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Hydrology and Earth System Sciences
Discussions

Interactive comment on "Scoping a field experiment: error diagnostics of TRMM precipitation radar estimates in complex terrain as a basis for IPHEx2014" *by* Y. Duan et al.

Anonymous Referee #1

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The paper is an excellent piece of scientific work and it is well written. A careful and detailed error characterization and analysis of the TRMM PR 2A25 product in complex terrain is carried out. It is a very interesting study on sub-grid scale effects in mountainous regions where there is a strong space-time variability of precipitation. The rainfall measurements from the high-density rain gauge network in the Southern Appalachian deployed in preparation for the IPHEX-2014 field experiment are used as ground-truth. In the paper several different aspects crucial to the evaluation of satellite-based precipitation product error structure are considered, and in my opinion the diagnostic analysis in time and space over complex topography presented in this paper could be used as

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reference for future work on validation of satellite based precipitation estimates, such as the precipitation products from the GPM Dual-frequency Precipitation Radar (DPR) of the Global Precipitation Measurement (GPM). I strongly recommend the manuscript for publication. However, there are a few minor issues that in my opinion need to be addressed by the authors prior to publication, such as further clarification on the methodology used to couple rain gauge rainfall data to the TRMM-PR pixel based product.

For further details please refer to the attached pdf document.

Please also note the supplement to this comment:
http://www.hydrol-earth-syst-sci-discuss.net/11/C5027/2014/hessd-11-C5027-2014-supplement.pdf

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 11137, 2014.