

### III. ATMOSPHERIC ELECTRICITY

Atmospheric electricity data have been published since 1962. Table I contains the hourly average values of the potential gradient expressed in V/m. Hourly averages have been taken only from hours having a recording period of 30 minutes or more. If values were available only for part of an hour the average is entered in square brackets  $\left[ \right]$ . These data have been used in the determination of the monthly and daily means. Values uncertain for some reason are entered in round brackets  $( )$  and have not been used in calculating of monthly and daily means. Daily means of each day with 24 hours of recording are entered. However, loss of a maximum of one hour's data out of twelve (for example, on account of instrument maintenance or calibration) has not precluded entering this mean value. In hours marked by S the value of the potential gradient exceeded permanently or several times the measuring limits of the equipment making the determination of an hourly average impossible. The directions of the deviations are marked by signs.

Table II gives the hourly means of the quantities of positive and negative charges transported by point-discharge for each month. The values are expressed in  $10^{-6}$  Asec/hour.

All data are presented in universal time (GMT).

Tables were compiled by F. MÄRCZ. Both the equipments and the methods of measurement of potential gradient and point-discharge have been described in the paper by P. BENCZE and F. MÄRCZ: „Atmosphärisch-elektrische und ionosphärische Messungen im Observatorium bei Nagycenk”, Observatoriumsberichte des Geophysikalischen Forschungslaboratoriums der Ungarischen Akademie der Wissenschaften vom Jahre 1966, Sopron, 1967.

I.

*Hourly means of the potential gradient*

January

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	50	30	0	0	20	10	30	10	20	60	90	—	70
2.	190	250	270	280	270	270	200	200	230	—	—	—	—
3.	100	100	80	50	160	150	140	110	90	100	110	130	180
4.	—10	40	100	110	100	70	100	—	—	—	70	30	30
5.	170	180	170	150	230	240	220	+S	+S	190	160	140	130
6.	90	100	110	90	140	120	110	100	100	110	150	120	140
7.	120	110	100	120	150	150	150	160	130	110	110	140	120
8.	230	100	100	110	30	—30	—80	—40	—40	—160	—160	—100	—100
9.	250	190	+S	+S	200	+S	+S	+S	230	+S	190	+S	110
10.	190	250	240	140	120	180	170	180	220	240	270	+S	+S
11.	+S	220	220	200	170	220	200	180	—	+S	+S	190	200
12.	—	—	—	—	—	—	—	—	—	—	—	—	—20
13.	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S
14.	+S	+S	+S	+S	+S	+S	+S	+S	170	190	130	0	40
15.	—50	—60	—90	—100	—90	—140	—180	—90	—50	—90	—140	—140	—140
16.	—40	20	0	—30	20	70	20	30	90	50	20	70	100
17.	180	70	150	160	200	170	140	100	160	250	160	110	160
18.	140	240	150	—80	—140	60	—90	—90	—	40	50	280	90
19.	—120	—160	—90	—80	—100	—100	—80	—100	—50	—150	—80	—100	—60
20.	+S	+S	+S	+S	+S	220	+S	+S	+S	+S	+S	+S	120
21.	—100	—S	—S	90	—100	—80	100	180	190	140	100	100	50
22.	—120	—10	40	20	—60	—60	—10	—90	—60	—20	70	70	70
23.	100	130	110	+S	+S	+S	+S	100	240	+S	—	—	—
24.	80	60	70	70	90	60	30	0	10	60	150	110	90
25.	90	60	80	70	70	40	40	60	—	—	—	—	—
26.	80	100	100	70	50	80	130	210	220	200	190	180	180
27.	100	120	120	120	90	100	100	90	90	80	—10	—200	—100
28.	130	100	80	70	60	60	120	+S	+S	+S	180	130	150
29.	—	—	—	130	100	130	140	160	+S	+S	260	180	—
30.	40	30	40	70	70	—30	—90	20	20	—50	—10	10	—10
31.	—50	—	—30	—50	—40	0	20	20	0	—40	30	40	—
Means	74	95	88	71	70	75	65	65	96	66	87	68	67
Number of days	25	24	24	25	26	26	25	23	21	20	24	22	24

13	14	15	16	17	18	19	20	21	22	23	Daily means
—	240	240	—	—	—	240	260	250	—	—	—
—	—S	—S	—S	—S	—S	170	170	110	130	120	—
180	130	70	100	60	50	70	50	50	50	60	99
70	110	130	200	50	50	90	110	110	140	100	—
130	160	140	140	90	30	10	20	30	50	70	—
200	270	280	260	200	180	180	190	200	150	120	155
190	240	280	+S	+S	+S	80	70	160	160	240	—
—100	—120	—140	—60	—80	40	—60	30	30	70	230	—13
150	+S	+S	+S	160	100	+S	240	170	200	180	—
+S	+S	+S	240	+S	+S	+S	+S	160	230	280	—
220	+S	—	—	—	—	—	—	—	—	—	—
0	50	20	50	20	—20	110	120	240	+S	260	—
+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	—
180	110	100	30	10	—60	—50	—120	—90	—100	—100	—
—140	—160	—90	—140	—200	—100	—180	—120	—40	—30	—60	—109
60	+S	150	100	60	+S	160	+S	+S	+S	200	—
190	190	160	170	160	140	+S	+S	160	150	90	—
100	100	120	100	130	100	—300	—180	—80	—120	—150	20
—160	—90	—150	70	110	+S	+S	+S	170	160	230	—
100	90	120	130	140	260	70	90	130	170	0	—
10	0	70	20	—50	—60	—10	70	—100	0	—150	—
110	90	90	100	180	80	80	210	240	150	80	52
—	—	120	90	40	—10	—10	30	60	90	80	—
110	100	100	100	110	160	110	100	100	110	100	87
—	—	0	10	30	60	—30	40	90	80	90	—
190	190	160	150	—	—	—	—	—	—	70	—
—S	—S	—S	—S	70	190	—	—	—	+S	170	—
160	—	140	190	160	190	—	—	—	—	—	—
160	150	130	110	100	100	130	180	—	—	—	—
130	10	—30	10	10	20	20	10	0	—80	—120	4
—	—	—	—	—	—	—	—	—	—	—	—
97	93	92	94	68	71	42	75	93	84	88	
23	20	24	23	23	21	21	21	23	21	25	

