

Home

Online Library HESS

- Recent Final Revised Papers
- [Volumes and Issues](#)
- Special Issues
- Library Search
- Title and Author Search

Online Library HESSD

Alerts & RSS Feeds

General Information

Submission

Review

Production

Subscription

Comment on a Paper

Impact
Factor
2.270

ISI
indexed



[Volumes and Issues](#) [Contents of Issue 3](#)

Hydrol. Earth Syst. Sci., 4, 419-424, 2000

www.hydrol-earth-syst-sci.net/4/419/2000/

© Author(s) 2000. This work is licensed under a Creative Commons License.

Physical disaggregation of numerical model rainfall

N. I. Fox¹ and Ch. G. Collier¹

¹Telford Institute of Environmental Systems, School of Environment and Life Sciences, Peel Building, University of Salford, Salford M5 4WT
e-mail for corresponding author: n.i.fox@salford.ac.uk

Abstract. A methodology is presented for the disaggregation of numerical model fields of convective rainfall using a physically based procedure. The scheme uses surface sensible heat flux values derived from high-resolution multichannel satellite radiometer observations. The sensible heat flux values initialise a simple convective model to calculate the convective disaggregation parameter (CDP), which is theoretically proportional to the convective rainfall rate. The CDP diagnostic parameter can be derived as a one-time field if the surface characteristics are invariant, as a seasonal value may be, or it may be evaluated on a case by case basis. Once found, the CDP can be used to disaggregate numerical weather prediction (NWP) convective rainfall fields for as far ahead as such fields are produced.

[Final Revised Paper](#) (PDF, 11913 KB)

Citation: Fox, N. I. and Collier, Ch. G.: Physical disaggregation of numerical model rainfall, Hydrol. Earth Syst. Sci., 4, 419-424, 2000. [Bibtex](#) [EndNote](#) [Reference Manager](#)



Search HESS

Library Search

Author Search

News

- New Service Charges
- Financial Support for Authors
- ISI Impact Factor: 2.270

Recent Papers

01 | HESSD, 24 Mar 2009:
The significance and lag-time of deep throughflow: an example from a small, ephemeral catchment with contrasting soil types in the Adelaide Hills, South Australia

02 | HESSD, 24 Mar 2009:
On the benefit of high-resolution climate simulations in impact studies of hydrological extremes

03 | HESSD, 23 Mar 2009:
Reducing the hydrological connectivity of gully systems through vegetation