

## I. EARTH CURRENTS

The coordinates of the Observatory are:

$$\begin{aligned} \varphi &= 47^{\circ}38' & \lambda &= 16^{\circ}43' \\ \phi &= 47,2^{\circ} & J &= 98,3^{\circ} \end{aligned}$$

All times are given in CET (i.e. GMT + 1h), nearly (—7 min) corresponding to LT.

The tables published in this part are the following:

I. The activity indices T of the general activity for each three hour interval of the local day, as well as the character figures of single frequency bands for whole days K<sub>1</sub>—K<sub>5</sub>.

The T-scale is linear; its steps correspond to 1.8 mV.km. The monthly mean T-values are separately given for the North-South and East-West components. The scales for K<sub>1</sub>—K<sub>5</sub> are as follows:

| Frequency band      | limits between K-values |     |     |     |     |     |     |     |     |
|---------------------|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
|                     | 0—1                     | 1—2 | 2—3 | 3—4 | 4—5 | 5—6 | 6—7 | 7—8 | 8—9 |
| 1. Period 0— 2 min  | 2                       | 4   | 7   | 13  | 18  | 23  | 29  | 41  | 54  |
| 2. Period 2— 6 min  | 9                       | 13  | 18  | 23  | 29  | 34  | 41  | 56  | 90  |
| 3. Period 6—12 min  | 16                      | 22  | 25  | 32  | 38  | 45  | 56  | 83  | 120 |
| 4. Period 12—24 min | 34                      | 43  | 54  | 70  | 85  | 101 | 124 | 151 | 202 |
| 5. Period 24—60 min | 29                      | 43  | 67  | 88  | 110 | 131 | 191 | 234 | 339 |

All values are given in the table in units of  $10^{-5}$  V/km.

Values in brackets mean extrapolated ones from incomplete material, where the lacking hours have been substituted by the average of recorded hours.

II. Monthly and yearly means, and means for disturbed and quiet days of the amplitudes of the former frequency bands and of the earth current field intensity. D and Q days are the same as in section Geomagnetism. The rows 1—5 contain the average amplitudes of the five bands in  $10^{-5}$  V.km. Row 6 contains the hourly means of the earth current scalar intensity corrected for long period variation (equally in  $10^{-5}$  V/km).

III. Results of harmonical analyses from monthly means of the earth current scalar intensity.

IV. Time of special events (common table from magnetic and earth current records).

The catalogue of Pc 1 events contains occurrence times, amplitudes and quality. Typical cases for the A, B and C events can be seen in the 1976 Observatory Report.

V. Average amplitudes in 12 pulsation bands. Here numerical data are presented on the average amplitudes of pulsations for (nearly complete) months. Averages are derived from manually processed earth current records (6 mm/min) for three-hour intervals of the day. Such averages (expressed in  $\mu\text{V}/\text{km}$ ) are published for each month and for the year. As the bands where amplitudes are determined have different bandwidths, amplitudes are comparable in different bands only after a correction for bandwidth. Data for the same band are, however, directly comparable. Basic data are estimated amplitudes in half-hour intervals.

VI. Micropulsation indices for the year 1981. The indices have been determined from the occurrence frequency of different period micropulsations, striving at a possibly uniform distribution of days in each of the five possible indices (1—5) in a basic intervals.

The determination of these indices can be shortly explained as follows: The days are arranged according to the occurrence frequency of each band. Index 1 is attributed to the days with lowest fifth of occurrence frequencies (0 to 20 per cent), index 2 to days with occurrence frequencies in the second lowest fifth (20 to 40 per cent) etc., index 5 to days with highest occurrence frequencies (80 to 100 per cent). It must be reminded that mainly in the lowest and highest period bands the uniform distribution could not be achieved due to insufficient occurrence of these bands on the records.

The bands are the following:

|    |    |    |        |
|----|----|----|--------|
| P1 | 0  | to | 5 sec  |
| P2 | 5  | to | 10 sec |
| P3 | 10 | to | 15 sec |
| P4 | 15 | to | 20 sec |
| P5 | 20 | to | 25 sec |
| P6 | 25 | to | 30 sec |

|     |    |    |         |
|-----|----|----|---------|
| P7  | 30 | to | 40 sec  |
| P8  | 40 | to | 60 sec  |
| P9  | 60 | to | 90 sec  |
| P10 | 90 | to | 120 sec |
| P11 | 2  | to | 5 min   |
| P12 | 5  | to | 10 min  |

For a detailed description of the method of determination of these indices, see:

L. HOLLÓ, M. TÁTRALLYAY and J. VERŐ: Experimental results with the characterization of geomagnetic micropulsations (*Acta Geod., Geoph. Mont. Hung.* 7 1972 15), and A. ADÁM, J. VERŐ, J. CZ. MILETITS, L. HOLLÓ and A. WALLNER: The geophysical observatory near Nagycenk. I. Electromagnetic measurement and processing of data. (*Acta Geod., Geoph. Mont. Hung.* 16 1981 333).

Daily Pc 1 indices are determined on the basis of the duration of the events. The scale of the indices is the following:

- 0 no record
- 1 no Pc 1 activity
- 2 Pc 1 activity during 1—40 minutes
- 3 Pc 1 activity during 41—100 minutes
- 4 Pc 1 activity during 101—160 minutes
- 5 Pc 1 activity during more than 160 minutes

Mrs. J. CZUCZOR, L. HOLLÓ and J. VERŐ took part in the processing and compilation of the data.

Records were taken in the Observatory with three instruments of the types GMG T9 1956 and GMG T14 1962, with small modifications in order to meet the demands of the use in the observatory. A general description of the processing and compilation is found in the report of the Observatory from 1966 in German by A. ADÁM, J. VERŐ, A. WALLNER: Tellurische und erdmagnetische Messungen im Observatorium bei Nagycenk. *Observatoriumsberichte des Geophysikalischen Forschungslaboratoriums der Ungarischen Akademie der Wissenschaften vom Jahre 1966, Sopron, 1967.*

*I. Activity indices T and K<sub>1</sub>—K<sub>5</sub>*

January

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 13132161 | 18  | 3              | 1              | 6              | 2              | 2              |
| 2.  | 00112432 | 13  | 3              | 0              | 4              | 1              | 3              |
| 3.  | 11222112 | 11  | 3              | 0              | 4              | 1              | 3              |
| 4.  | 32331137 | 23  | 3              | 0              | 4              | 1              | 3              |
| 5.  | 11112121 | 10  | 5              | 1              | 4              | 1              | 2              |
| 6.  | 11212121 | 11  | 5              | 0              | 4              | 1              | 2              |
| 7.  | 11101101 | 6   | 5              | 0              | 4              | 1              | 1              |
| 8.  | 11113131 | 12  | 3              | 0              | 4              | 1              | 2              |
| 9.  | 22011001 | 7   | 6              | 3              | 5              | 2              | 1              |
| 10. | 00012135 | 12  | 4              | 0              | 4              | 1              | 2              |
| 11. | 35552322 | 27  | 6              | 2              | 5              | 2              | 5              |
| 12. | 21010000 | 4   | 4              | 0              | 3              | 0              | 0              |
| 13. | 10111011 | 6   | 3              | 0              | 4              | 1              | 1              |
| 14. | 11014100 | 8   | 2              | 0              | 4              | 1              | 1              |
| 15. | 11111012 | 8   | 4              | 0              | 4              | 1              | 2              |
| 16. | 32223110 | 14  | 4              | 0              | 5              | 2              | 2              |
| 17. | 11112112 | 10  | 3              | 0              | 4              | 2              | 2              |
| 18. | 11101000 | 4   | 4              | 0              | 4              | 0              | 1              |
| 19. | 00000000 | 0   | 3              | 0              | 4              | 0              | 0              |
| 20. | 10010001 | 3   | 3              | 0              | 4              | 0              | 0              |
| 21. | 00000002 | 2   | 4              | 1              | 4              | 0              | 0              |
| 22. | 10124112 | 12  | 3              | 0              | 4              | 2              | 1              |
| 23. | 20023223 | 14  | 2              | 0              | 4              | 1              | 1              |
| 24. | 10112112 | 9   | 3              | 0              | 4              | 1              | 1              |
| 25. | 11111121 | 9   | 5              | 0              | 4              | 1              | 0              |
| 26. | 10014121 | 10  | 5              | 0              | 4              | 1              | 1              |
| 27. | 11023101 | 9   | 3              | 0              | 4              | 2              | 1              |
| 28. | 31124123 | 17  | 3              | 0              | 4              | 2              | 3              |
| 29. | 11335221 | 18  | 4              | 0              | 5              | 3              | 2              |
| 30. | 10012111 | 7   | 4              | 0              | 4              | 1              | 1              |
| 31. | 16343215 | 25  | 5              | 1              | 5              | 3              | 4              |

Monthly averages: T (N) 1.335

T (E) 0.766

K<sub>1</sub> 3.78K<sub>2</sub> 0.29K<sub>3</sub> 4.19K<sub>4</sub> 1.23K<sub>5</sub> 1.61

## February

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 12443115 | 21  | 4              | 0              | 4              | 2              | 4              |
| 2.  | 33366462 | 33  | 5              | 0              | 5              | 3              | 4              |
| 3.  | 22323134 | 20  | 6              | 1              | 4              | 1              | 3              |
| 4.  | 21011162 | 14  | 4              | 0              | 4              | 2              | 3              |
| 5.  | 11225243 | 20  | 4              | 1              | 4              | 2              | 4              |
| 6.  | 32189999 | 50  | 6              | 3              | 7              | 7              | 6              |
| 7.  | 92222100 | 18  | 3              | 0              | 4              | 3              | 3              |
| 8.  | 00019268 | 26  | 3              | 0              | 4              | 1              | 3              |
| 9.  | 74223111 | 21  | 3              | 0              | 4              | 1              | 3              |
| 10. | 00000100 | 1   | 3              | 0              | 4              | 0              | 0              |
| 11. | 00124233 | 15  | 4              | 1              | 5              | 2              | 1              |
| 12. | 31132111 | 13  | 5              | 0              | 4              | 2              | 2              |
| 13. | 11123101 | 10  | 5              | 1              | 4              | 2              | 1              |
| 14. | 00111001 | 5   | 5              | 1              | 4              | 0              | 0              |
| 15. | 00013343 | 14  | 4              | 0              | 4              | 3              | 3              |
| 16. | 41225120 | 17  | 4              | 0              | 5              | 3              | 3              |
| 17. | 11144110 | 13  | 5              | 1              | 4              | 2              | 3              |
| 18. | 01112211 | 7   | 4              | 0              | 4              | 1              | 2              |
| 19. | 31111011 | 9   | 3              | 0              | 4              | 1              | 1              |
| 20. | 10144310 | 14  | 3              | 0              | 4              | 3              | 2              |
| 21. | 11122001 | 8   | 4              | 0              | 4              | 1              | 0              |
| 22. | 00021008 | 11  | 2              | 0              | 4              | 1              | 4              |
| 23. | 53212423 | 22  | 5              | 1              | 4              | 3              | 2              |
| 24. | 23443576 | 34  | 4              | 0              | 4              | 3              | 6              |
| 25. | 43253243 | 26  | 3              | 1              | 4              | 2              | 5              |
| 26. | 42166399 | 40  | 4              | 1              | 5              | 3              | 7              |
| 27. | 32233455 | 27  | 6              | 0              | 5              | 3              | 5              |
| 28. | 21422125 | 19  | 5              | 0              | 4              | 2              | 2              |

Monthly averages: T (N) 2.308

T (E) 1.446

K<sub>1</sub> 4.14K<sub>2</sub> 0.43K<sub>3</sub> 4.29K<sub>4</sub> 2.11K<sub>5</sub> 2.93

| March |          |     |                |                |                |                |                |
|-------|----------|-----|----------------|----------------|----------------|----------------|----------------|
| Day   | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
| 1.    | 31946328 | 36  | 4              | 2              | 4              | 6              | 3              |
| 2.    | 42377331 | 30  | 6              | 1              | 5              | 4              | 5              |
| 3.    | 21211123 | 13  | 5              | 2              | 4              | 1              | 2              |
| 4.    | 12121101 | 9   | 4              | 0              | 4              | 0              | 2              |
| 5.    | 13999997 | 56  | 6              | 4              | 7              | 6              | 5              |
| 6.    | 33646510 | 28  | 3              | 0              | 4              | 3              | 2              |
| 7.    | 33344481 | 30  | 5              | 2              | 5              | 3              | 5              |
| 8.    | 21235100 | 14  | 4              | 0              | 4              | 1              | 0              |
| 9.    | 00111110 | 5   | 4              | 0              | 4              | 0              | 0              |
| 10.   | 11123210 | 11  | 5              | 1              | 4              | 2              | 1              |
| 11.   | 10142110 | 10  | 3              | 0              | 4              | 1              | 2              |
| 12.   | 00122254 | 16  | 4              | 0              | 4              | 3              | 2              |
| 13.   | 32379759 | 45  | 6              | 3              | 6              | 7              | 5              |
| 14.   | 59899647 | 57  | 7              | 6              | 8              | 6              | 6              |
| 15.   | 24423453 | 26  | 7              | 2              | 5              | 3              | 6              |
| 16.   | 22545121 | 22  | 7              | 3              | 4              | 1              | 3              |
| 17.   | 53253423 | 27  | 7              | 3              | 5              | 3              | 4              |
| 18.   | 22824331 | 25  | 5              | 0              | 4              | 3              | 2              |
| 19.   | 21333131 | 17  | 6              | 0              | 4              | 2              | 3              |
| 20.   | 12346200 | 18  | 4              | 1              | 5              | 3              | 2              |
| 21.   | 00122032 | 10  | 4              | 0              | 4              | 2              | 2              |
| 22.   | 01101001 | 4   | 3              | 0              | 4              | 0              | 1              |
| 23.   | 06112000 | 4   | 4              | 0              | 4              | 0              | 0              |
| 24.   | 00011111 | 5   | 5              | 0              | 4              | 1              | 0              |
| 25.   | 22436564 | 32  | 5              | 1              | 5              | 4              | 6              |
| 26.   | 63355435 | 34  | 5              | 1              | 5              | 5              | 5              |
| 27.   | 52423232 | 23  | 5              | 0              | 4              | 2              | 2              |
| 28.   | 21122113 | 13  | 5              | 0              | 4              | 0              | 2              |
| 29.   | 11224331 | 17  | 4              | 0              | 4              | 2              | 4              |
| 30.   | 11133145 | 19  | 3              | 0              | 4              | 2              | 3              |
| 31.   | 44244344 | 29  | 6              | 0              | 5              | 3              | 4              |

Monthly averages: T (N) 2.722

T (E) 1.806

K<sub>1</sub> 4.84

K<sub>2</sub> 1.03

K<sub>3</sub> 4.55

K<sub>4</sub> 2.55

K<sub>5</sub> 2.87

## April

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 52324232 | 23  | 6              | 1              | 4              | 3              | 3              |
| 2.  | 10423121 | 14  | 5              | 0              | 6              | 2              | 2              |
| 3.  | 13214333 | 20  | 6              | 2              | 5              | 3              | 3              |
| 4.  | 11223232 | 16  | 6              | 2              | 4              | 2              | 3              |
| 5.  | 00111111 | 6   | 4              | 0              | 4              | 1              | 1              |
| 6.  | 12433110 | 14  | 5              | 2              | 5              | 3              | 2              |
| 7.  | 11223143 | 17  | 6              | 2              | 5              | 2              | 2              |
| 8.  | 11221222 | 13  | 4              | 0              | 4              | 2              | 1              |
| 9.  | 22001101 | 7   | 4              | 0              | 4              | 1              | 2              |
| 10. | 01132212 | 12  | 6              | 2              | 4              | 2              | 2              |
| 11. | 10339979 | 41  | 7              | 3              | 7              | 3              | 7              |
| 12. | 99959999 | 68  | 8              | 8              | 9              | 9              | 8              |
| 13. | 99999999 | 72  | 9              | 9              | 9              | 8              | 7              |
| 14. | 83576411 | 35  | 7              | 3              | 7              | 4              | 4              |
| 15. | 11134212 | 15  | 7              | 2              | 5              | 3              | 1              |
| 16. | 31344221 | 20  | 7              | 3              | 6              | 3              | 2              |
| 17. | 12462228 | 27  | 5              | 3              | 5              | 3              | 2              |
| 18. | 32131634 | 23  | 5              | 3              | 5              | 3              | 2              |
| 19. | 68649534 | 45  | 7              | 4              | 7              | 6              | 6              |
| 20. | 16655436 | 36  | 7              | 4              | 5              | 3              | 6              |
| 21. | 76776446 | 47  | 8              | 6              | 6              | 6              | 5              |
| 22. | 45635453 | 35  | 7              | 4              | 5              | 3              | 5              |
| 23. | 44645234 | 32  | 8              | 6              | 7              | 5              | 3              |
| 24. | 14376442 | 31  | 8              | 5              | 5              | 5              | 2              |
| 25. | 42343213 | 22  | 8              | 5              | 5              | 4              | 2              |
| 26. | 22299887 | 47  | 9              | 8              | 7              | 5              | 5              |
| 27. | 69967424 | 47  | 7              | 4              | 6              | 5              | 6              |
| 28. | 21334412 | 20  | 9              | 4              | 5              | 3              | 1              |
| 29. | 63343222 | 25  | 7              | 3              | 5              | 2              | 4              |
| 30. | 11233011 | 12  | 7              | 2              | 5              | 1              | 1              |

Monthly averages: T (N) 3.433

T (E) 2.696

K<sub>1</sub> 6.63K<sub>2</sub> 3.33K<sub>3</sub> 5.53K<sub>4</sub> 3.70K<sub>5</sub> 3.33

## May

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 11434242 | 21  | 7              | 4              | 5              | 3              | 2              |
| 2.  | 22211111 | 11  | 8              | 4              | 5              | 1              | 2              |
| 3.  | 11221101 | 9   | 6              | 2              | 5              | 2              | 1              |
| 4.  | 11120101 | 7   | 3              | 0              | 4              | 1              | 1              |
| 5.  | 00001301 | 5   | 4              | 0              | 4              | 0              | 0              |
| 6.  | 11011010 | 5   | 4              | 0              | 4              | 0              | 1              |
| 7.  | 01111011 | 6   | 4              | 0              | 4              | 0              | 0              |
| 8.  | 01121252 | 14  | 4              | 0              | 4              | 2              | 2              |
| 9.  | 59963323 | 40  | 7              | 7              | 8              | 7              | 6              |
| 10. | 32222139 | 24  | 7              | 3              | 5              | 4              | 3              |
| 11. | 98994213 | 45  | 7              | 5              | 7              | 6              | 6              |
| 12. | 21323323 | 19  | 7              | 2              | 5              | 2              | 2              |
| 13. | 42421100 | 14  | 6              | 1              | 5              | 3              | 0              |
| 14. | 12333374 | 26  | 5              | 2              | 5              | 3              | 3              |
| 15. | 29993436 | 45  | 7              | 6              | 7              | 5              | 8              |
| 16. | 52966783 | 46  | 7              | 5              | 5              | 3              | 6              |
| 17. | 13111113 | 12  | 6              | 2              | 5              | 2              | 1              |
| 18. | 98977442 | 50  | 9              | 8              | 8              | 5              | 6              |
| 19. | 23532212 | 20  | 9              | 5              | 5              | 2              | 3              |
| 20. | 44633672 | 35  | 8              | 4              | 6              | 4              | 6              |
| 21. | 31222223 | 16  | 7              | 4              | 4              | 3              | 1              |
| 22. | 11111101 | 7   | 7              | 3              | 4              | 2              | 0              |
| 23. | 12323222 | 17  | 5              | 2              | 4              | 2              | 3              |
| 24. | 22313326 | 22  | 4              | 1              | 4              | 3              | 4              |
| 25. | 33362357 | 32  | 6              | 2              | 4              | 3              | 6              |
| 26. | 41111101 | 10  | 2              | 0              | 5              | 1              | 2              |
| 27. | 12111111 | 9   | 5              | 2              | 4              | 1              | 1              |
| 28. | 23213111 | 14  | 6              | 2              | 4              | 2              | 2              |
| 29. | 22111111 | 10  | 6              | 3              | 4              | 1              | 1              |
| 30. | 11112112 | 10  | 4              | 1              | 4              | 1              | 1              |
| 31. | 11112111 | 9   | 3              | 2              | 4              | 2              | 1              |

Monthly averages: T (N) 2.379

T (E) 1.879

K<sub>1</sub> 5.94K<sub>2</sub> 2.65K<sub>3</sub> 4.87K<sub>4</sub> 2.45K<sub>5</sub> 2.61



| June |          |     |                |                |                |                |                |
|------|----------|-----|----------------|----------------|----------------|----------------|----------------|
| Day  | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
| 1.   | 21211121 | 11  | 3              | 1              | 5              | 2              | 2              |
| 2.   | 11112111 | 9   | 2              | 0              | 4              | 1              | 1              |
| 3.   | 12313343 | 20  | 5              | 3              | 4              | 3              | 3              |
| 4.   | 12221111 | 11  | 5              | 2              | 5              | 1              | 2              |
| 5.   | 31112011 | 10  | 4              | 2              | 4              | 0              | 2              |
| 6.   | 21146331 | 21  | 4              | 1              | 4              | 1              | 3              |
| 7.   | 54698799 | 57  | 7              | 4              | 6              | 6              | 6              |
| 8.   | 63521242 | 25  | 7              | 3              | 5              | 3              | 2              |
| 9.   | 12111000 | 6   | 7              | 3              | 4              | 1              | 0              |
| 10.  | 11111110 | 7   | 3              | 1              | 4              | 2              | 2              |
| 11.  | 11001112 | 7   | 3              | 0              | 4              | 1              | 1              |
| 12.  | 02000101 | 4   | 3              | 0              | 4              | 0              | 0              |
| 13.  | 21112010 | 8   | 3              | 2              | 4              | 1              | 0              |
| 14.  | 01110110 | 5   | 3              | 0              | 4              | 1              | 1              |
| 15.  | 01022121 | 9   | 4              | 2              | 4              | 2              | 2              |
| 16.  | 22122433 | 19  | 7              | 3              | 5              | 1              | 3              |
| 17.  | 43212111 | 15  | 5              | 1              | 4              | 1              | 1              |
| 18.  | 22121213 | 14  | 4              | 2              | 4              | 2              | 2              |
| 19.  | 22121211 | 12  | 5              | 2              | 4              | 2              | 1              |
| 20.  | 12123112 | 13  | 4              | 2              | 5              | 1              | 2              |
| 21.  | 12311112 | 12  | 6              | 3              | 5              | 2              | 1              |
| 22.  | 11011223 | 11  | 3              | 1              | 4              | 1              | 1              |
| 23.  | 12111110 | 8   | 5              | 3              | 4              | 2              | 0              |
| 24.  | 12132232 | 16  | 5              | 3              | 4              | 2              | 1              |
| 25.  | 14232434 | 23  | 5              | 3              | 4              | 2              | 3              |
| 26.  | 33333211 | 19  | 6              | 3              | 5              | 3              | 3              |
| 27.  | 32222221 | 16  | 6              | 3              | 4              | 2              | 2              |
| 28.  | 22221120 | 12  | 5              | 3              | 4              | 0              | 2              |
| 29.  | 11965311 | 27  | 6              | 3              | 5              | 2              | 3              |
| 30.  | 23222242 | 19  | 6              | 4              | 5              | 3              | 3              |

