

## Supplementary Material

### Atmospheric observation of fluorinated greenhouse gases around four chemical plants in China

**Table S1.** Sample information and meteorological conditions during sampling in each plant.

Plant	Test	Sampling site	Wind direction	Wind speed (m/s)	Ambient temperature (°C)
A	1	U 1	South	0.3	13
		D 1	South	1.0	14
	2	U 2	Northwest	1.0	14
		D 2	Northwest	1.7	17
	3	U 3	Southwest	0.6	7
		D 3	Southwest	1.1	9
	4	U 4	Southwest	5.4	20
		D 4	Southwest	4.7	23
	5	U 5	Southwest	2.0	16
		D 5	Southwest	1.9	14
	6	U 6	East–Northeast	6.6	12
		D 6	East–Northeast	11.8	13
	7	U 7	Northeast	7.6	15
		D 7	Northeast	8.1	13
	8	U 8	East	4.1	8
		D 8	East	2.9	8
B	1	U 1	Southwest	4.0	13
		D 1	Southwest	4.0	13
	2	U 2	West	5.0	17
		D 2	West	5.0	17
	3	U 3	Southwest	3.0	11
		D 3	Southwest	3.0	11
	4	U 4	Southwest	2.0	18
		D 4	Southwest	2.0	18
	5	U 5	Northeast	1.0	13
		D 5	Northeast	1.0	13
	6	U 6	Northeast	2.0	18
		D 6	Northeast	2.0	18
	7	U 7	Northeast	1.0	13
		D 7	Northeast	1.0	13
C	1	U 1	Southeast	2.3	20
		D 1	Southeast	2.2	20
	2	U 2	Southeast	2.2	20

D	3	D 2	Southeast	2.1	20
		U 3	Southeast	1.8	16
	4	D 3	Southeast	1.7	16
		U 4	Southeast	2.0	18
	5	D 4	Southeast	2.1	18
		U 5	Southeast	2.2	19
	6	D 5	Southeast	2.4	19
		U 6	East	1.7	21
	7	D 6	East	1.6	21
		U 7	East	1.5	22
	8	D 7	East	1.8	21
		U 8	East	2.4	16
	1	D8	East	2.5	16
		U 1	North	2.0	22
	2	D 1	North	2.0	22
		U 2	Northwest	1.8	28
	3	D 2	Northwest	1.8	28
		U3	North	1.5	24
	4	D 3	North	1.5	24
		U 4	North	1.5	24
	5	D 4	North	1.5	24
		U 5	North	1.8	29
	6	D 5	North	1.8	29
		U 6	Northwest	2.5	25
	7	D 6	Northwest	2.5	25
		U 7	North	2.0	26
		D 7	North	2.0	26

**Table S2.** The background concentrations of each F-gas.

Substance	background concentrations (pptv)
CF <sub>4</sub>	88
PFC-116	5
PFC-218	0.7
PFC-318	2
C <sub>4</sub> F <sub>10</sub>	0.2
C <sub>6</sub> F <sub>14</sub>	0.3
SF <sub>6</sub>	11
HFC-23	36
HFC-32	29
HFC-125	38
HFC-134a	127
HFC-143a	28
HFC-152a	11
HFC-227ea	2

HFC-236fa	0.2
HFC-245fa	4
HFC-365mfc	1