

SIDC Space Weather Briefing

14 February 2021 - 21 February 2021

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& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2021-02-14 12:00 to 2021-02-21 23:59

Active regions	(Catania 72, NOAA-AR 2802) & (Catania 73, NOAA-AR 2803)
Flares	# C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filament eruptions	Tow filaments eruptions
Coronal Holes	Southern Coronal Holes

Proton flux	Background levels
Electron flux	Peaked above the 1000 pfu threshold

Solar wind and geomagnetic conditions

ICME	Ongoing ICME
SW Conditions	B : 0.29 - 14.52 nT // Bz: -10.9 nT to 10.95 nT // Speed: 312.0 - 623.5km/s
K-indices	max K-index (Dourbes): 5 max Kp-index (NOAA): 4

All Quiet Alert: On until 2021-02-19

Solar Activity

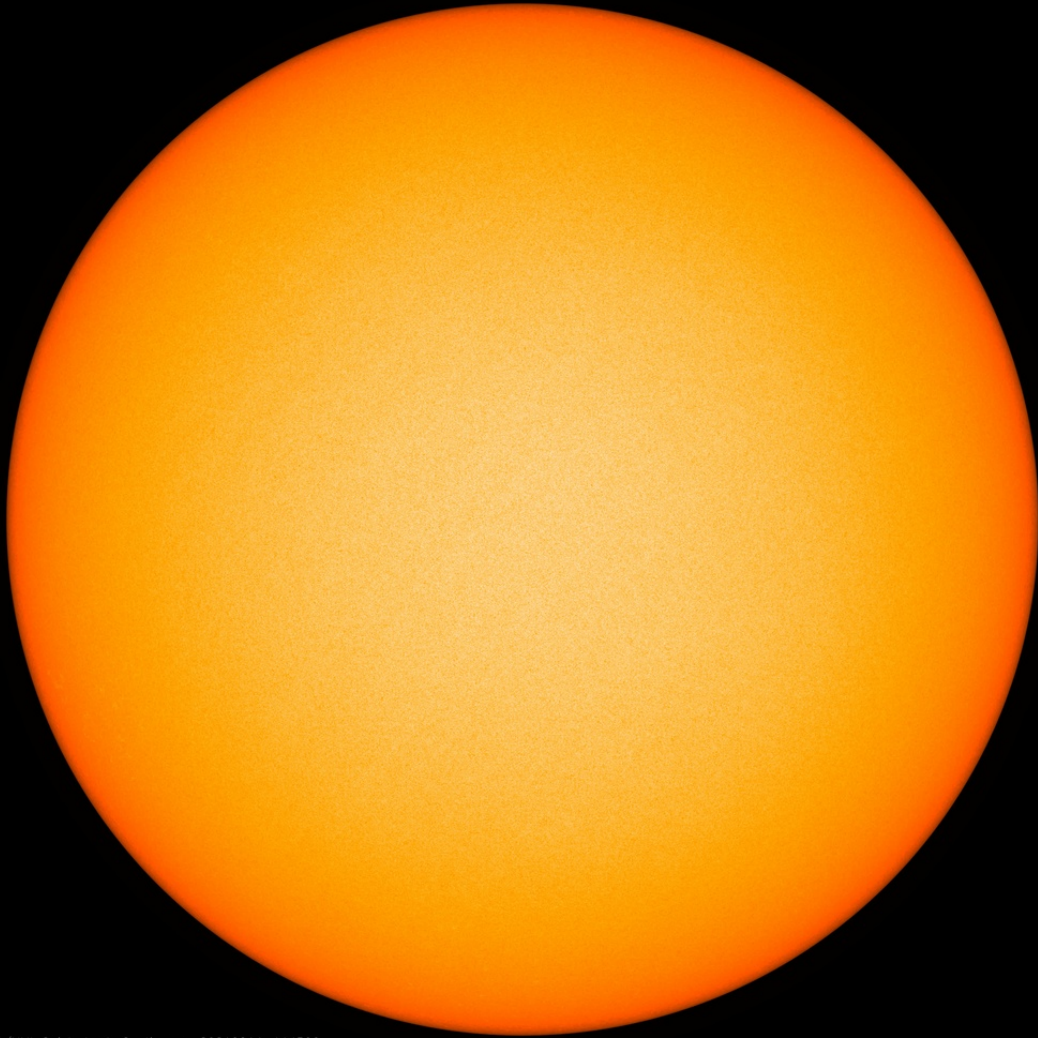


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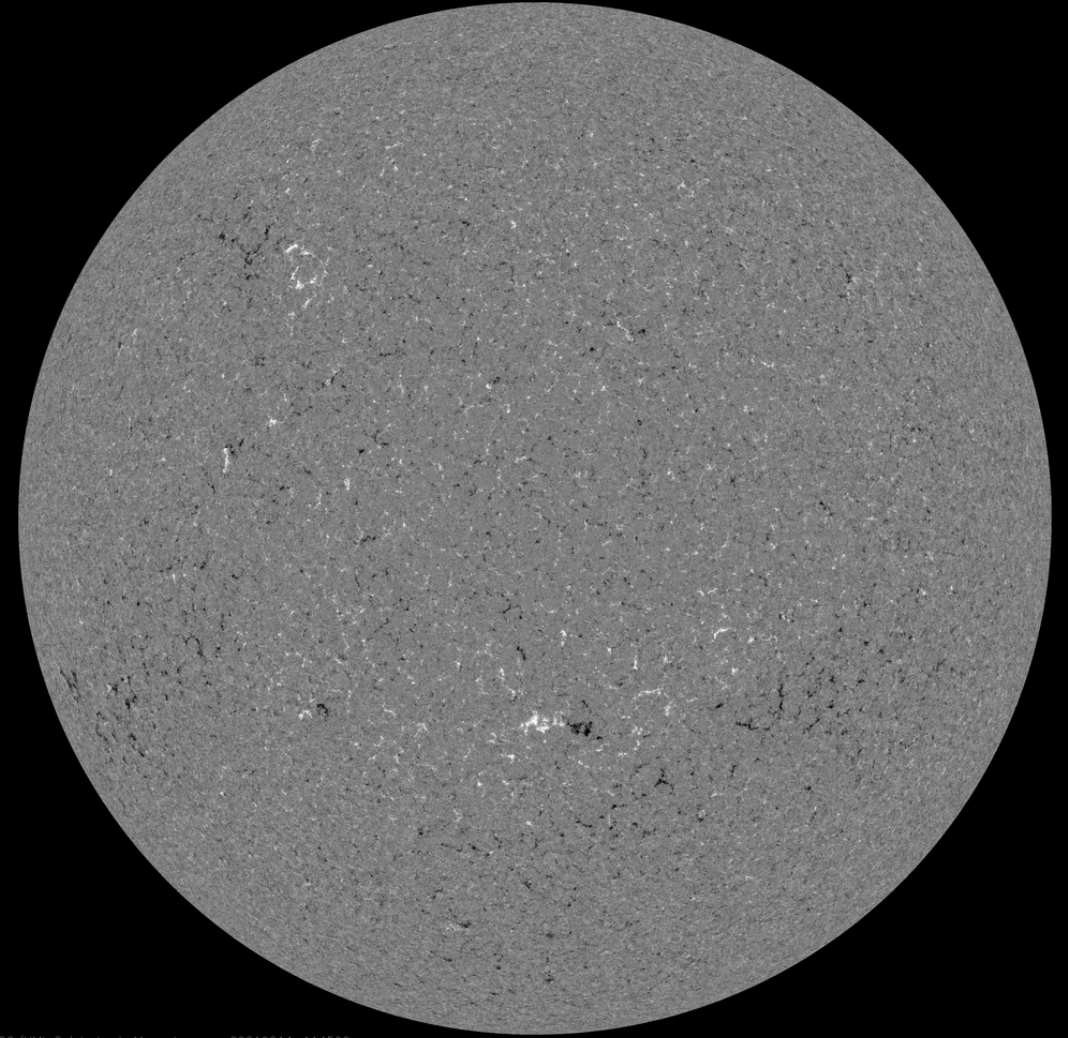
Solar active regions

