Supplement of

Enhanced atmospheric oxidizing capacity in simulating air quality with updated online emission inventories for power plants especially for haze periods over East China

Lei Zhang et al.

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Figure S1. Hourly variations of observed and simulated chemical variable concentrations in the 13 sites (labeled in Fig. 1b).

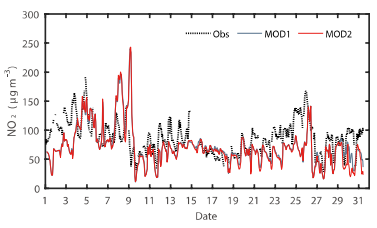
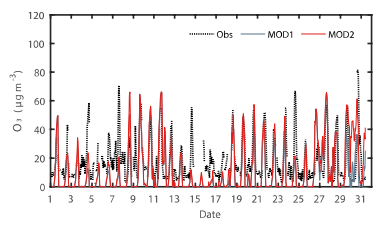
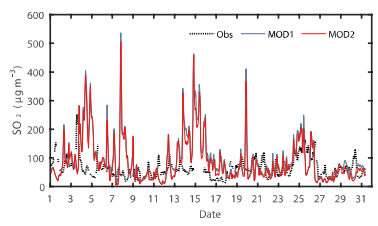
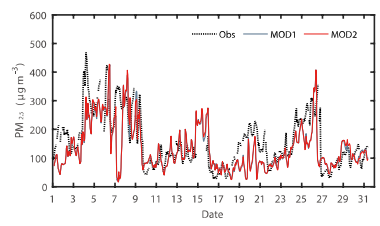
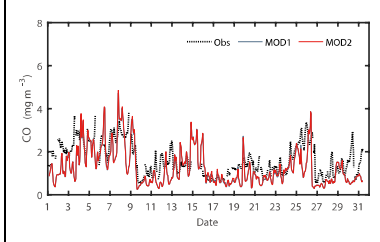
