



Sol – Cecatto
Period: Nov. 18 – Oct. 25, 2024

Summary

11/18 – M1.0, M1.7, M1.2, M2.5, M1.6, M1.5, M3.7, M1.8, M2.0, M1.1 flares; Fast (≤ 500 km/s) wind stream; 6 CME can have component toward the Earth;

11/19 – No M/X flare; Fast (≤ 420 km/s) wind stream; 3 CME can have component toward the Earth;

11/20 – M1.1 flare; Fast (≤ 420 km/s) wind stream; 5 CME can have component toward the Earth;

11/21 – No M/X flare; Fast (≤ 420 km/s) wind stream; 14 CME can have component toward the Earth;

11/22 – M1.6, M1.0 flares; Fast (≤ 420 km/s) wind stream; 6 CME can have component toward the Earth;

11/23 – M1.1, M1.1 flares; Fast (≤ 420 km/s) wind stream; 6 CME can have component toward the Earth;

11/24 – M1.1 flare; Fast (≤ 450 km/s) wind stream; 2 CME can have component toward the Earth;

11/25 – M1.1, M1.8, M9.4 flares; Fast (≤ 500 km/s) wind stream; 2 CME can have component toward the Earth

For.: Fast wind stream for the next 1-2 days; for while (55% M, 15% X) probability of M / X flares next 2 days; also, occasionally some other CME can present a component toward the Earth.

Resumo

18/11 – "Flares" M1.0, M1.7, M1.2, M2.5, M1.6, M1.5, M3.7, M1.8, M2.0, M1.1;

Vento rápido (≤ 500 km/s); 6 CMEs podem ter componente p Terra;

19/11 – Sem "Flare" M/X; Vento rápido (≤ 420 km/s); 3 CME com componente p/ Terra;

20/11 "Flare" M1.1; Vento rápido (≤ 420 km/s); 5 CME com componente p/ Terra *;

21/11 – Sem "Flare" M/X; Vento rápido (≤ 420 km/s); 14 CME podem ter componente p Terra;

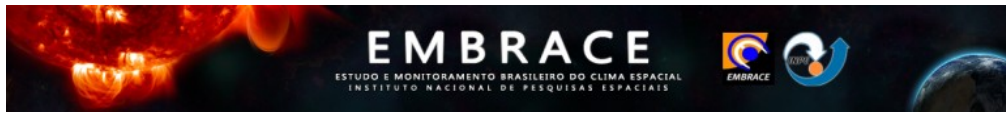
22/11 – "Flares" M1.6, M1.0; Vento rápido (≤ 420 km/s); 6 CME podem componente p Terra;

23/11 – "Flares" M1.1, M1.1; Vento rápido (≤ 420 km/s); 6 CME com componente p Terra;

24/11 – "Flare" M1.1; Vento rápido (≤ 450 km/s); 2 CME podem ter componente p/ a Terra;

25/11 – "Flares" M1.1, M1.8, M9.4; Vento rápido (≤ 500 km/s); 2 CME podem ter componente para a Terra

Prev.: Vento rápido para os próximo(s) 1-2 dia(s); probabilidade de "flares" M/X (55% M, 15% X) nos próximos 02 dias; eventualmente alguma(s) outra(s) CME pode(m) apresentar componente dirigida para a Terra.

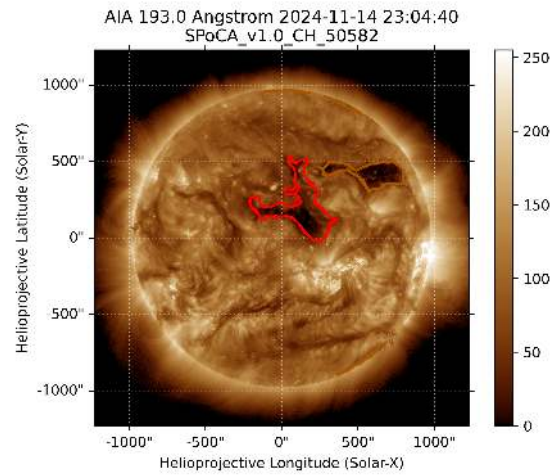
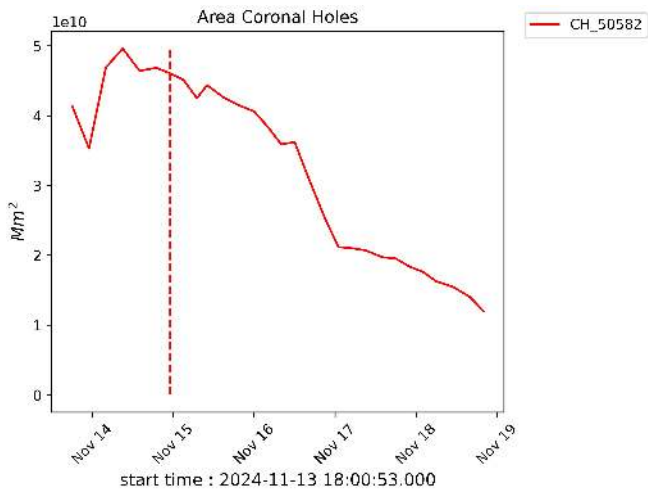


