Supporting Information

Characterization of local and regional sources of Chinese urban air pollution based on effect of Spring Festival

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Table S1 List of reported VOCs along with their protonated m/z, limits of detection (LOD), and classification.

Compound	Protonated m/z	LOD (ppb)	Group
Methanol	33	0.358	Oxygenated
Acetonitrile	42	0.052	Biomass burning tracer
Acetaldehyde	45	0.069	Oxygenated
Acetone	59	0.049	Oxygenated
Acetic Acid	61	0.020	Oxygenated
Dimethyl sulfide (DMS)	63	0.023	Marine tracer
Isoprene	79	0.011	Biogenic
Methy ethyl ketone (MEK)	73	0.031	Oxygenated
Benzene	79	0.009	Aromatic
Toluene	93	0.015	Aromatic
Styrene	105	0.010	Aromatic
C8 Aromatics	107	0.019	Aromatic
C9 Aromatics	121	0.040	Aromatic

Figure S1 The location of the sampling site.

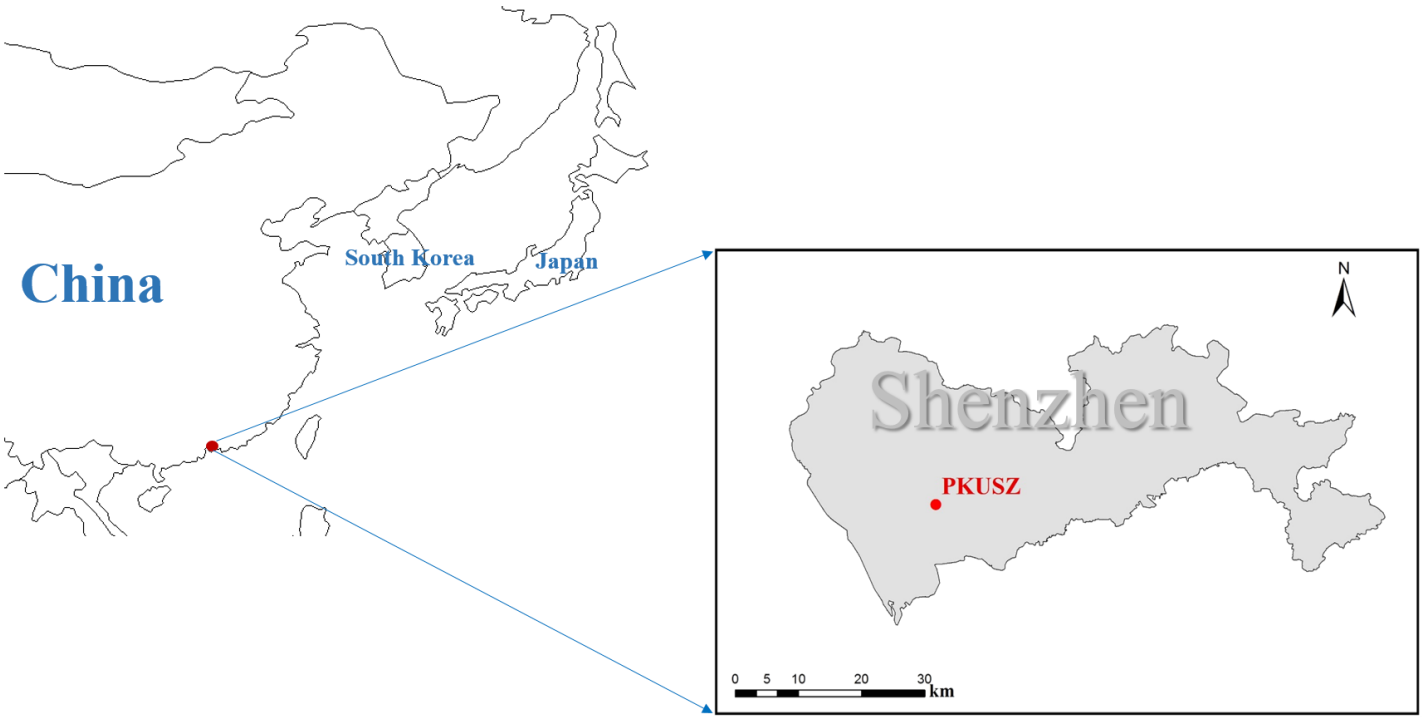


Figure S2 Wind rose plots for the (A) SF, (B) NSFM, (C) Tran. and (D) NSFT periods.

