



## **Performance of INM Short-Range Multi-model Ensemble using high resolution precipitation observations**

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A multi-model ensemble prediction system focused on weather forecast up to 72 hours has been developed at Spanish Met Service (INM). It tries to address the issue of predictability of severe mesoscale events, which are not yet handled properly by mesoscale models. The first priority of the system is to achieve good performance in predicting heavy precipitation events, of huge impact in daily life. Verification results of precipitation probabilistic forecasts against INM high-resolution climatological observation network are shown, and compared to a similar verification against synoptic stations. Two different verification methods are used, interpolation to observation points as a simple method, and as an advanced method upscaling of observations using average, ninetieth quantile and maximum. The exercise is done over the period April to June 2006 using several thousands of stations. Twenty four hours accumulated precipitation probabilistic forecasts are considered. The performance of the system in predicting precipitation probabilities is shown to be fairly good in usual forecasting thresholds.