

SO₂ has been significantly reduced in recent years; therefore, the nitrate aerosols become more and more important in China. This study presented a long-time measurement (2016-2017) of water-soluble ions of PM_{2.5} in Yangtze River Delta (Nanjing), China. They found that the nitrate was a major fraction of the PM_{2.5} mass. From their study, they found the nitrate was mostly produced by the N₂O₅ heterogeneous uptake under the NH₄⁺-rich condition. This study suggests the studied region is located in HNO₃-limit regime and thus the reduction of NO_x may be more helpful to mitigate the PM pollution. The results could help the understanding of the heterogeneous formation of NO₃⁻ aerosol in East China. This paper is well written, the method is sound, and the results could be important for aerosol chemistry community. I recommend this paper may be published after the following comments be addressed.

Line 48: reference is missing here.

Lines 130-136: QA/QC (ion balance) should be provided.

Line 209: should provide more evidence

Lines 254-282: the criterion value should be explained in the very beginning.

Lines 328-333: are there any difference between day and night samples?

Lines 360-378: I suggest comparing NO₃ increase rate with those reported in other studies

Lines 388-390: I think the authors should present more details about the Eq2. How to get this equation?