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Atmospheric Chemistry and Physics Discussions

Interactive comment on "The effects of recent control policies on trends in emissions of anthropogenic atmospheric pollutants and CO_2 in China" *by* Y. Zhao et al.

Anonymous Referee #1

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This manuscript presented a comprehensive picture of emissions in China during 2005-2010, which is of great intersts to the community. The paper is well organized and written. I therefore support publication after addressing the following comments:

When compiling this inventory, some of most recent advances in emission factors were omitted. I understand that emissions presented in this paper were estimated even earlier, but it is still helpful to put the work into the context of recent literatures, e.g., on-road emission factors measured by Tsinghua's group (published in Atmos. Environ. and Atmos. Chem. Phys. recently), residential emission factors from Tao Shu's group (in Envrion. Sci. Tech.), etc.

Background pixels should be rejected when comparing anthropogenic emissions with satellite data, because emissions from natural sources didn't growth as much as anthropogenic emissions. I believe this can explain part of discrepancy in SW and NW, where background pixels are dominant.

P24991, refer to Huo et al., Energy Policy, 39, 7130-7135; 43, 6-16; 43, 30-36; for updated method and data.

P25008, given the fact of high uncertainties in current SCIA SO2 data, discussions here are mainly speculative and should be shortened.

P25003, line 10, a reference to ground measurement data would be helpful.

P25007, line 7, should refer to Boersma et al., Atmos. Meas. Tech., 4, 1905-1928, 2011 for DOMINO v.2.

Acknowledgement: TEMIS should be also acknowledged for free use of their data.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 24985, 2012.