Atmos. Chem. Phys. Discuss.,
https://doi.org/10.5194/acp-2018-1077-RC2, 2019

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Two-way feedback mechanism between unfavorable meteorological conditions and cumulative aerosol pollution exists in various haze regions of China" *by* Junting Zhong et al.

Anonymous Referee #2

Received and published: 2 January 2019

This paper uses very comprehensive measurements, including PM2.5 mass concentrations, radiosonde observations, etc., to understand the two-way feedback mechanism between unfavorable meteorological conditions and cumulative aerosol pollution in several heavily and less heavily polluted regions in China. Previous studies have been focused on the North China region, while this study can provide a more general picture with extended study regions. My major concern for the paper is that the presentations of the results are descriptive, and I would suggest the authors provide more in-detailed calculations and present in a more quantitative way.

Printer-friendly version

Discussion paper

Specific comments are listed below: 1 Near ground temperature bias are shown at different PM2.5 concentrations, however, it is not clear to what extend is contributed by aerosol effects. It is likely that those temperature structures co-occur with different stagnant conditions and thus are different at different PM2.5 concentrations. It would be better to provide more quantitative results here.

2 Line 41-43: It is not surprising that FWRP and YRD regions are largely influenced by inter-regional and trans-regional transport. It would be more valuable to know in these regions, how important are the two-way feedback in cumulative periods, compared to the abrupt injection of transport.

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2018-1077, 2018.