

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

Anonymous Referee #1

Received and published: 18 December 2019

The manuscript describes the use of a canopy parameterization for characterizing surface roughness in WRF model simulations. Using the parameterization improves various aspects of the low-level flow in the challenging NEWA site of Perdigalço, Portugal. The topic of the manuscript is engaging and useful. The influence of forest roughness length on wind simulations has not been studied before in this way and with the WRF and WRF-LES model. The goals of the paper are exciting and worth publishing, but the methodology is generally not appropriate and, in many places, not well explained. I recommend major revisions. I give more details in the attached PDF file.

C1

Please also note the supplement to this comment:

<https://www.wind-energy-sci-discuss.net/wes-2019-77/wes-2019-77-RC1-supplement.pdf>

Interactive comment on Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2019-77>, 2019.

C2