

# SIDC Space Weather briefing

22 January – 28 January 2018

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Royal Observatory  
of Belgium

# Summary Report

## Solar Activity:

Active Regions	NOAA 2696 ; spotless
Flaring	X-Ray flux below C-class level
Filaments	No filaments
CMEs	One CME (NW quadrant)
Proton Events	Background level

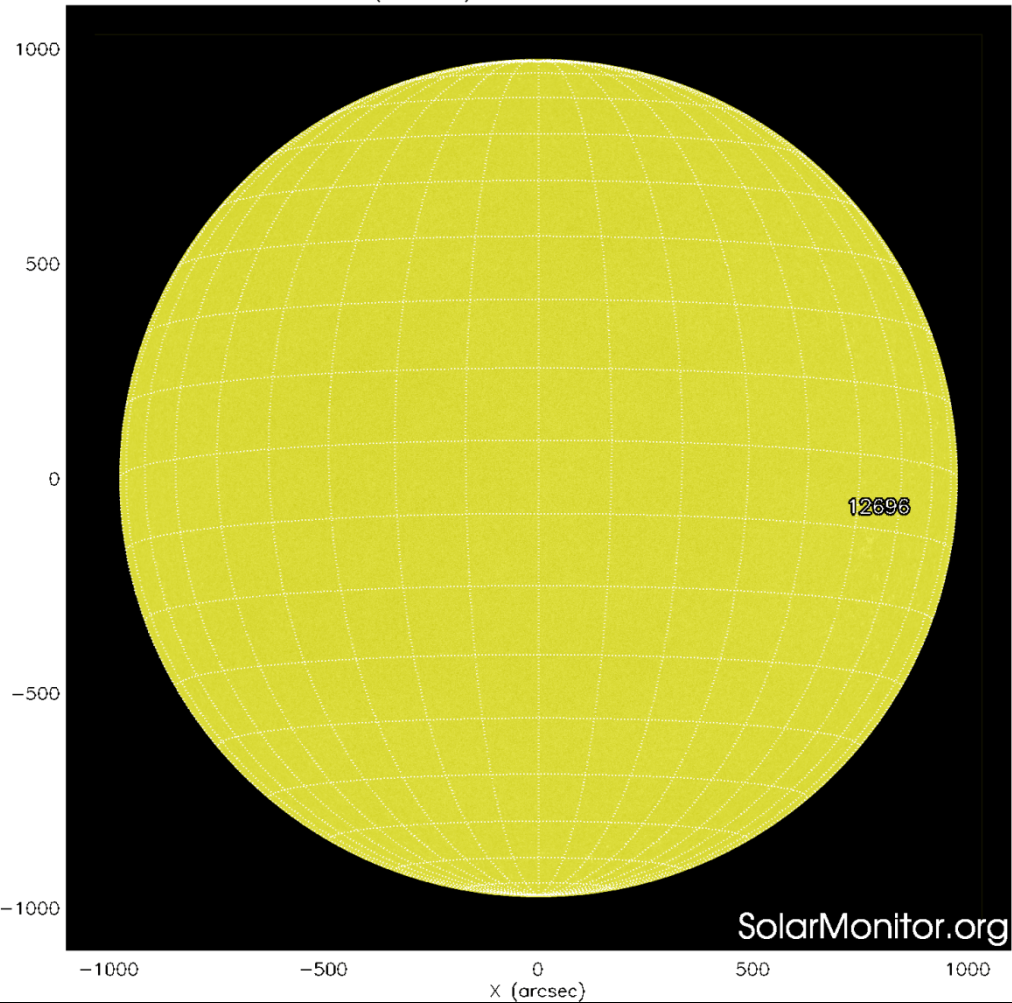
## Solar wind and Geomagnetic conditions:

ICME	No Earth directed CME
Coronal Hole	Various small & diffuse CHs
SW conditions	Weak CH wind streams (max $v_{sw} \sim 500$ km/s)
Kp index	Mostly quiet to unsettled

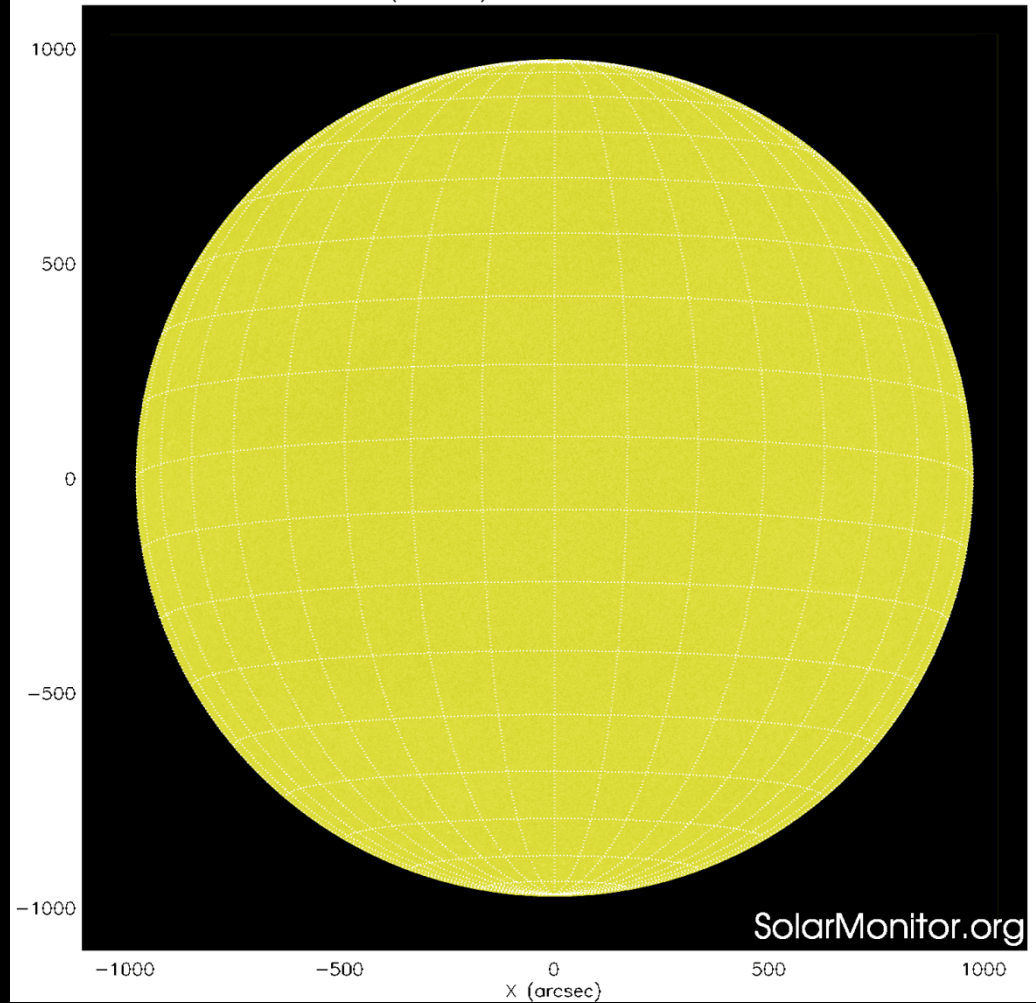
**ALL QUIET ALERT on since 2 January 2018**

