

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. 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.	60	110	60	70	70	-10	-20	-10	-40	-S	-S	-S	-120
2.	100	110	110	90	80	110	100	100	90	80	110	-	160
3.	160	170	130	130	120	120	120	150	180	200	170	120	120
4.	+S	+S	+S	+S	+S	180	170	120	110	140	+S	+S	150
5.	80	40	30	70	60	80	80	70	70	90	60	70	80
6.	110	80	70	70	60	70	110	130	-	150	200	+S	140
7.	70	30	40	60	70	100	110	100	140	+S	140	140	100
8.	60	20	30	60	60	70	110	100	100	140	+S	140	140
9.	+S	30	-S	+S	80	40	140	210	210	200	140	170	190
10.	120	180	190	170	150	200	220	200	+S	220	190	+S	+3
11.	100	90	90	70	100	90	130	190	210	+S	200	180	190
12.	150	100	70	60	70	50	+S	130	160	180	190	200	190
13.	110	100	70	130	140	20	30	+S	+S	-	+S	140	130
14.	+S	+S	140	80	60	40	60	40	-50	-	-	100	70
15.	70	50	20	10	40	50	60	+S	60	70	10	-20	-10
16.	-	-	-	-	80	20	20	70	100	70	70	110	130
17.	110	130	140	110	110	+S	150	200	160	120	60	50	+S
18.	80	110	110	120	110	60	70	60	50	70	70	60	130
19.	40	40	50	60	50	40	50	80	+S	80	100	80	30
20.	50	40	40	40	50	50	50	80	-	60	70	140	150
21.	-60	-60	-40	20	10	-30	-20	-40	-10	-70	-30	50	70
22.	130	100	80	90	50	90	100	60	100	150	150	150	110
23.	-10	-40	-50	-50	-40	-40	-	-	-	-	30	30	30
24.	100	120	110	70	110	80	130	180	150	70	80	50	30
25.	80	100	100	90	70	60	80	100	90	80	110	80	100
26.	-20	30	50	100	80	+S	60	80	90	100	130	110	100
27.	90	80	40	30	40	50	80	80	-	100	100	120	150
28.	40	40	-S	-S	+S	+S	30	40	100	100	100	100	100
29.	60	60	90	30	30	-S	+S	+S	+S	40	10	100	100
30.	60	60	80	80	60	60	90	120	130	140	+S	100	100
31.	100	40	30	40	60	0	0	60	0	-20	30	20	20
Means	76	70	70	70	70	61	83	100	96	102	100	100	90
Number of days	27	28	27	27	29	27	28	27	23	25	25	26	20

13	14	15	16	17	18	19	20	21	22	23	Daily means
-50	-70	-40	-90	20	80	50	+S	110	110	100	—
150	160	150	170	170	160	160	200	200	180	180	136
130	130	200	120	130	120	130	130	90	130	130	139
140	140	60	30	90	110	120	110	90	80	70	—
80	120	100	100	150	200	170	120	90	110	80	92
140	140	140	160	170	140	+S	170	180	70	110	—
90	80	70	+S	140	110	70	70	70	60	60	87
+S	120	130	+S	+S	100	60	80	+S	60	60	—
200	200	+S	100	110	130	110	160	130	150	120	—
180	150	140	160	140	140	120	100	110	110	110	—
180	190	140	130	210	170	160	100	160	140	150	147
190	170	130	60	160	130	+S	+S	150	130	130	—
120	+S	+S	80	110	140	+S	+S	+S	+S	+S	—
110	100	50	30	40	40	30	30	50	50	60	—
-20	-20	-50	-30	0	—	—	—	—	—	—	—
130	150	150	120	110	90	80	80	70	70	60	—
130	80	160	+S	+S	230	+S	100	40	40	60	—
120	150	160	170	160	+S	+S	+S	+S	0	50	—
40	90	130	110	130	150	+S	100	110	70	50	76
140	120	110	100	110	100	100	70	70	0	50	78
100	140	170	160	100	80	0	120	100	130	130	43
80	50	70	70	50	30	60	70	60	30	-10	80
30	30	40	70	70	60	70	90	70	30	70	—
100	120	130	140	150	100	140	100	70	130	130	108
90	70	70	70	90	100	100	100	100	+S	20	85
100	100	100	100	100	110	110	110	130	100	100	90
160	130	100	90	70	60	80	110	100	40	50	85
110	110	130	140	120	150	140	70	60	40	60	—
100	100	110	100	110	140	120	140	100	100	100	—
170	150	160	120	130	150	130	100	100	100	100	109
30	40	120	190	150	100	+S	+S	190	120	30	—
109	108	108	99	113	118	100	105	104	85	83	
30	30	29	28	29	29	23	25	27	28	29	

Hour GMT Day	February												
	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	10	100	80	170	210	150	-10	-80	-10	0	110	10	40
2.	-50	-50	-60	-40	-70	-40	-10	10	30	10	10	40	10
3.	100	80	30	30	30	70	90	80	-	70	30	-20	30
4.	20	-50	70	70	40	80	120	160	170	170	220	200	190
5.	50	50	70	50	60	60	80	90	60	40	30	30	30
6.	140	110	90	-	-	-	-	-	+S	+S	+S	+S	+S
7.	+S	170	+S	+S	+S	+S	+S	130	+S	230	160	160	160
8.	70	60	60	50	80	80	130	130	170	170	180	170	170
9.	140	90	100	100	100	120	130	110	120	150	140	130	120
10.	140	130	130	160	140	160	130	140	-	-	150	-	-
11.	130	130	120	130	140	170	190	210	230	210	190	220	180
12.	170	190	170	80	20	-10	80	80	40	10	60	120	170
13.	+S	+S	+S	+S	+S	+S	50	50	-20	60	130	+S	110
14.	20	50	60	70	40	30	20	90	+S	100	140	40	40
15.	10	20	20	30	30	30	30	30	80	50	80	60	90
16.	0	0	40	50	50	50	70	80	80	100	150	180	200
17.	90	100	100	100	80	100	100	80	-	100	100	100	140
18.	90	110	110	100	100	100	100	110	140	140	130	130	130
19.	100	80	50	50	60	70	70	80	70	60	60	70	110
20.	-10	-10	-50	-30	-10	0	0	0	0	-	-	+S	+S
21.	20	40	30	20	20	30	100	140	210	210	140	120	110
22.	60	70	50	90	50	60	100	120	160	190	160	180	150
23.	130	110	110	140	130	150	110	120	140	160	170	200	200
24.	80	70	80	80	60	60	60	60	-	-	130	130	170
25.	70	70	40	40	70	70	80	120	130	140	150	160	170
26.	20	-10	-10	-30	40	30	40	100	20	60	120	100	80
27.	-60	10	70	70	70	80	120	130	120	130	130	140	160
28.	+S	70	40	70	60	60	+S	140	170	170	140	140	130
Means	62	66	62	66	64	70	79	93	100	114	123	117	124
Number of days	25	27	26	25	25	25	25	27	21	24	26	24	25

