



Verification techniques for high resolution NWP forecasts

E V van der Plas, K Kok, and M J Schmeits
KNMI, Weather Research, De Bilt, Netherlands (plas@knmi.nl)

[asr]copernicus2

1]E. V. van der Plas 1]K. Kok 1]M. J. Schmeits

[1]Royal Netherlands Meteorological Institute, De Bilt, The Netherlands

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E. V. van der Plas
(Emiel.van.der.Plas@knmi.nl)

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Abstract

With the increasing amount of gridded observational data it becomes more and more compelling to look to what degree a Numerical Weather Prediction (NWP) model is able to reproduce the phenomena that we can observe. Verification of high resolution NWP forecasts is historically a non-trivial task as the higher resolution puts higher constraints on the location error of localised structures in the model output such as precipitation, if double penalty is to be prevented. The performance of some experimental NWP suites at KNMI is evaluated using several established verification techniques (FSS, SAL, etc), and compared to the current and former operational models. The precipitation radar will be the main source for observations to verify and validate the model forecast against. In addition, a generalized Model Output Statistics (MOS) approach is explored to verify the potential information content of a forecast, by computing the probability of precipitation for any given point and time interval. The results of the various techniques for the different models will be compared and discussed. verification, NWP

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May 2, 2013