

Interactive comment on “Global estimation of burned area using MODIS active fire observations” by L. Giglio et al.

Anonymous Referee #2

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The paper by Giglio et al. exploits the synergies of global active fire observations and burned area retrievals from the MODIS instrument in order to derive a consistent time series of global burned areas for the four-year period 2001-2004. This data set will be very useful for estimating the biogeochemical and atmospheric chemical impacts of wildfires including their inter-annual variability. The paper presents a new approach by scaling active fire counts to a limited (but reasonably extensive) set of burned area data using a regression tree and thus applying regionally adapted scaling factors rather than globally homogeneous values as it was done in previous studies. Of course, the authors correctly state that this method can only be seen as an interim solution, but it is probably the best one can do with active fire data to-date. The methodology is

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adequately described and well explained, appropriate references are provided, and the right amount of detail is given. In terms of structure and style, this paper could serve as a role model for aspiring authors.

As I have only very few minor comments to make, I suggest to publish this paper without further review, but I ask the authors to make the following changes: (1) Abstract: remove "true" - this is unnecessary and may be misleading

(2) Abstract: remove conventional

(3) Abstract: replace degradation of the by lower

(4) Abstract: add from multiple sensores and retrieval approaches in between data sets and become available

(5) p. 11099, line 10: replace diminishing to with by

(6) p. 11099, line 22: if I understand correctly, this last factor would lead to an opposite effect. May need to be reformulated

(7) p. 11108, ll. 15ff: Suggestion to rewrite as Our estimates of the total global annual area burned calculated for the years 2001-2004 range from a low of to a hogh of Although this does not qualify as an evaluation, we compare these results with the GBA2000 and GLOBSCAR products available for the year 2000 (Table 5). Despite ... our values are only 0.3%... They are, however, substantially above

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