

Interactive comment on “Quantification of the carbonaceous matter origin in submicron marine aerosol particles by dual carbon isotope analysis” by D. Ceburnis et al.

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Received and published: 19 March 2011

This manuscript is very important and interesting showing results about carbon isotope to identify sources of organic aerosols.

The first look of the title makes me confusing, since it mentions submicron particles, but indeed it refers to $D_p < 1.5$ micrometer throughout the paper, is that strange? Also, “aerosol particles” is awkward, why not just use “particles”?

I also think the paper might require expansion. In the introduction, little information is given for the stable carbon isotope analysis, I think more relevant studies should be mentioned, for example, Fisseha et al., Rapid Commun Mass Spectrom.

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2006;20(15):2343-7; Li et al., Anal. Chem., 2010, 82 (16), pp 6764–6769; Zhang et al., Chemosphere, 75, 2009, 453-461.

Page 2752, line 5: “other postulated . . . to marine sources”. I think it is probably better to cite the references for the specific species individually, not to mix them together. (Additionally, there are two recent papers on amines: Ge et al., Atmos. Environ., 2011, 45, 524-546 and 561-577)

I am also very surprised by the results of “0% continental non-fossil carbon”, probably more explanations and comparison with other relevant studies should be added.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 2749, 2011.