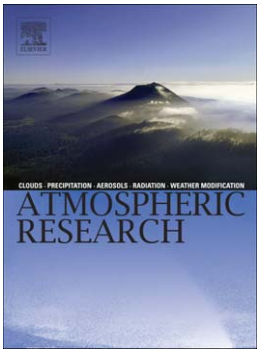

The ARPAL operational high resolution Poor Man's Ensemble, description and validation

Matteo Corazza, Davide Sacchetti, Marta Antonelli, Oxana Drofa

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The ARPAL operational high resolution Poor Man's Ensemble, description and validation

Matteo Corazza, Davide Sacchetti, Marta Antonelli

Agenzia Regionale per la Protezione dell'Ambiente Ligure (ARPAL), Genova, Italy

Oxana Drofa

Istituto di Scienze dell'Atmosfera e del Clima (ISAC-CNR), Bologna, Italy

Abstract

The Meteo Hydrological Functional Center for Civil Protection of the Environmental Protection Agency of the Liguria Region is responsible for issuing forecasts primarily aimed at the Civil Protection needs. Several deterministic high resolution models, run every 6 or 12 hours, are regularly used in the Center to elaborate weather forecasts at short to medium range. The Region is frequently affected by severe flash floods over its very small basins, characterized by a steep orography close to the sea. These conditions led the Center in the past years to pay particular attention to the use and development of high resolution model chains for explicit simulation of convective phenomena. For years, the availability of several models has been used by the forecasters for subjective analyses of the potential evolution of the atmosphere and of its uncertainty. More recently, an Interactive Poor Man's Ensemble has been developed, aimed at providing statistical ensemble variables to help forecaster's evaluations. In this paper the structure of this system is described and results are validated using the regional dense ground observational network.

Keywords: Ensemble Forecasting, Numerical Weather Prediction, Precipitation verification, Poor Man's Ensemble, Operational weather forecasting

Email address: matteo.corazza@arpal.gov.it (Matteo Corazza)