

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 the 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^{-8} 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.

I.

Hourly means of the potential gradient

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January

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	-20	0	120	60	+S	+S	-60	+S	10	-10	80	100	130
2.	50	70	60	-70	-90	30	20	30	40	100	90	100	120
3.	-50	-30	-10	10	-20	-50	-10	20	40	50	90	120	±S
4.	100	90	100	100	130	140	120	140	+S	±S	±S	120	140
5.	70	50	50	50	60	100	110	—	—	140	100	100	40
6.	60	60	40	50	50	50	+S	+S	±S	±S	±S	+S	+S
7.	+S	-S	100	100	30	150	120	120	110	30	(130)	+S	+S
8.	50	30	30	0	-60	80	+S	+S	50	190	100	70	+S
9.	—	—	—	—	—	—	—	+S	+S	+S	30	-40	—
10.	—	—	—	—	—	—	100	160	200	200	200	+S	+S
11.	80	70	90	0	-30	-S	-S	-20	50	-60	50	90	70
12.	±S	±S	±S	±S	-S	30	—	—	—	—	—	—	—
13.	—	—	—	—	—	—	—	—	—	—	90	(80)	(70)
14.	0	120	160	60	-S	±S	±S	-120	-80	40	-30	80	230
15.	±S	±S	70	90	+S	90	90	90	80	60	±S	±S	100
16.	160	140	150	150	80	100	—	—	140	140	150	160	170
17.	90	80	40	-30	±S	±S	-S	±S	+S	±S	+S	+S	110
18.	80	80	80	70	90	110	120	150	140	130	120	230	+S
19.	+S	±S	+S	40	70	100	130	+S	—	—	—	—	—
20.	130	110	80	70	70	80	70	100	120	180	+S	+S	170
21.	50	40	50	50	+S	+S	70	100	150	120	110	140	140
22.	60	60	50	50	50	50	40	50	±S	±S	±S	80	70
23.	120	120	80	70	100	70	70	60	70	90	90	130	160
24.	70	100	70	80	100	90	80	100	120	130	90	100	110
25.	120	110	130	140	120	110	80	110	130	150	140	110	120
26.	80	70	50	40	50	50	80	90	—	80	120	110	70
27.	+S	110	90	80	80	100	120	—	140	180	170	130	140
28.	—	—	—	—	—	—	—	—	50	60	60	70	(70)
29.	-140	-120	-140	-70	-190	80	40	-140	150	110	180	200	150
30.	80	80	80	80	70	70	70	70	30	70	70	70	80
31.	40	50	50	20	-20	-20	-40	—	-40	-80	0	-40	-10
Means	58	65	67	50	38	73	68	62	81	91	95	101	116
Number of days	22	23	25	26	21	22	21	18	21	23	22	22	20

13	14	15	16	17	18	19	20	21	22	23	Daily means
100	110	220	160	180	160	160	160	30	30	30	—
120	+S	±S	170	210	+S	140	100	+S	60	30	—
±S	±S	±S	±S	±S	+S	+S	±S	80	90	100	—
+S	—S	100	90	100	±S	±S	±S	±S	90	70	—
60	90	40	50	130	150	120	120	90	60	60	—
+S	+S	+S	+S	+S	±S	±S	±S	(±S)	(±S)	±S	—
210	200	140	150	40	0	20	10	40	30	40	—
+S	+S	+S	+S	+S	—	—	—	—	—	—	—
—	—	—	—	150	+S	+S	160	200	100	80	—
+S	+S	+S	+S	+S	130	170	+S	130	110	100	—
—S	40	50	±S	±S	—S	±S	±S	+S	±S	±S	—
—	—	—	—	—	—	—	—	—	—	—	—
50	140	130	130	160	+S	+S	±S	±S	60	80	—
210	120	120	170	+S	+S	+S	+S	160	130	110	—
160	160	180	200	220	240	240	+S	220	230	200	—
+S	210	200	140	170	150	120	90	110	100	90	—
140	+S	±S	130	130	±S	±S	+S	120	130	100	—
+S	+S	+S	+S	+S	+S	±S	±S	±S	±S	±S	—
—	+S	+S	120	80	120	120	140	150	150	140	—
190	190	170	230	220	230	210	150	80	80	100	—
150	140	150	160	130	130	90	100	90	70	60	—
60	100	100	50	—S	±S	±S	—50	—50	—50	30	—
150	140	130	110	120	—S	±S	±S	+S	100	90	—
130	150	140	140	140	130	130	120	140	130	150	114
150	180	140	140	150	140	130	130	110	90	90	126
90	120	110	90	100	150	140	80	140	150	150	96
150	130	130	150	140	160	150	100	70	100	—	—
(80)	(100)	60	110	140	120	120	70	40	30	—140	—
140	130	130	120	110	120	110	110	110	90	70	56
70	70	70	80	100	80	70	80	60	50	40	70
10	50	100	+S	+S	+S	50	10	20	20	30	—
125	130	124	131	139	138	127	93	97	86	76	
19	19	21	22	21	16	18	18	22	26	25	

													February		
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12		
Day															
1.	10	20	10	20	20	10	20	10	10	20	-10	-10	-10		
2.	-110	-140	-50	-50	-60	-10	10	20	—	-10	-60	-100	-60		
3.	30	-10	20	-20	-90	40	60	40	20	40	10	0	30		
4.	-50	-50	-10	-30	-20	-10	-10	—30	-20	30	30	110	180		
5.	80	70	90	110	40	20	-30	10	30	40	50	100	100		
6.	-110	-150	-90	-40	-100	-20	40	—10	-10	40	50	40	10		
7.	80	100	120	110	100	100	130	110	110	160	180	230	160		
8.	100	90	90	90	80	0	-30	-20	20	30	60	80	110		
9.	70	30	20	20	50	60	50	50	—	140	130	140	180		
10.	70	60	60	20	30	70	80	50	30	60	90	90	120		
11.	30	70	70	-80	-20	-40	±S	-S	+S	±S	+S	+S	±S		
12.	(70)	±S	±S	±S	±S	±S	+S	60	-S	±S	110	70	70		
13.	20	-40	-130	-150	-200	-200	—160	—210	-210	-170	-150	-130	-220		
14.	-140	-160	-130	-90	30	-100	-50	30	—150	-50	30	60	90		
15.	70	70	-S	-S	-S	20	10	10	+S	±S	+S	90	110		
16.	70	70	-30	-260	-100	-110	—	—	—	—	—	—	—		
17.	0	-20	-80	-70	20	40	-10	0	—	-10	40	90	110		
18.	-10	30	-10	20	30	-50	-90	—70	40	50	40	40	40		
19.	-10	0	10	20	10	-10	10	—20	0	90	90	110	80		
20.	60	40	50	40	40	20	-10	-10	—	-30	-20	60	70		
21.	0	30	30	80	100	50	110	20	-10	-30	10	100	160		
22.	90	110	120	130	160	150	80	—10	-10	90	120	120	180		
23.	160	140	140	120	160	120	150	140	—	100	120	160	220		
24.	100	100	120	90	90	130	140	130	80	130	140	+S	+S		
25.	-10	0	90	150	120	70	90	30	-20	-30	0	40	90		
26.	100	100	100	130	140	170	170	+S	190	200	150	120	130		
27.	80	70	30	60	90	100	100	100	150	(150)	130	160	120		
28.	90	90	80	100	80	130	110	190	200	170	160	170	120		
29.	100	100	100	70	60	50	100	+S	+S	+S	190	170	180		
Means	35	29	30	22	32	29	41	25	24	46	65	81	91		
Number of days	28	28	27	27	27	28	26	25	19	23	26	26	26		

