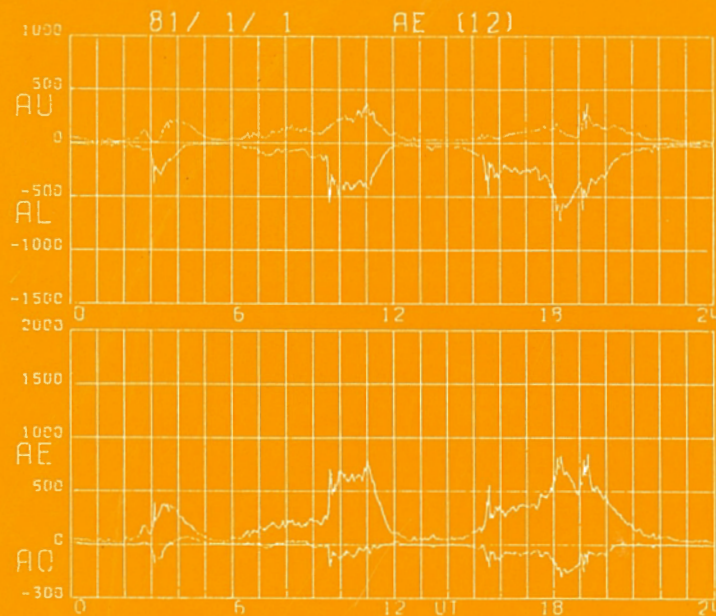


World Data Center C2 for Geomagnetism

DATA BOOK

No. 9

Auroral electrojet indices (AE)
for January-June 1981



MAY 1984

Data Analysis Center for
Geomagnetism and Spacemagnetism
FACULTY OF SCIENCE
KYOTO UNIVERSITY
KYOTO

Division of
Data Collection and Processing
**NATIONAL INSTITUTE OF
POLAR RESEARCH**
TOKYO

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PREFACE

The Auroral Electrojet (AE) index was originally introduced by Davis and Sugiura in 1966 as a measure of global electrojet activity in the auroral zone, and it is now widely used for studying geomagnetism, aeronomy and solar-terrestrial physics. The index was first derived at the Geophysical Institute of the University of Alaska, and hourly values were published for the years 1957 to 1964. The production of 2.5 min value was then tried at the Goddard Space Flight Center of NASA, and the results from September 1964 to June 1968 were published.

After that, the index was regularly published at the World Data Center A (WDC-A) in Boulder, Colorado, and the Center published 2.5 min values for the years 1966 to 1974 and 1.0 min values for 1975 and the first 4 months of 1976.

When it became difficult to continue the production of the AE-index at the WDC-A, it was requested that the index be produced at the WDC-C2 for Geomagnetism which is operated by Data Analysis Center for Geomagnetism and Spacemagnetism, Faculty of Science, Kyoto University. We decided to produce the index for two years (1978-1979) during the International Magnetospheric Study (IMS) and have published 1.0 min values as a part of "WDC-C2 for Geomagnetism Data Book" series (No.3 and 4 for 1978, and No.5 and 6 for 1979).

Although the International Association of Geomagnetism and Aeronomy (IAGA) recommended the continuation of the production of the AE-index at the WDC-C2, we could not extend it to the period after IMS because the available man-power and computing facilities were not sufficient for the continuous derivation.

Increasing demands for the index, however, moved us to resume the production of the AE-index and we published Data Book No.7 which contained the index for the first half of 1980. After that, the possibilities of financial support necessary for the production of the index were explored at the Subcommittee on Solar Terrestrial Physics of the Special Committee for International Cooperation, Japan Science Council, and the support was asked to National Institute of Polar Research (NIPR), Tokyo.

This Data Book No.9 is the second result of the co-operation between Kyoto University and National Institute of Polar Research. The index in this Book was derived at the WDC-C2 for Geomagnetism and the printing and distribution were made by Division of Data Collection and Processing, NIPR.

All inquiries about the Data Book and its distribution including change of address should be sent to

World Data Center C2 for Geomagnetism
Faculty of Science, Kyoto University
Kyoto 606, Japan.

Auroral Electrojet Indices (AE)

for January - June 1981

1. Derivation and Representation

The AE index is derived from the horizontal component of geomagnetic variations observed at some (10-13) observatories along the auroral zone in the northern hemisphere. To normalize the data from each station, a base value of each station for each month is first calculated by averaging all the data of the station on the five international quiet days, and this base value is subtracted from every-day data of the station in that month. Then the largest and smallest values are selected from all the stations. The largest value is called the AU index and the smallest value is called the AL index. These names came from the upper and lower envelopes of the overlapped figure of the data from these stations. The difference between the AU and AL indices gives the AE index, and the mean value of the AU and AL indices gives the AO index. The term "AE indices" is usually used to describe those four indices (AU, AL, AE and AO) in all.

The AU and AL indices are understood to express the strongest current density of the eastward and westward auroral electrojet, respectively. The AE index is understood to represent the overall activity of the electrojets, and the AO index is regarded as a measure of the equivalent zonal current.

In this report we shall present every-day diagrams and hourly values of the AE indices and "Contributing stations plot" of the AE indices which may give more information about the indices. That is, we named stations which give the AU and AL indices "the contributing stations of the AU and the AL index, respectively, and a pair of these AU and AL contributing stations "the contributing stations of AE indices". The plot gives these AE contributing stations on a plane whose coordinates are UT in abscissa and LT in ordinate at the stations. For users who want to check the AE indices precisely, this plot gives information about data availability of each station. Thus the plot will give us an idea which data are to be checked. For these users, we would like to suggest to check our way of derivation of the AE indices and our estimation of errors. Please see Data Book No.3 or No.4 for the estimation of errors of our AE data.

2. Selection of Observatories

To obtain good AE indices, we must use as many observatories as possible, but we meet two big difficulties: One is that the distribution of observatories in operation is not uniform over the auroral zone, and the other is that the digitization of analogue data (magnetograms) is a heavy job.

We selected 12 observatories listed in Table 1. Of these, 6 stations are taking digital data directly (called digital stations). Our selection is almost the same as that of the WDC-A (see Fig. 1).

Three of digital stations (Fort Churchill, Great Whale River, and Yellowknife) are

Table 1. List of AE(12) stations.

| Observatory | Abbreviations | | Geographic | | Geomagnetic | |
|-------------------|---------------|-------|------------|-----------|-------------|-----------|
| | IAGA | WDC-A | Lat. (°N) | Long.(°E) | Lat. (°N) | Long.(°E) |
| Abisko | ABK | AI | 68.36 | 18.82 | 66.04 | 115.08 |
| Dixon Island | DIK | DI | 73.55 | 80.57 | 63.02 | 161.57 |
| Cape Chelyuskin | CCS | CC | 77.72 | 104.28 | 66.26 | 176.46 |
| Tixie Bay | TIK | TI | 71.58 | 129.00 | 60.44 | 191.41 |
| Cape Wellen | CWE | UE | 66.17 | 190.17 | 61.79 | 237.10 |
| Barrow | BRW | BW | 71.30 | 203.25 | 68.54 | 241.15 |
| College | CMO | CO | 64.87 | 212.17 | 64.63 | 256.52 |
| Yellowknife | YKC | YEK | 62.40 | 245.60 | 69.00 | 292.80 |
| Fort Churchill | FCC | FC | 58.80 | 265.90 | 68.70 | 322.77 |
| Great Whale River | GWC | GWR | 55.27 | 282.22 | 66.58 | 347.36 |
| Narssarsuaq | NAQ | NAS | 61.20 | 314.16 | 71.21 | 36.79 |
| Leirvogur | LRV | LR | 64.18 | 338.30 | 70.22 | 71.04 |

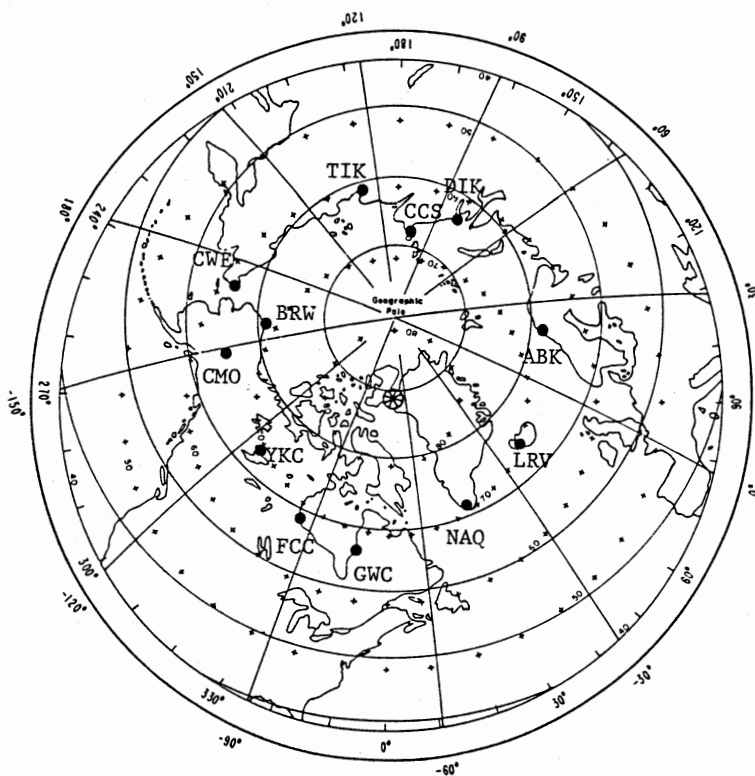
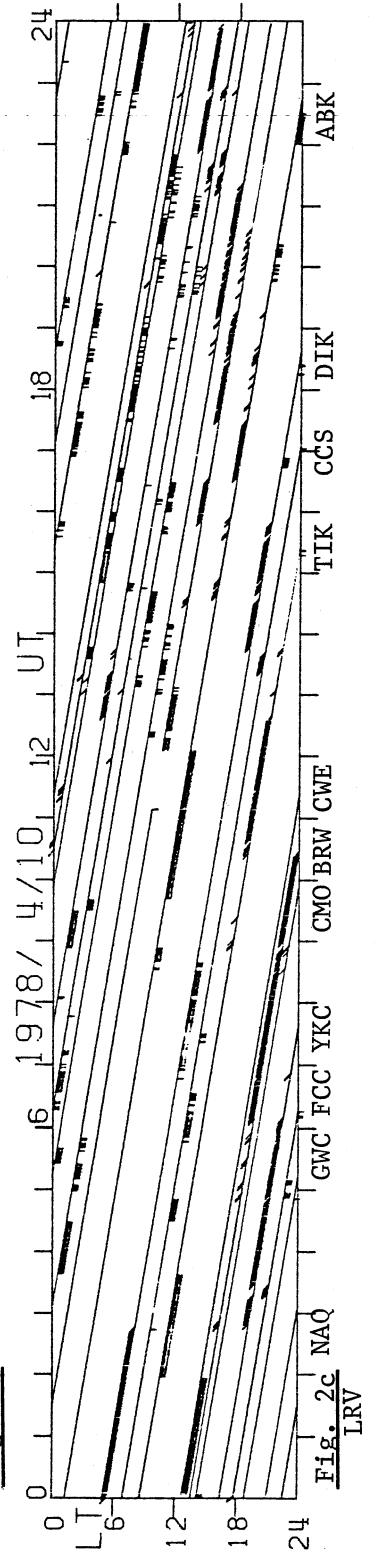
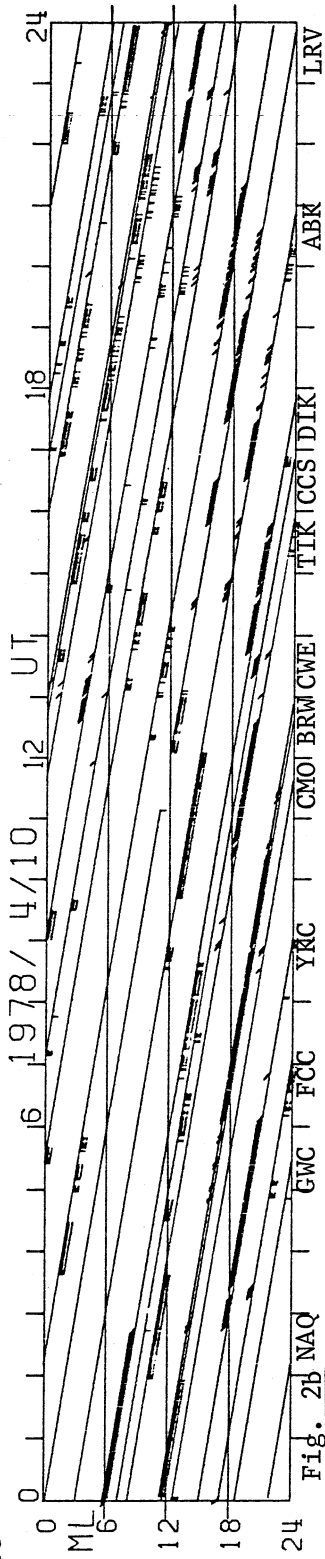
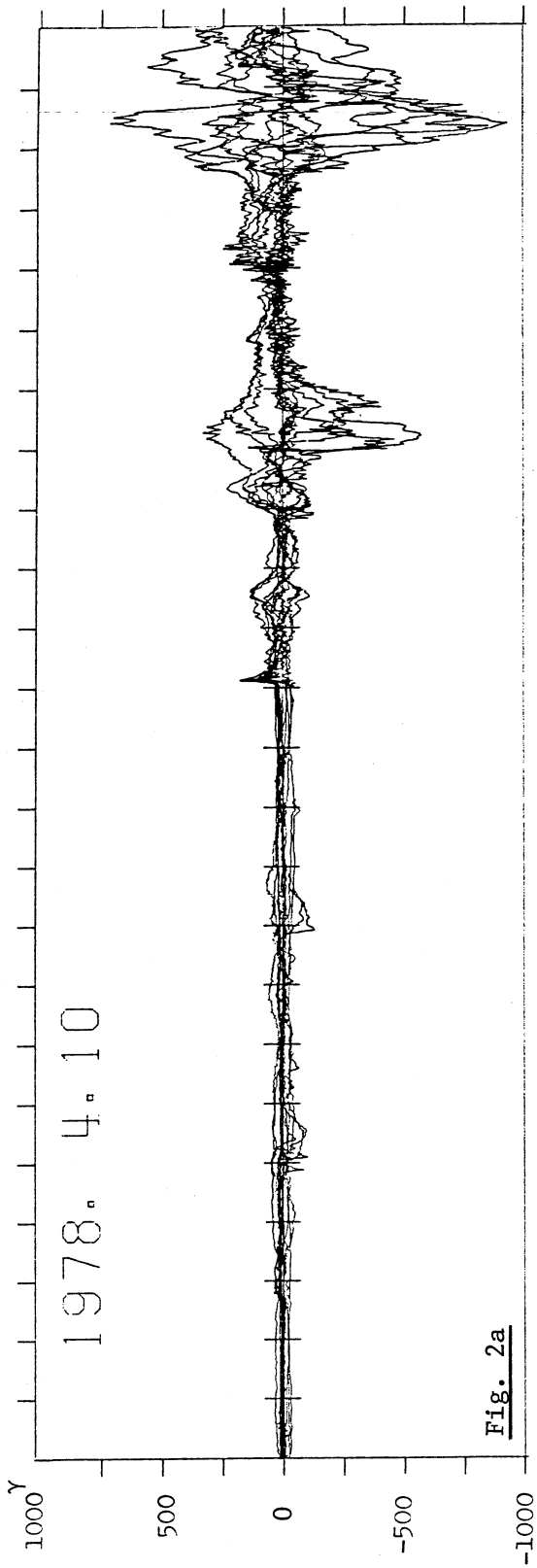


Fig. 1. Distribution of AE(12) stations.

Geographic latitude is indicated by the concentric circles of solid lines. Geomagnetic latitude is indicated by the numbered concentric circles formed by + signs. Geographic longitude is given by the outer circle of numerical values with meridians shown as solid lines every 30°. Geomagnetic longitude is given by the inner circle of numbers and the border of hash-marks at 100° intervals.



stations which give data in the X, Y, Z coordinate system. To make these data more compatible to other stations, we converted the X and Y components to H component by $H=(X^2+Y^2)^{1/2}$, and we treated the resulted H component to be missing for the period either X or Y is missing. For other two digital stations (Barrow and College), we used the original digital H-component data.

Narssarssuaq recorded data digitally as test operation from July 1980. We used its H-component values for most of this period. Abisko has supplied Digitized data from January 1981, which we also used for most of this period.

We digitized magnetograms on microfilms from non-digital stations. If a digital station has troubles in digital recording, we also digitized its magnetograms on microfilm if they are available.

3. Digitization of Analogue Data

We used a sonic digitizing machine with a large microfilm reader. The magnetogram on 35 mm microfilm is projected directly on the microfilm reader. The projected figure is almost the same size as the original magnetogram whose size is about 2 cm/hour or 48 cm/day.

Usually, the magnetograms are digitized day by day. When the time marks on the magnetogram are not spaced uniformly or base lines are not straight enough, one magnetogram is divided into several uniform parts and then digitized. We tried to use the ordinary magnetogram for all days. When the H trace crosses other traces, we tried to identify the H trace by referring to the insensitive or storm magnetogram. When we trace the H component on magnetograms, we also feed three basic points to define the time and the absolute value of the digitized data, and feed other necessary information like the station identification and observation date.

In digitizing analogue data, we could have trouble from the digitizer noise. To be free from such a noise, we digitized as many points as possible to get one value. In determining the three basic points we digitized each point as more than 20 times, and we picked the point only when these consecutive 20 readings are all within a limited area. The traced digital data are logically checked by a quality control program to reject spikes caused by the noise. After cleaned by the quality control program, the data are averaged to get the final one minute value. Usually, a one-min value is determined from an average of 3 or 4 digital readings. We checked all the digitized data visually by the plot on a monitoring graphic display at the reading stage and by the finer common scale plot made by a X-Y plotter after processed by the quality control program. Please see Data Book No.6 for further detail of our digitizing process and our digitizing machine.

4. The Overlapped Plot and the Plot of the Contributing Stations of the AE indices

Fig. 2a shows an example of the overlapped plot of the H traces from the AE stations on April 10, 1978. The upper envelope gives the AU index and the lower envelope gives the AL index, Figs. 2b and 2c show example plots of the contributing stations for the same day as in Fig. 2a, in the geomagnetic (2b) and geographic (2c) local times, where the upper and lower plumes on a diagonal line for each station show the contribution to the AU and AL indices of this station. In Fig. 2b, for example, the data of Dixon Island (DIK) give the AU index from 0000 to 0240 UT and again from 1330 to 1530 UT, and the AL index from 0640 to 0830 UT. It is seen that from 1100 to 1200 UT Leirvogur (LRV) offers no data. Since this is a key station for the AL index at that time, the exact AL values at that time have been lost.

We think some explanations are necessary for our trial plots of the contributing

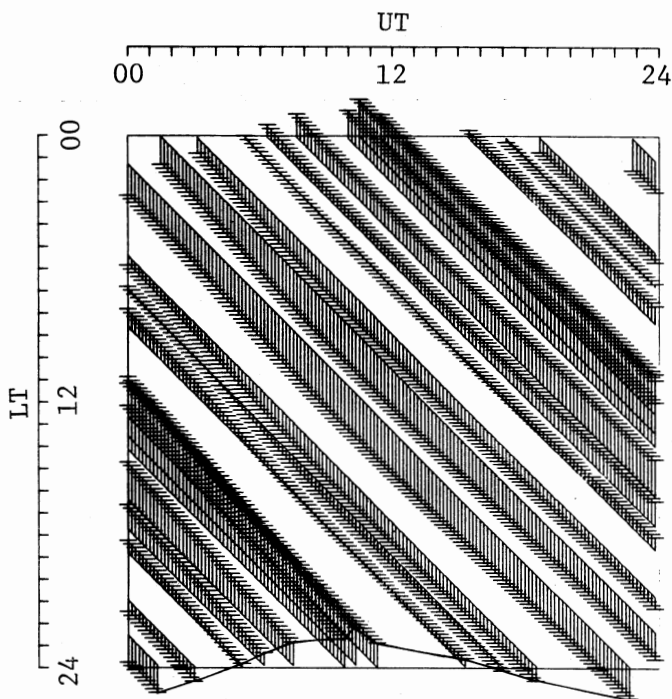


Fig. 3a Difference between GLT and MLT in winter.

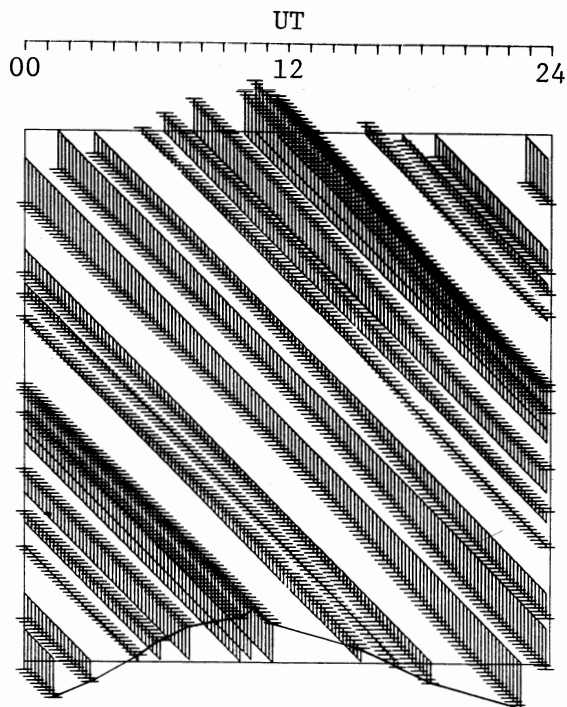


Fig. 3b Difference between GLT and MLT in summer.

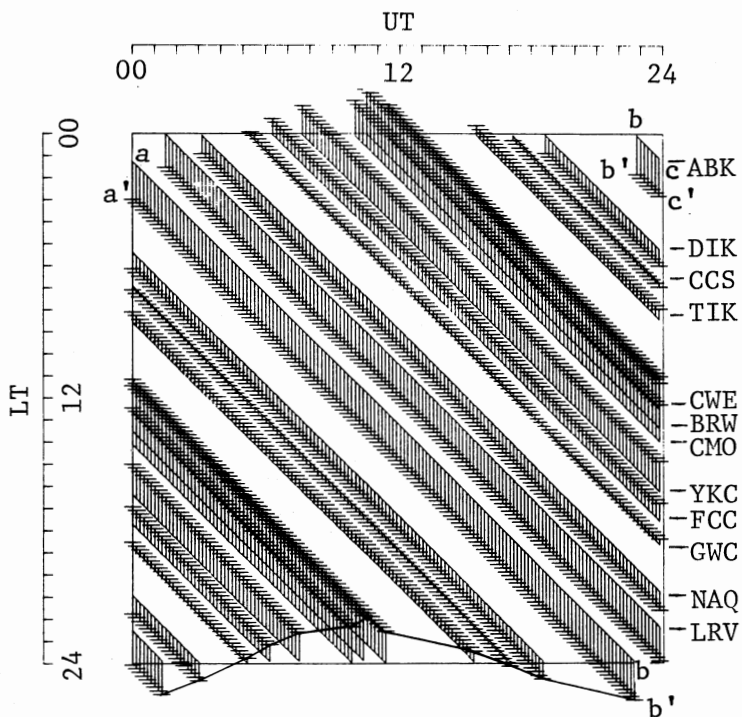


Fig. 3c Difference between GLT and MLT in equinox.

Fig. 3a, 3b and 3c show the difference between the geographic local time (GLT) and the geomagnetic local time (MLT) for winter, summer and equinox, where a-b-c (full line on the top or bottom of the vertical lines) shows the relation between UT and GLT, and a'-b'-c' (crossing of the vertical and horizontal lines) shows the relation between UT and MLT for each of the AE(12) stations.

stations. On the plots hereafter, the ordinate is the geomagnetic local time (MLT). The MLT is defined by the difference of the geomagnetic longitude of the station and the geomagnetic longitude of the Sun, and it is a function of the geomagnetic longitude of the station, season, and universal time. Figs. 3a, 3b, 3c show the difference between the GLT and the MLT of the stations used to derive AE indices for winter, summer and equinox, respectively. In these figures the GLT is shown by the straight line which runs diagonally, and the MLT is shown by the T (or inverted T) shaped mark. The length of the vertical line between the T (or inverted T) shaped mark and the diagonal line is the difference between GLT and MLT. Note that for some stations the difference between GLT and MLT is as much as 2 hours. The geomagnetic longitude of Cape Wellen (CWE) and Barrow (BRW) are very close, and so it is difficult to separate these two stations on the contributing stations plot. Sometimes, Cape Wellen gives AU and Barrow gives AL, and vice versa. This is thought to be an effect of local current system between the high latitude station and the low latitude station.

5. Results

Monthly quiet-time H reference values for January–June 1981 are listed in Table 2, where for four stations only deviations (H0+) from the H base line are given, as the base line values were not supplied from the observatories.

Table 3 gives the hourly average of AE indices on every day from January to June 1981.

Daily graphs of 1.0-min AE indices (AU, AL, AE and AO) are shown in Fig. 4, and corresponding plots of the contributing stations are given in Fig. 5. Fig. 6 shows the H-traces of magnetograms from AEC(12) stations in every month from January to June 1981. Finally, Fig. 7 shows a half year of hourly mean values of each index in one page.

6. Acknowledgements

This volume has been accomplished by the data supply from the AE stations through the World Data Centers. Acknowledgements are due to Ms. Yohko Yamamoto and Mr. Shinji Yokoyama for their assistances in digitizing magnetograms and also to Dr. M. Ayukawa and Mr. Y. Katsuta for arrangements for printing and distribution.

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Table 2. MONTHLY QUIET-TIME H REFERENCE VALUES (UNITS : NT = GAMMAS)
(YEAR 1981)

| STATION | JAN. | FEB. | MAR. | APR. | MAY | JUNE | |
|-------------------|-------|-------|-------|-------|-------|-------|-------|
| ABISKO | 11791 | 11785 | 11782 | 11774 | 11791 | 11796 | |
| DIXON ISLAND | -417 | -429 | -425 | -430 | -416 | -421 | (HO+) |
| CAPE CHELYUSKIN | 480 | 470 | 481 | 478 | 494 | 489 | (HO+) |
| TIXIE BAY | 222 | 213 | 210 | 217 | 221 | 223 | (HO+) |
| CAPE WELLEN | 161 | 153 | 145 | 147 | 155 | 157 | (HO+) |
| BARROW | 9811 | 9794 | 9787 | 9797 | 9802 | 9793 | |
| COLLEGE | 13004 | 12995 | 12986 | 12988 | 12999 | 13002 | |
| YELLOWKNIFE | 8734 | 8717 | 8723 | 8740 | 8734 | 8761 | |
| FORT CHURCHILL | 7586 | 7577 | 7571 | 7589 | 7592 | 7610 | |
| GREAT WHALE RIVER | 10691 | 10687 | 10659 | 10713 | 10723 | 10746 | |
| NARSSARSSUAØ | 12107 | 12105 | 12101 | 12112 | 12120 | 12136 | |
| LEIRVOGUR | 12408 | 12409 | 12400 | 12400 | 12420 | 12432 | |

(HO+) : DEVIATION FROM THE H BASE LINE
ON THE ORDINARY MAGNETOGRAM

TABLE 3

Hourly average AE indices (AU, AL, AE and AO)
for January-June 1981.

JANUARY 1981

AU INDEX (HOURLY VALUES)

| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 1 | 29 | 13 | 48 | 112 | 139 | 32 | 57 | 86 | 127 | 131 | 248 | 185 | 48 | 30 | 34 | 51 | 85 | 129 | 100 | 194 | 136 | 59 | 36 | 18 | 89 |
| 2 | 23 | 28 | 33 | 31 | 30 | 29 | 74 | 29 | 22 | 38 | 54 | 35 | 42 | 64 | 98 | 55 | 172 | 107 | 143 | 149 | 114 | 83 | 71 | 86 | 67 |
| 3 | 194 | 166 | 104 | 40 | 46 | 42 | 79 | 116 | 56 | 26 | 33 | 21 | 19 | 18 | 17 | 25 | 32 | 37 | 14 | 33 | 86 | 29 | 24 | 50 | 54 |
| D | 38 | 118 | 84 | 78 | 88 | 97 | 73 | 49 | 54 | 78 | 55 | 30 | 28 | 24 | 24 | 53 | 73 | 33 | 12 | 74 | 110 | 85 | 50 | 49 | 61 |
| 5 | 28 | 37 | 54 | 81 | 67 | 47 | 43 | 45 | 37 | 37 | 73 | 56 | 32 | 16 | 33 | 84 | 45 | 25 | 29 | 68 | 61 | 153 | 123 | 49 | 55 |
| 6 | 49 | 44 | 34 | 42 | 30 | 28 | 25 | 34 | 24 | 11 | 6 | 22 | 56 | 52 | 144 | 44 | 39 | 44 | 19 | 28 | 48 | 99 | 121 | 66 | 46 |
| 7 | 103 | 127 | 77 | 44 | 68 | 54 | 90 | 51 | 53 | 22 | 14 | 24 | 24 | 32 | 61 | 73 | 35 | 34 | 34 | 16 | 18 | 41 | 41 | 62 | 50 |
| 8 | 61 | 129 | 177 | 92 | 86 | 47 | 41 | 57 | 54 | 58 | 25 | 33 | 84 | 109 | 51 | 38 | 65 | 120 | 105 | 34 | 24 | 64 | 47 | 77 | 70 |
| 9 | 68 | 73 | 67 | 66 | 55 | 32 | 22 | 17 | 16 | 14 | 10 | 12 | 7 | 25 | 47 | 71 | 54 | 28 | 13 | 14 | 10 | 16 | 14 | 17 | 32 |
| 10 | 18 | 21 | 20 | 28 | 19 | 36 | 31 | 39 | 37 | 41 | 37 | 47 | 40 | 31 | 32 | 34 | 22 | 38 | 55 | 92 | 76 | 45 | 117 | 122 | 45 |
| D | 60 | 104 | 84 | 176 | 168 | 79 | 102 | 78 | 91 | 150 | 209 | 137 | 142 | 128 | 199 | 185 | 195 | 102 | 111 | 147 | 176 | 132 | 111 | 74 | 131 |
| 12 | 44 | 43 | 21 | 33 | 28 | 30 | 30 | 41 | 38 | 22 | 10 | 8 | 14 | 8 | 0 | 4 | 7 | 3 | 5 | 12 | 9 | 10 | 13 | 11 | 19 |
| 13 | 8 | 8 | 5 | 8 | 11 | 37 | 27 | 27 | 19 | 49 | 33 | 22 | 23 | 67 | 143 | 30 | 26 | 46 | 46 | 83 | 52 | 57 | 36 | 21 | 37 |
| 14 | 23 | 19 | 31 | 31 | 36 | 38 | 52 | 61 | 116 | 69 | 58 | 51 | 47 | 129 | 73 | 28 | 17 | 17 | 15 | 10 | 10 | 14 | 17 | 16 | 41 |
| 15 | 39 | 29 | 21 | 22 | 18 | 29 | 27 | 42 | 75 | 52 | 34 | 27 | 37 | 24 | 25 | 14 | 17 | 52 | 57 | 26 | 32 | 28 | 45 | 79 | 35 |
| 16 | 54 | 42 | 45 | 77 | 71 | 64 | 47 | 61 | 76 | 63 | 69 | 94 | 50 | 55 | 59 | 47 | 20 | 18 | 16 | 24 | 28 | 24 | 18 | 26 | 48 |
| 17 | 18 | 20 | 27 | 15 | 16 | 19 | 36 | 35 | 29 | 34 | 34 | 27 | 41 | 126 | 102 | 56 | 39 | 54 | 73 | 58 | 60 | 31 | 34 | 25 | 42 |
| 18 | 29 | 36 | 65 | 42 | 34 | 29 | 39 | 38 | 34 | 17 | 14 | 14 | 11 | 14 | 11 | 22 | 15 | 14 | 10 | 11 | 12 | 9 | 11 | 17 | 23 |
| 19 | 16 | 13 | 8 | 10 | 20 | 38 | 39 | 21 | 20 | 24 | 26 | 40 | 20 | 31 | 88 | 76 | 34 | 33 | 22 | 18 | 17 | 21 | 30 | 40 | 29 |
| 20 | 37 | 56 | 57 | 29 | 24 | 21 | 21 | 40 | 38 | 59 | 45 | 54 | 29 | 20 | 15 | 18 | 21 | 19 | 31 | 83 | 134 | 68 | 35 | 28 | 41 |
| 21 | 22 | 26 | 33 | 40 | 34 | 25 | 20 | 17 | 21 | 18 | 14 | 24 | 26 | 16 | 18 | 24 | 30 | 23 | 18 | 17 | 47 | 42 | 60 | 62 | 28 |
| 22 | 54 | 59 | 36 | 32 | 27 | 19 | 22 | 24 | 25 | 30 | 58 | 50 | 57 | 30 | 38 | 44 | 58 | 98 | 136 | 109 | 50 | 56 | 25 | 29 | 48 |
| 23 | 18 | 25 | 16 | 16 | 12 | 11 | 10 | 12 | 12 | 12 | 23 | 62 | 53 | 46 | 122 | 84 | 39 | 33 | 19 | 26 | 38 | 25 | 27 | 19 | 32 |
| 24 | 9 | 10 | 15 | 24 | 26 | 30 | 31 | 76 | 81 | 100 | 84 | 51 | 30 | 23 | 33 | 24 | 26 | 30 | 19 | 54 | 126 | 107 | 43 | 18 | 45 |
| 25 | 40 | 24 | 12 | 12 | 16 | 29 | 29 | 7 | 6 | 10 | 5 | 4 | 7 | 24 | 27 | 46 | 22 | 29 | 27 | 60 | 80 | 66 | 57 | 35 | 28 |
| 26 | 29 | 17 | 13 | 18 | 10 | 21 | 27 | 25 | 61 | 73 | 79 | 87 | 170 | 177 | 60 | 56 | 26 | 22 | 21 | 38 | 53 | 40 | 32 | 34 | 50 |
| 27 | 75 | 140 | 115 | 32 | 23 | 36 | 18 | 32 | 52 | 81 | 65 | 146 | 156 | 131 | 48 | 24 | 14 | 20 | 24 | 18 | 21 | 35 | 85 | 103 | 62 |
| D | 80 | 61 | 100 | 145 | 136 | 166 | 178 | 170 | 81 | 86 | 75 | 60 | 71 | 99 | 114 | 52 | 65 | 88 | 68 | 86 | 120 | 190 | 176 | 109 | 107 |
| D | 114 | 117 | 100 | 101 | 208 | 137 | 72 | 186 | 200 | 216 | 237 | 105 | 102 | 138 | 86 | 80 | 61 | 38 | 75 | 81 | 91 | 167 | 150 | 124 | 124 |
| 30 | 119 | 112 | 109 | 90 | 52 | 31 | 37 | 49 | 58 | 37 | 26 | 23 | 50 | 47 | 70 | 33 | 24 | 60 | 60 | 67 | 33 | 40 | 36 | 55 | 55 |
| D | 52 | 50 | 74 | 34 | 181 | 348 | 289 | 144 | 92 | 96 | 86 | 162 | 96 | 45 | 22 | 16 | 6 | 26 | 20 | 33 | 77 | 41 | 85 | 74 | 90 |
| MEAN | 50 | 57 | 54 | 51 | 57 | 54 | 54 | 55 | 55 | 56 | 59 | 55 | 52 | 57 | 61 | 48 | 44 | 45 | 45 | 56 | 62 | 60 | 57 | 51 | 54 |
| 50 MEAN | 29 | 34 | 36 | 30 | 28 | 28 | 29 | 31 | 30 | 28 | 21 | 28 | 20 | 17 | 26 | 28 | 21 | 18 | 17 | 28 | 43 | 30 | 29 | 31 | 27 |
| 5D MEAN | 68 | 90 | 88 | 106 | 156 | 165 | 142 | 125 | 103 | 125 | 132 | 98 | 87 | 88 | 89 | 77 | 80 | 57 | 57 | 84 | 114 | 123 | 114 | 86 | 102 |

| AU INDEX (HOURLY VALUES) | | FEBRUARY 1981 | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|------|---------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
| D | 1 | 39 | 27 | 47 | 58 | 76 | 64 | 96 | 81 | 104 | 94 | 52 | 50 | 153 | 96 | 51 | 41 | 38 | 38 | 39 | 55 | 135 | 87 | 144 | 156 | 76 |
| | 2 | 132 | 89 | 125 | 131 | 106 | 68 | 63 | 97 | 136 | 119 | 79 | 75 | 164 | 110 | 128 | 94 | 200 | 253 | 120 | 86 | 96 | 80 | 127 | 112 | 116 |
| | 3 | 82 | 72 | 63 | 55 | 47 | 52 | 63 | 59 | 105 | 134 | 99 | 105 | 127 | 80 | 48 | 46 | 48 | 64 | 55 | 101 | 76 | 67 | 38 | 38 | 72 |
| | 4 | 48 | 26 | 37 | 37 | 63 | 58 | 51 | 56 | 70 | 60 | 66 | 52 | 40 | 32 | 21 | 20 | 36 | 65 | 95 | 86 | 163 | 154 | 98 | 102 | 64 |
| D | 5 | 65 | 51 | 49 | 63 | 99 | 212 | 174 | 187 | 157 | 230 | 186 | 93 | 191 | 103 | 91 | 196 | 162 | 171 | 139 | 100 | 91 | 90 | 146 | 173 | 134 |
| D | 6 | 150 | 89 | 54 | 40 | 33 | 36 | 20 | 23 | 33 | 83 | 132 | 127 | 143 | 204 | 298 | 192 | 188 | 20 | 46 | 37 | 16 | 24 | -8 | -28 | 81 |
| | 7 | 105 | 79 | 50 | 82 | 54 | 136 | 115 | 68 | 50 | 30 | 18 | 18 | 11 | 15 | 13 | 7 | 11 | 12 | 6 | 6 | 2 | 3 | 8 | 9 | 38 |
| | 8 | 8 | 9 | 13 | 16 | 16 | 15 | 15 | 15 | 5 | 4 | 4 | 11 | 16 | 23 | 26 | 31 | 60 | 129 | 95 | 63 | 41 | 65 | 105 | 52 | 35 |
| | 9 | -28 | 102 | 104 | 251 | 177 | 162 | 132 | 145 | 91 | 76 | 60 | 116 | 155 | 78 | 30 | 13 | 5 | 14 | 11 | 8 | 10 | 10 | 10 | 6 | 72 |
| 0 | 10 | 8 | 6 | 6 | 6 | 13 | 9 | 9 | 10 | 13 | 11 | 9 | 8 | 10 | 11 | 14 | 17 | 17 | 10 | 15 | 11 | 13 | 10 | 12 | 10 | 11 |
| | 11 | 7 | 10 | 10 | 10 | 14 | 20 | 16 | 29 | 27 | 22 | 14 | 10 | 35 | 59 | 108 | 27 | 54 | 72 | 129 | 222 | 143 | 50 | 64 | 100 | 52 |
| | 12 | 80 | 67 | 36 | 88 | 24 | 41 | 38 | 64 | 89 | 88 | 100 | 67 | 56 | 28 | 18 | 16 | 17 | 11 | 11 | 22 | 52 | 39 | 51 | 60 | 48 |
| | 13 | 39 | 32 | 24 | 35 | 41 | 54 | 53 | 53 | 67 | 62 | 85 | 57 | 69 | 75 | 94 | 50 | 32 | 24 | 24 | 24 | 24 | 24 | 20 | 21 | 45 |
| 0 | 14 | 22 | 18 | 15 | 13 | 14 | 20 | 20 | 25 | 29 | 24 | 40 | 38 | 34 | 18 | 19 | 26 | 20 | 22 | 18 | 22 | 21 | 22 | 18 | 19 | 22 |
| | 15 | 23 | 25 | 22 | 24 | 29 | 25 | 27 | 29 | 37 | 28 | 24 | 30 | 39 | 68 | 71 | 85 | 152 | 200 | 155 | 188 | 264 | 205 | 237 | 209 | 91 |
| | 16 | 124 | 62 | 37 | 69 | 88 | 110 | 38 | 30 | 34 | 59 | 75 | 57 | 77 | 89 | 48 | 38 | 83 | 64 | 44 | 31 | 25 | 26 | 30 | 21 | 57 |
| 0 | 17 | 23 | 56 | 34 | 40 | 39 | 38 | 29 | 31 | 27 | 32 | 35 | 22 | 37 | 52 | 21 | 30 | 26 | 31 | 28 | 37 | 29 | 31 | 30 | 22 | 32 |
| 0 | 18 | 24 | 25 | 27 | 23 | 27 | 30 | 26 | 24 | 34 | 33 | 23 | 19 | 33 | 40 | 23 | 19 | 21 | 22 | 20 | 25 | 30 | 28 | 27 | 54 | 27 |
| | 19 | 40 | 41 | 37 | 42 | 46 | 82 | 48 | 44 | 76 | 59 | 23 | 15 | 18 | 20 | 15 | 27 | 17 | 15 | 17 | 16 | 10 | 17 | 15 | 24 | 32 |
| | 20 | 22 | 21 | 20 | 20 | 20 | 20 | 23 | 21 | 37 | 92 | 80 | 112 | 155 | 73 | 156 | 204 | 131 | 121 | 76 | 31 | 31 | 41 | 32 | 19 | 65 |
| | 21 | 22 | 18 | 15 | 18 | 27 | 69 | 76 | 91 | 62 | 58 | 67 | 60 | 71 | 43 | 28 | 26 | 17 | 16 | 14 | 20 | 21 | 18 | 18 | 20 | 37 |
| | 22 | 21 | 22 | 20 | 21 | 22 | 24 | 26 | 27 | 28 | 31 | 33 | 32 | 34 | 31 | 28 | 25 | 27 | 32 | 33 | 30 | 65 | 85 | 129 | 121 | 39 |
| | 23 | 120 | 88 | 82 | 49 | 46 | 54 | 49 | 42 | 29 | 28 | 32 | 28 | 23 | 31 | 37 | 52 | 39 | 42 | 31 | 21 | 30 | 34 | 35 | 26 | 44 |
| | 24 | 35 | 39 | 42 | 40 | 37 | 35 | 34 | 33 | 34 | 36 | 53 | 39 | 39 | 93 | 71 | 107 | 200 | 210 | 174 | 124 | 177 | 169 | 200 | 152 | 90 |
| D | 25 | 104 | 89 | 97 | 112 | 77 | 189 | 300 | 199 | 172 | 198 | 167 | 180 | 187 | 141 | 179 | 239 | 283 | 181 | 161 | 225 | 187 | 131 | 96 | 126 | 167 |
| D | 26 | 124 | 145 | 193 | 106 | 111 | 125 | 198 | 204 | 145 | 82 | 138 | 107 | 235 | 136 | 94 | 133 | 100 | 213 | 93 | 83 | 142 | 140 | 115 | 181 | 139 |
| | 27 | 169 | 188 | 139 | 104 | 104 | 148 | 214 | 187 | 172 | 195 | 271 | 236 | 93 | 51 | 114 | 119 | 184 | 163 | 75 | 164 | 130 | 99 | 116 | 84 | 147 |
| | 28 | 95 | 71 | 36 | 57 | 61 | 70 | 55 | 44 | 33 | 77 | 61 | 82 | 33 | 38 | 40 | 58 | 33 | 52 | 115 | 127 | 193 | 122 | 137 | 134 | 76 |
| | MEAN | 60 | 55 | 51 | 57 | 53 | 70 | 71 | 68 | 67 | 73 | 72 | 65 | 81 | 65 | 67 | 69 | 78 | 80 | 65 | 70 | 79 | 66 | 73 | 72 | 68 |
| 50 | MEAN | 19 | 24 | 19 | 20 | 24 | 33 | 32 | 36 | 33 | 31 | 34 | 29 | 37 | 32 | 21 | 23 | 20 | 20 | 19 | 23 | 22 | 21 | 21 | 25 | 26 |
| 50 | MEAN | 115 | 92 | 103 | 90 | 85 | 126 | 151 | 142 | 128 | 142 | 140 | 116 | 184 | 138 | 158 | 170 | 186 | 167 | 111 | 106 | 106 | 93 | 95 | 112 | 127 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| D 1 | 108 | 163 | 206 | 157 | 92 | 66 | 64 | 81 | 159 | 223 | 280 | 250 | 286 | 203 | 107 | 139 | 109 | 193 | 211 | 135 | 102 | 204 | 149 | 205 | 162 |
| 2 | 155 | 120 | 93 | 104 | 81 | 70 | 69 | 320 | 410 | 196 | 226 | 223 | 212 | 159 | 71 | 44 | 27 | 46 | 91 | 95 | 42 | 30 | 32 | 39 | 123 |
| 3 | 41 | 20 | 27 | 26 | 26 | 26 | 27 | 30 | 35 | 29 | 23 | 25 | 16 | 16 | 14 | 26 | 49 | 53 | 70 | 115 | 130 | 118 | 108 | 163 | 51 |
| 4 | 182 | 169 | 142 | 156 | 156 | 148 | 249 | 206 | 156 | 118 | 100 | 76 | 28 | 13 | 11 | 14 | 17 | 30 | 24 | 21 | 20 | 33 | 25 | 20 | 88 |
| D 5 | 24 | 34 | 60 | 118 | 226 | 265 | 330 | 416 | 368 | 341 | 193 | 364 | 186 | 161 | 233 | 5 | 62 | 32 | 130 | 158 | 151 | 197 | 98 | 86 | 177 |
| 6 | 42 | 17 | 10 | 26 | 38 | 20 | 38 | 13 | 0 | 5 | 0 | -12 | 3 | 6 | -2 | -6 | -6 | -4 | 0 | 4 | 1 | 1 | 3 | 17 | 9 |
| 7 | 23 | 14 | 33 | 27 | 45 | 38 | 42 | 63 | 115 | 94 | 140 | 100 | 159 | 185 | 195 | 244 | 262 | 153 | 171 | 231 | 102 | 50 | 40 | 43 | 107 |
| 8 | 31 | 94 | 38 | 32 | 32 | 31 | 55 | 75 | 71 | 208 | 196 | 84 | 112 | 96 | 43 | 37 | 37 | 10 | 13 | 15 | 27 | 22 | 17 | 10 | 58 |
| 9 | 25 | 22 | 13 | 15 | 15 | 20 | 19 | 14 | 21 | 17 | 20 | 26 | 23 | 33 | 25 | 24 | 15 | 11 | 6 | 9 | 19 | 22 | 23 | 20 | 19 |
| 10 | 31 | 30 | 33 | 44 | 54 | 39 | 64 | 34 | 28 | 72 | 148 | 267 | 160 | 100 | 71 | 51 | 52 | 59 | 37 | 25 | 27 | 18 | 21 | 20 | 62 |
| 11 | 31 | 33 | 46 | 34 | 34 | 27 | 55 | 59 | 32 | 40 | 63 | 87 | 69 | 53 | 24 | 32 | 30 | 51 | 24 | 10 | 18 | 20 | 15 | 22 | 38 |
| 12 | 33 | 39 | 31 | 28 | 26 | 24 | 33 | 51 | 62 | 101 | 124 | 40 | 44 | 61 | 62 | 24 | 23 | 17 | 37 | 40 | 45 | 146 | 93 | 82 | 53 |
| D 13 | 109 | 53 | 31 | 25 | 31 | 39 | 52 | 82 | 61 | 51 | 66 | 57 | 83 | 60 | 135 | 261 | 280 | 266 | 151 | 94 | 175 | 194 | 156 | 137 | 110 |
| D 14 | 72 | 31 | 37 | 61 | 105 | 159 | 142 | 125 | 200 | 131 | 127 | 130 | 318 | 204 | 273 | 144 | 63 | 76 | 98 | 63 | 89 | 58 | 41 | 33 | 116 |
| 15 | 42 | 41 | 36 | 75 | 108 | 38 | 68 | 51 | 42 | 25 | 20 | 34 | 53 | 81 | 76 | 80 | 105 | 243 | 187 | 107 | 49 | 61 | 51 | 60 | 72 |
| 16 | 93 | 54 | 77 | 79 | 51 | 139 | 129 | 109 | 63 | 45 | 24 | 41 | 45 | 69 | 33 | 71 | 31 | 25 | 66 | 146 | 67 | 30 | 102 | 118 | 71 |
| 17 | 74 | 80 | 94 | 94 | 86 | 52 | 52 | 46 | 84 | 61 | 34 | 45 | 95 | 75 | 124 | 81 | 94 | 98 | 49 | 64 | 100 | 64 | 38 | 53 | 72 |
| 18 | 17 | 70 | 90 | 87 | 72 | 73 | 162 | 128 | 174 | 158 | 129 | 155 | 205 | 126 | 75 | 166 | 223 | 269 | 155 | 146 | 158 | 146 | 77 | 85 | 139 |
| 19 | 49 | 65 | 49 | 43 | 40 | 31 | 37 | 34 | 37 | 34 | 45 | 51 | 30 | 22 | 19 | 79 | 144 | 253 | 194 | 206 | 145 | 106 | 53 | 36 | 75 |
| 20 | 27 | 28 | 21 | 34 | 39 | 38 | 37 | 54 | 58 | 63 | 49 | 49 | 114 | 113 | 103 | 82 | 55 | 26 | 23 | 18 | 20 | 19 | 17 | 14 | 46 |
| 21 | 15 | 19 | 22 | 21 | 21 | 22 | 25 | 21 | 31 | 19 | 24 | 24 | 24 | 21 | 27 | 24 | 19 | 14 | 111 | 181 | 153 | 161 | 70 | 33 | 46 |
| 22 | 32 | 18 | 21 | 49 | 46 | 24 | 26 | 21 | 20 | 19 | 16 | 18 | 23 | 25 | 27 | 25 | 24 | 25 | 22 | 26 | 28 | 29 | 23 | 21 | 25 |
| 23 | 21 | 19 | 20 | 22 | 26 | 25 | 32 | 33 | 45 | 58 | 59 | 59 | 47 | 39 | 33 | 28 | 21 | 16 | 13 | 17 | 25 | 25 | 23 | 27 | 31 |
| 24 | 28 | 27 | 27 | 28 | 29 | 34 | 31 | 44 | 54 | 44 | 28 | 28 | 32 | 30 | 32 | 34 | 30 | 34 | 51 | 49 | 67 | 64 | 53 | 49 | 39 |
| D 25 | 68 | 93 | 77 | 88 | 102 | 233 | 310 | 186 | 119 | 64 | 37 | 48 | 150 | 273 | 334 | 303 | 193 | 162 | 165 | 247 | 246 | 238 | 162 | 98 | 167 |
| 26 | 118 | 194 | 132 | 101 | 106 | 130 | 77 | 46 | 90 | 115 | 67 | 83 | 136 | 294 | 356 | 201 | 248 | 242 | 165 | 79 | 111 | 139 | 84 | 169 | 145 |
| 27 | 122 | 95 | 87 | 121 | 107 | 90 | 110 | 75 | 121 | 111 | 99 | 46 | 25 | 80 | 128 | 154 | 49 | 34 | 30 | 106 | 160 | 157 | 105 | 80 | 95 |
| 28 | 103 | 71 | 83 | 50 | 105 | 89 | 82 | 55 | 59 | 115 | 71 | 44 | 19 | 50 | 89 | 154 | 160 | 117 | 75 | 111 | 168 | 236 | 177 | 112 | 100 |
| 29 | 91 | 131 | 137 | 136 | 133 | 146 | 150 | 167 | 201 | 124 | 205 | 360 | 238 | 213 | 315 | 250 | 207 | 314 | 307 | 269 | 119 | 62 | 49 | 29 | 181 |
| 30 | 36 | 124 | 110 | 75 | 52 | 90 | 108 | 83 | 70 | 138 | 119 | 163 | 203 | 159 | 172 | 157 | 166 | 163 | 229 | 191 | 308 | 390 | 260 | 133 | 154 |
| 31 | 173 | 191 | 174 | 200 | 157 | 52 | 39 | 63 | 96 | 94 | 67 | 47 | 98 | 143 | 159 | 140 | 104 | 188 | 302 | 280 | 258 | 199 | 124 | 75 | 143 |
| MEAN | 66 | 70 | 66 | 69 | 72 | 76 | 86 | 91 | 98 | 93 | 91 | 98 | 104 | 102 | 108 | 98 | 93 | 103 | 103 | 105 | 100 | 104 | 73 | 67 | 89 |
| 50 MEAN | 27 | 23 | 25 | 29 | 30 | 26 | 32 | 34 | 34 | 35 | 37 | 43 | 38 | 36 | 28 | 28 | 24 | 27 | 23 | 22 | 31 | 32 | 27 | 27 | 30 |
| 5D MEAN | 76 | 74 | 82 | 89 | 111 | 152 | 179 | 178 | 181 | 162 | 140 | 169 | 204 | 180 | 216 | 170 | 141 | 145 | 151 | 139 | 152 | 178 | 121 | 111 | 146 |

| DATE | AU INDEX (HOURLY VALUES) | | | | | | | | | | | | | | | | | | | | | | | | MEAN |
|---------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
| 1 | 77 | 228 | 193 | 116 | 136 | 153 | 93 | 109 | 119 | 205 | 333 | 252 | 171 | 132 | 57 | 159 | 263 | 202 | 201 | 253 | 220 | 129 | 142 | 89 | 168 |
| 2 | 33 | 35 | 29 | 22 | 25 | 44 | 36 | 91 | 105 | 95 | 32 | 40 | 119 | 126 | 102 | 36 | 41 | 124 | 108 | 52 | 31 | 75 | 117 | 95 | 67 |
| 3 | 56 | 100 | 92 | 94 | 63 | 44 | 32 | 33 | 49 | 33 | 39 | 47 | 71 | 112 | 172 | 167 | 137 | 144 | 290 | 257 | 177 | 200 | 171 | 123 | 113 |
| 4 | 82 | 77 | 180 | 108 | 58 | 43 | 46 | 43 | 79 | 82 | 134 | 124 | 122 | 121 | 90 | 57 | 54 | 62 | 84 | 57 | 111 | 94 | 68 | 42 | 84 |
| 5 | 43 | 33 | 25 | 23 | 21 | 20 | 16 | 16 | 30 | 20 | 23 | 22 | 25 | 24 | 18 | 18 | 29 | 26 | 44 | 72 | 76 | 83 | 40 | 15 | 32 |
| 6 | 28 | 32 | 34 | 31 | 40 | 146 | 161 | 138 | 104 | 122 | 77 | 59 | 63 | 101 | 76 | 41 | 34 | 29 | 28 | 23 | 28 | 27 | 48 | 53 | 63 |
| 7 | 33 | 25 | 35 | 27 | 26 | 31 | 46 | 34 | 44 | 31 | 31 | 68 | 94 | 60 | 32 | 62 | 39 | 36 | 37 | 34 | 64 | 53 | 49 | 48 | 43 |
| 8 | 47 | 70 | 45 | 37 | 34 | 32 | 44 | 70 | 52 | 77 | 60 | 39 | 26 | 29 | 32 | 41 | 100 | 258 | 336 | 219 | 148 | 194 | 170 | 181 | 97 |
| 9 | 110 | 114 | 142 | 120 | 81 | 26 | 21 | 21 | 13 | 14 | 22 | 26 | 69 | 38 | 41 | 42 | 40 | 57 | 62 | 54 | 34 | 38 | 63 | 32 | 53 |
| 10 | 26 | 28 | 24 | 24 | 31 | 51 | 41 | 36 | 56 | 114 | 107 | 82 | 70 | 64 | 51 | 42 | 28 | 27 | 43 | 44 | 80 | 55 | 45 | 39 | 50 |
| 11 | 30 | 28 | 23 | 25 | 27 | 41 | 39 | 49 | 133 | 147 | 114 | 244 | 220 | 327 | 363 | 300 | 283 | 187 | 153 | 153 | 165 | 157 | 174 | 337 | 155 |
| 12 | 343 | 427 | 457 | 476 | 284 | 221 | 87 | 282 | 279 | 329 | 273 | 375 | 479 | 405 | 269 | 315 | 360 | 260 | 249 | 305 | 265 | 246 | 206 | 268 | 311 |
| 13 | 244 | 320 | 420 | 249 | 118 | 119 | 48 | 70 | 254 | 231 | 71 | 120 | 131 | 264 | 195 | 234 | 98 | 72 | 142 | 230 | 141 | 197 | 304 | 314 | 191 |
| 14 | 193 | 182 | 164 | 114 | 160 | 258 | 149 | 52 | 71 | 74 | 86 | 91 | 126 | 103 | 250 | 248 | 125 | 81 | 53 | 35 | 43 | 67 | 23 | 13 | 115 |
| 15 | 12 | 9 | 9 | 9 | 7 | 4 | 1 | -2 | 0 | 5 | 23 | 38 | 38 | 27 | 29 | 23 | 48 | 25 | 37 | 33 | 67 | 58 | 31 | 49 | 24 |
| 16 | 99 | 66 | 36 | 24 | 28 | 29 | 52 | 28 | 22 | 104 | 255 | 299 | 164 | 66 | 28 | 39 | 24 | 63 | 116 | 126 | 90 | 82 | 59 | 71 | 82 |
| 17 | 40 | 32 | 21 | 85 | 181 | 178 | 240 | 242 | 335 | 189 | 270 | 235 | 131 | 153 | 242 | 247 | 234 | 282 | 231 | 142 | 192 | 142 | 82 | 46 | 174 |
| 18 | 33 | 44 | 26 | 31 | 31 | 22 | 25 | 14 | 15 | 19 | 18 | 18 | 21 | 29 | 23 | 107 | 171 | 217 | 110 | 65 | 65 | 89 | 105 | 80 | 57 |
| 19 | 177 | 115 | 313 | 251 | 254 | 92 | 41 | 38 | 72 | 159 | 196 | 285 | 294 | 268 | 285 | 413 | 397 | 294 | 332 | 237 | 266 | 231 | 68 | 40 | 214 |
| 20 | 81 | 142 | 161 | 279 | 308 | 283 | 286 | 127 | 40 | 65 | 181 | 176 | 193 | 110 | 236 | 359 | 460 | 386 | 324 | 249 | 41 | 103 | 200 | 131 | 205 |
| 21 | 201 | 158 | 156 | 179 | 179 | 151 | 170 | 235 | 367 | 175 | 315 | 244 | 143 | 263 | 230 | 252 | 242 | 278 | 275 | 271 | 283 | 329 | 259 | 192 | 231 |
| 22 | 298 | 120 | 192 | 197 | 152 | 256 | 192 | 257 | 187 | 102 | 52 | 154 | 75 | 127 | 191 | 102 | 96 | 202 | 297 | 297 | 302 | 105 | 133 | 144 | 176 |
| 23 | 192 | 183 | 155 | 132 | 167 | 223 | 321 | 279 | 275 | 283 | 225 | 174 | 251 | 96 | 52 | 60 | 74 | 117 | 90 | 75 | 185 | 195 | 108 | 43 | 165 |
| 24 | 40 | 47 | 27 | 103 | 133 | 128 | 88 | 65 | 68 | 165 | 214 | 234 | 152 | 178 | 332 | 274 | 276 | 335 | 238 | 257 | 149 | 127 | 205 | 270 | 171 |
| 25 | 227 | 253 | 151 | 188 | 119 | 96 | 99 | 132 | 63 | 65 | 87 | 146 | 185 | 162 | 99 | 90 | 159 | 206 | 178 | 144 | 183 | 209 | 302 | 255 | 158 |
| 26 | 286 | 212 | 186 | 281 | 318 | 234 | 155 | 92 | 386 | 273 | 327 | 269 | 322 | 431 | 461 | 383 | 336 | 309 | 432 | 475 | 413 | 414 | 371 | 175 | 314 |
| 27 | 104 | 273 | 277 | 219 | 240 | 324 | 278 | 378 | 390 | 372 | 302 | 382 | 356 | 234 | 182 | 257 | 310 | 201 | 127 | 114 | 108 | 234 | 172 | 77 | 245 |
| 28 | 87 | 117 | 108 | 83 | 65 | 69 | 56 | 73 | 94 | 78 | 89 | 102 | 70 | 74 | 70 | 178 | 204 | 175 | 103 | 106 | 164 | 236 | 295 | 152 | 119 |
| 29 | 235 | 272 | 224 | 136 | 74 | 87 | 46 | 75 | 50 | 81 | 220 | 251 | 309 | 198 | 131 | 114 | 183 | 262 | 237 | 195 | 164 | 162 | 227 | 177 | 171 |
| 30 | 131 | 85 | 59 | 40 | 20 | 21 | 18 | 22 | 63 | 62 | 58 | 51 | 93 | 103 | 82 | 31 | 30 | 35 | 70 | 84 | 78 | 50 | 43 | 51 | 58 |
| MEAN | 119 | 127 | 132 | 123 | 112 | 114 | 97 | 103 | 127 | 125 | 141 | 154 | 152 | 147 | 147 | 156 | 162 | 165 | 167 | 155 | 144 | 146 | 142 | 120 | 136 |
| 50 MEAN | 64 | 53 | 51 | 43 | 32 | 24 | 19 | 18 | 32 | 43 | 46 | 43 | 59 | 51 | 44 | 31 | 35 | 34 | 51 | 57 | 67 | 56 | 44 | 37 | 43 |
| 5D MEAN | 226 | 243 | 307 | 307 | 256 | 189 | 123 | 121 | 206 | 211 | 209 | 245 | 283 | 295 | 289 | 340 | 330 | 264 | 295 | 299 | 225 | 242 | 229 | 185 | 247 |

| DATE | AU INDEX (HOURLY VALUES) | | | | | | | | | | | | | | | | | | | | | | | | MEAN |
|---------|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | |
| 1 | 35 | 35 | 36 | 35 | 49 | 58 | 112 | 167 | 200 | 150 | 99 | 174 | 189 | 121 | 71 | 61 | 68 | 154 | 292 | 249 | 138 | 106 | 204 | 179 | 124 |
| 2 | 143 | 162 | 129 | 55 | 69 | 78 | 65 | 65 | 49 | 49 | 38 | 71 | 92 | 59 | 20 | 21 | 53 | 67 | 48 | 42 | 56 | 49 | 45 | 61 | 65 |
| 3 | 67 | 51 | 35 | 27 | 25 | 91 | 141 | 129 | 174 | 130 | 54 | 18 | 39 | 66 | 57 | 46 | 35 | 44 | 42 | 45 | 49 | 41 | 39 | 32 | 62 |
| 4 | 19 | 19 | 21 | 24 | 20 | 24 | 38 | 68 | 67 | 41 | 31 | 42 | 47 | 26 | 27 | 45 | 45 | 56 | 39 | 68 | 45 | 25 | 22 | 35 | 37 |
| 5 | 38 | 41 | 21 | 16 | 16 | 14 | 14 | 40 | 34 | 34 | 56 | 55 | 55 | 66 | 54 | 31 | 31 | 41 | 60 | 39 | 27 | 27 | 33 | 27 | 35 |
| 6 | 27 | 26 | 32 | 31 | 51 | 30 | 21 | 52 | 27 | 23 | 41 | 48 | 93 | 63 | 33 | 20 | 26 | 63 | 66 | 41 | 35 | 56 | 34 | 30 | 40 |
| 7 | 43 | 43 | 56 | 74 | 101 | 65 | 32 | 23 | 31 | 49 | 116 | 47 | 27 | 45 | 41 | 48 | 38 | 37 | 38 | 39 | 50 | 26 | 26 | 33 | 47 |
| 8 | 29 | 36 | 78 | 55 | 38 | 49 | 63 | 64 | 51 | 84 | 88 | 70 | 88 | 86 | 64 | 53 | 63 | 65 | 84 | 46 | 30 | 35 | 134 | 175 | 68 |
| 9 | 216 | 233 | 255 | 306 | 365 | 404 | 551 | 406 | 540 | 418 | 270 | 214 | 158 | 77 | 39 | 47 | 98 | 118 | 124 | 132 | 139 | 125 | 135 | 238 | 234 |
| 10 | 229 | 144 | 152 | 268 | 296 | 178 | 128 | 101 | 75 | 67 | 59 | 36 | 33 | 80 | 78 | 78 | 97 | 310 | 377 | 407 | 308 | 396 | 174 | 156 | 176 |
| 11 | 240 | 327 | 521 | 339 | 481 | 617 | 485 | 422 | 327 | 356 | 430 | 443 | 380 | 277 | 342 | 134 | 104 | 113 | 82 | 88 | 128 | 182 | 157 | 102 | 295 |
| 12 | 100 | 62 | 48 | 48 | 104 | 95 | 57 | 54 | 52 | 50 | 51 | 35 | 44 | 47 | 149 | 301 | 244 | 320 | 291 | 289 | 222 | 206 | 235 | 213 | 138 |
| 13 | 270 | 284 | 149 | 112 | 295 | 349 | 84 | 88 | 52 | 43 | 44 | 56 | 33 | 45 | 44 | 41 | 38 | 38 | 43 | 24 | 32 | 39 | 33 | 34 | 95 |
| 14 | 46 | 92 | 111 | 102 | 101 | 212 | 233 | 93 | 182 | 211 | 234 | 316 | 206 | 166 | 78 | 149 | 117 | 86 | 155 | 153 | 121 | 185 | 180 | 121 | 152 |
| 15 | 77 | 137 | 182 | 567 | 324 | 317 | 452 | 444 | 264 | 345 | 281 | 277 | 262 | 279 | 176 | 214 | 353 | 392 | 369 | 328 | 210 | 209 | 335 | 274 | 294 |
| 16 | 110 | 296 | 294 | 199 | 250 | 282 | 424 | 429 | 417 | 481 | 170 | 185 | 486 | 472 | 367 | 293 | 302 | 370 | 477 | 347 | 261 | 147 | 156 | 169 | 308 |
| 17 | 202 | 180 | 123 | 61 | 65 | 63 | 80 | 61 | 71 | 32 | 32 | 20 | 38 | 66 | 104 | 95 | 102 | 98 | 98 | 98 | 144 | 210 | 237 | 360 | 110 |
| 18 | 305 | 250 | 176 | 285 | 363 | 557 | 270 | 491 | 480 | 244 | 270 | 146 | 347 | 294 | 472 | 383 | 439 | 559 | 454 | 308 | 347 | 171 | 130 | 113 | 327 |
| 19 | 87 | 65 | 55 | 100 | 126 | 130 | 158 | 227 | 94 | 68 | 147 | 163 | 103 | 146 | 222 | 159 | 175 | 213 | 96 | 78 | 69 | 98 | 163 | 228 | 132 |
| 20 | 222 | 212 | 306 | 226 | 199 | 215 | 333 | 372 | 213 | 102 | 73 | 122 | 262 | 253 | 233 | 218 | 158 | 212 | 285 | 383 | 299 | 164 | 130 | 203 | 225 |
| 21 | 172 | 117 | 142 | 103 | 87 | 79 | 107 | 90 | 106 | 148 | 188 | 188 | 112 | 44 | 63 | 48 | 46 | 44 | 117 | 122 | 187 | 259 | 324 | 131 | 126 |
| 22 | 71 | 86 | 116 | 143 | 154 | 134 | 106 | 41 | 69 | 47 | 21 | 27 | 30 | 49 | 33 | 30 | 81 | 91 | 91 | 114 | 139 | 81 | 25 | 24 | 75 |
| 23 | 37 | 41 | 61 | 70 | 132 | 136 | 153 | 231 | 333 | 252 | 303 | 217 | 132 | 161 | 163 | 170 | 262 | 281 | 429 | 364 | 337 | 400 | 349 | 300 | 221 |
| 24 | 307 | 274 | 241 | 256 | 191 | 216 | 349 | 315 | 299 | 239 | 201 | 203 | 148 | 142 | 153 | 225 | 126 | 165 | 101 | 126 | 247 | 391 | 379 | 407 | 238 |
| 25 | 256 | 281 | 288 | 161 | 280 | 355 | 362 | 401 | 326 | 300 | 156 | 230 | 162 | 59 | 156 | 205 | 302 | 370 | 344 | 337 | 322 | 203 | 198 | 151 | 259 |
| 26 | 208 | 209 | 216 | 156 | 134 | 170 | 123 | 136 | 122 | 81 | 50 | 51 | 50 | 15 | 21 | 47 | 65 | 50 | 57 | 57 | 55 | 56 | 88 | 84 | 96 |
| 27 | 54 | 42 | 34 | 32 | 56 | 72 | 49 | 41 | 31 | 54 | 80 | 51 | 30 | 41 | 29 | 28 | 28 | 30 | 82 | 181 | 158 | 128 | 96 | 149 | 66 |
| 28 | 274 | 176 | 41 | 200 | 215 | 164 | 48 | 34 | 39 | 92 | 90 | 156 | 140 | 85 | 109 | 48 | 63 | 91 | 89 | 63 | 56 | 57 | 87 | 148 | 107 |
| 29 | 131 | 105 | 91 | 121 | 155 | 119 | 74 | 99 | 56 | 79 | 69 | 79 | 92 | 43 | 38 | 41 | 63 | 83 | 98 | 103 | 112 | 104 | 59 | 70 | 87 |
| 30 | 57 | 86 | 112 | 86 | 74 | 60 | 66 | 47 | 84 | 114 | 102 | 118 | 69 | 72 | 47 | 87 | 89 | 81 | 54 | 54 | 129 | 166 | 114 | 81 | 85 |
| 31 | 190 | 140 | 135 | 142 | 98 | 107 | 160 | 68 | 109 | 142 | 92 | 115 | 91 | 121 | 61 | 63 | 49 | 50 | 87 | 92 | 59 | 73 | 98 | 51 | 100 |
| MEAN | 137 | 137 | 137 | 141 | 158 | 175 | 172 | 170 | 160 | 145 | 126 | 128 | 130 | 114 | 114 | 110 | 121 | 151 | 163 | 155 | 145 | 142 | 142 | 141 | 142 |
| 50 MEAN | 38 | 36 | 33 | 34 | 42 | 45 | 49 | 57 | 67 | 55 | 56 | 42 | 52 | 53 | 42 | 38 | 35 | 48 | 49 | 46 | 41 | 35 | 30 | 31 | 44 |
| 5D MEAN | 190 | 244 | 295 | 323 | 323 | 397 | 392 | 431 | 340 | 305 | 244 | 234 | 347 | 315 | 318 | 248 | 271 | 329 | 333 | 290 | 249 | 174 | 181 | 172 | 289 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 1 | 69 | 86 | 53 | 56 | 20 | 88 | 83 | 127 | 87 | 76 | 80 | 90 | 106 | 71 | 45 | 73 | 134 | 174 | 129 | 101 | 110 | 92 | 67 | 86 | 88 |
| 2 | 68 | 107 | 32 | 48 | 63 | 72 | 109 | 95 | 187 | 253 | 226 | 177 | 136 | 126 | 117 | 91 | 108 | 108 | 61 | 59 | 57 | 33 | 51 | 64 | 102 |
| 3 | 43 | 53 | 24 | 26 | 50 | 72 | 318 | 264 | 215 | 62 | 38 | 43 | 99 | 54 | 160 | 252 | 189 | 213 | 331 | 256 | 221 | 176 | 103 | 75 | 139 |
| 4 | 62 | 30 | 17 | 16 | 41 | 48 | 30 | 63 | 47 | 30 | 40 | 43 | 54 | 33 | 55 | 46 | 18 | 29 | 32 | 66 | 70 | 34 | 42 | 60 | 42 |
| 5 | 111 | 140 | 80 | 33 | 38 | 67 | 47 | 37 | 37 | 40 | 46 | 91 | 90 | 74 | 54 | 32 | 48 | 48 | 33 | 31 | 22 | 37 | 77 | 126 | 60 |
| 6 | 140 | 122 | 80 | 101 | 97 | 140 | 93 | 54 | 46 | 72 | 200 | 145 | 196 | 129 | 89 | 138 | 188 | 178 | 227 | 241 | 154 | 116 | 93 | 87 | 130 |
| 7 | 59 | 64 | 152 | 337 | 340 | 270 | 371 | 228 | 158 | 206 | 149 | 207 | 199 | 278 | 177 | 195 | 119 | 207 | 309 | 330 | 340 | 183 | 229 | 300 | 225 |
| 8 | 255 | 234 | 85 | 59 | 57 | 99 | 76 | 102 | 52 | 50 | 40 | 18 | 20 | 10 | 6 | 5 | 17 | 140 | 171 | 111 | 84 | 57 | 76 | 103 | 80 |
| 9 | 130 | 34 | 12 | 7 | 9 | 20 | 20 | 58 | 56 | 35 | 17 | 12 | 19 | 44 | 40 | 23 | 35 | 16 | 18 | 18 | 15 | 17 | 18 | 24 | 29 |
| 10 | 20 | 14 | 8 | 11 | 5 | 10 | 20 | 42 | 39 | 53 | 122 | 70 | 65 | 46 | 47 | 39 | 51 | 32 | 28 | 48 | 59 | 25 | 24 | 94 | 40 |
| 11 | 107 | 162 | 165 | 134 | 101 | 66 | 64 | 70 | 68 | 79 | 51 | 58 | 64 | 40 | 73 | 57 | 48 | 60 | 98 | 165 | 240 | 171 | 92 | 43 | 95 |
| 12 | 64 | 87 | 108 | 87 | 59 | 58 | 40 | 51 | 47 | 62 | 105 | 72 | 84 | 62 | 57 | 41 | 41 | 46 | 55 | 42 | 37 | 31 | 99 | 38 | 61 |
| 13 | 36 | 21 | 17 | 26 | 18 | 75 | 141 | 72 | 48 | 138 | 179 | 132 | 99 | 60 | 44 | 28 | 58 | 63 | 60 | 30 | 19 | 17 | 19 | 15 | 59 |
| 14 | 15 | 14 | 12 | 9 | 7 | 14 | 25 | 40 | 42 | 53 | 40 | 57 | 119 | 100 | 67 | 57 | 63 | 81 | 155 | 150 | 122 | 107 | 82 | 61 | 62 |
| 15 | 50 | 85 | 88 | 49 | 110 | 223 | 197 | 185 | 134 | 119 | 138 | 195 | 165 | 104 | 45 | 39 | 41 | 71 | 133 | 203 | 175 | 133 | 88 | 201 | 124 |
| 16 | 279 | 268 | 279 | 323 | 332 | 267 | 139 | 39 | 96 | 143 | 96 | 81 | 117 | 136 | 122 | 159 | 267 | 431 | 285 | 140 | 123 | 286 | 291 | 344 | 210 |
| 17 | 272 | 222 | 210 | 203 | 156 | 132 | 171 | 119 | 113 | 109 | 139 | 58 | 29 | 29 | 14 | 12 | 17 | 27 | 33 | 34 | 24 | 32 | 25 | 40 | 92 |
| 18 | 54 | 119 | 188 | 114 | 95 | 231 | 104 | 107 | 50 | 99 | 65 | 118 | 54 | 46 | 110 | 165 | 117 | 59 | 74 | 115 | 174 | 138 | 218 | 204 | 117 |
| 19 | 217 | 148 | 147 | 50 | 38 | 34 | 46 | 76 | 119 | 120 | 152 | 214 | 198 | 113 | 101 | 117 | 132 | 127 | 218 | 191 | 167 | 144 | 114 | 149 | 130 |
| 20 | 170 | 160 | 123 | 90 | 84 | 136 | 225 | 143 | 207 | 171 | 75 | 52 | 84 | 87 | 103 | 93 | 42 | 34 | 66 | 89 | 56 | 81 | 64 | 68 | 104 |
| 21 | 72 | 94 | 29 | 78 | 95 | 194 | 117 | 99 | 45 | 26 | 27 | 26 | 21 | 14 | 10 | 22 | 52 | 30 | 25 | 28 | 44 | 15 | 21 | 24 | 50 |
| 22 | 16 | 14 | 12 | 11 | 3 | 4 | 10 | 12 | 17 | 23 | 15 | 21 | 23 | 30 | 28 | 23 | 18 | 36 | 49 | 100 | 154 | 119 | 84 | 69 | 37 |
| 23 | 65 | 40 | 21 | 36 | 106 | 158 | 52 | 31 | 50 | 80 | 116 | 101 | 54 | 47 | 59 | 36 | 36 | 42 | 39 | 46 | 32 | 27 | 25 | 27 | 55 |
| 24 | 23 | 22 | 36 | 18 | 14 | 10 | 25 | 99 | 174 | 254 | 233 | 200 | 84 | 33 | 85 | 75 | 48 | 104 | 227 | 378 | 171 | 62 | 48 | 59 | 103 |
| 25 | 53 | 36 | 52 | 90 | 86 | 116 | 63 | 68 | 132 | 231 | 192 | 223 | 218 | 230 | 262 | 323 | 298 | 100 | 88 | 126 | 207 | 190 | 104 | 107 | 150 |
| 26 | 119 | 55 | 45 | 61 | 151 | 215 | 178 | 151 | 108 | 231 | 163 | 157 | 279 | 186 | 116 | 139 | 142 | 69 | 88 | 67 | 42 | 53 | 88 | 210 | 130 |
| 27 | 226 | 267 | 165 | 76 | 98 | 291 | 131 | 96 | 201 | 166 | 140 | 70 | 56 | 56 | 50 | 85 | 122 | 141 | 151 | 216 | 168 | 105 | 39 | 100 | 134 |
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| 5Q MEAN | 58 | 37 | 32 | 30 | 37 | 52 | 31 | 44 | 46 | 56 | 80 | 62 | 68 | 59 | 54 | 39 | 45 | 43 | 59 | 60 | 53 | 41 | 49 | 48 | 49 |
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AL INDEX (HOURLY VALUES)