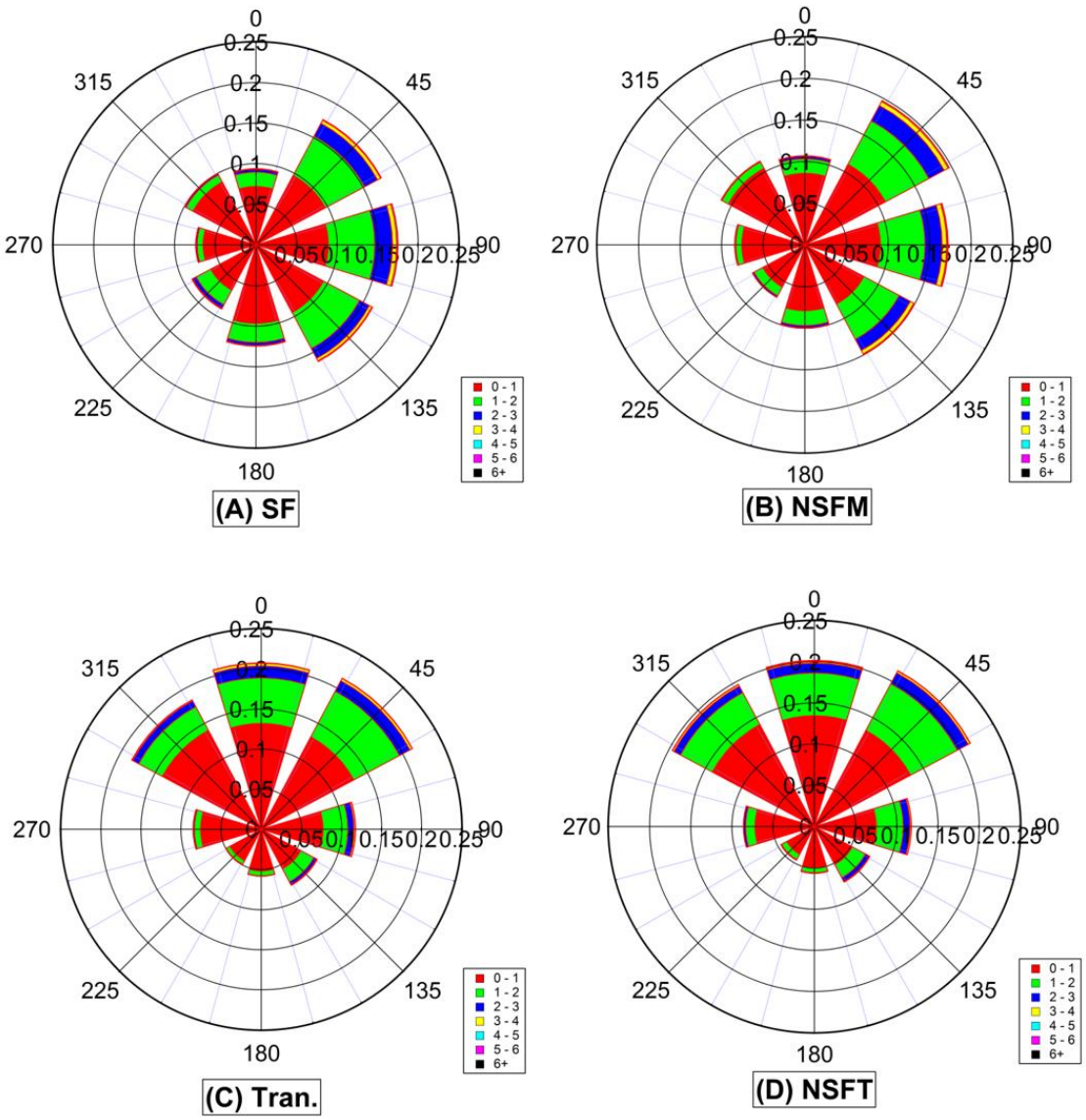
