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## Validation of multi-static meteor radar analysis using realistic mesospheric dynamics from UA-ICON model: Reliability of gradients and vertical velocities

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Specular meteor radars (SMRs) are a major ground-based instrument to study the mesosphere and the lower thermosphere (MLT) dynamics. The recently developed multi-static approach of SMRs allows maximising the number of measurements from different viewing angles, hence enabling the estimation of horizontal wind fields and their second-order statistics (power spectrum, momentum fluxes). We have installed the operational versions of these techniques in Germany, Peru and Argentina, called SIMONe (Spread-spectrum Interferometric Multistatic meteor radar Observing Network) systems. Here, we present a validation study of multi-static meteor radar analysis by using virtual radar systems on the upper-atmosphere extension of the ICOSahedral Non-hydrostatic (UA-ICON) general circulation model with a horizontal grid spacing of 5 km. This particular study is focusing on the estimates of gradients and vertical velocities with these multi-static systems.