MARCH 1981

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AL INDEX (HOURLY VALUES)

APRIL

1981

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| | | 1981 | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | MAY | | | | | | | | | | | | 1981 | | | | | | | | | | | | |
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AL INDEX (HOURLY VALUES) JUNE 1981

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| 17 | -444 | -337 | -171 | -142 | -259 | -136 | -229 | -277 | -143 | -51 | -125 | -84 | -32 | -37 | -26 | -26 | -25 | -21 | -23 | -33 | -44 | -56 | -50 | -52 | -118 |
| 18 | -63 | -87 | -137 | -173 | -121 | -164 | -136 | -80 | -38 | -51 | -43 | -131 | -96 | -75 | -174 | -304 | -166 | -61 | -90 | -133 | -298 | -128 | -240 | -227 | -134 |
| 19 | -265 | -197 | -137 | -108 | -90 | -42 | -61 | -44 | -38 | -158 | -155 | -220 | -356 | -258 | -181 | -265 | -241 | -185 | -357 | -359 | -146 | -150 | -158 | -142 | -180 |
| 20 | -124 | -144 | -127 | -185 | -78 | -116 | -101 | -152 | -199 | -223 | -85 | -65 | -80 | -107 | -247 | -224 | -79 | -30 | -51 | -69 | -55 | -179 | -72 | -53 | -119 |
| 21 | -43 | -125 | -55 | -46 | -86 | -116 | -230 | -76 | -35 | -30 | -32 | -45 | -40 | -29 | -35 | -39 | -115 | -51 | -13 | -22 | -52 | -46 | -48 | -47 | -61 |
| 22 | -36 | -43 | -45 | -37 | -45 | -51 | -53 | -45 | -33 | -37 | -43 | -41 | -40 | -37 | -28 | -32 | -28 | -29 | -41 | -94 | -117 | -96 | -66 | -65 | -49 |
| 23 | -82 | -36 | -31 | -33 | -87 | -173 | -58 | -35 | -31 | -29 | -69 | -121 | -115 | -62 | -63 | -47 | -36 | -17 | -9 | -20 | -17 | -40 | -50 | -43 | -54 |
| 24 | -39 | -26 | -26 | -34 | -41 | -45 | -37 | -22 | -156 | -263 | -154 | -162 | -167 | -77 | -113 | -99 | -33 | -51 | -219 | -324 | -151 | -8 | -16 | -53 | -97 |
| 25 | -38 | -47 | -60 | -43 | -95 | -117 | -90 | -40 | -59 | -252 | -183 | -239 | -229 | -443 | -528 | -243 | -298 | -193 | -64 | -116 | -159 | -267 | -64 | -66 | -164 |
| 26 | -136 | -113 | -53 | -54 | -89 | -208 | -241 | -232 | -181 | -238 | -355 | -187 | -278 | -343 | -248 | -131 | -92 | -60 | -86 | -8 | 1 | -23 | -61 | -170 | -149 |
| 27 | -208 | -198 | -206 | -95 | -140 | -276 | -321 | -149 | -147 | -108 | -127 | -103 | -33 | -47 | -26 | -41 | -89 | -199 | -256 | -202 | -95 | -142 | -65 | -69 | -139 |
| 28 | -92 | -218 | -65 | -80 | -183 | -202 | -346 | -299 | -257 | -330 | -192 | -70 | -69 | -92 | -89 | -107 | -137 | -123 | -273 | -91 | -59 | -79 | -130 | -100 | -153 |
| D 29 | -185 | -220 | -177 | -79 | -97 | -258 | -734 | -962 | -415 | -400 | -492 | -505 | -887 | -323 | -187 | -326 | -158 | -84 | -120 | -221 | -230 | -140 | -96 | -101 | -308 |
| 30 | -127 | -209 | -73 | -19 | -37 | -48 | -39 | -37 | -28 | -34 | -30 | -19 | -30 | -27 | -29 | -51 | -59 | -70 | -203 | -111 | -123 | -122 | -250 | -388 | -90 |
| MEAN | -120 | -126 | -93 | -90 | -97 | -112 | -151 | -125 | -96 | -104 | -109 | -108 | -131 | -112 | -117 | -118 | -118 | -123 | -129 | -126 | -108 | -99 | -92 | -111 | -113 |
| 50 MEAN | -62 | -43 | -57 | -50 | -59 | -76 | -46 | -40 | -37 | -36 | -59 | -53 | -62 | -48 | -60 | -62 | -77 | -70 | -54 | -51 | -53 | -45 | -51 | -44 | -54 |
| 5D MEAN | -220 | -206 | -156 | -197 | -174 | -157 | -312 | -318 | -175 | -138 | -136 | -166 | -239 | -132 | -142 | -183 | -166 | -223 | -256 | -271 | -234 | -175 | -177 | -200 | -199 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| D 1 | 43 | 31 | 93 | 311 | 168 | 43 | 92 | 175 | 203 | 371 | 649 | 395 | 71 | 62 | 72 | 251 | 338 | 420 | 640 | 576 | 293 | 109 | 62 | 40 | 229 |
| D 2 | 49 | 48 | 54 | 64 | 47 | 117 | 49 | 47 | 68 | 162 | 162 | 104 | 109 | 127 | 194 | 168 | 695 | 365 | 429 | 326 | 175 | 114 | 164 | 317 | 168 |
| D 3 | 420 | 253 | 170 | 56 | 67 | 54 | 193 | 280 | 67 | 36 | 90 | 70 | 55 | 71 | 45 | 158 | 85 | 56 | 43 | 303 | 303 | 55 | 50 | 127 | 121 |
| D 4 | 371 | 456 | 295 | 154 | 146 | 181 | 170 | 104 | 118 | 233 | 180 | 45 | 38 | 50 | 43 | 112 | 220 | 52 | 34 | 206 | 468 | 153 | 80 | 87 | 167 |
| D 5 | 41 | 55 | 67 | 132 | 101 | 58 | 51 | 69 | 133 | 93 | 98 | 122 | 63 | 60 | 303 | 322 | 178 | 103 | 78 | 275 | 365 | 422 | 161 | 74 | 143 |
| D 6 | 88 | 98 | 76 | 63 | 43 | 40 | 40 | 69 | 55 | 26 | 23 | 66 | 304 | 368 | 397 | 110 | 153 | 232 | 108 | 113 | 223 | 245 | 165 | 89 | 133 |
| D 7 | 151 | 194 | 105 | 57 | 85 | 77 | 130 | 78 | 63 | 24 | 25 | 50 | 55 | 92 | 221 | 210 | 111 | 84 | 65 | 55 | 75 | 220 | 133 | 128 | 104 |
| D 8 | 112 | 154 | 184 | 91 | 85 | 61 | 51 | 113 | 143 | 99 | 30 | 58 | 275 | 379 | 91 | 80 | 286 | 619 | 218 | 48 | 49 | 104 | 267 | 302 | 162 |
| D 9 | 98 | 118 | 117 | 187 | 94 | 36 | 22 | 19 | 22 | 28 | 25 | 37 | 27 | 54 | 165 | 254 | 186 | 61 | 36 | 35 | 38 | 82 | 91 | 33 | 78 |
| D 10 | 36 | 35 | 29 | 33 | 26 | 49 | 38 | 57 | 41 | 52 | 64 | 94 | 144 | 197 | 104 | 78 | 77 | 55 | 163 | 246 | 332 | 250 | 435 | 363 | 125 |
| D 11 | 159 | 309 | 327 | 551 | 488 | 107 | 203 | 144 | 165 | 248 | 423 | 335 | 359 | 466 | 658 | 737 | 444 | 266 | 362 | 455 | 446 | 409 | 332 | 232 | 359 |
| D 12 | 227 | 229 | 153 | 137 | 99 | 75 | 88 | 98 | 79 | 58 | 35 | 38 | 39 | 36 | 21 | 27 | 79 | 84 | 56 | 34 | 40 | 55 | 60 | 55 | 79 |
| D 13 | 30 | 65 | 42 | 90 | 148 | 225 | 121 | 88 | 97 | 202 | 108 | 104 | 155 | 442 | 388 | 158 | 146 | 263 | 280 | 375 | 177 | 158 | 148 | 140 | 173 |
| D 14 | 159 | 102 | 94 | 81 | 127 | 117 | 118 | 184 | 189 | 118 | 149 | 186 | 366 | 527 | 234 | 53 | 50 | 48 | 37 | 32 | 27 | 32 | 30 | 32 | 129 |
| D 15 | 107 | 113 | 51 | 42 | 35 | 48 | 110 | 268 | 353 | 153 | 99 | 83 | 163 | 126 | 95 | 65 | 126 | 373 | 252 | 76 | 64 | 60 | 193 | 277 | 139 |
| D 16 | 114 | 89 | 259 | 277 | 123 | 190 | 165 | 278 | 357 | 121 | 170 | 511 | 277 | 177 | 146 | 146 | 118 | 228 | 141 | 49 | 44 | 47 | 32 | 41 | 171 |
| D 17 | 32 | 53 | 90 | 56 | 27 | 24 | 49 | 51 | 74 | 80 | 146 | 76 | 150 | 684 | 475 | 241 | 236 | 300 | 255 | 157 | 223 | 165 | 78 | 83 | 159 |
| D 18 | 122 | 70 | 107 | 71 | 56 | 37 | 67 | 81 | 63 | 39 | 33 | 32 | 24 | 34 | 29 | 50 | 49 | 48 | 37 | 30 | 33 | 28 | 29 | 34 | 50 |
| D 19 | 29 | 21 | 14 | 13 | 40 | 59 | 38 | 19 | 20 | 26 | 41 | 98 | 81 | 71 | 244 | 174 | 98 | 61 | 43 | 27 | 25 | 33 | 46 | 62 | 58 |
| D 20 | 85 | 94 | 64 | 33 | 26 | 23 | 23 | 56 | 76 | 108 | 83 | 99 | 57 | 35 | 29 | 33 | 40 | 82 | 156 | 212 | 209 | 108 | 61 | 50 | 77 |
| D 21 | 43 | 41 | 50 | 56 | 38 | 23 | 18 | 17 | 24 | 26 | 22 | 34 | 35 | 27 | 24 | 33 | 51 | 49 | 35 | 30 | 182 | 132 | 96 | 102 | 49 |
| D 22 | 65 | 61 | 36 | 30 | 24 | 18 | 21 | 21 | 23 | 27 | 63 | 135 | 175 | 106 | 388 | 230 | 173 | 385 | 381 | 183 | 72 | 126 | 162 | 148 | 127 |
| D 23 | 143 | 149 | 33 | 27 | 29 | 37 | 42 | 53 | 113 | 163 | 210 | 345 | 319 | 580 | 475 | 275 | 104 | 136 | 76 | 111 | 232 | 107 | 78 | 121 | 165 |
| D 24 | 38 | 27 | 60 | 56 | 72 | 105 | 118 | 219 | 169 | 192 | 202 | 208 | 119 | 242 | 240 | 142 | 186 | 161 | 77 | 136 | 292 | 191 | 68 | 42 | 140 |
| D 25 | 105 | 73 | 51 | 49 | 45 | 80 | 122 | 19 | 22 | 24 | 16 | 23 | 36 | 95 | 286 | 335 | 150 | 84 | 140 | 395 | 289 | 142 | 105 | 123 | 117 |
| D 26 | 78 | 36 | 27 | 30 | 24 | 40 | 66 | 173 | 277 | 242 | 195 | 251 | 606 | 358 | 98 | 98 | 68 | 65 | 52 | 70 | 92 | 101 | 64 | 84 | 133 |
| D 27 | 219 | 313 | 162 | 49 | 34 | 51 | 34 | 62 | 161 | 196 | 175 | 360 | 532 | 246 | 92 | 63 | 57 | 80 | 90 | 46 | 47 | 72 | 150 | 197 | 145 |
| D 28 | 251 | 112 | 172 | 270 | 340 | 320 | 317 | 261 | 162 | 225 | 105 | 84 | 263 | 354 | 257 | 213 | 145 | 150 | 147 | 216 | 260 | 467 | 310 | 224 | 234 |
| D 29 | 317 | 264 | 148 | 123 | 282 | 273 | 96 | 531 | 375 | 443 | 444 | 155 | 190 | 463 | 274 | 291 | 175 | 88 | 201 | 338 | 236 | 229 | 205 | 200 | 264 |
| D 30 | 206 | 207 | 161 | 130 | 64 | 38 | 81 | 92 | 75 | 58 | 75 | 55 | 120 | 115 | 160 | 117 | 114 | 202 | 155 | 145 | 51 | 69 | 50 | 76 | 109 |
| D 31 | 82 | 69 | 99 | 253 | 618 | 801 | 599 | 194 | 122 | 205 | 747 | 618 | 193 | 76 | 60 | 67 | 61 | 130 | 126 | 92 | 459 | 254 | 417 | 131 | 270 |
| MEAN | 129 | 127 | 109 | 115 | 116 | 107 | 109 | 126 | 125 | 128 | 157 | 157 | 174 | 216 | 203 | 170 | 161 | 171 | 158 | 167 | 187 | 152 | 139 | 129 | 147 |
| 5Q MEAN | 101 | 91 | 77 | 62 | 51 | 43 | 46 | 54 | 52 | 51 | 42 | 60 | 47 | 40 | 69 | 63 | 63 | 64 | 65 | 66 | 97 | 71 | 58 | 60 | 62 |
| 5D MEAN | 236 | 242 | 208 | 270 | 374 | 336 | 277 | 246 | 188 | 270 | 379 | 247 | 208 | 281 | 258 | 284 | 209 | 137 | 174 | 261 | 373 | 302 | 268 | 174 | 258 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|------|------|-----|-----|-----|-----|-----|------|
| D | 64 | 59 | 84 | 119 | 231 | 226 | 233 | 118 | 273 | 231 | 78 | 103 | 372 | 244 | 78 | 64 | 85 | 105 | 131 | 96 | 229 | 429 | 364 | 204 | 176 |
| | 237 | 264 | 305 | 171 | 147 | 114 | 73 | 212 | 406 | 194 | 161 | 120 | 296 | 411 | 415 | 256 | 547 | 878 | 328 | 178 | 196 | 260 | 197 | 197 | 273 |
| | 166 | 159 | 106 | 64 | 54 | 76 | 154 | 276 | 530 | 542 | 319 | 315 | 472 | 207 | 95 | 88 | 190 | 371 | 225 | 303 | 276 | 100 | 67 | 75 | 218 |
| | 135 | 74 | 58 | 49 | 78 | 86 | 80 | 83 | 75 | 63 | 108 | 67 | 68 | 60 | 46 | 54 | 243 | 345 | 534 | 342 | 371 | 298 | 352 | 319 | 166 |
| D | 94 | 71 | 91 | 107 | 220 | 476 | 378 | 445 | 396 | 612 | 649 | 981 | 860 | 334 | 295 | 705 | 855 | 624 | 457 | 270 | 267 | 435 | 337 | 428 | |
| D | 233 | 200 | 111 | 59 | 40 | 63 | 47 | 45 | 63 | 133 | 381 | 238 | 213 | 865 | 1382 | 549 | 699 | 1025 | 1086 | 600 | 704 | 623 | 757 | 710 | 451 |
| | 560 | 446 | 450 | 394 | 159 | 285 | 211 | 111 | 74 | 66 | 55 | 63 | 48 | 53 | 52 | 48 | 55 | 52 | 41 | 33 | 30 | 30 | 33 | 32 | 141 |
| | 30 | 33 | 33 | 37 | 38 | 36 | 35 | 34 | 25 | 29 | 28 | 41 | 43 | 59 | 69 | 75 | 182 | 692 | 348 | 172 | 105 | 229 | 605 | 604 | 149 |
| | 501 | 425 | 426 | 519 | 463 | 362 | 378 | 327 | 211 | 179 | 135 | 307 | 475 | 274 | 88 | 56 | 46 | 70 | 44 | 32 | 33 | 34 | 33 | 25 | 227 |
| 0 | 28 | 25 | 26 | 28 | 33 | 26 | 27 | 29 | 34 | 34 | 35 | 39 | 46 | 57 | 68 | 66 | 77 | 46 | 43 | 28 | 30 | 26 | 27 | 24 | 38 |
| | 22 | 25 | 24 | 23 | 30 | 35 | 51 | 67 | 61 | 35 | 30 | 27 | 113 | 382 | 275 | 62 | 196 | 419 | 581 | 605 | 230 | 100 | 173 | 389 | 165 |
| | 353 | 109 | 60 | 160 | 110 | 78 | 63 | 153 | 397 | 452 | 243 | 187 | 164 | 90 | 36 | 31 | 37 | 28 | 39 | 131 | 300 | 157 | 91 | 134 | 150 |
| | 74 | 79 | 100 | 72 | 131 | 99 | 82 | 81 | 90 | 89 | 230 | 199 | 168 | 236 | 281 | 181 | 114 | 70 | 38 | 55 | 51 | 40 | 39 | 45 | 110 |
| 0 | 38 | 35 | 28 | 29 | 28 | 28 | 28 | 48 | 43 | 67 | 128 | 111 | 91 | 45 | 36 | 151 | 128 | 34 | 19 | 22 | 40 | 50 | 29 | 28 | 53 |
| | 41 | 55 | 50 | 35 | 38 | 31 | 33 | 32 | 52 | 36 | 63 | 89 | 97 | 181 | 208 | 215 | 492 | 798 | 520 | 521 | 490 | 398 | 401 | 361 | 218 |
| | 229 | 118 | 85 | 197 | 258 | 241 | 67 | 48 | 53 | 95 | 193 | 340 | 289 | 249 | 162 | 154 | 220 | 242 | 130 | 62 | 47 | 62 | 55 | 27 | 151 |
| 0 | 30 | 80 | 35 | 51 | 49 | 49 | 38 | 43 | 38 | 45 | 74 | 53 | 125 | 258 | 145 | 331 | 215 | 147 | 110 | 71 | 58 | 55 | 59 | 37 | 91 |
| 0 | 38 | 37 | 44 | 27 | 38 | 33 | 34 | 32 | 65 | 89 | 67 | 44 | 53 | 148 | 104 | 66 | 70 | 139 | 31 | 52 | 65 | 50 | 37 | 235 | 67 |
| | 150 | 93 | 60 | 82 | 115 | 220 | 116 | 86 | 128 | 96 | 38 | 30 | 39 | 36 | 30 | 35 | 47 | 33 | 21 | 19 | 16 | 25 | 25 | 42 | 66 |
| | 49 | 46 | 37 | 35 | 34 | 30 | 35 | 34 | 72 | 303 | 203 | 341 | 500 | 342 | 557 | 527 | 360 | 301 | 211 | 97 | 63 | 67 | 60 | 68 | 182 |
| 0 | 49 | 36 | 35 | 39 | 45 | 108 | 288 | 203 | 94 | 79 | 104 | 175 | 241 | 67 | 42 | 40 | 30 | 30 | 22 | 26 | 26 | 25 | 29 | 36 | 78 |
| | 38 | 38 | 39 | 42 | 42 | 40 | 37 | 37 | 36 | 40 | 42 | 45 | 50 | 49 | 49 | 41 | 36 | 38 | 38 | 50 | 92 | 408 | 469 | 424 | 92 |
| | 308 | 401 | 117 | 60 | 59 | 65 | 59 | 54 | 37 | 44 | 54 | 51 | 47 | 54 | 59 | 117 | 122 | 173 | 68 | 28 | 45 | 45 | 46 | 42 | 90 |
| | 46 | 57 | 52 | 44 | 41 | 39 | 41 | 44 | 42 | 44 | 88 | 62 | 61 | 210 | 329 | 354 | 544 | 831 | 591 | 637 | 613 | 738 | 496 | 316 | 263 |
| D | 25 | 281 | 358 | 274 | 282 | 290 | 386 | 539 | 426 | 481 | 494 | 661 | 435 | 471 | 534 | 629 | 596 | 386 | 451 | 715 | 504 | 351 | 393 | 354 | 457 |
| D | 297 | 418 | 422 | 259 | 240 | 213 | 317 | 310 | 381 | 243 | 357 | 431 | 454 | 235 | 224 | 582 | 290 | 739 | 687 | 555 | 696 | 431 | 235 | 369 | 391 |
| | 405 | 341 | 197 | 156 | 204 | 353 | 364 | 357 | 373 | 563 | 545 | 424 | 160 | 116 | 313 | 472 | 560 | 549 | 144 | 399 | 380 | 247 | 409 | 334 | 349 |
| | 191 | 257 | 169 | 90 | 113 | 137 | 133 | 122 | 91 | 214 | 236 | 220 | 97 | 147 | 120 | 232 | 243 | 163 | 363 | 487 | 464 | 552 | 431 | 316 | 233 |
| MEAN | 167 | 154 | 125 | 115 | 118 | 140 | 140 | 137 | 172 | 182 | 183 | 205 | 217 | 210 | 217 | 220 | 259 | 333 | 260 | 234 | 231 | 217 | 226 | 217 | 195 |
| 50 MEAN | 36 | 42 | 33 | 34 | 38 | 48 | 83 | 71 | 54 | 62 | 81 | 84 | 111 | 115 | 79 | 130 | 104 | 79 | 45 | 39 | 43 | 41 | 36 | 72 | 65 |
| 50 MEAN | 228 | 262 | 240 | 175 | 187 | 250 | 270 | 287 | 386 | 332 | 408 | 486 | 451 | 463 | 570 | 544 | 597 | 730 | 601 | 463 | 483 | 386 | 403 | 393 | 400 |

AE INDEX (HOURLY VALUES) MARCH 1981

| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|
| D 1 | 282 | 392 | 381 | 272 | 129 | 76 | 82 | 108 | 397 | 673 | 564 | 601 | 629 | 673 | 371 | 387 | 384 | 379 | 426 | 239 | 134 | 400 | 678 | 443 | 379 |
| D 2 | 277 | 262 | 321 | 170 | 90 | 88 | 92 | 621 | 878 | 584 | 819 | 738 | 782 | 669 | 267 | 120 | 68 | 138 | 236 | 335 | 134 | 57 | 56 | 139 | 331 |
| D 3 | 165 | 88 | 86 | 47 | 68 | 55 | 45 | 51 | 63 | 55 | 51 | 48 | 46 | 52 | 59 | 94 | 266 | 252 | 313 | 320 | 375 | 394 | 298 | 454 | 156 |
| D 4 | 455 | 475 | 462 | 413 | 364 | 356 | 513 | 436 | 439 | 358 | 330 | 158 | 54 | 37 | 43 | 46 | 83 | 152 | 98 | 57 | 42 | 67 | 62 | 40 | 231 |
| D 5 | 46 | 75 | 128 | 292 | 703 | 735 | 675 | 739 | 552 | 575 | 672 | 947 | 642 | 742 | 991 | 877 | 1075 | 917 | 765 | 823 | 482 | 491 | 267 | 148 | 598 |
| D 6 | 94 | 82 | 70 | 90 | 75 | 61 | 106 | 52 | 40 | 53 | 48 | 35 | 57 | 57 | 40 | 27 | 25 | 24 | 31 | 36 | 26 | 26 | 32 | 53 | 52 |
| D 7 | 96 | 67 | 78 | 80 | 78 | 75 | 104 | 243 | 367 | 260 | 442 | 703 | 706 | 598 | 589 | 874 | 1133 | 802 | 628 | 486 | 171 | 74 | 80 | 75 | 367 |
| D 8 | 54 | 216 | 144 | 55 | 57 | 52 | 114 | 226 | 290 | 575 | 423 | 178 | 375 | 380 | 118 | 80 | 112 | 89 | 74 | 37 | 56 | 35 | 30 | 25 | 158 |
| D 9 | 52 | 58 | 43 | 45 | 42 | 45 | 48 | 40 | 41 | 45 | 83 | 102 | 99 | 62 | 59 | 57 | 51 | 39 | 32 | 34 | 21 | 28 | 34 | 33 | 50 |
| D 10 | 49 | 52 | 49 | 63 | 72 | 74 | 165 | 86 | 52 | 121 | 285 | 725 | 337 | 244 | 288 | 158 | 196 | 155 | 108 | 58 | 51 | 35 | 36 | 39 | 146 |
| D 11 | 51 | 61 | 83 | 70 | 132 | 69 | 199 | 137 | 51 | 64 | 204 | 318 | 219 | 112 | 92 | 63 | 67 | 143 | 118 | 39 | 26 | 30 | 25 | 33 | 100 |
| D 12 | 48 | 61 | 57 | 50 | 51 | 49 | 52 | 114 | 229 | 379 | 326 | 86 | 119 | 161 | 234 | 144 | 61 | 41 | 49 | 57 | 59 | 217 | 339 | 232 | 134 |
| D 13 | 351 | 135 | 48 | 47 | 56 | 76 | 124 | 118 | 93 | 82 | 104 | 105 | 130 | 349 | 561 | 913 | 869 | 731 | 491 | 237 | 434 | 759 | 877 | 425 | 338 |
| D 14 | 143 | 71 | 63 | 100 | 220 | 245 | 204 | 221 | 414 | 305 | 328 | 832 | 1030 | 593 | 657 | 355 | 210 | 248 | 326 | 208 | 190 | 104 | 72 | 142 | 303 |
| D 15 | 162 | 94 | 126 | 184 | 555 | 351 | 204 | 223 | 135 | 76 | 116 | 125 | 241 | 363 | 368 | 312 | 308 | 599 | 448 | 218 | 82 | 143 | 305 | 225 | 248 |
| D 16 | 395 | 381 | 230 | 176 | 97 | 211 | 280 | 240 | 97 | 86 | 46 | 110 | 99 | 208 | 69 | 135 | 134 | 84 | 101 | 349 | 203 | 60 | 196 | 558 | 189 |
| D 17 | 649 | 439 | 253 | 191 | 144 | 80 | 81 | 106 | 188 | 184 | 120 | 101 | 254 | 239 | 473 | 206 | 282 | 283 | 136 | 112 | 348 | 300 | 118 | 119 | 225 |
| D 18 | 373 | 379 | 437 | 372 | 280 | 432 | 456 | 543 | 367 | 280 | 350 | 539 | 528 | 396 | 273 | 467 | 718 | 582 | 511 | 355 | 292 | 236 | 190 | 230 | 399 |
| D 19 | 132 | 206 | 109 | 99 | 63 | 67 | 67 | 156 | 108 | 77 | 105 | 143 | 66 | 53 | 55 | 174 | 460 | 759 | 612 | 483 | 281 | 156 | 75 | 57 | 190 |
| D 20 | 42 | 87 | 58 | 71 | 189 | 87 | 67 | 172 | 195 | 207 | 88 | 89 | 304 | 453 | 430 | 285 | 196 | 42 | 42 | 37 | 28 | 27 | 32 | 32 | 136 |
| D 21 | 32 | 37 | 38 | 39 | 39 | 46 | 41 | 57 | 61 | 55 | 67 | 67 | 63 | 55 | 60 | 57 | 45 | 33 | 353 | 730 | 380 | 358 | 186 | 63 | 123 |
| D 22 | 69 | 57 | 51 | 75 | 141 | 78 | 75 | 50 | 37 | 50 | 50 | 58 | 67 | 69 | 60 | 52 | 45 | 73 | 51 | 40 | 42 | 56 | 73 | 59 | 62 |
| D 23 | 52 | 49 | 53 | 57 | 55 | 53 | 66 | 54 | 71 | 102 | 141 | 220 | 173 | 112 | 65 | 52 | 41 | 28 | 19 | 28 | 37 | 45 | 50 | 62 | 70 |
| D 24 | 64 | 62 | 55 | 56 | 58 | 64 | 64 | 100 | 75 | 72 | 60 | 59 | 67 | 71 | 52 | 53 | 50 | 41 | 95 | 122 | 130 | 85 | 106 | 114 | 74 |
| D 25 | 153 | 430 | 180 | 116 | 180 | 538 | 858 | 385 | 193 | 98 | 70 | 71 | 249 | 764 | 909 | 603 | 316 | 221 | 297 | 560 | 487 | 703 | 695 | 405 | 395 |
| D 26 | 487 | 404 | 304 | 197 | 236 | 225 | 127 | 72 | 162 | 245 | 115 | 129 | 402 | 918 | 955 | 531 | 528 | 481 | 361 | 190 | 193 | 328 | 280 | 547 | 351 |
| D 27 | 231 | 159 | 178 | 307 | 214 | 211 | 276 | 219 | 239 | 241 | 159 | 94 | 57 | 198 | 492 | 515 | 198 | 116 | 67 | 351 | 552 | 422 | 311 | 171 | 249 |
| D 28 | 200 | 257 | 125 | 64 | 164 | 208 | 176 | 93 | 92 | 221 | 173 | 77 | 48 | 120 | 382 | 436 | 375 | 315 | 163 | 189 | 350 | 607 | 369 | 211 | 226 |
| D 29 | 191 | 343 | 237 | 203 | 189 | 296 | 459 | 399 | 448 | 206 | 488 | 713 | 560 | 642 | 632 | 580 | 436 | 642 | 674 | 631 | 184 | 66 | 74 | 53 | 389 |
| D 30 | 67 | 229 | 281 | 135 | 89 | 124 | 251 | 222 | 140 | 215 | 166 | 255 | 395 | 545 | 386 | 375 | 487 | 389 | 581 | 468 | 661 | 752 | 613 | 379 | 342 |
| D 31 | 283 | 631 | 590 | 344 | 419 | 110 | 68 | 89 | 163 | 220 | 281 | 99 | 185 | 359 | 366 | 323 | 266 | 409 | 843 | 921 | 681 | 496 | 366 | 473 | 374 |
| MEAN | 185 | 204 | 171 | 144 | 169 | 168 | 197 | 205 | 215 | 218 | 234 | 275 | 289 | 332 | 335 | 301 | 305 | 297 | 291 | 282 | 230 | 243 | 223 | 194 | 238 |
| 5Q MEAN | 57 | 57 | 57 | 60 | 85 | 61 | 89 | 76 | 55 | 66 | 107 | 151 | 125 | 85 | 65 | 55 | 50 | 64 | 63 | 52 | 51 | 48 | 57 | 60 | 71 |
| 5D MEAN | 195 | 220 | 160 | 165 | 257 | 334 | 388 | 314 | 329 | 346 | 347 | 511 | 536 | 624 | 697 | 627 | 570 | 499 | 461 | 413 | 345 | 491 | 517 | 312 | 402 |

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1981

| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|------|-----|-----|-----|-----|-----|------|------|------|-----|------|-----|------|------|------|-----|-----|------|-----|------|-----|-----|------|
| 1 | 258 | 456 | 315 | 236 | 362 | 273 | 157 | 197 | 206 | 553 | 650 | 412 | 242 | 262 | 159 | 305 | 736 | 679 | 444 | 655 | 474 | 203 | 302 | 193 | 364 |
| 2 | 72 | 75 | 65 | 55 | 47 | 80 | 65 | 142 | 236 | 260 | 74 | 94 | 257 | 433 | 217 | 89 | 95 | 255 | 351 | 154 | 58 | 142 | 297 | 208 | 159 |
| 3 | 93 | 164 | 266 | 337 | 151 | 62 | 55 | 64 | 82 | 71 | 84 | 95 | 142 | 236 | 394 | 454 | 347 | 413 | 642 | 607 | 348 | 344 | 304 | 221 | 249 |
| 4 | 147 | 134 | 317 | 222 | 76 | 71 | 74 | 75 | 119 | 125 | 222 | 246 | 238 | 316 | 314 | 137 | 103 | 146 | 183 | 106 | 201 | 243 | 105 | 71 | 166 |
| 0 | 71 | 73 | 83 | 66 | 60 | 54 | 48 | 41 | 83 | 59 | 51 | 58 | 64 | 54 | 57 | 63 | 83 | 75 | 85 | 126 | 118 | 114 | 78 | 50 | 71 |
| 6 | 64 | 64 | 89 | 90 | 75 | 289 | 456 | 255 | 164 | 180 | 132 | 119 | 90 | 221 | 182 | 80 | 62 | 65 | 66 | 63 | 69 | 72 | 105 | 95 | 131 |
| 7 | 76 | 114 | 104 | 76 | 60 | 131 | 176 | 153 | 111 | 68 | 53 | 94 | 237 | 195 | 65 | 117 | 81 | 69 | 74 | 53 | 92 | 80 | 95 | 90 | 103 |
| 8 | 76 | 165 | 102 | 69 | 59 | 62 | 67 | 221 | 159 | 113 | 106 | 98 | 50 | 59 | 69 | 89 | 183 | 446 | 585 | 428 | 312 | 373 | 302 | 337 | 189 |
| 0 | 440 | 308 | 387 | 324 | 157 | 98 | 67 | 57 | 43 | 34 | 40 | 51 | 109 | 67 | 75 | 84 | 79 | 135 | 113 | 78 | 69 | 79 | 125 | 79 | 129 |
| 0 | 66 | 61 | 83 | 64 | 74 | 146 | 77 | 56 | 64 | 146 | 211 | 137 | 99 | 99 | 88 | 83 | 65 | 81 | 82 | 69 | 137 | 89 | 83 | 81 | 93 |
| 11 | 70 | 67 | 54 | 53 | 56 | 61 | 66 | 72 | 233 | 282 | 214 | 359 | 443 | 723 | 919 | 851 | 420 | 231 | 151 | 165 | 203 | 217 | 239 | 440 | 275 |
| D | 991 | 871 | 575 | 728 | 876 | 729 | 283 | 434 | 544 | 644 | 658 | 949 | 982 | 761 | 528 | 598 | 696 | 783 | 416 | 616 | 893 | 515 | 335 | 570 | 666 |
| D | 446 | 894 | 1235 | 434 | 537 | 621 | 350 | 439 | 948 | 662 | 398 | 442 | 363 | 540 | 441 | 521 | 189 | 127 | 273 | 504 | 391 | 454 | 636 | 783 | 526 |
| 14 | 561 | 382 | 498 | 301 | 325 | 621 | 457 | 178 | 212 | 153 | 154 | 155 | 283 | 357 | 609 | 681 | 352 | 226 | 135 | 72 | 106 | 148 | 73 | 59 | 296 |
| 0 | 66 | 69 | 68 | 70 | 66 | 61 | 52 | 49 | 54 | 51 | 79 | 91 | 117 | 78 | 85 | 69 | 137 | 92 | 120 | 66 | 134 | 124 | 66 | 100 | 82 |
| 16 | 326 | 258 | 163 | 87 | 53 | 57 | 94 | 71 | 57 | 149 | 614 | 671 | 590 | 208 | 105 | 111 | 71 | 158 | 280 | 361 | 195 | 160 | 105 | 185 | 214 |
| 17 | 161 | 69 | 76 | 139 | 430 | 436 | 641 | 690 | 767 | 412 | 491 | 481 | 307 | 350 | 601 | 672 | 634 | 523 | 536 | 327 | 394 | 489 | 193 | 66 | 412 |
| 18 | 83 | 185 | 63 | 61 | 61 | 58 | 73 | 58 | 47 | 45 | 48 | 46 | 46 | 59 | 60 | 175 | 305 | 422 | 154 | 90 | 110 | 137 | 183 | 149 | 113 |
| D | 297 | 299 | 756 | 726 | 490 | 181 | 103 | 90 | 111 | 252 | 493 | 963 | 737 | 576 | 630 | 994 | 978 | 743 | 841 | 572 | 593 | 425 | 121 | 95 | 503 |
| D | 190 | 380 | 537 | 734 | 783 | 673 | 703 | 283 | 103 | 119 | 349 | 597 | 442 | 225 | 613 | 1056 | 1182 | 862 | 660 | 677 | 779 | 401 | 506 | 478 | 555 |
| 21 | 410 | 298 | 300 | 525 | 537 | 376 | 325 | 694 | 912 | 745 | 928 | 629 | 375 | 662 | 637 | 566 | 500 | 513 | 695 | 624 | 679 | 737 | 596 | 634 | 579 |
| 22 | 788 | 536 | 384 | 422 | 505 | 615 | 652 | 707 | 441 | 226 | 116 | 330 | 329 | 386 | 611 | 250 | 259 | 448 | 908 | 1180 | 805 | 298 | 288 | 281 | 490 |
| 23 | 602 | 438 | 295 | 302 | 463 | 595 | 887 | 861 | 551 | 667 | 775 | 696 | 603 | 301 | 159 | 170 | 206 | 375 | 167 | 134 | 410 | 569 | 329 | 116 | 445 |
| 24 | 90 | 97 | 89 | 153 | 404 | 548 | 287 | 104 | 152 | 372 | 668 | 725 | 532 | 501 | 636 | 664 | 671 | 981 | 771 | 634 | 270 | 209 | 387 | 517 | 436 |
| 25 | 731 | 680 | 324 | 379 | 387 | 183 | 146 | 308 | 133 | 122 | 165 | 285 | 430 | 525 | 404 | 294 | 419 | 517 | 399 | 263 | 328 | 396 | 621 | 508 | 373 |
| D | 630 | 443 | 364 | 515 | 581 | 464 | 224 | 137 | 1005 | 1092 | 836 | 921 | 1031 | 965 | 1056 | 912 | 752 | 437 | 715 | 958 | 906 | 1012 | 795 | 503 | 719 |
| 27 | 719 | 722 | 807 | 785 | 440 | 631 | 715 | 926 | 784 | 736 | 1009 | 964 | 807 | 676 | 617 | 653 | 626 | 408 | 215 | 173 | 168 | 520 | 399 | 119 | 609 |
| 28 | 149 | 180 | 180 | 116 | 88 | 114 | 65 | 84 | 132 | 117 | 153 | 160 | 128 | 175 | 178 | 388 | 588 | 437 | 176 | 163 | 271 | 545 | 775 | 497 | 244 |
| 29 | 563 | 595 | 391 | 223 | 206 | 231 | 120 | 116 | 77 | 107 | 454 | 950 | 839 | 612 | 401 | 307 | 610 | 874 | 657 | 549 | 415 | 288 | 452 | 340 | 432 |
| 0 | 267 | 164 | 126 | 67 | 54 | 53 | 49 | 43 | 83 | 80 | 79 | 68 | 174 | 168 | 137 | 86 | 40 | 48 | 124 | 124 | 109 | 68 | 56 | 75 | 98 |
| MEAN | 316 | 308 | 303 | 278 | 282 | 285 | 251 | 253 | 287 | 288 | 343 | 396 | 369 | 359 | 368 | 383 | 382 | 385 | 367 | 353 | 334 | 315 | 298 | 264 | 324 |
| 50 MEAN | 182 | 135 | 149 | 118 | 82 | 82 | 58 | 49 | 65 | 74 | 92 | 81 | 112 | 93 | 88 | 77 | 80 | 86 | 104 | 92 | 113 | 94 | 81 | 77 | 94 |
| 50 MEAN | 510 | 577 | 693 | 627 | 653 | 533 | 332 | 276 | 542 | 553 | 546 | 774 | 711 | 613 | 653 | 816 | 759 | 590 | 581 | 665 | 712 | 561 | 478 | 485 | 593 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|------|------|------|------|------|------|------|-----|-----|------|------|------|------|-----|------|------|------|-----|-----|------|------|------|------|
| 1 | 69 | 70 | 115 | 119 | 86 | 89 | 245 | 375 | 470 | 334 | 171 | 354 | 478 | 398 | 200 | 150 | 171 | 319 | 757 | 519 | 218 | 181 | 324 | 539 | 281 |
| 2 | 458 | 369 | 315 | 128 | 106 | 128 | 105 | 134 | 89 | 168 | 62 | 97 | 184 | 142 | 50 | 55 | 109 | 167 | 94 | 77 | 91 | 81 | 80 | 95 | 141 |
| 3 | 109 | 99 | 69 | 72 | 64 | 135 | 306 | 351 | 523 | 278 | 124 | 55 | 77 | 109 | 135 | 119 | 54 | 64 | 64 | 60 | 58 | 65 | 55 | 55 | 129 |
| 4 | 54 | 62 | 61 | 71 | 71 | 68 | 75 | 121 | 139 | 94 | 81 | 86 | 81 | 64 | 72 | 141 | 178 | 157 | 59 | 109 | 82 | 57 | 57 | 79 | 88 |
| 5 | 79 | 90 | 65 | 59 | 62 | 57 | 62 | 65 | 90 | 88 | 89 | 101 | 96 | 142 | 101 | 50 | 71 | 60 | 107 | 59 | 55 | 56 | 72 | 64 | 77 |
| 6 | 64 | 70 | 78 | 84 | 130 | 87 | 71 | 88 | 71 | 67 | 86 | 95 | 158 | 112 | 84 | 87 | 79 | 126 | 94 | 66 | 67 | 102 | 78 | 76 | 88 |
| 7 | 90 | 83 | 101 | 124 | 187 | 122 | 78 | 69 | 65 | 94 | 165 | 122 | 73 | 75 | 68 | 71 | 42 | 36 | 42 | 46 | 80 | 49 | 62 | 69 | 84 |
| 8 | 69 | 75 | 128 | 159 | 78 | 71 | 107 | 98 | 85 | 175 | 145 | 122 | 158 | 207 | 155 | 96 | 98 | 84 | 105 | 56 | 36 | 51 | 203 | 240 | 117 |
| 9 | 292 | 309 | 409 | 792 | 855 | 610 | 1298 | 760 | 834 | 816 | 526 | 412 | 359 | 227 | 107 | 107 | 215 | 207 | 231 | 249 | 226 | 196 | 232 | 361 | 443 |
| 10 | 511 | 377 | 319 | 521 | 447 | 269 | 230 | 174 | 137 | 104 | 100 | 95 | 82 | 187 | 203 | 129 | 188 | 656 | 1052 | 979 | 917 | 1072 | 1120 | 1011 | 453 |
| 11 | 402 | 757 | 1227 | 1324 | 1099 | 1011 | 1166 | 735 | 613 | 436 | 554 | 786 | 957 | 680 | 657 | 222 | 197 | 226 | 159 | 155 | 229 | 374 | 371 | 154 | 604 |
| 12 | 176 | 149 | 99 | 111 | 164 | 211 | 194 | 142 | 113 | 100 | 100 | 84 | 87 | 116 | 275 | 666 | 632 | 593 | 548 | 617 | 492 | 429 | 487 | 568 | 298 |
| 13 | 513 | 619 | 339 | 191 | 474 | 733 | 264 | 154 | 107 | 82 | 73 | 82 | 101 | 85 | 72 | 65 | 59 | 68 | 89 | 54 | 63 | 83 | 83 | 88 | 189 |
| 14 | 95 | 153 | 247 | 183 | 159 | 459 | 502 | 154 | 287 | 473 | 438 | 709 | 490 | 458 | 227 | 314 | 262 | 169 | 291 | 387 | 231 | 274 | 294 | 230 | 312 |
| 15 | 116 | 197 | 393 | 1221 | 915 | 779 | 783 | 1121 | 925 | 861 | 794 | 729 | 746 | 770 | 428 | 580 | 848 | 1001 | 991 | 822 | 779 | 760 | 726 | 622 | 746 |
| 16 | 630 | 646 | 577 | 508 | 517 | 767 | 929 | 794 | 724 | 871 | 952 | 1011 | 1330 | 1265 | 1002 | 654 | 562 | 870 | 888 | 935 | 598 | 338 | 365 | 404 | 756 |
| 17 | 521 | 405 | 260 | 163 | 147 | 122 | 135 | 109 | 157 | 111 | 81 | 58 | 79 | 179 | 383 | 372 | 378 | 379 | 246 | 184 | 274 | 406 | 523 | 1022 | 279 |
| 18 | 833 | 457 | 250 | 517 | 1212 | 1146 | 805 | 971 | 1004 | 587 | 666 | 552 | 686 | 651 | 946 | 770 | 1027 | 1187 | 903 | 637 | 682 | 417 | 361 | 283 | 731 |
| 19 | 148 | 111 | 101 | 164 | 223 | 283 | 367 | 652 | 295 | 127 | 276 | 494 | 364 | 403 | 680 | 488 | 487 | 573 | 267 | 153 | 169 | 238 | 426 | 558 | 335 |
| 20 | 682 | 555 | 753 | 424 | 572 | 853 | 912 | 931 | 539 | 207 | 137 | 291 | 765 | 862 | 804 | 493 | 334 | 591 | 828 | 985 | 731 | 358 | 270 | 431 | 596 |
| 21 | 321 | 220 | 245 | 166 | 167 | 153 | 301 | 190 | 178 | 445 | 489 | 419 | 291 | 98 | 84 | 75 | 134 | 106 | 234 | 363 | 432 | 638 | 600 | 276 | 276 |
| 22 | 122 | 149 | 226 | 376 | 479 | 416 | 239 | 83 | 142 | 162 | 52 | 65 | 70 | 139 | 180 | 151 | 248 | 246 | 207 | 201 | 293 | 170 | 81 | 84 | 191 |
| 23 | 83 | 88 | 105 | 107 | 180 | 354 | 332 | 663 | 737 | 586 | 758 | 638 | 280 | 417 | 568 | 486 | 641 | 649 | 992 | 740 | 707 | 748 | 795 | 746 | 517 |
| 24 | 703 | 648 | 598 | 528 | 473 | 561 | 784 | 788 | 679 | 522 | 440 | 322 | 351 | 325 | 455 | 652 | 217 | 204 | 192 | 236 | 496 | 760 | 637 | 934 | 519 |
| 25 | 802 | 743 | 719 | 522 | 515 | 859 | 894 | 780 | 644 | 633 | 297 | 429 | 324 | 241 | 423 | 420 | 792 | 789 | 636 | 763 | 773 | 616 | 495 | 458 | 607 |
| 26 | 477 | 475 | 451 | 350 | 299 | 350 | 250 | 200 | 230 | 148 | 99 | 116 | 134 | 54 | 51 | 78 | 113 | 110 | 119 | 124 | 144 | 147 | 174 | 147 | 202 |
| 27 | 102 | 83 | 67 | 73 | 118 | 116 | 91 | 77 | 65 | 101 | 128 | 99 | 67 | 62 | 43 | 56 | 82 | 51 | 158 | 312 | 248 | 175 | 142 | 266 | 116 |
| 28 | 580 | 379 | 85 | 342 | 690 | 399 | 88 | 69 | 70 | 120 | 121 | 259 | 316 | 158 | 196 | 91 | 93 | 150 | 171 | 111 | 103 | 95 | 147 | 236 | 211 |
| 29 | 224 | 206 | 213 | 219 | 318 | 236 | 114 | 158 | 187 | 119 | 103 | 127 | 226 | 155 | 90 | 147 | 183 | 167 | 135 | 132 | 163 | 171 | 129 | 117 | 168 |
| 30 | 93 | 138 | 221 | 209 | 99 | 85 | 92 | 74 | 115 | 157 | 176 | 208 | 130 | 143 | 127 | 214 | 321 | 288 | 100 | 85 | 225 | 349 | 268 | 151 | 169 |
| 31 | 291 | 295 | 216 | 202 | 142 | 143 | 283 | 149 | 144 | 203 | 154 | 188 | 153 | 251 | 146 | 149 | 93 | 89 | 105 | 198 | 105 | 114 | 144 | 78 | 168 |
| MEAN | 313 | 292 | 290 | 323 | 356 | 376 | 390 | 362 | 337 | 299 | 272 | 296 | 312 | 295 | 290 | 262 | 287 | 334 | 350 | 335 | 315 | 308 | 316 | 336 | 319 |
| 50 MEAN | 79 | 80 | 74 | 82 | 102 | 93 | 118 | 138 | 177 | 124 | 109 | 91 | 97 | 100 | 92 | 93 | 84 | 88 | 73 | 68 | 68 | 65 | 64 | 68 | 93 |
| 5D MEAN | 532 | 522 | 640 | 798 | 863 | 911 | 919 | 910 | 761 | 592 | 620 | 673 | 896 | 845 | 767 | 543 | 593 | 775 | 753 | 706 | 603 | 449 | 418 | 378 | 686 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|-----|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| | 130 | 169 | 114 | 88 | 45 | 112 | 205 | 231 | 152 | 113 | 111 | 119 | 135 | 121 | 74 | 139 | 358 | 439 | 193 | 162 | 167 | 142 | 96 | 139 | 156 |
| | 118 | 223 | 66 | 81 | 108 | 116 | 178 | 138 | 251 | 423 | 432 | 350 | 388 | 317 | 250 | 247 | 224 | 185 | 104 | 83 | 74 | 46 | 105 | 102 | 192 |
| D | 68 | 88 | 64 | 74 | 86 | 135 | 467 | 476 | 418 | 107 | 69 | 80 | 162 | 95 | 348 | 521 | 525 | 646 | 744 | 557 | 520 | 335 | 195 | 172 | 290 |
| | 153 | 91 | 59 | 55 | 105 | 91 | 62 | 97 | 124 | 67 | 86 | 89 | 99 | 72 | 97 | 91 | 76 | 78 | 82 | 121 | 111 | 66 | 73 | 100 | 89 |
| | 165 | 325 | 167 | 83 | 88 | 208 | 113 | 85 | 68 | 79 | 96 | 163 | 166 | 164 | 122 | 95 | 110 | 147 | 66 | 66 | 62 | 74 | 152 | 229 | 129 |
| | 326 | 223 | 152 | 203 | 231 | 272 | 182 | 114 | 92 | 119 | 340 | 309 | 366 | 393 | 305 | 342 | 408 | 478 | 465 | 424 | 240 | 172 | 151 | 241 | 273 |
| D | 112 | 109 | 246 | 661 | 630 | 530 | 896 | 502 | 308 | 259 | 263 | 391 | 313 | 386 | 243 | 259 | 209 | 303 | 455 | 882 | 873 | 506 | 410 | 567 | 430 |
| D | 630 | 477 | 214 | 131 | 151 | 155 | 164 | 202 | 120 | 98 | 68 | 48 | 56 | 46 | 45 | 46 | 71 | 322 | 473 | 279 | 145 | 139 | 181 | 216 | 187 |
| 0 | 238 | 88 | 49 | 51 | 58 | 82 | 78 | 121 | 110 | 70 | 44 | 27 | 45 | 75 | 97 | 87 | 150 | 87 | 55 | 55 | 55 | 58 | 61 | 64 | 79 |
| 0 | 54 | 48 | 49 | 46 | 38 | 59 | 55 | 80 | 81 | 95 | 197 | 109 | 91 | 64 | 113 | 151 | 156 | 145 | 50 | 81 | 109 | 52 | 59 | 159 | 89 |
| | 160 | 340 | 324 | 252 | 190 | 135 | 111 | 110 | 225 | 118 | 79 | 93 | 105 | 93 | 223 | 169 | 188 | 177 | 181 | 249 | 368 | 393 | 163 | 90 | 189 |
| 0 | 120 | 137 | 240 | 186 | 141 | 106 | 75 | 72 | 69 | 105 | 202 | 135 | 146 | 122 | 112 | 86 | 105 | 87 | 102 | 87 | 67 | 51 | 170 | 66 | 116 |
| | 61 | 48 | 41 | 63 | 57 | 125 | 285 | 150 | 87 | 182 | 235 | 211 | 293 | 210 | 163 | 102 | 147 | 227 | 126 | 64 | 45 | 44 | 47 | 48 | 128 |
| 0 | 52 | 63 | 65 | 58 | 57 | 68 | 75 | 89 | 84 | 91 | 73 | 87 | 206 | 176 | 134 | 103 | 131 | 192 | 317 | 271 | 256 | 210 | 147 | 113 | 130 |
| | 110 | 155 | 185 | 110 | 175 | 418 | 498 | 293 | 185 | 182 | 271 | 388 | 349 | 186 | 79 | 102 | 103 | 165 | 209 | 351 | 308 | 302 | 146 | 418 | 237 |
| D | 745 | 760 | 628 | 794 | 694 | 425 | 212 | 87 | 139 | 295 | 215 | 160 | 215 | 292 | 360 | 380 | 466 | 757 | 587 | 258 | 177 | 465 | 709 | 771 | 441 |
| | 716 | 559 | 382 | 347 | 417 | 270 | 402 | 397 | 256 | 161 | 266 | 143 | 62 | 67 | 41 | 38 | 42 | 49 | 57 | 67 | 69 | 89 | 77 | 93 | 211 |
| 18 | 119 | 207 | 326 | 289 | 217 | 395 | 242 | 188 | 89 | 151 | 109 | 250 | 152 | 122 | 285 | 470 | 285 | 121 | 164 | 248 | 473 | 267 | 459 | 432 | 252 |
| 19 | 482 | 346 | 285 | 159 | 130 | 77 | 108 | 121 | 158 | 280 | 308 | 434 | 555 | 372 | 283 | 383 | 375 | 313 | 576 | 551 | 314 | 296 | 273 | 292 | 311 |
| 20 | 295 | 306 | 252 | 276 | 163 | 253 | 328 | 296 | 408 | 394 | 161 | 118 | 165 | 194 | 350 | 318 | 123 | 64 | 118 | 159 | 111 | 260 | 137 | 122 | 224 |
| | 116 | 221 | 85 | 126 | 182 | 312 | 348 | 176 | 81 | 56 | 61 | 72 | 61 | 44 | 45 | 62 | 168 | 83 | 99 | 51 | 97 | 62 | 70 | 73 | 112 |
| 22 | 53 | 58 | 59 | 49 | 49 | 55 | 63 | 57 | 51 | 60 | 58 | 64 | 65 | 68 | 56 | 56 | 46 | 65 | 90 | 195 | 272 | 216 | 151 | 135 | 87 |
| 0 | 149 | 78 | 54 | 71 | 194 | 332 | 111 | 67 | 81 | 109 | 185 | 222 | 170 | 110 | 123 | 84 | 73 | 60 | 48 | 66 | 51 | 69 | 76 | 111 | 111 |
| 24 | 64 | 49 | 63 | 54 | 56 | 55 | 63 | 123 | 332 | 518 | 387 | 362 | 252 | 111 | 199 | 176 | 82 | 156 | 446 | 703 | 323 | 71 | 65 | 113 | 201 |
| 25 | 93 | 84 | 113 | 134 | 182 | 233 | 154 | 109 | 192 | 484 | 376 | 463 | 447 | 674 | 792 | 567 | 597 | 295 | 153 | 242 | 366 | 457 | 169 | 173 | 315 |
| 26 | 256 | 170 | 99 | 116 | 241 | 425 | 421 | 385 | 291 | 470 | 518 | 344 | 558 | 529 | 364 | 271 | 236 | 130 | 175 | 76 | 41 | 77 | 151 | 382 | 280 |
| 27 | 434 | 467 | 372 | 172 | 239 | 568 | 454 | 246 | 350 | 275 | 268 | 174 | 91 | 103 | 77 | 126 | 212 | 341 | 408 | 419 | 264 | 247 | 105 | 170 | 274 |
| 28 | 238 | 400 | 187 | 186 | 458 | 525 | 724 | 667 | 518 | 585 | 297 | 99 | 106 | 141 | 138 | 184 | 242 | 265 | 482 | 199 | 130 | 134 | 218 | 179 | 304 |
| D | 437 | 487 | 291 | 160 | 245 | 559 | 1177 | 1577 | 943 | 782 | 877 | 815 | 1377 | 615 | 416 | 498 | 225 | 143 | 203 | 381 | 403 | 253 | 157 | 143 | 549 |
| 30 | 346 | 384 | 159 | 62 | 74 | 76 | 58 | 52 | 43 | 55 | 60 | 33 | 44 | 45 | 66 | 90 | 142 | 179 | 405 | 264 | 296 | 278 | 421 | 608 | 177 |
| MEAN | 234 | 238 | 179 | 171 | 190 | 239 | 276 | 243 | 210 | 226 | 223 | 211 | 241 | 200 | 200 | 208 | 209 | 223 | 252 | 253 | 226 | 194 | 179 | 216 | 218 |
| 50 MEAN | 122 | 82 | 91 | 82 | 97 | 129 | 78 | 85 | 85 | 94 | 140 | 116 | 131 | 109 | 115 | 102 | 123 | 114 | 114 | 112 | 107 | 88 | 102 | 94 | 105 |
| 50 MEAN | 398 | 384 | 288 | 364 | 361 | 360 | 583 | 568 | 385 | 308 | 298 | 298 | 424 | 286 | 282 | 340 | 299 | 434 | 492 | 471 | 423 | 339 | 330 | 373 | 379 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|------|------|-----|-----|------|-----|-----|-----|------|-----|------|------|------|------|------|------|------|------|------|------|------|-----|------|-----|------|
| 1 | 7 | -1 | 1 | -43 | 54 | 10 | 10 | 0 | 25 | -53 | -74 | -11 | 12 | -1 | -1 | -73 | -82 | -79 | -219 | -93 | -9 | 4 | 5 | -1 | -25 |
| 2 | 0 | 4 | 5 | 0 | 6 | 5 | 14 | 4 | -1 | 4 | -26 | -14 | -11 | 0 | 1 | -28 | -174 | -74 | -71 | -14 | 26 | 25 | -10 | -71 | -16 |
| 3 | -15 | 38 | 18 | 11 | 12 | 14 | -16 | -23 | 22 | 8 | -11 | -12 | -7 | -16 | -4 | -52 | -10 | 9 | -6 | -12 | -64 | 1 | 0 | -12 | -5 |
| 4 | -146 | -109 | -62 | 1 | 14 | 6 | -11 | -2 | -3 | -37 | -34 | 7 | 8 | 5 | 1 | -2 | -36 | 7 | -4 | -28 | -122 | 8 | 9 | 5 | -21 |
| 5 | 7 | 9 | 19 | 15 | 17 | 18 | 17 | 10 | -28 | -8 | 24 | -4 | 1 | -13 | -117 | -76 | -43 | -25 | -9 | -68 | -119 | -57 | 42 | 12 | -15 |
| 6 | 4 | -4 | -3 | 10 | 9 | 8 | 5 | 0 | -3 | -1 | -4 | -9 | -95 | -131 | -54 | -11 | -35 | -70 | -33 | -27 | -62 | -23 | 38 | 21 | -19 |
| 7 | 27 | 30 | 24 | 15 | 24 | 15 | 25 | 12 | 21 | 10 | 2 | 0 | -2 | -13 | -48 | -31 | -19 | -7 | 1 | -10 | -18 | -67 | -25 | -1 | -1 |
| 8 | 5 | 51 | 84 | 46 | 44 | 16 | 15 | 1 | -16 | 8 | 9 | 4 | -52 | -79 | 5 | -2 | -77 | -188 | -3 | 10 | 0 | 11 | -85 | -73 | -10 |
| 9 | 18 | 13 | 8 | -25 | 8 | 13 | 11 | 7 | 5 | 1 | -1 | -4 | -3 | -1 | -35 | -55 | -37 | -1 | -4 | -2 | -8 | -24 | -30 | 0 | -6 |
| 10 | 0 | 3 | 5 | 11 | 6 | 12 | 12 | 11 | 16 | 14 | 4 | 1 | -31 | -66 | -18 | -3 | -14 | 10 | -25 | -30 | -89 | -79 | -100 | -58 | -17 |
| 11 | -18 | -49 | -78 | -98 | -76 | 25 | 1 | 6 | 9 | 25 | -2 | -29 | -36 | -104 | -129 | -182 | -25 | -29 | -68 | -79 | -46 | -71 | -54 | -41 | -48 |
| 12 | -68 | -71 | -54 | -35 | -21 | -6 | -12 | -7 | 0 | -5 | -6 | -9 | -4 | -8 | -9 | -8 | -32 | -37 | -22 | -3 | -9 | -16 | -15 | -16 | -20 |
| 13 | -6 | -23 | -15 | -36 | -62 | -74 | -33 | -16 | -28 | -51 | -19 | -28 | -53 | -153 | -51 | -47 | -46 | -83 | -93 | -104 | -35 | -20 | -36 | -48 | -48 |
| 14 | -55 | -31 | -15 | -8 | -26 | -19 | -6 | -29 | 21 | 10 | -15 | -40 | -135 | -133 | -43 | 1 | -7 | -6 | -2 | -5 | -2 | -1 | 1 | 0 | -22 |
| 15 | -13 | -27 | -3 | 0 | 1 | 5 | -27 | -91 | -99 | -23 | -14 | -13 | -43 | -38 | -22 | -17 | -45 | -133 | -67 | -10 | 0 | -1 | -50 | -58 | -33 |
| 16 | -2 | -2 | -82 | -60 | 9 | -29 | -35 | -76 | -101 | 2 | -14 | -160 | -87 | -33 | -13 | -25 | -37 | -94 | -53 | 0 | 5 | 1 | 1 | 5 | -36 |
| 17 | 2 | -6 | -17 | -11 | 2 | 6 | 11 | 9 | -7 | -5 | -38 | -10 | -33 | -214 | -135 | -63 | -78 | -95 | -53 | -19 | -51 | -50 | -4 | -15 | -36 |
| 18 | -31 | 1 | 11 | 6 | 6 | 10 | 5 | -1 | 3 | -2 | -2 | 0 | 0 | -1 | -2 | -2 | -8 | -9 | -7 | -2 | -3 | -2 | 0 | -1 | 0 |
| 19 | 1 | 3 | 1 | 3 | 0 | 8 | 19 | 12 | 10 | 11 | 5 | -8 | -19 | -4 | -33 | -10 | -14 | 2 | 1 | 4 | 4 | 4 | 7 | 8 | 0 |
| 20 | -4 | 9 | 25 | 12 | 10 | 10 | 9 | 11 | 0 | 5 | 3 | 5 | 0 | 2 | 1 | 1 | 0 | -21 | -45 | -22 | 28 | 14 | 4 | 2 | 2 |
| 21 | 0 | 5 | 8 | 12 | 15 | 13 | 11 | 8 | 9 | 4 | 3 | 7 | 8 | 3 | 5 | 7 | 4 | 0 | 1 | 2 | -42 | -22 | 11 | 10 | 3 |
| 22 | 21 | 28 | 17 | 16 | 14 | 9 | 11 | 12 | 13 | 16 | 27 | -16 | -30 | -22 | -155 | -70 | -27 | -93 | -53 | 17 | 13 | -7 | -54 | -44 | -14 |
| 23 | -52 | -48 | 0 | 2 | -2 | -6 | -10 | -14 | -43 | -68 | -80 | -110 | -105 | -243 | -114 | -52 | -12 | -34 | -18 | -28 | -76 | -27 | -11 | -40 | -50 |
| 24 | -9 | -2 | -13 | -2 | -9 | -21 | -27 | -32 | -2 | 5 | -15 | -51 | -29 | -98 | -85 | -46 | -65 | -49 | -18 | -12 | -19 | 12 | 9 | -2 | -24 |
| 25 | -12 | -11 | -12 | -11 | -5 | -10 | -31 | -1 | -3 | -1 | -2 | -6 | -10 | -22 | -114 | -121 | -51 | -12 | -42 | -136 | -63 | -4 | 4 | -25 | -29 |
| 26 | -8 | 0 | 0 | 2 | -1 | 1 | -5 | -60 | -76 | -47 | -16 | -37 | -132 | -1 | 10 | 7 | -6 | -9 | -3 | 3 | 7 | -9 | 0 | 7 | -16 |
| 27 | -33 | -15 | 33 | 8 | 6 | 10 | 1 | 1 | -26 | -15 | -21 | -32 | -109 | 8 | 2 | -7 | -13 | -19 | -20 | -4 | -1 | 0 | 9 | 4 | -9 |
| 28 | -44 | 5 | 13 | 9 | -33 | 6 | 18 | 38 | 0 | -26 | 22 | 19 | -60 | -77 | -14 | -53 | -6 | 13 | -4 | -22 | -9 | -43 | 21 | -2 | -9 |
| 29 | -44 | -14 | 26 | 39 | 66 | 0 | 24 | -78 | 13 | -5 | 15 | 27 | 7 | -92 | -50 | -64 | -25 | -5 | -24 | -87 | -26 | 52 | 47 | 23 | -7 |
| 30 | 15 | 8 | 28 | 25 | 20 | 11 | -3 | 3 | 19 | 8 | -9 | -3 | -8 | -10 | -9 | -24 | -32 | -39 | -16 | -5 | 7 | 5 | 10 | 16 | 0 |
| 31 | 11 | 15 | 24 | -91 | -127 | -50 | -9 | 47 | 31 | -6 | -286 | -146 | 0 | 6 | -7 | -16 | -23 | -37 | -42 | -11 | -151 | -84 | -123 | 8 | -44 |
| MEAN | -14 | -6 | 0 | -5 | 0 | 0 | 0 | -7 | -7 | -7 | -18 | -22 | -34 | -49 | -39 | -36 | -34 | -38 | -32 | -25 | -30 | -15 | -12 | -12 | -18 |
| 50 MEAN | -20 | -10 | -1 | 0 | 2 | 7 | 6 | 4 | 4 | 2 | 0 | -1 | -3 | -1 | -7 | -2 | -10 | -13 | -14 | -4 | -4 | -4 | 1 | 0 | -2 |
| 5D MEAN | -48 | -30 | -15 | -28 | -31 | -2 | 4 | 2 | 10 | -9 | -57 | -24 | -16 | -52 | -39 | -63 | -23 | -10 | -28 | -45 | -70 | -27 | -20 | -1 | -26 |

