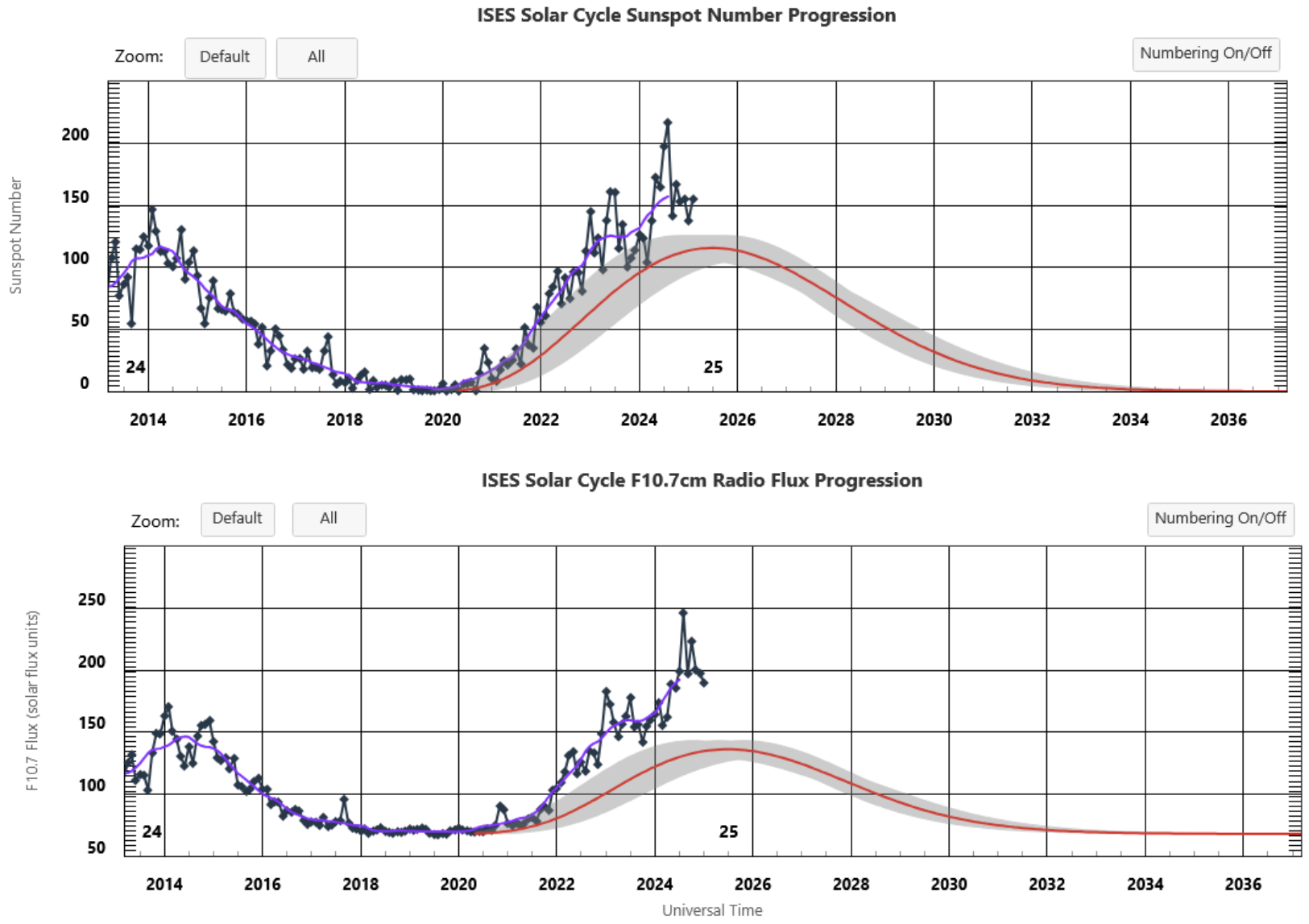
# SOLAR WEATHER
# 4 MAR 2025

**Lewis Thompson**
**W5IFQ**

Taken by Kieran Metcalfe on February 27, 2025 @ North of Tromso, Norway


ISES Solar Cycle Sunspot Number Progression
Zoom:
Default
All
Numbering On/Off
Sunspot Number
200
150
100
50
0
24
25
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
ISES Solar Cycle F10.7cm Radio Flux Progression
Zoom:
Default
All
Numbering On/Off
F10.7 Flux (solar flux units)
250
200
150
100
50
24
25
2014
2016
2018
2020
2022
2024
2026
2028
2030
2032
2034
2036
Universal Time

SolarHam

Indices: (3/4 @ 00:35 UTC) SFI 145 ▲5 SSN 99

**3 Day Geomagnetic Forecast**

| Mar. 04 | Mar. 05 | Mar. 06 |
|---|---|---|
| 5 (G1) | 5 (G1) | 2-3 (G0) |
| *Max Kp* | | |
| M-Lat 30% | M-Lat 30% | M-Lat 05% |
| H-Lat 65% | H-Lat 65% | H-Lat 30% |
| *Probabilities* | | |

