

SIDC Space Weather Briefing

09 February 2020 - 16 February 2020

Judith de Patoul
& the SIDC forecaster team



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

Summary Report

Solar activity from 2020-02-09 12:00 UT to 2020-02-16 12:00 UT

Active regions	The visible solar disc is spotless
Flaring	# B-class flare: 0 # C-class flare: 0 # M-class flare: 0 # X-class flare: 0
Filaments	No filament eruption
CMEs	No Earth directed CME
Proton Events	No proton Event

Solar wind and geomagnetic conditions from 2020-02-09 12:00 UT to 2020-02-16 12:00 UT

Coronal Holes	Few small patchy coronal hole
ICME	No ICMEs
SW Conditions	$V_{\text{MIN}} = 300 \text{ km/s}$ $V_{\text{MAX}} = 450 \text{ km/s}$ $B_t < 6.4$
K-indices	max K-index (Dourbes): 3.0 max Kp-index (NOAA): 3

All Quiet Alert: **ON** for the all week.

Solar Activity

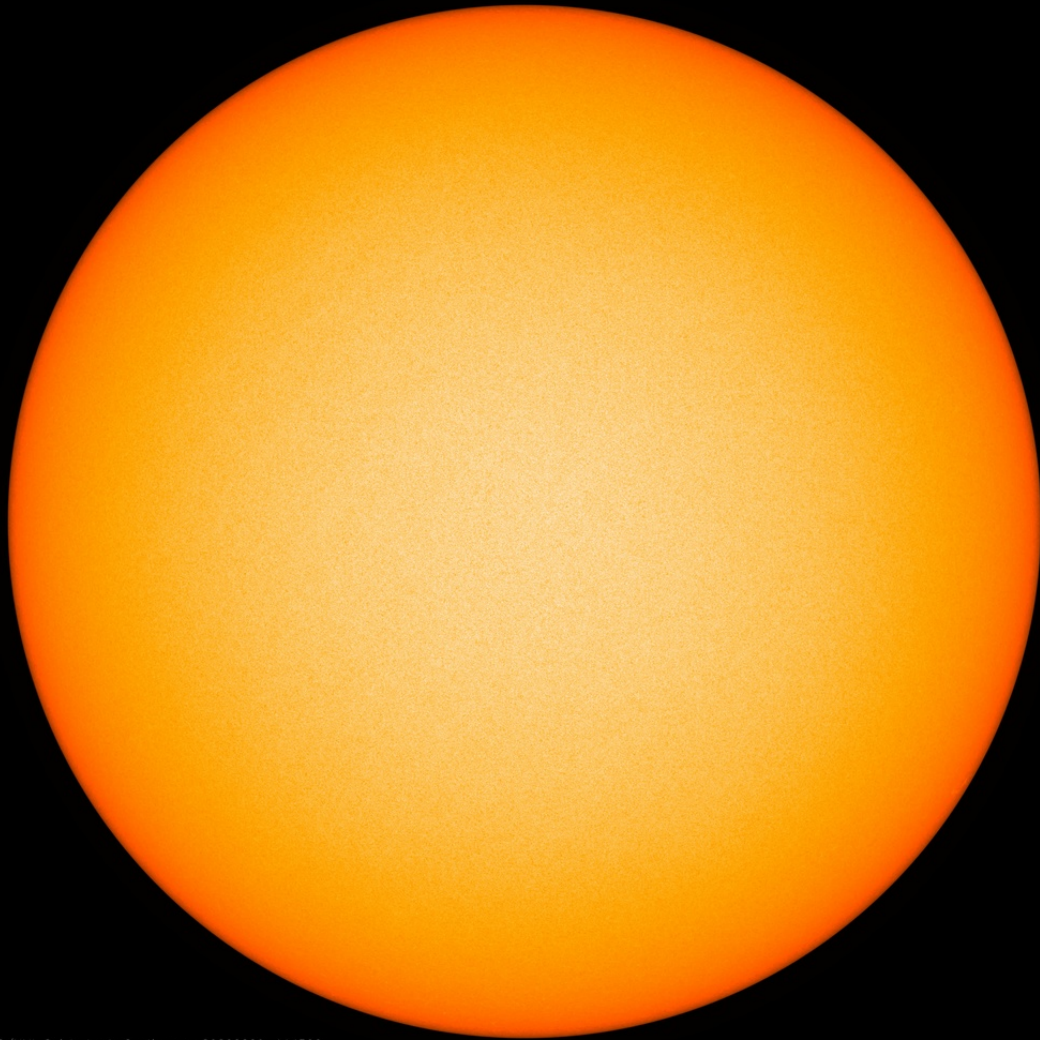


Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

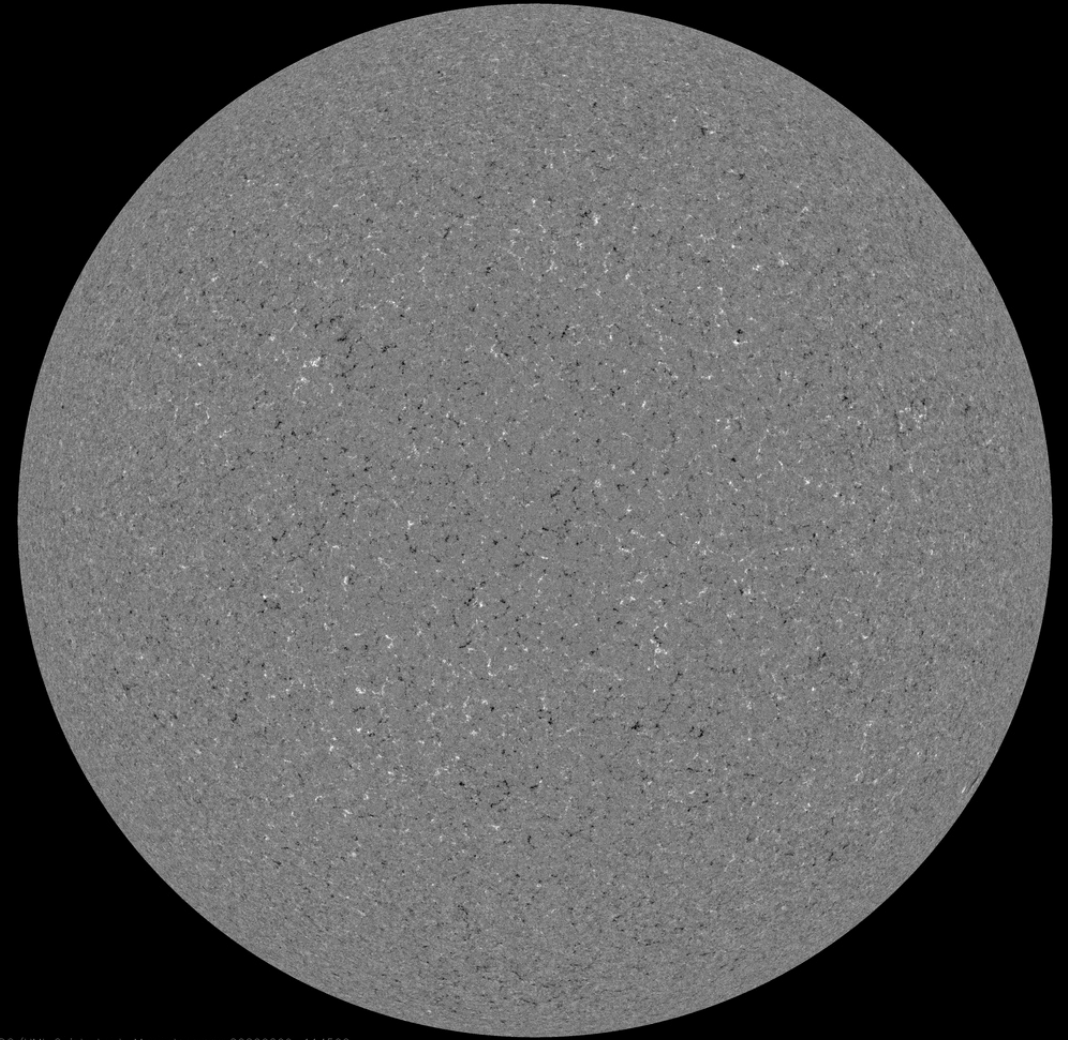
Solar active region - start of the week

SDO/HMI White Light 2020-02-09



SDO/HMI Quick-Look Continuum: 20200209_114500

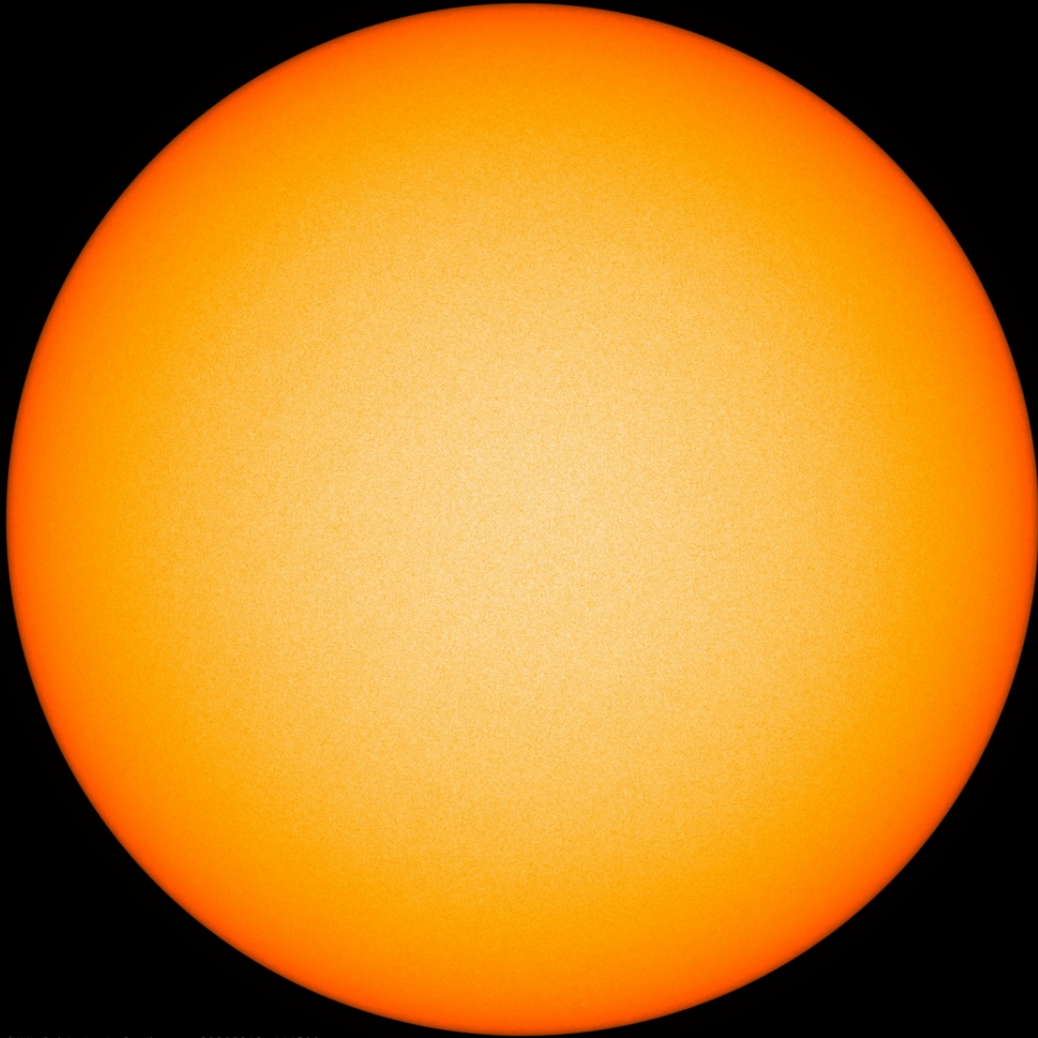
SDO/HMI Magnetogram 2020-02-09



SDO/HMI Quick-Look Magnetogram: 20200209_114500

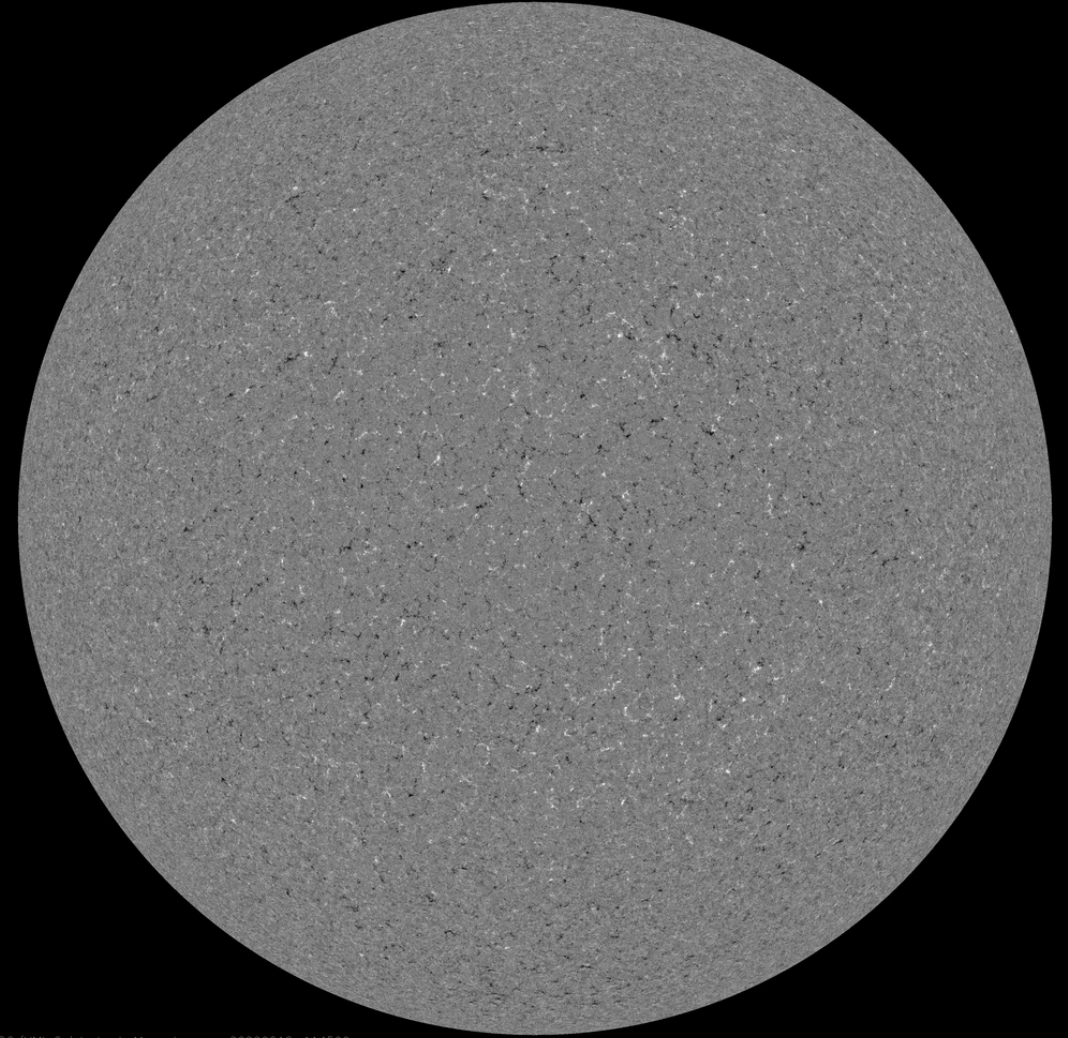
Solar active region - middle of the week

