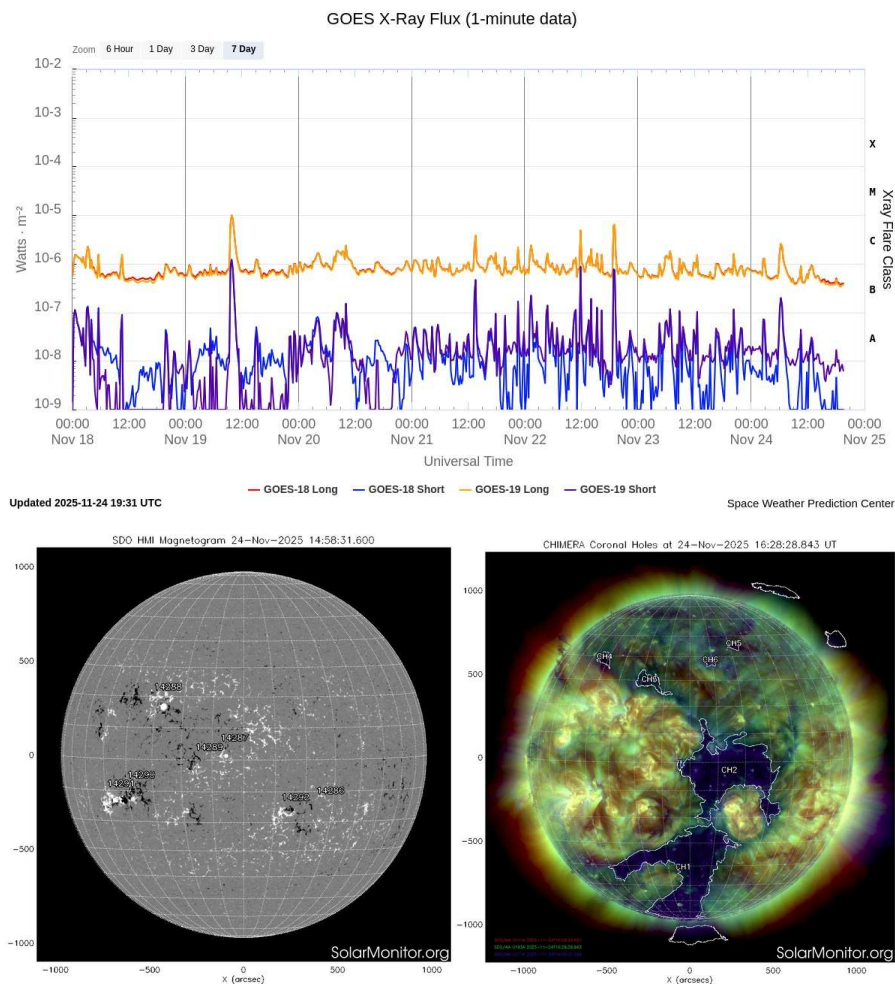


Sun – Solar Activity (Jean C. Santos)

Summary

This week the Sun showed low activity in terms of X-ray emission and the occurrence of CMEs. The active regions present on the Sun's surface showed low (alpha) and medium (beta) magnetic complexity, which was reflected in the absence of M- or X-class solar flares observed during the period. During the week, the Cactus program identified the occurrence of only one Halo-type CME (angular width greater than 90 degrees). At the end of the period, a large coronal hole formed in the solar disk (11% of the solar disk area), which is visible in 193 angstrom solar images near the center of the solar disk. A large number of filaments were also observed in H-alpha images.





