



Solar - WSA-ENLIL

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

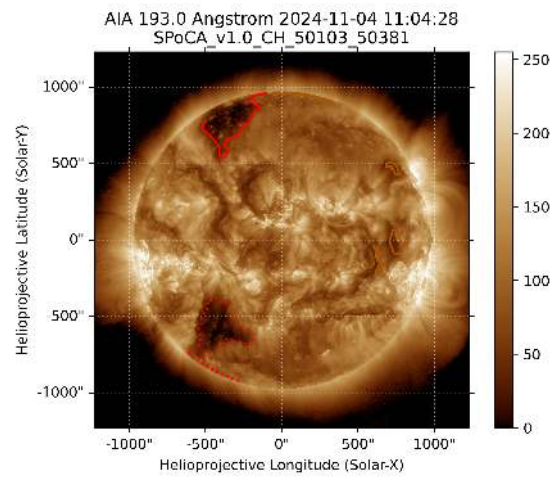
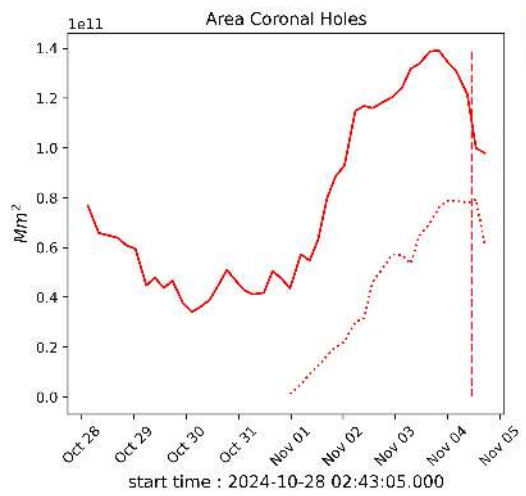
WSA-ENLIL(CME 2024-11-04 17:24:00 UT)

The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-11-08 03:00:00 UT and 2024-11-08 17:00:00 UT.

WSA-ENLIL(CME 2024-11-05 00:09:00 UT)

The simulation results indicate that the flank of CME will reach the DSCOVR mission between 2024-11-07 09:00:00 UT and 2024-11-07 23:00:00 UT.

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 October 28 and November 04, 2024.

(b) Above the 193 Å image of the Sun are highlighted coronal holes observed by SPOCA around 11:04 UT on November 04, 2024 (red dot line).

Geomagnetic Field

Responsible: Karen Sarmiento/ Lívia Alves

Summary

On the night side, GOES-18 recorded a decrease in the amplitude of the north component of the magnetic field on 11/9 (6–13 UT), reaching minimum values at two points: approximately 12.5 nT (~6:45 UT) and 10 nT (~11 UT), indicating an intensification of currents in the magnetotail, followed by rapid field fluctuations until the beginning of 11/10. On other days of the week, there were rapid variations in the north component, always on the night side, but without reaching significant minimum values. Auroral activity showed instabilities, with the AE index only exceeding 1000 nT on 11/8 (19–21 UT), 11/9 (15–19 UT), 11/10 (14–16 and 18–20 UT), and 11/11 (8–9 UT), with substorm signatures. The magnetic field fluctuated, experiencing minor storm conditions (11/4), instability (11/5–6), active (11/8), and moderate storm (11/10). The maximum Kp index was 6- on 11/10 (18–21 UT), reaching the level of a G2 moderate storm. The Dst index remained predominantly negative, reaching a minimum of -96 nT at 18 UT on 11/9, corresponding to a moderate storm level at low latitudes. Embrace-Magnet network magnetometers recorded a sudden increase in the H component on 11/7 at 15:18 UT, indicating the impact of a CME, followed by variations that did not reach storm level. Subsequently, on 11/8 and 11/9, the variation in the H component of the magnetic field showed moderate storm characteristics, which persisted until the beginning of 11/11. These two variations (11/8 and 11/9) indicated a moderate storm, without a clear sudden increase suggesting a frontal impact of structures on the magnetosphere.