SDO/HMI White Light 2020-02-12



SDO/HMI Quick-Look Continuum: 20200212_114500

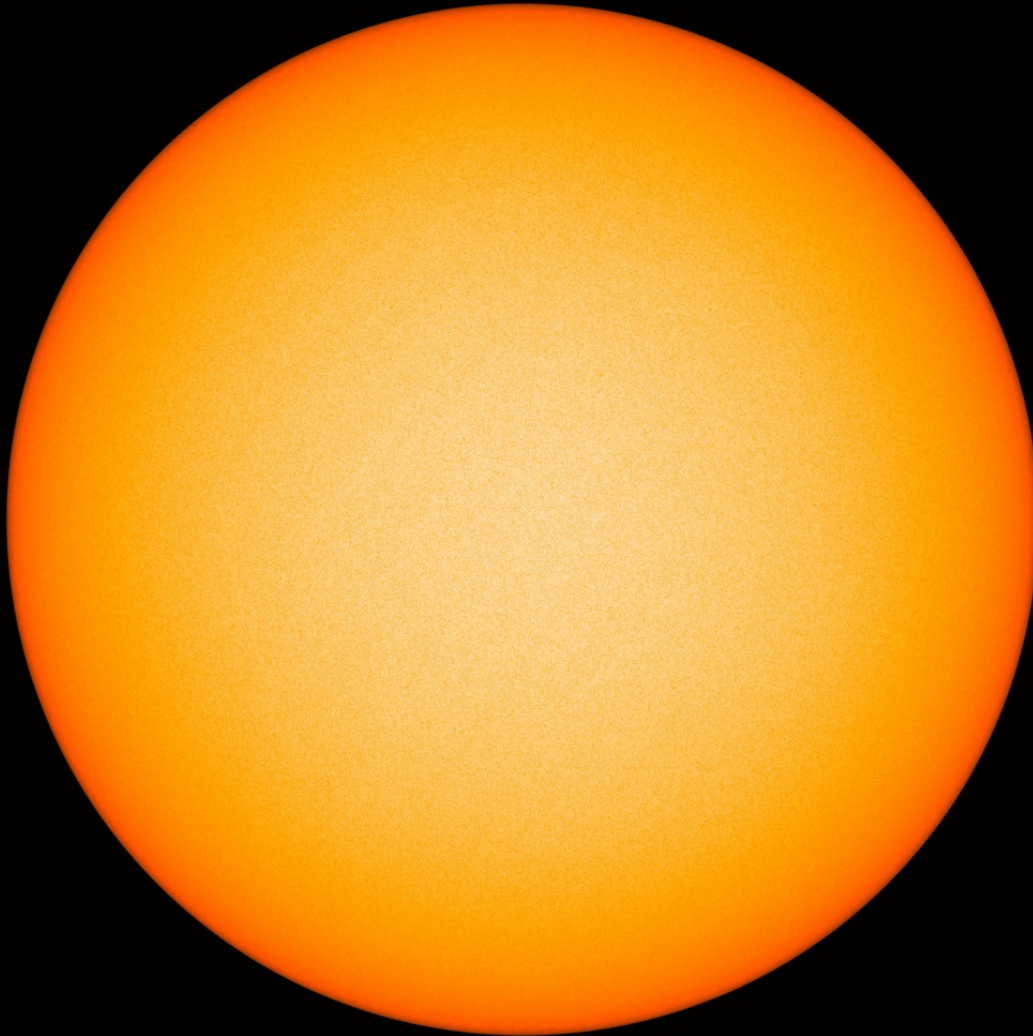
SDO/HMI Magnetogram 2020-02-12



SDO/HMI Quick-Look Magnetogram: 20200212_114500

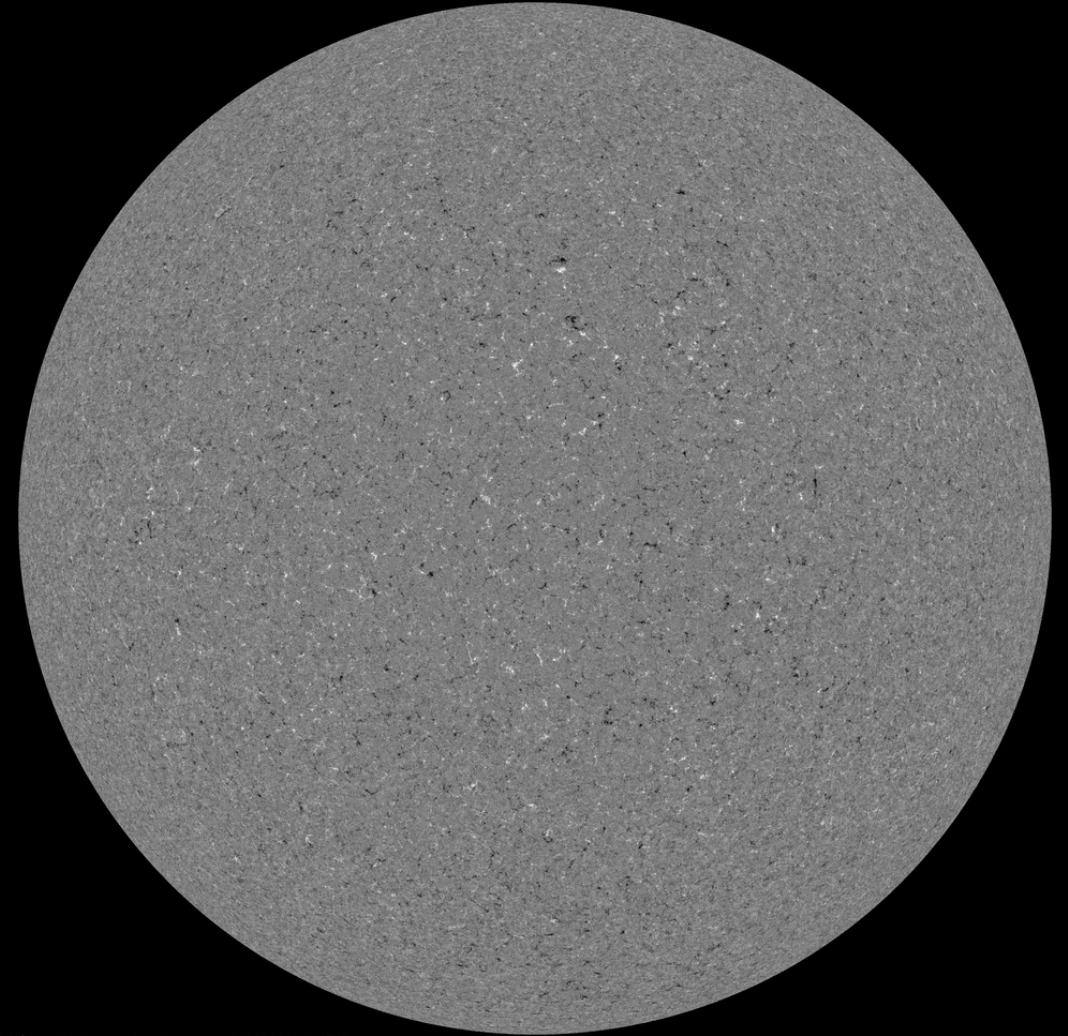
Solar active region - end of the week

SDO/HMI White Light 2020-02-16



SDO/HMI Quick-Look Continuum: 20200216_114500

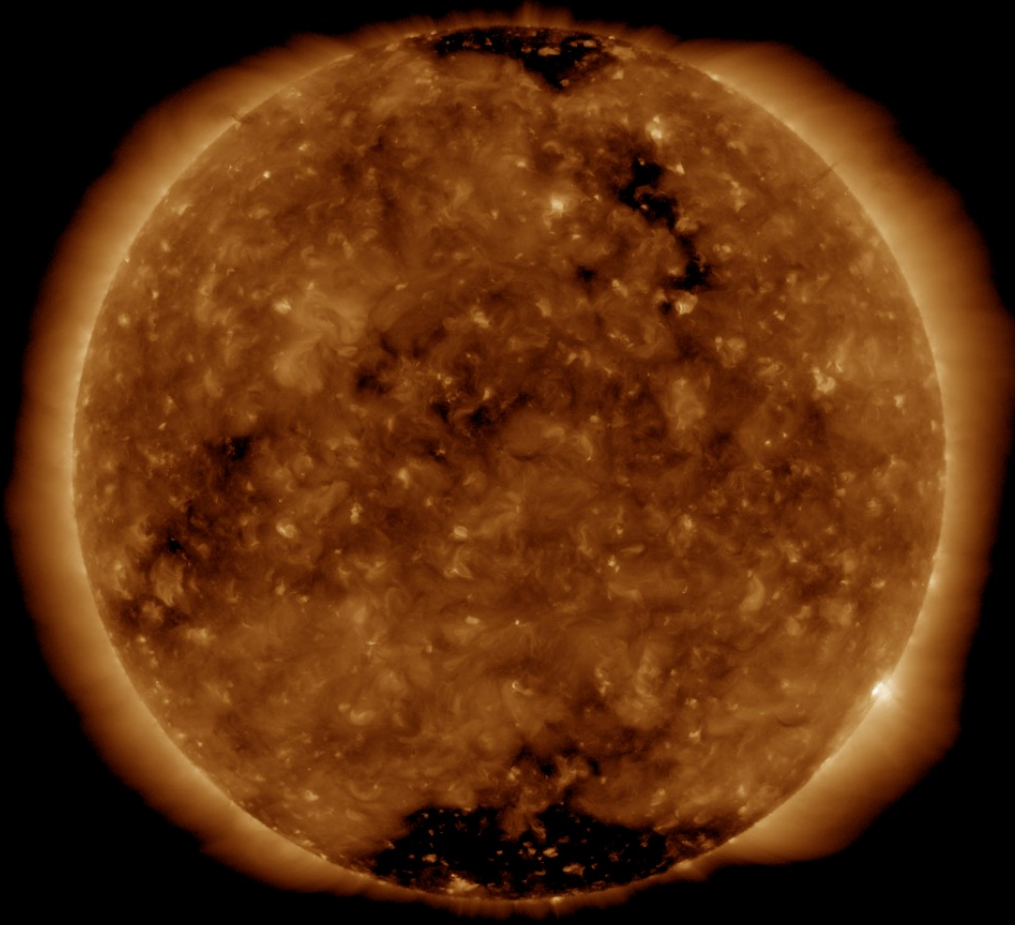
SDO/HMI Magnetogram 2020-02-16



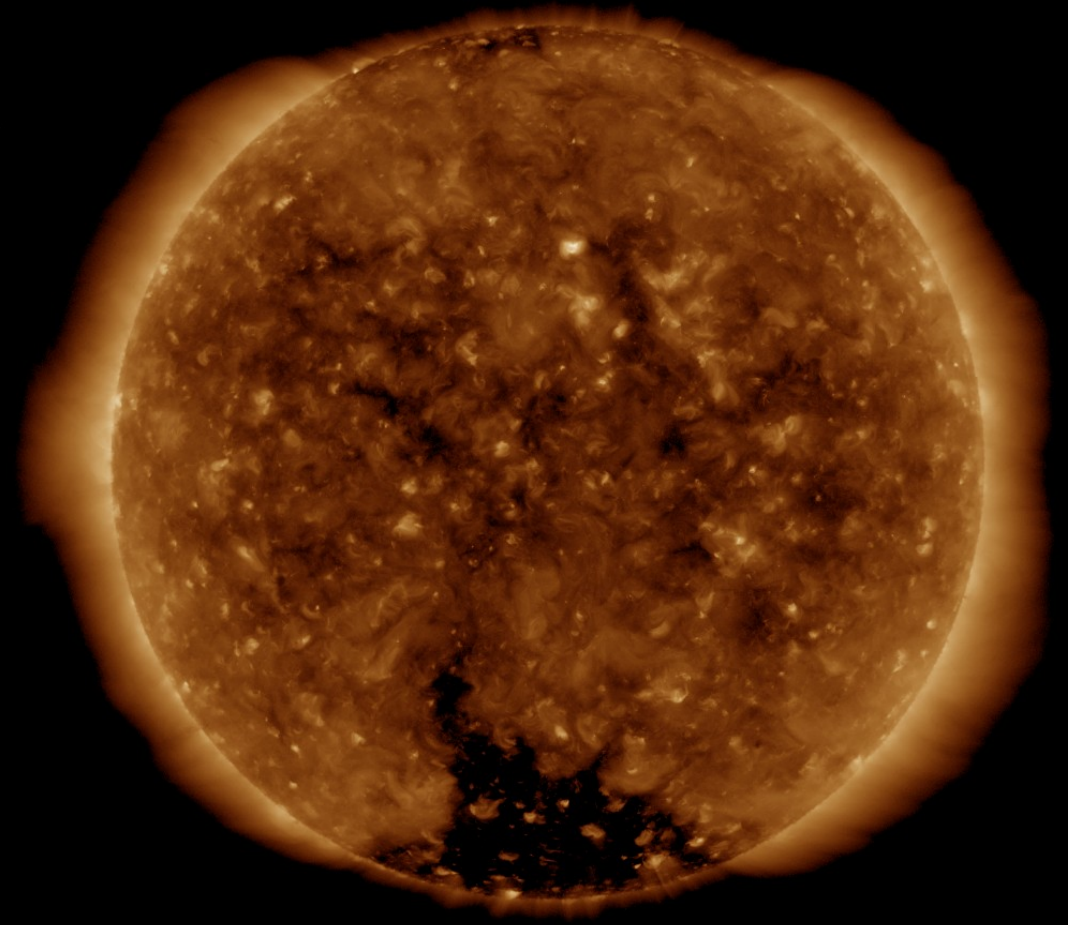
SDO/HMI Quick-Look Magnetogram: 20200216_114500