# Solar active region evolution

SDO HMI (6173 Å) 21-Jan-2018 19:46:30.000

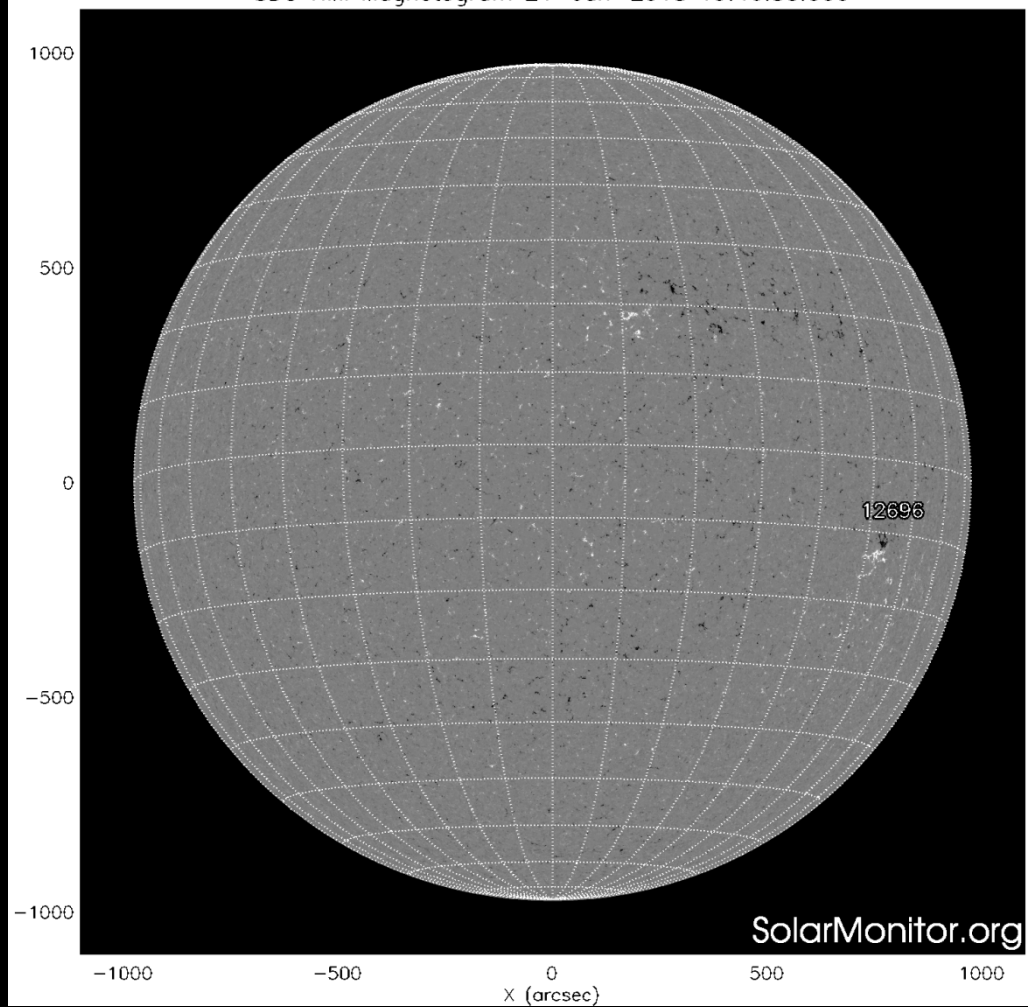


SDO HMI (6173 Å) 28-Jan-2018 07:46:30.600

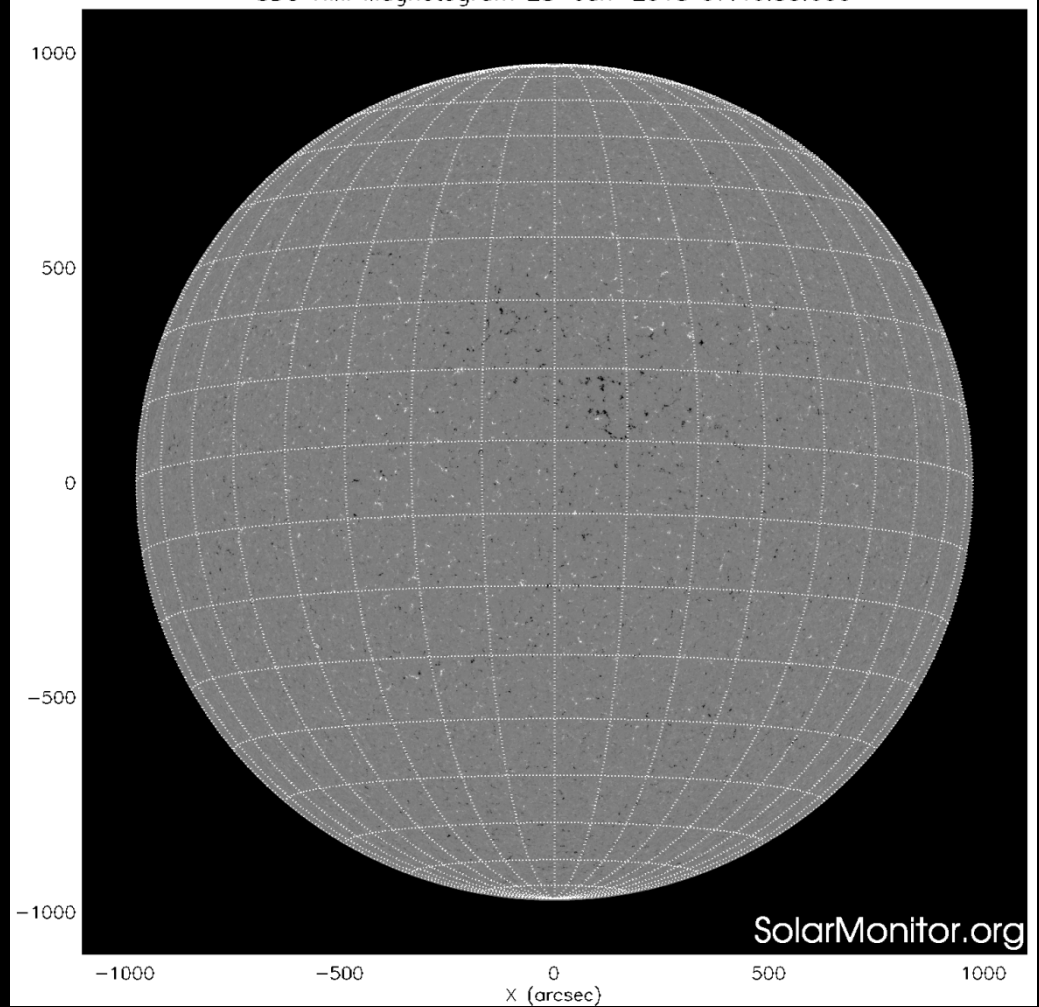


# Solar active region evolution

SDO HMI Magnetogram 21-Jan-2018 19:46:30.000

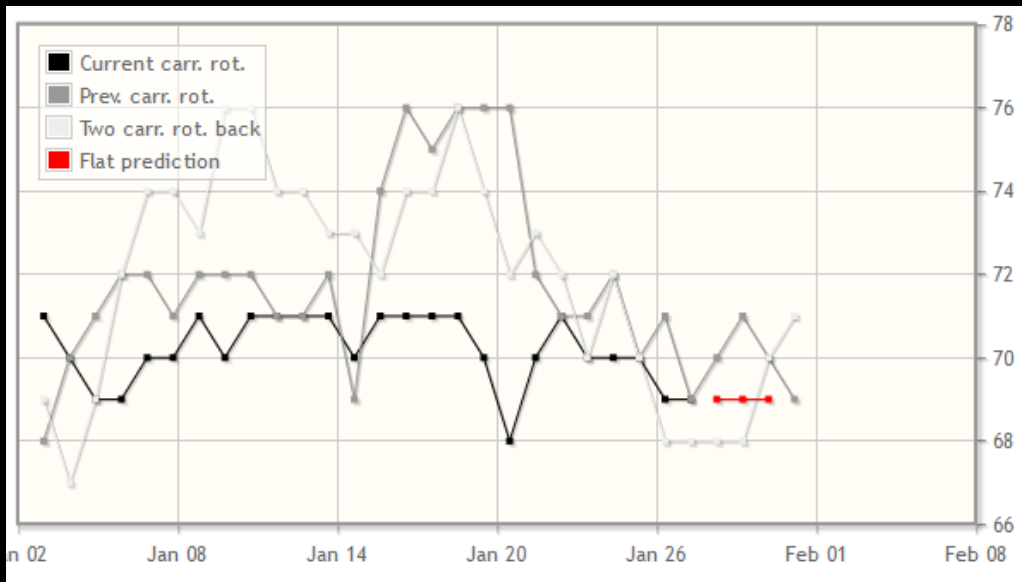


