ESWW14

SIDC & NICT Space Weather briefing

01 December 2017

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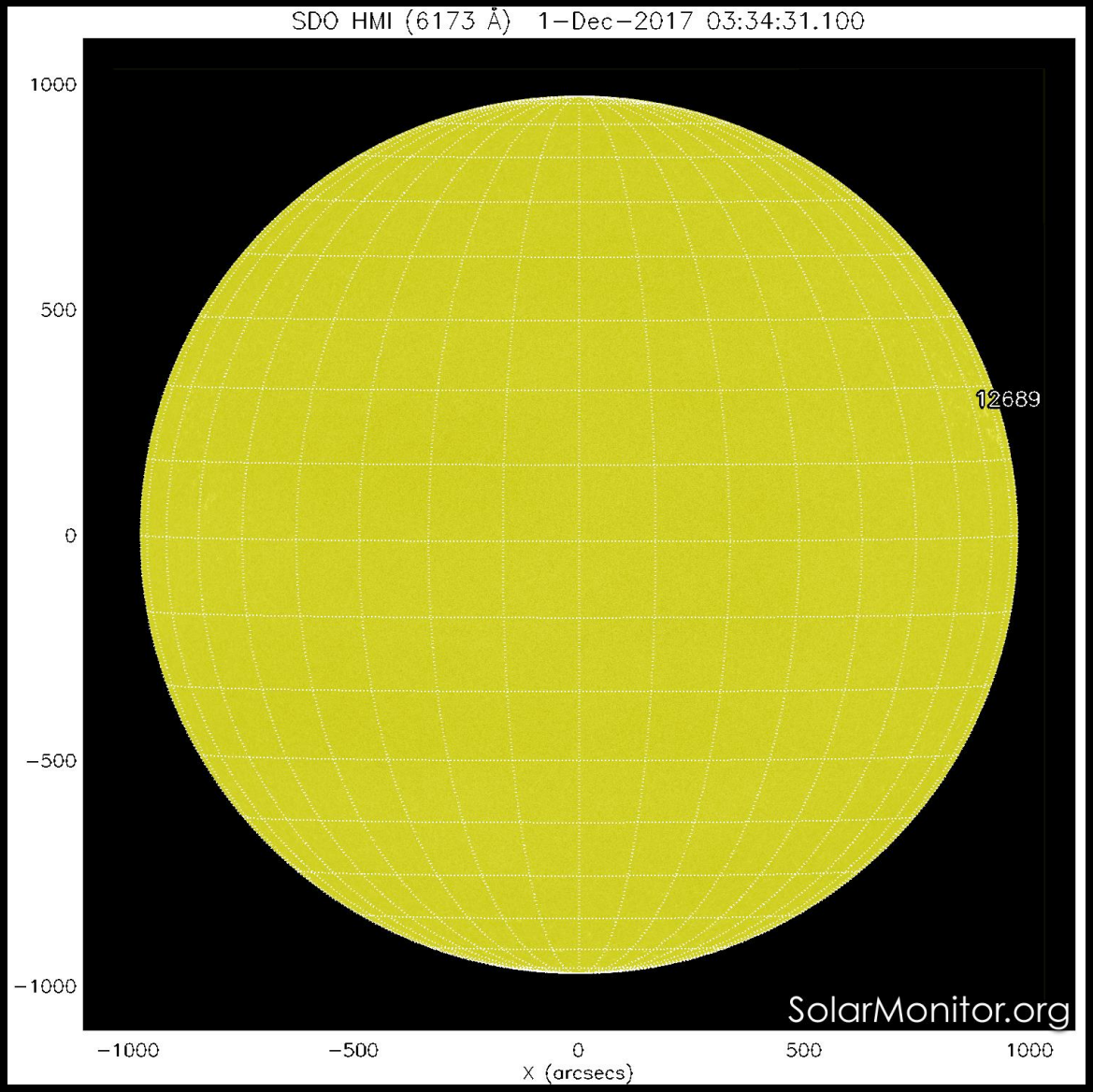
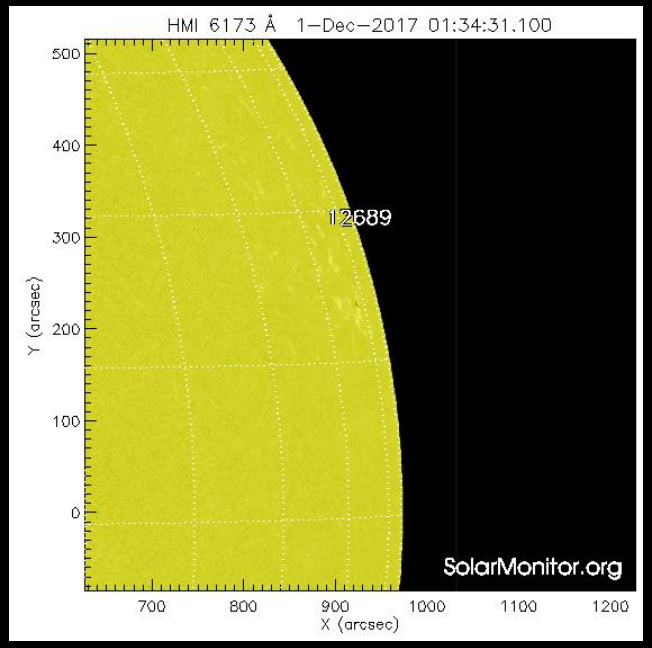
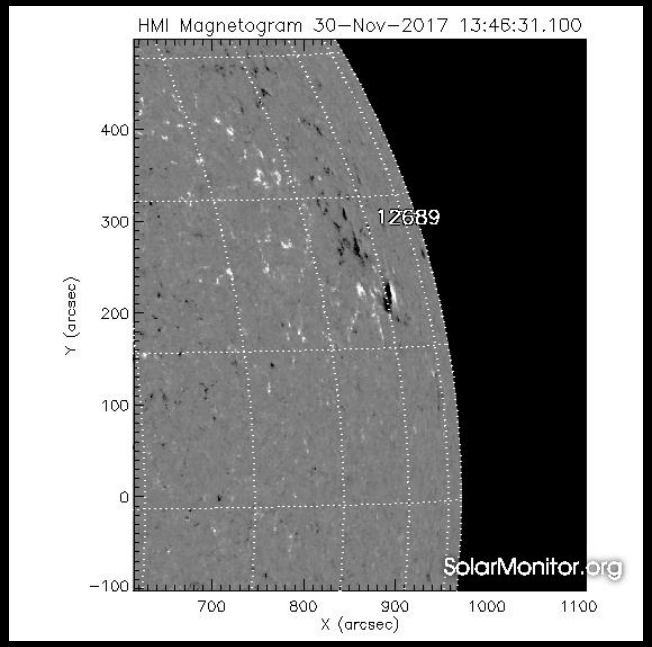
Solar Influences
Data analysis Centre
www.sidc.be

