

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 []. 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. MÁRCZ. 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. MÁRCZ: „Atmosphärisch-elektrische und ionosphärische Messungen im Observatorium bei Nagycenk”, Observatoriumsberichte des Geophysikalischen Forschungslaboratoriums der Ungarischen Akademie der Wissenschaften vom Jahre 1966, Sopron, 1967.

MAGYAR
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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.	+S	170	170	200	160	60	50	140	80	120	170	180	190
2.	100	120	100	80	100	80	80	120	160	80	140	200	160
3.	190	+S	100	0	70	70	170	100	130	220	—	170	20
4.	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	260	+S	+S
5.	-80	-50	-100	-240	-90	-100	-50	-140	-80	—	-70	60	60
6.	-S	+S	+S	+S	-S	40	70	70	140	180	190	170	190
7.	160	110	+S	260	170	+S	+S	230	150	120	80	120	110
8.	130	80	60	70	60	50	90	—	180	180	190	210	230
9.	150	160	130	60	120	10	-100	-100	-90	-30	0	10	0
10.	-60	-70	-70	-120	-160	-S	-S	-200	-160	-180	-230	-300	-300
11.	-140	-200	-130	-70	-100	-180	-160	-70	-140	-30	—	130	80
12.	-120	-230	-260	-160	10	-S	-S	200	20	—	-10	-70	30
13.	-80	-20	70	40	+S	+S	150	+S	120	+S	+S	+S	+S
14.	60	60	40	+S	+S	+S	+S	+S	+S	+S	130	150	200
15.	+S	130	150	+S	+S	120	+S	160	+S	+S	+S	+S	180
16.	+S	+S	+S	+S	+S	140	140	150	+S	+S	+S	180	230
17.	100	40	40	40	10	30	60	110	130	—	-60	60	160
18.	—	—	—	—	—	—	—	—	—	—	—	—	—
19.	—	—	—	—	—	—	—	—	—	—	—	—	—
20.	—	—	—	—	—	—	—	—	—	—	—	—	60
21.	-10	10	100	130	150	170	210	200	220	—	—	—	+S
22.	40	-10	70	40	30	140	160	110	70	—	120	160	190
23.	150	210	180	140	150	80	110	210	240	230	130	160	110
24.	40	0	40	-40	-90	-30	70	-70	-100	-60	-120	-70	-70
25.	30	20	30	110	80	90	10	80	230	110	110	150	80
26.	20	-10	-120	-70	-140	-180	-90	-70	-140	-120	-90	-90	-40
27.	0	-60	60	90	160	+S	+S	180	130	100	160	160	120
28.	-10	90	90	80	90	130	160	170	200	180	180	190	190
29.	90	80	—	—	—	—	—	—	—	—	—	260	190
30.	90	90	90	100	90	60	50	100	110	50	40	80	100
31.	130	110	80	90	90	110	130	120	60	80	110	130	110
Means	43	35	40	38	46	45	66	78	72	72	68	100	99
Number of days	23	24	23	22	21	20	20	23	23	17	21	24	23

13	14	15	16	17	18	19	20	21	22	23	Daily means
160	130	120	140	160	180	190	180	150	100	100	143
170	220	200	200	130	200	30	50	70	50	20	119
70	—	—	—	+S	180	100	+S	+S	+S	+S	—
260	130	100	160	+S	170	220	190	20	-170	-40	—
150	80	-70	-40	70	80	140	130	-S	+S	-S	—
180	190	190	220	—	—	—	—	—	270	210	—
40	0	-30	80	160	150	180	200	180	130	170	—
240	190	140	220	260	+S	240	250	+S	—	150	—
10	-70	-230	-90	-70	-90	-120	-200	-60	10	-40	-26
-200	-260	-300	-330	-260	-230	-160	-180	-160	-260	-160	—
—	-140	-140	-30	-100	-140	-180	-200	-180	-60	-90	-103
10	90	-10	-180	-230	-80	-20	-40	-100	-60	-50	—
+S	+S	+S	130	+S	-50	0	-100	-40	30	-40	—
+S	110	120	+S	+S	+S	+S	+S	+S	+S	+S	—
+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	—
170	+S	+S	+S	160	+S	+S	180	160	130	120	—
130	110	60	30	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
100	140	180	150	160	220	200	+S	210	120	70	—
+S	+S	250	230	250	160	140	100	130	80	110	—
230	210	230	160	160	80	+S	+S	180	220	+S	—
140	180	140	110	110	50	120	190	190	150	70	148
-40	-60	-70	-70	-30	-40	40	+S	+S	-60	0	—
70	0	-60	-90	-70	-100	-100	-100	-70	-70	-100	18
-140	-160	-90	-100	-120	-90	30	50	50	30	30	-69
140	160	120	100	160	+S	130	170	-40	10	40	—
180	180	180	160	—	—	—	—	—	—	—	—
160	190	+S	180	180	120	90	110	160	60	20	—
130	130	40	40	20	50	50	40	-10	60	120	72
100	140	180	+S	+S	200	180	180	100	100	100	—
103	79	52	58	55	49	68	61	47	40	37	60
24	24	24	24	20	21	22	20	20	22	22	

February

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	80	80	100	100	80	80	110	120	170	170	—	—	—
2.	—	—	—	—	—	—	—	—	—	—	—	—	—
3.	—	—	—	—	—	—	—	—	—	—	—	110	90
4.	100	±S	120	150	130	80	90	110	170	200	190	130	110
5.	160	200	240	+S	150	100	130	160	110	80	110	90	+S
6.	—S	—S	140	120	130	130	140	110	150	160	210	+S	+S
7.	160	140	120	110	130	100	110	100	120	130	110	110	120
8.	130	90	110	120	90	80	30	90	130	200	250	240	190
9.	—	110	100	110	80	130	130	140	—	190	210	190	190
10.	40	50	70	90	80	110	70	30	10	70	110	110	100
11.	80	70	100	70	100	120	110	200	210	190	80	110	80
12.	100	70	50	60	60	60	80	80	100	100	100	120	110
13.	100	50	90	70	90	100	110	100	120	120	100	90	60
14.	50	60	50	60	70	40	10	—40	—80	—10	—20	—10	20
15.	±S	±S	±S	±S	40	—10	0	—90	—130	—110	—130	—130	—140
16.	—110	—70	—70	—60	—80	—70	—40	—30	—40	—30	—70	—40	—80
17.	120	110	100	110	120	100	110	110	140	170	140	180	130
18.	80	70	80	100	100	100	140	+S	90	80	180	160	170
19.	20	20	40	30	—60	—80	—140	—40	—20	—20	20	20	30
20.	60	60	0	—60	—110	—70	—190	—130	—130	—70	—60	—20	—20
21.	—S	—170	—140	—20	20	20	70	80	120	+S	230	230	220
22.	—S	—S	—S	—S	—S	—S	—S	—220	—S	—S	—S	—S	—S
23.	—S	—S	—110	—S	—S	—S	—S	60	+S	120	±S	110	80
24.	40	+S	+S	90	100	80	90	160	140	130	120	170	180
25.	140	100	100	60	60	50	80	110	80	0	30	20	40
26.	100	80	70	90	90	80	80	80	100	70	80	90	60
27.	80	80	80	10	0	—30	20	80	100	100	100	80	110
28.	80	60	50	60	60	50	60	60	100	130	100	100	100
Means	81	63	65	67	64	56	58	57	77	90	95	94	85
Number of days	20	20	23	22	24	24	24	25	23	24	23	24	23

