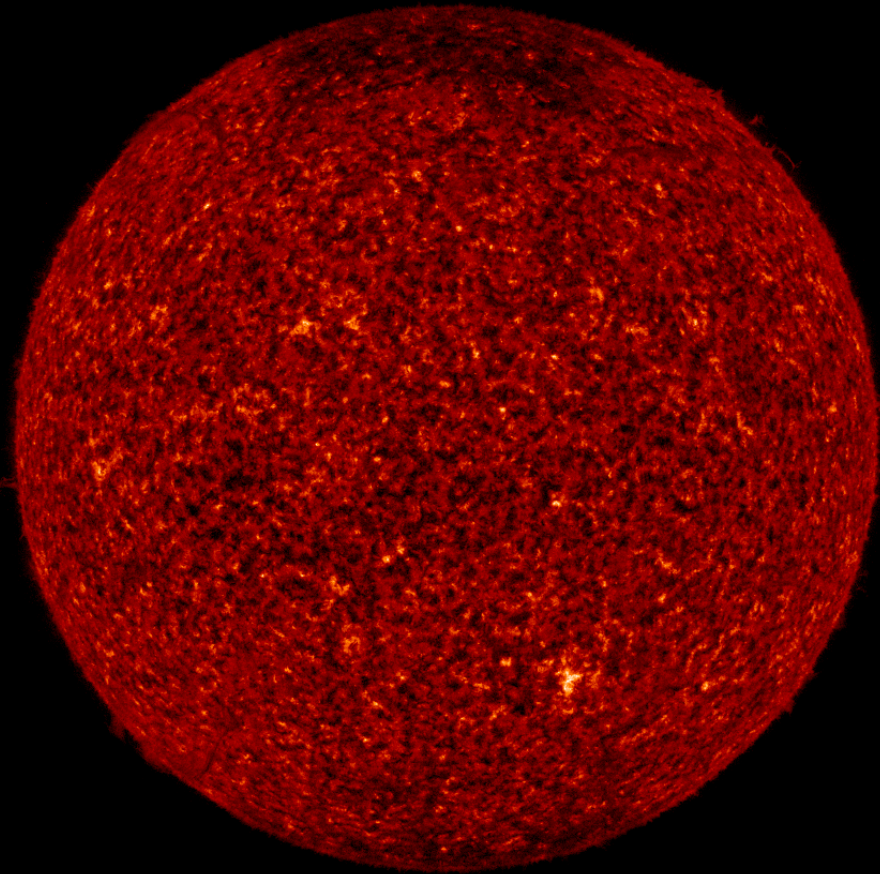
SDO/AIA AIA 193Å 2020-09-20T00:00:05.84



Filaments

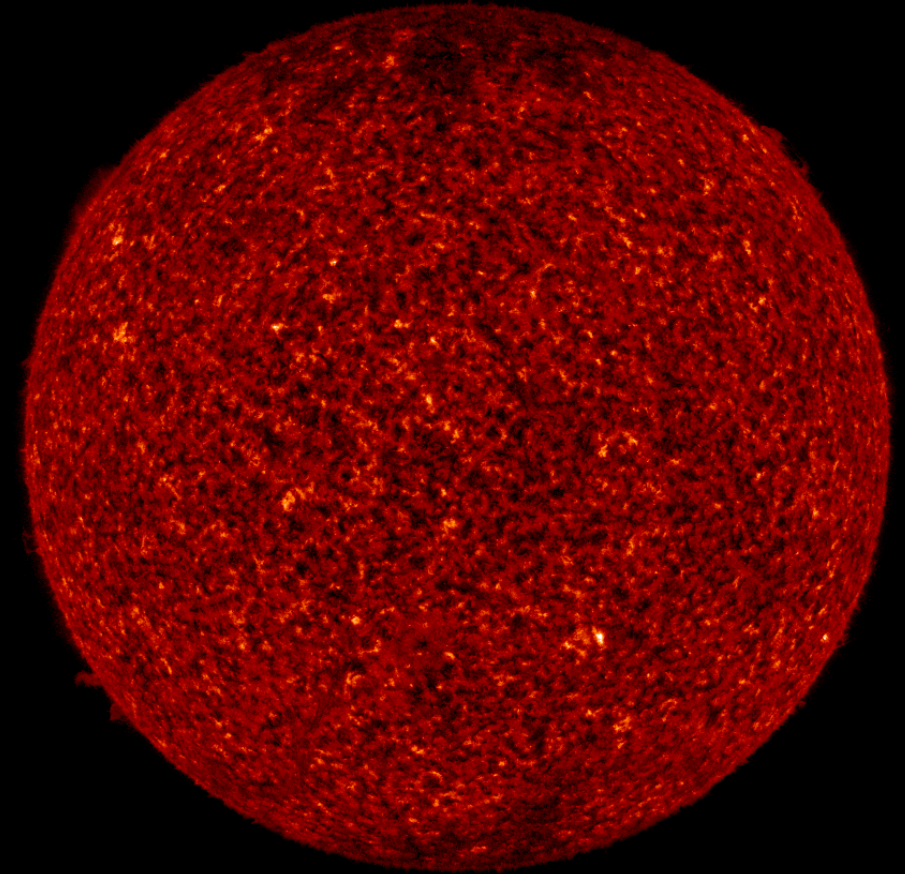
SDO/AIA 30.4 nm 2020-09-13

SDO/AIA AIA 304Å 2020-09-13T00:00:06.58



SDO/AIA 30.4 nm 2020-09-20

SDO/AIA AIA 304Å 2020-09-20T00:00:06.58



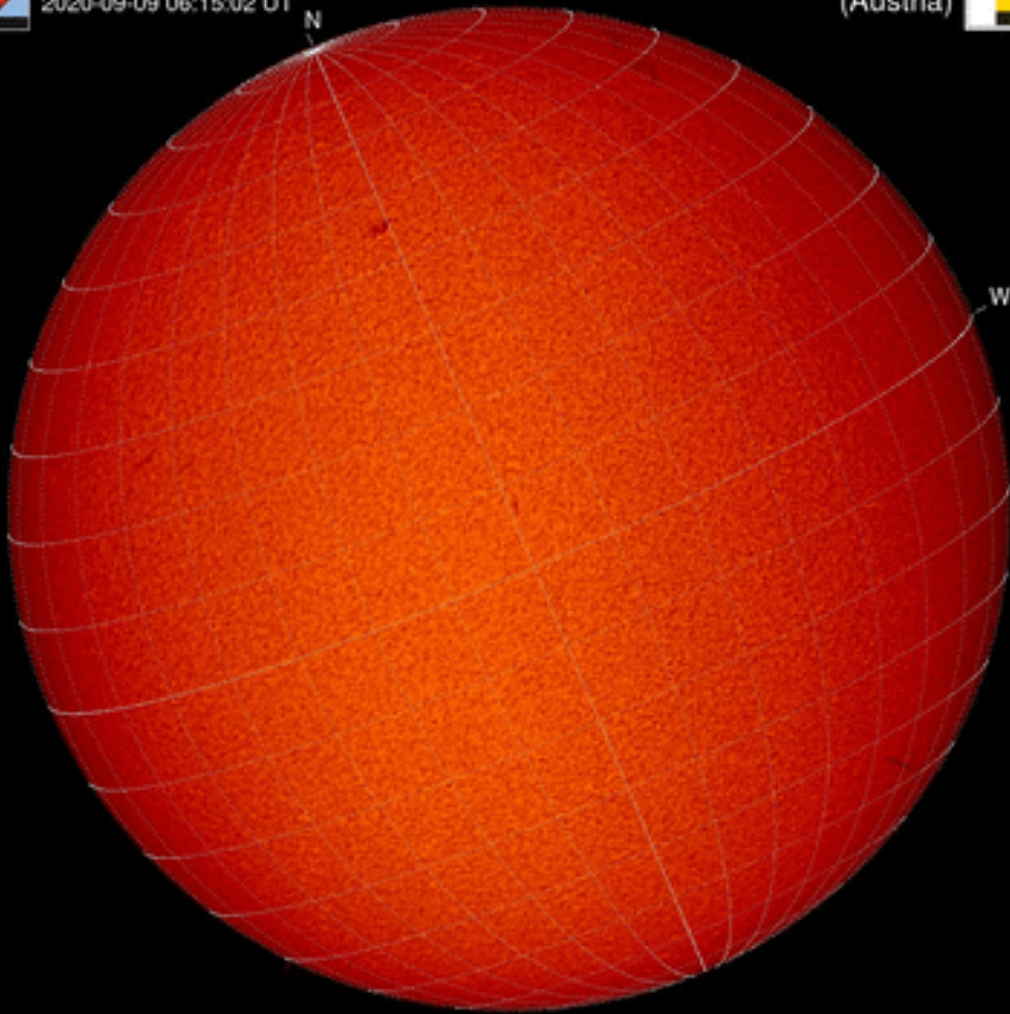
Filaments & Filament eruptions

H-alpha 2020-09-09



Kanzelhöhe Observatory
2020-09-09 06:15:02 UT

University of Graz
(Austria)

