

Mesospheric inversion layers and gravity wave activity over Brazilian equatorial region

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During the last five years mesospheric gravity wave activities have been observed using an all-sky imager at São João do Cariri (7.4S, 36.5W), Brazil. Among these waves, particularly interesting phenomenon is mesospheric front whose origin and physics are not well known. The mesospheric front is a well defined leading edge of the air-glow emission layer, that is, spatially extended and pronounced in. It is suggested that the development of these fronts is strongly associated with the MLT thermal structure. In the present paper we will use kinetic temperature profile data obtained by TIMED/SABER satellite to discuss the atmospheric background conditions where the mesospheric fronts propagate.