SDO/HMI White Light 2021-02-14



SDO/HMI Quick-Look Continuum: 20210214_114500

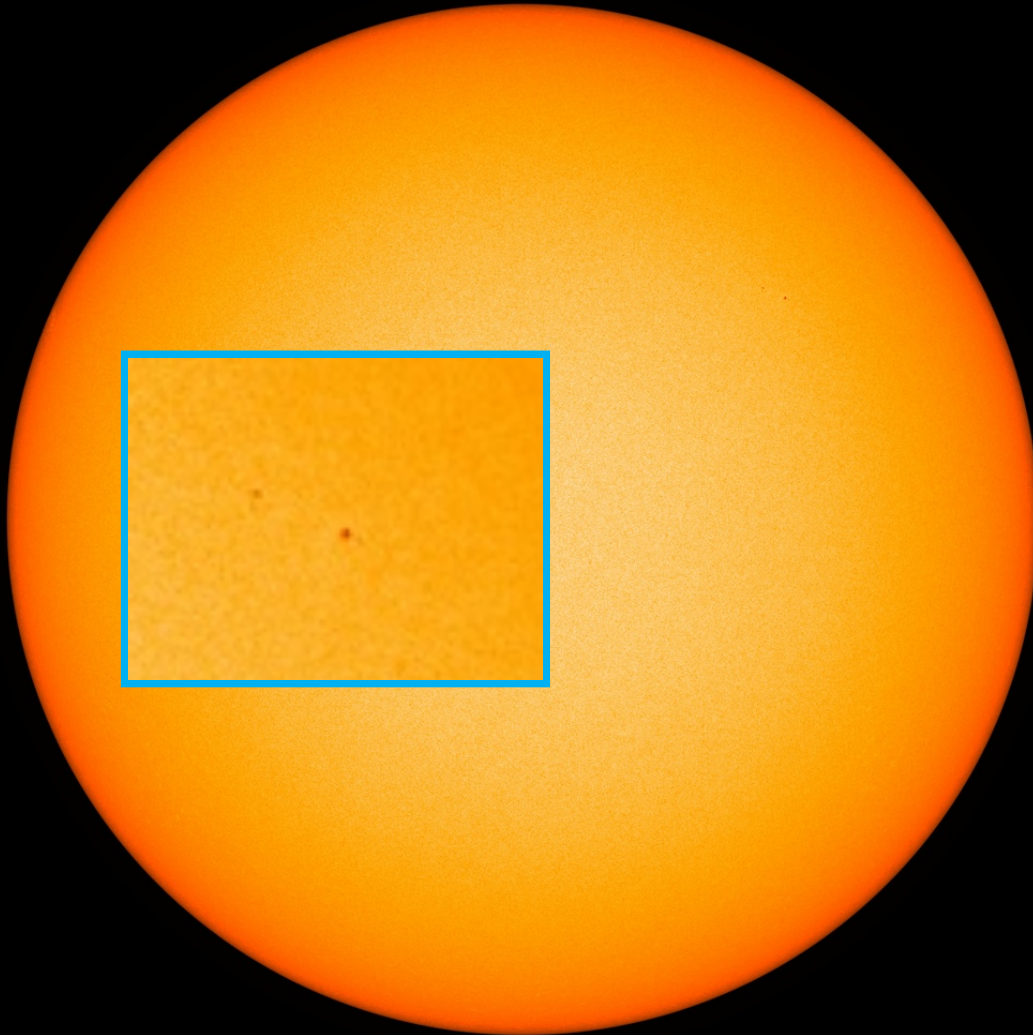
SDO/HMI Magnetogram 2021-02-14



SDO/HMI Quick-Look Magnetogram: 20210214_114500

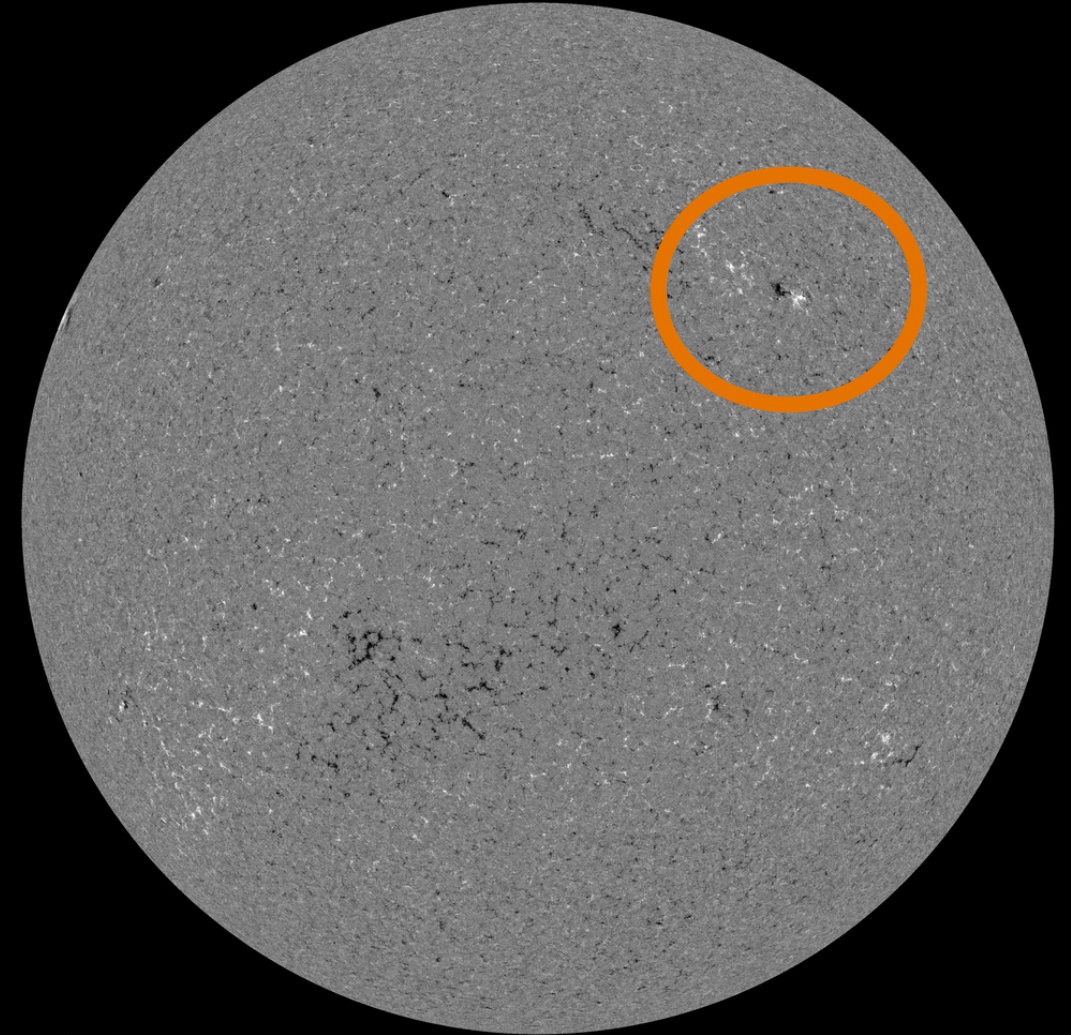
Solar active regions

SDO/HMI White Light 2021-02-18



SDO/HMI Quick-Look Continuum: 20210218_114500

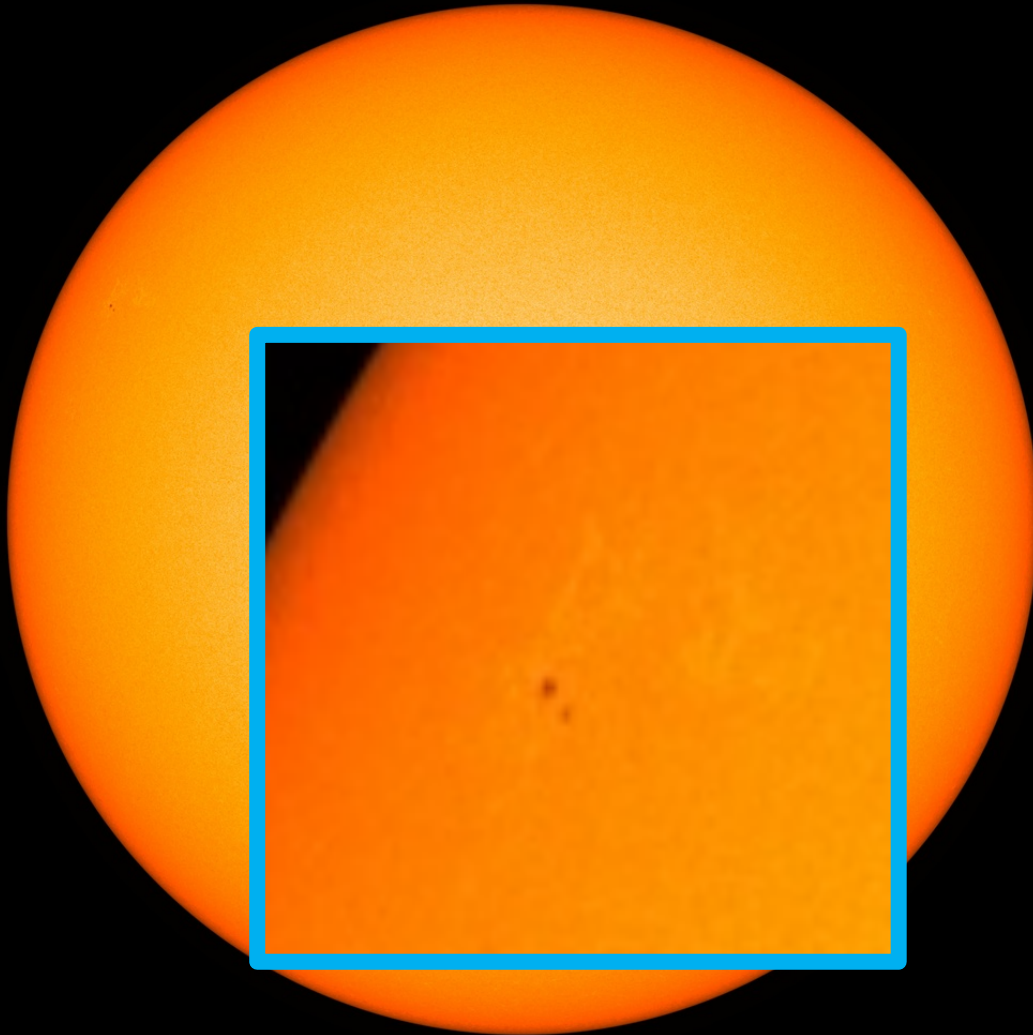
SDO/HMI Magnetogram 2021-02-18



SDO/HMI Quick-Look Magnetogram: 20210218_114500

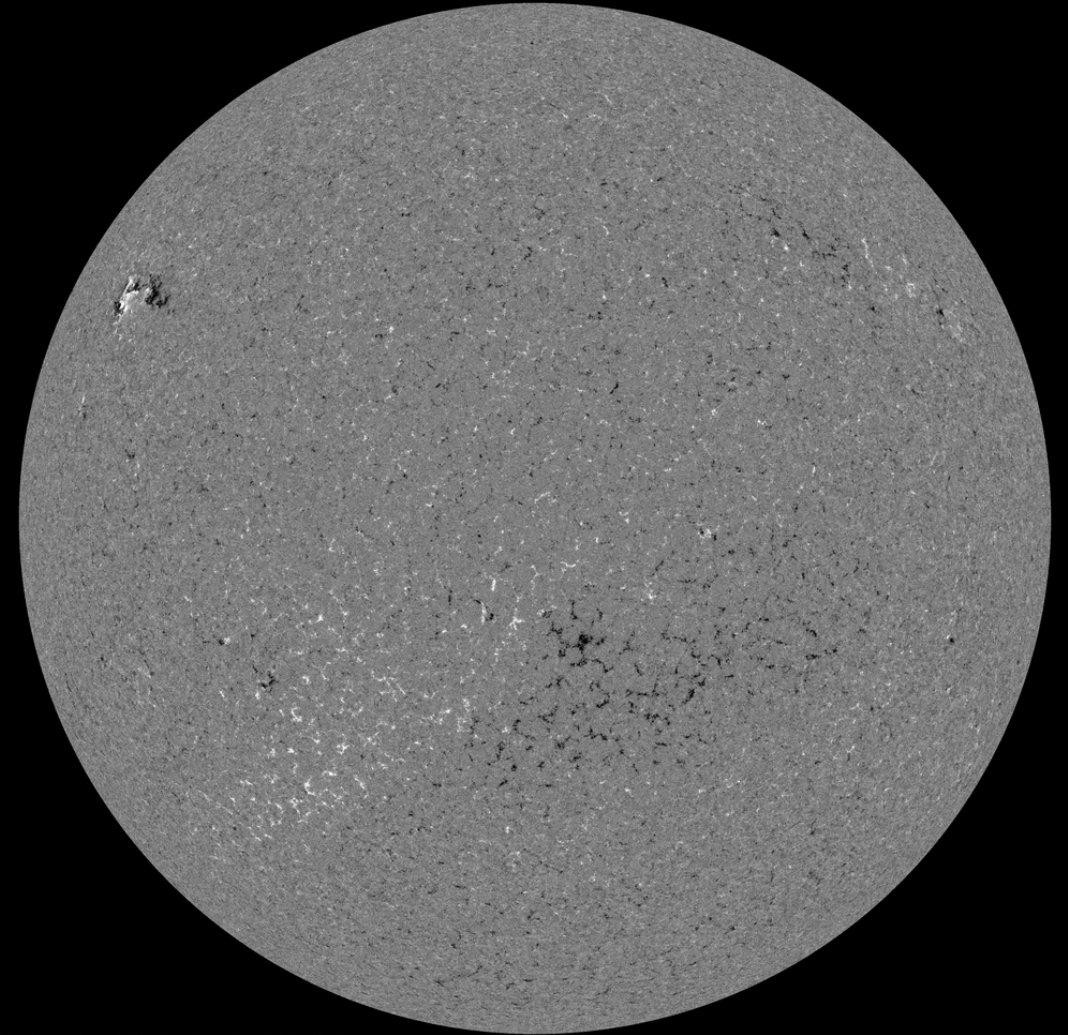
Solar active regions

SDO/HMI White Light 2021-02-20



SDO/HMI Quick-Look Continuum: 20210220_120000

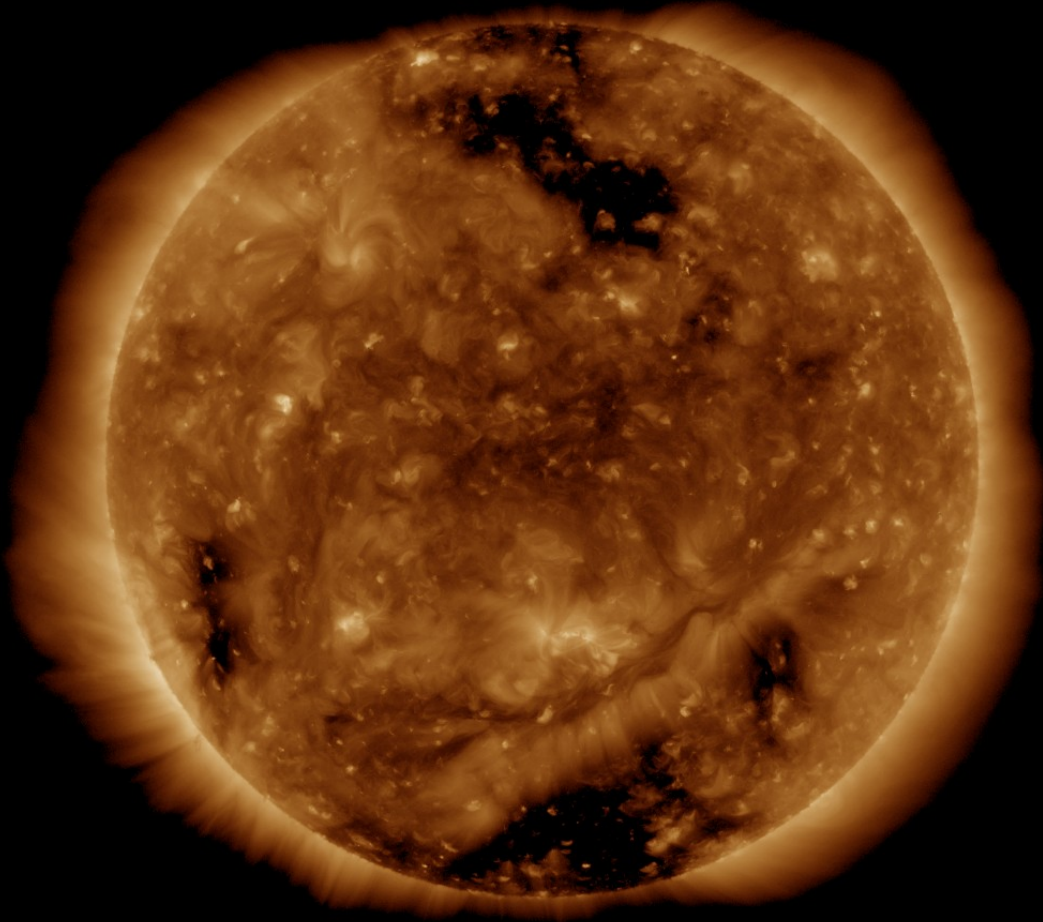
SDO/HMI Magnetogram 2021-02-20