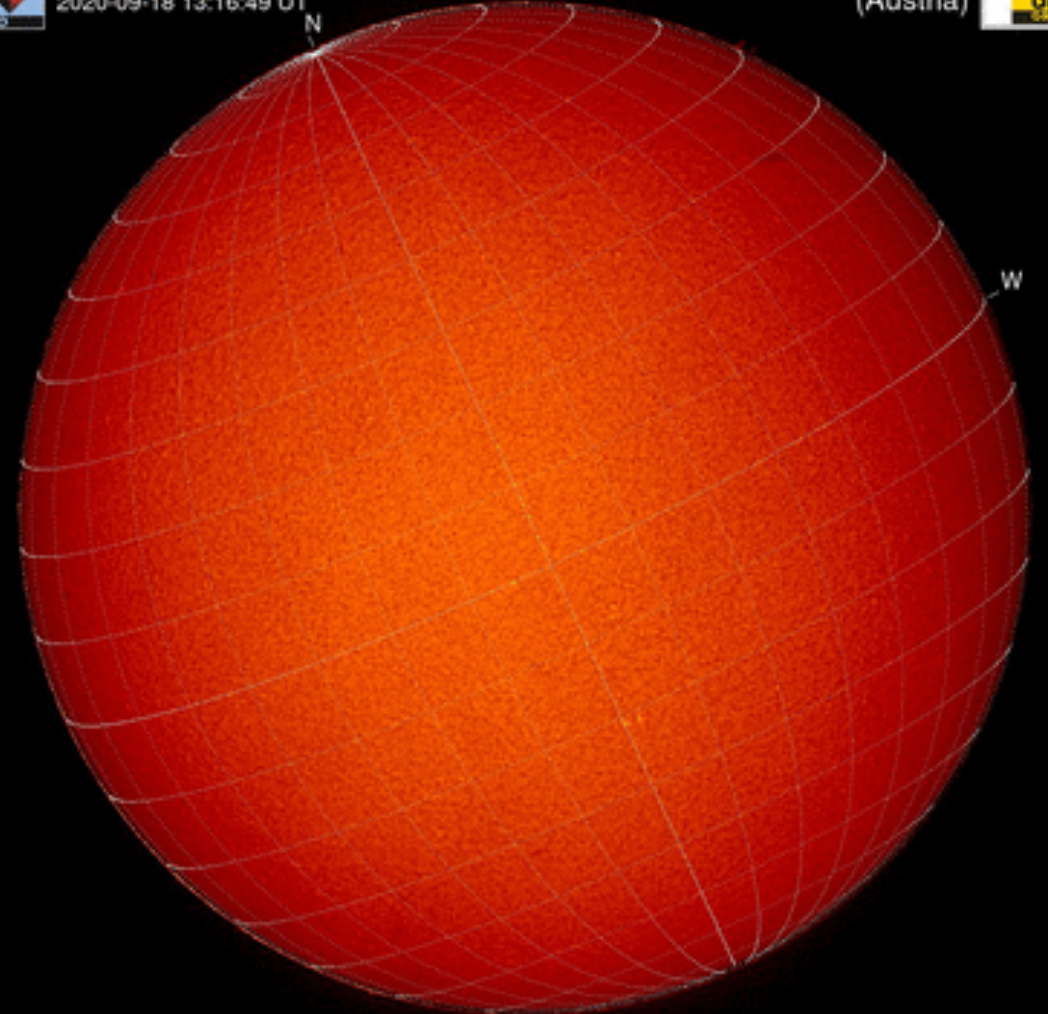


H-alpha 2020-09-18

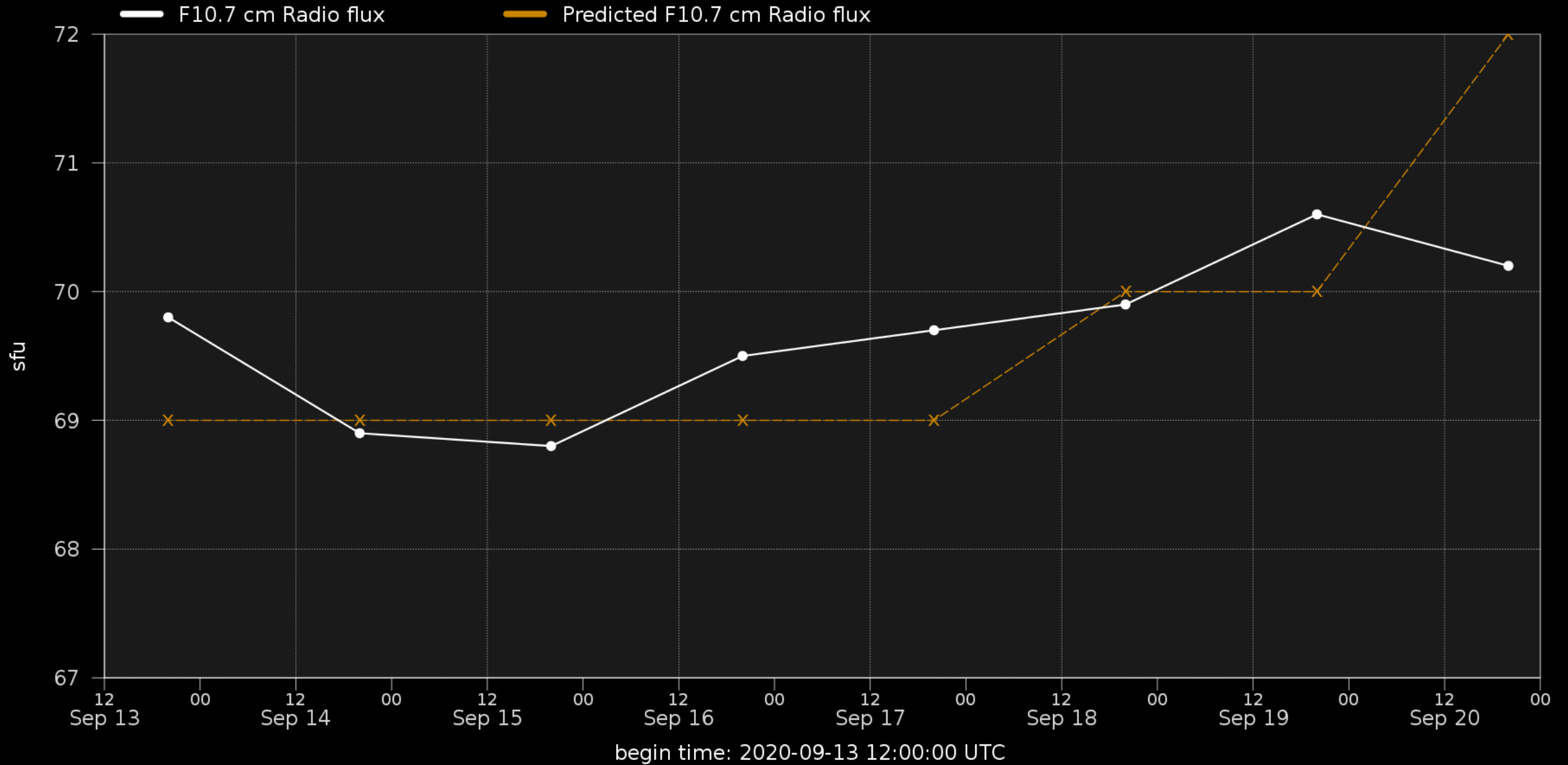


