

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

Anonymous Referee #1

Received and published: 21 December 2005

General comments

This is an excellent paper. It gives a valuable contribution to reducing uncertainties in the estimation of emissions from biomass burning, through the development of multi-year, global estimates of area burned. The procedure employed is original, technically sound, and is clearly explained. The advantages and limitations of the method proposed and of the results obtained are adequately discussed.

Specific comments

Section 4.2 Uncertainties: the authors state that very small burned areas are of relatively little interest to most users, and that larger burns are the most important, namely

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

in terms of emissions. I disagree, and I think this contradicts the authors' own work in section 3.3. "Tropical closed-canopy forest correction", where they state that "Ĕdespite the fact that a relatively large area of forest has been cleared and burned, the spatial extent of the burn scar per se is much smaller that the area cleared" and "Ĕlikely to systematically underestimate the effective area burned and fuel consumed." The point on fuel consumption is especially important, because slash residues from a relatively large area are piled up and set on fire. Thus, very large amounts of biomass are consumed, but generate a fire scar covering a small area. These small scar are very relevant from the standpoint of emissions. I recommend that the authors rewrite the sentence in section 4.2, to bring it in agreement with section 3.3. On section 6. Evaluation, when discussing global results (World) I think it would be useful to comment on the role the El Niño Southern Oscillation phase may have played on determining those results.

Technical corrections

In section 3.2. Regression tree approach, please list the meaning of variables close to equation 3.

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 11091, 2005.

[Full Screen / Esc](#)[Print Version](#)[Interactive Discussion](#)[Discussion Paper](#)