

Supplementary Material

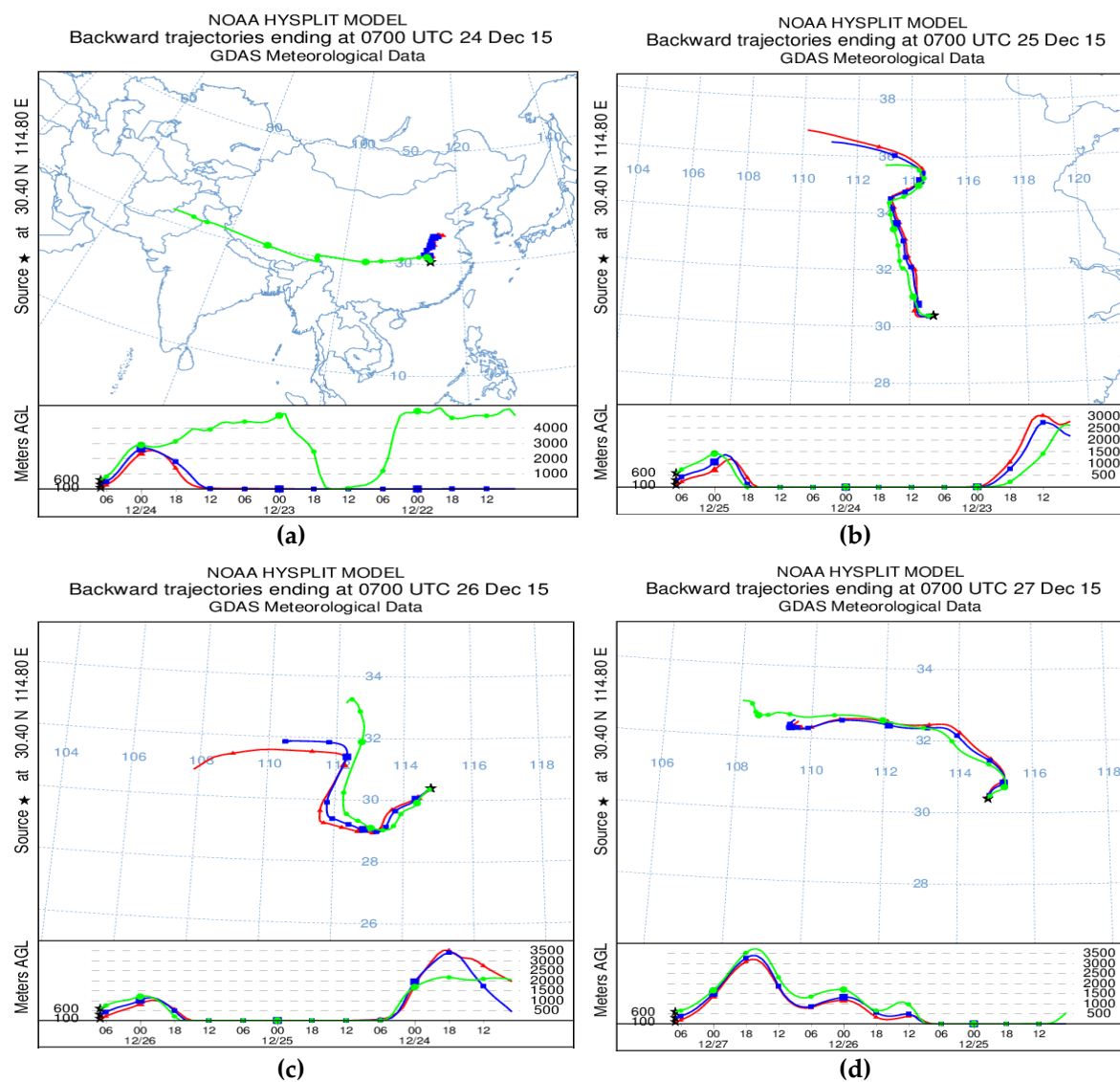


Figure S1. Backtrajectory results during the pollution process (a) 24 December 2015, AQI = 208 (b) 25 December 2015, AQI = 330 (c) 26 December 2015, AQI = 175 (d) 27 December 2015, AQI = 185.

