Atmospheric
Chemistry
and Physics
Discussions

Interactive comment on "Multiplatform analysis of upper air haze visibility in downtown Beijing" *by* Hongzhu Ji et al.

Anonymous Referee #2

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Major comments:

The scientific significance of this study is not clear enough to me. Why the authors investigate the relationship between haze parameters and upper air visibility? How important of the upper air visibility and the results of this study on the understanding of haze phenomena? Thus, I'd suggest giving more description on this.

The data analysis and discussion are very shallow and on the surface, and thus more studies and deep discussions should be made to make the study original enough. Furthermore, I was left wondering to what new understanding we are able to take away from the study.

Minor comments:

P1, Abstract: it is better to give the periods of the haze episodes, and which altitude of the upper air and what the haze parameters refer to here.

P1, L19: "the haze days have shown a marked increase in years before 2006." How about the years after 2006? Is it after 2006 here?

P3, 2.2: please give the short description on how to get the AOD from lidar measurements, how about the uncertainties?

P4, figure 2: Only one day's data is used to validate the lidar retrieved AOD, is it because only one day retrieval available?

P4, figure3: The AEC determined from lidar is only for cloud-free conditions or all conditions?

P5, L3: "the haze parameters would alter with the hourly and daily changes of haze level", this result is well known. The figures 3 just give the variation of haze height.

P7, L7: on haze day or non-haze day?

P8, L11: I do not see the results of "the spatial transport of pollutants has a significant effect on haze parameters" can be concluded from the above description.

Figure 7: please give the number of samples.

P10, L5: please give the standard of the four haze levels