

Interactive comment on “Chemical composition and mass size distribution of PM_{1.0} at an elevated site in central east China” by Y. M. Zhang et al.

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We appreciate your review for the revised version and valuable comments on improving the paper again. We have revised the paper according to the comments and our point-by-point responses are detailed below.

Q: Section 1. The points 2 and 3 on lines 6-8 overlap each other. All the ways by which aerosol particles influence cloud properties (albedo, precipitating properties, cloud radiative properties) originate somehow from the fact that aerosols act as cloud condensation nuclei (or ice nuclei). Please combine these two points or modify.

A: Accepted. They were combined.

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Q: Line 28 in page 5: Rather “Mt Tai is optimal...” than “It is optimal...” Check out the use of tense here and elsewhere (e.g. “are” on line 51 in page 5 vs. “were” on line 2 in page 6)

A: Accepted. It has been modified.

Q: Section 3.2 Lines 8-9: I would delete the sentence “The majorities of particle mass...”. This tends to be the case almost everywhere in the troposphere, so no need to state. A: Accepted. It has been deleted.

Q: Line 11: Maybe a new paragraph could be started from “Seasonally, maximum...”
A: Accepted.

Q: Section 3.3.1 Line 47 on page 10: Figure 3 rather than Figure4? Line 14 on page 11: “Atmospheric new particle formation “ rather than “Atmospheric formation” A: Accepted.

Q: Section 3.3.2 Please do not use acronym in section title, but instead write “Mass size distributions of chemical...”

A: Accepted.

Q: Please use consistently the terms “polluted episodes” and “NPF events” throughout the text in this section when referring to those cases. Using just the words “polluted” or “NPF” in this context causes confusion.

A: Accepted. All the points about these terms have been modified, and they were highlighted.

Q: Another term that causes confusion here (and in section 4) is “increasing factor”. I would suggest defining this explicitly, e.g. “the ratio in the value of MMD between the polluted episodes and NPF event”.

A: Accepted. It has been modified.

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Q: Finally, the language of this manuscript should be carefully checked out.

A: Accepted. The languages and tenses have been carefully checked out.

Interactive comment on *Atmos. Chem. Phys. Discuss.*, 14, 15191, 2014.

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