REPORT UAG - 22

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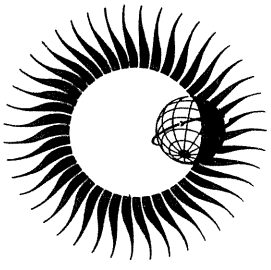
AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES (AE) FOR 1970



November 1972

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by

Joe Haskell Allen

National Geophysical and Solar – Terrestrial Data Center

Environmental Data Service

Boulder, Colorado

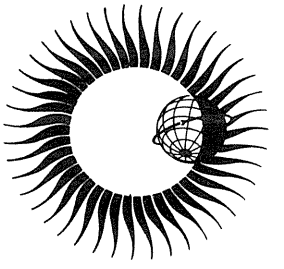

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TABLE OF CONTENTS

		Page
	ABSTRACT	1
Section I:	General Discussion	
1.	Introduction	1
1.1	Prior Derivations of AE	1
1.2	Definition and Computation of AE	2
1.3	Station Selection for 1970 AE	2
1.4	Quiet Time Reference Levels	5
1.5	Computation of Indices	5
2.	Problems in Derivation of AE	5
2.1	Inherent Problems	6
2.2	Data and Recording Problems	6
2.3	Digitizing Process Problems	7
3.	Availability of Indices	7
4.	Acknowledgements	8
Section II:	Tables	
1.	Explanation	10
2.	Tables of Adopted Monthly ΔH Reference Values	11
3.	Tables of Hourly Average AE Indices	12
4.	Tables of Hourly Average AL Indices	24
5.	Tables of Hourly Average AU Indices	36
6.	Tables of Hourly Average AO Indices	48
7.	Tables Giving Observatories Supplying AU and AL for Each Hour	60
Section III:	Graphs of Indices	
1.	Explanation	85
2.	Graphs of 2.5-min Values of Indices for Each Day	86

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ABSTRACT

The Auroral Electrojet index (AE) is discussed and a detailed description is given of the derivation of 2.5-min AE indices for 1970. Tables are given of hourly average indices for each day of the year and of the stations which supplied the extreme deviations from quiet time levels for each hour. Graphs of the variations of the indices are included for each day.

SECTION I

1. Introduction

The Auroral Electrojet Index, AE, is designed to provide a global, quantitative measure of auroral zone magnetic activity produced by enhanced ionospheric currents flowing along the margin of the auroral oval. Ideally it is the total range at an instant of time of the deviations from quiet day values of the horizontal magnetic field (H) around the auroral oval. Defined and developed by Davis and Sugiura [1966], AE has been shown to be especially useful to delineate the onset and progressive development of high latitude magnetic disturbances which are recognized as one aspect of polar and magnetospheric substorms [Akasofu, 1968]. It has been shown to correlate strongly with the integrated southward component of the interplanetary magnetic field [Pudovkin, et al., 1970; Arnoldy, 1971] and to be intimately related to the growth of the geomagnetic ring current during magnetic storms [Davis and Parthasarathy, 1967]. For these various roles AE possesses advantages over other geomagnetic indices, in particular:

(i) it can be derived on an instantaneous basis or from averages of variations computed over any selected interval;

(ii) it is a quantitative index which, in general, is directly related to the physical processes producing the observed magnetic variations;

(iii) its method of derivation is relatively simple, digital, and objective and is well suited to present computer processing techniques; and

(iv) it may be used to study either individual events or statistical aggregates.

Increasingly frequent reference to AE in journal articles concerned with solar-terrestrial interactions and magnetospheric physics as well as requests to World Data Centers for AE indices are indications of its utility. Also, IAGA Resolutions 2 and 15 [Alldredge, 1969]; the Joint COSPAR-IUCSTP Second Report on IMS [1972]; and several ad hoc conferences of users of geomagnetic data further document the need for systematic, timely derivation of AE indices. In order to satisfy this need of the scientific community, the Environmental Data Service of NOAA has undertaken to resume 2.5-min digitization of magnetograms and to perform the data processing necessary to derive AE. This report is one means of distributing a summary of the results. More detailed information and data may be obtained from World Data Center A for Solar-Terrestrial Physics, Boulder, Colorado, U.S.A.

1.1 Prior Derivations of AE

AE indices were calculated and published on a systematic basis by the Geophysical Institute of the University of Alaska for the years 1957 through 1964 [T. N. Davis, et al. 1967, 1968]. These values were based upon the standard tabulations of hourly-average scalings of the horizontal magnetic field for selected auroral zone magnetic observatories. Later, AE indices were derived at the NASA Goddard Spaceflight Center under the direction of D. Fairfield. These were derived from 2.5-min digitizations of H from selected observatories and they covered the interval from September 1964 through June 1968 [King, 1971].

The network of stations whose magnetograms were used to derive AE changed slightly from year to year. Originally, some high latitude, southern hemisphere stations were used to fill gaps in the longitudinal distribution of the available northern hemisphere auroral zone stations. Critically located new stations were incorporated from time to time and they significantly improved the station distribution and, thus, the approximation to "ideal" AE. However, because of delay in availability of magnetograms from some stations, the AE indices for the years 1966 through 1968 were "preliminary" and were based on an inadequate distribution of stations. Arnoldy [1971] has pointed out one effect of the biased station distribution for the published 1967 AE indices. Also, omission from the AE station network of high latitude stations such as Barrow or Inuvik may have sometimes severely limited the amplitude of detected events [K. Kawasaki, R. L. McPherron, private communications]. Because of a history of H-baseline problems, Barrow magnetograms were not used in the NASA derivation of the 2.5-min AE indices. In the EDS derivation of AE(11) for 1970, Barrow contributed 18.6% of the extreme positive deviations (AU) and 12.8% of the negative extreme values (AL).

1.2 Definition and Computation of AE

AE was originally derived by Davis and Sugiura [1966] from horizontal magnetic field (H) data from a group of seven auroral zone magnetic observatories. They derived a quiet time H level for each observatory and subtracted this value from observed instantaneous values of H. The result was a time series of deviations from the undisturbed field, $\pm\Delta H(t)$. Superposition of the seven time series produced a set of interwoven lines bounded by an upper and lower envelope formed by connecting the set of extreme ΔH values. The upper and lower envelopes were designated AU and AL respectively and the range between them at any instant, AU-AL, was defined as AE for that time. In the absence of other sources of variations, AU is a direct function of the current flowing in the eastward auroral electrojet while AL is similarly related to the westward flowing current.

A second index derived from AU and AL was their mean, AO = (AU+AL)/2. It is an approximate measure of the equivalent zonal currents affecting the auroral zone whether arising in the ionosphere or magnetosphere. It illustrates the presence or absence of symmetry in the variations of the oppositely directed electrojets and may provide a correlation with ring current effects in the auroral zone. The units of AU, AL, AE, and AO are gammas (1 gamma = 1 nanotesla = 1×10^{-5} Gauss).

The stations they selected to contribute to AE were chosen to lie in the auroral zone and to be as evenly distributed in longitude as was practical. Ideally, each station should lie just below the instantaneous auroral oval around the time of local geomagnetic midnight. In practice, the network of stations used must be relatively uniform in longitudinal coverage and include a reasonable distribution of latitudes.

1.3 Station Selection for 1970 AE

Conversations with Davis, Sugiura, Akasofu, and others led to selection of the eleven stations listed in Table 1 for the determination of 1970 AE(11). The station positions are shown in Fig. 1 relative to the geographic and geomagnetic north poles. The station names are given along with their mnemonic abbreviation (EDS-NOAA), geographic and geomagnetic coordinates to the nearest hundredth degree, and the universal time of geomagnetic midnight at equinox.

Delay in magnetogram acquisition from some observatories may lead to the future use of a subset of the given observatories for the derivation of "preliminary" AE. Availability of new stations may increase the list. We have chosen to indicate the number of stations contributing to a given determination by a parenthetical number following the letters AE.

This basic list of eleven magnetic observatories may be supplemented with other stations in future derivations to improve the approximation of "ideal" AE. For example, there are longitude gaps between Fort Churchill and College and between Cape Uelen and Tiksi Bay which may be filled. Also, because the auroral oval varies in areal extent with the level of magnetic activity, we will attempt to supplement the present network with meridional chains of stations. The addition of any standard station to the present network represents a significant increase in the work of digitization to secure 2.5-min values. For this reason, we are interested in continuing to review the desirability of retaining all stations used for deriving 1970 AE(11). In general, we have chosen to use records from standard magnetic observatories and to avoid the use of records from temporary installations although the latter may have been well-situated to

supplement the network. In this way we hope to produce comparable indices from year to year and to standardize our technique of magnetogram processing.

In addition to the geographic position of contributing stations, another factor in station selection is the promptness with which their records become available through the World Data Center system. This means not only the timely submission of microfilm or other copies of magnetograms but also the availability of calibration data such as scale values, baseline values, and temperature correction factors. Also of great importance is the availability of auxiliary storm magnetograms and their calibration information. This is because during active periods (of greatest interest for AE) the registration of normal magnetograms is often incomplete, necessarily resulting in missing data from these periods unless storm magnetograms are available. The effect of missing data at a critical station may be observed in the graphs of daily variation of the indices (Section III).

TABLE 1

Observatories Used for the Derivation of 1970 AE(11)

Observatory	Mnemonic Abbreviation	Geographic Coord. N. Lat.^{o}	E. Long.^{o}	Geomagnetic Coord. N. Lat.^{o}	E. Long.^{o}	LGM* UT
1. Leirvogur	LR	64.18	338.30	70.22	71.04	2351
2. Narssarssuaq	NAS	61.20	314.16	71.21	36.79	0210
3. Great Whale River	GWR	55.27	282.22	66.58	347.36	0526
4. Fort Churchill	FC	58.80	265.90	68.70	322.77	0704
5. College	CO	64.87	212.17	64.63	256.52	1133
6. Barrow	BW	71.30	203.25	68.54	241.15	1235
7. Cape Uelen #	UE	66.17	190.17	61.79	237.10	1250
8. Tiksi Bay #	TI	71.58	129.00	60.44	191.41	1551
9. Cape Chelyuskin	CC	77.72	104.28	66.26	176.46	1650
10. Dikson Island #	DI	73.55	80.57	63.02	161.57	1748
11. Abisko	AI	68.40	18.90	66.04	115.08	2052

*Local Geomagnetic Midnight (LGM) at equinox
Geomagnetic coordinates and time calculated for inclined dipole field

#Sometimes given as; Cape Wellen, Tixie Bay, and Dixon Island.

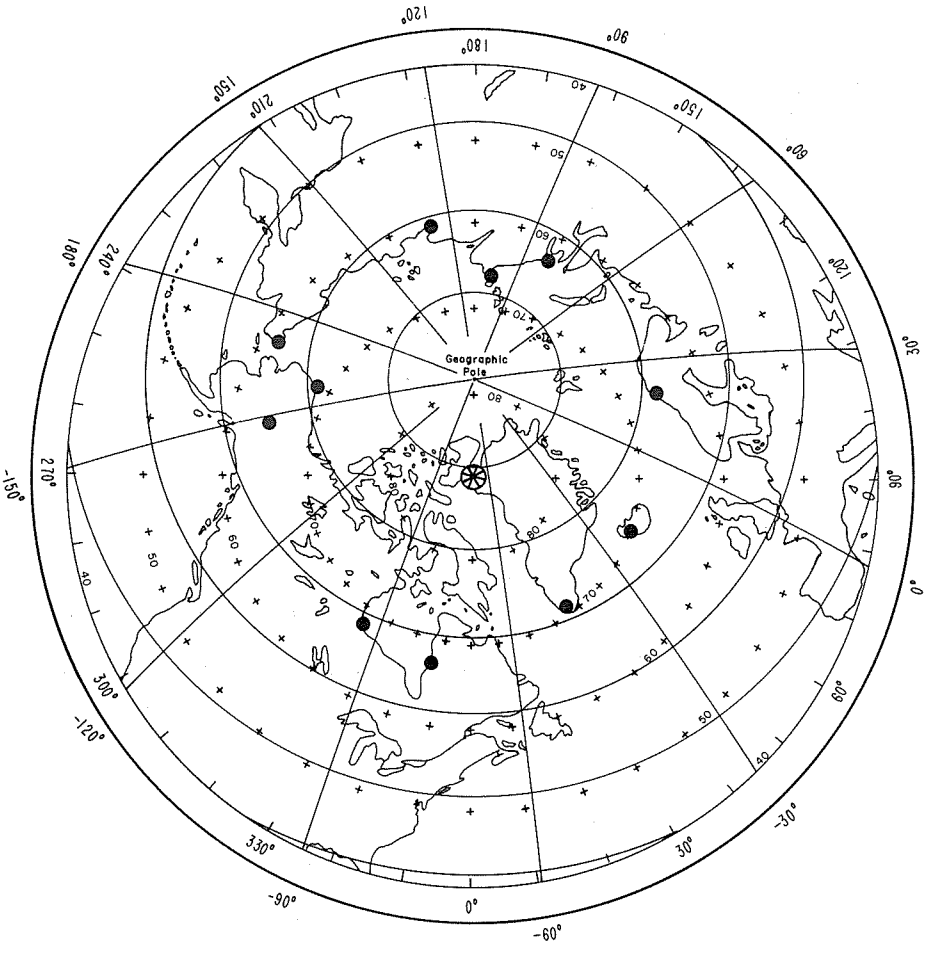

Fig. 1 Stations contributing to 1970 AE(11) are shown by solid filled circles. Polar equal-area projection centered on north geomagnetic pole with geographic and geomagnetic coordinate grids.

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 10° intervals.

1.4 Quiet Time Reference Levels

There are several techniques which could be used for deriving the quiet time reference level of the horizontal field at each AE station. We have selected the following as being simple, essentially objective, and easily performed on the computer. It is also the technique used by Davis and his associates [1967, 1968] for hourly AE for 1957-1964. A monthly quiet time average value of H is computed for each station from all the 2.5-min values on the internationally adopted 5 quiet days of each month. This provides a set of twelve monthly reference values for each station for a year. The average month-to-month absolute change in reference level during 1970 was about 13γ and the greatest change observed was 40γ. These changes introduce small discontinuities into AU and AL at each month's end and, therefore, into AE. This technique does not attempt to remove Sq variations; however, our computer program includes an option to derive monthly quiet time means for each 2.5-min interval from the 5 Quiet Days or any other selection of days.

As computed for 1970 AE(11) and given in the first table of Section II, the monthly H reference levels for each station include the H baseline value at that location. So long as each H variometer maintains stability relative to its baseline during a month of recording then the absolute value of the baseline is not important. However, as discussed below (subsection 2.2), when there is component drift relative to the baseline this can introduce errors into the AE indices. Effects of such instrumental drift or shifts can be compensated when absolute H observations are taken at critical times to permit H baseline determinations. For this reason we have computed our reference levels including baseline values instead of simply using average millimeter amplitudes of H or other alternative reference levels. For some Russian and Canadian observatories we did not have current adopted baseline values. Either arbitrary preliminary values were used or else the most recent adopted values available for dates near to 1970. In this way AE was derived on a more timely basis without our being forced to await final adoption of baselines. We are prepared to apply adopted baseline values when they become available and will circulate updated tables of reference levels and any changes necessary in the AE indices. We do not expect these to be significant although they might increase AE slightly in some cases.

1.5 Computation of Indices

The monthly reference levels for each station were subtracted from the observed values of H giving ΔH deviations for each 2.5-min UT. In practice these values were grouped in hourly blocks by month and with data for the 11 stations ordered by geographic longitude. The ΔH values were then scanned by computer techniques and the extreme deviations identified for each 2.5-min interval. These extreme values became AU and AL for that time and the observatories which produced them were also recorded. AE and AO were computed from AU and AL and all indices were recorded on magnetic tape. At the same time, hourly averages of all indices were computed.

Daily graphs of all the 2.5-min indices were produced on the computer's cathode ray tube plotting unit and microfilmed. Tables of hourly average indices were printed in monthly blocks. For hours of high AE the complete set of station deviations for each 2.5-min interval was listed. Quality control programs were used to check each stage of the derivation and sample statistics were kept on the frequency of station selection for AU and AL.

Section II of this report reproduces the tables of station reference values, hourly average indices tabulated by month, and monthly lists of stations contributing AU and AL for each hour. Section III reproduces the microfilm graphs of index variations for each day. Brief comments on these tables and graphs are given at the beginning of Sections II and III.

2. Problems in Derivation of AE

Users of these indices should be aware of the following types of problems:

(i) those inherent in the method of derivation of the index;

(ii) those arising from observatory procedures and the magnetograms; and

(iii) those produced by the digitizing process.

2.1 Inherent Problems

At an AE observatory the deviation from quiet time H will be the same either for an enhanced electrojet current or for a constant current which moves spatially relative to the fixed observatory. With a limited number of stations and for a small event, no approximation to AE will distinguish between these two sources of H deviations. Also, small electrojet variations could occur in the gaps between observatories and not show in AE. Further, failure to remove any Sq variations in computing the H deviations probably accounted for the small diurnal variation noted in AE by Pudovkin, et al. [1970]. Restriction of the set of contributing stations to the northern hemisphere should introduce a seasonal variation in the AU and AL ratios as noted by Afonina and Fel'dshteyn [1971].

2.2 Data and Recording Problems

The operating problems which may arise at an auroral zone magnetic observatory are many and varied. Those which particularly affect the derivation of AE are any which change the baseline of the H trace during a month; any which change the H scale values; and any setting of the H trace on the magnetogram which permits it to go off the edge of the photographic paper during times of moderate or large excursions.

An example of baseline drift effects is shown in Fig. 2. The relatively high yet unvarying level of AU for many hours of January 6 and for the first three hours of January 7 are obviously erroneous. For several days of the first week in January the H trace at one contributing observatory appeared to drift relative to its baseline. Apparently the problem was resolved by instrumental adjustments for after twenty four hours of blank record following 0300 UT, January 7, the magnetograph recordings were resumed and offered no further problems.

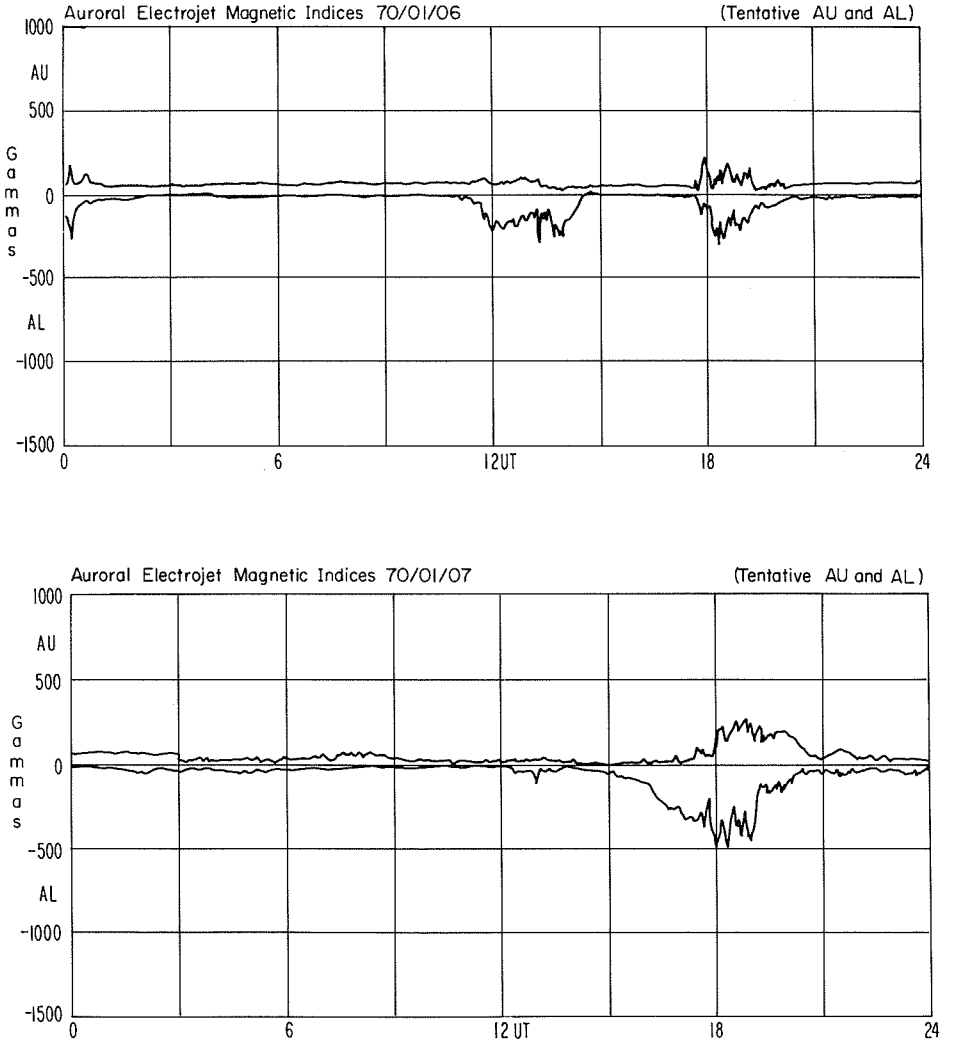

Fig. 2 Uncorrected index graphs of AU, AL for January 6-7, 1970.

This difficulty was compounded by the fact that we had no current baseline calibration data for that observatory and could make no attempt to compensate for the observed drifts. For the interval January 1-8 we derived AE(10) and excluded the drifting data. Lack of current baseline information is only serious for such times during which significant change occurs. Otherwise the process of deriving ΔH eliminates the baseline and any arbitrary value can be assumed so long as baseline stability is assured.

Some of the records processed in deriving 1970 AE had irregularly spaced hour marks arising from erratic time drives in the magnetographs. This caused unique problems for our semi-automatic digitizing equipment. In some instances difficulty with the time drive was also associated with multiple days of recording on a single magnetogram. This produced a complex network of overlapping traces which were difficult to separate.

Another problem encountered in deriving AE produces a characteristic effect easily seen in the graphs of the AU and AL indices (Section III). During moderate magnetic activity the H trace at some observatories may pass off the magnetogram and if there is no secondary trace some data will be lost. At other times the H trace simply becomes so faint that it cannot be digitized. On the other hand, during some large magnetic events the magnetogram traces become so mixed that they cannot be distinguished from one another for digitization. Unfortunately, many of the observatories selected for deriving AE do not routinely supply storm magnetograms. If for any reason the H trace is "lost" at a critically located station during a time when it is supplying either the AU or the AL values of the AE index then a "missing data effect" results. At such times the network of the AE stations is effectively reduced and the station recording the next most extreme H deviation is used to supply AU or AL. The two most outstanding such events can be seen in the graphs in Section III for AU on 70/03/08 at 1430 UT and 1900 UT and on 70/07/21 at 1330 UT. These missing data effects are characteristically rectangular bays in AU or AL with a sharp decrease toward zero, apparently normal variations for a few minutes to hours, then a sharp increase back to a higher value. During the great magnetic storm of 8 March 1970, data were missing from as many as eight stations during parts of the day. We were reduced to deriving AE(3) for those intervals and the three stations supplying H deviations were located in the North American sector.

This problem of missing data effects can be greatly mitigated at the observatories. Adjustment of the position of the H trace on the magnetograms, installation of secondary H mirrors on the variometers, and the inclusion of auxiliary storm magnetograms for active times would solve most missing data problems in the records supplied to the World Data Center system. When storm magnetograms are supplied appropriate calibration data should also be furnished.

2.3 Digitizing Process Problems

Quality control of the digitizing process proved to be more difficult than expected. It is not useful to discuss these problems in detail in this report, but we must admit the possibility that not all errors introduced in digitization were removed. We are not aware of any erroneous index values in the tables of this report or in the archived 2.5-min values. However, unless a digitizing mistake produced a suspiciously non-natural appearing variation on the index graphs it may have been missed. At any instant of time AE is the result of measured H deviations at only two stations and not the average of many measurements. For this reason it is especially susceptible to digitization errors. Currently, we have adopted the procedure of computer-plotting synthesized magnetograms from the raw digitized values and from the values obtained after application of calibration data. Large discontinuities in the H trace are easily observed. By this means we hope to reduce the number of errors in AE derivation which characterized our first attempts with 1970 data. We request that anyone detecting questionable values in 1970 AE(11) communicate with WDC-A concerning this matter. If necessary, corrections will be issued from time-to-time and distributed to the scientific user community, including statements in later reports in this series.

3. Availability of Indices

This report presents hourly average indices, some statistical summaries, and graphs of the 2.5-min indices for each day of 1970. Users of the indices desiring computer listings of 2.5-min values may obtain them upon request from WDC-A. In addition these indices are available on digital magnetic tape. They can be supplied in either 7- or 9- channel, 556 BPI, BCD format, IBM compatible modes. Other conversions are possible upon special request. Microfilm copies of the index graphs are also available. In general, WDC-A will attempt to supply the data for 1970 in any way which will meet user needs and which facilitates data distribution. We welcome suggestions concerning different means of effective data distribution.

4. Acknowledgements

The program to derive 2.5-min AE indices on a systematic and timely basis from records supplied by many geomagnetic observatories is necessarily a complex operation whose success depends upon many interacting parts. Many different people are involved at each stage: observers at remote auroral zone stations, processors of records in each country, the staff of the World Data Center system, and curve followers and geophysicists responsible for the final product. All play essential roles in the production of AE. It is our hope within EDS that all the many contributors will continue to exert their best efforts to secure a timely flow of high quality data through the system and that the indices will be made quickly available to the user community.

We have been greatly assisted in the work of deriving 1970 AE by informal contacts with representatives of the international scientific community and data service groups, especially at the 1971 IAGA Moscow meetings. Dr. A. F. Treshnikov, Dr. V. M. Driatsky, and Dr. A. N. Zaitsev contributed to improving the flow of data into the World Data Center system. Advice and encouragement from Dr. M. Sugiura, Dr. T. N. Davis, and Dr. S. Akasofu have helped in many ways. C. A. Abston (EDS) supervised the digitizing effort, rewrote his bulk data processing programs for the Boulder computer system, and did much of the original programming which produced the present results. In this work and the extensive quality control effort he has been assisted by L. D. Morris.

Dr. W. N. Hess and A. H. Shapley are thanked for their encouragement and support in the preparation of this report.

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SECTION II

TABLES

Table of Monthly H Reference Values

The monthly quiet-time H reference values are given for each observatory. These values are the base from which the ΔH deviations were derived and they were computed as the average of all 2.5-min digitized H values from the internationally adopted 5 magnetically quiet days of each month. The given values are in gamma units and are absolute in the sense that they include the applied scale value and provisional baseline used for each observatory's magnetograms. While subsequent changes in adopted baselines may shift the reference values slightly they should not affect the derived indices because the method of derivation eliminated the H baseline value (see text).

Tables of Hourly Mean Indices

The following tables contain monthly listings of average hourly indices: AE, AL, AU, and AO. These hourly values were computed as the mean of the 2.5-min instantaneous values and the first hour of each day covers the data interval from 0000-0100 UT. All times are given in Universal Time and the indices are given in gammas. On March 8, UT hours 15, 16, and 20 had hourly AL values more negative than -1000γ. This was also true for UT hour 12 on November 7 and for UT hour 8 on December 14. These values appear in the tables as underlined positive numbers because there was not sufficient space to print a four digit value and negative sign.

Tables of Stations Supplying Hourly AU and AL

As described above, the hourly average indices are computed from the 2.5-min instantaneous indices derived for that hour. Each pair of instantaneous values of AU and AL arise from data recorded at only two stations and the station-pair contributing these extreme values may change from one 2.5-min data interval to the next during an hour. In order to designate a single station as the source of hourly AU or AL some convention must be adopted as a basis for selection. We have chosen to designate the station having the maximum average ΔH for the hour as the "contributor" of hourly-AU. Likewise, the station having the most negative ΔH is the contributor of hourly-AL. Two empirical observations from deriving AE indices support this decision. During disturbed times (when hourly AE exceeds 150γ) it is most common for one pair of stations to be both the most frequent contributors of AU and AL and to also have extreme hourly average ΔH values. During quiet times (hourly AE lying in the range 20-60γ), one station-pair may supply AU and AL for most of an hour only to be displaced by another station-pair critically situated to record the onset of an AE event. Generally, there is little difference between ΔH at the stations supplying the AU and AL indices during quiet times and the other stations of the network. Thus large deviations associated with an event are sufficient to raise the hourly average ΔH of the critically located stations above the corresponding values of the station-pair which supplied most of the quiet-time values. For such hours the stations indicated as supplying AU and AL are the ones which responded to the event.

These tables serve to illustrate the nonuniform contribution to AU and AL made by different stations of the network. Barrow, Fort Churchill, Cape Chelyuskin, Dikson Island, Great Whale River, and Narssarssuaq supply about 71% of the extreme values used in deriving 1970 AE(11). In particular, Barrow, Dikson Island, and Cape Chelyuskin supplied almost 50% of the AU indices.

TABLE OF MONTHLY H—REFERENCE VALUES

Units: Gammas

OBSERVATORY NAME	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ABISKO	1970	11757	11760	11756	11755	11760	11762	11760	11763	11754	11762	11770	11770
BARROW	1970	9734	9756	9752	9757	9760	9760	9779	9763	9770	9777	9776	9794
CAPE CHELYUSKIN	1970	3418	3424	3434	3435	3432	3451	3431	3440	3427	3440	3446	3436
COLLEGE	1970	12946	12948	12947	12948	12957	12964	12957	12957	12953	12958	12960	12965
DIKSON ISLAND	1970	6430	6428	6437	6436	6447	6457	6482	6455	6443	6443	6454	6447
FORT CHURCHILL	1970	7021	7021	7032	7034	7055	7050	7033	7041	7063	7066	7056	7048
GREAT WHALE RIVER	1970	9955	9958	9960	9972	9974	9981	9983	9990	9973	9980	9993	9992
LEIRVOGUR	1970	12168	12163	12159	12168	12178	12176	12180	12175	12184	12174	12188	12187
NARSSARSSUAQ	1970	11691	11689	11684	11706	11708	11728	11736	11724	11719	11717	11729	11731
TIKSI BAY	1970	7847	7845	7862	7860	7884	7844	7847	7843	7846	7856	7858	7861
CAPE UELEN	1970	14159	14156	14158	14165	14164	14174	14174	14175	14181	14171	14176	14173

JANUARY 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	33	27	34	38	77	136	86	77	57	33	28	50	174	205	210	120	407	486	150	58	49	67	102	177	120
D	2	124	110	175	386	552	400	302	485	625	437	310	495	643	559	431	613	312	391	280	673	362	225	384	397	403
	3	316	187	205	143	117	50	158	208	289	205	196	120	153	253	138	33	46	57	37	31	48	147	81	28	135
Q	4	30	30	25	32	35	35	62	36	58	91	123	75	51	48	114	151	147	62	40	32	64	133	98	28	67
	5	39	41	49	40	45	33	46	36	54	78	203	201	147	136	164	116	106	62	33	34	43	58	92	245	88
	6	168	45	24	26	62	37	28	28	54	47	49	113	212	225	98	36	33	61	205	118	58	45	30	27	76
	7	29	29	41	35	48	45	54	68	80	50	27	27	53	53	48	79	217	354	517	373	156	114	49	66	109
	8	107	126	73	64	56	51	50	51	67	89	126	151	70	104	74	109	151	199	112	39	34	23	48	87	86
D	9	260	235	158	96	105	149	94	131	227	224	102	66	74	47	137	121	181	255	141	44	48	72	115	130	134
	10	159	75	190	64	43	30	26	22	39	36	31	136	78	124	71	26	40	65	83	35	25	15	15	19	60
Q	11	36	52	71	63	37	45	59	39	30	35	34	55	101	101	173	34	30	25	46	58	52	52	134	170	64
	12	364	188	109	100	73	40	66	113	120	90	99	81	40	32	96	75	97	264	182	91	148	388	165	107	130
Q	13	60	55	25	24	46	54	41	29	32	31	42	39	38	77	301	308	234	68	31	27	33	39	57	44	72
	14	37	32	50	102	204	127	53	77	74	67	70	75	72	159	147	78	44	28	26	20	23	26	51	193	76
	15	186	135	106	85	150	97	42	41	45	26	26	34	29	27	28	38	52	145	70	34	29	42	91	127	70
D	16	129	194	310	199	160	241	280	321	467	429	721	645	570	539	645	584	803	777	540	593	595	503	458	516	467
D	17	566	538	462	366	523	377	266	126	152	145	132	73	94	47	47	95	131	90	76	118	93	53	43	39	194
	18	56	204	106	72	108	114	180	191	91	53	90	117	48	48	36	73	165	67	62	34	24	22	40	31	85
	19	37	36	32	30	22	22	20	28	43	57	97	72	40	48	132	298	91	60	95	79	110	264	317	155	91
	20	140	177	115	54	69	24	21	30	43	131	140	129	150	409	363	87	76	43	109	333	368	208	72	48	139
	21	54	39	38	69	86	96	128	51	75	154	169	89	67	349	239	41	33	30	55	152	82	152	76	73	100
	22	164	51	65	59	31	33	43	39	28	43	59	95	84	45	44	61	153	92	45	76	93	87	48	36	66
	23	33	47	180	170	121	98	104	129	103	53	46	75	86	79	58	42	33	46	43	43	47	52	168	122	82
	24	132	77	41	44	36	35	95	133	218	301	465	317	228	196	69	151	206	104	92	49	137	312	157	107	154
Q	25	39	36	44	41	74	80	42	33	33	26	30	31	27	34	57	27	28	73	48	26	30	45	23	24	40
Q	26	28	38	61	87	26	24	26	32	100	49	52	40	62	30	35	44	47	46	28	17	28	28	22	24	41
	27	21	26	65	33	33	43	20	44	156	146	79	93	126	116	203	123	212	230	150	184	230	183	73	107	112
	28	99	62	34	23	24	26	28	31	32	41	55	45	41	43	36	39	43	45	84	195	87	48	52	260	61
	29	146	71	51	53	69	92	218	231	219	89	25	27	33	40	37	31	30	31	33	24	27	23	25	84	71
D	30	200	58	24	49	128	223	424	180	102	63	191	106	111	85	53	151	327	99	329	280	117	256	86	156	158
	31	267	440	365	177	94	49	30	32	34	34	39	62	27	30	34	44	66	34	107	125	68	42	34	35	95
	MEAN	131	112	107	91	105	94	100	99	121	108	124	120	120	138	139	123	146	142	124	129	107	120	103	118	118
5Q	MEAN	39	42	45	49	44	48	46	34	51	46	56	48	56	58	136	113	97	55	39	32	41	59	67	58	57
5D	MEAN	256	227	226	219	294	278	273	249	315	260	291	277	298	255	263	313	351	322	273	342	243	222	217	248	271

FEBRUARY 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	40	122	130	61	200	162	63	26	14	17	14	16	21	35	33	36	45	48	41	37	46	94	279	422	83
D	2	281	97	70	181	323	197	203	178	184	300	311	442	473	227	46	61	160	336	368	506	422	270	330	534	271
	3	261	244	101	78	117	51	28	41	35	45	127	138	197	67	32	57	28	24	26	22	14	25	27	22	75
D	4	22	41	30	33	27	30	76	92	207	376	156	201	315	474	380	180	369	597	370	195	169	232	131	133	202
	5	106	153	178	208	160	140	53	42	65	60	62	76	203	382	320	121	121	149	77	52	86	125	298	246	145
	6	121	68	50	54	76	63	32	125	99	88	30	22	22	20	23	24	26	47	79	85	34	20	14	16	52
Q	7	19	20	17	15	12	16	17	19	21	27	24	26	20	29	25	20	16	13	14	26	25	23	24	16	20
Q	8	21	19	19	21	18	21	21	24	24	27	25	19	27	49	74	106	125	131	71	101	73	53	32	24	47
	9	21	22	41	46	21	42	68	48	31	31	25	33	43	45	110	193	134	119	79	36	34	29	25	24	54
	10	24	21	19	24	46	33	72	54	40	21	18	16	24	49	108	417	491	476	394	58	63	47	52	43	109
Q	11	30	25	24	19	27	32	33	61	112	63	28	20	29	30	28	57	96	78	50	37	24	43	39	32	42
	12	26	31	22	19	19	14	16	17	18	24	23	22	23	36	31	40	43	41	42	29	26	30	31	29	27
	13	23	25	25	26	36	64	28	28	21	27	26	40	138	222	188	38	32	26	34	22	24	21	27	29	49
D	14	35	39	109	355	218	199	64	44	45	100	324	427	156	170	289	332	283	166	50	40	40	42	34	38	150
	15	38	47	123	114	153	230	253	217	142	126	346	163	38	47	69	155	96	177	258	216	60	38	47	48	133
	16	40	35	38	34	24	33	40	164	178	96	82	176	218	188	304	139	40	32	31	33	35	65	97	85	92
	17	32	25	33	32	27	24	15	18	23	40	201	172	75	40	37	74	252	506	491	555	378	324	286	156	159
	18	69	92	129	91	205	94	78	198	132	85	60	76	63	282	528	188	53	56	185	84	99	83	205	149	137
	19	93	117	35	22	20	28	27	52	37	27	36	134	165	61	63	66	61	30	27	35	34	41	35	45	54
	20	35	28	21	24	24	24	23	22	22	31	41	38	43	52	218	189	65	47	34	85	44	31	32	30	50
Q	21	28	22	34	30	17	29	28	41	50	42	29	31	36	35	29	27	26	32	20	22	51	31	28	39	32
Q	22	27	31	33	34	23	20	25	24	23	25	31	26	37	48	34	40	35	33	61	85	60	34	32	31	36
	23	26	24	22	21	16	16	23	22	20	23	26	30	36	31	29	32	29	36	27	22	32	31	28	26	26
D	24	21	22	32	131	31	20	32	159	148	34	150	99	38	40	62	211	832	714	316	83	88	39	37	37	141
	25	34	51	48	24	15	41	65	53	28	29	29	26	29	26	31	54	97	93	31	25	16	22	26	22	38
	26	33	103	162	125	136	183	254	373	331	349	511	536	664	674	525	323	77	109	44	25	20	37	29	34	236
	27	31	25	21	23	42	92	121	182	225	215	227	271	148	210	162	81	132	238	78	66	202	475	353	397	167
D	28	487	508	397	108	57	150	207	303	339	159	256	463	483	418	184	188	308	386	459	216	56	111	78	265	274
	MEAN	72	73	70	70	75	73	70	94	93	89	115	134	134	142	142	123	145	169	134	100	81	86	95	106	104
5Q	MEAN	25	23	25	24	19	24	25	34	46	37	27	24	30	38	38	50	60	57	43	54	47	37	31	28	35
5D	MEAN	169	141	128	162	131	119	116	155	185	194	239	326	293	266	192	194	390	440	313	208	155	139	122	201	208

MARCH 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	350	207	158	270	144	220	368	584	538	547	420	418	297	480	882	662	170	122	91	95	122	176	147	237	321
	2	283	355	392	236	278	472	195	163	264	538	478	386	112	56	66	129	124	262	102	44	68	46	124	272	227
	3	125	71	69	48	55	74	132	58	346	132	73	43	35	95	185	134	240	664	441	440	332	517	233	121	194
	4	151	143	240	171	97	118	230	123	276	436	361	641	636	585	704	640	590	643	763	597	469	343	240	452	402
	5	198	117	82	68	65	56	104	143	214	88	56	37	35	40	81	121	249	466	792	719	505	477	282	360	223
D	6	300	266	230	125	49	36	48	122	423	379	824	263	139	114	221	278	505	592	625	517	737	704	660	703	369
D	7	602	465	504	391	350	79	96	210	486	626	610	499	399	384	688	1105	586	788	981	694	265	161	251	535	490
D	8	469	429	557	1023	1189	1220	689	692	671	414	620	774	586	909	2394	1748	761	642	1158	789	609	674	372	330	822
D	9	257	253	611	803	315	189	177	186	200	209	399	440	563	608	468	678	926	684	250	199	143	203	317	416	396
	10	277	88	110	37	30	30	51	104	222	131	145	142	59	31	34	40	124	158	295	287	325	100	42	42	121
	11	40	39	37	39	47	46	41	47	47	43	39	41	43	40	99	48	50	49	49	79	191	198	181	111	69
	12	51	71	115	219	142	112	175	255	239	295	475	363	198	72	45	37	49	45	40	36	31	33	44	40	133
	13	41	37	40	39	46	39	119	272	101	122	417	176	102	272	391	254	108	63	62	316	328	81	38	42	146
	14	52	68	130	51	49	43	33	35	65	48	42	40	36	33	24	26	38	31	28	27	30	34	39	50	44
	15	56	150	160	160	246	304	207	106	75	72	170	98	56	30	167	298	132	55	55	165	106	46	31	34	124
Q	16	32	37	41	41	42	39	41	44	54	79	142	56	73	96	142	56	39	36	41	35	29	51	47	44	56
	17	45	42	41	50	43	38	69	54	51	50	59	49	54	126	192	93	116	163	314	164	50	53	102	107	89
	18	171	93	44	57	41	36	40	40	40	61	145	324	320	131	48	136	247	89	123	109	129	261	330	151	132
	19	86	58	62	49	37	35	49	140	119	70	58	53	107	147	57	42	54	61	96	59	114	317	153	91	88
	20	85	46	41	42	40	33	37	41	43	50	57	136	171	107	65	78	64	61	102	309	96	71	108	120	83
Q	21	139	165	175	183	76	49	54	44	45	57	53	50	58	55	73	206	203	153	77	54	55	29	33	38	89
Q	22	46	48	49	46	40	35	33	77	65	61	91	186	114	75	62	40	41	29	24	43	34	34	47	54	57
	23	58	68	57	49	45	45	46	62	176	240	93	59	43	54	81	68	91	72	102	111	50	46	54	60	76
Q	24	56	51	46	39	44	47	47	48	51	59	57	58	50	48	46	43	46	40	24	22	33	40	50	55	46
Q	25	60	60	57	64	45	34	59	139	78	51	46	46	58	57	43	48	44	44	46	41	33	37	41	51	53
	26	50	51	106	119	164	142	58	71	89	54	55	79	60	48	59	125	123	103	91	93	98	62	53	50	83
	27	47	47	47	50	42	44	54	56	88	142	204	305	194	120	82	70	77	146	334	352	223	363	705	453	177
	28	229	177	177	480	396	466	465	281	275	554	847	782	418	336	513	544	502	232	178	429	327	308	429	560	413
	29	390	237	362	436	389	215	213	274	208	141	173	210	546	348	386	548	437	460	469	424	321	212	214	396	334
	30	532	98	61	37	44	224	295	272	326	249	419	620	553	353	122	188	509	189	141	114	279	321	102	55	254
D	31	49	99	135	256	261	235	364	671	666	531	716	747	342	321	981	829	444	264	168	175	235	149	399	456	396
	MEAN	172	133	159	183	156	153	148	175	211	211	269	262	208	199	303	300	248	239	260	243	205	198	189	209	210
5Q	MEAN	67	72	74	75	49	41	47	70	59	61	78	79	71	66	73	79	75	60	42	39	37	38	44	48	60
5D	MEAN	335	302	407	520	433	352	275	376	489	432	634	545	406	467	950	928	644	594	636	475	398	378	400	488	495

APRIL 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	88	87	73	101	77	49	85	71	81	47	40	43	96	49	48	45	53	55	47	40	30	39	83	58	62
	2	44	41	36	38	26	31	47	56	60	75	66	56	84	153	313	223	69	66	123	59	46	104	122	133	86
	3	101	109	110	174	410	350	419	230	163	214	410	258	285	330	122	193	250	146	62	46	33	40	48	64	190
	4	87	107	254	136	49	50	95	298	321	168	104	263	308	99	77	67	67	72	49	43	35	46	64	65	122
	5	58	52	43	41	34	41	43	58	126	379	380	426	202	117	93	74	163	169	72	65	51	57	66	80	120
D	6	74	111	171	307	387	329	671	411	248	338	952	815	455	307	374	422	367	274	112	65	81	234	296	76	328
	7	80	229	158	55	59	190	347	211	540	189	57	98	76	62	50	43	47	51	85	45	38	52	57	71	120
	8	351	289	68	91	250	173	45	79	200	454	374	136	67	213	91	81	93	104	62	55	50	92	219	198	160
	9	82	63	57	124	333	166	260	240	615	352	210	509	523	690	149	88	80	105	64	45	40	181	211	166	223
Q	10	120	61	59	47	43	41	50	57	63	57	55	52	48	59	73	71	82	66	56	47	44	88	176	237	73
	11	277	176	198	166	170	110	134	175	429	425	316	388	144	106	114	65	74	118	213	145	54	47	41	41	172
	12	44	48	63	55	127	179	334	363	253	172	144	94	74	91	165	271	258	270	136	69	58	69	54	69	144
Q	13	57	50	42	37	43	39	43	66	55	67	62	157	187	173	142	43	48	68	34	24	35	51	57	64	69
Q	14	60	65	61	61	47	38	36	47	54	63	62	88	89	67	79	50	44	44	46	25	38	49	94	77	58
Q	15	63	54	48	49	46	36	37	46	73	112	101	72	65	76	83	123	300	524	611	328	386	192	185	238	160
	16	373	316	203	286	348	338	240	218	138	74	69	57	51	47	46	49	46	47	69	295	824	910	789	658	270
D	17	576	513	430	416	518	297	151	82	258	590	383	205	176	515	500	359	280	436	541	318	572	628	309	99	381
	18	97	76	64	44	33	30	31	36	163	359	659	693	793	800	442	146	290	125	163	108	100	429	719	775	299
	19	353	443	538	549	473	342	532	646	632	573	728	628	357	129	76	142	173	233	187	114	144	176	51	49	345
D	20	44	72	165	375	427	259	114	61	60	83	171	271	531	600	228	369	568	883	518	107	138	123	258	285	280
D	21	178	310	174	168	491	618	668	540	716	497	664	872	1090	820	858	768	1086	1027	693	433	491	786	595	565	630
D	22	882	826	692	784	617	737	489	292	348	523	300	187	171	170	153	116	139	77	56	54	50	55	59	83	328
	23	127	132	205	141	133	302	436	291	153	308	440	523	696	635	522	432	397	550	625	595	455	267	482	539	391
	24	347	322	475	466	340	389	452	435	338	289	363	462	445	462	349	718	496	574	576	277	294	205	103	133	388
	25	566	410	268	323	407	309	445	398	467	566	374	503	399	308	212	292	121	45	134	398	366	273	361	299	344
	26	394	384	222	224	79	73	61	47	57	62	81	99	253	389	291	112	121	272	420	672	583	486	415	530	264
	27	570	308	205	236	170	320	432	138	49	55	116	251	224	218	189	148	109	150	296	187	78	69	71	84	195
Q	28	198	421	301	238	212	225	199	195	165	117	137	147	204	173	98	75	52	56	60	54	76	133	94	77	154
	29	76	113	153	182	186	206	157	86	195	290	193	204	363	441	267	153	327	452	592	320	195	230	340	188	246
	30	128	196	575	608	580	273	313	305	490	537	471	277	118	135	335	578	605	336	247	147	203	212	364	401	351
	MEAN	217	213	204	217	237	218	246	206	250	268	283	294	286	281	218	211	227	247	232	173	186	211	226	213	232
5Q	MEAN	100	130	102	86	78	76	73	82	82	83	83	103	119	110	95	72	105	152	161	96	116	103	121	139	103
5D	MEAN	351	366	326	410	488	448	419	277	326	406	494	470	485	482	423	407	488	539	384	195	266	365	303	222	389

MAY 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	193	107	78	92	106	256	365	253	101	49	65	76	152	429	250	154	117	73	160	331	362	513	319	277	203
	2	343	121	77	156	309	96	149	215	261	127	96	77	92	73	54	61	152	199	328	235	89	118	177	240	160
	3	111	75	56	46	40	35	31	55	56	64	106	237	339	296	276	153	154	247	322	130	233	266	585	333	177
	4	188	91	68	58	58	44	59	91	165	227	221	137	139	105	129	177	296	334	136	81	100	83	83	132	133
	5	133	116	83	92	72	39	66	87	84	304	737	720	253	191	253	234	222	220	177	125	59	118	132	341	202
	6	188	70	59	53	47	48	42	58	74	131	140	142	191	167	130	85	222	180	122	105	60	59	66	60	104
	7	61	56	49	79	50	50	49	52	59	77	157	166	150	159	71	51	59	119	128	180	117	71	65	59	89
Q	8	66	96	55	47	54	47	47	50	67	89	73	73	65	71	58	63	168	310	234	231	191	157	155	205	111
Q	9	134	138	117	98	190	171	144	152	102	64	86	109	90	105	93	115	152	106	91	129	88	63	58	59	111
Q	10	62	56	51	95	113	88	72	87	155	130	115	80	78	59	63	59	56	36	38	46	46	50	55	58	73
Q	11	55	46	37	41	47	53	62	73	64	77	80	93	91	71	64	59	43	46	52	74	83	135	166	337	81
D	12	198	213	145	265	224	78	52	129	121	208	421	475	483	482	423	388	568	623	427	317	588	805	487	248	349
	13	166	169	422	570	559	303	202	65	51	53	215	166	73	93	134	93	60	37	47	88	91	90	148	231	172
	14	183	203	110	193	323	313	378	433	391	182	79	62	91	86	78	158	415	746	754	812	705	389	321	398	325
	15	371	378	138	87	143	201	132	145	332	675	423	123	87	69	69	79	53	175	129	149	172	99	113	104	185
	16	138	110	116	118	127	267	233	135	313	113	71	83	103	139	265	233	280	388	224	201	248	173	139	265	187
	17	351	213	119	74	409	576	343	97	50	64	126	286	301	408	232	84	97	101	62	75	50	88	114	239	190
	18	173	137	218	148	47	44	51	74	60	57	56	63	112	120	122	92	136	62	52	45	42	53	50	55	86
	19	67	74	82	100	167	127	343	332	350	484	493	348	231	166	81	74	95	195	187	163	167	275	229	132	207
D	20	230	249	178	246	485	559	267	129	148	346	414	344	358	467	343	478	472	446	332	249	479	346	273	407	344
	21	414	327	299	337	270	200	168	198	194	347	392	337	251	296	305	310	160	150	261	254	253	92	117	221	256
	22	287	359	310	195	107	131	233	265	100	94	130	243	269	225	351	307	315	561	541	287	238	177	123	97	248
	23	83	68	89	87	66	49	33	129	308	210	230	251	141	81	83	102	91	217	305	254	258	281	511	466	183
	24	394	294	139	118	76	59	41	61	121	165	283	358	169	191	225	185	170	185	85	78	126	149	173	266	171
	25	266	430	284	400	400	425	457	112	66	53	130	259	391	368	406	209	292	283	202	132	166	193	275	156	265
Q	26	67	70	60	48	39	33	30	45	53	71	73	69	59	58	80	146	125	100	137	121	98	125	160	87	81
D	27	133	94	87	120	115	173	361	296	380	326	145	195	390	526	306	288	576	792	782	570	802	815	729	607	400
D	28	446	853	319	126	95	74	62	57	149	448	786	853	968	1366	1081	737	656	281	200	299	214	171	145	300	445
D	29	375	297	144	106	359	403	519	643	451	246	222	159	238	186	79	92	128	134	68	262	335	190	108	186	247
	30	325	162	119	163	232	232	80	153	383	761	738	270	133	124	84	255	258	468	292	178	77	84	84	81	239
	31	77	73	81	73	95	38	95	120	206	322	228	124	413	379	312	276	296	139	93	78	67	70	80	80	159
	MEAN	206	189	136	143	175	168	167	155	175	212	243	225	223	244	210	187	222	257	225	203	213	203	201	217	200
5Q	MEAN	77	81	64	66	89	78	71	81	88	86	85	85	77	73	72	88	109	120	110	120	101	106	119	149	91
5D	MEAN	276	341	175	173	256	257	252	251	250	315	398	405	487	605	446	397	480	455	362	339	484	465	348	350	357

JUNE 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	94	132	291	733	524	234	174	164	237	597	288	343	392	598	796	722	590	660	418	320	232	331	345	211	393
	2	222	127	237	295	244	161	77	76	64	62	110	104	138	135	151	217	305	236	242	246	273	202	177	297	183
	3	147	171	288	312	545	507	344	244	469	501	473	414	451	233	359	338	259	168	285	391	253	274	223	398	335
	4	327	369	386	158	267	169	177	257	373	378	345	209	255	272	409	332	209	155	131	111	106	100	289	348	256
	5	86	73	194	293	179	283	435	405	305	175	211	232	90	44	42	40	42	93	51	46	58	51	40	36	146
Q	6	40	44	52	64	90	81	59	131	111	156	208	97	83	85	52	57	44	39	33	52	44	45	32	23	72
	7	35	37	49	58	92	46	45	61	79	118	99	86	77	79	95	106	102	118	173	400	571	412	451	690	170
	8	500	468	482	263	322	565	561	151	92	93	236	236	305	103	53	46	69	103	186	215	144	182	250	171	242
	9	112	79	130	162	73	45	51	68	126	92	56	48	53	53	78	84	90	104	194	376	338	321	301	180	134
	10	148	111	134	113	79	73	69	200	262	160	236	120	54	134	173	162	234	466	404	363	340	195	81	91	183
Q	11	161	189	250	147	56	56	63	69	84	67	65	71	62	53	55	112	114	306	261	196	116	59	57	75	114
Q	12	125	165	150	164	156	96	77	62	124	174	185	208	152	203	123	65	78	115	168	233	148	164	181	158	145
	13	175	143	116	114	134	69	211	413	370	503	660	636	627	817	479	203	125	240	295	201	283	263	192	171	310
	14	279	286	298	416	210	138	70	68	66	69	74	83	68	62	57	76	67	84	176	496	258	104	112	230	160
	15	497	438	369	198	113	271	300	401	496	517	610	647	421	411	251	271	269	347	270	227	255	465	315	352	363
	16	380	291	283	238	308	409	186	47	49	53	63	65	168	128	177	116	126	79	74	137	228	149	199	256	175
	17	98	52	54	57	54	34	51	74	81	99	116	145	357	379	234	93	206	457	522	711	691	500	434	587	254
D	18	504	307	128	86	68	97	85	370	620	719	918	853	1112	882	873	738	620	425	345	507	606	605	657	544	528
	19	463	417	391	174	74	74	211	96	111	253	235	128	85	108	117	112	103	147	235	258	200	495	545	643	236
D	20	706	699	572	554	639	625	503	602	649	660	636	707	591	612	666	907	947	773	579	669	861	745	638	600	673
D	21	625	499	600	581	510	552	685	684	632	442	482	600	346	468	395	408	407	385	200	50	46	134	95	86	413
Q	22	134	153	107	92	61	59	53	53	48	64	114	175	133	95	76	93	63	51	81	208	249	215	174	131	112
Q	23	170	182	94	88	97	112	91	42	81	53	54	96	83	73	62	44	52	62	52	50	63	99	58	64	80
	24	95	189	98	61	64	93	50	52	72	47	49	55	50	63	135	106	77	65	129	229	444	214	259	355	127
	25	376	412	121	62	57	50	166	142	213	317	358	407	389	378	246	216	136	112	122	108	96	181	312	245	218
	26	74	69	86	199	444	481	500	616	577	422	273	131	124	86	135	524	777	574	669	784	572	307	202	131	365
D	27	153	130	248	614	584	318	309	439	924	924	500	344	895	672	341	149	156	290	150	65	156	150	127	70	363
	28	98	283	342	204	191	298	155	90	76	247	408	450	505	473	347	174	51	91	87	62	109	103	134	116	212
	29	59	33	36	40	56	127	179	299	82	57	65	77	63	79	46	189	419	551	490	574	543	447	273	168	206
	30	93	77	58	51	53	55	71	381	481	503	458	276	189	60	43	44	56	61	63	56	52	55	53	91	141
	MEAN	233	221	221	220	211	206	200	225	265	284	286	268	277	261	236	226	226	246	236	278	278	254	245	255	244
5Q	MEAN	126	147	131	111	92	81	69	71	90	103	125	129	103	102	74	74	70	115	119	148	124	116	100	90	105
5D	MEAN	416	353	368	514	465	365	351	452	612	668	565	569	667	646	614	585	544	507	338	322	380	393	372	302	474

JULY 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	69	204	262	235	364	248	392	396	372	267	140	122	184	296	550	174	123	120	112	114	121	65	61	89	212
	2	73	68	66	54	105	199	433	474	422	205	378	701	171	67	47	60	111	83	59	48	53	73	52	121	172
	3	289	212	261	172	397	688	644	646	608	616	711	398	279	230	119	84	67	49	57	49	163	312	509	964	355
	4	943	592	294	126	343	655	644	398	624	310	227	129	137	130	74	81	80	58	52	55	57	54	63	66	258
	5	96	91	126	256	646	685	507	359	387	127	85	78	50	111	171	166	285	503	177	80	74	99	152	371	237
	6	605	414	439	295	419	264	437	544	615	474	337	305	449	455	123	77	64	54	34	30	37	45	64	59	277
Q	7	61	65	61	50	38	35	38	77	176	206	150	57	79	65	43	43	49	51	53	127	290	283	292	507	121
	8	302	208	336	545	608	602	616	369	179	90	65	69	234	430	287	268	356	544	534	457	468	451	506	816	389
D	9	814	440	159	670	738	636	474	260	352	652	799	814	9671	2991	1158	910	470	317	407	465	756	776	619	698	652
D	10	921	374	182	117	76	71	100	75	50	48	78	162	286	249	255	437	463	570	329	421	581	504	374	273	292
	11	214	322	252	102	55	83	211	297	292	275	206	265	281	256	221	206	330	321	215	267	340	388	262	422	253
	12	513	454	461	501	292	147	192	227	273	393	198	174	309	299	334	428	314	100	336	375	163	178	372	307	306
	13	303	260	393	440	190	359	207	85	36	35	111	120	116	110	112	171	297	565	495	181	222	313	259	127	229
	14	149	281	260	169	191	83	66	123	371	220	145	118	78	90	74	81	46	101	455	415	160	121	145	306	177
Q	15	280	97	105	114	100	41	39	69	137	377	368	259	120	127	87	81	90	102	96	74	57	63	111	151	131
	16	271	383	356	194	118	152	59	45	45	49	50	154	360	308	102	38	127	243	376	235	118	53	45	47	164
	17	40	82	145	87	26	26	35	52	45	51	55	67	106	142	263	216	366	532	260	182	218	439	618	318	182
Q	18	114	90	125	146	194	168	55	35	37	81	129	115	99	80	65	78	44	51	64	149	194	183	187	81	107
Q	19	71	69	87	212	275	155	112	71	70	133	310	230	58	43	50	97	194	386	185	78	116	291	291	425	167
	20	302	180	139	141	81	143	177	126	69	88	70	64	62	74	60	52	62	76	144	239	333	241	383	690	167
D	21	741	446	239	338	285	102	79	63	217	200	337	519	384	606	853	327	233	205	656	603	317	330	570	603	386
	22	488	222	81	160	195	289	225	243	469	473	298	124	118	93	113	184	379	505	203	165	410	470	527	543	291
	23	505	328	255	142	96	136	242	251	245	164	149	164	237	124	103	77	94	298	409	247	126	61	64	74	191
	24	165	443	646	743	574	488	598	308	69	56	59	129	324	426	507	590	309	355	458	307	99	153	395	465	361
D	25	1090	604	788	1045	421	733	705	710	876	916	826	1131	453	645	349	116	118	116	85	88	202	792	792	733	597
	26	662	858	653	616	212	186	609	266	466	477	587	651	565	410	155	71	49	55	75	87	137	263	628	150	370
	27	89	79	124	140	336	460	311	53	64	377	348	262	198	361	359	580	448	411	284	444	346	122	183	342	280
Q	28	147	76	57	52	40	28	28	37	84	105	67	61	53	44	46	56	53	65	59	72	86	76	161	143	71
D	29	300	195	124	294	784	813	864	860	930	882	1019	754	710	768	504	813	613	492	687	494	161	91	49	61	553
	30	60	54	50	74	199	419	133	98	80	67	98	174	174	126	142	155	76	68	177	246	136	205	474	393	162
	31	388	506	233	432	455	423	242	344	551	415	380	424	361	313	250	406	549	818	774	308	196	388	692	456	429
	MEAN	357	281	250	279	286	307	306	257	297	285	283	284	258	283	244	230	221	265	268	229	217	254	319	348	275
5Q	MEAN	135	79	87	115	129	85	54	58	101	180	205	144	82	72	58	71	86	131	91	100	149	179	208	261	119
5D	MEAN	773	412	298	493	461	471	444	394	485	540	612	676	560	713	624	521	379	340	433	414	403	499	481	474	496

AUGUST 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	319	242	242	140	53	71	91	98	131	110	148	95	53	43	41	48	103	55	63	51	74	103	82	126	108
	2	121	156	303	361	332	158	35	54	192	272	113	81	92	85	79	50	57	49	46	43	48	57	57	63	121
Q	3	72	67	57	61	72	59	47	39	48	54	58	88	52	72	89	131	81	51	39	46	46	46	42	46	61
Q	4	44	39	52	71	70	43	46	61	109	178	114	101	81	77	114	179	104	81	81	149	211	117	91	76	95
Q	5	77	55	111	149	185	131	67	40	30	38	54	57	53	61	59	60	44	47	38	41	60	68	62	58	69
	6	51	46	41	35	45	50	49	62	100	270	183	63	55	63	61	65	84	75	61	91	145	306	312	497	117
	7	313	213	80	61	47	47	70	132	108	79	75	69	78	96	125	192	243	85	116	106	167	412	702	522	172
D	8	279	178	405	314	97	95	270	334	735	770	706	688	306	105	158	189	100	178	401	464	166	252	375	506	336
D	9	669	813	463	279	332	257	240	216	179	97	398	574	300	201	74	70	90	359	482	176	100	92	66	57	274
	10	50	143	165	179	67	85	184	156	317	283	183	406	348	160	59	77	138	103	92	97	73	117	142	139	157
	11	152	107	133	171	260	114	103	126	269	411	195	166	98	264	292	195	69	70	85	199	171	98	286	620	194
	12	641	425	496	623	549	210	65	159	299	256	62	86	80	75	55	37	45	80	150	281	473	409	196	84	243
	13	73	74	110	73	41	238	215	133	142	218	268	142	131	263	170	102	129	176	316	452	449	518	519	174	214
	14	92	105	157	278	206	61	64	49	60	71	50	65	51	46	42	79	128	102	95	79	88	130	136	166	100
	15	171	141	185	177	124	152	105	79	100	200	199	222	183	87	52	59	102	67	85	162	97	101	218	411	145
	16	302	229	190	108	103	223	187	239	227	207	242	272	350	334	149	103	123	231	435	192	110	120	798	981	269
D	17	860	493	596	815	887	811	1068	912	945	676	741	594	690	923	695	548	825	973	1056	834	252	228	393	408	718
D	18	324	672	451	535	378	250	346	522	497	483	656	707	986	808	749	552	9081133		778	294	207	232	392	637	562
	19	653	552	342	234	242	255	214	66	182	406	500	149	239	277	322	311	378	234	125	67	44	53	50	54	248
	20	48	47	44	40	49	49	55	193	247	234	133	238	228	129	74	61	66	54	51	81	72	111	105	101	105
	21	109	141	233	191	135	107	106	121	97	96	136	177	120	66	64	98	190	134	128	54	54	88	101	74	118
	22	52	48	64	76	126	130	117	106	121	156	147	293	425	333	297	288	411	343	331	232	108	57	84	138	187
	23	181	133	129	233	291	214	326	303	467	439	289	191	302	174	81	87	119	208	143	82	63	98	57	48	194
Q	24	57	49	64	153	59	45	37	37	42	55	61	77	107	151	118	90	110	111	173	128	111	170	159	110	95
	25	110	110	143	195	229	302	441	566	463	339	390	376	465	478	474	379	382	306	143	224	335	296	300	205	319
D	26	308	215	86	195	675	615	481	551	610	758	664	642	884	674	509	699	537	335	317	189	233	350	207	261	458
	27	378	338	314	163	328	564	459	133	88	159	93	95	137	199	602	658	567	539	445	234	309	423	415	132	324
	28	64	51	46	43	65	215	192	70	92	58	48	46	68	84	259	561	513	393	471	484	377	397	367	323	220
	29	134	66	188	558	619	398	271	306	388	271	111	160	298	191	165	329	187	80	72	77	95	56	67	97	216
	30	144	312	272	220	168	115	141	198	223	111	105	100	103	85	84	112	77	79	96	175	124	59	51	51	134
	31	39	40	42	52	80	297	428	547	500	377	279	145	164	364	348	313	434	676	553	506	402	112	125	74	287
	MEAN	222	203	200	219	223	205	210	213	258	262	239	231	243	225	208	217	237	239	241	203	170	183	224	234	221
5Q	MEAN	114	90	105	115	88	70	58	55	72	87	87	84	69	81	84	102	88	69	79	83	100	101	87	83	86
5D	MEAN	488	474	400	428	474	406	481	507	593	557	633	641	633	542	437	412	492	596	607	391	192	231	287	374	470

SEPTEMBER 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	63	46	39	36	46	38	164	538	654	565	912	465	146	163	227	540	464	535	756	677	534	390	228	158	349
	2	271	247	123	70	58	120	117	78	64	243	575	440	292	277	227	199	273	515	372	162	226	236	136	82	225
	3	62	55	81	413	413	91	63	176	387	561	460	532	541	166	130	322	295	150	117	147	163	346	537	315	272
	4	185	169	125	77	55	55	164	148	168	79	87	194	342	66	75	177	381	115	165	173	238	226	87	121	153
	5	208	93	93	134	185	116	51	59	66	70	79	65	92	129	118	356	547	264	249	249	161	199	352	163	171
Q	6	85	57	67	96	85	55	47	40	58	72	54	59	60	66	110	247	213	196	346	158	111	101	210	74	111
	7	69	104	88	41	32	28	28	62	67	62	95	86	142	123	110	65	56	40	49	125	252	348	149	69	95
	8	58	47	41	47	62	182	266	164	186	117	90	71	83	209	434	489	521	514	477	329	107	64	71	64	196
Q	9	52	52	52	58	151	116	93	80	93	71	65	55	69	81	83	93	165	95	78	177	497	457	476	383	150
	10	432	377	241	292	283	195	67	62	64	47	51	53	64	76	63	46	45	33	28	30	31	32	32	32	112
Q	11	36	40	35	28	25	24	26	31	45	52	57	53	55	48	42	53	52	56	44	41	37	37	36	31	41
Q	12	31	44	57	58	299	309	234	326	273	63	50	44	46	39	41	42	57	91	41	38	40	45	41	38	98
D	13	37	40	59	64	213	511	539	563	654	748	849	732	584	643	377	160	435	356	115	323	772	671	417	506	432
D	14	199	362	384	159	89	61	101	173	325	271	232	958	656	733	822	776	419	292	254	399	571	304	164	291	375
	15	313	304	590	528	482	250	313	88	55	48	129	217	312	173	54	68	58	140	247	225	97	207	179	64	214
	16	91	124	257	112	210	372	330	209	326	137	175	213	214	219	77	46	46	90	235	227	224	125	67	53	174
	17	54	166	225	207	228	359	592	331	257	105	49	48	90	58	88	152	257	249	187	102	92	142	183	116	181
	18	130	253	229	422	287	183	234	359	378	229	142	54	46	90	129	296	73	187	254	121	98	216	260	89	198
	19	51	57	123	234	364	646	398	283	458	542	562	279	287	384	388	278	509	599	594	715	502	336	420	160	382
	20	172	164	80	54	137	446	346	230	347	465	302	282	400	386	474	425	463	315	172	219	247	168	211	558	294
D	21	505	435	391	360	333	432	481	573	655	210	76	244	793	886	706	450	321	468	474	337	136	226	131	134	407
	22	90	302	350	236	534	279	65	53	122	304	344	176	177	109	119	159	202	544	392	97	91	70	208	150	216
	23	241	224	87	59	40	45	208	322	399	494	522	280	277	230	141	100	171	211	75	77	65	80	73	63	187
	24	248	188	127	250	208	265	334	349	422	310	68	37	46	74	79	57	54	87	171	404	86	89	113	82	173
	25	66	62	56	134	429	412	351	222	336	300	75	37	44	55	89	132	125	161	321	94	59	54	47	48	155
	26	50	48	80	232	216	145	141	93	84	110	80	62	77	55	50	64	176	157	83	89	83	95	156	332	115
D	27	402	440	323	380	429	424	375	482	235	119	299	372	231	186	450	495	691	392	525	386	88	156	492	633	375
	28	435	194	100	97	86	71	39	29	28	43	66	81	77	77	77	59	47	38	49	40	47	49	48	50	80
Q	29	59	58	53	50	47	66	90	113	83	60	42	64	58	48	52	51	49	34	33	33	36	72	90	65	59
	30	60	57	63	200	268	146	86	36	53	60	52	74	78	51	52	48	60	85	69	38	57	140	90	102	84
	MEAN	159	160	154	171	210	215	211	209	245	219	221	211	213	197	196	215	241	234	232	208	192	189	190	168	202
5Q	MEAN	53	50	53	58	121	114	98	118	110	64	54	55	58	56	66	97	107	94	108	89	144	142	171	118	92
5D	MEAN	241	265	239	200	222	293	332	466	505	383	474	554	482	522	516	484	466	409	425	424	420	349	286	344	388

OCTOBER 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	195	251	108	65	121	246	131	71	47	45	85	53	50	54	112	172	105	108	351	542	348	202	172	420	169
	2	558	299	144	116	78	83	95	92	91	120	183	76	112	102	110	82	76	156	248	252	157	125	183	121	152
	3	231	182	156	226	135	95	97	112	95	93	77	85	83	82	133	370	446	258	331	415	262	398	288	425	211
D	4	347	282	216	503	629	229	360	401	343	259	494	503	277	437	162	84	163	378	381	203	202	118	178	130	303
	5	97	130	250	168	84	148	322	237	90	197	81	58	111	69	68	62	123	73	66	242	250	149	81	45	133
	6	53	146	108	99	122	107	109	94	58	65	154	233	74	85	56	46	38	34	69	203	184	232	175	44	108
Q	7	26	24	23	40	26	26	50	102	73	53	53	48	83	141	49	42	39	33	33	32	37	45	51	50	49
Q	8	42	34	34	80	59	42	29	28	37	48	46	46	38	41	39	38	41	42	50	30	38	43	46	56	43
Q	9	52	46	36	38	42	29	33	37	58	61	59	61	72	58	48	42	40	41	117	66	32	34	30	26	48
	10	28	27	33	30	101	117	198	346	163	70	50	51	43	41	63	74	151	318	562	573	506	409	361	430	198
	11	482	418	308	301	346	502	457	606	567	654	470	303	424	389	459	525	412	403	407	521	135	73	227	314	404
	12	428	408	345	485	692	422	265	431	392	368	362	258	217	168	59	49	34	36	35	40	32	21	21	32	233
	13	21	32	22	34	65	312	262	191	78	44	59	73	416	215	84	325	305	273	228	240	132	137	81	55	154
	14	179	281	207	208	183	60	84	185	225	175	169	243	199	136	56	49	53	123	156	146	177	146	122	73	151
Q	15	224	134	106	86	109	115	105	79	50	89	85	50	55	112	205	90	44	45	35	30	71	125	35	30	88
D	16	32	31	29	38	41	67	36	31	35	155	298	946	781	552	427	804	7261011		542	490	189	192	275	395	338
D	17	290	208	343	178	217	262	549	639	538	626	452	584	642	816	724	735	961	546	758	740	455	398	594	476	530
D	18	436	487	451	418	121	109	128	369	515	345	174	217	283	142	185	374	411	244	222	202	140	258	337	146	280
	19	153	165	212	198	256	246	421	236	471	216	256	310	408	441	292	223	288	269	225	230	272	143	169	155	261
	20	186	205	196	256	228	277	320	205	260	460	411	271	383	242	224	190	123	107	43	37	35	95	82	39	203
Q	21	35	43	32	37	35	30	27	29	27	38	31	39	39	43	44	47	63	84	77	48	41	51	87	76	46
	22	180	268	276	273	246	292	231	174	420	326	323	460	418	516	634	681	789	783	517	429	382	364	257	345	399
D	23	321	325	241	153	320	391	431	271	246	247	326	283	204	268	821	859	707	391	775	602	497	357	265	255	398
	24	340	82	74	183	202	371	192	190	544	240	229	442	353	323	276	164	81	79	187	202	215	67	42	71	215
	25	54	55	118	103	36	37	167	278	169	120	165	141	221	360	230	136	304	215	76	103	86	72	36	30	138
	26	31	50	163	130	66	44	48	55	54	74	200	331	252	164	139	71	80	103	84	68	43	31	52	42	99
	27	40	39	34	48	57	50	76	64	59	44	40	36	69	82	64	53	40	34	27	29	77	291	180	88	68
	28	58	173	163	146	126	135	374	137	63	50	42	43	71	53	176	253	193	204	370	592	494	366	166	129	191
	29	131	66	36	32	50	141	207	156	57	104	72	100	114	221	136	75	192	415	525	663	518	332	457	391	216
	30	206	173	315	301	185	47	35	73	46	88	70	181	60	42	43	143	252	66	38	36	38	50	45	40	107
	31	33	40	34	27	60	48	37	37	65	168	60	33	60	79	126	201	87	62	36	85	109	60	47	39	68
	MEAN	177	165	155	161	163	164	190	192	191	182	180	212	213	209	201	228	238	224	244	261	199	174	166	160	194
5Q	MEAN	76	56	46	56	54	48	49	55	49	58	55	49	57	79	77	52	45	49	62	41	44	60	50	48	55
5D	MEAN	285	267	256	258	266	212	301	342	335	326	349	507	437	443	464	571	594	514	536	447	297	265	330	280	370

