

THE DYNAMICS OF LARGE-SCALE TRAVELING IONOSPHERIC DISTURBANCES OF TOTAL ELECTRON CONTENT DURING MAJOR MAGNETIC STORMS

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This paper presents the measurements of large-scale traveling ionospheric disturbance (LS TID) velocities and directions for total electron content made under magnetically disturbed conditions at mid-latitudes. The investigations were based on using the method of spaced reception of signals from the navigation GPS system. An analysis of the distribution of LS TID propagation directions showed that the night-time and daytime conditions, respectively, are dominated by the south-eastward ($169\pm 20^\circ$) and south-westward ($198\pm 25^\circ$) directions. The LS TID propagation velocities on the nightside (970 ± 300 m/s) were found to be higher compared with the dayside of the Earth (660 ± 200 m/s).