SDO/HMI Quick-Look Magnetogram: 20210220_114500

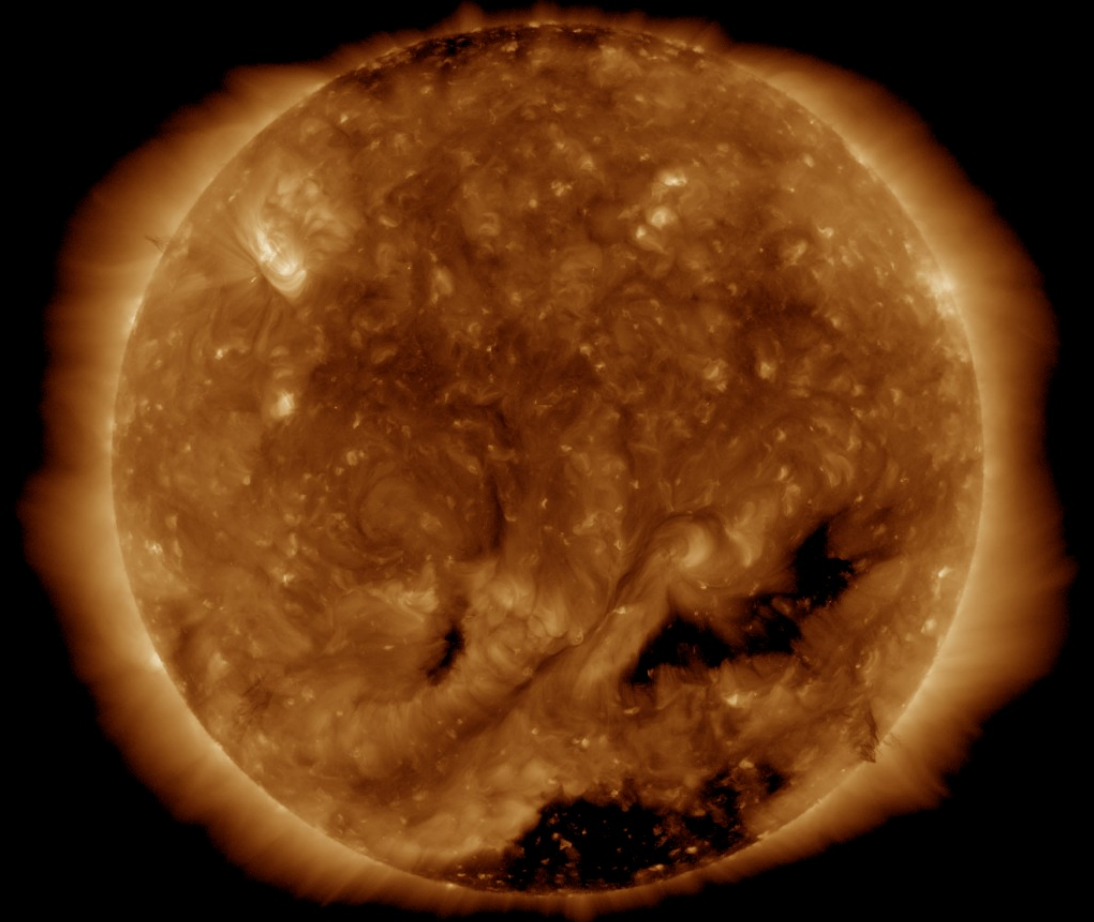
Coronal holes

SDO/AIA 19.3 nm 2021-02-14



SDO/AIA 193 2021-02-14 12:18:05 UT

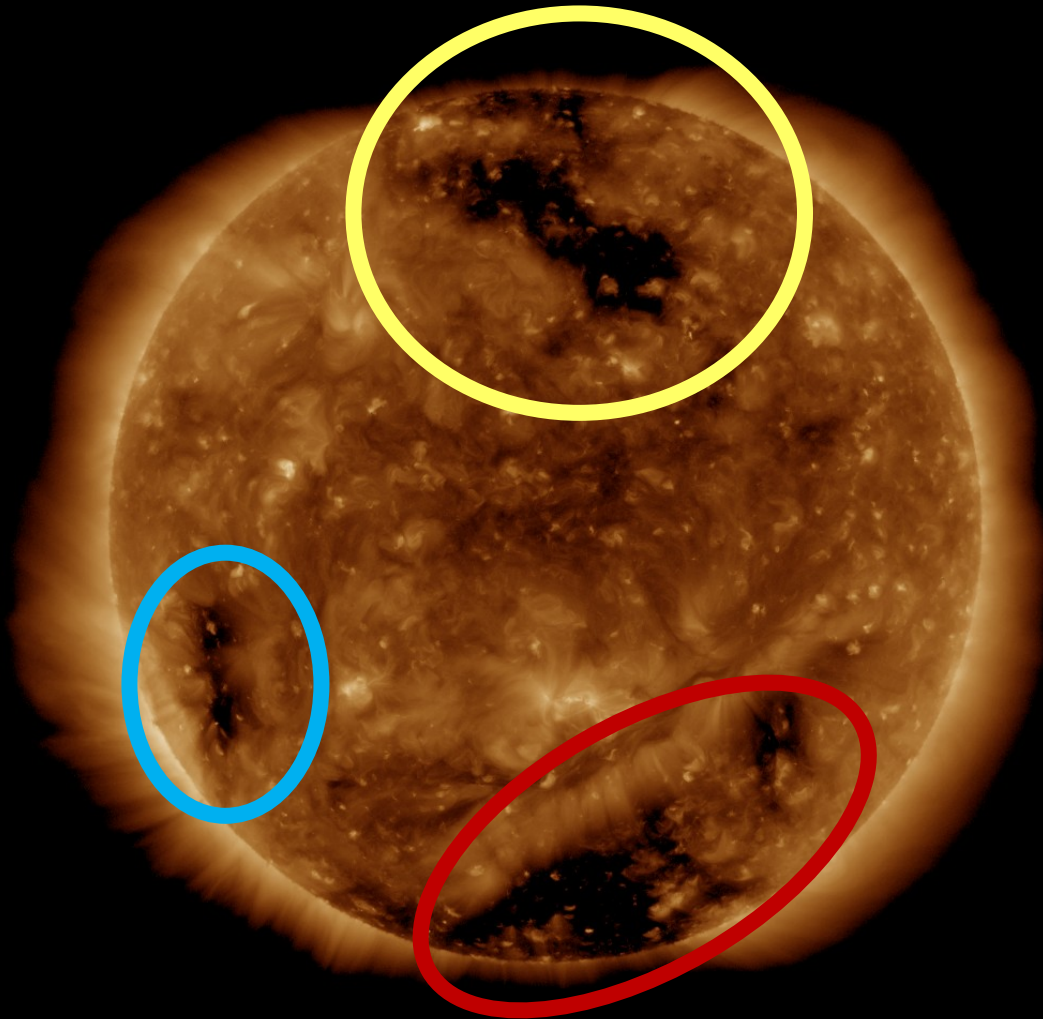
SDO/AIA 19.3 nm 2021-02-21



SDO/AIA 193 2021-02-21 12:17:41 UT

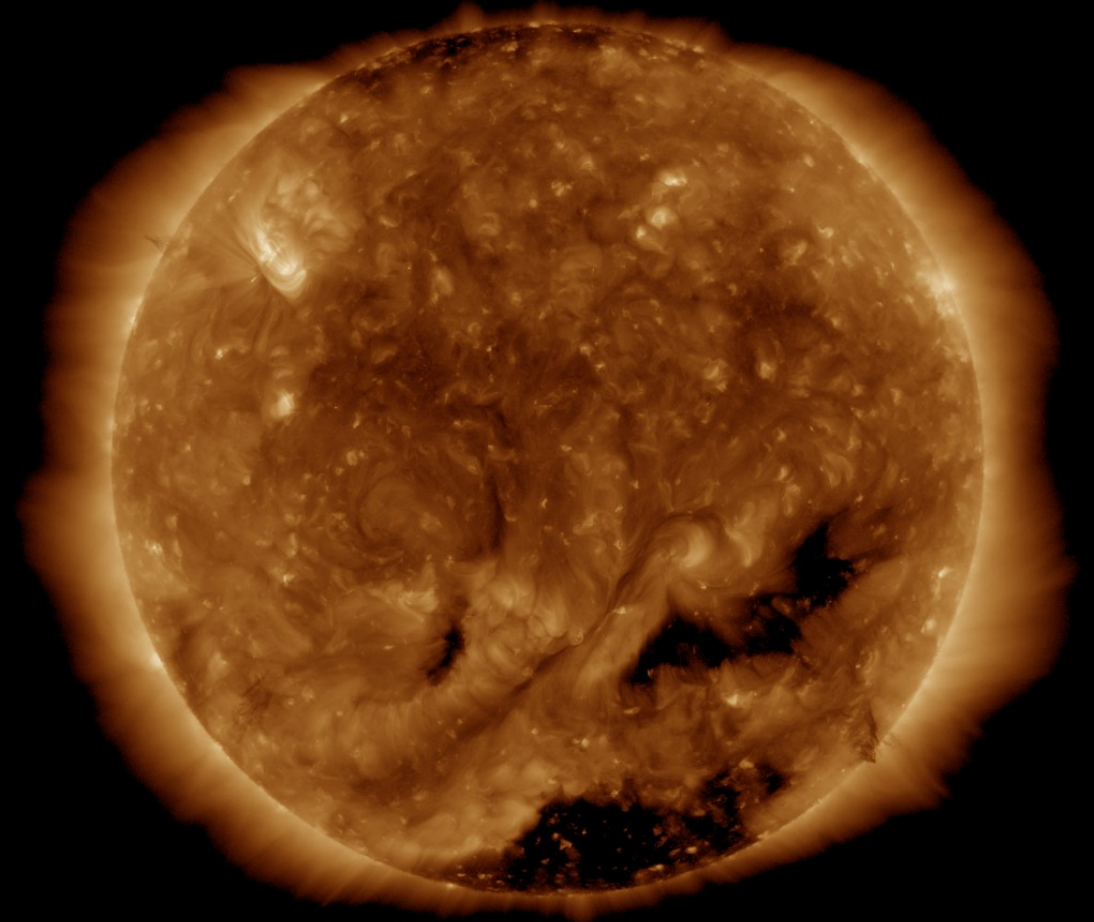
Coronal holes

SDO/AIA 19.3 nm 2021-02-14



SDO/AIA 193 2021-02-14 12:18:05 UT

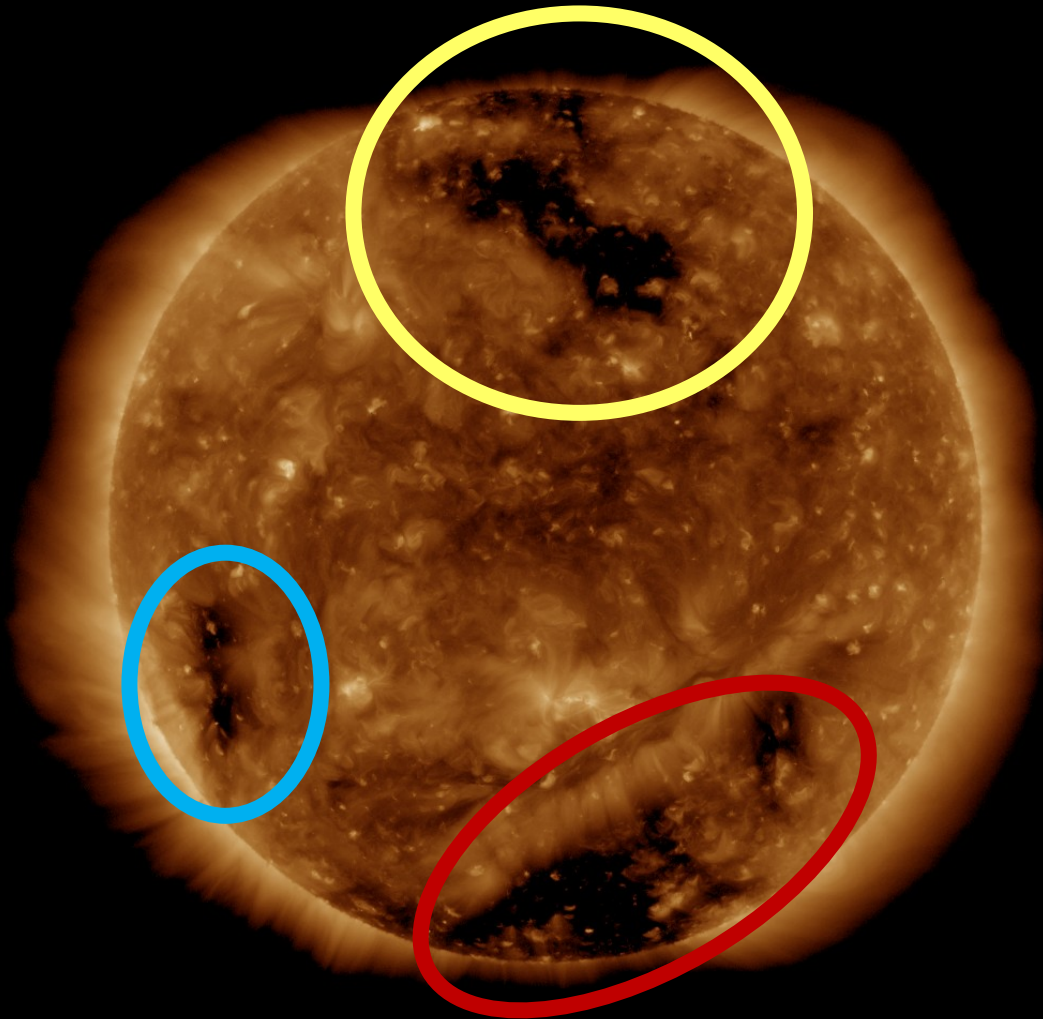
SDO/AIA 19.3 nm 2021-02-21



SDO/AIA 193 2021-02-21 12:17:41 UT

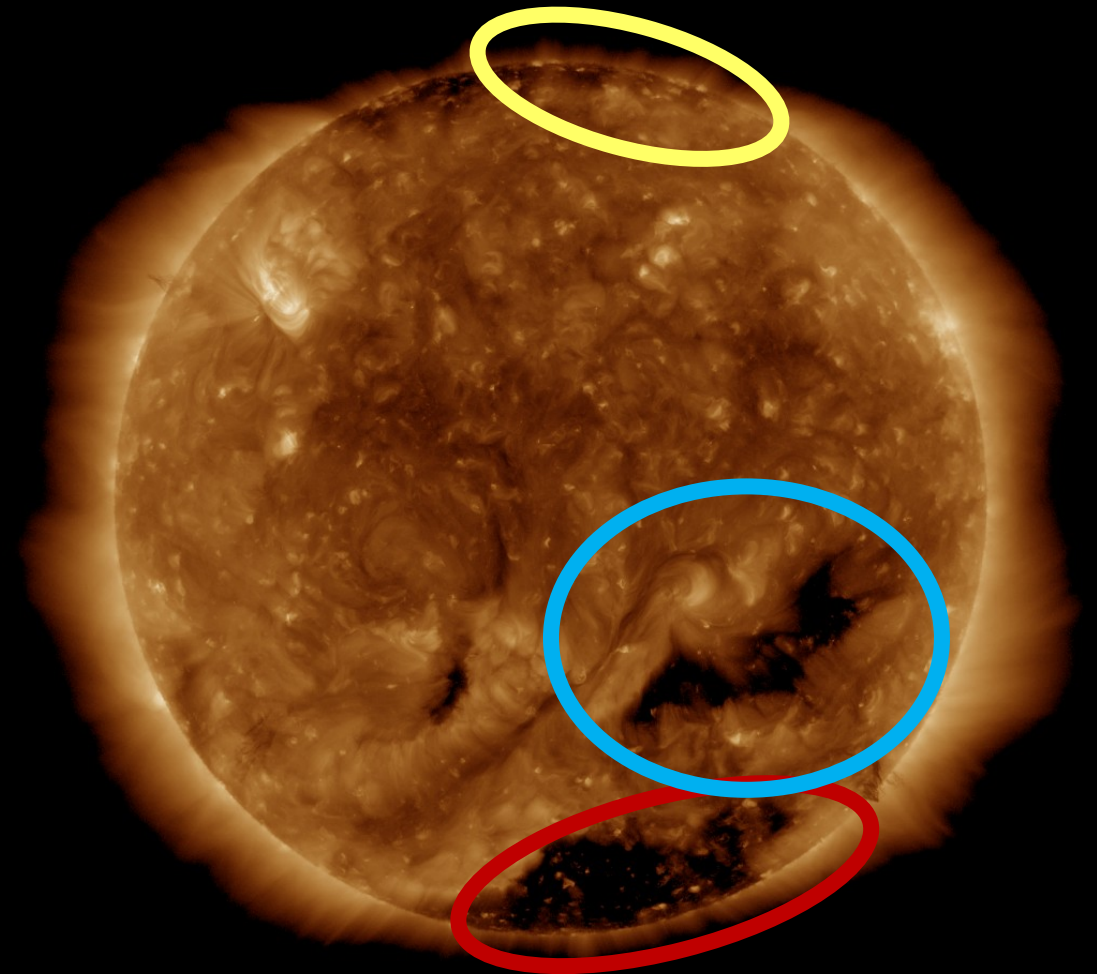
Coronal holes

SDO/AIA 19.3 nm 2021-02-14



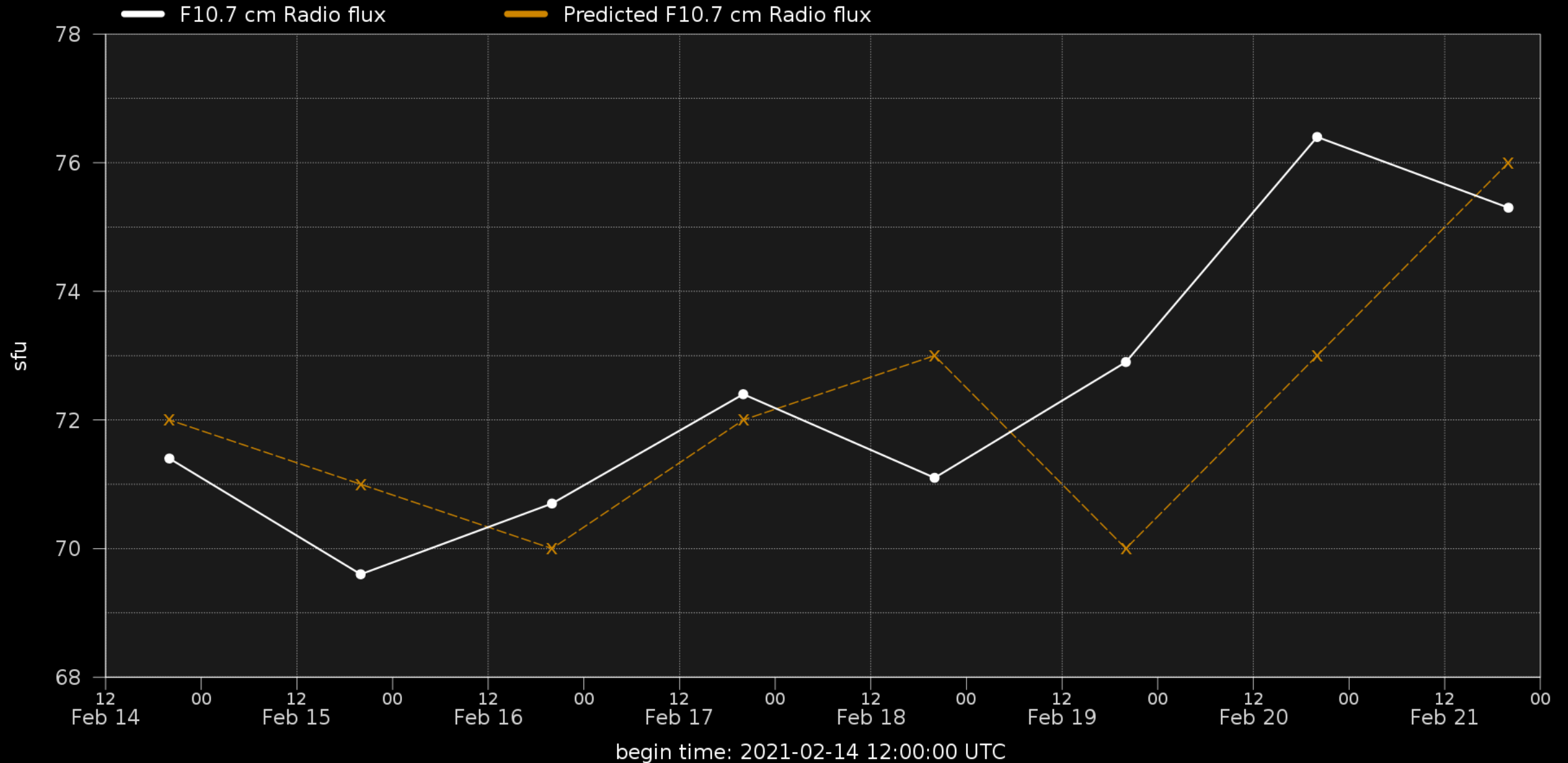
SDO/AIA 193 2021-02-14 12:18:05 UT

