

Long term variation of Spread-F in Cebu, Philippines

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Ionosphere observation has been held near the geomagnetic equator (Cebu, Philippines, 10.28N, 123.87E, dip=2.6degree) using a low power FMCW ionosonde. Eastward electric field appeared after almost every sunset in year 2000, sunspot maximum. Intense electric field was followed by spread-F condition. The eastward electric field was loaded at fixed time regardless of its intensity. Spread-F frequently appeared in spring and fall equinox. The post sunset eastward electric field became weak toward sunspot minimum. No electric field appeared in some days of 2003 year. However, seasonal variation of spread-F occurrence was kept. The eastward electric field sometimes appeared in the period between midnight and sunrise. During sunspot declining period, spread-F was sometimes triggered by not the eastward electric field but another migrating ionization blob in the F region. Spread-F disappeared with generation of lower ionosphere at sunrise.