Hydrology and Earth System Sciences Discussions

Hydrol. Earth Syst. Sci. Discuss., referee comment RC2
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Comment on hess-2022-177

Anonymous Referee #2

Referee comment on "Technical Note: Space–time statistical quality control of extreme precipitation observations" by Abbas El Hachem et al., Hydrol. Earth Syst. Sci. Discuss., https://doi.org/10.5194/hess-2022-177-RC2, 2022

The authors present a method for quality control/assessment of precipitation measurements especially in view a large values at different aggregation times between hours and days partly based on subhourly observations from DWD. As a new and innovative check they introduce radar precipitation estimates (DWD Radolan data set) as an independent set of observatins and discharge measurements at selected catchments which should show a hydrological response in case the observed rain gauge extreme rainfall event is not a fake observation.

Overall this could be a very useful contribution to HESS if the authors would indicate how the proposed procedure may generalize to other observing systems (e.g synop temperature/wind/humidity observations). Furthermore the text is written almost completely from the hydrolocical-engineering point of view: the authors should remember the E in the journals title, namely that other Earth System scientists should also be addressed and not to be scared off. Finally the text is largely written in a funding - interim report style, eg about one third of the figures is just added to the text without any discussion or even referencing in the text. All these points (and those commented in the annotated pdf document) should be revised before publication in HESS can be considered.

Please also note the supplement to this comment:
https://hess.copernicus.org/preprints/hess-2022-177/hess-2022-177-RC2-supplement.pdf