

Atmos. Meas. Tech. Discuss., referee comment RC2  
<https://doi.org/10.5194/amt-2022-26-RC2>, 2022  
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## Comment on amt-2022-26

Anonymous Referee #2

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Referee comment on "Intercomparison of wind observations from ESA's satellite mission Aeolus, ERA5 reanalysis and radiosonde over China" by Boming Liu et al., Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2022-26-RC2>, 2022

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**Comment on "Intercomparison of wind observations from ESA's satellite mission Aeolus, ERA5 reanalysis and radiosonde over China", by Boming Liu, Jianping Guo, Wei Gong, Yong Zhang, Lijuan Shi, Yingying Ma, Jian Li, Xiaoran Guo, Ad Stoffelen, Gerrit de Leeuw, and Xiaofeng Xu, Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2022-26-RC1>, 2022**

This manuscript describes a validation study that is relevant to Atmospheric Measurement Techniques in the topic of Aeolus L2B wind product over China. The authors describe a statistical intercomparison analysis between the Aeolus L2B wind product and wind data provided by radiosondes and ERA5 model over China.

### General comment

The authors used two different periods to compare wind data obtained from the Aeolus L2B wind product with those by radiosondes and ERA5: from 20 April to 30 September for radiosondes and from 9 July to 30 September for ERA5 model. The manuscript is not well-structured. The dataset is not suited for discussions of the statistical comparison. The manuscript has not been revised sufficiently in the methodology for the statistical comparison after the submission to ACP. Compared to the manuscript submitted to ACP, the manuscript states opposite results regarding to comparison between Aeolus L2B wind product (Rayleigh-clear) and wind observed by radiosondes or the wind speed differences for radiosonde and ERA5 zonal winds. There are explanation sentences for Figures S1 through S7. However, the figures and reference paper are not shown in the manuscript. The manuscript significantly lacks of the scientific quality and reliability.

Chen et al. have already published a very similar paper using ERA5 and radiosondes over China based on different months (July to December 2019 and May to October 2020). Compared to this manuscript, their manuscript is clearly structured, and all used methodologies are well explained. The manuscript does not extend our understandings beyond Chen et al.'s paper.

I do not recommend the manuscript for the publication in AMT because it has extensive problems.