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Atmospheric Chemistry and Physics Discussions

Interactive comment on "One-year characterization of organic aerosol composition and sources using an extractive electrospray ionization time-of-flight mass spectrometer (EESI-TOF)" *by* Lu Qi et al.

Anonymous Referee #1

Received and published: 18 February 2020

The presented work is quite innovative, could be helpful for identification of the key sources over a long time period based on offline, highly chemically-resolved data provided by an EESI-TOF.

In the offline AMS section, line 20, Authors mentioned about WSOM fraction. What is the fraction of water non soluble organics? If the fraction is large, then it is important to account water non soluble fraction otherwise they will lead to error in the source contributions.

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Discussion paper

In the description of primary biological organic aerosol (PBOAEESI), author suggested that PBOA is not related to the cooking emissions. It was also mentioned that on comparison with previously obtained EESI-TOF COA factor, the dominant PBOAEESI ions are different from the major components of cooking-related EESI-TOF factors obtained from source apportionment of online summer and winter mass data. Also mentioned, the time series of the PBOAEESI and COAAMS factors are not well correlated. It would be nice to add the relevant profile of these factors in the supplementary.

Fig5, font size of the legends should be increased, not readable.

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