SDO/AIA 19.3 nm 2021-02-21

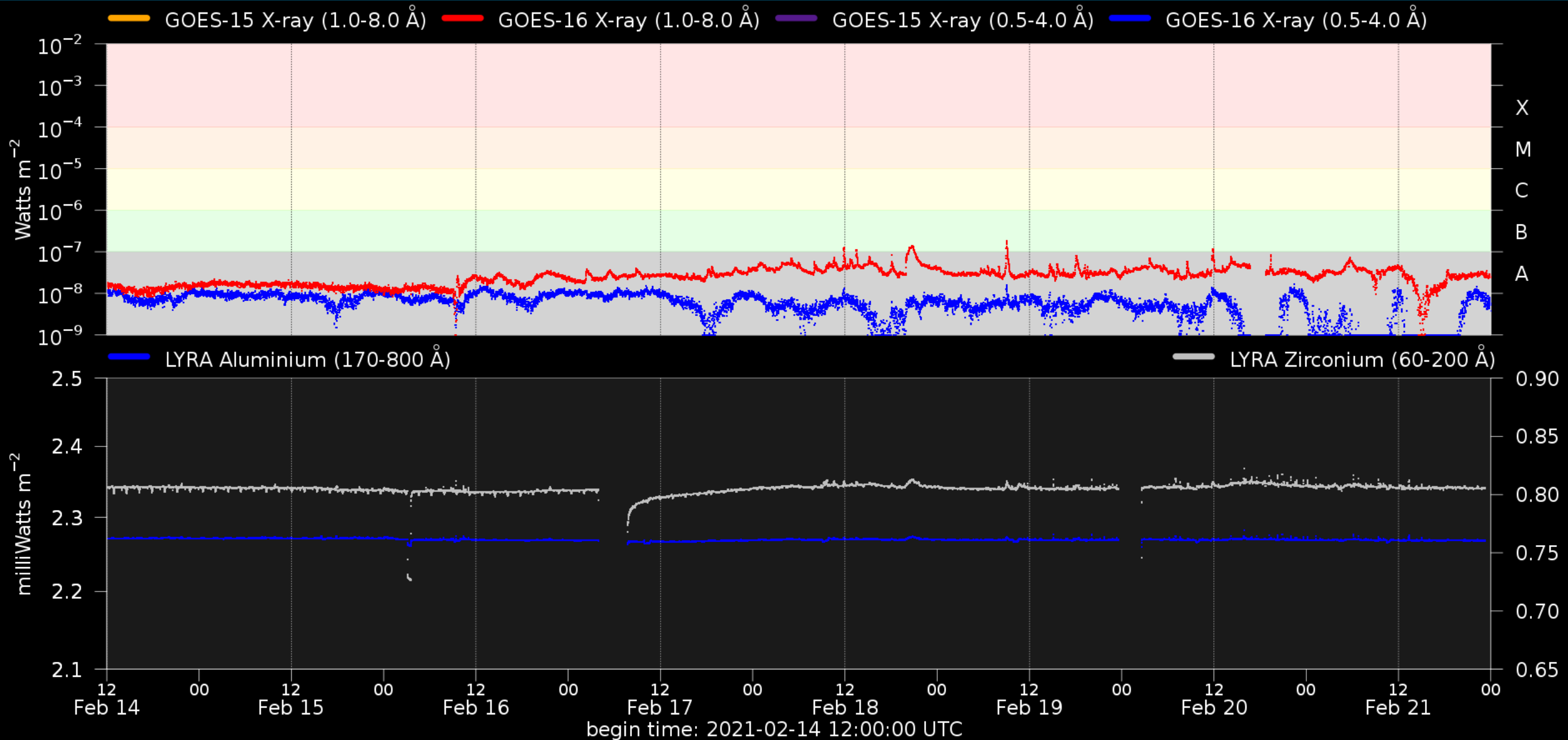


SDO/AIA 193 2021-02-21 12:17:41 UT

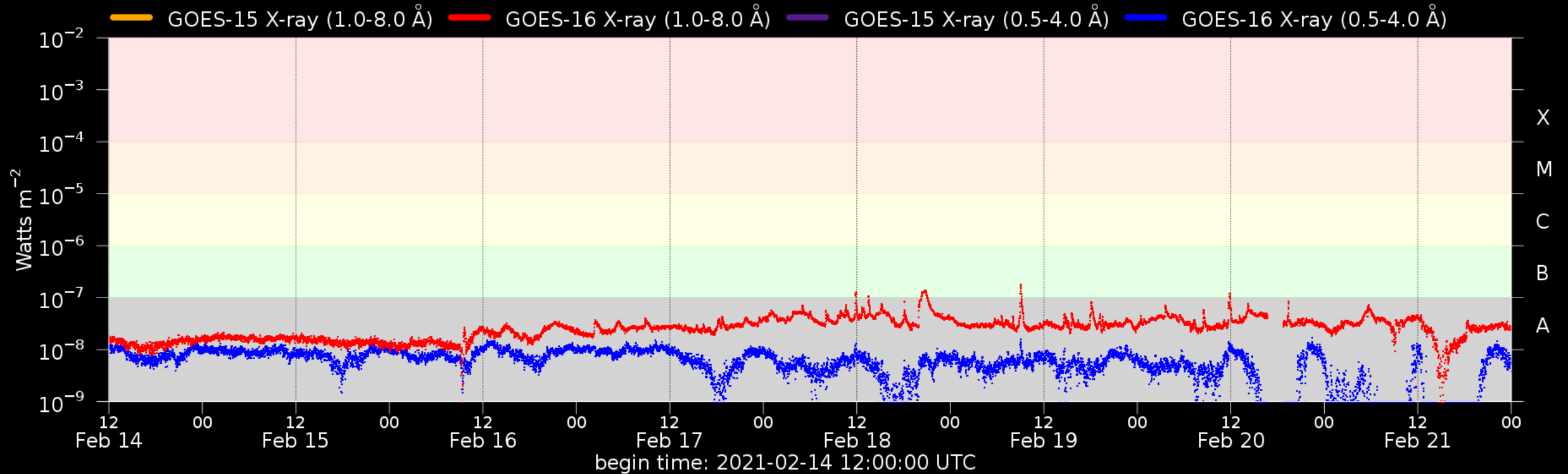
Solar F10.7cm radio flux



Solar X-Ray and UV flux



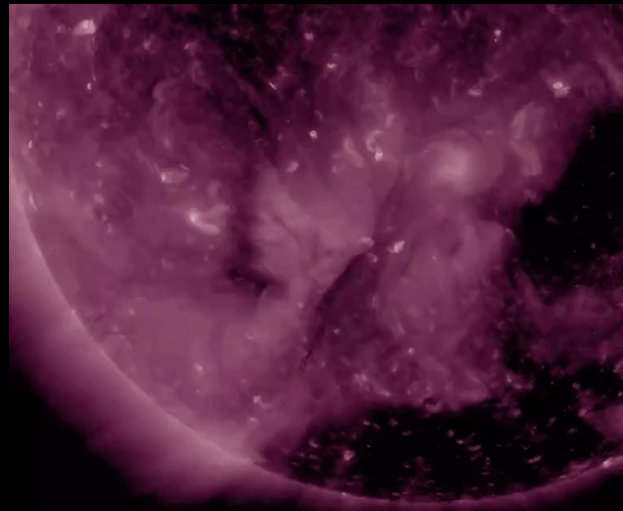
Flaring activity



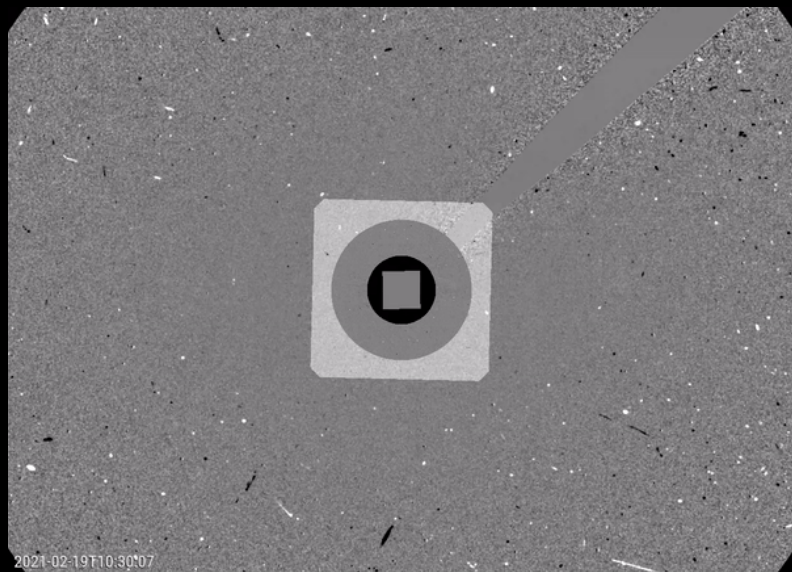
Probabilities (%) and occurrences (#) of C/M/X-flares issued at 12:30 and over the next 24h:

Issue date	2021-02-14	2021-02-15	2021-02-16	2021-02-17	2021-02-18	2021-02-19	2021-02-20	2021-02-21
Probability (%)	01 01 01	01 01 01	01 01 01	01 01 01	05 01 01	05 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

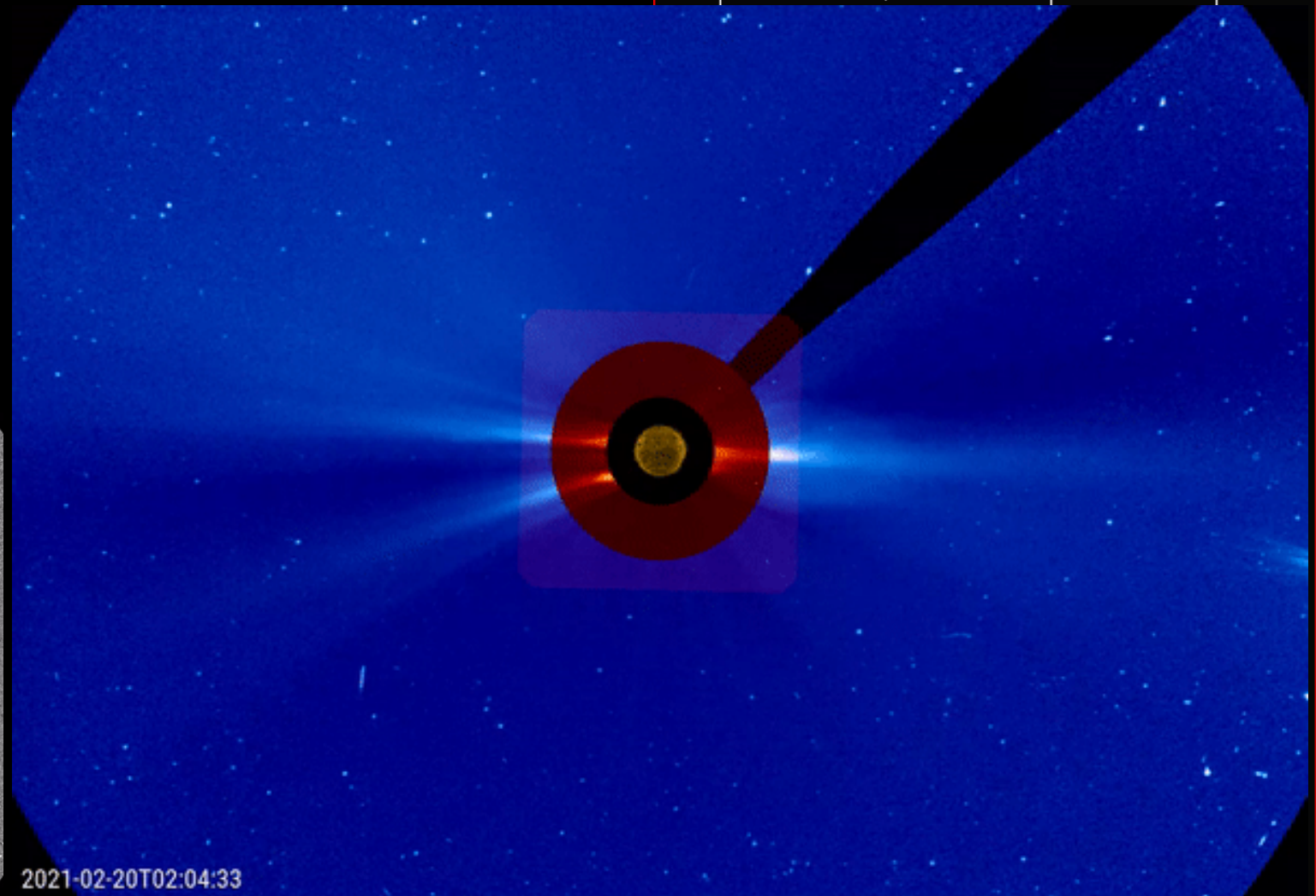
Coronal Mass Ejections



