

Interactive comment on “Airborne measurements of trace gas and aerosol particle emissions from biomass burning in Amazonia” by P. Guyon et al.

Anonymous Referee #1

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The manuscript analyses emission of carbon monoxide, carbon dioxide and aerosol particles from biomass burning in the Amazon region from measurements performed aboard an instrumented aircraft during LBA-SMOCC experiment. In general the paper is comprehensive and makes comments on the limitation of aircraft measurements but some questions remain unclear: 1) the authors claim they retrieved emission ratios for aerosol number concentration from deforestation fires, but on page 2797 they mentioned they had an instrumental problem with the particle counter which saturated when concentration was higher than 6999cm^{-3} , limiting analysis for data collected on the edges of the emitted plumes. Could the obtained aerosol number emission ratio present a bias due to this methodological problem? 2) Actually, due to an instrumenta-

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tion limit the estimated emission ratio comprises aerosol particles smaller than 300-500 nm in diameter only. From Reid and Hobbs, 1998 (JGR 103 D24, 32013-32030), particles larger than 1 micrometer in diameter can also be detected. 3) How much those limitations could interfere on the estimated CN emission ratio/factor?

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 2791, 2005.

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