

B. 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 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 direction of the deviations are marked by signs. For June, 1989 data are missing on account of instrument trouble,

Table II gives the hourly means of 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).

Both the equipments and methods of measurements 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. Further information is given by P. BENCZE and F. MÁRCZ: "The Geophysical Observatory near Nagycenk. II. Atmospheric electric and ionospheric measurements" Acta Geod. Geoph. Mont. Hung. 16/1981, 353-357.

I. Hourly means of the

January

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		23	20	30	50	40	40	40	30	10	-10	-10	[10]
2.		0	30	70	30	30	30	10	20	30	40	[10]	40
3.		30	60	40	30	50	40	20	20	0	30	-	10
4.		-10	-20	-10	30	100	50	50	(60)	(160)	90	70	60
5.		40	30	40	40	40	60	100	110	100	90	[110]	90
6.		120	130	140	210	190	200	190	210	210	[160]	[100]	90
7.		0	0	0	-10	-10	-10	-20	+5	-80	-110	[-80]	-90
8.		40	40	60	60	40	60	60	60	80	80	[60]	-
9.		40	20	30	40	40	40	60	70	[80]	90	100	90
10.		60	70	60	70	70	60	70	60	40	40	90	100
11.		-10	0	0	20	0	-30	-20	[-10]	-	-40	-50	(-20)
12.		100	80	60	40	30	40	60	60	90	[80]	100	90
13.		10	30	30	-10	0	-50	-60	-10	-10	-20	[-20]	-20
14.		-40	-30	-40	-20	-40	-40	-40	-10	-30	-40	[-50]	-60
15.		-40	-40	-50	-60	-50	-50	-40	-10	-20	-10	[-10]	-20
16.		-20	0	-10	-10	10	-10	-20	-10	-10	70	30	40
17.		-10	-40	30	60	-10	50	10	40	40	20	-	50
18.		0	20	40	40	50	60	40	[80]	[90]	70	60	70
19.		-10	0	-10	-10	20	40	20	30	10	-10	[-20]	-10
20.		-10	-10	-10	-10	-10	0	0	0	0	10	[20]	10
21.		-10	10	40	20	10	20	20	30	30	40	[60]	70
22.		20	10	30	60	60	50	40	30	40	30	[20]	40
23.		-10	10	40	50	70	80	110	110	50	60	60	[70]
24.		30	30	30	30	30	40	50	50	60	80	[70]	-
25.		0	-10	30	0	0	40	40	[40]	(30)	20	30	60
26.		-40	60	130	110	60	80	110	100	140	130	[140]	80
27.		140	110	130	+5	120	130	60	0	30	70	[70]	40
28.		70	40	40	60	40	70	90	100	140	140	[140]	60
29.		110	90	30	40	40	30	110	170	20	20	40	[70]
30.		30	-20	-10	-30	30	10	-50	-80	-30	-80	-20	-10
31.		60	40	40	40	60	60	60	70	60	40	40	-
Means		23	25	33	32	36	38	38	47	42	38	40	38
Number of days		31	31	31	30	31	31	31	29	28	31	29	27

potential gradient for 1988

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
20	10	30	70	70	10	30	40	30	30	20	20	28
60	80	80	80	80	70	80	60	60	60	50	50	48
30	40	40	40	40	50	30	60	40	80	90	0	38
60	40	40	40	40	40	60	70	70	60	60	40	-
100	90	100	120	120	120	100	110	120	90	80	30	85
90	80	60	10	0	30	20	30	60	30	30	20	100
-60	-10	80	40	30	40	40	70	140	160	110	70	13
-	-	-	-	-	-	90	100	100	70	60	60	-
90	100	100	90	100	80	80	80	90	90	70	70	73
[140]	160	150	140	90	90	200	-	180	110	40	20	92
10	30	-20	-30	-10	0	30	40	40	100	130	90	-
100	100	100	80	70	80	80	80	70	30	80	(20)	74
-20	-20	-20	-20	-30	-30	-50	-30	-10	-20	-40	-40	-19
-50	-50	-50	-40	-50	-50	-50	-50	-30	-30	-40	-50	-41
-20	0	-20	-30	-20	-20	0	-10	-10	-10	-10	-10	-23
60	[40]	40	60	20	30	-10	0	50	20	-20	30	16
60	50	50	30	30	30	30	70	40	60	30	0	31
70	60	40	30	40	20	0	10	10	0	-10	-10	37
10	10	30	10	0	-20	-60	-60	-20	-30	-60	-10	-6
0	0	0	0	10	20	10	-10	-10	-20	0	-10	-1
60	30	30	20	-10	20	-10	30	10	30	10	30	25
20	20	20	0	0	10	-30	-30	-60	-30	-60	0	12
60	60	60	70	80	80	50	40	60	60	40	20	58
80	100	80	40	50	50	60	60	-40	-30	-20	0	40
40	60	80	70	100	20	-40	-5	-20	-30	-30	-50	21
40	80	80	90	100	70	40	60	80	+5	220	160	92
60	60	60	40	40	60	90	120	100	90	70	90	77
40	20	30	30	40	60	110	120	80	70	40	70	71
90	90	70	40	60	80	100	90	80	70	40	10	66
40	[40]	40	60	80	100	110	100	90	80	80	60	26
-5	+5	30	+5	60	30	80	70	60	40	40	40	-
44	47	47	41	41	41	41	46	47	41	35	27	
29	29	30	29	30	30	31	29	31	30	31	30	

February

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		30	30	20	30	40	60	70	(90)	(100)	70	60	50
2.		40	40	30	40	0	20	-10	-20	-10	-90	-60	-40
3.		40	40	40	30	40	40	40	70	70	80	[80]	90
4.		50	70	60	60	40	40	70	70	70	60	[80]	80
5.		30	30	40	40	40	50	60	70	70	80	[70]	50
6.		100	80	50	50	60	80	70	50	30	40	60	70
7.		10	20	10	10	20	20	30	40	40	40	-	60
8.		0	-60	-70	-80	0	30	40	(40)	30	40	40	30
9.		10	30	30	40	40	40	50	50	60	60	[60]	60
10.		50	-S	-S	-S	-S	-S	-S	10	30	30	[40]	40
11.		40	40	40	40	50	40	50	70	50	50	60	[70]
12.		30	40	30	-30	0	-10	0	0	-10	-10	[20]	30
13.		40	20	20	10	0	40	-40	-S	70	50	50	40
14.		40	40	40	40	40	50	30	20	30	30	40	50
15.		40	40	30	40	40	40	50	[50]	(60)	60	60	60
16.		0	-10	-20	-40	-30	-20	-70	-80	-70	-60	(-40)	-10
17.		-50	-20	-50	10	60	30	80	80	130	110	[60]	[60]
18.		30	+S	-S	-S	-S	-S	20	40	50	50	[40]	40
19.		20	10	10	20	20	20	+S	80	60	80	[40]	30
20.		30	-S	60	40	40	-S	+S	-S	-S	-S	-S	-S
21.		50	50	50	60	50	60	70	80	70	80	[90]	[90]
22.		40	-10	0	30	30	30	-S	-S	-	40	60	60
23.		20	20	20	30	30	40	50	50	60	70	[80]	90
24.		20	20	30	30	40	40	50	60	60	60	50	[50]
25.		+S	-10	-10	40	30	-S	-S	-S	80	-S	-S	-S
26.		40	40	40	40	50	40	40	60	80	60	[70]	60
27.		-110	-40	-60	-40	90	30	110	[+S]	+S	+S	100	120
28.		30	30	30	20	20	30	10	10	20	30	30	40
29.		70	50	30	40	40	50	40	[50]	(50)	50	50	50
30.													
31.													
Means		23	23	19	23	33	36	38	41	47	43	53	53
Number of days		20	26	27	27	27	25	24	22	23	26	25	27

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
70	70	60	60	60	70	80	80	80	70	50	50	-
-S	[10]	30	50	60	60	70	60	60	60	60	50	22
100	80	80	70	100	100	110	120	120	110	90	70	75
70	80	60	60	70	70	70	60	60	50	40	30	63
70	70	50	40	30	30	30	40	70	70	90	100	55
70	[60]	[60]	50	40	30	20	20	20	30	20	20	50
50	40	40	40	70	50	30	10	10	30	-S	20	31
50	60	70	40	30	30	70	60	80	-S	-S	30	-
60	50	60	60	60	70	70	80	70	50	40	40	52
40	50	50	50	40	10	-S	40	30	40	40	40	-
80	80	70	50	40	80	90	100	110	90	70	40	63
40	40	10	-S	-S	-S	-10	30	30	-S	-70	10	-
50	100	80	[40]	20	40	30	60	30	40	40	30	37
-	40	50	50	50	50	40	50	50	40	40	40	41
60	60	60	50	40	40	40	20	0	0	-10	20	39
-10	-20	-10	-10	-10	-20	-10	-40	-30	-70	-50	-40	-32
70	80	80	80	50	80	80	40	40	40	40	30	50
40	40	40	50	50	60	60	40	20	40	40	40	-
-S	-S	40	-S	-S	40	30	40	-S	60	30	40	-
-S	[20]	30	50	60	70	70	60	80	70	60	60	-
110	130	120	110	80	90	80	90	90	90	100	80	82
60	60	60	60	60	60	80	70	70	60	40	30	-
80	70	80	80	110	60	60	40	50	20	10	30	52
60	40	40	-10	40	+S	-S	-S	-S	-S	-S	-S	-
70	60	80	50	70	60	70	60	60	70	60	50	-
80	50	60	50	40	50	30	50	-S	-S	-S	-60	-
[80]	+S	80	170	10	+S	+S	30	50	50	30	20	-
40	30	80	60	50	60	70	80	90	90	90	80	47
50	60	70	60	60	50	50	70	90	80	70	70	57
62	56	58	56	51	53	54	52	55	51	41	36	
25	27	29	27	27	26	26	28	26	25	25	28	

March

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		70	50	40	40	40	30	40	50	40	50	[40]	40
2.		40	10	0	0	30	30	40	0	10	[60]	+S	50
3.		40	40	40	30	40	30	50	70	60	50	-S	+S
4.		40	50	50	60	60	70	70	90	90	80	[70]	80
5.		40	40	40	50	50	50	50	70	80	50	50	40
6.		60	30	40	40	40	40	40	40	40	40	[40]	-
7.		20	20	30	30	30	50	50	[20]	-	[50]	40	-10
8.		40	30	30	30	40	50	60	50	50	40	[50]	50
9.		10	0	0	0	0	0	10	10	30	40	[40]	40
10.		40	30	30	30	40	40	50	70	100	90	70	60
11.		30	30	20	-10	0	-40	-50	-10	40	[40]	50	40
12.		50	40	40	0	-20	-20	-S	+S	+S	90	50	40
13.		+S	-S	-S	+S	-S	30	10	10	30	50	50	0
14.		50	50	40	40	40	40	30	-	-	+S	50	120
15.		50	50	50	50	40	10	30	30	[70]	70	30	50
16.		50	50	50	50	50	50	60	70	60	50	50	50
17.		-S	+S	30	30	30	40	(50)	50	50	40	-	40
18.		30	60	50	40	60	60	80	80	80	80	[80]	60
19.		40	20	20	30	30	30	40	50	60	60	60	60
20.		30	20	20	30	30	30	40	50	70	-S	-	-S
21.		100	40	30	30	40	30	40	(70)	(40)	20	-20	-S
22.		-90	-40	10	10	-20	-80	0	40	30	0	[0]	40
23.		0	-10	0	-10	20	10	30	30	40	40	40	[40]
24.		70	50	40	40	50	50	50	-S	-S	20	(30)	30
25.		-	-	-	-	-	-	-	-	50	[50]	50	70
26.		40	30	20	50	40	40	50	50	50	60	60	(60)
27.		50	40	40	40	40	40	70	40	40	-	40	40
28.		20	30	20	40	50	50	[50]	(+S)	-S	-S	20	30
29.		10	10	10	20	20	20	30	50	50	50	[50]	40
30.		20	30	30	20	20	20	30	40	[30]	30	20	20
31.		30	30	30	30	-20	10	10	0	-S	-S	50	50
Means		35	30	28	29	30	27	36	42	52	50	43	45
Number of days		28	28	29	29	29	30	28	25	24	26	26	26

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
40	40	50	50	40	40	60	50	50	50	50	30	45
50	50	50	40	60	70	70	70	30	30	-S	30	37
50	50	60	70	70	50	50	50	50	60	50	40	-
110	90	80	80	60	60	60	90	80	70	50	50	70
30	10	-60	[-S]	-S	-S	-S	-S	+S	170	100	20	-
50	60	50	60	50	50	60	50	60	30	20	30	44
40	40	-S	-S	40	50	50	70	70	60	60	50	-
50	60	70	40	60	50	50	(50)	40	40	30	20	45
30	20	20	40	40	40	30	40	50	50	40	40	26
[70]	70	50	50	50	50	50	70	70	70	60	40	56
50	40	30	-S	-S	+S	50	70	80	70	60	50	-
40	[-60]	-S	-S	-S	80	+S	10	40	50	40	40	-
0	-	-S	-20	10	+S	-100	10	30	50	50	50	-
150	80	150	120	80	50	50	40	20	+S	+S	70	-
30	10	30	50	50	50	40	50	50	50	50	60	44
(50)	-S	0	-10	30	40	50	50	50	50	50	40	-
40	40	40	50	40	40	50	30	50	60	40	10	-
0	30	50	-S	-S	-S	10	30	40	40	30	40	-
70	[80]	80	80	80	70	70	80	70	60	50	50	56
-S	50	40	-S	-10	-S	-S	+S	80	130	130	150	-
60	70	60	20	-90	-70	70	70	90	90	30	-10	-
30	40	40	40	40	20	10	10	10	10	0	0	6
[40]	40	40	30	40	40	30	-S	70	50	30	30	29
30	-	-	-	-	-	-	-	-	-	-	-	-
30	50	70	0	40	30	70	70	70	80	70	70	-
(30)	40	20	50	70	30	50	40	40	60	50	40	45
40	30	30	40	50	60	60	60	70	50	50	30	46
40	30	30	20	30	30	30	20	20	30	20	10	-
40	50	+S	+S	+S	50	50	50	40	40	30	30	-
20	20	30	30	40	40	30	40	40	30	30	30	29
80	-S	-S	-	-	-	-	-	-	-	-	-	-
47	42	44	42	40	43	42	47	52	58	47	39	
28	27	25	22	24	24	26	25	28	28	27	29	