13	14	15	16	17	18	19	20	21	22	23	Daily means
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
90	±S	—S	30	90	±S	±S	120	90	—S	±S	—
70	140	200	+S	+S	+S	200	200	+S	200	130	—
110	180	210	240	200	+S	+S	+S	±S	±S	±S	—
+S	160	160	190	180	170	160	160	170	230	150	—
170	170	180	160	130	110	80	60	70	80	100	120
190	220	210	150	160	140	200	180	140	170	170	153
160	140	130	+S	120	120	90	120	140	50	20	—
80	100	160	120	130	160	140	140	100	110	80	94
100	150	140	120	110	100	100	30	+S	80	130	112
90	100	60	60	40	110	90	90	90	110	100	85
—40	0	—30	70	100	90	100	80	50	50	60	72
50	80	70	90	100	110	160	200	±S	±S	±S	—
—140	—110	—140	—70	—70	—20	—40	—70	—80	—90	—70	—
60	120	170	+S	+S	+S	+S	220	200	150	120	—
140	100	100	130	120	100	140	150	130	130	110	125
140	120	100	90	140	0	200	130	110	30	40	107
80	100	100	110	120	100	80	80	90	90	80	35
—10	—40	0	10	—S	40	70	±S	±S	±S	—S	—
+S	250	150	40	40	70	10	—60	—70	—110	—S	—
—S	+S	±S	+S	+S	+S	180	140	100	50	60	—
100	100	130	90	100	80	60	80	60	±S	±S	—
150	150	140	130	140	140	120	160	130	140	170	—
60	60	90	100	100	110	100	100	90	100	110	79
130	160	170	+S	+S	±S	+S	120	+S	+S	40	—
160	160	140	130	130	130	100	90	100	100	90	89
100	70	30	100	80	100	90	60	100	70	100	80
89	112	111	100	108	98	110	108	91	87	90	86
23	24	24	21	21	20	22	24	20	20	20	

March

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	50	50	70	40	30	50	80	90	100	130	130	120	120
2.	100	100	100	80	30	40	110	100	—	110	100	—70	—110
3.	—40	0	140	100	20	0	30	100	220	+S	110	40	190
4.	+S	50	180	+S	—40	140	+S	+S	+S	230	190	170	200
5.	\pm S	\pm S	—S	—	—	—	—	—	—	—10	—50	50	110
6.	120	80	60	70	80	80	80	110	60	100	110	140	140
7.	130	140	130	130	130	120	140	160	150	150	160	140	150
8.	80	70	90	110	110	130	100	40	10	30	—40	170	200
9.	180	140	130	120	100	120	140	110	—	170	160	110	100
10.	+S	100	80	90	80	90	140	160	210	160	220	+S	250
11.	80	100	80	100	100	70	70	160	170	190	+S	250	250
12.	0	100	140	100	80	50	—40	+S	+S	\pm S	\pm S	—S	—90
13.	100	20	60	80	90	110	70	110	150	130	150	170	120
14.	80	80	30	90	160	170	30	0	30	20	40	70	110
15.	110	100	80	60	60	100	100	70	40	30	50	100	40
16.	100	90	80	100	120	170	190	210	—	220	220	210	170
17.	—20	30	40	—30	—50	—20	90	100	130	130	110	140	140
18.	+S	60	50	50	60	80	100	130	120	140	160	130	160
19.	50	10	70	70	50	70	100	100	80	80	70	60	50
20.	80	70	70	80	80	60	80	+S	+S	—S	90	80	100
21.	\pm S	\pm S	\pm S	60	70	80	110	110	140	90	60	60	60
22.	40	50	50	60	70	80	80	90	70	100	170	180	180
23.	50	50	40	30	50	70	80	90	—	120	130	110	120
24.	100	60	70	90	100	50	90	80	80	60	40	80	130
25.	50	40	30	40	40	50	50	50	50	50	90	80	60
26.	50	90	70	110	110	120	130	100	120	110	120	130	140
27.	60	50	40	50	0	10	30	30	0	—10	—30	—60	—70
28.	40	40	40	50	50	40	60	90	90	100	90	100	100
29.	50	50	50	50	50	50	60	70	50	70	60	70	60
30.	40	30	30	20	20	20	40	80	70	50	50	60	60
31.	50	50	60	60	60	60	90	70	—	80	80	60	50
Means	67	66	74	71	64	75	84	97	97	101	98	102	106
Number of days	26	29	29	29	30	30	29	27	22	28	29	29	31

13	14	15	16	17	18	19	20	21	22	23	Daily means
130	150	140	140	170	140	140	170	140	120	100	108
-140	-160	-140	0	50	0	-140	-130	-60	+S	±S	—
-S	+S	+S	150	220	140	100	20	100	70	200	—
180	130	90	-S	±S	±S	±S	±S	±S	±S	±S	—
160	+S	+S	+S	220	190	+S	+S	190	110	190	—
170	210	240	170	130	190	180	190	170	140	120	131
170	200	170	180	230	+S	+S	160	140	170	110	—
200	200	200	190	160	160	200	190	190	170	150	130
30	+S	+S	±S	±S	+S	±S	±S	-S	+S	±S	—
220	210	210	160	+S	230	110	120	160	150	110	—
250	100	160	120	100	180	160	200	200	170	160	149
±S	+S	-S	-110	-60	0	10	100	130	110	120	—
180	200	180	150	150	180	150	140	110	100	120	126
170	200	190	180	210	150	140	190	140	130	110	113
40	70	80	100	70	30	50	40	60	40	90	67
170	80	120	130	110	130	160	0	20	-50	-110	115
150	170	160	190	190	180	200	140	150	110	+S	106
100	100	150	90	80	120	140	140	130	140	170	113
70	+S	±S	50	80	+S	80	100	90	80	90	—
100	120	100	100	80	90	60	60	10	±S	±S	—
40	70	60	80	100	90	110	90	70	60	50	—
160	120	60	40	70	90	50	60	60	50	60	85
150	160	140	130	90	100	90	40	50	50	90	88
120	120	100	90	70	90	120	120	130	120	180	95
70	60	60	70	70	50	50	50	50	50	50	55
110	80	50	-10	-30	-10	30	10	40	50	40	73
-40	+S	0	40	40	30	±S	±S	-S	0	50	—
100	90	70	50	50	80	70	50	60	60	50	68
70	±S	±S	±S	±S	+S	±S	50	±S	40	30	—
60	60	60	70	70	70	60	70	70	60	50	53
50	50	50	50	60	70	50	60	60	60	60	60
112	116	108	96	103	107	95	90	99	87	94	92
29	24	25	27	27	26	25	27	27	27	26	