Monthly averages: T (N) 1.692  
 T (E) 1.458  
 K<sub>1</sub> 4.70  
 K<sub>2</sub> 2.10  
 K<sub>3</sub> 4.37  
 K<sub>4</sub> 1.73  
 K<sub>5</sub> 1.83

## July

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 34223323 | 23  | 7              | 4              | 5              | 3              | 5              |
| 2.  | 22446215 | 27  | 8              | 5              | 5              | 3              | 5              |
| 3.  | 22311124 | 16  | 8              | 5              | 4              | 2              | 3              |
| 4.  | 32101214 | 14  | 5              | 3              | 4              | 1              | 2              |
| 5.  | 52122322 | 19  | 7              | 4              | 4              | 2              | 3              |
| 6.  | 34343332 | 25  | 7              | 4              | 5              | 3              | 3              |
| 7.  | 33213331 | 19  | 7              | 3              | 4              | 2              | 3              |
| 8.  | 52221110 | 14  | 5              | 3              | 4              | 1              | 2              |
| 9.  | 12111111 | 9   | 4              | 2              | 4              | 1              | 1              |
| 10. | 10000051 | 7   | 4              | 1              | 4              | 1              | 1              |
| 11. | 02153232 | 18  | 5              | 2              | 5              | 3              | 2              |
| 12. | 24224334 | 24  | 8              | 4              | 4              | 1              | 4              |
| 13. | 31232121 | 15  | 5              | 2              | 4              | 2              | 1              |
| 14. | 22112111 | 11  | 3              | 0              | 4              | 1              | 0              |
| 15. | 11111000 | 5   | 3              | 1              | 4              | 1              | 1              |
| 16. | 14111311 | 13  | 5              | 3              | 5              | 4              | 5              |
| 17. | 12177227 | 29  | 3              | 2              | 5              | 3              | 2              |
| 18. | 62313211 | 19  | 5              | 2              | 5              | 0              | 2              |
| 19. | 01212221 | 11  | 4              | 3              | 5              | 3              | 4              |
| 20. | 24249512 | 29  | 4              | 1              | 5              | 1              | 2              |
| 21. | 33121111 | 13  | 6              | 3              | 4              | 2              | 5              |
| 22. | 12223426 | 22  | 6              | 4              | 5              | 4              | 6              |
| 23. | 43647584 | 41  | 7              | 3              | 4              | 2              | 3              |
| 24. | 21112233 | 15  | 9              | 8              | 9              | 8              | 7              |
| 25. | 45969999 | 60  | 7              | 7              | 9              | 8              | 7              |
| 26. | 99999873 | 63  | 7              | 3              | 6              | 5              | 3              |
| 27. | 54334323 | 27  | 7              | 4              | 5              | 3              | 2              |
| 28. | 43522312 | 22  | 7              | 2              | 4              | 0              | 1              |
| 29. | 12011101 | 7   | 6              | 1              | 4              | 2              | 2              |
| 30. | 12112221 | 12  | 6              | 2              | 5              | 2              | 2              |
| 31. | 22421123 | 17  | 7              | 2              | 5              | 1              | 4              |

Monthly averages: T (N) 2.407

T (E) 2.073

K<sub>1</sub> 5.87K<sub>2</sub> 3.00K<sub>3</sub> 4.81K<sub>4</sub> 2.42K<sub>5</sub> 3.00

## August

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 22632133 | 22  | 7              | 2              | 5              | 1              | 3              |
| 2.  | 22112326 | 19  | 5              | 1              | 4              | 3              | 2              |
| 3.  | 44432231 | 23  | 5              | 3              | 5              | 3              | 4              |
| 4.  | 23331111 | 15  | 6              | 3              | 4              | 3              | 3              |
| 5.  | 13345232 | 23  | 6              | 2              | 5              | 3              | 3              |
| 6.  | 44223111 | 18  | 4              | 0              | 4              | 3              | 2              |
| 7.  | 01112132 | 11  | 5              | 1              | 4              | 1              | 2              |
| 8.  | 11111001 | 6   | 2              | 0              | 3              | 0              | 0              |
| 9.  | 22101132 | 12  | 3              | 0              | 4              | 1              | 1              |
| 10. | 38546521 | 34  | 5              | 3              | 6              | 4              | 3              |
| 11. | 23143435 | 26  | 4              | 2              | 5              | 3              | 3              |
| 12. | 22316221 | 19  | 5              | 1              | 4              | 3              | 1              |
| 13. | 23332212 | 18  | 7              | 4              | 4              | 2              | 0              |
| 14. | 11124112 | 13  | 6              | 2              | 4              | 1              | 2              |
| 15. | 11111125 | 13  | 3              | 1              | 4              | 1              | 2              |
| 16. | 32124111 | 15  | 4              | 2              | 4              | 1              | 1              |
| 17. | 93554434 | 37  | 6              | 2              | 5              | 3              | 3              |
| 18. | 62424346 | 31  | 6              | 3              | 5              | 3              | 4              |
| 19. | 33222213 | 18  | 7              | 3              | 4              | 2              | 3              |
| 20. | 12111121 | 10  | 5              | 2              | 4              | 0              | 2              |
| 21. | 11223213 | 15  | 5              | 2              | 3              | 1              | 3              |
| 22. | 13221223 | 16  | 6              | 2              | 4              | 2              | 2              |
| 23. | 57439936 | 46  | 7              | 2              | 5              | 4              | 6              |
| 24. | 45233824 | 31  | 6              | 1              | 4              | 4              | 4              |
| 25. | 52343323 | 25  | 8              | 3              | 6              | 3              | 2              |
| 26. | 11322322 | 16  | 7              | 2              | 4              | 1              | 2              |
| 27. | 21225753 | 27  | 8              | 2              | 4              | 1              | 5              |
| 28. | 36643426 | 34  | 9              | 4              | 7              | 4              | 2              |
| 29. | 11335312 | 19  | 5              | 1              | 4              | 2              | 3              |
| 30. | 54333204 | 24  | 5              | 2              | 4              | 2              | 2              |
| 31. | 37743310 | 28  | 7              | 4              | 7              | 4              | 2              |

Monthly averages: T (N) 2.488

T (E) 1.968

K<sub>1</sub> 5.61K<sub>2</sub> 2.00K<sub>3</sub> 4.48K<sub>4</sub> 2.23K<sub>5</sub> 2.48

| September |          |     |                |                |                |                |                |
|-----------|----------|-----|----------------|----------------|----------------|----------------|----------------|
| Day       | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
| 1.        | 01112111 | 8   | 6              | 2              | 5              | 0              | 0              |
| 2.        | 12423322 | 19  | 7              | 3              | 4              | 2              | 3              |
| 3.        | 13224202 | 16  | 7              | 2              | 5              | 2              | 2              |
| 4.        | 11012123 | 11  | 5              | 2              | 4              | 1              | 2              |
| 5.        | 54344312 | 26  | 7              | 2              | 5              | 3              | 6              |
| 6.        | 31322111 | 14  | 7              | 2              | 6              | 3              | 2              |
| 7.        | 21211211 | 11  | 6              | 2              | 4              | 1              | 0              |
| 8.        | 01220008 | 13  | 6              | 1              | 4              | 2              | 0              |
| 9.        | 22242222 | 18  | 6              | 3              | 4              | 3              | 3              |
| 10.       | 23265321 | 24  | 4              | 1              | 5              | 2              | 2              |
| 11.       | 32433114 | 21  | 5              | 2              | 5              | 1              | 2              |
| 12.       | 11216220 | 15  | 3              | 2              | 4              | 3              | 1              |
| 13.       | 12212211 | 12  | 3              | 1              | 4              | 0              | 1              |
| 14.       | 10124212 | 13  | 5              | 1              | 4              | 1              | 3              |
| 15.       | 21222411 | 15  | 5              | 1              | 4              | 2              | 2              |
| 16.       | 11111302 | 10  | 6              | 1              | 4              | 1              | 1              |
| 17.       | 21101101 | 7   | 4              | 1              | 3              | 2              | 0              |
| 18.       | 10111189 | 22  | 7              | 2              | 4              | 2              | 3              |
| 19.       | 99979558 | 61  | 7              | 7              | 8              | 8              | 4              |
| 20.       | 23322223 | 19  | 7              | 2              | 4              | 2              | 3              |
| 21.       | 21311012 | 11  | 6              | 2              | 4              | 1              | 0              |
| 22.       | 13442002 | 16  | 5              | 1              | 4              | 1              | 2              |
| 23.       | 31012100 | 8   | 2              | 0              | 4              | 2              | 1              |
| 24.       | 11233112 | 14  | 3              | 0              | 4              | 2              | 2              |
| 25.       | 31334421 | 21  | 6              | 2              | 4              | 2              | 3              |
| 26.       | 13368254 | 32  | 6              | 2              | 5              | 1              | 6              |
| 27.       | 53422191 | 27  | 5              | 2              | 5              | 2              | 5              |
| 28.       | 21321111 | 12  | 6              | 2              | 4              | 2              | 1              |
| 29.       | 10127423 | 20  | 4              | 1              | 4              | 3              | 3              |
| 30.       | 12346132 | 22  | 6              | 2              | 5              | 3              | 2              |

Monthly averages: T (N) 2.171  
T (E) 1.512  
K<sub>1</sub> 5.40  
K<sub>2</sub> 1.80  
K<sub>3</sub> 4.43  
K<sub>4</sub> 2.07  
K<sub>5</sub> 2.17

## October

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 22334311 | 19  | 6              | 1              | 4              | 3              | 2              |
| 2.  | 22223229 | 24  | 5              | 2              | 5              | 3              | 3              |
| 3.  | 22699985 | 50  | 8              | 7              | 8              | 7              | 4              |
| 4.  | 22258233 | 27  | 7              | 2              | 5              | 2              | 3              |
| 5.  | 10152001 | 10  | 6              | 2              | 4              | 2              | 2              |
| 6.  | 00113103 | 9   | 7              | 2              | 4              | 1              | 1              |
| 7.  | 32133387 | 30  | 6              | 1              | 4              | 3              | 5              |
| 8.  | 34844124 | 30  | 5              | 2              | 5              | 3              | 4              |
| 9.  | 53464242 | 30  | 7              | 3              | 5              | 4              | 3              |
| 10. | 12254977 | 37  | 7              | 3              | 5              | 5              | 6              |
| 11. | 65766443 | 41  | 7              | 3              | 5              | 3              | 6              |
| 12. | 32441000 | 14  | 4              | 2              | 4              | 2              | 2              |
| 13. | 12152159 | 26  | 6              | 2              | 5              | 3              | 3              |
| 14. | 99664348 | 49  | 8              | 6              | 9              | 7              | 6              |
| 15. | 44648323 | 34  | 6              | 2              | 5              | 4              | 2              |
| 16. | 36733111 | 25  | 3              | 0              | 5              | 2              | 2              |
| 17. | 00499755 | 39  | 6              | 2              | 5              | 4              | 2              |
| 18. | 31111021 | 10  | 3              | 0              | 4              | 2              | 0              |
| 19. | 12567345 | 33  | 7              | 3              | 6              | 4              | 3              |
| 20. | 23359999 | 49  | 7              | 4              | 6              | 6              | 7              |
| 21. | 54478512 | 36  | 7              | 3              | 5              | 3              | 3              |
| 22. | 21679899 | 51  | 7              | 4              | 7              | 9              | 5              |
| 23. | 95662213 | 34  | 4              | 2              | 5              | 6              | 6              |
| 24. | 00135937 | 28  | 5              | 2              | 4              | 2              | 4              |
| 25. | 14354221 | 22  | 3              | 1              | 5              | 3              | 2              |
| 26. | 11744311 | 22  | 3              | 3              | 5              | 4              | 2              |
| 27. | 11312213 | 14  | 7              | 3              | 5              | 3              | 2              |
| 28. | 23474247 | 33  | 7              | 3              | 6              | 3              | 6              |
| 29. | 22352114 | 20  | 5              | 3              | 4              | 3              | 2              |
| 30. | 22244422 | 21  | 6              | 2              | 5              | 2              | 2              |
| 31. | 10133111 | 11  | 3              | 1              | 4              | 1              | 2              |

Monthly averages: T (N) 3.440

T (E) 2.444

K<sub>1</sub> 5.47K<sub>2</sub> 2.48K<sub>3</sub> 5.10K<sub>4</sub> 3.52K<sub>5</sub> 3.29

## November

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 01132201 | 10  | 3              | 1              | 4              | 2              | 1              |
| 2.  | 01111111 | 7   | 3              | 1              | 3              | 0              | 1              |
| 3.  | 22132113 | 15  | 5              | 2              | 5              | 2              | 3              |
| 4.  | 00111223 | 10  | 2              | 0              | 3              | 1              | 2              |
| 5.  | 32135111 | 17  | 3              | 0              | 4              | 4              | 2              |
| 6.  | 23112112 | 13  | 2              | 1              | 4              | 1              | 3              |
| 7.  | 33234212 | 20  | 3              | 0              | 4              | 3              | 2              |
| 8.  | 13285973 | 38  | 5              | 3              | 7              | 6              | 2              |
| 9.  | 10223001 | 9   | 5              | 2              | 4              | 0              | 2              |
| 10. | 01254112 | 16  | 3              | 1              | 5              | 4              | 2              |
| 11. | 22319878 | 40  | 5              | 3              | 6              | 4              | 7              |
| 12. | 98999311 | 49  | 5              | 2              | 6              | 6              | 4              |
| 13. | 00113103 | 9   | 2              | 0              | 5              | 1              | 1              |
| 14. | 32458565 | 38  | 5              | 3              | 7              | 6              | 3              |
| 15. | 67522421 | 29  | 3              | 1              | 6              | 3              | 2              |
| 16. | 24334219 | 28  | 6              | 2              | 6              | 3              | 2              |
| 17. | 53565584 | 41  | 6              | 4              | 7              | 3              | 4              |
| 18. | 44476473 | 39  | 5              | 1              | 5              | 3              | 6              |
| 19. | 32123531 | 20  | 3              | 0              | 4              | 3              | 3              |
| 20. | 22133113 | 16  | 4              | 1              | 5              | 2              | 4              |
| 21. | 21222146 | 20  | 4              | 1              | 4              | 2              | 3              |
| 22. | 23231100 | 12  | 3              | 0              | 4              | 3              | 1              |
| 23. | 11136391 | 25  | 4              | 1              | 5              | 6              | 3              |
| 24. | 40113110 | 11  | 3              | 0              | 4              | 1              | 2              |
| 25. | 18559522 | 37  | 5              | 3              | 7              | 4              | 3              |
| 26. | 21122220 | 12  | 4              | 0              | 4              | 2              | 1              |
| 27. | 10010000 | 2   | 4              | 0              | 4              | 1              | 0              |
| 28. | 11111101 | 7   | 4              | 0              | 4              | 1              | 1              |
| 29. | 12011000 | 5   | 3              | 0              | 4              | 1              | 1              |
| 30. | 00010000 | 1   | 3              | 0              | 3              | 0              | 0              |

Monthly averages: T (N) 2.392  
T (E) 1.654  
K<sub>1</sub> 3.83  
K<sub>2</sub> 1.10  
K<sub>3</sub> 4.77  
K<sub>4</sub> 2.60  
K<sub>5</sub> 2.37

## December

| Day | T        | Sum | K <sub>1</sub> | K <sub>2</sub> | K <sub>3</sub> | K <sub>4</sub> | K <sub>5</sub> |
|-----|----------|-----|----------------|----------------|----------------|----------------|----------------|
| 1.  | 00112221 | 9   | 3              | 0              | 4              | 1              | 2              |
| 2.  | 22157022 | 21  | 2              | 1              | 6              | 3              | 3              |
| 3.  | 11135232 | 18  | 4              | 0              | 5              | 3              | 1              |
| 4.  | 21435111 | 18  | 6              | 2              | 5              | 3              | 1              |
| 5.  | 30111112 | 10  | 3              | 0              | 4              | 1              | 2              |
| 6.  | 22111100 | 8   | 4              | 0              | 3              | 2              | 0              |
| 7.  | 00010001 | 2   | 1              | 0              | 3              | 1              | 0              |
| 8.  | 01211535 | 18  | 1              | 0              | 5              | 2              | 3              |
| 9.  | 12112212 | 12  | 2              | 0              | 5              | 1              | 2              |
| 10. | 14212000 | 10  | 0              | 0              | 4              | 2              | 0              |
| 11. | 02010021 | 6   | 2              | 0              | 4              | 2              | 1              |
| 12. | 53234749 | 37  | 5              | 0              | 5              | 4              | 6              |
| 13. | 22232101 | 13  | 5              | 1              | 4              | 2              | 1              |
| 14. | 10111021 | 7   | 0              | 0              | 4              | 1              | 0              |
| 15. | 10100013 | 6   | 3              | 0              | 4              | 0              | 0              |
| 16. | 10211011 | 7   | 2              | 0              | 4              | 1              | 0              |
| 17. | 10012114 | 10  | 3              | 0              | 4              | 0              | 1              |
| 18. | 42123311 | 17  | 2              | 0              | 4              | 3              | 3              |
| 19. | 21112121 | 11  | 4              | 0              | 4              | 1              | 2              |
| 20. | 01011111 | 6   | 4              | 0              | 4              | 2              | 1              |
| 21. | 10011111 | 6   | 4              | 0              | 4              | 0              | 1              |
| 22. | 00111200 | 5   | 3              | 0              | 4              | 0              | 0              |
| 23. | 01112111 | 8   | 4              | 1              | 4              | 0              | 2              |
| 24. | 22122122 | 14  | 5              | 0              | 4              | 1              | 3              |
| 25. | 11112112 | 10  | 4              | 0              | 4              | 2              | 1              |
| 26. | 11121010 | 7   | 3              | 0              | 4              | 2              | 1              |
| 27. | 11101122 | 9   | 4              | 0              | 4              | 0              | 1              |
| 28. | 41111211 | 12  | 4              | 1              | 4              | 2              | 3              |
| 29. | 14775662 | 36  | 6              | 4              | 7              | 5              | 3              |
| 30. | 26446342 | 31  | 4              | 2              | 5              | 5              | 3              |
| 31. | 12345412 | 22  | 6              | 2              | 5              | 3              | 4              |

Monthly averages: T (N) 1.573  
T (E) 1.654  
K<sub>1</sub> 3.32  
K<sub>2</sub> 0.48  
K<sub>3</sub> 4.32  
K<sub>4</sub> 1.78  
K<sub>5</sub> 1.65

*II. Average amplitudes for different periods*

| Hour<br>Parameter | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| January North     |     |     |     |     |     |     |     |     |     |     |     |     |
| 1.                | 7   | 7   | 6   | 6   | 7   | 7   | 9   | 14  | 19  | 20  | 13  | 16  |
| 2.                | 5   | 4   | 2   | 2   | 2   | 3   | 1   | 6   | 11  | 9   | 5   | 7   |
| 3.                | 36  | 33  | 35  | 35  | 35  | 35  | 34  | 36  | 35  | 37  | 37  | 35  |
| 4.                | 31  | 37  | 37  | 31  | 42  | 37  | 39  | 38  | 38  | 50  | 46  | 55  |
| 5.                | 50  | 57  | 32  | 45  | 30  | 49  | 39  | 38  | 40  | 30  | 30  | 48  |
| 6.                | -5  | +4  | -2  | -9  | -21 | -3  | -3  | +15 | +62 | +48 | -11 | -67 |
| January East      |     |     |     |     |     |     |     |     |     |     |     |     |
| 1.                | 7   | 6   | 5   | 4   | 11  | 10  | 13  | 17  | 19  | 17  | 16  | 21  |
| 2.                | 6   | 3   | 3   | 2   | 3   | 2   | 4   | 3   | 5   | 5   | 3   | 9   |
| 3.                | 35  | 30  | 31  | 35  | 33  | 35  | 35  | 35  | 33  | 37  | 32  | 36  |
| 4.                | 30  | 24  | 25  | 22  | 29  | 28  | 34  | 30  | 32  | 35  | 36  | 38  |
| 5.                | 45  | 45  | 26  | 47  | 43  | 28  | 29  | 21  | 27  | 24  | 22  | 27  |
| 6.                | +1  | +1  | +4  | +5  | -19 | -22 | -19 | -30 | +20 | +46 | +44 | +22 |
| February North    |     |     |     |     |     |     |     |     |     |     |     |     |
| 1.                | 3   | 5   | 8   | 6   | 9   | 13  | 13  | 21  | 19  | 17  | 17  | 13  |
| 2.                | 3   | 2   | 4   | 3   | 2   | 3   | 5   | 12  | 12  | 7   | 8   | 10  |
| 3.                | 33  | 35  | 35  | 33  | 35  | 34  | 35  | 37  | 39  | 35  | 37  | 37  |
| 4.                | 37  | 47  | 65  | 42  | 53  | 40  | 42  | 46  | 49  | 59  | 61  | 55  |
| 5.                | 64  | 98  | 53  | 65  | 35  | 43  | 30  | 37  | 46  | 40  | 83  | 103 |
| 6.                | +25 | -8  | -26 | -16 | -33 | +5  | +6  | +24 | +36 | -24 | -39 | -56 |
| February East     |     |     |     |     |     |     |     |     |     |     |     |     |
| 1.                | 4   | 4   | 6   | 6   | 7   | 15  | 17  | 23  | 20  | 24  | 19  | 24  |
| 2.                | 5   | 4   | 2   | 3   | 1   | 3   | 5   | 8   | 6   | 9   | 9   | 9   |
| 3.                | 35  | 36  | 36  | 35  | 36  | 35  | 35  | 32  | 37  | 35  | 43  | 38  |
| 4.                | 28  | 44  | 40  | 38  | 35  | 30  | 23  | 34  | 29  | 26  | 35  | 53  |
| 5.                | 72  | 56  | 76  | 37  | 26  | 25  | 46  | 25  | 29  | 42  | 42  | 41  |
| 6.                | +2  | +13 | -17 | +9  | -13 | -17 | -27 | -18 | -7  | +29 | +28 | +20 |



