

METEOROLOGICAL SERVICE



**MAGNETIC OBSERVATIONS
AT VALENTIA OBSERVATORY
1989**

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1990**

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Magnetic Observations at Valentia Observatory 1989

1. Introduction

Absolute magnetic observations have been made at Valentia Observatory since 1888. An account of these observations during the period 1888-1953 has been published by the Meteorological Service [1]. In December 1952, a set of La Cour Variometers was installed at the Observatory and was recording on an experimental basis during the year 1953. Other new instruments brought into use at the same time were:-

- (a) The Copenhagen Quartz Horizontal Magnetometer (QHM)
- (b) The Copenhagen Magnetometric Zero Balance (BMZ)

During 1953, special comparative readings with the old and new instruments were made and an account of this comparison is given in [1].

The data for the years 1954-1988 have been published in annual volumes. The present volume contains the data for 1989.

2. Site of the Observations

The geographic co-ordinates of Valentia Observatory are as follows:-

Latitude: 51° 56' N Longitude: 10° 15' W

The height of the station above M.S.L. is 14 metres.

A full description of the site and of the variometer hut is given in [6]. The observing hut for absolute observations has been in use since October 1956. A plan showing the layout of the instrument pillars in this hut, together with some particulars concerning its construction, is given in [7].

3. Variometers and Recorders

La Cour Variometers

Up to December 1955, the instruments installed in the variometer hut consisted of a standard La Cour 15mm/hr recorder with a set of La Cour H, D and Z variometers. In December 1955, a second set of La Cour H, D and Z variometers with a La Cour 180mm/hr (quick-run) recorder was installed, and has been recording continuously since 1st January 1956.

A description of the instruments and of the recorders will be found in [2], [3] and [4].

The variometers-recorder lines are approximately along the Magnetic Meridian, the recorders being south of the variometers. At Valentia, the time marking system in the La Cour recorder has been modified to give lines at ten minute intervals. In addition, a number of alarm devices have been installed to reduce to a minimum the possibility of accidental loss of trace.

A full description of the time marking system and alarm devices is given in [5] and [6].

Digital Fluxgate Magnetometer

In March 1988 an EDA FM105B fluxgate magnetometer was installed in the variometer hut. Output was recorded on a three-channel chart recorder in the main Observatory building. In August 1988 a digital data logger and IBM PC compatible microcomputer were added. The fluxgate system was run under test until the end of that year.

The digital fluxgate magnetometer became the official instrument on the 1st January 1989. All data published in this yearbook are derived from the one-minute means from the fluxgate.

The outputs of the fluxgate magnetometer are sampled every second by a Campbell Scientific CR10 Datalogger. One minute means, centered on the half-minute, are computed and stored in the logger. Several times a week these data are transferred to an IBM-PC compatible computer for storage in a database.

A full description of the digital system is given in the Appendix.

Variometer Hut

The variometer hut has a thermostatically controlled heating system which maintains the temperature in the hut at $20^{\circ}\text{C} \pm 1^{\circ}\text{C}$ except in very warm weather when the temperature may rise to 26 or 27°C . Temperature corrections are applied to the fluxgate data.

4. Base Line Instruments

Since routine recordings began in 1954 a number of changes have been made in the instruments used for base line determination. An account of these changes and comparisons between the instruments is given in Appendix to [9]. Base line instruments used during 1989 were:-

Declination.....Ruska Observatory Magnetometer No. 5917 with
Magnet No. 655
Horizontal Force...Proton Vector Magnetometer
Vertical Force.....Proton Vector Magnetometer

4.1 Declination

Ruska Observatory Magnetometer No. 5917 has been in use as the standard base line instrument for Declination since 1st January 1959. Prior to this date the instrument in use was the Dover Magnetometer No. 139 with Collimator Magnet No. 139A. Particulars of a comparison between the old and new instruments will be found in [8].

4.2 Horizontal and Vertical Force

The Proton Vector Magnetometer was introduced as a routine base line instrument for H and Z from 1st January 1970. An account of the comparison of results obtained with this absolute instrument and those obtained with the relative instruments used in previous years is given in the Appendix to [9].

5. Base Line Determination

A summary of the base line values, deduced from the observations made with the instruments specified in paragraph 4, is given in Table 1. The values adopted for the tabulation of the records are given in Table 2.

6. Scale Values of the Variometers

The scale values for all three variometers were determined by means of the Helmholtz coil, supplied with the variometers. The scale value for the D variometer was also checked by geometric considerations. The scale values for 1989 were:-

| Standard La Cour | Fluxgate |
|---------------------|-------------------|
| D.....1mm = 0.90 | 1' = 55mV = 5.5nT |
| H.....1mm = 4.29 nT | 1nT = 10mV |
| Z.....1mm = 5.60 nT | 1nT = 10mV |

7. Diurnal Variation of the Magnetic Elements

Diurnal variation data for all days and international quiet and disturbed days for the seasons and the year are given in Tables 8 to 16. The months taken as comprising the different seasons are as is usual in magnetic work:-

Winter.....January, February, November and December
 Equinox.....March, April, September and October
 Summer.....May, June, July and August.

8. K - Indices

The K - Indices given in Table 17, have been scaled from the standard La Cour magnetograms, using the procedure recommended by the Committee on Characterisation of Magnetic Disturbances of the I.A.G.A. The lower limit for K = 9 is 500 nT.

The actual scaled value for K is given without reduction for a presumed solar flare effect.

9. Magnetic Disturbance Data

Tables 18 and 19 give the times of onset, as recorded on the Valentia normal speed magnetograms, of the following phenomena:-

- (a) Sudden commencements of magnetic storms or periods of storminess (s.s.c.)
- (b) Presumed solar flare effects (s.f.e.)

Giant pulsations (p.g.) as recorded on the quick-run magnetograms are listed in Table 20.

Definitions and descriptions of the phenomena listed in Tables 18 to 20 will be found in [10].

10. Data availability

Computer generated plots of magnetograms are sent to WDC-C1 in Copenhagen for microfilming.

Machine readable hourly mean values of H,D and Z from 1968 to 1989 are available from Boulder and Edinburgh.

One minute means for 1989 are available from Edinburgh.

11. Notes on the Tables

Tables 4 to 6 (incl.)

The hourly values are the mean values for each hourly interval centered at the half hours.

The mean for each day is the arithmetic mean of the 24 hourly values.

Tables 4 to 7 (incl.)

The international quiet and disturbed days are indicated by letters "Q" and "D" respectively. These days have been selected by the International Association of Geomagnetism and Aeronomy.

Tables 7 to 16 (incl.)

The maxima and minima are indicated by the letters "M" and "m" respectively.

Table 21

The data given in this table have been adjusted, where necessary, to eliminate discontinuities resulting from occasional changes in base line instruments or other causes. Particulars of this homogenisation will be found in Appendix to [9].

Table 1 Baseline Values as Computed from the Absolute Observations 1989

Declination 9⁰ + ..0.1 minutes
 Horizontal Force 19000 + ..nanoTesla units
 Vertical Force 44000 + ..nanoTesla units

| Date | D | H | Z | Date | D | H | Z | Date | D | H | Z | Date | D | H | Z | Date | D | H | Z | | | | |
|-------|-----|----|-----|-------|-----|-----|-----|-------|-----|----|-----|-------|-----|----|-----|-------|-----|----|-----|-------|-----|----|-----|
| 2/ 1 | 334 | 60 | 456 | 1/ 3 | 358 | 64 | 457 | 1/ 5 | 306 | 50 | 459 | 3/ 7 | 327 | 57 | 450 | 1/ 9 | 325 | 46 | 448 | 1/11 | 324 | 48 | 448 |
| 4/ 1 | 334 | 61 | 457 | 3/ 3 | 356 | 63 | 457 | 3/ 5 | 321 | 54 | 450 | 5/ 7 | 327 | 58 | 451 | 4/ 9 | 325 | 46 | 449 | 3/11 | 325 | 46 | 449 |
| 6/ 1 | 335 | 61 | 456 | 6/ 3 | 356 | 64 | 456 | 5/ 5 | 322 | 54 | 451 | 7/ 7 | 327 | 56 | 450 | 6/ 9 | 325 | 47 | 449 | 6/11 | 324 | 47 | 449 |
| 9/ 1 | 336 | 59 | 457 | 8/ 3 | 356 | 64 | 456 | 8/ 5 | 324 | 54 | 451 | 10/ 7 | 328 | 57 | 450 | 8/ 9 | 325 | 47 | 449 | 8/11 | 326 | 48 | 449 |
| 11/ 1 | 335 | 60 | 456 | 10/ 3 | 356 | 66 | 456 | 10/ 5 | 324 | 54 | 451 | 12/ 7 | 329 | 56 | 450 | 11/ 9 | 325 | 46 | 450 | 10/11 | 323 | 47 | 450 |
| 13/ 1 | 336 | 58 | 456 | 15/ 3 | 356 | 65 | 456 | 12/ 5 | 324 | 55 | 451 | 14/ 7 | 327 | 56 | 450 | 13/ 9 | 325 | 45 | 450 | 13/11 | 324 | 46 | 450 |
| 16/ 1 | 336 | 59 | 456 | 17/ 3 | 356 | 65 | 457 | 15/ 5 | 321 | 53 | 450 | 17/ 7 | 327 | 57 | 450 | 15/ 9 | 324 | 44 | 450 | 15/11 | 325 | 46 | 450 |
| 18/ 1 | 336 | 61 | 456 | 20/ 3 | | | 459 | 17/ 5 | 320 | 54 | 450 | 19/ 7 | 329 | 56 | 450 | 18/ 9 | 325 | 46 | 449 | 17/11 | 324 | 47 | 451 |
| 20/ 1 | 355 | 64 | 456 | 22/ 3 | 350 | 217 | 456 | 19/ 5 | 324 | 52 | 451 | 21/ 7 | 328 | 55 | 449 | 20/ 9 | 326 | 44 | 449 | 20/11 | 323 | 46 | 451 |
| 23/ 1 | 357 | 62 | 457 | 24/ 3 | 349 | 218 | 456 | 22/ 5 | 323 | 53 | 451 | 24/ 7 | 328 | 55 | 449 | 22/ 9 | 323 | 46 | 449 | 22/11 | 324 | 48 | 450 |
| 25/ 1 | 357 | 62 | 456 | 27/ 3 | 347 | 215 | 457 | 24/ 5 | 321 | 54 | 448 | 26/ 7 | 329 | 57 | 448 | 25/ 9 | 325 | 45 | 450 | 24/11 | 326 | 47 | 449 |
| 27/ 1 | 357 | 63 | 455 | 29/ 3 | 351 | 214 | 456 | 26/ 5 | 323 | 53 | 451 | 28/ 7 | 329 | 56 | 447 | 27/ 9 | 326 | 46 | 448 | 27/11 | 323 | 49 | 450 |
| 30/ 1 | 357 | 62 | 455 | 31/ 3 | 350 | 210 | 456 | 29/ 5 | 321 | 52 | 451 | 31/ 7 | 329 | 57 | 447 | 29/ 9 | 326 | 47 | 449 | 29/11 | 324 | 47 | 451 |
| 1/ 2 | 356 | 63 | 455 | 3/ 4 | 349 | 206 | 456 | 31/ 5 | 323 | 53 | 452 | 2/ 8 | 331 | 56 | 447 | 2/10 | 324 | 46 | 449 | 1/12 | 323 | 51 | 451 |
| 3/ 2 | 357 | 60 | 456 | 4/ 4 | 352 | 56 | 457 | 2/ 6 | 324 | 53 | 451 | 4/ 8 | 331 | 55 | 447 | 4/10 | 325 | 45 | 449 | 4/12 | 322 | 51 | 451 |
| 6/ 2 | 356 | 61 | 456 | 5/ 4 | 350 | 56 | 456 | 5/ 6 | 323 | 53 | 452 | 7/ 8 | 330 | 55 | 446 | 6/10 | 325 | 45 | 450 | 6/12 | 321 | 48 | 452 |
| 8/ 2 | 356 | 62 | 455 | 7/ 4 | 348 | 54 | 457 | 7/ 6 | 324 | 53 | 451 | 9/ 8 | 332 | 55 | 445 | 9/10 | 326 | 46 | 449 | 8/12 | 323 | 48 | 452 |
| 10/ 2 | 356 | 64 | 455 | 10/ 4 | 348 | 54 | 457 | 9/ 6 | 322 | 53 | 451 | 11/ 8 | 325 | 46 | 449 | 11/10 | 326 | 46 | 449 | 11/12 | 321 | 49 | 454 |
| 13/ 2 | 355 | 61 | 455 | 12/ 4 | 349 | 55 | 456 | 12/ 6 | 323 | 52 | 450 | 14/ 8 | 327 | 47 | 449 | 13/10 | 327 | 46 | 449 | 13/12 | 321 | 48 | 453 |
| 15/ 2 | 356 | 62 | 455 | 14/ 4 | 330 | 49 | 458 | 14/ 6 | 324 | 53 | 451 | 16/ 8 | 325 | 48 | 448 | 16/10 | 323 | 46 | 449 | 15/12 | 322 | 49 | 453 |
| 17/ 2 | 356 | 62 | 455 | 17/ 4 | 329 | 49 | 459 | 16/ 6 | 323 | 52 | 450 | 18/ 8 | 325 | 46 | 449 | 18/10 | 325 | 45 | 449 | 18/12 | 320 | 51 | 453 |
| 20/ 2 | 356 | 64 | 456 | 19/ 4 | 307 | 52 | 459 | 19/ 6 | 325 | 53 | 452 | 21/ 8 | 326 | 46 | 449 | 20/10 | 325 | 48 | 447 | 20/12 | 323 | 48 | 454 |
| 22/ 2 | 356 | 65 | 456 | 21/ 4 | 305 | 49 | 458 | 21/ 6 | 326 | 54 | 451 | 23/ 8 | 326 | 46 | 449 | 23/10 | 324 | 47 | 448 | 22/12 | 326 | 50 | 453 |
| 24/ 2 | 355 | 64 | 456 | 24/ 4 | 306 | 52 | 458 | 23/ 6 | 323 | 53 | 451 | 25/ 8 | 325 | 45 | 449 | 25/10 | 326 | 45 | 449 | 25/12 | 324 | 49 | 453 |
| 27/ 2 | 356 | 64 | 456 | 26/ 4 | 304 | 52 | 459 | 26/ 6 | 324 | 53 | 450 | 28/ 8 | 327 | 47 | 449 | 27/10 | 324 | 46 | 449 | 27/12 | 326 | 51 | 453 |
| | | | | 28/ 4 | 304 | 51 | 459 | 28/ 6 | 326 | 57 | 450 | 30/ 8 | 325 | 45 | 449 | 30/10 | 326 | 47 | 449 | 29/12 | 327 | 49 | 454 |
| | | | | | | | | 30/ 6 | 326 | 57 | 451 | | | | | | | | | | | | |

5

Table 2

Adopted Baseline Values

1989

DECLINATION

9° + ..Tenths of minutes

| Date | Adop | Date | Adop | Date | Adop | Date | Adop |
|---------------|------|---------------|------|---------------|------|---------------|------|
| 1/ 1 - 4/ 1 | 334 | 14/ 4 - 18/ 4 | 329 | 28/ 6 - 17/ 7 | 327 | 30/11 - 10/12 | 323 |
| 5/ 1 - 18/ 1 | 335 | 19/ 4 - 24/ 4 | 306 | 18/ 7 - 29/ 7 | 328 | 11/12 - 18/12 | 322 |
| 19/ 1 - 19/ 3 | 356 | 25/ 4 - 2/ 5 | 305 | 30/ 7 - 1/ 8 | 329 | 19/12 - 20/12 | 323 |
| 20/ 3 - 22/ 3 | 351 | 3/ 5 - 7/ 5 | 322 | 2/ 8 - 9/ 8 | 330 | 21/12 - | 324 |
| 23/ 3 - | 350 | 8/ 5 - 13/ 5 | 323 | 10/ 8 - 18/ 8 | 325 | 22/12 - 31/12 | 325 |
| 24/ 3 - 28/ 3 | 349 | 14/ 5 - 30/ 5 | 322 | 19/ 8 - 30/ 8 | 326 | | |
| 29/ 3 - 6/ 4 | 350 | 31/ 5 - 17/ 6 | 323 | 31/ 8 - 8/11 | 325 | | |
| 7/ 4 - 13/ 4 | 349 | 18/ 6 - 27/ 6 | 324 | 9/11 - 29/11 | 324 | | |

HORIZONTAL COMPONENT

19000 + ..nanotesla units

| Date | Adop | Date | Adop | Date | Adop | Date | Adop |
|---------------|------|---------------|------|---------------|------|---------------|------|
| 1/ 1 - 7/ 1 | 60 | 27/ 3 - 29/ 3 | 215 | 3/ 5 - 14/ 5 | 54 | 19/10 - 26/11 | 47 |
| 8/ 1 - 18/ 1 | 59 | 30/ 3 - | 213 | 15/ 5 - 27/ 6 | 53 | 27/11 - 29/11 | 48 |
| 19/ 1 - 24/ 1 | 63 | 31/ 3 - | 211 | 28/ 6 - 17/ 7 | 57 | 30/11 - 15/12 | 49 |
| 25/ 1 - 2/ 2 | 62 | 1/ 4 - | 209 | 18/ 7 - 2/ 8 | 56 | 16/12 - 31/12 | 50 |
| 3/ 2 - 8/ 2 | 61 | 2/ 4 - | 207 | 3/ 8 - 9/ 8 | 55 | | |
| 9/ 2 - 17/ 2 | 62 | 3/ 4 - 5/ 4 | 56 | 10/ 8 - 17/ 8 | 47 | | |
| 18/ 2 - | 63 | 6/ 4 - 13/ 4 | 55 | 18/ 8 - 12/ 9 | 46 | | |
| 19/ 2 - 19/ 3 | 64 | 14/ 4 - 18/ 4 | 49 | 13/ 9 - 8/10 | 45 | | |
| 20/ 3 - 26/ 3 | 216 | 19/ 4 - 2/ 5 | 51 | 9/10 - 18/10 | 46 | | |

VERTICAL COMPONENT

44000 + ..nanotesla units

| Date | Adop | Date | Adop | Date | Adop | Date | Adop |
|---------------|------|---------------|------|--------------|------|---------------|------|
| 1/ 1 - 24/ 1 | 456 | 20/ 4 - 2/ 5 | 458 | 3/ 8 - 9/ 8 | 446 | 29/12 - 31/12 | 454 |
| 25/ 1 - 17/ 2 | 455 | 3/ 5 - 9/ 7 | 451 | 10/ 8 - 8/11 | 449 | | |
| 18/ 2 - 17/ 3 | 456 | 10/ 7 - 17/ 7 | 450 | 9/11 - 29/11 | 450 | | |
| 18/ 3 - 28/ 3 | 457 | 18/ 7 - 25/ 7 | 449 | 30/11 - 5/12 | 451 | | |
| 29/ 3 - 13/ 4 | 456 | 26/ 7 - 29/ 7 | 448 | 6/12 - 8/12 | 452 | | |
| 14/ 4 - 19/ 4 | 459 | 30/ 7 - 2/ 8 | 447 | 9/12 - 28/12 | 453 | | |

Note: The adopted values as shown above are for periods which are multiples of 24 hours commencing at 0000 UTC.

Table 3

Monthly and Annual Means of the Magnetic Elements 1989ALL DAYS

| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
|----------------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|------|
| Declination 9deg+.. | 274 | 268 | 256 | 248 | 244 | 237 | 232 | 221 | 213 | 209 | 203 | 194 | 233 |
| Horizontal Force 19000nT+. | 64 | 71 | 54 | 73 | 87 | 84 | 96 | 80 | 72 | 71 | 68 | 75 | 75 |
| Vertical Force 44000nT+. | 488 | 484 | 492 | 486 | 480 | 485 | 477 | 480 | 484 | 491 | 499 | 494 | 487 |

QUIET DAYS

| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
|----------------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|------|
| Declination 9deg+.. | 269 | 271 | 262 | 255 | 249 | 239 | 234 | 228 | 215 | 215 | 202 | 199 | 237 |
| Horizontal Force 19000nT+. | 76 | 84 | 64 | 88 | 89 | 89 | 90 | 90 | 75 | 85 | 80 | 89 | 83 |
| Vertical Force 44000nT+. | 483 | 475 | 494 | 480 | 478 | 484 | 480 | 474 | 484 | 479 | 493 | 490 | 483 |

DISTURBED DAYS

| | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Year |
|----------------------------|-----|-----|-----|-----|-----|------|------|-----|------|-----|-----|-----|------|
| Declination 9deg+.. | 281 | 263 | 235 | 231 | 235 | 231 | 235 | 214 | 198 | 192 | 202 | 185 | 225 |
| Horizontal Force 19000nT+. | 50 | 57 | 8 | 55 | 75 | 70 | 101 | 65 | 58 | 32 | 45 | 53 | 56 |
| Vertical Force 44000nT+. | 494 | 489 | 493 | 489 | 484 | 494 | 480 | 483 | 484 | 523 | 515 | 504 | 494 |

| Table 4 Hour Date | Declination | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9 ⁰ +.....(Tenths of Minutes) | | | | | January 1989 | | | Mean |
|-------------------------|-------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|--------------|-----|--|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | |
| 1 | 178 | 223 | 257 | 256 | 257 | 267 | 263 | 264 | 262 | 260 | 268 | 291 | 301 | 325 | 324 | 324 | 282 | 222 | 230 | 232 | 208 | 210 | 181 | 145 | 251 | | |
| 2 Q | 133 | 155 | 184 | 195 | 196 | 197 | 198 | 194 | 190 | 182 | 230 | 292 | 293 | 308 | 316 | 302 | 295 | 290 | 292 | 284 | 266 | 271 | 267 | 271 | 242 | | |
| 3 Q | 272 | 274 | 276 | 277 | 278 | 276 | 273 | 270 | 267 | 265 | 274 | 285 | 292 | 302 | 313 | 309 | 300 | 294 | 291 | 287 | 281 | 276 | 276 | 274 | 283 | | |
| 4 Q | 266 | 255 | 254 | 254 | 255 | 260 | 262 | 268 | 260 | 253 | 261 | 276 | 294 | 299 | 299 | 294 | 290 | 291 | 290 | 288 | 282 | 278 | 278 | 281 | 275 | | |
| 5 D | 283 | 245 | 177 | 205 | 245 | 177 | 233 | 300 | 297 | 253 | 236 | 257 | 277 | 299 | 321 | 329 | 381 | 380 | 333 | 309 | 287 | 267 | 261 | 257 | 275 | | |
| 6 Q | 227 | 262 | 270 | 272 | 260 | 267 | 263 | 262 | 258 | 245 | 251 | 267 | 278 | 291 | 309 | 314 | 304 | 294 | 289 | 282 | 280 | 272 | 274 | 272 | 273 | | |
| 7 | 271 | 275 | 283 | 283 | 277 | 283 | 277 | 266 | 267 | 256 | 255 | 266 | 279 | 299 | 311 | 311 | 315 | 305 | 293 | 293 | 282 | 258 | 265 | 272 | 281 | | |
| 8 | 271 | 274 | 274 | 272 | 276 | 279 | 272 | 264 | 265 | 258 | 258 | 266 | 285 | 330 | 342 | 341 | 346 | 337 | 315 | 284 | 278 | 257 | 243 | 223 | 284 | | |
| 9 | 252 | 256 | 261 | 256 | 271 | 262 | 261 | 262 | 253 | 241 | 245 | 276 | 304 | 322 | 356 | 306 | 299 | 299 | 287 | 279 | 264 | 240 | 222 | 251 | 272 | | |
| 10 | 230 | 206 | 241 | 273 | 284 | 276 | 271 | 264 | 258 | 245 | 244 | 272 | 289 | 309 | 320 | 316 | 299 | 313 | 296 | 290 | 274 | 276 | 270 | 268 | 274 | | |
| 11 D | 264 | 253 | 265 | 277 | 280 | 277 | 271 | 267 | 257 | 246 | 247 | 267 | 312 | 327 | 351 | 393 | 372 | 400 | 408 | 355 | 276 | 223 | 187 | 116 | 287 | | |
| 12 | 200 | 260 | 292 | 268 | 243 | 273 | 263 | 258 | 247 | 246 | 253 | 265 | 281 | 302 | 310 | 304 | 293 | 289 | 290 | 281 | 266 | 255 | 261 | 261 | 269 | | |
| 13 | 263 | 267 | 272 | 274 | 274 | 273 | 272 | 263 | 256 | 244 | 243 | 264 | 288 | 330 | 348 | 374 | 344 | 370 | 356 | 360 | 304 | 269 | 255 | 240 | 292 | | |
| 14 | 231 | 247 | 255 | 258 | 258 | 266 | 264 | 261 | 255 | 245 | 249 | 263 | 281 | 302 | 310 | 303 | 297 | 301 | 295 | 296 | 266 | 257 | 228 | 150 | 264 | | |
| 15 D | 179 | 236 | 227 | 226 | 233 | 259 | 245 | 259 | 255 | 251 | 260 | 297 | 336 | 364 | 369 | 380 | 365 | 336 | 341 | 330 | 308 | 172 | 183 | 214 | 276 | | |
| 16 D | 176 | 222 | 251 | 238 | 280 | 284 | 327 | 321 | 330 | 284 | 244 | 262 | 268 | 322 | 345 | 358 | 327 | 341 | 319 | 268 | 270 | 216 | 240 | 207 | 279 | | |
| 17 | 186 | 161 | 201 | 236 | 250 | 263 | 263 | 283 | 270 | 260 | 250 | 317 | 283 | 300 | 334 | 331 | 320 | 331 | 366 | 344 | 260 | 261 | 243 | 241 | 273 | | |
| 18 | 243 | 227 | 209 | 224 | 237 | 254 | 255 | 247 | 243 | 241 | 239 | 267 | 287 | 316 | 323 | 316 | 312 | 307 | 302 | 291 | 283 | 267 | 270 | 270 | 268 | | |
| 19 Q | 265 | 250 | 234 | 236 | 249 | 260 | 257 | 259 | 257 | 246 | 249 | 272 | 297 | 308 | 312 | 313 | 303 | 288 | 293 | 290 | 280 | 266 | 265 | 252 | 271 | | |
| 20 D | 234 | 255 | 283 | 279 | 279 | 275 | 272 | 264 | 259 | 247 | 251 | 269 | 306 | 348 | 390 | 449 | 320 | 326 | 391 | 310 | 265 | 208 | 192 | 209 | 287 | | |
| 21 | 239 | 235 | 221 | 226 | 267 | 277 | 278 | 294 | 273 | 248 | 250 | 278 | 308 | 315 | 335 | 336 | 281 | 310 | 268 | 255 | 236 | 208 | 214 | 225 | 266 | | |
| 22 | 223 | 227 | 254 | 264 | 259 | 309 | 307 | 268 | 258 | 249 | 244 | 269 | 312 | 325 | 329 | 331 | 304 | 284 | 270 | 263 | 251 | 249 | 235 | 254 | 272 | | |
| 23 | 263 | 249 | 261 | 258 | 240 | 259 | 260 | 267 | 286 | 268 | 257 | 269 | 290 | 305 | 316 | 320 | 282 | 274 | 284 | 261 | 241 | 259 | 250 | 259 | 270 | | |
| 24 | 260 | 258 | 272 | 274 | 272 | 261 | 256 | 255 | 251 | 239 | 242 | 264 | 286 | 300 | 314 | 321 | 299 | 294 | 272 | 263 | 275 | 270 | 240 | 258 | 271 | | |
| 25 | 257 | 263 | 270 | 274 | 267 | 267 | 275 | 261 | 266 | 257 | 253 | 272 | 280 | 313 | 316 | 321 | 310 | 299 | 301 | 294 | 277 | 265 | 255 | 238 | 277 | | |
| 26 | 245 | 251 | 263 | 271 | 272 | 266 | 265 | 259 | 259 | 248 | 248 | 267 | 288 | 301 | 327 | 322 | 315 | 278 | 288 | 294 | 270 | 265 | 263 | 264 | 275 | | |
| 27 | 261 | 244 | 211 | 206 | 262 | 265 | 263 | 271 | 264 | 260 | 256 | 273 | 287 | 316 | 317 | 308 | 303 | 293 | 286 | 282 | 277 | 270 | 267 | 265 | 271 | | |
| 28 | 266 | 267 | 275 | 294 | 262 | 267 | 266 | 261 | 254 | 244 | 244 | 264 | 292 | 318 | 343 | 335 | 318 | 311 | 279 | 274 | 280 | 264 | 254 | 258 | 279 | | |
| 29 | 257 | 259 | 267 | 268 | 270 | 275 | 273 | 268 | 265 | 246 | 245 | 260 | 291 | 310 | 325 | 311 | 301 | 300 | 287 | 274 | 271 | 266 | 260 | 257 | 275 | | |
| 30 | 263 | 263 | 273 | 263 | 262 | 262 | 266 | 260 | 251 | 242 | 242 | 273 | 313 | 329 | 343 | 351 | 329 | 305 | 300 | 288 | 271 | 257 | 239 | 244 | 279 | | |
| 31 | 238 | 233 | 202 | 224 | 242 | 245 | 259 | 256 | 251 | 247 | 270 | 289 | 295 | 317 | 339 | 341 | 337 | 396 | 381 | 328 | 302 | 243 | 134 | 183 | 273 | | |
| Mean | 239 | 244 | 250 | 254 | 260 | 264 | 265 | 265 | 261 | 249 | 250 | 273 | 293 | 315 | 329 | 331 | 314 | 312 | 306 | 291 | 272 | 252 | 241 | 238 | 274 | | |
| Mean Q | 233 | 239 | 244 | 247 | 248 | 252 | 251 | 251 | 246 | 238 | 253 | 278 | 291 | 302 | 310 | 306 | 298 | 291 | 291 | 286 | 278 | 273 | 272 | 270 | 269 | | |
| Mean D | 227 | 242 | 241 | 245 | 263 | 254 | 270 | 282 | 280 | 256 | 248 | 270 | 300 | 332 | 355 | 382 | 353 | 357 | 358 | 314 | 281 | 217 | 213 | 201 | 281 | | |

| Table 4 | Declination | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9 ^m +.....(Tenths of Minutes) | | | | February 1989 | | | Mean |
|---------|-------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|---------------|-----|-----|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | 185 | 228 | 232 | 229 | 200 | 212 | 251 | 249 | 244 | 236 | 229 | 261 | 298 | 340 | 345 | 329 | 310 | 299 | 301 | 290 | 278 | 243 | 181 | 265 | 260 | |
| 2 | 246 | 238 | 236 | 231 | 231 | 244 | 244 | 250 | 241 | 239 | 248 | 268 | 295 | 327 | 322 | 311 | 306 | 309 | 337 | 232 | 190 | 221 | 231 | 255 | 261 | |
| 3 D | 250 | 220 | 143 | 154 | 208 | 209 | 238 | 244 | 237 | 240 | 264 | 286 | 303 | 309 | 363 | 304 | 350 | 267 | 204 | 279 | 275 | 257 | 225 | 181 | 250 | |
| 4 D | 213 | 261 | 268 | 271 | 260 | 261 | 267 | 261 | 260 | 258 | 261 | 273 | 308 | 294 | 330 | 337 | 316 | 308 | 309 | 297 | 254 | 257 | 243 | 232 | 275 | |
| 5 | 216 | 225 | 246 | 261 | 227 | 240 | 249 | 261 | 250 | 239 | 242 | 253 | 278 | 304 | 318 | 315 | 291 | 283 | 274 | 305 | 288 | 257 | 224 | 222 | 261 | |
| 6 D | 226 | 193 | 238 | 237 | 241 | 262 | 280 | 263 | 266 | 248 | 252 | 267 | 294 | 330 | 353 | 356 | 327 | 297 | 294 | 254 | 225 | 266 | 256 | 247 | 270 | |
| 7 D | 232 | 211 | 210 | 228 | 239 | 243 | 256 | 277 | 259 | 244 | 253 | 279 | 288 | 328 | 327 | 331 | 302 | 274 | 279 | 267 | 231 | 251 | 220 | 160 | 258 | |
| 8 | 223 | 244 | 246 | 230 | 253 | 273 | 259 | 249 | 243 | 234 | 234 | 259 | 291 | 295 | 317 | 313 | 308 | 292 | 289 | 285 | 285 | 268 | 266 | 264 | 268 | |
| 9 | 241 | 222 | 199 | 216 | 214 | 218 | 243 | 251 | 243 | 230 | 229 | 245 | 272 | 299 | 320 | 327 | 323 | 313 | 309 | 290 | 287 | 235 | 231 | 214 | 257 | |
| 10 | 194 | 202 | 209 | 215 | 237 | 246 | 240 | 240 | 236 | 236 | 238 | 268 | 297 | 323 | 311 | 314 | 305 | 297 | 295 | 286 | 278 | 271 | 267 | 262 | 261 | |
| 11 | 262 | 262 | 265 | 271 | 268 | 268 | 263 | 264 | 248 | 233 | 232 | 261 | 284 | 290 | 307 | 318 | 320 | 316 | 326 | 320 | 305 | 284 | 255 | 253 | 278 | |
| 12 | 250 | 241 | 220 | 218 | 231 | 246 | 245 | 256 | 253 | 241 | 246 | 259 | 280 | 310 | 331 | 318 | 322 | 310 | 296 | 296 | 299 | 262 | 233 | 190 | 265 | |
| 13 | 207 | 164 | 185 | 212 | 205 | 231 | 231 | 254 | 260 | 252 | 257 | 281 | 295 | 307 | 319 | 320 | 311 | 323 | 310 | 297 | 282 | 269 | 236 | 235 | 260 | |
| 14 | 231 | 223 | 186 | 178 | 228 | 230 | 239 | 245 | 263 | 255 | 253 | 261 | 299 | 327 | 346 | 331 | 312 | 309 | 297 | 288 | 278 | 272 | 269 | 268 | 266 | |
| 15 | 265 | 263 | 264 | 253 | 248 | 249 | 252 | 257 | 249 | 239 | 250 | 268 | 286 | 306 | 325 | 338 | 340 | 312 | 309 | 266 | 317 | 277 | 250 | 234 | 276 | |
| 16 | 212 | 208 | 205 | 188 | 218 | 258 | 254 | 253 | 244 | 241 | 256 | 281 | 280 | 295 | 302 | 306 | 295 | 288 | 284 | 284 | 290 | 272 | 238 | 253 | 259 | |
| 17 Q | 267 | 271 | 275 | 277 | 270 | 264 | 258 | 252 | 246 | 234 | 232 | 252 | 270 | 285 | 294 | 293 | 288 | 293 | 293 | 286 | 279 | 275 | 271 | 266 | 270 | |
| 18 | 268 | 271 | 273 | 274 | 275 | 283 | 259 | 253 | 244 | 238 | 248 | 271 | 295 | 321 | 310 | 300 | 304 | 316 | 299 | 287 | 274 | 266 | 264 | 262 | 277 | |
| 19 | 259 | 264 | 270 | 269 | 268 | 271 | 264 | 256 | 250 | 238 | 258 | 293 | 305 | 316 | 317 | 320 | 299 | 308 | 299 | 291 | 280 | 278 | 244 | 229 | 277 | |
| 20 | 262 | 263 | 240 | 254 | 236 | 254 | 251 | 261 | 266 | 257 | 266 | 301 | 335 | 341 | 359 | 340 | 305 | 286 | 223 | 278 | 279 | 266 | 257 | 266 | 277 | |
| 21 | 269 | 266 | 266 | 259 | 257 | 255 | 251 | 245 | 266 | 263 | 265 | 278 | 294 | 302 | 298 | 298 | 298 | 284 | 291 | 287 | 280 | 276 | 272 | 270 | 275 | |
| 22 | 271 | 273 | 270 | 264 | 254 | 257 | 251 | 244 | 248 | 278 | 292 | 292 | 292 | 290 | 289 | 271 | 274 | 279 | 281 | 279 | 261 | 250 | 267 | 270 | 271 | |
| 23 Q | 271 | 268 | 269 | 268 | 266 | 262 | 255 | 246 | 237 | 234 | 244 | 258 | 284 | 297 | 300 | 288 | 279 | 279 | 284 | 282 | 277 | 274 | 254 | 245 | 268 | |
| 24 | 229 | 217 | 218 | 252 | 271 | 267 | 247 | 237 | 233 | 235 | 245 | 276 | 308 | 324 | 324 | 310 | 297 | 290 | 288 | 280 | 273 | 265 | 263 | 260 | 267 | |
| 25 Q | 256 | 258 | 260 | 262 | 261 | 256 | 270 | 257 | 237 | 219 | 219 | 248 | 278 | 304 | 319 | 314 | 303 | 296 | 288 | 278 | 273 | 268 | 264 | 262 | 269 | |
| 26 Q | 260 | 261 | 261 | 260 | 260 | 260 | 255 | 253 | 247 | 245 | 251 | 269 | 301 | 326 | 329 | 321 | 305 | 296 | 291 | 284 | 275 | 270 | 266 | 261 | 275 | |
| 27 Q | 254 | 241 | 247 | 255 | 256 | 255 | 253 | 247 | 243 | 243 | 258 | 280 | 308 | 311 | 322 | 299 | 291 | 287 | 292 | 288 | 280 | 272 | 269 | 255 | 271 | |
| 28 | 262 | 266 | 267 | 266 | 264 | 258 | 256 | 252 | 253 | 253 | 264 | 276 | 293 | 329 | 308 | 316 | 299 | 285 | 289 | 276 | 270 | 254 | 234 | 225 | 271 | |
| Mean | 242 | 240 | 238 | 241 | 245 | 251 | 253 | 253 | 249 | 243 | 250 | 270 | 293 | 312 | 322 | 316 | 306 | 296 | 290 | 283 | 274 | 263 | 248 | 243 | 268 | |
| Mean Q | 262 | 260 | 262 | 264 | 263 | 259 | 258 | 251 | 242 | 235 | 241 | 261 | 288 | 305 | 313 | 303 | 293 | 290 | 290 | 284 | 277 | 272 | 265 | 258 | 271 | |
| Mean D | 221 | 223 | 218 | 224 | 230 | 237 | 258 | 259 | 253 | 245 | 252 | 273 | 298 | 320 | 344 | 331 | 321 | 289 | 277 | 277 | 253 | 255 | 225 | 217 | 263 | |

| Table 4 | Declination | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9+.....(Tenths of Minutes) | | | | | | March 1989 | | | Mean |
|---------|-------------|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|-----|-----|------------|-----|-----|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Q | 230 | 229 | 229 | 238 | 221 | 231 | 236 | 236 | 224 | 226 | 248 | 280 | 304 | 340 | 350 | 330 | 299 | 294 | 293 | 289 | 286 | 275 | 268 | 253 | 267 | |
| 2 | 249 | 240 | 258 | 218 | 188 | 131 | 216 | 215 | 211 | 205 | 229 | 265 | 324 | 361 | 369 | 359 | 332 | 310 | 287 | 255 | 266 | 243 | 202 | 230 | 257 | |
| 3 | 241 | 242 | 204 | 219 | 231 | 270 | 237 | 269 | 328 | 266 | 243 | 291 | 328 | 352 | 370 | 343 | 326 | 290 | 288 | 253 | 268 | 258 | 250 | 243 | 275 | |
| 4 Q | 240 | 207 | 225 | 238 | 241 | 230 | 223 | 221 | 224 | 228 | 247 | 273 | 327 | 341 | 324 | 292 | 301 | 279 | 275 | 267 | 263 | 262 | 262 | 261 | 260 | |
| 5 | 255 | 241 | 222 | 224 | 210 | 246 | 249 | 246 | 268 | 240 | 265 | 307 | 337 | 327 | 339 | 305 | 293 | 277 | 264 | 211 | 250 | 260 | 202 | 222 | 261 | |
| 6 | 232 | 262 | 278 | 260 | 239 | 253 | 252 | 239 | 230 | 254 | 261 | 290 | 314 | 340 | 409 | 349 | 325 | 289 | 274 | 277 | 233 | 259 | 251 | 238 | 275 | |
| 7 | 211 | 241 | 231 | 243 | 238 | 249 | 222 | 231 | 220 | 215 | 230 | 264 | 308 | 335 | 360 | 342 | 318 | 281 | 279 | 279 | 277 | 270 | 242 | 231 | 263 | |
| 8 | 238 | 245 | 248 | 249 | 251 | 250 | 252 | 248 | 232 | 216 | 224 | 248 | 282 | 312 | 321 | 317 | 300 | 290 | 315 | 313 | 341 | 285 | 172 | 144 | 262 | |
| 9 | 164 | 192 | 199 | 201 | 213 | 174 | 193 | 208 | 205 | 217 | 240 | 266 | 312 | 350 | 365 | 343 | 334 | 297 | 289 | 265 | 285 | 269 | 231 | 212 | 251 | |
| 10 | 217 | 255 | 227 | 208 | 220 | 210 | 226 | 225 | 219 | 230 | 245 | 269 | 294 | 310 | 315 | 317 | 308 | 276 | 276 | 280 | 277 | 258 | 244 | 261 | 257 | |
| 11 | 258 | 257 | 249 | 248 | 244 | 242 | 250 | 239 | 231 | 219 | 237 | 278 | 312 | 326 | 324 | 324 | 306 | 290 | 267 | 265 | 269 | 239 | 235 | 180 | 262 | |
| 12 | 197 | 176 | 240 | 252 | 234 | 236 | 230 | 229 | 223 | 224 | 241 | 269 | 292 | 291 | 298 | 321 | 318 | 332 | 309 | 283 | 286 | 269 | 261 | 253 | 261 | |
| 13 D | 254 | 242 | 227 | 49 | 149 | 208 | 254 | 290 | 148 | 79 | 172 | 122 | 380 | 422 | 515 | 591 | 512 | 509 | 367 | 431 | 171 | -72 | 69 | 111 | 258 | |
| 14 D | -235 | -41 | 42 | 143 | 189 | 158 | 266 | 355 | 249 | 229 | 252 | 250 | 252 | 264 | 275 | 284 | 281 | 253 | 259 | 182 | 203 | 215 | 284 | 209 | 201 | |
| 15 | 239 | 95 | 169 | 123 | 203 | 227 | 219 | 216 | 196 | 197 | 216 | 243 | 278 | 295 | 288 | 306 | 301 | 256 | 245 | 237 | 248 | 236 | 260 | 256 | 231 | |
| 16 D | 257 | 250 | 245 | 250 | 252 | 242 | 224 | 225 | 206 | 170 | 195 | 209 | 282 | 297 | 291 | 287 | 240 | 225 | 264 | 252 | 193 | 220 | 233 | 218 | 239 | |
| 17 | 175 | 154 | 166 | 226 | 230 | 243 | 288 | 336 | 299 | 237 | 262 | 273 | 282 | 297 | 298 | 284 | 253 | 212 | 235 | 239 | 237 | 256 | 253 | 264 | 250 | |
| 18 Q | 260 | 258 | 257 | 260 | 242 | 234 | 231 | 220 | 209 | 219 | 237 | 258 | 291 | 318 | 327 | 323 | 273 | 255 | 253 | 262 | 261 | 257 | 261 | 262 | 260 | |
| 19 | 265 | 266 | 268 | 256 | 250 | 236 | 272 | 295 | 219 | 198 | 290 | 294 | 338 | 402 | 359 | 328 | 307 | 292 | 266 | 214 | 245 | 248 | 263 | 261 | 276 | |
| 20 Q | 262 | 266 | 265 | 284 | 260 | 247 | 261 | 239 | 222 | 227 | 240 | 275 | 298 | 312 | 323 | 323 | 301 | 278 | 271 | 274 | 275 | 276 | 223 | 232 | 268 | |
| 21 | 215 | 178 | 195 | 245 | 258 | 268 | 306 | 311 | 280 | 286 | 286 | 293 | 304 | 332 | 322 | 304 | 281 | 261 | 244 | 225 | 238 | 249 | 231 | 220 | 264 | |
| 22 | 242 | 234 | 238 | 251 | 245 | 240 | 285 | 270 | 245 | 220 | 202 | 235 | 267 | 303 | 356 | 321 | 295 | 277 | 264 | 252 | 179 | 162 | 135 | 135 | 244 | |
| 23 | 175 | 224 | 253 | 253 | 258 | 261 | 239 | 220 | 196 | 204 | 235 | 282 | 321 | 363 | 372 | 375 | 400 | 297 | 253 | 243 | 259 | 237 | 221 | 170 | 263 | |
| 24 | 205 | 221 | 237 | 207 | 222 | 232 | 229 | 223 | 238 | 221 | 228 | 257 | 286 | 313 | 318 | 310 | 292 | 276 | 260 | 258 | 259 | 260 | 258 | 258 | 253 | |
| 25 Q | 254 | 254 | 251 | 249 | 245 | 243 | 241 | 227 | 201 | 192 | 211 | 249 | 291 | 325 | 339 | 335 | 313 | 302 | 250 | 237 | 242 | 231 | 232 | 254 | 257 | |
| 26 | 259 | 272 | 274 | 240 | 240 | 238 | 237 | 224 | 198 | 191 | 219 | 265 | 311 | 330 | 335 | 333 | 313 | 283 | 258 | 261 | 263 | 259 | 231 | 237 | 261 | |
| 27 | 244 | 250 | 250 | 243 | 238 | 237 | 238 | 199 | 206 | 206 | 236 | 278 | 325 | 352 | 385 | 410 | 346 | 354 | 309 | 273 | 250 | 149 | 161 | 200 | 264 | |
| 28 | 221 | 224 | 236 | 233 | 229 | 230 | 241 | 223 | 203 | 208 | 209 | 249 | 272 | 333 | 339 | 331 | 341 | 309 | 287 | 290 | 295 | 259 | 260 | 256 | 262 | |
| 29 D | 230 | 186 | 119 | 101 | 192 | 232 | 230 | 231 | 225 | 242 | 248 | 287 | 309 | 336 | 359 | 348 | 331 | 295 | 269 | 191 | 244 | 199 | 240 | 226 | 245 | |
| 30 | 202 | 222 | 222 | 202 | 173 | 216 | 243 | 256 | 275 | 263 | 269 | 288 | 320 | 338 | 323 | 313 | 285 | 280 | 246 | 176 | 239 | 236 | 243 | 173 | 250 | |
| 31 D | 204 | 172 | 129 | 138 | 195 | 180 | 203 | 206 | 204 | 224 | 261 | 282 | 328 | 346 | 344 | 313 | 319 | 255 | 233 | 225 | 161 | 225 | 251 | 204 | 233 | |
| Mean | 215 | 217 | 221 | 218 | 226 | 229 | 242 | 244 | 227 | 218 | 238 | 264 | 305 | 331 | 342 | 334 | 314 | 289 | 273 | 257 | 250 | 234 | 230 | 222 | 256 | |
| Mean Q | 249 | 243 | 245 | 254 | 242 | 237 | 238 | 229 | 216 | 218 | 237 | 267 | 302 | 327 | 333 | 321 | 297 | 282 | 268 | 266 | 265 | 260 | 249 | 252 | 262 | |
| Mean D | 142 | 162 | 152 | 136 | 195 | 204 | 235 | 261 | 206 | 189 | 226 | 230 | 310 | 333 | 357 | 365 | 337 | 307 | 278 | 256 | 194 | 157 | 215 | 194 | 235 | |

| Table 4 | | Declination | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9°+.....(Tenths of Minutes) | | | | April 1989 | | | | |
|---------|--|-------------|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|------------|-----|-----|-----|------|
| Hour | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | | 216 | 201 | 208 | 154 | 165 | 213 | 235 | 227 | 269 | 246 | 253 | 279 | 302 | 331 | 335 | 321 | 280 | 274 | 247 | 213 | 224 | 207 | 202 | 226 | 243 |
| 2 | | 243 | 250 | 261 | 264 | 236 | 214 | 226 | 220 | 197 | 197 | 227 | 263 | 309 | 316 | 354 | 341 | 315 | 264 | 253 | 265 | 258 | 244 | 251 | 250 | 259 |
| 3 | | 267 | 266 | 236 | 200 | 226 | 233 | 233 | 219 | 202 | 197 | 222 | 261 | 313 | 350 | 359 | 342 | 309 | 299 | 283 | 255 | 221 | 212 | 203 | 192 | 254 |
| 4 D | | 221 | 234 | 188 | 164 | 222 | 226 | 206 | 203 | 208 | 194 | 219 | 296 | 299 | 325 | 328 | 334 | 301 | 292 | 222 | 181 | 247 | 242 | 193 | 228 | 241 |
| 5 D | | 148 | 198 | 187 | 183 | 197 | 216 | 224 | 248 | 215 | 225 | 248 | 283 | 310 | 328 | 313 | 287 | 270 | 257 | 244 | 235 | 185 | 247 | 239 | 224 | 238 |
| 6 | | 228 | 211 | 202 | 207 | 227 | 228 | 222 | 207 | 194 | 192 | 214 | 248 | 291 | 325 | 335 | 328 | 295 | 279 | 266 | 258 | 234 | 247 | 228 | 250 | 247 |
| 7 | | 257 | 254 | 253 | 252 | 247 | 223 | 217 | 248 | 239 | 210 | 235 | 298 | 333 | 371 | 376 | 371 | 332 | 297 | 267 | 230 | 248 | 239 | 228 | 211 | 268 |
| 8 | | 235 | 226 | 235 | 219 | 207 | 202 | 208 | 215 | 208 | 208 | 230 | 269 | 307 | 323 | 326 | 339 | 327 | 299 | 261 | 251 | 255 | 250 | 237 | 238 | 253 |
| 9 | | 237 | 254 | 238 | 210 | 219 | 233 | 236 | 227 | 193 | 185 | 206 | 243 | 292 | 336 | 347 | 335 | 306 | 277 | 272 | 217 | 255 | 251 | 242 | 240 | 252 |
| 10 Q | | 242 | 234 | 238 | 235 | 233 | 235 | 236 | 223 | 203 | 184 | 201 | 245 | 277 | 319 | 338 | 326 | 309 | 284 | 267 | 251 | 258 | 263 | 238 | 235 | 253 |
| 11 | | 245 | 249 | 243 | 231 | 239 | 249 | 250 | 225 | 200 | 186 | 202 | 245 | 299 | 342 | 371 | 400 | 388 | 325 | 308 | 297 | 285 | 274 | 261 | 251 | 274 |
| 12 Q | | 244 | 242 | 242 | 242 | 246 | 231 | 219 | 201 | 181 | 182 | 210 | 252 | 291 | 315 | 321 | 308 | 285 | 270 | 270 | 274 | 275 | 272 | 270 | 256 | 254 |
| 13 | | 250 | 250 | 244 | 228 | 223 | 228 | 258 | 260 | 234 | 203 | 237 | 248 | 282 | 314 | 331 | 319 | 297 | 271 | 245 | 225 | 240 | 248 | 253 | 255 | 256 |
| 14 | | 227 | 219 | 219 | 227 | 223 | 216 | 202 | 183 | 168 | 166 | 196 | 239 | 299 | 348 | 367 | 350 | 323 | 289 | 290 | 259 | 216 | 225 | 205 | 168 | 243 |
| 15 | | 217 | 213 | 160 | 203 | 257 | 245 | 241 | 235 | 229 | 234 | 242 | 283 | 290 | 304 | 312 | 306 | 276 | 264 | 247 | 240 | 246 | 258 | 264 | 243 | 250 |
| 16 | | 243 | 241 | 240 | 238 | 229 | 219 | 213 | 212 | 212 | 204 | 216 | 250 | 283 | 310 | 324 | 305 | 292 | 283 | 261 | 228 | 246 | 229 | 146 | 199 | 243 |
| 17 | | 238 | 198 | 234 | 230 | 227 | 223 | 213 | 210 | 209 | 216 | 243 | 277 | 307 | 323 | 311 | 295 | 277 | 263 | 253 | 247 | 251 | 220 | 253 | 258 | 249 |
| 18 | | 256 | 256 | 265 | 229 | 182 | 194 | 203 | 197 | 187 | 195 | 198 | 229 | 263 | 297 | 310 | 302 | 285 | 271 | 261 | 259 | 264 | 263 | 256 | 253 | 245 |
| 19 Q | | 254 | 244 | 244 | 235 | 228 | 221 | 222 | 214 | 206 | 207 | 219 | 244 | 280 | 309 | 326 | 315 | 300 | 290 | 278 | 269 | 265 | 264 | 260 | 260 | 256 |
| 20 | | 244 | 242 | 252 | 241 | 239 | 217 | 179 | 203 | 202 | 196 | 202 | 228 | 256 | 287 | 300 | 288 | 278 | 268 | 258 | 248 | 258 | 259 | 258 | 247 | 244 |
| 21 Q | | 217 | 216 | 228 | 248 | 252 | 239 | 227 | 215 | 203 | 203 | 218 | 252 | 289 | 319 | 325 | 319 | 302 | 285 | 269 | 264 | 262 | 258 | 257 | 256 | 255 |
| 22 Q | | 253 | 258 | 242 | 239 | 234 | 230 | 221 | 210 | 197 | 197 | 216 | 251 | 295 | 327 | 337 | 321 | 305 | 280 | 262 | 256 | 255 | 257 | 254 | 257 | 256 |
| 23 | | 222 | 220 | 220 | 230 | 225 | 220 | 212 | 207 | 193 | 190 | 205 | 235 | 286 | 327 | 334 | 325 | 339 | 323 | 288 | 248 | 202 | 234 | 250 | 246 | 249 |
| 24 | | 249 | 215 | 239 | 242 | 238 | 233 | 220 | 208 | 200 | 207 | 220 | 248 | 283 | 291 | 301 | 298 | 289 | 278 | 265 | 260 | 262 | 263 | 257 | 213 | 249 |
| 25 | | 228 | 238 | 239 | 235 | 235 | 236 | 221 | 197 | 196 | 201 | 217 | 230 | 265 | 308 | 319 | 322 | 325 | 335 | 321 | 296 | 282 | 223 | 206 | 213 | 254 |
| 26 D | | 167 | 162 | 173 | 135 | 224 | 195 | 137 | 145 | 191 | 251 | 271 | 251 | 287 | 290 | 295 | 302 | 279 | 256 | 255 | 163 | 216 | 157 | 188 | 185 | 216 |
| 27 D | | 171 | 128 | 124 | 123 | 160 | 155 | 184 | 205 | 198 | 215 | 235 | 250 | 279 | 306 | 319 | 319 | 292 | 260 | 268 | 261 | 189 | 216 | 208 | 208 | 220 |
| 28 | | 240 | 214 | 230 | 142 | 198 | 189 | 195 | 183 | 202 | 220 | 225 | 248 | 278 | 292 | 302 | 302 | 286 | 259 | 225 | 244 | 236 | 235 | 231 | 230 | 234 |
| 29 | | 227 | 244 | 245 | 244 | 215 | 229 | 204 | 206 | 208 | 198 | 212 | 232 | 273 | 319 | 318 | 331 | 325 | 269 | 264 | 240 | 231 | 238 | 217 | 193 | 245 |
| 30 | | 191 | 220 | 244 | 233 | 221 | 210 | 204 | 208 | 229 | 227 | 238 | 257 | 275 | 283 | 288 | 288 | 282 | 271 | 255 | 237 | 245 | 258 | 252 | 239 | 244 |
| Mean | | 229 | 227 | 226 | 215 | 222 | 220 | 216 | 212 | 206 | 205 | 223 | 254 | 290 | 318 | 327 | 321 | 302 | 281 | 264 | 246 | 244 | 242 | 234 | 231 | 248 |
| Mean Q | | 242 | 239 | 239 | 240 | 239 | 231 | 225 | 213 | 198 | 195 | 213 | 249 | 286 | 318 | 329 | 318 | 300 | 282 | 269 | 263 | 263 | 263 | 256 | 253 | 255 |
| Mean D | | 185 | 185 | 176 | 152 | 194 | 201 | 197 | 206 | 216 | 226 | 245 | 272 | 295 | 316 | 318 | 313 | 284 | 268 | 247 | 211 | 212 | 214 | 206 | 214 | 231 |

| Table 4 | Declination | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | | 9 ^m +.....(Tenths of Minutes) | | May 1989 | | |
|---------|-------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|----------|-----|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 225 | 216 | 219 | 221 | 217 | 215 | 214 | 212 | 206 | 209 | 222 | 244 | 262 | 282 | 293 | 300 | 298 | 290 | 271 | 266 | 266 | 260 | 270 | 247 | 247 | |
| 2 | 232 | 224 | 218 | 202 | 200 | 189 | 212 | 231 | 248 | 260 | 276 | 285 | 304 | 323 | 323 | 311 | 303 | 303 | 278 | 217 | 250 | 244 | 251 | 242 | 255 | |
| 3 | 249 | 227 | 231 | 222 | 221 | 230 | 214 | 201 | 184 | 193 | 215 | 227 | 257 | 284 | 293 | 294 | 287 | 274 | 248 | 239 | 232 | 244 | 242 | 256 | 240 | |
| 4 | 241 | 229 | 214 | 182 | 179 | 189 | 206 | 211 | 209 | 217 | 245 | 271 | 307 | 330 | 340 | 326 | 305 | 261 | 261 | 244 | 230 | 219 | 247 | 253 | 247 | |
| 5 D | 261 | 97 | 169 | 129 | 105 | 106 | 131 | 123 | 133 | 179 | 206 | 251 | 285 | 309 | 316 | 299 | 283 | 263 | 247 | 245 | 222 | 202 | 231 | 243 | 210 | |
| 6 | 237 | 242 | 236 | 252 | 240 | 216 | 194 | 174 | 178 | 207 | 234 | 254 | 290 | 304 | 321 | 324 | 300 | 286 | 272 | 254 | 237 | 212 | 212 | 232 | 246 | |
| 7 D | 236 | 239 | 240 | 234 | 229 | 224 | 214 | 168 | 160 | 196 | 207 | 245 | 301 | 336 | 361 | 349 | 314 | 311 | 281 | 249 | 221 | 220 | 231 | 237 | 250 | |
| 8 Q | 236 | 238 | 237 | 227 | 217 | 202 | 188 | 178 | 177 | 191 | 221 | 253 | 292 | 321 | 329 | 316 | 301 | 287 | 280 | 261 | 252 | 246 | 239 | 234 | 247 | |
| 9 Q | 238 | 240 | 237 | 236 | 228 | 215 | 201 | 191 | 182 | 187 | 209 | 250 | 288 | 322 | 340 | 328 | 306 | 285 | 265 | 254 | 251 | 250 | 247 | 249 | 250 | |
| 10 Q | 249 | 253 | 261 | 250 | 231 | 211 | 190 | 183 | 188 | 204 | 231 | 269 | 308 | 331 | 335 | 319 | 297 | 277 | 266 | 259 | 258 | 257 | 252 | 247 | 255 | |
| 11 Q | 242 | 243 | 233 | 226 | 219 | 196 | 174 | 163 | 165 | 188 | 223 | 252 | 277 | 298 | 312 | 311 | 301 | 275 | 261 | 259 | 266 | 268 | 261 | 256 | 245 | |
| 12 | 250 | 244 | 238 | 242 | 233 | 209 | 190 | 171 | 195 | 206 | 240 | 262 | 283 | 301 | 306 | 307 | 279 | 260 | 253 | 252 | 258 | 266 | 264 | 260 | 249 | |
| 13 | 250 | 244 | 240 | 230 | 219 | 199 | 187 | 187 | 185 | 196 | 230 | 258 | 284 | 292 | 303 | 325 | 316 | 306 | 283 | 275 | 279 | 276 | 265 | 258 | 254 | |
| 14 | 255 | 245 | 233 | 230 | 262 | 243 | 181 | 165 | 167 | 194 | 236 | 285 | 318 | 323 | 315 | 301 | 281 | 262 | 250 | 250 | 264 | 263 | 248 | 250 | 251 | |
| 15 | 249 | 240 | 237 | 225 | 211 | 204 | 191 | 182 | 198 | 233 | 280 | 301 | 327 | 338 | 324 | 301 | 286 | 272 | 260 | 254 | 259 | 246 | 254 | 260 | 256 | |
| 16 | 258 | 253 | 253 | 238 | 219 | 197 | 188 | 188 | 187 | 199 | 220 | 248 | 281 | 301 | 306 | 300 | 289 | 274 | 259 | 253 | 263 | 266 | 265 | 261 | 249 | |
| 17 | 256 | 242 | 243 | 245 | 248 | 222 | 201 | 183 | 181 | 198 | 220 | 243 | 276 | 298 | 292 | 286 | 266 | 254 | 245 | 248 | 252 | 255 | 256 | 256 | 244 | |
| 18 | 255 | 247 | 241 | 238 | 229 | 204 | 175 | 163 | 174 | 186 | 219 | 253 | 281 | 309 | 312 | 299 | 285 | 269 | 259 | 256 | 259 | 259 | 254 | 254 | 245 | |
| 19 Q | 250 | 247 | 236 | 236 | 221 | 213 | 196 | 187 | 192 | 207 | 236 | 262 | 287 | 303 | 306 | 299 | 287 | 274 | 261 | 255 | 256 | 261 | 264 | 254 | 250 | |
| 20 | 243 | 251 | 240 | 225 | 221 | 217 | 200 | 183 | 178 | 194 | 221 | 263 | 310 | 313 | 325 | 319 | 294 | 268 | 244 | 223 | 237 | 247 | 253 | 254 | 247 | |
| 21 | 251 | 247 | 246 | 233 | 220 | 200 | 185 | 181 | 180 | 212 | 235 | 263 | 280 | 287 | 289 | 290 | 288 | 277 | 259 | 252 | 251 | 245 | 251 | 253 | 245 | |
| 22 | 254 | 253 | 245 | 243 | 250 | 221 | 193 | 178 | 182 | 186 | 210 | 237 | 280 | 300 | 325 | 314 | 289 | 272 | 263 | 254 | 251 | 229 | 241 | 245 | 246 | |
| 23 D | 243 | 247 | 240 | 239 | 241 | 226 | 210 | 173 | 159 | 158 | 168 | 209 | 259 | 291 | 328 | 357 | 374 | 326 | 294 | 240 | 241 | 250 | 223 | 218 | 246 | |
| 24 D | 224 | 150 | 218 | 233 | 260 | 271 | 310 | 230 | 214 | 221 | 196 | 215 | 265 | 293 | 318 | 333 | 315 | 265 | 265 | 212 | 257 | 211 | 221 | 203 | 246 | |
| 25 D | 215 | 192 | 149 | 160 | 202 | 197 | 189 | 197 | 167 | 165 | 182 | 218 | 257 | 290 | 293 | 294 | 294 | 285 | 253 | 250 | 255 | 246 | 223 | 228 | 225 | |
| 26 | 230 | 234 | 247 | 231 | 223 | 208 | 189 | 179 | 169 | 183 | 217 | 246 | 287 | 311 | 325 | 329 | 284 | 286 | 248 | 249 | 243 | 242 | 222 | 228 | 242 | |
| 27 | 178 | 161 | 184 | 146 | 178 | 228 | 193 | 188 | 175 | 206 | 221 | 233 | 261 | 295 | 315 | 324 | 305 | 283 | 264 | 263 | 252 | 226 | 228 | 243 | 231 | |
| 28 | 241 | 233 | 225 | 221 | 211 | 205 | 186 | 169 | 163 | 177 | 198 | 230 | 263 | 304 | 312 | 310 | 309 | 303 | 264 | 259 | 248 | 256 | 229 | 224 | 239 | |
| 29 | 212 | 185 | 185 | 201 | 193 | 182 | 171 | 161 | 160 | 186 | 234 | 267 | 290 | 316 | 316 | 292 | 285 | 276 | 272 | 253 | 255 | 249 | 243 | 236 | 234 | |
| 30 | 221 | 239 | 210 | 214 | 223 | 193 | 161 | 148 | 168 | 190 | 219 | 255 | 280 | 296 | 308 | 303 | 295 | 286 | 272 | 262 | 249 | 231 | 245 | 248 | 238 | |
| 31 | 246 | 254 | 218 | 214 | 206 | 178 | 156 | 143 | 139 | 172 | 206 | 233 | 268 | 297 | 302 | 293 | 281 | 274 | 268 | 255 | 248 | 249 | 246 | 230 | 232 | |
| Mean | 240 | 228 | 227 | 220 | 218 | 207 | 193 | 180 | 179 | 197 | 222 | 251 | 284 | 306 | 316 | 311 | 297 | 280 | 263 | 250 | 250 | 245 | 244 | 244 | 244 | |
| Mean Q | 243 | 244 | 241 | 235 | 223 | 207 | 190 | 180 | 181 | 195 | 224 | 257 | 290 | 315 | 324 | 315 | 298 | 280 | 267 | 258 | 257 | 256 | 253 | 248 | 249 | |
| Mean D | 236 | 185 | 203 | 199 | 207 | 205 | 211 | 178 | 167 | 184 | 192 | 228 | 273 | 304 | 323 | 326 | 316 | 290 | 268 | 239 | 239 | 226 | 226 | 226 | 235 | |

