Electronic Supplementary Information for: Enhancement of $PM_{2.5}$ exposure estimation using PM_{10} observations†

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Received Xth XXXXXXXXXX 20XX, Accepted Xth XXXXXXXXX 20XX
First published on the web Xth XXXXXXXXXX 200X
DOI: 10.1039/b000000x

The Electronic Supplementary Information file provides four additional tables. The tables are similar to Table 3 of the paper but give results for different exposure time scales.

Table 1 The R^2, MB and NME performance measures of the across-stations transferability testing, calculated using the half–hourly $PM_{2.5}$ concentrations. The results are provided for the simulation schemes LR_1 and RT_1 (note that LR_o and RT_o are identical to LR_1 and RT_1, respectively, see the Methods section for details). The station denoting each row is the one whose data were used for the model development. The measures were calculated using the data of the stations denoting the columns.

			R^2			MB			NME	
		TMM	YLB	NSH	TMM	YLB	NSH	TMM	YLB	NSH
LR_1	TMM	*	0.94	0.91	*	0.02	-3.33	*	20	30
	YLB	0.94	*	0.91	-1.84	*	-3.30	19	*	30
	NSH	0.93	0.94	*	3.48	3.46	*	24	27	*
RT_1	TMM	*	0.94	0.87	*	0.72	-1.80	*	18	26
	YLB	0.94	*	0.83	-0.19	*	-1.71	17	*	28
	NSH	0.86	0.88	*	3.46	3.02	*	31	31	*

Table 2 The R^2, MB ($\mu g\ m^{-3}$ units) and NME (%) performance measures of the across-stations transferability, calculated using the weekly (336 time points) mean $PM_{2.5}$ concentrations. The results are provided for the four simulation schemes: LR_o, LR_{336}, RT_o and RT_{336} (see the Methods section for details). The station denoting each row is the one whose data were used for the model development. The measures were calculated using the data of the stations denoting the columns.

			R^2			MB			NME	
		TMM	YLB	NSH	TMM	YLB	NSH	TMM	YLB	NSH
LR_o	TMM	*	0.92	0.86	*	0.17	-3.37	*	11	22
	YLB	0.90	*	0.87	-1.72	*	-3.34	12	*	22
	NSH	0.88	0.89	*	3.58	3.65	*	19	21	*
LR_{336}	TMM	*	0.92	0.86	*	-2.22	-6.85	*	15	33
	YLB	0.91	*	0.87	-5.00	*	-8.10	21	*	39
	NSH	0.77	0.78	*	11.88	5.22	*	49	35	*
RT_o	TMM	*	0.93	0.86	*	0.88	-1.87	*	10	16
	YLB	0.91	*	0.83	0.16	*	-1.57	9	*	17
	NSH	0.82	0.85	*	3.79	3.20	*	20	21	*
RT_{336}	TMM	*	0.93	0.86	*	0.66	-2.36	*	10	17
	YLB	0.91	*	0.81	-0.59	*	-2.20	9	*	19
	NSH	0.84	0.87	*	3.67	3.06	*	20	21	*

Table 3 The R^2, MB ($\mu g\ m^{-3}$ units) and NME (%) performance measures of the across-stations transferability, calculated using the monthly (1344 time points) mean $PM_{2.5}$ concentrations. The results are provided for the four simulation schemes: LR_o, LR_{1344}, RT_o and RT_{1344} (see the Methods section for details). The station denoting each row is the one whose data were used for the model development. The measures were calculated using the data of the stations denoting the columns.

		R^2			MB			NME		
		TMM	YLB	NSH	TMM	YLB	NSH	TMM	YLB	NSH
LR_o	TMM	*	0.70	0.71	*	0.39	-3.43	*	11	21
	YLB	0.82	*	0.72	-1.80	*	-3.39	10	*	21
	NSH	0.81	0.67	*	3.43	3.86	*	18	23	*
LR_{1344}	TMM	*	0.81	0.79	*	2.89	-1.42	*	15	16
	YLB	0.86	*	0.83	-2.81	*	-4.84	13	*	24
	NSH	0.53	0.39	*	27.23	13.81	*	107	66	*
RT_o	TMM	*	0.80	0.78	*	1.06	-1.89	*	11	15
	YLB	0.82	*	0.78	0.06	*	-1.63	9	*	15
	NSH	0.77	0.79	*	3.80	3.29	*	18	19	*
RT_{1344}	TMM	*	0.82	0.80	*	0.90	-2.40	*	10	16
	YLB	0.75	*	0.74	-0.97	*	-2.33	10	*	17
	NSH	0.75	0.82	*	3.65	3.35	*	19	21	*

Table 4 The R^2, MB ($\mu g\ m^{-3}$ units) and NME (%) performance measures of the across-stations transferability, calculated using the annual (17520 time points) mean $PM_{2.5}$ concentrations. The results are provided for the four simulation schemes: LR_o, LR_{17520}, RT_o and RT_{17520} (see the Methods section for details). The station denoting each row is the one whose data were used for the model development. The measures were calculated using the data of the stations denoting the columns.

		R^2			MB			NME		
		TMM	YLB	NSH	TMM	YLB	NSH	TMM	YLB	NSH
LR_o	TMM	*	0.32	0.31	*	0.81	-3.29	*	7	17
	YLB	0.34	*	0.28	-1.23	*	-3.26	8	*	17
	NSH	0.42	0.30	*	4.07	4.57	*	16	21	*
LR_{17520}	TMM	*	0.65	-0.02	*	6.54	6.66	*	30	32
	YLB	0.15	*	0.00	-117.7	*	-77.78	460	*	370
	NSH	0.88	0.21	*	69.86	15.56	*	275	81	*
RT_o	TMM	*	0.78	0.31	*	1.18	-1.56	*	7	10
	YLB	0.75	*	0.21	-0.11	*	-1.62	5	*	13
	NSH	0.70	0.56	*	3.33	3.20	*	14	16	*
RT_{17520}	TMM	*	0.79	0.44	*	0.94	-2.19	*	7	12
	YLB	0.73	*	0.30	-1.05	*	-2.60	6	*	14
	NSH	0.70	0.59	*	3.12	3.30	*	14	16	*