April

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	40	60	+S	30	--	--	-S	±S	±S	-S	±S	±S	±S
2.	50	60	80	90	100	±S	±S	±S	+S	±S	±S	±S	±S
3	±S	±S	±S	+S	--	--	--	--	--	--	--	--	150
4.	60	50	50	60	50	50	60	70	±S	±S	±S	±S	90
5.	50	50	40	30	0	40	50	50	40	40	40	50	40
6.	10	30	50	60	80	90	100	90	--	--	90	100	110
7.	20	0	30	50	50	50	60	70	80	90	60	50	50
8.	70	60	50	40	30	60	70	70	80	90	70	70	80
9.	10	40	10	50	30	-30	--	--	0	20	10	30	20
10.	50	60	50	50	0	40	50	50	70	80	50	60	±S
11.	±S	-S	±S	±S	-40	20	50	80	90	90	100	80	50
12.	50	50	50	50	70	70	80	70	100	110	110	110	110
13.	40	40	50	40	50	100	120	130	150	160	130	120	110
14.	50	50	70	60	40	60	80	60	90	100	--	80	70
15.	90	90	100	90	90	80	100	90	100	70	70	90	110
16.	130	120	130	110	120	110	140	180	170	130	120	130	150
17.	60	50	40	40	-20	20	50	100	70	70	50	50	80
18.	40	30	20	30	30	40	50	80	90	100	110	110	100
19.	100	90	110	110	120	100	80	110	90	80	60	60	70
20.	70	60	60	50	50	80	90	70	--	--	--	110	100
21.	30	20	20	60	50	50	70	90	100	90	100	80	30
22.	40	30	40	50	60	50	60	80	80	90	60	50	60
23.	50	50	50	80	70	90	100	110	130	120	90	70	60
24.	30	30	50	110	60	50	60	70	80	80	40	30	20
25.	30	30	20	30	30	50	80	70	110	80	70	50	50
26.	40	40	50	50	50	60	50	50	60	50	40	30	50
27.	±S	10	40	50	70	70	100	100	--	60	20	±S	+S
28.	-20	30	50	50	80	60	80	120	150	100	130	150	120
29.	30	30	30	50	40	50	60	90	100	70	50	40	50
30.	±S	-20	10	40	50	60	90	80	60	70	70	60	80
Means	47	44	50	58	50	58	76	86	91	85	73	74	77
Number of days	26	28	27	28	28	27	26	26	23	24	24	25	26

13	14	15	16	17	18	19	20	21	22	23	Daily means
+S	60	80	110	110	100	70	70	70	60	50	—
±S	±S	±S	±S	—S	50	30	50	50	±S	—S	—
50	60	70	70	80	80	90	80	70	60	60	—
80	80	80	70	50	60	80	70	70	60	60	—
50	50	+S	+S	30	30	50	50	60	50	50	—
90	80	60	40	60	60	60	60	50	50	40	—
50	50	60	70	70	80	90	80	70	60	70	59
60	90	60	60	40	60	50	30	40	50	20	58
50	±S	±S	±S	±S	±S	+S	90	70	70	70	—
±S	±S	±S	±S	+S	±S	50	50	30	40	—S	—
60	70	70	50	60	60	110	90	70	70	60	—
130	130	130	120	90	90	90	80	70	50	50	86
130	130	120	110	80	±S	±S	±S	60	50	40	—
30	30	20	60	80	90	70	90	80	90	110	68
—	110	100	120	140	180	200	200	150	140	110	114
140	130	130	110	120	160	90	50	70	60	70	120
90	100	90	40	90	80	110	110	60	50	40	63
110	110	100	100	80	80	70	90	90	60	60	74
70	50	50	50	50	50	50	60	60	60	50	74
80	70	70	50	60	±S	±S	±S	60	—20	90	—
50	0	0	30	70	50	60	60	50	50	50	53
70	60	80	70	60	90	100	70	50	60	70	64
50	70	70	60	60	60	50	70	70	70	10	71
±S	±S	±S	—S	±S	±S	40	30	30	30	30	—
50	40	40	30	40	40	30	40	40	40	40	47
40	40	40	40	40	—S	±S	±S	±S	±S	±S	—
±S	±S	±S	±S	±S	±S	±S	±S	±S	±S	—S	—
100	70	50	+S	+S	—10	50	80	60	40	20	—
50	50	—S	±S	±S	±S	20	50	±S	±S	±S	—
60	50	110	60	60	80	80	80	60	50	50	60
73	71	73	69	70	74	72	72	63	56	55	67
24	25	23	22	23	22	25	26	27	26	25	

May

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	40	40	30	$\pm S$	$\pm S$	$\pm S$	90	90	80	50	60	60	$\pm S$
2.	30	20	20	30	40	50	60	70	70	80	60	50	50
3.	30	30	30	40	50	50	60	70	80	110	110	120	120
4.	50	50	50	50	50	70	80	80	—	130	110	100	90
5.	70	90	90	80	70	80	100	70	50	10	$\pm S$	0	30
6.	110	120	110	50	30	50	30	50	100	90	60	50	70
7.	50	50	50	60	70	80	90	80	60	70	70	80	70
8.	100	120	110	120	120	130	110	90	110	70	50	10	10
9.	—30	0	40	60	50	50	50	—10	—20	50	20	10	30
10.	50	50	50	60	70	70	70	70	70	90	120	90	50
11.	50	50	70	80	70	60	70	70	—	50	100	$\pm S$	80
12.	50	50	50	70	60	60	70	80	100	100	110	120	—S
13.	30	10	20	10	20	40	60	20	0	—20	0	10	20
14.	40	40	40	30	40	50	60	70	50	40	50	50	50
15.	40	50	70	60	100	100	90	110	140	140	140	100	120
16.	20	50	40	40	40	40	40	$\pm S$	$\pm S$	50	30	—70	0
17.	10	0	0	10	10	20	40	40	30	10	50	40	—S
18.	40	40	30	30	40	50	50	70	—	60	70	50	70
19.	60	70	70	60	60	60	80	110	100	100	90	70	80
20.	50	40	40	40	50	50	50	60	60	60	60	—	40
21.	50	40	50	50	30	50	80	100	90	100	100	90	60
22.	$\pm S$	$\pm S$	$\pm S$	—S	—20	50	20	20	60	40	50	$\pm S$	90
23.	30	30	40	30	40	50	60	60	60	50	$\pm S$	—S	$\pm S$
24.	20	30	40	40	40	40	50	70	80	70	50	50	50
25.	50	50	50	60	70	100	120	140	—	110	120	130	130
26.	50	40	100	60	70	100	100	100	90	100	100	90	90
27.	30	30	30	30	20	—10	—40	—40	—S	$\pm S$	—30	40	40
28.	40	50	50	40	50	80	90	70	80	60	—S	$\pm S$	50
29.	40	40	50	30	30	50	60	100	60	60	40	$\pm S$	$\pm S$
30.	60	40	40	40	50	60	100	90	100	90	70	60	60
31.	0	30	20	30	10	30	30	70	60	30	30	30	30
Means	42	45	49	48	48	59	65	69	70	68	68	57	61
Number of days	30	30	30	29	30	30	31	30	25	30	28	25	26