NOVEMBER 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	16	20	27	26	27	25	24	23	26	42	52	122	65	42	40	42	68	59	35	26	31	36	33	30	39
	2	45	39	54	50	50	40	34	45	226	230	80	110	307	251	131	104	71	39	35	22	23	29	32	74	88
	3	140	165	145	104	108	77	95	97	180	156	49	25	43	42	127	305	343	487	417	427	277	358	228	132	189
	4	216	216	148	107	67	47	37	64	216	188	173	218	87	46	44	85	140	139	79	144	167	283	187	101	133
	5	97	201	154	88	109	123	205	147	196	160	80	110	105	64	69	199	163	87	105	245	371	426	280	234	167
	6	192	235	224	286	337	427	347	337	606	539	507	510	614	643	398	375	223	116	58	63	121	233	188	139	322
D	7	199	765	599	686	705	712	648	523	824	788	8601476		559	8391079		361	288	272	311	470	532	320	225	500	606
	8	453	194	213	257	117	92	42	74	148	252	233	274	171	227	257	206	91	62	162	204	32	38	37	46	162
	9	102	39	44	55	119	220	221	317	292	271	279	249	173	67	89	442	396	409	304	168	234	127	37	33	195
	10	92	193	281	138	219	289	101	66	56	286	565	584	407	272	376	759	442	271	273	126	178	163	61	169	265
D	11	307	486	296	318	159	183	400	305	350	493	475	215	279	312	241	388	527	188	64	74	259	310	102	90	284
	12	147	79	128	180	221	137	140	290	344	327	321	240	147	452	514	234	342	52	33	29	32	20	27	31	186
	13	30	63	162	216	71	170	196	139	31	39	181	265	337	433	401	332	417	495	415	330	208	186	243	299	236
	14	329	298	85	39	55	126	90	163	131	96	54	68	52	54	160	148	376	352	317	221	97	99	28	20	144
Q	15	24	19	16	14	15	17	16	20	30	64	77	215	119	55	36	38	35	32	57	143	231	86	38	33	60
	16	27	30	31	42	38	34	27	23	34	47	196	154	117	58	54	76	224	358	175	66	99	167	93	128	96
	17	137	163	108	205	165	45	43	46	52	55	115	195	124	56	41	43	30	32	24	23	26	30	27	32	76
	18	62	36	19	50	32	60	38	40	32	19	20	71	534	384	540	599	324	175	161	48	44	178	430	384	178
	19	277	316	398	529	422	451	400	179	146	47	71	54	40	33	44	33	28	31	23	19	20	21	26	23	151
Q	20	28	26	30	22	21	20	21	14	16	14	17	41	41	22	18	21	18	19	17	12	15	21	53	62	25
D	21	47	87	216	361	177	53	175	319	615	102111171121			848	9311057		759	365	316	249	269	250	249	290	187	462
D	22	399	313	365	446	179	98	67	109	263	227	424	358	356	535	577	591	748	589	617	498	482	366	347	345	387
D	23	280	331	314	430	262	316	384	453	558	698	573	497	362	3861072		1044	785	607	314	342	230	230	414	250	464
	24	105	116	131	128	98	114	50	56	85	53	47	30	36	40	40	117	412	586	446	269	140	139	80	91	142
	25	116	175	193	100	62	61	76	99	117	292	151	152	154	117	167	289	330	477	492	255	137	105	95	138	181
	26	140	113	60	56	74	89	40	36	47	78	125	131	77	46	82	301	329	147	60	166	472	123	98	41	122
	27	38	47	103	72	82	84	78	101	112	387	259	263	374	594	168	59	62	237	264	81	182	212	227	169	177
	28	83	55	59	99	152	313	158	51	49	47	90	97	162	102	273	426	105	36	42	78	52	89	34	41	112
Q	29	27	23	26	48	42	33	29	32	42	38	44	88	54	34	30	29	60	68	44	57	28	22	18	20	39
Q	30	20	17	11	26	33	37	34	30	36	42	41	45	33	30	31	25	57	55	42	42	38	32	28	40	34
	MEAN	139	162	155	173	141	150	141	140	195	233	243	266	226	239	272	281	260	226	188	164	167	157	134	129	191
5Q	MEAN	23	21	22	27	28	26	25	24	30	40	46	102	62	37	31	31	48	47	39	56	69	39	34	37	39
5D	MEAN	246	396	358	448	296	272	335	342	522	645	690	733	481	601	805	629	543	394	311	331	351	295	276	274	441

DECEMBER 1970 AE INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	21	17	13	21	16	19	19	20	25	29	31	34	30	28	30	32	47	44	21	16	17	20	25	24	25
	2	27	29	23	24	24	25	16	15	13	25	27	31	25	28	37	75	91	115	129	252	202	66	43	31	57
	3	65	169	163	41	31	41	64	138	272	175	52	25	20	24	23	49	108	48	21	21	23	72	113	74	76
	4	36	26	17	21	17	24	31	67	103	79	41	47	134	143	38	54	43	41	43	63	201	444	315	277	96
	5	237	194	215	189	173	214	169	152	305	371	129	103	115	214	224	330	136	57	36	27	21	22	25	27	154
	6	27	70	101	109	39	64	148	181	340	268	335	163	90	414	502	415	510	375	255	251	187	92	40	38	209
	7	59	43	40	52	103	67	170	125	75	74	135	176	479	339	291	223	171	191	152	289	316	362	335	311	191
D	8	384	438	453	568	414	239	202	434	336	239	536	417	478	691	509	78	58	103	335	388	204	124	163	99	329
	9	90	125	104	83	84	161	115	92	97	59	260	234	69	97	138	115	94	122	64	26	17	20	22	22	96
Q	10	35	24	19	21	29	19	22	19	104	190	106	119	229	299	161	104	115	68	102	184	88	52	23	19	90
Q	11	28	21	20	32	21	42	65	45	72	78	35	29	36	28	31	24	25	27	89	24	11	15	17	20	35
	12	21	28	81	46	40	37	42	44	47	163	136	178	274	225	168	86	43	40	100	57	48	83	192	142	97
	13	109	73	53	60	42	29	29	33	60	43	33	27	28	27	20	18	44	181	180	43	20	49	171	281	69
D	14	138	226	335	237	405	924	821	952	949	451	428	316	373	182	168	146	68	133	648	523	382	394	527	257	416
D	15	128	289	431	179	131	235	339	455	426	403	343	318	149	406	259	397	320	200	237	103	87	77	79	117	255
	16	97	105	91	72	59	52	92	73	40	41	31	71	82	51	54	56	70	101	86	52	43	41	65	169	71
Q	17	131	91	60	53	70	47	60	70	78	106	127	169	89	52	101	92	64	45	25	45	68	75	44	37	75
	18	34	29	31	32	39	55	105	81	87	52	27	31	40	89	44	33	42	59	35	29	37	38	32	37	47
	19	66	38	52	74	35	38	117	136	331	451	138	46	45	46	38	24	18	27	57	136	119	121	430	211	116
	20	70	67	72	55	111	161	221	315	507	551	450	321	172	198	216	98	64	55	75	187	199	115	110	76	186
	21	131	141	100	62	76	97	148	198	168	160	128	108	173	87	48	24	22	28	25	37	102	190	149	105	104
	22	118	195	155	127	113	153	124	143	210	136	111	82	115	166	122	165	161	82	77	70	103	137	179	65	130
	23	52	74	137	176	117	66	77	39	43	34	87	234	162	183	158	161	183	51	47	25	21	35	40	141	98
D	24	363	426	401	363	193	137	114	73	110	199	59	47	68	132	234	188	52	33	39	128	158	94	61	71	156
	25	117	74	33	28	29	25	25	27	27	22	23	28	35	36	59	129	204	161	96	81	209	57	64	124	71
	26	40	37	43	59	56	177	189	116	154	86	43	25	24	54	74	95	134	67	31	33	39	90	71	50	74
	27	34	41	55	95	65	36	47	54	91	132	129	91	70	327	204	304	278	232	195	234	273	496	458	366	179
D	28	387	338	202	276	131	137	187	103	81	261	190	183	540	425	238	337	650	542	494	546	452	393	318	369	324
	29	226	62	82	118	146	203	161	137	172	126	49	38	70	114	133	147	213	200	380	169	99	111	210	449	159
	30	371	263	371	476	331	102	49	45	39	46	27	27	24	32	46	78	521	343	60	36	40	58	30	27	143
Q	31	29	27	20	50	21	15	15	12	17	20	28	27	33	30	24	27	27	31	24	21	24	25	26	32	25
	MEAN	118	122	128	123	102	117	128	142	174	164	138	121	138	167	142	132	148	123	134	132	123	128	141	131	134
5Q MEAN		49	36	26	35	31	28	36	33	59	85	65	76	83	87	69	56	56	43	52	58	42	37	27	26	50
5D MEAN		280	343	364	325	255	334	333	403	380	311	311	256	322	367	282	229	230	202	351	338	257	216	230	183	296

JANUARY 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-6	-3	-3	-3	-41	-104	-44	-35	-21	-7	-3	-14	-124	-132	-126	-82	-311	-352	-99	-9	-9	-26	-56	-108	-72
D	2	-54	-42	-87	-283	-286	-219	-180	-368	-431	-262	-228	-394	-578	-415	-322	-425	-150	-243	-186	-550	-311	-168	-299	-292	-282
	3	-230	-100	-119	-85	-38	-8	-89	-158	-233	-151	-130	-71	-118	-210	-102	-18	-36	-53	-28	-22	-41	-135	-62	-15	-94
Q	4	-14	-15	-10	-12	-10	-14	-40	-15	-25	-56	-80	-35	-33	-26	-96	-137	-127	-28	-5	-10	-46	-113	-83	-15	-44
	5	-9	-7	-12	-11	-13	-10	-6	-3	-13	-44	-130	-77	-48	-68	-95	-57	-34	-6	0	-1	-16	-34	-51	-189	-39
	6	-92	-11	-3	-3	-16	-13	-8	-9	-12	-16	-25	-83	-182	-170	-74	-11	-11	-46	-192	-104	-31	-11	-6	-8	-47
	7	-4	-4	-10	-11	-8	-11	-14	-16	-26	-20	-8	-9	-33	-28	-29	-69	-202	-311	-363	-200	-52	-47	-8	-27	-63
	8	-64	-76	-30	-25	-23	-11	-5	-11	-15	-21	-68	-51	-14	-37	-13	-29	-75	-145	-65	-5	1	4	-16	-45	-35
D	9	-202	-149	-35	-17	-46	-65	-8	-73	-158	-67	-15	-16	-25	-21	-104	-85	-161	-207	-115	-32	-24	-41	-91	-94	-77
	10	-105	-18	-132	-1	0	-3	-3	0	-8	-8	-12	-99	-48	-89	-28	-14	-16	-55	-70	-22	-12	-6	-4	-6	-32
Q	11	-10	-14	-10	0	1	-4	-1	-3	-4	-9	-12	-27	-74	-75	-119	-13	-18	-16	-32	-48	-43	-32	-64	-110	-31
	12	-286	-101	-32	-55	-28	-8	-14	-78	-83	-45	-46	-40	-15	-17	-51	-38	-61	-206	-147	-58	-93	-295	-63	-8	-78
Q	13	-4	-6	0	-6	-11	-12	-10	0	-3	-6	-12	-10	-21	-39	-203	-250	-167	-38	-17	-11	-11	-11	-22	-9	-37
	14	-5	-7	-19	-72	-143	-64	0	-19	-15	-10	-10	-19	-24	-116	-88	-39	-20	-10	-7	-7	-6	-9	-17	-120	-35
	15	-70	-25	-4	-3	-47	14	5	0	-6	-1	-4	-6	0	-6	-6	-19	-34	-120	-43	-14	-10	-13	-26	-39	-20
D	16	-34	-122	-178	-86	-67	-112	-125	-211	-315	-263	-538	-443	-370	-431	-477	-399	-593	-537	-361	-458	-481	-391	-333	-421	-323
D	17	-421	-406	-345	-219	-380	-210	-115	-64	-68	-67	-62	-37	-48	-26	-28	-64	-84	-69	-55	-83	-61	-29	-21	-22	-124
	18	-38	-165	-62	-32	-69	-52	-136	-85	-29	-16	-44	-45	-17	-17	-17	-46	-108	-27	-27	-19	-11	-8	-26	-16	-46
	19	-13	-13	-7	-3	-1	-2	-5	-7	-19	-35	-46	-24	-18	-22	-97	-241	-81	-52	-88	-63	-84	-225	-214	-81	-60
	20	-88	-112	-66	-21	-44	-9	-6	-6	-11	-79	-93	-80	-97	-303	-273	-50	-48	-22	-91	-252	-298	-134	-22	-15	-93
	21	-11	-7	-7	-14	-44	-56	-91	-24	-43	-110	-119	-52	-31	-250	-175	-10	-16	-18	-39	-132	-63	-123	-50	-41	-64
	22	-141	-17	-28	-28	-6	-3	-14	-18	-8	-11	-29	-57	-47	-18	-25	-44	-152	-82	-35	-60	-72	-64	-20	-11	-41
	23	-12	-28	-160	-134	-78	-62	-69	-89	-32	-10	-12	-30	-54	-43	-37	-24	-20	-32	-30	-31	-36	-33	-139	-103	-54
	24	-114	-46	-22	-20	-18	-17	-41	-107	-142	-226	-381	-186	-149	-116	-46	-131	-152	-88	-72	-22	-94	-262	-84	-47	-108
Q	25	-19	-8	-12	-17	-44	-43	0	-5	-6	-8	-10	-14	-12	-13	-36	-16	-16	-65	-39	-11	-16	-34	-12	-11	-19
Q	26	-10	-22	-41	-53	0	1	-3	-7	-67	-10	-13	-15	-15	-13	-26	-34	-37	-39	-18	-9	-13	-9	-10	-11	-20
	27	-9	-6	-39	-21	1	0	0	-11	-114	-71	-23	-32	-50	-59	-137	-73	-155	-203	-110	-99	-92	-67	-20	-62	-61
	28	-36	-7	-5	0	0	0	-1	-2	-3	-8	-14	-2	-8	-18	-4	-8	-10	-12	-36	-125	-50	-21	-23	-216	-25
	29	-105	-45	-21	-23	-20	-50	-146	-159	-114	-26	0	-4	-10	-14	-11	-11	-9	-10	-9	1	0	0	0	-47	-35
D	30	-144	-27	-8	-19	-75	-141	-273	-83	-38	-21	-119	-61	-69	-44	-21	-114	-267	-64	-213	-188	-23	-146	-21	-94	-95
	31	-197	-324	-276	-126	-52	-13	0	-1	-4	-7	-9	-33	-6	-7	-11	-24	-45	-13	-80	-102	-37	-8	-8	-11	-58
	MEAN	-82	-62	-58	-45	-52	-42	-47	-54	-67	-55	-74	-67	-75	-92	-93	-83	-104	-102	-86	-89	-69	-80	-60	-74	-71
5Q	MEAN	-11	-13	-15	-18	-13	-14	-11	-6	-21	-18	-25	-20	-31	-33	-96	-90	-73	-37	-22	-18	-26	-40	-38	-31	-30
5D	MEAN	-171	-149	-131	-125	-171	-149	-140	-160	-202	-136	-192	-190	-218	-187	-190	-217	-251	-224	-186	-262	-180	-155	-153	-185	-180

FEBRUARY 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-14	-80	-92	-24	-125	-111	-32	-7	-1	-4	-2	-5	-7	-13	-13	-19	-32	-33	-24	-14	-8	-35	-176	-293	-49
D	2	-132	-27	-10	-119	-188	-94	-78	-83	-98	-239	-229	-360	-387	-152	-11	-21	-109	-254	-257	-371	-339	-163	-216	-406	-181
	3	-155	-151	-21	-42	-51	-18	-7	-11	-13	-22	-85	-96	-166	-47	-15	-39	-18	-16	-14	-13	-5	-7	-5	-6	-43
D	4	-8	-10	-11	-8	-7	-7	-39	-33	-121	-289	-54	-124	-221	-383	-247	-82	-276	-467	-269	-130	-91	-168	-43	-53	-131
	5	-41	-103	-125	-134	-71	-61	0	-3	-25	-26	-34	-42	-169	-320	-234	-69	-87	-129	-56	-29	-54	-83	-254	-204	-98
	6	-59	-13	-9	-16	-23	-12	0	-79	-43	-13	-6	-7	-10	-10	-10	-12	-15	-34	-62	-81	-25	-7	-4	-5	-23
Q	7	-7	-9	-4	-3	-3	-4	-7	-5	-6	-7	-6	-7	-13	-18	-12	-14	-12	-9	-7	-16	-17	-11	-9	-8	-9
Q	8	-8	-7	-9	-10	-2	-1	-4	-4	-4	-6	-6	-7	-12	-28	-55	-81	-104	-98	-58	-86	-55	-34	-16	-7	-29
	9	-5	-7	-27	-37	-7	-8	-36	-16	-7	-7	-8	-15	-17	-18	-61	-124	-85	-84	-49	-9	-5	-6	-5	-4	-27
	10	-3	-3	-4	-4	-23	-15	-44	-24	-7	-5	-5	-5	-14	-35	-76	-348	-391	-335	-209	-22	-20	-15	-17	-12	-68
Q	11	-10	-8	-9	-4	-9	-4	-5	-30	-79	-39	-12	-11	-18	-21	-17	-32	-66	-58	-38	-25	-13	-24	-20	-15	-24
	12	-11	-8	-4	-3	-3	-2	-3	-4	-6	-6	-8	-9	-11	-23	-19	-26	-26	-22	-20	-11	-10	-16	-18	-16	-12
	13	-10	-11	-9	-3	-7	-48	1	0	1	-5	-9	-19	-98	-180	-122	-5	-4	-8	-10	-3	-7	-5	-8	-10	-24
D	14	-13	-12	-84	-323	-152	-111	-27	-30	-38	-67	-255	-301	-117	-128	-249	-284	-210	-109	-17	-11	-9	-12	-9	-12	-108
	15	-10	-15	-94	-99	-124	-190	-209	-112	-74	-59	-253	-92	-5	-23	-47	-120	-71	-145	-223	-181	-29	-2	-10	-14	-92
	16	-8	-5	-13	-7	-2	-10	-22	-121	-143	-64	-46	-137	-180	-142	-188	-78	-14	-13	-5	-18	-23	-35	-60	-48	-58
	17	-6	-7	-15	-6	-3	-1	0	-1	-1	-7	-140	-130	-42	-24	-20	-43	-210	-389	-337	-369	-248	-248	-238	-92	-107
	18	-30	-59	-82	-52	-142	-62	-37	-147	-49	-27	-8	-33	-21	-212	-440	-108	-21	-35	-152	-49	-69	-51	-173	-119	-91
	19	-71	-91	-15	-9	-5	-4	-9	-19	-11	-6	-14	-98	-144	-45	-47	-43	-44	-18	-4	-9	-13	-19	-18	-18	-32
	20	-11	-3	-2	-5	-6	-5	-7	-8	-8	-9	-13	-14	-15	-28	-182	-137	-39	-29	-19	-72	-34	-17	-15	-14	-29
Q	21	-8	-9	-23	-16	-1	-8	-16	-16	-27	-23	-13	-19	-24	-23	-17	-17	-16	-24	-12	-11	-34	-18	-17	-22	-17
Q	22	-13	-17	-22	-19	-7	-9	-10	-11	-11	-12	-15	-13	-23	-29	-18	-27	-23	-19	-50	-67	-44	-23	-21	-18	-22
	23	-12	-9	-8	-4	0	-1	-8	-7	-3	-6	-9	-13	-19	-15	-12	-14	-13	-20	-12	-6	-4	-3	-6	-7	-9
D	24	-4	-4	-17	-112	-12	-1	-17	-127	-102	-14	-136	-84	-18	-10	-17	-158	-579	-496	-153	-14	-12	-14	-16	-19	-89
	25	-14	-33	-30	-6	-2	-21	-42	-34	-9	-12	-15	-14	-13	-14	-16	-36	-81	-70	-9	-4	-1	-7	-13	-13	-21
	26	-21	-91	-138	-99	-96	-99	-165	-222	-235	-213	-244	-263	-427	-423	-309	-167	-39	-91	-38	-23	-20	-27	-25	-26	-146
	27	-24	-23	-21	-21	-36	-87	-80	-104	-157	-126	-145	-148	-94	-131	-110	-56	-96	-187	-63	-30	-127	-369	-214	-248	-112
D	28	-420	-449	-290	-42	-7	-82	-148	-187	-135	-57	-151	-256	-223	-243	-100	-120	-201	-248	-306	-133	-21	-41	-25	-157	-168
	MEAN	-40	-45	-42	-44	-40	-38	-38	-52	-50	-49	-69	-83	-90	-98	-95	-81	-103	-123	-88	-65	-48	-52	-59	-67	-65
5Q	MEAN	-9	-10	-13	-10	-4	-5	-8	-13	-25	-17	-10	-11	-18	-24	-24	-34	-44	-42	-33	-41	-33	-22	-17	-14	-20
5D	MEAN	-115	-100	-82	-121	-73	-59	-62	-92	-99	-133	-165	-225	-193	-183	-125	-133	-275	-315	-200	-132	-94	-80	-62	-129	-135

MARCH 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-250	-88	-68	-199	-66	-58	-150	-337	-320	-336	-270	-218	-143	-278	-537	-418	-73	-48	-53	-51	-59	-96	-73	-119	-180
	2	-189	-307	-297	-124	-203	-366	-113	-69	-175	-439	-340	-274	-49	-22	-31	-85	-62	-217	-63	-16	-29	-15	-86	-202	-157
	3	-83	-29	-37	-25	-30	-45	-82	-23	-244	-73	-16	-14	-16	-42	-160	-90	-181	-518	-335	-325	-224	-338	-137	-61	-130
	4	-78	-85	-176	-67	-40	-36	-66	-65	-178	-317	-253	-444	-493	-481	-493	-450	-363	-422	-470	-394	-260	-209	-135	-284	-261
	5	-116	-38	-21	-16	-18	-15	-54	-63	-106	-23	-21	-15	-15	-18	-28	-60	-175	-269	-530	-475	-321	-312	-173	-201	-128
D	6	-244	-204	-116	-36	-7	-5	-19	-81	-334	-293	-671	-165	-80	-67	-167	-199	-299	-319	-372	-289	-475	-483	-581	-566	-253
D	7	-455	-375	-347	-306	-262	-17	-43	-116	-326	-483	-461	-362	-211	-264	-457	-745	-454	-507	-706	-496	-141	-60	-112	-344	-335
D	8	-258	-223	-328	-725	-752	-783	-425	-383	-375	-182	-431	-473	-369	-537	2255	1630	-383	-117	-743	1216	-633	-552	-326	-223	-597
D	9	-117	-138	-387	-675	-232	-92	-45	-61	-68	-80	-295	-342	-519	-527	-368	-581	-720	-474	-131	-99	-77	-172	-238	-370	-284
	10	-226	-55	-66	-37	-28	-29	-40	-79	-169	-87	-106	-120	-54	-33	-41	-51	-120	-116	-237	-212	-242	-76	-35	-41	-96
	11	-47	-46	-44	-41	-43	-38	-38	-42	-42	-40	-39	-42	-45	-36	-84	-48	-50	-43	-36	-52	-153	-148	-113	-60	-57
	12	-39	-65	-81	-201	-108	-89	-126	-210	-187	-203	-327	-210	-120	-44	-39	-38	-46	-37	-25	-20	-14	-19	-26	-24	-96
	13	-28	-28	-29	-30	-36	-27	-89	-212	-72	-67	-343	-108	-65	-212	-310	-199	-94	-28	-37	-202	-233	-37	-21	-28	-106
	14	-32	-51	-110	-43	-32	-27	-20	-20	-22	-33	-37	-36	-33	-28	-22	-21	-24	-21	-19	-15	-14	-18	-24	-30	-31
	15	-32	-110	-119	-118	-176	-200	-137	-58	-43	-40	-115	-70	-26	-15	-124	-256	-104	-21	-27	-128	-78	-32	-19	-28	-87
Q	16	-23	-23	-28	-31	-27	-24	-31	-32	-27	-63	-108	-42	-45	-65	-116	-48	-30	-26	-26	-17	-14	-33	-28	-29	-39
	17	-29	-26	-25	-38	-29	-21	-49	-28	-28	-32	-35	-29	-25	-72	-126	-57	-83	-103	-218	-94	-13	-15	-64	-81	-55
	18	-152	-78	-31	-38	-30	-24	-32	-31	-28	-22	-73	-219	-221	-81	-27	-98	-213	-43	-75	-77	-62	-176	-235	-92	-90
	19	-54	-39	-47	-39	-25	-18	-27	-89	-71	-31	-35	-30	-74	-120	-40	-32	-33	-42	-80	-32	-59	-261	-102	-67	-60
	20	-61	-27	-28	-30	-26	-23	-29	-31	-28	-27	-25	-71	-129	-78	-33	-60	-48	-27	-60	-247	-64	-38	-69	-79	-56
Q	21	-80	-71	-92	-100	-28	-18	-32	-33	-21	-27	-34	-33	-42	-30	-40	-150	-179	-114	-39	-9	-11	-15	-17	-21	-52
Q	22	-28	-27	-26	-29	-25	-20	-21	-47	-39	-26	-40	-104	-36	-27	-30	-28	-27	-9	-5	-23	-11	-13	-27	-35	-29
	23	-37	-38	-33	-24	-22	-21	-23	-17	-122	-162	-58	-26	-11	-27	-51	-39	-68	-51	-50	-81	-21	-20	-30	-35	-44
Q	24	-36	-32	-28	-20	-23	-27	-28	-27	-28	-33	-33	-33	-26	-25	-16	-17	-23	-17	-4	-1	-7	-17	-28	-29	-23
Q	25	-34	-38	-31	-32	-25	-19	-32	-80	-34	-26	-29	-23	-34	-32	-20	-24	-23	-20	-22	-18	-12	-14	-21	-28	-28
	26	-30	-31	-78	-88	-135	-107	-40	-37	-41	-31	-35	-42	-29	-26	-27	-90	-94	-54	-59	-58	-53	-27	-21	-23	-52
	27	-25	-28	-33	-38	-30	-28	-32	-10	-10	-38	-57	-79	-64	-56	-51	-36	-36	-60	-179	-175	-94	-189	-421	-286	-86
	28	-135	-121	-123	-375	-267	-317	-267	-154	-136	-352	-611	-489	-254	-212	-339	-314	-276	-106	-77	-298	-187	-159	-249	-455	-261
	29	-319	-140	-262	-221	-218	-90	-100	-184	-125	-61	-73	-112	-408	-204	-258	-382	-275	-264	-229	-273	-180	-100	-108	-257	-202
	30	-321	-20	-16	-17	-25	-80	-203	-174	-225	-141	-256	-370	-298	-219	-75	-107	-331	-118	-61	-45	-138	-236	-32	-20	-147
D	31	-24	-48	-93	-160	-207	-74	-130	-424	-409	-343	-539	-411	-173	-180	-554	-498	-230	-118	-60	-73	-148	-86	-250	-365	-233
	MEAN	-116	-85	-103	-127	-102	-88	-81	-104	-130	-133	-186	-161	-132	-131	-223	-221	-165	-140	-162	-178	-130	-128	-123	-145	-137
5Q	MEAN	-40	-38	-41	-42	-26	-22	-29	-44	-30	-35	-49	-47	-37	-36	-44	-53	-56	-37	-19	-14	-11	-18	-24	-28	-34
5D	MEAN	-220	-198	-254	-380	-292	-194	-132	-213	-302	-276	-479	-351	-270	-315	-760	-730	-417	-307	-402	-434	-295	-271	-301	-374	-340

APRIL 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-46	-61	-65	-100	-82	-47	-87	-77	-86	-54	-45	-42	-83	-44	-44	-45	-50	-49	-45	-38	-27	-34	-54	-40	-56
	2	-33	-33	-31	-35	-24	-32	-37	-41	-40	-65	-51	-43	-48	-97	-246	-182	-52	-47	-75	-39	-25	-67	-92	-110	-64
	3	-70	-67	-55	-101	-252	-212	-203	-67	-39	-106	-228	-164	-164	-201	-75	-135	-169	-96	-12	-6	-5	-13	-20	-27	-104
	4	-70	-78	-235	-116	-28	-30	-52	-228	-230	-90	-43	-156	-238	-56	-42	-41	-43	-36	-29	-20	-18	-30	-40	-46	-83
	5	-35	-31	-26	-27	-21	-23	-21	-17	-63	-270	-252	-292	-120	-63	-60	-68	-115	-93	-25	-14	-1	-11	-20	-28	-71
D	6	-27	-65	-126	-169	-262	-195	-449	-258	-117	-176	-760	-500	-247	-220	-255	-283	-216	-185	-52	-4	-28	-139	-233	-25	-208
	7	-39	-172	-118	-13	-21	-119	-256	-118	-368	-125	-36	-43	-47	-34	-38	-33	-32	-28	-54	-13	-10	-17	-22	-31	-74
	8	-262	-190	-28	-39	-159	-136	-24	-24	-99	-296	-269	-73	-37	-131	-48	-35	-69	-73	-34	-27	-20	-48	-147	-125	-100
	9	-38	-27	-20	-75	-251	-120	-135	-139	-321	-198	-85	-318	-339	-439	-80	-51	-45	-68	-32	-8	-4	-71	-126	-98	-129
Q	10	-68	-27	-23	-23	-26	-26	-31	-36	-34	-30	-33	-31	-27	-28	-41	-45	-47	-35	-26	-20	-17	-38	-102	-143	-40
	11	-178	-133	-126	-95	-116	-67	-59	-84	-288	-267	-198	-249	-68	-43	-54	-47	-41	-71	-140	-77	-15	-17	-17	-17	-103
	12	-21	-24	-29	-41	-82	-112	-205	-207	-150	-76	-53	-43	-37	-39	-71	-159	-162	-141	-62	-9	-10	-24	-18	-29	-75
Q	13	-28	-25	-23	-25	-28	-27	-22	-29	-25	-33	-34	-68	-118	-105	-87	-13	-17	-23	-12	-6	-13	-21	-24	-30	-35
Q	14	-26	-27	-30	-38	-30	-27	-22	-23	-30	-38	-42	-44	-42	-45	-52	-29	-25	-18	-19	-7	-14	-18	-48	-45	-31
Q	15	-23	-23	-16	-24	-24	-19	-19	-12	-27	-66	-36	-39	-37	-35	-44	-59	-193	-317	-379	-160	-232	-93	-76	-93	-85
	16	-303	-210	-89	-133	-217	-210	-108	-90	-46	-37	-40	-37	-34	-32	-29	-25	-19	-12	-14	-119	-481	-519	-435	-452	-154
D	17	-463	-334	-280	-233	-343	-159	-66	-35	-117	-421	-250	-117	-101	-342	-316	-266	-194	-274	-326	-151	-316	-541	-220	-41	-246
	18	-35	-26	-35	-28	-19	-17	-19	-17	-51	-202	-468	-492	-537	-533	-338	-94	-123	-53	-66	-20	-32	-293	-521	-532	-190
	19	-222	-334	-419	-389	-240	-128	-351	-494	-397	-286	-470	-458	-191	-61	-34	-79	-103	-145	-94	-43	-82	-116	-19	-11	-215
D	20	-18	-44	-122	-240	-270	-148	-62	-34	-27	-33	-67	-156	-341	-405	-143	-228	-308	-470	-339	-3	-23	-40	-122	-177	-159
D	21	-126	-265	-132	-98	-236	-367	-408	-298	-475	-353	-506	-529	-721	-561	-593	-620	-868	-909	-588	-317	-477	-704	-491	-393	-460
D	22	-629	-689	-577	-617	-363	-413	-254	-187	-218	-424	-225	-119	-85	-82	-73	-81	-95	-39	-20	-30	-28	-32	-37	-46	-223
	23	-69	-93	-143	-78	-40	-175	-286	-150	-54	-138	-242	-265	-529	-528	-395	-262	-158	-301	-400	-355	-224	-67	-299	-359	-234
	24	-169	-181	-339	-290	-155	-211	-253	-242	-165	-131	-154	-208	-275	-269	-187	-560	-347	-353	-324	-96	-137	-124	-58	-51	-220
	25	-425	-276	-185	-217	-295	-173	-219	-175	-269	-314	-231	-337	-213	-196	-122	-178	-70	-18	-59	-219	-216	-139	-173	-211	-205
	26	-242	-214	-113	-157	-35	-30	-40	-28	-28	-38	-46	-38	-133	-263	-178	-73	-63	-151	-241	-455	-321	-223	-174	-340	-151
	27	-382	-190	-150	-165	-77	-153	-207	-55	-26	-26	-36	-146	-140	-118	-106	-94	-57	-74	-185	-97	-7	-20	-27	-36	-107
Q	28	-124	-366	-222	-155	-113	-132	-105	-94	-61	-32	-29	-43	-109	-116	-65	-52	-30	-25	-13	-12	-26	-68	-42	-32	-86
	29	-32	-49	-102	-113	-113	-120	-71	-25	-78	-179	-82	-85	-219	-289	-181	-75	-196	-263	-330	-108	-29	-71	-206	-100	-130
	30	-43	-112	-414	-430	-361	-114	-215	-149	-266	-339	-200	-102	-39	-38	-144	-227	-301	-146	-115	-61	-102	-108	-193	-230	-185
	MEAN	-142	-146	-142	-142	-143	-125	-143	-114	-140	-161	-174	-175	-177	-180	-138	-138	-140	-150	-137	-84	-98	-124	-135	-130	-141
5Q	MEAN	-54	-94	-63	-53	-44	-46	-40	-39	-35	-40	-35	-45	-67	-66	-58	-40	-62	-84	-90	-41	-60	-48	-58	-69	-55
5D	MEAN	-253	-279	-247	-271	-295	-256	-248	-162	-191	-281	-362	-284	-299	-322	-276	-296	-336	-375	-265	-101	-174	-291	-221	-136	-259

MAY 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-88	-38	-36	-39	-51	-85	-225	-183	-56	-24	-32	-32	-61	-291	-163	-71	-60	-31	-60	-141	-203	-236	-191	-157	-106
	2	-215	-62	-36	-82	-183	-61	-59	-113	-176	-62	-47	-36	-29	-30	-23	-27	-69	-128	-179	-126	-40	-52	-97	-163	-87
	3	-61	-31	-27	-28	-26	-27	-26	-26	-33	-29	-40	-89	-211	-201	-166	-100	-64	-143	-217	-55	-75	-101	-400	-233	-100
	4	-133	-45	-39	-33	-31	-28	-23	-27	-72	-84	-104	-67	-78	-49	-59	-109	-184	-175	-44	-19	-27	-28	-34	-64	-65
	5	-76	-60	-36	-49	-34	-16	-27	-40	-33	-124	-420	-422	-137	-110	-162	-144	-90	-121	-71	-45	-17	-49	-53	-190	-105
	6	-144	-45	-43	-42	-34	-37	-33	-36	-41	-71	-85	-63	-120	-103	-80	-43	-108	-67	-43	-42	-5	-16	-26	-21	-56
	7	-30	-26	-23	-25	-29	-32	-31	-32	-31	-36	-52	-75	-84	-98	-41	-32	-36	-48	-58	-98	-47	-27	-30	-33	-44
Q	8	-38	-73	-38	-30	-31	-27	-28	-26	-31	-38	-37	-34	-29	-27	-21	-29	-82	-237	-137	-100	-87	-75	-69	-105	-60
Q	9	-79	-80	-60	-53	-111	-111	-73	-63	-33	-23	-39	-44	-45	-43	-39	-68	-94	-74	-49	-65	-32	-27	-29	-33	-57
Q	10	-28	-23	-25	-67	-66	-31	-23	-32	-66	-44	-43	-34	-39	-33	-39	-46	-40	-22	-14	-20	-18	-23	-28	-30	-35
Q	11	-29	-26	-22	-27	-34	-34	-36	-39	-29	-29	-38	-42	-48	-45	-37	-34	-24	-22	-16	-25	-24	-51	-68	-158	-39
D	12	-101	-86	-98	-125	-134	-40	-16	-38	-42	-68	-177	-245	-271	-320	-314	-239	-300	-273	-235	-171	-291	-370	-227	-89	-178
	13	-81	-93	-291	-377	-299	-129	-98	-36	-24	-16	-185	-123	-21	-30	-51	-60	-27	-15	-9	-28	-36	-22	-55	-99	-92
	14	-77	-136	-48	-103	-146	-134	-165	-234	-188	-77	-24	-29	-39	-27	-31	-72	-221	-439	-403	-444	-354	-181	-124	-218	-163
	15	-213	-212	-77	-58	-39	-78	-67	-34	-142	-349	-219	-43	-32	-39	-40	-42	-23	-89	-64	-85	-89	-41	-39	-48	-90
	16	-78	-44	-49	-51	-53	-155	-140	-52	-161	-51	-19	-18	-29	-54	-172	-153	-188	-270	-96	-77	-86	-49	-38	-161	-94
	17	-278	-135	-37	-28	-146	-362	-199	-41	-11	-17	-31	-112	-140	-267	-170	-14	-13	-24	5	-12	-3	-17	-24	-114	-91
	18	-74	-54	-135	-126	-15	-17	-14	-18	-17	-22	-21	-21	-29	-30	-33	-19	-64	-1	5	3	1	-17	-17	-22	-32
	19	-33	-35	-31	-56	-122	-99	-209	-217	-168	-250	-257	-153	-124	-75	-11	-15	-30	-93	-74	-22	-31	-145	-126	-49	-101
D	20	-157	-184	-133	-104	-267	-302	-108	-43	-28	-151	-237	-150	-169	-266	-148	-277	-302	-264	-124	-94	-282	-203	-145	-215	-181
	21	-268	-254	-246	-305	-258	-184	-159	-145	-117	-164	-220	-145	-99	-125	-183	-200	-78	-72	-125	-136	-111	-46	-60	-135	-160
	22	-203	-225	-203	-126	-57	-47	-94	-99	-24	-20	-30	-79	-76	-73	-175	-182	-195	-314	-284	-110	-98	-71	-42	-38	-119
	23	-37	-42	-47	-46	-40	-34	-17	-36	-189	-125	-89	-111	-55	-27	-49	-75	-54	-140	-176	-129	-95	-121	-296	-221	-94
	24	-163	-127	-59	-55	-41	-39	-28	-23	-43	-62	-125	-164	-71	-74	-106	-111	-133	-104	-22	-16	-41	-63	-70	-153	-79
	25	-173	-254	-181	-229	-266	-255	-257	-58	-33	-27	-50	-104	-247	-242	-250	-118	-175	-178	-114	-56	-83	-79	-117	-58	-150
Q	26	-24	-34	-38	-35	-31	-22	-17	-30	-33	-47	-51	-49	-34	-31	-45	-109	-92	-65	-82	-54	-42	-41	-55	-28	-45
D	27	-35	-38	-37	-77	-73	-108	-159	-103	-168	-156	-49	-54	-193	-317	-176	-125	-338	-469	-417	-325	-458	-429	-525	-476	-221
D	28	-224	-596	-241	-50	-26	-23	-27	-20	-45	-155	-600	-544	-573	-692	-435	-320	-296	-111	-85	-144	-71	-55	-40	-133	-229
D	29	-242	-190	-90	-57	-196	-191	-272	-389	-237	-73	-90	-82	-155	-128	-43	-48	-72	-66	-8	-113	-124	-75	-46	-97	-129
	30	-194	-117	-76	-86	-148	-141	-50	-43	-174	-515	-432	-151	-83	-76	-48	-115	-129	-195	-150	-56	-26	-36	-40	-40	-130
	31	-50	-46	-54	-45	-80	-35	-39	-71	-112	-168	-112	-50	-185	-247	-160	-113	-103	-44	-49	-43	-37	-38	-44	-54	-82
	MEAN	-117	-110	-82	-84	-99	-93	-88	-76	-82	-99	-128	-109	-113	-135	-112	-100	-119	-139	-110	-92	-95	-90	-102	-117	-104
5Q	MEAN	-40	-47	-37	-42	-55	-45	-35	-38	-38	-36	-42	-41	-39	-36	-36	-57	-66	-84	-60	-53	-41	-43	-50	-71	-47
5D	MEAN	-152	-219	-120	-83	-139	-133	-116	-119	-104	-121	-231	-215	-272	-345	-223	-202	-262	-237	-174	-169	-245	-226	-197	-202	-188

JUNE 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	-55	-69	-198	-413	-320	-191	-135	-75	-65	-413	-156	-179	-204	-334	-471	-414	-281	-323	-185	-146	-119	-205	-231	-130	-221
	2	-171	-86	-117	-192	-151	-99	-41	-46	-32	-19	-40	-36	-58	-70	-70	-115	-185	-137	-130	-143	-161	-117	-105	-195	-105
	3	-75	-77	-230	-231	-327	-318	-217	-119	-225	-269	-257	-249	-315	-147	-178	-193	-159	-49	-112	-199	-119	-139	-131	-228	-190
	4	-210	-286	-296	-97	-202	-158	-118	-160	-198	-181	-157	-118	-143	-154	-276	-180	-84	-59	-62	-19	-25	-29	-141	-207	-148
	5	-64	-56	-138	-256	-126	-195	-293	-246	-160	-51	-64	-93	-50	-20	-18	-20	-19	-38	-20	-15	-27	-25	-22	-23	-85
Q	6	-29	-31	-35	-39	-74	-69	-40	-73	-70	-42	-109	-44	-39	-32	-20	-41	-30	-14	0	-12	-7	-10	-8	-10	-37
	7	-22	-24	-32	-35	-78	-32	-29	-26	-34	-53	-47	-33	-34	-34	-36	-32	-28	-23	-61	-205	-299	-179	-202	-464	-85
	8	-264	-272	-347	-195	-167	-329	-345	-70	-48	-44	-99	-137	-194	-63	-25	-22	-24	-26	-95	-114	-64	-81	-125	-77	-134
	9	-61	-49	-79	-128	-45	-24	-30	-33	-93	-68	-39	-32	-35	-32	-44	-51	-34	-44	-73	-159	-180	-164	-156	-77	-72
	10	-48	-43	-82	-72	-43	-38	-45	-105	-140	-81	-106	-60	-31	-62	-104	-87	-95	-171	-155	-140	-157	-99	-27	-37	-85
Q	11	-81	-111	-179	-92	-30	-33	-35	-48	-57	-37	-35	-33	-34	-29	-32	-50	-42	-150	-131	-106	-69	-38	-36	-36	-64
Q	12	-58	-81	-81	-103	-108	-75	-65	-34	-67	-74	-101	-80	-63	-84	-46	-17	-25	-28	-49	-82	-80	-74	-76	-67	-67
	13	-65	-49	-44	-48	-85	-35	-113	-245	-183	-258	-333	-288	-349	-374	-284	-52	-53	-111	-138	-87	-126	-134	-96	-74	-151
	14	-96	-132	-167	-241	-142	-100	-53	-56	-54	-43	-40	-33	-22	-19	-24	-43	-39	-48	-56	-258	-108	-24	-37	-79	-80
	15	-325	-298	-222	-131	-69	-169	-209	-184	-285	-285	-305	-370	-256	-288	-128	-112	-92	-155	-121	-61	-58	-282	-153	-156	-196
	16	-186	-155	-180	-184	-155	-280	-164	-29	-20	-22	-29	-30	-82	-43	-79	-58	-66	-60	-36	-62	-117	-51	-92	-148	-97
	17	-48	-25	-30	-34	-32	-15	-36	-41	-27	-37	-41	-56	-179	-250	-135	-45	-67	-213	-206	-371	-379	-279	-264	-334	-131
D	18	-307	-243	-38	-39	-38	-47	-47	-184	-385	-425	-621	-586	-615	-484	-445	-428	-313	-163	-98	-225	-286	-309	-414	-262	-292
	19	-241	-290	-299	-132	-38	-50	-161	-53	-43	-100	-133	-87	-52	-55	-63	-59	-39	-41	-95	-117	-76	-261	-292	-374	-131
D	20	-488	-544	-419	-347	-425	-354	-277	-386	-428	-375	-322	-368	-364	-353	-356	-521	-528	-440	-289	-283	-467	-421	-397	-447	-400
D	21	-485	-408	-459	-448	-404	-397	-470	-453	-403	-273	-235	-337	-194	-294	-252	-211	-179	-115	-46	-17	-13	-50	-27	-34	-259
Q	22	-51	-84	-60	-63	-45	-51	-49	-51	-36	-40	-50	-90	-52	-42	-39	-47	-24	-17	-26	-87	-106	-89	-80	-52	-55
Q	23	-65	-115	-51	-45	-50	-77	-69	-29	-68	-40	-38	-42	-30	-23	-21	-27	-28	-29	-22	-13	-29	-39	-28	-33	-42
	24	-31	-99	-54	-36	-35	-65	-31	-36	-54	-26	-27	-29	-24	-23	-48	-29	-22	-9	-25	-48	-232	-85	-93	-158	-55
	25	-195	-310	-74	-28	-28	-29	-123	-75	-85	-115	-147	-230	-244	-239	-133	-126	-77	-37	-68	-64	-58	-68	-188	-138	-120
	26	-23	-28	-41	-65	-144	-162	-152	-275	-313	-269	-118	-36	-54	-36	-45	-228	-318	-214	-312	-435	-298	-139	-99	-72	-162
D	27	-87	-55	-155	-440	-401	-206	-168	-181	-457	-599	-217	-124	-447	-347	-175	-27	-44	-140	-58	-23	-59	-74	-70	-33	-191
	28	-50	-188	-329	-184	-141	-201	-108	-57	-33	-56	-210	-284	-340	-350	-245	-92	-23	-58	-54	-27	-42	-42	-55	-56	-134
	29	-34	-26	-27	-31	-35	-99	-141	-231	-67	-25	-30	-40	-30	-32	-19	-92	-210	-228	-175	-250	-263	-247	-152	-85	-107
	30	-40	-40	-35	-31	-29	-32	-41	-218	-258	-232	-209	-146	-132	-35	-25	-16	-9	-1	2	-6	-8	-21	-25	-46	- 68
	MEAN	-132	-142	-150	-146	-132	-131	-127	-127	-146	-152	-144	-142	-156	-145	-128	-116	-105	-105	-97	-126	-134	-126	-127	-138	-132
5Q	MEAN	-57	-84	-81	-68	-61	-61	-52	-47	-60	-47	-67	-58	-44	-42	-32	-36	-30	-48	-46	-60	-58	-50	-46	-40	-53
5D	MEAN	-284	-264	-254	-337	-318	-239	-219	-256	-348	-417	-310	-319	-365	-362	-340	-320	-269	-236	-135	-139	-189	-212	-228	-181	-273

JULY 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-37	-93	-183	-161	-250	-161	-245	-211	-248	-153	-47	-59	-57	-130	-313	-80	-34	-57	-27	-16	-18	-15	-14	-30	-110
	2	-30	-33	-25	-29	-59	-135	-198	-295	-210	-71	-131	-377	-79	-9	-7	-19	-40	-18	-18	-26	-30	-29	-25	-46	-81
	3	-152	-102	-138	-114	-253	-441	-412	-324	-348	-395	-366	-208	-145	-148	-83	-44	-37	-24	-25	-14	-50	-117	-284	-867	-212
	4	-755	-392	-181	-74	-206	-370	-412	-201	-361	-136	-117	-55	-33	-87	-47	-46	-42	-20	-17	-27	-28	-32	-44	-47	-155
	5	-57	-50	-49	-80	-386	-488	-321	-177	-196	-50	-32	-35	-30	-43	-89	-84	-142	-273	-62	-23	-36	-46	-51	-195	-125
	6	-446	-227	-296	-204	-237	-142	-288	-321	-406	-262	-175	-138	-285	-285	-34	-19	-10	-4	-1	-3	-12	-20	-35	-37	-162
Q	7	-37	-40	-40	-37	-33	-31	-23	-52	-129	-127	-89	-42	-32	-26	-17	-15	-16	-13	-8	-47	-138	-150	-139	-286	-65
	8	-142	-73	-182	-273	-279	-275	-297	-185	-79	-36	-25	-20	-106	-295	-163	-152	-186	-329	-275	-190	-204	-175	-255	-575	-199
D	9	-519	-233	-40	-233	-391	-327	-196	-116	-130	-356	-517	-576	-697	-709	-495	-409	-208	-114	-120	-154	-430	-421	-396	-433	-343
D	10	-706	-187	-84	-57	-38	-37	-45	-39	-34	-26	-16	-43	-108	-103	-118	-309	-274	-321	-178	-213	-286	-293	-178	-144	-160
	11	-149	-277	-184	-69	-33	-37	-101	-196	-193	-145	-87	-159	-162	-140	-128	-132	-200	-146	-110	-122	-181	-254	-136	-224	-149
	12	-333	-286	-239	-318	-161	-86	-84	-98	-123	-189	-70	-67	-185	-191	-171	-272	-211	-30	-143	-204	-56	-85	-226	-155	-166
	13	-144	-130	-257	-282	-87	-239	-153	-53	-21	-22	-45	-38	-35	-58	-74	-90	-170	-338	-343	-76	-79	-198	-149	-71	-131
	14	-83	-192	-200	-65	-140	-63	-41	-59	-218	-145	-63	-35	-27	-26	-18	-22	-20	-37	-300	-258	-68	-52	-60	-187	-99
Q	15	-170	-50	-55	-67	-60	-24	-20	-31	-54	-231	-231	-156	-51	-11	-3	-2	-5	-13	-24	-19	-25	-31	-51	-82	-61
	16	-171	-279	-277	-100	-77	-110	-42	-34	-30	-29	-27	-60	-217	-219	-40	-14	-73	-140	-253	-151	-58	-32	-24	-24	-103
	17	-25	-37	-81	-55	-12	-11	-16	-25	-25	-31	-31	-32	-40	-53	-171	-127	-236	-384	-139	-63	-96	-221	-297	-104	-96
Q	18	-38	-35	-67	-84	-58	-90	-31	-19	-18	-26	-49	-48	-34	-23	-22	-35	-23	-18	-23	-76	-112	-82	-84	-34	-47
Q	19	-34	-39	-40	-145	-186	-95	-45	-30	-27	-41	-135	-96	-19	-19	-18	-46	-106	-236	-92	-28	-35	-142	-134	-210	-83
	20	-125	-93	-89	-97	-50	-83	-106	-74	-18	-42	-38	-32	-26	-31	-25	-23	-31	-30	-69	-124	-163	-122	-206	-451	-90
D	21	-534	-257	-139	-118	-141	-51	-19	-17	-69	-61	-94	-277	-178	-373	-430	-161	-142	-81	-402	-347	-152	-152	-397	-406	-208
	22	-314	-116	-35	-82	-145	-173	-123	-72	-242	-296	-224	-47	-40	-48	-58	-127	-225	-288	-52	-58	-179	-224	-279	-361	-159
	23	-310	-217	-189	-90	-47	-35	-94	-127	-68	-38	-33	-34	-117	-56	-33	-3	-42	-149	-188	-94	-49	-28	-26	-38	-88
	24	-87	-296	-419	-492	-311	-258	-385	-142	-26	-30	-32	-44	-156	-255	-299	-330	-130	-114	-183	-135	-9	-43	-204	-239	-192
D	25	-643	-358	-344	-484	-236	-425	-513	-628	-703	-653	-494	-724	-245	-359	-222	-47	-18	-42	-7	-23	-71	-500	-652	-549	-373
	26	-473	-580	-414	-420	-101	-113	-382	-174	-288	-311	-376	-418	-383	-273	-82	-33	-23	-22	-31	-35	-58	-114	-386	-77	-232
	27	-51	-54	-82	-113	-174	-302	-199	-38	-29	-208	-207	-160	-149	-241	-204	-299	-271	-269	-150	-263	-190	-62	-98	-221	-168
Q	28	-80	-34	-40	-40	-34	-29	-22	-19	-29	-51	-35	-30	-29	-21	-29	-28	-26	-29	-34	-34	-43	-51	-80	-67	-38
D	29	-159	-112	-55	-133	-516	-612	-566	-530	-612	-718	-680	-461	-351	-357	-314	-459	-313	-312	-404	-307	-75	-25	-15	-31	-338
	30	-31	-32	-29	-46	-113	-280	-88	-63	-50	-53	-59	-88	-87	-63	-60	-107	-43	-31	-116	-154	-50	-86	-271	-221	-93
	31	-232	-368	-156	-283	-279	-281	-145	-199	-298	-200	-204	-233	-245	-222	-149	-251	-339	-547	-493	-145	-85	-233	-464	-292	-264
	MEAN	-228	-170	-149	-156	-164	-187	-181	-147	-170	-166	-153	-155	-140	-157	-126	-122	-117	-143	-138	-111	-99	-130	-183	-216	-155
5Q	MEAN	-72	-40	-48	-75	-74	-54	-28	-30	-51	-95	-108	-74	-33	-20	-18	-25	-35	-62	-36	-41	-71	-91	-98	-136	-59
5D	MEAN	-512	-229	-132	-205	-264	-290	-268	-266	-310	-363	-360	-416	-316	-380	-316	-277	-191	-174	-222	-209	-203	-278	-328	-313	-284

AUGUST 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	-201	-139	-165	-115	-23	-30	-35	-38	-54	-42	-67	-42	-27	-24	-26	-29	-55	-26	-27	-18	-37	-50	-41	-56	-57
	2	-55	-85	-203	-209	-207	-115	-21	-25	-51	-167	-53	-41	-37	-34	-46	-21	-24	-21	-17	-13	-20	-31	-32	-29	-65
Q	3	-32	-36	-31	-27	-49	-34	-26	-19	-21	-35	-35	-43	-26	-32	-53	-104	-57	-22	-12	-15	-19	-26	-23	-25	-33
Q	4	-27	-25	-24	-40	-42	-29	-21	-14	-37	-100	-54	-53	-27	-30	-50	-128	-69	-33	-20	-58	-115	-57	-44	-40	-47
Q	5	-44	-28	-51	-87	-113	-65	-32	-24	-12	-21	-31	-31	-28	-29	-24	-28	-21	-22	-10	-12	-28	-34	-29	-23	-34
	6	-20	-21	-19	-16	-25	-31	-25	-27	-24	-140	-115	-26	-30	-31	-31	-25	-25	-17	-7	-18	-42	-200	-164	-258	-56
	7	-139	-80	-35	-26	-19	-19	-19	-48	-36	-31	-30	-27	-40	-48	-57	-114	-177	-51	-42	-19	-63	-152	-553	-344	-90
D	8	-156	-87	-198	-165	-38	-44	-115	-176	-519	-657	-531	-434	-200	-54	-72	-135	-50	-63	-224	-292	-83	-117	-196	-310	-205
D	9	-462	-618	-267	-164	-184	-134	-138	-98	-115	-58	-210	-430	-196	-107	-44	-35	-38	-215	-334	-83	-42	-35	-30	-28	-169
	10	-25	-90	-123	-130	-28	-47	-111	-100	-191	-176	-97	-263	-257	-87	-16	-29	-92	-59	-33	-52	-33	-39	-80	-74	-93
	11	-78	-67	-83	-114	-194	-80	-39	-46	-130	-216	-115	-75	-42	-172	-206	-125	-30	-29	-24	-131	-109	-60	-145	-406	-113
	12	-377	-276	-374	-451	-377	-102	-24	-56	-183	-191	-25	-26	-35	-42	-36	-22	-27	-41	-79	-137	-247	-187	-86	-31	-143
	13	-33	-43	-66	-57	-21	-108	-125	-55	-62	-90	-130	-61	-49	-165	-81	-31	-62	-96	-119	-246	-225	-277	-335	-94	-110
	14	-30	-27	-78	-185	-111	-30	-38	-26	-22	-29	-30	-35	-35	-32	-28	-52	-81	-67	-53	-54	-59	-76	-69	-72	-55
	15	-80	-38	-92	-80	-64	-85	-57	-22	-30	-80	-74	-81	-73	-28	-24	-40	-84	-39	-39	-79	-45	-45	-88	-201	-65
	16	-152	-82	-90	-37	-21	-57	-92	-106	-94	-84	-100	-101	-154	-186	-48	-24	-38	-124	-289	-84	-46	-35	-418	-643	-129
D	17	-560	-151	-237	-423	-679	-263	-803	-446	-338	-315	-527	-390	-201	-435	-297	-313	-582	-668	-683	-506	-89	-101	-234	-337	-399
D	18	-210	-453	-285	-380	-252	-118	-179	-334	-310	-299	-495	-489	-650	-502	-390	-244	-586	-723	-424	-115	-76	-128	-265	-561	-353
	19	-513	-404	-205	-132	-159	-176	-165	-36	-91	-258	-343	-59	-119	-166	-215	-187	-255	-131	-65	-18	-12	-22	-25	-35	-158
	20	-34	-40	-37	-33	-42	-45	-44	-95	-156	-150	-82	-151	-161	-71	-54	-40	-34	-30	-31	-37	-42	-64	-57	-45	-66
	21	-46	-91	-202	-148	-88	-74	-85	-86	-86	-48	-42	-84	-58	-25	-34	-42	-130	-98	-96	-15	-20	-40	-53	-44	-72
	22	-38	-38	-52	-61	-85	-95	-96	-69	-53	-58	-57	-162	-380	-243	-194	-160	-229	-196	-164	-137	-78	-29	-40	-74	-116
	23	-102	-82	-80	-139	-198	-121	-197	-152	-237	-205	-126	-86	-203	-101	-46	-51	-56	-125	-69	-21	-16	-26	-23	-27	-104
Q	24	-29	-34	-33	-136	-28	-25	-25	-30	-34	-40	-39	-40	-45	-83	-77	-54	-71	-59	-123	-77	-66	-106	-113	-71	-60
	25	-69	-76	-89	-148	-170	-215	-286	-342	-247	-202	-195	-214	-272	-295	-288	-213	-244	-192	-77	-128	-182	-176	-196	-128	-194
D	26	-215	-155	-22	-82	-469	-402	-265	-324	-390	-510	-413	-452	-530	-452	-278	-405	-298	-180	-189	-108	-113	-216	-124	-124	-280
	27	-267	-262	-208	-123	-166	-363	-321	-64	-41	-110	-52	-28	-39	-92	-434	-397	-331	-268	-245	-124	-169	-239	-229	-67	-193
	28	-18	-18	-28	-33	-20	-92	-168	-48	-33	-32	-32	-32	-35	-38	-145	-443	-334	-246	-314	-273	-173	-224	-178	-244	-133
	29	-78	-34	-67	-356	-386	-205	-131	-168	-201	-136	-37	-48	-183	-120	-104	-203	-108	-58	-37	-34	-48	-27	-31	-43	-118
	30	-64	-235	-202	-161	-106	-92	-97	-98	-123	-40	-40	-31	-39	-48	-43	-67	-47	-26	-46	-121	-68	-18	-13	-15	-77
	31	-16	-19	-28	-29	-30	-178	-277	-362	-311	-191	-137	-59	-54	-262	-249	-163	-200	-289	-219	-284	-222	-40	-60	-43	-155
	MEAN	-135	-124	-119	-138	-142	-112	-131	-114	-137	-152	-139	-132	-136	-130	-119	-127	-143	-136	-133	-107	-83	-93	-128	-145	-127
5Q	MEAN	-67	-52	-61	-81	-51	-37	-28	-25	-32	-48	-45	-42	-31	-40	-46	-69	-55	-32	-38	-36	-53	-55	-50	-43	-46
5D	MEAN	-321	-293	-202	-243	-324	-192	-300	-276	-334	-368	-435	-439	-355	-310	-216	-226	-311	-370	-371	-221	-81	-119	-170	-272	-281

SEPTEMBER 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	-25	-12	-16	-18	-15	-10	-56	-349	-436	-358	-619	-236	-49	-83	-146	-361	-275	-337	-486	-437	-350	-139	-95	-51	-207
	2	-177	-136	-40	-16	-13	-33	-29	-24	-25	-104	-358	-267	-196	-169	-127	-99	-147	-328	-243	-64	-73	-165	-98	-32	-123
	3	-21	-23	-32	-287	-322	-40	-19	-63	-253	-396	-252	-287	-368	-69	-41	-165	-201	-74	-39	-52	-72	-245	-334	-193	-160
	4	-60	-72	-63	-32	-19	-19	-60	-76	-105	-44	-38	-81	-263	-36	-28	-65	-256	-47	-85	-79	-146	-144	-33	-53	-79
	5	-151	-54	-43	-80	-132	-66	-8	-15	-20	-27	-38	-29	-46	-72	-62	-216	-397	-170	-139	-161	-102	-95	-221	-94	-102
Q	6	-25	-21	-42	-42	-39	-25	-16	-16	-18	-25	-30	-36	-33	-29	-46	-183	-168	-123	-221	-78	-40	-35	-135	-38	-61
	7	-28	-60	-45	-18	-13	-6	-11	-16	-15	-29	-42	-37	-78	-57	-63	-35	-22	-12	-11	-51	-135	-230	-70	-15	-46
	8	-19	-18	-15	-13	-11	-140	-162	-96	-84	-46	-25	-29	-56	-155	-322	-320	-364	-267	-258	-188	-36	-25	-29	-29	-113
Q	9	-22	-19	-21	-31	-74	-31	-28	-21	-28	-32	-35	-28	-48	-60	-63	-46	-119	-62	-25	-88	-360	-314	-305	-213	-86
	10	-320	-246	-129	-159	-192	-108	-32	-25	-20	-26	-29	-30	-32	-34	-35	-28	-21	-17	-14	-16	-15	-13	-11	-7	-65
Q	11	-10	-15	-16	-15	-15	-12	-8	-11	-21	-30	-35	-31	-32	-25	-22	-34	-35	-36	-25	-17	-13	-10	-6	-4	-20
Q	12	-4	-11	-14	-17	-255	-258	-175	-206	-178	-26	-22	-25	-27	-20	-23	-24	-25	-62	-13	-11	-7	-10	-11	-9	-60
D	13	-9	-14	-21	-17	-130	-397	-353	-348	-389	-479	-530	-410	-396	-427	-272	-101	-217	-226	-44	-137	-527	-376	-249	-423	-271
D	14	-121	-226	-296	-122	-40	-11	-43	-107	-233	-160	-132	-679	-471	-544	-536	-523	-245	-174	-151	-260	-398	-173	-91	-158	-246
	15	-238	-216	-403	-339	-260	-123	-179	-51	-17	-9	-37	-117	-206	-125	-20	-31	-33	-77	-162	-147	-37	-113	-121	-24	-129
	16	-47	-83	-212	-61	-119	-259	-203	-135	-198	-66	-110	-127	-163	-145	-50	-31	-25	-49	-174	-166	-160	-83	-27	-26	-113
	17	-27	-128	-174	-148	-156	-238	-458	-188	-167	-43	-19	-24	-48	-26	-40	-109	-190	-148	-111	-54	-54	-66	-119	-63	-117
	18	-86	-198	-174	-315	-195	-123	-123	-245	-271	-123	-79	-24	-19	-36	-55	-232	-34	-87	-176	-50	-51	-131	-175	-34	-127
	19	-12	-17	-85	-163	-265	-438	-227	-189	-335	-389	-356	-161	-194	-250	-233	-173	-356	-429	-371	-466	-225	-165	-306	-111	-247
	20	-100	-100	-36	-25	-82	-323	-262	-110	-206	-318	-161	-176	-225	-270	-319	-282	-280	-179	-81	-107	-149	-98	-116	-441	-185
D	21	-337	-294	-274	-243	-184	-262	-314	-425	-439	-105	-16	-115	-555	-686	-483	-279	-178	-289	-288	-202	-62	-116	-59	-72	-262
	22	-38	-247	-258	-184	-425	-212	-29	-20	-57	-176	-215	-109	-108	-72	-71	-100	-140	-429	-278	-42	-56	-31	-151	-94	-148
	23	-184	-125	-41	-25	-20	-18	-133	-237	-259	-357	-364	-165	-173	-144	-79	-60	-132	-167	-46	-39	-21	-18	-21	-33	-119
	24	-178	-119	-64	-188	-175	-154	-170	-233	-256	-199	-26	-20	-24	-21	-34	-30	-22	-43	-101	-291	-32	-27	-52	-39	-104
	25	-21	-22	-21	-91	-306	-320	-240	-112	-210	-200	-30	-18	-23	-23	-37	-74	-86	-104	-202	-41	-15	-20	-17	-17	-94
	26	-19	-17	-41	-180	-155	-102	-63	-51	-36	-48	-31	-10	-26	-22	-21	-23	-135	-120	-45	-50	-49	-42	-90	-245	-68
D	27	-308	-304	-189	-241	-335	-320	-258	-294	-87	-38	-169	-196	-130	-111	-269	-315	-367	-250	-312	-263	-42	-49	-308	-571	-239
	28	-307	-94	-32	-59	-58	-44	-18	-8	-6	-13	-23	-27	-32	-29	-24	-25	-20	-13	-28	-14	-18	-16	-20	-17	-39
Q	29	-26	-24	-21	-12	-5	-18	-42	-52	-37	-19	-17	-29	-33	-25	-23	-24	-20	-11	-7	-7	-8	-23	-25	-26	-22
	30	-21	-16	-25	-127	-163	-66	-22	-2	-7	-17	-22	-27	-22	-17	-14	-13	-18	-34	-31	-14	-20	-58	-40	-48	-35
	MEAN	-98	-98	-95	-109	-139	-139	-125	-124	-147	-130	-129	-118	-136	-126	-119	-133	-151	-145	-139	-120	-109	-101	-111	-106	-123
5Q	MEAN	-17	-18	-23	-23	-78	-69	-54	-61	-56	-26	-28	-30	-35	-32	-35	-62	-73	-59	-58	-40	-86	-78	-96	-58	-50
5D	MEAN	-160	-170	-159	-128	-141	-200	-205	-305	-317	-228	-293	-327	-320	-370	-341	-316	-256	-255	-256	-260	-276	-171	-160	-255	-245

OCTOBER 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-147	-193	-44	-23	-68	-175	-75	-17	-11	-15	-38	-25	-23	-23	-49	-114	-75	-63	-233	-360	-204	-78	-69	-236	-98
	2	-396	-140	-55	-59	-53	-48	-45	-50	-45	-57	-125	-49	-59	-72	-71	-52	-52	-92	-151	-157	-86	-77	-96	-65	-90
	3	-116	-78	-74	-89	-71	-40	-41	-36	-40	-55	-40	-45	-52	-49	-93	-295	-354	-170	-189	-257	-152	-274	-156	-326	-129
D	4	-210	-176	-120	-290	-358	-95	-243	-263	-245	-163	-388	-388	-177	-353	-95	-37	-102	-269	-303	-142	-141	-63	-114	-78	-201
	5	-36	-64	-173	-91	-31	-82	-250	-132	-39	-146	-51	-25	-66	-40	-36	-37	-92	-36	-35	-164	-173	-94	-30	-18	-81
	6	-22	-93	-60	-34	-57	-47	-55	-30	-25	-36	-97	-159	-27	-32	-26	-30	-25	-18	-27	-159	-125	-162	-93	-14	-61
Q	7	-7	-10	-8	-9	-7	-7	-17	-67	-47	-19	-23	-27	-50	-115	-25	-29	-24	-21	-16	-14	-17	-20	-22	-18	-26
Q	8	-11	-8	-8	-34	-17	-10	-10	-10	-15	-22	-25	-28	-24	-23	-24	-29	-29	-27	-18	-11	-17	-27	-26	-22	-20
Q	9	-15	-15	-18	-20	-18	-11	-12	-17	-25	-20	-22	-24	-38	-27	-25	-26	-26	-27	-91	-49	-14	-15	-15	-14	-24
	10	-14	-12	-14	-8	-72	-82	-126	-242	-53	-20	-13	-22	-19	-12	-30	-36	-102	-216	-380	-349	-308	-188	-152	-245	-113
	11	-282	-274	-205	-165	-160	-265	-306	-443	-360	-387	-294	-217	-295	-277	-304	-299	-243	-235	-243	-328	-37	-14	-103	-187	-247
	12	-362	-295	-162	-309	-564	-273	-157	-344	-276	-212	-194	-119	-105	-92	-36	-29	-23	-20	-16	-16	-13	-3	-6	-11	-152
	13	-8	-11	-10	-21	-54	-280	-214	-147	-28	-23	-32	-39	-321	-151	-54	-235	-254	-192	-172	-175	-82	-87	-32	-16	-110
	14	-130	-267	-185	-175	-156	-16	-44	-112	-158	-104	-103	-169	-135	-100	-41	-38	-30	-90	-127	-118	-128	-113	-82	-46	-111
Q	15	-166	-95	-58	-56	-86	-83	-50	-35	-25	-61	-61	-30	-25	-80	-154	-64	-33	-34	-20	-11	-36	-88	-16	-13	-58
D	16	-12	-15	-14	-22	-24	-48	-16	-15	-11	-66	-143	-786	-595	-340	-265	-510	-471	-679	-439	-304	-46	-35	-98	-270	-218
D	17	-202	-163	-312	-165	-180	-207	-502	-537	-402	-418	-295	-458	-466	-554	-473	-537	-799	-381	-619	-565	-296	-350	-404	-370	-402
D	18	-324	-344	-336	-308	-57	-43	-52	-215	-373	-219	-126	-180	-261	-110	-160	-284	-293	-181	-145	-121	-77	-175	-263	-108	-198
	19	-121	-123	-191	-172	-193	-170	-304	-155	-380	-135	-152	-227	-269	-317	-200	-146	-229	-181	-140	-162	-188	-92	-109	-110	-186
	20	-108	-133	-137	-196	-158	-210	-221	-121	-147	-375	-304	-179	-241	-142	-154	-160	-98	-83	-22	-20	-18	-64	-32	-13	-139
Q	21	-17	-21	-20	-22	-19	-16	-16	-12	-9	-14	-20	-26	-28	-30	-37	-38	-44	-61	-53	-24	-18	-21	-35	-49	-27
	22	-144	-191	-182	-191	-115	-107	-91	-83	-316	-221	-141	-234	-317	-370	-372	-316	-393	-459	-308	-341	-340	-278	-218	-202	-247
D	23	-173	-180	-148	-101	-247	-291	-321	-181	-132	-135	-223	-203	-150	-186	-560	-529	-401	-197	-519	-380	-271	-239	-111	-184	-253
	24	-259	-16	-12	-123	-151	-268	-112	-96	-387	-150	-152	-311	-262	-241	-201	-114	-56	-45	-134	-155	-152	-27	-13	-52	-145
	25	-28	-30	-94	-87	-6	-12	-122	-241	-117	-60	-107	-96	-179	-309	-134	-101	-235	-162	-44	-67	-58	-41	-8	-8	-98
	26	-9	-25	-138	-109	-41	-18	-26	-35	-21	-36	-143	-207	-169	-107	-87	-53	-59	-84	-61	-50	-20	-10	-12	-10	-64
	27	-10	-7	-4	-18	-19	-3	-13	-10	-13	-17	-13	-10	-35	-49	-34	-18	-12	-13	-8	-7	-32	-237	-117	-22	-30
	28	-11	-112	-101	-57	-44	-65	-231	-46	-7	-13	-18	-16	-24	-19	-115	-187	-131	-93	-251	-467	-371	-226	-102	-43	-115
	29	-72	-21	1	0	-4	-77	-143	-23	5	-29	-17	-45	-57	-121	-62	-35	-122	-249	-363	-464	-367	-167	-344	-251	-126
	30	-104	-89	-242	-217	-114	0	0	-14	-10	-27	-37	-145	-34	-28	-24	-105	-214	-32	-16	-20	-22	-30	-23	-13	-65
	31	-6	-10	-8	-2	-21	-12	-3	0	-11	-118	-8	-7	-30	-45	-81	-144	-48	-37	-19	-57	-81	-29	-12	-10	-33
	MEAN	-114	-104	-101	-102	-102	-99	-123	-120	-120	-109	-110	-145	-146	-142	-130	-149	-164	-143	-167	-178	-125	-107	-94	-98	-125
5Q	MEAN	-43	-30	-22	-28	-29	-25	-21	-28	-24	-27	-30	-27	-33	-55	-53	-37	-31	-34	-40	-22	-20	-34	-23	-23	-31
5D	MEAN	-184	-176	-186	-177	-173	-137	-227	-242	-233	-200	-235	-403	-330	-309	-311	-379	-413	-341	-405	-302	-166	-172	-198	-202	-254

