



## **Investigating links between Long-Range Dependence in mean rainfall and clustering of extreme rainfall**

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Clustering of extremes is a statistical behavior often observed in geophysical timeseries. However, it is usually studied independently of the theoretical framework of Long-Range Dependence, or the Hurst-Kolmogorov behavior, which provides consistent theoretical and practical tools for identifying it and understanding it. Herein, a dataset of daily rainfall records spanning more than 150 years is studied in order to investigate the dependence properties of extreme rainfall at the annual and seasonal timescale. The same investigation is carried out for mean rainfall at the annual scale. The research question is focused on investigating the link between the Hurst behavior in the mean rainfall, which is already acknowledged in literature, and the Hurst behavior in extreme rainfall timeseries, which is also to be testified.