13	14	15	16	17	18	19	20	21	22	23	Daily means
70	40	80	110	100	10	-80	-50	-10	10	-10	44
80	70	80	30	-60	-50	-30	-30	-10	-10	60	-3
50	110	90	140	200	120	20	70	80	50	20	68
210	200	170	170	160	170	160	110	90	70	50	126
80	90	30	90	80	70	100	110	110	110	120	70
+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	—
180	160	100	130	120	80	100	70	110	120	80	—
150	200	160	180	180	160	170	220	190	200	160	145
140	130	110	100	110	150	160	170	200	180	150	131
170	100	60	80	100	130	+S	130	120	150	110	—
170	210	170	170	160	200	190	200	210	210	170	180
200	110	160	50	—	60	+S	170	+S	+S	+S	—
120	160	130	140	100	30	120	100	100	20	30	—
60	0	60	50	20	-70	20	40	50	70	30	45
100	40	30	120	60	70	70	-30	30	10	-20	43
170	210	+S	180	+S	180	180	170	100	80	60	—
140	110	130	130	120	130	120	110	110	100	80	107
110	120	110	100	110	110	100	80	80	90	90	108
110	90	90	-S	±S	±S	±S	±S	+S	-20	-30	—
110	120	140	130	110	140	150	120	90	20	0	—
120	130	110	180	200	190	130	110	110	100	90	111
110	100	60	60	120	160	180	140	100	100	100	111
200	200	+S	140	190	180	180	190	130	110	100	152
170	200	190	200	170	170	+S	140	70	70	100	—
190	150	150	130	160	70	70	+S	20	-10	20	94
90	140	170	190	+S	+S	+S	170	60	40	-40	—
200	+S	+S	+S	+S	+S	+S	+S	170	150	150	—
140	150	140	150	120	+S	140	120	120	120	100	—
133	128	113	126	120	107	107	110	97	82	68	
27	26	24	25	22	23	21	24	25	26	26	

Hour GMT Day	March												
	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	70	60	40	30	40	120	130	140	120	160	200	170	160
2.	80	100	70	80	110	110	130	170	+S	+S	+S	+S	+S
3.	40	20	60	110	80	90	100	140	—	150	150	140	150
4.	70	50	20	-20	-40	20	-70	-70	-20	20	70	70	60
5.	70	70	60	50	60	70	70	100	120	110	100	90	90
6.	60	70	60	20	70	120	90	120	130	130	120	60	70
7.	30	40	50	40	40	30	60	80	90	90	80	100	110
8.	-20	0	50	60	60	70	90	90	90	100	70	60	30
9.	-10	-20	-30	0	20	40	60	70	50	100	100	110	120
10.	70	—	—	—	—	—	—	—	—	130	150	150	150
11.	30	30	0	10	10	10	20	30	0	50	80	110	150
12.	10	10	-10	-20	-10	0	30	50	70	100	100	80	±S
13.	70	50	30	20	0	-20	0	30	30	30	70	100	100
14.	+S	0	-10	10	0	0	30	0	-10	-10	-10	0	-10
15.	70	70	70	110	+S	+S	+S	+S	90	30	30	50	60
16.	160	+S	+S	+S	+S	70	40	60	10	60	30	100	110
17.	50	30	20	-30	-10	0	0	0	—	0	-10	-20	-30
18.	30	30	10	0	40	70	120	+S	-S	±S	+S	-10	30
19.	110	110	110	150	100	90	70	70	100	30	—	—	60
20.	120	130	130	130	120	100	80	50	70	100	—	100	70
21.	-10	-20	-10	-20	-20	-20	50	100	140	120	110	90	-30
22.	100	70	70	70	70	70	100	120	140	120	130	120	120
23.	30	10	30	30	30	30	50	60	70	—	80	90	110
24.	100	120	120	110	150	110	80	90	—	100	100	110	100
25.	50	30	30	-10	20	30	-S	±S	±S	40	40	30	40
26.	40	30	50	50	50	40	50	60	50	40	—	70	60
27.	40	40	40	40	50	70	80	100	110	70	60	50	50
28.	90	60	80	120	120	90	-70	-100	-30	70	80	80	60
29.	—	—	—	—	—	—	+S	+S	50	100	90	50	70
30.	-80	-S	±S	±S	±S	±S	130	±S	-S	-30	+S	+S	20
31.	-40	-40	-70	-60	-30	-10	30	0	40	50	30	30	80
Means	49	43	40	40	43	52	57	62	66	74	82	79	74
Number of days	29	27	27	27	26	27	27	25	23	28	25	28	29

13	14	15	16	17	18	19	20	21	22	23	Daily means
140	130	110	100	90	120	130	160	130	130	110	116
130	110	90	130	130	130	130	120	110	70	100	—
130	110	70	50	100	110	90	60	30	10	40	88
50	60	70	70	70	70	70	70	70	20	10	33
70	70	70	70	70	40	0	-80	10	30	0	59
80	120	90	70	90	110	80	70	70	70	50	84
100	70	70	70	30	-10	-40	-60	-60	-90	-70	35
30	40	60	70	70	100	100	-10	0	0	-20	50
120	110	90	70	60	70	70	70	80	80	70	63
160	120	100	70	60	70	60	30	+S	+S	10	—
160	160	140	130	60	50	30	30	20	0	0	55
±S	-10	+S	+S	60	30	10	70	110	70	110	—
+S	±S	50	70	80	90	60	70	30	50	80	—
0	10	-10	0	30	0	30	50	-20	-10	-10	3
140	100	100	110	120	130	150	110	+S	110	140	—
100	100	110	90	100	80	60	50	80	60	60	—
0	10	-10	-40	20	50	50	60	50	40	70	13
60	70	110	120	70	±S	±S	170	170	160	100	—
40	70	70	110	150	150	170	160	170	150	100	—
50	60	50	30	20	-30	+S	10	-40	-30	-10	60
-S	30	110	140	150	150	180	160	120	100	100	75
120	100	120	120	100	130	100	100	70	70	40	99
90	150	70	60	100	120	150	160	170	110	160	85
120	130	150	170	120	130	120	100	100	60	50	110
50	60	70	40	100	100	90	70	70	70	30	—
80	80	80	70	80	130	80	70	70	50	40	62
60	70	90	70	80	50	70	70	60	70	50	64
80	70	70	70	30	±S	-S	±S	±S	±S	±S	—
80	70	90	110	100	70	70	60	50	-S	±S	—
+S	130	90	-20	-S	-60	-80	-10	10	-70	-120	—
90	100	130	110	110	140	120	100	80	80	80	48
86	83	83	78	82	80	77	70	65	52	47	
27	30	30	30	30	29	28	30	28	28	29	