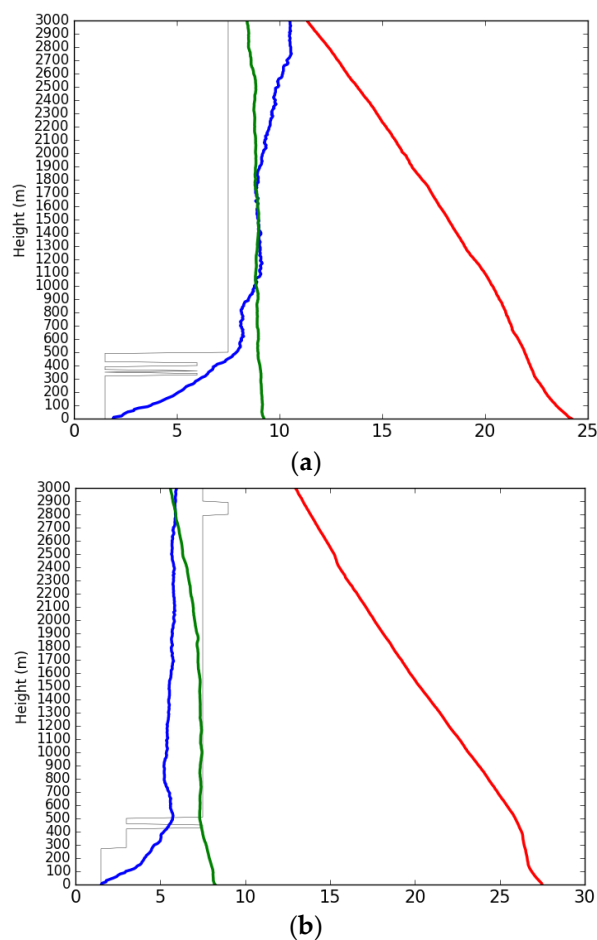


Figure S2. Average vertical structure of the atmosphere during (a) Clean days and (b) polluted days showing the profile of Temperature (red line, °C), relative humidity (green line, %), wind velocity (blue line, m/s), wind direction (grey line) during the pollution process. The number on X-axis is the result after dividing the relative humidity value by 10 and the wind direction angle by 30, while temperature and wind speed remain the same.

