

Interactive comment on “Wind speed deviations in complex terrain” by Christian Ingenhorst et al.

Anonymous Referee #1

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Review of wes-2020-25 Wind speed deviations in complex terrain Christian Ingenhorst et al.

Summary

This manuscript reports on some lab and field tests to check whether a UAV is able to measure the 3D field of turbulence in a wind park of as an alternative of expensive CFD calculations or 3D scanning LIDAR observations. I find this manuscript immature and of marginal scientific impact. See more details below.

Recommendation: reject

Major remarks.

1. Title: The title is not concrete and very broad and does not cover what is discussed in the paper precisely.

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2. Research questions: the paper lacks a clear and well-posed research question, or questions and sub questions. As such also the conclusion is rather generally formulated.

3. Methodology: The title suggests this paper is about wind speed deviations/variability. So I do not understand why the paper does not show spectra or wavelet analysis

4. Discussion: the paper also lacks a discussion section that reflects on the strengths and weaknesses of the study, and overall also put the work in context with other studies. Only then the paper can show how it extends the existing knowledge. Also the paper misses a discussion about the representativeness of the atmospheric conditions that were studied.

5. Figures: the paper contains far too many figures. 24 figures is a bizar number, and many of these figures are not essential. Figures 5 and 10 can be removed. I also find that the left panels of figs 6-9 and 11-18 of very limited value, since they are also not much discussed. Figure captions are also not mature and panels have not been labelled a) and b).

Overall I think this work better fits in a scientific report than a journal paper.

Minor remarks: Ln 7: “huge”: hyperbolic, should be avoided

Ln 50: USA: not defined

Ln 95: its

Ln 168: corresponding (typo)

Ln 169: speed.

Ln 201: typo in German

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