13	14	15	16	17	18	19	20	21	22	23	Daily means
-50	-50	-10	-50	-50	0	-20	10	0	-50	-90	-10
-100	-30	-30	10	-70	0	-20	30	60	60	80	-27
40	50	30	-70	-100	-140	-130	-60	10	-50	-70	-13
140	90	140	140	110	160	100	120	150	100	90	61
140	170	70	90	50	40	40	30	-20	-80	-150	45
120	170	110	180	160	100	120	90	30	20	30	33
190	190	210	200	140	60	90	90	80	100	90	130
150	170	170	150	140	120	130	120	130	110	80	90
210	190	200	+S	150	150	50	20	0	-10	80	90
130	-10	80	30	20	20	50	20	110	60	-20	55
-S	-20	-40	0	100	150	150	150	150	130	70	-
80	130	130	130	130	100	120	+S	0	-80	-20	-
-200	-190	-240	-270	-220	-210	-190	-180	-220	-130	-150	-173
100	+S	-80	60	40	60	110	100	110	90	90	2
140	20	+S	150	160	190	200	160	-80	-190	-80	-
40	10	-10	30	100	80	80	130	70	50	60	-
170	160	100	60	10	30	90	0	-10	10	-40	30
60	60	40	50	0	20	50	80	100	40	0	23
-30	50	80	10	-20	0	-10	40	20	0	-10	21
130	120	90	50	30	90	60	50	70	80	30	48
200	210	180	140	120	150	150	140	190	160	140	101
220	200	+S	190	190	210	+S	+S	130	170	210	-
230	250	190	+S	+S	+S	+S	210	170	120	120	-
+S	+S	+S	170	140	170	170	90	40	90	0	-
30	30	40	-20	70	100	90	40	100	110	100	55
130	170	180	+S	+S	150	150	220	+S	170	110	-
+S	160	220	220	200	150	90	120	80	60	70	116
130	120	110	70	70	110	120	110	120	100	100	119
210	+S	170	110	70	70	90	110	110	120	180	-
100	95	82	70	64	76	71	76	61	47	38	
26	26	26	26	27	28	27	27	28	29	29	

March													
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12
Day													
1.	140	90	60	50	70	80	120	180	—	+S	130	130	110
2.	110	90	100	70	90	90	120	150	180	150	150	130	120
3.	100	80	70	80	100	130	160	150	180	200	200	170	200
4.	150	150	150	150	150	180	190	210	160	180	200	200	220
5.	140	150	130	150	140	130	160	150	160	120	140	90	100
6.	50	60	50	60	80	90	90	110	130	90	90	80	50
7.	50	+S	60	70	50	60	50	80	+S	+S	130	120	140
8.	50	50	40	50	40	30	—20	40	—	130	80	40	80
9.	50	50	70	70	80	90	120	80	150	80	40	20	10
10.	50	50	50	50	50	40	50	100	130	140	120	110	110
11.	80	80	70	70	70	70	80	110	150	160	160	160	160
12.	70	70	70	60	70	80	100	120	200	180	150	130	160
13.	120	110	100	100	0	—10	80	130	110	110	130	130	140
14.	—60	—10	40	—20	—50	—30	—50	—50	—50	—10	80	110	120
15.	40	50	40	30	40	50	20	40	—	30	20	30	50
16.	30	0	30	50	50	70	50	0	40	60	50	100	100
17.	70	80	90	90	110	70	110	100	80	100	120	110	120
18.	40	40	30	30	50	50	110	110	80	80	70	60	100
19.	70	+S	70	60	50	40	100	90	+S	—30	120	150	100
20.	20	90	100	90	100	90	90	110	130	150	120	160	160
21.	+S	—10	50	100	80	70	80	80	80	90	80	100	100
22.	70	70	90	50	60	70	80	100	—	100	90	100	100
23.	60	60	50	30	30	30	60	—	—	—	—	—	—
24.	—	—	—	—	—	—	—	—	—	—	—	—	—
25.	—	—	—	—	—	—	—	—	—	—	—	—	—
26.	20	30	60	120	50	20	—50	—50	0	—20	—60	60	50
27.	60	50	60	50	50	60	80	90	(60)	50	40	90	+S
28.	30	30	20	20	20	20	30	60	80	80	70	60	90
29.	40	40	40	40	40	50	60	100	—	90	80	90	100
30.	40	20	30	30	30	60	90	100	70	60	30	40	40
31.	40	30	20	30	30	30	70	70	+S	100	90	100	100
Means	62	59	63	63	60	62	77	91	108	95	97	103	109
Number of days	28	27	29	29	29	29	29	28	19	26	28	28	27

13	14	15	16	17	18	19	20	21	22	23	Daily means
120	190	150	140	140	130	130	120	90	80	100	—
150	160	120	100	130	180	+S	+S	+S	170	140	—
200	+S	+S	+S	+S	+S	+S	210	200	160	150	—
200	190	180	+S	230	+S	130	150	150	110	150	—
100	80	110	110	90	90	80	80	50	50	40	110
110	80	70	80	60	70	70	70	40	50	50	74
140	130	120	130	120	110	90	90	40	50	50	—
120	90	50	-10	-50	-80	-100	-20	0	10	40	29
90	90	80	120	110	120	90	80	70	60	50	78
100	120	130	160	180	150	130	130	130	130	100	103
180	180	+S	190	210	200	180	150	140	120	100	134
160	150	150	140	120	140	130	150	110	110	130	123
160	190	150	140	90	50	40	50	90	60	-20	94
160	100	90	90	80	40	50	70	50	50	40	35
30	90	50	30	30	80	-S	-S	-S	-S	10	—
100	110	100	100	90	100	90	100	90	50	30	66
120	150	140	80	100	70	60	30	+S	100	70	94
90	140	140	110	100	120	130	120	100	10	+S	83
-S	+S	100	120	100	+S	170	130	100	80	30	—
150	150	150	130	180	190	200	140	100	10	+S	122
100	90	70	60	80	120	140	120	100	80	80	84
100	100	100	100	100	80	60	60	60	60	60	81
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	20	20	20	20	20	30	50	40	30	—
80	80	60	60	60	60	60	60	60	50	50	—
-S	70	100	110	100	90	90	70	60	60	60	—
100	120	100	100	120	140	110	100	90	80	50	72
90	70	70	70	70	70	70	100	90	60	50	69
40	30	30	30	80	60	70	50	30	30	30	47
90	70	60	50	50	30	0	20	70	40	30	53
118	115	99	94	99	95	89	91	83	70	63	
26	26	27	27	28	26	26	27	26	28	27	

