

*Comments on Liechti et al. manuscript for HESS-2011-257, "Comparison and Evaluation of Satellite Derived Precipitation Products for Hydrological Modeling of the Zambezi River Basin"*

General Comments

The authors address the important question of which of several openly available precipitation data sets are most appropriate for hydrological modeling in a river basin that lacks sufficient raingauge data. They take a very reasonable approach, including being very careful about handling the point gauge-vs-area satellite data problem. I think a few questions need to be resolved before this paper is released. In general, the English grammar and usage are very good.

Specific Comments

1. *Choice of data sets* The manuscript adequately informs the reader of the welter of contradictory results in different locations with different datasets and different statistics. I'm less clear on precisely why the datasets chosen for evaluation were picked. In particular:
2. *Ultimate use of data sets* Is it envisioned that the datasets being examined are candidates for post-real-time research, or for near-real-time operations? The paragraph in the middle of p.8187 is not explicit. That is, what are the requirements for timeliness? As examples; the 3B42 Version 6 came out about two weeks after the end of the month, while in its new Version 7 form it will be two months after the month; PERSIANN is three days; FEWS is "next day"; CMORPH is about 18 hours after observation time; and 3B42RT is about 8 hours.
3. *Versions* In general, the authors could be more precise about the versions of data sets being used. For example (p.8180), the GPCC Full Analysis described is probably Version 4, compared to the recently released Version 5 that runs to 2009.
4. *Original grid size (p.8182,l.9)* Working at the original grid size might have implications, just as the time averaging does; I think the authors need to be a little more careful about explaining when possible scale mismatches between estimates might affect the results.
5. *TRMM uses GSOD (p.8186, l.2)* Do the authors know this for sure? All we're told about the gauge analyses used in TRMM is that they use the GTS "first-order" stations. Are all the GSOD stations in this collective?
6. *p.8186,l.10* I'd suggest "... the cloud of scatterplot points is on the left ..."
7. *P.8187,l.12* I'd suggest "... CMORPH being less precise ...".