Kanzelhöhe Observatory
2020-09-18 13:16:49 UT

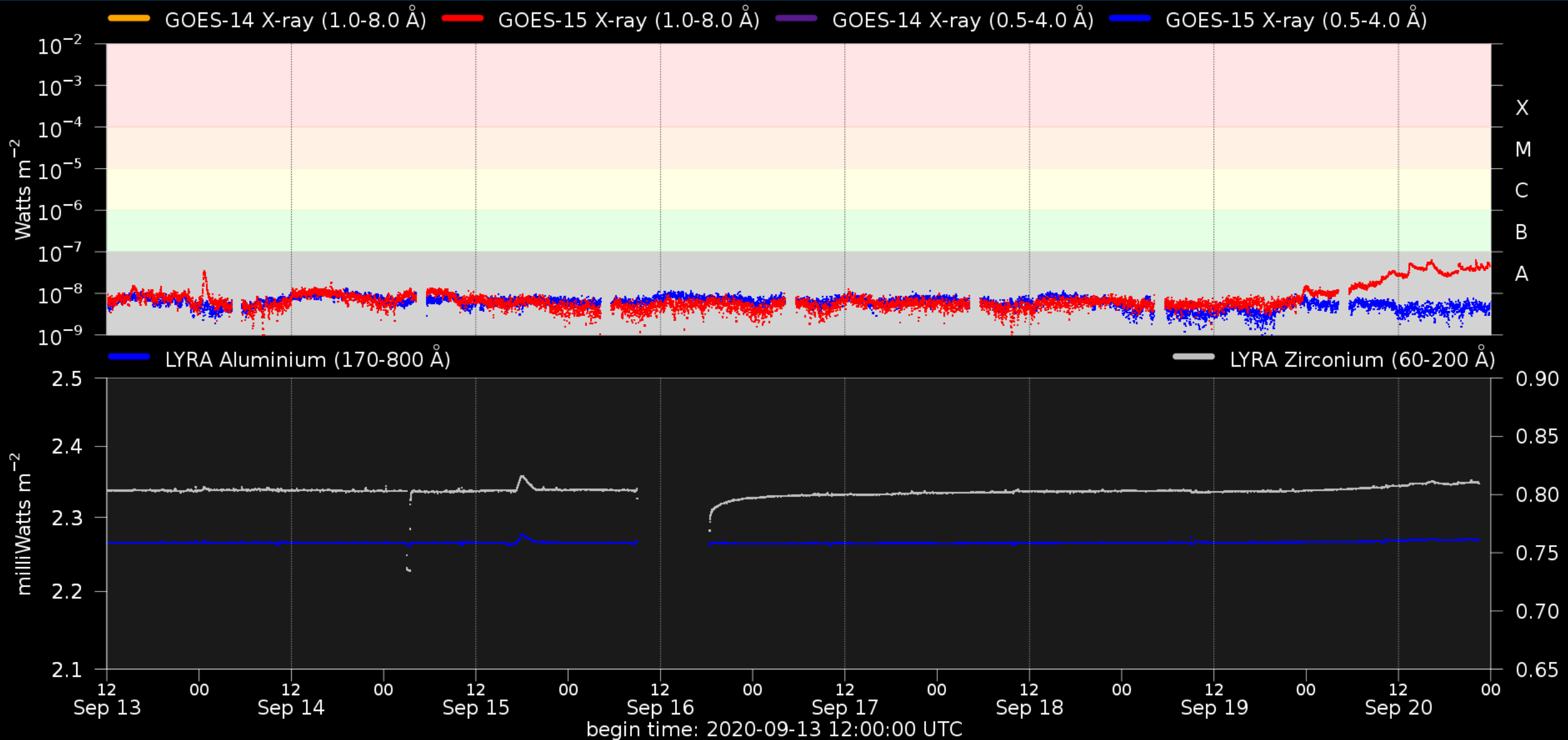
University of Graz
(Austria)