| Table 4 | Declination | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9 ^m +.....(Tenths of Minutes) | | | | | | June 1989 | | | |
|---------|-------------|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|-----|-----|-----------|-----|------|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 200 | 202 | 205 | 198 | 204 | 186 | 163 | 162 | 172 | 188 | 212 | 244 | 287 | 318 | 324 | 322 | 308 | 290 | 272 | 244 | 243 | 240 | 209 | 215 | 234 | |
| 2 | 219 | 231 | 228 | 220 | 211 | 183 | 169 | 163 | 161 | 196 | 204 | 249 | 306 | 311 | 314 | 331 | 308 | 285 | 263 | 237 | 242 | 248 | 242 | 233 | 240 | |
| 3 | 218 | 214 | 217 | 226 | 221 | 190 | 165 | 152 | 163 | 187 | 216 | 250 | 290 | 316 | 331 | 335 | 315 | 298 | 267 | 247 | 251 | 243 | 243 | 210 | 240 | |
| 4 | 209 | 180 | 185 | 221 | 169 | 185 | 167 | 166 | 166 | 189 | 230 | 268 | 293 | 309 | 316 | 308 | 299 | 273 | 254 | 234 | 222 | 237 | 248 | 244 | 232 | |
| 5 | 241 | 247 | 242 | 222 | 212 | 204 | 175 | 168 | 169 | 173 | 201 | 239 | 270 | 306 | 334 | 326 | 302 | 271 | 250 | 243 | 240 | 228 | 214 | 225 | 238 | |
| 6 | 232 | 238 | 249 | 231 | 219 | 180 | 151 | 133 | 143 | 163 | 203 | 245 | 287 | 318 | 321 | 317 | 303 | 281 | 262 | 252 | 245 | 241 | 238 | 251 | 238 | |
| 7 D | 262 | 152 | 151 | 159 | 132 | 104 | 124 | 112 | 131 | 156 | 216 | 273 | 291 | 314 | 323 | 315 | 295 | 270 | 257 | 244 | 245 | 238 | 238 | 265 | 219 | |
| 8 | 278 | 270 | 237 | 212 | 213 | 217 | 198 | 172 | 153 | 157 | 185 | 219 | 261 | 301 | 316 | 312 | 301 | 290 | 290 | 282 | 293 | 268 | 257 | 221 | 246 | |
| 9 D | 235 | 168 | 42 | 148 | 180 | 189 | 167 | 171 | 182 | 204 | 226 | 260 | 289 | 302 | 304 | 295 | 287 | 280 | 280 | 259 | 247 | 231 | 225 | 175 | 223 | |
| 10 D | 128 | 111 | 160 | 204 | 196 | 156 | 156 | 211 | 181 | 191 | 254 | 316 | 326 | 338 | 334 | 312 | 352 | 296 | 271 | 229 | 247 | 244 | 216 | 253 | 237 | |
| 11 | 298 | 254 | 254 | 258 | 217 | 184 | 185 | 158 | 164 | 183 | 203 | 227 | 268 | 290 | 308 | 303 | 289 | 279 | 266 | 244 | 242 | 236 | 250 | 262 | 243 | |
| 12 | 254 | 262 | 241 | 221 | 217 | 210 | 202 | 195 | 189 | 188 | 201 | 235 | 254 | 281 | 280 | 271 | 268 | 268 | 259 | 245 | 245 | 243 | 242 | 239 | 238 | |
| 13 | 239 | 241 | 234 | 225 | 213 | 204 | 194 | 188 | 172 | 177 | 192 | 229 | 261 | 307 | 323 | 322 | 310 | 289 | 268 | 243 | 212 | 222 | 238 | 250 | 240 | |
| 14 D | 253 | 253 | 255 | 284 | 236 | 212 | 222 | 181 | 185 | 192 | 216 | 240 | 275 | 301 | 333 | 308 | 301 | 272 | 252 | 251 | 241 | 247 | 231 | 232 | 249 | |
| 15 D | 213 | 197 | 214 | 185 | 168 | 157 | 119 | 116 | 144 | 193 | 214 | 237 | 277 | 307 | 326 | 302 | 304 | 291 | 260 | 246 | 244 | 241 | 236 | 257 | 227 | |
| 16 | 247 | 252 | 256 | 254 | 220 | 205 | 186 | 165 | 142 | 146 | 172 | 207 | 253 | 282 | 294 | 288 | 267 | 246 | 225 | 215 | 222 | 232 | 237 | 237 | 227 | |
| 17 Q | 235 | 232 | 230 | 227 | 217 | 200 | 175 | 161 | 155 | 158 | 190 | 233 | 286 | 330 | 341 | 326 | 315 | 284 | 261 | 248 | 244 | 243 | 251 | 244 | 241 | |
| 18 Q | 250 | 253 | 236 | 231 | 222 | 203 | 176 | 155 | 140 | 147 | 180 | 236 | 289 | 321 | 338 | 335 | 314 | 289 | 264 | 241 | 244 | 248 | 246 | 246 | 242 | |
| 19 | 246 | 243 | 237 | 227 | 235 | 223 | 209 | 186 | 179 | 189 | 200 | 239 | 289 | 316 | 328 | 327 | 315 | 287 | 256 | 240 | 235 | 250 | 257 | 229 | 248 | |
| 20 | 240 | 230 | 243 | 221 | 209 | 180 | 151 | 136 | 155 | 172 | 215 | 288 | 354 | 376 | 378 | 365 | 313 | 270 | 245 | 241 | 208 | 220 | 229 | 236 | 245 | |
| 21 Q | 232 | 228 | 226 | 218 | 201 | 185 | 166 | 154 | 160 | 165 | 188 | 219 | 267 | 312 | 329 | 321 | 304 | 283 | 258 | 249 | 242 | 236 | 235 | 230 | 234 | |
| 22 Q | 230 | 228 | 223 | 217 | 210 | 198 | 179 | 167 | 160 | 156 | 183 | 227 | 261 | 294 | 304 | 305 | 289 | 288 | 268 | 254 | 244 | 242 | 244 | 240 | 234 | |
| 23 Q | 252 | 254 | 252 | 245 | 239 | 228 | 222 | 205 | 180 | 168 | 188 | 219 | 253 | 280 | 298 | 303 | 290 | 280 | 270 | 260 | 248 | 236 | 239 | 247 | 244 | |
| 24 | 250 | 251 | 238 | 232 | 226 | 212 | 185 | 183 | 185 | 202 | 206 | 233 | 272 | 281 | 298 | 299 | 288 | 277 | 274 | 267 | 255 | 245 | 242 | 234 | 243 | |
| 25 | 226 | 226 | 223 | 194 | 180 | 173 | 186 | 171 | 178 | 188 | 197 | 223 | 257 | 282 | 296 | 297 | 294 | 288 | 275 | 264 | 255 | 248 | 222 | 227 | 232 | |
| 26 | 233 | 228 | 224 | 218 | 203 | 193 | 175 | 167 | 163 | 161 | 183 | 222 | 255 | 281 | 299 | 306 | 296 | 280 | 252 | 242 | 251 | 252 | 244 | 237 | 232 | |
| 27 | 246 | 219 | 204 | 207 | 200 | 201 | 175 | 156 | 160 | 167 | 190 | 225 | 256 | 278 | 294 | 300 | 285 | 273 | 264 | 251 | 248 | 242 | 219 | 235 | 229 | |
| 28 | 240 | 238 | 219 | 214 | 206 | 181 | 162 | 155 | 146 | 160 | 190 | 216 | 250 | 282 | 297 | 289 | 270 | 264 | 253 | 243 | 245 | 249 | 243 | 239 | 227 | |
| 29 | 246 | 252 | 236 | 237 | 275 | 242 | 211 | 193 | 190 | 201 | 227 | 258 | 283 | 303 | 315 | 292 | 277 | 253 | 251 | 250 | 240 | 246 | 261 | 263 | 250 | |
| 30 | 247 | 216 | 194 | 163 | 184 | 191 | 165 | 177 | 188 | 208 | 227 | 249 | 276 | 286 | 284 | 283 | 272 | 256 | 247 | 245 | 244 | 244 | 248 | 238 | 231 | |
| Mean | 237 | 226 | 219 | 217 | 208 | 193 | 176 | 166 | 165 | 178 | 204 | 241 | 278 | 304 | 316 | 311 | 298 | 278 | 261 | 247 | 243 | 241 | 238 | 237 | 237 | |
| Mean Q | 240 | 239 | 233 | 228 | 218 | 203 | 184 | 168 | 159 | 159 | 186 | 227 | 271 | 307 | 322 | 318 | 302 | 285 | 264 | 250 | 244 | 241 | 243 | 241 | 239 | |
| Mean D | 218 | 176 | 164 | 196 | 182 | 164 | 158 | 158 | 165 | 187 | 225 | 265 | 292 | 312 | 324 | 306 | 308 | 282 | 264 | 246 | 245 | 240 | 229 | 236 | 231 | |

| Table 4 | Declination | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9 ^m(Tenths of Minutes) | | | | July 1989 | | | Mean |
|---------|-------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|-----|-----------|-----|-----|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | 228 | 217 | 207 | 208 | 205 | 185 | 158 | 146 | 150 | 169 | 203 | 231 | 256 | 279 | 297 | 311 | 333 | 347 | 304 | 271 | 253 | 207 | 194 | 198 | 232 | |
| 2 | 209 | 191 | 199 | 219 | 201 | 195 | 169 | 162 | 161 | 172 | 201 | 236 | 263 | 290 | 304 | 296 | 280 | 259 | 242 | 232 | 230 | 233 | 237 | 237 | 226 | |
| 3 Q | 240 | 237 | 229 | 223 | 211 | 195 | 174 | 158 | 147 | 154 | 177 | 213 | 252 | 281 | 300 | 293 | 278 | 267 | 251 | 232 | 227 | 237 | 235 | 232 | 227 | |
| 4 Q | 229 | 226 | 226 | 224 | 222 | 208 | 182 | 156 | 146 | 156 | 185 | 224 | 272 | 312 | 327 | 316 | 301 | 290 | 270 | 250 | 242 | 241 | 241 | 239 | 237 | |
| 5 D | 237 | 233 | 224 | 220 | 205 | 186 | 158 | 148 | 145 | 157 | 189 | 223 | 258 | 280 | 302 | 301 | 288 | 291 | 274 | 261 | 242 | 238 | 232 | 234 | 230 | |
| 6 | 223 | 209 | 211 | 224 | 230 | 211 | 192 | 176 | 174 | 180 | 200 | 241 | 286 | 317 | 336 | 319 | 298 | 285 | 268 | 244 | 254 | 256 | 252 | 250 | 243 | |
| 7 | 246 | 229 | 227 | 223 | 208 | 216 | 201 | 179 | 167 | 156 | 175 | 211 | 258 | 285 | 297 | 289 | 271 | 254 | 243 | 237 | 241 | 247 | 246 | 243 | 231 | |
| 8 Q | 241 | 237 | 232 | 226 | 213 | 196 | 178 | 168 | 164 | 172 | 195 | 232 | 277 | 305 | 317 | 311 | 288 | 266 | 252 | 247 | 250 | 247 | 243 | 239 | 237 | |
| 9 | 238 | 231 | 241 | 245 | 218 | 183 | 164 | 154 | 149 | 145 | 170 | 212 | 245 | 273 | 289 | 299 | 300 | 283 | 263 | 254 | 258 | 258 | 249 | 240 | 232 | |
| 10 | 237 | 233 | 234 | 225 | 222 | 233 | 193 | 158 | 154 | 169 | 201 | 240 | 287 | 314 | 315 | 316 | 307 | 288 | 261 | 238 | 241 | 232 | 215 | 230 | 239 | |
| 11 Q | 228 | 217 | 212 | 214 | 210 | 195 | 177 | 174 | 170 | 178 | 196 | 228 | 252 | 288 | 312 | 316 | 310 | 290 | 266 | 249 | 241 | 239 | 240 | 236 | 235 | |
| 12 | 231 | 227 | 223 | 223 | 217 | 204 | 186 | 171 | 159 | 157 | 172 | 202 | 246 | 277 | 294 | 300 | 290 | 280 | 266 | 256 | 248 | 248 | 252 | 248 | 232 | |
| 13 | 236 | 229 | 220 | 221 | 223 | 200 | 175 | 181 | 186 | 191 | 201 | 220 | 248 | 289 | 314 | 319 | 299 | 268 | 246 | 236 | 248 | 244 | 238 | 240 | 236 | |
| 14 | 233 | 231 | 225 | 221 | 221 | 198 | 172 | 156 | 152 | 164 | 188 | 207 | 231 | 262 | 279 | 287 | 289 | 275 | 253 | 246 | 242 | 232 | 239 | 244 | 227 | |
| 15 | 237 | 222 | 214 | 209 | 198 | 178 | 172 | 187 | 184 | 184 | 213 | 248 | 267 | 287 | 293 | 281 | 269 | 258 | 245 | 237 | 240 | 234 | 243 | 236 | 231 | |
| 16 Q | 231 | 232 | 230 | 225 | 222 | 200 | 182 | 182 | 181 | 185 | 210 | 232 | 267 | 288 | 303 | 293 | 283 | 271 | 254 | 241 | 240 | 240 | 241 | 240 | 236 | |
| 17 D | 237 | 234 | 228 | 208 | 193 | 180 | 173 | 191 | 173 | 164 | 187 | 229 | 270 | 286 | 302 | 309 | 290 | 272 | 246 | 232 | 240 | 251 | 249 | 234 | 232 | |
| 18 D | 212 | 219 | 211 | 183 | 216 | 248 | 208 | 185 | 181 | 198 | 227 | 262 | 301 | 323 | 336 | 325 | 299 | 268 | 242 | 229 | 218 | 235 | 238 | 241 | 242 | |
| 19 | 242 | 245 | 230 | 230 | 219 | 209 | 178 | 154 | 137 | 138 | 168 | 208 | 257 | 298 | 308 | 293 | 276 | 254 | 234 | 234 | 240 | 233 | 236 | 235 | 227 | |
| 20 | 233 | 229 | 223 | 217 | 209 | 187 | 173 | 164 | 168 | 172 | 185 | 204 | 248 | 288 | 302 | 301 | 287 | 273 | 250 | 241 | 245 | 245 | 245 | 230 | 230 | |
| 21 | 226 | 224 | 225 | 224 | 222 | 219 | 188 | 160 | 164 | 173 | 204 | 233 | 264 | 289 | 291 | 286 | 274 | 259 | 243 | 238 | 240 | 238 | 243 | 239 | 232 | |
| 22 | 235 | 232 | 221 | 221 | 212 | 204 | 190 | 200 | 205 | 202 | 210 | 237 | 277 | 308 | 315 | 302 | 282 | 261 | 245 | 242 | 242 | 241 | 240 | 239 | 240 | |
| 23 | 213 | 230 | 234 | 213 | 205 | 153 | 139 | 143 | 142 | 165 | 181 | 213 | 248 | 295 | 318 | 325 | 294 | 274 | 254 | 246 | 244 | 245 | 242 | 234 | 227 | |
| 24 | 215 | 219 | 208 | 213 | 215 | 215 | 212 | 190 | 175 | 174 | 194 | 226 | 272 | 304 | 333 | 339 | 320 | 304 | 285 | 264 | 252 | 248 | 237 | 231 | 244 | |
| 25 | 220 | 218 | 219 | 209 | 190 | 177 | 167 | 159 | 148 | 160 | 190 | 225 | 258 | 295 | 317 | 325 | 311 | 286 | 259 | 241 | 232 | 240 | 223 | 218 | 229 | |
| 26 D | 208 | 214 | 219 | 222 | 231 | 215 | 187 | 169 | 154 | 182 | 204 | 234 | 290 | 316 | 303 | 313 | 324 | 310 | 280 | 240 | 236 | 238 | 241 | 222 | 240 | |
| 27 | 220 | 217 | 218 | 215 | 222 | 175 | 145 | 156 | 155 | 165 | 184 | 212 | 249 | 278 | 305 | 311 | 293 | 263 | 244 | 225 | 235 | 243 | 229 | 213 | 224 | |
| 28 | 223 | 223 | 236 | 258 | 237 | 196 | 174 | 164 | 159 | 164 | 185 | 217 | 260 | 287 | 295 | 296 | 281 | 263 | 252 | 227 | 228 | 233 | 218 | 189 | 228 | |
| 29 | 215 | 220 | 225 | 206 | 197 | 177 | 153 | 132 | 133 | 143 | 181 | 231 | 273 | 306 | 317 | 312 | 295 | 268 | 230 | 229 | 226 | 205 | 224 | 230 | 222 | |
| 30 | 231 | 231 | 223 | 215 | 213 | 190 | 162 | 160 | 153 | 176 | 208 | 239 | 268 | 289 | 303 | 292 | 276 | 250 | 238 | 222 | 226 | 232 | 232 | 225 | 227 | |
| 31 | 224 | 220 | 210 | 200 | 196 | 179 | 166 | 165 | 161 | 171 | 202 | 234 | 254 | 276 | 282 | 280 | 268 | 249 | 237 | 229 | 225 | 230 | 236 | 231 | 222 | |
| Mean | 228 | 225 | 222 | 219 | 213 | 197 | 176 | 166 | 161 | 169 | 193 | 226 | 263 | 292 | 307 | 305 | 292 | 275 | 255 | 241 | 240 | 238 | 236 | 232 | 232 | |
| Mean Q | 234 | 230 | 226 | 222 | 216 | 199 | 179 | 168 | 162 | 169 | 193 | 226 | 264 | 295 | 312 | 306 | 292 | 277 | 259 | 244 | 240 | 241 | 240 | 237 | 234 | |
| Mean D | 224 | 223 | 218 | 208 | 210 | 203 | 177 | 168 | 161 | 174 | 202 | 236 | 275 | 297 | 308 | 312 | 307 | 298 | 269 | 247 | 238 | 234 | 231 | 226 | 235 | |

| Table 4 | Declination | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9+.....(Tenths of Minutes) | | | | August 1989 | | | Mean | |
|---------|-------------|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|-------------|-----|-----|------|-----|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | | 23 |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Q | 217 | 214 | 211 | 203 | 190 | 168 | 145 | 154 | 160 | 181 | 212 | 246 | 278 | 300 | 309 | 302 | 278 | 258 | 243 | 240 | 231 | 233 | 232 | 226 | 226 |
| 2 | 196 | 204 | 192 | 199 | 194 | 178 | 165 | 174 | 162 | 167 | 184 | 222 | 260 | 291 | 312 | 307 | 290 | 273 | 260 | 249 | 242 | 237 | 231 | 229 | 226 |
| 3 Q | 222 | 219 | 230 | 221 | 212 | 200 | 209 | 196 | 187 | 191 | 207 | 227 | 256 | 287 | 310 | 327 | 310 | 284 | 252 | 231 | 231 | 234 | 233 | 227 | 238 |
| 4 | 225 | 228 | 228 | 219 | 208 | 193 | 165 | 138 | 116 | 125 | 162 | 206 | 245 | 286 | 336 | 341 | 311 | 276 | 252 | 240 | 228 | 219 | 237 | 234 | 226 |
| 5 Q | 222 | 222 | 216 | 211 | 202 | 191 | 170 | 161 | 153 | 158 | 187 | 218 | 260 | 297 | 325 | 326 | 302 | 272 | 244 | 234 | 234 | 235 | 232 | 231 | 229 |
| 6 | 232 | 230 | 229 | 225 | 220 | 208 | 187 | 161 | 151 | 167 | 197 | 241 | 287 | 309 | 318 | 319 | 296 | 272 | 253 | 236 | 232 | 237 | 230 | 224 | 236 |
| 7 | 221 | 221 | 216 | 204 | 202 | 188 | 160 | 150 | 144 | 144 | 174 | 210 | 250 | 293 | 307 | 293 | 282 | 263 | 247 | 241 | 233 | 234 | 230 | 219 | 222 |
| 8 | 213 | 216 | 212 | 207 | 215 | 196 | 171 | 166 | 162 | 187 | 214 | 244 | 268 | 292 | 304 | 298 | 282 | 265 | 252 | 241 | 232 | 228 | 228 | 224 | 230 |
| 9 | 213 | 211 | 217 | 214 | 203 | 186 | 163 | 150 | 152 | 159 | 184 | 229 | 274 | 303 | 306 | 294 | 275 | 253 | 249 | 267 | 258 | 259 | 249 | 227 | 229 |
| 10 D | 215 | 237 | 221 | 201 | 163 | 161 | 176 | 177 | 140 | 175 | 226 | 274 | 296 | 306 | 324 | 300 | 250 | 234 | 227 | 225 | 222 | 177 | 194 | 178 | 221 |
| 11 | 207 | 215 | 179 | 205 | 239 | 172 | 133 | 125 | 132 | 158 | 199 | 241 | 282 | 296 | 301 | 295 | 269 | 258 | 240 | 229 | 232 | 239 | 232 | 235 | 221 |
| 12 | 201 | 188 | 172 | 161 | 170 | 160 | 156 | 140 | 138 | 149 | 161 | 199 | 242 | 266 | 301 | 290 | 269 | 254 | 244 | 244 | 245 | 240 | 222 | 207 | 209 |
| 13 | 203 | 195 | 224 | 221 | 201 | 197 | 188 | 183 | 186 | 184 | 210 | 239 | 261 | 288 | 294 | 287 | 259 | 240 | 236 | 240 | 244 | 241 | 238 | 227 | 229 |
| 14 D | 221 | 225 | 234 | 186 | 181 | 179 | 180 | 202 | 132 | 227 | 219 | 279 | 316 | 330 | 296 | 271 | 249 | 247 | 250 | 247 | 238 | 209 | 247 | 206 | 232 |
| 15 D | 159 | 173 | 138 | 160 | 188 | 144 | 136 | 132 | 153 | 155 | 182 | 231 | 269 | 270 | 300 | 282 | 256 | 254 | 247 | 238 | 243 | 246 | 206 | 270 | 210 |
| 16 | 190 | 203 | 219 | 182 | 171 | 170 | 168 | 153 | 135 | 140 | 181 | 220 | 274 | 305 | 309 | 300 | 270 | 241 | 211 | 219 | 196 | 213 | 224 | 227 | 213 |
| 17 D | 211 | 216 | 243 | 197 | 192 | 187 | 165 | 137 | 141 | 153 | 178 | 228 | 275 | 317 | 314 | 294 | 280 | 275 | 240 | 223 | 220 | 239 | 203 | 174 | 221 |
| 18 | 135 | 189 | 233 | 198 | 195 | 187 | 172 | 129 | 126 | 140 | 185 | 219 | 265 | 302 | 317 | 295 | 270 | 245 | 237 | 228 | 221 | 183 | 212 | 210 | 212 |
| 19 | 193 | 203 | 172 | 142 | 203 | 183 | 149 | 123 | 118 | 138 | 183 | 235 | 270 | 295 | 303 | 277 | 248 | 223 | 216 | 208 | 221 | 232 | 228 | 225 | 208 |
| 20 | 225 | 222 | 212 | 206 | 199 | 171 | 139 | 167 | 212 | 171 | 192 | 223 | 285 | 320 | 316 | 309 | 293 | 267 | 247 | 242 | 239 | 234 | 230 | 223 | 231 |
| 21 | 219 | 214 | 210 | 203 | 193 | 176 | 148 | 129 | 129 | 160 | 196 | 247 | 303 | 354 | 375 | 378 | 342 | 295 | 250 | 198 | 194 | 215 | 182 | 174 | 229 |
| 22 | 172 | 193 | 214 | 206 | 217 | 212 | 184 | 172 | 157 | 143 | 146 | 189 | 229 | 261 | 269 | 260 | 242 | 228 | 223 | 224 | 228 | 231 | 232 | 227 | 211 |
| 23 | 206 | 190 | 175 | 171 | 155 | 176 | 172 | 146 | 133 | 146 | 187 | 234 | 286 | 310 | 334 | 341 | 290 | 280 | 246 | 184 | 167 | 200 | 231 | 225 | 216 |
| 24 Q | 218 | 216 | 209 | 201 | 202 | 191 | 175 | 159 | 150 | 166 | 192 | 231 | 278 | 310 | 314 | 286 | 258 | 239 | 237 | 245 | 245 | 238 | 232 | 225 | 226 |
| 25 Q | 218 | 213 | 207 | 202 | 197 | 186 | 175 | 165 | 167 | 182 | 208 | 246 | 267 | 288 | 287 | 271 | 253 | 239 | 234 | 237 | 235 | 235 | 229 | 222 | 223 |
| 26 | 219 | 219 | 218 | 220 | 204 | 185 | 182 | 184 | 189 | 198 | 240 | 267 | 275 | 285 | 280 | 264 | 240 | 228 | 223 | 225 | 228 | 228 | 226 | 224 | 227 |
| 27 | 224 | 219 | 212 | 197 | 185 | 174 | 155 | 144 | 150 | 162 | 192 | 238 | 272 | 294 | 316 | 307 | 293 | 269 | 276 | 244 | 185 | 226 | 233 | 179 | 223 |
| 28 | 197 | 205 | 201 | 197 | 189 | 180 | 173 | 171 | 174 | 190 | 221 | 253 | 281 | 289 | 280 | 262 | 241 | 229 | 227 | 229 | 272 | 284 | 228 | 127 | 221 |
| 29 D | 102 | 25 | 164 | 85 | 128 | 72 | 118 | 115 | 145 | 188 | 219 | 259 | 297 | 310 | 291 | 256 | 229 | 198 | 181 | 165 | 222 | 232 | 225 | 212 | 185 |
| 30 | 226 | 221 | 225 | 221 | 198 | 180 | 154 | 143 | 138 | 153 | 202 | 249 | 267 | 295 | 291 | 280 | 240 | 194 | 197 | 214 | 200 | 196 | 214 | 209 | 213 |
| 31 | 202 | 201 | 192 | 201 | 193 | 186 | 183 | 173 | 165 | 176 | 204 | 242 | 275 | 287 | 289 | 275 | 242 | 209 | 207 | 219 | 220 | 215 | 217 | 225 | 217 |
| Mean | 204 | 205 | 207 | 196 | 194 | 179 | 165 | 155 | 152 | 166 | 195 | 235 | 272 | 298 | 307 | 296 | 271 | 250 | 237 | 229 | 227 | 228 | 225 | 215 | 221 |
| Mean Q | 219 | 217 | 215 | 208 | 201 | 187 | 175 | 167 | 163 | 176 | 201 | 234 | 268 | 296 | 309 | 302 | 280 | 258 | 242 | 237 | 235 | 235 | 232 | 226 | 228 |
| Mean D | 182 | 175 | 200 | 166 | 170 | 149 | 155 | 153 | 142 | 180 | 205 | 254 | 291 | 307 | 305 | 281 | 253 | 242 | 229 | 220 | 229 | 221 | 215 | 208 | 214 |

| Table 4 Hour Date | Declination | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | | September 1989 | | | Mean |
|-------------------------|-------------|-----|-----|------|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------|-----|-----|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| 1 | 218 | 193 | 195 | 194 | 196 | 194 | 167 | 154 | 159 | 188 | 218 | 248 | 279 | 303 | 289 | 258 | 231 | 209 | 209 | 221 | 226 | 227 | 228 | 227 | 218 |
| 2 | 225 | 222 | 207 | 210 | 198 | 181 | 169 | 167 | 174 | 198 | 240 | 275 | 308 | 319 | 312 | 303 | 251 | 235 | 229 | 237 | 232 | 232 | 229 | 223 | 232 |
| 3 | 213 | 212 | 208 | 207 | 214 | 221 | 184 | 171 | 174 | 187 | 225 | 269 | 292 | 302 | 295 | 280 | 255 | 231 | 224 | 229 | 234 | 233 | 221 | 215 | 229 |
| 4 D | 210 | 156 | 163 | 165 | 106 | 151 | 164 | 138 | 134 | 196 | 201 | 242 | 283 | 296 | 296 | 278 | 251 | 225 | 220 | 227 | 229 | 223 | 212 | 183 | 206 |
| 5 | 165 | 183 | 170 | 120 | 126 | 132 | 122 | 142 | 175 | 190 | 199 | 236 | 256 | 272 | 278 | 267 | 253 | 235 | 228 | 228 | 230 | 228 | 222 | 212 | 203 |
| 6 | 211 | 208 | 205 | 202 | 203 | 202 | 179 | 177 | 172 | 169 | 172 | 212 | 260 | 288 | 283 | 270 | 242 | 226 | 225 | 210 | 221 | 229 | 222 | 227 | 217 |
| 7 | 227 | 201 | 205 | 205 | 203 | 191 | 178 | 160 | 154 | 171 | 203 | 225 | 280 | 294 | 290 | 268 | 250 | 219 | 206 | 233 | 218 | 196 | 207 | 194 | 216 |
| 8 | 195 | 186 | 203 | 213 | 207 | 204 | 186 | 183 | 175 | 187 | 219 | 258 | 272 | 284 | 289 | 277 | 248 | 229 | 228 | 231 | 236 | 236 | 234 | 221 | 225 |
| 9 | 193 | 189 | 191 | 195 | 191 | 185 | 177 | 166 | 165 | 178 | 203 | 235 | 277 | 280 | 292 | 297 | 272 | 257 | 250 | 251 | 229 | 237 | 237 | 237 | 224 |
| 10 | 215 | 209 | 200 | 186 | 165 | 166 | 169 | 155 | 159 | 198 | 221 | 250 | 282 | 297 | 278 | 251 | 247 | 235 | 229 | 230 | 237 | 237 | 215 | 221 | 219 |
| 11 Q | 213 | 201 | 194 | 190 | 192 | 189 | 184 | 181 | 178 | 189 | 210 | 248 | 276 | 280 | 276 | 265 | 251 | 237 | 239 | 238 | 236 | 237 | 230 | 223 | 223 |
| 12 | 220 | 214 | 216 | 198 | 178 | 202 | 207 | 191 | 191 | 205 | 204 | 238 | 269 | 303 | 301 | 271 | 246 | 231 | 233 | 239 | 240 | 232 | 227 | 222 | 228 |
| 13 | 219 | 216 | 214 | 200 | 193 | 188 | 170 | 157 | 151 | 177 | 201 | 234 | 268 | 283 | 288 | 280 | 256 | 241 | 234 | 239 | 223 | 208 | 221 | 226 | 220 |
| 14 Q | 219 | 215 | 206 | 195 | 188 | 182 | 170 | 156 | 171 | 199 | 236 | 260 | 268 | 274 | 275 | 259 | 241 | 228 | 226 | 231 | 231 | 228 | 226 | 222 | 221 |
| 15 D | 219 | 215 | 211 | 205 | 223 | 172 | 158 | 148 | 143 | 151 | 193 | 246 | 319 | 342 | 309 | 279 | 278 | 221 | 205 | 199 | 161 | 165 | 149 | 120 | 210 |
| 16 | 155 | 85 | 53 | 47 | 64 | 80 | 164 | 160 | 171 | 206 | 241 | 264 | 282 | 290 | 279 | 267 | 258 | 255 | 252 | 243 | 248 | 248 | 231 | 216 | 198 |
| 17 | 185 | 195 | 198 | 196 | 193 | 186 | 177 | 173 | 168 | 183 | 207 | 235 | 264 | 273 | 280 | 271 | 257 | 248 | 242 | 233 | 228 | 217 | 211 | 213 | 218 |
| 18 D | 195 | 107 | 162 | 182 | 186 | 187 | 164 | 148 | 149 | 151 | 174 | 214 | 266 | 294 | 303 | 287 | 285 | 274 | 268 | 237 | 110 | 124 | 139 | 40 | 194 |
| 19 D | 38 | 65 | -13 | -205 | 0 | 53 | 109 | 164 | 159 | 132 | 165 | 189 | 240 | 251 | 251 | 259 | 245 | 234 | 230 | 230 | 230 | 219 | 209 | 205 | 152 |
| 20 Q | 202 | 201 | 199 | 198 | 206 | 202 | 189 | 177 | 163 | 159 | 172 | 213 | 246 | 261 | 258 | 249 | 237 | 224 | 222 | 216 | 217 | 217 | 199 | 200 | 209 |
| 21 | 194 | 174 | 161 | 201 | 192 | 191 | 191 | 193 | 194 | 191 | 200 | 228 | 254 | 273 | 266 | 257 | 245 | 231 | 227 | 225 | 217 | 217 | 216 | 198 | 214 |
| 22 | 183 | 199 | 197 | 193 | 214 | 194 | 208 | 210 | 202 | 194 | 225 | 263 | 292 | 306 | 308 | 307 | 282 | 226 | 209 | 227 | 221 | 205 | 219 | 222 | 229 |
| 23 Q | 217 | 208 | 205 | 202 | 201 | 197 | 189 | 178 | 176 | 182 | 199 | 220 | 241 | 245 | 241 | 238 | 233 | 233 | 231 | 229 | 225 | 226 | 223 | 219 | 215 |
| 24 | 212 | 213 | 207 | 198 | 195 | 191 | 185 | 176 | 167 | 173 | 198 | 228 | 256 | 277 | 267 | 255 | 243 | 237 | 237 | 239 | 227 | 198 | 193 | 194 | 215 |
| 25 Q | 177 | 174 | 168 | 172 | 179 | 180 | 180 | 178 | 173 | 183 | 215 | 242 | 263 | 266 | 255 | 238 | 225 | 216 | 220 | 198 | 211 | 218 | 224 | 223 | 207 |
| 26 D | 219 | 213 | 207 | 202 | 195 | 189 | 181 | 188 | 220 | 260 | 269 | 312 | 312 | 327 | 281 | 299 | 287 | 240 | 246 | 161 | 159 | 171 | 178 | 113 | 226 |
| 27 | 131 | 152 | 133 | 168 | 189 | 179 | 166 | 157 | 157 | 165 | 179 | 196 | 210 | 214 | 215 | 218 | 223 | 223 | 229 | 228 | 223 | 218 | 213 | 210 | 192 |
| 28 | 208 | 210 | 201 | 195 | 195 | 186 | 185 | 182 | 175 | 172 | 192 | 221 | 249 | 263 | 256 | 254 | 243 | 229 | 206 | 220 | 223 | 221 | 202 | 182 | 211 |
| 29 | 186 | 196 | 196 | 190 | 190 | 188 | 184 | 177 | 170 | 169 | 183 | 214 | 258 | 266 | 269 | 265 | 263 | 256 | 257 | 243 | 230 | 223 | 211 | 199 | 216 |
| 30 | 197 | 156 | 170 | 168 | 179 | 178 | 179 | 174 | 162 | 163 | 183 | 214 | 244 | 260 | 268 | 260 | 249 | 243 | 240 | 244 | 211 | 220 | 227 | 221 | 209 |
| Mean | 195 | 186 | 181 | 173 | 179 | 178 | 175 | 169 | 169 | 182 | 205 | 238 | 269 | 283 | 278 | 268 | 252 | 234 | 230 | 227 | 219 | 216 | 213 | 201 | 213 |
| Mean Q | 206 | 200 | 194 | 191 | 193 | 190 | 182 | 174 | 172 | 182 | 206 | 237 | 259 | 265 | 261 | 250 | 237 | 228 | 228 | 222 | 224 | 225 | 220 | 217 | 215 |
| Mean D | 176 | 151 | 146 | 110 | 142 | 150 | 155 | 157 | 161 | 178 | 200 | 241 | 284 | 302 | 288 | 280 | 269 | 239 | 234 | 211 | 178 | 180 | 177 | 132 | 198 |

| Table 4 | Declination | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9 ^m +.....(Tenths of Minutes) | | | | October 1989 | | | |
|---------|-------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|-----|--------------|-----|------|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 190 | 177 | 159 | 168 | 191 | 198 | 211 | 191 | 192 | 180 | 189 | 231 | 281 | 300 | 298 | 289 | 272 | 245 | 242 | 236 | 228 | 217 | 213 | 209 | 221 | |
| 2 | 207 | 205 | 202 | 201 | 193 | 194 | 190 | 174 | 155 | 150 | 164 | 196 | 244 | 278 | 286 | 278 | 270 | 251 | 242 | 231 | 224 | 218 | 215 | 212 | 216 | |
| 3 | 214 | 211 | 209 | 206 | 205 | 201 | 194 | 185 | 164 | 156 | 174 | 219 | 283 | 302 | 301 | 273 | 259 | 233 | 231 | 223 | 223 | 217 | 192 | 199 | 220 | |
| 4 Q | 199 | 186 | 188 | 185 | 190 | 199 | 192 | 174 | 157 | 153 | 176 | 217 | 260 | 290 | 297 | 278 | 262 | 252 | 247 | 243 | 238 | 223 | 213 | 218 | 218 | |
| 5 Q | 189 | 192 | 195 | 184 | 191 | 193 | 190 | 181 | 166 | 164 | 188 | 223 | 263 | 281 | 290 | 269 | 251 | 243 | 241 | 235 | 231 | 217 | 202 | 179 | 215 | |
| 6 | 192 | 200 | 200 | 206 | 203 | 197 | 188 | 174 | 172 | 164 | 186 | 208 | 248 | 275 | 304 | 280 | 279 | 257 | 246 | 245 | 230 | 227 | 220 | 208 | 221 | |
| 7 | 158 | 159 | 184 | 169 | 148 | 149 | 165 | 176 | 169 | 162 | 168 | 189 | 223 | 264 | 284 | 281 | 276 | 259 | 257 | 253 | 252 | 214 | 202 | 198 | 207 | |
| 8 | 181 | 190 | 182 | 169 | 183 | 192 | 185 | 187 | 174 | 162 | 166 | 186 | 219 | 241 | 266 | 271 | 264 | 261 | 252 | 243 | 238 | 228 | 225 | 205 | 211 | |
| 9 | 195 | 184 | 181 | 199 | 190 | 209 | 193 | 189 | 181 | 175 | 179 | 200 | 226 | 254 | 264 | 269 | 265 | 257 | 250 | 242 | 234 | 227 | 220 | 202 | 216 | |
| 10 | 193 | 205 | 192 | 197 | 192 | 197 | 197 | 191 | 179 | 175 | 180 | 210 | 224 | 251 | 260 | 271 | 263 | 243 | 238 | 234 | 221 | 215 | 212 | 206 | 214 | |
| 11 | 203 | 201 | 195 | 181 | 164 | 172 | 185 | 194 | 178 | 172 | 185 | 209 | 236 | 258 | 258 | 259 | 244 | 234 | 230 | 227 | 225 | 218 | 216 | 215 | 211 | |
| 12 | 211 | 209 | 203 | 200 | 200 | 192 | 190 | 181 | 169 | 168 | 176 | 197 | 230 | 254 | 257 | 259 | 250 | 244 | 235 | 236 | 231 | 225 | 223 | 218 | 215 | |
| 13 Q | 207 | 211 | 209 | 200 | 198 | 193 | 188 | 178 | 161 | 154 | 162 | 186 | 218 | 239 | 249 | 245 | 235 | 226 | 221 | 219 | 218 | 220 | 218 | 215 | 207 | |
| 14 Q | 211 | 209 | 207 | 204 | 200 | 196 | 191 | 181 | 171 | 170 | 188 | 226 | 258 | 264 | 262 | 252 | 238 | 230 | 225 | 219 | 216 | 213 | 212 | 212 | 215 | |
| 15 Q | 209 | 205 | 201 | 196 | 192 | 193 | 189 | 185 | 174 | 172 | 187 | 222 | 252 | 268 | 270 | 260 | 253 | 248 | 245 | 246 | 231 | 217 | 215 | 214 | 219 | |
| 16 | 209 | 201 | 192 | 191 | 197 | 194 | 187 | 180 | 168 | 158 | 176 | 211 | 263 | 285 | 306 | 279 | 273 | 257 | 226 | 211 | 199 | 204 | 201 | 203 | 215 | |
| 17 | 201 | 172 | 175 | 198 | 191 | 200 | 184 | 190 | 187 | 181 | 200 | 234 | 268 | 268 | 273 | 264 | 246 | 236 | 226 | 216 | 174 | 199 | 204 | 198 | 212 | |
| 18 | 190 | 184 | 182 | 134 | 207 | 197 | 188 | 183 | 175 | 174 | 199 | 252 | 284 | 291 | 284 | 279 | 250 | 237 | 225 | 222 | 225 | 188 | 189 | 159 | 212 | |
| 19 D | 188 | 94 | 113 | 184 | 181 | 201 | 230 | 246 | 204 | 198 | 223 | 207 | 236 | 295 | 273 | 250 | 228 | 215 | 211 | 207 | 196 | 207 | 212 | 213 | 209 | |
| 20 D | 208 | 207 | 219 | 212 | 208 | 209 | 241 | 227 | 232 | 201 | 111 | 133 | 206 | 258 | 235 | 223 | 167 | 125 | 251 | 252 | 227 | 245 | 193 | 209 | 208 | |
| 21 D | 210 | 182 | 223 | 260 | 215 | 167 | 188 | 196 | 155 | 71 | 48 | 93 | 179 | 189 | 236 | 192 | 174 | 179 | 207 | 147 | 169 | 139 | 124 | 118 | 169 | |
| 22 D | 65 | 92 | 144 | 157 | 120 | 158 | 168 | 146 | 145 | 131 | 136 | 176 | 212 | 239 | 251 | 229 | 222 | 197 | 193 | 166 | 205 | 176 | 154 | 184 | 169 | |
| 23 | 186 | 195 | 200 | 193 | 219 | 265 | 276 | 228 | 182 | 175 | 183 | 207 | 224 | 237 | 233 | 233 | 220 | 213 | 207 | 193 | 161 | 183 | 186 | 187 | 208 | |
| 24 | 189 | 196 | 207 | 187 | 180 | 188 | 171 | 156 | 182 | 185 | 183 | 215 | 246 | 249 | 243 | 237 | 230 | 228 | 229 | 224 | 220 | 202 | 202 | 184 | 206 | |
| 25 | 138 | 122 | 169 | 136 | 123 | 212 | 234 | 263 | 232 | 211 | 198 | 212 | 230 | 251 | 253 | 246 | 220 | 208 | 212 | 212 | 207 | 199 | 197 | 170 | 202 | |
| 26 D | 196 | 204 | 204 | 198 | 232 | 195 | 182 | 171 | 158 | 163 | 174 | 197 | 230 | 256 | 270 | 265 | 262 | 225 | 184 | 197 | 190 | 200 | 180 | 134 | 203 | |
| 27 | 137 | 195 | 214 | 217 | 204 | 196 | 190 | 184 | 168 | 166 | 182 | 212 | 237 | 251 | 265 | 253 | 241 | 223 | 216 | 179 | 184 | 171 | 187 | 199 | 203 | |
| 28 | 205 | 206 | 203 | 200 | 204 | 200 | 190 | 177 | 159 | 151 | 172 | 217 | 249 | 257 | 268 | 256 | 259 | 240 | 207 | 190 | 191 | 187 | 183 | 193 | 207 | |
| 29 | 200 | 202 | 206 | 208 | 206 | 208 | 202 | 185 | 166 | 157 | 176 | 210 | 249 | 260 | 252 | 238 | 235 | 237 | 237 | 215 | 193 | 116 | 118 | 105 | 199 | |
| 30 | 117 | 186 | 201 | 204 | 208 | 201 | 198 | 187 | 176 | 162 | 167 | 205 | 238 | 261 | 288 | 274 | 263 | 242 | 232 | 237 | 223 | 185 | 155 | 140 | 206 | |
| 31 | 115 | 142 | 176 | 187 | 202 | 204 | 196 | 186 | 168 | 155 | 167 | 202 | 262 | 277 | 307 | 294 | 255 | 260 | 248 | 209 | 211 | 205 | 196 | 192 | 209 | |
| Mean | 184 | 185 | 191 | 191 | 192 | 196 | 196 | 189 | 175 | 165 | 173 | 203 | 241 | 263 | 270 | 260 | 246 | 232 | 229 | 220 | 213 | 203 | 196 | 190 | 209 | |
| Mean Q | 203 | 201 | 200 | 194 | 194 | 195 | 190 | 180 | 166 | 163 | 180 | 215 | 250 | 268 | 274 | 261 | 248 | 240 | 236 | 232 | 227 | 218 | 212 | 208 | 215 | |
| Mean D | 173 | 156 | 181 | 202 | 191 | 186 | 202 | 197 | 179 | 153 | 138 | 161 | 213 | 247 | 253 | 232 | 211 | 188 | 209 | 194 | 197 | 193 | 173 | 172 | 192 | |

| Table 4 | Declination | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | | 9 th(Tenths of Minutes) | | | November 1989 | | |
|---------|-------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|-----|---------------|------|--|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 193 | 188 | 193 | 199 | 203 | 204 | 194 | 187 | 172 | 160 | 164 | 192 | 227 | 254 | 258 | 259 | 247 | 239 | 233 | 223 | 209 | 203 | 177 | 177 | 206 | | |
| 2 | 189 | 123 | 139 | 178 | 192 | 204 | 195 | 194 | 182 | 172 | 185 | 212 | 234 | 257 | 260 | 253 | 247 | 253 | 277 | 248 | 232 | 204 | 193 | 201 | 209 | | |
| 3 | 132 | 155 | 185 | 166 | 176 | 175 | 168 | 163 | 206 | 183 | 186 | 209 | 270 | 286 | 299 | 294 | 293 | 280 | 286 | 272 | 216 | 187 | 193 | 190 | 215 | | |
| 4 D | 189 | 183 | 192 | 198 | 198 | 182 | 193 | 180 | 205 | 235 | 205 | 219 | 247 | 278 | 283 | 266 | 275 | 268 | 246 | 229 | 206 | 211 | 195 | 171 | 219 | | |
| 5 | 163 | 189 | 183 | 175 | 185 | 210 | 195 | 188 | 173 | 166 | 168 | 195 | 227 | 252 | 255 | 250 | 240 | 236 | 251 | 224 | 205 | 152 | 154 | 163 | 200 | | |
| 6 | 173 | 167 | 176 | 182 | 191 | 195 | 194 | 186 | 176 | 166 | 177 | 211 | 227 | 255 | 259 | 247 | 236 | 223 | 233 | 236 | 214 | 211 | 200 | 187 | 205 | | |
| 7 | 139 | 121 | 134 | 165 | 194 | 171 | 184 | 186 | 180 | 175 | 180 | 210 | 247 | 276 | 254 | 234 | 227 | 222 | 217 | 216 | 210 | 188 | 189 | 192 | 196 | | |
| 8 | 185 | 169 | 188 | 184 | 188 | 194 | 184 | 176 | 165 | 155 | 164 | 205 | 222 | 241 | 245 | 239 | 242 | 244 | 254 | 227 | 212 | 205 | 201 | 198 | 204 | | |
| 9 | 196 | 185 | 173 | 143 | 142 | 176 | 182 | 182 | 172 | 166 | 184 | 210 | 243 | 261 | 252 | 248 | 262 | 256 | 242 | 245 | 227 | 209 | 180 | 171 | 204 | | |
| 10 | 179 | 191 | 188 | 187 | 166 | 185 | 187 | 181 | 176 | 169 | 179 | 204 | 228 | 244 | 242 | 239 | 234 | 227 | 223 | 217 | 210 | 208 | 201 | 203 | 203 | | |
| 11 | 196 | 197 | 192 | 211 | 190 | 189 | 187 | 182 | 173 | 162 | 172 | 193 | 218 | 234 | 247 | 241 | 252 | 268 | 299 | 262 | 224 | 224 | 202 | 173 | 212 | | |
| 12 | 175 | 194 | 197 | 200 | 195 | 193 | 188 | 182 | 174 | 169 | 185 | 213 | 240 | 248 | 241 | 228 | 218 | 216 | 213 | 211 | 210 | 208 | 204 | 197 | 204 | | |
| 13 D | 201 | 157 | 148 | 173 | 198 | 210 | 207 | 182 | 169 | 164 | 173 | 226 | 255 | 289 | 290 | 300 | 328 | 365 | 321 | 238 | 206 | 197 | 124 | 115 | 218 | | |
| 14 | 144 | 167 | 164 | 182 | 162 | 168 | 167 | 163 | 172 | 167 | 170 | 198 | 223 | 239 | 240 | 229 | 215 | 209 | 206 | 206 | 210 | 202 | 186 | 187 | 191 | | |
| 15 Q | 185 | 194 | 188 | 195 | 198 | 189 | 180 | 171 | 162 | 152 | 167 | 194 | 218 | 232 | 238 | 226 | 222 | 219 | 214 | 213 | 207 | 201 | 196 | 194 | 198 | | |
| 16 Q | 195 | 196 | 198 | 201 | 201 | 199 | 195 | 184 | 168 | 150 | 160 | 193 | 230 | 255 | 248 | 231 | 226 | 222 | 225 | 221 | 219 | 205 | 197 | 178 | 204 | | |
| 17 D | 133 | 133 | 175 | 192 | 188 | 199 | 216 | 200 | 188 | 140 | 142 | 218 | 236 | 312 | 359 | 309 | 321 | 390 | 389 | 272 | 237 | 3 | -34 | 121 | 210 | | |
| 18 D | 61 | 184 | 26 | 76 | 96 | 187 | 193 | 190 | 178 | 166 | 166 | 180 | 198 | 216 | 223 | 216 | 221 | 219 | 209 | 201 | 188 | 168 | 186 | 184 | 172 | | |
| 19 | 188 | 195 | 191 | 196 | 194 | 192 | 188 | 189 | 186 | 166 | 167 | 186 | 207 | 223 | 228 | 220 | 217 | 215 | 204 | 190 | 170 | 187 | 176 | 167 | 193 | | |
| 20 | 176 | 189 | 194 | 194 | 195 | 186 | 184 | 189 | 177 | 169 | 176 | 209 | 219 | 232 | 248 | 245 | 237 | 232 | 223 | 220 | 210 | 198 | 184 | 171 | 202 | | |
| 21 | 162 | 140 | 141 | 158 | 166 | 175 | 172 | 183 | 181 | 173 | 182 | 200 | 223 | 230 | 229 | 227 | 222 | 216 | 209 | 206 | 203 | 198 | 196 | 196 | 191 | | |
| 22 Q | 199 | 199 | 199 | 197 | 197 | 195 | 192 | 190 | 187 | 175 | 175 | 193 | 209 | 227 | 235 | 230 | 234 | 241 | 224 | 217 | 209 | 198 | 181 | 175 | 203 | | |
| 23 Q | 167 | 167 | 166 | 182 | 192 | 196 | 192 | 190 | 185 | 178 | 185 | 202 | 220 | 225 | 233 | 228 | 223 | 219 | 216 | 212 | 213 | 215 | 201 | 197 | 200 | | |
| 24 | 195 | 184 | 173 | 178 | 186 | 185 | 185 | 179 | 182 | 186 | 199 | 214 | 224 | 248 | 255 | 240 | 241 | 235 | 222 | 207 | 195 | 181 | 185 | 194 | 203 | | |
| 25 Q | 197 | 201 | 202 | 200 | 198 | 194 | 190 | 188 | 183 | 181 | 188 | 205 | 220 | 229 | 233 | 232 | 225 | 223 | 217 | 211 | 206 | 204 | 203 | 200 | 205 | | |
| 26 | 199 | 198 | 195 | 192 | 190 | 190 | 190 | 191 | 189 | 188 | 196 | 210 | 227 | 244 | 253 | 253 | 257 | 291 | 330 | 308 | 238 | 212 | 208 | 192 | 223 | | |
| 27 | 182 | 171 | 173 | 181 | 174 | 179 | 171 | 174 | 178 | 181 | 192 | 213 | 223 | 252 | 262 | 244 | 236 | 241 | 241 | 209 | 214 | 205 | 204 | 132 | 201 | | |
| 28 D | 128 | 152 | 142 | 127 | 165 | 194 | 180 | 180 | 166 | 174 | 180 | 200 | 205 | 221 | 225 | 223 | 222 | 238 | 231 | 229 | 215 | 200 | 205 | 201 | 192 | | |
| 29 | 194 | 183 | 175 | 175 | 180 | 183 | 179 | 181 | 175 | 179 | 193 | 209 | 225 | 231 | 246 | 213 | 253 | 278 | 252 | 229 | 210 | 162 | 175 | 139 | 201 | | |
| 30 | 155 | 138 | 143 | 98 | 118 | 129 | 159 | 159 | 163 | 168 | 184 | 207 | 239 | 269 | 265 | 258 | 245 | 253 | 236 | 222 | 214 | 225 | 185 | 129 | 190 | | |
| Mean | 172 | 174 | 171 | 176 | 181 | 188 | 186 | 182 | 178 | 171 | 178 | 204 | 228 | 249 | 254 | 244 | 244 | 248 | 245 | 227 | 211 | 192 | 182 | 177 | 203 | | |
| Mean Q | 189 | 191 | 191 | 195 | 197 | 195 | 190 | 185 | 177 | 167 | 175 | 197 | 219 | 234 | 237 | 229 | 226 | 225 | 219 | 215 | 211 | 205 | 196 | 189 | 202 | | |
| Mean D | 142 | 162 | 137 | 153 | 169 | 194 | 198 | 186 | 181 | 176 | 173 | 209 | 228 | 263 | 276 | 263 | 273 | 296 | 279 | 234 | 210 | 156 | 135 | 158 | 202 | | |

