Supplement of

Sensitivity Analysis of Planetary Boundary Layer Parameterization on Meteorological Simulations in the Yangtze River Delta Region, China

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Fig. S1 Time series of observed and model predicted air temperature (a), wind speed (b), and relative humidity (c) over the YRD region during July, 2018; the yellow area represents the range of maximum and minimum observations, same as below.

Fig. S2 Time series of observed and model predicted air temperature (a), wind speed (b), and relative humidity (c) over YRD region during November, 2018.

Table S1 Locations and surface land use type of the 41 meteorological stations.

Table S2 Daily minimum PBLH modeled with four schemes in summer and winter of 2018.
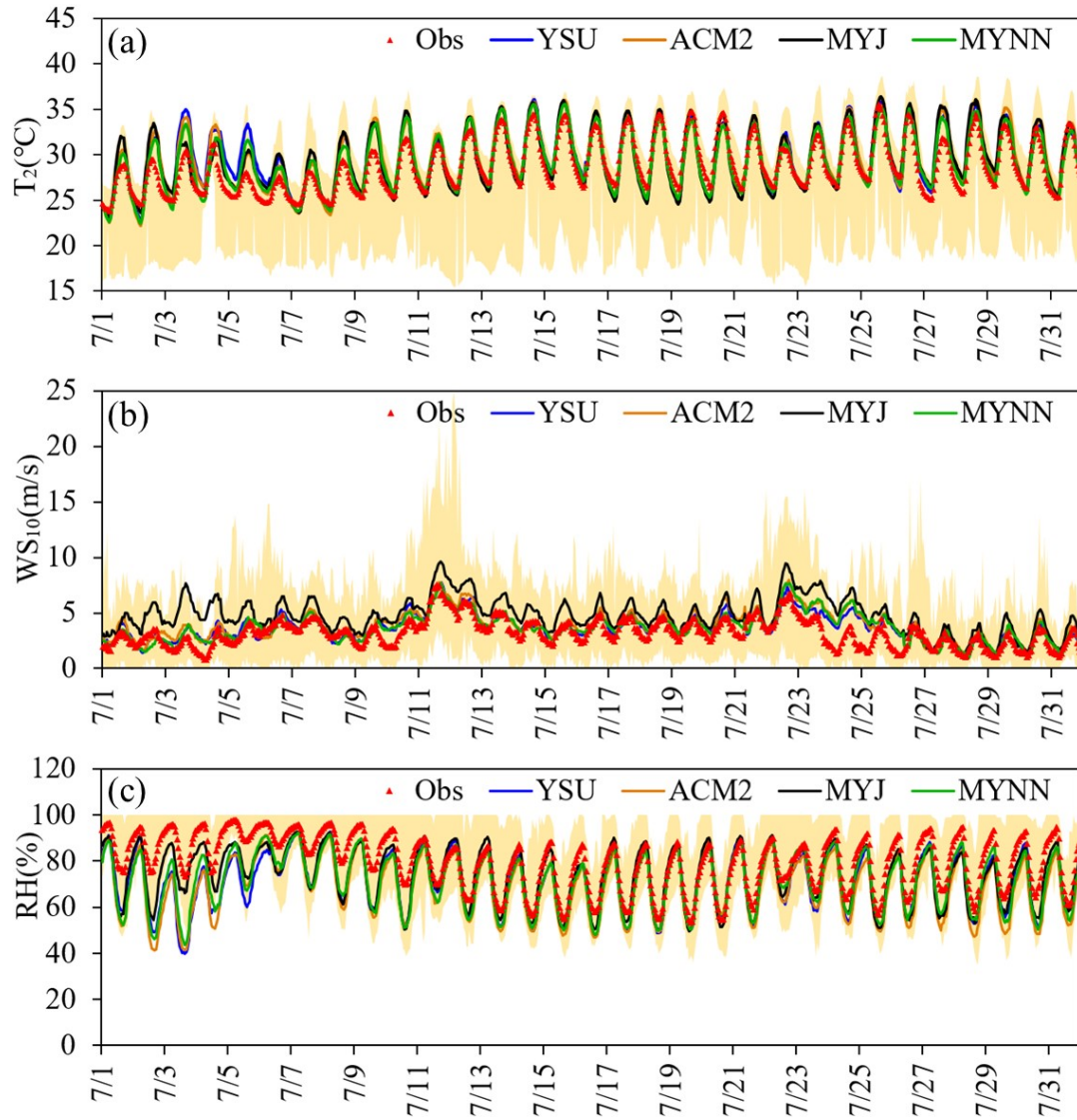
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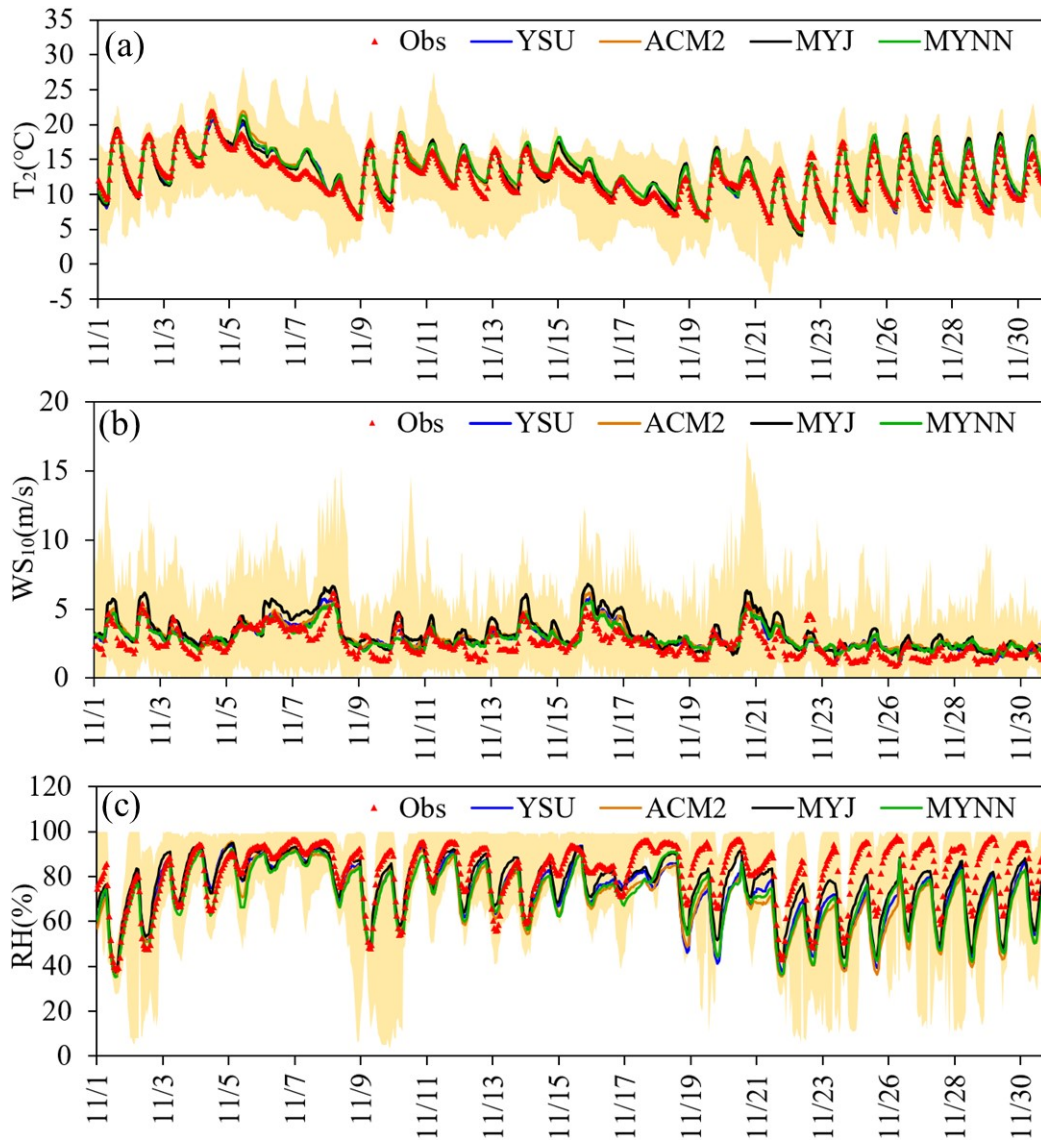
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Table S1 Locations and surface land use type of the 41 meteorological stations.

