**CLOUD TOP, CLOUD CENTRE, CLOUD LAYER – WHERE TO PLACE AMVS?**

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Abstract

This contribution investigates alternative interpretations of what AMVs represent best. Traditionally, in operational derivation of AMVs, these are interpreted as single-level point estimates of wind, and high-level (resp. low-level) AMVs are generally assigned to an estimate of the top (resp. base) of the cloud layer.

This study uses a simulation framework to explore alternative interpretations of AMVs: an integration with a high-resolution model provides the true atmosphere, including the wind and the spatial and vertical distribution of clouds, and AMVs are derived from images simulated from the model output. Provided the simulation is realistic, the detailed description of the atmosphere allows to explore and evaluate alternative vertical assignments for AMVs.

Our results suggest that AMVs are more representative of either a wind average over the model cloud layer or of wind at a representative level within the cloud layer, rather than of wind at the model cloud top or cloud base. We will discuss the implications of these findings, with a particular focus on the use of AMVs in Numerical Weather Prediction.