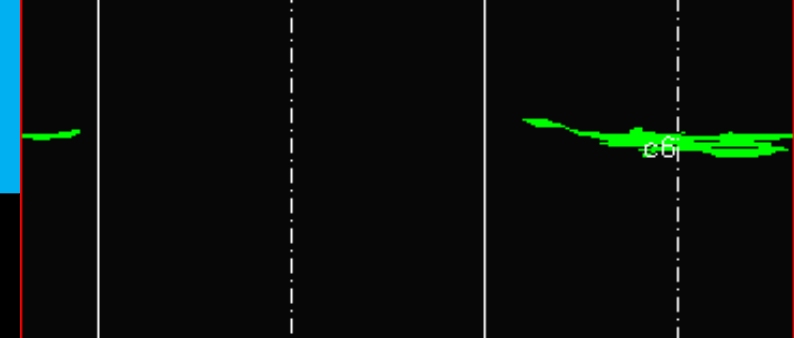
2021-02-20T09:04:33



2021-02-19T10:30:07

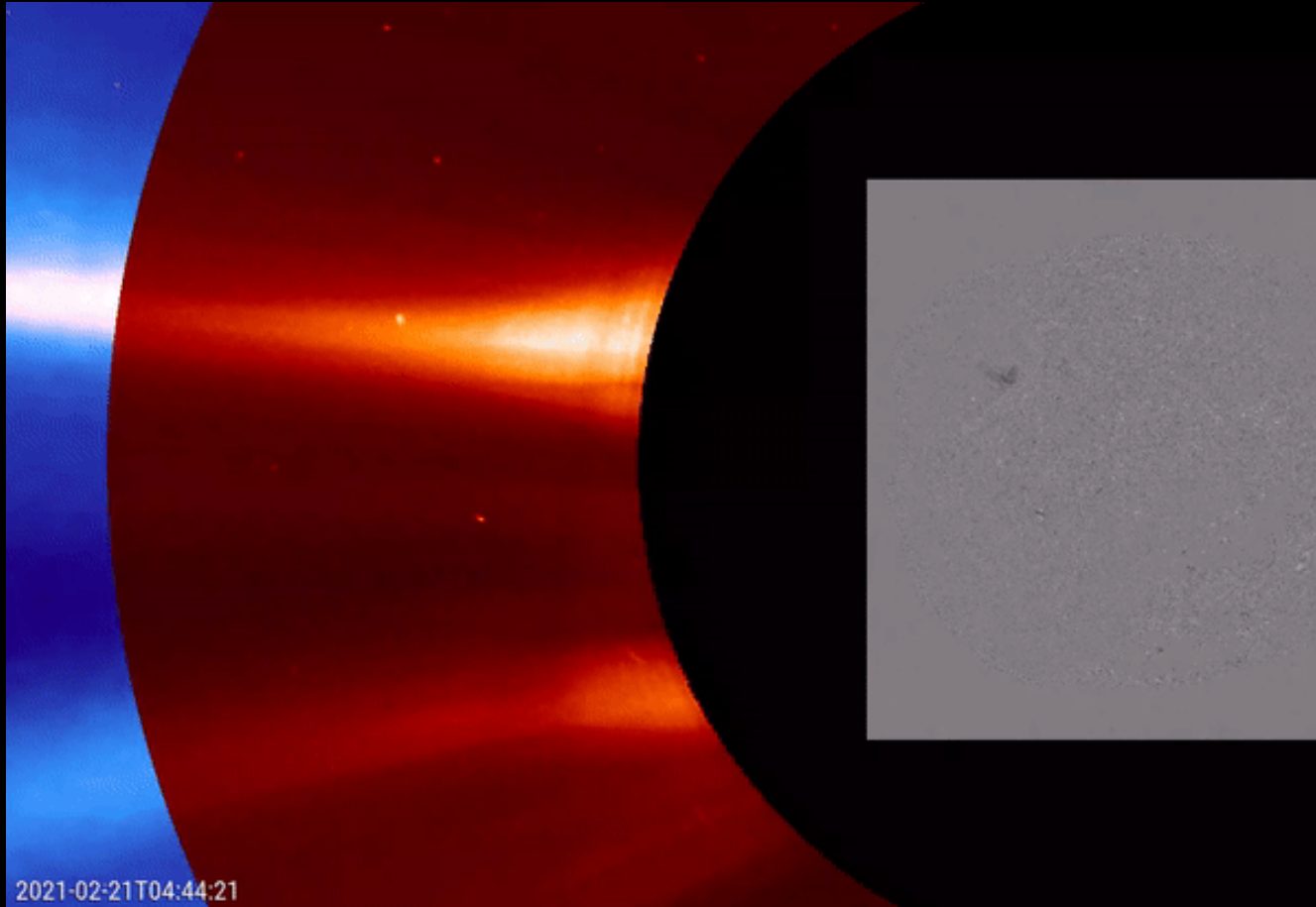


2021-02-20T02:04:33



23:36	02/20
20:12	02/20
17:42	02/20
14:48	02/20
11:24	02/20
08:12	02/20
05:24	02/20
02:48	02/20
23:48	02/19
20:12	02/19
17:48	02/19
14:12	02/19
11:18	02/19
08:12	02/19
04:38	02/19
00:00	02/19
20:12	02/18
17:36	02/18
14:48	02/18
11:48	02/18
08:42	02/18
06:12	02/18
03:18	02/18
23:48	02/17
20:00	02/17
17:00	02/17
14:12	02/17
11:12	02/17
08:24	02/17
05:48	02/17
03:12	02/17
23:36	02/16
20:00	02/16
17:24	02/16
14:36	02/16
11:36	02/16
08:24	02/16
05:30	02/16
02:48	02/16
23:48	02/15
20:36	02/15
17:48	02/15
14:36	02/15
11:36	02/15
08:36	02/15