Solar - WSA-ENLIL

EMC (<https://ccmc.gsfc.nasa.gov/donki/>):

No Earth-directed CMEs were observed.

Solar - Coronal holes Spatial Possibilistic Clustering Algorithm (SPoCAS):



(a) The solid black line depicts the products of the sum of areas for each detection interval performed by SPOCA between November 11 and 18, 2024.

(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 23:04 UT on November 14, 2024 (red dot line).

Geomagnetic Field

Responsible: Karen Sarmiento/ Lívia Alves

Summary

At the beginning of the week, the magnetic field exhibited predominantly diurnal variation. Rapid fluctuations in the amplitude of the north component of the magnetic field were recorded late on 11/22, on the dayside, along with a decrease in this component, reaching a minimum value of 35.3 nT early on 11/25 (3:45 UT) on the nightside, suggesting an intensification of current systems in the magnetotail. Additionally, an increase in field amplitude was observed on the dayside late on 11/24, reaching 123 nT at 20 UT. The AE index briefly exceeded 500 nT on 11/22 (12–14 and 15–18 UT), 11/23 (13–14 UT), 11/24 (22–24 UT), and 11/25 (0–1 UT), reflecting auroral region activity with substorm signatures, correlating with variations detected by the GOES satellite. Geomagnetic activity transitioned from unsettled (11/22–23) to active on 11/24, as indicated by the Kp index, which reached a maximum of 4-, highlighting instabilities on 11/24 (21–24 UT) and 11/25 (0–3 UT). The Dst index fluctuated between positive and negative values, without reaching storm levels, with a minimum of -20 nT at 19 UT on 11/22 and a maximum of 23 nT at 12 UT on the same day. Data from the Embrace-Magnet magnetometer network recorded rapid variations in the H component between 12–19 UT on 11/22 and 11/23, more pronounced at the Porto Velho (PVE) station, and located in the region influenced by the Equatorial Electrojet, in addition to an increase in the H component late on 11/24.

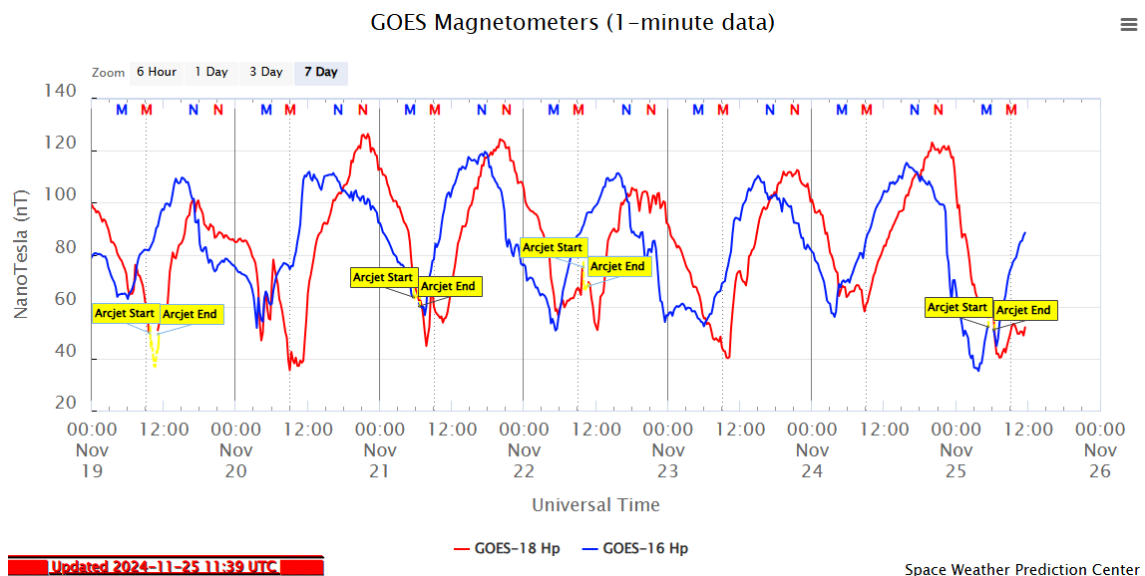


Figure 1- Magnetic field horizontal component at the GOES satellite orbit through.