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| DATE | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | MEAN |
|---------|------|------|------|------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
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| 10 | -24 | -43 | -6 | 8 | 73 | 44 | 14 | 14 | 7 | 15 | 8 | -10 | -7 | -12 | -22 | 14 | 3 | -18 | -148 | -81 | -149 | -139 | -385 | -348 | -49 |
| 11 | 39 | -50 | -90 | -321 | -67 | 111 | -97 | 55 | 20 | 138 | 152 | 49 | -98 | -62 | 13 | 23 | 5 | 0 | 2 | 10 | 13 | -4 | -26 | 25 | -6 |
| 12 | 12 | -11 | 0 | -6 | 22 | -9 | -38 | -15 | -3 | 0 | 1 | -6 | 1 | -10 | 11 | -31 | -71 | 23 | 17 | -18 | -22 | -7 | -7 | -69 | -9 |
| 13 | 13 | -25 | -19 | 16 | 58 | -16 | -46 | 11 | 0 | 2 | 8 | 14 | -16 | 3 | 7 | 8 | 9 | 4 | 0 | -1 | -1 | 1 | -7 | -8 | 0 |
| 14 | 0 | 15 | -11 | 10 | 21 | -16 | -16 | 16 | 37 | -25 | 14 | -37 | -37 | -61 | -34 | -7 | -12 | 1 | 9 | -39 | 5 | 47 | 32 | 6 | -3 |
| 15 | 18 | 38 | -13 | -42 | -132 | -70 | 60 | -116 | -197 | -84 | -114 | -86 | -110 | -105 | -37 | -75 | -70 | -107 | -125 | -82 | -179 | -170 | -27 | -35 | -77 |
| 16 | -203 | -26 | 6 | -54 | -7 | -101 | -39 | 31 | 55 | 46 | -305 | -319 | -178 | -160 | -134 | -33 | 20 | -64 | 33 | -119 | -36 | -20 | -25 | -31 | -69 |
| 17 | -57 | -21 | -5 | -19 | -7 | 2 | 12 | 7 | -5 | -22 | -7 | -8 | -1 | -22 | -86 | -90 | -85 | -90 | -24 | 5 | 6 | 8 | 7 | -22 | -149 |
| 18 | -110 | 22 | 51 | 27 | -241 | -15 | -131 | 5 | -21 | -49 | -62 | -129 | 4 | -30 | 0 | -1 | -73 | -34 | 3 | -10 | 6 | -36 | -49 | -27 | -37 |
| 19 | 12 | 10 | 4 | 18 | 15 | -10 | -25 | -98 | -52 | 4 | 9 | -82 | -77 | -54 | -116 | -84 | -67 | -72 | -37 | 2 | -14 | -19 | -48 | -49 | -34 |
| 20 | -117 | -63 | -69 | 14 | -85 | -210 | -122 | -92 | -55 | -1 | 4 | -22 | -119 | -177 | -168 | -27 | -8 | -82 | -127 | -108 | -65 | -14 | -4 | -11 | -72 |
| 21 | 11 | 7 | 19 | 19 | 4 | 3 | -41 | -4 | 17 | -73 | -55 | -20 | -32 | -4 | 21 | 10 | -19 | -8 | 0 | -58 | -28 | -58 | 24 | -6 | -11 |
| 22 | 10 | 11 | 3 | -44 | -84 | -72 | -12 | 0 | -1 | -32 | -3 | -4 | -3 | -19 | -56 | -44 | -42 | -30 | -11 | 13 | -7 | -3 | -14 | -16 | -19 |
| 23 | -2 | -1 | 9 | 16 | 42 | -39 | -12 | -100 | -34 | -39 | -74 | -101 | -7 | -46 | -120 | -72 | -57 | -43 | -65 | -5 | -15 | 26 | -47 | -71 | -36 |
| 24 | -43 | -48 | -37 | -6 | -44 | -63 | -42 | -77 | -39 | -20 | -17 | 42 | -26 | -20 | -73 | -99 | 17 | 62 | 5 | 8 | 0 | 11 | 60 | -59 | -21 |
| 25 | -144 | -88 | -69 | -98 | -22 | -73 | -83 | 11 | 3 | -16 | 8 | 15 | 0 | -60 | -54 | -4 | -93 | -24 | 25 | -43 | -63 | -104 | -49 | -76 | -44 |
| 26 | -29 | -27 | -8 | -17 | -15 | -4 | -2 | 35 | 7 | 7 | 0 | -6 | -16 | -11 | -3 | 7 | 8 | -4 | -2 | -4 | -16 | -16 | 1 | 10 | -4 |
| 27 | 3 | 1 | 1 | -3 | -1 | 14 | 4 | 3 | 0 | 4 | 17 | 2 | -2 | 9 | 7 | 0 | -12 | 5 | 3 | 24 | 34 | 40 | 24 | 16 | 8 |
| 28 | -15 | -12 | 0 | 30 | -128 | -34 | 4 | 0 | 4 | 32 | 29 | 26 | -16 | 6 | 11 | 3 | 15 | 15 | 3 | 7 | 4 | 9 | 14 | 30 | 1 |
| 29 | 19 | 3 | -14 | 12 | -3 | 1 | 17 | 20 | -36 | 19 | 18 | 16 | -19 | -33 | -5 | -30 | -27 | 0 | 30 | 37 | 31 | 17 | -4 | 12 | 3 |
| 30 | 10 | 17 | 2 | -17 | 24 | 17 | 20 | 10 | 26 | 35 | 13 | 14 | 4 | 0 | -15 | -18 | -70 | -61 | 3 | 11 | 16 | -8 | -18 | 6 | 1 |
| 31 | 44 | -6 | 27 | 41 | 27 | 35 | 18 | -5 | 36 | 39 | 15 | 20 | 14 | -3 | -10 | -11 | 2 | 5 | 33 | -6 | 6 | 16 | 26 | 12 | 15 |
| MEAN | -18 | -8 | -7 | -18 | -18 | -11 | -21 | -10 | -7 | -2 | -9 | -19 | -25 | -32 | -30 | -19 | -21 | -15 | -11 | -12 | -11 | -11 | -14 | -26 | -16 |
| 50 MEAN | 0 | -3 | -3 | -5 | -7 | 0 | -7 | -11 | -19 | -5 | 2 | -3 | 4 | 3 | -2 | -8 | -6 | 4 | 11 | 12 | 7 | 2 | 0 | -1 | -1 |
| 5D MEAN | -74 | -15 | -23 | -75 | -106 | -57 | -65 | -23 | -39 | 10 | -65 | -101 | -100 | -106 | -65 | -22 | -25 | -57 | -42 | -61 | -52 | -48 | -26 | -15 | -52 |

AO INDEX (HOURLY VALUES)

JUNE 1981

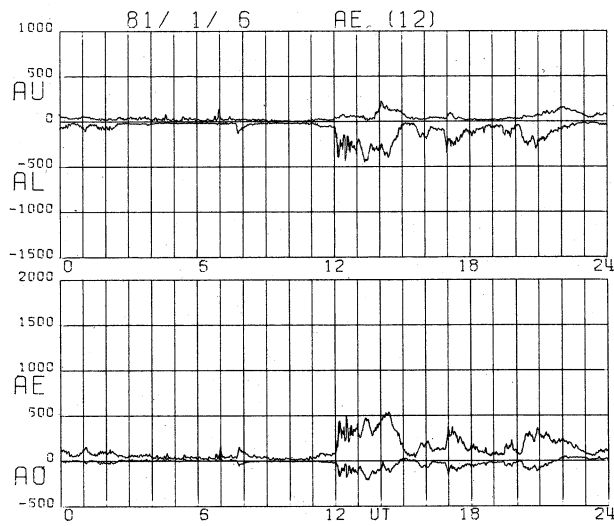
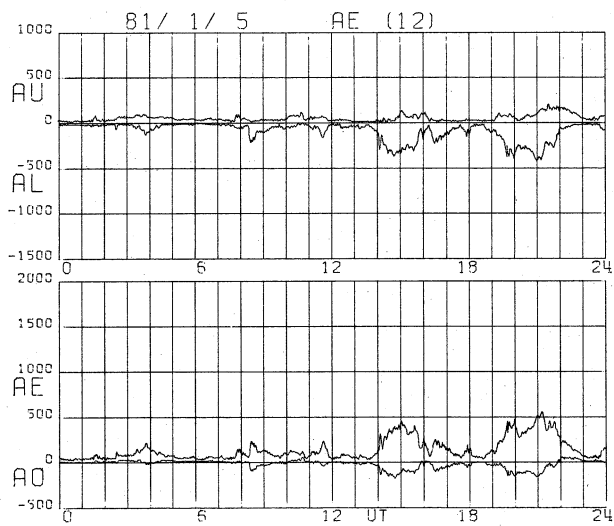
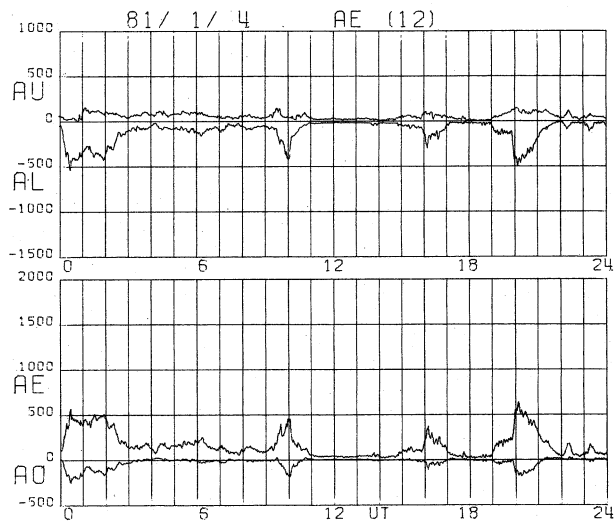
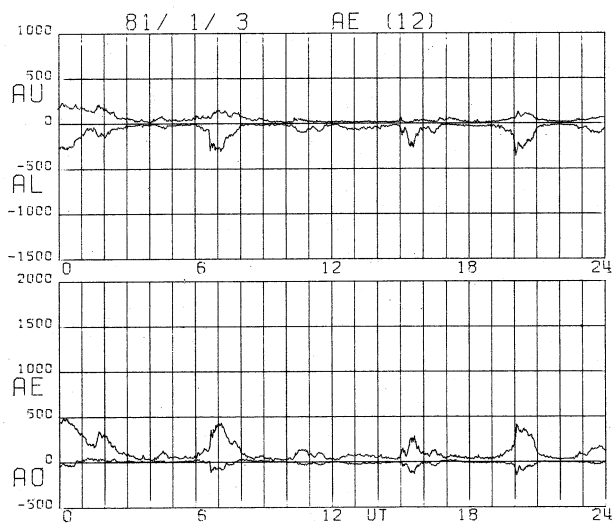
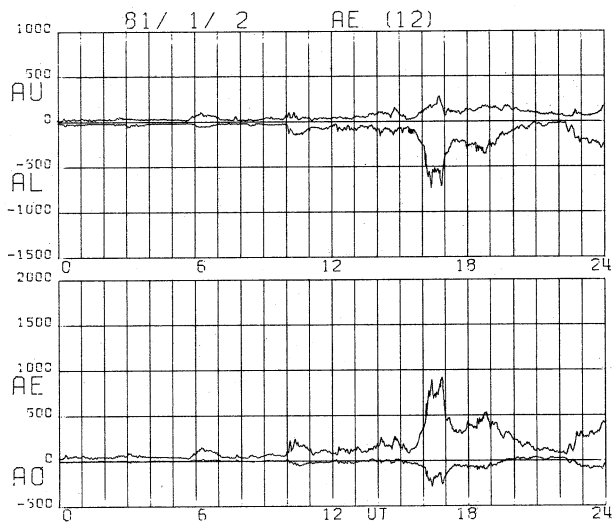
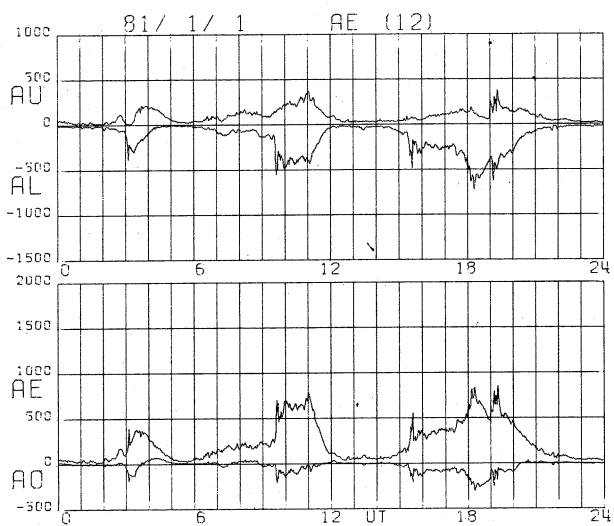
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|---------|-----|------|-----|-----|-----|-----|------|------|-----|-----|-----|-----|------|------|------|-----|-----|------|-----|------|-----|-----|-----|-----|------|
| D | 4 | 2 | -3 | 12 | -1 | 32 | -17 | 12 | 11 | 19 | 25 | 31 | 38 | 11 | 8 | 3 | -44 | -44 | 32 | 19 | 26 | 20 | 19 | 16 | 9 |
| | 9 | -4 | 0 | 7 | 9 | 15 | 19 | 25 | 61 | 41 | 11 | 2 | -57 | -31 | -6 | -31 | -2 | 15 | 8 | 18 | 21 | 10 | 0 | 12 | 6 |
| | 8 | 8 | -7 | -9 | 7 | 6 | 83 | 25 | 6 | 8 | 3 | 3 | 17 | 6 | -12 | -7 | -72 | -109 | -40 | -22 | -38 | 9 | 6 | -10 | -5 |
| | -14 | -15 | -10 | -10 | -11 | 3 | 0 | 15 | -13 | -2 | -1 | -1 | 5 | -2 | 6 | 0 | -18 | -8 | -7 | 5 | 14 | 1 | 4 | 10 | -2 |
| | 28 | -22 | -2 | -8 | -4 | -36 | -8 | -5 | 2 | 0 | 0 | 9 | 7 | -7 | -5 | -14 | -6 | -24 | 1 | -1 | -8 | 0 | 1 | 11 | -3 |
| | -22 | 11 | 3 | 0 | -17 | 4 | 2 | -2 | 0 | 12 | 30 | -9 | 13 | -67 | -63 | -31 | -14 | -60 | -5 | 28 | 33 | 28 | 16 | -31 | -5 |
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| 0 | -10 | -17 | -18 | -18 | -20 | -19 | -10 | -3 | 0 | 7 | 4 | 13 | 16 | 12 | 1 | 5 | -1 | -14 | -3 | 13 | -4 | 2 | 9 | 5 | -2 |
| 15 | -4 | 8 | -3 | -5 | 22 | 14 | -50 | 38 | 41 | 27 | 2 | 0 | -8 | 11 | 5 | -11 | -9 | -10 | 28 | 27 | 20 | -17 | 14 | -7 | 5 |
| D | -92 | -110 | -34 | -73 | -13 | 54 | 33 | -3 | 26 | -4 | -10 | 1 | 10 | -8 | -56 | -30 | 34 | 52 | -7 | 10 | 34 | -62 | -40 | -9 | -9 |
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| | 8 | 34 | -20 | -9 | -20 | 7 | -94 | -26 | 26 | 28 | 6 | -15 | 11 | 4 | 11 | 21 | 16 | -28 | -51 | 6 | 35 | -18 | -12 | 15 | -2 |
| | 25 | -18 | 27 | 11 | 44 | 59 | 15 | 32 | 0 | -37 | -43 | -20 | -15 | -21 | -19 | -14 | -15 | 8 | -32 | 8 | 5 | -12 | -21 | -10 | -1 |
| D | 33 | 22 | -32 | 0 | 24 | 20 | -145 | -174 | 54 | -10 | -54 | -97 | -199 | -15 | 20 | -76 | -45 | -12 | -18 | -30 | -28 | -13 | -17 | -29 | -34 |
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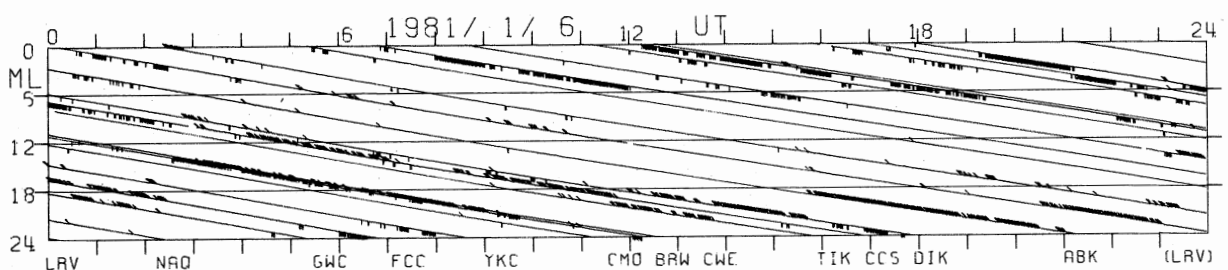
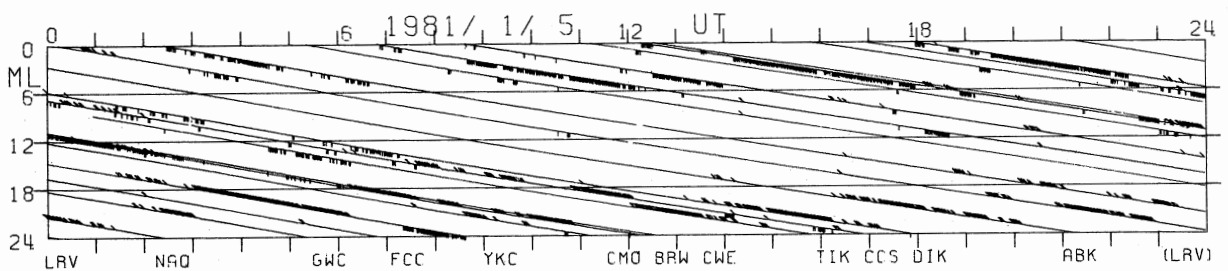
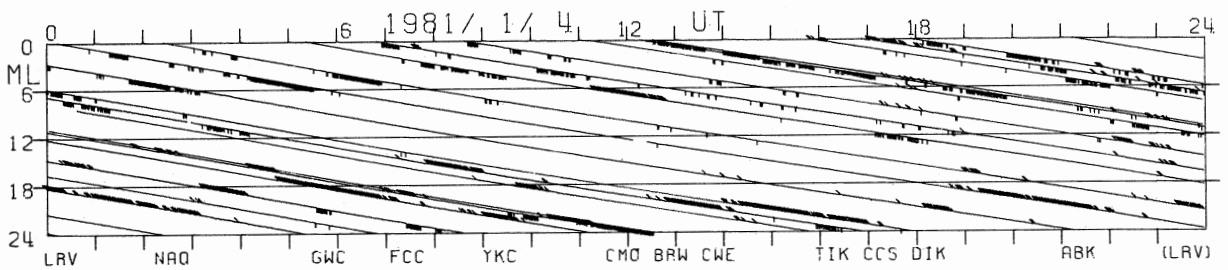
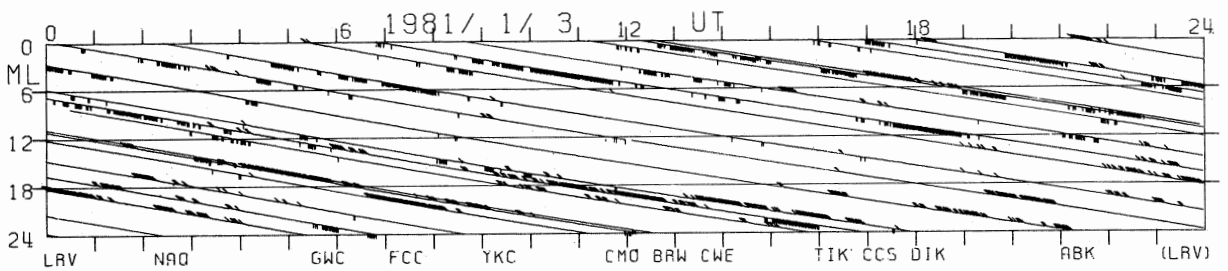
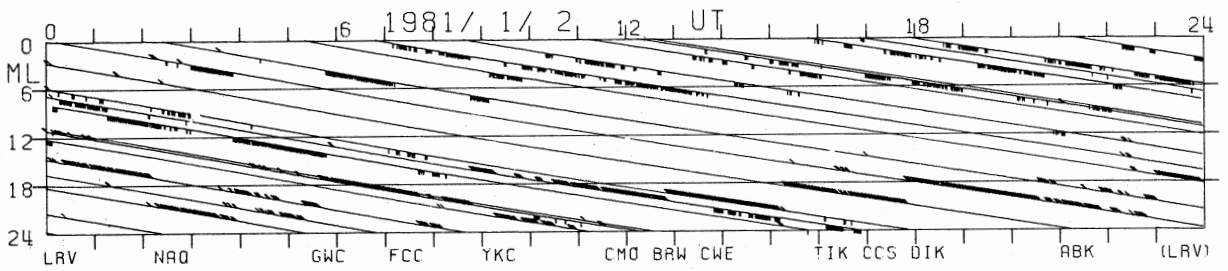
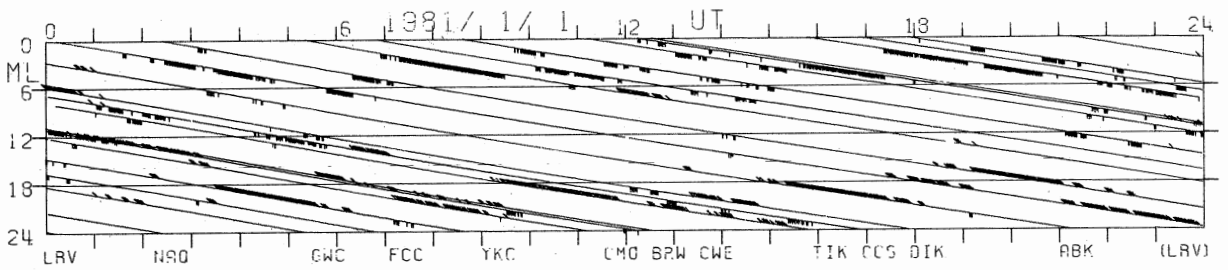
FIGURE 4 (on even pages)

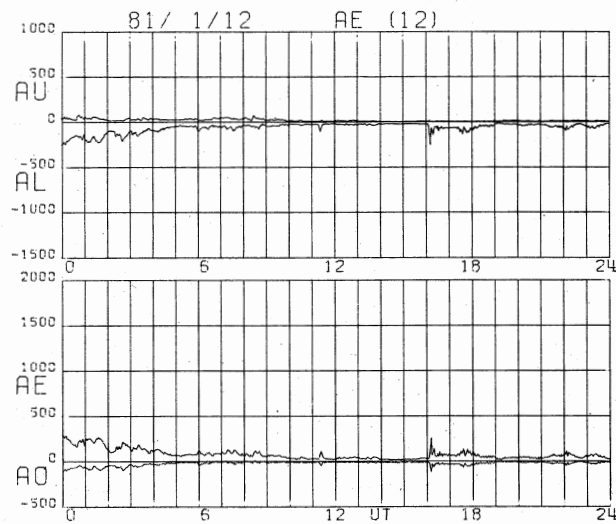
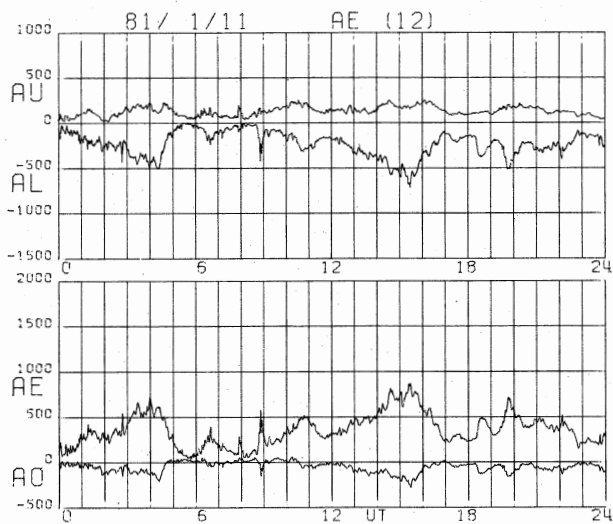
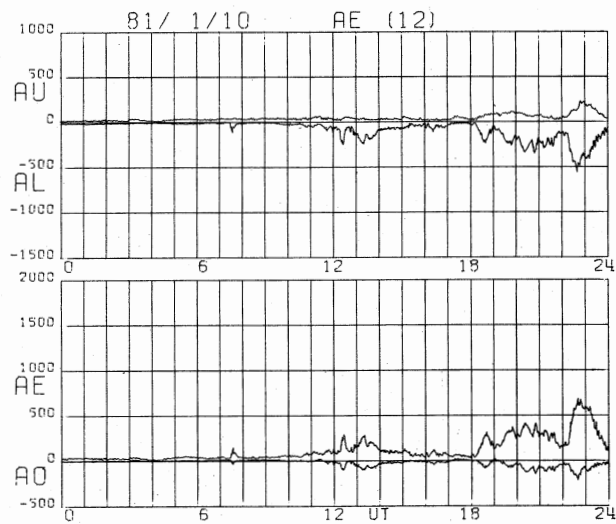
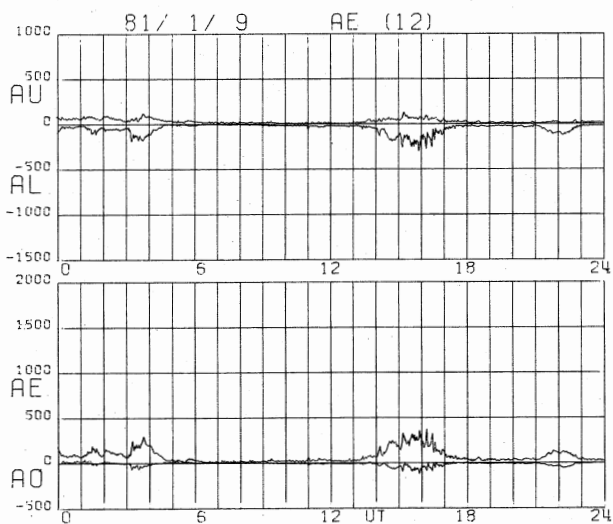
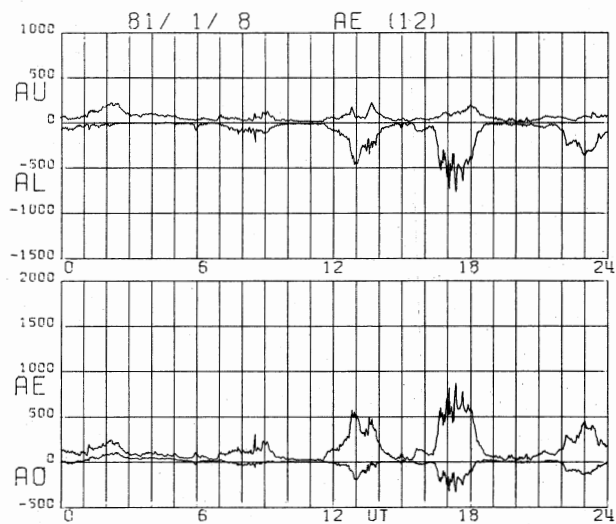
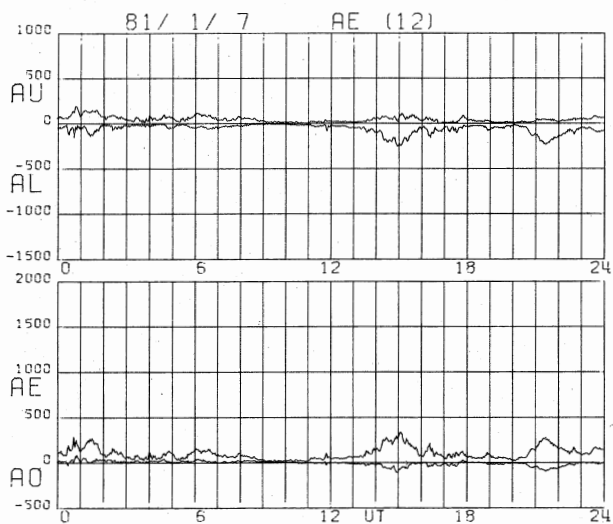
Daily graphs of 1.0-min AE indices (AU, AL, AE and AO) for January-June 1981. Graphs on very disturbed days (February 5 and 6) are reproduced on page 96.

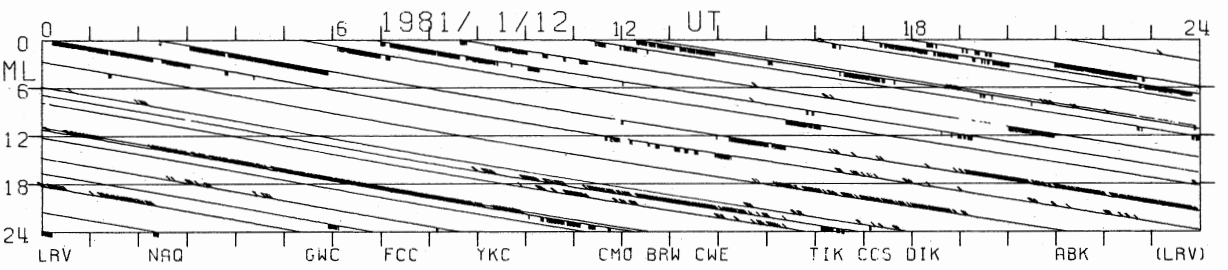
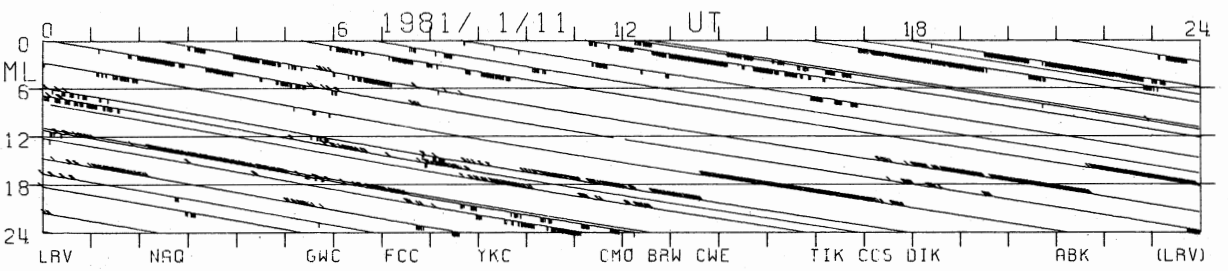
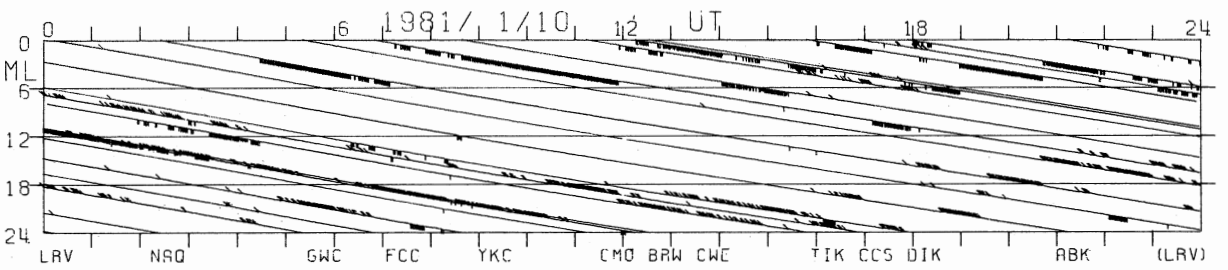
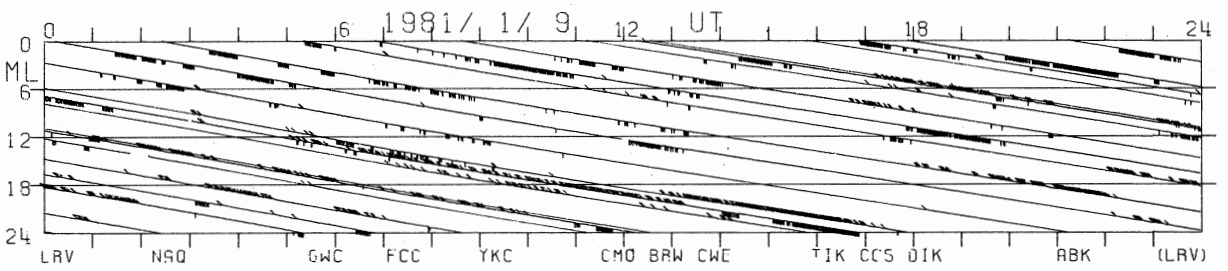
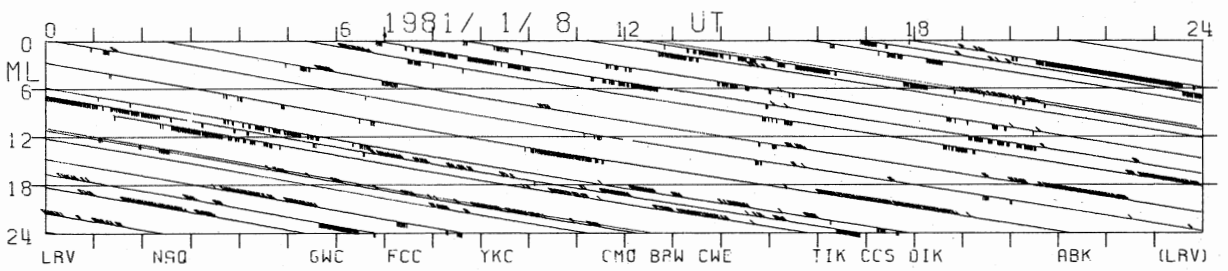
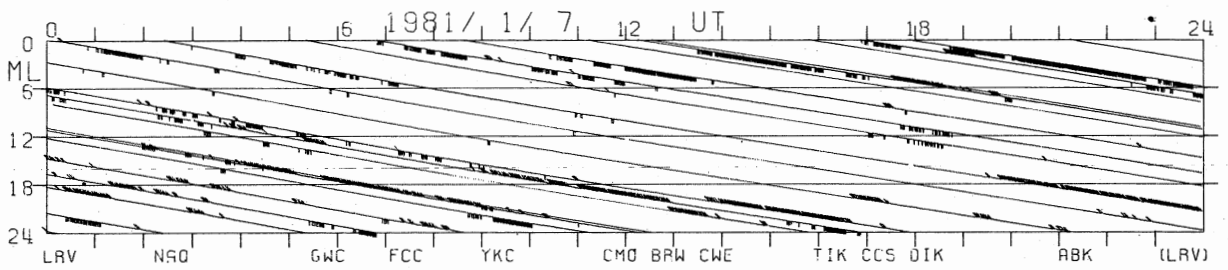
FIGURE 5 (on odd pages)

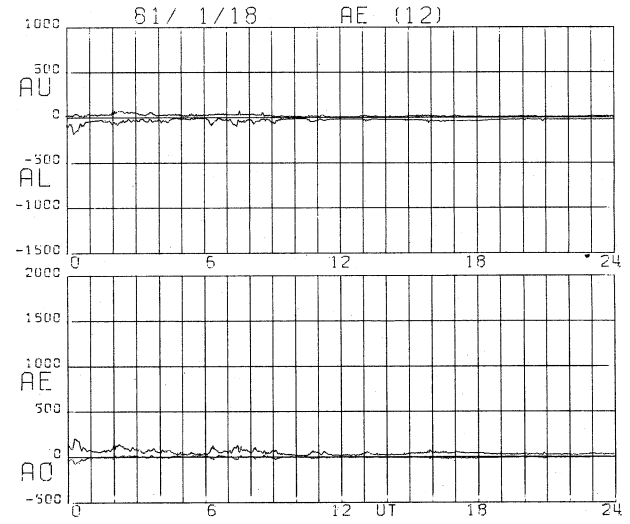
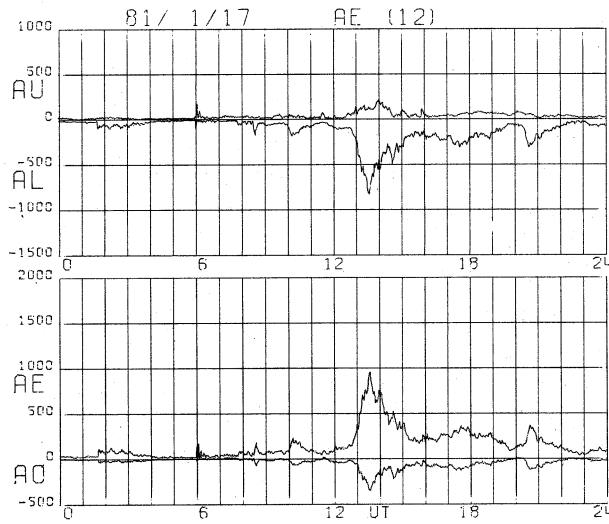
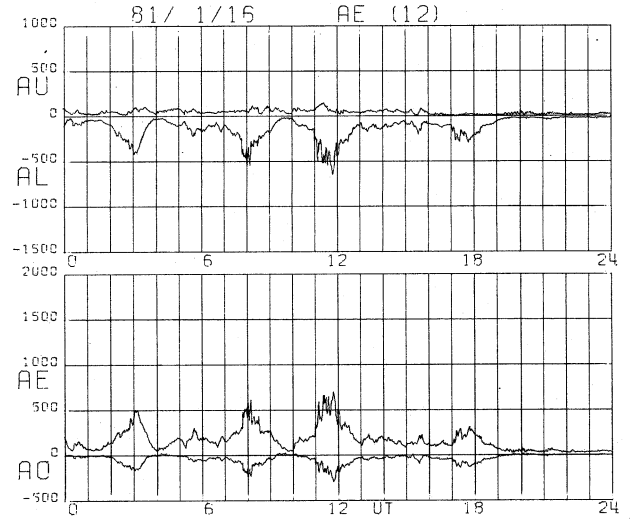
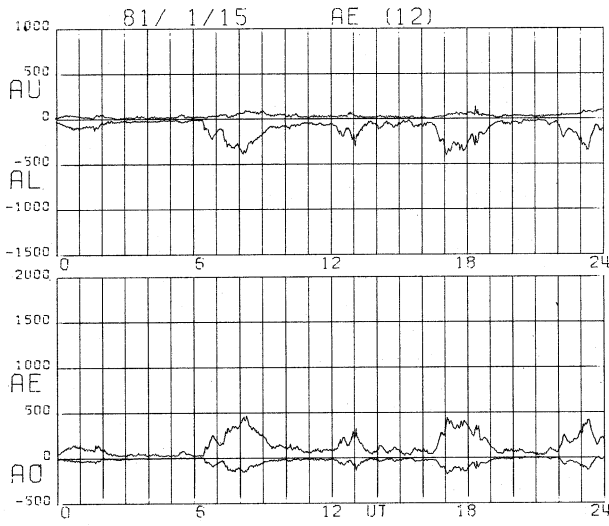
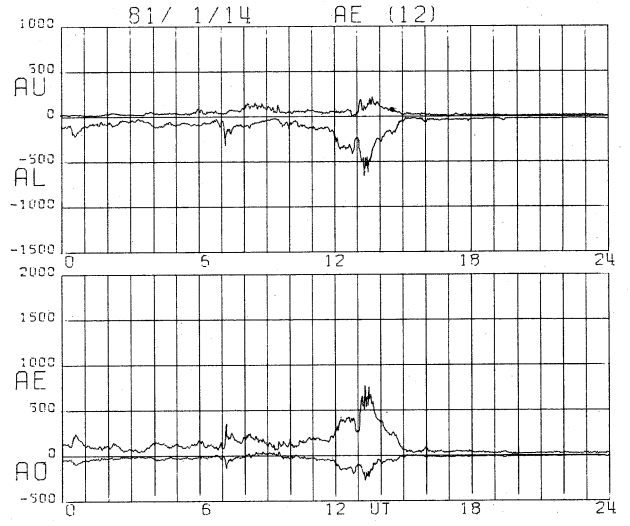
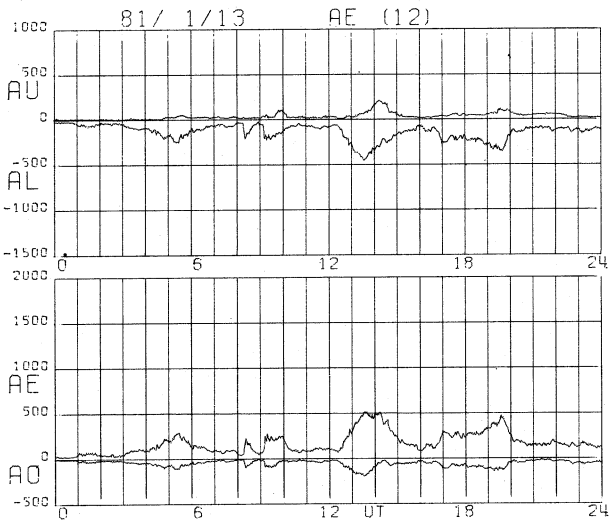
Plots of the contributing stations to the AU (upper plumes) and AL (lower plumes) indices, where you can see which station contributes to these indices at each UT minute.

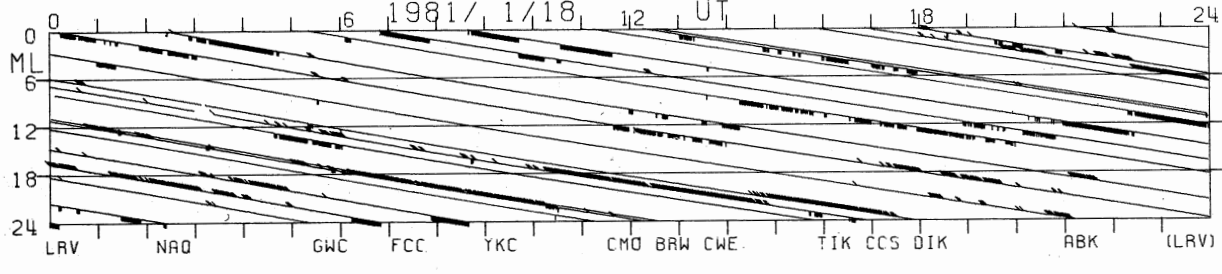
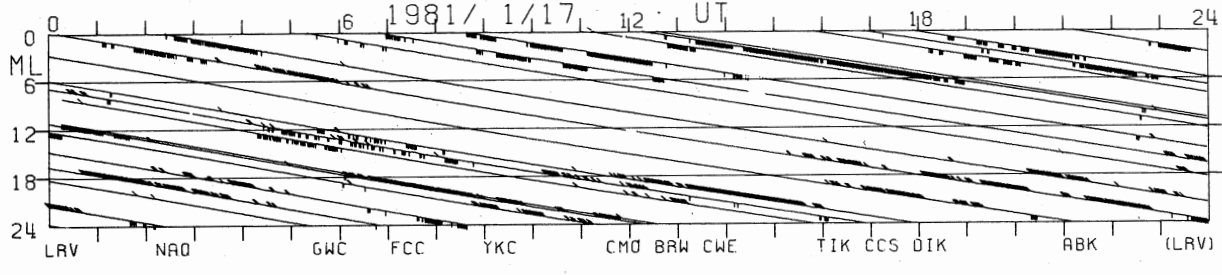
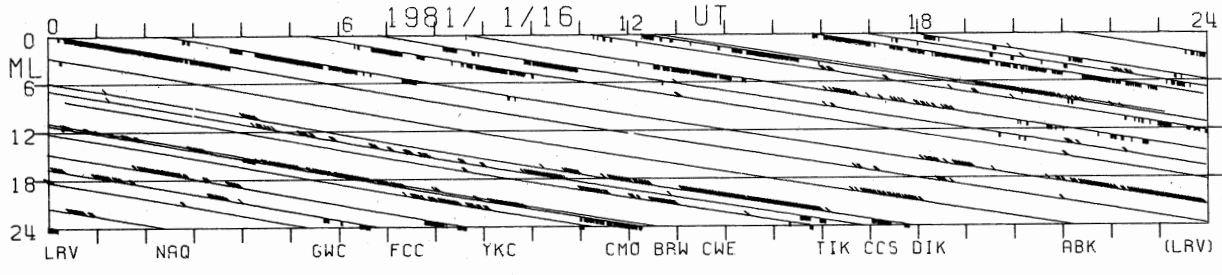
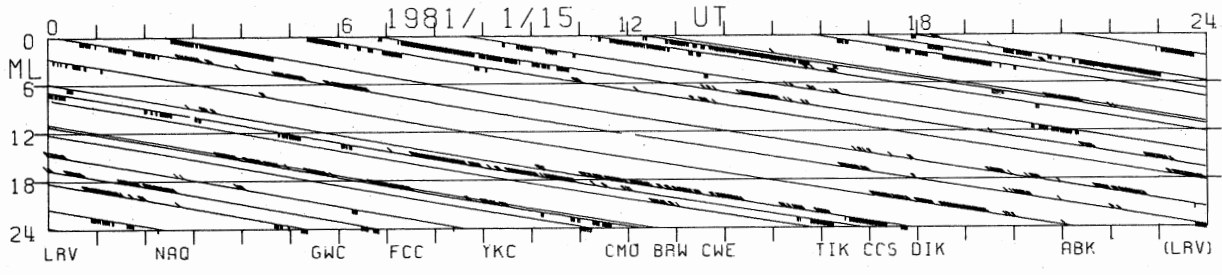
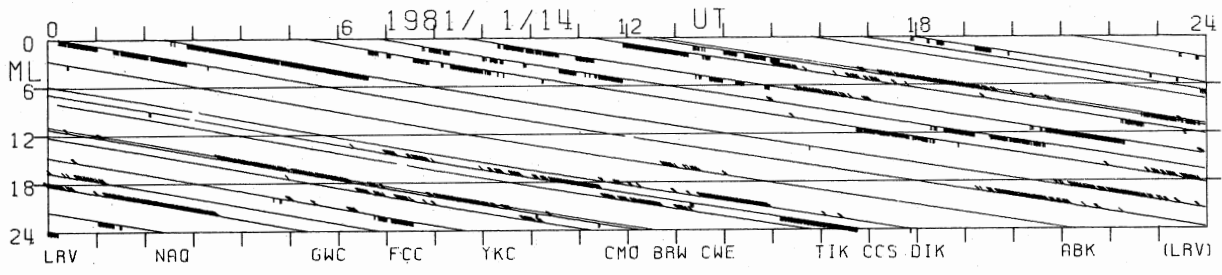
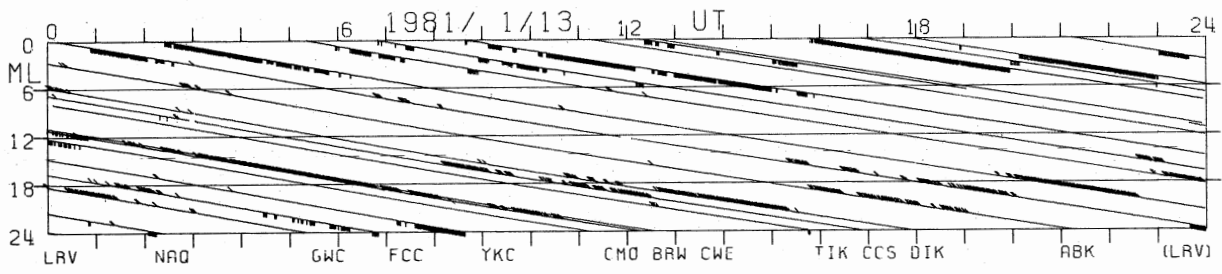


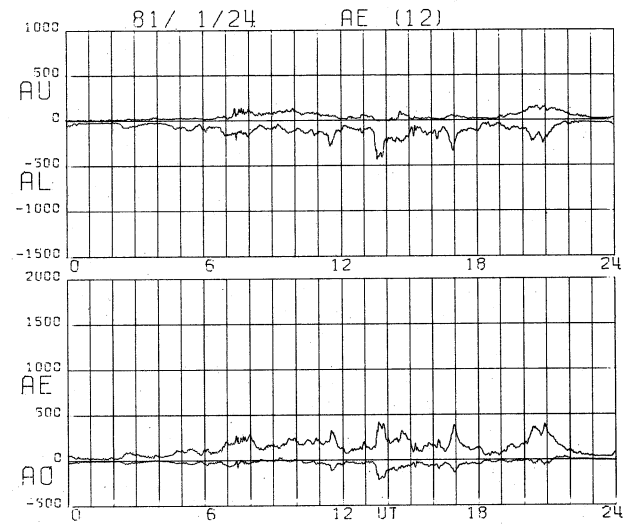
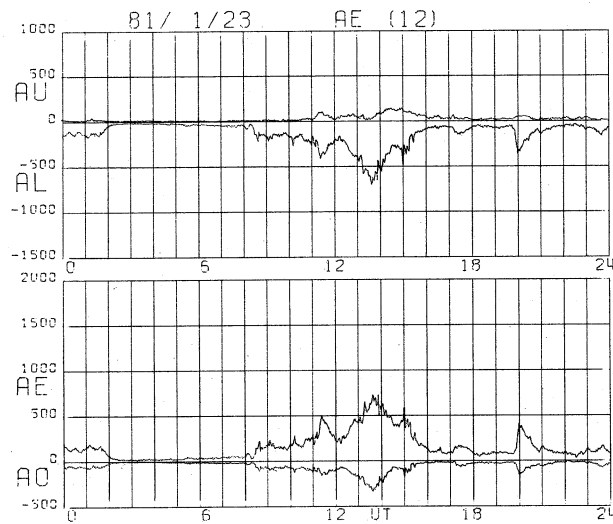
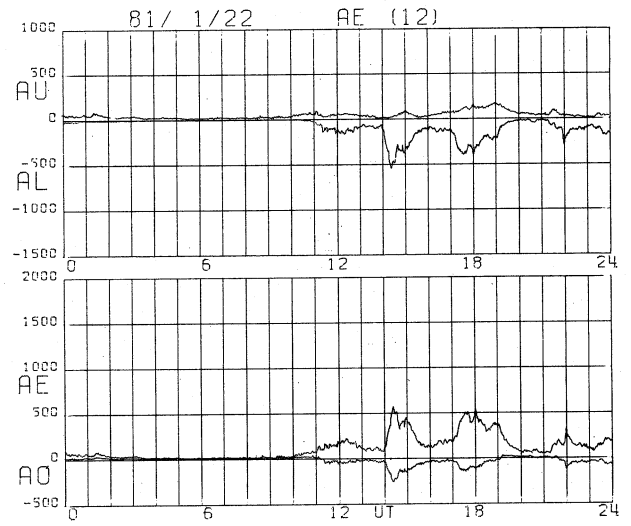
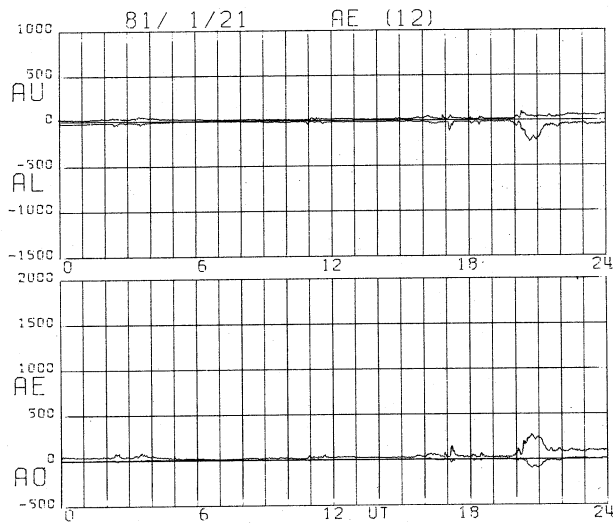
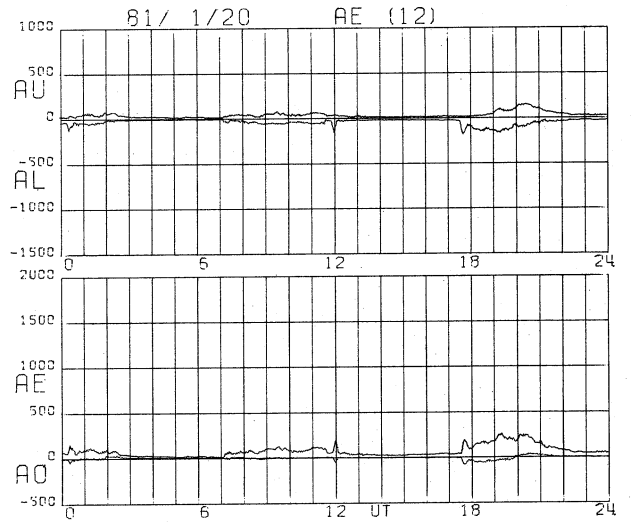
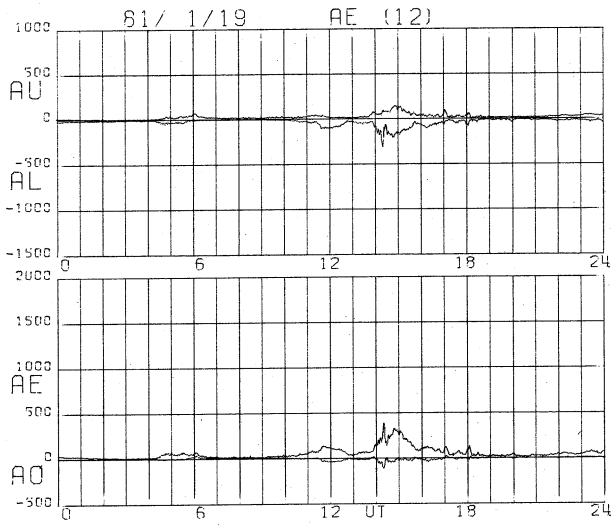


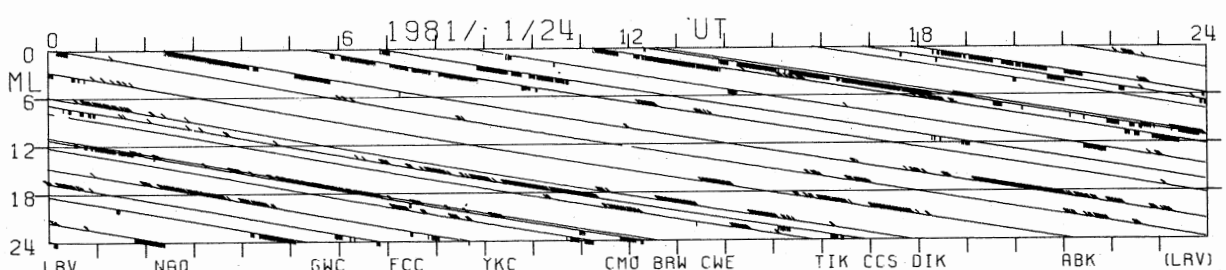
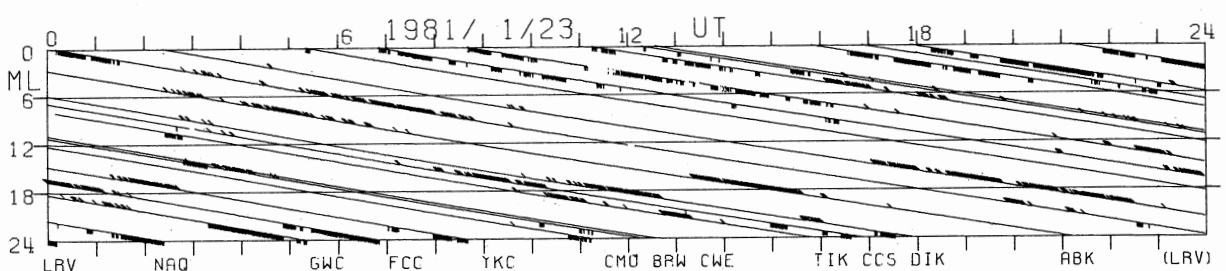
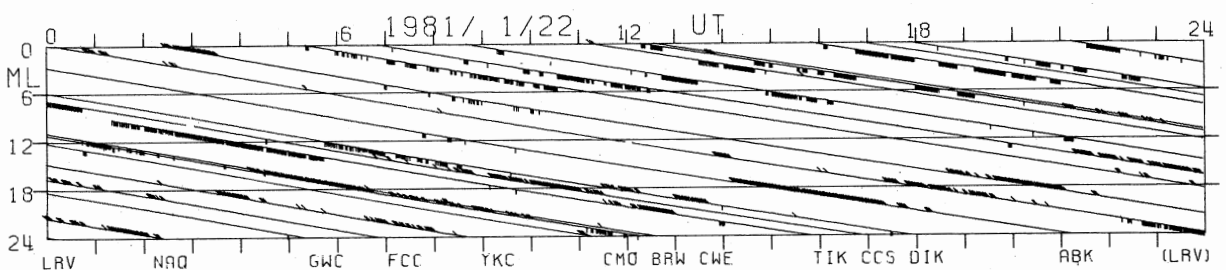
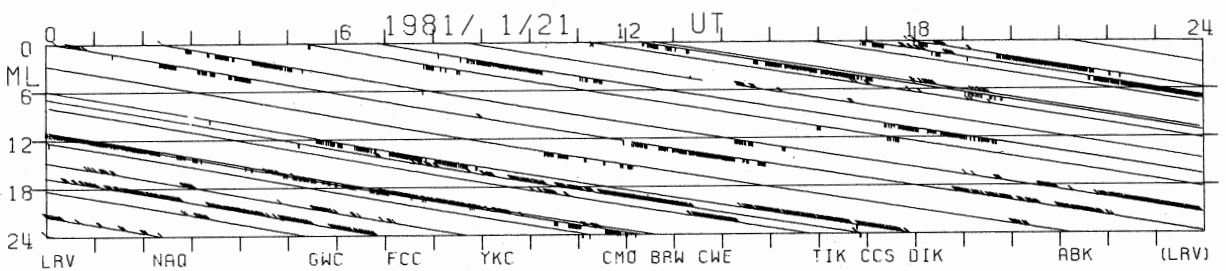
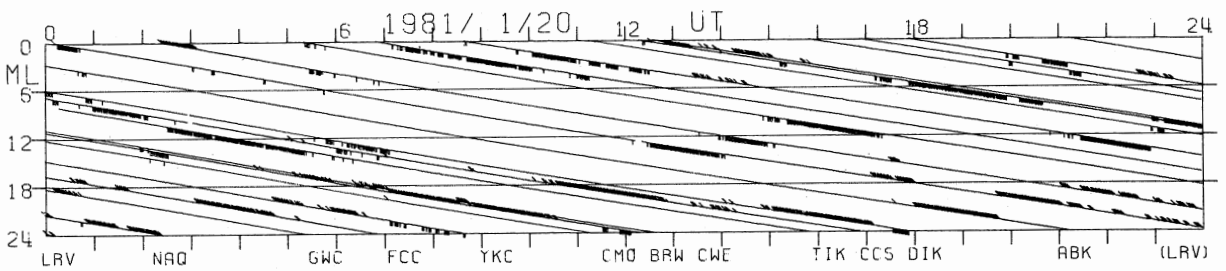
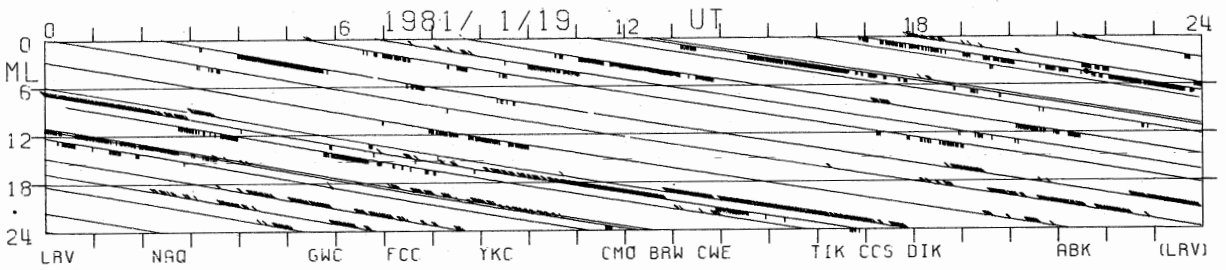


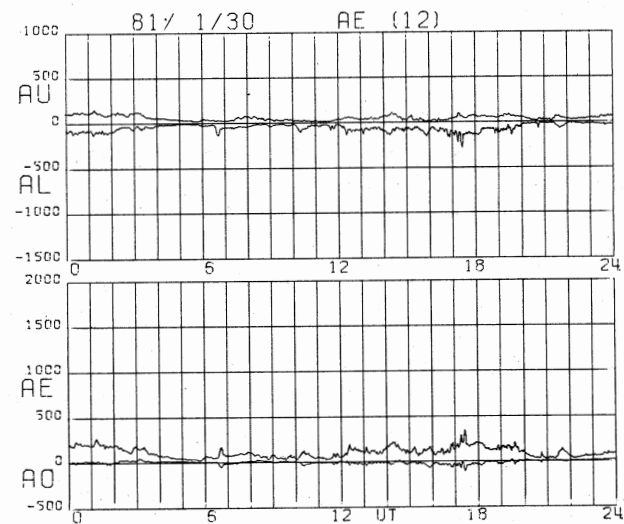
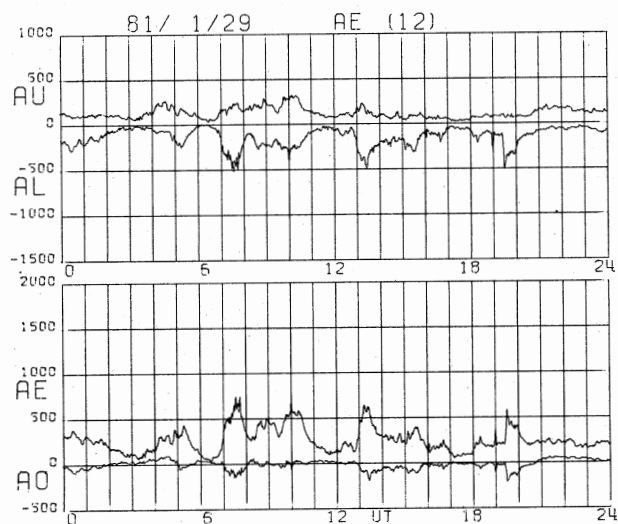
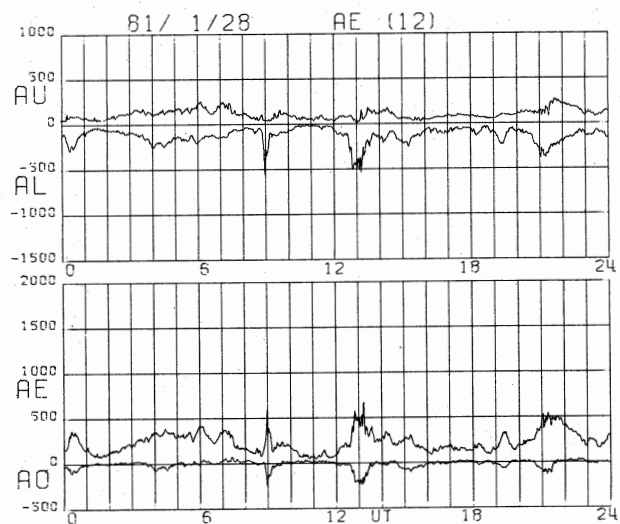
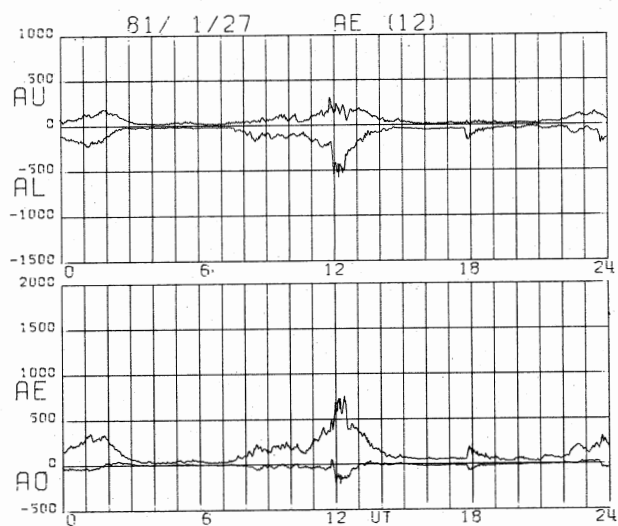
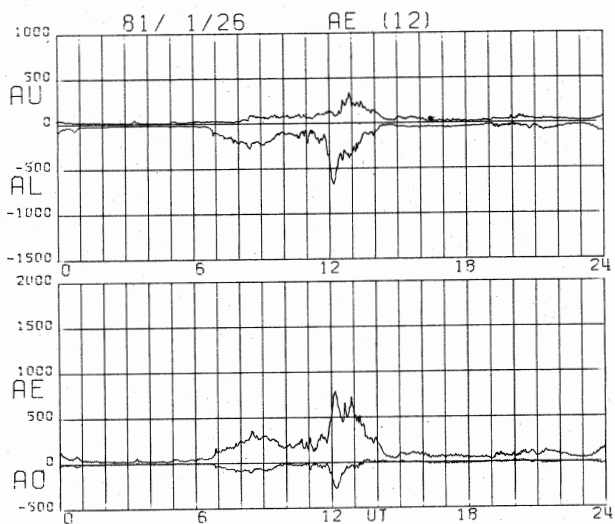
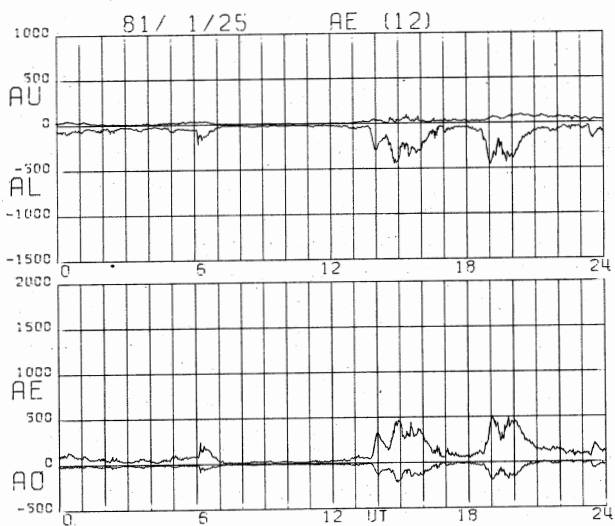


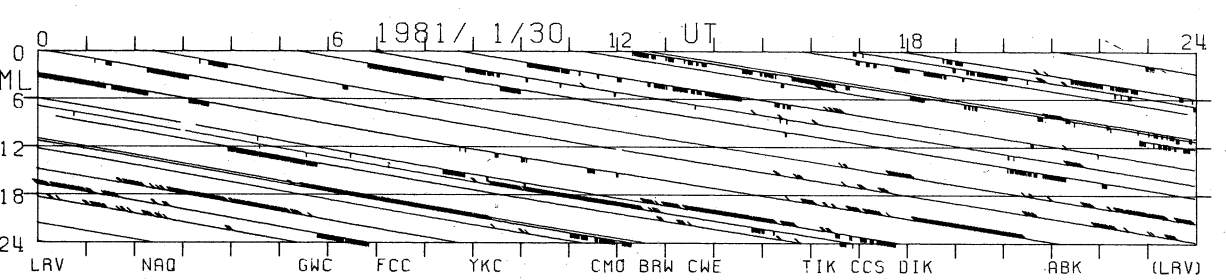
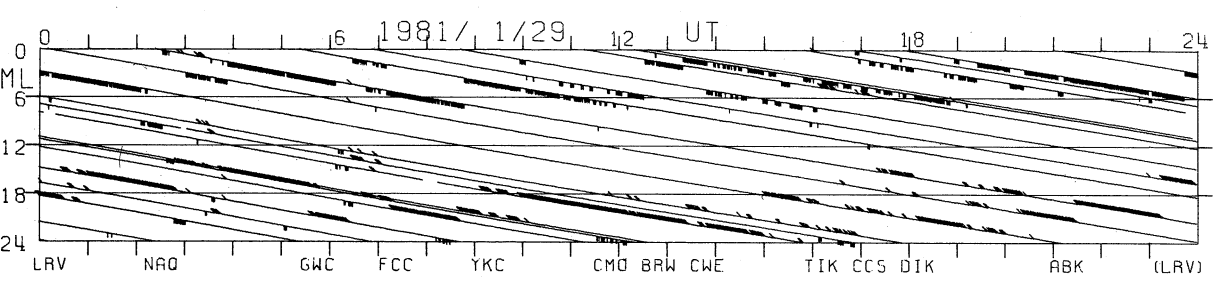
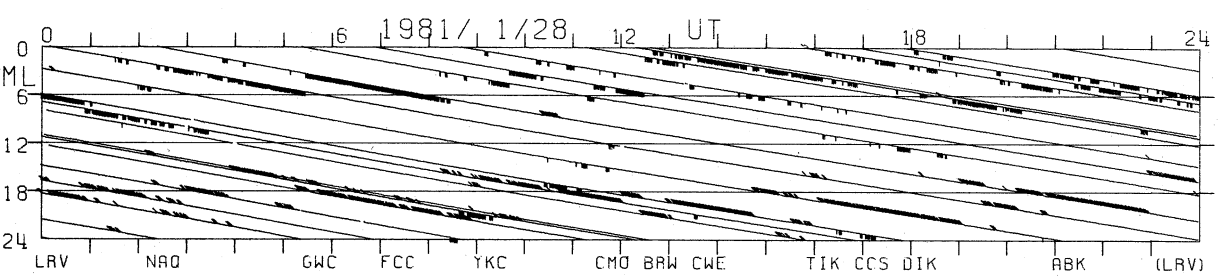
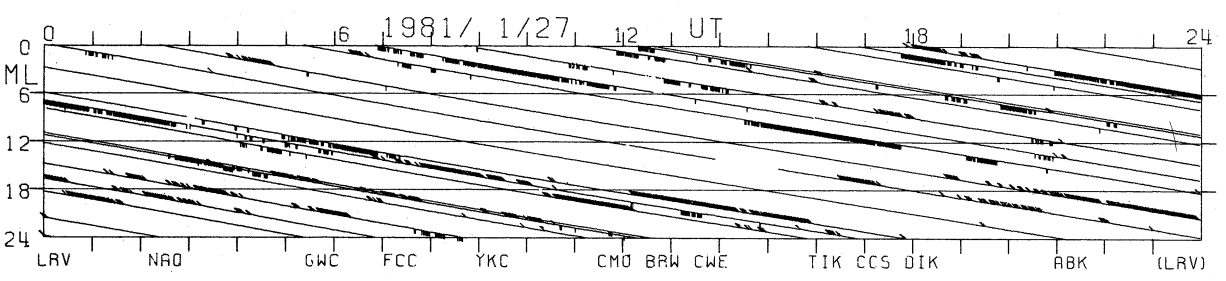
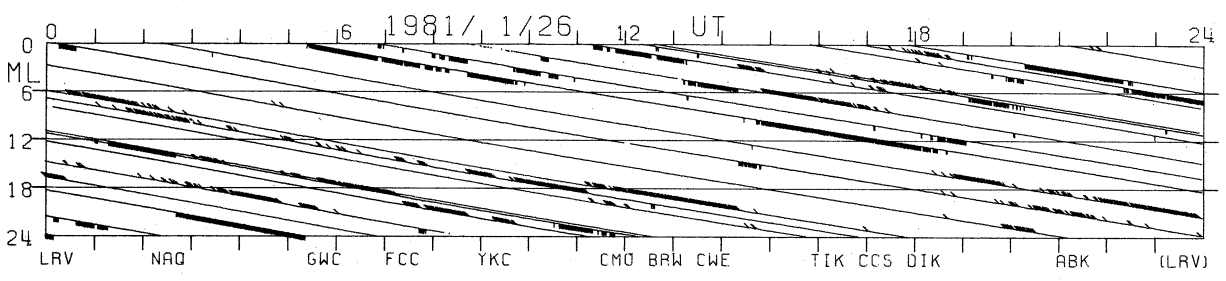
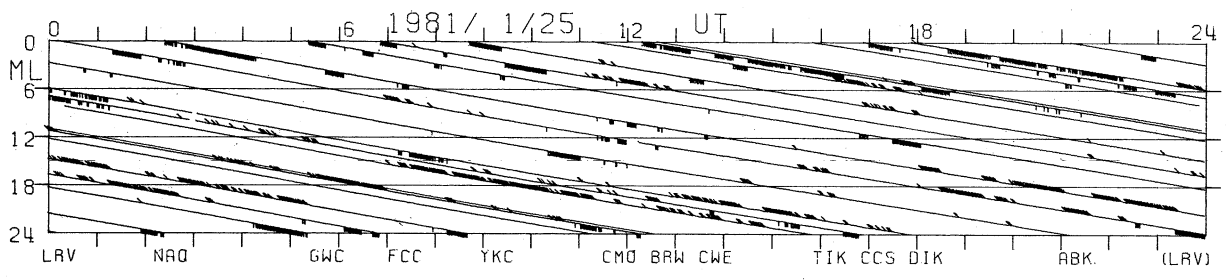


