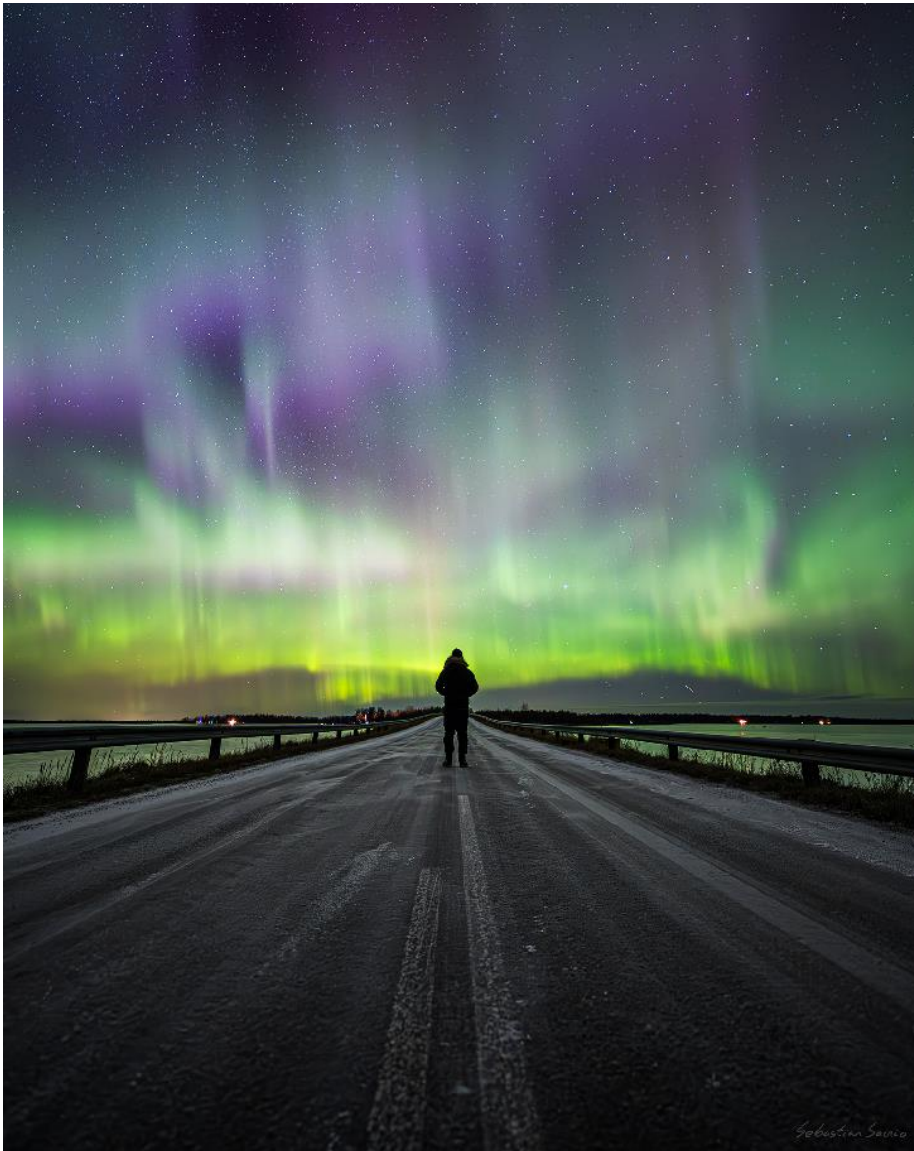


# SOLAR WEATHER

## 6 JAN 2026

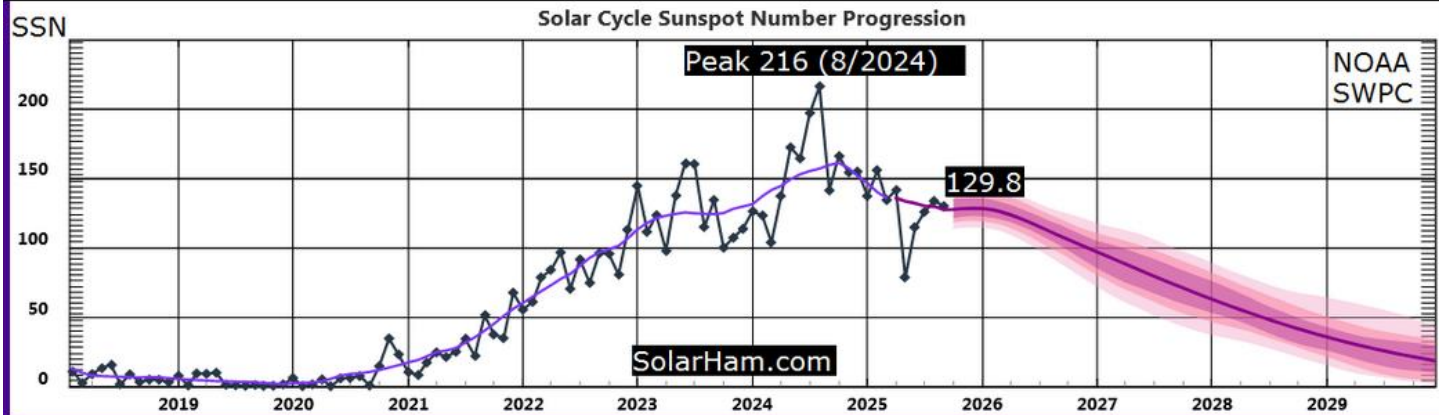
Lewis Thompson  
W5IFQ



Taken by Sebastian Sainio  
on December 22, 2025 @  
Raippaluoto, Finland

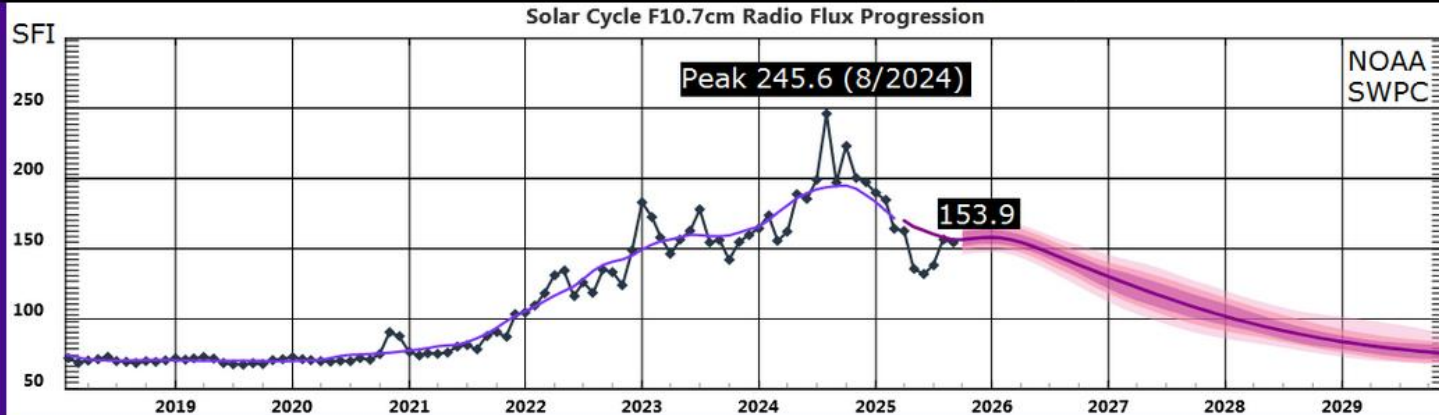
### Sunspot Number Progression (September 2025)

Predicted SSN: 127.8 Actual: 129.8 Latest Smoothed Predicted SSN (3/2025): ---.- Actual: 135.9



### 10.7cm Solar Flux Progression (September 2025)

Predicted SFI: 155.8 Actual: 153.9 Latest Smoothed Predicted SFI (3/2025): ---.- Actual: 171.3