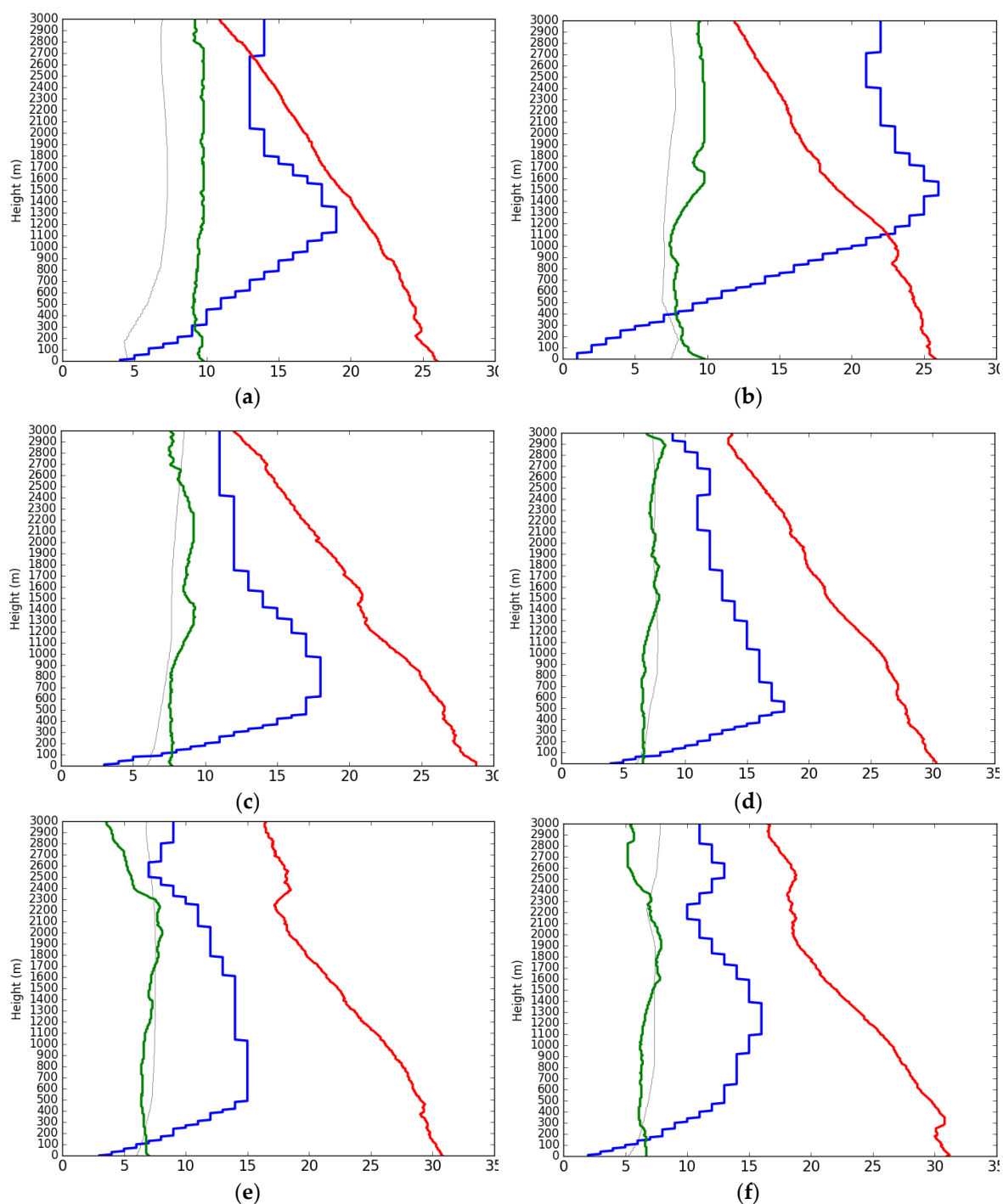


Figure S3. Vertical structure of the atmosphere on (a) 19 July 2016, AQI = 42 (b) 20 July 2016, AQI = 35 (c) 21 July 2016, AQI = 45 (d) 22 July 2016, AQI = 60 (e) 23 July 2016, AQI = 70 (f) 24 July 2016, AQI = 63 showing the profile of Temperature (red line, °C), relative humidity (green line, %), wind velocity (blue line, m/s), wind direction (grey line) during the pollution process. The number on X-axis is the result after dividing the relative humidity value by 10 and the wind direction angle by 30, while temperature and wind speed remain the same.

