First results from the Trondheim Norway momentum-flux meteor radar

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The Trondheim Momentum-Flux meteor radar was installed at the NTNU campus (63.41N 10.47E) and has been operational since late August 2012. The radar was designed to provide direct measurements of the vertical flux of horizontal momentum by gravity waves and will play a key role in quantifying the seasonal and latitudinal behaviour of the gravity-wave momentum flux at high latitudes. When combined with the radars at Andenes, Norway (69.27N 16.04E, Institute for Atmospheric Physics, Kühlungsborn, Germany) and Kiruna, Sweden (67.89N, 21.07E, University of Bath, UK), it will quantify the wave-momentum flux over the full range of wave scales from typical propagating gravity waves (~20km), mountain waves (~100km) and mesoscale waves associated with aurora and the polar vortex shear zones. Preliminary results from the radar will be presented focusing on the evolution of the tidal amplitudes and phases from 64 to 69 N, and the influence of mountain waves on the tide.