February

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	—	(10)	(40)	(0)	(20)	+S	(230)	—	—	[100]	110	90	120
2.	70	120	70	90	70	90	90	120	[150]	—	150	150	110
3.	180	190	200	200	200	190	190	190	[230]	[190]	150	110	70
4.	70	70	100	90	90	100	110	—S	180	120	130	170	180
5.	190	140	100	120	160	200	260	+S	+S	220	190	200	190
6.	120	120	110	100	130	190	160	200	[190]	190	200	190	210
7.	50	20	—10	—10	10	30	40	60	70	[80]	100	100	130
8.	60	60	60	60	50	90	110	[90]	—	160	150	160	160
9.	90	100	110	110	90	110	140	150	120	[120]	[80]	30	100
10.	90	100	100	90	130	120	150	170	130	[180]	200	230	230
11.	150	130	110	80	70	130	170	100	110	110	130	90	—20
12.	110	160	140	130	90	110	70	60	50	60	50	30	50
13.	90	70	30	30	40	50	50	90	+S	+S	200	220	190
14.	130	120	120	80	70	80	90	110	[120]	90	70	70	30
15.	40	40	50	40	60	50	60	30	—	30	30	40	30
16.	130	140	160	150	130	90	60	50	30	[—30]	[—30]	0	50
17.	0	0	10	10	0	—20	0	0	10	40	—	30	50
18.	70	60	60	70	70	70	100	130	190	200	—	[100]	90
19.	30	30	30	30	30	80	100	150	110	[120]	120	130	140
20.	110	100	90	80	80	80	90	100	[110]	120	110	120	120
21.	70	50	50	50	50	60	70	90	[100]	[150]	160	170	190
22.	50	50	50	60	50	60	50	20	—	[90]	130	120	80
23.	50	50	50	±S	±S	+S	90	110	100	—	—	110	80
24.	80	60	70	80	80	90	[120]	[120]	[150]	110	110	110	100
25.	40	20	30	10	10	40	90	90	[70]	40	30	80	—S
26.	100	120	+S	±S	110	110	±S	±S	±S	±S	+S	+S	±S
27.	±S	40	+S	40	80	110	100	80	50	[10]	70	130	180
28.	120	100	80	80	70	+S	+S	—30	80	80	170	—	—
Means	90	84	79	75	78	92	102	95	112	108	117	115	114
Number of days	25	27	25	25	26	25	25	24	21	24	24	26	25

13	14	15	16	17	18	19	20	21	22	23	Daily means
70	110	120	10	10	100	60	80	40	+S	+S	—
110	120	180	200	200	200	210	200	190	160	180	140
100	+S	+S	+S	+S	+S	0	20	20	+S	20	—
180	170	200	150	150	130	120	110	150	140	130	132
200	160	100	140	100	100	60	160	140	100	120	—
140	140	120	100	100	100	90	60	60	60	50	130
190	170	130	140	130	80	90	110	100	70	70	81
190	140	180	190	70	110	110	120	130	100	100	115
100	90	70	110	110	130	150	130	130	90	110	107
+S	+S	+S	200	140	160	160	180	180	190	140	—
50	50	30	20	20	-10	50	110	100	110	150	85
80	50	30	70	80	90	80	70	70	90	100	80
170	150	110	110	80	60	120	170	160	150	130	—
80	90	80	150	160	120	120	90	60	70	60	94
10	50	90	110	110	110	60	100	60	80	90	60
50	50	40	50	50	50	50	50	60	60	50	62
70	70	80	60	50	80	90	80	90	70	70	41
150	160	180	150	180	150	130	130	110	50	(30)	118
130	130	130	110	150	140	150	140	130	130	110	110
100	90	50	50	70	100	100	60	70	80	70	90
190	180	150	130	130	130	100	80	70	60	60	106
100	+S	50	60	90	60	110	80	100	110	80	75
100	100	100	80	90	70	70	70	60	100	80	—
130	130	140	170	150	190	210	150	140	110	80	120
10	120	+S	130	130	150	+S	+S	+S	80	80	—
+S	120	130	190	190	200	250	210	180	170	50	—
+S	+S	+S	50	40	40	150	150	140	150	140	—
—	—	—	—	—	—	—	—	—	—	—	—
113	115	108	113	107	109	111	112	105	103	93	
24	23	23	26	26	26	26	26	26	25	25	

March

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	—	—	—	—	—	—	—	—	—	0	70	90	100
2.	90	90	100	70	60	70	100	100	100	200	220	130	140
3.	80	70	60	60	50	60	70	100	70	50	60	70	100
4.	100	90	90	100	100	100	120	170	110	140	160	180	180
5.	170	180	190	180	140	150	140	130	130	120	110	100	110
6.	80	70	50	70	+S	+S	+S	+S	+S	+S	+S	120	130
7.	240	160	100	100	50	80	110	150	170	200	190	170	140
8.	70	60	60	40	30	30	30	60	—	100	110	110	130
9.	110	120	130	100	60	70	60	90	120	140	150	160	180
10.	70	60	70	60	50	60	20	—70	30	0	20	+S	60
11.	80	60	60	60	60	60	80	100	80	60	+S	+S	+S
12.	60	60	80	90	90	90	90	120	70	130	140	150	160
13.	40	30	30	50	40	30	40	80	120	140	130	110	120
14.	150	100	90	80	60	70	110	180	250	160	160	100	100
15.	10	—10	10	10	—40	—20	0	10	—	60	90	100	100
16.	180	+S	+S	230	170	210	160	60	10	60	130	100	70
17.	70	30	40	60	60	70	70	100	100	100	130	130	140
18.	80	70	60	40	60	60	100	90	100	90	100	100	100
19.	40	30	40	40	40	60	80	90	70	50	40	10	30
20.	0	0	20	20	20	30	70	80	110	80	70	70	60
21.	50	50	60	70	70	70	100	150	190	90	70	70	60
22.	40	30	40	50	—30	60	50	60	—	—10	0	100	50
23.	+S	—130	—90	—160	—10	50	60	110	130	150	140	140	170
24.	60	50	50	40	80	70	100	+S	—	100	90	110	100
25.	60	50	40	40	30	40	60	70	100	90	90	80	100
26.	—10	—220	—110	—S	—70	—200	—230	—150	—200	—280	—180	20	—120
27.	—100	—40	—30	—40	—40	—30	—90	—150	—20	20	40	70	80
28.	90	50	60	70	80	90	90	80	90	90	100	100	100
29.	100	100	100	100	110	120	130	160	—	160	110	100	90
30.	80	50	40	50	60	70	60	60	50	100	—40	10	60
31.	—10	60	70	70	50	60	60	60	40	0	20	70	90
Means	72	46	52	60	49	58	63	75	84	80	87	99	98
Number of days	29	29	29	29	29	29	29	28	24	30	29	29	30

13	14	15	16	17	18	19	20	21	22	23	Daily means
60	100	80	80	60	60	80	70	90	90	80	—
140	140	170	180	160	150	130	120	80	60	90	120
120	140	130	140	110	+S	60	160	160	130	100	93
170	150	140	150	150	+S	120	180	210	200	170	143
120	120	150	160	170	110	120	110	100	100	90	133
140	210	150	+S	+S	230	+S	+S	+S	+S	+S	—
140	120	100	100	110	100	100	90	80	80	80	123
140	150	150	140	110	120	140	150	150	150	120	102
160	160	170	150	150	130	130	130	150	170	130	130
20	100	100	80	20	±S	±S	+S	100	90	100	—
-10	100	+S	±S	±S	±S	100	-S	100	80	60	—
160	140	150	150	120	150	150	120	90	80	80	113
100	80	80	90	90	110	150	180	170	160	200	99
90	100	70	50	60	40	20	30	40	20	60	91
100	100	80	70	60	60	60	-10	20	100	100	46
50	80	120	80	60	60	40	20	0	40	60	—
140	160	140	170	130	140	210	210	120	100	80	113
90	80	60	70	80	90	100	90	80	60	50	79
40	50	50	50	50	100	90	90	100	80	60	58
50	40	90	90	80	80	100	100	90	80	60	62
50	80	90	90	80	80	80	100	100	80	50	83
100	10	±S	-S	±S	±S	±S	±S	±S	±S	±S	—
160	140	110	110	50	80	90	100	100	90	90	73
110	120	130	120	100	100	80	70	60	60	60	—
100	100	100	100	100	100	100	80	40	40	0	71
-50	-200	-280	-S	-50	0	-30	-50	-160	-80	-50	123
100	120	120	120	100	120	120	110	110	100	90	37
190	200	180	170	160	150	150	130	130	110	100	115
120	110	110	100	80	60	80	40	50	60	50	97
60	90	100	100	130	110	100	110	80	60	-10	66
80	80	50	50	60	70	80	70	60	60	50	56
98	102	100	110	92	100	98	96	86	84	76	
31	31	29	27	28	26	28	27	29	29	29	

