Supplymentary Materials

Analysis of the Vertical Distribution and Driving Factors of Aerosol and Ozone Precursors in Huaniao Island, China, Based on Ground-Based MAX-DOAS

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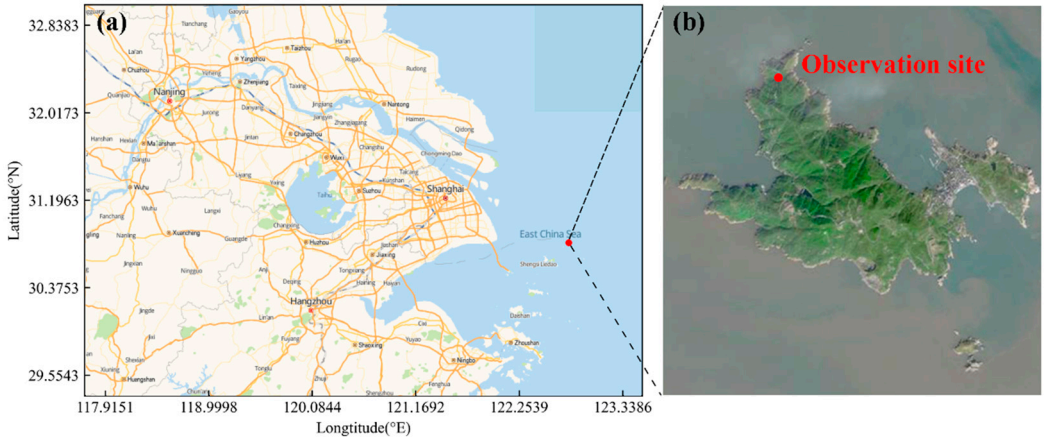

Figure S1. The research area (**a**) and the MAX-DAOS instrument location (**b**).

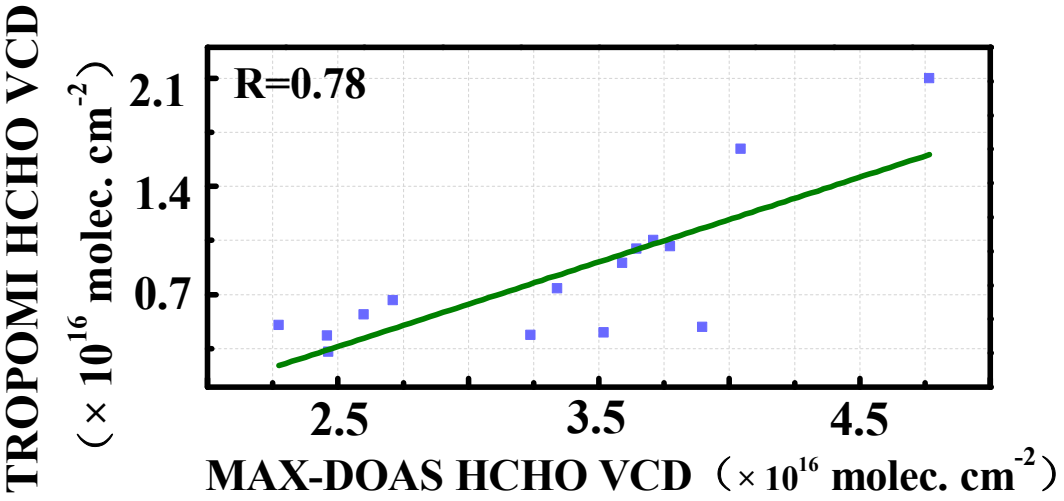

Figure S2. Linear regression plots between MAX-DOAS HCHO and TROPOMI HCHO.

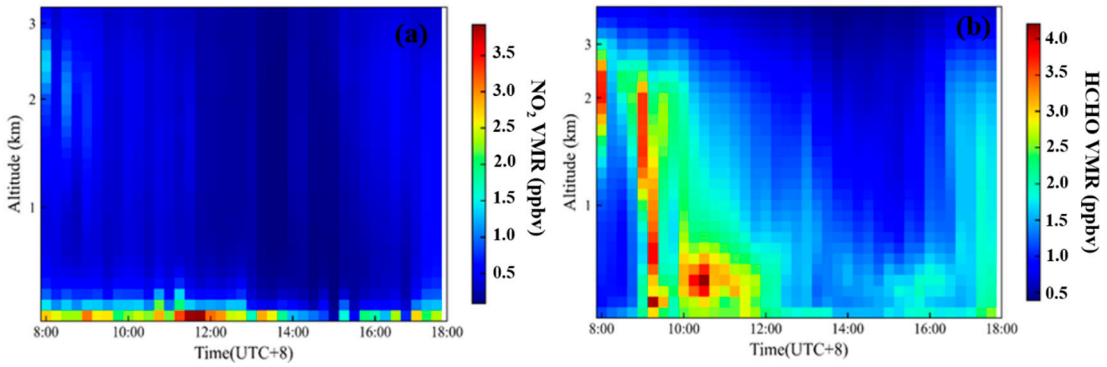

Figure S3. Diurnal variation of the vertical profile of NO_2 (**a**) and HCHO (**b**) during the study period.