SDO HMI Magnetogram 28-Jan-2018 07:46:30.600



# Evolution of 10.7cm Radio Flux

Predicted and observed 10.7cm Radio flux (sfu)



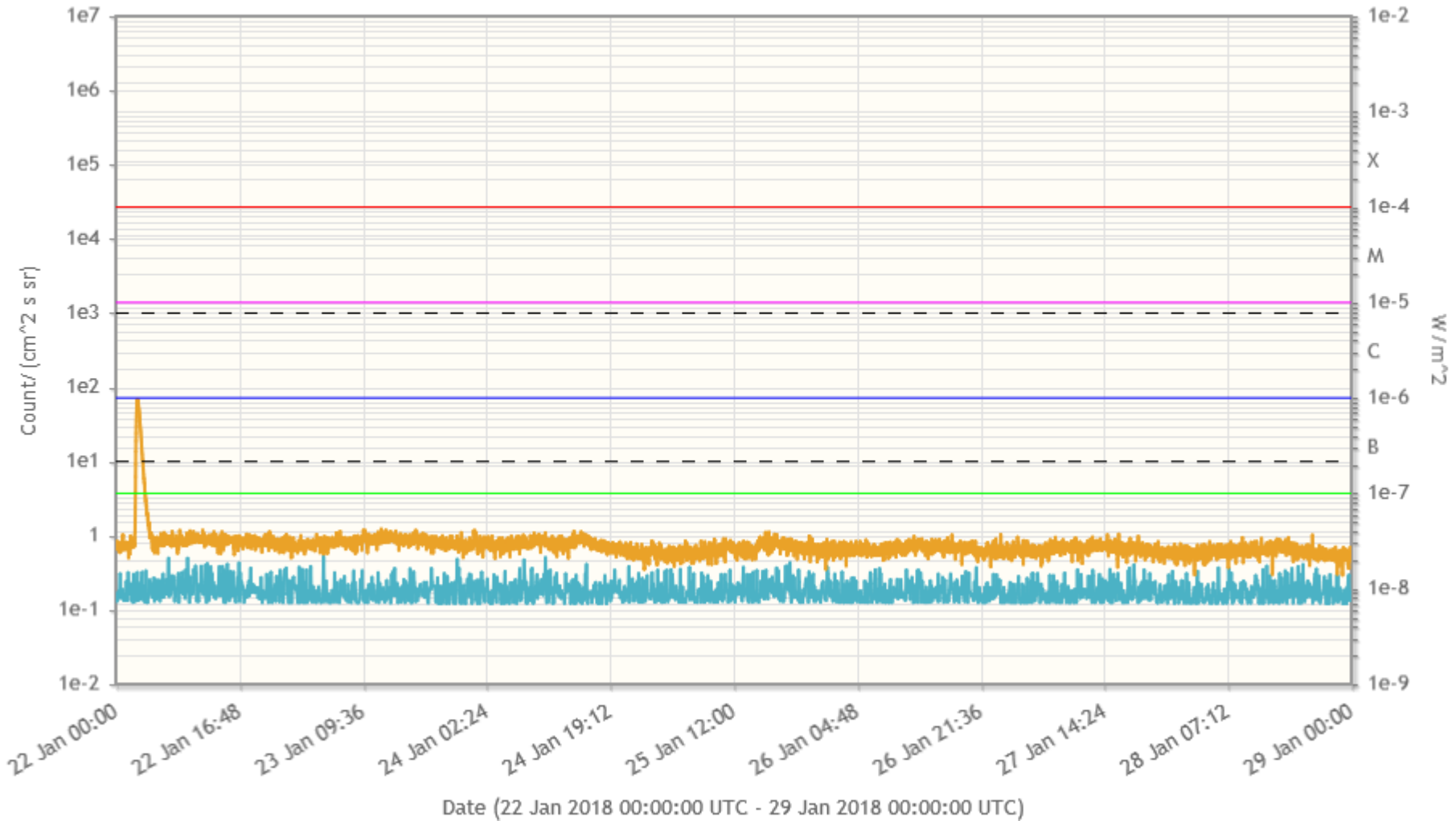
Issue time (12:30UT)	Pred.	Obs.
2018-01-22	69	70
2018-01-23	70	71
2018-01-24	70	70
2018-01-25	70	70
2018-01-26	70	70
2018-01-27	70	69
2018-01-28	69	69