April

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	100	80	60	70	60	130	130	120	—	150	140	110	130
2.	90	70	50	40	70	70	80	90	70	70	80	90	110
3.	40	50	50	60	40	±S	—S	70	100	80	80	90	60
4.	60	60	50	70	60	80	80	100	120	110	70	90	70
5.	50	50	50	70	80	70	80	90	100	110	110	100	80
6.	60	20	10	20	30	50	50	70	70	60	100	110	60
7.	50	30	40	±S	—20	20	50	60	—	—	40	50	20
8.	110	100	110	120	100	70	110	110	80	70	80	70	50
9.	40	40	10	40	50	70	70	70	50	20	20	50	—10
10.	50	40	40	40	50	40	40	—	—	—S	—10	—S	—S
11.	—S	+S	±S	±S	—S	70	—	—	—	—	—	—	—
12.	50	50	40	30	50	70	60	40	60	10	—30	—60	40
13.	40	50	60	50	40	40	40	40	30	50	60	70	80
14.	—S	—S	0	+S	80	—90	—S	—S	—	0	70	80	100
15.	130	90	90	90	60	60	60	20	0	—	—	70	70
16.	—60	0	120	160	140	130	180	120	80	100	100	70	80
17.	50	50	50	50	50	60	70	60	70	90	80	80	60
18.	70	20	30	70	60	50	20	40	90	90	70	70	70
19.	70	80	70	40	50	70	50	90	170	140	120	110	110
20.	60	50	50	50	50	80	90	120	120	120	120	140	170
21.	40	40	40	50	50	50	50	40	—	10	30	70	50
22.	40	20	20	20	30	0	—10	60	90	100	90	90	—
23.	40	40	20	—30	10	30	—50	—	—	—	—	40	40
24.	10	30	30	—30	—10	30	20	30	50	60	60	50	60
25.	70	80	50	70	50	±S	—S	70	70	60	70	70	80
26.	10	20	30	30	10	—10	+S	70	+S	90	±S	±S	—S
27.	60	40	40	50	30	—10	60	90	110	100	90	90	90
28.	30	50	30	30	30	40	50	80	—	100	110	90	90
29.	30	30	30	50	40	60	50	70	70	60	60	70	70
30.	30	30	30	30	30	60	70	50	50	50	50	60	60
Means	51	47	45	50	47	50	60	72	79	76	72	75	73
Number of days	28	28	29	27	29	28	25	26	21	25	26	27	26

13	14	15	16	17	18	19	20	21	22	23	Daily means
140	120	70	120	130	130	130	150	120	90	90	112
100	100	90	60	30	50	30	70	70	70	60	71
70	70	70	60	50	70	60	70	70	50	60	—
70	70	40	50	70	70	70	60	50	40	40	69
70	80	50	70	70	80	80	+S	200	120	60	84
—	—	—	—	—	70	70	70	70	+S	90	—
70	130	160	130	110	110	130	120	170	90	30	—
30	—40	60	60	70	70	70	50	30	50	50	70
40	30	40	60	40	50	100	90	60	70	50	48
—S	40	80	130	10	±S	±S	±S	±S	±S	±S	—
—	50	+S	50	70	50	70	70	70	50	50	—
90	60	60	60	60	80	50	40	40	40	50	43
100	100	120	80	90	90	100	90	+S	130	±S	—
110	80	110	110	90	90	80	120	150	110	140	—
60	50	—S	±S	—20	—S	—S	—S	50	30	—30	—
90	80	90	80	60	40	+S	40	40	50	60	80
50	60	50	50	50	50	40	50	60	10	40	55
90	90	90	70	80	130	130	160	160	110	90	81
120	130	140	130	130	120	140	130	80	60	70	101
160	170	150	130	90	60	70	50	50	60	50	94
90	80	80	90	60	70	50	60	70	60	50	56
—	—	—	—	—	60	60	70	70	70	60	—
40	50	60	90	110	160	160	130	60	30	30	—
60	70	60	60	60	70	60	60	40	40	80	44
90	70	70	80	+S	60	50	40	—S	—20	+S	—
+S	—S	+S	±S	70	50	40	50	70	60	50	—
90	90	100	110	120	90	80	60	70	70	40	73
90	100	110	120	120	120	100	80	70	60	40	76
60	60	60	70	50	60	40	50	40	40	30	52
70	70	70	60	50	50	40	30	50	30	30	48
82	76	83	97	71	79	78	76	77	60	54	
25	27	25	26	27	28	27	27	27	28	27	

May

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	30	20	0	-10	0	-10	-20	-50	-30	-30	40	70	80
2.	60	50	40	40	40	30	60	70	70	60	70	70	70
3.	30	30	20	20	30	40	40	60	90	80	80	80	90
4.	-10	-10	-20	-10	-10	10	10	0	0	0	0	10	10
5.	-20	-10	20	30	30	10	20	50	—	—	20	70	50
6.	10	20	20	10	20	30	30	40	50	50	30	30	30
7.	50	60	50	30	50	60	60	70	70	60	60	60	60
8.	40	40	40	30	50	60	30	+S	+S	60	±S	+S	+S
9.	-10	-10	20	30	30	30	30	30	+S	+S	+S	±S	+S
10.	60	50	40	30	50	70	90	70	60	20	30	60	30
11.	40	30	30	30	10	110	100	40	50	50	50	50	50
12.	—	—	—	—	—	—	—	—	—	50	60	60	50
13.	-50	-50	10	20	20	30	50	50	—	0	0	30	40
14.	10	20	30	20	30	50	40	40	60	100	90	90	80
15.	10	0	0	10	10	30	40	80	70	70	80	90	100
16.	30	30	30	30	30	40	30	50	70	80	90	90	100
17.	±S	+S	30	50	+S	30	0	±S	100	60	70	80	90
18.	10	10	10	10	10	30	30	30	40	70	60	60	70
19.	30	10	10	10	20	30	30	60	—	90	90	110	110
20.	10	10	20	20	30	20	40	—	—	—	—	—	100
21.	40	0	30	40	40	50	30	—	110	110	90	90	90
22.	30	20	10	20	20	30	40	50	70	80	80	80	+S
23.	-60	±S	-S	-20	+S	80	40	0	20	30	70	70	30
24.	50	40	40	30	40	40	60	80	80	90	110	120	140
25.	-30	-60	-70	-30	-90	+S	140	180	170	120	20	30	90
26.	50	30	50	50	60	60	140	110	—	60	30	50	60
27.	20	20	10	-10	0	10	20	30	30	30	50	60	60
28.	-10	0	-10	-10	20	10	0	—	—	—	—	—	—
29.	—	—	—	—	—	—	—	—	30	30	30	30	30
30.	30	30	20	20	30	20	30	50	—	±S	70	80	90
31.	+S	-S	10	30	40	110	+S	160	170	130	90	70	50
Means	17	15	18	18	23	40	43	56	66	60	58	63	69
Number of days	27	26	28	29	27	28	28	24	21	26	27	27	27

