

Interactive comment on “Impacts of Coal Burning on Ambient PM_{2.5} Pollution in China” by Qiao Ma et al.

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The authors use an emission inventory that separates the contribution of coal burning to PM_{2.5} emissions by different activity sectors for the year 2013. This is an update of an existing emission inventory for 2010. The model uses the nested capability of GEOS-Chem and compares results for surface PM_{2.5} concentrations to the measurements of the China National Environmental Monitoring Center for that same year.

The description of the simulation is too concise for the reader to understand from the information provided if the contributions to PM_{2.5} from sources outside the nested domain are accounted for or not. If these contributions are accounted for, a paragraph should discuss the importance of these contributions and a Figure should show the relative importance of the sources within the domain and contrast them with outside

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sources and their contribution.

The aerosol composition used page 6 has been gathered for measurements taken from 2006 to 2007 in cities across China. Your study centers on the year 2013. How did you connect this composition for 2006-2007 to the year 2013?

Concerning Figure 2, you present the maps of surface PM_{2.5} for four seasons and simply give the normalized mean bias and the correlation coefficient. I would like to see with Figure 2 the correlation plots so that the reader can have a better view of how the predicted PM_{2.5} concentrations agree/disagree with the measured ones.

Finally the syntax for paragraphs 4.1 through 4.4 should be improved before the manuscript is considered for publication in ACP.

thank you,

Yves Balkanski

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