# Solar X-ray flux and $\geq 10$ MeV proton flux (GOES)

www.staff.oma.be

■ Protons / Electrons - GOES Particles at  $> 10$  Mev (quicklook) - (raw - 5 minute data)  
■ X-Ray - GOES X-Ray flux 0.1-0.8 nm (quicklook) - (raw - 1 minute data)



# Evolution of Flare probability

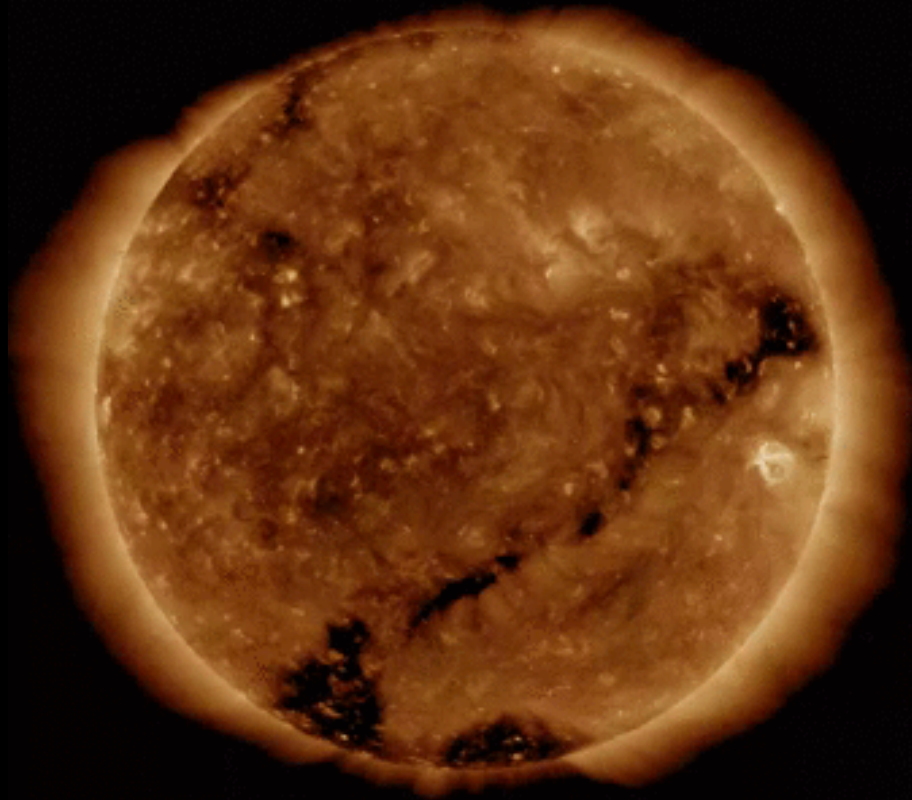
Probability of full disk x-ray flare occurrence over 24h

Issue time (12:30UT)	P(C)	P(M)	P(X)	#C obs.	#M obs.	#X obs.
2018-01-22	0.10	0.01	0.01	0	0	0
2018-01-23	0.05	0.01	0.01	0	0	0
2018-01-24	0.01	0.01	0.01	0	0	0
2018-01-25	0.01	0.01	0.01	0	0	0
2018-01-26	0.01	0.01	0.01	0	0	0
2018-01-27	0.01	0.01	0.01	0	0	0
2018-01-28	0.01	0.01	0.01	0	0	0