April

Hour Day	0	1	2	3	4	5	6	7	8	9	10	11
1.	-	-	-	-	-	-	-	-	40	[40]	50	40
2.	0	0	0	10	30	30	50	50	40	40	40	[40]
3.	20	30	20	30	40	40	40	60	70	[70]	-	80
4.	30	30	30	30	30	40	40	40	30	[40]	-	30
5.	20	20	10	0	0	10	[20]	0	10	10	30	-10
6.	10	-10	10	30	40	30	30	50	[50]	50	60	50
7.	50	60	50	40	30	0	40	40	30	[20]	0	10
8.	40	30	-10	0	30	30	50	40	40	[40]	40	50
9.	-	-	-	-	-	-	-	-	-	-	[40]	60
10.	+S	+S	-80	-80	-50	(-30)	30	30	40	-	50	50
11.	40	30	40	40	30	40	(40)	[50]	60	60	60	60
12.	40	40	40	50	50	50	50	[50]	40	80	80	70
13.	40	30	0	20	-10	-30	0	10	[20]	20	40	40
14.	40	40	50	40	50	50	50	50	40	30	[30]	30
15.	40	40	40	40	40	50	70	60	[70]	60	50	60
16.	60	50	50	40	40	50	50	40	40	50	[70]	80
17.	20	20	20	20	20	30	30	40	40	-	30	30
18.	30	30	30	30	30	40	[50]	-	50	50	50	50
19.	10	10	10	10	10	20	40	40	[60]	60	70	70
20.	20	20	20	30	30	40	40	40	40	30	[30]	30
21.	-	-	-	-	-	-	50	40	40	[10]	0	40
22.	40	30	30	20	30	40	40	50	[50]	40	30	40
23.	20	20	30	30	30	20	-10	-10	0	40	50	[40]
24.	70	70	70	60	80	70	90	90	80	80	-	70
25.	40	40	40	40	40	50	(70)	(50)	50	50	40	40
26.	30	20	30	20	30	40	50	40	40	40	40	50
27.	20	10	20	20	30	30	30	30	40	30	[40]	40
28.	40	30	30	20	30	40	50	40	[30]	40	50	40
29.	30	30	20	10	20	30	30	40	[40]	40	40	50
30.	10	0	10	30	30	40	50	[40]	40	20	20	10
31.												
Means	31	28	23	23	28	32	41	40	42	42	42	45
Number of days	26	26	27	27	27	26	26	26	29	27	27	30

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
30	+S	-S	+S	20	40	30	40	30	20	20	10	-
30	30	30	20	40	40	40	40	40	30	30	30	30
80	70	50	30	30	40	50	40	40	40	40	30	45
40	30	20	20	30	30	20	30	30	20	30	30	30
30	40	30	20	10	30	-20	0	-10	0	0	10	11
60	60	50	20	40	40	50	40	30	40	40	40	38
30	40	40	40	40	40	30	20	30	30	30	40	33
+S	-	-	-	-	-	-	-	-	-	-	-	-
70	70	+S	70	60	60	50	50	60	40	10	30	-
50	50	50	50	50	50	50	50	40	40	40	40	-
50	50	50	50	50	50	50	50	60	50	50	50	49
60	60	50	50	40	40	40	50	50	50	50	50	51
30	30	30	-40	-40	-S	-50	-10	20	-50	30	30	7
40	40	30	30	40	50	50	50	70	50	40	30	43
60	60	50	70	80	90	90	50	50	50	90	60	59
80	90	70	60	50	60	50	40	40	20	20	20	51
40	50	40	40	40	40	40	50	50	50	40	40	36
60	60	60	60	70	40	40	50	40	50	30	20	44
70	70	80	60	50	40	40	40	30	30	20	20	40
20	20	20	-	-	-	-	-	-	-	-	-	-
50	50	50	50	60	60	60	50	50	50	50	50	-
30	70	+S	+S	30	40	+S	30	40	40	40	30	-
30	40	50	40	70	50	60	70	90	80	70	70	41
70	80	80	90	90	90	70	60	50	50	40	40	71
40	40	40	40	40	30	30	40	30	30	40	30	-
50	50	50	40	40	30	40	40	40	30	30	20	37
40	40	40	50	40	50	40	50	50	40	50	40	36
30	30	30	10	20	30	30	20	30	10	30	30	31
40	50	50	60	50	50	50	50	50	50	30	30	39
10	30	(30)	-	-	-	-	-	-	-	-	-	-
46	50	46	41	42	47	40	40	42	35	37	34	
29	28	25	25	27	26	26	27	27	27	27	27	

May

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		-	-	-	-	-	-	-	-	-	-	-	-
2.		20	20	30	0	-10	0	30	(40)	50	40	30	30
3.		30	20	30	30	30	40	40	(40)	-	[30]	40	40
4.		40	30	30	30	30	40	50	[40]	[50]	40	40	40
5.		-10	-20	-10	0	10	20	30	30	40	[50]	50	50
6.		20	20	30	30	30	40	40	40	[40]	40	-S	-S
7.		0	0	10	10	30	30	50	40	40	40	[40]	40
8.		30	40	30	30	30	20	10	20	30	30	-	20
9.		20	20	20	10	20	30	-	[40]	40	40	40	40
10.		30	30	30	40	40	50	60	60	60	60	60	70
11.		40	40	40	40	40	50	50	50	[50]	50	50	50
12.		20	20	20	20	30	30	40	40	[40]	[40]	40	40
13.		20	20	10	10	10	20	30	30	[20]	30	30	20
14.		10	10	10	10	20	30	40	40	40	50	40	[40]
15.		-	-	-	-	-	-	-	[40]	50	40	30	30
16.		20	10	20	10	10	20	[30]	-	[40]	40	40	40
17.		10	10	10	30	30	30	30	40	[40]	60	40	40
18.		-	-	-	-	-	-	-	20	30	[10]	30	-
19.		-	-	-	-	-	-	-	-	20	(20)	-	-
20.		-	-	-	-	-	-	20	30	30	30	40	[20]
21.		-20	-10	-10	-10	10	10	0	-20	30	10	10	[30]
22.		20	30	30	30	30	40	40	-	40	40	40	30
23.		30	30	30	30	20	20	[30]	-	30	30	40	40
24.		30	30	20	20	20	40	40	[50]	50	40	50	50
25.		10	10	10	10	10	40	40	[60]	60	70	60	50
26.		40	60	70	70	80	60	60	[60]	50	50	40	40
27.		-	-	-	-	-	-	-	-	10	-50	50	-S
28.		10	(20)	(10)	-	-	-	10	20	[20]	20	10	10
29.		20	10	0	10	10	20	-	10	20	20	20	20
30.		-	-	-	-	-	-	[10]	[30]	20	20	10	10
31.		20	20	30	10	10	20	+S	[30]	10	10	10	30
Means		19	20	21	20	23	30	34	35	36	34	36	35
Number of days		24	23	23	23	23	23	23	23	29	29	27	26

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
-	-	-	-	30	30	40	30	30	10	10	20	-
20	30	30	30	40	40	50	50	40	30	30	20	28
40	30	40	40	40	50	+S	-S	30	40	50	50	-
30	30	30	30	20	30	40	30	20	+S	+S	50	-
50	50	40	40	30	30	30	30	30	30	20	30	27
30	50	60	50	60	70	60	40	40	30	20	0	-
30	30	40	40	40	30	30	30	20	20	20	30	29
30	30	30	30	30	30	30	30	20	20	30	20	27
40	40	50	50	50	50	50	40	40	30	30	30	36
70	70	70	70	60	50	40	50	30	30	40	30	50
50	50	50	50	40	40	40	40	30	30	30	20	43
40	30	30	30	20	30	30	30	40	40	30	20	31
20	20	20	30	30	20	30	30	30	30	20	20	23
40	30	30	30	20	30	30	30	30	-	-	-	-
30	30	30	30	30	50	40	40	40	30	30	30	-
40	40	40	40	40	40	30	30	10	20	20	10	28
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
+S	-S	+S	-40	10	10	30	40	0	100	40	-10	-
20	10	10	-10	-10	0	0	-10	0	10	0	10	3
40	40	40	40	40	40	40	50	40	40	40	30	37
40	40	40	40	50	50	40	40	40	40	40	40	36
40	50	50	50	50	50	60	50	40	40	30	10	40
50	50	60	60	50	50	40	40	70	70	20	30	43
40	70	+S	-50	-	-	-	-	-	-	-	-	-
-	-40	+S	+S	20	20	20	-10	20	30	10	10	-
10	10	20	-30	+S	30	40	10	20	20	30	30	-
30	-	-	-	-	-	-	-	-	-	-	-	-
10	10	10	10	10	20	20	10	0	0	20	20	-
40	40	30	20	30	30	40	40	40	50	40	40	28
35	34	37	27	33	35	36	32	29	33	27	24	
25	25	23	25	25	26	25	25	26	24	24	25	

June

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		30	10	⁺ S	⁺ S	+S	-S	[-S]	0	80	110	120	70
2.		30	30	20	10	10	10	10	20	20	[20]	⁺ S	10
3.		-	-	-	-	-	-	-	-	-	[40]	40	30
4.		20	20	20	20	20	20	[20]	30	(30)	30	30	30
5.		30	30	30	30	30	20	20	30	-	[40]	30	30
6.		0	0	10	10	-30	-60	-10	20	80	30	90	60
7.		-	-	-	-	-	-	-	-	+S	40	40	50
8.		-	-	-	-	-	-	-	[30]	40	40	40	30
9.		30	30	40	20	30	40	40	[50]	60	60	60	50
10.		20	30	20	30	30	40	40	[40]	40	50	50	40
11.		-10	+S	⁺ S	10	20	30	40	80	90	-	-	⁺ S
12.		30	30	40	30	40	40	-	[30]	40	30	30	70
13.		30	40	40	40	50	70	80	-	[70]	60	50	40
14.		10	0	0	10	10	30	30	[40]	40	50	40	40
15.		10	10	10	10	10	20	30	[40]	40	40	40	40
16.		10	0	10	-S	-S	+S	-S	[130]	120	110	70	-S
17.		30	50	50	50	50	60	60	[70]	60	50	50	40
18.		40	40	30	40	50	50	[50]	50	50	40	40	40
19.		20	20	30	30	40	40	-	40	50	50	40	50
20.		10	10	10	10	10	20	[20]	[40]	40	50	40	50
21.		30	30	10	10	20	30	[40]	[50]	50	50	50	50
22.		30	40	30	30	40	40	[50]	[40]	40	30	30	30
23.		10	10	10	10	-20	30	-40	[30]	40	+S	40	30
24.		40	40	40	40	40	40	[50]	50	40	40	30	30
25.		30	30	30	20	10	10	10	[30]	40	30	20	20
26.		30	10	20	20	40	30	-	30	40	40	40	30
27.		-	-	-	-	-	-	-	⁺ S	(20)	30	30	(30)
28.		30	20	30	40	40	30	40	40	40	[30]	(40)	(30)
29.		-	-	-	-	-	30	40	40	40	[40]	40	40
30.		10	10	20	30	40	40	40	[40]	40	40	30	30
31.													
Means		22	23	24	24	25	30	31	42	52	45	45	40
Number of days		25	24	23	23	23	24	21	26	25	28	27	26

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
50	40	60	50	50	50	40	40	30	30	40	40	-
10	-	-	-	-	-	-	-	-	-	-	-	-
40	40	50	40	40	30	40	40	40	30	20	20	-
30	40	40	40	30	30	40	20	10	10	20	20	26
60	40	30	10	30	10	10	30	-10	30	20	10	26
80	50	50	40	40	-S	-	-	-	-	-	-	-
50	40	40	50	40	-	-	-	-	-	-	-	-
40	40	40	40	40	40	40	30	30	20	30	30	-
30	40	40	40	30	30	40	30	30	30	20	10	37
+S	-S	-S	60	30	10	20	30	30	20	10	-10	-
20	40	40	40	40	40	30	40	40	20	20	20	-
20	50	50	40	30	30	20	10	0	0	20	20	30
30	30	40	40	40	40	50	40	30	20	10	10	41
30	30	20	30	20	30	20	20	10	10	10	10	23
50	40	40	-50	-10	0	30	50	30	20	20	10	22
-S	60	50	30	50	50	40	20	50	40	40	30	-
40	40	40	40	50	40	50	30	30	40	40	40	46
40	40	30	30	40	40	40	30	30	20	30	20	38
30	10	+S	90	40	40	50	50	50	50	20	10	39
50	40	40	30	40	30	30	30	40	20	20	20	29
50	50	50	50	60	50	50	40	40	40	40	30	40
30	30	30	30	20	20	30	20	20	10	10	10	29
-S	-S	-S	30	50	40	40	50	50	40	40	30	-
20	30	30	40	40	50	50	40	40	30	10	20	37
20	30	40	50	30	20	30	10	20	10	10	20	24
-	-	-	-	-	-	-	-	-	-	-	-	-
30	40	20	30	30	30	40	40	40	30	30	40	-
30	30	+S	-S	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	40	30	30	20	10	20	-
20	30	30	30	40	40	40	40	40	30	20	30	32
37	38	39	37	36	33	36	32	30	25	22	20	
26	25	23	26	26	24	25	25	25	25	25	25	

