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Interactive comment on "Photodegradation of secondary organic aerosol generated from limonene oxidation by ozone studied with chemical ionization mass spectrometry" by X. Pan et al.

Anonymous Referee #4

Received and published: 11 May 2009

Review:

The manuscript of Pan et al. describes the generation of photoproducts from the photochemical degradation of ozone-generated SOA from limonene. This work is an extension of previous work of the authors, bringing a new analytical technique (chemical ionization mass spec) to bear on the problem.

The work is novel and will be of interest to the general readership of ACP. I suggest it is published, with minor revisions as indicated below:

C691

Page 4730: Is the final paragraph necessary (which describes the organization of the paper?)

Page 4737: proton transfer mechanism relies solely on the proton affinity of the target ... it is not necessarily true that only oxygenated species will be ionized.

Given your irradiation intensity, what would be the corresponding atmospheric irradiation time, i.e. does 5 minutes of experimental irradiation represent 1 hour of environmental exposure, etc.?

How might experimental results change (and can you do the experiment at some future point?) if using humidifed air? It might help to explicitly state in the manuscript why dry air was necessary.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 4727, 2009.