

## ***Interactive comment on “Nutrients Dissolution Kinetics of Aerosols at Qianliyan Island, the Yellow Sea by a High Time-resolution Nutrient Dissolution Experiment, Potential Linkages with Inorganic Compositions and P solubility controlled factors” by Ke Zhang et al.***

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Received and published: 28 January 2019

Thank you for your valuable comments. To protect the motor of the sampler, the aerosol sampler was stopped for one hour every five hours. Hence, the actual sampling time per membrane was 20 hours. In ultra-sound extraction, the use of 1M HCl was to obtain the maximum amount of nutrients dissolution compared with aerosol water-soluble nutrient. After acidic extraction and filtration, filtrates were adjusted to neutral used

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NaOH before the Molybdosilicate Blue methods for P and Si analyses. Fe-P in spr-NW aerosol accounting for 33%, which was higher than Fe-P in its source, Asian sand-dust (0.12%-14%, Yang, 2012), so except for source, Fe-P pattern also probably linked to the modification in atmospheric transport path (e.g. acid processing). In order to avoid errors between experimental methods, only one-site comparison was made. Considered the wider implications for reader's form outside the region, key and generalizable conclusions will be strengthened. The discussion on nitrate/ammonium ratio without Na<sup>+</sup> was the most simplified case under the observation that Na<sup>+</sup> was not dominant component in water-soluble components of aerosols over the Yellow sea (Yang & Xiu, 2009).

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Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2018-985>, 2018.

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