

## SYNOPTIC AND HYDROLOGICAL ANALYSIS OF A FLOOD EVENT

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This is a four-step study to analyze a flood event which occurred over Friuli (north-eastern Italy) during October 1998. The first step is a synoptic analysis, in which the importance of moisture originated in the tropical Atlantic, and carried towards the Mediterranean by the remnants of a former tropical system, is emphasized. The second step analyzes the numerical forecast, as performed by the NCEP Medium range forecast (MRF) global model and by the Eta model, highlighting the importance of the large scale forcing. The third step involves multifractal modeling (Deidda et al., 1999) on the rainfall forecast for two different simulations. Finally, the hydrological effects over land, produced by the predicted precipitation, are compared with the observed effects. The hydrological simulation is therefore the tool to validate the performance of meteorological forecast. The results suggest the importance of the correct representation of the large scale forcing for the regional models, and the crucial contribution of multifractal modeling to reproduce the spatial variability of the rainfall on a smaller scale.