THE PERFORMANCES OF THE REGIONAL ATMOSPHERIC MODELING SYSTEM (RAMS) OVER CENTRAL ITALY.

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ABSTRACT

The Regional Atmospheric Modeling System (RAMS) is managed at the Laboratory for Meteorology, climatology and Environmental Modelling (LaMMA) for general weather forecasting and regional civil protection warnings. It is also applied in the frame of several national and international research and industry projects.

The sensitivity of the quantitative precipitation forecasts (QPF), within the operational settings, is studied with regards to several key features: land cover and leaf area index, cloud microphysics, parameterisation of cumulus convection, and horizontal resolution.

Results from the comparison of model outputs and observations over Tuscany (Central Italy) revealed significant changes of the performances is using a two grids configuration with a horizontal resolution of 20 km and 4 km respectively. Several performance scores are computed in order to show the typical model's behaviour during a summer period.