13	14	15	16	17	18	19	20	21	22	23	Daily means
±S	130	+S	40	50	50	50	50	40	30	20	—
+S	60	+S	40	50	60	50	40	50	40	30	—
120	120	100	70	50	60	80	50	50	50	60	72
100	100	110	120	140	120	100	80	50	50	50	84
90	40	0	30	30	50	30	0	0	50	70	49
100	90	100	90	80	80	60	50	70	70	50	73
70	80	80	90	110	140	120	100	100	70	90	80
50	±S	60	80	70	±S	±S	+S	60	70	30	—
50	50	40	40	50	50	50	50	60	60	50	35
60	50	90	70	70	50	50	40	50	20	0	61
110	110	-S	+S	60	80	70	80	70	80	50	—
±S	±S	±S	-30	10	30	+S	50	50	40	50	—
30	40	50	50	50	50	50	50	40	40	40	30
60	70	80	80	80	50	50	50	40	40	40	52
±S	±S	±S	±S	±S	±S	±S	±S	±S	±S	±S	—
0	30	+S	±S	±S	+S	0	0	0	10	10	—
+S	-S	10	20	60	60	50	50	60	50	30	—
50	50	50	50	80	90	80	80	90	80	70	60
80	80	70	80	80	60	50	70	60	50	50	73
40	40	50	60	70	60	60	50	50	40	40	50
50	50	20	70	60	60	60	70	30	+S	-S	—
40	50	30	40	40	40	30	10	30	40	40	—
40	±S	±S	±S	+S	±S	10	10	10	0	10	—
60	60	60	70	80	90	90	80	70	70	60	59
140	130	130	110	80	90	80	60	50	50	50	91
-S	±S	±S	30	30	30	30	30	40	40	40	—
10	30	40	50	40	50	50	30	30	30	30	—
30	40	-40	90	20	60	60	60	50	50	50	—
±S	-S	50	30	40	50	50	60	50	50	50	—
60	80	±S	±S	±S	140	60	80	60	40	20	—
20	20	30	40	40	30	40	40	10	50	40	32
61	67	55	58	60	66	56	51	47	47	42	57
24	24	22	26	27	27	28	29	30	29	29	

June

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	50	50	40	50	30	60	70	—	70	90	70	30	70
2.	20	30	20	10	30	50	60	60	80	70	50	40	70
3.	60	70	70	60	70	60	50	70	70	—S	±S	+S	±S
4.	20	20	20	20	20	30	50	50	50	40	60	50	30
5.	0	0	0	20	30	30	40	±S	±S	40	40	40	0
6.	40	50	50	20	40	10	20	50	70	60	60	80	70
7.	40	30	30	30	30	40	60	70	70	60	70	60	50
8.	30	20	20	20	30	40	30	—	+S	±S	—120	20	—S
9.	90	70	50	0	—30	—20	40	20	30	30	30	30	—
10.	30	30	30	50	50	70	90	70	80	90	90	80	—S
11.	30	60	20	20	30	40	60	40	30	20	30	—S	20
12.	40	30	20	20	40	30	40	60	80	80	70	70	60
13.	30	30	30	30	70	90	90	140	150	120	110	130	130
14.	70	40	60	70	80	70	100	110	110	130	150	150	140
15.	60	90	50	50	60	80	100	80	—	60	40	40	70
16.	40	40	50	50	70	100	120	110	120	110	70	60	70
17.	40	50	120	90	80	80	110	110	120	120	120	60	90
18.	—10	0	+S	100	70	—S	±S	±S	+S	90	70	40	60
19.	90	50	70	30	60	60	80	100	100	120	120	70	80
20.	20	20	40	50	60	70	100	130	190	160	140	120	110
21.	60	50	50	50	70	80	90	90	90	120	110	100	80
22.	60	50	30	40	50	70	90	90	—	120	120	110	120
23.	40	40	40	40	40	70	100	70	70	100	110	120	120
24.	50	40	40	40	50	90	100	70	60	60	50	50	70
25.	50	50	40	70	60	60	80	80	90	100	100	70	70
26.	40	30	30	30	40	50	70	70	—	100	100	110	130
27.	50	60	100	100	60	100	70	70	50	30	30	50	60
28.	30	30	30	30	40	30	30	30	30	30	30	30	30
29.	30	±S	30	30	+S	10	+S	70	60	—S	±S	110	100
30.	40	40	40	30	40	30	50	120	140	100	80	110	0
Means	41	40	42	42	47	54	71	78	84	83	71	72	73
Number of days	30	29	29	30	29	29	28	26	24	27	28	28	26

13	14	15	16	17	18	19	20	21	22	23	Daily means
50	60	60	50	70	70	70	10	±S	120	20	57
60	70	80	90	80	70	70	70	69	70	60	57
-10	70	80	110	120	110	80	70	50	40	30	—
50	70	-170	20	40	0	-40	10	-10	-80	30	16
90	50	50	70	70	90	140	120	90	80	40	—
50	60	60	60	60	40	50	70	80	50	40	52
30	30	40	40	40	40	60	50	30	30	40	45
+S	+S	-210	-230	—	—	80	60	60	90	60	—
40	60	30	30	30	40	30	30	30	40	30	32
±S	±S	50	80	80	60	50	40	-30	40	40	—
+S	30	40	60	60	40	40	30	30	20	30	35
50	60	50	50	50	60	50	40	30	40	30	48
130	130	130	110	130	110	110	100	100	100	100	100
130	120	120	130	120	110	130	90	100	80	60	103
30	±S	±S	±S	±S	80	60	70	60	50	40	—
80	70	70	—	—	20	-130	40	50	70	60	—
±S	±S	±S	±S	±S	±S	±S	+S	30	-20	-50	—
120	140	130	110	120	100	110	100	110	70	110	—
90	90	80	80	60	50	50	60	50	40	30	71
120	80	70	60	50	—	70	70	60	50	60	83
70	80	80	80	70	70	70	80	90	80	70	78
90	80	60	50	50	40	40	40	50	40	30	66
0	±S	±S	±S	+S	80	80	70	70	50	40	—
80	60	—	—	70	70	70	80	80	70	40	—
60	70	110	100	80	80	60	50	50	50	50	70
130	130	130	100	110	130	100	70	70	70	50	82
50	50	40	40	40	40	50	40	40	40	30	54
30	30	30	30	40	30	30	30	30	30	90	33
20	90	100	100	90	70	60	50	40	40	40	—
10	20	10	±S	±S	+S	40	0	+S	+S	30	—
63	72	51	59	72	65	58	57	54	50	44	60
26	25	26	24	24	26	29	29	28	29	30	