NOVEMBER 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	-10	-10	-12	-11	-11	-10	-10	-10	-12	-17	-34	-74	-22	-31	-31	-35	-59	-45	-26	-19	-20	-23	-20	-18	-24
	2	-29	-23	-41	-39	-37	-25	-16	-23	-183	-182	-43	-66	-229	-210	-103	-64	-39	-26	-22	-10	-13	-11	-16	-41	-62
	3	-98	-98	-19	-48	-78	-24	-13	-45	-112	-74	-15	-11	-20	-24	-87	-233	-266	-317	-271	-216	-129	-271	-135	-63	-111
	4	-122	-72	-56	-43	-39	-26	-18	-31	-143	-91	-69	-118	-44	-31	-32	-60	-102	-107	-51	-96	-78	-186	-91	-40	-73
	5	-30	-89	-36	-13	-25	-44	-92	-20	-97	-89	-39	-70	-76	-41	-43	-167	-131	-60	-71	-199	-302	-358	-215	-147	-102
	6	-112	-143	-152	-209	-212	-232	-206	-231	-434	-341	-344	-329	-480	-484	-255	-244	-152	-86	-44	-41	-69	-192	-132	-88	-217
D	7	-133	-738	-463	-388	-402	-399	-343	-175	-650	-525	-697	1142	-390	-597	-699	-229	-209	-210	-233	-376	-470	-249	-131	-440	-429
	8	-339	-95	-156	-165	-45	-49	-24	-54	-101	-186	-183	-215	-123	-176	-233	-169	-62	-50	-147	-187	-20	-20	-21	-35	-119
	9	-85	-29	-25	-40	-88	-188	-171	-240	-203	-207	-209	-176	-127	-53	-69	-410	-344	-338	-237	-126	-185	-102	-10	-14	-153
	10	-54	-170	-259	-75	-140	-224	-50	-30	-33	-217	-474	-484	-260	-170	-286	-569	-342	-221	-194	-72	-109	-120	-24	-118	-196
D	11	-270	-428	-235	-254	-95	-133	-234	-186	-286	-395	-358	-123	-209	-247	-198	-274	-374	-138	-26	-42	-171	-245	-42	-47	-209
	12	-117	-60	-90	-163	-176	-78	-93	-213	-206	-251	-208	-166	-100	-399	-447	-181	-301	-29	-14	-20	-20	-14	-16	-13	-141
	13	-16	-50	-132	-175	-36	-85	-134	-41	-10	-16	-132	-236	-313	-355	-323	-238	-289	-341	-260	-181	-118	-127	-196	-256	-169
	14	-287	-269	-49	-12	-24	-85	-52	-65	-68	-53	-25	-28	-29	-35	-132	-121	-324	-267	-221	-141	-59	-60	-10	-6	-101
Q	15	-5	-5	-6	-6	-6	-7	-7	-7	-12	-46	-51	-167	-59	-38	-24	-28	-27	-21	-32	-83	-138	-40	-11	-8	-35
	16	-10	-8	-7	-7	-8	-9	-1	-3	-6	-21	-145	-114	-75	-23	-14	-38	-149	-227	-124	-8	-30	-100	-36	-66	-51
	17	-69	-100	-64	-146	-116	-12	0	-6	-10	-9	-75	-172	-110	-35	-16	-25	-21	-22	-19	-13	-15	-18	-16	-20	-46
	18	-45	-20	-6	-34	-16	-46	-27	-26	-11	-4	-5	-47	-457	-263	-383	-367	-86	-29	-18	-15	-16	-74	-422	-383	-117
	19	-225	-212	-277	-322	-228	-297	-182	-32	-41	-8	-45	-29	-30	-27	-31	-24	-19	-23	-21	-19	-20	-20	-21	-18	-90
Q	20	-17	-17	-16	-17	-17	-14	-15	-13	-14	-11	-14	-36	-35	-13	-12	-15	-13	-13	-11	-11	-9	-13	-47	-55	-19
D	21	-42	-76	-211	-312	-129	-26	-68	-243	-525	-920	-915	-844	-609	-667	-723	-429	-218	-242	-238	-249	-229	-230	-247	-152	-356
D	22	-366	-287	-315	-334	-85	-54	-36	-70	-180	-183	-301	-242	-279	-457	-434	-438	-549	-360	-415	-313	-335	-251	-240	-256	-283
D	23	-220	-291	-267	-332	-177	-229	-271	-353	-420	-541	-443	-396	-189	-242	-832	-885	-550	-316	-158	-272	-160	-163	-335	-202	-344
	24	-64	-75	-94	-103	-61	-62	-13	-21	-42	-24	-28	-19	-20	-23	-27	-71	-280	-426	-259	-131	-44	-61	-25	-43	-84
	25	-68	-100	-100	-4	0	-11	-20	-27	-54	-251	-95	-95	-95	-41	-111	-252	-279	-348	-402	-147	-55	-46	-46	-89	-114
	26	-67	-27	1	-5	-31	-43	-4	-2	-9	-34	-74	-75	-34	-20	-55	-266	-278	-89	-24	-96	-389	-81	-49	-12	-73
	27	-13	-15	-57	-26	-30	-31	-17	-17	-58	-310	-167	-196	-314	-407	-80	-30	-38	-177	-225	-42	-101	-149	-171	-100	-115
	28	-20	-17	-9	-62	-108	-255	-82	-5	-7	-11	-44	-72	-134	-65	-244	-399	-84	-12	-19	-50	-29	-59	-10	-8	-75
Q	29	-5	-3	-3	-11	-3	-2	-1	-2	-7	-5	-10	-29	-8	-5	-5	-11	-30	-36	-20	-39	-11	-4	-2	-1	-11
Q	30	-2	-2	1	-1	-5	-7	-1	-1	-4	-9	-8	-11	-11	-12	-16	-10	-36	-42	-29	-23	-18	-6	-8	-23	-12
	MEAN	-98	-118	-105	-112	-81	-90	-73	-73	-131	-168	-175	-193	-163	-173	-198	-209	-188	-154	-128	-108	-112	-110	-92	-92	-131
5Q	MEAN	-8	-7	-7	-9	-8	-8	-7	-7	-10	-18	-23	-63	-27	-20	-18	-20	-33	-31	-24	-35	-39	-17	-18	-21	-20
5D	MEAN	-206	-364	-298	-324	-178	-168	-190	-205	-412	-513	-543	-549	-335	-442	-577	-451	-380	-253	-214	-250	-273	-228	-199	-219	-324

DECEMBER 1970 AL INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	-4	-2	0	-4	-3	-3	-1	-1	-4	-3	-4	-12	-12	-17	-18	-19	-31	-30	-7	-3	-5	-7	-9	-9	-9
	2	-6	-6	-3	-3	-6	-9	0	0	1	-4	-6	-12	-7	-10	-15	-37	-41	-69	-91	-162	-108	-18	-9	-8	-26
	3	-33	-143	-131	-17	-8	-11	-28	-93	-210	-96	-10	-5	-6	-10	-10	-11	-89	-20	-9	-8	-9	-41	-73	-28	-46
	4	-7	-2	-1	-3	-1	0	-2	-36	-50	-14	-8	-7	-82	-102	-9	-15	-14	-16	-15	-17	-135	-372	-199	-144	-52
	5	-117	-112	-168	-156	-130	-153	-112	-68	-186	-218	-52	-56	-56	-159	-189	-289	-93	-26	-15	-13	-7	-7	-9	-11	-100
	6	-9	-45	-90	-61	-18	-44	-90	-111	-277	-221	-224	-76	-45	-332	-405	-310	-348	-236	-155	-134	-79	-38	-18	-13	-141
	7	-18	-7	-5	-19	-75	-33	-131	-83	-46	-38	-77	-130	-349	-217	-199	-156	-122	-121	-95	-190	-173	-276	-225	-237	-126
D	8	-256	-330	-255	-425	-303	-141	-151	-359	-204	-106	-450	-299	-387	-525	-442	-31	-20	-76	-266	-302	-112	-66	-108	-57	-236
	9	-37	-71	-65	-47	-44	-97	-34	-30	-31	-26	-183	-117	-19	-60	-86	-71	-81	-110	-42	-6	-3	-5	-5	-5	-53
Q	10	-10	-7	-1	-1	-3	-1	-4	-2	-82	-152	-72	-76	-197	-206	-133	-95	-101	-53	-86	-162	-71	-33	-9	-9	-65
Q	11	-11	-7	-5	-15	-9	-28	-43	-23	-47	-56	-14	-10	-17	-7	-18	-11	-13	-14	-77	-14	1	0	-2	-5	-19
	12	-3	-6	-57	-25	-20	-19	-19	-18	-23	-115	-81	-121	-167	-126	-107	-44	-25	-25	-78	-39	-16	-43	-102	-43	-55
	13	-15	-2	-6	-7	-3	-2	-3	-2	-5	-11	-8	-7	-7	-7	-3	-4	-9	-134	-124	-16	4	-6	-77	-135	-25
D	14	-36	-77	-102	-9	-122	-614	-749	1057	-798	-258	-342	-231	-166	-110	-105	-106	-53	-98	-599	-376	-223	-286	-413	-158	-295
D	15	-80	-203	-356	-143	-100	-199	-315	-421	-337	-330	-296	-241	-100	-289	-173	-330	-242	-149	-167	-56	-56	-44	-48	-71	-198
	16	-49	-46	-17	-21	-20	-17	-26	-16	-14	-17	-19	-48	-28	-18	-41	-31	-45	-87	-65	-36	-27	-24	-36	-96	-35
Q	17	-70	-35	-18	-11	-12	-11	-10	-22	-38	-77	-98	-146	-65	-42	-96	-68	-39	-14	-11	-16	-39	-52	-20	-13	-43
	18	-8	-7	-7	-9	-14	-27	-67	-50	-47	-24	-12	-16	-27	-76	-31	-24	-37	-51	-16	-10	-18	-6	0	-4	-25
	19	-34	-13	-26	-38	-11	-18	-82	-92	-209	-311	-72	-15	-15	-20	-16	-10	-6	-11	-36	-90	-80	-87	-304	-114	-71
	20	-27	-41	-57	-34	-93	-133	-186	-263	-429	-373	-261	-154	-102	-154	-175	-76	-51	-43	-54	-162	-151	-75	-64	-44	-133
	21	-92	-97	-66	-45	-62	-77	-128	-159	-112	-112	-96	-79	-138	-49	-18	-15	-20	-24	-20	-27	-78	-160	-119	-68	-78
	22	-79	-130	-83	-68	-67	-96	-57	-54	-151	-91	-71	-45	-64	-103	-82	-100	-115	-69	-56	-47	-61	-55	-116	-28	-79
	23	-16	-20	-107	-77	-35	-16	-10	-2	-8	-7	-45	-160	-102	-93	-104	-121	-124	-14	-19	-2	-5	-13	-13	-80	-50
D	24	-323	-304	-290	-273	-108	-68	-52	-16	-29	-8	-4	-15	-39	-78	-200	-120	-7	-14	-22	-89	-109	-51	-25	-31	-95
	25	-53	-12	-8	-11	-11	-9	-10	-12	-13	-11	-13	-12	-12	-14	-41	-83	-162	-116	-44	-44	-142	-21	-18	-72	-39
	26	-8	-5	-9	-9	-3	-113	-56	-35	-61	-21	-6	-3	-5	-29	-37	-60	-92	-31	-9	-10	-9	-60	-30	-12	-30
	27	-2	-4	-9	-32	-6	0	-7	-9	-15	-41	-52	-11	-22	-225	-92	-243	-191	-153	-98	-104	-146	-361	-227	-161	-92
D	28	-158	-171	-90	-146	-25	-12	-52	-32	-25	-162	-68	-46	-318	-210	-148	-205	-442	-385	-433	-440	-331	-276	-252	-300	-197
	29	-82	-13	-36	-65	-80	-91	-64	-49	-122	-22	-10	-14	-44	-71	-83	-91	-144	-108	-194	-73	-11	-26	-138	-412	-85
	30	-292	-186	-263	-274	-137	-18	-2	-8	-13	-24	-7	-8	-8	-10	-15	-62	-451	-276	-15	-3	-9	-23	-8	-6	-88
Q	31	-8	-8	-5	-21	-2	-1	-1	-1	-3	-4	-11	-4	-8	-6	-6	-5	-10	-13	-6	-2	-2	0	-2	-9	-6
	MEAN	-63	-68	-75	-67	-49	-66	-80	-101	-116	-95	-86	-70	-84	-109	-100	-92	-104	-83	-94	-86	-71	-82	-86	-77	-84
5Q	MEAN	-21	-12	-6	-10	-6	-9	-12	-10	-35	-58	-40	-50	-60	-56	-54	-40	-39	-25	-37	-39	-23	-18	-8	-9	-28
5D	MEAN	-171	-217	-219	-199	-132	-207	-264	-389	-279	-173	-232	-166	-202	-242	-214	-158	-153	-144	-297	-253	-166	-145	-169	-123	-204

JANUARY 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	26	23	31	34	36	32	42	42	36	26	25	35	49	72	83	37	96	133	51	49	39	40	45	68	48
D	2	70	68	87	103	265	181	122	117	193	175	82	101	64	143	109	188	162	148	94	122	51	56	85	104	120
	3	85	87	86	58	78	42	69	50	55	53	66	48	34	42	35	15	9	4	8	9	7	12	18	13	41
Q	4	15	15	15	19	24	20	21	21	33	35	42	40	17	22	17	14	20	34	34	21	18	19	14	13	23
	5	29	33	36	29	31	22	40	32	41	34	73	124	99	67	69	58	71	56	33	32	27	24	40	56	48
	6	75	33	20	23	46	23	20	19	42	31	24	30	29	54	23	25	22	14	12	13	26	34	24	19	28
	7	25	24	30	23	39	34	40	51	53	29	19	17	19	24	18	9	15	42	154	172	103	67	41	38	45
	8	42	49	43	39	32	40	45	40	51	67	57	100	56	66	61	80	75	54	47	34	35	28	32	42	51
D	9	57	85	123	78	59	83	85	57	68	157	87	49	49	25	32	36	20	47	26	11	23	30	24	36	56
	10	53	57	58	63	42	26	22	21	31	28	19	37	29	34	43	12	24	10	12	12	13	8	11	13	28
Q	11	26	38	61	63	38	40	57	36	26	26	21	28	27	25	54	21	11	9	14	10	9	19	70	59	33
	12	77	87	76	45	45	32	51	34	37	44	53	41	25	14	45	36	36	57	35	32	54	92	102	98	52
Q	13	56	49	25	17	35	42	31	30	29	25	29	29	17	37	98	58	67	29	13	15	21	27	35	35	35
	14	32	25	31	29	61	62	52	58	59	56	60	55	47	43	58	38	24	17	19	12	17	17	33	73	41
	15	115	109	101	81	103	111	48	41	39	25	21	27	29	21	21	19	18	25	26	19	19	29	64	87	50
D	16	94	71	131	113	92	128	154	109	152	165	183	202	200	108	167	184	209	240	178	135	114	112	125	95	144
D	17	144	131	117	147	142	167	151	61	83	78	70	35	46	21	18	30	47	21	21	35	32	23	21	17	69
	18	17	38	43	40	38	62	43	105	62	36	45	71	31	30	19	27	56	40	34	15	13	14	14	15	38
	19	23	23	25	27	20	20	14	20	24	21	50	48	22	25	34	56	10	7	6	16	25	39	103	73	30
	20	52	65	48	32	25	14	14	23	31	52	47	49	52	106	89	37	28	20	17	81	70	74	50	33	46
	21	42	32	31	54	42	39	36	26	31	43	49	37	36	99	63	31	17	12	16	20	18	29	25	32	36
	22	22	34	36	31	24	30	29	20	19	31	30	37	37	26	19	16	1	10	9	15	21	23	27	24	24
	23	21	18	20	36	42	36	34	39	70	43	33	44	32	36	20	18	13	14	13	12	11	19	28	19	28
	24	18	31	18	24	17	18	53	26	76	75	83	131	79	80	22	20	54	15	19	27	43	50	73	59	46
Q	25	20	27	31	24	29	37	42	27	27	17	19	17	15	21	20	11	11	7	8	14	13	11	10	12	20
Q	26	18	15	19	34	26	25	22	25	32	39	39	24	46	17	9	10	9	6	10	8	15	19	12	12	20
	27	12	20	25	12	35	43	20	33	41	74	55	60	75	57	66	50	56	27	40	84	138	116	52	44	51
	28	62	55	28	22	25	27	26	28	28	32	40	42	32	25	32	30	32	32	48	70	36	27	28	44	35
	29	41	25	29	30	49	42	72	72	104	62	24	22	23	25	25	20	20	20	24	26	27	23	25	37	36
D	30	55	31	16	30	53	81	151	97	63	42	71	45	41	41	32	37	60	35	116	91	94	109	65	61	63
	31	70	115	88	50	42	35	30	30	29	27	29	28	21	23	23	20	20	20	27	23	30	33	26	24	36
	MEAN	48	49	49	45	53	51	53	45	54	53	50	53	44	46	46	40	42	39	38	40	37	39	43	44	46
5Q	MEAN	27	29	30	31	30	33	35	28	29	28	30	28	24	24	40	23	24	17	16	14	15	19	28	26	26
5D	MEAN	84	77	95	94	122	128	133	88	112	123	99	86	80	68	72	95	100	98	87	79	63	66	64	63	90

FEBRUARY 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	26	42	38	37	74	51	31	18	13	12	12	10	14	22	19	16	13	15	16	23	38	58	102	129	35
D	2	148	70	60	62	135	103	125	94	85	61	81	81	86	75	34	40	50	82	110	135	82	107	114	128	90
	3	106	92	79	36	65	33	20	30	22	22	42	42	31	19	17	17	10	8	11	9	9	17	21	16	32
D	4	13	31	19	25	20	23	37	58	85	87	102	77	94	90	132	97	93	129	100	64	77	64	87	80	70
	5	65	50	53	74	89	79	53	38	39	33	27	34	34	62	85	51	34	20	21	22	32	41	44	41	47
	6	61	55	41	37	53	50	31	45	55	74	24	15	11	9	12	12	11	13	16	4	9	12	10	10	28
Q	7	11	11	12	11	9	11	10	14	15	20	18	18	7	10	12	6	4	3	7	9	7	12	15	8	11
Q	8	13	11	10	10	15	19	16	19	20	21	18	12	15	21	18	24	21	32	13	14	17	18	16	16	17
	9	15	14	13	9	14	33	31	31	24	24	17	17	25	27	49	69	48	35	29	27	29	22	20	19	27
	10	20	17	15	19	22	18	28	30	33	15	12	11	10	14	32	69	100	141	185	36	42	31	34	31	40
Q	11	20	17	14	14	18	28	27	31	32	24	15	9	10	9	10	25	30	20	12	12	10	19	18	16	18
	12	15	23	17	15	15	12	12	13	11	17	14	13	12	13	11	14	16	19	21	18	16	13	12	12	15
	13	12	14	15	22	28	15	30	28	23	21	16	20	39	42	66	32	28	17	24	18	16	16	18	18	24
D	14	22	26	24	31	66	88	37	14	6	32	69	125	39	42	40	48	73	56	33	29	30	30	25	25	42
	15	28	32	28	14	28	40	44	105	68	66	92	70	33	23	22	35	25	31	34	34	30	36	36	34	41
	16	32	29	24	26	22	23	17	42	34	31	36	39	38	46	116	60	26	18	25	15	12	29	37	36	34
	17	26	18	17	26	23	23	15	17	22	33	61	42	32	16	16	30	42	116	154	186	130	75	48	63	51
	18	39	33	46	38	62	31	40	50	83	57	51	43	42	69	88	79	32	21	32	34	30	31	32	29	46
	19	21	26	19	13	15	24	17	32	25	21	22	35	20	16	16	23	16	12	22	25	20	22	17	26	21
	20	24	25	19	19	18	18	16	14	13	21	27	23	28	23	36	52	25	17	15	13	9	13	17	15	21
Q	21	19	12	11	14	15	20	11	24	22	19	15	11	12	12	11	9	9	8	8	11	16	13	10	16	14
Q	22	14	14	10	14	15	10	15	12	11	12	16	12	14	19	15	12	11	13	11	17	16	11	11	13	13
	23	13	15	13	17	16	15	15	15	16	17	17	16	17	16	16	18	16	16	15	16	27	27	21	18	17
D	24	17	18	15	18	18	18	15	32	46	20	14	14	19	29	44	53	253	217	162	69	75	24	21	17	51
	25	19	18	18	17	12	19	23	19	19	16	13	12	15	12	15	18	16	22	21	20	15	15	12	9	16
	26	12	12	24	25	40	84	89	151	96	136	266	272	237	250	216	155	38	17	5	2	0	10	3	7	89
	27	6	2	0	2	5	4	41	77	68	89	82	123	54	79	51	25	36	51	15	36	74	106	139	148	55
D	28	66	59	106	66	49	68	59	116	203	101	104	207	260	175	84	67	107	137	153	83	35	70	52	107	106
	MEAN	32	28	27	25	34	34	32	42	42	39	46	50	45	44	46	41	42	46	45	35	32	34	35	39	38
5Q	MEAN	15	13	11	13	14	18	16	20	20	19	16	12	12	14	13	15	15	15	10	13	13	15	14	14	15
5D	MEAN	53	41	45	40	58	60	55	63	85	60	74	101	100	82	67	61	115	124	112	76	60	59	60	71	72

MARCH 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	99	119	90	70	78	162	217	247	217	210	149	200	154	201	344	244	96	74	37	43	62	80	73	117	141
	2	94	47	95	111	74	105	82	94	89	99	138	112	62	34	34	44	61	44	39	27	38	30	37	69	69
	3	41	41	32	22	24	29	50	34	102	58	56	29	19	52	25	43	58	145	105	114	108	179	95	60	63
	4	72	57	63	103	57	82	164	57	97	118	107	197	142	103	210	189	227	220	293	203	208	133	105	167	141
	5	82	78	61	52	47	40	50	79	107	65	35	21	20	22	52	60	73	197	262	243	184	165	109	158	94
D	6	56	62	113	89	42	30	29	41	89	85	152	97	59	46	53	79	205	272	253	228	261	220	78	137	116
D	7	147	90	157	84	88	61	53	93	159	143	149	137	187	120	230	360	131	281	275	198	124	101	139	190	154
D	8	211	205	229	298	436	437	264	308	295	232	189	300	217	372	138	118	377	525	415	-426	-23	121	46	106	225
D	9	140	115	224	128	82	96	131	124	131	129	104	98	43	81	99	96	206	210	119	99	66	30	78	46	111
	10	50	33	43	0	1	1	10	24	52	43	38	21	4	-2	-6	-10	4	41	57	74	82	24	7	1	25
	11	-6	-7	-7	-2	4	8	3	4	4	3	0	0	-2	4	15	0	0	5	13	26	38	49	68	51	11
	12	12	6	33	17	33	22	48	45	51	91	148	153	77	27	6	0	3	8	15	15	17	14	18	15	36
	13	13	9	11	8	9	11	29	59	29	55	73	68	37	60	81	55	14	34	25	113	94	43	16	13	40
	14	19	17	20	8	17	15	12	14	43	15	5	4	3	4	1	5	14	9	8	12	15	15	14	20	13
	15	24	39	40	41	69	103	69	47	31	31	55	27	30	14	42	42	28	33	28	36	27	13	11	5	37
Q	16	8	14	13	9	15	14	10	11	26	16	34	14	28	30	26	7	9	10	15	18	14	18	19	14	16
	17	16	16	16	12	14	17	20	25	23	17	23	20	28	53	66	36	32	59	96	70	36	37	38	25	33
	18	18	14	13	19	11	12	8	9	12	39	71	105	98	49	20	38	34	46	47	31	66	85	95	58	42
	19	32	18	14	10	12	17	21	51	48	38	23	22	33	26	16	10	20	19	16	26	55	56	50	23	27
	20	23	19	13	12	13	9	8	10	14	22	32	64	41	29	31	17	15	33	42	61	31	32	38	40	27
Q	21	58	94	83	82	47	30	22	11	23	30	18	17	15	24	33	55	24	38	37	45	43	14	16	16	36
Q	22	17	21	22	16	14	15	11	29	26	35	51	82	77	48	31	12	14	19	19	20	23	20	20	18	28
	23	20	29	24	25	23	24	23	44	53	78	35	33	31	27	29	29	22	20	52	30	29	26	24	24	31
Q	24	19	18	18	18	21	19	19	21	23	26	23	24	24	23	29	26	23	23	20	20	25	23	21	25	22
Q	25	26	22	25	31	19	14	26	59	44	24	16	22	24	25	22	23	21	23	23	22	20	22	20	22	25
	26	20	19	28	31	29	34	18	34	48	22	20	37	30	22	31	35	28	48	32	35	45	34	31	26	31
	27	21	18	14	12	11	15	22	46	78	103	147	226	129	63	31	34	41	86	155	177	129	174	283	167	91
	28	94	55	53	104	128	148	198	127	138	202	236	293	163	124	174	230	225	125	100	130	139	148	179	105	151
	29	70	96	100	215	170	124	113	90	82	79	100	98	138	144	127	166	161	195	239	150	141	112	106	138	131
	30	210	77	44	19	18	144	92	97	101	108	163	249	255	134	46	81	177	70	80	68	141	84	70	34	107
D	31	24	50	41	96	53	161	234	246	257	188	176	335	168	140	426	331	214	145	107	101	87	62	149	91	162
	MEAN	56	48	56	56	54	64	66	70	80	78	83	100	75	68	79	79	82	99	98	65	75	70	66	64	72
5Q	MEAN	26	34	32	31	23	18	18	26	28	26	28	32	34	30	28	25	18	23	23	25	25	19	19	19	25
5D	MEAN	116	104	153	139	140	157	142	162	186	155	154	193	135	152	189	197	227	287	234	40	103	107	98	114	154

APRIL 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	42	25	7	0	-4	1	-2	-6	-5	-7	-5	1	12	4	4	0	2	5	1	1	2	4	29	18	5
	2	10	7	5	3	1	-1	10	14	19	10	15	13	36	56	66	40	16	19	47	19	21	36	29	22	21
	3	31	41	55	72	158	138	216	163	123	108	182	94	120	129	47	58	80	49	49	40	27	26	28	36	86
	4	17	29	18	19	21	19	42	69	91	77	60	107	70	42	34	26	23	36	20	22	16	16	23	19	38
	5	22	21	16	13	13	17	22	40	63	108	128	133	81	54	32	6	47	76	47	51	50	46	45	51	49
D	6	47	46	44	137	124	134	222	153	130	161	191	314	208	86	119	138	150	88	59	61	52	94	63	50	120
	7	40	57	39	42	37	71	90	93	172	64	20	54	28	27	12	10	15	23	31	32	27	34	34	40	46
	8	89	99	39	52	90	37	20	55	100	158	105	62	30	81	43	46	24	31	27	27	29	44	71	72	60
	9	44	35	37	49	81	45	124	101	294	153	124	191	184	250	69	36	35	36	31	36	36	109	85	67	94
Q	10	51	33	36	23	16	15	19	21	28	27	22	20	20	30	31	26	35	31	30	27	27	49	74	93	33
	11	98	42	72	70	54	42	74	91	140	158	118	138	75	63	60	17	33	47	72	68	38	29	24	23	69
	12	23	24	33	14	45	66	129	155	103	95	91	51	37	52	93	111	95	129	74	60	48	44	36	40	69
Q	13	28	24	18	12	15	12	20	36	29	34	28	89	69	67	54	29	31	45	22	18	22	29	32	33	33
Q	14	34	38	31	23	16	10	13	23	23	24	20	44	47	21	26	21	18	26	27	18	23	30	46	32	26
Q	15	39	30	31	25	22	16	17	34	46	46	64	33	27	40	39	63	107	207	232	168	153	98	108	145	75
	16	69	106	113	152	130	127	132	127	91	37	28	20	16	15	16	24	27	35	55	176	343	391	353	206	116
D	17	113	179	150	183	174	137	85	46	140	168	132	87	75	173	183	93	85	161	215	167	256	87	89	58	135
	18	61	49	29	16	14	12	11	18	112	156	190	201	256	267	104	51	167	71	96	87	68	136	198	242	109
	19	130	109	119	160	232	214	180	152	234	287	257	170	165	67	42	63	70	87	93	71	61	60	31	37	129
D	20	25	28	43	135	157	110	51	27	32	49	103	114	189	195	85	140	259	413	178	104	115	83	135	108	120
D	21	52	45	41	70	255	251	259	242	240	144	157	343	368	259	265	147	218	118	104	115	13	82	104	171	169
D	22	253	136	115	166	254	324	234	105	129	98	75	68	85	87	79	35	43	38	36	24	22	22	21	36	104
	23	58	39	62	63	93	126	149	141	99	170	197	257	167	107	126	169	238	249	224	239	230	199	182	179	157
	24	177	141	135	176	185	177	199	192	173	158	209	253	169	193	161	158	148	221	251	180	157	80	45	82	168
	25	140	134	83	106	111	136	226	223	197	252	142	165	186	112	89	113	51	26	74	179	149	134	188	87	138
	26	151	169	109	66	43	43	20	19	28	24	35	60	119	126	112	38	58	121	179	217	261	263	241	190	112
	27	188	117	55	70	93	166	224	82	23	28	79	104	84	100	83	54	52	76	111	89	71	49	43	48	87
Q	28	73	54	78	82	98	92	93	100	104	85	108	104	94	56	32	23	22	31	46	41	49	65	52	44	68
	29	43	63	50	69	73	85	85	60	116	110	110	119	144	151	86	77	131	189	261	212	166	158	134	88	116
	30	85	84	161	177	219	159	98	156	224	197	270	174	79	96	190	351	303	190	131	85	101	103	171	170	166
	MEAN	74	67	61	75	94	93	102	91	110	106	109	119	108	100	79	72	86	96	94	88	88	87	90	83	90
5Q	MEAN	45	36	39	33	33	29	32	43	46	43	48	58	51	43	36	32	43	68	71	54	55	54	62	69	47
5D	MEAN	98	87	79	138	193	191	170	115	134	124	132	185	185	160	146	111	151	164	118	94	92	74	82	85	130

MAY 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	104	68	42	52	54	170	139	69	44	24	33	43	90	137	86	82	56	41	99	189	158	276	128	120	96
	2	128	58	41	74	125	35	89	102	84	65	49	40	63	43	31	34	83	70	149	109	49	65	80	77	73
	3	49	43	28	17	14	7	4	29	22	34	65	147	128	94	110	53	89	104	105	75	157	164	184	99	76
	4	55	46	29	24	27	15	35	63	93	142	116	69	60	56	70	68	111	159	92	62	72	55	48	68	68
	5	57	56	47	42	37	23	38	47	51	180	317	298	115	81	91	90	131	99	106	79	41	68	79	151	97
	6	44	25	15	11	12	10	9	21	33	59	55	79	70	63	50	41	113	113	78	62	55	42	40	38	47
	7	31	29	26	53	21	17	18	19	28	40	105	91	65	60	30	19	23	71	69	82	69	44	34	25	45
Q	8	27	22	17	17	22	19	19	24	36	50	36	38	36	44	36	34	86	72	97	131	103	82	85	99	51
Q	9	55	58	57	44	79	60	71	88	69	41	47	65	44	61	54	47	58	31	42	63	55	35	28	26	53
Q	10	34	33	25	28	46	57	48	55	89	85	71	45	38	26	23	12	16	14	23	26	27	27	27	28	38
Q	11	25	20	15	13	12	18	25	34	35	47	41	50	43	26	26	25	18	23	36	48	58	84	97	179	42
D	12	96	127	46	139	89	37	35	90	79	140	243	230	211	162	109	148	267	350	192	146	296	435	259	159	170
	13	85	76	131	192	259	174	104	29	27	37	30	42	52	62	83	32	33	21	38	59	54	68	93	131	80
	14	105	66	61	89	177	179	213	199	202	105	55	33	51	59	47	86	193	306	351	367	351	207	196	179	162
	15	157	166	60	28	103	122	65	110	189	326	203	80	54	30	29	37	30	86	65	64	83	57	73	55	95
	16	60	66	67	67	73	111	93	82	151	62	52	64	74	85	93	79	92	118	128	123	161	124	101	104	93
	17	72	78	82	46	263	214	144	56	39	47	95	174	160	140	62	70	84	77	68	63	47	70	90	125	99
	18	99	82	82	22	32	26	36	56	43	35	34	41	83	89	88	72	72	60	57	49	43	36	32	32	54
	19	33	38	50	44	44	28	133	115	182	234	236	194	107	90	70	58	65	101	113	141	135	130	102	82	105
D	20	72	64	45	141	218	257	159	85	120	195	177	193	189	201	194	200	170	181	208	154	197	142	127	191	162
	21	146	72	52	32	11	15	9	52	77	182	172	192	152	171	121	110	81	78	136	117	141	46	57	85	96
	22	83	133	106	69	50	84	138	166	75	73	99	163	193	152	176	124	120	247	257	177	140	106	81	59	128
	23	46	25	42	41	26	15	15	93	119	84	141	139	86	54	33	26	36	76	129	124	162	159	214	244	89
	24	231	167	80	63	35	20	13	37	78	103	157	193	97	117	119	73	36	81	63	62	84	85	103	112	92
	25	93	175	102	171	134	169	200	53	33	25	80	154	144	125	156	90	116	104	87	75	83	113	157	98	114
Q	26	43	36	21	13	7	11	13	15	19	23	21	20	24	26	34	36	33	34	55	67	55	83	104	58	35
D	27	98	55	50	43	42	65	201	192	212	169	95	141	196	209	130	163	238	323	364	244	343	386	204	131	179
D	28	222	256	77	76	69	51	35	36	103	293	186	309	395	673	646	417	360	169	115	154	143	115	105	167	216
D	29	133	106	54	48	163	211	246	254	214	172	132	76	82	57	36	43	55	68	59	149	210	115	61	89	118
	30	131	44	43	76	84	91	30	110	209	246	305	118	50	47	35	139	128	272	141	122	51	48	43	40	108
	31	27	26	27	27	15	3	56	49	94	153	116	74	228	132	151	162	193	94	44	35	30	32	36	26	76
	MEAN	89	78	53	58	76	75	78	78	92	112	115	116	109	109	97	86	103	118	115	110	118	113	99	99	95
5Q	MEAN	37	34	27	23	33	33	35	43	50	49	43	44	37	37	35	31	42	35	51	67	60	62	68	78	44
5D	MEAN	124	122	54	89	116	124	135	131	146	194	167	190	215	260	223	194	218	218	188	169	238	239	151	147	169

JUNE 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	39	62	93	319	204	43	39	89	172	183	132	163	188	263	325	307	309	336	233	174	113	126	114	81	171
	2	51	40	119	103	93	61	36	29	32	43	69	67	79	64	80	101	119	99	111	103	112	84	72	102	78
	3	71	94	57	80	218	189	127	124	243	231	216	165	135	86	180	145	99	118	172	192	134	134	91	170	145
	4	117	83	89	61	64	11	58	96	175	197	188	90	112	118	133	152	124	95	68	92	81	70	148	141	107
	5	22	17	55	36	53	88	142	158	145	124	146	138	40	24	23	20	22	54	31	30	31	26	18	12	61
Q	6	10	12	16	25	15	12	19	57	41	114	99	53	43	52	31	16	14	24	32	40	36	35	24	12	35
	7	13	13	16	22	13	14	16	34	45	65	52	52	43	44	58	73	74	94	111	194	271	233	249	226	84
	8	236	195	134	68	155	236	216	80	44	48	137	99	111	40	27	24	44	77	90	101	80	101	124	94	107
	9	51	30	50	34	28	21	21	34	33	23	16	15	18	21	33	33	56	60	121	217	157	157	145	103	62
	10	100	68	51	41	36	34	23	95	122	79	130	59	23	72	69	74	138	295	248	223	182	95	54	53	99
Q	11	79	77	70	54	26	22	27	21	27	30	29	37	28	24	22	61	71	155	129	89	47	20	20	38	50
Q	12	66	84	68	61	48	21	12	28	57	99	84	128	88	119	77	47	53	86	118	151	68	89	105	91	77
	13	109	93	72	66	48	34	97	168	186	244	326	348	278	443	194	150	71	128	157	114	157	128	96	97	159
	14	182	153	131	174	68	37	16	11	11	26	33	49	45	42	32	33	27	36	119	237	149	80	74	150	80
	15	172	139	147	67	44	101	90	216	210	231	305	276	165	123	123	158	177	191	148	166	196	182	161	195	166
	16	193	135	103	54	152	129	21	18	29	30	34	35	85	84	97	58	59	18	38	74	110	97	106	107	78
	17	49	27	24	23	22	19	14	32	54	61	75	89	177	128	98	47	139	243	315	339	312	221	169	252	122
D	18	196	64	89	47	30	50	37	186	235	293	296	267	497	397	427	310	306	261	247	281	320	296	243	282	236
	19	221	127	91	42	35	23	50	42	68	153	101	41	33	52	53	52	63	105	140	140	123	233	253	268	105
D	20	218	154	153	207	214	270	226	215	220	285	314	338	227	259	310	386	418	333	289	386	394	323	240	153	272
D	21	140	90	141	133	105	154	214	230	228	169	246	263	152	173	142	196	228	270	154	33	32	84	68	51	154
Q	22	83	68	46	29	15	7	4	2	11	23	63	84	81	52	37	46	38	33	54	121	142	125	93	78	56
Q	23	104	66	43	43	47	34	21	12	13	12	16	53	53	50	41	16	24	33	30	36	33	60	29	30	37
	24	63	90	44	24	28	28	19	16	18	21	22	25	25	40	86	77	55	55	103	180	212	128	165	197	72
	25	181	102	46	34	28	20	42	67	127	202	210	177	144	138	112	89	58	75	54	43	38	112	124	106	97
	26	50	40	45	134	300	318	347	341	263	153	155	94	70	49	90	296	459	359	357	348	274	168	103	58	203
D	27	65	74	92	173	182	111	141	257	466	324	282	220	447	325	165	122	111	150	91	41	96	76	57	37	171
	28	48	95	12	19	49	96	46	32	42	190	197	166	164	123	101	82	27	32	33	35	67	61	79	59	77
	29	25	6	9	8	21	28	38	68	15	32	34	36	32	47	26	97	208	322	315	323	280	200	121	82	99
	30	53	37	23	19	24	22	30	163	223	271	249	129	56	25	17	28	46	59	65	49	44	33	27	45	72
	MEAN	100	78	71	73	79	74	73	97	119	132	142	125	121	116	107	110	121	140	139	152	143	128	117	117	111
5Q	MEAN	68	61	49	42	30	19	17	24	30	56	58	71	59	59	42	37	40	66	73	87	65	66	54	50	51
5D	MEAN	132	89	114	176	147	126	131	195	264	251	254	250	302	283	274	264	274	270	203	183	191	181	144	121	201

JULY 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	32	111	79	74	114	87	146	184	124	113	92	62	126	166	237	94	88	62	84	97	103	50	46	59	101
	2	42	35	40	25	46	63	235	179	212	134	246	323	91	58	40	41	71	64	41	22	23	43	26	74	91
	3	136	109	123	57	143	246	232	321	259	220	344	190	134	82	36	40	29	24	31	34	113	194	225	96	142
	4	188	200	112	51	137	285	232	196	262	173	110	74	104	43	26	34	37	37	34	27	28	21	18	19	102
	5	39	40	77	175	259	196	185	182	191	77	53	43	20	67	81	82	142	230	115	56	38	52	101	175	112
	6	158	186	142	91	182	121	149	223	209	212	161	167	164	169	89	58	54	50	33	26	25	24	28	21	114
Q	7	23	24	21	13	4	4	15	25	47	78	61	15	47	38	25	27	33	38	45	79	151	133	152	220	55
	8	160	135	154	271	329	326	319	183	99	54	40	49	127	135	123	115	170	214	258	267	263	275	251	241	190
D	9	295	207	119	436	346	309	278	144	221	296	282	237	270	590	662	501	262	203	287	310	325	354	223	264	309
D	10	214	187	97	60	37	33	55	35	16	21	61	119	178	145	136	128	188	248	150	207	294	210	195	129	131
	11	64	45	67	33	22	45	109	101	98	129	119	106	118	116	93	74	130	174	105	144	158	133	125	198	104
	12	179	168	222	182	130	60	108	128	149	204	127	106	123	107	162	156	102	69	192	170	107	93	146	152	139
	13	158	129	136	158	102	120	54	31	15	13	65	81	80	52	37	80	126	227	152	104	143	114	110	55	98
	14	65	88	59	103	51	20	24	63	152	75	82	83	51	64	55	59	25	64	154	157	91	68	84	119	77
Q	15	110	46	49	47	40	16	18	37	82	146	137	102	69	115	84	79	85	88	71	55	31	32	60	68	69
	16	100	104	78	93	40	42	17	11	14	20	22	93	143	88	62	24	54	103	122	84	59	20	20	22	60
	17	14	45	63	32	13	15	19	26	19	19	24	35	65	88	92	88	130	148	121	118	122	217	321	214	85
Q	18	75	54	58	61	136	77	24	15	19	55	79	66	65	56	42	42	21	32	41	73	81	100	102	46	59
Q	19	37	30	47	67	89	60	67	41	43	92	174	134	38	23	32	50	88	149	92	50	80	148	157	215	83
	20	177	87	49	44	31	59	70	51	50	46	32	32	35	42	35	29	31	46	75	115	170	118	177	239	77
D	21	206	188	99	219	144	51	59	45	147	138	242	242	205	233	423	165	90	124	254	255	164	177	173	196	177
	22	174	106	46	77	49	116	102	170	226	176	73	77	78	44	54	57	153	216	150	106	231	245	248	181	131
	23	195	111	66	52	48	101	148	124	177	125	116	129	120	68	70	74	52	149	220	153	77	32	37	35	103
	24	78	146	226	251	262	229	213	166	42	25	26	85	168	171	208	259	178	240	275	172	89	110	190	225	168
D	25	446	246	443	561	185	307	192	81	173	262	332	407	208	286	126	69	100	74	78	64	131	291	139	183	224
	26	189	278	239	195	110	73	227	92	177	165	211	233	182	136	73	37	26	32	44	51	79	148	241	72	138
	27	38	25	42	26	162	157	111	14	35	168	141	102	49	120	154	280	176	142	133	181	155	59	85	121	112
Q	28	66	42	17	12	5	-1	6	17	55	54	32	30	24	22	16	27	26	35	24	37	43	25	81	75	32
D	29	140	83	69	161	267	200	298	330	318	163	338	292	358	411	190	353	300	180	283	187	86	66	33	30	214
	30	28	21	20	28	85	139	44	35	29	13	38	86	87	63	82	48	33	36	61	91	85	118	202	171	68
	31	155	137	76	148	176	142	96	145	253	215	176	191	116	91	100	155	209	270	280	162	111	154	228	164	165
	MEAN	128	110	101	123	121	119	124	110	126	119	130	129	118	125	118	107	104	122	129	118	118	123	136	132	120
5Q	MEAN	62	39	38	40	55	31	26	27	49	85	97	69	49	51	40	45	51	68	55	59	77	88	110	125	60
5D	MEAN	260	182	165	287	196	180	176	127	175	176	251	259	244	333	307	243	188	166	210	205	200	220	153	160	211

AUGUST 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	118	102	76	25	29	41	56	59	77	67	81	52	26	18	15	19	48	29	35	32	37	53	40	69	50
	2	66	70	100	152	124	42	14	29	141	105	60	39	54	50	32	29	33	27	29	29	27	25	25	33	56
Q	3	40	30	25	34	22	25	21	19	26	18	22	44	26	40	35	26	24	29	27	30	26	20	19	20	27
Q	4	17	14	27	30	27	13	24	47	71	77	60	47	53	47	64	50	34	48	60	90	95	60	46	36	47
Q	5	32	26	60	61	72	65	35	15	18	17	22	25	24	31	34	31	22	25	27	29	31	33	33	35	33
	6	30	25	21	19	19	18	24	35	75	129	67	36	25	31	29	39	59	58	53	73	102	105	148	238	61
	7	174	133	45	34	28	27	50	83	72	48	44	42	38	47	67	77	65	33	73	87	104	259	149	177	82
D	8	123	90	207	149	58	50	154	158	215	113	174	254	105	51	85	53	50	114	177	172	83	135	178	195	131
D	9	206	194	196	115	148	123	102	117	64	39	187	143	103	93	30	35	52	144	147	92	58	57	35	28	105
	10	25	53	41	48	39	38	73	55	126	107	86	143	91	73	42	47	45	43	59	44	39	78	62	64	63
	11	74	40	49	57	66	34	63	80	139	195	79	90	55	92	85	70	38	41	60	68	62	38	141	214	80
	12	263	149	122	172	171	107	41	103	116	65	37	60	45	33	19	14	17	39	71	144	226	221	110	52	100
	13	39	30	44	15	20	129	89	78	79	127	137	80	81	98	88	71	67	79	196	206	223	241	183	80	103
	14	61	77	78	92	95	31	26	23	37	41	20	29	15	14	14	27	47	34	42	25	28	53	67	94	45
	15	91	102	92	97	60	66	48	57	70	120	125	141	109	58	27	18	17	27	46	82	52	55	129	209	79
	16	150	147	99	71	82	165	94	133	132	123	142	170	195	148	101	79	85	106	146	107	64	85	379	338	139
D	17	299	342	358	391	208	547	264	465	607	361	214	203	488	488	398	235	242	305	372	328	162	126	159	71	318
D	18	113	219	165	155	125	131	167	188	187	183	160	217	336	305	359	308	321	410	354	179	131	103	127	75	209
	19	139	148	137	102	83	78	48	30	91	148	157	89	119	111	107	124	122	103	60	48	31	30	24	18	89
	20	14	7	6	6	7	4	11	98	91	84	51	86	66	57	20	21	31	23	20	43	29	47	48	56	39
	21	62	50	31	43	46	33	20	35	10	47	93	93	62	40	29	56	60	36	32	39	34	47	47	29	45
	22	13	10	11	15	41	35	20	36	68	97	90	130	45	90	103	128	181	146	166	95	30	27	44	63	70
	23	79	51	48	93	92	93	129	150	229	233	162	104	99	73	35	35	62	82	74	60	46	72	34	21	90
Q	24	28	14	30	17	30	20	11	6	8	14	22	36	62	67	40	35	39	52	50	51	44	63	45	39	34
	25	40	34	53	46	59	86	154	224	216	136	195	162	193	182	186	166	137	113	65	96	152	119	104	76	125
D	26	93	60	64	113	206	212	216	226	219	247	250	189	353	222	230	294	238	154	127	80	119	134	82	136	178
	27	110	75	106	40	162	200	138	68	47	48	40	66	97	107	167	261	236	271	200	109	140	183	185	65	130
	28	45	33	18	10	44	123	24	22	58	26	15	14	32	46	114	118	179	147	157	210	203	173	189	78	87
	29	56	31	120	202	232	192	140	138	187	135	74	112	115	70	61	126	79	22	34	42	47	29	35	53	97
	30	79	76	69	59	62	23	44	99	99	70	65	69	64	37	40	45	29	53	49	54	56	41	38	35	56
	31	23	20	13	22	50	119	151	185	189	185	141	86	110	102	98	149	234	387	333	221	179	71	65	31	132
	MEAN	87	79	81	80	81	93	79	99	121	110	99	98	106	94	89	90	93	103	108	96	86	90	96	88	94
5Q	MEAN	47	37	44	33	36	33	29	29	40	39	41	41	38	41	38	32	33	37	40	46	47	46	37	40	38
5D	MEAN	167	181	198	185	149	213	181	231	258	189	197	201	277	232	220	185	181	225	235	170	111	111	116	101	188

SEPTEMBER 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	37	34	22	17	30	27	107	188	218	207	292	228	97	80	81	179	189	197	270	239	183	251	133	107	142
	2	93	111	83	54	45	87	87	54	39	139	217	172	95	107	99	99	125	187	128	98	152	71	37	50	101
	3	40	31	49	126	91	51	43	112	133	164	208	244	173	96	88	156	94	75	78	94	91	101	203	122	111
	4	124	97	61	45	36	35	104	72	62	35	49	112	79	29	47	111	125	67	79	94	92	81	53	68	73
	5	57	39	49	54	53	49	42	43	45	43	41	36	45	57	55	139	149	94	110	87	59	103	130	68	69
Q	6	60	35	24	53	45	30	30	23	40	47	23	23	27	36	64	63	44	73	124	79	71	65	75	35	50
	7	40	44	43	22	18	22	17	46	51	32	52	49	64	65	46	29	34	28	38	74	117	118	78	53	49
	8	39	29	26	33	51	41	104	67	101	70	65	42	26	54	112	169	157	247	219	140	70	39	41	35	82
Q	9	30	32	31	26	77	84	65	58	65	39	29	27	20	21	20	46	45	33	52	88	136	143	171	170	63
	10	112	131	111	133	91	86	35	37	43	21	21	23	32	41	27	17	23	16	13	14	16	18	21	24	46
Q	11	25	25	19	13	9	11	17	20	23	22	22	21	23	22	19	18	16	20	19	23	24	26	29	27	21
Q	12	27	32	43	40	44	51	58	120	95	37	27	18	18	19	18	18	31	29	27	27	32	35	30	28	38
D	13	28	26	38	47	83	114	185	214	265	269	319	321	187	215	105	59	218	130	71	186	244	295	168	83	161
D	14	78	136	87	36	48	49	57	65	91	110	99	279	185	189	286	253	174	117	102	138	173	131	73	133	129
	15	75	87	186	189	221	127	134	37	38	38	92	100	105	47	33	36	24	62	85	77	60	94	57	40	85
	16	43	40	44	51	90	112	126	73	127	71	65	86	50	74	27	15	21	41	61	61	63	42	40	27	60
	17	27	38	51	58	72	121	133	142	89	62	30	23	41	32	47	42	67	100	76	48	38	75	63	52	64
	18	43	55	55	106	92	59	110	113	107	106	62	29	27	54	73	64	39	99	78	70	46	84	85	55	71
	19	39	40	38	70	98	207	170	93	123	152	206	117	93	133	155	104	153	170	223	249	276	170	113	48	135
	20	72	64	44	29	55	123	83	120	141	147	141	106	175	116	154	143	183	136	90	112	98	70	95	117	109
D	21	168	140	116	116	149	169	166	147	215	104	60	128	237	199	223	170	142	178	185	135	74	110	72	61	144
	22	51	54	92	52	108	67	36	32	65	128	129	67	68	37	47	59	62	115	114	55	35	38	56	56	68
	23	56	98	45	33	20	27	74	84	139	137	158	115	103	86	61	40	39	43	28	37	44	61	52	30	67
	24	70	68	63	62	32	111	164	115	165	110	42	17	22	53	45	27	32	43	70	113	53	61	60	43	68
	25	45	40	34	42	122	92	110	110	125	100	45	19	20	31	51	57	38	57	119	53	43	34	30	31	60
	26	30	30	38	52	61	42	78	41	47	62	49	52	51	33	28	41	40	36	37	38	34	52	66	86	47
D	27	93	135	134	139	93	103	116	188	148	80	130	176	101	75	180	179	324	141	213	122	45	107	183	61	136
	28	128	100	68	38	27	27	21	21	22	29	42	53	45	48	52	33	26	25	21	25	28	32	28	32	40
Q	29	32	34	31	38	41	48	48	61	46	41	24	34	25	23	29	27	29	23	26	26	28	48	65	38	36
	30	39	40	37	72	104	80	64	34	46	42	30	47	56	34	38	34	41	50	38	24	37	82	50	53	49
	MEAN	60	62	59	62	70	75	86	84	97	88	92	92	76	70	77	81	89	88	93	88	82	88	79	61	79
5Q	MEAN	35	32	30	34	43	45	44	56	54	37	25	25	23	24	30	34	33	36	50	49	58	63	74	60	42
5D	MEAN	81	94	79	71	81	92	126	160	187	154	180	226	161	152	175	168	209	153	168	164	144	179	126	89	142

OCTOBER 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	47	58	64	42	52	70	55	54	36	29	47	27	26	30	62	57	29	45	118	181	143	123	102	184	70
	2	162	159	89	57	25	35	50	41	46	62	57	27	52	30	39	30	24	64	97	95	71	48	86	55	63
	3	114	103	82	136	63	55	56	75	55	37	37	39	31	32	39	75	92	88	142	158	110	124	132	98	82
D	4	137	105	96	212	270	133	116	137	98	95	106	114	100	84	67	46	60	109	78	60	61	54	63	52	102
	5	61	66	76	76	53	66	71	105	51	50	30	32	45	28	32	25	30	37	31	77	76	55	50	26	52
	6	31	52	48	65	64	59	53	63	33	28	57	73	47	53	29	16	13	16	42	44	58	70	82	29	47
Q	7	19	13	15	30	19	18	33	35	26	34	29	20	33	25	24	12	15	12	17	17	20	25	28	31	23
Q	8	30	26	25	46	42	32	19	17	22	25	20	18	14	18	14	9	12	14	31	19	21	16	20	33	23
Q	9	36	31	18	18	23	17	20	19	33	41	37	36	34	30	22	15	14	14	26	16	17	19	14	11	23
	10	14	14	19	21	29	34	72	103	109	50	36	29	23	28	33	37	49	101	182	224	197	221	209	184	84
	11	200	144	103	136	186	237	150	162	207	267	175	86	129	112	154	225	168	167	163	193	97	58	124	127	157
	12	65	113	182	176	128	149	108	86	116	155	167	139	112	76	23	20	10	16	19	24	19	18	15	21	82
	13	12	20	11	12	10	31	47	44	49	21	27	34	94	64	30	89	51	81	55	65	50	49	49	39	43
	14	48	13	22	33	27	44	39	72	67	70	65	73	64	35	15	11	22	32	28	28	49	33	40	26	40
Q	15	58	39	47	29	22	31	54	43	25	27	24	20	29	31	50	26	11	10	14	18	35	37	19	17	30
D	16	19	16	15	16	16	19	20	15	23	89	154	159	186	212	162	293	255	331	102	186	142	157	177	125	120
D	17	87	44	30	12	36	54	47	101	135	207	156	126	176	262	251	198	161	164	139	174	158	47	190	105	128
D	18	111	142	114	110	64	66	75	154	142	125	48	37	21	31	24	90	118	62	76	80	63	83	74	38	81
	19	31	41	20	26	62	76	116	81	90	80	104	82	138	124	91	77	59	87	84	67	84	51	60	44	74
	20	78	72	58	60	69	67	99	83	113	84	106	91	141	100	69	29	25	23	20	17	16	30	49	26	64
Q	21	18	22	12	15	15	13	11	16	17	24	10	13	11	13	7	9	18	23	24	23	23	30	51	27	19
	22	36	76	93	82	130	184	139	90	104	104	182	226	101	146	261	364	396	324	209	87	42	86	39	143	152
D	23	148	144	92	51	72	100	110	89	114	111	102	80	54	82	260	330	306	194	255	221	225	117	154	71	145
	24	80	66	61	59	51	102	80	94	157	89	77	131	90	82	75	50	25	33	52	46	62	39	28	18	69
	25	26	24	23	16	29	24	45	37	51	60	57	44	41	51	95	34	68	53	31	36	28	31	27	22	40
	26	21	24	25	21	25	25	22	20	33	38	56	124	82	57	51	18	20	19	22	18	23	21	40	31	35
	27	30	31	29	30	37	46	63	53	45	27	26	26	34	32	29	34	28	21	19	22	45	53	62	66	37
	28	47	61	61	88	81	69	143	91	56	37	23	27	47	34	60	66	62	111	118	125	123	140	63	86	76
	29	58	45	37	31	46	64	63	133	62	74	54	54	57	100	73	40	70	165	162	198	151	165	113	140	90
	30	102	84	73	84	71	47	35	58	35	60	33	35	25	14	19	37	37	33	21	16	16	20	21	26	42
	31	26	29	25	25	39	36	34	37	54	49	52	25	30	33	44	57	38	24	16	28	28	31	34	28	34
	MEAN	63	61	54	59	60	65	66	71	71	73	69	66	67	66	71	78	74	80	77	83	73	66	71	62	69
5Q	MEAN	32	26	23	28	24	22	27	26	25	30	24	21	24	23	23	14	14	15	22	19	23	25	26	24	24
5D	MEAN	100	90	69	80	92	74	74	99	102	125	113	103	107	134	153	191	180	172	130	144	130	92	132	78	115

NOVEMBER 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	6	9	15	15	15	15	14	13	14	24	17	47	42	10	8	6	8	14	8	7	10	12	12	12	15
	2	16	15	13	11	13	15	17	21	42	48	37	43	78	41	28	40	31	13	13	11	9	17	16	33	26
	3	42	67	126	55	30	53	81	51	68	82	33	13	23	18	40	72	77	170	146	210	148	86	93	68	77
	4	94	144	91	63	28	20	18	32	72	97	104	99	43	14	12	24	37	32	28	47	89	97	96	60	60
	5	66	111	118	75	83	79	113	126	98	70	40	40	28	22	26	31	32	27	33	46	68	67	64	87	65
	6	80	91	72	77	125	194	140	106	172	198	162	180	134	158	143	131	71	30	14	21	51	41	55	51	104
D	7	65	27	136	297	302	312	305	348	173	263	163	333	169	242	379	131	78	61	78	93	61	70	93	59	177
	8	114	99	56	92	72	42	18	19	47	65	50	59	48	50	23	36	28	12	14	16	11	18	15	11	42
	9	16	10	18	14	31	32	49	76	89	64	69	73	45	14	20	32	51	71	66	42	48	24	27	19	42
	10	37	22	22	62	78	64	51	35	22	69	91	99	147	101	89	189	100	49	78	53	69	42	37	51	69
D	11	36	57	61	63	64	50	166	119	64	97	117	92	69	65	42	113	153	50	38	32	88	64	60	43	75
	12	30	18	38	17	45	58	46	76	138	75	113	74	47	53	67	53	41	23	19	9	12	6	11	17	45
	13	14	12	29	41	34	84	61	97	21	22	49	29	24	77	77	94	128	154	154	149	89	59	47	43	66
	14	42	28	36	27	31	41	38	98	62	43	29	39	22	19	27	26	52	84	95	80	38	39	17	14	43
Q	15	18	13	10	8	8	9	9	12	17	17	26	47	59	17	12	10	7	10	25	59	93	45	27	25	24
	16	17	22	24	35	29	25	25	20	27	25	51	39	41	35	39	38	75	130	51	57	69	66	56	61	44
	17	68	63	44	58	49	32	43	39	42	45	40	22	13	20	24	17	9	10	4	10	11	12	11	11	29
	18	17	16	12	15	15	14	11	14	21	15	15	23	77	121	157	231	238	146	142	32	27	104	7	1	61
	19	52	103	120	206	193	154	218	147	105	39	26	25	10	6	13	9	8	8	2	0	0	1	4	4	61
Q	20	10	8	14	5	4	6	5	0	1	2	3	5	6	9	5	6	5	6	5	0	6	7	6	7	5
D	21	5	10	5	48	48	27	106	75	90	100	201	276	239	264	334	330	146	74	10	20	20	18	43	35	105
D	22	32	26	50	112	94	43	30	38	83	43	123	116	77	78	142	153	198	228	201	184	147	115	107	88	105
D	23	59	40	47	97	84	87	113	100	138	157	130	100	173	144	240	158	234	290	155	69	69	66	78	47	120
	24	40	41	36	24	36	52	37	35	43	28	18	10	15	17	13	45	132	160	187	137	95	78	54	48	58
	25	48	75	92	95	61	50	55	72	62	41	56	57	59	75	55	37	50	129	89	107	82	58	48	48	67
	26	72	85	61	51	43	46	35	33	37	44	51	56	43	25	26	35	50	57	36	69	82	41	49	29	48
	27	25	32	45	45	51	53	61	84	53	76	92	67	60	187	88	29	23	60	39	39	81	62	56	69	62
	28	62	38	49	36	44	58	76	46	42	35	45	24	28	36	28	27	20	23	23	27	23	30	24	32	37
Q	29	21	20	23	36	39	31	28	30	35	32	34	59	46	28	24	18	30	31	24	18	16	18	16	18	28
Q	30	18	14	12	24	27	30	32	28	31	32	33	34	22	17	14	15	21	12	13	19	20	25	19	16	22
	MEAN	41	44	49	60	59	59	67	66	64	65	67	73	63	65	73	71	71	72	60	55	54	46	42	37	59
5Q	MEAN	15	13	15	18	19	18	18	17	20	21	23	38	35	16	13	11	14	15	15	21	29	21	16	16	19
5D	MEAN	39	32	60	123	118	104	144	136	110	132	147	183	145	159	227	177	162	141	96	80	77	67	76	54	116

DECEMBER 1970 AU INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	17	15	14	16	13	15	18	18	21	26	27	22	17	11	11	12	16	14	13	12	12	13	15	15	16
	2	20	22	19	21	18	16	15	14	14	20	21	18	18	17	22	38	50	46	37	90	93	47	33	22	30
	3	31	26	31	24	23	29	35	45	62	78	42	20	14	14	13	37	19	28	12	13	14	31	40	45	30
	4	29	24	16	17	16	24	29	31	53	65	33	40	52	41	29	38	28	24	27	46	66	72	116	132	44
	5	119	82	47	33	42	60	56	83	119	153	77	47	58	54	35	40	42	30	20	13	13	15	15	15	53
	6	17	24	11	48	21	19	57	69	62	47	111	86	44	81	96	105	162	139	99	116	108	54	22	25	68
	7	40	35	34	33	28	33	39	41	28	36	57	46	129	122	92	66	49	70	57	99	143	86	109	74	64
D	8	128	108	197	142	111	97	50	74	131	133	85	117	91	166	66	47	38	27	68	86	91	57	54	42	92
	9	53	54	38	36	39	63	80	62	65	32	77	116	49	37	52	43	13	11	21	20	13	15	16	16	43
Q	10	25	17	17	19	25	18	17	16	22	38	33	42	32	93	27	9	13	15	15	21	17	18	14	9	24
Q	11	17	13	15	17	12	13	21	22	24	22	21	18	19	20	12	12	11	13	11	10	12	15	14	15	16
	12	18	21	24	20	19	18	22	25	24	47	54	57	107	98	60	41	17	14	22	18	31	40	89	99	41
	13	94	70	46	52	38	27	26	31	55	32	25	20	21	19	16	14	34	46	56	27	25	43	94	146	44
D	14	101	149	232	227	282	310	71	-104	150	192	86	84	206	71	63	40	14	35	48	147	158	108	114	98	120
D	15	47	85	74	36	30	35	24	33	89	73	47	76	48	116	85	66	78	51	70	47	30	33	31	45	56
	16	48	58	73	51	39	35	65	56	26	24	11	23	54	33	12	24	25	14	20	16	16	17	28	72	35
Q	17	61	55	41	42	57	35	50	48	40	29	29	23	24	10	4	24	25	31	13	29	29	22	23	24	32
	18	25	22	23	23	24	27	37	30	39	28	15	14	12	13	12	9	5	8	18	19	18	31	32	33	22
	19	32	24	25	35	23	20	35	43	121	140	66	31	29	25	21	13	12	15	20	46	38	34	126	96	45
	20	42	26	15	20	18	28	35	52	77	178	189	166	70	43	40	21	12	11	21	25	47	39	46	32	52
	21	39	44	34	17	14	19	19	39	56	47	31	28	35	38	29	9	1	3	5	9	24	30	30	36	27
	22	39	65	72	58	46	56	66	89	59	45	40	36	50	63	39	65	46	13	21	23	42	82	62	37	51
	23	36	54	29	98	81	49	66	36	35	26	42	73	59	89	54	40	59	37	27	22	16	21	27	60	47
D	24	39	122	111	90	84	69	62	56	81	190	55	32	28	54	33	67	44	18	17	38	49	42	35	39	61
	25	63	61	25	17	18	16	15	15	14	10	10	15	23	22	18	45	42	45	51	36	67	35	45	51	32
	26	31	32	33	49	52	64	132	80	92	65	36	21	19	25	37	35	41	36	22	22	30	30	41	38	44
	27	31	36	46	63	59	35	40	45	75	91	76	80	48	101	111	61	86	78	97	129	126	135	230	205	87
D	28	228	166	111	130	106	125	134	71	55	98	122	137	222	215	89	132	208	156	61	105	121	116	65	68	127
	29	143	49	46	53	65	112	96	88	50	104	39	23	26	43	49	55	69	91	186	95	87	85	71	36	73
	30	78	76	108	201	194	83	46	37	26	21	19	19	16	22	30	16	70	66	45	33	31	35	21	20	55
Q	31	21	18	15	29	18	13	13	11	14	15	16	22	24	23	18	21	16	17	18	18	21	25	24	23	19
	MEAN	55	53	52	55	52	50	47	41	57	68	51	50	53	57	41	40	43	39	39	46	51	46	54	54	50
5Q	MEAN	28	24	20	25	25	19	24	23	24	26	25	25	23	31	14	16	16	18	14	18	18	19	18	17	21
5D	MEAN	109	126	145	125	123	127	68	26	101	137	79	89	119	124	67	70	76	57	53	85	90	71	60	58	91

JANUARY 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	9	10	13	15	-2	-35	-1	3	7	9	10	10	-37	-29	-21	-22	-107	-109	-24	19	14	6	-5	-19	-12
D	2	7	12	0	-90	-10	-18	-28	-125	-118	-43	-72	-146	-256	-135	-106	-118	5	-47	-45	-213	-130	-55	-106	-93	-80
	3	-72	-6	-16	-13	19	17	-10	-53	-88	-48	-31	-11	-41	-83	-33	0	-13	-24	-9	-6	-16	-61	-21	-1	-26
Q	4	0	0	2	3	6	2	-9	2	3	-10	-18	2	-7	-2	-38	-61	-53	2	14	5	-13	-46	-33	0	-10
	5	9	12	12	8	9	5	16	14	13	-4	-28	23	25	0	-12	0	18	24	16	15	5	-4	-5	-66	4
	6	-8	10	8	9	14	4	5	5	14	7	0	-26	-76	-57	-25	6	5	-16	-89	-45	-2	11	8	5	-10
	7	10	9	9	6	15	11	12	17	13	4	5	4	-6	-2	-5	-29	-93	-134	-104	-13	25	9	16	5	-9
	8	-10	-13	6	6	4	14	19	14	17	22	-5	24	21	14	23	24	0	-45	-9	14	18	16	7	-1	8
D	9	-72	-31	43	30	6	8	38	-7	-44	44	35	16	11	1	-35	-24	-70	-79	-44	-10	0	-5	-33	-28	-10
	10	-25	19	-37	30	20	11	9	10	11	9	3	-31	-9	-27	7	-1	3	-21	-28	-5	0	1	3	3	-2
Q	11	7	11	25	31	19	17	27	16	10	8	4	0	-23	-25	-32	3	-2	-3	-8	-18	-16	-6	3	-25	1
	12	-103	-6	21	-4	8	11	18	-21	-22	0	3	0	5	-1	-2	-1	-12	-74	-55	-12	-19	-101	19	44	-13
Q	13	25	21	13	5	11	14	10	15	12	9	8	9	-1	-1	-52	-95	-49	-4	-1	1	4	7	6	12	-1
	14	12	8	6	-21	-41	-1	25	19	21	22	24	17	11	-36	-14	0	1	3	5	2	5	3	8	-23	2
	15	22	41	48	38	27	62	27	21	16	11	7	9	14	7	7	0	-7	-46	-8	2	4	7	18	23	15
D	16	30	-25	-23	13	12	7	14	-50	-81	-48	-177	-120	-85	-161	-154	-107	-192	-148	-90	-161	-183	-139	-103	-162	-89
D	17	-138	-137	-113	-35	-118	-21	17	-1	7	5	4	0	-1	-2	-4	-16	-18	-23	-16	-23	-13	-3	0	-2	-27
	18	-9	-63	-9	3	-15	4	-45	10	16	9	0	12	6	6	0	-9	-25	6	2	-1	0	2	-5	0	-4
	19	4	5	8	11	9	8	4	6	2	-6	1	11	1	1	-31	-92	-35	-22	-40	-23	-29	-92	-55	-3	-15
	20	-17	-23	-8	5	-9	1	4	8	9	-13	-22	-15	-22	-98	-91	-6	-9	0	-36	-85	-114	-30	14	8	-23
	21	15	12	12	19	0	-8	-27	0	-5	-33	-34	-7	2	-75	-55	10	0	-3	-11	-55	-22	-46	-12	-4	-14
	22	-59	8	3	1	8	13	7	0	5	9	0	-9	-4	3	-3	-13	-75	-35	-12	-22	-24	-20	3	6	-9
	23	4	-4	-69	-48	-17	-13	-17	-24	18	16	10	7	-10	-3	-8	-3	-3	-8	-8	-9	-12	-6	-55	-41	-13
	24	-48	-7	-2	1	0	0	6	-40	-32	-75	-148	-27	-34	-17	-11	-55	-49	-36	-26	2	-25	-105	-5	5	-30
Q	25	0	9	9	3	-7	-3	21	11	10	4	4	0	1	3	-7	-2	-2	-28	-15	1	-1	-11	0	0	0
Q	26	3	-3	-10	-9	12	13	9	8	-17	14	12	4	15	2	-8	-11	-13	-16	-3	0	0	4	0	0	0
	27	1	6	-7	-4	18	21	10	10	-36	1	15	13	12	-1	-35	-10	-49	-87	-35	-7	22	24	15	-9	-5
	28	12	24	11	10	12	13	12	13	12	11	12	19	11	3	14	11	10	9	5	-27	-6	2	2	-85	5
	29	-31	-9	3	3	14	-4	-36	-43	-5	17	11	8	6	5	6	4	5	4	7	13	13	11	12	-5	0
D	30	-44	2	3	5	-11	-29	-60	6	12	10	-23	-8	-13	-1	5	-38	-103	-14	-48	-48	35	-18	21	-16	-16
	31	-63	-103	-94	-38	-4	10	15	14	12	9	9	-2	7	7	6	-1	-12	3	-26	-39	-3	12	8	6	-11
	MEAN	-17	-7	-4	-0	0	4	3	-5	-7	-1	-12	-7	-15	-23	-23	-21	-30	-31	-24	-24	-16	-20	-9	-15	-13
5Q	MEAN	7	8	8	7	8	9	12	10	4	5	2	3	-3	-5	-27	-33	-24	-10	-3	-2	-5	-10	-5	-3	-2
5D	MEAN	-43	-36	-18	-15	-24	-11	-4	-35	-45	-6	-47	-52	-69	-60	-59	-61	-76	-62	-49	-91	-58	-44	-44	-60	-44

FEBRUARY 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	6	-19	-27	6	-25	-30	0	5	5	3	4	2	3	4	2	-1	-9	-8	-3	4	14	11	-36	-82	-7
D	2	8	21	24	-28	-26	4	23	5	-6	-88	-73	-139	-150	-38	11	9	-29	-85	-73	-118	-128	-27	-50	-138	-45
	3	-24	-29	28	-3	6	7	6	9	4	0	-21	-26	-67	-13	0	-10	-3	-3	-1	-2	1	4	7	4	-5
D	4	2	10	3	8	6	7	0	12	-17	-100	23	-23	-63	-146	-57	7	-91	-168	-83	-32	-6	-52	21	13	-30
	5	11	-25	-35	-29	8	9	25	17	6	3	-3	-3	-67	-128	-74	-9	-26	-54	-17	-3	-10	-20	-104	-81	-25
	6	1	20	15	10	14	18	15	-16	5	30	8	4	0	0	0	0	-1	-10	-22	-38	-7	2	2	2	2
Q	7	1	1	3	3	2	3	1	4	4	6	5	5	-2	-3	0	-3	-3	-2	0	-3	-4	0	2	0	1
Q	8	2	1	0	0	6	9	5	7	7	7	5	2	0	-3	-18	-28	-41	-33	-22	-35	-18	-7	0	4	-6
	9	4	3	-6	-13	3	12	-2	7	7	8	4	1	3	3	-5	-26	-18	-24	-9	8	11	7	7	7	-0
	10	7	6	5	7	0	1	-8	2	12	4	2	2	-1	-10	-21	-139	-145	-97	-12	6	10	7	8	8	-14
Q	11	4	4	2	4	3	11	10	0	-22	-7	1	0	-3	-5	-3	-3	-17	-18	-12	-6	-1	-2	0	0	-3
	12	1	7	6	5	5	4	4	4	1	5	2	1	0	-4	-3	-5	-4	-1	0	3	2	-1	-2	-2	1
	13	0	1	2	9	10	-16	15	13	12	7	3	0	-29	-68	-28	13	11	4	6	7	4	5	4	3	-1
D	14	4	6	-30	-145	-42	-11	4	-7	-15	-17	-93	-87	-38	-42	-104	-118	-68	-26	8	8	10	8	7	6	-33
	15	8	8	-32	-42	-47	-74	-82	-3	-3	3	-79	-11	13	0	-12	-42	-22	-56	-93	-73	0	16	12	9	-25
	16	11	11	5	9	9	6	-2	-39	-54	-16	-5	-48	-70	-47	-35	-9	5	2	10	-1	-5	-2	-11	-6	-12
	17	9	5	1	9	9	10	7	7	10	12	-39	-43	-4	-3	-1	-6	-84	-136	-91	-91	-58	-86	-94	-14	-28
	18	4	-12	-18	-6	-39	-15	1	-48	16	14	21	4	9	-71	-175	-14	5	-6	-59	-7	-19	-9	-70	-44	-22
	19	-24	-32	1	1	4	10	3	6	6	7	3	-31	-61	-14	-15	-9	-14	-2	8	7	3	1	0	3	-6
	20	6	10	8	6	5	6	4	2	2	6	6	4	6	-2	-73	-42	-6	-5	-2	-28	-12	-1	1	0	-4
Q	21	4	1	-6	0	6	5	-2	4	-2	-2	1	-4	-6	-5	-2	-3	-3	-7	-1	0	-8	-2	-3	-2	-2
Q	22	0	-1	-5	-2	3	0	2	0	0	0	0	0	-4	-5	-1	-7	-5	-2	-19	-24	-13	-5	-5	-2	-4
	23	0	2	2	6	8	6	3	3	5	5	3	1	0	0	1	1	1	-1	1	5	11	11	7	4	4
D	24	6	6	0	-46	2	7	0	-47	-28	2	-60	-34	0	9	13	-52	-162	-139	4	26	31	4	2	-1	-19
	25	2	-7	-5	5	4	-1	-9	-7	4	1	0	-1	0	0	0	-8	-32	-23	5	7	6	3	0	-1	-2
	26	-4	-39	-56	-36	-27	-7	-37	-35	-69	-37	11	4	-94	-86	-46	-5	0	-37	-16	-10	-9	-8	-10	-9	-28
	27	-8	-10	-10	-9	-15	-41	-19	-13	-44	-18	-31	-12	-19	-26	-28	-15	-29	-67	-23	3	-26	-131	-37	-49	-28
D	28	-176	-194	-91	11	20	-7	-44	-35	33	21	-23	-24	18	-34	-8	-26	-46	-55	-76	-24	6	14	13	-25	-31
	MEAN	-5	-9	-8	-9	-3	-2	-3	-5	-4	-5	-12	-16	-22	-26	-24	-20	-30	-38	-21	-15	-8	-9	-12	-14	-13
5Q	MEAN	2	1	-1	1	4	6	3	3	-3	1	2	1	-3	-4	-5	-9	-14	-12	-11	-14	-9	-3	-1		-3
5D	MEAN	-31	-30	-19	-40	-8		-3	-14	-7	-36	-45	-61	-47	-50	-29	-36	-79	-95	-44	-28	-17	-11	-1	-29	-32

