Geophysical Research Abstracts Vol. 12, EGU2010-15074, 2010 EGU General Assembly 2010 © Author(s) 2010



Local Rainfall Forecast System based on Time Series Analysis and Neural Networks

Fulgencio S. Buendia (1), A.M. Tarquis (2,3), G. Buendia (4), D. Andina (1,3)

(1) ETSII, Universidad Politécnica de Madrid, Spain (fbuebue@yahoo.es), (2) CEIGRAM, Universidad Politécnica de Madrid, Spain (anamaria.tarquis@upm.es), (3) Grupo de Automatización en Señal y Comunicaciones GASC, UPM, Spain (d.andina@upm.es), (4) AEMET (Spanish Meteorological Agency), Valladolid, Spain.

Rainfall is one of the most important events in daily life of human beings. During several decades, scientists have been trying to characterize the weather, current forecasts are based on high complex dynamic models. In this paper is presented a local rainfall forecast system based on Time Series analysis and Neural Networks. This model tries to complement the currently state of the art ensembles, from a locally historical perspective, where the model definition is not so dependent from the exact values of the initial conditions. After several year taking data, expert meteorologists proposed this approximation to characterize the local weather behavior, that is being automated by this system in different stages. However the whole system is introduced, it is focused on the different rainfall events situation classification as well as the time series analysis and forecast