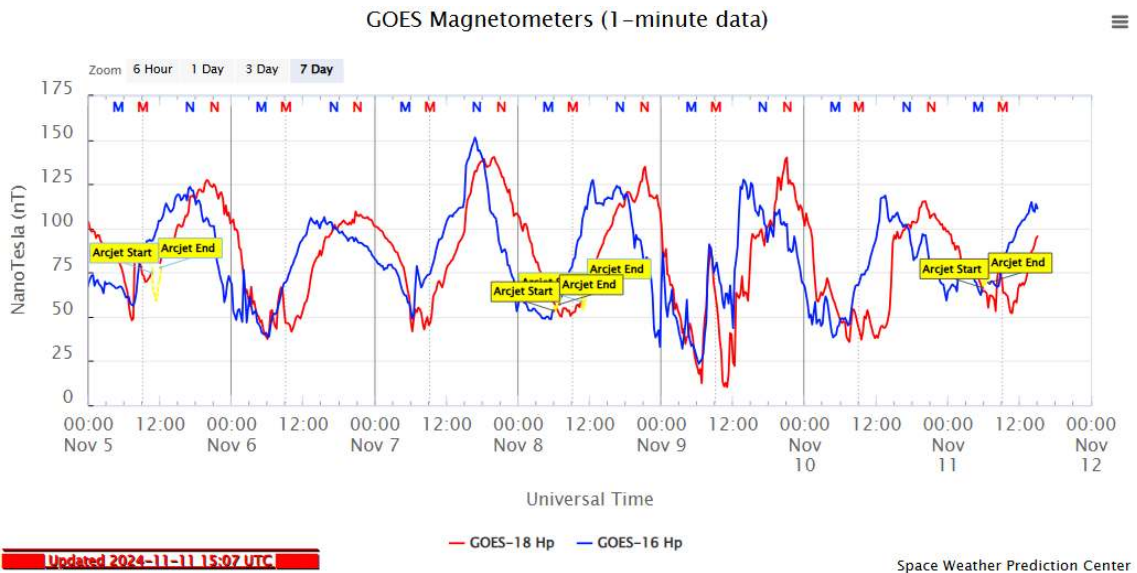


Figure 1- Magnetic field horizontal component at the GOES satellite orbit through.

