



## **F-layer irregularities and plasma drifts associated with spread-F echoes during distinct solar activity periods**

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Equatorial F-layer irregularities are extensively reported to occur after post-sunset times presenting occurrence peaks in equinoxes and December Solstice in Brazilian sector. One of their most singular features is its seasonal dependence, associated with the alignment between the terminator and magnetic field meridian. On the other hand, during low and early ascending solar activity plasma irregularities are frequently observed to occur around midnight/ post-midnight hours, especially in June solstice. They present distinct features, such as westward propagation and distinct morphology, as observed by digisondes and other instruments. In this work we present studies of the plasma drifts obtained from a special mode operation of the digisonde DPS-4, associated with F-layer irregularities observed during distinct levels of solar activity. We discuss the ionospheric climatology associated with the irregularities using data from digisondes installed at equatorial and low latitude region: Sao Luis, Fortaleza and Cachoeira Paulista.