April

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	30	30	70	70	100	100	120	90	80	100	100	100	80
2.	40	30	30	20	20	30	30	50	60	60	40	60	50
3.	60	50	40	30	40	60	50	50	60	70	—	—	—
4.	—	—	—	—	—	—	—	—	—	—	—	—	—
5.	—	—	—	—	—	—	—	—	—	80	100	100	100
6.	30	50	50	30	30	30	50	60	70	70	90	100	90
7.	±S	±S	—S	±S	±S	+S	(30)	+S	60	—S	+S	—S	±S
8.	40	30	20	10	—30	—10	—30	0	0	—20	—50	—60	—60
9.	—50	—50	—40	—50	—30	—50	—80	—90	—50	20	70	40	30
10.	—30	—70	—90	—40	—30	10	70	100	110	80	40	30	60
11.	70	50	50	60	50	70	80	100	100	100	100	100	100
12.	60	50	50	30	50	70	60	80	—	110	130	120	130
13.	40	30	—20	—10	—10	0	—30	—40	60	60	60	70	30
14.	60	60	50	40	60	60	20	50	80	110	90	90	90
15.	30	50	40	50	20	20	60	80	130	140	110	120	120
16.	—10	10	30	0	±S	±S	±S	±S	50	70	90	±S	±S
17.	30	40	40	30	40	50	70	70	80	70	80	110	120
18.	40	40	30	30	30	40	50	60	70	70	70	80	70
19.	20	20	30	30	30	30	20	70	80	—	—	—	—
20.	—	—	—	—	—	—	—	70	—	90	70	90	100
21.	30	30	50	40	30	60	(80)	(100)	—	—	—	—	110
22.	30	40	30	30	0	10	±S	±S	0	60	±S	±S	—S
23.	+S	±S	±S	—S	—S	50	30	80	40	70	40	30	70
24.	—30	—30	—30	±S	0	60	—S	+S	—20	—S	—S	—S	—80
25.	110	140	180	150	100	100	110	90	60	60	40	50	±S
26.	80	70	60	40	±S	±S	+S	10	—	70	40	±S	±S
27.	20	—20	—10	10	30	10	10	30	70	90	110	90	110
28.	±S	+S	40	0	20	50	90	110	110	80	100	80	80
29.	100	110	90	80	90	110	120	110	110	100	70	70	80
30.	100	80	80	70	70	70	100	120	120	110	120	110	110
Means	38	35	35	31	31	43	48	59	64	77	74	75	75
Number of days	24	24	25	24	23	24	21	23	24	25	23	21	22

13	14	15	16	17	18	19	20	21	22	23	Daily means
70	60	70	60	70	60	40	70	100	50	60	74
50	50	60	50	40	40	30	30	40	40	50	42
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
60	—S	20	40	50	50	60	100	70	50	30	—
80	70	70	50	70	80	80	70	70	60	50	63
+S	60	40	100	50	100	70	40	50	50	40	—
—80	—20	—30	30	—40	—70	—100	—60	—60	—50	—40	—28
—110	—S	—S	—10	60	80	80	70	50	30	0	—
70	80	100	140	150	140	160	110	100	110	90	62
110	100	110	100	90	80	70	80	80	70	60	83
140	150	150	140	120	50	100	70	40	20	20	84
70	70	60	60	70	70	70	70	60	60	40	41
90	90	90	70	70	60	50	50	30	30	40	64
±S	±S	+S	20	50	70	110	80	60	50	40	—
±S	±S	±S	±S	+S	50	60	70	60	40	40	—
110	110	+S	+S	+S	40	30	20	20	10	30	—
70	70	80	70	60	50	60	40	40	30	20	53
—	—	—	—	—	—	—	—	—	—	—	—
100	110	120	110	120	130	110	70	70	40	50	—
110	100	90	70	50	40	30	20	20	30	20	—
±S	±S	±S	30	±S	+S	±S	+S	±S	±S	30	—
70	80	90	+S	+S	30	60	30	+S	40	30	—
20	70	50	30	40	50	30	0	—S	—S	80	—
±S	20	50	70	80	60	70	80	70	80	70	—
±S	±S	+S	+S	—10	—60	—90	—70	—20	±S	±S	—
100	100	80	80	70	70	80	70	+S	120	70	60
70	70	70	90	70	80	100	90	90	90	100	—
100	100	110	120	110	100	120	160	130	120	100	105
130	120	120	120	100	90	60	50	40	40	40	90
68	79	76	71	67	59	59	54	53	50	45	
21	21	21	23	23	26	26	26	23	24	26	

													May	
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12	
Day														
1.	30	30	30	40	50	60	100	100	70	80	90	90	90	
2.	40	20	20	30	40	50	40	40	50	50	60	50	50	
3.	10	10	20	30	-20	30	100	70	—	40	60	70	90	
4.	20	30	30	30	30	40	60	80	70	70	40	+S	70	
5.	30	40	20	30	30	30	150	90	100	80	40	30	30	
6.	10	20	30	30	10	60	70	70	70	60	60	50	60	
7.	10	20	30	30	40	70	70	110	110	110	120	120	110	
8.	30	30	30	30	30	40	30	40	50	50	50	50	50	
9.	20	10	20	20	20	30	30	30	30	40	40	50	50	
10.	30	20	20	30	20	30	30	30	—	60	60	60	60	
11.	10	10	10	10	10	20	30	40	50	60	50	50	60	
12.	10	10	10	10	20	40	40	30	30	30	30	70	10	
13.	10	10	10	0	+S	0	±S	0	10	+S	10	20	-50	
14.	—	—	—	—	—	—	—	—	50	+S	±S	+S	-30	
15.	40	10	10	10	30	40	50	30	30	10	30	50	70	
16.	40	40	20	20	20	30	70	50	70	80	70	70	60	
17.	-10	-10	10	0	0	10	60	50	—	50	60	60	70	
18.	30	40	40	40	50	50	50	50	60	60	70	70	60	
19.	0	-10	0	0	0	30	10	20	40	50	40	30	30	
20.	-20	-20	-10	-10	10	30	30	40	50	50	70	+S	±S	
21.	30	10	10	30	30	50	110	70	50	50	50	90	±S	
22.	0	30	10	20	20	30	40	40	50	40	70	80	+S	
23.	50	+S	+S	20	40	10	-30	-10	30	-10	10	30	40	
24.	60	50	50	50	40	50	50	60	—	60	50	40	70	
25.	20	20	10	10	20	10	10	20	40	30	40	40	50	
26.	20	10	10	20	20	30	40	20	30	40	—	—	—	
27.	—	—	—	—	—	—	—	40	30	0	10	10	20	
28.	30	20	20	30	30	50	60	40	50	50	40	40	50	
29.	10	20	30	10	20	30	50	70	80	80	70	60	50	
30.	40	50	30	60	30	70	70	60	70	70	70	60	10	
31.	10	-10	-S	-30	-70	-90	70	—	—	—	70	+S	30	
Means	21	18	19	22	20	32	53	48	53	51	53	55	47	
Number of days	29	28	27	29	28	29	28	29	26	28	29	26	27	