13	14	15	16	17	18	19	20	21	22	23	Daily means
80	80	70	60	70	60	60	60	50	70	60	34
80	70	80	90	110	90	50	50	60	40	40	62
90	110	110	50	50	30	10	10	0	10	0	48
0	10	-10	0	10	10	-10	0	20	10	0	1
30	30	20	40	40	40	30	40	30	30	20	—
30	30	50	60	70	60	80	80	60	60	60	42
60	60	70	60	50	40	40	30	30	30	30	52
+S	+S	+S	70	40	0	70	50	30	10	30	—
40	30	30	40	40	50	50	50	30	50	60	—
50	60	90	90	60	70	70	40	30	40	50	55
60	60	70	70	70	—	—	—	—	—	—	—
70	60	40	40	30	±S	±S	-50	-120	80	90	—
80	90	100	100	100	60	70	30	30	30	20	37
80	90	80	70	50	50	+S	±S	±S	±S	10	—
100	100	—	80	70	50	40	50	40	50	30	52
100	80	100	100	80	50	30	30	30	30	10	56
90	90	100	100	70	40	30	30	30	20	30	—
60	60	70	60	60	50	30	30	30	30	30	40
120	130	130	120	70	40	20	30	20	10	10	57
100	90	90	80	70	70	70	60	60	50	30	—
90	100	100	80	40	30	20	20	20	-10	30	54
±S	±S	±S	±S	±S	-90	30	20	-10	-S	0	—
30	30	30	40	30	30	70	60	80	70	50	—
140	130	140	120	90	100	100	80	40	80	50	83
10	60	80	60	30	40	40	50	90	110	70	48
70	70	60	60	60	70	70	80	80	60	40	64
50	50	30	40	50	40	10	20	20	0	30	28
—	—	—	—	—	—	—	—	—	—	—	—
30	40	30	30	30	30	30	30	30	30	30	—
±S	±S	80	±S	100	70	+S	-70	-40	-S	±S	—
50	±S	±S	+S	40	40	-60	+S	±S	±S	-S	—
66	70	71	67	58	44	40	34	29	40	34	
27	26	26	27	29	28	26	27	27	25	27	

													June
Hour GMT													
Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1	-20	-40	-40	-40	0	10	-20	90	+S	+S	100	20	-50
2.	70	70	+S	-110	-S	-S	30	+S	-	70	90	90	60
3.	60	70	60	60	60	70	60	60	60	50	50	60	50
4.	30	20	30	40	50	60	60	60	60	80	60	60	60
5.	30	30	20	40	40	20	60	70	90	60	+S	20	60
6.	40	30	50	50	40	60	80	100	100	70	90	70	60
7.	60	60	60	60	60	60	60	20	60	50	50	30	40
8.	70	60	40	30	20	+S	+S	-70	-10	+S	10	20	0
9.	-S	+S	-50	-40	-60	-80	-130	-110	-	20	30	-80	+S
10.	-130	20	90	110	80	20	120	+S	170	110	80	70	70
11.	10	10	10	10	30	90	130	130	100	100	80	80	70
12.	20	20	20	30	20	70	60	60	70	60	60	70	70
13.	10	20	10	20	40	110	100	70	70	40	30	40	60
14.	10	10	10	20	20	20	20	30	60	70	70	80	80
15.	10	10	10	10	20	60	50	50	40	20	20	20	10
16.	10	50	20	-10	10	10	40	50	-	-	-	10	0
17.	70	50	50	40	20	-10	-10	-40	+S	+S	110	100	140
18.	50	50	20	-10	-20	-S	+S	-S	+S	+S	110	60	90
19.	60	50	70	70	70	70	100	100	120	100	110	100	60
20.	40	0	0	-40	20	0	20	-20	+S	20	70	30	-20
21.	50	50	40	30	30	40	40	40	50	80	90	80	90
22.	70	50	70	70	70	100	90	100	80	120	110	110	110
23.	20	20	10	10	30	40	-	-	-	-	100	100	100
24.	-	-	-	-	-	-	-	-	110	120	130	100	-
25.	80	30	20	-10	-10	120	90	70	20	30	0	+S	+S
26.	70	90	100	100	120	130	140	170	170	140	110	110	100
27.	10	40	50	60	60	80	80	70	90	100	100	100	110
28.	10	10	0	20	60	50	40	80	100	100	90	100	100
29.	40	40	50	70	80	110	150	160	160	160	160	130	110
30.	+S	+S	+S	+S	10	10	-40	30	-	70	60	+S	+S
Means	31	33	30	25	35	51	55	55	84	77	78	64	63
Number of days	27	27	27	28	28	26	26	25	21	24	28	28	26

13	14	15	16	17	18	19	20	21	22	23	Daily means
-40	-10	-30	-20	0	-10	0	-10	40	30	50	—
60	60	50	60	60	10	20	30	60	60	80	—
60	60	40	30	60	40	50	10	50	40	40	52
60	60	60	60	50	60	60	60	50	40	30	53
70	20	40	80	+S	30	20	10	10	0	30	38
80	100	100	90	80	90	80	90	90	70	60	74
50	50	60	60	60	+S	60	120	140	90	70	62
0	20	50	30	-20	-10	0	20	20	10	+S	—
-S	90	20	-10	20	20	-50	-20	60	20	100	—
70	+S	+S	30	60	70	90	60	20	20	20	—
70	80	70	70	60	40	60	30	20	30	40	59
+S	+S	60	100	70	70	70	60	30	30	20	—
60	70	80	90	40	30	40	30	30	20	10	47
70	70	70	70	40	20	20	0	0	-20	-30	34
0	10	20	20	20	20	20	10	20	-10	-20	18
10	30	50	50	20	50	70	20	40	50	50	—
140	160	170	170	130	90	60	60	50	50	50	—
60	70	70	70	60	80	90	80	70	60	50	—
70	60	70	60	60	60	70	90	60	50	30	73
10	10	20	+S	+S	40	50	60	60	50	50	—
100	120	130	140	130	110	70	70	80	90	80	76
130	110	120	120	70	50	50	50	50	40	20	82
—	—	—	—	—	—	—	—	—	—	—	—
—	—	+S	+S	+S	-S	+S	+S	60	70	70	—
10	30	50	100	90	80	60	70	110	100	100	56
100	110	120	140	160	130	100	50	50	20	20	106
100	100	100	100	70	40	30	20	10	20	10	65
—	—	—	70	50	-20	-160	-100	-30	0	40	—
+S	+S	30	40	80	80	30	-20	90	120	+S	—
+S	+S	+S	+S	-50	70	-60	120	+S	+S	+S	—
58	64	65	70	56	50	36	38	48	41	41	
23	23	25	26	26	27	28	28	28	28	26	

