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Interactive comment on "Atmospheric impacts of the 2010 Russian wildfires: integrating modelling and measurements of the extreme air pollution episode in the Moscow megacity region" *by* I. B. Konovalov et al.

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In contrast to traditional inventories (one of the most comprehensive modern studies is by van der Werf et al. (2010)), this paper is based on measured FRP that is simply difference in brightness temperature between fire and background pixels. A set of empirical relations and 6-7 parameters taken from literature combined with a chemistry transport model allowed the authors to estimate the CO emission rates. The authors demonstrated a high level skills in using these tools, but the result is unsatisfactory. The final estimates of emitted CO was found to be just $\frac{1}{4}$ of a top-down estimate in our

paper (Yurganov et al., 2011). This huge difference needs to be explained.

I think the justifications for using specific assumptions (like assumed SSA, pointed out by Chubarova (2011))should be better. However, to my mind, the traditional inventory gives much more information about specific contributions in biomass burning emissions, then using any empirical relationships. I foresee a fruitful discussion and comparison of different techniques for the case of Russian wildfires of 2010 in the nearest future as long as new results would become available.

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