National Institute of Information
and Communications Technology
swc.nict.go.jp

Solar active region evolution

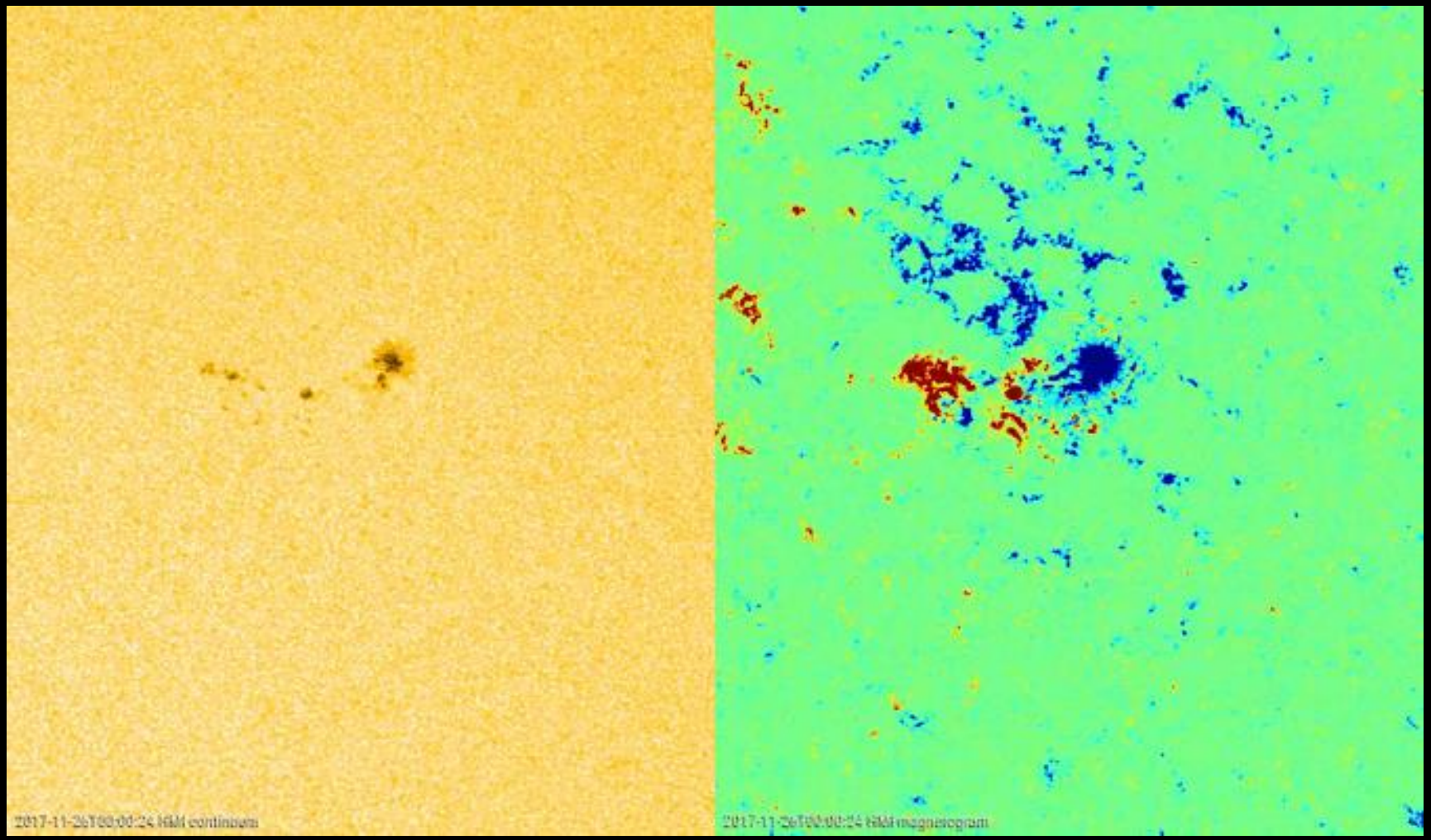






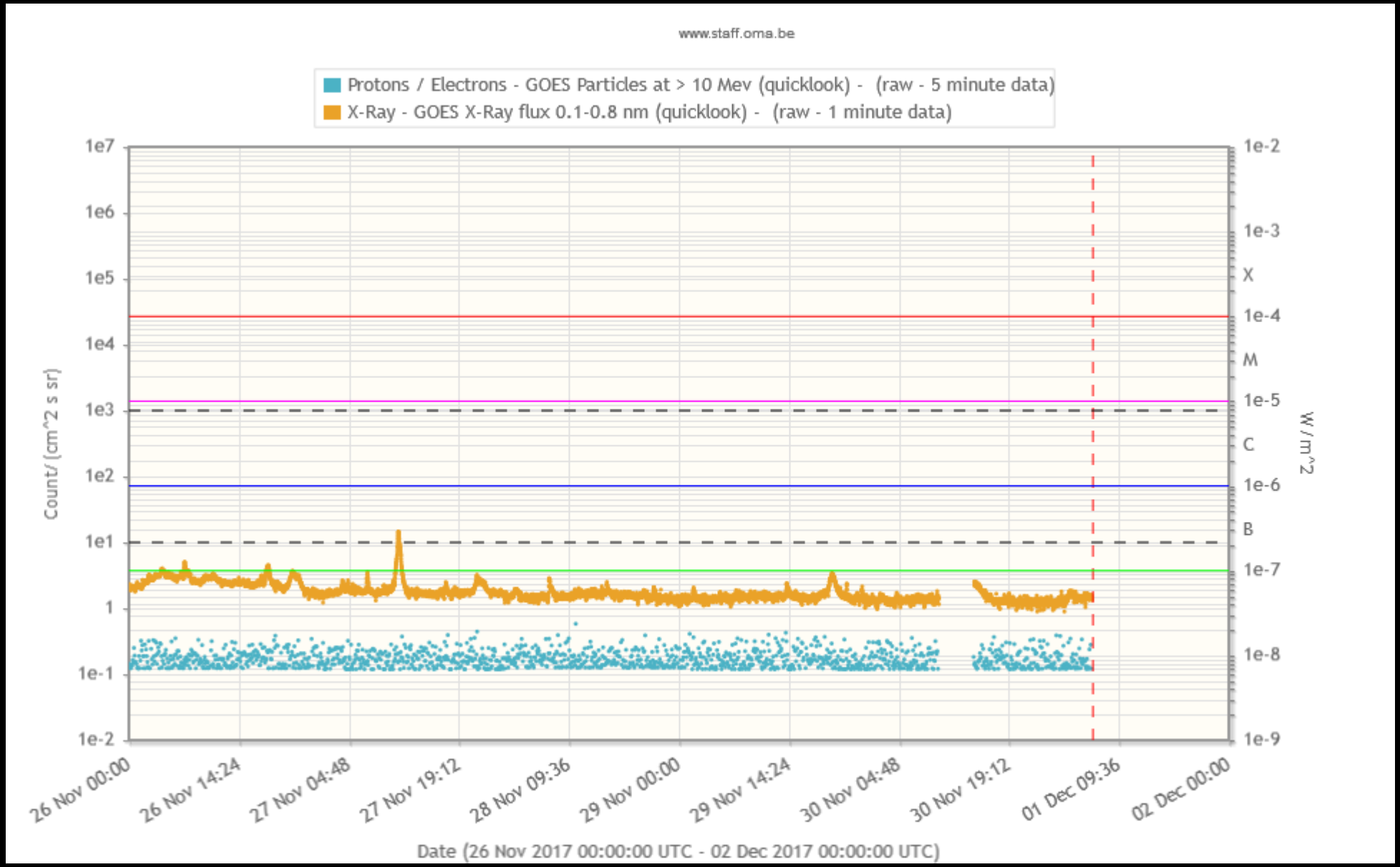
NOAA 2689 (26 Nov – 30 Nov)

SDO/HMI Continuum & SDO/HMI Magnetogram



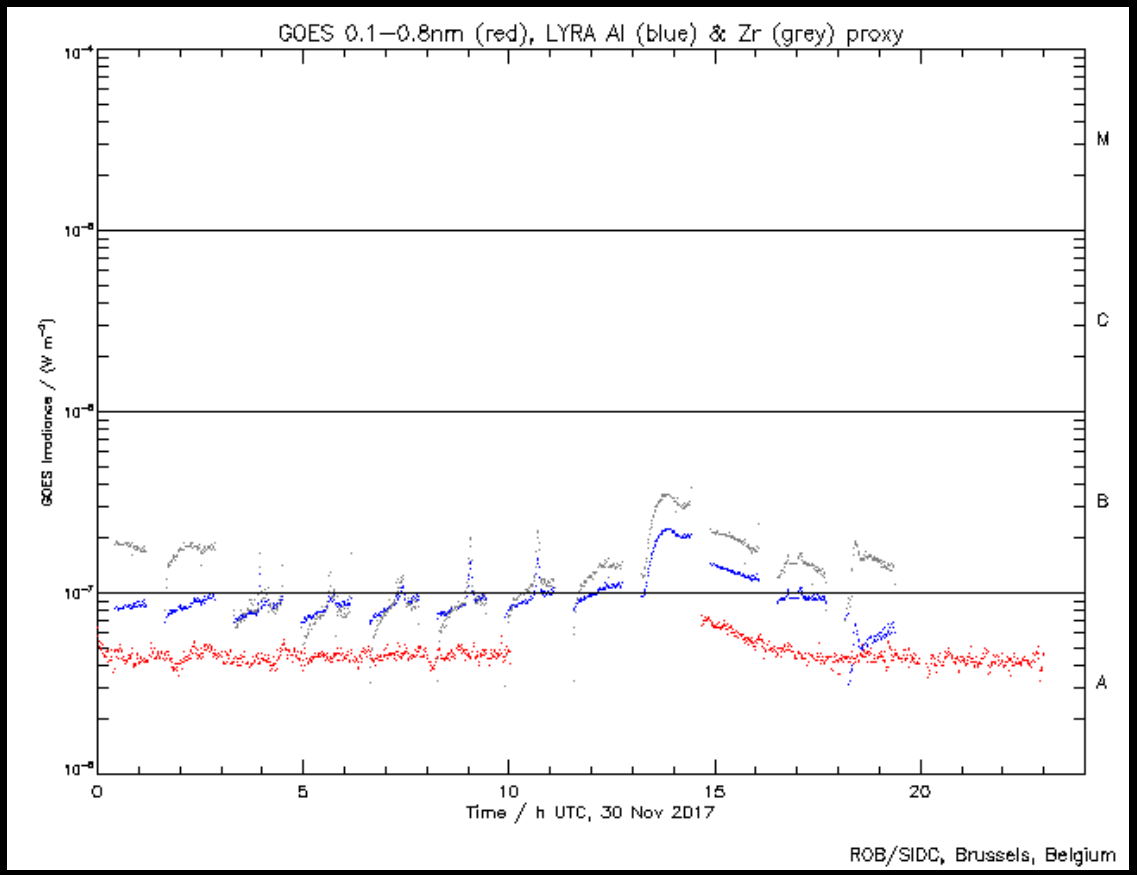
Jhelioviewer, http://www.jhelioviewer.org/

