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# Multistatic meteor radar observations and tomographic retrievals to assess the spatial and temporal variability of 3D winds on regional scales at the mesosphere and lower thermosphere

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Multistatic meteor radar observations offer the possibility to investigate the short-term variability at the mesosphere and lower thermosphere on regional scales. Here we present preliminary results of spatially resolved 3D winds and their corresponding horizontal wavelength spectra using the Nordic Meteor Radar Cluster and CONDOR in Chile with a recently developed 3DVAR+div retrieval. The new retrieval provides for the first time a physically consistent solution for the vertical winds that conform the continuity equation. Based on these spectra we can separate the spatial scales that are driven by rotational modes from those dominated by divergent gravity waves. Furthermore, we present the first results of momentum flux spectra derived from these observations on a daily basis.