July

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		40	40	50	40	40	40	(50)	[40]	30	40	50	30
2.		30	30	40	40	40	30	10	-	50	40	20	0
3.		30	50	20	10	20	30	30	[30]	30	30	30	30
4.		40	40	40	30	40	50	[50]	[40]	40	40	40	30
5.		40	40	40	40	40	40	40	40	40	[40]	30	+S
6.		40	30	30	30	30	30	30	(30)	-	(20)	20	-S
7.		20	30	30	30	30	40	40	[50]	40	40	50	60
8.		10	10	30	30	40	50	70	[60]	70	70	80	60
9.		-S	-S	-S	-S	30	30	[110]	60	50	30	40	30
10.		30	30	20	40	40	40	40	-	50	70	50	50
11.		20	20	30	30	30	50	[50]	[40]	40	40	40	40
12.		30	20	20	20	30	40	40	40	40	30	[30]	+S
13.		30	20	30	30	40	70	80	[80]	80	70	60	50
14.		30	40	30	20	30	30	30	[30]	50	+S	-S	+S
15.		10	10	10	0	0	10	30	130	80	70	+S	-S
16.		40	40	30	30	40	50	[40]	[40]	40	40	30	30
17.		30	30	30	30	20	30	[30]	-	30	30	20	30
18.		20	80	40	20	30	40	[80]	-	40	40	40	-S
19.		30	30	20	30	40	30	[60]	30	40	(50)	50	40
20.		30	20	20	30	40	30	40	[50]	[50]	50	50	50
21.		30	20	30	20	20	40	[40]	[40]	40	40	40	40
22.		30	20	20	30	30	50	30	[40]	40	50	50	40
23.		20	20	30	20	20	30	30	40	30	[40]	[40]	40
24.		30	30	40	30	30	20	20	-	20	40	40	30
25.		40	30	30	40	40	40	40	-	[50]	50	50	60
26.		30	20	30	40	40	30	50	[60]	60	60	50	40
27.		30	20	20	10	20	40	40	40	[40]	40	50	50
28.		60	50	50	40	40	[40]	50	70	60	60	60	50
29.		30	20	30	30	30	30	40	-40[-160]	-50	-10	10	
30.		-30	-40	-20	30	60	50	70	[60]	70	60	50	40
31.		30	20	20	20	30	30	30	-	40	40	30	20
Means		28	27	28	28	33	37	45	47	39	43	41	38
Number of days		30	30	30	30	31	31	30	23	30	28	29	25

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
40	10	+S	⁺ S	10	30	30	40	40	40	40	30	-
40	50	40	40	50	50	40	40	40	40	40	40	37
40	40	40	40	40	50	50	0	30	30	40	40	33
40	40	30	30	30	40	50	60	60	50	40	50	42
30	30	30	10	20	30	30	30	30	30	30	30	33
-80	10	20	30	40	40	40	40	40	30	30	20	-
60	60	50	-30	-S	-S	+S	-S	-S	-S	30	0	-
80	40	50	40	40	40	50	40	40	40	30	-S	47
20	20	30	10	10	40	50	40	40	30	30	30	-
60	60	70	60	70	80	70	50	50	30	30	20	48
40	40	50	40	40	40	30	30	30	40	30	30	36
-S	+S	60	100	80	100	80	70	60	60	50	30	-
40	30	20	20	30	20	40	30	30	30	30	20	41
80	-S	-S	-S	-S	40	30	40	10	10	10	10	-
80	30	30	30	30	10	20	30	50	60	50	50	-
20	20	30	30	30	30	40	40	30	40	40	30	35
30	30	30	30	30	40	40	40	40	30	10	20	30
30	30	30	-S	-S	-S	30	30	30	30	20	30	-
40	30	30	30	30	40	50	40	30	30	40	30	36
50	50	40	40	40	40	40	40	40	40	30	30	39
40	30	30	30	30	30	30	40	40	40	40	30	34
40	30	30	30	40	40	40	40	30	30	30	20	35
40	-	-	-	30	40	40	40	30	40	40	30	-
30	40	40	30	30	40	50	50	30	10	10	30	31
60	50	50	50	60	50	50	50	50	50	40	40	47
40	30	30	30	30	20	30	30	30	30	20	20	35
40	40	30	30	30	20	-S	-S	-S	40	20	50	-
40	50	50	40	40	40	40	40	30	30	20	30	45
-	-	30	40	40	40	40	40	30	0	+S	-S	-
40	40	40	40	50	50	50	60	60	40	30	30	39
30	20	10	20	30	30	30	30	40	30	30	30	28
39	35	36	33	37	40	42	40	38	34	31	29	
29	27	28	27	28	29	29	29	29	30	30	29	

August

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		30	20	20	20	30	40	[40]	-	(30)	40	20	10
2.		30	20	10	10	30	40	50	50	40	[50]	50	40
3.		40	70	30	20	30	20	50	+S	[50]	40	30	30
4.		50	40	50	+S	-S	-S	-S	+S	40	-	60	-S
5.		-S	-S	-20	40	-10	30	10	[50]	50	70	50	50
6.		20	20	20	20	20	20	40	[50]	50	50	50	50
7.		40	40	30	30	40	30	50	50	50	[50]	40	50
8.		10	0	0	0	0	30	[30]	-	50	50	30	30
9.		40	20	+S	10	10	20	40	[40]	40	30	30	+S
10.		30	30	20	20	30	[30]	-	[30]	40	30	40	50
11.		20	20	20	20	30	20	30	[40]	[50]	40	40	40
12.		40	30	30	30	20	30	40	[40]	50	50	40	40
13.		30	30	20	20	20	30	[40]	30	40	40	40	40
14.		30	30	30	20	30	20	30	[20]	50	50	40	40
15.		20	20	20	10	20	30	[30]	-	[30]	30	40	50
16.		50	40	30	30	40	40	50	40	30	30	30	30
17.		40	30	30	30	30	50	[40]	[30]	60	60	60	50
18.		50	50	50	50	50	40	50	[60]	70	80	90	80
19.		40	40	30	30	30	40	40	[40]	-30	-20	10	20
20.		60	50	50	50	50	[60]	-	-	-	-	-	10
21.		-S	0	-30	+S	-S	-S	40	-	+S	+S	-S	0
22.		50	+S	20	-S	-S	-S	[0]	[20]	70	30	100	60
23.		70	80	40	30	40	10	-50	[10]	40	-S	-S	-S
24.		50	60	50	50	40	50	60	[100]	100	110	90	80
25.		50	50	50	40	40	50	50	50	50	-	50	50
26.		20	20	30	30	30	50	50	[50]	50	50	40	40
27.		20	20	30	20	30	40	40	[50]	40	40	30	30
28.		30	20	20	30	40	40	60	[50]	[60]	70	60	50
29.		40	30	30	30	20	30	[40]	-	80	80	70	70
30.		40	40	50	40	40	50	40	[50]	60	80	80	70
31.		30	20	20	20	10	20	20	30	30	[30]	40	30
Means		37	32	26	27	28	33	36	43	48	49	48	43
Number of days		29	29	30	28	28	29	28	23	28	26	28	28

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
-20	-30	-20	-10	10	20	20	30	20	30	20	20	-
30	40	30	20	+S	-S	90	50	-S	-S	70	50	-
20	-S	-S	-S	-S	20	50	30	20	50	+S	50	-
-S	70	50	20	+S	20	20	30	10	30	10	-S	-
40	30	30	30	40	40	40	50	50	50	40	40	-
50	40	40	40	30	30	40	50	50	50	50	50	39
50	60	70	50	50	50	50	40	[30]	20	10	20	42
30	20	30	20	20	20	-10	-S	30	20	20	20	21
-S	-S	-	-	[70]	40	30	30	50	40	40	30	-
50	40	30	30	20	20	40	30	30	30	30	20	31
50	40	30	30	30	40	40	60	+S	-S	-S	60	-
40	30	30	30	30	40	40	40	40	40	50	40	37
40	50	40	+S	+S	+S	40	40	50	50	40	40	-
30	30	30	30	30	30	40	40	40	40	30	30	33
-S	-S	50	30	30	40	50	-S	-S	40	50	50	-
[50]	-S	-S	30	+S	-S	-S	-S	+S	50	50	40	-
50	50	50	60	70	80	70	50	50	50	50	50	50
90	90	80	80	70	60	50	50	50	50	40	40	61
30	30	30	40	50	60	60	70	80	70	60	50	38
10	10	20	20	20	20	20	40	40	40	40	-S	-
30	40	50	50	50	[50]	50	40	60	60	50	40	-
70	40	50	40	50	50	60	60	70	70	70	-	-
-S	+S	+S	20	0	30	30	10	20	30	50	50	-
90	90	60	40	30	30	40	40	30	40	60	50	60
70	+S	+S	-S	-S	30	40	40	40	40	30	10	-
40	40	50	60	60	50	50	60	40	40	50	40	43
30	40	40	40	50	40	40	40	40	30	30	30	35
50	40	40	50	40	40	40	40	40	30	30	30	42
70	70	50	30	40	40	50	40	40	40	50	30	47
60	70	60	70	60	40	30	20	30	40	30	30	49
30	20	30	20	20	30	30	30	20	20	30	30	25
44	42	40	36	39	38	41	41	40	41	41	37	
27	25	26	27	25	28	30	28	27	29	29	28	

September

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		30	30	30	30	40	40	60	50	40	[30]	30	30
2.		20	10	10	20	10	10	10	[10]	20	20	20	30
3.		60	50	50	40	40	50	70	70	60	50	50	[40]
4.		50	50	50	50	40	50	50	[40]	-S	30	50	50
5.		+S	50	50	40	40	-S	-S	-	-S	-S	100	50
6.		40	30	10	20	30	30	60	70	100	80	70	60
7.		50	50	50	50	40	50	50	[40]	50	40	60	50
8.		40	40	40	40	40	40	50	50	[50]	[60]	50	50
9.		30	30	30	30	40	50	60	70	70	[80]	80	80
10.		40	40	30	30	30	40	50	60	70	[80]	80	70
11.		20	20	30	30	40	40	50	50	[50]	40	30	30
12.		20	20	20	30	30	30	40	-	50	10	30	50
13.		-S	-S	-50	-S	-S	-S	-S	+S	-S	-S	-S	-S
14.		30	0	20	20	-80	+S	0	[30]	90	+S	+S	90
15.		40	30	30	30	30	40	30	[30]	[50]	40	40	40
16.		-S	-S	-S	-S	30	+S	20	-S	[60]	-30	-S	-S
17.		30	30	40	40	40	70	10	10	80	[60]	30	30
18.		50	50	50	40	30	[30]	40	50	30	50	30	10
19.		30	20	20	30	30	20	[30]	-	-	50	60	50
20.		40	40	40	40	40	50	50	50	50	[50]	50	60
21.		20	10	20	20	20	20	30	40	[40]	30	30	30
22.		20	30	20	30	30	30	30	[40]	[40]	40	40	30
23.		20	20	0	0	10	0	0	[10]	20	20	20	20
24.		50	50	40	50	50	50	60	50	40	[30]	30	20
25.		30	40	50	50	50	40	40	30	30	20	[0]	40
26.		30	30	30	40	40	40	50	[50]	-	-	30	30
27.		40	40	40	40	40	30	40	[50]	30	30	40	40
28.		30	30	30	40	60	90	170	120	70	30	30	50
29.		50	40	40	50	50	50	60	70	[60]	50	40	40
30.		40	40	40	40	80	100	110	80	[60]	40	40	40
31.													
Means		35	33	30	35	33	42	47	49	52	40	43	43
Number of days		27	28	29	28	29	26	28	25	25	26	27	28

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
20	20	20	20	20	30	30	20	30	40	30	30	31
20	30	-S	-S	-S	-S	+S	-S	+S	50	30	30	-
50	40	50	40	50	40	40	40	50	40	50	50	49
50	40	50	50	50	50	50	40	40	40	50	-S	46
40	50	40	40	40	30	30	+S	20	20	20	40	-
70	60	60	40	40	40	30	50	60	50	50	40	50
-S	10	50	50	50	40	60	40	30	40	40	40	45
50	50	50	50	60	70	60	60	50	40	40	40	49
80	80	90	80	70	60	60	50	60	50	40	40	59
60	50	40	30	30	40	40	40	30	30	30	30	45
30	30	30	20	20	30	30	20	20	20	30	30	31
40	20	30	40	10	20	10	30	30	30	-S	-S	-
-S	-S	-S	-S	10	80	50	40	20	30	30	30	-
30	40	70	50	40	50	50	40	40	50	50	40	-
40	50	50	50	40	-S	-S	+S	30	40	30	20	-
10	110	60	70	50	50	30	50	60	40	50	30	-
0	10	-30	-10	10	20	20	20	20	30	40	50	27
20	30	20	30	40	30	30	20	10	20	10	20	31
50	40	50	50	50	60	50	50	40	40	40	40	-
60	60	60	50	50	50	50	50	50	40	40	20	48
20	20	30	30	20	20	30	30	30	30	30	20	26
30	30	30	30	30	40	30	30	30	20	20	30	30
20	20	10	10	20	20	40	50	40	50	50	40	21
20	20	20	20	20	10	10	20	20	20	30	30	32
20	10	50	60	50	50	50	50	50	50	40	30	39
10	10	10	10	0	10	10	30	30	60	50	50	-
[40]	-	20	30	30	30	20	10	20	20	20	20	31
50	40	30	20	30	30	40	40	40	30	30	30	48
40	50	40	30	40	40	30	30	50	40	30	40	44
50	50	60	60	50	40	30	20	20	20	10	10	47
36	38	40	38	35	38	36	36	35	36	35	33	
28	28	28	28	29	28	28	27	29	30	29	28	