July

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	30	60	30	0	0	-10	0	30	60	100	150	130	110
2.	20	-20	40	40	40	100	90	80	+S	—	—	60	60
3.	+S	+S	+S	-40	30	30	60	60	70	100	80	+S	30
4.	40	30	30	30	30	30	40	50	30	30	-170	-200	0
5.	-10	10	10	20	30	40	60	100	110	90	70	50	50
6.	60	50	50	40	40	40	70	90	—	100	100	90	100
7.	60	60	50	50	60	70	90	110	130	130	130	110	120
8.	30	30	30	30	30	40	60	60	50	40	40	40	50
9.	40	30	30	40	50	70	50	40	40	40	50	50	50
10.	40	50	40	30	50	70	70	70	80	70	70	70	70
11.	60	50	40	40	60	60	80	90	90	60	40	40	40
12.	80	70	70	60	70	70	60	100	100	100	90	90	90
13.	50	40	30	40	40	60	80	90	—	90	70	70	70
14.	30	30	30	40	40	40	50	20	30	50	40	40	10
15.	10	-50	10	30	30	+S	60	10	+S	+S	+S	+S	+S
16.	-10	10	10	30	60	70	70	70	90	90	90	60	-50
17.	-20	+S	+S	+S	-S	+S	-30	0	-90	-140	-120	+S	+S
18.	-200	+S	+S	+S	-170	20	30	70	—	90	20	20	40
19.	20	40	30	30	30	20	40	40	50	30	20	20	10
20.	30	20	30	30	30	30	40	50	—	70	60	50	40
21.	40	20	30	40	30	50	40	30	0	20	20	40	50
22.	100	120	80	70	80	90	140	150	170	170	120	80	70
23.	30	30	30	20	40	50	90	100	80	80	80	70	80
24.	30	30	30	40	30	40	50	50	60	70	80	70	60
25.	+S	30	30	10	-10	+S	+S	+S	—	+S	+S	+S	+S
26.	40	30	30	30	50	50	60	60	80	60	70	50	50
27.	30	30	30	40	50	60	40	50	90	150	70	90	40
28.	60	60	70	60	80	80	100	110	—	170	140	160	120
29.	50	50	40	50	50	50	50	50	50	60	50	50	50
30.	50	40	40	50	50	50	80	120	140	110	—	160	190
31.	140	150	120	110	190	220	80	70	70	80	60	50	50
Means	32	39	39	37	40	57	63	67	69	75	56	60	59
Number of days	29	28	28	29	30	28	30	30	23	28	27	27	28

13	14	15	16	17	18	19	20	21	22	23	Daily means
100	90	90	70	80	70	80	50	50	40	30	60
20	-120	-200	0	30	50	10	±S	-S	±S	±S	—
-10	40	40	40	30	40	40	40	90	70	50	—
20	40	40	30	±S	+S	40	40	30	0	-20	—
50	50	60	60	60	70	80	80	70	70	60	56
100	100	110	120	120	120	100	100	90	80	60	84
120	100	100	100	90	80	70	40	30	30	30	82
50	50	60	60	70	60	50	40	40	40	30	45
50	100	±S	+S	-S	-20	-S	±S	30	30	40	—
70	80	100	110	120	90	70	90	80	70	60	72
30	-S	+S	+S	±S	±S	30	40	50	40	50	—
80	60	50	40	40	50	40	70	60	50	50	68
60	50	40	40	40	50	50	50	50	50	40	54
30	20	20	40	10	-S	±S	±S	40	30	20	—
±S	±S	+S	±S	-S	-50	+S	-50	0	30	20	—
30	60	60	40	50	90	20	10	70	10	20	44
±S	-S	±S	-S	-S	-S	10	20	-160	-200	-250	—
-S	±S	30	50	50	60	50	50	20	10	-20	—
20	20	20	20	20	20	20	40	30	20	30	27
40	30	30	30	40	40	30	30	40	90	60	41
40	50	70	90	70	80	40	70	40	90	110	48
50	50	50	70	60	80	50	-S	±S	±S	10	—
70	+S	±S	±S	±S	±S	±S	50	40	40	40	—
40	30	40	30	40	40	40	40	50	50	±S	45
20	40	30	10	30	50	70	60	60	70	60	—
50	40	60	90	70	70	80	90	60	40	30	56
60	100	60	90	70	60	110	90	50	50	40	65
100	90	80	90	80	130	140	110	120	100	70	101
50	50	50	50	60	70	60	60	60	60	50	53
180	180	220	210	190	170	190	180	180	140	140	133
50	50	50	50	50	50	70	50	50	50	40	81
56	56	52	63	63	62	61	57	49	43	33	54
28	26	26	26	25	26	27	27	29	29	29	

August

Day	0	1	2	3	4	5	6	7	8	9	10	11	12
Hour GMT													
1.	40	50	50	50	50	50	90	110	130	150	140	140	120
2.	50	50	50	50	60	70	80	70	110	110	50	70	80
3.	$\pm S$	$-S$	0	30	50	60	90	140	—	—	60	70	50
4.	50	50	30	50	60	110	110	130	130	170	$+S$	$\pm S$	$\pm S$
5.	90	60	80	150	100	170	160	100	90	80	90	90	100
6.	50	50	50	50	50	60	70	80	90	90	90	100	90
7.	110	90	110	130	110	160	110	130	130	120	$+S$	$\pm S$	$\pm S$
8.	70	60	80	60	80	80	50	50	70	110	90	60	60
9.	$+S$	$\pm S$	$+S$	-40	60	70	$+S$	-50	110	110	50	60	$+S$
10.	-50	10	30	10	50	30	180	140	—	130	100	110	70
11.	0	0	-30	0	10	30	50	70	70	70	70	80	60
12.	$\pm S$	40	30	40	60	50	80	100	100	80	60	40	50
13.	60	30	40	40	40	60	100	90	90	80	90	90	80
14.	30	30	40	40	40	100	80	70	70	50	50	40	40
15.	40	40	30	30	40	40	50	60	50	60	50	50	50
16.	50	40	40	50	60	90	$+S$	$+S$	170	130	110	90	70
17.	30	30	20	30	30	30	30	30	—	$\pm S$	150	120	90
18.	50	60	60	50	50	60	90	130	130	130	140	130	110
19.	60	50	50	50	50	70	50	80	90	90	70	60	50
20.	30	30	30	30	30	40	40	30	30	40	40	40	30
21.	50	40	40	40	50	110	90	—	120	110	100	50	$\pm S$
22.	50	100	80	60	80	90	100	110	100	60	50	50	$\pm S$
23.	30	30	20	30	30	40	60	60	60	70	60	50	30
24.	10	40	50	50	60	10	-10	80	—	100	110	100	110
25.	40	$+S$	-50	40	40	40	70	60	—	100	70	$+S$	$+S$
26.	70	60	70	70	80	80	100	100	90	110	110	130	140
27.	—	30	30	40	50	80	—	—	150	140	130	110	100
28.	40	30	20	30	20	30	50	40	30	30	30	30	30
29.	—	—	—	—	—	0	0	0	70	70	70	50	60
30.	50	30	30	40	40	50	50	50	80	80	70	40	50
31.	50	50	70	10	60	40	60	90	—	80	70	70	80
Means	44	44	40	44	53	66	74	77	94	95	82	76	72
Number of days	26	27	29	30	30	31	28	28	25	29	29	28	25

