

Supplement of Atmos. Chem. Phys., 18, 167–184, 2018
<https://doi.org/10.5194/acp-18-167-2018-supplement>
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Supplement of

Role of ambient ammonia in particulate ammonium formation at a rural site in the North China Plain

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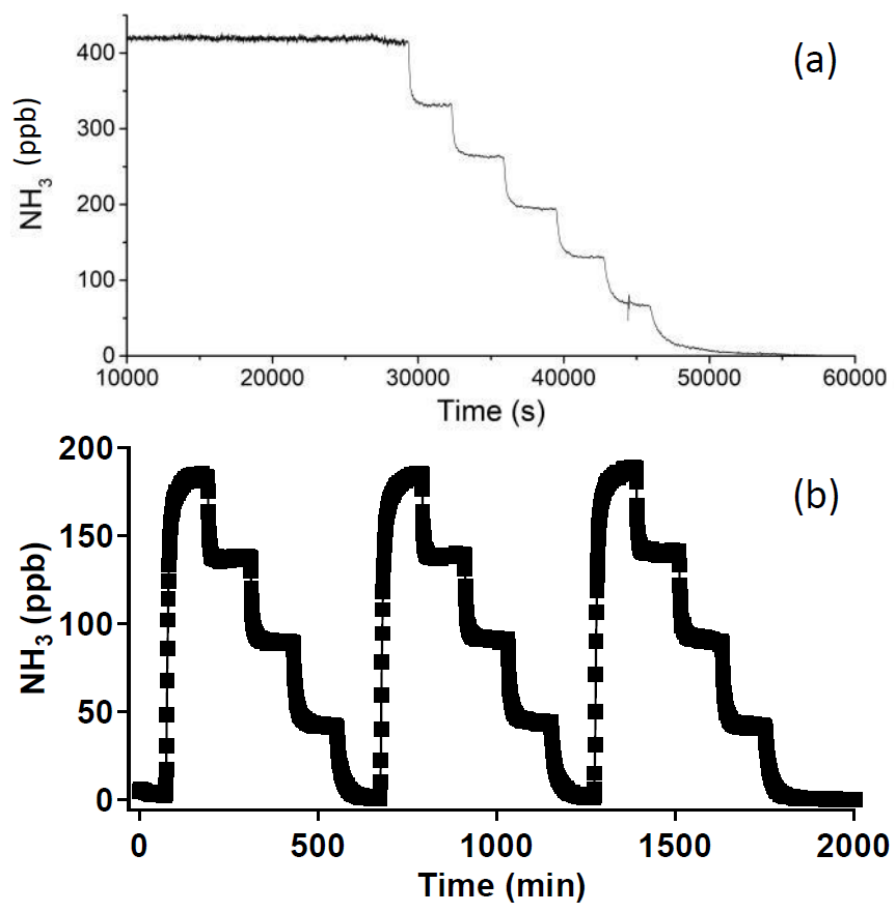


Figure S1. Confirmation of the performance of NH₃ analyzer using diluted standard gas (mixture NH₃/N₂). Instrument response to changed NH₃ concentration and stability (a) and repeated multipoint calibrations(b).

