



## **Statistics of MLT wind field values derived from 11 years of common volume specular meteor observations in northern Norway**

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Traditionally mean values of the mesosphere and lower thermosphere winds over the radar volume are obtained using monostatic specular meteor radars. Such observing volume consist of a few hundreds of kilometers in radius. Moreover the differences between measured radial velocities and the expected radial velocities from the measured mean winds are used to derive properties of gravity wave momentum fluxes. Recently, Stober and Chau [2015] have proposed to use a multi-static approach to retrieve horizontally resolved wind fields, where most of the radar volume is observed from different viewing angles. Similar results could be obtained if measurements from close-by monostatic systems are combined. In this work we present the results of the derived wind fields from combining specular meteor radar data between 2004 and 2015 from the Trømsø (19.22oW, 69.58oN) and Andenes (16.04oW, 69.27oN) radar systems. Among the directly estimated values are the mean winds and the horizontal and vertical gradients of the zonal and meridional winds. Combining the horizontal gradients, the horizontal divergence, relative vorticity, shear and deformation are derived. The seasonal and annual variability of these parameters are presented and discussed, as well as the planetary wave, tidal, and gravity wave information embedded in these new parameters.