

Interactive comment on “Sulfur dioxide emissions in China and sulfur trends in East Asia since 2000” by Z. Lu et al.

Anonymous Referee #1

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I find this is a very good paper, making use of the key past contributions and new data and connecting the emission estimates with trends observed by remote sensing community as well as deposition and ambient measurements. And it is well written with fair amount of quality graphical illustrations. Congratulations to the authors who have also carefully considered comments from the first quick review and included them in the submission.

Only few minor comments:

General: In previous work of many authors the common assumption about effectiveness of implemented policies proven often false or at least too optimistic. While the remote sensing activities and other measurements confirm the increased penetration of properly operated FGD, it would be of great interest to the readers to make a brief

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comment in the conclusions if that is going to continue and what has changed in the last years that the chances are emissions of SO₂ will start declining?

p.8659, line 11-15; One could include here also reference to the work of remote sensing community showing such trends; few papers appeared recently and already few years ago Andreas Richter from Bremen University has been showing at the ACCENT meeting in 2007 not only NO₂ column changes but also development in SO₂. However, the latter results were never published in peer reviewed literature...proceedings from that meeting are available.

p.8660, line 16-17; In fact some of the referred studies do not present a single year estimate but rather no annual time series for past years.

p.8661, line 10; It would be useful to add one sentence of explanation why these regions were not included.

p.8662, section 2.1.3; There is actually no comment on treatment and data sources for non-road vehicles? Suggest adding a brief discussion.

p.8662, section 2.1.3; It would be very useful to add a short discussion on how appropriate US EPA MOBILE emission factor model is for China and if there are alternatives that could offer a more representative to China set of factors.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 8657, 2010.