

Interactive comment on “Reconstruction of sub-daily rainfall sequences using multinomial multiplicative cascades” by L. Wang et al.

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The authors would like to appreciate the referee’s insightful comments on this work and for generously providing useful references to help understand the deficiency of this paper.

This work aims to develop a downscaling method which will be further used to generate high-resolution rainfall information as inputs in nearly real-time (NRT) flood modelling over urban areas. In addition to being realistic, efficiency and the ability to reproduce (certain) statistics of observed rainfall data are also crucial factors needed to be considered when downscaling techniques are developed.

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In view of these two reasons, the discrete-based cascade model is therefore employed. The proposed method is developed based upon the formation of an exact self-similar cascade, which is a very simplified yet efficient model. The results suggest the acceptable ability of this method to reproduce certain statistics of historical rainfall observations.

To clarify the possible confusion in the paper, a supplement is attached to detailedly respond to the issues raised in the detailed comments made by the referee.

Please also note the supplement to this comment:
<http://www.hydrol-earth-syst-sci-discuss.net/7/C2506/2010/hessd-7-C2506-2010-supplement.pdf>

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