Solar active region & Coronal hole

SDO/AIA 19.3 nm 2020-02-09



SDO/AIA 19.3 nm 2020-02-16

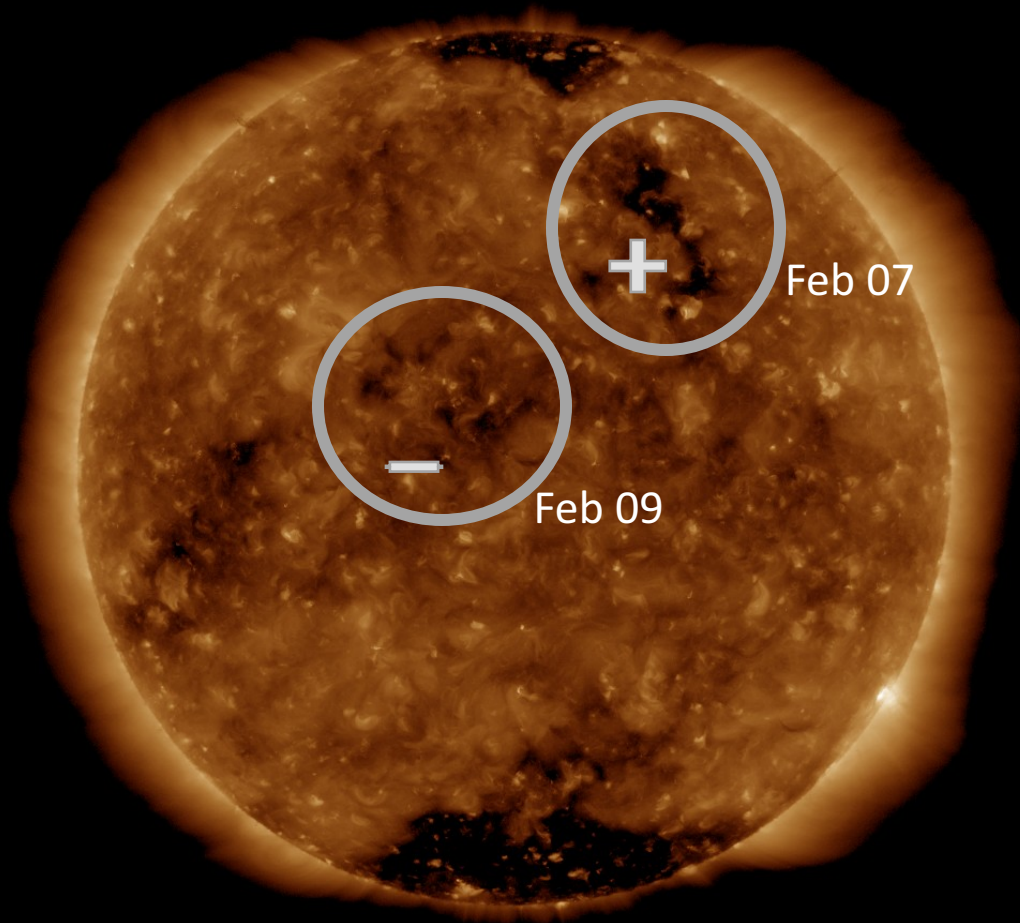


SDO/AIA 193 2020-02-09 12:11:17 UT

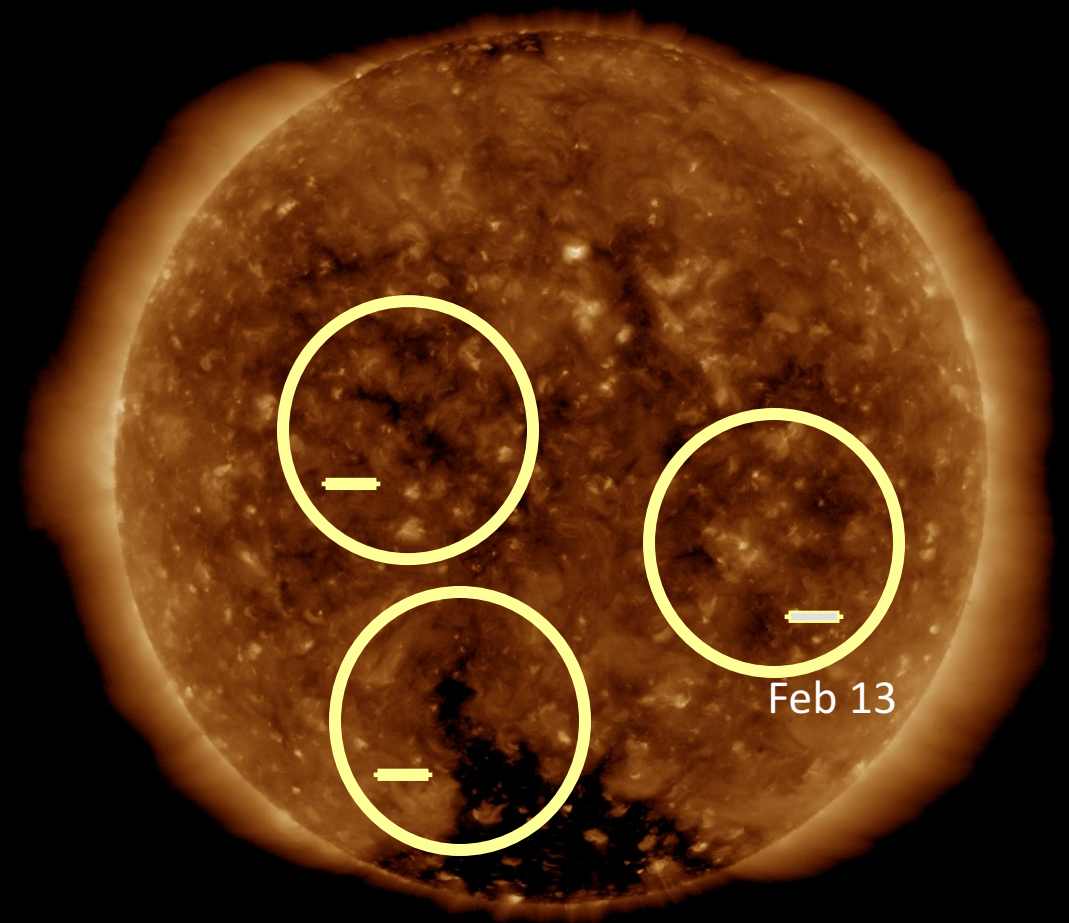
SDO/AIA 193 2020-02-16 12:10:53 UT

Solar active region & Coronal hole

SDO/AIA 19.3 nm 2020-02-09



SDO/AIA 19.3 nm 2020-02-16



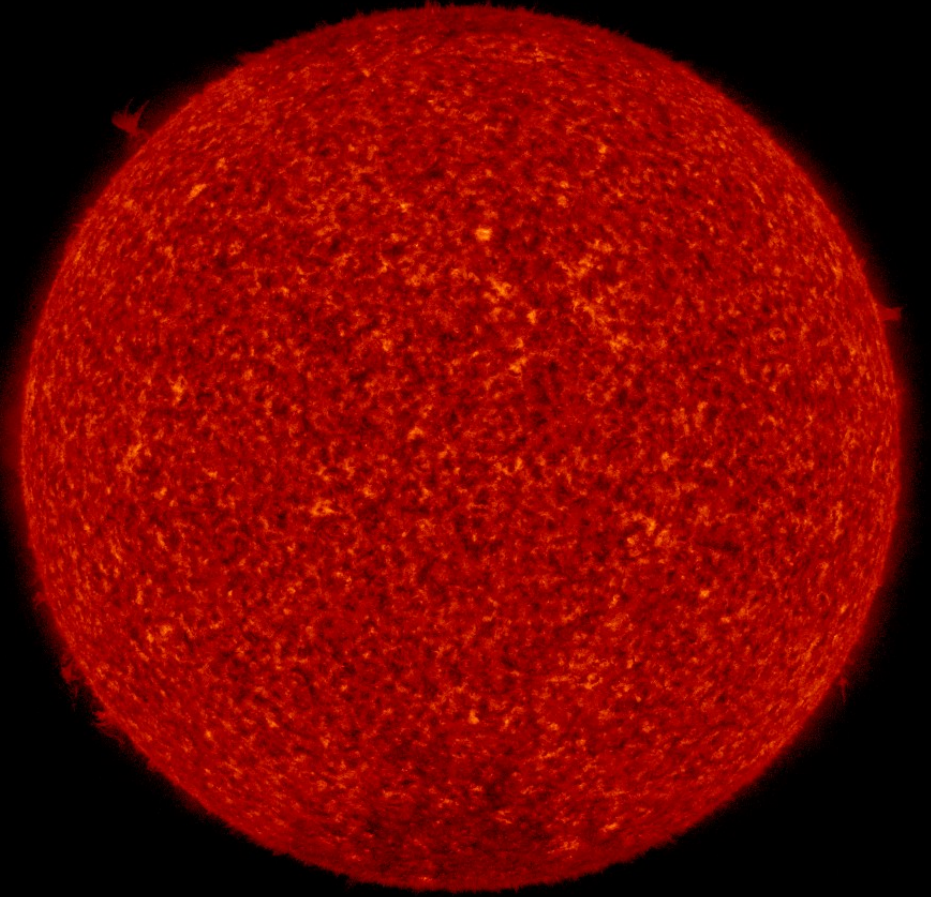
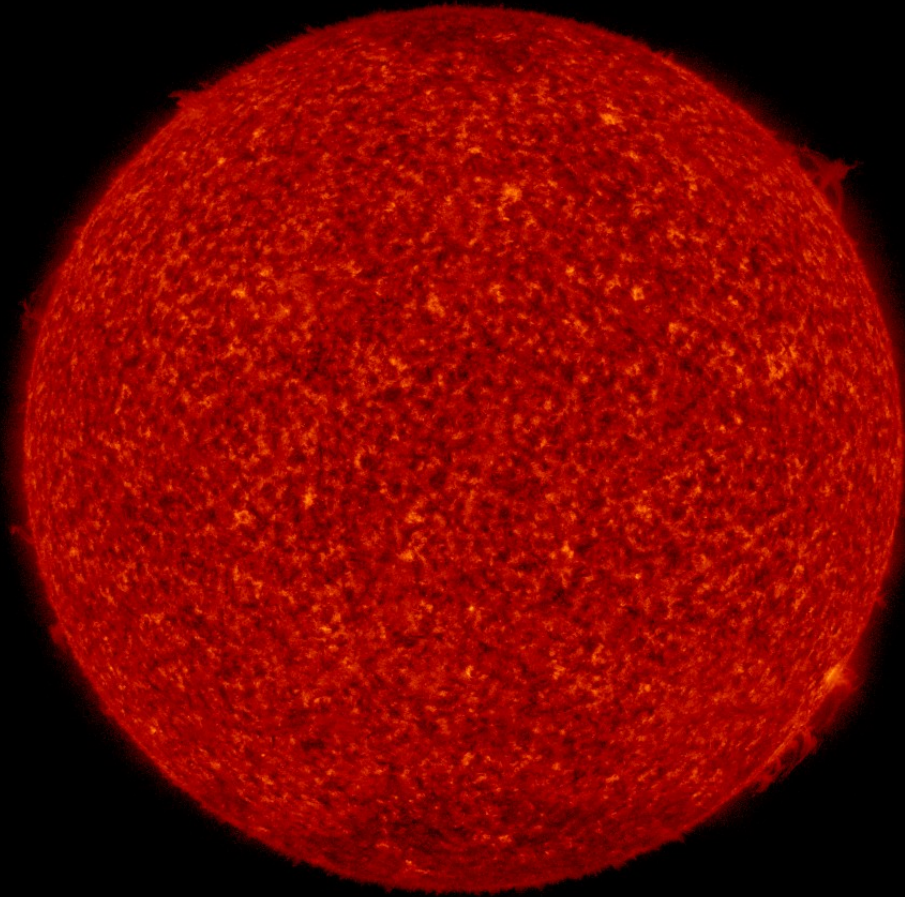
