Supplement of Atmos. Chem. Phys., 18, 9107–9120, 2018
https://doi.org/10.5194/acp-18-9107-2018-supplement

Atmospheric Chemistry and Physics
Open Access
EGU

Supplement of

Tropospheric HONO distribution and chemistry in the southeastern US

Chunxiang Ye et al.

Correspondence to: Chunxiang Ye (c.ye@pku.edu.cn) and Xianliang Zhou (xianliang.zhou@health.ny.gov)

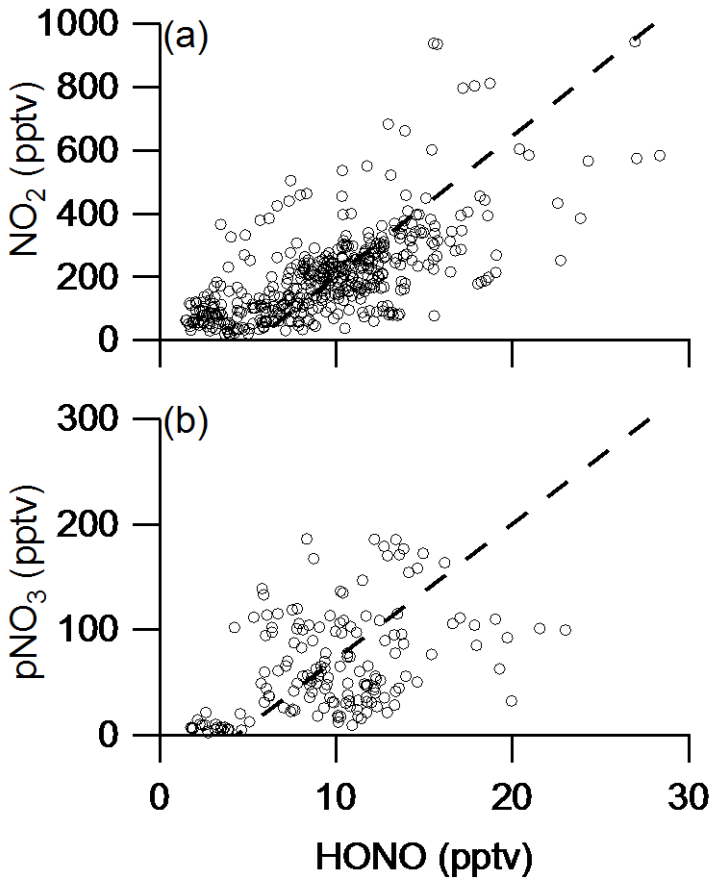

Figure S1. Correlation analysis of HONO with NO_x (a) and particulate nitrate, pNO_3 (b) in the southeast US during the NOMADSS 2013 summer study. The line represents the Deming least-squares regression (Wu and Yu, 2018) (r^2=0.45 for Figure 6a; r^2=0.17 for Figure 6b).