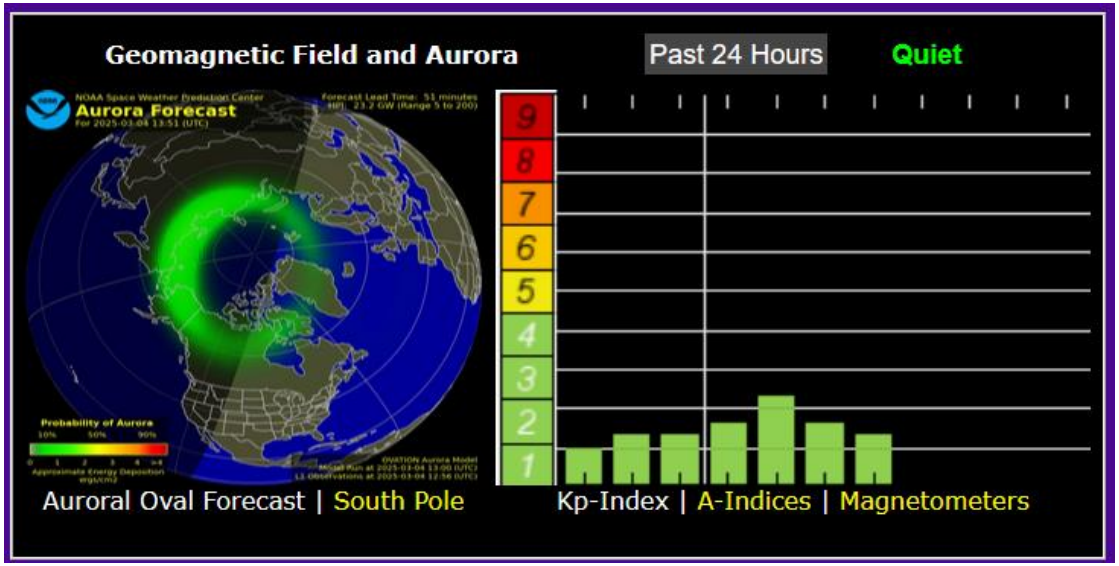
**Click HERE for latest forecast**

Detailed Forecast

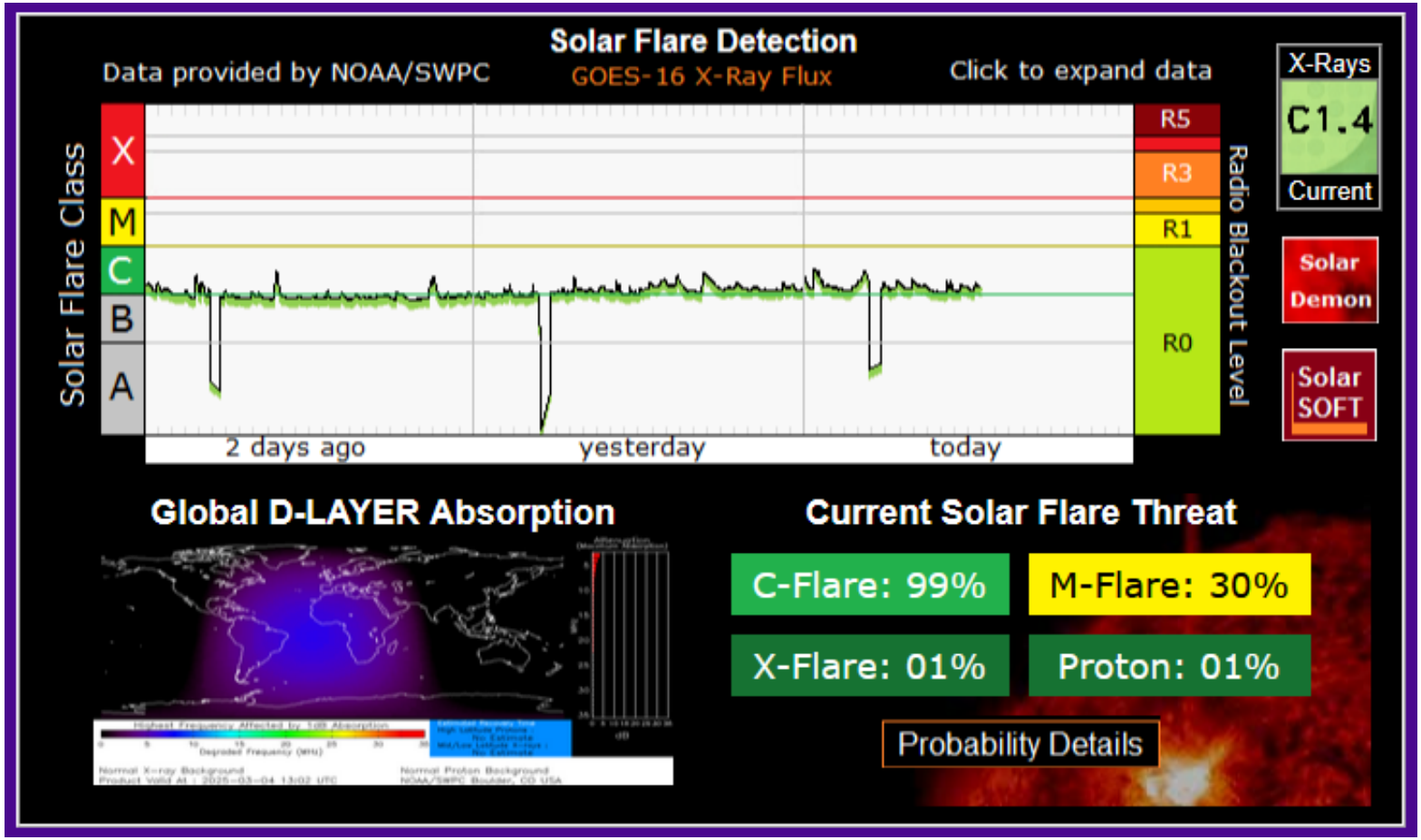
**Current Moon Phase:**

**27%** Illumination

Waxing Crescent

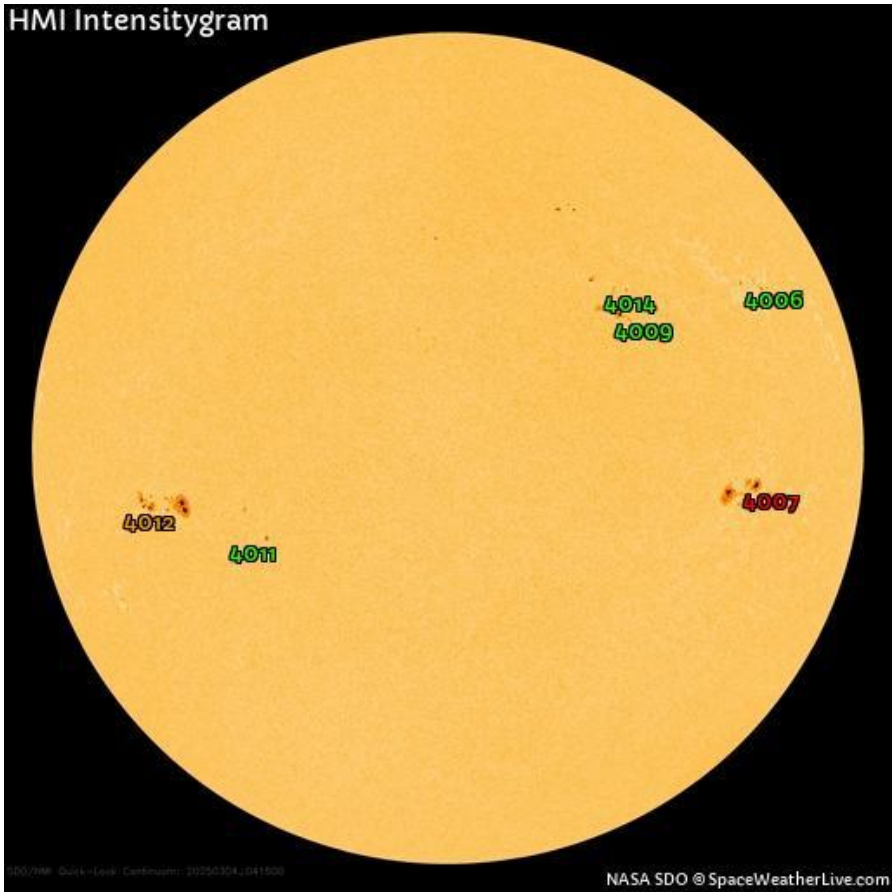


SolarHam


Solar Flare Detection
Data provided by NOAA/SWPC
GOES-16 X-Ray Flux
Click to expand data
Solar Flare Class
X
M
C
B
A
2 days ago
yesterday
today
R5
R3
R1
R0
Radio Blackout Level
X-Rays
C1.4
Current
Solar Demon
Solar SOFT
Global D-LAYER Absorption
Current Solar Flare Threat
C-Flare: 99%
M-Flare: 30%
X-Flare: 01%
Proton: 01%
Probability Details