| Table 4 | | Declination | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 9+.....(Tenths of Minutes) | | | | December 1989 | | | | |
|---------|--|-------------|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|---------------|-----|-----|-----|------|
| Hour | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | | 102 | 122 | 179 | 165 | 178 | 186 | 188 | 181 | 182 | 180 | 182 | 194 | 207 | 244 | 248 | 250 | 239 | 255 | 260 | 269 | 221 | 189 | 180 | 125 | 197 |
| 2 | | 133 | 147 | 170 | 153 | 180 | 186 | 193 | 185 | 176 | 169 | 185 | 192 | 208 | 224 | 227 | 225 | 217 | 215 | 210 | 209 | 201 | 173 | 135 | 170 | 187 |
| 3 | | 160 | 194 | 177 | 185 | 199 | 199 | 206 | 197 | 185 | 169 | 174 | 183 | 217 | 234 | 260 | 243 | 230 | 221 | 207 | 198 | 157 | 104 | 92 | 75 | 186 |
| 4 D | | 76 | 120 | 130 | 130 | 91 | 133 | 175 | 186 | 181 | 175 | 177 | 193 | 218 | 239 | 233 | 225 | 222 | 250 | 233 | 217 | 187 | 152 | 128 | 108 | 174 |
| 5 | | 72 | 51 | 102 | 147 | 168 | 174 | 182 | 176 | 169 | 161 | 162 | 177 | 197 | 222 | 232 | 225 | 212 | 212 | 206 | 199 | 173 | 184 | 180 | 173 | 173 |
| 6 Q | | 172 | 182 | 184 | 191 | 189 | 188 | 187 | 184 | 183 | 174 | 183 | 194 | 209 | 228 | 242 | 237 | 226 | 224 | 222 | 215 | 208 | 195 | 190 | 185 | 200 |
| 7 | | 170 | 160 | 172 | 185 | 184 | 175 | 181 | 186 | 178 | 177 | 186 | 191 | 201 | 224 | 253 | 239 | 226 | 239 | 243 | 254 | 246 | 222 | 199 | 188 | 203 |
| 8 | | 186 | 188 | 187 | 189 | 190 | 189 | 184 | 185 | 181 | 168 | 175 | 194 | 212 | 236 | 245 | 225 | 217 | 217 | 206 | 205 | 197 | 194 | 191 | 186 | 198 |
| 9 Q | | 187 | 186 | 182 | 186 | 181 | 180 | 182 | 185 | 181 | 174 | 180 | 195 | 210 | 231 | 239 | 230 | 224 | 219 | 210 | 206 | 204 | 199 | 197 | 196 | 199 |
| 10 Q | | 192 | 190 | 192 | 188 | 185 | 184 | 188 | 187 | 184 | 176 | 177 | 190 | 201 | 220 | 232 | 231 | 222 | 216 | 212 | 207 | 202 | 199 | 196 | 195 | 199 |
| 11 Q | | 194 | 195 | 196 | 195 | 193 | 193 | 192 | 190 | 181 | 176 | 190 | 220 | 217 | 214 | 222 | 218 | 210 | 203 | 202 | 202 | 195 | 183 | 185 | 177 | 198 |
| 12 | | 185 | 194 | 203 | 198 | 192 | 190 | 185 | 182 | 182 | 185 | 196 | 209 | 212 | 224 | 228 | 224 | 220 | 210 | 209 | 206 | 200 | 169 | 150 | 173 | 197 |
| 13 | | 179 | 171 | 164 | 162 | 189 | 189 | 185 | 184 | 182 | 179 | 184 | 189 | 196 | 210 | 210 | 212 | 208 | 218 | 224 | 215 | 199 | 190 | 190 | 191 | 193 |
| 14 | | 191 | 193 | 194 | 195 | 192 | 190 | 187 | 185 | 183 | 175 | 188 | 214 | 223 | 247 | 251 | 256 | 218 | 226 | 231 | 199 | 181 | 167 | 180 | 184 | 202 |
| 15 | | 179 | 206 | 161 | 168 | 171 | 182 | 183 | 185 | 183 | 176 | 187 | 200 | 213 | 222 | 228 | 224 | 223 | 214 | 207 | 204 | 200 | 189 | 188 | 187 | 195 |
| 16 | | 187 | 188 | 186 | 190 | 188 | 190 | 197 | 195 | 199 | 186 | 208 | 218 | 244 | 269 | 230 | 221 | 238 | 228 | 204 | 191 | 170 | 132 | 165 | 176 | 200 |
| 17 | | 176 | 176 | 183 | 186 | 194 | 193 | 188 | 185 | 188 | 200 | 211 | 220 | 229 | 235 | 227 | 219 | 218 | 212 | 204 | 197 | 191 | 167 | 170 | 177 | 198 |
| 18 | | 183 | 199 | 197 | 194 | 192 | 189 | 193 | 196 | 188 | 184 | 197 | 204 | 218 | 223 | 229 | 229 | 228 | 225 | 214 | 219 | 196 | 185 | 173 | 172 | 201 |
| 19 Q | | 178 | 178 | 188 | 184 | 188 | 193 | 191 | 187 | 186 | 182 | 189 | 203 | 214 | 223 | 226 | 226 | 222 | 218 | 215 | 217 | 208 | 199 | 190 | 184 | 200 |
| 20 | | 184 | 178 | 173 | 170 | 183 | 185 | 186 | 184 | 185 | 182 | 190 | 210 | 224 | 223 | 228 | 225 | 215 | 221 | 209 | 212 | 219 | 191 | 183 | 184 | 198 |
| 21 | | 178 | 145 | 135 | 175 | 190 | 190 | 192 | 191 | 194 | 192 | 188 | 200 | 217 | 231 | 234 | 244 | 230 | 230 | 247 | 252 | 238 | 203 | 190 | 184 | 203 |
| 22 | | 179 | 175 | 176 | 180 | 181 | 191 | 191 | 194 | 191 | 188 | 191 | 208 | 235 | 275 | 239 | 233 | 234 | 244 | 276 | 230 | 199 | 186 | 176 | 171 | 206 |
| 23 | | 178 | 182 | 178 | 179 | 205 | 186 | 165 | 173 | 173 | 185 | 179 | 193 | 199 | 225 | 247 | 240 | 228 | 221 | 222 | 210 | 200 | 198 | 190 | 181 | 197 |
| 24 | | 184 | 192 | 179 | 172 | 176 | 173 | 181 | 179 | 174 | 163 | 170 | 207 | 201 | 227 | 231 | 248 | 265 | 238 | 253 | 219 | 200 | 187 | 135 | 136 | 195 |
| 25 | | 162 | 157 | 168 | 129 | 155 | 184 | 177 | 178 | 176 | 170 | 179 | 210 | 221 | 232 | 233 | 236 | 220 | 230 | 210 | 202 | 201 | 155 | 134 | 150 | 186 |
| 26 | | 164 | 172 | 188 | 192 | 191 | 185 | 183 | 180 | 166 | 155 | 168 | 201 | 219 | 228 | 241 | 232 | 233 | 227 | 247 | 226 | 131 | 193 | 167 | 126 | 192 |
| 27 | | 144 | 143 | 169 | 188 | 188 | 192 | 187 | 178 | 174 | 164 | 168 | 188 | 222 | 252 | 261 | 244 | 245 | 269 | 233 | 200 | 202 | 156 | 159 | 168 | 196 |
| 28 | | 169 | 170 | 193 | 194 | 199 | 189 | 197 | 187 | 180 | 169 | 170 | 185 | 202 | 214 | 228 | 226 | 215 | 215 | 216 | 207 | 201 | 198 | 187 | 176 | 195 |
| 29 D | | 182 | 177 | 191 | 199 | 196 | 192 | 191 | 186 | 182 | 172 | 173 | 219 | 256 | 258 | 255 | 262 | 234 | 232 | 219 | 212 | 126 | -49 | 108 | 9 | 183 |
| 30 D | | 87 | 171 | 178 | 196 | 198 | 193 | 194 | 172 | 161 | 158 | 154 | 189 | 192 | 213 | 231 | 242 | 228 | 239 | 257 | 235 | 213 | 156 | 132 | 107 | 187 |
| 31 D | | 137 | 134 | 84 | 100 | 98 | 154 | 161 | 205 | 245 | 222 | 201 | 200 | 222 | 240 | 229 | 218 | 228 | 225 | 217 | 204 | 192 | 181 | 169 | 171 | 185 |
| Mean | | 163 | 169 | 173 | 176 | 181 | 184 | 186 | 185 | 183 | 177 | 183 | 200 | 215 | 232 | 236 | 233 | 226 | 226 | 223 | 214 | 195 | 172 | 168 | 161 | 194 |
| Mean Q | | 185 | 186 | 188 | 189 | 187 | 188 | 188 | 187 | 183 | 176 | 184 | 200 | 210 | 223 | 232 | 228 | 221 | 216 | 212 | 209 | 203 | 195 | 192 | 187 | 199 |
| Mean D | | 117 | 145 | 152 | 158 | 152 | 172 | 182 | 186 | 190 | 181 | 177 | 199 | 219 | 239 | 239 | 239 | 230 | 240 | 237 | 227 | 188 | 126 | 143 | 104 | 185 |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 19000nT+..(Nanotesla Units) | | | | January 1989 | | | Mean |
|---------|----------------------|----|----|----|----|----|--------------------|-----|-----|-----|----|----|----|----|----|----|----|----|----|-----|-----------------------------|-----|----|-----|--------------|--|--|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 74 | 71 | 72 | 71 | 72 | 66 | 79 | 74 | 70 | 64 | 65 | 65 | 60 | 55 | 56 | 55 | 62 | 78 | 83 | 68 | 53 | 51 | 59 | 62 | 66 | | | |
| 2 Q | 71 | 68 | 79 | 83 | 83 | 87 | 92 | 93 | 92 | 89 | 77 | 67 | 69 | 72 | 72 | 76 | 80 | 80 | 77 | 71 | 69 | 69 | 78 | 83 | 78 | | | |
| 3 Q | 83 | 83 | 83 | 84 | 85 | 86 | 88 | 90 | 89 | 86 | 80 | 75 | 73 | 73 | 75 | 79 | 83 | 84 | 87 | 87 | 87 | 88 | 86 | 83 | 83 | | | |
| 4 Q | 78 | 77 | 77 | 78 | 80 | 80 | 84 | 85 | 85 | 88 | 82 | 82 | 83 | 84 | 86 | 90 | 87 | 88 | 88 | 94 | 95 | 91 | 91 | 103 | 86 | | | |
| 5 D | 102 | 95 | 86 | 59 | 59 | 94 | 111 | 100 | 100 | 76 | 66 | 57 | 49 | 54 | 48 | 44 | 35 | 28 | 32 | 56 | 57 | 57 | 56 | 57 | 66 | | | |
| 6 Q | 60 | 66 | 64 | 66 | 65 | 66 | 70 | 69 | 67 | 65 | 54 | 53 | 45 | 45 | 43 | 49 | 59 | 64 | 68 | 71 | 74 | 76 | 76 | 77 | 63 | | | |
| 7 | 81 | 80 | 86 | 86 | 85 | 87 | 87 | 88 | 90 | 88 | 78 | 70 | 65 | 54 | 56 | 63 | 69 | 68 | 80 | 86 | 87 | 88 | 82 | 85 | 79 | | | |
| 8 | 82 | 80 | 80 | 80 | 81 | 86 | 91 | 99 | 101 | 101 | 97 | 89 | 89 | 76 | 48 | 52 | 56 | 63 | 63 | 61 | 53 | 57 | 70 | 67 | 76 | | | |
| 9 | 66 | 64 | 62 | 63 | 64 | 68 | 69 | 68 | 69 | 68 | 60 | 50 | 47 | 49 | 41 | 54 | 63 | 56 | 64 | 70 | 71 | 71 | 73 | 65 | 62 | | | |
| 10 | 79 | 67 | 62 | 66 | 67 | 69 | 72 | 73 | 68 | 65 | 67 | 64 | 48 | 51 | 53 | 59 | 61 | 65 | 72 | 79 | 79 | 79 | 78 | 77 | 68 | | | |
| 11 D | 78 | 75 | 75 | 75 | 78 | 81 | 82 | 85 | 82 | 74 | 63 | 55 | 53 | 55 | 72 | 82 | 66 | 89 | 15 | -11 | -26 | -19 | -7 | 14 | 54 | | | |
| 12 | 25 | 16 | 21 | 36 | 46 | 48 | 32 | 32 | 33 | 36 | 28 | 26 | 26 | 23 | 26 | 31 | 34 | 38 | 48 | 54 | 58 | 63 | 66 | 63 | 38 | | | |
| 13 | 62 | 61 | 62 | 63 | 65 | 68 | 70 | 71 | 69 | 61 | 48 | 41 | 31 | 33 | 41 | 48 | 44 | 44 | 52 | 40 | 42 | 57 | 58 | 60 | 54 | | | |
| 14 | 58 | 55 | 55 | 56 | 56 | 59 | 64 | 66 | 66 | 61 | 50 | 38 | 32 | 40 | 47 | 57 | 68 | 65 | 60 | 62 | 53 | 56 | 73 | 68 | 57 | | | |
| 15 D | 50 | 53 | 56 | 48 | 51 | 77 | 80 | 72 | 61 | 56 | 36 | 31 | 28 | 15 | 13 | 25 | 23 | 26 | 36 | 46 | 59 | 25 | 12 | 11 | 41 | | | |
| 16 D | 10 | 18 | 25 | 36 | 35 | 34 | 55 | 88 | 58 | 36 | 17 | 8 | -4 | 9 | 24 | 24 | 52 | 41 | 21 | 3 | 20 | 34 | 25 | 32 | 29 | | | |
| 17 | 33 | 45 | 48 | 47 | 54 | 55 | 63 | 73 | 78 | 59 | 28 | 9 | 21 | 28 | 34 | 36 | 36 | 50 | 40 | 39 | 19 | 41 | 55 | 56 | 44 | | | |
| 18 | 40 | 52 | 54 | 54 | 58 | 63 | 66 | 67 | 67 | 57 | 47 | 37 | 31 | 40 | 48 | 50 | 55 | 64 | 67 | 71 | 72 | 67 | 71 | 67 | 57 | | | |
| 19 Q | 69 | 74 | 70 | 68 | 72 | 73 | 79 | 82 | 75 | 71 | 66 | 63 | 56 | 51 | 56 | 63 | 68 | 72 | 75 | 75 | 80 | 77 | 82 | 77 | 71 | | | |
| 20 D | 81 | 78 | 79 | 86 | 91 | 96 | 100 | 94 | 88 | 82 | 74 | 70 | 85 | 87 | 48 | 27 | -3 | 38 | 32 | 15 | 20 | 17 | 13 | 13 | 59 | | | |
| 21 | 19 | 27 | 28 | 40 | 41 | 47 | 53 | 60 | 58 | 38 | 26 | 22 | 18 | 3 | 16 | 20 | 50 | 44 | 48 | 47 | 35 | 51 | 59 | 56 | 38 | | | |
| 22 | 55 | 74 | 69 | 54 | 60 | 70 | 81 | 69 | 67 | 59 | 43 | 31 | 29 | 10 | 49 | 54 | 60 | 46 | 55 | 50 | 62 | 68 | 88 | 78 | 58 | | | |
| 23 | 76 | 72 | 75 | 87 | 87 | 80 | 81 | 78 | 66 | 69 | 58 | 46 | 44 | 47 | 50 | 56 | 47 | 53 | 61 | 66 | 76 | 74 | 88 | 88 | 68 | | | |
| 24 | 83 | 76 | 79 | 77 | 73 | 77 | 81 | 83 | 80 | 75 | 69 | 62 | 48 | 45 | 53 | 59 | 56 | 57 | 66 | 82 | 79 | 77 | 86 | 82 | 71 | | | |
| 25 | 79 | 77 | 79 | 84 | 86 | 81 | 84 | 89 | 89 | 83 | 68 | 54 | 42 | 48 | 60 | 67 | 71 | 78 | 61 | 70 | 78 | 84 | 89 | 88 | 75 | | | |
| 26 | 83 | 79 | 78 | 78 | 78 | 83 | 85 | 88 | 87 | 83 | 71 | 56 | 49 | 47 | 55 | 62 | 67 | 65 | 73 | 74 | 73 | 76 | 81 | 84 | 73 | | | |
| 27 | 84 | 85 | 89 | 80 | 72 | 80 | 85 | 85 | 88 | 92 | 86 | 76 | 63 | 53 | 51 | 65 | 69 | 75 | 80 | 84 | 85 | 86 | 86 | 86 | 79 | | | |
| 28 | 85 | 83 | 82 | 92 | 88 | 77 | 83 | 86 | 83 | 72 | 63 | 57 | 58 | 56 | 45 | 37 | 55 | 63 | 53 | 67 | 72 | 78 | 78 | 80 | 71 | | | |
| 29 | 79 | 77 | 91 | 85 | 83 | 84 | 87 | 90 | 92 | 84 | 68 | 57 | 56 | 56 | 60 | 43 | 54 | 67 | 73 | 64 | 67 | 79 | 79 | 81 | 73 | | | |
| 30 | 83 | 83 | 85 | 89 | 86 | 94 | 95 | 90 | 88 | 80 | 67 | 44 | 35 | 47 | 63 | 65 | 67 | 70 | 72 | 75 | 74 | 74 | 80 | 84 | 75 | | | |
| 31 | 72 | 72 | 83 | 75 | 73 | 76 | 88 | 91 | 82 | 64 | 61 | 51 | 39 | 46 | 47 | 38 | 53 | 53 | 36 | 51 | 71 | 88 | 35 | 27 | 61 | | | |
| Mean | 67 | 67 | 69 | 69 | 70 | 74 | 79 | 80 | 77 | 70 | 60 | 52 | 47 | 47 | 50 | 53 | 56 | 60 | 59 | 60 | 61 | 64 | 66 | 66 | 64 | | | |
| Mean Q | 72 | 74 | 75 | 76 | 77 | 78 | 83 | 84 | 82 | 80 | 72 | 68 | 65 | 65 | 66 | 71 | 75 | 78 | 79 | 80 | 81 | 80 | 83 | 85 | 76 | | | |
| Mean D | 64 | 64 | 64 | 61 | 63 | 76 | 86 | 88 | 78 | 65 | 51 | 44 | 42 | 44 | 41 | 40 | 35 | 44 | 27 | 22 | 26 | 23 | 20 | 25 | 50 | | | |

| Table 5 | | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | February 1989 | | | |
|---------|--|----------------------|----|----|----|----|----|--------------------|-----|-----|----|----|----|----|----|-----|----|----|----|----|----|----------------------------|----|-----|---------------|------|--|--|
| Hour | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | | 26 | 28 | 31 | 33 | 56 | 52 | 54 | 58 | 60 | 58 | 51 | 50 | 40 | 21 | 35 | 57 | 62 | 64 | 66 | 44 | 37 | 37 | 39 | 57 | 47 | | |
| 2 | | 65 | 65 | 67 | 67 | 63 | 60 | 60 | 58 | 52 | 49 | 42 | 32 | 32 | 43 | 57 | 65 | 74 | 79 | 86 | 26 | 24 | 17 | 34 | 46 | 53 | | |
| 3 D | | 52 | 62 | 57 | 35 | 50 | 68 | 62 | 58 | 59 | 56 | 54 | 47 | 38 | 51 | 48 | 37 | 47 | 46 | 46 | 23 | 33 | 48 | 69 | 53 | 50 | | |
| 4 D | | 54 | 54 | 52 | 58 | 60 | 61 | 63 | 65 | 70 | 64 | 59 | 56 | 52 | 55 | 47 | 48 | 50 | 64 | 69 | 71 | 80 | 75 | 48 | 63 | 60 | | |
| 5 | | 66 | 61 | 68 | 68 | 71 | 68 | 71 | 74 | 86 | 74 | 60 | 46 | 42 | 45 | 50 | 55 | 63 | 59 | 65 | 68 | 79 | 63 | 50 | 68 | 63 | | |
| 6 D | | 69 | 57 | 69 | 65 | 65 | 69 | 74 | 77 | 86 | 74 | 62 | 58 | 53 | 54 | 55 | 45 | 46 | 64 | 63 | 70 | 59 | 58 | 60 | 62 | 63 | | |
| 7 D | | 68 | 66 | 66 | 65 | 81 | 79 | 89 | 88 | 77 | 64 | 61 | 57 | 49 | 42 | 44 | 44 | 47 | 50 | 66 | 69 | 80 | 69 | 71 | 80 | 66 | | |
| 8 | | 59 | 70 | 73 | 70 | 69 | 63 | 73 | 78 | 76 | 67 | 61 | 55 | 44 | 40 | 47 | 51 | 56 | 57 | 72 | 77 | 81 | 74 | 67 | 78 | 65 | | |
| 9 | | 91 | 84 | 74 | 68 | 76 | 78 | 87 | 78 | 81 | 71 | 62 | 57 | 49 | 43 | 41 | 41 | 58 | 66 | 68 | 71 | 82 | 66 | 60 | 56 | 67 | | |
| 10 | | 69 | 57 | 68 | 69 | 66 | 65 | 67 | 70 | 74 | 67 | 54 | 47 | 35 | 27 | 41 | 53 | 61 | 67 | 75 | 80 | 81 | 83 | 84 | 84 | 64 | | |
| 11 | | 83 | 82 | 80 | 81 | 82 | 84 | 86 | 89 | 86 | 74 | 60 | 53 | 42 | 46 | 53 | 59 | 72 | 82 | 77 | 64 | 50 | 60 | 61 | 62 | 70 | | |
| 12 | | 64 | 70 | 74 | 70 | 68 | 70 | 73 | 77 | 83 | 81 | 73 | 61 | 52 | 46 | 48 | 51 | 60 | 66 | 67 | 76 | 52 | 71 | 71 | 76 | 67 | | |
| 13 | | 61 | 76 | 63 | 63 | 66 | 67 | 69 | 69 | 71 | 65 | 60 | 41 | 39 | 43 | 43 | 44 | 66 | 62 | 66 | 78 | 83 | 81 | 74 | 70 | 63 | | |
| 14 | | 70 | 70 | 68 | 63 | 66 | 65 | 65 | 69 | 79 | 76 | 65 | 51 | 45 | 41 | 38 | 36 | 57 | 60 | 66 | 74 | 73 | 79 | 80 | 80 | 64 | | |
| 15 | | 78 | 78 | 81 | 86 | 83 | 85 | 91 | 89 | 86 | 72 | 55 | 47 | 47 | 49 | 57 | 60 | 60 | 56 | 63 | 78 | 51 | 66 | 60 | 52 | 68 | | |
| 16 | | 41 | 44 | 45 | 49 | 44 | 58 | 73 | 77 | 75 | 67 | 50 | 39 | 24 | 30 | 37 | 51 | 61 | 66 | 72 | 75 | 73 | 70 | 73 | 67 | 57 | | |
| 17 Q | | 74 | 77 | 77 | 83 | 80 | 83 | 86 | 88 | 88 | 83 | 74 | 67 | 69 | 72 | 77 | 77 | 76 | 76 | 78 | 83 | 86 | 88 | 88 | 89 | 80 | | |
| 18 | | 91 | 90 | 91 | 92 | 93 | 99 | 102 | 96 | 91 | 81 | 71 | 66 | 68 | 74 | 76 | 84 | 81 | 64 | 67 | 80 | 79 | 84 | 87 | 86 | 83 | | |
| 19 | | 90 | 88 | 88 | 90 | 91 | 94 | 95 | 98 | 90 | 80 | 73 | 69 | 66 | 68 | 71 | 70 | 64 | 78 | 89 | 92 | 92 | 95 | 79 | 82 | 83 | | |
| 20 | | 83 | 86 | 88 | 92 | 86 | 86 | 93 | 94 | 89 | 82 | 74 | 75 | 67 | 49 | 52 | 54 | 62 | 64 | 73 | 78 | 84 | 77 | 76 | 78 | 77 | | |
| 21 | | 78 | 81 | 83 | 81 | 79 | 77 | 81 | 88 | 76 | 73 | 67 | 65 | 62 | 67 | 70 | 71 | 64 | 63 | 75 | 83 | 86 | 86 | 86 | 86 | 76 | | |
| 22 | | 86 | 88 | 90 | 97 | 91 | 88 | 88 | 89 | 71 | 70 | 73 | 75 | 70 | 79 | 77 | 75 | 73 | 73 | 79 | 84 | 80 | 78 | 85 | 86 | 81 | | |
| 23 Q | | 85 | 86 | 84 | 85 | 85 | 88 | 90 | 88 | 78 | 66 | 60 | 50 | 51 | 60 | 70 | 75 | 80 | 79 | 79 | 86 | 92 | 91 | 95 | 100 | 79 | | |
| 24 | | 94 | 92 | 81 | 78 | 87 | 91 | 100 | 97 | 92 | 83 | 70 | 60 | 57 | 55 | 63 | 78 | 85 | 86 | 88 | 92 | 93 | 93 | 94 | 92 | 83 | | |
| 25 Q | | 94 | 93 | 92 | 94 | 96 | 97 | 98 | 110 | 104 | 94 | 85 | 71 | 62 | 63 | 66 | 73 | 81 | 82 | 84 | 88 | 89 | 93 | 93 | 94 | 87 | | |
| 26 Q | | 93 | 92 | 92 | 91 | 91 | 93 | 93 | 95 | 99 | 94 | 84 | 74 | 66 | 62 | 70 | 80 | 85 | 86 | 87 | 90 | 92 | 93 | 95 | 93 | 87 | | |
| 27 Q | | 94 | 93 | 89 | 89 | 90 | 92 | 93 | 94 | 89 | 83 | 79 | 75 | 84 | 94 | 104 | 88 | 86 | 76 | 79 | 82 | 88 | 92 | 95 | 95 | 88 | | |
| 28 | | 93 | 93 | 93 | 95 | 97 | 98 | 102 | 101 | 96 | 91 | 84 | 71 | 70 | 76 | 65 | 72 | 77 | 78 | 66 | 83 | 89 | 87 | 100 | 90 | 86 | | |
| Mean | | 74 | 74 | 74 | 74 | 76 | 78 | 81 | 83 | 81 | 74 | 65 | 58 | 53 | 53 | 57 | 61 | 66 | 68 | 73 | 74 | 74 | 74 | 74 | 76 | 71 | | |
| Mean Q | | 88 | 88 | 87 | 88 | 88 | 91 | 92 | 95 | 92 | 84 | 76 | 67 | 66 | 70 | 77 | 79 | 82 | 80 | 81 | 86 | 89 | 91 | 93 | 94 | 84 | | |
| Mean D | | 54 | 53 | 55 | 51 | 62 | 66 | 68 | 69 | 70 | 63 | 57 | 54 | 46 | 45 | 46 | 46 | 50 | 58 | 62 | 55 | 58 | 57 | 57 | 63 | 57 | | |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | | March 1989 | | | Mean |
|---------|----------------------|------|------|------|-----|-----|--------------------|-----|------|----|----|------|-----|----|-----|-----|-----|-----|-----|-----|----------------------------|------|------|------|------------|--|--|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Q | 80 | 83 | 78 | 69 | 78 | 79 | 84 | 82 | 74 | 63 | 54 | 52 | 50 | 54 | 59 | 67 | 74 | 89 | 96 | 101 | 101 | 98 | 97 | 92 | 77 | | | |
| 2 | 93 | 101 | 98 | 105 | 97 | 105 | 76 | 76 | 72 | 59 | 50 | 53 | 57 | 41 | 40 | 47 | 41 | 54 | 66 | 62 | 73 | 68 | 62 | 65 | 69 | | | |
| 3 | 70 | 83 | 88 | 72 | 76 | 93 | 78 | 74 | 51 | 41 | 52 | 48 | 35 | 37 | 45 | 52 | 51 | 67 | 62 | 63 | 52 | 47 | 50 | 49 | 60 | | | |
| 4 Q | 60 | 58 | 62 | 57 | 57 | 63 | 62 | 60 | 56 | 52 | 59 | 51 | 57 | 48 | 36 | 59 | 62 | 61 | 68 | 74 | 77 | 79 | 80 | 81 | 62 | | | |
| 5 | 79 | 84 | 82 | 72 | 83 | 82 | 96 | 73 | 77 | 81 | 61 | 7 | 26 | 50 | 44 | 53 | 62 | 69 | 68 | 72 | 81 | 77 | 83 | 87 | 69 | | | |
| 6 | 75 | 73 | 78 | 82 | 83 | 81 | 82 | 81 | 78 | 66 | 62 | 68 | 59 | 64 | 76 | 80 | 59 | 58 | 79 | 78 | 72 | 73 | 80 | 90 | 74 | | | |
| 7 | 86 | 77 | 72 | 73 | 66 | 77 | 78 | 78 | 71 | 57 | 51 | 46 | 46 | 56 | 63 | 63 | 67 | 71 | 76 | 75 | 82 | 85 | 96 | 94 | 71 | | | |
| 8 | 84 | 78 | 77 | 78 | 79 | 79 | 76 | 81 | 80 | 77 | 67 | 63 | 64 | 70 | 75 | 79 | 80 | 88 | 113 | 114 | 98 | 67 | 75 | 62 | 79 | | | |
| 9 | 33 | 33 | 63 | 47 | 41 | 46 | 55 | 54 | 57 | 46 | 53 | 61 | 61 | 56 | 61 | 52 | 70 | 61 | 73 | 66 | 67 | 57 | 49 | 56 | 55 | | | |
| 10 | 40 | 58 | 53 | 54 | 55 | 53 | 64 | 57 | 58 | 55 | 53 | 56 | 60 | 58 | 63 | 63 | 58 | 53 | 65 | 77 | 82 | 78 | 84 | 75 | 61 | | | |
| 11 | 74 | 75 | 78 | 83 | 89 | 79 | 77 | 78 | 72 | 59 | 49 | 51 | 51 | 55 | 68 | 77 | 80 | 74 | 71 | 83 | 78 | 86 | 80 | 89 | 73 | | | |
| 12 | 54 | 57 | 60 | 62 | 66 | 71 | 70 | 72 | 71 | 67 | 56 | 44 | 42 | 50 | 61 | 71 | 78 | 50 | 63 | 77 | 76 | 81 | 84 | 97 | 66 | | | |
| 13 D | 90 | 108 | 123 | 80 | 2 | 34 | 50 | -29 | -120 | 50 | 10 | -137 | -44 | 61 | 118 | 193 | 159 | 254 | 98 | 88 | -83 | -618 | -701 | -694 | -38 | | | |
| 14 D | -664 | -795 | -183 | -144 | -63 | -29 | -91 | -57 | -31 | 25 | 29 | 10 | 22 | 22 | 20 | 17 | 24 | 59 | 49 | 55 | 44 | 42 | 59 | 39 | -64 | | | |
| 15 | -7 | 27 | 27 | 19 | 12 | 33 | 38 | 55 | 57 | 41 | 52 | 39 | 29 | 31 | 39 | 45 | 51 | 46 | 37 | 64 | 64 | 68 | 60 | 57 | 41 | | | |
| 16 D | 58 | 59 | 62 | 63 | 66 | 76 | 95 | 91 | 54 | 20 | 14 | 33 | 20 | 17 | 14 | 12 | 3 | 18 | 29 | 55 | 68 | 52 | 47 | 48 | 45 | | | |
| 17 | 49 | 59 | 41 | 42 | 64 | 47 | 47 | 59 | 39 | 25 | 11 | 7 | 18 | 16 | 18 | 23 | 43 | 48 | 53 | 44 | 54 | 65 | 69 | 61 | 42 | | | |
| 18 Q | 61 | 61 | 62 | 64 | 63 | 61 | 61 | 60 | 54 | 45 | 37 | 29 | 32 | 35 | 49 | 58 | 44 | 51 | 63 | 63 | 62 | 64 | 71 | 69 | 55 | | | |
| 19 | 67 | 64 | 65 | 65 | 73 | 82 | 64 | 78 | 54 | 44 | 37 | 21 | 4 | 39 | 5 | 5 | 37 | 48 | 39 | 45 | 52 | 48 | 49 | 50 | 47 | | | |
| 20 Q | 53 | 55 | 57 | 53 | 47 | 65 | 64 | 68 | 64 | 52 | 35 | 22 | 23 | 27 | 38 | 48 | 52 | 56 | 64 | 77 | 78 | 82 | 77 | 76 | 56 | | | |
| 21 | 77 | 82 | 80 | 70 | 82 | 101 | 80 | 81 | 79 | 87 | 64 | 39 | 35 | 37 | 30 | 37 | 54 | 66 | 73 | 68 | 76 | 71 | 66 | 64 | 67 | | | |
| 22 | 65 | 70 | 65 | 65 | 70 | 77 | 82 | 80 | 70 | 57 | 49 | 38 | 23 | 19 | 42 | 19 | 54 | 82 | 64 | 70 | 57 | 50 | 34 | 50 | 56 | | | |
| 23 | 34 | 46 | 47 | 49 | 58 | 61 | 65 | 73 | 71 | 70 | 46 | 30 | 14 | 20 | 35 | 54 | 56 | 74 | 54 | 57 | 63 | 43 | 46 | 58 | 51 | | | |
| 24 | 45 | 45 | 41 | 69 | 62 | 54 | 56 | 69 | 59 | 56 | 52 | 49 | 43 | 41 | 43 | 46 | 56 | 64 | 70 | 74 | 77 | 77 | 78 | 81 | 59 | | | |
| 25 Q | 80 | 80 | 80 | 79 | 79 | 81 | 83 | 86 | 83 | 70 | 48 | 39 | 39 | 48 | 58 | 67 | 68 | 76 | 60 | 69 | 63 | 72 | 69 | 74 | 69 | | | |
| 26 | 77 | 79 | 85 | 91 | 81 | 80 | 85 | 88 | 80 | 73 | 66 | 46 | 33 | 35 | 58 | 69 | 68 | 68 | 78 | 78 | 86 | 87 | 97 | 119 | 75 | | | |
| 27 | 101 | 103 | 106 | 104 | 102 | 107 | 111 | 116 | 101 | 88 | 79 | 71 | 56 | 59 | 76 | 116 | 67 | 41 | 65 | 72 | 81 | 81 | 51 | 35 | 83 | | | |
| 28 | 69 | 58 | 60 | 68 | 66 | 70 | 73 | 91 | 91 | 77 | 60 | 43 | 31 | 59 | 65 | 72 | 70 | 57 | 73 | 79 | 75 | 79 | 98 | 87 | 70 | | | |
| 29 D | 83 | 53 | 86 | 34 | 40 | 56 | 58 | 60 | 35 | 36 | 37 | 27 | 8 | 33 | 42 | 65 | 68 | 59 | 99 | 107 | 36 | 25 | 31 | 62 | 52 | | | |
| 30 | 46 | 45 | 49 | 52 | 60 | 68 | 70 | 50 | 43 | 54 | 37 | 18 | 21 | 29 | 38 | 53 | 60 | 75 | 68 | 78 | 66 | 78 | 77 | 71 | 54 | | | |
| 31 D | 52 | 58 | 32 | 39 | 52 | 52 | 40 | 46 | 44 | 29 | 11 | 1 | 18 | 18 | 21 | 47 | 55 | 89 | 71 | 54 | 61 | 47 | 53 | 48 | 43 | | | |
| Mean | 41 | 39 | 60 | 59 | 61 | 67 | 65 | 66 | 56 | 56 | 46 | 33 | 33 | 41 | 48 | 58 | 60 | 69 | 68 | 72 | 65 | 45 | 44 | 45 | 54 | | | |
| Mean Q | 67 | 67 | 68 | 64 | 65 | 70 | 71 | 71 | 66 | 56 | 47 | 39 | 40 | 42 | 48 | 60 | 60 | 67 | 70 | 77 | 76 | 79 | 79 | 78 | 64 | | | |
| Mean D | -76 | -103 | 24 | 14 | 19 | 38 | 30 | 22 | -4 | 32 | 20 | -13 | 5 | 30 | 43 | 67 | 62 | 96 | 69 | 72 | 25 | -90 | -102 | -99 | 8 | | | |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | | April 1989 | | | Mean |
|---------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|----|----|----|----|----|----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|------------|--|--|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | 54 | 49 | 45 | 56 | 52 | 60 | 68 | 44 | 58 | 46 | 35 | 19 | 18 | 22 | 24 | 28 | 65 | 73 | 76 | 116 | 69 | 89 | 85 | 72 | 55 | | | |
| 2 | 62 | 63 | 64 | 61 | 65 | 67 | 68 | 71 | 63 | 44 | 36 | 38 | 42 | 24 | 46 | 61 | 54 | 94 | 74 | 69 | 72 | 80 | 77 | 78 | 61 | | | |
| 3 | 81 | 88 | 79 | 72 | 65 | 64 | 73 | 70 | 61 | 52 | 42 | 41 | 51 | 49 | 47 | 56 | 63 | 80 | 86 | 82 | 92 | 78 | 77 | 83 | 68 | | | |
| 4 D | 78 | 68 | 88 | 78 | 58 | 62 | 69 | 60 | 53 | 57 | 29 | 12 | 17 | 41 | 44 | 64 | 47 | 78 | 86 | 78 | 62 | 71 | 103 | 90 | 62 | | | |
| 5 D | 53 | 57 | 57 | 43 | 57 | 60 | 63 | 48 | 29 | 33 | 34 | 32 | 39 | 47 | 56 | 59 | 63 | 67 | 64 | 75 | 98 | 79 | 83 | 107 | 58 | | | |
| 6 | 68 | 77 | 77 | 68 | 66 | 70 | 74 | 78 | 75 | 67 | 53 | 45 | 49 | 54 | 58 | 66 | 69 | 73 | 81 | 85 | 85 | 94 | 82 | 78 | 71 | | | |
| 7 | 81 | 84 | 84 | 82 | 81 | 90 | 73 | 72 | 67 | 52 | 33 | 18 | 21 | 43 | 53 | 65 | 66 | 75 | 61 | 80 | 68 | 73 | 76 | 103 | 67 | | | |
| 8 | 92 | 62 | 77 | 64 | 66 | 68 | 66 | 66 | 47 | 46 | 39 | 20 | 18 | 30 | 39 | 59 | 81 | 65 | 74 | 91 | 87 | 90 | 93 | 87 | 64 | | | |
| 9 | 77 | 96 | 85 | 76 | 74 | 74 | 80 | 81 | 77 | 62 | 39 | 22 | 18 | 29 | 46 | 60 | 84 | 113 | 92 | 106 | 92 | 86 | 84 | 76 | 72 | | | |
| 10 Q | 89 | 79 | 74 | 71 | 74 | 77 | 82 | 89 | 88 | 75 | 61 | 50 | 40 | 52 | 64 | 79 | 85 | 87 | 96 | 96 | 99 | 94 | 93 | 85 | 78 | | | |
| 11 | 86 | 87 | 91 | 88 | 86 | 92 | 99 | 104 | 96 | 81 | 61 | 47 | 54 | 62 | 90 | 130 | 120 | 94 | 105 | 104 | 110 | 112 | 106 | 103 | 92 | | | |
| 12 Q | 103 | 103 | 99 | 99 | 98 | 101 | 100 | 97 | 96 | 85 | 66 | 55 | 57 | 67 | 78 | 85 | 91 | 99 | 98 | 108 | 110 | 108 | 107 | 102 | 92 | | | |
| 13 | 101 | 101 | 100 | 99 | 95 | 92 | 89 | 107 | 91 | 73 | 65 | 51 | 37 | 45 | 45 | 48 | 60 | 74 | 89 | 89 | 89 | 89 | 93 | 97 | 80 | | | |
| 14 | 120 | 99 | 96 | 91 | 96 | 98 | 95 | 93 | 85 | 75 | 57 | 41 | 34 | 39 | 48 | 68 | 85 | 90 | 125 | 91 | 77 | 53 | 35 | 52 | 77 | | | |
| 15 | 54 | 62 | 66 | 60 | 65 | 76 | 63 | 42 | 60 | 51 | 30 | 22 | 20 | 22 | 34 | 49 | 46 | 55 | 76 | 79 | 81 | 83 | 84 | 80 | 57 | | | |
| 16 | 78 | 78 | 75 | 75 | 74 | 72 | 75 | 76 | 67 | 56 | 43 | 37 | 35 | 47 | 67 | 76 | 65 | 77 | 112 | 82 | 91 | 86 | 80 | 60 | 70 | | | |
| 17 | 86 | 66 | 59 | 62 | 66 | 69 | 70 | 70 | 67 | 61 | 46 | 35 | 35 | 42 | 48 | 61 | 68 | 71 | 81 | 90 | 94 | 93 | 90 | 89 | 67 | | | |
| 18 | 90 | 90 | 100 | 113 | 110 | 88 | 87 | 89 | 81 | 65 | 49 | 35 | 36 | 40 | 49 | 63 | 73 | 83 | 92 | 94 | 95 | 96 | 94 | 95 | 79 | | | |
| 19 Q | 96 | 94 | 91 | 89 | 89 | 88 | 89 | 91 | 87 | 76 | 59 | 49 | 46 | 56 | 70 | 71 | 81 | 94 | 113 | 106 | 106 | 105 | 104 | 105 | 86 | | | |
| 20 | 104 | 101 | 103 | 104 | 98 | 95 | 87 | 80 | 85 | 77 | 56 | 46 | 49 | 58 | 68 | 77 | 89 | 103 | 99 | 87 | 91 | 95 | 96 | 94 | 85 | | | |
| 21 Q | 96 | 88 | 80 | 83 | 96 | 108 | 106 | 107 | 100 | 87 | 76 | 66 | 61 | 60 | 68 | 82 | 97 | 107 | 100 | 101 | 99 | 99 | 99 | 99 | 90 | | | |
| 22 Q | 107 | 103 | 97 | 93 | 96 | 96 | 96 | 96 | 93 | 87 | 78 | 70 | 66 | 73 | 83 | 87 | 98 | 102 | 103 | 107 | 111 | 100 | 93 | 89 | 93 | | | |
| 23 | 91 | 87 | 92 | 88 | 89 | 92 | 99 | 101 | 98 | 93 | 79 | 73 | 81 | 70 | 73 | 83 | 92 | 77 | 74 | 73 | 76 | 82 | 86 | 86 | 85 | | | |
| 24 | 90 | 102 | 91 | 86 | 83 | 85 | 86 | 84 | 80 | 73 | 68 | 66 | 69 | 74 | 77 | 73 | 83 | 92 | 92 | 94 | 97 | 103 | 103 | 114 | 86 | | | |
| 25 | 104 | 98 | 99 | 96 | 95 | 101 | 110 | 109 | 101 | 89 | 89 | 83 | 79 | 78 | 63 | 74 | 105 | 134 | 124 | 106 | 97 | 72 | 47 | 52 | 92 | | | |
| 26 D | 51 | 31 | 31 | 28 | 25 | 54 | 44 | 30 | -1 | 11 | 13 | 30 | 19 | 6 | 19 | 34 | 50 | 89 | 76 | 126 | 80 | 54 | 52 | 63 | 42 | | | |
| 27 D | 62 | 51 | 40 | 62 | 55 | 52 | 46 | 66 | 48 | 25 | 17 | 9 | 10 | 17 | 43 | 56 | 84 | 151 | 128 | 103 | 81 | 69 | 55 | 77 | 59 | | | |
| 28 | 62 | 82 | 76 | 62 | 57 | 58 | 67 | 64 | 60 | 47 | 35 | 35 | 21 | 37 | 49 | 74 | 61 | 104 | 112 | 85 | 82 | 98 | 96 | 84 | 67 | | | |
| 29 | 76 | 74 | 70 | 70 | 57 | 66 | 85 | 77 | 73 | 54 | 44 | 38 | 40 | 44 | 39 | 66 | 90 | 140 | 130 | 113 | 87 | 83 | 79 | 90 | 74 | | | |
| 30 | 68 | 64 | 65 | 66 | 65 | 64 | 63 | 62 | 56 | 52 | 50 | 44 | 43 | 44 | 60 | 70 | 82 | 89 | 95 | 95 | 97 | 89 | 88 | 100 | 70 | | | |
| Mean | 82 | 79 | 78 | 76 | 75 | 78 | 79 | 77 | 71 | 62 | 49 | 41 | 40 | 46 | 55 | 67 | 77 | 91 | 94 | 94 | 89 | 87 | 85 | 86 | 73 | | | |
| Mean Q | 98 | 93 | 88 | 87 | 91 | 94 | 95 | 96 | 93 | 82 | 68 | 58 | 54 | 62 | 73 | 81 | 90 | 98 | 102 | 104 | 105 | 101 | 99 | 96 | 88 | | | |
| Mean D | 60 | 51 | 52 | 53 | 49 | 58 | 58 | 50 | 37 | 34 | 26 | 20 | 21 | 27 | 37 | 48 | 62 | 92 | 86 | 100 | 78 | 72 | 76 | 82 | 55 | | | |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 19000nT+..(Nanotesla Units) | | | | May 1989 | |
|---------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|----|----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|----------|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 105 | 86 | 77 | 79 | 80 | 77 | 81 | 78 | 75 | 74 | 75 | 70 | 71 | 74 | 85 | 94 | 98 | 114 | 106 | 102 | 98 | 95 | 92 | 90 | 87 | |
| 2 | 80 | 79 | 85 | 97 | 96 | 85 | 91 | 70 | 61 | 71 | 65 | 58 | 59 | 68 | 67 | 81 | 90 | 123 | 118 | 116 | 108 | 88 | 85 | 92 | 85 | |
| 3 | 106 | 92 | 84 | 76 | 80 | 82 | 87 | 93 | 91 | 87 | 81 | 68 | 65 | 62 | 67 | 80 | 89 | 99 | 101 | 106 | 103 | 102 | 100 | 111 | 88 | |
| 4 | 93 | 94 | 109 | 85 | 87 | 82 | 87 | 87 | 81 | 69 | 57 | 56 | 61 | 57 | 67 | 73 | 79 | 100 | 110 | 107 | 102 | 105 | 95 | 99 | 85 | |
| 5 D | 132 | 103 | 57 | 79 | 57 | 84 | 81 | 41 | 22 | 19 | 28 | 27 | 28 | 37 | 49 | 44 | 54 | 66 | 83 | 95 | 92 | 92 | 82 | 83 | 64 | |
| 6 | 82 | 81 | 83 | 78 | 81 | 77 | 75 | 68 | 62 | 43 | 47 | 53 | 60 | 59 | 65 | 63 | 62 | 80 | 100 | 111 | 114 | 94 | 92 | 90 | 76 | |
| 7 D | 90 | 88 | 88 | 84 | 82 | 98 | 64 | 63 | 53 | 69 | 70 | 54 | 36 | 34 | 60 | 48 | 75 | 107 | 110 | 108 | 90 | 101 | 68 | 63 | 75 | |
| 8 Q | 71 | 67 | 68 | 65 | 64 | 61 | 57 | 55 | 50 | 45 | 45 | 57 | 68 | 74 | 77 | 78 | 89 | 84 | 97 | 96 | 93 | 98 | 94 | 92 | 73 | |
| 9 Q | 90 | 88 | 86 | 84 | 83 | 83 | 78 | 79 | 79 | 77 | 72 | 68 | 71 | 81 | 87 | 84 | 94 | 97 | 97 | 99 | 100 | 100 | 99 | 97 | 86 | |
| 10 Q | 97 | 98 | 93 | 95 | 92 | 92 | 91 | 90 | 85 | 79 | 74 | 64 | 60 | 66 | 74 | 81 | 91 | 96 | 105 | 113 | 112 | 111 | 108 | 108 | 91 | |
| 11 Q | 101 | 102 | 99 | 95 | 97 | 99 | 99 | 94 | 90 | 80 | 69 | 68 | 70 | 73 | 77 | 86 | 100 | 104 | 117 | 117 | 119 | 116 | 114 | 110 | 96 | |
| 12 | 109 | 102 | 96 | 108 | 121 | 119 | 103 | 86 | 87 | 91 | 84 | 74 | 70 | 62 | 66 | 79 | 84 | 103 | 103 | 105 | 100 | 97 | 99 | 98 | 94 | |
| 13 | 94 | 86 | 83 | 83 | 87 | 87 | 85 | 81 | 78 | 80 | 81 | 76 | 71 | 69 | 87 | 107 | 109 | 123 | 98 | 102 | 103 | 106 | 110 | 111 | 92 | |
| 14 | 116 | 115 | 109 | 103 | 111 | 118 | 112 | 98 | 86 | 81 | 75 | 69 | 68 | 71 | 80 | 94 | 100 | 101 | 110 | 116 | 114 | 113 | 115 | 117 | 100 | |
| 15 | 108 | 109 | 107 | 105 | 105 | 106 | 99 | 89 | 79 | 73 | 78 | 86 | 89 | 81 | 80 | 88 | 97 | 116 | 123 | 111 | 104 | 101 | 95 | 98 | 97 | |
| 16 | 97 | 99 | 99 | 97 | 94 | 96 | 96 | 92 | 86 | 82 | 83 | 82 | 77 | 70 | 75 | 94 | 101 | 105 | 105 | 114 | 115 | 114 | 113 | 110 | 96 | |
| 17 | 106 | 99 | 93 | 94 | 100 | 106 | 110 | 101 | 91 | 80 | 70 | 68 | 72 | 75 | 81 | 102 | 97 | 110 | 113 | 104 | 104 | 103 | 105 | 103 | 95 | |
| 18 | 104 | 99 | 97 | 95 | 96 | 98 | 89 | 82 | 81 | 79 | 76 | 73 | 68 | 77 | 81 | 91 | 105 | 104 | 111 | 110 | 113 | 105 | 102 | 101 | 93 | |
| 19 Q | 101 | 101 | 99 | 98 | 99 | 102 | 98 | 91 | 86 | 81 | 78 | 87 | 96 | 100 | 101 | 105 | 103 | 114 | 117 | 118 | 116 | 112 | 113 | 112 | 101 | |
| 20 | 106 | 109 | 108 | 101 | 103 | 106 | 103 | 92 | 79 | 70 | 57 | 42 | 41 | 62 | 72 | 81 | 78 | 88 | 107 | 116 | 112 | 106 | 105 | 103 | 89 | |
| 21 | 102 | 98 | 99 | 103 | 104 | 106 | 100 | 97 | 81 | 68 | 71 | 67 | 66 | 60 | 67 | 76 | 90 | 105 | 119 | 121 | 124 | 114 | 113 | 112 | 94 | |
| 22 | 114 | 118 | 109 | 107 | 110 | 112 | 113 | 104 | 95 | 89 | 86 | 86 | 81 | 70 | 80 | 81 | 96 | 107 | 109 | 110 | 118 | 120 | 113 | 110 | 102 | |
| 23 D | 101 | 109 | 110 | 107 | 107 | 104 | 110 | 110 | 102 | 94 | 82 | 78 | 75 | 82 | 123 | 180 | 94 | 150 | 116 | 76 | 84 | 81 | 110 | 123 | 105 | |
| 24 D | 106 | 84 | 56 | 69 | 56 | 67 | 70 | 23 | 15 | -3 | 4 | -17 | 2 | -5 | 37 | 64 | 78 | 141 | 134 | 114 | 103 | 77 | 86 | 77 | 60 | |
| 25 D | 86 | 72 | 75 | 66 | 59 | 61 | 51 | 45 | 39 | 46 | 48 | 44 | 41 | 38 | 47 | 80 | 79 | 93 | 124 | 113 | 95 | 97 | 105 | 104 | 71 | |
| 26 | 89 | 85 | 87 | 79 | 75 | 76 | 80 | 79 | 72 | 67 | 60 | 64 | 59 | 55 | 67 | 92 | 108 | 108 | 127 | 124 | 112 | 100 | 81 | 89 | 85 | |
| 27 | 83 | 67 | 65 | 78 | 88 | 81 | 85 | 76 | 54 | 40 | 33 | 28 | 35 | 55 | 57 | 74 | 81 | 88 | 93 | 109 | 105 | 93 | 96 | 91 | 73 | |
| 28 | 89 | 90 | 97 | 79 | 74 | 80 | 86 | 82 | 75 | 62 | 51 | 56 | 66 | 64 | 76 | 76 | 96 | 125 | 107 | 123 | 111 | 102 | 101 | 95 | 86 | |
| 29 | 103 | 94 | 73 | 80 | 81 | 81 | 73 | 66 | 52 | 49 | 40 | 48 | 54 | 71 | 62 | 70 | 96 | 108 | 124 | 114 | 106 | 113 | 106 | 104 | 82 | |
| 30 | 96 | 102 | 96 | 91 | 78 | 82 | 77 | 67 | 64 | 68 | 70 | 74 | 73 | 78 | 82 | 76 | 86 | 99 | 114 | 121 | 109 | 111 | 107 | 101 | 88 | |
| 31 | 93 | 106 | 93 | 88 | 92 | 88 | 75 | 75 | 80 | 78 | 73 | 78 | 86 | 91 | 86 | 89 | 87 | 101 | 122 | 124 | 107 | 110 | 113 | 117 | 94 | |
| Mean | 98 | 94 | 90 | 89 | 88 | 90 | 87 | 79 | 72 | 67 | 64 | 61 | 63 | 65 | 74 | 84 | 90 | 105 | 110 | 110 | 106 | 102 | 101 | 100 | 87 | |
| Mean Q | 92 | 91 | 89 | 87 | 87 | 87 | 85 | 82 | 78 | 72 | 68 | 69 | 73 | 79 | 83 | 87 | 95 | 99 | 107 | 109 | 108 | 107 | 106 | 104 | 89 | |
| Mean D | 103 | 91 | 77 | 81 | 72 | 83 | 75 | 56 | 46 | 45 | 46 | 37 | 36 | 37 | 63 | 83 | 76 | 111 | 113 | 101 | 93 | 90 | 90 | 90 | 75 | |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | | June 1989 | | |
|---------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|----|----|----|-----|-----|-----|----------------------------|-----|-----|-----|-----------|-----|------|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 113 | 97 | 90 | 90 | 92 | 93 | 89 | 83 | 79 | 72 | 71 | 80 | 73 | 83 | 80 | 89 | 98 | 109 | 111 | 108 | 115 | 106 | 110 | 97 | 93 |
| 2 | 86 | 89 | 91 | 92 | 95 | 89 | 83 | 80 | 67 | 66 | 70 | 76 | 77 | 58 | 61 | 81 | 93 | 107 | 129 | 111 | 103 | 109 | 96 | 110 | 88 |
| 3 | 95 | 91 | 83 | 74 | 78 | 83 | 81 | 76 | 73 | 66 | 65 | 66 | 64 | 71 | 79 | 106 | 111 | 131 | 121 | 108 | 95 | 99 | 103 | 94 | 88 |
| 4 | 101 | 82 | 78 | 83 | 73 | 75 | 65 | 58 | 60 | 71 | 75 | 65 | 56 | 56 | 56 | 64 | 81 | 97 | 112 | 112 | 108 | 100 | 99 | 95 | 80 |
| 5 | 87 | 87 | 88 | 88 | 93 | 98 | 94 | 80 | 64 | 53 | 50 | 56 | 68 | 75 | 78 | 86 | 95 | 98 | 105 | 112 | 116 | 114 | 109 | 96 | 87 |
| 6 | 93 | 96 | 109 | 99 | 96 | 101 | 95 | 83 | 69 | 58 | 50 | 49 | 50 | 54 | 63 | 76 | 86 | 100 | 113 | 115 | 110 | 109 | 109 | 132 | 88 |
| 7 D | 134 | 133 | 82 | 63 | 79 | 65 | 53 | 61 | 72 | 47 | 9 | 0 | 34 | 52 | 54 | 57 | 61 | 68 | 77 | 86 | 95 | 98 | 88 | 92 | 69 |
| 8 | 98 | 93 | 89 | 84 | 77 | 75 | 73 | 75 | 71 | 66 | 56 | 52 | 51 | 58 | 64 | 74 | 89 | 105 | 124 | 124 | 163 | 135 | 130 | 132 | 90 |
| 9 D | 104 | 79 | 71 | 70 | 58 | 53 | 57 | 52 | 38 | 30 | 33 | 37 | 44 | 47 | 62 | 82 | 100 | 120 | 153 | 156 | 131 | 99 | 83 | 78 | 77 |
| 10 D | 66 | 68 | 50 | 66 | 53 | 16 | 55 | 43 | -6 | -31 | -26 | -29 | 8 | 56 | 76 | 105 | 180 | 176 | 173 | 124 | 94 | 68 | 61 | 64 | 63 |
| 11 | 66 | 72 | 73 | 74 | 67 | 70 | 53 | 37 | 34 | 24 | 16 | 20 | 13 | 12 | 20 | 38 | 66 | 87 | 118 | 113 | 98 | 95 | 85 | 85 | 60 |
| 12 | 86 | 88 | 84 | 87 | 84 | 81 | 60 | 49 | 55 | 50 | 36 | 26 | 38 | 47 | 59 | 70 | 76 | 83 | 103 | 104 | 100 | 93 | 91 | 90 | 73 |
| 13 | 87 | 87 | 91 | 88 | 87 | 87 | 84 | 79 | 60 | 47 | 41 | 44 | 52 | 78 | 70 | 51 | 75 | 104 | 122 | 116 | 138 | 115 | 111 | 111 | 84 |
| 14 D | 108 | 113 | 111 | 102 | 93 | 94 | 79 | 87 | 48 | 38 | 67 | 68 | 35 | 35 | 62 | 56 | 114 | 126 | 141 | 132 | 103 | 81 | 77 | 63 | 85 |
| 15 D | 56 | 63 | 66 | 64 | 63 | 66 | 54 | 32 | 5 | 3 | -3 | -5 | 6 | 31 | 59 | 24 | 58 | 111 | 144 | 138 | 107 | 97 | 89 | 83 | 59 |
| 16 | 74 | 72 | 77 | 81 | 80 | 73 | 65 | 55 | 40 | 34 | 29 | 26 | 24 | 25 | 32 | 44 | 69 | 86 | 99 | 106 | 98 | 92 | 87 | 85 | 65 |
| 17 Q | 83 | 85 | 85 | 87 | 90 | 91 | 87 | 80 | 67 | 57 | 49 | 51 | 56 | 60 | 70 | 79 | 100 | 120 | 102 | 105 | 111 | 111 | 113 | 111 | 85 |
| 18 Q | 108 | 105 | 100 | 98 | 99 | 100 | 96 | 88 | 81 | 68 | 54 | 45 | 53 | 66 | 79 | 91 | 99 | 110 | 115 | 125 | 116 | 116 | 118 | 117 | 94 |
| 19 | 116 | 112 | 110 | 108 | 106 | 102 | 98 | 97 | 93 | 88 | 80 | 72 | 71 | 67 | 75 | 91 | 108 | 120 | 128 | 129 | 119 | 114 | 113 | 100 | 101 |
| 20 | 93 | 97 | 94 | 94 | 98 | 104 | 111 | 97 | 86 | 72 | 53 | 42 | 57 | 38 | 68 | 50 | 61 | 87 | 94 | 130 | 112 | 106 | 98 | 92 | 85 |
| 21 Q | 83 | 80 | 79 | 80 | 82 | 81 | 77 | 69 | 62 | 63 | 60 | 54 | 54 | 57 | 63 | 70 | 74 | 87 | 97 | 96 | 95 | 94 | 101 | 101 | 77 |
| 22 Q | 102 | 100 | 97 | 93 | 91 | 92 | 92 | 82 | 76 | 72 | 68 | 63 | 59 | 55 | 56 | 76 | 89 | 99 | 104 | 107 | 107 | 107 | 108 | 110 | 88 |
| 23 Q | 112 | 111 | 107 | 107 | 108 | 110 | 108 | 104 | 98 | 96 | 87 | 81 | 77 | 80 | 78 | 102 | 95 | 97 | 100 | 112 | 111 | 111 | 109 | 108 | 100 |
| 24 | 107 | 106 | 102 | 104 | 110 | 111 | 113 | 109 | 101 | 94 | 97 | 102 | 98 | 72 | 71 | 91 | 106 | 108 | 114 | 120 | 114 | 107 | 106 | 102 | 103 |
| 25 | 104 | 96 | 99 | 101 | 100 | 98 | 93 | 83 | 75 | 74 | 73 | 68 | 63 | 66 | 69 | 82 | 91 | 108 | 113 | 121 | 121 | 115 | 108 | 102 | 93 |
| 26 | 101 | 100 | 99 | 100 | 101 | 101 | 100 | 94 | 90 | 80 | 66 | 47 | 43 | 50 | 61 | 86 | 108 | 130 | 117 | 120 | 116 | 112 | 109 | 101 | 93 |
| 27 | 104 | 101 | 86 | 91 | 94 | 98 | 95 | 90 | 84 | 76 | 70 | 69 | 65 | 74 | 81 | 89 | 98 | 108 | 116 | 118 | 110 | 107 | 104 | 97 | 93 |
| 28 | 103 | 110 | 110 | 98 | 98 | 96 | 92 | 90 | 86 | 79 | 69 | 66 | 64 | 63 | 73 | 84 | 76 | 96 | 110 | 107 | 103 | 106 | 104 | 92 | 91 |
| 29 | 95 | 111 | 111 | 108 | 101 | 114 | 104 | 82 | 65 | 58 | 49 | 39 | 39 | 41 | 62 | 77 | 92 | 97 | 99 | 100 | 100 | 98 | 92 | 93 | 84 |
| 30 | 99 | 88 | 82 | 81 | 91 | 80 | 67 | 62 | 52 | 46 | 42 | 48 | 48 | 51 | 58 | 71 | 87 | 102 | 112 | 106 | 98 | 100 | 92 | 90 | 77 |
| Mean | 95 | 94 | 90 | 89 | 88 | 87 | 82 | 75 | 65 | 57 | 52 | 49 | 51 | 56 | 65 | 75 | 91 | 106 | 116 | 115 | 110 | 104 | 100 | 97 | 84 |
| Mean Q | 98 | 96 | 94 | 93 | 94 | 95 | 92 | 85 | 77 | 71 | 64 | 59 | 60 | 64 | 69 | 84 | 91 | 103 | 104 | 109 | 108 | 108 | 110 | 109 | 89 |
| Mean D | 94 | 91 | 76 | 73 | 69 | 59 | 60 | 55 | 31 | 17 | 16 | 14 | 25 | 44 | 63 | 65 | 103 | 120 | 138 | 127 | 106 | 89 | 80 | 76 | 70 |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | | July 1989 | | |
|---------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|----|----|----|----|-----|-----|-----|-----|----------------------------|-----|-----|-----|-----------|------|------|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | Mean | |
| 1 D | 88 | 83 | 85 | 87 | 90 | 89 | 80 | 76 | 82 | 90 | 86 | 86 | 87 | 85 | 88 | 112 | 158 | 195 | 175 | 128 | 125 | 89 | 71 | 65 | 100 |
| 2 | 71 | 69 | 66 | 72 | 64 | 64 | 68 | 66 | 56 | 46 | 39 | 35 | 39 | 48 | 57 | 72 | 88 | 101 | 107 | 101 | 91 | 85 | 85 | 80 | 70 |
| 3 Q | 79 | 77 | 78 | 80 | 80 | 83 | 81 | 72 | 61 | 49 | 41 | 44 | 46 | 45 | 56 | 68 | 87 | 106 | 115 | 106 | 94 | 90 | 89 | 88 | 76 |
| 4 Q | 87 | 87 | 87 | 87 | 89 | 90 | 88 | 81 | 69 | 59 | 51 | 51 | 57 | 65 | 83 | 98 | 110 | 114 | 116 | 115 | 112 | 109 | 109 | 108 | 88 |
| 5 D | 108 | 106 | 105 | 104 | 105 | 108 | 98 | 87 | 80 | 78 | 80 | 88 | 85 | 92 | 103 | 100 | 110 | 159 | 132 | 137 | 143 | 134 | 112 | 106 | 107 |
| 6 | 113 | 111 | 108 | 115 | 110 | 120 | 114 | 99 | 89 | 80 | 71 | 72 | 74 | 77 | 85 | 94 | 107 | 100 | 116 | 115 | 119 | 116 | 114 | 112 | 101 |
| 7 | 115 | 109 | 99 | 102 | 108 | 104 | 91 | 95 | 90 | 82 | 67 | 54 | 62 | 73 | 79 | 92 | 99 | 106 | 107 | 113 | 108 | 106 | 106 | 106 | 95 |
| 8 Q | 104 | 101 | 100 | 99 | 100 | 105 | 103 | 95 | 84 | 70 | 62 | 60 | 65 | 77 | 90 | 102 | 105 | 109 | 112 | 110 | 110 | 111 | 109 | 109 | 96 |
| 9 | 115 | 114 | 108 | 98 | 103 | 104 | 102 | 94 | 80 | 70 | 66 | 59 | 65 | 72 | 75 | 89 | 106 | 118 | 118 | 119 | 122 | 122 | 121 | 121 | 98 |
| 10 | 126 | 122 | 120 | 123 | 116 | 117 | 120 | 110 | 92 | 83 | 76 | 75 | 83 | 87 | 93 | 111 | 118 | 132 | 124 | 124 | 116 | 114 | 113 | 98 | 108 |
| 11 Q | 95 | 91 | 93 | 98 | 99 | 100 | 92 | 79 | 65 | 59 | 56 | 65 | 68 | 72 | 75 | 87 | 102 | 116 | 123 | 122 | 114 | 108 | 108 | 104 | 91 |
| 12 | 102 | 102 | 102 | 104 | 106 | 108 | 103 | 94 | 84 | 78 | 82 | 80 | 78 | 74 | 76 | 94 | 102 | 104 | 113 | 118 | 120 | 124 | 126 | 123 | 100 |
| 13 | 118 | 114 | 110 | 110 | 114 | 110 | 103 | 110 | 104 | 95 | 81 | 66 | 56 | 60 | 65 | 86 | 107 | 116 | 112 | 116 | 117 | 112 | 106 | 102 | 100 |
| 14 | 99 | 97 | 98 | 100 | 102 | 105 | 104 | 95 | 85 | 77 | 70 | 64 | 63 | 65 | 64 | 79 | 101 | 117 | 122 | 119 | 117 | 120 | 112 | 109 | 95 |
| 15 | 105 | 104 | 103 | 104 | 108 | 109 | 103 | 100 | 91 | 80 | 74 | 68 | 67 | 81 | 88 | 101 | 102 | 119 | 122 | 130 | 120 | 112 | 106 | 103 | 100 |
| 16 Q | 99 | 100 | 100 | 100 | 104 | 106 | 100 | 94 | 90 | 82 | 80 | 79 | 75 | 74 | 81 | 94 | 105 | 117 | 125 | 119 | 114 | 111 | 110 | 109 | 99 |
| 17 D | 110 | 112 | 130 | 130 | 129 | 123 | 108 | 99 | 103 | 101 | 97 | 79 | 72 | 80 | 92 | 101 | 119 | 143 | 116 | 110 | 115 | 117 | 115 | 109 | 109 |
| 18 D | 107 | 107 | 110 | 98 | 99 | 103 | 108 | 102 | 89 | 74 | 73 | 73 | 74 | 80 | 94 | 79 | 84 | 90 | 105 | 105 | 96 | 97 | 97 | 97 | 93 |
| 19 | 94 | 96 | 97 | 97 | 98 | 96 | 92 | 83 | 75 | 68 | 60 | 55 | 52 | 56 | 67 | 86 | 100 | 110 | 114 | 111 | 111 | 105 | 107 | 107 | 89 |
| 20 | 106 | 102 | 103 | 100 | 99 | 103 | 104 | 96 | 89 | 84 | 84 | 83 | 85 | 90 | 101 | 109 | 117 | 121 | 112 | 117 | 113 | 115 | 117 | 114 | 103 |
| 21 | 108 | 105 | 105 | 106 | 111 | 110 | 107 | 98 | 88 | 73 | 66 | 69 | 78 | 78 | 81 | 95 | 106 | 111 | 114 | 115 | 119 | 115 | 111 | 107 | 99 |
| 22 | 108 | 108 | 106 | 107 | 108 | 108 | 102 | 92 | 88 | 83 | 83 | 80 | 72 | 76 | 77 | 90 | 97 | 102 | 112 | 114 | 115 | 118 | 118 | 121 | 99 |
| 23 | 120 | 119 | 122 | 117 | 122 | 113 | 112 | 103 | 89 | 79 | 73 | 69 | 70 | 73 | 73 | 100 | 98 | 110 | 119 | 121 | 119 | 108 | 106 | 109 | 102 |
| 24 | 123 | 111 | 106 | 104 | 108 | 108 | 107 | 96 | 86 | 76 | 61 | 54 | 71 | 70 | 86 | 90 | 106 | 119 | 122 | 122 | 121 | 116 | 115 | 114 | 100 |
| 25 | 113 | 111 | 115 | 113 | 109 | 105 | 99 | 93 | 84 | 74 | 59 | 55 | 57 | 62 | 67 | 82 | 93 | 101 | 111 | 115 | 117 | 114 | 117 | 114 | 95 |
| 26 D | 104 | 98 | 102 | 104 | 105 | 103 | 101 | 96 | 79 | 65 | 65 | 70 | 80 | 68 | 74 | 78 | 100 | 119 | 125 | 111 | 118 | 111 | 111 | 108 | 96 |
| 27 | 104 | 101 | 98 | 96 | 95 | 96 | 90 | 82 | 79 | 73 | 64 | 60 | 59 | 67 | 88 | 101 | 107 | 115 | 115 | 117 | 117 | 111 | 105 | 109 | 94 |
| 28 | 98 | 98 | 102 | 108 | 105 | 107 | 98 | 84 | 72 | 67 | 73 | 69 | 65 | 76 | 80 | 100 | 115 | 117 | 129 | 107 | 101 | 113 | 107 | 108 | 96 |
| 29 | 95 | 98 | 103 | 98 | 97 | 97 | 96 | 89 | 76 | 69 | 62 | 58 | 53 | 58 | 68 | 88 | 105 | 119 | 115 | 114 | 119 | 115 | 104 | 99 | 91 |
| 30 | 101 | 102 | 98 | 99 | 101 | 97 | 94 | 88 | 75 | 63 | 56 | 57 | 58 | 67 | 71 | 85 | 101 | 112 | 126 | 117 | 114 | 117 | 108 | 95 | 92 |
| 31 | 93 | 98 | 101 | 93 | 93 | 95 | 91 | 78 | 67 | 63 | 66 | 72 | 75 | 79 | 80 | 88 | 103 | 112 | 112 | 113 | 114 | 112 | 113 | 109 | 93 |
| Mean | 103 | 102 | 102 | 102 | 102 | 103 | 99 | 91 | 82 | 74 | 69 | 66 | 67 | 72 | 79 | 92 | 105 | 117 | 119 | 116 | 115 | 111 | 108 | 105 | 96 |
| Mean Q | 93 | 91 | 92 | 93 | 94 | 97 | 93 | 84 | 74 | 64 | 58 | 60 | 62 | 67 | 77 | 90 | 102 | 112 | 118 | 114 | 109 | 106 | 105 | 104 | 90 |
| Mean D | 103 | 101 | 106 | 105 | 106 | 105 | 99 | 92 | 87 | 82 | 80 | 79 | 80 | 81 | 90 | 94 | 114 | 141 | 131 | 118 | 119 | 110 | 101 | 97 | 101 |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | | August 1989 | | | Mean |
|---------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|-------------|-----|-----|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Q | 101 | 100 | 100 | 103 | 101 | 100 | 96 | 93 | 92 | 90 | 87 | 94 | 103 | 111 | 107 | 109 | 112 | 112 | 109 | 116 | 113 | 110 | 112 | 110 | 103 | |
| 2 | 117 | 118 | 111 | 104 | 104 | 104 | 92 | 93 | 93 | 88 | 83 | 84 | 78 | 78 | 79 | 88 | 102 | 113 | 120 | 117 | 116 | 114 | 112 | 115 | 101 | |
| 3 Q | 115 | 113 | 109 | 111 | 109 | 109 | 111 | 110 | 99 | 79 | 71 | 75 | 75 | 78 | 79 | 83 | 95 | 103 | 105 | 112 | 111 | 110 | 110 | 110 | 99 | |
| 4 | 110 | 108 | 107 | 103 | 103 | 108 | 110 | 109 | 101 | 90 | 81 | 85 | 72 | 79 | 97 | 81 | 77 | 111 | 123 | 121 | 117 | 106 | 103 | 110 | 101 | |
| 5 Q | 105 | 103 | 101 | 100 | 102 | 103 | 100 | 91 | 78 | 68 | 61 | 52 | 51 | 58 | 71 | 83 | 99 | 108 | 111 | 112 | 113 | 114 | 113 | 112 | 92 | |
| 6 | 113 | 110 | 110 | 109 | 109 | 110 | 106 | 93 | 73 | 55 | 47 | 53 | 52 | 62 | 73 | 90 | 112 | 126 | 128 | 137 | 121 | 110 | 97 | 97 | 96 | |
| 7 | 102 | 103 | 102 | 99 | 100 | 99 | 99 | 92 | 80 | 75 | 76 | 82 | 78 | 74 | 70 | 79 | 104 | 119 | 124 | 125 | 112 | 109 | 103 | 106 | 96 | |
| 8 | 105 | 104 | 101 | 99 | 99 | 103 | 97 | 84 | 70 | 61 | 60 | 62 | 62 | 71 | 75 | 81 | 93 | 102 | 116 | 116 | 111 | 108 | 108 | 105 | 91 | |
| 9 | 108 | 100 | 97 | 99 | 100 | 100 | 97 | 89 | 78 | 65 | 60 | 58 | 64 | 78 | 87 | 102 | 110 | 115 | 145 | 162 | 130 | 133 | 124 | 121 | 101 | |
| 10 D | 126 | 128 | 130 | 135 | 119 | 118 | 102 | 83 | 34 | 53 | 64 | 50 | 36 | 47 | 35 | 31 | 29 | 65 | 85 | 98 | 101 | 87 | 94 | 81 | 80 | |
| 11 | 71 | 90 | 82 | 88 | 82 | 112 | 86 | 65 | 54 | 43 | 33 | 20 | 29 | 41 | 63 | 58 | 64 | 74 | 96 | 101 | 101 | 95 | 88 | 95 | 72 | |
| 12 | 94 | 80 | 77 | 75 | 80 | 79 | 72 | 65 | 61 | 56 | 55 | 54 | 49 | 52 | 54 | 63 | 81 | 97 | 103 | 106 | 102 | 99 | 96 | 96 | 77 | |
| 13 | 94 | 89 | 91 | 100 | 95 | 90 | 89 | 77 | 65 | 61 | 57 | 56 | 72 | 79 | 91 | 100 | 98 | 99 | 95 | 96 | 102 | 99 | 103 | 96 | 87 | |
| 14 D | 96 | 98 | 111 | 103 | 99 | 94 | 85 | 55 | -3 | 58 | 55 | 33 | 35 | 39 | 61 | 69 | 75 | 77 | 83 | 92 | 88 | 96 | 102 | 81 | 74 | |
| 15 D | 60 | 46 | 48 | 63 | 41 | 30 | 48 | 22 | -1 | -14 | -16 | -18 | -16 | 39 | 55 | 59 | 62 | 79 | 87 | 89 | 104 | 105 | 148 | 142 | 53 | |
| 16 | 75 | 56 | 51 | 63 | 59 | 57 | 55 | 51 | 45 | 29 | 18 | 25 | 27 | 30 | 26 | 44 | 60 | 88 | 103 | 92 | 94 | 100 | 107 | 83 | 60 | |
| 17 D | 80 | 76 | 84 | 75 | 73 | 70 | 68 | 52 | 54 | 43 | 30 | 30 | 31 | 43 | 69 | 105 | 126 | 101 | 92 | 89 | 100 | 99 | 104 | 73 | 74 | |
| 18 | 66 | 47 | 49 | 64 | 67 | 70 | 66 | 61 | 41 | -13 | 17 | 30 | 29 | 34 | 43 | 51 | 67 | 86 | 99 | 117 | 100 | 114 | 97 | 91 | 62 | |
| 19 | 113 | 112 | 104 | 75 | 63 | 68 | 69 | 60 | 43 | 23 | 10 | 6 | 10 | 27 | 43 | 56 | 71 | 79 | 99 | 86 | 84 | 89 | 87 | 89 | 65 | |
| 20 | 89 | 91 | 89 | 94 | 96 | 96 | 86 | 61 | 37 | 7 | 35 | 45 | 49 | 41 | 55 | 66 | 88 | 89 | 92 | 94 | 95 | 96 | 94 | 91 | 74 | |
| 21 | 87 | 85 | 87 | 88 | 85 | 83 | 79 | 69 | 56 | 44 | 38 | 35 | 42 | 61 | 87 | 120 | 131 | 139 | 129 | 92 | 63 | 56 | 56 | 52 | 78 | |
| 22 | 62 | 47 | 63 | 74 | 63 | 76 | 79 | 67 | 44 | 48 | 50 | 40 | 35 | 33 | 37 | 51 | 60 | 74 | 87 | 93 | 93 | 90 | 87 | 85 | 64 | |
| 23 | 87 | 95 | 90 | 91 | 81 | 91 | 86 | 78 | 71 | 71 | 57 | 44 | 37 | 46 | 83 | 100 | 90 | 78 | 66 | 93 | 80 | 87 | 76 | 78 | 77 | |
| 24 Q | 68 | 69 | 86 | 77 | 77 | 77 | 71 | 58 | 43 | 38 | 33 | 35 | 40 | 48 | 65 | 69 | 67 | 78 | 89 | 95 | 98 | 94 | 93 | 91 | 69 | |
| 25 Q | 89 | 89 | 88 | 86 | 89 | 89 | 85 | 79 | 71 | 63 | 54 | 55 | 58 | 68 | 72 | 79 | 87 | 94 | 105 | 110 | 108 | 114 | 106 | 105 | 85 | |
| 26 | 102 | 103 | 103 | 106 | 103 | 105 | 100 | 90 | 87 | 78 | 69 | 70 | 74 | 78 | 76 | 78 | 76 | 89 | 93 | 95 | 97 | 99 | 99 | 98 | 90 | |
| 27 | 98 | 101 | 102 | 96 | 83 | 116 | 101 | 87 | 74 | 62 | 62 | 58 | 60 | 79 | 100 | 108 | 112 | 106 | 130 | 134 | 95 | 108 | 105 | 106 | 95 | |
| 28 | 81 | 75 | 72 | 72 | 74 | 76 | 74 | 67 | 60 | 56 | 60 | 67 | 79 | 93 | 97 | 102 | 110 | 114 | 116 | 116 | 108 | 95 | 60 | 50 | 82 | |
| 29 D | 58 | 19 | -1 | 48 | 76 | 90 | 32 | 29 | 17 | 1 | -9 | 0 | 9 | 31 | 36 | 26 | 47 | 59 | 66 | 68 | 77 | 77 | 78 | 88 | 43 | |
| 30 | 75 | 76 | 82 | 83 | 74 | 75 | 69 | 67 | 58 | 46 | 28 | 30 | 32 | 59 | 51 | 70 | 70 | 102 | 76 | 79 | 83 | 82 | 80 | 80 | 68 | |
| 31 | 78 | 77 | 77 | 77 | 77 | 79 | 74 | 62 | 49 | 41 | 42 | 44 | 50 | 58 | 73 | 77 | 78 | 78 | 79 | 88 | 93 | 84 | 81 | 84 | 71 | |
| Mean | 91 | 87 | 87 | 89 | 87 | 90 | 83 | 73 | 59 | 50 | 47 | 47 | 48 | 59 | 68 | 77 | 86 | 95 | 102 | 105 | 100 | 99 | 98 | 94 | 80 | |
| Mean Q | 96 | 95 | 97 | 95 | 96 | 96 | 93 | 86 | 77 | 68 | 61 | 62 | 65 | 73 | 79 | 85 | 92 | 99 | 104 | 109 | 109 | 108 | 107 | 106 | 90 | |
| Mean D | 84 | 73 | 74 | 85 | 82 | 80 | 67 | 48 | 20 | 28 | 25 | 19 | 19 | 40 | 51 | 58 | 68 | 76 | 83 | 87 | 94 | 93 | 105 | 93 | 65 | |