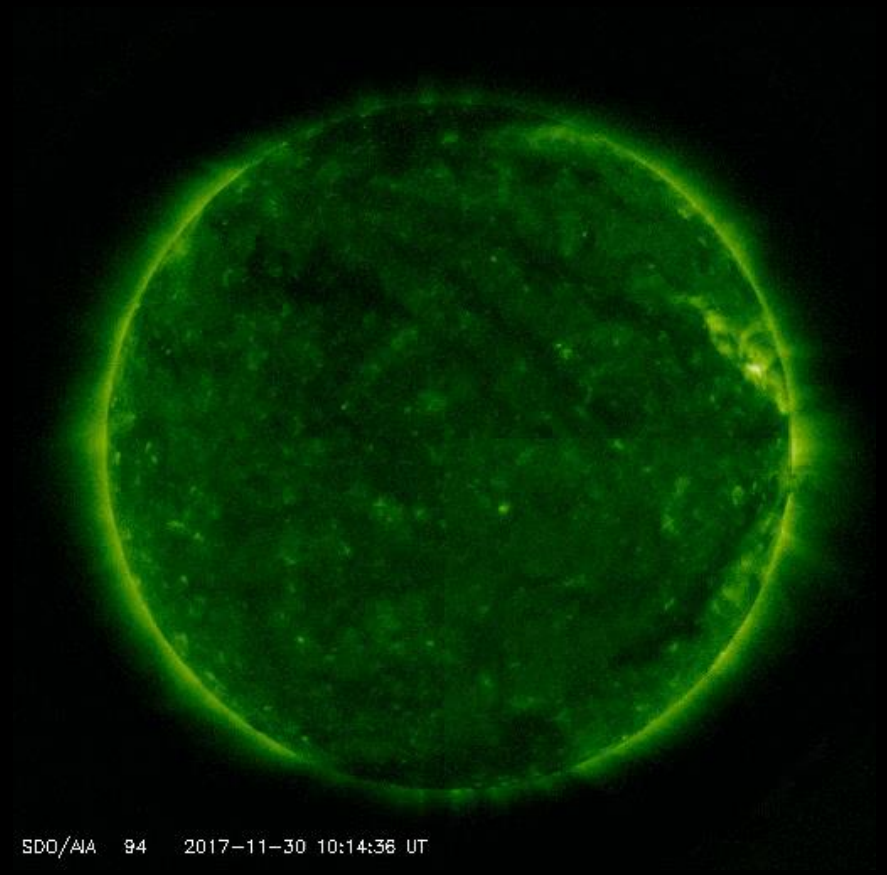
GOES X-ray flux and Proton flux



Small B-flare in NOAA 2689

Est. B1.3 from PROBA2/LYRA



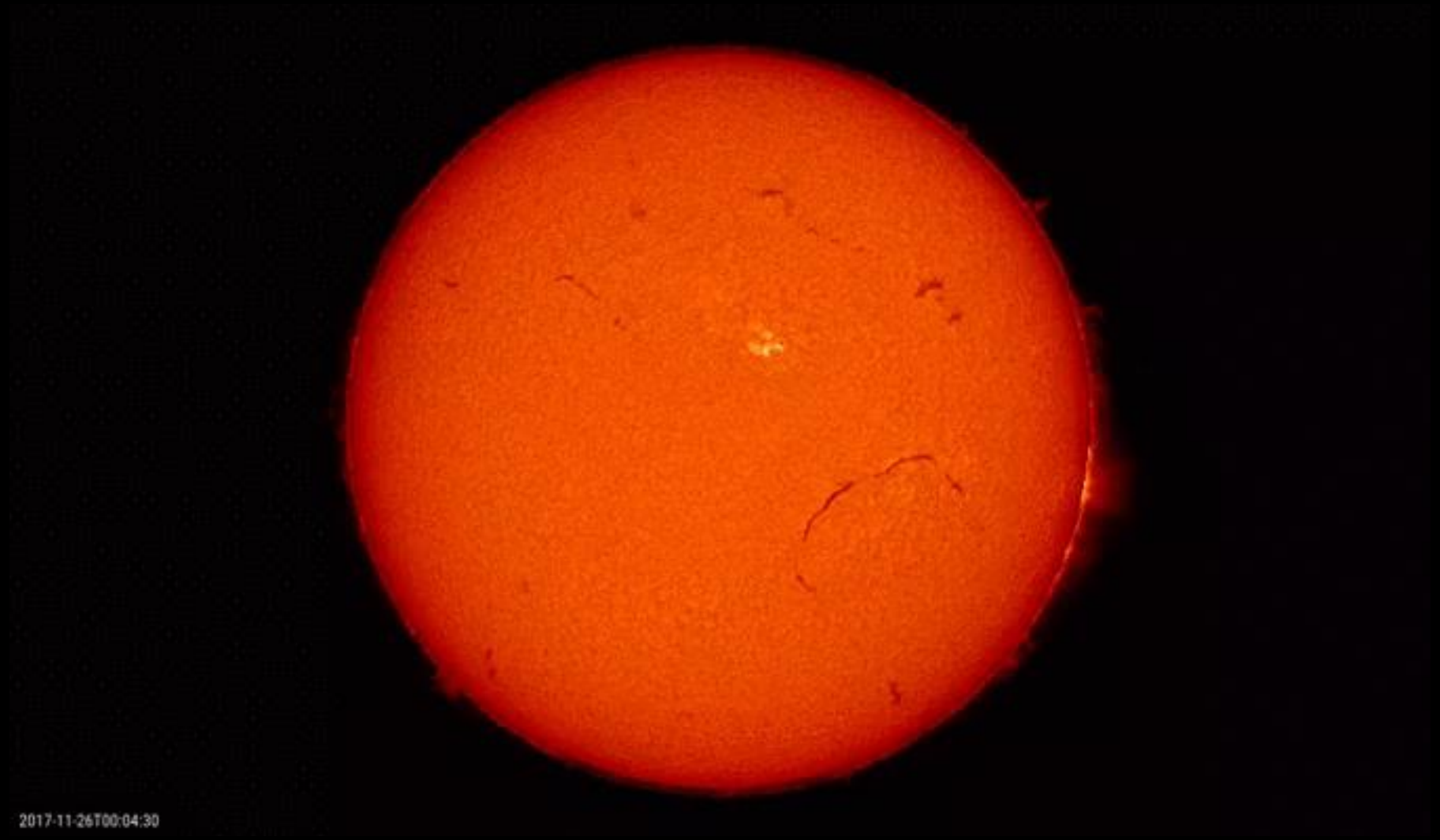


P2SC, http://proba2.oma.be/ssa

SDO, https://sdo.gsfc.nasa.gov/data/aiahmi/

Filaments (26 Nov – 01 Dec)

GONG/H-alpha overlay on SDO/AIA 304



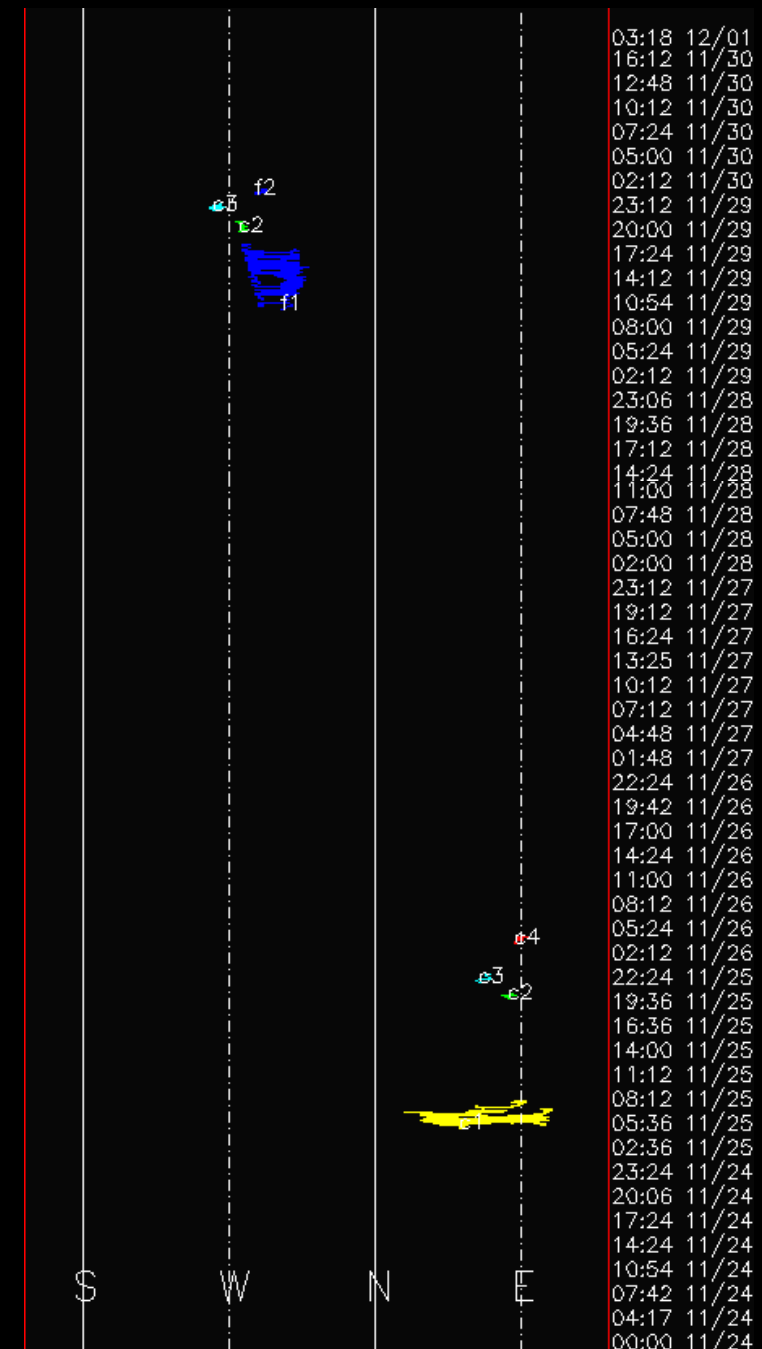
Jhelioviewer, http://www.jhelioviewer.org/

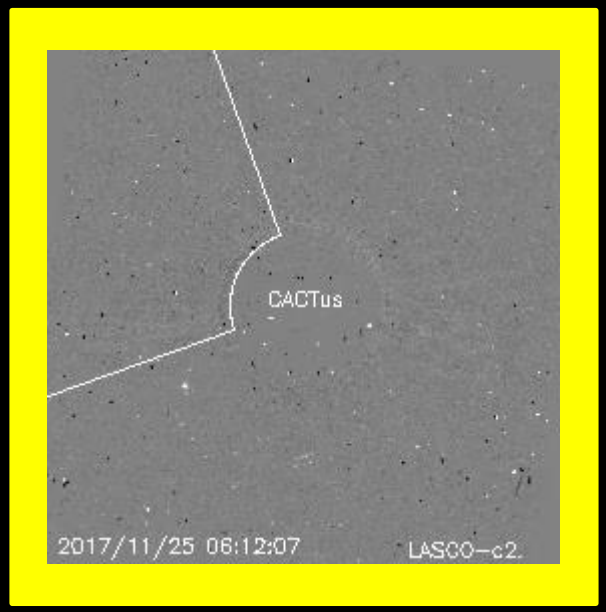
Evolution of Flare probability

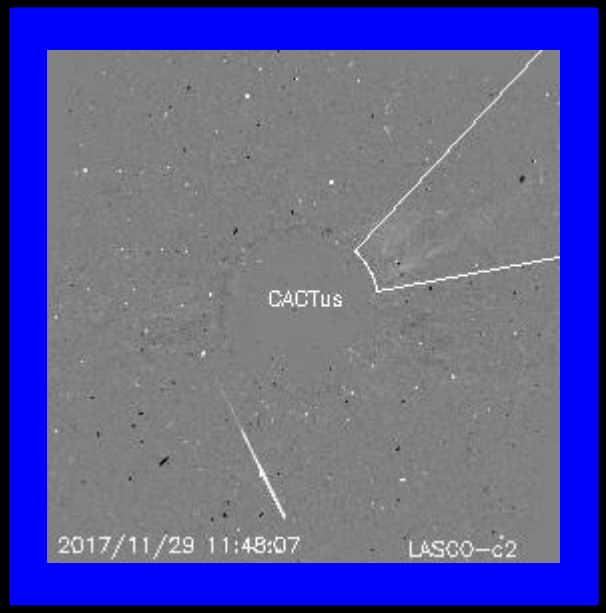
Probability of full disk x-ray flare occurrence over 24h