# Sun Spots

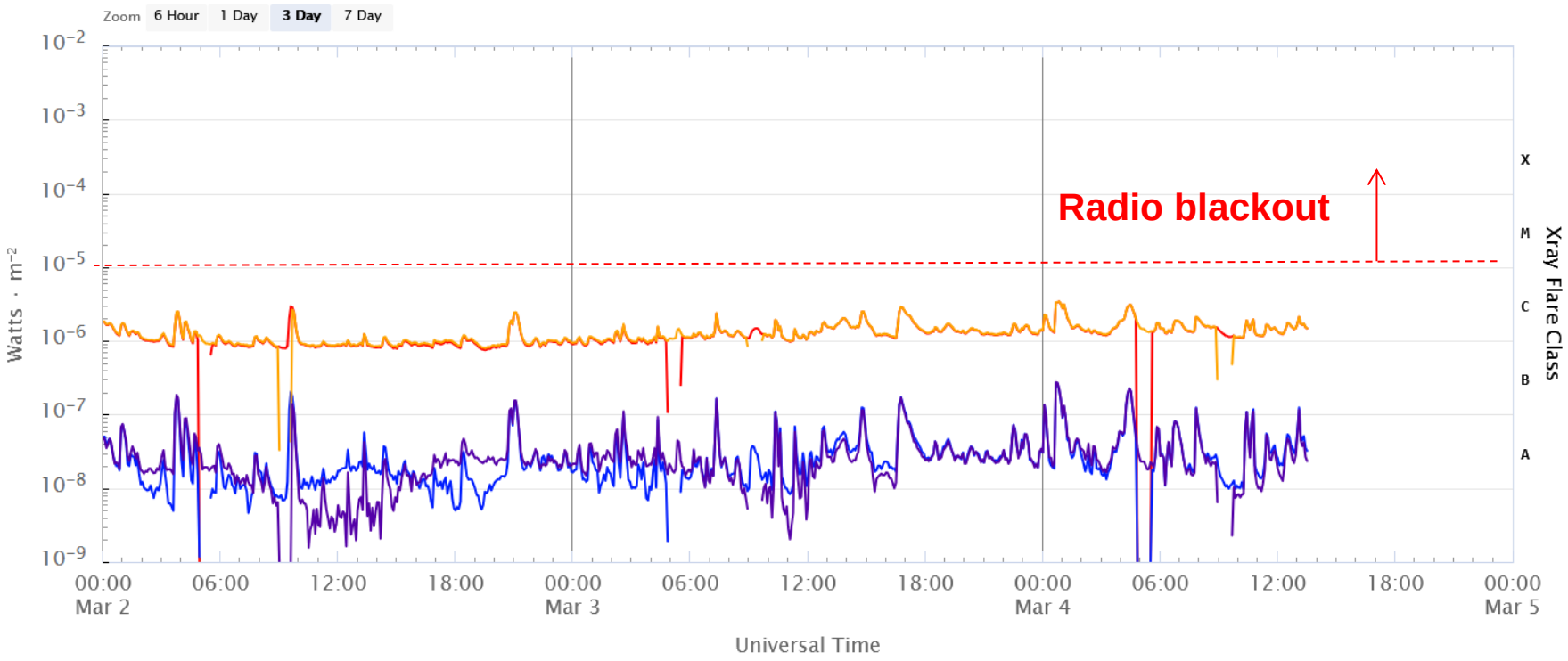
SpaceWeatherLive.com
Real-time auroral and solar activity



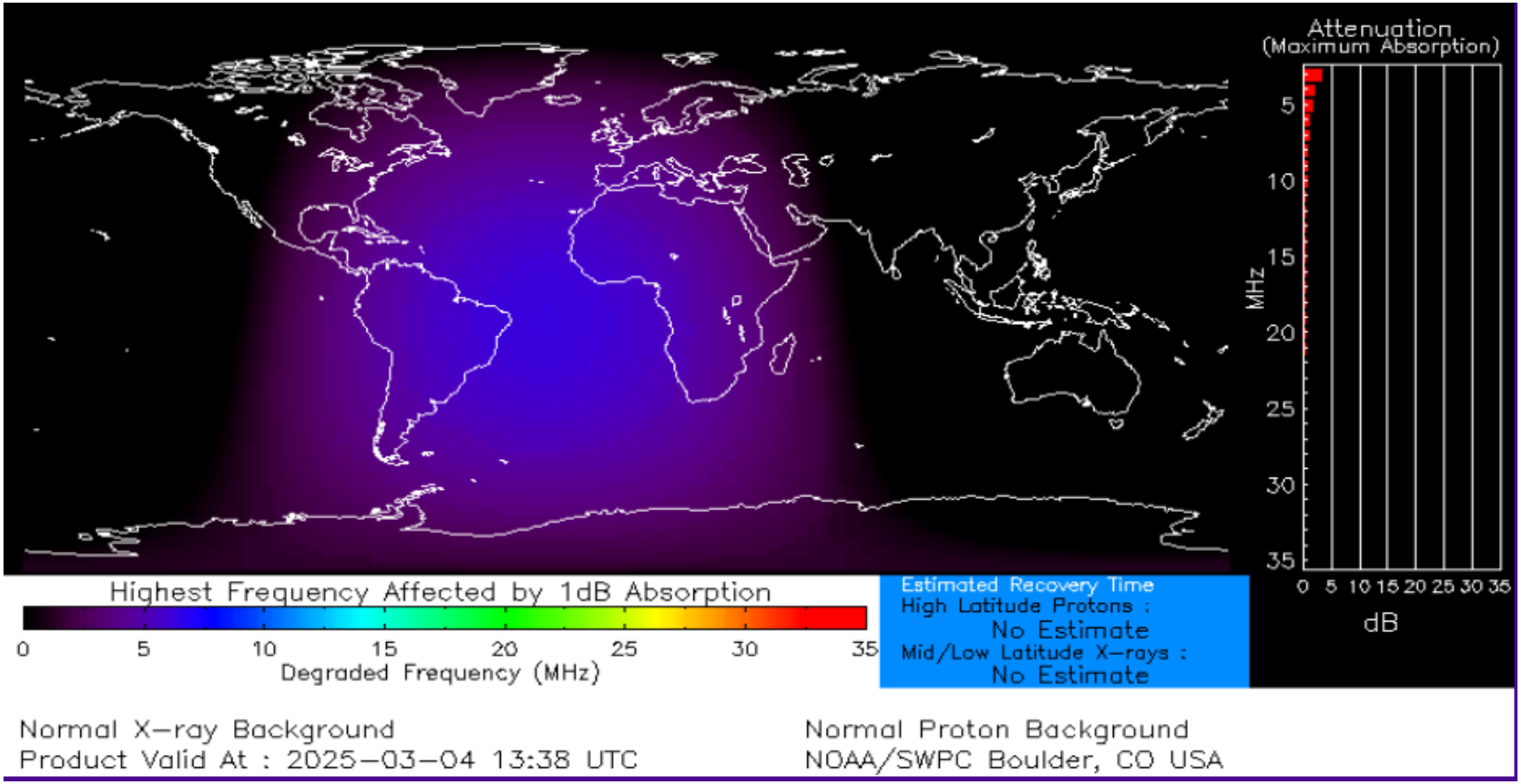

Sunspot regions

| Region | Number of sunspots | Class Magn. | Class Spot |
|---|---|---|---|
| 4006 | 13 | β | CAI |
| 4007 | 14 | β- γ | DAI |
| 4009 | 10 | β | CAO |
| 4011 | 4 | β | BXO |
| 4012 | 16 | β- γ | DKI |
| 4014 | 6 | β | CRI |
| 4015 | 3 | β | CRO |

