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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Technical Note: First comparison of wind observations from ESA's satellite mission Aeolus and ground-based Radar wind profiler network of China" *by* Jianping Guo et al.

Anonymous Referee #2

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This Technical Note systematically compared the Mie-cloudy and Rayleigh-clear wind products from Aeolus measurements with wind observations from the radar wind profiler (RWP) network in China. The topic is very interesting and has important implications in evaluating the quality of Aeolus observation and applications over China regions. The paper is well organized and written. The findings of this study are worth of publication in the journal after minor revision as following: 1. P4:" Over countries or regions with episodes of extensive heavy air pollution, such as China, the high aerosol concentrations could significantly affect satellite observations, which in turn can affect

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Discussion paper

the accuracy of wind products and their applications in weather forecast and climate prediction." Some references should be added to support this deduction. How high aerosol concentrations could significantly affect satellite observations? 2. P6: "To achieve a synchronization, the time difference between the RWP and Aeolus wind profiles should be minimum". How do you define the minimum? Please clarify it. 3. P7: What is the reason that you distinguished and employed ascending orbit and descending orbit data to discuss their accuracy? R fallen? May influence the comparison results? 4. P8-9: the variables in equations 4-6 should be clarified. 5. P24: Table 1 caption : 75km-radius–>75-km radius 6. Figure 1: The flag of geographic direction should added 7. Figure 3: The flag of geographic direction is unclear.

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