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Supplement of

Performance of site-specific parameterizations of longwave radiation

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Table S1: Optimal parameters sets for Model 1 and all the analyzed locations

Model: 1			
STATION ID	X	Y	Z
8	0.93	0.18	-0.07
11	1.03	0.50	-0.21
22	0.90	0.21	-0.23
24	0.93	0.54	-0.41
30	0.90	0.27	-0.34
37	0.99	0.36	-0.17
38	0.93	0.29	-0.41
39	1.01	0.46	-0.33
41	1.00	0.40	-0.13
44	1.01	0.27	-0.14
46	0.95	0.38	-0.28
54	0.98	0.44	-0.36
55	1.17	0.48	-0.14
62	1.00	0.33	-0.23
66	1.00	0.28	-0.17
75	0.96	0.38	-0.22
86	0.93	0.31	-0.40
100	1.06	0.55	-0.27
101	1.08	0.43	-0.14
102	1.16	0.36	-0.08
107	0.90	0.26	-0.13
126	0.97	0.32	-0.23
129	0.90	0.27	-0.26
132	0.89	0.17	-0.38

Table S2: Optimal parameters sets for Model 2 and all the analyzed location

Model: 2		
STATION ID	X	Y
8	0.65	0.14
11	0.44	0.28
22	0.57	0.16
24	0.58	0.18
30	0.48	0.27
37	0.49	0.31
38	0.47	0.32
39	0.43	0.33
41	0.52	0.22
44	0.60	0.10
46	0.62	0.16
54	0.61	0.17
55	0.61	0.17
62	0.53	0.23
66	0.66	0.11
75	0.61	0.20
86	0.59	0.17
100	0.72	0.10
101	0.69	0.13
102	0.59	0.21
107	0.71	0.13
126	0.62	0.19
129	0.60	0.19
132	0.67	0.11

Table S3: Optimal parameters sets for Model 3 and all the analyzed locations

Model: 3	
STATION ID	X
8	5.16
11	4.44
22	5.00
24	5.24
30	4.28
37	4.85
38	4.70
39	4.42
41	5.93
44	4.18
46	5.20
54	5.22
55	5.22
62	4.69
66	4.75
75	4.77
86	5.03
100	5.19
101	4.72
102	4.68
107	5.30
126	4.34
129	5.70
132	4.40

Table S4: Optimal parameters sets for Model 4 and all the analyzed locations

Model: 4		
STATION ID	X	Y
8	0.25	-6.99
11	0.43	-3.86
22	0.37	-10.59
24	0.33	-7.86
30	0.30	-2.11
37	0.38	-6.94
38	0.38	-6.08
39	0.41	-5.08
41	0.36	-13.19
44	0.33	-2.83
46	0.30	-8.00
54	0.30	-14.85
55	0.30	-14.81
62	0.39	-4.74
66	0.32	-6.47
75	0.28	-4.01
86	0.31	-6.37
100	0.21	-8.14
101	0.24	-3.43
102	0.29	-3.58
107	0.22	-8.53
126	0.25	-1.90
129	0.28	-14.98
132	0.24	-1.81

Table S5: Optimal parameters sets for Model 5 and all the analyzed locations

Model: 5		
STATION ID	X	Y
8	1.62	11.50
11	1.69	9.84
22	1.52	6.45
24	1.64	5.45
30	1.74	9.98
37	1.77	2.39
38	1.77	6.84
39	1.72	6.38
41	1.83	4.52
44	1.49	10.36
46	1.75	7.00
54	1.58	5.39
55	1.58	8.47
62	1.67	4.71
66	1.70	6.59
75	1.78	10.83
86	1.65	3.79
100	1.62	8.53
101	1.57	3.99
102	1.79	8.87
107	1.70	4.67
126	1.84	8.40
129	1.72	2.82
132	1.59	8.95