13	14	15	16	17	18	19	20	21	22	23	Daily means
50	50	70	60	-20	+S	60	50	50	70	80	73
120	±S	±S	±S	-120	40	20	10	40	50	10	—
50	50	50	±S	±S	-S	70	70	70	60	60	—
±S	-20	110	50	40	50	70	80	100	120	90	—
90	100	+S	±S	70	80	80	50	50	60	50	—
70	60	60	50	70	80	100	90	70	110	100	74
±S	140	90	90	110	90	70	70	70	60	50	—
90	100	100	70	50	30	-S	±S	±S	50	30	—
±S	±S	±S	±S	±S	-30	-10	-90	-70	-20	-80	—
50	40	30	40	50	50	40	30	20	30	10	54
60	70	70	70	70	40	40	40	50	+S	+S	—
70	80	70	70	70	80	80	40	100	80	80	67
80	60	80	80	80	60	60	50	40	50	50	66
40	30	30	30	40	50	40	40	40	50	50	47
90	+S	±S	±S	±S	±S	40	40	50	30	40	—
60	50	50	80	90	80	30	80	60	50	50	—
100	150	90	30	+S	90	90	150	60	50	70	—
100	100	100	90	50	70	100	80	70	70	50	86
50	50	50	50	50	50	60	50	50	50	50	58
40	40	50	40	30	40	50	50	50	50	50	38
±S	-10	10	30	+S	50	±S	±S	±S	±S	±S	—
50	50	50	50	50	50	50	50	50	50	40	64
40	20	20	10	40	20	20	20	30	40	40	36
90	-S	±S	+S	100	80	100	80	60	50	50	—
110	-S	50	40	90	100	120	110	100	80	60	—
120	110	100	110	90	70	60	60	50	40	50	86
70	70	70	50	50	40	50	40	30	40	50	—
30	30	+S	-S	-S	—	30	50	50	50	—	—
70	70	70	70	60	50	40	20	30	40	50	—
50	40	60	30	50	50	40	50	40	40	40	48
80	90	70	80	90	120	140	130	140	130	100	83
71	62	64	57	54	58	61	55	53	56	49	63
27	26	25	24	25	27	29	29	29	29	28	

September

Hour GMT													
Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	80	70	80	60	70	70	130	100	110	100	100	100	100
2.	30	40	40	70	90	150	170	140	100	100	110	110	110
3.	60	60	50	40	50	90	100	110	150	130	100	90	80
4.	30	60	50	60	0	50	100	200	110	80	30	60	60
5.	10	20	20	30	40	60	70	50	60	50	50	40	60
6.	30	20	10	10	20	+S	±S	0	30	30	40	40	40
7.	-10	-60	-40	-20	-10	0	50	80	—	30	80	80	80
8.	70	50	40	30	30	60	90	90	80	70	60	40	50
9.	30	40	60	40	30	90	100	90	110	70	70	60	60
10.	30	30	30	30	10	0	0	10	50	50	50	50	50
11.	10	10	20	10	30	30	100	150	150	130	120	100	90
12.	40	40	40	60	60	90	40	0	0	20	+S	110	100
13.	40	40	90	90	50	60	80	90	90	10	60	50	10
14.	60	50	50	50	70	70	90	100	110	—	100	90	80
15.	30	30	30	30	40	40	70	80	90	100	80	80	70
16.	70	80	80	50	30	100	120	160	160	—	90	70	90
17.	60	50	40	70	70	70	80	70	70	70	70	100	90
18.	70	70	70	70	70	70	100	100	130	150	130	160	180
19.	70	70	70	70	50	80	100	150	130	160	190	230	230
20.	50	40	30	30	30	30	30	50	110	120	130	150	150
21.	50	60	60	60	100	100	100	110	—	170	170	120	150
22.	10	-20	0	100	80	170	190	240	230	180	130	110	110
23.	60	70	60	80	60	40	50	70	70	70	70	60	90
24.	50	50	60	50	50	70	90	90	110	120	110	100	110
25.	40	30	20	0	—	—	—	50	90	100	60	70	90
26.	40	30	-20	20	0	—	10	30	0	10	30	0	70
27.	90	80	90	110	90	90	90	220	220	200	170	110	100
28.	60	70	60	70	70	70	110	130	—	130	140	140	160
29.	70	40	30	30	50	40	60	70	90	90	90	100	100
30.	30	30	40	30	30	50	90	150	110	100	90	100	100
Means	45	42	42	48	47	68	86	100	102	94	95	91	95
Number of days	30	30	30	30	29	27	28	30	27	28	29	30	30

13	14	15	16	17	18	19	20	21	22	23	Daily means
100	100	80	±S	+S	50	30	10	30	10	40	—
130	110	100	80	70	60	60	50	60	60	60	88
70	60	70	+S	±S	±S	-10	+S	±S	+S	-60	—
40	30	50	70	60	70	50	50	40	30	10	58
50	60	60	50	50	40	40	40	30	0	30	42
50	40	30	40	40	40	50	50	30	30	0	—
80	60	40	40	60	80	110	90	90	90	90	47
50	60	60	40	40	60	90	70	50	50	20	56
50	60	50	50	50	40	30	50	20	20	30	55
50	50	50	50	50	50	60	30	30	30	10	35
100	90	90	100	110	110	120	150	100	100	70	87
90	150	160	120	110	90	70	100	70	60	50	73
0	50	30	70	60	60	100	90	90	80	80	61
70	70	80	90	80	100	80	50	30	30	30	71
50	60	50	60	80	90	90	90	70	60	60	64
130	-10	60	70	40	-20	50	100	70	70	70	75
90	80	100	100	100	110	100	100	100	90	60	81
170	180	180	150	170	190	150	130	100	100	80	125
200	170	130	110	120	100	70	70	50	100	80	117
140	140	100	80	70	80	90	80	110	90	60	83
140	170	120	90	70	70	70	-S	10	60	90	97
120	110	110	120	150	100	110	120	120	130	20	117
110	110	100	120	120	160	70	50	50	70	60	75
120	130	140	140	120	70	70	40	30	30	50	83
100	100	80	60	120	100	160	100	90	20	40	—
50	70	80	110	—	—	—	100	130	120	130	—
100	90	90	60	50	60	100	100	100	60	50	105
170	170	200	250	210	140	130	140	100	100	100	127
100	100	90	60	70	60	40	30	50	40	30	64
100	100	100	90	100	90	100	100	90	-20	-20	75
94	92	89	88	88	78	77	78	67	59	49	76
30	30	30	28	27	28	29	28	29	29	30	