# SolarHam

Indices: (1/6 @ 00:35 UTC)    SFI 154 ▼ 3    SSN 91

### 3 Day Geomagnetic Forecast

| Jan. 6               | Jan. 7    | Jan. 8    |
|----------------------|-----------|-----------|
| 2 (G0)               | 2 (G0)    | 2 (G0)    |
| <i>Max Kp</i>        |           |           |
| M-Lat 01%            | M-Lat 01% | M-Lat 01% |
| H-Lat 15%            | H-Lat 15% | H-Lat 15% |
| <i>Probabilities</i> |           |           |

Latest SWPC Forecast (@ 00:30 + 12:30 UTC)

[Detailed Forecast](#)

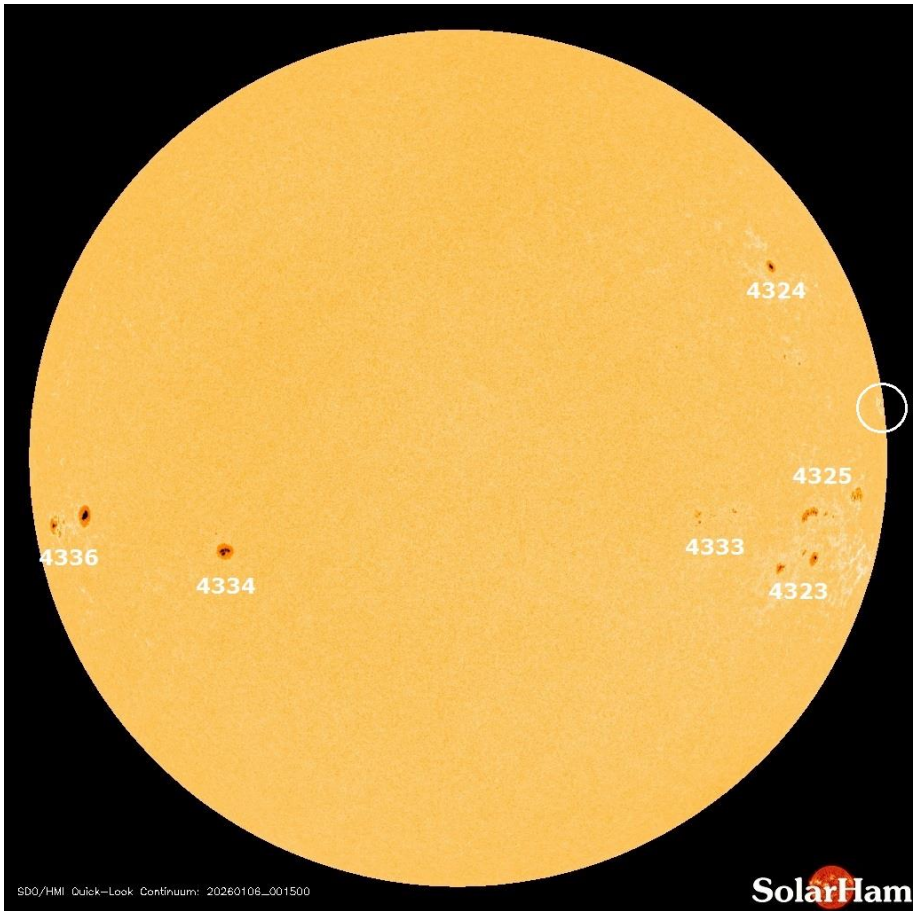
### Flare Events (M2+) Past 72 Hours

No Noteworthy Flare Events Detected.

[Event Report](#)    [Top Solar Flares](#)

[Data Archive](#)

# SolarHam

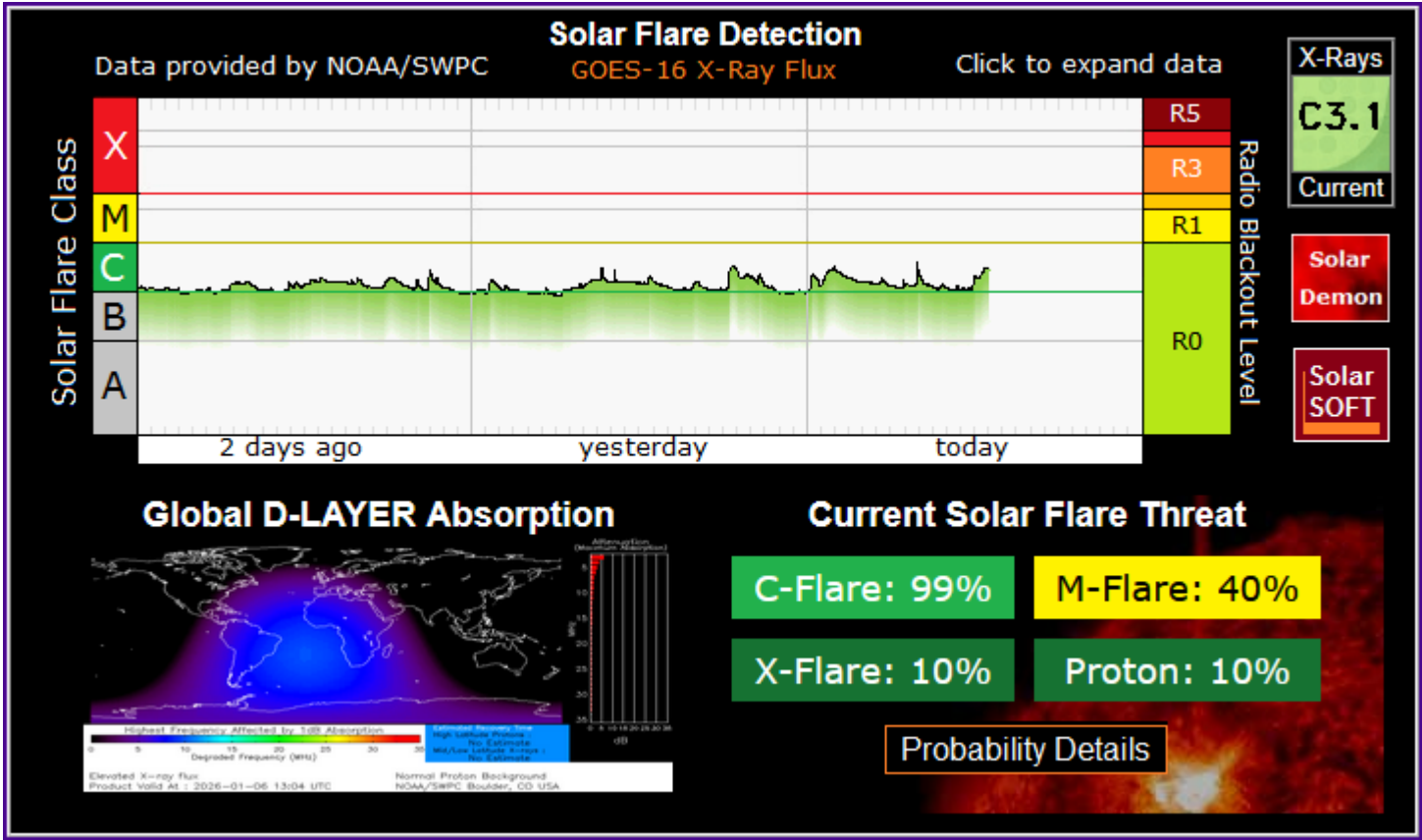


### Visible Sunspot Regions

| Sunspot Summary |   | SRS    |                  |
|-----------------|---|--------|------------------|
| <b>AR 4336</b>  | B | S09E66 | <i>Stable</i>    |
| <b>AR 4334</b>  | B | S15E34 | <i>Stable</i>    |
| <b>AR 4333</b>  | B | S10W39 | <i>Declining</i> |
| <b>AR 4325</b>  | B | S08W64 | <i>Stable</i>    |
| <b>AR 4324</b>  | B | N25W54 | <i>Declining</i> |
| <b>AR 4323</b>  | B | S16W56 | <i>Stable</i>    |