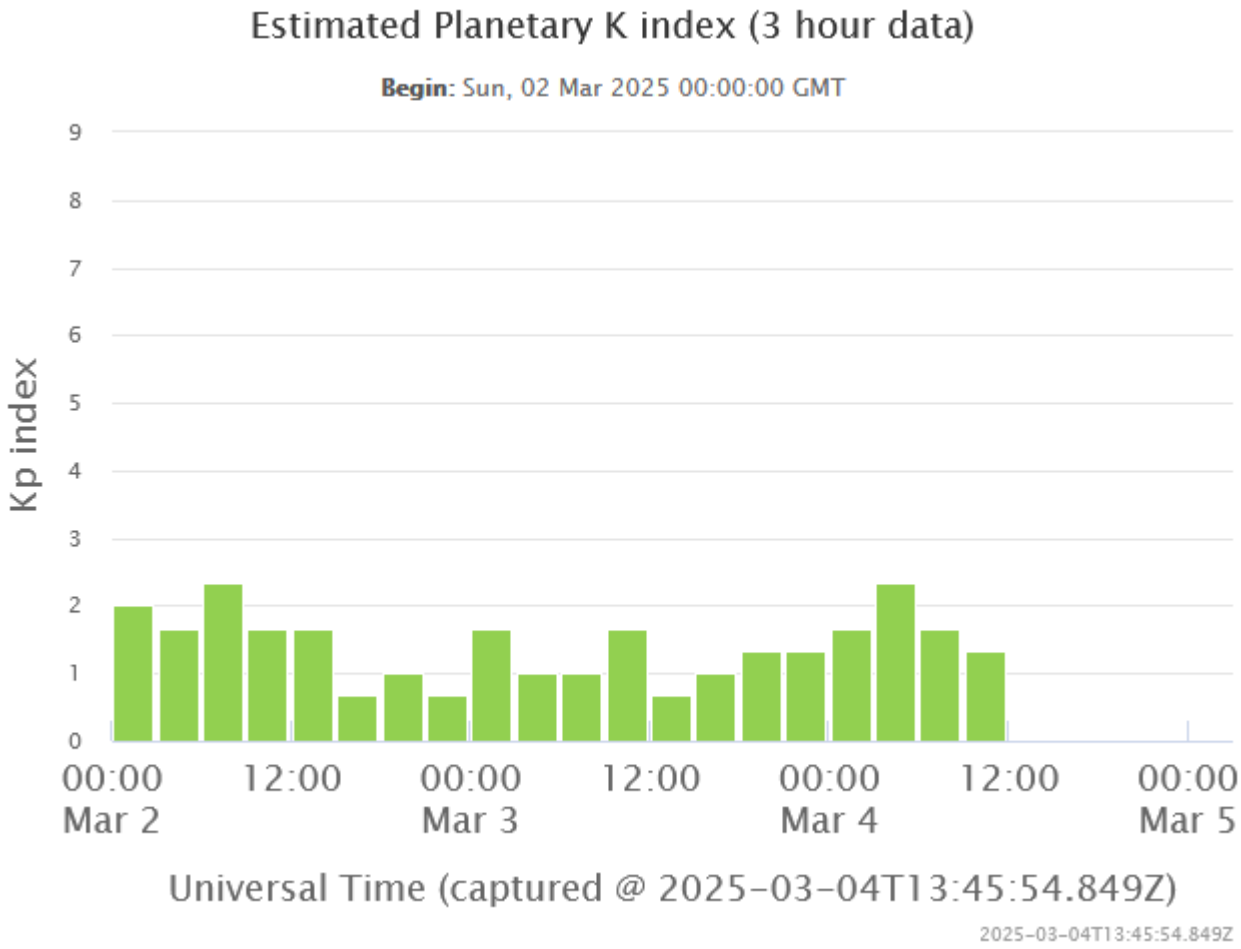
# Solar X-Ray Flux:  2 – 5 MAR 2025



# NOAA – D-Region Absorption Predictions



# Earth's Geomagnetic Activity



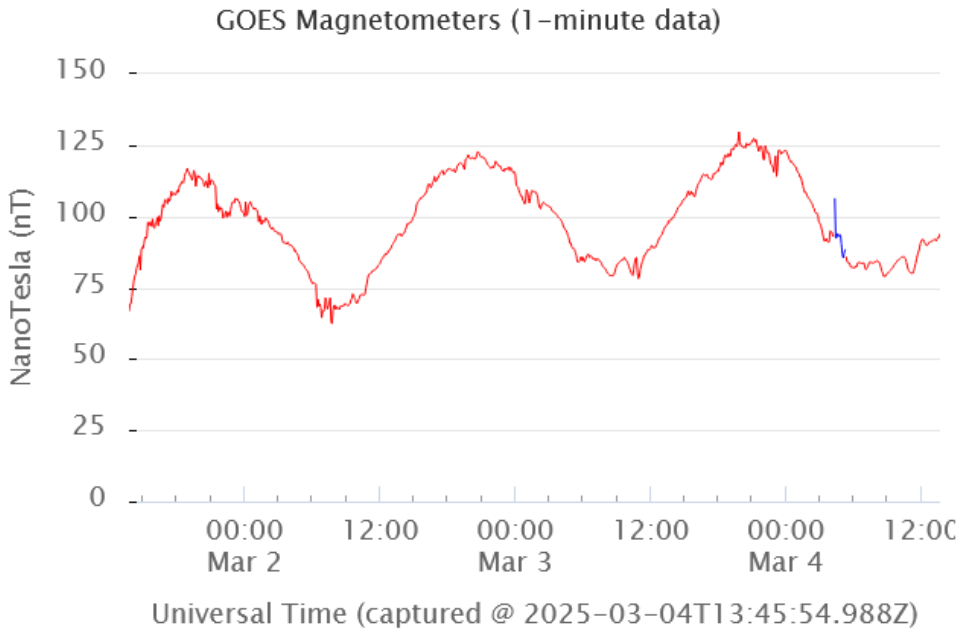
# Geomagnetic Conditions: 4 MAR 2025

Solar wind:
Bz = -2 nT
speed = 479 km/sec
