EMS Annual Meeting Abstracts,
Vol. 6, EMS2009-112-1, 2009
9th EMS / 9th ECAM

9th EMS Annual Meeting
9th European Conference on Applications of Meteorology
High resolution meteorology
- applications and services

Operational forecasting of daily temperatures in the Valencia Region. Part II: minimum temperatures in winter.

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Extreme temperature events have a great impact on human society. Knowledge of minimum temperatures during winter is very useful for both the general public and organisations whose workers have to operate in the open, e.g. railways, roadways, tourism, etc. Moreover, winter minimum temperatures are considered a parameter of interest and concern since persistent cold-waves can affect areas as diverse as public health, energy consumption, etc. Thus, an accurate forecasting of these temperatures could help to predict cold-wave conditions and permit the implementation of strategies aimed at minimizing the negative effects that low temperatures have on human health. The aim of this work is to evaluate the skill of the RAMS model in determining daily minimum temperatures during winter over the Valencia Region. For this, we have used the real-time configuration of this model currently running at the CEAM Foundation. To carry out the model verification process, we have analysed not only the global behaviour of the model for the whole Valencia Region, but also its behaviour for the individual stations distributed within this area. The study has been performed for the winter forecast period from 1 December 2007 - 31 March 2008. The results obtained are encouraging and indicate a good agreement between the observed and simulated minimum temperatures. Moreover, the model captures quite well the temperatures in the extreme cold episodes.

Acknowledgement. This work was supported by "GRACCIE" (CSD2007-00067, Programa Consolider-Ingenio 2010), by the Spanish Ministerio de Educación y Ciencia, contract number CGL2005-03386/CLI, and by the Regional Government of Valencia Conselleria de Sanitat, contract "Simulación de las olas de calor e invasiones de frío y su regionalización en la Comunidad Valenciana" ("Heat wave and cold invasion simulation and their regionalization at Valencia Region"). The CEAM Foundation is supported by the Generalitat Valenciana and BANCAIXA (Valencia, Spain).