July

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	$\pm S$	$+S$	$+S$	50	-40	-60	$+S$	70	150	90	130	70	40
2.	40	-10	-30	-10	--50	0	0	80	120	80	-30	$+S$	140
3.	50	50	50	50	60	80	100	110	160	150	120	110	70
4.	20	20	20	30	50	70	80	110	140	130	90	80	70
5.	130	70	60	80	-S	$\pm S$	$+S$	$+S$	20	-60	150	90	90
6.	40	50	60	50	50	70	80	90	130	140	120	110	120
7.	60	60	70	60	100	100	90	110	—	120	120	110	100
8.	40	30	50	40	50	40	20	—	110	110	110	120	120
9.	30	30	30	40	70	80	—	60	50	30	30	30	-S
10.	30	30	30	30	30	30	30	30	40	50	60	50	-S
11.	0	20	30	30	20	20	70	$+S$	—	120	120	110	130
12.	50	50	60	$+S$	$\pm S$	$\pm S$	$\pm S$	$+S$	50	30	-S	$\pm S$	$\pm S$
13.	30	20	10	10	-10	10	30	40	40	50	40	80	80
14.	0	0	0	30	50	100	90	80	—	110	90	100	90
15.	30	30	40	60	70	100	110	130	140	130	120	100	100
16.	40	30	30	0	40	60	90	110	120	80	50	50	60
17.	-40	-20	-40	-10	10	20	20	70	120	—	60	50	-S
18.	30	10	10	10	0	0	30	50	70	0	-S	80	$\pm S$
19.	20	$+S$	$\pm S$	$\pm S$	10	50	$\pm S$	$\pm S$	$\pm S$	-S	$\pm S$	40	30
20.	30	20	20	30	50	80	80	60	50	50	50	50	50
21.	40	30	40	40	50	100	90	140	—	50	60	40	50
22.	40	30	40	50	50	50	60	90	110	110	120	120	120
23.	30	40	40	40	40	80	80	80	110	120	110	100	90
24.	40	40	40	40	50	50	50	70	80	100	110	110	110
25.	-S	20	-40	-100	-10	-30	-S	-S	110	130	$+S$	90	60
26.	50	50	50	50	50	70	70	60	70	90	50	80	70
27.	30	40	40	30	50	60	60	70	110	100	80	110	120
28.	30	20	0	10	10	20	30	40	—	30	30	50	40
29.	20	20	20	30	50	50	60	70	100	120	140	100	100
30.	30	30	30	30	30	50	70	70	90	100	80	70	60
31.	50	60	60	60	70	70	80	100	110	120	110	70	$+S$
Means	34	30	28	30	34	49	63	80	96	86	86	82	84
Number of days	29	29	29	29	29	29	25	25	25	29	27	29	25

13	14	15	16	17	18	19	20	21	22	23	Daily means
—	—	—	—10	—40	—40	0	—40	50	—40	10	—
60	40	40	40	40	30	30	—20	30	50	50	31
80	80	80	110	110	80	70	60	50	30	20	80
60	70	90	90	80	70	+S	80	+S	+S	+S	—
110	120	130	140	180	220	160	100	80	70	60	—
120	70	120	90	110	120	130	100	90	100	80	93
100	110	110	110	100	80	70	80	80	70	40	89
120	110	110	110	70	40	50	30	30	30	30	68
—S	50	60	70	70	60	40	40	40	30	30	—
+S	+S	+S	+S	+S	+S	+S	—20	—70	—80	—50	—
140	130	120	110	90	70	50	40	50	30	30	—
+S	—50	10	—30	—10	10	+S	—50	—60	80	30	—
90	100	120	120	120	70	50	50	30	30	10	51
80	80	70	50	40	40	40	30	40	40	40	56
120	+S	+S	20	+S	+S	+S	+S	+S	20	20	—
70	50	90	120	+S	+S	70	80	40	—50	—40	—
+S	+S	+S	—S	40	30	40	50	40	20	20	—
—S	90	100	70	10	+S	—	—	—	0	0	—
10	20	30	40	50	40	40	50	40	40	40	—
60	70	60	60	60	50	60	70	80	60	50	54
30	40	50	70	80	90	90	60	50	40	40	60
1°0	120	120	130	110	70	50	50	40	40	30	80
70	70	60	60	50	60	50	40	50	50	50	65
120	200	110	100	50	0	+S	+S	+S	—S	+S	—
60	60	—30	60	40	—10	—30	50	50	50	40	—
70	60	60	70	50	60	60	50	50	40	40	59
80	70	70	80	60	40	50	50	50	40	40	64
70	60	60	70	70	60	60	50	50	20	20	39
100	110	110	110	70	50	30	40	50	40	30	68
70	70	70	90	70	70	70	60	70	60	50	62
+S	+S	+S	70	20	40	50	60	50	60	70	—
84	77	78	76	64	56	55	44	43	33	30	
24	26	26	29	28	27	25	28	27	29	29	

													August
Day Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	70	60	60	60	70	80	80	110	120	110	110	100	110
2.	60	40	50	40	40	50	30	60	80	80	—S	±S	40
3.	40	50	60	70	70	70	70	—	—	—	—	—	—
4.	—	—	—	—	—	—	—	—	—	70	70	100	80
5.	60	50	50	60	70	70	70	100	110	110	110	+S	100
6.	80	80	80	60	60	60	80	90	110	120	120	120	120
7.	40	40	50	40	50	80	60	90	120	120	120	130	±S
8.	30	40	30	60	0	50	+S	110	110	110	110	80	±S
9.	20	20	20	30	30	40	40	60	70	90	100	100	100
10.	30	30	30	30	30	30	30	50	80	80	100	100	100
11.	0	0	0	0	0	30	30	50	60	—	70	100	90
12.	—10	—10	—10	0	0	20	30	(30)	40	70	±S	±S	±S
13.	30	30	40	40	40	40	40	50	60	60	70	60	40
14.	100	90	100	70	60	110	120	110	110	—	—	—	90
15.	40	40	40	40	40	20	30	40	—	—	50	60	50
16.	40	50	80	110	100	130	80	70	40	±S	±S	±S	±S
17.	—30	—30	—10	20	10	50	50	100	90	80	70	60	60
18.	50	40	30	40	30	30	60	50	—	70	100	±S	±S
19.	30	30	40	20	30	90	50	80	100	110	80	30	10
20.	30	50	40	50	50	70	100	90	120	120	110	100	80
21.	60	40	30	40	50	50	100	110	130	110	—	—	—
22.	30	40	40	50	50	50	50	60	—	—	70	70	70
23.	30	30	40	50	70	130	190	190	170	120	150	140	120
24.	50	50	50	50	50	50	90	50	90	120	110	90	50
25.	—S	±S	±S	—S	—	—	—	—	—	—	—	—	—
26.	50	50	70	70	70	90	90	110	—	—	—	—	110
27.	40	40	40	30	30	10	0	—	—	—	—	—	90
28.	30	+S	+S	50	70	110	(110)	—	—	—	120	150	130
29.	30	30	50	90	120	50	70	—	—	150	100	100	110
30.	140	90	70	60	50	40	80	80	60	110	90	110	80
31.	20	20	40	40	40	70	70	70	80	80	70	20	—S
Means	41	39	43	47	48	61	66	83	93	100	95	91	83
Number of days	29	28	28	29	29	29	27	24	21	21	22	20	22