density = 1.42 protons/cm$^3$

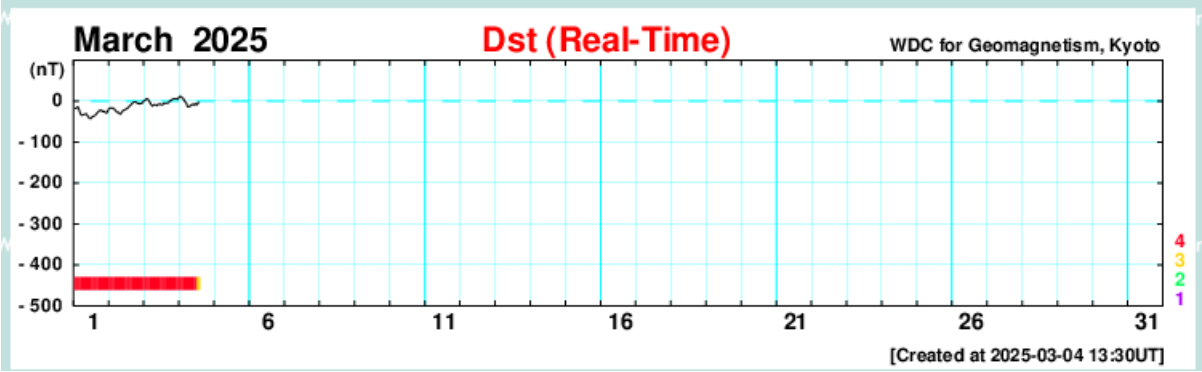
(From – NOAA DSCOVR
In L1, Lagrange Point)

Dst = -2 nT (Ring Field)

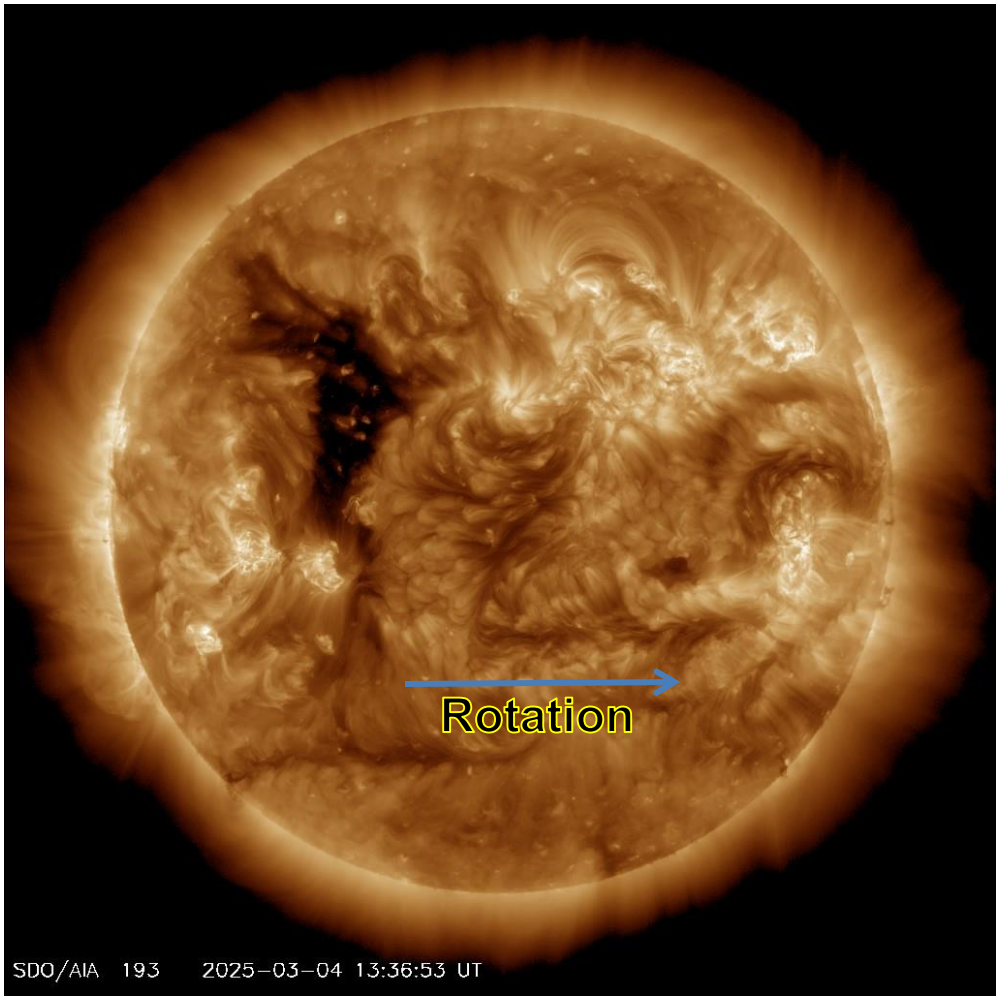
(From – Data Analysis Center
For Geomagnetics and Space
Magnetism – Kyoto University)