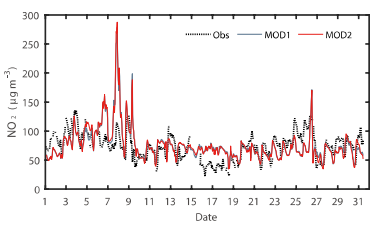
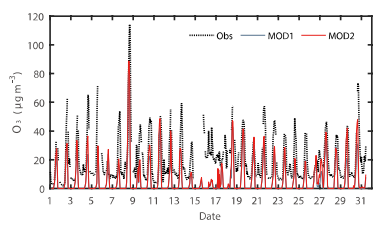
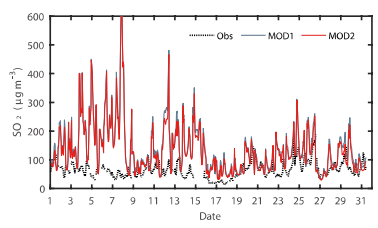
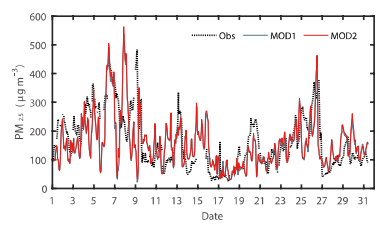
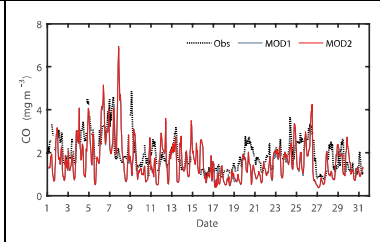
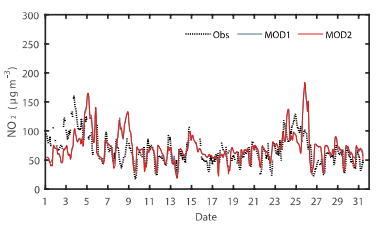
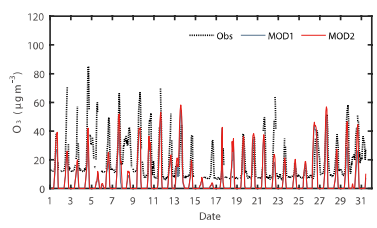
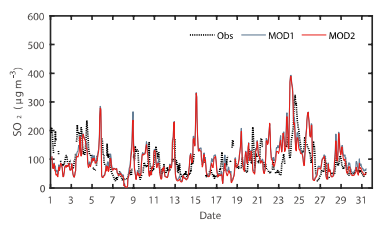
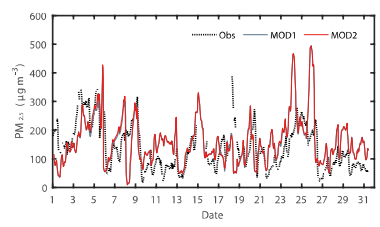
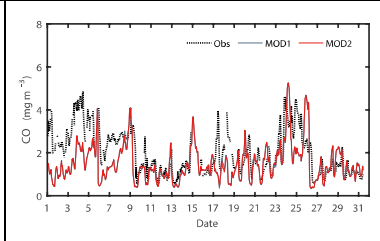
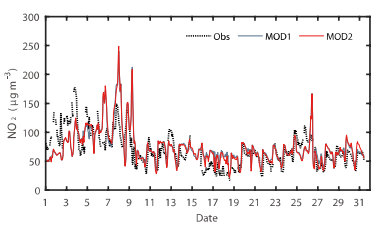
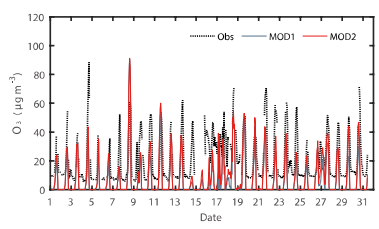
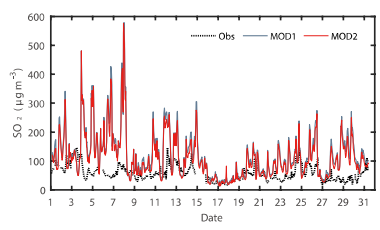
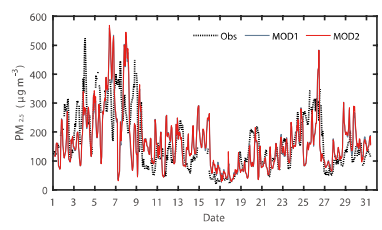
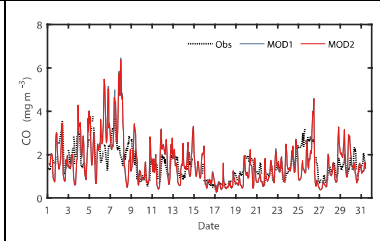