| Table 5 Hour Date | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | | | September 1989 | | | Mean |
|-------------------------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|----|----|----|----|----|----|-----|-----|-----|----------------------------|-----|-----|-----|----|----------------|--|--|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | | | |
| 1 | 89 | 95 | 90 | 82 | 80 | 84 | 86 | 74 | 59 | 49 | 57 | 60 | 61 | 70 | 65 | 71 | 77 | 74 | 88 | 93 | 96 | 97 | 97 | 97 | 79 | | | | |
| 2 | 98 | 98 | 103 | 93 | 95 | 89 | 84 | 74 | 66 | 55 | 57 | 59 | 69 | 73 | 82 | 73 | 62 | 86 | 93 | 95 | 95 | 96 | 97 | 95 | 83 | | | | |
| 3 | 97 | 94 | 91 | 94 | 94 | 97 | 84 | 83 | 73 | 66 | 63 | 65 | 66 | 68 | 64 | 68 | 74 | 83 | 94 | 99 | 103 | 103 | 98 | 93 | 84 | | | | |
| 4 D | 104 | 103 | 69 | 102 | 87 | 82 | 78 | 78 | 65 | 53 | 57 | 38 | 15 | 21 | 37 | 55 | 70 | 81 | 85 | 92 | 96 | 94 | 100 | 86 | 73 | | | | |
| 5 | 77 | 76 | 84 | 80 | 91 | 74 | 93 | 70 | 44 | 44 | 38 | 23 | 17 | 29 | 41 | 56 | 73 | 82 | 86 | 92 | 96 | 93 | 86 | 87 | 68 | | | | |
| 6 | 86 | 90 | 89 | 88 | 94 | 89 | 91 | 88 | 73 | 63 | 57 | 56 | 50 | 49 | 58 | 66 | 81 | 75 | 87 | 96 | 98 | 100 | 97 | 94 | 80 | | | | |
| 7 | 96 | 96 | 86 | 85 | 87 | 86 | 87 | 75 | 65 | 59 | 58 | 67 | 67 | 56 | 59 | 60 | 85 | 102 | 103 | 104 | 97 | 106 | 110 | 120 | 84 | | | | |
| 8 | 93 | 75 | 80 | 84 | 92 | 105 | 108 | 89 | 64 | 50 | 44 | 43 | 48 | 54 | 66 | 71 | 71 | 87 | 87 | 93 | 94 | 95 | 97 | 102 | 79 | | | | |
| 9 | 85 | 86 | 82 | 82 | 82 | 84 | 77 | 67 | 58 | 50 | 49 | 51 | 51 | 57 | 75 | 86 | 73 | 87 | 96 | 101 | 106 | 94 | 92 | 88 | 77 | | | | |
| 10 | 92 | 98 | 100 | 99 | 90 | 81 | 85 | 73 | 67 | 64 | 62 | 59 | 65 | 72 | 66 | 74 | 93 | 94 | 87 | 97 | 99 | 91 | 94 | 93 | 83 | | | | |
| 11 Q | 91 | 89 | 87 | 88 | 85 | 84 | 82 | 80 | 78 | 72 | 66 | 60 | 65 | 70 | 76 | 80 | 85 | 90 | 94 | 95 | 98 | 103 | 103 | 110 | 85 | | | | |
| 12 | 110 | 104 | 109 | 119 | 116 | 107 | 120 | 109 | 90 | 72 | 57 | 51 | 53 | 51 | 57 | 71 | 82 | 95 | 96 | 98 | 102 | 103 | 105 | 103 | 91 | | | | |
| 13 | 102 | 102 | 101 | 97 | 92 | 92 | 86 | 80 | 74 | 66 | 58 | 55 | 58 | 71 | 83 | 90 | 85 | 92 | 89 | 99 | 95 | 102 | 91 | 92 | 86 | | | | |
| 14 Q | 94 | 93 | 92 | 92 | 90 | 87 | 80 | 72 | 70 | 65 | 58 | 51 | 58 | 67 | 69 | 71 | 74 | 81 | 88 | 93 | 92 | 93 | 93 | 93 | 80 | | | | |
| 15 D | 96 | 102 | 103 | 108 | 117 | 114 | 86 | 84 | 74 | 60 | 56 | 64 | 67 | 64 | 51 | 59 | 85 | 87 | 88 | 77 | 103 | 100 | 46 | 24 | 80 | | | | |
| 16 | 41 | 46 | 34 | 39 | 40 | 32 | 27 | 32 | 20 | 26 | 25 | 31 | 42 | 56 | 63 | 63 | 68 | 68 | 71 | 75 | 85 | 76 | 75 | 73 | 50 | | | | |
| 17 | 69 | 64 | 65 | 63 | 62 | 58 | 52 | 47 | 50 | 48 | 40 | 38 | 50 | 61 | 65 | 67 | 70 | 73 | 80 | 85 | 92 | 92 | 92 | 98 | 66 | | | | |
| 18 D | 105 | 99 | 79 | 78 | 81 | 86 | 91 | 78 | 68 | 65 | 68 | 67 | 72 | 79 | 86 | 79 | 92 | 83 | 116 | 89 | 82 | 52 | -17 | -60 | 72 | | | | |
| 19 D | 9 | -23 | -2 | -4 | 2 | -73 | -33 | -57 | -37 | -29 | -28 | -9 | 3 | 11 | 30 | 48 | 50 | 53 | 50 | 52 | 56 | 57 | 56 | 56 | 10 | | | | |
| 20 Q | 52 | 51 | 50 | 50 | 51 | 55 | 58 | 59 | 56 | 46 | 35 | 33 | 29 | 34 | 38 | 42 | 53 | 57 | 66 | 74 | 72 | 72 | 66 | 67 | 53 | | | | |
| 21 | 64 | 67 | 63 | 69 | 72 | 74 | 76 | 72 | 66 | 55 | 48 | 44 | 40 | 48 | 57 | 65 | 73 | 79 | 83 | 85 | 84 | 85 | 87 | 88 | 69 | | | | |
| 22 | 85 | 82 | 85 | 88 | 87 | 87 | 92 | 81 | 90 | 70 | 37 | 15 | 25 | 20 | 31 | 49 | 71 | 65 | 85 | 80 | 77 | 76 | 81 | 80 | 68 | | | | |
| 23 Q | 84 | 82 | 80 | 80 | 80 | 80 | 75 | 68 | 61 | 55 | 51 | 52 | 55 | 60 | 68 | 76 | 81 | 84 | 85 | 89 | 93 | 97 | 97 | 89 | 76 | | | | |
| 24 | 88 | 84 | 88 | 89 | 88 | 85 | 82 | 81 | 75 | 72 | 69 | 68 | 71 | 74 | 81 | 86 | 90 | 92 | 95 | 99 | 96 | 110 | 101 | 102 | 86 | | | | |
| 25 Q | 92 | 88 | 85 | 84 | 85 | 85 | 83 | 77 | 73 | 65 | 63 | 63 | 66 | 69 | 74 | 79 | 83 | 92 | 95 | 96 | 98 | 97 | 97 | 98 | 83 | | | | |
| 26 D | 97 | 96 | 97 | 97 | 99 | 98 | 107 | 94 | 75 | 71 | 69 | 45 | 12 | 29 | 21 | 59 | 63 | 85 | 29 | -2 | 4 | -9 | 12 | 32 | 58 | | | | |
| 27 | 36 | 31 | 44 | 45 | 48 | 50 | 49 | 44 | 42 | 43 | 44 | 41 | 34 | 34 | 36 | 40 | 48 | 56 | 63 | 67 | 70 | 72 | 73 | 74 | 49 | | | | |
| 28 | 71 | 74 | 85 | 82 | 73 | 71 | 72 | 70 | 68 | 59 | 56 | 53 | 46 | 42 | 43 | 51 | 59 | 63 | 67 | 81 | 82 | 75 | 75 | 75 | 66 | | | | |
| 29 | 77 | 82 | 83 | 83 | 85 | 85 | 84 | 83 | 75 | 62 | 49 | 28 | 32 | 51 | 65 | 71 | 82 | 83 | 82 | 91 | 93 | 94 | 92 | 87 | 75 | | | | |
| 30 | 84 | 90 | 83 | 83 | 86 | 90 | 90 | 86 | 81 | 72 | 62 | 59 | 58 | 60 | 71 | 77 | 82 | 93 | 109 | 99 | 67 | 73 | 85 | 84 | 80 | | | | |
| Mean | 82 | 80 | 80 | 81 | 81 | 77 | 78 | 70 | 63 | 56 | 51 | 48 | 48 | 53 | 59 | 67 | 75 | 81 | 85 | 86 | 87 | 86 | 83 | 81 | 72 | | | | |
| Mean Q | 83 | 81 | 79 | 79 | 78 | 78 | 76 | 71 | 68 | 61 | 55 | 52 | 55 | 60 | 65 | 70 | 75 | 81 | 86 | 89 | 91 | 92 | 91 | 91 | 75 | | | | |
| Mean D | 82 | 75 | 69 | 76 | 77 | 61 | 66 | 55 | 49 | 44 | 44 | 41 | 34 | 41 | 45 | 60 | 72 | 78 | 74 | 62 | 68 | 59 | 39 | 28 | 58 | | | | |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | | | October 1989 | | | |
|---------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|------|------|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|-----|--------------|------|--|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 75 | 71 | 69 | 75 | 83 | 84 | 99 | 96 | 87 | 75 | 56 | 43 | 48 | 55 | 51 | 48 | 64 | 82 | 90 | 94 | 97 | 93 | 93 | 93 | 76 | | |
| 2 | 91 | 90 | 92 | 102 | 114 | 117 | 111 | 111 | 104 | 90 | 72 | 66 | 67 | 75 | 75 | 73 | 85 | 90 | 98 | 101 | 101 | 99 | 99 | 100 | 93 | | |
| 3 | 101 | 100 | 101 | 102 | 103 | 105 | 106 | 98 | 87 | 70 | 58 | 45 | 51 | 45 | 60 | 67 | 81 | 79 | 76 | 90 | 94 | 88 | 77 | 83 | 82 | | |
| 4 Q | 87 | 91 | 89 | 88 | 86 | 89 | 87 | 79 | 68 | 54 | 39 | 34 | 38 | 52 | 66 | 75 | 83 | 90 | 93 | 93 | 97 | 96 | 95 | 100 | 78 | | |
| 5 Q | 100 | 91 | 94 | 93 | 90 | 88 | 87 | 82 | 74 | 64 | 56 | 55 | 60 | 70 | 78 | 77 | 83 | 88 | 91 | 96 | 97 | 102 | 103 | 104 | 84 | | |
| 6 | 98 | 92 | 93 | 92 | 94 | 93 | 94 | 92 | 86 | 76 | 64 | 57 | 61 | 72 | 91 | 83 | 88 | 91 | 88 | 96 | 95 | 96 | 97 | 106 | 87 | | |
| 7 | 93 | 90 | 87 | 95 | 97 | 87 | 84 | 85 | 87 | 82 | 74 | 62 | 59 | 63 | 63 | 64 | 74 | 82 | 93 | 85 | 93 | 90 | 98 | 91 | 82 | | |
| 8 | 93 | 92 | 95 | 97 | 91 | 95 | 91 | 93 | 90 | 81 | 73 | 62 | 62 | 66 | 73 | 74 | 79 | 82 | 89 | 94 | 97 | 97 | 99 | 96 | 86 | | |
| 9 | 116 | 100 | 92 | 94 | 95 | 100 | 95 | 89 | 85 | 82 | 78 | 74 | 64 | 61 | 63 | 70 | 78 | 90 | 100 | 104 | 105 | 108 | 107 | 109 | 90 | | |
| 10 | 98 | 97 | 95 | 99 | 99 | 95 | 94 | 94 | 88 | 81 | 72 | 71 | 63 | 71 | 78 | 92 | 87 | 91 | 98 | 97 | 95 | 97 | 97 | 97 | 89 | | |
| 11 | 101 | 100 | 95 | 100 | 99 | 94 | 92 | 90 | 82 | 74 | 66 | 62 | 64 | 65 | 72 | 77 | 84 | 88 | 95 | 99 | 99 | 101 | 100 | 99 | 87 | | |
| 12 | 99 | 99 | 98 | 102 | 101 | 100 | 96 | 94 | 94 | 86 | 81 | 77 | 74 | 79 | 82 | 86 | 91 | 101 | 98 | 99 | 99 | 100 | 101 | 93 | 93 | | |
| 13 Q | 95 | 95 | 95 | 94 | 90 | 88 | 84 | 81 | 75 | 66 | 58 | 56 | 56 | 62 | 71 | 78 | 82 | 86 | 91 | 94 | 95 | 96 | 97 | 98 | 83 | | |
| 14 Q | 97 | 96 | 95 | 94 | 93 | 91 | 88 | 83 | 77 | 68 | 61 | 61 | 70 | 78 | 84 | 86 | 88 | 91 | 97 | 100 | 102 | 104 | 104 | 104 | 88 | | |
| 15 Q | 105 | 101 | 97 | 94 | 92 | 91 | 90 | 87 | 82 | 76 | 75 | 82 | 84 | 83 | 85 | 85 | 90 | 97 | 106 | 99 | 91 | 100 | 99 | 101 | 91 | | |
| 16 | 102 | 104 | 100 | 97 | 99 | 100 | 100 | 97 | 95 | 96 | 93 | 84 | 83 | 82 | 73 | 66 | 64 | 65 | 62 | 70 | 80 | 86 | 90 | 93 | 87 | | |
| 17 | 94 | 95 | 82 | 88 | 94 | 96 | 94 | 93 | 82 | 59 | 50 | 53 | 48 | 49 | 54 | 60 | 73 | 82 | 86 | 86 | 84 | 84 | 86 | 88 | 78 | | |
| 18 | 86 | 87 | 103 | 98 | 80 | 87 | 88 | 86 | 79 | 68 | 41 | 29 | 36 | 46 | 60 | 62 | 66 | 76 | 76 | 74 | 80 | 77 | 77 | 72 | 72 | | |
| 19 D | 72 | 75 | 66 | 75 | 83 | 78 | 77 | 75 | 72 | 45 | 34 | 23 | 19 | -7 | 18 | 39 | 55 | 67 | 76 | 78 | 79 | 79 | 83 | 82 | 60 | | |
| 20 D | 80 | 76 | 81 | 85 | 88 | 90 | 87 | 67 | 72 | 49 | 21 | -12 | -12 | 6 | 72 | 75 | 60 | 136 | 92 | 105 | 29 | 17 | -3 | -9 | 56 | | |
| 21 D | -30 | -11 | -22 | -19 | 21 | 27 | 31 | 29 | 28 | -91 | -234 | -143 | -46 | -79 | -18 | -20 | -39 | -15 | -4 | -22 | -45 | -38 | -40 | -21 | -33 | | |
| 22 D | -43 | -38 | -30 | -15 | 13 | 26 | 18 | 12 | 5 | -11 | -24 | -18 | -19 | -11 | 0 | 35 | 32 | 40 | 64 | 65 | 39 | 36 | 56 | 49 | 12 | | |
| 23 | 50 | 50 | 54 | 48 | 61 | 58 | 59 | 42 | 44 | 37 | 30 | 23 | 22 | 30 | 39 | 48 | 48 | 54 | 59 | 69 | 77 | 66 | 52 | 58 | 49 | | |
| 24 | 60 | 58 | 57 | 64 | 58 | 65 | 67 | 61 | 53 | 52 | 46 | 49 | 47 | 47 | 48 | 60 | 64 | 71 | 69 | 76 | 74 | 77 | 77 | 69 | 61 | | |
| 25 | 55 | 51 | 48 | 59 | 83 | 71 | 57 | 74 | 49 | 36 | 43 | 37 | 38 | 38 | 41 | 47 | 51 | 57 | 64 | 68 | 71 | 70 | 72 | 75 | 56 | | |
| 26 D | 74 | 74 | 75 | 75 | 81 | 78 | 75 | 72 | 58 | 42 | 35 | 37 | 37 | 44 | 66 | 75 | 72 | 70 | 77 | 62 | 49 | 65 | 61 | 58 | 63 | | |
| 27 | 71 | 58 | 56 | 65 | 68 | 72 | 75 | 68 | 70 | 61 | 45 | 27 | 32 | 39 | 48 | 51 | 62 | 70 | 75 | 57 | 66 | 69 | 81 | 81 | 61 | | |
| 28 | 81 | 80 | 78 | 77 | 77 | 80 | 83 | 82 | 74 | 60 | 48 | 51 | 51 | 53 | 56 | 52 | 53 | 47 | 63 | 66 | 65 | 65 | 66 | 71 | 66 | | |
| 29 | 76 | 81 | 82 | 79 | 78 | 81 | 76 | 74 | 66 | 58 | 51 | 49 | 53 | 53 | 62 | 71 | 78 | 87 | 91 | 74 | 79 | 94 | 97 | 79 | 74 | | |
| 30 | 53 | 57 | 61 | 65 | 67 | 78 | 74 | 75 | 69 | 63 | 51 | 44 | 46 | 56 | 68 | 73 | 78 | 83 | 81 | 79 | 76 | 93 | 98 | 95 | 70 | | |
| 31 | 77 | 74 | 69 | 71 | 75 | 80 | 81 | 80 | 72 | 63 | 54 | 45 | 40 | 35 | 43 | 48 | 53 | 64 | 66 | 81 | 77 | 78 | 79 | 79 | 66 | | |
| Mean | 78 | 77 | 76 | 78 | 82 | 83 | 82 | 79 | 73 | 58 | 44 | 41 | 45 | 48 | 59 | 64 | 68 | 77 | 81 | 82 | 79 | 80 | 81 | 80 | 71 | | |
| Mean Q | 97 | 95 | 94 | 93 | 90 | 89 | 87 | 82 | 75 | 66 | 58 | 58 | 62 | 69 | 77 | 80 | 85 | 90 | 96 | 96 | 96 | 100 | 100 | 101 | 85 | | |
| Mean D | 31 | 35 | 34 | 40 | 57 | 60 | 58 | 51 | 47 | 7 | -34 | -23 | -4 | -9 | 28 | 41 | 36 | 60 | 61 | 58 | 30 | 32 | 31 | 32 | 32 | | |

| Table 5 Hour Date | Horizontal Component | | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | November 1989 | | | Mean |
|-------------------------|----------------------|------|-----|-----|-----|-----|-----|--------------------|-----|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---------------|-----|-----|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | |
| 1 | 79 | 78 | 81 | 80 | 79 | 82 | 86 | 86 | 81 | 69 | 53 | 40 | 38 | 44 | 54 | 62 | 72 | 75 | 80 | 74 | 82 | 83 | 90 | 85 | 72 |
| 2 | 90 | 79 | 74 | 72 | 77 | 77 | 83 | 84 | 91 | 88 | 78 | 70 | 63 | 67 | 74 | 82 | 87 | 93 | 83 | 56 | 66 | 74 | 79 | 83 | 78 |
| 3 | 89 | 72 | 65 | 65 | 75 | 73 | 79 | 75 | 75 | 73 | 52 | 39 | 37 | 22 | 45 | 47 | 49 | 59 | 53 | 50 | 63 | 71 | 70 | 71 | 61 |
| 4 D | 72 | 69 | 68 | 70 | 70 | 77 | 75 | 70 | 40 | 29 | 55 | 54 | 52 | 58 | 63 | 56 | 60 | 58 | 51 | 61 | 59 | 66 | 83 | 100 | 63 |
| 5 | 72 | 68 | 66 | 67 | 64 | 62 | 70 | 74 | 73 | 65 | 46 | 44 | 41 | 45 | 53 | 60 | 68 | 75 | 67 | 55 | 73 | 65 | 66 | 66 | 63 |
| 6 | 67 | 67 | 68 | 67 | 67 | 67 | 70 | 71 | 71 | 67 | 58 | 49 | 38 | 47 | 57 | 62 | 61 | 72 | 75 | 80 | 79 | 81 | 84 | 80 | 67 |
| 7 | 77 | 78 | 73 | 73 | 68 | 72 | 73 | 81 | 79 | 67 | 50 | 45 | 43 | 43 | 46 | 51 | 54 | 64 | 71 | 80 | 81 | 73 | 74 | 76 | 66 |
| 8 | 76 | 84 | 76 | 75 | 76 | 75 | 75 | 75 | 72 | 57 | 51 | 54 | 60 | 72 | 79 | 78 | 84 | 71 | 75 | 67 | 74 | 79 | 81 | 80 | 73 |
| 9 | 82 | 88 | 85 | 87 | 82 | 67 | 67 | 66 | 68 | 64 | 56 | 52 | 53 | 50 | 58 | 65 | 82 | 70 | 55 | 71 | 80 | 75 | 77 | 81 | 70 |
| 10 | 82 | 79 | 77 | 75 | 78 | 74 | 77 | 87 | 87 | 76 | 68 | 62 | 59 | 62 | 66 | 72 | 77 | 79 | 83 | 82 | 83 | 84 | 83 | 84 | 77 |
| 11 | 81 | 84 | 88 | 85 | 89 | 91 | 95 | 96 | 98 | 84 | 71 | 57 | 54 | 61 | 74 | 82 | 94 | 104 | 93 | 67 | 78 | 92 | 83 | 95 | 83 |
| 12 | 83 | 77 | 78 | 77 | 75 | 79 | 84 | 84 | 82 | 70 | 59 | 52 | 50 | 57 | 65 | 70 | 77 | 81 | 85 | 87 | 89 | 86 | 88 | 89 | 76 |
| 13 D | 90 | 111 | 86 | 93 | 70 | 76 | 111 | 78 | 72 | 61 | 50 | 44 | 34 | 32 | 20 | 31 | 51 | 27 | 24 | 29 | 42 | 38 | 15 | 19 | 54 |
| 14 | 26 | 31 | 27 | 34 | 40 | 41 | 46 | 48 | 39 | 33 | 16 | 10 | 10 | 18 | 34 | 47 | 52 | 61 | 63 | 66 | 63 | 61 | 71 | 60 | 42 |
| 15 Q | 57 | 73 | 71 | 69 | 70 | 74 | 78 | 80 | 76 | 66 | 53 | 42 | 39 | 43 | 55 | 59 | 65 | 74 | 81 | 85 | 86 | 88 | 89 | 89 | 69 |
| 16 Q | 88 | 87 | 87 | 87 | 89 | 91 | 92 | 92 | 85 | 77 | 59 | 49 | 49 | 49 | 63 | 71 | 75 | 80 | 83 | 89 | 83 | 82 | 79 | 81 | 78 |
| 17 D | 87 | 79 | 78 | 81 | 85 | 86 | 93 | 93 | 77 | 65 | 69 | 55 | 25 | 37 | 22 | -10 | -2 | 44 | 124 | -17 | -28 | -20 | 144 | -65 | 38 |
| 18 D | -97 | -133 | -50 | -41 | -38 | -23 | 11 | 0 | -11 | -10 | -9 | -12 | -16 | -12 | -10 | -1 | 15 | 25 | 35 | 40 | 43 | 48 | 48 | 50 | -6 |
| 19 | 53 | 56 | 59 | 60 | 62 | 64 | 71 | 69 | 66 | 59 | 49 | 34 | 30 | 32 | 41 | 45 | 52 | 56 | 47 | 72 | 74 | 58 | 66 | 66 | 56 |
| 20 | 62 | 65 | 68 | 76 | 75 | 74 | 77 | 75 | 69 | 59 | 52 | 46 | 38 | 35 | 47 | 59 | 68 | 72 | 71 | 81 | 74 | 68 | 66 | 65 | 64 |
| 21 | 71 | 82 | 70 | 73 | 73 | 81 | 90 | 96 | 85 | 80 | 79 | 74 | 66 | 62 | 71 | 75 | 77 | 79 | 85 | 87 | 89 | 89 | 86 | 83 | 79 |
| 22 Q | 84 | 86 | 88 | 89 | 90 | 91 | 91 | 88 | 86 | 77 | 69 | 67 | 66 | 68 | 76 | 71 | 75 | 67 | 76 | 78 | 77 | 75 | 80 | 79 | 79 |
| 23 Q | 82 | 90 | 82 | 83 | 84 | 85 | 87 | 86 | 85 | 82 | 76 | 71 | 70 | 69 | 75 | 73 | 77 | 85 | 90 | 95 | 97 | 90 | 90 | 90 | 83 |
| 24 | 87 | 86 | 87 | 88 | 95 | 103 | 99 | 98 | 96 | 87 | 82 | 74 | 68 | 69 | 71 | 66 | 62 | 64 | 69 | 74 | 80 | 83 | 85 | 86 | 82 |
| 25 Q | 87 | 86 | 89 | 95 | 99 | 97 | 97 | 96 | 92 | 84 | 76 | 73 | 73 | 76 | 78 | 82 | 87 | 93 | 97 | 100 | 99 | 99 | 99 | 99 | 90 |
| 26 | 99 | 97 | 98 | 98 | 101 | 104 | 105 | 106 | 102 | 95 | 87 | 89 | 89 | 93 | 97 | 101 | 106 | 98 | 86 | 57 | 58 | 64 | 74 | 75 | 91 |
| 27 | 73 | 73 | 75 | 74 | 76 | 74 | 75 | 73 | 72 | 75 | 74 | 73 | 72 | 72 | 68 | 67 | 74 | 82 | 80 | 85 | 92 | 103 | 110 | 94 | 79 |
| 28 D | 55 | 52 | 61 | 61 | 58 | 61 | 59 | 63 | 82 | 87 | 72 | 81 | 85 | 84 | 83 | 84 | 84 | 89 | 91 | 98 | 94 | 90 | 97 | 98 | 78 |
| 29 | 96 | 84 | 79 | 74 | 74 | 76 | 75 | 72 | 81 | 91 | 85 | 79 | 81 | 74 | 76 | 82 | 83 | 78 | 66 | 65 | 71 | 67 | 63 | 69 | 77 |
| 30 | 66 | 56 | 62 | 78 | 71 | 78 | 71 | 73 | 58 | 57 | 55 | 48 | 36 | 46 | 49 | 62 | 74 | 76 | 72 | 74 | 82 | 77 | 72 | 105 | 67 |
| Mean | 71 | 69 | 71 | 72 | 72 | 74 | 79 | 78 | 74 | 68 | 60 | 54 | 50 | 53 | 58 | 62 | 68 | 72 | 74 | 70 | 73 | 73 | 70 | 74 | 68 |
| Mean Q | 80 | 84 | 83 | 85 | 86 | 88 | 89 | 88 | 85 | 77 | 67 | 60 | 59 | 61 | 69 | 71 | 76 | 80 | 85 | 89 | 88 | 87 | 87 | 88 | 80 |
| Mean D | 41 | 36 | 49 | 53 | 49 | 55 | 70 | 61 | 52 | 46 | 47 | 44 | 36 | 40 | 36 | 32 | 42 | 49 | 65 | 42 | 42 | 44 | 20 | 40 | 45 |

