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**Title: Insight into the Composition of Organic Compounds ( $\geq C_6$ ) in PM<sub>2.5</sub> in Wintertime in Beijing, China**

**Author(s): Ruihe Lyu et al.**

**Special Issue: In-depth study of air pollution sources and processes within Beijing and its surrounding region (APHH-Beijing) (ACP/AMT inter-journal SI)**

## **RESPONSE TO REVIEWER #2**

Comments: This manuscript has been well improved and the authors have answered most of the questions. However, I still have one question regarding the conclusion of 'There is strong evidence that the organic aerosol is more highly oxidized ...on haze days' in the abstract (Line 49-50). In line 534-537 'By definition, concentrations of PM<sub>2.5</sub> are elevated during haze events, but the question arises as to whether primary or secondary organic compounds make a larger contribution to the rise in concentrations. Constituents that are expected to be primary are typically elevated in mean concentration by a factor of around two', it shows the higher primary contribution on haze days compared to non-haze days. In Line 376 'lower ratios of O-PAHs/PAHs on haze days than non-haze days were observed'. In line 549-554 'This result was consistent with Section 3.5; ...a low ratio may reflect a high degree of further processing to form more oxidised 553 species on the haze days compensating for enhanced formation'. These observation or discussion probably indicates that the organic aerosol on non-haze days are more oxidized. So, I'm doubting about the conclusion in the abstract. If this comment can be addressed, I am very happy to suggest this manuscript to be published in Atmos. Chem. Phys.

**RESPONSE:** We thank the reviewer for pointing out the apparent inconsistency. The statement in the abstract is based upon the distribution of compounds in the chromatogram, and the final sentence of the abstract has been amended to reflect this more clearly.