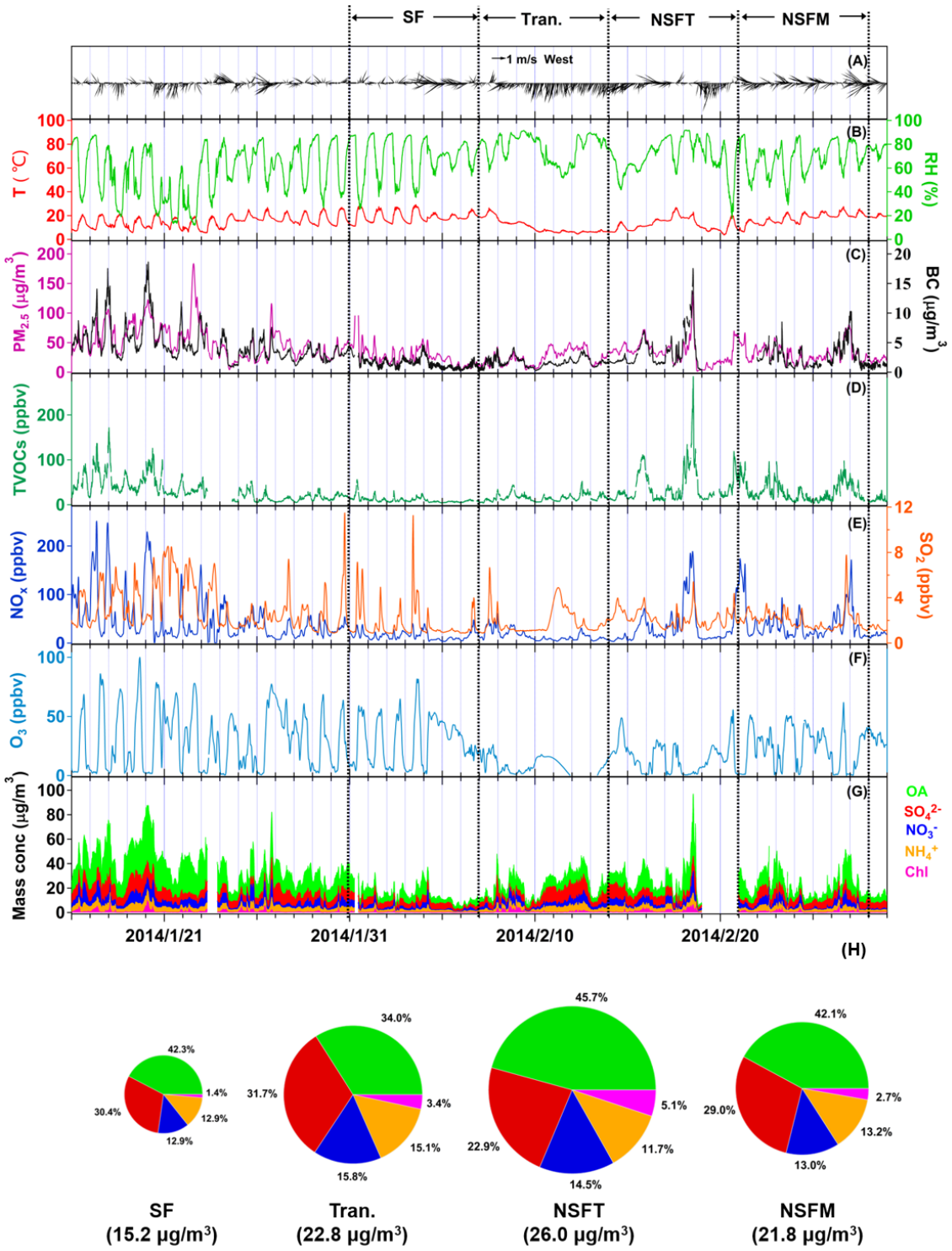