MARCH 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-75	14	10	-63	5	51	33	-44	-51	-63	-60	-9	5	-38	-96	-86	11	12	-7	-4	1	-8	0	0	-19
	2	-46	-129	-100	-6	-64	-130	-15	12	-42	-169	-100	-81	6	6	1	-20	0	-86	-11	5	4	7	-24	-66	-44
	3	-20	5	-2	-1	-3	-7	-15	5	-71	-7	19	7	1	5	-67	-23	-61	-186	-114	-105	-57	-79	-20	0	-33
	4	-2	-14	-56	17	8	23	49	-3	-40	-99	-72	-123	-175	-188	-141	-129	-67	-100	-88	-95	-25	-38	-15	-58	-60
	5	-16	19	19	17	14	12	-1	8	0	20	6	2	2	1	11	0	-50	-35	-133	-116	-68	-73	-31	-21	-17
D	6	-93	-71	-1	26	17	12	4	-19	-122	-103	-259	-33	-10	-10	-56	-59	-47	-23	-59	-30	-106	-131	-251	-213	-68
D	7	-153	-141	-94	-111	-87	22	4	-11	-83	-169	-155	-112	-12	-71	-113	-192	-160	-112	-214	-149	-8	20	13	-77	-90
D	8	-23	-9	-49	-213	-157	-172	-80	-37	-39	24	-120	-86	-75	-82	1058	-755	-3	203	-163	-821	-328	-215	-139	-58	-97
D	9	11	-11	-81	-272	-74	2	42	31	31	24	-95	-122	-237	-222	-133	-242	-256	-132	-5	0	-5	-70	-79	-161	-86
	10	-88	-10	-11	-18	-13	-13	-14	-26	-58	-22	-33	-49	-24	-17	-23	-30	-58	-37	-89	-68	-79	-25	-13	-19	-35
	11	-26	-26	-26	-21	-19	-14	-17	-18	-19	-18	-19	-21	-23	-15	-34	-24	-24	-18	-11	-12	-57	-49	-22	-4	-22
	12	-13	-29	-24	-91	-37	-33	-38	-82	-67	-56	-89	-28	-21	-8	-15	-19	-21	-14	-4	-1	1	-2	-3	-4	-29
	13	-7	-8	-8	-10	-13	-7	-29	-76	-21	-5	-134	-19	-13	-75	-114	-71	-39	2	-5	-44	-69	3	-2	-7	-32
	14	-6	-16	-44	-17	-7	-5	-3	-2	10	-9	-15	-16	-14	-11	-10	-7	-4	-5	-4	-1	0	-1	-4	-4	-8
	15	-4	-35	-39	-38	-53	-48	-34	-5	-6	-4	-29	-21	1	0	-40	-107	-37	5	0	-45	-25	-9	-3	-11	-24
Q	16	-7	-4	-7	-10	-5	-4	-10	-10	0	-23	-36	-13	-8	-17	-44	-20	-10	-7	-5	0	0	-7	-4	-7	-11
	17	-5	-5	-4	-12	-6	-1	-14	-1	-2	-7	-5	-4	1	-9	-29	-10	-25	-22	-61	-11	11	10	-12	-27	-10
	18	-67	-31	-8	-9	-9	-5	-11	-11	-7	8	0	-56	-61	-16	-3	-29	-89	1	-13	-22	1	-45	-69	-16	-24
	19	-10	-10	-15	-14	-6	0	-2	-18	-11	3	-5	-3	-20	-46	-11	-11	-6	-11	-31	-3	-1	-102	-25	-22	-16
	20	-18	-3	-7	-9	-6	-6	-10	-10	-6	-2	3	-3	-43	-23	0	-21	-16	3	-9	-93	-16	-2	-15	-19	-14
Q	21	-10	11	-4	-8	9	5	-4	-10	0	1	-7	-7	-13	-2	-3	-47	-77	-38	0	17	15	0	0	-2	-7
Q	22	-5	-3	-1	-6	-5	-2	-5	-9	-5	4	5	-10	20	10	0	-7	-6	4	6	-1	5	3	-3	-8	-1
	23	-8	-4	-4	0	0	1	0	13	-34	-41	-11	3	9	0	-11	-5	-22	-15	0	-24	3	2	-3	-5	-7
Q	24	-8	-6	-4	0	-1	-3	-4	-2	-2	-3	-5	-4	-1	0	6	4	0	2	7	9	8	3	-3	-2	-0
Q	25	-4	-7	-2	0	-2	-2	-3	-10	4	0	-6	0	-4	-3	0	0	0	1	0	1	3	3	0	-2	-1
	26	-4	-5	-24	-28	-52	-36	-10	-1	3	-4	-7	-2	0	-2	1	-27	-32	-3	-13	-11	-4	3	5	1	-11
	27	-1	-5	-9	-12	-9	-5	-4	17	33	32	44	73	32	3	-9	0	2	12	-12	1	17	-7	-68	-59	3
	28	-20	-33	-34	-135	-69	-84	-34	-13	0	-74	-187	-98	-45	-43	-82	-41	-25	9	11	-83	-24	-5	-34	-174	-55
	29	-124	-21	-80	-2	-23	17	6	-47	-21	9	13	-6	-134	-29	-65	-107	-56	-34	5	-61	-18	6	0	-59	-35
	30	-55	28	13	1	-3	31	-54	-37	-62	-15	-46	-59	-21	-42	-14	-12	-76	-23	9	11	1	-76	18	6	-20
D	31	0	1	-25	-31	-76	43	52	-88	-75	-77	-181	-37	-2	-20	-63	-83	-7	13	23	13	-30	-11	-50	-136	-35
	MEAN	-29	-18	-23	-35	-24	-12	-7	-16	-25	-27	-51	-30	-28	-31	-3	-70	-41	-20	-32	-56	-27	-29	-28	-40	-29
5Q	MEAN	-7	-2	-4	-5	-1	-1	-5	-8	-1	-4	-10	-7	-1	-2	-8	-14	-19	-8	2	5	6		-2	-4	-4
5D	MEAN	-52	-46	-50	-120	-75	-19	4	-25	-58	-60	-162	-78	-67	-81	139	-266	-95	-10	-84	-197	-95	-81	-101	-129	-75

APRIL 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-2	-17	-28	-49	-42	-22	-44	-41	-45	-30	-25	-19	-34	-19	-19	-22	-23	-21	-21	-18	-12	-15	-12	-10	-25
	2	-11	-12	-12	-15	-11	-16	-13	-13	-10	-27	-17	-14	-5	-20	-89	-70	-17	-13	-14	-9	-2	-15	-31	-43	-21
	3	-19	-13	0	-14	-47	-36	6	47	41	0	-22	-34	-21	-36	-13	-38	-44	-23	18	17	10	5	3	4	-9
	4	-26	-24	-108	-48	-3	-5	-4	-79	-69	-6	8	-24	-83	-7	-4	-7	-9	0	-4	0	0	-6	-8	-13	-22
	5	-6	-4	-4	-6	-4	-2	0	11	0	-80	-61	-79	-19	-4	-13	-30	-34	-8	10	18	23	17	12	11	-11
D	6	9	-9	-40	-16	-69	-30	-113	-52	6	-7	-284	-93	-19	-66	-67	-72	-33	-48	3	28	11	-22	-85	12	-44
	7	0	-57	-39	14	7	-23	-82	-12	-97	-30	-7	5	-8	-3	-13	-11	-8	-2	-11	9	8	8	5	4	-14
	8	-86	-45	4	6	-34	-49	-1	14	0	-68	-82	-5	-3	-24	-2	5	-22	-20	-3	0	4	-1	-37	-26	-20
	9	2	4	7	-12	-84	-37	-5	-18	-13	-22	19	-63	-77	-94	-5	-7	-4	-16	0	13	16	18	-20	-15	-17
Q	10	-8	3	6	0	-4	-5	-5	-6	-2	-1	-5	-5	-3	1	-4	-9	-5	-1	2	3	4	5	-14	-24	-3
	11	-40	-45	-26	-12	-30	-12	7	3	-73	-54	-39	-55	3	9	3	-14	-3	-12	-33	-4	11	5	3	2	-17
	12	0	0	1	-13	-18	-22	-37	-25	-23	9	18	3	0	6	10	-23	-33	-5	5	25	18	9	8	5	-3
Q	13	0	0	-2	-6	-6	-6	-1	2	1	0	-3	10	-24	-18	-16	8	6	10	4	5	4	3	3	1	-1
Q	14	3	5	0	-6	-7	-8	-4	0	-2	-7	-10	0	2	-11	-13	-3	-3	3	4	5	4	6	0	-6	-2
Q	15	7	3	7	0	-1	-1	0	10	9	-9	13	-2	-4	2	-2	1	-42	-54	-73	4	-39	2	15	25	-5
	16	-116	-52	11	9	-43	-41	12	18	22	0	-5	-8	-8	-7	-6	0	3	11	20	28	-68	-63	-40	-122	-19
D	17	-174	-77	-65	-25	-84	-10	9	5	11	-126	-58	-14	-12	-83	-66	-86	-54	-56	-55	8	-29	-226	-64	8	-55
	18	12	11	-2	-6	-2	-2	-3	0	30	-22	-138	-145	-140	-132	-117	-21	21	8	14	33	17	-78	-160	-145	-40
	19	-45	-112	-150	-114	-3	42	-85	-170	-81	0	-106	-143	-13	2	3	-8	-16	-28	0	13	-10	-27	5	12	-43
D	20	3	-7	-39	-51	-56	-18	-5	-3	2	7	17	-21	-75	-104	-29	-43	-24	-28	-80	50	45	21	6	-34	-19
D	21	-36	-109	-45	-13	9	-57	-74	-28	-117	-104	-174	-92	-176	-150	-163	-236	-324	-395	-241	-101	-231	-310	-193	-110	-145
D	22	-187	-276	-231	-225	-54	-44	-10	-41	-44	-162	-74	-25	0	2	3	-23	-25	0	7	-2	-3	-4	-7	-4	-60
	23	-5	-27	-40	-7	26	-24	-68	-4	22	16	-22	-3	-180	-210	-134	-46	39	-25	-87	-57	3	65	-58	-89	-38
	24	3	-20	-101	-57	15	-17	-26	-24	4	13	27	22	-52	-37	-13	-200	-99	-65	-36	42	9	-21	-6	15	-26
	25	-141	-70	-50	-55	-91	-18	3	24	-35	-30	-44	-85	-13	-41	-16	-32	-9	3	7	-19	-33	-2	7	-61	-33
	26	-45	-22	-1	-45	3	6	-9	-3	0	-6	-5	11	-7	-68	-32	-17	-2	-14	-30	-118	-29	20	33	-74	-19
	27	-96	-36	-47	-47	7	6	8	13	-1	0	21	-20	-27	-9	-11	-19	-2	0	-36	-4	31	14	8	5	-10
Q	28	-25	-155	-71	-36	-7	-19	-6	2	21	26	38	30	-7	-29	-15	-14	-3	2	16	14	11	-1	4	5	-9
	29	5	6	-25	-22	-19	-17	6	16	18	-34	13	17	-37	-68	-47	0	-32	-36	-34	51	68	43	-35	-5	-7
	30	20	-13	-126	-126	-70	22	-58	3	-21	-70	34	35	19	28	22	61	0	21	7	12	0	-2	-10	-29	-10
	MEAN	-33	-39	-41	-33	-24	-16	-20	-12	-15	-27	-32	-27	-34	-40	-29	-33	-27	-27	-21	2	-5	-18	-22	-23	-25
5Q	MEAN	-5	-29	-12	-10	-5	-8	-3	2	5	2	7	7	-7	-11	-10	-3	-9	-8	-9	6	-3	3	2		-4
5D	MEAN	-77	-96	-84	-66	-51	-32	-39	-24	-28	-78	-115	-49	-56	-80	-64	-92	-92	-105	-73	-3	-41	-108	-69	-26	-65

MAY 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	7	14	3	6	1	42	-42	-56	-6	0	0	5	14	-76	-38	5	-2	4	19	23	-22	19	-31	-18	-5
	2	-43	-2	2	-3	-28	-12	14	-5	-45	1	0	1	16	6	3	3	6	-28	-15	-8	4	6	-8	-42	-7
	3	-6	6	0	-5	-5	-9	-10	1	-5	2	12	28	-41	-53	-28	-23	12	-19	-55	10	41	31	-107	-66	-12
	4	-39	0	-4	-4	-1	-6	6	17	10	28	5	0	-9	3	5	-20	-36	-8	24	21	22	13	6	2	1
	5	-9	-1	5	-3	1	3	5	3	8	27	-51	-61	-11	-14	-35	-27	20	-11	17	16	11	9	12	-19	-4
	6	-49	-9	-13	-15	-11	-13	-11	-7	-3	-6	-14	8	-25	-19	-14	0	2	22	17	10	24	12	6	8	-4
	7	0	1	1	14	-3	-7	-6	-6	-1	2	26	7	-9	-18	-5	-6	-5	11	5	-7	10	8	1	-3	0
Q	8	-4	-24	-10	-6	-4	-4	-4	-1	2	5	0	1	3	8	7	2	2	-82	-19	15	7	3	7	-2	-4
Q	9	-11	-10	-1	-4	-15	-25	0	12	17	8	3	10	0	8	7	-10	-17	-21	-3	0	11	3	0	-2	-2
Q	10	3	4	0	-19	-10	12	12	11	11	20	13	5	0	-3	-8	-16	-12	-4	4	3	4	2	0	-1	1
Q	11	-1	-2	-3	-7	-10	-8	-5	-2	3	8	1	3	-2	-9	-5	-4	-2	0	9	11	16	15	14	10	1
D	12	-2	20	-25	7	-22	-1	8	26	18	35	32	-7	-29	-78	-102	-45	-16	38	-21	-12	2	32	15	34	-4
	13	2	-8	-79	-92	-20	22	2	-3	1	10	-77	-40	15	15	15	-13	3	3	14	14	9	22	18	15	-6
	14	13	-34	6	-7	15	21	23	-17	7	13	15	1	6	15	7	6	-14	-66	-25	-38	-1	12	35	-19	-1
	15	-27	-22	-8	-14	31	21	0	37	23	-11	-8	18	10	-4	-5	-2	3	-1	0	-10	-3	7	16	3	2
	16	-8	10	8	7	9	-21	-23	14	-4	5	16	22	21	15	-39	-37	-47	-76	15	23	36	37	31	-28	-1
	17	-102	-28	22	8	58	-74	-27	7	13	14	31	31	9	-63	-53	27	35	25	36	24	21	26	32	5	3
	18	12	13	-26	-51	8	4	10	18	12	6	6	10	26	29	27	26	4	29	30	26	22	9	7	4	11
	19	0	1	9	-5	-38	-35	-37	-50	7	-7	-10	20	-8	7	29	21	17	4	19	59	51	-7	-12	15	2
D	20	-42	-59	-43	18	-24	-22	25	20	45	21	-30	21	10	-32	23	-38	-65	-41	42	30	-41	-30	-9	-12	-10
	21	-60	-90	-96	-136	-122	-84	-74	-46	-19	9	-24	22	26	22	-31	-45	1	2	5	-9	14	0	0	-25	-32
	22	-59	-45	-48	-28	-3	17	21	33	25	26	34	42	58	39	0	-28	-37	-33	-13	33	20	17	19	10	4
	23	4	-8	-2	-2	-6	-9	0	28	-34	-20	25	14	15	13	-8	-24	-9	-31	-23	-2	33	18	-40	11	-2
	24	34	19	10	4	-2	-9	-7	6	17	20	15	14	12	21	6	-18	-48	-11	20	22	21	11	15	-20	6
	25	-39	-39	-39	-28	-65	-42	-28	-2	0	-1	14	24	-51	-57	-46	-13	-29	-36	-13	9	0	16	19	19	-18
Q	26	9	0	-8	-10	-11	-5	-1	-7	-6	-11	-14	-14	-4	-2	-5	-36	-29	-15	-13	6	6	20	24	14	-5
D	27	31	8	6	-16	-15	-21	20	43	21	6	22	43	1	-53	-23	18	-49	-72	-26	-40	-57	-21	-160	-172	-21
D	28	-1	-169	-81	13	21	13	4	7	28	68	-206	-117	-88	-9	105	48	31	28	14	4	35	29	32	16	-7
D	29	-54	-42	-17	-4	-16	10	-13	-66	-11	49	20	-3	-36	-35	-3	-2	-8	1	25	18	42	19	7	-3	-5
	30	-31	-36	-15	-4	-31	-25	-9	33	17	-134	-63	-16	-16	-14	-6	11	0	38	-4	32	12	5	1	0	-11
	31	-11	-9	-13	-8	-32	-15	8	-10	-9	-7	2	11	21	-57	-4	24	45	24	-2	-3	-3	-2	-4	-14	-3
	MEAN	-14	-16	-14	-13	-11	-9	-4	1	5	6	-7	3	-2	-13	-7	-7	-8	-11	3	9	11	11	-2	-9	-4
5Q	MEAN	-1	-6	-4	-9	-10	-6		3	5	6	1	1	-1		-1	-13	-12	-24	-4	7	9	9	9	4	-2
5D	MEAN	-14	-48	-32	4	-11	-4	9	6	20	36	-32	-13	-28	-41		-4	-21	-9	7		-4	6	-23	-27	-9

JUNE 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	-7	-3	-52	-46	-57	-73	-47	7	53	-114	-11	-7	-8	-35	-73	-53	14	5	24	13	-3	-39	-58	-24	-25
	2	-59	-22	1	-44	-28	-18	-2	-8	0	11	14	15	10	-3	5	-6	-33	-18	-9	-19	-24	-16	-16	-46	-13
	3	-1	8	-86	-75	-54	-64	-44	2	8	-18	-20	-41	-89	-29	1	-23	-30	34	29	-3	7	-2	-19	-28	-22
	4	-46	-100	-103	-17	-68	-73	-29	-31	-11	8	15	-13	-15	-17	-70	-14	19	18	2	36	27	19	3	-32	-21
	5	-20	-19	-41	-109	-36	-53	-75	-43	-7	36	40	22	-4	1	2	0	1	8	5	7	1	0	-1	-5	-12
Q	6	-9	-9	-9	-6	-29	-28	-9	-7	-14	36	-5	4	2	9	5	-12	-7	5	15	13	14	12	7	0	-1
	7	-4	-5	-7	-6	-32	-8	-6	3	5	5	2	9	4	5	10	19	23	35	24	-5	-13	27	23	-118	-0
	8	-13	-38	-106	-63	-5	-46	-63	4	-2	1	18	-18	-41	-11	0	0	10	25	-2	-6	7	10	0	8	-14
	9	-4	-9	-14	-47	-8	-1	-4	0	-29	-22	-11	-8	-8	-5	-5	-8	10	7	23	28	-11	-3	-5	12	-5
	10	25	12	-15	-15	-3	-1	-10	-4	-8	0	11	0	-3	5	-17	-6	21	61	46	41	12	-1	13	8	7
Q	11	-1	-17	-54	-18	-1	-5	-3	-13	-14	-3	-2	1	-2	-2	-4	5	14	2	0	-8	-10	-8	-7	1	-6
Q	12	4	1	-6	-20	-29	-26	-26	-2	-4	12	-8	23	12	17	15	14	13	28	33	34	-5	7	13	11	5
	13	21	21	13	8	-18	0	-7	-38	1	-6	-3	29	-35	34	-44	49	8	8	9	13	15	-3	0	11	4
	14	42	10	-17	-33	-36	-31	-18	-22	-21	-8	-3	7	11	10	3	-4	-6	-6	31	-10	20	27	18	35	-0
	15	-76	-79	-37	-32	-12	-33	-59	15	-37	-26	0	-46	-44	-82	-2	22	42	17	13	52	69	-49	3	19	-15
	16	3	-9	-38	-64	-1	-75	-71	-5	4	3	2	2	1	20	8	0	-3	-20	0	5	-3	22	6	-20	-10
	17	0	1	-2	-5	-4	1	-10	-4	13	11	17	16	-1	-60	-18	1	35	14	54	-15	-33	-28	-47	-40	-4
D	18	-55	-89	25	3	-4	1	-5	0	-75	-65	-162	-159	-58	-43	-9	-59	-3	48	73	27	16	-6	-85	9	-28
	19	-9	-81	-103	-44	-1	-13	-55	-5	12	26	-15	-22	-9	-1	-4	-3	12	31	22	11	23	-14	-19	-52	-13
D	20	-134	-194	-132	-69	-105	-41	-25	-85	-103	-44	-4	-14	-68	-47	-22	-66	-54	-53	0	50	-36	-48	-78	-146	-63
D	21	-172	-158	-158	-157	-149	-121	-127	-111	-87	-51	5	-37	-20	-60	-55	-7	24	77	53	7	9	17	19	8	-52
Q	22	16	-7	-6	-16	-14	-21	-22	-24	-11	-8	6	-3	14	4	0	-1	7	7	14	16	18	17	6	12	0
Q	23	19	-24	-4	-1	-1	-21	-23	-8	-27	-13	-11	5	11	13	9	-5	-2	2	3	11	1	10	0	-1	-2
	24	15	-4	-4	-5	-3	-18	-5	-9	-17	-2	-2	-2	0	8	18	23	16	22	38	65	-9	21	35	19	8
	25	-7	-103	-13	2	0	-4	-40	-3	20	43	31	-26	-50	-50	-10	-17	-9	18	-6	-10	-9	22	-32	-16	-11
	26	13	5	2	33	77	78	96	32	-24	-57	18	28	8	6	22	33	70	72	22	-43	-12	14	2	-7	20
D	27	-10	9	-31	-133	-109	-47	-13	37	4	-137	32	48	0	-10	-5	47	33	5	16	8	17	0	-6	1	-10
	28	0	-46	-157	-81	-45	-52	-30	-12	4	66	-6	-58	-87	-113	-71	-5	1	-13	-10	3	12	9	11	1	-28
	29	-4	-9	-9	-11	-6	-35	-51	-80	-25	3	1	-1	1	7	3	2	0	46	69	36	8	-23	-15	-1	-4
	30	6	-1	-5	-5	-2	-5	-5	-27	-17	19	19	-8	-37	-4	-3	5	18	28	33	21	17	5	0	0	2
	MEAN	-16	-32	-39	-36	-26	-28	-26	-15	-14	-10	-1	-8	-17	-14	-10	-3	8	17	21	13	4	1	-5	-10	-10
5Q MEAN		6	-11	-16	-12	-15	-20	-17	-11	-14	5	-4	6	7	8	5		5	9	13	13	4	8	4	5	-1
5D MEAN		-76	-87	-70	-80	-85	-56	-43	-30	-42	-82	-28	-34	-31	-39	-33	-28	3	16	33	21	1	-15	-42	-30	-36

JULY 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-2	9	-51	-43	-67	-36	-48	-13	-61	-19	22	1	34	17	-37	6	26	2	28	40	41	17	15	14	-4
	2	5	0	6	-2	-6	-35	18	-57	0	31	57	-26	6	24	16	10	15	22	11	-1	-3	6	0	13	5
	3	-8	3	-7	-28	-54	-97	-89	-1	-44	-87	-10	-9	-5	-32	-23	-1	-3	0	3	9	31	37	-29	-385	-35
	4	-283	-95	-34	-11	-34	-42	-89	-2	-49	18	-3	9	35	-21	-10	-5	-2	8	8	0	0	-5	-12	-13	-26
	5	-8	-4	14	47	-63	-145	-67	2	-2	13	10	3	-4	12	-4	-1	0	-21	26	16	1	2	24	-9	-7
	6	-143	-20	-76	-56	-27	-10	-69	-48	-98	-24	-7	14	-60	-57	27	19	21	22	16	11	6	1	-3	-7	-24
Q	7	-6	-7	-9	-12	-14	-13	-4	-13	-40	-24	-13	-13	7	5	3	5	8	12	18	15	6	-7	6	-32	-5
	8	9	30	-13	0	24	25	10	0	9	8	6	14	10	-79	-20	-18	-7	-57	-8	38	29	50	-1	-167	-5
D	9	-111	-12	39	101	-22	-9	40	14	44	-29	-117	-169	-213	-59	83	46	26	44	83	77	-52	-33	-86	-84	-17
D	10	-245	0	6	1	0	-1	4	-2	-8	-2	22	37	34	21	8	-90	-42	-36	-13	-3	3	-41	8	-7	-14
	11	-42	-115	-58	-17	-5	3	4	-47	-47	-8	15	-26	-21	-11	-17	-28	-34	13	-2	11	-11	-60	-5	-12	-22
	12	-76	-58	-8	-67	-15	-12	11	14	13	7	28	18	-30	-41	-4	-57	-53	19	24	-17	24	4	-39	-1	-13
	13	6	0	-60	-62	7	-59	-49	-10	-2	-4	10	21	22	-2	-17	-5	-21	-55	-95	13	32	-41	-18	-8	-17
	14	-9	-51	-70	18	-44	-21	-8	2	-32	-34	9	23	11	19	18	18	2	13	-72	-50	10	8	11	-34	-11
Q	15	-29	-1	-2	-9	-9	-3	0	2	13	-42	-46	-26	8	51	40	38	39	37	23	17	3	0	4	-7	4
	16	-35	-87	-99	-3	-17	-34	-12	-11	-7	-4	-2	16	-36	-64	10	5	-9	-18	-65	-33	0	-5	-1	-1	-21
	17	-4	3	-8	-11	0	1	1	0	-2	-5	-3	1	12	17	-39	-19	-52	-118	-8	26	12	-1	11	54	-6
Q	18	18	9	-4	-11	38	-6	-3	-2	0	14	15	9	15	16	9	3	-1	6	8	-1	-15	8	8	5	6
Q	19	1	-4	2	-38	-48	-17	10	4	7	25	19	18	9	1	7	1	-8	-42	0	11	22	2	11	2	-0
	20	25	-2	-19	-25	-9	-11	-17	-11	15	2	-2	0	4	5	4	3	0	7	2	-4	3	-2	-14	-105	-6
D	21	-163	-34	-19	50	1	0	19	13	38	38	73	-16	13	-69	-3	1	-25	21	-73	-46	5	12	-111	-104	-16
	22	-69	-4	4	-2	-47	-28	-9	48	-7	-59	-75	14	18	-2	-1	-34	-35	-35	48	23	25	10	-15	-89	-13
	23	-57	-52	-61	-18	0	32	26	-1	54	43	41	47	1	6	18	35	4	0	15	29	13	1	5	-1	8
	24	-4	-74	-96	-120	-24	-14	-85	12	7	-2	-3	20	5	-41	-45	-35	23	62	45	18	39	33	-6	-6	-12
D	25	-98	-55	49	38	-25	-59	-160	-272	-264	-195	-81	-158	-18	-35	-47	10	40	15	35	20	29	-104	-256	-182	-74
	26	-141	-151	-87	-112	4	-19	-76	-40	-55	-72	-82	-92	-100	-68	-4	1	1	4	6	7	9	17	-72	-2	-47
	27	-6	-14	-19	-43	-5	-72	-43	-11	2	-19	-32	-28	-49	-60	-24	-9	-47	-63	-8	-41	-17	-1	-6	-50	-28
Q	28	-6	3	-11	-13	-14	-15	-8	0	13	1	-1	0	-2	0	-6	0	0	3	-4	1	0	-12	0	3	-3
D	29	-9	-14	6	13	-124	-205	-134	-99	-147	-277	-170	-84	3	26	-61	-52	-6	-65	-60	-59	5	20	9	0	-62
	30	-1	-5	-4	-8	-13	-70	-22	-14	-10	-19	-10	0	0	0	11	-29	-4	2	-27	-31	16	15	-33	-24	-12
	31	-38	-115	-39	-67	-51	-69	-24	-26	-22	6	-14	-20	-64	-65	-24	-47	-64	-138	-106	8	12	-39	-117	-63	-49
	MEAN	-49	-30	-23	-16	-21	-34	-28	-18	-22	-23	-11	-13	-11	-16	-4	-7	-7	-11	-5	3	9	-3	-23	-42	-17
5Q	MEAN	-4		-5	-17	-9	-11	-1	-2	-1	-5	-5	-2	7	15	11	9	8	3	9	9	3	-2	6	-6	
5D	MEAN	-125	-23	16	41	-34	-55	-46	-69	-67	-93	-55	-78	-36	-23	-4	-17	-1	-4	-6	-2	-2	-29	-87	-75	-37

AUGUST 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	-41	-17	-44	-44	2	5	10	10	11	12	7	5	0	-2	-5	-4	-3	1	3	6	0	1	0	6	-3
	2	5	-7	-51	-28	-41	-36	-3	1	44	-30	3	-1	8	7	-7	3	4	2	5	7	3	-2	-2	1	-5
Q	3	3	-2	-3	3	-13	-4	-2	0	2	-8	-6	0	0	3	-9	-38	-16	3	7	7	3	-2	-1	-2	-3
Q	4	-4	-5	1	-4	-7	-8	1	16	16	-11	3	-2	12	8	6	-38	-17	7	20	16	-9	1	1	-1	0
Q	5	-6	0	4	-12	-20	0	1	-4	2	-1	-4	-2	-1	1	4	1	0	1	8	8	1	0	1	5	-1
	6	5	2	1	1	-2	-6	0	4	25	-5	-23	4	-2	0	-1	6	17	19	22	27	29	-47	-8	-9	2
	7	17	26	5	4	4	3	15	17	17	8	7	7	0	0	5	-18	-56	-8	15	33	20	53	-201	-83	-5
D	8	-16	1	4	-7	9	2	18	-8	-151	-271	-178	-89	-47	-1	6	-40	0	25	-23	-59	0	8	-9	-57	-37
D	9	-127	-211	-35	-24	-18	-5	-17	9	-25	-9	-11	-143	-46	-6	-6	0	7	-35	-93	4	7	10	2	0	-32
	10	0	-18	-41	-40	5	-4	-18	-22	-32	-34	-5	-59	-82	-6	13	8	-23	-8	12	-4	3	19	-8	-4	-15
	11	-2	-13	-16	-28	-64	-22	11	16	4	-10	-18	7	6	-39	-59	-26	3	5	17	-31	-23	-10	-2	-95	-16
	12	-56	-63	-125	-139	-102	2	8	23	-33	-63	5	16	4	-4	-8	-4	-4	0	-3	3	-10	16	12	9	-22
	13	2	-6	-11	-20	0	10	-17	11	8	18	3	9	15	-33	3	19	2	-8	38	-19	-1	-18	-75	-7	-3
	14	15	24	0	-46	-8	0	-5	-1	7	5	-4	-2	-9	-8	-7	-12	-16	-16	-5	-14	-15	-11	0	10	-5
	15	5	31	0	8	-2	-9	-4	17	19	19	24	29	17	15	1	-10	-33	-5	3	1	2	5	20	3	7
	16	0	31	4	16	30	53	0	13	18	19	21	34	20	-18	25	27	23	-9	-70	11	8	24	-19	-152	5
D	17	-130	95	60	-16	-235	142	-269	9	134	23	-156	-93	143	26	50	-38	-169	-180	-155	-88	36	12	-37	-132	-40
D	18	-47	-116	-59	-112	-63	6	-6	-72	-61	-57	-167	-135	-156	-98	-15	32	-132	-156	-34	32	27	-12	-68	-242	-71
	19	-187	-127	-33	-15	-37	-48	-58	-3	0	-55	-92	14	0	-27	-53	-31	-66	-13	-2	14	9	3	0	-8	-34
	20	-9	-16	-15	-13	-17	-19	-16	1	-31	-32	-15	-32	-47	-7	-16	-9	-1	-3	-5	3	-6	-8	-4	5	-13
	21	7	-19	-85	-52	-20	-20	-31	-25	-37	0	25	4	1	7	-2	6	-34	-30	-31	11	6	3	-2	-7	-14
	22	-12	-13	-20	-22	-21	-29	-37	-16	7	19	16	-16	-167	-76	-44	-15	-23	-24	1	-21	-23	-1	2	-5	-23
	23	-11	-15	-15	-23	-52	-13	-34	-1	-3	13	17	9	-51	-13	-5	-8	2	-21	2	19	14	22	5	-2	-7
Q	24	0	-9	-1	-59	0	-2	-6	-11	-12	-12	-8	-1	8	-7	-17	-9	-15	-3	-35	-12	-11	-21	-33	-15	-12
	25	-14	-21	-18	-50	-55	-64	-65	-58	-15	-32	0	-25	-39	-56	-50	-23	-53	-39	-6	-15	-14	-28	-45	-25	-34
D	26	-60	-47	20	15	-131	-94	-24	-48	-85	-131	-81	-131	-88	-114	-24	-55	-30	-12	-31	-13	3	-40	-21	5	-51
	27	-78	-93	-50	-41	-2	-81	-91	2	2	-30	-5	18	28	7	-133	-67	-47	1	-21	-7	-14	-27	-21	-1	-31
	28	12	7	-4	-11	11	15	-71	-13	12	-3	-8	-8	-1	3	-15	-162	-77	-49	-77	-31	14	-25	5	-82	-23
	29	-11	-1	26	-76	-76	-6	4	-14	-6	0	18	31	-33	-24	-21	-38	-14	-17	-1	3	0	0	1	4	-10
	30	6	-79	-66	-50	-21	-34	-26	0	-11	14	12	18	12	-5	-1	-11	-8	13	1	-33	-5	11	12	9	-10
	31	3	0	-7	-3	9	-29	-62	-87	-60	-3	2	13	27	-79	-75	-6	16	48	57	-31	-21	15	2	-5	-12
	MEAN	-24	-22	-19	-29	-30	-10	-26	-8	-8	-21	-20	-17	-15	-18	-15	-18	-25	-16	-12	-6	1	-2	-16	-28	-17
5Q	MEAN	-10	-7	-9	-23	-8	-2	1	2	4	-4	-2		4	1	-4	-18	-10	2	1	5	-3	-4	-6	-1	-4
5D	MEAN	-76	-56	-2	-29	-88	10	-60	-22	-38	-89	-119	-118	-39	-39	2	-20	-65	-72	-67	-25	15	-4	-27	-85	-46

SEPTEMBER 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
D	1	5	10	3	0	7	8	25	-80	-108	-75	-163	-4	23	-1	-32	-90	-42	-69	-107	-98	-83	55	18	27	-32
	2	-42	-12	21	18	15	26	28	14	6	17	-69	-47	-50	-30	-14	0	-10	-69	-57	16	39	-46	-30	8	-11
	3	9	3	8	-80	-115	5	11	24	-60	-115	-21	-21	-97	13	23	-4	-53	0	19	20	9	-71	-65	-35	-25
	4	31	11	-1	6	7	7	22	-1	-21	-4	5	15	-91	-3	9	22	-65	9	-2	7	-26	-31	9	7	-3
	5	-46	-7	3	-12	-39	-8	16	13	12	7	1	3	0	-7	-3	-38	-123	-38	-14	-37	-21	4	-45	-12	-16
Q	6	17	6	-8	5	2	2	6	3	10	11	-3	-6	-3	3	8	-60	-61	-24	-48	0	15	14	-30	-1	-6
	7	6	-7	0	1	2	7	2	14	17	1	4	6	-6	3	-8	-2	5	7	13	11	-9	-55	4	18	1
	8	9	5	5	9	19	-49	-28	-14	8	11	19	6	-14	-50	-104	-75	-103	-9	-19	-23	16	7	6	3	-15
Q	9	3	6	4	-2	1	26	18	18	18	3	-2	0	-13	-19	-21	0	-37	-14	13	0	-111	-85	-66	-21	-12
	10	-103	-57	-8	-12	-50	-10	1	5	11	-2	-3	-3	0	3	-3	-5	1	0	0	-1	0	2	4	8	-9
Q	11	7	5	1	0	-2	0	4	4	0	-3	-6	-5	-4	-1	-1	-7	-9	-8	-3	2	5	7	11	11	0
Q	12	11	10	14	11	-105	-103	-58	-42	-41	5	2	-3	-4	0	-2	-2	2	-16	7	7	12	12	9	9	-11
D	13	9	5	8	14	-23	-140	-83	-67	-61	-104	-104	-44	-104	-105	-83	-20	0	-48	13	24	-141	-40	-40	-169	-54
D	14	-21	-45	-104	-42	3	19	7	-20	-70	-24	-16	-199	-142	-177	-124	-135	-35	-28	-24	-60	-112	-21	-8	-12	-58
	15	-81	-64	-108	-74	-19	1	-22	-7	10	14	26	-8	-50	-38	6	2	-4	-7	-37	-34	11	-9	-31	8	-21
	16	-2	-21	-83	-4	-14	-73	-38	-30	-34	2	-22	-20	-56	-35	-11	-7	-2	-3	-56	-51	-47	-19	6	0	-26
	17	0	-44	-61	-45	-41	-58	-162	-23	-38	9	5	0	-3	2	3	-33	-61	-23	-17	-3	-7	4	-28	-5	-26
	18	-21	-70	-59	-104	-50	-31	-6	-65	-81	-8	-8	2	3	9	8	-84	2	5	-48	9	-2	-23	-44	10	-27
	19	12	10	-23	-46	-83	-115	-28	-47	-105	-118	-75	-22	-49	-58	-39	-34	-101	-129	-74	-108	25	2	-96	-31	-56
	20	-14	-17	3	1	-13	-99	-89	4	-32	-85	-9	-34	-24	-76	-82	-69	-48	-21	4	2	-25	-14	-10	-162	-38
D	21	-83	-76	-78	-63	-17	-46	-73	-138	-111	0	21	6	-158	-243	-129	-54	-17	-55	-51	-33	5	-3	6	-5	-58
	22	6	-96	-82	-65	-158	-72	3	5	3	-24	-43	-20	-19	-17	-11	-20	-38	-157	-81	6	-10	3	-47	-18	-40
	23	-63	-13	2	3	0	4	-29	-76	-59	-109	-103	-24	-34	-28	-9	-10	-46	-61	-8	-1	10	21	15	-1	-26
	24	-53	-25	0	-63	-71	-21	-3	-58	-45	-44	7	-1	0	15	5	-1	5	0	-15	-89	10	16	3	1	-18
	25	11	8	6	-24	-91	-113	-64	0	-42	-49	7	0	-1	3	6	-8	-23	-23	-41	5	13	6	6	6	-17
	26	5	6	-1	-63	-46	-29	7	-4	5	6	8	20	12	5	3	8	-47	-41	-3	-5	-7	5	-11	-79	-10
D	27	-107	-84	-27	-50	-120	-108	-70	-52	30	20	-19	-9	-14	-17	-44	-67	-21	-54	-49	-70	1	29	-62	-254	-51
	28	-89	2	17	-10	-15	-8	1	6	7	7	9	12	6	9	13	3	3	5	-3	5	4	7	3	7	0
Q	29	2	4	4	13	17	14	3	4	4	10	3	2	-3	-1	2	1	4	5	9	8	9	12	19	5	6
	30	9	11	5	-27	-29	7	20	16	19	12	3	9	16	8	11	10	11	7	3	4	8	12	5	2	6
	MEAN	-19	-18	-18	-24	-34	-32	-19	-20	-25	-21	-18	-13	-29	-28	-21	-26	-30	-29	-23	-16	-14	-7	-16	-23	-22
5Q MEAN		8	6	3	5	-17	-12	-5	-3	-2	5	-1	-2	-5	-4	-3	-14	-20	-11	-4	3	-14	-8	-11	1	-5
5D MEAN		-39	-38	-40	-28	-30	-53	-39	-71	-64	-37	-56	-50	-79	-109	-82	-73	-23	-51	-44	-47	-66	4	-17	-83	-51

OCTOBER 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
	1	-49	-67	9	9	-8	-51	-9	18	12	6	4	0	1	3	6	-28	-22	-8	-57	-89	-30	21	16	-25	-14
	2	-116	9	16	0	-13	-6	2	-4	0	2	-33	-10	-3	-20	-16	-10	-13	-14	-26	-30	-7	-14	-4	-4	-13
	3	0	12	3	23	-3	7	7	19	7	-9	-1	-2	-10	-8	-27	-109	-131	-40	-23	-49	-20	-74	-12	-113	-23
D	4	-36	-35	-11	-38	-43	19	-63	-63	-73	-34	-141	-136	-38	-134	-13	4	-21	-79	-112	-41	-39	-4	-25	-12	-49
	5	12	0	-48	-7	10	-8	-89	-13	5	-47	-10	3	-10	-5	-1	-5	-30	0	-2	-43	-48	-19	9	3	-14
	6	4	-20	-6	15	3	5	-1	16	3	-4	-20	-42	9	10	1	-6	-5	-1	7	-57	-32	-45	-5	7	-7
Q	7	5	1	3	10	5	5	7	-15	-10	7	2	-3	-8	-44	0	-7	-4	-3	0	1	1	2	2	5	-2
Q	8	9	8	8	6	12	10	4	3	3	1	-2	-4	-4	-2	-4	-10	-8	-6	6	3	1	-5	-2	5	1
Q	9	10	7	0	0	2	2	3	1	3	9	6	5	-2	1	-1	-5	-5	-6	-32	-16	1	1	0	-1	-1
	10	0	0	2	6	-21	-23	-26	-69	27	14	11	3	1	7	1	0	-26	-57	-99	-62	-55	16	28	-30	-15
	11	-40	-64	-50	-14	12	-13	-77	-140	-76	-59	-59	-65	-83	-82	-74	-36	-37	-33	-39	-67	30	21	10	-30	-44
	12	-148	-90	9	-66	-217	-61	-23	-128	-79	-28	-13	9	3	-7	-6	-4	-6	-2	1	4	3	7	4	5	-35
	13	2	4	0	-4	-21	-124	-83	-51	10	-1	-2	-2	-113	-43	-11	-72	-101	-55	-58	-54	-15	-18	8	11	-33
	14	-40	-126	-81	-70	-64	13	-2	-19	-44	-16	-18	-48	-35	-31	-13	-13	-3	-29	-49	-44	-39	-39	-20	-10	-35
Q	15	-53	-27	-5	-13	-31	-26	1	4	0	-17	-18	-5	1	-24	-51	-18	-10	-11	-3	3	0	-25	1	2	-14
D	16	3	0	0	-2	-3	-14	1	0	5	11	5	-313	-204	-63	-51	-108	-107	-173	-168	-58	47	60	38	-71	-49
D	17	-57	-59	-140	-76	-71	-76	-227	-217	-133	-105	-69	-165	-144	-145	-111	-169	-318	-108	-239	-195	-68	-151	-106	-132	-137
D	18	-106	-100	-110	-98	3	11	11	-30	-115	-46	-38	-71	-119	-39	-67	-97	-87	-59	-34	-19	-7	-45	-94	-34	-58
	19	-44	-41	-85	-72	-65	-46	-93	-36	-144	-27	-23	-71	-65	-96	-53	-34	-84	-46	-27	-47	-51	-20	-24	-32	-55
	20	-14	-30	-39	-67	-44	-71	-60	-18	-16	-145	-98	-43	-49	-20	-41	-65	-36	-30	-1	-1	0	-16	8	6	-37
Q	21	0	0	-4	-3	-1	-1	-2	1	3	4	-4	-6	-8	-8	-14	-14	-12	-18	-14	0	2	4	7	-10	-4
	22	-53	-57	-44	-54	7	38	23	3	-105	-58	20	-3	-107	-111	-55	23	1	-67	-49	-126	-148	-95	-89	-29	-47
D	23	-12	-17	-27	-24	-87	-94	-104	-45	-8	-11	-60	-61	-47	-51	-150	-99	-47	-1	-131	-78	-23	-60	21	-56	-53
	24	-89	25	24	-31	-49	-82	-16	-1	-114	-30	-37	-89	-85	-79	-62	-31	-15	-5	-40	-54	-45	5	7	-16	-38
	25	0	-2	-35	-35	11	5	-38	-101	-32	0	-24	-25	-68	-128	-19	-33	-83	-54	-6	-15	-14	-5	9	6	-29
	26	5	0	-56	-43	-7	3	-2	-7	5	0	-43	-41	-42	-24	-17	-16	-19	-32	-19	-16	1	5	13	10	-14
	27	9	11	12	5	8	21	24	21	15	4	6	7	0	-8	-2	8	7	3	5	7	6	-91	-27	22	3
	28	17	-25	-20	15	18	2	-44	22	24	11	2	5	11	7	-27	-60	-34	8	-66	-170	-123	-43	-19	21	-20
	29	-7	11	19	15	20	-6	-39	55	33	22	18	4	0	-10	5	2	-25	-42	-100	-133	-107	0	-115	-55	-18
	30	-1	-2	-84	-66	-21	24	17	21	12	15	-1	-54	-4	-6	-2	-33	-88	0	2	-2	-2	-4	-1	5	-11
	31	10	9	8	11	8	12	15	18	21	-34	21	8	0	-5	-18	-43	-4	-6	-1	-14	-26	0	10	9	0
	MEAN	-25	-21	-24	-22	-21	-17	-28	-24	-25	-18	-20	-39	-39	-38	-29	-35	-44	-31	-44	-47	-26	-20	-11	-18	-28
5Q	MEAN	-6	-2			-3	-2	3	-1		1	-3	-3	-4	-15	-14	-11	-8	-9	-9	-2	1	-5	2		-4
5D	MEAN	-42	-42	-58	-48	-40	-31	-76	-71	-65	-37	-61	-149	-110	-86	-78	-94	-116	-84	-137	-78	-18	-40	-33	-61	-69

NOVEMBER 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	-1	0	1	1	1	2	1	1	0	3	-8	-13	9	-10	-11	-14	-24	-15	-8	-6	-4	-5	-3	-2	-4
	2	-6	-3	-13	-13	-12	-4	0	-1	-70	-66	-3	-11	-75	-84	-37	-11	-3	-6	-4	0	-1	2	0	-3	-18
	3	-28	-15	53	3	-23	14	33	3	-21	4	8	0	1	-2	-23	-80	-94	-73	-62	-3	9	-92	-21	2	-17
	4	-13	35	17	9	-5	-2	0	0	-35	3	17	-9	0	-8	-10	-17	-32	-37	-11	-24	5	-44	2	9	-6
	5	17	10	40	31	28	17	10	52	0	-9	0	-15	-23	-9	-8	-67	-49	-16	-18	-76	-117	-145	-75	-30	-19
	6	-16	-26	-39	-65	-43	-18	-32	-62	-130	-71	-90	-74	-173	-162	-55	-56	-40	-28	-14	-9	-8	-75	-37	-18	-56
D	7	-33	-355	-163	-45	-49	-43	-18	86	-238	-130	-266	-404	-110	-177	-159	-48	-64	-74	-77	-141	-204	-89	-19	-190	-125
	8	-112	2	-49	-36	13	-3	-2	-17	-26	-59	-66	-77	-37	-62	-104	-66	-16	-18	-66	-85	-4	0	-3	-11	-38
	9	-34	-9	-3	-12	-28	-77	-60	-82	-56	-71	-70	-51	-40	-19	-23	-188	-146	-133	-85	-41	-68	-38	8	2	-55
	10	-8	-73	-117	-6	-31	-79	0	2	-5	-73	-191	-192	-55	-34	-98	-189	-120	-85	-57	-9	-19	-38	6	-33	-63
D	11	-116	-185	-86	-95	-15	-41	-33	-33	-110	-148	-120	-15	-69	-90	-78	-80	-110	-43	6	-4	-41	-90	9	-1	-66
	12	-43	-20	-25	-73	-65	-9	-22	-67	-33	-87	-47	-45	-26	-172	-189	-63	-130	-2	2	-5	-3	-3	-2	2	-47
	13	0	-19	-51	-66	-1	0	-36	27	5	2	-41	-103	-144	-138	-122	-71	-80	-93	-52	-15	-14	-33	-74	-106	-51
	14	-122	-120	-6	7	3	-21	-6	16	-2	-4	2	5	-3	-7	-52	-47	-135	-90	-62	-30	-10	-10	3	3	-29
Q	15	6	3	2	1	1	0	0	2	2	-14	-12	-59	0	-10	-5	-8	-9	-4	-3	-12	-22	2	7	8	-5
	16	3	6	8	13	9	7	11	8	10	2	-46	-37	-16	5	12	0	-36	-48	-35	24	19	-16	9	-2	-4
	17	0	-18	-9	-43	-33	10	21	16	15	18	-17	-74	-48	-7	3	-4	-5	-5	-7	-1	-1	-2	-2	-4	-8
	18	-13	-1	2	-9	0	-15	-7	-5	4	5	4	-12	-189	-70	-113	-67	75	58	61	8	5	14	-207	-190	-28
	19	-85	-54	-78	-57	-17	-71	17	57	31	15	-8	-1	-9	-10	-9	-7	-5	-7	-9	-10	-10	-9	-8	-6	-15
Q	20	-3	-3	0	-6	-6	-3	-4	-6	-6	-4	-5	-15	-14	-1	-3	-4	-3	-3	-2	-5	-1	-2	-20	-23	-6
D	21	-18	-32	-102	-131	-40	0	19	-83	-217	-409	-356	-283	-184	-201	-194	-49	-35	-83	-113	-114	-104	-105	-102	-58	-125
D	22	-166	-130	-132	-110	4	-5	-2	-15	-48	-69	-88	-62	-100	-189	-145	-142	-175	-65	-106	-64	-93	-68	-65	-83	-88
D	23	-80	-125	-110	-117	-46	-70	-78	-126	-140	-191	-156	-147	-7	-48	-295	-363	-157	-13	-1	-100	-45	-48	-128	-77	-111
	24	-11	-16	-29	-39	-12	-5	11	7	0	1	-4	-4	-2	-2	-6	-12	-74	-132	-35	3	25	8	14	2	-13
	25	-9	-12	-3	45	30	19	17	22	4	-104	-19	-18	-17	16	-27	-106	-114	-109	-156	-20	13	5	1	-20	-23
	26	2	28	31	23	5	1	15	15	13	4	-11	-9	4	2	-14	-115	-114	-15	6	-13	-153	-19	0	8	-13
	27	5	8	-5	9	10	11	22	33	-2	-116	-37	-64	-126	-109	4	0	-7	-57	-92	-1	-10	-43	-57	-15	-27
	28	21	10	19	-12	-31	-98	-2	20	17	12	0	-23	-52	-14	-107	-185	-32	5	1	-11	-3	-14	6	11	-19
Q	29	8	8	9	12	17	14	13	13	13	13	11	14	18	11	9	3	0	-2	1	-10	2	6	6	8	8
Q	30	8	6	6	11	10	11	15	13	13	11	12	11	4	2	-1	2	-7	-14	-7	-2	0	9	5	-3	5
	MEAN	-28	-37	-28	-26	-11	-15	-3	-3	-34	-51	-54	-60	-49	-53	-62	-68	-58	-40	-34	-26	-29	-31	-25	-27	-36
5Q	MEAN	4	3	4	4	5	5	5	5	4	2		-12	3	-2	-2	-4	-9	-8	-4	-7	-5	2	-1	-2	
5D	MEAN	-83	-165	-119	-100	-29	-32	-22	-34	-151	-189	-197	-182	-94	-141	-174	-136	-108	-56	-58	-85	-97	-80	-61	-82	-103

DECEMBER 1970 AO INDICES VALUES ARE EXPRESSED IN GAMMAS

	UT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	MEAN
Q	1	6	6	7	5	4	5	8	8	8	11	11	4	2	-2	-3	-3	-7	-8	3	4	3	2	2	3	3
	2	6	7	7	8	5	3	7	7	7	8	7	2	5	3	3	0	4	-11	-26	-36	-7	14	11	7	2
	3	0	-58	-49	3	7	8	3	-24	-73	-8	15	7	3	2	1	12	-34	3	1	1	2	-5	-16	8	-8
	4	10	10	7	6	7	11	13	-2	1	24	12	16	-14	-29	9	11	6	3	5	14	-34	-149	-41	-5	-5
	5	1	-14	-60	-61	-43	-45	-27	7	-33	-32	12	-4	1	-52	-76	-123	-25	2	2	0	2	3	2	2	-23
	6	3	-10	-39	-6	1	-12	-16	-21	-107	-86	-56	5	0	-124	-154	-102	-92	-48	-28	-9	14	7	1	5	-36
	7	10	13	14	7	-23	0	-45	-21	-8	0	-9	-41	-109	-47	-53	-44	-36	-25	-18	-44	-15	-94	-57	-81	-30
D	8	-63	-110	-28	-141	-95	-21	-50	-142	-36	13	-182	-90	-147	-179	-187	7	9	-23	-98	-107	-10	-4	-26	-7	-72
	9	7	-8	-13	-5	-2	-16	23	15	16	2	-52	0	14	-11	-16	-13	-33	-49	-10	7	4	4	5	5	-5
Q	10	7	4	7	8	10	8	6	6	-29	-56	-19	-16	-82	-55	-52	-42	-44	-18	-35	-70	-26	-7	2	0	-21
Q	11	3	2	4	0	1	-7	-10	0	-11	-16	3	3	1	6	-3	0	0	0	-33	-2	6	7	5	4	-2
	12	7	6	-16	-2	0	0	1	3	0	-33	-13	-31	-29	-13	-23	-1	-4	-5	-27	-10	7	-1	-6	28	-7
	13	39	33	19	22	17	12	11	14	24	10	8	6	6	6	6	4	12	-43	-34	5	14	18	8	5	9
D	14	32	35	64	109	79	-151	-338	-580	-323	-33	-128	-73	19	-19	-20	-32	-19	-31	-275	-114	-32	-88	-149	-29	-87
D	15	-16	-58	-140	-53	-34	-81	-145	-193	-123	-128	-124	-82	-26	-86	-43	-131	-81	-48	-48	-4	-12	-5	-8	-12	-70
	16	0	6	27	14	9	8	19	19	5	3	-3	-12	13	7	-14	-3	-10	-36	-22	-9	-5	-3	-3	-11	-0
Q	17	-4	9	11	15	21	11	19	12	1	-24	-34	-61	-20	-16	-45	-21	-6	8	0	6	-5	-14	1	5	-5
	18	8	7	8	6	4	0	-14	-10	-3	2	1	-1	-7	-31	-9	-6	-15	-21	0	4	0	12	15	13	-2
	19	-1	5	0	-1	5	0	-23	-24	-43	-84	-2	8	6	2	2	1	3	2	-7	-21	-20	-25	-89	-8	-13
	20	7	-7	-21	-6	-37	-51	-75	-105	-175	-97	-35	5	-16	-55	-67	-27	-19	-15	-16	-68	-51	-17	-9	-5	-40
	21	-26	-26	-15	-14	-23	-28	-54	-59	-27	-32	-32	-25	-51	-5	5	-3	-9	-10	-7	-8	-26	-64	-44	-16	-25
	22	-19	-32	-5	-4	-10	-19	4	17	-45	-22	-15	-4	-6	-19	-20	-17	-34	-27	-17	-11	-9	13	-27	4	-14
	23	10	17	-38	10	22	16	27	16	13	9	-1	-43	-21	-2	-24	-40	-32	11	4	9	4	3	6	-9	-1
D	24	-141	-90	-89	-91	-11	0	4	19	26	90	25	8	-5	-11	-83	-26	18	1	-2	-25	-29	-4	4	3	-17
	25	5	24	8	2	3	2	2	1	0	0	-1	1	5	3	-11	-18	-59	-35	3	-3	-37	6	13	-10	-4
	26	11	13	11	19	24	-24	37	22	15	21	14	8	6	-2	0	-12	-25	2	6	5	10	-15	5	12	7
	27	14	15	18	15	26	17	16	17	29	24	11	34	12	-62	9	-90	-52	-37	0	12	-9	-112	1	21	-3
D	28	34	-2	10	-8	40	56	40	19	14	-32	27	45	-47	2	-29	-36	-116	-114	-185	-167	-104	-79	-93	-116	-35
	29	30	17	4	-6	-7	10	15	19	-35	41	14	3	-8	-13	-16	-18	-37	-8	-4	11	38	29	-33	-188	-6
	30	-106	-54	-77	-36	27	32	21	14	6	-1	6	5	3	6	7	-22	-190	-105	14	14	11	5	6	6	-17
Q	31	6	4	4	3	7	6	5	4	4	5	2	8	7	8	5	7	3	1	6	7	9	12	10	6	6
	MEAN	-4	-8	-12	-6	1	-8	-17	-30	-29	-14	-17	-10	-16	-25	-29	-25	-30	-22	-27	-20	-10	-18	-16	-12	-17
5Q	MEAN	4	5	7	6	9	5	6	6	-5	-16	-7	-12	-18	-12	-20	-12	-11	-3	-12	-11	-3		4	4	-4
5D	MEAN	-31	-45	-37	-37	-4	-39	-98	-175	-88	-18	-76	-38	-41	-59	-72	-44	-38	-43	-122	-83	-37	-36	-54	-32	-56

TABLE OF OBSERVATORIES SUPPLYING HOURLY AU

JANUARY 1970

AU = MAXIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	DI	DI	AI	AI	AI	BW	BW	NAS	LR	FC
2	NAS	GWR	BW	BW	BW	BW	CC	CC	DI	CC	CC	DI	AI	AI	AI	AI	AI	NAS	NAS	NAS	FC	LR	FC	BW
3	GWR	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	CC	DI	DI	DI	DI	DI	CO	CO	BW	NAS	NAS	BW	BW
4	DI	CC	CC	BW	BW	BW	BW	BW	BW	CC	BW	CC	CC	CC	DI	LR	CO	BW	BW	BW	BW	NAS	NAS	FC
5	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	DI	BW	BW	BW	BW	LR	LR	FC
6	NAS	NAS	CC	BW	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	DI	DI	BW	BW	LR	AI	NAS	BW	BW	BW	BW
7	BW	BW	BW	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	DI	DI	LR	AI	AI	LR	LR	NAS	NAS	BW
8	BW	BW	BW	BW	GWR	FC	FC	BW	BW	BW	BW	BW	CC	CC	DI	DI	DI	AI	LR	BW	BW	BW	FC	FC
9	GWR	GWR	FC	GWR	BW	BW	FC	CC	CC	BW	BW	BW	CC	DI	DI	DI	AI	AI	NAS	NAS	GWR	NAS	FC	FC
10	FC	NAS	FC	BW	BW	CC	CC	CC	BW	BW	CC	CC	CC	DI	CC	DI	DI	AI	AI	LR	FC	FC	BW	FC
11	BW	NAS	FC	FC	FC	GWR	FC	FC	CC	CC	BW	CC	CC	DI	DI	CO	CO	CO	NAS	NAS	LR	LR	LR	FC
12	BW	BW	FC	GWR	GWR	CC	CC	CC	CC	CO	CC	CC	CC	DI	DI	DI	DI	AI	AI	NAS	NAS	NAS	NAS	NAS
13	LR	NAS	BW	CC	BW	BW	CC	BW	CC	CC	CC	CC	CC	DI	DI	DI	DI	DI	GWR	GWR	FC	FC	NAS	NAS
14	NAS	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	BW	BW	BW	AI	CC	FC	NAS	FC
15	FC	FC	FC	GWR	GWR	FC	CC	CC	CC	CC	CC	BW	CC	CC	CC	CC	LR	AI	DI	DI	NAS	LR	NAS	NAS
16	GWR	BW	FC	FC	BW	BW	BW	CC	CO	DI	TI	DI	TI	AI	AI	AI	LR	LR	LR	LR	GWR	GWR	GWR	GWR
17	BW	BW	CO	CO	CO	CO	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	DI	NAS	NAS	NAS	LR	DI	DI	NAS
18	BW	FC	BW	BW	FC	BW	BW	BW	BW	CC	CC	BW	BW	BW	CC	DI	DI	DI	DI	BW	BW	LR	NAS	DI
19	DI	DI	DI	BW	BW	BW	BW	BW	BW	CC	BW	BW	CC	CC	DI	DI	DI	BW	NAS	NAS	NAS	FC	NAS	NAS
20	FC	GWR	FC	DI	CC	NAS	BW	BW	CC	CC	BW	CC	TI	DI	DI	DI	DI	CC	CO	LR	NAS	NAS	NAS	DI
21	CC	CC	CC	BW	BW	BW	BW	BW	CC	CC	CC	CC	TI	DI	DI	CC	CC	CC	GWR	GWR	LR	NAS	NAS	FC
22	FC	BW	DI	FC	GC	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	LR	NAS	NAS	BW	BW	NAS	DI	DI
23	CC	FC	FC	GWR	BW	BW	CC	BW	BW	BW	CC	CC	CC	TI	DI	CC	BW	BW	BW	BW	NAS	BW	NAS	NAS	FC
24	FC	FC	FC	CC	NAS	CC	CC	CC	CC	CC	DI	CC	CC	CC	CC	DI	DI	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS
25	NAS	BW	BW	BW	BW	BW	FC	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	TI	BW	BW	GWR	GWR	TI	TI
26	FC	FC	BW	FC	CC	CC	CC	BW	BW	BW	BW	CC	CC	CC	BW	BW	BW	UE	BW	BW	BW	BW	BW	CC
27	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	AI	NAS	NAS	NAS	NAS	NAS	FC
28	GWR	FC	FC	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	BW	BW	CC	CC	AI	AI	AI	BW	BW	FC
29	GWR	TI	BW	BW	BW	BW	BW	CC	CC	BW	NAS	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	FC
30	FC	FC	TI	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	TI	DI	DI	AI	LR	LR	AI	AI	LR	NAS	GWR
31	FC	GWR	BW	BW	BW	BW	CC	CC	BW	BW	CC	CC	CC	CC	BW	BW	CC	CC	AI	FC	FC	FC	FC	FC

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
AI = ABISKO	68 21.5	18 49.4	66.0	114.9
BW = BARROW	71 18.2	-156 44.9	68.5	241.1
CC = C. CHELYUSKIN	77 43.0	104 17.0	66.2	176.4
CO = COLLEGE	64 51.6	-147 50.2	64.6	256.5
GWR= GREAT WHALE R.	55 16.0	-77 47.0	66.5	347.4
DI = DIKSON ISLAND	73 32.6	80 33.7	63.0	161.5

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
FC = FT. CHURCHILL	58 48.0	-94 06.0	68.7	322.8
LR = LEIRVOGUR	64 11.0	-21 42.0	70.2	71.0
NAS= NASSARSSUAQ	61 06.0	-45 12.0	71.0	37.0
TI = TIKSI BAY	71 35.0	129 00.0	60.4	191.4
UE = CAPE UELEN	66 09.8	-169 50.1	61.7	237.0

TABLE OF OBSERVATORIES SUPPLYING HOURLY AL

JANUARY 1970

AL = MINIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	UE	UE	NAS	LR	NAS	NAS	NAS	FC	FC	FC	LR	FC	BW	FC	BW	BW	BW	BW	BW	FC	FC	DI	AI	AI
2	AI	NAS	LR	LR	GWR	NAS	NAS	NAS	GWR	BW	BW	CO	CO	BW	BW	BW	DI	DI	DI	DI	CC	CC	DI	AI
3	AI	NAS	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	FC	BW	BW	BW	BW	GWR	CC	CC	GWR	GWR	DI	DI	AI	AI
4	UE	UE	GWR	GWR	LR	LR	GWR	NAS	GWR	FC	FC	FC	BW	BW	BW	CC	CC	CC	GWR	GWR	DI	DI	CC	UE
5	UE	GWR	LR	LR	NAS	NAS	GWR	FC	FC	FC	FC	FC	FC	CO	BW	BW	GWR	NAS	NAS	NAS	CC	DI	AI	AI
6	CC	UE	UE	LR	NAS	NAS	NAS	NAS	NAS	FC	FC	CO	BW	BW	BW	FC	GWR	DI	CC	CC	CC	NAS	NAS	UE
7	UE	LR	LR	NAS	LR	NAS	NAS	NAS	FC	FC	NAS	NAS	BW	BW	BW	BW	BW	BW	BW	DI	CC	DI	CC	AI
8	NAS	NAS	LR	LR	LR	LR	LR	LR	LR	NAS	FC	FC	FC	FC	FC	BW	BW	CC	BW	UE	UE	LR	CC	CC
9	CC	LR	LR	LR	NAS	FC	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	BW	BW	CC	BW	BW	BW	DI	DI	DI	CC
10	CC	UE	LR	AI	LR	LR	LR	NAS	GWR	FC	LR	BW	BW	BW	NAS	NAS	BW	DI	CC	BW	CC	UE	NAS	AI
11	AI	LR	AI	TI	TI	LR	LR	LR	TI	NAS	NAS	BW	BW	BW	BW	GWR	GWR	TI	BW	BW	CC	CC	CC	CC
12	LR	LR	LR	NAS	NAS	TI	NAS	FC	GWR	FC	FC	FC	FC	BW	BW	BW	BW	DI	BW	BW	DI	DI	CC	TI
13	CC	LR	TI	TI	NAS	NAS	NAS	NAS	NAS	LR	FC	FC	BW	BW	BW	BW	BW	BW	TI	TI	TI	TI	CC	BW
14	UE	LR	LR	NAS	NAS	GWR	NAS	NAS	NAS	NAS	NAS	FC	FC	BW	BW	BW	FC	GWR	FC	TI	TI	TI	CC	AI
15	CC	CC	TI	CC	LR	LR	LR	LR	NAS	NAS	BW	NAS	NAS	BW	GWR	BW	BW	BW	BW	BW	TI	CC	CC	CC
16	AI	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	BW	CO	CO	CO	CO	BW	TI	BW	TI	TI	TI	TI	AI	AI
17	AI	AI	AI	LR	LR	NAS	NAS	NAS	GWR	FC	FC	FC	FC	BW	LR	BW	BW	BW	CC	BW	CC	CC	CO	UE
18	LR	LR	NAS	NAS	AI	NAS	GWR	FC	FC	FC	BW	FC	NAS	NAS	NAS	BW	BW	GWR	GWR	GWR	DI	FC	DI	CO
19	UE	UE	UE	LR	LR	NAS	NAS	NAS	FC	FC	FC	FC	LR	BW	BW	BW	BW	DI	CC	CC	DI	DI	DI	CC
20	CC	LR	LR	NAS	GWR	GWR	FC	FC	GWR	FC	FC	FC	BW	BW	BW	FC	BW	GWR	TI	DI	DI	DI	AI	LR
21	NAS	UE	NAS	NAS	NAS	GWR	GWR	FC	GWR	FC	FC	FC	FC	CO	BW	NAS	FC	FC	DI	DI	DI	DI	CC	CC
22	LR	LR	NAS	NAS	NAS	GWR	FC	FC	AI	LR	FC	FC	BW	FC	BW	BW	CC	CC	BW	DI	DI	CC	CC	CO
23	LR	NAS	LR	LR	NAS	NAS	GWR	GWR	GWR	AI	AI	BW	BW	BW	BW	NAS	GWR	GWR	GWR	GWR	GWR	GWR	DI	LR
24	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	FC	BW	FC	FC	FC	BW	BW	BW	BW	CC	DI	DI	DI	CC	CC
25	UE	UE	NAS	NAS	NAS	NAS	AI	NAS	LR	AI	AI	LR	NAS	NAS	BW	GWR	GWR	CC	CC	DI	DI	DI	CO	CO
26	CO	NAS	NAS	NAS	LR	LR	FC	FC	FC	FC	FC	FC	LR	NAS	CC	CC	CC	CC	FC	GWR	CC	CO	CO	CO
27	CO	UE	NAS	LR	LR	LR	DI	FC	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	BW	DI	DI	CC	CC	CC
28	CC	UE	UE	LR	LR	LR	AI	AI	LR	LR	LR	AI	FC	LR	LR	GWR	GWR	FC	BW	CC	TI	CC	CC	LR
29	AI	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	FC	UE	LR	LR	LR	NAS	NAS	FC	FC	FC	CO	CO	CO	CO	LR
30	CC	CC	NAS	NAS	NAS	NAS	GWR	NAS	GWR	FC	BW	FC	FC	BW	FC	BW	BW	BW	CC	BW	TI	DI	CO	AI
31	LR	LR	LR	NAS	NAS	NAS	AI	AI	NAS	NAS	NAS	BW	AI	GWR	DI	TI	TI	GWR	DI	DI	DI	CO	CO	CO

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
AI = ABISKO	68 21.5	18 49.4	66.0	114.9
BW = BARROW	71 18.2	-156 44.9	68.5	241.1
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FEBRUARY 1970 — AU = MAXIMUM DELTA H

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1	FC	FC	FC	BW	BW	BW	CC	LR	FC	FC	FC	FC	FC	CC	CC	BW	CO	BW	BW	FC	FC	FC	FC	GWR
2	GWR	NAS	FC	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	DI	CC	DI	AI	LR	NAS	LR	GWR	FC	GWR	GWR
3	FC	GWR	GWR	LR	BW	CC	CC	BW	BW	CC	CC	CC	DI	DI	DI	DI	DI	BW	BW	BW	BW	BW	BW	NAS
4	NAS	NAS	FC	FC	BW	BW	BW	BW	CO	DI	CC	CC	DI	DI	DI	DI	AI	LR	NAS	LR	NAS	GWR	BW	NAS
5	FC	FC	GWR	GWR	BW	BW	NAS	BW	BW	CC	CC	CC	CC	DI	DI	DI	NAS	FC	NAS	FC	FC	FC	FC	NAS
6	NAS	NAS	NAS	GWR	FC	FC	CC	BW	CC	BW	BW	BW	BW	BW	CC	CC	CC	BW	NAS	NAS	NAS	BW	NAS	NAS
7	BW	BW	CC	CC	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	BW	BW	BW	BW	AI	BW	BW	GWR
8	BW	GWR	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	DI	DI	DI	DI	NAS	NAS	LR	LR	BW	DI
9	NAS	DI	GWR	GWR	BW	BW	BW	BW	BW	BW	CC	CC	BW	CC	DI	DI	DI	DI	DI	DI	BW	CC	CC	DI
10	DI	DI	DI	DI	GWR	DI	BW	BW	BW	BW	BW	CC	CC	UE	DI	DI	AI	AI	LR	NAS	BW	BW	BW	BW
11	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	DI	DI	DI	NAS	NAS	DI	DI	DI	DI
12	DI	BW	BW	BW	BW	FC	FC	BW	GWR	BW	BW	CC	CC	CC	DI	DI	DI	CC	DI	DI	DI	DI	DI	DI
13	DI	FC	FC	FC	FC	UE	GWR	FC	GWR	GWR	CC	CC	CC	DI	DI	BW	BW	BW	NAS	BW	NAS	FC	FC	FC
14	FC	FC	FC	BW	BW	BW	BW	LR	NAS	CC	DI	DI	LR	LR	LR	LR	LR	NAS	FC	FC	FC	FC	FC	FC
15	FC	FC	FC	FC	BW	BW	CC	BW	BW	CC	DI	CC	FC	CC	FC	DI	NAS	AI	AI	AI	DI	DI	FC	NAS
16	NAS	FC	FC	FC	CC	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	DI	LR	DI	CC	CC	NAS	LR	LR
17	DI	FC	FC	FC	FC	FC	GWR	BW	BW	CC	CC	CC	CC	CC	CC	LR	AI	LR	NAS	NAS	NAS	GWR	GWR	NAS
18	NAS	GWR	FC	BW	BW	BW	BW	BW	BW	CC	BW	CC	CC	DI	DI	DI	BW	LR	BW	NAS	BW	LR	GWR	BW
19	GWR	GWR	DI	GWR	GWR	BW	BW	BW	BW	BW	CC	CC	CC	CC	TI	DI	DI	GWR	GWR	GWR	GWR	GWR	GWR	GWR
20	GWR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	BW	BW	BW	BW	CC	DI	DI	DI	DI	DI	NAS	FC	LR	LR	DI	DI
21	FC	FC	FC	FC	FC	BW	BW	BW	CO	BW	BW	UE	FC	TI	UE	UE	TI	TI	TI	NAS	NAS	GWR	GWR	GWR
22	GWR	GWR	GWR	GWR	GWR	CO	FC	FC	CO	BW	BW	TI	TI	CC	CO	UE	CO	LR	AI	LR	LR	TI	DI	DI
23	CC	DI	AI	FC	FC	FC	FC	FC	TI	FC	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	FC	TI	TI
24	FC	FC	AI	FC	FC	AI	BW	BW	BW	BW	TI	CC	CC	CC	DI	LR	AI	AI	LR	AI	FC	FC	DI	DI
25	FC	FC	FC	BW	FC	BW	TI	TI	TI	TI	TI	TI	CC	CC	CC	DI	AI	AI	DI	DI	TI	TI	TI	LR
26	FC	FC	GWR	FC	FC	BW	BW	BW	CC	TI	TI	TI	TI	AI	AI	AI	NAS	LR	NAS	TI	DI	NAS	FC	FC
27	FC	FC	FC	FC	DI	DI	BW	BW	CC	CC	DI	DI	CC	DI	DI	LR	NAS	AI	AI	NAS	NAS	GWR	GWR	GWR
28	GWR	BW	BW	GWR	GWR	BW	BW	CO	CO	CC	TI	TI	TI	DI	DI	TI	LR	LR	LR	NAS	NAS	FC	NAS	FC

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	TI	LR	LR	LR	GWR	NAS	NAS	NAS	GWR	AI	GWR	LR	NAS	BW	GWR	GWR	GWR	GWR	GWR	GWR	CC	DI	DI	CC
2	CC	CC	TI	FC	NAS	NAS	NAS	FC	FC	FC	FC	CO	CO	BW	FC	FC	TI	TI	TI	TI	AI	AI	AI	DI
3	CC	CC	UE	GWR	NAS	NAS	NAS	NAS	FC	FC	FC	BW	BW	BW	FC	BW	GWR	GWR	GWR	GWR	UE	AI	CO	UE
4	CO	UE	UE	TI	TI	NAS	GWR	FC	GWR	CO	GWR	FC	BW	BW	BW	BW	TI	TI	DI	DI	TI	AI	AI	CC
5	CC	LR	LR	LR	LR	NAS	TI	NAS	FC	FC	FC	FC	FC	BW	BW	CC	CC	CC	DI	DI	DI	DI	DI	CC
6	CC	UE	UE	AI	NAS	GWR	TI	FC	FC	GWR	GWR	LR	NAS	NAS	GWR	GWR	GWR	CC	CC	CC	CC	TI	TI	CO
7	CO	CO	UE	UE	TI	TI	TI	AI	AI	AI	AI	AI	LR	BW	GWR	GWR	GWR	CC	CO	CO	CO	TI	TI	TI
8	TI	TI	TI	TI	TI	DI	DI	DI	DI	AI	AI	LR	NAS	BW	BW	BW	BW	CC	BW	DI	DI	CC	CC	UE
9	UE	CO	NAS	NAS	TI	LR	GWR	NAS	NAS	AI	AI	LR	NAS	NAS	BW	BW	BW	BW	CC	TI	TI	CO	TI	TI
10	TI	TI	TI	TI	FC	FC	FC	FC	TI	TI	AI	LR	NAS	BW	BW	BW	BW	BW	BW	TI	DI	CO	AI	LR
11	CO	TI	TI	UE	GWR	LR	TI	FC	FC	GWR	AI	LR	NAS	NAS	GWR	FC	BW	CC	CC	CC	CO	CO	CO	CO
12	CO	TI	TI	TI	TI	TI	AI	AI	AI	AI	AI	LR	NAS	BW	GWR	GWR	GWR	GWR	GWR	GWR	CO	CO	CO	UE
13	BW	BW	BW	BW	NAS	FC	AI	AI	AI	AI	AI	BW	BW	BW	BW	FC	GWR	GWR	GWR	GWR	CO	CO	CO	CO
14	BW	BW	NAS	LR	NAS	NAS	GWR	GWR	FC	FC	CO	FC	BW	CO	CO	BW	TI	TI	GWR	BW	UE	CO	CO	CO
15	CO	CO	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	BW	GWR	DI	BW	BW	CC	BW	DI	DI	CC	CC	CO	CC	AI
16	CO	CO	BW	BW	TI	FC	GWR	FC	FC	FC	FC	CO	BW	BW	BW	BW	CC	DI	GWR	DI	DI	DI	DI	CC
17	CO	CO	NAS	TI	NAS	TI	NAS	AI	AI	NAS	FC	FC	FC	NAS	GWR	GWR	BW	BW	BW	TI	AI	AI	AI	LR
18	CC	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	AI	BW	NAS	CO	BW	BW	LR	BW	DI	DI	DI	DI	DI	DI
19	LR	LR	UE	BW	NAS	NAS	NAS	GWR	GWR	AI	AI	BW	BW	BW	BW	BW	CC	CC	CO	CO	CO	CO	CO	CO
20	CO	CO	UE	NAS	NAS	NAS	NAS	DI	DI	NAS	AI	LR	LR	BW	BW	BW	CC	CC	GWR	DI	DI	CO	CO	UE
21	CO	CO	BW	BW	TI	NAS	FC	FC	FC	FC	LR	LR	BW	BW	LR	LR	FC	FC	BW	CO	DI	CO	BW	BW
22	UE	UE	BW	BW	DI	DI	DI	DI	DI	AI	AI	AI	LR	BW	NAS	BW	GWR	GWR	DI	CC	DI	CC	CO	UE
23	CO	UE	BW	UE	BW	DI	DI	DI	DI	AI	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	CO	CO	CO	CO
24	CO	NAS	NAS	NAS	NAS	DI	FC	FC	FC	DI	FC	FC	BW	NAS	GWR	TI	BW	BW	TI	GWR	AI	CO	UE	UE
25	UE	NAS	NAS	NAS	NAS	FC	GWR	GWR	DI	AI	AI	LR	NAS	NAS	GWR	GWR	BW	BW	FC	FC	CO	CO	CO	BW
26	UE	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	FC	CC	CO	FC	BW	BW	TI	CC	GWR	BW	BW	CO	BW
27	UE	UE	UE	TI	NAS	NAS	NAS	NAS	GWR	FC	GWR	FC	FC	FC	BW	BW	TI	BW	BW	DI	DI	DI	AI	DI
28	AI	AI	LR	CC	NAS	FC	NAS	NAS	NAS	GWR	BW	CO	FC	FC	FC	BW	BW	TI	BW	TI	UE	BW	BW	DI