April

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	50	50	50	40	40	60	50	60	—	—	20	50	50
2.	40	20	10	20	0	—40	30	10	50	—10	10	40	90
3.	150	130	90	110	90	90	110	90	90	70	50	50	60
4.	10	20	50	50	50	70	80	100	100	100	100	80	70
5.	70	90	80	60	0	80	—10	—70	—	—S	20	50	±S
6.	80	110	120	90	50	40	50	110	100	—	—	100	80
7.	50	70	70	90	90	80	100	120	130	120	130	140	140
8.	110	100	100	110	130	140	150	190	200	180	140	120	140
9.	50	10	20	0	40	0	—40	0	40	70	110	110	100
10.	50	50	90	90	80	90	100	130	140	140	150	140	120
11.	60	50	70	80	70	70	50	60	80	90	90	140	130
12.	130	100	130	140	140	140	170	200	190	—	130	110	80
13.	40	50	40	40	50	50	90	100	—	—	90	120	130
14.	—60	±S	—	—	80	80	90	130	130	120	120	130	220
15.	100	110	100	110	120	150	170	170	170	180	210	200	210
16.	50	50	50	50	50	60	80	100	90	60	50	90	90
17.	50	50	50	50	50	50	50	50	50	50	50	50	50
18.	50	80	80	70	70	100	130	160	160	160	170	130	130
19.	130	130	190	160	150	110	130	120	—	130	130	140	130
20.	70	60	60	50	50	90	90	100	100	100	80	50	50
21.	±S	50	50	50	50	50	50	50	90	120	130	100	80
22.	40	50	50	50	60	90	100	80	70	70	70	60	70
23.	60	50	60	50	50	50	60	60	80	100	100	90	100
24.	70	60	70	70	70	90	100	80	60	50	50	60	40
25.	40	40	40	50	70	10	—40	60	30	—100	10	20	—20
26.	30	30	40	20	40	30	30	—30	—	±S	70	—120	30
27.	50	40	50	50	20	30	50	50	50	40	50	50	50
28.	70	60	50	50	10	40	±S	50	±S	±S	±S	0	40
29.	90	70	60	60	60	60	70	80	70	60	70	60	70
30.	90	100	110	100	110	130	150	170	160	150	140	130	130
Means	63	65	70	68	65	70	77	86	101	89	91	83	92
Number of days	29	29	29	29	30	30	29	30	24	23	28	30	29

13	14	15	16	17	18	19	20	21	22	23	Daily means
60	70	70	90	60	60	50	40	50	50	50	—
120	140	130	±S	—S	100	50	10	90	90	100	—
60	130	100	80	60	100	190	80	70	—10	30	83
90	100	100	90	80	60	—S	0	—10	20	20	62
±S	±S	110	150	150	140	200	190	120	90	90	—
90	100	120	110	100	60	70	70	80	70	60	—
190	230	230	170	130	150	110	100	120	110	110	124
100	100	80	80	100	110	120	110	90	70	70	118
90	90	90	90	80	80	90	90	60	70	60	58
140	160	200	200	220	+S	170	90	80	40	50	118
140	150	130	130	110	100	110	110	120	130	140	100
80	90	80	100	80	80	80	60	60	60	50	193
130	130	130	130	140	140	130	140	110	80	100	—
+S	+S	+S	+S	+S	+S	+S	200	200	160	100	—
210	180	150	130	90	120	100	60	60	60	60	134
60	70	70	60	70	60	60	60	60	50	50	54
50	—S	±S	±S	±S	±S	±S	±S	50	50	50	—
130	120	110	120	120	130	150	130	130	140	170	123
130	130	110	100	60	100	120	100	80	70	70	118
60	60	50	50	60	70	70	50	50	50	80	67
80	70	60	60	60	90	90	80	70	50	50	71
70	80	80	80	100	110	90	70	60	60	50	71
90	80	50	110	90	100	80	110	110	110	90	80
—20	±S	±S	±S	±S	±S	10	—20	50	40	30	—
—10	20	20	30	30	0	—150	50	20	20	20	11
0	0	30	50	70	70	60	50	50	50	40	—
50	—50	100	100	70	110	110	90	70	60	50	56
40	50	50	50	70	+S	+S	90	90	70	60	—
70	80	70	70	70	70	50	50	70	100	110	70
130	130	130	90	90	100	90	30	0	30	50	106
87	93	98	97	91	92	85	79	75	68	69	
28	27	27	26	26	25	26	29	30	30	30	

May

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	40	40	30	30	30	+S	110	+S	10	30	70	80	20
2.	50	70	90	60	50	0	30	-30	-10	—	—	—	—
3.	110	110	100	70	110	110	150	170	—	—	160	160	160
4.	100	70	90	50	60	-10	0	50	70	70	30	60	100
5.	80	70	90	70	50	80	100	100	120	100	20	40	30
6.	40	30	50	50	50	90	100	120	80	90	90	100	110
7.	50	60	50	40	50	80	70	50	70	70	60	70	80
8.	50	50	40	40	60	70	70	80	90	90	70	60	80
9.	70	50	50	50	50	60	110	120	130	130	90	60	60
10.	40	40	40	50	40	40	50	50	—	—	—	—	30
11.	20	20	20	20	30	30	30	40	70	90	100	90	70
12.	60	50	50	60	60	100	70	—	80	80	60	40	30
13.	30	30	30	30	30	40	50	50	50	50	40	40	30
14.	40	50	40	50	60	90	100	110	160	110	80	60	60
15.	30	30	30	30	30	40	50	60	60	50	40	30	30
16.	30	30	30	30	30	30	40	40	120	140	140	130	110
17.	70	70	60	70	80	70	70	70	—	90	70	80	70
18.	40	40	40	50	50	50	70	100	80	60	40	30	30
19.	40	40	40	40	50	80	70	70	60	60	50	60	70
20.	20	40	40	40	60	80	80	80	70	80	110	100	60
21.	50	50	50	50	50	50	60	70	50	50	40	40	50
22.	50	40	50	40	40	50	90	60	—	—	—	—	—
23.	—	—	—	—	—	—	—	—	—	—	40	20	20
24.	80	50	70	60	70	80	100	100	—	50	50	50	50
25.	70	50	50	50	70	100	90	90	110	100	50	50	40
26.	40	20	0	0	10	70	100	110	90	40	20	-10	-20
27.	10	10	10	0	10	60	100	120	120	90	50	50	50
28.	-70	-90	-10	50	0	60	110	100	120	70	50	10	50
29.	60	50	50	50	60	90	90	70	90	100	110	110	90
30.	30	10	10	-10	10	+S	-S	+S	+S	60	50	50	50
31.	+S	+S	20	-10	30	30	50	50	—	30	50	30	40
Means	46	41	47	40	46	61	76	77	83	77	65	59	57
Number of days	29	29	30	30	30	28	29	27	23	26	28	28	29