Figure S3 Time series of meteorological conditions and various air pollutants measured during the SF and NSF periods in 2014. (A) Wind speed and direction, (B) temperature and relatively humidity, (C) $PM_{2.5}$ and BC, (D) TVOCs, (E) NOx and SO_2, (F) O_3, (G) AMS species and (H) NR–PM_1 compositions.



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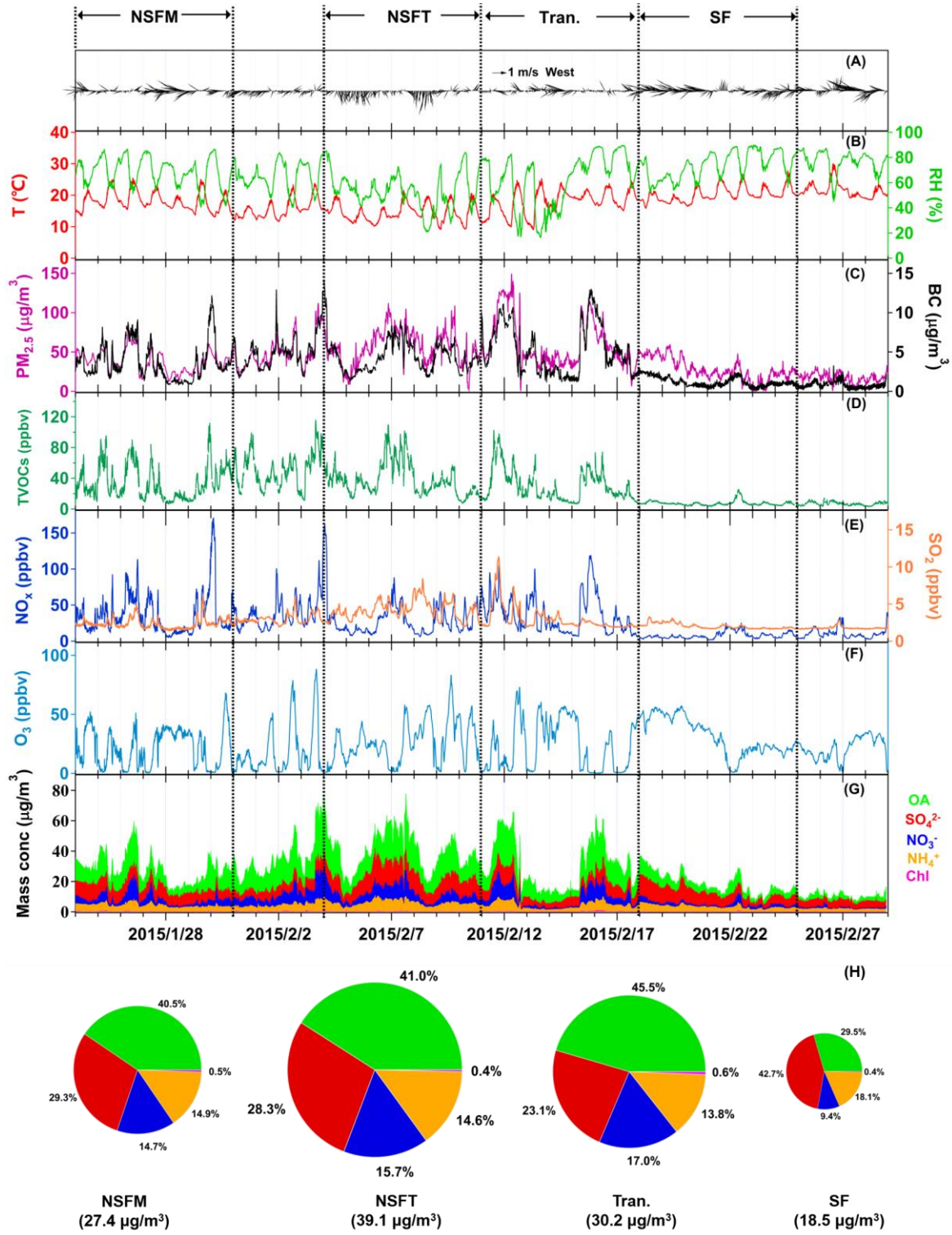