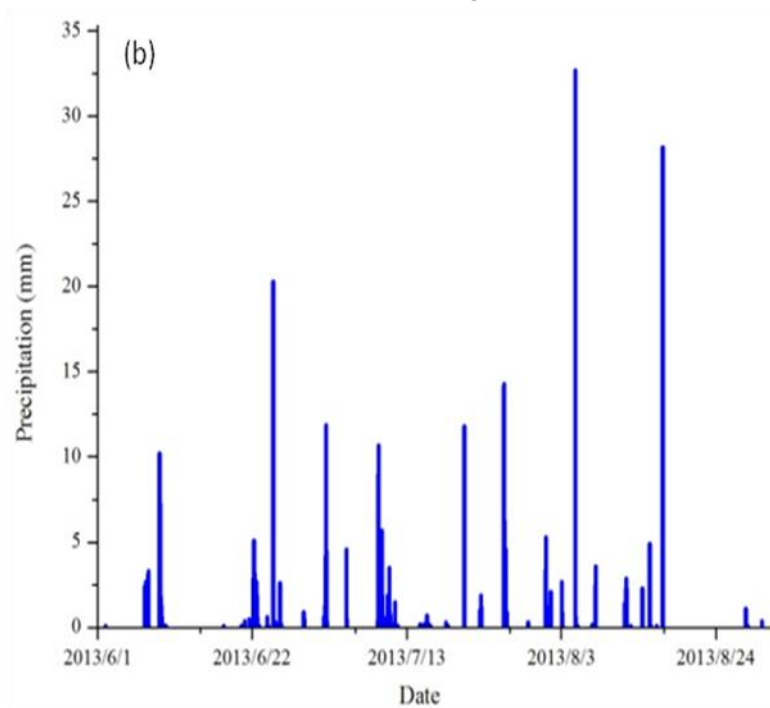
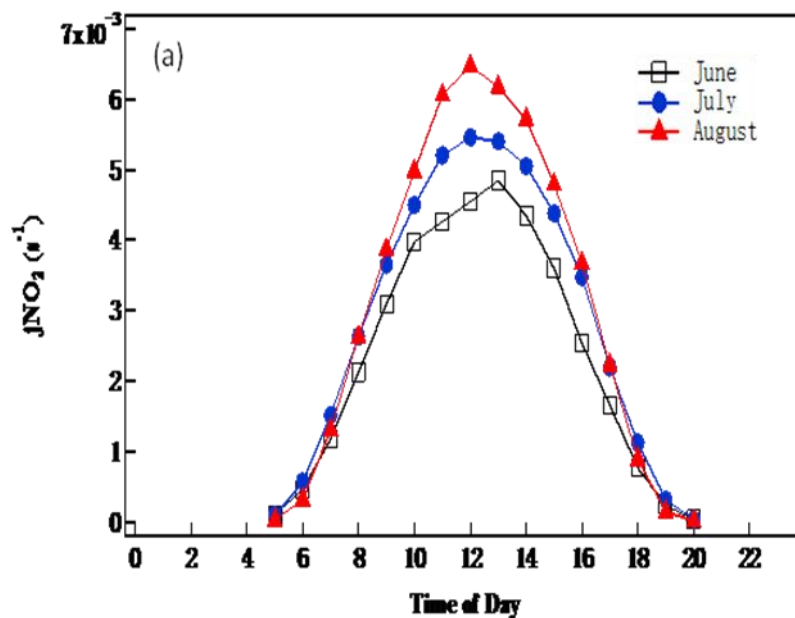


Figure S2. Monthly diurnal variations of photolysis rate coefficient of NO_2 ($j\text{NO}_2$) (a) and hourly amount of precipitation (b) in summer 2013.

