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Observations of mesospheric gravity waves using an imaging riometer and an airglow imager

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Gravity waves play an important role in determining the structure and dynamics of the mesopause region. The Imaging Riometer for Ionospheric Studies (IRIS) at Halley, (76°S 27°W), is capable of detecting short-period mesospheric gravity waves using fluctuations of the ionospheric absorption of cosmic radio noise as a tracer. Work in applying wavelet analysis techniques to the IRIS data has resulted in extraction of the temporal and spatial characteristics of mesospheric gravity waves above Halley. Comparisons between gravity wave parameters derived from IRIS and those derived from a co-located airglow imager have been undertaken.