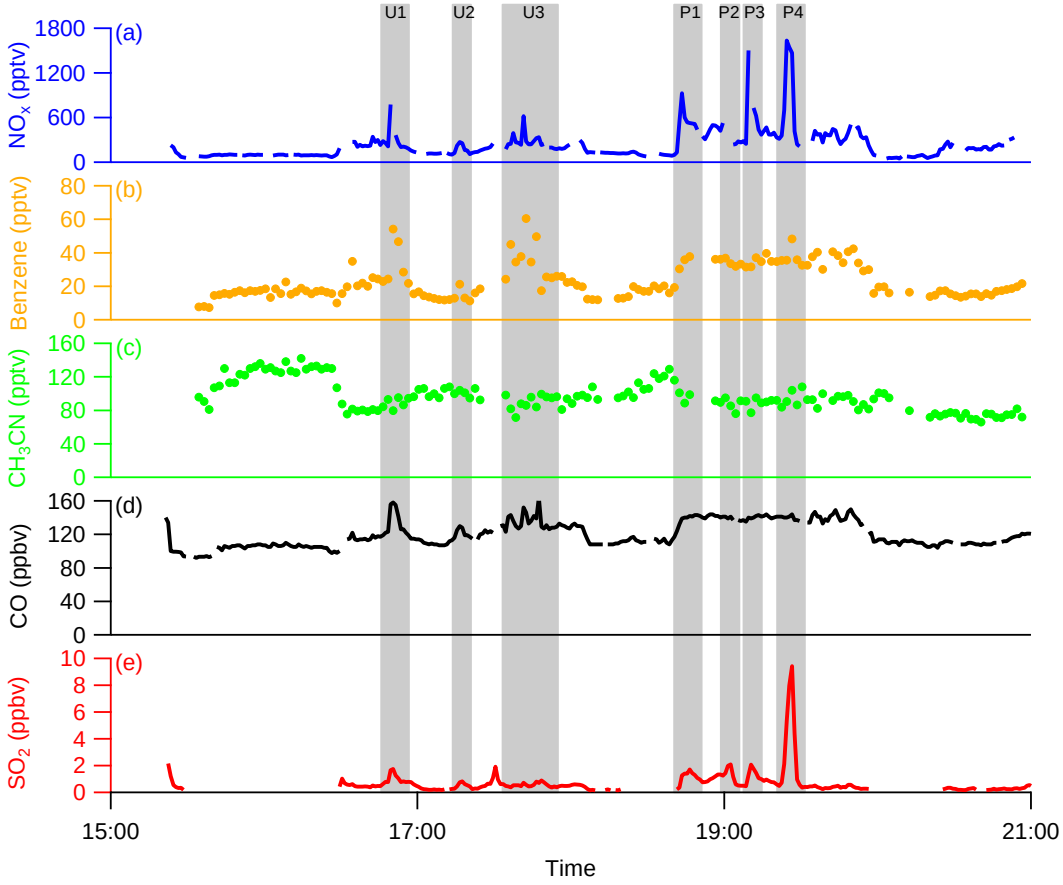

Figure S2. Time series of plume tracers in RF #11 in the Southeast US during the NOMADSS 2013 summer study.

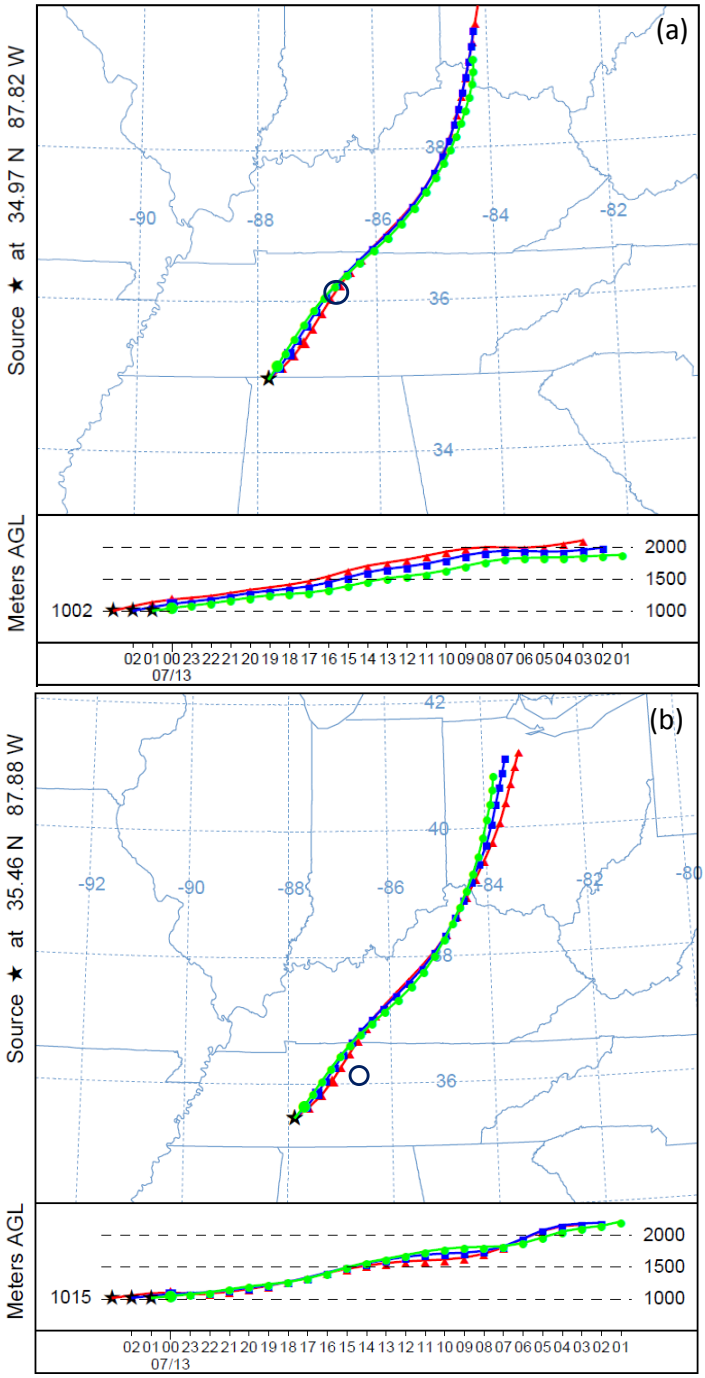

Figure S3. Back trajectory analysis of air masses encountered in the PBL in RF #18 in the Southeast US during the NOMADSS 2013 summer study. The air masses arriving at the southern point of the flight tracks were found to pass over the metropolitan area of Nashville (the black circle, panel a), while those at the northern point to stay to the north of the area. The back-trajectory analysis was made using NOAA's online HYSPLIT model (http://www.arl.noaa.gov/HYSPLIT_info.php).

Table S1. Daytime HONO budget analysis in the PBL and the FT in Southeast U.S. during the NOMADSS 2013 summer field study. Night-time data (RF #18) and power plant plume and urban plume data have been excluded from the analysis. Unit is pptv h^{-1}.

	HONO source	Total	NO_x-related	pNO_3 photolysis
PBL	Range	9 – 173	2 – 40	4 – 98
	Mean ± (SD)	53 ± 21	10 ± 5	38 ± 23
	Median	51	10	35
FT	Range	10 – 127	0.19 – 27	3 – 134
	Mean(±SD)	44 ± 26	4 ± 4	31 ± 34
	Median	34	2	19