

CLIMATOLOGY OF THERMOSPHERIC NEUTRAL WINDS OVER CACHOEIRA PAULISTA AND ITS IMPACTS ON THE IONOSPHERE

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Abstract

In this presentation, the climatology of thermospheric neutral winds and their effects on the low-latitude ionosphere in periods of low solar activity will be analyzed. The distribution of ionospheric plasma is affected by the competition of production processes and loss of ionization, and is also affected by plasma transport processes such as those caused by the action of thermospheric neutral winds. From data on thermospheric neutral winds collected by the Fabry-Perot Interferometer (FPI) between 2019 and 2021, it was possible to obtain a climatology of these winds near Cachoeira Paulista. Data processing was applied with the aim of removing measurements contaminated by clouds. The preliminary analysis for the month of September will allow the comparison of wind climatology with the HWM14 model. The impacts caused on the region's ionosphere will be evaluated through modeling carried out by the SUPIM-INPE model and data collected by the Digisonde.