Interactive comment on “Dust aerosol optical properties over North China” by Shengjie Niu and Xiaofeng Xu

Anonymous Referee #2

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The study presented in this manuscript is based on several years of optical depth measurements at a network of ground stations in Northern China. It is a useful data set but in its present form, the manuscript is unsuitable for publication in ACP. The reason is that it lacks any critical thinking and useful analysis. The results and conclusions do not address any important questions for the scientific community. The authors should consider the following before taking the analysis further and resubmitting for my review.

1) Choose one of the important topics related to dust in China and focus on that, e.g. climate change, health, China as a source of dust that is transported globally, etc.

2) Add additional meteorological variables. This data set can not stand on its own, it must have meteorological data to accompany it. If met data is not available than use...
analyzed meteorological fields from the global models, i.e. from NCEP or ECWMF.

3) Focus on explaining two or three cases studies where the diurnal trends differ and use the meterological or climatological data to support the hypothesis.

4) As one of the other reviewers pointed out, there is a large library of publications on China dust and the present data set has to be referenced to previous measurements to explain similarities and differnce.

5) There are AOD measurements from satellite available from NASA that should be used to compare with the observed trends.

6) With this wonderful network of measurements, all of the data should go into the analysis and perhaps the authors can actually calculate the flux of dust out of China by looking at patterns across the network.

To reiterate, the important point here is critical thinking, look deep into the data set and I believe there is much that could be contributed.

Finally, locate a native English speaker who can help during the rewriting of this paper.

Interactive comment on Atmos. Chem. Phys. Discuss., 8, 17037, 2008.