*and hourly means of earth current elements*

| 12        | 13  | 14  | 15 | 16 | 17  | 18  | 19  | 20  | 21  | 22  | 23 | Averages |
|-----------|-----|-----|----|----|-----|-----|-----|-----|-----|-----|----|----------|
| Component |     |     |    |    |     |     |     |     |     |     |    |          |
| 16        | 15  | 13  | 10 | 9  | 9   | 6   | 6   | 5   | 10  | 6   | 8  | 10.0     |
| 13        | 8   | 6   | 4  | 2  | 2   | 3   | 2   | 3   | 4   | 2   | 5  | 4.6      |
| 38        | 38  | 33  | 35 | 35 | 34  | 33  | 35  | 41  | 32  | 36  | 37 | 35.4     |
| 46        | 55  | 43  | 33 | 32 | 31  | 34  | 34  | 43  | 39  | 38  | 42 | 39.4     |
| 73        | 60  | 50  | 37 | 28 | 50  | 43  | 42  | 49  | 73  | 48  | 69 | 46.4     |
| -87       | -65 | -26 | +5 | +8 | +11 | +17 | +22 | +48 | +49 | +13 | -1 |          |

|           |     |    |    |     |     |     |    |    |     |    |     |      |
|-----------|-----|----|----|-----|-----|-----|----|----|-----|----|-----|------|
| Component |     |    |    |     |     |     |    |    |     |    |     |      |
| 20        | 20  | 21 | 16 | 30  | 10  | 6   | 6  | 7  | 10  | 7  | 9   | 12.0 |
| 13        | 6   | 5  | 2  | 3   | 5   | 3   | 4  | 3  | 8   | 5  | 6   | 4.6  |
| 37        | 37  | 33 | 33 | 35  | 34  | 33  | 35 | 37 | 31  | 35 | 37  | 34.3 |
| 42        | 34  | 37 | 23 | 26  | 30  | 21  | 30 | 36 | 35  | 39 | 35  | 30.8 |
| 24        | 33  | 31 | 30 | 31  | 38  | 43  | 43 | 53 | 72  | 52 | 61  | 36.5 |
| +15       | +12 | +6 | -7 | -17 | -13 | -17 | -8 | -9 | -13 | +9 | -10 |      |

|           |     |     |     |    |    |     |     |     |     |     |     |      |
|-----------|-----|-----|-----|----|----|-----|-----|-----|-----|-----|-----|------|
| Component |     |     |     |    |    |     |     |     |     |     |     |      |
| 13        | 19  | 13  | 12  | 11 | 10 | 8   | 5   | 7   | 6   | 10  | 6   | 11.0 |
| 10        | 12  | 5   | 8   | 6  | 5  | 2   | 5   | 4   | 6   | 6   | 5   | 6.0  |
| 37        | 39  | 36  | 39  | 37 | 35 | 35  | 34  | 35  | 33  | 38  | 36  | 35.8 |
| 80        | 71  | 62  | 52  | 40 | 45 | 40  | 37  | 56  | 45  | 55  | 58  | 51.5 |
| 83        | 71  | 85  | 78  | 49 | 58 | 97  | 132 | 117 | 166 | 91  | 123 | 76.9 |
| -89       | -44 | +15 | +10 | +9 | +9 | +40 | +15 | +39 | +31 | +37 | +33 |      |

|           |    |    |    |    |     |    |     |     |     |     |     |      |
|-----------|----|----|----|----|-----|----|-----|-----|-----|-----|-----|------|
| Component |    |    |    |    |     |    |     |     |     |     |     |      |
| 28        | 26 | 27 | 21 | 18 | 13  | 13 | 7   | 11  | 10  | 13  | 8   | 15.1 |
| 9         | 15 | 9  | 6  | 5  | 4   | 3  | 8   | 5   | 6   | 10  | 6   | 6.1  |
| 35        | 39 | 35 | 34 | 35 | 35  | 36 | 34  | 37  | 36  | 37  | 37  | 35.6 |
| 46        | 40 | 55 | 47 | 31 | 49  | 64 | 40  | 47  | 40  | 47  | 30  | 39.6 |
| 53        | 43 | 34 | 34 | 48 | 37  | 71 | 76  | 66  | 157 | 72  | 100 | 54.4 |
| +11       | -1 | -5 | 0  | +9 | +13 | +3 | -10 | -15 | -19 | +10 | +1  |      |

| Hour<br>Parameter | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10   | 11   |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| 1.                | 6   | 7   | 10  | 10  | 12  | 15  | 21  | 23  | 23  | 25  | 17   | 20   |
| 2.                | 7   | 3   | 3   | 4   | 6   | 11  | 12  | 14  | 13  | 17  | 17   | 13   |
| 3.                | 31  | 36  | 35  | 32  | 37  | 49  | 39  | 40  | 42  | 46  | 51   | 37   |
| 4.                | 52  | 43  | 35  | 48  | 45  | 43  | 48  | 77  | 75  | 65  | 63   | 74   |
| 5.                | 49  | 66  | 71  | 45  | 52  | 57  | 56  | 52  | 57  | 41  | 68   | 129  |
| 6.                | -2  | -4  | +9  | +22 | -21 | -22 | +18 | +54 | +80 | -15 | -111 | -141 |
| March East        |     |     |     |     |     |     |     |     |     |     |      |      |
| 1.                | 8   | 7   | 8   | 5   | 5   | 17  | 27  | 31  | 31  | 34  | 32   | 30   |
| 2.                | 4   | 2   | 3   | 1   | 6   | 10  | 14  | 14  | 15  | 14  | 17   | 14   |
| 3.                | 38  | 38  | 39  | 33  | 35  | 54  | 35  | 34  | 37  | 45  | 41   | 35   |
| 4.                | 33  | 41  | 50  | 38  | 35  | 42  | 37  | 53  | 52  | 45  | 63   | 49   |
| 5.                | 54  | 52  | 28  | 39  | 39  | 35  | 48  | 32  | 34  | 28  | 32   | 63   |
| 6.                | +5  | -5  | -6  | +8  | -11 | -19 | -27 | -11 | +10 | +62 | +64  | +41  |
| April North       |     |     |     |     |     |     |     |     |     |     |      |      |
| 1.                | 11  | 12  | 15  | 14  | 20  | 25  | 25  | 29  | 30  | 31  | 24   | 25   |
| 2.                | 14  | 17  | 12  | 20  | 20  | 22  | 28  | 31  | 28  | 31  | 37   | 19   |
| 3.                | 36  | 42  | 40  | 42  | 45  | 59  | 82  | 79  | 51  | 55  | 53   | 49   |
| 4.                | 58  | 59  | 58  | 58  | 50  | 77  | 109 | 107 | 73  | 88  | 70   | 72   |
| 5.                | 85  | 144 | 104 | 80  | 67  | 49  | 35  | 48  | 73  | 60  | 73   | 129  |
| 6.                | +22 | +28 | +20 | +14 | +11 | +27 | +85 | +97 | +83 | -15 | -138 | -195 |
| April East        |     |     |     |     |     |     |     |     |     |     |      |      |
| 1.                | 14  | 12  | 14  | 17  | 28  | 40  | 45  | 59  | 60  | 61  | 59   | 53   |
| 2.                | 16  | 13  | 13  | 16  | 18  | 30  | 33  | 34  | 35  | 37  | 34   | 33   |
| 3.                | 44  | 38  | 36  | 42  | 35  | 44  | 53  | 53  | 52  | 48  | 44   | 45   |
| 4.                | 76  | 44  | 52  | 56  | 36  | 77  | 70  | 60  | 49  | 83  | 63   | 77   |
| 5.                | 44  | 115 | 61  | 57  | 100 | 46  | 35  | 33  | 70  | 44  | 59   | 73   |
| 6.                | +2  | +5  | +28 | -3  | +21 | -4  | +1  | +45 | +51 | +40 | +29  | +25  |

| 12        | 13  | 14 | 15  | 16   | 17  | 18  | 19  | 20 | 21 | 22  | 23  | Averages |
|-----------|-----|----|-----|------|-----|-----|-----|----|----|-----|-----|----------|
| Component |     |    |     |      |     |     |     |    |    |     |     |          |
| 21        | 19  | 19 | 17  | 13   | 10  | 12  | 11  | 9  | 8  | 8   | 10  | 14.4     |
| 17        | 15  | 12 | 10  | 9    | 6   | 4   | 3   | 2  | 5  | 3   | 6   | 8.8      |
| 45        | 50  | 42 | 48  | 38   | 39  | 35  | 34  | 34 | 38 | 38  | 39  | 39.8     |
| 78        | 91  | 73 | 65  | 55   | 61  | 41  | 52  | 50 | 50 | 48  | 51  | 58.0     |
| 92        | 129 | 83 | 60  | 75   | 56  | 86  | 121 | 51 | 74 | 85  | 107 | 73.4     |
| 137       | -62 | 0  | +88 | +109 | +63 | +21 | +14 | +2 | +1 | +27 | +6  |          |

|           |     |     |     |    |     |     |     |     |     |     |    |      |
|-----------|-----|-----|-----|----|-----|-----|-----|-----|-----|-----|----|------|
| Component |     |     |     |    |     |     |     |     |     |     |    |      |
| 30        | 35  | 28  | 25  | 23 | 16  | 9   | 10  | 7   | 7   | 10  | 10 | 18.5 |
| 16        | 17  | 16  | 13  | 12 | 9   | 6   | 7   | 5   | 2   | 4   | 7  | 9.5  |
| 41        | 41  | 40  | 38  | 42 | 35  | 35  | 35  | 34  | 37  | 34  | 35 | 38.0 |
| 62        | 52  | 58  | 60  | 48 | 56  | 46  | 50  | 48  | 50  | 39  | 53 | 48.3 |
| 47        | 91  | 56  | 55  | 51 | 41  | 73  | 117 | 36  | 56  | 84  | 89 | 53.3 |
| +29       | +16 | +14 | +10 | 0  | -24 | -20 | -31 | -23 | -35 | -39 | -3 |      |

|           |      |     |     |      |      |     |     |     |    |     |    |      |
|-----------|------|-----|-----|------|------|-----|-----|-----|----|-----|----|------|
| Component |      |     |     |      |      |     |     |     |    |     |    |      |
| 25        | 27   | 21  | 22  | 19   | 17   | 11  | 11  | 10  | 7  | 11  | 10 | 18.8 |
| 24        | 29   | 17  | 16  | 14   | 12   | 5   | 7   | 9   | 6  | 10  | 17 | 18.5 |
| 52        | 51   | 69  | 62  | 42   | 41   | 39  | 35  | 40  | 39 | 37  | 41 | 49.2 |
| 94        | 64   | 92  | 87  | 95   | 67   | 73  | 58  | 44  | 80 | 95  | 90 | 75.8 |
| 98        | 126  | 38  | 145 | 66   | 134  | 94  | 92  | 95  | 99 | 89  | 86 | 87.8 |
| -220      | -118 | -57 | +71 | +105 | +100 | +39 | +16 | +11 | +1 | +19 | -6 |      |

|           |    |     |     |     |     |     |     |     |    |     |     |      |
|-----------|----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|------|
| Component |    |     |     |     |     |     |     |     |    |     |     |      |
| 51        | 47 | 42  | 44  | 37  | 32  | 26  | 19  | 16  | 14 | 14  | 17  | 34.2 |
| 34        | 35 | 24  | 35  | 24  | 19  | 15  | 11  | 10  | 10 | 11  | 14  | 23.1 |
| 48        | 46 | 70  | 75  | 40  | 59  | 54  | 32  | 39  | 38 | 39  | 52  | 46.1 |
| 76        | 70 | 79  | 100 | 65  | 60  | 65  | 62  | 63  | 86 | 62  | 83  | 67.3 |
| 89        | 54 | 39  | 113 | 70  | 98  | 78  | 80  | 83  | 65 | 81  | 56  | 68.4 |
| -1        | -7 | -21 | -39 | -43 | -30 | -35 | -14 | -19 | -2 | -11 | -17 |      |

| Hour<br>Parameter | 0   | 1   | 2   | 3   | 4   | 5    | 6    | 7   | 8   | 9    | 10   | 11   |
|-------------------|-----|-----|-----|-----|-----|------|------|-----|-----|------|------|------|
| May North         |     |     |     |     |     |      |      |     |     |      |      |      |
| 1.                | 9   | 11  | 15  | 15  | 20  | 22   | 24   | 30  | 28  | 27   | 22   | 21   |
| 2.                | 6   | 7   | 9   | 9   | 16  | 19   | 25   | 35  | 35  | 22   | 19   | 16   |
| 3.                | 48  | 37  | 38  | 42  | 39  | 42   | 55   | 59  | 56  | 53   | 48   | 45   |
| 4.                | 48  | 74  | 52  | 52  | 46  | 47   | 72   | 80  | 66  | 70   | 55   | 52   |
| 5.                | 87  | 49  | 88  | 84  | 62  | 115  | 71   | 60  | 58  | 60   | 55   | 44   |
| 6.                | +20 | +35 | +26 | +11 | +72 | +89  | +127 | +67 | +12 | -102 | -174 | -213 |
| May East          |     |     |     |     |     |      |      |     |     |      |      |      |
| 1.                | 12  | 10  | 16  | 17  | 21  | 34   | 48   | 60  | 52  | 54   | 41   | 46   |
| 2.                | 13  | 10  | 12  | 12  | 16  | 20   | 29   | 42  | 37  | 30   | 27   | 28   |
| 3.                | 31  | 38  | 34  | 39  | 35  | 32   | 37   | 49  | 59  | 56   | 47   | 42   |
| 4.                | 62  | 58  | 59  | 54  | 40  | 39   | 46   | 49  | 69  | 59   | 52   | 42   |
| 5.                | 60  | 42  | 45  | 80  | 42  | 53   | 55   | 77  | 35  | 44   | 46   | 51   |
| 6.                | +3  | -2  | +9  | -15 | +1  | +17  | +46  | +42 | +55 | +38  | +7   | -21  |
| June North        |     |     |     |     |     |      |      |     |     |      |      |      |
| 1.                | 7   | 10  | 16  | 14  | 16  | 17   | 19   | 19  | 20  | 16   | 14   | 10   |
| 2.                | 9   | 11  | 12  | 14  | 17  | 18   | 18   | 14  | 19  | 17   | 8    | 8    |
| 3.                | 36  | 47  | 39  | 38  | 38  | 41   | 40   | 38  | 37  | 36   | 36   | 35   |
| 4.                | 56  | 50  | 44  | 41  | 46  | 56   | 34   | 47  | 56  | 43   | 47   | 56   |
| 5.                | 41  | 44  | 58  | 31  | 37  | 33   | 50   | 54  | 38  | 46   | 62   | 49   |
| 6.                | +5  | +20 | 0   | +27 | +58 | +107 | +114 | +63 | +13 | -77  | -129 | -179 |
| June East         |     |     |     |     |     |      |      |     |     |      |      |      |
| 1.                | 7   | 11  | 16  | 16  | 16  | 21   | 26   | 29  | 34  | 38   | 34   | 32   |
| 2.                | 7   | 8   | 12  | 11  | 12  | 14   | 20   | 25  | 26  | 27   | 26   | 26   |
| 3.                | 36  | 39  | 40  | 31  | 28  | 32   | 34   | 29  | 30  | 31   | 28   | 25   |
| 4.                | 38  | 46  | 49  | 36  | 29  | 31   | 31   | 32  | 41  | 36   | 46   | 54   |
| 5.                | 47  | 35  | 38  | 29  | 34  | 25   | 29   | 37  | 44  | 49   | 68   | 46   |
| 6.                | -7  | +5  | -2  | -13 | -31 | -4   | +53  | +77 | +68 | +30  | +7   | -18  |

| 12        | 13  | 14  | 15  | 16  | 17  | 18  | 19 | 20 | 21 | 22  | 23  | Averages |
|-----------|-----|-----|-----|-----|-----|-----|----|----|----|-----|-----|----------|
| Component |     |     |     |     |     |     |    |    |    |     |     |          |
| 16        | 16  | 13  | 13  | 12  | 10  | 8   | 5  | 10 | 11 | 12  | 7   | 15.7     |
| 12        | 9   | 5   | 6   | 2   | 2   | 2   | 3  | 8  | 5  | 6   | 5   | 11.6     |
| 38        | 39  | 39  | 38  | 36  | 37  | 35  | 37 | 37 | 37 | 37  | 37  | 42.1     |
| 55        | 60  | 42  | 46  | 49  | 48  | 39  | 50 | 54 | 46 | 45  | 49  | 54.2     |
| 62        | 56  | 59  | 64  | 52  | 52  | 77  | 87 | 83 | 86 | 138 | 86  | 71.3     |
| -149      | -74 | -16 | +49 | +71 | +74 | +47 | -1 | -2 | -6 | +19 | +16 |          |

|           |    |     |     |     |     |     |    |    |    |    |    |      |
|-----------|----|-----|-----|-----|-----|-----|----|----|----|----|----|------|
| Component |    |     |     |     |     |     |    |    |    |    |    |      |
| 42        | 30 | 30  | 24  | 26  | 20  | 13  | 12 | 11 | 12 | 15 | 12 | 27.4 |
| 24        | 21 | 19  | 17  | 16  | 12  | 9   | 8  | 9  | 9  | 12 | 11 | 18.4 |
| 30        | 32 | 30  | 31  | 33  | 30  | 32  | 35 | 32 | 30 | 31 | 37 | 36.8 |
| 46        | 56 | 48  | 53  | 49  | 47  | 45  | 49 | 63 | 49 | 48 | 58 | 51.7 |
| 56        | 39 | 51  | 48  | 72  | 62  | 66  | 46 | 67 | 69 | 74 | 61 | 55.9 |
| +6        | -8 | -24 | -13 | -50 | -40 | -33 | -5 | -8 | +5 | -1 | -9 |      |

|           |     |     |     |     |     |     |    |    |     |    |    |      |
|-----------|-----|-----|-----|-----|-----|-----|----|----|-----|----|----|------|
| Component |     |     |     |     |     |     |    |    |     |    |    |      |
| 14        | 13  | 9   | 9   | 5   | 8   | 5   | 6  | 7  | 8   | 10 | 7  | 11.6 |
| 13        | 8   | 7   | 2   | 4   | 4   | 4   | 7  | 5  | 9   | 9  | 7  | 10.2 |
| 37        | 37  | 37  | 34  | 37  | 37  | 36  | 37 | 35 | 37  | 37 | 37 | 37.5 |
| 45        | 52  | 43  | 50  | 43  | 49  | 34  | 47 | 40 | 44  | 50 | 35 | 46.2 |
| 43        | 51  | 52  | 46  | 41  | 31  | 43  | 42 | 51 | 64  | 52 | 61 | 46.7 |
| -162      | -95 | -24 | +34 | +74 | +77 | +48 | +5 | 0  | +14 | +4 | -1 |      |

|           |     |    |     |     |     |     |     |    |     |    |    |      |
|-----------|-----|----|-----|-----|-----|-----|-----|----|-----|----|----|------|
| Component |     |    |     |     |     |     |     |    |     |    |    |      |
| 27        | 26  | 21 | 22  | 19  | 14  | 13  | 8   | 8  | 8   | 12 | 7  | 19.4 |
| 21        | 22  | 18 | 14  | 10  | 11  | 8   | 9   | 6  | 11  | 12 | 5  | 15.0 |
| 28        | 35  | 31 | 32  | 31  | 32  | 31  | 32  | 35 | 29  | 32 | 32 | 31.8 |
| 35        | 53  | 38 | 43  | 41  | 33  | 37  | 51  | 35 | 37  | 45 | 41 | 39.9 |
| 63        | 62  | 61 | 55  | 45  | 45  | 63  | 66  | 69 | 69  | 44 | 43 | 48.6 |
| -13       | +11 | -7 | -43 | -39 | -41 | -32 | -20 | +3 | +16 | +3 | -2 |      |

| Hour<br>Parameter | 0   | 1   | 2   | 3   | 4   | 5    | 6    | 7    | 8    | 9    | 10   | 11   |
|-------------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|
| July North        |     |     |     |     |     |      |      |      |      |      |      |      |
| 1.                | 13  | 12  | 15  | 15  | 20  | 17   | 21   | 22   | 18   | 16   | 17   | 18   |
| 2.                | 18  | 8   | 12  | 15  | 16  | 20   | 19   | 19   | 20   | 13   | 16   | 13   |
| 3.                | 41  | 36  | 39  | 46  | 45  | 41   | 40   | 44   | 43   | 39   | 41   | 40   |
| 4.                | 51  | 67  | 46  | 50  | 69  | 44   | 53   | 63   | 62   | 57   | 69   | 53   |
| 5.                | 70  | 60  | 95  | 60  | 59  | 106  | 53   | 57   | 51   | 35   | 55   | 95   |
| 6.                | +52 | +57 | +19 | +35 | +62 | +115 | +117 | +66  | -15  | -93  | -192 | -214 |
| July East         |     |     |     |     |     |      |      |      |      |      |      |      |
| 1.                | 20  | 15  | 20  | 24  | 26  | 28   | 34   | 43   | 41   | 37   | 37   | 38   |
| 2.                | 15  | 13  | 17  | 17  | 22  | 19   | 21   | 29   | 28   | 23   | 28   | 30   |
| 3.                | 38  | 32  | 33  | 29  | 30  | 28   | 36   | 35   | 41   | 33   | 48   | 45   |
| 4.                | 57  | 59  | 66  | 45  | 31  | 39   | 46   | 63   | 59   | 60   | 70   | 50   |
| 5.                | 45  | 46  | 45  | 66  | 87  | 54   | 49   | 41   | 40   | 41   | 60   | 113  |
| 6.                | +30 | +10 | -5  | -13 | -34 | +3   | +63  | +106 | +77  | +66  | +6   | -20  |
| August North      |     |     |     |     |     |      |      |      |      |      |      |      |
| 1.                | 5   | 10  | 9   | 11  | 16  | 18   | 17   | 17   | 19   | 17   | 17   | 15   |
| 2.                | 10  | 12  | 9   | 14  | 13  | 21   | 18   | 19   | 17   | 16   | 15   | 13   |
| 3.                | 35  | 36  | 36  | 35  | 36  | 51   | 42   | 48   | 46   | 42   | 41   | 38   |
| 4.                | 55  | 44  | 45  | 38  | 51  | 60   | 56   | 74   | 63   | 49   | 61   | 56   |
| 5.                | 67  | 74  | 91  | 106 | 59  | 45   | 44   | 44   | 44   | 34   | 38   | 63   |
| 6.                | +40 | +19 | +15 | +31 | +64 | +132 | +145 | +80  | -9   | -115 | -198 | -205 |
| August East       |     |     |     |     |     |      |      |      |      |      |      |      |
| 1.                | 13  | 13  | 13  | 17  | 23  | 32   | 38   | 39   | 40   | 37   | 38   | 41   |
| 2.                | 12  | 9   | 13  | 10  | 13  | 17   | 20   | 20   | 20   | 18   | 24   | 20   |
| 3.                | 37  | 35  | 38  | 33  | 33  | 35   | 35   | 39   | 44   | 41   | 39   | 28   |
| 4.                | 57  | 39  | 51  | 39  | 51  | 46   | 48   | 46   | 54   | 46   | 51   | 55   |
| 5.                | 41  | 53  | 32  | 63  | 28  | 35   | 22   | 37   | 21   | 28   | 35   | 57   |
| 6.                | +5  | -10 | -9  | -22 | -10 | -4   | +51  | +107 | +133 | +70  | -3   | -36  |

