

SIDC Space Weather Briefing

25 July 2021 - 01 August 2021

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& the SIDC forecaster team



Royal Observatory
of Belgium

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Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2021-07-25 12:00 to 2021-08-01 23:59

Active regions	Several mostly quiet regions (Catania sunspot group 22-25 / NOAA AR 2846-2849)
Flares	# C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filament eruptions	Several Filament eruptions with faint CMEs
Coronal Holes	Positive polarity northern polar CH, that crossed the central meridian on July 24

Proton flux	Quiet
Electron flux	< 1000 pfu

Solar wind and geomagnetic conditions

ICME	None
SW Conditions	B : 0.48 - 17.89 nT // Bz: -11.26 nT to 14.62 nT // Speed: 289.0 - 574.2km/s
K-indices	max K-index (Dourbes): 4 max Kp-index (NOAA): 4

All Quiet Alert: All quiet for the week

Solar Activity

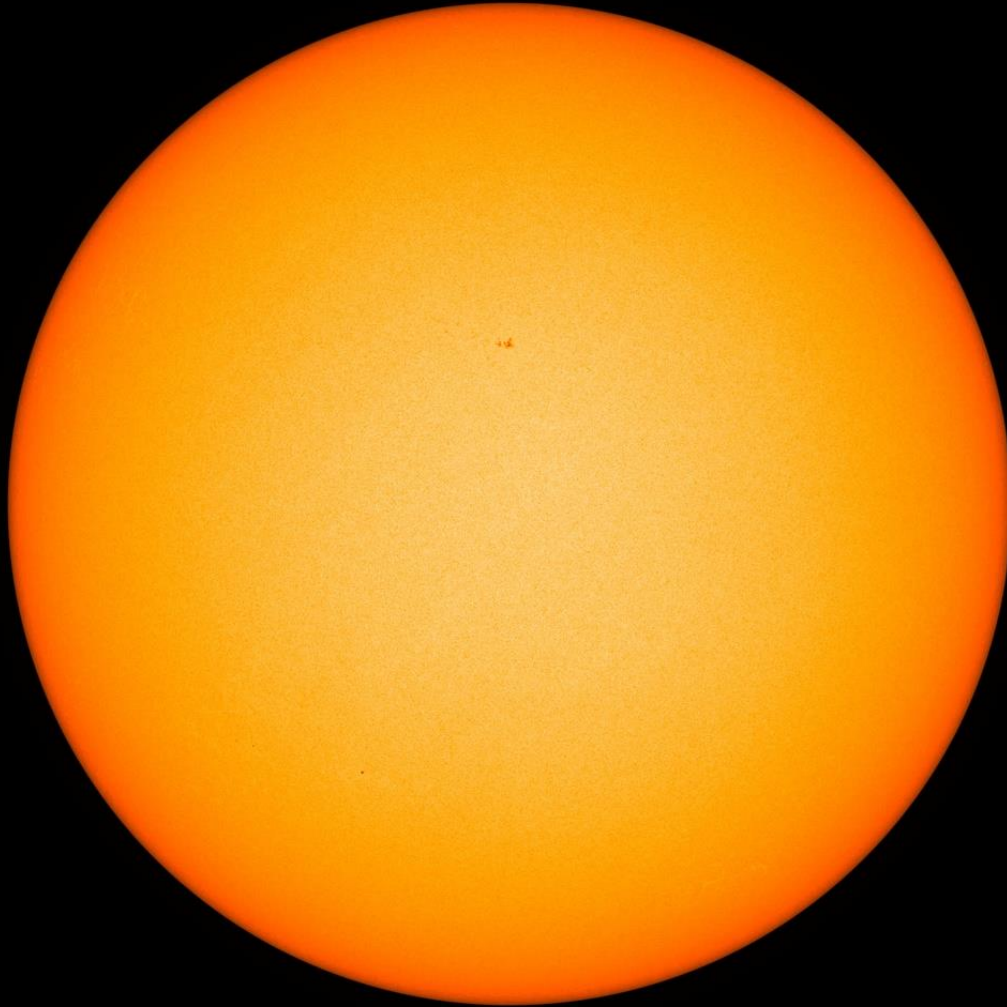


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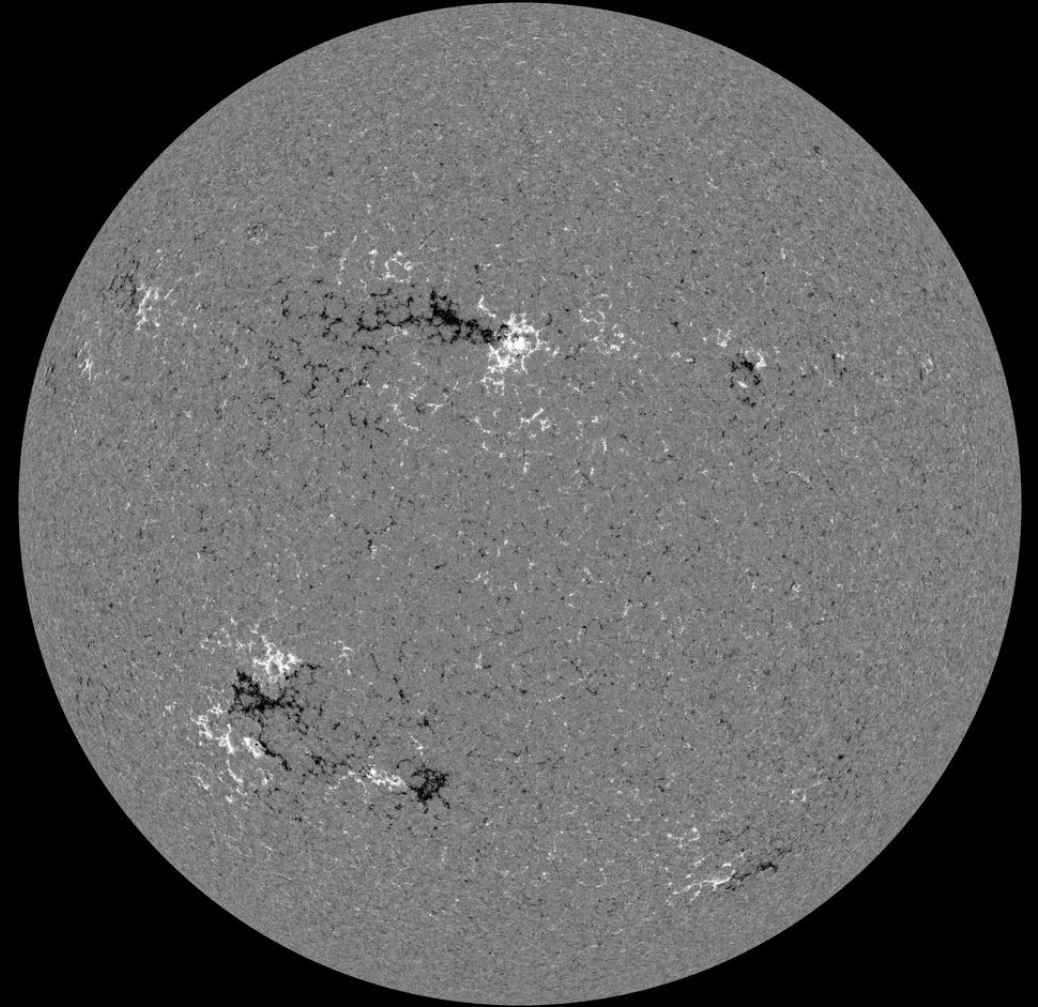
Solar active regions

