

Interactive comment on “Brief communication: Extraction of the wake induction and angle of attack on rotating wind turbine blades from PIV and CFD results” by Iván Herráez et al.

J. N. Sørensen (Editor)

jnso@dtu.dk

Received and published: 1 November 2017

The reviewer points at two main problems with the paper:

a. It claims originality. However, a similar analysis was carried out using Mexico-rotor data in the paper by Yang et al. 'Extraction of airfoil data using PIV and pressure measurements' from WE 2011. It is required to clearly state the difference between your contribution and the previous paper.

b. The reviewer claims that it is not the AOA that your method computes, as it is based on the velocity at a point far away from the blades. It is therefore needed that you

C1

document that it is indeed the same velocity that you would get at the blade, i.e. the velocity induced by the free vortices corresponding to the one used in BEM analyses.

Besides there is no explanation of how the measurements were collected. Since the blade is rotating, it is unclear how the PIV data are obtained at the bisectrix. Either the PIV-data are taken in a co-rotating system or they are phase-averaged. If the latter is the case, the full time-history should be shown in order to compare the azimuthal dependence with the bisectrix value and the azimuthally averaged values with the full time (azimuth) history.

Please address these problems (plus the remaining ones) properly in your reply.

Interactive comment on Wind Energ. Sci. Discuss., <https://doi.org/10.5194/wes-2017-43>, 2017.

C2