| 12        | 13   | 14  | 15  | 16   | 17  | 18  | 19 | 20 | 21  | 22 | 23  | Averages |
|-----------|------|-----|-----|------|-----|-----|----|----|-----|----|-----|----------|
| Component |      |     |     |      |     |     |    |    |     |    |     |          |
| 16        | 15   | 12  | 15  | 10   | 12  | 7   | 6  | 6  | 12  | 12 | 10  | 14.0     |
| 17        | 12   | 10  | 14  | 5    | 9   | 6   | 3  | 5  | 11  | 9  | 10  | 12.5     |
| 47        | 39   | 46  | 47  | 41   | 38  | 35  | 37 | 36 | 38  | 48 | 49  | 41.5     |
| 33        | 59   | 53  | 53  | 51   | 55  | 42  | 55 | 49 | 41  | 88 | 61  | 55.2     |
| 96        | 84   | 82  | 78  | 58   | 55  | 89  | 81 | 63 | 88  | 69 | 124 | 73.5     |
| -196      | -111 | -45 | +32 | +133 | +85 | +51 | -3 | -3 | +19 | +9 | +22 |          |

|           |     |     |     |     |     |     |     |    |    |     |     |      |
|-----------|-----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|------|
| Component |     |     |     |     |     |     |     |    |    |     |     |      |
| 39        | 35  | 36  | 31  | 30  | 27  | 22  | 17  | 13 | 15 | 15  | 19  | 27.6 |
| 27        | 24  | 27  | 31  | 27  | 26  | 15  | 14  | 10 | 14 | 18  | 17  | 21.3 |
| 47        | 36  | 49  | 53  | 38  | 45  | 30  | 32  | 33 | 30 | 37  | 38  | 37.3 |
| 59        | 51  | 52  | 55  | 50  | 53  | 37  | 40  | 50 | 59 | 62  | 56  | 52.9 |
| 70        | 89  | 87  | 70  | 71  | 69  | 91  | 121 | 57 | 75 | 66  | 117 | 69.6 |
| -49       | -31 | -24 | -46 | -24 | -31 | -42 | -12 | -7 | +2 | -20 | -4  |      |

|           |     |    |     |     |     |     |     |     |     |     |    |      |
|-----------|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|----|------|
| Component |     |    |     |     |     |     |     |     |     |     |    |      |
| 13        | 14  | 13 | 10  | 6   | 7   | 5   | 5   | 6   | 6   | 9   | 6  | 11.3 |
| 8         | 13  | 10 | 9   | 6   | 9   | 3   | 6   | 8   | 8   | 9   | 9  | 11.5 |
| 38        | 43  | 37 | 37  | 34  | 34  | 31  | 32  | 34  | 34  | 33  | 36 | 37.9 |
| 44        | 61  | 59 | 44  | 44  | 38  | 44  | 37  | 38  | 45  | 59  | 45 | 50.4 |
| 75        | 37  | 38 | 69  | 76  | 86  | 78  | 74  | 82  | 63  | 120 | 73 | 65.8 |
| --162     | -99 | -1 | +57 | +94 | +96 | +25 | -15 | -19 | -11 | +26 | +9 |      |

|           |     |     |     |     |     |     |     |     |     |     |    |      |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|------|
| Component |     |     |     |     |     |     |     |     |     |     |    |      |
| 34        | 38  | 39  | 31  | 23  | 19  | 15  | 10  | 8   | 11  | 13  | 13 | 24.9 |
| 20        | 21  | 17  | 15  | 14  | 13  | 8   | 6   | 9   | 10  | 15  | 10 | 14.8 |
| 35        | 36  | 36  | 32  | 35  | 33  | 35  | 31  | 32  | 34  | 32  | 38 | 35.3 |
| 38        | 44  | 50  | 52  | 44  | 39  | 41  | 37  | 55  | 34  | 54  | 76 | 47.8 |
| 67        | 38  | 41  | 67  | 67  | 74  | 68  | 64  | 42  | 54  | 87  | 39 | 48.3 |
| -57       | -44 | -21 | -13 | -28 | -17 | -38 | -15 | -15 | -19 | -10 | +2 |      |

| Hour<br>Parameter | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7    | 8    | 9   | 10   | 11   |
|-------------------|-----|-----|-----|-----|-----|-----|-----|------|------|-----|------|------|
| September North   |     |     |     |     |     |     |     |      |      |     |      |      |
| 1.                | 7   | 6   | 3   | 8   | 11  | 16  | 18  | 18   | 15   | 14  | 14   | 11   |
| 2.                | 12  | 10  | 10  | 11  | 9   | 12  | 19  | 24   | 19   | 14  | 10   | 10   |
| 3.                | 37  | 34  | 36  | 39  | 37  | 42  | 41  | 45   | 52   | 32  | 36   | 39   |
| 4.                | 52  | 48  | 41  | 46  | 56  | 50  | 64  | 54   | 67   | 56  | 57   | 55   |
| 5.                | 70  | 52  | 56  | 61  | 43  | 37  | 41  | 49   | 35   | 61  | 75   | 71   |
| 6.                | +28 | +15 | +34 | +32 | +24 | +54 | +81 | +107 | +51  | -64 | -157 | -207 |
| September East    |     |     |     |     |     |     |     |      |      |     |      |      |
| 1.                | 11  | 8   | 7   | 14  | 14  | 28  | 30  | 32   | 36   | 32  | 38   | 34   |
| 2.                | 9   | 8   | 5   | 20  | 13  | 15  | 19  | 17   | 16   | 16  | 16   | 19   |
| 3.                | 32  | 35  | 31  | 32  | 30  | 42  | 37  | 33   | 32   | 37  | 32   | 31   |
| 4.                | 50  | 35  | 49  | 36  | 44  | 38  | 41  | 38   | 51   | 41  | 47   | 44   |
| 5.                | 64  | 46  | 45  | 46  | 46  | 33  | 26  | 40   | 33   | 47  | 49   | 43   |
| 6.                | -11 | -6  | -5  | -12 | -6  | -6  | +23 | +88  | +104 | +75 | +29  | +6   |
| October North     |     |     |     |     |     |     |     |      |      |     |      |      |
| 1.                | 8   | 6   | 5   | 8   | 9   | 13  | 18  | 23   | 21   | 18  | 17   | 19   |
| 2.                | 8   | 10  | 5   | 9   | 11  | 13  | 16  | 25   | 20   | 22  | 19   | 21   |
| 3.                | 38  | 45  | 49  | 41  | 38  | 35  | 42  | 45   | 53   | 43  | 45   | 48   |
| 4.                | 71  | 68  | 51  | 80  | 59  | 52  | 77  | 77   | 91   | 72  | 89   | 87   |
| 5.                | 107 | 75  | 78  | 41  | 90  | 60  | 49  | 37   | 71   | 97  | 73   | 114  |
| 6.                | +16 | -1  | -12 | -12 | -23 | -24 | +34 | +97  | +105 | +24 | -87  | -207 |
| October East      |     |     |     |     |     |     |     |      |      |     |      |      |
| 1.                | 12  | 12  | 9   | 14  | 18  | 23  | 33  | 35   | 38   | 37  | 38   | 41   |
| 2.                | 12  | 14  | 9   | 10  | 12  | 16  | 21  | 17   | 22   | 24  | 21   | 29   |
| 3.                | 36  | 60  | 41  | 44  | 33  | 33  | 34  | 36   | 38   | 42  | 35   | 46   |
| 4.                | 77  | 60  | 53  | 55  | 47  | 41  | 51  | 49   | 45   | 67  | 59   | 82   |
| 5.                | 77  | 43  | 35  | 34  | 68  | 54  | 37  | 39   | 55   | 33  | 41   | 55   |
| 6.                | +3  | +14 | +5  | +12 | -1  | -20 | -18 | +23  | +69  | +81 | +72  | +39  |



| 12        | 13   | 14  | 15  | 16  | 17  | 18 | 19  | 20  | 21  | 22  | 23  | Averages |
|-----------|------|-----|-----|-----|-----|----|-----|-----|-----|-----|-----|----------|
| Component |      |     |     |     |     |    |     |     |     |     |     |          |
| 14        | 10   | 13  | 7   | 9   | 7   | 4  | 5   | 4   | 5   | 4   | 4   | 9.5      |
| 16        | 10   | 10  | 7   | 9   | 5   | 7  | 5   | 6   | 8   | 8   | 5   | 10.7     |
| 38        | 37   | 40  | 34  | 34  | 34  | 32 | 32  | 32  | 36  | 32  | 37  | 37.0     |
| 73        | 56   | 64  | 50  | 42  | 38  | 33 | 35  | 35  | 29  | 48  | 54  | 50.1     |
| 50        | 64   | 91  | 70  | 39  | 49  | 42 | 88  | 73  | 107 | 62  | 58  | 60.2     |
| -180      | -109 | -23 | +38 | +66 | +46 | +3 | +24 | +15 | +46 | +52 | +25 |          |

|           |     |     |     |     |     |     |     |     |     |    |    |      |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|------|
| Component |     |     |     |     |     |     |     |     |     |    |    |      |
| 35        | 34  | 33  | 29  | 25  | 21  | 10  | 7   | 8   | 10  | 7  | 8  | 21.3 |
| 17        | 20  | 17  | 15  | 11  | 11  | 7   | 6   | 8   | 8   | 12 | 7  | 13.0 |
| 33        | 26  | 33  | 29  | 31  | 23  | 29  | 25  | 34  | 31  | 35 | 32 | 32.1 |
| 38        | 39  | 52  | 45  | 43  | 43  | 38  | 40  | 50  | 39  | 34 | 52 | 42.8 |
| 49        | 47  | 62  | 42  | 35  | 35  | 44  | 79  | 52  | 69  | 68 | 33 | 47.2 |
| +3        | -34 | -39 | -36 | -27 | -19 | -41 | -40 | -26 | -18 | +1 | -5 |      |

|           |      |     |     |     |     |     |     |     |     |     |     |      |
|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Component |      |     |     |     |     |     |     |     |     |     |     |      |
| 16        | 15   | 16  | 12  | 7   | 6   | 4   | 6   | 5   | 7   | 6   | 7   | 11.3 |
| 21        | 19   | 14  | 12  | 8   | 10  | 9   | 9   | 6   | 8   | 10  | 10  | 13.1 |
| 49        | 42   | 63  | 48  | 36  | 37  | 37  | 35  | 36  | 35  | 35  | 42  | 42.4 |
| 98        | 87   | 81  | 62  | 88  | 70  | 57  | 87  | 37  | 86  | 84  | 64  | 74.0 |
| 76        | 83   | 64  | 84  | 48  | 98  | 103 | 90  | 140 | 102 | 107 | 118 | 83.5 |
| -156      | -122 | -24 | +73 | +94 | +30 | +40 | +34 | +66 | +38 | +10 | +6  |      |

|           |     |    |    |     |     |     |     |     |     |     |     |      |
|-----------|-----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Component |     |    |    |     |     |     |     |     |     |     |     |      |
| 37        | 36  | 37 | 29 | 27  | 19  | 17  | 12  | 17  | 16  | 14  | 16  | 24.5 |
| 23        | 26  | 19 | 20 | 16  | 12  | 9   | 8   | 12  | 11  | 13  | 13  | 16.2 |
| 46        | 49  | 42 | 44 | 31  | 31  | 33  | 33  | 33  | 38  | 38  | 39  | 38.9 |
| 52        | 67  | 55 | 55 | 77  | 51  | 45  | 65  | 45  | 56  | 71  | 63  | 57.0 |
| 45        | 37  | 42 | 52 | 47  | 95  | 122 | 89  | 127 | 117 | 73  | 116 | 63.9 |
| -9        | -27 | -9 | -3 | -19 | -48 | -10 | -24 | -37 | -38 | -18 | -37 |      |

| Hour<br>Parameter | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8    | 9   | 10  | 11   |
|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|------|
| November North    |     |     |     |     |     |     |     |     |      |     |     |      |
| 1.                | 5   | 4   | 2   | 4   | 6   | 8   | 11  | 17  | 18   | 13  | 10  | 13   |
| 2.                | 7   | 7   | 4   | 6   | 7   | 6   | 12  | 16  | 16   | 11  | 6   | 14   |
| 3.                | 34  | 36  | 35  | 37  | 41  | 36  | 36  | 44  | 42   | 37  | 37  | 40   |
| 4.                | 37  | 64  | 50  | 44  | 53  | 62  | 44  | 58  | 55   | 62  | 58  | 85   |
| 5.                | 94  | 38  | 71  | 90  | 41  | 31  | 43  | 22  | 16   | 41  | 64  | 60   |
| 6.                | -20 | +1  | -27 | -43 | -10 | -20 | +16 | +61 | +101 | +32 | -29 | -119 |
| November East     |     |     |     |     |     |     |     |     |      |     |     |      |
| 1.                | 7   | 4   | 7   | 8   | 13  | 16  | 19  | 23  | 22   | 17  | 20  | 23   |
| 2.                | 5   | 3   | 4   | 7   | 8   | 12  | 17  | 16  | 11   | 13  | 13  | 13   |
| 3.                | 34  | 36  | 35  | 28  | 29  | 31  | 44  | 35  | 34   | 34  | 34  | 34   |
| 4.                | 37  | 46  | 41  | 44  | 37  | 38  | 38  | 36  | 41   | 44  | 49  | 35   |
| 5.                | 61  | 32  | 47  | 48  | 47  | 31  | 32  | 19  | 16   | 23  | 43  | 49   |
| 6.                | -29 | +2  | -10 | -13 | -11 | -15 | -24 | +10 | +68  | +60 | +75 | +52  |
| December North    |     |     |     |     |     |     |     |     |      |     |     |      |
| 1.                | 2   | 2   | 2   | 4   | 4   | 7   | 8   | 10  | 17   | 10  | 10  | 11   |
| 2.                | 3   | 3   | 3   | 5   | 4   | 6   | 8   | 9   | 16   | 9   | 9   | 8    |
| 3.                | 31  | 36  | 35  | 34  | 35  | 35  | 36  | 35  | 39   | 43  | 37  | 44   |
| 4.                | 39  | 44  | 46  | 39  | 55  | 59  | 39  | 47  | 53   | 56  | 53  | 67   |
| 5.                | 52  | 56  | 49  | 57  | 38  | 42  | 30  | 21  | 18   | 33  | 39  | 50   |
| 6.                | -8  | -14 | -18 | -29 | -10 | -15 | +6  | -20 | +54  | +38 | -19 | -58  |
| December East     |     |     |     |     |     |     |     |     |      |     |     |      |
| 1.                | 6   | 5   | 5   | 5   | 8   | 16  | 11  | 16  | 19   | 15  | 15  | 20   |
| 2.                | 5   | 2   | 3   | 6   | 5   | 2   | 8   | 9   | 10   | 10  | 8   | 9    |
| 3.                | 31  | 35  | 34  | 35  | 34  | 35  | 39  | 35  | 46   | 39  | 37  | 36   |
| 4.                | 30  | 35  | 38  | 35  | 37  | 38  | 37  | 34  | 30   | 37  | 46  | 44   |
| 5.                | 52  | 41  | 28  | 33  | 49  | 27  | 20  | 19  | 24   | 11  | 13  | 31   |
| 6.                | -3  | +   | -8  | -8  | +1  | -33 | -17 | -15 | +33  | +69 | +57 | +41  |

| 12        | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | Averages |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| Component |     |     |     |     |     |     |     |     |     |     |     |          |
| 17        | 17  | 12  | 10  | 5   | 2   | 2   | 2   | 5   | 5   | 4   | 7   | 8.3      |
| 16        | 16  | 10  | 10  | 7   | 2   | 3   | 5   | 3   | 5   | 5   | 7   | 8.4      |
| 64        | 56  | 41  | 41  | 35  | 38  | 41  | 35  | 33  | 34  | 37  | 37  | 39.5     |
| 104       | 79  | 52  | 59  | 49  | 48  | 59  | 60  | 46  | 48  | 49  | 43  | 57.0     |
| 108       | 52  | 95  | 44  | 43  | 67  | 63  | 65  | 74  | 68  | 76  | 112 | 61.6     |
| -132      | -74 | +1  | +3  | +5  | +15 | +37 | +34 | +53 | +51 | +55 | +11 |          |
| Component |     |     |     |     |     |     |     |     |     |     |     |          |
| 26        | 23  | 23  | 17  | 12  | 10  | 7   | 7   | 5   | 5   | 6   | 8   | 13.7     |
| 21        | 15  | 13  | 10  | 6   | 4   | 5   | 7   | 6   | 4   | 10  | 11  | 9.8      |
| 42        | 35  | 36  | 32  | 35  | 39  | 38  | 37  | 35  | 34  | 34  | 44  | 35.4     |
| 64        | 58  | 53  | 41  | 39  | 38  | 40  | 66  | 49  | 61  | 51  | 62  | 46.2     |
| 53        | 51  | 44  | 32  | 43  | 86  | 78  | 59  | 65  | 29  | 62  | 59  | 46.2     |
| +20       | -11 | 0   | -6  | -15 | -26 | -15 | -23 | -28 | -14 | -12 | -34 |          |
| Component |     |     |     |     |     |     |     |     |     |     |     |          |
| 13        | 13  | 10  | 10  | 5   | 2   | 3   | 2   | 3   | 3   | 5   | 6   | 6.8      |
| 10        | 6   | 8   | 6   | 4   | 3   | 5   | 4   | 3   | 5   | 3   | 6   | 6.1      |
| 42        | 37  | 37  | 37  | 35  | 39  | 35  | 35  | 35  | 34  | 34  | 35  | 36.5     |
| 56        | 57  | 44  | 46  | 47  | 44  | 33  | 37  | 37  | 39  | 40  | 42  | 46.6     |
| 73        | 52  | 38  | 52  | 45  | 51  | 59  | 63  | 52  | 71  | 67  | 49  | 48.2     |
| -86       | -46 | -15 | +13 | +3  | +12 | +26 | +20 | +29 | +62 | +32 | +5  |          |
| Component |     |     |     |     |     |     |     |     |     |     |     |          |
| 22        | 21  | 18  | 18  | 7   | 7   | 4   | 4   | 5   | 8   | 7   | 9   | 11.2     |
| 8         | 6   | 5   | 6   | 5   | 5   | 2   | 5   | 5   | 3   | 8   | 9   | 6.0      |
| 37        | 37  | 37  | 36  | 36  | 35  | 34  | 34  | 34  | 35  | 34  | 37  | 35.9     |
| 39        | 32  | 32  | 42  | 31  | 44  | 39  | 43  | 33  | 41  | 44  | 39  | 37.5     |
| 33        | 21  | 32  | 35  | 42  | 52  | 48  | 48  | 41  | 47  | 48  | 55  | 35.4     |
| +4        | -2  | +4  | -16 | -8  | -8  | -25 | -22 | -21 | -10 | -5  | -14 |          |

| Hour<br>Parameter | 0   | 1   | 2  | 3  | 4   | 5   | 6   | 7   | 8   | 9   | 10   | 11   |
|-------------------|-----|-----|----|----|-----|-----|-----|-----|-----|-----|------|------|
| Year 1981 North   |     |     |    |    |     |     |     |     |     |     |      |      |
| 1.                | 7   | 8   | 9  | 10 | 12  | 15  | 17  | 20  | 21  | 19  | 16   | 16   |
| 2.                | 8   | 8   | 7  | 9  | 10  | 13  | 15  | 19  | 19  | 16  | 14   | 13   |
| 3.                | 36  | 38  | 38 | 38 | 39  | 42  | 43  | 46  | 45  | 41  | 42   | 41   |
| 4.                | 49  | 54  | 48 | 47 | 52  | 52  | 57  | 64  | 62  | 60  | 61   | 64   |
| 5.                | 69  | 68  | 71 | 64 | 51  | 56  | 45  | 43  | 46  | 49  | 60   | 80   |
| 6.                | +14 | +13 | +3 | +5 | +14 | +36 | +62 | +63 | +48 | -26 | -107 | -155 |
| Year 1981 East    |     |     |    |    |     |     |     |     |     |     |      |      |
| 1.                | 10  | 9   | 10 | 12 | 16  | 23  | 28  | 34  | 34  | 33  | 32   | 34   |
| 2.                | 9   | 8   | 8  | 10 | 11  | 13  | 18  | 20  | 19  | 19  | 19   | 20   |
| 3.                | 36  | 38  | 36 | 35 | 33  | 36  | 38  | 37  | 40  | 40  | 37   | 37   |
| 4.                | 48  | 44  | 43 | 42 | 38  | 41  | 41  | 44  | 46  | 48  | 51   | 50   |
| 5.                | 55  | 50  | 42 | 47 | 51  | 37  | 36  | 35  | 36  | 34  | 42   | 54   |
| 6.                | 0   | +3  | -2 | -5 | -10 | -10 | +9  | +35 | +57 | +55 | +35  | +13  |