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		10	10	10	10	10	10	10	[20]	30	10	0	20
2.		-10	0	-10	0	10	0	10	[20]	[40]	60	30	30
3.		10	20	[20]	-	-	-	-	[40]	-	50	70	50
4.		20	20	20	10	20	10	10	10	30	30	[30]	30
5.		20	20	20	20	20	10	0	-10	0	20	[30]	40
6.		0	40	60	60	50	-30	+S	-S	-S	20	0	0
7.		10	20	20	0	20	20	20	[30]	40	30	[50]	40
8.		-S	-S	-S	-S	-S	-S	20	50	30	30	20	[30]
9.		40	30	30	30	20	30	40	50	50	60	[60]	70
10.		50	40	40	40	40	40	50	[50]	[40]	40	50	30
11.		40	30	30	20	10	10	40	50	30	30	[20]	20
12.		20	30	30	30	40	50	40	[50]	[30]	20	30	40
13.		40	30	40	30	40	20	50	30	20	30	[30]	30
14.		-20	-30	20	10	-10	-30	-20	10	[20]	20	60	50
15.		30	20	30	20	10	20	30	10	[40]	40	40	40
16.		30	40	40	40	50	60	70	80	50	[40]	[40]	40
17.		0	10	10	30	30	30	30	-	-	50	50	50
18.		10	40	50	60	60	50	80	100	[80]	80	70	60
19.		70	60	50	50	50	50	50	90	[50]	30	0	50
20.		-10	-30	-20	-20	-20	-20	-30	-40	-40	-30	-40	-40
21.		-20	-10	0	-10	-20	0	40	90	[70]	[120]	100	70
22.		40	40	40	50	40	50	50	50	40	30	[40]	30
23.		30	30	20	20	30	20	0	-10	-10	-10	[-10]	20
24.		70	70	40	60	40	40	60	30	[20]	[30]	30	30
25.		20	10	10	-10	20	30	40	50	-	[50]	40	40
26.		70	80	80	60	60	60	80	60	[60]	[40]	30	30
27.		50	40	30	40	30	40	10	0	-10	10	[50]	60
28.		10	20	20	20	20	40	50	50	[50]	80	70	30
29.		-	-	-	-	-	-	-	-	-	-	-	-
30.		-	-	-	-	-	-	-	-	-	-	-	-
31.		30	40	40	30	30	40	40	70	-	80	70	70
Means		24	26	28	26	26	24	32	38	32	38	37	37
Number of days		28	28	28	27	27	27	27	27	24	29	29	29

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
20	20	10	20	10	20	30	30	10	10	20	0	15
20	30	40	30	30	30	40	30	30	20	30	20	22
50	40	30	20	20	30	40	40	20	30	30	30	-
30	30	30	30	30	40	30	20	20	20	30	30	24
30	30	20	30	20	20	-40	-50	-30	-30	-50	-30	5
30	40	50	50	60	50	50	60	60	60	60	50	-
10	-10	0	-30	-30	-S	-S	-S	-S	-S	-S	-S	-
30	30	40	30	40	50	50	70	60	50	50	50	-
70	70	60	60	60	60	60	50	60	60	50	50	51
50	70	80	70	80	80	60	60	60	90	80	50	56
20	20	10	10	30	20	30	40	20	30	30	10	25
30	50	50	30	10	50	70	50	60	80	50	40	41
40	30	30	40	70	70	60	40	20	10	20	0	34
50	50	50	40	30	30	30	20	20	30	30	30	20
50	40	50	40	40	40	40	40	40	40	40	40	35
50	50	40	40	40	40	40	30	10	10	0	0	39
60	50	+S	-S	50	40	50	20	10	-10	-20	50	-
70	80	70	70	80	90	90	100	90	80	50	50	69
50	50	30	30	50	50	40	40	-40	-30	-10	10	36
-40	-50	-30	-30	-20	-40	-50	-40	-50	-40	-100	-30	-36
60	70	60	50	60	60	50	50	50	40	50	50	45
40	30	10	0	30	20	30	20	30	30	10	20	32
40	40	20	10	20	20	-20	20	20	20	50	70	18
10	20	10	10	20	30	50	30	50	40	30	30	35
40	50	60	90	70	70	60	50	40	40	40	60	42
30	30	40	50	50	30	40	40	40	50	50	60	51
50	50	50	30	30	30	40	40	10	-10	-30	0	27
20	40	40	40	40	60	60	70	80	50	70	100	47
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	[30]	30	30	-
70	70	60	70	70	80	70	40	30	20	30	20	51
37	39	36	33	38	42	39	36	29	28	25	31	
29	29	28	28	29	28	28	28	28	29	29	29	

Hour Day	0	1	2	3	4	5	6	7	8	9	10	11
1.	30	30	30	30	30	60	70	70	[80]	[90]	70	60
2.	70	80	80	80	70	60	40	60	90	80	[60]	[60]
3.	20	10	20	20	30	20	20	30	40	80	40	40
4.	60	60	60	40	40	30	30	40	[70]	70	80	90
5.	60	60	60	40	60	40	60	60	70	60	60	70
6.	50	40	50	40	60	60	70	80	70	80	[70]	60
7.	60	60	40	50	50	50	50	50	50	50	-	80
8.	40	40	30	30	30	30	20	30	-	50	50	60
9.	40	30	30	30	40	60	40	30	[10]	-60	-50	-30
10.	-20	-20	-10	0	-20	-20	-20	-20	-40	-40	[-20]	30
11.	10	0	-20	-50	-30	-10	-10	-70	-70	[-30]	-30	-20
12.	-30	-20	-30	-40	-40	-20	-20	-30	-30	-30	[-40]	[-20]
13.	0	0	0	0	-10	-20	0	-10	-10	10	0	[-10]
14.	-10	0	0	10	[10]	-	[20]	[40]	-	60	60	60
15.	10	50	60	50	50	60	70	60	70	70	[70]	70
16.	80	70	60	50	50	50	70	80	90	70	[60]	70
17.	10	0	10	0	20	30	40	50	40	50	[60]	70
18.	210	190	160	120	220	250	210	180	110	60	[90]	80
19.	30	10	20	10	10	10	-5	0	10	30	[60]	60
20.	30	20	10	[20]	[20]	[10]	20	20	40	50	[60]	60
21.	70	70	60	60	60	50	20	0	-	10	10	60
22.	10	10	10	10	10	10	10	-10	0	10	10	20
23.	60	60	60	70	70	60	60	-	-	100	[90]	[110]
24.	70	80	80	70	60	70	50	90	120	130	[90]	[50]
25.	40	40	30	50	50	70	30	40	50	-	-30	-10
26.	30	30	-10	0	10	10	-10	10	10	10	20	0
27.	0	10	30	20	20	20	20	30	50	50	60	[60]
28.	30	40	40	50	50	50	50	70	-	90	90	90
29.	60	60	50	60	60	70	70	80	50	50	[50]	50
30.	20	10	30	40	40	40	50	50	50	50	[50]	[50]
31.												
Means	38	37	35	32	37	41	39	38	41	45	41	47
Number of days	30	30	30	30	30	29	29	29	25	29	29	30

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
60	60	60	70	60	40	60	-	40	40	60	40	54
60	40	40	60	70	80	80	80	70	60	30	30	64
[60]	60	70	80	80	100	90	90	110	110	90	60	57
90	110	110	100	80	80	80	70	70	60	80	70	70
[70]	70	60	40	60	60	70	10	-10	-10	30	60	50
70	50	50	30	40	40	50	60	60	60	50	50	59
+S	+S	+S	90	100	80	80	80	80	70	60	50	-
60	50	50	60	60	60	70	80	50	80	50	40	49
-30	-20	0	0	20	20	30	30	20	-20	20	-10	10
40	60	20	-30	-50	-10	-20	-20	-10	-20	-40	-20	-13
0	20	20	10	10	-10	20	-20	0	-10	-10	-10	-13
-30	-30	[-30]	-30	-10	-10	-10	20	10	10	-10	-10	-20
-20	-60	-S	30	10	-S	-S	70	+S	20	-20	-10	-
70	70	60	60	70	70	+S	10	-10	-S	+S	+S	-
70	70	60	60	70	80	110	100	100	110	90	70	70
60	80	70	30	50	50	70	60	50	30	10	30	58
90	100	80	50	70	90	100	110	70	80	140	210	65
60	70	60	60	90	60	70	40	100	120	50	40	113
60	50	60	60	60	70	70	70	60	40	40	40	40
50	60	60	50	60	[60]	100	100	100	90	80	80	52
10	-S	-S	100	-50	+S	-S	-S	-	-10	-10	0	-
20	20	20	20	30	30	30	30	-	60	60	60	21
110	120	120	110	110	130	90	80	100	120	100	90	-
70	40	70	100	100	70	90	70	100	60	50	40	76
-30	0	20	+S	30	80	160	60	0	-40	-10	50	31
50	60	80	110	110	120	150	90	80	50	60	50	47
50	50	50	70	100	120	100	[120]	100	70	40	30	53
80	80	70	70	70	80	70	80	70	70	60	50	65
50	50	70	50	60	60	60	50	50	50	30	20	55
50	50	60	60	50	40	50	40	20	0	30	-30	38
47	49	54	54	54	62	71	59	57	47	42	40	
29	28	27	29	30	28	27	28	26	29	29	29	

December

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		-40	-50	-50	-60	-50	-20	-20	-30	-20	-20	[-30]	-20
2.		-30	-20	20	20	40	30	30	10	[60]	110	90	-20
3.		-10	50	20	40	60	70	80	[70]	[70]	80	60	50
4.		60	40	20	30	40	50	50	30	40	[50]	50	70
5.		30	50	⁺ S	⁺ S	-S	60	50	[60]	[60]	70	70	70
6.		0	30	⁺ S	-S	50	50	50	60	80	60	70	[70]
7.		30	20	-20	-20	20	10	30	0	30	80	[50]	[50]
8.		-S	⁺ S	30	20	10	10	10	40	60	50	[50]	50
9.		20	20	20	40	60	110	+S	+S	+S	30	-	10
10.		50	50	40	40	40	50	50	70	80	80	[40]	20
11.		0	10	10	10	10	20	20	20	20	30	[30]	[10]
12.		50	40	40	40	100	100	30	[30]	-	60	30	40
13.		30	40	30	20	30	40	40	30	30	50	50	60
14.		50	30	30	40	⁺ S	⁺ S	50	40	[40]	[70]	110	70
15.		50	50	60	60	60	60	60	60	90	[70]	70	60
16.		-S	-S	20	50	60	80	100	100	90	[90]	100	90
17.		80	60	50	40	50	40	30	40	50	70	90	[100]
18.		40	60	60	70	70	60	50	30	+S	0	-	50
19.		40	0	-50	-50	-20	-70	-S	⁺ S	-S	-S	-S	-10
20.		50	50	50	40	50	40	60	30	-S	-S	⁺ S	[40]
21.		40	40	60	70	80	90	80	70	70	60	80	[80]
22.		0	20	60	50	60	70	60	50	[80]	[90]	110	120
23.		60	60	50	60	70	70	60	90	110	100	[130]	140
24.		40	30	40	40	50	40	50	50	40	50	60	70
25.		20	30	60	50	50	50	50	50	[60]	60	70	80
26.		60	70	60	60	50	60	80	90	110	-	[130]	160
27.		50	50	50	50	40	50	80	60	60	60	70	[80]
28.		50	0	0	20	30	40	50	70	60	70	[60]	60
29.		60	60	50	60	60	60	50	40	60	[80]	70	60
30.		60	60	50	40	50	60	60	60	80	70	[60]	60
31.		160	160	+S	+S	+S	160	+S	160	120	80	[80]	80
Means		38	38	31	33	44	51	50	51	63	63	69	60
Number of days		29	29	28	28	28	30	28	29	26	28	27	31

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
-20	-30	0	10	-30	0	20	-30	-20	-10	0	20	-21
-S	-S	-S	-S	-S	-S	-S	0	50	50	40	-10	-
50	50	50	50	60	80	70	60	70	70	60	50	57
70	50	10	-10	0	-10	-30	[-20]	-30	-70	-50	-10	18
70	80	80	90	80	90	80	20	-70	-110	-20	0	-
[60]	70	60	60	60	70	70	70	70	40	30	30	-
40	50	50	30	30	40	40	60	90	50	30	70	36
50	50	60	70	80	80	80	70	60	50	40	30	-
±S	20	50	50	60	80	100	90	70	60	50	60	-
20	30	20	-10	-30	-60	10	0	10	-20	-20	-50	21
20	50	60	60	70	70	60	60	50	50	[40]	-	34
30	50	50	50	50	50	50	40	50	60	40	40	49
-	[50]	-	50	80	90	80	80	80	60	60	60	-
60	50	50	40	50	60	60	50	50	20	20	30	-
60	40	40	40	20	10	30	40	10	20	-S	-S	-
90	90	80	70	60	50	50	70	80	90	70	60	-
90	50	60	70	80	100	100	120	140	120	70	20	72
30	70	70	50	50	50	50	40	40	50	40	40	-
60	70	100	100	100	90	100	100	50	50	50	50	-
80	90	70	60	80	90	90	90	80	60	50	50	-
[80]	90	100	100	100	100	90	40	20	40	20	10	67
120	110	100	100	140	120	100	120	100	90	80	60	84
140	130	100	130	150	±S	60	120	140	140	90	60	98
90	[100]	80	90	100	70	60	-S	-S	-S	±S	-S	-
80	90	100	90	100	90	110	100	90	80	100	80	73
110	100	70	90	100	110	[100]	80	100	100	80	60	88
70	70	50	60	60	80	90	110	110	80	10	30	63
70	70	90	80	70	80	90	70	70	70	70	40	58
60	60	60	60	80	130	140	130	110	110	80	60	75
70	70	80	80	90	110	80	100	120	110	170	160	81
90	80	80	70	50	40	40	30	40	40	40	40	-
66	65	65	63	66	68	69	64	61	52	46	41	
28	30	29	30	30	29	30	30	30	30	29	28	

