Atmos. Chem. Phys. Discuss.,
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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Different trends between extreme and median surface aerosol extinction coefficients over China inferred from quality controlled visibility data" *by* Jing Li et al.

Anonymous Referee #1

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This is original analysis air pollution trends in China based on aerosol extinction measurements. The paper is well structured and clearly written. I do not find any scientific errors in methods or data interpretation. I recommend this paper to published in ACP after considering the following minor issues.

Scientific issues:

Lines 53-55: There is at least one more point why remote sensing observations are problematic here: they do not easily distinguish between different mixed-layer height, which is a major parameters affecting surface air pollution.

Lines 61-63. The authors compared visibility observations against remote sensing

here. How about in situ measurements of air pollution vs. visibility observations? I suppose that there are clear differences in terms of both spatial coverage and length of time series. I would like to see in situ measurement shortly (couple of lines) mentioned in this context as well.

Technical issues:

The use of tense is not in a good balance in the abstract. I would recommend the authors to consider this point carefully and make the necessary revisions.

Both AEC and its trend have a unit. It seems that these units have been scaled out somehow from figures 1-4, making it impossible interprete the real magnitude of AEC (or its trend) from these figures. The authors should add this information.

line 266-267: studies – > studied . . .remains to be understood whether. . .

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