

Interactive comment on “Insights on organic aerosol aging and the influence of coal combustion at a regional receptor site of Central Eastern China” by W. W. Hu et al.

Anonymous Referee #1

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The paper presents the characteristics of atmospheric fine particles in Spring from a receptor site which lies between the Jiaodong and the Liaodong Peninsula in the Bohai Sea. Results of different chemical in submicron aerosol such as sulfate, organic, nitrate, BC etc are investigated using HR-ToF-AMS, Aethalometer, GAC-IC. Based on AMS high-resolution spectra data, four OA components were resolved by Positive Matrix Factorization (PMF), and a coal combustion OA (CCOA) was reported.

I recommend this paper to be published in the journal.

There are some specific comments for authors: 1.Line 15: ... the season of spring

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monsoon at a receptor site, why do the authors use spring monsoon? 2.What kind of reference volume is used when the authors report the concentration? The concentration could be different when using different reference volume. 3.Line 390, The diurnal variations of OM/OC and elemental ratios(O/C and H/C) are shown in Fig. 10b., please check the figure order. Are OM and OC both from AMS measurements or OC from Sunset measurements? From the supplement material, we could see the slope of 1.52 for OC from AMS vs. OC from Sunset online EC/OC analyzer. 4.Line 542, and followed by nitrate, sulfate, ammonium, nitrate, black carbon and chloride (in that order). There are twice nitrate, should delete one of them. 5.Line 766, what kind of time resolution data are used in Table2? 6.Line 775, In Figure1, the fraction of PM1 of BC is much higher than 6% by naked eyes, please check to make sure the figure is correct. 7.Line 788, in Figure2c, how many bins are used for probability, why the Probability density of PM1 concentrations (right) is so low? 8.In supplement Table S-1, there is no Sunset EC/OC instruments, but you showed the results in Figure S-3

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