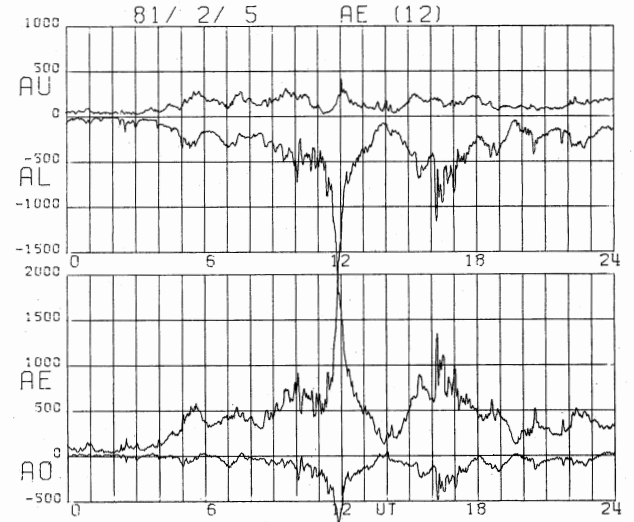
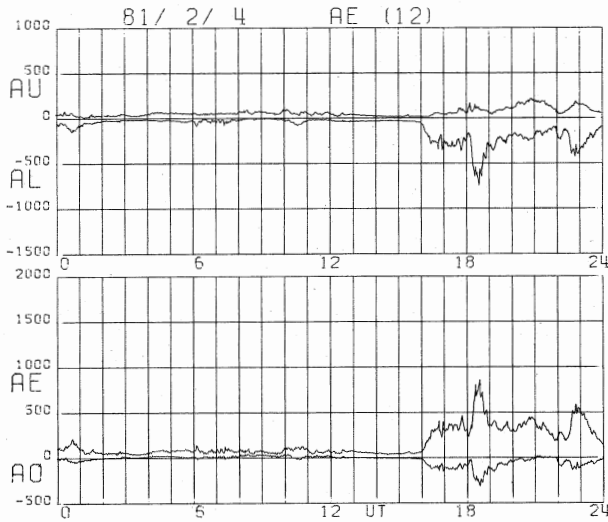
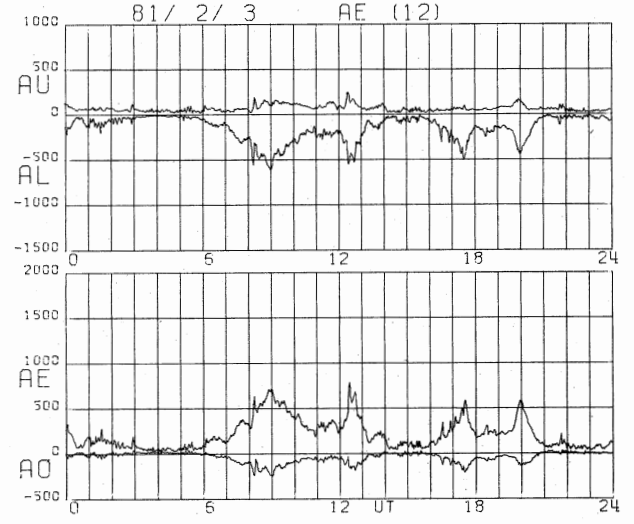
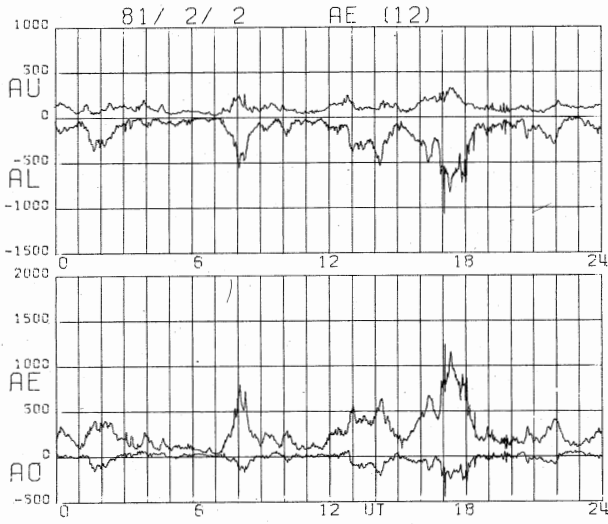
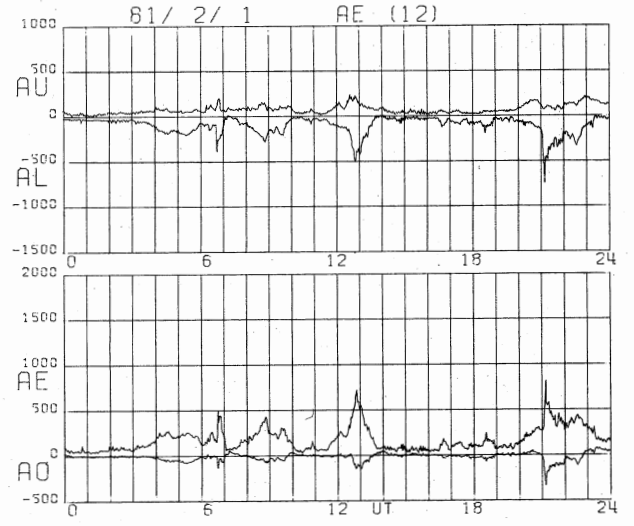
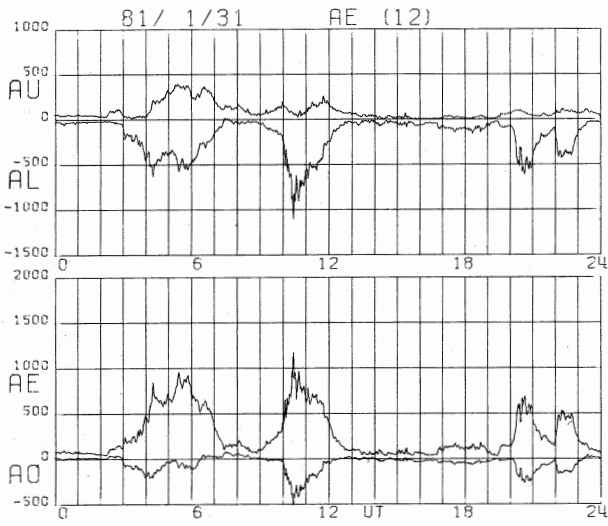


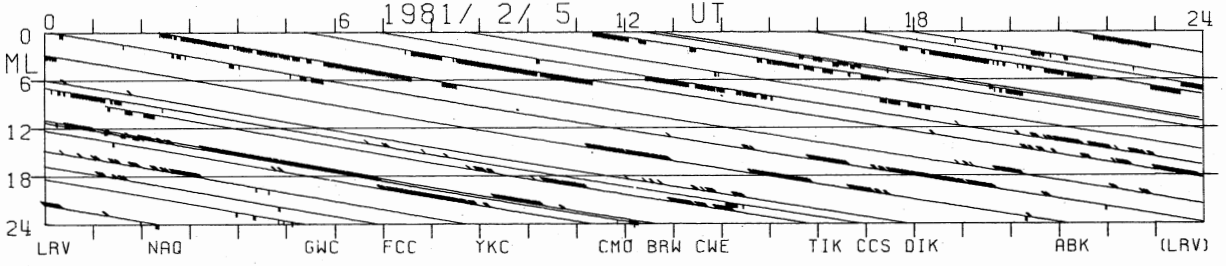
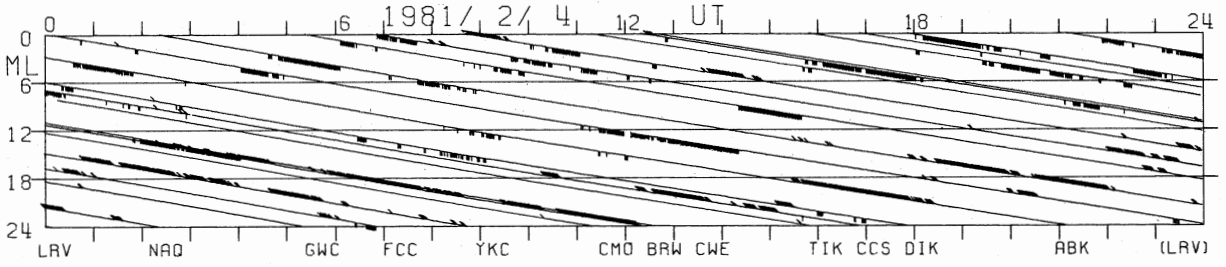
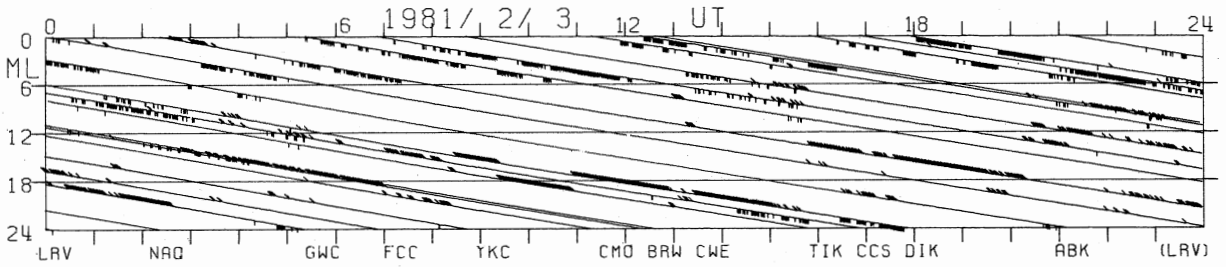
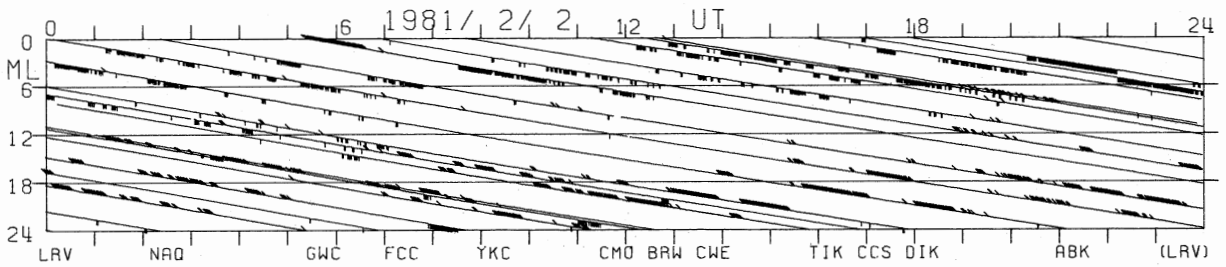
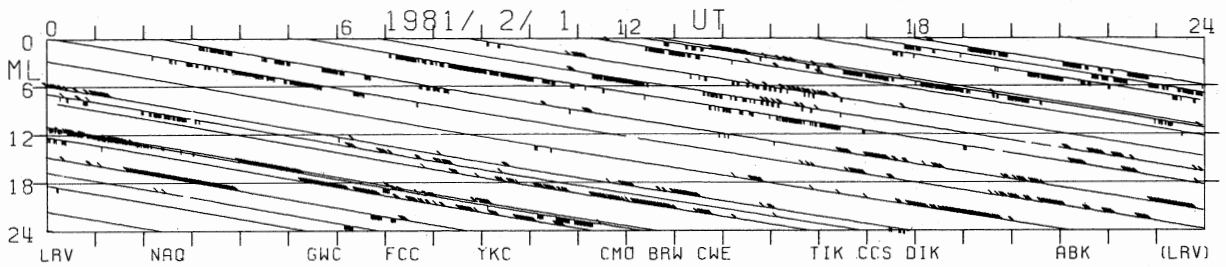
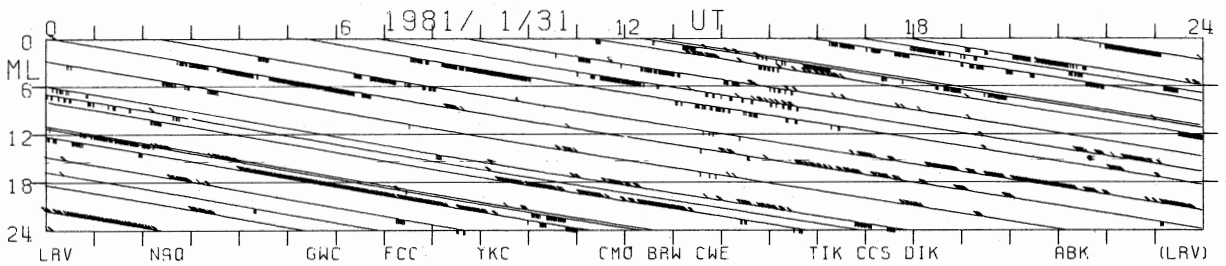


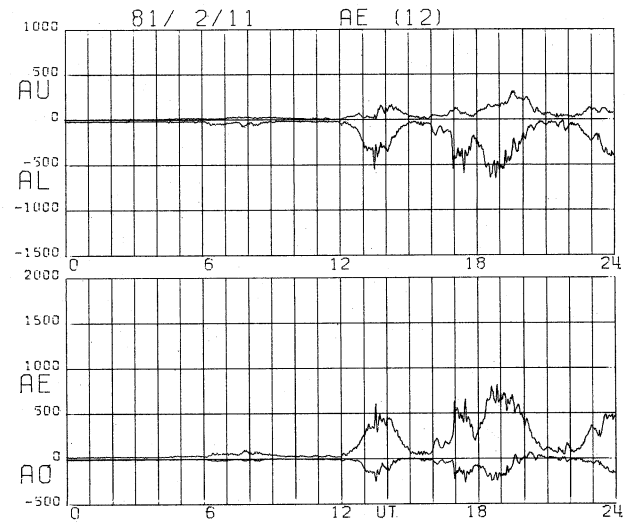
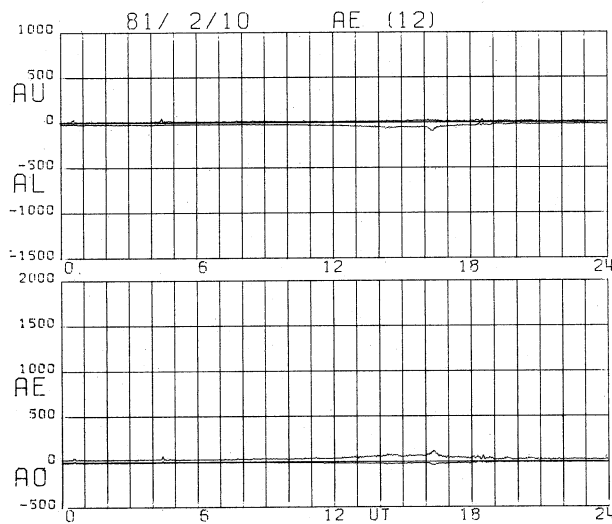
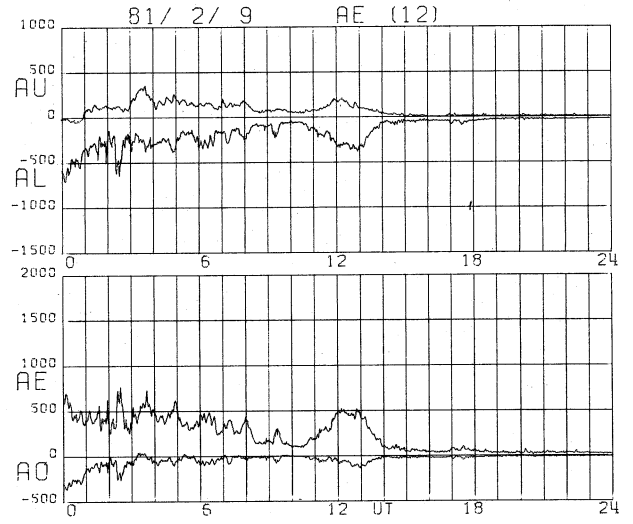
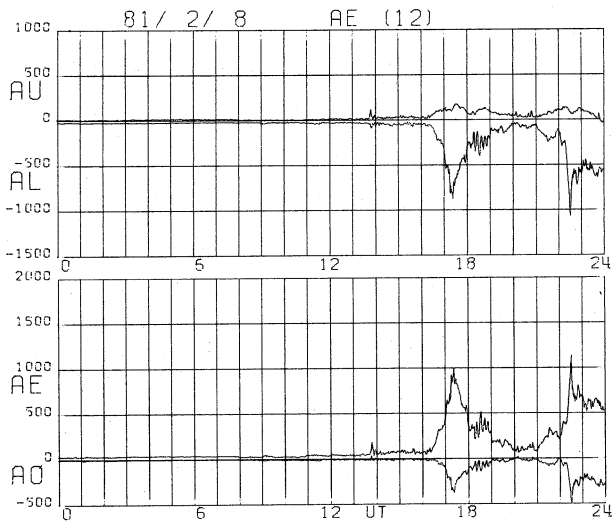
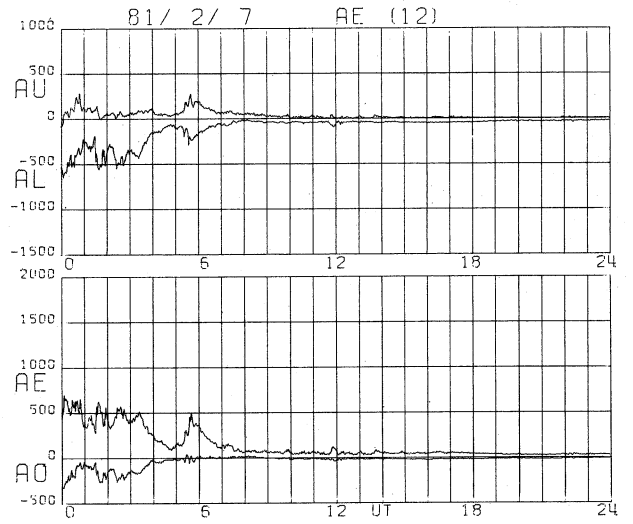
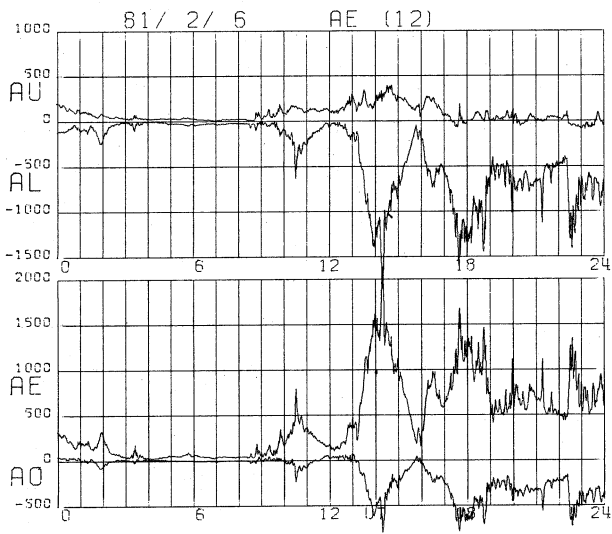


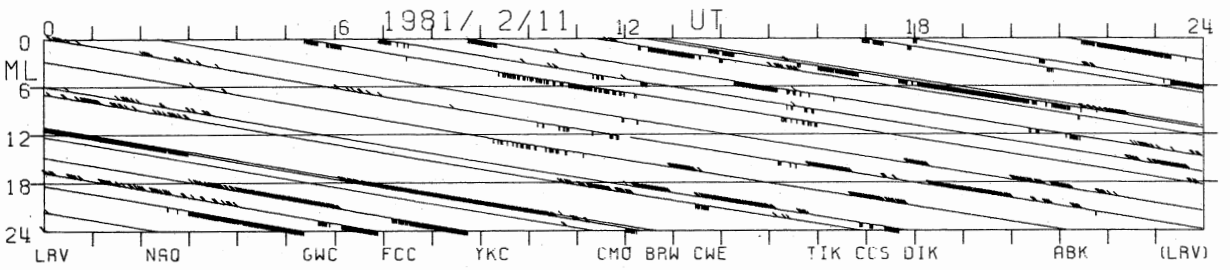
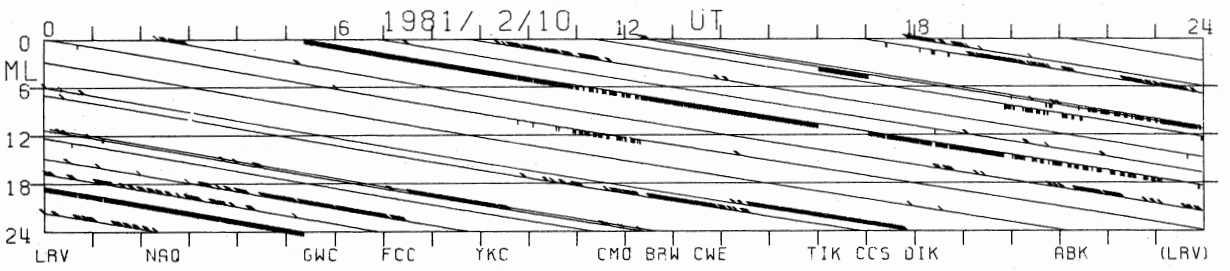
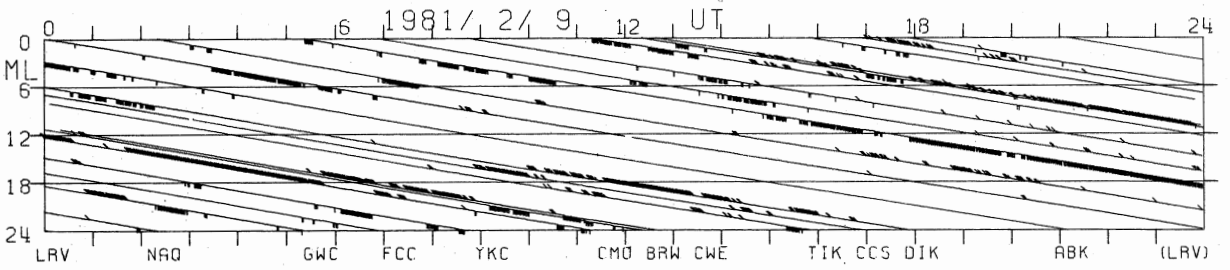
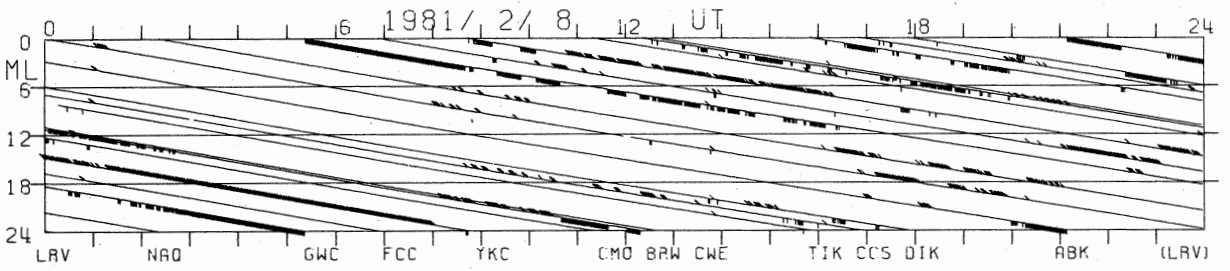
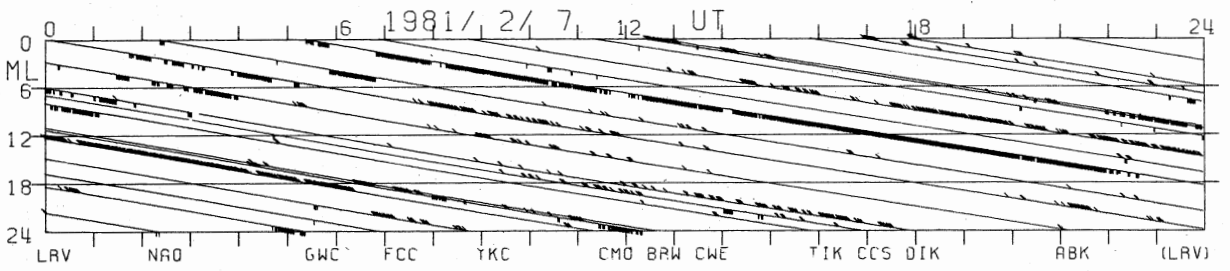
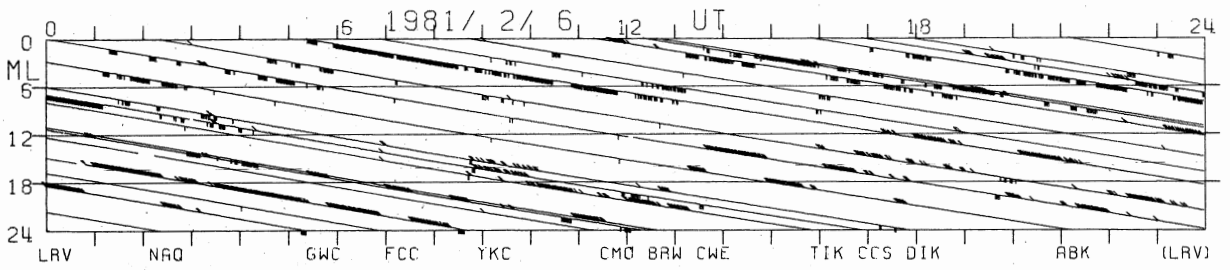


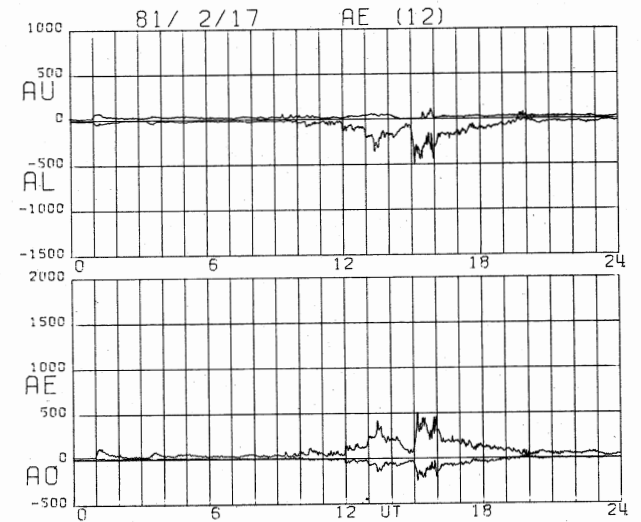
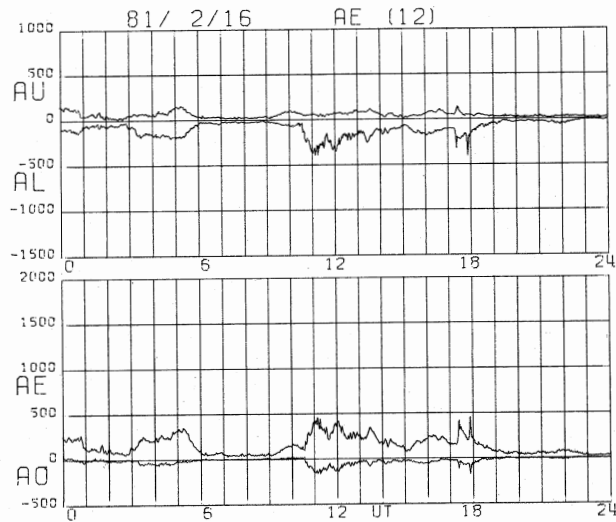
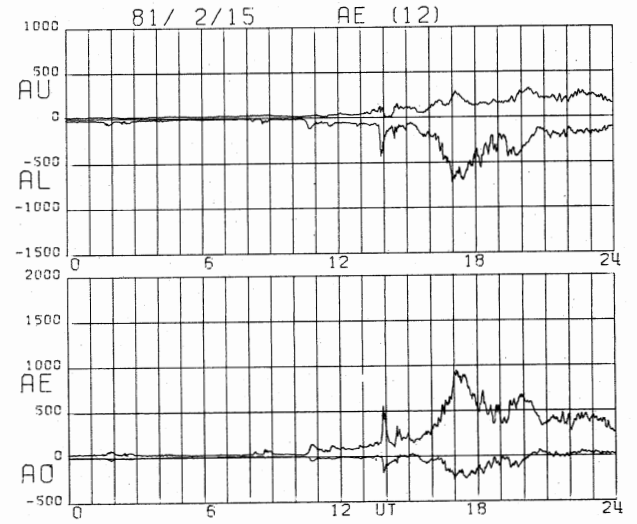
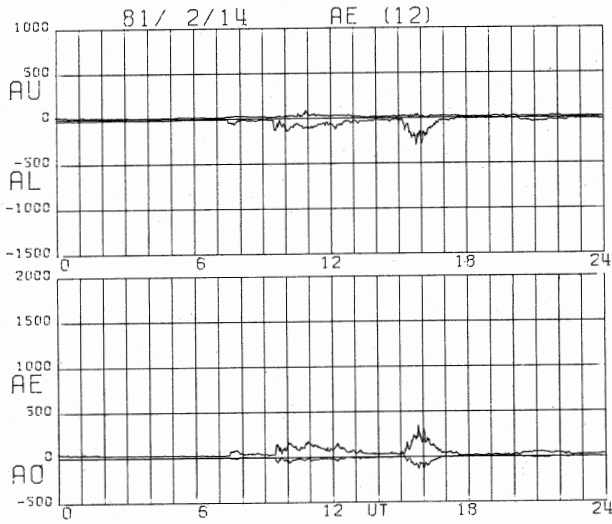
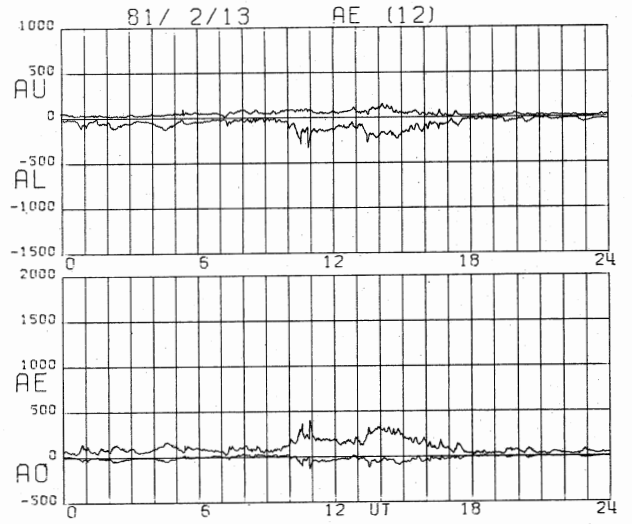
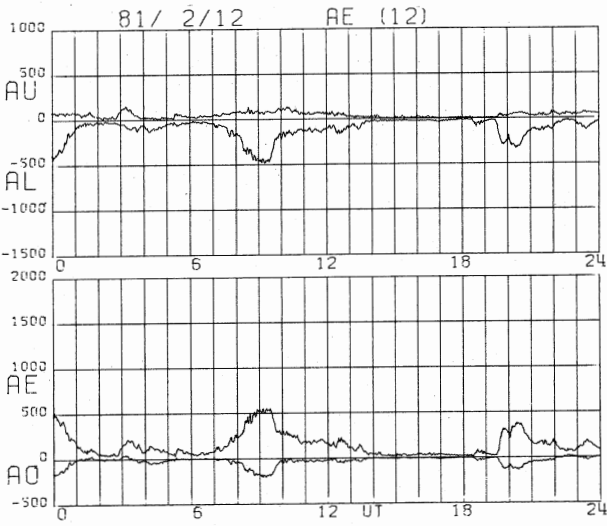


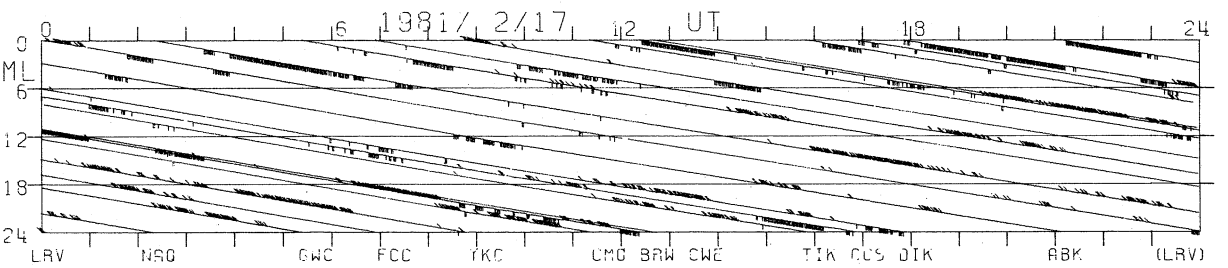
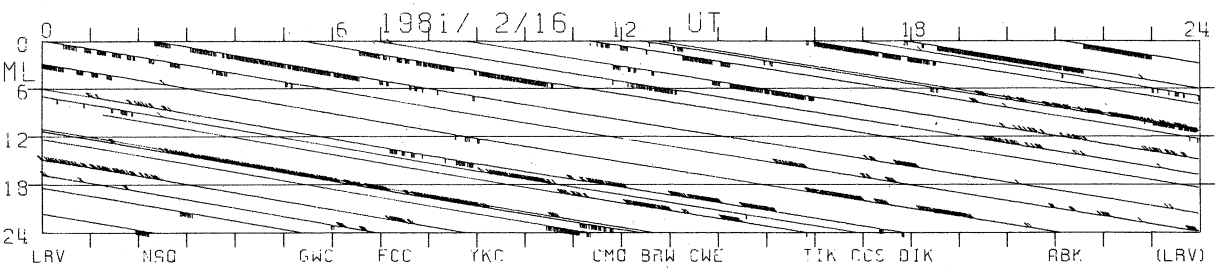
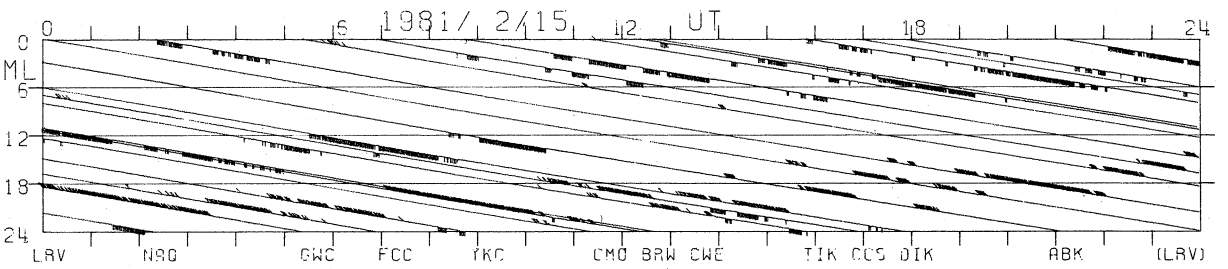
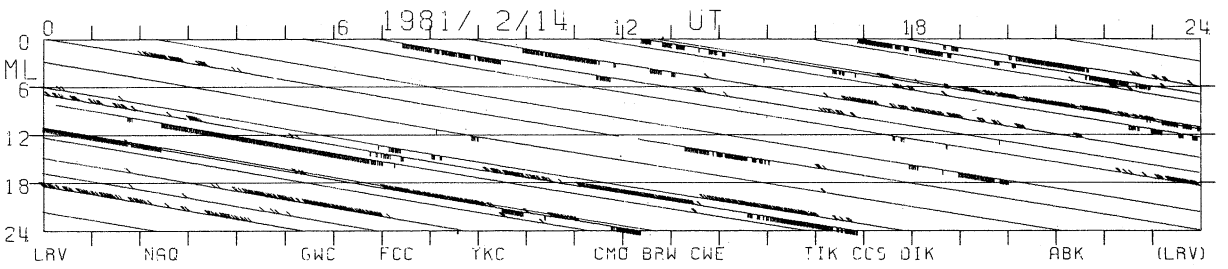
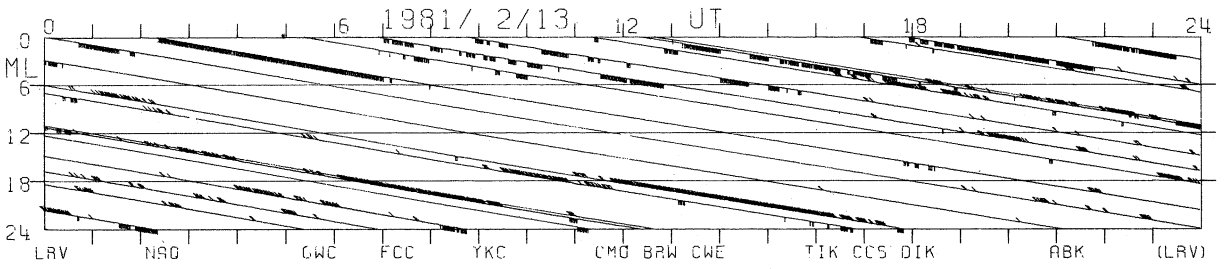
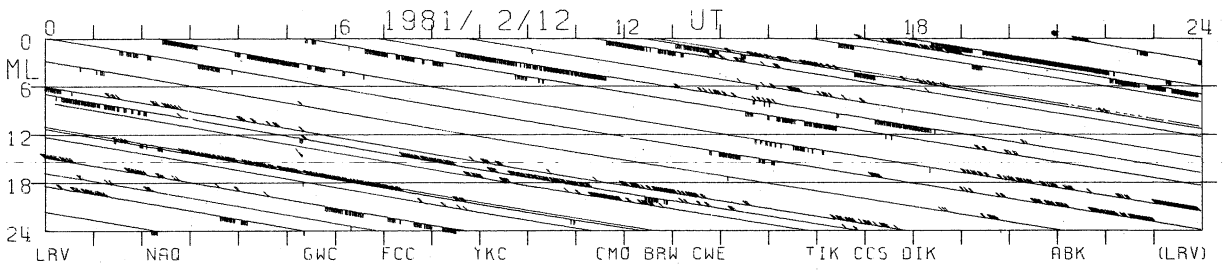


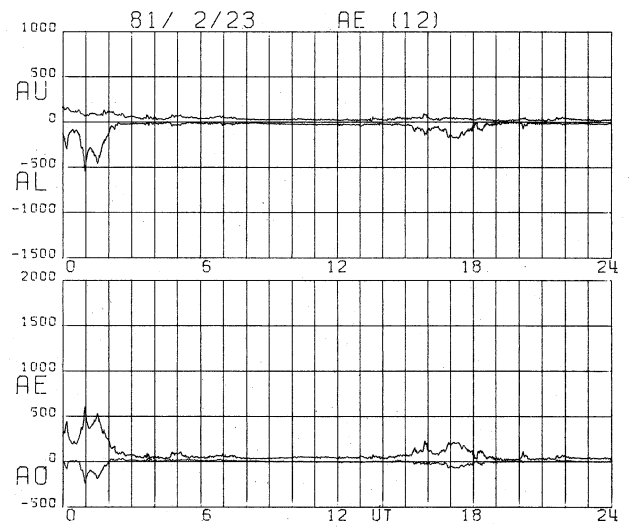
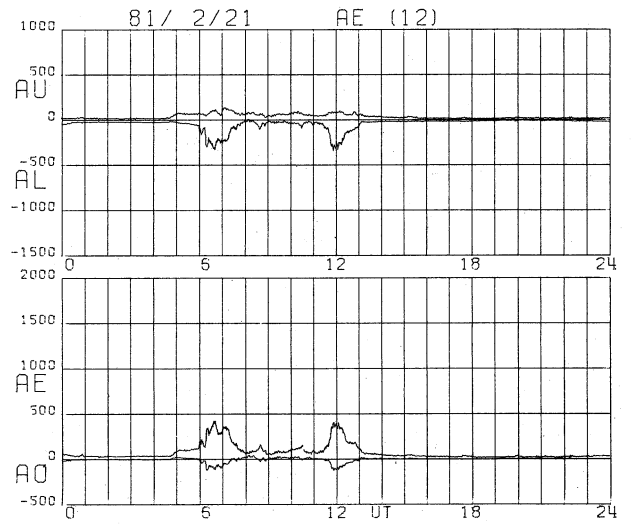
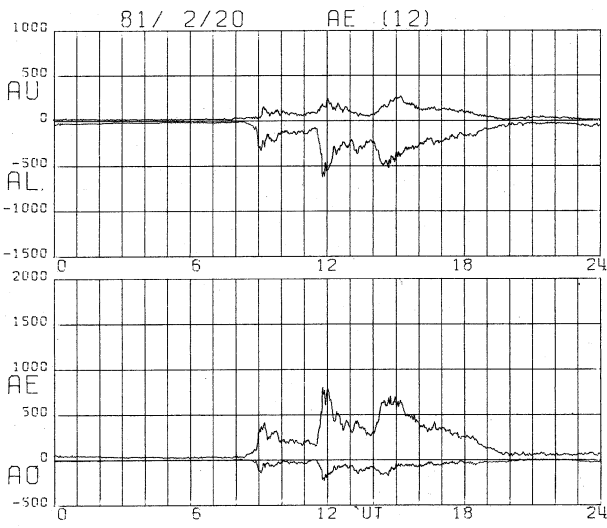
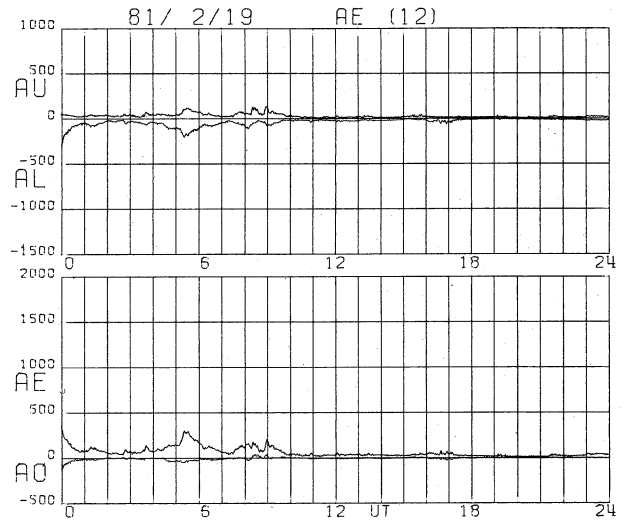
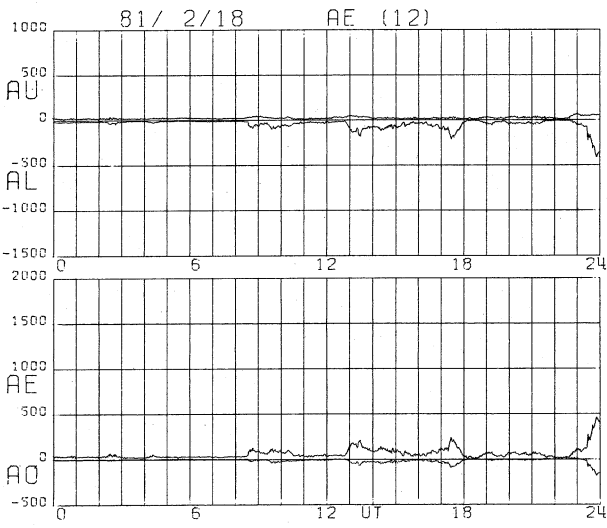


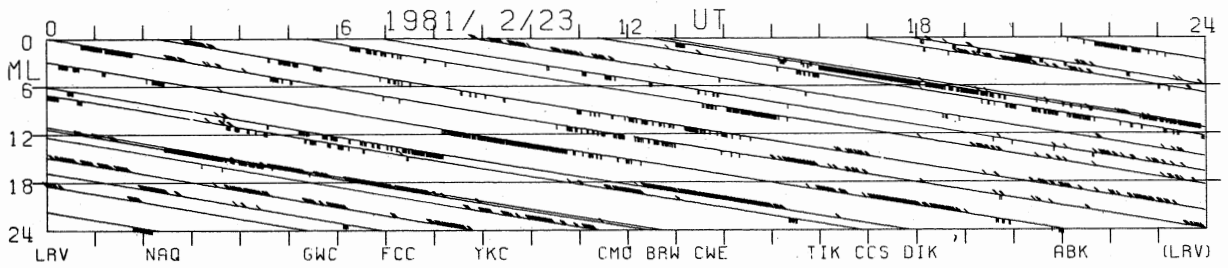
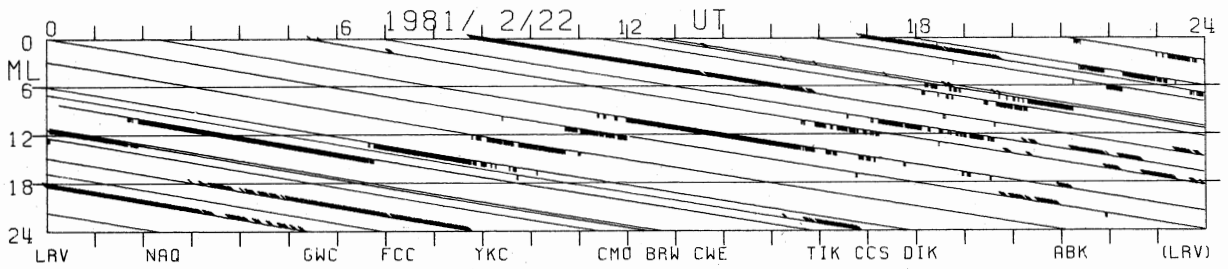
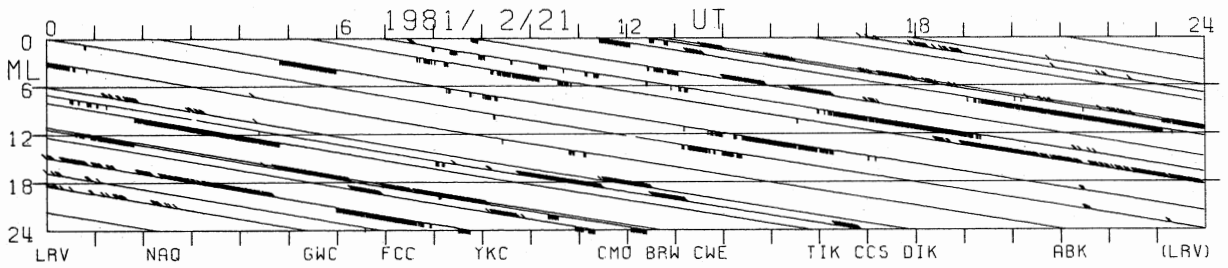
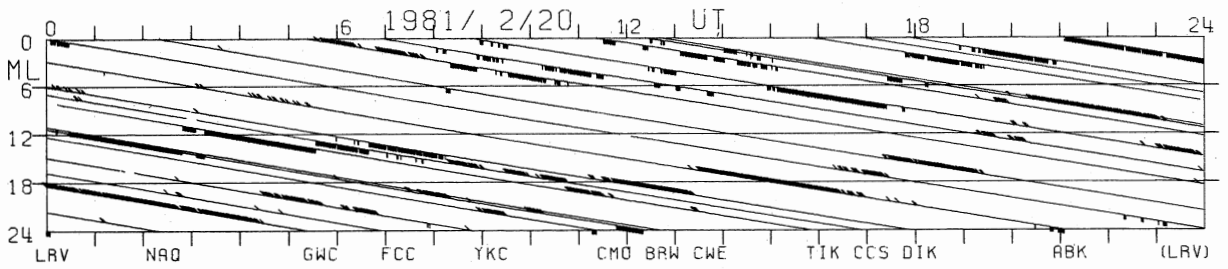
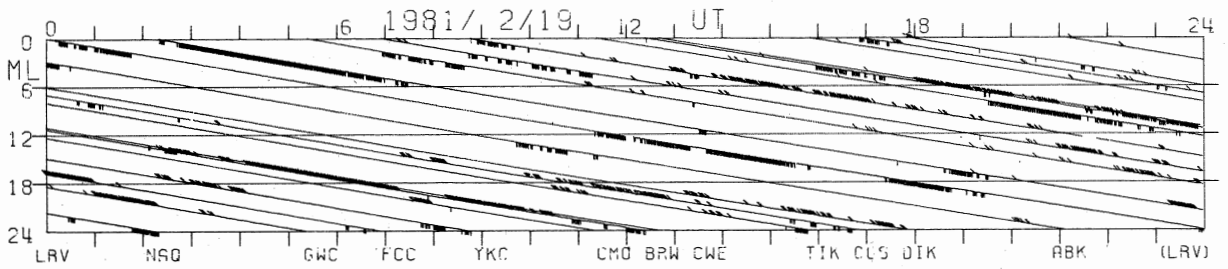
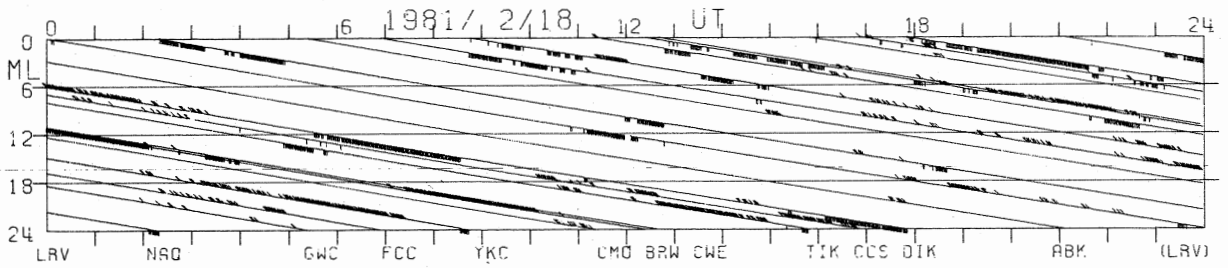


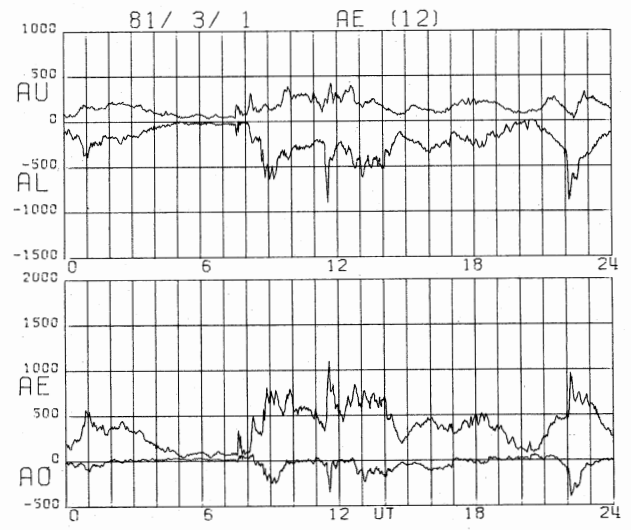
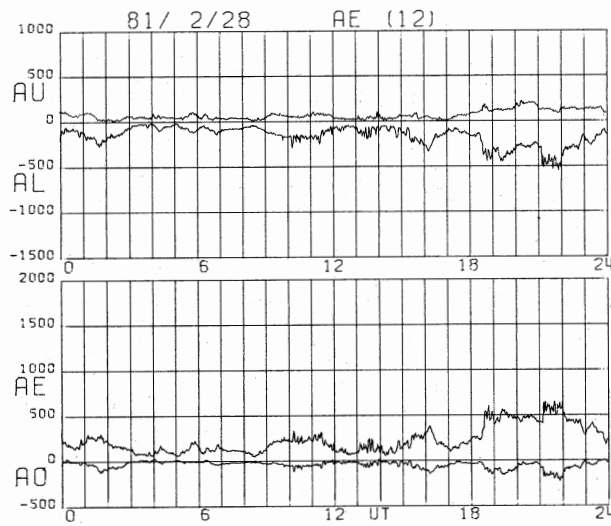
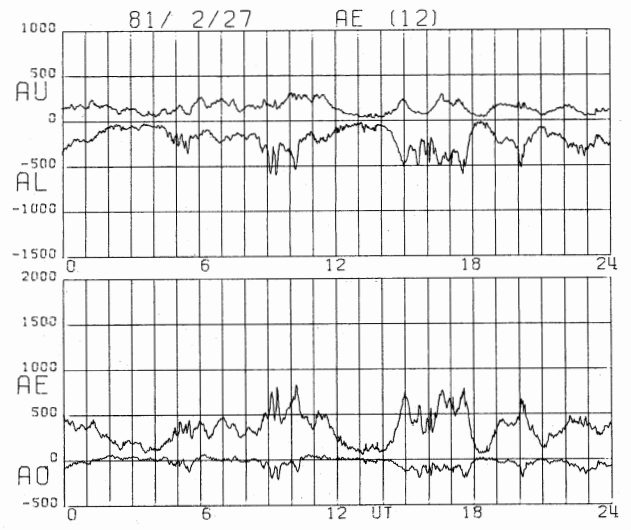
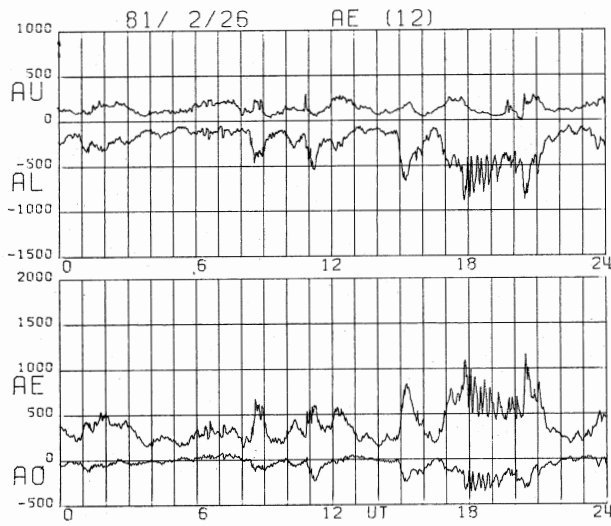
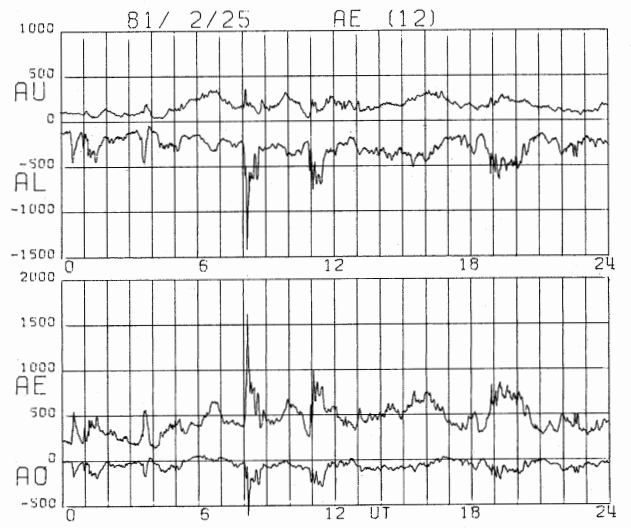
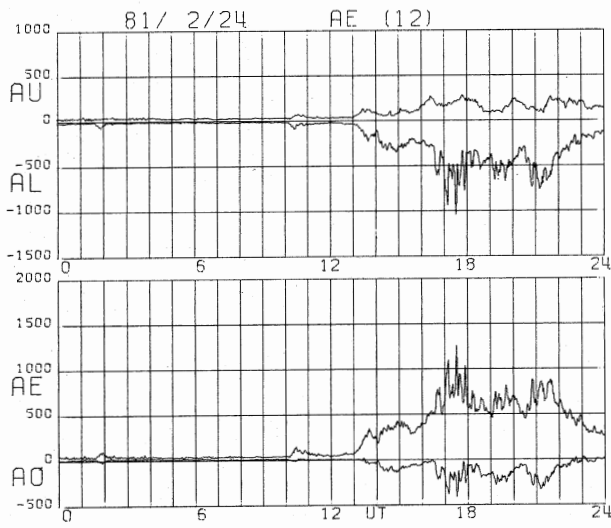


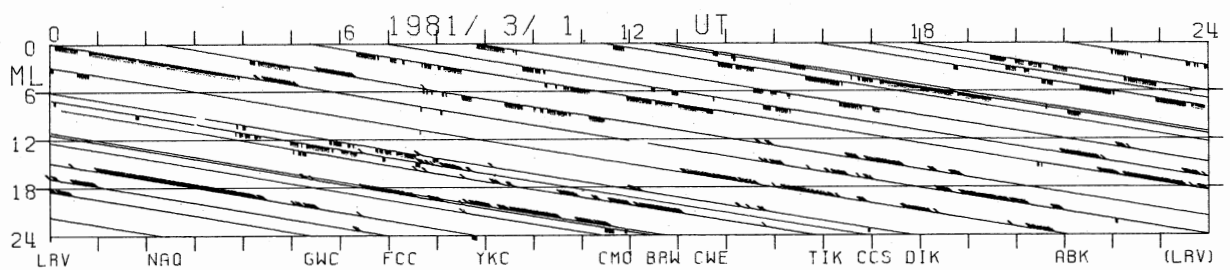
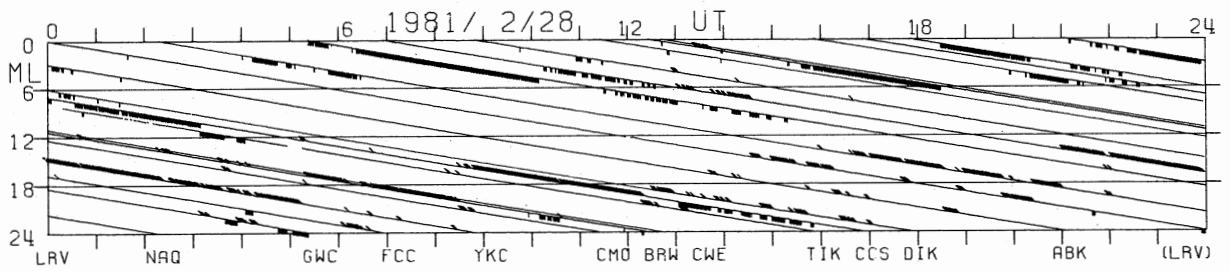
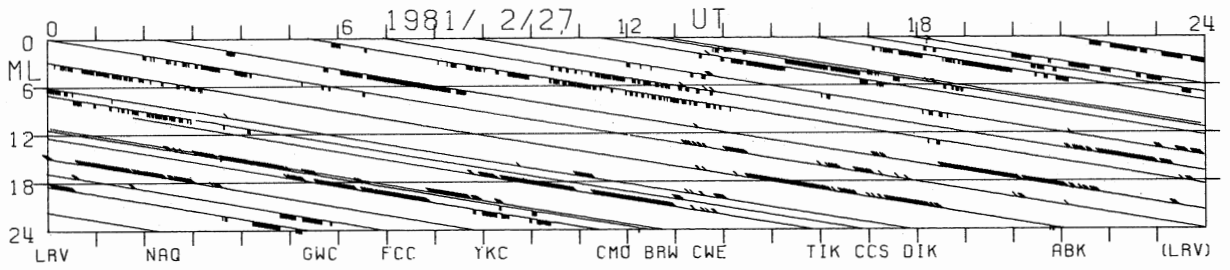
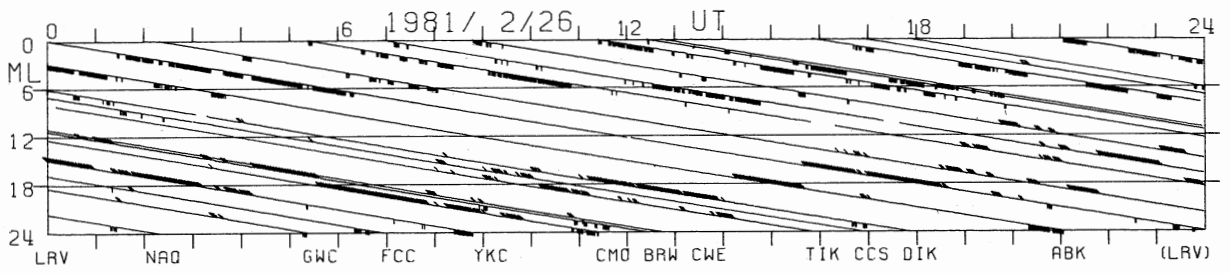
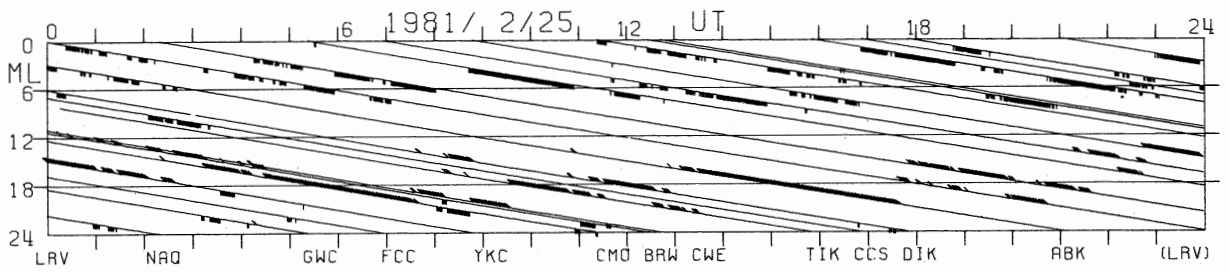
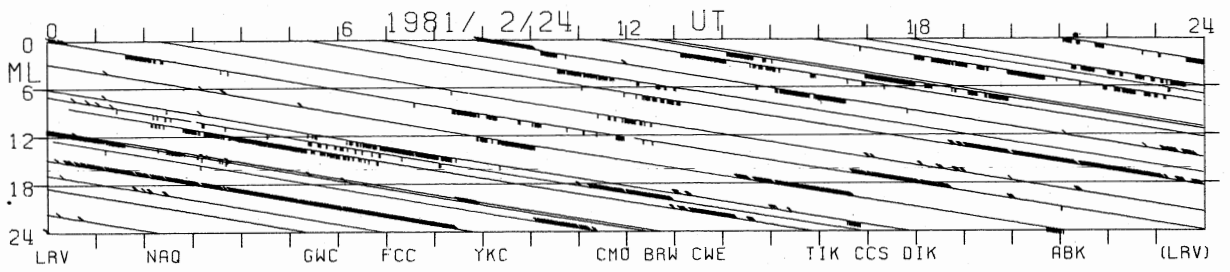


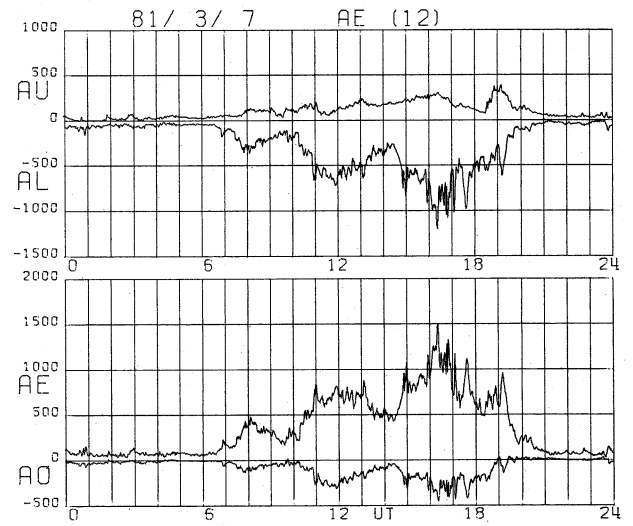
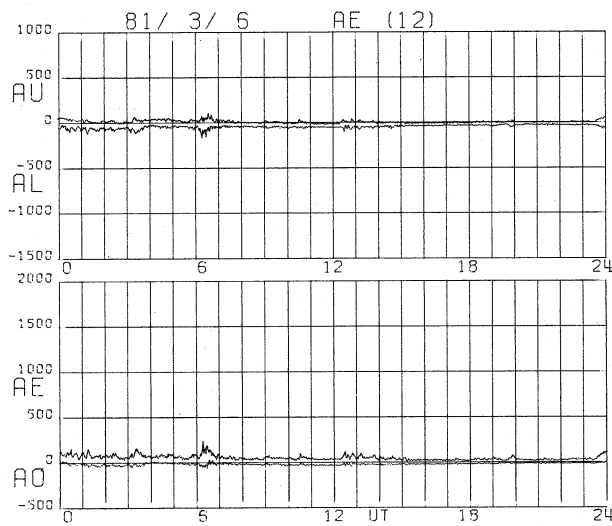
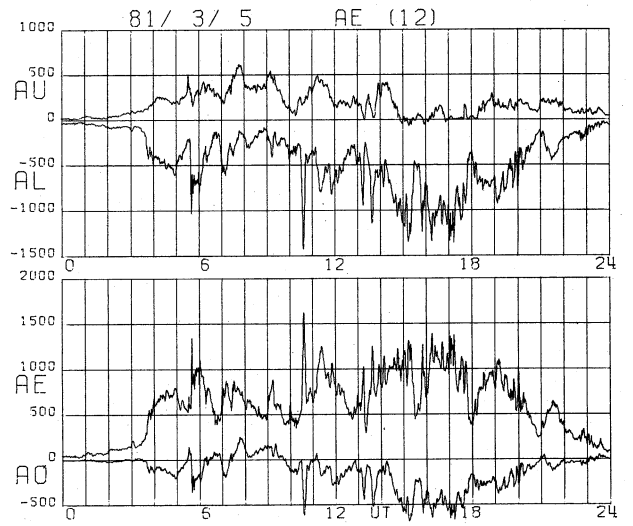
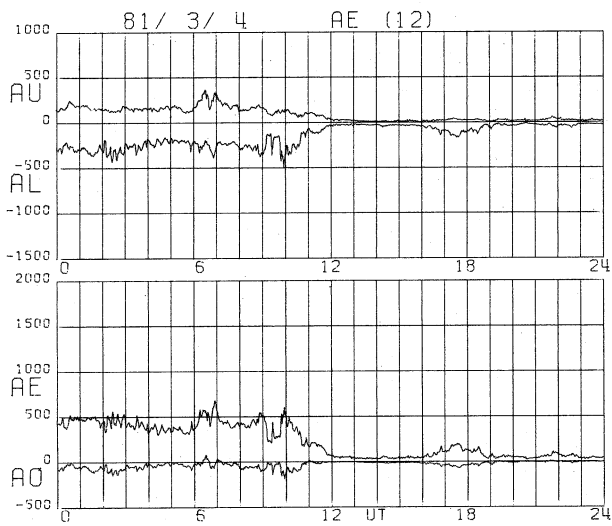
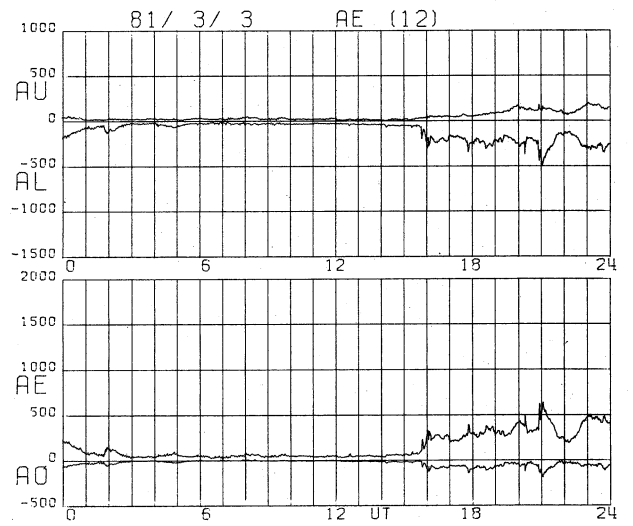
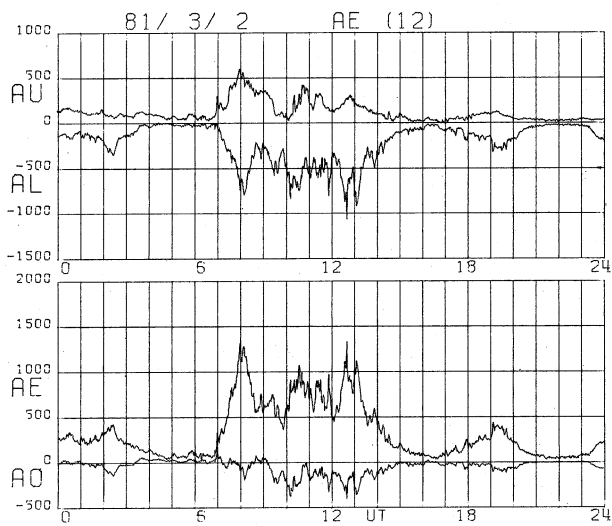


