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Interactive comment

Interactive comment on "Effect of climate change on winter haze pollution in Beijing: uncertain and likely small" *by* Lu Shen et al.

Anonymous Referee #2

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This paper studied the reason for the variance in PM2.5 of Beijing during 2010-2017 winters. It shows that V850 and RH can serve as a proxy for Beijing haze and are used to predict the effect of climate change on Beijing haze. The authors make the conclusion different from previous studies. They claim no evidence for a significant effect of climate change on Beijing haze, which sounds really new to me. I recommend publishing the paper after minor revision.

General comments:

1. The authors show that the correlation between PM2.5 and PC1 is larger than V850 or RH alone. Are V850 and RH somehow related in the domain? If so, will it contribute to the larger correlation?

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[Discussion paper]

2. The authors put several figures in the supplement, which actually could be very interesting for the readers. I suggest the authors to reconsider the arrangement of figures by moving some important figures to the main text. For example, the figure illustrates the ground measurements.

Specific comments:

1. Page 1, line 13, "than either V850 or RH" alone?

2. Page 3, line 11. I suggest the authors to put the latest reference for NCEP reanalysis here.

3. Please spell it out for "RCP8.5" when the first time used it.

4. Page 6, line 20. The authors pointed out that δU500 shows no significant trend. However, in the next paragraph, the authors reported a trend in δU500. It makes me confused here. Please clarify the difference for those two statements.

Interactive comment on Atmos. Chem. Phys. Discuss., https://doi.org/10.5194/acp-2018-932, 2018.