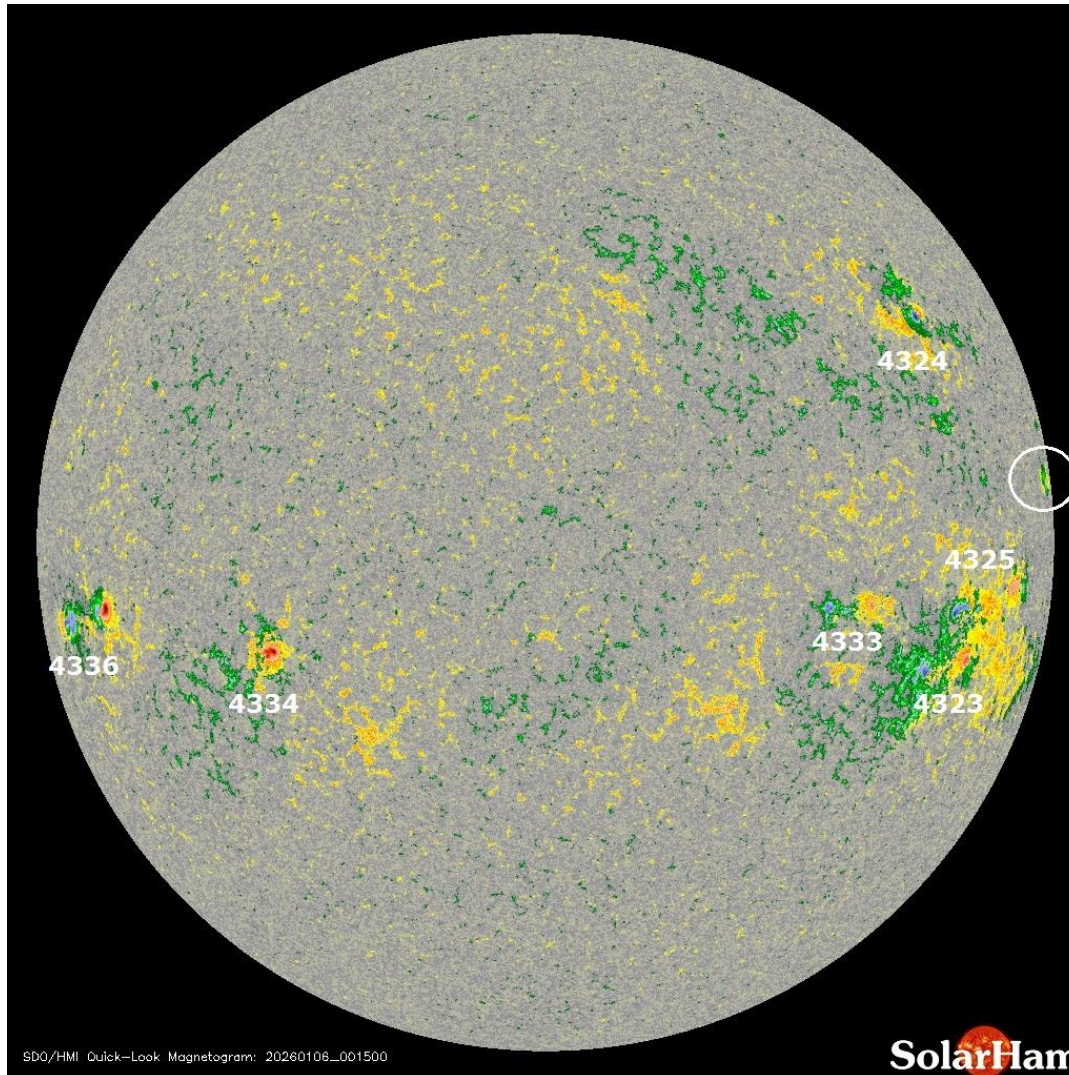
Updated @ 00:35 UTC (January 6)

# SolarHam




# Sun Spots


Magnetogram Image (Updated January 6, 2026)



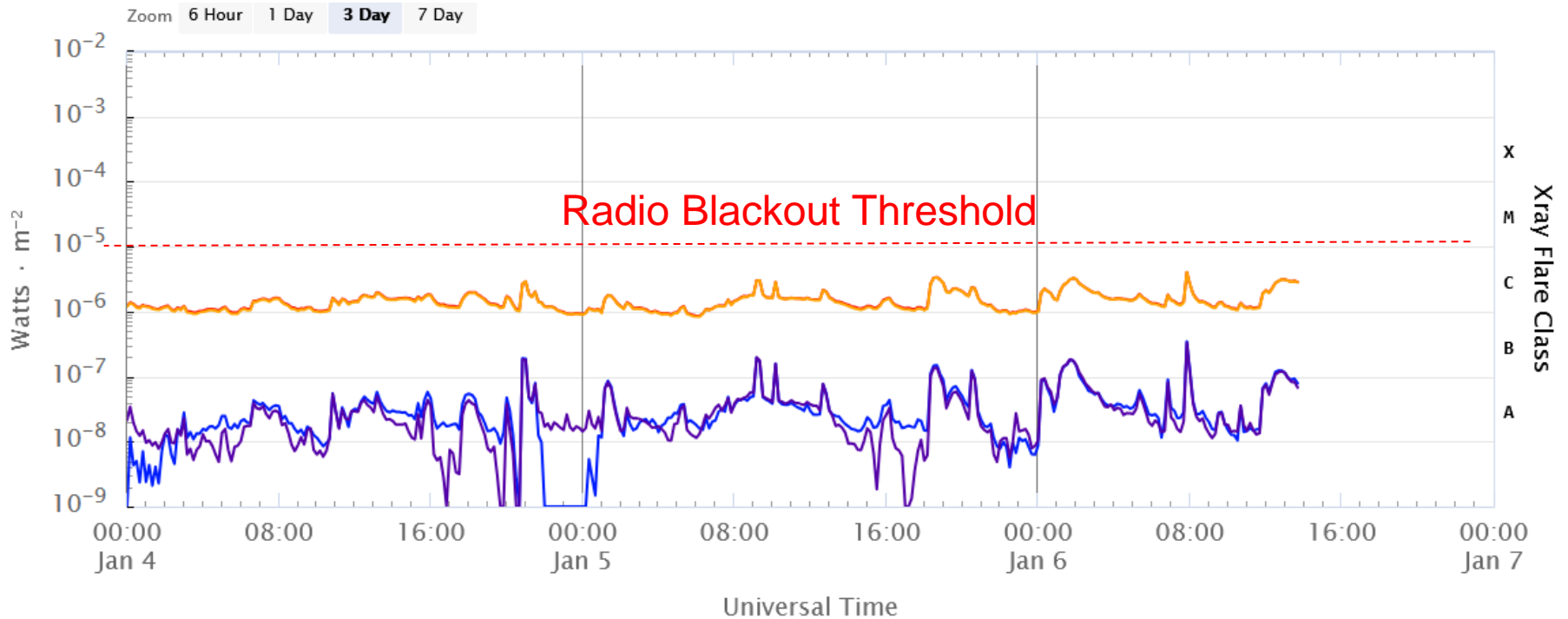
# Zeeman Effect

Solar magnetograms use color to map the Sun's magnetic fields, typically with **white/yellow for strong outward (North) polarity, black/blue for strong inward (South) polarity, and gray for weak or zero magnetic fields**, though specific colors can vary by instrument (e.g., red/blue for north/south, green for open fields) to highlight different field strengths or types, with brighter/more saturated colors showing stronger fields and coinciding with sunspots. 

## Common Color Schemes

- **Black & White/Gray:** A classic representation where white is North (outward), black is South (inward), and gray is quiet (near zero).
- **Red & Blue:** Often used for strong fields, with red for North and blue for South polarity, sometimes with green for open fields (coronal holes).
- **Pink/Yellow & Purple/Blue:** Strong positive fields might be pink/yellow, while strong negative fields are purple/blue, with brighter colors indicating greater intensity. 