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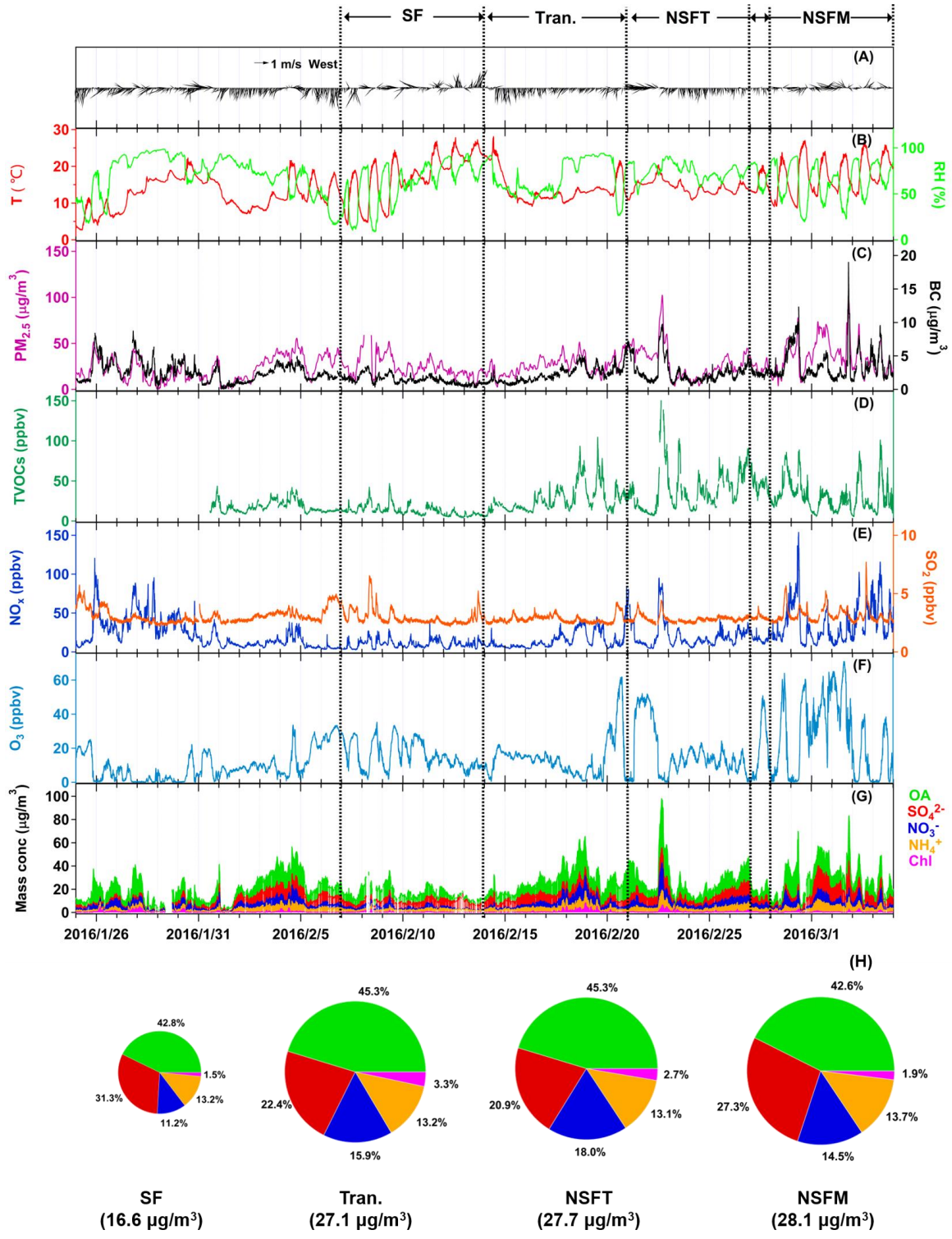

Figure S6 Percent change in the concentration of VOCs between the SF and NSF periods over 2014–2016.