SDO/HMI White Light 2021-07-25



SDO/HMI Quick-Look Continuum: 20210725_114500

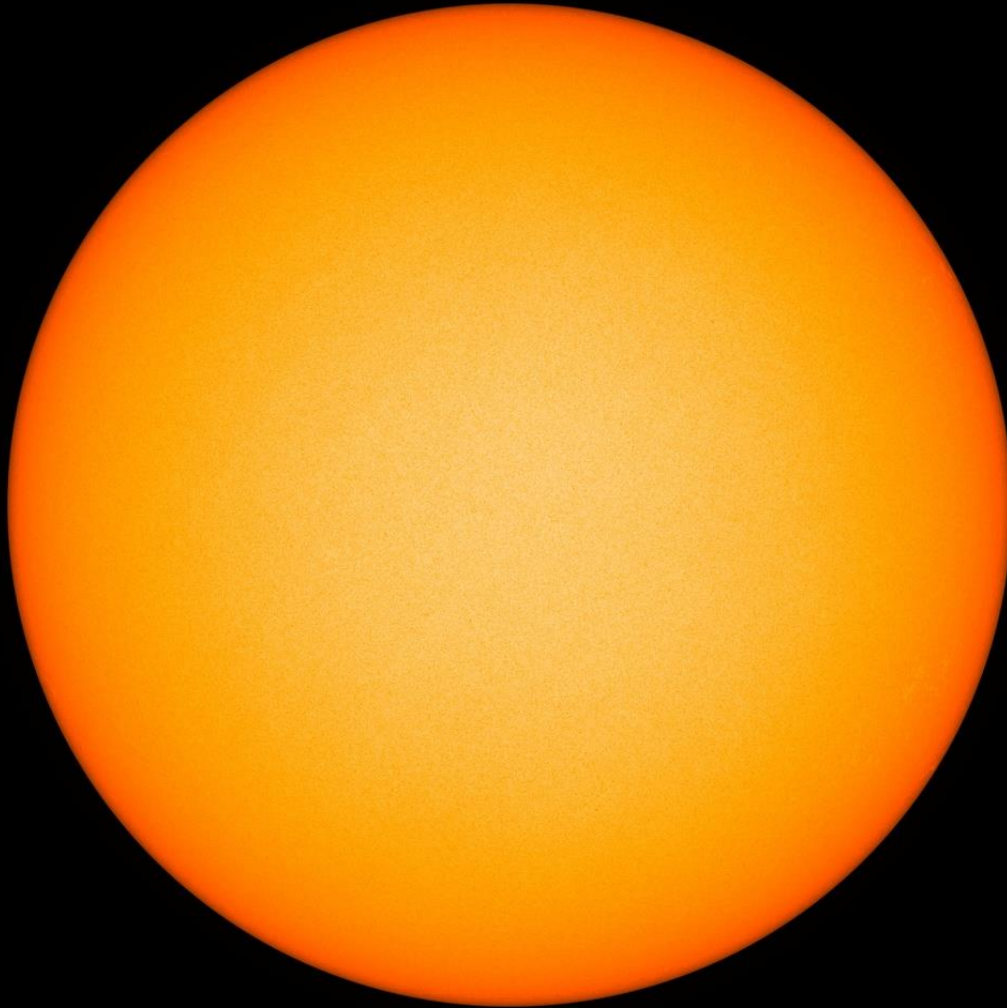
SDO/HMI Magnetogram 2021-07-25



SDO/HMI Quick-Look Magnetogram: 20210725_114500

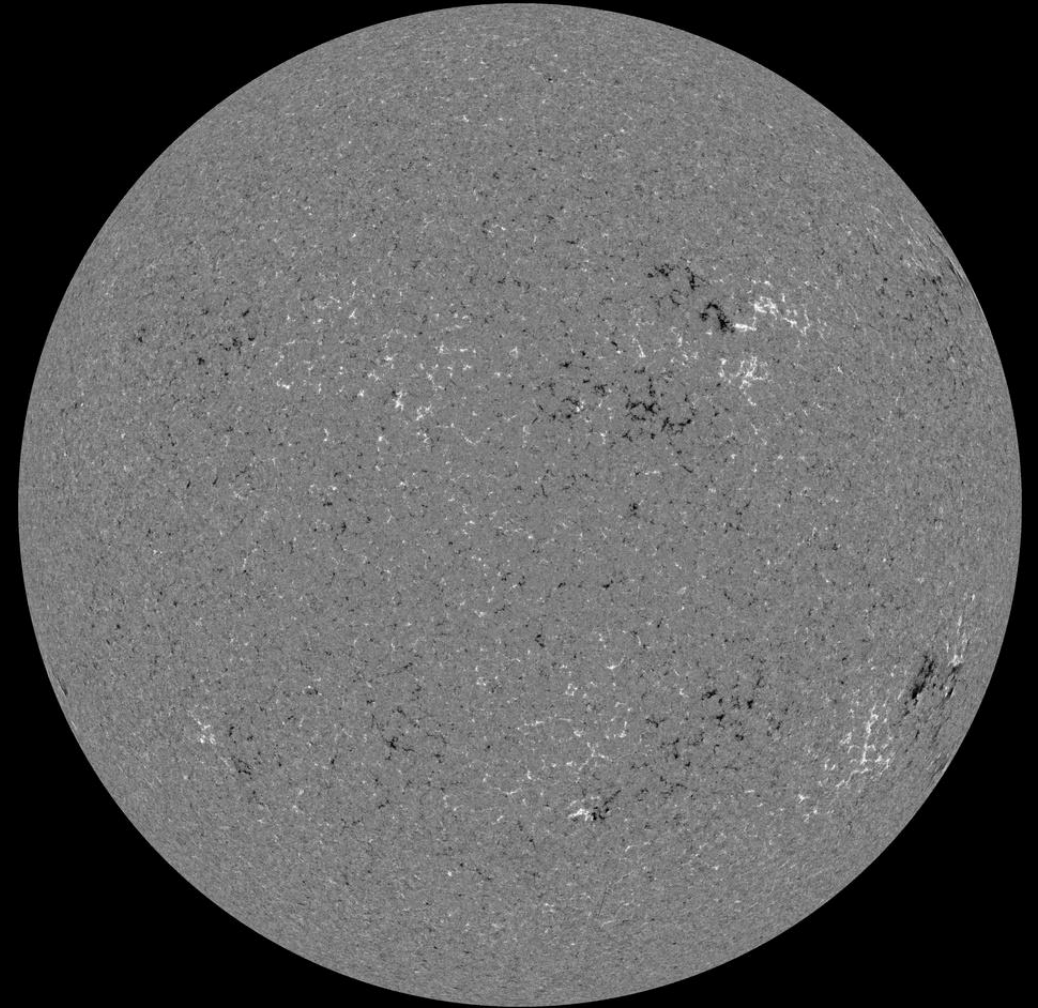
Solar active regions

SDO/HMI White Light 2021-08-01



SDO/HMI Quick-Look Continuum: 20210801_114500

SDO/HMI Magnetogram 2021-08-01