| 12        | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | Averages |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|
| Component |     |     |     |     |     |     |     |     |     |     |     |          |
| 16        | 16  | 14  | 12  | 9   | 8   | 6   | 6   | 6   | 8   | 8   | 7   | 11.9     |
| 15        | 13  | 9   | 9   | 6   | 6   | 5   | 5   | 5   | 6   | 7   | 8   | 10.2     |
| 44        | 42  | 43  | 42  | 37  | 37  | 35  | 35  | 36  | 36  | 37  | 38  | 39.6     |
| 67        | 66  | 59  | 54  | 52  | 50  | 44  | 49  | 44  | 49  | 58  | 54  | 54.8     |
| 77        | 72  | 65  | 69  | 52  | 66  | 73  | 82  | 78  | 89  | 81  | 88  | 66.5     |
| -146      | -85 | -22 | +39 | +64 | +52 | +33 | +14 | +20 | +25 | +25 | +10 |          |

|           |     |     |     |     |     |     |     |     |     |    |     |      |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|------|
| Component |     |     |     |     |     |     |     |     |     |    |     |      |
| 33        | 31  | 30  | 26  | 22  | 17  | 13  | 10  | 10  | 10  | 11 | 11  | 20.8 |
| 19        | 19  | 15  | 15  | 12  | 11  | 8   | 8   | 7   | 8   | 11 | 10  | 13.2 |
| 38        | 37  | 39  | 39  | 35  | 36  | 33  | 33  | 35  | 34  | 35 | 39  | 36.5 |
| 50        | 50  | 51  | 51  | 46  | 46  | 43  | 48  | 48  | 49  | 49 | 50  | 46.7 |
| 54        | 50  | 48  | 54  | 52  | 61  | 70  | 74  | 63  | 73  | 68 | 69  | 52.3 |
| -4        | -10 | -11 | -18 | -22 | -24 | -26 | -19 | -17 | -12 | -8 | -12 |      |

| Hour<br>Parameter    | 0   | 1   | 2   | 3   | 4   | 5   | 6   | 7    | 8   | 9   | 10   | 11   |
|----------------------|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|------|------|
| Quiet days North     |     |     |     |     |     |     |     |      |     |     |      |      |
| 1.                   | 5   | 7   | 9   | 8   | 10  | 13  | 14  | 15   | 17  | 14  | 13   | 11   |
| 2.                   | 5   | 7   | 6   | 5   | 6   | 9   | 8   | 8    | 9   | 7   | 5    | 5    |
| 3.                   | 33  | 34  | 35  | 34  | 35  | 37  | 35  | 36   | 35  | 35  | 35   | 34   |
| 4.                   | 41  | 33  | 35  | 37  | 38  | 38  | 42  | 37   | 41  | 40  | 32   | 43   |
| 5.                   | 35  | 33  | 27  | 32  | 22  | 28  | 24  | 26   | 11  | 17  | 35   | 37   |
| 6.                   | +7  | +4  | +4  | +8  | +22 | +50 | +59 | +48  | +42 | -17 | -99  | -134 |
| Quiet days East      |     |     |     |     |     |     |     |      |     |     |      |      |
| 1.                   | 6   | 8   | 8   | 9   | 13  | 17  | 19  | 22   | 23  | 21  | 22   | 24   |
| 2.                   | 8   | 5   | 6   | 7   | 6   | 8   | 10  | 12   | 11  | 12  | 11   | 15   |
| 3.                   | 34  | 33  | 33  | 28  | 27  | 32  | 30  | 28   | 30  | 33  | 27   | 31   |
| 4.                   | 31  | 28  | 34  | 29  | 29  | 26  | 29  | 28   | 32  | 33  | 32   | 35   |
| 5.                   | 27  | 25  | 23  | 24  | 28  | 22  | 23  | 19   | 19  | 15  | 30   | 21   |
| 6.                   | -7  | -19 | -13 | -15 | -24 | -19 | -5  | +17  | +37 | +41 | +23  | +10  |
| Disturbed days North |     |     |     |     |     |     |     |      |     |     |      |      |
| 1.                   | 16  | 15  | 15  | 21  | 23  | 25  | 35  | 34   | 33  | 33  | 27   | 30   |
| 2.                   | 17  | 26  | 16  | 35  | 28  | 31  | 46  | 57   | 42  | 38  | 49   | 31   |
| 3.                   | 47  | 59  | 63  | 74  | 58  | 92  | 93  | 105  | 62  | 63  | 63   | 55   |
| 4.                   | 99  | 111 | 82  | 123 | 83  | 103 | 112 | 149  | 117 | 117 | 126  | 98   |
| 5.                   | 133 | 141 | 160 | 135 | 194 | 99  | 62  | 64   | 139 | 61  | 93   | 180  |
| 6.                   | +69 | +55 | +4  | -1  | +4  | -25 | +60 | +111 | +35 | -70 | -128 | -178 |
| Disturbed days East  |     |     |     |     |     |     |     |      |     |     |      |      |
| 1.                   | 23  | 19  | 27  | 32  | 36  | 39  | 54  | 62   | 63  | 56  | 57   | 55   |
| 2.                   | 20  | 21  | 22  | 41  | 25  | 42  | 55  | 45   | 39  | 43  | 47   | 46   |
| 3.                   | 68  | 53  | 60  | 67  | 45  | 105 | 92  | 79   | 64  | 55  | 92   | 63   |
| 4.                   | 122 | 87  | 130 | 83  | 53  | 110 | 108 | 99   | 91  | 112 | 120  | 91   |
| 5.                   | 95  | 183 | 67  | 131 | 225 | 69  | 69  | 98   | 104 | 58  | 69   | 154  |
| 6.                   | +14 | -5  | +5  | +2  | +29 | -10 | +28 | +63  | +43 | +31 | +21  | +14  |

| 12        | 13  | 14  | 15  | 16  | 17  | 18  | 19 | 20  | 21  | 22  | 23  | Averages |
|-----------|-----|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|----------|
| Component |     |     |     |     |     |     |    |     |     |     |     |          |
| 14        | 12  | 10  | 9   | 7   | 5   | 5   | 4  | 4   | 5   | 6   | 6   | 9.3      |
| 8         | 4   | 3   | 3   | 2   | 2   | 2   | 3  | 2   | 3   | 3   | 4   | 5.0      |
| 36        | 34  | 35  | 35  | 34  | 34  | 32  | 33 | 32  | 33  | 35  | 35  | 34.4     |
| 37        | 34  | 39  | 33  | 34  | 37  | 30  | 33 | 32  | 33  | 36  | 36  | 36.3     |
| 35        | 33  | 21  | 32  | 22  | 23  | 28  | 23 | 20  | 37  | 36  | 36  | 28.0     |
| -121      | -73 | -21 | +28 | +52 | +43 | +25 | +8 | +15 | +21 | +17 | +12 |          |

|           |    |    |    |     |     |     |    |    |     |     |    |      |
|-----------|----|----|----|-----|-----|-----|----|----|-----|-----|----|------|
| Component |    |    |    |     |     |     |    |    |     |     |    |      |
| 24        | 22 | 22 | 19 | 17  | 12  | 8   | 6  | 4  | 4   | 6   | 8  | 14.3 |
| 12        | 11 | 9  | 8  | 7   | 7   | 4   | 4  | 4  | 5   | 6   | 8  | 8.2  |
| 28        | 32 | 29 | 28 | 32  | 31  | 31  | 31 | 32 | 29  | 32  | 34 | 30.6 |
| 30        | 30 | 32 | 26 | 31  | 28  | 25  | 31 | 32 | 31  | 30  | 32 | 30.2 |
| 28        | 19 | 24 | 32 | 23  | 32  | 29  | 26 | 29 | 39  | 35  | 37 | 26.2 |
| -5        | -3 | -6 | -5 | -14 | -14 | -14 | -3 | +6 | +11 | +13 | +8 |      |

|           |     |     |     |      |     |     |     |     |     |     |     |       |
|-----------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-------|
| Component |     |     |     |      |     |     |     |     |     |     |     |       |
| 30        | 27  | 21  | 25  | 18   | 15  | 9   | 13  | 13  | 14  | 11  | 14  | 21.5  |
| 38        | 38  | 25  | 28  | 14   | 18  | 9   | 13  | 16  | 10  | 15  | 21  | 27.5  |
| 75        | 59  | 88  | 81  | 45   | 45  | 39  | 42  | 44  | 46  | 55  | 58  | 63.0  |
| 85        | 113 | 105 | 83  | 110  | 98  | 87  | 95  | 84  | 118 | 139 | 105 | 105.9 |
| 153       | 96  | 99  | 196 | 129  | 134 | 213 | 218 | 255 | 189 | 145 | 193 | 147.2 |
| -180      | -63 | -49 | +62 | +107 | +32 | +77 | 0   | +30 | +15 | +9  | +21 |       |

|           |    |     |     |     |     |     |     |     |     |     |     |       |
|-----------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| Component |    |     |     |     |     |     |     |     |     |     |     |       |
| 50        | 41 | 51  | 45  | 39  | 39  | 31  | 27  | 23  | 23  | 21  | 21  | 38.9  |
| 48        | 39 | 42  | 57  | 33  | 33  | 20  | 19  | 18  | 15  | 21  | 18  | 33.7  |
| 80        | 67 | 119 | 115 | 50  | 54  | 32  | 44  | 43  | 33  | 43  | 59  | 65.9  |
| 117       | 93 | 94  | 104 | 83  | 98  | 82  | 93  | 104 | 105 | 92  | 141 | 100.5 |
| 91        | 69 | 100 | 149 | 153 | 92  | 195 | 247 | 241 | 177 | 124 | 134 | 128.9 |
| +3        | -9 | +1  | -43 | -11 | -54 | -22 | +11 | -38 | -12 | -19 | -41 |       |

## III.

*Results of harmonical analysis of the daily variations*

## North Component

|           | A <sub>1</sub> | $\varphi_1$ | A <sub>2</sub> | $\varphi_2$ | A <sub>3</sub> | $\varphi_3$ | A <sub>4</sub> | $\varphi_4$ | A <sub>5</sub> | $\varphi_5$ | A <sub>6</sub> | $\varphi_6$ |
|-----------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
| January   | 20             | 106         | 33             | 232         | 20             | 84          | 22             | 295         | 5              | 89          | 7              | 16          |
| February  | 26             | 130         | 26             | 244         | 23             | 131         | 9              | 315         | 5              | 140         | 7              | 240         |
| March     | 31             | 129         | 51             | 292         | 54             | 109         | 27             | 299         | 12             | 244         | 9              | 140         |
| April     | 50             | 97          | 85             | 284         | 66             | 106         | 22             | 302         | 9              | 291         | 3              | 40          |
| May       | 58             | 92          | 86             | 302         | 51             | 140         | 9              | 39          | 6              | 263         | 7              | 344         |
| June      | 52             | 89          | 84             | 295         | 42             | 134         | 2              | 174         | 4              | 1           | 8              | 343         |
| July      | 72             | 95          | 97             | 301         | 52             | 129         | 4              | 176         | 11             | 324         | 11             | 9           |
| August    | 59             | 89          | 98             | 305         | 60             | 144         | 7              | 121         | 9              | 306         | 7              | 326         |
| September | 64             | 92          | 72             | 286         | 56             | 133         | 23             | 312         | 12             | 273         | 3              | 204         |
| October   | 38             | 116         | 68             | 265         | 60             | 108         | 39             | 309         | 1              | 71          | 11             | 110         |
| November  | 28             | 110         | 50             | 236         | 36             | 113         | 27             | 311         | 11             | 151         | 6              | 328         |
| December  | 18             | 123         | 33             | 229         | 20             | 111         | 18             | 289         | 5              | 142         | 8              | 342         |
| Year      | 42             | 100         | 59             | 282         | 43             | 121         | 14             | 305         | 3              | 268         | 3              | 9           |
| Q         | 36             | 94          | 53             | 284         | 35             | 126         | 11             | 296         | 2              | 216         | 5              | 23          |
| D         | 51             | 111         | 64             | 288         | 56             | 113         | 21             | 342         | 12             | 296         | 6              | 162         |

## East Component

|           |    |     |    |     |    |     |    |     |    |     |   |     |
|-----------|----|-----|----|-----|----|-----|----|-----|----|-----|---|-----|
| January   | 12 | 295 | 18 | 122 | 10 | 5   | 8  | 271 | 5  | 142 | 5 | 317 |
| February  | 8  | 253 | 10 | 105 | 12 | 25  | 8  | 195 | 3  | 171 | 1 | 336 |
| March     | 28 | 297 | 18 | 99  | 14 | 16  | 8  | 249 | 8  | 101 | 2 | 126 |
| April     | 29 | 354 | 15 | 164 | 7  | 9   | 8  | 331 | 4  | 250 | 2 | 74  |
| May       | 27 | 1   | 17 | 197 | 8  | 159 | 11 | 359 | 0  | 90  | 3 | 360 |
| June      | 26 | 358 | 23 | 190 | 16 | 145 | 19 | 5   | 7  | 276 | 4 | 317 |
| July      | 34 | 1   | 30 | 212 | 23 | 107 | 17 | 357 | 6  | 328 | 1 | 298 |
| August    | 36 | 356 | 34 | 222 | 33 | 106 | 18 | 337 | 6  | 203 | 6 | 132 |
| September | 39 | 346 | 27 | 191 | 21 | 88  | 6  | 322 | 11 | 250 | 7 | 96  |
| October   | 34 | 329 | 16 | 153 | 24 | 34  | 14 | 284 | 7  | 108 | 4 | 202 |
| November  | 31 | 309 | 21 | 148 | 16 | 28  | 9  | 267 | 3  | 86  | 2 | 63  |
| December  | 20 | 307 | 19 | 135 | 15 | 27  | 11 | 248 | 4  | 121 | 5 | 3   |
| Year      | 24 | 336 | 16 | 172 | 11 | 67  | 8  | 315 | 1  | 184 | 1 | 41  |
| Q         | 30 | 343 | 10 | 207 | 3  | 12  | 10 | 360 | 2  | 228 | 6 | 170 |
| D         | 8  | 303 | 20 | 172 | 7  | 99  | 7  | 290 | 3  | 182 | 1 | 172 |



IV.  
*Special phenomena*  
 (magnetic and earth current data)  
 SSC-s

| Month | Day | CET<br>(GMT+1h) | Amplitude in<br>E(mV/km) H(gamma) |     | Ex | Ey | Hx | Hy | End of storm                           |
|-------|-----|-----------------|-----------------------------------|-----|----|----|----|----|----------------------------------------|
| 01.   | 29. | 08.00           | 10                                | 22  | +  | -  | +  | -  | 01 29 14 00                            |
| 02.   | 06. | 09.45           | 18                                | 23  | +  | +  | +  | +  | 02.07 04 00                            |
|       | 08. | 14.45           | >18                               | 50  | +  | +  | +  | -  | 02 09.07 00 (si?)                      |
| 03.   | 01. | 08.30           | 18                                | 35  | -  | +  | +  | +  | 03.01 24 00                            |
|       | 02. | 07.45           | >15                               | 30  | -  | +  | +  | +  | 03.02 15 00                            |
|       | 05. | 06.30           | 12.5                              | 60  | +  | +  | +  | -  | 03.06.16 00                            |
|       | 07. | 02.45           | 5.5                               | 18  | +  | +  | +  | -  | 03.07.21.00                            |
|       | 12. | 19.30           | 9                                 | 35  | +  | +  | +  | -  | 03.14.23 00                            |
|       | 14. | 05.15           | 7                                 | 45  | +  | +  | +  | -  | (in pg)                                |
|       | 25. | 18.45           | 13.5                              | 50  | +  | +  | +  | -  | (in storm and on<br>storm 03 26.04.00) |
| 04.   | 07. | 20.45           | 10                                | 32  | +  | +  | +  | -  | 04.08.02.00                            |
|       | 11. | 14.45           | >18                               | 100 | +  | +  | +  | -  | 04 13 24 00                            |
|       | 15. | 11.15           | 5.5                               | 14  | +  | +  | +  | -  | 04.15.16 00 (?)                        |
|       | 18. | 16.00           | 11                                | 30  | +  | +  | +  | -  | 04.19 22 00                            |
|       | 26. | 09.15           | 12                                | 35  | +  | +  | +  | -  | 04 27 16.00                            |
| 05.   | 08. | 18.45           | 9                                 | 25  | +  | +  | +  | -  | 05.09 17.00                            |
|       | 09. | 01.00           | 5.5                               | 15  | +  | +  | +  | -  | (in storm) (?)                         |
|       | 10. | 23.00           | 20                                | 85  | +  | +  | +  | -  | 05.11 15.00                            |
|       | 14. | 20.00           | 11                                | 35  | +  | +  | +  | -  | 05.14 01.00                            |
|       | 15. | 03.45           | 14.5                              | 40  | +  | +  | +  | -  | 05 16.03.00                            |
|       | 16. | 06.30           | 16                                | 40  | -  | -  | -  | +  | 05 16.20.00                            |
|       | 18. | 00.00           | 18                                | 75  | +  | +  | +  | -  | 05.18.21 00                            |
| 06.   | 06. | 10.00           | 7                                 | 30  | +  | +  | +  | -  | 06.08.03.00                            |
|       | 07. | 09.30           | 16                                | 35  | -  | +  | +  | +  | in storm                               |
|       |     | 18.45           | >15                               | 120 | -  | -  | -  | +  | in storm                               |
|       | 29. | 07.15           | 16                                | 22  | -  | +  | -  | -  | 06.29.16.30                            |

## SSC-s

| Month | Day | CET<br>(GMT+1h) | Amplitude in<br>E(mV.km) H(gamma) |     | Ex | Ey | Hx | Hy | End of storm           |
|-------|-----|-----------------|-----------------------------------|-----|----|----|----|----|------------------------|
| 07.   | 16. | 05.45           | 7                                 | 18  | +  | +  | +  | —  | no storm               |
|       | 17. | 09.00           | 11                                | 30  | —  | +  | +  | +  | 07.17.16.00            |
|       | 23. | 07.45           | 25                                | 18  | +  | +  | +  | —  | 07.23.20.00            |
|       | 25. | 06.15           | 12.5                              | 22  | +  | +  | +  | —  | 07.26.19.00            |
|       |     | 14.15           | >25                               | 165 | +  | +  | +  | —  | (in storm)             |
| 08.   | 10. | 05.30           | 14.5                              | 50  | +  | +  | +  | —  | 08.10.17.00            |
|       | 17. | 01.45           | 23.5                              | 55  | +  | +  | +  | —  | 08.18.20.00            |
|       | 23. | 14.00           | 14.5                              | 70  | +  | +  | +  | —  | 08.24.03.00            |
| 09.   | 08. | 22.45           | >14.5                             | 60  | +  | +  | +  | —  | 09.09.02.00            |
|       | 18. | 20.15           | 16                                | 50  | +  | +  | +  | —  | 09.19.22.00            |
|       | 19. | 02.30           | 18                                | 45  | +  | +  | +  | —  | (in storm)             |
| 10.   | 02. | 21.30           | >14.5                             | 120 | —  | +  | +  | —  | 10.03.17.00            |
|       | 07. | 07.15           | 14.5                              | 40  | +  | +  | +  | —  | 10.07.13.00            |
|       | 10. | 15.30           | 12.5                              | 30  | +  | +  | +  | —  | 10.10.22.00            |
|       | 13. | 23.30           | 14.5                              | 75  | +  | +  | +  | —  | 10.15.16.00            |
|       | 20. | 14.45           | >18                               | 50  | +  | +  | +  | —  | 10.21.13.00            |
|       | 22. | 06.30           | 11                                | 30  | +  | +  | +  | —  | 10.23.16.00            |
| 11.   | 08. | 17.30           | >18                               | 50  | +  | +  | +  | —  | 11.08.22.00 (in storm) |
|       | 11. | 13.30           | 18                                | 65  | +  | +  | +  | —  | 11.12.14.00            |
|       | 14. | 06.30           | 8                                 | 15  | +  | +  | +  | —  | 11.15.04.00            |
|       |     | 14.30           | 6.5                               | 25  | +  | —  | —  | —  | (in storm)             |
|       | 16. | 21.30           | 16                                | 35  | +  | +  | +  | —  | 11.18.02.00            |
|       | 25. | 03.30           | 10                                | 65  | +  | +  | +  | —  | 11.25.18.00            |
| 12.   | 12. | 02.45           | 10                                | 30  | +  | +  | +  | —  | 12.13.01.00            |
|       | 29. | 06.45           | 7                                 | 25  | +  | +  | +  | —  | 12.29.21.00            |

|       |     | Bays            |              |          | Pi-s |    |    |    |          |  |    |    |
|-------|-----|-----------------|--------------|----------|------|----|----|----|----------|--|----|----|
| Month | Day | CET<br>(GMT+1h) | Amplitude in |          | Ex   | Ey | Hx | Hy | E(mV/km) |  | Ex | Ey |
|       |     |                 | E(mV/km)     | H(gamma) |      |    |    |    |          |  |    |    |
| 01.   | 01. | 04.00           | 6            | 35       | +    | +  | +  | —  |          |  |    |    |
|       |     | 19.45           | 13.5         | 55       | +    | +  | +  | +  |          |  |    |    |
|       | 02. | 17.00           | 6            | 40       | —    | —  | —  | +  |          |  |    |    |
|       | 04. | 01.00           | 13.5         | 35       | —    | +  | +  | +  | tr       |  |    |    |
|       |     | 21.00           | 9            | 60       | —    | +  | +  | +  | tr       |  |    |    |
|       | 10. | 21.15           | 8            | 40       | —    | +  | +  | —  | 2.5      |  | +  | +  |
|       | 14. | 14.15           | 8            | 18       | —    | +  | —  | +  |          |  |    |    |
|       | 15. | 23.45           | 4.5          | 25       | —    | +  | +  | +  | tr       |  |    |    |
|       | 16. | 03.30           | 7            | 35       | +    | +  | +  | —  |          |  |    |    |
|       | 21. | 21.15           | 4.5          | 22       | —    | +  | +  | +  | 3.5      |  | +  | +  |
|       | 26. | 13.30           | 7            | 25       | —    | —  | —  | +  | tr       |  |    |    |
|       | 28. | 01.15           | 8            | 30       | —    | +  | +  | +  | tr       |  |    |    |
|       | 31. | 04.48           | 6.5          | 35       | +    | +  | +  | —  |          |  |    |    |
|       |     | 21.00           | 5.5          | 40       | —    | +  | +  | +  | 2        |  | +  | +  |
|       |     | 23.00           | 6.5          | 50       | +    | +  | +  | —  | 2.5      |  | +  | +  |
| 02.   | 03. | 20.30           | 11           | 50       | —    | +  | +  | +  | tr       |  |    |    |
|       |     | 01.30           | 3.5          | 15       | +    | +  | +  | —  |          |  |    |    |
|       |     | 19.15           | 11           | 50       | —    | +  | +  | +  | tr       |  |    |    |
|       |     | 05.45           | 5.5          | 30       | +    | +  | +  | —  |          |  |    |    |
|       | 05. | 23.00           | 6.5          | 45       | —    | +  | +  | +  | tr       |  |    |    |
|       |     | 02.30           | 25           | 95       | +    | +  | +  | —  | tr       |  |    |    |
|       | 08. | 18.00           | 11           | 65       | —    | —  | —  | +  |          |  |    |    |
|       |     | 23.15           | 14.5         | 85       | —    | —  | —  | +  | tr       |  |    |    |
|       | 13. | 23.30           | 25           | 12       | +    | +  | +  | —  | 2.5      |  | +  | +  |
|       | 14. | 21.15           |              |          |      |    |    |    | 2        |  | +  | +  |
|       | 16. | 01.30           | 9            | 25       | —    | —  | —  | +  |          |  |    |    |
|       |     | 18.00           | 5.5          | 25       | +    | +  | +  | +  | 2        |  | +  | +  |
|       | 19. | 00.30           | 5.5          | 18       | +    | +  | +  | —  | 3.5      |  | +  | +  |
|       | 22. | 22.15           | 14.5         | 60       | —    | +  | +  | +  | tr       |  |    |    |
|       | 23. | 01.00           | 9            | 30       | —    | —  | —  | +  |          |  |    |    |
|       | 26. | 01.45           | 9            | 30       | +    | +  | +  | —  | tr       |  |    |    |