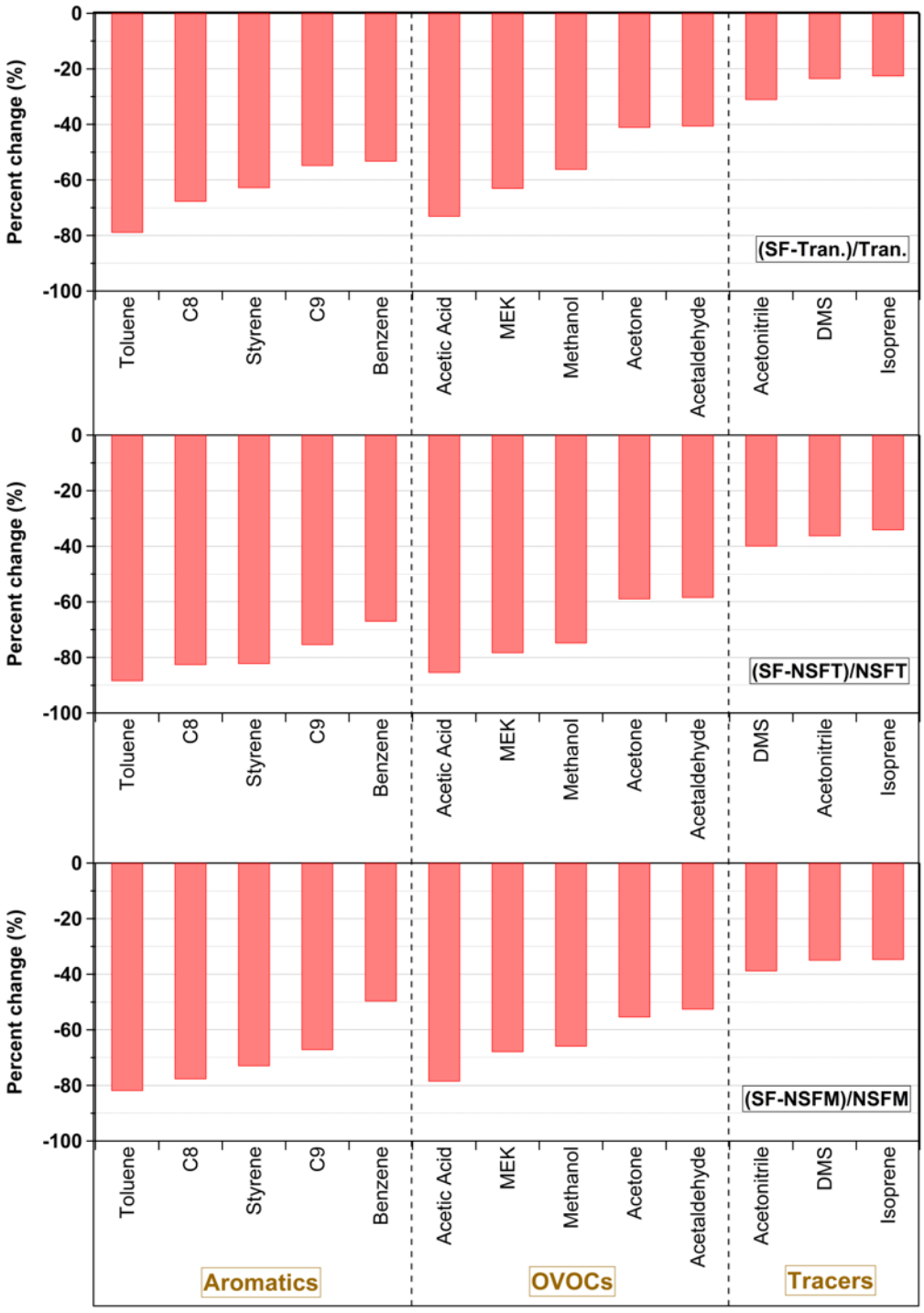

Figure S7 Annual percent change in concentration of air pollutants between the SF and NSF periods in 2014–2016.