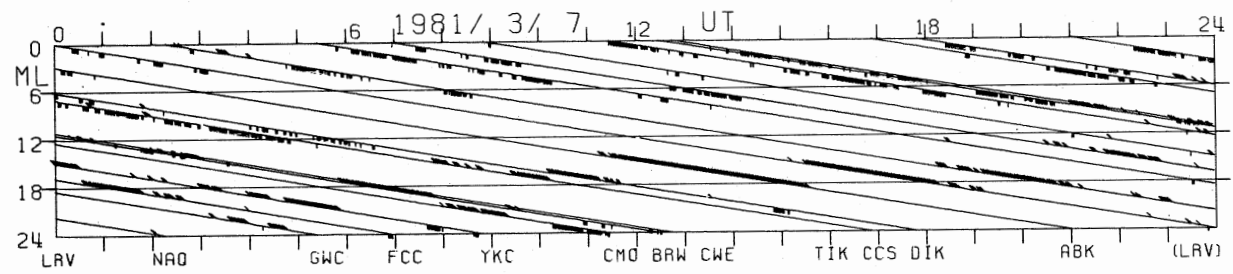
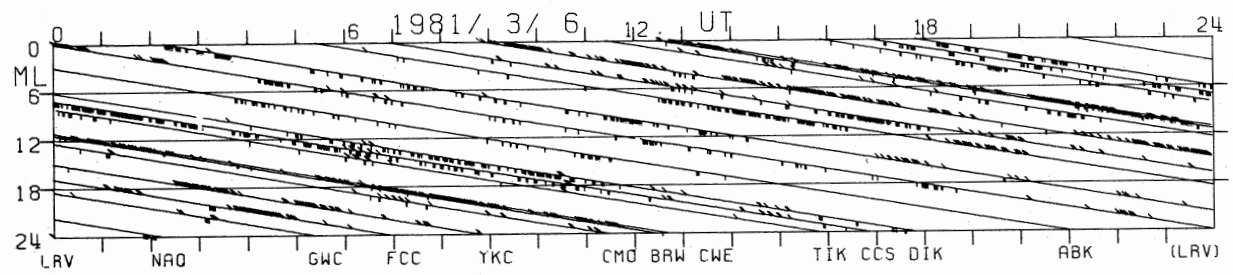
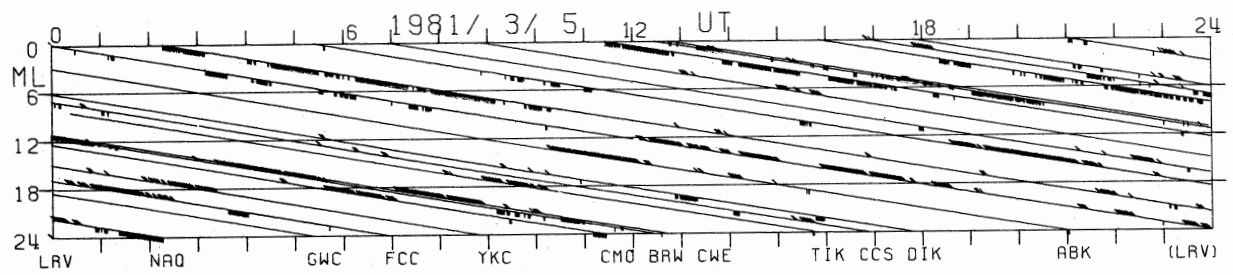
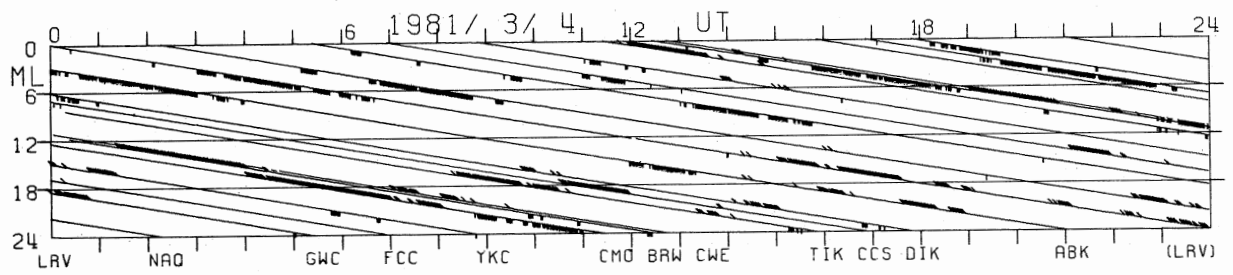
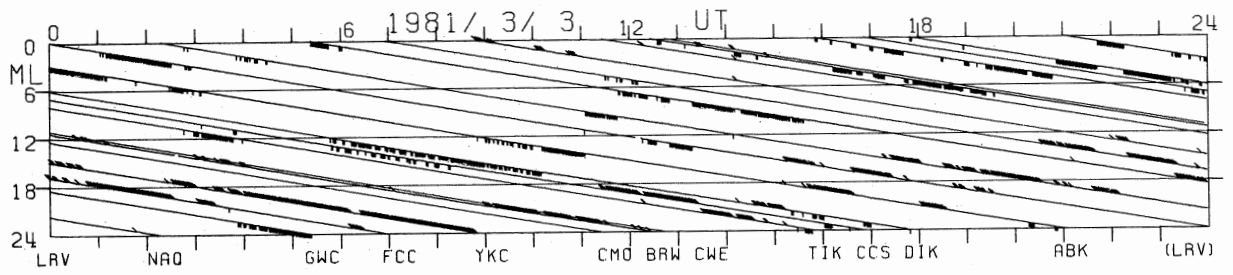
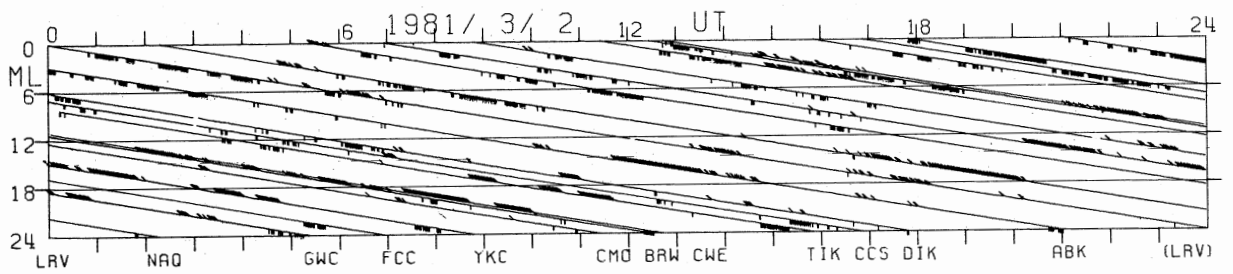


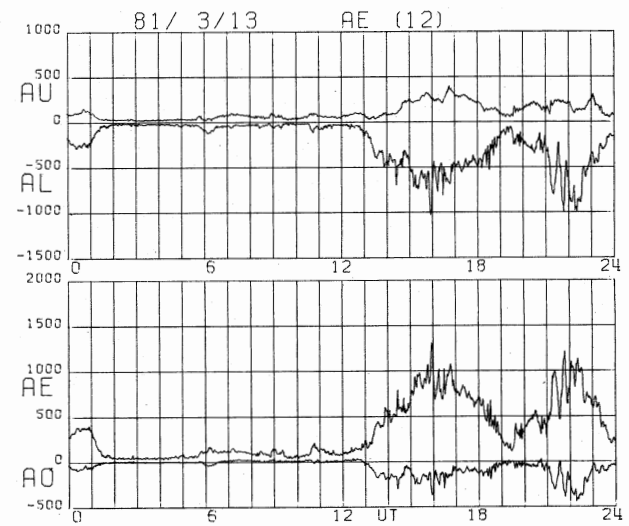
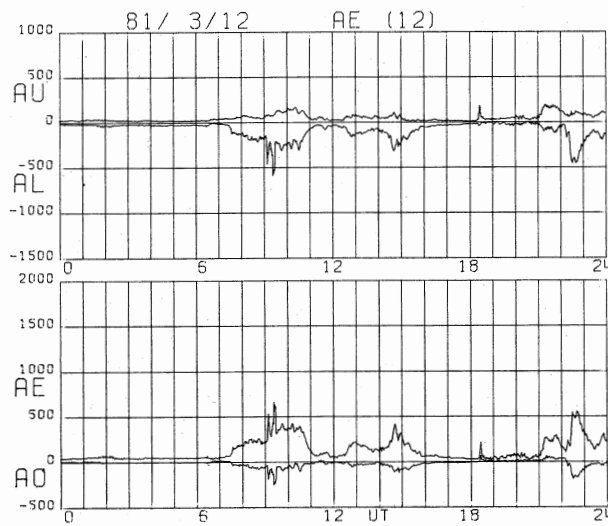
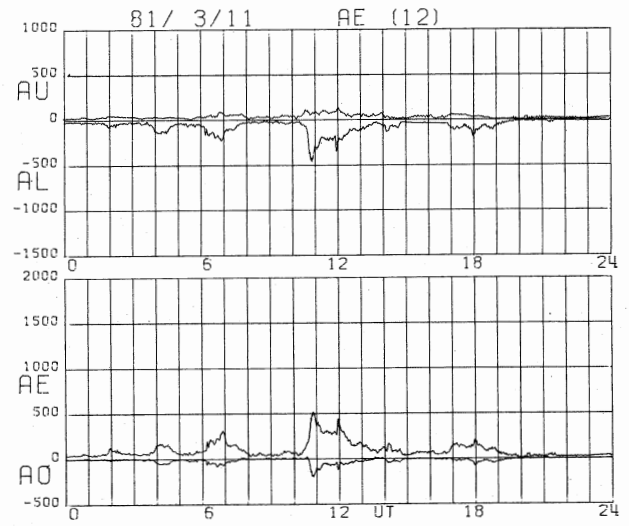
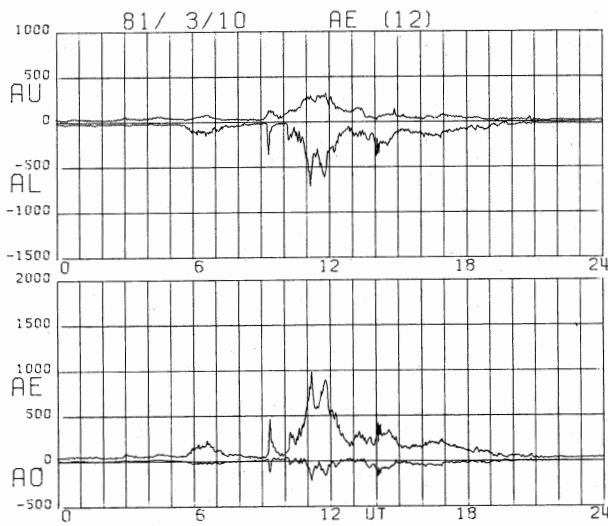
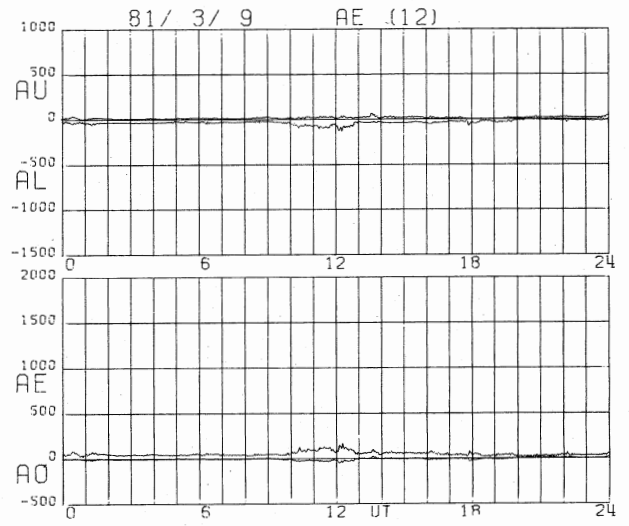
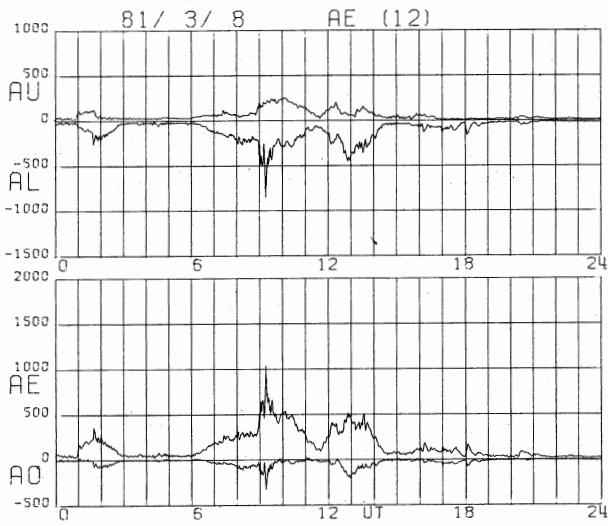


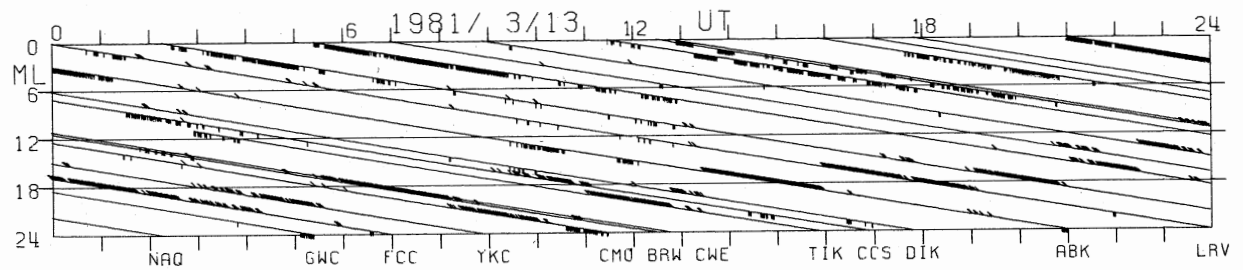
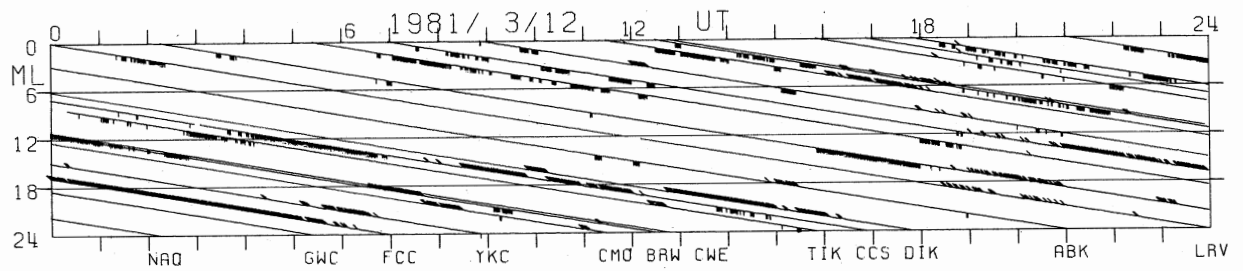
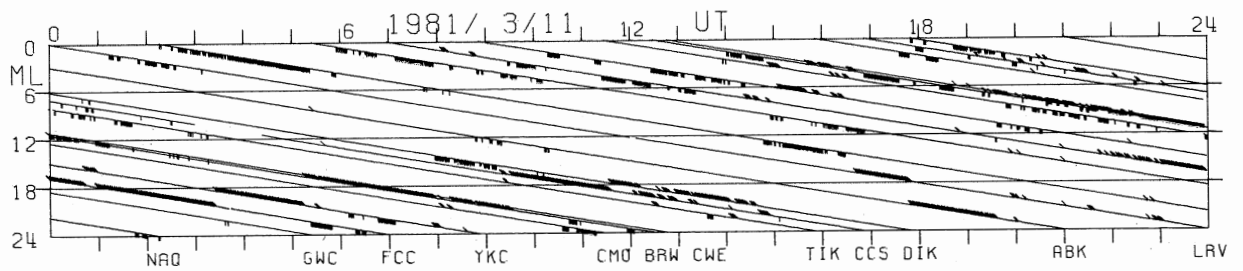
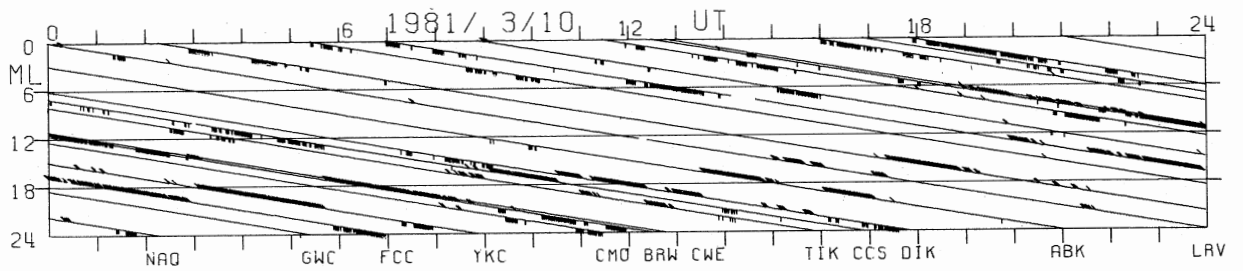
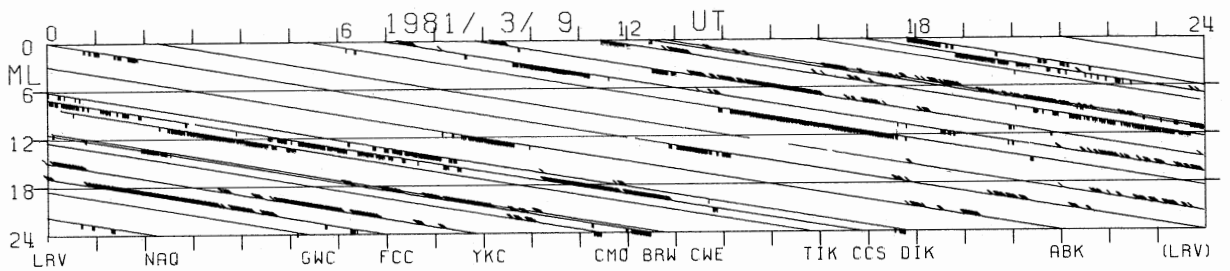
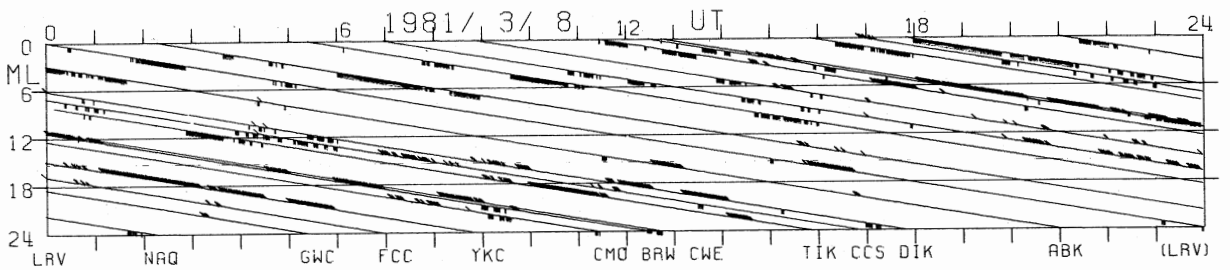


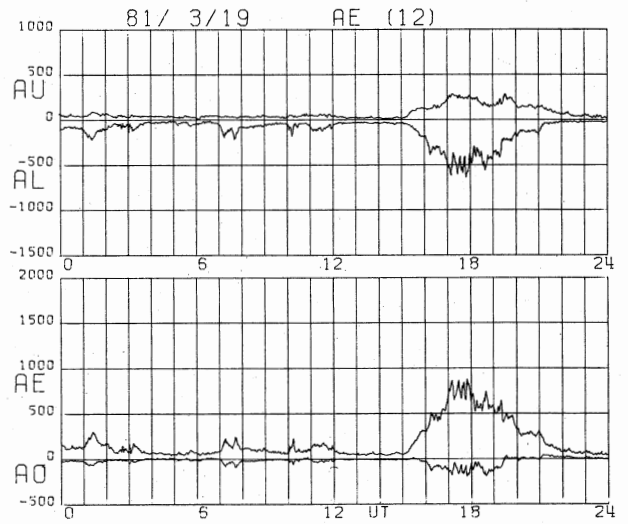
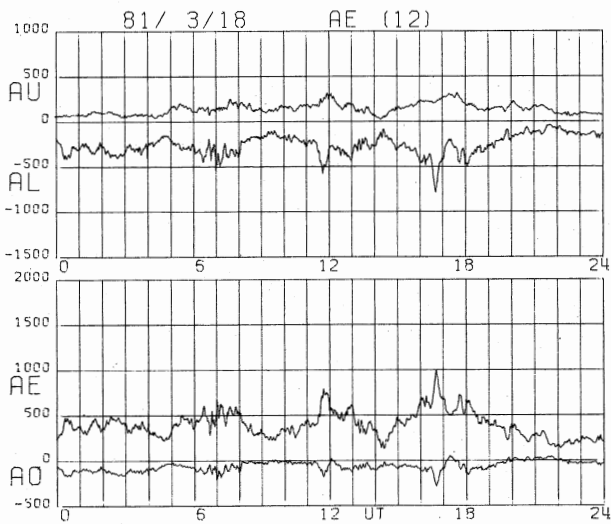
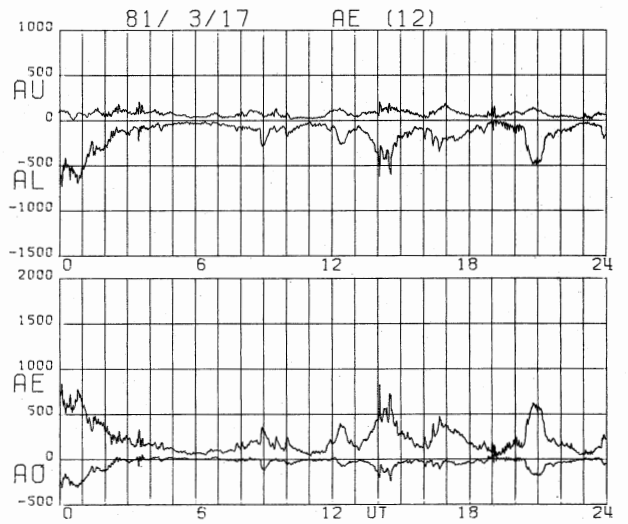
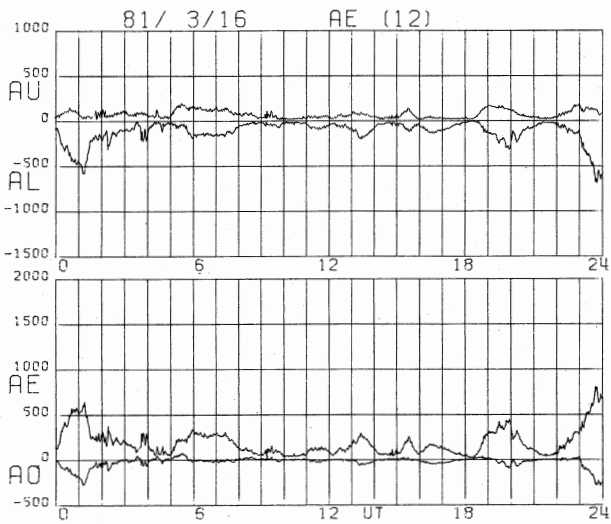
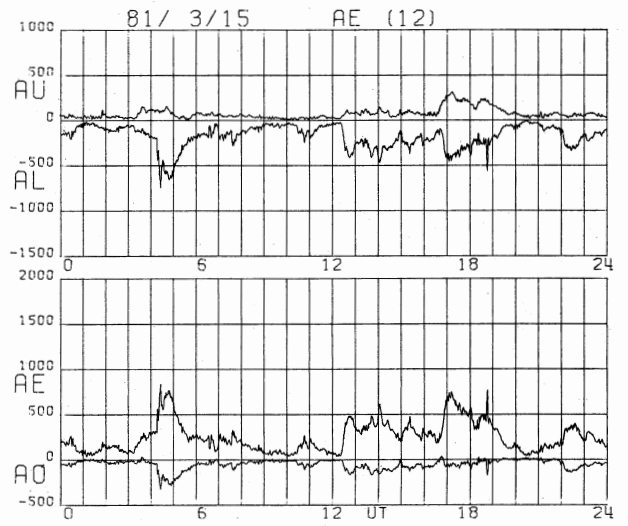
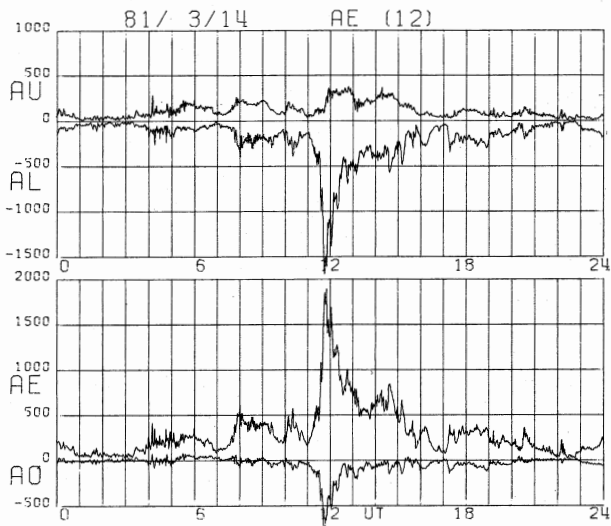


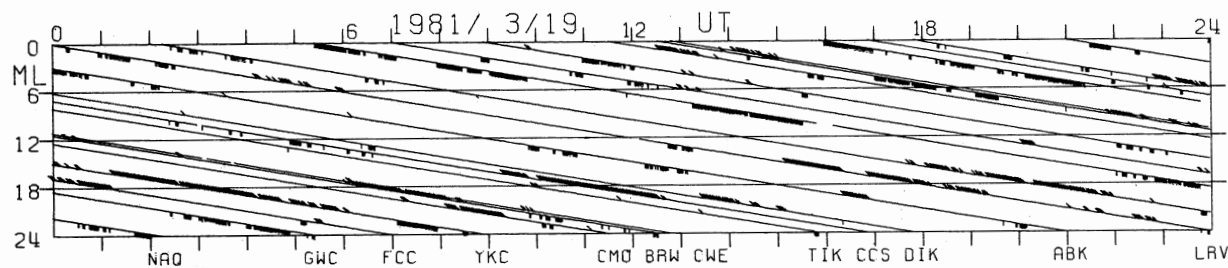
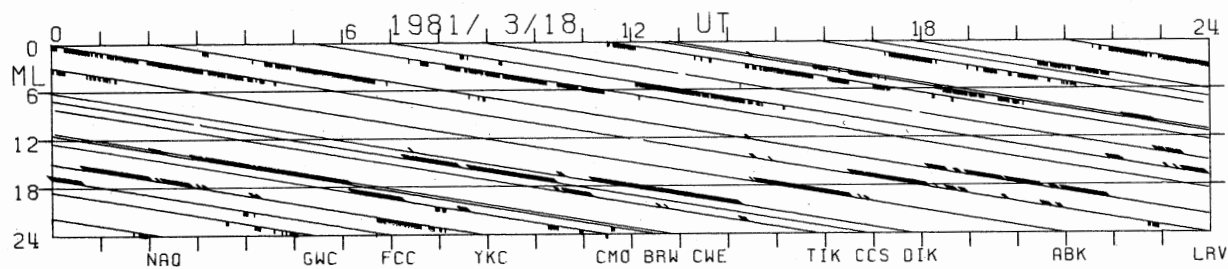
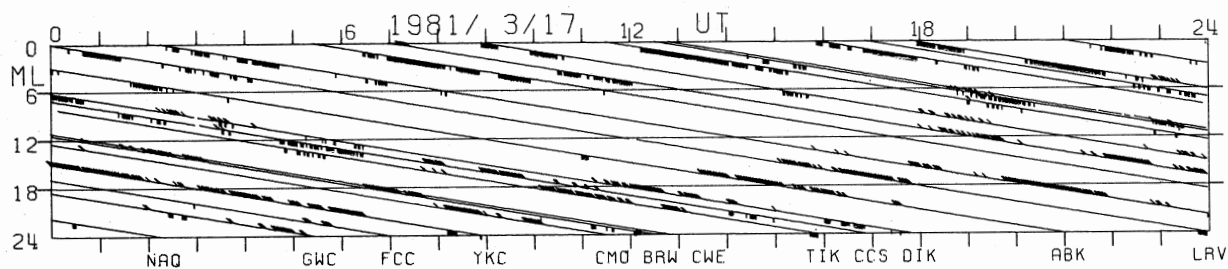
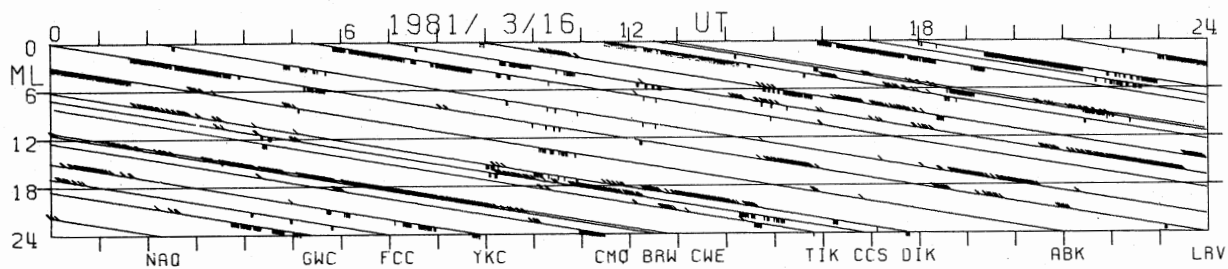
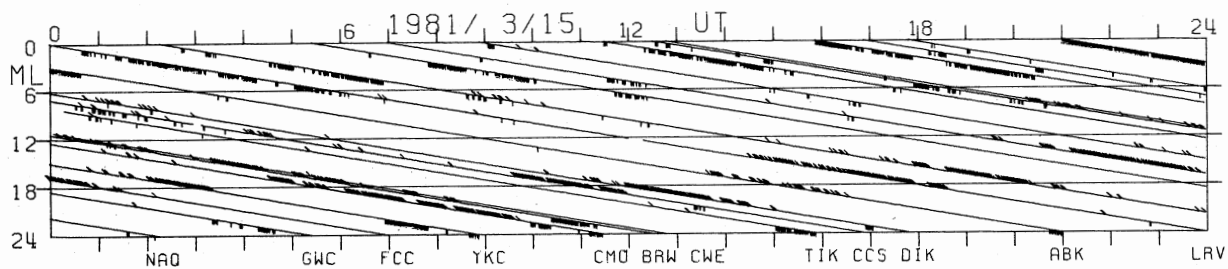
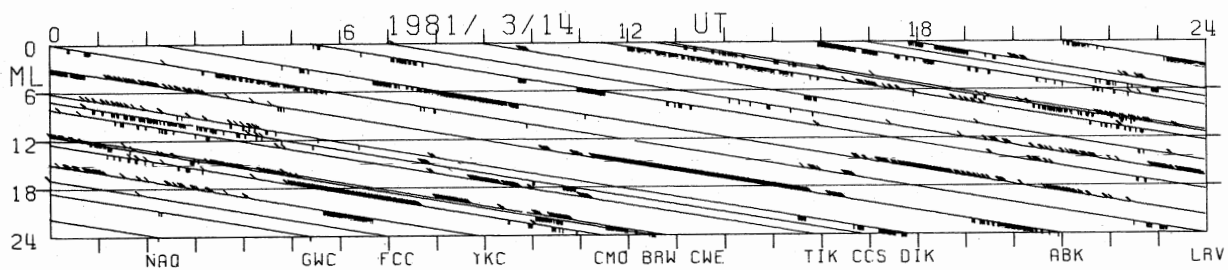


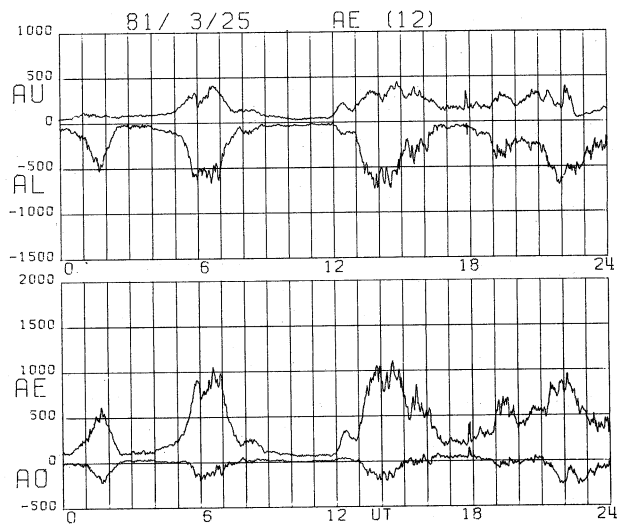
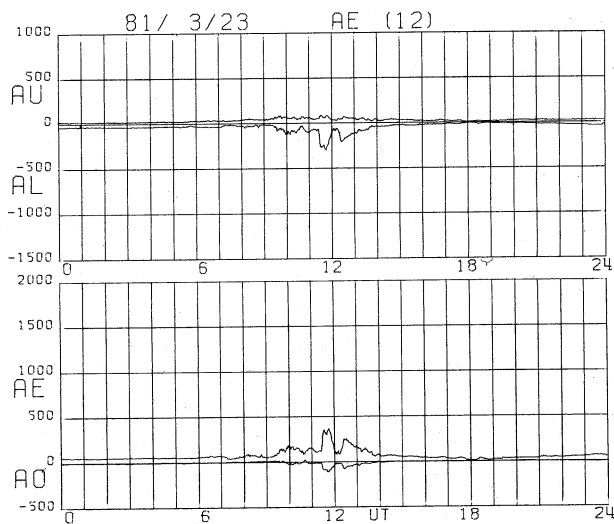
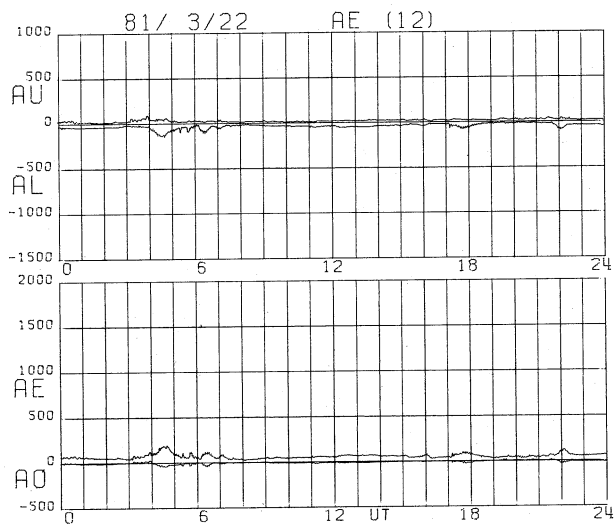
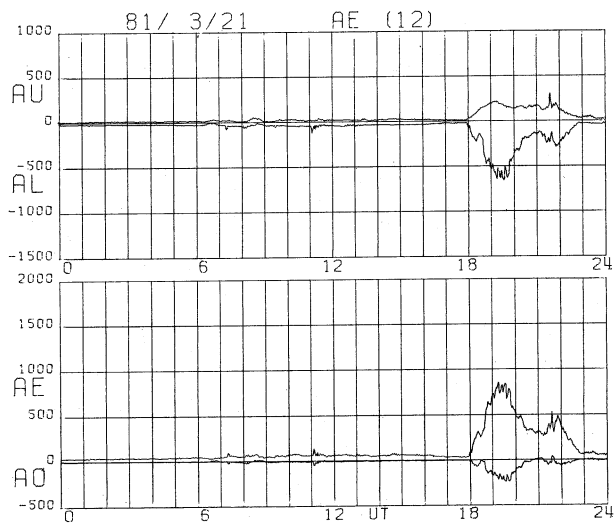
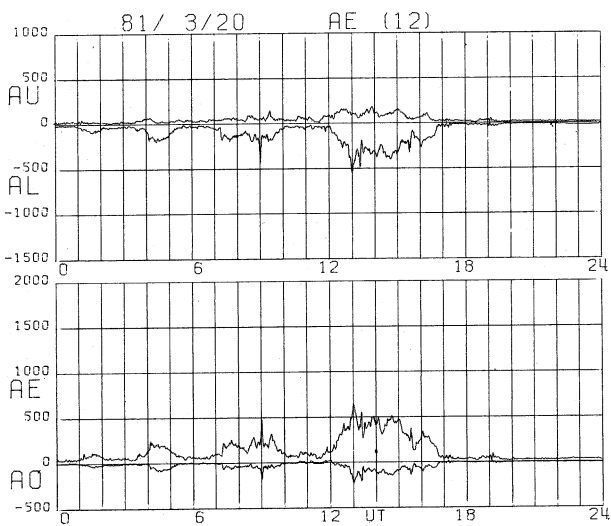


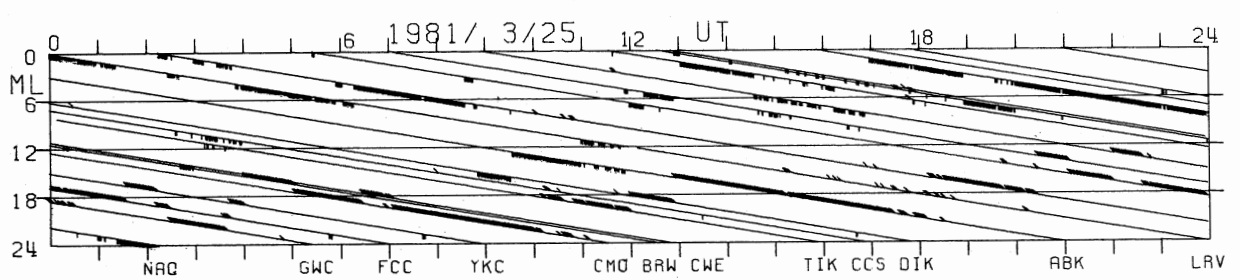
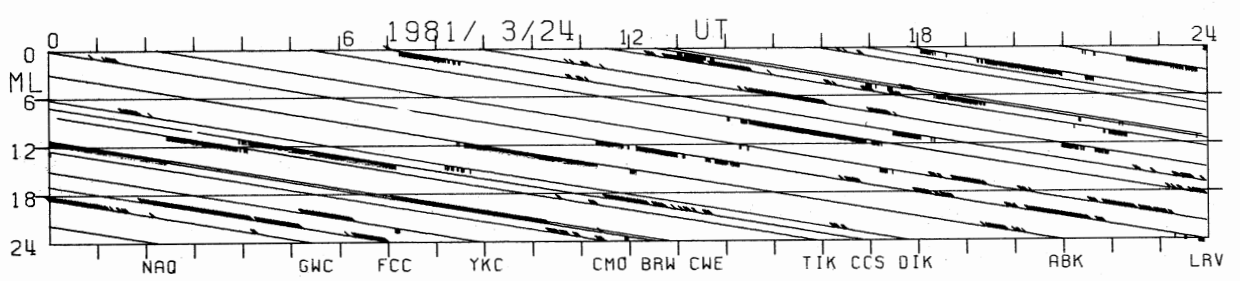
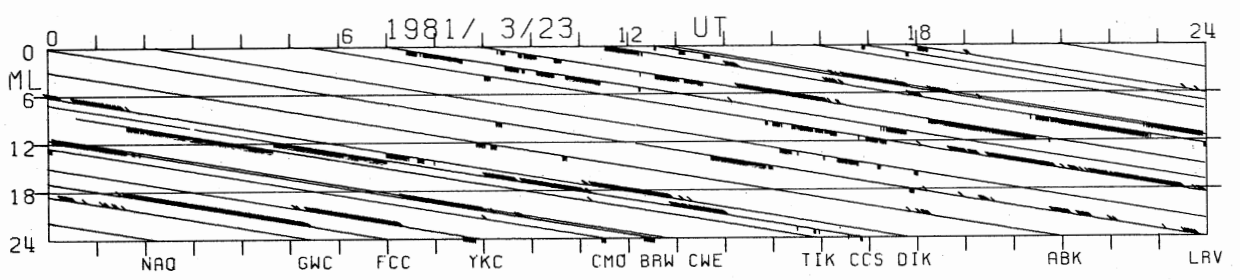
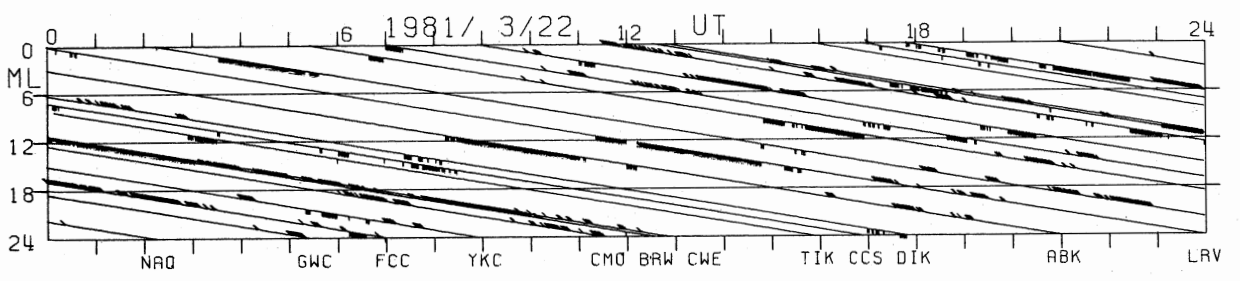
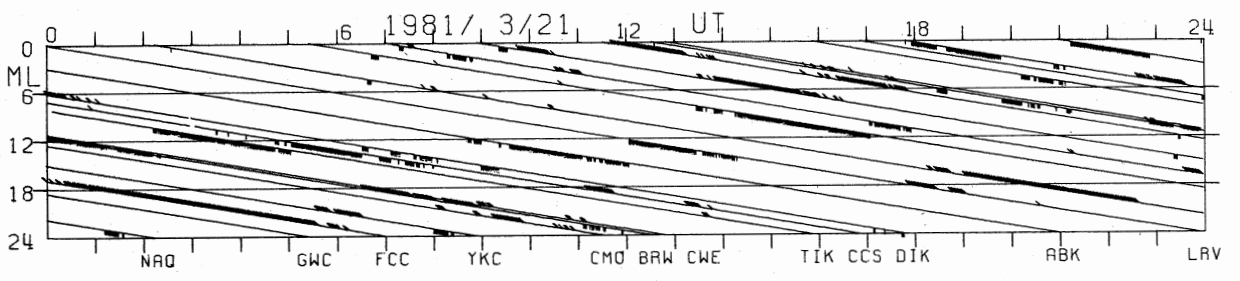
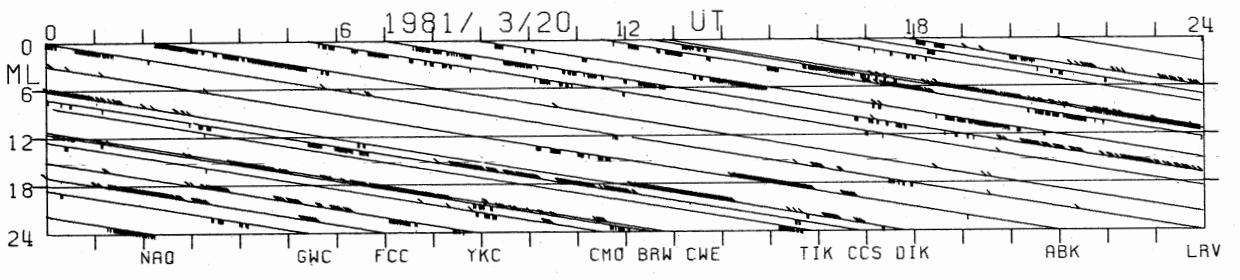


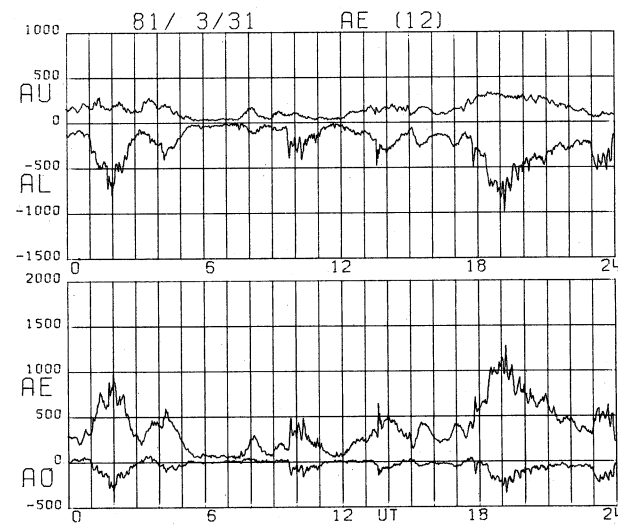
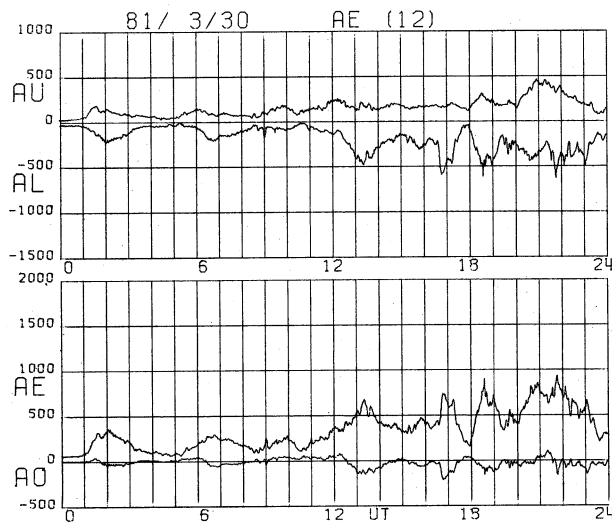
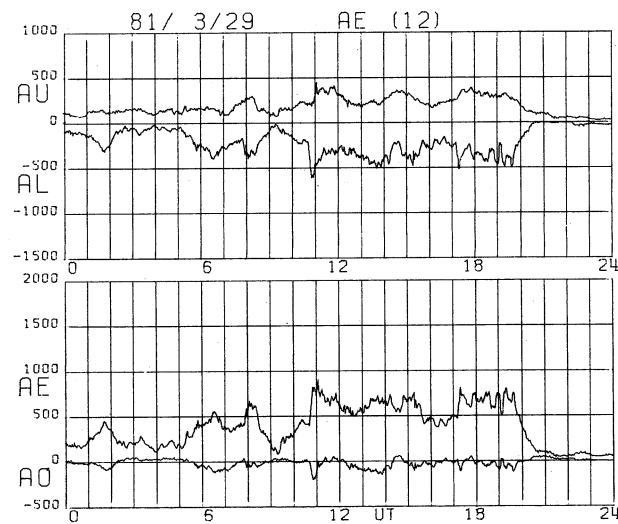
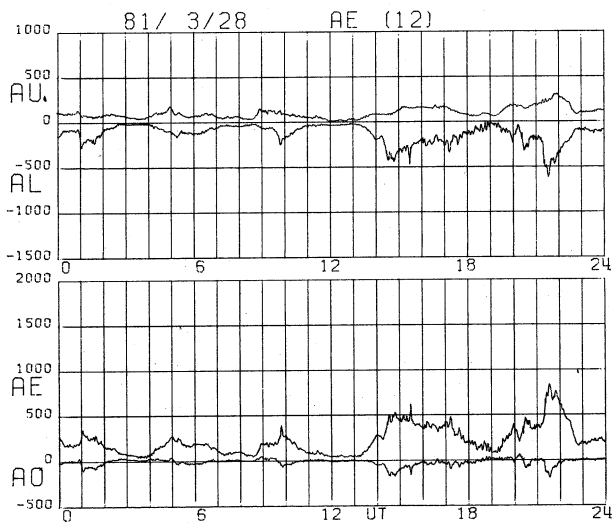
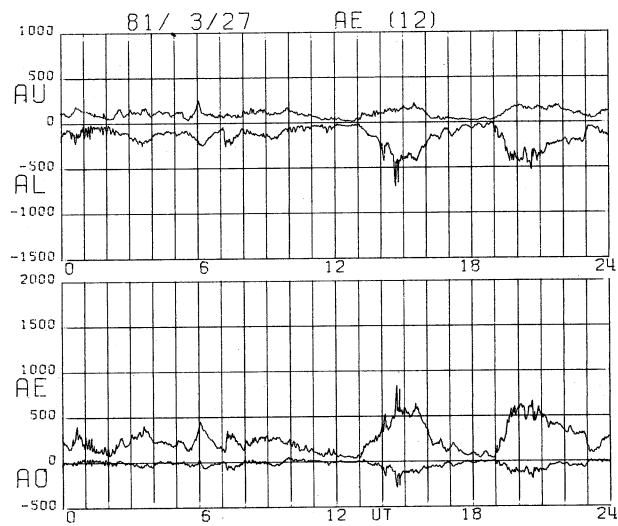
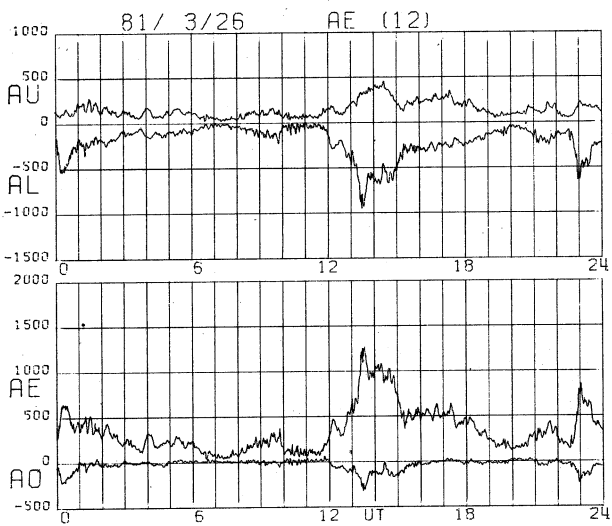


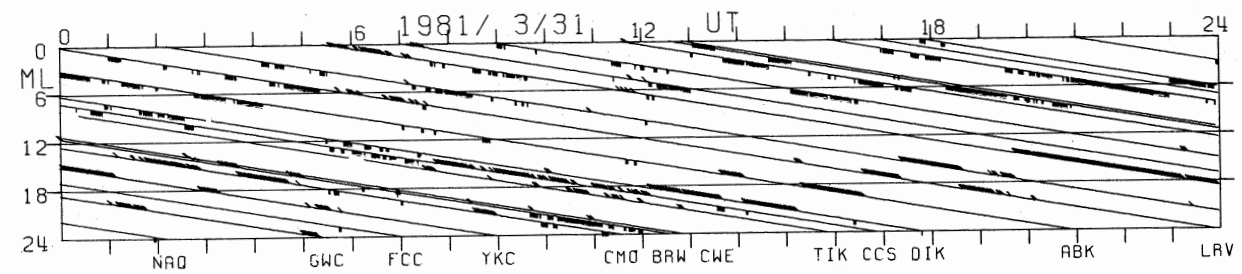
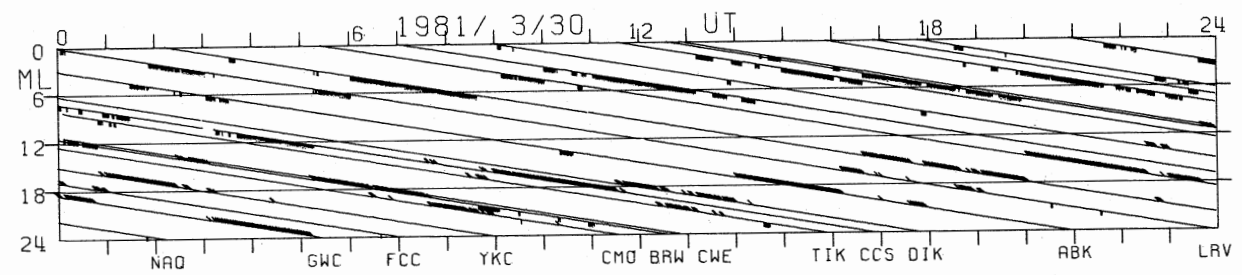
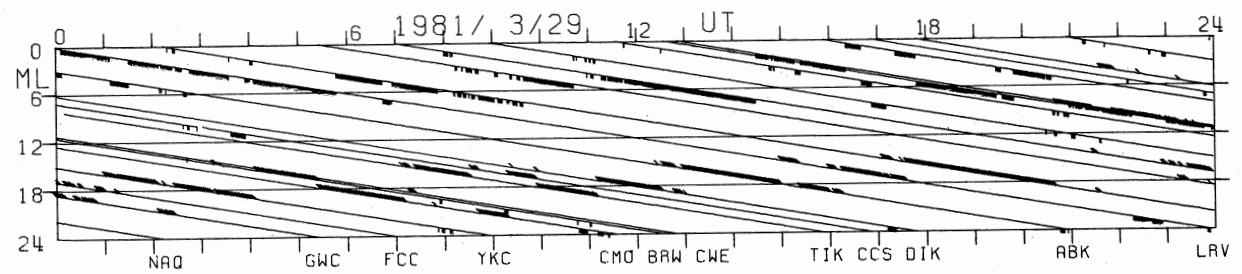
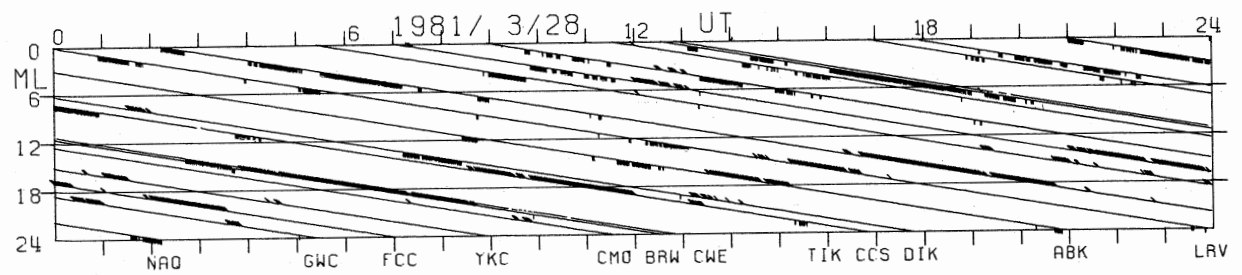
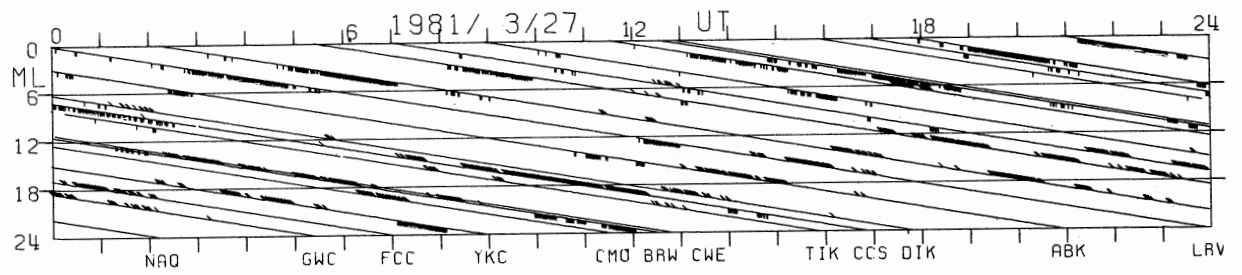
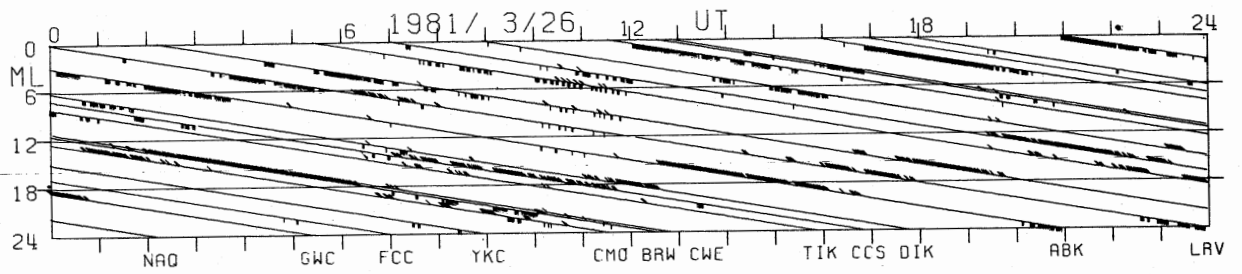


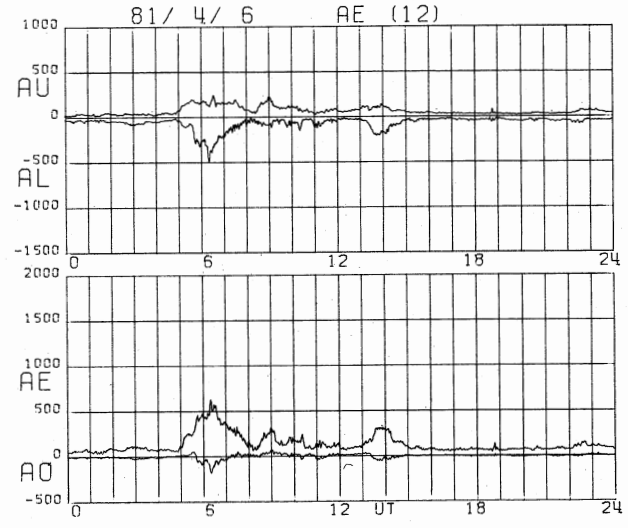
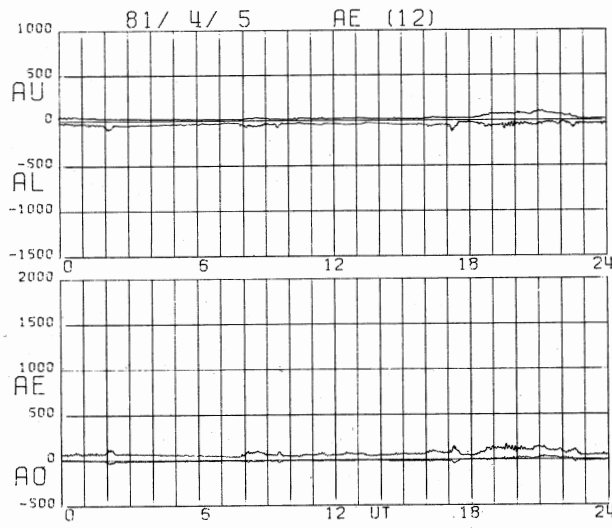
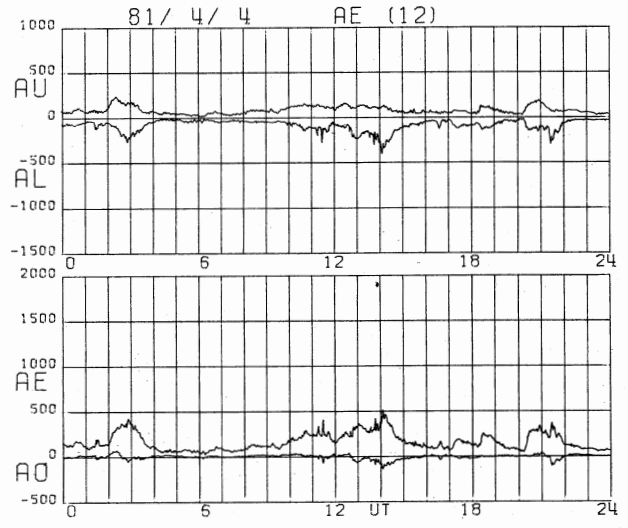
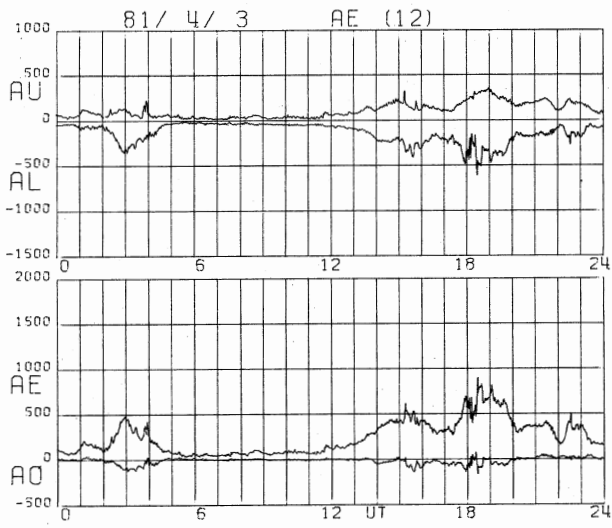
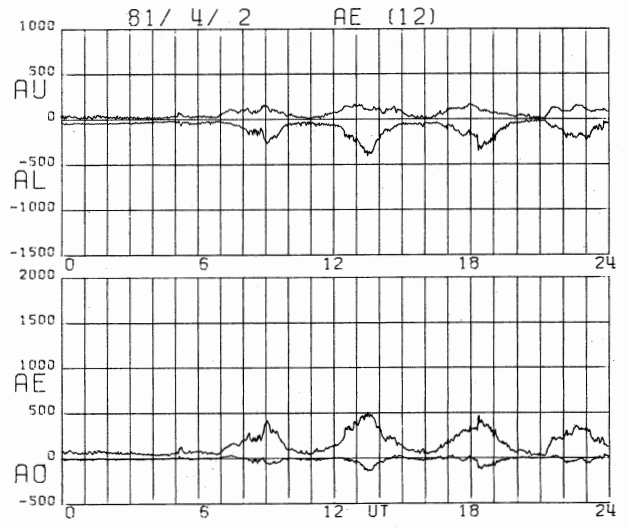
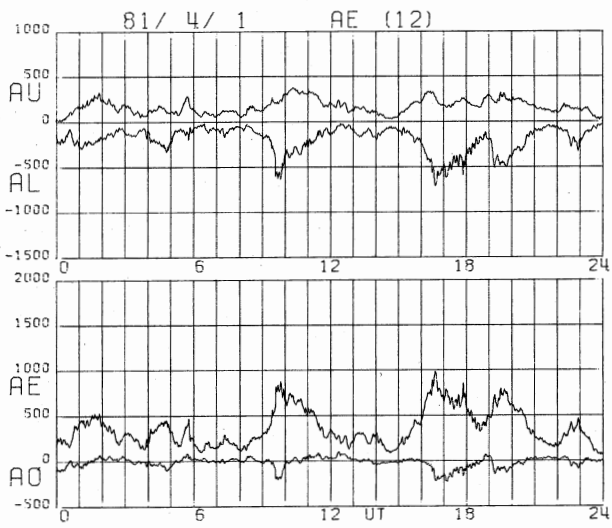


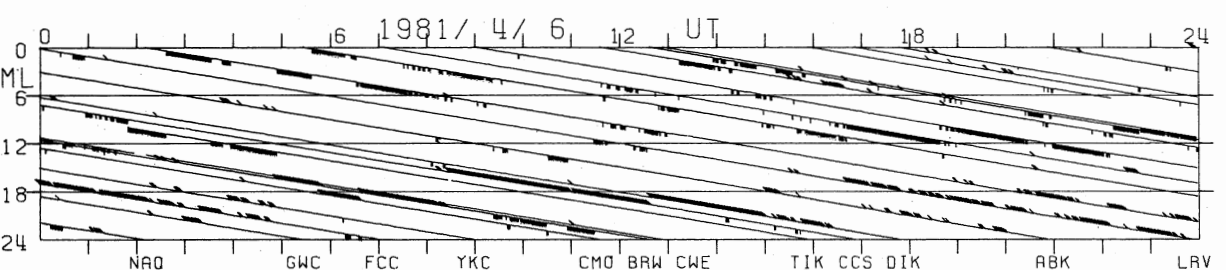
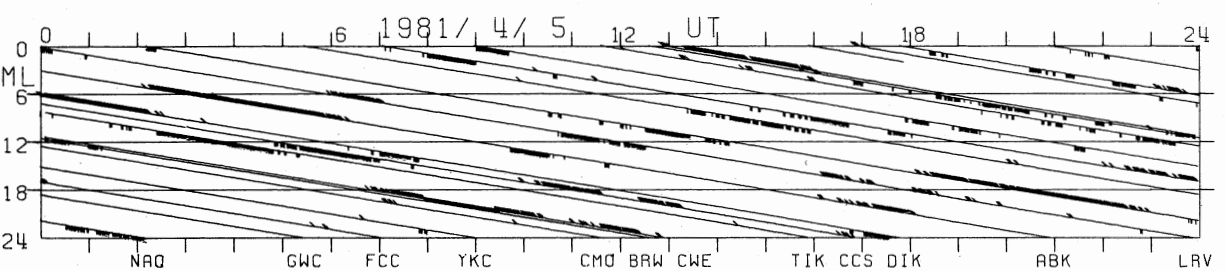
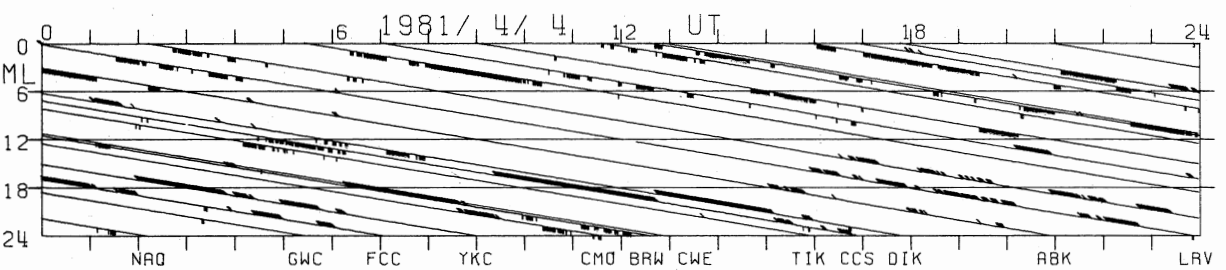
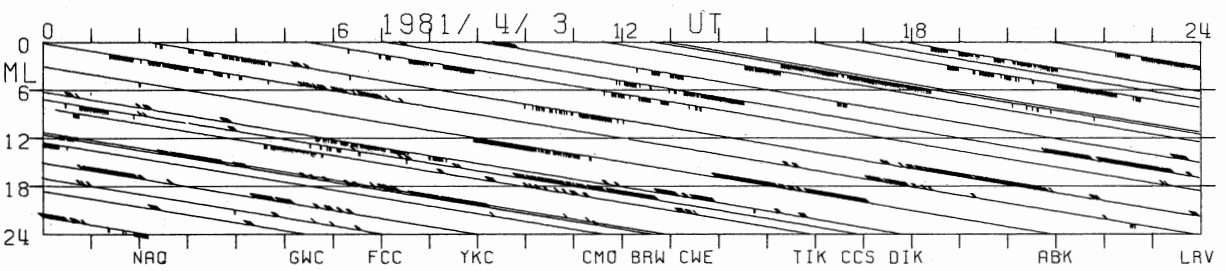
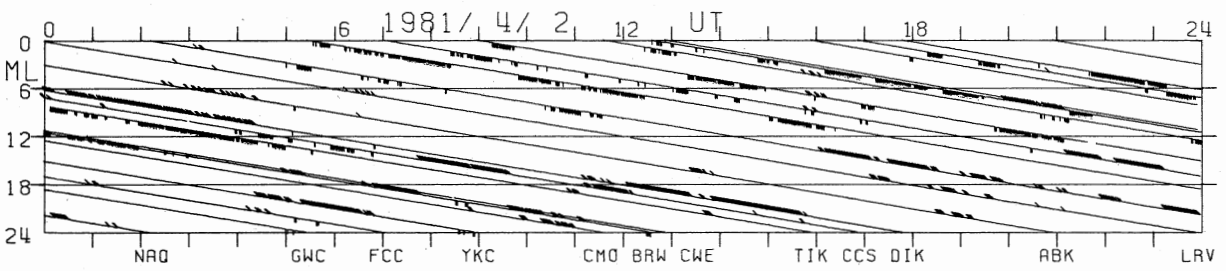
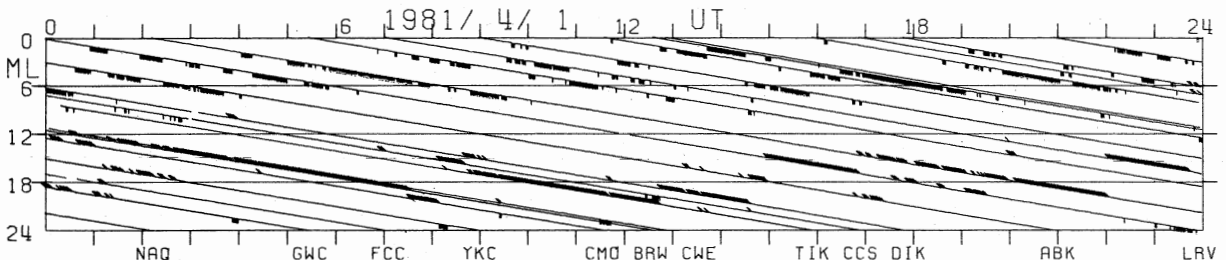


