

1 **Supporting information for**

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3 Wang et al.,

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5 *Correspondence to:* Haichao Wang (wanghch27@mail.sysu.edu.cn); Yee Jun Tham  
6 (thamyj@mail.sysu.edu.cn)

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8 **Contents**

9 **Figure S1.** The wind rose plot for NO concentrations (ppbv) and wind direction.

10 **Figure S2.** Fits O<sub>3</sub> against NO<sub>2</sub> during the nocturnal time.

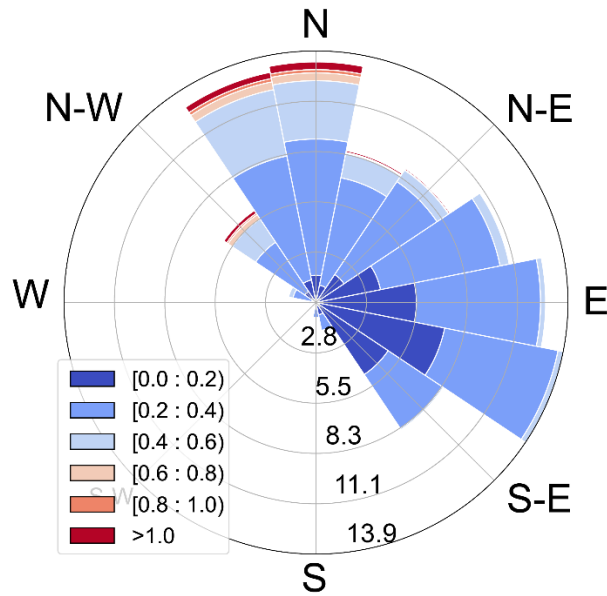
11 **Figure S3.** N<sub>2</sub>O<sub>5</sub> uptake coefficients derived from the pseudo steady state method.

12 **Figure S4.** Nighttime NO mixing ratio and its contribution to NO<sub>3</sub> loss.

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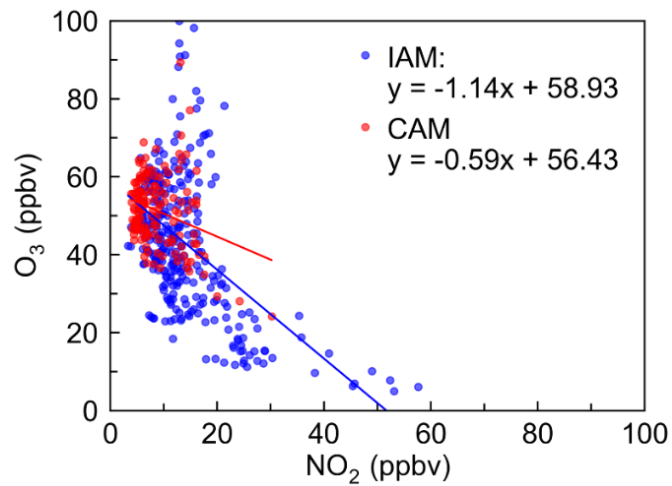
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17 Figure S1. The wind rose plot for NO concentrations (ppbv) and wind direction.