SDO/AIA 193 2020-02-09 12:11:17 UT

SDO/AIA 193 2020-02-16 12:10:53 UT

Solar active region & Filament

SDO/AIA 30.4 nm 2020-02-09

SDO/AIA 30.4 nm 2020-02-16



SDO/AIA 304 2020-02-09 12:13:42 UT

SDO/AIA 304 2020-02-16 12:13:42 UT

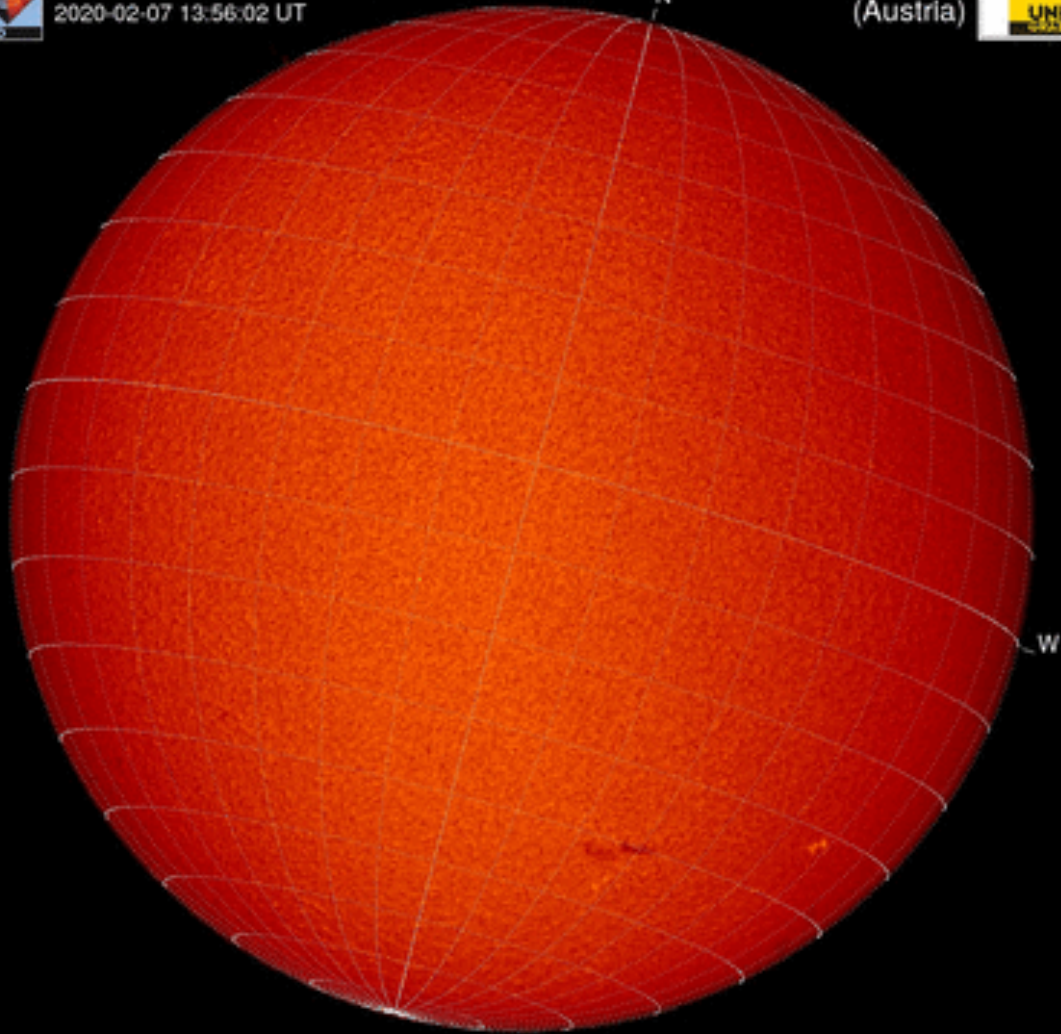
Filament & Filament eruption

H-alpha 2020-02-09



Kanzelhöhe Observatory
2020-02-07 13:56:02 UT

University of Graz
(Austria)

