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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Inter-comparison of source apportionment models for the estimation of wood burning aerosols during wintertime in an Alpine city (Grenoble, France)" *by* O. Favez et al.

Anonymous Referee #1

Received and published: 8 March 2010

Thank you for your reply! I have some additional comments.

To (1) – I'm looking forward to the clarifications about the "another version of this model" in the revised manuscript. There is no doubt that you need a C3 as soon as you have SOA and/or primary biogenic OA. But you performed all your studies in winter and showed previously that C3 is not even necessary for Paris. Please make clear the benefit of C3 to this study.

To (3) – I'm happy if you can convince me and future readers that the aethalometer model is not somewhat "calibrated" by choosing best fitting α parameters. I agree

– you can definitely do so by presenting results of the sensitivity calculations in the manuscript.
I figured that you forgot to mention the site specific C2 and C3 coefficients in the actual manuscript. Please state them as they might be of interest for future studies. Certainly C coefficients have no precision better than 10000. But I would assume the precision to be even worse? To clarify this please mention the C coefficients with error bars (you should get them from the regression) and add the R^2 of your regression.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 559, 2010.