

Interactive comment on “Improving the seasonal cycle and interannual variations of biomass burning aerosol sources” by S. Generoso et al.

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There is almost no discussion of how the technique for estimating emissions presented is different from the techniques presented by other researchers. Likewise, there is no comparison or discussion of the authors' results with those of other researchers. I feel that you need to clearly establish how your work is different from work presented in previous publications. As I see it, this work simply presents again the methods of previous researchers.

Here are a few examples:

1) How is the method presented different from that of Schulz [2002]? You say "This work has some similarities with that of Schultz (2002) but shows in addition a comparison with satellite and ground based measurements." Is it the same method? Do you

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get better results than Schulz? Schulz is listed as a co-author on your manuscript.

2) Question 1 also applies to the work of Duncan et al. [2003]. You say "The method presented in Duncan et al. [2003] is similar but applied to carbon monoxide emissions." To clarify, the manuscript of Duncan et al. [2003] clearly states that the method they presented is applicable to other trace gases and aerosols and that CO is used as an example. In fact, Chin et al. [2002] applied the method of Duncan et al. [2003] to aerosols and numerous researchers have applied the method of Duncan et al. to trace gas emissions. How is your work different from the method of Chin et al.? You don't even cite Chin et al. in your manuscript. Do Chin et al. get a better model-observation agreement than you? In my opinion, Chin et al. get a better agreement than you?

Duncan, B.N., R.V. Martin, A.C. Staudt, R. Yevich, J.A. Logan, Interannual and Seasonal Variability of Biomass Burning Emissions Constrained by Satellite Observations, *J. Geophys. Res.*, 108(D2), 4040, doi:10.1029/2002JD002378, 2003.

Chin, M., P. Ginoux, S. Kinne, O. Torres, B. Holben, B.N. Duncan, R.V. Martin, J.A. Logan, A. Higurashi, and T. Nakajima, Tropospheric aerosol optical thickness from the GOCART model and comparisons with satellite and sunphotometer measurements, *J. Atmos. Sci.*, 59(3):461-483, 2002.

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