

## ***Interactive comment on “Significant reduction of PM<sub>2.5</sub> in eastern China due to regional-scale emission control: Evidences from the SORPES station, 2011–2018” by Aijun Ding et al.***

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### Response to Referee #2

The manuscript by Ding et al. investigated the roles of emission control and meteorology in decreasing PM<sub>2.5</sub> in eastern China using long-term measurements. The results showed that control of open biomass burning and fossil-fuel combustion are the two major factors in reducing PM<sub>2.5</sub> in early summer and winter, respectively. Such long-term measurements are very limited in China, which makes this study be important to understand the impact of emission sources, chemical mechanisms and meteorology processes on the reductions of aerosol species. This manuscript is overall well

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written, and I recommend it for publication in ACP. Major comment: High concentrations of PM<sub>2.5</sub> in Yangtze River Delta were often associated with the transport from north China, particularly in winter season. Considering that the air quality in Beijing and Hebei province has been significantly improved during the last 6 years, I suggest the authors expanding some discussions how air quality improvement in eastern China was potentially associated with that in northern China.

Response: Thanks a lot for the suggestion. We will conduct some additional results based on back-trajectory cluster analysis to evaluate potential reduction associated with emission reduction from different regions, including the northern China.

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