

Interactive comment on “OH-chemistry of non-methane organic gases (NMOG) emitted from laboratory and ambient biomass burning smoke: evaluating the influence of furans and oxygenated aromatics on ozone and secondary NMOG formation” by Matthew M. Coggon et al.

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This paper provides some important insights into emissions from biomass burning.

Biomaterial was burned and chemical measurements of the resulting emissions. The MCM chemical mechanism was used in simulations of the experiments. The authors added more chemical reactions to the MCM to improve its performance in simulating the experiments.

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Discussion paper



Much more data like this is needed for the continuing development chemical mechanisms for atmospheric chemistry modeling. Also the authors have used some quantum chemistry in the further development of the test reactions that were added to the MCM. Finally, they considered real biomass burning plumes.

All in all, this paper represents a good mix of laboratory measurements, mechanism development with evaluation and applications to the real world. It is an excellent template for future studies.

Minor: Lines 210 - 215 I commend the authors for using the correct term, photolysis frequencies in this section. However, they need to be consistent and state at the beginning: "Photolysis frequencies are calculated using literature cross-sections and quantum yields of relevant organic and inorganic species..."

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