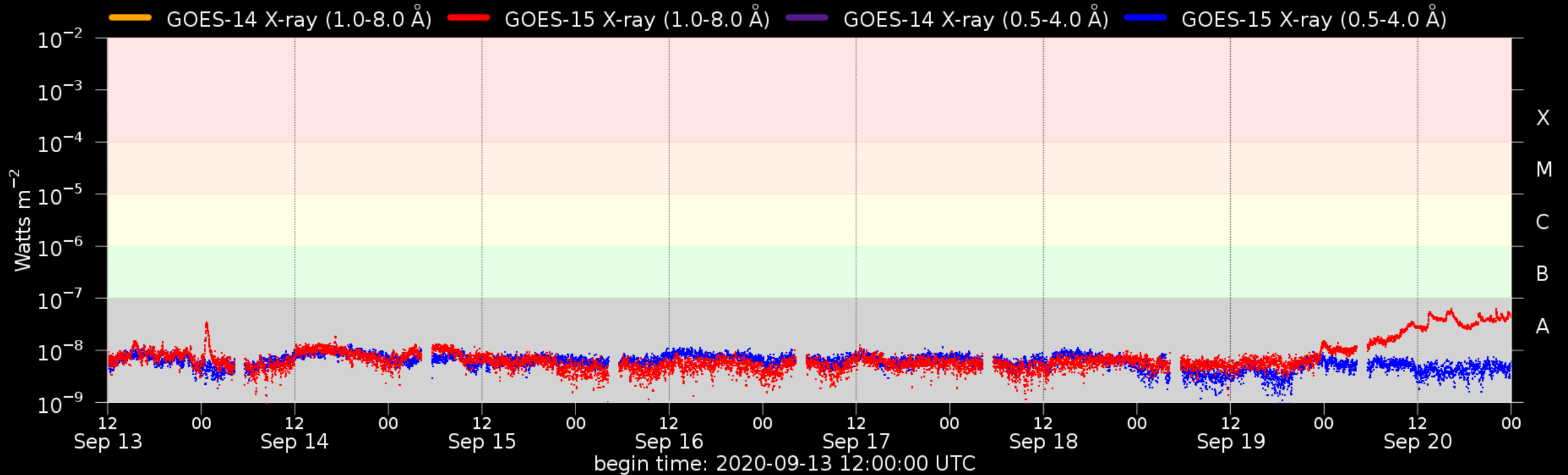
Solar F10.7cm radio flux



Solar X-Ray and UV flux



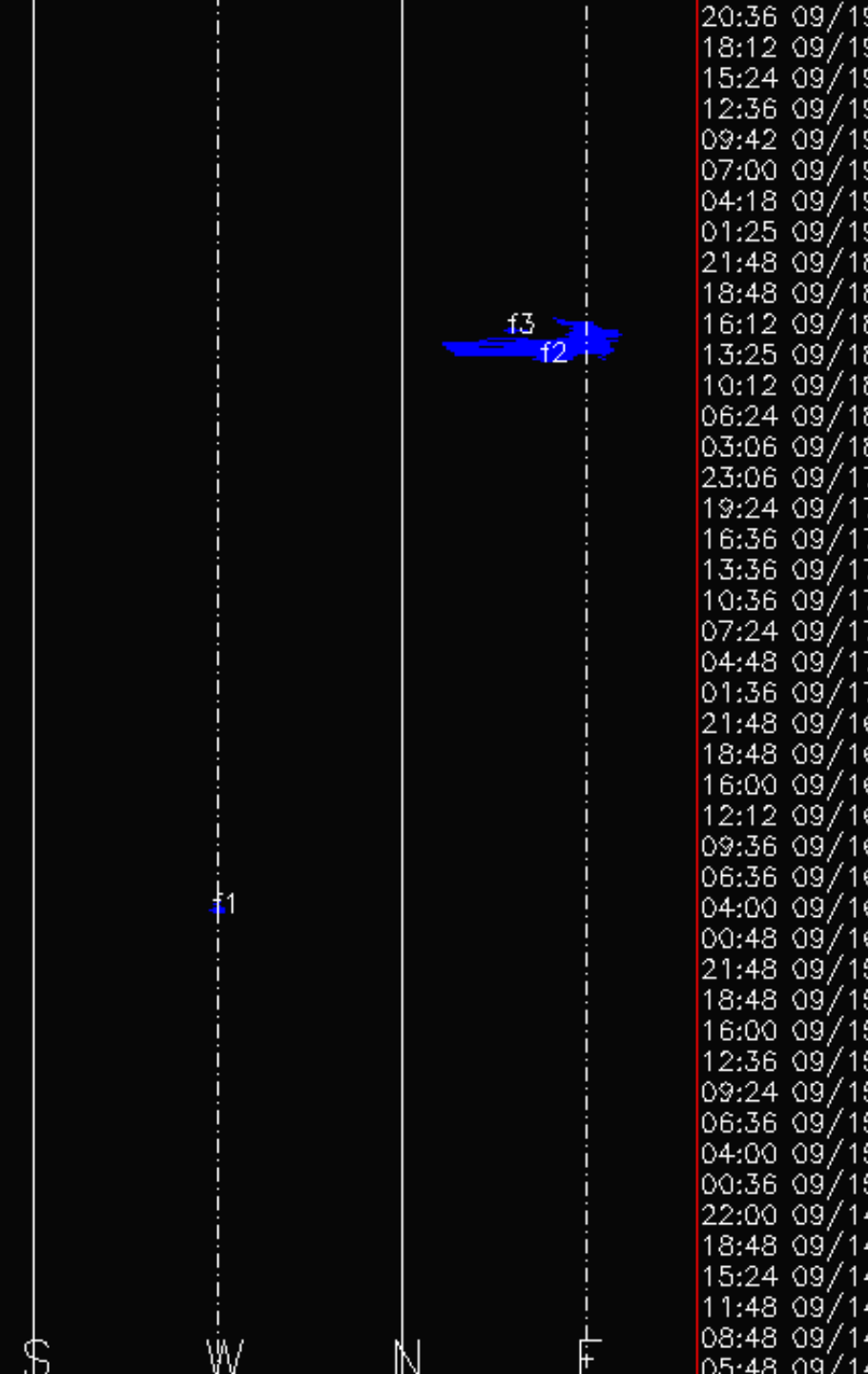
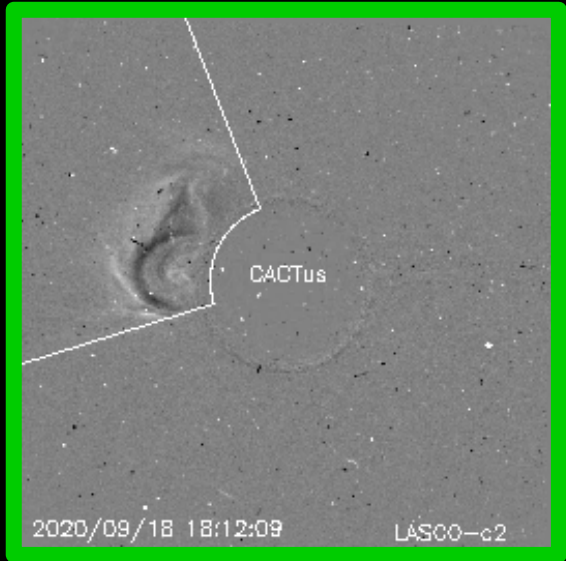
Flaring activity