Issue time	P(C)	P(M)	P(X)	#C obs.	#M obs.	#X obs.
2017-11-26T12:30	0.05	0.01	0.01	0	0	0
2017-11-27T12:30	0.15	0.01	0.01	0	0	0
2017-11-28T12:30	0.15	0.01	0.01	0	0	0
2017-11-29T12:30	0.10	0.01	0.01	0	0	0
2017-11-30T12:30	0.10	0.01	0.01	0	0	0
2017-12-01T12:30	0.05	0.01	0.01			
2017-12-02T12:30	*0.01*	*0.01*	*0.01*			
2017-12-03T12:30	*0.01*	*0.01*	*0.01*			

CMEs

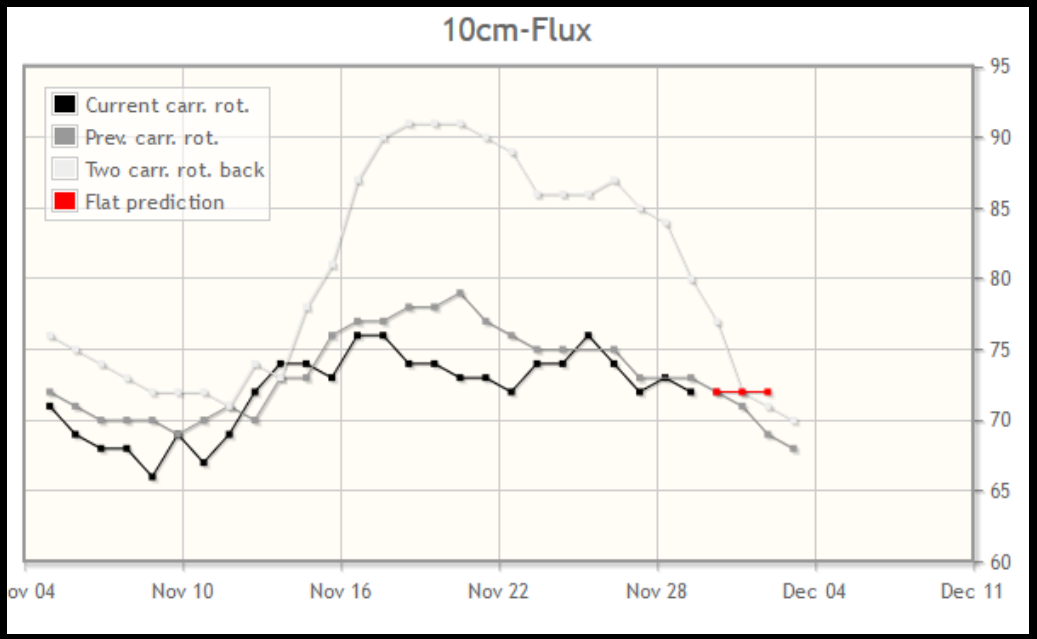

03:18 12/01
16:12 11/30
12:48 11/30
10:12 11/30
07:24 11/30
05:00 11/30
02:12 11/30
23:12 11/29
20:00 11/29
17:24 11/29
14:12 11/29
10:54 11/29
08:00 11/29
05:24 11/29
02:12 11/29
23:06 11/28
19:36 11/28
17:12 11/28
14:24 11/28
11:00 11/28
07:48 11/28
05:00 11/28
02:00 11/28
23:12 11/27
19:12 11/27
16:24 11/27
13:25 11/27
10:12 11/27
07:12 11/27
04:48 11/27
01:48 11/27
22:24 11/26
19:42 11/26
17:00 11/26
14:24 11/26
11:00 11/26
08:12 11/26
05:24 11/26
02:12 11/26
22:24 11/25
19:36 11/25
16:36 11/25
14:00 11/25
11:12 11/25
08:12 11/25
05:36 11/25
02:36 11/25
23:24 11/24
20:06 11/24
17:24 11/24
14:24 11/24
10:54 11/24
07:42 11/24
04:17 11/24
00:00 11/24
f2
c3
c2
f1
c4
c3
c2
f1
S
W
N
E


CACTus
2017/11/25 06:12:07
LASCO-c2


CACTus
2017/11/29 11:48:07
LASCO-c2

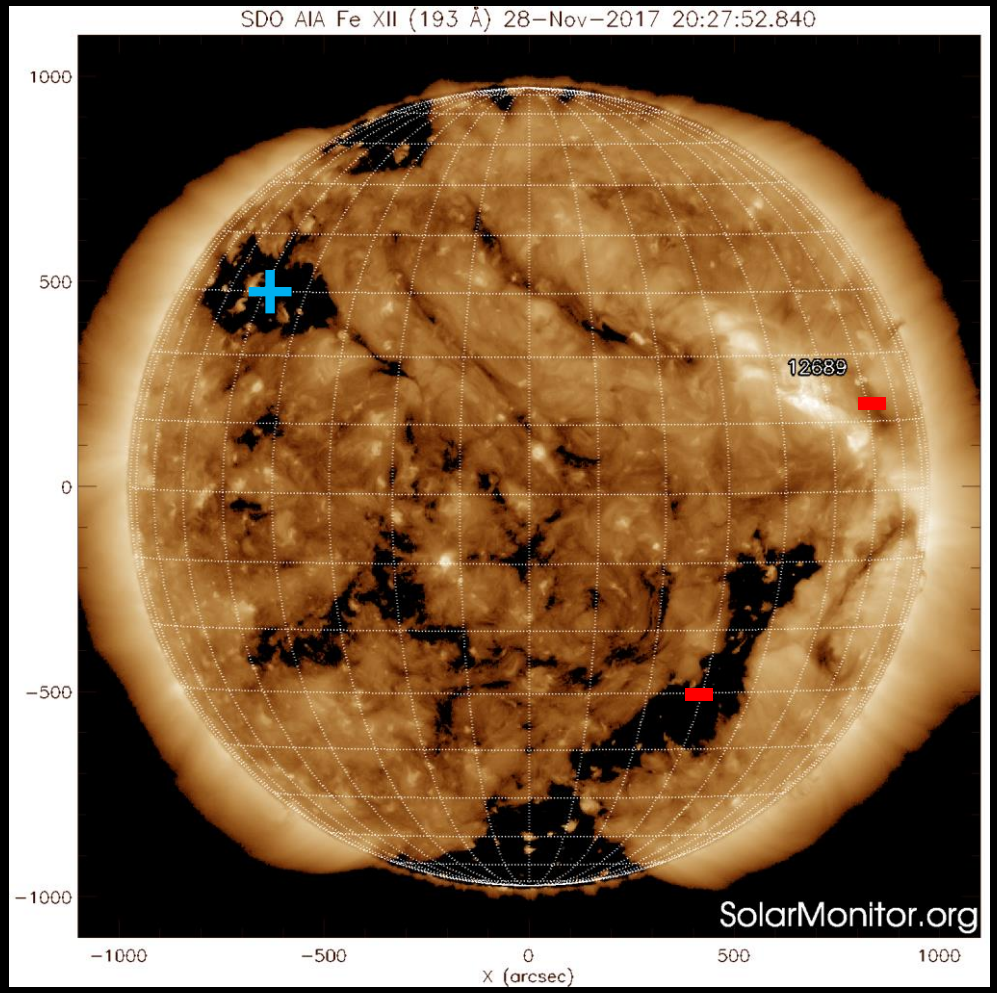
Evolution of 10.7cm Radio Flux

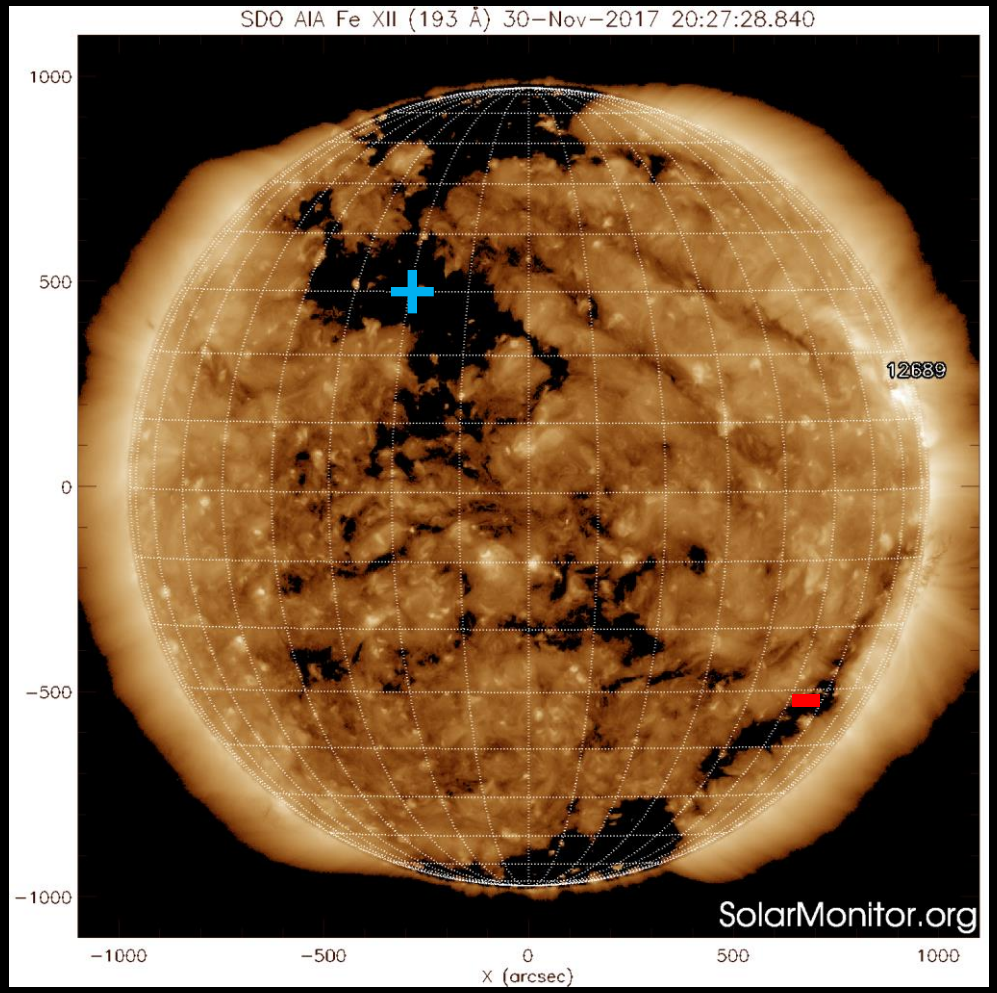
Predicted and observed 10.7cm Radio flux (sfu)