MAGYAR
 Tudományos Akadémia
 Könyvtára

13	14	15	16	17	18	19	20	21	22	23	Daily means
100	120	110	70	70	70	60	40	30	40	30	67
50	30	20	10	20	20	20	0	-30	-20	0	26
70	70	60	50	30	30	30	30	30	20	10	43
+S	±S	±S	+S	-S	±S	±S	+S	-10	-10	20	—
30	40	30	30	30	20	30	30	20	10	10	41
70	80	80	70	40	30	40	30	20	30	20	46
110	110	100	100	100	90	80	60	60	50	50	78
50	60	60	50	30	30	30	30	30	20	20	38
50	50	50	40	30	30	30	30	30	30	30	33
60	60	70	60	20	20	30	20	10	10	10	36
60	70	70	60	30	40	30	10	10	10	10	34
40	10	±S	—	110	90	70	60	40	30	10	—
30	30	50	50	-10	—	—	—	—	—	—	—
-40	-40	10	30	40	40	40	40	30	20	10	—
80	80	80	80	70	50	40	30	30	30	30	42
70	70	80	80	40	30	20	10	10	10	10	45
70	70	70	70	30	30	40	20	10	10	10	34
60	60	50	40	40	40	30	20	20	10	0	43
30	20	30	30	20	10	0	0	-10	-10	-10	15
±S	-S	40	50	50	50	±S	20	20	30	40	—
0	40	40	30	10	20	20	30	50	40	10	38
40	50	50	50	40	20	-100	40	30	20	-10	29
0	110	80	80	-S	70	70	50	50	60	70	—
70	70	80	80	70	60	50	40	20	10	20	52
50	40	50	50	30	10	10	20	10	20	20	26
—	—	—	—	—	—	—	—	—	—	—	—
30	20	20	30	40	20	20	10	10	20	30	—
60	60	60	30	40	30	40	30	20	10	10	38
60	60	70	70	40	40	40	30	20	20	30	44
60	+S	+S	30	20	30	30	20	30	0	20	—
110	80	50	±S	+S	60	60	60	50	40	30	—
53	56	58	53	40	39	32	29	22	19	19	
28	27	27	27	27	28	27	28	29	29	29	

													June	
Hour GMT														
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	
1.	40	50	40	40	50	50	50	—	[60]	70	70	70	70	
2.	50	50	50	60	50	50	—S	—S	—S	50	140	130	100	
3.	20	—20	—S	30	—20	—50	—S	—S	—S	—60	+S	+S	+S	
4.	40	40	50	50	50	50	70	[90]	100	80	60	50	40	
5.	130	100	80	80	110	130	[120]	100	70	90	80	130	130	
6.	80	80	90	100	110	110	[100]	130	170	160	110	120	120	
7.	100	90	70	70	90	120	(90)	—	—	170	120	110	110	
8.	30	30	20	10	20	10	60	[80]	150	120	140	150	150	
9.	70	50	50	50	70	80	80	[120]	120	120	100	110	120	
10.	60	70	50	60	70	90	100	[120]	[110]	100	110	100	110	
11.	20	20	20	20	40	60	40	[70]	[70]	70	80	70	90	
12.	30	20	10	10	20	—10	50	[60]	80	80	70	70	70	
13.	0	—10	10	10	20	20	20	40	[50]	70	70	+S	+S	
14.	40	30	10	20	20	20	50	90	—	—	—	—	—	
15.	—	—	—	—	—	—	—	—	—	—	—	—	—	
16.	+S	+S	+S	+S	+S	+S	+S	+S	+S	20	—S	+S	+S	
17.	40	30	30	40	50	60	70	[90]	100	110	90	90	100	
18.	20	20	20	30	30	40	[50]	—	—	70	60	50	50	
19.	20	20	10	10	20	30	50	50	[70]	70	60	70	60	
20.	30	20	20	20	30	30	[60]	70	70	70	70	70	70	
21.	20	20	20	20	30	60	60	70	—	70	70	110	130	
22.	50	40	40	40	50	80	80	[100]	[110]	100	110	120	+S	
23.	40	20	40	+S	+S	+S	+S	110	120	[120]	110	90	90	
24.	40	30	10	10	20	30	40	50	90	[120]	120	120	90	
25.	40	50	50	50	70	80	60	90	[110]	140	110	90	70	
26.	30	30	20	40	50	50	50	60	[60]	80	70	80	90	
27.	20	10	10	20	30	30	50	40	[60]	[90]	70	50	60	
28.	10	—	10	10	10	30	50	60	—	[50]	50	60	70	
29.	10	10	0	0	10	20	40	[40]	[50]	50	70	100	110	
30.	50	40	40	30	40	50	60	[80]	[120]	140	120	120	100	
Means	40	35	32	34	42	49	61	79	92	86	90	93	92	
Number of days	28	27	27	27	27	27	24	23	21	28	26	25	24	

13	14	15	16	17	18	19	20	21	22	23	Daily means
80	80	110	110	90	70	90	70	60	50	50	66
50	40	40	50	50	60	60	30	20	20	40	—
±S	±S	—S	—100	—50	—20	—10	30	40	40	10	—
70	80	90	80	60	70	140	120	120	130	120	77
130	160	200	140	100	90	90	100	120	130	110	113
130	110	110	120	130	110	100	120	90	150	120	115
100	100	80	70	60	40	40	30	20	20	30	—
150	140	140	130	140	120	120	140	90	70	70	95
120	120	110	110	110	110	120	+S	80	70	70	94
110	110	110	90	100	60	50	60	40	30	40	81
100	110	100	100	70	40	—S	±S	70	—10	0	—
70	90	80	70	70	50	30	20	10	0	10	44
±S	+S	+S	±S	±S	—10	—60	10	±S	+S	30	—
—	—	—	—	—	—	—	—	—	—	—	—
+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	—
—20	20	40	30	—30	—30	30	50	60	50	50	—
100	+S	±S	±S	60	40	20	—10	—30	—20	—10	—
50	60	60	60	40	30	30	20	20	20	20	—
50	10	60	50	50	40	40	30	30	30	30	40
±S	—S	30	60	70	40	20	30	30	20	20	—
140	160	130	100	70	50	40	20	30	30	60	66
—S	±S	—S	100	50	40	50	50	50	50	10	—
100	120	130	140	130	70	50	70	60	50	50	—
80	90	90	90	130	130	70	70	50	40	40	69
80	70	70	80	80	50	40	40	30	20	20	66
90	100	90	80	50	30	30	40	40	40	20	55
60	70	60	70	70	50	40	10	10	10	10	42
70	70	80	90	50	40	20	10	10	10	10	—
80	60	—S	—S	70	80	80	50	40	50	40	—
100	110	130	110	100	90	60	50	40	40	50	78
87	90	93	81	71	55	51	48	46	42	40	
24	23	23	25	27	28	27	26	27	27	28	