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

Issue date	2020-09-13	2020-09-14	2020-09-15	2020-09-16	2020-09-17	2020-09-18	2020-09-19	2020-09-20
Probability	-- 01 01 01	-- 01 01 01	-- 01 01 01	-- 01 01 01	-- 01 01 01	-- 01 01 01	-- 01 01 01	-- 05 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	01 00 00 00

Coronal Mass Ejections



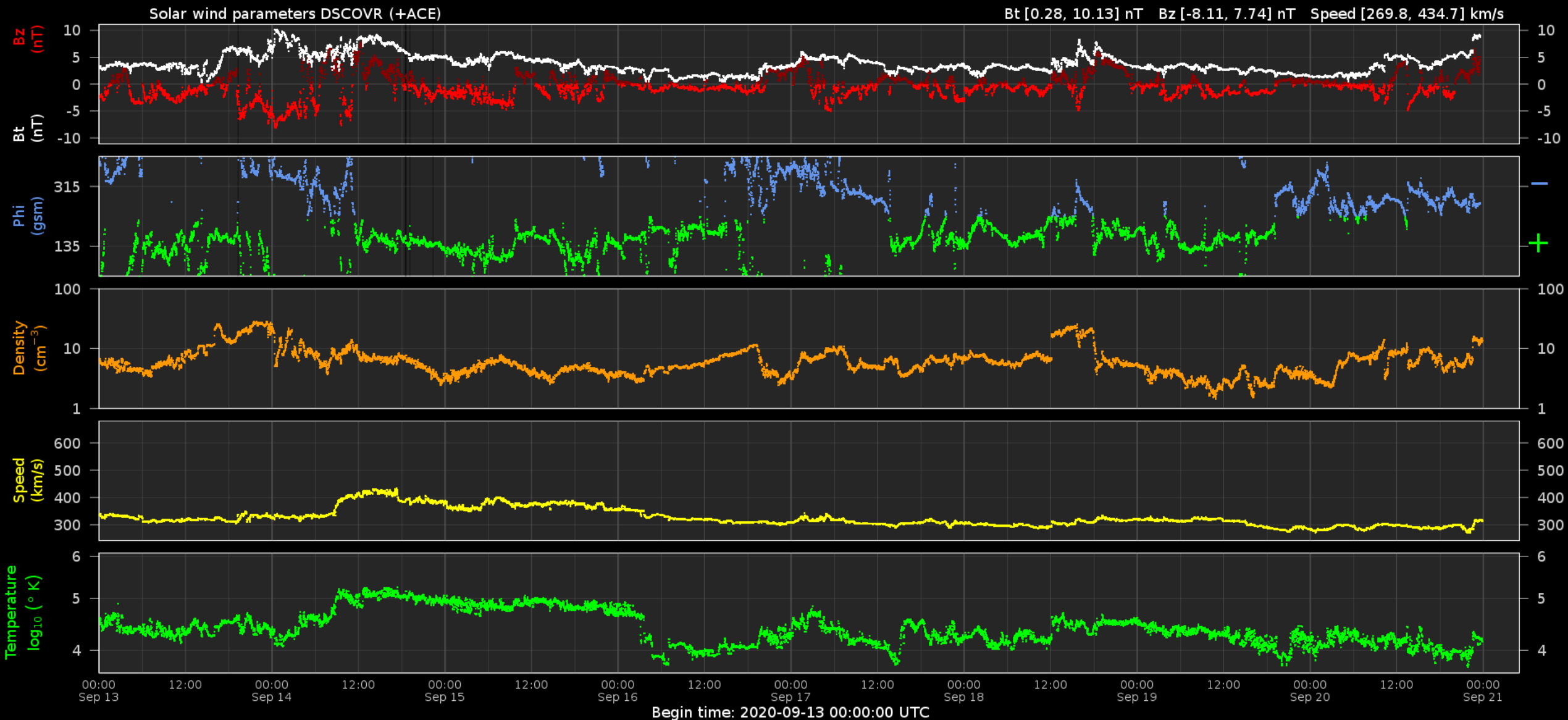
Solar Wind and Geomagnetic Activity



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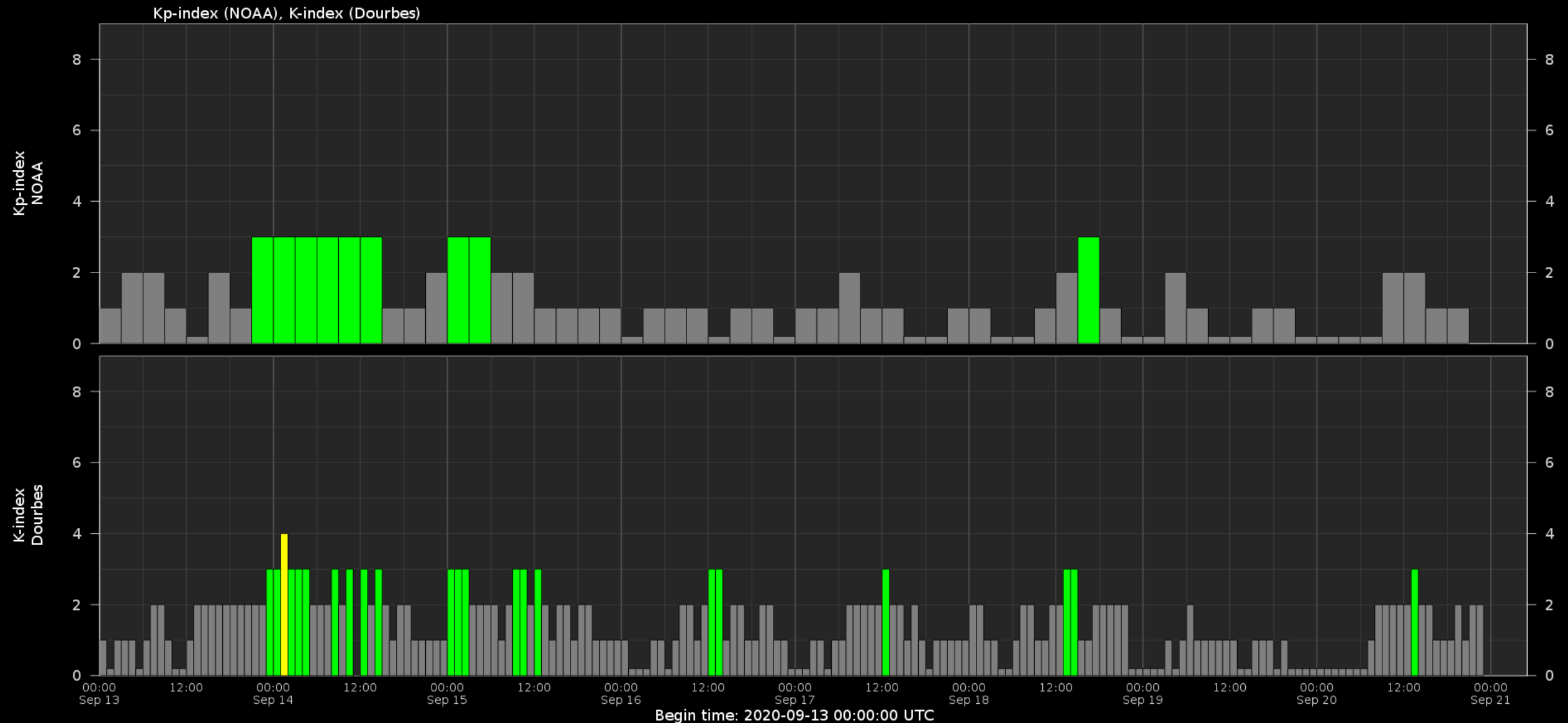
Solar wind parameters (DSCOVR data)