13	14	15	16	17	18	19	20	21	22	23	Daily means
+S	+S	+S	+S	±S	30	+S	+S	+S	50	60	—
+S	+S	-20	-20	-20	-20	-20	-20	40	50	60	—
—	—	—	—	—	—	—	—	—	—	—	—
-10	+S	+S	100	100	90	80	80	80	80	70	—
100	110	110	120	+S	80	70	100	80	80	70	86
120	120	110	120	+S	-S	70	90	70	80	70	—
±S	±S	±S	90	±S	±S	±S	90	90	50	30	—
20	+S	110	110	130	100	90	80	60	40	30	—
100	100	100	90	40	30	30	30	30	30	30	55
100	100	110	70	30	30	20	10	10	10	10	51
80	100	70	30	20	10	20	10	0	10	0	34
50	60	100	100	60	40	60	60	50	50	50	—
50	50	40	0	40	190	250	250	160	140	120	79
80	70	80	70	50	50	40	40	40	30	40	—
50	50	40	50	-S	±S	0	20	40	50	40	—
+S	70	70	90	40	40	10	0	0	0	-10	—
70	70	70	70	40	40	30	-10	±S	±S	50	—
±S	±S	±S	40	0	30	30	-40	-40	-30	-40	—
80	70	80	70	60	70	110	70	60	50	50	61
110	100	90	100	70	60	60	60	70	50	50	76
100	100	90	70	50	50	50	40	40	30	30	—
70	70	70	50	50	50	50	40	40	40	40	—
110	110	120	130	110	90	90	80	70	50	60	98
±S	±S	110	30	-S	-S	0	0	-20	±S	+S	—
—	—	—	—	—	110	+S	0	-50	80	70	—
90	80	60	50	50	30	60	70	70	60	50	—
100	100	110	80	80	100	120	100	30	30	+S	—
110	80	70	80	50	+S	±S	+S	130	60	-50	—
120	70	120	-30	110	130	110	90	60	120	160	—
90	100	80	70	50	70	80	50	50	40	30	74
±S	±S	20	60	50	50	40	30	40	50	30	—
81	85	80	68	55	62	60	51	46	49	43	
22	21	25	28	23	25	26	28	28	28	28	

												September	
Hour GMI Day	0	1	2	3	4	5	6	7	8	9	10	11	12
1.	40	50	50	50	50	60	—	120	—	110	110	120	110
2.	50	40	40	80	+S	+S	+S	170	80	70	60	60	70
3.	50	50	60	70	70	70	110	40	—	—	—	—	70
4.	80	80	50	50	120	—	—	—	—	—	—	—	120
5.	30	30	30	50	50	70	—	—	90	60	70	+S	+S
6.	30	40	50	40	40	60	120	170	160	120	80	100	+S
7.	50	50	60	70	70	120	140	120	110	120	80	30	70
8.	30	40	40	30	30	40	60	—	—	120	100	90	90
9.	70	60	50	40	50	70	70	70	70	60	70	70	60
10.	50	70	90	140	140	+S	+S	170	100	110	100	110	120
11.	80	80	80	90	80	90	90	70	80	70	90	80	100
12.	70	60	70	50	80	40	+S	+S	(±S)	—S	+S	70	80
13.	+S	+S	—10	50	70	70	110	120	110	80	50	100	70
14.	40	50	50	60	60	70	80	90	70	40	40	40	30
15.	20	10	30	50	40	40	40	60	—	50	60	50	50
16.	30	40	40	50	50	50	70	70	110	130	140	120	140
17.	60	70	80	50	80	110	+S	+S	+S	200	170	160	140
18.	90	70	60	50	90	50	70	30	—	—	—	100	130
19.	70	70	50	50	50	50	60	50	70	110	90	100	100
20.	70	50	40	40	40	120	160	180	100	70	90	70	80
21.	40	30	40	40	30	50	40	60	110	100	110	100	100
22.	50	40	40	40	50	30	20	30	—	30	40	30	50
23.	30	50	50	30	30	20	50	60	30	40	50	50	60
24.	10	20	20	10	60	100	120	140	100	100	100	100	90
25.	50	50	60	70	30	30	30	30	—	—	—	—	—
26.	—10	—30	—30	—70	—50	—70	—30	10	—20	30	30	10	30
27.	50	40	30	30	30	30	50	50	50	70	70	90	90
28.	—50	—30	—10	—30	60	70	50	100	90	100	100	100	120
29.	50	60	40	40	90	100	+S	+S	—	150	150	160	130
30.	40	50	60	50	50	80	170	110	50	50	50	60	70
Means	44	44	44	46	57	60	76	88	82	88	84	83	88
Number of days	29	29	30	30	29	27	22	24	19	25	25	26	27

13	14	15	16	17	18	19	20	21	22	23	Daily means
120	110	20	40	40	50	40	30	30	40	30	—
50	+S	90	60	60	40	50	50	50	50	50	—
70	100	+S	80	50	60	60	70	50	50	50	—
160	140	170	+S	+S	60	80	80	50	40	30	—
+S	+S	+S	+S	10	0	30	40	50	50	40	—
90	60	40	50	50	50	60	50	50	40	40	69
70	90	170	170	150	120	120	100	90	60	50	95
80	100	130	130	150	190	210	130	100	70	60	—
60	60	50	50	50	50	50	50	70	50	50	58
110	90	70	70	60	50	50	50	70	80	90	—
100	100	70	70	90	80	80	60	70	70	60	80
70	80	70	70	90	100	70	50	70	30	+S	—
60	70	60	70	70	70	70	70	60	60	60	—
30	40	30	30	40	40	40	30	20	40	20	45
50	50	30	40	50	60	+S	+S	60	30	40	—
140	170	140	110	100	120	90	100	120	90	70	95
140	160	120	90	130	170	150	120	120	120	100	—
130	120	110	80	70	70	70	80	60	60	50	—
90	90	70	80	80	80	80	70	70	60	50	73
80	80	60	60	70	70	50	50	40	30	40	73
120	110	90	80	60	60	60	50	50	50	40	68
60	80	80	90	70	80	80	80	60	30	30	52
40	50	30	-10	10	0	0	10	20	20	20	31
80	70	60	50	40	30	40	50	30	50	40	63
—	10	30	40	30	0	20	0	-30	-10	-20	—
30	50	40	+S	-S	0	30	20	30	30	50	—
100	60	50	40	30	-10	20	0	-60	-40	-40	35
110	100	70	70	70	100	90	50	60	50	30	61
120	110	60	100	100	100	80	60	70	50	40	—
50	40	30	30	30	30	50	50	40	40	40	55
86	85	73	68	66	64	66	57	52	46	42	
28	28	28	27	28	30	29	29	30	30	29	