| Bays  |     |                 |              |          | Pi-s |    |    |    |           |    |    |
|-------|-----|-----------------|--------------|----------|------|----|----|----|-----------|----|----|
| Month | Day | CET<br>(GMT+1h) | Amplitude in |          | Ex   | Ey | Hx | Hy | E(mV/km)  | Ex | Ey |
|       |     |                 | E(mV/km)     | H(gamma) |      |    |    |    |           |    |    |
| 04.   | 19. | 04.30           | 12           | 65       | +    | +  | +  | —  | tr        |    |    |
|       | 20. | 23.00           | 6.5          | 45       | —    | +  | +  | +  | tr        |    |    |
|       | 22. | 19.15           | 8            | 55       | +    | +  | +  | —  |           |    |    |
|       | 25. | 22.30           | 5.5          | 35       | +    | +  | +  | +  | tr        |    |    |
|       | 28. | 12.00           | 5.5          | 20       | +    | +  | +  | —  |           |    |    |
| 05.   | 09. | 21.00           |              |          |      |    |    |    | 3.5       | +  | +  |
|       | 10. | 00.45           | 3.5          | 18       | +    | +  | +  | —  | tr        |    |    |
|       |     | 22.15           | 5.5          | 25       | +    | +  | +  | —  |           |    |    |
|       | 15. | 17.00           | 9            | 50       | +    | +  | +  | +  |           |    |    |
|       | 16. | 02.15           | 6.5          | 45       | +    | +  | +  | —  | tr        |    |    |
|       |     | 18.30           | 14.5         | 70       | —    | +  | +  | +  | tr        |    |    |
|       | 18. | 20.00           | 5.5          | 40       | —    | +  | +  | +  |           |    |    |
|       | 20. | 03.30           | 6.5          | 35       | +    | +  | +  | —  | tr        |    |    |
|       |     | 16.00           | 10           | 50       | +    | +  | +  | +  | tr        |    |    |
|       |     | 19.30           | 8            | 35       | +    | +  | +  | —  | tr        |    |    |
|       |     | 20.30           | 9            | 40       | +    | +  | +  | —  | tr        |    |    |
|       | 24. | 21.45           | 8            | 32       | —    | —  | —  | +  | tr (ssc?) |    |    |
|       | 25. | 20.15           | 10           | 35       | —    | —  | —  | +  |           |    |    |
|       |     | 22.00           | 12.5         | 55       | —    | —  | —  | +  | tr        |    |    |
|       | 28. | 05.15           | 4.5          | 35       | +    | +  | +  | —  |           |    |    |
| 06.   | 01. | 21.45           |              |          |      |    |    |    | 2         | +  | +  |
|       | 05. | 02.15           | 4.5          | 30       | +    | +  | +  | —  | 2.5       | +  | +  |
|       |     | 21.30           | 4.5          | 10       | —    | —  | —  | +  |           |    |    |
|       | 06. | 00.45           | 4.5          | 18       | +    | +  | +  | —  | 2.5       | +  | +  |
|       | 08. | 02.30           | 12           | 65       | +    | +  | +  | —  | tr        |    |    |
|       | 13. | 00.30           |              |          |      |    |    |    | 3.5       | +  | +  |
|       | 16. | 22.30           | 9            | 50       | —    | +  | +  | +  | tr        |    |    |
|       | 18. | 21.00           | 5.5          | 30       | —    | +  | +  | +  |           |    |    |
| 07.   | 02. | 14.00           | 11           | 50       | +    | +  | +  | —  |           |    |    |
|       |     | 21.00           | 9            | 40       | +    | +  | +  | —  |           |    |    |
|       |     | 23.00           | 7            | 30       | +    | +  | +  | —  | 3.5       | +  | +  |

|       |     | Bays              |                                   |     |    | Pi-s |    |    |           |    |    |
|-------|-----|-------------------|-----------------------------------|-----|----|------|----|----|-----------|----|----|
| Month | Day | CET<br>(GMT + 1h) | Amplitude in<br>E(mV/km) H(gamma) |     | Ex | Ey   | Hx | Hy | E(mV/km)  | Ex | Ey |
| 07.   | 03. | 23.30             | 9                                 | 45  | +  | +    | +  | —  | 2.5       | +  | +  |
|       | 04. | 22.15             | 5.5                               | 30  | —  | +    | +  | +  | tr        |    |    |
|       | 05. | 00.00             | 10                                | 35  | +  | +    | +  | —  | tr        |    |    |
|       | 07. | 19.00             | 5.5                               | 18  | +  | +    | +  | —  | (si?)     |    |    |
|       | 10. | 19.15             |                                   |     |    |      |    |    | 9         | —  | +  |
|       | 12. | 23.30             | 9                                 | 45  | +  | +    | +  | +  | tr        |    |    |
|       | 14. | 23.30             |                                   |     |    |      |    |    | 2.5       | +  | +  |
|       | 16. | 16.30             | 5.5                               | 22  | —  | —    | —  | +  |           |    |    |
|       | 17. | 13.15             | 12.5                              | 65  | +  | +    | +  | —  |           |    |    |
|       |     | 22.30             | 10                                | 42  | —  | +    | +  | +  | tr        |    |    |
|       | 20. | 11.15             | 10                                | 35  | +  | +    | +  | —  | tr (ssc?) |    |    |
|       | 22. | 11.30             | 5.5                               | 25  | —  | —    | —  | +  |           |    |    |
|       |     | 22.45             | 11                                | 55  | —  | +    | +  | +  | tr        |    |    |
|       | 23. | 11.30             | 9                                 | 60  | +  | +    | +  | —  |           |    |    |
|       |     | 18.30             | 12.5                              | 55  | —  | —    | —  | —  |           |    |    |
|       |     | 22.45             | 9                                 | 45  | +  | +    | +  | —  | 2.5       | +  | +  |
|       | 24. | 00.45             | 5.5                               | 14  | —  | —    | +  | —  |           |    |    |
|       | 25. | 02.00             | 6.5                               | 35  | +  | +    | +  | —  |           |    |    |
|       | 26. | 00.00             | >30                               | 250 | +  | +    | +  | —  | tr        |    |    |
|       | 27. | 01.30             | 7                                 | 65  | +  | —    | —  | —  |           |    |    |
|       | 28. | 04.30             |                                   |     |    |      |    |    | 5.5 (pg)  |    |    |
| 68.   | 01. | 23.15             | 4.5                               | 20  | —  | +    | +  | 0  | tr        |    |    |
|       | 02. | 22.30             | 11                                | 55  | —  | +    | +  | +  | tr        |    |    |
|       | 03. | 19.30             | 7                                 | 30  | —  | +    | +  | +  |           |    |    |
|       | 06. | 13.00             | 6.5                               | 30  | +  | +    | +  | —  |           |    |    |
|       | 07. | 18.30             | 6.5                               | 40  | +  | +    | +  | —  | tr        |    |    |
|       | 09. |                   |                                   |     |    |      |    |    | 2.5       | +  | +  |
|       |     | 20.45             | 5.5                               | 20  | 0  | +    | +  | 0  | 3.5       | —  | —  |
|       | 11. | 16.45             | 9                                 | 32  | +  | +    | +  | —  | tr        |    |    |
|       |     | 20.30             | 7                                 | 32  | —  | —    | —  | +  | tr        |    |    |
|       | 16. | 02.00             | 6.5                               | 22  | —  | —    | —  | +  |           |    |    |

| Bays  |     |                 |              |          | Pi-s |    |    |    |          |    |    |
|-------|-----|-----------------|--------------|----------|------|----|----|----|----------|----|----|
| Month | Day | CET<br>(GMT+1h) | Amplitude in |          | Ex   | Ey | Hx | Hy | E(mV/km) | Ex | Ey |
|       |     |                 | E(mV/km)     | H(gamma) |      |    |    |    |          |    |    |
| 08.   | 16. | 18.00           | 8            | 55       | +    | +  | +  | —  | tr       |    |    |
|       |     | 21.45           | 9            | 45       | —    | +  | +  | +  | tr       |    |    |
|       | 21. | 21.45           | 6.5          | 30       | +    | +  | +  | +  | tr       |    |    |
|       | 22. | 22.30           | 5.5          | 25       | —    | —  | +  | —  |          |    |    |
|       | 23. | 01.30           | 7            | 32       | +    | +  | +  | —  | tr       |    |    |
|       |     | 03.00           | 12.5         | 55       | +    | +  | +  | —  |          |    |    |
|       | 24. | 17.00           | 10           | 70       | —    | —  | +  | +  | tr       |    |    |
|       | 25. | 00.30           | 5.5          | 35       | +    | +  | +  | +  | tr       |    |    |
|       | 26. | 16.15           | 7            | 22       | +    | +  | +  | —  |          |    |    |
|       |     | 22.45           | 5.5          | 22       | —    | —  | —  | +  |          |    |    |
|       | 28. | 22.45           | 11           | 45       | +    | +  | +  | —  | tr       |    |    |
|       | 30. | 11.30           | 5            | 25       | +    | +  | +  | —  |          |    |    |
|       |     | 23.15           | 11           | 42       | +    | +  | +  | —  | tr       |    |    |
| 09.   | 01. | 21.30           |              |          |      |    |    |    | 2.5      | +  | +  |
|       |     | 20.30           | 4.5          | 25       | —    | +  | —  | +  | tr       |    |    |
|       | 05. | 03.00           | 8            | 35       | +    | +  | +  | —  | tr       |    |    |
|       | 11. | 22.45           | 5.5          | 28       | —    | +  | +  | +  | tr       |    |    |
|       | 12. | 14.15           | 10           | 25       | —    | +  | —  | +  | tr       |    |    |
|       |     | 18.45           | 4.5          | 45       | —    | +  | +  | +  | tr       |    |    |
|       | 13. | 23.30           | 3.5          | 16       | —    | +  | +  | +  | 2.5      | +  | +  |
|       | 14. | 23.00           | 4.5          | 22       | +    | +  | +  | —  |          |    |    |
|       | 17. | 00.30           | 3.5          | 16       | —    | +  | +  | +  | tr       |    |    |
|       | 19. | 03.15           |              |          |      |    |    |    | 6 (pg)   |    |    |
|       | 22. | 05.00           | 5.5          | 30       | +    | +  | +  | —  |          |    |    |
|       |     | 13.45           | 4.5          | 15       | —    | —  | —  | +  |          |    |    |
|       |     | 21.30           | 4.5          | 20       | —    | +  | +  | +  | 2.5      | +  | +  |
|       | 25. | 16.45           | 5.5          | 45       | —    | —  | —  | +  | tr       |    |    |
|       | 26. | 09.45           | 9            | 35       | —    | —  | —  | +  |          |    |    |
|       |     | 14.00           | 7            | 45       | +    | +  | +  | —  |          |    |    |
|       |     | 18.15           | 11           | 55       | —    | +  | +  | +  | 2.5      | —  | +  |
|       |     | 21.00           | 11           | 50       | —    | —  | —  | +  | 2.5      | —  | +  |

| Bays  |     |                 |                                   |     | Pi-s |    |    |    |          |    |    |
|-------|-----|-----------------|-----------------------------------|-----|------|----|----|----|----------|----|----|
| Month | Day | CET<br>(GMT+1h) | Amplitude in<br>E(mV km) H(gamma) |     | Ex   | Ey | Hx | Hy | E(mV/km) | Ex | Ey |
| 09.   | 27. | 19.15           | 20                                | 75  | —    | +  | +  | +  | tr       |    |    |
|       | 28. | 06.15           | 5.5                               | 15  | +    | +  | +  | —  | (si ?)   |    |    |
| 10.   | 04. | 20.45           | 5.5                               | 40  | —    | +  | +  | +  | tr       |    |    |
|       | 05. | 23.30           | 2.5                               | 18  | +    | +  | +  | —  | 2        | +  | +  |
|       | 07. | 20.45           | 14.5                              | 65  | —    | +  | +  | +  | tr       |    |    |
|       |     | 21.45           | 9                                 | 45  | —    | —  | —  | —  |          |    |    |
|       | 09. | 01.15           | 4.5                               | 35  | +    | +  | +  | —  | tr       |    |    |
|       |     | 20.00           | 6.5                               | 45  | —    | +  | +  | +  | tr       |    |    |
|       | 10. | 21.30           | 16                                | 72  | +    | +  | +  | —  |          |    |    |
|       | 11. | 00.00           | 7                                 | 50  | +    | +  | +  | —  | tr       |    |    |
|       | 12. | 11.15           | 5.5                               | 15  | —    | —  | —  | +  |          |    |    |
|       | 13. | 09.00           | 11                                | 32  | +    | +  | +  | —  |          |    |    |
|       |     | 19.30           | 10                                | 40  | —    | +  | +  | +  | tr       |    |    |
|       | 14. | 03.30           | >16                               | 200 | —    | —  | —  | +  | tr       |    |    |
|       |     | 12.00           |                                   |     |      |    |    |    | 5 (pg)   |    |    |
|       |     | 23.30           | 16                                | 85  | —    | —  | —  | +  | tr       |    |    |
|       | 16. | 06.00           |                                   |     |      |    |    |    | 9 (pg)   |    |    |
|       | 17. | 22.15           |                                   |     |      |    |    |    | 5.5      | —  | —  |
|       | 19. | 23.00           | 11                                | 45  | +    | +  | +  | —  |          |    |    |
|       | 20. | 12.00           | 14.5                              | 45  | +    | +  | +  | —  |          |    |    |
|       |     | 20.00           | 6.5                               | 45  | —    | +  | +  | +  | tr       |    |    |
|       |     | 21.30           | >30                               | 125 | —    | +  | +  | +  | tr       |    |    |
|       |     | 23.30           | 14.5                              | 55  | +    | +  | +  | —  | tr       |    |    |
|       | 22. | 22.00           | >30                               | 180 | +    | +  | +  | —  | tr       |    |    |
|       | 23. | 00.30           | >22.5                             | 95  | —    | +  | +  | +  | tr       |    |    |
|       | 24. | 16.45           | 18                                | 85  | +    | +  | +  | +  | tr       |    |    |
|       |     | 22.45           | 11                                | 60  | +    | +  | +  | —  | tr       |    |    |
|       | 26. | 11.45           | 9                                 | 30  | —    | —  | —  | +  | tr       |    |    |
|       | 28. | 21.00           | 11                                | 90  | —    | +  | +  | +  | tr       |    |    |
|       | 29. | 11.30           | 8                                 | 35  | +    | +  | +  | —  |          |    |    |
|       |     | 23.15           | 6.5                               | 35  | +    | +  | +  | —  | 2.5      | +  | +  |
| 11.   | 03. | 10.30           | 5.5                               | 18  | —    | —  | —  | +  |          |    |    |



| Bays  |     |                 |              |          | Pi-s |    |    |    |          |    |    |
|-------|-----|-----------------|--------------|----------|------|----|----|----|----------|----|----|
| Month | Day | CET<br>(GMT+1h) | Amplitude in |          | Ex   | Ey | Hx | Hy | E(mV/km) | Ex | Ey |
|       |     |                 | E(mV km)     | H(gamma) |      |    |    |    |          |    |    |
| 11.   | 03. | 20.15           | 6.5          | 30       | —    | +  | +  | +  | tr       |    |    |
|       | 04. | 15.30           | 2.5          | 10       | +    | +  | +  | —  |          |    |    |
|       | 05. | 00.15           |              |          |      |    |    |    | 2.5      | +  | +  |
|       |     | 13.15           | 9            | 30       | —    | —  | —  | +  |          |    |    |
|       | 06. | 03.15           | 6.5          | 25       | +    | +  | +  | —  | tr       |    |    |
|       | 08. | 11.30           | 12.5         | 40       | +    | +  | +  | —  |          |    |    |
|       | 12. | 01.45           | 18           | 95       | +    | +  | +  | —  | tr       |    |    |
|       | 14. | 17.45           | 14.5         | 50       | +    | +  | +  | —  | tr       |    |    |
|       | 17. | 06.00           |              |          |      |    |    |    | 7 (pg)   |    |    |
|       |     | 19.30           | 11           | 60       | —    | +  | +  | +  | tr       |    |    |
|       |     | 23.30           | 8            | 45       | +    | +  | +  | —  | tr       |    |    |
|       | 18. | 17.30           | 7            | 30       | —    | —  | —  | +  |          |    |    |
|       |     | 19.30           | 12           | 50       | —    | +  | +  | +  | tr       |    |    |
|       | 20. | 22.45           | 5.5          | 35       | —    | +  | +  | +  | tr       |    |    |
|       | 21. | 23.00           | 12.5         | 60       | +    | +  | +  | —  | tr       |    |    |
|       | 23. | 18.15           | 11           | 60       | —    | +  | —  | +  | tr       |    |    |
|       | 24. | 00.00           | 8            | 50       | —    | +  | +  | +  | tr       |    |    |
|       |     | 14.00           | 4.5          | 25       | +    | +  | +  | +  | tr       |    |    |
|       | 26. | 18.45           | 4.5          | 30       | —    | +  | +  | +  | tr       |    |    |
|       | 29. | 03.00           | 4.5          | 25       | +    | +  | +  | —  | tr       |    |    |
| 12.   | 02. | 12.15           | ?            | 30       | ?    | ?  | —  | —  |          |    |    |
|       | 05. | 23.45           | 5.5          | 15       | +    | +  | +  | 0  | 2.5      | +  | +  |
|       | 07. | 22.45           | 2.5          | 10       | +    | +  | +  | —  |          |    |    |
|       | 08. | 21.45           | 9            | 40       | —    | +  | +  | +  | tr       |    |    |
|       | 12. | 20.45           | 13.5         | 75       | —    | —  | —  | +  | tr       |    |    |
|       |     | 23.15           | 7            | 35       | —    | +  | +  | +  | tr       |    |    |
|       | 14. | 20.45           | 4.5          | 12       | —    | —  | —  | +  |          |    |    |
|       | 15. | 21.00           | 4.5          | 50       | —    | —  | —  | +  |          |    |    |
|       | 16. | 23.15           | 4.5          | 22       | —    | +  | +  | +  | 3.5      | +  | +  |
|       | 17. | 21.30           | 6.5          | 35       | +    | +  | +  | +  | 2.5      | +  | +  |
|       | 22. | 16.45           | 5.5          | 18       | —    | —  | —  | +  | tr       |    |    |
|       | 24. | 23.00           | 5.5          | 30       | +    | +  | +  | —  | tr       |    |    |
|       | 26. | 20.00           | 3.5          | 10       | —    | +  | +  | +  | 2.5      | +  | +  |
|       | 28. | 01.00           | 7            | 30       | —    | +  | +  | +  | tr       |    |    |
|       | 29. | 19.00           | 13.5         | 65       | +    | +  | +  | —  | tr       |    |    |

8. 10. 1954

*Further pi-traces*

| Month | Day | CET   | Month | Day | CET   | Month | Day | CET   |
|-------|-----|-------|-------|-----|-------|-------|-----|-------|
| 01.   | 05. | 20.15 | 03.   | 11. | 02.00 | 05.   | 29. | 21.30 |
|       | 07. | 22.00 |       | 16. | 05.15 |       | 30. | 21.00 |
|       | 09. | 22.15 |       | 17. | 03.30 |       |     | 22.00 |
|       |     | 23.00 |       | 18. | 00.45 |       | 31. | 02.00 |
|       | 11. | 19.15 |       |     | 23.45 |       |     | 20.15 |
|       |     | 20.15 |       | 19. | 00.45 | 06.   | 03. | 19.30 |
|       | 12. | 00.30 |       |     | 19.45 |       |     | 21.30 |
|       | 13. | 20.15 |       | 25. | 00.15 |       |     | 22.15 |
|       | 14. | 01.15 |       | 26. | 02.30 | 05.   |     | 22.15 |
|       | 17. | 02.30 |       | 28. | 20.45 |       |     | 22.45 |
|       |     | 21.30 |       |     | 21.15 |       | 08. | 20.45 |
|       | 18. | 01.15 |       |     | 22.00 |       |     | 21.30 |
|       | 20. | 00.30 |       | 29. | 23.30 | 09.   |     | 01.00 |
|       |     | 01.15 |       | 30. | 21.30 | 12.   |     | 03.15 |
|       | 21. | 03.30 |       | 31. | 00.30 |       |     | 10.30 |
|       |     | 19.00 | 04.   | 03. | 04.45 |       |     | 20.45 |
|       | 24. | 00.30 |       | 06. | 23.30 | 15.   |     | 03.00 |
|       | 25. | 00.45 |       | 07. | 05.00 |       |     | 20.45 |
|       | 26. | 21.00 |       | 09. | 03.00 |       |     | 21.15 |
|       | 28. | 21.15 |       | 10. | 23.45 |       |     | 21.45 |
|       | 29. | 20.15 |       | 11. | 00.15 | 16.   |     | 00.00 |
| 02.   | 02. | 17.30 |       |     | 00.45 |       |     | 00.15 |
|       | 03. | 01.00 |       | 15. | 21.00 |       |     | 00.45 |
|       | 06. | 20.30 |       | 16. | 01.45 | 19.   |     | 22.45 |
|       | 11. | 22.30 |       | 24. | 20.00 | 20.   |     | 21.45 |
|       |     | 22.45 |       | 29. | 00.45 | 24.   |     | 17.00 |
|       |     | 23.15 |       |     | 19.45 |       |     | 18.45 |
|       | 12. | 20.30 | 05.   | 03. | 03.45 | 25.   |     | 22.00 |
|       | 13. | 22.30 |       | 04. | 20.30 | 28.   |     | 01.45 |
|       | 15. | 03.15 |       | 05. | 01.00 |       |     | 18.15 |
|       | 17. | 22.30 |       |     | 21.00 |       |     | 19.00 |
|       | 24. | 19.30 |       |     | 22.15 | 07.   | 03. | 20.15 |
|       |     | 21.30 |       | 11. | 16.00 |       |     | 23.45 |
|       | 25. | 02.15 |       | 26. | 00.30 | 08.   |     | 02.15 |
|       |     | 19.45 |       | 28. | 00.30 |       |     | 02.30 |
|       |     | 22.15 |       | 29. | 01.45 | 09.   |     | 03.30 |
| 03.   | 02. | 01.45 |       |     | 02.15 | 10.   |     | 02.00 |