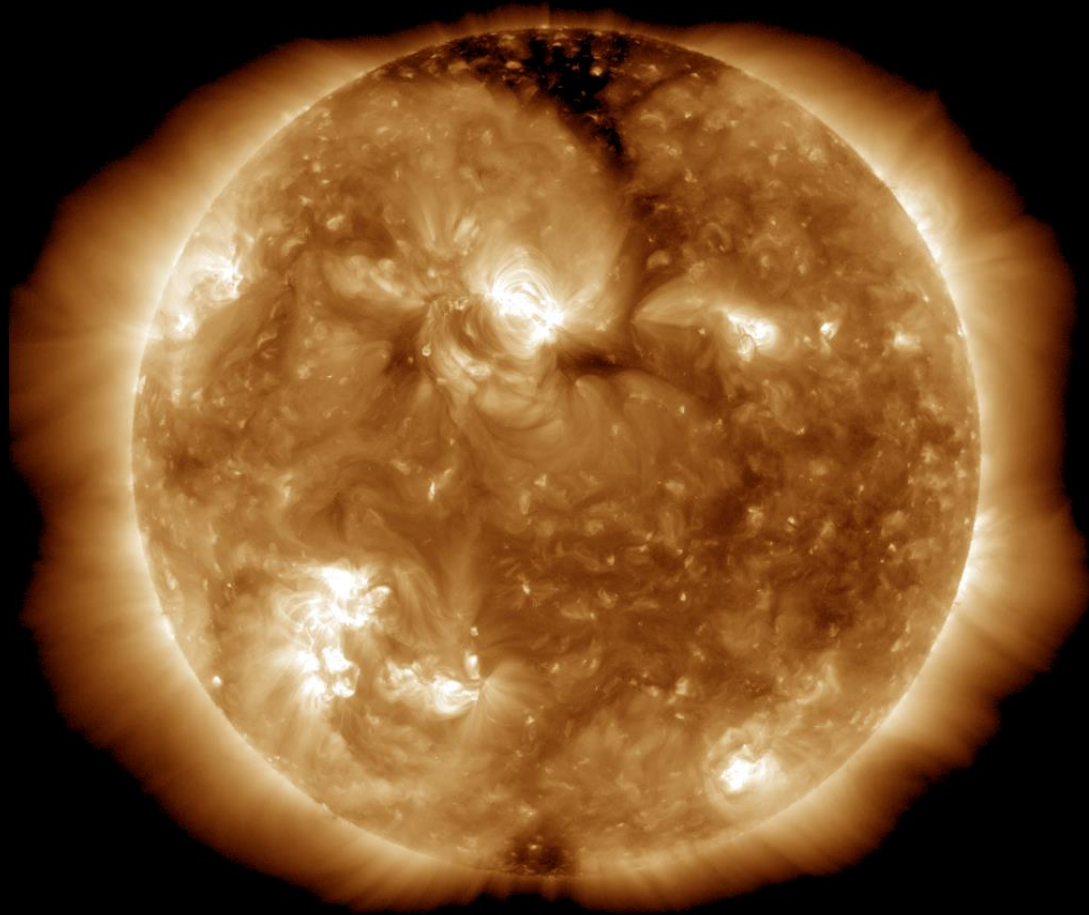


SDO/HMI Quick-Look Magnetogram: 20210801_114500

Coronal holes

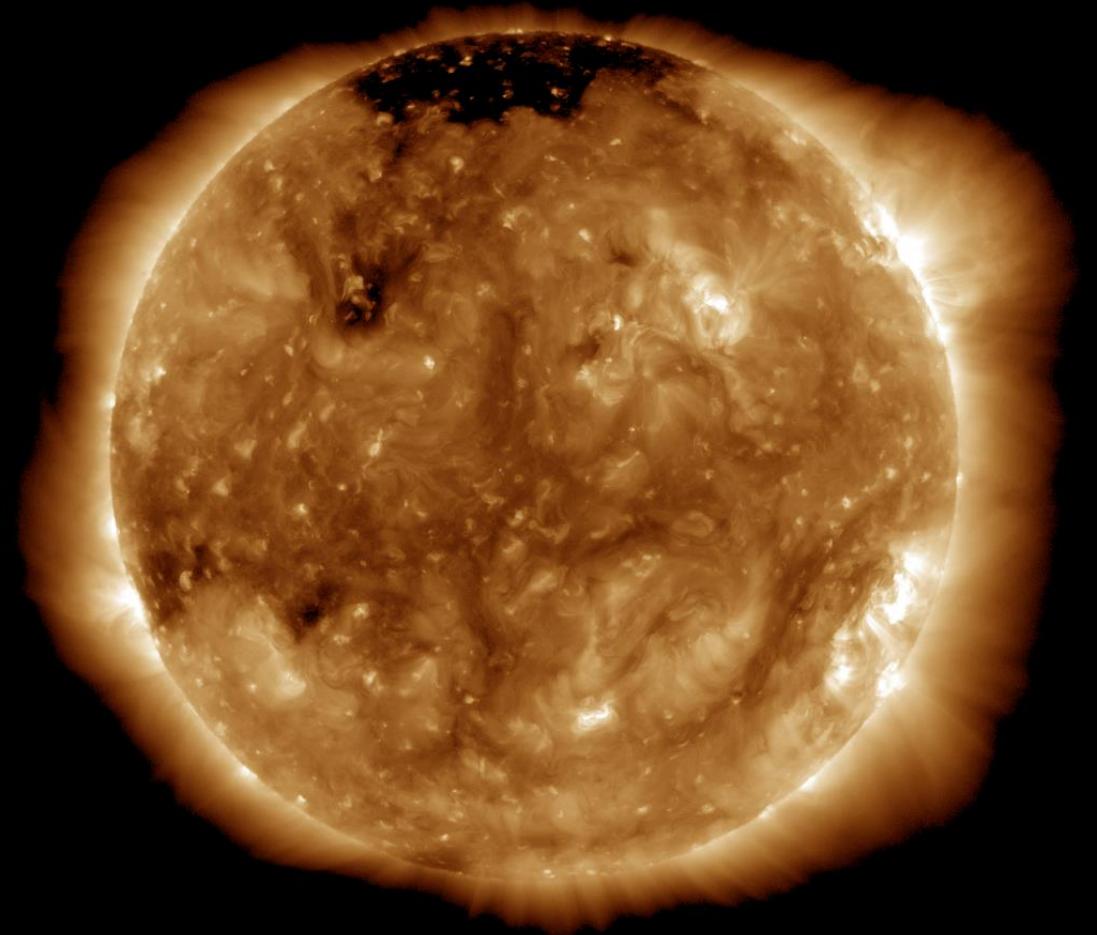
SDO/AIA 19.3 nm 2021-07-25

SDO/AIA AIA 193Å 2021-07-25T12:00:05.843

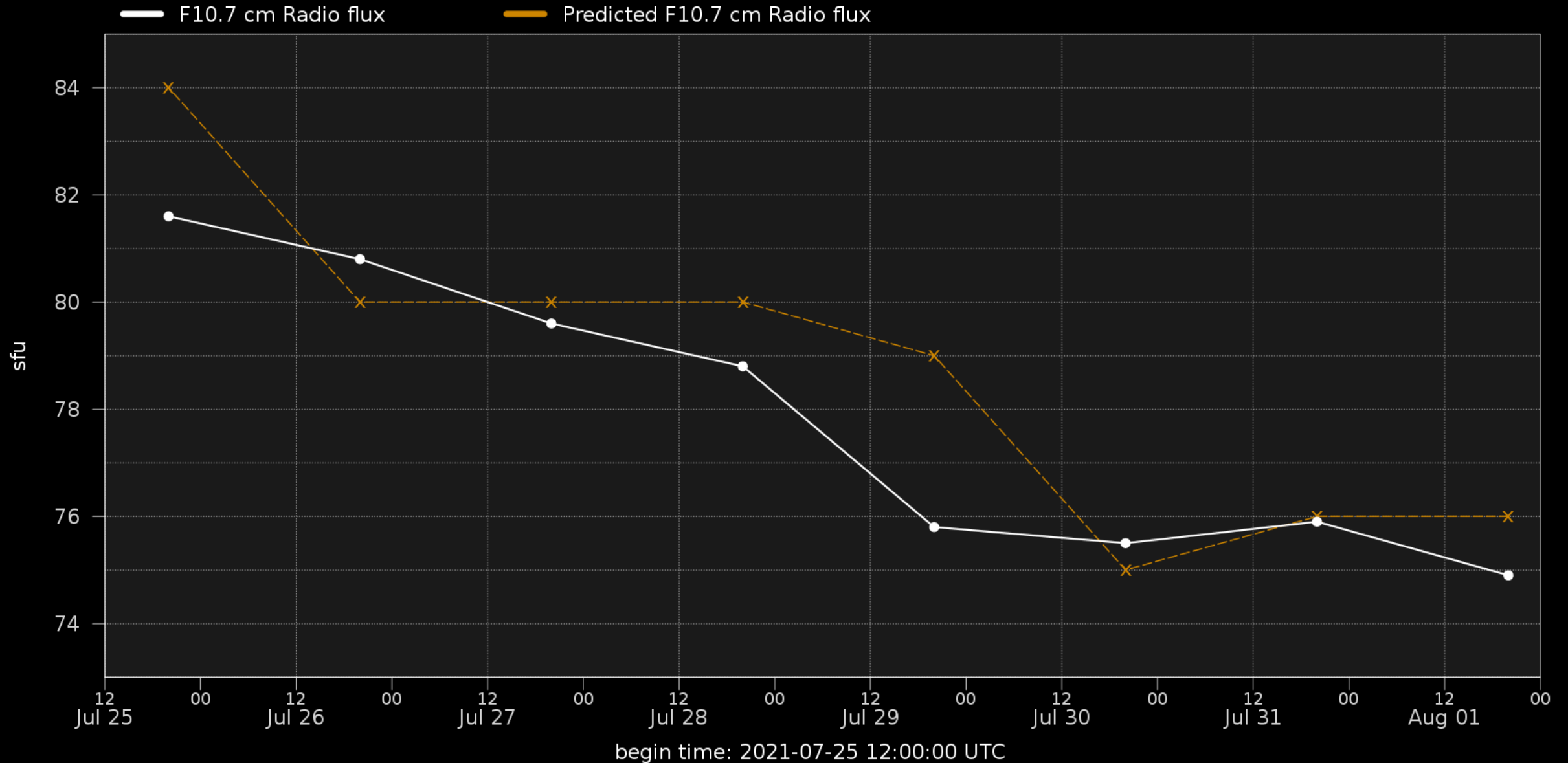


SDO/AIA 19.3 nm 2021-08-01

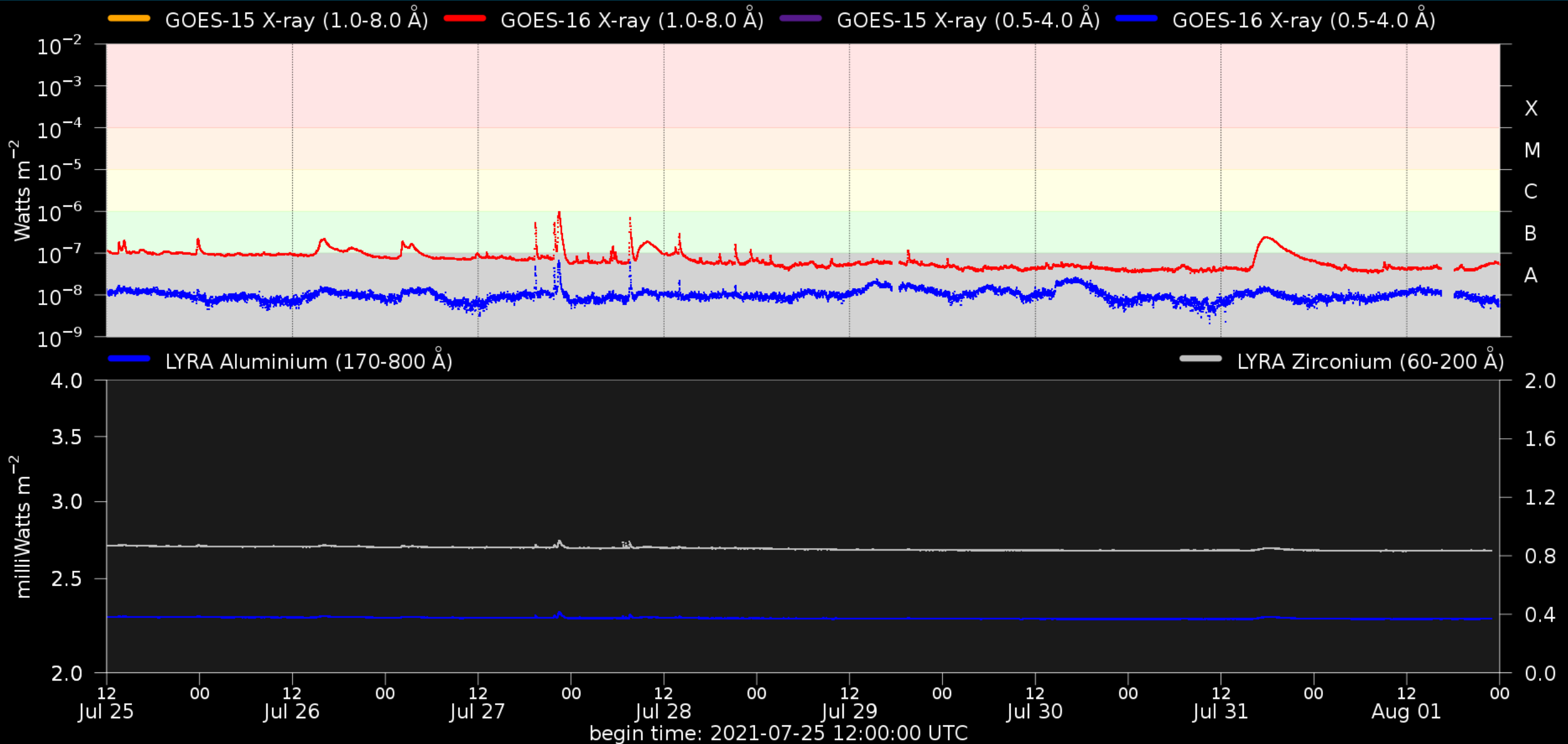
SDO/AIA AIA 193Å 2021-08-01T12:00:05.843