| Table 5 | Horizontal Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 1900nT+..(Nanotesla Units) | | | December 1989 | | | Mean |
|---------|----------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|----|----|----|----|----|----|-----|-----|-----|----------------------------|-----|-----|---------------|----|--|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | 79 | 59 | 68 | 70 | 65 | 63 | 67 | 71 | 74 | 65 | 62 | 57 | 50 | 60 | 57 | 69 | 72 | 92 | 85 | 82 | 77 | 56 | 73 | 68 | 68 | | |
| 2 | 45 | 40 | 47 | 52 | 55 | 56 | 66 | 58 | 56 | 51 | 45 | 31 | 34 | 42 | 50 | 55 | 65 | 67 | 69 | 76 | 76 | 75 | 59 | 62 | 56 | | |
| 3 | 71 | 63 | 58 | 57 | 56 | 72 | 79 | 77 | 71 | 62 | 29 | 39 | 40 | 48 | 45 | 40 | 50 | 61 | 69 | 73 | 75 | 62 | 36 | 28 | 57 | | |
| 4 D | 48 | 47 | 54 | 45 | 35 | 48 | 49 | 60 | 64 | 61 | 59 | 62 | 56 | 56 | 56 | 63 | 66 | 68 | 49 | 49 | 46 | 66 | 53 | 43 | 54 | | |
| 5 | 41 | 52 | 39 | 40 | 50 | 58 | 56 | 58 | 62 | 62 | 53 | 45 | 39 | 41 | 51 | 59 | 67 | 71 | 76 | 77 | 81 | 79 | 77 | 78 | 59 | | |
| 6 Q | 80 | 79 | 79 | 79 | 80 | 81 | 84 | 85 | 84 | 77 | 67 | 62 | 61 | 66 | 69 | 71 | 81 | 84 | 85 | 87 | 89 | 91 | 93 | 90 | 79 | | |
| 7 | 87 | 88 | 84 | 83 | 84 | 88 | 91 | 94 | 92 | 88 | 78 | 71 | 68 | 74 | 82 | 84 | 88 | 95 | 92 | 84 | 85 | 79 | 92 | 95 | 85 | | |
| 8 | 93 | 91 | 87 | 88 | 91 | 93 | 94 | 95 | 89 | 85 | 77 | 65 | 65 | 74 | 80 | 82 | 92 | 93 | 96 | 97 | 98 | 99 | 94 | 91 | 88 | | |
| 9 Q | 91 | 90 | 87 | 86 | 88 | 93 | 94 | 94 | 91 | 85 | 76 | 68 | 69 | 74 | 80 | 87 | 88 | 89 | 92 | 98 | 98 | 97 | 97 | 96 | 88 | | |
| 10 Q | 95 | 95 | 94 | 96 | 95 | 95 | 98 | 101 | 101 | 99 | 93 | 85 | 83 | 84 | 88 | 93 | 97 | 98 | 102 | 103 | 103 | 104 | 103 | 103 | 96 | | |
| 11 Q | 103 | 102 | 101 | 104 | 104 | 107 | 109 | 107 | 106 | 101 | 84 | 84 | 84 | 79 | 74 | 73 | 83 | 88 | 91 | 91 | 84 | 80 | 83 | 86 | 92 | | |
| 12 | 87 | 89 | 96 | 100 | 103 | 104 | 104 | 102 | 96 | 95 | 90 | 87 | 84 | 84 | 79 | 81 | 84 | 89 | 89 | 88 | 83 | 68 | 66 | 75 | 88 | | |
| 13 | 81 | 77 | 77 | 85 | 85 | 86 | 90 | 93 | 93 | 92 | 86 | 82 | 78 | 75 | 73 | 75 | 81 | 82 | 78 | 84 | 93 | 97 | 98 | 97 | 85 | | |
| 14 | 95 | 95 | 95 | 96 | 97 | 98 | 100 | 100 | 98 | 92 | 81 | 62 | 71 | 83 | 72 | 55 | 62 | 76 | 65 | 73 | 63 | 64 | 77 | 80 | 81 | | |
| 15 | 76 | 91 | 93 | 82 | 89 | 95 | 86 | 80 | 81 | 82 | 83 | 84 | 79 | 68 | 67 | 73 | 79 | 82 | 87 | 86 | 84 | 85 | 91 | 91 | 83 | | |
| 16 | 93 | 94 | 98 | 94 | 96 | 100 | 104 | 100 | 93 | 86 | 77 | 64 | 62 | 63 | 68 | 57 | 48 | 48 | 56 | 60 | 61 | 64 | 78 | 86 | 77 | | |
| 17 | 84 | 85 | 84 | 86 | 87 | 85 | 85 | 90 | 87 | 82 | 75 | 59 | 59 | 69 | 70 | 60 | 75 | 80 | 83 | 81 | 82 | 84 | 83 | 85 | 79 | | |
| 18 | 86 | 91 | 93 | 88 | 89 | 94 | 101 | 99 | 95 | 89 | 85 | 79 | 84 | 91 | 96 | 95 | 91 | 88 | 89 | 80 | 82 | 87 | 90 | 81 | 89 | | |
| 19 Q | 86 | 87 | 86 | 87 | 84 | 90 | 97 | 93 | 90 | 85 | 81 | 79 | 79 | 79 | 82 | 84 | 87 | 93 | 98 | 95 | 87 | 92 | 96 | 93 | 88 | | |
| 20 | 93 | 91 | 93 | 89 | 89 | 92 | 94 | 97 | 96 | 94 | 90 | 87 | 86 | 87 | 92 | 93 | 94 | 94 | 97 | 104 | 95 | 83 | 91 | 92 | 92 | | |
| 21 | 93 | 100 | 94 | 84 | 90 | 96 | 102 | 102 | 102 | 100 | 96 | 91 | 92 | 93 | 92 | 88 | 93 | 101 | 100 | 96 | 93 | 90 | 97 | 98 | 95 | | |
| 22 | 103 | 91 | 86 | 84 | 90 | 95 | 100 | 104 | 108 | 113 | 108 | 91 | 68 | 34 | 40 | 58 | 43 | 56 | 56 | 48 | 76 | 79 | 86 | 78 | 79 | | |
| 23 | 71 | 70 | 70 | 81 | 80 | 75 | 85 | 84 | 74 | 67 | 62 | 61 | 55 | 55 | 54 | 61 | 68 | 78 | 86 | 91 | 91 | 90 | 86 | 86 | 74 | | |
| 24 | 82 | 79 | 76 | 80 | 81 | 82 | 84 | 87 | 83 | 77 | 79 | 83 | 78 | 75 | 64 | 76 | 55 | 73 | 75 | 73 | 59 | 54 | 60 | 70 | 74 | | |
| 25 | 71 | 69 | 79 | 80 | 75 | 78 | 79 | 77 | 73 | 74 | 75 | 67 | 64 | 62 | 74 | 76 | 77 | 79 | 84 | 87 | 86 | 91 | 99 | 74 | 77 | | |
| 26 | 72 | 76 | 74 | 76 | 81 | 84 | 83 | 84 | 86 | 83 | 69 | 64 | 64 | 64 | 70 | 61 | 72 | 79 | 76 | 64 | 38 | 60 | 60 | 43 | 70 | | |
| 27 | 64 | 67 | 68 | 66 | 70 | 76 | 78 | 81 | 85 | 82 | 74 | 67 | 69 | 53 | 58 | 58 | 75 | 61 | 47 | 41 | 49 | 71 | 78 | 73 | 67 | | |
| 28 | 72 | 68 | 71 | 71 | 74 | 82 | 79 | 78 | 77 | 74 | 66 | 62 | 63 | 66 | 73 | 78 | 85 | 87 | 89 | 90 | 91 | 87 | 87 | 89 | 77 | | |
| 29 D | 76 | 78 | 77 | 80 | 80 | 82 | 89 | 98 | 102 | 92 | 68 | 56 | 65 | 60 | 46 | 58 | 24 | 50 | 70 | 73 | 29 | 30 | 0 | 9 | 62 | | |
| 30 D | 19 | 21 | 21 | 27 | 33 | 40 | 36 | 46 | 50 | 45 | 26 | 21 | 27 | 30 | 22 | 24 | 37 | 38 | 30 | 30 | 23 | 17 | 27 | 37 | 30 | | |
| 31 D | 31 | 61 | 58 | 67 | 53 | 38 | 57 | 43 | 49 | 35 | 40 | 26 | 17 | 26 | 27 | 43 | 51 | 37 | 49 | 63 | 63 | 66 | 69 | 74 | 48 | | |
| Mean | 76 | 77 | 77 | 78 | 78 | 81 | 85 | 85 | 84 | 80 | 72 | 66 | 64 | 65 | 66 | 69 | 72 | 77 | 78 | 78 | 75 | 76 | 77 | 76 | 75 | | |
| Mean Q | 91 | 91 | 89 | 90 | 90 | 93 | 96 | 96 | 94 | 89 | 80 | 76 | 75 | 76 | 79 | 82 | 87 | 90 | 94 | 95 | 92 | 93 | 94 | 94 | 89 | | |
| Mean D | 51 | 53 | 56 | 58 | 53 | 54 | 60 | 64 | 68 | 60 | 51 | 44 | 43 | 46 | 42 | 51 | 50 | 57 | 57 | 59 | 48 | 47 | 44 | 46 | 53 | | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | January 1989 | | | Mean |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|--------------|--|--|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 503 | 475 | 473 | 478 | 479 | 475 | 475 | 474 | 476 | 476 | 473 | 469 | 472 | 468 | 477 | 485 | 502 | 520 | 511 | 520 | 531 | 533 | 541 | 538 | 493 | | | |
| 2 Q | 529 | 516 | 508 | 505 | 507 | 506 | 505 | 504 | 502 | 501 | 486 | 476 | 474 | 469 | 477 | 482 | 482 | 482 | 481 | 486 | 493 | 488 | 487 | 483 | 493 | | | |
| 3 Q | 481 | 480 | 478 | 477 | 476 | 477 | 477 | 477 | 478 | 477 | 470 | 470 | 471 | 469 | 470 | 474 | 479 | 478 | 476 | 478 | 480 | 481 | 481 | 482 | 477 | | | |
| 4 Q | 485 | 487 | 483 | 480 | 478 | 475 | 475 | 474 | 478 | 477 | 474 | 476 | 473 | 472 | 473 | 474 | 474 | 473 | 473 | 473 | 475 | 476 | 477 | 473 | 476 | | | |
| 5 D | 472 | 482 | 487 | 467 | 449 | 451 | 428 | 415 | 429 | 454 | 468 | 469 | 469 | 470 | 470 | 484 | 491 | 510 | 529 | 513 | 507 | 503 | 499 | 497 | 476 | | | |
| 6 Q | 500 | 484 | 484 | 484 | 485 | 481 | 480 | 475 | 478 | 481 | 480 | 475 | 478 | 478 | 477 | 485 | 488 | 487 | 485 | 485 | 484 | 485 | 483 | 485 | 483 | | | |
| 7 | 482 | 482 | 479 | 479 | 478 | 475 | 476 | 477 | 473 | 474 | 473 | 473 | 475 | 473 | 480 | 483 | 485 | 487 | 484 | 479 | 481 | 485 | 481 | 479 | 479 | | | |
| 8 | 481 | 482 | 482 | 482 | 478 | 475 | 474 | 472 | 467 | 467 | 464 | 461 | 454 | 456 | 478 | 491 | 491 | 493 | 504 | 509 | 505 | 506 | 500 | 500 | 482 | | | |
| 9 | 486 | 488 | 488 | 489 | 484 | 484 | 481 | 481 | 481 | 481 | 474 | 467 | 469 | 473 | 483 | 500 | 490 | 491 | 494 | 491 | 494 | 498 | 493 | 485 | 485 | | | |
| 10 | 490 | 492 | 483 | 479 | 481 | 486 | 485 | 483 | 479 | 477 | 475 | 464 | 465 | 467 | 476 | 484 | 492 | 489 | 493 | 489 | 490 | 484 | 484 | 483 | 482 | | | |
| 11 D | 483 | 485 | 482 | 481 | 483 | 485 | 485 | 482 | 483 | 482 | 476 | 469 | 455 | 462 | 467 | 477 | 485 | 483 | 601 | 621 | 605 | 591 | 559 | 552 | 506 | | | |
| 12 | 532 | 509 | 491 | 485 | 489 | 482 | 493 | 498 | 501 | 496 | 493 | 487 | 481 | 475 | 486 | 495 | 498 | 499 | 498 | 499 | 501 | 497 | 490 | 489 | 494 | | | |
| 13 | 487 | 486 | 486 | 487 | 489 | 490 | 491 | 493 | 493 | 493 | 489 | 480 | 474 | 466 | 477 | 490 | 513 | 502 | 505 | 514 | 531 | 524 | 516 | 513 | 495 | | | |
| 14 | 506 | 496 | 494 | 493 | 492 | 491 | 492 | 492 | 491 | 489 | 481 | 478 | 475 | 473 | 478 | 486 | 488 | 488 | 495 | 497 | 513 | 507 | 503 | 504 | 492 | | | |
| 15 D | 484 | 460 | 474 | 483 | 483 | 470 | 469 | 468 | 479 | 477 | 479 | 473 | 474 | 484 | 498 | 510 | 517 | 527 | 513 | 517 | 511 | 552 | 533 | 520 | 494 | | | |
| 16 D | 511 | 499 | 501 | 501 | 482 | 479 | 456 | 450 | 457 | 484 | 496 | 485 | 482 | 469 | 474 | 493 | 500 | 497 | 525 | 545 | 530 | 531 | 497 | 503 | 494 | | | |
| 17 | 498 | 491 | 477 | 473 | 477 | 476 | 481 | 472 | 481 | 487 | 491 | 477 | 497 | 486 | 485 | 499 | 510 | 500 | 501 | 520 | 548 | 527 | 519 | 511 | 495 | | | |
| 18 | 504 | 493 | 492 | 486 | 484 | 480 | 482 | 484 | 483 | 479 | 478 | 472 | 473 | 473 | 481 | 488 | 491 | 492 | 492 | 495 | 497 | 502 | 496 | 497 | 487 | | | |
| 19 Q | 497 | 498 | 498 | 493 | 485 | 482 | 484 | 481 | 485 | 487 | 478 | 476 | 479 | 480 | 481 | 485 | 492 | 493 | 488 | 489 | 490 | 494 | 490 | 493 | 487 | | | |
| 20 D | 495 | 482 | 479 | 481 | 480 | 479 | 478 | 479 | 482 | 483 | 472 | 467 | 460 | 464 | 483 | 508 | 545 | 527 | 557 | 573 | 555 | 566 | 552 | 532 | 503 | | | |
| 21 | 516 | 507 | 495 | 495 | 489 | 492 | 492 | 485 | 493 | 498 | 495 | 491 | 488 | 502 | 507 | 522 | 533 | 517 | 523 | 519 | 525 | 527 | 496 | 496 | 504 | | | |
| 22 | 496 | 485 | 468 | 480 | 487 | 463 | 465 | 484 | 489 | 491 | 491 | 485 | 484 | 499 | 496 | 499 | 503 | 516 | 509 | 513 | 506 | 502 | 491 | 480 | 491 | | | |
| 23 | 478 | 484 | 480 | 474 | 473 | 476 | 480 | 476 | 477 | 480 | 479 | 473 | 478 | 480 | 481 | 483 | 513 | 508 | 500 | 503 | 500 | 488 | 486 | 477 | 484 | | | |
| 24 | 479 | 485 | 481 | 485 | 488 | 491 | 489 | 487 | 487 | 485 | 479 | 471 | 474 | 480 | 483 | 493 | 503 | 502 | 506 | 494 | 487 | 489 | 492 | 481 | 487 | | | |
| 25 | 482 | 482 | 482 | 481 | 481 | 482 | 479 | 479 | 475 | 477 | 475 | 469 | 470 | 465 | 467 | 475 | 487 | 492 | 493 | 494 | 495 | 491 | 486 | 485 | 481 | | | |
| 26 | 480 | 479 | 478 | 480 | 484 | 485 | 484 | 483 | 480 | 481 | 475 | 473 | 470 | 469 | 471 | 483 | 490 | 502 | 491 | 490 | 496 | 492 | 487 | 483 | 483 | | | |
| 27 | 482 | 485 | 484 | 478 | 469 | 479 | 480 | 480 | 481 | 477 | 473 | 466 | 468 | 466 | 482 | 487 | 488 | 491 | 490 | 487 | 486 | 486 | 484 | 482 | 480 | | | |
| 28 | 480 | 479 | 477 | 470 | 479 | 477 | 478 | 481 | 484 | 487 | 480 | 472 | 468 | 467 | 473 | 492 | 492 | 493 | 509 | 499 | 495 | 494 | 492 | 485 | 483 | | | |
| 29 | 484 | 482 | 476 | 476 | 478 | 479 | 481 | 481 | 482 | 486 | 479 | 472 | 467 | 468 | 472 | 493 | 498 | 492 | 492 | 497 | 496 | 491 | 489 | 486 | 483 | | | |
| 30 | 481 | 480 | 474 | 476 | 478 | 477 | 477 | 479 | 481 | 481 | 475 | 465 | 462 | 468 | 468 | 473 | 488 | 495 | 492 | 494 | 497 | 497 | 495 | 482 | 481 | | | |
| 31 | 484 | 482 | 479 | 471 | 473 | 474 | 471 | 473 | 477 | 477 | 469 | 467 | 473 | 474 | 473 | 490 | 504 | 499 | 535 | 536 | 523 | 514 | 519 | 501 | 489 | | | |
| Mean | 492 | 487 | 484 | 482 | 481 | 480 | 479 | 478 | 480 | 482 | 479 | 473 | 473 | 473 | 479 | 489 | 497 | 498 | 505 | 507 | 507 | 506 | 500 | 495 | 488 | | | |
| Mean Q | 498 | 493 | 490 | 488 | 486 | 484 | 484 | 482 | 484 | 485 | 478 | 475 | 475 | 474 | 476 | 480 | 483 | 483 | 481 | 482 | 484 | 485 | 484 | 483 | 483 | | | |
| Mean D | 489 | 482 | 485 | 483 | 475 | 473 | 463 | 459 | 466 | 476 | 478 | 473 | 468 | 470 | 478 | 494 | 508 | 509 | 545 | 554 | 542 | 549 | 528 | 521 | 494 | | | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | February 1989 | | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|---------------|--|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | 499 | 489 | 495 | 492 | 493 | 482 | 478 | 486 | 490 | 491 | 486 | 472 | 472 | 474 | 478 | 481 | 488 | 494 | 494 | 509 | 518 | 528 | 528 | 477 | 491 | | |
| 2 | 493 | 483 | 475 | 476 | 478 | 479 | 484 | 487 | 492 | 489 | 485 | 477 | 470 | 470 | 481 | 483 | 484 | 484 | 479 | 544 | 541 | 520 | 524 | 512 | 491 | | |
| 3 D | 510 | 510 | 499 | 479 | 471 | 464 | 468 | 476 | 480 | 479 | 475 | 475 | 479 | 481 | 484 | 520 | 500 | 541 | 548 | 522 | 517 | 519 | 506 | 518 | 497 | | |
| 4 D | 494 | 487 | 485 | 484 | 487 | 485 | 482 | 485 | 480 | 476 | 465 | 463 | 468 | 482 | 477 | 488 | 503 | 495 | 491 | 494 | 506 | 492 | 504 | 500 | 486 | | |
| 5 | 500 | 496 | 485 | 484 | 491 | 484 | 477 | 475 | 478 | 481 | 479 | 483 | 480 | 476 | 478 | 490 | 502 | 503 | 500 | 491 | 491 | 505 | 512 | 499 | 489 | | |
| 6 D | 489 | 494 | 471 | 480 | 486 | 478 | 470 | 473 | 468 | 473 | 468 | 466 | 466 | 468 | 484 | 501 | 504 | 498 | 498 | 507 | 507 | 493 | 500 | 500 | 485 | | |
| 7 D | 500 | 497 | 491 | 485 | 479 | 476 | 469 | 457 | 465 | 469 | 466 | 464 | 468 | 471 | 494 | 504 | 510 | 518 | 502 | 501 | 500 | 489 | 500 | 498 | 486 | | |
| 8 | 477 | 478 | 481 | 489 | 483 | 483 | 488 | 482 | 482 | 483 | 479 | 471 | 469 | 475 | 470 | 484 | 498 | 500 | 492 | 489 | 489 | 495 | 494 | 489 | 484 | | |
| 9 | 483 | 478 | 490 | 484 | 489 | 481 | 475 | 476 | 483 | 489 | 484 | 474 | 466 | 463 | 469 | 486 | 492 | 494 | 495 | 502 | 496 | 506 | 502 | 503 | 486 | | |
| 10 | 494 | 488 | 487 | 482 | 481 | 483 | 488 | 489 | 489 | 493 | 493 | 479 | 473 | 479 | 483 | 486 | 492 | 493 | 492 | 492 | 491 | 489 | 487 | 485 | 487 | | |
| 11 | 484 | 484 | 484 | 484 | 487 | 487 | 489 | 487 | 490 | 489 | 480 | 463 | 458 | 460 | 458 | 467 | 476 | 487 | 492 | 504 | 521 | 524 | 520 | 507 | 487 | | |
| 12 | 501 | 498 | 495 | 490 | 486 | 485 | 486 | 483 | 485 | 486 | 474 | 464 | 460 | 458 | 463 | 477 | 486 | 500 | 515 | 505 | 515 | 515 | 508 | 500 | 489 | | |
| 13 | 488 | 496 | 478 | 478 | 483 | 481 | 482 | 477 | 483 | 486 | 483 | 473 | 474 | 472 | 471 | 486 | 493 | 499 | 500 | 497 | 498 | 499 | 506 | 499 | 487 | | |
| 14 | 495 | 494 | 500 | 493 | 475 | 478 | 481 | 479 | 472 | 474 | 474 | 470 | 459 | 462 | 473 | 495 | 498 | 495 | 496 | 496 | 497 | 495 | 492 | 490 | 485 | | |
| 15 | 489 | 487 | 485 | 483 | 480 | 478 | 477 | 476 | 481 | 483 | 477 | 469 | 461 | 458 | 459 | 473 | 488 | 507 | 504 | 511 | 501 | 518 | 512 | 513 | 486 | | |
| 16 | 515 | 508 | 502 | 497 | 489 | 483 | 486 | 483 | 481 | 475 | 468 | 467 | 476 | 476 | 480 | 484 | 487 | 487 | 487 | 487 | 489 | 498 | 504 | 495 | 488 | | |
| 17 Q | 491 | 480 | 486 | 483 | 485 | 484 | 483 | 482 | 483 | 483 | 470 | 455 | 453 | 459 | 465 | 473 | 478 | 476 | 478 | 481 | 482 | 483 | 484 | 485 | 478 | | |
| 18 | 484 | 484 | 483 | 482 | 480 | 476 | 477 | 475 | 479 | 483 | 480 | 471 | 468 | 469 | 477 | 480 | 487 | 490 | 492 | 489 | 490 | 488 | 487 | 486 | 482 | | |
| 19 | 485 | 483 | 483 | 483 | 483 | 480 | 479 | 479 | 481 | 477 | 463 | 455 | 463 | 467 | 471 | 480 | 493 | 481 | 483 | 483 | 485 | 482 | 496 | 492 | 479 | | |
| 20 | 481 | 484 | 484 | 473 | 479 | 476 | 477 | 471 | 471 | 467 | 458 | 449 | 458 | 473 | 477 | 495 | 503 | 504 | 515 | 485 | 485 | 488 | 491 | 486 | 480 | | |
| 21 | 487 | 486 | 483 | 484 | 486 | 486 | 485 | 483 | 478 | 477 | 473 | 470 | 470 | 473 | 476 | 483 | 494 | 494 | 487 | 485 | 484 | 483 | 482 | 482 | 482 | | |
| 22 | 481 | 482 | 484 | 483 | 483 | 481 | 482 | 479 | 476 | 464 | 466 | 467 | 476 | 481 | 488 | 490 | 490 | 486 | 484 | 483 | 487 | 488 | 478 | 478 | 481 | | |
| 23 Q | 479 | 481 | 482 | 484 | 485 | 485 | 485 | 486 | 489 | 488 | 477 | 466 | 456 | 462 | 472 | 482 | 485 | 485 | 484 | 482 | 480 | 479 | 484 | 479 | 480 | | |
| 24 | 480 | 478 | 474 | 471 | 472 | 474 | 479 | 478 | 478 | 476 | 469 | 459 | 458 | 469 | 482 | 485 | 488 | 487 | 485 | 484 | 483 | 482 | 479 | 479 | 477 | | |
| 25 Q | 478 | 476 | 476 | 477 | 478 | 480 | 475 | 473 | 475 | 474 | 463 | 450 | 446 | 452 | 464 | 475 | 481 | 482 | 484 | 484 | 483 | 480 | 478 | 477 | 473 | | |
| 26 Q | 476 | 476 | 476 | 477 | 478 | 479 | 479 | 473 | 471 | 468 | 461 | 448 | 440 | 442 | 453 | 463 | 473 | 476 | 479 | 479 | 479 | 478 | 476 | 476 | 470 | | |
| 27 Q | 475 | 477 | 473 | 473 | 475 | 477 | 478 | 477 | 479 | 477 | 466 | 456 | 449 | 455 | 463 | 480 | 487 | 485 | 484 | 484 | 485 | 482 | 479 | 480 | 475 | | |
| 28 | 474 | 473 | 473 | 474 | 475 | 477 | 476 | 476 | 479 | 477 | 474 | 473 | 467 | 461 | 474 | 474 | 482 | 493 | 492 | 490 | 487 | 489 | 485 | 482 | 478 | | |
| Mean | 489 | 487 | 484 | 482 | 482 | 480 | 480 | 479 | 480 | 480 | 473 | 466 | 464 | 467 | 474 | 484 | 491 | 494 | 494 | 495 | 496 | 496 | 496 | 492 | 484 | | |
| Mean Q | 480 | 480 | 479 | 479 | 480 | 481 | 480 | 478 | 479 | 478 | 467 | 455 | 449 | 454 | 463 | 475 | 481 | 481 | 482 | 482 | 482 | 480 | 480 | 479 | 475 | | |
| Mean D | 498 | 495 | 488 | 484 | 483 | 477 | 473 | 475 | 477 | 478 | 472 | 468 | 471 | 475 | 483 | 499 | 501 | 509 | 507 | 507 | 510 | 504 | 508 | 499 | 489 | | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 44000nT+..(Nanotesla Units) | | | | March 1989 | | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|------------|------|--|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Q | 480 | 479 | 476 | 478 | 484 | 479 | 480 | 484 | 489 | 484 | 477 | 468 | 464 | 460 | 472 | 479 | 485 | 483 | 479 | 478 | 480 | 484 | 484 | 487 | 479 | | |
| 2 | 483 | 474 | 470 | 478 | 473 | 464 | 451 | 471 | 479 | 477 | 469 | 459 | 446 | 454 | 469 | 480 | 484 | 493 | 499 | 508 | 495 | 501 | 506 | 489 | 478 | | |
| 3 | 483 | 476 | 475 | 455 | 458 | 445 | 469 | 461 | 459 | 484 | 485 | 465 | 465 | 479 | 494 | 530 | 533 | 550 | 533 | 532 | 509 | 515 | 513 | 513 | 491 | | |
| 4 Q | 505 | 511 | 494 | 491 | 490 | 491 | 489 | 485 | 481 | 475 | 465 | 459 | 453 | 471 | 488 | 496 | 495 | 494 | 490 | 490 | 489 | 488 | 489 | 490 | 486 | | |
| 5 | 491 | 492 | 491 | 486 | 484 | 470 | 467 | 468 | 470 | 480 | 470 | 469 | 473 | 475 | 489 | 504 | 499 | 497 | 499 | 510 | 486 | 489 | 502 | 483 | 485 | | |
| 6 | 483 | 475 | 470 | 480 | 482 | 474 | 476 | 478 | 478 | 474 | 472 | 458 | 458 | 465 | 472 | 515 | 512 | 510 | 504 | 498 | 506 | 490 | 491 | 486 | 484 | | |
| 7 | 485 | 478 | 484 | 483 | 481 | 470 | 470 | 473 | 479 | 480 | 472 | 461 | 454 | 458 | 461 | 479 | 493 | 501 | 496 | 490 | 486 | 486 | 490 | 486 | 479 | | |
| 8 | 482 | 484 | 486 | 487 | 485 | 483 | 480 | 479 | 483 | 477 | 466 | 452 | 442 | 440 | 449 | 464 | 477 | 481 | 475 | 490 | 507 | 536 | 531 | 503 | 481 | | |
| 9 | 487 | 478 | 475 | 490 | 480 | 477 | 468 | 470 | 471 | 465 | 457 | 447 | 436 | 449 | 462 | 478 | 501 | 529 | 519 | 523 | 512 | 519 | 514 | 503 | 484 | | |
| 10 | 494 | 479 | 495 | 492 | 484 | 486 | 474 | 474 | 466 | 456 | 452 | 445 | 443 | 458 | 470 | 487 | 508 | 524 | 511 | 499 | 495 | 498 | 492 | 485 | 482 | | |
| 11 | 487 | 489 | 489 | 489 | 485 | 483 | 485 | 492 | 494 | 491 | 476 | 462 | 465 | 470 | 474 | 484 | 498 | 504 | 508 | 504 | 504 | 505 | 492 | 492 | 488 | | |
| 12 | 473 | 481 | 478 | 491 | 499 | 496 | 496 | 495 | 490 | 481 | 469 | 457 | 457 | 463 | 467 | 474 | 500 | 516 | 531 | 519 | 506 | 502 | 494 | 488 | 488 | | |
| 13 D | 477 | 473 | 440 | 437 | 365 | 387 | 380 | 420 | 435 | 437 | 417 | 439 | 415 | 443 | 508 | 699 | 720 | 786 | 727 | 677 | 637 | 417 | 88 | 268 | 479 | | |
| 14 D | 150 | 627 | 456 | 426 | 358 | 388 | 403 | 405 | 491 | 516 | 508 | 514 | 518 | 517 | 518 | 522 | 525 | 558 | 594 | 601 | 557 | 572 | 511 | 518 | 490 | | |
| 15 | 509 | 526 | 477 | 481 | 472 | 482 | 499 | 502 | 503 | 497 | 491 | 480 | 474 | 485 | 504 | 511 | 536 | 553 | 541 | 524 | 512 | 507 | 499 | 503 | 503 | | |
| 16 D | 503 | 504 | 503 | 498 | 494 | 495 | 490 | 489 | 494 | 493 | 485 | 480 | 482 | 495 | 508 | 517 | 554 | 553 | 514 | 517 | 522 | 509 | 505 | 505 | 505 | | |
| 17 | 494 | 487 | 475 | 459 | 457 | 466 | 462 | 456 | 482 | 497 | 490 | 486 | 489 | 503 | 516 | 526 | 555 | 562 | 540 | 537 | 524 | 508 | 500 | 501 | 499 | | |
| 18 Q | 506 | 506 | 505 | 501 | 504 | 504 | 505 | 507 | 506 | 495 | 486 | 476 | 469 | 474 | 498 | 527 | 550 | 536 | 519 | 509 | 506 | 506 | 503 | 503 | 504 | | |
| 19 | 503 | 503 | 501 | 504 | 503 | 499 | 486 | 472 | 491 | 484 | 462 | 475 | 476 | 501 | 543 | 568 | 580 | 567 | 568 | 561 | 530 | 525 | 515 | 515 | 514 | | |
| 20 Q | 512 | 509 | 507 | 497 | 496 | 496 | 493 | 503 | 505 | 499 | 496 | 488 | 486 | 488 | 492 | 504 | 518 | 521 | 514 | 506 | 503 | 502 | 516 | 503 | 502 | | |
| 21 | 505 | 505 | 487 | 483 | 481 | 472 | 463 | 472 | 480 | 470 | 473 | 483 | 480 | 479 | 493 | 503 | 511 | 509 | 511 | 512 | 503 | 500 | 505 | 505 | 491 | | |
| 22 | 497 | 496 | 494 | 497 | 501 | 494 | 475 | 483 | 494 | 496 | 495 | 480 | 473 | 469 | 478 | 510 | 507 | 522 | 527 | 530 | 552 | 506 | 506 | 473 | 498 | | |
| 23 | 488 | 487 | 494 | 504 | 503 | 501 | 506 | 508 | 504 | 489 | 481 | 469 | 470 | 478 | 506 | 520 | 538 | 594 | 594 | 571 | 548 | 546 | 534 | 528 | 515 | | |
| 24 | 500 | 499 | 485 | 473 | 480 | 484 | 497 | 500 | 496 | 495 | 486 | 475 | 469 | 474 | 486 | 499 | 508 | 512 | 512 | 504 | 500 | 498 | 497 | 496 | 493 | | |
| 25 Q | 497 | 497 | 499 | 500 | 501 | 500 | 498 | 503 | 505 | 496 | 483 | 467 | 459 | 461 | 474 | 491 | 507 | 515 | 548 | 533 | 526 | 514 | 507 | 496 | 499 | | |
| 26 | 493 | 490 | 487 | 489 | 489 | 494 | 496 | 502 | 505 | 494 | 473 | 464 | 457 | 457 | 463 | 481 | 498 | 506 | 512 | 503 | 498 | 498 | 498 | 483 | 489 | | |
| 27 | 485 | 485 | 486 | 488 | 490 | 487 | 485 | 492 | 486 | 472 | 456 | 443 | 439 | 439 | 440 | 467 | 533 | 520 | 521 | 525 | 525 | 531 | 499 | 506 | 488 | | |
| 28 | 493 | 492 | 497 | 500 | 500 | 497 | 492 | 491 | 486 | 479 | 476 | 457 | 459 | 455 | 480 | 490 | 502 | 511 | 524 | 517 | 512 | 518 | 501 | 499 | 493 | | |
| 29 D | 496 | 455 | 437 | 453 | 458 | 462 | 475 | 477 | 479 | 479 | 471 | 454 | 461 | 464 | 481 | 520 | 553 | 552 | 554 | 539 | 509 | 533 | 502 | 505 | 490 | | |
| 30 | 502 | 499 | 485 | 490 | 472 | 463 | 471 | 473 | 473 | 476 | 479 | 482 | 477 | 481 | 493 | 499 | 507 | 509 | 544 | 555 | 515 | 513 | 493 | 491 | 493 | | |
| 31 D | 476 | 476 | 470 | 455 | 461 | 476 | 474 | 483 | 488 | 483 | 481 | 481 | 476 | 494 | 512 | 528 | 539 | 577 | 557 | 559 | 545 | 502 | 490 | 509 | 500 | | |
| Mean | 481 | 494 | 483 | 482 | 476 | 476 | 476 | 480 | 485 | 483 | 475 | 468 | 464 | 471 | 486 | 508 | 523 | 534 | 531 | 526 | 516 | 507 | 489 | 491 | 492 | | |
| Mean Q | 500 | 500 | 496 | 493 | 495 | 494 | 493 | 496 | 497 | 490 | 481 | 472 | 466 | 471 | 485 | 499 | 511 | 510 | 510 | 503 | 501 | 499 | 500 | 496 | 494 | | |
| Mean D | 420 | 507 | 461 | 454 | 427 | 442 | 444 | 455 | 477 | 482 | 472 | 474 | 470 | 483 | 505 | 557 | 578 | 605 | 589 | 579 | 554 | 507 | 419 | 461 | 493 | | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | April 1989 | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|------------|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | 502 | 493 | 471 | 490 | 477 | 470 | 455 | 470 | 468 | 479 | 476 | 475 | 473 | 476 | 498 | 512 | 529 | 533 | 537 | 524 | 508 | 505 | 489 | 482 | 491 | |
| 2 | 491 | 490 | 485 | 477 | 483 | 492 | 492 | 498 | 499 | 491 | 479 | 467 | 465 | 483 | 484 | 512 | 519 | 544 | 531 | 513 | 509 | 507 | 502 | 501 | 496 | |
| 3 | 492 | 481 | 486 | 490 | 486 | 487 | 488 | 495 | 494 | 483 | 463 | 448 | 443 | 455 | 477 | 495 | 498 | 499 | 505 | 519 | 515 | 505 | 501 | 482 | 487 | |
| 4 D | 466 | 472 | 477 | 480 | 470 | 485 | 492 | 489 | 484 | 482 | 466 | 453 | 468 | 467 | 479 | 500 | 535 | 546 | 582 | 557 | 512 | 513 | 496 | 465 | 493 | |
| 5 D | 482 | 432 | 435 | 474 | 481 | 475 | 483 | 477 | 492 | 483 | 480 | 478 | 478 | 485 | 508 | 521 | 521 | 525 | 522 | 522 | 510 | 488 | 495 | 482 | 489 | |
| 6 | 486 | 493 | 477 | 484 | 490 | 493 | 497 | 501 | 502 | 493 | 482 | 467 | 460 | 464 | 477 | 493 | 505 | 503 | 504 | 503 | 507 | 493 | 496 | 490 | 490 | |
| 7 | 492 | 495 | 495 | 495 | 497 | 498 | 492 | 478 | 478 | 478 | 460 | 453 | 463 | 469 | 493 | 520 | 548 | 564 | 567 | 546 | 512 | 508 | 501 | 488 | 500 | |
| 8 | 473 | 483 | 472 | 487 | 499 | 496 | 493 | 486 | 483 | 476 | 463 | 452 | 450 | 464 | 476 | 485 | 510 | 532 | 537 | 518 | 505 | 499 | 494 | 490 | 488 | |
| 9 | 488 | 473 | 481 | 494 | 492 | 490 | 492 | 493 | 496 | 486 | 471 | 458 | 446 | 447 | 460 | 477 | 504 | 525 | 532 | 539 | 499 | 500 | 495 | 494 | 489 | |
| 10 Q | 487 | 488 | 491 | 493 | 496 | 494 | 494 | 496 | 495 | 486 | 470 | 456 | 454 | 451 | 468 | 491 | 502 | 509 | 511 | 508 | 496 | 494 | 499 | 494 | 488 | |
| 11 | 488 | 487 | 488 | 490 | 487 | 482 | 485 | 496 | 498 | 490 | 469 | 444 | 429 | 429 | 440 | 456 | 480 | 498 | 496 | 493 | 493 | 493 | 492 | 492 | 479 | |
| 12 Q | 490 | 486 | 485 | 485 | 485 | 488 | 492 | 498 | 497 | 486 | 464 | 450 | 446 | 451 | 467 | 482 | 489 | 494 | 490 | 486 | 485 | 485 | 486 | 489 | 482 | |
| 13 | 488 | 485 | 484 | 485 | 486 | 487 | 479 | 475 | 484 | 487 | 469 | 463 | 450 | 453 | 464 | 484 | 496 | 509 | 519 | 519 | 505 | 498 | 493 | 490 | 486 | |
| 14 | 483 | 473 | 475 | 478 | 483 | 488 | 491 | 493 | 493 | 482 | 463 | 446 | 434 | 435 | 447 | 462 | 478 | 493 | 503 | 533 | 536 | 526 | 518 | 497 | 484 | |
| 15 | 479 | 471 | 475 | 465 | 442 | 433 | 451 | 469 | 477 | 476 | 476 | 470 | 467 | 466 | 477 | 500 | 511 | 510 | 516 | 512 | 504 | 497 | 495 | 501 | 481 | |
| 16 | 497 | 496 | 496 | 495 | 497 | 496 | 493 | 491 | 491 | 492 | 479 | 461 | 455 | 451 | 468 | 497 | 504 | 502 | 521 | 534 | 509 | 511 | 516 | 487 | 493 | |
| 17 | 471 | 491 | 490 | 496 | 496 | 495 | 495 | 492 | 488 | 485 | 475 | 473 | 474 | 474 | 485 | 499 | 506 | 506 | 504 | 499 | 494 | 504 | 490 | 492 | 491 | |
| 18 | 493 | 493 | 489 | 482 | 477 | 472 | 479 | 485 | 494 | 489 | 480 | 468 | 460 | 461 | 472 | 482 | 488 | 490 | 489 | 486 | 485 | 485 | 488 | 489 | 482 | |
| 19 Q | 489 | 492 | 492 | 493 | 492 | 488 | 483 | 479 | 478 | 474 | 466 | 448 | 439 | 441 | 453 | 475 | 484 | 485 | 489 | 489 | 487 | 485 | 486 | 486 | 478 | |
| 20 | 490 | 489 | 485 | 484 | 476 | 477 | 479 | 469 | 472 | 473 | 467 | 455 | 449 | 452 | 462 | 476 | 481 | 490 | 497 | 499 | 488 | 485 | 484 | 489 | 478 | |
| 21 Q | 494 | 486 | 484 | 483 | 481 | 480 | 480 | 478 | 478 | 472 | 461 | 446 | 437 | 441 | 455 | 468 | 478 | 483 | 485 | 483 | 480 | 480 | 480 | 481 | 474 | |
| 22 Q | 482 | 482 | 488 | 488 | 487 | 486 | 486 | 484 | 483 | 475 | 460 | 443 | 435 | 440 | 457 | 474 | 481 | 489 | 491 | 486 | 484 | 485 | 486 | 488 | 477 | |
| 23 | 495 | 493 | 491 | 489 | 490 | 490 | 489 | 484 | 481 | 472 | 460 | 443 | 433 | 443 | 475 | 495 | 509 | 531 | 552 | 550 | 539 | 502 | 491 | 490 | 491 | |
| 24 | 486 | 487 | 477 | 483 | 488 | 491 | 493 | 491 | 485 | 474 | 461 | 445 | 439 | 451 | 460 | 476 | 486 | 494 | 495 | 491 | 486 | 483 | 484 | 489 | 479 | |
| 25 | 473 | 476 | 481 | 485 | 488 | 489 | 487 | 488 | 483 | 479 | 467 | 457 | 446 | 451 | 461 | 470 | 481 | 492 | 540 | 541 | 542 | 544 | 535 | 525 | 491 | |
| 26 D | 466 | 451 | 492 | 477 | 435 | 421 | 453 | 475 | 466 | 463 | 469 | 477 | 474 | 493 | 504 | 515 | 541 | 550 | 548 | 551 | 510 | 518 | 502 | 483 | 489 | |
| 27 D | 457 | 473 | 447 | 433 | 454 | 465 | 455 | 450 | 468 | 465 | 469 | 467 | 460 | 465 | 483 | 504 | 526 | 546 | 543 | 548 | 546 | 508 | 501 | 467 | 483 | |
| 28 | 450 | 457 | 458 | 482 | 465 | 475 | 478 | 481 | 480 | 474 | 473 | 457 | 456 | 461 | 480 | 506 | 526 | 540 | 542 | 528 | 518 | 498 | 479 | 477 | 485 | |
| 29 | 491 | 485 | 489 | 488 | 485 | 477 | 475 | 473 | 481 | 481 | 475 | 465 | 449 | 449 | 469 | 475 | 492 | 529 | 534 | 544 | 521 | 503 | 493 | 484 | 488 | |
| 30 | 480 | 468 | 462 | 471 | 482 | 488 | 490 | 489 | 482 | 481 | 469 | 460 | 457 | 461 | 471 | 479 | 488 | 498 | 508 | 509 | 498 | 494 | 496 | 494 | 482 | |
| Mean | 483 | 481 | 480 | 483 | 482 | 482 | 483 | 484 | 485 | 480 | 469 | 458 | 453 | 458 | 472 | 489 | 503 | 514 | 520 | 518 | 506 | 500 | 495 | 489 | 486 | |
| Mean Q | 488 | 487 | 488 | 488 | 488 | 487 | 487 | 487 | 486 | 479 | 464 | 449 | 442 | 445 | 460 | 478 | 487 | 492 | 493 | 490 | 486 | 486 | 487 | 488 | 480 | |
| Mean D | 475 | 464 | 464 | 471 | 463 | 463 | 468 | 472 | 476 | 474 | 472 | 470 | 471 | 477 | 494 | 510 | 530 | 540 | 546 | 540 | 517 | 506 | 497 | 476 | 489 | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | May 1989 | | | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|----------|-----|-----|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 487 | 486 | 486 | 488 | 488 | 488 | 484 | 484 | 482 | 475 | 465 | 455 | 448 | 448 | 456 | 466 | 475 | 494 | 507 | 509 | 503 | 501 | 492 | 494 | 482 | |
| 2 | 487 | 480 | 476 | 473 | 470 | 472 | 459 | 455 | 454 | 457 | 460 | 456 | 450 | 452 | 469 | 487 | 491 | 501 | 521 | 532 | 500 | 503 | 497 | 494 | 479 | |
| 3 | 479 | 485 | 482 | 485 | 489 | 482 | 485 | 486 | 485 | 481 | 478 | 474 | 466 | 463 | 470 | 478 | 488 | 496 | 508 | 504 | 501 | 490 | 491 | 478 | 484 | |
| 4 | 486 | 489 | 479 | 483 | 479 | 474 | 469 | 470 | 475 | 471 | 462 | 452 | 449 | 458 | 471 | 485 | 498 | 513 | 508 | 509 | 506 | 498 | 485 | 487 | 482 | |
| 5 D | 460 | 462 | 412 | 449 | 432 | 422 | 429 | 457 | 459 | 453 | 454 | 437 | 435 | 442 | 463 | 485 | 495 | 505 | 506 | 501 | 509 | 504 | 491 | 489 | 465 | |
| 6 | 492 | 488 | 488 | 481 | 486 | 490 | 495 | 495 | 489 | 478 | 466 | 456 | 445 | 449 | 458 | 476 | 492 | 494 | 495 | 497 | 500 | 508 | 499 | 489 | 484 | |
| 7 D | 487 | 488 | 490 | 494 | 495 | 492 | 491 | 489 | 475 | 467 | 457 | 447 | 437 | 451 | 469 | 504 | 536 | 540 | 564 | 562 | 550 | 482 | 484 | 492 | 493 | |
| 8 Q | 491 | 493 | 495 | 500 | 502 | 506 | 503 | 494 | 485 | 475 | 456 | 442 | 436 | 443 | 464 | 491 | 503 | 504 | 505 | 506 | 500 | 495 | 489 | 488 | 486 | |
| 9 Q | 487 | 487 | 489 | 491 | 494 | 498 | 499 | 493 | 485 | 471 | 450 | 430 | 421 | 426 | 447 | 471 | 484 | 492 | 497 | 495 | 489 | 487 | 485 | 484 | 477 | |
| 10 Q | 483 | 481 | 480 | 485 | 491 | 498 | 497 | 486 | 473 | 461 | 449 | 433 | 428 | 435 | 450 | 468 | 482 | 491 | 494 | 495 | 491 | 488 | 488 | 482 | 475 | |
| 11 Q | 482 | 482 | 485 | 487 | 489 | 494 | 494 | 487 | 476 | 459 | 447 | 437 | 433 | 434 | 446 | 461 | 474 | 487 | 489 | 486 | 483 | 482 | 483 | 482 | 473 | |
| 12 | 482 | 483 | 485 | 480 | 480 | 475 | 473 | 472 | 458 | 449 | 447 | 442 | 445 | 451 | 464 | 479 | 502 | 512 | 513 | 507 | 499 | 491 | 489 | 488 | 478 | |
| 13 | 488 | 488 | 488 | 490 | 490 | 495 | 495 | 490 | 483 | 467 | 447 | 432 | 430 | 438 | 450 | 463 | 478 | 490 | 498 | 498 | 491 | 489 | 489 | 487 | 477 | |
| 14 | 485 | 485 | 486 | 485 | 477 | 480 | 485 | 481 | 471 | 455 | 441 | 429 | 435 | 445 | 463 | 485 | 496 | 499 | 495 | 492 | 487 | 487 | 490 | 484 | 476 | |
| 15 | 483 | 484 | 484 | 487 | 491 | 492 | 492 | 484 | 471 | 462 | 447 | 444 | 441 | 452 | 471 | 481 | 489 | 498 | 504 | 507 | 502 | 500 | 494 | 490 | 481 | |
| 16 | 489 | 489 | 486 | 489 | 492 | 495 | 490 | 483 | 478 | 467 | 458 | 448 | 439 | 445 | 459 | 478 | 490 | 493 | 494 | 493 | 486 | 484 | 484 | 485 | 479 | |
| 17 | 486 | 488 | 486 | 484 | 480 | 484 | 483 | 480 | 475 | 464 | 456 | 455 | 454 | 462 | 476 | 488 | 492 | 494 | 493 | 488 | 484 | 482 | 482 | 483 | 479 | |
| 18 | 485 | 487 | 488 | 486 | 486 | 492 | 494 | 482 | 470 | 465 | 455 | 444 | 441 | 447 | 472 | 486 | 494 | 496 | 491 | 485 | 482 | 482 | 484 | 484 | 478 | |
| 19 Q | 486 | 487 | 489 | 487 | 490 | 489 | 488 | 481 | 471 | 465 | 455 | 451 | 451 | 457 | 469 | 476 | 482 | 488 | 493 | 491 | 486 | 480 | 479 | 482 | 478 | |
| 20 | 484 | 480 | 481 | 484 | 486 | 486 | 491 | 491 | 484 | 468 | 452 | 447 | 447 | 464 | 470 | 479 | 490 | 497 | 503 | 503 | 490 | 483 | 481 | 481 | 480 | |
| 21 | 483 | 485 | 486 | 490 | 493 | 496 | 494 | 484 | 474 | 458 | 449 | 448 | 449 | 458 | 473 | 484 | 490 | 495 | 499 | 495 | 488 | 484 | 479 | 479 | 480 | |
| 22 | 480 | 480 | 482 | 484 | 482 | 488 | 491 | 489 | 481 | 477 | 468 | 456 | 450 | 453 | 459 | 482 | 493 | 494 | 491 | 489 | 485 | 492 | 483 | 479 | 480 | |
| 23 D | 480 | 479 | 482 | 485 | 488 | 493 | 496 | 502 | 496 | 485 | 473 | 458 | 447 | 451 | 444 | 475 | 485 | 529 | 563 | 557 | 525 | 506 | 487 | 452 | 489 | |
| 24 D | 448 | 465 | 436 | 445 | 453 | 450 | 432 | 468 | 467 | 477 | 489 | 478 | 479 | 491 | 518 | 532 | 549 | 575 | 572 | 562 | 511 | 512 | 481 | 472 | 490 | |
| 25 D | 452 | 462 | 471 | 468 | 472 | 487 | 495 | 492 | 496 | 489 | 476 | 460 | 451 | 458 | 483 | 501 | 508 | 511 | 519 | 509 | 500 | 495 | 491 | 478 | 484 | |
| 26 | 475 | 469 | 465 | 475 | 486 | 491 | 494 | 491 | 487 | 476 | 461 | 444 | 438 | 446 | 458 | 483 | 512 | 513 | 530 | 518 | 516 | 507 | 501 | 475 | 484 | |
| 27 | 481 | 475 | 461 | 473 | 462 | 452 | 468 | 481 | 486 | 478 | 468 | 460 | 460 | 456 | 462 | 475 | 495 | 502 | 504 | 499 | 504 | 507 | 494 | 485 | 479 | |
| 28 | 485 | 485 | 479 | 478 | 484 | 488 | 493 | 494 | 486 | 477 | 463 | 451 | 448 | 452 | 470 | 481 | 496 | 513 | 521 | 513 | 511 | 498 | 496 | 488 | 485 | |
| 29 | 484 | 479 | 481 | 481 | 486 | 491 | 492 | 489 | 480 | 460 | 440 | 439 | 443 | 453 | 468 | 479 | 489 | 495 | 499 | 509 | 501 | 493 | 487 | 486 | 479 | |
| 30 | 482 | 466 | 472 | 468 | 471 | 485 | 486 | 478 | 463 | 451 | 441 | 430 | 433 | 440 | 455 | 471 | 479 | 485 | 493 | 496 | 498 | 499 | 491 | 489 | 472 | |
| 31 | 484 | 470 | 478 | 482 | 487 | 496 | 495 | 489 | 483 | 473 | 463 | 454 | 445 | 452 | 474 | 491 | 491 | 494 | 498 | 503 | 498 | 490 | 486 | 481 | 482 | |
| Mean | 481 | 481 | 478 | 481 | 482 | 485 | 485 | 484 | 477 | 468 | 458 | 448 | 444 | 451 | 465 | 482 | 494 | 503 | 509 | 507 | 499 | 494 | 488 | 483 | 480 | |
| Mean Q | 486 | 486 | 488 | 490 | 493 | 497 | 496 | 488 | 478 | 466 | 451 | 439 | 434 | 439 | 455 | 473 | 485 | 492 | 496 | 495 | 490 | 486 | 485 | 484 | 478 | |
| Mean D | 465 | 471 | 458 | 468 | 468 | 469 | 469 | 482 | 479 | 474 | 470 | 456 | 450 | 459 | 475 | 499 | 515 | 532 | 545 | 538 | 519 | 500 | 487 | 477 | 484 | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 44000nT+..(Nanotesla Units) | | | | June 1989 | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----------|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 482 | 478 | 479 | 480 | 477 | 485 | 488 | 482 | 475 | 462 | 451 | 440 | 435 | 441 | 458 | 473 | 484 | 495 | 503 | 506 | 500 | 496 | 495 | 482 | 477 | |
| 2 | 484 | 483 | 484 | 484 | 486 | 495 | 492 | 487 | 485 | 472 | 461 | 438 | 437 | 464 | 469 | 479 | 494 | 502 | 514 | 516 | 498 | 490 | 492 | 491 | 483 | |
| 3 | 484 | 475 | 465 | 472 | 483 | 496 | 499 | 493 | 477 | 464 | 453 | 442 | 440 | 450 | 464 | 493 | 511 | 521 | 535 | 529 | 511 | 503 | 490 | 490 | 485 | |
| 4 | 470 | 478 | 474 | 454 | 458 | 462 | 481 | 487 | 484 | 470 | 452 | 439 | 444 | 452 | 463 | 478 | 492 | 508 | 512 | 512 | 507 | 493 | 486 | 485 | 477 | |
| 5 | 486 | 486 | 489 | 495 | 496 | 497 | 500 | 493 | 482 | 464 | 448 | 428 | 421 | 423 | 446 | 472 | 490 | 501 | 504 | 496 | 489 | 490 | 488 | 481 | 478 | |
| 6 | 481 | 481 | 475 | 477 | 479 | 486 | 495 | 497 | 484 | 466 | 447 | 432 | 429 | 440 | 458 | 476 | 488 | 496 | 498 | 496 | 489 | 482 | 479 | 471 | 475 | |
| 7 D | 468 | 465 | 444 | 457 | 468 | 473 | 467 | 474 | 469 | 459 | 445 | 441 | 452 | 459 | 475 | 488 | 500 | 509 | 514 | 511 | 500 | 495 | 492 | 475 | 475 | |
| 8 | 460 | 464 | 477 | 485 | 487 | 485 | 491 | 495 | 490 | 478 | 461 | 441 | 430 | 435 | 454 | 470 | 482 | 492 | 494 | 493 | 486 | 498 | 496 | 486 | 476 | |
| 9 D | 473 | 483 | 477 | 468 | 480 | 490 | 503 | 503 | 500 | 494 | 486 | 473 | 467 | 472 | 485 | 497 | 507 | 514 | 523 | 538 | 543 | 534 | 519 | 521 | 498 | |
| 10 D | 502 | 483 | 463 | 440 | 433 | 437 | 420 | 406 | 431 | 429 | 431 | 431 | 453 | 491 | 548 | 599 | 637 | 670 | 636 | 598 | 559 | 536 | 518 | 501 | 502 | |
| 11 | 478 | 494 | 496 | 487 | 493 | 503 | 495 | 499 | 496 | 485 | 476 | 465 | 457 | 458 | 469 | 486 | 500 | 519 | 528 | 537 | 527 | 515 | 505 | 497 | 494 | |
| 12 | 496 | 485 | 487 | 493 | 496 | 498 | 499 | 491 | 480 | 476 | 468 | 456 | 451 | 458 | 473 | 493 | 503 | 505 | 509 | 510 | 505 | 502 | 499 | 497 | 489 | |
| 13 | 494 | 492 | 490 | 490 | 494 | 496 | 497 | 495 | 499 | 491 | 478 | 463 | 453 | 458 | 477 | 484 | 490 | 499 | 501 | 508 | 519 | 507 | 495 | 491 | 490 | |
| 14 D | 490 | 488 | 484 | 470 | 478 | 473 | 476 | 478 | 472 | 465 | 459 | 455 | 458 | 468 | 486 | 517 | 532 | 552 | 563 | 550 | 542 | 523 | 502 | 500 | 495 | |
| 15 D | 502 | 497 | 465 | 478 | 496 | 501 | 509 | 500 | 482 | 464 | 465 | 460 | 456 | 477 | 501 | 510 | 507 | 533 | 560 | 554 | 533 | 523 | 509 | 496 | 499 | |
| 16 | 500 | 499 | 495 | 484 | 492 | 496 | 504 | 508 | 506 | 491 | 484 | 469 | 460 | 466 | 482 | 491 | 504 | 511 | 515 | 512 | 498 | 494 | 492 | 494 | 494 | |
| 17 Q | 495 | 496 | 496 | 496 | 498 | 500 | 502 | 498 | 494 | 483 | 465 | 452 | 447 | 453 | 464 | 479 | 494 | 506 | 508 | 506 | 499 | 493 | 488 | 489 | 488 | |
| 18 Q | 488 | 489 | 495 | 496 | 498 | 502 | 506 | 499 | 490 | 483 | 469 | 444 | 435 | 440 | 453 | 473 | 486 | 497 | 499 | 499 | 490 | 486 | 485 | 484 | 483 | |
| 19 | 484 | 487 | 490 | 493 | 491 | 497 | 498 | 494 | 489 | 487 | 480 | 461 | 452 | 456 | 468 | 486 | 498 | 508 | 516 | 517 | 509 | 494 | 488 | 493 | 489 | |
| 20 | 489 | 490 | 490 | 499 | 501 | 509 | 505 | 501 | 483 | 468 | 455 | 438 | 444 | 463 | 487 | 503 | 512 | 520 | 523 | 527 | 533 | 507 | 491 | 487 | 493 | |
| 21 Q | 489 | 493 | 495 | 498 | 500 | 503 | 504 | 498 | 490 | 472 | 453 | 444 | 443 | 448 | 461 | 479 | 494 | 501 | 506 | 502 | 495 | 490 | 485 | 485 | 485 | |
| 22 Q | 485 | 486 | 489 | 492 | 494 | 496 | 499 | 495 | 488 | 481 | 464 | 450 | 440 | 444 | 455 | 467 | 476 | 486 | 497 | 499 | 494 | 488 | 482 | 481 | 480 | |
| 23 Q | 477 | 479 | 482 | 486 | 490 | 495 | 495 | 497 | 490 | 477 | 466 | 462 | 457 | 460 | 467 | 484 | 498 | 504 | 508 | 506 | 500 | 494 | 487 | 482 | 485 | |
| 24 | 481 | 481 | 486 | 489 | 492 | 494 | 496 | 492 | 485 | 476 | 471 | 456 | 451 | 465 | 465 | 477 | 483 | 492 | 498 | 499 | 497 | 494 | 488 | 486 | 483 | |
| 25 | 483 | 481 | 482 | 485 | 485 | 481 | 476 | 480 | 474 | 470 | 461 | 446 | 438 | 440 | 451 | 464 | 476 | 484 | 491 | 492 | 494 | 492 | 493 | 485 | 475 | |
| 26 | 481 | 482 | 482 | 484 | 488 | 488 | 491 | 490 | 487 | 480 | 466 | 452 | 450 | 451 | 461 | 472 | 485 | 502 | 511 | 507 | 492 | 488 | 489 | 488 | 482 | |
| 27 | 478 | 481 | 482 | 482 | 484 | 487 | 491 | 485 | 478 | 469 | 457 | 442 | 439 | 446 | 454 | 470 | 481 | 487 | 488 | 489 | 489 | 490 | 489 | 481 | 476 | |
| 28 | 481 | 477 | 473 | 473 | 477 | 486 | 487 | 481 | 475 | 465 | 452 | 439 | 429 | 432 | 450 | 476 | 488 | 492 | 494 | 490 | 485 | 483 | 487 | 488 | 473 | |
| 29 | 484 | 481 | 481 | 468 | 456 | 466 | 474 | 481 | 482 | 479 | 468 | 467 | 473 | 481 | 497 | 519 | 527 | 526 | 514 | 508 | 505 | 497 | 490 | 489 | 488 | |
| 30 | 494 | 490 | 483 | 484 | 466 | 464 | 471 | 470 | 470 | 471 | 474 | 468 | 461 | 469 | 486 | 492 | 498 | 504 | 501 | 498 | 493 | 491 | 489 | 492 | 482 | |
| Mean | 485 | 484 | 482 | 481 | 484 | 488 | 490 | 488 | 483 | 473 | 462 | 450 | 447 | 455 | 471 | 488 | 501 | 511 | 515 | 514 | 506 | 499 | 493 | 489 | 485 | |
| Mean Q | 487 | 489 | 491 | 494 | 496 | 499 | 501 | 497 | 490 | 479 | 463 | 450 | 444 | 449 | 460 | 476 | 490 | 499 | 504 | 502 | 496 | 490 | 485 | 484 | 484 | |
| Mean D | 487 | 483 | 467 | 463 | 471 | 475 | 475 | 472 | 471 | 462 | 457 | 452 | 457 | 473 | 499 | 522 | 537 | 556 | 559 | 550 | 535 | 522 | 508 | 499 | 494 | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+...(Nanotesla Units) | | | | July 1989 | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|-----|-----------|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 D | 493 | 495 | 495 | 491 | 490 | 494 | 494 | 484 | 469 | 457 | 447 | 441 | 442 | 446 | 451 | 466 | 474 | 502 | 530 | 533 | 519 | 515 | 501 | 499 | 485 | |
| 2 | 494 | 500 | 496 | 495 | 500 | 497 | 497 | 493 | 493 | 489 | 479 | 467 | 464 | 468 | 476 | 491 | 499 | 508 | 511 | 506 | 496 | 490 | 487 | 488 | 491 | |
| 3 Q | 489 | 492 | 495 | 496 | 499 | 502 | 505 | 503 | 499 | 488 | 473 | 461 | 456 | 456 | 465 | 481 | 491 | 500 | 506 | 507 | 497 | 486 | 486 | 486 | 488 | |
| 4 Q | 488 | 489 | 489 | 491 | 492 | 494 | 498 | 497 | 494 | 481 | 467 | 459 | 450 | 445 | 461 | 476 | 485 | 490 | 494 | 491 | 487 | 481 | 478 | 479 | 482 | |
| 5 D | 480 | 483 | 485 | 487 | 492 | 494 | 497 | 492 | 485 | 473 | 462 | 451 | 443 | 451 | 460 | 477 | 485 | 494 | 507 | 502 | 505 | 490 | 478 | 479 | 481 | |
| 6 | 481 | 481 | 481 | 480 | 478 | 477 | 480 | 485 | 475 | 461 | 446 | 434 | 436 | 449 | 469 | 492 | 499 | 501 | 510 | 513 | 496 | 488 | 483 | 481 | 478 | |
| 7 | 479 | 480 | 482 | 485 | 491 | 491 | 497 | 493 | 490 | 484 | 469 | 456 | 449 | 454 | 466 | 481 | 492 | 501 | 500 | 495 | 489 | 483 | 481 | 480 | 482 | |
| 8 Q | 479 | 480 | 482 | 486 | 491 | 496 | 498 | 492 | 485 | 472 | 454 | 442 | 430 | 432 | 453 | 477 | 490 | 495 | 495 | 491 | 486 | 484 | 481 | 479 | 477 | |
| 9 | 477 | 479 | 477 | 478 | 488 | 494 | 495 | 493 | 484 | 468 | 452 | 442 | 432 | 440 | 452 | 462 | 472 | 483 | 493 | 492 | 481 | 478 | 479 | 479 | 474 | |
| 10 | 476 | 477 | 476 | 478 | 478 | 476 | 484 | 486 | 481 | 470 | 467 | 456 | 447 | 446 | 459 | 474 | 490 | 503 | 511 | 511 | 499 | 495 | 486 | 479 | 479 | |
| 11 Q | 480 | 482 | 481 | 480 | 482 | 486 | 490 | 489 | 485 | 476 | 465 | 448 | 434 | 436 | 448 | 464 | 475 | 487 | 495 | 498 | 493 | 486 | 482 | 481 | 476 | |
| 12 | 481 | 480 | 479 | 478 | 481 | 485 | 491 | 491 | 486 | 476 | 463 | 447 | 435 | 433 | 443 | 457 | 472 | 480 | 484 | 483 | 480 | 477 | 475 | 477 | 472 | |
| 13 | 479 | 477 | 478 | 476 | 477 | 485 | 491 | 486 | 486 | 476 | 462 | 446 | 440 | 436 | 446 | 465 | 485 | 497 | 500 | 494 | 485 | 485 | 485 | 482 | 476 | |
| 14 | 483 | 481 | 481 | 481 | 483 | 486 | 488 | 489 | 484 | 472 | 458 | 444 | 440 | 448 | 456 | 466 | 476 | 486 | 491 | 490 | 487 | 484 | 478 | 477 | 475 | |
| 15 | 481 | 482 | 482 | 482 | 484 | 487 | 484 | 478 | 474 | 467 | 459 | 446 | 447 | 449 | 461 | 477 | 487 | 497 | 500 | 496 | 490 | 487 | 481 | 481 | 477 | |
| 16 Q | 482 | 482 | 481 | 483 | 483 | 489 | 488 | 483 | 481 | 475 | 460 | 447 | 438 | 444 | 456 | 470 | 477 | 486 | 489 | 486 | 480 | 477 | 477 | 478 | 475 | |
| 17 D | 480 | 480 | 478 | 481 | 483 | 483 | 484 | 478 | 478 | 472 | 459 | 443 | 444 | 454 | 458 | 473 | 489 | 500 | 505 | 496 | 484 | 479 | 482 | 485 | 477 | |
| 18 D | 485 | 473 | 469 | 474 | 464 | 456 | 464 | 470 | 470 | 472 | 466 | 463 | 460 | 466 | 480 | 496 | 510 | 520 | 524 | 516 | 508 | 491 | 486 | 484 | 482 | |
| 19 | 483 | 482 | 483 | 483 | 486 | 490 | 495 | 497 | 491 | 482 | 471 | 460 | 451 | 450 | 467 | 482 | 491 | 498 | 496 | 484 | 478 | 478 | 476 | 477 | 480 | |
| 20 | 478 | 481 | 483 | 485 | 487 | 491 | 488 | 486 | 480 | 469 | 449 | 438 | 431 | 435 | 454 | 473 | 487 | 491 | 493 | 488 | 480 | 476 | 475 | 478 | 474 | |
| 21 | 477 | 478 | 479 | 482 | 487 | 488 | 490 | 488 | 478 | 463 | 446 | 445 | 445 | 455 | 466 | 478 | 491 | 496 | 493 | 486 | 481 | 480 | 478 | 478 | 476 | |
| 22 | 477 | 478 | 480 | 482 | 486 | 488 | 487 | 482 | 480 | 479 | 471 | 455 | 444 | 442 | 459 | 473 | 485 | 493 | 493 | 490 | 486 | 481 | 476 | 475 | 477 | |
| 23 | 479 | 470 | 471 | 478 | 480 | 492 | 488 | 483 | 481 | 469 | 460 | 438 | 425 | 421 | 437 | 455 | 478 | 488 | 496 | 495 | 490 | 484 | 480 | 478 | 472 | |
| 24 | 474 | 466 | 472 | 473 | 476 | 478 | 476 | 479 | 480 | 473 | 459 | 447 | 434 | 434 | 441 | 458 | 475 | 484 | 493 | 497 | 493 | 486 | 484 | 482 | 471 | |
| 25 | 479 | 476 | 473 | 473 | 479 | 484 | 486 | 489 | 487 | 472 | 458 | 451 | 443 | 442 | 452 | 462 | 473 | 485 | 493 | 494 | 490 | 483 | 485 | 480 | 475 | |
| 26 D | 476 | 474 | 472 | 472 | 471 | 479 | 481 | 480 | 479 | 470 | 466 | 450 | 437 | 449 | 461 | 458 | 466 | 479 | 500 | 508 | 496 | 490 | 485 | 487 | 474 | |
| 27 | 478 | 476 | 476 | 476 | 475 | 490 | 489 | 482 | 480 | 475 | 465 | 455 | 445 | 443 | 448 | 468 | 487 | 496 | 496 | 495 | 484 | 480 | 485 | 482 | 476 | |
| 28 | 477 | 478 | 472 | 462 | 468 | 480 | 483 | 483 | 480 | 474 | 460 | 449 | 441 | 439 | 448 | 467 | 484 | 490 | 496 | 499 | 486 | 481 | 486 | 487 | 474 | |
| 29 | 476 | 474 | 471 | 478 | 481 | 488 | 489 | 486 | 479 | 465 | 448 | 433 | 431 | 433 | 444 | 463 | 478 | 493 | 505 | 494 | 489 | 488 | 477 | 478 | 473 | |
| 30 | 477 | 478 | 480 | 481 | 480 | 488 | 490 | 484 | 479 | 467 | 454 | 441 | 438 | 443 | 456 | 472 | 479 | 487 | 490 | 493 | 484 | 480 | 475 | 480 | 474 | |
| 31 | 480 | 480 | 480 | 479 | 481 | 485 | 485 | 484 | 475 | 462 | 446 | 435 | 436 | 442 | 458 | 472 | 483 | 487 | 487 | 485 | 479 | 474 | 472 | 476 | 472 | |
| Mean | 481 | 480 | 480 | 481 | 483 | 487 | 489 | 487 | 482 | 473 | 460 | 448 | 442 | 445 | 456 | 472 | 484 | 493 | 499 | 497 | 490 | 484 | 481 | 481 | 477 | |
| Mean Q | 484 | 485 | 486 | 487 | 489 | 493 | 496 | 493 | 489 | 478 | 464 | 451 | 442 | 443 | 457 | 474 | 484 | 492 | 496 | 495 | 489 | 483 | 481 | 481 | 480 | |
| Mean D | 483 | 481 | 480 | 481 | 480 | 481 | 484 | 481 | 476 | 469 | 460 | 450 | 445 | 453 | 462 | 474 | 485 | 499 | 513 | 511 | 502 | 493 | 486 | 487 | 480 | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | August 1989 | | | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|-------------|------|--|--|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 Q | 480 | 480 | 480 | 481 | 484 | 489 | 486 | 477 | 466 | 454 | 445 | 434 | 437 | 445 | 458 | 472 | 482 | 490 | 491 | 483 | 480 | 476 | 475 | 478 | 472 | 472 | | |
| 2 | 481 | 472 | 474 | 475 | 479 | 485 | 484 | 475 | 469 | 454 | 440 | 427 | 426 | 434 | 451 | 470 | 481 | 485 | 486 | 483 | 480 | 477 | 475 | 473 | 468 | 468 | | |
| 3 Q | 474 | 474 | 471 | 475 | 477 | 478 | 475 | 478 | 479 | 473 | 457 | 440 | 429 | 425 | 434 | 451 | 475 | 488 | 495 | 492 | 480 | 475 | 472 | 473 | 468 | 468 | | |
| 4 | 472 | 471 | 474 | 478 | 483 | 487 | 490 | 488 | 481 | 465 | 451 | 438 | 432 | 424 | 436 | 462 | 480 | 492 | 498 | 496 | 494 | 486 | 475 | 473 | 472 | 472 | | |
| 5 Q | 472 | 473 | 476 | 478 | 481 | 482 | 482 | 481 | 478 | 467 | 448 | 430 | 426 | 428 | 438 | 461 | 478 | 487 | 489 | 484 | 479 | 474 | 472 | 471 | 468 | 468 | | |
| 6 | 469 | 470 | 472 | 476 | 480 | 487 | 490 | 492 | 485 | 464 | 441 | 423 | 415 | 421 | 434 | 454 | 478 | 495 | 505 | 504 | 497 | 487 | 486 | 481 | 471 | 471 | | |
| 7 | 475 | 473 | 476 | 480 | 482 | 486 | 490 | 486 | 477 | 461 | 445 | 427 | 422 | 433 | 449 | 468 | 482 | 496 | 502 | 498 | 497 | 486 | 482 | 480 | 473 | 473 | | |
| 8 | 476 | 474 | 475 | 477 | 477 | 484 | 487 | 484 | 478 | 466 | 450 | 435 | 429 | 429 | 446 | 463 | 478 | 487 | 488 | 486 | 484 | 481 | 478 | 477 | 470 | 470 | | |
| 9 | 476 | 473 | 474 | 476 | 481 | 488 | 490 | 483 | 474 | 462 | 448 | 430 | 425 | 430 | 443 | 458 | 472 | 480 | 482 | 484 | 488 | 480 | 481 | 483 | 469 | 469 | | |
| 10 D | 478 | 466 | 459 | 455 | 462 | 462 | 456 | 458 | 472 | 452 | 448 | 433 | 440 | 450 | 470 | 505 | 524 | 514 | 503 | 494 | 503 | 520 | 488 | 483 | 475 | 475 | | |
| 11 | 474 | 459 | 460 | 445 | 434 | 454 | 473 | 484 | 479 | 469 | 458 | 450 | 447 | 454 | 466 | 477 | 492 | 496 | 502 | 498 | 493 | 489 | 490 | 486 | 472 | 472 | | |
| 12 | 491 | 484 | 480 | 481 | 481 | 490 | 493 | 493 | 483 | 476 | 472 | 451 | 441 | 440 | 444 | 473 | 487 | 492 | 492 | 487 | 485 | 486 | 490 | 491 | 478 | 478 | | |
| 13 | 483 | 480 | 472 | 471 | 478 | 478 | 478 | 477 | 475 | 470 | 455 | 443 | 441 | 445 | 458 | 473 | 481 | 486 | 485 | 481 | 479 | 481 | 483 | 488 | 473 | 473 | | |
| 14 D | 487 | 482 | 471 | 475 | 474 | 475 | 468 | 467 | 491 | 459 | 481 | 460 | 462 | 481 | 514 | 526 | 528 | 526 | 519 | 513 | 516 | 520 | 478 | 495 | 490 | 490 | | |
| 15 D | 490 | 423 | 421 | 402 | 381 | 420 | 424 | 447 | 457 | 474 | 476 | 465 | 468 | 475 | 460 | 489 | 507 | 504 | 502 | 502 | 496 | 491 | 475 | 403 | 461 | 461 | | |
| 16 | 430 | 446 | 455 | 473 | 487 | 499 | 501 | 504 | 506 | 497 | 485 | 466 | 456 | 467 | 482 | 499 | 512 | 520 | 522 | 504 | 504 | 490 | 473 | 479 | 486 | 486 | | |
| 17 D | 488 | 485 | 473 | 491 | 493 | 493 | 498 | 502 | 491 | 483 | 471 | 455 | 458 | 470 | 510 | 553 | 583 | 592 | 592 | 550 | 527 | 507 | 497 | 487 | 506 | 506 | | |
| 18 | 465 | 466 | 472 | 488 | 497 | 492 | 500 | 510 | 500 | 487 | 479 | 466 | 453 | 458 | 478 | 497 | 508 | 512 | 503 | 501 | 502 | 500 | 485 | 487 | 488 | 488 | | |
| 19 | 478 | 463 | 459 | 460 | 451 | 475 | 493 | 501 | 500 | 482 | 456 | 440 | 437 | 443 | 462 | 490 | 504 | 504 | 500 | 499 | 488 | 482 | 482 | 482 | 476 | 476 | | |
| 20 | 483 | 484 | 488 | 490 | 492 | 498 | 501 | 482 | 466 | 469 | 451 | 439 | 430 | 442 | 460 | 478 | 490 | 495 | 496 | 494 | 490 | 488 | 486 | 487 | 478 | 478 | | |
| 21 | 487 | 488 | 489 | 491 | 495 | 500 | 503 | 500 | 493 | 478 | 461 | 445 | 439 | 447 | 469 | 498 | 538 | 559 | 581 | 590 | 549 | 510 | 490 | 484 | 499 | 499 | | |
| 22 | 478 | 469 | 467 | 475 | 484 | 492 | 499 | 501 | 502 | 504 | 495 | 474 | 465 | 461 | 469 | 486 | 501 | 504 | 500 | 497 | 494 | 491 | 489 | 489 | 487 | 487 | | |
| 23 | 493 | 487 | 486 | 486 | 490 | 482 | 487 | 492 | 482 | 467 | 454 | 450 | 440 | 442 | 454 | 492 | 549 | 567 | 590 | 578 | 545 | 505 | 500 | 500 | 497 | 497 | | |
| 24 Q | 499 | 497 | 492 | 494 | 496 | 500 | 505 | 502 | 498 | 484 | 467 | 451 | 437 | 443 | 465 | 489 | 496 | 497 | 490 | 483 | 486 | 489 | 490 | 490 | 485 | 485 | | |
| 25 Q | 490 | 489 | 488 | 489 | 489 | 491 | 492 | 491 | 484 | 471 | 455 | 447 | 443 | 445 | 459 | 477 | 487 | 489 | 485 | 481 | 482 | 482 | 485 | 486 | 478 | 478 | | |
| 26 | 485 | 483 | 482 | 480 | 483 | 487 | 488 | 487 | 484 | 484 | 474 | 471 | 469 | 468 | 476 | 485 | 493 | 489 | 486 | 484 | 483 | 483 | 483 | 484 | 482 | 482 | | |
| 27 | 484 | 483 | 483 | 485 | 486 | 472 | 469 | 478 | 481 | 476 | 464 | 458 | 453 | 453 | 458 | 477 | 487 | 491 | 483 | 509 | 530 | 494 | 498 | 496 | 481 | 481 | | |
| 28 | 487 | 491 | 492 | 492 | 492 | 493 | 493 | 491 | 486 | 476 | 462 | 449 | 450 | 462 | 481 | 498 | 511 | 515 | 515 | 516 | 502 | 507 | 512 | 510 | 491 | 491 | | |
| 29 D | 462 | 478 | 429 | 454 | 404 | 420 | 444 | 474 | 479 | 475 | 471 | 463 | 467 | 483 | 510 | 536 | 546 | 548 | 543 | 531 | 496 | 494 | 496 | 493 | 483 | 483 | | |
| 30 | 490 | 492 | 489 | 479 | 482 | 496 | 505 | 504 | 501 | 487 | 471 | 461 | 462 | 465 | 484 | 502 | 525 | 535 | 518 | 495 | 501 | 496 | 488 | 490 | 492 | 492 | | |
| 31 | 493 | 490 | 493 | 492 | 496 | 497 | 498 | 502 | 501 | 487 | 471 | 459 | 458 | 466 | 482 | 505 | 523 | 526 | 509 | 494 | 492 | 495 | 493 | 490 | 492 | 492 | | |
| Mean | 480 | 476 | 473 | 476 | 476 | 482 | 485 | 487 | 484 | 473 | 461 | 448 | 444 | 449 | 465 | 486 | 503 | 508 | 508 | 503 | 497 | 491 | 485 | 483 | 480 | 480 | | |
| Mean Q | 483 | 483 | 481 | 483 | 485 | 488 | 488 | 486 | 481 | 470 | 454 | 440 | 434 | 437 | 451 | 470 | 484 | 490 | 490 | 485 | 481 | 479 | 479 | 480 | 474 | 474 | | |
| Mean D | 481 | 467 | 451 | 455 | 443 | 454 | 458 | 470 | 478 | 469 | 469 | 455 | 459 | 472 | 493 | 522 | 538 | 537 | 532 | 518 | 508 | 506 | 487 | 472 | 483 | 483 | | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | September 1989 | | | Mean |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|----------------|-----|--|------|
| | Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 492 | 493 | 489 | 490 | 491 | 495 | 500 | 501 | 496 | 481 | 468 | 459 | 456 | 460 | 481 | 499 | 507 | 504 | 495 | 487 | 486 | 484 | 484 | 485 | 487 | 487 | | |
| 2 | 486 | 487 | 490 | 487 | 491 | 494 | 492 | 485 | 477 | 464 | 449 | 443 | 446 | 463 | 488 | 511 | 520 | 512 | 502 | 493 | 493 | 489 | 487 | 488 | 485 | 485 | | |
| 3 | 489 | 488 | 490 | 491 | 487 | 484 | 491 | 486 | 477 | 466 | 450 | 441 | 450 | 464 | 480 | 495 | 507 | 505 | 498 | 492 | 489 | 488 | 490 | 490 | 483 | 483 | | |
| 4 D | 484 | 487 | 466 | 451 | 473 | 466 | 466 | 476 | 476 | 468 | 475 | 460 | 458 | 466 | 478 | 496 | 508 | 511 | 502 | 493 | 491 | 491 | 491 | 493 | 480 | 480 | | |
| 5 | 486 | 482 | 472 | 470 | 461 | 475 | 484 | 475 | 470 | 468 | 462 | 453 | 454 | 456 | 469 | 487 | 496 | 498 | 495 | 491 | 490 | 489 | 490 | 490 | 478 | 478 | | |
| 6 | 489 | 488 | 489 | 491 | 491 | 490 | 495 | 489 | 485 | 478 | 468 | 452 | 444 | 454 | 470 | 485 | 508 | 510 | 500 | 502 | 493 | 488 | 489 | 485 | 485 | | | |
| 7 | 485 | 488 | 484 | 487 | 489 | 494 | 498 | 498 | 490 | 477 | 468 | 461 | 452 | 460 | 474 | 491 | 496 | 520 | 510 | 495 | 501 | 496 | 482 | 473 | 486 | | | |
| 8 | 468 | 479 | 480 | 481 | 482 | 480 | 475 | 473 | 474 | 467 | 458 | 450 | 450 | 454 | 464 | 482 | 502 | 506 | 500 | 493 | 489 | 488 | 486 | 487 | 478 | | | |
| 9 | 491 | 488 | 485 | 486 | 488 | 489 | 491 | 489 | 484 | 470 | 457 | 449 | 446 | 456 | 462 | 478 | 486 | 485 | 482 | 484 | 495 | 493 | 492 | 491 | 480 | | | |
| 10 | 492 | 489 | 484 | 484 | 486 | 481 | 477 | 482 | 476 | 461 | 454 | 454 | 454 | 457 | 472 | 483 | 486 | 500 | 498 | 492 | 489 | 491 | 493 | 487 | 480 | | | |
| 11 Q | 488 | 490 | 488 | 487 | 485 | 485 | 484 | 483 | 482 | 475 | 462 | 449 | 445 | 454 | 463 | 474 | 479 | 480 | 477 | 478 | 480 | 481 | 483 | 483 | 476 | | | |
| 12 | 482 | 483 | 481 | 480 | 477 | 469 | 469 | 470 | 473 | 472 | 472 | 454 | 444 | 445 | 459 | 473 | 480 | 480 | 476 | 474 | 476 | 480 | 481 | 483 | 472 | | | |
| 13 | 483 | 484 | 483 | 485 | 485 | 485 | 490 | 491 | 485 | 469 | 459 | 448 | 445 | 447 | 451 | 466 | 481 | 486 | 488 | 487 | 494 | 489 | 479 | 482 | 477 | | | |
| 14 Q | 485 | 487 | 488 | 489 | 486 | 484 | 485 | 485 | 474 | 462 | 448 | 446 | 453 | 459 | 470 | 480 | 486 | 486 | 481 | 478 | 478 | 479 | 480 | 482 | 476 | | | |
| 15 D | 483 | 483 | 483 | 483 | 471 | 474 | 477 | 479 | 476 | 464 | 450 | 433 | 432 | 460 | 487 | 487 | 494 | 535 | 531 | 531 | 503 | 455 | 475 | 482 | 480 | | | |
| 16 | 452 | 468 | 466 | 471 | 463 | 457 | 452 | 464 | 468 | 467 | 468 | 471 | 477 | 490 | 506 | 512 | 519 | 517 | 514 | 512 | 501 | 500 | 502 | 504 | 484 | | | |
| 17 | 508 | 502 | 501 | 502 | 501 | 500 | 499 | 493 | 484 | 472 | 463 | 455 | 450 | 458 | 468 | 481 | 490 | 491 | 491 | 491 | 487 | 488 | 487 | 484 | 485 | | | |
| 18 D | 493 | 504 | 484 | 485 | 487 | 488 | 491 | 488 | 481 | 471 | 453 | 438 | 434 | 443 | 456 | 472 | 496 | 502 | 512 | 542 | 556 | 497 | 436 | 429 | 481 | | | |
| 19 D | 469 | 453 | 453 | 372 | 284 | 307 | 338 | 410 | 460 | 489 | 494 | 490 | 481 | 490 | 500 | 509 | 521 | 527 | 530 | 524 | 515 | 511 | 508 | 505 | 464 | | | |
| 20 Q | 504 | 504 | 504 | 505 | 502 | 502 | 506 | 507 | 506 | 498 | 484 | 468 | 465 | 474 | 482 | 491 | 501 | 503 | 501 | 504 | 502 | 500 | 504 | 500 | 497 | | | |
| 21 | 500 | 503 | 499 | 488 | 494 | 497 | 497 | 496 | 496 | 494 | 482 | 467 | 466 | 469 | 479 | 487 | 494 | 497 | 495 | 496 | 497 | 494 | 493 | 497 | 491 | | | |
| 22 | 493 | 489 | 490 | 490 | 484 | 490 | 485 | 487 | 484 | 482 | 471 | 470 | 471 | 485 | 489 | 488 | 505 | 525 | 515 | 508 | 510 | 511 | 497 | 493 | 492 | | | |
| 23 Q | 491 | 493 | 493 | 493 | 493 | 494 | 497 | 500 | 498 | 493 | 483 | 473 | 470 | 471 | 473 | 476 | 479 | 479 | 484 | 488 | 490 | 489 | 490 | 491 | 487 | | | |
| 24 | 492 | 490 | 490 | 490 | 489 | 490 | 490 | 490 | 487 | 476 | 460 | 449 | 448 | 453 | 466 | 474 | 480 | 480 | 481 | 485 | 491 | 492 | 486 | 482 | 480 | | | |
| 25 Q | 486 | 485 | 487 | 486 | 485 | 486 | 488 | 493 | 493 | 487 | 473 | 466 | 464 | 468 | 475 | 484 | 489 | 487 | 484 | 490 | 483 | 483 | 483 | 485 | 483 | | | |
| 26 D | 487 | 488 | 488 | 487 | 486 | 485 | 485 | 481 | 470 | 469 | 465 | 464 | 474 | 481 | 491 | 499 | 549 | 606 | 648 | 639 | 593 | 554 | 529 | 492 | 513 | | | |
| 27 | 500 | 494 | 502 | 497 | 497 | 504 | 511 | 514 | 510 | 503 | 495 | 489 | 489 | 492 | 491 | 488 | 491 | 492 | 490 | 493 | 494 | 496 | 497 | 498 | 497 | | | |
| 28 | 499 | 499 | 497 | 494 | 493 | 495 | 494 | 494 | 494 | 492 | 481 | 475 | 475 | 480 | 483 | 485 | 496 | 503 | 509 | 497 | 495 | 498 | 503 | 502 | 493 | | | |
| 29 | 498 | 494 | 496 | 497 | 495 | 493 | 492 | 492 | 493 | 489 | 477 | 452 | 433 | 448 | 461 | 475 | 486 | 492 | 490 | 491 | 491 | 491 | 494 | 495 | 484 | | | |
| 30 | 496 | 501 | 492 | 491 | 488 | 488 | 487 | 487 | 487 | 480 | 471 | 461 | 457 | 462 | 472 | 483 | 489 | 488 | 488 | 495 | 524 | 512 | 497 | 495 | 487 | | | |
| Mean | 488 | 489 | 486 | 483 | 479 | 481 | 483 | 485 | 484 | 477 | 467 | 458 | 456 | 464 | 475 | 486 | 497 | 504 | 502 | 501 | 499 | 493 | 490 | 488 | 484 | | | |
| Mean Q | 491 | 492 | 492 | 492 | 490 | 490 | 492 | 494 | 491 | 483 | 470 | 460 | 459 | 465 | 473 | 481 | 487 | 487 | 485 | 488 | 487 | 486 | 488 | 488 | 484 | | | |
| Mean D | 483 | 483 | 475 | 456 | 440 | 444 | 451 | 467 | 473 | 472 | 467 | 457 | 456 | 468 | 482 | 493 | 514 | 536 | 545 | 546 | 532 | 502 | 488 | 480 | 484 | | | |