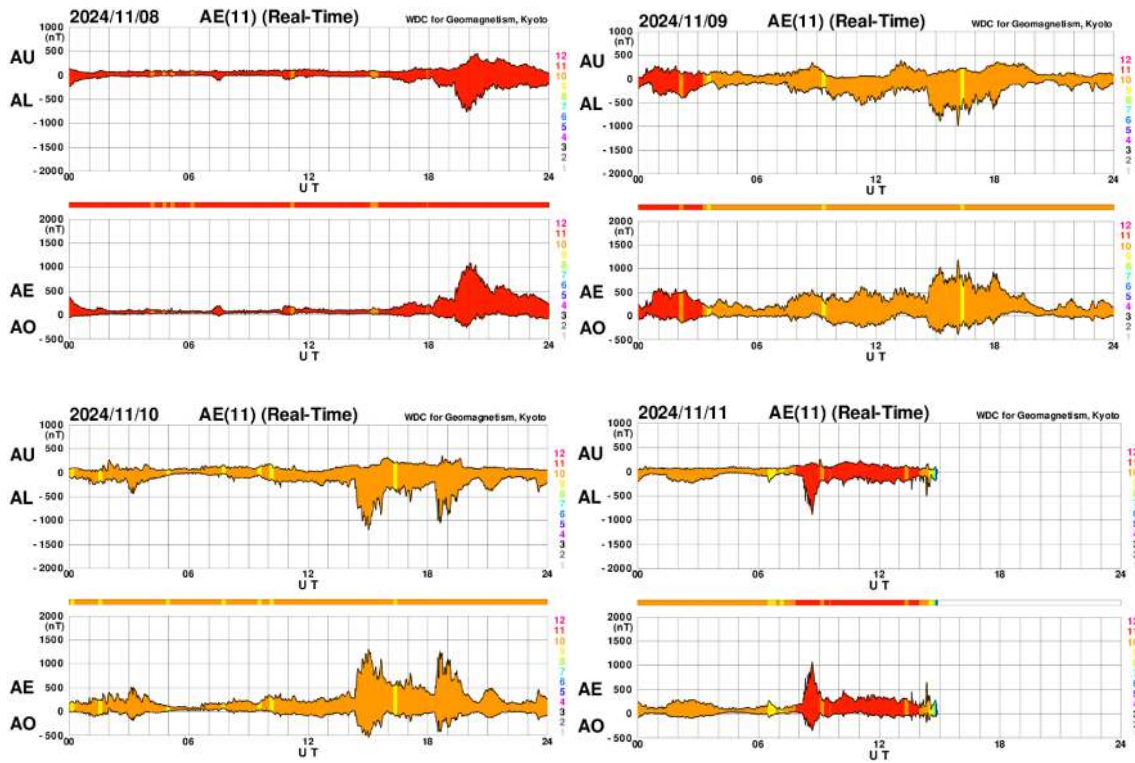


Figure 2- AE index for the days of the week with greater auroral activity.

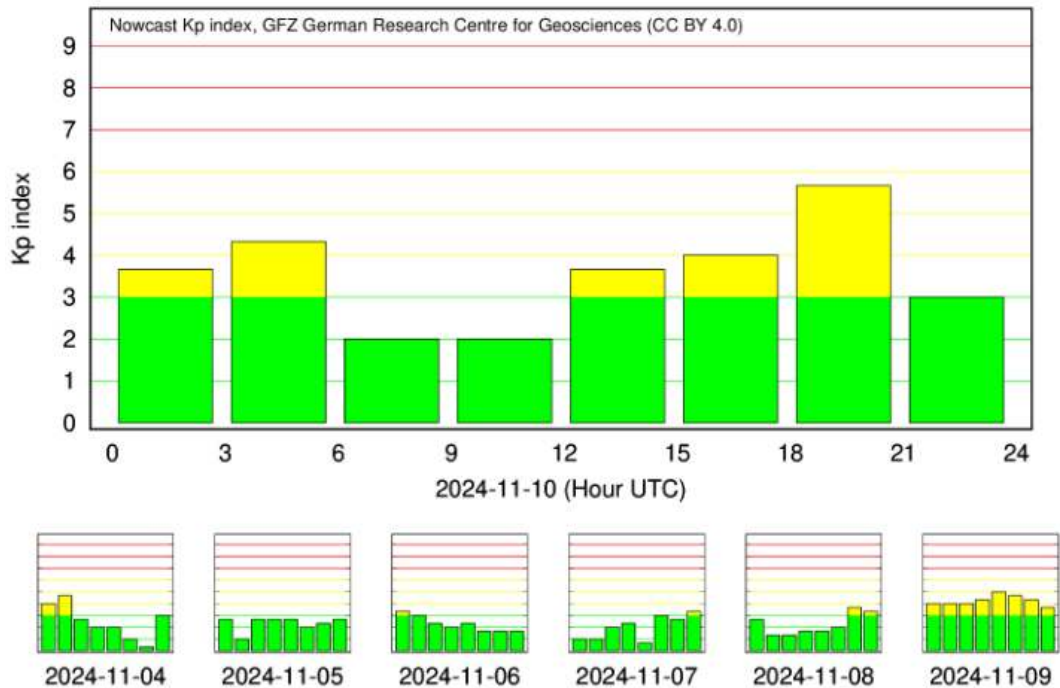


Figure 3- Kp index in logarithmic scale.