													July	
Hour GMT														
Day	0	1	2	3	4	5	6	7	8	9	10	11	12	
1.	50	50	50	50	50	60	70	70	—	—	—	—	—	
2.	—	—	—	—	—	—	—	—	70	80	90	80	90	
3.	40	30	30	30	40	50	(70)	60	50	40	40	50	60	
4.	20	10	10	20	40	40	50	50	60	70	70	90	100	
5.	20	10	10	10	20	30	30	30	—	50	60	110	40	
6.	10	20	30	50	60	70	100	110	150	140	120	100	90	
7.	30	20	20	30	30	50	60	70	100	110	120	110	110	
8.	20	10	10	20	20	50	50	50	80	80	80	70	70	
9.	0	0	0	±S	±S	20	30	30	±S	±S	30	30	30	
10.	120	110	70	30	40	60	70	50	90	—S	±S	±S	+S	
11.	50	40	30	40	50	60	60	70	70	80	70	70	80	
12.	50	50	30	20	40	40	60	90	—	70	70	70	60	
13.	10	10	10	10	10	20	40	40	40	80	90	80	90	
14.	30	10	±S	50	+S	—20	+S	30	20	50	40	30	30	
15.	30	20	20	20	10	30	30	40	70	80	90	80	90	
16.	10	0	10	0	10	20	30	40	50	50	60	60	60	
17.	—10	—10	0	0	10	20	30	30	50	50	60	60	70	
18.	20	10	10	10	20	30	—10	0	10	30	30	40	40	
19.	20	20	30	30	20	20	20	20	—	30	40	50	50	
20.	40	30	30	20	30	40	50	50	60	50	50	50	60	
21.	50	30	—S	±S	±S	±S	30	±S	±S	+S	+S	90	100	
22.	0	±S	—S	—40	—110	—170	—100	—20	80	30	50	30	20	
23.	40	40	40	40	50	30	30	20	0	80	20	+S	30	
24.	40	40	30	30	10	10	10	30	30	40	50	60	70	
25.	60	+S	±S	±S	+S	+S	—S	±S	+S	—30	20	—10	—10	
26.	—20	10	—20	30	—50	—90	—10	30	—	10	±S	+S	±S	
27.	30	20	30	20	30	30	40	20	—	—	80	90	90	
28.	10	10	10	10	10	10	20	20	50	60	60	50	40	
29.	±S	20	±S	—S	20	50	70	70	70	70	70	70	70	
30.	20	0	0	0	10	10	20	30	—	30	40	40	40	
31.	20	20	20	20	20	30	50	50	60	50	20	20	20	
Means	28	23	20	21	19	21	34	42	60	57	60	62	60	
Number of days	29	28	25	26	26	28	27	28	21	26	27	27	28	

13	14	15	16	17	18	19	20	21	22	23	Daily means
—	—	—	—	—	—	—	—	—	—	—	—
70	100	100	110	110	60	40	50	80	50	40	—
60	80	70	70	50	50	40	40	30	20	30	46
110	120	120	110	50	40	30	20	10	10	10	53
10	20	0	0	10	10	20	120	70	30	10	31
80	90	90	110	100	90	70	50	50	40	30	77
120	120	120	100	50	30	30	20	20	20	10	63
80	80	70	60	40	10	10	10	0	0	0	40
+S	+S	70	±S	+S	±S	±S	+S	±S	±S	70	—
±S	20	20	50	40	10	-10	-20	10	30	40	—
70	80	70	60	50	40	40	30	30	30	40	55
50	70	80	80	40	20	20	0	0	10	0	44
±S	±S	±S	40	20	30	30	40	40	20	20	—
40	50	30	40	50	50	30	30	30	30	30	—
80	80	70	80	70	50	30	20	10	0	10	46
70	70	80	90	50	20	10	10	0	-10	-10	33
70	70	60	70	50	50	40	30	30	30	20	37
50	50	50	50	40	40	30	30	30	30	30	28
50	50	50	50	50	40	30	40	30	40	50	36
70	50	50	50	40	40	50	60	+S	+S	30	—
90	70	50	40	40	50	50	50	±S	+S	+S	—
30	60	80	80	70	70	70	80	110	90	50	—
40	30	0	10	-10	-10	0	10	20	30	20	24
60	50	50	50	50	50	70	90	100	100	70	50
-10	10	-10	0	20	20	30	30	30	30	10	—
60	70	30	30	+S	±S	±S	70	60	50	30	—
90	100	130	±S	±S	30	20	20	20	10	10	—
30	40	20	20	10	20	30	40	60	50	30	30
60	60	70	70	80	100	60	40	40	30	20	—
50	40	30	20	20	20	20	20	20	30	20	23
20	40	+S	±S	±S	±S	+S	+S	80	-20	0	—
59	63	59	57	46	38	33	37	37	29	25	
27	28	28	27	26	27	27	28	27	27	29	

													August
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12
Day													
1.	10	-20	30	+S	+S	+S	-10	110	+S	30	+S	+S	+S
2.	30	30	30	30	20	50	70	70	—	90	80	70	60
3.	20	10	10	10	20	10	10	10	+S	50	70	70	80
4.	20	20	20	20	-S	+S	70	60	-S	—	30	20	+S
5.	20	-50	+S	20	-S	20	20	20	60	70	60	+S	+S
6.	20	20	20	30	30	70	60	60	70	90	70	70	70
7.	20	20	10	10	10	20	20	60	(70)	70	70	70	70
8.	20	20	20	10	+S	70	100	90	100	90	70	70	70
9.	30	20	40	20	20	30	40	30	—	70	40	30	20
10.	10	10	10	10	20	20	20	20	30	40	30	50	30
11.	10	-10	-30	20	60	30	40	50	60	60	50	50	60
12.	-20	-20	-30	-10	10	20	60	70	70	70	70	80	+S
13.	20	20	20	20	20	20	30	40	60	60	70	70	+S
14.	60	30	20	30	30	40	50	100	110	100	90	110	120
15.	40	20	20	20	20	30	50	20	50	70	80	70	40
16.	0	0	0	10	10	20	20	20	—	50	40	40	30
17.	30	20	20	30	20	30	50	70	10	-10	-20	0	30
18.	-40	-40	-40	-40	-30	-10	20	30	90	90	90	80	70
19.	40	50	50	50	40	60	70	80	120	120	100	110	100
20.	60	70	60	50	50	50	70	60	110	130	110	100	110
21.	70	60	60	70	30	-30	-120	70	+S	+S	+S	-S	+S
22.	+S	+S	+S	+S	-40	20	-30	-S	+S	+S	110	90	120
23.	70	50	40	40	50	50	70	80	—	—	—	—	—
24.	—	—	—	—	—	—	—	—	—	—	—	—	—
25.	—	—	—	—	—	—	—	—	—	130	130	120	120
26.	30	30	30	30	40	40	80	90	—	—	—	—	—
27.	30	20	20	20	20	30	70	70	50	50	30	40	40
28.	10	30	30	30	30	50	60	60	60	50	50	50	40
29.	30	30	20	30	30	30	60	60	50	50	40	40	60
30.	30	30	30	20	30	10	-10	30	—	40	10	-10	40
31.	60	80	70	70	70	50	180	160	110	120	100	130	+S
Means	26	20	21	24	24	31	42	60	71	71	64	65	63
Number of days	28	28	27	27	25	27	29	28	17	25	26	25	21

