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QPF verification using different radar-based analyses: a case study

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Verification of QPF in NWP models has been always challenging not only for knowing what scores are better to quantify a particular skill of a model but also for choosing the more appropriate methodology when comparing forecasts with observations. On the one hand, an objective verification technique can provide conclusions that are not in agreement with those ones obtained by the "eyeball" method. Consequently, QPF can provide valuable information to forecasters in spite of having poor scores. On the other hand, there are difficulties in knowing the "truth" so different results can be achieved depending on the procedures used to obtain the precipitation analysis.

The aim of this study is to show the importance of combining different precipitation analyses and verification methodologies to obtain a better knowledge of the skills of a forecasting system. In particular, a short range precipitation forecasting system based on MM5 at 12 km coupled with LAPS is studied in a local convective precipitation event that took place in NE Iberian Peninsula on October 3rd 2008. For this purpose, a variety of verification methods (dichotomous, recalibration and object oriented methods) are used to verify this case study. At the same time, different precipitation analyses are used in the verification process obtained by interpolating radar data using different techniques.