

A LONG-DURATION STUDY OF TOTAL ELECTRON CONTENT IN THE EQUATORIAL IONOSPHERE

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In study, the GPS data observed by the AREQ station is used to estimate the total electron content (TEC). Because the AREQ station is located near the dip equator, the observed TEC can be applied to describe the behaviors of the equatorial ionosphere. The data period is 1998-2007, which is in the 23rd solar cycle. Under the geomagnetic quiet-condition, the diurnal, seasonal, annual variations are derived from the observed TEC. Furthermore, the solar cycle variation is also analyzed.

TEC, equatorial ionosphere, GPS

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