

Interactive comment on “Development of a window correlation matching method for improved radar rainfall estimation” by T. Piman et al.

Anonymous Referee #1

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General: The paper describes an interesting extension to the PMM adjustment technique for CAPPI radar data in a tropical environment with limited measurement coverage. The approach attempts to take into account drift and drop fall time. Main (and partly limiting) assumptions are a uniform drift and persistence of drop size distribution between 3 km (CAPPI level) and the ground. The approach has been tested on one event of 86 hours duration. If put a bit further into the large picture, referring to other methods which are currently used or being discussed (see my remarks below), the paper should be accepted for publication.

Discussion: There are some special points in this paper which I would like to be investigated further:

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- how does the approach compare to other ones such as WPMM (I was surprised not to see this method by Rosenfeld), "merging" by Sinclair et al. (see below) or Brandes correction fields?

- what is the impact of the sparse raingauge network? Would a denser network improve results or be in favour of another adjustment method?

- why was a CAPPI used and not a PPI where the radar measurement would be closer to the ground (and therefore to the raingauges)?

- can the results be verified on other rainfall events, also with a different rainfall characteristic?

Technical items:

- the name of Calheiros (I suspect it is him in the cited reference) is misspelled throughout the paper.

- there are very few other typing errors.

References: Comparison of Conditional and Bayesian Methods of Merging Radar & Raingauge Estimates of Rainfields Scott Sinclair, Uwe Ehret, Andra Bardossy, Geoff Pegram Geophysical Research Abstracts, Vol. 5, 30-1-2003

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