OBSERVATION OF TWO SIMULTANEOUS MESOSPHERIC FRONT IN THE OH, O_2 AND OI5557 AIRGLOW EMISSIONS

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Two simultaneous mesospheric fronts were observed by all-sky airglow imaging technique at São João do Cariri, PB (7,4°S; 36,5°W) on 13th August 2004. Besides the airglow images, meteor radar wind and TIMED/SABER satellite temperature data were used in order to investigate the characteristics of the mesospheric fronts as well as the atmospheric condition in which they propagate. The two fronts were observed simultaneously in three different airglow emission layers, OH, O2 and OI5577, showing a perpendicular propagation and a distinct complementary effect. Wind analysis showed that both fronts were propagating in Doppler duct under a strong influence of the semi-diurnal tide.

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