13	14	15	16	17	18	19	20	21	22	23	Daily means
70	110	110	110	20	20	130	40	70	80	50	—
—	110	100	90	60	50	120	140	100	90	110	—
170	160	180	130	130	10	60	170	160	160	120	—
110	120	120	110	110	130	130	160	140	120	110	88
40	40	40	50	80	90	60	50	90	—20	10	62
100	110	90	120	50	50	90	80	70	70	60	79
70	70	70	80	50	50	60	50	50	50	60	61
70	70	60	80	90	60	60	80	50	70	50	66
50	50	50	50	30	50	50	40	40	30	40	63
90	100	60	90	70	60	40	60	30	20	20	—
±S	±S	50	60	50	50	50	40	40	50	60	—
30	30	40	30	30	40	40	40	40	40	30	49
40	30	40	40	40	50	50	40	50	50	40	40
60	60	50	50	60	50	40	40	60	40	40	65
30	40	—20	±S	±S	50	40	40	50	30	30	—
110	100	110	100	90	100	90	80	80	70	70	79
70	60	70	(90)	(90)	70	60	50	50	40	30	—
40	40	40	40	40	50	50	50	50	40	40	48
60	60	±S	±S	±S	±S	50	70	70	50	30	—
60	50	50	50	60	50	50	50	50	50	40	58
±S	—S	—	±S	±S	±S	50	60	50	60	50	—
—	—	—	—	—	—	—	—	—	—	—	—
40	40	—60	50	70	70	70	60	50	60	80	—
50	50	50	70	60	100	120	100	90	70	70	71
40	30	10	30	40	50	50	50	40	40	40	56
20	20	10	10	50	50	50	70	60	50	40	38
40	40	50	—	—	—	90	100	40	20	—40	—
60	90	100	110	110	70	60	50	60	50	50	53
80	60	40	40	50	50	40	30	20	20	40	62
50	50	40	50	30	40	40	30	20	—10	20	—
30	50	±S	±S	±S	80	110	100	20	—30	—30	—
62	66	57	70	61	59	67	67	60	49	45	
27	28	27	24	24	27	30	30	30	30	30	

June

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	20	20	0	20	80	100	90	—	—	—	—	—120	—130
2.	±S	+S	+S	70	140	200	200	140	120	140	130	140	120
3.	50	50	50	40	70	80	60	60	50	50	60	30	30
4.	10	20	40	20	40	80	60	30	—10	—30	(—60)	±S	±S
5.	30	40	30	40	40	70	70	70	90	80	30	50	50
6.	30	30	40	40	40	60	70	70	60	50	40	30	10
7.	30	30	30	40	50	60	80	90	—	50	50	50	50
8.	50	50	60	50	40	70	150	60	50	—	±S	±S	±S
9.	50	40	40	40	50	50	60	100	100	70	40	40	—10
10.	50	50	50	50	40	50	60	50	30	30	40	0	—20
11.	70	50	50	50	50	50	60	50	50	40	—	+S	50
12.	40	30	40	40	40	—	+S	±S	±S	±S	±S	±S	10
13.	30	30	20	40	40	50	50	60	50	40	30	0	—S
14.	30	30	30	30	40	50	50	50	—	—	30	30	20
15.	20	20	20	10	30	40	50	40	40	40	30	30	30
16.	30	40	40	40	40	60	70	90	80	±S	±S	±S	+S
17.	30	70	70	70	70	60	30	10	20	60	70	40	50
18.	±S	±S	±S	±S	±S	±S	20	+S	+S	100	80	70	100
19.	40	40	50	50	50	40	50	60	80	90	100	50	—30
20.	±S	±S	—S	—40	—10	20	—30	—30	40	50	40	20	200
21.	+S	—110	—60	20	20	90	160	160	—	50	40	70	40
22.	110	80	60	50	70	90	10	100	60	60	70	60	50
23.	30	30	30	30	30	50	40	50	90	70	70	80	90
24.	70	70	60	50	30	40	50	50	40	30	50	50	60
25.	80	50	—50	20	—20	110	160	140	130	130	140	100	90
26.	50	30	—40	—100	—80	20	30	30	10	30	30	40	60
27.	70	50	70	100	130	130	110	80	20	• 30	30	30	40
28.	70	60	60	70	100	150	170	130	—	150	90	60	60
29.	±S	±S	±S	90	60	80	140	110	50	60	40	50	70
30.	80	60	50	40	40	50	70	70	50	30	70	±S	±S
Means	49	37	32	37	46	71	76	71	57	60	58	42	44
Number of days	25	26	26	29	29	28	29	27	23	25	24	24	25

13	14	15	16	17	18	19	20	21	22	23	Daily means
-10	140	100	100	90	60	80	70	-60	+S	±S	—
100	±S	+S	±S	-S	200	160	50	50	60	70	—
30	30	-20	-S	10	30	40	30	20	10	20	38
±S	±S	10	30	50	50	60	50	40	20	40	—
50	50	30	40	40	50	50	50	50	40	30	49
20	30	30	30	50	60	70	60	50	40	40	44
30	0	-10	50	50	70	60	50	50	50	50	46
+S	+S	70	70	50	60	70	80	60	50	50	—
10	20	30	30	40	50	50	50	50	50	50	46
0	-40	50	60	80	70	80	80	90	70	70	45
+S	±S	±S	±S	60	50	60	100	40	30	50	—
50	40	30	30	20	30	40	30	30	30	30	—
10	60	50	50	50	50	50	50	40	40	40	40
30	30	30	30	30	40	40	40	30	30	30	—
10	20	30	±S	50	30	30	40	40	50	40	32
60	40	40	70	90	100	100	100	100	90	100	—
50	50	50	50	40	±S	+S	±S	±S	±S	±S	—
60	70	90	100	90	90	100	70	70	60	40	—
-10	30	70	+S	-S	-S	-160	-S	±S	-140	-140	—
100	70	50	40	90	100	90	30	+S	-80	+S	—
70	70	70	60	70	90	110	140	160	100	100	—
50	60	50	40	40	60	50	40	30	40	30	57
120	130	130	150	120	100	110	120	80	80	80	80
60	50	40	40	40	40	40	40	+S	+S	90	—
90	110	100	100	110	70	70	90	80	70	50	84
110	60	90	100	10	100	90	100	90	70	60	41
60	40	40	30	30	70	80	90	80	80	70	65
60	70	80	90	90	90	50	+S	±S	±S	±S	—
60	60	50	40	50	50	40	50	40	30	60	—
±S	±S	170	150	100	20	60	40	40	30	20	—
49	52	55	63	59	67	61	64	54	38	45	
26	25	28	25	28	28	29	27	25	26	26	