Province/City	Station	Latitude	Longtitude	Surface Land use Class
	Bozhou	33.867	115.767	Urban
	Huaibei	33.983	116.083	Cropland
	Suzhou	33.633	116.983	Urban
	Fuyang	32.867	115.733	Urban
	Bengbu	32.85	117.3	Cropland
	Huainan	32.65	117.017	Urban
	Chuzhou	32.35	118.25	Cropland
	Luan	31.733	116.05	Forest
Anhui	Hefei	31.783	117.3	Urban
	Wuhu	31.383	118.367	Urban
	Tongling	30.983	117.85	Urban
	Xuancheng	30.933	118.75	Cropland
	Huangshan	30.133	118.15	Forest
	Maanshan	31.567	118.517	Cropland
	Chizhou	30.28	117.48	Cropland
	Anqing	31.067	116.95	Cropland
	Xuzhou	34.283	117.15	Urban
	Lianyungang	34.533	119.233	Cropland
	Huaian	33.633	118.933	Cropland
	Nanjing	31.933	118.9	Urban
	Yancheng	33.433	120.2	Urban
	Yangzhou	32.417	119.417	Cropland
Jiangsu	Taizhou	32.55	120	Cropland
	Dantu	32.183	119.467	Urban
	Nantong	32.083	120.983	Cropland
	Suzhou	31.417	120.567	Urban
	Wuxi	31.617	120.35	Urban
	Changzhou	31.433	119.483	Urban
	Suqian	33.717	118.683	Urban
Shanghai	Shanghai	31.4	121.45	Urban
	Huzhou	30.867	120.05	Cropland
	Jiaxing	30.733	120.767	Urban
	Shaoxing	30.067	120.05	Forest
	Hangzhou	30.233	120.017	Urban
	Zhoushan	30.033	122.1	Forest
Zhejiang	Quzhou	29.033	119.183	Urban
	Jinhua	29.117	119.65	Urban
	Ningbo	29.783	121.55	Cropland
	Lishui	28.45	119.917	Urban
	Taizhou	28.867	121.2	Cropland
	Wenzhou	28.067	120.967	Forest

Table S2 Daily minimum PBLH modeled at Fuyang site with four schemes in

summer and winter of 2018.

	ACM2	YSU	MYJ	MYNN		ACM2	YSU	MYJ	MYNN
1-Jul	31	26	21	37	1-Nov	51	145	40	52
2-Jul	48	19	21	29	2-Nov	73	84	88	53
3-Jul	32	18	22	24	3-Nov	38	94	20	23
4-Jul	32	17	21	41	4-Nov	31	10	20	32
5-Jul	32	12	21	139	5-Nov	76	45	20	49
6-Jul	264	107	121	317	6-Nov	223	144	682	463
7-Jul	93	56	148	198	7-Nov	208	149	390	463
8-Jul	32	11	21	34	8-Nov	33	53	19	32
9-Jul	32	33	21	44	9-Nov	30	46	20	23
10-Jul	101	42	21	122	10-Nov	71	13	20	31
11-Jul	385	334	427	345	11-Nov	30	10	20	26
12-Jul	37	114	21	36	12-Nov	42	57	20	42
13-Jul	32	133	21	52	13-Nov	33	71	20	73
14-Jul	32	148	22	44	14-Nov	117	85	163	230
15-Jul	53	11	97	38	15-Nov	129	124	20	300
16-Jul	47	13	21	36	16-Nov	294	205	397	382
17-Jul	40	15	21	27	17-Nov	30	19	19	304
18-Jul	72	29	21	92	18-Nov	30	10	19	24
19-Jul	99	204	22	69	19-Nov	29	10	19	24
20-Jul	150	205	209	107	20-Nov	29	10	20	23
21-Jul	94	135	21	61	21-Nov	29	10	19	31
22-Jul	189	191	21	299	22-Nov	30	30	19	24
23-Jul	32	12	21	37	23-Nov	29	13	19	25
24-Jul	60	18	21	126	24-Nov	29	15	19	25
25-Jul	88	40	21	27	25-Nov	29	10	20	29
26-Jul	86	29	21	54	26-Nov	30	10	19	24
27-Jul	32	14	21	34	27-Nov	29	10	20	38
28-Jul	32	11	22	34	28-Nov	30	12	20	23
29-Jul	32	11	21	29	29-Nov	30	10	20	27
30-Jul	32	11	21	31	30-Nov	30	16	20	40
31-Jul	32	11	21	36					