

## **The effect of errors (quality) of radar data (in reflectivity and Doppler radial velocity) on quality of 3D Simple Adjoint Velocity Retrievals (SAR)**

J. Achimowicz, IMGW, Warsaw, Poland

Problems related to the quality of 3D wind field retrievals from single-doppler radar will be discussed. The effect of noise in reflectivity and measurement errors of radial velocity (Nyquist folding) on the retrieved 3D wind fields will be presented on simulated and real case studies. The uncertainties induced by thinning of data and generating composite radar products effect significantly the quality of wind fields prepared for nudging procedure. The possible solution of above mentioned problems in operational suite will be also presented. The options of alternative approach based e.g. on 4Dvar as implemented in ARPS model will be discussed.