*Further pi-traces*

| Month | Day | CET   | Month | Day | CET   | Month | Day | CET   |
|-------|-----|-------|-------|-----|-------|-------|-----|-------|
| 07.   | 11. | 00.45 | 09.   | 08. | 21.45 | 11.   | 03. | 20 00 |
|       | 13. | 20.45 |       |     | 23.00 |       | 04. | 23.15 |
|       | 14. | 02.00 |       | 10. | 00.30 |       |     | 23.30 |
|       |     | 23.45 |       |     | 01.45 |       | 06. | 02.30 |
|       | 15. | 00.15 |       | 12. | 03.30 |       | 09. | 22.30 |
|       | 19. | 21.15 |       |     | 03 45 |       |     | 23.00 |
|       | 23. | 21.30 |       | 14. | 00.00 |       | 10. | 04.30 |
|       |     | 21.45 |       | 16. | 02.15 |       | 12. | 23.30 |
|       | 27. | 01.45 |       |     | 03.45 |       | 13. | 23.15 |
|       |     | 02.15 |       |     | 23.30 |       | 18. | 20.15 |
|       | 28. | 00.15 |       | 17. | 01.30 |       |     | 22.45 |
|       | 29. | 01.15 |       |     | 01.45 |       | 19. | 01.00 |
|       |     | 23.00 |       | 20. | 20.30 |       | 20. | 22.15 |
| 08.   | 01. | 20.15 |       | 22. | 01.00 |       | 23. | 00.30 |
|       |     | 22.15 |       |     | 03.15 |       | 25. | 22.15 |
|       |     | 22.30 |       | 23. | 00.00 |       | 28. | 22.30 |
|       | 04. | 23.30 | 10.   | 01. | 23.30 |       | 30. | 22.15 |
|       | 08. | 00.30 |       | 05. | 01.45 |       |     | 22.45 |
|       | 07. | 23.30 |       |     | 22.30 | 12.   | 02. | 22.30 |
|       | 08. | 23.00 |       | 06. | 01.45 |       | 04. | 00.30 |
|       | 14. | 22.30 |       |     | 16.45 |       |     | 01.00 |
|       | 19. | 01.30 |       |     | 23.30 |       |     | 22.15 |
|       | 20. | 23.15 |       |     | 23.45 |       |     | 23.15 |
|       | 21. | 02.30 |       | 11. | 22.15 |       |     | 23.45 |
|       | 21. | 06.30 |       | 13. | 20.15 |       | 06. | 00.30 |
|       | 25. | 21.45 |       | 18. | 21.45 |       |     | 01.15 |
|       | 27. | 21.30 |       |     | 22.45 |       |     | 04.30 |
| 09.   | 02. | 00.15 |       | 19. | 02.45 |       |     | 16.30 |
|       |     | 19.45 |       | 25. | 14.30 |       | 07. | 01.45 |
|       | 03. | 00.30 |       | 27. | 00.30 |       | 13. | 00.15 |
|       |     | 01.15 |       |     | 01.00 |       | 16. | 08.45 |
|       |     | 22.30 |       |     | 22.15 |       |     | 22.30 |
|       | 04. | 22.30 |       | 31. | 00.30 |       |     | 22.45 |
|       | 05. | 00.15 |       |     | 19.30 |       | 17. | 20.45 |
|       | 07. | 00.30 |       |     | 20.30 |       |     | 21.15 |
|       |     | 00.45 |       |     | 22.00 |       | 19. | 00.15 |
|       |     | 04.15 | 11.   | 01. | 23.30 |       |     | 00.45 |

| Month | Day | CET   | Month | Day | CET   | Month | Day | CET   |
|-------|-----|-------|-------|-----|-------|-------|-----|-------|
| 12.   | 19. | 01.00 | 12.   | 23. | 01.30 | 12.   | 26. | 19.30 |
|       |     | 18.15 |       |     | 21.30 |       | 27. | 23.45 |
|       |     | 22.30 |       | 25. | 21.15 |       | 28. | 00.30 |
|       |     |       |       |     |       |       | 30. | 03.30 |

## SI-s

| Month | Day | CET<br>(GMT+1h) | Amplitude in<br>E(mV km) H(gamma) |    | Ex | Ey | Hx | Hy     |
|-------|-----|-----------------|-----------------------------------|----|----|----|----|--------|
| 01.   | 11. | 09.45           | 9                                 | 23 | +  | +  | +  | —      |
| 02.   | 01. | 08.45           | 9                                 | 22 | +  | +  | +  | —      |
|       | 06. | 16.45           | 12.5                              | 30 | +  | +  | +  | —      |
|       |     | 19.45           | 12.5                              | 32 | —  | —  | —  | +      |
|       | 09. | 17.45           | 2.5                               | 12 | +  | +  | +  | — (b?) |
|       | 19. | 18.00           | 2                                 | 5  | +  | +  | +  | —      |
|       | 23. | 22.30           | 6.5                               | 20 | +  | +  | +  | —      |
|       | 24. | 03.30           | 5.5                               | 12 | —  | —  | —  | +      |
|       |     | 04.30           | 7                                 | 16 | —  | —  | —  | +      |
|       | 28. | 07.45           | 7                                 | 22 | —  | —  | —  | +      |
| 03.   | 10. | 00.45           | 2.5                               | 12 | +  | +  | +  | — (?)  |
|       | 13. | 09.15           | 10                                | 20 | —  | +  | +  | +      |
|       | 15. | 07.30           | 7                                 | 22 | —  | —  | —  | +      |
|       | 16. | 06.45           | 9                                 | 20 | —  | —  | —  | +      |
|       |     | 08.30           | 6.5                               | 16 | —  | —  | —  | +      |
|       | 18. | 07.45           | 13.5                              | 35 | —  | —  | —  | +      |
|       |     | 15.45           | 7                                 | 15 | +  | +  | +  | —      |
|       | 24. | 00.30           | 1                                 | 6  | —  | —  | —  | +      |
|       | 26. | 08.00           | 5.5                               | 12 | —  | —  | —  | +      |
|       | 31. | 18.15           | 5.5                               | 14 | —  | —  | —  | +      |
| 04.   | 02. | 06.15           | 4.5                               | 18 | —  | —  | —  | +      |
|       | 11. | 08.30           | 8                                 | 18 | —  | —  | —  | +      |
|       | 13. | 22.00           | >24                               | 85 | —  | —  | —  | +      |
|       | 15. | 13.00           | 7                                 | 25 | +  | +  | +  | —      |
|       | 21. | 02.30           | 3.5                               | 22 | +  | +  | +  | —      |
| 05.   | 04. | 09.30           | 4.5                               | 12 | —  | —  | —  | +      |
|       | 05. | 15.00           | 6.5                               | 20 | +  | +  | +  | —      |
|       | 12. | 14.45           | 5.5                               | 15 | +  | +  | +  | —      |
|       |     | 20.45           | 7                                 | 45 | +  | +  | +  | —      |
|       | 13. | 14.15           | 3.2                               | 8  | +  | +  | +  | —      |
|       | 17. | 05.15           | 5.5                               | 10 | —  | —  | —  | +      |
|       | 19. | 07.00           | 11                                | 22 | +  | +  | +  | —      |
|       | 21. | 16.30           | 4.5                               | 8  | +  | +  | +  | —      |
|       | 24. | 06.45           | 5.5                               | 12 | —  | —  | —  | +      |
|       | 28. | 14.30           | 7                                 | 22 | +  | +  | +  | —      |

## SI-s

| Month | Day | CET<br>(GMT+1h) | Amplitude in |          | Ex | Ey | Hx | Hy       |
|-------|-----|-----------------|--------------|----------|----|----|----|----------|
|       |     |                 | E(mV/km)     | H(gamma) |    |    |    |          |
| 06    | 26. | 11.30           | 4.5          | 12       | +  | +  | +  | —        |
| 07.   | 03. | 05.30           | 4.5          | 12       | +  | +  | +  | —        |
|       | 04. | 16.45           | 4.5          | 10       | +  | +  | +  | — (b?)   |
|       | 07. | 04.30           | 4.5          | 10       | +  | +  | +  | —        |
|       | 20. | 15.00           | 20           | 40       | +  | +  | +  | —        |
|       | 21. | 02.30           | 4.5          | 13       | —  | —  | —  | +        |
|       | 25. | 05.00           | 9            | 25       | —  | —  | —  | +        |
|       | 27. | 18.30           | 4.5          | 10       | —  | —  | —  | +        |
|       | 31. | 08.45           | 7            | 15       | +  | +  | +  | —        |
| 08.   | 10. | 02.30           | 4.5          | 22       | —  | —  | —  | +        |
|       | 11. | 11.45           | 10           | 15       | —  | —  | —  | +        |
|       | 17. | 11.45           | 12           | 30       | —  | —  | —  | +        |
|       |     | 17.30           | 5.5          | 15       | —  | —  | —  | +        |
|       | 18. | 00.30           | 5.5          | 12       | —  | —  | —  | +        |
|       | 28. | 03.15           | 10           | 25       | +  | +  | +  | — (b?)   |
|       | 29. | 23.30           | 5.5          | 14       | —  | —  | —  | +        |
| 09.   | 02. | 08.00           | 3.5          | 12       | —  | —  | —  | +        |
|       | 03. | 04.00           | 4.5          | 16       | —  | —  | —  | +        |
|       | 09. | 09.00           | 7            | 12       | +  | +  | +  | —        |
|       | 10. | 10.30           | 9            | 16       | —  | —  | —  | +        |
|       | 11. | 01.00           | 4.5          | 15       | —  | —  | —  | +        |
|       |     | 08.30           | 5.5          | 12       | —  | —  | —  | +        |
|       | 15. | 16.15           | 5.5          | 10       | +  | +  | +  | —        |
|       | 16. | 15.15           | 3.5          | 10       | +  | +  | +  | —        |
|       | 19. | 21.00           | 16           | 32       | +  | +  | +  | —        |
| 10.   | 03. | 20.45           | 11           | 28       | +  | +  | +  | —        |
|       | 13. | 03.00           | 3.5          | 12       | —  | —  | —  | +        |
|       | 15. | 04.30           | 10           | 22       | —  | —  | —  | +        |
|       | 16. | 00.00           | 7            | 22       | —  | —  | —  | +        |
|       | 17. | 14.00           | 12.5         | 30       | —  | —  | —  | +        |
|       |     | 14.30           | 14.5         | 35       | —  | —  | —  | +        |
|       |     | 17.00           | 11           | 30       | —  | —  | —  | +        |
|       | 20. | 14.00           | 16           | 45       | +  | +  | +  | — (ssc?) |
| 11.   | 06. | 06.30           | 3.5          | 6        | +  | +  | +  | —        |
|       | 08. | 18.00           | 13.5         | 28       | +  | +  | +  | —        |

## SI-s

| Month | Day | CET<br>(GMT+1h) | Amplitude in<br>E(mV km) H(gamma) |    | Ex | Ey | Hx | Hy | - |
|-------|-----|-----------------|-----------------------------------|----|----|----|----|----|---|
| 11.   | 11. | 15.30           | 12.5                              | 25 | +  | +  | +  | -  |   |
|       | 12. | 17.45           | 7                                 | 15 | +  | +  | +  | -  |   |
| 12.   | 04. | 06.45           | 8                                 | 18 | -  | -  | -  | +  |   |
|       | 10. | 12.00           | 4.5                               | 12 | +  | +  | +  | -  |   |
|       | 18. | 02.15           | 5.5                               | 12 | -  | -  | -  | +  |   |

## Needles

| Month | Day | CET<br>(GMT+1h) | Amplitude in<br>E(mV/km) | Ex | Ey |
|-------|-----|-----------------|--------------------------|----|----|
| 01.   | 10. | 12.15           | 2                        | —  | —  |
| 02.   | 02. | 11.00           | 4                        | +  | +  |
|       | 03. | 09.00           | 4.5                      | +  | +  |
|       | 07. | 08.00           | 2.5                      | +  | +  |
| 03.   | 06. | 09.45           | 3.5                      | +  | +  |
|       | 15. | 17.30           | 4.5                      | —  | —  |
|       | 16. | 13.30           | 5.5                      | +  | +  |
| 04.   | 08. | 14.30           | 3.5                      | +  | +  |
|       | 14. | 16.30           | 3.5                      | —  | —  |
|       | 16. | 09.30           | 5.5                      | +  | +  |
|       | 17. | 07.00           | 7                        | —  | +  |
| 05.   | 23. | 13.00           | 4.5                      | +  | +  |
| 07.   | 12. | 15.00           | 2.5                      | —  | —  |
|       | 24. | 18.00           | 5.5                      | —  | —  |
| 08.   | 04. | 10.00           | 3.5                      | +  | +  |
|       | 11. | 11.45           | 7                        | —  | —  |
|       | 16. | 14.15           | 8                        | +  | +  |
|       | 24. | 13.00           | 3.5                      | —  | —  |
|       | 27. | 13.45           | 4.5                      | —  | —  |
|       | 30. | 12.30           | 3.5                      | +  | —  |
|       | 31. | 11.00           | 5.5                      | —  | —  |
| 09.   | 10. | 10.30           | 3.5                      | +  | —  |
|       | 15. | 09.45           | 2.5                      | +  | +  |
|       |     | 13.15           | 2.5                      | +  | —  |
| 10.   | 23. | 08.30           | 4.5                      | +  | +  |
| 11.   | 11. | 07.45           | 8                        | —  | —  |
| 12.   | 01. | 11.45           | 2.5                      | —  | —  |
|       | 03. | 13.00           | 11                       | +  | +  |
|       | 11. | 05.45           | 4.5                      | +  | +  |
|       | 12. | 06.30           | 2.5                      | —  | —  |
|       | 29. | 17.30           | 8                        | —  | —  |
|       | 30. | 19.15           | 2.5                      | —  | 0  |



1981  
Pc 1-events

| Month | Day | Duration |          | Quality |
|-------|-----|----------|----------|---------|
|       |     | hour min | hour min |         |
| 2.    | 7.  | 305—     | 340      | C       |
| 3.    | 5.  | 1855—    | 1930     | A       |
| 4.    | 18. | 516—     | 553      | C       |
| 10.   | 14. | 2338—    | 15 001   | C       |
|       | 20. | 2003—    | 2039     | B       |
|       | 22. | 1632—    | 1644     | C       |
|       |     | 1707—    | 1721     | C       |
|       |     | 1810—    | 1857     | C       |
| 11.   |     | 1921—    | 2142     | C       |
|       | 8.  | 554—     | 628      | C       |
|       | 25. | 308—     | 329      | C       |
|       |     |          |          |         |



## V.

Average amplitudes in 12 pulsation bands  
(monthly averages for 3 hour intervals in  $\mu\text{V.km}$ )

| January |         |      |       |       |       |       |       |       |       |        |         |                |
|---------|---------|------|-------|-------|-------|-------|-------|-------|-------|--------|---------|----------------|
| CET     | Periods |      |       |       |       |       |       |       |       |        |         |                |
|         | 1—5     | 5—10 | 10—15 | 15—20 | 20—25 | 25—30 | 30—40 | 40—60 | 60—90 | 90—120 | 120—300 | 300—600<br>sec |
| 0— 3    | 0       | 2    | 17    | 35    | 19    | 29    | 28    | 35    | 57    | 56     | 6       | 5              |
| 3— 6    | 0       | 2    | 2     | 27    | 62    | 79    | 52    | 19    | 14    | 10     | 16      | 25             |
| 6— 9    | 1       | 5    | 10    | 57    | 61    | 82    | 55    | 13    | 9     | 2      | 50      | 73             |
| 9—12    | 0       | 12   | 34    | 41    | 66    | 100   | 35    | 13    | 26    | 16     | 45      | 40             |
| 12—15   | 0       | 6    | 12    | 42    | 73    | 174   | 40    | 24    | 14    | 16     | 73      | 24             |
| 15—18   | 0       | 1    | 10    | 57    | 57    | 108   | 30    | 24    | 19    | 5      | 20      | 19             |
| 18—21   | 0       | 5    | 14    | 43    | 27    | 40    | 37    | 19    | 92    | 17     | 31      | 33             |
| 21—24   | 2       | 7    | 19    | 25    | 22    | 56    | 32    | 56    | 101   | 97     | 11      | 5              |
| Average | 0       | 5    | 15    | 41    | 48    | 84    | 39    | 25    | 42    | 29     | 32      | 28             |

| February |    |    |    |    |    |     |    |    |     |    |     |     |
|----------|----|----|----|----|----|-----|----|----|-----|----|-----|-----|
| 0— 3     | 6  | 38 | 13 | 12 | 17 | 26  | 17 | 60 | 36  | 54 | 42  | 79  |
| 3— 6     | 0  | 20 | 29 | 45 | 14 | 44  | 22 | 22 | 20  | 18 | 58  | 46  |
| 6— 9     | 2  | 10 | 28 | 77 | 64 | 75  | 34 | 30 | 6   | 3  | 47  | 71  |
| 9—12     | 3  | 12 | 24 | 52 | 75 | 139 | 29 | 37 | 25  | 15 | 68  | 56  |
| 12—15    | 0  | 7  | 30 | 55 | 66 | 137 | 31 | 32 | 9   | 21 | 149 | 161 |
| 15—18    | 0  | 11 | 33 | 42 | 92 | 72  | 15 | 33 | 12  | 18 | 126 | 119 |
| 18—21    | 4  | 25 | 36 | 29 | 15 | 22  | 51 | 32 | 70  | 21 | 96  | 134 |
| 21—24    | 10 | 34 | 19 | 11 | 13 | 13  | 33 | 86 | 147 | 97 | 78  | 86  |
| Average  | 3  | 20 | 27 | 40 | 45 | 66  | 29 | 42 | 28  | 31 | 83  | 94  |

## March

| CET     | Periods |      |       |       |       |       |       |       |       |        |         |                |
|---------|---------|------|-------|-------|-------|-------|-------|-------|-------|--------|---------|----------------|
|         | 1—5     | 5—10 | 10—15 | 15—20 | 20—25 | 25—30 | 30—40 | 40—60 | 60—90 | 90—120 | 120—300 | 300—600<br>sec |
| 0—3     | 6       | 51   | 10    | 19    | 11    | 25    | 19    | 53    | 58    | 51     | 93      | 178            |
| 3—6     | 1       | 21   | 32    | 55    | 61    | 33    | 15    | 29    | 22    | 15     | 154     | 150            |
| 6—9     | 0       | 48   | 46    | 67    | 90    | 192   | 30    | 11    | 17    | 50     | 405     | 163            |
| 9—12    | 0       | 46   | 81    | 49    | 64    | 220   | 35    | 39    | 85    | 0      | 158     | 130            |
| 12—15   | 0       | 15   | 34    | 52    | 112   | 167   | 75    | 35    | 22    | 12     | 250     | 206            |
| 15—18   | 2       | 26   | 24    | 47    | 72    | 151   | 36    | 38    | 69    | 33     | 233     | 171            |
| 18—21   | 6       | 51   | 24    | 38    | 25    | 15    | 14    | 36    | 59    | 49     | 116     | 97             |
| 21—24   | 0       | 62   | 31    | 19    | 20    | 7     | 34    | 55    | 123   | 40     | 84      | 120            |
| Average | 2       | 40   | 35    | 43    | 57    | 101   | 32    | 37    | 57    | 31     | 187     | 152            |