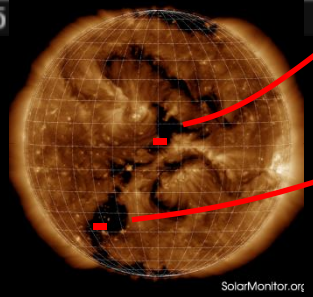
Issue time	Pred.	Obs.
2017-11-26T12:30	75	76
2017-11-27T12:30	75	74
2017-11-28T12:30	74	72
2017-11-29T12:30	72	73
2017-11-30T12:30	72	72
2017-12-01T12:30	71	
2017-12-01T12:30	*70*	
2017-12-01T12:30	*69*	

Coronal Holes



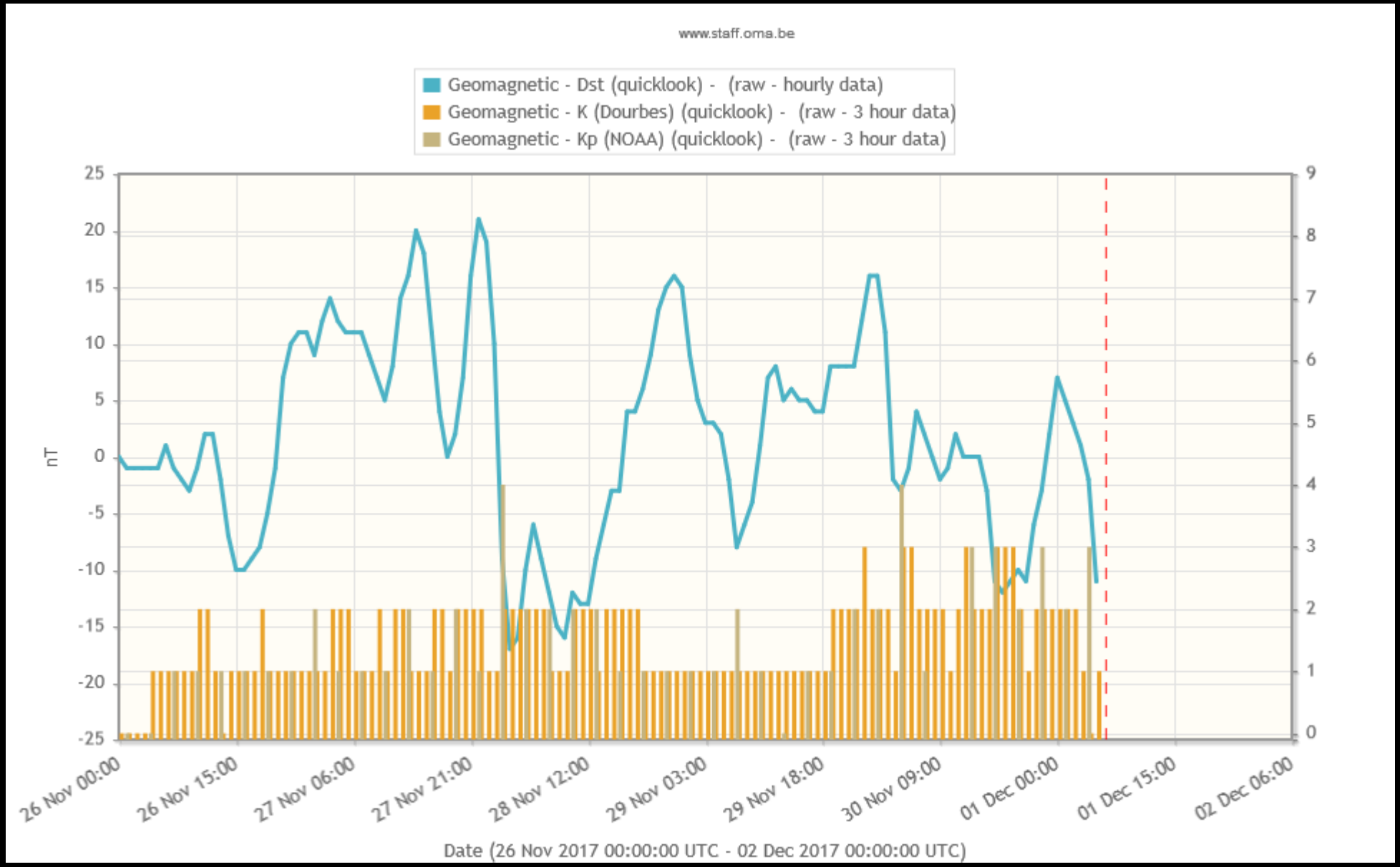


Solar wind



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

Geomagnetism



Summary Forecast

	Today	02 Dec	03 Dec
Solar activity	Very low	*Very low*	*Very low*
10.7 cm Radio flux (sfu)	71	*70*	*69*
Geomagnetic activity	Quiet, with an unsettled episode possible	*Quiet*	*Quiet*