I. Hourly means of the

January

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11
1.	40	40	40	40	40	40	40	40	[40]	60	60	50
2.	20	10	0	20	30	10	0	[30]	70	80	80	60
3.	60	50	40	70	30	20	50	40	30	50	[60]	[60]
4.	10	-20	10	0	80	50	30	20	80	140	[100]	180
5.	150	100	130	160	170	140	120	90	80	100	[70]	80
6.	50	30	10	0	50	20	40	40	20	20	50	50
7.	20	30	50	60	60	50	50	60	60	60	[40]	10
8.	[30]	-	-	-	-	-	-	-	-	-	[50]	10
9.	50	30	40	60	60	60	70	[80]	-	50	60	60
10.	60	40	40	20	20	-60	50	10	100	[110]	50	100
11.	30	20	0	10	10	30	60	70	40	-	30	70
12.	50	40	30	30	30	30	50	40	[40]	-	20	-40
13.	-20	0	0	-20	20	40	50	20	30	30	90	[70]
14.	60	90	70	50	50	40	50	60	70	70	70	[80]
15.	20	30	30	40	40	50	50	50	60	60	-	60
16.	60	50	60	60	70	100	90	[90]	-	-	80	80
17.	50	50	50	60	70	80	90	110	120	110	[80]	80
18.	70	80	60	60	60	60	30	0	50	30	[40]	70
19.	70	60	60	70	80	70	100	90	90	[110]	100	80
20.	70	80	70	70	70	50	110	120	120	[40]	[50]	40
21.	0	10	-10	-10	-30	-50	0	0	-20	-40	-50	-
22.	-10	0	20	20	50	50	70	50	30	20	30	[50]
23.	90	70	70	60	70	70	60	[50]	-	30	60	70
24.	70	60	50	60	70	60	70	50	70	70	50	40
25.	40	50	40	40	40	40	40	40	[30]	50	60	40
26.	30	30	20	20	30	20	20	20	10	20	[30]	[40]
27.	60	70	80	60	60	70	60	70	90	70	[60]	40
28.	-20	-20	-20	-50	-20	-20	-20	10	-20	10	10	-10
29.	50	110	70	60	30	30	40	40	20	30	[20]	20
30.	70	70	30	20	50	80	70	[50]	30	20	20	50
31.	80	80	80	90	10	120	170	+S	120	120	[90]	70
Means	46	45	41	41	47	45	57	50	54	56	52	55
Number of days	31	30	30	30	30	30	30	29	27	27	30	30

potential gradient for 1989

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
50	50	60	70	60	80	80	60	50	40	20	10	48
[70]	70	80	50	90	100	120	120	110	90	60	50	59
70	80	40	50	50	40	20	20	20	40	20	20	43
70	50	90	60	70	60	30	40	20	50	90	70	58
70	30	20	30	10	60	20	60	80	100	60	40	82
10	-60	-60	60	±S	20	10	60	70	70	40	30	27
+S	+S	±S	±S	10	10	50	-10	10	20	10	20	-
-	-	-	-	40	40	50	30	80	30	20	20	-
60	50	30	40	60	50	60	80	80	70	70	70	58
90	110	120	130	140	150	70	60	20	20	60	30	64
80	90	90	90	90	90	80	100	60	70	50	50	57
-30	90	90	90	20	70	60	20	20	20	70	30	38
[70]	50	50	60	70	70	100	110	90	80	70	50	49
70	110	130	170	+S	+S	+S	+S	130	130	100	30	-
70	60	70	90	80	100	90	110	80	70	70	70	63
70	80	60	60	100	140	130	90	80	60	50	50	-
100	100	100	90	90	100	100	90	80	90	90	60	85
60	70	60	50	50	70	80	70	70	70	80	70	59
70	70	60	90	90	110	120	110	120	110	90	70	87
30	20	0	10	0	70	50	10	40	90	40	30	53
10	30	10	50	90	90	30	20	10	0	-10	10	60
50	50	50	40	50	80	50	50	50	50	60	60	43
70	80	70	80	100	80	120	130	120	120	100	80	80
[20]	30	30	50	30	10	10	20	30	30	50	40	45
40	50	50	50	50	40	50	70	40	40	40	30	44
50	50	40	40	40	40	40	20	30	40	20	30	30
60	80	80	60	50	40	30	30	20	10	0	-10	52
-	20	40	20	20	80	130	50	50	50	20	90	17
40	50	50	40	50	80	90	80	60	60	40	60	51
80	80	70	70	60	80	90	110	80	120	100	90	66
80	100	110	100	80	90	80	60	50	80	40	40	81
56	60	58	65	60	71	68	62	60	64	55	45	
28	29	29	29	29	30	30	30	31	30	31	31	

February

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		50	30	30	40	30	20	30	20	40	60	[40]	50
2.		0	20	0	0	-20	-40	-40	-60	-40	-30	[-40]	-30
3.		10	-10	10	-30	10	60	30	40	40	50	[50]	40
4.		60	60	50	40	40	40	40	50	30	0	[20]	[20]
5.		20	50	20	20	50	50	40	40	40	40	-	50
6.		20	20	20	30	30	10	30	[10]	-	50	40	50
7.		50	60	50	50	50	60	70	80	90	90	80	60
8.		180	170	140	180	+S	+S	+S	+S	+S	+S	+S	120
9.		20	10	30	40	-20	10	20	40	50	[10]	[50]	20
10.		40	40	20	20	30	30	30	30	20	[20]	40	50
11.		30	30	20	20	40	20	10	10	20	40	[50]	60
12.		60	80	70	60	40	20	30	0	30	10	[30]	[50]
13.		20	20	30	40	50	40	50	[50]	-	40	40	40
14.		40	40	30	30	40	40	40	50	20	20	[30]	20
15.		±S	+S	40	50	60	±S	60	±S	+S	30	[10]	50
16.		30	40	40	40	40	30	30	40	40	40	-	40
17.		30	30	30	40	40	40	40	50	50	50	50	-
18.		20	30	20	30	20	30	70	60	[60]	60	70	80
19.		30	-10	-10	20	-20	30	-20	-80	30	+S	+S	-
20.		20	20	20	40	40	50	50	50	-	50	30	40
21.		50	30	40	40	40	-50	-10	40	-S	±S	[80]	50
22.		90	100	80	70	50	40	60	60	80	60	[50]	50
23.		20	20	20	20	10	-10	0	20	30	10	[20]	40
24.		90	160	+S	120	-10	0	30	40	40	50	[60]	60
25.		40	40	30	30	40	30	30	40	50	50	[50]	50
26.		40	40	40	40	30	±S	-S	-10	-S	-S	-S	-20
27.		40	40	30	30	30	50	50	70	-	60	60	50
28.		50	50	40	30	40	50	50	90	[70]	80	70	60
29.													
30.													
31.													
Means		43	45	35	41	29	26	32	32	38	39	43	44
Number of days		27	27	27	28	27	25	26	26	21	24	23	26

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
50	70	70	10	40	50	0	0	30	0	10	10	33
-10	0	10	0	10	10	50	30	30	20	30	30	-3
50	50	50	30	50	50	50	70	80	70	80	80	42
40	40	30	40	50	40	40	20	20	30	10	40	35
60	60	60	50	40	60	40	50	30	20	30	30	41
60	70	80	80	100	100	110	120	110	90	70	60	59
60	60	60	60	60	70	90	90	90	70	60	120	70
80	+S	90	110	170	170	110	100	70	30	70	20	-
20	40	50	50	40	10	40	40	40	50	40	40	31
50	[40]	40	50	50	40	30	30	20	10	0	20	31
70	70	60	50	30	30	20	30	60	40	50	60	38
60	60	50	50	40	40	50	30	50	40	60	30	43
50	±S	±S	20	20	50	60	60	60	50	40	40	41
40	60	50	50	70	140	80	60	70	60	60	60	50
50	60	60	60	60	70	70	60	50	60	50	30	-
40	60	60	60	70	60	60	60	60	60	50	40	47
60	50	40	30	30	50	70	50	30	40	40	40	43
80	60	80	60	50	90	80	50	50	0	10	60	51
10	60	60	40	20	10	60	60	50	50	40	40	-
40	50	70	60	60	70	70	60	70	40	10	30	45
-10	-30	-40	-20	0	60	70	40	20	80	100	100	-
50	50	40	40	40	30	30	10	10	40	30	40	50
50	40	40	30	50	50	40	40	40	40	30	40	29
60	70	50	50	60	70	70	70	60	50	40	40	58
50	10	-S	-S	±S	10	20	30	30	30	30	40	-
±S	50	50	40	40	50	60	50	50	40	50	40	-
60	60	50	60	60	70	80	70	70	60	60	60	55
40	40	30	20	20	50	40	40	30	60	50	50	48
47	48	50	44	49	57	57	51	49	44	43	46	
27	26	26	27	27	28	28	28	28	28	28	28	

March

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		50	30	40	40	50	60	60	100	80	[50]	[50]	50
2.		0	30	40	50	70	60	50	60	-	50	40	50
3.		40	40	40	40	30	40	50	20	[10]	[80]	60	20
4.		-100	-20	±S	±S	±S	±S	±S	-S	20	-	20	50
5.		40	50	50	50	40	60	70	80	-	80	100	90
6.		30	30	30	40	40	40	40	[40]	-	70	70	70
7.		30	20	30	40	40	40	50	70	70	[60]	70	60
8.		60	40	40	40	40	50	50	50	60	50	[30]	90
9.		30	30	30	40	40	40	30	20	30	40	20	[30]
10.		20	20	30	30	40	40	60	50	[60]	60	60	70
11.		40	40	40	30	40	20	40	40	40	40	30	[40]
12.		20	20	20	0	0	10	0	-10	0	20	20	[20]
13.		40	40	100	100	50	10	30	20	[0]	[20]	30	40
14.		±S	±S	±S	-S	40	±S	40	40	50	50	[50]	50
15.		30	40	40	30	30	40	50	40	50	60	50	[60]
16.		50	60	50	50	50	60	70	80	70	60	60	[60]
17.		40	30	20	20	30	40	40	40	60	[50]	60	50
18.		20	30	30	30	20	10	0	10	20	20	[30]	30
19.		30	30	40	80	20	50	50	60	-	80	90	90
20.		40	60	60	40	0	10	10	[0]	[-10]	-30	-20	-10
21.		40	90	80	80	+S	+S	30	40	20	-90	20	120
22.		70	80	80	80	80	80	90	120	[100]	[100]	[70]	60
23.		60	60	40	40	60	40	40	40	40	[90]	[60]	+S
24.		40	40	40	60	60	80	80	110	[90]	70	70	70
25.		70	60	60	60	60	70	80	70	60	-	[60]	70
26.		-60	20	20	20	20	40	90	110	[110]	[110]	110	100
27.		60	50	50	60	50	50	60	60	60	60	[60]	[70]
28.		30	30	30	30	30	30	50	60	60	60	70	80
29.		40	70	80	80	60	70	110	[100]	[70]	80	70	60
30.		40	10	-10	20	30	60	70	70	40	30	40	[50]
31.		30	20	20	20	20	40	50	50	50	[60]	50	50
Means		31	38	42	45	39	44	51	55	49	51	52	58
Number of days		30	30	29	29	29	28	30	30	27	29	31	30

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
40	40	30	20	20	40	60	60	60	50	20	50	48
50	[50]	[40]	50	50	80	80	120	120	50	40	50	56
±S	±S	-S	-30	30	-90	50	90	70	130	70	-100	-
60	60	20	±S	30	50	60	±S	50	60	50	50	-
70	70	70	60	70	70	80	90	70	40	40	40	64
50	40	40	40	40	50	60	40	40	40	30	30	44
60	60	50	40	40	50	90	80	70	70	50	40	53
-20	0	±S	±S	20	80	20	40	40	30	30	20	-
20	30	30	40	40	40	40	20	20	20	-20	-10	27
90	100	90	100	100	110	100	90	60	50	40	50	63
[40]	0	30	30	20	10	-10	-10	-20	-20	-20	10	21
[30]	40	80	-30	0	0	-40	-20	-50	-20	-60	-20	1
60	50	50	50	50	60	60	50	40	±S	±S	±S	-
50	60	50	50	50	70	70	80	60	40	30	30	-
70	60	50	40	40	30	30	60	70	+S	50	60	47
70	70	50	30	40	30	30	40	40	30	40	30	51
40	30	30	30	40	50	40	50	40	20	20	30	38
10	40	0	20	10	10	20	10	20	20	40	20	20
90	90	100	110	120	110	120	80	80	60	50	50	74
20	30	30	30	30	40	0	30	40	90	0	10	21
-30	-30	-110	0	20	80	90	110	90	70	60	80	-
40	60	70	80	80	80	130	110	90	70	60	60	81
±S	±S	0	20	10	60	70	60	70	70	60	70	-
70	70	70	60	70	70	80	80	80	70	70	70	70
70	60	60	70	70	80	60	30	-S	-S	-60	-S	-
100	100	100	120	100	70	60	90	80	80	70	70	72
90	90	80	80	80	80	80	80	70	60	50	50	66
80	80	70	70	70	70	60	60	10	20	20	30	50
60	40	30	±S	±S	+S	±S	40	50	20	10	30	-
50	60	30	30	40	60	40	30	40	40	30	30	39
50	50	40	40	60	60	60	60	60	50	50	50	45
51	52	44	45	48	53	56	58	52	47	31	34	
29	29	29	28	30	30	30	30	30	28	30	29	

