

Research on Ionospheric Variations Associated with Solar Activity Covering One Complete Solar Cycle (1991-2002) in Korea

이상우¹, 김정훈¹, 표유선²

¹(주)에스이랩, ²전파연구소

Ionospheric data from DGS-256 ionosonde operated by Radio Research Laboratory in Anyang archived during 1991-2002 was extracted and analyzed firstly in Korea. Daily, monthly and annual variations of the 12-year F2 layer critical frequency(foF2) are derived to investigate the statistical ionospheric characteristics during one complete solar cycle. Positive correlation between the mean values of 24-hourly monthly median foF2 and the monthly smoothed sunspot number(SSN) for the same period is found. This means that the local ionosphere also shows typical response according to the strength of solar activity, as proved by previous studies on ionospheric variations for other regions. Results of additional correlation studies using other manifestations of solar activity like ACE interplanetary magnetic field and geomagnetic Kp index data are also presented.