



Trends in hailstorm frequency in Castile-León (Spain)

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The Community of Castile-León is located in the NW of the Iberian Peninsula. One of the most frequent meteorological risks in the Community during the summer is hailstorms. On average, in the Province of León, there are 42 days with storms, almost half of them being hailstorms. However, the spatial variability of the storms is very elevated. The majority of these episodes are registered in mountainous areas during the summer months and they have a convective origin.

In the present study, making use of the data from the AEMET's meteorological stations situated in Castile and León, we analyzed trends in the frequency of the appearance of this type of storm from the year 1940 until the present. One of the principal problems we found is that the quality of databases generated from the years without hail precipitation data available are frequent. This is due, in large part, to the difficulty in detecting this type of meteor in meteorological stations, given their large spatial variability and their ephemeral character.

On the other hand, with the objective of performing a meteorological analysis of the results found, we have also studied the trends in days with rain and the absolute maximum temperature. The overall analysis of results found allowed us to affirm a large variability in the different regions related to climatic hail series and trends found in those regions.

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