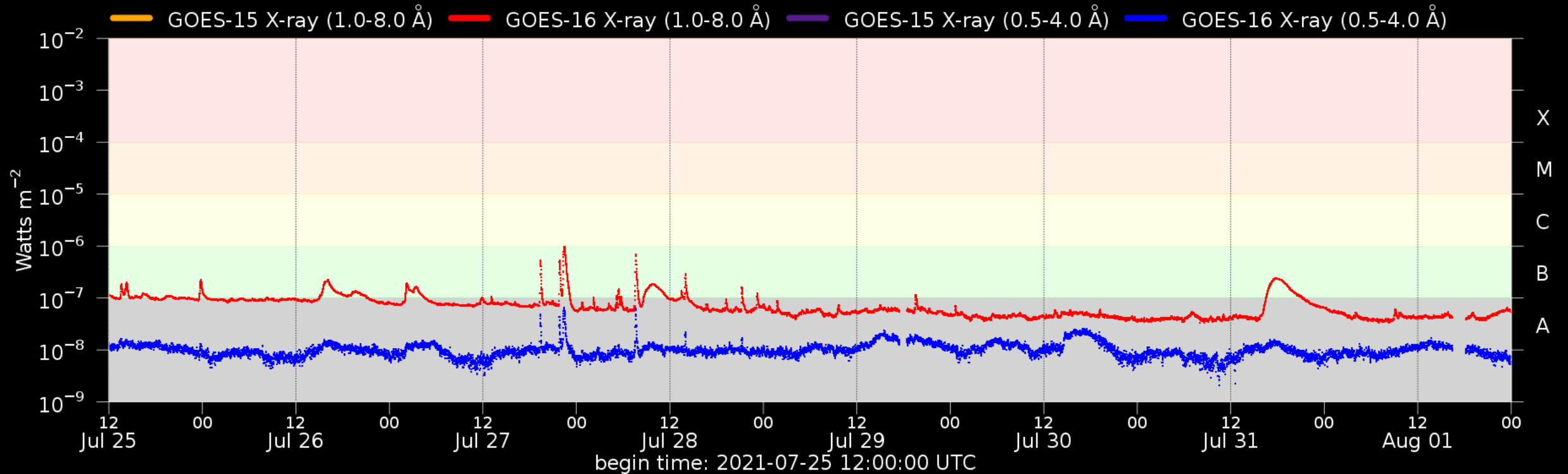
Solar F10.7cm radio flux



Solar X-Ray and UV flux



Flaring activity



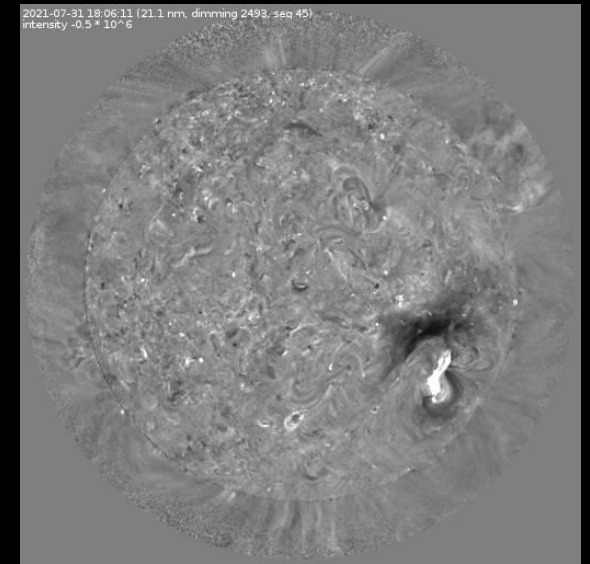
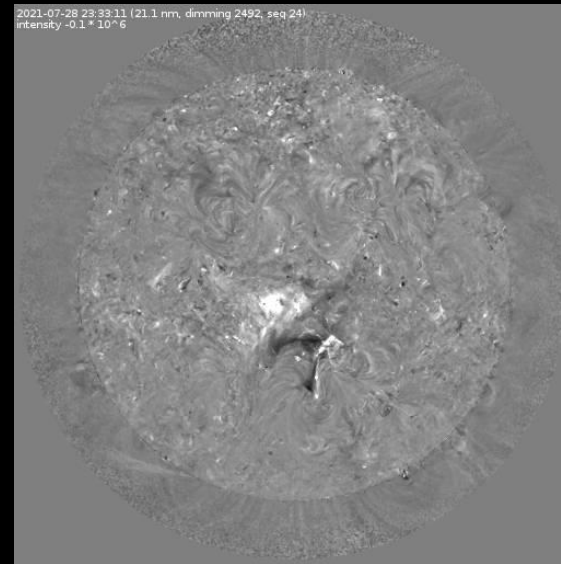
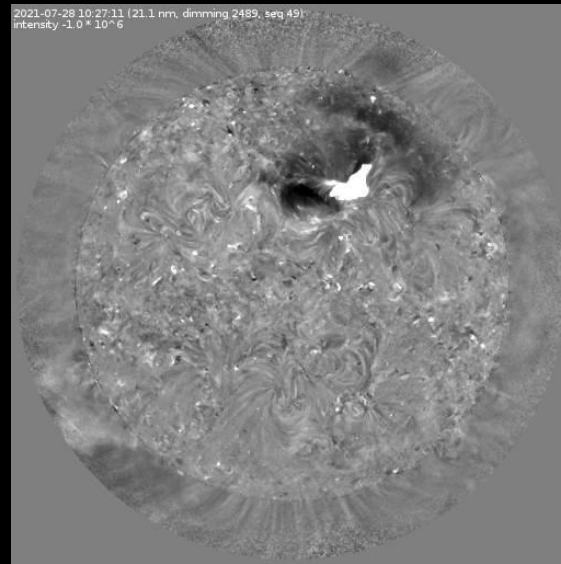
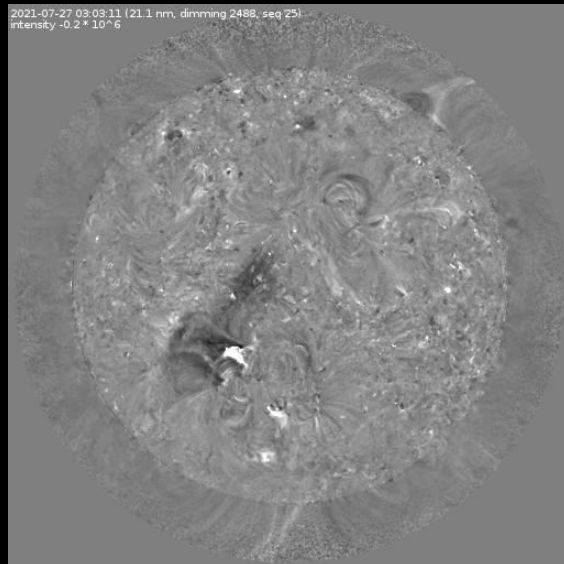
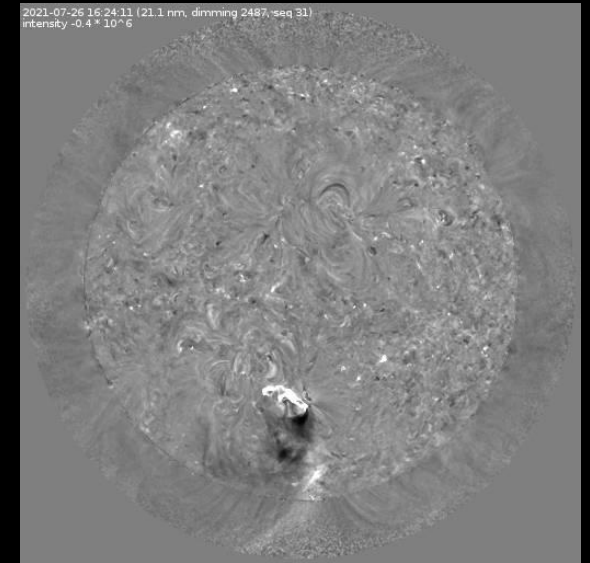
Probabilities (%) and occurrences (#) of C/M/X-flares daily, from noon to noon:

Issue date	2021-07-25	2021-07-26	2021-07-27	2021-07-28	2021-07-29	2021-07-30	2021-07-31	2021-08-01
Probability (%)	45 01 01	20 01 01	10 01 01	10 01 01	05 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