July

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	20	30	30	30	60	70	60	100	40	-80	-150	-120	60
2.	—	—	—	—	—	—	—	—	50	50	60	50	30
3.	30	30	30	10	-10	-50	20	-40	40	60	60	60	50
4.	50	40	30	50	50	60	70	80	100	90	60	40	50
5.	10	20	30	30	30	40	50	60	—	100	40	30	30
6.	70	60	50	50	50	60	70	90	100	120	120	100	80
7.	60	50	50	50	100	100	100	130	110	110	100	90	80
8.	100	100	90	80	80	80	110	120	160	160	140	120	140
9.	50	50	40	40	60	70	90	100	110	140	150	110	100
10.	30	30	30	30	30	70	50	70	90	100	100	90	80
11.	10	10	10	10	10	20	30	50	60	80	80	80	80
12.	40	50	50	50	50	50	100	100	—	100	90	90	70
13.	40	50	50	40	50	70	50	50	50	20	50	60	50
14.	50	90	0	40	80	110	130	150	130	120	120	130	120
15.	40	30	30	40	40	50	50	60	—	120	100	90	100
16.	10	10	10	20	40	50	50	60	100	110	110	100	110
17.	-20	0	-20	0	10	50	90	50	±S	+S	-150	70	110
18.	60	50	30	30	80	+S	150	+S	+S	110	130	100	70
19.	30	-60	-100	-100	-60	10	80	90	—	90	100	90	70
20.	70	60	60	60	60	70	80	90	100	120	80	70	70
21.	50	50	40	50	50	70	80	90	90	70	70	80	70
22.	40	40	30	40	40	50	50	50	50	60	60	60	60
23.	0	0	10	10	30	30	40	40	40	50	40	50	50
24.	40	30	30	30	30	40	40	40	50	40	40	40	40
25.	20	10	10	10	10	20	20	50	40	40	40	40	40
26.	30	20	30	30	30	30	30	40	—	30	30	30	30
27.	—	—	—	—	—	—	—	—	50	50	60	50	50
28.	—	—	—	—	—	—	—	—	130	110	100	60	50
29.	30	±S	-10	30	30	30	20	30	—	-10	-50	-60	-30
30.	20	30	10	30	30	30	40	70	80	90	80	80	100
31.	40	30	10	0	10	20	30	90	130	150	90	100	90
Means	36	34	24	28	38	48	64	71	83	80	63	64	68
Number of days	28	27	28	28	28	27	28	27	23	30	31	31	31

13	14	15	16	17	18	19	20	21	22	23	Daily means
70	80	100	100	100	130	130	100	90	50	50	48
30	40	30	40	50	50	50	50	40	40	30	—
50	60	60	50	80	30	20	60	80	+S	+S	—
50	50	60	60	60	70	60	70	70	60	30	59
30	40	30	30	50	100	100	70	60	50	70	49
70	80	90	90	90	60	70	100	90	80	80	80
90	90	90	80	80	80	90	90	140	130	130	93
130	140	130	130	140	130	130	110	70	50	40	112
100	100	100	100	100	60	60	40	50	70	30	80
80	80	80	70	50	40	50	30	30	20	10	56
50	50	50	50	50	60	70	60	50	50	40	46
70	70	60	60	40	40	50	50	30	40	40	60
20	-S	+S	+S	+S	140	80	0	-70	-40	-10	—
130	120	120	130	110	120	90	50	50	50	40	95
120	130	100	100	100	90	90	80	50	30	30	73
100	50	50	40	50	+S	+S	+S	—	+S	-90	—
+S	—	—	+S	+S	+S	90	50	40	50	50	—
90	+S	-100	+S	+S	+S	+S	+S	0	30	50	—
70	60	60	60	120	90	80	70	80	80	70	47
60	50	50	60	60	70	80	90	80	80	70	73
70	70	80	60	60	50	50	50	50	50	40	62
50	50	50	50	40	30	30	40	30	10	10	43
50	50	40	40	40	50	60	70	60	50	40	39
30	30	40	40	40	40	50	40	40	30	20	37
50	50	50	50	50	50	50	50	50	50	40	37
30	30	30	30	30	30	30	30	20	—	—	—
40	—	—	—	—	—	—	—	—	—	—	—
40	50	40	40	30	30	40	30	30	30	30	—
-30	-30	-40	-10	10	20	10	10	20	20	10	—
10	100	90	60	50	50	60	70	50	40	30	58
80	100	100	110	80	100	60	40	70	60	60	69
64	66	59	64	65	67	65	57	48	47	37	
30	27	28	27	27	27	28	28	29	27	28	

August

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	40	50	50	50	50	40	40	40	80	100	70	40	40
2.	30	30	30	20	10	30	40	50	—	50	50	40	40
3.	40	30	30	30	30	30	60	70	70	40	50	40	40
4.	30	50	40	+S	+S	20	20	+S	90	40	40	50	40
5.	110	90	60	50	40	60	70	70	70	100	100	110	80
6.	30	50	50	60	40	50	90	130	110	100	80	90	90
7.	40	40	50	50	60	60	50	60	70	70	60	50	50
8.	50	50	50	50	50	50	50	90	120	100	80	0	10
9.	40	30	40	30	50	130	120	100	—	100	100	90	30
10.	30	30	20	30	40	50	70	50	—	50	50	60	60
11.	40	40	40	40	50	50	50	50	60	60	60	60	50
12.	60	50	30	30	30	30	40	50	40	+S	+S	+S	+S
13.	40	30	30	30	40	60	110	160	130	100	70	60	60
14.	40	40	30	30	40	60	60	60	80	90	80	60	60
15.	80	60	40	30	40	50	90	90	90	80	80	90	80
16.	40	60	90	100	90	80	—	70	—	100	120	+S	+S
17.	—	—	—	—	—	—	—	—	80	80	90	80	80
18.	—	—	—	—	—	—	—	—	—	70	70	80	60
19.	40	50	40	40	50	50	50	50	50	50	40	40	50
20.	30	30	10	30	50	50	50	60	60	30	20	40	40
21.	30	40	30	40	40	50	50	50	70	60	60	50	50
22.	50	40	40	40	40	40	50	50	60	70	60	70	40
23.	30	30	30	30	30	40	50	40	50	40	60	90	+S
24.	80	70	40	30	60	20	50	60	40	50	30	40	50
25.	10	20	30	50	50	70	100	110	130	120	80	—	70
26.	20	30	30	20	30	30	30	40	80	70	70	80	80
27.	+S	-S	60	100	+S	+S	+S	+S	-S	+S	+S	40	-10
28.	50	30	30	50	50	70	100	50	60	50	60	70	60
29.	40	30	30	30	30	30	50	50	60	60	60	60	60
30.	50	40	40	50	50	60	60	80	—	60	60	60	60
31.	40	30	30	50	-S	-S	+S	+S	+S	+S	170	70	-40
Means	43	42	39	43	44	50	62	68	76	71	70	61	51
Number of days	28	28	29	28	26	27	26	26	23	28	29	28	28