National Institute of Information and Communications Technology

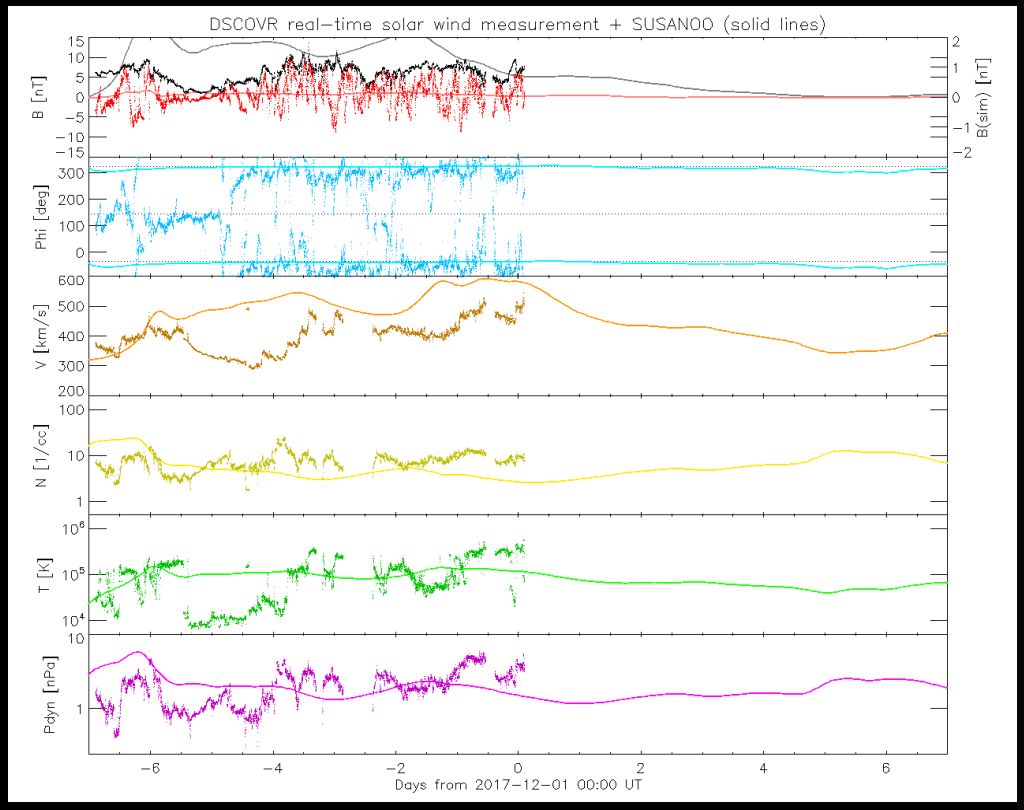
Space Weather Live Forecast

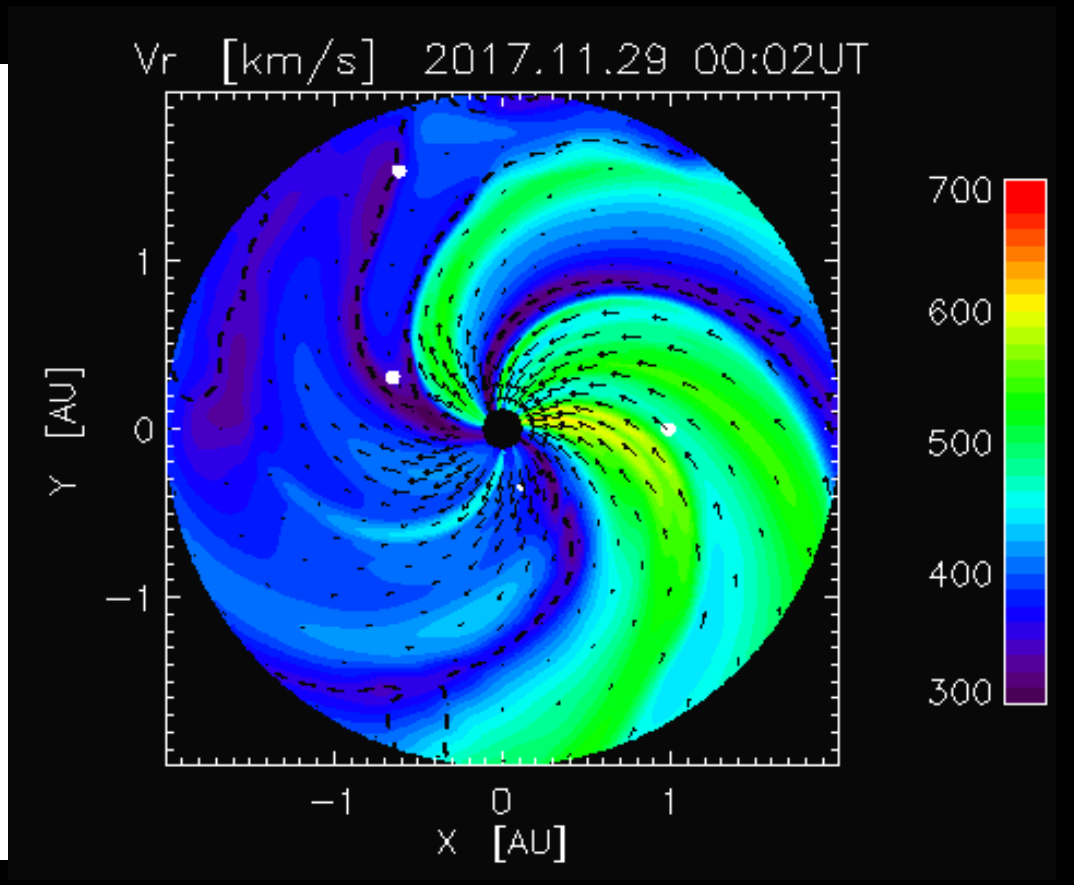
geomagnetism and ionosphere

Mamoru Ishii

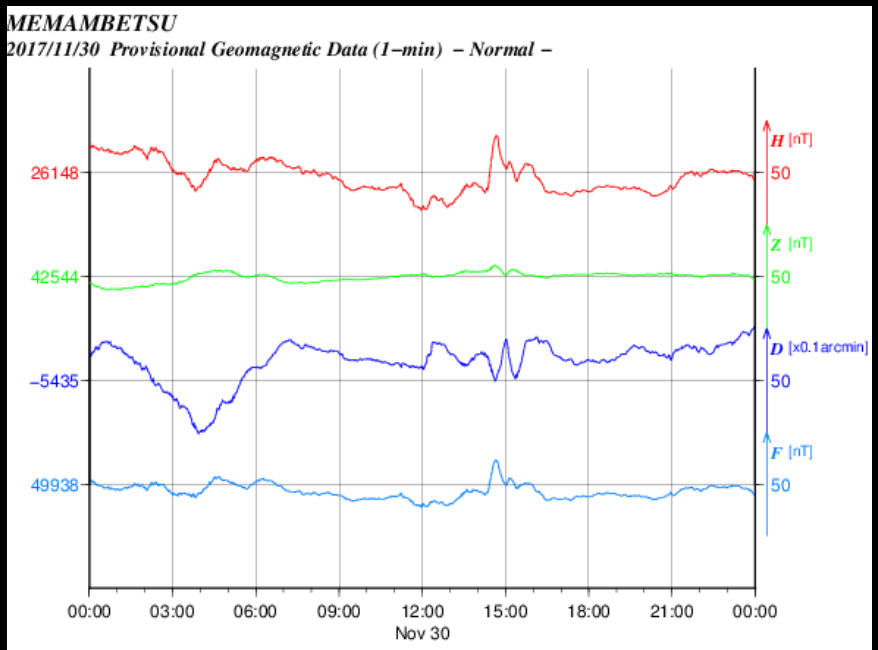
National Institute of Information and Communications Technology, Japan

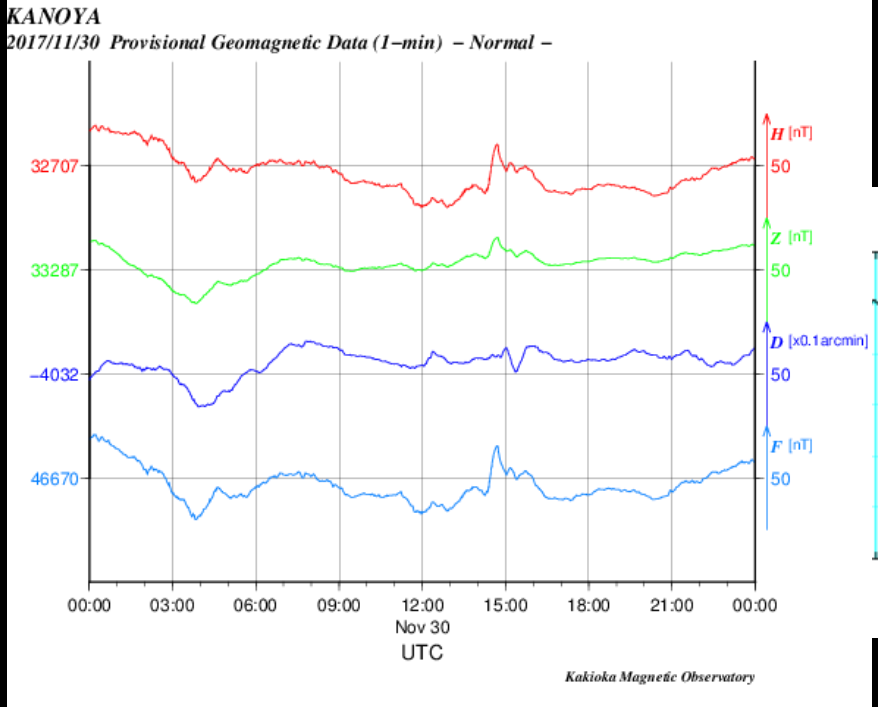
Solar Wind Observation and forecast with SUSANOO

