EMS7/ECAM8 Abstracts, Vol. 4, EMS2007-A-00128, 2007 7th EMS Annual Meeting / 8th ECAM © Author(s) 2007



Tendency Analysis of Intense Widespread Rains in the Canary Islands

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Heavy rainfall events in the Canary Islands region have recently gained both scientific and social relevance. This work deals with the evolution of these phenomena through the 1972-2007 period. Data from more than 300 stations covering a large area over $110000 km^2$ have been analysed. The present contribution aims to fill the shortage of studies on such rainfall episodes in the Canaries and to compare the results with current climate tendencies.

Precipitation events selected from each station (after careful selection to avoid unwanted biases) must satisfy two conditions: first, daily amount of rainfall must be over a given threshold, and second, a minimum amount of nearby stations must report the episode. These parameters have been chosen for each of the islands according to their own climate regime. We thus deal with heavy and well spread rains in each of the island. Statistical analysis has been carried out considering the conditions both combined and separetely. The tendency is then studied over a thirty-five years long period.

Results reveal a rise in intensity of these events in good agreement with global predictions of last IPCC report on Climatic Change.