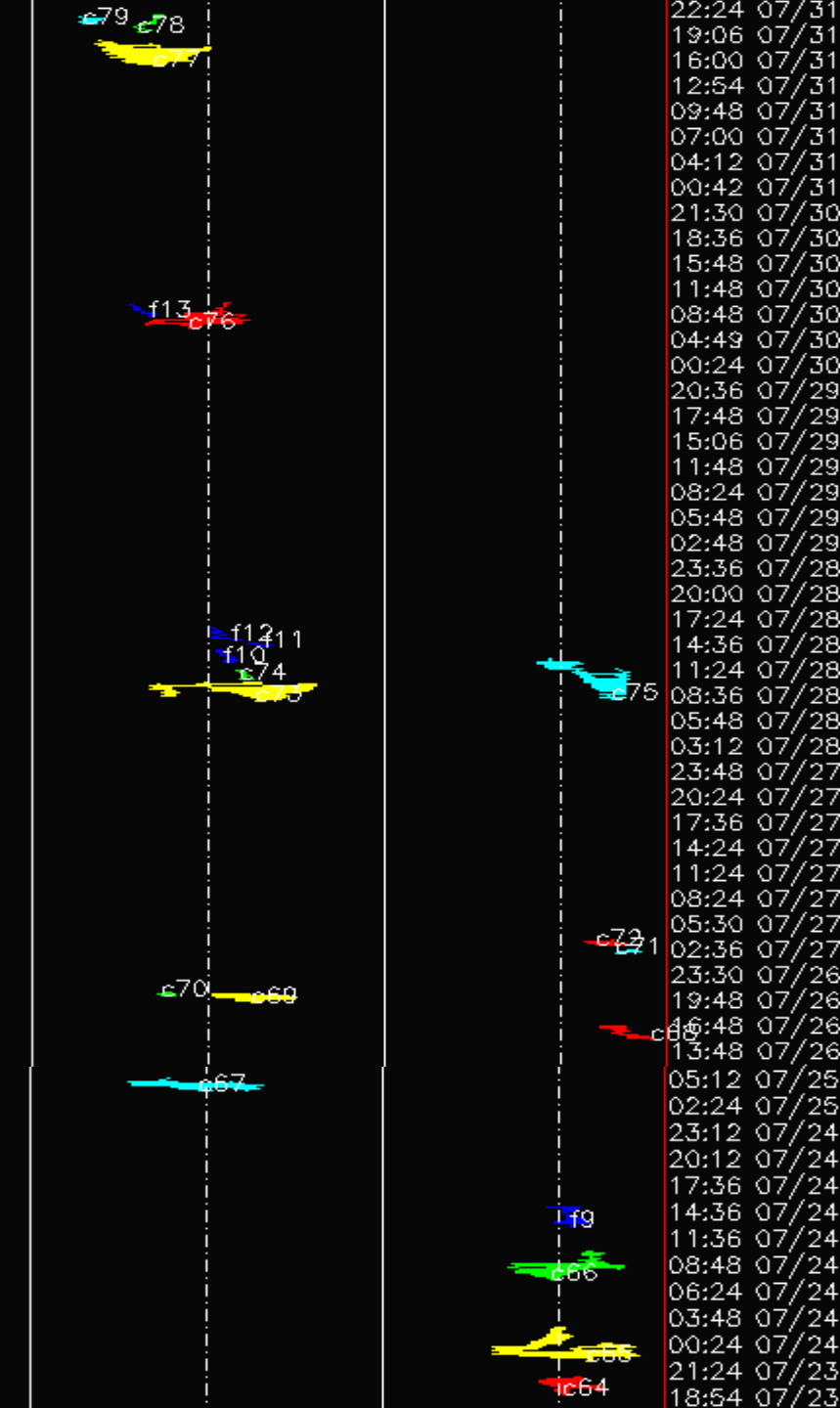
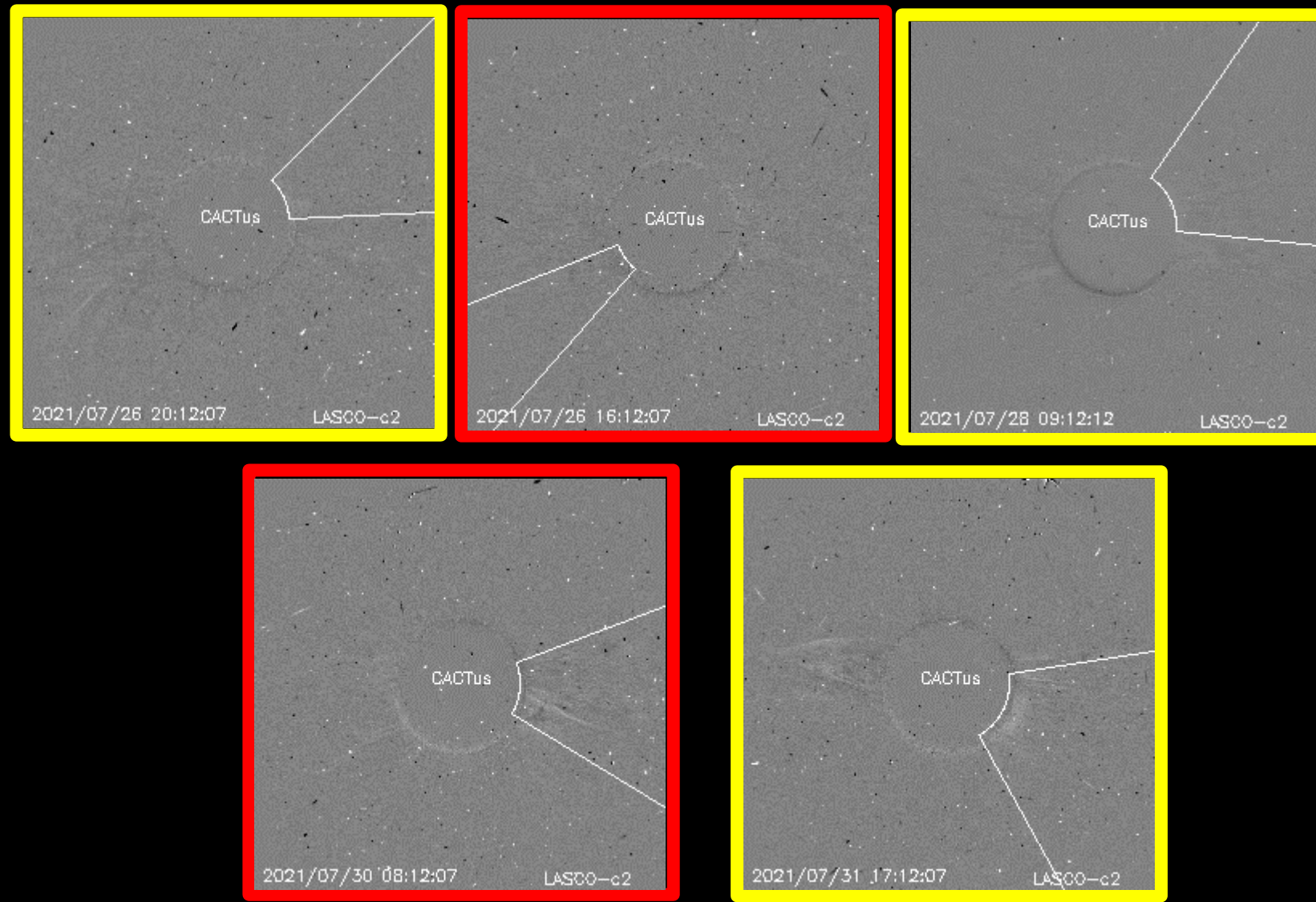
Coronal Mass Ejections - Dimmings

<https://wwwbis.sidc.be/solardemon/dimmings.php>

	intensity	start	peak	end	#	max drop	lat	lon	dist. R _☉	AR	count	flare
July, 2021												
31	-496	16:09	17:30	18:06	2493	33	-12	40	0.70		45	
28	-113	22:39	22:57	23:45	2492	57	-15	7	0.37	AR 2847	28	
28	-1,031	08:18	08:48	10:27	2489	68	34	13	0.52	AR 2846	49	B2
27	-249	02:06	02:21	03:21	2488	99	-11	-20	0.44	AR 2847	31	B1
26	-370	15:09	15:42	16:33	2487	51	-33	-1	0.63	AR 2847	34	