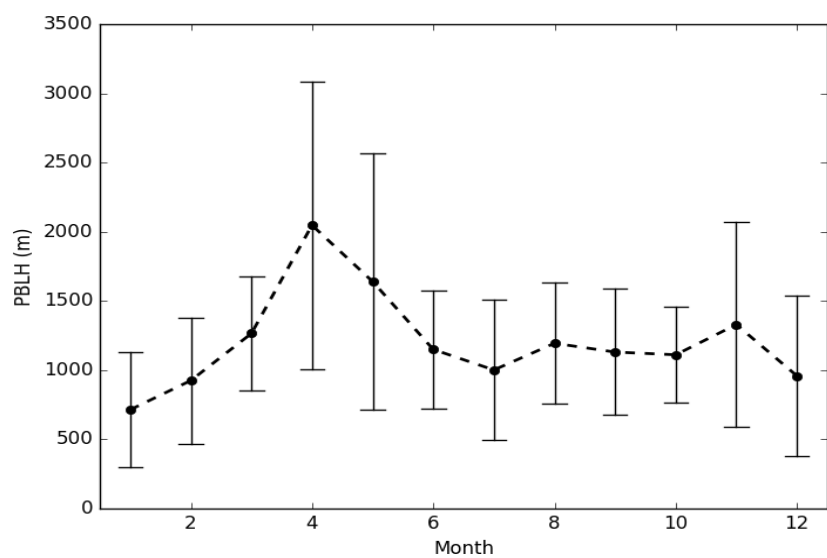


Figure S3. The monthly planetary boundary layer heights at 14:00 during 2013 at Gucheng.