# Solar X-Ray Flux: 4 – 6 JAN 2026

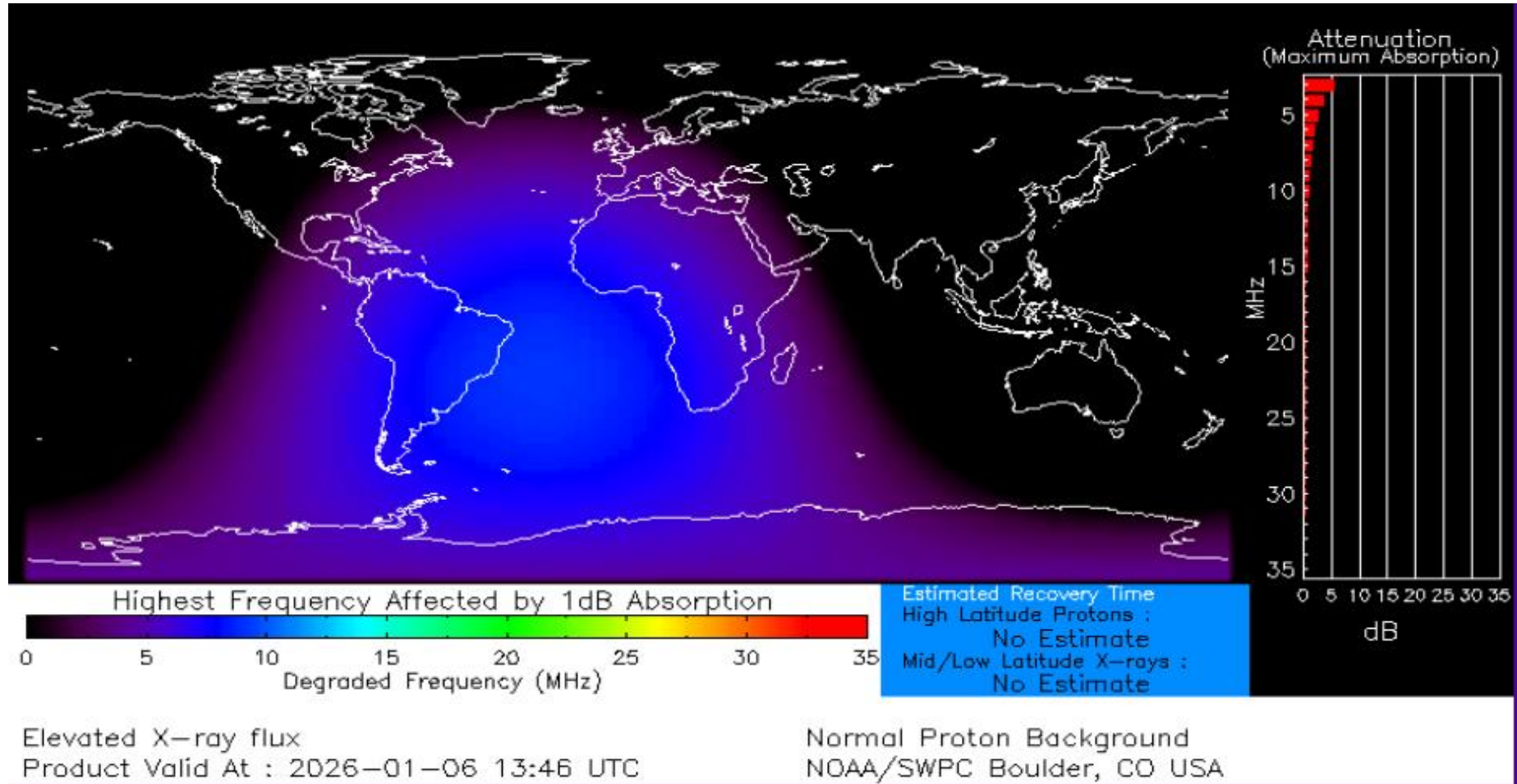


— GOES-18 Long — GOES-18 Short — GOES-19 Long — GOES-19 Short

Updated 2026-01-06 13:41 UTC

Space Weather Prediction Center

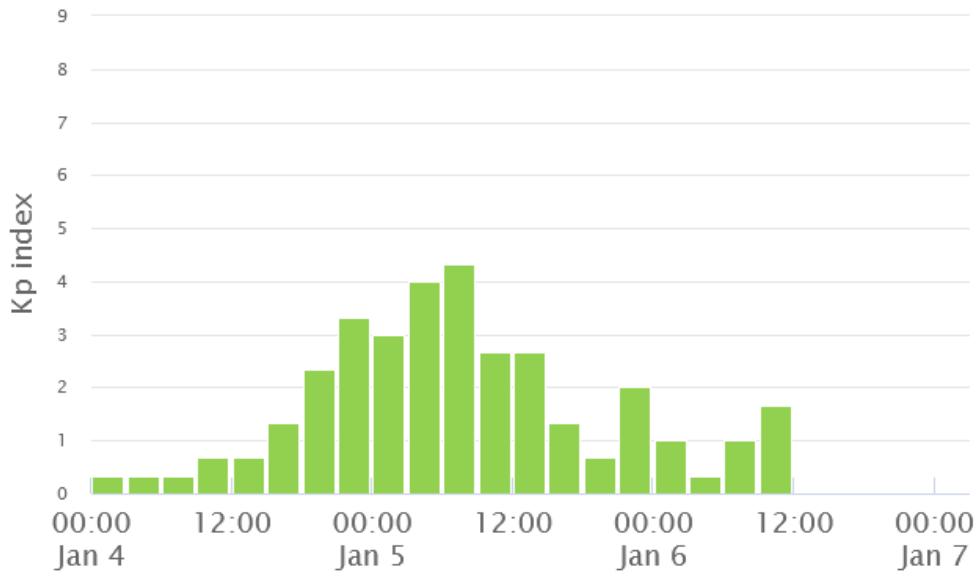
# NOAA – D-Region Absorption Predictions



# Earth's Geomagnetic Activity

Estimated Planetary K index (3 hour data)

Begin: Sun, 04 Jan 2026 00:00:00 GMT



Universal Time (captured @ 2026-01-06T14:38:25.698Z)

2026-01-06T14:38:25.698Z

Generally, as planetary K-Index rises, critical frequency is suppressed.

| K-Index | Effect  |
|---------|---|
| 0-2     | Inactive/Quiet, no impact on HF                     |
| 3-4     | Unsettled/Active, minor HF fade in higher latitudes |
| 5-6     | HF fade at higher latitudes                         |
| 7-8     | HF sporadic   |
| 9       | HF impossible above 40M                             |

# Geomagnetic Conditions: 6 JAN 2026

Solar wind:

$B_z = 0.8$  nT

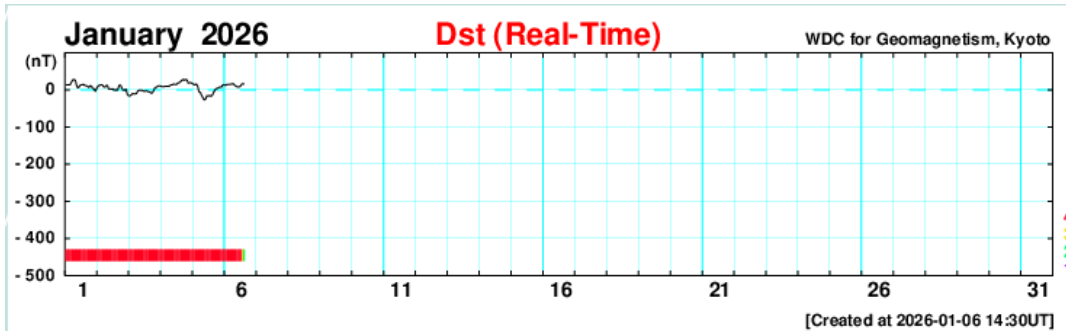
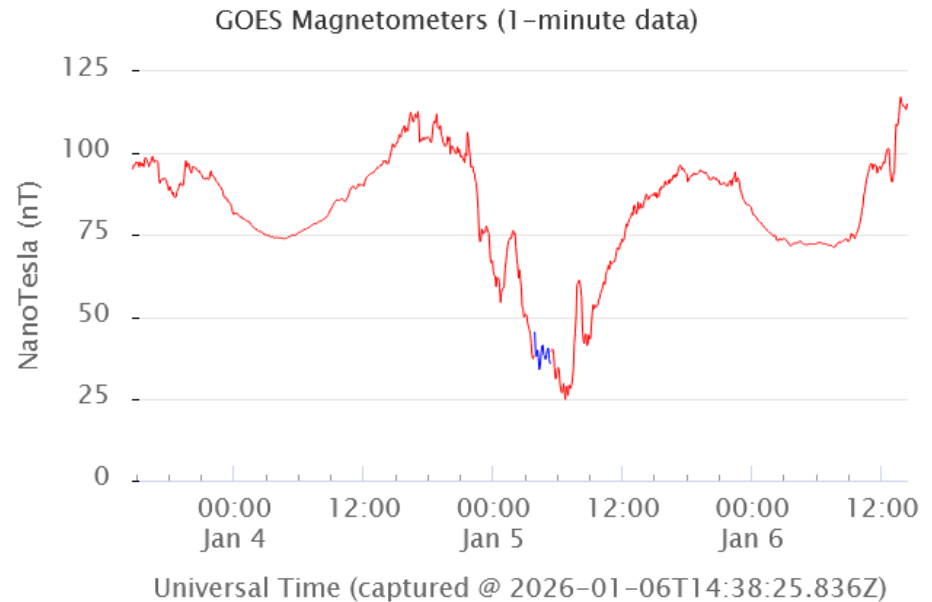
speed = 378 km/sec

density = 11.6 protons/cm<sup>3</sup>

(From – NOAA DSCOVR  
In L1, Lagrange Point)