Table S6: Optimal parameters sets for Model 6 and all the analyzed locations

Model: 6		
STATION ID	X	Y
8	0.70	4.35
11	0.54	12.08
22	0.65	3.24
24	0.63	6.58
30	0.60	12.17
37	0.59	14.00
38	0.58	14.00
39	0.55	14.00
41	0.67	5.40
44	0.63	4.65
46	0.68	5.50
54	0.65	7.05
55	0.65	7.04
62	0.60	9.96
66	0.71	2.56
75	0.68	8.36
86	0.65	6.09
100	0.75	3.43
101	0.72	6.16
102	0.66	9.89
107	0.75	5.08
126	0.84	0.03
129	0.67	6.48
132	0.70	4.77

Table S7: Optimal parameters sets for Model 7 and all the analyzed locations

Model: 7		
STATION ID	X	Y
8	-83.39	1.02
11	-104.32	0.89
22	-84.81	0.94
24	-146.55	1.12
30	-46.26	0.84
37	-93.56	0.92
38	-79.48	0.88
39	-67.42	0.81
41	-196.54	1.29
44	-5.37	0.70
46	-167.34	1.18
54	-56.46	0.90
55	-55.00	0.89
62	-109.60	0.95
66	-52.33	0.89
75	-65.59	0.93
86	-119.59	1.06
100	-55.82	0.98
101	-19.76	0.85
102	-76.26	0.93
107	-79.62	1.03
126	3.67	0.77
129	-134.69	1.16
132	5.91	0.77

Table S8: Optimal parameters sets for Model 8 and all the analyzed locations

Model: 8		
STATION ID	X	Y
8	0.51	0.82
11	0.00	1.91
22	0.52	0.56
24	0.06	1.90
30	0.09	1.77
37	0.24	1.35
38	0.00	2.04
39	0.00	1.95
41	0.00	2.11
44	0.41	0.79
46	0.58	0.61
54	0.42	0.94
55	0.42	0.95
62	0.13	1.67
66	0.67	0.24
75	0.20	1.63
86	0.09	1.82
100	0.39	1.17
101	0.64	0.45
102	0.19	1.65
107	0.39	1.23
126	0.32	1.24
129	0.31	1.34
132	0.29	1.33

Table S9: Optimal parameters sets for Model 9 and all the analyzed locations

Model: 9			
STATION ID	X	Y	Z
8	4.98	10.87	0.58
11	2.98	5.07	0.80
22	5.87	8.99	0.56
24	1.89	6.00	0.74
30	1.48	5.96	0.72
37	1.00	0.34	0.12
38	3.00	4.79	0.98
39	2.96	4.47	0.92
41	0.30	5.76	0.70
44	1.90	5.77	0.68
46	2.36	6.13	0.75
54	2.86	5.96	0.86
55	2.87	5.96	0.89
62	2.97	5.75	0.80
66	2.24	5.39	0.79
75	1.88	5.96	0.90
86	1.71	5.74	0.76
100	0.44	5.91	0.81
101	1.05	5.53	0.89
102	2.22	5.94	0.93
107	2.55	8.58	0.86
126	0.62	5.95	0.79
129	1.71	5.99	0.82
132	6.24	11.28	0.60

Table S10: Optimal parameters sets for Model 10 and all the analyzed locations

Model: 10			
STATION ID	X	Y	Z
8	38.63	171.71	42.03
11	6.63	110.53	174.48
22	2.14	186.44	30.32
24	29.01	132.73	108.33
30	0.46	150.74	96.12
37	0.21	148.45	127.18
38	0.06	134.58	151.82
39	0.06	125.35	158.33
41	0.07	120.76	154.09
44	53.08	105.03	105.85
46	0.09	188.01	69.27
54	55.34	123.33	99.19
55	56.01	122.24	100.27
62	0.68	150.39	95.12
66	37.64	182.26	4.69
75	39.45	154.46	79.96
86	33.62	135.85	97.63
100	78.32	112.74	103.41
101	62.08	147.42	68.12
102	24.13	152.75	96.77
107	73.65	132.25	100.46
126	17.84	161.27	71.43
129	15.71	159.41	89.76
132	74.09	97.62	128.17