We really thank the editor for their comments. We have addressed the comments (numbered, below), with editor's comments in quotes and italics, and our responses immediately after in plain text.

Editor

1. *"l. 81, and 86: The study by Nguyen et al. (3013) refers to lab studies of organic compounds. Do you mean Nguyen et al. (2014)? If not, please, add a reference for a study that shows that secondary inorganic aerosol formation is promoted by aerosol LWC."*
We added a reference, Seinfeld and Pandis (2006), to support our statement that inorganic aerosol formation is promoted by aerosol LWC. For example, aqueous phase SO_2 reactions produce SO_4^{2-}. Nguyen et al. (2013) is a lab study that demonstrates LWC's role in secondary organic aerosol formation.

2. *"l. 135: where a wide range", " l. 171: Köhler theory (?) can be used ....", "l. 222: SOAS average composition aerosol→SOAS average aerosol composition ?", "l. 294: accordingly", "l. 347: You might want to put 2 µg m^{-3} in parentheses", "l. 369: doesn't→does not", "l. 389, and l. 546: owing to", "l. 489: were measured", "l. 553: do not", "l. 565: when pH approaches…"*
We have revised the text according to the above editorial suggestions.

3. *"l. 303 and everywhere else: Numbers ±SD are usually rounded to their last significant digits:*
24.7 ±3.3 ℃→25 ± 3
73.8 ± 16.1 %→74 ± 16
4.52 ± 3.75 µg m-3→5 ± 4"
We have rounded T and RH data as the editor suggested, and particle mass data to 0.1 µg m^{-3}.

4. *"l. 474: Do you mean 'gas and particle data of NH3 and NH4+, respectively' are not available'?."*
The sentence has been reworded to "When gas data are not available, pH predictions are not as accurate (Hennigan et al., 2014)."

5. *"l. 524: 'aerosol sources of particle water' is unclear. Please reword."*
We have revised the sentence to "The effect of particle water on pH can also be delineated. pH calculated just by W_i alone will be affected by an underestimation of particle water, resulting in a slightly lower pH (Figure 13)."

6. *"Comment 37: It might be worthwhile to include your response to the reviewer in the manuscript text."*
We have added an explanation after Equation 6 as "H_{air}^+ and W_i are the output of ISORROPIA-II based on input of water soluble ions, RH, and T. H_{aq}^+ is H_{air}^+ divided by the LWC, and so including W_o decreases H_{aq}^+ by a factor of $W_o/(W_i+W_o)$, relative to only considering W_i."

References

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Nguyen, T. B., Coggon, M. M., Flagan, R. C., and Seinfeld, J. H.: Reactive uptake and photo-Fenton oxidation of glycolaldehyde in aerosol liquid water, Environmental science & technology, 47, 4307-4316, doi: 10.1021/es400538j, 2013.

Seinfeld, J. H., and Pandis, S. N.: Atmospheric Chemistry and Physics: from Air Pollution to Climate Change 2nd Edition, John Wiley & Sons, Inc., Hoboken, New Jersey, 2006.