## April

|         |   |    |    |    |     |     |     |     |     |     |     |     |
|---------|---|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0—3     | 0 | 92 | 20 | 20 | 13  | 8   | 17  | 59  | 72  | 81  | 204 | 283 |
| 3—6     | 0 | 41 | 52 | 84 | 47  | 17  | 12  | 29  | 22  | 57  | 510 | 241 |
| 6—9     | 0 | 15 | 34 | 76 | 139 | 272 | 63  | 56  | 37  | 99  | 337 | 469 |
| 9—12    | 0 | 14 | 55 | 89 | 67  | 318 | 171 | 134 | 82  | 76  | 377 | 104 |
| 12—15   | 0 | 12 | 38 | 76 | 127 | 195 | 177 | 63  | 75  | 121 | 534 | 75  |
| 15—18   | 0 | 10 | 34 | 58 | 90  | 137 | 53  | 44  | 139 | 27  | 333 | 465 |
| 18—21   | 0 | 37 | 57 | 42 | 32  | 32  | 18  | 32  | 37  | 59  | 231 | 272 |
| 21—24   | 0 | 80 | 40 | 13 | 5   | 3   | 9   | 78  | 70  | 82  | 370 | 389 |
| Average | 0 | 38 | 41 | 57 | 65  | 123 | 65  | 62  | 67  | 75  | 362 | 287 |

| May     |         |      |       |       |       |       |       |       |       |        |         |                |
|---------|---------|------|-------|-------|-------|-------|-------|-------|-------|--------|---------|----------------|
| CET     | Periods |      |       |       |       |       |       |       |       |        |         |                |
|         | 1—5     | 5—10 | 10—15 | 15—20 | 20—25 | 25—30 | 30—40 | 40—60 | 60—90 | 90—120 | 120—300 | 300—600<br>sec |
| 0— 3    | 11      | 49   | 21    | 19    | 13    | 10    | 16    | 51    | 74    | 19     | 339     | 247            |
| 3— 6    | 2       | 33   | 37    | 68    | 40    | 43    | 17    | 27    | 15    | 24     | 237     | 241            |
| 6— 9    | 0       | 14   | 43    | 159   | 173   | 142   | 26    | 49    | 55    | 53     | 520     | 172            |
| 9—12    | 1       | 15   | 36    | 76    | 145   | 164   | 63    | 80    | 46    | 22     | 368     | 194            |
| 12—15   | 0       | 8    | 28    | 91    | 75    | 118   | 50    | 48    | 40    | 56     | 280     | 153            |
| 15—18   | 1       | 14   | 26    | 53    | 72    | 61    | 30    | 11    | 64    | 54     | 225     | 164            |
| 18—21   | 7       | 39   | 35    | 31    | 11    | 7     | 9     | 44    | 74    | 29     | 162     | 133            |
| 21—24   | 10      | 57   | 23    | 9     | 2     | 13    | 26    | 96    | 95    | 59     | 182     | 200            |
| Average | 4       | 29   | 31    | 63    | 66    | 70    | 30    | 42    | 58    | 40     | 289     | 188            |

| June    |   |    |    |     |     |    |    |    |     |    |     |     |
|---------|---|----|----|-----|-----|----|----|----|-----|----|-----|-----|
| 0— 3    | 0 | 30 | 14 | 19  | 9   | 17 | 24 | 51 | 115 | 56 | 31  | 131 |
| 3— 6    | 1 | 30 | 27 | 40  | 28  | 26 | 30 | 35 | 36  | 9  | 53  | 54  |
| 6— 9    | 0 | 10 | 84 | 156 | 74  | 41 | 32 | 34 | 9   | 3  | 169 | 77  |
| 9—12    | 0 | 9  | 39 | 148 | 109 | 64 | 30 | 42 | 32  | 6  | 260 | 87  |
| 12—15   | 0 | 25 | 45 | 100 | 56  | 20 | 8  | 51 | 31  | 6  | 287 | 186 |
| 15—18   | 0 | 28 | 46 | 37  | 23  | 34 | 24 | 23 | 74  | 19 | 230 | 64  |
| 18—21   | 0 | 46 | 18 | 23  | 7   | 6  | 17 | 47 | 130 | 58 | 189 | 72  |
| 21—24   | 0 | 46 | 28 | 5   | 2   | 10 | 18 | 88 | 118 | 77 | 113 | 48  |
| Average | 0 | 28 | 38 | 66  | 39  | 27 | 23 | 46 | 68  | 30 | 167 | 90  |

## July

| CET     | Periods |      |       |       |       |       |       |       |       |        |         |                |
|---------|---------|------|-------|-------|-------|-------|-------|-------|-------|--------|---------|----------------|
|         | 1—5     | 5—10 | 10—15 | 15—20 | 20—25 | 25—30 | 30—40 | 40—60 | 60—90 | 90—120 | 120—300 | 300—600<br>sec |
| 0— 3    | 0       | 53   | 12    | 15    | 9     | 21    | 87    | 115   | 116   | 26     | 147     | 77             |
| 3— 6    | 0       | 29   | 52    | 65    | 24    | 40    | 28    | 60    | 44    | 15     | 120     | 13             |
| 6— 9    | 0       | 18   | 54    | 279   | 43    | 7     | 18    | 107   | 54    | 33     | 334     | 171            |
| 9—12    | 0       | 8    | 69    | 165   | 82    | 29    | 40    | 69    | 78    | 11     | 383     | 156            |
| 12—15   | 0       | 18   | 55    | 152   | 115   | 31    | 34    | 39    | 47    | 88     | 401     | 149            |
| 15—18   | 0       | 15   | 55    | 65    | 39    | 35    | 44    | 54    | 40    | 49     | 212     | 284            |
| 18—21   | 0       | 40   | 52    | 17    | 11    | 17    | 15    | 49    | 107   | 44     | 162     | 196            |
| 21—24   | 5       | 60   | 20    | 5     | 8     | 16    | 26    | 107   | 167   | 107    | 118     | 209            |
| Average | 1       | 30   | 46    | 95    | 41    | 24    | 37    | 75    | 82    | 47     | 235     | 157            |

## August

|         |   |    |    |     |     |     |    |    |     |    |     |     |
|---------|---|----|----|-----|-----|-----|----|----|-----|----|-----|-----|
| 0— 3    | 4 | 38 | 14 | 31  | 23  | 25  | 26 | 88 | 79  | 27 | 80  | 143 |
| 3— 6    | 3 | 29 | 63 | 169 | 35  | 26  | 9  | 30 | 40  | 12 | 175 | 174 |
| 6— 9    | 0 | 14 | 51 | 255 | 172 | 165 | 14 | 8  | 19  | 6  | 295 | 158 |
| 9—12    | 0 | 6  | 21 | 134 | 226 | 293 | 27 | 15 | 21  | 11 | 192 | 213 |
| 12—15   | 0 | 9  | 34 | 134 | 95  | 235 | 30 | 16 | 26  | 66 | 449 | 80  |
| 15—18   | 0 | 10 | 38 | 87  | 85  | 69  | 44 | 25 | 97  | 64 | 192 | 87  |
| 18—21   | 0 | 44 | 32 | 47  | 12  | 22  | 34 | 34 | 44  | 38 | 122 | 94  |
| 21—24   | 2 | 56 | 24 | 11  | 10  | 19  | 28 | 75 | 147 | 79 | 104 | 190 |
| Average | 1 | 26 | 35 | 109 | 82  | 107 | 27 | 36 | 59  | 38 | 201 | 142 |

## September

| CET     | Periods |      |       |       |       |       |       |       |       |        |         |                |
|---------|---------|------|-------|-------|-------|-------|-------|-------|-------|--------|---------|----------------|
|         | 1—5     | 5—10 | 10—15 | 15—20 | 20—25 | 25—30 | 30—40 | 40—60 | 60—90 | 90—120 | 120—300 | 300—600<br>sec |
| 0— 3    | 1       | 40   | 14    | 18    | 8     | 36    | 28    | 73    | 67    | 61     | 119     | 104            |
| 3— 6    | 0       | 18   | 52    | 75    | 55    | 55    | 22    | 27    | 29    | 9      | 171     | 176            |
| 6— 9    | 0       | 24   | 69    | 56    | 104   | 210   | 44    | 5     | 13    | 8      | 98      | 107            |
| 9—12    | 0       | 11   | 35    | 68    | 63    | 164   | 63    | 11    | 12    | 55     | 142     | 37             |
| 12—15   | 0       | 32   | 39    | 71    | 49    | 301   | 42    | 21    | 12    | 23     | 171     | 49             |
| 15—18   | 0       | 9    | 26    | 52    | 65    | 155   | 38    | 27    | 25    | 8      | 78      | 112            |
| 18—21   | 0       | 32   | 27    | 36    | 18    | 36    | 11    | 51    | 48    | 67     | 95      | 162            |
| 21—24   | 2       | 42   | 19    | 14    | 4     | 18    | 20    | 47    | 113   | 92     | 131     | 241            |
| Average | 0       | 26   | 35    | 49    | 46    | 134   | 34    | 33    | 40    | 40     | 126     | 124            |

## October

|         |   |    |    |    |    |     |     |    |    |     |     |     |
|---------|---|----|----|----|----|-----|-----|----|----|-----|-----|-----|
| 0— 3    | 2 | 45 | 20 | 13 | 12 | 24  | 31  | 38 | 49 | 82  | 61  | 320 |
| 3— 6    | 2 | 19 | 30 | 58 | 46 | 54  | 18  | 18 | 16 | 28  | 179 | 367 |
| 6— 9    | 0 | 14 | 32 | 39 | 77 | 231 | 52  | 23 | 30 | 73  | 469 | 202 |
| 9—12    | 0 | 10 | 62 | 55 | 48 | 173 | 105 | 40 | 47 | 69  | 325 | 406 |
| 12—15   | 0 | 6  | 41 | 61 | 45 | 210 | 81  | 60 | 31 | 65  | 377 | 385 |
| 15—18   | 0 | 15 | 35 | 40 | 60 | 118 | 40  | 16 | 42 | 52  | 255 | 327 |
| 18—21   | 8 | 29 | 17 | 16 | 19 | 52  | 28  | 63 | 59 | 60  | 117 | 314 |
| 21—24   | 2 | 47 | 26 | 11 | 8  | 29  | 29  | 53 | 95 | 163 | 281 | 192 |
| Average | 2 | 23 | 33 | 37 | 39 | 111 | 48  | 39 | 46 | 74  | 258 | 310 |



## November

| CET      | Periods |      |       |       |       |       |       |       |       |        |                           |
|----------|---------|------|-------|-------|-------|-------|-------|-------|-------|--------|---------------------------|
|          | 1—5     | 5—10 | 10—15 | 15—20 | 20—25 | 25—30 | 30—40 | 40—60 | 60—90 | 90—120 | 120—300<br>300—600<br>sec |
| 0— 3     | 0       | 25   | 12    | 18    | 14    | 40    | 32    | 36    | 69    | 32     | 61                        |
| 3— 6     | 0       | 12   | 30    | 33    | 52    | 51    | 21    | 19    | 15    | 3      | 183                       |
| 6— 9     | 0       | 10   | 32    | 47    | 67    | 87    | 36    | 37    | 12    | 15     | 193                       |
| 9—12     | 0       | 10   | 23    | 41    | 41    | 116   | 46    | 27    | 51    | 44     | 83                        |
| 12—15    | 0       | 23   | 22    | 36    | 33    | 167   | 44    | 22    | 36    | 46     | 271                       |
| 15—18    | 0       | 10   | 29    | 36    | 36    | 76    | 23    | 25    | 18    | 8      | 221                       |
| 18—21    | 0       | 20   | 22    | 34    | 22    | 39    | 13    | 65    | 32    | 58     | 88                        |
| 21—24    | 0       | 18   | 16    | 29    | 8     | 27    | 34    | 64    | 96    | 67     | 86                        |
| Averages | 0       | 16   | 23    | 34    | 34    | 75    | 31    | 371   | 41    | 34     | 148                       |

## December

|         |   |    |    |    |    |     |    |    |     |     |     |
|---------|---|----|----|----|----|-----|----|----|-----|-----|-----|
| 0— 3    | 2 | 14 | 12 | 18 | 12 | 17  | 23 | 49 | 88  | 106 | 52  |
| — 6     | 0 | 6  | 22 | 39 | 30 | 47  | 40 | 33 | 36  | 10  | 48  |
| 6— 9    | 1 | 15 | 31 | 35 | 51 | 75  | 36 | 24 | 15  | 24  | 102 |
| 9—12    | 0 | 12 | 31 | 52 | 53 | 76  | 27 | 19 | 13  | 17  | 171 |
| 12—15   | 0 | 7  | 22 | 51 | 72 | 140 | 41 | 12 | 14  | 4   | 160 |
| 15—18   | 1 | 16 | 28 | 27 | 35 | 64  | 23 | 45 | 23  | 16  | 145 |
| 18—21   | 0 | 17 | 20 | 34 | 28 | 41  | 22 | 25 | 19  | 38  | 111 |
| 21—24   | 1 | 14 | 30 | 25 | 11 | 17  | 23 | 31 | 140 | 71  | 85  |
| Average | 1 | 13 | 21 | 34 | 37 | 60  | 29 | 30 | 44  | 36  | 109 |

| CET     | Yearly average |      |       |       |       |       |       |       |       |        |         |                |
|---------|----------------|------|-------|-------|-------|-------|-------|-------|-------|--------|---------|----------------|
|         | Periods        |      |       |       |       |       |       |       |       |        |         |                |
|         | 1—5            | 5—10 | 10—15 | 15—20 | 20—25 | 25—30 | 30—40 | 40—60 | 60—90 | 90—120 | 120—300 | 300—600<br>sec |
| 0— 3    | 3              | 40   | 15    | 20    | 13    | 23    | 29    | 59    | 73    | 55     | 103     | 147            |
| 3— 6    | 1              | 22   | 36    | 63    | 41    | 43    | 24    | 28    | 26    | 18     | 159     | 151            |
| 6— 9    | 0              | 16   | 42    | 109   | 93    | 132   | 37    | 33    | 23    | 31     | 252     | 158            |
| 9—12    | 0              | 14   | 43    | 81    | 87    | 163   | 56    | 44    | 43    | 29     | 214     | 131            |
| 12—15   | 0              | 14   | 33    | 76    | 77    | 158   | 54    | 35    | 30    | 41     | 284     | 145            |
| 15—18   | 0              | 16   | 33    | 52    | 59    | 102   | 34    | 30    | 51    | 31     | 197     | 164            |
| 18—21   | 2              | 28   | 30    | 33    | 19    | 27    | 22    | 41    | 64    | 40     | 127     | 142            |
| 21—24   | 3              | 44   | 25    | 15    | 9     | 19    | 26    | 70    | 118   | 86     | 137     | 162            |
| Average | 1              | 16   | 21    | 37    | 33    | 56    | 24    | 28    | 36    | 28     | 123     | 100            |

VI.

Micropulsation indices for the year  
1981

*Activity indices for the micropulsations  
(P1 ot P12)*

*1981. January—December*

|     | January      | February     | March        | April        |
|-----|--------------|--------------|--------------|--------------|
| 1.  | 153334335141 | 145532114224 | 155223345241 | 155215533554 |
| 2.  | 124454333111 | 255523224435 | 155423244235 | 155425331224 |
| 3.  | 115534222122 | 135225334132 | 152235335412 | 155433233141 |
| 4.  | 125522224323 | 124435332121 | 155425131113 | 155325415123 |
| 5.  | 113355223522 | 555321244541 | 355211225455 | 145424424221 |
| 6.  | 211425522211 | 555312155155 | 555412534244 | 155434132241 |
| 7.  | 113145514211 | 255411333312 | 155332134454 | 155113524332 |
| 8.  | 114434424311 | 355421121154 | 155345122123 | 155423225242 |
| 9.  | 112324555511 | 555412232254 | 155345212222 | 155444211211 |
| 10. | 145425415333 | 115533111112 | 155421122451 | 134225524132 |
| 11. | 135425225335 | 133533313241 | 135413122221 | 155311133555 |
| 12. | 111135324211 | 245254135212 | 155423225234 | 155311124555 |
| 13. | 115442325211 | 114335434114 | 155413225555 | 155311135555 |
| 14. | 115534212221 | 112235554111 | 155322124355 | 155432124344 |
| 15. | 122345323512 | 152324454322 | 345423214255 | 155425111341 |
| 16. | 125445223323 | 155434132323 | 154445423325 | 155324224155 |
| 17. | 115435442522 | 143535122322 | 155434224145 | 155322134155 |
| 18. | 125424333222 | 145532314221 | 155321142325 | 155424124245 |
| 19. | 113324425221 | 155433233335 | 155335324412 | 155411345554 |
| 20. | 114534123111 | 155422343244 | 135534222124 | 155212333554 |
| 21. | 113443324411 | 115244223122 | 154444112221 | 155213224555 |
| 22. | 225451235242 | 155422124522 | 133454113221 | 155222344555 |
| 23. | 125523324325 | 155434224154 | 125225334211 | 155222235255 |
| 24. | 155334245541 | 155222335344 | 135533122321 | 155442344152 |
| 25. | 114245344522 | 155312145522 | 155211241551 | 155354324234 |
| 26. | 113335333122 | 155333434221 |              | 155414122255 |
| 27. | 113543224221 | 155421344342 | 153115553141 | 155222244555 |
| 28. | 155443114132 | 155235124121 | 455335335123 | 155435121344 |
| 29. | 155434232242 |              | 155421244444 | 155452334151 |
| 30. | 112435334121 |              | 155322235543 | 155333235423 |
| 31. | 255534215544 |              | 155325235251 |              |

|     | May          | June         | July         | August       |
|-----|--------------|--------------|--------------|--------------|
| 1.  | 145444113344 | 155511113455 | 155531123124 | 555431135332 |
| 2.  | 145345234131 | 155311215551 | 155522125345 | 155521114241 |
| 3.  | 125324224243 | 155411225452 | 153232455312 | 155434233144 |
| 4.  | 115534112131 | 155411145132 | 155422353231 | 155335332224 |
| 5.  | 135433231253 | 145311355222 | 155521144444 | 255524433254 |
| 6.  | 135433312141 | 155311355453 | 155521125155 | 153432145341 |
| 7.  | 115423122343 | 155311115355 | 135511124241 | 155444234142 |
| 8.  | 155311331155 | 155123444245 | 155513233221 | 145532223331 |
| 9.  | 155411244354 | 125335144111 | 355422225431 | 154524233523 |
| 10. | 155233325444 | 155511223254 | 145433134421 | 155411225555 |
| 11. | 455211225255 | 155421233323 | 155311134355 | 155532214454 |
| 12. | 355432125445 | 155533112311 | 115411145131 | 145542224354 |
| 13. | 345554124155 | 135222544421 | 155411445222 | 115523131111 |
| 14. | 155442225155 | 155222435441 | 155223544222 | 111325345414 |
| 15. | 555211155455 | 455111324131 | 125114445322 | 155431425543 |
| 16. | 555311245554 | 154521154354 | 155333232343 | 135523345543 |
| 17. | 255421554224 | 155433143155 | 155512223554 | 155421135355 |
| 18. | 455321145555 | 155541214452 | 155213245453 | 155521233153 |
| 19. | 151141115115 | 155421445241 | 155522145532 | 145544132344 |
| 20. | 355524245345 | 145522344121 | 155411125545 | 154525135144 |
| 21. | 352235435225 | 155532214243 | 155412255544 | 155225145542 |
| 22. | 153333453222 | 155333324344 | 145522235144 | 155235134341 |
| 23. | 455431145542 | 125533133121 | 155311145552 | 155122225455 |
| 24. | 355311445453 | 155421335452 | 155531123223 | 155422234345 |
| 25. | 555321245353 | 155511123454 | 155211233455 | 155534225243 |
| 26. | 355422223322 | 155511114354 | 155321134155 | 245445121224 |
| 27. | 255422311552 | 155331335145 | 155211545445 | 155523121555 |
| 28. | 255521124244 | 155213445421 | 145311455544 | 354553114435 |
| 29. | 255531225321 | 155312245151 | 125313554311 | 255534122354 |
| 30. | 115535123111 | 155211145254 | 155322243543 | 155421125543 |
| 31. | 155511223351 |              | 545511434241 | 155335112554 |

|     | September    | October      | November     | December     |
|-----|--------------|--------------|--------------|--------------|
| 1.  | 125325114553 | 155425323445 | 115435224231 | 255423234452 |
| 2.  | 255512235444 | 155425312445 | 115534114231 | 355421224442 |
| 3.  | 155434134145 | 255423224555 | 143425424412 | 145422323355 |
| 4.  | 355435324422 | 251125542223 | 125423423323 | 125424333444 |
| 5.  | 155424125554 | 152125414311 | 125325225311 | 143315443321 |
| 6.  | 154425333425 | 123325344421 | 155215125532 | 144115534121 |
| 7.  | 155434245422 | 155232145541 | 155313345542 | 125225131311 |
| 8.  | 153435124212 | 155424232245 | 155412144455 | 155311214555 |
| 9.  | 155424122355 | 155335134345 | 122235432121 | 155421124555 |
| 10. | 155325224554 | 155125335355 | 124325414354 | 125224434341 |
| 11. | 155215345541 | 155312135555 | 155422122455 | 135314434441 |
| 12. | 155425235453 | 554345222144 | 155312343545 | 155412244354 |
| 13. | 155225335241 | 155325134455 | 121345213222 | 153345221521 |
| 14. | 135435112242 | 255211125555 | 155422243555 | 135235313242 |
| 15. | 125345212333 | 135434121455 | 155335114355 | 115334324112 |
| 16. | 153225445512 | 135212235555 | 155425422145 | 125433444521 |
| 17. | 151234434421 | 135234113555 | 155334214455 | 125432355424 |
| 18. | 155225222423 | 125235333314 | 155223345445 | 255421422441 |
| 19. | 155312123355 | 155333121555 | 155325233142 | 145534234331 |
| 20. | 145425345225 | 255212445554 | 125534232152 | 123345243111 |
| 21. | 155334234412 | 155335225254 | 134444322223 | 112543323121 |
| 22. | 254235234431 | 155223114555 | 135415333422 | 111345322111 |
| 23. | 155434224221 | 155313235545 | 155225335422 | 115443114241 |
| 24. | 155324235354 | 155422333341 | 155314324111 | 155534124114 |
| 25. | 155423224341 | 155424411452 | 155421124355 | 114335243321 |
| 26. | 155323344554 | 155421114554 | 113345321121 | 115432244421 |
| 27. | 152235222543 | 155334431332 | 111555112111 | 125434144232 |
| 28. | 125225524221 | 155225321255 | 112535431211 | 155412115355 |
| 29. | 155334113344 | 142215535124 | 113345422111 | 155321225555 |
| 30. | 155522114145 | 135444233222 | 115325432121 | 255212435155 |
| 31. |              | 113435333212 |              | 125425323425 |

## Pc 1 indices 1981

|     | January | February | March | April | May | June | July | August | September | October | November | December |
|-----|---------|----------|-------|-------|-----|------|------|--------|-----------|---------|----------|----------|
| 1.  | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 2.  | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 3.  | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 4.  | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 5.  | 1       | 1        | 2     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 6.  | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 7.  | 1       | 2        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 8.  | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 2        | 1        |
| 9.  | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 10. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 11. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 12. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 13. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 14. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 2       | 1        | 1        |
| 15. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 1       | 1        | 1        |
| 16. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 0      | 1         | 5       | 1        | 1        |
| 17. | 1       | 1        | 1     | 1     | 1   | 1    | 1    | 1      | 1         | 1       | 1        | 1        |
| 18. | 1       | 1        | 1     | 2     | 1   | 1    | 0    | 0      | 1         | 1       | 1        | 1        |
| 19. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 20. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 21. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 22. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 23. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 24. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 25. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 2        | 1        |
| 26. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 27. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 28. | 1       | 1        | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 29. | 1       |          | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 30. | 1       |          | 1     | 1     | 1   | 1    | 0    | 1      | 1         | 1       | 1        | 1        |
| 31. | 1       |          | 1     |       | 1   |      | 0    | 1      |           | 1       |          | 1        |

0 = no recording