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1	GWR	GWR	GWR	CO	CO	CO	CO	CO	TI	TI	DI	DI	TI	AI	AI	AI	CO	CO	NAS	NAS	NAS	LR	NAS	FC
2	GWR	BW	GWR	GWR	BW	CO	CO	BW	TI	TI	TI	DI	CC	CO	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	NAS	GWR
3	GWR	NAS	NAS	FC	BW	BW	BW	CO	CC	CC	BW	CO	DI	DI	DI	DI	NAS	LR	NAS	NAS	LR	GWR	FC	FC
4	FC	GWR	FC	FC	FC	BW	BW	CO	CC	CC	CC	DI	DI	AI	AI	AI	LR	LR	LR	NAS	NAS	GWR	GWR	GWR
5	GWR	GWR	GWR	GWR	BW	BW	BW	BW	CC	CO	CO	CC	CC	CC	TI	TI	NAS	LR	LR	LR	GWR	GWR	FC	GWR
6	GWR	BW	FC	BW	NAS	NAS	BW	CC	CC	DI	DI	CC	CC	DI	LR	AI	LR	NAS	NAS	NAS	GWR	GWR	GWR	CO
7	CO	BW	BW	BW	BW	LR	LR	CC	CC	DI	TI	AI	DI	AI	AI	AI	AI	LR	LR	LR	LR	DI	FC	FC
8	FC	BW	BW	BW	CO	CO	DI	DI	DI	TI	AI	DI	AI	AI	AI	AI	AI	NAS	NAS	BW	NAS	NAS	BW	NAS
9	NAS	BW	CO	CO	CO	NAS	NAS	NAS	NAS	NAS	NAS	NAS	DI	AI	AI	AI	LR	LR	LR	NAS	NAS	NAS	FC	FC
10	FC	NAS	BW	LR	FC	BW	BW	BW	CC	CO	CC	DI	CC	FC	BW	CO	LR	NAS	NAS	NAS	NAS	NAS	NAS	NAS
11	GWR	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	BW	CO	CC	DI	CO	CO	BW	NAS	NAS	NAS	NAS	NAS	NAS
12	NAS	FC	BW	BW	BW	BW	BW	CC	CC	CC	DI	CC	CC	CC	FC	CO	CO	NAS	NAS	NAS	NAS	NAS	NAS	NAS
13	NAS	NAS	NAS	NAS	NAS	FC	BW	BW	BW	CC	CC	CC	CC	DI	DI	AI	CO	BW	NAS	NAS	NAS	NAS	NAS	NAS
14	FC	FC	FC	FC	FC	FC	NAS	BW	BW	BW	BW	CO	FC	CO	CO	CO	NAS	NAS	NAS	LR	GWR	GWR	GWR	GWR
15	GWR	GWR	GWR	GWR	BW	BW	BW	BW	BW	CC	CC	CC	GWR	CC	DI	LR	AI	BW	NAS	NAS	NAS	LR	CC	NAS
16	AI	AI	AI	AI	GWR	AI	LR	LR	BW	UE	CC	CC	CC	DI	DI	UE	CO	CO	BW	LR	LR	NAS	LR	LR
17	NAS	AI	AI	LR	LR	LR	BW	BW	BW	CO	BW	CO	CC	DI	DI	DI	LR	NAS	NAS	NAS	BW	NAS	FC	GWR
18	GWR	CC	LR	LR	AI	BW	GWR	GWR	BW	BW	CC	TI	TI	CC	DI	LR	LR	NAS	NAS	NAS	NAS	NAS	FC	FC
19	GWR	GWR	AI	GWR	LR	BW	BW	BW	BW	BW	BW	CC	CC	DI	DI	UE	LR	NAS	LR	NAS	NAS	NAS	NAS	DI
20	FC	FC	LR	LR	FC	FC	GWR	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	NAS	NAS	NAS	NAS	NAS	NAS	FC
21	FC	FC	FC	FC	FC	BW	BW	LR	BW	BW	BW	BW	BW	CC	DI	DI	LR	NAS	DI	DI	DI	CC	CC	CC
22	AI	AI	AI	LR	NAS	NAS	LR	BW	BW	BW	CC	CC	CC	CC	CC	CO	CO	BW	LR	LR	LR	FC	FC	NAS
23	FC	FC	FC	FC	FC	FC	BW	BW	CO	CC	CO	BW	CC	DI	DI	DI	DI	NAS	NAS	NAS	NAS	NAS	NAS	NAS
24	GWR	GWR	GWR	FC	FC	FC	FC	BW	FC	BW	BW	TI	BW	BW	BW	CO	BW	TI	TI	TI	GWR	GWR	LR	LR
25	AI	AI	FC	FC	FC	BW	BW	BW	BW	BW	CO	CO	CO	CO	CO	UE	CO	CO	CO	NAS	NAS	NAS	NAS	NAS
26	NAS	NAS	GWR	BW	BW	BW	BW	BW	BW	TI	TI	CC	CC	TI	DI	DI	AI	NAS	NAS	NAS	NAS	NAS	NAS	NAS
27	DI	GWR	DI	GWR	GWR	BW	UE	BW	BW	CC	UE	TI	TI	TI	BW	AI	AI	NAS	LR	NAS	NAS	GWR	GWR	GWR
28	GWR	GWR	BW	BW	BW	BW	BW	BW	CC	TI	TI	DI	DI	AI	AI	AI	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR
29	GWR	BW	BW	CO	BW	BW	CO	CC	CC	CC	CC	DI	DI	DI	AI	AI	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR
30	GWR	GWR	DI	DI	BW	BW	BW	CO	CC	CC	CC	DI	DI	AI	DI	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	DI
31	CC	GWR	GWR	BW	BW	CC	BW	UE	DI	DI	DI	DI	TI	AI	AI	AI	AI	LR	NAS	NAS	NAS	GWR	FC	FC

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2	AI	AI	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	BW	FC	TI	BW	TI	BW	DI	TI	TI	DI	TI	LR	AI
3	AI	TI	TI	TI	TI	NAS	NAS	DI	BW	GWR	AI	AI	BW	CO	CC	TI	TI	TI	CC	DI	DI	AI	AI	AI
4	AI	LR	NAS	NAS	NAS	NAS	NAS	GWR	BW	BW	GWR	CO	CO	CO	CO	CO	CO	DI	TI	BW	BW	TI	DI	AI	AI
5	AI	CC	TI	TI	TI	NAS	GWR	GWR	GWR	DI	AI	AI	AI	GWR	GWR	GWR	BW	BW	DI	BW	TI	TI	DI	DI
6	AI	AI	LR	LR	TI	GWR	LR	GWR	GWR	GWR	CO	FC	FC	FC	TI	TI	TI	TI	TI	TI	TI	DI	TI	AI	AI
7	AI	AI	AI	LR	LR	CO	GWR	NAS	GWR	GWR	GWR	GWR	BW	FC	CO	BW	TI	BW	BW	BW	BW	UE	CC	AI
8	DI	LR	LR	NAS	NAS	NAS	LR	GWR	NAS	NAS	CO	CO	GWR	UE	CO	CO	UE	UE	CO	CO	CO	DI	UE	TI
9	GWR	LR	NAS	NAS	LR	GWR	GWR	GWR	GWR	GWR	BW	CO	CO	CO	CO	BW	BW	UE	TI	TI	AI	AI	AI	AI
10	LR	UE	LR	UE	UE	UE	DI	FC	GWR	FC	FC	BW	BW	DI	GWR	GWR	CC	CC	DI	DI	DI	CC	CO	UE
11	UE	UE	BW	TI	TI	TI	CC	CC	DI	CC	AI	AI	AI	LR	BW	GWR	GWR	GWR	FC	DI	CC	CC	CC	CC
12	UE	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	BW	CO	GWR	FC	AI	LR	GWR	GWR	BW	GWR	GWR	DI	CO	CO	UE
13	UE	UE	UE	TI	TI	TI	GWR	GWR	FC	FC	BW	FC	BW	BW	BW	TI	BW	LR	BW	DI	DI	TI	UE	UE
14	UE	LR	LR	TI	TI	TI	DI	DI	DI	DI	AI	AI	LR	LR	LR	LR	FC	FC	FC	FC	FC	CO	CO	UE
15	UE	LR	NAS	NAS	NAS	NAS	NAS	FC	FC	FC	BW	BW	AI	LR	CC	BW	BW	FC	DI	DI	CC	CC	UE	UE
16	UE	UE	TI	TI	TI	DI	DI	DI	DI	FC	FC	AI	BW	BW	CC	BW	FC	FC	FC	FC	CO	DI	BW	BW
17	UE	UE	TI	BW	BW	BW	FC	DI	DI	AI	AI	AI	LR	FC	BW	BW	BW	DI	DI	DI	FC	DI	AI	LR
18	LR	NAS	TI	TI	TI	DI	CC	DI	DI	AI	GWR	FC	FC	FC	CO	CC	CC	TI	DI	DI	DI	AI	AI	AI
19	LR	TI	NAS	NAS	TI	DI	DI	GWR	GWR	AI	AI	AI	BW	BW	BW	GWR	GWR	DI	DI	DI	DI	DI	AI	LR
20	LR	TI	TI	TI	TI	DI	DI	DI	DI	AI	AI	FC	FC	BW	GWR	CC	GWR	FC	DI	DI	CC	CC	DI	LR
21	LR	LR	NAS	NAS	NAS	DI	DI	DI	DI	AI	AI	LR	LR	LR	GWR	BW	BW	BW	CC	GWR	CO	CO	CO	CO
22	UE	UE	TI	TI	TI	TI	DI	FC	FC	AI	AI	BW	LR	LR	BW	GWR	GWR	GWR	DI	DI	CO	CO	CO	CO
23	UE	UE	UE	TI	TI	DI	DI	DI	GWR	FC	GWR	AI	AI	NAS	BW	BW	BW	BW	DI	DI	DI	CO	CO	CO
24	UE	UE	UE	UE	CC	CC	DI	DI	DI	AI	AI	AI	AI	LR	LR	GWR	GWR	GWR	FC	FC	CO	CO	CO	CO
25	UE	UE	UE	TI	TI	DI	DI	FC	FC	AI	AI	AI	LR	LR	LR	GWR	GWR	FC	FC	FC	FC	FC	CO	CO
26	UE	UE	NAS	NAS	NAS	NAS	DI	DI	DI	AI	AI	FC	AI	LR	GWR	CC	BW	BW	CC	CC	CC	CC	CO	CO
27	CO	UE	TI	TI	TI	CC	FC	DI	FC	FC	FC	FC	FC	FC	FC	GWR	FC	BW	TI	DI	DI	AI	AI	AI
28	AI	LR	LR	GWR	LR	GWR	GWR	NAS	GWR	GWR	GWR	CO	FC	CO	CO	CO	TI	TI	BW	DI	DI	AI	AI	AI
29	AI	LR	AI	LR	NAS	NAS	NAS	GWR	FC	FC	FC	CO	BW	FC	CO	BW	BW	TI	BW	TI	DI	AI	AI	AI
30	AI	AI	UE	TI	FC	NAS	NAS	NAS	FC	FC	GWR	GWR	GWR	FC	CO	FC	BW	BW	BW	DI	DI	DI	AI	FC
31	UE	LR	NAS	LR	NAS	NAS	LR	LR	GWR	GWR	CO	GWR	GWR	CO	UE	CO	FC	BW	FC	TI	AI	AI	AI	AI

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
AI = ABISKO	68 21.5	18 49.4	66.0	114.9
BW = BARROW	71 18.2	-156 44.9	68.5	241.1
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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU

APRIL 1970 — AU = MAXIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	DI	DI	DI	AI	AI	AI	TI	TI	TI	TI	TI	DI	DI	DI	DI	DI	LR	LR	LR	LR	DI	DI	LR	DI
2	DI	DI	LR	AI	FC	CO	BW	BW	BW	CC	BW	CC	CC	DI	DI	DI	CO	LR	NAS	BW	NAS	NAS	FC	FC
3	FC	GWR	GWR	BW	BW	CO	UE	CC	CO	CC	DI	CC	DI	DI	DI	LR	LR	LR	BW	BW	BW	DI	NAS	FC
4	FC	FC	BW	BW	FC	BW	BW	BW	CC	BW	BW	CC	DI	TI	DI	DI	LR	LR	BW	BW	LR	DI	FC	LR
5	DI	DI	DI	FC	AI	BW	BW	BW	BW	CC	TI	CC	CC	BW	TI	UE	LR	DI	BW	LR	LR	NAS	DI	FC
6	FC	FC	BW	BW	BW	BW	CC	CC	CC	TI	TI	DI	DI	AI	AI	AI	LR	LR	NAS	BW	FC	FC	FC	BW
7	FC	FC	DI	DI	BW	BW	BW	CC	DI	CC	TI	CC	CC	DI	DI	DI	DI	LR	LR	LR	DI	DI	DI	FC
8	FC	FC	DI	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	DI	DI	NAS	NAS	LR	NAS	FC	FC	FC
9	DI	DI	BW	BW	BW	BW	BW	CO	CC	CC	CC	DI	AI	AI	DI	CO	CO	LR	AI	BW	BW	FC	FC	FC
10	DI	DI	FC	FC	BW	BW	BW	TI	TI	TI	TI	TI	CO	BW	CO	CO	BW	LR	NAS	NAS	NAS	NAS	FC	FC
11	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	CC	CC	DI	AI	LR	LR	LR	NAS	BW	NAS	FC	DI
12	DI	DI	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	AI	AI	AI	AI	LR	NAS	BW	BW	NAS	DI	FC
13	DI	DI	DI	AI	BW	CO	BW	BW	BW	BW	BW	CC	CC	DI	CC	CO	BW	LR	NAS	LR	DI	DI	DI	DI
14	DI	DI	DI	DI	DI	LR	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	LR	NAS	NAS	GWR	NAS	NAS	NAS
15	DI	DI	DI	DI	AI	AI	BW	BW	BW	BW	BW	TI	TI	CC	DI	DI	LR	LR	NAS	NAS	NAS	NAS	NAS	FC
16	GWR	BW	BW	BW	BW	BW	BW	BW	BW	BW	TI	TI	TI	TI	DI	DI	DI	LR	NAS	NAS	GWR	GWR	GWR	GWR
17	GWR	CO	BW	BW	CO	BW	LR	LR	CC	DI	TI	TI	TI	AI	AI	LR	LR	NAS	GWR	NAS	GWR	GWR	GWR	DI
18	DI	DI	DI	AI	AI	AI	UE	TI	CC	DI	DI	TI	AI	AI	AI	CC	LR	LR	NAS	NAS	FC	GWR	FC	GWR
19	FC	FC	BW	BW	CO	CO	TI	DI	DI	DI	DI	DI	DI	TI	CO	LR	LR	AI	LR	NAS	NAS	FC	FC	DI
20	DI	FC	BW	BW	BW	BW	BW	TI	TI	CC	CC	CC	DI	AI	AI	AI	LR	LR	LR	LR	NAS	GWR	GWR	FC
21	FC	BW	BW	BW	BW	CO	CC	DI	DI	AI	AI	AI	AI	LR	LR	LR	LR	LR	LR	LR	FC	GWR	CO	CO
22	CO	CO	UE	CO	CO	CO	CO	CO	CC	DI	DI	DI	TI	DI	DI	DI	LR	LR	NAS	NAS	DI	DI	DI	FC
23	FC	FC	GWR	GWR	BW	BW	BW	BW	CC	CC	CC	DI	DI	TI	DI	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR
24	GWR	FC	BW	BW	BW	CO	CO	CO	CC	CC	TI	DI	DI	DI	AI	AI	NAS	LR	LR	NAS	NAS	GWR	GWR	FC
25	FC	FC	FC	BW	BW	BW	CO	BW	TI	TI	DI	DI	DI	DI	DI	LR	DI	TI	NAS	NAS	NAS	FC	FC	GWR
26	FC	FC	BW	BW	LR	NAS	NAS	GWR	TI	TI	CC	CC	DI	DI	DI	DI	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR
27	FC	FC	BW	BW	BW	BW	BW	BW	TI	TI	CC	CC	DI	DI	DI	DI	DI	LR	LR	NAS	NAS	NAS	NAS	FC
28	FC	FC	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	TI	TI	CC	CC	LR	LR	NAS	NAS	NAS	NAS	NAS	NAS
29	FC	GWR	GWR	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	DI	DI	LR	LR	NAS	LR	NAS	NAS	GWR	NAS
30	FC	FC	BW	BW	CO	BW	BW	CO	TI	TI	DI	TI	TI	DI	AI	AI	LR	LR	LR	NAS	NAS	NAS	FC	FC

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1	NAS	NAS	NAS	NAS	NAS	FC	FC	FC	FC	FC	AI	LR	BW	NAS	NAS	GWR	GWR	GWR	FC	FC	FC	CO	BW	BW
2	UE	UE	UE	TI	TI	GWR	GWR	DI	FC	FC	AI	AI	NAS	BW	BW	BW	GWR	FC	BW	CC	DI	AI	LR	LR
3	LR	LR	LR	LR	LR	LR	NAS	NAS	NAS	GWR	CO	CO	FC	FC	FC	TI	TI	DI	DI	FC	CO	CO	CO	CO
4	LR	NAS	LR	NAS	CC	NAS	GWR	GWR	GWR	FC	FC	FC	BW	BW	GWR	GWR	GWR	FC	FC	FC	CO	CO	CO	CO
5	UE	UE	TI	TI	CC	CC	CC	NAS	GWR	GWR	GWR	FC	FC	AI	FC	BW	BW	BW	GWR	FC	FC	CO	CO	UE
6	UE	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	CO	CO	CO	CO	BW	TI	TI	TI	TI	AI	CC	AI	AI	AI
7	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	GWR	AI	BW	LR	NAS	GWR	GWR	GWR	FC	CC	GWR	CO	CO	CO	UE
8	LR	LR	UE	NAS	NAS	NAS	FC	GWR	GWR	GWR	FC	FC	NAS	CO	BW	GWR	BW	BW	CC	DI	UE	CC	DI	CC
9	NAS	UE	TI	GWR	GWR	GWR	GWR	GWR	GWR	GWR	FC	CO	CO	CO	FC	BW	GWR	DI	DI	FC	CO	BW	AI	LR
10	LR	UE	TI	TI	CC	CC	DI	DI	DI	AI	AI	AI	NAS	NAS	GWR	GWR	GWR	GWR	GWR	FC	CO	CO	DI	DI
11	LR	LR	GWR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	FC	CO	FC	FC	FC	TI	TI	BW	DI	CC	UE	CC	CO	CO
12	UE	TI	TI	NAS	GWR	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	FC	FC	CO	BW	TI	TI	DI	DI	AI	UE	UE
13	UE	UE	TI	TI	CC	CC	CC	GWR	DI	AI	LR	CO	FC	FC	BW	GWR	FC	FC	FC	CO	CO	CO	CO	CO
14	UE	UE	TI	TI	TI	CC	CC	DI	AI	AI	AI	NAS	NAS	NAS	BW	GWR	FC	FC	BW	DI	CO	CO	CC	CC
15	UE	UE	UE	TI	TI	CC	CC	DI	GWR	FC	FC	FC	NAS	GWR	GWR	GWR	CC	TI	BW	BW	DI	CC	CC	CC
16	CC	AI	CC	AI	LR	NAS	NAS	GWR	GWR	AI	AI	AI	AI	LR	GWR	FC	FC	CO	BW	BW	DI	DI	DI	DI
17	DI	AI	LR	LR	NAS	NAS	FC	CO	CO	BW	FC	FC	FC	CO	CO	BW	BW	BW	BW	CC	DI	DI	CC	CO
18	UE	UE	NAS	NAS	GWR	CC	CC	CC	NAS	GWR	GWR	GWR	CO	CO	FC	FC	TI	BW	BW	TI	UE	AI	AI	AI
19	AI	LR	LR	LR	LR	LR	GWR	GWR	GWR	BW	GWR	UE	CO	FC	FC	FC	BW	DI	BW	DI	DI	DI	AI	UE
20	NAS	LR	NAS	LR	GWR	NAS	NAS	CC	AI	AI	GWR	FC	CO	UE	CO	CO	CO	BW	TI	BW	BW	AI	AI	AI
21	LR	LR	NAS	NAS	LR	NAS	NAS	GWR	GWR	GWR	GWR	UE	CO	CO	CO	UE	UE	CO	CO	CO	UE	AI	DI	FC
22	AI	AI	AI	AI	LR	LR	GWR	NAS	FC	BW	FC	FC	FC	CO	CO	CC	TI	TI	FC	FC	CO	CO	UE	UE
23	LR	LR	LR	LR	NAS	GWR	NAS	NAS	NAS	BW	CO	FC	CO	CO	CO	CO	CO	BW	DI	BW	TI	AI	AI	AI
24	AI	LR	LR	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	FC	FC	FC	BW	BW	BW	BW	TI	AI	DI	AI	AI
25	LR	LR	LR	LR	NAS	NAS	GWR	NAS	NAS	GWR	GWR	CO	BW	FC	BW	BW	BW	GWR	BW	TI	CC	CC	AI	AI
26	LR	LR	LR	NAS	CC	CC	CC	CC	AI	AI	NAS	LR	FC	FC	BW	BW	BW	BW	BW	BW	TI	AI	AI	AI
27	LR	AI	LR	NAS	NAS	GWR	GWR	GWR	DI	AI	NAS	BW	FC	CO	BW	BW	BW	BW	BW	CC	UE	UE	UE	UE
28	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	FC	FC	FC	FC	BW	BW	BW	GWR	GWR	GWR	CC	DI	DI	CC	UE
29	UE	LR	LR	NAS	NAS	NAS	NAS	DI	GWR	GWR	FC	FC	FC	FC	FC	CO	BW	BW	BW	BW	DI	AI	DI	CC
30	UE	LR	LR	LR	LR	LR	GWR	GWR	NAS	NAS	NAS	CO	GWR	GWR	FC	UE	CO	BW	TI	AI	AI	AI	AI	AI

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2	FC	FC	DI	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	DI	DI	DI	LR	NAS	NAS	NAS	NAS	FC	FC	FC
3	FC	DI	GWR	AI	GWR	GWR	TI	BW	BW	BW	BW	CC	DI	DI	DI	CC	LR	LR	LR	NAS	GWR	FC	GWR	GWR
4	GWR	DI	DI	AI	AI	AI	CC	BW	CC	CC	CC	CC	CC	DI	DI	DI	LR	LR	NAS	NAS	GWR	NAS	NAS	FC
5	FC	GWR	GWR	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	CC	AI	AI	LR	LR	NAS	BW	BW	NAS	NAS	FC
6	GWR	DI	AI	AI	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	LR	LR	LR	BW	GWR	NAS	NAS	DI
7	DI	DI	GWR	BW	BW	BW	BW	BW	TI	BW	CC	CC	CC	CC	TI	CO	NAS	NAS	NAS	NAS	NAS	GWR	GWR	NAS
8	FC	FC	AI	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	LR	LR	LR	NAS	NAS	NAS	FC	FC
9	FC	FC	FC	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	LR	LR	LR	NAS	NAS	NAS	FC	DI
10	DI	DI	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	CC	NAS	NAS	NAS	LR	DI	DI	DI
11	DI	DI	FC	GWR	FC	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	DI	CO	CC	CC	LR	NAS	NAS	GWR	FC
12	FC	FC	FC	BW	BW	BW	NAS	BW	BW	CC	DI	DI	DI	DI	DI	LR	LR	LR	LR	NAS	GWR	GWR	FC	FC
13	FC	FC	BW	BW	BW	BW	BW	LR	GWR	CC	CC	CC	NAS	NAS	NAS	DI	CC	LR	LR	NAS	NAS	NAS	FC	FC
14	FC	FC	FC	BW	BW	BW	BW	CC	CC	CC	CO	BW	CC	CC	CC	LR	LR	NAS	NAS	NAS	GWR	FC	FC	GWR
15	BW	FC	FC	LR	BW	BW	BW	CC	CC	DI	CC	CC	CC	CC	CC	CC	CC	NAS	LR	NAS	NAS	NAS	FC	FC
16	AI	AI	AI	AI	AI	BW	BW	BW	CC	BW	AI	AI	AI	CC	DI	AI	AI	NAS	NAS	NAS	NAS	NAS	NAS	GWR
17	FC	FC	GWR	AI	BW	CO	BW	BW	TI	BW	CC	DI	DI	DI	CC	CC	NAS	CC	AI	AI	NAS	NAS	FC	FC
18	FC	FC	BW	BW	AI	AI	TI	TI	TI	TI	TI	CC	CC	CC	DI	AI	AI	AI	AI	NAS	NAS	NAS	AI	AI
19	FC	FC	FC	BW	BW	BW	BW	CC	CC	CC	DI	CC	CC	CC	BW	FC	FC	LR	LR	NAS	NAS	NAS	GWR	GWR
20	GWR	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	AI	AI	FC	FC	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR
21	GWR	GWR	GWR	GWR	GWR	NAS	TI	BW	CC	CC	CC	CC	CC	DI	DI	FC	FC	FC	NAS	NAS	NAS	NAS	NAS	GWR
22	GWR	GWR	BW	GWR	FC	FC	FC	FC	FC	FC	CC	FC	FC	FC	FC	FC	LR	NAS	NAS	NAS	NAS	NAS	NAS	NAS
23	GWR	GWR	GWR	FC	FC	NAS	FC	BW	CC	CC	CC	CC	CC	CC	CC	DI	CC	NAS	NAS	NAS	NAS	NAS	FC	FC
24	FC	FC	FC	FC	BW	AI	LR	BW	CC	CC	CC	CC	CC	CC	DI	AI	NAS	NAS	NAS	NAS	NAS	NAS	FC	FC
25	FC	FC	FC	BW	BW	BW	BW	TI	TI	TI	CC	CC	DI	DI	AI	LR	NAS	NAS	NAS	NAS	NAS	NAS	FC	FC
26	DI	DI	DI	AI	AI	UE	UE	TI	TI	TI	TI	UE	CC	CC	CC	DI	LR	LR	NAS	NAS	NAS	NAS	FC	NAS
27	FC	FC	FC	FC	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	AI	LR	LR	LR	NAS	LR	GWR	GWR	GWR	GWR
28	BW	BW	FC	DI	AI	AI	BW	TI	CC	TI	TI	AI	AI	AI	AI	LR	LR	LR	NAS	NAS	NAS	FC	FC	FC
29	FC	FC	DI	BW	BW	BW	CO	DI	CC	CC	CC	CC	DI	DI	DI	AI	AI	NAS	NAS	NAS	NAS	NAS	NAS	FC
30	FC	FC	GWR	BW	BW	BW	LR	BW	CC	DI	DI	CC	CC	CC	DI	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	NAS
31	DI	GWR	GWR	FC	AI	AI	BW	BW	CC	CC	CC	CC	DI	CC	DI	DI	DI	DI	DI	DI	NAS	GWR	GWR	DI

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2	AI	LR	TI	GWR	GWR	NAS	NAS	GWR	FC	FC	FC	FC	NAS	FC	BW	FC	FC	BW	DI	DI	CO	UE	AI	LR
3	LR	TI	TI	TI	CC	CC	DI	AI	AI	AI	LR	CO	BW	FC	FC	BW	BW	BW	BW	DI	AI	AI	AI	AI
4	LR	TI	TI	TI	CC	CC	DI	GWR	GWR	GWR	GWR	FC	FC	FC	FC	CC	BW	BW	DI	DI	DI	CO	TI	LR
5	LR	LR	TI	TI	NAS	DI	DI	DI	LR	GWR	GWR	GWR	FC	FC	CO	CC	FC	TI	DI	DI	UE	UE	AI	DI
6	AI	TI	TI	TI	TI	CC	DI	FC	FC	FC	FC	FC	FC	FC	FC	FC	DI	BW	BW	DI	UE	TI	CO	UE
7	CO	TI	TI	TI	CC	DI	DI	FC	AI	LR	LR	FC	FC	BW	FC	FC	FC	BW	DI	DI	DI	CO	UE	UE
8	TI	NAS	TI	TI	CC	CC	CC	DI	AI	AI	AI	LR	NAS	NAS	GWR	GWR	BW	BW	BW	DI	CC	DI	DI	CC
9	NAS	NAS	NAS	NAS	GWR	GWR	NAS	GWR	GWR	LR	LR	LR	NAS	NAS	GWR	BW	BW	BW	DI	CC	CC	CO	CO	UE
10	UE	TI	TI	NAS	NAS	NAS	DI	FC	FC	FC	FC	LR	LR	LR	GWR	GWR	GWR	GWR	CO	CO	CO	CO	CO	CO
11	CO	UE	TI	TI	CC	CC	DI	DI	DI	LR	LR	LR	LR	LR	NAS	GWR	GWR	FC	FC	BW	UE	CC	CC	LR
12	LR	LR	LR	LR	NAS	NAS	DI	NAS	GWR	GWR	GWR	FC	FC	FC	FC	CO	BW	BW	BW	TI	TI	DI	CC	CC
13	LR	LR	LR	LR	LR	NAS	NAS	DI	DI	NAS	FC	FC	GWR	GWR	GWR	BW	BW	GWR	GWR	BW	DI	UE	CC	CC
14	LR	LR	NAS	LR	LR	LR	NAS	NAS	GWR	FC	DI	LR	NAS	NAS	GWR	FC	BW	BW	BW	BW	TI	TI	CC	DI
15	LR	LR	LR	CO	TI	NAS	GWR	GWR	GWR	GWR	GWR	FC	NAS	BW	BW	BW	TI	BW	BW	DI	DI	TI	TI	TI
16	LR	TI	TI	TI	TI	NAS	GWR	NAS	GWR	FC	LR	LR	GWR	FC	BW	BW	BW	BW	BW	DI	DI	TI	UE	LR
17	LR	LR	NAS	TI	LR	NAS	NAS	NAS	LR	AI	LR	GWR	GWR	FC	FC	GWR	TI	BW	CO	BW	UE	UE	UE	AI
18	CC	LR	LR	LR	CC	DI	CC	LR	LR	AI	LR	LR	LR	GWR	GWR	GWR	BW	BW	DI	DI	CO	CO	CO	UE
19	TI	TI	TI	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	FC	LR	GWR	BW	BW	BW	FC	DI	FC	FC	LR
20	FC	FC	FC	FC	LR	NAS	GWR	NAS	GWR	GWR	GWR	GWR	CO	CO	BW	CO	BW	BW	BW	TI	DI	DI	CC	CC
21	CC	FC	FC	FC	FC	FC	FC	FC	FC	GWR	GWR	GWR	GWR	BW	CO	BW	BW	BW	BW	DI	DI	TI	CC	LR
22	LR	LR	LR	LR	NAS	GWR	GWR	GWR	NAS	LR	NAS	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	BW
23	TI	TI	TI	TI	TI	GWR	DI	NAS	GWR	FC	FC	FC	FC	NAS	BW	BW	BW	BW	BW	BW	CC	DI	DI	CC
24	CC	LR	TI	TI	NAS	GWR	BW	AI	GWR	GWR	GWR	FC	FC	FC	BW	BW	BW	BW	TI	CO	DI	DI	CC	LR
25	LR	LR	LR	LR	NAS	NAS	NAS	NAS	BW	DI	NAS	FC	FC	FC	FC	BW	BW	BW	BW	CC	CC	DI	DI	CC
26	TI	BW	TI	TI	BW	BW	DI	DI	AI	AI	AI	AI	AI	LR	FC	BW	BW	BW	BW	BW	BW	BW	CC	TI
27	TI	TI	TI	NAS	NAS	GWR	NAS	GWR	GWR	GWR	AI	NAS	FC	BW	BW	BW	BW	BW	BW	BW	TI	TI	AI	AI
28	AI	AI	AI	LR	CO	UE	DI	GWR	NAS	NAS	GWR	GWR	GWR	GWR	CO	UE	FC	TI	TI	BW	AI	AI	LR	DI
29	AI	LR	LR	CC	GWR	GWR	LR	GWR	NAS	GWR	GWR	GWR	FC	FC	BW	FC	TI	BW	CC	BW	DI	AI	AI	LR
30	AI	LR	LR	LR	LR	NAS	GWR	GWR	GWR	GWR	GWR	GWR	BW	FC	FC	FC	BW	TI	TI	TI	DI	CO	BW	BW
31	LR	TI	BW	TI	NAS	GWR	NAS	GWR	GWR	FC	FC	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	BW	BW	BW

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU

JUNE 1970 — AU = MAXIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	FC	FC	BW	BW	BW	CO	LR	CC	CC	TI	TI	TI	DI	DI	AI	AI	LR	LR	LR	NAS	NAS	GWR	FC	FC
2	FC	FC	BW	BW	BW	BW	TI	TI	TI	TI	CC	CC	CC	DI	DI	LR	LR	LR	LR	LR	NAS	NAS	FC	FC
3	FC	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	CC	AI	AI	LR	LR	NAS	NAS	NAS	FC	FC	FC
4	FC	FC	CO	CO	CO	CO	CO	CC	CC	CC	CC	CC	DI	DI	AI	LR	LR	LR	NAS	NAS	NAS	NAS	FC	FC
5	FC	NAS	CO	CO	CO	CO	CC	CC	CC	DI	CC	CC	GWR	TI	TI	AI	CO	LR	LR	LR	GWR	GWR	DI	DI
6	FC	FC	FC	FC	CO	CO	CO	CC	CC	CC	CC	TI	CC	CC	CC	CO	NAS	LR	LR	LR	LR	GWR	GWR	DI
7	AI	FC	FC	FC	UE	GWR	UE	TI	TI	CC	TI	TI	TI	TI	CC	DI	DI	LR	LR	NAS	GWR	GWR	GWR	GWR
8	FC	FC	CO	FC	CO	CO	CC	TI	LR	CC	CC	TI	DI	TI	CC	LR	NAS	NAS	NAS	NAS	NAS	NAS	FC	FC
9	FC	FC	FC	FC	FC	UE	UE	UE	UE	TI	TI	TI	TI	TI	LR	LR	LR	LR	NAS	NAS	FC	FC	GWR	FC
10	FC	FC	GWR	FC	FC	UE	CO	CC	CC	CC	CC	TI	TI	CC	DI	AI	LR	NAS	NAS	NAS	NAS	NAS	DI	FC
11	FC	FC	FC	FC	AI	AI	UE	TI	TI	TI	TI	CC	TI	TI	TI	LR	LR	NAS	NAS	NAS	NAS	DI	DI	DI
12	FC	FC	FC	FC	FC	FC	CO	TI	CC	CC	CC	CC	CC	CC	CC	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	FC
13	FC	FC	FC	GWR	GWR	UE	CC	CC	TI	DI	DI	DI	AI	AI	AI	LR	AI	NAS	NAS	GWR	NAS	FC	FC	GWR
14	FC	FC	CO	CO	CC	UE	GWR	GWR	TI	TI	TI	CC	CC	TI	TI	LR	AI	LR	NAS	NAS	NAS	NAS	FC	FC
15	FC	FC	FC	FC	CO	CO	CO	CC	TI	TI	DI	DI	DI	AI	AI	LR	LR	LR	NAS	NAS	NAS	GWR	FC	FC
16	FC	GWR	CO	GWR	CO	CO	CC	LR	GWR	TI	TI	TI	CC	DI	DI	DI	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR
17	FC	DI	AI	AI	AI	UE	UE	UE	TI	TI	TI	CC	DI	TI	TI	TI	NAS	LR	NAS	GWR	GWR	GWR	GWR	GWR
18	FC	GWR	DI	DI	AI	CO	CC	CC	DI	DI	DI	AI	AI	AI	LR	LR	LR	LR	LR	NAS	GWR	GWR	GWR	FC
19	FC	GWR	FC	FC	AI	CO	CO	TI	CC	CC	CC	CC	CC	DI	LR	LR	LR	NAS	NAS	NAS	GWR	FC	FC	GWR
20	GWR	FC	CO	CO	CO	CO	TI	DI	TI	DI	DI	DI	DI	AI	AI	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR
21	GWR	UE	FC	UE	UE	UE	TI	DI	DI	DI	DI	DI	AI	AI	AI	AI	LR	LR	NAS	CO	LR	NAS	FC	FC
22	FC	FC	FC	GWR	AI	LR	LR	TI	TI	CC	CC	CC	CC	CC	CC	DI	DI	LR	NAS	NAS	NAS	NAS	NAS	FC
23	FC	GWR	GWR	CO	CO	CO	CO	UE	UE	UE	UE	CC	CC	CC	DI	DI	DI	DI	DI	NAS	NAS	NAS	NAS	FC
24	FC	FC	FC	AI	AI	AI	DI	UE	UE	UE	CO	CO	TI	TI	CC	DI	DI	LR	LR	NAS	NAS	NAS	FC	FC
25	FC	FC	FC	AI	AI	CO	CO	CC	CC	CC	CC	CC	DI	DI	AI	AI	AI	AI	LR	LR	LR	NAS	FC	FC	FC
26	DI	FC	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	CC	CC	CC	CO	AI	LR	LR	LR	NAS	NAS	NAS	NAS	FC	DI
27	FC	FC	FC	CO	CO	CO	CO	DI	DI	DI	DI	AI	AI	AI	LR	LR	NAS	NAS	LR	LR	NAS	NAS	NAS	FC
28	FC	FC	CO	CO	CO	CO	CO	TI	CC	CC	CC	CC	DI	DI	AI	AI	AI	CO	NAS	NAS	NAS	NAS	FC	FC
29	FC	AI	AI	AI	CO	CO	CO	CC	UE	TI	CC	CC	CC	CC	TI	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	NAS
30	DI	DI	AI	AI	AI	CO	CO	CC	CC	CC	CC	CC	CC	CO	CO	CO	LR	LR	LR	LR	FC	FC	FC	FC

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1	TI	TI	LR	NAS	NAS	NAS	DI	DI	GWR	GWR	GWR	FC	CO	GWR	CO	CO	FC	DI	BW	BW	DI	DI	DI	CC
2	LR	LR	NAS	LR	GWR	GWR	GWR	CC	DI	AI	BW	LR	FC	BW	CC	FC	BW	BW	BW	DI	DI	DI	DI	CC
3	CC	LR	LR	NAS	GWR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	CO	FC	FC	FC	BW	FC	DI	CC	CC	DI	CC	DI
4	AI	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	GWR	FC	FC	FC	CO	FC	FC	CC	CC	CC	DI	CC	CC	DI
5	CC	TI	NAS	LR	NAS	NAS	NAS	NAS	GWR	GWR	CO	CO	FC	AI	GWR	FC	FC	FC	DI	UE	UE	CO	UE	TI
6	TI	TI	TI	CC	NAS	NAS	NAS	GWR	GWR	LR	FC	AI	NAS	NAS	NAS	CC	CC	DI	CO	CC	CO	CO	CO	CO
7	TI	TI	CC	CC	NAS	CC	DI	DI	AI	AI	FC	LR	NAS	NAS	GWR	GWR	FC	FC	DI	DI	TI	TI	AI	DI
8	LR	LR	LR	LR	LR	LR	NAS	GWR	DI	GWR	GWR	FC	CO	FC	FC	FC	FC	CO	DI	DI	CC	CC	CC	CC
9	LR	LR	LR	NAS	NAS	CC	CC	NAS	GWR	FC	AI	LR	GWR	GWR	GWR	FC	CC	CC	CC	DI	CC	CC	CC	CC
10	LR	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	FC	FC	FC	NAS	FC	CO	FC	CO	DI	DI	DI	DI	CC	CO	TI
11	LR	LR	LR	NAS	CC	DI	NAS	GWR	GWR	LR	LR	NAS	NAS	FC	GWR	FC	FC	CC	CC	CC	CC	CO	UE	UE
12	TI	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	FC	FC	FC	GWR	FC	FC	DI	DI	DI	DI	CC	CC
13	CC	TI	TI	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	CC	DI	DI	CC	DI	DI	CC	CC
14	LR	LR	LR	LR	NAS	NAS	DI	CC	DI	AI	LR	LR	NAS	NAS	GWR	GWR	FC	CC	CC	DI	CC	CC	CC	CC
15	LR	LR	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	CO	FC	FC	CO	CO	CO	TI	TI	TI	TI	DI	CC	CC
16	AI	LR	LR	LR	LR	LR	NAS	DI	DI	AI	AI	AI	FC	FC	FC	FC	FC	FC	FC	DI	CC	CC	CC	AI
17	LR	UE	TI	TI	TI	NAS	DI	FC	DI	AI	NAS	FC	FC	FC	FC	CC	CC	TI	TI	TI	TI	TI	AI	DI
18	AI	AI	TI	TI	TI	NAS	GWR	GWR	NAS	NAS	GWR	GWR	GWR	UE	UE	CO	CO	CO	TI	TI	TI	TI	AI	CC
19	AI	AI	LR	LR	NAS	NAS	GWR	GWR	NAS	GWR	GWR	FC	FC	FC	FC	FC	FC	CC	CC	DI	DI	DI	CC	DI
20	DI	AI	AI	LR	LR	LR	LR	LR	NAS	NAS	GWR	GWR	GWR	FC	CO	CO	CO	CO	CO	TI	TI	TI	TI	DI
21	DI	AI	AI	AI	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	FC	FC	FC	CO	CO	TI	TI	GWR	UE	DI	AI	UE
22	LR	LR	LR	NAS	CC	CC	DI	DI	DI	AI	FC	FC	FC	NAS	FC	FC	FC	FC	DI	DI	DI	DI	CC	CC
23	LR	LR	LR	LR	NAS	NAS	NAS	DI	FC	AI	AI	FC	NAS	NAS	GWR	FC	FC	FC	FC	CO	CO	CO	UE	UE
24	TI	LR	LR	GWR	GWR	GWR	CC	GWR	GWR	DI	AI	AI	AI	NAS	FC	FC	CC	FC	CO	DI	DI	CC	CC	AI
25	AI	AI	CC	TI	CC	GWR	GWR	NAS	NAS	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	CC	FC	DI	DI	DI
26	TI	TI	TI	TI	LR	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	FC	FC	CO	CO	TI	TI	TI	DI	DI	CC	LR
27	LR	LR	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	CO	CO	TI	CC	TI	CC	CC	CC	AI	AI	TI
28	TI	LR	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	FC	FC	FC	FC	FC	FC	CC	DI	CC	CC	DI	CC	CC	CC
29	LR	TI	TI	CC	CC	FC	GWR	GWR	GWR	LR	FC	LR	LR	FC	FC	FC	CO	TI	TI	TI	TI	CC	DI	CC
30	UE	UE	TI	TI	CC	CC	GWR	GWR	GWR	GWR	GWR	FC	FC	AI	DI	FC	DI	CC	DI	DI	CC	CC	CC	CC

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2	FC	FC	FC	FC	CO	CO	CO	CC	CC	CC	CC	DI	CC	CC	CO	AI	LR	LR	CO	AI	LR	NAS	FC	FC
3	FC	FC	FC	FC	CO	CO	CO	CO	DI	DI	DI	CC	CC	CC	CO	CO	CO	NAS	NAS	NAS	FC	FC	GWR	GWR
4	CO	FC	FC	DI	CO	CO	CO	CO	DI	CO	CC	CC	DI	TI	LR	AI	LR	LR	LR	LR	LR	DI	FC	FC
5	FC	FC	UE	CO	CO	CO	CO	CC	CC	CC	CC	CC	CC	CC	AI	AI	LR	LR	LR	LR	NAS	NAS	FC	FC
6	FC	FC	FC	CO	CO	CC	CC	CC	DI	CC	CC	CC	DI	DI	DI	CO	CO	CO	LR	NAS	FC	FC	FC	FC
7	AI	AI	AI	AI	AI	FC	UE	CO	CC	CC	CC	CC	CC	CC	CC	AI	LR	LR	LR	NAS	NAS	NAS	FC	FC
8	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	BW	BW	CC	DI	AI	AI	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR
9	FC	FC	BW	BW	CO	CO	CO	UE	DI	DI	DI	DI	AI	AI	AI	AI	LR	LR	NAS	GWR	FC	FC	GWR	BW
10	BW	BW	BW	AI	AI	BW	BW	BW	BW	BW	PW	CC	CC	CC	BW	AI	AI	LR	NAS	LR	GWR	FC	FC	GWR
11	FC	BW	GWR	FC	AI	BW	BW	BW	CC	CC	CC	CC	DI	DI	TI	LR	LR	LR	NAS	NAS	NAS	NAS	FC	FC
12	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	AI	AI	LR	NAS	NAS	NAS	NAS	NAS	FC	FC
13	FC	FC	BW	BW	BW	BW	BW	BW	GWR	GWR	CC	CC	CC	CC	DI	AI	AI	LR	NAS	NAS	NAS	NAS	GWR	DI
14	FC	FC	CO	FC	FC	FC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CC	CO	LR	NAS	NAS	NAS	NAS	FC	FC
15	FC	FC	GWR	AI	GWR	UE	TI	TI	BW	CC	CC	TI	TI	DI	DI	DI	DI	DI	DI	DI	LR	NAS	NAS	FC
16	FC	FC	FC	BW	BW	BW	GWR	TI	TI	TI	TI	CC	DI	DI	CC	CC	LR	LR	NAS	NAS	LR	NAS	DI	DI
17	DI	FC	BW	FC	LR	UE	UE	BW	TI	TI	BW	CC	CC	CC	DI	AI	LR	LR	NAS	NAS	NAS	FC	FC	FC
18	FC	FC	FC	BW	BW	BW	TI	TI	TI	CC	CC	CC	CC	CC	CC	CC	CC	LR	LR	LR	NAS	NAS	FC	NAS
19	NAS	DI	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CO	CO	AI	LR	LR	LR	LR	NAS	NAS	FC	FC
20	FC	FC	FC	FC	AI	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	LR	LR	LR	NAS	NAS	NAS	FC	GWR
21	GWR	FC	BW	BW	PW	AI	LR	GWR	CC	CC	CC	DI	DI	AI	AI	LR	LR	LR	LR	NAS	GWR	GWR	GWR	FC
22	GWR	GWR	FC	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	CC	LR	LR	LR	LR	NAS	NAS	FC	FC	FC	FC
23	FC	FC	BW	BW	AI	BW	BW	BW	CC	CC	CC	CC	CC	CC	DI	CC	LR	NAS	NAS	NAS	NAS	AI	DI	NAS
24	FC	FC	BW	CO	CO	CO	TI	BW	LR	GWR	CC	CC	DI	DI	AI	AI	AI	LR	LR	LR	NAS	NAS	FC	FC
25	FC	FC	CO	BW	BW	CO	TI	TI	TI	AI	AI	AI	AI	AI	AI	CO	CO	CO	BW	NAS	FC	GWR	GWR	CO
26	CO	CO	CO	BW	BW	BW	BW	BW	CC	DI	DI	DI	DI	AI	LR	CO	NAS	NAS	NAS	NAS	NAS	FC	GWR	GWR
27	FC	DI	FC	BW	BW	BW	BW	TI	CC	CC	DI	CC	LR	AI	LR	LR	LR	LR	LR	GWR	GWR	NAS	FC	FC
28	FC	DI	DI	AI	AI	LR	LR	BW	BW	BW	BW	CC	TI	CC	TI	CC	CC	NAS	NAS	NAS	NAS	NAS	NAS	FC
29	FC	FC	BW	BW	CO	CO	DI	DI	DI	AI	DI	AI	AI	AI	AI	AI	LR	NAS	LR	NAS	BW	BW	DI	DI
30	DI	DI	GWR	FC	BW	BW	BW	CC	BW	CC	CC	CC	CC	CC	CC	DI	CC	LR	LR	NAS	NAS	FC	FC	FC
31	FC	FC	FC	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	CC	LR	LR	AI	NAS	NAS	NAS	NAS	FC	GWR	FC

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2	TI	TI	TI	NAS	GWR	GWR	NAS	NAS	NAS	GWR	CO	CO	FC	FC	DI	GWR	FC	FC	DI	CC	CC	CO	UE	TI
3	LR	LR	LR	LR	LR	GWR	NAS	GWR	GWR	NAS	CO	GWR	FC	FC	FC	CC	CC	CC	DI	DI	CC	DI	DI	AI
4	AI	AI	AI	LR	LR	LR	LR	GWR	GWR	GWR	GWR	CO	CO	CO	CO	CO	CC	CC	TI	DI	DI	UE	CO	UE
5	TI	TI	TI	LR	LR	LR	NAS	NAS	GWR	GWR	AI	AI	NAS	GWR	CO	UE	TI	TI	TI	CC	UE	CO	UE	AI
6	LR	LR	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	FC	CO	FC	GWR	GWR	DI	DI	TI	TI	TI	CO	UE	UE
7	TI	TI	TI	TI	TI	CC	NAS	GWR	GWR	FC	FC	FC	NAS	NAS	NAS	GWR	FC	FC	TI	CC	CC	CC	CC	LR
8	CC	LR	LR	LR	LR	NAS	NAS	NAS	GWR	FC	FC	FC	CO	FC	BW	BW	BW	BW	TI	TI	TI	CC	AI	
9	AI	AI	NAS	AI	AI	AI	LR	NAS	NAS	NAS	GWR	GWR	GWR	CO	GWR	UE	UE	TI	BW	UE	CC	AI	AI	AI
10	AI	LR	LR	CO	CO	NAS	NAS	DI	DI	GWR	NAS	NAS	FC	FC	FC	CO	BW	BW	TI	TI	TI	DI	AI	CC
11	AI	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	FC	FC	FC	FC	CO	BW	BW	TI	BW	TI	DI	DI	CC	AI
12	LR	AI	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	FC	CO	CO	CO	BW	BW	BW	BW	TI	TI	AI	DI	LR
13	LR	LR	LR	NAS	NAS	FC	GWR	NAS	DI	AI	NAS	NAS	FC	BW	BW	BW	BW	BW	BW	TI	TI	DI	CC	LR
14	LR	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	FC	FC	FC	CO	FC	GWR	FC	FC	FC	DI	CC	CC	CC	CC	AI
15	LR	LR	LR	NAS	NAS	NAS	DI	FC	GWR	FC	FC	FC	FC	GWR	GWR	GWR	FC	FC	BW	CO	CO	CO	UE	CC
16	LR	LR	LR	LR	NAS	NAS	NAS	CC	DI	AI	LR	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	UE	UE
17	TI	TI	NAS	NAS	TI	TI	NAS	NAS	AI	AI	AI	NAS	FC	FC	BW	BW	BW	BW	BW	TI	DI	AI	CC	CC
18	UE	TI	LR	LR	LR	GWR	GWR	FC	AI	NAS	FC	FC	NAS	NAS	NAS	GWR	BW	FC	BW	DI	CC	CC	CC	CO
19	TI	TI	NAS	NAS	NAS	NAS	NAS	NAS	AI	NAS	FC	FC	NAS	NAS	GWR	BW	BW	BW	BW	DI	DI	DI	CC	CC
20	CC	LR	LR	NAS	NAS	GWR	GWR	FC	AI	FC	FC	LR	NAS	NAS	NAS	GWR	BW	BW	BW	CC	CC	CC	CC	AI
21	AI	AI	AI	LR	LR	NAS	BW	DI	NAS	AI	GWR	GWR	FC	CO	FC	FC	BW	BW	TI	BW	CC	DI	AI	AI
22	LR	LR	CC	LR	NAS	GWR	GWR	NAS	FC	GWR	GWR	FC	FC	BW	BW	BW	BW	TI	DI	DI	AI	CC	AI	
23	AI	LR	LR	LR	NAS	NAS	NAS	NAS	FC	NAS	AI	NAS	FC	FC	NAS	BW	BW	BW	BW	CC	CC	CO	CO	BW
24	LR	LR	LR	LR	LR	LR	LR	GWR	DI	DI	AI	LR	CO	FC	CO	CO	BW	TI	BW	BW	CC	CC	DI	LR
25	AI	AI	AI	LR	LR	AI	AI	NAS	NAS	NAS	NAS	GWR	GWR	FC	FC	AI	AI	TI	AI	AI	AI	TI	AI	AI
26	AI	AI	AI	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	CO	CO	CO	FC	AI	AI	FC	AI	AI	BW	BW	DI	LR
27	TI	TI	TI	NAS	LR	GWR	NAS	FC	CO	CO	GWR	FC	CO	CO	CO	TI	BW	BW	BW	TI	DI	CC	CC	LR
28	LR	UE	TI	TI	BW	CC	CC	NAS	FC	FC	FC	NAS	LR	GWR	GWR	GWR	FC	FC	FC	CO	BW	CO	BW	CC
29	LR	LR	NAS	NAS	GWR	NAS	NAS	GWR	GWR	GWR	CO	GWR	UE	UE	TI	UE	FC	BW	TI	AI	AI	AI	LR	LR
30	TI	TI	TI	CC	NAS	FC	NAS	FC	FC	LR	NAS	FC	FC	FC	FC	BW	BW	BW	TI	BW	BW	CC	DI	CC	CC
31	AI	LR	LR	LR	NAS	LR	GWR	GWR	GWR	GWR	FC	FC	FC	FC	BW	CO	BW	BW	BW	BW	DI	DI	DI	LR

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
AI = ARISKO	68 21.5	18 49.4	66.0	114.9
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CO = COLLEGE	64 51.6	-147 50.2	64.6	256.5
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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU

AUGUST 1970 — AU = MAXIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	FC	FC	FC	GWR	BW	NAS	NAS	NAS	BW	CC	NAS	BW	CC	CC	CO	CC	LR	LR	LR	LR	LR	NAS	NAS	FC
2	FC	FC	BW	BW	BW	BW	LR	BW	CC	CC	CC	CC	CC	DI	TI	CO	BW	CC	LR	LR	CC	DI	DI	DI
3	DI	DI	FC	FC	GWR	GWR	GWR	FC	BW	BW	BW	CC	CC	CC	DI	DI	DI	NAS	NAS	NAS	NAS	NAS	NAS	NAS
4	FC	GWR	BW	FC	BW	BW	TI	BW	BW	BW	CC	CC	CC	CC	DI	DI	LR	LR	NAS	NAS	NAS	NAS	NAS	DI
5	FC	FC	FC	BW	BW	BW	BW	TI	BW	BW	BW	BW	BW	CC	CC	DI	DI	BW	CC	CC	GWR	DI	DI	DI
6	DI	DI	AI	AI	CO	FC	BW	BW	BW	CC	CC	BW	CO	BW	CC	CC	CC	CC	NAS	LR	NAS	NAS	GWR	GWR
7	FC	FC	GWR	GWR	UE	LR	BW	BW	BW	BW	BW	BW	CC	CC	DI	DI	AI	AI	NAS	NAS	NAS	GWR	GWR	GWR
8	BW	BW	BW	BW	GWR	BW	BW	CC	DI	UE	AI	AI	DI	AI	LR	LR	NAS	NAS	LR	LR	LR	FC	GWR	FC
9	GWR	CO	CO	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	DI	DI	DI	LR	LR	LR	LR	NAS	NAS	NAS	DI
10	DI	GWR	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	AI	CC	CC	LR	LR	LR	LR	LR	NAS	NAS	NAS	FC
11	FC	GWR	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	AI	LR	LR	NAS	LR	LR	LR	FC	GWR
12	FC	FC	BW	BW	BW	CO	LR	BW	CC	CO	BW	CC	CC	CC	DI	CO	LR	LR	LR	NAS	NAS	FC	FC	DI
13	DI	BW	FC	GWR	DI	BW	BW	BW	BW	CC	CC	TI	CC	DI	DI	DI	LR	NAS	NAS	NAS	NAS	GWR	GWR	DI
14	DI	BW	BW	BW	BW	LP	LR	LR	TI	BW	TI	CC	CO	CO	CO	LR	LR	LR	LR	AI	LR	NAS	FC	FC
15	FC	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	CC	CO	LR	LR	NAS	NAS	LR	FC	FC	GWR
16	GWR	FC	FC	GWR	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	LR	LR	LR	NAS	LR	NAS	GWR	GWR
17	GWR	FC	FC	FC	CO	FC	DI	FC	FC	FC	AI	FC	FC	FC	FC	AI	LR	LR	GWR	LR	LR	FC	GWR	GWR
18	CO	CO	BW	BW	UE	BW	CO	UE	DI	TI	AI	AI	AI	AI	LR	LR	LR	LR	LR	NAS	NAS	FC	FC	FC
19	CO	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	LR	LR	LR	NAS	NAS	BW	CC	CC	CC	DI
20	DI	DI	AI	FC	FC	CO	CO	CC	CC	CC	CC	CC	DI	DI	LR	CO	BW	BW	LR	NAS	LR	NAS	NAS	FC
21	FC	FC	BW	BW	BW	BW	BW	BW	TI	CC	CC	CC	CC	CC	CC	LR	AI	AI	LR	NAS	LR	NAS	NAS	NAS
22	CC	AI	FC	FC	BW	BW	BW	BW	CC	CC	CC	CC	AI	AI	AI	AI	LR	LR	NAS	BW	LR	BW	FC	FC
23	FC	FC	GWR	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	CC	CC	DI	LR	LR	LR	NAS	FC	FC	FC	NAS
24	FC	FC	FC	BW	FC	FC	FC	CO	CO	CO	BW	BW	CC	CC	CC	CC	LR	LR	LR	LR	LR	NAS	LR	LR
25	FC	FC	FC	FC	BW	BW	BW	BW	BW	CC	CC	DI	DI	DI	AI	AI	AI	LR	LR	LR	NAS	NAS	GWR	FC
26	FC	FC	BW	BW	CO	CO	CO	CC	DI	DI	DI	AI	AI	AI	AI	AI	LR	LR	NAS	NAS	NAS	FC	FC	FC
27	FC	BW	BW	BW	BW	BW	BW	CO	CC	CC	CC	CC	CC	DI	AI	LR	LR	LR	NAS	NAS	NAS	NAS	FC	FC
28	DI	DI	CO	AI	CO	BW	BW	CO	CO	CO	CO	CO	CC	CC	LR	AI	LR	LR	NAS	NAS	NAS	FC	FC	FC
29	BW	DI	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	AI	LR	LR	LR	LR	LR	LR	BW	FC	FC
30	FC	FC	BW	BW	BW	LR	BW	BW	BW	CC	CC	CC	CC	DI	LR	DI	LR	LR	LR	LR	NAS	LR	BW	DI
31	FC	DI	LR	LR	BW	BW	CO	CO	TI	TI	CC	CC	DI	DI	DI	LR	LR	LR	LR	NAS	NAS	FC	BW	BW

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AUGUST 1970 — AL = MINIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	LR	LR	NAS	NAS	CC	GWR	GWR	GWR	GWR	GWR	GWR	FC	AI	NAS	GWR	GWR	BW	FC	FC	CO	CO	CO	CO	CC
2	CC	LR	LR	LR	NAS	NAS	DI	DI	GWR	GWR	NAS	NAS	NAS	GWR	BW	GWR	GWR	FC	FC	FC	CO	CO	CO	UE
3	TI	TI	TI	TI	NAS	CC	DI	DI	AI	AI	NAS	NAS	NAS	GWR	FC	BW	BW	FC	FC	CO	CO	CO	UE	UE
4	UE	TI	TI	TI	NAS	CC	DI	AI	GWR	FC	FC	FC	FC	GWR	BW	BW	BW	BW	CO	DI	DI	CO	CO	UE
5	LR	TI	NAS	NAS	NAS	NAS	NAS	FC	FC	AI	AI	AI	NAS	NAS	GWR	GWR	FC	FC	FC	CO	CO	CO	CO	CO
6	TI	TI	TI	TI	CC	CC	DI	DI	AI	GWR	FC	AI	NAS	NAS	NAS	GWR	FC	FC	BW	DI	BW	DI	DI	AI
7	LR	LR	TI	TI	CC	CC	DI	NAS	NAS	AI	NAS	AI	FC	FC	FC	BW	BW	BW	BW	CO	DI	DI	DI	CC
8	AI	LR	GWR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	CO	BW	FC	BW	FC	BW	BW	BW	DI	DI	AI	AI
9	AI	AI	GWR	NAS	LR	FC	GWR	GWR	BW	NAS	BW	BW	FC	CO	BW	GWR	FC	BW	DI	DI	DI	AI	UE	UE
10	TI	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR	GWR	FC	CO	CO	BW	BW	FC	BW	BW	BW	DI	DI	AI	AI	LR
11	LR	LR	LR	LR	FC	NAS	NAS	GWR	GWR	CO	FC	FC	FC	CO	BW	BW	TI	DI	DI	DI	CC	CC	CC	AI
12	CC	LR	LR	LR	LR	FC	GWR	GWR	GWR	FC	AI	FC	NAS	BW	NAS	GWR	GWR	FC	BW	DI	CC	CC	AI	UE
13	TI	TI	NAS	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	NAS	FC	CO	CO	BW	BW	BW	BW	BW	DI	DI	AI	AI
14	LR	TI	NAS	NAS	LR	CC	FC	DI	AI	AI	LR	LR	NAS	NAS	GWR	FC	BW	BW	BW	CC	CC	CC	CC	CC
15	CC	CC	LR	NAS	NAS	NAS	NAS	LR	LR	FC	FC	FC	FC	NAS	GWR	BW	BW	FC	CO	CO	CO	UE	DI	CC
16	CC	CC	LR	LR	TI	GWR	GWR	GWR	GWR	FC	FC	FC	FC	FC	FC	BW	FC	BW	BW	BW	DI	UE	DI	CC
17	CC	AI	AI	GWR	GWR	CC	GWR	GWR	CC	NAS	GWR	GWR	CC	UE	CO	CO	CO	BW	BW	BW	DI	AI	AI	AI
18	DI	AI	AI	LR	AI	LR	GWR	GWR	GWR	GWR	GWR	UE	UE	UE	CO	UE	CO	CO	BW	TI	TI	AI	AI	AI
19	AI	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR	CO	CO	FC	FC	CO	BW	BW	BW	TI	DI	DI	CO	CO	UE	UE
20	TI	TI	TI	CC	CC	CC	DI	GWR	GWR	FC	FC	FC	FC	FC	BW	GWR	DI	DI	DI	DI	DI	BW	DI	UE
21	LR	LR	LR	NAS	NAS	DI	DI	DI	DI	DI	AI	BW	BW	DI	GWR	GWR	BW	BW	DI	BW	CO	CC	CC	UE
22	TI	TI	DI	DI	DI	DI	DI	DI	DI	DI	FC	CO	CO	FC	FC	FC	BW	BW	BW	DI	DI	UE	UE	LR
23	LR	NAS	DI	LR	NAS	GWR	GWR	GWR	GWR	GWR	GWR	FC	CO	FC	BW	BW	BW	BW	BW	CC	DI	DI	UE	UE
24	TI	TI	TI	NAS	NAS	DI	DI	AI	AI	AI	LR	LR	FC	FC	BW	FC	BW	BW	BW	BW	DI	DI	CC	CC
25	CC	CC	NAS	NAS	LR	NAS	NAS	NAS	GWP	FC	GWR	GWR	FC	FC	CO	TI	CO	BW	BW	DI	CC	DI	DI	AI
26	LR	LR	NAS	LR	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR	CO	CO	CO	CO	CO	BW	DI	CC	DI	AI	AI	AI
27	AI	AI	LR	GWR	LR	GWR	GWR	NAS	DI	BW	FC	FC	FC	FC	CO	CO	BW	BW	TI	BW	BW	DI	DI	AI
28	NAS	NAS	NAS	BW	NAS	LR	NAS	NAS	NAS	AI	AI	AI	NAS	NAS	CO	BW	BW	BW	DI	TI	TI	DI	AI	AI
29	AI	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	NAS	AI	CO	FC	FC	FC	TI	BW	BW	DI	DI	DI	DI	DI	CC
30	LR	LR	LR	LR	NAS	GWR	GWR	GWR	GWP	AI	FC	FC	FC	GWR	FC	BW	BW	FC	DI	DI	DI	TI	TI	TI
31	TI	TI	TI	TI	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	CO	FC	CO	BW	TI	CO	TI	TI	DI	AI	LR

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1	DI	DI	DI	DI	GWR	CO	CC	CC	TI	TI	DI	DI	CO	TI	AI	AI	AI	NAS	NAS	GWR	GWR	GWR	FC	FC
2	FC	GWR	GWR	BW	BW	BW	BW	BW	CC	CC	TI	TI	TI	AI	AI	DI	NAS	NAS	NAS	NAS	NAS	NAS	FC	CC
3	DI	DI	BW	BW	BW	GWR	GWR	CC	CC	TI	DI	DI	DI	DI	TI	AI	AI	NAS	NAS	NAS	NAS	NAS	GWR	GWR
4	FC	FC	DI	GWR	GWR	CC	BW	CO	CC	CO	CC	CC	DI	CC	NAS	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	FC
5	GWR	BW	GWR	BW	BW	BW	TI	TI	TI	TI	TI	TI	TI	TI	TI	LR	LR	LR	LR	GWR	GWR	FC	GWR	GWR
6	DI	DI	DI	BW	GWR	FC	FC	FC	BW	BW	CC	CC	CC	CC	DI	DI	NAS	NAS	NAS	NAS	NAS	NAS	FC	NAS
7	BW	DI	BW	BW	NAS	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	DI	BW	FC	FC	NAS	NAS	NAS	DI
8	DI	DI	BW	BW	BW	BW	BW	BW	CC	CC	BW	CC	BW	DI	NAS	LR	NAS	NAS	LR	GWR	LR	BW	DI	DI
9	DI	DI	DI	BW	BW	BW	BW	BW	BW	BW	BW	BW	CO	TI	TI	LR	AI	AI	NAS	NAS	NAS	FC	FC	GWR
10	BW	BW	BW	BW	BW	BW	BW	BW	FC	TI	TI	TI	DI	CC	CC	TI	DI	DI	DI	DI	DI	AI	DI	DI
11	DI	DI	DI	DI	UE	UE	UE	UE	UE	UE	UE	UE	UE	UE	UE	DI	DI	DI	DI	CC	AI	GWR	CC	DI
12	DI	GWR	GWR	GWR	BW	BW	CC	CC	CC	CO	CO	CO	UE	UE	UE	DI	DI	AI	AI	NAS	NAS	GWR	DI	DI
13	GWR	GWR	GWR	GWR	BW	BW	CO	CC	TI	TI	DI	DI	TI	AI	AI	NAS	LR	AI	NAS	NAS	GWR	GWR	GWR	FC
14	BW	BW	BW	GWR	BW	BW	BW	BW	CC	CC	CC	DI	DI	AI	AI	AI	AI	AI	NAS	NAS	GWR	NAS	FC	FC
15	BW	BW	BW	BW	BW	BW	BW	LR	TI	TI	CC	DI	DI	DI	DI	LR	NAS	NAS	NAS	NAS	NAS	NAS	FC	DI
16	BW	BW	BW	BW	BW	BW	BW	CC	BW	CC	CC	CC	TI	CC	AI	TI	NAS	NAS	NAS	NAS	NAS	NAS	FC	FC
17	FC	FC	BW	BW	BW	BW	CC	CO	CC	BW	TI	TI	DI	CC	DI	AI	AI	LR	NAS	NAS	FC	FC	FC	FC
18	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	CC	GWR	DI	DI	DI	AI	DI	NAS	LR	NAS	NAS	FC	NAS	NAS
19	DI	DI	BW	BW	BW	CO	BW	CC	CC	DI	DI	DI	DI	AI	AI	AI	AI	LR	NAS	NAS	NAS	FC	GWR	FC
20	DI	BW	DI	DI	BW	BW	BW	BW	CC	CC	CC	DI	DI	AI	AI	AI	LR	LR	NAS	NAS	NAS	FC	FC	FC
21	GWR	BW	BW	BW	BW	BW	CC	DI	TI	CC	CC	DI	DI	AI	AI	AI	AI	LR	NAS	NAS	NAS	NAS	NAS	FC
22	DI	BW	BW	BW	BW	BW	FC	BW	CC	CC	CC	CC	DI	DI	DI	DI	NAS	NAS	NAS	NAS	NAS	FC	FC	FC
23	FC	FC	FC	DI	FC	BW	BW	CC	CC	CC	DI	CC	DI	DI	DI	DI	AI	AI	NAS	FC	FC	FC	FC	FC
24	FC	GWR	BW	BW	BW	BW	BW	CC	CC	CC	CC	GWR	DI	DI	DI	DI	DI	NAS	NAS	NAS	FC	FC	FC	NAS
25	DI	DI	DI	BW	BW	BW	CO	BW	CC	CC	CC	CO	TI	DI	DI	DI	DI	NAS	NAS	LR	FC	FC	DI	DI
26	DI	DI	BW	BW	BW	BW	BW	CO	CO	CO	CC	BW	TI	CC	DI	DI	AI	AI	NAS	GWR	FC	FC	FC	FC
27	FC	GWR	GWR	BW	CO	CO	CO	TI	CC	CC	DI	DI	DI	TI	AI	AI	LR	NAS	NAS	NAS	NAS	FC	FC	FC
28	BW	DI	DI	DI	DI	DI	BW	BW	BW	BW	BW	BW	TI	DI	DI	DI	CC	CC	AI	AI	DI	DI	DI	DI
29	DI	DI	DI	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	BW	BW	DI	DI	DI	DI	DI	FC	FC	NAS
30	DI	BW	BW	BW	BW	FC	BW	BW	BW	BW	CC	CC	BW	CC	BW	CC	CC	NAS	DI	GWR	GWR	NAS	NAS	FC

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TABLE OF OBSERVATORIES SUPPLYING HOURLY AL

SEPTEMBER 1970 — AL = MINIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	LR	LR	TI	TI	TI	LR	NAS	GWR	GWR	NAS	CO	GWR	NAS	FC	FC	CO	BW	TI	BW	BW	DI	TI	CC	AI
2	LR	LR	LR	TI	TI	NAS	NAS	AI	AI	GWR	GWR	FC	FC	TI	CO	BW	TI	DI	TI	TI	TI	AI	AI	UE
3	TI	TI	TI	NAS	NAS	BW	BW	NAS	NAS	GWR	GWR	GWR	FC	UE	FC	CO	BW	BW	BW	DI	DI	DI	DI	AI
4	AI	LR	LR	LR	TI	TI	NAS	NAS	GWR	AI	AI	FC	BW	BW	GWR	FC	BW	TI	DI	DI	DI	DI	UE	UE
5	LR	LR	LR	NAS	NAS	NAS	DI	AI	LR	AI	LR	LR	FC	BW	NAS	BW	BW	BW	DI	DI	DI	CC	DI	CC
6	UE	TI	NAS	NAS	NAS	NAS	NAS	NAS	AI	AI	LR	LR	LR	NAS	FC	BW	BW	BW	DI	DI	CC	CO	AI	UE
7	UE	NAS	NAS	TI	TI	TI	DI	LR	LR	AI	AI	NAS	BW	FC	BW	BW	GWR	GWR	CO	CO	DI	DI	CC	UE
8	UE	UE	TI	TI	TI	FC	NAS	NAS	GWR	AI	LR	LR	FC	FC	BW	BW	BW	BW	BW	TI	TI	CO	LR	UE
9	UE	TI	TI	NAS	NAS	LR	DI	AI	AI	AI	AI	LR	NAS	NAS	NAS	FC	BW	BW	UE	DI	DI	CC	CC	CC
10	LR	LR	LR	LR	LR	NAS	FC	FC	DI	AI	AI	LR	GWR	GWR	BW	GWR	GWR	GWR	CO	CO	CO	CO	CO	CO
11	BW	BW	BW	BW	BW	BW	BW	AI	AI	AI	LR	LR	LR	LR	GWR	FC	FC	FC	FC	CO	CO	CO	UE	UE
12	BW	CC	BW	LR	FC	FC	GWR	GWR	FC	AI	LR	NAS	LR	LR	GWR	GWR	FC	DI	BW	CC	BW	UE	UE	UE
13	TI	BW	NAS	LR	FC	NAS	NAS	NAS	NAS	CO	CO	GWR	GWR	UE	FC	FC	CO	BW	TI	BW	DI	TI	AI	AI
14	AI	LR	LR	LR	NAS	GWR	GWR	GWR	FC	FC	FC	CO	FC	CO	UE	CO	CO	TI	TI	DI	DI	AI	AI	CC
15	AI	LR	LR	LR	LR	NAS	NAS	NAS	BW	AI	GWR	CO	FC	FC	GWR	GWR	BW	BW	BW	DI	DI	DI	CC	LR
16	LR	NAS	NAS	NAS	NAS	NAS	NAS	GWR	FC	FC	FC	FC	BW	BW	BW	DI	FC	BW	DI	DI	DI	DI	UE	LR
17	LR	NAS	NAS	LR	NAS	GWR	GWR	NAS	BW	FC	LR	LR	BW	LR	GWR	CC	DI	BW	BW	DI	DI	DI	DI	LR
18	NAS	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	BW	NAS	GWR	FC	BW	FC	BW	BW	BW	DI	DI	CC	CC
19	UE	NAS	NAS	NAS	NAS	LR	NAS	NAS	GWR	GWR	GWR	GWR	CO	CO	TI	TI	TI	TI	TI	TI	TI	AI	AI	AI
20	LR	NAS	NAS	NAS	NAS	GWR	NAS	GWR	GWR	FC	FC	FC	FC	CO	CO	CO	TI	DI	BW	TI	DI	DI	CC	AI
21	LR	AI	LR	GWR	NAS	NAS	NAS	GWR	GWR	GWR	AI	FC	CO	CO	CO	FC	TI	TI	BW	TI	CC	AI	CC	LR
22	LR	LR	LR	NAS	GWR	NAS	NAS	NAS	GWR	GWR	FC	FC	FC	BW	CC	BW	TI	BW	BW	TI	DI	CC	AI	LR
23	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	FC	FC	FC	FC	BW	BW	TI	DI	DI	DI	CC	UE	UE	CC
24	LR	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	FC	FC	AI	LR	GWR	BW	BW	GWR	BW	DI	DI	TI	CC	CC	CC
25	UE	UE	TI	NAS	NAS	NAS	NAS	GWR	GWR	FC	FC	AI	LR	NAS	GWR	BW	BW	BW	BW	BW	UE	UE	UE	UE
26	UE	UE	LR	NAS	NAS	NAS	NAS	GWR	GWR	FC	FC	LR	LR	LR	GWR	GWR	TI	DI	DI	DI	DI	CC	CC	AI
27	LR	LR	LR	LR	LR	LR	NAS	NAS	GWR	FC	CO	CO	FC	FC	CO	CO	TI	TI	BW	TI	AI	AI	AI	AI
28	AI	LR	LR	GWR	GWR	GWR	GWR	UE	UE	LR	LR	NAS	LR	LR	GWR	GWR	GWR	UE	UE	UE	UE	UE	UE	UE
29	UE	UE	UE	UE	NAS	NAS	GWR	GWR	FC	AI	AI	AI	LR	LR	GWR	GWR	GWR	GWR	UE	UE	UE	UE	UE	UE
30	UE	UE	LR	NAS	NAS	NAS	NAS	UE	AI	AI	LR	LR	LR	LR	GWR	GWR	FC	FC	CC	UE	UE	DI	DI	CC