13	14	15	16	17	18	19	20	21	22	23	Daily means
50	50	50	50	50	60	70	±S	±S	+S	30	—
50	50	50	40	50	60	50	40	50	60	60	43
50	40	40	50	50	50	40	40	30	30	30	42
40	50	70	80	100	100	110	90	100	110	90	—
50	40	40	40	40	50	40	±S	±S	±S	±S	—
80	70	60	60	50	60	60	50	50	40	40	66
40	40	50	50	50	50	50	70	30	-10	40	49
20	±S	±S	±S	±S	+S	±S	+S	+S	50	50	—
80	90	100	100	90	80	60	70	50	40	30	74
50	40	50	40	40	50	50	50	50	40	40	45
50	40	50	50	70	80	90	60	+S	+S	40	—
-S	80	70	50	50	50	60	70	50	50	40	—
60	60	60	70	70	70	80	60	50	50	40	66
60	60	70	80	90	90	90	90	70	70	70	65
80	60	50	50	50	60	60	70	70	60	40	65
±S	±S	80	100	70	60	50	30	40	30	30	—
80	90	90	80	80	70	50	50	—	—	—	—
60	60	60	50	40	50	50	50	40	40	40	—
50	50	60	50	50	70	50	50	50	40	50	49
50	50	50	50	50	50	50	50	50	40	40	43
50	50	60	60	60	70	60	50	60	50	50	52
140	30	30	30	30	40	40	40	30	30	30	47
±S	70	60	50	100	130	130	100	100	90	100	—
60	90	70	60	40	40	80	50	40	30	0	49
60	40	60	50	40	40	50	40	30	20	20	56
60	60	70	80	90	70	70	70	80	+S	±S	—
10	20	20	30	40	40	50	50	40	40	50	—
50	60	50	60	60	80	100	100	70	60	60	62
60	70	70	60	60	60	70	60	60	50	50	53
50	50	50	50	60	50	70	60	60	60	50	56
-40	-90	20	60	40	50	40	70	80	100	90	—
54	51	57	58	59	63	64	60	55	49	46	
28	29	30	30	30	30	30	28	26	26	28	

September

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	70	60	60	60	60	90	120	140	160	140	120	110	110
2.	60	50	50	60	50	70	100	110	110	80	100	90	110
3.	70	50	30	—	—	—	—	100	130	130	100	100	100
4.	50	50	40	50	40	40	90	110	130	110	100	100	90
5.	40	60	70	60	50	60	60	90	80	70	70	90	110
6.	80	90	70	50	40	50	70	70	—	—	90	80	40
7.	130	130	120	120	120	130	160	210	200	130	120	110	80
8.	100	120	80	100	100	100	140	160	140	120	100	60	60
9.	60	70	50	50	70	80	110	90	110	110	80	70	70
10.	40	30	30	30	20	30	30	30	50	70	100	80	50
11.	50	50	70	60	60	150	100	80	50	50	50	70	70
12.	70	60	60	50	50	50	50	30	-60	0	+S	+S	+S
13.	20	40	50	10	30	60	+S	+S	—	120	70	100	110
14.	40	60	60	70	70	100	150	110	130	130	100	100	100
15.	50	60	50	40	$\pm S$	$\pm S$	$\pm S$	$\pm S$	130	110	110	90	100
16.	60	60	60	60	60	60	70	90	120	110	100	70	60
17.	90	90	100	80	90	90	110	120	120	120	120	60	50
18.	50	50	50	50	50	50	70	90	—	—	100	80	80
19.	40	30	40	50	40	50	50	50	50	70	30	50	70
20.	40	30	30	30	30	40	50	60	60	70	80	90	100
21.	60	50	50	50	40	50	70	80	90	90	90	100	100
22.	30	30	30	40	40	60	80	70	60	60	50	60	50
23.	80	50	30	40	60	50	60	90	100	110	110	100	100
24.	70	50	50	30	50	60	70	70	50	50	50	70	60
25.	50	50	70	60	50	60	60	50	50	60	60	70	80
26.	90	60	40	40	30	30	70	100	90	70	50	80	90
27.	80	50	40	40	70	50	60	60	—	50	30	60	40
28.	70	80	70	80	70	60	80	100	90	110	100	110	100
29.	$\pm S$	-90	-160	-60	100	90	140	190	160	70	70	120	80
30.	60	60	20	60	60	40	20	-10	-60	0	40	70	70
Means	62	54	47	50	57	66	83	91	91	85	82	84	80
Number of days	29	30	30	29	28	28	27	28	26	28	29	29	29

13	14	15	16	17	18	19	20	21	22	23	Daily means
100	100	100	100	90	100	90	100	90	60	80	96
100	80	70	80	60	70	70	60	70	50	60	75
110	120	100	100	110	90	90	100	90	70	60	—
90	80	80	70	90	70	70	70	80	70	50	76
120	110	110	100	110	100	100	100	90	80	60	83
+S	50	100	120	130	110	120	100	60	90	130	—
100	110	120	130	150	120	110	120	90	60	60	122
70	90	110	100	110	100	100	100	90	90	50	100
50	50	50	50	60	50	50	50	50	50	50	66
50	70	70	70	70	60	50	40	40	30	40	49
90	80	80	70	80	80	70	80	80	70	60	73
+S	+S	±S	±S	+S	0	60	50	50	40	50	—
90	100	110	100	120	90	50	—80	20	30	40	—
80	90	80	70	70	60	50	50	40	30	50	80
90	100	50	30	0	50	80	60	60	70	70	—
80	80	80	100	100	100	110	70	80	70	80	80
40	50	70	70	70	90	100	90	80	70	60	85
80	90	100	80	70	90	60	50	70	30	30	—
80	90	70	40	30	40	60	50	50	40	30	50
80	90	60	60	80	96	80	80	80	80	50	64
100	80	60	40	50	80	90	60	50	40	30	67
40	40	40	60	80	96	100	90	80	70	70	59
50	90	80	90	100	90	100	100	90	80	70	82
80	70	70	70	80	90	80	70	60	40	60	63
70	40	40	60	60	50	60	60	60	40	70	58
70	100	100	100	90	70	60	70	70	70	80	72
30	90	120	100	70	86	80	70	70	60	70	64
110	110	90	70	80	100	—S	—S	±S	±S	±S	—
0	70	90	60	90	90	50	60	60	50	50	60
100	70	70	80	70	80	100	90	100	80	80	56
78	82	82	78	82	80	79	69	69	59	60	
28	29	29	29	29	30	29	29	29	29	29	