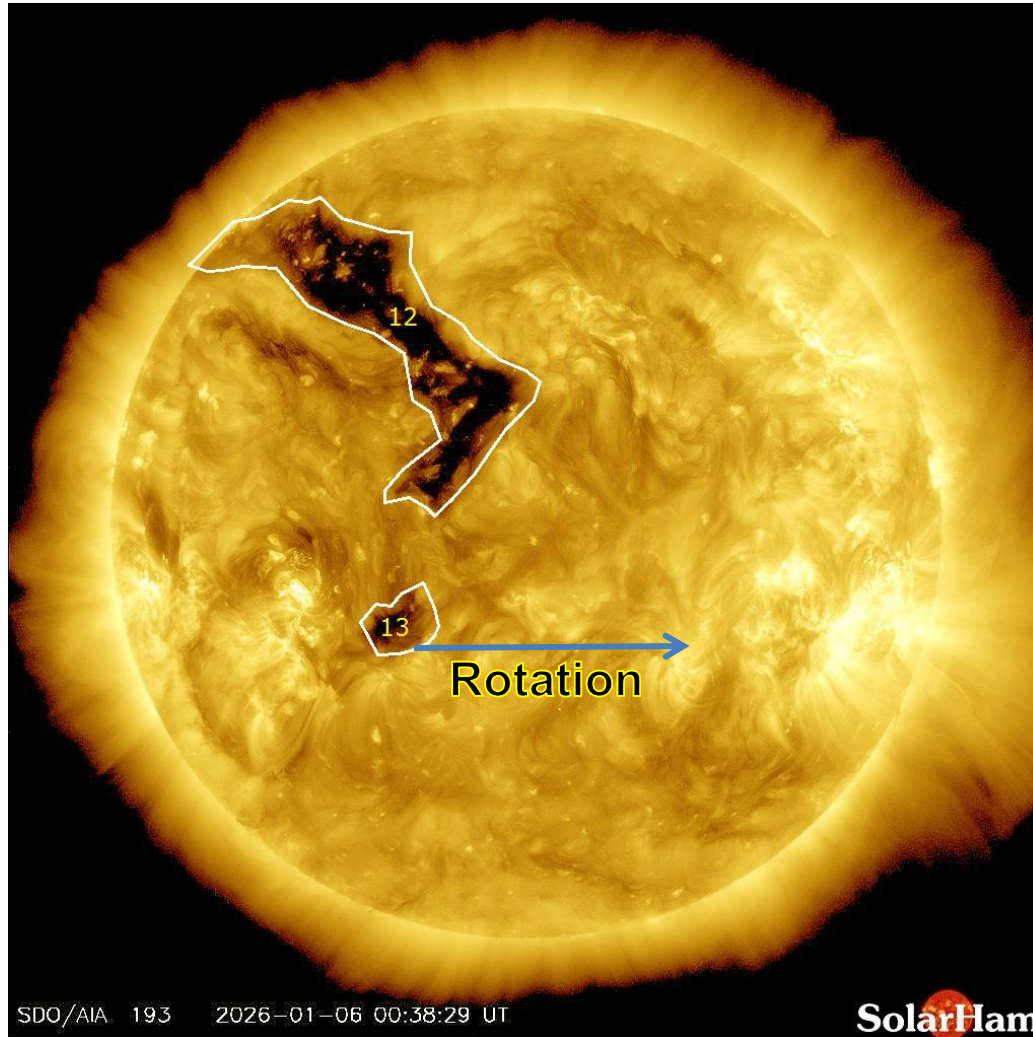
Dst = 17 nT (Ring Field)

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



From – GOES 16  
In geostationary orbit

# Coronal Holes – 6 JAN 2026



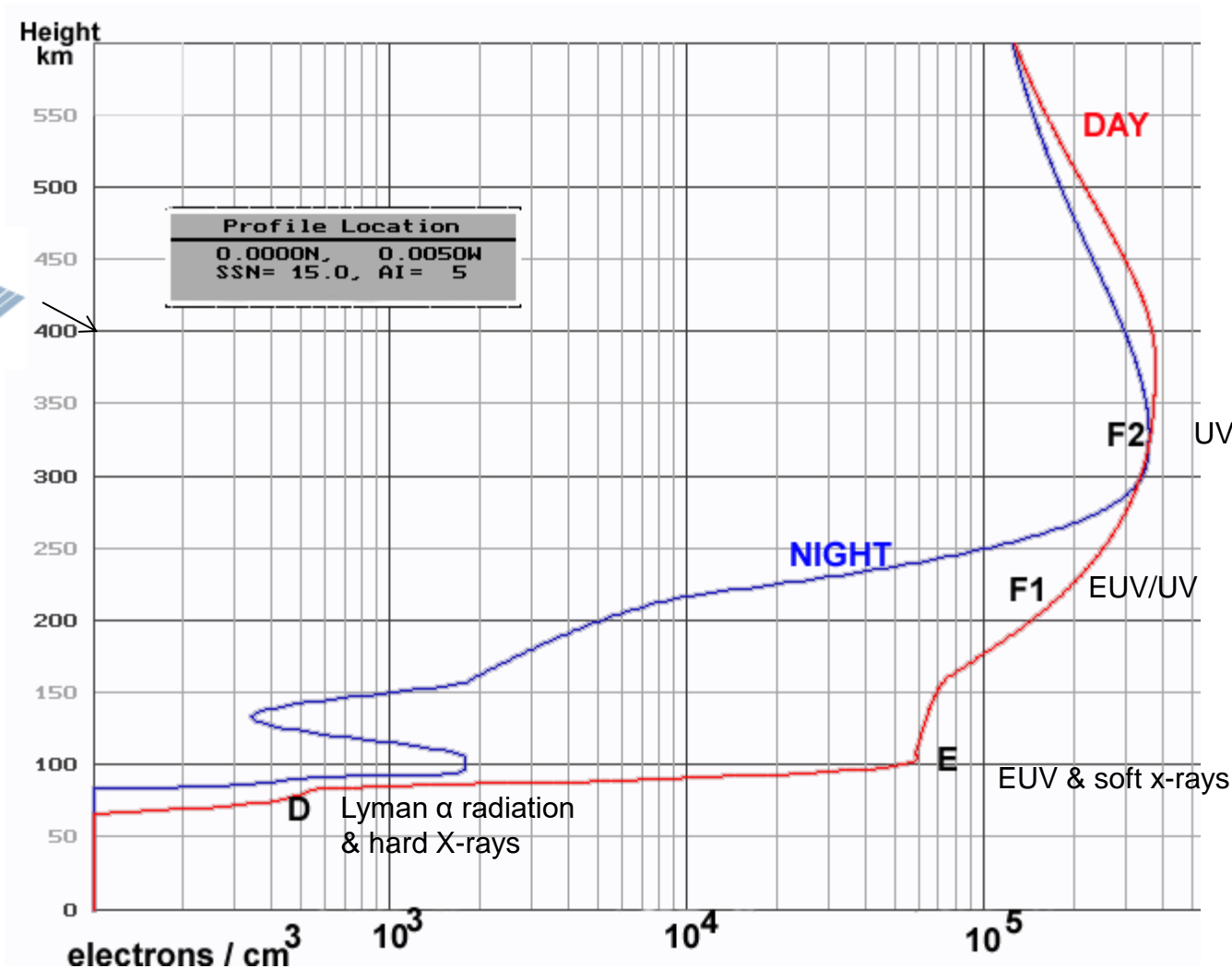
## Analysis

Coronal holes #12 and 13 will begin to face Earth later this week and will be monitored.