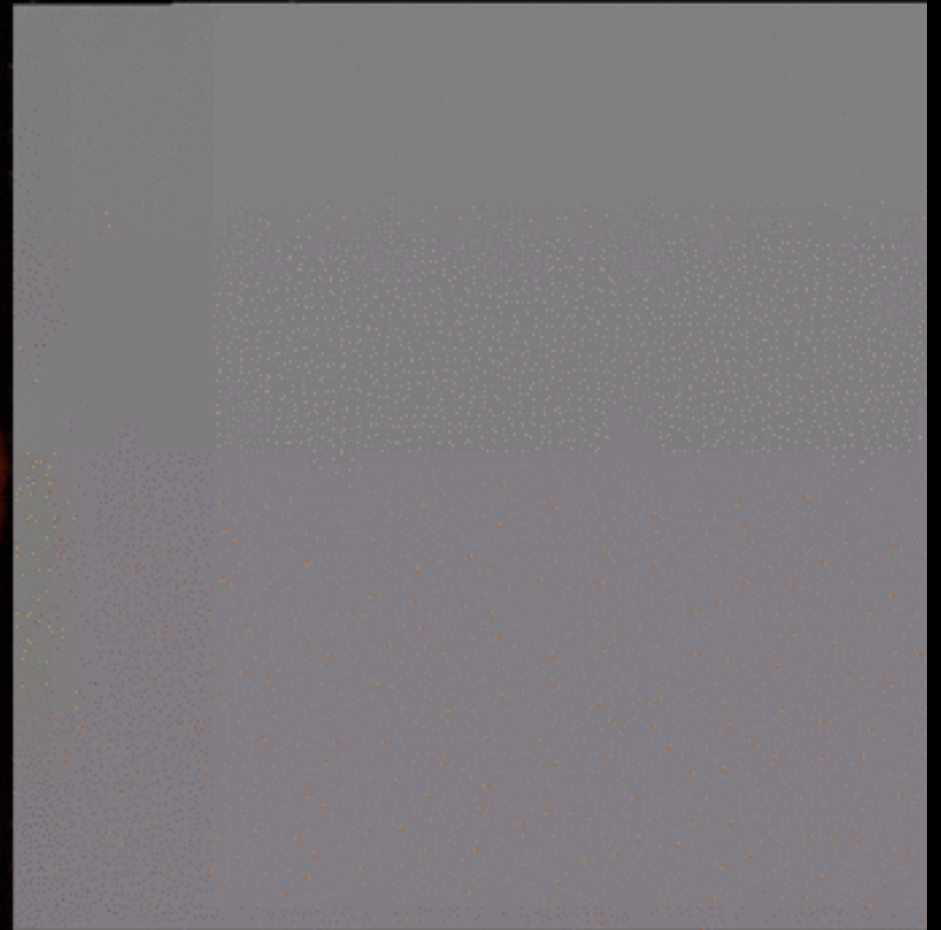
# Spotless NOAA 2696

*B9.5 flare on 22 January at 02:57UT*

SDO/AIA 193 and difference imagery



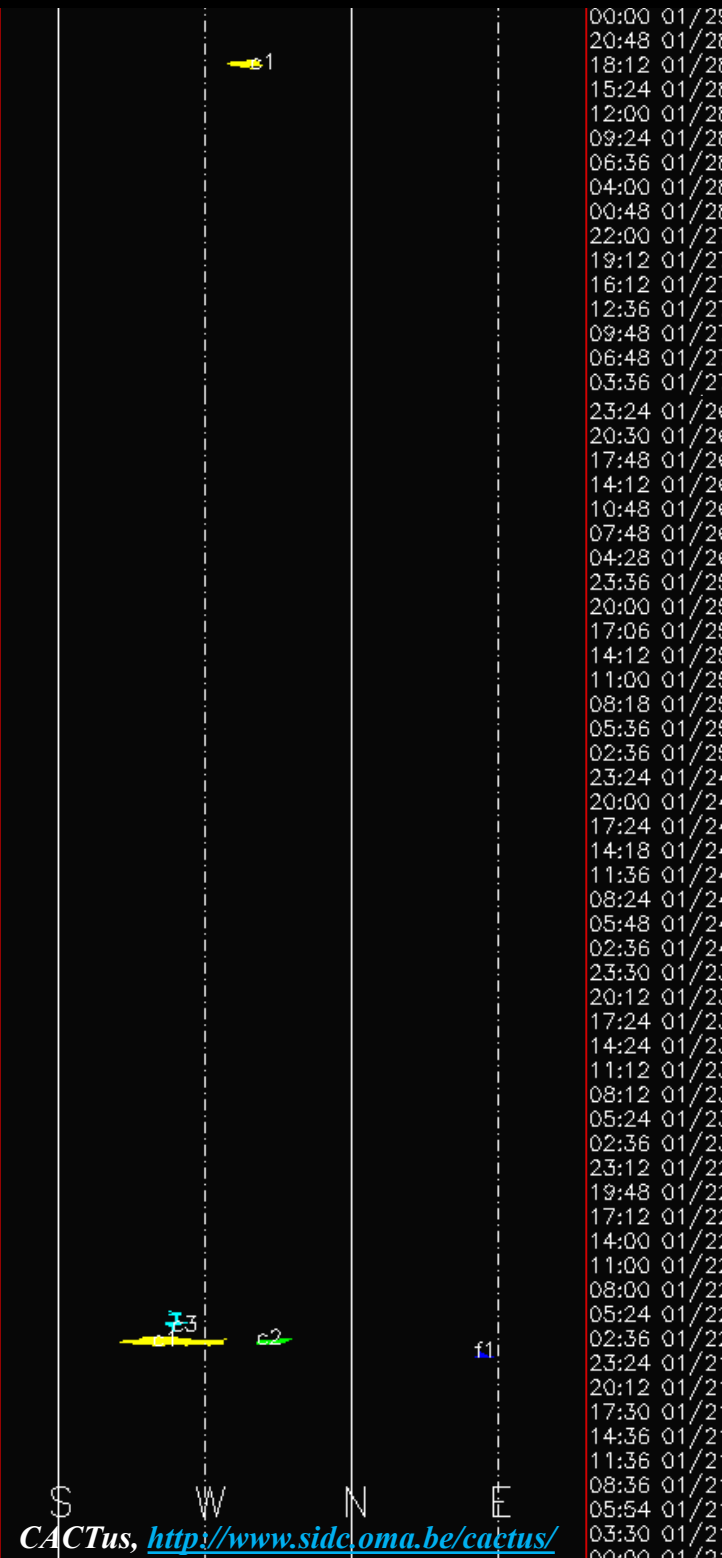
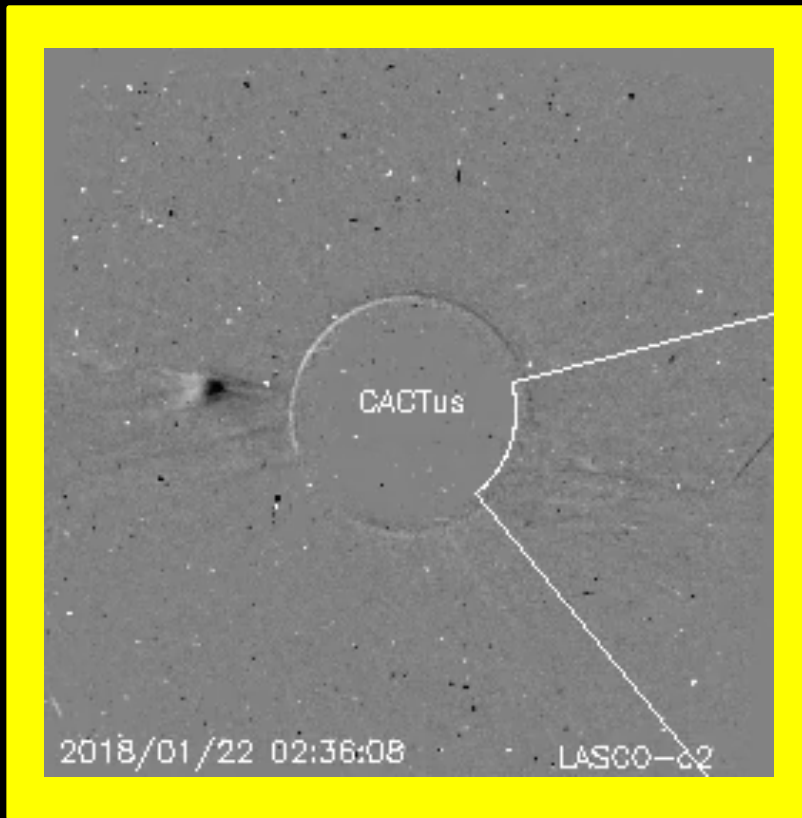
2018-01-21T23:00:28 AIA 193



