RAINFALL DISAGGREGATION IN TIME USING NEYMAN-SCOTT MODELS

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In order to investigate the capability of Neyman-Scott model in temporal down-scaling rainfall events some analytical features of this model are presented.
In particular, both the probability distribution function of the event duration, and the event volume are derived analytically.
The knowledge of the probability distribution for "event" based variables allows us to perform in a simple way rainfall simulations conditioned to have (statistically speaking) the same duration and the same volume of the event considered.
Some results are presented in order to show the advantages of the event conditioned simulation in comparison with the traditional one, i.e. an unconditionally simulation from the model until a rainfall sequence is generated which has the correct cumulative values.