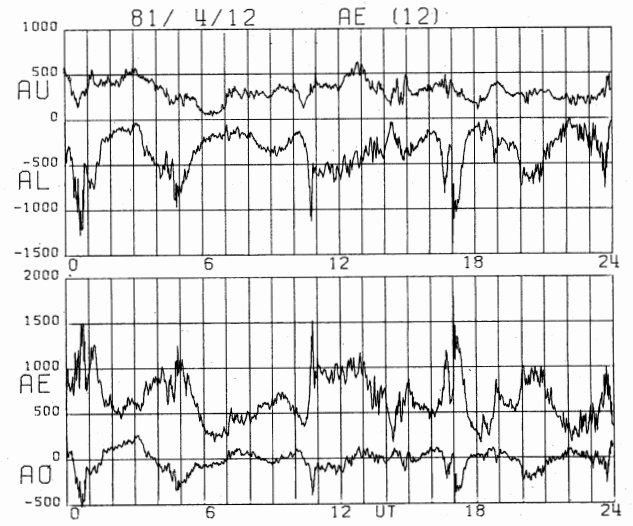
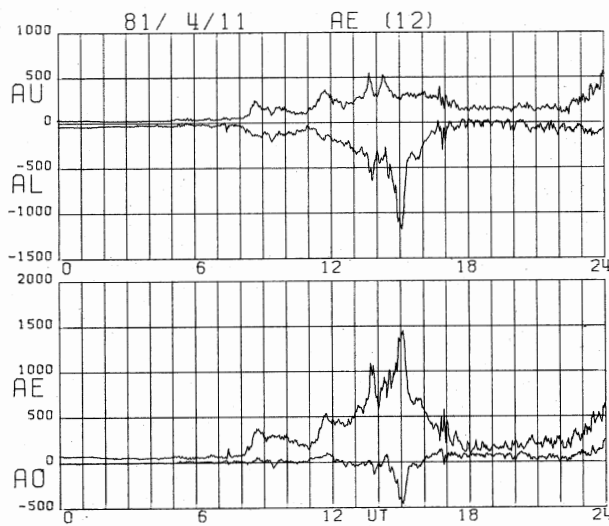
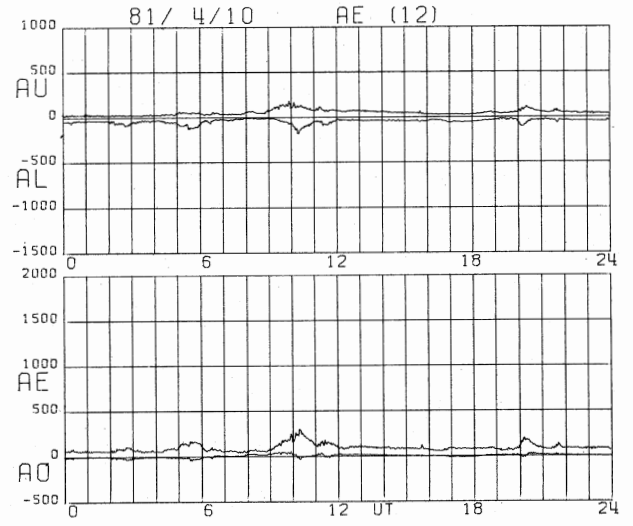
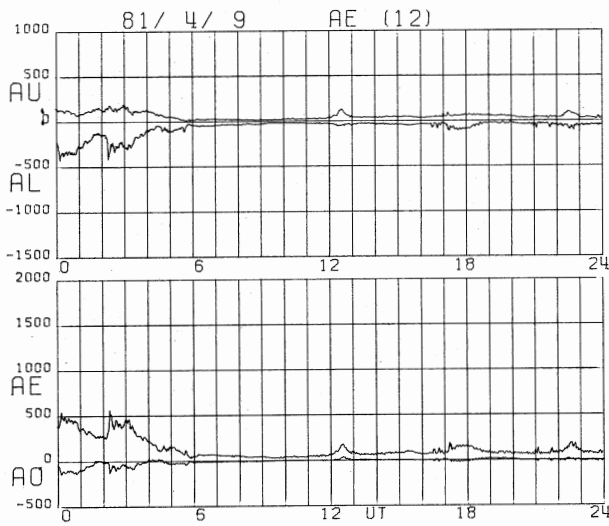
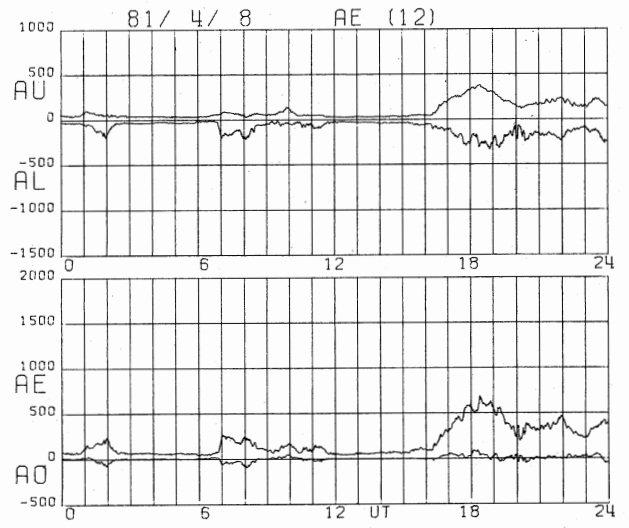
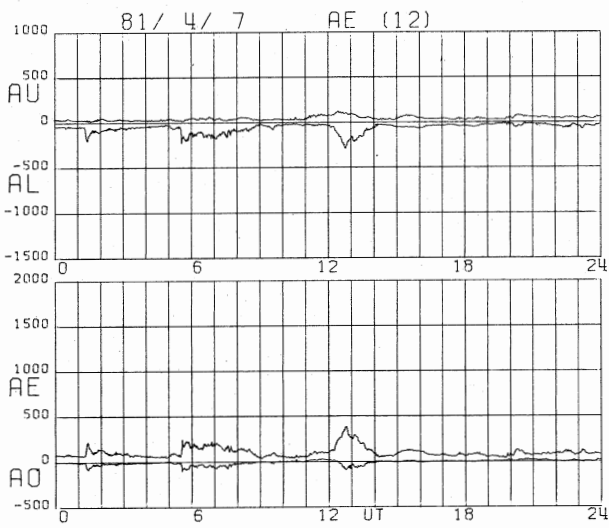


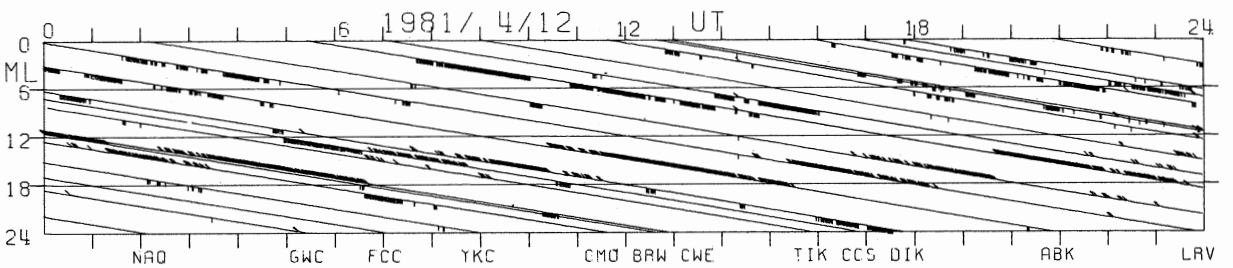
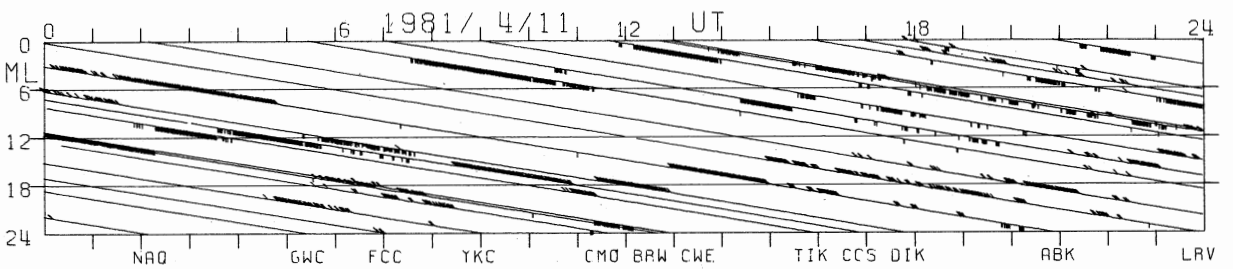
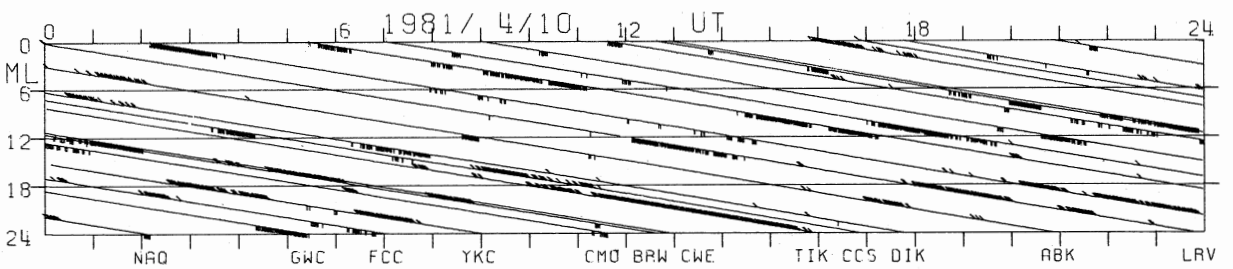
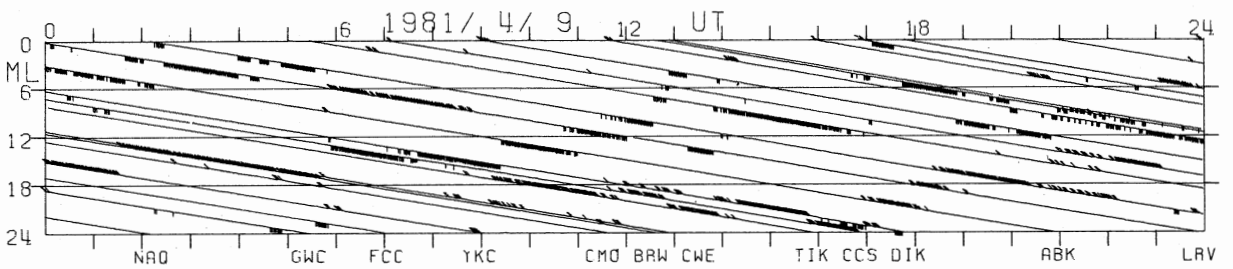
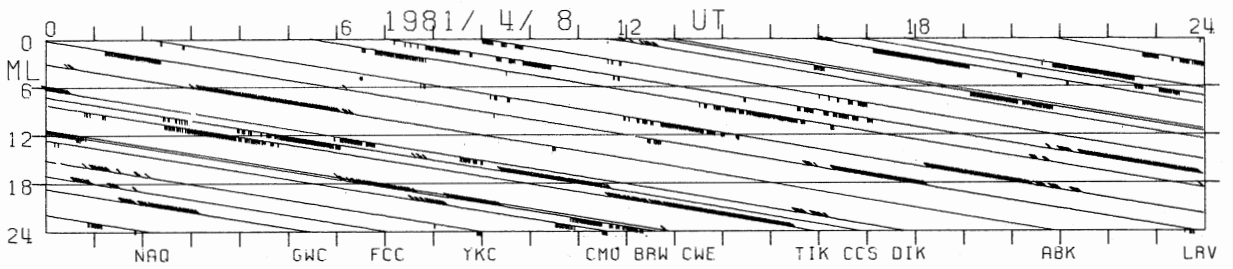
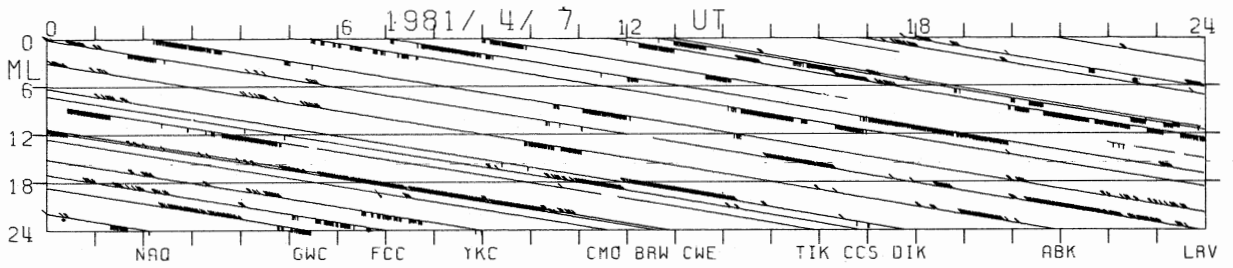


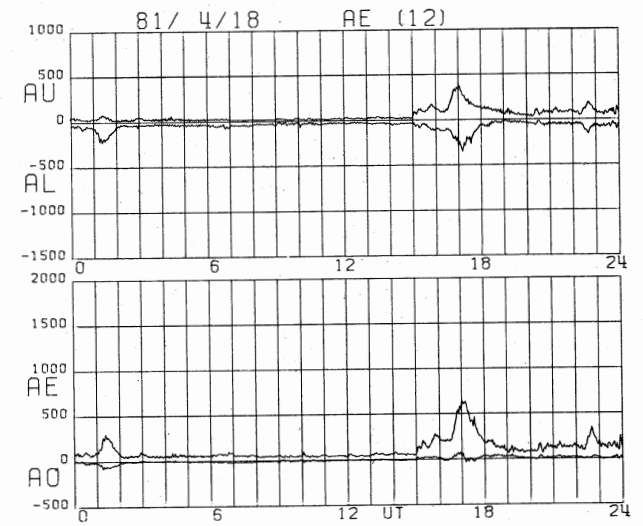
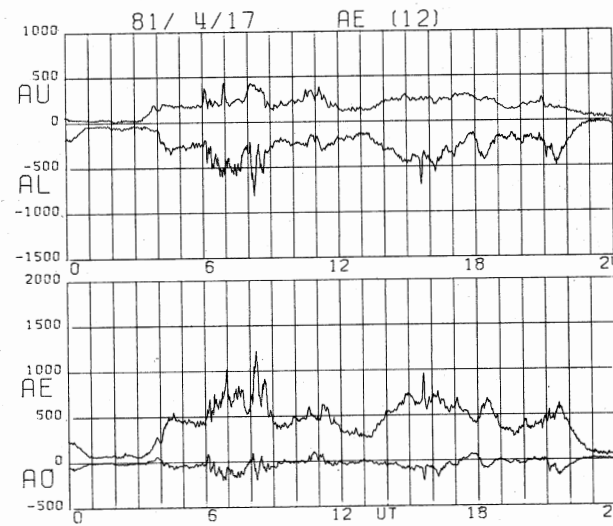
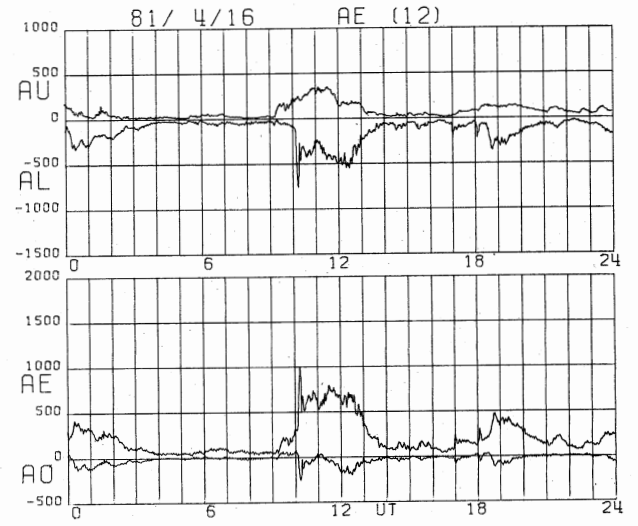
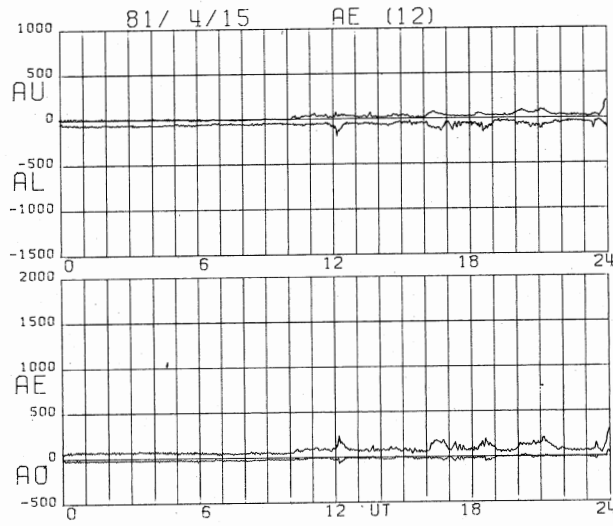
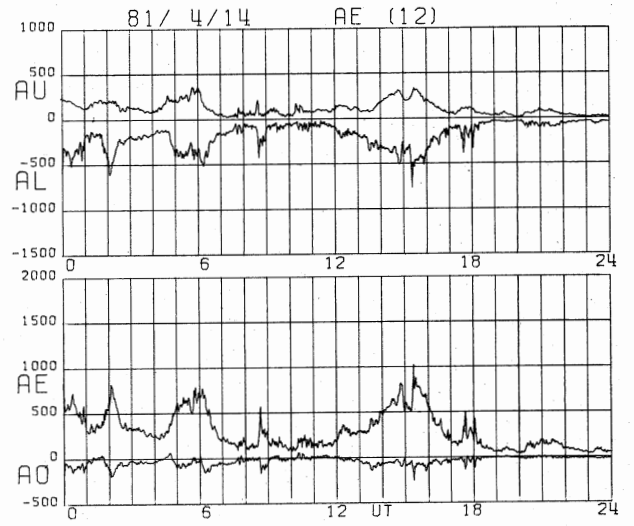
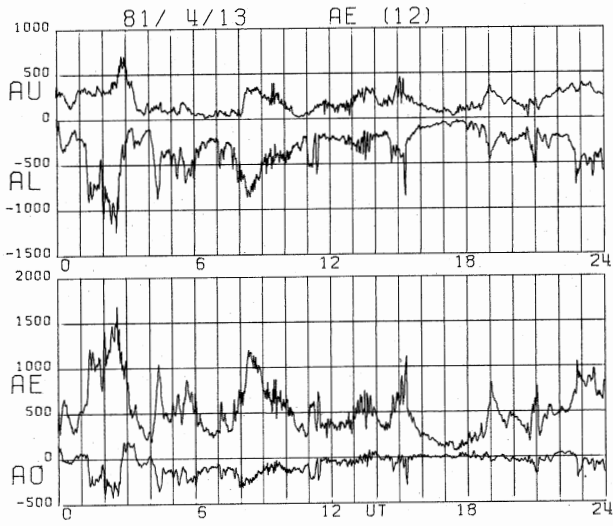


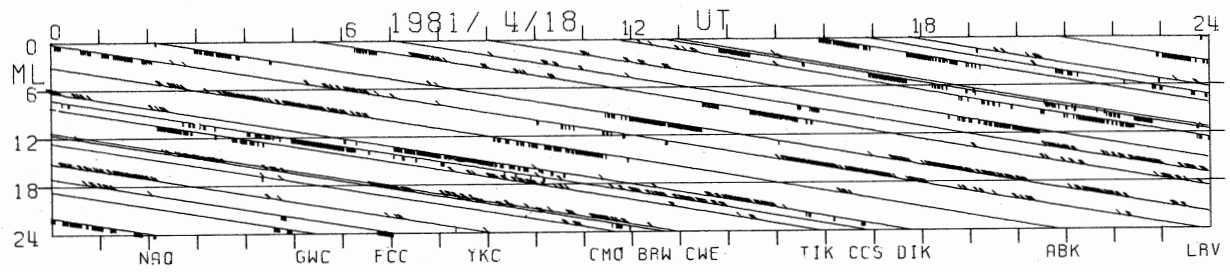
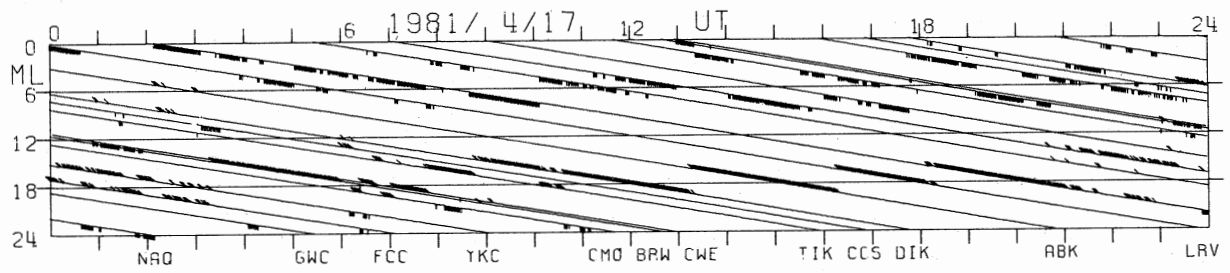
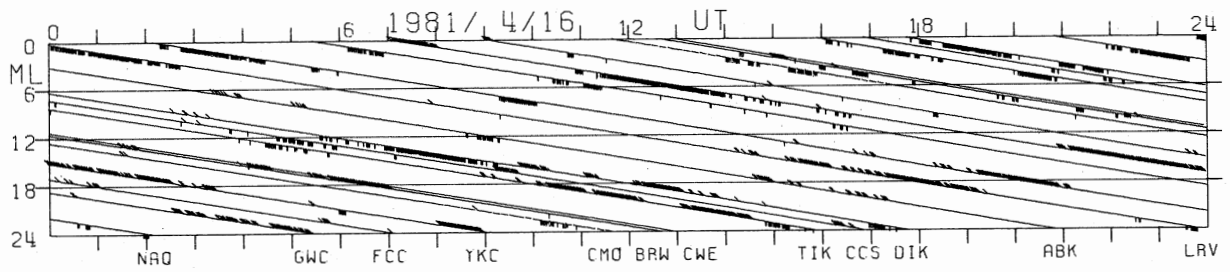
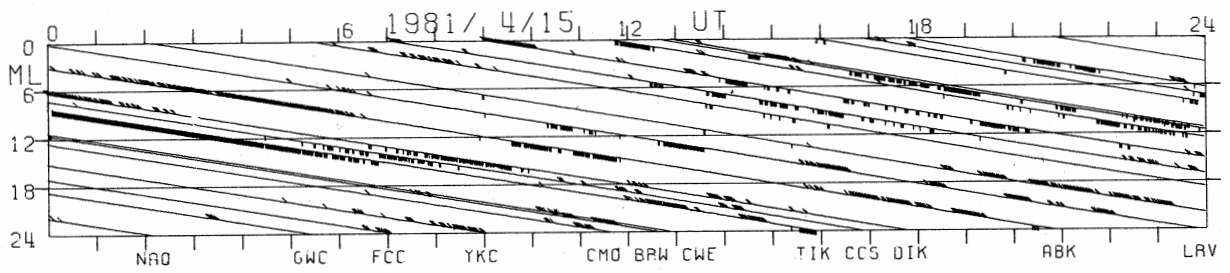
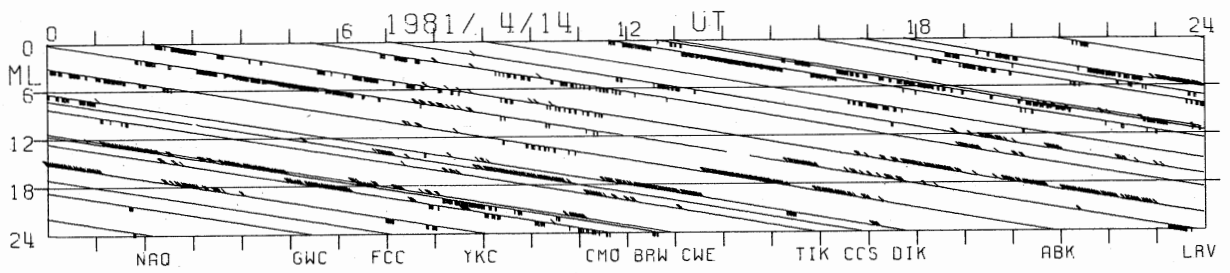
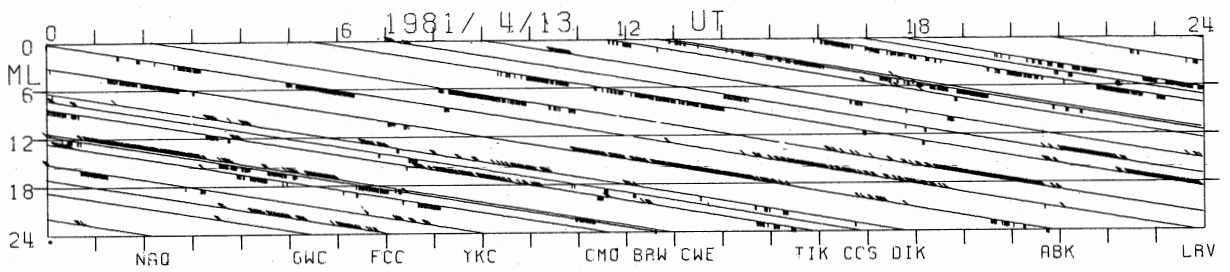


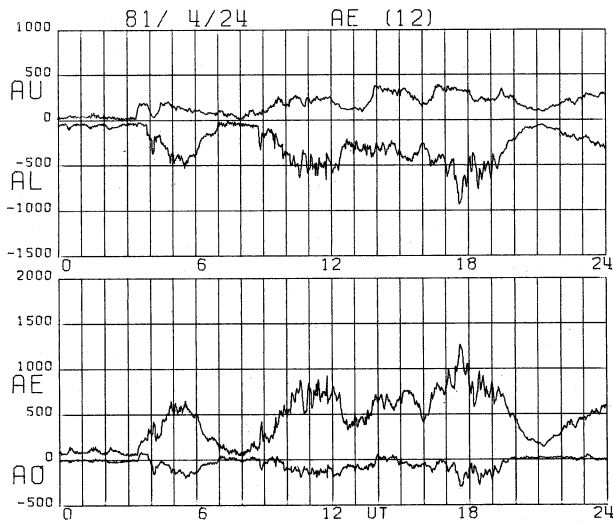
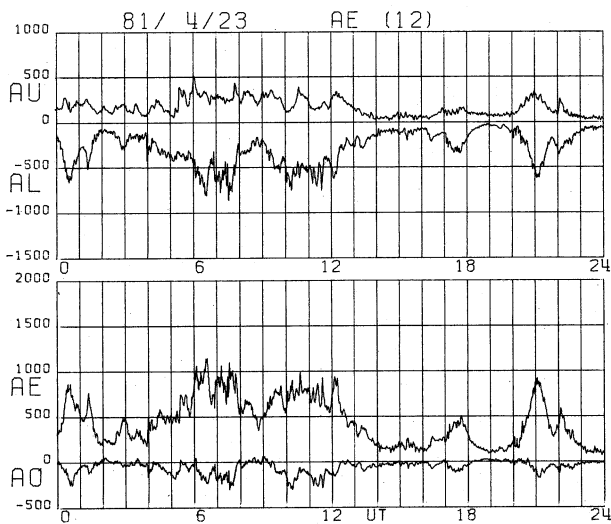
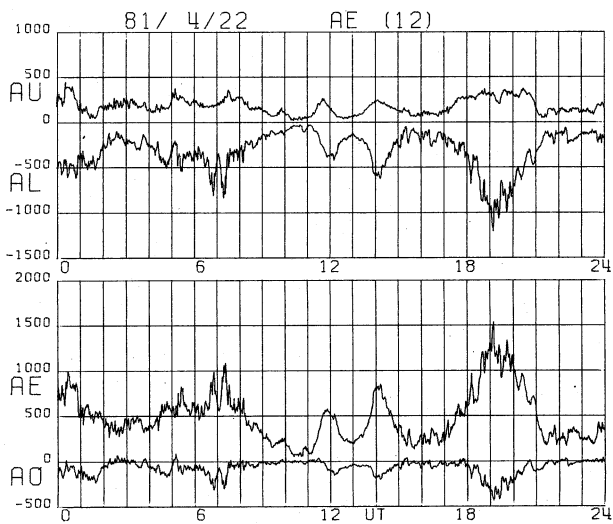
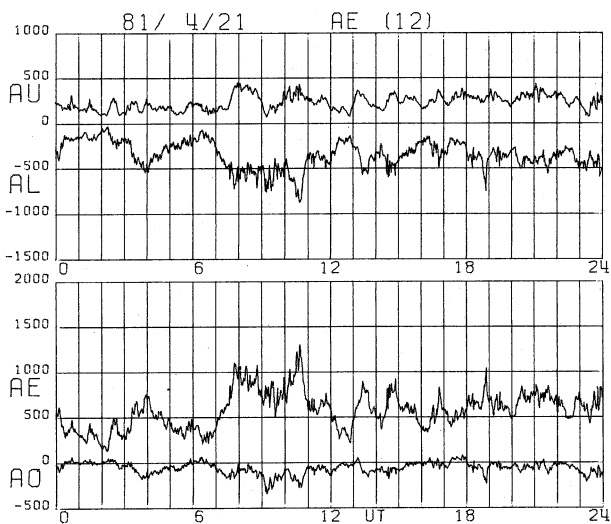
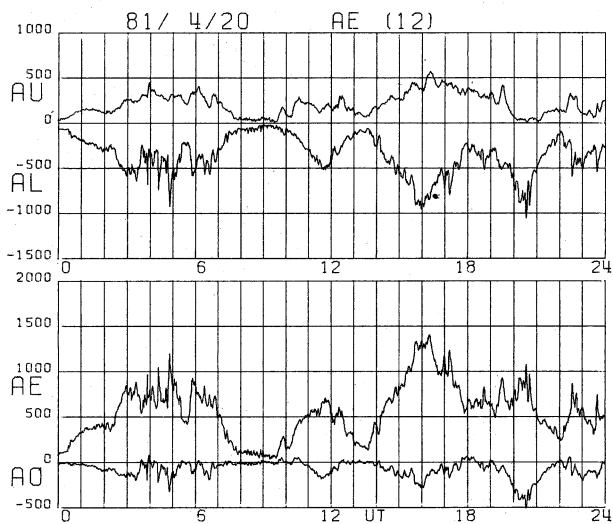
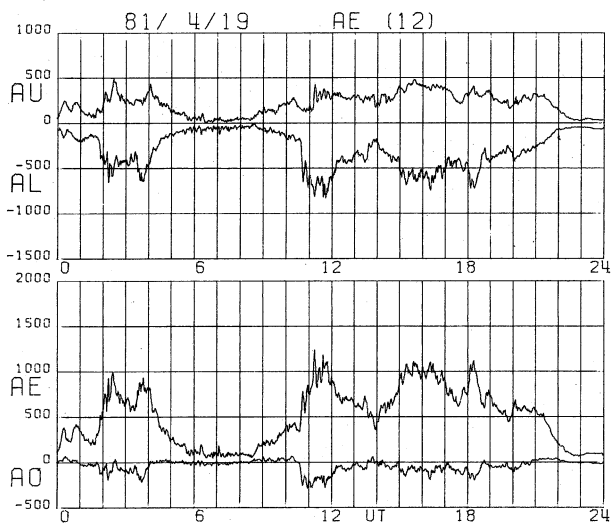


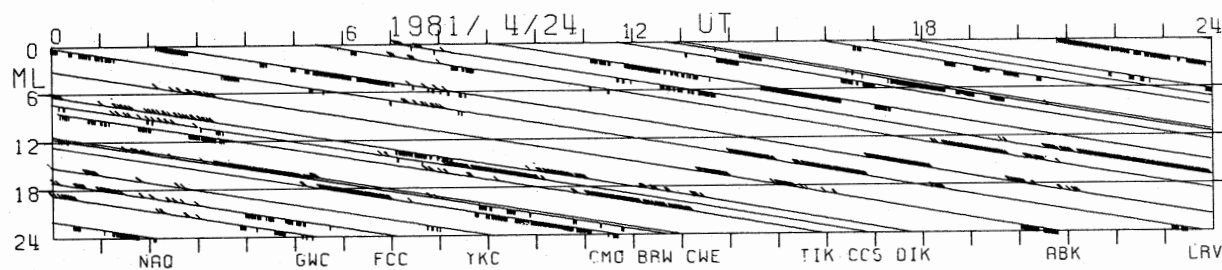
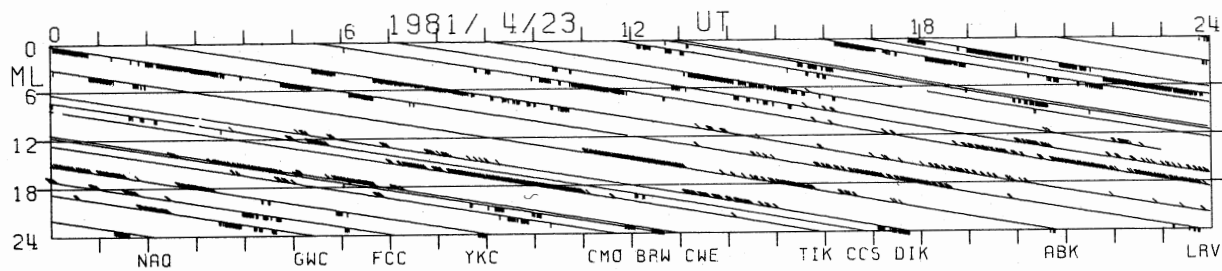
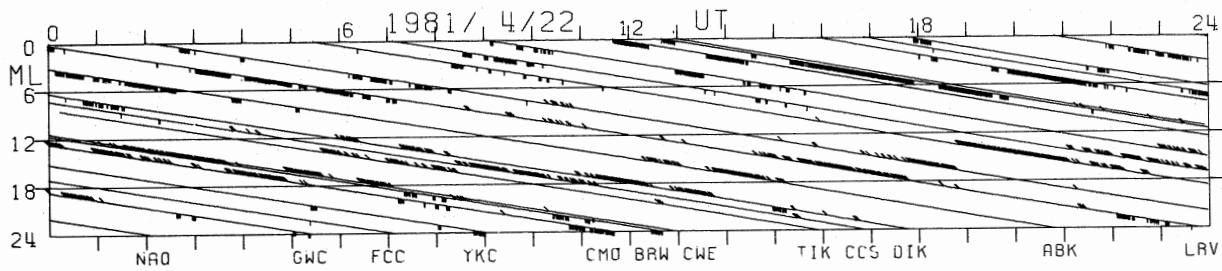
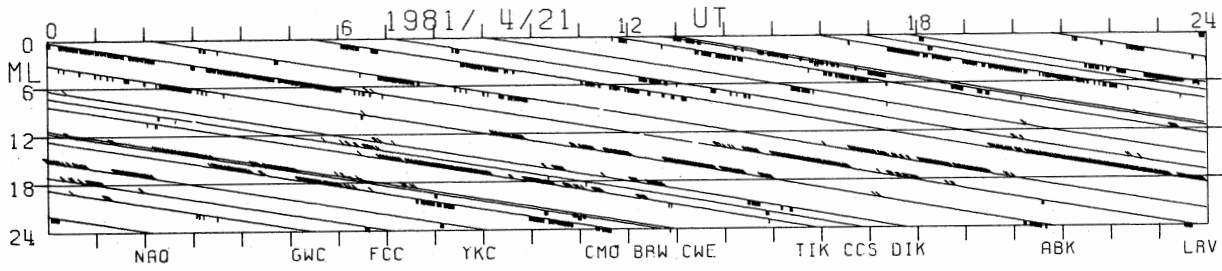
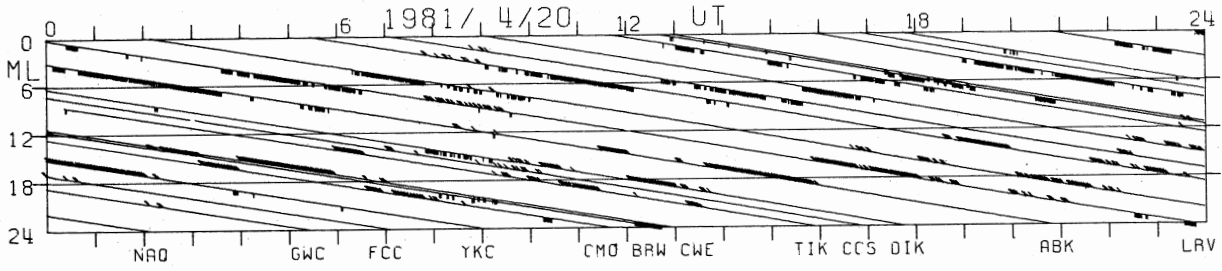
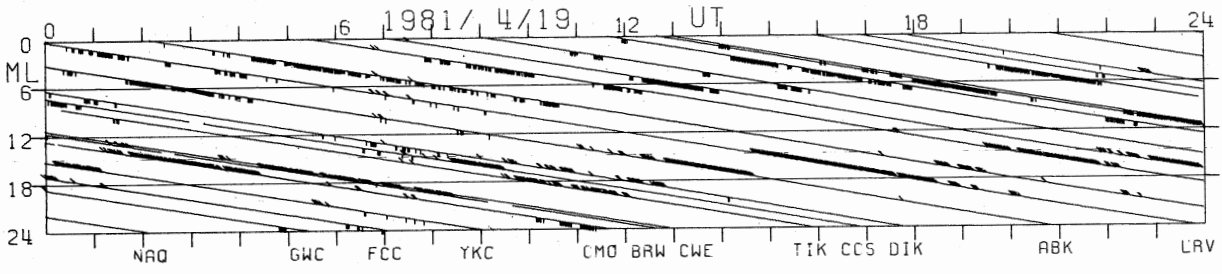


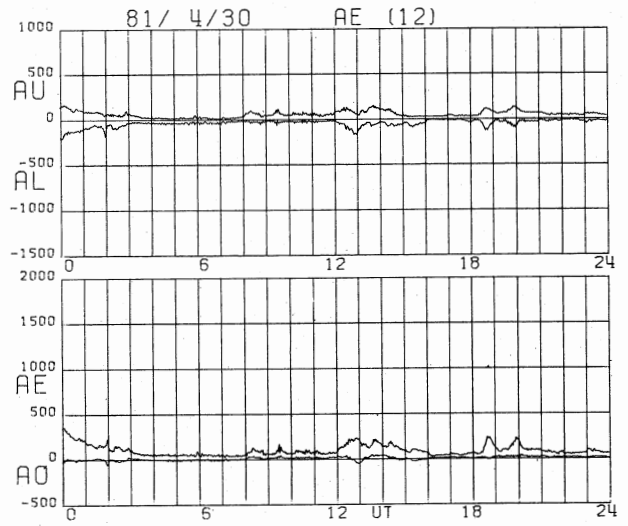
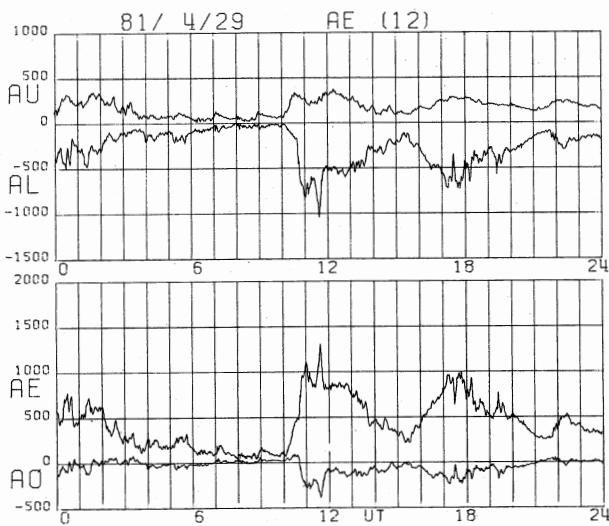
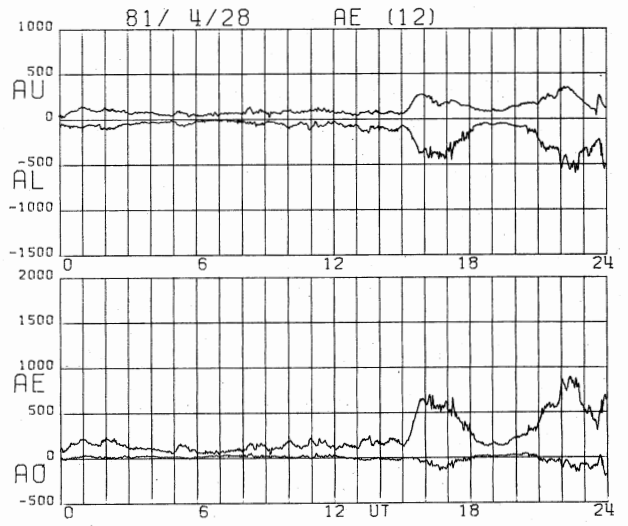
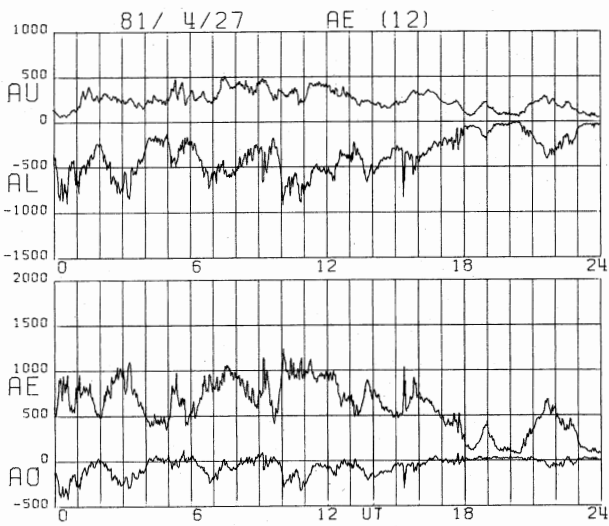
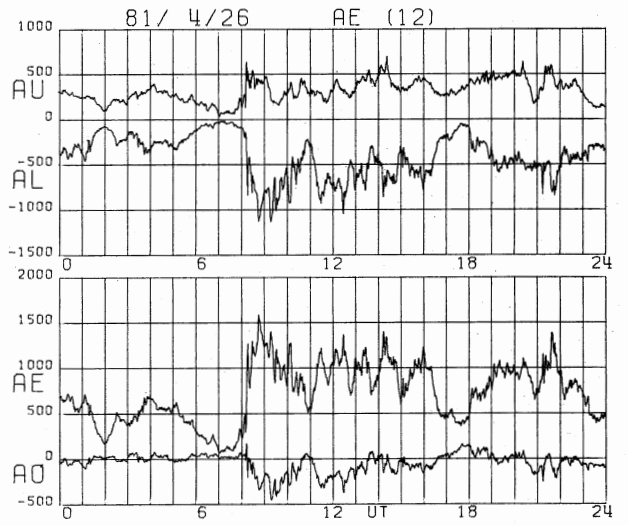
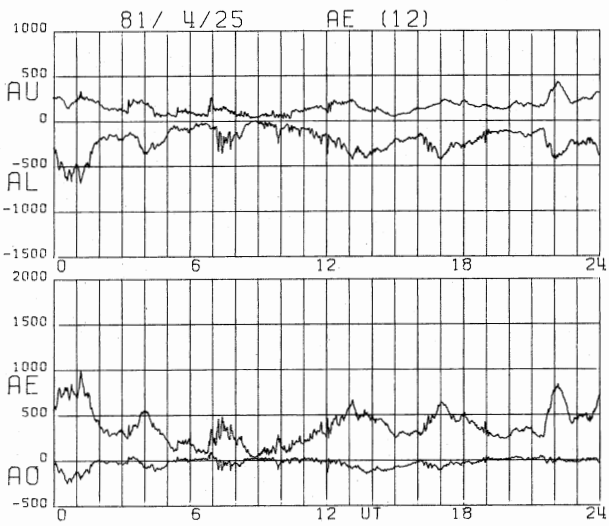


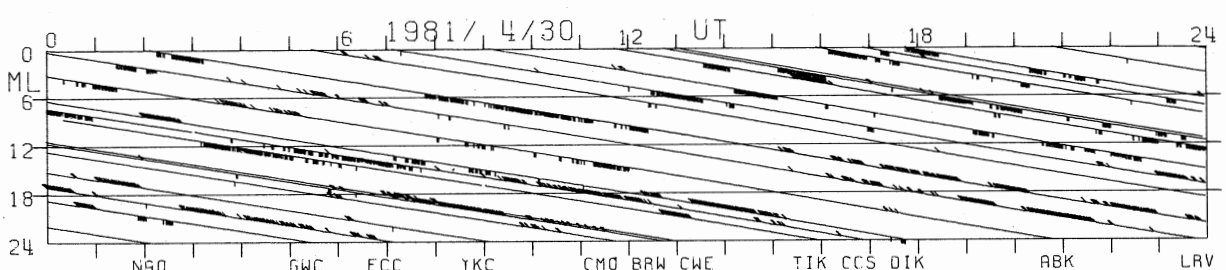
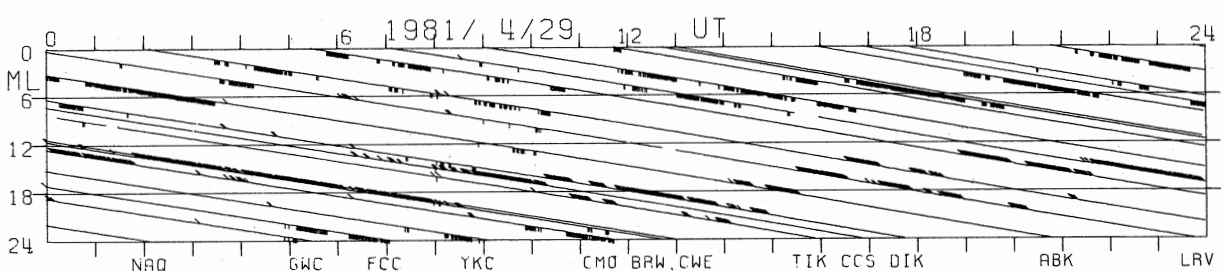
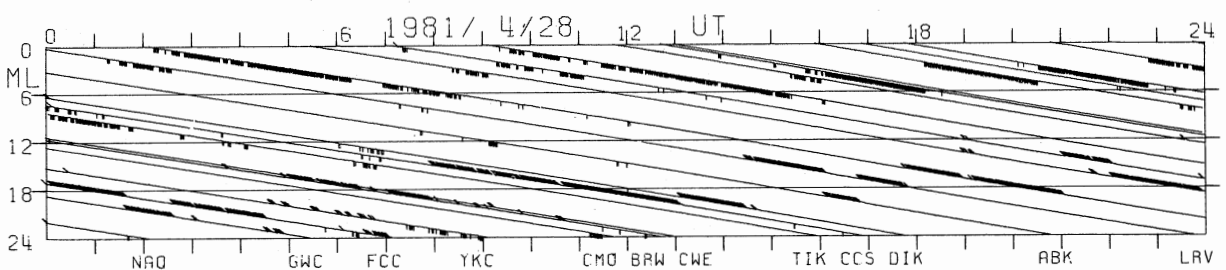
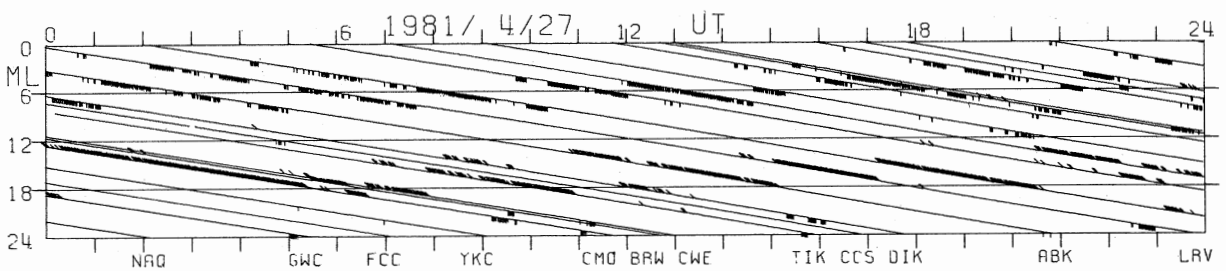
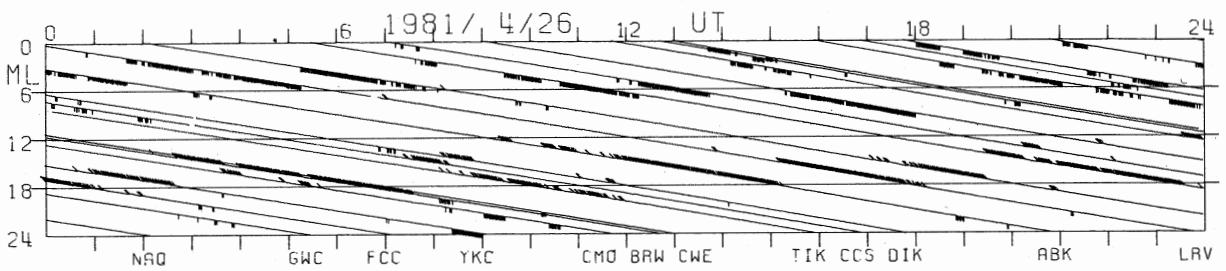
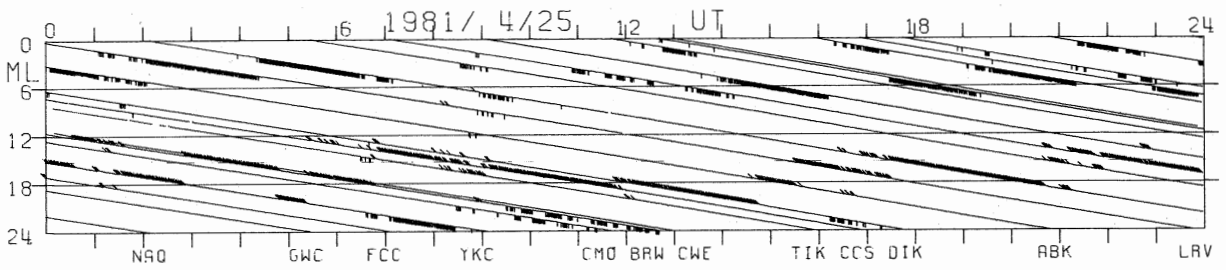


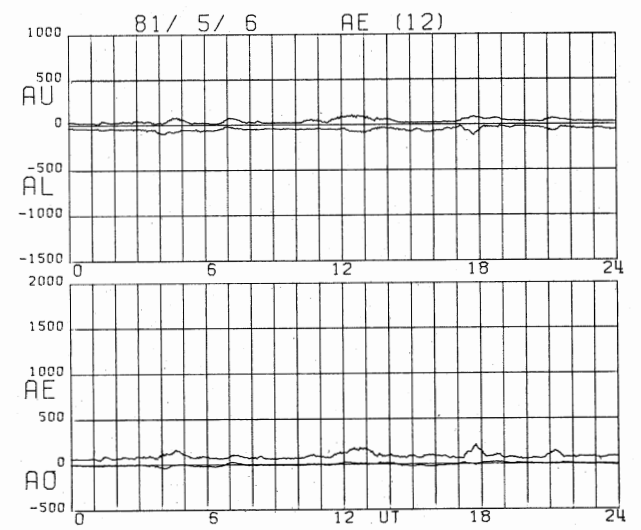
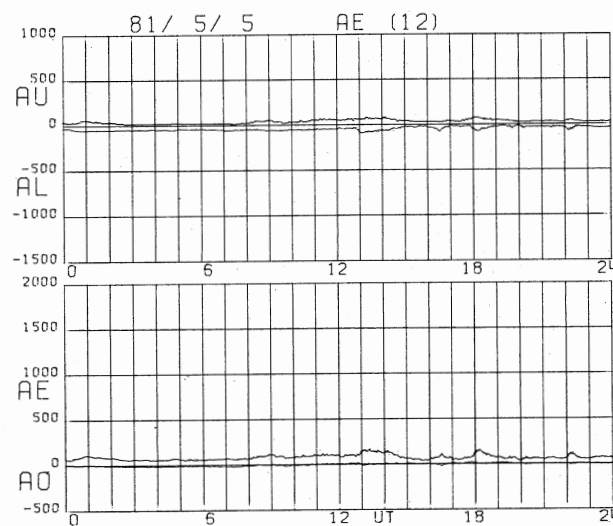
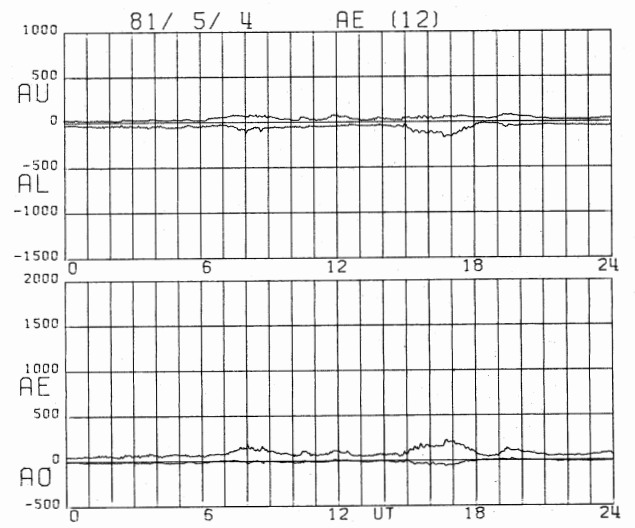
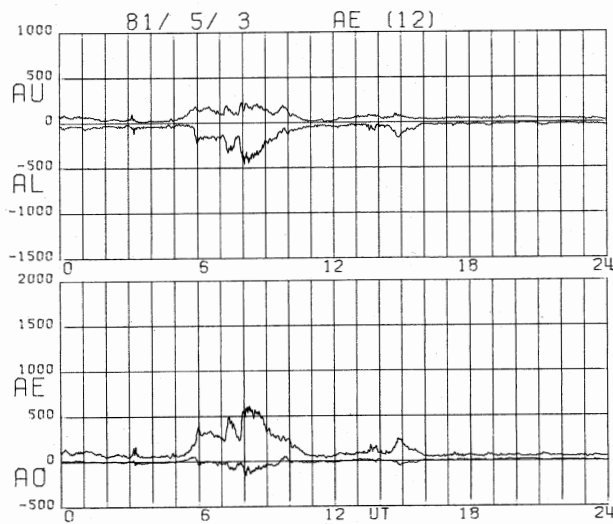
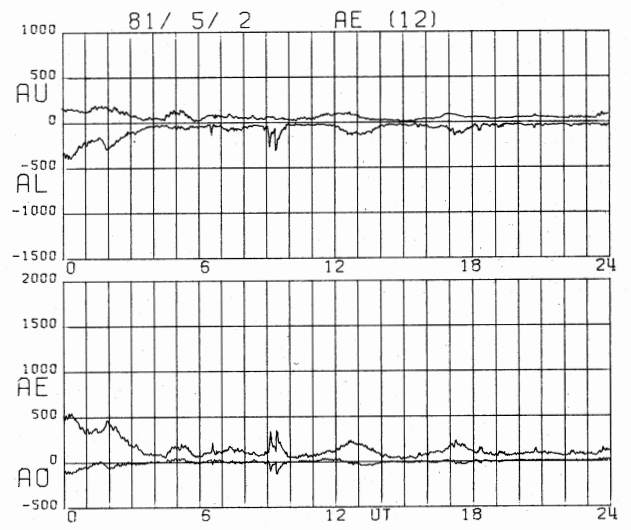
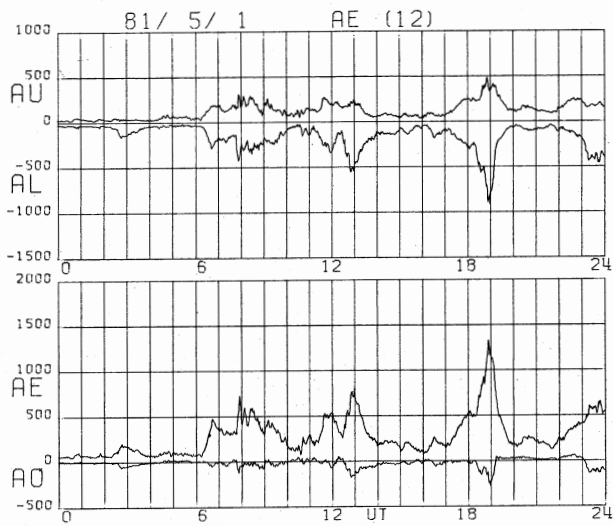


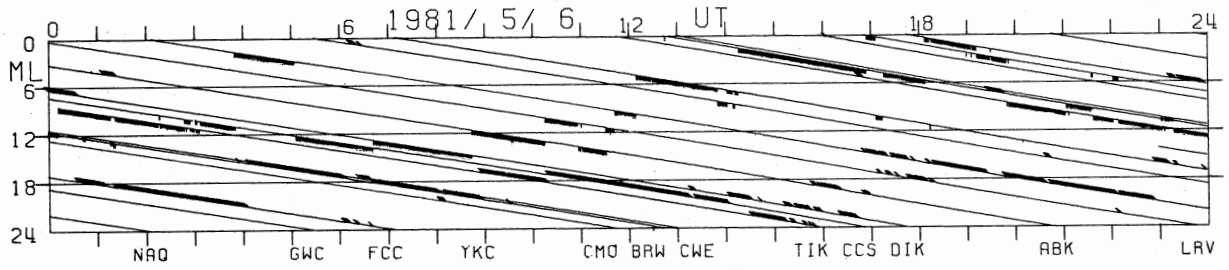
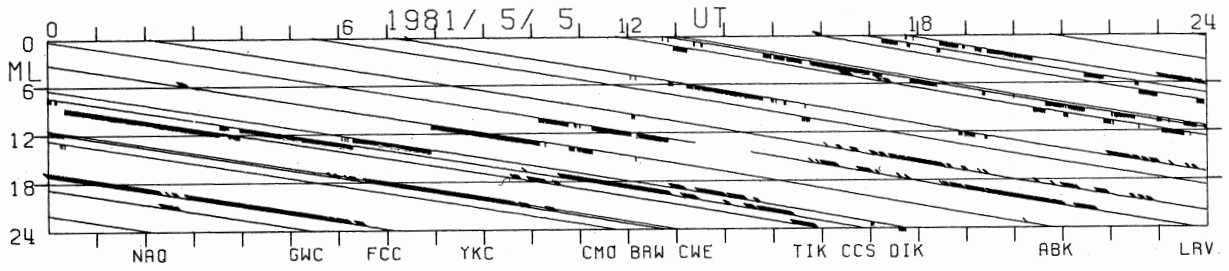
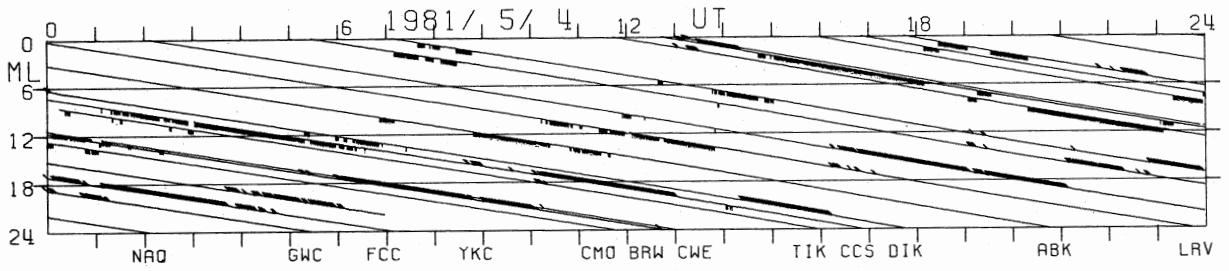
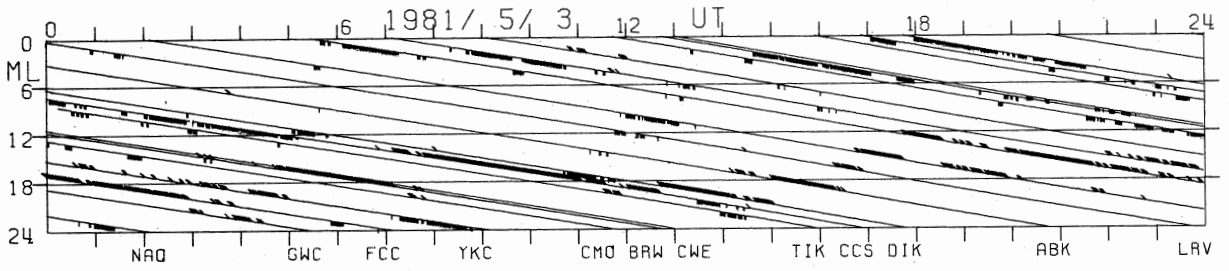
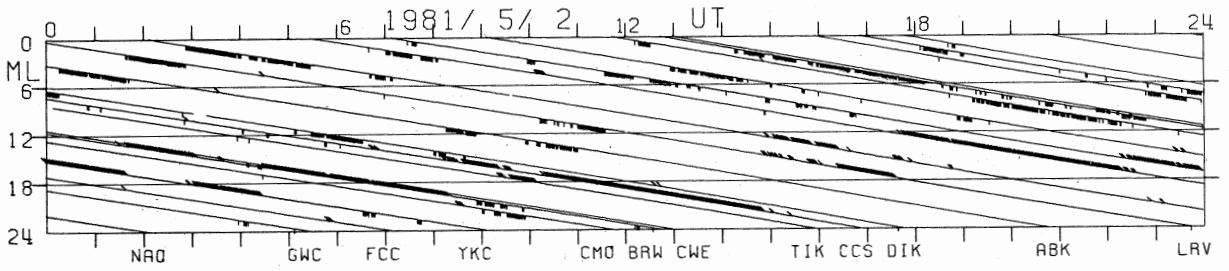
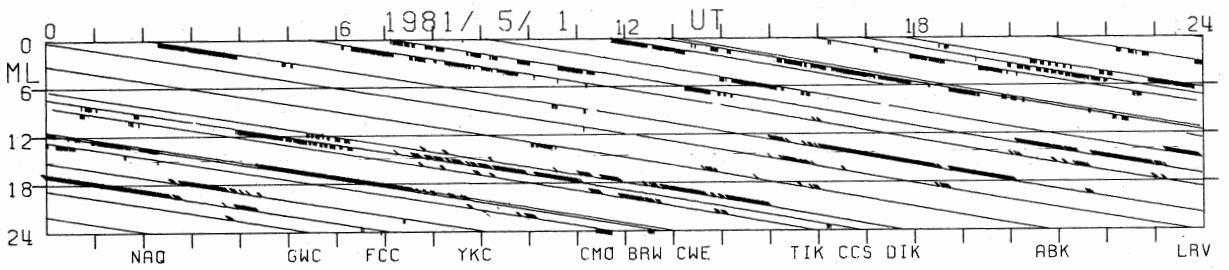


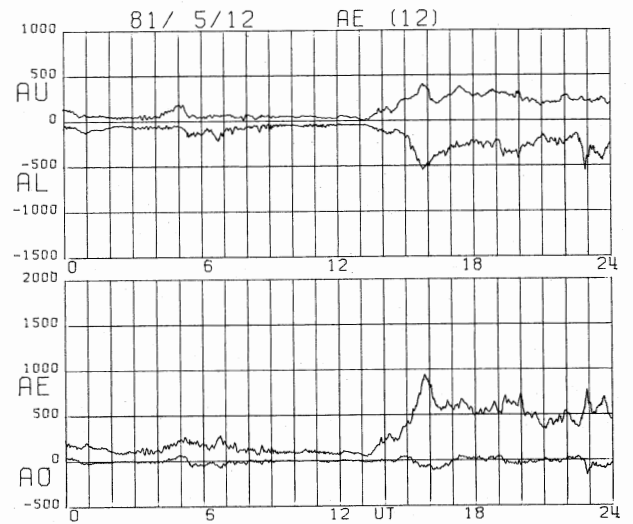
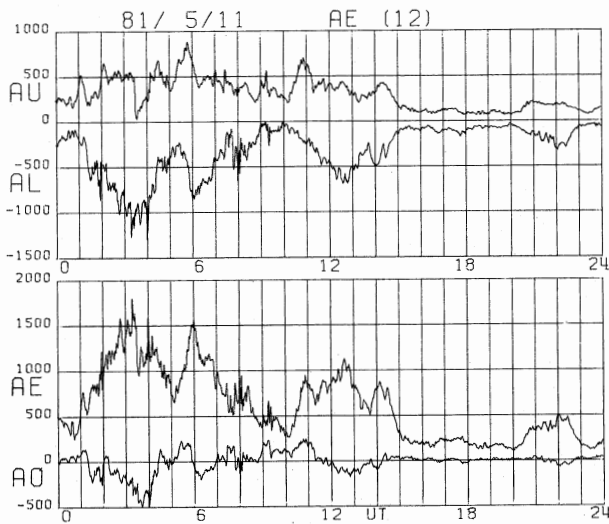
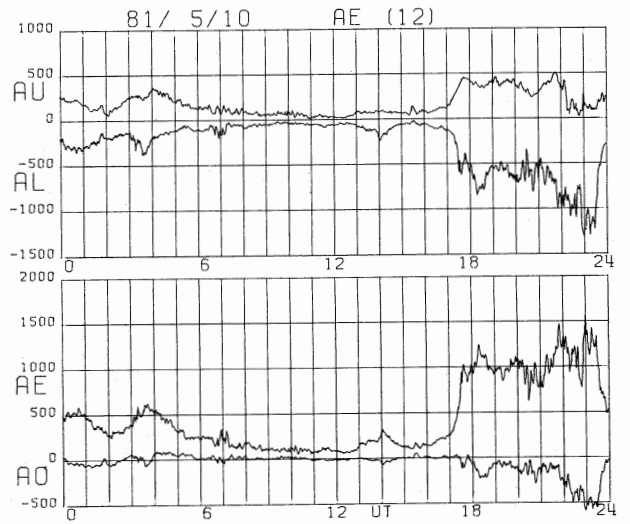
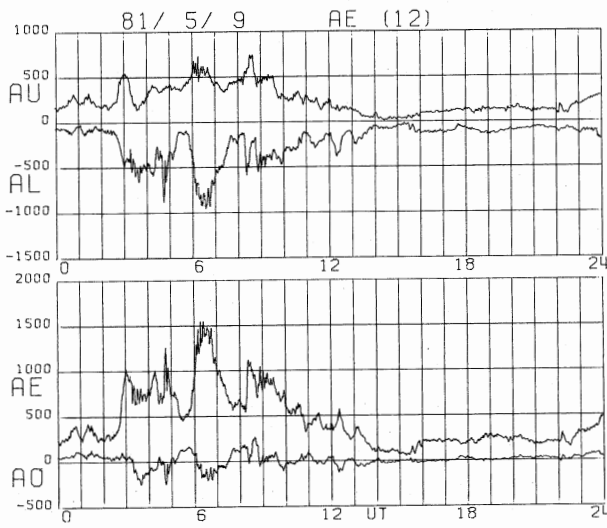
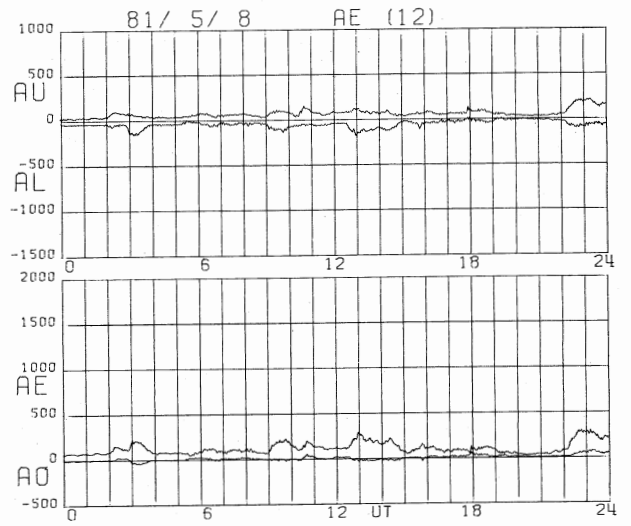
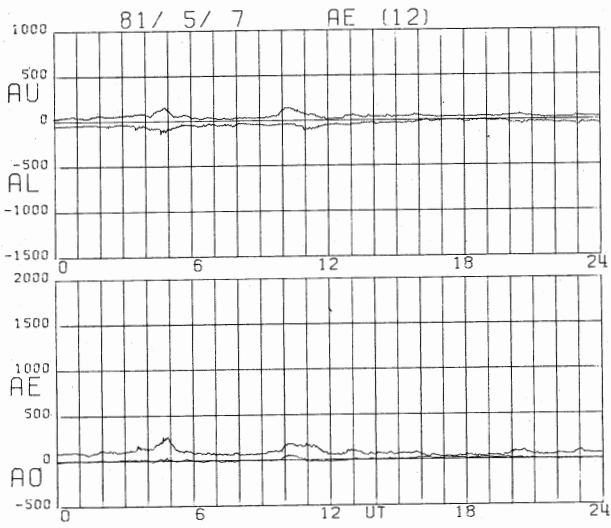


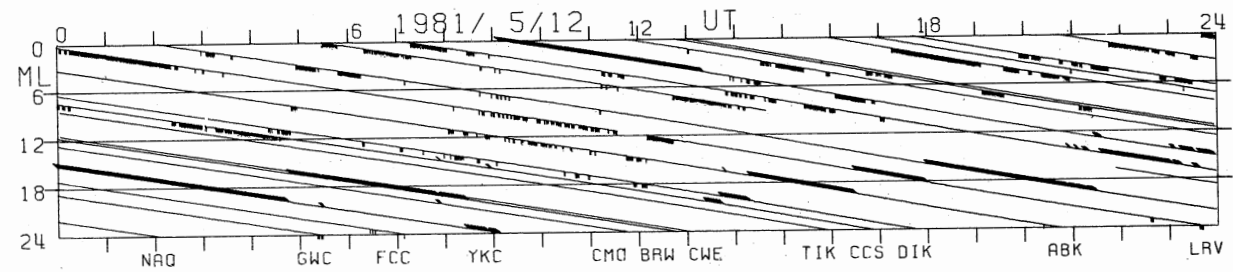
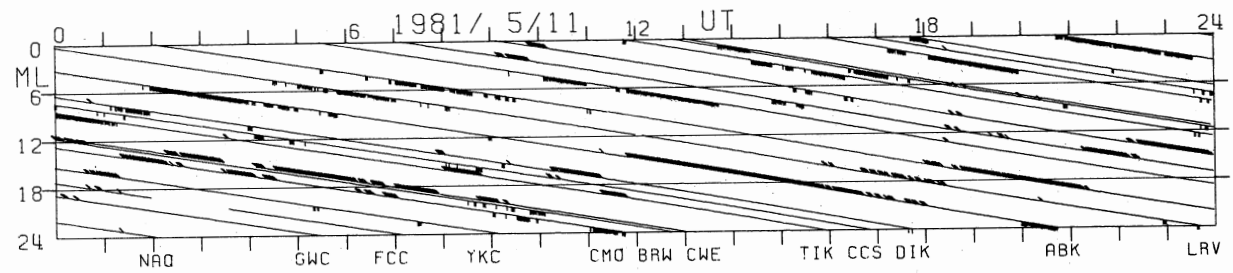
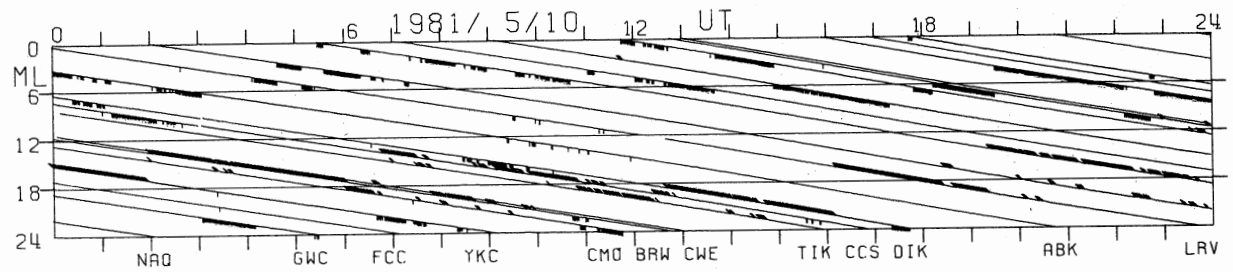
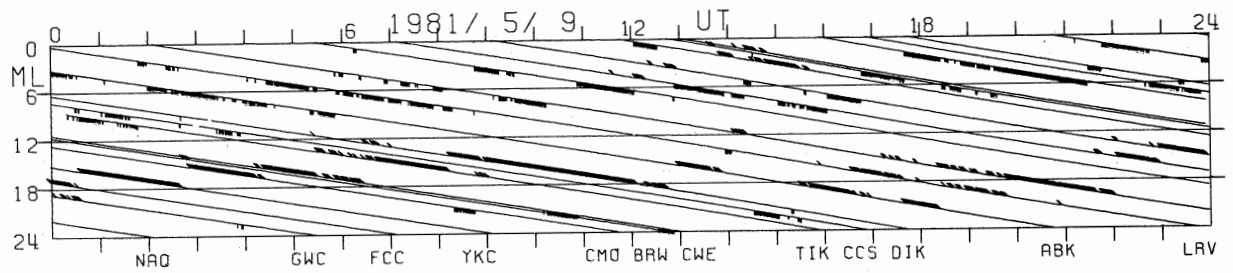
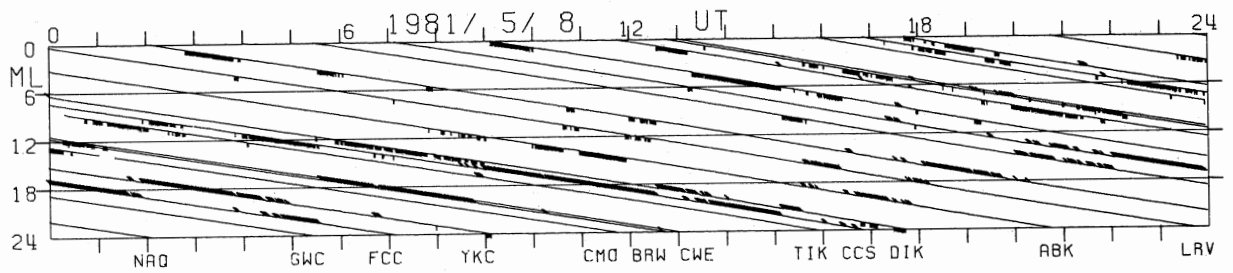
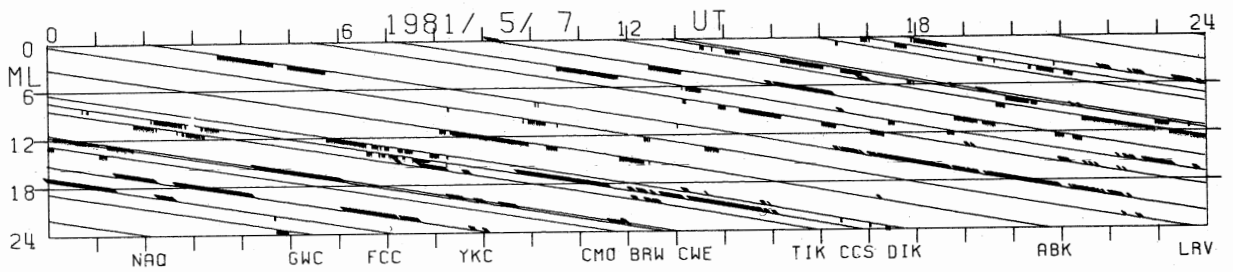


