

Interactive comment on “A review of current knowledge concerning PM_{2.5} chemical composition, aerosol optical properties, and their relationships across China” by Jun Tao et al.

Anonymous Referee #2

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The review paper jumps to the hot topics on PM_{2.5} pollution and aerosol optical property in China. It is well-written and very helpful for understanding the current situations and challenges ahead for alleviating severe PM_{2.5} pollution in China. This reviewer has a few minor comments for authors considering before publishing in ACP.

1) The authors are encouraged to use either OC or OM through the manuscript. 2) As a rural site downwind of BTH, the study by Feng et al. (JRG, 117, D03302, doi:10.1029/2011JD016400, 2012) is worthy of inclusion for comparison. 3) Lines 191-194, temperature effect should be included. A few very recent studies suggest that extreme weather could also be important factors for heavy PM_{2.5} pollution in winter.

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The authors may have no time to read, but these studies are really worthy of inclusion for a complete review. 4) Lines 288-295, the reviewer suggest to include these contentious studies for sulfate formation in atmospheric particles published in 2016 and add a few arguments as well. It is helpful for students and young scientists. 5) Lines 616-624, relative humidity is also important factor to determine spatial variation of AOD. 6) In Section “4.3 Aerosol gyroscopic properties”, the authors are encouraged to include aerosol particle size information if possible.

Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-271>, 2017.

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