

Interactive comment on “The time evolution of aerosol composition over the Mexico City plateau” by L. I. Kleinman et al.

Anonymous Referee #2

Received and published: 14 November 2007

This paper discusses the evolution of aerosol composition over the Mexico City Plateau based on measurements from multiple DOE flights covering a range of photochemical ages. Air masses analyzed range from freshly emitted to approximately 1 day old according to NO_x/NO_y ratio. The authors performed a thoughtful analysis of their data and report important findings such as the substantial underestimation of OA production using chamber yields and VOC measurement data and the lack of correlation between SOA production rates and pollution level. This paper is extremely well written, on a topic that clearly suits the scope of ACP. I highly recommend its publication.

One suggestion I want to make is to show the scatter plots of aerosol species vs. CO for the entire dataset (color by photochemical age). These figures will provide good overviews. They can be included in the supplementary info if limited by space. I am

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curious about how the organic-equivalent mass concentrations of m/z 44 and 57 vary as a function of photochemical age. It will be interesting to see if there is any trend in HOA concentration vs. photochemical age.

Minor comments:

Replace amu/z with m/z (e.g. Page 14465, line 3)

Page 14473, line 14, extra -a- after -we-

Page 14479, line 21, replace -loose- by -loss-

Page 14484, line 26, replace -massed- with -mass-

Page 14496, footnote 1, Age Growth factor was defined in Eq. (7)

Fig. 9 can be expanded to include the plots of SO_4/CO and NO_3/CO vs. Age.

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 14461, 2007.

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