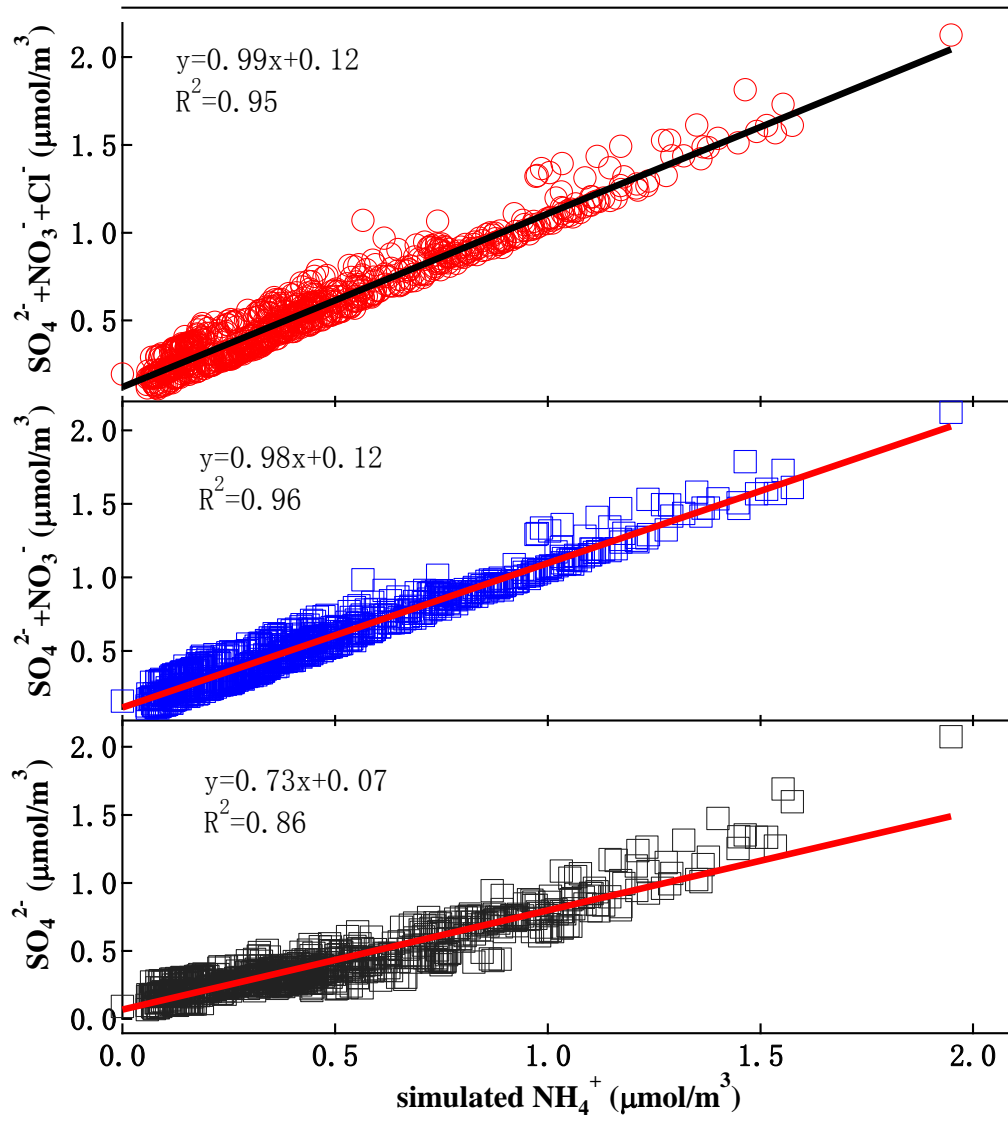


Figure S4. Correlation of modelled NH₄⁺ with modelled SO₄²⁻, SO₄²⁻+NO₃⁻ and SO₄²⁻+NO₃⁻+Cl⁻.

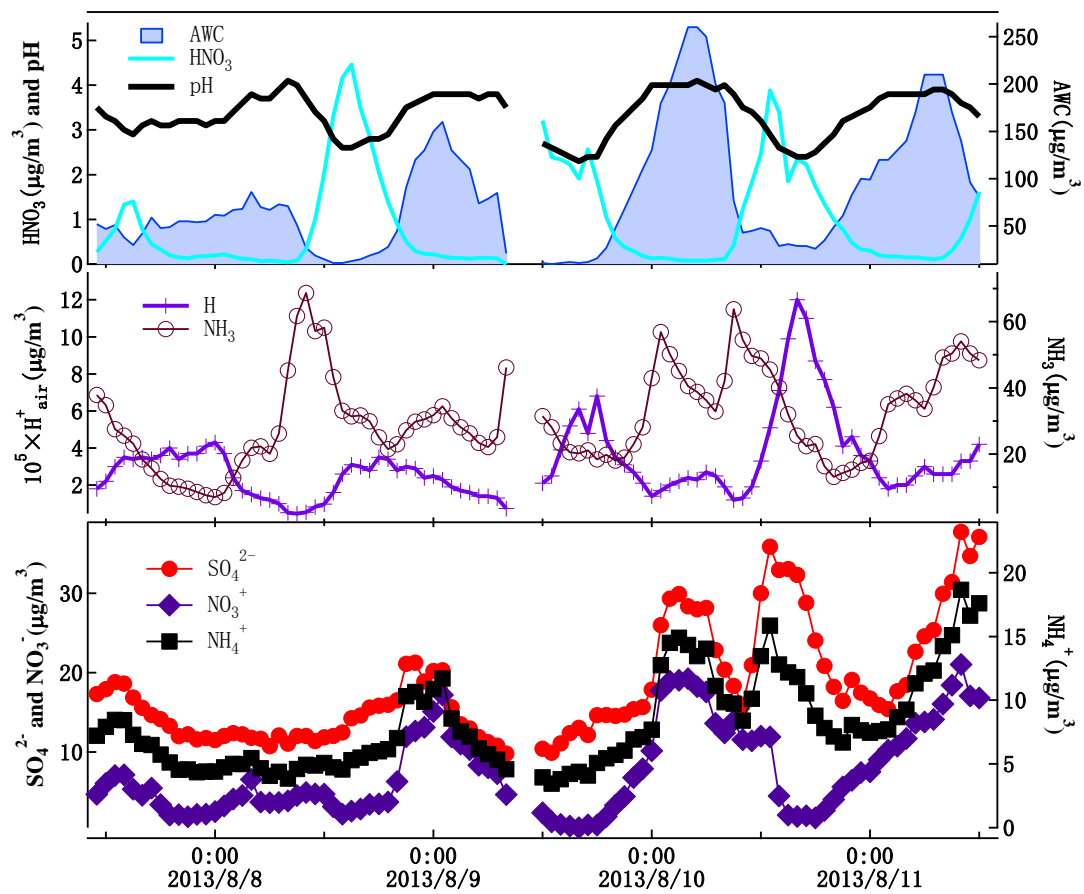


Figure S5. Time series of predicted fine particle pH, particle water mass, HNO₃, H_{air}⁺, NH₃ and inorganic ions during 7-11 August 2013.