Atmospheric
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Discussions

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Interactive comment on "Characteristics and performance of vertical winds as observed by the radar wind profiler network of China" *by* Boming Liu et al.

Anonymous Referee #1

Received and published: 25 March 2020

This paper examines the characteristics and performance of vertical wind measured by China Radar Wind Profiler Network. The topic is interesting and has climate implications in evaluating and using the wind observations with their reliabilities from Wind Profiler site over China. The paper is well organized and written. The findings of this study are worth of publication in the journal after minor revision. My comment on this paper is mainly related to the evaluation indexes used in the study, which may impact on some of the conclusions. 1. Which criteria are referenced for thresholds of the acceptable levels for these parameters including height, sample rate, confidence (Fig. 5), bias, and RMSE (Fig. 7) in the paper. 2. The ECMWF data set used for validation needs a brief introduction, including its uncertainty and reliability. 3. Note that South

China Sea should be added in the Figures 1,3,4,7,8,910. 4. What does the "ABL" mean in the line 10 of the introduction? Acronyms must be explained in detail when the article first appears. Similar to MODIS at line 8 of page 11 5. The word spacing at P3 L15 need to be modified. 6. For Figure 6, as stations in northwest show much difference with other stations in diurnal phase, any reason? 7. For better cover across the whole China, you should a station in the northwest to make comprehensive comparison with ECMWF. 8. at P10 L18, diurnal phase and amplitude of the mean maximum wind at different heights are almost same. Do authors have any ideas about the reasons that cause this phenomenon? So does the inconsistency for some northwest stations. 9. You used some station names in the text or other figures (e.g., names in figure 6, so should add the locations of these names in figure 1 for readerships. 10. Land use data from MODIS should be described in data section. Suggest that MODIS-based land use type should be added as background in Figure 10 for reahderships.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2020-75, 2020.