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Hydrology and Earth System Sciences Discussions

Interactive comment on "A framework for upscaling short-term process-level understanding to longer time scales" *by* W. H. Lim and M. L. Roderick

Anonymous Referee #2

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The paper illustrates how covariance between the variables in equations used to estimate instantaneous values of evaporation are related to changes in the parameters estimated using averaged values of the variables. This result is well known and it has been explored in the context of evaporation many times before [e.g. Koster & Suarez 1999, Choudhury 1999]. In addition, the data analysis in the paper provides no significant results on an alternative or independent method (i.e. their attempt to use relative humidity) to estimate the correction factors (which would be the spirit of "A framework for upscaling short-term process-level understanding to longer time scales"). The title of the paper does not reflect the paper content, and the results are far from original or

significative. Therefore I suggest rejecting publication of this work.

I regret that I cannot provide a more constructive/thorough review of the work at this time.

References

[1] R.D. Koster and M.J. Suarez. A simple framework for examining the interannual variability of land surface moisture fluxes. Journal of Climate, 12(7):1911–1917, 2012/06/24 1999.

[2] B.J. Choudhury. Evaluation of an empirical equation for annual evaporation using field observations and results from a biophysical model. Journal of Hydrology, 216(12):99–110(12), 1999.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 9, 6203, 2012.