Coronal Mass Ejections



c7

c5

c3
c2

c8

c6

c4

f1

14:00	02/21
08:36	02/21
05:48	02/21
02:48	02/21
23:36	02/20
20:12	02/20
17:42	02/20
14:48	02/20
11:24	02/20
08:12	02/20
05:24	02/20
02:48	02/20
23:48	02/19
20:12	02/19
17:48	02/19
14:12	02/19
11:18	02/19
08:12	02/19
04:38	02/19
00:00	02/19
20:12	02/18
17:36	02/18
14:48	02/18
11:48	02/18
08:42	02/18
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03:18	02/18
23:48	02/17
20:00	02/17
17:00	02/17
14:12	02/17
11:12	02/17
08:24	02/17
05:48	02/17
03:12	02/17
23:36	02/16
20:00	02/16
17:24	02/16
14:36	02/16
11:36	02/16
08:24	02/16
05:30	02/16
02:48	02/16
02:18	02/16

Solar Wind and

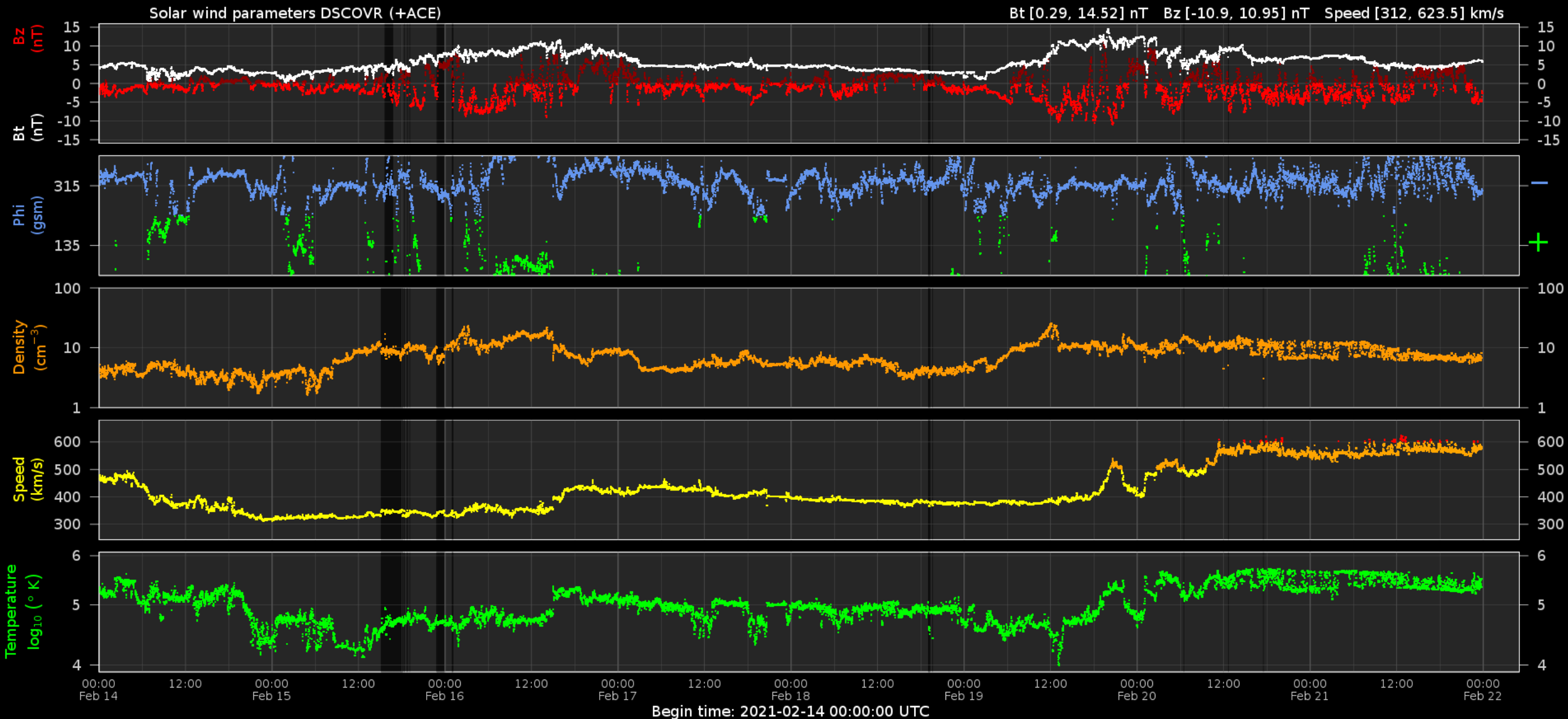
Geomagnetic Activity



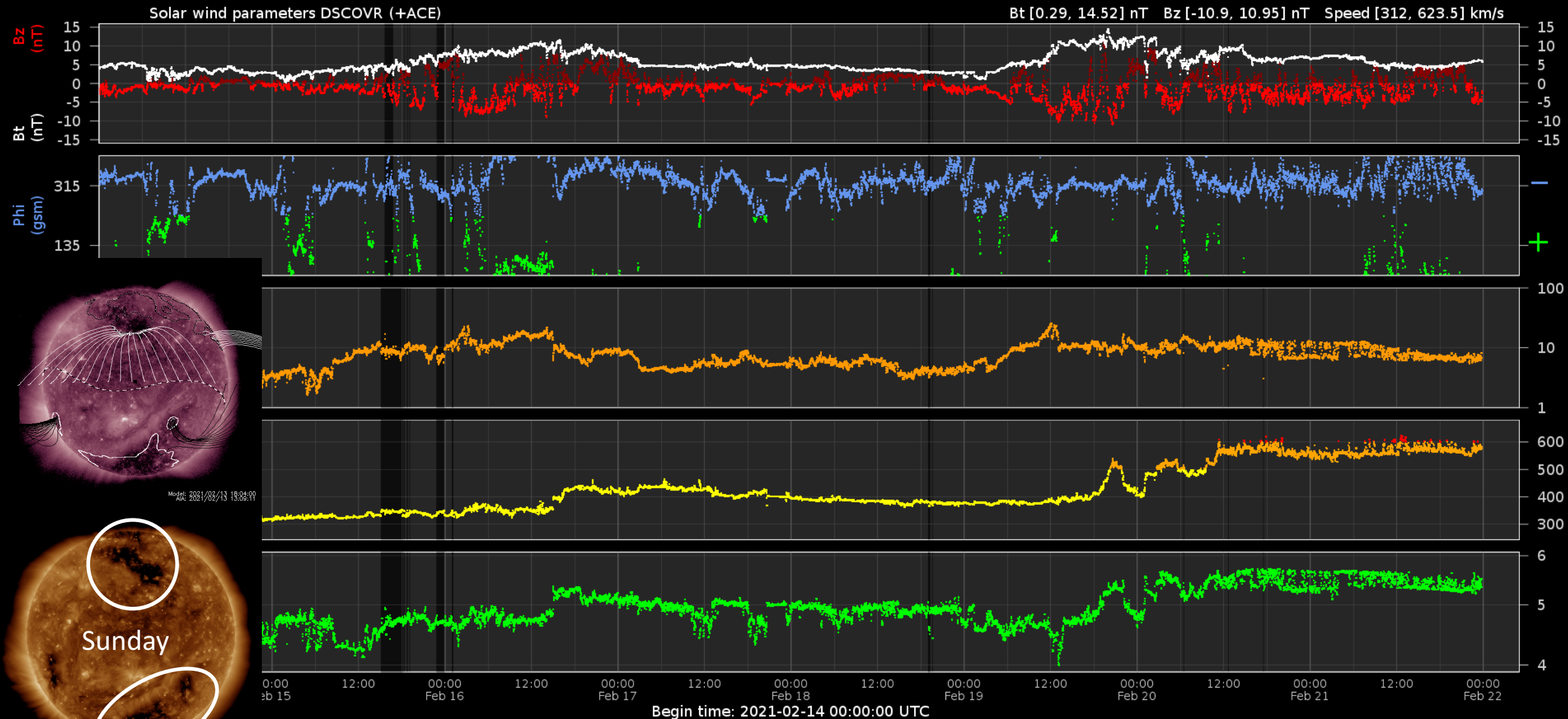
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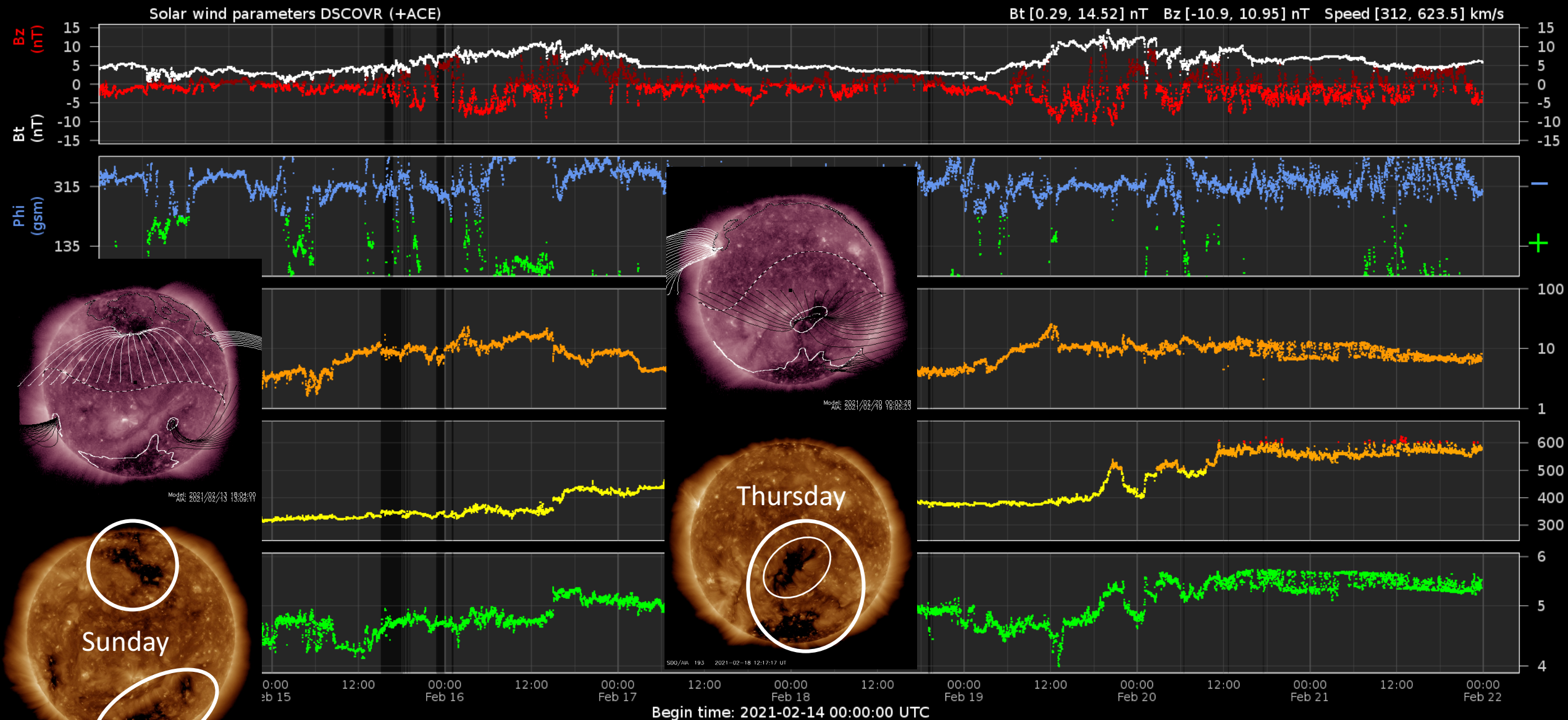
Solar wind parameters



