

## *Point by Point Response to Review Comments*

### **Daytime and nighttime aerosol soluble iron formation in clean and slightly-polluted moisture air in a coastal city in eastern China**

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We thank the **Reviewer #2** for the detailed and constructive comments. We provide below point-by-point response to the comments. The reviewer's comments and the original contents of the manuscript are in **black**. The response text is in **blue**. Revisions in the manuscript are in **red**.

**Comment (1):** Page R2: it is “Aerosol liquid water content (ALWC)” not “Ambient Liquid Water Content (ALWC)” in General response.

**Response:**

Many thanks for the reviewer's corrections.

**Comment (2):** Page R3: Please give a link to ISORROPIA II (version 2.3) in the text so that readers can learn more about this model.

**Response:**

We have provided the link to ISORROPIA II on line 109 of the manuscript.

“ISORROPIA thermodynamic equilibrium model (version II, <https://www.epfl.ch/labs/lapi/models-and-software/isorrophia/iso-code-repository/>) was employed to estimate gas concentrations and aerosol water pH (Song et al., 2018).”

**Comment (3):** Page R4: “As demonstrated in Figure S3, the significant correlations for  $\text{NO}_3^-$  ( $R^2 = 0.625$ ),  $\text{NH}_4^+$  ( $R^2 = 0.982$ ) and  $\text{Cl}^-$  ( $R^2 = 0.521$ ) underscore the high confidence level in the simulation outcomes.” Here, the regression coefficients in the text do not match those in the figures, and the authors are advised to correct the data if it was used in the manuscript. For example, the  $R^2$  for  $\text{NO}_3^-$  and  $\text{Cl}^-$  are 0.625 and 0.521, respectively, but are 0.705 and 0.511 in the graph. Moreover, the

intercomparisons of simulated and measured concentrations of  $\text{NO}_3^-$ ,  $\text{NH}_4^+$  and  $\text{Cl}^-$  in R5 can be moved to the supplementary materials.

**Response:**

We are sorry for the mistakes in the response contents. But the correlations ( $r^2$ ) in Figure S3 and the manuscript are right, i.e., the correlations of  $\text{NO}_3^-$ ,  $\text{NH}_4^+$  and  $\text{Cl}^-$  between the simulated results and measured concentrations are 0.71, 0.98, 0.51, respectively. Moreover, Figures S2 and S3 in Pages R4 and R5 have already added in the supplementary materials.