

## Editor comments

l. 36: ‘...that amines were undergone uptake by particles’ should be replaced by ‘that amines were taken up by particles’

l. 71/72: I think Referee #1 criticized this sentence because of its structure. I suggest removing it.

l. 72 – 82: This discussion of previous results is very brief. Add some more details in order to make it a useful comparison to your work:

- Which particle types were found in Barcelona?
- Why were TMA particles in Guangzhou important?
- Did Zhang et al find TMA formation in fog? (It is not clear what ‘similar scenario’ refers to.)

l. 110: remove ‘yielded’

l. 121-123: The sentence is still not clear. What are duplicate particles? ‘Query results’ is not clear either.

l. 134/135: This sentence is not clear: Do you mean: ‘The RPA of DEA for each particle type was first calculated from all particles’? Please clarify.

l. 140: Do you mean ‘...accounting for 70% and 78% of all amine-containing particles in winter and summer...’?

l. 147: remove ‘mixing’

l. 163/164: I think this sentence (‘Seasonal variations ...’) can be removed here as the discussion of the unscaled size distribution starts only in l. 176.

l. 217: Only the left panel in Figure 3 shows wintertime results. If you refer to Figure 3a, you should add ‘a)’ and ‘b)’ to the Figure, respectively.

l. 252: Remove ‘In addition’.

l. 271: It is not clear what you mean by ‘this kind of discussion’.

l. 281-283: Remove this new sentence as it is already in l. 132. You can refer here simply to Section 2.3. (Even though I don’t think it is necessary at all.)

l. 299-301: As Referee#2 stated correctly, you cannot make any assumption on aerosol water content and pH since you analyzed dry particles. Thus, the new sentence does not make much sense.

I suggest changing your text

*In this study, the relative acidity of amine-containing particles ((sulfate +nitrate)/ammonium, (Yao et al., 2011)) was in a range of 20-150, providing favorable conditions for the dissolution of DEA. Indeed, due to the nature of SPAMS, the amount of aerosol water content and pH were unavailable, making it difficult for further analysis.*

as follows (or similar):

*As particles are dried in the SPAMS, the amount of aerosol water content and pH were unavailable. The values of the anion/ cation ratio ((sulfate +nitrate)/ammonium, (Yao et al., 2011)) were in a range of 20-150 suggesting that the particles might have been acidic which favors the dissolution of DEA.*

l. 309: remove ‘content’

l. 342: replace ‘OC’ by ‘organic’

Supporting information:

- Use the updated manuscript title on the first page

- Change ‘Table 1’ to ‘Table S1’

- Figure S1: This map is not very useful. The first panel does not show any contrast and, thus, does not give any information. I suggest adding a map that shows the location of the sampling site within China and/or the larger region. If you have a satellite image with high resolution, it might be useful to add to show the topology, together with a scale.