April

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		50	50	50	50	50	60	[60]	-	90	90	90	50
2.		-30	-50	0	30	40	50	60	40	10	40	[60]	30
3.		30	30	20	10	0	0	0	-20	-	-10	-30	20
4.		-S	30	40	20	20	50	30	[30]	20	40	10	30
5.		80	80	70	90	70	40	100	[60]	30	±S	+S	50
6.		20	30	30	40	40	50	60	[60]	50	60	60	40
7.		40	50	40	50	50	40	30	-	30	-40	40	50
8.		30	30	20	30	40	40	40	60	-	60	60	60
9.		40	30	30	30	30	40	40	50	50	[30]	40	40
10.		30	20	20	30	40	40	60	60	-	60	60	60
11.		60	60	60	60	50	70	70	80	-	[70]	60	50
12.		20	20	30	30	40	50	50	50	[50]	50	40	30
13.		30	30	20	20	20	30	30	30	40	-	30	30
14.		10	20	10	20	30	30	40	30	20	[10]	-10	0
15.		±S	+S	-S	10	10	-S	20	-20	±S	+S	-20	20
16.		-10	-10	-10	-10	-10	0	-	-	-	-	-	[50]
17.		10	0	10	20	20	30	40	-	[40]	30	40	50
18.		30	30	40	30	40	20	80	+S	10	50	40	40
19.		30	30	30	30	20	30	20	20	-	-10	10	0
20.		10	20	30	20	20	+S	30	50	50	[30]	40	40
21.		-	-	-	-	-	-	-	-	-	50	60	60
22.		30	10	20	30	40	40	50	[50]	-S	±S	-S	70
23.		50	30	30	30	30	30	60	40	60	[40]	30	20
24.		30	20	20	20	20	20	30	-	[60]	60	60	60
25.		40	30	30	20	30	30	10	20	[20]	[20]	20	30
26.		40	40	50	60	60	50	60	60	[50]	50	50	50
27.		-	-	-	-	-	-	-	-	-	-	-	-
28.		-	-	-	-	-	-	-	-	-	-	-	-
29.		-	-	-	-	-	-	-	-	-	-	-	-
30.		-	-	-	-	-	-	-	-	-	30	+S	±S
31.													
Means		29	26	29	31	32	37	45	38	40	37	38	40
Number of days		23	24	24	25	25	23	24	20	17	22	23	26

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
60	±S	±S	±S	±S	±S	±S	±S	±S	-S	±S	+S	-
60	60	60	60	60	60	40	50	50	40	30	30	37
30	10	-10	-10	60	50	30	10	40	-40	10	10	10
40	50	50	60	60	60	50	60	60	50	60	70	43
50	50	50	50	60	60	60	60	60	50	50	40	-
50	50	50	50	50	60	60	50	60	60	50	50	49
50	50	+S	+S	50	50	60	60	40	40	40	40	-
40	40	40	40	40	50	50	50	60	50	40	40	44
40	40	30	30	30	30	50	60	50	40	40	40	39
60	60	60	60	60	50	60	60	60	60	60	60	52
40	40	40	40	40	50	50	50	40	30	30	30	51
40	40	30	30	40	40	40	40	40	30	40	30	38
30	30	20	20	20	10	20	10	20	20	20	20	24
10	20	40	30	30	30	±S	-S	±S	±S	-S	+S	-
20	30	10	+S	±S	-S	-30	-10	-20	-20	-20	-20	-
40	50	60	50	50	40	20	20	20	0	-10	10	-
60	50	60	50	40	10	0	20	10	20	30	40	30
60	50	40	40	50	60	60	60	50	30	20	20	41
0	10	10	10	20	10	20	20	10	20	30	10	17
40	40	30	20	40	30	20	20	20	10	30	20	29
50	40	50	±S	40	50	30	40	+S	20	20	40	-
+S	+S	50	±S	±S	±S	±S	±S	30	40	+S	±S	-
10	20	20	20	10	20	20	20	20	20	20	20	30
50	60	60	60	60	40	50	40	40	30	30	30	41
30	40	40	40	40	40	40	30	20	20	30	30	29
50	60	60	60	60	60	60	60	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
10	-20	-10	0	±S	±S	±S	±S	±S	-90	-70	-60	-
39	39	38	37	44	42	37	38	35	22	25	26	
26	25	25	22	23	23	23	23	22	24	23	23	

May

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		-60	-70	-S	-S	-S	-S	-40	-10	-10	±S	-S	-S
2.		-S	±S	±S	±S	-20	+S	±S	-	[20]	0	30	±S
3.		±S	±S	40	60	60	70	80	[100]	[80]	60	60	100
4.		20	10	0	20	40	50	70	[90]	100	80	60	80
5.		40	20	20	30	30	20	50	[60]	[60]	80	80	80
6.		20	10	+S	-20	±S	±S	+S	±S	-S	60	60	±S
7.		30	70	50	50	60	60	50	-	60	+S	90	70
8.		70	70	70	70	70	80	90	[80]	[60]	50	40	40
9.		30	30	30	30	40	50	[60]	60	90	80	70	60
10.		10	20	-10	30	50	60	60	[60]	50	50	50	40
11.		0	0	-10	0	20	40	40	-	20	20	20	20
12.		10	10	10	20	20	40	90	60	[50]	40	30	40
13.		40	40	40	40	40	50	40	[40]	40	30	30	30
14.		0	0	0	-10	10	-	-	-	80	60	50	30
15.		-10	-10	-10	-10	-S	-S	±S	-	10	20	20	10
16.		±S	+S	50	±S	-50	20	30	-	20	10	±S	-S
17.		30	30	20	20	20	30	40	[50]	[60]	50	50	40
18.		20	10	10	10	10	20	10	30	40	40	40	40
19.		0	10	10	10	±S	-S	±S	50	-	-	-	-
20.		-	-	-	-	-	-	-	-	-	-	-	-
21.		-	-	-	-	-	-	-	-	-	-	-	-
22.		-	-	-	-	-	-	-	-	-	-	-	-
23.		-	-	-	-	-	-	-	-	-	-	-	-
24.		-	-	-	-	-	-	-	-	-	-	-	-
25.		-	-	-	-	-	-	-	-	-	-	-	-
26.		-	-	-	-	-	-	-	-	-	-	-	-
27.		-	-	-	-	-	-	-	-	-	-	-	-
28.		-	-	-	-	-	-	-	-	-	-	-	-
29.		-	-	-	-	-	-	-	-	-	-	-	-
30.		-	-	-	-	-	-	-	-	-	-	-	-
31.		-	-	-	-	-	-	-	-	-	-	-	-
Means		16	16	20	22	27	45	48	56	49	46	49	49
Number of days		16	16	16	16	15	13	14	12	17	16	16	14

	12	13	14	15	16	17	18	19	20	21	22	23	Daily means
-10	0	30	50	40	10	10	±S	+S	-S	±S	±S		-
+S	+S	20	30	-S	-S	±S	±S	±S	±S	±S	±S		-
100	100	90	80	80	60	30	30	50	30	30	30	20	-
70	60	80	80	80	80	80	80	70	40	40	60	50	59
60	60	50	60	60	70	50	50	20	20	20	20	20	46
±S	±S	±S	±S	±S	20	60	60	60	60	60	60	40	-
±S	30	±S	+S	50	40	50	60	60	70	70	70	70	-
50	50	50	50	50	50	60	50	40	40	50	50	50	58
60	60	50	40	40	50	40	30	20	20	20	20	20	45
50	50	40	40	40	40	30	10	10	30	20	30	30	36
20	20	+S	±S	±S	±S	20	10	20	10	0	0	0	-
40	50	40	20	20	30	40	30	20	30	30	30	30	33
30	30	20	0	10	+S	±S	±S	±S	-10	-20	40	40	-
-40	30	30	30	10	20	10	+S	0	40	30	-20	-20	-
10	10	-50	-20	-S	20	10	10	0	+S	40	10	10	-
-S	30	20	40	40	30	30	30	30	30	30	30	30	-
50	50	50	40	30	20	10	0	0	10	20	20	20	31
40	40	±S	±S	0	30	±S	-S	0	10	10	10	0	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	42	37	39	39	38	35	34	25	29	29	29	26	
14	16	14	14	14	15	15	13	15	15	16	16	16	

July

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		-	-	-	-	-	-	-	-	-	-	-	-
2.		-	-	-	-	-	-	-	-	-	-	-	-
3.		-	-	-	-	-	-	-	-	(30)	40	40	60
4.		-30	-30	-10	0	0	10	(30)	(40)	30	[60]	60	+S
5.		20	30	10	20	20	30	30	[60]	60	70	80	80
6.		10	20	30	30	40	60	60	-	60	60	60	70
7.		10	20	20	10	20	40	40	(40)	[30]	0	-10	-10
8.		-10	0	10	10	20	20	10	-10	0	30	30	40
9.		20	30	30	20	30	30	[40]	-	50	60	60	60
10.		70	30	30	40	40	40	60	(40)	30	40	70	80
11.		-	-	-	50	0	-60	100	[100]	110	110	110	80
12.		20	30	20	10	0	30	40	70	80	[80]	-S	+S
13.		30	30	20	20	20	20	40	40	40	40	[50]	[40]
14.		-10	-10	-10	0	20	50	50	40	[30]	±S	40	+S
15.		40	40	30	40	40	50	[50]	60	60	50	40	40
16.		20	20	30	30	20	20	30	-	30	40	40	50
17.		30	20	20	20	20	30	(30)	(30)	50	60	60	60
18.		20	20	10	10	10	20	20	[30]	40	50	40	40
19.		50	50	50	40	60	80	80	70	70	[50]	60	40
20.		0	0	-10	0	10	10	20	30	[50]	50	40	50
21.		10	0	-10	10	20	30	30	[30]	50	70	60	60
22.		10	0	0	10	0	10	30	20	30	[30]	40	50
23.		10	20	30	40	40	40	30	-	30	40	40	50
24.		20	10	20	30	-S	30	20	-	60	±S	10	80
25.		±S	80	80	70	30	60	80	90	[80]	70	60	70
26.		-10	-60	10	-10	0	-10	10	0	20	0	[70]	[140]
27.		50	50	50	50	60	70	80	[70]	[80]	90	90	80
28.		20	20	10	20	20	30	40	30	[30]	50	50	40
29.		-10	-10	-10	-10	10	0	20	[30]	30	40	40	50
30.		10	10	10	10	20	30	[30]	[30]	30	30	40	40
31.		+S	30	20	0	-10	0	+S	±S	+S	±S	±S	±S
Means		16	17	18	20	21	28	42	44	47	50	51	58
Number of days		25	27	27	28	27	28	25	18	27	26	27	25

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
40	+S	±S	±S	30	-10	-10	-20	-30	-30	-20	-20	-
70	±S	0	-S	±S	20	+S	70	0	10	20	10	-
80	90	80	90	80	70	60	40	40	30	20	10	50
80	70	70	70	40	50	30	20	20	20	20	20	44
0	10	10	-10	-10	-10	0	10	0	-20	-10	-10	6
30	40	50	40	30	30	40	40	30	20	20	10	22
50	+S	40	50	30	40	40	40	50	40	40	50	41
70	70	80	70	70	40	40	30	±S	±S	+S	±S	-
70	80	90	80	+S	±S	±S	±S	±S	±S	10	-40	-
70	60	50	60	50	40	30	30	40	40	60	40	-
20	20	30	10	30	20	0	-10	-10	-20	-20	-10	19
±S	±S	50	40	50	60	60	50	50	40	40	40	-
30	20	20	30	30	30	30	30	20	10	10	0	33
40	40	30	30	20	20	20	30	20	30	10	30	28
50	50	50	50	40	60	50	50	40	20	20	20	-
±S	70	±S	10	40	±S	±S	30	30	30	30	40	-
30	30	20	30	30	30	20	20	20	20	10	0	40
50	40	40	30	20	20	20	10	-10	0	10	0	20
50	40	40	30	30	40	20	10	10	10	10	20	28
60	60	70	80	80	50	30	20	30	30	20	30	33
60	60	50	40	40	30	10	10	10	+S	0	10	31
70	70	80	30	10	20	30	40	40	±S	±S	±S	-
60	±S	±S	±S	±S	-80	-20	0	-30	-20	0	10	-
160	110	60	70	80	60	60	40	50	50	50	40	41
80	80	70	60	60	40	40	20	10	10	0	20	55
30	20	20	30	20	10	10	10	0	0	0	0	21
50	40	50	60	50	40	20	10	10	10	10	0	22
60	60	60	60	60	60	[70]	-	-S	±S	-30	30	-
±S	±S	+S	±S	±S	±S	±S	±S	30	20	30	20	-
56	53	48	46	40	30	28	24	18	15	13	14	
26	23	25	25	25	26	25	26	26	24	27	27	

August

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		30	30	30	20	20	30	60	[90]	90	90	±S	±S
2.		40	30	40	30	50	50	40	[40]	30	40	30	40
3.		40	40	40	30	30	40	30	[10]	30	30	40	40
4.		30	10	10	20	20	30	50	[10]	-40	10	80	100
5.		30	30	20	10	20	20	[30]	20	30	40	40	40
6.		30	20	20	20	20	30	60	-	30	40	30	40
7.		0	10	10	10	10	20	[30]	-	40	40	50	70
8.		30	20	30	20	30	40	50	[40]	40	60	70	60
9.		0	-10	20	40	40	-10	-110	-120	-70	-40	-S	±S
10.		-10	-10	-10	-10	0	20	40	50	60	70	[70]	70
11.		10	20	20	20	30	50	50	[40]	[50]	60	60	50
12.		20	20	20	0	10	20	50	[60]	70	70	70	70
13.		80	30	30	10	-10	-10	-20	-10	10	30	30	40
14.		20	20	20	20	40	40	[60]	-	50	60	70	80
15.		20	30	30	30	40	80	110	[40]	40	60	50	60
16.		10	10	20	10	20	30	40	[40]	50	50	60	50
17.		20	10	10	30	20	40	60	[50]	50	70	60	70
18.		-20	10	10	0	10	20	40	[10]	40	70	40	50
19.		30	±S	±S	±S	±S	±S	80	[80]	120	80	40	20
20.		±S	30	20	±S	±S	±S	±S	70	120	90	70	70
21.		-	-	-	-	-	-	40	[50]	30	30	40	60
22.		-	-	-	-	-	-	-	-	-	-	-	-
23.		-	-	-	-	-	-	-	-	-	-	-	-
24.		-	-	-	-	-	-	-	-	-	-	-	-
25.		10	10	0	10	10	10	20	30	[40]	40	50	±S
26.		30	20	20	0	40	-80	[30]	[70]	30	40	40	50
27.		40	40	30	30	20	20	20	[20]	40	60	70	60
28.		30	30	40	50	40	50	[40]	-	10	90	90	90
29.		40	30	30	40	40	20	30	40	[30]	30	30	30
30.		±S	±S	±S	-100	-S	-S	-170	[-150	-100]	-160	-80	0
31.		-30	-50	-100	-20	-40	0	50	[70]	80	60	40	40
Means		21	17	16	13	21	23	30	27	36	43	48	54
Number of days		25	25	25	25	24	24	27	24	28	28	26	25

