

Interactive
Comment

***Interactive comment on* “Spatial distributions and seasonal cycles of aerosols in India and China seen in global climate-aerosol model” by S. V. Henriksson et al.**

S. V. Henriksson et al.

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Received and published: 7 June 2011

Correction to the supplement pdf: answer to the first paragraph below should be the second paragraph below.

This work applied a “REAS prediction inventory” for the year 2006 as the current emission scenario. However, the original REAS inventory was developed for years 1980–2003. The authors should describe the differences between the prediction inventory in this work and the original REAS 2003 and elaborate the modifications made to the original inventory. In addition, the REAS inventory was reported to be unrealistically high for some species after 2000, for example, SO₂ in China (Aikawa et al., 2010; Smith et

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al., 2011; Zhang et al., 2009). I am wondering whether the authors have considered other newly developed inventories such as INTEX-B (Zhang et al., 2009), GAINS-Asia (Klimont et al., 2009) or EDGAR4.1.

Description of the prediction inventory is added to Section 3. It is true that Zhang et al. (2009) and Smith et al. (2011) obtain lower SO₂ emissions, but also these references recognize the spread between and uncertainty within the different inventories. We have in the new version of the manuscript a more quantitative comparison of MODIS and simulation AODs and the correspondence for China is good, especially in the latter half of the year, which considering the large contribution of sulfate aerosols to AOD suggests that SO₂ emissions are at least not much overestimated. INTEX-B and GAINS-Asia with their own strengths and weaknesses have come out since we started our study. We briefly discuss them in Section 3 in the revised manuscript.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 4017, 2011.

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