13	14	15	16	17	18	19	20	21	22	23	Daily means
+S	+S	-10	-20	+S	10	40	30	30	40	40	—
60	50	20	20	20	40	60	40	30	20	20	44
70	50	40	60	60	50	30	20	10	10	10	34
±S	+S	-S	±S	30	30	20	20	20	20	20	—
±S	50	+S	±S	+S	10	10	20	20	20	20	—
60	50	40	50	60	50	30	20	30	20	20	46
40	30	30	30	30	30	20	20	10	20	20	32
70	60	50	60	50	40	40	40	40	40	30	54
30	30	20	30	30	20	20	30	20	10	10	28
30	20	20	+S	+S	40	30	30	20	20	20	—
±S	±S	±S	-30	-40	-50	-80	-40	-10	-10	-10	—
±S	60	70	60	40	20	20	30	30	40	20	—
±S	+S	30	70	70	90	70	60	20	60	50	—
120	+S	±S	40	70	100	60	50	50	50	40	—
70	-10	20	30	20	10	10	-10	0	0	-10	28
±S	±S	+S	30	30	30	50	50	60	50	40	—
±S	±S	±S	+S	-40	-60	-70	-40	-40	-40	-30	—
70	50	60	70	50	80	70	70	60	50	40	39
100	70	80	70	70	80	70	70	60	60	60	74
110	90	100	90	90	110	100	100	80	60	60	84
-50	60	40	150	110	100	90	70	100	90	90	—
70	30	40	40	40	50	60	70	70	90	90	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
110	120	120	70	70	50	40	40	30	30	30	—
—	—	—	(60)	60	60	60	50	50	50	30	—
40	50	30	40	40	50	50	50	50	30	30	40
40	50	50	50	50	60	70	50	50	40	30	45
50	50	50	40	40	50	50	50	40	30	30	42
(60)	60	50	60	60	60	60	70	60	50	60	—
±S	-40	±S	±S	±S	+S	±S	60	70	20	-50	—
61	47	45	48	44	43	39	39	37	33	28	
18	21	21	23	25	28	28	29	29	29	29	

September													
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12
Day													
1.	0	-10	30	40	50	±S	10	50	110	170	160	70	70
2.	40	50	30	20	30	50	+S	+S	120	90	60	+S	90
3.	50	50	40	50	50	60	60	+S	20	40	70	50	40
4.	50	50	50	50	60	70	50	-10	-50	50	-30	30	30
5.	-S	-S	-S	0	110	120	210	250	180	170	170	70	100
6.	50	50	70	70	60	70	80	(60)	—	90	80	70	50
7.	30	30	20	20	20	20	30	40	60	70	100	120	130
8.	30	30	30	40	40	40	70	—	80	70	70	70	60
9.	20	30	30	40	40	70	70	80	100	90	100	90	70
10.	30	20	20	20	20	30	30	40	60	60	70	60	0
11.	10	20	20	20	10	-100	-20	100	+S	150	140	80	70
12.	50	70	+S	150	120	80	80	120	100	110	120	110	100
13.	40	20	20	30	20	30	60	70	—	100	70	60	70
14.	60	50	40	40	40	50	40	40	50	60	60	50	40
15.	60	50	50	50	+S	40	±S	70	60	+S	±S	20	20
16.	30	30	30	40	40	30	30	+S	-40	40	40	50	60
17.	50	50	40	40	50	50	70	60	50	30	20	30	20
18.	-180	-160	-120	-100	-S	-S	-S	-S	20	120	120	70	40
19.	30	30	30	30	30	40	50	50	40	50	70	70	90
20.	80	60	50	70	90	80	90	80	—	90	70	70	70
21.	80	70	70	60	70	110	100	80	—	100	100	100	100
22.	30	30	20	30	20	30	30	80	50	80	60	70	100
23.	50	50	40	70	60	70	60	70	60	70	70	90	90
24.	40	30	30	30	50	50	50	50	60	70	70	70	90
25.	50	70	70	80	80	80	70	90	90	90	100	100	120
26.	80	90	60	50	60	70	60	30	30	20	30	70	80
27.	50	30	40	20	-20	20	50	50	—	20	30	50	60
28.	30	30	20	30	30	0	-10	60	40	30	90	130	110
29.	100	190	50	50	100	110	100	110	90	100	90	90	80
30.	30	50	40	30	10	-10	0	90	20	50	120	+S	+S
Means	37	40	33	39	48	49	56	73	58	79	80	72	71
Number of days	29	29	28	30	28	28	27	24	24	29	29	28	29

13	14	15	16	17	18	19	20	21	22	23	Daily means
100	70	±S	±S	±S	—S	50	70	90	50	40	—
90	90	100	90	100	80	60	50	50	50	60	—
10	±S	—90	—40	10	50	80	100	80	60	50	41
—S	±S	±S	±S	±S	±S	±S	±S	±S	±S	—S	—
100	60	70	70	60	80	80	80	90	70	50	—
50	60	60	60	60	70	60	60	50	50	60	—
110	110	150	120	90	90	70	50	50	40	30	67
70	70	60	50	40	30	20	20	10	30	20	46
70	70	60	50	50	50	40	30	40	30	30	56
—10	20	10	10	20	60	40	0	±S	—S	—10	—
40	50	50	40	50	70	50	50	30	40	30	44
100	90	90	80	70	50	30	70	60	20	30	83
90	70	60	50	40	40	40	50	60	50	50	52
50	70	70	60	100	80	90	80	60	50	50	58
130	±S	80	70	80	50	60	50	50	80	50	—
60	60	50	50	50	60	50	60	20	40	50	40
40	10	—50	±S	—S	—30	10	—10	10	—50	—80	—
60	50	10	—10	10	20	30	0	10	30	0	—
80	80	70	80	80	90	120	120	110	90	90	68
40	50	60	60	70	80	90	80	70	80	70	72
100	60	100	90	100	110	70	60	50	40	40	81
110	100	100	70	80	90	90	100	90	70	60	66
90	100	100	70	70	60	80	70	60	50	30	68
100	90	80	70	30	30	20	40	50	50	40	54
110	100	110	90	90	80	70	100	70	90	80	87
70	80	50	40	50	90	80	60	60	50	50	59
30	40	30	50	60	70	90	70	60	40	50	43
110	120	110	110	100	100	100	110	110	110	40	71
80	90	±S	±S	±S	100	90	80	50	30	30	—
130	110	100	110	100	100	100	100	120	90	60	71
76	73	63	61	64	66	64	62	59	51	40	
29	27	27	26	26	28	29	29	28	28	29	

												October	
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12
Day													
1.	100	60	40	50	60	80	110	150	80	90	70	70	30
2.	50	40	70	60	60	60	70	60	70	70	60	80	90
3.	40	90	+S	120	130	180	110	50	40	50	60	70	80
4.	40	30	40	50	70	70	50	60	—	70	110	120	90
5.	80	70	80	90	130	110	130	50	100	60	40	0	40
6.	80	90	70	50	60	80	90	70	120	150	150	130	130
7.	90	90	70	120	120	130	150	160	150	130	160	200	110
8.	90	110	150	110	+S	+S	+S	+S	+S	+S	140	120	+S
9.	60	70	50	80	210	+S	+S	180	180	150	110	80	80
10.	70	60	70	+S	+S	+S	+S	+S	+S	90	80	80	120
11.	150	+S	140	130	80	60	50	—	0	30	30	50	70
12.	20	60	50	50	50	50	50	50	50	80	80	70	80
13.	40	40	40	50	50	40	30	30	—	70	60	70	70
14.	70	70	60	50	20	40	90	80	—	70	+S	+S	120
15.	60	70	70	70	70	70	70	100	70	100	100	110	170
16.	20	30	30	30	30	20	20	70	70	70	70	70	90
17.	—30	—20	80	70	30	20	10	20	—30	—160	—40	0	30
18.	20	20	20	20	—40	10	20	20	—	20	30	30	20
19.	—10	—10	—10	—10	—10	20	20	—10	—10	0	30	30	70
20.	50	40	50	40	50	50	60	70	80	90	100	70	80
21.	70	70	70	50	70	60	60	120	70	70	70	50	30
22.	40	30	50	50	50	60	50	50	50	60	50	60	70
23.	50	40	40	50	40	40	50	40	40	20	30	40	70
24.	30	50	40	40	50	50	40	30	—10	—30	—30	40	30
25.	50	50	40	10	30	—50	—20	—10	—	—50	0	10	+S
26.	20	—30	20	—10	30	—10	—40	50	50	—	—50	—40	0
27.	30	20	50	50	60	70	50	—20	—30	—40	—10	0	—10
28.	80	80	70	80	90	150	170	200	230	180	140	100	70
29.	—30	—40	—30	—50	10	—20	—20	—20	—20	—50	—30	—90	—90
30.	60	10	—40	—10	20	70	—10	—50	—70	—70	—20	10	50
31.	50	30	60	70	70	90	100	110	120	70	30	40	30
Means	50	44	51	52	58	57	56	61	58	48	54	56	63
Number of days	31	30	30	30	29	28	28	28	24	29	30	30	29

