Supporting Information for *Atmos. Chem. Phys.* manuscript:

Measurement Report: Exchange Fluxes of HONO over Agricultural Fields in the North China Plain

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Table S1

Figures S1 to S4

Table 1. Statistical parameters for HONO fluxes at 12h intervals. PFP: pre-fertilization period (before June 18); HEP: high HONO emission period (from June 18 to July 10); LEP: low HONO emission period (after July 10).

Flux	PFP		HEP		LEP	
(ng N m^{-2} s^{-1})	NP	CK	NP	CK	NP	CK
AVG	0.54	-0.51	97.7	-0.36	1.03	-2.88
SD[a]	0.35	0.13	8.6	0.04	3.17	2.41
MAX[b]	0.91	0.44	319	1.78	8.15	1.68
MIN[c]	-0.05	-1.65	-1.14	-3.29	-5.52	-8.55

a: SD represents the standard deviation between the three duplicates in parallel.

b, c: MAX and MIN represent the maximum and minimum values of the observed HONO flux.

Figures

$$y = 8.16\times10^{-6}\,x + 2.17\times10^{-4}$$
$$R = 0.92$$
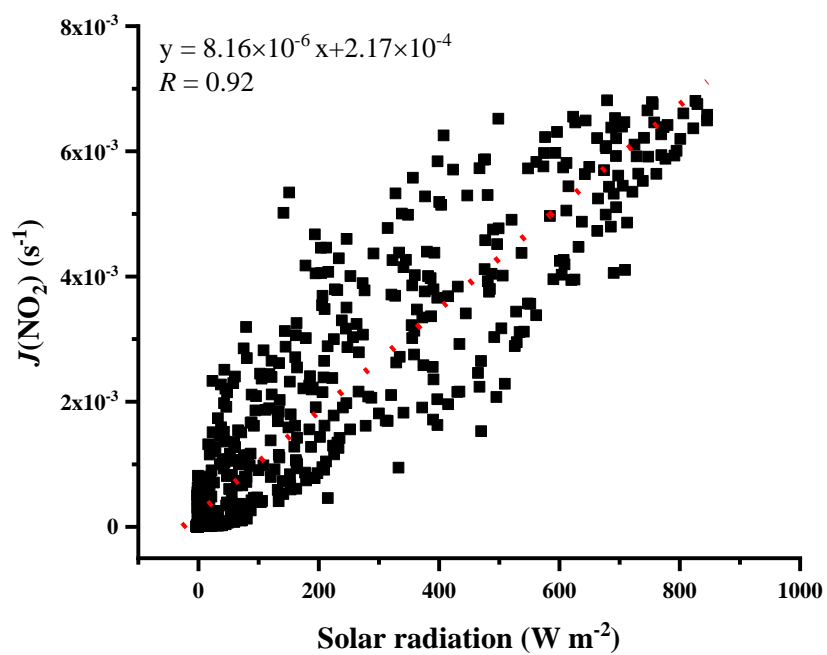
Figure S1. Correlation between the measured $J(NO_2)$ and solar radiation (August 28–

