

STUDY OF THE ENVIRONMENT IN WHICH MESOSPHERIC FRONTS PROPAGATE

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An extensive study on mesospheric fronts was carried out by means of mesospheric airglow image observation at São João do Cariri, PB (7,4°S; 36,5°W) from July 2004 to December 2005. All sky airglow images, meteor radar wind and TIMED/SABER satellite temperature data were used in order to investigate physical scenario of the mesospheric front. Three different types of fronts were identified: bores with wave train, wall, and solitary waves. In addition to these, some evidences were also observed such as, front generation and/or dissipation, front destruction by background wind, double fronts and various fronts in a same night. The most important result in the present work was that in most of the cases Doppler ducts generated by vertical wind shear and surround by evanescent regions were responsible for supporting the mesospheric front.

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