



## **Investigating changes in extreme precipitation in the Netherlands**

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An elementary tool to quantify rainfall extremes is the ombrian curves (also known as rainfall intensity-duration-frequency curves), which assign a return period to each rainfall intensity value at a specified time scale. Caution is required when this technique is applied to a spatial network of rainfall stations, since the acquired information from data is strongly affected by the spatial correlation between stations. We investigate this matter in a spatial network of several rainfall stations with daily and hourly resolution, and uniformly distributed in the Netherlands. We further construct the ombrian curves adjusted for spatial correlation between stations and we compare with the non-adjusted results. Finally, we investigate whether or not the latter results can be misleading in portraying a regularly changing process as one with unnatural extreme changes.