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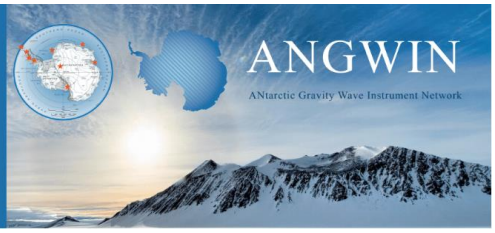

PLANETARY WAVES OBSERVED IN THE MLT REGION WITH A METEOR RADAR AT FERRAZ STATION, ANTARCTICA

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ABSTRACT

Wind measurements from meteor radar at Ferraz station (62.1°S, 58.4°W), Antarctica obtained from February 2011 to mid-February 2012, have been used to examine the planetary wave activity in the upper mesosphere and lower thermosphere - MLT region. The hourly mean winds in the altitude range from 82 to 98 km were subjected to spectral and harmonic analysis and from these analyses it was possible to identify the presence of planetary-scale oscillations. The analysis can be used to study the transient character of these planetary waves, once they have been seen to occur in intermittent bursts. The presence of planetary wave oscillations with periods around 2 and 5 days have been observed during summer, whilst in the time interval from late autumn to late spring the characteristic was the presence of waves with periods of around 10 and 16 days. The characteristics of these planetary waves identified over Ferraz station will be discussed and presented in this work.

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