| Table 6 | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 44000nT+..(Nanotesla Units) | | | | October 1989 | | | |
|---------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----------------------------|-----|-----|------|--------------|--|--|--|
| Hour | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | Mean | | | | |
| 1 | 502 | 500 | 497 | 489 | 486 | 487 | 481 | 486 | 485 | 485 | 476 | 461 | 454 | 466 | 482 | 491 | 506 | 508 | 498 | 495 | 493 | 493 | 491 | 491 | 488 | | | |
| 2 | 491 | 492 | 492 | 490 | 485 | 482 | 482 | 484 | 482 | 475 | 462 | 448 | 441 | 443 | 458 | 474 | 482 | 489 | 488 | 489 | 487 | 486 | 485 | 485 | 478 | | | |
| 3 | 483 | 485 | 485 | 486 | 485 | 485 | 485 | 488 | 490 | 487 | 473 | 455 | 444 | 456 | 466 | 482 | 498 | 513 | 506 | 499 | 494 | 495 | 502 | 494 | 485 | | | |
| 4 Q | 492 | 495 | 489 | 491 | 489 | 489 | 492 | 497 | 497 | 488 | 475 | 461 | 452 | 455 | 467 | 479 | 486 | 489 | 491 | 492 | 489 | 493 | 491 | 486 | 484 | | | |
| 5 Q | 487 | 486 | 486 | 488 | 487 | 487 | 489 | 492 | 493 | 484 | 467 | 454 | 448 | 454 | 464 | 477 | 484 | 489 | 488 | 488 | 487 | 488 | 487 | 487 | 481 | | | |
| 6 | 479 | 480 | 482 | 482 | 485 | 487 | 488 | 490 | 487 | 481 | 464 | 452 | 441 | 447 | 453 | 469 | 483 | 499 | 498 | 494 | 495 | 490 | 488 | 489 | 479 | | | |
| 7 | 496 | 489 | 480 | 484 | 484 | 480 | 477 | 479 | 485 | 484 | 477 | 459 | 447 | 440 | 448 | 459 | 474 | 484 | 487 | 491 | 489 | 504 | 493 | 492 | 478 | | | |
| 8 | 494 | 486 | 488 | 487 | 482 | 480 | 482 | 484 | 488 | 487 | 478 | 464 | 450 | 451 | 457 | 469 | 480 | 485 | 489 | 489 | 490 | 491 | 490 | 497 | 481 | | | |
| 9 | 485 | 484 | 482 | 478 | 477 | 470 | 476 | 482 | 485 | 484 | 473 | 458 | 448 | 444 | 452 | 458 | 470 | 477 | 479 | 481 | 483 | 483 | 485 | 489 | 474 | | | |
| 10 | 488 | 483 | 486 | 481 | 481 | 479 | 479 | 481 | 485 | 482 | 474 | 457 | 457 | 453 | 461 | 468 | 482 | 486 | 483 | 484 | 489 | 488 | 488 | 489 | 479 | | | |
| 11 | 485 | 483 | 483 | 483 | 482 | 479 | 476 | 478 | 484 | 484 | 474 | 461 | 457 | 463 | 472 | 477 | 484 | 487 | 484 | 482 | 482 | 484 | 485 | 485 | 479 | | | |
| 12 | 486 | 485 | 485 | 482 | 476 | 477 | 478 | 482 | 481 | 478 | 470 | 463 | 457 | 455 | 461 | 466 | 474 | 479 | 482 | 480 | 482 | 483 | 484 | 487 | 476 | | | |
| 13 Q | 490 | 486 | 486 | 486 | 485 | 484 | 483 | 485 | 485 | 481 | 474 | 462 | 459 | 460 | 468 | 476 | 482 | 482 | 480 | 478 | 478 | 479 | 481 | 483 | 479 | | | |
| 14 Q | 485 | 486 | 487 | 486 | 485 | 484 | 482 | 482 | 480 | 477 | 465 | 453 | 452 | 463 | 470 | 478 | 483 | 480 | 481 | 479 | 478 | 477 | 478 | 480 | 477 | | | |
| 15 Q | 482 | 485 | 487 | 487 | 486 | 483 | 481 | 479 | 479 | 470 | 455 | 442 | 446 | 455 | 467 | 477 | 480 | 481 | 481 | 480 | 485 | 484 | 482 | 481 | 476 | | | |
| 16 | 482 | 485 | 486 | 485 | 482 | 481 | 480 | 479 | 478 | 468 | 448 | 436 | 436 | 451 | 472 | 501 | 502 | 506 | 512 | 509 | 501 | 491 | 487 | 484 | 481 | | | |
| 17 | 483 | 486 | 481 | 474 | 475 | 471 | 475 | 474 | 476 | 471 | 458 | 452 | 457 | 470 | 479 | 491 | 498 | 496 | 493 | 493 | 500 | 486 | 485 | 486 | 480 | | | |
| 18 | 485 | 482 | 465 | 471 | 457 | 472 | 478 | 484 | 490 | 487 | 476 | 459 | 462 | 471 | 481 | 494 | 501 | 498 | 500 | 501 | 498 | 507 | 498 | 493 | 484 | | | |
| 19 D | 455 | 476 | 460 | 456 | 465 | 477 | 471 | 478 | 492 | 489 | 483 | 493 | 477 | 464 | 487 | 497 | 503 | 502 | 501 | 502 | 500 | 494 | 490 | 489 | 483 | | | |
| 20 D | 489 | 488 | 481 | 480 | 481 | 480 | 471 | 482 | 486 | 496 | 515 | 502 | 502 | 552 | 709 | 719 | 770 | 716 | 710 | 722 | 625 | 595 | 563 | 545 | 566 | | | |
| 21 D | 511 | 498 | 458 | 404 | 471 | 512 | 510 | 514 | 522 | 532 | 538 | 552 | 588 | 592 | 637 | 666 | 677 | 663 | 609 | 568 | 546 | 503 | 527 | 486 | 545 | | | |
| 22 D | 510 | 491 | 475 | 474 | 499 | 484 | 490 | 509 | 518 | 524 | 515 | 504 | 501 | 512 | 529 | 553 | 538 | 553 | 537 | 530 | 524 | 534 | 527 | 505 | 514 | | | |
| 23 | 507 | 505 | 496 | 494 | 484 | 463 | 467 | 495 | 512 | 515 | 504 | 497 | 496 | 497 | 503 | 509 | 513 | 514 | 514 | 515 | 519 | 508 | 514 | 509 | 502 | | | |
| 24 | 503 | 502 | 501 | 503 | 502 | 500 | 503 | 507 | 504 | 510 | 501 | 487 | 488 | 496 | 502 | 504 | 507 | 506 | 504 | 505 | 507 | 510 | 508 | 511 | 503 | | | |
| 25 | 515 | 504 | 480 | 475 | 471 | 449 | 460 | 464 | 487 | 500 | 498 | 489 | 490 | 490 | 496 | 504 | 514 | 514 | 508 | 506 | 506 | 508 | 506 | 510 | 494 | | | |
| 26 D | 497 | 498 | 499 | 499 | 481 | 487 | 493 | 499 | 504 | 498 | 494 | 487 | 482 | 482 | 487 | 498 | 507 | 528 | 546 | 535 | 542 | 521 | 523 | 533 | 505 | | | |
| 27 | 503 | 490 | 490 | 488 | 495 | 497 | 497 | 498 | 500 | 499 | 493 | 492 | 495 | 496 | 501 | 507 | 507 | 507 | 504 | 520 | 512 | 509 | 501 | 498 | 500 | | | |
| 28 | 498 | 499 | 500 | 499 | 496 | 495 | 496 | 499 | 503 | 498 | 485 | 471 | 471 | 477 | 489 | 508 | 519 | 526 | 522 | 518 | 509 | 508 | 506 | 501 | 500 | | | |
| 29 | 497 | 493 | 488 | 490 | 492 | 490 | 493 | 498 | 501 | 497 | 485 | 476 | 470 | 482 | 494 | 499 | 498 | 497 | 496 | 507 | 511 | 520 | 500 | 497 | 495 | | | |
| 30 | 486 | 479 | 487 | 494 | 492 | 493 | 490 | 489 | 491 | 489 | 482 | 468 | 470 | 472 | 479 | 492 | 498 | 503 | 504 | 502 | 509 | 509 | 501 | 489 | 490 | | | |
| 31 | 500 | 495 | 489 | 491 | 489 | 491 | 496 | 498 | 502 | 501 | 485 | 472 | 469 | 481 | 491 | 514 | 526 | 512 | 512 | 516 | 506 | 505 | 505 | 503 | 498 | | | |
| Mean | 492 | 490 | 485 | 482 | 483 | 483 | 484 | 488 | 492 | 490 | 481 | 471 | 468 | 474 | 490 | 502 | 511 | 512 | 509 | 508 | 504 | 501 | 498 | 495 | 491 | | | |
| Mean Q | 487 | 488 | 487 | 488 | 486 | 485 | 485 | 487 | 487 | 480 | 467 | 454 | 451 | 457 | 467 | 477 | 483 | 484 | 484 | 483 | 483 | 484 | 484 | 483 | 479 | | | |
| Mean D | 492 | 490 | 475 | 463 | 479 | 488 | 487 | 496 | 504 | 508 | 509 | 508 | 510 | 520 | 570 | 587 | 599 | 592 | 581 | 571 | 547 | 529 | 526 | 512 | 523 | | | |

| Table 6 Hour Date | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | November 1989 | | | Mean |
|-------------------------|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|---------------|--|--|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | | | | |
| 1 | 501 | 502 | 499 | 497 | 497 | 497 | 498 | 496 | 498 | 496 | 487 | 477 | 474 | 476 | 484 | 494 | 501 | 504 | 501 | 506 | 505 | 504 | 507 | 500 | 496 | | | |
| 2 | 498 | 514 | 504 | 496 | 495 | 493 | 497 | 492 | 493 | 492 | 481 | 474 | 473 | 475 | 481 | 489 | 493 | 492 | 501 | 522 | 518 | 516 | 511 | 495 | 496 | | | |
| 3 | 501 | 487 | 490 | 500 | 491 | 491 | 493 | 489 | 475 | 481 | 476 | 478 | 471 | 483 | 495 | 508 | 512 | 524 | 524 | 537 | 542 | 531 | 514 | 508 | 500 | | | |
| 4 D | 501 | 501 | 498 | 498 | 501 | 504 | 500 | 502 | 492 | 488 | 486 | 482 | 478 | 479 | 492 | 504 | 501 | 509 | 528 | 525 | 530 | 517 | 505 | 494 | 501 | | | |
| 5 | 484 | 487 | 497 | 498 | 495 | 492 | 498 | 500 | 504 | 498 | 491 | 482 | 477 | 477 | 486 | 495 | 500 | 500 | 501 | 520 | 517 | 523 | 508 | 505 | 497 | | | |
| 6 | 496 | 497 | 496 | 496 | 496 | 498 | 500 | 501 | 500 | 496 | 484 | 471 | 473 | 473 | 487 | 497 | 503 | 502 | 497 | 500 | 507 | 503 | 503 | 505 | 495 | | | |
| 7 | 517 | 504 | 490 | 481 | 480 | 492 | 487 | 484 | 487 | 485 | 480 | 471 | 466 | 477 | 490 | 496 | 498 | 499 | 498 | 498 | 502 | 512 | 505 | 502 | 492 | | | |
| 8 | 502 | 500 | 492 | 496 | 493 | 492 | 496 | 497 | 499 | 499 | 492 | 476 | 476 | 478 | 485 | 488 | 489 | 493 | 493 | 507 | 507 | 504 | 502 | 501 | 494 | | | |
| 9 | 499 | 498 | 497 | 487 | 479 | 477 | 488 | 495 | 502 | 501 | 496 | 489 | 481 | 489 | 496 | 496 | 489 | 500 | 513 | 509 | 510 | 514 | 517 | 511 | 497 | | | |
| 10 | 499 | 494 | 495 | 496 | 497 | 490 | 491 | 491 | 492 | 496 | 490 | 482 | 480 | 482 | 488 | 492 | 492 | 493 | 491 | 493 | 496 | 497 | 499 | 498 | 492 | | | |
| 11 | 500 | 497 | 495 | 488 | 490 | 489 | 487 | 488 | 490 | 491 | 485 | 481 | 474 | 474 | 480 | 484 | 481 | 481 | 486 | 526 | 531 | 510 | 513 | 514 | 493 | | | |
| 12 | 500 | 496 | 496 | 495 | 495 | 492 | 491 | 491 | 490 | 487 | 482 | 480 | 482 | 488 | 494 | 500 | 498 | 494 | 490 | 489 | 490 | 492 | 494 | 495 | 492 | | | |
| 13 D | 492 | 491 | 484 | 476 | 467 | 460 | 457 | 475 | 486 | 490 | 485 | 482 | 496 | 505 | 532 | 550 | 558 | 560 | 580 | 573 | 538 | 528 | 552 | 532 | 510 | | | |
| 14 | 514 | 509 | 519 | 510 | 511 | 508 | 505 | 502 | 495 | 492 | 487 | 484 | 485 | 489 | 499 | 508 | 511 | 508 | 505 | 503 | 503 | 506 | 501 | 498 | 502 | | | |
| 15 Q | 503 | 493 | 490 | 494 | 498 | 502 | 500 | 497 | 497 | 491 | 480 | 473 | 472 | 478 | 487 | 496 | 501 | 500 | 498 | 496 | 496 | 495 | 494 | 493 | 493 | | | |
| 16 Q | 494 | 495 | 495 | 495 | 496 | 496 | 496 | 496 | 500 | 497 | 486 | 471 | 468 | 472 | 486 | 497 | 500 | 499 | 496 | 495 | 496 | 499 | 500 | 499 | 493 | | | |
| 17 D | 502 | 489 | 483 | 487 | 493 | 489 | 485 | 485 | 490 | 496 | 484 | 466 | 486 | 480 | 524 | 603 | 684 | 740 | 867 | 740 | 730 | 696 | 536 | 526 | 561 | | | |
| 18 D | 503 | 446 | 479 | 469 | 474 | 478 | 493 | 506 | 519 | 528 | 526 | 519 | 518 | 514 | 522 | 532 | 528 | 527 | 527 | 525 | 527 | 523 | 514 | 513 | 509 | | | |
| 19 | 509 | 506 | 507 | 507 | 509 | 510 | 511 | 510 | 510 | 509 | 498 | 491 | 492 | 493 | 497 | 504 | 509 | 515 | 521 | 518 | 513 | 510 | 513 | 505 | 507 | | | |
| 20 | 503 | 501 | 501 | 500 | 498 | 503 | 502 | 503 | 509 | 509 | 501 | 485 | 491 | 492 | 489 | 497 | 503 | 504 | 507 | 506 | 512 | 516 | 519 | 518 | 503 | | | |
| 21 | 513 | 503 | 495 | 493 | 494 | 493 | 494 | 489 | 495 | 499 | 495 | 487 | 482 | 486 | 489 | 492 | 496 | 499 | 501 | 500 | 501 | 502 | 501 | 499 | 496 | | | |
| 22 Q | 497 | 496 | 494 | 494 | 494 | 494 | 494 | 495 | 499 | 501 | 494 | 490 | 488 | 485 | 484 | 494 | 497 | 498 | 504 | 503 | 506 | 508 | 509 | 505 | 497 | | | |
| 23 Q | 503 | 498 | 492 | 489 | 489 | 490 | 492 | 494 | 497 | 496 | 487 | 487 | 484 | 484 | 484 | 490 | 494 | 495 | 494 | 494 | 493 | 498 | 503 | 502 | 493 | | | |
| 24 | 501 | 503 | 501 | 495 | 490 | 489 | 489 | 491 | 489 | 488 | 485 | 487 | 488 | 484 | 490 | 498 | 500 | 503 | 506 | 507 | 506 | 505 | 500 | 496 | 495 | | | |
| 25 Q | 495 | 495 | 494 | 492 | 490 | 490 | 489 | 489 | 491 | 492 | 489 | 485 | 478 | 478 | 483 | 488 | 489 | 489 | 490 | 490 | 490 | 491 | 491 | 492 | 489 | | | |
| 26 | 493 | 493 | 492 | 491 | 488 | 485 | 483 | 481 | 481 | 481 | 479 | 480 | 476 | 476 | 481 | 488 | 488 | 482 | 485 | 527 | 552 | 548 | 530 | 520 | 495 | | | |
| 27 | 516 | 512 | 506 | 500 | 499 | 496 | 495 | 490 | 489 | 489 | 484 | 483 | 484 | 484 | 493 | 504 | 500 | 496 | 500 | 506 | 498 | 497 | 500 | 521 | 498 | | | |
| 28 D | 517 | 519 | 528 | 514 | 498 | 491 | 498 | 491 | 487 | 479 | 474 | 476 | 478 | 477 | 485 | 491 | 492 | 491 | 498 | 496 | 500 | 501 | 496 | 495 | 495 | | | |
| 29 | 497 | 503 | 502 | 500 | 497 | 494 | 494 | 491 | 488 | 481 | 479 | 479 | 480 | 486 | 491 | 505 | 487 | 494 | 514 | 516 | 522 | 523 | 508 | 517 | 498 | | | |
| 30 | 507 | 514 | 505 | 508 | 496 | 490 | 484 | 486 | 486 | 487 | 481 | 482 | 478 | 481 | 499 | 508 | 506 | 504 | 516 | 512 | 510 | 509 | 522 | 519 | 500 | | | |
| Mean | 502 | 498 | 497 | 495 | 493 | 492 | 493 | 493 | 494 | 494 | 487 | 482 | 481 | 483 | 492 | 503 | 507 | 510 | 518 | 518 | 518 | 516 | 509 | 506 | 499 | | | |
| Mean Q | 498 | 495 | 493 | 493 | 493 | 494 | 494 | 494 | 497 | 495 | 487 | 481 | 478 | 479 | 485 | 493 | 496 | 496 | 496 | 496 | 496 | 498 | 499 | 498 | 493 | | | |
| Mean D | 503 | 489 | 494 | 489 | 487 | 484 | 487 | 492 | 495 | 496 | 491 | 485 | 491 | 491 | 511 | 536 | 553 | 565 | 600 | 572 | 565 | 553 | 521 | 512 | 515 | | | |

| Table 6 | | Vertical Component | | | | | | MEAN HOURLY VALUES | | | | | | | | | | | | | | 4400nT+..(Nanotesla Units) | | | | December 1989 | | | |
|---------|---|--------------------|-----|-----|-----|-----|-----|--------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------------------------|-----|-----|-----|---------------|--|--|--|
| Hour | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | Mean | | | |
| Date | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | D | 503 | 494 | 491 | 501 | 493 | 496 | 495 | 497 | 495 | 495 | 495 | 486 | 483 | 480 | 493 | 500 | 510 | 512 | 536 | 585 | 583 | 552 | 531 | 518 | 509 | | | |
| 2 | | 508 | 507 | 500 | 503 | 493 | 498 | 500 | 503 | 507 | 506 | 495 | 494 | 489 | 490 | 498 | 503 | 506 | 504 | 505 | 504 | 508 | 514 | 520 | 507 | 503 | | | |
| 3 | | 502 | 490 | 495 | 498 | 496 | 497 | 494 | 498 | 503 | 501 | 497 | 493 | 486 | 486 | 493 | 517 | 516 | 516 | 516 | 513 | 520 | 523 | 509 | 508 | 503 | | | |
| 4 | D | 491 | 479 | 473 | 466 | 476 | 474 | 482 | 488 | 498 | 504 | 502 | 491 | 481 | 477 | 488 | 496 | 499 | 497 | 516 | 523 | 539 | 520 | 500 | 494 | 494 | | | |
| 5 | | 500 | 486 | 478 | 488 | 489 | 494 | 499 | 502 | 503 | 502 | 499 | 495 | 493 | 489 | 494 | 502 | 504 | 501 | 503 | 505 | 510 | 502 | 504 | 504 | 498 | | | |
| 6 | Q | 500 | 497 | 496 | 496 | 497 | 498 | 498 | 499 | 499 | 498 | 491 | 491 | 486 | 483 | 485 | 493 | 495 | 497 | 497 | 500 | 501 | 504 | 501 | 501 | 496 | | | |
| 7 | | 504 | 500 | 493 | 490 | 492 | 495 | 491 | 491 | 493 | 490 | 490 | 490 | 482 | 473 | 473 | 488 | 492 | 488 | 493 | 498 | 508 | 517 | 511 | 505 | 494 | | | |
| 8 | | 500 | 496 | 494 | 492 | 491 | 491 | 492 | 493 | 495 | 495 | 487 | 485 | 482 | 477 | 486 | 494 | 492 | 490 | 493 | 493 | 494 | 495 | 496 | 496 | 492 | | | |
| 9 | Q | 495 | 494 | 493 | 491 | 491 | 489 | 488 | 489 | 493 | 497 | 489 | 486 | 484 | 479 | 484 | 489 | 490 | 492 | 492 | 491 | 491 | 493 | 493 | 493 | 490 | | | |
| 10 | Q | 494 | 492 | 490 | 489 | 488 | 486 | 484 | 484 | 485 | 488 | 487 | 486 | 484 | 478 | 482 | 487 | 489 | 488 | 487 | 486 | 488 | 488 | 488 | 489 | 487 | | | |
| 11 | Q | 489 | 489 | 487 | 486 | 484 | 482 | 480 | 479 | 482 | 484 | 479 | 476 | 484 | 484 | 486 | 491 | 494 | 493 | 490 | 489 | 493 | 497 | 495 | 495 | 487 | | | |
| 12 | | 492 | 489 | 486 | 486 | 486 | 483 | 482 | 480 | 480 | 477 | 477 | 478 | 480 | 482 | 486 | 490 | 493 | 492 | 489 | 489 | 492 | 506 | 505 | 494 | 487 | | | |
| 13 | | 495 | 497 | 494 | 487 | 482 | 485 | 487 | 485 | 484 | 480 | 478 | 481 | 476 | 474 | 483 | 491 | 496 | 492 | 491 | 493 | 494 | 491 | 488 | 488 | 487 | | | |
| 14 | | 488 | 490 | 490 | 491 | 491 | 489 | 488 | 486 | 484 | 482 | 470 | 471 | 476 | 473 | 485 | 500 | 516 | 502 | 505 | 510 | 515 | 511 | 498 | 495 | 492 | | | |
| 15 | | 495 | 483 | 489 | 487 | 488 | 484 | 486 | 485 | 484 | 483 | 476 | 476 | 475 | 479 | 485 | 489 | 494 | 499 | 496 | 495 | 494 | 496 | 491 | 489 | 487 | | | |
| 16 | | 489 | 488 | 487 | 487 | 489 | 488 | 485 | 485 | 482 | 483 | 470 | 477 | 474 | 486 | 500 | 507 | 515 | 520 | 522 | 518 | 518 | 516 | 495 | 491 | 495 | | | |
| 17 | | 491 | 490 | 490 | 491 | 490 | 492 | 494 | 493 | 490 | 484 | 480 | 481 | 484 | 484 | 489 | 498 | 497 | 500 | 501 | 502 | 502 | 503 | 496 | 491 | 492 | | | |
| 18 | | 488 | 482 | 483 | 487 | 490 | 491 | 488 | 487 | 488 | 482 | 479 | 480 | 475 | 473 | 473 | 479 | 486 | 491 | 496 | 497 | 504 | 503 | 500 | 496 | 487 | | | |
| 19 | Q | 493 | 491 | 488 | 491 | 491 | 489 | 488 | 489 | 490 | 487 | 481 | 473 | 475 | 477 | 478 | 485 | 487 | 491 | 492 | 491 | 498 | 497 | 495 | 494 | 488 | | | |
| 20 | | 491 | 492 | 491 | 490 | 486 | 487 | 488 | 488 | 487 | 485 | 477 | 475 | 474 | 479 | 480 | 486 | 490 | 487 | 491 | 488 | 491 | 503 | 497 | 494 | 487 | | | |
| 21 | | 493 | 500 | 486 | 479 | 480 | 482 | 483 | 484 | 483 | 483 | 478 | 472 | 468 | 470 | 476 | 481 | 487 | 483 | 481 | 489 | 498 | 511 | 506 | 501 | 486 | | | |
| 22 | | 495 | 493 | 489 | 488 | 485 | 481 | 481 | 480 | 480 | 477 | 474 | 474 | 478 | 485 | 503 | 492 | 504 | 503 | 507 | 535 | 521 | 513 | 506 | 503 | 494 | | | |
| 23 | | 498 | 496 | 495 | 489 | 472 | 483 | 490 | 486 | 490 | 493 | 497 | 493 | 490 | 487 | 489 | 493 | 496 | 496 | 494 | 497 | 500 | 499 | 503 | 503 | 493 | | | |
| 24 | | 501 | 498 | 502 | 499 | 495 | 493 | 490 | 490 | 491 | 493 | 488 | 476 | 484 | 483 | 491 | 491 | 499 | 505 | 503 | 521 | 520 | 526 | 533 | 511 | 499 | | | |
| 25 | | 504 | 504 | 494 | 493 | 484 | 479 | 486 | 486 | 486 | 485 | 477 | 470 | 475 | 480 | 484 | 489 | 495 | 493 | 496 | 495 | 497 | 508 | 499 | 495 | 490 | | | |
| 26 | | 496 | 495 | 493 | 493 | 492 | 491 | 489 | 488 | 488 | 489 | 483 | 478 | 484 | 488 | 488 | 498 | 497 | 496 | 494 | 513 | 546 | 511 | 521 | 533 | 498 | | | |
| 27 | | 520 | 509 | 499 | 492 | 492 | 491 | 491 | 492 | 488 | 487 | 484 | 479 | 478 | 487 | 498 | 507 | 508 | 508 | 530 | 540 | 527 | 526 | 509 | 503 | 502 | | | |
| 28 | | 502 | 501 | 495 | 499 | 497 | 497 | 493 | 495 | 493 | 492 | 488 | 485 | 478 | 477 | 485 | 493 | 498 | 494 | 492 | 494 | 494 | 497 | 498 | 501 | 493 | | | |
| 29 | D | 501 | 503 | 497 | 496 | 497 | 497 | 494 | 489 | 485 | 488 | 485 | 471 | 471 | 480 | 496 | 512 | 540 | 524 | 513 | 508 | 571 | 559 | 520 | 514 | 505 | | | |
| 30 | D | 492 | 497 | 507 | 505 | 506 | 503 | 503 | 510 | 509 | 504 | 504 | 500 | 506 | 502 | 509 | 522 | 531 | 522 | 527 | 542 | 552 | 564 | 553 | 538 | 517 | | | |
| 31 | D | 523 | 505 | 505 | 494 | 478 | 460 | 463 | 461 | 462 | 478 | 480 | 489 | 490 | 495 | 511 | 512 | 516 | 525 | 521 | 517 | 516 | 516 | 512 | 506 | 497 | | | |
| Mean | | 498 | 494 | 492 | 491 | 489 | 489 | 489 | 489 | 490 | 489 | 485 | 482 | 481 | 482 | 489 | 496 | 501 | 500 | 502 | 507 | 512 | 512 | 506 | 502 | 494 | | | |
| Mean Q | | 494 | 493 | 491 | 491 | 490 | 489 | 488 | 488 | 490 | 491 | 485 | 482 | 483 | 480 | 483 | 489 | 491 | 492 | 492 | 491 | 494 | 496 | 494 | 494 | 490 | | | |
| Mean D | | 502 | 496 | 495 | 492 | 490 | 486 | 487 | 489 | 490 | 494 | 493 | 487 | 486 | 487 | 499 | 508 | 519 | 516 | 523 | 535 | 552 | 542 | 523 | 514 | 504 | | | |

Table 7

Extreme Values of the Magnetic Elements

January 1989

| Date | DECLINATION | | | HORIZONTAL COMPONENT | | | | | | VERTICAL COMPONENT | | | | | |
|------|-------------------|-------------------|-------------------|----------------------|-------------------|--------------------|------------------|-------------------|--------------------|--------------------|-------|------------------|------------------|-------|------------------|
| | Maximum G.M.T. | 9 ^m + | Minimum G.M.T. | Range | Maximum G.M.T. | Minimum 1900nT+ | Range G.M.T. | Maximum G.M.T. | Minimum 4400nT+ | Range G.M.T. | | | | | |
| 1 | 13:38 | 33.5 | 13.2 | 23:57 | 20.3 | 18:02 | 87 | 41 | 20:38 | 46 | 22:33 | 550 | 465 | 13:22 | 85 |
| 2 Q | 14:05 | 32.1 | 9.5 | 00:40 | 22.6 | 08:14 | 95 | 61 | 01:18 | 34 | 00:40 | 546 | 468 | 13:44 | 78 |
| 3 Q | 14:55 | 31.6 | 26.2 | 09:39 | 5.4 _m | 07:50 | 92 | 71 | 12:51 | 21 _m | 24:00 | 484 | 466 | 10:38 | 18 _m |
| 4 Q | 12:58 | 31.2 | 24.5 | 01:47 | 6.7 | 23:13 | 111 | 74 | 01:27 | 37 | 01:40 | 490 | 467 | 12:58 | 23 |
| 5 D | 16:46 | 39.5 | 14.6 | 05:27 | 24.9 | 06:38 | 120 | 18 | 17:09 | 102 | 18:34 | 539 | 412 _m | 06:48 | 127 |
| 6 Q | 15:21 | 31.7 | 21.4 | 00:29 | 10.3 | 24:00 | 93 | 41 | 14:01 | 52 | 00:15 | 508 | 470 | 12:05 | 38 |
| 7 | 16:17 | 31.8 | 24.4 | 21:27 | 7.4 | 00:07 | 97 | 49 | 13:47 | 48 | 21:24 | 492 | 469 | 11:46 | 23 |
| 8 | 16:22 | 36.1 | 20.8 | 23:13 | 15.3 | 08:54 | 105 | 35 | 14:40 | 70 | 19:37 | 525 | 447 | 13:14 | 78 |
| 9 | 14:15 | 38.3 | 21.2 | 22:01 | 17.1 | 23:52 | 80 | 34 | 14:37 | 46 | 15:37 | 503 | 461 | 13:59 | 42 |
| 10 | 14:13 | 33.6 | 19.5 | 01:29 | 14.1 | 00:06 | 85 | 43 | 12:28 | 42 | 18:17 | 498 | 458 | 12:03 | 40 |
| 11 D | 18:11 | 52.0 | -6.6 _m | 23:25 | 58.6 _M | 17:13 | 118 | -45 _m | 20:37 | 163 _M | 18:42 | 678 _M | 442 | 23:37 | 236 _M |
| 12 | 02:44 | 33.1 | 13.3 | 00:10 | 19.8 | 22:29 | 67 | 2 | 00:28 | 65 | 00:38 | 565 | 469 | 02:45 | 96 |
| 13 | 15:47 | 38.8 | 23.5 | 23:55 | 15.3 | 07:16 | 72 | 23 | 12:56 | 49 | 20:37 | 534 | 455 | 13:40 | 79 |
| 14 | 14:00 | 31.9 | 11.3 | 23:06 | 20.6 | 22:14 | 81 | 28 | 12:03 | 53 | 23:03 | 530 | 470 | 13:57 | 60 |
| 15 D | 15:17 | 40.4 | 12.1 | 21:35 | 28.3 | 20:24 | 93 | -12 | 22:08 | 105 | 21:18 | 582 | 446 | 01:26 | 136 |
| 16 D | 07:05 | 37.7 | 15.0 | 00:58 | 22.7 | 07:32 | 92 | -13 | 19:06 | 105 | 19:14 | 557 | 431 | 07:05 | 126 |
| 17 | 18:24 | 37.7 | 10.5 | 01:33 | 27.2 | 08:11 | 85 | 3 | 11:21 | 82 | 20:27 | 562 | 463 | 07:41 | 99 |
| 18 | 14:26 | 33.0 | 19.8 | 02:08 | 13.2 | 20:02 | 73 | 27 | 11:56 | 46 | 00:12 | 515 | 463 | 11:50 | 52 |
| 19 Q | 15:33 | 31.5 | 22.6 | 02:50 | 8.9 | 06:57 | 87 | 51 | 13:05 | 36 | 01:30 | 501 | 474 | 10:57 | 27 |
| 20 D | 15:45 | 56.2 _M | 12.7 | 22:52 | 43.5 | 13:02 | 104 | -38 | 16:13 | 142 | 21:30 | 587 | 443 | 13:04 | 144 |
| 21 | 15:09 | 36.1 | 11.9 | 21:50 | 24.2 | 21:58 | 97 | -4 | 13:51 | 101 | 21:50 | 557 | 479 | 07:15 | 78 |
| 22 | 13:05 | 35.9 | 17.1 | 01:40 | 18.8 | 01:48 | 109 | -22 | 13:25 | 131 | 17:45 | 526 | 455 | 01:57 | 71 |
| 23 | 13:59 | 33.8 | 20.7 | 04:09 | 13.1 | 23:30 | 97 | 39 | 12:49 | 58 | 16:35 | 524 | 462 | 03:30 | 62 |
| 24 | 15:19 | 32.8 | 22.3 | 22:34 | 10.5 | 22:45 | 97 | 41 | 13:39 | 56 | 18:39 | 517 | 467 | 11:25 | 50 |
| 25 | 13:20 | 32.4 | 23.3 | 23:48 | 9.1 | 22:11 | 103 | 38 | 12:28 | 65 | 20:46 | 500 | 459 | 13:20 | 41 |
| 26 | 14:34 | 33.2 | 22.8 | 09:58 | 10.4 | 07:17 | 90 | 43 | 13:02 | 47 | 17:38 | 509 | 463 | 13:49 | 46 |
| 27 | 14:16 | 32.8 | 19.0 | 03:09 | 13.8 | 09:37 | 97 | 46 | 14:05 | 51 | 17:16 | 492 | 458 | 12:58 | 34 |
| 28 | 14:47 | 35.1 | 21.6 | 18:57 | 13.5 | 03:25 | 97 | 34 | 15:17 | 63 | 18:53 | 534 | 462 | 14:03 | 72 |
| 29 | 14:35 | 34.3 | 23.8 | 09:49 | 10.5 | 02:34 | 98 | 39 | 15:21 | 59 | 15:59 | 506 | 464 | 12:52 | 42 |
| 30 | 14:49 | 35.7 | 22.2 | 22:26 | 13.5 | 05:17 | 99 | 31 | 12:32 | 68 | 22:19 | 503 | 457 | 12:50 | 46 |
| 31 | 17:51 | 41.4 | 2.7 | 22:34 | 38.7 | 21:37 | 142 _M | -11 | 22:50 | 153 | 19:09 | 572 | 463 | 02:54 | 109 |
| Mean | | 36.0 | 17.3 | | 18.7 | | 96 | 25 | | 71 | | 532 | 459 | | 73 |

Table 7

Extreme Values of the Magnetic Elements

February 1989

| Date | DECLINATION | | | HORIZONTAL COMPONENT | | | | | | VERTICAL COMPONENT | | | | | |
|------|-------------------|-------------------|-------------------|----------------------|-------------------|---------------------|------------------|-------------------|---------------------|--------------------|-------|------------------|------------------|-------|------------------|
| | Maximum G.M.T. | 9 ^m + | Minimum G.M.T. | Range | Maximum G.M.T. | Minimum 19000nT+ | Range G.M.T. | Maximum G.M.T. | Minimum 44000nT+ | Range G.M.T. | | | | | |
| 1 D | 13:54 | 37.9 | 9.4 _m | 22:44 | 28.5 _M | 22:48 | 86 | 15 | 13:35 | 71 | 22:44 | 566 | 444 | 23:01 | 122 |
| 2 | 18:52 | 35.8 | 17.3 | 19:51 | 18.5 | 18:19 | 93 | 10 _m | 21:16 | 83 _M | 19:36 | 570 | 461 | 13:30 | 109 |
| 3 D | 14:37 | 38.6 _M | 11.0 | 02:37 | 27.6 | 22:25 | 88 | 12 | 19:24 | 76 | 17:54 | 581 _M | 455 | 05:47 | 126 _M |
| 4 D | 14:46 | 35.1 | 18.6 | 00:01 | 16.5 | 20:50 | 105 | 38 | 22:32 | 67 | 20:17 | 527 | 449 | 12:10 | 78 |
| 5 | 14:31 | 33.1 | 19.8 | 00:41 | 13.3 | 20:02 | 91 | 37 | 12:55 | 54 | 22:31 | 521 | 470 | 13:46 | 51 |
| 6 D | 15:24 | 37.0 | 16.1 | 01:35 | 20.9 | 08:28 | 91 | 34 | 15:41 | 57 | 20:03 | 518 | 460 | 11:43 | 58 |
| 7 D | 13:47 | 34.6 | 11.9 | 23:29 | 22.7 | 06:55 | 96 | 34 | 13:54 | 62 | 17:47 | 531 | 452 | 11:41 | 79 |
| 8 | 14:39 | 32.3 | 19.9 | 00:01 | 12.4 | 23:53 | 86 | 37 | 13:01 | 49 | 17:37 | 503 | 464 | 12:05 | 39 |
| 9 | 15:07 | 33.6 | 18.7 | 02:48 | 14.9 | 00:21 | 98 | 32 | 13:05 | 66 | 21:12 | 525 | 460 | 13:37 | 65 |
| 10 | 13:12 | 33.6 | 15.8 | 00:33 | 17.8 | 00:37 | 91 | 20 | 13:06 | 71 | 00:32 | 511 | 469 | 12:38 | 42 |
| 11 | 19:37 | 35.9 | 22.3 | 10:06 | 13.6 | 07:35 | 91 | 37 | 12:42 | 54 | 21:46 | 530 | 455 | 13:04 | 75 |
| 12 | 14:36 | 35.5 | 16.9 | 23:39 | 18.6 | 18:36 | 90 | 41 | 13:34 | 49 | 18:51 | 541 | 451 | 13:18 | 90 |
| 13 | 14:50 | 34.2 | 12.4 | 01:36 | 21.8 | 01:38 | 94 | 32 | 11:53 | 62 | 01:32 | 510 | 465 | 11:09 | 45 |
| 14 | 15:20 | 36.2 | 16.2 | 03:12 | 20.0 | 08:52 | 85 | 20 | 15:26 | 65 | 16:00 | 507 | 454 | 12:43 | 53 |
| 15 | 15:15 | 34.3 | 20.4 | 24:00 | 13.9 | 19:45 | 95 | 37 | 22:33 | 58 | 19:22 | 543 | 456 | 14:23 | 87 |
| 16 | 15:00 | 31.2 | 15.9 | 03:44 | 15.3 | 07:05 | 82 | 21 | 12:39 | 61 | 00:01 | 519 | 459 | 11:37 | 60 |
| 17 Q | 14:39 | 29.7 | 22.0 | 10:28 | 7.7 | 23:20 | 91 | 65 | 11:51 | 26 _m | 00:14 | 493 | 452 | 12:13 | 41 |
| 18 | 13:26 | 33.7 | 23.6 | 09:25 | 10.1 | 05:59 | 108 | 56 | 17:48 | 52 | 17:56 | 494 | 463 | 13:25 | 31 _m |
| 19 | 14:46 | 33.2 | 20.4 | 23:12 | 12.8 | 07:55 | 101 | 60 | 16:03 | 41 | 22:46 | 506 | 452 | 11:52 | 54 |
| 20 | 14:08 | 37.8 | 18.9 | 18:21 | 18.9 | 07:08 | 106 | 42 | 13:37 | 64 | 18:09 | 535 | 445 | 11:47 | 90 |
| 21 | 16:06 | 31.2 | 23.9 | 07:28 | 7.3 _m | 07:30 | 91 | 50 | 16:32 | 41 | 16:53 | 501 | 468 | 11:18 | 33 |
| 22 | 14:16 | 32.0 | 23.8 | 07:33 | 8.2 | 03:19 | 101 | 59 | 08:49 | 42 | 14:39 | 495 | 460 | 10:02 | 35 |
| 23 Q | 14:04 | 30.4 | 23.1 | 08:39 | 7.3 _m | 22:56 | 105 | 47 | 11:57 | 58 | 08:31 | 491 | 454 | 12:19 | 37 |
| 24 | 14:11 | 34.5 | 20.0 | 01:53 | 14.5 | 06:34 | 101 | 49 | 13:05 | 52 | 16:13 | 488 | 452 | 11:46 | 36 |
| 25 Q | 14:08 | 32.9 | 21.3 | 09:47 | 11.6 | 07:13 | 113 | 60 | 12:48 | 53 | 19:16 | 485 | 442 | 11:51 | 43 |
| 26 Q | 13:54 | 33.3 | 24.0 | 09:01 | 9.3 | 08:53 | 100 | 59 | 13:40 | 41 | 06:23 | 480 | 435 _m | 12:38 | 45 |
| 27 Q | 14:05 | 33.0 | 23.1 | 01:42 | 9.9 | 13:59 | 108 | 72 | 11:24 | 36 | 16:52 | 492 | 444 | 12:15 | 48 |
| 28 | 13:40 | 34.5 | 21.8 | 23:27 | 12.7 | 22:19 | 116 _M | 57 | 18:15 | 59 | 18:53 | 496 | 455 | 13:20 | 41 |
| Mean | | 34.1 | 18.9 | | 15.2 | | 97 | 41 | | 56 | | 516 | 455 | | 61 |

Table 7

Extreme Values of the Magnetic Elements

March 1989

| Date | DECLINATION | | | | | HORIZONTAL COMPONENT | | | | | VERTICAL COMPONENT | | | | |
|------|-------------------|------------------|-------------------|-------|--------|----------------------|---------------------|-----------------|-------|-------|--------------------|---------------------|-----------------|-------|-------|
| | Maximum G.M.T. | 9 ^o + | Minimum G.M.T. | Range | | Maximum G.M.T. | Minimum 19000nT+ | Range G.M.T. | | | Maximum G.M.T. | Minimum 44000nT+ | Range G.M.T. | | |
| 1 Q | 14:24 | 37.4 | 21.3 | 04:18 | 16.1 | 19:32 | 105 | 46 | 12:38 | 59 | 08:12 | 492 | 456 | 13:13 | 36m |
| 2 | 13:53 | 38.9 | 11.1 | 05:24 | 27.8 | 04:59 | 127 | 32 | 14:30 | 95 | 19:18 | 512 | 439 | 06:14 | 73 |
| 3 | 14:54 | 40.1 | 18.1 | 02:56 | 22.0 | 05:24 | 108 | 27 | 09:22 | 81 | 17:38 | 564 | 426 | 05:29 | 138 |
| 4 Q | 13:46 | 35.4 | 18.8 | 01:47 | 16.6 | 23:27 | 83 | 28 | 14:42 | 55 | 01:17 | 524 | 443 | 12:23 | 81 |
| 5 | 14:28 | 35.5 | 17.7 | 22:29 | 17.8 | 06:45 | 105 | -9 | 11:44 | 114 | 19:21 | 521 | 455 | 07:03 | 66 |
| 6 | 14:13 | 45.0 | 20.7 | 08:15 | 24.3 | 23:46 | 101 | 50 | 14:00 | 51 | 15:20 | 520 | 442 | 14:04 | 78 |
| 7 | 14:57 | 38.3 | 16.6 | 00:22 | 21.7 | 22:34 | 109 | 42 | 12:23 | 67 | 00:22 | 506 | 452 | 12:03 | 54 |
| 8 | 20:15 | 40.3 | 8.3 | 23:37 | 32.0 | 20:02 | 136 | 46 | 23:26 | 90 | 21:59 | 552 | 438 | 13:21 | 114 |
| 9 | 14:31 | 37.4 | 14.4 | 05:49 | 23.0 | 18:48 | 81 | 12 | 01:05 | 69 | 17:41 | 540 | 427 | 12:40 | 113 |
| 10 | 16:24 | 32.5 | 19.3 | 00:08 | 13.2m | 21:05 | 91 | 34 | 00:24 | 57 | 17:51 | 529 | 438 | 11:38 | 91 |
| 11 | 13:43 | 33.5 | 15.6 | 23:33 | 17.9 | 21:55 | 100 | 45 | 11:08 | 55 | 21:13 | 517 | 454 | 11:50 | 63 |
| 12 | 17:24 | 34.4 | 12.6 | 01:19 | 21.8 | 24:00 | 115 | 38 | 17:25 | 77 | 19:01 | 543 | 455 | 12:40 | 88 |
| 13 D | 15:24 | 74.7M | -130.0m | 21:50 | 204.7M | 17:29 | 345M | -964m | 21:48 | 1309M | 20:03 | 920 | -231m | 22:11 | 1151M |
| 14 D | 01:51 | 59.9 | -53.3 | 00:20 | 113.2 | 19:29 | 138 | -964m | 01:46 | 1102 | 01:48 | 1014M | 0 | 00:31 | 1014 |
| 15 | 16:22 | 33.8 | 4.7 | 01:46 | 29.1 | 21:18 | 75 | -46 | 00:54 | 121 | 16:57 | 564 | 440 | 02:13 | 124 |
| 16 D | 13:31 | 31.5 | 13.9 | 08:53 | 17.6 | 05:57 | 105 | -27 | 16:24 | 132 | 16:49 | 574 | 463 | 11:46 | 111 |
| 17 | 07:27 | 35.5 | 12.3 | 01:17 | 23.2 | 04:28 | 78 | 1 | 10:26 | 77 | 17:07 | 577 | 446 | 03:57 | 131 |
| 18 Q | 15:26 | 34.1 | 19.5 | 08:35 | 14.6 | 22:53 | 73 | 26 | 11:46 | 47m | 16:26 | 555 | 467 | 12:53 | 88 |
| 19 | 13:25 | 42.7 | 12.8 | 08:56 | 29.9 | 07:05 | 95 | -15 | 15:16 | 110 | 15:59 | 587 | 445 | 10:16 | 142 |
| 20 Q | 15:20 | 32.8 | 18.5 | 22:54 | 14.3 | 21:22 | 83 | 15 | 11:57 | 68 | 22:40 | 524 | 483 | 12:22 | 41 |
| 21 | 13:39 | 35.4 | 16.1 | 01:17 | 19.3 | 05:12 | 105 | 27 | 14:25 | 78 | 22:59 | 522 | 458 | 06:54 | 64 |
| 22 | 14:31 | 37.9 | 1.6 | 20:46 | 36.3 | 06:30 | 93 | 9 | 15:16 | 84 | 20:46 | 619 | 438 | 23:45 | 181 |
| 23 | 16:24 | 41.5 | 13.1 | 23:45 | 28.4 | 17:34 | 121 | 5 | 12:54 | 116 | 17:29 | 631 | 466 | 11:20 | 165 |
| 24 | 14:25 | 32.1 | 16.1 | 00:01 | 16.0 | 03:37 | 85 | 26 | 02:46 | 59 | 00:01 | 514 | 461 | 02:51 | 53 |
| 25 Q | 14:45 | 34.4 | 18.3 | 09:20 | 16.1 | 07:36 | 88 | 36 | 11:57 | 52 | 18:54 | 572 | 457 | 12:44 | 115 |
| 26 | 14:47 | 33.8 | 18.7 | 08:55 | 15.1 | 23:02 | 131 | 17 | 13:14 | 114 | 18:39 | 513 | 451 | 13:16 | 62 |
| 27 | 15:32 | 48.5 | 9.2 | 21:43 | 39.3 | 15:33 | 179 | 27 | 23:33 | 152 | 21:43 | 544 | 422 | 13:54 | 122 |
| 28 | 16:34 | 36.8 | 18.2 | 10:40 | 18.6 | 22:27 | 110 | 13 | 12:03 | 97 | 18:41 | 532 | 441 | 13:07 | 91 |
| 29 D | 16:09 | 39.3 | 3.7 | 03:16 | 35.6 | 18:42 | 168 | -8 | 21:00 | 176 | 18:37 | 611 | 416 | 01:09 | 195 |
| 30 | 13:45 | 34.6 | 11.9 | 23:20 | 22.7 | 22:56 | 110 | 9 | 11:40 | 101 | 19:01 | 584 | 448 | 23:06 | 136 |
| 31 D | 14:01 | 36.5 | 11.0 | 02:39 | 25.5 | 17:52 | 122 | -6 | 11:17 | 128 | 17:49 | 607 | 442 | 22:49 | 165 |
| Mean | | 38.9 | 7.4 | | 31.4 | | 115 | -45 | | 161 | | 577 | 411 | | 166 |

Table 7

Extreme Values of the Magnetic Elements

April 1989

| Date | DECLINATION | | | HORIZONTAL COMPONENT | | | | | | VERTICAL COMPONENT | | | | | |
|------|-------------------|-----------------|-------------------|----------------------|-------------------|---------------------|-----------------|-------------------|---------------------|--------------------|-------|------|------|-------|------|
| | Maximum G.M.T. | 9 ^{m+} | Minimum G.M.T. | Range | Maximum G.M.T. | Minimum 19000nT+ | Range G.M.T. | Maximum G.M.T. | Minimum 44000nT+ | Range G.M.T. | | | | | |
| 1 D | 13:45 | 35.5 | 12.0 | 04:07 | 23.5 | 19:04 | 132 | 9 | 11:58 | 123 | 19:00 | 569 | 448 | 07:55 | 121 |
| 2 | 14:30 | 36.4 | 18.8 | 08:48 | 17.6 | 17:27 | 127 | 18 | 13:10 | 109 | 17:18 | 567 | 461 | 12:15 | 106 |
| 3 | 14:29 | 36.7 | 16.1 | 22:56 | 20.6 | 23:53 | 114 | 36 | 14:13 | 78 | 20:09 | 528 | 438 | 24:00 | 90 |
| 4 D | 15:22 | 34.8 | 12.0 | 19:15 | 22.8 | 22:34 | 131 | 1 | 12:09 | 130 | 18:50 | 620 | 435 | 00:03 | 185 |
| 5 D | 13:37 | 33.8 | 8.9 | 00:43 | 24.9 | 20:12 | 127 | 22 | 09:47 | 105 | 20:03 | 563 | 409 | 01:43 | 154 |
| 6 | 13:31 | 34.1 | 18.4 | 02:49 | 15.7 | 21:07 | 104 | 43 | 11:05 | 61 | 20:23 | 517 | 459 | 12:42 | 58 |
| 7 | 14:01 | 39.6 | 18.2 | 23:15 | 21.4 | 23:25 | 123 | 11 | 11:17 | 112 | 19:09 | 581 | 450 | 11:40 | 131 |
| 8 | 15:35 | 34.9 | 19.0 | 04:58 | 15.9 | 00:17 | 103 | 12 | 11:51 | 91 | 19:02 | 544 | 444 | 12:18 | 100 |
| 9 | 14:29 | 35.0 | 15.8 | 19:38 | 19.2 | 19:50 | 146 | 15 | 12:17 | 131 | 19:38 | 566 | 441 | 13:02 | 125 |
| 10 Q | 14:31 | 34.3 | 18.1 | 09:19 | 16.2 | 19:53 | 104 | 37 | 12:36 | 67 | 19:18 | 517 | 449 | 13:25 | 68 |
| 11 | 16:21 | 40.8M | 18.2 | 09:14 | 22.6 | 16:05 | 139 | 46 | 11:16 | 93 | 08:10 | 501 | 426 | 12:39 | 75 |
| 12 Q | 14:10 | 33.0 | 17.3 | 09:01 | 15.7 | 20:47 | 116 | 52 | 12:05 | 64 | 07:49 | 502 | 445 | 12:52 | 57 |
| 13 | 14:53 | 34.1 | 18.9 | 09:33 | 15.2 | 07:25 | 111 | 33 | 12:22 | 78 | 19:02 | 531 | 447 | 12:58 | 84 |
| 14 | 14:35 | 37.1 | 10.0 | 23:26 | 27.1 | 18:30 | 135 | 25 | 22:21 | 110 | 19:49 | 555 | 430 | 12:32 | 125 |
| 15 | 14:44 | 32.1 | 12.8 | 02:38 | 19.3 | 22:50 | 88 | 15 | 11:59 | 73 | 18:48 | 519 | 425 | 04:23 | 94 |
| 16 | 15:00 | 33.4 | 9.2 | 22:10 | 24.2 | 18:17 | 120 | 32 | 12:11 | 88 | 22:06 | 552 | 449 | 13:32 | 103 |
| 17 | 13:26 | 32.7 | 16.6 | 01:15 | 16.1 | 00:27 | 106 | 32 | 12:05 | 74 | 21:29 | 518 | 461 | 00:34 | 57 |
| 18 | 14:26 | 31.4 | 17.2 | 04:55 | 14.2 | 03:01 | 131 | 32 | 11:50 | 99 | 00:53 | 495 | 459 | 12:33 | 36m |
| 19 Q | 14:48 | 33.8 | 19.0 | 09:03 | 14.8 | 18:28 | 118 | 42 | 12:20 | 76 | 03:00 | 494 | 436 | 12:06 | 58 |
| 20 | 14:23 | 31.0 | 17.5 | 06:11 | 13.5 | 17:29 | 109 | 44 | 11:22 | 65 | 19:12 | 502 | 447 | 12:48 | 55 |
| 21 Q | 13:42 | 32.8 | 19.8 | 08:42 | 13.0 | 07:22 | 114 | 57 | 13:31 | 57 | 00:22 | 495 | 434 | 12:56 | 61 |
| 22 Q | 13:52 | 34.5 | 19.2 | 09:02 | 15.3 | 00:43 | 115 | 62 | 12:52 | 53 | 24:00 | 497 | 434 | 12:21 | 63 |
| 23 | 16:40 | 35.1 | 18.4 | 20:40 | 16.7 | 06:59 | 106 | 65 | 13:29 | 41m | 18:44 | 559 | 431 | 12:37 | 128 |
| 24 | 14:47 | 30.5 | 17.1 | 23:35 | 13.4 | 23:41 | 125 | 63 | 11:05 | 62 | 23:33 | 506 | 436 | 12:16 | 70 |
| 25 | 18:17 | 35.6 | 13.7 | 22:18 | 21.9 | 17:42 | 157 | 24 | 23:53 | 133 | 22:18 | 575 | 438 | 12:45 | 137 |
| 26 D | 15:33 | 31.9 | 3.8m | 19:20 | 28.1M | 19:27 | 188M | -17m | 08:51 | 205M | 19:19 | 625M | 388m | 00:55 | 237M |
| 27 D | 15:20 | 33.0 | 7.4 | 03:43 | 25.6 | 17:30 | 164 | -1 | 10:49 | 165 | 19:57 | 583 | 415 | 03:05 | 168 |
| 28 | 15:32 | 31.2 | 12.3 | 03:21 | 18.9 | 18:19 | 148 | 13 | 12:24 | 135 | 18:09 | 568 | 421 | 00:16 | 147 |
| 29 | 15:32 | 33.9 | 14.8 | 23:04 | 19.1 | 17:32 | 158 | 27 | 12:49 | 131 | 19:38 | 556 | 442 | 12:59 | 114 |
| 30 | 14:39 | 29.4 | 16.6 | 00:32 | 12.8m | 24:00 | 109 | 34 | 13:01 | 75 | 19:53 | 515 | 455 | 01:55 | 60 |
| Mean | | 34.1 | 15.2 | | 18.8 | | 126 | 30 | | 96 | | 541 | 438 | | 102 |

