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Interactive comment on "Improving boundary layer flow simulations over complex terrain by applying a forest parameterization in WRF" *by* Johannes Wagner et al.

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Dear Alfredo,

thank you very much for your comment. We uploaded the used namelists for both the long and short runs as a supplement. You are right that triggering turbulence is important and should be included in future works. Especially, triggering turbulence at the boundaries of the LES domains could be done with a cell-perturbation method similar to the one described in Muñoz-Esparza et al. (2017). This method is, however, not included in the standard WRF repository. You are also right that triggering of subgrid-scale turbulence by the forest parameterization should be included in future

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simulations. It goes, however, beyond the scope of this study to include the TKE-effect of the forest parameterization and to rerun all simulations.

Thanks and best regards,

J. Wagner and co-authors

References: Muñoz-Esparza, D., Lundquist, J. K., Sauer, J. A., Kosovic, B., and Linn, R. R.: Coupled mesoscale-LES modeling of a diurnal cycle during the CWEX-13 field campaign: From weather to boundary-layer eddies, J. Adv. Model. Earth Sy., 9, 1572–1594, https://doi.org/10.1002/2017MS000960, 2017.

Please also note the supplement to this comment:
https://www.wind-energ-sci-discuss.net/wes-2019-77/wes-2019-77-AC1-supplement.zip

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