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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Comparison of global inventories of monthly CO emissions derived from remotely sensed data" *by* D. Stroppiana et al.

Anonymous Referee #2

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The paper by Stroppiana et al. is a good paper that attempts to shed light of the accuracy of global inventories of monthly CO emisisons through a comparison of different products that are used to drive the emission inventories. It is a complex task because there are any differences in the methods used, the data sources utilised and the uncertainty associated with these data sources. The results look encouraging, but a key limiting factor is that GFEDv2 is used as well as reference to a land cover data set that is not considered to be state of the art (GLC2000). The paper still does not address whether the derived results are correct as validated from an independent method. This is stated in the last sentence of the abstract. So what have we learned with this paper, it is not clear to me.

The following specific comments are made: 1. The data and methods are not strictly independent of each other. For example MOPITT is couple with an active fire data set. How coupled? 2. There are strict conditions of use for L3JRC (wrt seasonality). Has this been observed? 3. Many beleive that the ATSR inventory is flawed as it collects its data at night when there are much fewer fires. What assumptions have been made? Is the data set reliable? I understand the WFA has recently been re-processed. Are the authors aware of this? 4. I'm not clear what the reference time period for the intercomparison? Is the time period sufficient? 5. Are not MODIS and GFEDv2 based on very much the same data set? I it therefore no surprise that the results are similar and agreement is high?

The literature review is sound. The use of figures are necessary.

My recommendation is to look at GFED3, consider a new version of the WFA, use L3JRC with seasonality indicators as much as possible and finally to ue GlobCover as the baseline vegetation map.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 17657, 2010.