Characteristics of the GPS-TEC Variations Observed at Tokyo During the Last Solar Cycle

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Since 1992, we have made a routine observation of total electron content (TEC) with the use of GPS by measuring the difference of group delay between two radio beacons of 1227.60 and 1575.42 MHz frequencies at Chofu (35.65deg.N, 139.55deg.E),Tokyo.This paper reports annual,seasonal,and diurnal variations of the GPS-TEC (vertically corrected) observed for these nine years, and discusses their results in terms of the solar cycle variation. The slab thickness which can be calculated from the TEC using foF2 data (from Kokubunji, CRL) is also discussed.

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relation. (2)TEC has strong correlation with (foF2)**2,and it is evident that the amplitude level of TEC is greater in winter than in summer.(3)The slab thickness does not necessarily grow in summer compared with that in winter.(4)There is a tendency for the slab thickness to vary with the solar activity.