13	14	15	16	17	18	19	20	21	22	23	Daily means
40	70	50	50	30	-20	30	20	10	20	30	55
80	80	70	50	40	50	60	80	70	100	110	68
100	90	80	90	80	80	70	70	70	70	30	80
70	70	70	70	80	70	90	100	80	80	90	73
40	40	60	120	150	170	150	120	110	90	100	89
150	170	170	170	180	130	120	100	80	80	80	113
140	160	150	140	70	40	40	40	10	40	70	108
110	70	90	100	100	80	70	110	60	50	60	—
120	120	110	120	120	130	190	200	180	120	80	—
150	110	110	80	100	140	120	120	+S	+S	120	—
60	50	70	70	60	60	60	70	50	50	50	—
80	70	70	60	70	50	50	40	50	40	40	57
70	70	60	60	50	50	20	20	50	60	70	51
110	100	110	120	120	130	120	90	80	50	50	—
180	110	130	70	50	70	70	60	30	30	30	82
90	40	90	70	-50	-40	10	50	-30	40	20	38
20	30	30	50	50	70	70	30	0	10	-20	13
20	20	20	-10	0	10	10	30	20	-20	-10	12
70	70	70	10	20	40	70	60	60	60	60	29
80	80	70	60	70	70	90	80	90	70	60	69
30	50	90	110	80	80	80	70	70	60	50	68
60	50	50	50	50	50	70	60	70	50	50	53
90	70	70	70	60	50	10	50	60	50	40	49
40	50	60	90	50	30	60	30	40	30	40	35
70	100	130	40	50	10	-10	20	0	20	10	23
10	70	70	110	120	110	100	70	70	80	40	37
-50	-30	80	20	60	70	80	90	90	70	80	33
50	80	20	60	60	60	60	40	20	70	50	92
-60	-20	0	30	50	50	40	0	-20	-30	40	-17
50	50	±S	±S	±S	±S	+S	0	60	60	50	—
40	50	70	80	110	80	110	130	80	50	70	73
68	69	77	74	69	66	70	66	54	52	53	
31	31	30	30	30	30	30	31	30	30	31	

November													
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12
Day													
1.	40	10	20	30	10	20	40	70	—	80	80	110	140
2.	10	70	100	110	120	120	150	160	0	70	60	30	80
3.	70	—20	—60	—30	—30	—70	—80	—40	0	—10	—60	—10	—10
4.	—20	30	40	50	70	40	—10	—10	50	80	60	80	90
5.	170	190	110	70	130	170	150	100	50	100	110	90	100
6.	50	60	40	30	30	60	50	100	180	110	90	110	80
7.	40	40	—20	—10	0	30	0	—30	—30	—20	0	20	30
8.	30	30	30	60	90	80	100	130	—	150	150	130	120
9.	40	50	50	50	50	40	50	50	30	50	40	90	110
10.	40	20	20	20	30	20	10	40	50	70	100	100	120
11.	50	40	40	30	30	30	50	30	50	80	90	100	100
12.	—40	30	100	200	190	80	—100	40	10	60	60	80	100
13.	80	100	0	—50	10	10	10	70	40	60	50	60	50
14.	50	—50	—90	—90	—90	—90	—30	—30	—100	—110	—170	—140	60
15.	40	40	20	±S	—30	0	—50	10	—	70	+S	+S	—30
16.	70	70	70	70	60	60	90	100	—	100	100	90	80
17.	—10	50	60	10*	60	30	10	20	70	70	50	90	110
18.	100	80	70	100	100	100	70	110	80	70	50	70	90
19.	110	110	110	90	70	70	70	70	70	70	70	70	40
20.	10	—10	—10	—10	20	70	80	90	80	110	110	80	70
21.	—10	—10	0	—90	—110	—140	—110	—70	—40	20	20	20	40
22.	70	70	70	70	90	70	70	90	—	20	30	40	50
23.	70	70	50	±S	±S	±S	±S	20	0	±S	±S	±S	±S
24.	60	60	70	60	70	80	100	150	0	—	90	110	90
25.	±S	+S	+S	120	90	100	160	200	210	190	210	190	170
26.	±S	—S	130	±S	±S	—10	10	30	40	50	0	30	90
27.	40	20	20	60	60	170	+S	+S	+S	+S	+S	+S	+S
28.	140	90	60	100	60	60	100	60	80	120	130	100	120
29.	170	200	+S	+S	130	200	270	+S	—	+S	+S	+S	+S
30.	—10	20	10	—10	—40	0	60	40	10	80	90	180	170
Means	52	52	40	40	45	48	47	57	40	67	60	74	84
Number of days	28	28	28	26	28	29	28	28	23	26	25	26	27

13	14	15	16	17	18	19	20	21	22	23	Daily means
120	130	140	120	180	120	130	70	100	90	40	82
70	80	+S	100	110	130	60	60	70	50	30	80
50	60	80	40	30	30	60	30	30	10	30	4
80	110	130	150	150	130	180	220	150	150	140	89
110	130	80	90	130	150	170	130	160	170	100	124
60	50	60	80	90	100	120	130	110	70	60	80
30	60	70	40	40	70	90	±S	20	40	60	25
130	110	90	80	60	70	60	40	30	50	40	81
110	100	60	30	20	30	10	10	-20	0	60	46
110	100	110	110	100	110	100	90	80	70	70	70
80	100	50	40	20	50	30	70	70	100	30	57
110	90	80	130	70	40	100	60	70	70	80	71
60	40	50	90	-140	-90	-170	-210	-130	40	50	3
110	100	80	110	80	70	50	-20	±S	-20	40	-12
30	40	50	20	40	70	90	60	30	50	60	—
100	110	120	110	90	80	80	50	60	10	10	77
110	130	150	90	110	160	130	110	110	110	120	81
110	140	130	120	130	140	120	100	140	140	150	105
30	20	70	40	20	40	20	30	50	-10	0	55
90	100	70	80	-20	-20	-60	-10	-20	-30	-20	35
20	40	20	30	80	100	110	100	80	50	70	9
40	60	70	110	110	120	100	100	80	70	80	73
±S	±S	±S	120	130	100	110	90	70	70	70	—
80	30	±S	±S	40	-10	-20	-170	±S	±S	±S	—
160	130	200	220	210	170	160	150	110	90	+S	—
80	130	120	110	100	110	100	80	80	30	50	—
+S	+S	+S	+S	+S	+S	+S	+S	+S	140	150	—
50	70	120	140	140	90	50	100	80	50	110	93
+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	90	—
160	160	160	150	160	150	120	60	20	10	0	73
85	90	94	94	81	83	75	57	63	60	63	
27	27	25	27	28	28	28	27	26	28	28	

