

MESOSPHERIC TIDES MODULATION BY PLANETARY WAVE PERIODS OVER 7.4°S AND 23°S DURING AUSTRAL SUMMER

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Abstract:

The meteor winds observed over São João do Cariri (7.4°S, 36.5°W) and Cachoeira Paulista (22.7°S, 45.0°W), Brazil, have been used to study modulations of mesospheric tides by planetary wave periods during austral summer. The behavior of meteor winds over both sites is characterized by a westward change rate in mid-January, but this change rate is increased during major events of the Sudden Stratospheric Warming (SSW) at high latitude on northern hemisphere, mainly at São João do Cariri. Oscillations with periods around 10 and 16 days have been observed in the meteor winds over both sites during austral summers. The amplitudes of the diurnal and semidiurnal tides show modulation signatures by planetary wave periods during stratospheric warming.

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References:

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