

Supplementary Material

Table S1. Stations on the Northern Hemisphere [34].

No.	Station	Lat. (° ')			Lon. (° ')			Height (m)
01	Ostrov Dikson	73	30	N	80	24	E	47
02	Barrow	71	17	N	156	47	W	12
03	Reykjavik	64	08	N	21	54	W	54
04	Anchor age	61	09	N	149	59	W	52
05	Helsinki	60	19	N	24	58	E	51
06	Oslo	60	12	N	11	04	E	202
07	St. Petersburg	59	58	N	30	18	E	6
08	Stockholm	59	21	N	17	53	E	15
09	Moskva	55	50	N	37	37	E	156
10	Koebenhavn	55	41	N	12	32	E	7
11	Omsk	55	01	N	73	23	E	122
12	Edmonton	53	34	N	113	31	W	671
13	Dublin	53	26	N	06	15	W	68
14	Berlin	52	28	N	13	24	E	48
15	Irkutsk	52	16	N	104	19	E	469
16	Warszawa	52	09	N	20	57	E	106
17	De Bilt	52	05	N	05	10	E	1
18	London	51	28	N	00	27	W	24
19	Kiev	50	24	N	30	34	E	166
20	Praha	50	06	N	14	15	E	380
21	Winnipeg	49	55	N	97	14	W	238
22	Luxembourg	49	37	N	06	13	E	376
23	Vancouver	49	11	N	123	10	W	4
24	Muenchen	48	21	N	11	48	E	443
25	Wien	48	14	N	16	21	W	198
26	Budapest	47	26	N	19	11	E	138
27	Zuerich	47	22	N	08	33	E	555
28	Lyon	45	43	N	04	56	E	197
29	Montreal	45	28	N	73	45	W	35
30	Beograd	44	48	N	20	28	E	132

31	Bucuresti	44	30	N	26	04	E	90
32	Chang-chun	43	54	N	125	13	E	238
33	Urumchi	43	47	N	87	39	E	936
34	Vladivostok	43	07	N	131	56	E	183
35	Sapporo	43	04	N	141	20	E	17
36	Sofia	42	39	N	23	23	E	595
37	Boston	42	22	N	71	02	W	6
38	Chicago	41	59	N	87	54	W	203
39	Shenyang	41	44	N	123	31	E	49
40	Tashkent	41	20	N	69	18	E	488
41	Barcelona	41	17	N	02	04	E	4
42	Istanbul	40	54	N	29	09	E	18
43	New York	40	46	N	73	54	W	7
44	Madrid	40	24	N	03	40	W	667
45	Ankara	39	57	N	32	53	E	891
46	Denver	39	46	N	104	52	W	1611
47	Kashgar	39	28	N	75	59	E	1291
48	Dalian	38	54	N	121	38	E	97
49	Washington	38	51	N	77	02	W	5
50	Lisboa	38	43	N	09	09	W	77
51	Ashgabat	37	55	N	58	08	E	312
52	Athina	37	44	N	23	44	E	28
53	San Francisco	37	37	N	122	23	W	6
54	Tunis	36	50	N	10	14	E	4
55	Dar-El-Beida	36	41	N	03	13	E	25
56	Gibraltar	36	09	N	05	20	W	5
57	Las Vegas	36	05	N	115	10	W	662
58	Tehran	35	41	N	51	19	E	1204
59	Tokyo	35	41	N	139	46	E	6
60	Osaka	34	41	N	135	31	E	23
61	Peshawar	34	01	N	71	35	E	359
62	Atlanta	33	39	N	84	25	W	312
63	Fukuoka	33	35	N	130	23	E	3
64	Damascus	33	25	N	36	31	E	608
65	Amman	31	59	N	35	59	E	778
66	Shanghai	31	25	N	121	27	E	9