# Ionosphere Creation



Gravity  
↓



Solar Radiation  
↓

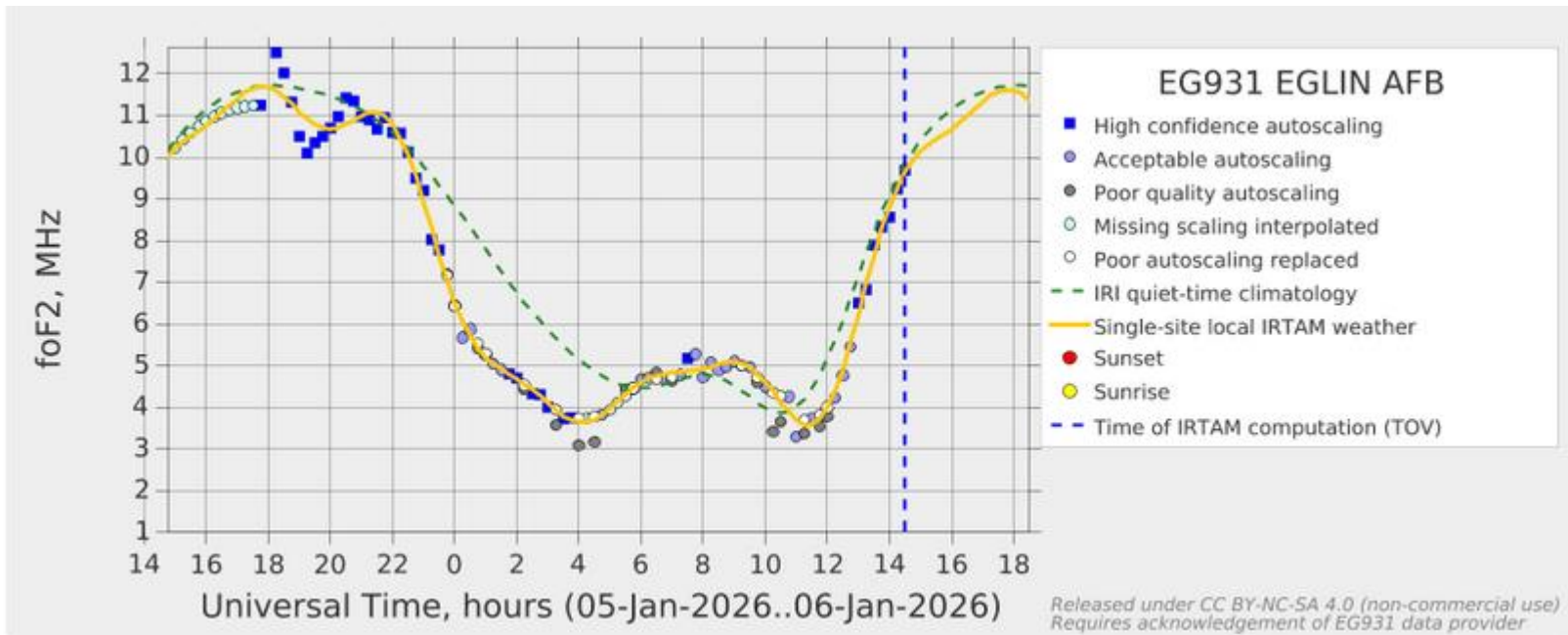
Monoatomic oxygen

# Austin Ionosonde Status

- Austin Ionosonde has not sent Ionograms to GIRO since 15 DEC 2025 at 0100Z.
- Austin Ionosonde is still scheduled for a shut down and this may have happened. My requested update email has gone unanswered.
- I recommend that all users move to the Eglin AFB Ionosonde, EG931, as discussed next.

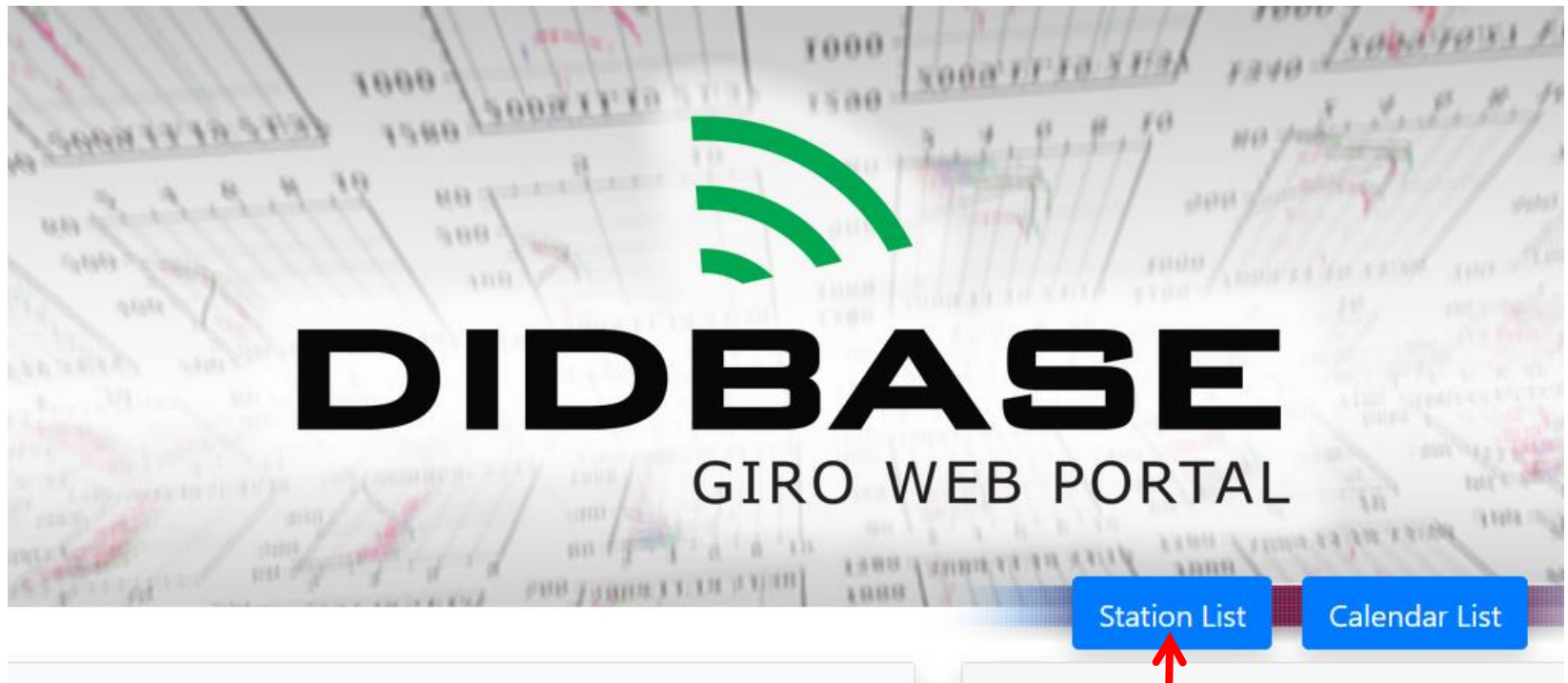
# GAMBIT foF2 Trending Chart for Eglin Ionosonde

