

Interactive comment on “Theory and Verification of a new 3D RANS Wake Model” by Philip Bradstock and Wolfgang Schlez

Anonymous Referee #2

Received and published: 3 April 2020

The development of this new wake model represents a nice step forward and fresh air in the current industry standards across wind farms design process, especially offshore.

The literature review is quite complete and the explanation is clear in general.

Main strenghts come from the merge of both concepts: the Ainslie approach for turbulence closure (fully proven along last decades) with the parabolic approach as developed in the original UPMPARK, indeed very practical in terms of computational cost without losing accuracy. The possibility of launching the model in the cloud makes its usage more practical.

Nevertheless, as a new wake model, it still needs to be validated extensively and check the sensitivity of the parameters affecting turbulent viscosity, in order to get some guide-

C1

lines on potential recommended ranges for each wind farm scenario.

The paper is accepted with some minor corrections in the attached document.

Please also note the supplement to this comment:

<https://www.wind-energ-sci-discuss.net/wes-2020-33/wes-2020-33-RC2-supplement.pdf>

Interactive comment on Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2020-33>, 2020.

C2