

## ***Interactive comment on “Role of Atmospheric Circulations on Haze Pollution in December 2016” by Zhicong Yin and Huijun Wang***

**Anonymous Referee #2**

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Air pollution is a complicated question, which is caused by both anthropogenic emissions and meteorological conditions. In this study, the authors investigated the possible mechanism for the several haze in December 2016 from the meteorological aspect. They concluded some atmospheric, oceanic, and snow cover factors which are related to the haze in eastern China. The results are interesting and important for us to understand the variability of haze over eastern China. I recommend the publication of the manuscript. However, the manuscript needs some revisions before it can be considered for publication, which can potentially contribute to enhance the value of the manuscript. Specified comments: (1) The abstract should be reworded to including more physical processes. (2) Datasets and method: what is the variable of “surface”? The NCEP/NCAR data are from 1948 onward, not from 1979. (3) For the reanalysis

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data, I recommend the authors use the NCEP/NCAR or ERA-Interim for analysis. Using a dataset across the study can assure the match guarantee the consistency among the variables. (4) What time period for the correlations in Table 1? (5) There is no (a) and (b) in Figure 3. (6) Figure 6 is the averaged mean over 16-21 December 2016? How did the authors calculate the significant test in Figure 6? Similar question is also to Figure 7, 9, and 10. (7) The authors should clearly show the definition for the EA/WR pattern, haze event, and surface lift index.

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