October

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	90	90	80	70	100	120	120	130	130	150	190	160	190
2.	80	50	60	70	70	70	100	130	130	140	100	100	100
3.	80	100	80	100	130	+S	+S	+S	+S	+S	120	120	120
4.	50	60	+S	+S	+S	+S	+S	—	110	140	100	100	80
5.	90	90	80	90	100	100	130	150	150	160	120	110	120
6.	100	100	100	100	100	130	130	160	190	170	150	150	130
7.	70	70	70	80	100	160	160	170	150	150	130	100	90
8.	40	40	40	30	40	60	50	70	80	70	80	80	100
9.	100	80	90	80	90	100	80	100	90	100	100	100	100
10.	110	110	100	80	90	80	80	80	70	90	80	80	80
11.	90	80	70	70	70	70	80	90	—	70	70	50	60
12.	50	50	50	50	60	70	80	80	80	50	50	50	60
13.	70	60	60	50	50	70	70	130	140	110	100	90	90
14.	50	50	90	170	160	90	110	60	20	0	30	50	70
15.	—S	—230	—60	0	20	—100	—230	—300	—	—	50	40	49
16.	100	100	90	90	90	90	110	110	90	100	110	100	110
17.	130	140	120	130	130	100	100	100	100	90	90	120	120
18.	50	40	50	40	50	70	100	90	—	80	100	130	140
19.	120	140	150	160	190	220	+S	+S	190	140	130	90	90
20.	10	30	70	90	120	130	180	120	140	120	120	100	90
21.	50	50	50	50	0	40	50	80	110	110	90	100	90
22.	50	50	40	10	20	50	50	50	80	110	80	60	80
23.	50	50	50	30	30	40	50	—50	50	80	70	70	80
24.	90	100	70	60	50	50	60	70	80	70	120	100	100
25.	70	50	50	50	60	50	90	130	—	—	110	120	110
26.	60	50	50	50	60	100	120	120	110	120	110	90	70
27.	120	130	120	140	130	130	140	170	130	—	—	—	100
28.	130	140	130	130	130	150	170	190	140	150	130	110	130
29.	70	80	80	70	70	80	110	120	140	130	100	100	100
30.	40	40	50	50	60	80	70	110	130	60	70	100	80
31.	60	20	—20	50	30	50	50	70	50	20	50	70	90
Means	76	65	69	75	30	84	86	90	111	103	98	95	97
Number of days	30	31	30	30	30	29	28	28	26	27	30	30	31

13	14	15	16	17	18	19	20	21	22	23	Daily means
190	180	200	190	140	150	150	70	80	80	70	130
120	110	100	100	90	70	50	30	50	30	80	85
130	110	100	100	100	90	90	100	70	30	30	—
100	100	100	90	20	-70	+S	0	70	40	70	—
120	120	120	120	140	130	150	170	160	140	110	124
120	110	110	100	110	130	140	100	90	70	70	119
70	80	70	80	90	110	110	100	100	100	60	103
100	100	80	100	90	80	80	80	80	70	80	72
100	90	90	100	100	110	110	100	100	100	100	96
90	80	80	80	100	100	100	80	60	70	80	85
50	60	60	70	70	70	70	70	50	50	50	67
60	60	80	100	110	80	70	50	60	70	60	66
60	50	60	50	40	10	60	80	70	50	50	70
90	60	50	50	50	70	70	70	110	±S	±S	—
90	90	60	70	90	100	90	100	120	100	100	—
130	140	150	130	160	200	150	160	160	160	140	124
110	110	100	120	100	100	70	60	90	60	50	102
150	130	120	120	110	90	80	100	70	60	100	90
110	100	50	90	70	50	50	30	0	-10	-20	—
90	90	80	80	70	70	70	70	60	90	50	89
90	90	120	130	100	100	60	90	60	50	50	75
100	90	100	120	150	140	150	90	70	50	50	77
70	80	90	90	80	110	170	200	170	140	130	80
100	110	130	140	130	130	110	80	150	100	120	97
100	120	110	110	90	80	60	70	50	40	50	—
100	100	140	100	150	170	190	170	130	150	160	111
130	140	130	160	190	160	130	140	160	150	130	—
130	130	100	100	110	90	100	50	80	60	80	119
110	110	100	100	110	120	130	120	70	70	50	98
100	120	120	120	120	130	110	90	90	90	80	88
90	90	100	120	130	130	130	140	120	90	90	76
103	102	100	104	104	100	103	92	90	78	77	
31	31	31	31	31	31	30	31	31	30	30	

November

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	90	80	70	70	60	70	60	60	—	90	80	110	60
2.	—10	—60	—50	—10	—10	10	50	10	30	50	30	50	40
3.	40	40	70	80	80	100	110	120	130	120	110	100	100
4.	50	50	50	50	60	60	60	70	80	80	110	110	110
5.	60	50	50	50	60	80	80	120	120	110	90	130	100
6.	100	70	80	50	110	120	130	150	200	150	150	140	140
7.	100	100	90	90	50	30	40	60	40	50	100	100	130
8.	40	40	50	50	60	70	70	70)	—	110	120	120	110
9.	150	240	+S	+S	+S	+S	+S	+S	200	190	200	230	180
10.	70	70	90	100	120	130	150	180	+S	—140	150	170	+S
11.	—	10	40	70	30	0	100	90	+S	+S	+S	160	+S
12.	—	—	—	—	—	—	—	—	—	—	—	—	—
13.	90	140	150	180	130	130	150	150	150	180	220	200	220
14.	140	120	150	130	100	30	80	100	140	140	80	80	90
15.	90	80	80	90	80	90	130	140	—	—	80	80	90
16.	60	70	80	80	80	60	70	70	100	120	140	140	140
17.	90	100	140	100	100	80	70	20	50	60	—20	40	70
18.	50	40	30	20	70	20	60	90	0	—20	—60	—40	0
19.	80	70	80	90	70	110	110	110	90	70	70	60	10
20.	100	70	110	110	100	80	100	80	100	120	150	+S	160
21.	160	150	150	170	160	140	150	—	—	150	200	210	180
22.	50	0	0	0	10	—50	—100	+S	—	+S	+S	+S	+S
23.	—	—	—	—	—	—	—	—	—	—	—	—	—
24.	—	—	—	—	—	—	—	—	—	—	—	—	—
25.	—	—	—	—	—	—	—	—	—	—	—	—	—
26.	—	—	—	—	—	—	—	—	—	70	130	160	30
27.	110	60	60	60	70	120	160	200	220	250	160	130	140
28.	—90	—70	—130	—90	—70	—60	—20	—80	—50	—60	—20	20	80
29.	+S	+S	+S	+S	+S	+S	+S	+S	—	—	—	—	—
30.	—	—	—	—	—	—	—	—	—	—	—	—	—
Means	74	66	65	70	69	65	82	90	100	90	103	114	104
Number of days	22	23	22	22	22	22	22	20	16	21	22	22	21