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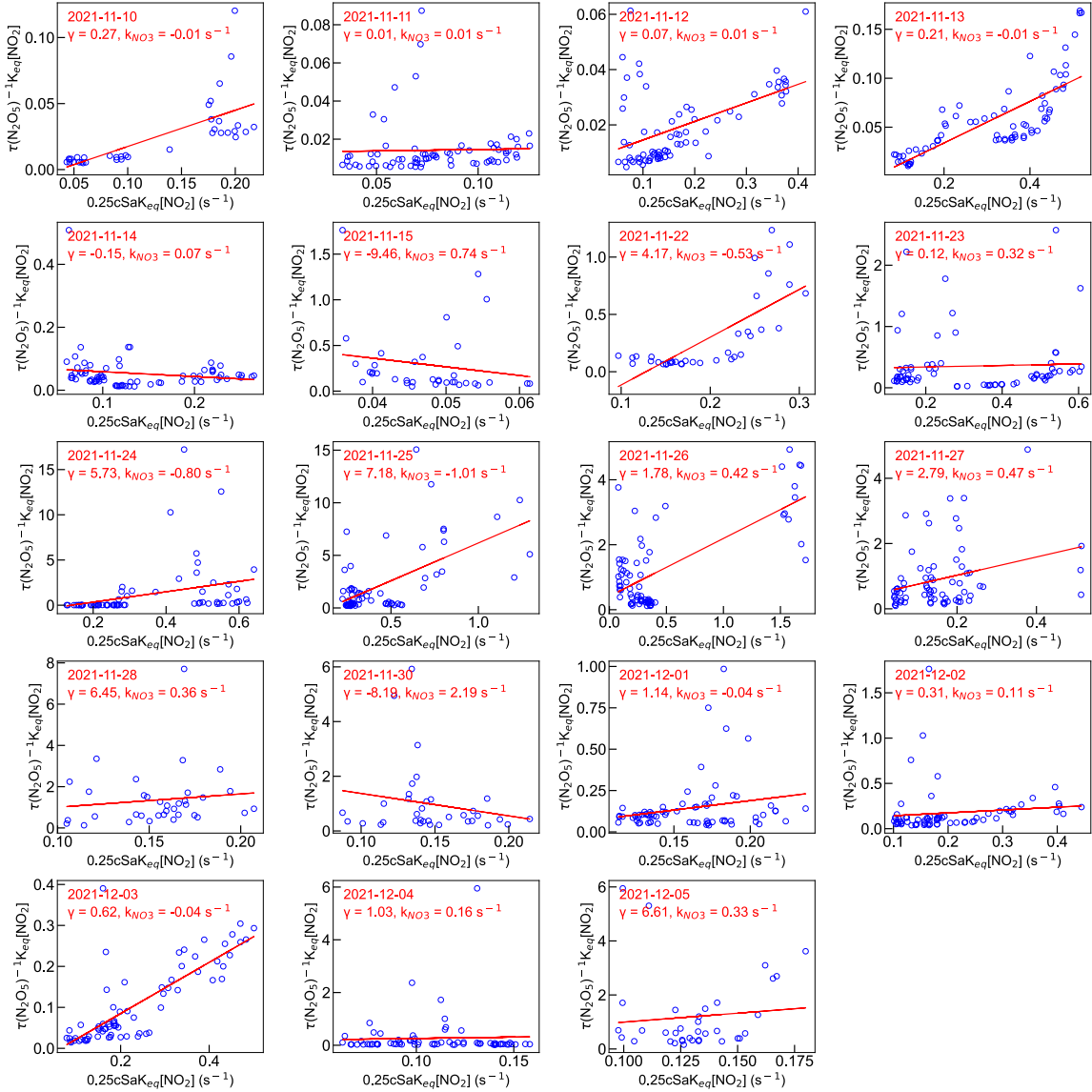


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20 Figure S2. Fits O<sub>3</sub> against NO<sub>2</sub> during the nocturnal time with a time resolution of 1 hour  
21 for air mass from inland China (IAM) and coastal areas (CAM).

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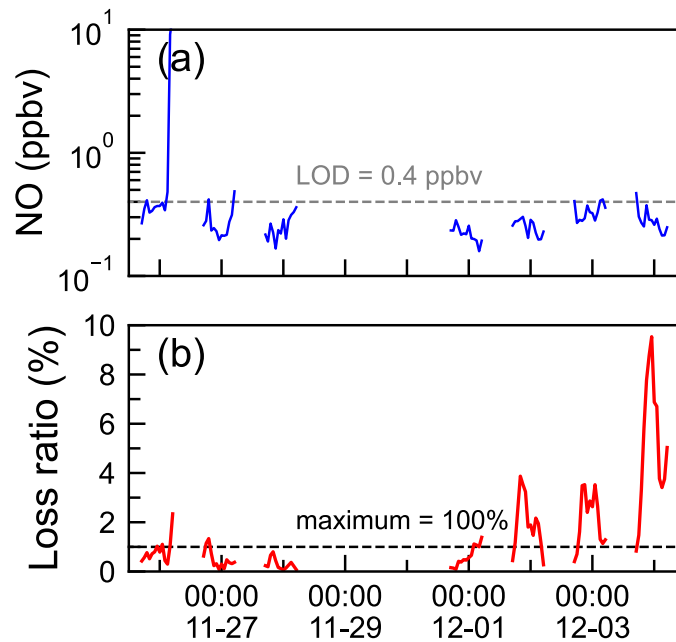


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25 Figure S3. N<sub>2</sub>O<sub>5</sub> uptake coefficients derived from scatter plots of  $K_{eq}[NO_2]\tau(N_2O_5)^{-1}$   
 26 versus  $0.25cSaK_{eq}[NO_2]$ ,  $K_{eq}$ : the equilibrium constant between N<sub>2</sub>O<sub>5</sub>, NO<sub>2</sub>, and NO<sub>3</sub>;  $c$ :  
 27 the mean molecular speed of N<sub>2</sub>O<sub>5</sub>;  $Sa$ : the aerosol surface area density;  $\gamma$ : the N<sub>2</sub>O<sub>5</sub> uptake  
 28 coefficient;  $k_{NO_3}$ : the indirect NO<sub>3</sub> loss frequency.

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32 Figure S4. (a) Nighttime NO mixing ratio with the gray dashed line denoting the detection  
33 limit of the instrument (0.4 ppbv). (b) The fraction ratio of NO to NO<sub>3</sub> loss, with the black  
34 dashed line representing a maximum of 100%.