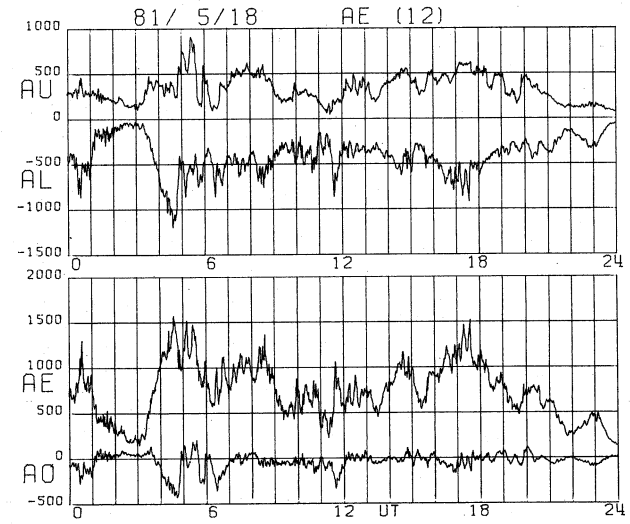
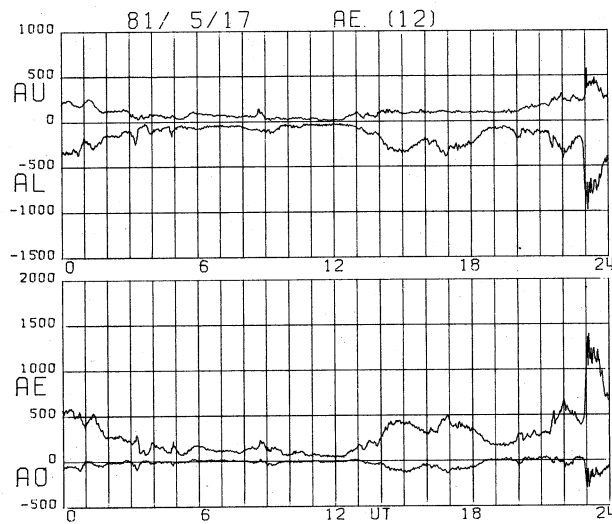
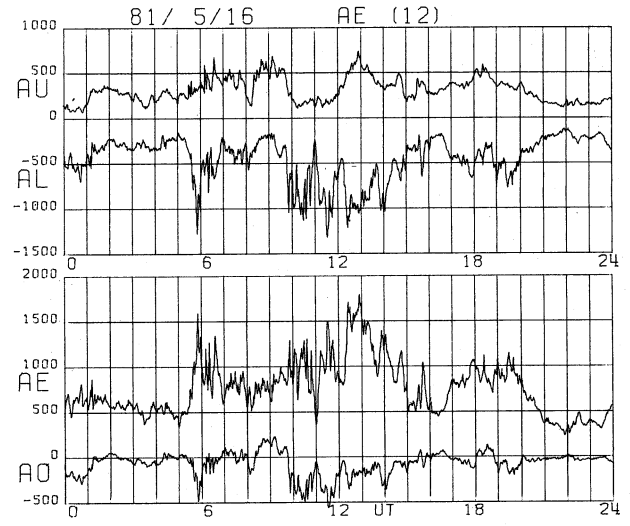
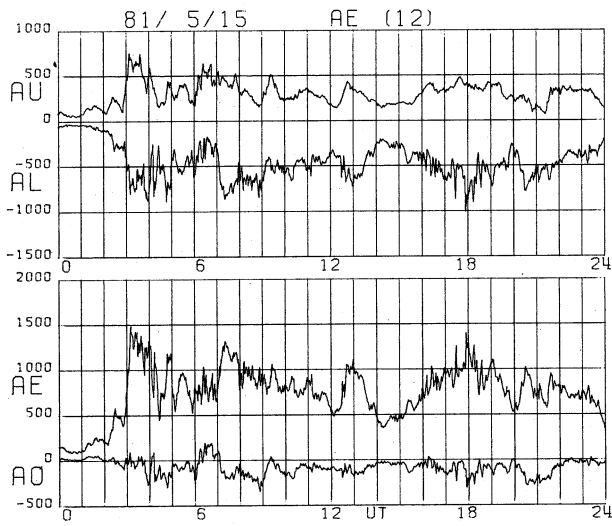
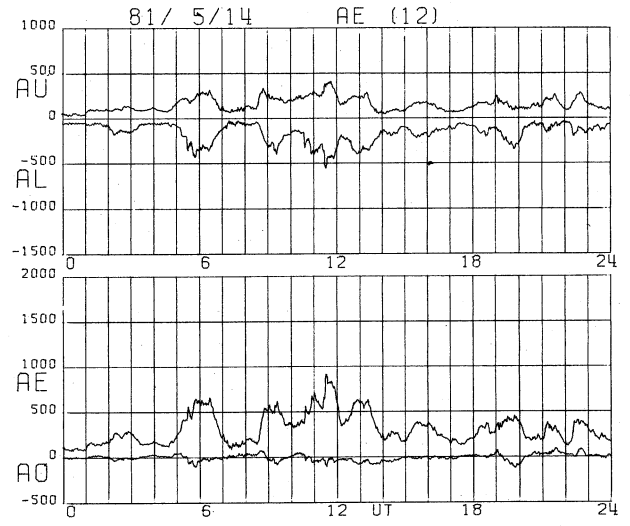
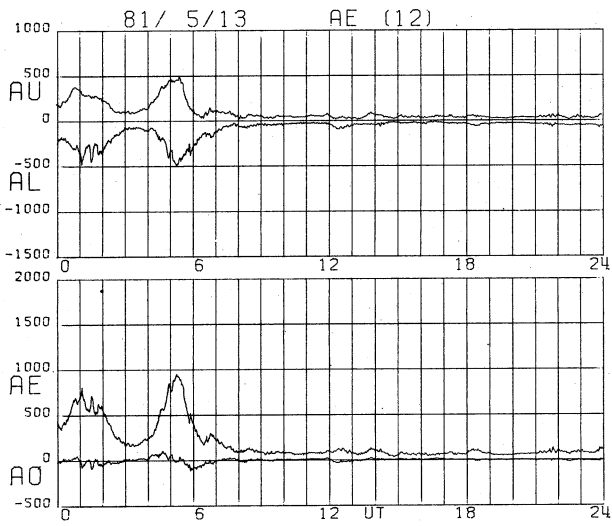


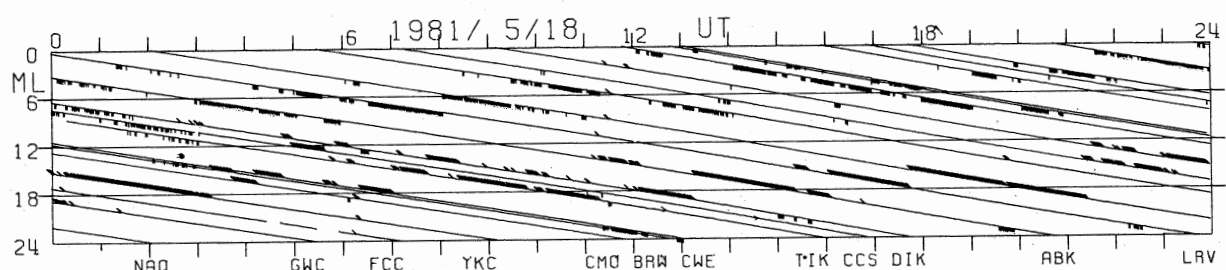
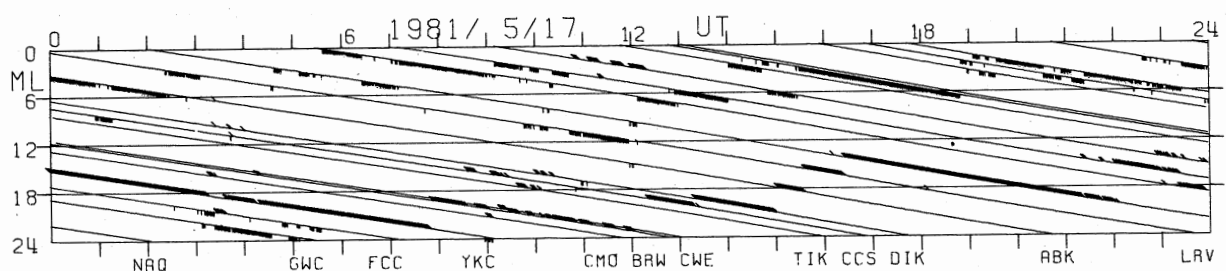
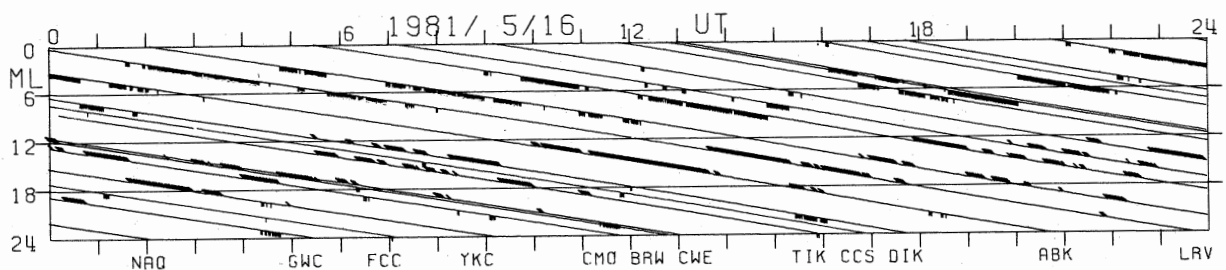
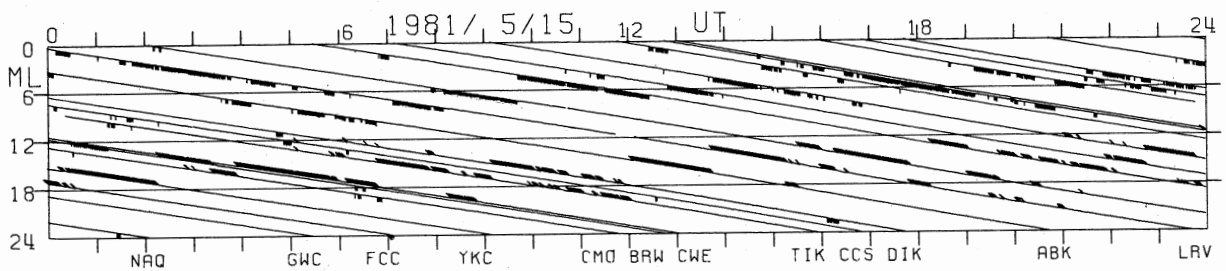
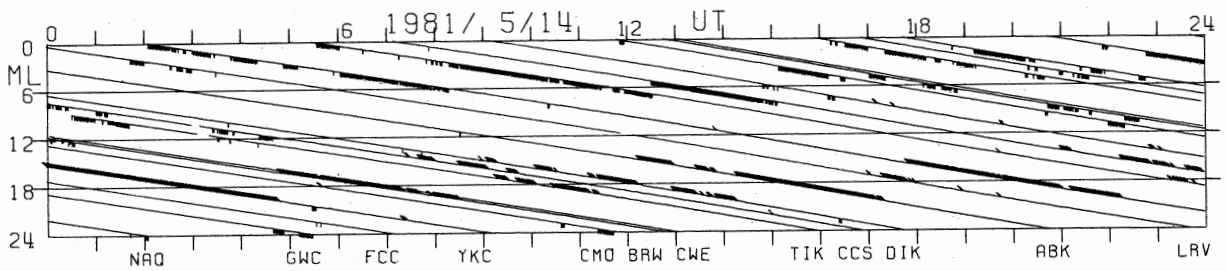
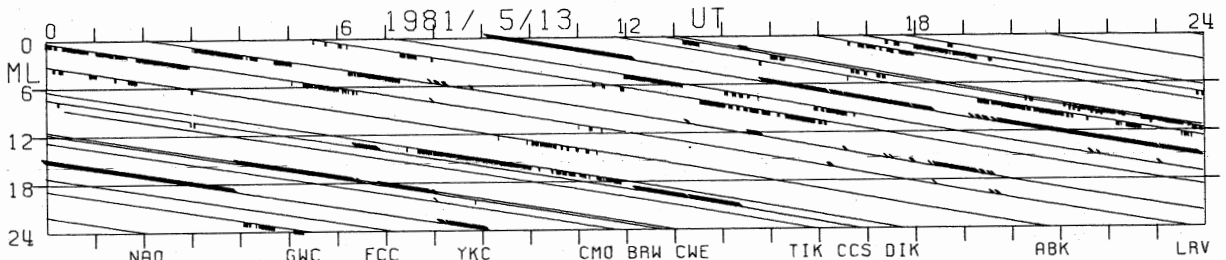


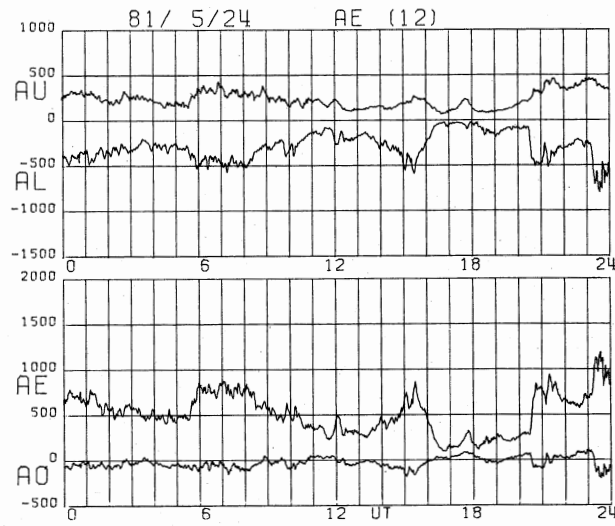
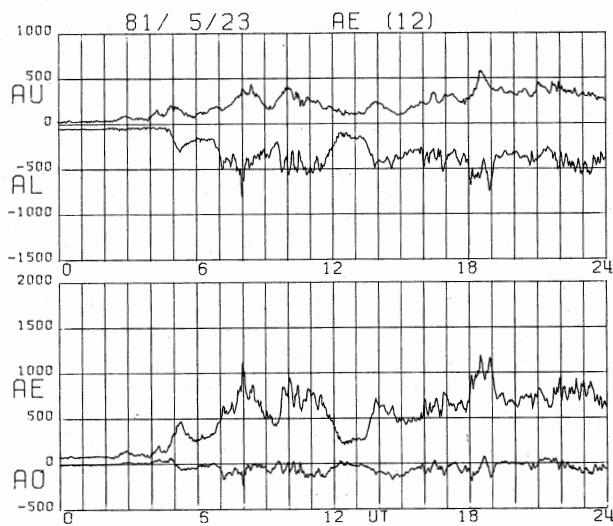
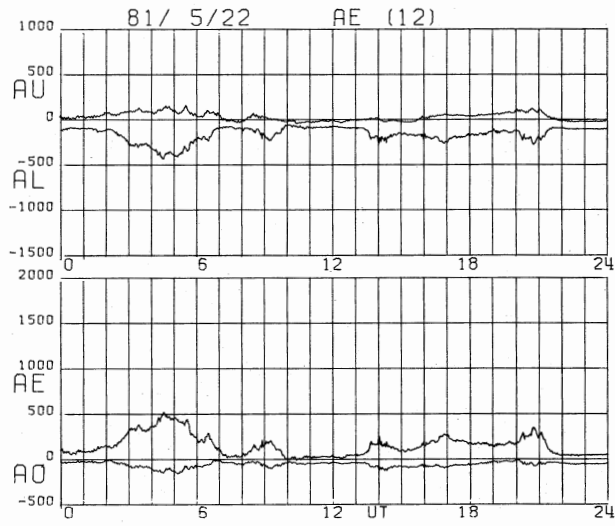
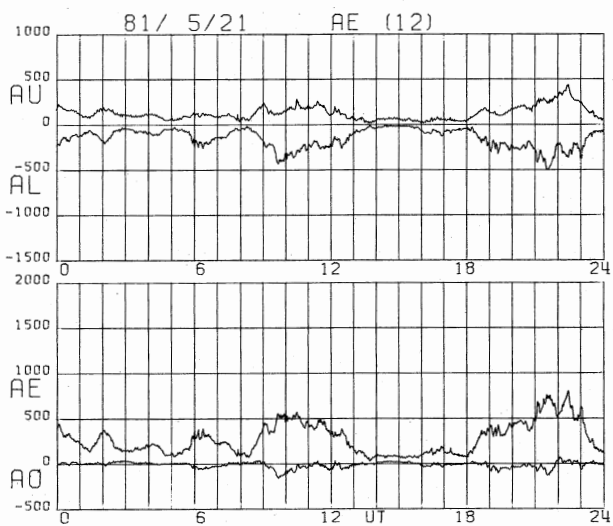
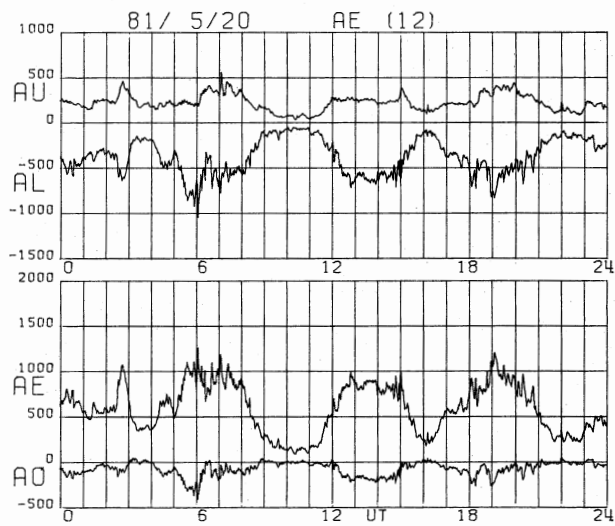
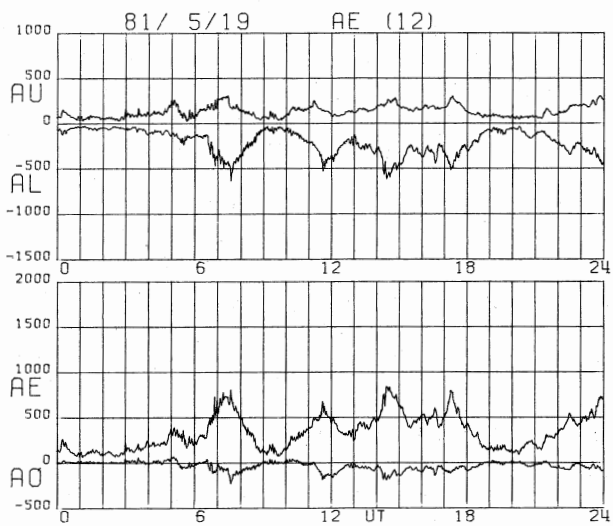


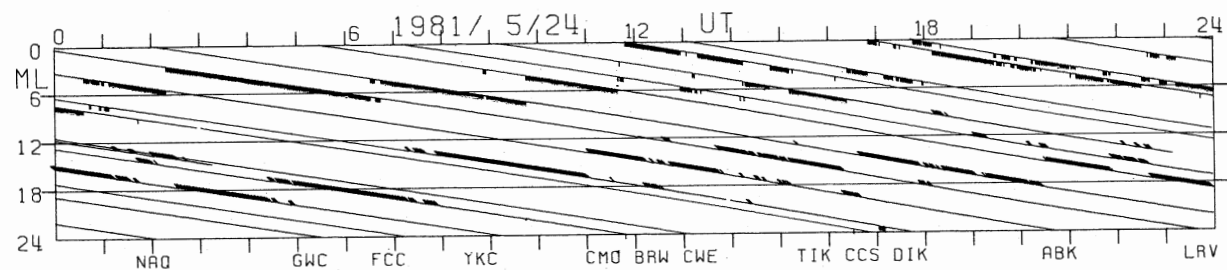
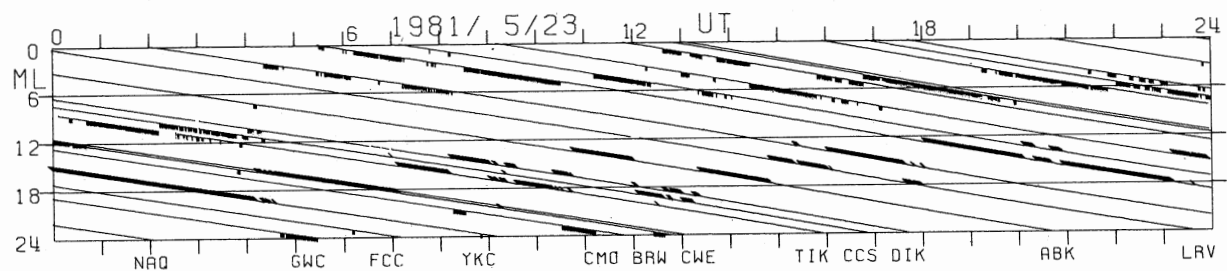
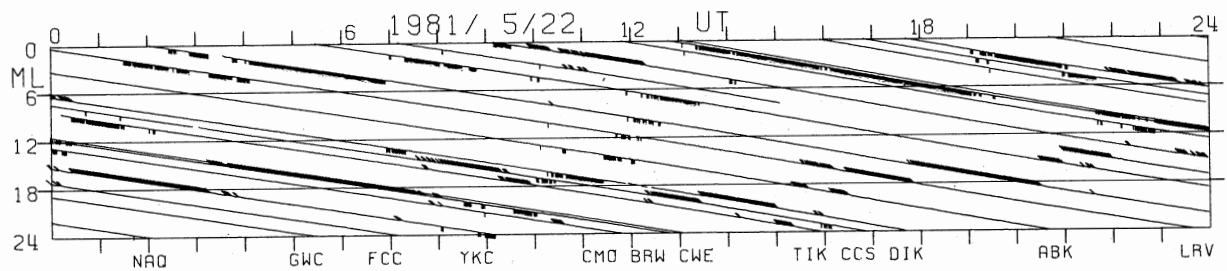
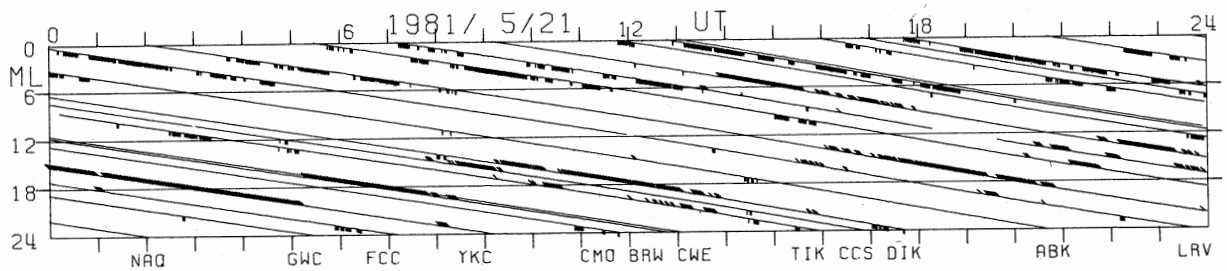
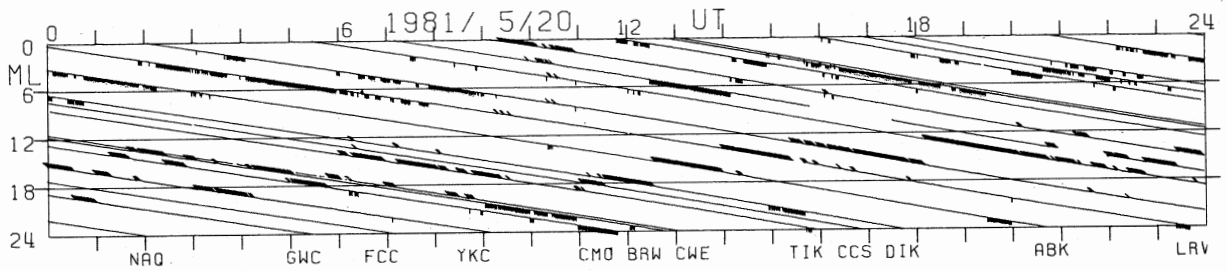
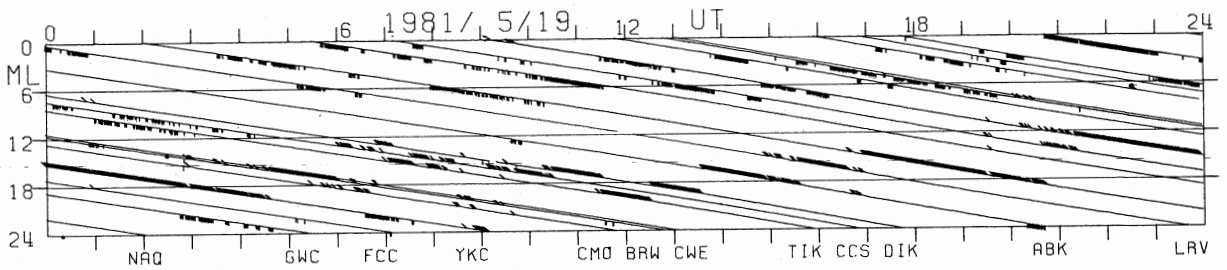


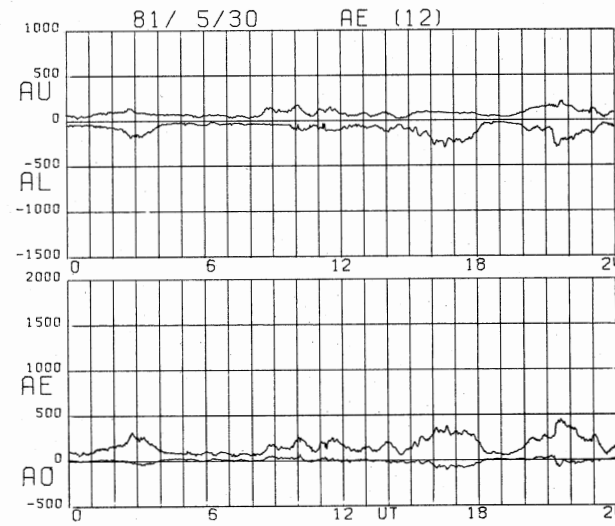
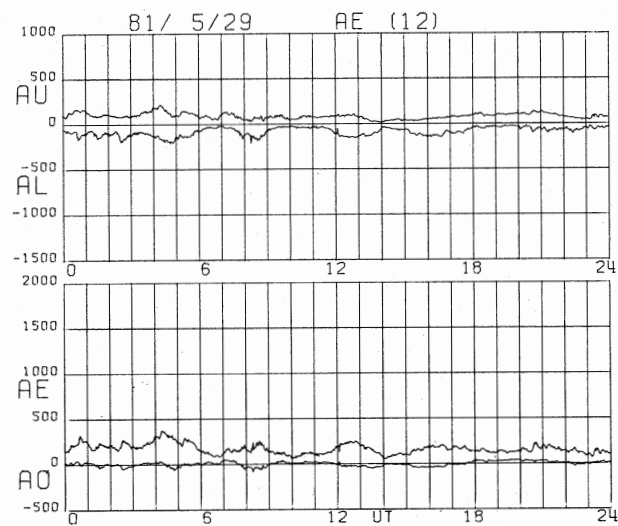
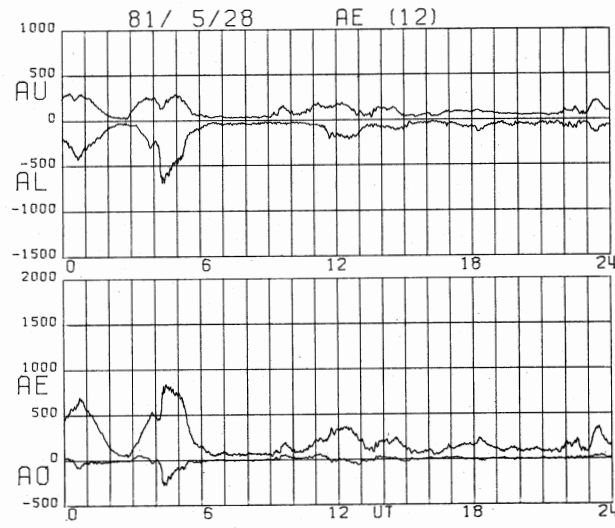
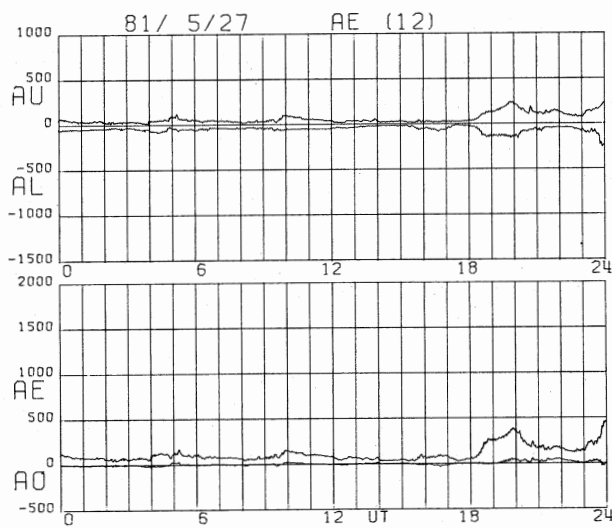
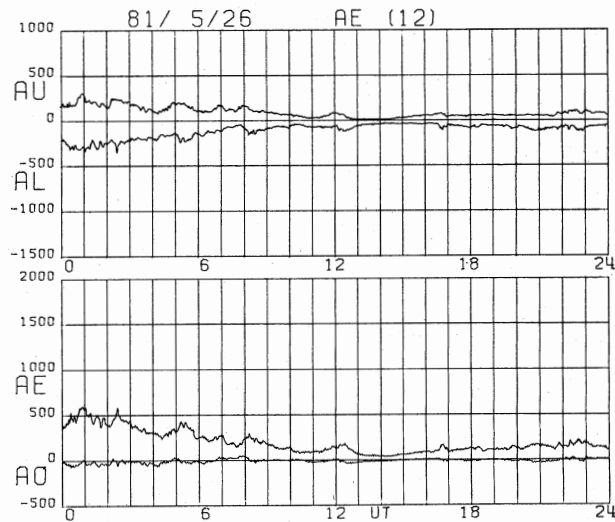
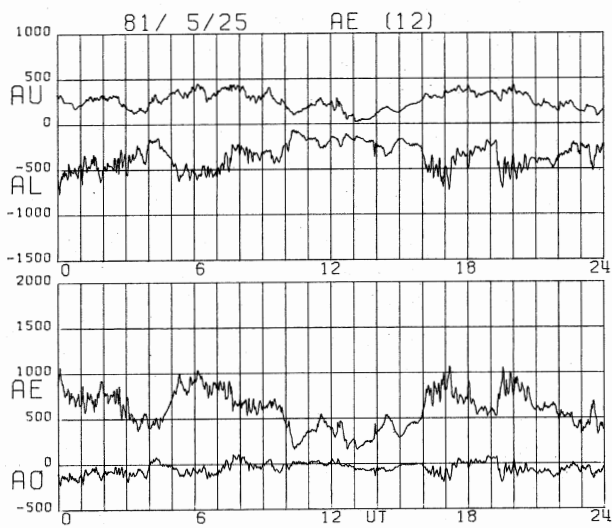


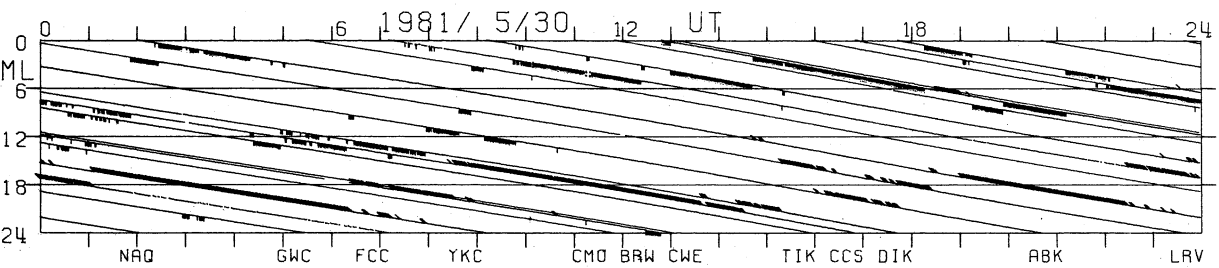
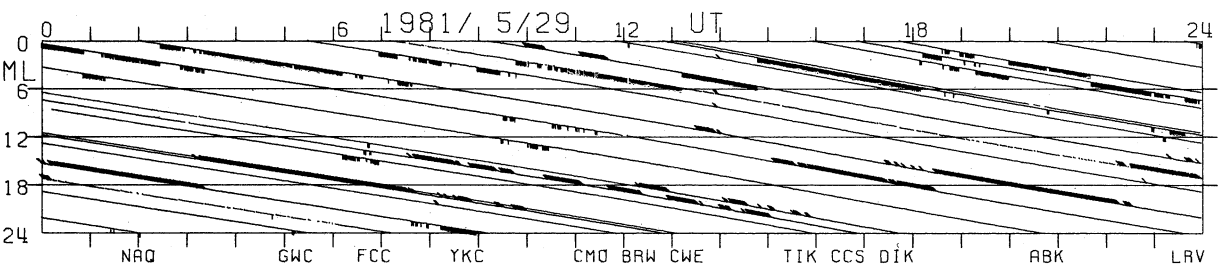
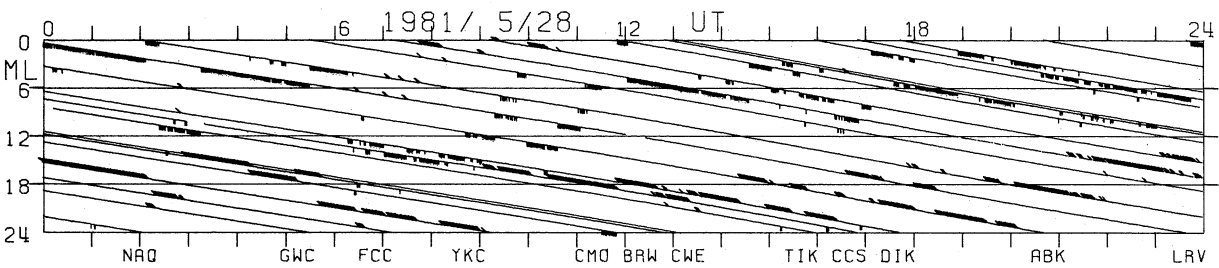
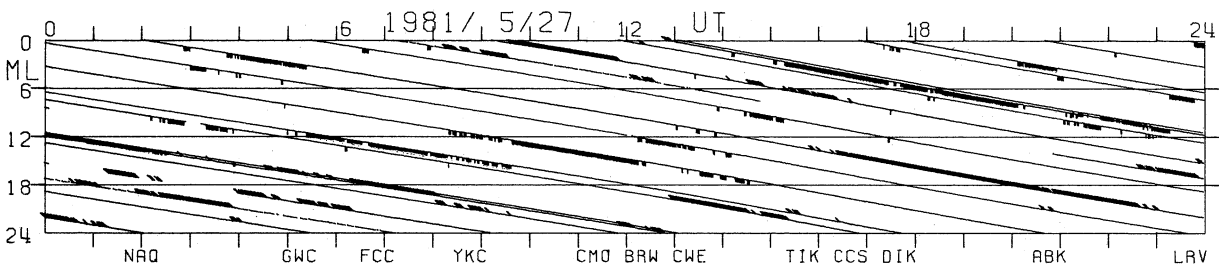
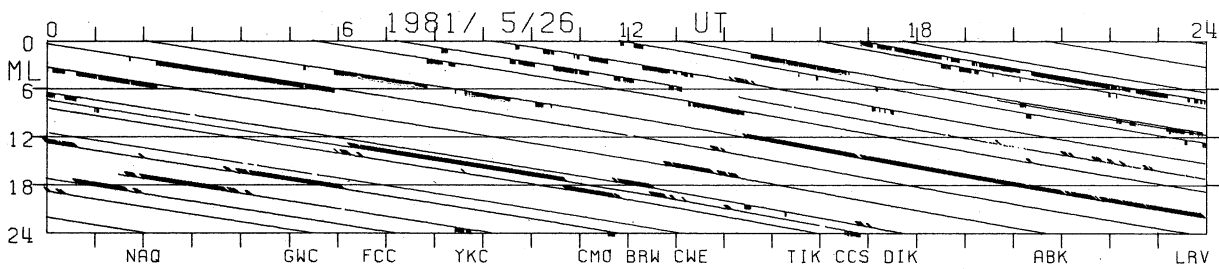
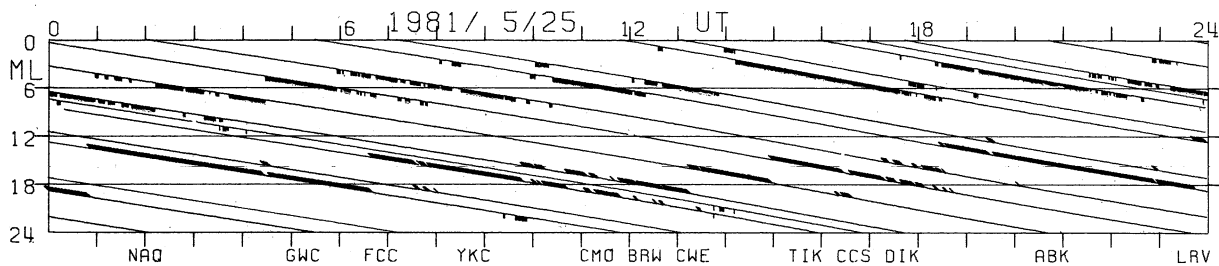


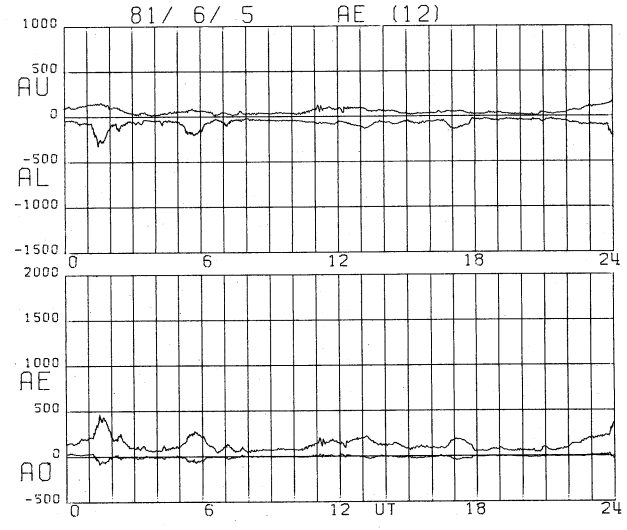
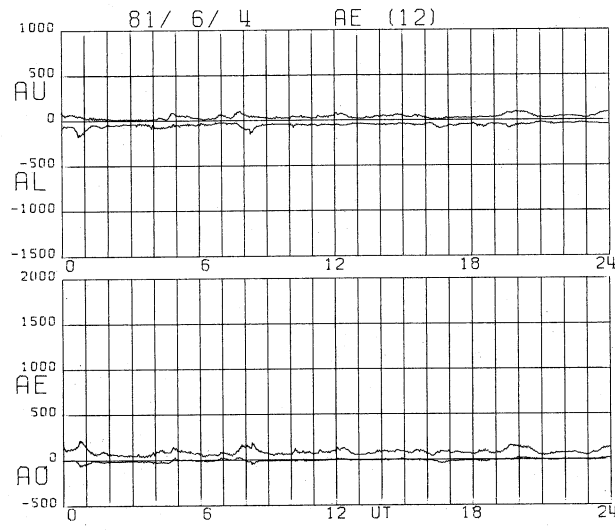
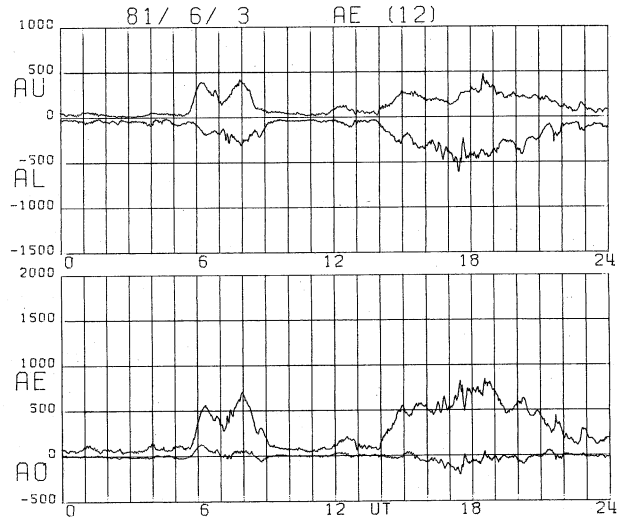
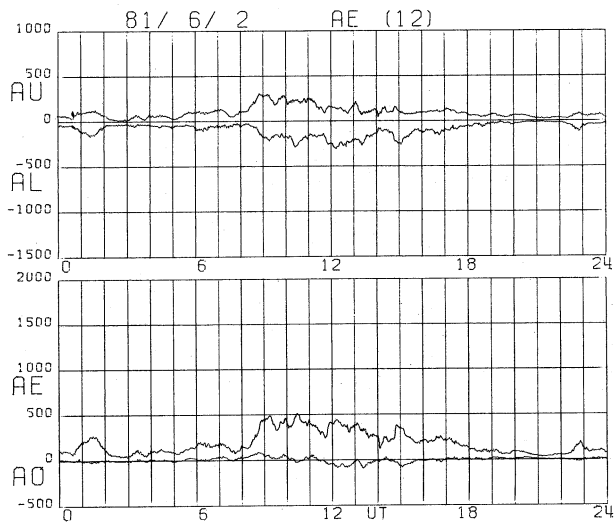
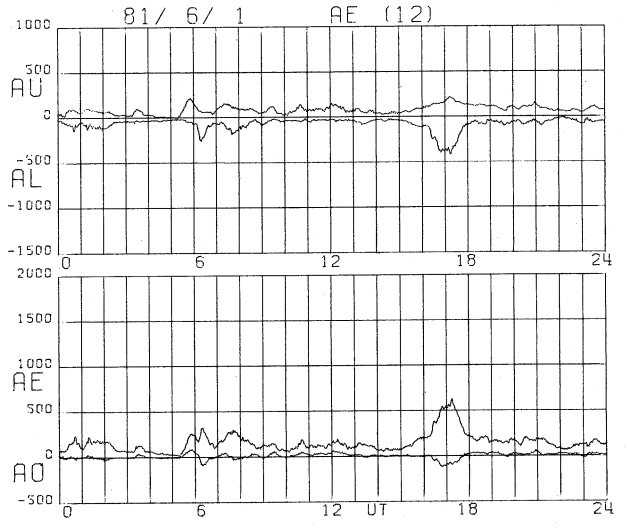
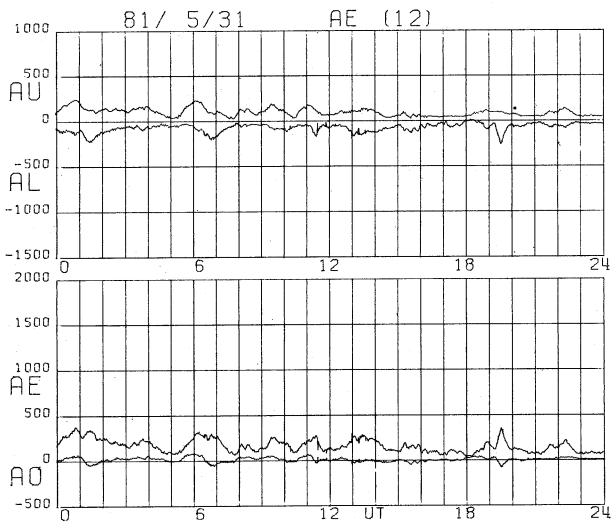


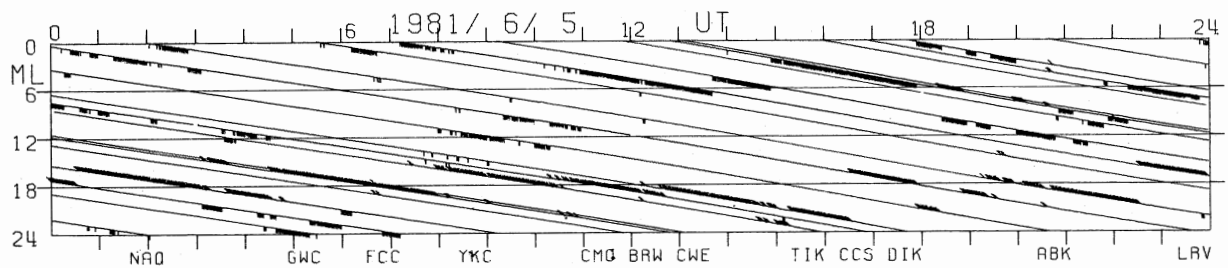
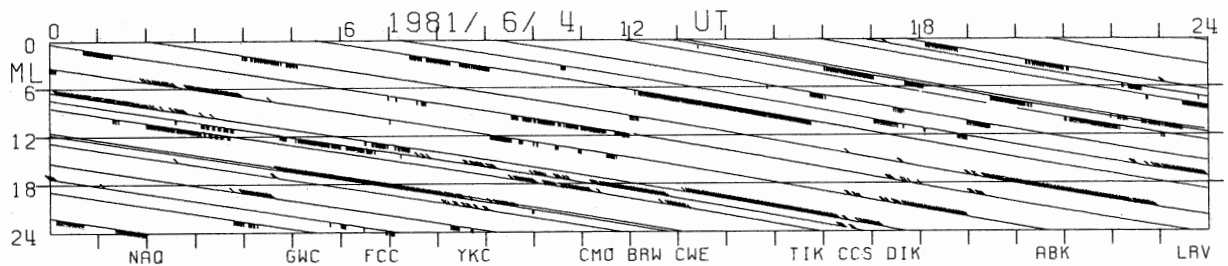
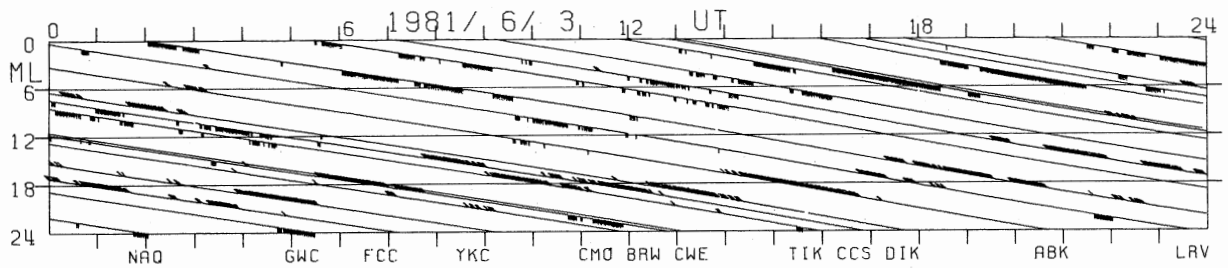
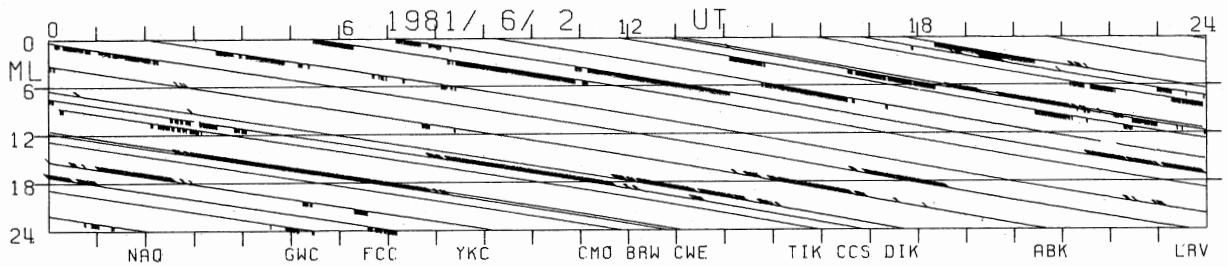
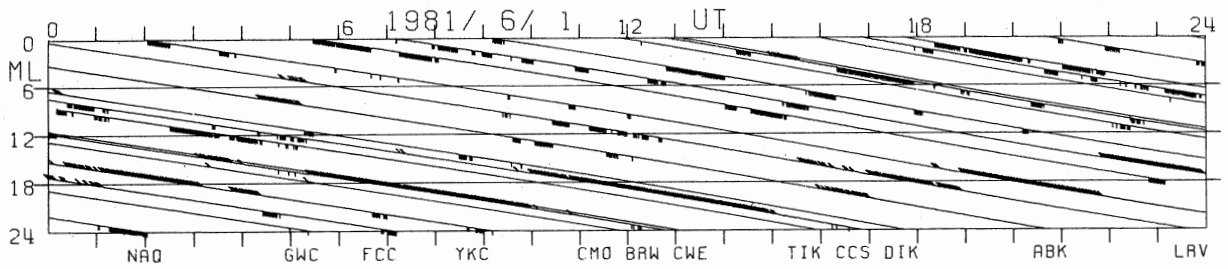
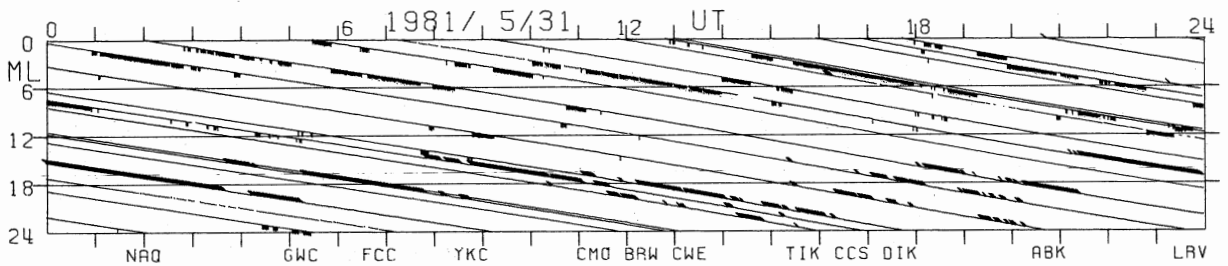


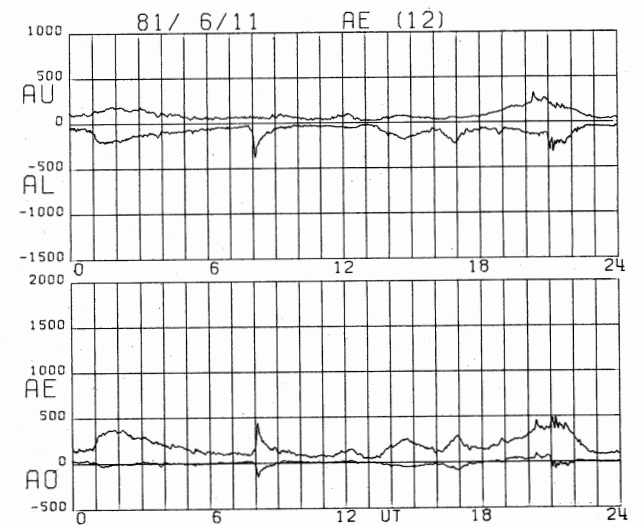
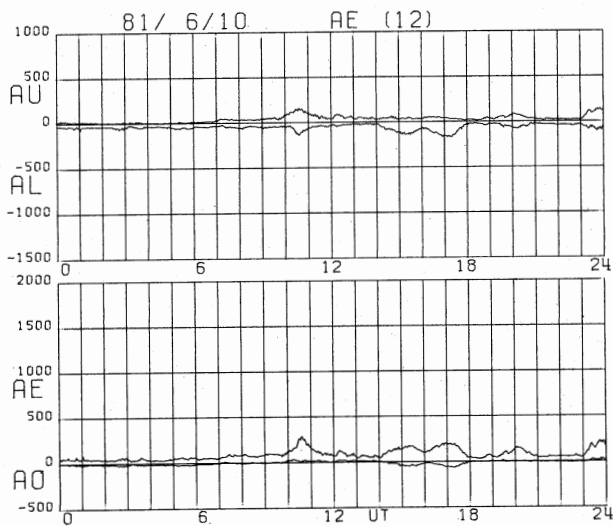
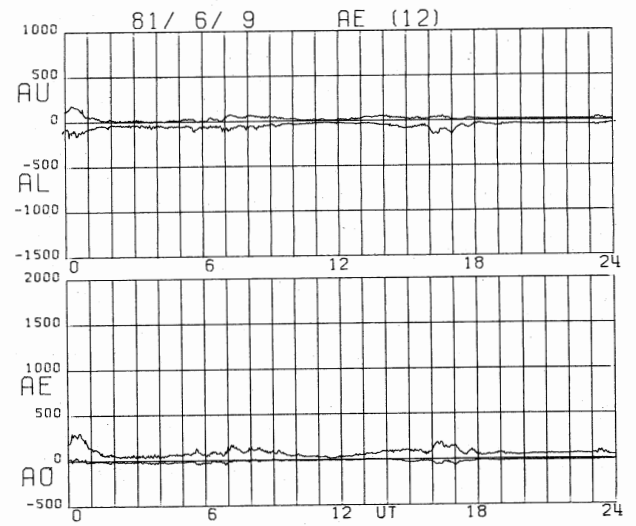
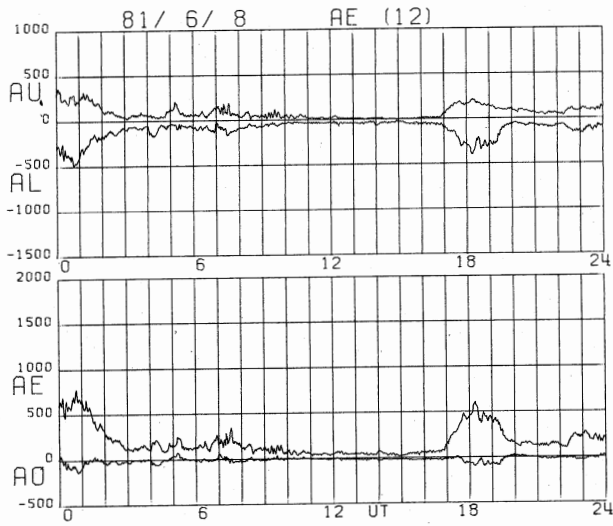
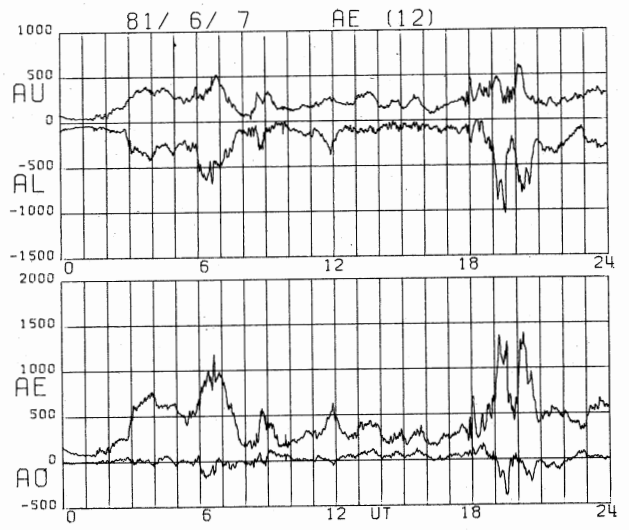
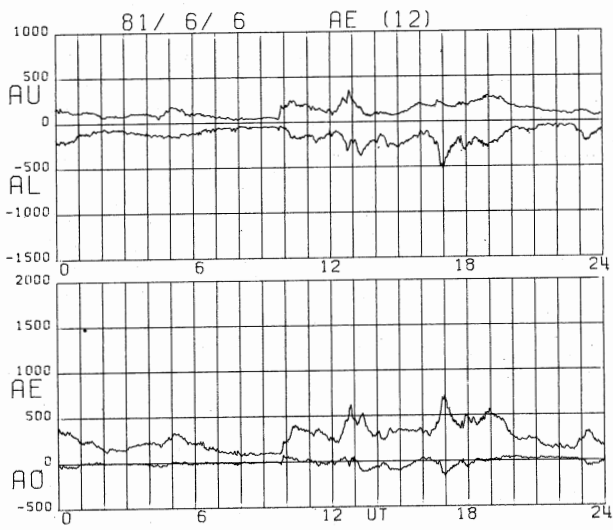


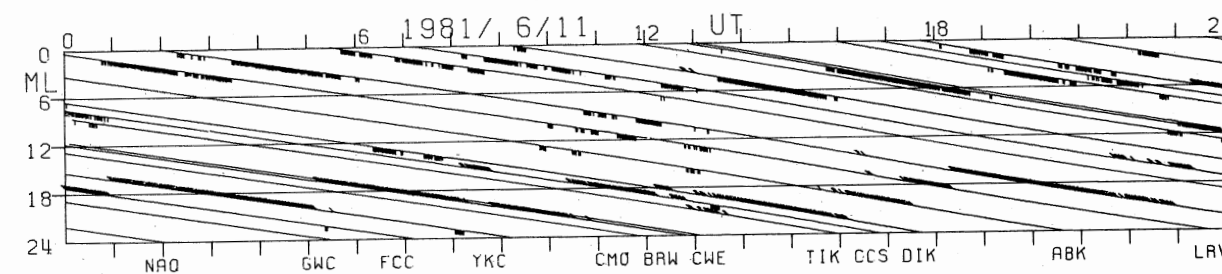
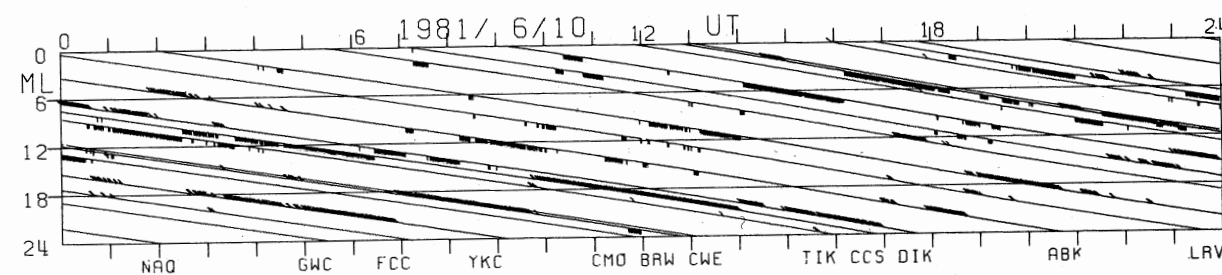
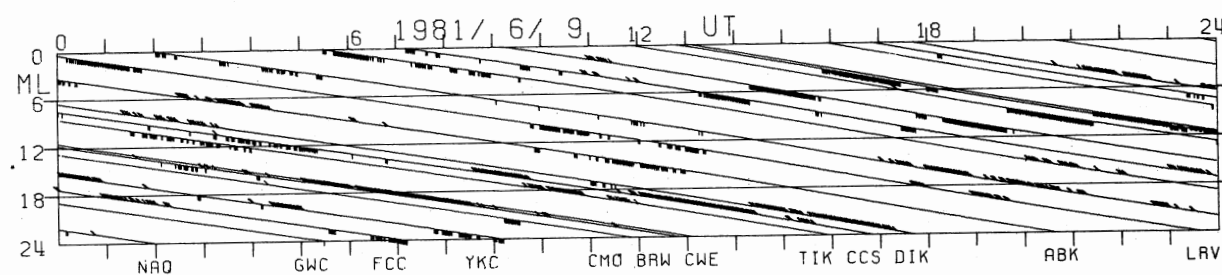
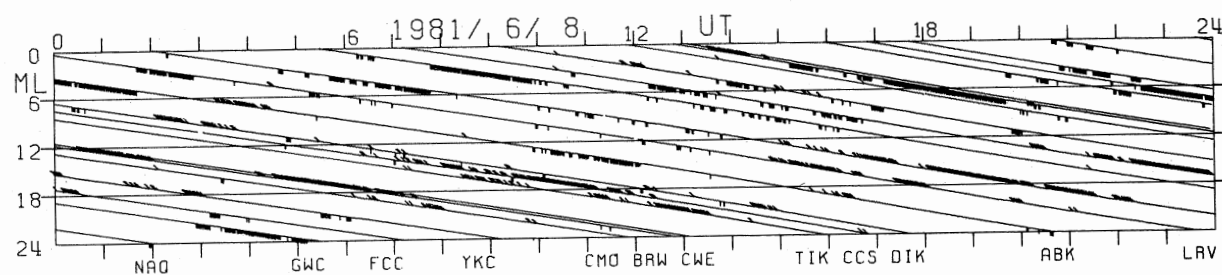
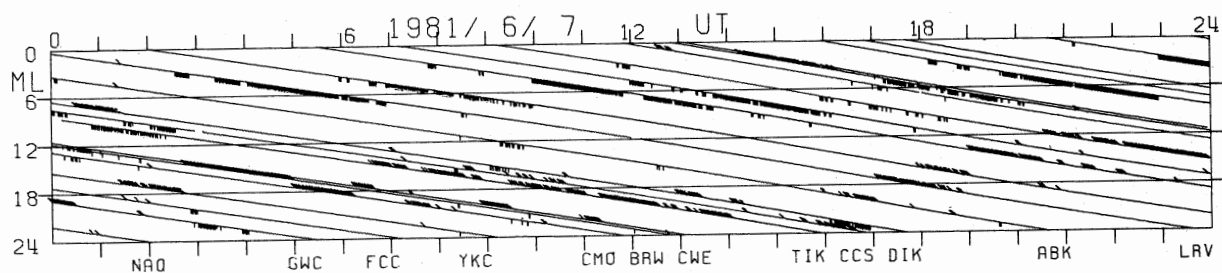
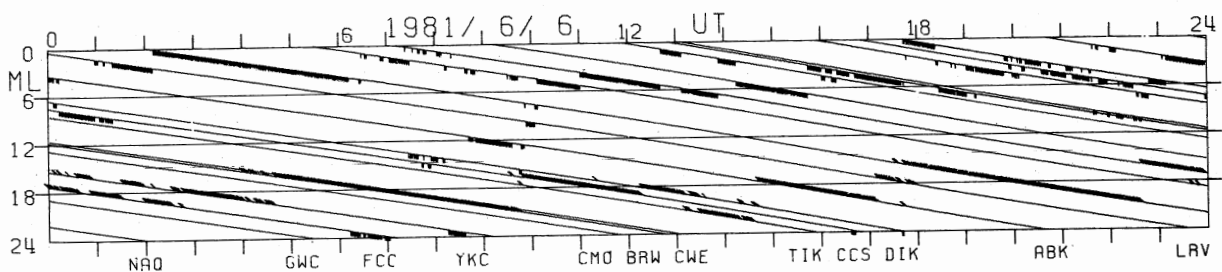


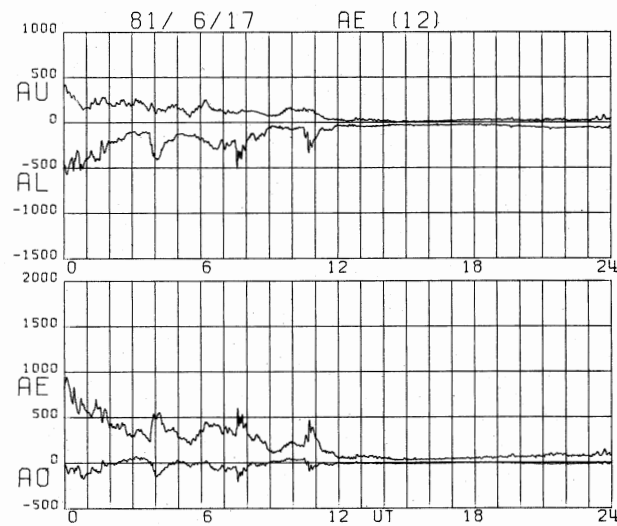
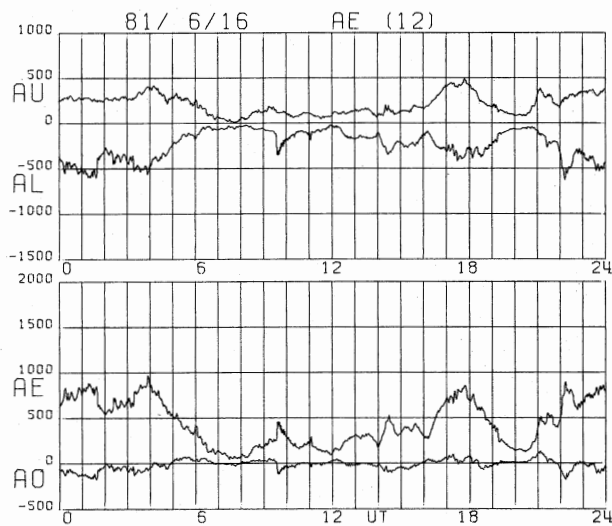
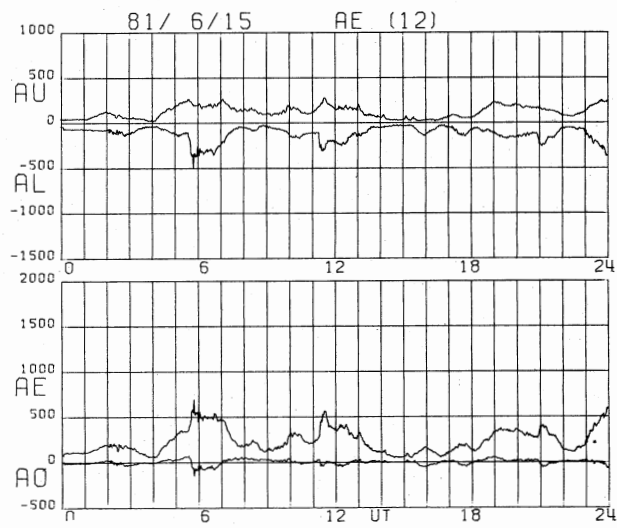
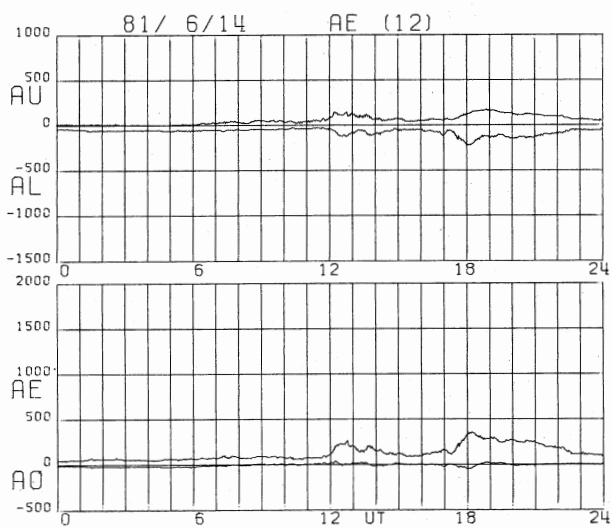
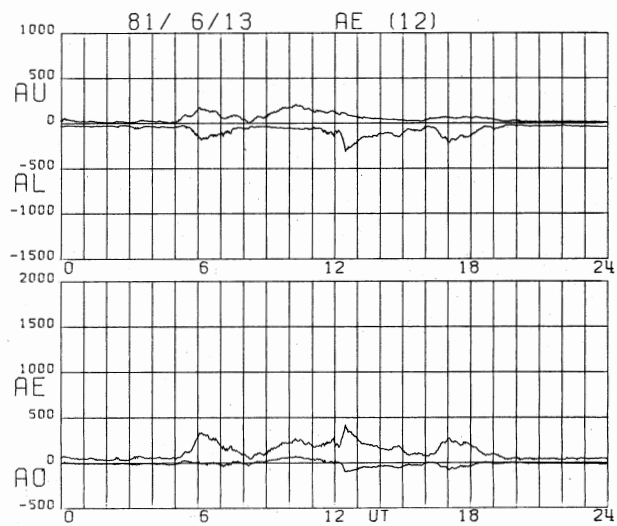
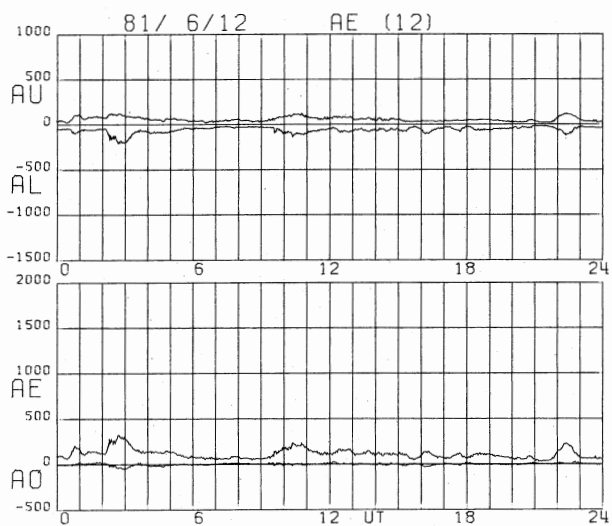


