



Identification of Different Patterns of Life Cycle of Convective Cells in Catalonia (NE of Spain)

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The analysis of heavy rainfall events that affected the studied region in the period 1996-2000 using the meteorological radar and different algorithms for analysing the precipitation structures (both in 2D and 3D) has allowed to develop a data base of convective cells. The present paper has been centred in the classification of the life cycles of those cells considering some parameters as the type of structure (isolated cell, multiceleular, superceleular, and mesoscale convective system), the duration, the maximum value of reflectivity, and VIL, among others. The main goal of the study is to obtain some models of the life cycle of convective cells, with the purpose to improve the nowcasting methodology of these structures. The work has been divided in the present parts: the selection of those cells with a duration exceeding the 30 minutes, the classification of the structures depending on the parameters previously cited, and, finally, the verification of the model for different cases. In this study, only radar parameters have been used, but it is planned to introduce other type of information (as topography, or wind profiles) in the future.