



## **The rainfall behavior in time: the influence of the instrumentation time resolution and the seasonal variability**

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The rainfall phenomenon has a discrete nature in time. Thus, it can be represented through a stochastic model, providing the arrival times and diameters of the rain drops. However, every instrument used to measure rainfall properties has a finite resolution  $\Delta$ : the integration time of the instrument. Based on the time resolution  $\Delta$ , quantities like drought duration, rain event duration and rain event intensity are introduced to describe the rainfall phenomenon. In this contribution we study the dependence of the probability density functions for drought duration, rain event duration and rain event intensity on 1) the instrument time resolution  $\Delta$  and 2) different time intervals during a year. We use data with a 10 s resolution from the disdrometer of Chilbolton (UK), covering the interval of time between 1st of April 2003 and 28th of February 2005.