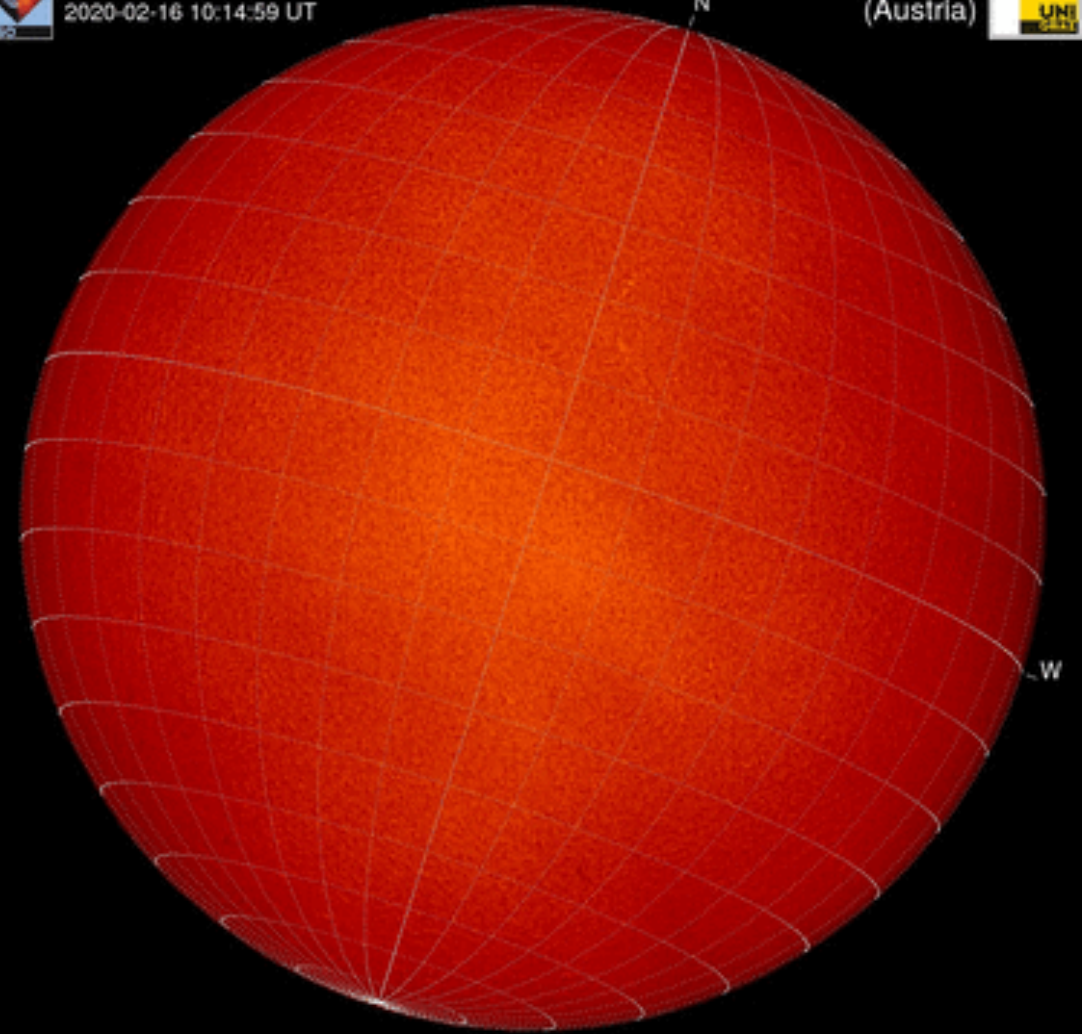


H-alpha 2020-02-16

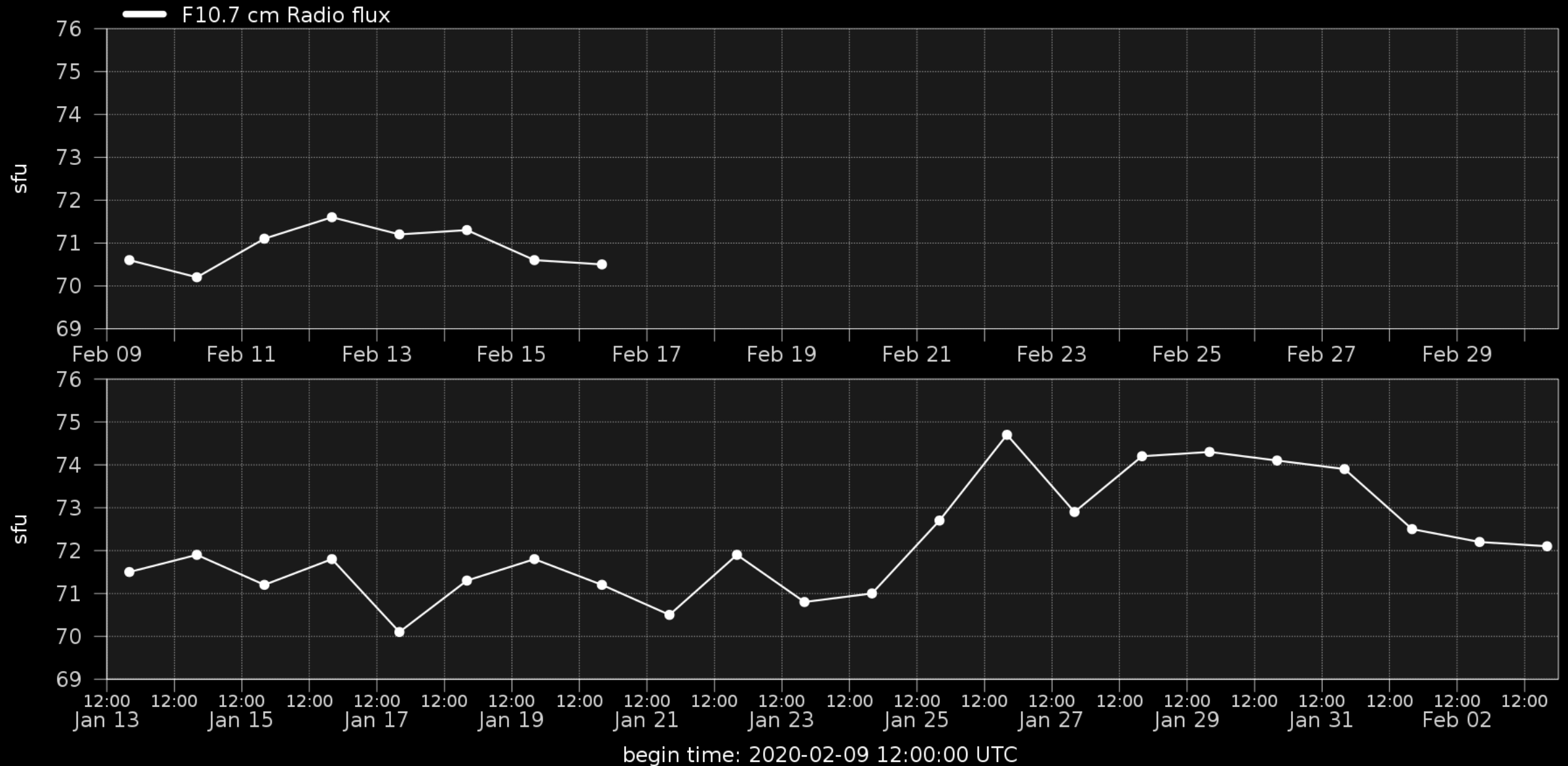


Kanzelhöhe Observatory
2020-02-16 10:14:59 UT

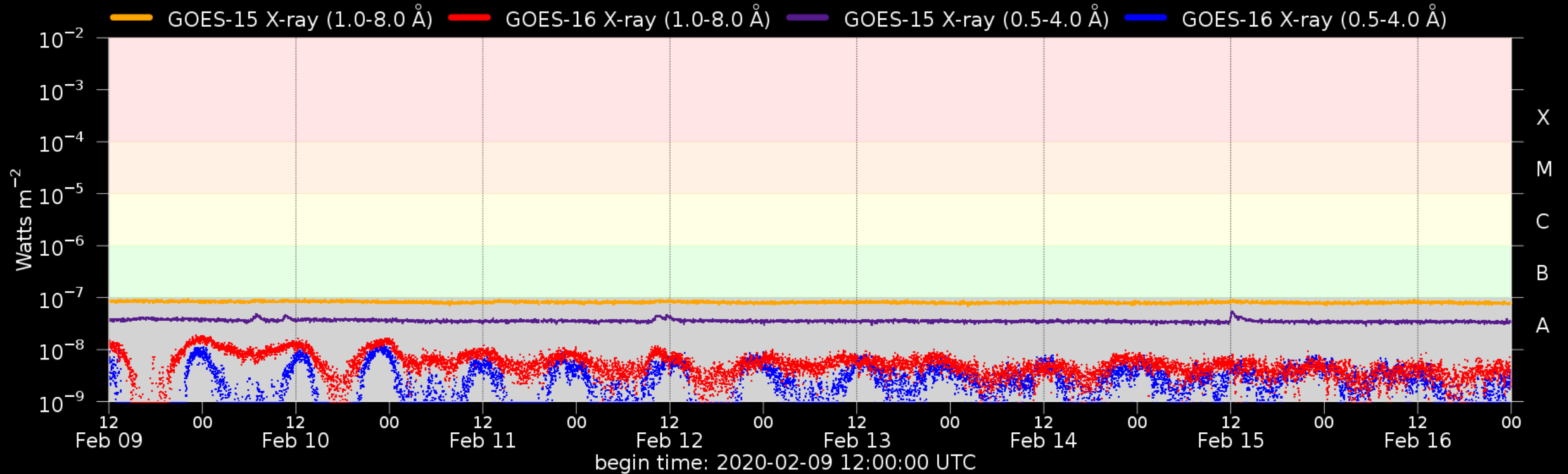
University of Graz
(Austria)



