

## ***Interactive comment on “Inter-annual variation of aerosol pollution in East Asia and its relation with strong/weak East Asian winter monsoon” by Min Xie et al.***

### **Anonymous Referee #1**

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Presentation quality is poor. I am surprised the manuscript can pass the quality control process with such poor figure quality.

1. Figure 5 is a critical figure to determine the weak/strong monsoon years, but not a complete one. The printed version only shows data from 79-05, but caption shows it should cover till 2014. Without a complete figure, it is difficult to evaluate many parts of manuscript. 2. Figure 3 is also an important figure, not clear what “changes of AOD” mean? 14 years trend or 2013 minus 2000? 3. Figure 1, what shade shows? Terrain? 4. Figure 2, averaged over which region? 5. Figure 4, how did you define the 4 regions (PRD, YRD, BTH, SCB)?

C1

Section 4, there are not any evaluation of model performance provided in simulating aerosol concentration, PM<sub>2.5</sub>, AOD and precipitation?

Scientific significance is poor. Finding is not new and many studies have been done in this area but not being discussed or compared. Idea and analysis in this manuscript apparently follow these two paper, but not being cited.

Jeong, J.I. and Park, R.J. (2017). Winter monsoon variability and its impact on aerosol concentrations in East Asia. *Environ. Pollut.* 221: 285–292.

Mao, Y.-H., Liao, H., and Chen, H.-S.: Impacts of East Asian summer and winter monsoons on interannual variations of mass concentrations and direct radiative forcing of black carbon over eastern China, *Atmos. Chem. Phys.*, 17, 4799-4816, <https://doi.org/10.5194/acp-17-4799-2017>, 2017.

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Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-500>, 2017.

C2