

Comparative study of equatorial F2-layer quiet time disturbances

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An analysis of regular vertical sounding data was made to determine statistical properties of low-latitude ionospheric F2-layer disturbances not related to geomagnetic activity (so called quiet-time or Q-disturbances). Both positive and negative Q-disturbances (foF2 deviation relatively to median values is not lesser than 20%) were revealed, their amplitude being comparable to usual F2-layer storm effects caused by enhanced geomagnetic activity. It was found that the occurrence of Q-disturbances has some differences in American and Indian longitude sectors and depends on solar activity, season, and local time. Physical mechanism is discussed proposed for obtained results explanation.