67	Wu h a n	30	36	N	114	03	E	24
68	C a i r o	30	06	N	31	24	E	116
69	New O r l e a n s	29	59	N	90	15	W	1
70	L h a s a	29	40	N	91	08	E	3650
71	New D e l h i	28	35	N	77	12	E	211
72	N a z e	28	23	N	129	30	E	3
73	M i a m i	25	45	N	80	23	W	4
74	T a i p e i	25	02	N	121	31	E	9
75	Kunming	25	01	N	102	41	E	1892
76	K a r a c h i	24	54	N	67	08	E	21
77	R i y a d h	24	42	N	46	44	E	635
78	A s s w a n	23	57	N	32	49	E	201
79	K o l k a t a	22	32	N	88	20	E	6
80	H o n g K o n g	22	18	N	114	10	E	31
81	H o n o l u l u	21	21	N	157	56	W	2
82	B o m b a y	18	54	N	72	49	E	9
83	K i n g s t o n	17	56	N	76	47	W	3
84	Y a n g o n	16	46	N	96	10	E	14
85	K h a r t o u m	15	36	N	32	33	E	382
86	D a k a r	14	43	N	17	30	W	24
87	B a n g k o k	13	43	N	100	33	E	3
88	N i a m e y	13	29	N	02	10	E	223
89	G u a m	13	28	N	144	47	E	75
90	B a m a k o	12	32	N	07	57	W	380
91	N d j a m e n a	12	08	N	15	02	E	295
92	D j i b o u t i	11	33	N	43	09	E	13
93	A d d i s A b a b a	09	02	N	38	45	E	2354
94	C o l o m b o	06	54	N	79	52	E	7
95	B o g o t a	04	42	N	74	09	W	2547
96	K u a l a L u m p u r	03	07	N	101	33	E	27
97	S i n g a p o r e	01	22	N	103	59	E	5

Table S2. Stations on the Southern Hemisphere [34].

No.	S t a t i o n	Lat. (° ')			Lon. (° ')			Height (m)
01	U s h u a i a	54	48	S	68	19	W	28
02	C h r i s t c h u r c h	43	29	S	172	33	E	38
03	M e l b o u r n e	37	39	S	144	49	E	132
04	A u c k l a n d	37	01	S	174	48	E	7
05	C a n b e r r a	35	18	S	149	12	E	575
06	B u e n o s A i r e s	34	35	S	58	29	W	25
07	C a p e T o w n	33	58	S	18	36	E	46
08	S y d n e y	33	56	S	151	10	E	6
09	P e r t h	31	55	S	115	58	E	20
10	M a p u t o	25	55	S	32	34	E	39
11	P r e t o r i a	25	44	S	28	11	E	1308
12	R i o D e J a n e i r o	22	55	S	43	10	W	5
13	L a P a z	16	31	S	68	11	W	4058
14	S a l v a d o r	13	01	S	38	31	W	52
15	L i m a	12	01	S	77	07	W	12
16	H o n i a r a	09	25	S	160	03	E	8
17	D a r E s S a l a a m	06	52	S	39	12	E	55
18	M a n a u s	03	08	S	60	01	W	72
19	N a i r o b i	01	19	S	36	54	E	1624

Table S3. Observational stations in Japan [34].