<https://www.region6armymars.org/resources/solarweather.php>



# Use of GIRO DIDBASE

<https://giro.uml.edu/didbase/>



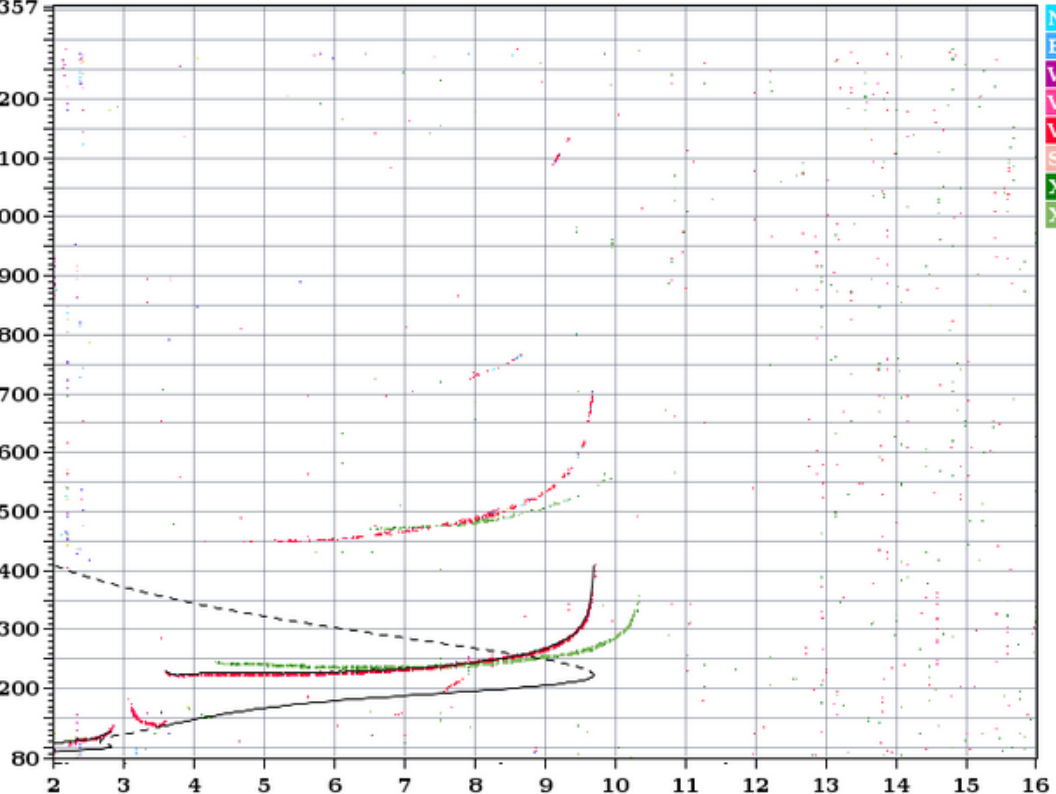
**Eglin AFB**

# Eglin Ionosonde – 1445Z (0845 CDT)

Lowell GIRO Data Center

Station YYYY DAY DDD HHMMSS P1 FFS S AXN PPS IGA PS  
 Eglin AFB 2026 Jan06 006 144500 RSF 1 712 100 03+ C0

|         |        |      |
|---------|--------|------|
| foF2    | 9.700  | 1357 |
| foF1    | N/A    |      |
| foF1p   | N/A    |      |
| foE     | 2.83   |      |
| foEp    | 2.50   | 1200 |
| fxI     | 10.43  |      |
| foEs    | 3.53   | 1100 |
| fmin    | 2.00   |      |
| <hr/>   |        |      |
| MUF(D)  | 35.424 | 1000 |
| M(D)    | 3.65   | 900  |
| D       | 3000.0 | 800  |
| <hr/>   |        |      |
| h`F     | 220.0  | 800  |
| h`F2    | 220.0  | 800  |
| h`E     | 103.4  | 700  |
| h`Es    | 137.5  | 700  |
| <hr/>   |        |      |
| hmF2    | 222.3  | 600  |
| hmF1    | N/A    |      |
| hmE     | 101.4  | 600  |
| yF2     | 48.9   | 500  |
| yF1     | N/A    |      |
| yE      | 11.2   | 400  |
| B0      | 47.3   | 400  |
| B1      | 2.42   | 300  |
| <hr/>   |        |      |
| C-level | 11     | 300  |
| <hr/>   |        |      |
| Auto:   |        |      |
| Artist5 |        |      |
| 500200  |        |      |



D 100 200 400 600 800 1000 1500 3000 [km]  
 MUF 10.3 10.5 11.0 12.0 13.3 15.2 20.8 35.4 [MHz]  
 db eg931 20260106 144500.rsf / 561fx512h 5 kHz 2.5 km / DPS-4D EG931 84 / 30.5 N 273.5 E

DIDBasePortal\_Servlet 0.1

# Time Shift for Eglin Ionosonde

- Eglin AFB Ionosonde is east of Austin at about the same Latitude so sun angle is about the same (same solar insolation).
- What happens to the Ionosphere over Eglin will occur over Austin about 45 minutes later.
- This is simply a Longitude difference converted to time.
- So look at Eglin's foF2 45 minutes earlier to see what is going to happen over Austin.
- The most rapid change in foF2 occurs as the sun is rising and setting (morning and evening).