13	14	15	16	17	18	19	20	21	22	23	Daily means
30	0	-10	-20	30	0	-20	-20	-100	-40	-10	32
40	20	30	40	40	60	70	40	60	60	50	27
90	110	100	100	80	100	110	90	70	50	50	90
110	60	110	150	190	160	120	150	130	80	70	95
90	90	140	120	90	110	120	140	120	110	100	97
120	130	120	130	150	160	150	150	110	100	100	125
120	70	50	50	60	60	60	60	40	50	40	68
100	60	100	100	160	150	130	130	140	160	190	101
140	90	100	100	130	140	160	150	130	100	60	—
130	150	170	60	+S	140	60	+S	—	—	—	—
110	100	20	-80	-90	—	—	—	—	—	—	—
—	—	—	—	—	—	-30	-110	-110	-80	-70	—
240	210	180	190	270	230	190	200	220	160	170	181
70	100	140	120	120	100	60	80	90	70	80	100
100	90	100	110	130	170	140	150	90	80	60	—
150	150	120	140	120	130	160	190	150	150	140	117
-110	-60	10	50	40	80	40	50	70	70	60	50
10	40	30	30	50	70	80	150	150	120	100	45
+S	+S	+S	-40	-60	100	110	130	110	80	80	—
150	160	170	180	210	240	230	220	200	190	160	147
180	180	160	170	180	170	150	130	120	90	80	—
+S	150	20	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
60	80	90	50	100	130	80	160	110	70	80	—
120	120	110	150	120	90	120	-10	-10	-20	20	106
130	130	110	50	50	+S	100	130	80	40	0	8
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
99	97	94	85	99	123	104	107	90	77	73	—
22	23	23	23	22	21	23	22	22	22	22	—

December

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	—	—	—	—	—	—	—	—	—	—	—	—	—
2.	—	—	—	—	—	—	—	—	—	—	—	—	—
3.	—	—	—	—	—	—	—	—	—	—	[60]	30	10
4.	40	50	50	50	70	110	130	100	70	[120]	150	160	180
5.	-30	-30	-20	-10	-40	-60	-90	-10	60	60	[50]	110	110
6.	70	70	80	120	110	160	130	160	—	—	210	160	200
7.	60	100	70	60	60	100	110	140	100	110	[140]	110	110
8.	60	50	70	80	80	90	60	100	120	120	[140]	+S	+S
9.	50	60	70	90	100	120	120	150	[140]	160	170	120	130
10.	70	60	—	30	60	10	30	40	60	-10	-30	—	—
11.	—	—	—	—	—	—	—	—	50	[110]	130	130	90
12.	40	30	50	70	40	60	80	120	110	[110]	120	120	120
13.	30	40	50	40	40	30	20	30	—	—	100	130	160
14.	60	50	60	90	80	100	110	100	80	80	[100]	150	100
15.	100	100	90	80	70	70	90	150	[190]	190	240	230	190
16.	110	80	70	80	90	110	120	150	160	200	[150]	140	120
17.	130	110	100	110	100	100	100	100	110	120	[150]	160	190
18.	80	70	70	70	70	90	130	120	140	190	[190]	200	190
19.	+S	+S	+S	+S	+S	140	+S	+S	+S	[220]	[100]	60	80
20.	50	50	30	10	-20	70	120	50	—	—	-30	-50	-50
21.	—	—	—	160	160	170	150	160	120	160	160	180	190
22.	90	80	60	70	70	80	100	[80]	130	140	110	120	130
23.	110	70	70	80	90	90	110	130	140	140	[140]	140	150
24.	60	70	70	90	90	100	100	100	100	[90]	[100]	70	70
25.	130	140	120	130	100	90	110	120	100	[100]	100	110	100
26.	100	100	90	80	100	100	[80]	100	120	170	120	100	90
27.	120	110	160	110	100	120	120	100	—	[80]	110	140	130
28.	100	70	110	90	10	90	100	[90]	60	[60]	[140]	70	100
29.	60	70	30	20	60	30	30	30	0	20	[-20]	-10	20
30.	60	30	20	50	50	40	100	150	50	90	110	[120]	130
31.	130	120	100	160	220	240	210	150	110	80	[40]	60	90
Means	75	70	70	77	75	91	95	104	101	116	112	113	116
Number of days	25	25	24	26	26	27	26	26	23	25	29	27	27

13	14	15	16	17	18	19	20	21	22	23	Daily means
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
0	—10	—10	—30	—20	—60	50	90	60	20	10	—
230	210	140	160	170	200	150	130	90	20	—30	115
80	80	110	70	70	30	50	40	40	40	20	30
90	110	210	200	230	210	200	120	30	10	20	—
140	190	190	160	170	190	190	170	120	80	60	122
+S	100	150	50	100	100	+S	+S	+S	60	80	—
120	80	140	170	220	220	180	170	140	120	80	130
—	—	—	—	—	—	—	—	—	—	—	—
110	80	90	130	90	90	100	90	80	70	60	—
—	120	150	160	150	150	120	120	100	80	60	99
140	110	100	90	60	110	100	90	100	100	60	—
100	140	170	200	240	240	250	210	170	140	110	130
200	170	170	180	200	240	—	250	210	170	140	162
120	100	110	160	210	190	190	—	220	200	130	140
180	160	140	140	130	120	140	140	170	160	120	133
180	160	180	200	190	150	190	+S	+S	+S	+S	—
50	30	—20	110	90	50	60	80	10	—10	50	—
—120	—20	10	60	70	100	70	100	30	30	20	—
250	220	210	190	160	180	180	150	100	110	110	—
150	160	180	190	190	150	190	120	100	120	80	120
140	140	210	140	100	90	100	100	70	50	60	111
100	100	90	90	100	80	100	100	180	120	150	97
90	90	90	100	120	130	160	140	150	120	100	114
50	100	120	140	190	170	190	170	30	80	90	114
80	160	210	120	—60	0	10	100	40	80	120	98
60	10	90	120	—30	—20	90	50	40	130	10	68
10	0	60	80	80	100	110	120	90	50	50	45
100	130	100	0	80	50	80	120	90	130	150	85
20	160	100	100	120	120	160	200	250	200	210	140
103	110	125	124	122	121	131	127	106	92	79	
26	28	28	28	28	28	26	25	26	27	27	

## II. Hourly means of the quantities of positive and negative

Hour GMT		0	1	2	3	4	5	6	7	8	9	10	11
Month													
January	+	0	0	0	0	0	0	0	9	2	8	7	23
	-	0	0	0	0	0	0	0	0	0	0	0	0
February	+	15	0	5	1	1	0	89	2	16	3	1	0
	-	21	0	0	6	1	0	76	9	13	10	0	0
March	+	2	0	0	0	0	0	0	0	0	0	0	0
	-	1	2	0	0	0	0	0	0	0	0	0	2
April	+	0	7	0	0	0	0	0	0	16	8	2	0
	-	0	16	0	0	0	0	0	0	0	4	1	0
May	+	0	0	0	0	0	0	0	11	3	0	0	0
	-	0	0	0	0	0	0	0	26	0	0	0	31
June	+	169	29	7	0	0	9	1	0	6	14	44	49
	-	70	134	31	0	0	0	0	24	52	63	38	76
July	+	0	3	0	0	0	0	0	0	7	0	0	0
	-	0	0	0	0	0	0	0	0	14	0	0	0
August	+	0	0	0	0	0	24	37	13	0	20	26	63
	-	2	0	0	0	0	18	39	80	8	7	0	0
September	+	0	0	0	0	0	8	0	0	0	0	0	0
	-	0	0	0	0	5	5	0	0	0	0	0	0
October	+	0	0	0	0	0	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0	0	0	0	0	0
November	+	0	0	4	0	0	0	0	0	1	0	0	0
	-	0	0	5	0	0	0	0	0	1	0	0	0
December	+	0	1	1	0	0	0	0	0	0	0	0	36
	-	0	1	9	3	0	1	0	0	0	0	0	75