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



Geomagnetic activity (K-indexes)



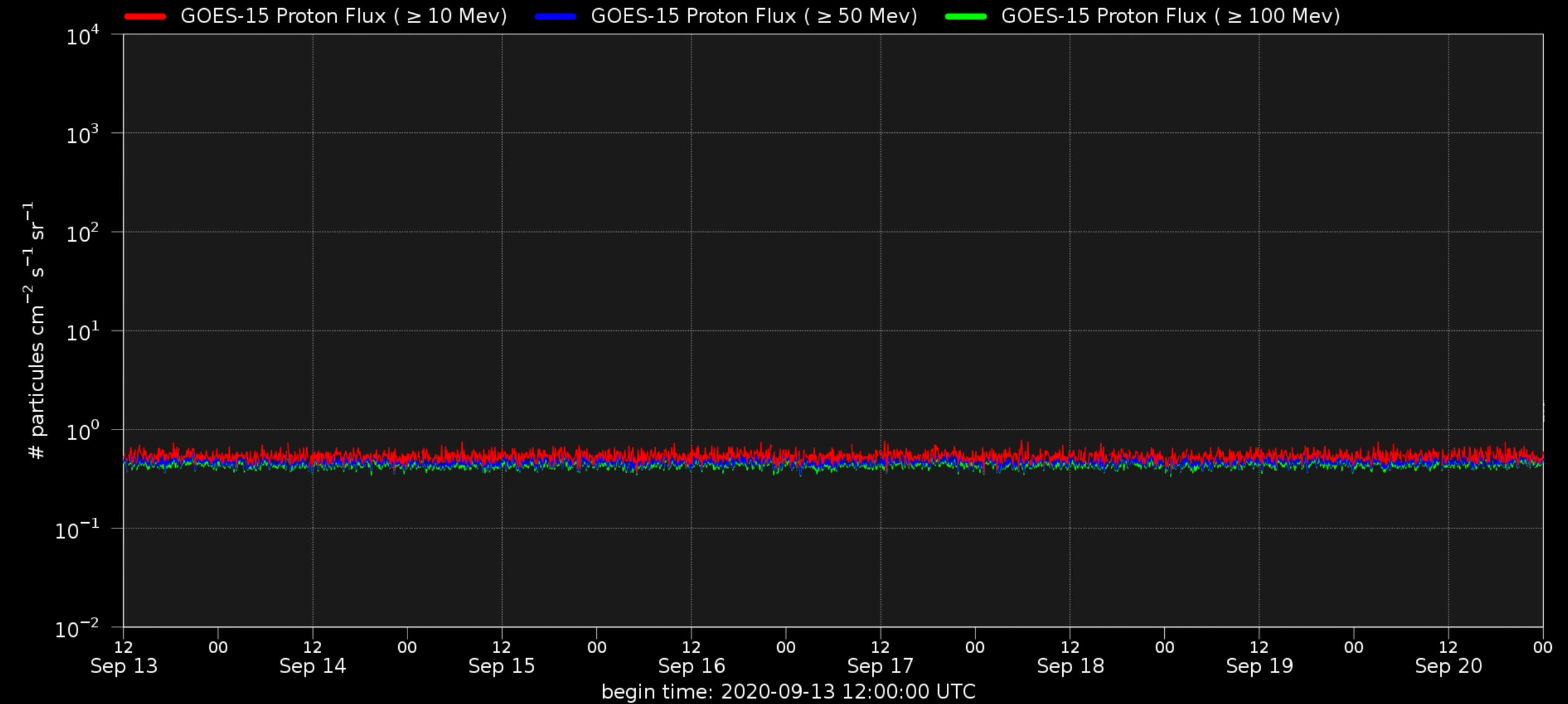
Solar Energetic Particles



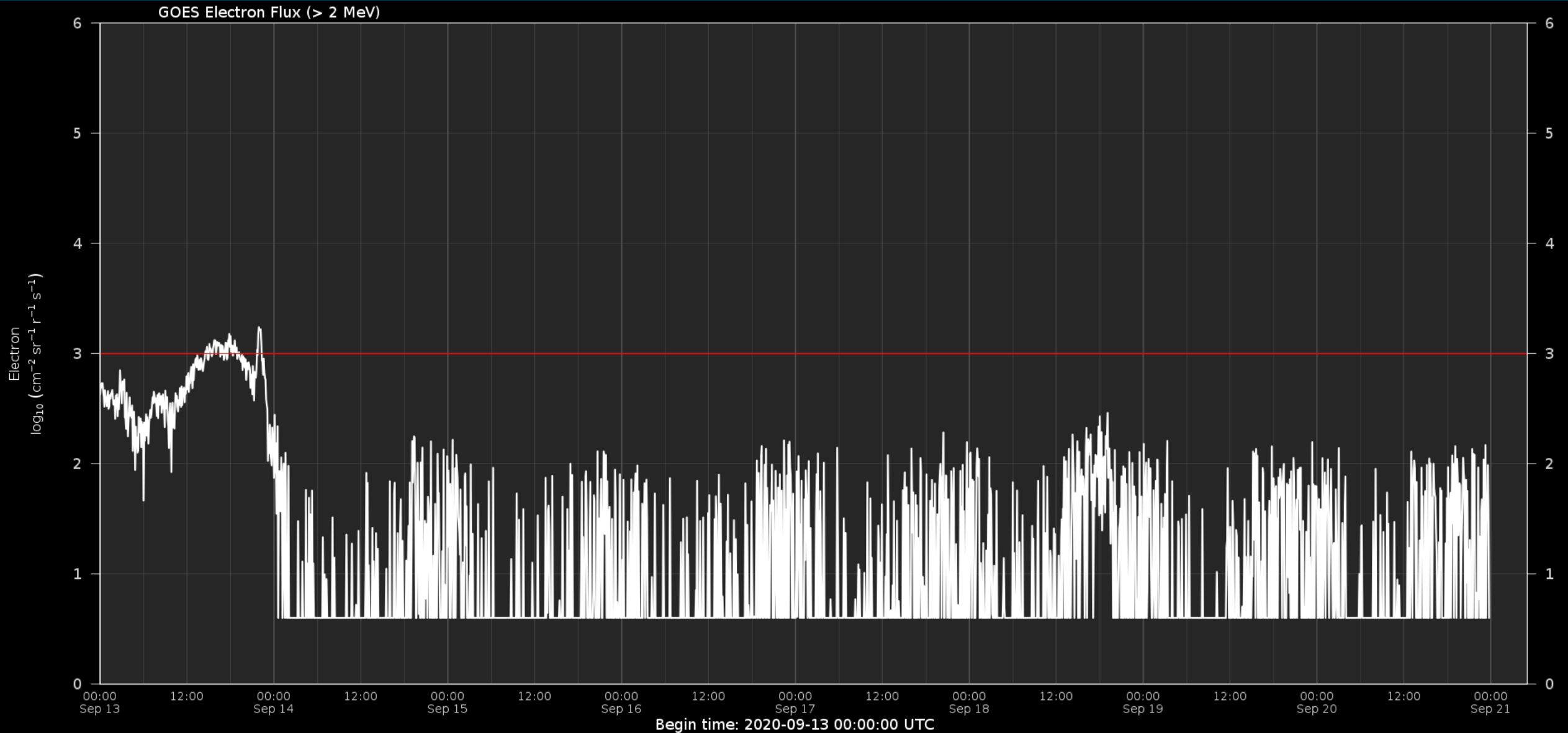
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Solar proton flux