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UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	FC	FC	FC	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	BW	DI	DI	NAS	NAS	NAS	NAS	LR	NAS	FC	GWR
2	BW	GWR	GWR	NAS	NAS	BW	BW	BW	BW	CC	CC	CC	DI	TI	DI	DI	CC	NAS	LR	NAS	LR	NAS	NAS	NAS
3	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	BW	CC	BW	DI	DI	DI	AI	NAS	NAS	NAS	NAS	NAS	GWR	GWR	FC
4	GWR	GWR	BW	CO	CO	BW	BW	UE	CC	TI	DI	DI	DI	DI	LR	DI	NAS	NAS	NAS	NAS	FC	NAS	FC	NAS
5	GWR	GWR	GWR	GWR	GWR	BW	CO	BW	CO	CC	GWR	CC	CC	DI	DI	LR	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS
6	FC	FC	FC	FC	BW	BW	BW	BW	CC	TI	CC	CC	CC	CC	CC	TI	TI	NAS	NAS	NAS	NAS	FC	NAS	NAS
7	DI	LR	BW	BW	LR	LR	BW	BW	BW	BW	BW	CC	CC	DI	CO	CO	BW	CC	NAS	NAS	NAS	NAS	NAS	NAS
8	NAS	FC	GWR	GWR	FC	FC	FC	BW	BW	BW	BW	BW	BW	BW	BW	CC	UE	DI	NAS	LR	LR	NAS	NAS	NAS
9	NAS	NAS	GWR	FC	GWR	AI	BW	BW	BW	BW	BW	CC	CC	CC	CC	TI	TI	LR	NAS	NAS	NAS	GWR	CC	LR
10	LR	LR	GWR	BW	BW	BW	CO	CC	CO	BW	BW	FC	TI	TI	TI	DI	NAS	AI	LR	LR	GWR	GWR	GWR	GWR
11	GWR	GWR	BW	BW	BW	CO	UE	TI	DI	DI	DI	TI	DI	AI	AI	AI	AI	LR	NAS	NAS	NAS	BW	FC	FC
12	BW	CO	BW	CO	UE	CO	CC	TI	UE	TI	TI	TI	DI	DI	CO	CO	CO	LR	NAS	NAS	NAS	NAS	NAS	NAS
13	NAS	NAS	NAS	BW	BW	BW	CO	CO	BW	GWR	CC	CC	DI	DI	DI	LR	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS
14	FC	BW	BW	BW	CO	CC	BW	CC	CC	CC	TI	TI	CC	DI	CC	BW	NAS	NAS	NAS	NAS	NAS	FC	FC	FC
15	FC	FC	FC	GWR	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	DI	CO	TI	AI	LR	NAS	NAS	NAS	DI
16	DI	DI	DI	AI	AI	AI	BW	LR	BW	CC	CC	TI	AI	AI	AI	AI	FC	FC	GWR	FC	FC	FC	FC	FC
17	FC	BW	BW	BW	BW	BW	CC	CC	TI	TI	TI	DI	AI	AI	AI	LR	LR	LR	GWR	GWR	GWR	BW	GWR	CO
18	CO	UE	CO	UE	LR	LR	LR	TI	TI	TI	CC	DI	DI	DI	LR	AI	LR	LR	NAS	NAS	GWR	FC	FC	NAS
19	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	DI	DI	AI	AI	NAS	NAS	NAS	NAS	NAS	NAS	FC
20	FC	FC	FC	BW	BW	CC	CC	CC	CC	TI	DI	DI	DI	DI	DI	DI	AI	NAS	NAS	NAS	NAS	NAS	NAS	NAS
21	NAS	BW	BW	FC	BW	BW	LR	BW	BW	BW	BW	CC	CC	CC	LR	DI	LR	NAS	NAS	NAS	NAS	NAS	NAS	FC
22	GWR	FC	GWR	BW	BW	BW	BW	CC	CC	TI	TI	TI	TI	AI	AI	AI	AI	LR	LR	GWR	GWR	GWR	GWR	BW
23	CO	BW	BW	BW	CO	CO	CC	CC	CC	TI	TI	TI	DI	AI	LR	LR	LR	NAS	GWR	GWR	GWR	GWR	GWR	GWR
24	BW	GWR	BW	BW	BW	CO	UE	CO	TI	CC	TI	TI	TI	AI	DI	DI	CO	NAS	NAS	NAS	LR	LR	DI	DI
25	BW	GWR	GWR	BW	FC	BW	BW	CC	BW	BW	CC	CC	DI	AI	DI	LR	AI	NAS	LR	BW	NAS	NAS	BW	CC
26	GWR	GWR	GWR	GWR	GWR	FC	BW	BW	BW	CC	TI	CC	CC	DI	DI	DI	NAS	NAS	NAS	LR	BW	NAS	NAS	NAS
27	GWR	NAS	GWR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	CC	CC	TI	DI	DI	DI	DI	TI	GWR	NAS	GWR	GWR	NAS
28	NAS	GWR	GWR	GWR	BW	BW	CO	CO	GWR	CO	CO	CC	DI	DI	NAS	LR	AI	NAS	NAS	GWR	GWR	GWR	GWR	BW
29	BW	DI	DI	GWR	GWR	BW	BW	BW	BW	CC	CO	CC	TI	TI	TI	DI	NAS	LR	NAS	GWR	GWR	GWR	GWR	FC
30	GWR	BW	BW	BW	BW	LR	GWR	BW	CC	CC	TI	TI	TI	TI	DI	LR	AI	NAS	DI	DI	LR	NAS	GWR	GWR
31	GWR	GWR	GWR	GWR	GWR	GWR	GWR	BW	BW	CO	BW	BW	CC	DI	DI	DI	DI	DI	GWR	NAS	GWR	GWR	GWR	GWR

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2	AI	LR	CO	CO	CO	CO	CO	CO	CO	FC	FC	FC	CO	CO	CO	CO	CO	CO	TI	DI	CO	CO	AI	CO
3	CC	CC	CO	LR	NAS	CO	CO	CO	GWR	FC	CO	CO	CO	CO	CO	TI	BW	BW	BW	AI	AI	DI	CO	LR
4	AI	AI	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	CO	CO	CO	CO	BW	CC	TI	TI	DI	DI	DI	DI	AI	AI
5	AI	NAS	NAS	NAS	TI	NAS	GWR	GWR	GWR	BW	BW	LR	BW	BW	BW	GWR	CC	TI	DI	DI	DI	CC	CC	TI
6	TI	NAS	NAS	NAS	NAS	FC	GWR	GWR	AI	BW	BW	BW	FC	BW	GWR	GWR	GWR	FC	BW	CC	DI	DI	CC	UE
7	TI	TI	TI	TI	TI	TI	GWR	GWR	FC	AI	AI	NAS	BW	BW	GWR	GWR	GWR	FC	FC	CO	CO	CO	UE	UE
8	CO	UE	CO	NAS	TI	TI	DI	DI	DI	AI	AI	LR	LR	LR	GWR	GWR	GWR	CC	CC	CO	CO	CO	CO	CO
9	CO	TI	TI	TI	TI	TI	DI	DI	FC	AI	AI	AI	LR	LR	NAS	GWR	GWR	BW	CC	DI	CO	CO	UE	UE
10	UE	TI	TI	TI	NAS	NAS	NAS	GWR	FC	DI	AI	LR	LR	GWR	BW	BW	DI	BW	BW	BW	BW	DI	DI	CC
11	CC	AI	AI	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	FC	CO	BW	BW	TI	TI	AI	LR	CC	AI
12	AI	AI	LR	AI	NAS	LR	NAS	GWR	NAS	GWR	GWR	FC	CO	FC	BW	GWR	FC	FC	FC	FC	DI	FC	FC	BW
13	LR	UE	UE	NAS	NAS	FC	NAS	FC	FC	AI	FC	FC	CO	BW	FC	TI	BW	BW	DI	DI	DI	DI	AI	AI
14	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	FC	BW	FC	FC	BW	GWR	GWR	GWR	DI	DI	DI	DI	AI	AI	CC
15	LR	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	BW	FC	BW	LR	BW	BW	BW	FC	FC	FC	CO	DI	DI	CO	CO
16	UE	UE	UE	NAS	TI	GWR	TI	FC	FC	FC	GWR	CO	FC	FC	UE	UE	UE	UE	UE	UE	AI	AI	AI	AI
17	LR	LR	LR	NAS	NAS	NAS	FC	FC	GWR	GWR	GWR	CO	CO	CO	CO	CO	UE	CO	UE	CO	UE	DI	LR	LR
18	LR	LR	LR	LR	FC	GWR	GWR	NAS	FC	FC	CO	FC	CO	FC	CC	CO	BW	BW	TI	TI	AI	AI	AI	CC
19	GWR	GWR	GWR	GWR	NAS	NAS	GWR	NAS	FC	FC	FC	FC	FC	CO	BW	TI	BW	BW	TI	CC	DI	CC	CC	CC
20	LR	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	BW	FC	FC	FC	BW	BW	BW	CC	CC	DI	CC	UE	DI	CC	UE
21	TI	TI	TI	TI	TI	TI	TI	DI	DI	AI	AI	LR	NAS	NAS	GWR	GWR	GWR	BW	BW	BW	TI	CC	CC	AI
22	LR	LR	LR	LR	FC	NAS	NAS	NAS	FC	GWR	GWR	FC	FC	FC	FC	FC	BW	BW	CO	BW	BW	BW	LR	AI
23	AI	LR	AI	LR	NAS	GWR	NAS	NAS	GWR	GWR	CO	CO	FC	CO	UE	BW	CO	BW	BW	BW	BW	AI	AI	LR
24	LR	UE	LR	LR	NAS	NAS	NAS	GWR	GWR	FC	FC	FC	FC	BW	BW	CC	BW	BW	DI	CC	DI	CC	AI	LR
25	LR	LR	NAS	NAS	TI	NAS	GWR	FC	FC	FC	FC	FC	CO	BW	BW	BW	TI	TI	CC	CC	CC	CC	AI	UE
26	UE	NAS	NAS	NAS	NAS	NAS	FC	FC	FC	FC	FC	FC	FC	BW	BW	BW	BW	CC	DI	DI	CC	CC	CC	UE
27	UE	UE	UE	NAS	NAS	CC	FC	DI	AI	AI	AI	NAS	NAS	BW	BW	FC	GWR	FC	FC	BW	DI	DI	LR	UE
28	UE	LR	NAS	LR	LR	NAS	NAS	FC	AI	AI	AI	AI	FC	FC	TI	BW	BW	BW	TI	DI	AI	BW	AI	AI
29	LR	LR	NAS	UE	NAS	FC	FC	FC	DI	FC	FC	FC	FC	FC	BW	FC	BW	TI	BW	BW	TI	TI	AI	AI
30	CC	GWR	LR	LR	NAS	NAS	NAS	FC	FC	GWR	FC	BW	FC	BW	FC	DI	DI	CC	FC	FC	CO	CC	CC	BW
31	BW	BW	BW	CC	NAS	CC	DI	DI	FC	FC	AI	AI	BW	BW	BW	BW	CC	CC	CC	DI	CC	CC	UE	UE

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2	FC	FC	FC	FC	FC	FC	LR	TI	CC	CC	CC	CC	DI	TI	AI	DI	DI	TI	TI	TI	TI	TI	FC	FC
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4	GWR	FC	FC	BW	GWR	FC	BW	CC	CC	BW	CC	TI	TI	CC	CC	DI	DI	DI	NAS	AI	LR	LR	NAS	NAS
5	FC	GWR	FC	FC	BW	BW	CO	CO	CO	CO	CC	CC	TI	DI	DI	AI	AI	AI	NAS	NAS	NAS	FC	GWR	FC
6	BW	BW	BW	BW	BW	BW	BW	CO	TI	DI	DI	TI	AI	LR	AI	AI	AI	NAS	CO	NAS	NAS	NAS	NAS	FC
7	FC	CO	CC	BW	CO	CO	CO	DI	AI	AI	AI	AI	AI	AI	AI	AI	AI	NAS	NAS	FC	FC	FC	FC	GWR
8	GWR	FC	BW	BW	FC	BW	LR	CC	CC	CC	CC	DI	CC	DI	LR	LR	DI	CO	LR	LR	FC	DI	FC	FC
9	FC	FC	FC	FC	BW	BW	CC	CC	CC	DI	DI	CC	DI	CO	LR	LR	LR	LR	LR	FC	NAS	FC	DI	NAS
10	FC	FC	BW	GWR	BW	BW	CC	CC	BW	DI	AI	LR	DI	TI	LR	AI	LR	LR	LR	LR	FC	FC	LR	FC
11	TI	BW	TI	BW	CC	CC	BW	CC	TI	TI	AI	TI	DI	LR	LR	NAS	NAS	FC	BW	BW	FC	FC	DI	BW
12	FC	FC	BW	BW	BW	CC	CC	CC	BW	DI	DI	DI	DI	AI	NAS	LR	AI	FC	BW	LR	LR	FC	FC	FC
13	GWR	GWR	BW	BW	FC	BW	CO	BW	FC	CC	CC	DI	TI	AI	AI	AI	AI	LR	LR	NAS	NAS	NAS	FC	FC
14	BW	BW	GWR	FC	BW	BW	BW	BW	CC	CO	CC	CC	GWR	DI	DI	DI	LR	AI	NAS	LR	FC	NAS	LR	BW
15	BW	BW	BW	BW	BW	BW	BW	CC	BW	CC	CC	CC	CC	CC	DI	DI	DI	LR	LR	LR	LR	LR	LR	FC
16	DI	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	BW	LR	AI	AI	AI	AI	LR	NAS	LR	NAS
17	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	CC	CC	UE	UE	CO	BW	BW	CO	AI	CC	LR	LR	NAS	NAS	GWR
18	GWR	GWR	LR	GWR	AI	AI	BW	CO	BW	NAS	CC	CC	DI	DI	AI	LR	AI	AI	AI	AI	NAS	FC	GWR	CO
19	CO	CO	CO	CO	CO	CO	CO	CO	CO	NAS	CC	NAS	CC	DI	DI	DI	DI	DI	DI	DI	NAS	DI	DI	DI
20	BW	DI	BW	DI	AI	AI	NAS	NAS	NAS	FC	FC	DI	CC	CO	CO	CO	CO	CO	UE	LR	DI	NAS	NAS	NAS
21	DI	DI	BW	BW	BW	LR	CC	CC	DI	DI	AI	AI	AI	LR	LR	LR	LR	NAS	NAS	FC	FC	BW	BW	BW
22	BW	BW	BW	BW	BW	BW	LR	CC	CC	DI	DI	DI	DI	AI	AI	LR	LR	LR	LR	NAS	GWR	GWR	GWR	GWR
23	GWR	BW	BW	BW	BW	BW	CO	DI	TI	DI	UE	AI	DI	DI	AI	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR
24	BW	BW	BW	BW	CC	BW	BW	BW	BW	GWR	GWR	GWR	GWR	GWR	DI	NAS	AI	LR	LR	LR	LR	NAS	NAS	BW
25	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	TI	TI	TI	FC	AI	AI	LR	NAS	AI	LR	LR	NAS	NAS
26	NAS	NAS	NAS	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	NAS	NAS	AI	DI	NAS	NAS	NAS	NAS	BW	BW
27	NAS	BW	GWR	GWR	BW	BW	NAS	CC	CC	CC	CC	TI	DI	DI	DI	CO	NAS	NAS	NAS	FC	FC	NAS	FC	NAS
28	BW	FC	FC	BW	BW	BW	BW	FC	FC	CC	CC	TI	DI	DI	AI	AI	DI	BW	BW	NAS	NAS	NAS	GWR	FC
29	BW	GWR	BW	FC	FC	FC	FC	BW	BW	BW	BW	CC	BW	BW	BW	DI	DI	DI	DI	NAS	NAS	GWR	GWR	GWR
30	GWR	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	DI	CO	BW	BW	NAS	BW	BW	BW	BW	BW

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
AI = ABISKO	68 21.5	18 49.4	66.0	114.9
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TABLE OF OBSERVATORIES SUPPLYING HOURLY AL

NOVEMBER 1970 — AL = MINIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	CO	CO	BW	CC	CC	CC	DI	DI	AI	AI	BW	BW	LR	NAS	GWR	GWR	BW	CC	GWR	GWR	BW	CO	CO	CO
2	CO	UE	NAS	NAS	NAS	NAS	GWR	NAS	GWR	FC	FC	FC	BW	FC	CC	BW	CC	GWR	GWR	GWR	CO	CO	CC	CC
3	CC	CC	CC	NAS	NAS	DI	DI	FC	GWR	FC	AI	NAS	NAS	BW	CC	BW	BW	BW	BW	BW	BW	DI	CC	DI
4	DI	LR	NAS	NAS	NAS	NAS	DI	NAS	GWR	GWR	FC	FC	BW	BW	BW	BW	BW	BW	DI	DI	DI	DI	DI	CC
5	CC	CC	CC	NAS	NAS	NAS	NAS	GWR	GWR	FC	BW	BW	BW	BW	BW	BW	BW	BW	BW	DI	DI	DI	DI	CC
6	AI	NAS	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	CO	CO	BW	CO	BW	BW	BW	CC	CC	AI	DI	CC	AI
7	LR	AI	AI	AI	GWR	NAS	NAS	GWR	GWR	GWR	CO	CO	FC	CO	BW	BW	TI	TI	TI	TI	DI	CC	AI	AI
8	AI	AI	LR	LR	AI	NAS	GWR	GWR	FC	FC	FC	BW	BW	BW	BW	BW	CC	CC	DI	DI	GWR	BW	BW	LR
9	NAS	UE	UE	NAS	NAS	NAS	GWR	GWR	GWR	GWR	CO	CO	CO	BW	BW	CC	TI	BW	TI	DI	DI	AI	UE	UE
10	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	FC	CO	FC	FC	CO	BW	BW	BW	TI	TI	DI	AI	AI	AI
11	LR	NAS	LR	LR	NAS	GWR	GWR	GWR	GWR	GWR	CO	FC	CO	CC	BW	TI	CC	TI	CC	CC	TI	DI	BW	AI
12	LR	LR	NAS	NAS	GWR	NAS	GWR	GWR	FC	GWR	CO	CO	CO	CC	BW	BW	DI	TI	GWR	GWR	GWR	BW	BW	BW
13	TI	NAS	LR	NAS	NAS	NAS	GWR	FC	BW	FC	BW	BW	BW	CO	BW	BW	BW	BW	BW	BW	DI	DI	AI	LR
14	LR	LR	LR	NAS	FC	FC	GWR	GWR	GWR	BW	AI	FC	AI	CC	CC	BW	BW	BW	TI	DI	AI	AI	CO	TI
15	TI	TI	TI	DI	DI	DI	DI	DI	FC	FC	FC	BW	BW	BW	BW	NAS	GWR	FC	DI	DI	CC	CC	TI	CO
16	TI	TI	TI	NAS	NAS	NAS	DI	DI	DI	FC	BW	FC	BW	NAS	GWR	GWR	BW	DI	BW	TI	DI	AI	AI	CC
17	AI	LR	LR	NAS	NAS	NAS	NAS	NAS	NAS	GWR	BW	BW	BW	BW	NAS	GWR	GWR	GWR	GWR	GWR	BW	BW	BW	BW
18	LR	LR	TI	NAS	NAS	FC	FC	FC	FC	AI	AI	BW	BW	BW	CO	CO	CO	TI	BW	BW	TI	BW	AI	CC
19	TI	AI	AI	LR	LR	LR	LR	TI	NAS	UE	FC	BW	FC	BW	BW	GWR	FC	GWR	BW	BW	BW	CO	CO	CO
20	UE	UE	UE	TI	BW	BW	BW	BW	BW	BW	LR	BW	BW	NAS	NAS	GWR	CC	FC	TI	FC	TI	CC	AI	AI
21	LR	NAS	LR	LR	NAS	NAS	GWR	GWR	GWR	CO	CO	CO	CO	CC	CO	UE	UE	TI	TI	DI	DI	AI	AI	LR
22	LR	LR	LR	GWR	GWR	NAS	GWR	NAS	GWR	GWR	GWR	FC	CO	CO	CO	BW	BW	BW	BW	BW	TI	DI	DI	AI
23	AI	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	CC	CO	BW	CO	UE	TI	AI	DI	AI	AI	AI	AI
24	LR	LR	LR	NAS	FC	FC	FC	FC	FC	DI	FC	LR	LR	NAS	FC	FC	BW	BW	BW	TI	TI	DI	AI	AI
25	LR	AI	LR	TI	TI	GWR	GWR	GWR	GWR	BW	FC	FC	FC	FC	TI	TI	TI	TI	BW	BW	TI	DI	AI	AI
26	AI	LR	UE	TI	FC	NAS	DI	DI	FC	FC	FC	FC	FC	FC	FC	CC	BW	BW	TI	DI	DI	DI	CC	FC
27	FC	LR	NAS	LR	NAS	FC	DI	FC	GWR	FC	FC	FC	FC	BW	FC	FC	BW	BW	CC	CC	DI	DI	CC	CC
28	AI	AI	LR	NAS	FC	GWR	NAS	DI	AI	LR	FC	FC	BW	BW	CC	CC	CC	GWR	DI	DI	DI	CC	CO	CO
29	UE	UE	TI	NAS	TI	TI	CO	NAS	AI	AI	AI	FC	LR	FC	FC	BW	BW	BW	BW	CC	CC	CO	CO	CO
30	UE	UE	UE	NAS	NAS	NAS	LR	LR	AI	AI	AI	LR	NAS	NAS	NAS	LR	CC	CC	GWR	GWR	GWR	DI	DI	GWR

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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU

DECEMBER 1970 — AU = MAXIMUM DELTA H

UT	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	FC	CC	CC	CC	CO	CO	BW	CC	BW	BW	BW	BW	FC	DI	CC	DI	DI	DI	CC	DI	AI	AI	NAS	NAS
2	FC	FC	FC	FC	CO	FC	FC	BW	UE	BW	BW	BW	CC	CC	CC	DI	DI	DI	AI	LR	LR	NAS	DI	DI
3	FC	GWR	BW	BW	CC	CC	CC	CC	CC	CC	CC	DI	CC	CC	CC	FC	NAS	DI	DI	NAS	NAS	NAS	NAS	NAS
4	CC	NAS	CC	CC	CC	CC	CC	CC	BW	BW	BW	CC	CC	CC	CC	FC	FC	FC	CC	FC	LR	FC	FC	FC
5	FC	FC	BW	BW	BW	BW	BW	CO	CC	CC	CC	CC	FC	FC	FC	AI	DI	BW	TI	TI	TI	TI	TI	FC
6	FC	FC	TI	FC	AI	BW	BW	CO	CC	CC	TI	TI	TI	DI	AI	AI	AI	LR	NAS	NAS	NAS	NAS	DI	DI
7	FC	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	DI	DI	NAS	NAS	NAS	NAS	NAS	FC	FC	FC
8	GWR	CO	BW	CO	CO	BW	CO	DI	CC	CC	DI	TI	TI	AI	LR	CO	CO	NAS	NAS	LR	LR	FC	FC	NAS
9	BW	FC	FC	BW	BW	BW	BW	BW	BW	CC	DI	CC	CC	DI	DI	DI	FC	AI	BW	BW	TI	TI	TI	NAS
10	NAS	FC	FC	FC	FC	FC	FC	FC	CC	CC	CC	CC	DI	DI	GWR	AI	AI	CO	CO	NAS	NAS	NAS	NAS	CC
11	CC	CC	FC	FC	CC	CC	BW	BW	BW	BW	CC	FC	FC	CC	FC	CO	CO	CO	CO	AI	LR	BW	FC	FC
12	FC	FC	FC	FC	FC	FC	BW	BW	CC	CC	CC	CC	DI	DI	DI	DI	FC	LR	AI	LR	FC	NAS	NAS	NAS
13	NAS	FC	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	BW	FC	CC	TI	DI	AI	AI	NAS	NAS	NAS	NAS	NAS
14	NAS	FC	GWR	GWR	CO	CO	UE	DI	DI	CO	TI	LR	TI	AI	AI	AI	NAS	NAS	NAS	NAS	NAS	GWR	GWR	LR
15	BW	BW	BW	BW	CC	CC	CC	TI	CO	TI	TI	DI	TI	DI	DI	DI	AI	LR	AI	AI	NAS	NAS	NAS	NAS
16	FC	FC	FC	BW	BW	BW	BW	BW	BW	BW	BW	DI	CC	CC	DI	DI	DI	AI	NAS	NAS	NAS	NAS	FC	NAS
17	NAS	NAS	BW	BW	BW	BW	BW	BW	BW	CC	CC	DI	CC	GWR	DI	DI	BW	BW	BW	BW	BW	BW	BW	BW
18	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	GWR	GWR	GWR	TI	TI	DI	CO	CO	BW	BW	BW	GWR	GWR	GWR
19	GWR	FC	FC	GWR	GWR	BW	BW	BW	CC	TI	CC	GWR	FC	FC	FC	FC	CO	CO	GWR	AI	LR	GWR	GWR	FC
20	FC	FC	FC	CC	CC	BW	CC	CO	TI	TI	TI	TI	TI	GWR	DI	CO	CO	CO	GWR	NAS	LR	NAS	NAS	GWR
21	GWR	FC	GWR	FC	CC	CC	CC	CO	CC	TI	CC	GWR	GWR	GWR	FC	FC	FC	GWR	GWR	GWR	FC	NAS	GWR	GWR
22	FC	FC	FC	FC	BW	BW	BW	BW	CC	CC	CC	TI	DI	CC	DI	DI	DI	GWR	NAS	NAS	NAS	LR	LR	FC
23	NAS	FC	GWR	FC	FC	FC	CC	CC	CC	CC	DI	DI	DI	DI	AI	AI	LR	LR	NAS	DI	FC	FC	GWR	FC
24	BW	BW	GWR	CO	CO	CO	BW	BW	CO	BW	FC	DI	DI	DI	AI	DI	FC	NAS	NAS	NAS	NAS	NAS	NAS	NAS
25	NAS	NAS	CC	FC	FC	FC	FC	FC	FC	GWR	FC	FC	DI	GWR	DI	DI	DI	DI	DI	AI	LR	NAS	FC	NAS
26	FC	FC	FC	FC	GWR	BW	BW	BW	BW	BW	BW	FC	CC	DI	CC	CC	DI	DI	DI	LR	GWR	NAS	NAS	NAS
27	GWR	GWR	FC	GWR	FC	FC	BW	BW	BW	BW	CC	CC	CC	DI	DI	AI	AI	AI	AI	LR	LR	GWR	NAS	GWR
28	GWR	GWR	GWR	BW	BW	BW	BW	CO	CC	TI	TI	TI	DI	DI	AI	AI	AI	LR	GWR	GWR	GWR	GWR	GWR	GWR
29	GWR	BW	BW	BW	BW	BW	BW	BW	CO	BW	BW	BW	DI	DI	DI	LR	DI	AI	LR	AI	LR	LR	FC	FC
30	BW	BW	BW	CO	BW	FC	BW	GWR	CC	CC	NAS	CC	FC	DI	DI	GWR	NAS	AI	DI	BW	DI	FC	LR	FC
31	FC	FC	FC	BW	FC	BW	FC	FC	FC	FC	FC	FC	FC	DI	DI	DI	DI	DI	DI	DI	FC	FC	FC	FC	FC

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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1	CO	UE	TI	GWR	GWR	GWR	GWR	GWR	NAS	GWR	GWR	LR	NAS	GWR	GWR	GWR	GWR	GWR	FC	FC	CO	CO	CO	CO
2	CC	UE	TI	GWR	GWR	GWR	LR	GWR	LR	LR	LR	LR	GWR	GWR	GWR	GWR	CC	BW	BW	TI	CC	TI	CO	GWR
3	LR	LR	NAS	NAS	FC	FC	FC	FC	FC	FC	LR	LR	NAS	NAS	NAS	GWR	FC	GWR	GWR	CC	CO	DI	CC	CC
4	BW	BW	BW	BW	LR	LR	GWR	GWR	GWR	GWR	AI	AI	BW	BW	NAS	GWR	GWR	GWR	GWR	DI	DI	DI	CC	AI
5	LR	LR	LR	NAS	GWR	GWR	GWR	GWR	GWR	GWR	BW	BW	BW	UE	UE	BW	UE	GWR	GWR	GWR	GWR	CO	UE	BW
6	UE	NAS	NAS	NAS	GWR	GWR	GWR	GWR	FC	GWR	FC	FC	BW	CO	BW	BW	BW	BW	TI	BW	DI	CC	AI	LR
7	LR	LR	NAS	LR	GWR	GWR	GWR	GWR	GWR	FC	FC	CO	CO	FC	BW	BW	BW	BW	BW	DI	TI	AI	AI	AI
8	AI	AI	LR	LR	LR	NAS	GWR	CO	GWR	FC	CO	CO	CO	CO	CO	TI	TI	TI	TI	CC	CC	CC	LR	LR
9	AI	LR	LR	NAS	NAS	FC	GWR	FC	GWR	FC	FC	BW	BW	BW	BW	CC	DI	DI	CC	CC	CC	GWR	CO	CO
10	BW	BW	LR	LR	LR	LR	DI	NAS	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	CC	CO	CO
11	UE	UE	TI	NAS	NAS	FC	GWR	FC	FC	FC	AI	LR	BW	NAS	BW	NAS	GWR	GWR	DI	DI	NAS	CO	CO	CO
12	CO	NAS	NAS	NAS	NAS	NAS	FC	FC	GWR	FC	FC	BW	FC	FC	CC	CC	CC	BW	DI	CC	CC	DI	DI	CC
13	CC	LR	LR	LR	LR	LR	LR	LR	NAS	FC	FC	LR	LR	LR	NAS	LR	BW	BW	CC	CC	AI	CC	CC	CC
14	CC	CC	CC	AI	LR	NAS	NAS	CO	NAS	NAS	NAS	UE	FC	FC	DI	DI	DI	CO	DI	BW	BW	CC	CC	CC
15	CC	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR	GWR	BW	FC	CO	CO	BW	CC	CC	BW	BW	CC	CC	CC	CC	CC
16	CC	CC	AI	AI	AI	AI	FC	AI	AI	AI	AI	CO	NAS	UE	BW	BW	BW	CC	BW	CC	CC	CC	CC	CC
17	CC	CC	CC	AI	NAS	NAS	UE	FC	FC	FC	FC	BW	BW	BW	BW	CC	CC	AI	FC	DI	DI	DI	CC	UE
18	CO	LR	LR	NAS	NAS	FC	FC	FC	FC	FC	LR	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	UE	CO	UE
19	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	FC	FC	GWR	AI	NAS	BW	BW	NAS	NAS	BW	BW	DI	CC	DI	LR	AI
20	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	GWR	GWR	CO	CO	CO	BW	BW	BW	DI	DI	DI	DI	AI	AI	LR
21	LR	LR	NAS	NAS	NAS	GWR	GWR	FC	GWR	BW	BW	BW	BW	BW	BW	DI	BW	BW	BW	BW	DI	DI	CC	CC
22	CC	LR	LR	NAS	NAS	NAS	NAS	NAS	FC	FC	BW	BW	BW	BW	BW	BW	BW	BW	DI	DI	DI	DI	DI	CC
23	CC	CC	NAS	NAS	NAS	DI	LR	AI	AI	AI	BW	BW	BW	BW	BW	BW	TI	DI	BW	LR	BW	BW	BW	CC
24	LR	LR	LR	LR	LR	FC	LR	AI	GWR	FC	UE	CO	BW	BW	CC	BW	UE	BW	BW	DI	CC	CC	BW	CC
25	CC	BW	BW	LR	LR	LR	NAS	NAS	BW	AI	LR	BW	NAS	BW	BW	CC	BW	BW	BW	BW	CC	BW	CC	DI
26	UE	CC	LR	LR	AI	FC	NAS	NAS	GWR	NAS	AI	NAS	CO	BW	BW	BW	CC	BW	FC	BW	DI	DI	CC	UE
27	UE	AI	CC	LR	LR	NAS	NAS	NAS	NAS	FC	FC	LR	FC	CC	CC	CC	BW	BW	BW	BW	TI	CC	CC	CC
28	CC	CC	CC	LR	NAS	NAS	NAS	NAS	GWR	CO	GWR	FC	BW	FC	FC	TI	BW	BW	TI	BW	TI	TI	TI	AI
29	CC	CC	LR	NAS	NAS	NAS	NAS	GWR	BW	GWR	AI	GWR	BW	BW	BW	BW	BW	BW	BW	TI	TI	DI	AI	AI
30	AI	LR	LR	LR	NAS	NAS	GWR	CO	GWR	FC	UE	AI	NAS	CO	BW	CC	CC	BW	TI	LR	AI	CC	CC	LR
31	LR	NAS	CC	NAS	DI	DI	LR	UE	UE	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	CC	CC	CC	CC

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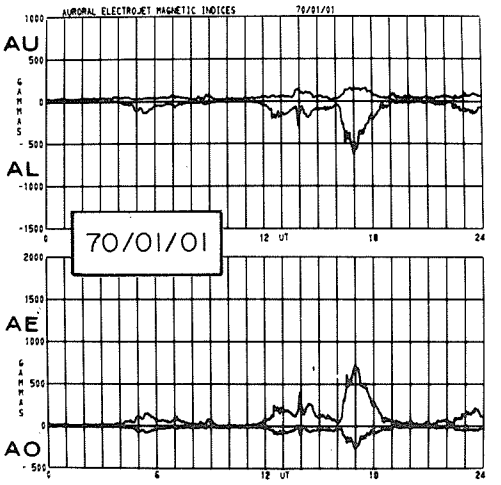
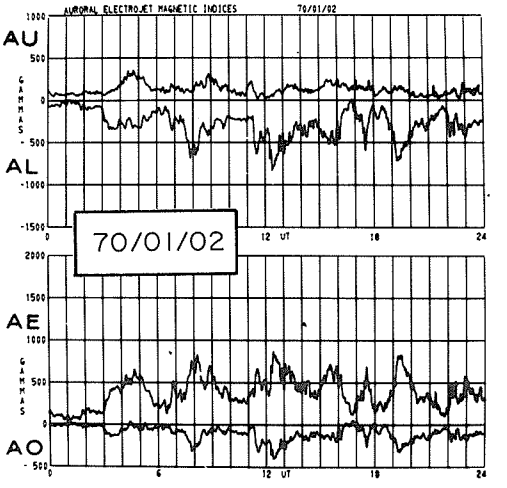
SECTION III

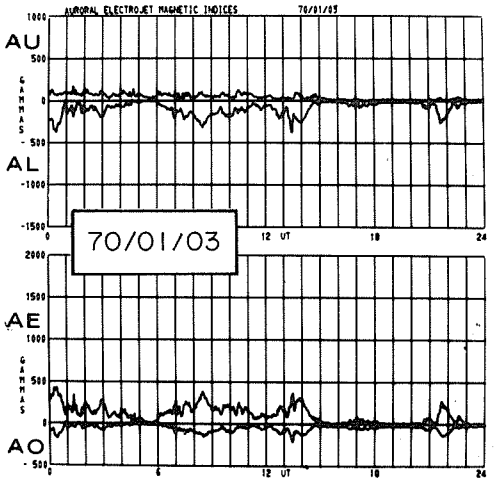
GRAPHS OF INDICES

Daily Graphs of 2.5-min Auroral Electrojet Indices

The following graphs are computer drawn plots of variations of the 2.5-min indices AU, AL, AE, and AO for each day of 1970. They are printed from microfilm produced by the computer but with drafted labels to improve legibility of the small characters. The dates are given as year/month/day in descending order (1 April 1970 is 70/04/01).


AURORAL ELECTROJET MAGNETIC INDICES
70/01/01
AU
AL
AE
AO
GAMMAS
12 UT


AURORAL ELECTROJET MAGNETIC INDICES
70/01/02
AU
AL
AE
AO
GAMMAS
12 UT


AURORAL ELECTROJET MAGNETIC INDICES
70/01/03
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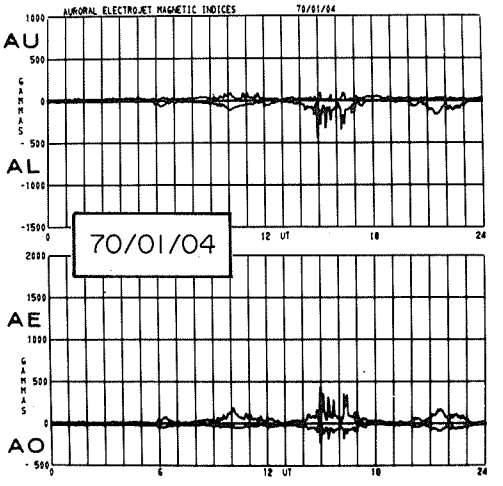
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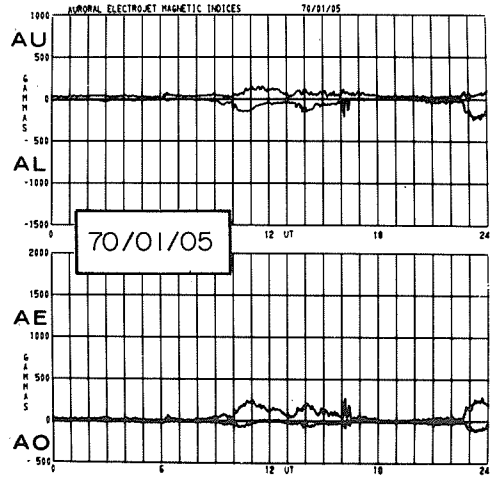
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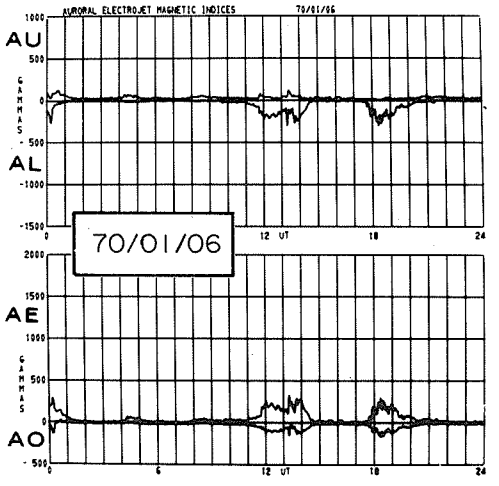
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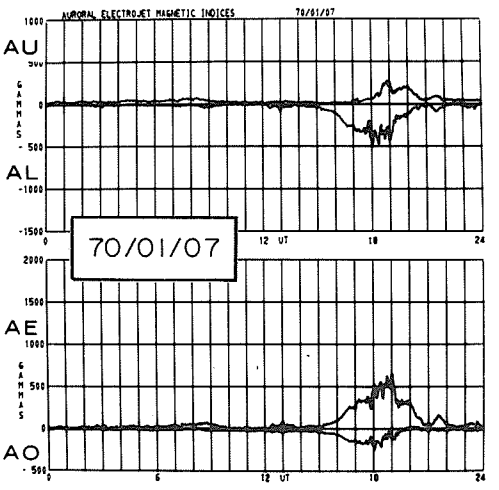
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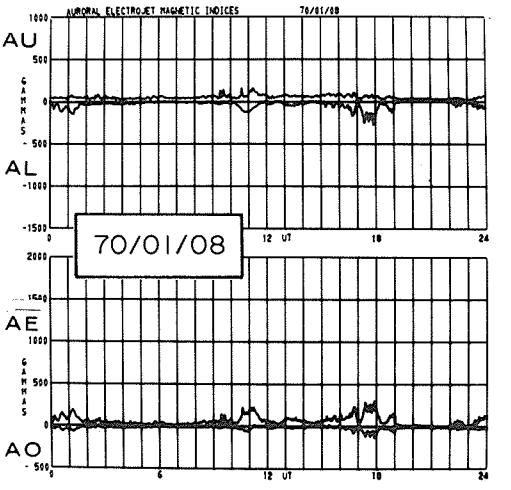
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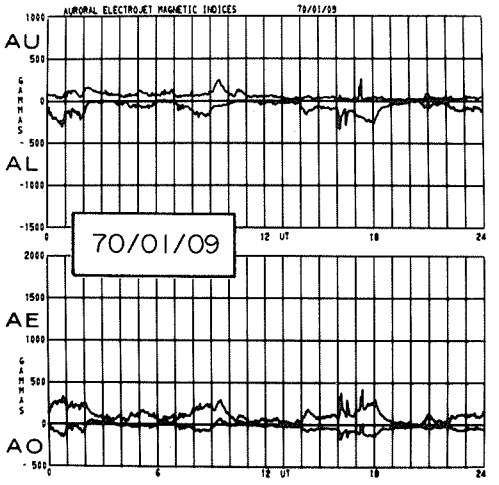
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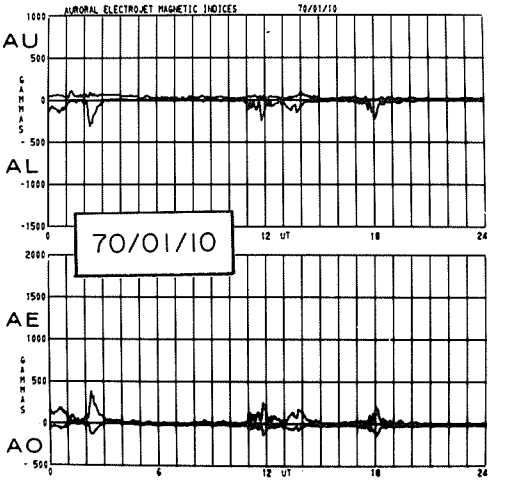
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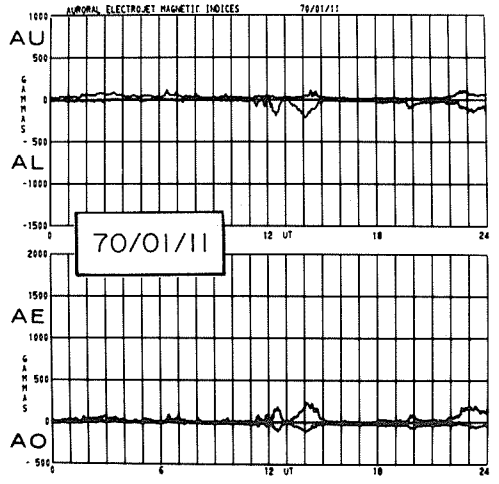
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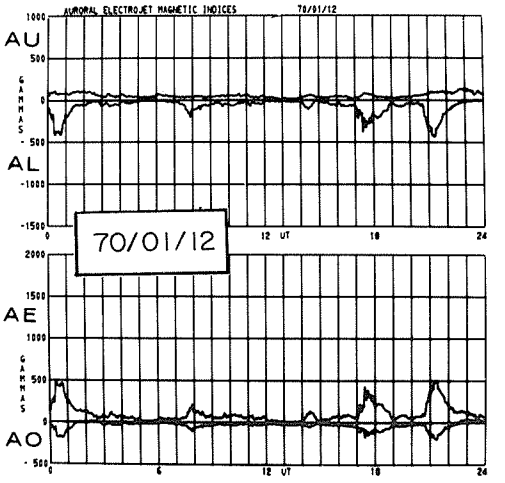
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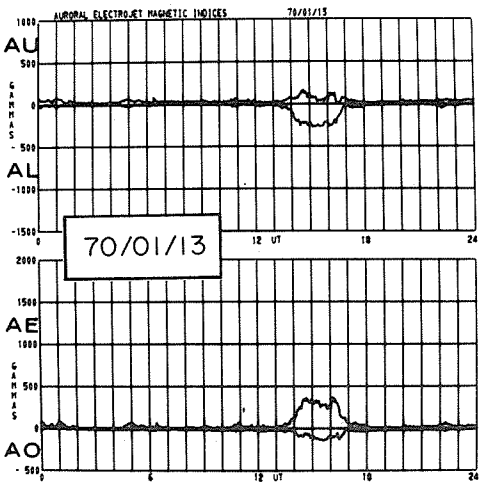
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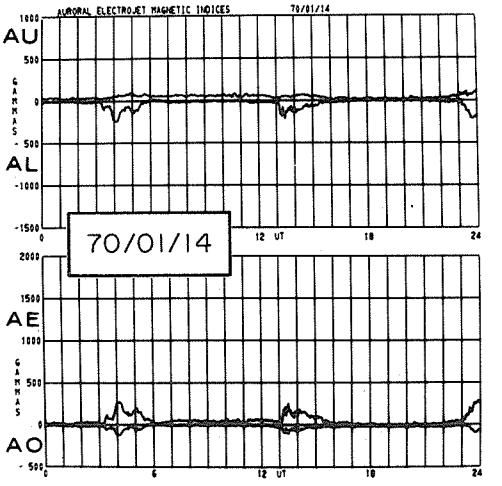
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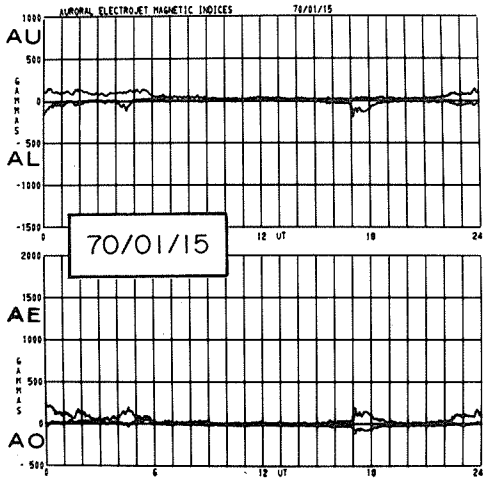
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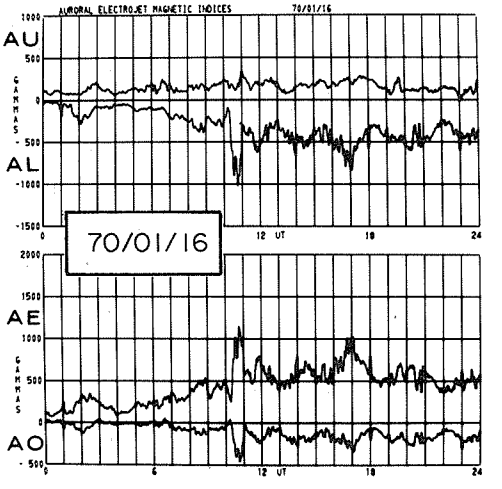
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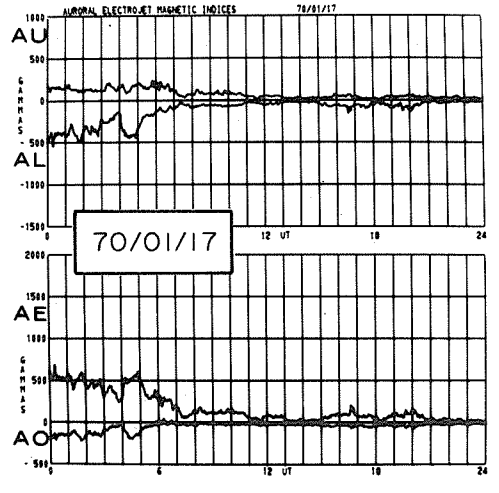
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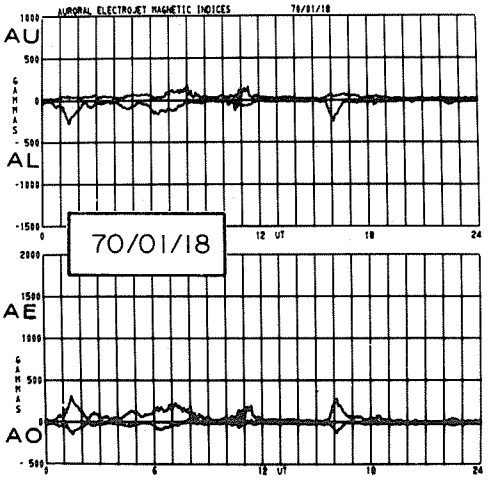
GAMMAS
12 UT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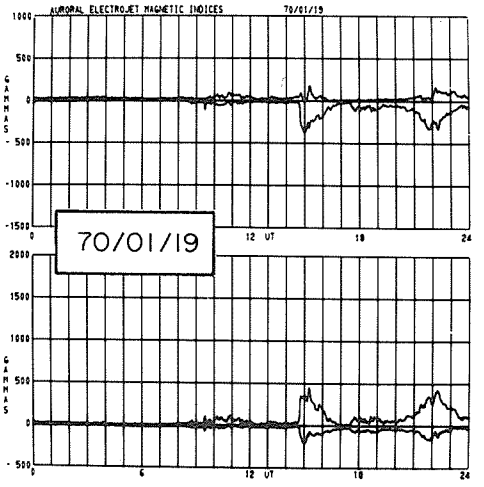
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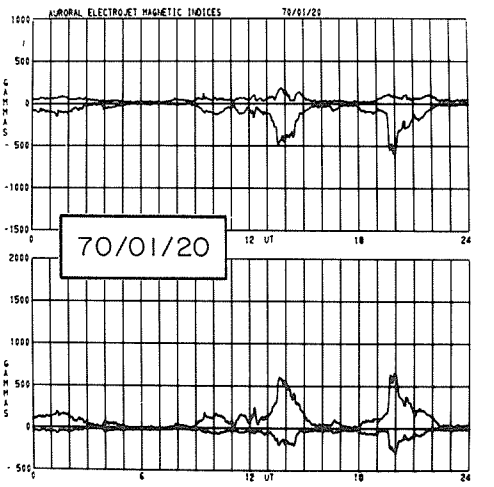
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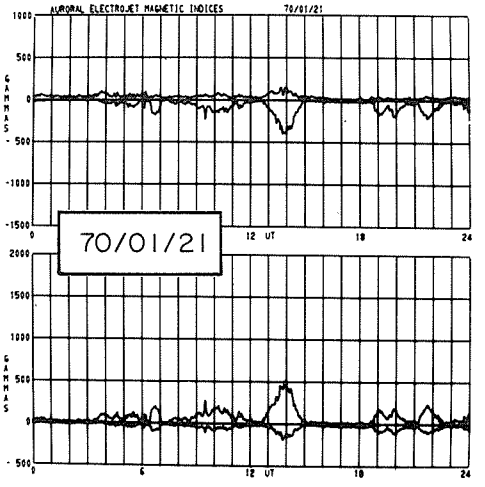
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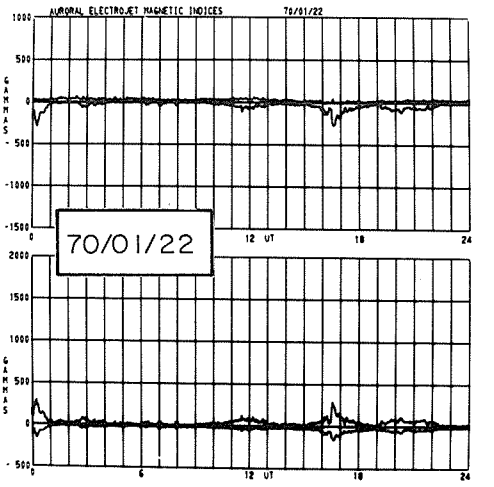
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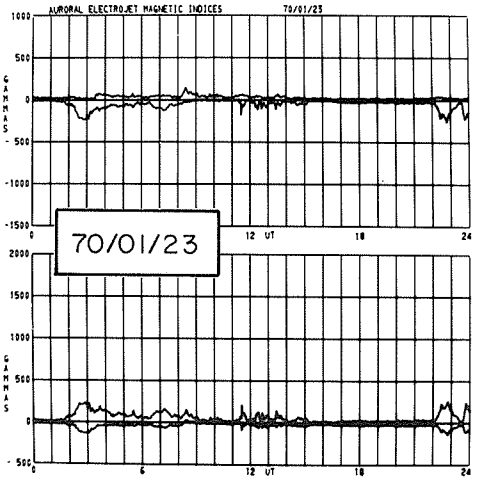
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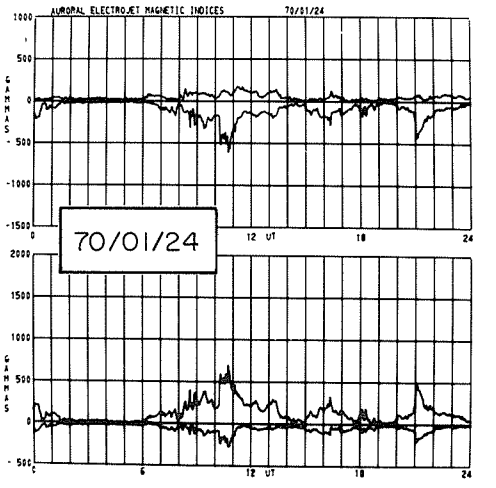
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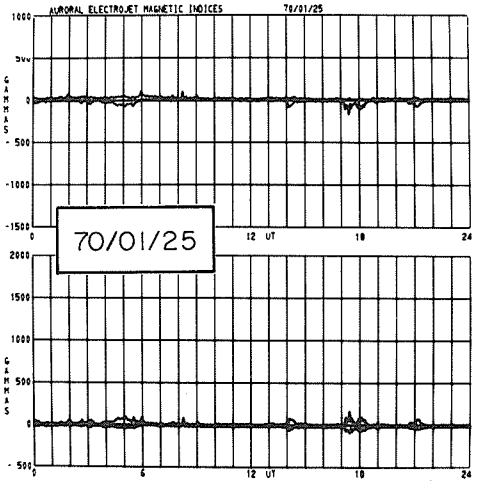
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GAMMAS
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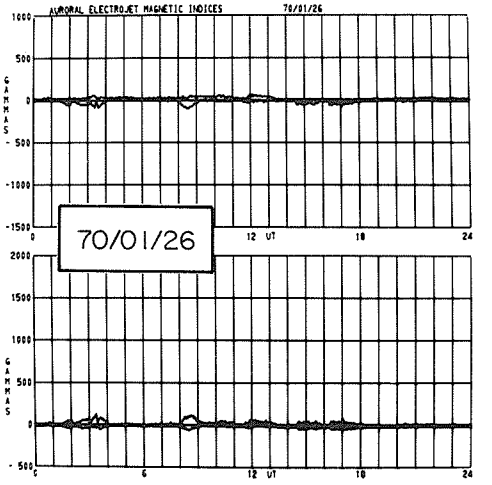
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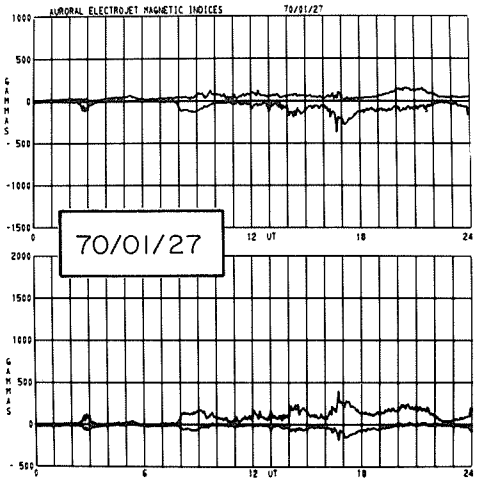
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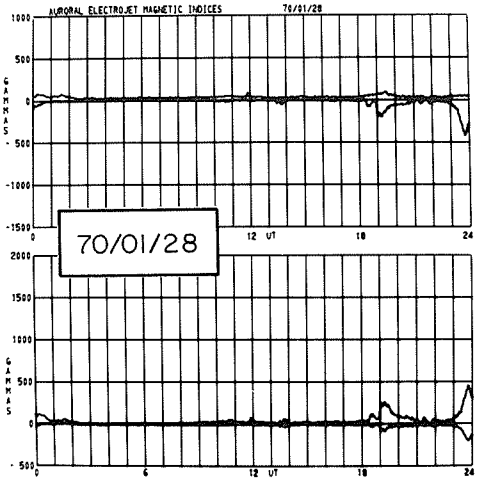
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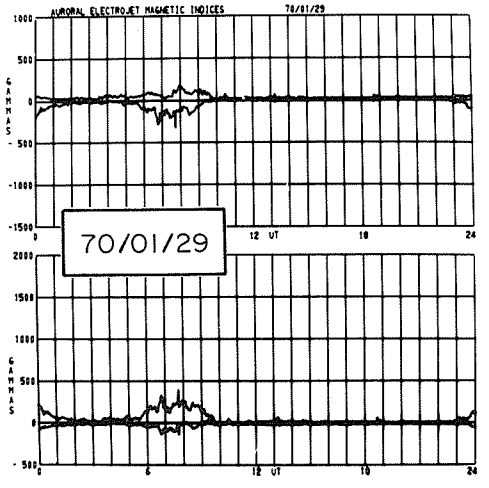
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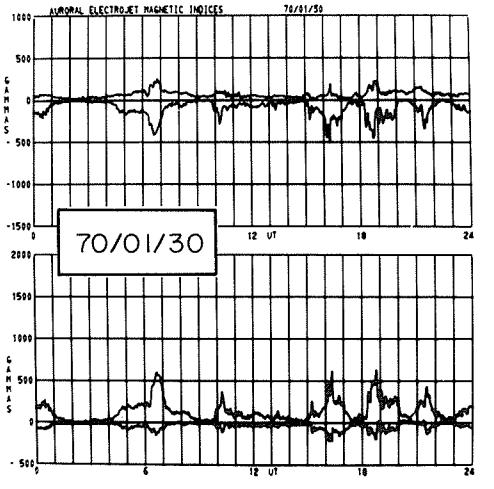
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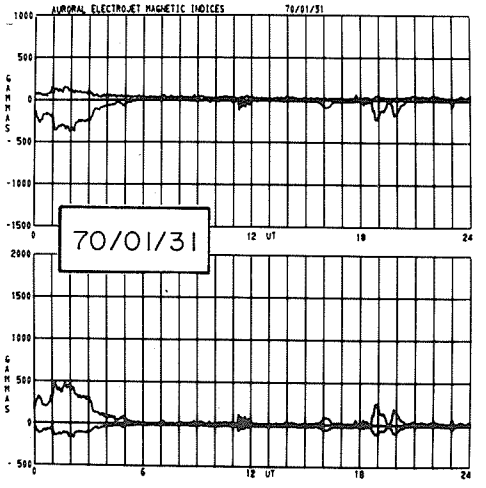
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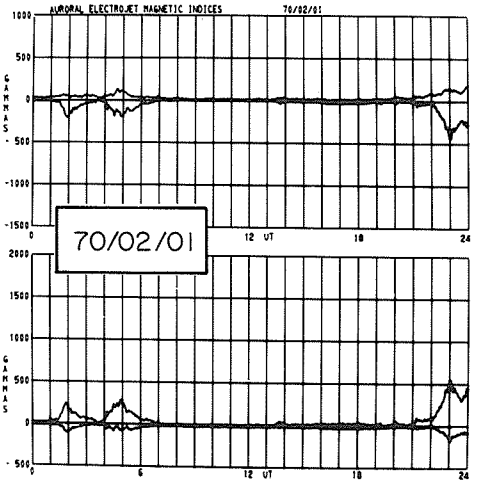
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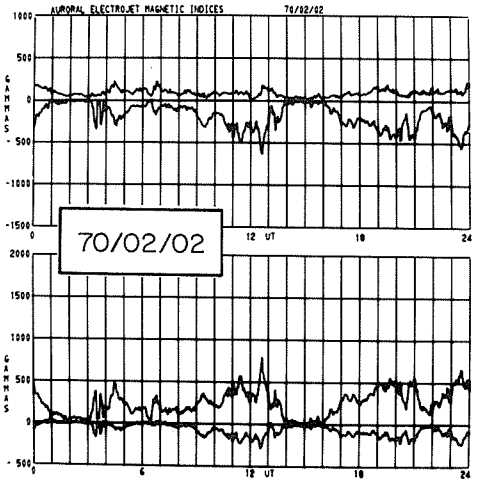
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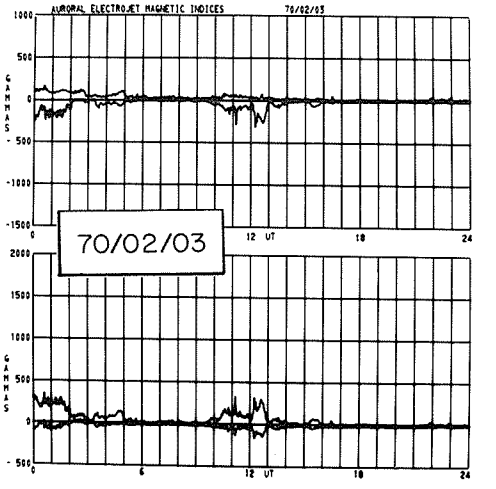
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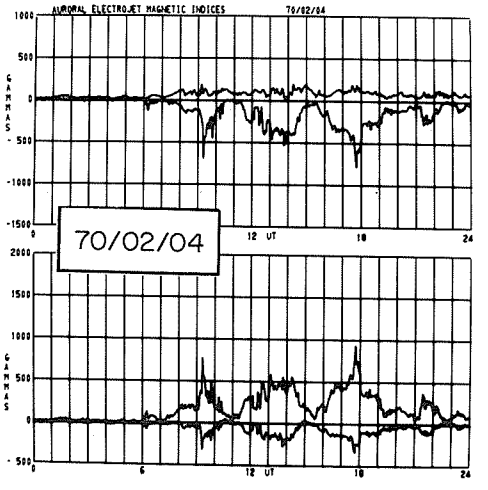
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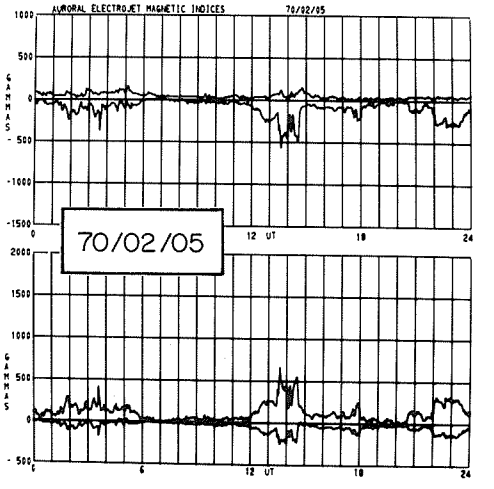
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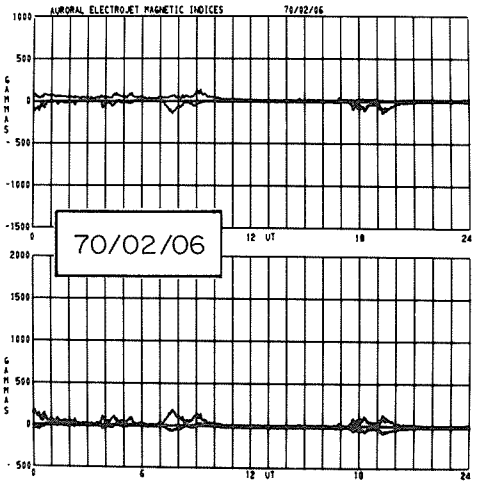
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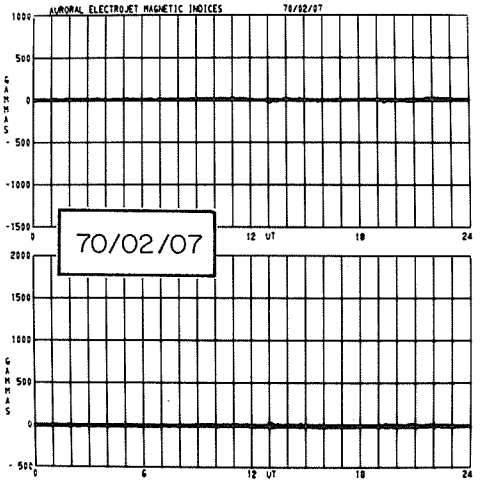
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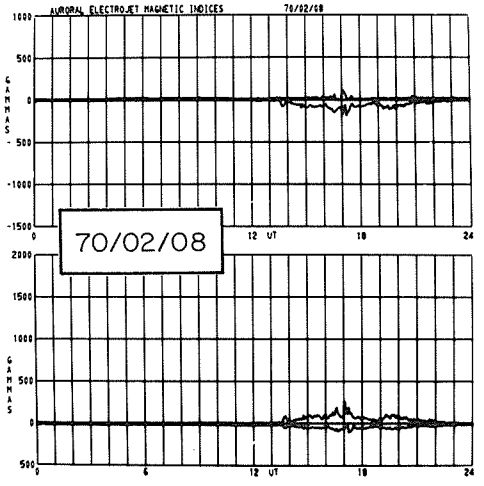
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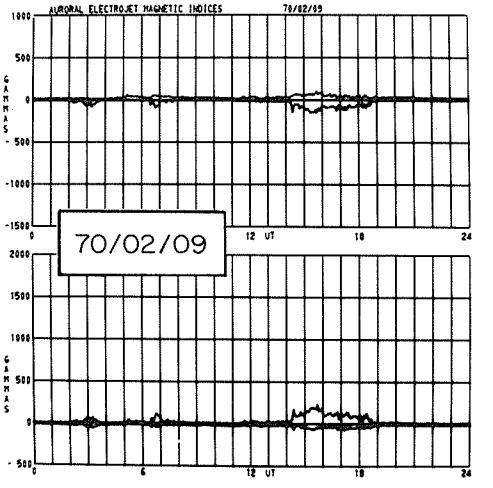
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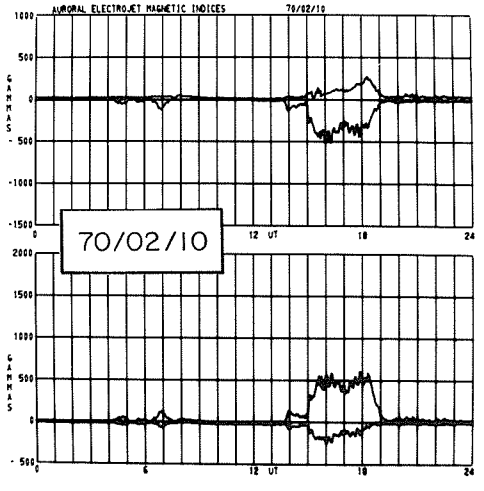
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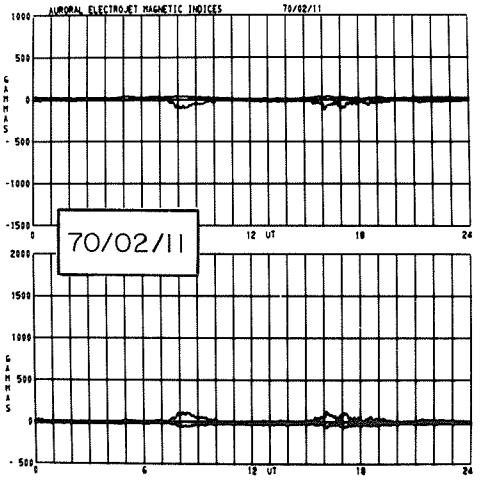
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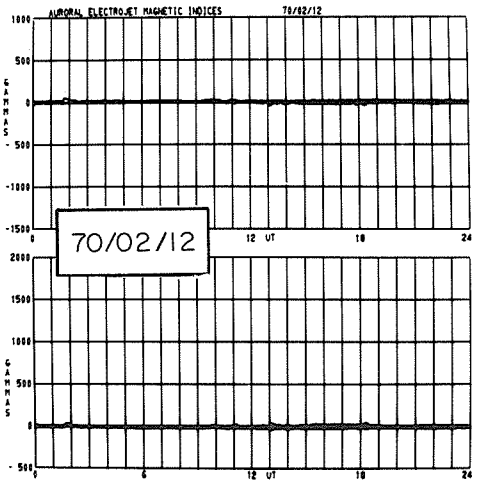
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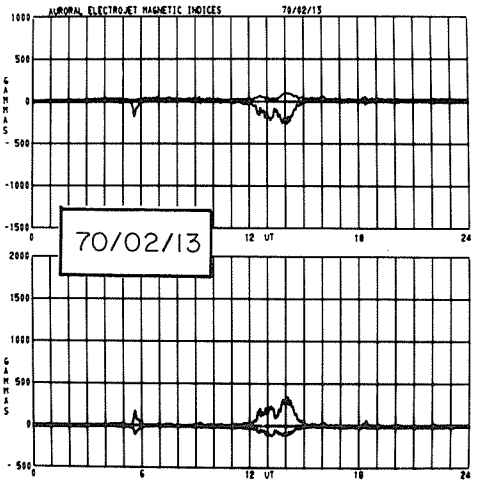
70/02/12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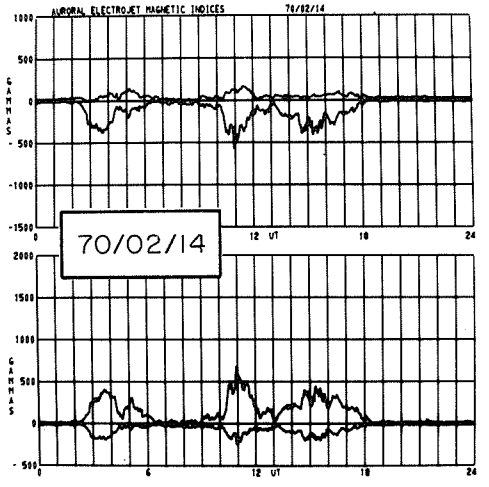
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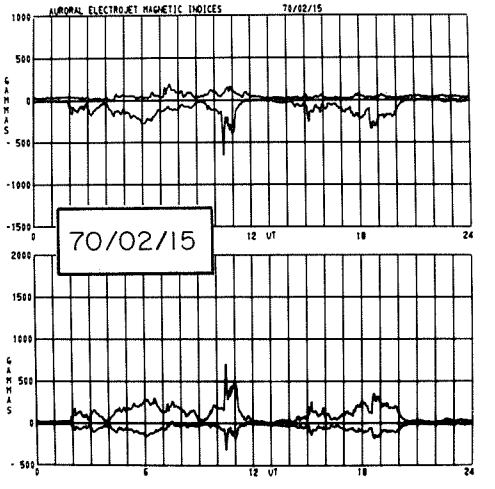
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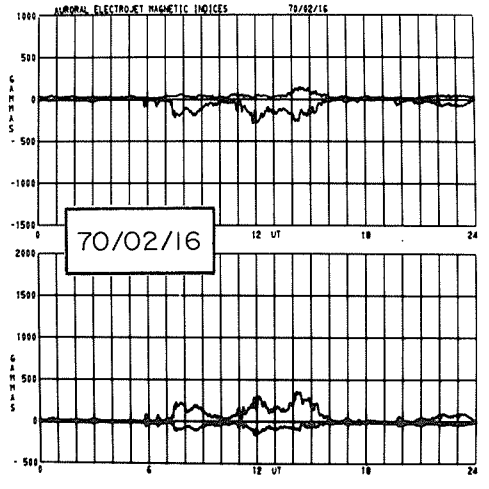
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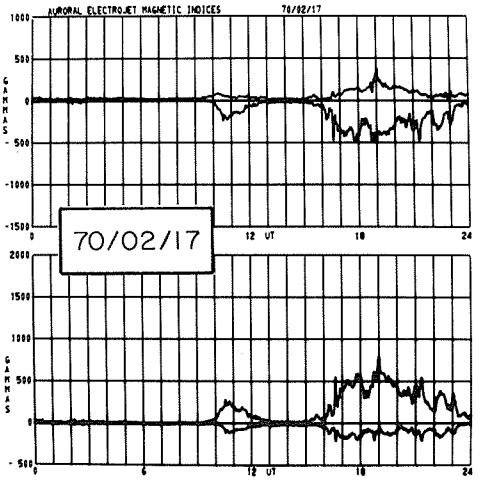
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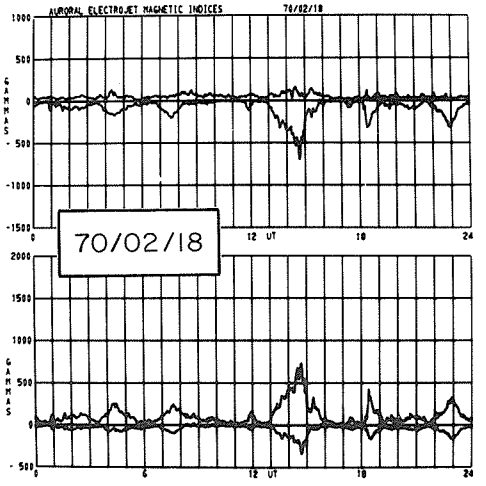
70/02/17