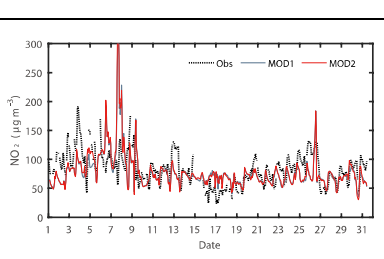
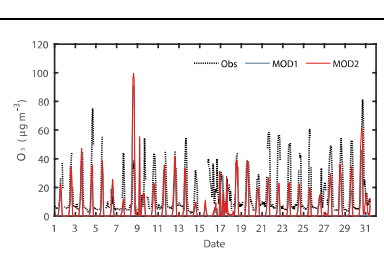
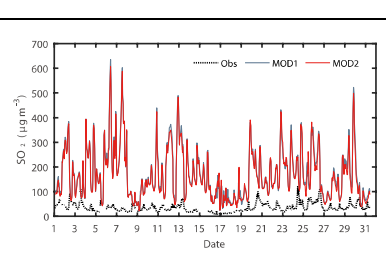
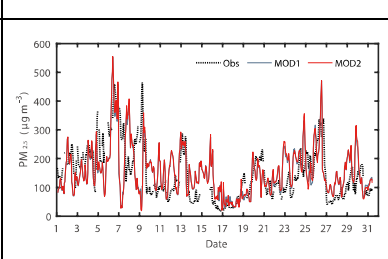
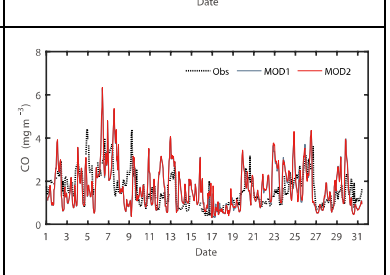
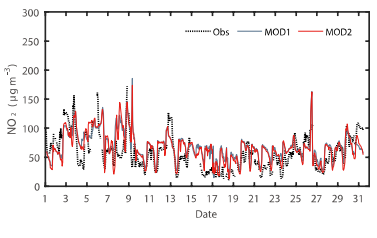
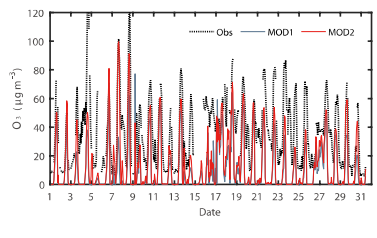
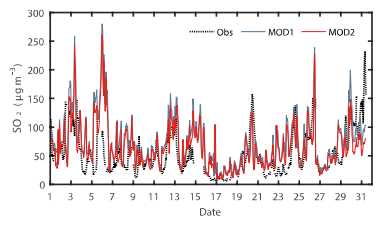
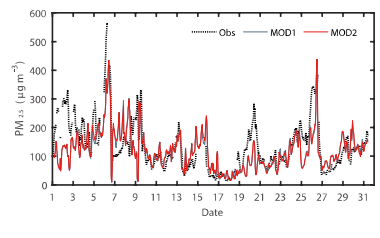
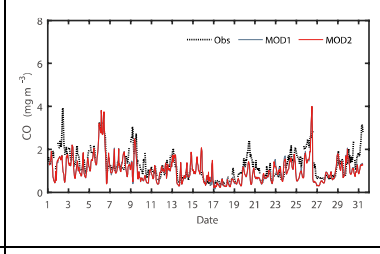
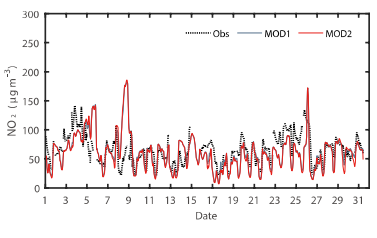
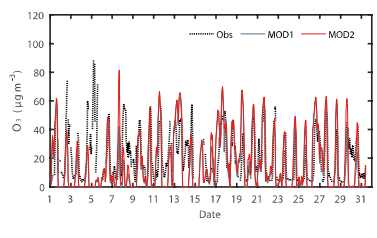
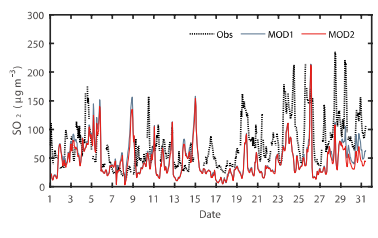
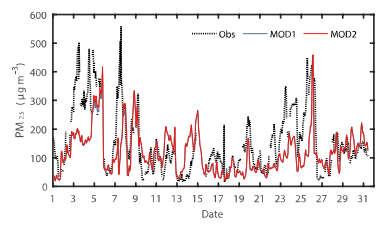