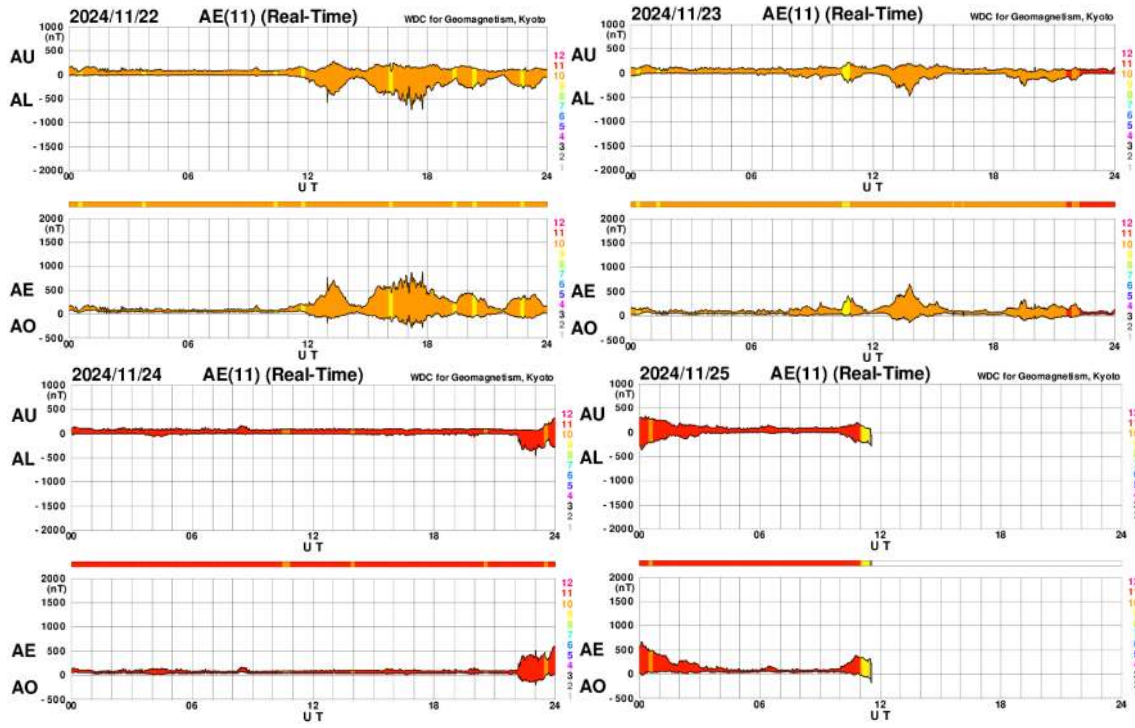


Figure 2- AE index for the days of the week with greater auroral activity.