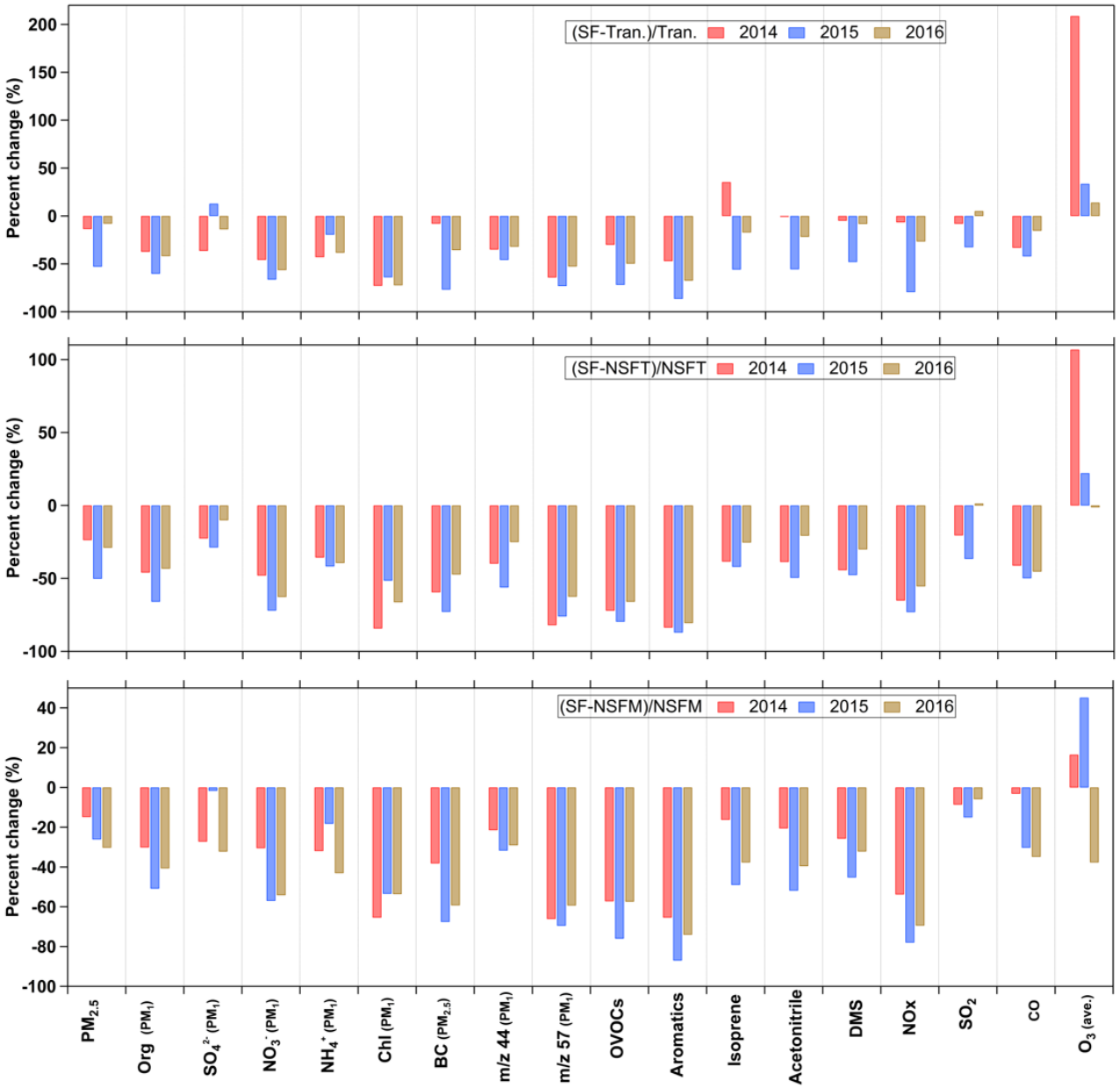

Figure S8 Diurnal variations of concentrations of OVOCs and aromatics during the SF and NSFM periods.