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
±S	±S	40	60	50	50	40	30	40	30	30	30	-
30	40	40	40	30	30	40	40	50	40	40	50	39
30	30	40	30	40	40	50	50	40	+S	+S	30	-
80	70	60	70	40	30	30	30	40	20	30	20	35
40	50	40	30	30	30	40	30	30	30	20	30	30
50	40	40	30	-10	-10	10	10	0	10	0	0	22
80	70	80	60	40	30	20	40	20	30	30	30	36
50	60	80	-S	±S	±S	±S	±S	±S	-10	-40	0	-
20	+S	+S	80	40	30	20	20	20	20	0	0	-
70	60	70	50	30	40	30	20	30	30	20	10	33
60	60	50	50	-S	±S	±S	-S	50	20	20	20	-
80	70	70	40	40	40	40	50	40	10	30	70	44
70	60	50	60	30	40	30	30	30	30	20	30	29
80	90	80	70	80	50	40	50	40	40	40	30	51
60	70	70	60	50	40	30	30	30	30	20	10	45
40	40	40	40	30	40	30	40	20	20	20	20	32
80	80	70	80	70	50	40	40	40	30	30	20	47
70	70	80	80	70	40	30	40	30	+S	±S	±S	-
40	30	70	±S	±S	±S	±S	±S	±S	+S	0	±S	-
60	80	-	-	-	-	-	-	-	-	-	-	-
70	70	70	70	40	40	40	40	40	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-
10	10	10	20	30	20	30	10	20	30	30	20	-
-S	40	40	40	20	10	30	40	40	40	40	40	28
30	30	30	40	40	40	40	50	50	50	50	50	33
60	60	60	60	50	50	+S	±S	±S	+S	30	30	-
80	70	60	60	60	60	60	60	60	40	40	50	55
30	40	30	20	10	30	30	20	30	30	40	30	30
0	20	20	0	0	-50	+S	±S	±S	-60	-20	0	-
40	40	50	40	40	50	40	30	30	30	30	40	23
52	54	53	49	38	33	34	35	34	23	22	26	
27	27	27	26	25	25	23	23	24	23	25	25	

September

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.		30	40	40	40	40	60	[90]	[90]	90	90	70	70
2.		40	40	30	30	40	40	50	50	50	60	50	[60]
3.		40	20	0	-10	±S	+S	+S	-80	-120	-	+S	+S
4.		30	40	40	40	40	50	[60]	-	20	0	10	10
5.		-70	±S	-70	±S	±S	20	50	70	[80]	70	80	20
6.		40	30	30	30	30	40	50	60	[60]	60	50	40
7.		40	30	30	30	30	30	70	70	[60]	[80]	80	70
8.		20	10	10	10	20	30	40	50	50	40	[60]	50
9.		20	20	20	20	20	30	40	30	20	30	[30]	40
10.		20	30	30	30	20	30	50	-	50	50	50	70
11.		10	10	20	20	20	30	50	-	50	60	70	70
12.		10	±S	+S	30	50	50	50	50	[40]	70	40	30
13.		30	20	20	20	30	40	30	30	20	[30]	40	40
14.		10	10	20	30	30	30	50	60	[50]	50	50	50
15.		40	40	30	30	30	30	[40]	40	40	40	50	40
16.		20	0	-30	-30	0	-10	-30	[40]	60	60	60	50
17.		30	20	30	30	20	30	40	-	40	50	40	50
18.		50	50	40	50	40	60	(80)	(70)	70	60	70	70
19.		30	20	20	30	40	30	30	20	40	30	40	50
20.		10	30	20	30	30	50	[60]	40	50	60	60	50
21.		30	30	30	30	30	30	[60]	[70]	80	40	40	30
22.		30	30	30	30	20	30	20	20	30	30	50	40
23.		30	30	30	40	40	40	[30]	30	40	40	40	40
24.		20	10	20	20	30	30	40	50	-	[40]	50	50
25.		30	40	40	30	40	40	50	50	[40]	[50]	50	60
26.		50	40	50	50	50	40	60	80	[70]	50	50	60
27.		20	20	10	10	20	40	40	40	10	[0]	0	0
28.		-S	20	10	10	20	10	-20	0	40	50	[50]	50
29.		20	10	10	20	±S	+S	20	20	20	20	40	[40]
30.		50	50	50	50	60	60	70	60	70	[80]	80	70
31.													
Means		25	26	21	26	31	35	43	42	42	48	50	47
Number of days		29	28	29	29	27	28	28	25	29	29	29	29

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
80	80	70	70	60	50	40	50	50	40	40	40	59
60	70	70	80	70	60	80	50	60	40	50	50	53
+S	-40	-10	-110	-100	-60	20	50	50	40	40	40	-
10	10	20	10	-10	0	-10	-10	-10	10	-10	-70	12
20	30	30	40	60	60	50	60	50	50	60	40	-
40	50	40	40	50	40	30	30	40	40	40	40	42
70	70	70	60	60	50	30	30	20	20	20	10	47
50	40	30	30	30	20	30	20	20	20	20	20	30
30	30	40	40	40	40	40	40	50	60	40	30	33
70	70	80	60	50	40	50	40	30	30	20	10	43
70	70	70	50	50	40	40	40	30	30	30	30	42
20	30	50	0	50	50	50	40	40	30	30	30	-
40	30	30	30	20	30	40	40	50	-	30	20	31
40	40	40	30	30	30	40	40	50	40	40	40	38
40	40	30	30	30	30	30	20	-10	0	20	30	31
60	50	50	50	40	50	40	40	40	50	40	40	31
50	50	40	40	40	30	30	20	30	30	40	40	36
70	80	70	50	40	30	30	20	30	40	30	20	-
70	70	50	50	40	10	0	0	10	10	0	0	29
70	70	60	70	60	60	60	50	50	40	40	30	48
40	40	20	0	10	30	30	30	30	30	40	30	35
40	50	50	50	50	40	40	40	40	40	40	30	36
40	50	40	40	40	40	30	20	30	30	20	20	35
60	60	50	40	30	20	30	30	30	40	40	30	36
70	70	70	60	40	50	60	50	50	40	50	60	50
70	70	60	70	50	40	50	50	50	40	40	40	53
-10	-10	20	±S	±S	+S	0	±S	-S	-20	±S	-S	-
40	20	20	20	40	40	20	40	40	20	0	10	24
50	20	-10	50	50	50	60	60	60	60	60	60	-
70	-	-	-	-	-	-	-	-	-	-	-	-
49	45	43	38	36	35	36	35	36	32	33	28	
29	29	29	28	28	28	29	28	28	28	28	28	

October

Hour Day	GMT	0	1	2	3	4	5	6	7	8	9	10	11
1.	-	-	-	-	-	-	-	-	-	-	-	80	90
2.	40	50	50	50	40	40	60	[50]	-	[30]	30	40	40
3.	0	10	20	30	30	20	±S	±S	[+S]	50	70	60	60
4.	70	80	70	70	90	110	100	120	[120]	100	80	70	70
5.	70	60	70	70	70	80	120	100	[90]	90	80	70	70
6.	40	40	40	50	40	40	60	70	[70]	70	70	70	70
7.	30	10	20	30	30	30	30	[40]	[40]	40	40	30	30
8.	30	30	30	40	40	40	50	70	60	80	70	(80)	(80)
9.	20	20	20	30	20	10	10	[20]	(40)	40	40	30	30
10.	30	20	20	30	40	30	30	20	[40]	50	50	60	60
11.	40	40	40	40	40	40	60	[50]	[50]	40	40	40	40
12.	30	30	30	20	30	10	10	-20	[10]	30	40	60	60
13.	50	40	40	30	40	50	50	[60]	[70]	60	70	60	60
14.	40	40	40	30	30	40	80	120	[90]	70	60	60	60
15.	+S	±S	±S	0	-	-	-	-	-	-	-	[30]	[30]
16.	40	40	40	40	40	40	40	[40]	[50]	70	80	70	70
17.	40	40	40	30	30	40	50	[70]	70	40	50	50	50
18.	50	40	30	30	30	40	60	[80]	70	40	50	60	60
19.	30	30	20	70	60	80	100	100	[80]	40	40	50	50
20.	30	10	20	-10	-10	-20	30	30	[-10]	-20	10	40	40
21.	80	70	50	60	50	40	40	50	[60]	50	50	60	60
22.	30	20	60	60	60	50	80	80	90	90	-	80	80
23.	0	10	10	20	30	20	30	30	(10)	(40)	40	40	40
24.	20	0	10	10	10	10	20	40	[70]	70	60	60	60
25.	20	10	10	10	20	20	30	[40]	70	50	60	60	60
26.	50	60	70	70	80	80	80	(80)	(100)	100	100	90	90
27.	40	70	70	70	140	70	40	[80]	[+S]	180	160	130	130
28.	-10	10	0	-20	-20	-80	-60	-50	-30	-30	-20	[-10]	[-10]
29.	20	20	30	30	40	30	30	30	40	30	10	-	-
30.	40	40	40	40	50	40	50	[30]	(30)	60	80	80	80
31.	20	10	10	+S	20	30	30	40	40	50	40	[20]	[20]
Means		34	33	34	36	40	36	47	51	56	56	56	57
Number of days		29	29	29	29	29	29	28	27	22	28	29	29

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
90	80	70	60	60	50	60	50	50	50	40	40	-
30	30	20	30	40	50	60	50	40	20	-10	-10	36
60	50	40	40	50	70	80	70	70	70	60	60	-
70	90	80	70	60	70	90	90	90	80	80	60	84
60	80	70	90	70	60	80	80	70	50	40	40	73
60	60	30	30	20	10	10	20	30	40	-40	30	40
30	30	20	40	40	50	40	60	40	40	20	30	34
80	90	90	90	90	80	50	30	30	40	30	20	55
60	60	60	50	40	50	40	50	40	40	40	30	36
70	60	60	80	70	60	50	40	50	60	60	50	47
50	40	0	0	-50	-40	20	20	20	20	30	20	27
80	80	70	80	70	80	60	50	60	60	50	40	44
60	50	50	40	10	20	40	40	40	40	40	40	45
60	60	50	40	40	50	40	20	10	30	40	40	49
30	30	±S	±S	40	50	60	60	60	60	60	50	-
80	90	90	90	80	80	70	70	50	40	30	40	58
70	80	80	60	60	80	80	70	50	50	40	40	55
60	90	80	70	60	50	40	60	50	40	30	30	52
70	60	50	40	30	10	20	10	10	30	30	20	45
50	60	60	50	60	70	70	80	70	40	60	80	35
50	60	60	60	50	60	70	80	70	50	40	50	57
70	70	70	70	50	50	70	30	10	-10	-10	-10	54
50	50	40	40	40	40	30	70	50	40	30	10	-
70	70	60	50	60	60	70	40	30	30	20	10	40
60	70	60	40	50	60	80	70	70	70	70	50	48
90	90	90	80	100	80	70	80	90	80	70	70	-
80	70	60	60	50	50	50	30	30	20	0	-20	67
[-30]	-20	-40	-70	-60	-50	-40	-30	-90	-30	-10	10	-33
20	20	20	20	40	50	50	70	80	70	50	40	37
70	60	50	60	40	+S	-S	-S	50	30	10	30	-
20	±S	-S	-10	20	-20	-30	-20	-20	0	10	20	-
57	60	53	48	45	46	49	48	42	40	33	33	
31	30	29	30	31	30	30	30	31	31	31	31	

November

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11
1.	-10	±S	±S	60	50	50	60	60	40	(60)	[70]	60
2.	30	40	30	60	40	50	60	90	70	[80]	70	60
3.	40	40	40	40	60	60	60	60	40	10	[20]	30
4.	0	-10	10	-10	0	0	0	0	[0]	10	10	10
5.	20	30	30	30	40	40	-	40	50	50	50	50
6.	70	60	50	50	60	50	30	20	-	[90]	30	-40
7.	-S	0	0	30	40	30	30	60	70	[60]	60	40
8.	20	20	20	20	10	-10	0	10	(10)	0	[20]	30
9.	0	40	40	40	60	40	30	70	70	70	[60]	60
10.	20	20	20	20	30	40	60	70	[90]	90	100	110
11.	30	20	30	30	20	30	80	[80]	[90]	90	100	110
12.	60	80	30	20	20	30	30	-	-	-	-	-
13.	-	-	-	-	-	-	-	-	-	-	40	70
14.	80	80	60	80	70	70	90	120	100	(100)	80	110
15.	80	80	70	70	90	80	80	70	80	20	[-10]	20
16.	10	20	20	40	50	40	50	50	60	70	50	[50]
17.	70	60	50	50	60	50	40	60	80	80	[70]	50
18.	0	10	10	0	10	-10	-30	-10	30	40	50	50
19.	0	0	0	0	30	20	20	-	-	-	-	50
20.	-40	-30	-50	-30	-20	0	0	0	(0)	-30	-30	-30
21.	0	-20	40	40	40	30	30	-50	70	70	[50]	70
22.	70	50	60	60	40	30	30	-10	-20	-20	[-30]	50
23.	20	30	30	30	30	20	20	30	60	50	[50]	50
24.	40	40	40	40	40	40	50	50	50	60	[50]	60
25.	80	70	30	40	20	0	0	0	40	60	[60]	40
26.	50	50	50	50	50	50	40	40	40	50	[50]	-
27.	10	10	10	10	+S	30	40	[40]	(40)	30	60	40
28.	30	20	30	40	60	+S	±S	-	-	-	-	40
29.	50	60	50	100	110	80	70	120	130	110	[110]	100
30.	40	40	40	50	60	70	90	110	120	110	[100]	100
31.												
Means	31	33	30	37	42	36	39	45	62	52	50	51
Number of days	28	28	28	29	28	28	27	26	22	24	27	28

