Geophysical Research Abstracts, Vol. 9, 06311, 2007
SRef-ID: 1607-7962/gra/EGU2007-A-06311

Severe precipitation processes in complex orography: meteorological modelling and comparison of observed and simulated radar data.

L. Rossello (1), L. Molini (1), **A. Parodi** (1) and F. Siccardi(1,2)
(1) CIMA, University of Genoa, Savona, Italy (2) DIST, University of Genoa, Genoa, Italy,

The last decades have experienced considerable improvements in numerical weather prediction models due to the enhanced performances of the computing systems. Nevertheless, forecast verification is a still a long-standing and open problem in applied meteorology though great efforts had been spent to develop reliable methods for assessing forecast skill. This study proposes a twofold approach employing rain gauges (Ligurian network) and radar data (Mt. Settepani), through both observed and simulated datasets. In the first part, observed rain gauges are put into comparison with the corresponding measures simulated by means of the high resolution numerical model LAMI, using a set of statistical variables as the temporal correlation coefficient, the frequency distribution, the dicotomic indexes and the deviation between the gauged accumulated precipitation and the estimated one. Then, in order to conduct a distributed analysis with a higher spatio-temporal resolution, the same technique is applied both to real radar data and the ones generated with the LAMI/RSM modelling chain. The severe event occurred over western Liguria on 13-14-15 September 2006 was selected as the case study so as to evaluate the degree of reliability of two different 13/09/2006 LAMI forecast run initialized at 00.00 GMT and at 12.00 GMT, respectively.