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Convective and stratiform precipitation analysis in Spain

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A period comprised between 1997-2006 of hourly rainfall observations are analysed in order to develop a systematic methodology to classify the iberian precipitation into their stratiform and convective components. An exponential distribution is observed when the accumulated precipitation is represented respect to precipitation intensity. An algorithm is developed with the aim to determine the critical intensity value (Rc, in mm/6h) which allows to separate the precipitation into its two components. When the intensity of a 6-hr precipitation event exceeds Rc threshold a predominant convective regime is assumed. Those episodes which present an intensity lower than Rc are related to prevalent stratiform regime. The goal of the presented study is to characterize the variability of convective-stratiform predominances over the Iberian Peninsula and to evaluate the large scale climatic patterns influence over their global amounts and trends. Different iberian regions are identified related to preferred convective-stratiform rates.