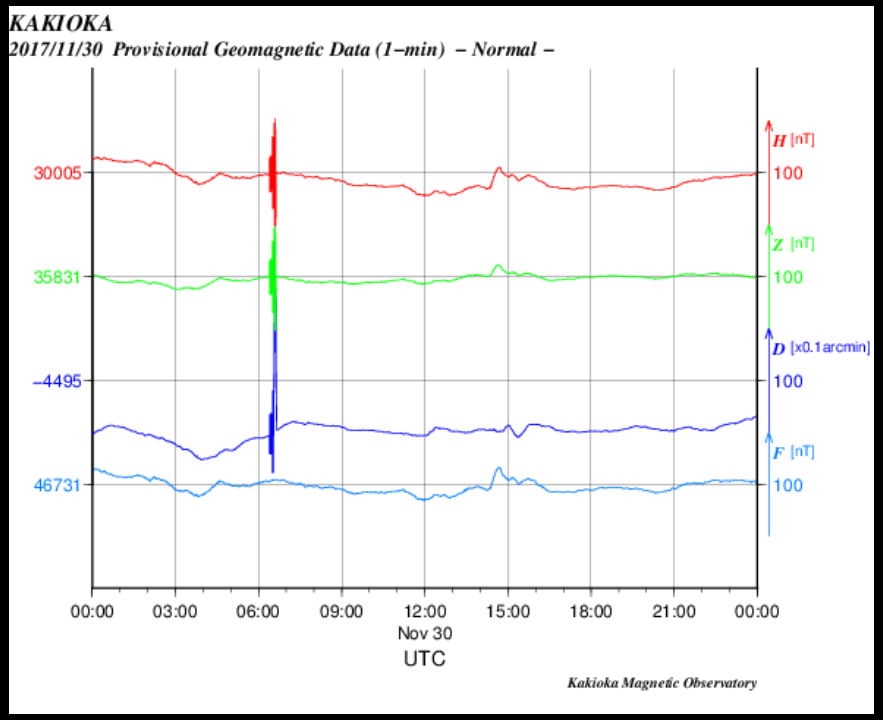


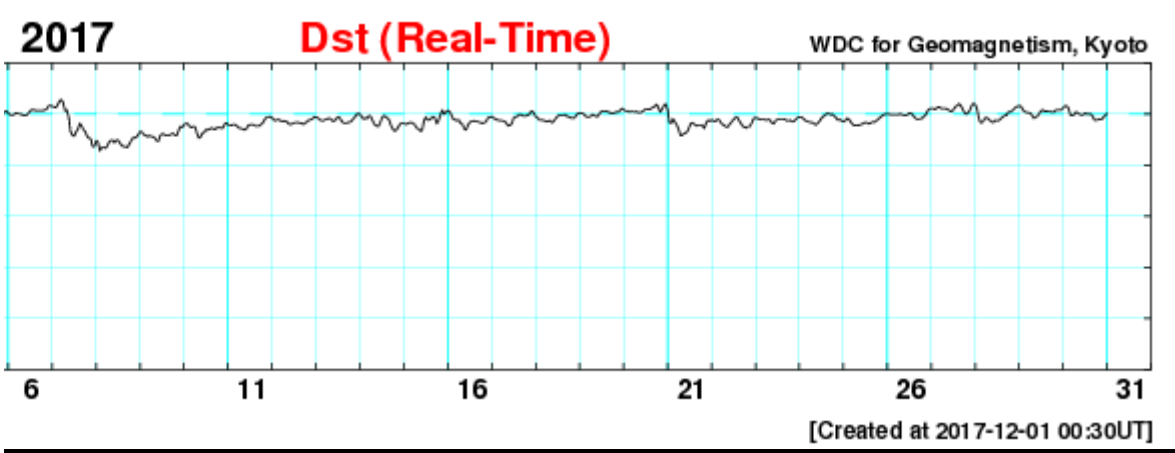


Magnetometer data

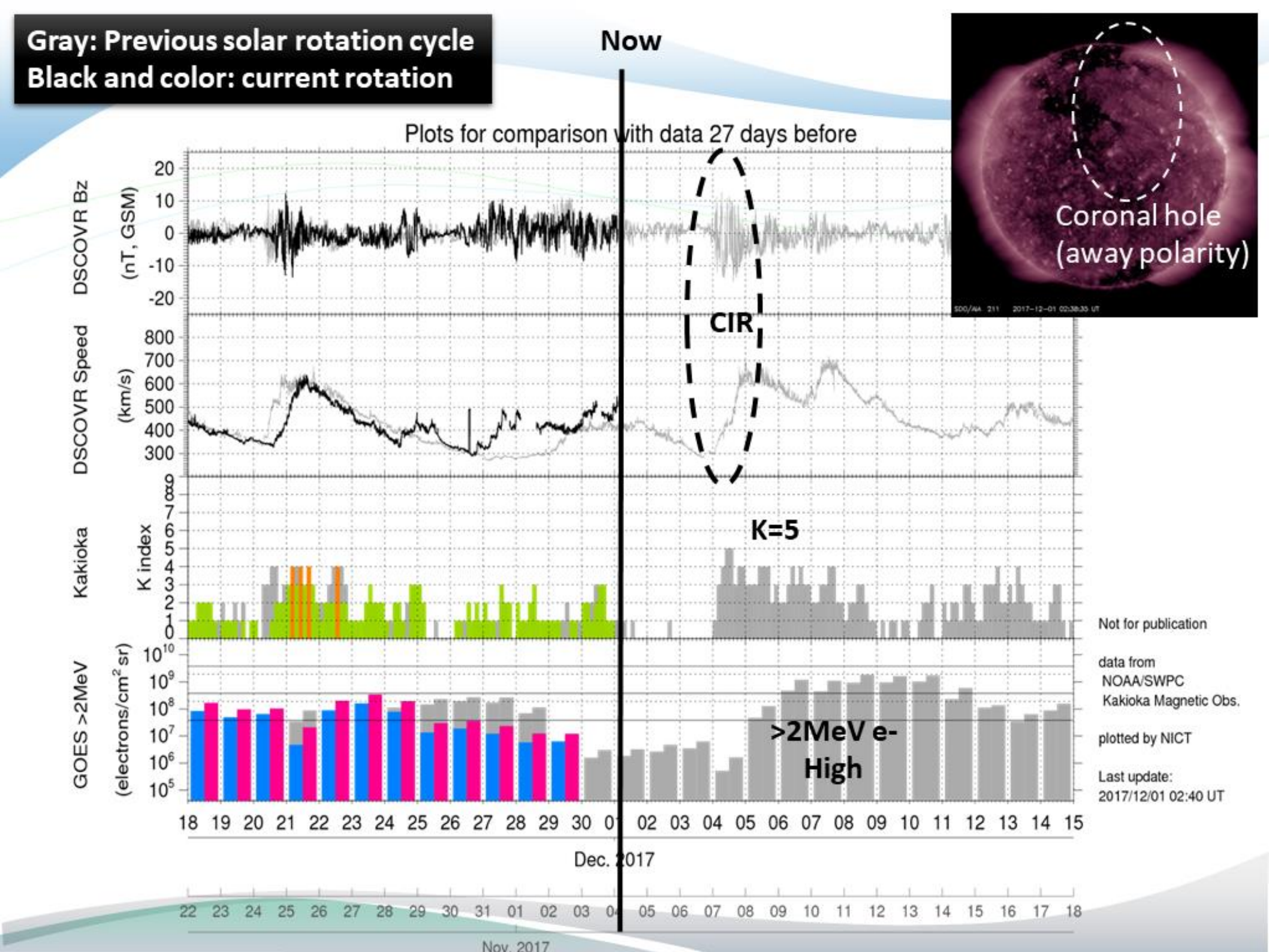








Gray: Previous solar rotation cycle
Black and color: current rotation

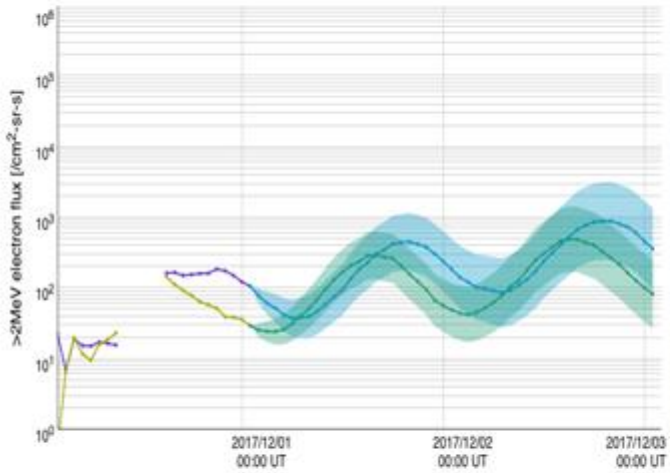


> 2MeV electron forecast

Geostationary orbit

2017/11/30 02:00 - 2017/12/03 02:00

Update every 10min. / Last update : 2017/12/01 02:46 (UT)

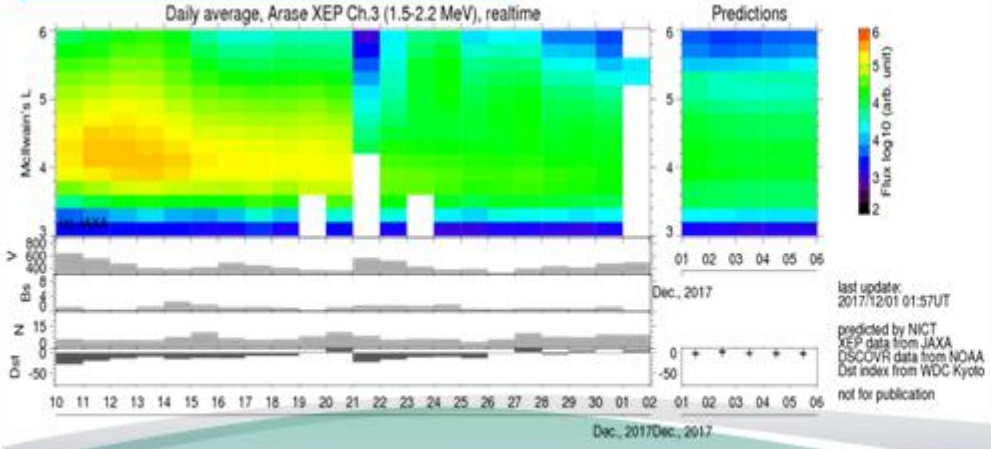


—/-/-- --:-- UT (--:-- LT)

GOES/Secondary
Observation
Forecast
GOES/Primary
Observation
Forecast
Band: Forecast error range (Standard deviation : ±1 σ)

These plots show 2 days electron flux forecasts at longitudes of GOES secondary and primary satellites.

Arase satellite's orbit



last update:
2017/12/01 01:57UT

predicted by NICT
XEP data from JAXA
DSCOVR data from NOAA
Dst index from WDC Kyoto

not for publication

NICT Radiation Belt Forecast

Top | Hazard Map at GEO | Observation Data Box | Forecast Performance | Electron Flux Variation | About This Site | What is the Radiation Belt?

About This Site
Introducing observation data and methods to forecast electron fluence

What is the Radiation Belt?
Introducing characteristics of the radiation belt and causes of its variation

Electron Fluence Forecast

Updated every one hour / Latest update at: 2017/12/01 02:40 (UT)

Next 24 hours
from 2017/12/01 02:00 UT
Low
24h fluence
1.02e+7 [/cm² sr]

Tomorrow
from 2017/12/02 02:00 UT
Low
24h fluence
1.74e+7 [/cm² sr]

Day after tomorrow
from 2017/12/03 02:00 UT
Low
24h fluence
2.40e+7 [/cm² sr]

Event back number (Japanese Only)

ARASE high-energy electrons forecast

Daily report (Japanese Only)

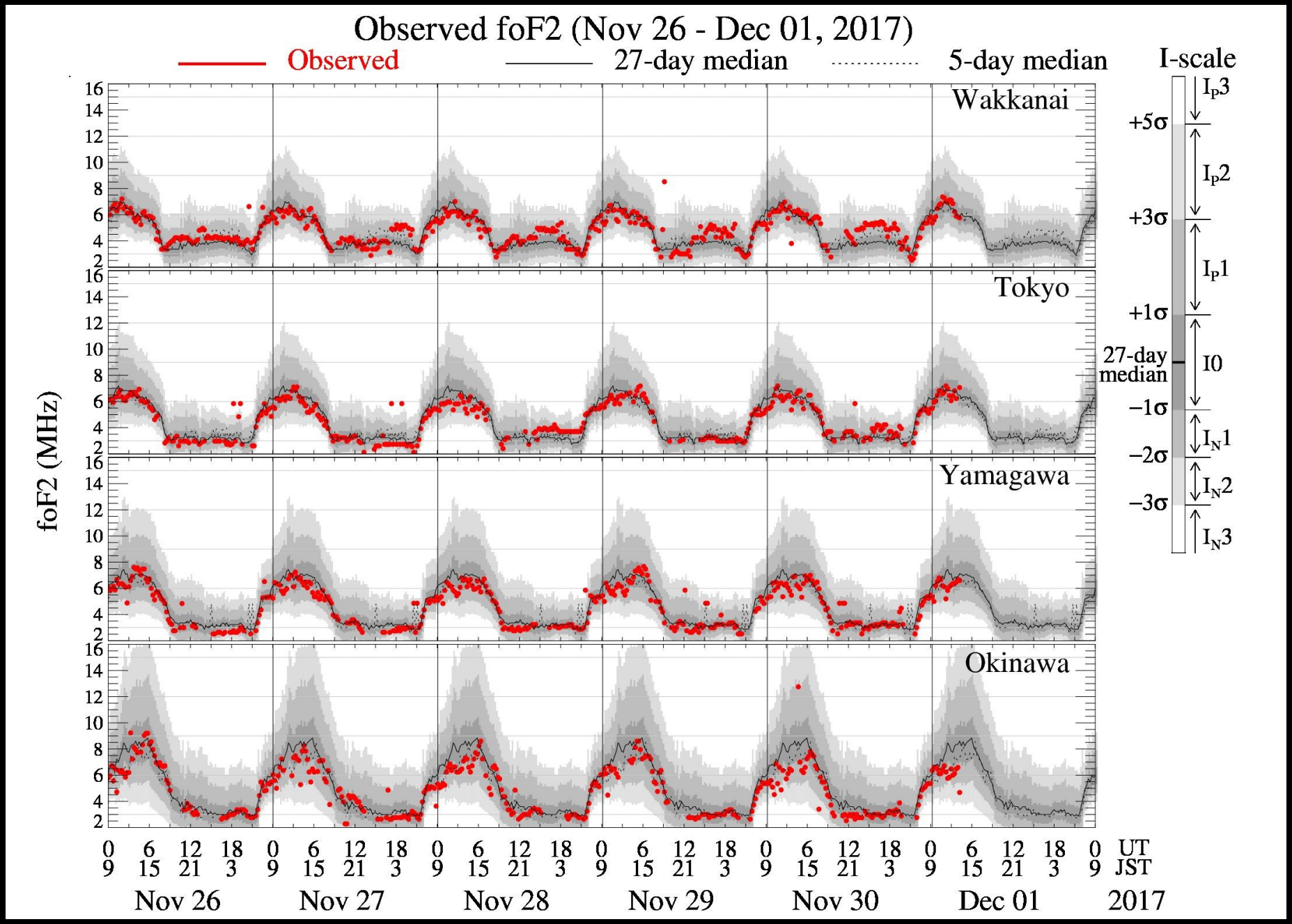
2017/11/30 06:00 (UT)
静止軌道の2MeV以上の高エネルギー電子の24時間フルエンスは、1.10×10^7[個/cm²/sr]の静穏レベルでした。