Solar F10.7cm radio flux



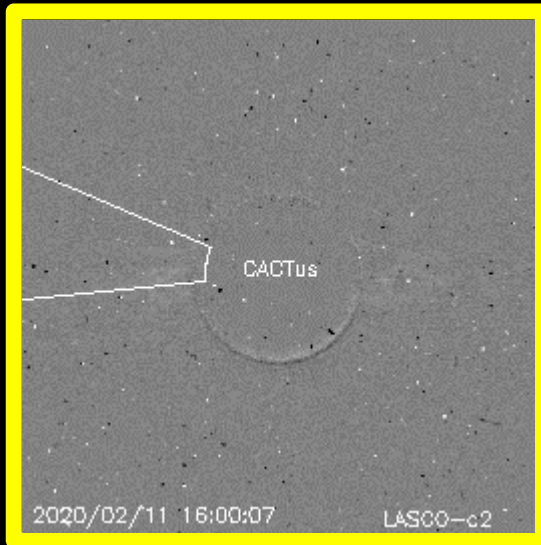
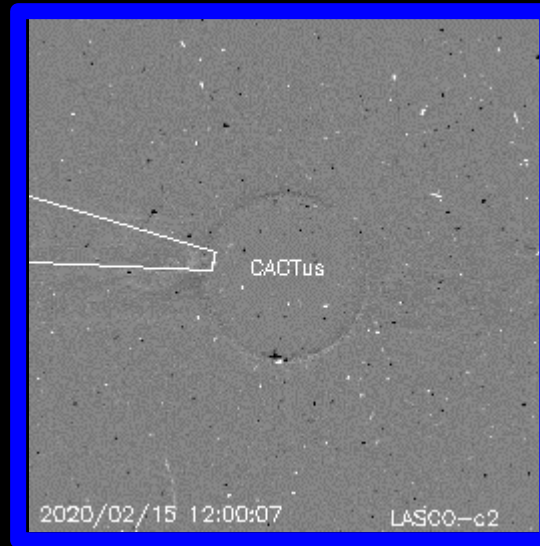
Flaring activity



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

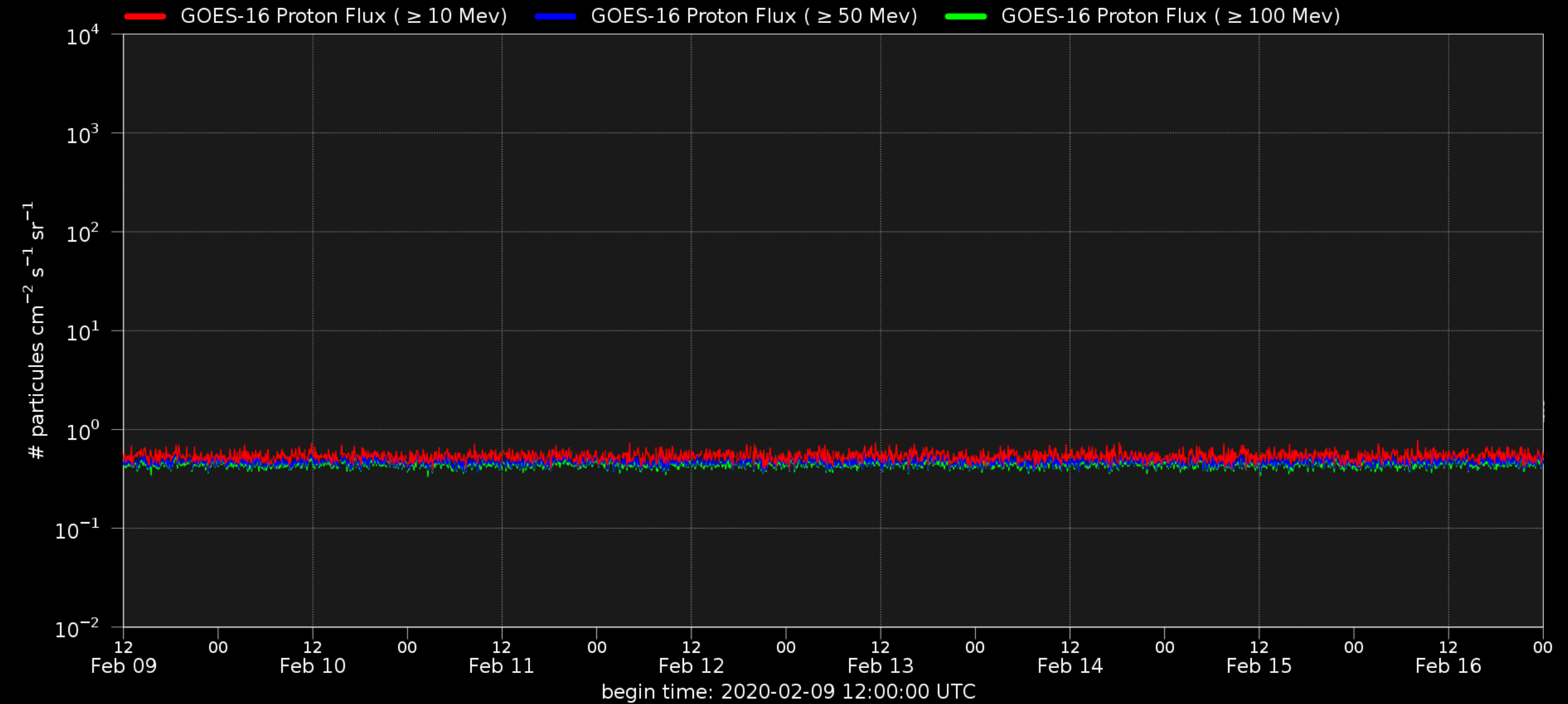
Issue date	2020-02-09	2020-02-10	2020-02-11	2020-02-12	2020-02-13	2020-02-14	2020-02-15	2020-02-16
Probability	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01	--- 01 01 01
Observed	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00	00 00 00 00

Coronal Mass Ejection

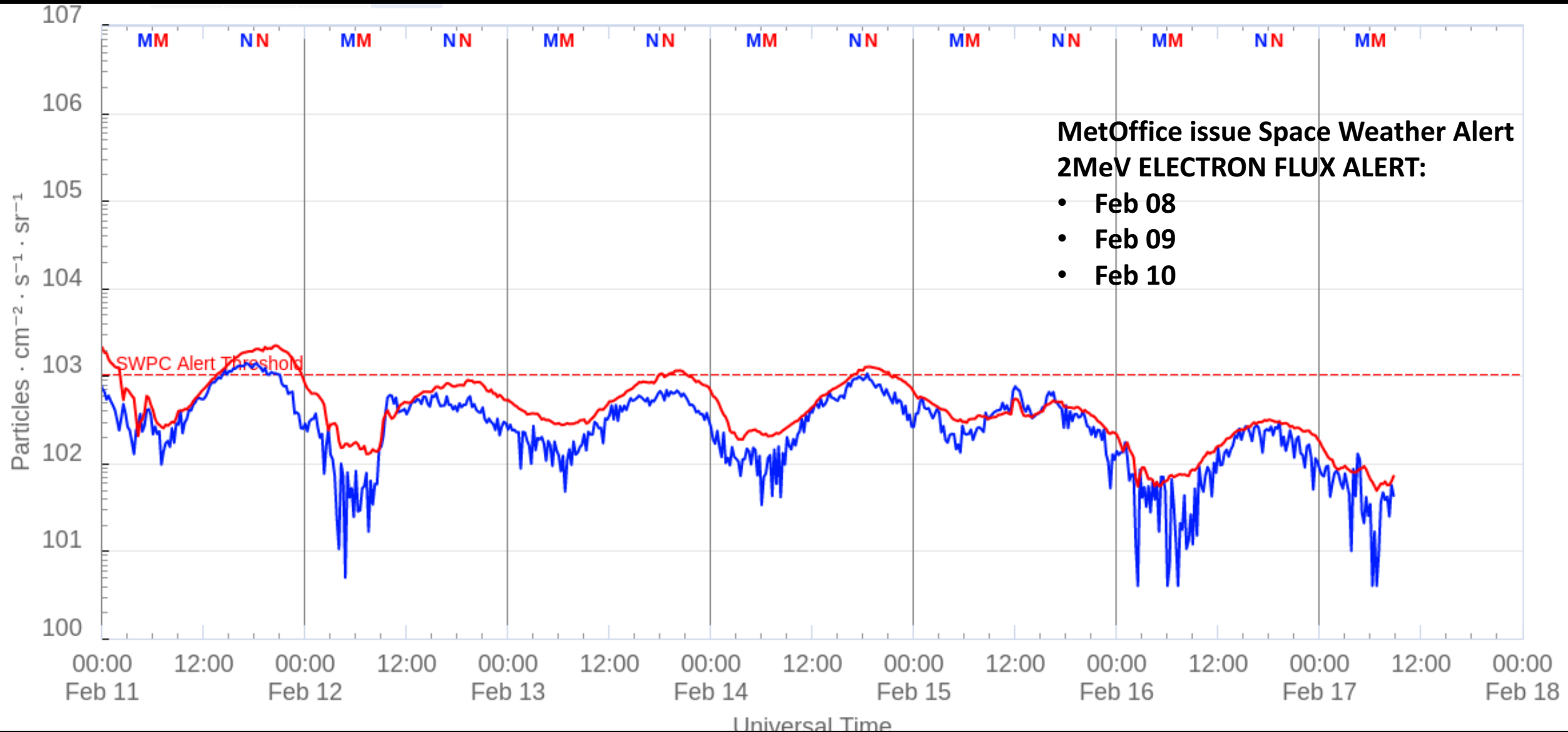


f2	00:12	02/16
	20:36	02/15
	17:48	02/15
	14:48	02/15
	11:24	02/15
	08:36	02/15
	05:48	02/15
	03:12	02/15
	23:54	02/14
	20:36	02/14
	17:48	02/14
	14:36	02/14
	11:24	02/14
	08:00	02/14
	04:39	02/14
	00:00	02/14
	20:12	02/13
	17:48	02/13
	14:48	02/13
	11:48	02/13
	08:36	02/13
	05:48	02/13
	02:48	02/13
	23:36	02/12
	20:00	02/12
	17:12	02/12
	14:24	02/12
	11:12	02/12
	08:12	02/12
	05:36	02/12
	02:48	02/12
	00:12	02/12
	20:48	02/11
	17:41	02/11
	14:12	02/11
	11:12	02/11
	08:24	02/11
	05:36	02/11
	02:36	02/11
	23:30	02/10
	20:00	02/10
	17:00	02/10
	13:54	02/10
	11:00	02/10
	08:00	02/10
f1		
e1		

Solar proton flux



Solar GOES Electron flux (5-min data, SWPC)