Coronal Mass Ejections



Solar Wind and

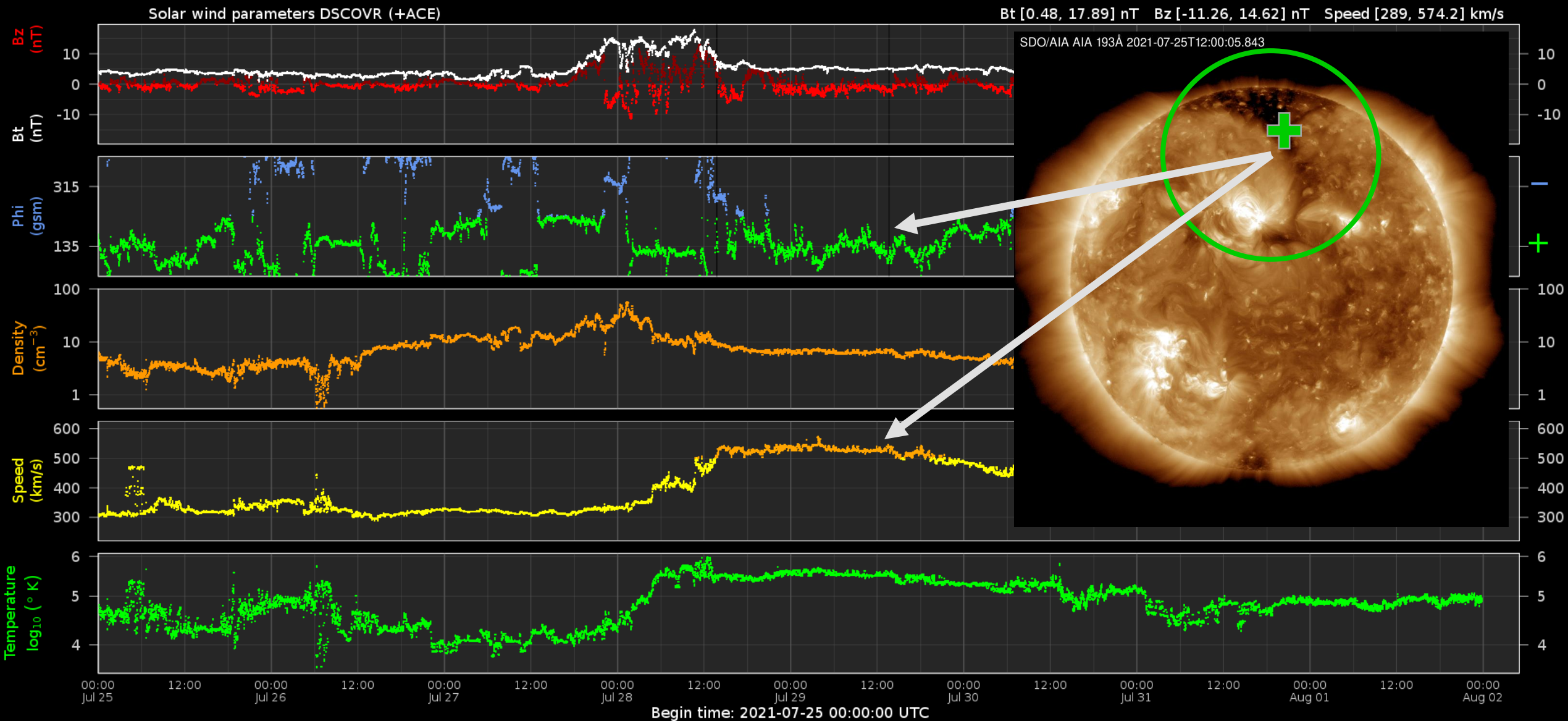
Geomagnetic Activity



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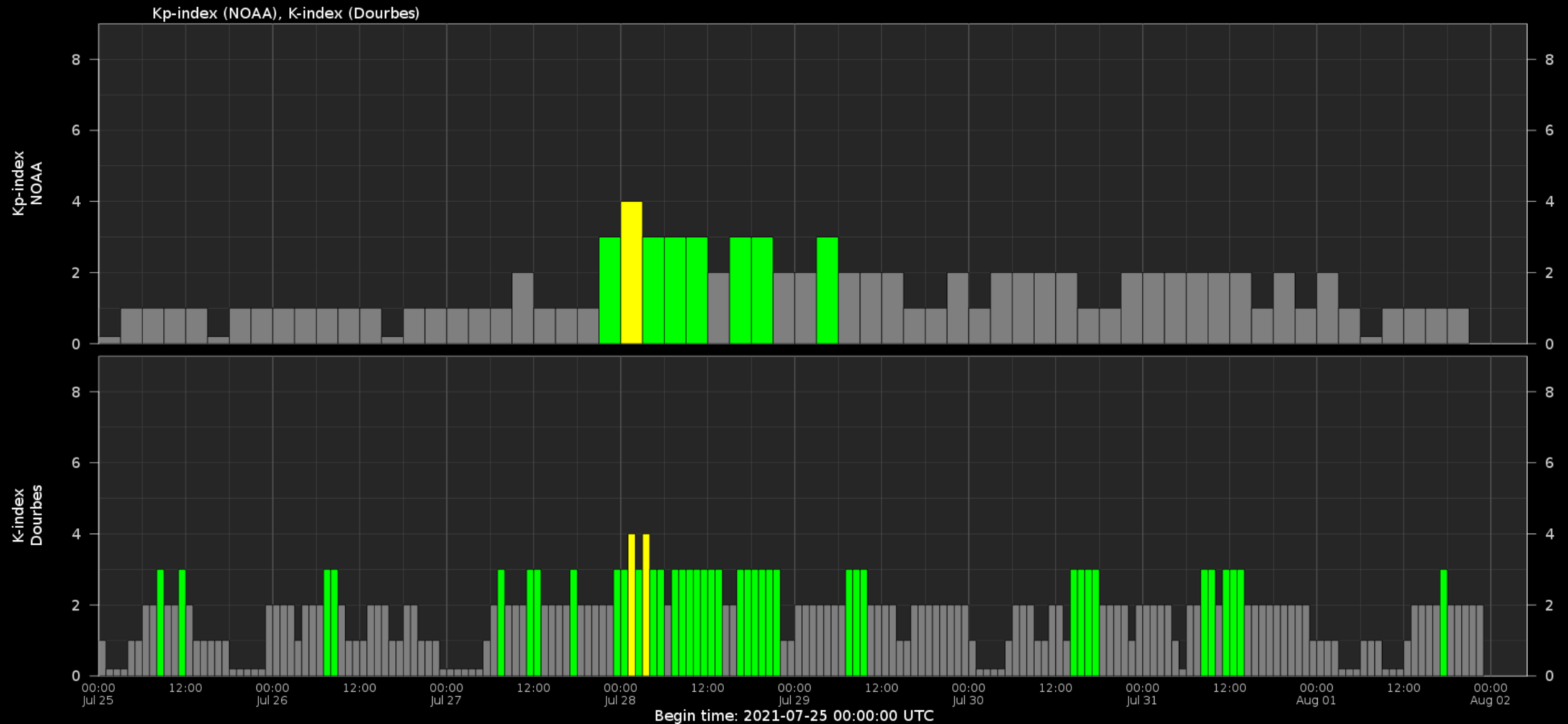
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