October

Day	0	1	2	3	4	5	6	7	8	9	10	11	12
Hour GMT													
1.	10	60	90	50	0	0	0	20	50	50	30	-60	-30
2.	80	80	60	70	50	50	70	90	70	30	10	-30	10
3.	50	70	60	40	50	70	50	90	150	60	+S	+S	40
4.	30	-50	+S	30	40	70	90	100	80	-S	±S	±S	±S
5.	50	60	60	70	60	30	-40	-130	-	+S	+S	0	50
6.	40	40	70	50	60	80	100	80	-	150	160	140	130
7.	130	190	180	230	180	+S	+S	+S	+S	160	140	100	80
8.	70	50	30	40	60	170	+S	160	130	150	170	140	110
9.	170	+S	170	210	+S	150	150	160	120	140	110	100	130
10.	40	30	0	0	10	0	0	20	40	60	60	70	60
11.	30	10	30	70	90	80	40	70	60	90	100	100	140
12.	20	10	20	20	10	10	80	100	-	50	90	100	70
13.	10	0	10	10	40	30	10	20	40	40	60	70	60
14.	10	20	30	20	10	10	30	20	0	10	10	10	10
15.	10	10	20	40	50	90	100	110	120	90	100	110	110
16.	60	50	40	40	40	40	80	100	130	150	130	120	130
17.	0	0	10	0	10	30	100	140	150	70	90	100	90
18.	40	30	40	40	40	40	80	80	60	90	90	100	100
19.	70	60	70	60	60	80	110	100	-	110	130	150	160
20.	20	30	30	20	30	30	40	50	40	70	40	-10	0
21.	-20	-30	-30	-20	0	10	80	170	+S	+S	100	70	80
22.	120	100	60	80	70	40	60	40	100	100	80	70	80
23.	50	60	70	90	100	130	110	90	100	100	80	80	100
24.	0	20	90	10	40	60	50	80	100	80	60	60	80
25.	50	20	10	0	10	30	0	-10	10	30	10	60	70
26.	80	60	50	50	60	70	120	140	190	210	-	120	140
27.	40	50	70	70	70	100	90	120	-	110	170	130	130
28.	80	90	70	70	20	0	0	-10	10	50	40	50	50
29.	60	60	80	90	90	90	90	100	40	50	0	-10	20
30.	10	0	-10	0	0	10	10	10	20	30	60	110	110
31.	0	0	0	0	20	10	30	130	150	130	110	100	110
Means	45	39	49	50	46	54	60	75	82	88	83	74	81
Number of days	31	30	30	31	30	30	29	30	24	28	27	29	30

13	14	15	16	17	18	19	20	21	22	23	Daily means
40	60	-S	20	30	40	40	40	60	60	60	31
10	0	0	40	70	70	+S	+S	0	10	40	—
±S	30	30	30	30	30	30	30	50	40	40	—
±S	±S	-S	±S	50	40	40	50	60	70	60	—
30	40	20	0	30	100	70	40	40	40	30	—
150	150	140	150	140	140	150	100	80	100	120	110
50	30	50	70	10	-30	20	20	80	70	60	—
140	150	90	60	80	120	110	120	130	170	100	111
140	160	90	30	10	0	0	10	10	40	20	—
100	110	80	10	0	10	20	20	20	30	60	35
150	140	110	30	20	10	20	20	10	20	10	60
110	80	60	10	0	0	0	0	0	10	10	37
50	30	70	40	10	50	40	20	40	10	0	32
20	20	0	0	0	40	30	20	0	0	0	13
120	120	110	110	120	130	110	100	100	80	70	89
140	160	110	90	70	30	20	10	10	10	0	73
90	100	100	110	80	90	90	80	70	60	50	71
90	80	80	90	80	90	90	100	90	80	70	74
—	100	100	120	100	60	40	30	20	30	50	82
0	0	0	0	—	—	-60	-30	-10	-30	-10	—
60	±S	60	70	90	90	120	140	130	130	120	—
80	70	80	100	130	130	130	100	80	70	60	85
120	80	50	20	30	70	60	60	60	50	10	74
100	100	120	110	130	110	100	100	80	70	60	75
60	-10	0	30	100	120	150	160	120	100	80	50
140	140	110	100	80	110	100	100	60	60	50	102
150	110	100	100	130	130	120	130	140	150	110	110
40	90	110	120	130	130	130	130	90	90	70	69
10	10	10	10	10	10	10	10	10	10	10	36
80	60	30	10	0	0	0	0	0	10	0	23
110	130	160	190	180	180	150	120	110	100	100	97
85	81	71	62	65	70	64	61	56	56	49	64
28	29	29	30	30	30	30	30	31	31	31	

November

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	100	90	70	60	70	70	10	50	-10	100	100	110	140
2.	50	80	70	60	60	60	70	90	—	90	90	50	60
3.	40	50	80	60	60	60	60	50	30	80	100	100	100
4.	50	50	60	60	50	70	80	80	100	70	60	60	100
5.	60	20	40	50	40	40	50	50	30	50	80	70	90
6.	30	30	30	50	70	90	100	100	90	100	60	20	40
7.	0	0	0	10	20	10	0	0	-10	-20	10	40	40
8.	20	10	0	0	0	10	10	20	40	40	70	90	100
9.	-20	-50	-30	-10	0	0	0	0	0	20	40	-30	30
10.	-10	10	30	30	40	90	100	90	90	80	30	-10	10
11.	50	50	40	50	20	0	0	40	60	70	60	70	70
12.	100	80	70	70	50	20	30	130	140	120	120	130	140
13.	0	-10	-10	-10	-10	-10	-10	50	160	160	200	200	190
14.	0	0	0	-20	-30	-60	-50	-20	-50	-70	-30	-10	-20
15.	70	50	20	0	0	0	0	30	130	130	80	110	130
16.	10	40	50	60	50	60	80	100	—	100	90	70	70
17.	40	50	50	50	60	60	110	90	90	130	120	120	120
18.	90	150	150	150	180	150	140	120	130	140	140	150	160
19.	20	-10	10	80	50	110	50	90	70	120	100	90	90
20.	180	190	170	150	110	100	0	20	80	50	10	0	0
21.	50	40	40	50	50	10	-70	-30	30	50	30	40	40
22.	0	-60	-30	-180	-160	-20	50	0	-60	-70	±S	±S	100
23.	40	50	50	40	40	50	50	50	—	70	40	40	40
24.	80	90	100	100	130	100	90	130	160	160	180	160	140
25.	10	10	0	0	10	10	0	0	10	0	-20	-30	-60
26.	20	50	60	50	100	40	40	10	20	30	70	120	120
27.	0	0	40	-20	-20	-20	-20	0	70	110	70	40	30
28.	50	20	20	10	20	40	20	20	20	0	-20	-40	-40
29.	0	0	-10	-10	-10	0	0	-10	-20	-20	-30	-10	-10
30.	130	150	30	0	10	40	40	10	—	20	50	90	100
Means	42	41	40	33	35	39	34	45	54	64	66	63	71
Number of days	30	30	30	30	30	30	30	30	26	30	29	29	30

13	14	15	16	17	18	19	20	21	22	23	Daily means
160	140	90	90	60	60	50	100	90	80	70	81
20	100	100	100	90	70	50	60	60	40	30	70
110	160	100	100	110	100	110	90	90	80	60	80
100	110	130	150	90	90	100	80	60	60	50	80
100	110	100	110	100	40	100	90	50	30	50	65
30	60	±S	0	10	0	0	10	30	40	30	44
40	40	10	0	20	30	40	60	30	-20	-10	14
120	90	40	0	0	0	-30	-40	-10	-10	-10	23
30	40	20	10	10	0	0	0	0	0	10	3
50	50	60	30	20	30	60	90	80	70	70	50
80	60	70	70	90	100	110	80	60	60	60	59
150	130	130	110	90	120	70	50	50	20	10	89
190	150	120	150	140	60	50	50	20	-30	0	75
40	50	70	30	0	50	50	50	60	60	50	6
120	70	40	30	0	0	0	0	-40	-20	-10	39
70	60	80	90	100	90	90	90	80	70	50	72
150	170	140	120	140	160	210	160	180	180	140	118
100	150	110	160	220	250	+S	190	90	20	0	139
80	90	100	90	110	120	100	110	240	180	150	93
0	0	50	120	180	230	180	90	80	80	80	88
70	50	50	20	30	100	100	20	0	0	0	32
100	40	+S	±S	±S	-S	+S	20	120	60	30	—
50	20	30	30	40	60	80	90	90	90	90	53
100	80	90	100	70	70	80	40	30	50	40	99
-40	-70	-60	-20	-10	0	0	0	10	20	0	-10
140	60	20	50	70	30	30	10	0	0	0	48
50	60	80	60	50	30	50	50	70	100	90	40
-40	-20	-10	-10	-10	0	0	10	10	10	0	3
0	50	50	80	100	60	50	90	110	140	110	30
60	70	30	0	0	0	0	0	0	0	30	37
78	70	65	64	66	67	62	58	58	49	42	54
30	30	28	29	29	29	28	30	30	30	30	