September 30, 2021).
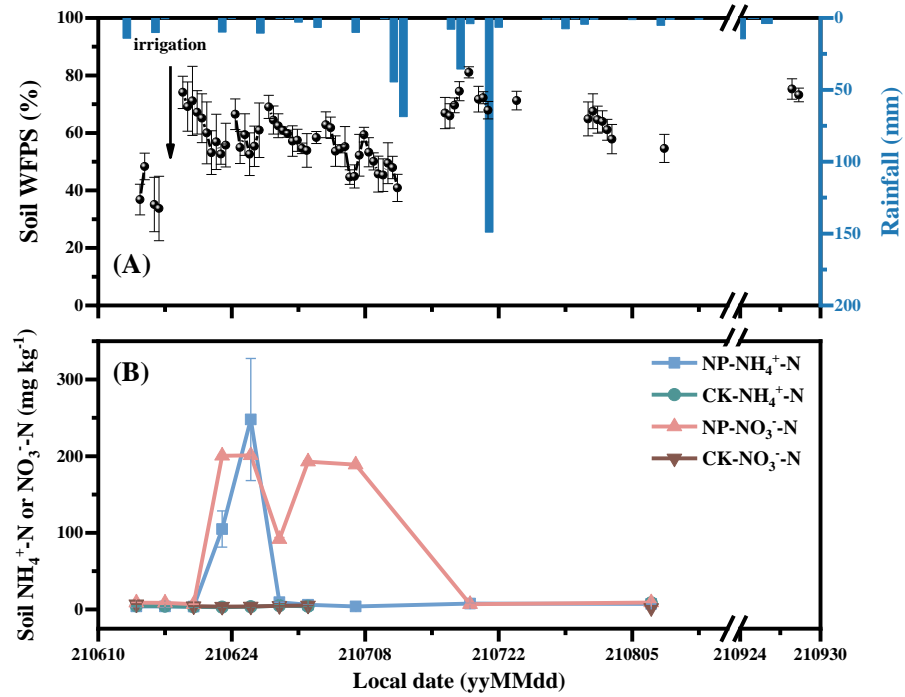
Figure S2. Variations of soil water-filled pore space (WFPS) and rainfall (A), concentrations of soil NH_4^+-N and NO_3^--N from the NP (chemical N fertilizer + normal irrigation), and CK (no fertilization but with normal irrigation) plots (B) during the maize growing season. Error bars represent the standard deviations (n=5 for soil WPFS and 3 for soil NH_4^+-N and NO_3^--N concentrations).
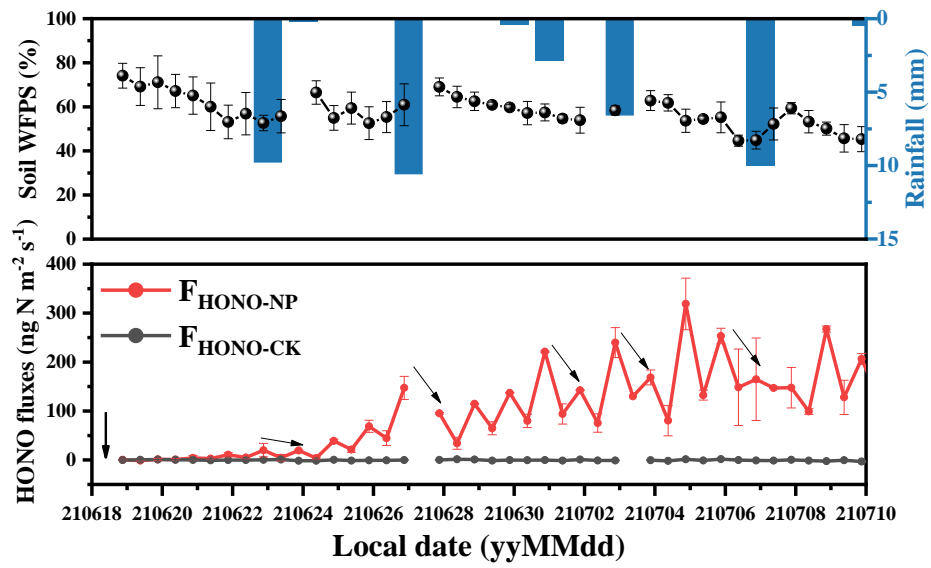
Figure S3. Influence of rainfall on soil HONO emissions and soil water-filled pore space (WFPS).
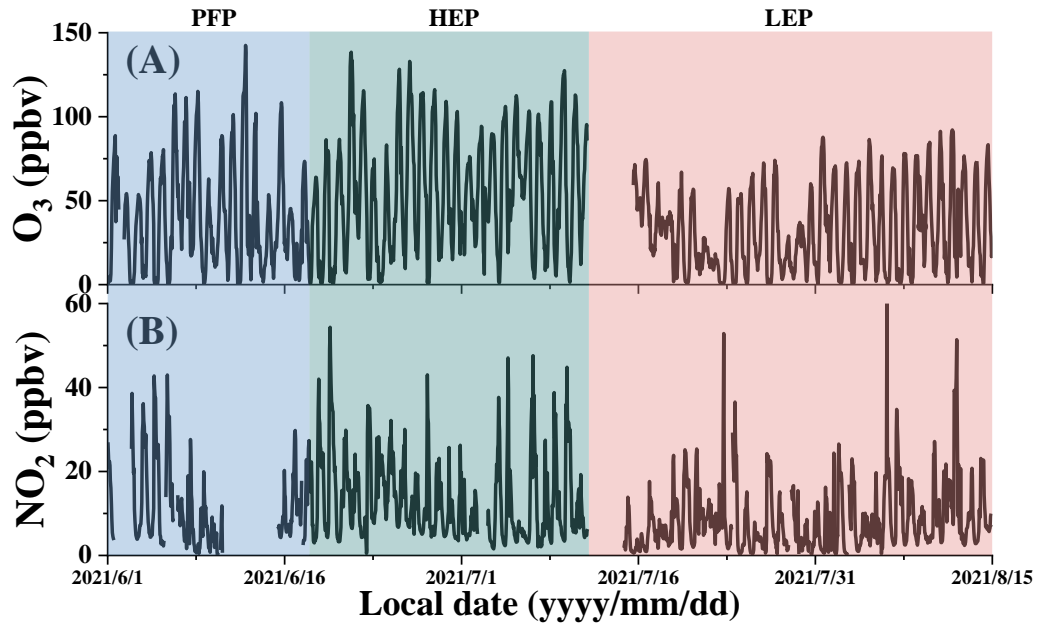
Figure S4. Time series of atmospheric O₃ (A) and NO₂ (B) concentrations at the observation site from June 1 to August 15, 2021.