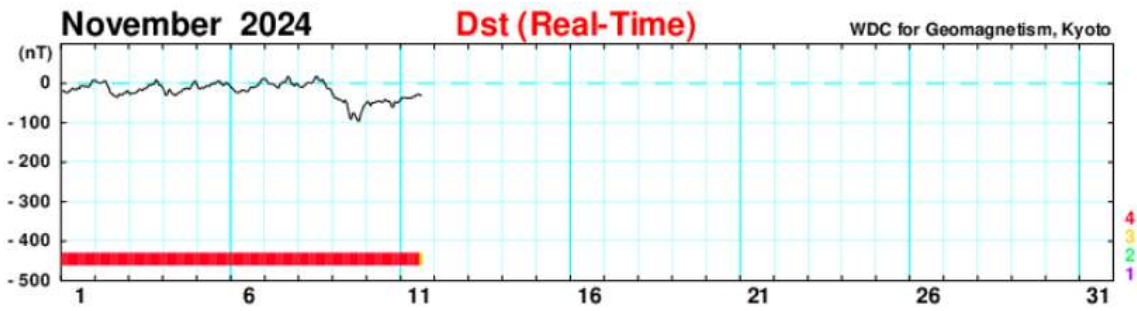


Figure 4- Dst Index

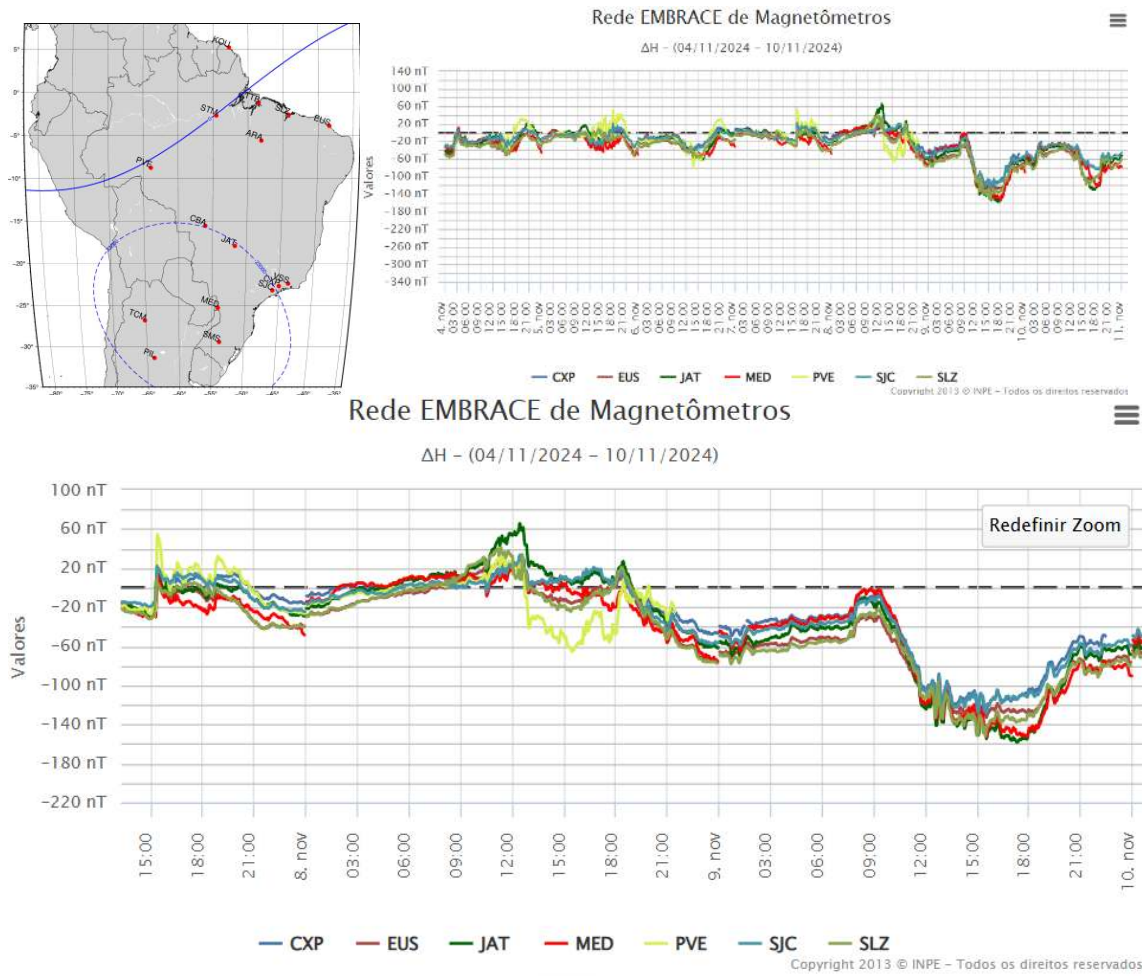


Figure 5- Daily variation of the geomagnetic field from $H(nT)$ measured at Embrace MagNet.