

Interactive comment on “Mass Spectral Characterization of Primary Emissions and Implications in Source Apportionment of Organic Aerosol” by Weiqi Xu et al.

Anonymous Referee #1

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This is a very important and necessary piece of work comparing mass spectral profiles of different organic aerosol types comparing the 'standard' vs 'capture' vaporisers used in the AMS and ACSM. While it is acknowledged that there are differences between the two, an extensive comparison for different 'real world' aerosols is currently lacking. The experiments are appropriately and methodically performed and include both online and offline measurements, making these results applicable to both. This paper demonstrates the improvement to ME-2 source apportionment when these profiles are applied, showing this to be a very important technical contribution that will aid analysis in the future. While the aerosols sampled are undeniably focused on Chinese sources, given the number of these instruments in use in China currently, this will still be of

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much use to the community and is firmly within scope for AMT. The work is appropriately and methodically performed and generally well written. I have only a couple of minor comments, but otherwise recommend publication.

Data availability: Given the scope for utilisation of this data, I would strongly encourage the mass spectral profiles to be hosted on a public archive. Traditionally, this has been the University of Colorado database. One would expect that future utilisation of these profiles by others will drive up the paper's citations, so it will be in the authors' interests to do so.

Consider placing figures S1 and S2 in the main article, as I think these are of sufficient interest that they should exist there.

Page 2, line 14: Should be 'owing' rather than 'owining'

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