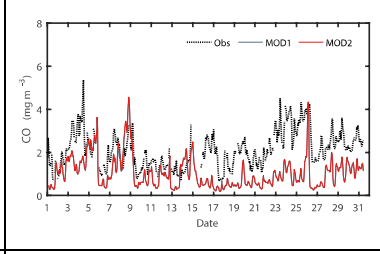
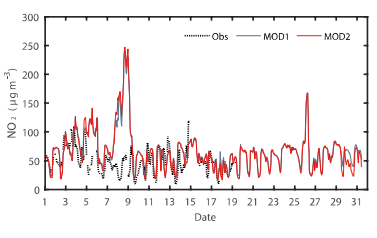
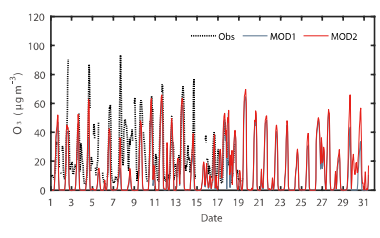
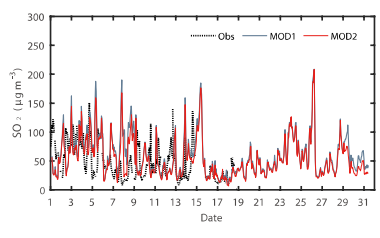
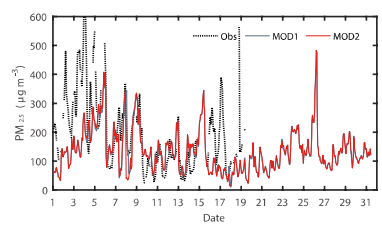
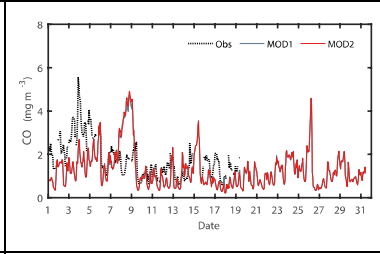
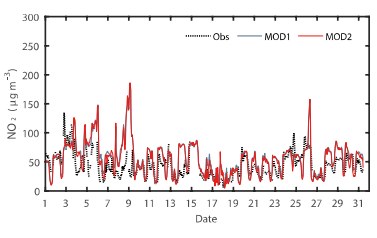
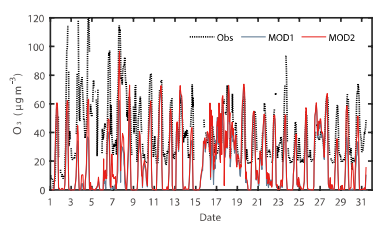
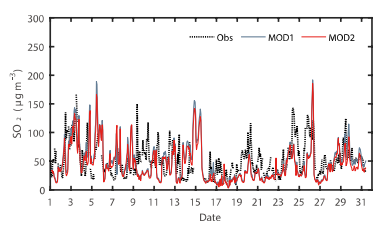
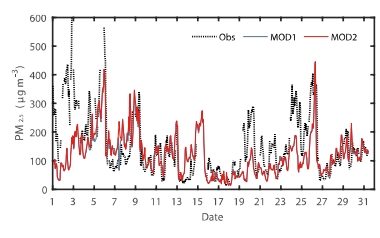
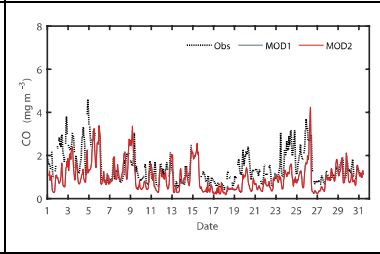
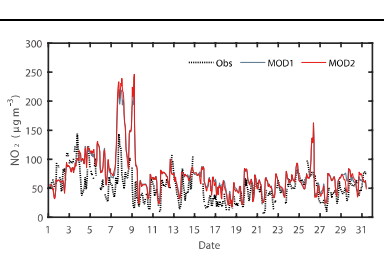
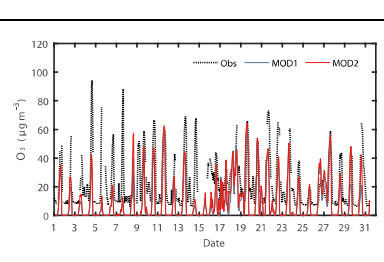
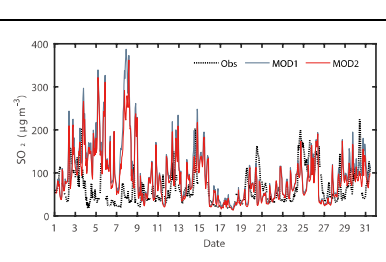
