



**First Observations from a New Meteor Radar at  
McMurdo Station Antarctica (77.8 S, 166.7 E)**

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**Extended Abstract**

A new 36.17 MHz all-sky meteor radar was installed at McMurdo Station Antarctica (77.8 S, 166.7 E) in March 2018 to provide hourly wind measurements in the mesosphere and lower thermosphere (MLT) region (75 - 105 km). This instrument is the highest latitude meteor radar currently in operation in the southern hemisphere and it joins two other meteor high latitude southern hemisphere radars within the Antarctic Circle. The McMurdo meteor radar provides long-term continuous wind measurements of the polar region, and contribute to a greater understanding of MLT dynamics. The meteor radar has operated nearly continuously collected since March 2018 and has detected over 6 million meteor echoes.

This paper will describe the current configuration of the meteor radar hardware and its context with other instruments in the region. An overview of the spatial and temporal variation in meteor echoes since March 2018 will be presented along with details of the mean winds and solar tides which have been observed. Other features including short period intradiurnal, planetary scale (2-20 day) wave periods and a 24-35 day oscillation will be discussed. Data was collected from the 2019 southern hemisphere sudden stratospheric warming will also be presented.