

Variations in the Meteor Radar winds at 22.7°S during geomagnetic storms on July 2004

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Rodrigues de Araujo, Luciana; Batista, Paulo; Lima, Lourivaldo

The interactions between the solar wind and the magnetosphere-thermosphere-ionosphere system produce variations on upper atmospheric dynamic to different spatial and temporal scales. The episodic increases in energy during geomagnetic storms results in additional variations in dynamics, chemistry as well as in the composition of the atmosphere. In this paper we have used winds from meteor radar at Cachoeira Paulista (22.7°S, 45°W) to investigate a possible relationship between variations in the dynamics of the upper mesosphere and lower themosphere (MLT) region and geomagnetic storm events on July 2004. The wind behavior presented a different pattern from those observed before and after the period of the geomagnetic storms, mainly in the meridional component. The possible relationship between diurnal tide variations and the geomagnetic storm events are discussed.

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