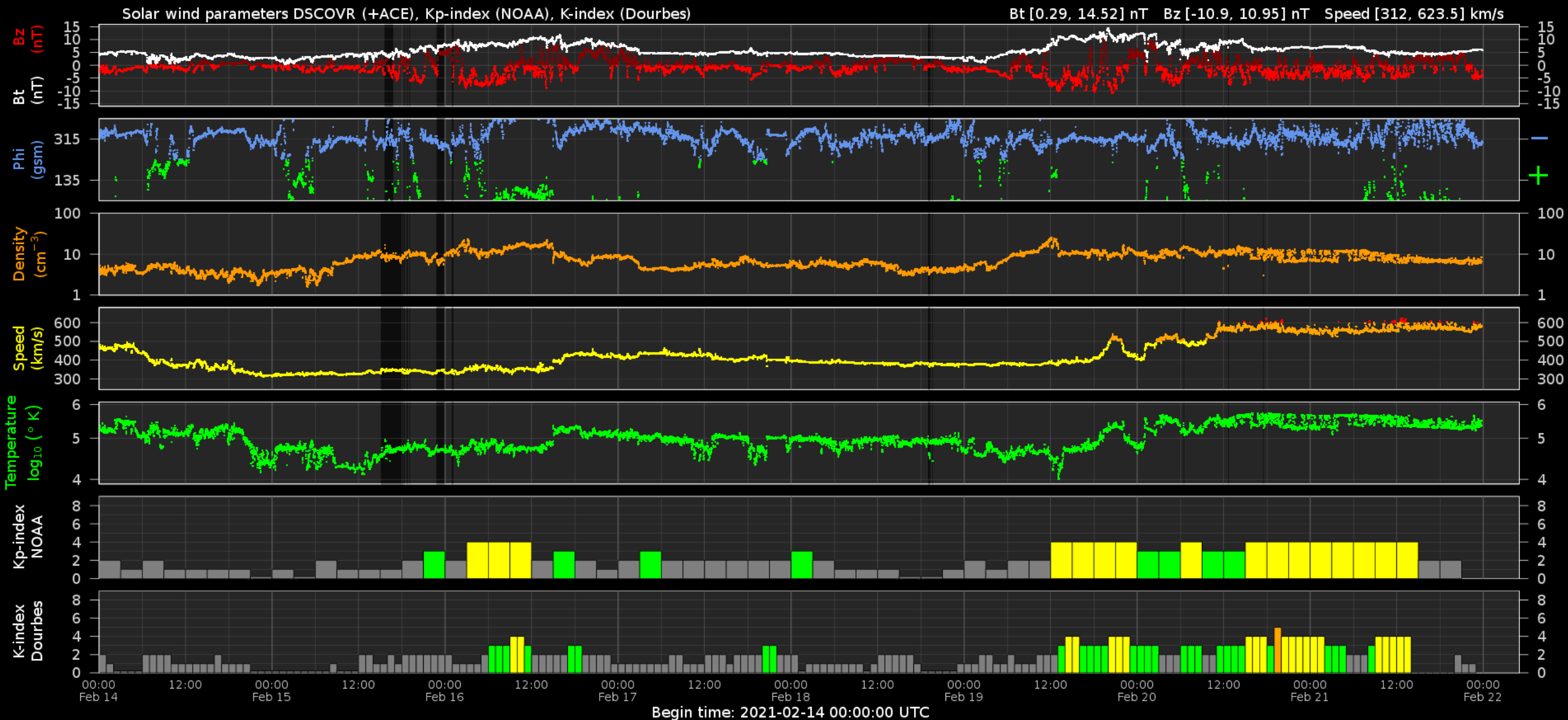
Solar wind parameters



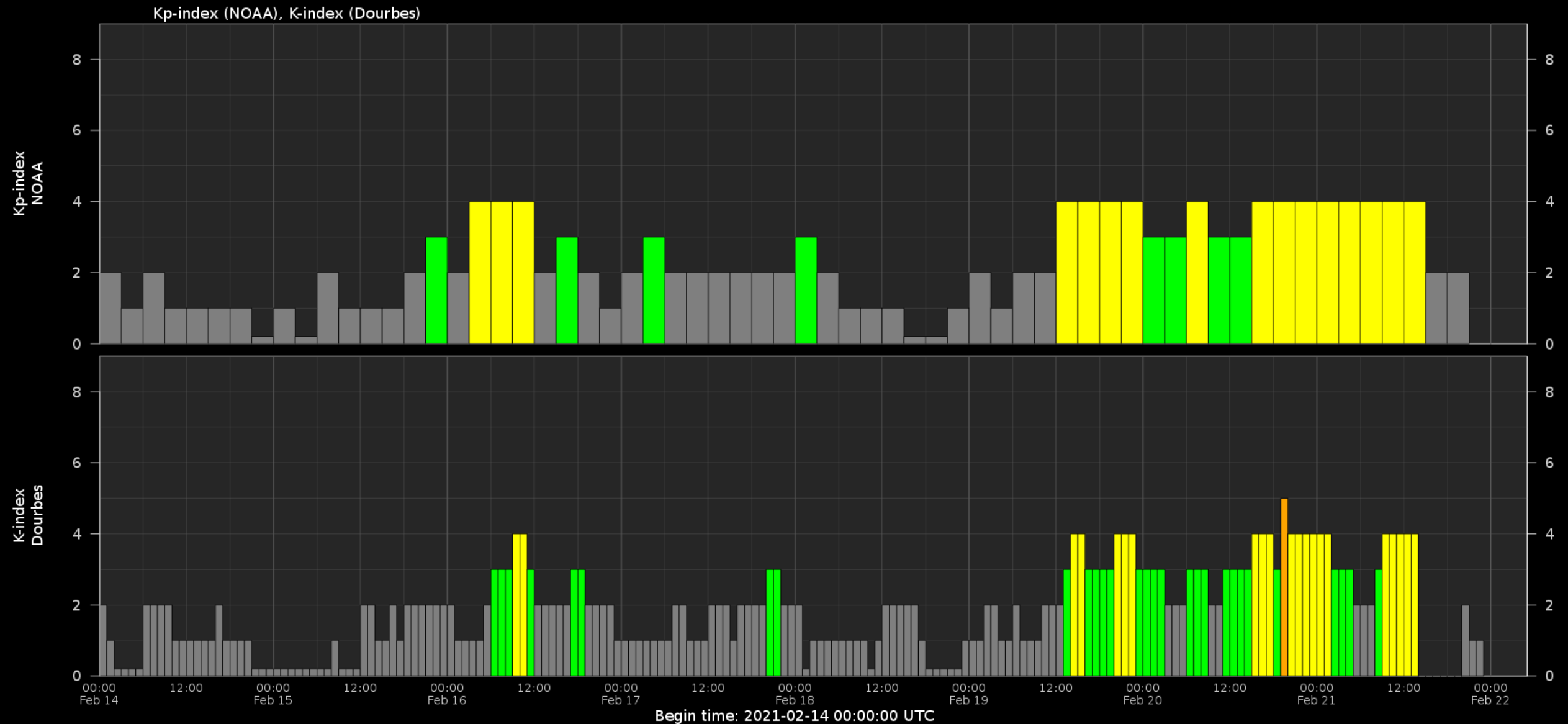
Solar wind parameters



Solar wind parameters & K-indices



Geomagnetic activity (K-indexes)



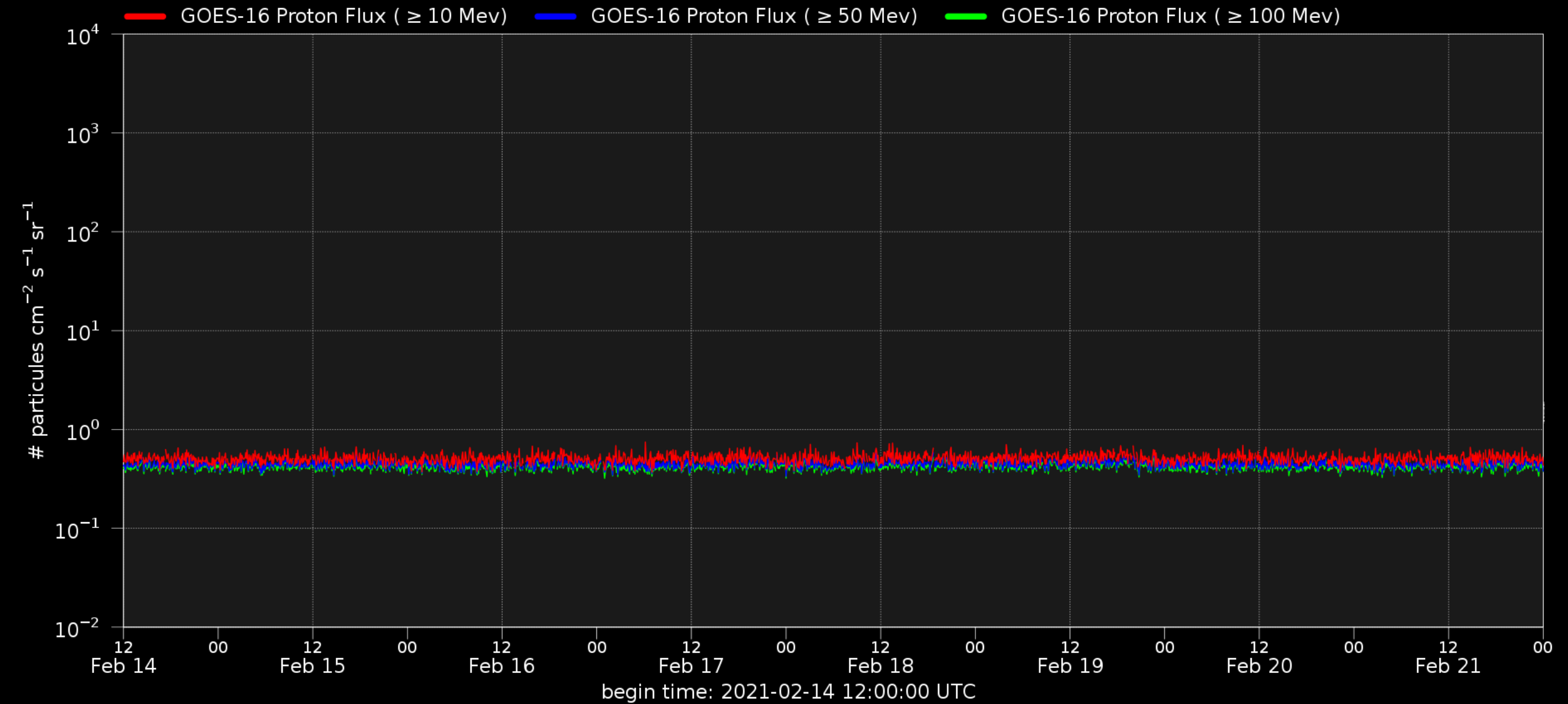
Energetic Particles



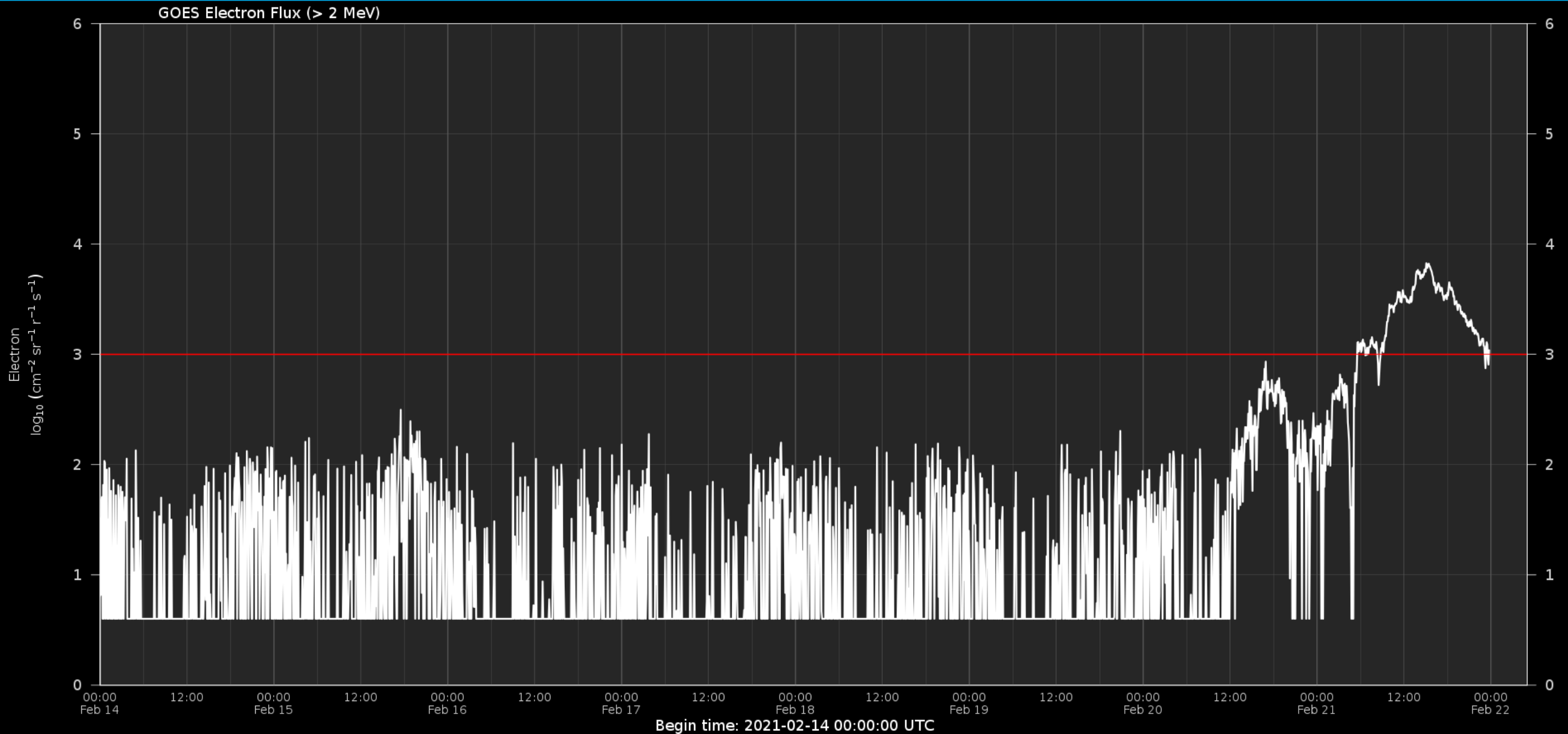
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Solar proton flux