From – GOES 16
In geostationary orbit



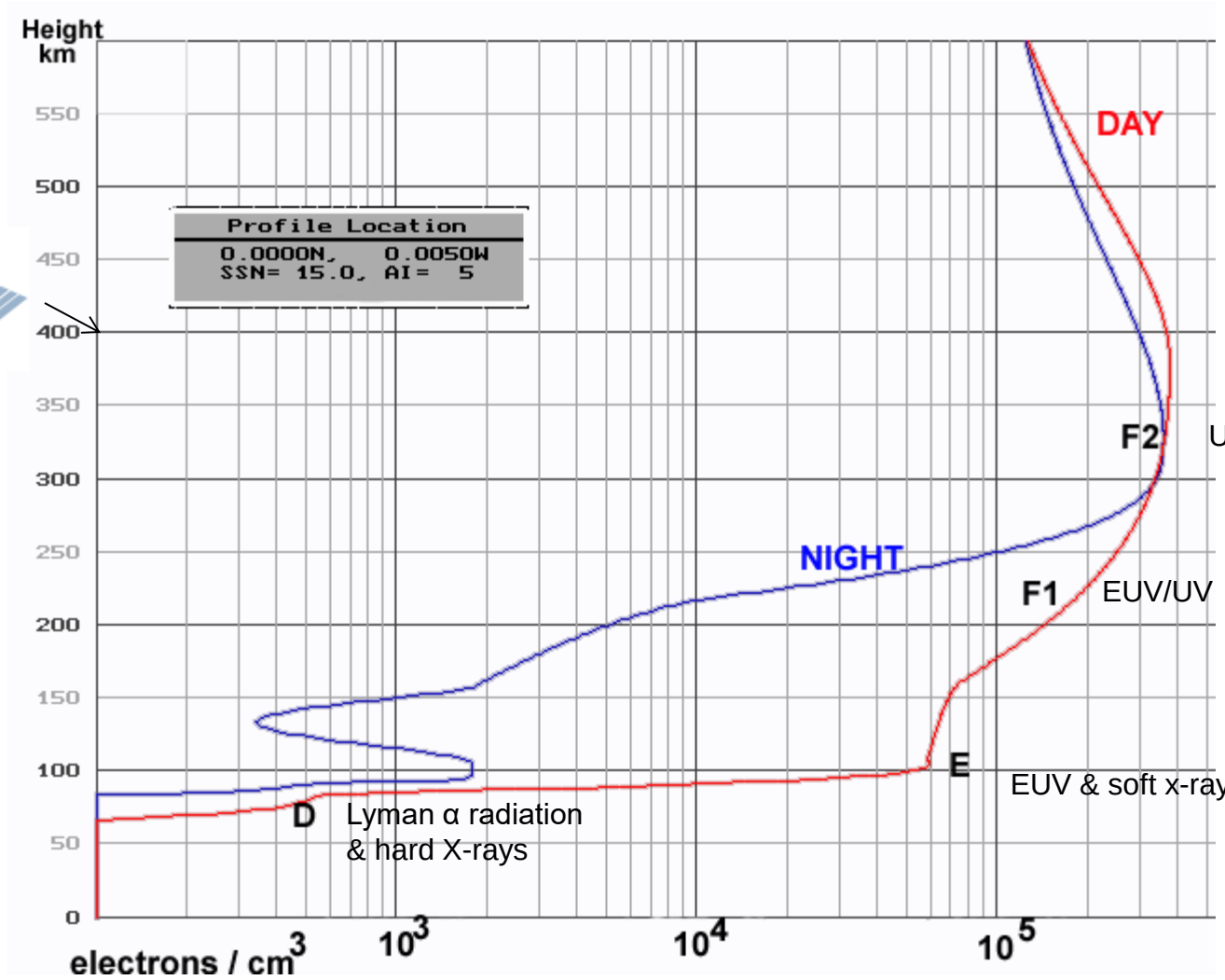
# Coronal Holes – 4 MAR 2025




Analysis:
A recurrent trans equatorial negative polarity coronal hole (CH1274) will be Earth facing on March 5-7