													October	
Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12	
1.	30	40	60	50	60	50	70	90	70	30	50	70	70	
2.	50	50	60	50	60	80	90	90	80	70	100	100	110	
3.	10	10	20	40	50	50	70	130	170	170	130	120	90	
4.	50	50	50	50	60	60	90	120	80	70	70	70	50	
5.	40	40	40	40	40	50	50	70	80	80	110	(100)	90	
6.	40	30	40	50	40	40	50	50	—	30	30	30	70	
7.	40	30	50	50	40	40	(70)	80	80	60	50	50	50	
8.	60	50	60	60	70	70	110	120	90	80	40	60	80	
9.	50	40	40	40	50	50	50	50	80	70	80	100	80	
10.	40	40	30	30	20	0	30	50	50	40	40	40	30	
11.	40	40	40	50	50	50	70	60	70	60	70	90	100	
12.	80	80	60	60	50	90	110	100	110	110	110	100	100	
13.	120	70	—	—	—	—	—	—	—	—	—	—	—	
14.	—	—	—	—	—	—	—	—	—	—	—	±S	±S	
15.	30	30	40	50	50	50	50	60	—	60	70	90	90	
16.	50	10	+S	40	0	70	-20	-10	30	50	80	100	90	
17.	±S	-S	0	30	60	60	70	50	+S	+S	—	—	—	
18.	—	—	—	—	—	—	—	—	—	—	—	—	—	
19.	—	—	—	—	—	—	—	—	—	—	—	—	—	
20.	—	—	—	—	—	—	—	—	—	—	—	—	—	
21.	—	—	—	—	—	—	—	—	—	—	—	—	—	
22.	—	—	—	—	—	—	—	—	—	—	—	—	70	
23.	60	60	60	50	70	50	50	60	—	100	70	60	70	
24.	30	30	70	70	90	110	110	100	90	90	90	100	110	
25.	100	80	60	50	70	80	100	110	100	90	120	150	150	
26.	110	90	60	60	50	60	60	80	110	120	130	150	170	
27.	100	90	90	70	70	50	80	100	—	150	150	160	180	
28.	110	120	100	90	110	120	130	130	150	130	100	120	170	
29.	120	120	100	140	160	(160)	180	130	100	170	210	160	+S	
30.	+S	+S	120	80	+S	+S	+S	+S	+S	+S	120	100	80	
31.	—	—	—	50	70	+S	+S	+S	+S	+S	+S	120	80	
Means	62	55	57	56	60	61	76	83	91	87	92	97	95	
Number of days	22	22	22	24	23	21	21	22	17	21	22	22	23	

13	14	15	16	17	18	19	20	21	22	23	Daily means
70	60	70	60	70	70	60	50	50	40	40	58
120	140	150	110	80	70	60	50	40	30	10	77
100	90	60	70	50	70	±S	+S	60	70	50	—
50	60	70	80	80	80	80	70	50	50	50	66
90	90	70	90	100	70	80	70	60	50	40	67
100	50	70	100	130	100	70	70	50	30	30	57
50	50	40	50	+S	—S	50	60	50	50	—S	—
70	80	90	90	90	100	90	80	50	50	40	74
80	80	70	80	80	50	50	50	30	30	30	59
40	50	50	50	60	60	60	50	50	40	50	42
100	110	90	70	80	80	80	100	140	130	100	78
100	90	90	90	70	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
±S	±S	—S	110	100	80	100	70	50	40	40	—
80	50	50	50	80	80	60	50	90	60	100	62
90	90	90	100	110	120	120	120	110	40	—S	67
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
120	140	130	150	110	110	120	100	90	70	60	—
80	90	100	70	100	100	100	90	70	30	50	71
110	100	70	100	100	100	100	90	90	100	80	89
180	170	150	150	150	170	170	160	150	100	90	121
170	150	230	220	110	70	70	100	90	120	120	113
190	130	120	130	210	+S	+S	200	100	100	120	—
210	+S	170	190	220	250	200	200	150	120	90	147
+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	—
100	130	+S	+S	+S	+S	+S	+S	+S	80	30	—
130	140	120	50	+S	+S	+S	+S	+S	60	30	—
106	97	98	98	104	96	91	92	77	65	60	
23	22	22	23	21	19	19	20	21	23	21	

													November	
Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11	12	
1.	60	10	-30	-40	-40	-10	-60	-10	-70	-70	-80	-50	-10	
2.	30	-30	-10	-20	-10	20	10	-60	10	-10	20	70	50	
3.	20	30	40	30	50	30	70	30	—	20	20	30	30	
4.	60	70	70	70	70	70	70	80	70	50	40	40	50	
5.	50	60	60	60	60	50	70	70	60	30	30	50	50	
6.	60	40	50	70	70	70	70	60	30	20	20	10	20	
7.	20	40	30	30	20	40	50	70	90	120	120	70	70	
8.	80	80	70	70	100	90	80	80	150	80	70	90	110	
9.	70	70	60	70	80	100	90	70	—	30	60	160	100	
10.	70	+S	130	+S	70	-70	-10	10	20	10	10	30	20	
11.	40	30	+S	+S	+S	110	120	110	90	—	120	50	80	
12.	80	80	50	90	100	100	110	+S	110	80	110	90	120	
13.	0	40	30	40	50	40	30	30	0	0	-40	-40	-40	
14.	-30	-20	-50	-S	-S	+S	-S	-S	-S	+S	-70	60	-S	
15.	120	110	60	80	90	120	110	100	160	170	110	120	120	
16.	70	70	70	50	60	40	60	60	40	0	-20	-20	0	
17.	-20	-40	-40	-20	-30	10	0	50	—	40	10	-70	-10	
18.	-20	50	10	+S	50	50	-90	20	90	—	—	—	—	
19.	—	—	—	—	—	—	—	—	—	80	70	80	80	
20.	30	50	60	70	60	80	50	60	30	30	60	-60	-S	
21.	70	60	50	130	100	110	80	80	+S	100	120	80	50	
22.	40	40	20	50	70	60	0	50	+S	+S	90	70	+S	
23.	60	50	50	40	50	70	100	90	90	120	70	70	80	
24.	40	40	50	100	70	70	70	40	—	—	70	90	140	
25.	10	0	-40	30	140	150	100	130	70	130	170	190	220	
26.	140	140	+S	120	150	160	190	200	200	—	230	230	+S	
27.	-30	0	10	30	20	20	40	30	20	10	20	-50	0	
28.	-140	-110	-10	-120	-20	30	50	80	90	20	50	70	70	
29.	80	20	-50	-110	-70	-50	-50	70	40	20	60	60	90	
30.	70	-10	20	50	0	40	—	—	—	—	—	—	—	
Means	39	35	28	39	50	57	52	62	66	47	55	54	62	
Number of days	29	28	27	25	27	28	27	26	21	23	28	28	24	

13	14	15	16	17	18	19	20	21	22	23	Daily means
10	10	10	30	10	40	70	100	10	10	0	-4
60	30	50	50	50	20	20	20	0	10	20	17
20	20	10	20	20	20	60	70	80	70	70	37
70	70	70	100	90	90	100	90	80	60	70	71
40	40	50	50	50	80	100	80	70	70	70	58
10	10	50	70	70	30	50	60	50	30	20	43
80	70	100	90	80	70	50	50	60	60	90	65
130	100	90	80	90	80	120	110	100	80	80	92
+S	110	30	70	+S	160	100	110	20	100	50	-
20	20	20	60	70	90	100	70	70	70	10	-
120	130	240	210	100	170	170	140	+S	+S	70	-
+S	120	110	110	120	110	90	80	90	50	50	93
-50	-50	-40	-30	-50	-30	-40	-20	-50	-40	20	-10
-S	-S	-S	-S	-S	-70	70	10	0	+S	+S	-
120	110	100	110	110	130	130	110	90	60	60	108
-10	0	-10	0	50	50	40	40	20	-20	-10	26
10	10	60	0	40	10	40	+S	+S	0	-10	-
-	-	-	-	-	-	-	-	-	-	-	-
70	80	60	60	110	130	110	100	90	60	50	-
+S	+S	80	70	50	90	130	100	+S	+S	+S	-
60	100	110	110	120	150	+S	120	80	70	50	91
+S	70	70	80	90	130	160	140	160	120	110	-
80	70	60	70	70	70	60	50	50	0	30	65
70	0	-50	-50	-90	0	40	20	90	120	90	-
230	230	160	+S	+S	150	160	150	120	+S	150	-
+S	180	180	150	160	140	90	60	60	30	10	-
20	50	40	60	80	40	40	-10	-70	-50	20	14
60	110	100	70	70	210	220	180	110	90	90	57
150	110	120	120	40	60	70	150	120	80	50	49
-	-	-	-	0	30	20	50	30	40	50	-
62	69	69	68	62	76	85	80	59	47	50	
22	26	27	26	26	29	28	28	26	25	27	