Description of Symbols(For details, please click here)

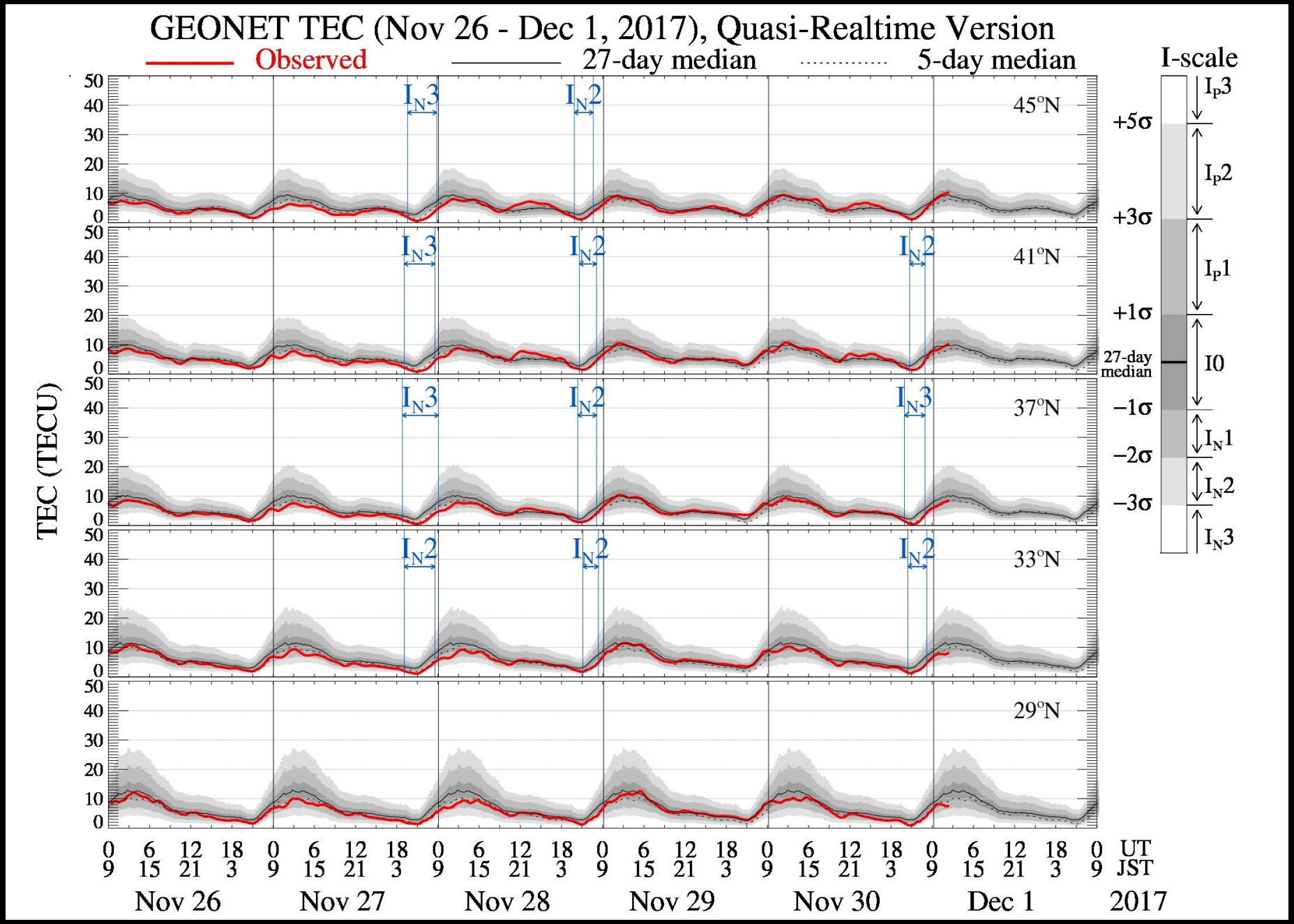
Low	< 3.8e+7 [/cm² sr]
Slightly high	>= 3.8e+7 [/cm² sr] < 3.8e+8 [/cm² sr]
High	>= 3.8e+8 [/cm² sr] < 3.8e+9 [/cm² sr]
Very high	>= 3.8e+9 [/cm² sr]

Warning level is determined on the basis of 24h fluence of electrons (>2 MeV) at Geostationary orbit of the GOES secondary satellite.
Forecast is updated every one hour.

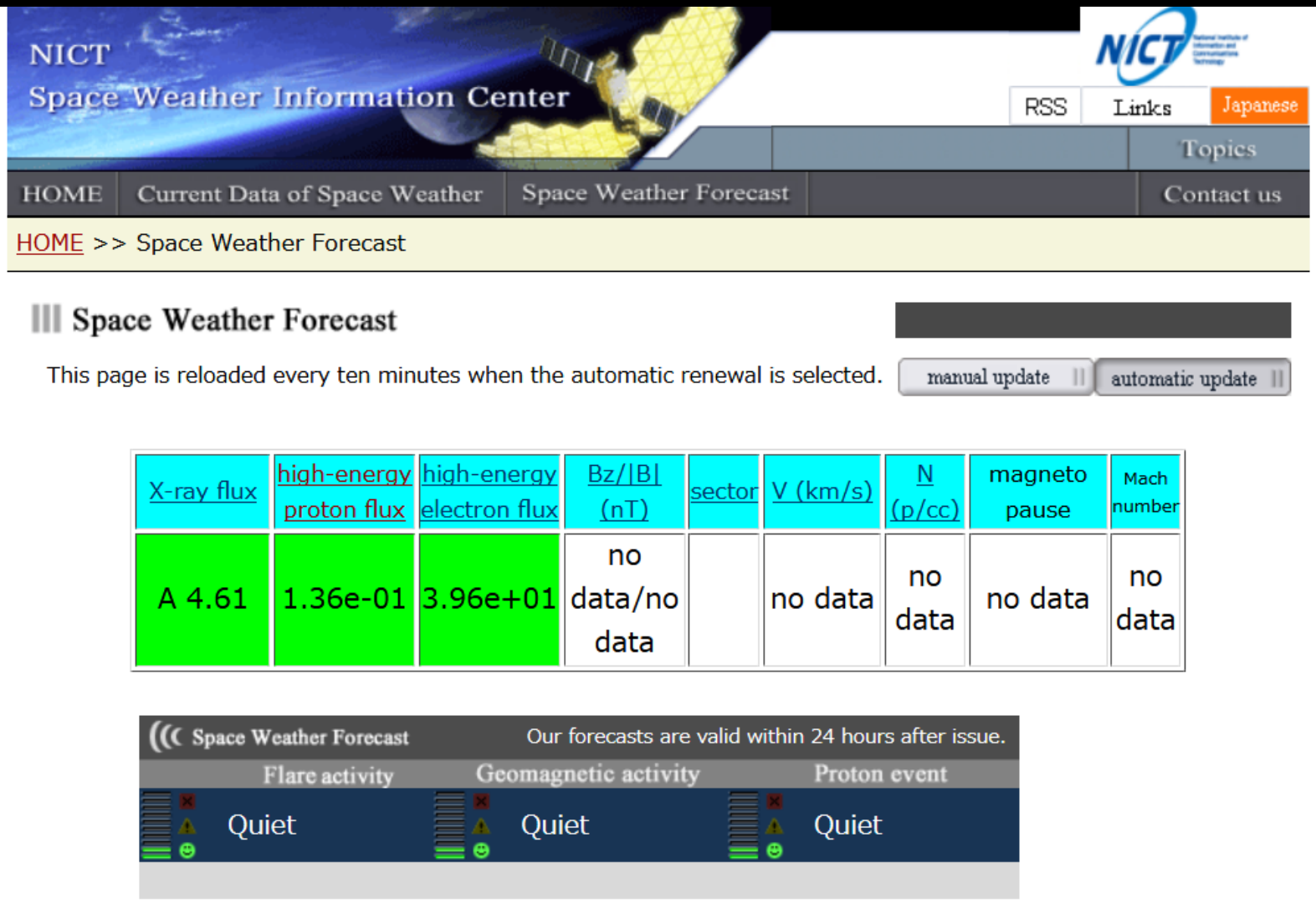
Ionosphere: Observed foF2



Ionosphere: GEONET TEC



Forecast by NICT



ESWW14

SIDC & NICT Space Weather briefing

Thank you for your attention!

ありがとうございました！

Visit us at

www.sidc.be and swc.nict.go.jp

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Thank You!
ありがとうございました！