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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Identification of particulate organosulfates in three megacities at the middle and lower reaches of the Yangtze River" *by* X. K. Wang et al.

Anonymous Referee #1

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I have a short remark to the authors comment on 'Bearing in mind the availibility of instruments having resolutions better than 1 ppm, and the availablitly of the environmental samples as those considered here, we do believe having conducted our study according to the best available standards.'

As mentioned in the main the text of the paper – the authors used a mass tolerance of 2 ppm and only C, H, O, N, and S elements for their formulae assignments. This would be valid if you have authentic standards or/and compared your chromatographic RTs as well as the MSn fragmentation patterns with the literature data for all of the suggested OSs. The riverine environments (including Yangtze River region) are not only

rich in nitrogen but also phosphorous (e.g. Li et al., 2007, Duan et al., 2009, Hou et al., 2009). Therefore, not considering phosphorous and isotopic ratios for the most abundant elements (i.e. C, N, S and P) could lead to significant formulae misassignments, especially for the ions with m/z >300. The authors describe their formulae assignment procedure by referring to Wozniak et al. (2008). However, the work by Wozniak et al. (2008) does consider phosphorous and isotopic ratios in their molecular formulae assignment procedure.

References:

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