

Anonymous Referee #1

Received and published: 27 May 2015

The manuscript presented by H. Che et al. is an excellent compilation of a climatology of aerosol optical depth and Angstrom exponents in China, including a large number of sites with a good temporal coverage. Useful and reasonable comments are added to the main results, with an adequate use of references. Therefore, I consider this article to be very adequate to ACP. I already wrote a revision for ACPD. Therefore, I will only add a few general suggestions to the authors:

Response: The authors would like to thank the reviewer for the positive comments.

1 Page 12728, line 10: please define "fugitive dust"

Response: The definition of "fugitive dust" has been added in the revised paper. The fugitive dust refers to aerosol particles that are lifted into the air either by man-made or natural activities in urban open areas, which is typically the result from activities such as the physical movement of soil, vehicles traveling over unpaved surfaces, heavy equipment operation, blasting, and wind.

2 Many of the figures are not explicitly referred in the text. Please refer to them in the appropriate paragraphs.

Response: The type writing mistakes of the figure numbers have been corrected in the revised version.

3 Figures 6-15: the authors could add one or two horizontal hair-lines to the different histograms indicating the annual average for the whole database, and for the subgroup (urban, remote, etc) so the reader can easily point out the station AOD variation in relation to the group average.

Response: According to the reviewer's suggestion, the horizontal hair-lines about the annual averages have been added in the revised paper.

4 Finally, I also suggest using the acronym "AE" for Angstrom Exponent instead of "Alpha".

Response: The term of "Alpha" has been instead by the "AE" in the revised manuscript.