AURORAL ELECTROJET MAGNETIC INDICES
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GAMMAS
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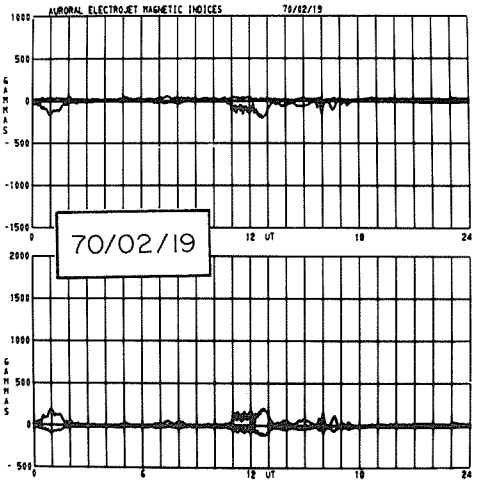
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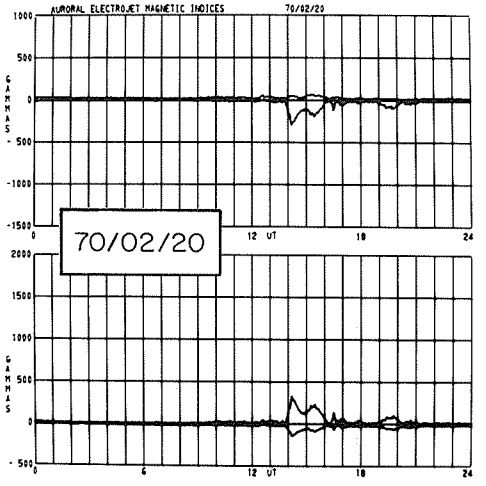
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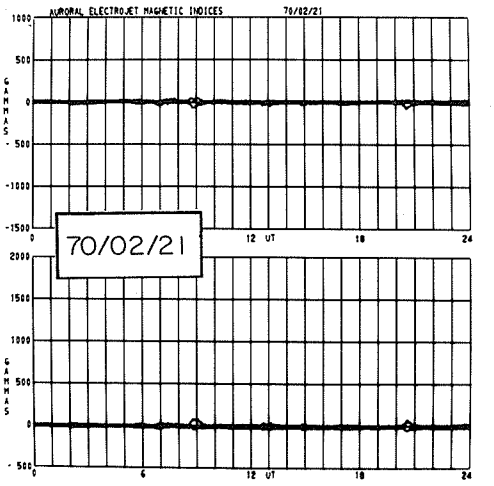
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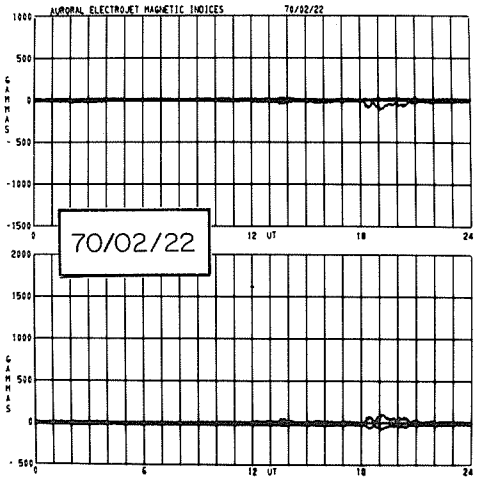
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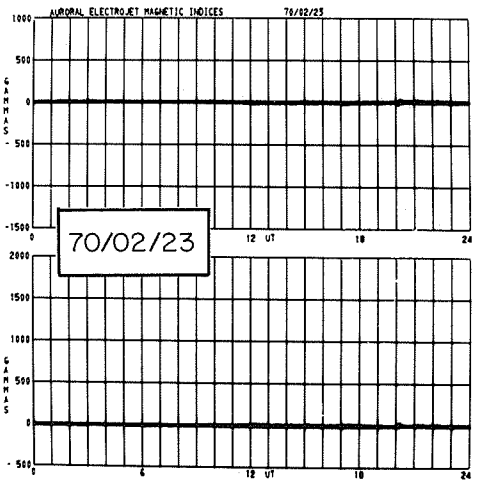
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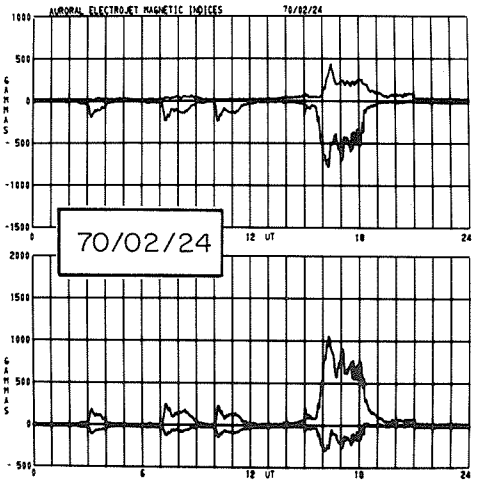
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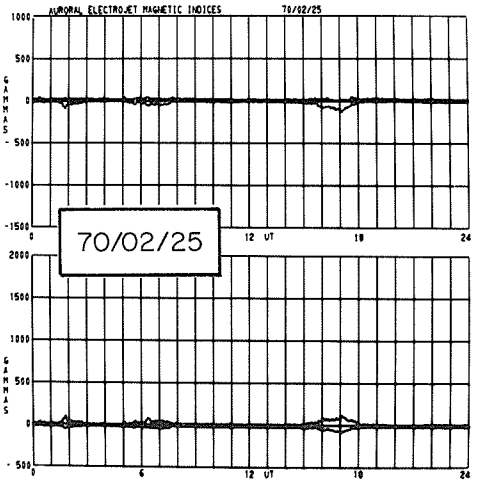
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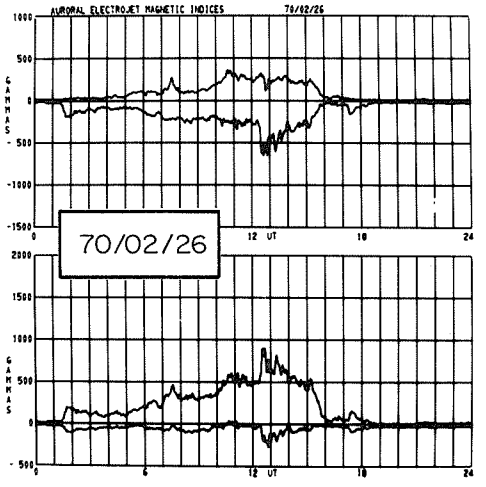
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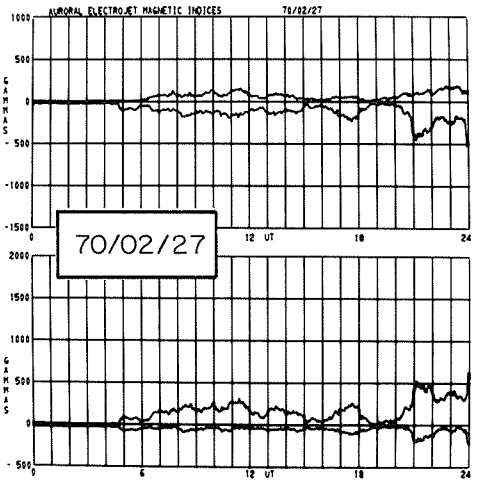
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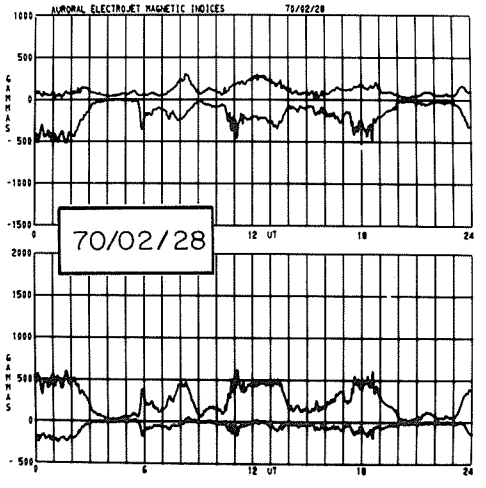
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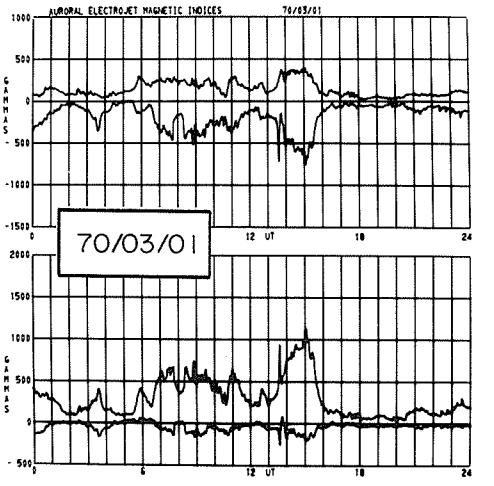
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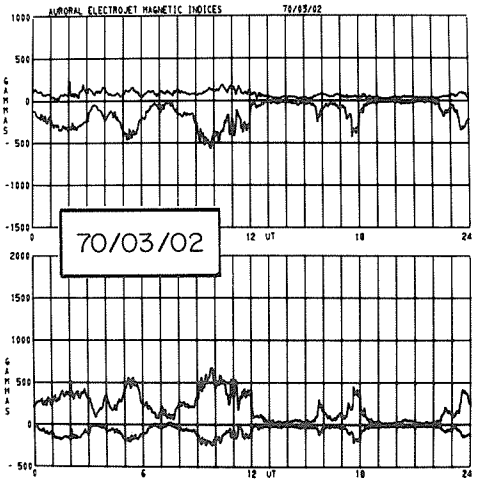
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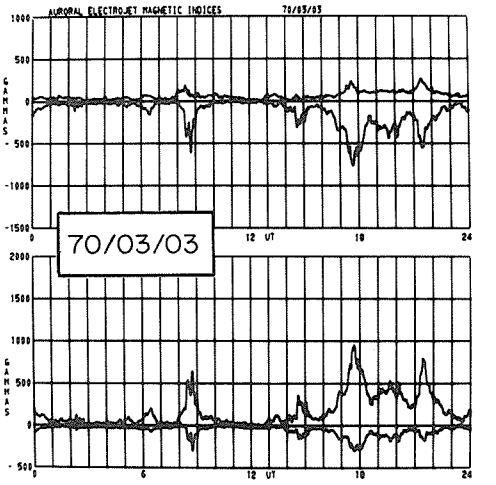
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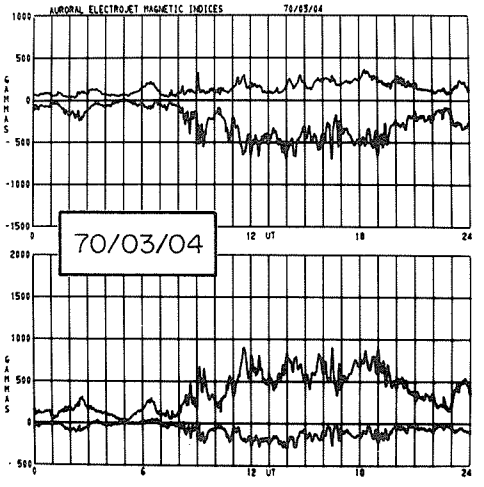
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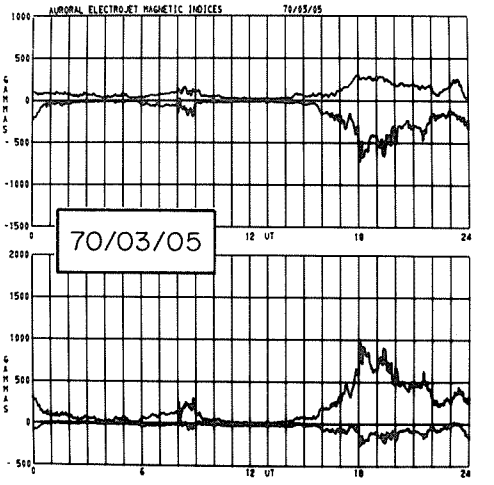
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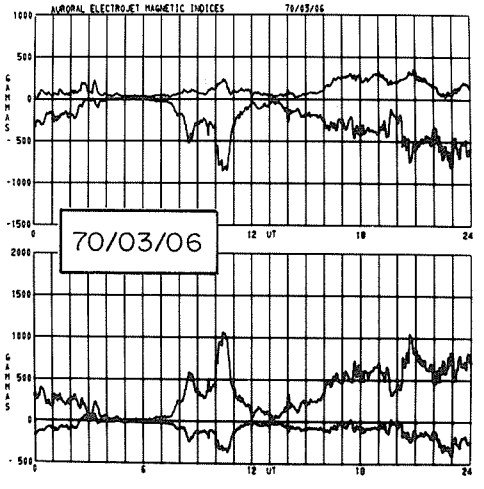
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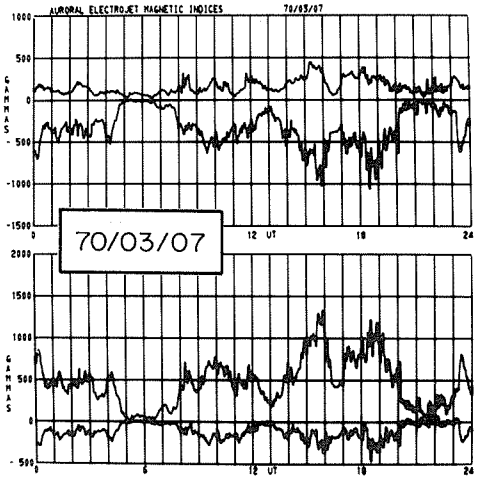
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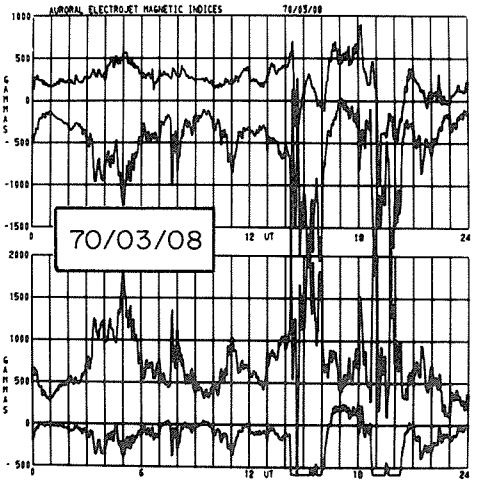
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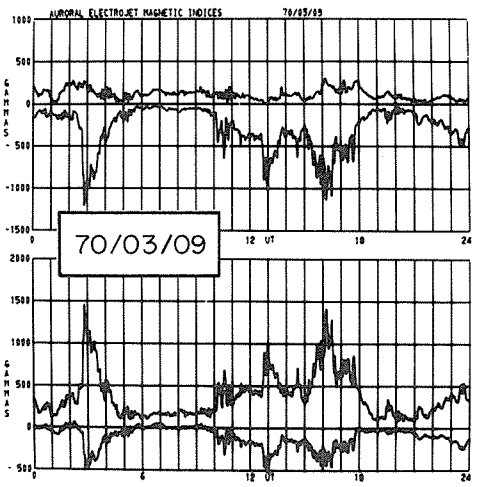
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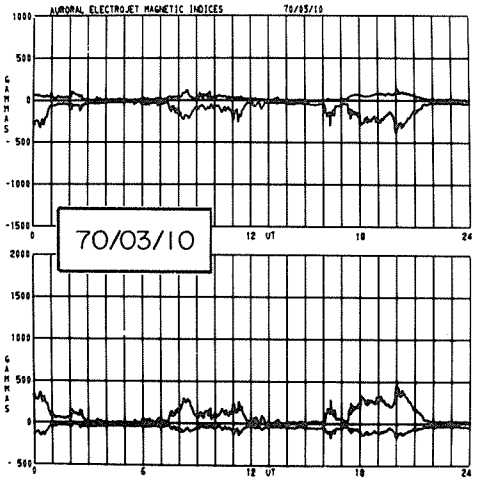
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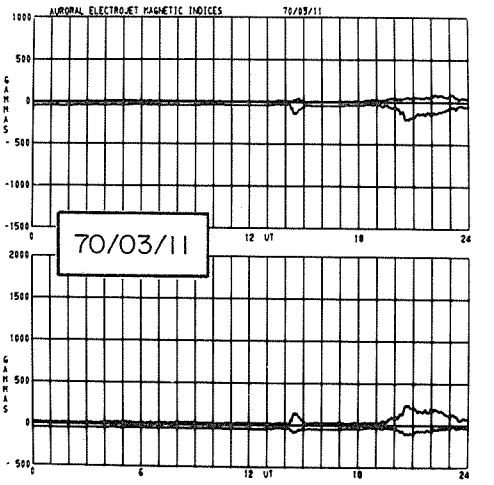
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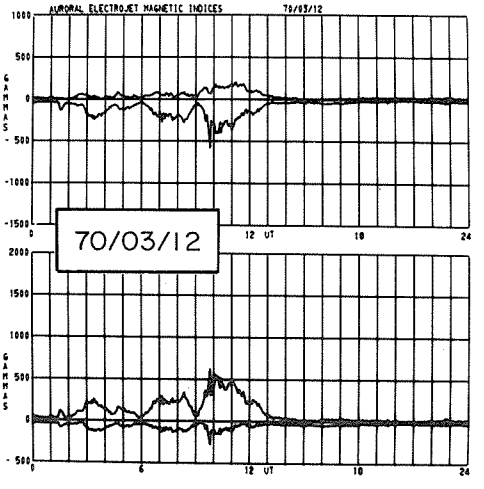
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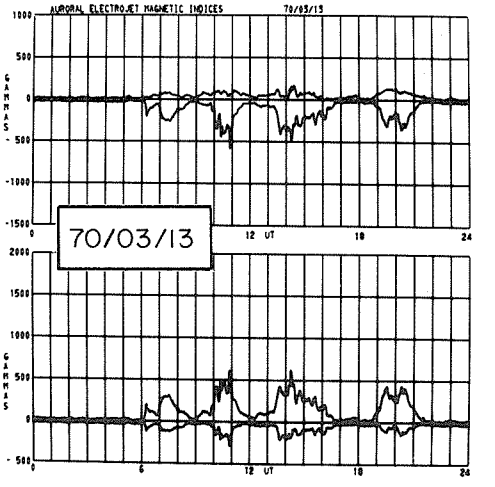
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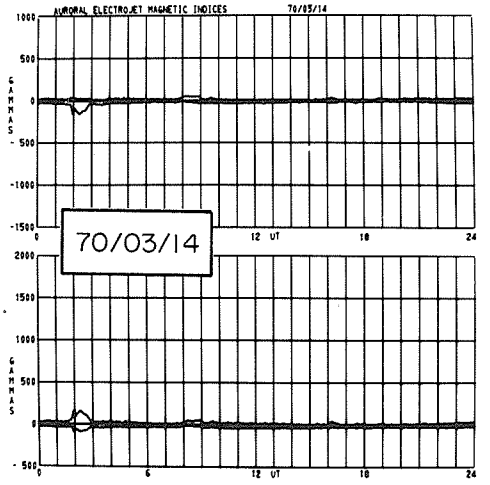
12 UT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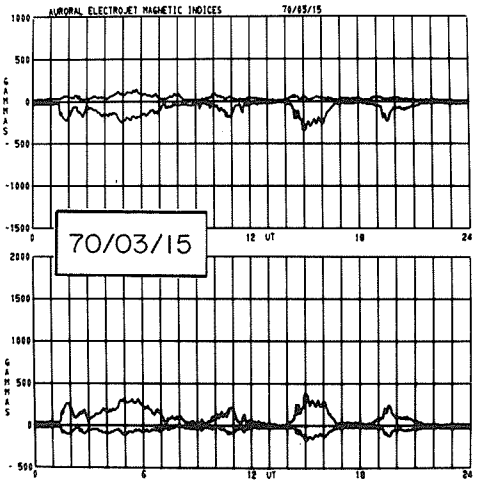
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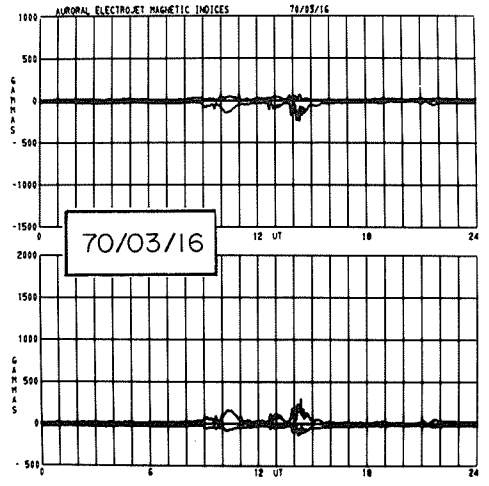
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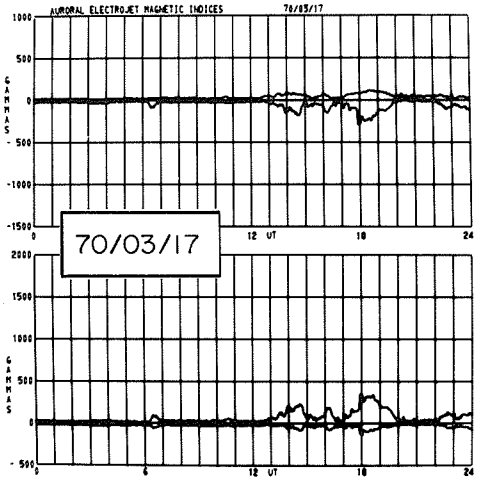
70/03/16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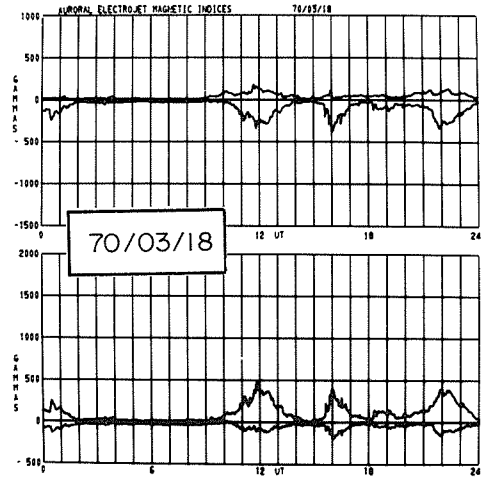
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GAMMAS
12 UT
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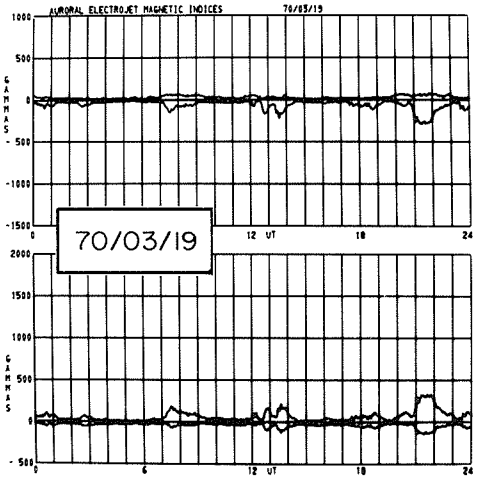
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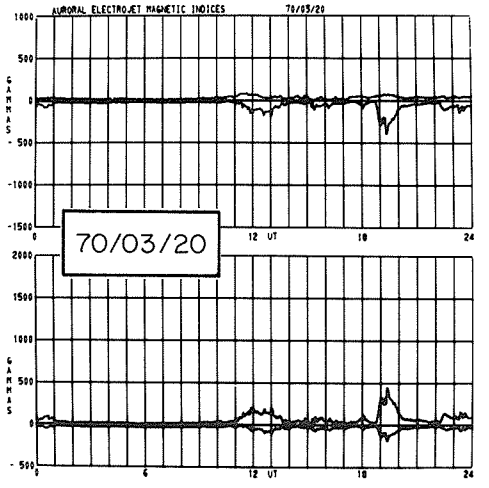
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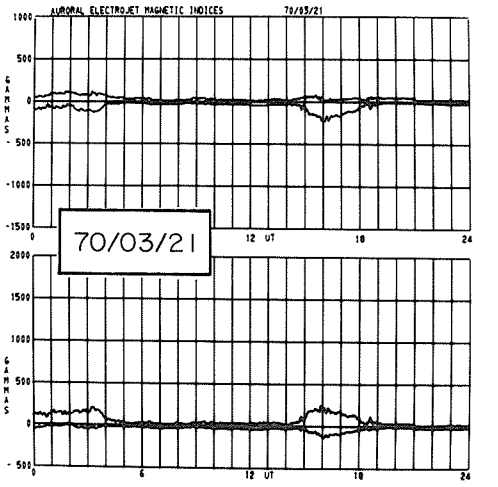
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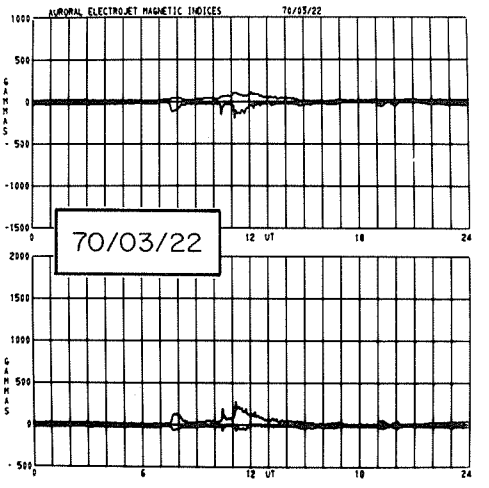
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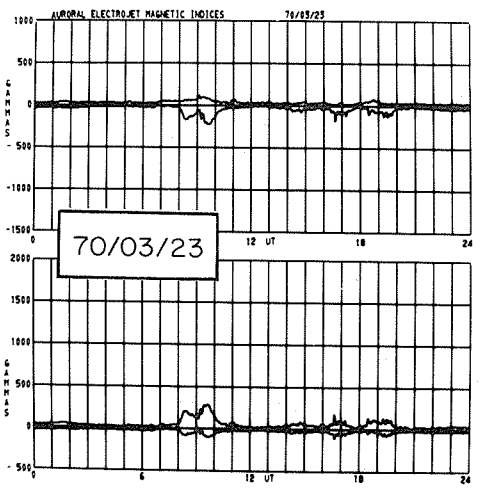
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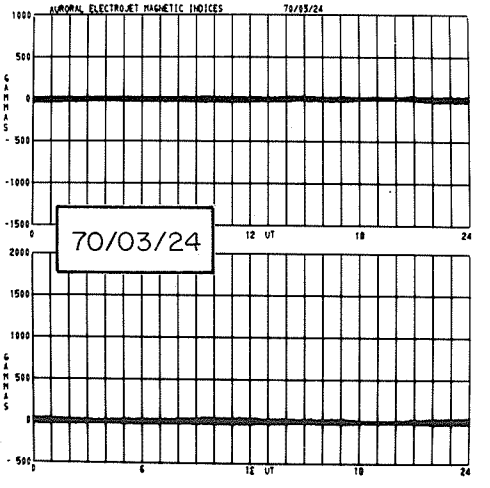
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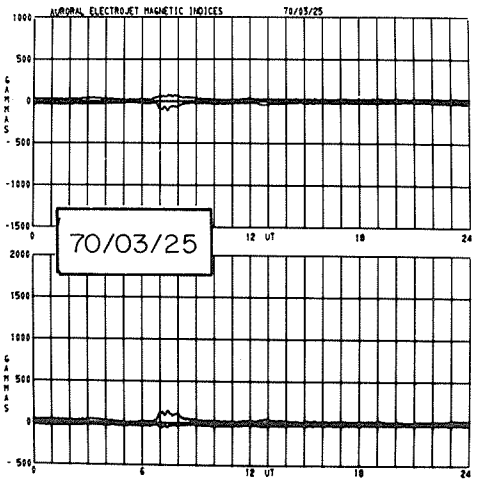
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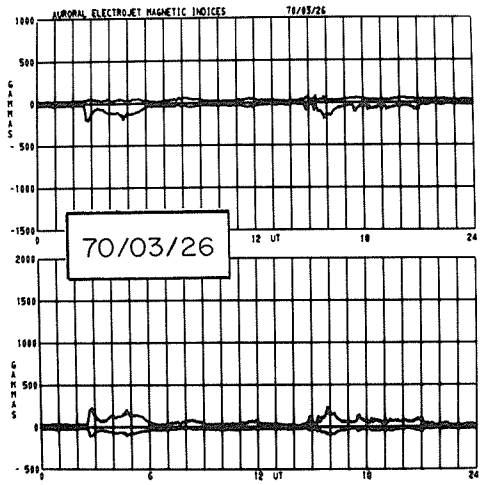
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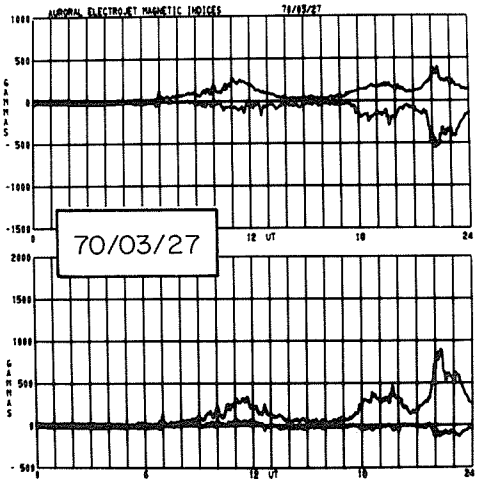
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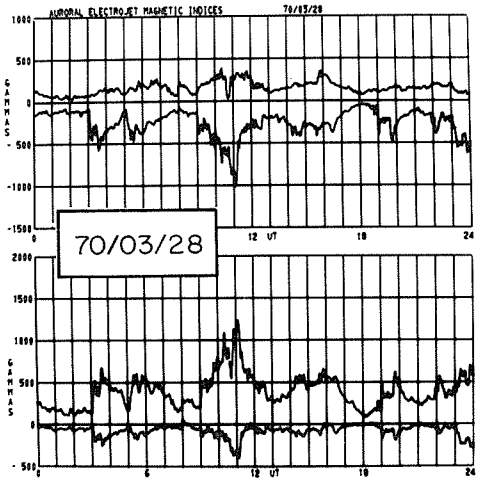
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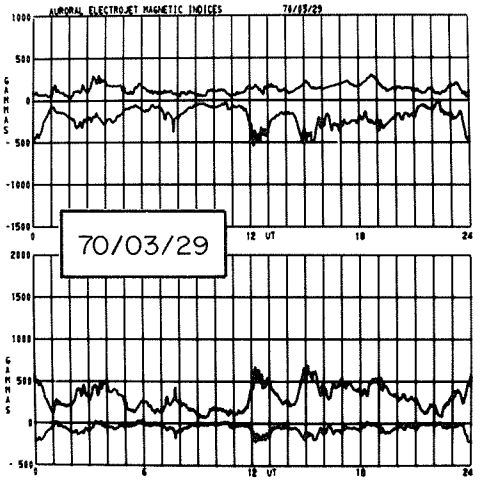
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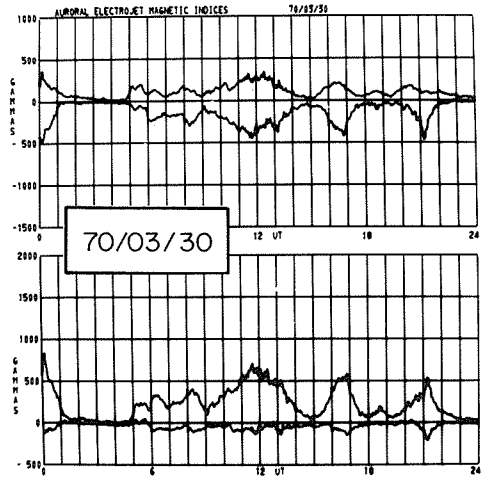
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70/03/30
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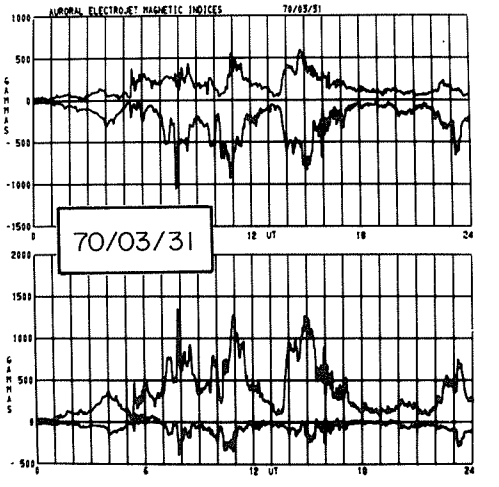
12 UT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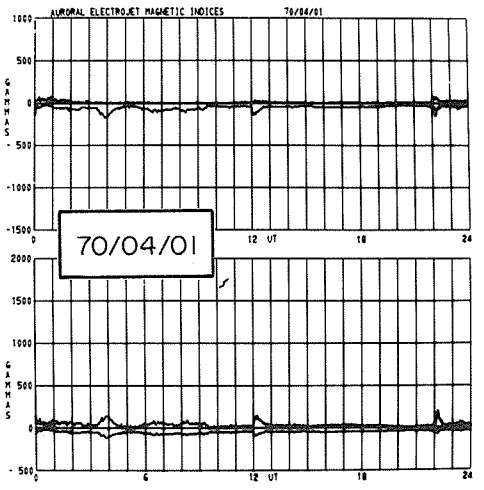
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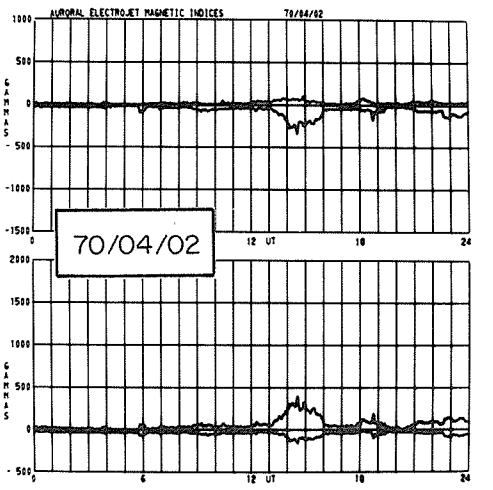
70/04/01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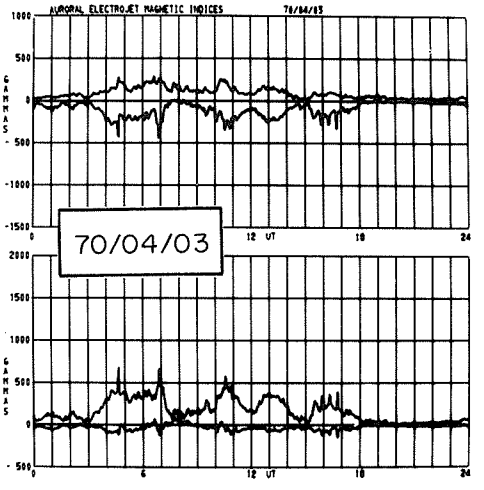
70/04/02
GAMMAS
12 UT
70/04/02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70/04/03
GAMMAS
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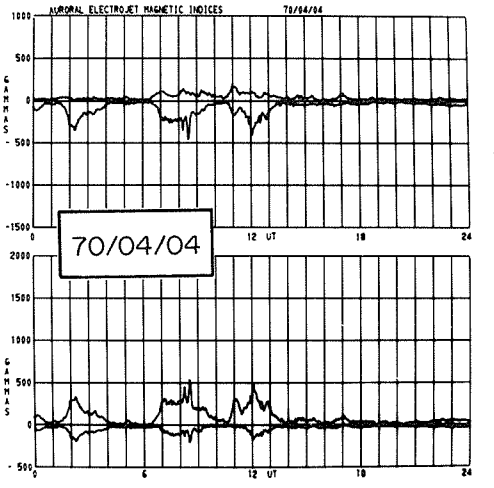
70/04/03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GAMMAS
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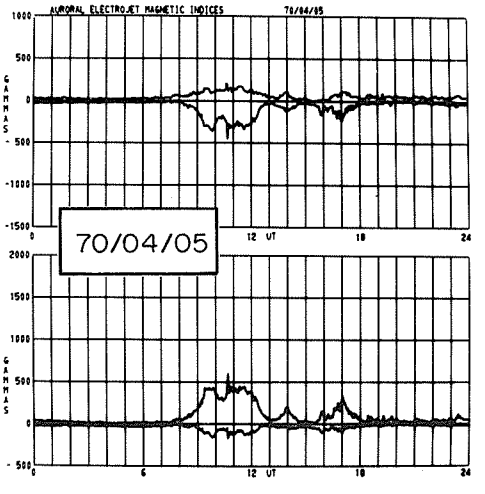
70/04/04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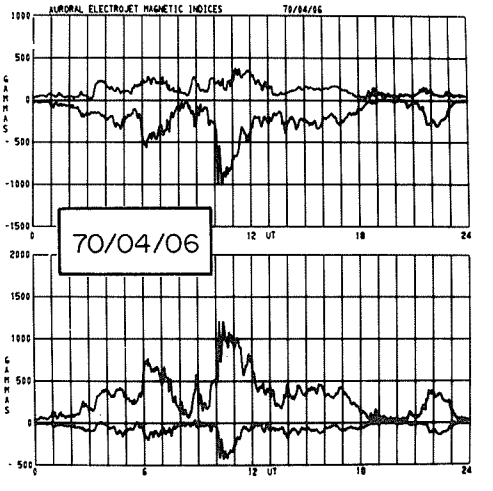
70/04/05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GAMMAS
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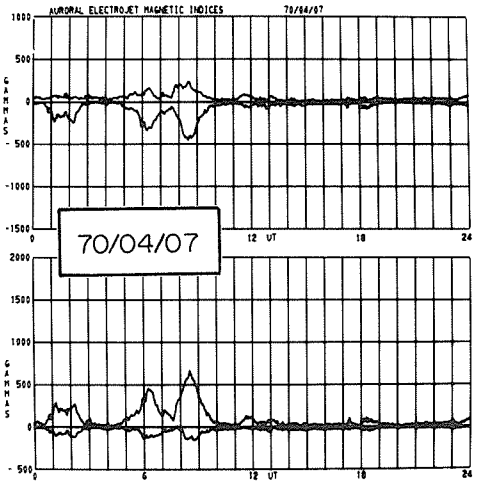
70/04/06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GAMMAS
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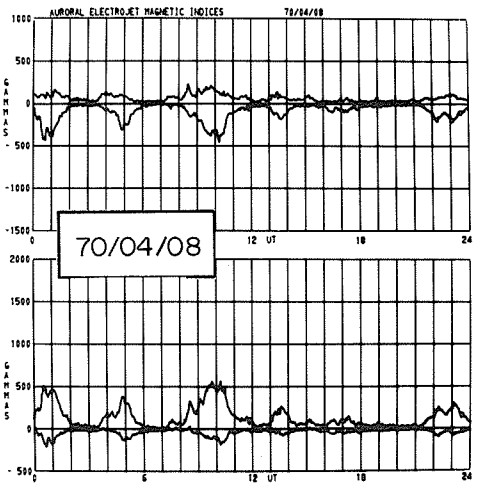
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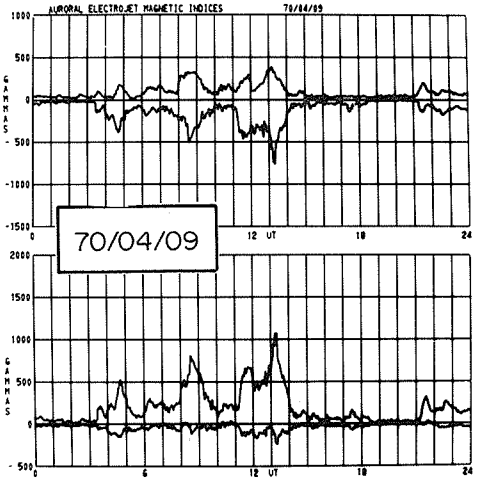
GAMMAS
12 UT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GAMMAS
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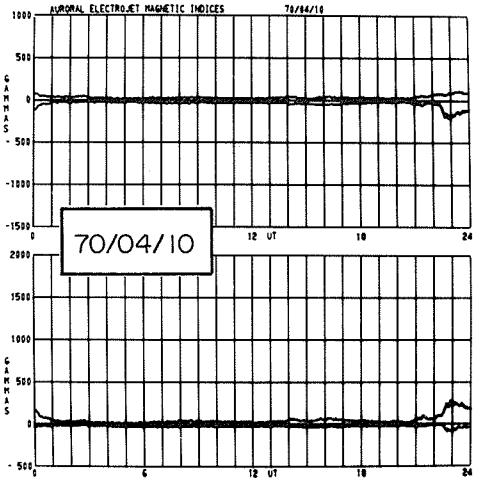
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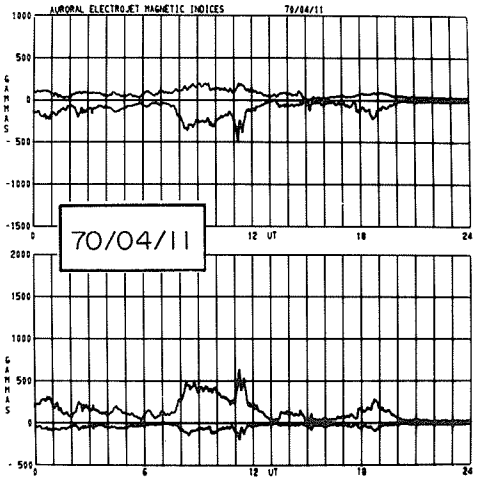
GAMMAS
12 UT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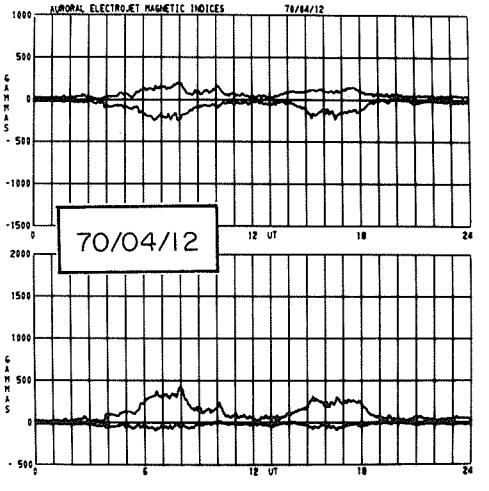
GAMMAS
12 UT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GAMMAS
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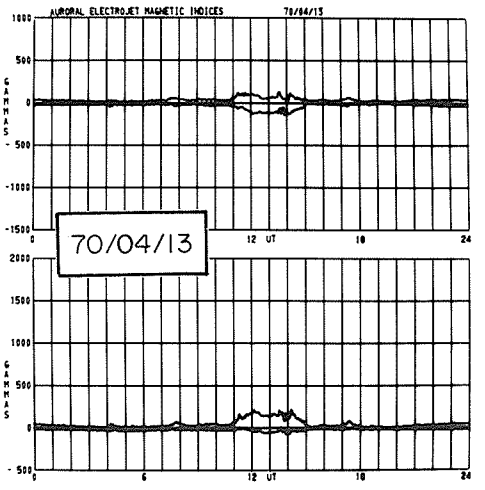
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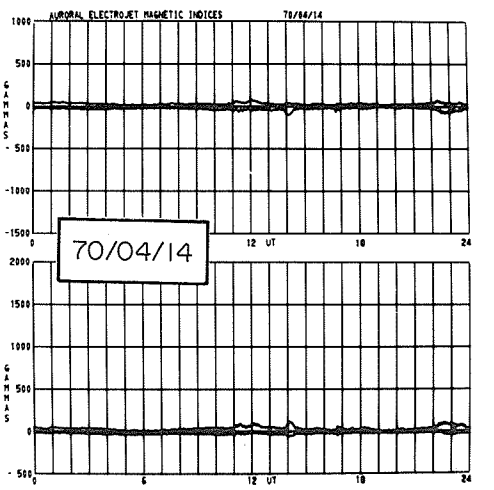
GAMMAS
12 UT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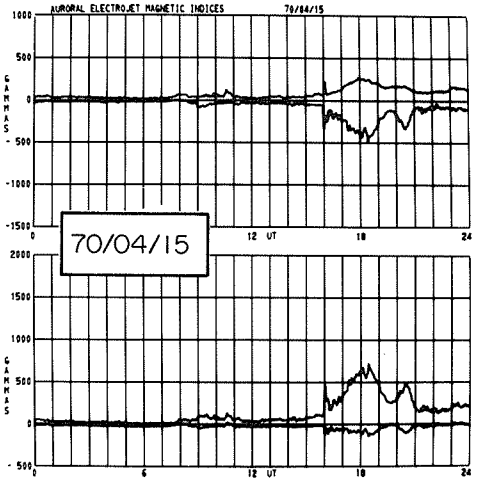
GAMMAS
12 UT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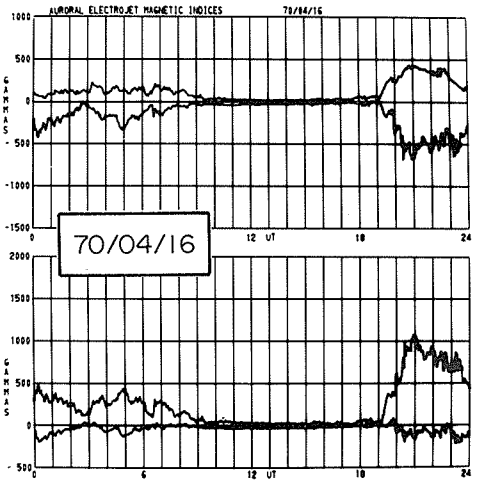
GAMMAS
12 UT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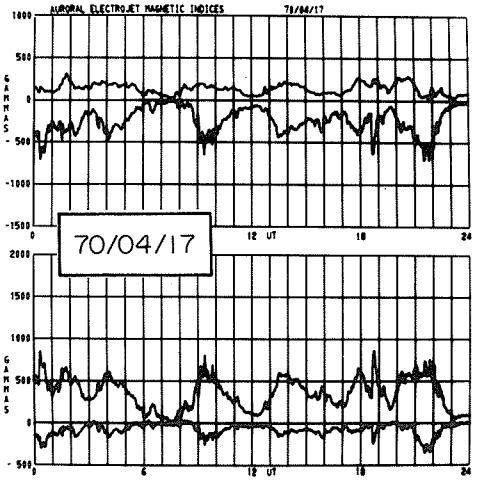
GAMMAS
12 UT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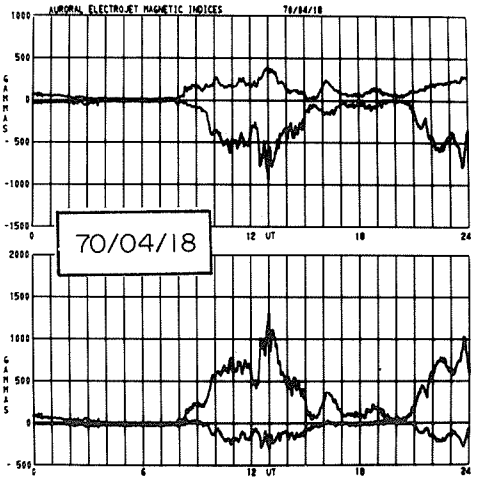
70/04/17
GAMMAS
12 UT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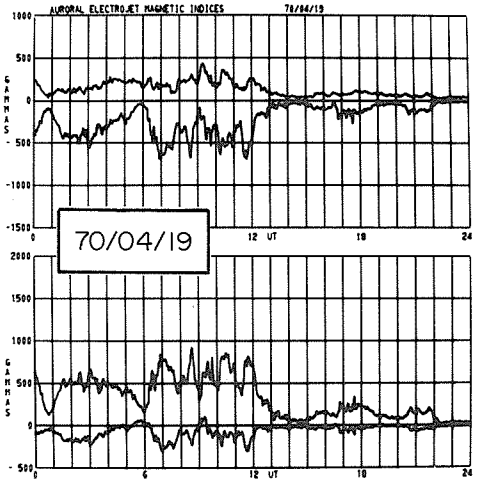
70/04/18
GAMMAS
12 UT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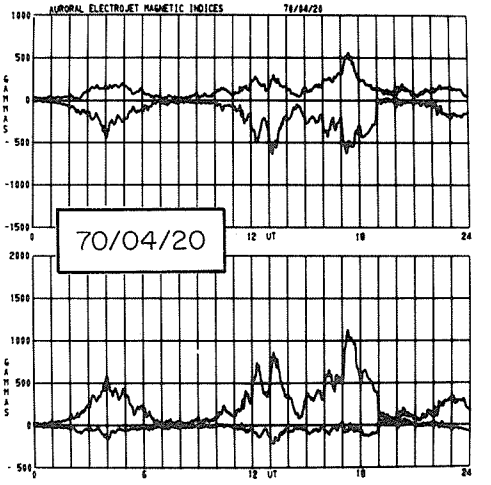
70/04/19
GAMMAS
12 UT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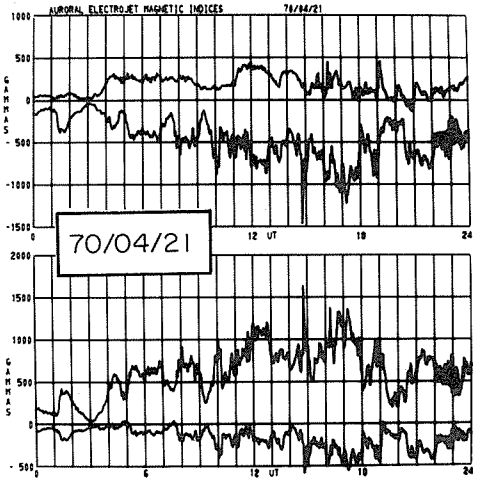
70/04/20
GAMMAS
12 UT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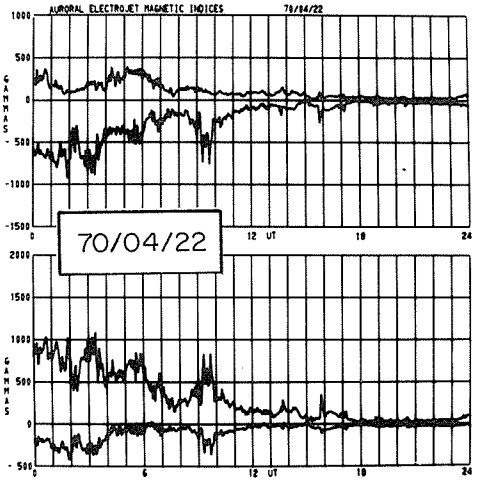
GAMMAS
12 UT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GAMMAS
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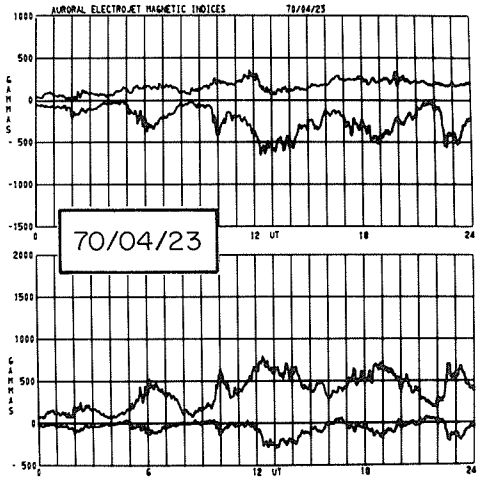
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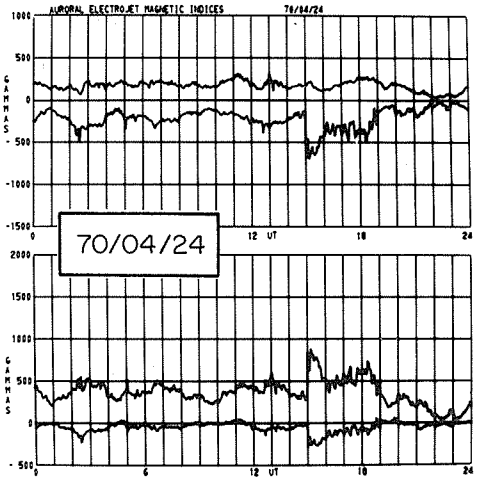
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GAMMAS
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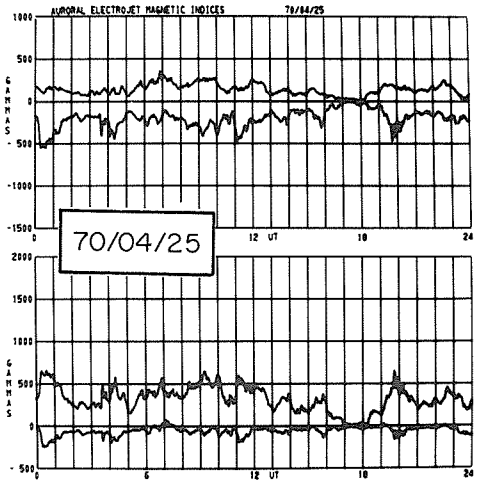
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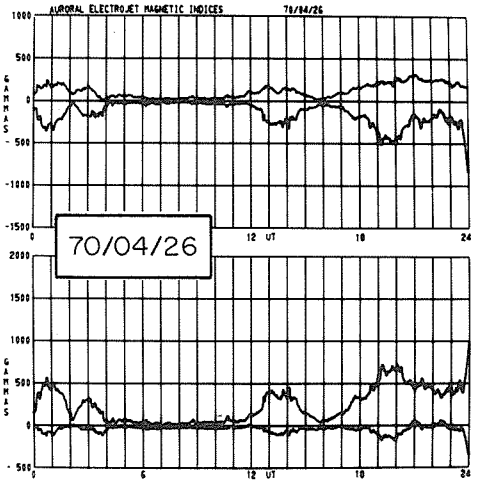
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GAMMAS
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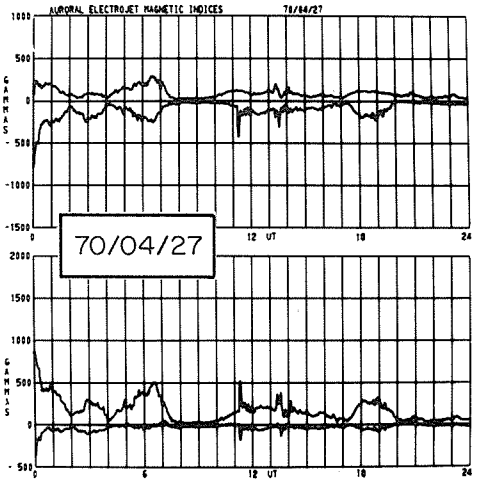
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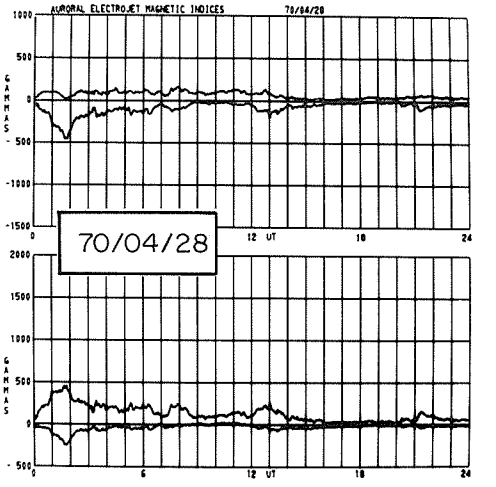
GAMMAS
12 UT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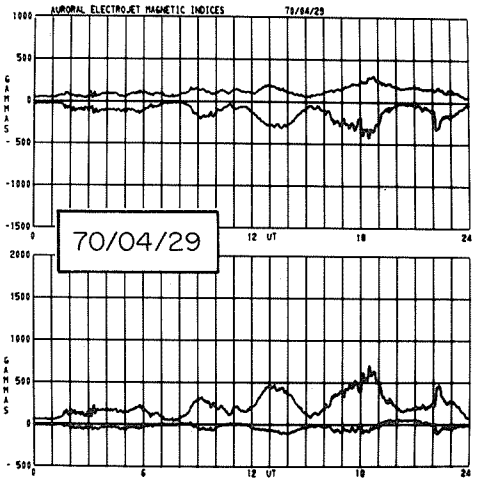
70/04/28
GAMMAS
12 UT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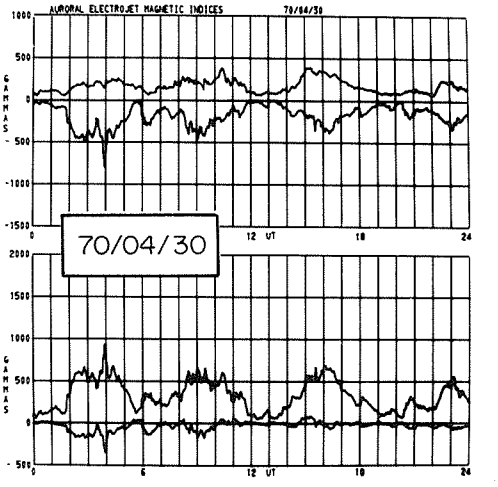
70/04/29
GAMMAS
12 UT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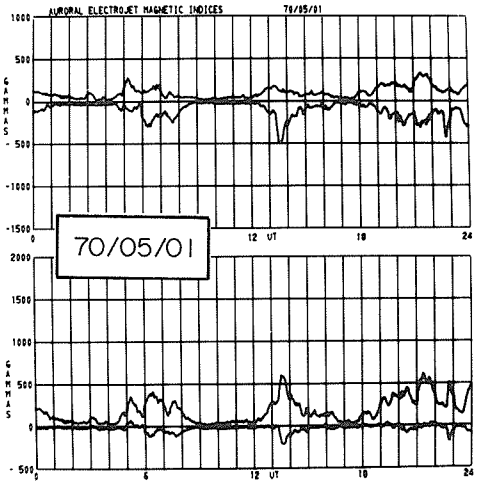
GAMMAS
12 UT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70/05/01
GAMMAS
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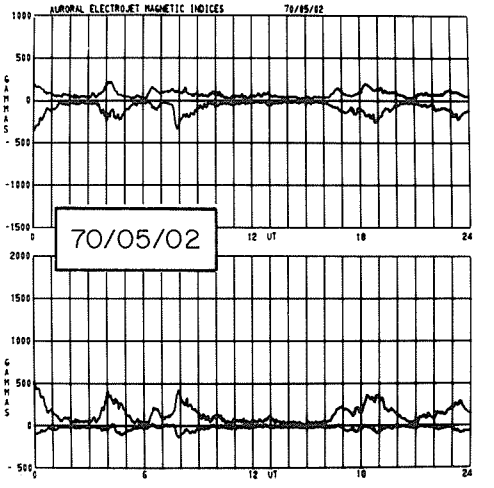
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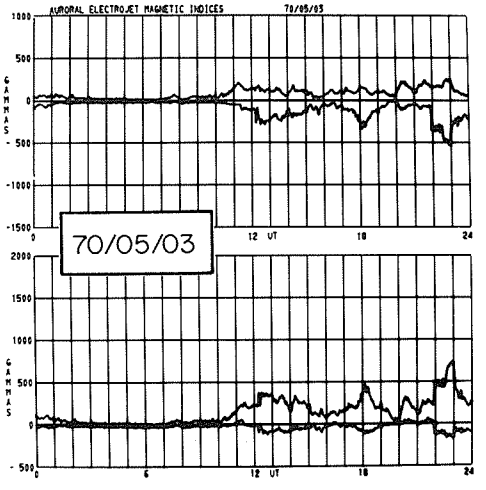
70/05/02
GAMMAS
12 UT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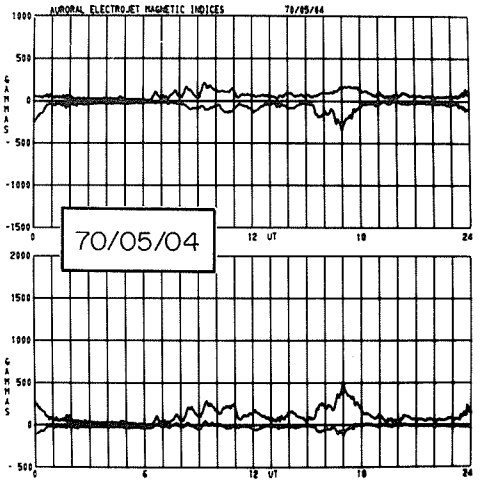
GAMMAS
12 UT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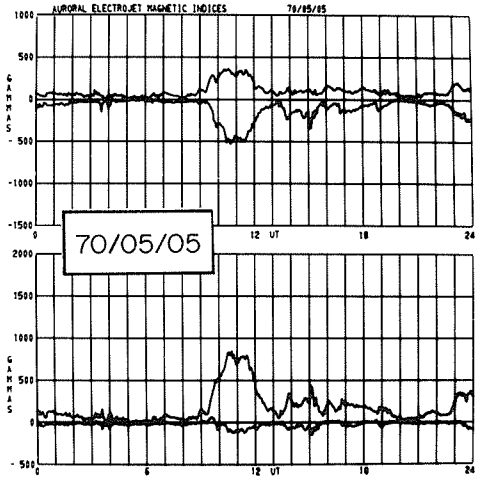
GAMMAS
12 UT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GAMMAS
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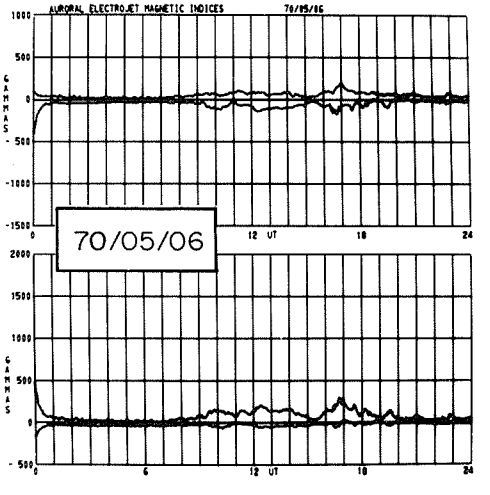
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70/05/06
GAMMAS
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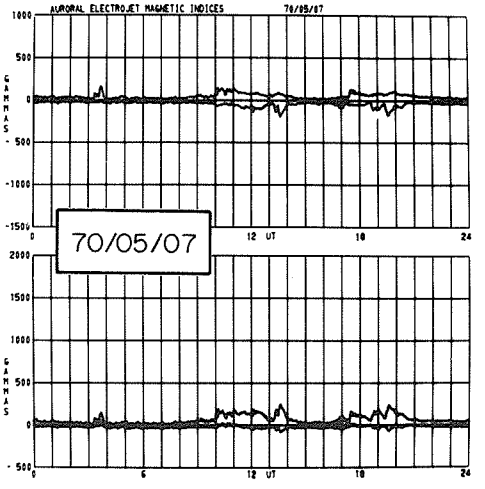
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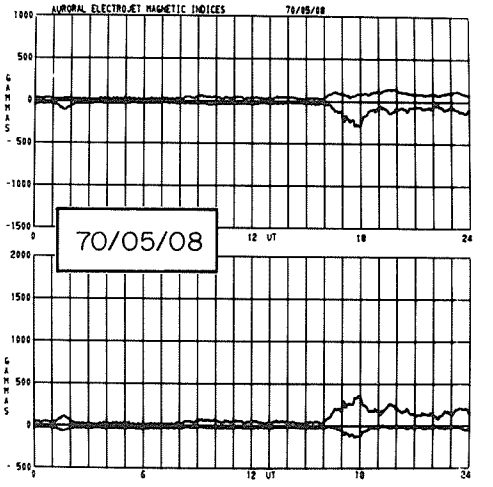
GAMMAS
12 UT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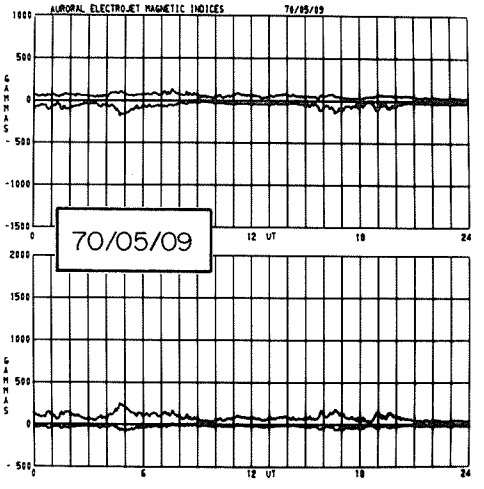
GAMMAS
12 UT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GAMMAS
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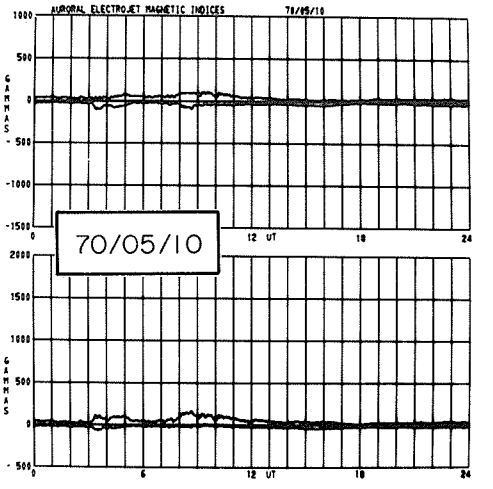
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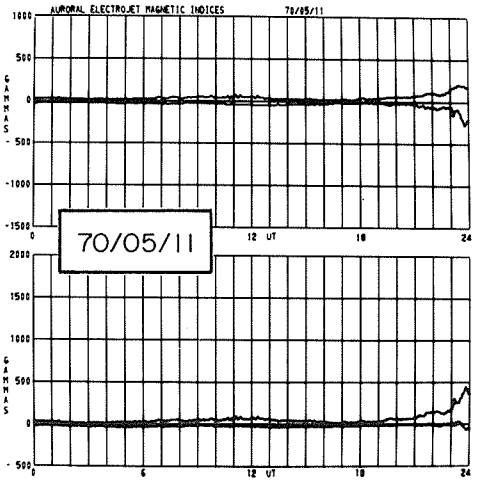
GAMMAS
12 UT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GAMMAS
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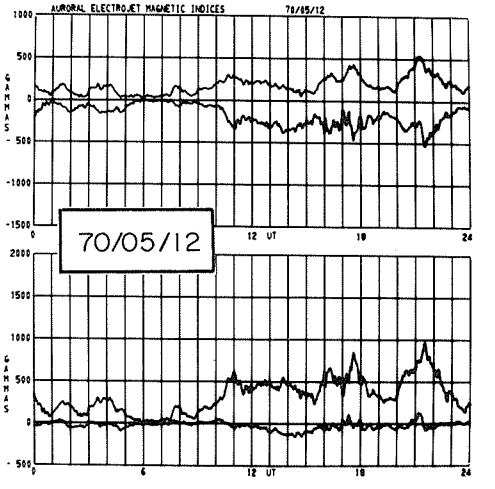
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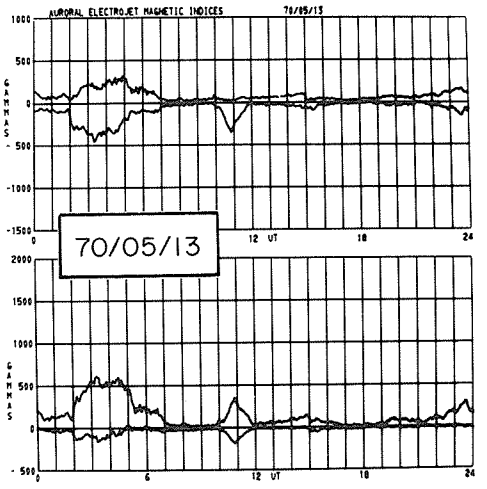
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GAMMAS
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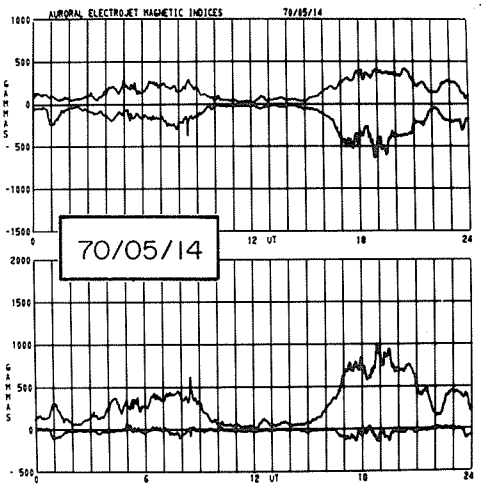
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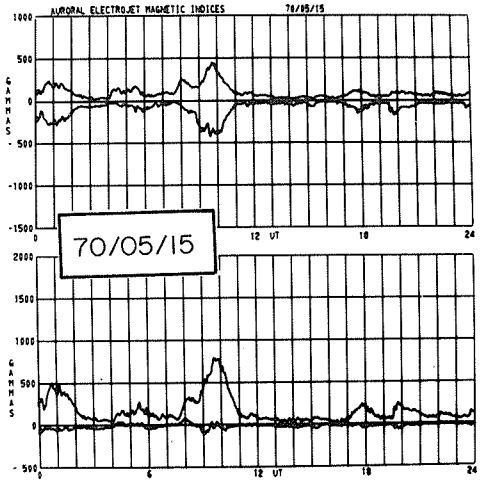
GAMMAS
12 UT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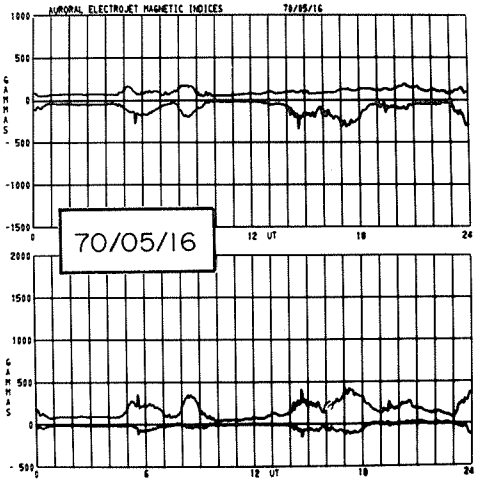
70/05/15
GAMMAS
12 UT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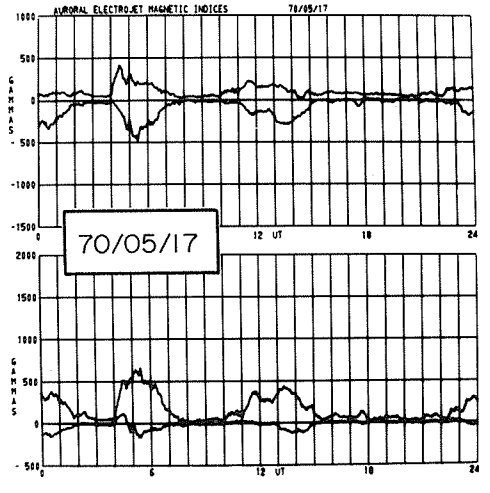
12 UT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70/05/17
GAMMAS
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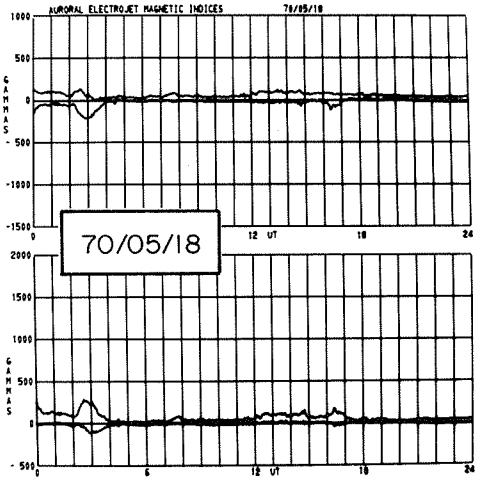
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70/05/18
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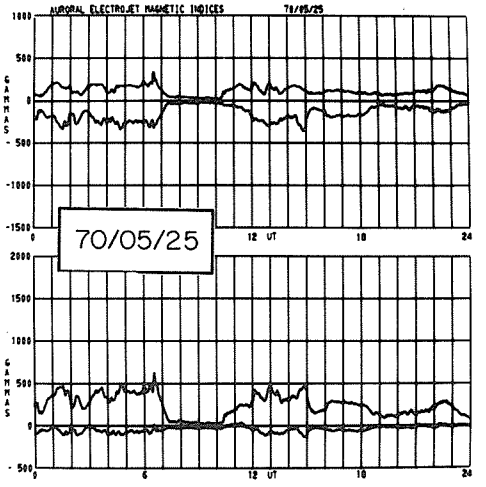
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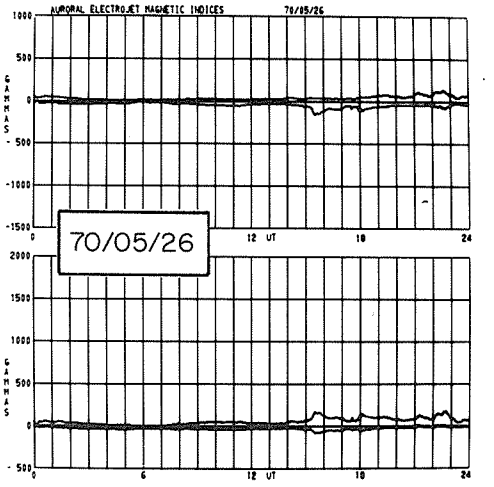
70/05/25
GAMMAS
12 UT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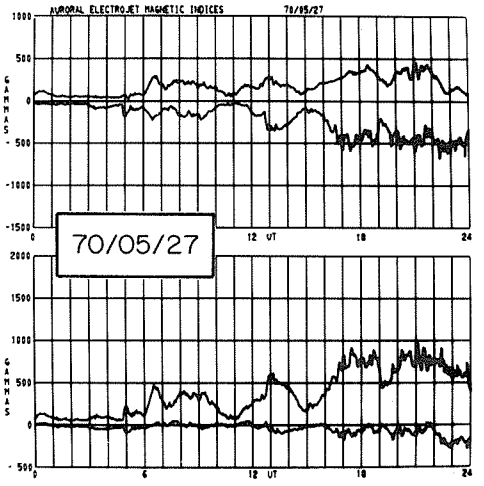
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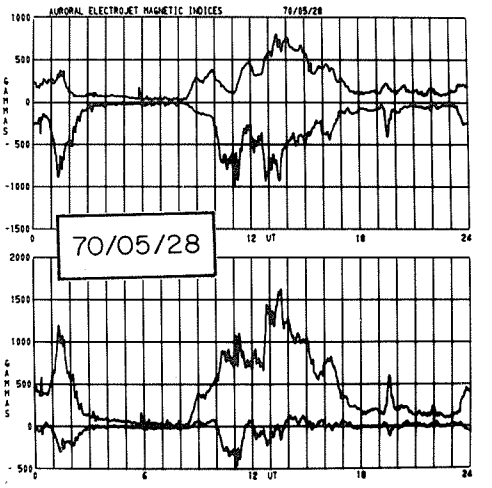
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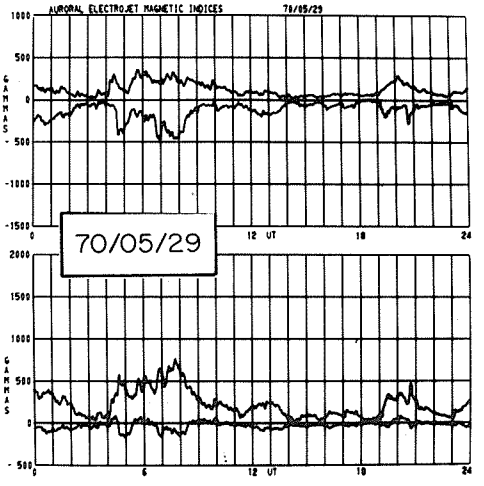
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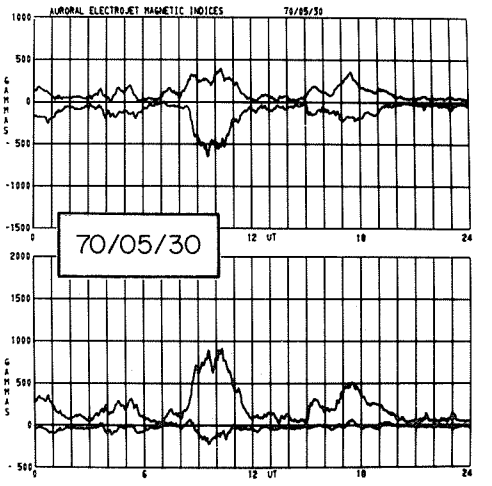
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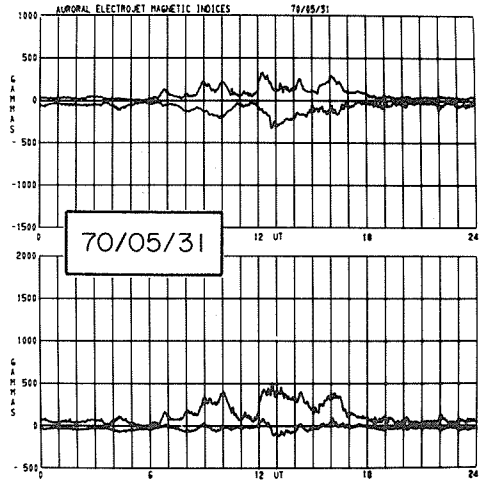
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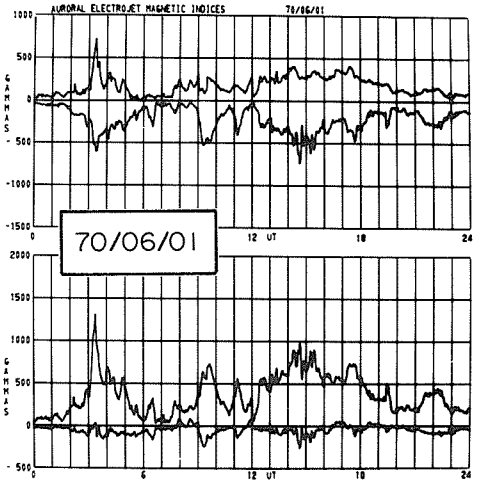
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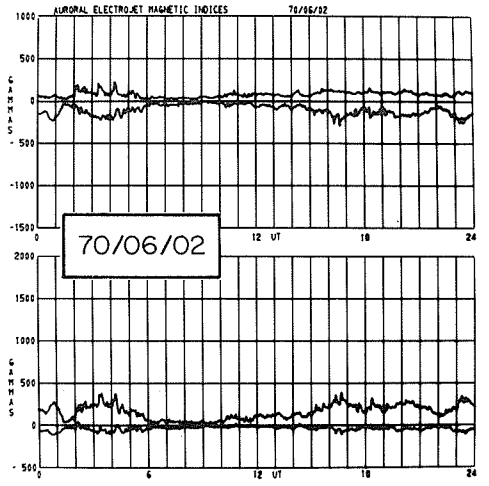
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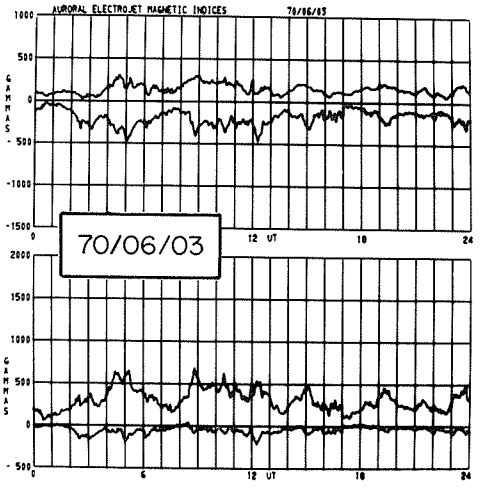
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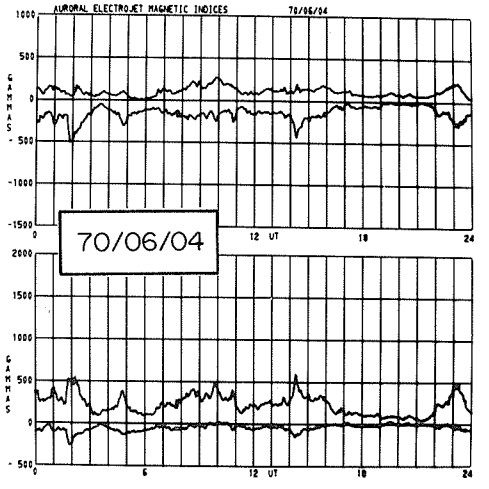
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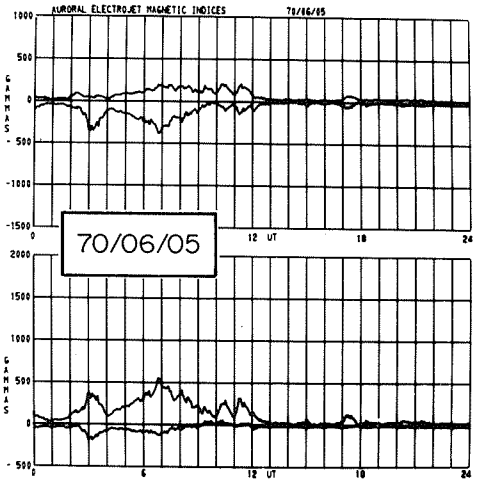
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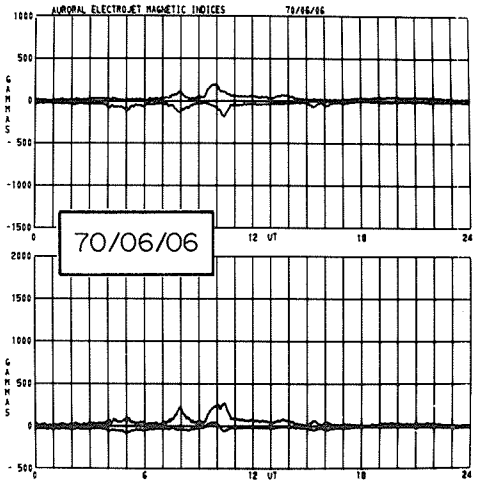
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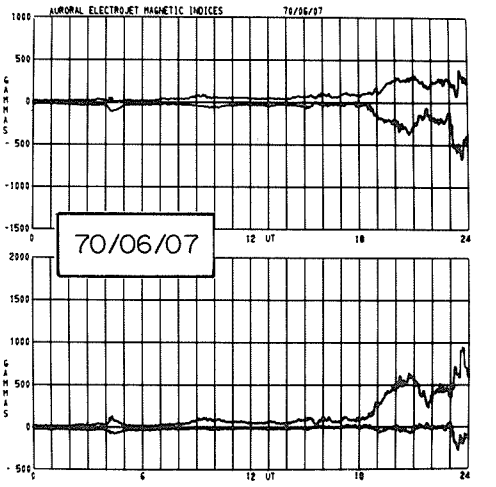
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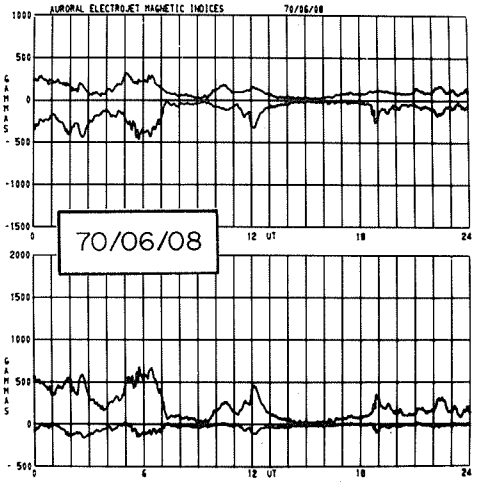
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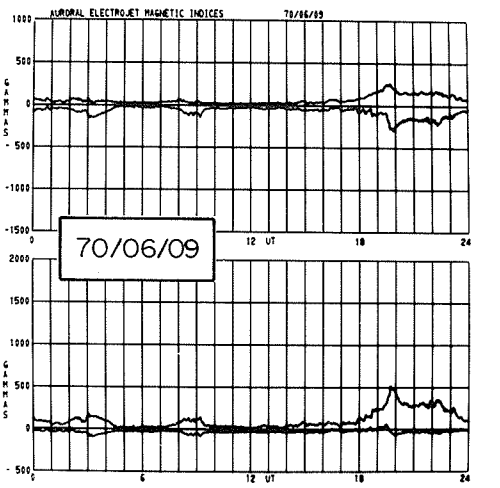
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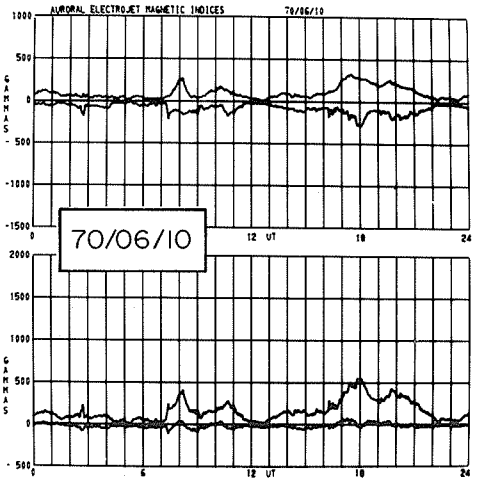
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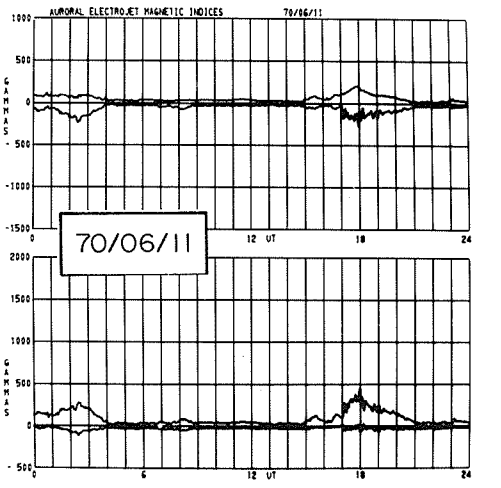
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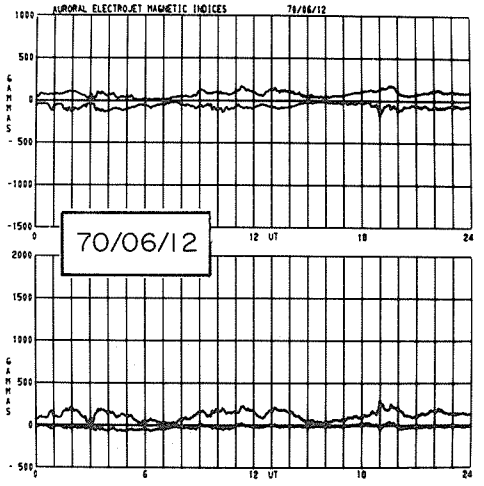
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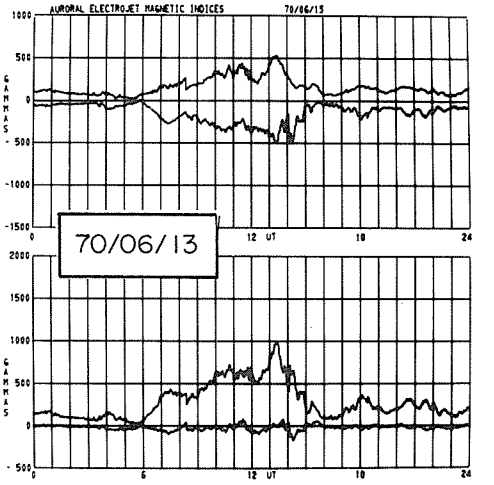
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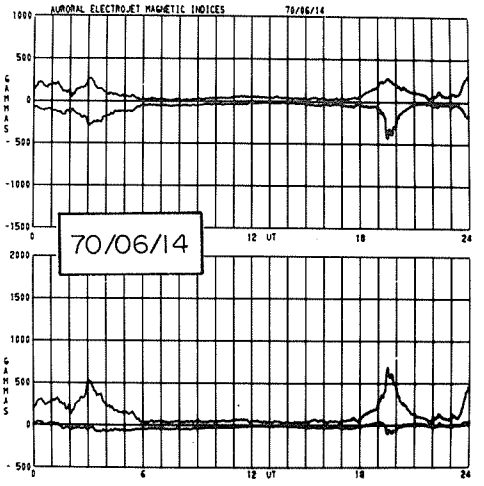
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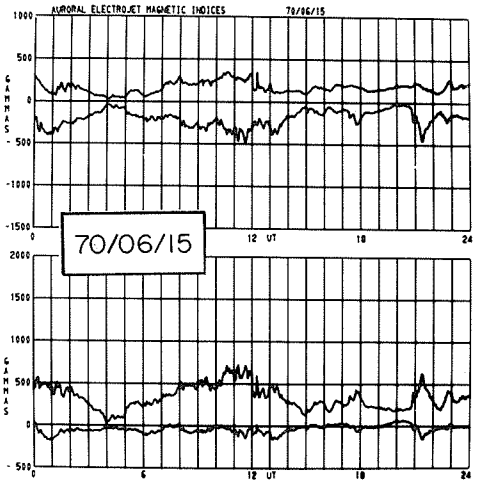
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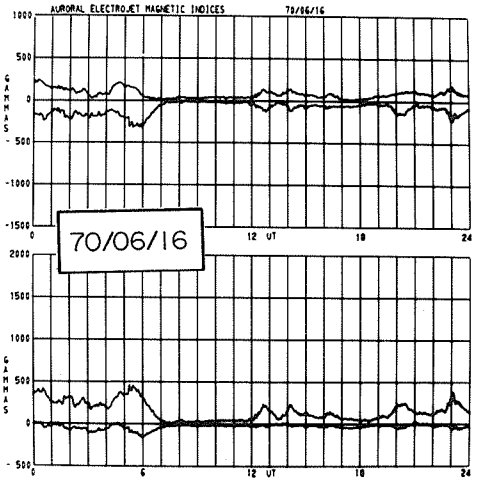
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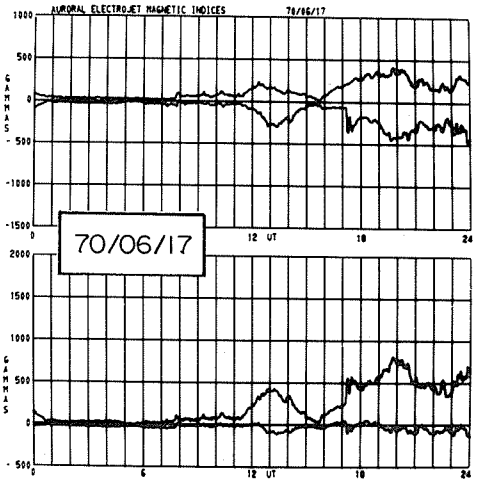
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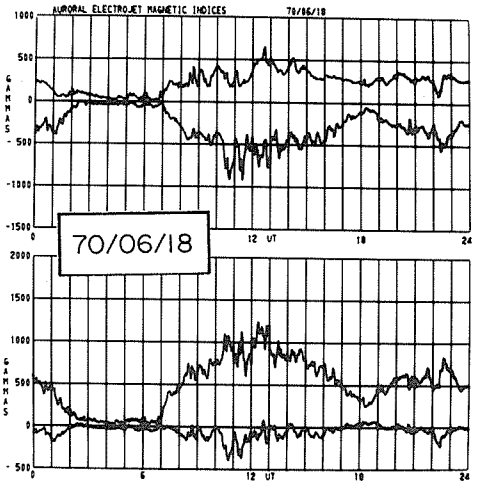
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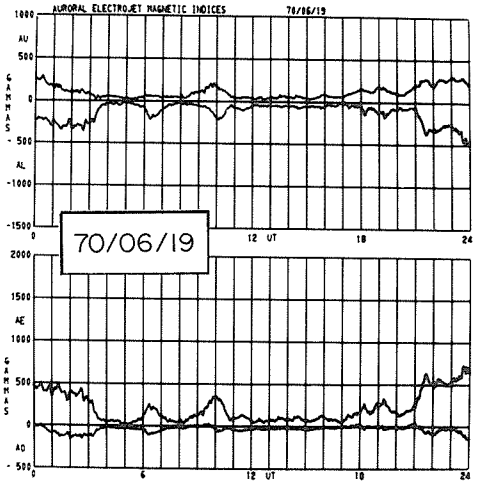
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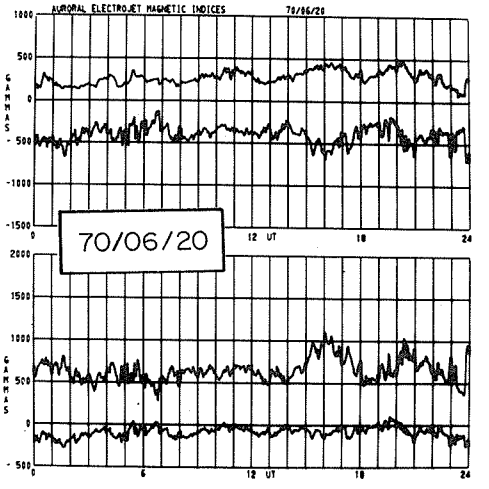
12 UT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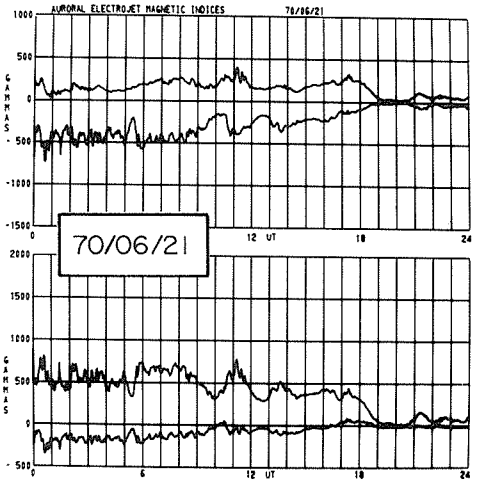
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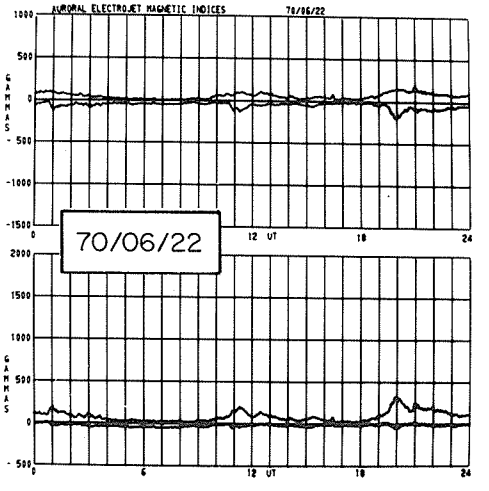
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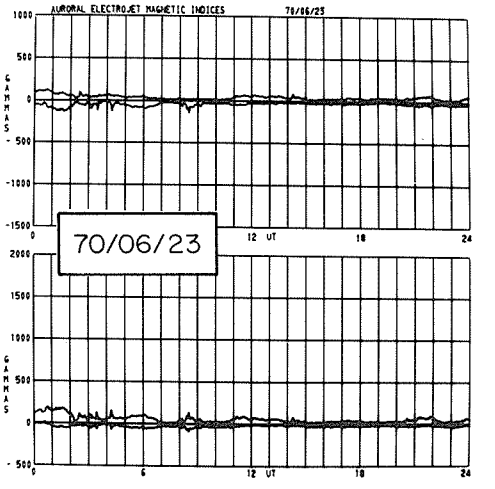
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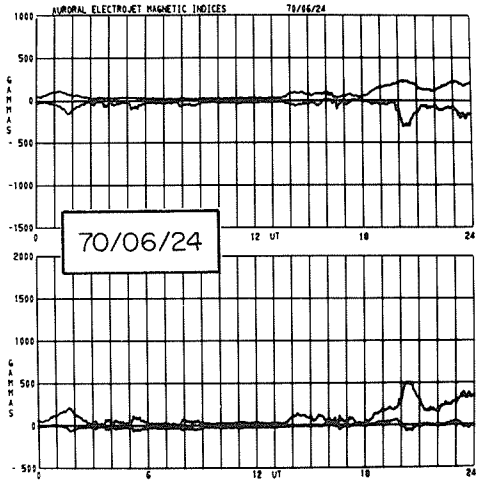
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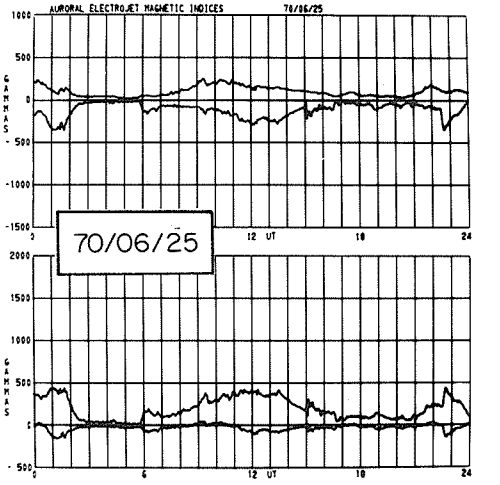
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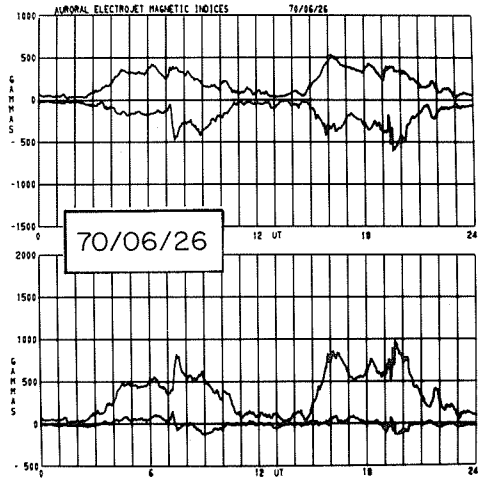
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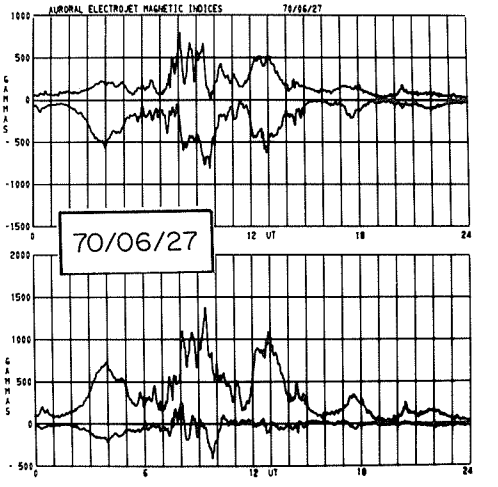
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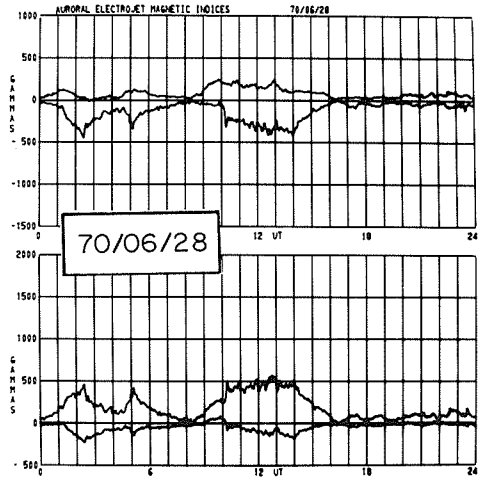
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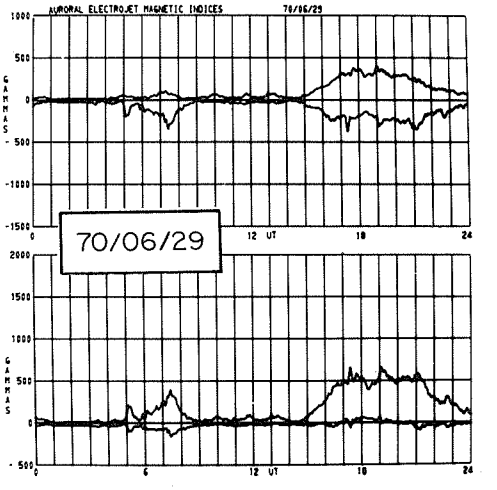
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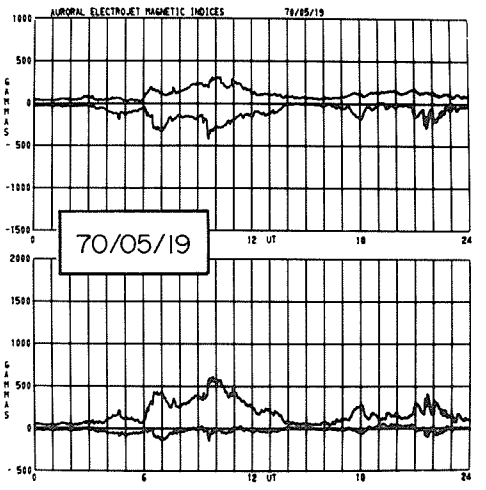
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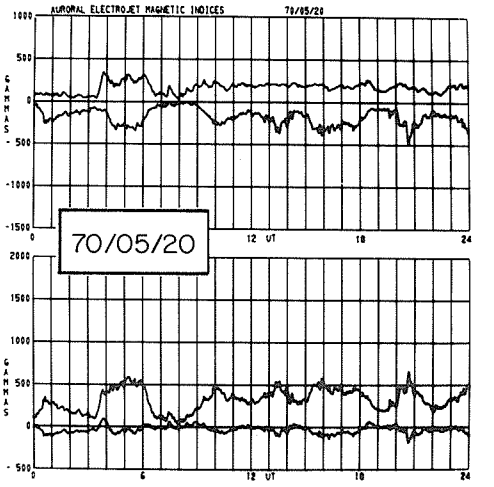
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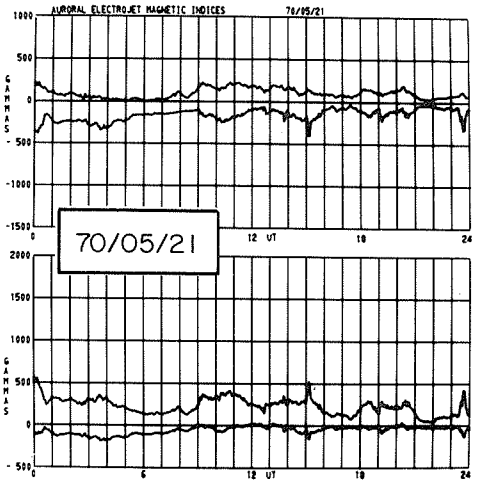
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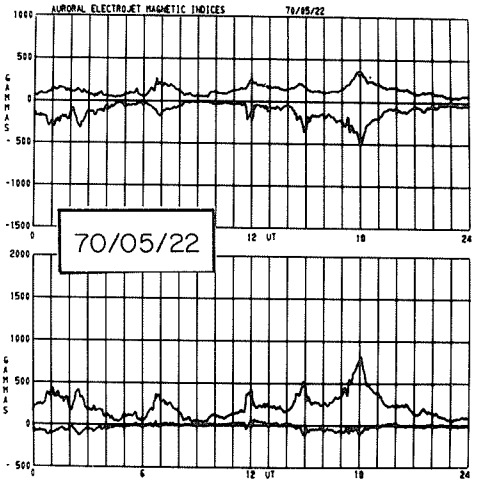
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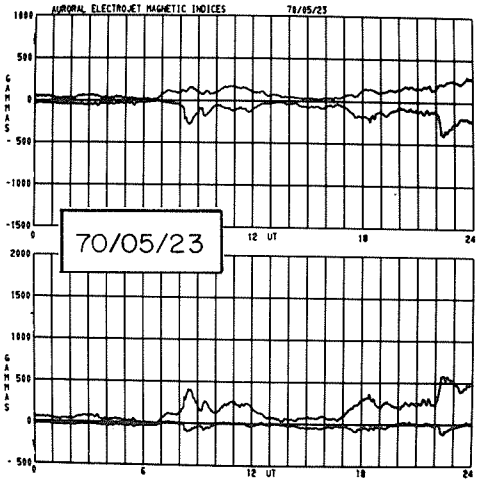
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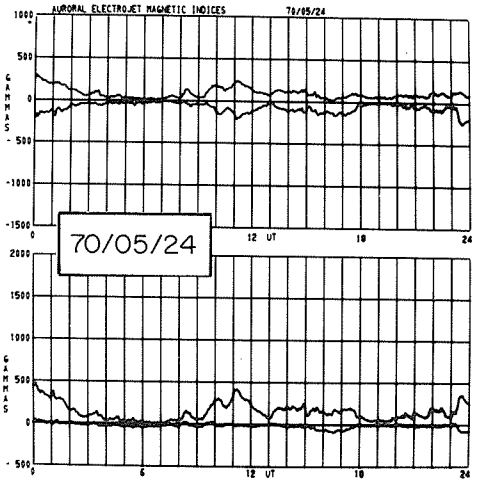
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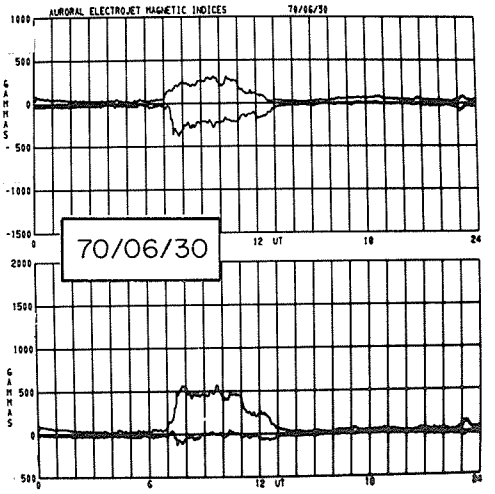
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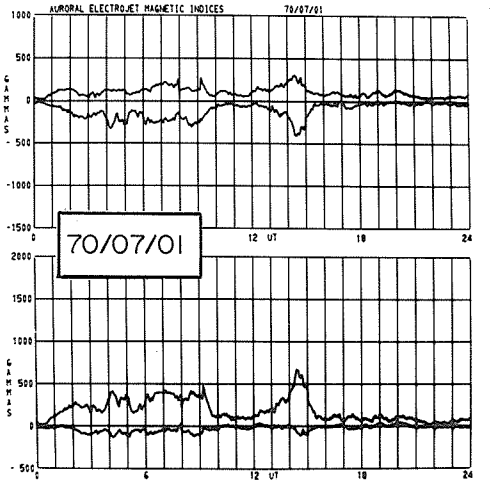
70/06/30
GAMMAS
12 UT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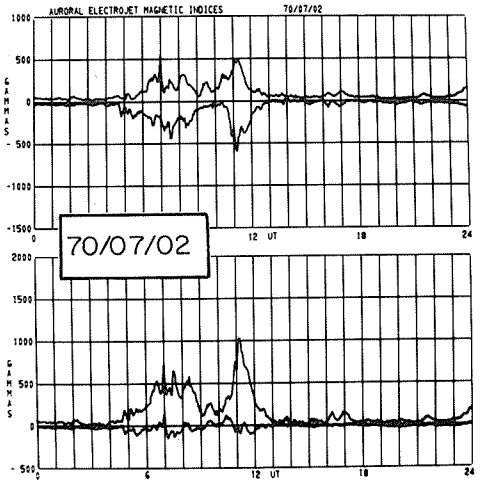
GAMMAS
12 UT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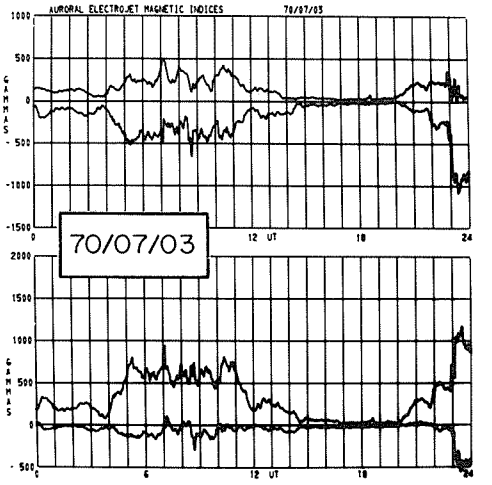
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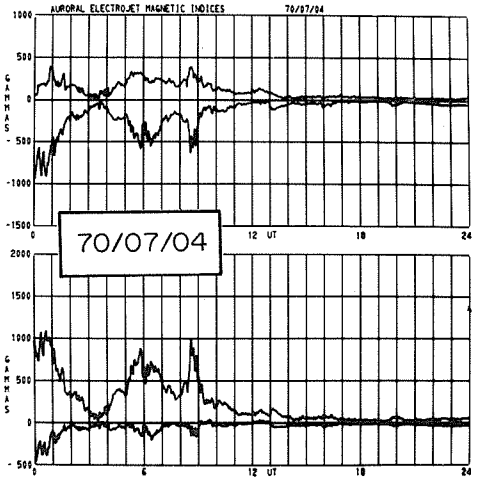
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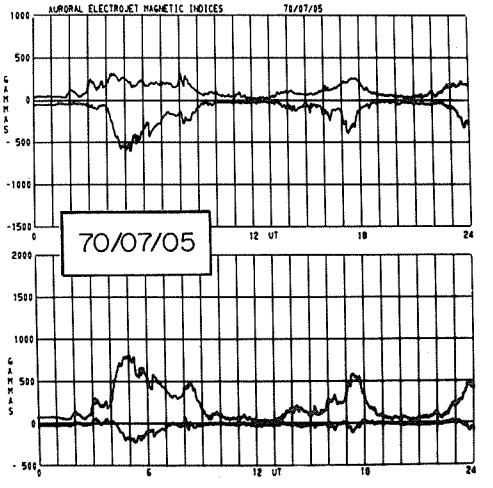
AURORAL ELECTROJET MAGNETIC INDICES
70/07/05
GAMMAS
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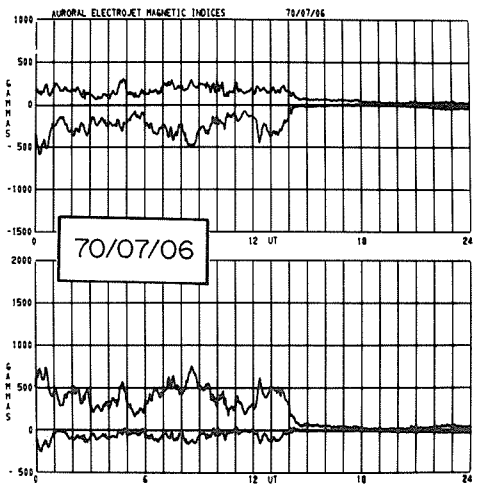

