

1 **Supplement of**  
2 **OH and HO<sub>2</sub> radicals chemistry at a suburban site during**  
3 **the EXPLORE-YRD campaign in 2018**

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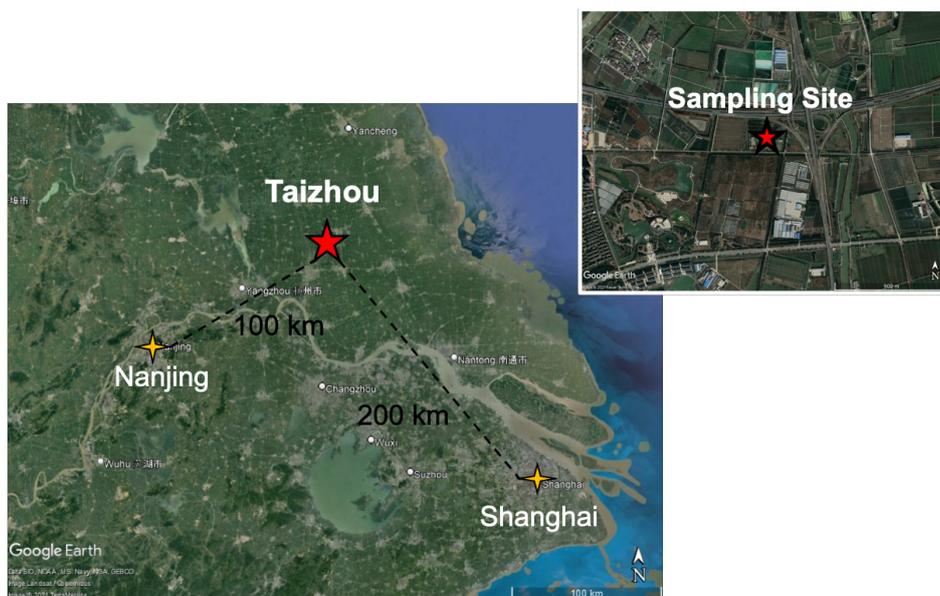
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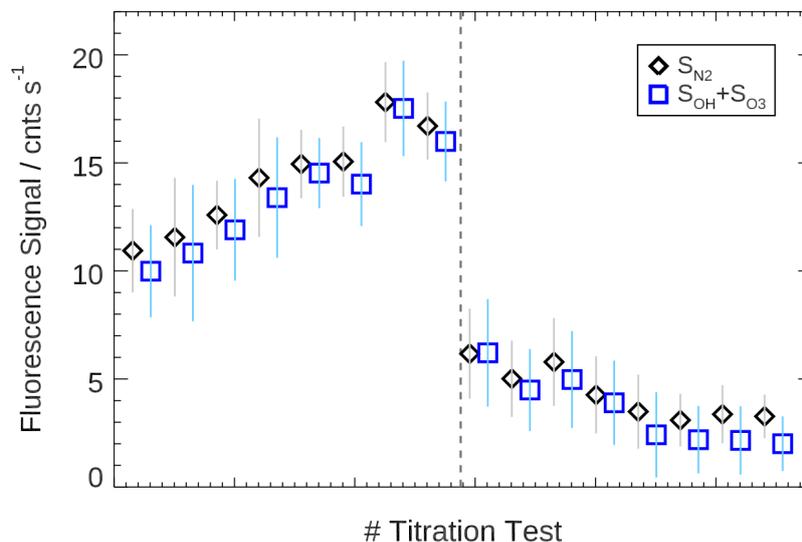
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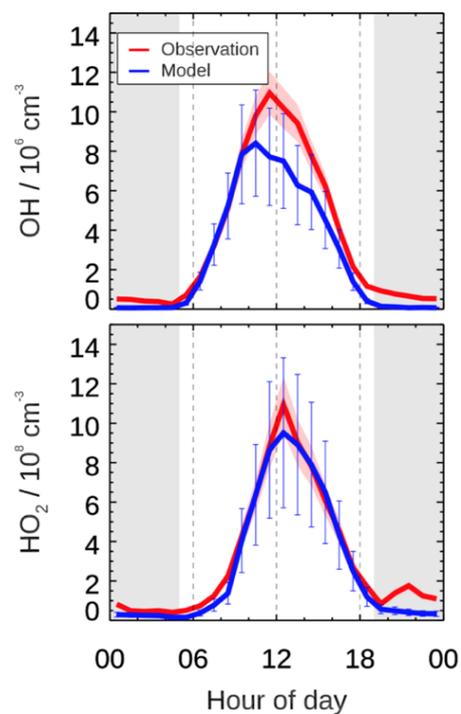
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21 **Figure S1. Map of the field measurement site (red five-pointed star) in Taizhou, Jiangsu Province,**  
 22 **which is approximately 200 km north-west and 100 km north-east of the two major megacities,**  
 23 **Shanghai and Nanjing, in Yangtze River Delta region (© Google Earth).**



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25 **Figure S2. Results of OH chemical modulation tests performed during this campaign. In each test, the**  
 26 **total measured OH signal without scavenger injected ( $S_{N_2}$ ) is compared with the sum of ambient OH**  
 27 **induced signal ( $S_{OH}$ ) and the known interference from  $O_3$  photolysis ( $S_{O_3}$ ). The error bars denote the**  
 28  **$1\sigma$  statistical error. A fluorescence signal of 14 cnts  $s^{-1}$  (counts per second) corresponds to an OH**  
 29 **concentration of  $1.0 \times 10^7 \text{ cm}^{-3}$ .**



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31 **Figure S3. The median diurnal profiles of measured and modelled OH and HO<sub>2</sub> concentrations.**

32 **Colored areas (red) and error bars (blue) denote 1 $\sigma$  uncertainties of measured and base case modelled**

33 **radical concentrations, respectively. The grey areas denote nighttime.**