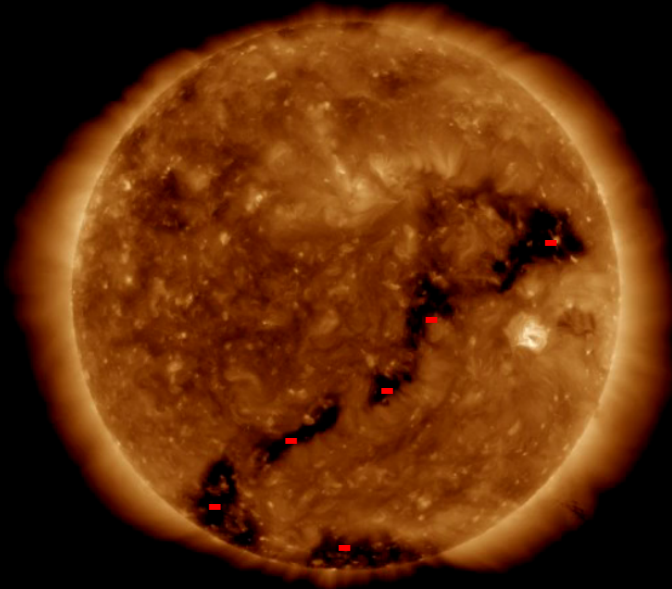
2018-01-21T23:00:28 AIA 193



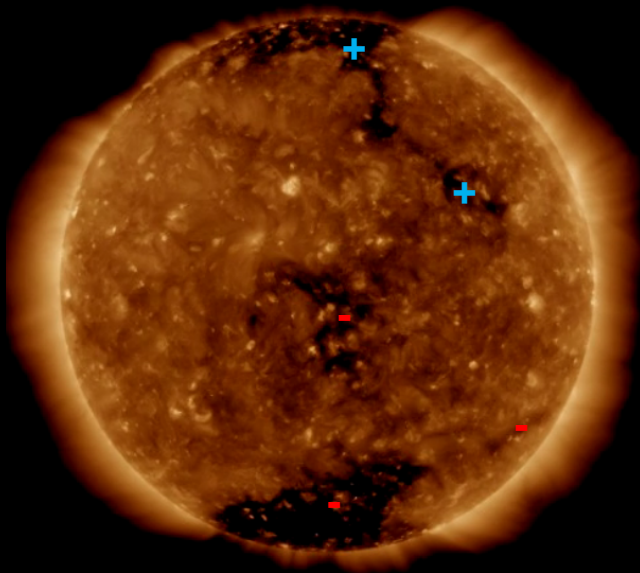
# CMEs



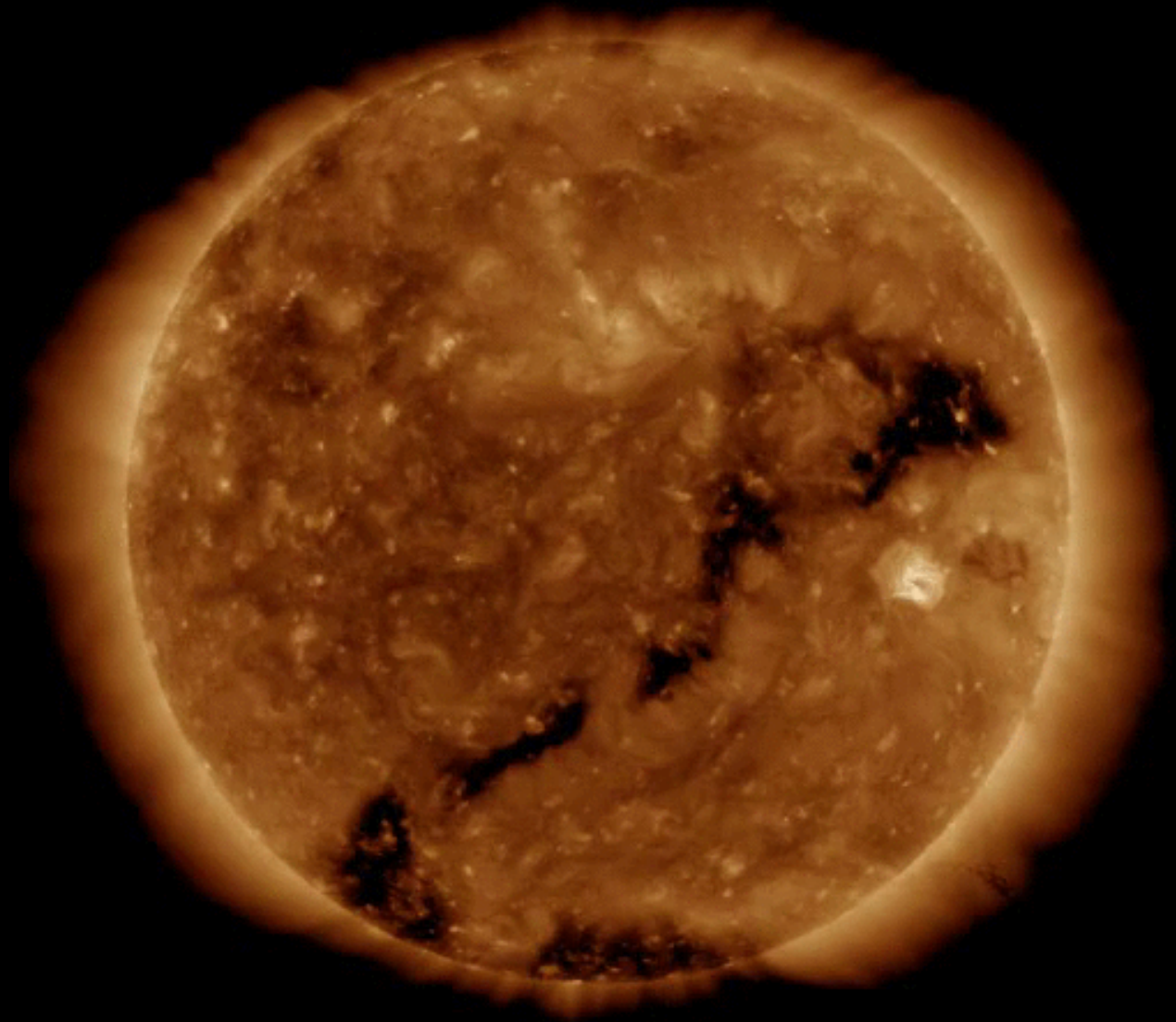
# Coronal holes



SDO/AIA 193 2018-01-21 00:56:05 UT

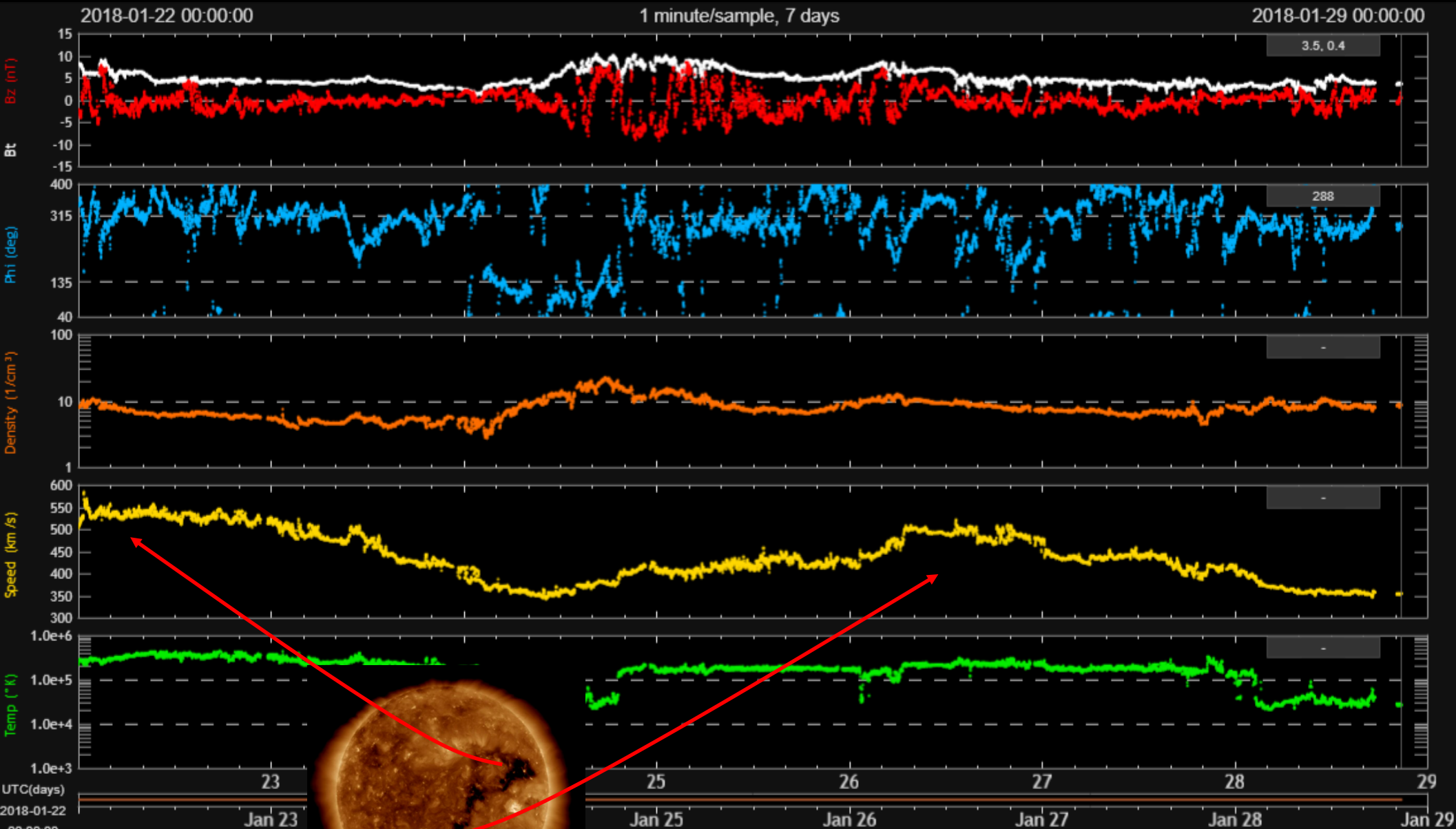


SDO/AIA 193 2018-01-26 14:55:41 UT