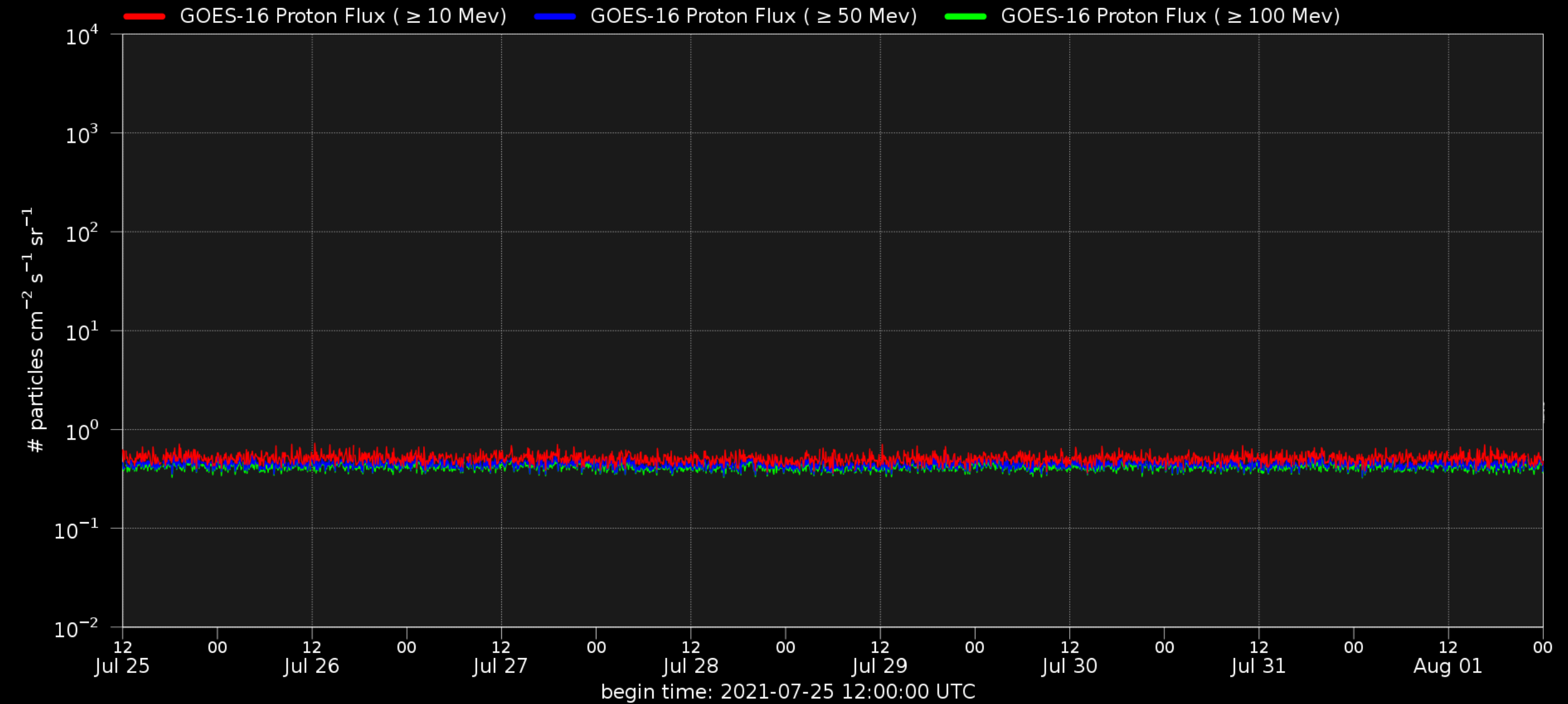
Energetic Particles



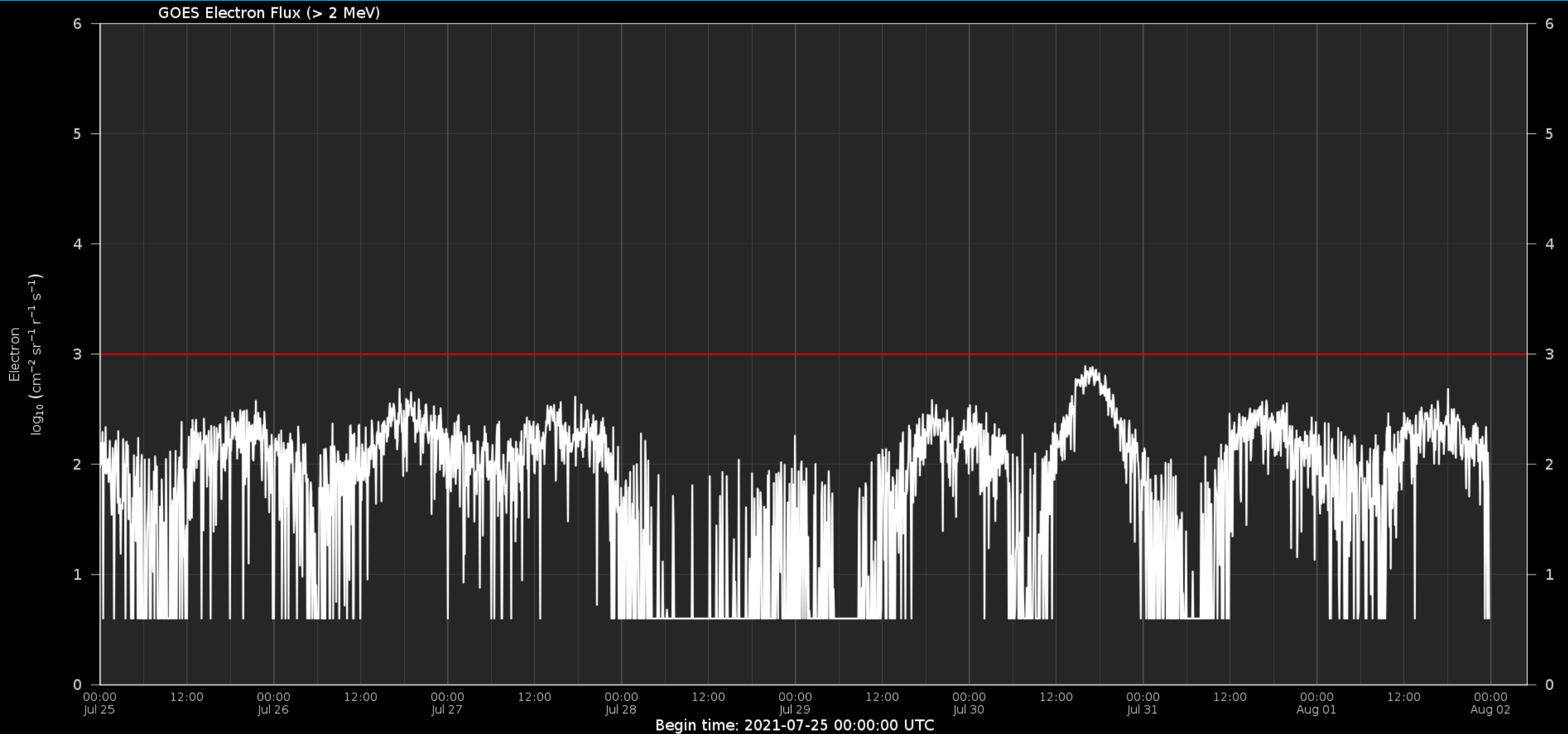
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Solar proton flux