Table 7

Extreme Values of the Magnetic Elements

May 1989

| Date | DECLINATION | | | HORIZONTAL COMPONENT | | | VERTICAL COMPONENT | | | | | | | | |
|------|-------------------|--------------------------------------|-------|----------------------|-------------------------------|-------|--------------------|-------------------------------|-------|------|-------|------|------|-------|------|
| | Maximum G.M.T. | Minimum 9 ^{m+} G.M.T. | Range | Maximum G.M.T. | Minimum 19000nT+ G.M.T. | Range | Maximum G.M.T. | Minimum 44000nT+ G.M.T. | Range | | | | | | |
| 1 | 17:01 | 30.6 | 20.1 | 09:31 | 10.5m | 17:29 | 119 | 67 | 11:52 | 52 | 19:30 | 512 | 445 | 13:06 | 67 |
| 2 | 13:36 | 33.2 | 16.6 | 19:32 | 16.6 | 19:39 | 136 | 53 | 12:02 | 83 | 19:32 | 555 | 449 | 12:28 | 106 |
| 3 | 15:07 | 29.5 | 17.7 | 08:52 | 11.8 | 23:13 | 120 | 59 | 13:28 | 61 | 18:45 | 514 | 462 | 12:57 | 52 |
| 4 | 14:14 | 34.7 | 17.1 | 02:59 | 17.6 | 23:58 | 162 | 48 | 11:16 | 114 | 17:20 | 517 | 446 | 12:10 | 71 |
| 5 D | 00:08 | 34.4 | 2.1m | 01:44 | 32.3M | 00:01 | 156 | 7 | 09:49 | 149 | 21:00 | 531 | 383m | 02:18 | 148 |
| 6 | 14:57 | 33.1 | 16.9 | 07:37 | 16.2 | 20:25 | 123 | 36 | 09:40 | 87 | 21:40 | 524 | 443 | 12:35 | 81 |
| 7 D | 14:59 | 37.7 | 13.5 | 20:57 | 24.2 | 19:10 | 129 | 13 | 13:32 | 116 | 19:01 | 594 | 430 | 12:48 | 164 |
| 8 Q | 14:05 | 33.2 | 16.6 | 07:46 | 16.6 | 21:59 | 110 | 42 | 09:52 | 68 | 19:10 | 509 | 435 | 12:40 | 74 |
| 9 Q | 14:36 | 34.3 | 18.0 | 08:06 | 16.3 | 20:51 | 103 | 65 | 12:08 | 38m | 06:13 | 501 | 420 | 12:04 | 81 |
| 10 Q | 14:01 | 33.7 | 18.1 | 07:21 | 15.6 | 19:31 | 115 | 58 | 12:36 | 57 | 05:41 | 501 | 426 | 12:01 | 75 |
| 11 Q | 14:56 | 31.5 | 15.7 | 07:57 | 15.8 | 19:45 | 123 | 66 | 10:50 | 57 | 05:54 | 497 | 432 | 12:43 | 65 |
| 12 | 15:20 | 31.2 | 15.5 | 07:06 | 15.7 | 04:50 | 126 | 58 | 13:44 | 68 | 18:26 | 514 | 441 | 11:24 | 73 |
| 13 | 15:30 | 33.3 | 17.7 | 06:15 | 15.6 | 17:17 | 136 | 65 | 13:14 | 71 | 19:05 | 501 | 428 | 11:42 | 73 |
| 14 | 13:21 | 32.7 | 16.0 | 08:00 | 16.7 | 05:32 | 122 | 66 | 12:23 | 56 | 17:10 | 500 | 428 | 11:39 | 72 |
| 15 | 12:45 | 34.2 | 17.4 | 07:34 | 16.8 | 18:57 | 132 | 69 | 09:46 | 63 | 19:12 | 510 | 439 | 11:56 | 71 |
| 16 | 14:13 | 31.0 | 17.8 | 05:48 | 13.2 | 19:45 | 121 | 67 | 13:43 | 54 | 05:48 | 500 | 438 | 12:36 | 62 |
| 17 | 13:11 | 29.9 | 16.9 | 08:28 | 13.0 | 17:58 | 118 | 63 | 11:55 | 55 | 17:44 | 495 | 453 | 10:59 | 42m |
| 18 | 13:45 | 31.9 | 15.9 | 07:12 | 16.0 | 20:43 | 116 | 63 | 12:35 | 53 | 17:26 | 497 | 438 | 12:19 | 59 |
| 19 Q | 14:13 | 31.0 | 18.4 | 07:11 | 12.6 | 18:44 | 122 | 77 | 10:36 | 45 | 18:20 | 494 | 449 | 12:20 | 45 |
| 20 | 14:48 | 33.1 | 17.1 | 08:43 | 16.0 | 19:23 | 124 | 25 | 12:01 | 99 | 19:15 | 512 | 440 | 12:16 | 72 |
| 21 | 13:13 | 29.4 | 16.1 | 08:06 | 13.3 | 20:06 | 127 | 55 | 13:31 | 72 | 18:34 | 500 | 446 | 12:33 | 54 |
| 22 | 14:49 | 33.9 | 17.2 | 08:01 | 16.7 | 21:14 | 139 | 63 | 14:00 | 76 | 21:44 | 499 | 448 | 12:08 | 51 |
| 23 D | 16:06 | 40.3M | 14.8 | 23:02 | 25.5 | 15:31 | 236M | 62 | 18:57 | 174 | 18:58 | 583 | 428 | 23:49 | 155 |
| 24 D | 15:35 | 34.6 | 11.6 | 01:54 | 23.0 | 17:16 | 179 | -42m | 13:19 | 221M | 17:07 | 601M | 422 | 06:21 | 179M |
| 25 D | 16:04 | 30.9 | 12.9 | 02:53 | 18.0 | 18:44 | 135 | 28 | 08:19 | 107 | 18:21 | 523 | 441 | 00:21 | 82 |
| 26 | 15:29 | 34.3 | 15.7 | 08:36 | 18.6 | 19:15 | 147 | 44 | 13:12 | 103 | 18:33 | 537 | 435 | 11:58 | 102 |
| 27 | 15:21 | 32.8 | 13.8 | 03:32 | 19.0 | 19:57 | 128 | 26 | 11:09 | 102 | 21:24 | 510 | 444 | 05:31 | 66 |
| 28 | 14:35 | 32.1 | 15.7 | 08:18 | 16.4 | 17:26 | 134 | 44 | 10:52 | 90 | 18:08 | 528 | 444 | 12:58 | 84 |
| 29 | 13:38 | 32.5 | 14.6 | 08:15 | 17.9 | 18:39 | 132 | 35 | 10:28 | 97 | 19:25 | 512 | 437 | 10:59 | 75 |
| 30 | 14:25 | 31.1 | 13.9 | 07:36 | 17.2 | 19:22 | 124 | 62 | 07:58 | 62 | 21:02 | 507 | 428 | 11:46 | 79 |
| 31 | 13:54 | 30.6 | 13.2 | 08:20 | 17.4 | 18:50 | 136 | 66 | 06:52 | 70 | 19:31 | 505 | 442 | 12:36 | 63 |
| Mean | | 32.8 | 15.6 | | 17.2 | | 133 | 49 | | 85 | | 519 | 437 | | 82 |

Table 7

Extreme Values of the Magnetic Elements

June 1989

| Date | DECLINATION | | | HORIZONTAL COMPONENT | | | | | | VERTICAL COMPONENT | | | | | | | | |
|------|-------------------|-------------------|-----------------|----------------------|--------------------|-----------------|-------------------|--------------------|-----------------|--------------------|-------|------|------|-------|------|-----|--|----|
| | Maximum G.M.T. | Minimum G.M.T. | Range G.M.T. | Maximum G.M.T. | Minimum 1900nT+ | Range G.M.T. | Maximum G.M.T. | Minimum 4400nT+ | Range G.M.T. | | | | | | | | | |
| 1 | 13:57 | 33.2 | 15.4 | 06:36 | 17.8 | 20:27 | 123 | 67 | 12:24 | 56 | 19:01 | 510 | 432 | 12:03 | 78 | | | |
| 2 | 15:18 | 33.9 | 14.6 | 08:39 | 19.3 | 18:27 | 139 | 44 | 13:38 | 95 | 19:21 | 522 | 431 | 12:03 | 91 | | | |
| 3 | 15:23 | 34.0 | 14.5 | 07:50 | 19.5 | 17:13 | 139 | 62 | 12:51 | 77 | 18:38 | 543 | 437 | 12:19 | 106 | | | |
| 4 | 14:12 | 32.5 | 13.7 | 04:35 | 18.8 | 18:46 | 118 | 52 | 14:28 | 66 | 19:10 | 514 | 428 | 03:37 | 86 | | | |
| 5 | 14:37 | 33.7 | 16.0 | 06:40 | 17.7 | 22:09 | 122 | 48 | 10:17 | 74 | 18:22 | 505 | 417 | 13:07 | 88 | | | |
| 6 | 13:37 | 32.4 | 12.6 | 07:22 | 19.8 | 23:19 | 165 | 47 | 11:21 | 118 | 07:14 | 501 | 428 | 12:33 | 73 | | | |
| 7 D | 14:17 | 32.5 | 6.1 | 07:43 | 26.4 | 01:17 | 149 | -22 | 11:23 | 171 | 18:47 | 515 | 436 | 10:58 | 79 | | | |
| 8 | 14:53 | 32.0 | 14.2 | 08:44 | 17.8 | 20:37 | 205 | 46 | 12:14 | 159 | 22:27 | 509 | 427 | 12:27 | 82 | | | |
| 9 D | 13:57 | 31.5 | -1.4m | 02:08 | 32.9M | 18:57 | 164 | 26 | 09:39 | 138 | 20:34 | 551 | 453 | 02:51 | 98 | | | |
| 10 D | 16:24 | 38.6 | 7.9 | 01:37 | 30.7 | 16:43 | 244M | -40m | 10:56 | 284M | 18:09 | 696M | 385m | 07:24 | 311M | | | |
| 11 | 00:31 | 33.2 | 13.3 | 07:14 | 19.9 | 19:00 | 134 | -3 | 13:12 | 137 | 19:15 | 542 | 455 | 13:13 | 87 | | | |
| 12 | 14:02 | 28.6 | 18.3 | 07:43 | 10.3m | 18:51 | 115 | 21 | 11:08 | 94 | 18:55 | 514 | 451 | 12:14 | 63 | | | |
| 13 | 14:21 | 32.7 | 16.2 | 08:34 | 16.5 | 20:37 | 153 | 37 | 10:19 | 116 | 20:31 | 531 | 449 | 12:32 | 82 | | | |
| 14 D | 14:22 | 34.3 | 16.6 | 07:13 | 17.7 | 18:41 | 145 | 14 | 12:54 | 131 | 18:02 | 569 | 449 | 11:50 | 120 | | | |
| 15 D | 14:44 | 34.1 | 10.9 | 07:52 | 23.2 | 18:55 | 174 | -11 | 11:05 | 185 | 18:47 | 589 | 450 | 02:41 | 139 | | | |
| 16 | 15:05 | 29.8 | 13.5 | 08:52 | 16.3 | 19:25 | 108 | 23 | 13:07 | 85 | 19:08 | 517 | 459 | 12:35 | 58 | | | |
| 17 Q | 14:03 | 34.3 | 15.1 | 08:08 | 19.2 | 17:20 | 135 | 48 | 10:52 | 87 | 18:31 | 509 | 446 | 12:31 | 63 | | | |
| 18 Q | 15:10 | 34.2 | 13.6 | 08:31 | 20.6 | 19:29 | 132 | 43 | 11:37 | 89 | 06:39 | 508 | 433 | 12:32 | 75 | | | |
| 19 | 14:34 | 33.3 | 17.4 | 07:55 | 15.9 | 18:57 | 133 | 63 | 13:45 | 70 | 18:56 | 518 | 450 | 12:45 | 68 | | | |
| 20 | 15:04 | 40.0M | 11.1 | 07:16 | 28.9 | 19:11 | 145 | 27 | 11:44 | 118 | 20:33 | 543 | 431 | 11:11 | 112 | | | |
| 21 Q | 14:30 | 33.4 | 14.5 | 07:28 | 18.9 | 22:14 | 103 | 51 | 11:51 | 52 | 06:11 | 507 | 441 | 12:49 | 66 | | | |
| 22 Q | 15:08 | 31.3 | 15.3 | 09:32 | 16.0 | 23:47 | 116 | 48 | 14:05 | 68 | 06:00 | 502 | 438 | 12:48 | 64 | | | |
| 23 Q | 15:08 | 30.9 | 15.8 | 09:27 | 15.1 | 20:37 | 118 | 74 | 14:31 | 44m | 18:31 | 509 | 455 | 12:43 | 54 | | | |
| 24 | 15:11 | 30.5 | 17.5 | 06:28 | 13.0 | 19:05 | 122 | 63 | 13:33 | 59 | 06:13 | 501 | 446 | 12:18 | 55 | | | |
| 25 | 15:23 | 29.8 | 16.1 | 05:11 | 13.7 | 19:24 | 124 | 58 | 12:58 | 66 | 20:29 | 495 | 435 | 12:45 | 60 | | | |
| 26 | 15:35 | 31.2 | 15.2 | 08:55 | 16.0 | 17:26 | 138 | 38 | 12:35 | 100 | 19:11 | 513 | 448 | 13:18 | 65 | | | |
| 27 | 15:27 | 30.3 | 15.3 | 07:36 | 15.0 | 19:28 | 124 | 60 | 12:23 | 64 | 21:57 | 497 | 437 | 12:05 | 60 | | | |
| 28 | 15:06 | 30.2 | 14.3 | 08:22 | 15.9 | 01:37 | 118 | 60 | 13:10 | 58 | 18:30 | 495 | 427 | 13:00 | 68 | | | |
| 29 | 14:49 | 31.9 | 18.4 | 08:11 | 13.5 | 05:51 | 117 | 32 | 12:46 | 85 | 16:49 | 530 | 452 | 04:29 | 78 | | | |
| 30 | 13:18 | 28.8 | 14.2 | 03:49 | 14.6 | 18:20 | 114 | 40 | 10:31 | 74 | 17:24 | 505 | 452 | 05:20 | 53m | | | |
| Mean | | 32.6 | | 13.9 | | 18.7 | | 138 | | 37 | | 101 | | 525 | | 439 | | 86 |

Table 7

Extreme Values of the Magnetic Elements

July 1989

| Date | DECLINATION | | | | | HORIZONTAL COMPONENT | | | | | VERTICAL COMPONENT | | | | |
|------|-------------------|----------------|-------------------|-------|-------------------|----------------------|--------------------------------|-----------------|-------|-----------------|--------------------|--------------------------------|------------------|-------|-----------------|
| | Maximum G.M.T. | 9 ⁺ | Minimum G.M.T. | Range | | Maximum G.M.T. | Minimum 1900nT ⁺ | Range G.M.T. | | | Maximum G.M.T. | Minimum 4400nT ⁺ | Range G.M.T. | | |
| 1 D | 17:54 | 36.7M | 13.5 | 07:23 | 23.2M | 17:44 | 205M | 62 | 23:32 | 143M | 19:18 | 545M | 439 | 11:14 | 106M |
| 2 | 14:33 | 30.7 | 15.4 | 07:32 | 15.3 | 18:43 | 108 | 33 _m | 11:56 | 75 | 18:21 | 512 | 463 | 12:30 | 49 _m |
| 3 Q | 14:36 | 30.3 | 13.9 | 08:34 | 16.4 | 18:11 | 117 | 40 | 10:28 | 77 | 18:53 | 509 | 454 | 12:56 | 55 |
| 4 Q | 14:11 | 32.9 | 14.4 | 08:12 | 18.5 | 19:13 | 117 | 49 | 10:37 | 68 | 06:37 | 500 | 442 | 13:16 | 58 |
| 5 D | 15:00 | 31.4 | 14.1 | 08:16 | 17.3 | 17:44 | 190 | 76 | 09:38 | 114 | 20:18 | 517 | 441 | 12:39 | 76 |
| 6 | 14:26 | 34.3 | 16.9 | 07:36 | 17.4 | 18:28 | 135 | 68 | 10:29 | 67 | 19:11 | 516 | 433 | 11:55 | 83 |
| 7 | 14:08 | 29.9 | 15.1 | 09:11 | 14.8 | 19:39 | 126 | 50 | 11:52 | 76 | 17:21 | 502 | 446 | 12:30 | 56 |
| 8 Q | 14:46 | 32.1 | 15.9 | 08:08 | 16.2 | 18:47 | 114 | 59 | 11:43 | 55 | 06:18 | 500 | 426 | 12:53 | 74 |
| 9 | 15:52 | 30.3 | 14.1 | 09:31 | 16.2 | 21:04 | 128 | 56 | 11:45 | 72 | 06:13 | 497 | 429 | 12:36 | 68 |
| 10 | 13:27 | 32.0 | 14.2 | 07:19 | 17.8 | 17:38 | 143 | 71 | 10:57 | 72 | 19:09 | 514 | 444 | 13:28 | 70 |
| 11 Q | 15:25 | 31.8 | 16.5 | 08:12 | 15.3 | 18:42 | 125 | 55 | 10:37 | 70 | 19:33 | 498 | 432 | 12:44 | 66 |
| 12 | 15:00 | 30.2 | 15.4 | 08:57 | 14.8 | 23:18 | 133 | 70 | 14:15 | 63 | 06:58 | 492 | 430 | 13:04 | 62 |
| 13 | 15:03 | 32.2 | 15.9 | 07:00 | 16.3 | 17:40 | 121 | 53 | 12:27 | 68 | 18:02 | 501 | 434 | 13:16 | 67 |
| 14 | 16:22 | 29.4 | 14.9 | 08:14 | 14.5 | 21:09 | 125 | 59 | 12:05 | 66 | 18:48 | 493 | 439 | 12:42 | 54 |
| 15 | 14:18 | 29.9 | 16.4 | 06:11 | 13.5 | 19:18 | 135 | 59 | 11:58 | 76 | 18:21 | 503 | 443 | 11:48 | 60 |
| 16 Q | 14:30 | 30.5 | 17.9 | 08:51 | 12.6 _m | 18:21 | 126 | 73 | 13:17 | 53 | 05:58 | 491 | 436 | 12:17 | 55 |
| 17 D | 15:31 | 31.3 | 15.5 | 08:59 | 15.8 | 17:20 | 148 | 68 | 12:22 | 80 | 18:14 | 507 | 441 | 11:14 | 66 |
| 18 D | 14:20 | 33.9 | 17.6 | 03:27 | 16.3 | 02:26 | 120 | 66 | 15:52 | 54 | 18:39 | 526 | 448 | 05:24 | 78 |
| 19 | 14:04 | 31.4 | 13.1 | 08:55 | 18.3 | 18:25 | 115 | 51 | 12:13 | 64 | 17:33 | 500 | 447 | 12:54 | 53 |
| 20 | 14:33 | 30.5 | 15.9 | 07:22 | 14.6 | 17:07 | 128 | 80 | 11:27 | 48 _m | 18:10 | 494 | 428 | 12:51 | 66 |
| 21 | 13:55 | 29.2 | 15.4 | 07:37 | 13.8 | 20:25 | 121 | 62 | 10:24 | 59 | 17:24 | 496 | 441 | 10:52 | 55 |
| 22 | 13:46 | 32.2 | 18.6 | 06:42 | 13.6 | 23:22 | 128 | 64 | 13:00 | 64 | 17:53 | 496 | 439 | 13:30 | 57 |
| 23 | 15:25 | 33.0 | 13.2 | 06:17 | 19.8 | 04:26 | 133 | 59 | 14:18 | 74 | 18:45 | 499 | 419 _m | 13:31 | 80 |
| 24 | 14:59 | 34.6 | 16.7 | 09:26 | 17.9 | 00:50 | 130 | 50 | 11:14 | 80 | 18:57 | 499 | 429 | 12:56 | 70 |
| 25 | 15:56 | 32.8 | 12.6 | 08:46 | 20.2 | 22:30 | 124 | 52 | 11:21 | 72 | 18:48 | 495 | 437 | 13:08 | 58 |
| 26 D | 16:23 | 33.1 | 14.4 | 08:12 | 18.7 | 17:56 | 142 | 62 | 10:21 | 80 | 19:26 | 509 | 435 | 12:20 | 74 |
| 27 | 15:09 | 31.4 | 14.1 | 06:34 | 17.3 | 17:42 | 124 | 55 | 12:31 | 69 | 18:15 | 500 | 442 | 12:43 | 58 |
| 28 | 15:23 | 30.1 | 15.5 | 08:56 | 14.6 | 18:31 | 133 | 63 | 12:13 | 70 | 19:24 | 501 | 438 | 13:10 | 63 |
| 29 | 14:56 | 33.0 | 12.5 _m | 07:45 | 20.5 | 18:08 | 138 | 44 | 12:17 | 94 | 18:35 | 509 | 427 | 11:51 | 82 |
| 30 | 14:41 | 30.6 | 15.0 | 07:54 | 15.6 | 18:18 | 129 | 52 | 11:08 | 77 | 19:41 | 495 | 436 | 12:08 | 59 |
| 31 | 13:51 | 28.4 | 15.3 | 08:56 | 13.1 | 20:05 | 118 | 60 | 08:54 | 58 | 17:00 | 488 | 434 | 11:36 | 54 |
| Mean | | 31.6 | 15.2 | | 16.5 | | 132 | 59 | | 73 | | 503 | 438 | | 66 |

Table 7

Extreme Values of the Magnetic Elements
HORIZONTAL COMPONENT

August 1989

| Date | DECLINATION | | | | HORIZONTAL COMPONENT | | | | | | VERTICAL COMPONENT | | | | |
|------|-------------------|-------|-------------------|-------|----------------------|--------------------|-----------------|-------------------|--------------------|-----------------|--------------------|--------------------|-----------------|-------|------|
| | Maximum G.M.T. | 9°+ | Minimum G.M.T. | Range | Maximum G.M.T. | Minimum 1900nT+ | Range G.M.T. | Maximum G.M.T. | Minimum 4400nT+ | Range G.M.T. | Maximum G.M.T. | Minimum 4400nT+ | Range G.M.T. | | |
| 1 Q | 15:13 | 31.3 | 14.3 | 06:10 | 17.0 | 19:40 | 120 | 86 | 10:41 | 34m | 17:50 | 492 | 432 | 11:44 | 60 |
| 2 | 14:19 | 31.3 | 15.7 | 06:17 | 15.6 | 00:37 | 125 | 76 | 12:55 | 49 | 00:20 | 490 | 423 | 12:15 | 67 |
| 3 Q | 15:32 | 33.1 | 18.0 | 08:34 | 15.1 | 00:04 | 118 | 68 | 10:55 | 50 | 18:54 | 498 | 424 | 13:05 | 74 |
| 4 | 14:54 | 34.8 | 10.7 | 08:54 | 24.1 | 18:04 | 129 | 70 | 12:37 | 59 | 18:49 | 500 | 422 | 13:23 | 78 |
| 5 Q | 14:56 | 33.2 | 15.0 | 08:44 | 18.2 | 24:00 | 117 | 48 | 11:39 | 69 | 18:29 | 489 | 425 | 11:49 | 64 |
| 6 | 15:04 | 32.8 | 14.6 | 08:06 | 18.2 | 19:31 | 146 | 46 | 10:22 | 100 | 18:41 | 508 | 413 | 12:29 | 95 |
| 7 | 14:26 | 31.2 | 13.5 | 08:29 | 17.7 | 19:50 | 135 | 63 | 14:04 | 72 | 18:45 | 503 | 420 | 12:11 | 83 |
| 8 | 14:54 | 30.9 | 15.1 | 08:15 | 15.8 | 18:42 | 126 | 54 | 09:54 | 72 | 06:27 | 491 | 424 | 13:03 | 67 |
| 9 | 14:11 | 31.4 | 14.5 | 07:45 | 16.9 | 18:48 | 177 | 55 | 11:35 | 122 | 20:24 | 494 | 422 | 12:08 | 72 |
| 10 D | 14:16 | 32.8 | 10.6 | 08:37 | 22.2 | 02:02 | 148 | 4 | 08:18 | 144 | 21:11 | 531 | 426 | 11:26 | 105 |
| 11 | 15:05 | 31.4 | 11.0 | 07:35 | 20.4 | 05:34 | 118 | 15 | 11:20 | 103 | 19:01 | 503 | 428 | 04:26 | 75 |
| 12 | 14:39 | 31.4 | 13.0 | 08:08 | 18.4 | 19:05 | 109 | 46 | 12:46 | 63 | 00:34 | 499 | 438 | 14:24 | 61 |
| 13 | 14:39 | 30.1 | 17.3 | 07:00 | 12.8 | 20:24 | 107 | 50 | 11:27 | 57 | 23:44 | 490 | 440 | 12:28 | 50 |
| 14 D | 13:15 | 35.3 | 8.3 | 08:56 | 27.0 | 22:09 | 130 | -25 | 08:44 | 155 | 21:47 | 554 | 446 | 09:38 | 108 |
| 15 D | 23:36 | 36.1 | 7.8 | 02:15 | 28.3 | 22:36 | 203M | -36m | 12:38 | 239M | 22:27 | 545 | 342m | 04:18 | 203 |
| 16 | 13:54 | 31.4 | 12.7 | 08:39 | 18.7 | 22:18 | 133 | 13 | 10:49 | 120 | 18:28 | 526 | 390 | 00:51 | 136 |
| 17 D | 17:09 | 35.5 | 7.2 | 24:00 | 28.3 | 16:39 | 148 | 25 | 11:58 | 123 | 17:30 | 607 | 454 | 11:39 | 153 |
| 18 | 14:15 | 33.4 | 6.5 | 00:02 | 26.9 | 19:12 | 131 | -29 | 09:28 | 160 | 21:06 | 522 | 444 | 00:39 | 78 |
| 19 | 14:07 | 30.7 | 11.0 | 03:25 | 19.7 | 00:41 | 124 | 4 | 11:18 | 120 | 17:01 | 507 | 436 | 12:24 | 71 |
| 20 | 14:47 | 34.4 | 12.5 | 06:46 | 21.9 | 04:52 | 102 | -10 | 09:21 | 112 | 06:22 | 504 | 424 | 12:35 | 80 |
| 21 | 15:18 | 38.8M | 12.0 | 07:57 | 26.8 | 17:26 | 147 | 32 | 11:27 | 115 | 19:47 | 596 | 437 | 12:12 | 159 |
| 22 | 14:08 | 27.1 | 12.1 | 00:54 | 15.0 | 19:57 | 95 | 31 | 13:56 | 64 | 08:31 | 513 | 457 | 02:53 | 56 |
| 23 | 14:57 | 35.7 | 11.3 | 20:40 | 24.4 | 14:57 | 111 | 24 | 12:48 | 87 | 19:06 | 612M | 438 | 12:28 | 174 |
| 24 Q | 14:21 | 32.0 | 14.2 | 08:09 | 17.8 | 20:24 | 99 | 31 | 10:59 | 68 | 06:31 | 506 | 435 | 12:29 | 71 |
| 25 Q | 14:00 | 29.3 | 16.1 | 07:59 | 13.2 | 21:40 | 119 | 51 | 10:38 | 68 | 06:47 | 495 | 440 | 13:09 | 55 |
| 26 | 13:25 | 28.9 | 17.8 | 07:25 | 11.1m | 03:20 | 110 | 65 | 10:33 | 45 | 16:15 | 494 | 465 | 13:13 | 29m |
| 27 | 14:30 | 32.3 | 12.9 | 07:48 | 19.4 | 19:17 | 155 | 56 | 12:04 | 99 | 20:11 | 552 | 447 | 13:48 | 105 |
| 28 | 21:26 | 32.8 | 5.8 | 23:41 | 27.0 | 19:42 | 130 | 30 | 23:06 | 100 | 23:28 | 535 | 445 | 11:53 | 90 |
| 29 D | 13:07 | 31.6 | -1.3m | 01:40 | 32.9M | 05:08 | 126 | -25 | 01:53 | 151 | 17:01 | 554 | 347 | 04:47 | 207M |
| 30 | 13:56 | 31.7 | 12.9 | 08:43 | 18.8 | 17:34 | 122 | 22 | 11:02 | 100 | 17:21 | 548 | 457 | 11:44 | 91 |
| 31 | 14:22 | 29.3 | 16.2 | 08:14 | 13.1 | 20:19 | 95 | 40 | 09:21 | 55 | 17:07 | 533 | 456 | 12:19 | 77 |
| Mean | | 32.3 | 12.2 | | 20.1 | | 128 | 32 | | 96 | | 522 | 429 | | 93 |

Table 7

Extreme Values of the Magnetic Elements

September 1989

| Date | DECLINATION | | | HORIZONTAL COMPONENT | | | | | | VERTICAL COMPONENT | | |
|------|-------------------|-----------------|-------------------|----------------------|-------------------|--------------------|-----------------|-------------------|--------------------|--------------------|------------|------|
| | Maximum G.M.T. | 9 ^{o+} | Minimum G.M.T. | Range | Maximum G.M.T. | Minimum 1900nT+ | Range G.M.T. | Maximum G.M.T. | Minimum 4400nT+ | Range G.M.T. | | |
| 1 | 13:49 | 31.3 | 14.2 07:39 | 17.1 | 01:10 | 99 | 47 09:33 | 52 | 16:36 | 510 | 455 12:01 | 55 |
| 2 | 13:25 | 32.4 | 16.4 07:06 | 16.0 | 02:19 | 108 | 52 10:05 | 56 | 16:16 | 523 | 440 11:41 | 83 |
| 3 | 14:33 | 31.4 | 16.6 07:33 | 14.8 | 20:06 | 105 | 59 14:33 | 46 | 16:32 | 508 | 439 11:25 | 69 |
| 4 D | 14:16 | 30.1 | 7.2 04:00 | 22.9 | 03:28 | 134 | 7 12:36 | 127 | 17:24 | 513 | 434 03:17 | 79 |
| 5 | 13:44 | 28.5 | 9.3 06:23 | 19.2 | 06:36 | 109 | 11 12:14 | 98 | 06:23 | 500 | 448 11:46 | 52 |
| 6 | 14:13 | 29.6 | 16.0 09:57 | 13.6 | 20:54 | 108 | 43 12:42 | 65 | 16:55 | 516 | 441 12:55 | 75 |
| 7 | 15:00 | 30.3 | 15.0 08:35 | 15.3 | 16:55 | 171M | 46 14:18 | 125 | 17:48 | 540 | 447 12:11 | 93 |
| 8 | 13:44 | 29.8 | 15.8 06:48 | 14.0 | 05:59 | 126 | 38 10:52 | 88 | 16:58 | 512 | 447 11:52 | 65 |
| 9 | 15:06 | 30.6 | 15.7 09:12 | 14.9 | 20:23 | 119 | 41 09:12 | 78 | 20:54 | 499 | 438 12:14 | 61 |
| 10 | 13:19 | 30.3 | 14.9 08:12 | 15.4 | 03:24 | 105 | 57 11:34 | 48 | 17:59 | 504 | 452 10:58 | 52 |
| 11 Q | 13:30 | 28.1 | 17.7 08:20 | 10.4 | 23:35 | 117 | 59 11:25 | 58 | 01:12 | 491 | 443 12:10 | 48 |
| 12 | 13:37 | 31.0 | 17.3 04:49 | 13.7 | 06:40 | 131 | 46 13:54 | 85 | 01:46 | 485 | 438 12:37 | 47 |
| 13 | 14:51 | 29.1 | 13.8 08:15 | 15.3 | 21:12 | 112 | 53 11:06 | 59 | 21:36 | 504 | 443 12:29 | 61 |
| 14 Q | 14:05 | 28.1 | 15.2 07:15 | 12.9 | 00:10 | 96 | 45 11:27 | 51 | 03:46 | 490 | 439 11:14 | 51 |
| 15 D | 13:52 | 34.9 | 5.7 20:49 | 29.2 | 20:32 | 152 | 14 23:10 | 138 | 17:47 | 554 | 416 21:36 | 138 |
| 16 | 12:58 | 29.2 | 3.4 03:41 | 25.8 | 20:35 | 90 | 9 06:01 | 81 | 16:47 | 523 | 435 00:32 | 88 |
| 17 | 14:08 | 28.2 | 15.6 07:46 | 12.6 | 23:46 | 109 | 35 11:13 | 74 | 00:28 | 512 | 449 12:05 | 63 |
| 18 D | 14:28 | 31.5 | -3.9 23:55 | 35.4 | 18:19 | 134 | -143 23:06 | 277M | 20:03 | 599 | 272 23:02 | 327M |
| 19 D | 05:38 | 29.9 | -26.2m 03:53 | 56.1M | 21:05 | 58 | -152m 05:48 | 210 | 19:10 | 535 | 218m 04:15 | 317 |
| 20 Q | 13:52 | 26.5 | 15.6 09:19 | 10.9 | 19:21 | 78 | 25 12:29 | 53 | 22:14 | 510 | 462 12:11 | 48 |
| 21 | 13:04 | 28.0 | 15.0 02:14 | 13.0 | 23:16 | 93 | 36 12:32 | 57 | 01:50 | 505 | 463 11:45 | 42 |
| 22 | 13:47 | 33.0 | 16.1 18:04 | 16.9 | 06:17 | 98 | 8 11:15 | 90 | 17:49 | 546 | 466 12:00 | 80 |
| 23 Q | 12:52 | 24.7 | 16.8 08:10 | 7.9m | 21:24 | 99 | 50 11:00 | 49 | 08:11 | 502 | 469 12:51 | 33m |
| 24 | 13:33 | 28.6 | 16.1 08:35 | 12.5 | 21:16 | 117 | 66 12:05 | 51 | 21:35 | 500 | 447 12:52 | 53 |
| 25 Q | 13:00 | 27.3 | 16.4 02:26 | 10.9 | 22:00 | 100 | 61 10:17 | 39m | 08:30 | 495 | 462 13:01 | 33m |
| 26 D | 18:10 | 35.4M | 8.0 23:15 | 27.4 | 06:46 | 110 | -24 21:27 | 134 | 18:35 | 691M | 449 23:02 | 242 |
| 27 | 18:45 | 23.1 | 8.7 00:05 | 14.4 | 23:03 | 76 | 17 01:35 | 59 | 07:39 | 517 | 472 00:25 | 45 |
| 28 | 13:25 | 26.7 | 16.8 09:27 | 9.9 | 03:00 | 87 | 37 13:49 | 50 | 18:17 | 513 | 473 11:56 | 40 |
| 29 | 14:57 | 27.1 | 16.5 08:36 | 10.6 | 21:20 | 96 | 3 11:40 | 93 | 22:58 | 501 | 430 12:25 | 71 |
| 30 | 14:48 | 27.4 | 14.3 01:23 | 13.1 | 18:35 | 114 | 56 13:01 | 58 | 20:25 | 534 | 456 12:20 | 78 |
| Mean | | 29.4 | 12.0 | 17.4 | | 108 | 23 | 85 | | 521 | 435 | 86 |

Table 7

| Date | DECLINATION | | | | | Extreme Values of the Magnetic Elements | | | | | October 1989 | | | | | |
|------|-------------|-------------------|-------------------|--------|-------------------|---|------------------|-------------------|--------------------|------------------|--------------|------------------|------------------|-------|------------------|-----|
| | Maximum | | Minimum | | Range | HORIZONTAL COMPONENT | | | VERTICAL COMPONENT | | | Maximum | Minimum | Range | | |
| | G.M.T. | 9 ^m + | G.M.T. | G.M.T. | | Maximum | Minimum | Range | Maximum | Minimum | Range | | | | | |
| | | | | | G.M.T. | 1900nT+ | G.M.T. | G.M.T. | 4400nT+ | G.M.T. | | | | | | |
| 1 | 14:02 | 30.7 | 15.1 | 00:57 | 15.6 | 06:48 | 107 | 39 | 11:40 | 68 | 00:53 | 516 | 450 | 12:26 | 66 | |
| 2 | 14:39 | 29.6 | 14.5 | 09:01 | 15.1 | 06:08 | 121 | 62 | 12:15 | 59 | 02:53 | 494 | 439 | 12:46 | 55 | |
| 3 | 13:07 | 32.2 | 14.5 | 09:25 | 17.7 | 06:54 | 108 | 34 | 11:45 | 74 | 17:14 | 517 | 440 | 12:30 | 77 | |
| 4 Q | 14:55 | 30.7 | 14.8 | 09:30 | 15.9 | 24:00 | 109 | 32 | 11:13 | 77 | 08:11 | 500 | 450 | 13:07 | 50 | |
| 5 Q | 14:05 | 29.6 | 15.8 | 08:57 | 13.8 | 00:05 | 111 | 52 | 11:17 | 59 | 08:22 | 495 | 446 | 12:12 | 49 | |
| 6 | 14:26 | 31.6 | 15.9 | 09:11 | 15.7 | 23:48 | 121 | 53 | 10:52 | 68 | 17:52 | 503 | 439 | 12:34 | 64 | |
| 7 | 13:59 | 30.6 | 14.1 | 04:42 | 16.5 | 00:02 | 105 | 55 | 14:26 | 50 | 21:54 | 516 | 433 | 13:56 | 83 | |
| 8 | 15:25 | 27.7 | 15.6 | 09:59 | 12.1 | 24:00 | 113 | 56 | 11:37 | 57 | 23:54 | 500 | 444 | 12:36 | 56 | |
| 9 | 14:49 | 27.3 | 16.4 | 02:05 | 10.9 | 00:11 | 126 | 57 | 13:47 | 69 | 00:01 | 499 | 436 | 13:11 | 63 | |
| 10 | 15:51 | 27.8 | 15.7 | 08:24 | 12.1 | 05:23 | 107 | 58 | 12:06 | 49 | 08:24 | 494 | 449 | 11:52 | 45 | |
| 11 | 13:38 | 27.2 | 15.6 | 04:19 | 11.6 | 00:17 | 110 | 60 | 11:08 | 50 | 00:01 | 491 | 454 | 12:19 | 37 | |
| 12 | 13:33 | 26.7 | 15.7 | 08:41 | 11.0 | 17:55 | 111 | 70 | 12:50 | 41 | 23:45 | 490 | 450 | 13:21 | 40 | |
| 13 Q | 14:05 | 25.0 | 15.3 | 09:05 | 9.7 ^m | 00:43 | 98 | 55 | 12:10 | 43 | 00:20 | 494 | 458 | 12:22 | 36 | |
| 14 Q | 12:35 | 26.5 | 16.7 | 09:05 | 9.8 | 22:18 | 105 | 60 | 11:13 | 45 | 02:53 | 487 | 450 | 12:30 | 37 | |
| 15 Q | 14:44 | 27.8 | 17.0 | 08:58 | 10.8 | 18:55 | 111 | 73 | 10:05 | 38 ^m | 02:58 | 488 | 440 | 11:38 | 48 | |
| 16 | 14:24 | 32.0 | 13.7 | 09:21 | 18.3 | 00:17 | 106 | 59 | 16:44 | 47 | 18:09 | 517 | 429 | 12:24 | 88 | |
| 17 | 14:39 | 27.7 | 15.2 | 01:53 | 12.5 | 04:48 | 102 | 46 | 12:24 | 56 | 20:07 | 510 | 448 | 11:57 | 62 | |
| 18 | 13:01 | 30.3 | 12.1 | 03:26 | 18.2 | 02:09 | 114 | 26 | 11:12 | 88 | 21:29 | 510 | 447 | 02:13 | 63 | |
| 19 D | 13:29 | 30.2 | 7.5 | 01:37 | 22.7 | 00:11 | 92 | -15 | 13:16 | 107 | 19:56 | 508 | 418 | 00:17 | 90 | |
| 20 D | 19:20 | 64.6 | .8 | 19:36 | 63.8 | 19:05 | 314 ^M | -52 | 12:36 | 366 | 19:34 | 952 ^M | 373 | 19:16 | 579 | |
| 21 D | 18:30 | 72.9 ^M | -2.2 ^m | 22:58 | 75.1 ^M | 18:26 | 252 | -330 ^m | 10:02 | 582 ^M | 18:25 | 812 | 208 ^m | 18:29 | 604 ^M | |
| 22 D | 14:08 | 26.0 | 3.4 | 00:41 | 22.6 | 18:03 | 104 | -65 | 00:01 | 169 | 17:59 | 613 | 434 | 02:49 | 179 | |
| 23 | 06:03 | 29.5 | 15.0 | 20:42 | 14.5 | 05:51 | 84 | 16 | 12:46 | 68 | 20:15 | 525 | 451 | 06:03 | 74 | |
| 24 | 12:21 | 25.7 | 13.8 | 07:51 | 11.9 | 19:08 | 87 | 41 | 12:46 | 46 | 23:18 | 518 | 483 | 12:21 | 35 ^m | |
| 25 | 07:25 | 27.0 | 8.5 | 04:11 | 18.5 | 04:55 | 90 | 27 | 08:56 | 63 | 01:02 | 521 | 444 | 05:06 | 77 | |
| 26 D | 14:33 | 29.6 | 5.9 | 23:59 | 23.7 | 19:06 | 117 | 19 | 19:35 | 98 | 19:45 | 579 | 469 | 04:25 | 110 | |
| 27 | 14:45 | 27.0 | 6.4 | 00:01 | 20.6 | 00:11 | 88 | 21 | 11:21 | 67 | 00:01 | 547 | 481 | 03:04 | 66 | |
| 28 | 14:29 | 27.1 | 13.2 | 09:19 | 13.9 | 07:23 | 85 | 40 | 17:52 | 45 | 17:59 | 543 | 468 | 11:26 | 75 | |
| 29 | 13:08 | 27.9 | 6.6 | 23:58 | 21.3 | 22:22 | 108 | 48 | 11:39 | 60 | 21:25 | 537 | 466 | 12:53 | 71 | |
| 30 | 14:17 | 31.3 | 7.0 | 00:01 | 24.3 | 23:09 | 111 | 34 | 00:52 | 77 | 21:02 | 520 | 458 | 11:44 | 62 | |
| 31 | 15:03 | 33.0 | 5.9 | 00:09 | 27.1 | 00:15 | 94 | 29 | 13:00 | 65 | 16:22 | 536 | 460 | 12:14 | 76 | |
| Mean | | 31.4 | | 11.8 | | | 117 | | 25 | | | 540 | | 439 | | 101 |

Table 7

Extreme Values of the Magnetic Elements

November 1989

| Date | DECLINATION | | | | | HORIZONTAL COMPONENT | | | | | VERTICAL COMPONENT | | | | |
|------|-------------------|-----------------|-------------------|-------|--------|----------------------|--------------------|-----------------|-------|------|--------------------|--------------------|-----------------|-------|------|
| | Maximum G.M.T. | 9 ^{o+} | Minimum G.M.T. | Range | | Maximum G.M.T. | Minimum 1900nT+ | Range G.M.T. | | | Maximum G.M.T. | Minimum 4400nT+ | Range G.M.T. | | |
| 1 | 15:19 | 26.7 | 15.4 | 10:07 | 11.3 | 22:18 | 107 | 35 | 12:20 | 72 | 22:06 | 516 | 472 | 13:04 | 44 |
| 2 | 18:48 | 29.1 | 9.7 | 01:33 | 19.4 | 00:57 | 111 | 46 | 19:26 | 65 | 19:07 | 530 | 471 | 12:59 | 59 |
| 3 | 12:33 | 31.0 | 9.7 | 00:33 | 21.3 | 00:37 | 103 | 13 | 13:13 | 90 | 19:54 | 553 | 456 | 12:31 | 97 |
| 4 D | 13:52 | 31.8 | 12.5 | 23:34 | 19.3 | 23:38 | 129 | 19 | 09:02 | 110 | 20:45 | 535 | 465 | 23:52 | 70 |
| 5 | 14:05 | 26.1 | 9.5 | 21:55 | 16.6 | 20:52 | 95 | 39 | 12:56 | 56 | 21:55 | 540 | 474 | 00:13 | 66 |
| 6 | 13:56 | 27.3 | 15.6 | 09:34 | 11.7 | 19:57 | 91 | 31 | 12:18 | 60 | 20:34 | 526 | 464 | 11:51 | 62 |
| 7 | 12:54 | 30.5 | 11.1 | 00:36 | 19.4 | 00:46 | 88 | 31 | 12:12 | 57 | 00:31 | 526 | 451 | 12:50 | 75 |
| 8 | 13:31 | 26.6 | 14.7 | 10:15 | 11.9 | 16:38 | 96 | 36 | 11:26 | 60 | 20:07 | 510 | 460 | 11:40 | 50 |
| 9 | 16:18 | 29.8 | 11.1 | 03:25 | 18.7 | 16:18 | 101 | 40 | 17:53 | 61 | 18:08 | 527 | 464 | 04:55 | 63 |
| 10 | 13:31 | 25.4 | 15.2 | 04:24 | 10.2 | 23:12 | 93 | 53 | 12:02 | 40 | 00:01 | 505 | 477 | 12:34 | 28 |
| 11 | 18:32 | 31.1 | 13.5 | 09:11 | 17.6 | 17:48 | 119 | 52 | 12:24 | 67 | 20:15 | 554 | 471 | 12:57 | 83 |
| 12 | 13:13 | 25.5 | 16.0 | 09:18 | 9.5 | 00:02 | 102 | 48 | 11:56 | 54 | 00:47 | 504 | 477 | 11:15 | 27 |
| 13 D | 17:26 | 38.5 | 6.5 | 22:59 | 32.0 | 06:26 | 124 | -4 | 14:43 | 128 | 19:02 | 602 | 442 | 05:41 | 160 |
| 14 | 14:30 | 24.3 | 12.9 | 00:14 | 11.4 | 22:11 | 74 | 8 | 12:21 | 66 | 02:33 | 531 | 483 | 12:33 | 48 |
| 15 D | 14:20 | 24.4 | 14.7 | 09:34 | 9.7 | 23:11 | 91 | 37 | 12:31 | 54 | 00:08 | 504 | 470 | 12:10 | 34 |
| 16 D | 13:33 | 26.6 | 14.4 | 09:44 | 12.2 | 06:48 | 93 | 39 | 13:29 | 54 | 22:41 | 503 | 466 | 12:21 | 37 |
| 17 D | 18:13 | 75.6M | -26.2m | 21:26 | 101.8M | 18:14 | 324M | -205m | 22:22 | 529M | 18:22 | 1044M | 445 | 11:38 | 599M |
| 18 D | 01:36 | 26.8 | -1.2 | 02:45 | 28.0 | 23:55 | 54 | -180 | 01:17 | 234 | 15:18 | 534 | 411m | 01:16 | 123 |
| 19 | 14:46 | 23.2 | 14.4 | 20:24 | 8.8 | 19:10 | 87 | 26 | 12:43 | 61 | 19:04 | 548 | 489 | 11:38 | 59 |
| 20 | 14:32 | 25.9 | 16.3 | 00:01 | 9.6 | 20:19 | 82 | 32 | 13:04 | 50 | 22:54 | 523 | 480 | 11:25 | 43 |
| 21 | 13:48 | 24.7 | 10.7 | 02:00 | 14.0 | 07:27 | 109 | 58 | 13:47 | 51 | 00:23 | 522 | 474 | 11:02 | 48 |
| 22 D | 17:08 | 25.0 | 16.1 | 10:22 | 8.9 | 06:18 | 92 | 60 | 17:29 | 32 | 22:05 | 510 | 480 | 14:30 | 30 |
| 23 D | 14:51 | 23.7 | 15.2 | 02:06 | 8.5 | 20:29 | 99 | 66 | 13:11 | 33 | 00:07 | 508 | 479 | 12:44 | 29 |
| 24 | 14:06 | 26.3 | 16.7 | 02:26 | 9.6 | 05:38 | 105 | 60 | 16:43 | 45 | 20:04 | 510 | 482 | 13:39 | 28 |
| 25 D | 15:05 | 23.7 | 17.9 | 09:09 | 5.8m | 03:52 | 101 | 71 | 12:19 | 30m | 00:14 | 496 | 476 | 12:45 | 20m |
| 26 | 19:16 | 34.1 | 18.1 | 09:14 | 16.0 | 16:37 | 109 | 49 | 19:33 | 60 | 20:59 | 561 | 473 | 12:54 | 88 |
| 27 | 13:26 | 27.0 | 8.3 | 23:33 | 18.7 | 21:44 | 133 | 64 | 15:28 | 69 | 23:32 | 546 | 474 | 11:43 | 72 |
| 28 D | 17:43 | 24.8 | 10.6 | 03:06 | 14.2 | 22:34 | 124 | 45 | 00:25 | 79 | 02:32 | 535 | 469 | 11:52 | 66 |
| 29 | 17:55 | 28.8 | 11.8 | 23:27 | 17.0 | 00:34 | 102 | 50 | 19:00 | 52 | 20:35 | 549 | 475 | 09:45 | 74 |
| 30 | 13:34 | 28.7 | 7.7 | 23:51 | 21.0 | 23:28 | 120 | 30 | 12:35 | 90 | 18:48 | 535 | 473 | 11:18 | 62 |
| Mean | | 29.1 | 11.3 | | 17.8 | | 109 | 25 | | 84 | | 546 | 468 | | 78 |

Table 7

Extreme Values of the Magnetic Elements

December 1989

| Date | DECLINATION | | | | | HORIZONTAL COMPONENT | | | | | VERTICAL COMPONENT | | | | |
|------|-------------|-------|---------|-------|-------|----------------------|---------|---------|-------|-------|--------------------|---------|---------|-------|-------|
| | Maximum | | Minimum | | Range | Maximum | | Minimum | | Range | Maximum | | Minimum | | Range |
| | G.M.T. | 9=+ | G.M.T. | | | G.M.T. | 1900nT+ | G.M.T. | | | G.M.T. | 4400nT+ | G.M.T. | | |
| 1 D | 19:44 | 32.8M | 5.2 | 00:35 | 27.6 | 17:51 | 130M | 46 | 21:10 | 84 | 20:01 | 648 | 471 | 13:16 | 177 |
| 2 | 13:35 | 23.9 | 11.2 | 00:27 | 12.7 | 21:06 | 89 | 27 | 11:16 | 62 | 22:17 | 528 | 486 | 13:35 | 42 |
| 3 | 14:39 | 27.7 | 5.0 | 24:00 | 22.7 | 06:30 | 83 | 20 | 10:46 | 63 | 21:55 | 532 | 469 | 01:46 | 63 |
| 4 D | 13:51 | 26.7 | 4.3 | 00:06 | 22.4 | 21:56 | 94 | 27 | 04:29 | 67 | 20:55 | 556 | 449m | 02:05 | 107 |
| 5 | 14:55 | 23.8 | -4.4 | 01:02 | 28.2 | 20:38 | 84 | 28 | 00:13 | 56 | 00:58 | 530 | 461 | 01:19 | 69 |
| 6 Q | 14:40 | 25.0 | 16.3 | 00:01 | 8.7 | 22:20 | 97 | 58 | 12:17 | 39 | 00:01 | 506 | 481 | 13:03 | 25 |
| 7 | 19:34 | 26.4 | 15.3 | 01:00 | 11.1 | 17:24 | 100 | 67 | 12:41 | 33 | 21:18 | 521 | 468 | 14:15 | 53 |
| 8 | 13:54 | 25.7 | 16.0 | 09:49 | 9.7 | 22:02 | 102 | 62 | 11:49 | 40 | 00:04 | 502 | 475 | 12:35 | 27 |
| 9 Q | 14:15 | 25.0 | 17.2 | 09:39 | 7.8 | 19:20 | 100 | 68 | 11:56 | 32 | 09:06 | 498 | 477 | 13:23 | 21 |
| 10 Q | 14:28 | 23.4 | 17.4 | 09:47 | 6.0 | 21:53 | 105 | 82 | 12:55 | 23m | 00:08 | 495 | 477 | 13:23 | 18m |
| 11 Q | 12:08 | 23.1 | 17.2 | 09:40 | 5.9 | 06:10 | 112 | 69 | 15:22 | 43 | 21:38 | 500 | 473 | 11:08 | 27 |
| 12 | 13:17 | 23.5 | 13.8 | 22:02 | 9.7 | 04:53 | 108 | 63 | 22:16 | 45 | 21:59 | 515 | 476 | 10:00 | 39 |
| 13 | 18:26 | 22.7 | 14.9 | 01:54 | 7.8 | 22:17 | 98 | 67 | 02:04 | 31 | 01:53 | 504 | 471 | 12:48 | 33 |
| 14 | 15:26 | 26.4 | 15.3 | 20:48 | 11.1 | 06:49 | 101 | 48 | 16:05 | 53 | 16:12 | 526 | 465 | 10:44 | 61 |
| 15 | 14:27 | 23.3 | 15.2 | 02:22 | 8.1 | 01:58 | 99 | 62 | 13:55 | 37 | 17:20 | 500 | 472 | 11:54 | 28 |
| 16 | 13:08 | 29.1 | 10.5 | 21:11 | 18.6 | 06:31 | 108 | 40 | 16:13 | 68 | 21:11 | 535 | 466 | 10:29 | 69 |
| 17 | 13:26 | 24.5 | 15.9 | 22:01 | 8.6 | 07:44 | 93 | 47 | 11:56 | 46 | 21:11 | 508 | 477 | 10:43 | 31 |
| 18 | 14:39 | 23.4 | 15.9 | 23:04 | 7.5 | 06:27 | 103 | 72 | 19:59 | 31 | 20:19 | 509 | 471 | 14:01 | 38 |
| 19 Q | 14:42 | 23.1 | 17.3 | 03:30 | 5.8m | 18:53 | 100 | 77 | 13:12 | 23m | 20:41 | 500 | 470 | 11:44 | 30 |
| 20 | 14:49 | 23.5 | 16.6 | 03:03 | 6.9 | 19:42 | 106 | 77 | 21:15 | 29 | 21:52 | 510 | 472 | 12:10 | 38 |
| 21 | 19:24 | 26.6 | 10.4 | 02:00 | 16.2 | 01:54 | 116 | 79 | 02:57 | 37 | 21:46 | 516 | 465 | 12:31 | 51 |
| 22 | 13:48 | 32.8M | 16.4 | 04:04 | 16.4 | 09:46 | 120 | 23 | 18:56 | 97 | 19:06 | 556 | 466 | 11:14 | 90 |
| 23 | 13:56 | 25.9 | 15.5 | 06:47 | 10.4 | 20:50 | 94 | 47 | 14:11 | 47 | 22:58 | 507 | 459 | 04:14 | 48 |
| 24 | 16:15 | 28.8 | 7.0 | 22:58 | 21.8 | 07:25 | 90 | 41 | 20:31 | 49 | 19:49 | 558 | 464 | 12:02 | 94 |
| 25 | 15:02 | 24.6 | 11.6 | 03:23 | 13.0 | 22:13 | 114 | 57 | 13:00 | 57 | 21:48 | 517 | 463 | 11:16 | 54 |
| 26 | 14:58 | 26.0 | 7.3 | 20:18 | 18.7 | 08:27 | 90 | 28 | 20:07 | 62 | 20:16 | 579 | 469 | 11:44 | 110 |
| 27 | 17:47 | 30.1 | 12.5 | 01:17 | 17.6 | 09:01 | 90 | 27 | 19:20 | 63 | 19:38 | 556 | 468 | 12:51 | 88 |
| 28 | 14:48 | 23.3 | 15.7 | 23:56 | 7.6 | 23:15 | 94 | 60 | 12:53 | 34 | 23:56 | 509 | 475 | 13:18 | 34 |
| 29 D | 16:33 | 29.2 | -20.8m | 21:00 | 50.0M | 06:59 | 106 | -16m | 23:28 | 122M | 20:55 | 694M | 455 | 12:02 | 239M |
| 30 D | 11:11 | 31.1 | -1.1 | 00:01 | 32.2 | 08:31 | 57 | 6 | 00:27 | 51 | 20:55 | 576 | 463 | 11:11 | 113 |
| 31 D | 08:52 | 26.1 | 5.3 | 02:12 | 20.8 | 01:39 | 78 | 13 | 12:41 | 65 | 17:10 | 529 | 450 | 05:49 | 79 |
| Mean | | 26.1 | 10.8 | | 15.2 | | 99 | 48 | | 51 | | 533 | 469 | | 64 |

Table B

Diurnal Variation - ALL Days - Declination (Tenths of Minutes)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | -35 | -30 | -24 | -20 | -14 | -10 | -9 | -9 | -13 | -25 | -24 | -1 | 19 | 41 | 55 | 57M | 40 | 38 | 32 | 17 | -2 | -22 | -33 | -36m |
| Feb | -26 | -28 | -30m | -27 | -23 | -17 | -15 | -15 | -19 | -25 | -18 | 2 | 25 | 44 | 54M | 48 | 38 | 28 | 22 | 15 | 6 | -5 | -20 | -25 |
| Mar | -41m | -39 | -35 | -38 | -30 | -27 | -14 | -12 | -29 | -38 | -18 | 8 | 49 | 75 | 86M | 78 | 58 | 33 | 17 | 1 | -6 | -22 | -26 | -34 |
| Apr | -19 | -21 | -22 | -33 | -26 | -28 | -32 | -36 | -42 | -43m | -25 | 6 | 42 | 70 | 79M | 73 | 54 | 33 | 16 | -2 | -4 | -6 | -14 | -17 |
| May | -4 | -16 | -17 | -24 | -26 | -37 | -51 | -64 | -65m | -47 | -22 | 7 | 40 | 62 | 72M | 67 | 53 | 36 | 19 | 6 | 6 | 1 | 0 | 0 |
| June | 0 | -11 | -18 | -20 | -29 | -44 | -61 | -71 | -72m | -59 | -33 | 4 | 41 | 67 | 79M | 74 | 61 | 41 | 24 | 10 | 6 | 4 | 1 | 0 |
| July | -4 | -7 | -10 | -13 | -19 | -35 | -56 | -66 | -71m | -63 | -39 | -6 | 31 | 60 | 75M | 73 | 60 | 43 | 23 | 9 | 8 | 6 | 4 | 0 |
| Aug | -17 | -16 | -14 | -25 | -27 | -42 | -56 | -66 | -69m | -55 | -26 | 14 | 51 | 77 | 86M | 75 | 50 | 29 | 16 | 8 | 6 | 7 | 4 | -6 |
| Sept | -18 | -27 | -32 | -40 | -34 | -35 | -38 | -44m | -44m | -31 | -8 | 25 | 56 | 70M | 65 | 55 | 39 | 21 | 17 | 14 | 6 | 3 | 0 | -12 |
| Oct | -25 | -24 | -18 | -18 | -17 | -13 | -13 | -20 | -34 | -44m | -36 | -6 | 32 | 54 | 61M | 51 | 37 | 23 | 20 | 11 | 4 | -6 | -13 | -19 |
| Nov | -31 | -29 | -32m | -27 | -22 | -15 | -17 | -21 | -25 | -32m | -25 | 1 | 25 | 46 | 51M | 41 | 41 | 45 | 42 | 24 | 8 | -11 | -21 | -26 |
| Dec | -31 | -25 | -21 | -18 | -13 | -10 | -8 | -9 | -11 | -17 | -11 | 6 | 21 | 38 | 42M | 39 | 32 | 32 | 29 | 20 | 1 | -22 | -26 | -33m |
| Year | -21 | -23 | -23 | -25 | -23 | -26 | -31 | -36 | -41m | -40 | -24 | 5 | 36 | 59 | 67M | 61 | 47 | 34 | 23 | 11 | 3 | -6 | -12 | -17 |
| Winter | -31m | -28 | -27 | -22 | -18 | -13 | -12 | -13 | -17 | -25 | -19 | 2 | 22 | 42 | 50M | 46 | 38 | 36 | 32 | 20 | 3 | -15 | -25 | -30 |
| Equinx | -25 | -28 | -26 | -32 | -26 | -25 | -24 | -27 | -37 | -39m | -21 | 9 | 45 | 68 | 74M | 65 | 48 | 28 | 18 | 6 | 1 | -7 | -13 | -20 |
| Summer | -6 | -12 | -14 | -20 | -25 | -39 | -55 | -66 | -69m | -56 | -30 | 5 | 41 | 67 | 78M | 73 | 56 | 38 | 21 | 9 | 7 | 5 | 3 | -1 |

