

Interactive comment on “Parameterizing microphysical effects on variances and covariances of moisture and heat content using a multivariate PDF” by Brian M. Griffin and Vincent E. Larson

Anonymous Referee #1

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The paper integrates various microphysical terms in higher-order moment equations analytically and compares the results with those from LES. It is overall a very boring paper. It is more like a technical report than a formal paper. If the readers do not need to dig into the model code, One does not think a reader can go through all the formulae.

The results are not new. Most of the them were documented in the literature. The differences between the analytical solution and LESs are kind of expected. More in-depth analysis may make the paper reach more readers and more interesting.

The method is not new, for example, Cheng and Xu (2009) published a pioneer work

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in Journal of Atmospheric Science using the similar pdfs to integrate for various micro-physical terms. The analyses and experiments are more interesting than here. The author do not cite this work. This is not a good scholar.

Therefore, major revisions are needed.

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