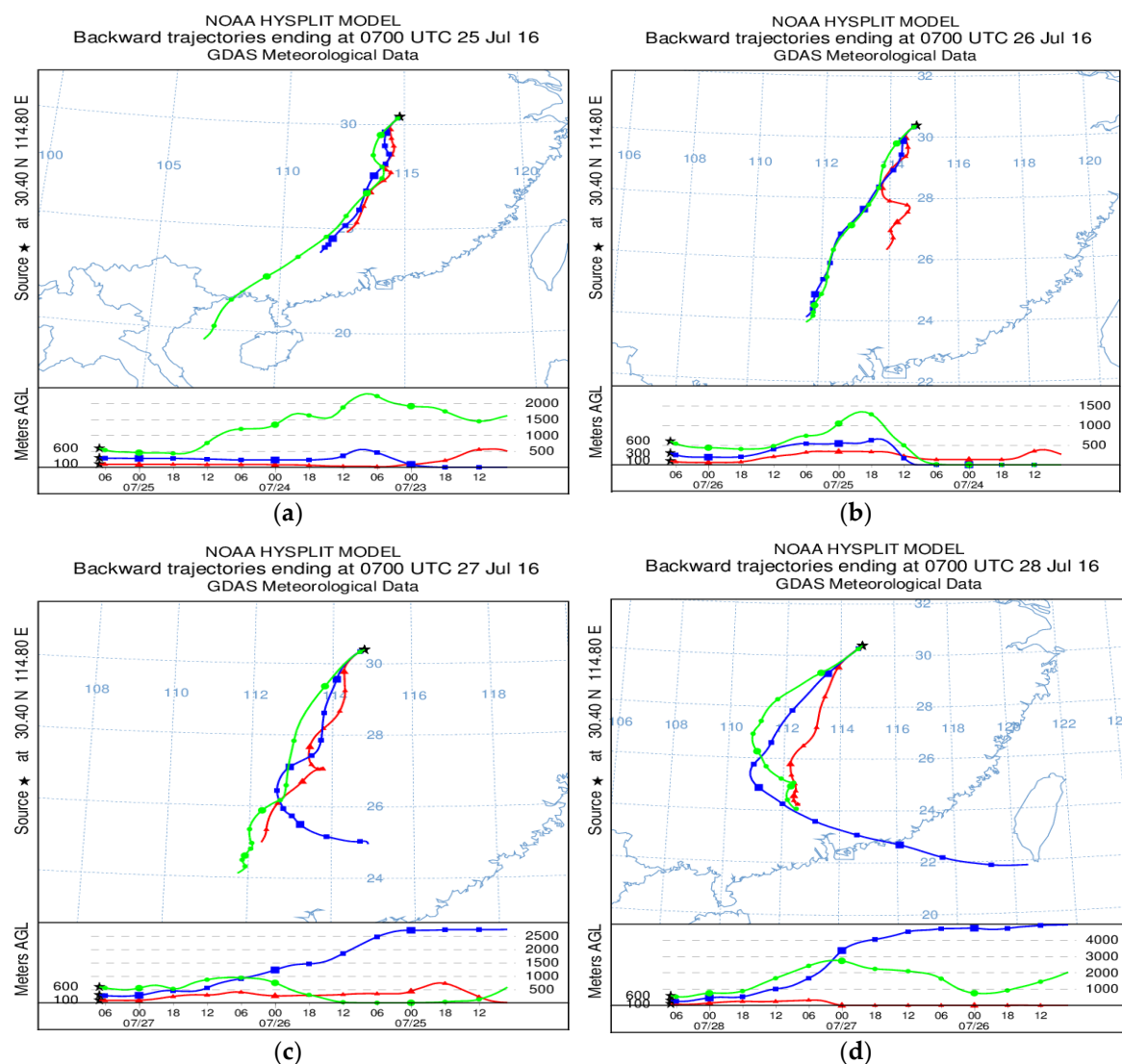


Figure S4. Backtrajectory results during the Ozone pollution process on (a) 25 July 2016, AQI = 91 (b) 26 July 2016, AQI = 95 (c) 27 July 2016, AQI = 99 (d) 28 July 2016, AQI = 110.

Table S1. Rainfall and sunshine hours during Ozone pollution process.

Date	Rainfall (mm)	Sunshine (h)
17 July 2016	6.9	6.7
18 July 2016	>0.1	7.6
19 July 2016	58.2	0
20 July 2016	17.6	0
21 July 2016	>0.1	10.4
22 July 2016	0	11.6
23 July 2016	0	11.9
24 July 2016	0	11.8
25 July 2016	0	12.2
26 July 2016	0	12.1
27 July 2016	0	11.5
28 July 2016	0	11.2
29 July 2016	0	11.3
30 July 2016	0	12

Table S2. Ground meteorological variables during Ozone pollution process.

Date	Air	Humidity	Wind	Wind	Pressure	Characteristics of Inversion Layer		
	Temperature	(%)	speed	direction	(hPa)	Strength	Altitude	Thickness
	(°C)		(m/s)			(°C/100 m)	(m)	(m)
17 July 2016	28.2	90	1	135	1002	0.8	300	50
18 July 2016	27.0	91	1	135	1002	0.3	320	90
19 July 2016	26.0	98	4	135	998	0.7	230	60
20 July 2016	25.8	98	1	225	996	0.5	110	40
21 July 2016	28.8	77	3	180	1000	0.4	220	50
22 July 2016	30.3	66	4	180	1002	NIL	NIL	NIL
23 July 2016	30.8	70	3	180	1002	0.5	190	20
24 July 2016	31.0	67	2	158	1003	0.5	220	130
25 July 2016	31.8	76	3	203	1004	1.3	220	100
26 July 2016	32.1	77	2	180	1003	1.1	100	70
27 July 2016	31.0	79	2	203	1002	0.8	210	40
28 July 2016	28.5	80	1	248	1003	0.4	140	310
29 July 2016	31.0	69	4	225	1002	1	0	20
30 July 2016	31.6	71	3	203	1004	0.4	410	150
Average	29.6	79	2.4	180	1002	0.6	223ⁿ	87

ⁿAveraged suspended inversions below the altitude of 600 m.