Interactive comment on "Vertically nested LES for high-resolution simulation of the surface layer in PALM (version 5.0)" *by* Sadiq Huq et al.

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Dear editor Dr. Knote,

We thank the reviewers for your comments and your suggestions to improve the manuscript. Please find below our responses to the comments and questions and we have updated our manuscript accordingly.

Two of the reviewers had requested for spectral analysis. Since we did not have the necessary data output we had to repeat the simulations. While repeating the simulations we realized that in the initial runs the compiler flag "-fpmodel strict" had not been included. This flag is necessary to make every realization deterministic. As a result, the plots in our initial submission have compiler optimization related random effects

that were noticeable in the variance profile. The results of both the nested and the standalone simulation were affected. We have now ensured that the simulations are deterministic, which improves their comparability. The plots and their description have been updated accordingly.

The second set of simulations performed to evaluate the computational performance were not affected. We had used the appropriate compiler flags recommended by the Leibniz Supercomputing Center. Please find our detailed responses to all referees' comments in the attached PDF.

Best regards,

Dr. Matthias Mauder (on behalf of all coauthors)

Please also note the supplement to this comment:
https://www.geosci-model-dev-discuss.net/gmd-2018-287/gmd-2018-287-AC1-supplement.pdf

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Interactive comment on Geosci. Model Dev. Discuss., https://doi.org/10.5194/gmd-2018-287, 2018.