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Characteristics of low latitude mesospheric gravity waves using simultaneous MF radar observations from Tirunelveli (8.7° N, 77.8°E) and Kolhapur (16.8°N, 74.2°E)

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The Indian Institute of Geomagnetism has been operating two medium frequency (MF) radars at Tirunelveli (8.7° N, 77.8°E) and Kolhapur (16.8°N, 74.2°E), with the objective of delineating latitudinal differences in characteristics of atmospheric waves including large-scale tides and planetary waves. Simultaneous data of winds in the mesosphere and lower thermosphere (MLT) region (70-98 km) over a few years are now available. These data sets are combined in this work and the behavior of short-period gravity waves over these low latitude sites is brought out. Results from this study will be presented and discussed in the context of the latitudinal dependences of gravity wave activity over the tropical region in India.