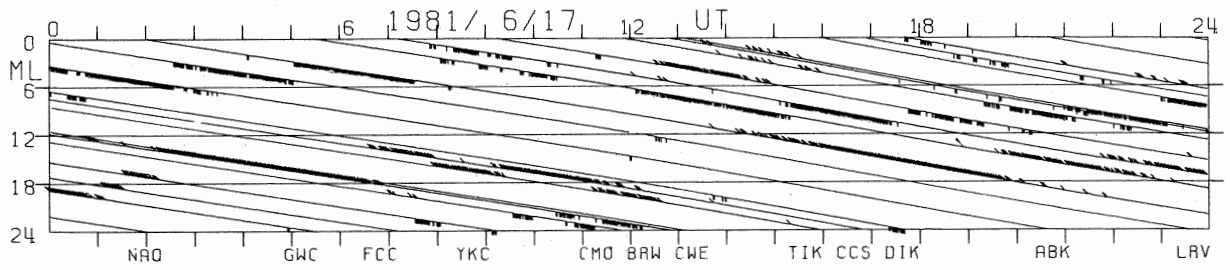
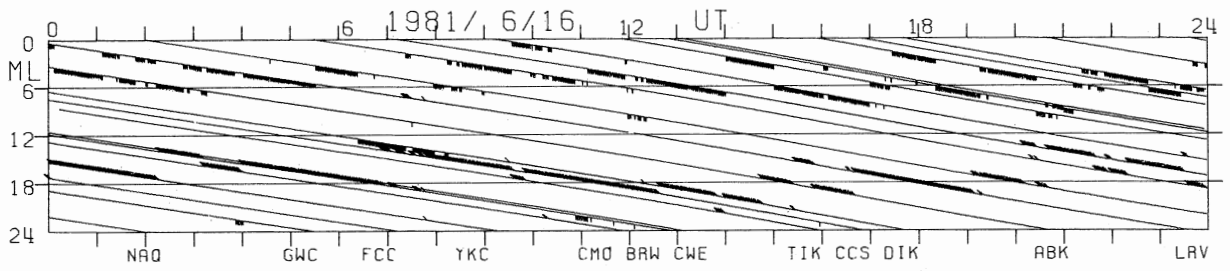
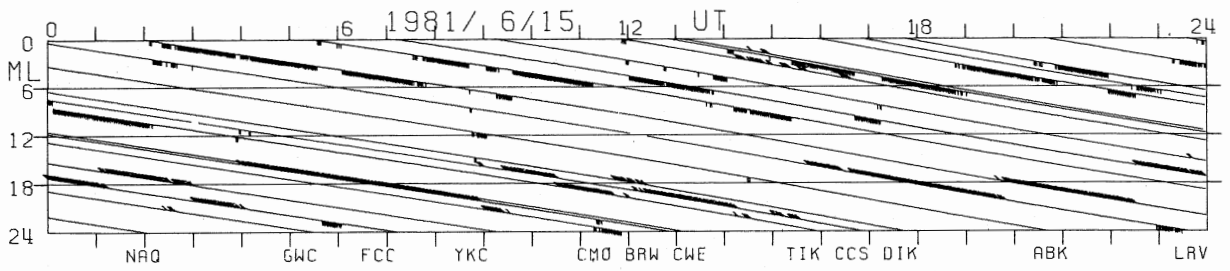
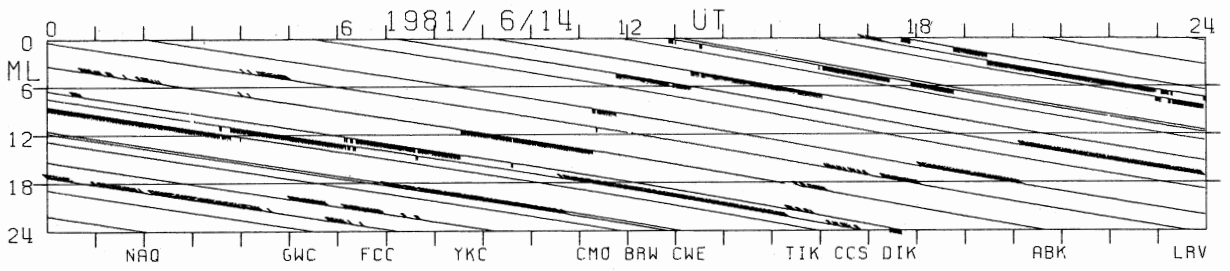
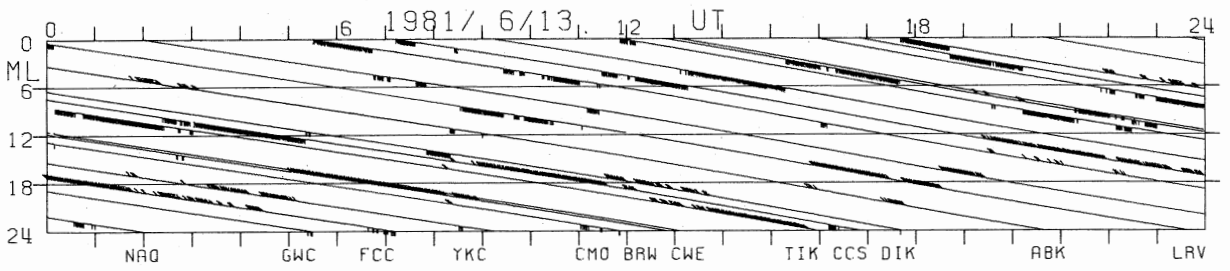
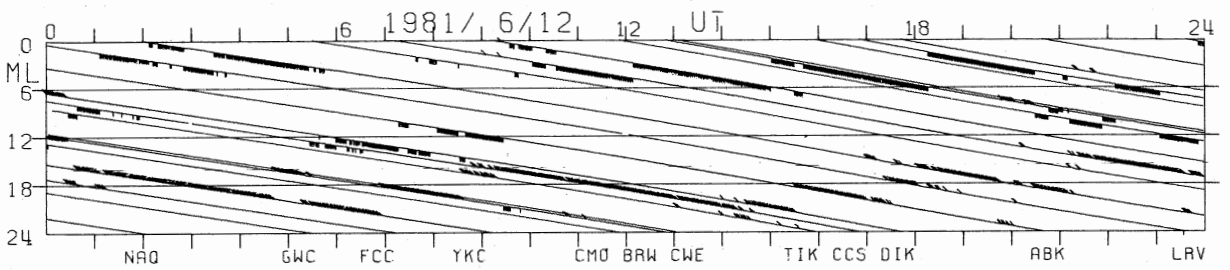


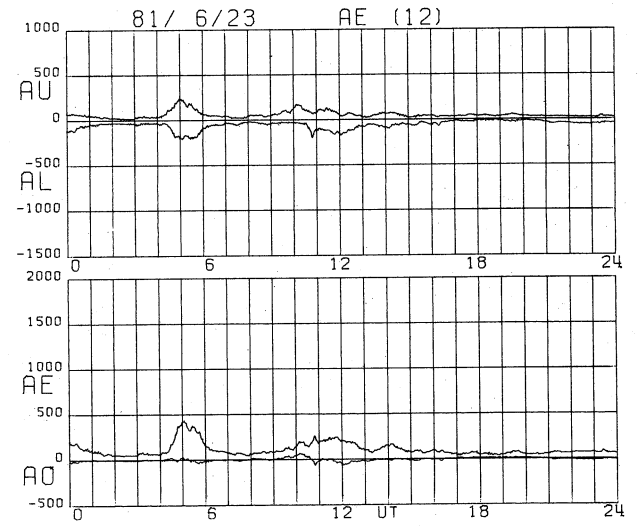
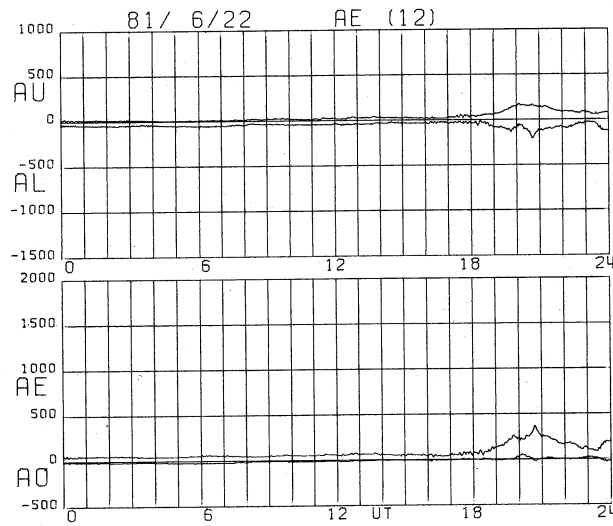
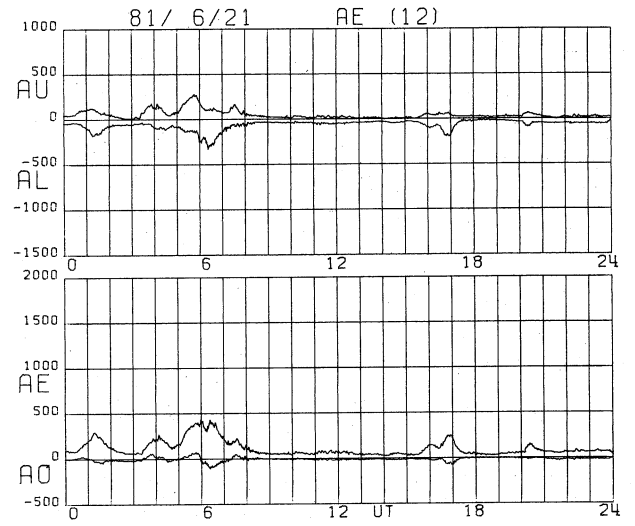
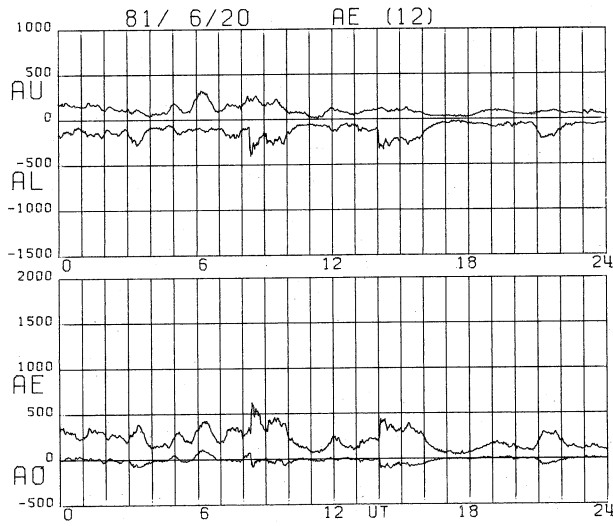
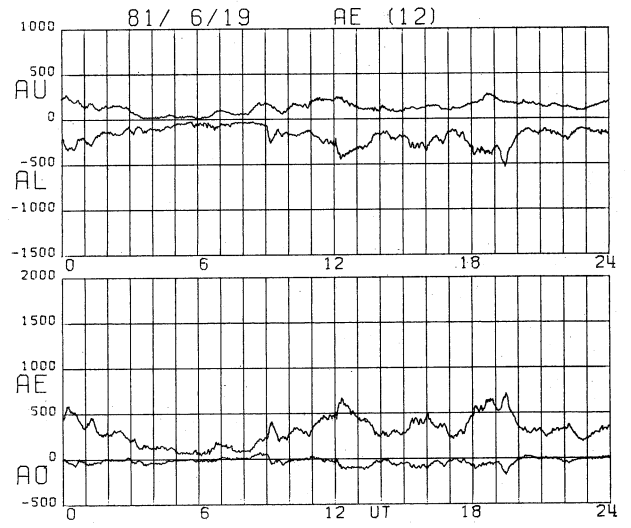
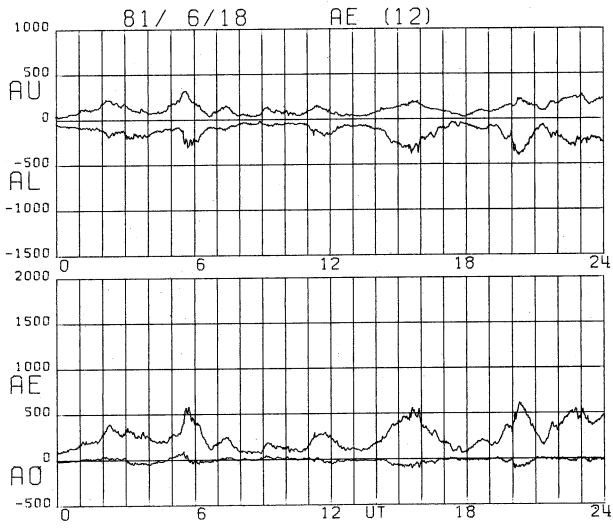


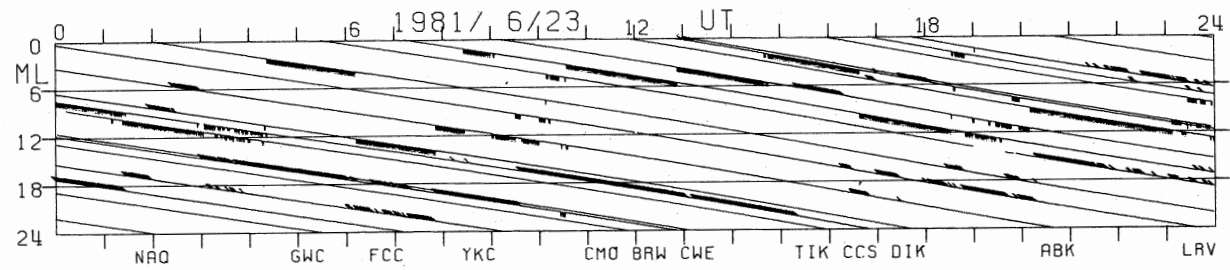
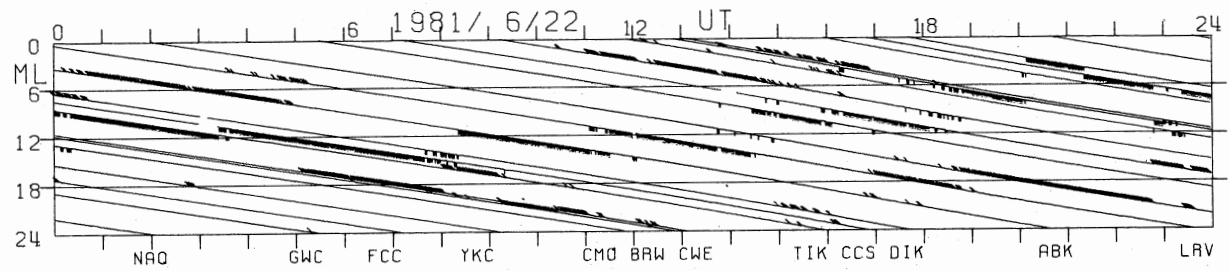
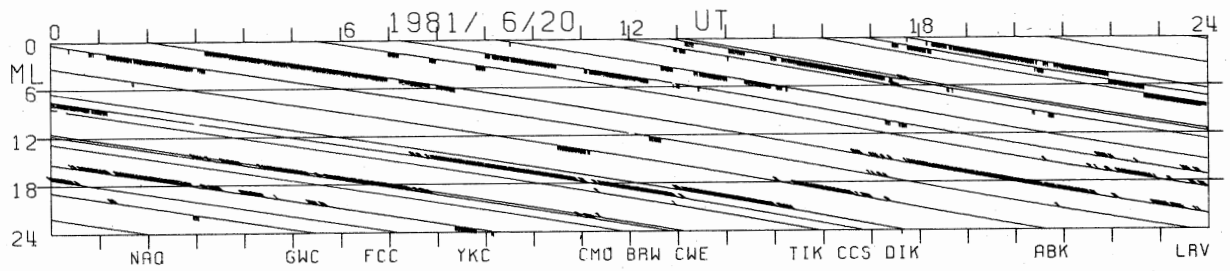
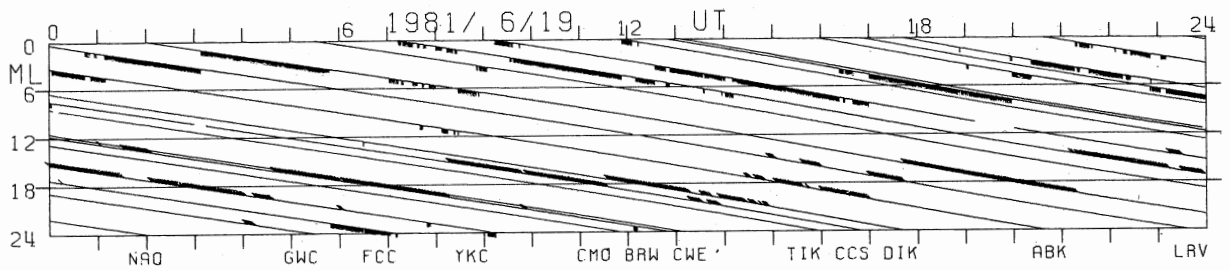
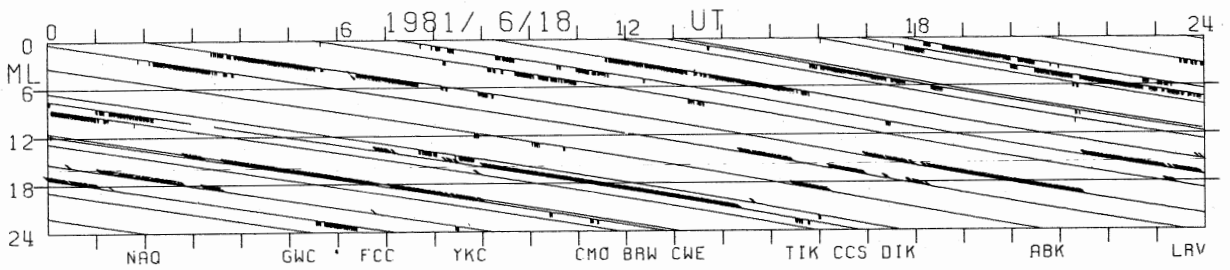


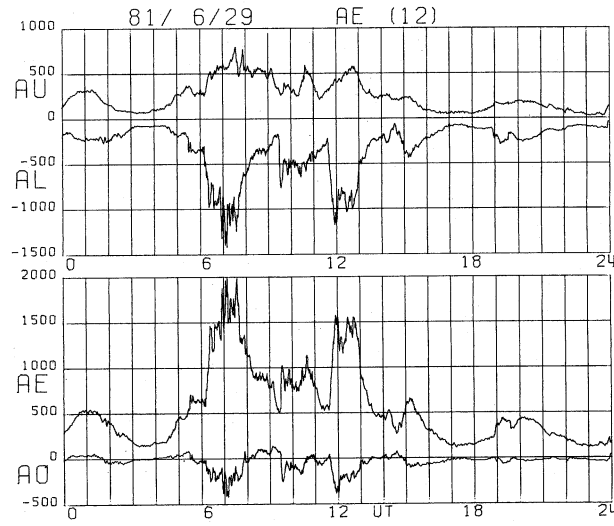
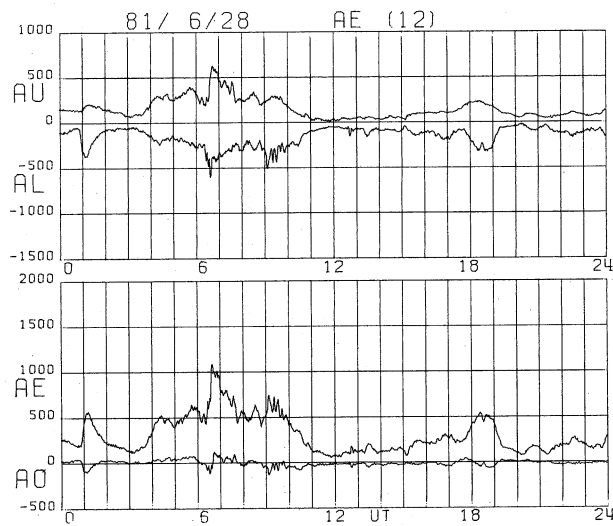
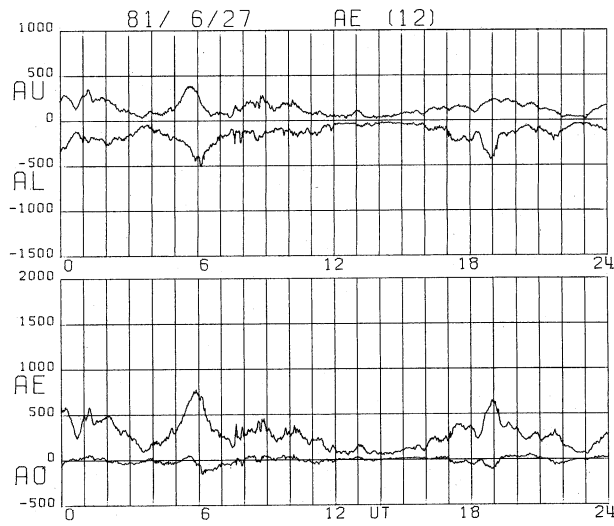
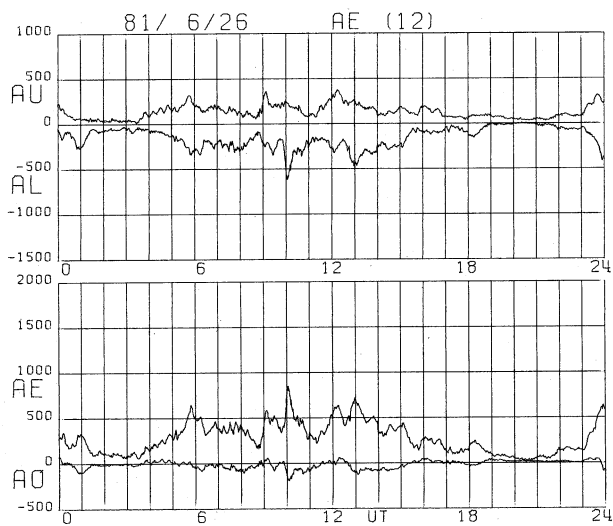
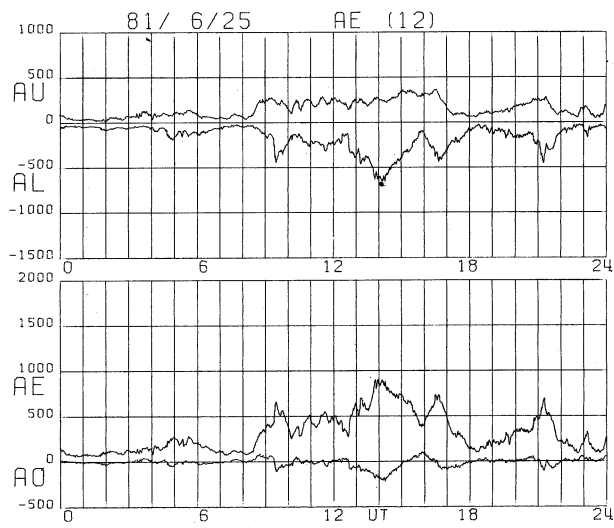
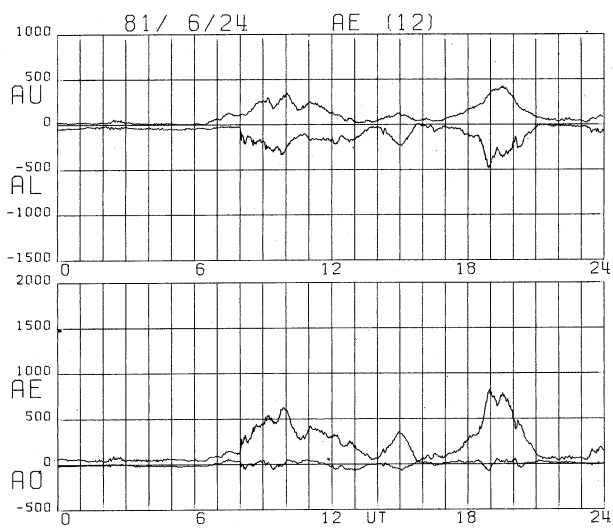


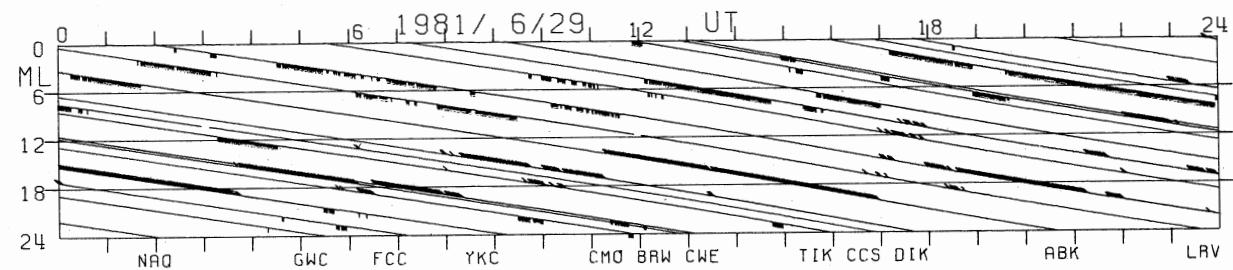
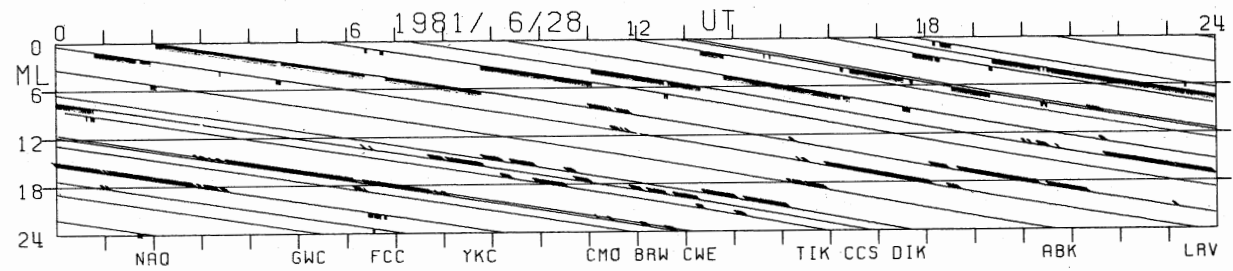
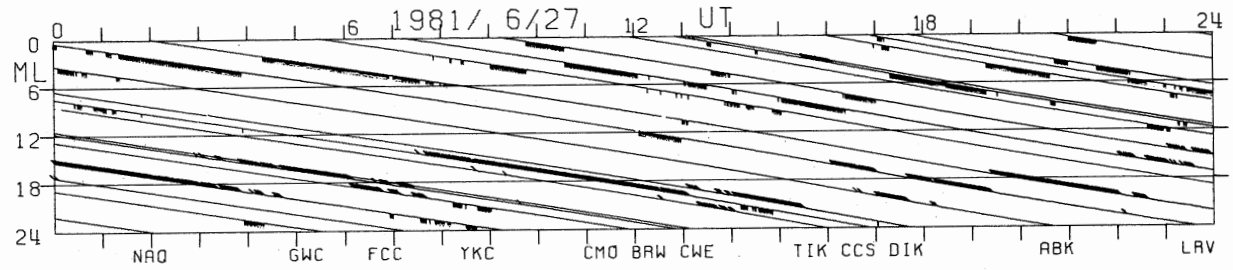
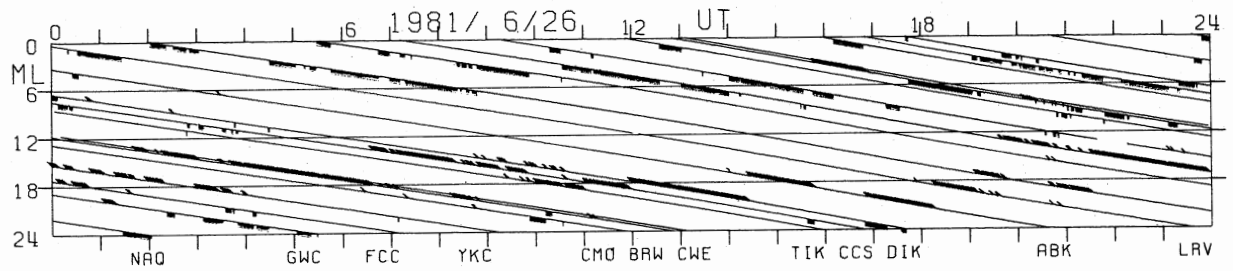
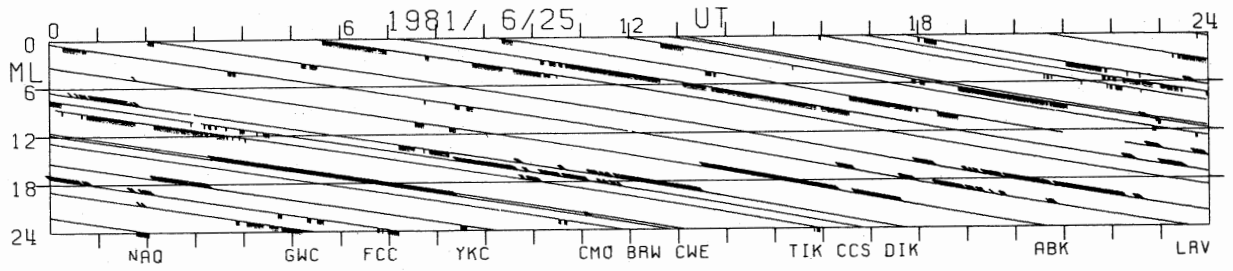
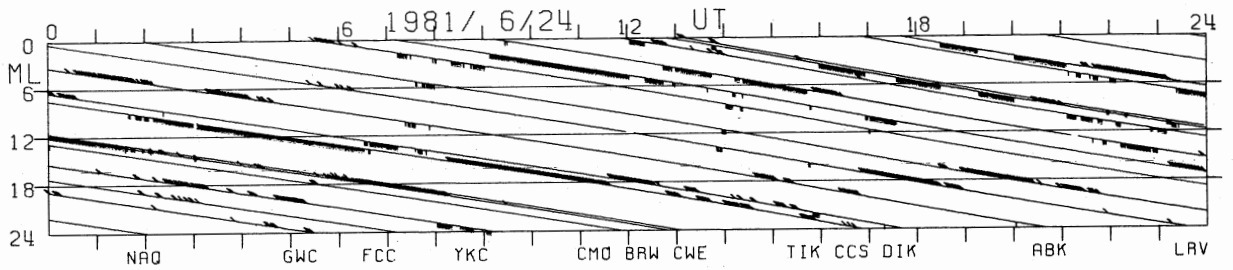


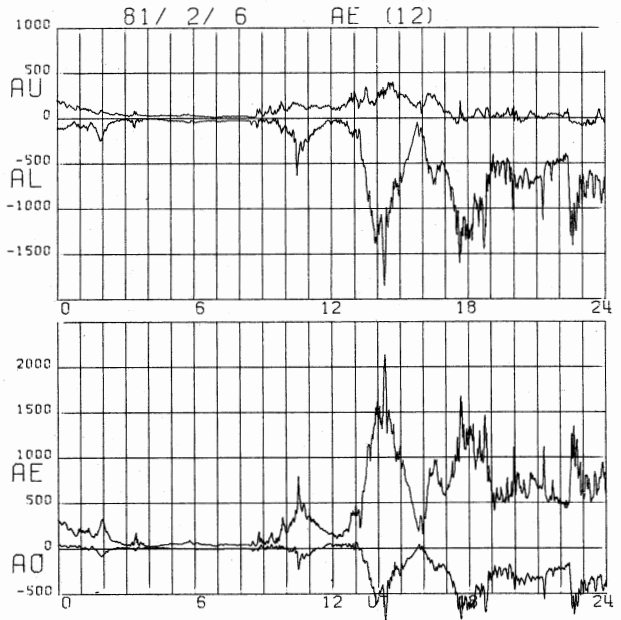
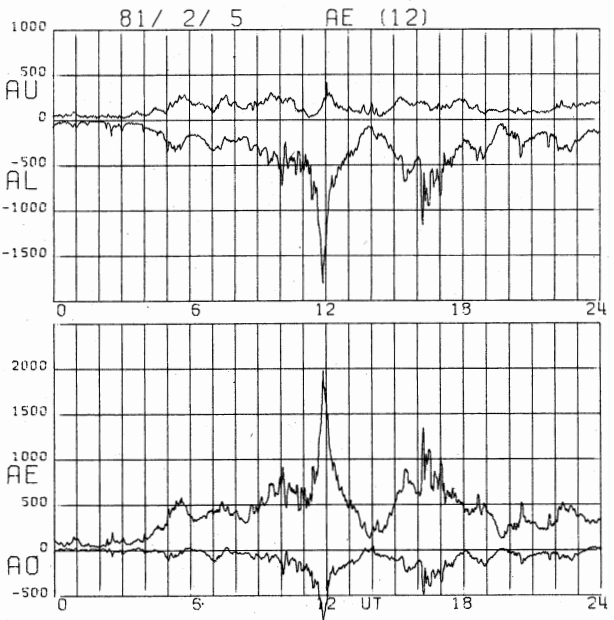
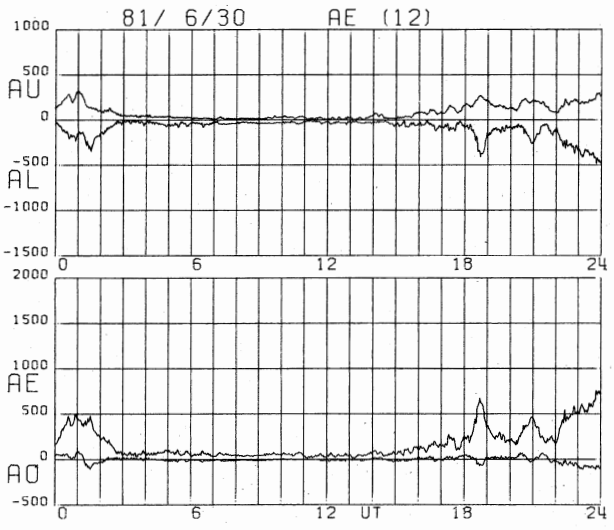












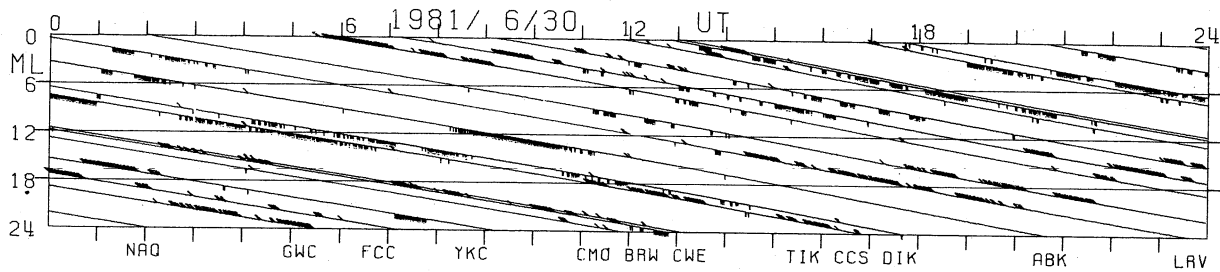
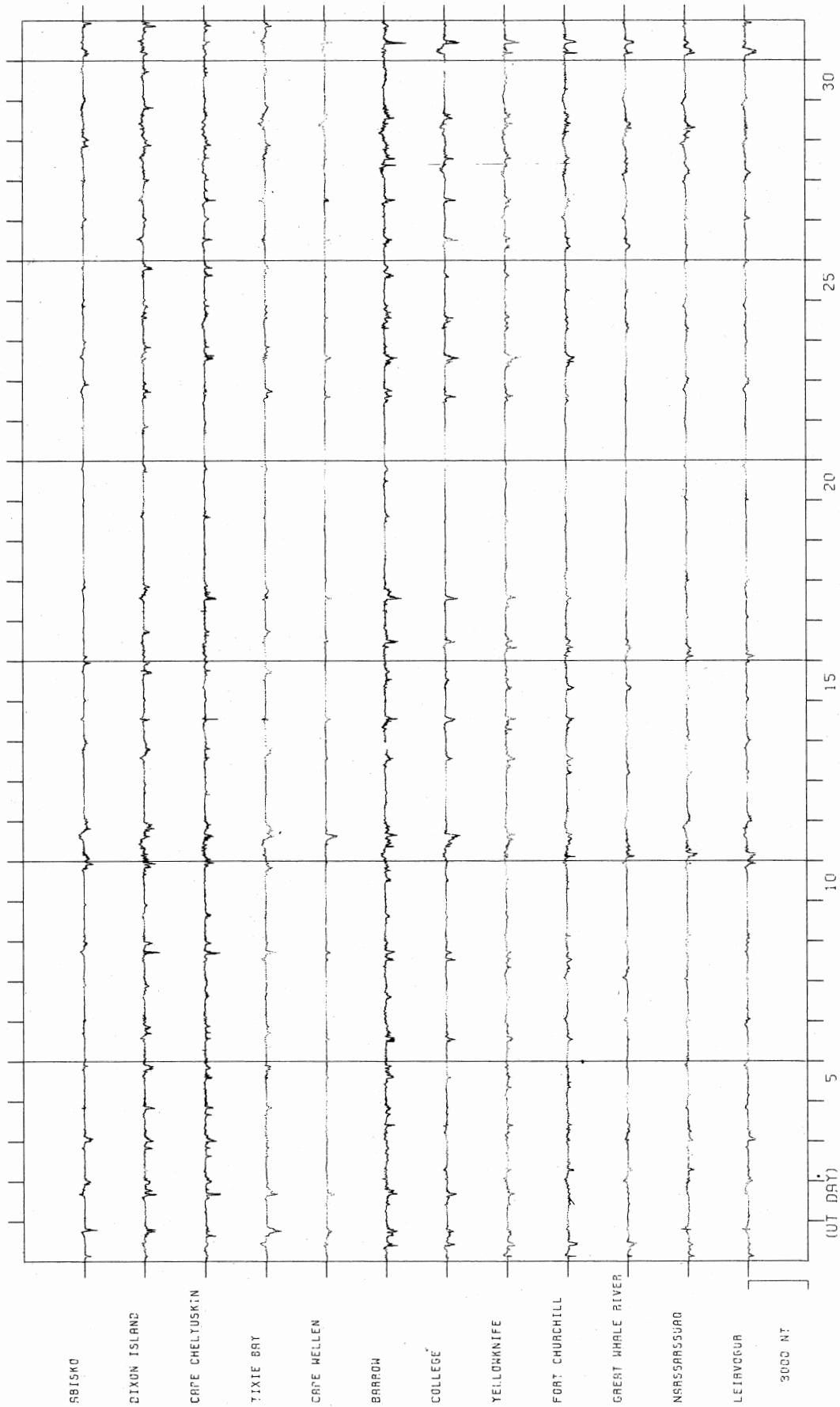


FIGURE 6

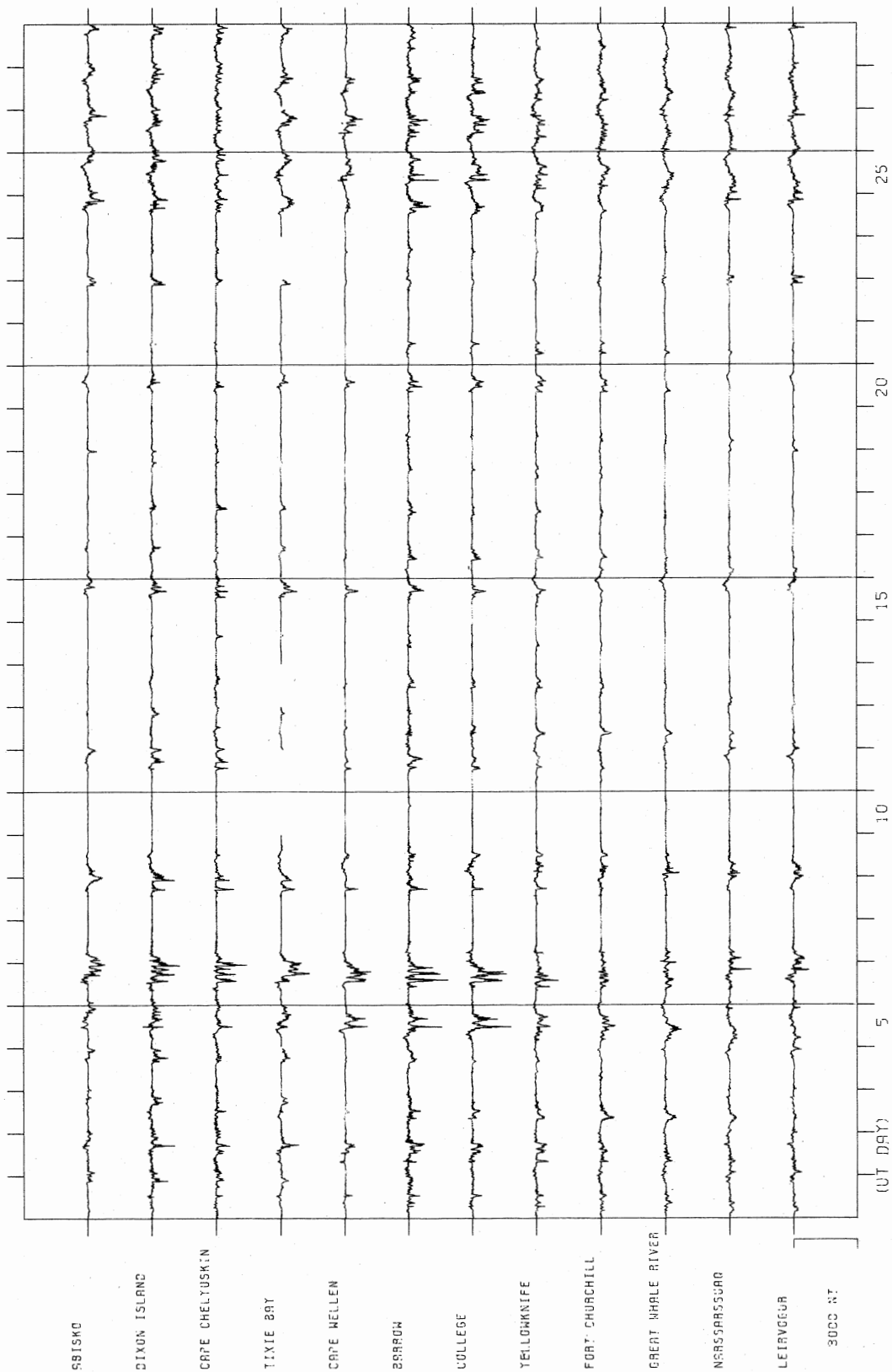
The H traces of magnetograms from AE(12) stations in every month from January to June 1981.

FIGURE 7

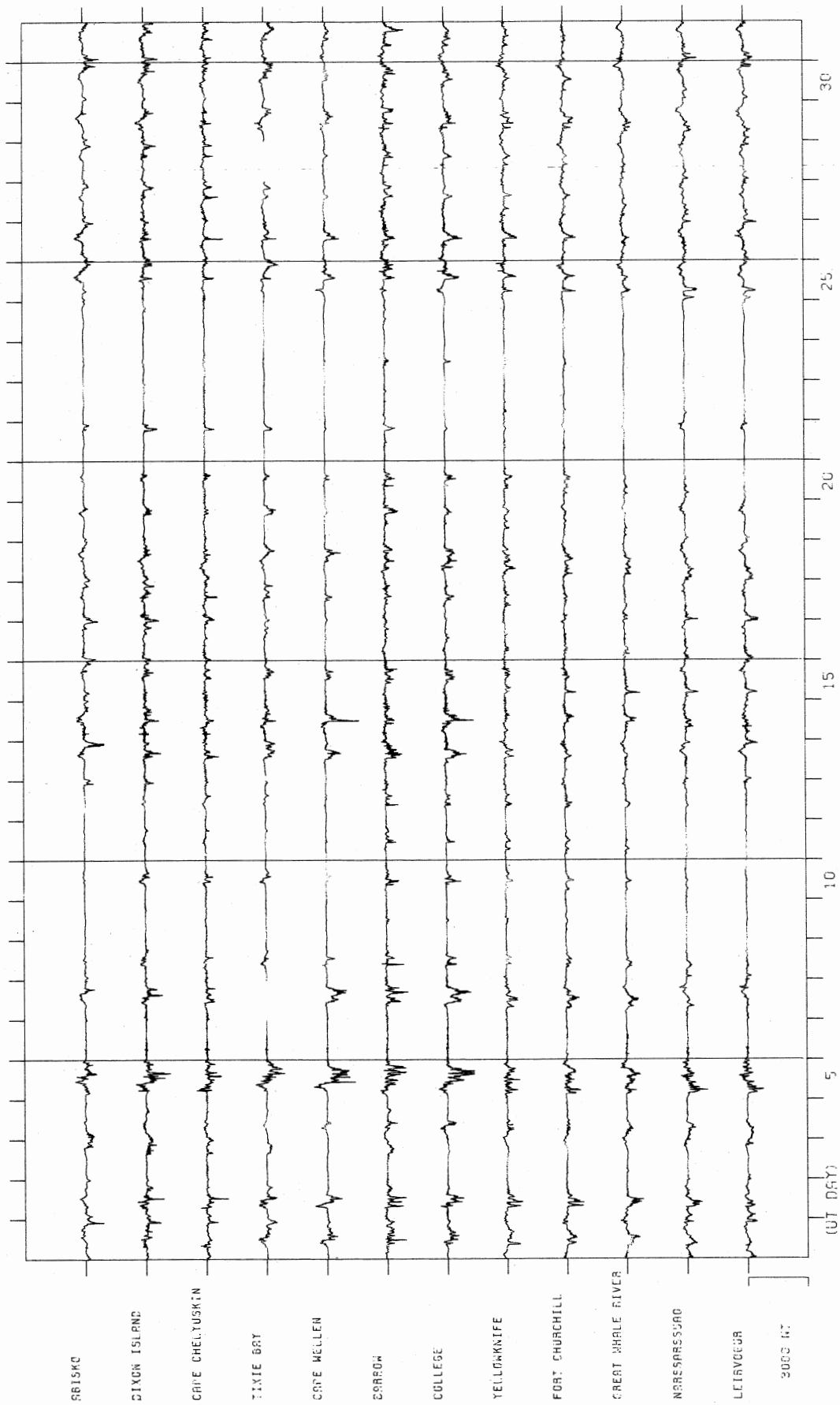
Plots of hourly values for each index from January to June 1981.



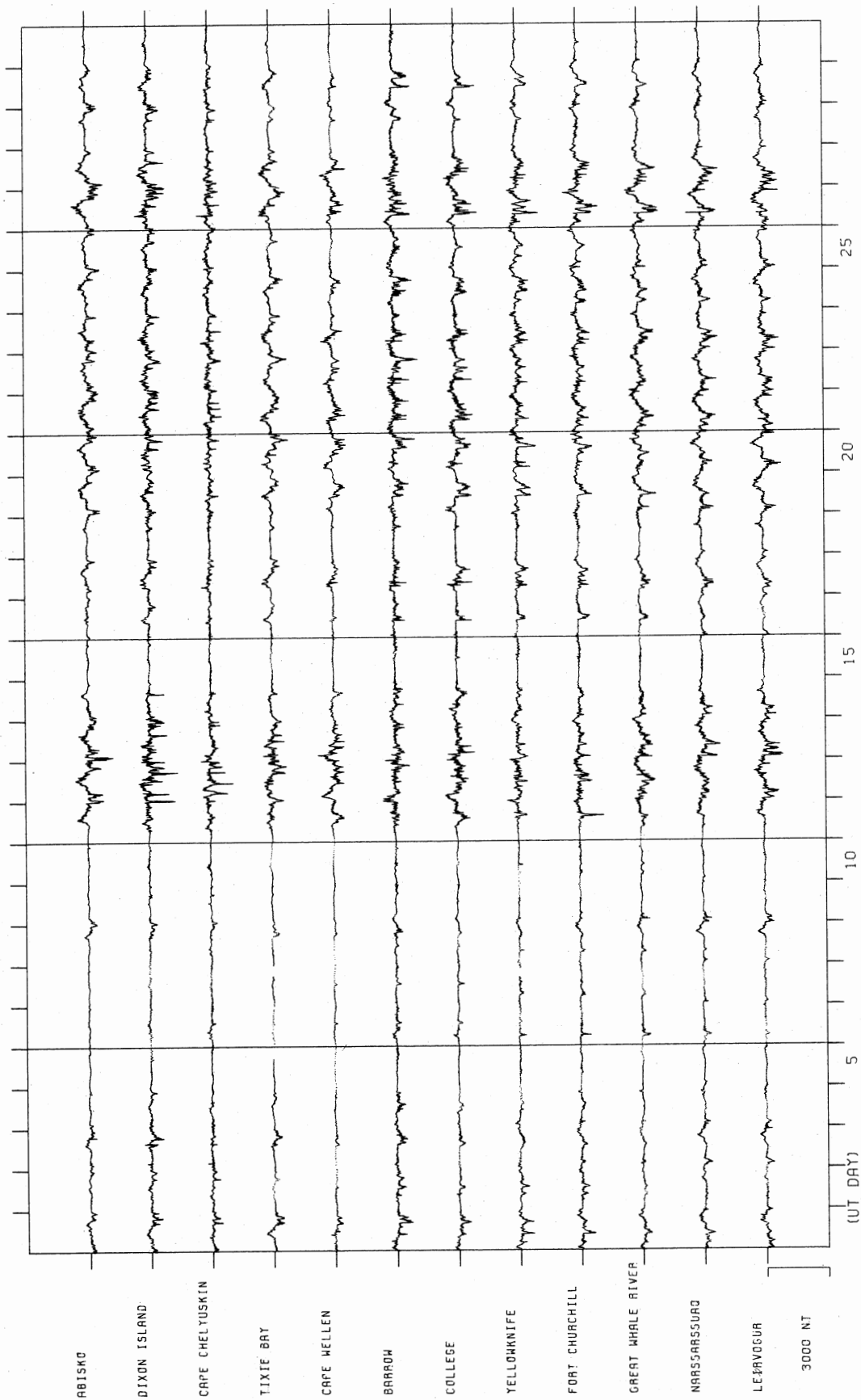
STACKED COMMON SCALE MAGNETOGRAMS FOR JANUARY 1981



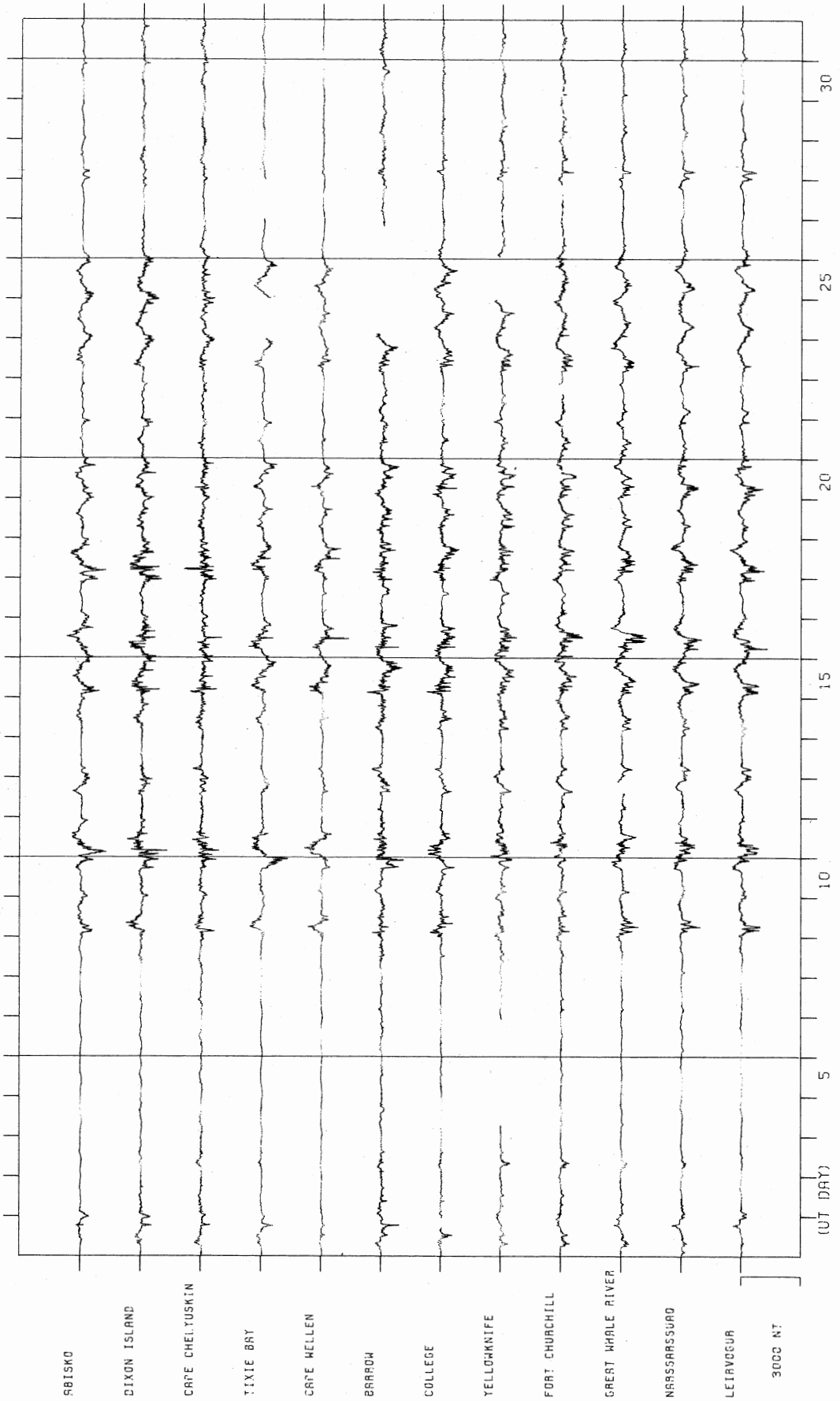
STACKED COMMON SCALE MAGNETOGRAMS FOR FEBRUARY 1981



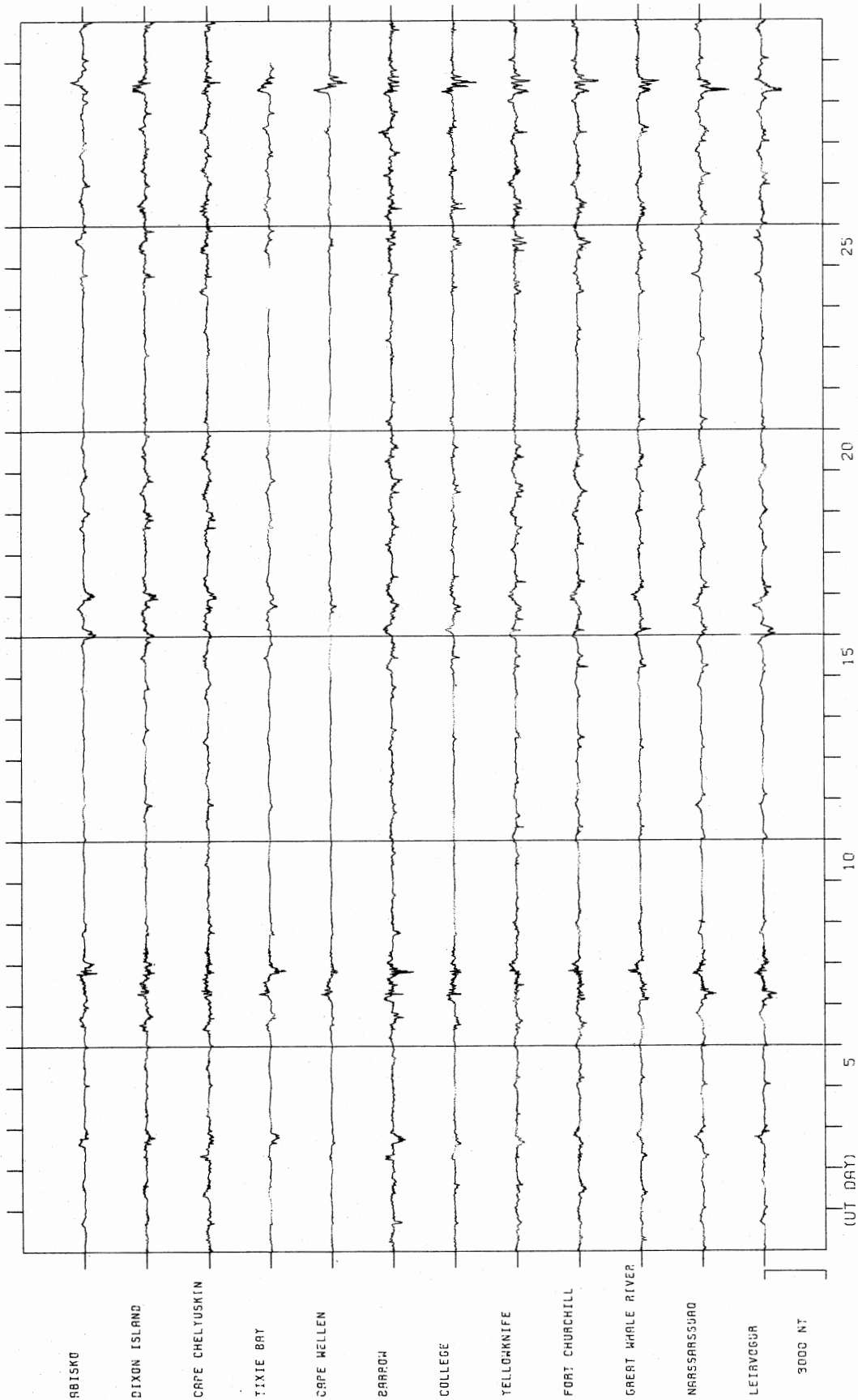
STACKED COMMON SCALE MAGNETOGRAMS FOR MARCH 1981



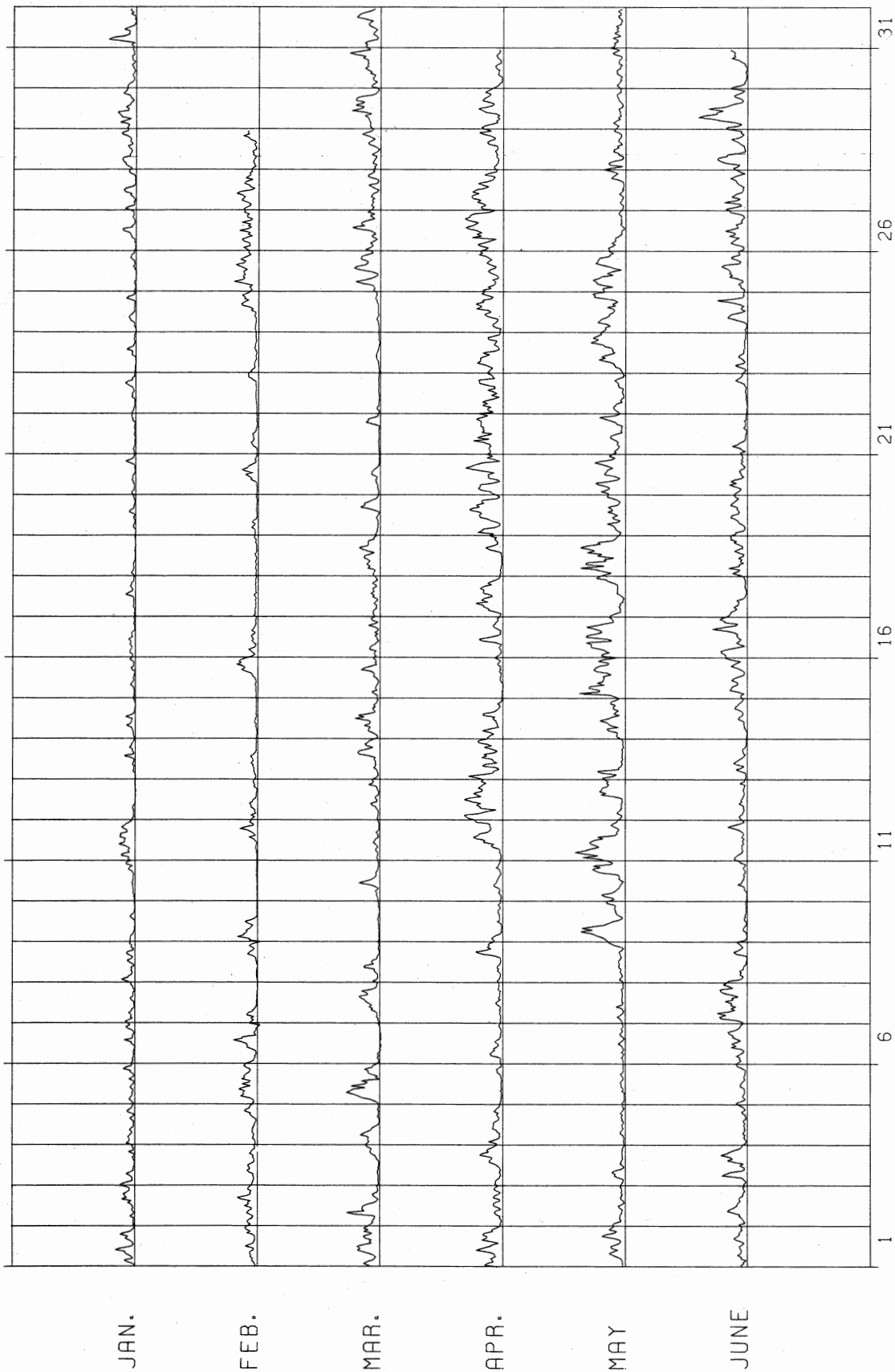
STACKED COMMON SCALE MAGNETOGRAMS FOR APRIL 1981



STACKED COMMON SCALE MAGNETOGRAMS FOR MAY 1981



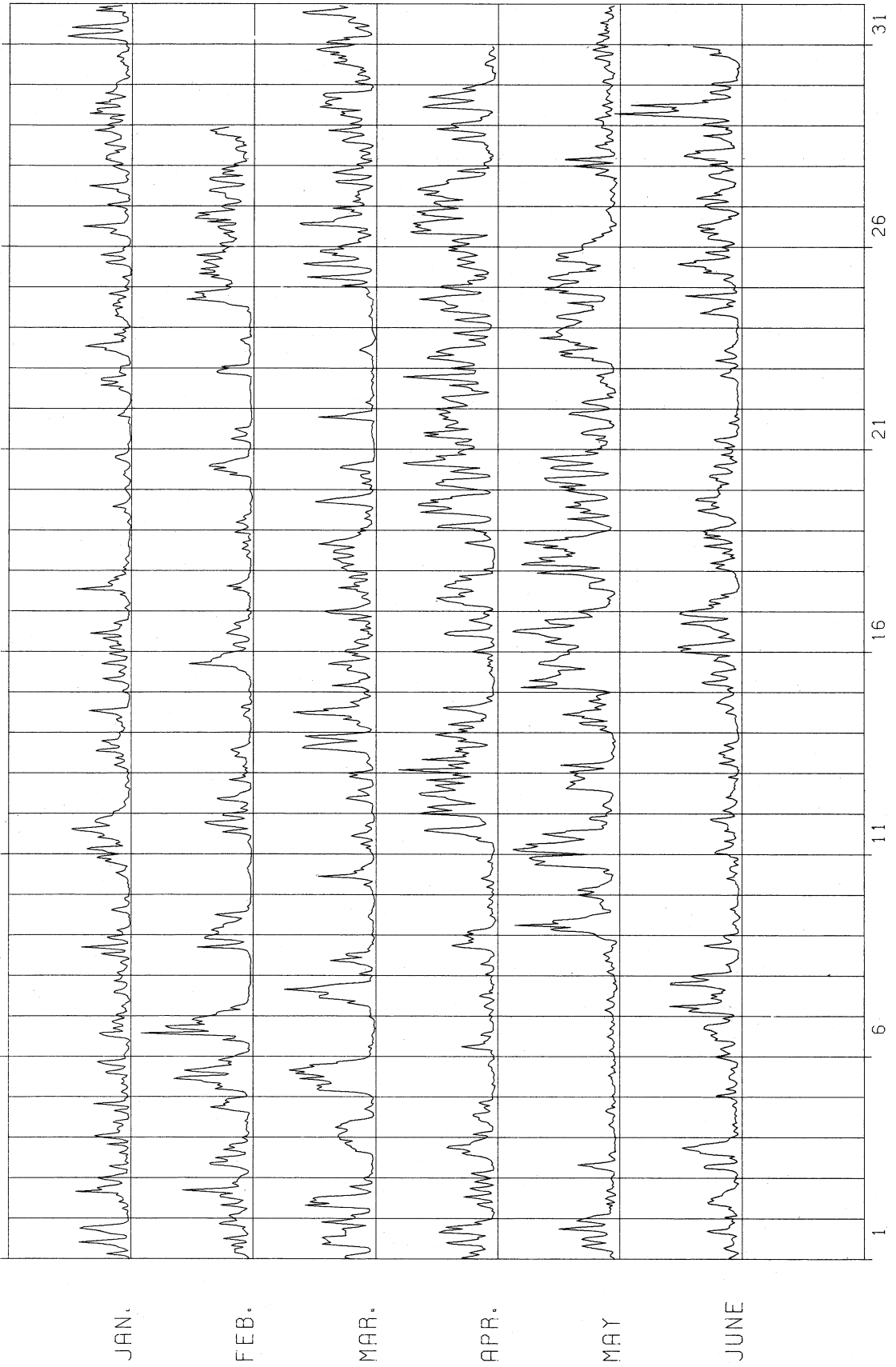
STACKED COMMON SCALE MAGNETOGRAMS FOR JUNE 1981



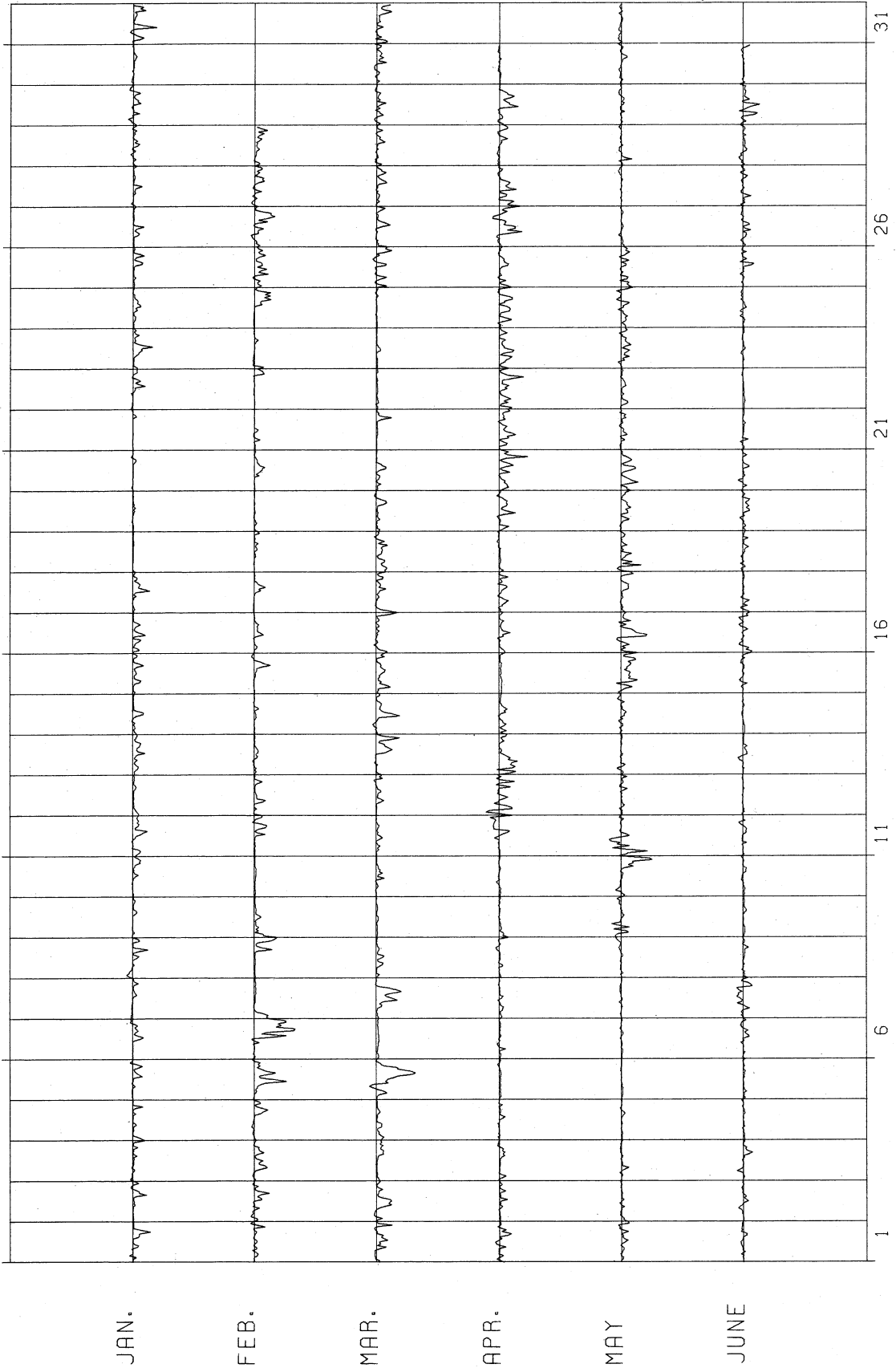
AU HOURLY VALUES FOR THE FIRST HALF OF 1981 15000NT/DIV)



AL HOURLY VALUES FOR THE FIRST HALF OF 1981 (1500NT/DIV)



AE HOURLY VALUES FOR THE FIRST HALF OF 1981 (1500NT/DIV)



AO HOURLY VALUES FOR THE FIRST HALF OF 1981 (1500NT/DIV)

