

General comment:

- Many figures show yields vs SOA mass loading. I assume that the SOA mass loading corresponds to the resulting SOA using different concentrations of precursors (alpha-pinene etc), and not to seed aerosol loading. – Is this correct?

Could you add to the figures the information what precursor concentrations have been used to obtain the SOA mass yields? For example, I assume that the different ‘branches’ in Figure 6 correspond to different initial alpha-pinene concentrations (0.5 – 200 ppb)? Would the figure look the same if you plotted yield vs initial precursor concentration? – I’m not suggesting presenting all figures like this, but I’m just trying to understand it.

- Please use consistent descriptions on the y-axes (either Y or ‘mass yields’)

l. 65: Define MW

l. 113: Why is Table 1c cited before the other Table parts? – I think it is rather unusual anyway to have multiple Table parts (a, b, c), but I leave it up to you or to the copy editing service to change it or not.

l. 209: The x-axis of the figure seems to only show a range of < 100 (~800?).

l. 232: replace ‘value’ by ‘yield’

l. 252: ‘ozonolysis’ misspelled

l. 268: Add the value measured by Lee et al (0.58?)

l. 281: Do you mean ‘Figure 3’? (Fig. 2 shows ozone oxidation.)

l. 313: Shouldn’t it just read ‘... from application of MCM’ as PRAM is not available for NO₃ reactions? – If so, please also change the header of the figure.

l. 400: Shouldn’t that be 99% (as in the SI, you list 98.59%)?

l. 567: Please replace by citation of ACP (not ACPD) paper.

l. 622: Reference is incomplete

l. 644: Update reference.

l. 685: Incomplete.

Supplement material

Table 1s a- c: Add to the table captions that it is for the oxidation of alpha-pinene by ozone

l. 28, 34 and 41: Should be called ‘Figure 4s’

l. 36: The reference to Figure 9 seems wrong here. Do you mean Figure 4s?