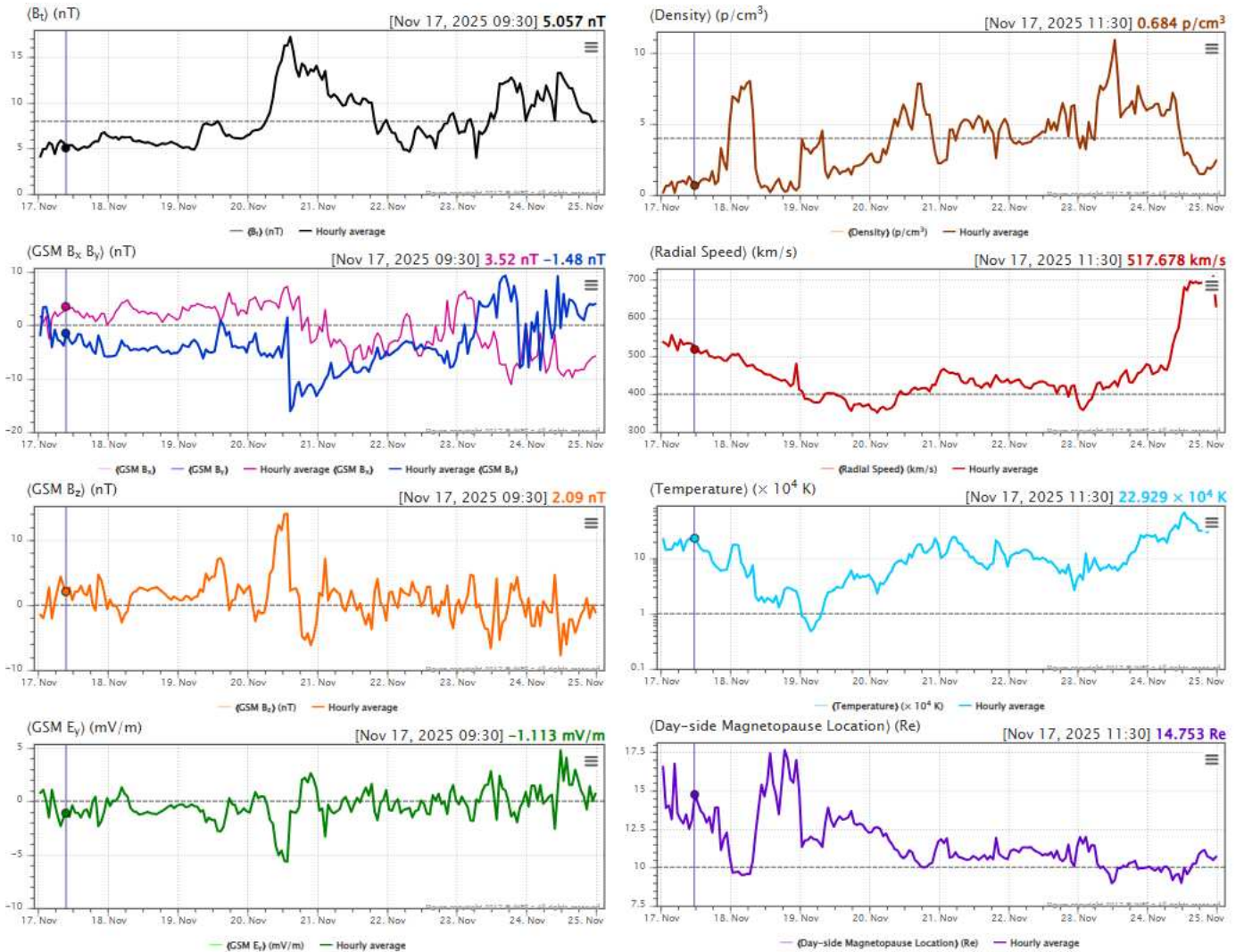
Interplanetary Medium – IM – Daniele da S. F. Medeiros and Paulo R. Jauer
Period: November 17th to November 24th.

Summary

Summary of IM conditions for the last week. The interplanetary medium region in the last week showed a moderate level of plasma disturbances due to the possible interaction with CME identified by the DSCOVR satellite in the interplanetary medium. The Kp index obtained by NOAA/SWPC and the modeling.

