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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Quantification of aerosol chemical composition using continuous single particle measurements" *by* C.-H. Jeong et al.

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This work provides a quantification of aerosol chemical composition using Single particle MS. The results were given as scaled values from single particle composition, but it is in correlation with other measurement. The results in AMS particularly show that ATOFMS is in consistent with measurements by AMS. I know some other references showed no correlation between them (I suggest the authors to make a literature search on the results ATOFMS vs AMS). Then the method in this paper may be very useful in future studies, but the assumptions made indeed need to be discussed in very details for readers to catch it. But overall, this is a good and important paper.

(1)I agree with referee 1 that the abstract should be refined.

(2)More related ATOFMS field studies should be mentioned in the introduction part. For example: Zhao et al., JGR,2005,110(D7).

(3) About amine particles, a very important paper by Angelino et al., EST ESt, 35, 3130-3138 is missing. Recently, i noticed a good review by Ge et al., AE, 2011,524-546 on this topic, and a companion paper (AE, 2011, 561-577) tried to explain the gas/particle partitioning based on equilibrium thermodynamics, those probably should be mentioned.

(4)I think meteorologic conditions associated with these observations should be provided and discussed.

(5) The consistency between ATOFMS and AMS is worthy to be highlighted, of course, also more detailed explanation and data treatment are required.

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