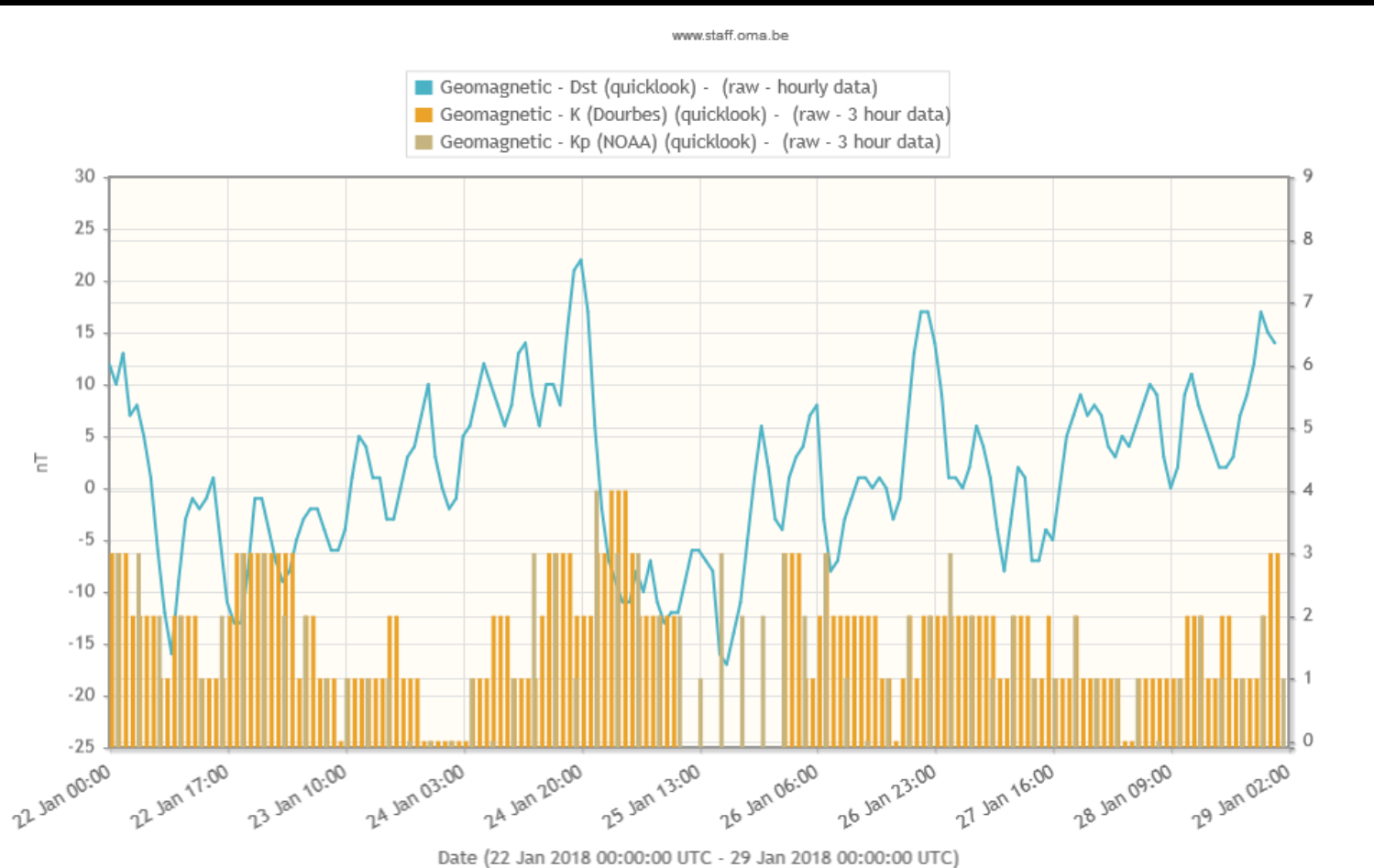
SDO/AIA 193 2018-01-21 00:56:05 UT

# Solar wind



DSCOVR, <http://www.swpc.noaa.gov/products/real-time-solar-wind>

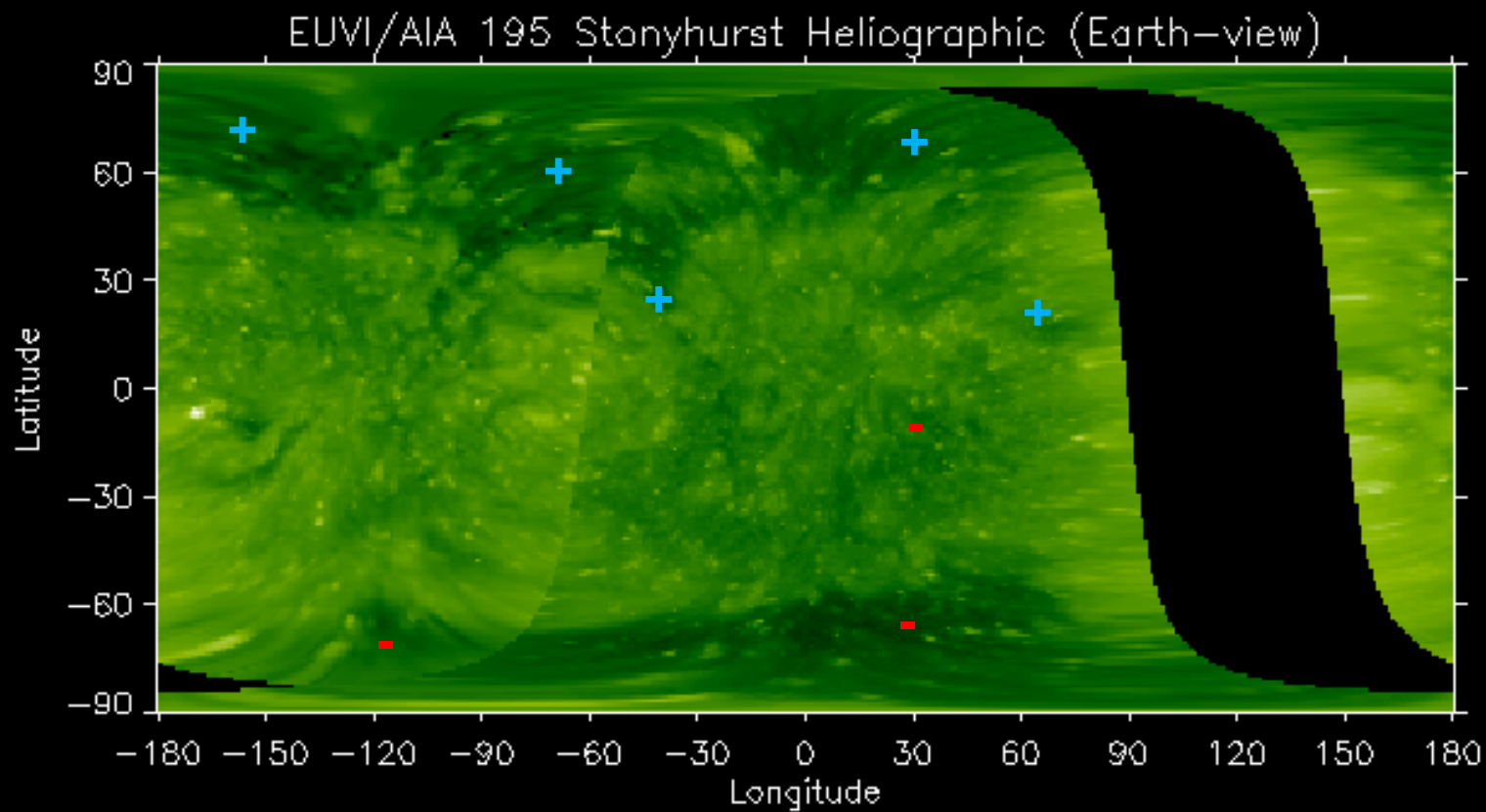
# Geomagnetism



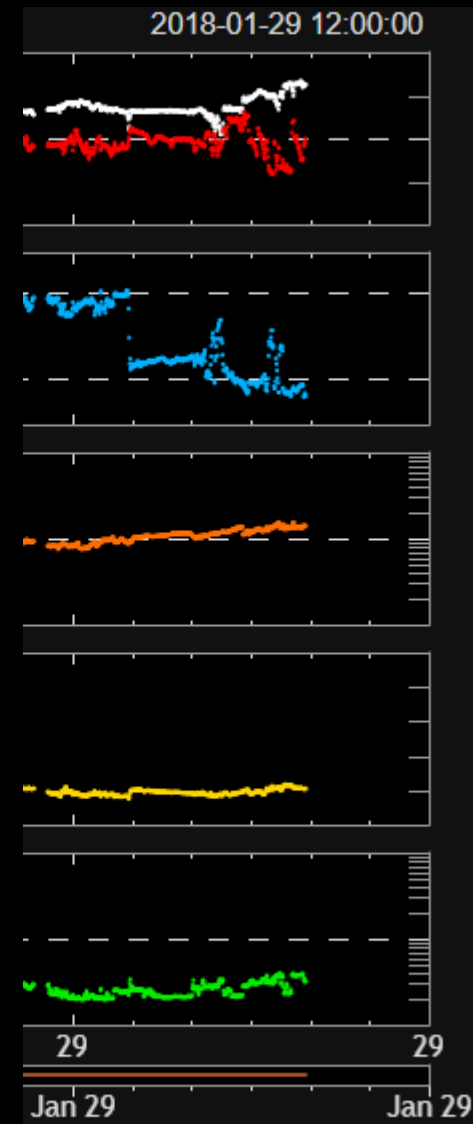
Issue time (12:30UT)	Pred. Kp $\leq$	Obs. Kp
2018-01-22	3	3
2018-01-23	3	2
2018-01-24	3	4
2018-01-25	3	3
2018-01-26	4	3
2018-01-27	3	3
2018-01-28	3	2



# Outlook



Observation date: 2018/01/29 07:15:30





# SIDC Space Weather briefing

See you at our next briefing!

Or visit us at [www.sidc.be](http://www.sidc.be)

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