No.	S t a t i o n	Lat. (° ')			Lon. (° ')			Height (m)
0 1	W a k k a n a i	4 5	2 5	N	1 4 1	4 1	E	3
0 2	A b a s h i r i	4 4	0 1	N	1 4 4	1 7	E	3 8
0 3	A s a h i k a w a	4 3	4 6	N	1 4 2	2 2	E	1 2 0
0 4	N e m u r o	4 3	2 0	N	1 4 5	3 5	E	2 5
0 5	S a p p o r o	4 3	0 4	N	1 4 1	2 0	E	1 7
0 6	K u s h i r o	4 2	5 9	N	1 4 4	2 3	E	5
0 7	O b i h i r o	4 2	5 5	N	1 4 3	1 3	E	3 8
0 8	S u t t s u	4 2	4 8	N	1 4 0	1 3	E	3 3
0 9	U r a k a w a	4 2	1 0	N	1 4 2	4 7	E	3 7
1 0	H a k o d a t e	4 1	4 9	N	1 4 0	4 5	E	3 5
1 1	A o m o r i	4 0	4 9	N	1 4 0	4 6	E	3
1 2	A k i t a	3 9	4 3	N	1 4 0	0 6	E	6
1 3	M o r i o k a	3 9	4 2	N	1 4 1	1 0	E	1 5 5
1 4	M i y a k o	3 9	3 9	N	1 4 1	5 8	E	4 3
1 5	S a k a t a	3 8	5 5	N	1 3 9	5 1	E	3
1 6	S e n d a i	3 8	1 6	N	1 4 0	5 4	E	3 9
1 7	Y a m a g a t a	3 8	1 5	N	1 4 0	2 1	E	1 5 3
1 8	A i k a w a	3 8	0 2	N	1 3 8	1 4	E	6
1 9	N i g a t a	3 7	5 4	N	1 3 9	0 1	E	4
2 0	F u k u s h i m a	3 7	4 6	N	1 4 0	2 8	E	6 7
2 1	W a j i m a	3 7	2 3	N	1 3 6	5 4	E	5
2 2	T a k a d a	3 7	0 6	N	1 3 8	1 5	E	1 3
2 3	O n a h a m a	3 6	5 7	N	1 4 0	5 4	E	3
2 4	T o y a m a	3 6	4 3	N	1 3 7	1 2	E	9
2 5	N a g a n o	3 6	4 0	N	1 3 8	1 2	E	4 1 8
2 6	K a n a z a w a	3 6	3 5	N	1 3 6	3 8	E	6
2 7	U t s u m o m i y a	3 6	3 3	N	1 3 9	5 2	E	1 1 9
2 8	M a e b a s h i	3 6	2 4	N	1 3 9	2 3	E	1 1 2
2 9	M i t o	3 6	2 3	N	1 4 0	2 8	E	2 9
3 0	K a r u i z a w a	3 6	2 1	N	1 3 8	3 3	E	9 9 9
3 1	M a t s u m o t o	3 6	1 5	N	1 3 7	5 8	E	6 1 0
3 2	S a i g o	3 6	1 2	N	1 3 3	2 0	E	2 7

33	Kumagaya	36	09	N	139	23	E	30
34	Takayama	36	09	N	137	15	E	560
35	Fukui	36	03	N	136	13	E	9
36	Choshi	35	44	N	140	51	E	20
37	Tokyo	35	41	N	139	46	E	6
38	Kofu	35	40	N	138	33	E	273
39	Tsuruga	35	39	N	136	04	E	2
40	Ida	35	31	N	137	49	E	516
41	Tottori	35	29	N	134	14	E	7
42	Yokohama	35	26	N	139	39	E	39
43	Gifu	35	24	N	136	46	E	13
44	Hikone	35	17	N	136	15	E	87
45	Nagoya	35	10	N	136	58	E	51
46	Kyoto	35	01	N	135	44	E	41
47	Shizuoka	34	59	N	138	24	E	14
48	Hamada	34	54	N	132	04	E	19
49	Oshima	34	45	N	139	22	E	74
50	Hamamatsu	34	45	N	137	43	E	46
51	Tsu	34	44	N	136	31	E	3
52	Kobe	34	42	N	135	13	E	5
53	Osaka	34	41	N	135	31	E	23
54	Okayama	34	40	N	133	55	E	3
55	Hiroshima	34	24	N	132	28	E	4
56	Takamatsu	34	19	N	134	03	E	9
57	Wakayama	34	14	N	135	10	E	14
58	Izuhara	34	12	N	129	18	E	4
59	Owase	34	04	N	136	12	E	15
60	Tokushima	34	04	N	134	34	E	2
61	Shimonoseki	33	57	N	130	56	E	3
62	Matsuyama	33	51	N	132	47	E	32
63	Fukuoka	33	35	N	130	23	E	3
64	Kochi	33	34	N	133	33	E	1
65	Ushiomisaki	33	27	N	135	45	E	68
66	Saga	33	16	N	130	18	E	6
67	Murotomisaki	33	15	N	134	11	E	185
68	Oita	33	14	N	131	37	E	5

6 9	H a c h i j o j i m a	3 3	0 7	N	1 3 9	4 7	E	1 5 1
7 0	K u m a m o t o	3 2	4 9	N	1 3 0	4 2	E	3 8
7 1	N a g a s a k i	3 2	4 4	N	1 2 9	5 2	E	2 7
7 2	S h i m i z u	3 2	4 3	N	1 3 3	0 1	E	3 1
7 3	M i y a z a k i	3 1	5 6	N	1 3 1	2 5	E	9
7 4	K a g o s h i m a	3 1	3 3	N	1 3 0	3 3	E	4
7 5	N a z e	2 8	2 3	N	1 2 9	3 0	E	3
