

Ionospheric Trough in GPS Signal

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Abstract

The article presents research conducted by means of the GPS technique through TEC (Total Electron Content) computation for individual satellites. The proposed method makes it possible to investigate small ionospheric structures. For strong ionospheric disturbances, at high and middle latitudes, one can observe a ionospheric trough shift towards the lower latitudes. The results presented in this paper were obtained for strong disturbances observed in October 2003.

The paper shows a comparison for chosen quiet and strongly disturbed days. To avoid differences caused by changing position of the Sun (seasonal zenith angle changes), all the analysed information was related to the same period of time.

Key words: GPS, ionospheric disturbances, TEC.