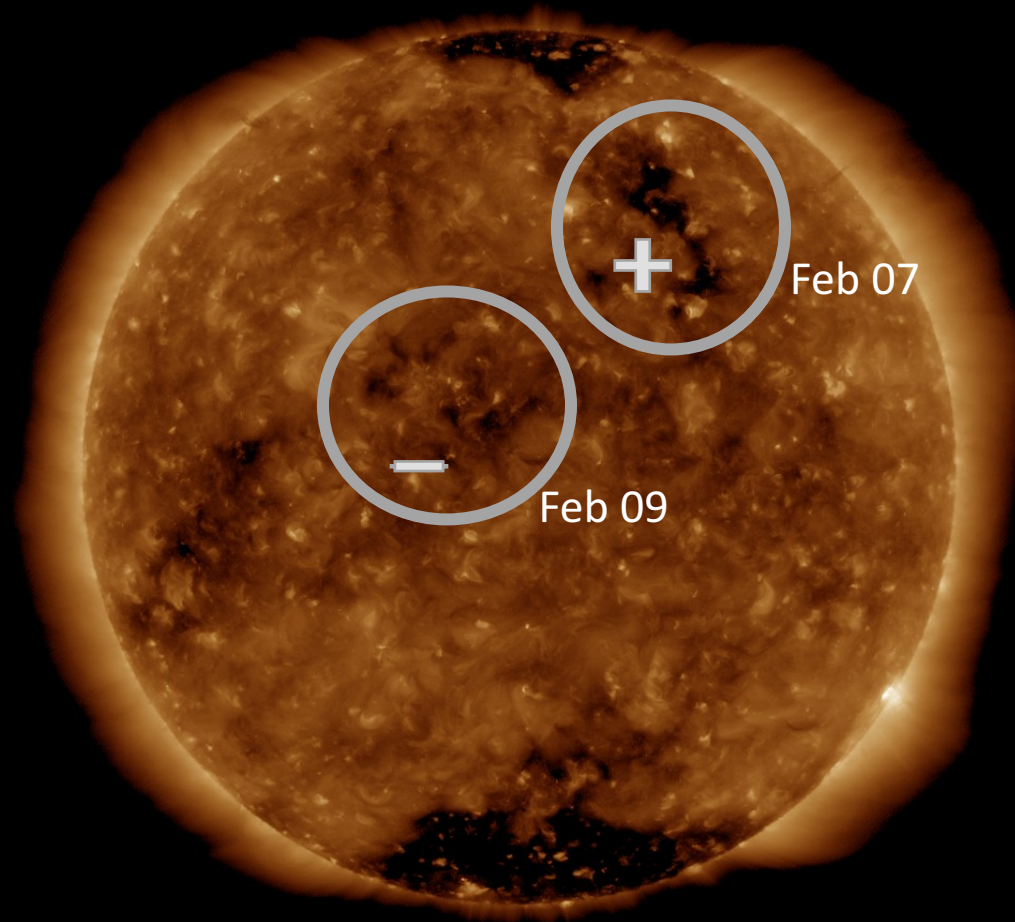
Solar Wind and Geomagnetic Activity



Solar Influences
Data analysis Centre
www.sidc.be

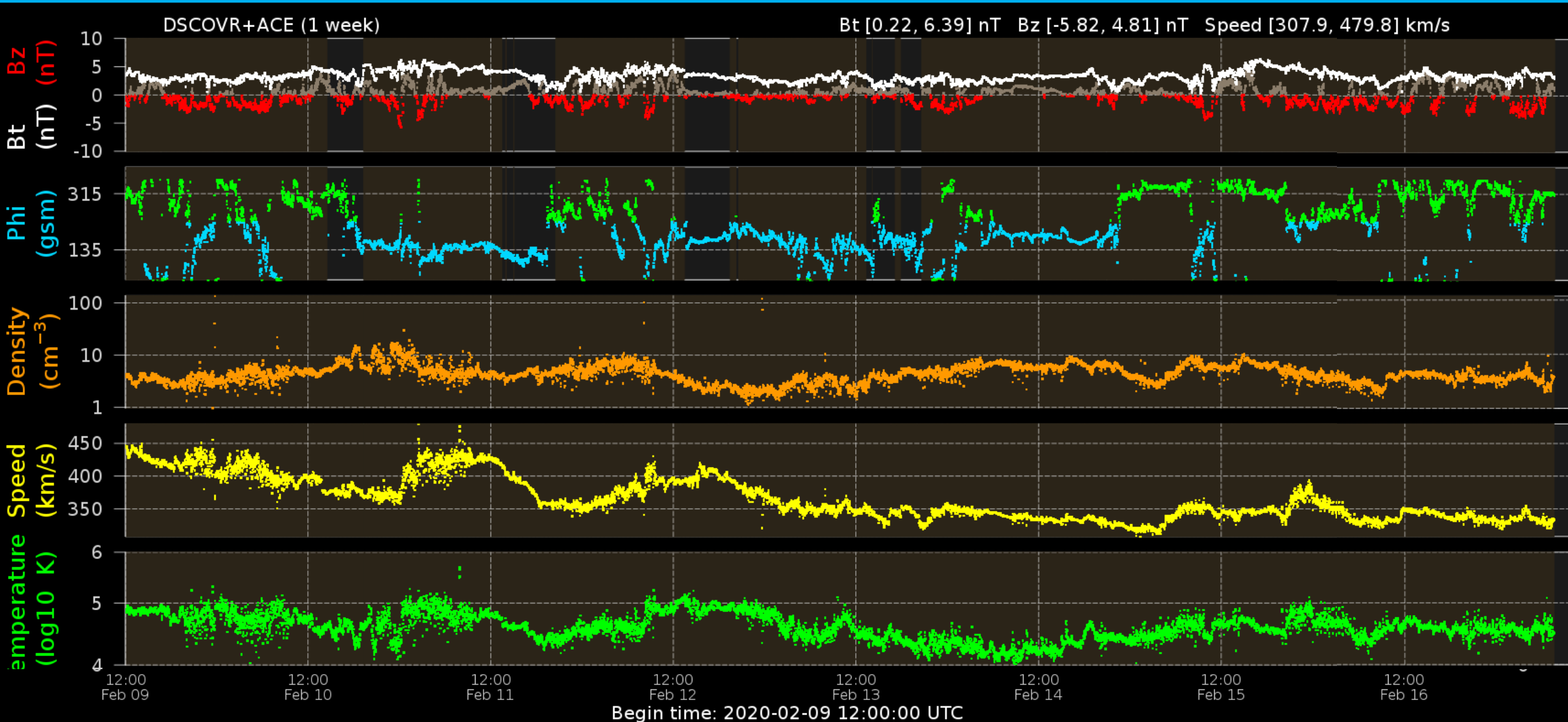
Coronal hole

SDO/AIA 19.3 nm 2020-02-09

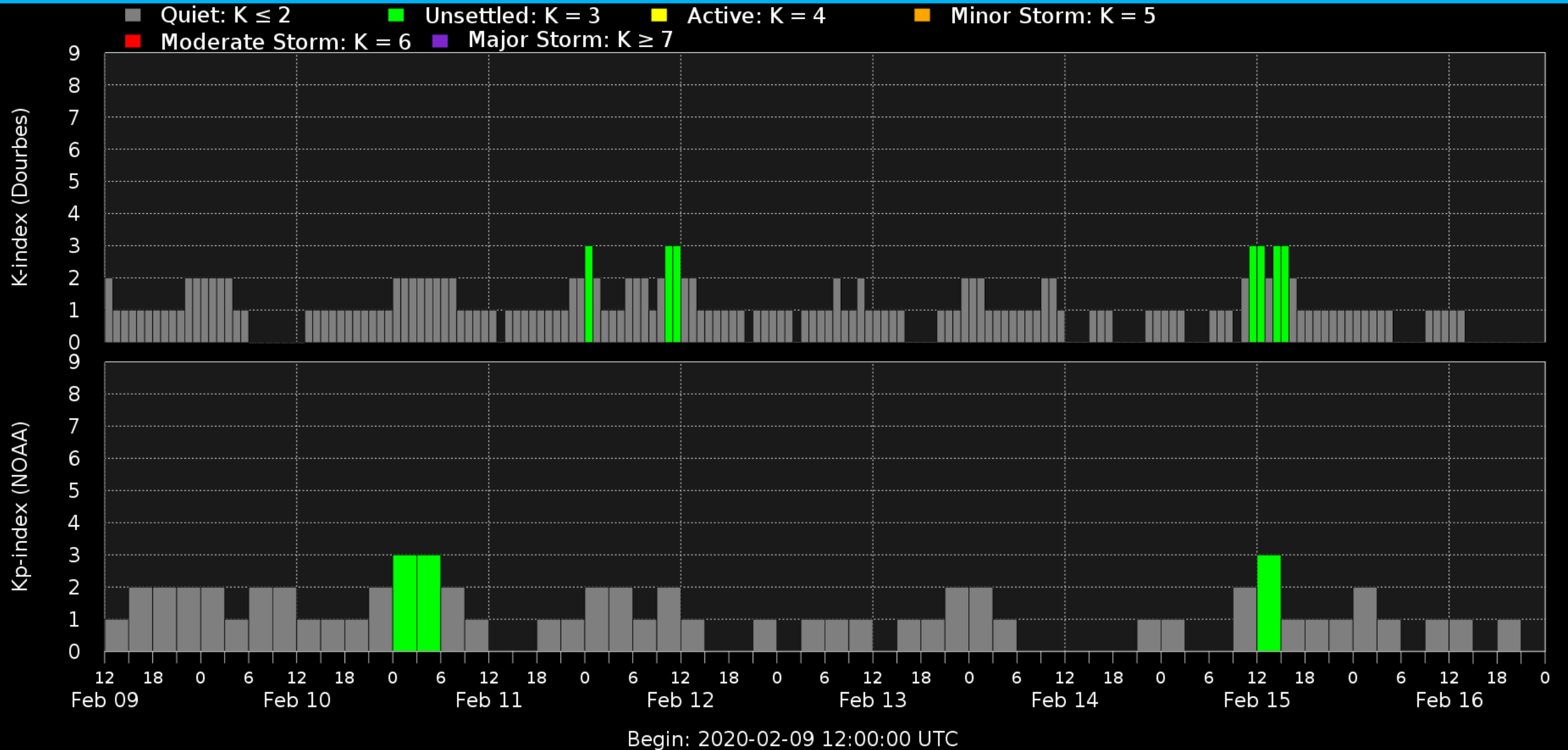


SDO/AIA 193 2020-02-09 12:11:17 UT

Solar wind parameters (DSCOVR/ACE data)



Geomagnetic activity (K-indexes)