# Cycle 25 is not Dead!

## NCDXF Beacons

<https://www.ncdxf.org/pages/beacons.html>



# Hardware System

GAP Titan DX  
Vertical Dipole

Audio – Line in

USB to  
Serial

ICOM CT-17

Fixed  
Audio out

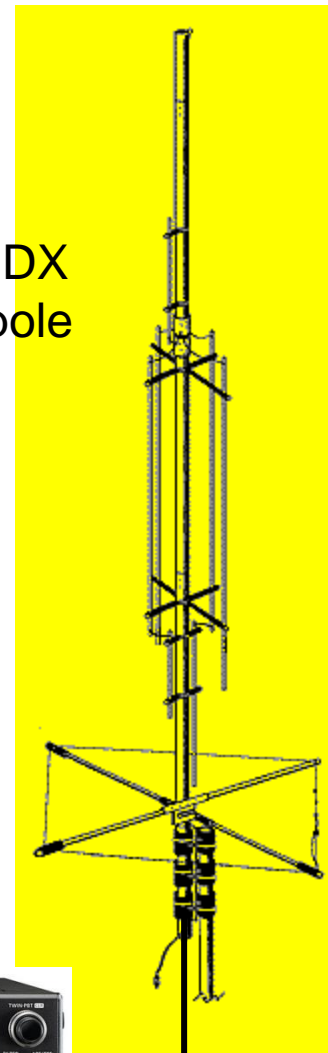
CI-V



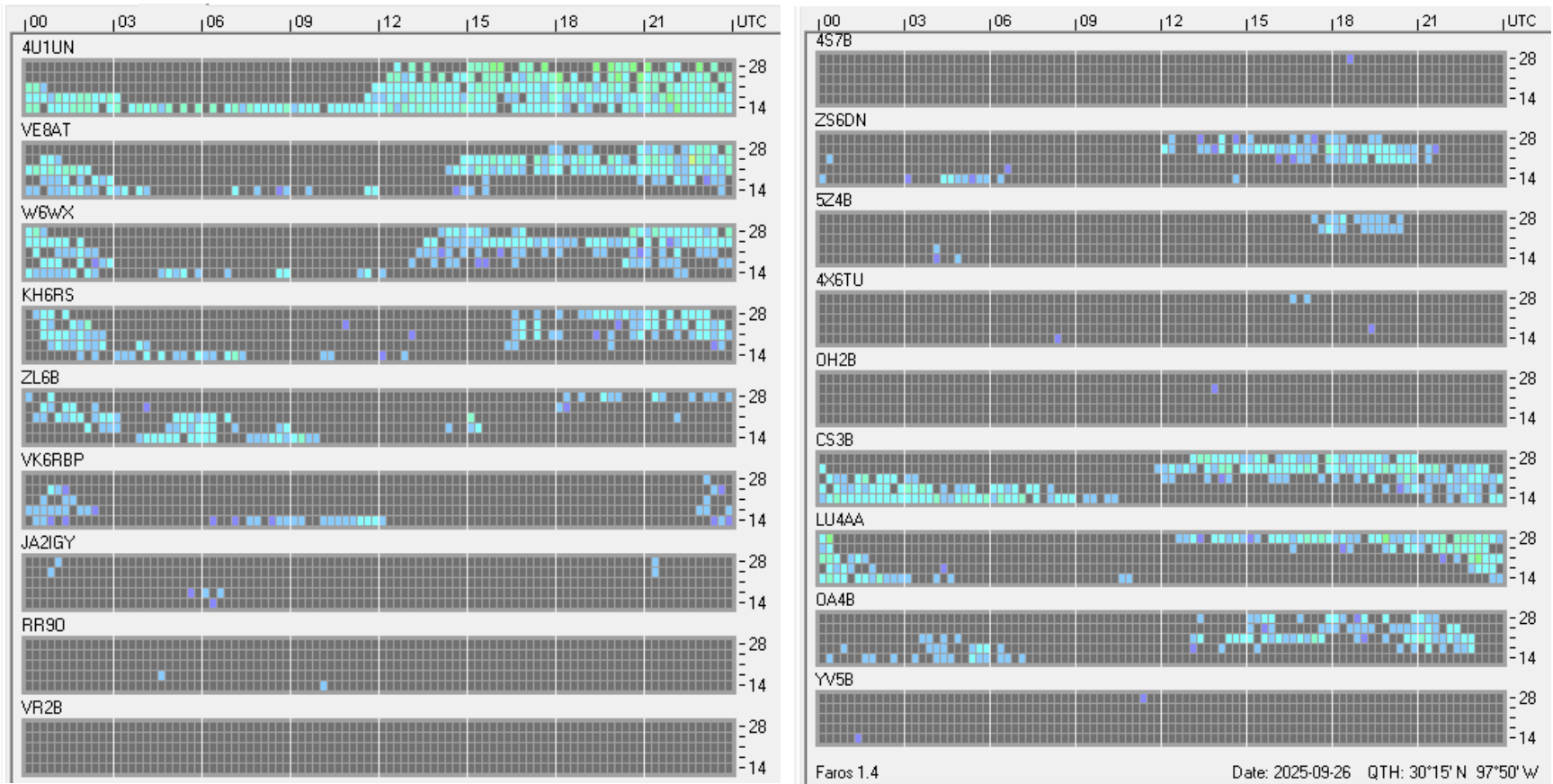
W10 Desktop



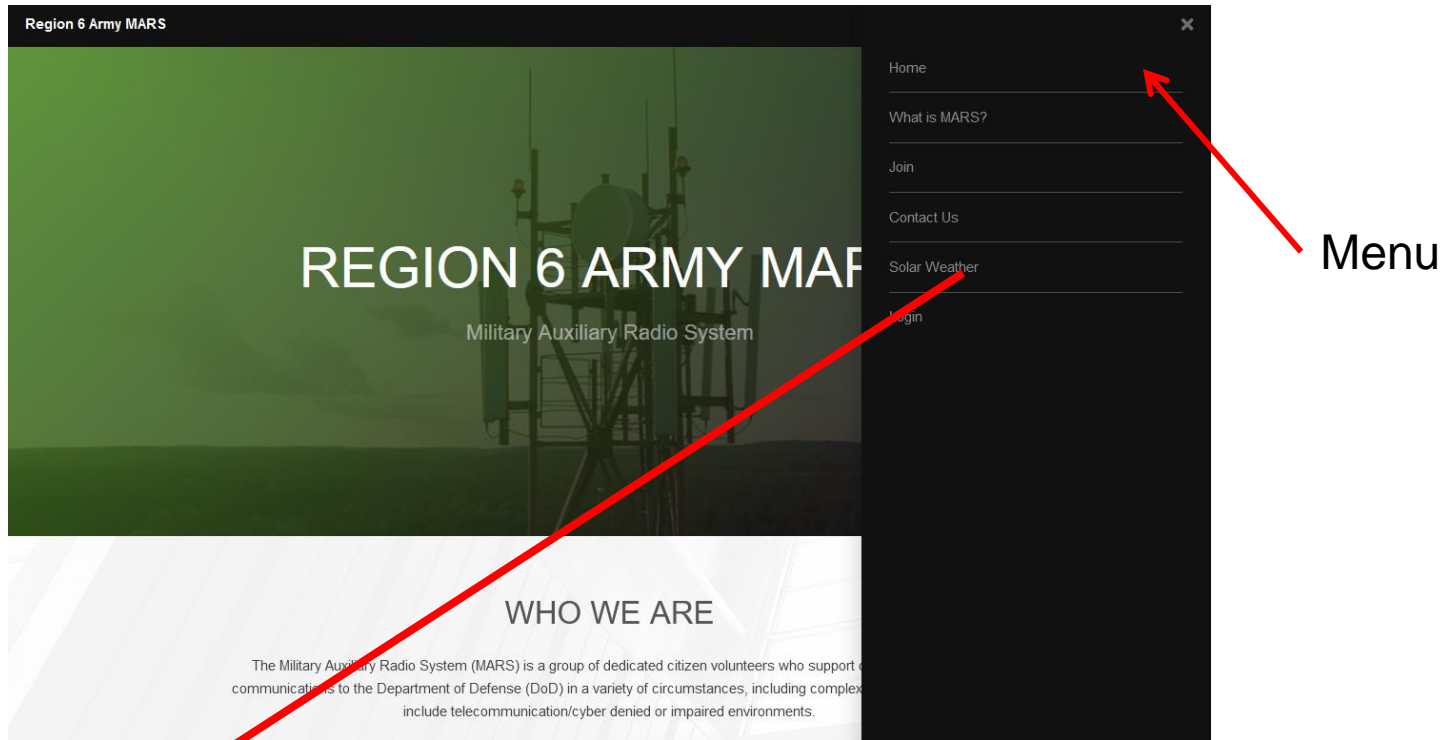
ICOM IC-7610



# Faros Beacon Logs 26 SEP 2025



# Solar Weather Data



Solar Weather

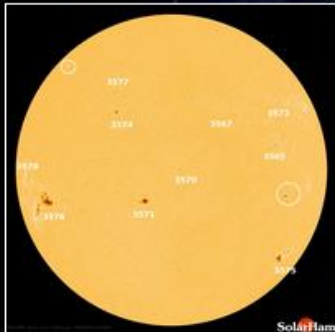
All Ionosondes  
GAMBIT URL

- [GAMBIT](#) - Global Assimilative Model of Bottomside Ionosphere Timeline
  - [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. 22

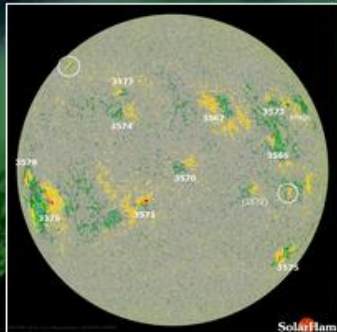
## Space Weather for February 6, 2024

[Help Center + FAQ](#)

**UTC Time 13:45:49 Tuesday**



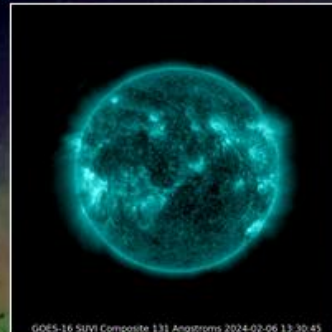
**HMI Intensity**  
Latest | [Movie](#) | [HARP](#)



**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](#) | [Heliviewer](#) | [YouTube](#)

[Solar Report](#)

[Space Weather Alerts](#) >

[Real Time Solar Wind](#)

[Protons and Electrons](#)

[Satellite Environment](#) >

## Real Time Solar Wind (BETA) | [Expand Data](#)

Speed: 437 km/s

Density: 2.96 p/cm<sup>3</sup>

Bz: 4.25 nT ↑

Bt: 6.39 nT

Updated every minute.

<https://www.spaceweather.com/>

## Current Conditions

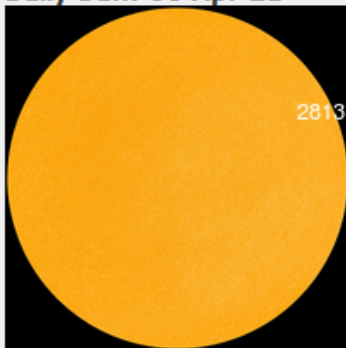
### Solar wind

speed: **314.8** km/sec  
density: **9.9** protons/cm<sup>3</sup>  
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?

Lewis Thompson

[W5IFQ@att.net](mailto:W5IFQ@att.net)

512-587-9944