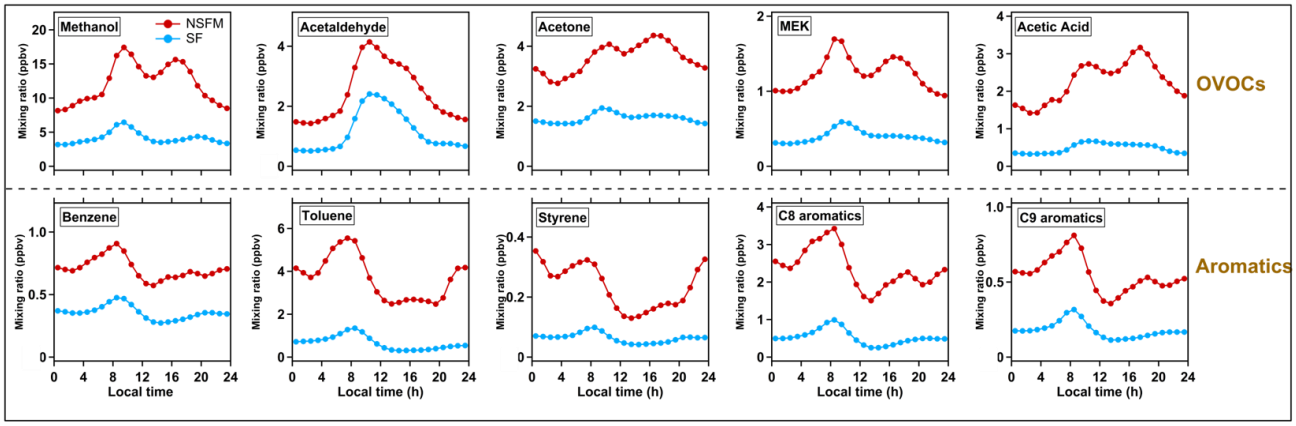
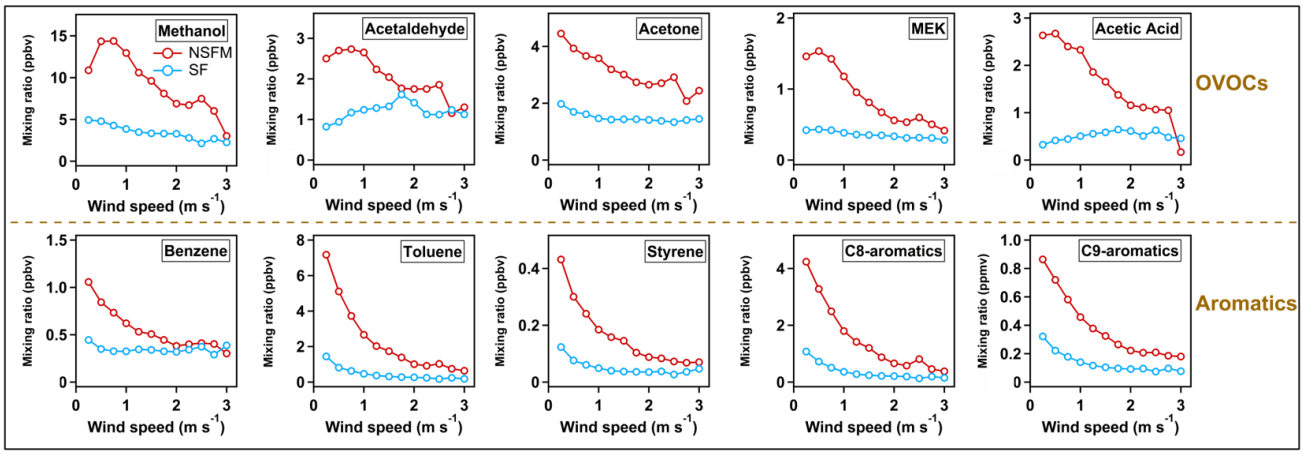
Figure S9 Variations of concentrations of OVOCs and aromatics as the function of wind speed during the SF and NSFM periods.