The experimental model of total electron content over Japan developed by using GEONET data.

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The general behavior of ionosphere over Japan has been obtained by statistical analysis of absolute TEC. We investigate the dependence of TEC on the local time, season, latitude and solar flux. TEC decreases with an increase in latitude, annual variation has peaks at spring and autumn, and diurnal variation has the maximum at near noon. TEC increases almost linear as the solar flux (F10.7) up to 180 and seem either linear or nonlinear at above 180. The slope depends on the location, season and local time. The experimental model of TEC over Japan has been developed by using these information. This model can calculate TEC if latitude, longitude, local time and solar activity (F10.7) are given.