

Distinct Regimes of O₃ Response to COVID-19 Lockdown in China

Table S1. Type or paste caption here. The relationship between percentage changes of O₃ and associated factors in the BTH, YRD and P RD regions (coefficients listed are significant at 0.05 level).

Region	Years	OLS
BTH	2015–2019	$O_3 = 0.48 T + 0.16 SWR - 0.41 PM_{2.5}$
	2020	$O_3 = -0.28 PM_{2.5} - 0.48 NO_2$
YRD	2015–2019	$O_3 = 0.20 T + 0.14 SWR - 0.13 NO_2$
	2020	$O_3 = 0.35 T + 0.34 SWR + 0.31 HCHO - 0.28 NO_2$
PRD	2015–2019	$O_3 = 0.50 SWR + 0.35 NO_2$
	2020	$O_3 = 0.66 SWR + 0.59 HCHO + 0.27 RH$

Table S2. The mean values of considered parameters during pre-lockdown, lockdown periods, and percentage changes in the BTH region.

Parameters	2015–2019			2020		
	Pre	Lockdown	Percentage	Pre	Lockdown	Percentage
T (K)	270.53	271.78	0.46	269.95	273.94	1.48
RH (%)	51.87	43.70	−15.75	61.34	60.91	−0.70
W (m/s)	1.93	2.17	12.44	1.75	1.95	11.43
SWR (W/m ²)	201.81	266.45	32.03	194.36	254.14	30.76
HCHO (10 ¹⁵ molec/cm ²)	6.14	6.00	−2.24	8.56	9.16	6.93
PM _{2.5} (ug/m ³)	110.13	74.77	−32.11	78.35	66.18	−15.53
NO ₂ (ppb)	33.51	24.65	−26.44	28.13	14.10	−49.88

Table S3. The mean values of considered parameters during pre-lockdown, lockdown periods, and percentage changes in the YRD region.

Parameters	2015–2019			2020		
	Pre	Lockdown	Percentage	Pre	Lockdown	Percentage
T (K)	279.00	278.05	-0.34	279.92	281.63	0.61
RH (%)	74.84	70.72	-5.50	82.18	76.06	-7.45
W (m/s)	1.97	2.19	11.17	1.81	2.11	16.57
SWR (W/m ²)	189.10	235.12	24.34	139.29	231.02	65.86
HCHO (10 ¹⁵ molec/cm ²)	7.80	8.18	4.84	10.33	8.40	-18.64
PM _{2.5} (ug/m ³)	78.03	66.95	-14.20	55.94	34.62	-38.11
NO ₂ (ppb)	27.62	21.39	-22.56	21.79	9.45	-56.63

Table S4. The mean values of considered parameters during pre-lockdown, lockdown periods, and percentage changes in the PRD region.

Parameters	2015–2019			2020		
	Pre	Lockdown	Percentage	Pre	Lockdown	Percentage
T (K)	288.58	287.65	-0.32	290.83	290.3	-0.18
RH (%)	72.62	71.22	-1.93	71.07	75.68	6.49
W (m/s)	1.19	1.34	12.60	1.52	1.68	10.53
SWR (W/m ²)	219.33	230.87	5.26	238.17	233.10	-2.13
HCHO (10 ¹⁵ molec/cm ²)	8.45	8.70	2.90	9.83	9.97	1.50
PM _{2.5} (ug/m ³)	50.67	41.33	-18.43	40.09	24.76	-38.24
NO ₂ (ppb)	25.34	19.51	-23.01	22.95	10.22	-55.47