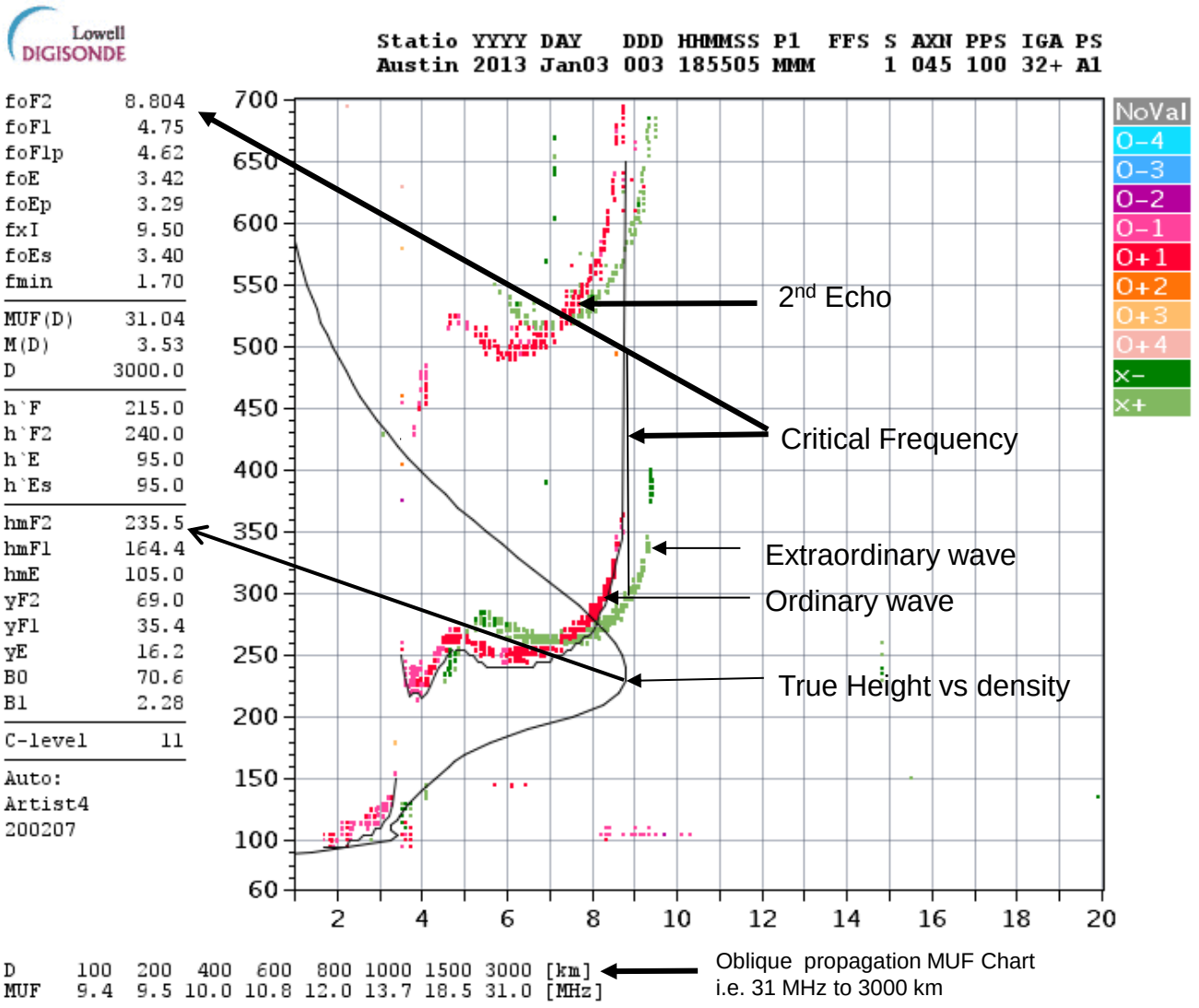
# Ionosphere Creation

Gravity




Solar Radiation

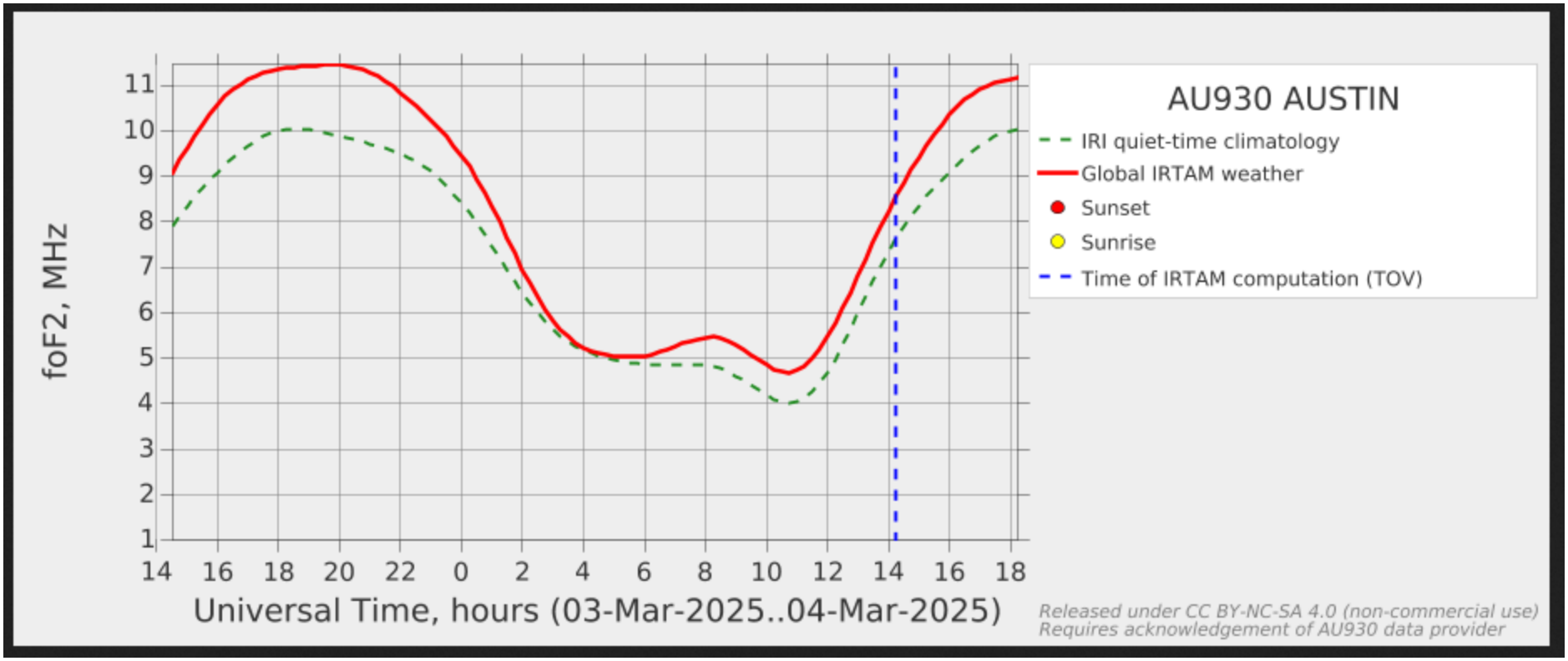
# Ionogram Interpretation



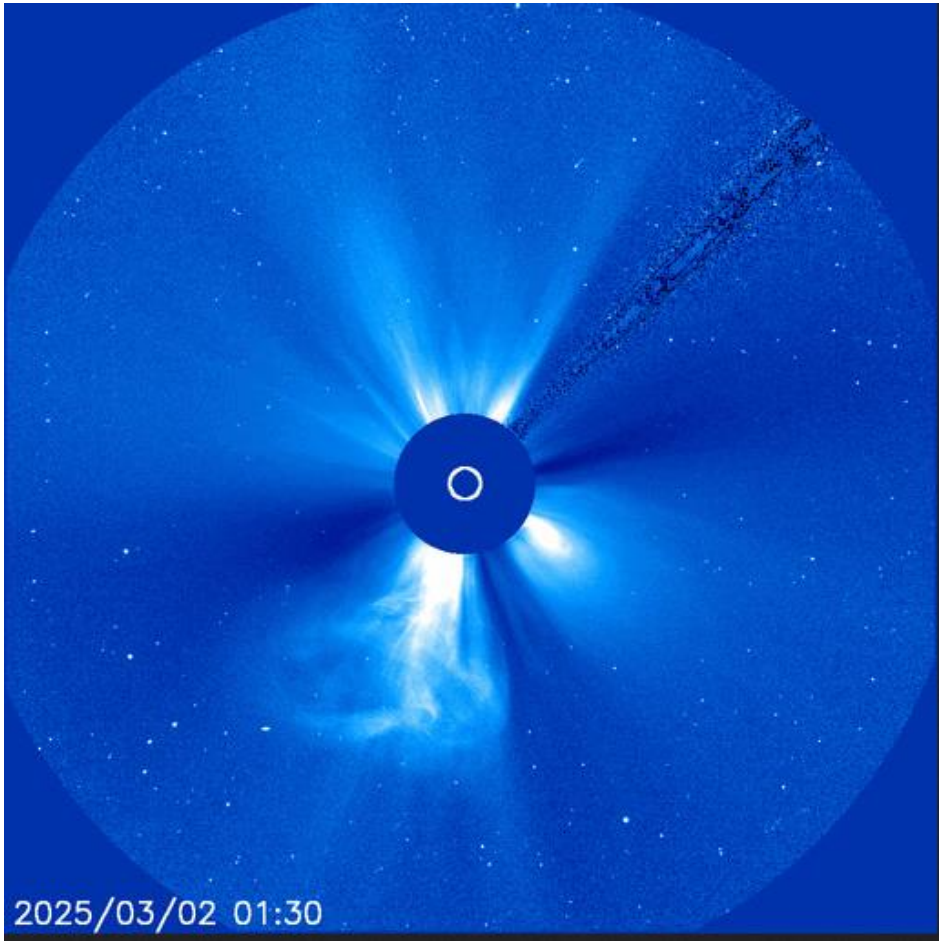
# Austin Ionosonde Down

- The Austin Ionosonde is down due to a failed primary (C:) Hard Disk failure. ARL:UT is attempting repairs but has no funding.