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
60	50	40	30	30	20	10	10	30	10	30	40	-
50	40	40	80	80	80	80	70	70	80	60	40	60
20	30	40	20	10	10	10	10	0	0	0	10	28
20	40	30	10	-20	20	10	30	20	20	10	10	9
40	50	60	60	70	80	60	40	70	80	70	70	51
20	20	30	30	30	-10	-50	+5	-50	+5	-10	0	-
40	40	40	40	30	40	40	40	30	40	30	10	37
30	30	-10	30	60	30	30	20	10	0	-10	30	17
40	40	40	90	100	80	70	60	40	40	30	30	52
110	90	100	80	140	110	80	40	40	40	40	30	65
120	150	120	140	110	90	90	150	150	100	40	90	85
-	-	-	-	-	-	-	-	-	-	-	-	-
60	70	80	80	90	60	90	80	90	80	90	100	-
110	80	90	90	90	80	100	90	70	80	60	80	85
30	30	40	40	50	40	40	10	10	20	10	0	44
50	60	50	70	70	70	90	110	90	80	70	80	58
50	50	40	30	40	40	40	20	20	10	0	20	45
50	50	[50]	50	50	40	30	30	50	40	20	0	25
60	40	40	30	10	-20	-10	-20	-10	-30	-20	-20	-
-50	-50	-30	0	10	-10	0	0	-30	-10	0	0	-19
90	100	90	110	110	110	110	50	70	50	-10	30	53
70	110	80	70	40	10	0	0	0	0	-10	-10	28
60	60	60	50	60	80	80	60	50	50	50	50	47
60	70	70	60	70	70	70	70	110	100	110	100	63
40	70	50	60	60	60	50	60	60	60	50	50	46
50	40	30	30	+S	±S	+S	40	-30	0	0	10	-
50	70	70	80	110	120	100	80	110	90	80	60	-
70	60	50	50	70	90	120	110	90	110	100	70	-
90	70	40	40	110	120	100	80	60	50	50	40	81
110	110	90	100	110	80	70	80	70	60	40	50	79
55	58	52	57	64	57	54	51	44	45	34	37	
29	29	29	29	28	28	28	28	29	28	29	29	

December

Hour GMT Day	0	1	2	3	4	5	6	7	8	9	10	11
1.	40	30	50	40	60	80	80	110	130	140	[140]	140
2.	50	80	70	50	70	70	60	70	110	100	[130]	120
3.	60	60	70	60	50	60	70	80	80	80	-	100
4.	130	80	60	90	70	70	80	70	[40]	40	40	50
5.	110	40	30	20	30	30	30	10	30	50	[60]	50
6.	30	20	30	30	20	30	40	40	40	30	[10]	-10
7.	10	0	10	0	0	-10	10	30	40	40	-	50
8.	20	20	30	30	40	50	60	30	40	50	[50]	30
9.	50	40	-10	20	40	60	80	70	40	[60]	60	60
10.	50	50	50	50	50	50	60	70	80	-	70	80
11.	30	40	30	10	10	0	30	70	60	60	-	80
12.	90	80	100	70	40	50	50	60	80	70	[70]	80
13.	70	50	10	50	70	90	120	100	90	130	[160]	[120]
14.	30	40	40	50	40	40	50	60	60	60	[70]	60
15.	20	10	10	10	20	30	40	40	50	40	[40]	40
16.	70	50	60	80	40	40	40	40	60	70	[60]	50
17.	-20	20	30	30	30	30	20	10	20	-	-	40
18.	±5	±5	0	20	10	20	20	[30]	-	50	0	-20
19.	0	10	10	20	20	30	40	40	60	50	[50]	30
20.	10	20	20	20	30	30	40	30	50	40	50	[50]
21.	30	40	40	40	40	50	50	60	50	80	[80]	80
22.	90	80	40	60	100	160	190	190	180	180	[90]	80
23.	60	30	0	0	10	30	40	40	[40]	40	30	40
24.	40	40	30	20	-60	20	50	50	±5	50	10	-
25.	40	70	50	50	70	80	70	90	100	[90]	90	90
26.	30	20	0	0	20	10	10	20	20	30	[20]	10
27.	10	10	10	0	10	0	-10	-10	-20	-10	0	[-20]
28.	-10	-10	0	10	20	10	0	0	-10	-10	0	[30]
29.	80	70	60	80	70	70	70	80	80	60	[80]	70
30.	-10	0	10	10	30	30	40	30	30	30	[30]	50
31.	-10	-10	-10	-10	-10	-30	-30	-50	-40	-30	-	-30
Means	41	36	30	33	34	41	48	50	55	58	57	53
Number of days	30	30	31	31	31	31	31	31	29	29	26	30

12	13	14	15	16	17	18	19	20	21	22	23	Daily means
150	+5	170	170	150	140	140	150	130	120	80	100	110
110	120	120	120	180	160	150	150	130	120	70	60	105
110	120	130	140	110	140	130	120	150	120	120	120	99
70	70	20	50	60	110	130	70	120	140	120	120	79
70	60	50	40	50	60	70	60	60	40	40	40	47
-20	20	40	60	70	40	30	30	40	70	70	10	32
50	40	40	30	30	20	10	30	30	30	30	30	24
30	40	40	40	50	30	40	50	50	50	50	30	40
60	50	40	10	10	-20	-10	10	50	50	40	50	38
90	100	90	70	100	130	120	80	60	0	20	30	67
80	90	100	80	80	80	110	100	110	90	70	90	65
80	80	70	30	10	-20	-50	-70	10	-10	40	40	44
80	90	80	50	60	80	90	80	60	70	40	40	78
60	50	60	50	30	40	40	40	40	30	30	10	45
40	50	40	70	50	20	50	60	70	60	50	50	40
50	70	80	50	40	20	20	-	(30)	30	30	30	-
30	30	30	40	60	50	60	40	40	40	50	0	-
-10	0	0	20	20	30	30	20	10	20	10	0	-
40	40	-5	±5	±5	±5	±5	±5	±5	40	20	30	-
50	30	10	-10	0	40	40	40	40	40	20	20	30
70	70	80	60	80	80	60	50	40	80	30	80	59
80	60	60	110	130	120	100	80	40	70	70	80	102
50	50	60	70	60	60	60	50	60	50	60	50	43
40	60	40	40	50	80	90	80	80	100	80	40	-
70	50	30	70	80	80	160	180	20	30	50	30	73
10	20	10	10	10	20	10	20	20	10	10	10	15
-20	-20	-10	-10	-20	-10	10	0	0	0	10	0	-4
30	40	40	20	10	30	50	70	80	70	80	80	26
90	90	70	80	80	80	50	80	60	30	10	10	67
20	0	20	10	30	10	20	0	-10	10	-10	-10	15
-30	-30	-20	-10	-20	-10	-10	-10	-20	-30	-40	-20	-24
53	51	53	52	55	56	60	57	54	51	44	40	
31	30	30	30	30	30	30	29	29	31	31	31	

II. Hourly means of the quantities of positive and negative

<u>Hour</u> <u>GMT</u>		0	1	2	3	4	5	6	7	8	9	10	11
Day													
January	+	0	0	0	1	2	4	2	6	1	0	0	0
	-	0	0	1	2	1	4	5	1	1	1	0	0
February	+	0	1	1	0	7	5	15	24	3	6	7	0
	-	5	1	7	23	7	7	34	23	1	7	4	1
March	+	0	4	4	0	0	0	0	0	3	0	2	1
	-	0	8	6	0	1	0	0	0	1	0	2	0
April	+	1	1	0	0	0	0	0	0	0	0	0	0
	-	2	0	0	0	0	0	0	0	0	0	0	0
May	+	0	0	0	0	0	0	0	0	0	0	7	0
	-	0	0	0	0	0	0	0	0	0	0	1	0
June	+	0	4	3	4	6	0	0	0	0	0	0	4
	-	0	0	5	4	15	3	2	0	0	0	0	1
July	+	2	6	6	0	0	0	0	0	0	0	14	3
	-	23	19	13	0	0	0	0	0	0	0	16	3
August	+	23	16	0	16	14	16	7	16	24	37	23	47
	-	33	7	0	29	30	28	13	0	16	54	19	60
September	+	3	34	0	2	5	0	10	0	27	11	5	31
	-	16	9	0	0	4	0	3	18	24	16	9	19
October	+	25	3	1	0	10	5	4	0	1	1	0	0
	-	10	4	5	1	6	6	1	0	1	2	0	0
November	+	0	0	0	0	0	0	0	0	0	0	0	0
	-	0	0	0	0	0	0	0	0	0	0	0	0
December	+	0	2	4	4	5	0	0	0	0	2	2	0
	-	0	4	3	2	2	1	0	0	0	0	0	0

charges transported by point-discharge for each month in 1988

12	13	14	15	16	17	18	19	20	21	22	23	Means
2	1	0	1	0	0	0	0	0	0	1	3	1.0
2	0	0	0	0	0	0	0	0	0	1	2	0.9
0	19	0	0	0	0	8	0	0	4	0	3	4.3
0	5	0	0	0	0	7	1	1	2	1	6	6.0
0	0	0	3	12	5	4	0	0	0	0	0	1.6
0	2	1	12	9	6	2	0	0	0	0	0	2.1
1	5	2	2	0	0	0	0	0	0	0	0	0.5
0	8	6	2	0	0	1	0	0	0	0	0	0.8
1	7	9	1	1	0	0	2	0	0	0	0	1.2
16	32	1	1	6	0	0	2	0	0	0	0	2.5
2	10	9	0	0	0	0	0	0	0	0	0	1.8
0	13	6	6	0	0	0	0	0	0	0	0	2.3
24	12	11	2	20	0	1	21	9	2	0	1	5.6
18	2	14	3	48	4	0	29	5	2	0	5	8.5
7	46	16	43	17	29	16	0	25	9	6	0	18.9
13	69	31	52	21	39	16	6	47	30	0	16	26.2
15	0	9	22	16	4	2	40	17	0	4	9	11.1
6	3	4	62	135	12	0	20	0	0	5	5	15.4
0	0	3	2	0	0	0	4	13	0	11	0	3.5
0	0	0	0	0	0	0	0	14	9	23	7	3.7
0	2	6	3	0	9	1	4	0	0	2	1	1.2
0	0	0	0	0	10	3	1	1	0	0	0	0.6
4	0	0	0	0	0	0	3	16	3	11	4	2.5
0	0	0	0	0	0	0	2	0	1	25	7	2.0

II. Hourly means of the quantities of positive and negative

<u>Hour</u>	<u>GMT</u>	0	1	2	3	4	5	6	7	8	9	10	11
Day													
January	+	0	0	0	0	0	0	0	0	8	7	0	0
	-	0	0	0	0	0	0	0	0	0	0	0	0
February	+	0	0	0	0	0	0	0	5	0	0	0	0
	-	0	0	0	0	0	2	0	0	0	0	0	0
March	+	1	1	0	0	7	1	4	0	0	0	0	0
	-	0	1	0	1	7	0	3	0	0	0	0	0
April	+	3	0	0	6	9	4	1	0	0	6	4	6
	-	12	2	0	17	13	3	0	0	0	23	0	2
May	+	7	21	20	0	17	10	15	1	0	0	0	3
	-	9	40	20	8	27	21	31	4	4	0	3	4
June	+	0	0	3	29	31	10	0	0	0	0	0	0
	-	0	0	0	20	10	0	0	0	0	0	0	6
July	+	0	0	0	0	0	0	1	0	0	16	15	52
	-	0	0	0	0	0	0	0	3	0	26	64	2
August	+	7	5	5	22	10	10	0	0	0	0	5	9
	-	7	15	38	31	25	0	6	0	0	0	0	10
September	+	0	1	1	0	2	3	1	0	0	0	1	0
	-	0	1	0	4	3	0	0	0	0	1	0	0
October	+	0	0	0	0	0	1	15	45	9	0	0	0
	-	0	0	0	0	0	1	18	32	5	0	0	0
November	+	0	2	1	0	0	3	9	2	0	1	0	0
	-	0	1	0	0	0	0	7	0	0	5	0	0
December	+	0	0	0	0	0	0	0	0	0	0	0	0
	-	10	1	0	0	0	0	0	0	0	0	0	0

charges transported by point-discharge for each month in 1989

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	0.6
0	0	0	0	0	0	0	0	0	0	0	0	0.0
0	4	4	0	0	0	0	0	0	0	0	0	0.5
0	4	2	0	0	0	0	0	0	0	0	0	0.3
6	0	1	14	0	0	0	0	0	1	0	0	1.5
16	7	18	23	0	0	0	1	0	1	0	4	3.4
0	1	0	6	42	31	24	29	0	2	0	1	7.3
0	4	1	3	12	41	49	40	26	0	0	0	10.3
40	45	49	56	36	20	16	14	7	1	5	8	16.3
48	35	67	55	22	13	13	35	12	6	18	4	20.8
0	53	23	25	27	16	28	12	10	0	3	1	11.3
7	32	88	43	28	80	21	0	8	0	8	0	14.6
40	38	32	34	26	69	30	18	10	7	6	15	17.0
27	53	22	34	36	83	80	21	34	22	2	14	21.8
29	1	0	1	12	15	30	49	17	2	0	0	9.5
4	11	0	10	45	22	29	61	51	0	0	0	15.2
0	0	0	2	1	0	0	6	0	0	0	0	0.8
0	0	0	2	0	0	0	6	0	0	0	0	0.7
0	0	0	0	0	0	0	0	0	0	0	0	2.9
0	0	1	0	0	0	0	1	0	0	0	0	2.4
0	0	0	0	0	0	1	2	0	11	0	0	1.3
0	0	0	0	0	0	0	0	0	4	0	0	0.7
0	0	0	0	2	3	3	1	13	0	0	0	0.9
0	0	0	0	7	2	5	11	11	0	0	0	2.0