- The magnitude of the interplanetary magnetic field component peaked on November 20th at 14:30 UT at +17.18 nT due CME.
- The BxBy components presented variations in the analyzed period, keeping both oscillating within the interval [-16.05, +9.31] nT. Showing twelve rotations of the By component.
- The Bz component presents negative values for most of the week with a maximum negative -7.70 nT at 11:30 UT on November 24th. It presented positive value of +14.05 nT on November 20th at 13:30 UT.
- The solar wind density maximum peaked on November 23rd at 12:30 UT at 10.94 protons/cm³.
- The solar wind speed fluctuated between 351 to 710 km/s, with a increase on November 24th starting at 06:30 UT due to CMEs.
- The magnetopause position remained relaxed almost throughout the analyzed period, reaching maximum compression (8.99 RE) at 11:30 UT on November 23rd.
- The measured interplanetary Kp reached a peak of approximately 4 on November 14th, while the modeled Kp exceeded the limit of 3 on November 21st and November 23rd.

Figure 1 illustrates a set of parameters observed in the solar wind by the DSCVR satellite. The measured solar wind parameters can be identified in the following order starting in column 1: Interplanetary magnetic field modulus (IMF), the Bx and By components, Bz component, convection electric field Ey. Column 2: Solar wind density, speed, temperature and the last graph represents the position of the subsolar magnetopause.



Please, acknowledge EMBRACE/INPE for the data in your publication
The B_t, B_x, B_y, B_z, Density, Radial Speed and Temperature Solar Wind data are provided by the DSCOV/R (SWPC/NOAA) spacecraft

Figure 1: Illustrates a set of parameters observed in the solar wind by the DSCVR satellite.

Figure 2 illustrates a set of parameters observed in the solar wind by the DSCOVR satellite. The measured solar wind parameters can be identified in the following order, starting with the panels below: solar wind speed, Bz component of the interplanetary magnetic field (IMF), solar wind density, and the last graph represents the Kp index obtained by NOAA/SWPC and the modeling.

