

Interactive comment on “Cleaning up the air: Effectiveness of air quality policy for SO₂ and NO_x emissions in China” by Ronald J. van der A et al.

Anonymous Referee #1

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While I find the topic of the manuscript timely and intriguing, I think that the paper is too thin on content and there is little independent information presented or literature citations given to support their weak conclusions. For instance, the authors do not really discuss or quantify the “effectiveness of air quality policy”, as given in the title, beyond saying that the trends in space-based air quality data appear somewhat consistent. Further analysis is needed before this manuscript should be published or before it can live up to what is promised by the title.

Comments

Abstract. Please clearly say in the abstract what is new and interesting about your work. “unprecedented accuracy” – you didn’t show this or even really discuss this. The

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abstract does not have any interesting or strong conclusions.

Introduction. 1st paragraph. 1st sentence. Why are satellite instruments “especially effective”? 2nd sentence. What improved datasets? 4th sentence. How is this data set “improved”? Accuracy?

Please put your work into the context of other studies of emissions and trends over China. There are quite a few recent ones to discuss that use satellite data. Please include the new paper by McLinden et al. (Nature). Many of these discuss individual emission sources, such as power plants. However, you do not, which would be necessary to estimate the effectiveness of environmental regulations.

Section 3.2. There are many speculations here. Back up them up with provincial data. Please overplot fuel consumption data in Figure 3.

Section 3.3. Are the trends in OMI NO₂ consistent with the provincial emissions data? Please plot.

Section 3.4. Again, I’m interested in the provincial data.

Figures 1 & 2. Need to have a map of provinces for the reader to refer to with major cities. Most readers will not know provincial names. It may also help to plot the locations of major power plants.

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-445, 2016.

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