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Supplement of

An in situ flow tube system for direct measurement of N_2O_5 heterogeneous uptake coefficients in polluted environments

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Table S1. Lab test with synthetic (NH₄)₂SO₄ aerosols under different conditions

No.	Initial NO ₂ (ppb)	Initial O ₃ (ppb)	Initial NO (ppb)	Initial N ₂ O ₅ (ppb)	RH (%)	Sa (μm ² /cm ³)	γ
1	62	57	0	2.1	25.1	848	0.0226
2	62	57	5.0	2.1	24.6	928	0.0208
3	57	106	0	4.3	22.9	965	0.0182
4	57	106	5.0	4.3	23.2	894	0.0212
5	57	106	0	4.3	48	1425	0.0259

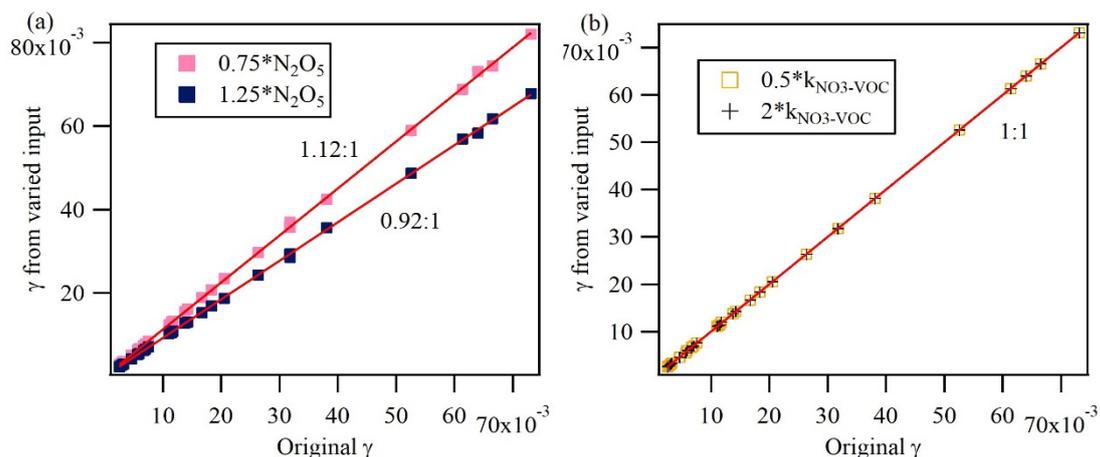


Figure S1. Sensitivity test of the iterative model by varying inputs of (a) N₂O₅ and (b) k_{NO3-VOC} in both operation modes.

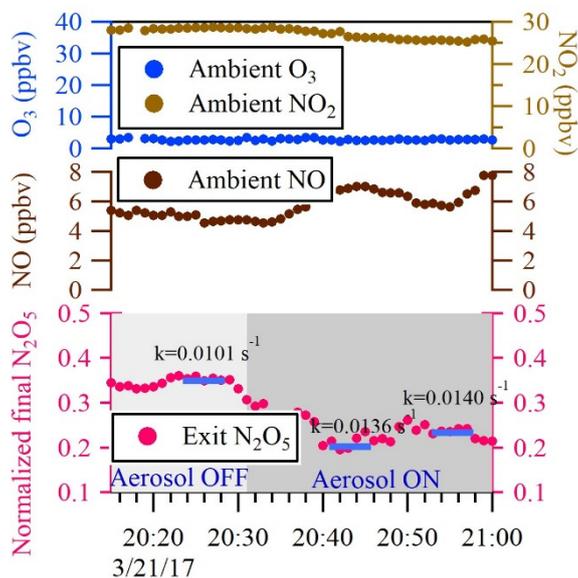


Figure S2. Example case on Mar 21st with two different periods of stable data points under different NO levels for N₂O₅ loss rate constant calculation. The symbols are the same as in Fig 9a.