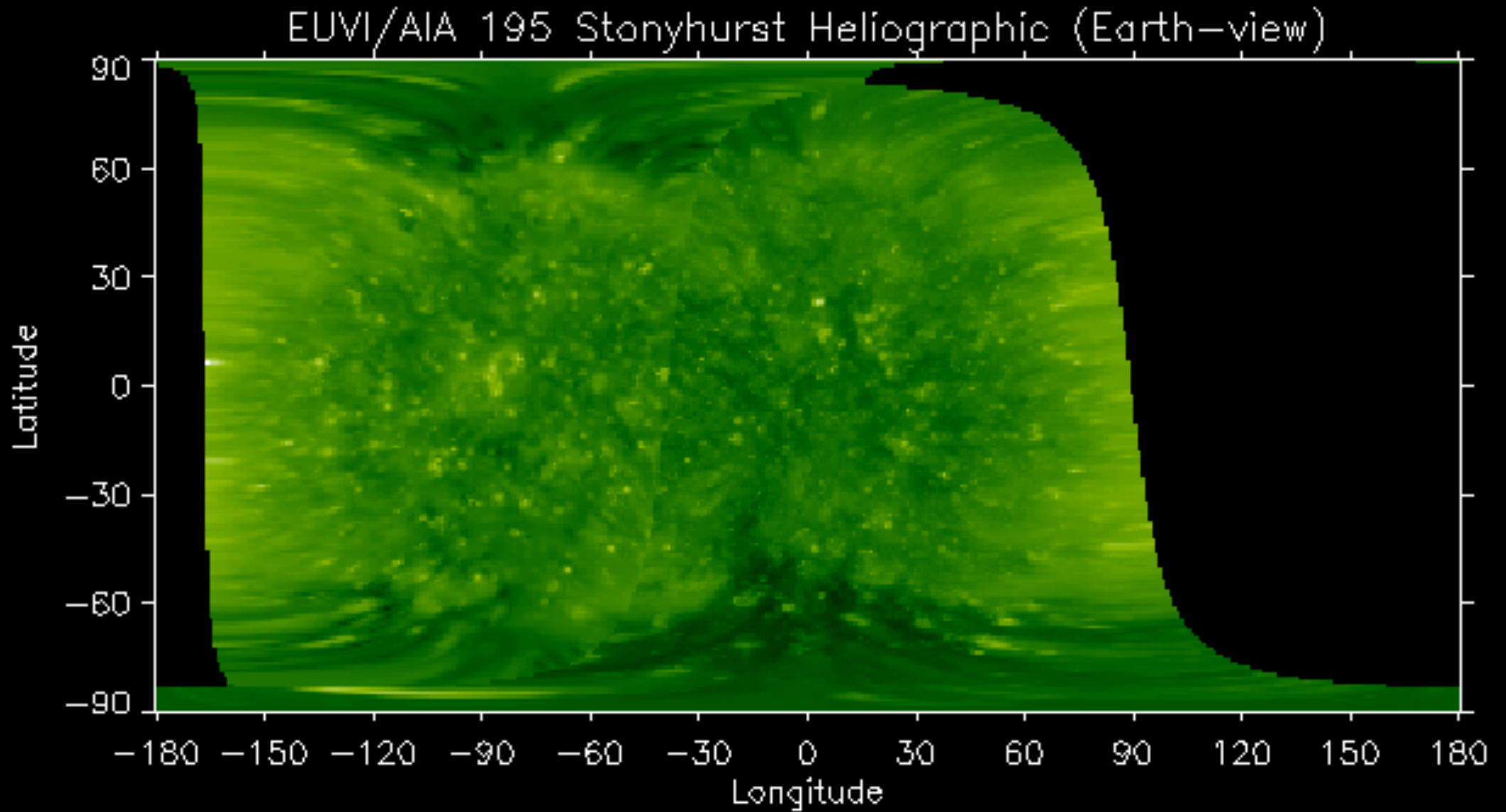
Outlook



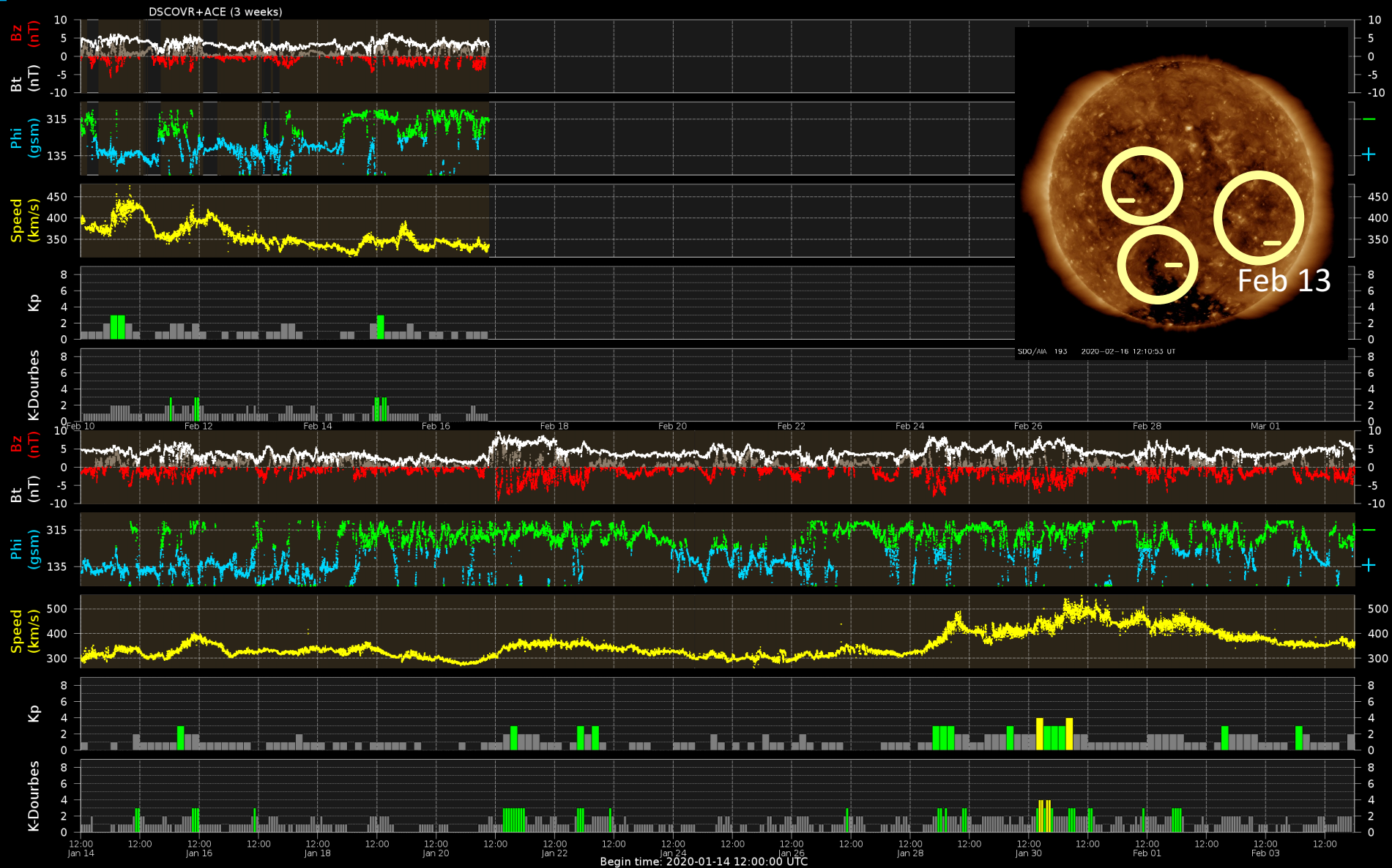
Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be

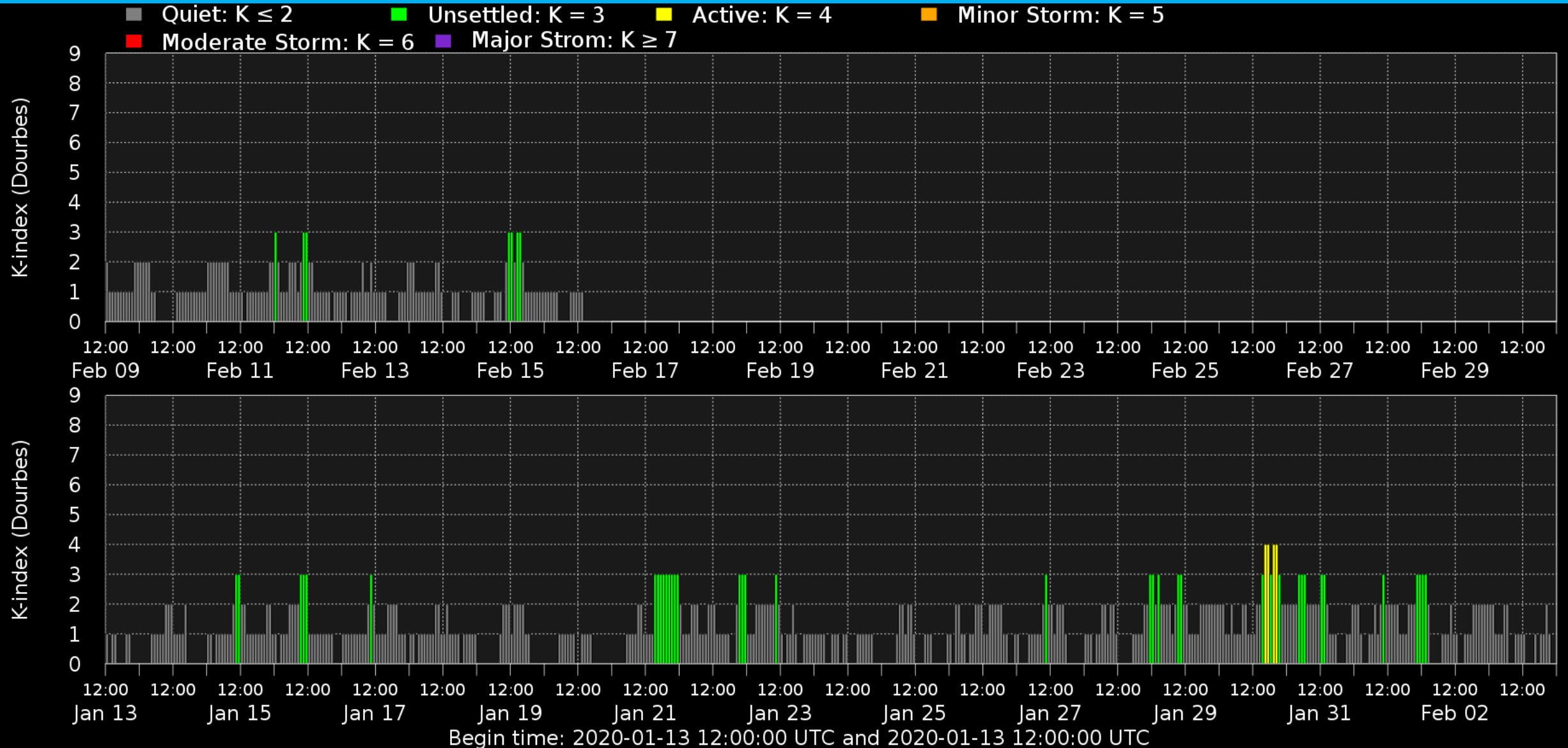
Outlook: Solar activity



Outlook: Solar wind



Outlook: Geomagnetic activity



SIDC Space Weather Briefing

See you at our next briefing!

Or visit us at www.sidc.be



Royal Observatory
of Belgium

Solar Influences
Data analysis Centre
www.sidc.be