

Interactive comment on “Theoretical framework to estimate spatially averaged rainfalls conditional on river discharges and point rainfall measurements from a single location: an application to Western Greece” by A. Langousis and V. Kaleris

Anonymous Referee #2

Received and published: 1 January 2013

The article presents a statistically solid method of using basin outlet flow and single-location raingauge information, in order to compute spatial rainfall averages. Multifractal properties of rainfall fields are being skillfully employed, and an application to the Glafkos basin in Western Greece is presented. I think this is very good work, and therefore I recommend the article for publication in HESS, with the following minor observations:

- I'd find it useful to relate the rainfall-runoff consistency in a multifractal framework to the work of Eleuch et al. (SERRA 24(5), 2010, p.559-565).

- I'd suggest mentioning the use of a (perhaps temperature-related) heuristic approach to outliers (without necessarily applying it at this point, but pointing out the need of relating outliers rather to some phenomenological aspect, than just statistics).

- Last, a note on language: I'd avoid using the plural "rainfalls", replacing it with whatever term best fits each context (e.g., "rainfall events").

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 12463, 2012.

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Interactive Discussion

Discussion Paper