													December	
Hour GMT	0	1	2	3	4	5	6	7	8	9	10	11	12	
Day														
1.	50	50	70	90	80	90	90	50	—	—30	—10	60	+S	
2.	70	70	70	0	70	60	90	80	—	—	—	50	0	
3.	—50	—100	—160	—140	—	—	—	—	—	20	0	—30	—50	
4.	+S	130	120	90	90	80	(40)	—20	30	30	40	40	80	
5.	70	50	40	90	90	120	70	60	130	150	160	120	130	
6.	80	90	90	100	110	130	130	130	150	120	120	70	130	
7.	—S	100	100	110	110	120	140	200	190	180	170	150	140	
8.	110	110	140	140	100	80	50	40	—	110	100	110	100	
9.	70	100	90	100	100	110	160	+S	150	100	100	100	110	
10.	70	90	90	60	60	70	100	100	160	180	160	120	150	
11.	80	70	90	80	90	90	80	100	100	120	160	130	170	
12.	—130	—120	—130	—130	—170	—140	—	—	—	—	—	—	—	
13.	—50	—50	—100	—20	0	10	—20	0	30	10	40	50	30	
14.	70	80	90	100	90	80	70	80	100	100	120	110	110	
15.	50	20	20	20	—10	—50	—	—	—	—	—	—	—	
16.	—50	—50	—40	—50	—70	—50	—50	—	—	—	—100	—90	—80	
17.	50	40	20	80	120	160	—	—	—	—	—	—	—	
18.	—	—	—	—	—	—	—	—	40	70	30	—10	—60	
19.	80	90	100	110	110	90	110	120	110	120	120	130	180	
20.	190	120	120	70	90	90	70	70	80	80	70	90	70	
21.	200	200	0	—60	30	70	70	50	90	90	110	100	110	
22.	120	100	110	90	100	100	120	120	—	150	130	130	110	
23.	140	160	200	160	150	90	90	70	120	150	170	160	100	
24.	100	60	30	60	80	90	80	60	60	80	100	120	100	
25.	80	80	70	70	60	60	100	100	100	100	120	110	120	
26.	60	30	50	+S	+S	30	30	10	50	0	30	90	50	
27.	—S	—50	30	40	50	40	40	30	30	20	50	50	70	
28.	100	80	100	100	100	90	110	120	100	130	+S	160	160	
29.	+S	+S	+S	+S	+S	+S	+S	+S	—	+S	+S	+S	+S	
30.	+S	+S	180	140	130	90	110	140	100	+S	100	+S	+S	
31.	0	30	50	+S	50	30	90	0	+S	70	90	—20	+S	
Means	62	56	57	56	67	65	80	74	96	90	87	81	85	
Number of days	25	28	29	27	27	28	24	23	20	24	25	26	24	

13	14	15	16	17	18	19	20	21	22	23	Daily means
±S	-S	-200	-60	-110	-120	40	70	130	90	90	—
0	-60	-100	-120	-70	-130	-210	-180	-130	-70	-80	—
-30	-60	-80	-50	-60	-110	-40	140	140	180	110	—
120	(120)	110	110	140	130	90	110	100	110	70	—
100	130	130	90	+S	+S	+S	+S	140	100	90	—
130	40	60	80	80	(+S)	±S	±S	±S	±S	80	—
+S	180	140	180	150	140	180	+S	130	110	120	—
90	100	50	70	70	100	100	100	100	70	80	92
120	120	110	+S	160	150	120	110	100	70	70	110
170	210	130	170	170	160	170	180	140	110	90	130
140	110	120	160	140	80	-20	-130	-40	-70	-100	73
—	—	—	—	0	-50	-40	-60	-40	-80	-50	—
50	90	70	60	60	100	70	110	100	100	70	34
120	+S	150	100	70	70	80	90	90	100	50	92
—	—	—	—	—	-60	-20	-30	-10	-50	-50	—
-110	-140	-140	-190	-160	-50	-40	-70	70	70	60	—
—	—	—	30	-130	-S	±S	+S	±S	±S	±S	—
-100	-60	-70	-30	80	140	140	140	110	130	120	—
230	240	+S	270	+S	+S	+S	+S	+S	+S	+S	—
80	60	80	120	180	170	120	90	130	110	130	103
120	160	170	140	190	170	130	120	160	140	120	112
100	80	120	160	+S	210	200	160	180	150	140	131
70	100	100	160	170	160	200	+S	200	120	100	137
100	120	150	150	160	+S	+S	200	200	100	100	—
100	100	100	120	140	110	110	100	70	60	60	93
60	100	150	+S	210	110	80	±S	±S	+S	30	—
90	100	100	120	130	160	160	140	130	140	100	51
160	180	200	200	160	120	160	+S	+S	+S	+S	—
+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	+S	—
+S	+S	+S	+S	+S	+S	60	70	20	50	30	—
40	50	70	30	+S	+S	-20	+S	-20	-120	-10	—
81	85	69	83	80	77	73	70	88	69	60	—
24	23	25	25	24	23	25	21	25	25	27	—

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	3	0	0	1,2
0	0	0	0	0	0	0	0	0	5	0	0	0,4
0	0	0	0	0	0	0	0	0	0	0	0	0,3
0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	1	49	36	114	49	29	17,1
0	7	1	0	0	0	0	6	186	61	70	56	22,3
0	0	0	0	8	11	0	0	0	0	0	0	2,5
0	0	2	0	2	0	0	0	0	0	0	0	0,5
7	53	57	57	45	0	21	17	23	46	4	37	20,0
13	28	96	61	19	0	15	4	91	49	25	14	23,9
3	53	20	2	11	14	0	15	20	0	0	57	9,9
19	81	14	14	12	22	0	100	34	0	0	0	16,6
102	51	2	7	9	1	21	9	37	40	0	0	23,3
80	35	0	7	0	79	99	11	70	34	0	21	32,3
0	14	16	9	91	38	0	0	0	0	15	0	9,7
0	46	36	10	20	62	1	0	0	0	0	0	13,2
10	24	7	11	34	0	0	0	0	0	0	0	6,9
33	44	8	49	98	0	0	0	0	0	0	0	11,7
1	3	0	0	0	39	0	24	3	0	0	1	3,0
3	0	0	0	0	26	0	39	4	0	0	0	3,1
0	0	0	0	0	0	0	0	0	5	18	0	1,8
0	0	0	0	0	0	0	0	0	60	22	0	3,6
0	2	0	0	0	0	0	1	15	43	49	58	7,0
0	4	0	0	0	0	0	1	11	54	31	17	4,9