



## **Seasonal variations in the horizontal wind structure from 0-100 km above Rothera station, Antarctica (67° S, 68° W)**

**R. Hibbins** (1), P. Espy (1), M. Jarvis (1), J. Shanklin (1), D. Riggan (2), D. Fritts (2),  
FJ. Lübken (3)

(1) British Antarctic Survey, Cambridge, UK, (2) Colorado Research Associates, Boulder, CO,  
USA, (3) Leibniz-Institute of Atmospheric Physics, Kühlungsborn, Germany (rehi@bas.ac.uk  
/ Fax: +44 1223 221226 / Phone: +44 1223 221540)

A medium frequency spaced-antenna radar has been operating at Rothera station, Antarctica (67° S, 68° W) for two periods between 1997-8 and since 2002, measuring winds in the mesosphere and lower thermosphere. Monthly mean winds and tides are derived and compared with other high latitude southern hemisphere sites. Mean wind data are merged with the horizontal wind climatology obtained from falling sphere measurements made during the PORTA campaign at Rothera in early 1998, two years of Rothera radiosonde balloon data and the HWM-93 model atmosphere to generate a complete zonal wind climatology between 0 and 100 km as a benchmark for future studies at Rothera.