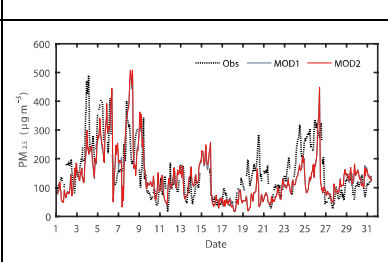
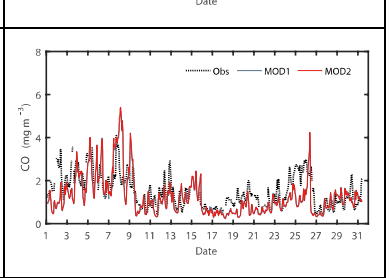
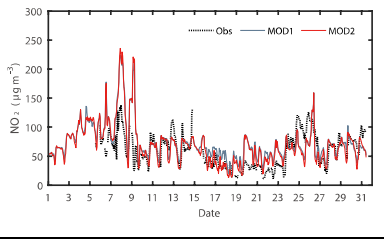
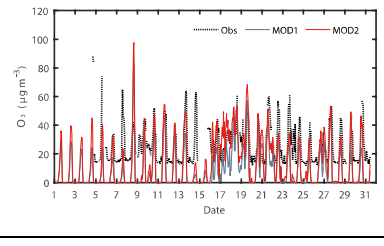
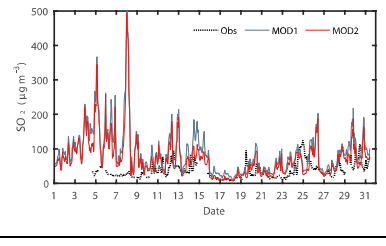
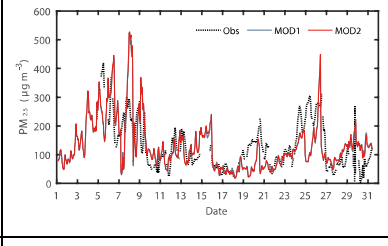
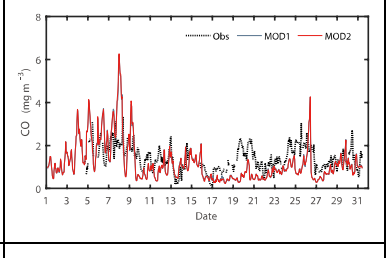
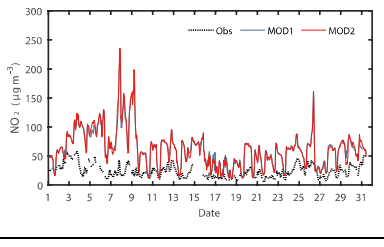
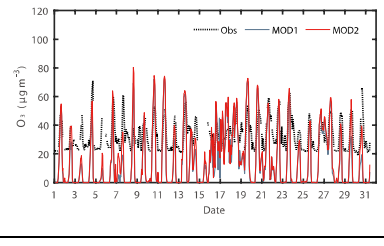
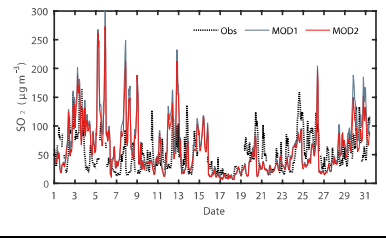
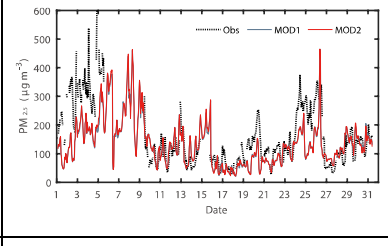
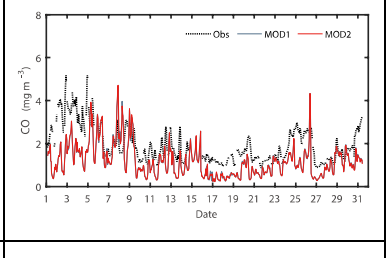
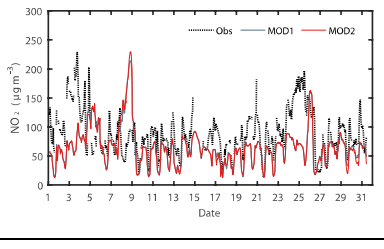
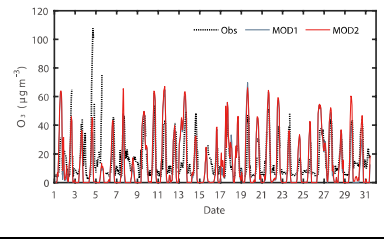
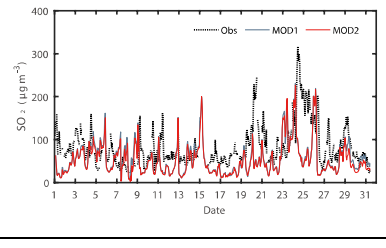