													December	
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12	
Day														
1.	0	10	-10	30	70	60	50	10	10	20	20	+S	+S	
2.	80	90	90	70	50	50	+S	50	50	100	70	70	80	
3.	80	110	130	130	130	70	80	40	70	80	50	60	100	
4.	50	50	30	+S	50	80	60	+S	+S	70	130	150	90	
5.	80	80	80	70	60	70	100	120	140	130	+S	120	110	
6.	90	120	130	120	+S	+S	+S	+S	—	40	30	-30	-50	
7.	20	-10	-10	40	50	60	20	-20	20	10	-20	-60	-60	
8.	80	120	120	110	70	70	120	140	170	+S	+S	210	140	
9.	100	70	60	60	80	70	80	120	60	110	170	180	200	
10.	80	70	60	80	110	70	80	60	40	90	80	+S	-20	
11.	80	60	40	70	70	80	110	120	120	120	120	120	100	
12.	20	30	40	40	60	90	30	90	120	100	90	40	50	
13.	80	50	60	60	80	70	80	100	—	70	70	70	50	
14.	40	40	30	30	50	50	10	30	100	70	70	60	90	
15.	50	50	100	90	110	50	130	80	100	120	70	100	150	
16.	40	30	40	50	90	70	60	40	90	50	70	80	120	
17.	20	30	40	-10	50	120	100	110	110	150	120	60	90	
18.	-20	-10	0	0	-10	30	20	-20	-50	-50	-10	20	-20	
19.	110	160	40	0	-40	40	40	20	-20	-100	-130	-130	-60	
20.	-10	30	20	20	-20	40	40	80	—	50	10	-10	10	
21.	10	0	10	-10	20	50	70	40	30	40	30	50	10	
22.	-10	-40	30	30	10	30	70	70	0	50	50	100	50	
23.	30	0	-20	-10	-10	0	-10	20	-10	-10	-40	20	60	
24.	50	60	50	50	50	90	50	40	30	50	70	70	50	
25.	0	10	20	40	70	80	50	40	50	70	70	50	70	
26.	70	60	50	40	40	50	50	70	0	90	120	+S	10	
27.	160	150	110	90	100	100	110	110	—	80	90	140	150	
28.	190	160	150	160	150	140	130	120	150	150	180	150	170	
29.	+S	150	200	110	170	210	220	120	150	90	80	110	120	
30.	-20	-50	-50	-40	-30	-40	-40	-40	-20	-10	0	50	70	
31.	180	—	—	—	—	—	—	—	—	—	20	0	30	
Means	53	54	55	52	58	67	68	63	60	63	58	66	63	
Number of days	30	30	30	29	29	29	28	28	25	29	29	28	30	

13	14	15	16	17	18	19	20	21	22	23	Daily means
+S	+S	-S	-S	-S	20	50	120	60	90	70	—
±S	—	—	—	—	—	—	10	50	50	50	—
130	140	180	+S	+S	+S	140	160	120	120	70	—
80	130	130	+S	110	+S	+S	+S	+S	140	+S	—
120	120	130	150	170	150	130	140	130	110	90	113
-40	-30	-70	-60	-40	-40	-40	-50	-40	-30	-10	—
-10	-60	-30	-50	-20	-20	60	-S	±S	170	140	—
120	130	120	120	100	110	120	110	100	80	+S	—
170	+S	190	150	150	150	150	140	160	120	100	124
80	110	10	-10	0	70	130	130	120	90	80	70
90	110	110	90	80	110	120	130	120	80	80	97
80	70	60	170	90	70	40	40	60	80	80	68
+S	70	70	70	80	70	70	80	80	70	40	71
100	130	100	70	100	110	120	90	80	70	50	70
160	110	130	110	100	60	60	110	50	30	30	90
110	120	100	100	70	70	70	-20	-10	-10	40	61
100	110	120	70	90	80	70	120	150	40	-50	79
20	50	120	150	160	130	150	130	20	110	70	41
30	30	50	-10	10	10	20	-10	-20	-40	0	-3
40	120	150	100	60	40	50	50	50	-10	-10	39
-10	-20	-10	0	30	-10	-10	-20	-50	-20	0	10
20	40	20	40	50	70	60	50	60	0	0	35
60	90	120	110	110	50	40	50	40	40	80	34
50	40	40	60	70	70	70	-10	10	30	10	48
150	150	110	140	120	100	120	130	120	110	80	81
100	120	110	110	110	120	70	90	140	150	160	84
+S	210	+S	+S	230	190	160	160	160	130	160	—
170	160	180	170	200	+S	190	200	150	120	210	163
70	70	90	-40	-70	-90	-90	-40	0	-10	-20	70
110	130	—	—	+S	+S	+S	+S	210	160	220	—
110	150	170	170	140	120	30	20	10	-10	-80	—
82	93	93	79	85	70	77	75	73	66	60	
27	28	27	25	27	26	28	28	29	31	39	

charges transported by point-discharge for each month

12	13	14	15	16	17	18	19	20	21	22	23	Means
16	43	3	2	16	4	19	98	68	12	22	16	21,5
0	7	16	0	1	3	10	95	64	39	32	12	17,5
0	0	0	0	0	0	0	0	0	0	0	0	1,5
0	0	0	0	0	0	0	0	0	0	0	0	1,1
0	0	0	0	0	0	0	0	0	0	0	2	0,1
0	0	0	0	0	0	0	0	0	0	0	0	0
20	53	31	25	41	0	0	7	0	0	14	4	11,5
100	21	105	55	12	3	0	5	0	0	4	11	15,6
26	39	10	13	0	0	26	34	50	11	0	0	8,9
2	3	20	32	0	0	10	49	59	1	0	0	7,4
40	21	28	35	27	0	0	3	2	6	0	0	7,8
36	15	41	40	11	0	0	1	0	1	0	0	7,4
1	1	0	0	13	4	13	20	2	19	3	8	9,5
0	1	30	30	73	15	16	15	15	41	15	14	13,8
65	32	28	30	25	23	10	15	0	0	0	0	13,0
54	152	24	86	65	58	38	3	0	0	0	0	31,8
0	0	6	5	4	5	0	0	0	10	9	0	1,7
0	0	0	13	5	4	0	0	5	0	9	5	1,9
0	0	0	1	0	1	7	0	0	0	0	0	0,4
0	0	0	0	0	1	13	1	0	0	0	0	0,6
4	6	6	0	8	0	0	0	0	0	0	0	4,5
8	4	3	0	0	0	0	0	0	0	0	0	5,7
5	11	88	84	33	35	1	6	0	0	0	0	11,0
0	12	59	50	38	28	52	2	0	0	0	0	10,3