

## Response to referees

We would like to express our sincere appreciation again for the referees' time and efforts devoted to improving this manuscript. The minor errors pointed out by referee 2 has been revised as follows:

**Comment 1:** L60, the meaning of “massive data analysis” is vague. Revise.

**Response:** We deeply appreciate this valuable suggestion. This sentence has been revised as follows: “The AMS-PMF method is based on the PMF analysis for the mass spectral of organic aerosols, which is usually a big dataset since online AMS has a high time-resolution”.

**Comment 2:** L486, should be “Thornton et al., 2020”

**Response:** We deeply appreciate this kind suggestion. This error has been corrected.