December

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	130	+S	+S	+S	+S	+S	200	+S	+S	+S	180	130	100
2.	10	0	0	-10	0	0	10	30	70	70	—	—	60
3.	70	60	50	50	50	60	70	40	50	90	100	90	90
4.	80	70	70	70	70	100	110	110	100	110	120	140	120
5.	90	60	60	70	40	30	50	30	10	20	40	20	-30
6.	140	100	120	90	90	80	80	110	110	120	110	90	100
7.	-20	-30	0	20	10	50	110	200	—	—	—	—	60
8.	20	30	30	0	0	10	20	80	70	150	140	120	110
9.	100	70	70	60	50	50	50	50	90	100	110	140	150
10.	50	50	60	50	50	60	80	50	90	120	140	170	200
11.	30	50	50	50	50	50	60	70	70	70	80	60	80
12.	0	0	-40	0	0	-30	-20	30	30	90	50	10	10
13.	0	30	40	50	50	50	70	100	100	90	90	50	50
14.	40	40	20	30	30	20	0	40	—	10	40	30	20
15.	0	20	20	20	20	20	30	60	50	—	60	90	80
16.	40	40	50	50	50	60	70	80	80	110	—	160	160
17.	120	120	100	110	120	110	120	110	120	130	140	140	130
18.	70	80	90	70	90	70	90	100	100	60	70	50	50
19.	50	30	20	10	20	20	40	50	40	40	20	80	120
20.	50	50	30	30	10	110	70	120	170	+S	+S	60	140
21.	+S	150	180	180	150	120	90	100	—	+S	60	70	80
22.	60	60	80	90	90	100	100	110	110	100	90	70	60
23.	90	100	80	100	120	100	110	110	100	110	110	80	70
24.	50	-10	-10	-20	-60	-80	-110	-50	30	30	-10	20	60
25.	100	120	100	70	120	100	100	100	120	130	120	110	150
26.	10	-10	-20	-30	-20	10	40	50	50	60	70	100	150
27.	60	80	80	80	110	100	110	50	+S	30	\pm S	+S	140
28.	90	80	-S	-S	\pm S	-S	\pm S	-S	—	-10	-10	-10	-110
29.	100	100	110	60	100	120	170	150	180	180	140	120	140
30.	-30	-200	-110	-S	-S	-S	-90	-110	-S	-S	-40	70	20
31.	50	80	60	120	+S	+S	50	110	170	250	220	140	70
Means	54	47	48	53	52	55	63	72	88	90	86	86	85
Number of days	30	30	29	28	27	27	30	29	24	25	26	28	31

13	14	15	16	17	18	19	20	21	22	23	Daily means
130	130	100	60	30	80	70	40	60	100	20	—
90	110	120	120	80	100	90	50	50	40	90	—
0	-20	-60	20	+S	60	110	10	90	90	70	54
120	130	100	110	140	120	150	140	170	140	90	112
-S	±S	-S	-40	—	—	+S	+S	200	120	110	—
80	70	50	30	30	30	0	-20	0	-10	-10	66
80	50	40	30	30	20	30	30	50	50	30	—
110	90	80	90	100	130	100	110	100	100	70	78
170	180	40	100	90	70	100	110	70	50	50	88
230	200	140	160	150	100	60	40	20	30	40	98
140	120	100	70	20	60	30	10	0	50	20	60
40	10	60	90	70	50	30	30	30	-10	50	24
90	140	140	70	60	80	130	100	60	30	20	70
10	30	40	-20	0	30	30	10	-10	0	0	19
110	110	50	60	50	70	90	60	50	40	40	52
120	110	100	100	130	140	140	170	160	120	90	101
140	110	110	120	120	130	150	130	90	100	70	118
110	20	10	30	50	80	100	40	70	90	60	69
130	120	90	110	60	80	100	100	50	40	50	61
170	130	+S	+S	190	+S	+S	+S	+S	+S	+S	—
100	60	—	—	—	—	—	90	10	70	90	—
60	60	50	50	60	70	70	80	70	60	60	75
60	30	-30	+S	60	+S	+S	±S	+S	-10	60	—
80	100	100	100	140	170	160	150	120	110	100	49
150	140	140	100	100	50	70	130	30	10	10	99
170	140	150	140	190	130	190	160	130	100	100	36
60	190	100	50	120	20	120	140	100	30	30	—
-130	-160	-260	-200	50	-30	20	10	-100	-90	90	—
210	200	120	50	100	90	100	90	130	50	-40	117
-110	20	70	120	120	10	100	10	±S	+S	30	—
+S	+S	+S	±S	±S	±S	±S	±S	-S	-10	0	—
94	90	65	64	87	75	92	75	67	51	50	70
29	29	27	27	27	26	26	27	27	29	30	

charges transported by point-discharge for each month

12	13	14	15	16	17	18	19	20	21	22	23	Means
0	0	0	0	0	0	0	0	0	0	0	0	3,0
0	0	0	0	0	0	0	0	0	0	2	0	2,8
0	0	0	2	1	0	5	0	5	16	40	93	8,0
4	5	0	5	0	0	7	31	0	66	39	189	16,5
0	7	2	6	31	1	0	5	11	1	1	24	4,9
0	0	0	2	19	3	5	6	8	2	4	21	17,1
114	21	50	55	139	37	50	12	31	37	8	21	45,0
47	29	58	135	85	85	38	30	139	43	85	40	53,8
42	18	63	65	80	24	47	10	2	20	24	2	21,9
115	69	133	26	68	86	32	18	0	0	28	9	29,1
1	16	57	146	139	29	44	30	2	11	0	0	23,5
6	87	43	96	201	57	3	16	0	18	0	0	24,0
56	22	48	30	130	137	28	56	71	54	117	4	63,7
35	15	80	64	33	36	41	176	76	52	44	6	50,0
96	9	7	38	117	40	0	1	3	15	27	3	20,8
76	20	26	143	58	4	36	20	70	7	56	14	25,2
0	0	0	0	4	11	11	0	13	0	3	0	2,0
0	0	0	0	0	75	12	0	3	7	0	0	4,1
8	28	61	11	71	118	39	5	13	1	0	0	19,0
2	99	202	210	45	99	87	20	11	0	0	0	32,5
0	0	0	6	23	8	4	1	0	0	0	0	1,8
0	0	0	4	12	4	28	0	5	6	0	1	2,7
0	0	0	1	0	2	0	2	1	4	4	0	0,58
0	0	0	0	1	3	0	0	1	3	1	1	0,41