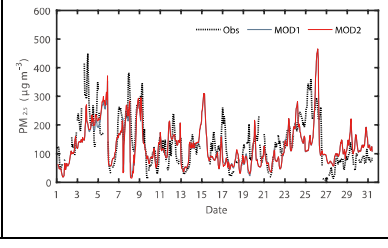
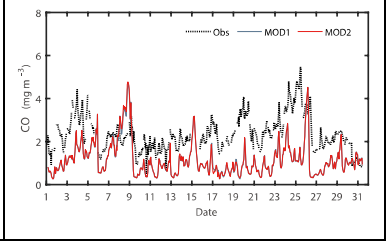
	NO_2	O_3	SO_2	$PM_{2.5}$	CO
Nanjing					
Wuxi					
Xuzhou					
Changzhou					
Suzhou					
Nantong					
Lianyungang					
Huaian					
Yancheng					
Yangzhou					
Zhenjiang					
Taizhou					
Suqian					

Figure S2. Interdiurnal variations of observed and simulated $PM_{2.5}$ chemical composition concentrations at Nanjing site.

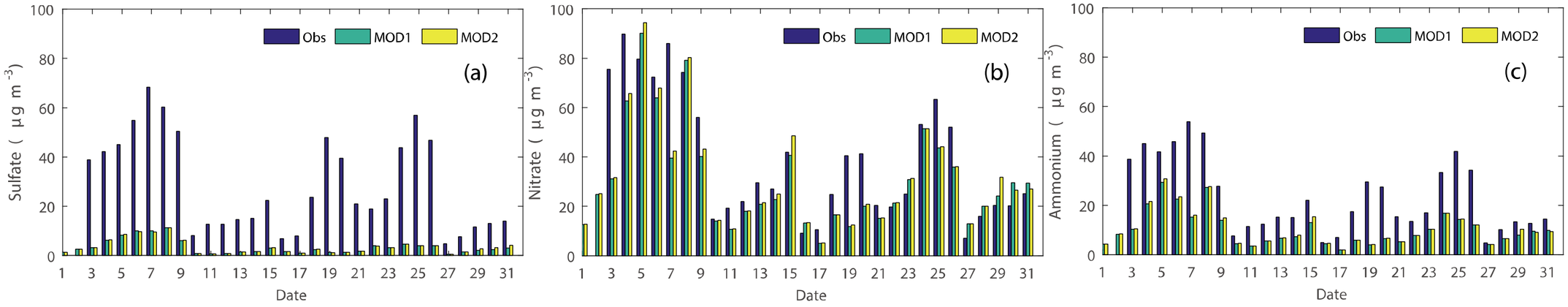


Table S1. Performance statistics of chemical variables between MOD1 and MOD2 during December 2013 in the 13 sites (labeled in Fig. 1b).