Table 9

Diurnal Variation - ALL Days - Horizontal Component (Nanotesla Units)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | 3 | 3 | 5 | 5 | 6 | 10 | 15 | 16M | 13 | 6 | -4 | -12 | -17m | -17m | -14 | -11 | -8 | -4 | -5 | -4 | -3 | 0 | 2 | 2 |
| Feb | 3 | 3 | 3 | 3 | 5 | 7 | 10 | 12M | 10 | 3 | -6 | -13 | -18m | -18m | -14 | -10 | -5 | -3 | 2 | 3 | 3 | 3 | 3 | 5 |
| Mar | -13 | -15 | 6 | 5 | 7 | 13 | 11 | 12 | 2 | 2 | -8 | -21m | -21m | -13 | -6 | 4 | 6 | 15 | 14 | 18M | 11 | -9 | -10 | -9 |
| Apr | 9 | 6 | 5 | 3 | 2 | 5 | 6 | 4 | -2 | -11 | -24 | -32 | -33m | -27 | -18 | -6 | 4 | 18 | 21M | 21M | 16 | 14 | 12 | 13 |
| May | 11 | 7 | 3 | 2 | 1 | 3 | 0 | -8 | -15 | -20 | -23 | -26m | -24 | -22 | -13 | -3 | 3 | 18 | 23M | 23M | 19 | 15 | 14 | 13 |
| June | 11 | 10 | 6 | 5 | 4 | 3 | -2 | -9 | -19 | -27 | -32 | -35m | -33 | -28 | -19 | -9 | 7 | 22 | 32M | 31 | 26 | 20 | 16 | 13 |
| July | 7 | 6 | 6 | 6 | 6 | 7 | 3 | -5 | -14 | -22 | -27 | -30m | -29 | -24 | -17 | -4 | 9 | 21 | 23M | 20 | 19 | 15 | 12 | 9 |
| Aug | 11 | 7 | 7 | 9 | 7 | 10 | 3 | -7 | -21 | -30 | -33m | -33m | -32 | -21 | -12 | -3 | 6 | 15 | 22 | 25M | 20 | 19 | 18 | 14 |
| Sept | 10 | 8 | 8 | 9 | 9 | 5 | 6 | -2 | -9 | -16 | -21 | -24m | -24m | -19 | -13 | -5 | 3 | 9 | 13 | 14 | 15M | 14 | 11 | 9 |
| Oct | 7 | 6 | 5 | 7 | 11 | 12M | 11 | 8 | 2 | -13 | -27 | -30m | -26 | -23 | -12 | -7 | -3 | 6 | 10 | 11 | 8 | 9 | 10 | 9 |
| Nov | 3 | 1 | 3 | 4 | 4 | 6 | 11M | 10 | 6 | 0 | -8 | -14 | -18m | -15 | -10 | -6 | 0 | 4 | 6 | 2 | 5 | 5 | 2 | 6 |
| Dec | 1 | 2 | 2 | 3 | 3 | 6 | 10M | 10M | 9 | 5 | -3 | -9 | -11m | -10 | -9 | -6 | -3 | 2 | 3 | 3 | 0 | 1 | 2 | 1 |
| Year | 5 | 3 | 4 | 5 | 5 | 7 | 7 | 3 | -4 | -11 | -18 | -24m | -24m | -20 | -13 | -6 | 1 | 10 | 13 | 14M | 11 | 9 | 7 | 7 |
| Winter | 3 | 3 | 4 | 4 | 5 | 8 | 12M | 12M | 10 | 4 | -5 | -12 | -15m | -15m | -11 | -8 | -3 | 0 | 2 | 1 | 2 | 3 | 3 | 4 |
| Equinox | 2 | 1 | 5 | 5 | 7 | 8 | 8 | 5 | -2 | -10 | -20 | -27m | -26 | -21 | -13 | -4 | 2 | 11 | 14 | 15M | 12 | 6 | 5 | 9 |
| Summer | 10 | 7 | 5 | 5 | 4 | 5 | 1 | -7 | -18 | -25 | -29 | -31m | -30 | -24 | -16 | -5 | 6 | 19 | 25M | 25M | 21 | 17 | 15 | 12 |

Table 10

Diurnal Variation - ALL Days - Vertical Component (Nanotesla Units)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | 4 | -1 | -4 | -6 | -7 | -8 | -9 | -10 | -8 | -6 | -9 | -15m | -15m | -15m | -9 | 1 | 9 | 10 | 17 | 19M | 19M | 18 | 12 | 7 |
| Feb | 5 | 3 | 0 | -2 | -2 | -4 | -4 | -5 | -4 | -4 | -11 | -18 | -20m | -17 | -10 | 0 | 7 | 10 | 10 | 11 | 12M | 12M | 12M | 8 |
| Mar | -11 | 2 | -9 | -10 | -16 | -16 | -16 | -12 | -7 | -9 | -17 | -24 | -28m | -21 | -6 | 16 | 31 | 42M | 39 | 34 | 24 | 15 | -3 | -1 |
| Apr | -3 | -5 | -6 | -3 | -4 | -4 | -3 | -2 | -1 | -6 | -17 | -28 | -33m | -28 | -14 | 3 | 17 | 28 | 34M | 32 | 20 | 14 | 9 | 3 |
| May | 1 | 1 | -2 | 1 | 2 | 5 | 5 | 4 | -3 | -12 | -22 | -32 | -36m | -29 | -15 | 2 | 14 | 23 | 29M | 27 | 19 | 14 | 8 | 3 |
| June | 0 | -1 | -3 | -4 | -1 | 3 | 5 | 3 | -2 | -12 | -23 | -35 | -38m | -30 | -14 | 3 | 16 | 26 | 30M | 29 | 21 | 14 | 8 | 4 |
| July | 4 | 3 | 3 | 4 | 6 | 10 | 12 | 10 | 5 | -4 | -17 | -29 | -35m | -32 | -21 | -5 | 7 | 16 | 22M | 20 | 13 | 7 | 4 | 4 |
| Aug | 0 | -4 | -7 | -4 | -4 | 2 | 5 | 7 | 4 | -7 | -19 | -32 | -36m | -31 | -15 | 6 | 23 | 28M | 28M | 23 | 17 | 11 | 5 | 3 |
| Sept | 4 | 5 | 2 | -1 | -5 | -3 | -1 | 1 | 0 | -7 | -17 | -26 | -28m | -20 | -9 | 2 | 13 | 20M | 18 | 17 | 15 | 9 | 6 | 4 |
| Oct | 1 | -1 | -6 | -9 | -8 | -8 | -7 | -3 | 1 | -1 | -10 | -20 | -23m | -17 | -1 | 11 | 20 | 21M | 18 | 17 | 13 | 10 | 7 | 4 |
| Nov | 3 | -1 | -2 | -4 | -6 | -7 | -6 | -6 | -5 | -5 | -12 | -17 | -18m | -16 | -7 | 4 | 8 | 11 | 19M | 19M | 19M | 17 | 10 | 7 |
| Dec | 4 | 0 | -2 | -3 | -5 | -5 | -5 | -5 | -4 | -5 | -9 | -12 | -13m | -12 | -5 | 2 | 7 | 6 | 8 | 13 | 18M | 18M | 12 | 8 |
| Year | 1 | 0 | -3 | -4 | -4 | -3 | -2 | -2 | -2 | -7 | -15 | -24 | -27m | -23 | -11 | 4 | 14 | 20 | 22M | 21 | 17 | 13 | 7 | 4 |
| Winter | 4 | 1 | -2 | -3 | -5 | -6 | -6 | -6 | -5 | -5 | -10 | -15 | -16m | -14 | -7 | 2 | 8 | 9 | 14 | 16 | 18M | 17 | 12 | 8 |
| Equinox | -2 | 0 | -4 | -5 | -8 | -8 | -7 | -4 | -2 | -5 | -15 | -24 | -28m | -21 | -7 | 9 | 21 | 28M | 28M | 25 | 18 | 12 | 5 | 3 |
| Summer | 1 | -1 | -3 | -1 | 0 | 4 | 6 | 5 | 1 | -9 | -21 | -33 | -37m | -31 | -17 | 1 | 14 | 23 | 27M | 24 | 17 | 11 | 6 | 3 |

CU

Table 11

Diurnal Variation - Quiet Days - Declination (Tenths of Minutes)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | -36m | -30 | -25 | -22 | -21 | -17 | -18 | -18 | -23 | -31 | -16 | 9 | 22 | 33 | 41M | 37 | 29 | 22 | 22 | 17 | 9 | 4 | 3 | 1 |
| Feb | -9 | -11 | -9 | -7 | -8 | -12 | -13 | -20 | -29 | -36m | -30 | -10 | 17 | 34 | 42M | 32 | 22 | 19 | 19 | 13 | 6 | 1 | -6 | -13 |
| Mar | -13 | -19 | -17 | -8 | -20 | -25 | -24 | -33 | -46m | -44 | -25 | 5 | 40 | 65 | 71M | 59 | 35 | 20 | 6 | 4 | 3 | -2 | -13 | -10 |
| Apr | -13 | -16 | -16 | -15 | -16 | -24 | -30 | -42 | -57 | -60m | -42 | -6 | 31 | 63 | 74M | 63 | 45 | 27 | 14 | 8 | 8 | 8 | 1 | -2 |
| May | -6 | -5 | -8 | -14 | -26 | -42 | -59 | -69m | -68 | -54 | -25 | 8 | 41 | 66 | 75M | 66 | 49 | 31 | 18 | 9 | 8 | 7 | 4 | -1 |
| June | 1 | 0 | -6 | -11 | -21 | -36 | -55 | -71 | -80m | -80m | -53 | -12 | 32 | 68 | 83M | 79 | 63 | 46 | 25 | 11 | 5 | 2 | 4 | 2 |
| July | 0 | -4 | -8 | -12 | -18 | -35 | -55 | -66 | -72m | -65 | -41 | -8 | 30 | 61 | 78M | 72 | 58 | 43 | 25 | 10 | 6 | 7 | 6 | 3 |
| Aug | -9 | -11 | -13 | -20 | -27 | -41 | -53 | -61 | -65m | -52 | -27 | 6 | 40 | 68 | 81M | 74 | 52 | 30 | 14 | 9 | 7 | 7 | 4 | -2 |
| Sept | -9 | -15 | -21 | -24 | -22 | -25 | -33 | -41 | -43m | -33 | -9 | 22 | 44 | 50M | 46 | 35 | 22 | 13 | 13 | 7 | 9 | 10 | 5 | 2 |
| Oct | -12 | -14 | -15 | -21 | -21 | -20 | -25 | -35 | -49 | -52m | -35 | 0 | 35 | 53 | 59M | 46 | 33 | 25 | 21 | 17 | 12 | 3 | -3 | -7 |
| Nov | -13 | -11 | -11 | -7 | -5 | -7 | -12 | -17 | -25 | -35m | -27 | -5 | 17 | 32 | 35M | 27 | 24 | 23 | 17 | 13 | 9 | 3 | -6 | -13 |
| Dec | -14 | -13 | -11 | -10 | -12 | -11 | -11 | -12 | -16 | -23m | -15 | 1 | 11 | 24 | 33M | 29 | 22 | 17 | 13 | 10 | 4 | -4 | -7 | -12 |
| Year | -11 | -12 | -13 | -14 | -18 | -25 | -32 | -41 | -48m | -47 | -29 | 1 | 30 | 51 | 60M | 52 | 38 | 26 | 17 | 11 | 7 | 4 | -1 | -4 |
| Winter | -19 | -16 | -14 | -12 | -12 | -12 | -14 | -17 | -23 | -31m | -22 | -1 | 17 | 30 | 38M | 31 | 24 | 20 | 18 | 13 | 7 | 1 | -4 | -9 |
| Equinx | -11 | -16 | -17 | -17 | -19 | -23 | -27 | -38 | -48m | -47 | -27 | 5 | 38 | 58 | 63M | 51 | 34 | 21 | 14 | 9 | 8 | 5 | -2 | -4 |
| Summer | -3 | -5 | -9 | -14 | -23 | -38 | -56 | -67 | -71m | -63 | -37 | -2 | 36 | 66 | 79M | 73 | 56 | 37 | 20 | 10 | 7 | 6 | 4 | 1 |

Table 12

Diurnal Variation - Quiet Days - Horizontal Component (Nanotesla Units)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | -4 | -2 | -1 | 0 | 1 | 2 | 7 | 8 | 6 | 4 | -4 | -8 | -11m | -11m | -10 | -5 | -1 | 2 | 3 | 4 | 5 | 4 | 7 | 9M |
| Feb | 4 | 4 | 3 | 4 | 4 | 7 | 8 | 11M | 8 | 0 | -8 | -17 | -18m | -14 | -7 | -5 | -2 | -4 | -3 | 2 | 5 | 7 | 9 | 10 |
| Mar | 3 | 3 | 4 | 0 | 1 | 6 | 7 | 7 | 2 | -8 | -17 | -25m | -24 | -22 | -16 | -4 | -4 | 3 | 6 | 13 | 12 | 15M | 15M | 14 |
| Apr | 10 | 5 | 0 | -1 | 3 | 6 | 7 | 8 | 5 | -6 | -20 | -30 | -34m | -26 | -15 | -7 | 2 | 10 | 14 | 16 | 17M | 13 | 11 | 8 |
| May | 3 | 2 | 0 | -2 | -2 | -2 | -4 | -7 | -11 | -17 | -21m | -20 | -16 | -10 | -6 | -2 | 6 | 10 | 18 | 20M | 19 | 18 | 17 | 15 |
| June | 9 | 7 | 5 | 4 | 5 | 6 | 3 | -4 | -12 | -18 | -25 | -30m | -29 | -25 | -20 | -5 | 2 | 14 | 15 | 20 | 19 | 19 | 21M | 20 |
| July | 3 | 1 | 2 | 3 | 4 | 7 | 3 | -6 | -16 | -26 | -32m | -30 | -28 | -23 | -13 | 0 | 12 | 22 | 28M | 24 | 19 | 16 | 15 | 14 |
| Aug | 6 | 5 | 7 | 5 | 6 | 6 | 3 | -4 | -13 | -22 | -29m | -28 | -25 | -17 | -11 | -5 | 2 | 9 | 14 | 19M | 19M | 18 | 17 | 16 |
| Sept | 8 | 6 | 4 | 4 | 3 | 3 | 1 | -4 | -7 | -14 | -20 | -23m | -20 | -15 | -10 | -5 | 0 | 6 | 11 | 14 | 16 | 17M | 16 | 16 |
| Oct | 12 | 10 | 9 | 8 | 5 | 4 | 2 | -3 | -10 | -19 | -27m | -27m | -23 | -16 | -8 | -5 | 0 | 5 | 11 | 11 | 11 | 15 | 15 | 16M |
| Nov | 0 | 4 | 3 | 5 | 6 | 8 | 9M | 8 | 5 | -3 | -13 | -20 | -21m | -19 | -11 | -9 | -4 | 0 | 5 | 9M | 8 | 7 | 7 | 8 |
| Dec | 2 | 2 | 0 | 1 | 1 | 4 | 7M | 7M | 5 | 0 | -9 | -13 | -14m | -13 | -10 | -7 | -2 | 1 | 5 | 6 | 3 | 4 | 5 | 5 |
| Year | 4 | 4 | 3 | 2 | 3 | 5 | 4 | 2 | -3 | -11 | -19 | -23m | -22 | -18 | -12 | -5 | 1 | 6 | 10 | 13M | 13M | 13M | 13M | 12 |
| Winter | 0 | 2 | 1 | 2 | 3 | 5 | 8M | 8M | 6 | 0 | -9 | -15 | -16m | -14 | -10 | -7 | -2 | -1 | 2 | 5 | 5 | 5 | 7 | 8M |
| Equinox | 9 | 7 | 5 | 3 | 4 | 5 | 5 | 3 | -2 | -11 | -21 | -26m | -25 | -19 | -12 | -5 | 0 | 6 | 11 | 14 | 15 | 16M | 15 | 14 |
| Summer | 5 | 4 | 3 | 3 | 3 | 4 | 1 | -5 | -13 | -21 | -27m | -27m | -24 | -19 | -12 | -3 | 6 | 14 | 19 | 21M | 19 | 18 | 17 | 16 |

09

Table 13

Diurnal Variation - Quiet Days - Vertical Component (Nanotesla Units)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | 15M | 10 | 7 | 5 | 3 | 1 | 1 | -1 | 1 | 2 | -5 | -8 | -8 | -9m | -7 | -3 | 0 | 0 | -2 | -1 | 1 | 2 | 1 | 0 |
| Feb | 5 | 5 | 4 | 4 | 5 | 6 | 5 | 3 | 4 | 3 | -8 | -20 | -26m | -21 | -12 | 0 | 6 | 6 | 7M | 7M | 7M | 5 | 5 | 4 |
| Mar | 6 | 6 | 2 | -1 | 1 | 0 | -1 | 2 | 3 | -4 | -13 | -22 | -28m | -23 | -9 | 5 | 17M | 16 | 16 | 9 | 7 | 5 | 6 | 2 |
| Apr | 8 | 7 | 8 | 8 | 8 | 7 | 7 | 7 | 6 | -1 | -16 | -31 | -38m | -35 | -20 | -2 | 7 | 12 | 13M | 10 | 6 | 6 | 7 | 8 |
| May | 8 | 8 | 10 | 12 | 15 | 19M | 18 | 10 | 0 | -12 | -27 | -39 | -44m | -39 | -23 | -5 | 7 | 14 | 18 | 17 | 12 | 8 | 7 | 6 |
| June | 3 | 5 | 7 | 10 | 12 | 15 | 17 | 13 | 6 | -5 | -21 | -34 | -40m | -35 | -24 | -8 | 6 | 15 | 20M | 18 | 12 | 6 | 1 | 0 |
| July | 4 | 5 | 6 | 7 | 9 | 13 | 16M | 13 | 9 | -2 | -16 | -29 | -38m | -37 | -23 | -6 | 4 | 12 | 16M | 15 | 9 | 3 | 1 | 1 |
| Aug | 9 | 9 | 7 | 9 | 11 | 14 | 14 | 12 | 7 | -4 | -20 | -34 | -40m | -37 | -23 | -4 | 10 | 16M | 16M | 11 | 7 | 5 | 5 | 6 |
| Sept | 7 | 8 | 8 | 8 | 6 | 6 | 8 | 10M | 7 | -1 | -14 | -24 | -25m | -19 | -11 | -3 | 3 | 3 | 1 | 4 | 3 | 2 | 4 | 4 |
| Oct | 8 | 9M | 8 | 9M | 7 | 6 | 6 | 8 | 8 | 1 | -12 | -25 | -28m | -22 | -12 | -2 | 4 | 5 | 5 | 4 | 4 | 5 | 5 | 4 |
| Nov | 5 | 2 | 0 | 0 | 0 | 1 | 1 | 1 | 4 | 2 | -6 | -12 | -15m | -14 | -8 | 0 | 3 | 3 | 3 | 3 | 3 | 5 | 6M | 5 |
| Dec | 4 | 3 | 1 | 1 | 0 | -1 | -2 | -2 | 0 | 1 | -5 | -8 | -7 | -10m | -7 | -1 | 1 | 2 | 2 | 1 | 4 | 6M | 4 | 4 |
| Year | 7 | 7 | 6 | 6 | 7 | 8 | 8 | 7 | 5 | -1 | -13 | -23 | -28m | -25 | -15 | -2 | 6 | 9 | 10M | 9 | 7 | 5 | 5 | 4 |
| Winter | 7M | 5 | 3 | 2 | 2 | 2 | 1 | 0 | 2 | 2 | -6 | -12 | -14m | -14m | -9 | -1 | 2 | 2 | 2 | 2 | 4 | 4 | 4 | 3 |
| Equinox | 7 | 7 | 6 | 6 | 6 | 5 | 5 | 7 | 6 | -2 | -14 | -26 | -30m | -25 | -13 | 0 | 7 | 9M | 9M | 7 | 5 | 4 | 5 | 4 |
| Summer | 5 | 6 | 7 | 9 | 12 | 15 | 16 | 12 | 5 | -6 | -21 | -34 | -41m | -37 | -24 | -6 | 6 | 14 | 17M | 15 | 9 | 5 | 3 | 3 |

Table 14

Diurnal Variation - Disturbed Days - Declination (Tenths of Minutes)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | -54 | -39 | -40 | -36 | -18 | -27 | -11 | 1 | -1 | -25 | -33 | -11 | 19 | 51 | 74 | 101M | 72 | 76 | 77 | 33 | 0 | -64 | -68 | -80m |
| Feb | -42 | -40 | -45 | -39 | -33 | -26 | -5 | -4 | -10 | -18 | -11 | 10 | 35 | 57 | 81M | 68 | 58 | 26 | 14 | 14 | -10 | -8 | -38 | -46m |
| Mar | -93 | -73 | -83 | -99m | -40 | -31 | 0 | 26 | -29 | -46 | -9 | -5 | 75 | 98 | 122 | 130M | 102 | 72 | 43 | 21 | -41 | -78 | -20 | -41 |
| Apr | -46 | -46 | -55 | -79m | -37 | -30 | -34 | -25 | -15 | -5 | 14 | 41 | 64 | 85 | 87M | 82 | 53 | 37 | 16 | -20 | -19 | -17 | -25 | -17 |
| May | 1 | -50 | -32 | -36 | -28 | -30 | -24 | -57 | -68m | -51 | -43 | -7 | 38 | 69 | 88 | 91M | 81 | 55 | 33 | 4 | 4 | -9 | -9 | -9 |
| June | -13 | -55 | -67 | -35 | -49 | -67 | -73m | -73m | -66 | -44 | -6 | 34 | 61 | 81 | 93M | 75 | 77 | 51 | 33 | 15 | 14 | 9 | -2 | 5 |
| July | -11 | -12 | -17 | -27 | -25 | -32 | -58 | -67 | -74m | -61 | -33 | 1 | 40 | 62 | 73 | 77M | 72 | 63 | 34 | 12 | 3 | -1 | -4 | -9 |
| Aug | -32 | -39 | -14 | -48 | -44 | -65 | -59 | -61 | -72m | -34 | -9 | 40 | 77 | 93M | 91 | 67 | 39 | 28 | 15 | 6 | 15 | 7 | 1 | -6 |
| Sept | -22 | -47 | -52 | -88m | -56 | -48 | -43 | -41 | -37 | -20 | 2 | 43 | 86 | 104M | 90 | 82 | 71 | 41 | 36 | 13 | -20 | -18 | -21 | -66 |
| Oct | -19 | -36 | -11 | 10 | -1 | -6 | 10 | 5 | -13 | -39 | -54m | -31 | 21 | 55 | 61M | 40 | 19 | -4 | 17 | 2 | 5 | 1 | -19 | -20 |
| Nov | -60 | -40 | -65 | -49 | -33 | -8 | -4 | -16 | -21 | -26 | -29 | 7 | 26 | 61 | 74 | 61 | 71 | 94M | 77 | 32 | 8 | -46 | -67m | -44 |
| Dec | -68 | -40 | -33 | -27 | -33 | -13 | -3 | 1 | 5 | -4 | -8 | 14 | 34 | 54 | 54 | 54 | 45 | 55M | 52 | 42 | 3 | -59 | -42 | -81m |
| Year | -38 | -43 | -43 | -46m | -33 | -32 | -26 | -26 | -34 | -31 | -18 | 11 | 48 | 72 | 82M | 77 | 63 | 49 | 37 | 14 | -3 | -24 | -26 | -35 |
| Winter | -56 | -40 | -46 | -37 | -29 | -18 | -6 | -4 | -6 | -18 | -20 | 5 | 29 | 56 | 71M | 71M | 62 | 63 | 56 | 31 | 1 | -44 | -53 | -62m |
| Equinox | -45 | -51 | -51 | -64m | -34 | -29 | -17 | -9 | -24 | -28 | -12 | 11 | 61 | 85 | 90M | 83 | 61 | 36 | 28 | 3 | -19 | -28 | -22 | -37 |
| Summer | -13 | -38 | -32 | -36 | -36 | -48 | -53 | -64 | -70m | -47 | -22 | 17 | 54 | 76 | 87M | 78 | 67 | 49 | 29 | 9 | 9 | 2 | -3 | -4 |

Table 15

Diurnal Variation - Disturbed Days - Horizontal Component (Nanotesla Units)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---------|------|-------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | 14 | 14 | 14 | 11 | 13 | 26 | 36 | 38M | 28 | 15 | 1 | -6 | -8 | -6 | -9 | -10 | -15 | -6 | -23 | -28 | -24 | -27 | -30m | -25 |
| Feb | -3 | -4 | -2 | -6 | 5 | 9 | 11 | 12 | 13M | 6 | 0 | -3 | -11 | -12m | -11 | -11 | -7 | 1 | 5 | -2 | 1 | 0 | 0 | 6 |
| Mar | -84 | -111m | 16 | 6 | 11 | 30 | 22 | 14 | -12 | 24 | 12 | -21 | -3 | 22 | 35 | 59 | 54 | 88M | 61 | 64 | 17 | -98 | -110 | -107 |
| Apr | 5 | -4 | -3 | -2 | -6 | 3 | 3 | -5 | -18 | -21 | -29 | -35m | -34 | -28 | -18 | -7 | 7 | 37 | 31 | 45M | 23 | 17 | 21 | 27 |
| May | 28 | 16 | 2 | 6 | -3 | 8 | 0 | -19 | -29 | -30 | -29 | -38 | -39m | -38 | -12 | 8 | 1 | 36 | 38M | 26 | 18 | 15 | 15 | 15 |
| June | 24 | 21 | 6 | 3 | -1 | -11 | -10 | -15 | -39 | -53 | -54 | -56m | -45 | -26 | -7 | -5 | 33 | 50 | 68M | 57 | 36 | 19 | 10 | 6 |
| July | 2 | 0 | 5 | 4 | 5 | 4 | -2 | -9 | -14 | -19 | -21 | -22m | -21 | -20 | -11 | -7 | 13 | 40M | 30 | 17 | 18 | 9 | 0 | -4 |
| Aug | 19 | 8 | 9 | 20 | 17 | 15 | 2 | -17 | -45 | -37 | -40 | -46m | -46m | -25 | -14 | -7 | 3 | 11 | 18 | 22 | 29 | 28 | 40M | 28 |
| Sept | 24M | 17 | 11 | 18 | 19 | 3 | 8 | -3 | -9 | -14 | -14 | -17 | -24 | -17 | -13 | 2 | 14 | 20 | 16 | 4 | 10 | 1 | -19 | -30m |
| Oct | -1 | 3 | 2 | 8 | 25 | 28 | 26 | 19 | 15 | -25 | -66m | -55 | -36 | -41 | -4 | 9 | 4 | 28 | 29M | 26 | -2 | 0 | -1 | 0 |
| Nov | -4 | -9 | 4 | 8 | 4 | 10 | 25M | 16 | 7 | 1 | 2 | -1 | -9 | -5 | -9 | -13 | -3 | 4 | 20 | -3 | -3 | -1 | -25m | -5 |
| Dec | -2 | 0 | 3 | 5 | 0 | 1 | 7 | 11 | 15M | 7 | -2 | -9 | -10 | -7 | -11m | -2 | -3 | 4 | 4 | 6 | -5 | -6 | -9 | -7 |
| Year | 2 | -4 | 6 | 7 | 8 | 11 | 11 | 4 | -7 | -12 | -20 | -25m | -24 | -17 | -7 | 2 | 9 | 26M | 25 | 20 | 10 | -3 | -9 | -8 |
| Winter | 1 | 0 | 4 | 4 | 5 | 11 | 19M | 19M | 16 | 7 | 0 | -5 | -10 | -8 | -10 | -9 | -7 | 0 | 1 | -7 | -8 | -9 | -16m | -8 |
| Equinox | -14 | -24 | 6 | 8 | 12 | 16 | 15 | 6 | -6 | -9 | -24 | -32m | -25 | -16 | 0 | 16 | 19 | 43M | 34 | 34 | 12 | -20 | -27 | -28 |
| Summer | 19 | 12 | 6 | 8 | 5 | 4 | -2 | -15 | -31 | -34 | -36 | -40m | -37 | -27 | -11 | -2 | 13 | 35 | 39M | 31 | 26 | 18 | 17 | 12 |

63

Table 16

Diurnal Variation - Disturbed Days - Vertical Component (Nanotesla Units)

1989

| Hr | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Month | to 1 | to 2 | to 3 | to 4 | to 5 | to 6 | to 7 | to 8 | to 9 | to 10 | to 11 | to 12 | to 13 | to 14 | to 15 | to 16 | to 17 | to 18 | to 19 | to 20 | to 21 | to 22 | to 23 | to 24 |
| Jan | -5 | -12 | -9 | -11 | -19 | -21 | -31 | -35m | -28 | -18 | -16 | -21 | -26 | -24 | -16 | 0 | 14 | 15 | 51 | 60M | 48 | 55 | 34 | 27 |
| Feb | 9 | 6 | -1 | -5 | -6 | -12 | -16 | -14 | -12 | -11 | -17 | -21m | -18 | -14 | -6 | 10 | 12 | 20 | 18 | 18 | 21M | 15 | 19 | 10 |
| Mar | -73 | 14 | -32 | -39 | -66 | -51 | -49 | -38 | -16 | -11 | -21 | -19 | -23 | -10 | 12 | 64 | 85 | 112M | 96 | 86 | 61 | 14 | -74m | -32 |
| Apr | -14 | -25 | -25 | -18 | -26m | -26m | -21 | -17 | -13 | -15 | -17 | -19 | -18 | -12 | 5 | 21 | 41 | 51 | 57M | 51 | 28 | 17 | 8 | -13 |
| May | -19 | -13 | -26 | -16 | -16 | -15 | -15 | -2 | -5 | -10 | -14 | -28 | -34m | -25 | -9 | 15 | 31 | 48 | 61M | 54 | 35 | 16 | 3 | -7 |
| June | -7 | -11 | -27 | -31 | -23 | -19 | -19 | -22 | -23 | -32 | -37 | -42m | -37 | -21 | 5 | 28 | 43 | 62 | 65M | 56 | 41 | 28 | 14 | 5 |
| July | 3 | 1 | 0 | 1 | 0 | 1 | 4 | 1 | -4 | -11 | -20 | -30 | -35m | -27 | -18 | -6 | 5 | 19 | 33M | 31 | 22 | 13 | 6 | 7 |
| Aug | -2 | -16 | -32 | -28 | -40m | -29 | -25 | -13 | -5 | -14 | -14 | -28 | -24 | -11 | 10 | 39 | 55M | 54 | 49 | 35 | 25 | 23 | 4 | -11 |
| Sept | -1 | -1 | -9 | -28 | -44m | -40 | -33 | -17 | -11 | -12 | -17 | -27 | -28 | -16 | -2 | 9 | 30 | 52 | 61 | 62M | 48 | 18 | 4 | -4 |
| Oct | -31 | -33 | -48 | -60m | -44 | -35 | -36 | -27 | -19 | -15 | -14 | -15 | -13 | -3 | 47 | 64 | 76M | 69 | 58 | 48 | 24 | 6 | 3 | -11 |
| Nov | -12 | -26 | -21 | -26 | -28 | -31m | -28 | -23 | -20 | -19 | -24 | -30 | -24 | -24 | -4 | 21 | 38 | 50 | 85M | 57 | 50 | 38 | 6 | -3 |
| Dec | -2 | -8 | -9 | -12 | -14 | -18m | -17 | -15 | -14 | -10 | -11 | -17 | -18m | -17 | -5 | 4 | 15 | 12 | 19 | 31 | 48M | 38 | 19 | 10 |
| Year | -13 | -10 | -20 | -23 | -27m | -25 | -24 | -19 | -14 | -15 | -10 | -25 | -25 | -17 | 2 | 22 | 37 | 47 | 54M | 49 | 37 | 23 | 4 | -2 |
| Winter | -2 | -10 | -10 | -14 | -17 | -20 | -23m | -22 | -19 | -15 | -17 | -22 | -21 | -20 | -7 | 9 | 20 | 24 | 43M | 41 | 42 | 37 | 19 | 11 |
| Equinx | -30 | -11 | -29 | -37 | -45m | -38 | -35 | -25 | -15 | -13 | -17 | -20 | -21 | -10 | 16 | 39 | 58 | 71M | 68 | 62 | 40 | 14 | -15 | -15 |
| Summer | -6 | -10 | -22 | -19 | -20 | -16 | -14 | -9 | -10 | -17 | -21 | -32 | -33m | -21 | -3 | 19 | 33 | 45 | 52M | 44 | 31 | 20 | 7 | -2 |

Table 17

Three Hour Range Indices - K 1989

| Date | January | | February | | March | | April | | May | | June | |
|------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|
| | K | K Sum | K | K Sum | K | K Sum | K | K Sum | K | K Sum | K | K Sum |
| 1 | 4221 2243 | 20 | 4323 4235 | 26 | 3222 3322 | 19 | 3443 3344 | 28 | 3122 2323 | 18 | 2211 2223 | 15 |
| 2 | 1111 2022 | 10 | 2311 3253 | 20 | 3432 3323 | 23 | 3331 3421 | 20 | 2232 2343 | 21 | 2222 3333 | 20 |
| 3 | 0011 1111 | 6 | 5423 4544 | 31 | 3454 3443 | 30 | 4322 3334 | 24 | 3232 2232 | 19 | 3211 2433 | 19 |
| 4 | 1111 1112 | 9 | 4222 3244 | 23 | 3112 3301 | 14 | 4434 3454 | 31 | 3312 3334 | 22 | 3522 2321 | 20 |
| 5 | 4543 2441 | 27 | 3323 3333 | 23 | 3335 3234 | 26 | 5332 2243 | 24 | 6543 2334 | 30 | 1121 1222 | 12 |
| 6 | 3212 2212 | 15 | 3322 4342 | 23 | 4322 5333 | 25 | 3322 1222 | 17 | 2121 1333 | 16 | 2322 2314 | 19 |
| 7 | 2111 2122 | 12 | 3223 3434 | 24 | 4322 3313 | 21 | 2233 3444 | 25 | 0343 4454 | 27 | 5334 2133 | 24 |
| 8 | 0121 4243 | 17 | 3322 3212 | 18 | 1121 0445 | 18 | 3223 2332 | 20 | 1112 1112 | 10 | 3232 3354 | 25 |
| 9 | 2222 4213 | 18 | 4322 3332 | 22 | 4432 4344 | 28 | 3233 3442 | 24 | 1121 2211 | 11 | 6322 1434 | 25 |
| 10 | 3212 3221 | 16 | 3312 3210 | 15 | 3221 2322 | 17 | 2122 3222 | 16 | 1211 1111 | 9 | 4544 5654 | 37 |
| 11 | 1012 4566 | 25 | 0013 2333 | 15 | 2212 2224 | 17 | 1133 4421 | 19 | 1110 1212 | 9 | 4332 2433 | 24 |
| 12 | 5311 2120 | 15 | 2222 4244 | 22 | 4222 2333 | 21 | 1133 2121 | 14 | 2322 2211 | 15 | 2223 1231 | 16 |
| 13 | 0012 4343 | 17 | 4323 2333 | 23 | 4688 7799 | 58 | 2132 2322 | 17 | 1112 3311 | 13 | 1121 3543 | 20 |
| 14 | 3112 2235 | 19 | 3322 3311 | 18 | 9764 4466 | 46 | 3233 3445 | 27 | 1323 1221 | 15 | 3444 4543 | 31 |
| 15 | 4333 4345 | 29 | 1112 2244 | 17 | 6533 3432 | 29 | 4533 2222 | 23 | 1222 3332 | 18 | 3242 4543 | 27 |
| 16 | 4444 4345 | 32 | 2413 2213 | 18 | 1344 3443 | 26 | 1111 4335 | 19 | 1311 2221 | 13 | 3331 2310 | 16 |
| 17 | 4334 4353 | 29 | 1112 1011 | 8 | 3343 2432 | 24 | 4112 1223 | 16 | 2222 2221 | 15 | 0011 2411 | 10 |
| 18 | 4313 2211 | 17 | 1321 3321 | 16 | 0111 2311 | 10 | 3413 2211 | 17 | 1211 2211 | 11 | 1133 2221 | 15 |
| 19 | 2211 1112 | 11 | 1113 2213 | 14 | 1254 4432 | 25 | 1112 3321 | 14 | 1111 2111 | 9 | 1222 2323 | 17 |
| 20 | 3111 5654 | 26 | 3233 3441 | 23 | 1333 2224 | 20 | 1333 2332 | 20 | 1123 3220 | 14 | 2334 3442 | 25 |
| 21 | 3323 3434 | 25 | 1122 1320 | 12 | 3334 3323 | 24 | 2322 2311 | 16 | 1221 2311 | 13 | 1121 2211 | 11 |
| 22 | 4333 4333 | 26 | 1232 3222 | 17 | 2233 4465 | 29 | 3012 2212 | 13 | 1211 3323 | 16 | 0122 2322 | 14 |
| 23 | 2333 3333 | 23 | 1111 2112 | 10 | 4233 3534 | 27 | 2122 3343 | 20 | 2133 4654 | 28 | 1032 1221 | 12 |
| 24 | 2111 3233 | 16 | 2223 3111 | 15 | 4331 1211 | 16 | 3111 1214 | 14 | 4444 5544 | 34 | 1122 3311 | 14 |
| 25 | 1213 3132 | 16 | 1132 3111 | 13 | 1123 2142 | 16 | 1222 3444 | 22 | 4431 3333 | 24 | 1221 1312 | 13 |
| 26 | 2112 3321 | 15 | 1012 3101 | 9 | 2223 3223 | 19 | 5544 3555 | 36 | 3121 3333 | 19 | 1123 2411 | 15 |
| 27 | 3412 3200 | 15 | 2102 2212 | 12 | 1133 4554 | 26 | 4442 3554 | 31 | 3432 2332 | 22 | 3111 1222 | 13 |
| 28 | 1311 3341 | 17 | 1112 3233 | 16 | 4234 4433 | 27 | 4432 4444 | 29 | 3222 3432 | 21 | 2122 2312 | 15 |
| 29 | 2113 3221 | 15 | | | 6543 4465 | 37 | 2322 3544 | 25 | 3122 3432 | 20 | 2432 3222 | 20 |
| 30 | 1113 3222 | 15 | | | 3443 3345 | 29 | 3222 2222 | 17 | 2211 1332 | 15 | 3431 1321 | 18 |
| 31 | 3221 3446 | 25 | | | 4433 3444 | 29 | | | 3132 2232 | 18 | | |

Table 17 (Contd.) Three Hour Range Indices - K 1989

| Date | July | | August | | September | | October | | November | | December | |
|------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
| | K | K Sum | K | K Sum | K | K Sum | K | K Sum | K | K Sum | K | K Sum |
| 1 | 1121 2553 | 20 | 1121 2111 | 10 | 2132 2221 | 15 | 3323 2311 | 18 | 1122 2223 | 15 | 4322 3454 | 27 |
| 2 | 2222 1321 | 15 | 2121 2211 | 12 | 2213 1311 | 14 | 1223 2211 | 14 | 4222 3243 | 22 | 3332 2123 | 19 |
| 3 | 0121 1330 | 11 | 1121 2220 | 11 | 1223 2112 | 14 | 1123 3322 | 17 | 4233 4242 | 24 | 4223 3334 | 24 |
| 4 | 0031 2111 | 9 | 1132 3322 | 17 | 4533 3313 | 25 | 2212 3212 | 15 | 1133 4334 | 22 | 5422 3344 | 27 |
| 5 | 1111 3544 | 20 | 1012 2211 | 10 | 4342 2321 | 21 | 2111 2113 | 12 | 2322 2234 | 20 | 5311 2122 | 17 |
| 6 | 2222 3331 | 18 | 1132 2332 | 17 | 1122 3232 | 16 | 1122 3213 | 15 | 2123 3132 | 17 | 2111 2111 | 10 |
| 7 | 2133 2221 | 16 | 1121 3331 | 15 | 2122 3533 | 21 | 3222 3224 | 20 | 3313 4223 | 21 | 2111 3223 | 15 |
| 8 | 1112 2111 | 10 | 1221 1221 | 12 | 3332 2212 | 18 | 2222 3112 | 15 | 2224 3320 | 18 | 1111 3211 | 11 |
| 9 | 2322 2321 | 17 | 1111 2242 | 14 | 2122 3331 | 17 | 3312 2213 | 17 | 2322 3433 | 22 | 1101 1010 | 5 |
| 10 | 1332 1323 | 18 | 3344 3433 | 27 | 2322 2322 | 18 | 1222 2211 | 13 | 1222 2111 | 12 | 0001 1111 | 5 |
| 11 | 1121 1321 | 12 | 4433 3322 | 24 | 1101 1112 | 8 | 1222 1111 | 11 | 2213 3343 | 21 | 0112 2111 | 9 |
| 12 | 0111 2112 | 9 | 3121 3312 | 16 | 2333 2311 | 18 | 1111 2211 | 10 | 3112 1112 | 12 | 2111 2023 | 12 |
| 13 | 1223 1311 | 14 | 3211 2121 | 13 | 1132 2224 | 17 | 1010 1000 | 3 | 4333 4444 | 29 | 2211 1120 | 10 |
| 14 | 0111 1312 | 10 | 3354 4234 | 28 | 1122 1110 | 9 | 0001 1000 | 2 | 3212 2202 | 14 | 0013 2332 | 14 |
| 15 | 1223 2221 | 15 | 5543 4336 | 33 | 2424 3455 | 29 | 1111 2121 | 10 | 3112 2111 | 12 | 3221 3112 | 15 |
| 16 | 0100 1210 | 5 | 4332 2333 | 23 | 4432 2123 | 21 | 1112 3121 | 12 | 1022 3112 | 12 | 1123 3333 | 19 |
| 17 | 3133 3331 | 20 | 3132 4435 | 25 | 1021 1122 | 10 | 3212 1231 | 15 | 4236 6687 | 42 | 1112 2211 | 11 |
| 18 | 3431 2321 | 19 | 5244 3333 | 27 | 4223 3356 | 28 | 4413 2223 | 21 | 6532 2322 | 25 | 2111 1122 | 11 |
| 19 | 1032 1211 | 11 | 3522 2331 | 21 | 6753 3220 | 28 | 5333 3321 | 23 | 1112 2133 | 14 | 2111 1111 | 9 |
| 20 | 1111 1221 | 10 | 1244 4411 | 21 | 0111 1112 | 8 | 1135 5575 | 32 | 2212 2222 | 15 | 1111 1122 | 10 |
| 21 | 1121 1211 | 10 | 1122 4445 | 23 | 3211 2202 | 13 | 5557 5485 | 44 | 3123 2101 | 13 | 3211 2122 | 14 |
| 22 | 1111 2212 | 11 | 4232 1201 | 15 | 2234 2432 | 22 | 5422 3454 | 29 | 0001 2212 | 8 | 3223 4342 | 23 |
| 23 | 2322 3312 | 18 | 3323 4453 | 27 | 1010 0112 | 6 | 2441 2132 | 19 | 2111 1112 | 10 | 1322 3112 | 15 |
| 24 | 2133 2322 | 18 | 3121 2111 | 12 | 1011 1212 | 9 | 2231 2122 | 15 | 1111 2121 | 10 | 2113 3345 | 22 |
| 25 | 1122 2222 | 14 | 1111 1212 | 10 | 1101 1121 | 8 | 4433 2112 | 20 | 1101 1010 | 5 | 2312 2223 | 17 |
| 26 | 2131 3432 | 19 | 1111 2101 | 8 | 1143 3464 | 26 | 1321 4355 | 24 | 1001 2342 | 13 | 2113 3254 | 21 |
| 27 | 1311 2212 | 13 | 1332 3344 | 23 | 4311 2111 | 14 | 4223 1233 | 20 | 1113 3234 | 18 | 3322 3432 | 22 |
| 28 | 2321 1233 | 17 | 2002 2146 | 17 | 2211 2122 | 13 | 1122 2321 | 14 | 3433 3323 | 24 | 2211 2113 | 13 |
| 29 | 2123 3332 | 19 | 6532 3342 | 28 | 1114 3212 | 15 | 2121 2233 | 16 | 3122 3443 | 22 | 1123 3476 | 27 |
| 30 | 1111 1323 | 13 | 2322 3422 | 20 | 3211 2342 | 18 | 4223 4134 | 23 | 4323 3235 | 25 | 5233 3344 | 27 |
| 31 | 2111 1211 | 10 | 1110 1222 | 10 | | | 4222 4331 | 21 | | | 4443 3332 | 26 |

Table 18 Sudden Commencements of Magnetic Storms
or Periods of Storminess (S.S.C's)

| Date | Time (GMT) | Date | Time (GMT) | Date | Time (GMT) | Date | Time (GMT) | Date | Time (GMT) |
|--------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|---------------|
| Jan 4 | 0847 | Mar 26 | 2249 | Jun 13 | 1741 | Aug 23 | 1427 | Oct 20 | 0917 |
| Jan 4 | 2306 | Mar 27 | 1343 | Jul 1 | 0718 | Aug 27 | 1338 | Oct 26 | 1427 |
| Jan 5 | 1324 | Apr 11 | 1435 | Jul 1 | 1546 | Sep 4 | 0026 | Nov 2 | 0036 |
| Jan 6 | 2354 | Apr 13 | 2224 | Jul 17 | 0155 | Sep 7 | 1651 | Nov 8 | 1123 |
| Jan 11 | 1205 | May 4 | 2351 | Aug 9 | 1833 | Sep 12 | 1229 | Nov 9 | 0056 |
| Jan 20 | 1130 | May 7 | 0512 | Aug 10 | 0728 | Sep 15 | 0048 | Nov 11 | 1410 |
| Mar 2 | 0247 | May 20 | 0957 | Aug 14 | 0613 | Sep 18 | 1027 | Nov 17 | 0925 |
| Mar 8 | 1754 | May 23 | 1347 | Aug 17 | 1540 | Oct 2 | 0340 | Nov 27 | 2140 |
| Mar 13 | 0127 | Jun 6 | 2314 | Aug 21 | 1416 | Oct 12 | 0742 | Dec 1 | 1750 |
| Mar 16 | 0532 | Jun 8 | 1953 | Aug 23 | 0048 | Oct 18 | 0050 | Dec 29 | 0656 |
| Mar 19 | 0424 | | | | | | | | |

Table 19 Presumed Solar Flare Effects (S.F.E's)

NIL

Table 20 Giant Pulsations (p.g.'s)

NIL

TABLE 21

ANNUAL MEAN VALUES OF THE MAGNETIC ELEMENTS

| Year | D | H | I | X | Y | Z | T |
|------|----------|-------|---------|-------|-------|-------|-------|
| 1899 | -21 35.0 | 17739 | 68 33.0 | 16495 | -6525 | 45149 | 48508 |
| 1900 | -21 30.0 | 17765 | 68 29.6 | 16529 | -6511 | 45084 | 48458 |
| 1901 | -21 27.7 | 17801 | 68 26.3 | 16567 | -6513 | 45048 | 48438 |
| 1902 | -21 24.2 | 17833 | 68 23.9 | 16603 | -6508 | 45037 | 48439 |
| 1903 | -21 18.7 | 17833 | 68 22.6 | 16614 | -6481 | 44987 | 48393 |
| 1904 | -21 15.2 | 17840 | 68 20.9 | 16627 | -6467 | 44941 | 48352 |
| 1905 | -21 10.4 | 17848 | 68 19.2 | 16643 | -6447 | 44895 | 48313 |
| 1906 | -21 06.3 | 17867 | 68 16.9 | 16669 | -6433 | 44856 | 48283 |
| 1907 | -21 01.4 | 17870 | 68 17.0 | 16680 | -6411 | 44867 | 48295 |
| 1908 | -20 55.7 | 17870 | 68 16.3 | 16691 | -6383 | 44840 | 48270 |
| 1909 | -20 50.3 | 17877 | 68 15.1 | 16708 | -6359 | 44813 | 48247 |
| 1910 | -20 44.6 | 17892 | 68 13.0 | 16732 | -6337 | 44771 | 48214 |
| 1911 | -20 38.1 | 17889 | 68 12.1 | 16741 | -6304 | 44729 | 48174 |
| 1912 | -20 29.3 | 17898 | 68 10.3 | 16766 | -6265 | 44684 | 48135 |
| 1913 | -20 19.6 | 17892 | 68 09.2 | 16778 | -6215 | 44628 | 48081 |
| 1914 | -20 12.3 | 17895 | 68 07.8 | 16794 | -6181 | 44583 | 48040 |
| 1915 | -20 03.8 | 17869 | 68 07.9 | 16785 | -6130 | 44522 | 47974 |
| 1916 | -19 53.1 | 17869 | 68 06.6 | 16804 | -6078 | 44473 | 47929 |
| 1917 | -19 43.0 | 17855 | 68 06.9 | 16808 | -6024 | 44449 | 47901 |
| 1918 | -19 36.2 | 17843 | 68 06.5 | 16809 | -5986 | 44405 | 47855 |
| 1919 | -19 27.2 | 17840 | 68 06.1 | 16822 | -5941 | 44382 | 47833 |
| 1920 | -19 17.9 | 17837 | 68 05.3 | 16835 | -5895 | 44345 | 47798 |
| 1921 | -19 06.5 | 17844 | 68 03.4 | 16861 | -5841 | 44292 | 47751 |
| 1922 | -18 57.0 | 17844 | 68 02.9 | 16877 | -5795 | 44273 | 47734 |
| 1923 | -18 46.5 | 17846 | 68 01.3 | 16896 | -5744 | 44219 | 47684 |
| 1924 | -18 34.9 | 17847 | 68 00.3 | 16917 | -5687 | 44184 | 47652 |
| 1925 | -18 22.4 | 17841 | 67 59.6 | 16932 | -5624 | 44143 | 47612 |
| 1926 | -18 10.8 | 17825 | 67 59.6 | 16935 | -5561 | 44104 | 47570 |
| 1927 | -17 59.5 | 17826 | 67 58.5 | 16954 | -5506 | 44066 | 47535 |
| 1928 | -17 48.0 | 17813 | 67 58.5 | 16960 | -5445 | 44033 | 47500 |
| 1929 | -17 37.3 | 17807 | 67 58.6 | 16971 | -5391 | 44022 | 47487 |
| 1930 | -17 27.6 | 17798 | 67 58.7 | 16978 | -5340 | 44004 | 47467 |
| 1931 | -17 16.8 | 17798 | 67 57.4 | 16995 | -5287 | 43956 | 47422 |
| 1932 | -17 05.4 | 17791 | 67 57.1 | 17005 | -5228 | 43928 | 47394 |
| 1933 | -16 54.5 | 17792 | 67 56.4 | 17023 | -5175 | 43904 | 47372 |
| 1934 | -16 43.7 | 17791 | 67 55.8 | 17038 | -5121 | 43880 | 47349 |
| 1935 | -16 32.7 | 17782 | 67 55.6 | 17046 | -5064 | 43850 | 47319 |
| 1936 | -16 21.6 | 17777 | 67 55.7 | 17057 | -5007 | 43842 | 47309 |
| 1937 | -16 11.7 | 17777 | 67 55.9 | 17072 | -4958 | 43849 | 47315 |
| 1938 | -16 02.7 | 17782 | 67 56.3 | 17089 | -4915 | 43876 | 47342 |
| 1939 | -15 54.1 | 17793 | 67 56.1 | 17112 | -4875 | 43896 | 47365 |
| 1940 | -15 45.6 | 17798 | 67 56.1 | 17129 | -4834 | 43908 | 47378 |
| 1941 | -15 36.8 | 17808 | 67 55.2 | 17151 | -4793 | 43900 | 47374 |
| 1942 | -15 28.0 | 17831 | 67 53.6 | 17185 | -4755 | 43898 | 47381 |
| 1943 | -15 19.8 | 17837 | 67 53.6 | 17202 | -4716 | 43913 | 47397 |
| 1944 | -15 11.6 | 17861 | 67 52.1 | 17237 | -4681 | 43917 | 47410 |
| 1945 | -15 03.6 | 17867 | 67 51.1 | 17253 | -4642 | 43895 | 47392 |
| 1946 | -14 54.2 | 17857 | 67 52.3 | 17256 | -4593 | 43914 | 47406 |
| 1947 | -14 45.1 | 17876 | 67 52.3 | 17287 | -4552 | 43961 | 47456 |
| 1948 | -14 37.2 | 17883 | 67 52.1 | 17304 | -4514 | 43971 | 47468 |

TABLE 21

ANNUAL MEAN VALUES OF THE MAGNETIC ELEMENTS

| Year | D | H | I | X | Y | Z | T |
|------|----------|-------|---------|-------|-------|-------|-------|
| 1949 | -14 30.1 | 17911 | 67 50.9 | 17340 | -4485 | 43996 | 47502 |
| 1950 | -14 23.9 | 17952 | 67 49.8 | 17388 | -4464 | 44056 | 47573 |
| 1951 | -14 16.5 | 17983 | 67 48.3 | 17428 | -4434 | 44077 | 47604 |
| 1952 | -14 10.3 | 18020 | 67 45.7 | 17472 | -4412 | 44072 | 47614 |
| 1953 | -14 03.6 | 18061 | 67 44.3 | 17520 | -4388 | 44121 | 47675 |
| 1954 | -13 55.9 | 18109 | 67 41.8 | 17576 | -4360 | 44147 | 47717 |
| 1955 | -13 48.5 | 18137 | 67 39.9 | 17613 | -4329 | 44146 | 47727 |
| 1956 | -13 41.6 | 18158 | 67 39.0 | 17642 | -4298 | 44165 | 47752 |
| 1957 | -13 35.1 | 18192 | 67 37.1 | 17683 | -4273 | 44178 | 47777 |
| 1958 | -13 29.0 | 18226 | 67 35.4 | 17724 | -4250 | 44197 | 47808 |
| 1959 | -13 22.9 | 18252 | 67 34.1 | 17756 | -4224 | 44215 | 47831 |
| 1960 | -13 16.4 | 18279 | 67 32.7 | 17791 | -4197 | 44229 | 47857 |
| 1961 | -13 10.3 | 18318 | 67 30.5 | 17836 | -4174 | 44242 | 47884 |
| 1962 | -13 04.1 | 18359 | 67 27.9 | 17884 | -4151 | 44245 | 47903 |
| 1963 | -12 57.6 | 18391 | 67 26.0 | 17923 | -4125 | 44253 | 47922 |
| 1964 | -12 51.6 | 18428 | 67 23.7 | 17966 | -4102 | 44260 | 47943 |
| 1965 | -12 46.1 | 18466 | 67 21.4 | 18009 | -4081 | 44268 | 47965 |
| 1966 | -12 40.8 | 18495 | 67 19.8 | 18044 | -4060 | 44277 | 47985 |
| 1967 | -12 35.7 | 18526 | 67 18.3 | 18080 | -4040 | 44298 | 48016 |
| 1968 | -12 30.7 | 18564 | 67 16.3 | 18123 | -4022 | 44316 | 48047 |
| 1969 | -12 25.8 | 18605 | 67 14.1 | 18169 | -4005 | 44337 | 48082 |
| 1970 | -12 20.6 | 18651 | 67 11.8 | 18220 | -3987 | 44361 | 48122 |
| 1971 | -12 14.8 | 18697 | 67 09.3 | 18271 | -3966 | 44379 | 48157 |
| 1972 | -12 08.2 | 18735 | 67 07.4 | 18316 | -3939 | 44400 | 48191 |
| 1973 | -12 00.7 | 18773 | 67 05.3 | 18362 | -3907 | 44416 | 48220 |
| 1974 | -11 52.0 | 18809 | 67 03.5 | 18407 | -3868 | 44436 | 48253 |
| 1975 | -11 43.0 | 18849 | 67 01.2 | 18456 | -3828 | 44447 | 48279 |
| 1976 | -11 33.0 | 18882 | 66 59.1 | 18500 | -3781 | 44454 | 48298 |
| 1977 | -11 22.7 | 18914 | 66 57.1 | 18543 | -3731 | 44456 | 48312 |
| 1978 | -11 11.9 | 18932 | 66 56.2 | 18572 | -3677 | 44465 | 48328 |
| 1979 | -11 01.0 | 18956 | 66 54.5 | 18607 | -3622 | 44460 | 48332 |
| 1980 | -10 50.4 | 18980 | 66 52.7 | 18641 | -3570 | 44450 | 48332 |
| 1981 | -10 40.4 | 18990 | 66 52.1 | 18662 | -3517 | 44455 | 48341 |
| 1882 | -10 30.2 | 19000 | 66 51.6 | 18682 | -3463 | 44461 | 48350 |
| 1983 | -10 20.1 | 19022 | 66 50.0 | 18713 | -3413 | 44454 | 48353 |
| 1984 | -10 10.1 | 19036 | 66 49.0 | 18737 | -3361 | 44450 | 48355 |
| 1985 | -10 00.8 | 19050 | 66 48.0 | 18760 | -3312 | 44448 | 48358 |
| 1986 | -9 51.2 | 19058 | 66 47.7 | 18777 | -3261 | 44454 | 48367 |
| 1987 | -9 41.9 | 19072 | 66 46.8 | 18799 | -3213 | 44454 | 48372 |
| 1988 | -9 32.4 | 19074 | 66 47.0 | 18810 | -3161 | 44468 | 48386 |
| 1989 | -9 23.3 | 19075 | 66 47.5 | 18819 | -3112 | 44487 | 48404 |

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FLUXGATE MAGNETOMETER SYSTEM AT VALENTIA

by

K. G. Commins and E. R. Hardy

Introduction

From 1st January 1989 the primary output from this station is in the form of one minute values of Horizontal Intensity (H), Vertical Intensity (Z) and Declination (D) measured by a triaxial fluxgate magnetometer. Temperature of the magnetic sensors is measured by a platinum resistance thermometer.

Description of the Digital Magnetometer

The output voltages from an EDA FM105B fluxgate magnetometer in the variometer room are scanned by a Campbell Scientific CR10 data logger located in an annex. One second readings of H, Z, D and temperature are averaged to give one minute means centered on the half-minute. Hourly means centered on the half-hour are also computed. The logger, powered by a 12V battery pack, can store up to five and a half days data. On command, digitized data from the logger are fed, via Campbell short haul modems, to an IBM PC compatible computer in the main Observatory building, about 100m distant. A 30MB hard disc contains all the data handling software and space for at least two years data, current year and previous year. H and Z values are corrected for temperature dependence, and all data are then transferred to a random access database, a copy of which is stored on 3.5in floppy discs. Computer programs are used to access the data files. A brief description of the software and technical specifications of the hardware are given below.

Performance

Since the digital system was installed in August 1988 it has run smoothly with very few problems. Baselines are generally stable with observations showing deviations of typically ± 1 nT or $\pm 0.1'$ which are of the order of the accuracy of the baseline instruments - Ruska Declinometer and Elsec Proton Vector Magnetometer. The baseline observations show smaller deviations for the fluxgate than for the La Cour. The H and Z baselines do show some drift which seems to be due to slight tilting of the sensor.

In March 1989 a thunderstorm damaged the three output amplifiers of the fluxgate electronics but the logger was not affected. The amplifiers were repaired the same day but the H component had a large baseline shift. A few days later it started to drift. A new amplifier on the H board resolved the problem. This was the only significant loss of data in 1989. Other short gaps, due to causes such as power failures or downloading new programs to the datalogger, were filled

by manually entering data derived from the La Cour variometers and interpolation between these data.

Temperature effects were determined by making a series of baseline observations with the sensors at different temperatures. Over a range of 12°C temperature coefficients were found to be 0.43nT/°C for H and 0.29nT/°C for Z. The temperature dependence of the D component was negligible. These corrections are applied as the data are being transferred from the logger data file to the database. The fluxgate is located in a thermostatically controlled hut. Temperature in the hut generally varies between 19 and 21°C except in very warm weather when it may rise to 27°C.

Software

The MAGS Program

This program, written in FORTRAN 77, provides all the facilities required to run and maintain the digital magnetometer. It has functions to display any data, minute (for computation of baselines) or hourly data (including temperature), to edit minute values for removal of transients, to plot magnetograms on the screen for quality control and to enter and store baseline observations, adopted baselines and K-indices previously determined from the La Cour charts. It also provides routines for making backup copies of the data and restoring data from the backup discs; formatting the one minute means for transmission to the World Digital Data Centre on floppy discs and for plotting full size magnetograms (A3 or A4) with baselines applied using a pen plotter. A plot, scaled to La Cour magnetogram size, can also be produced for comparison purposes. Hourly means and the extreme values with the times of occurrence can be computed and transferred to a yearbook database for use by the YEARBOOK program.

The YEARBOOK Program

This program, also written in FORTRAN, takes the hourly means computed by the MAGS program together with the baselines and stores them in a smaller database. The program has editing facilities for amending hourly readings or entering readings scaled from the LA Cour charts in the event of a malfunction in the fluxgate systems. It contains all the routines necessary to produce the yearbook - annual and hourly means of H,D and Z, extreme values and times of their occurrence, diurnal variation tables, tables of observed and adopted baselines and K-indices.

Technical Specifications

Fluxgate

| | |
|---------------------------|--|
| Model: | EDA FM105B |
| Dynamic Range: | $\pm 1000nT$ |
| Output Voltage: | 10mV/nT (-10 to +10V) |
| Temperature coefficients: | H- 0.43nT/°C Z- 0.29nT/°C D- Nil |

Data Logger

| | |
|------------------|--|
| Model: | Campbell Scientific CR10 |
| No. of Channels: | 6 analogue, 8 digital, 2 pulse |
| Resolution: | .133nT |
| Dynamic Range: | -2.5V to +2.5V extended to $\pm 10V$ by voltage dividers |
| Sample Period: | 1 second |
| Output Period: | 1 minute means of H,Z and D Hourly means of H,Z,D and Temp. |
| Storage: | 29900 readings |
| Capacity: | 5.4 days of 1 minute means |
| Modem: | SC95A Short Haul Answer Modem |

Computer

| | |
|---------------|--|
| Model: | PROMPT XT |
| Hard disc: | 30MB |
| Floppy discs: | 360k 5.25" and 1.44MB 3.5" |
| Peripherals: | 132 col. printer Gould A3 HP-GL Pen Plotter SC95C Short Haul Calling Modem |
| Software: | MSDOS 3.3 Microsoft FORTRAN 4.1 ISS Interacter FORTRAN Library PC208 Datalogger support software. |