Solar electron flux



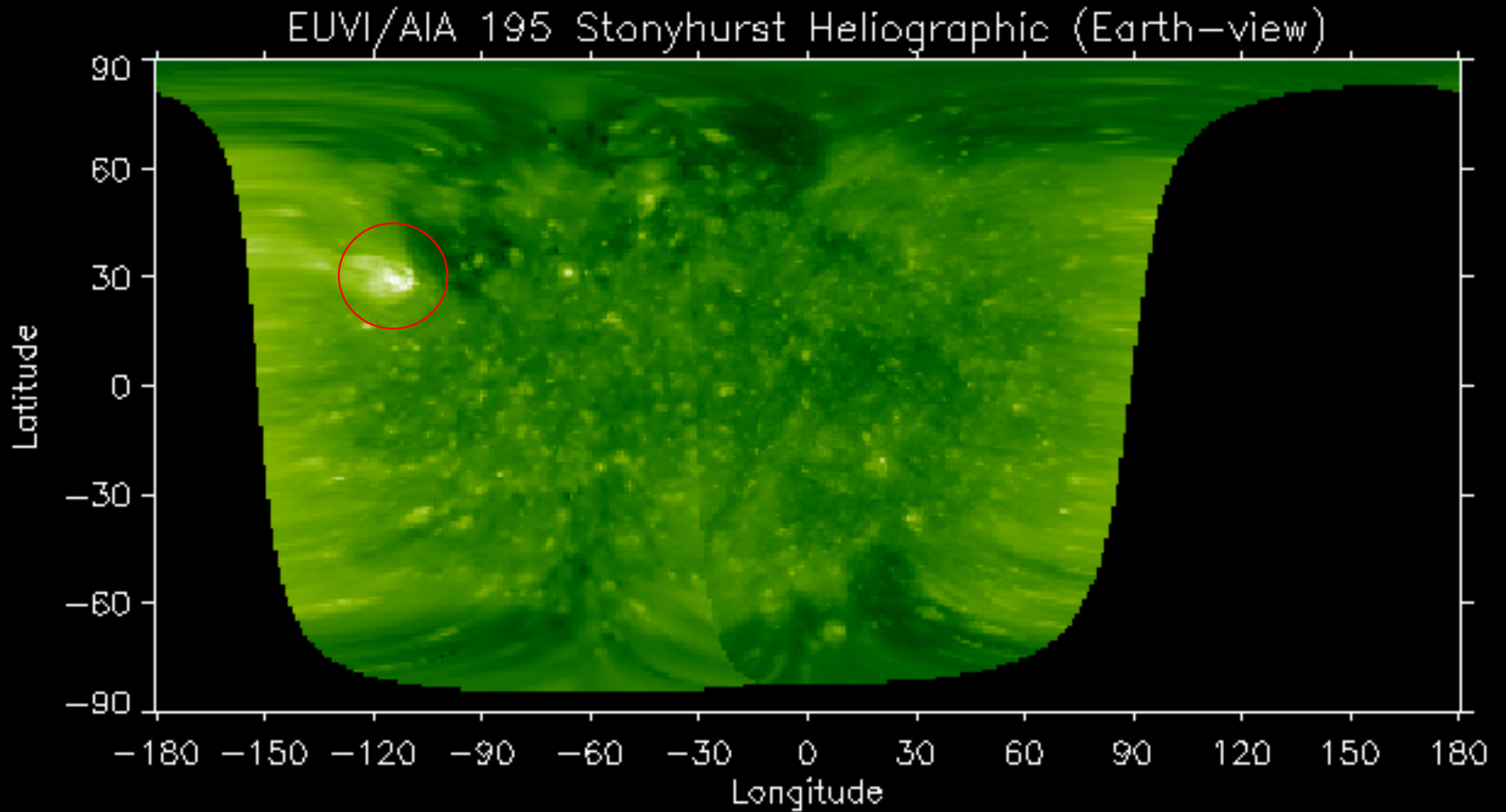
Outlook



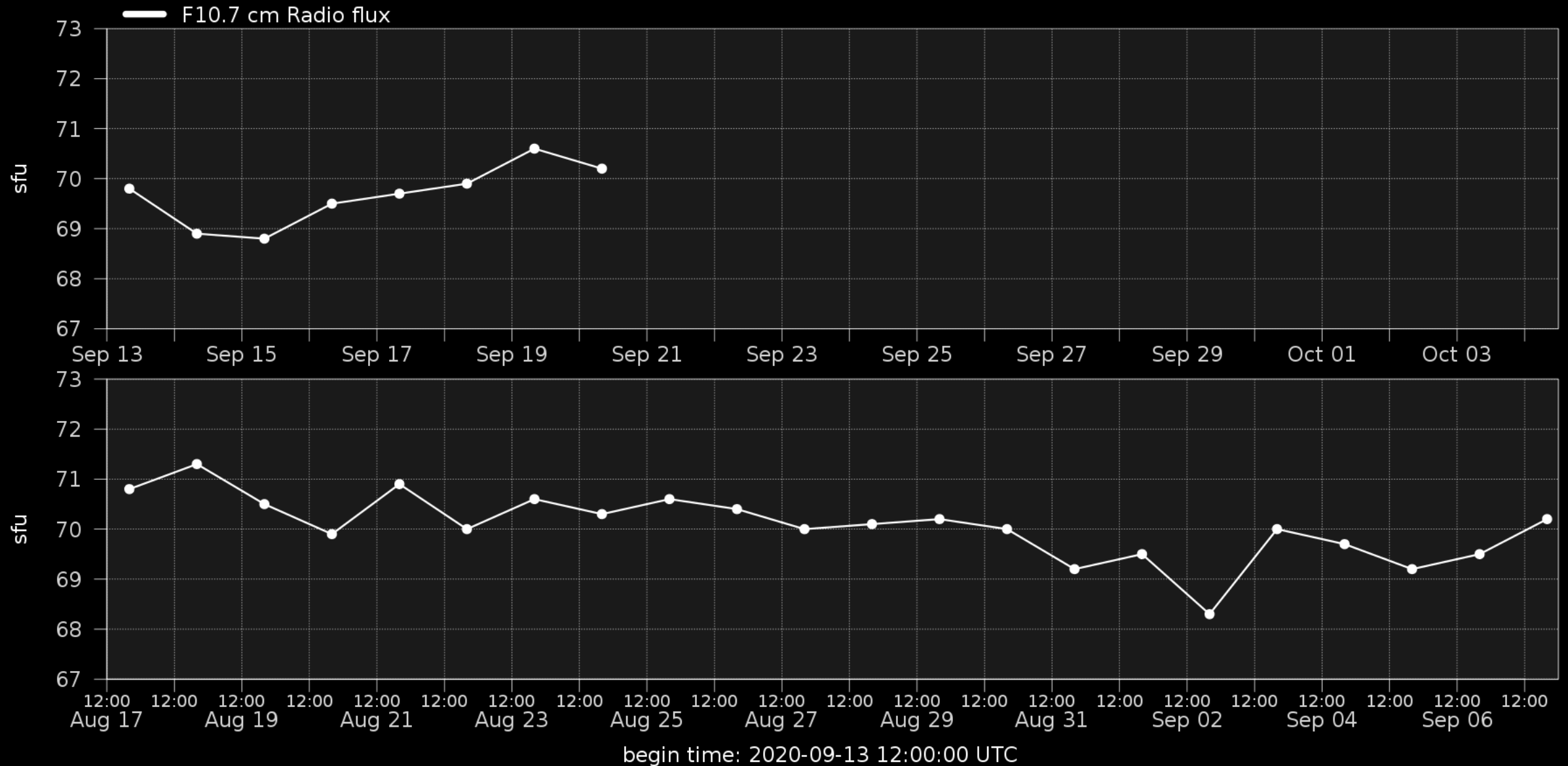
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