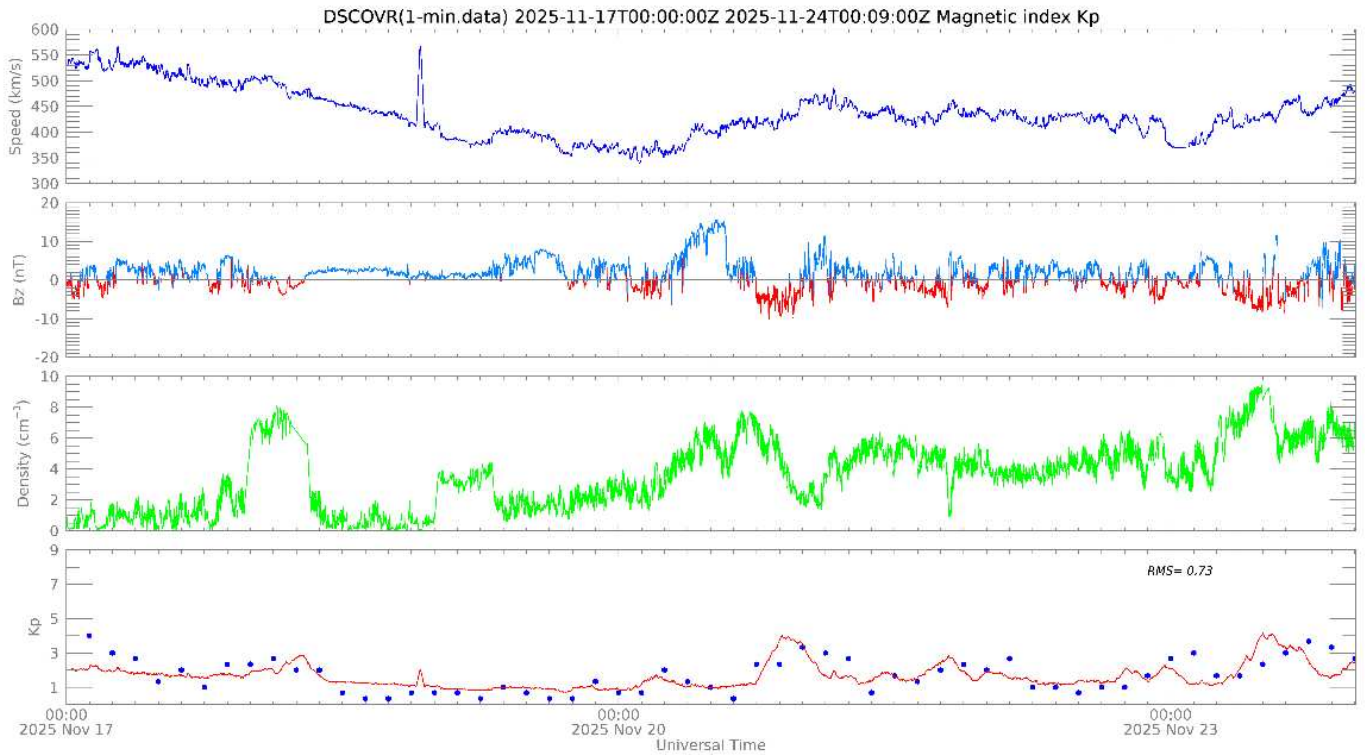


Figure 2: Illustrates a set of parameters observed in the solar wind by the DSCVR satellite and the Kp index by NOAA/SWPC, blue dot, and the modeling, red line.

Ionosfera – Digissonda (Laysa Resende)

Summary

This week, we observed spread F at Cachoeira Paulista and São Luís (Figure 1). The Es layers were weak in both regions.

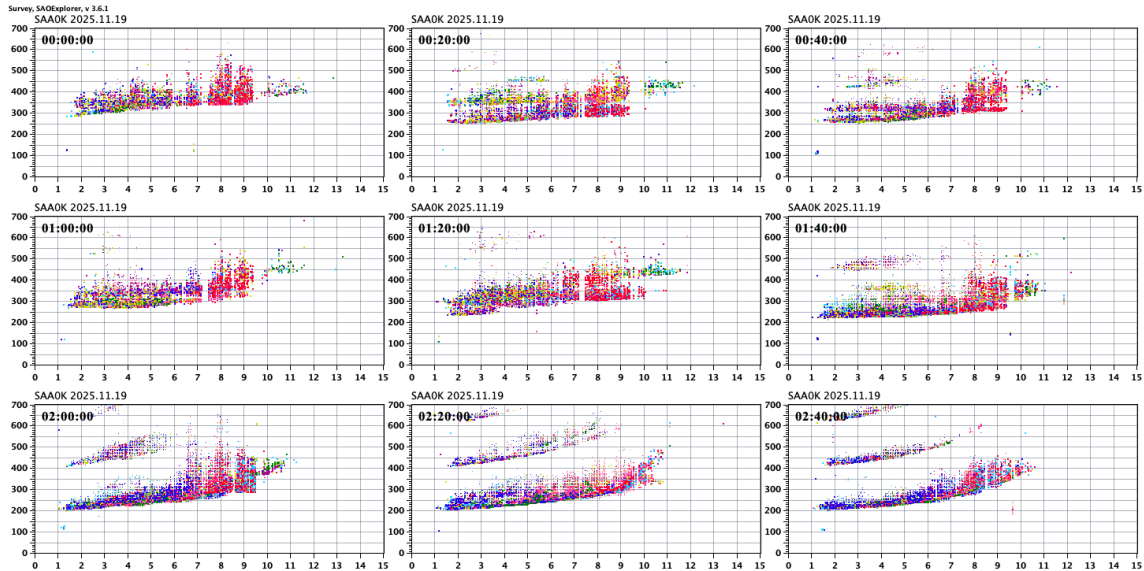


Figure 1 – Ionogram over São Luís, showing the spread F on November 19, 2025