Electron flux at GEO



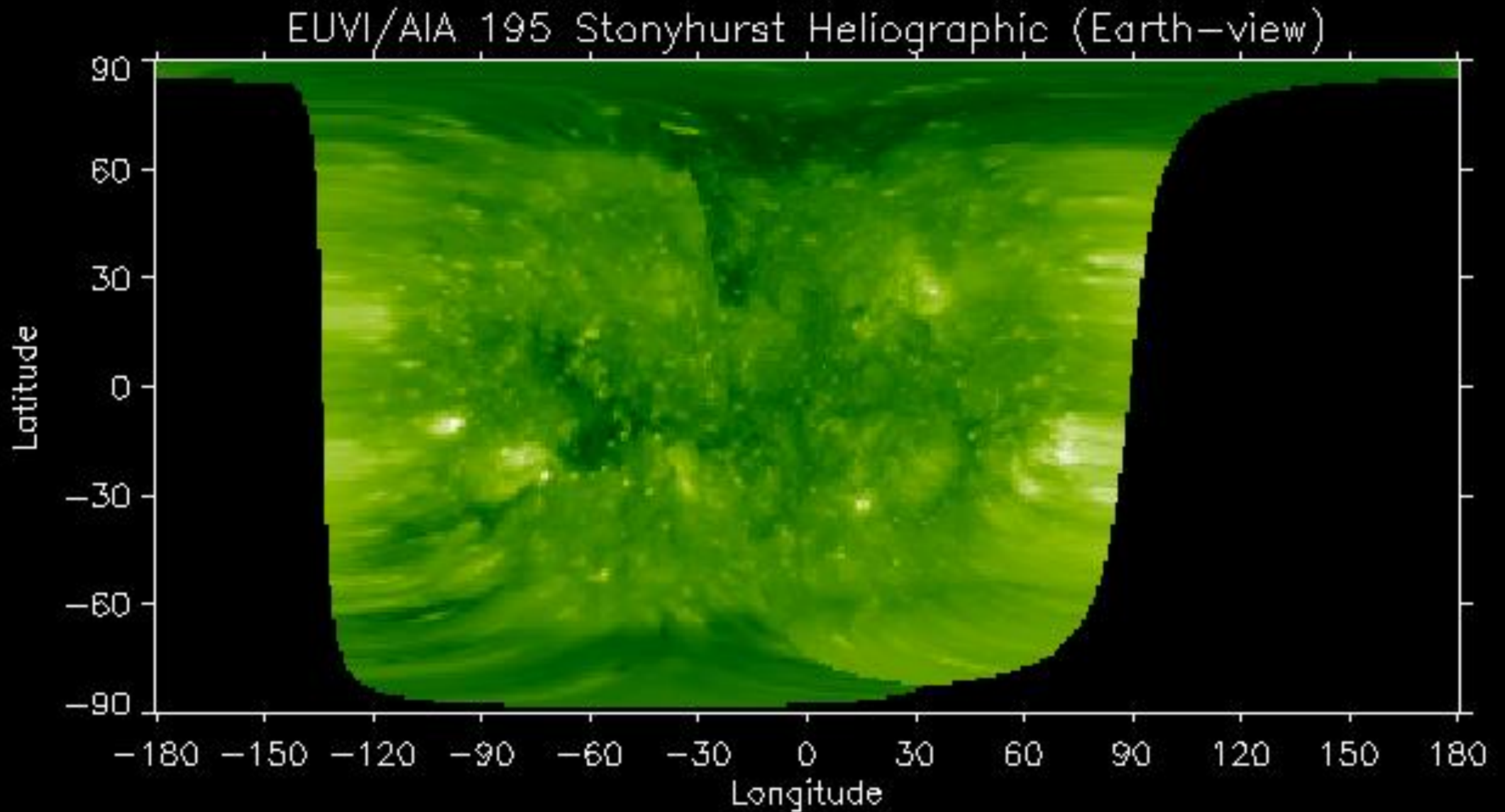
Outlook



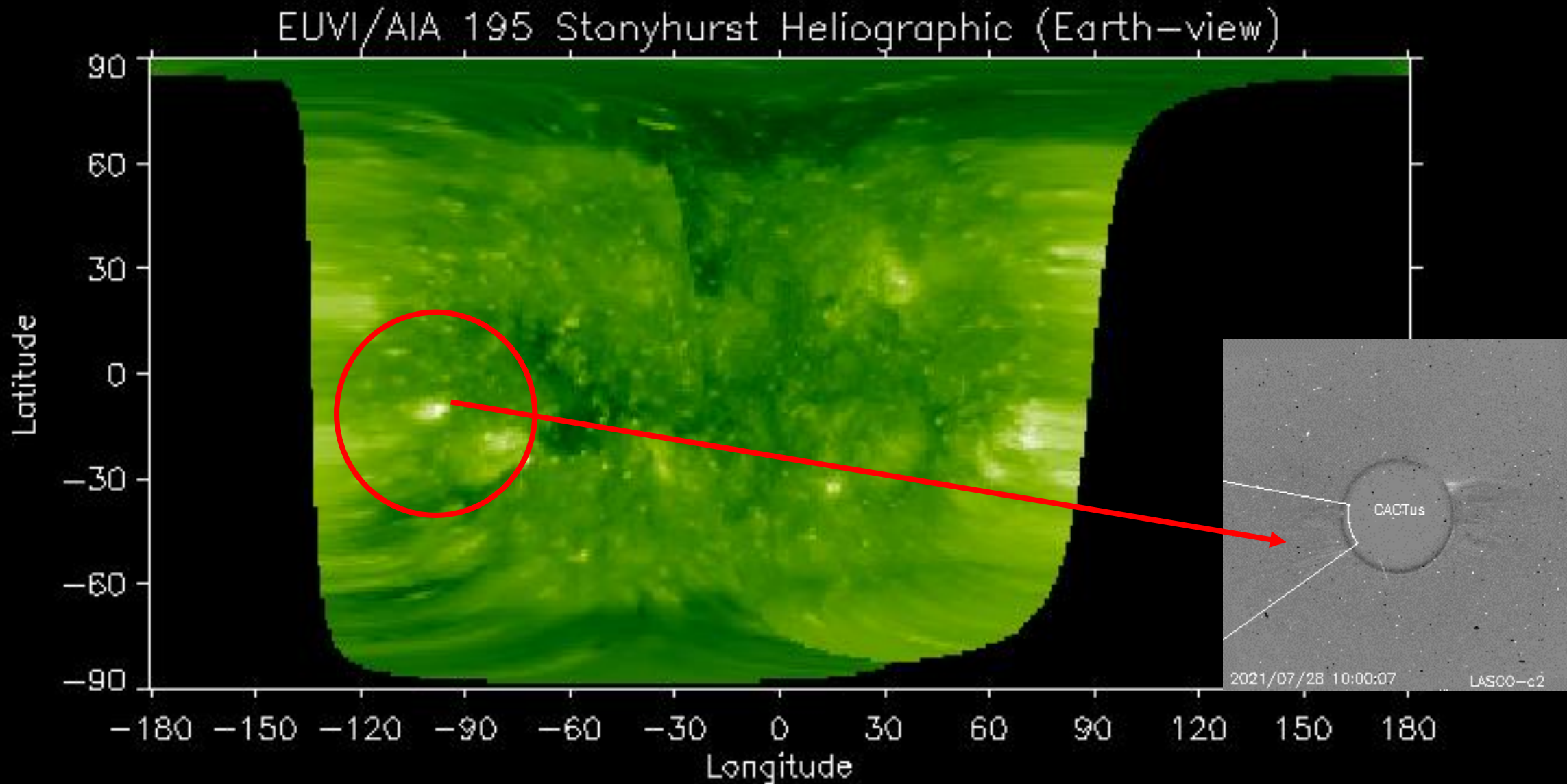
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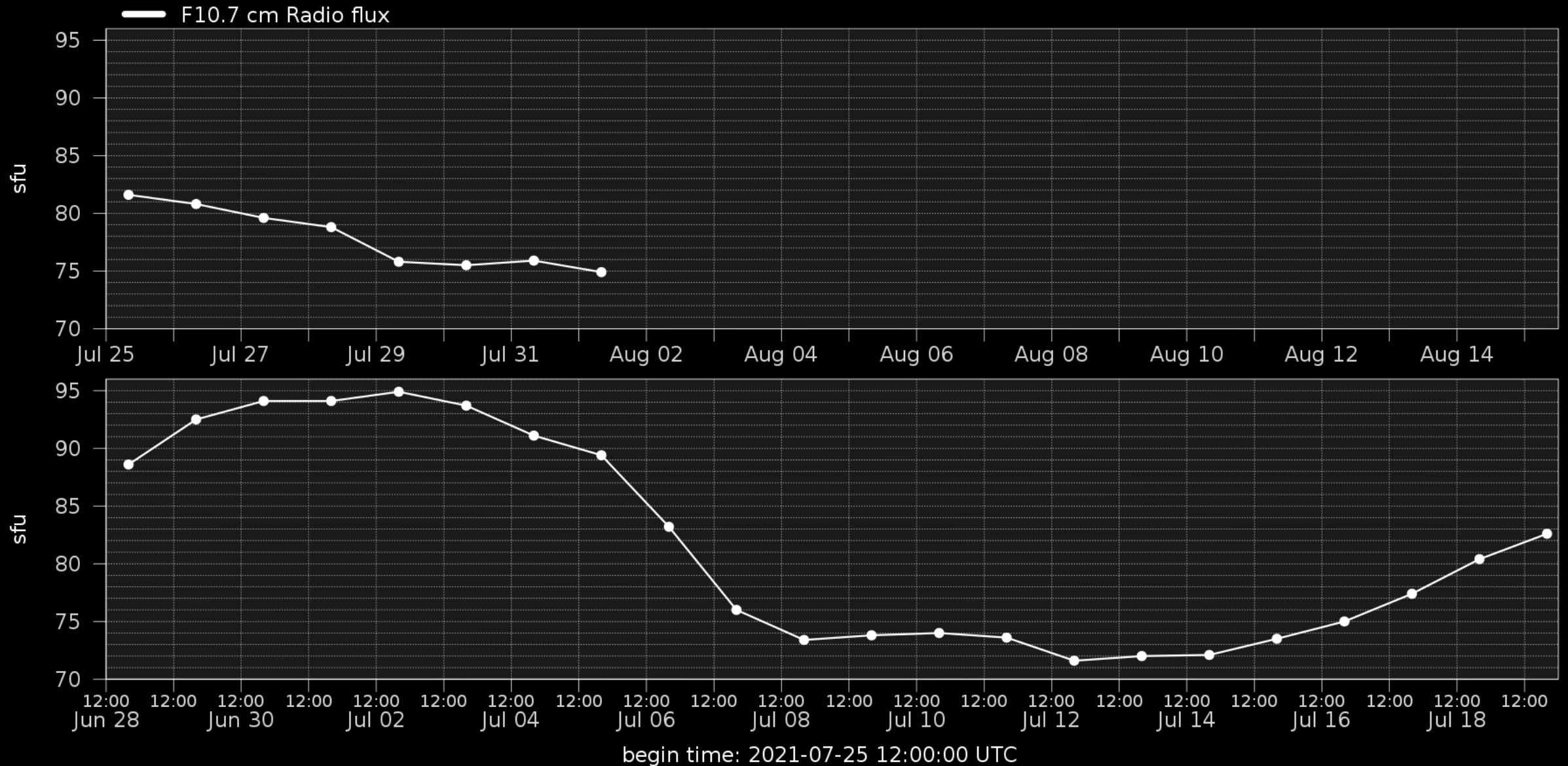
Outlook: Solar activity



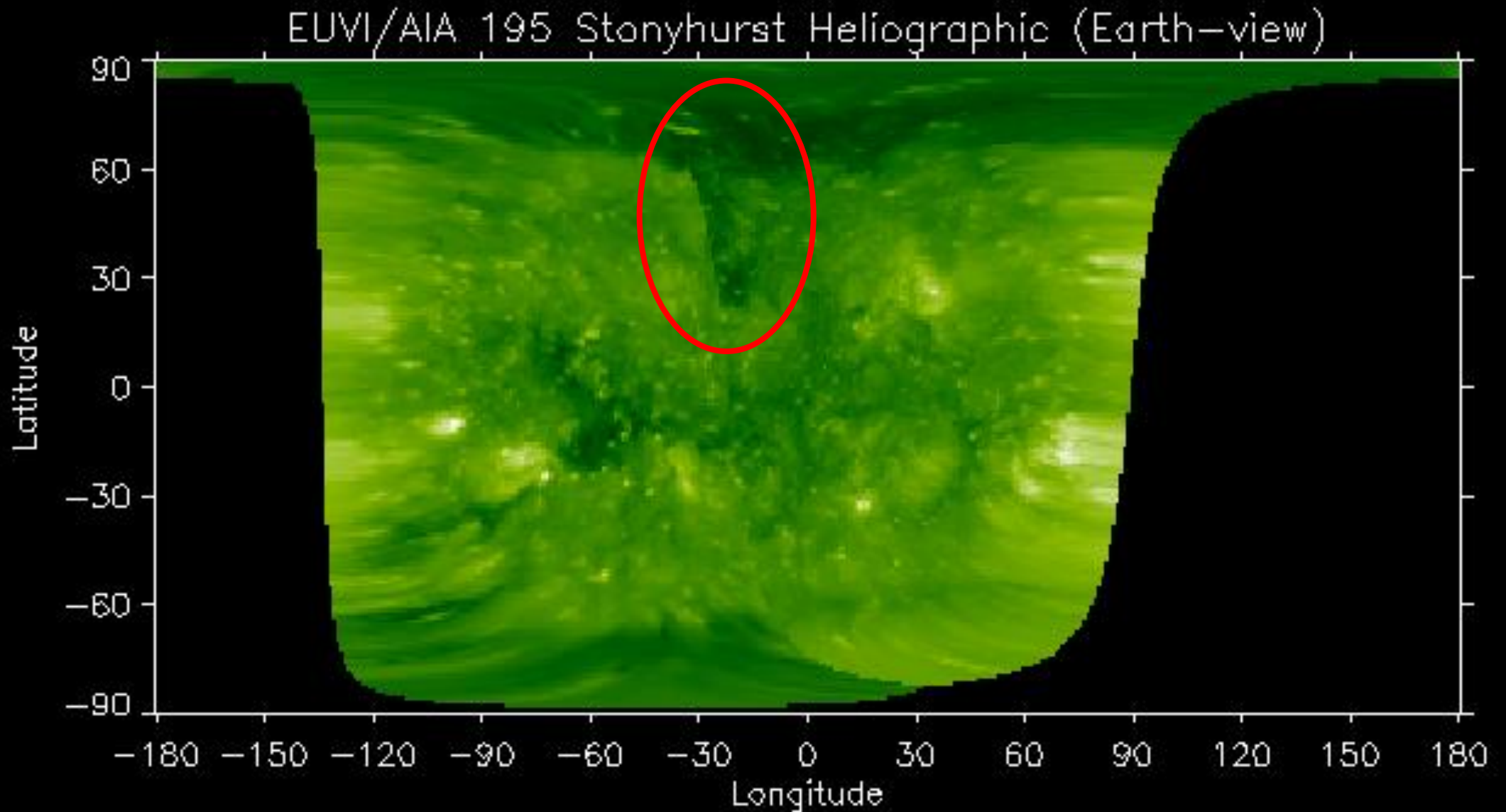
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux



Outlook: Solar activity



Outlook: Electron Flux at GEO Outlook



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