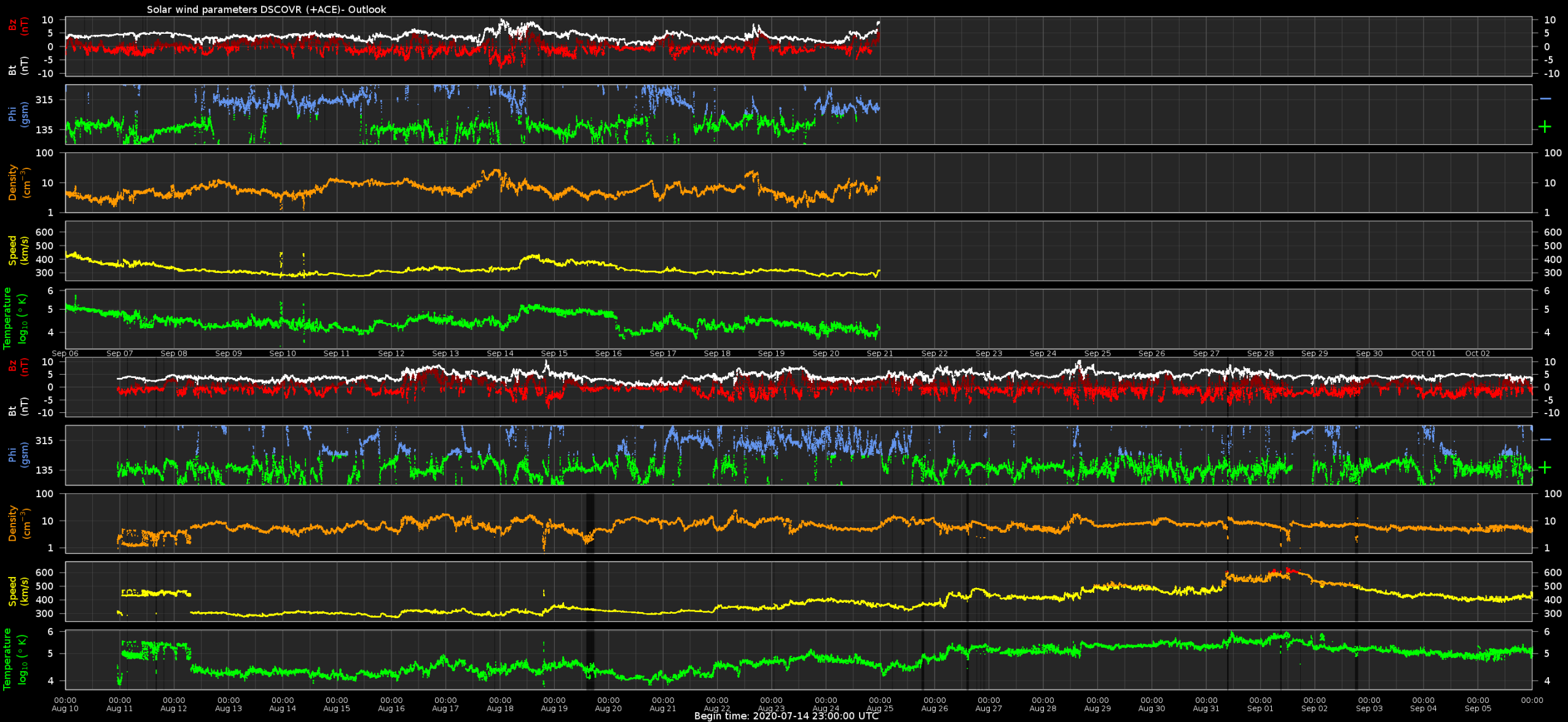
Outlook: Solar activity



Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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