Electron flux at GEO



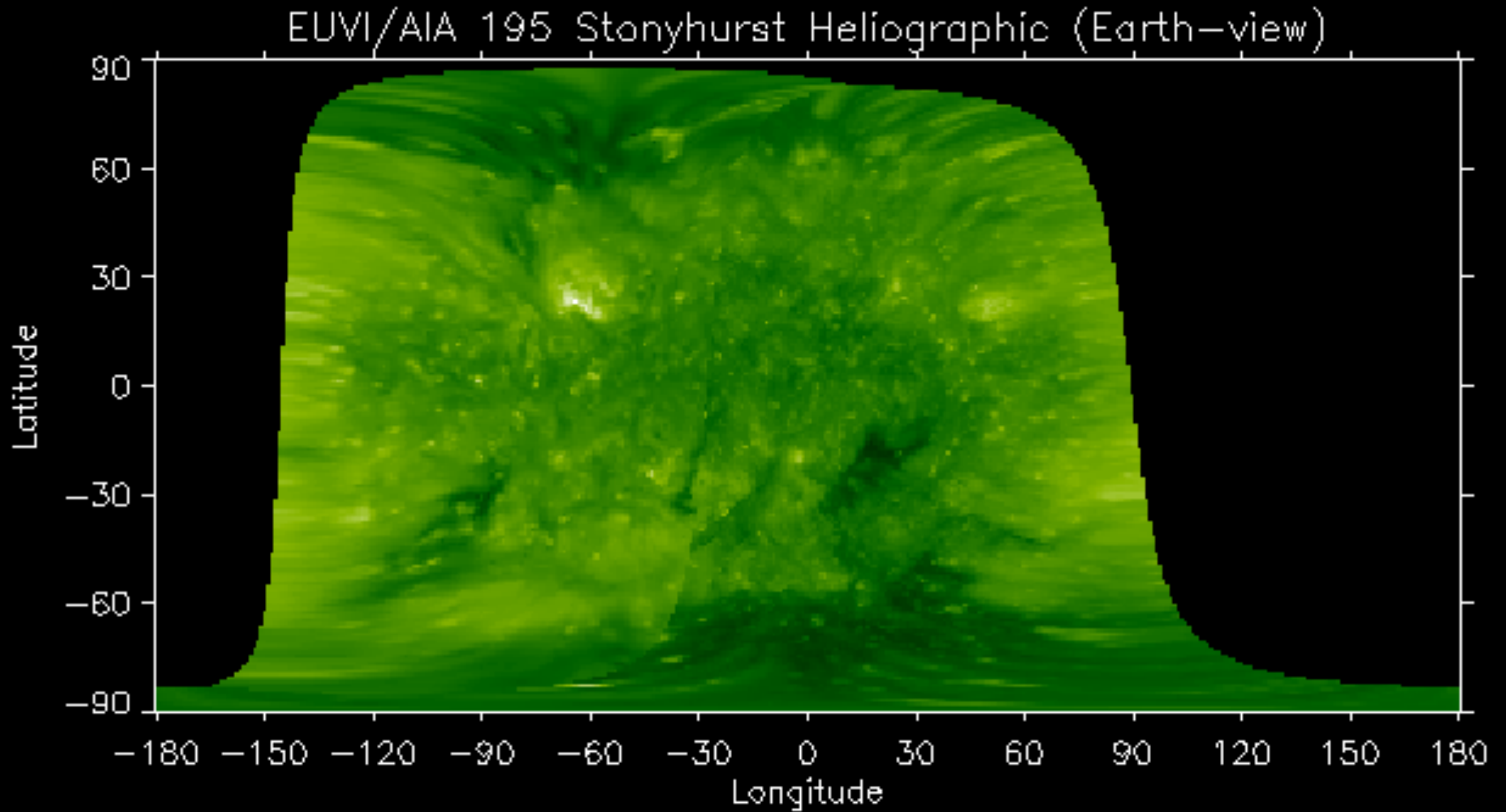
Outlook



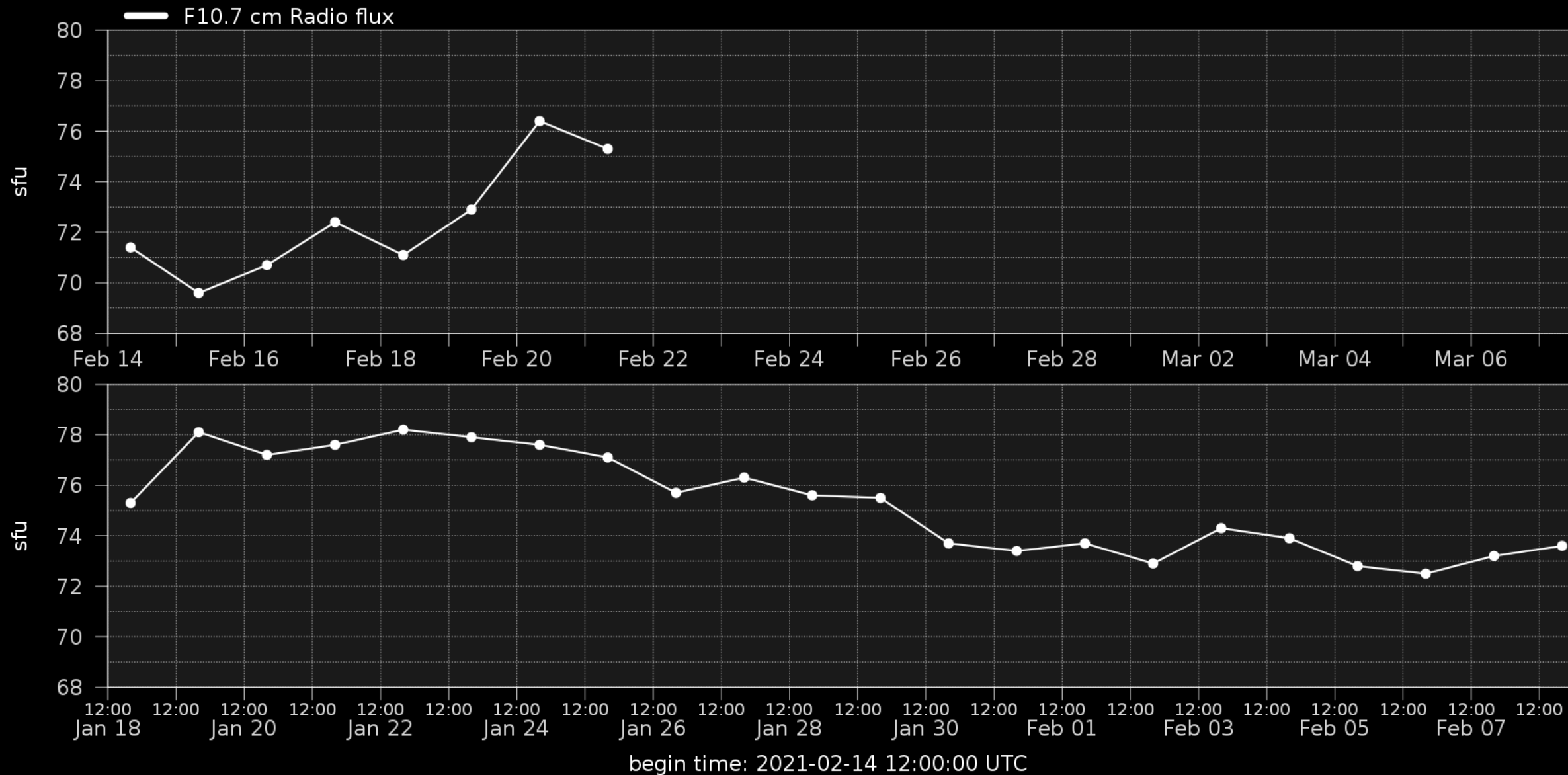
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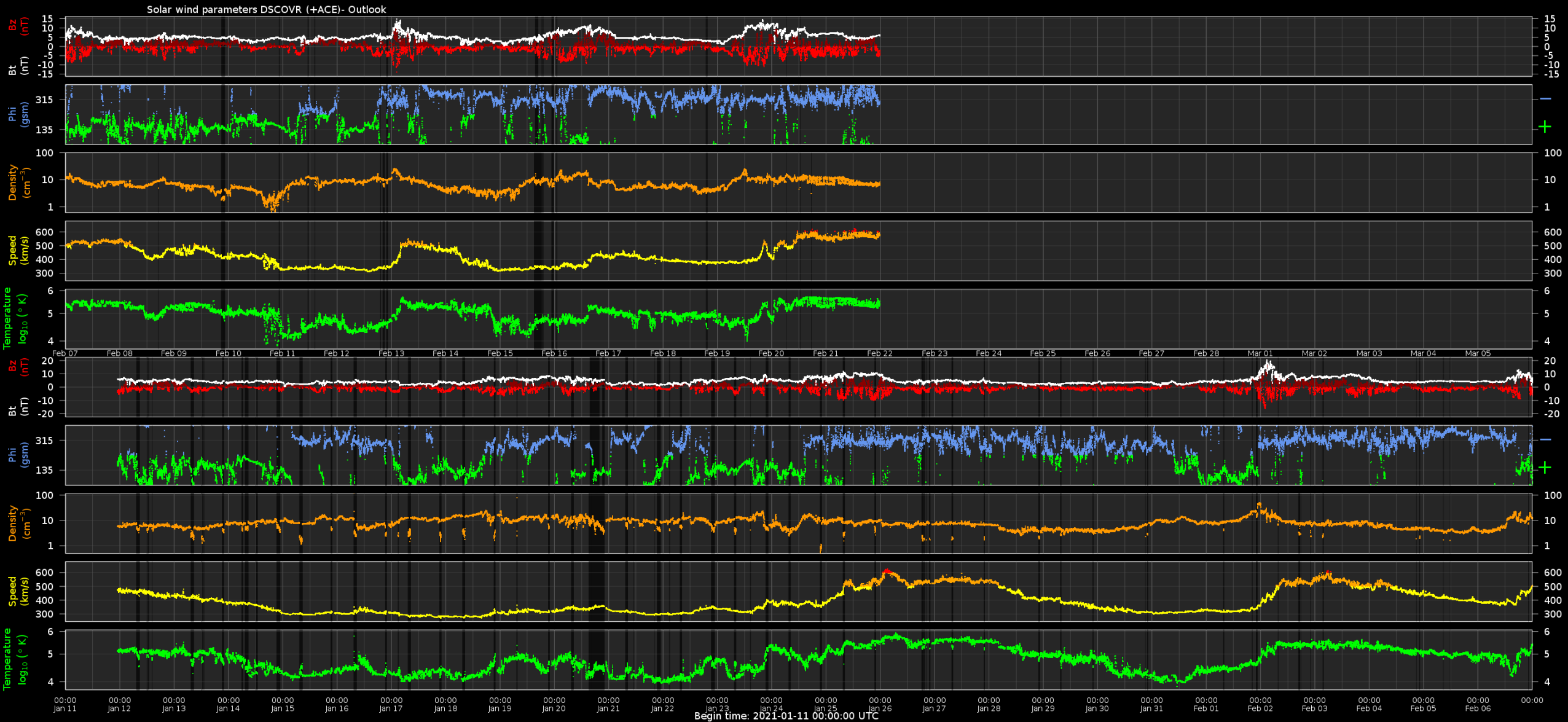
Outlook: Solar activity



Outlook: Solar F10.7cm radio flux



Outlook: Solar wind parameters



Outlook: Geomagnetic activity



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