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## 2.0 and 3.5 day oscillations observed in the mesospheric airglow emissions and the ionospheric h'F

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Upper mesosphere airglow emissions (OI5577, O<sub>2</sub> and OH) and OH rotational temperatures have been observed at Cariri airglow observatory (7S, 35W) since 1998. Ionospheric sounding has also been carried out at Sao Luis (2S, 44W), with a distance of approximately 1000 km from the west of Cariri. Both are located in the equatorial region of South America. Spectral analyses of the airglow emission rates and ionospheric F-region height (h'F) reveal that there are 2.0 and 3.5 day period variability in their temporal and day to day variations. This might indicate that planetary scale oscillations, the Rossby and Ultra Fast Kelvin waves, are propagating from the troposphere up to the thermosphere in the equatorial region.

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