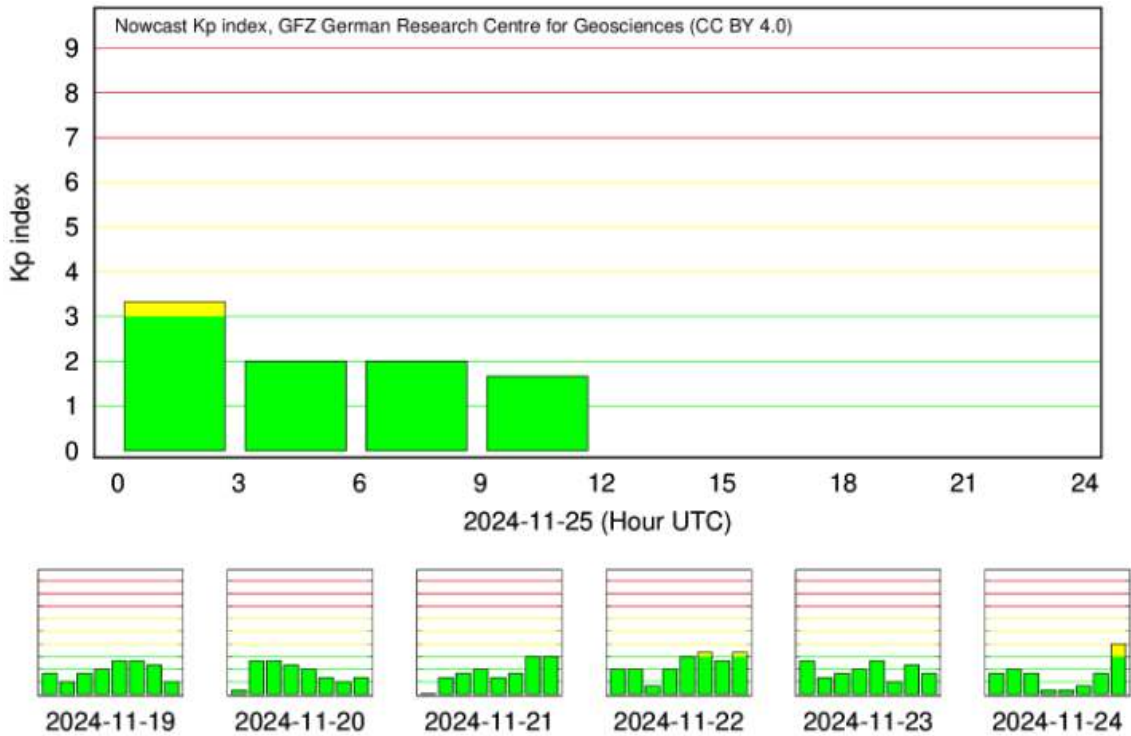


Figure 3- Kp index in logarithmic scale.

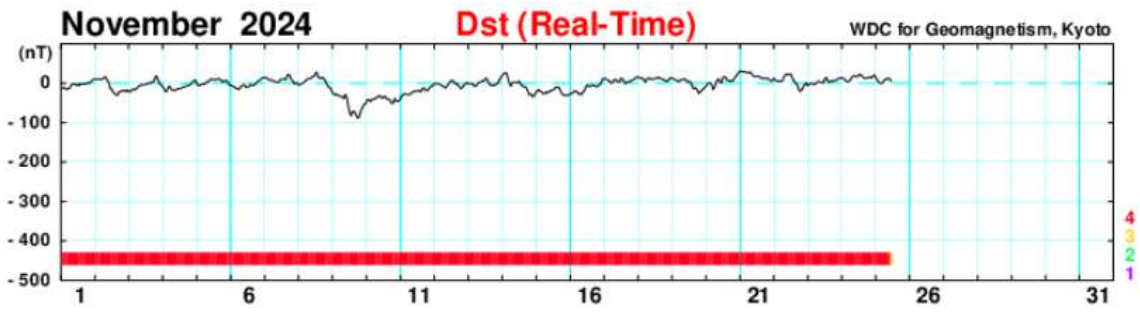


Figure 4- Dst Index

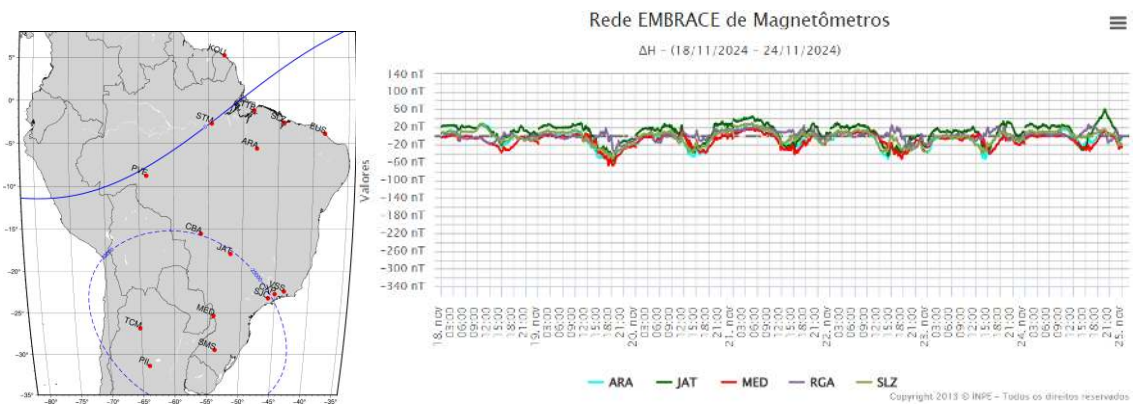


Figure 5- Daily variation of the geomagnetic field from $H(nT)$ measured at Embrace MagNet.