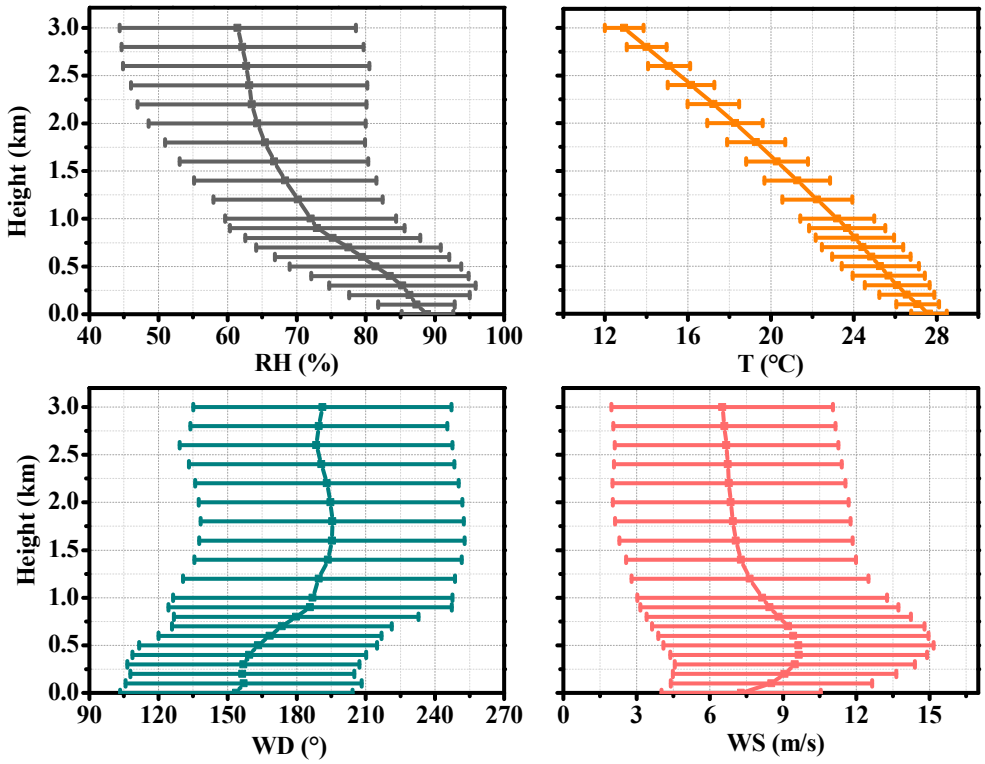

Figure S4. Vertical profile distribution of relative humidity (RH), temperature (T), wind direction (WD) and wind speed (WS).

Table S1. Exposure-response coefficients and incidence rate (per person) used in the analysis.

Health Outcome	Mean (95% CI)[a]	Frequency
Long-term mortality (adult > 30 years)	0.00430 (0.00260, 0.00610)	0.01077
Chronic bronchitis	0.00450 (0.00127, 0.00773)	0.01390
Short-term mortality	0.00028 (0.00010, 0.00046)	0.00728
Respiratory hospital admission	0.00130 (0.00010, 0.00250)	0.01240
Cardiovascular hospital admission	0.00130 (0.00070, 0.00190)	0.00850
Outpatient visits-internal medicine	0.00034 (0.00019, 0.00049)	3.26000
Outpatient visits-pediatrics	0.00039 (0.00014, 0.00064)	0.30000
Acute bronchitis	0.00550 (0.00189, 0.00911)	0.39000
Asthma attack (children < 15 years)	0.00440 (0.00270, 0.00620)	0.06930
Asthma attack (adults > 15 years)	0.00390 (0.00190, 0.00590)	0.05610
RADs (adults >20 years)	0.00940 (0.00790, 0.01090)	3.00000

[a] Source of data in the table References Kan et al. [66].