	NO_2				O_3				SO_2				$PM_{2.5}$				CO			
	NMB (%)		NME (%)		NMB (%)		NME (%)		NMB (%)		NME (%)		NMB (%)		NME (%)		NMB (%)		NME (%)	
	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2	MOD1	MOD2
Nanjing	−15.71	−17.15	31.32	32.19	−48.65	−41.71	66.30	63.81	50.44	37.89	90.04	82.58	−17.66	−17.33	35.82	35.80	−22.16	−21.87	35.71	35.83
Wuxi	6.15	6.01	28.77	28.99	−71.18	−66.77	72.50	69.09	119.59	109.55	126.34	117.94	−6.66	−5.00	38.73	38.37	−19.06	−18.10	36.71	36.06
Xuzhou	5.62	4.05	27.10	26.95	−62.33	−55.33	71.10	68.34	6.06	−0.65	47.93	47.58	11.50	12.69	46.46	46.99	−27.38	−27.05	39.96	39.82
Changzhou	7.59	5.98	29.54	28.24	−64.78	−57.10	69.13	63.92	104.63	89.35	114.08	101.28	−4.93	−4.32	41.28	41.19	1.90	2.31	38.28	38.20
Suzhou	−5.14	−4.34	29.54	29.12	−63.60	−59.29	74.18	72.81	393.83	379.84	394.47	380.70	3.98	5.20	45.15	45.74	7.99	9.33	41.54	42.48
Nantong	23.65	18.58	39.26	36.66	−71.69	−60.89	72.69	63.00	46.53	30.39	64.65	56.91	−14.33	−13.98	38.60	38.53	−19.09	−18.97	31.74	31.68
Lianyungang	−9.16	−11.30	30.66	32.36	−17.96	−8.56	60.84	62.55	−35.60	−39.40	51.73	51.83	−27.29	−26.79	46.90	46.65	−51.93	−51.62	56.32	56.29
Huaian	44.97	43.09	57.33	59.02	−56.08	−45.68	63.07	60.17	26.09	12.88	68.09	60.97	−30.44	−31.56	46.77	47.67	−24.65	−24.46	49.29	49.85
Yancheng	30.80	25.53	45.90	44.31	−55.51	−48.21	60.37	55.94	−10.85	−17.43	50.03	49.77	−25.03	−23.82	45.52	45.61	−34.63	−34.84	42.69	42.81
Yangzhou	40.80	39.53	51.00	50.72	−60.61	−53.81	66.94	63.72	51.42	36.07	84.77	75.93	−13.77	−13.51	38.48	38.83	−18.15	−17.75	38.44	38.97
Zhenjiang	24.80	16.18	41.69	37.99	−62.25	−42.71	66.48	58.59	138.43	95.69	153.20	120.48	−5.83	−5.70	41.42	41.70	−18.65	−18.73	50.16	50.60
Taizhou	167.35	163.09	167.98	163.97	−52.16	−46.54	62.84	59.87	18.97	9.41	64.67	61.20	−28.07	−27.57	42.42	42.02	−39.42	−39.26	45.75	45.59
Suqian	−27.53	−28.25	41.33	42.13	−14.78	−9.13	64.55	65.16	−35.51	−38.66	54.34	54.66	−12.58	−12.06	36.45	36.72	−52.95	−52.63	57.13	57.32
Average	22.63	20.08	47.80	47.13	−53.97	−45.83	67.00	63.61	67.23	54.22	104.95	97.06	−13.16	−12.60	41.85	41.99	−24.48	−24.13	43.36	43.50