# GAMBIT – Trending Chart for Austin Ionosonde

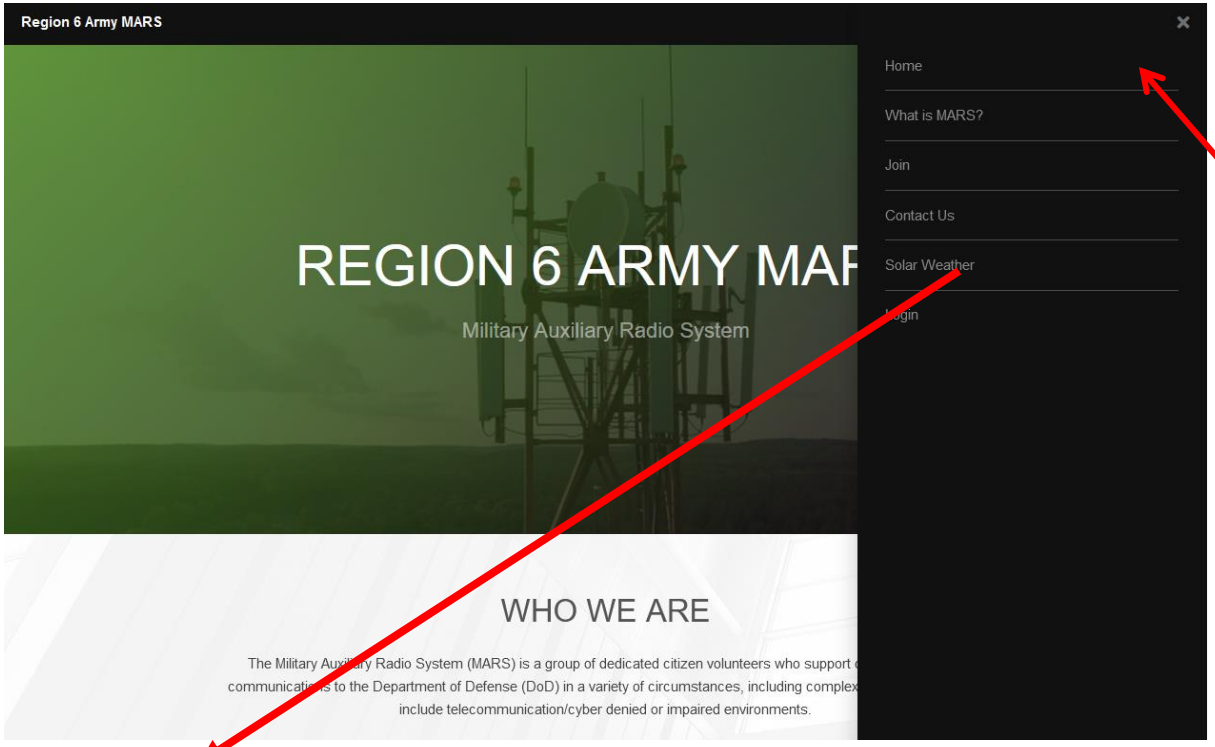


# Notable Recent Events




**A CME IS COMING:** On Mar. 1st, a magnetic filament on the sun erupted and hurled a CME into space. NOAA forecasters say it will graze Earth on **March 4th or 5th**, potentially sparking a G1-class geomagnetic storm. High latitude sky watchers should be alert for auroras if/when the CME arrives

# Solar Weather Data



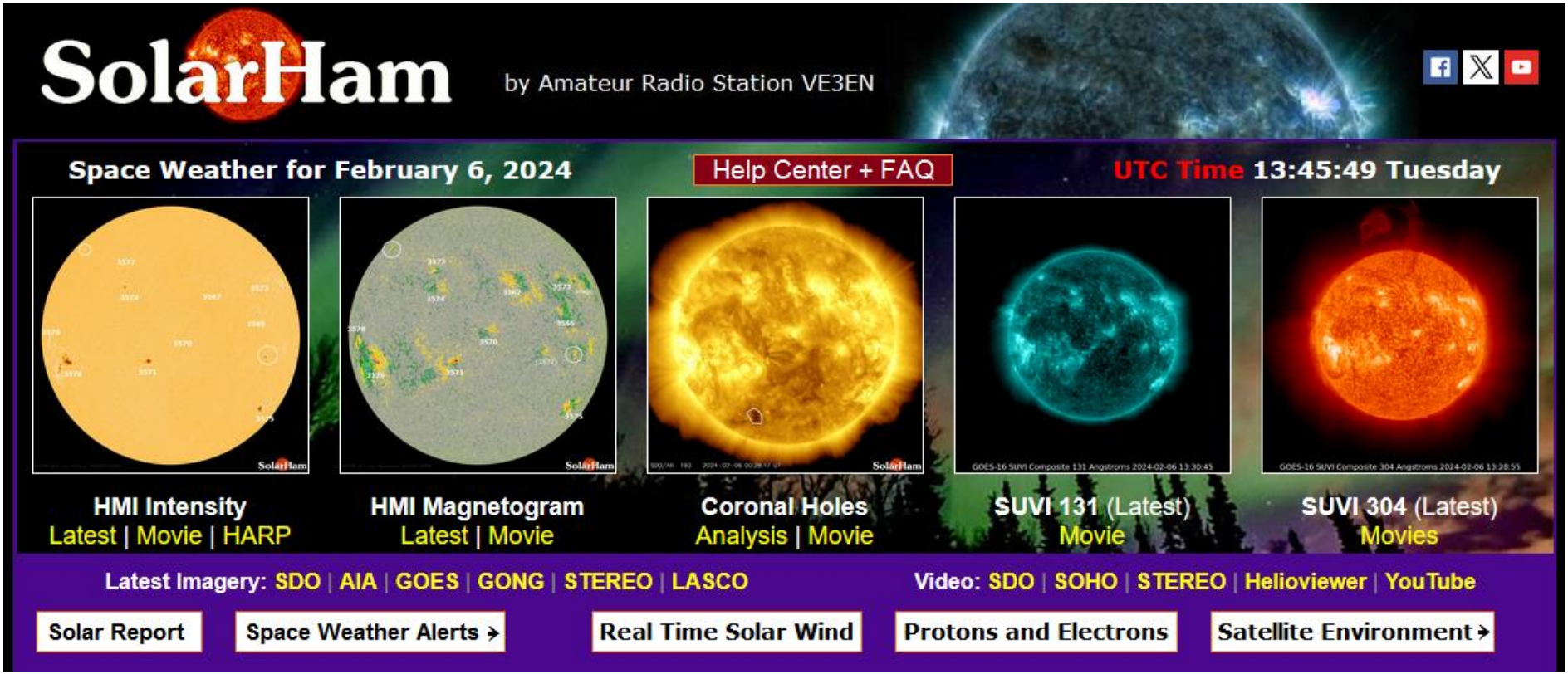

Menu

Solar Weather

All Ionosondes
GAMBIT URL
Austin Ionosonde

- GAMBIT - Global Assimilative Model of Bottomside Ionosphere Timeline
- Austin
- Boulder
- Eglin

- NOAA Solar Weather - Solar Weather plots of Kp and X-Ray and other solar emissions.
- Solen Solar Weather - Good general solar forecast from an individual.
- Solar Ham - SolarHam provides real time solar news, as well as consolidated data from various sources.


SolarHam
by Amateur Radio Station VE3EN
Space Weather for February 6, 2024
Help Center + FAQ
UTC Time 13:45:49 Tuesday
HMI Intensity
Latest | Movie | HARP
HMI Magnetogram
Latest | Movie
Coronal Holes
Analysis | Movie
SUVI 131 (Latest)
Movie
SUVI 304 (Latest)
Movies
Latest Imagery: SDO | AIA | GOES | GONG | STEREO | LASCO
Video: SDO | SOHO | STEREO | Helioviewer | YouTube
Solar Report
Space Weather Alerts
Real Time Solar Wind
Protons and Electrons
Satellite Environment

spaceweather.com

News and information about the Sun-Earth environment

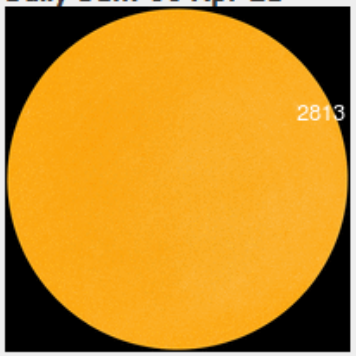
https://www.spaceweather.com/

## Current Conditions

**Solar wind**
speed: **314.8** km/sec
density: **9.9** protons/cm$^3$
more data: ACE, DSCOVR
**Updated: Today at 1225 UT**

**X-ray Solar Flares**
6-hr max: **A1** 1027 UT Apr06
24-hr: **A1** 1515 UT Apr05
explanation | more data
**Updated: Today at: 1230 UT**

**Daily Sun: 06 Apr 21**




Sunspot AR2813 is decaying, and poses no threat for strong flares.
Credit: SDO/HMI

**FLYING TO THE VOLCANO:** Iceland's Geldingadalur volcano has turned into an popular tourist attraction---especially since auroras were sighted above the glowing lava. Early this morning, Tuesday, April 6th, Brian Emfinger saw auroras before he even reached the Reykjanes peninsula:

# QUESTIONS?

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