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Comment on amt-2022-233

Anonymous Referee #2

Referee comment on "Validation of the Aeolus L2B wind product with airborne wind lidar measurements in the polar North Atlantic region and in the tropics" by Benjamin Witschas et al., Atmos. Meas. Tech. Discuss., <https://doi.org/10.5194/amt-2022-233-RC2>, 2022

The results of two airborne campaigns (AVATAR-I and AVATAR-T) for the Aeolus validation are analyzed in detail in this article. In the validation process, quality control of Aeolus data is critical. In this paper, the authors improve the Z-score method using median and scaled MAD to avoid the impact of a single outlier. Based on a statistical analysis, the systematic and random errors of Aeolus HLOS wind observations are determined by comparing to 2- μm DWL observations. A detailed analysis of the Rayleigh-clear Mie-cloudy wind errors is carried out. This analysis is an important contribution to evaluate the quality of Aeolus winds and the fulfillment of mission requirements defined in advance.

This paper has feasible data, proper method and detailed data analysis. Thus, this paper is recommended to be published as it is.