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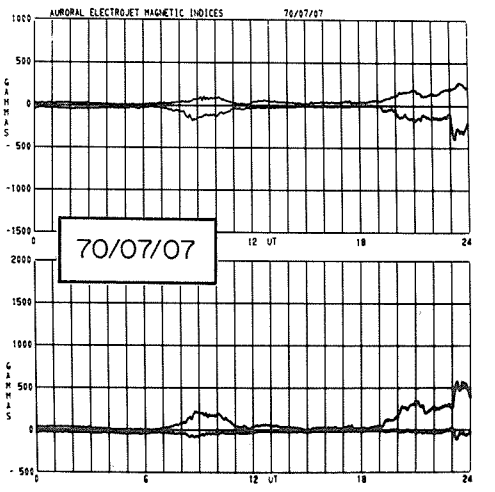

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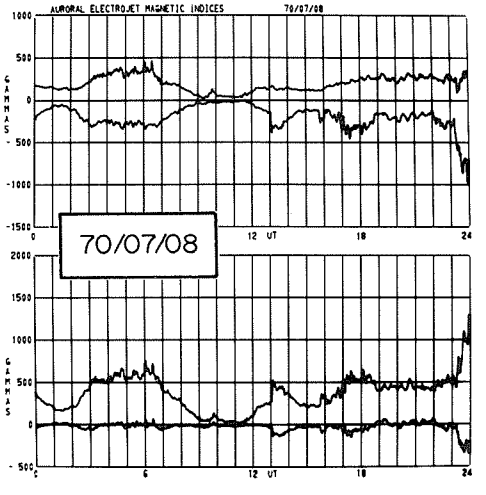

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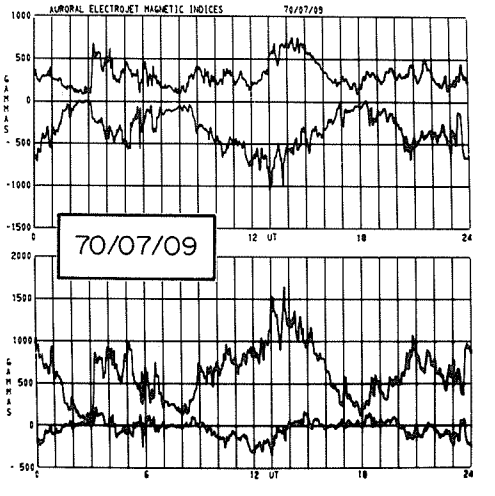

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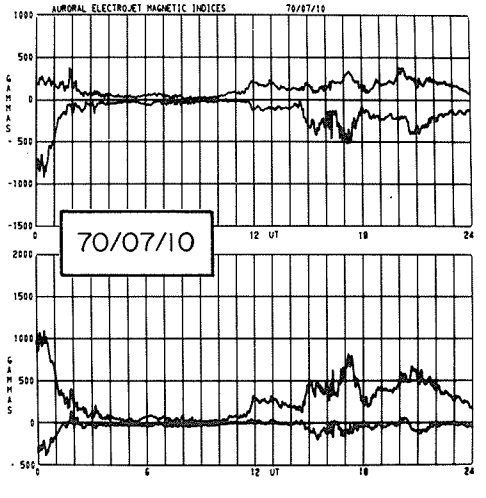

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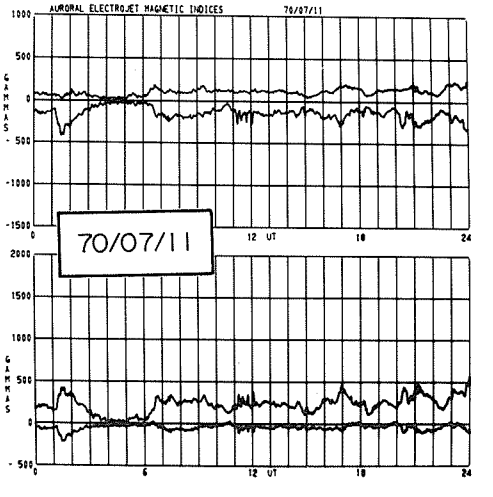

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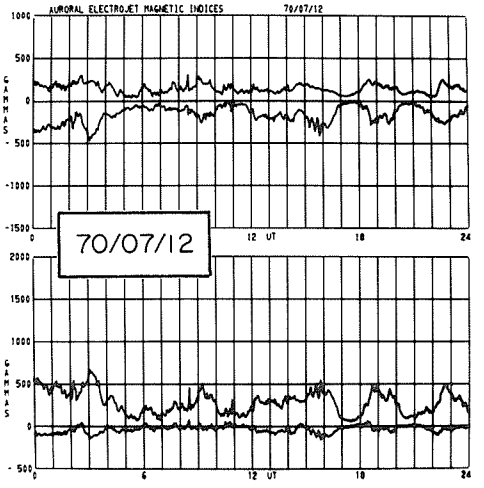
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70/07/12
GAMMAS
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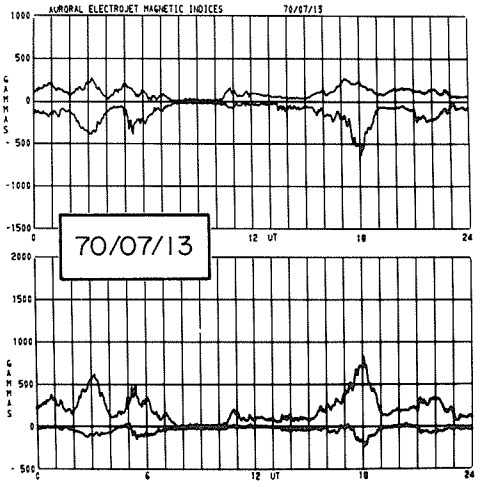
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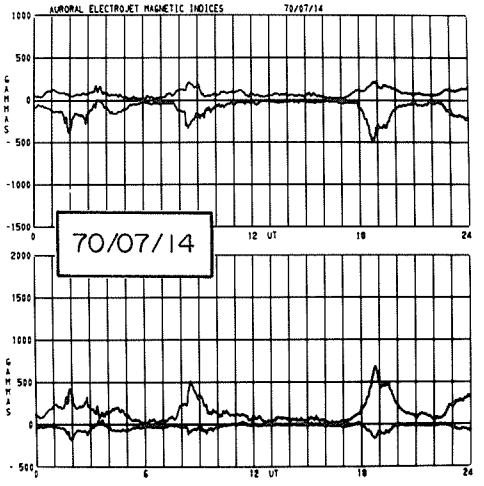
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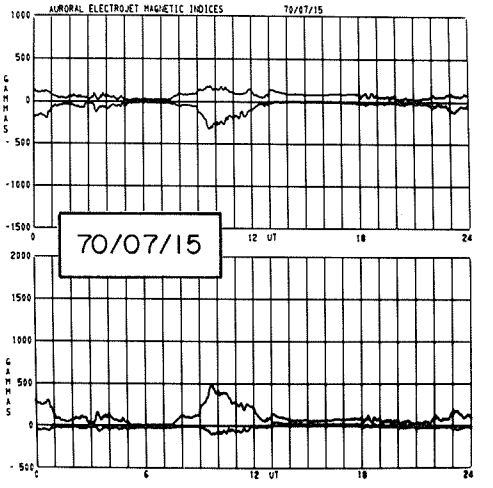
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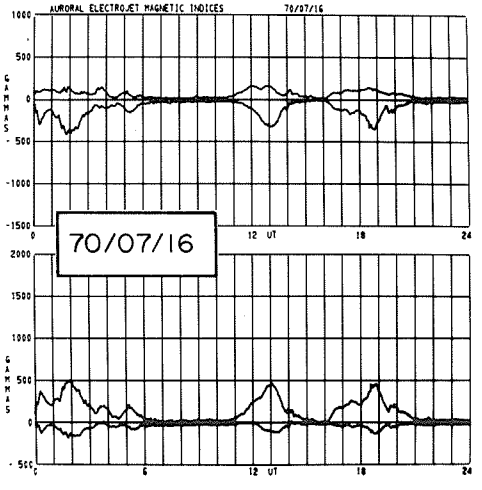
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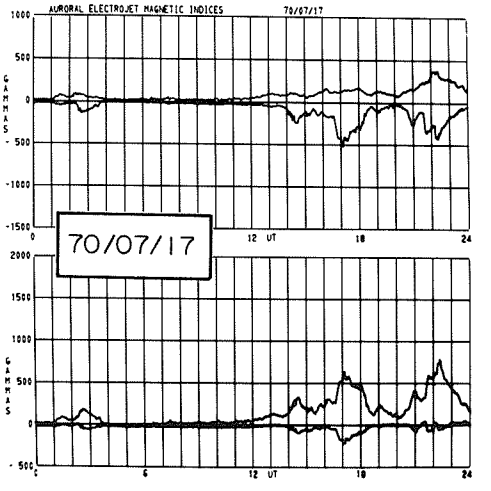
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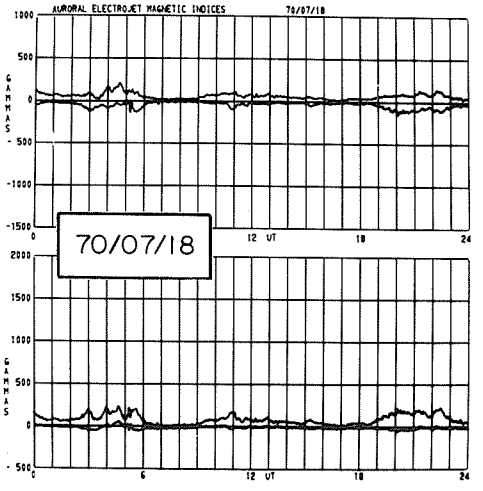
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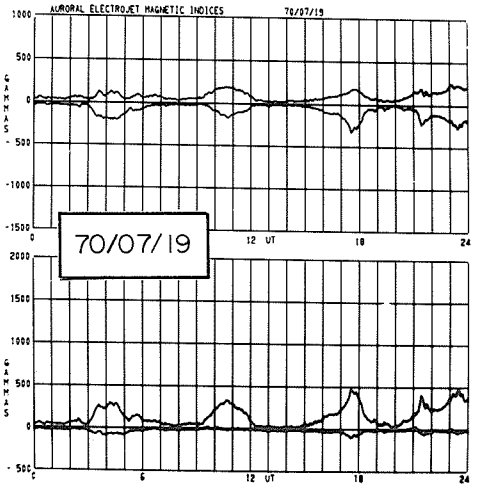
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GAMMAS
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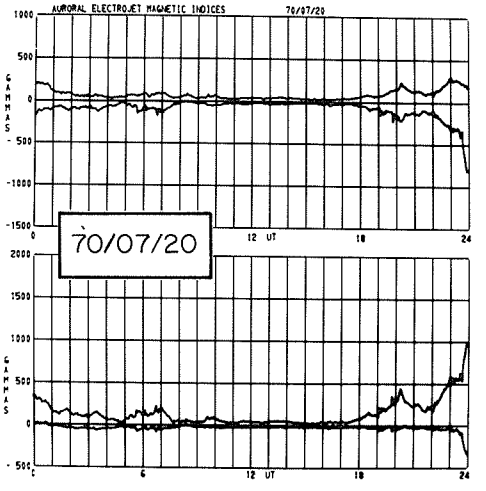
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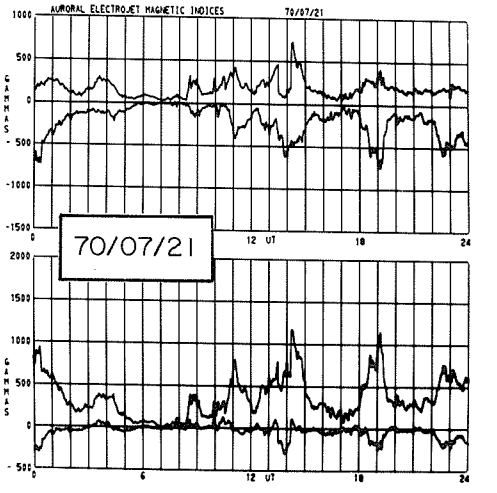
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GAMMAS
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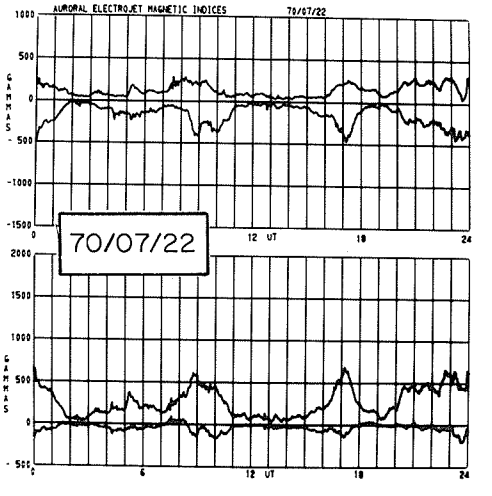
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GAMMAS
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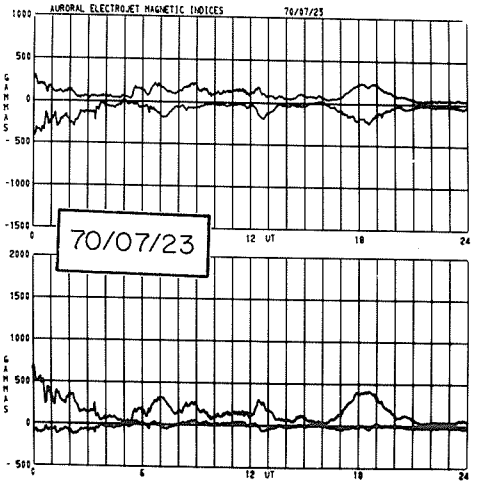
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GAMMAS
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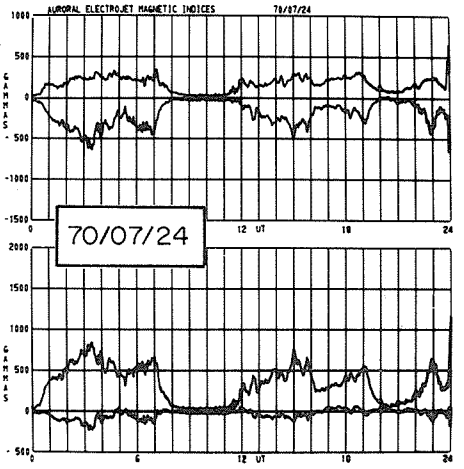
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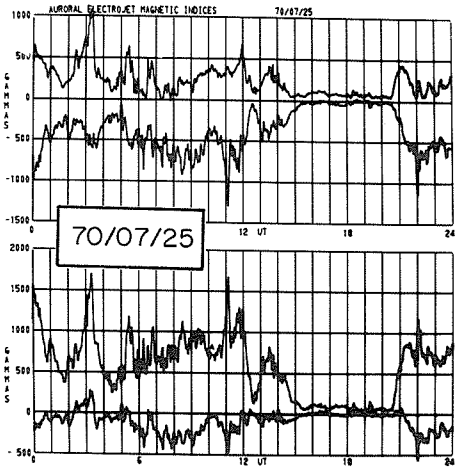
70/07/24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GAMMAS
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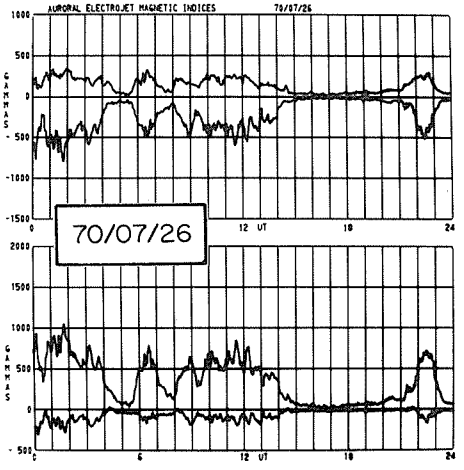
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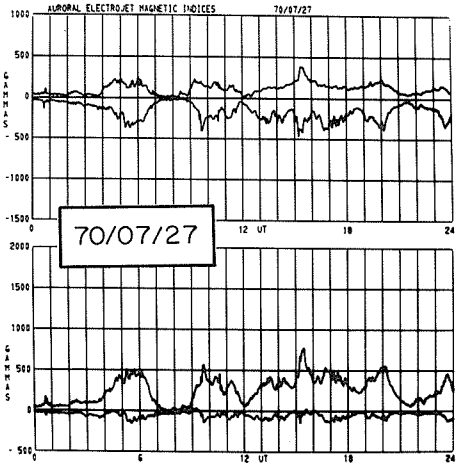
70/07/26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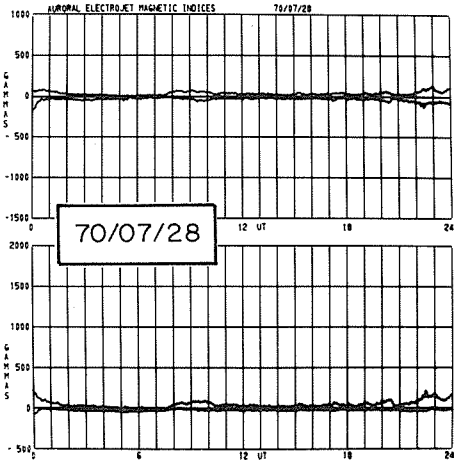
70/07/27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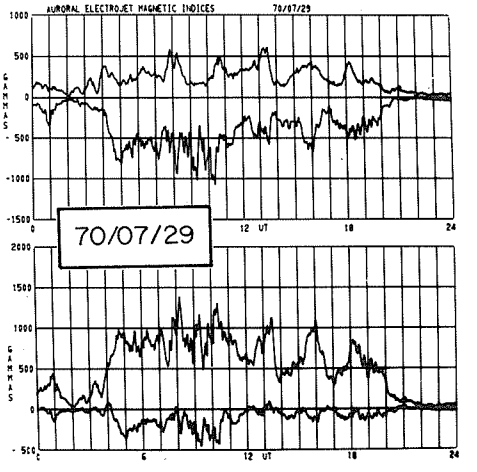
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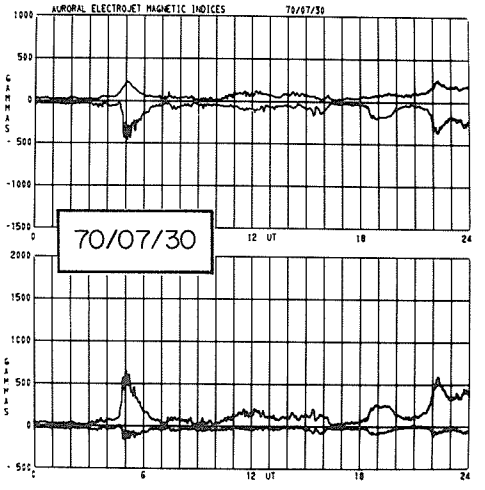
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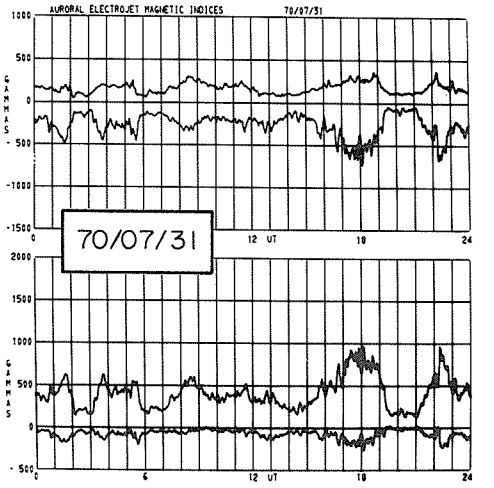
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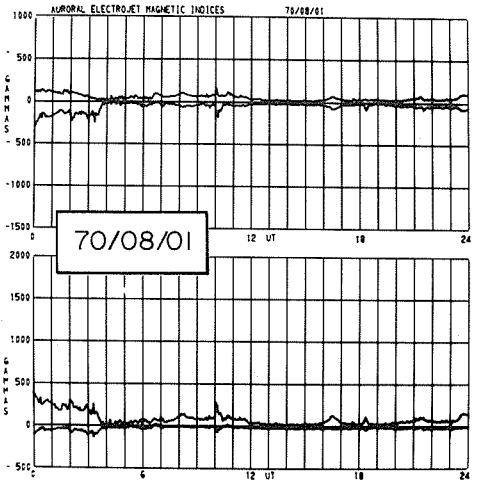
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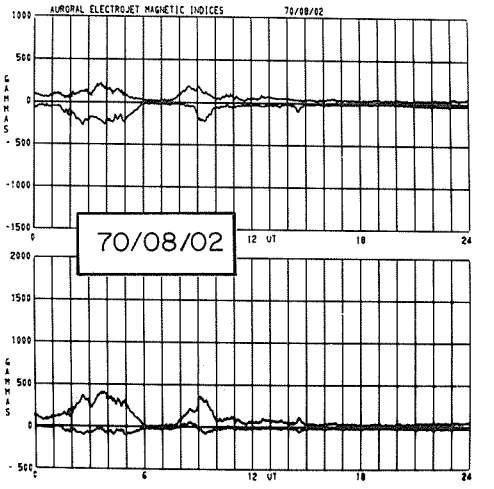
70/08/01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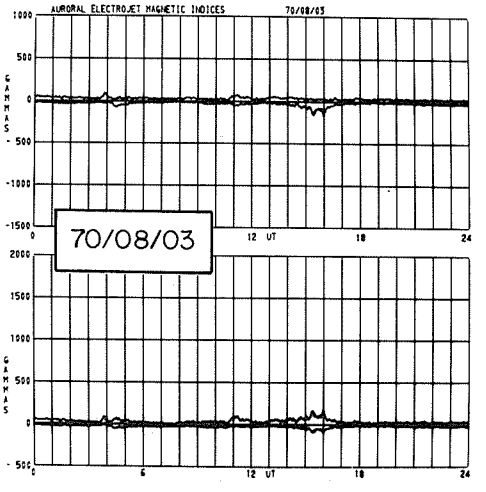
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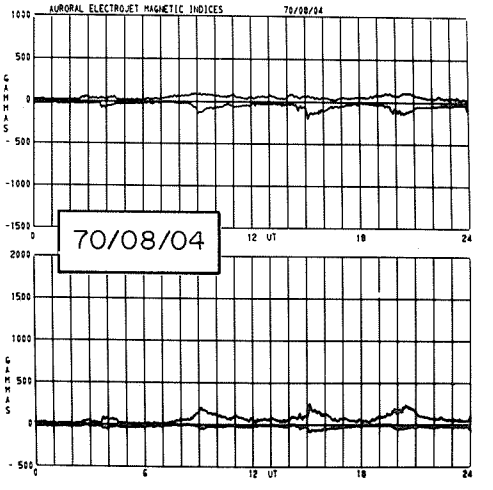
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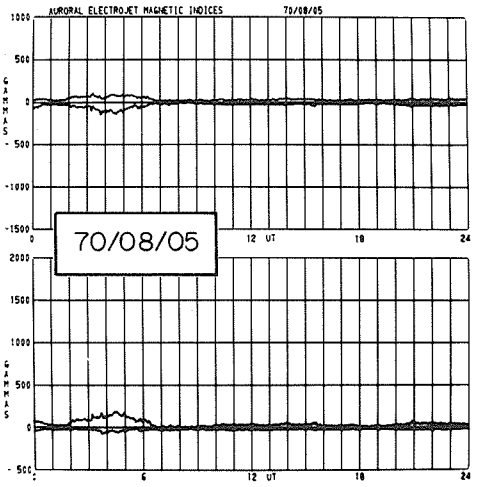
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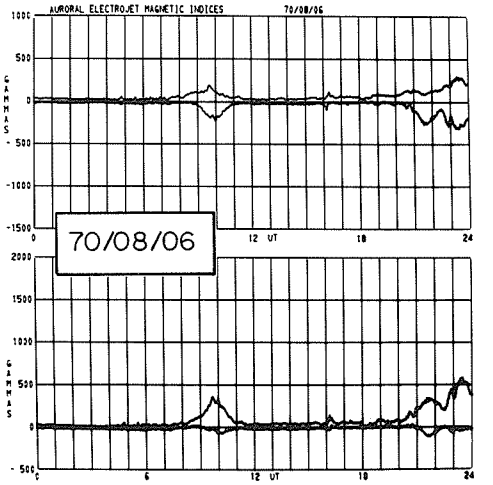
70/08/05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GAMMAS
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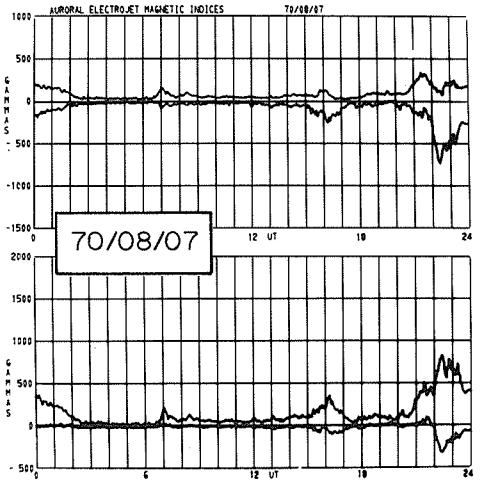
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GAMMAS
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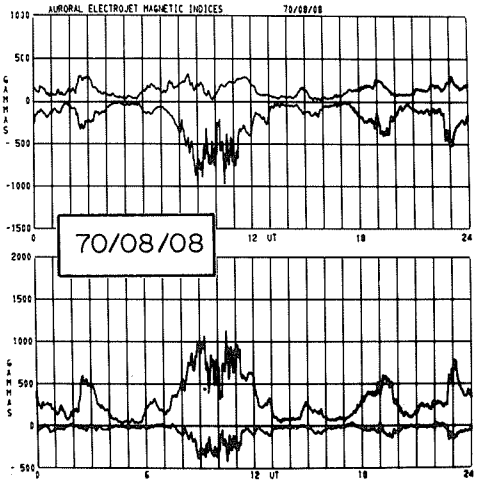
70/08/07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GAMMAS
12 UT
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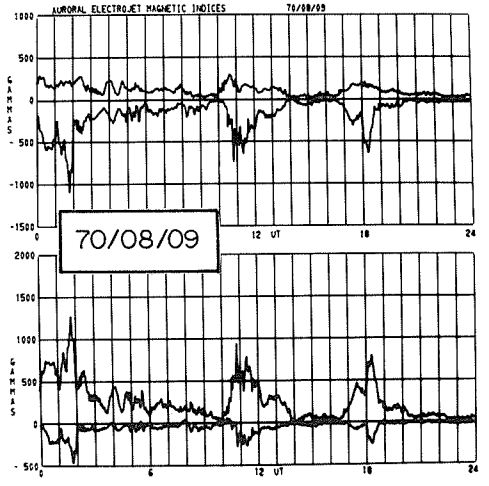
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GAMMAS
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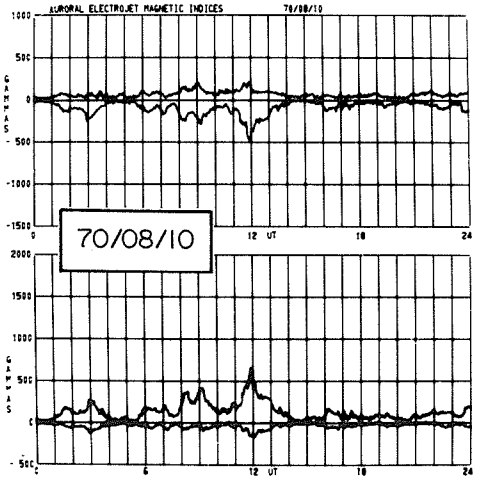
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GAMMAS
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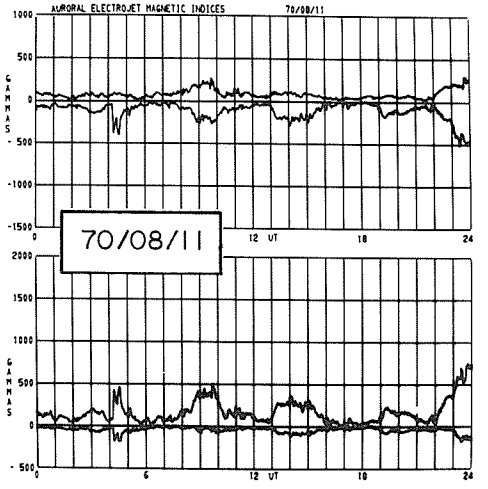
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GAMMAS
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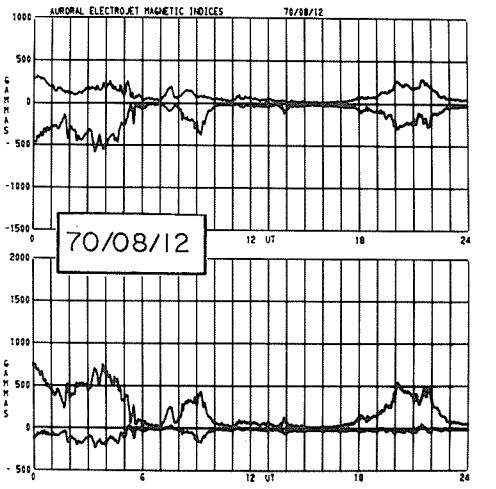
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GAMMAS
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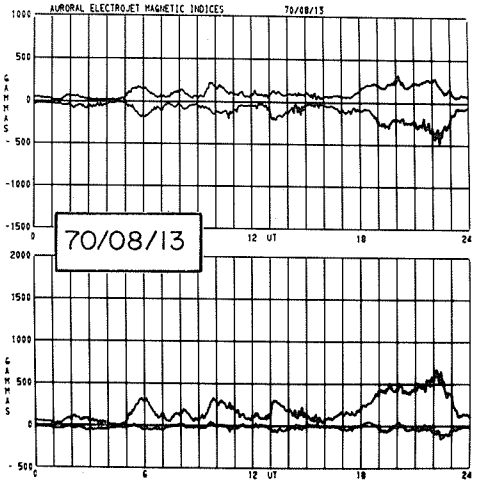
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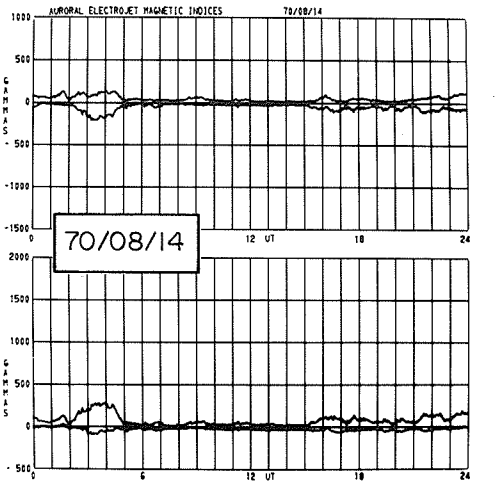
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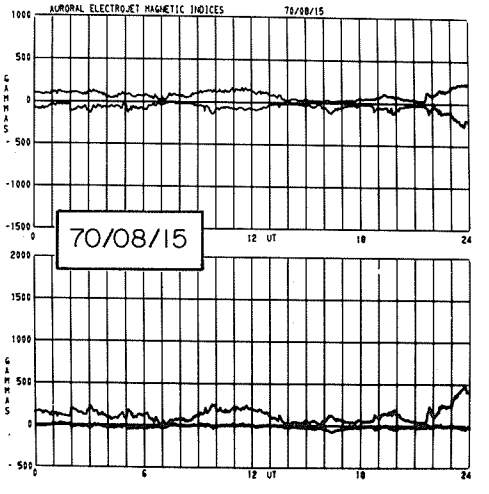
70/08/14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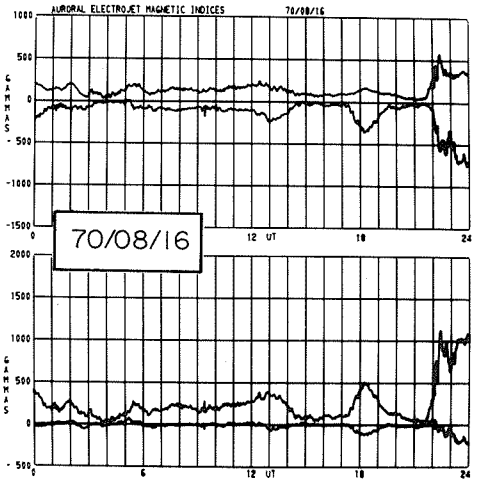
70/08/15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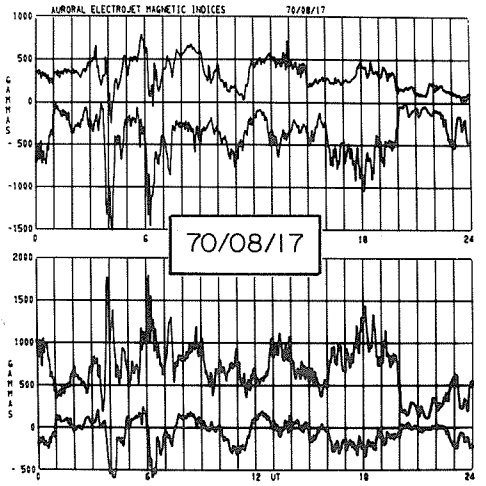
70/08/16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GAMMAS
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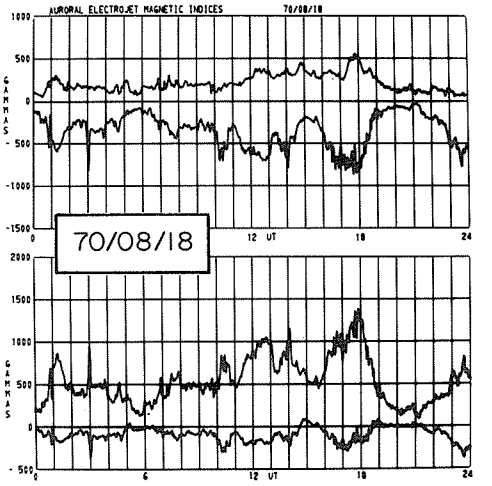
70/08/17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GAMMAS
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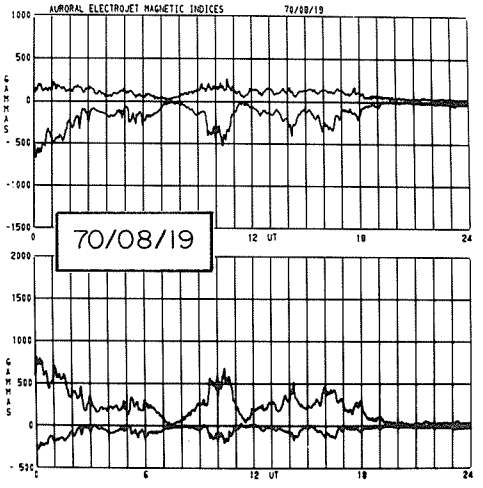
70/08/18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GAMMAS
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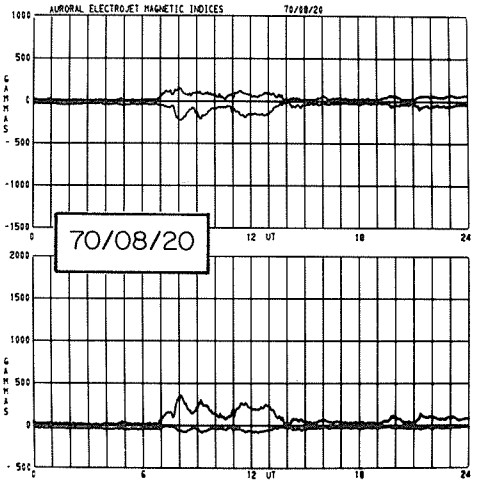
70/08/19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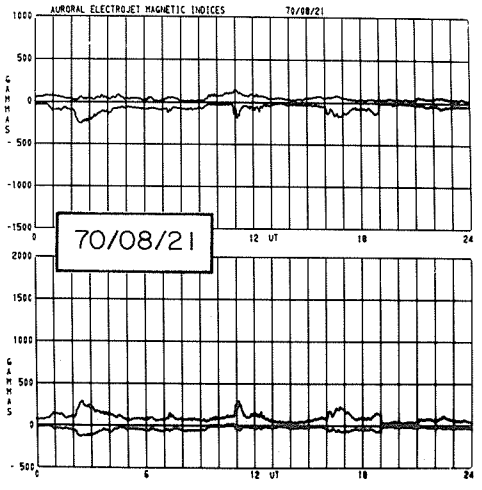
70/08/20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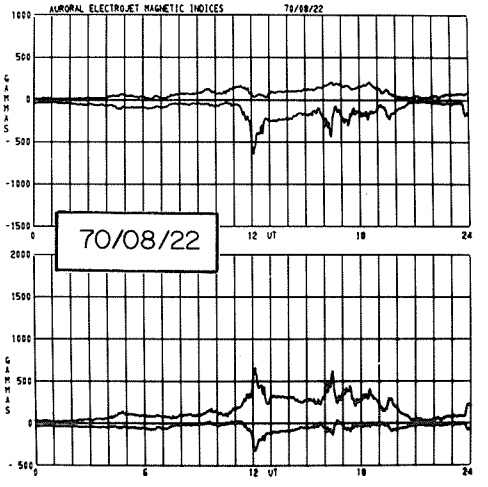
70/08/21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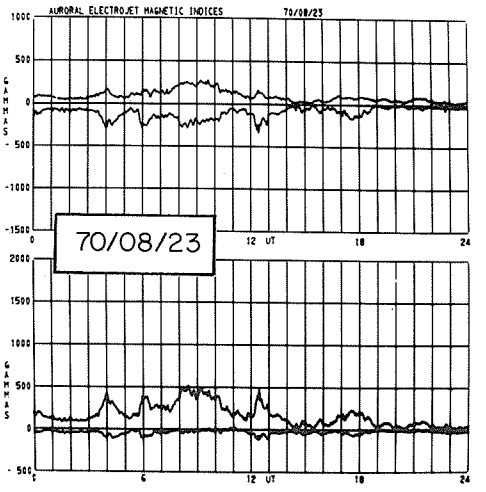
70/08/22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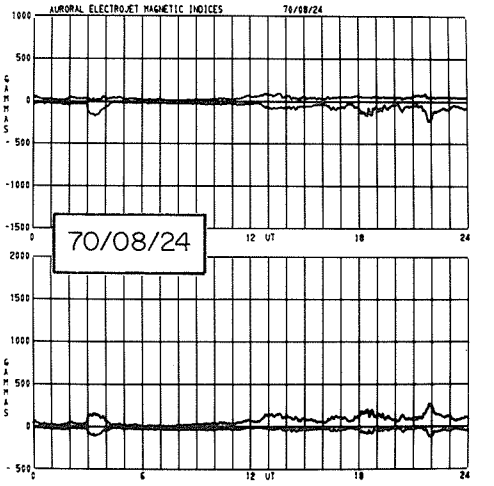
70/08/23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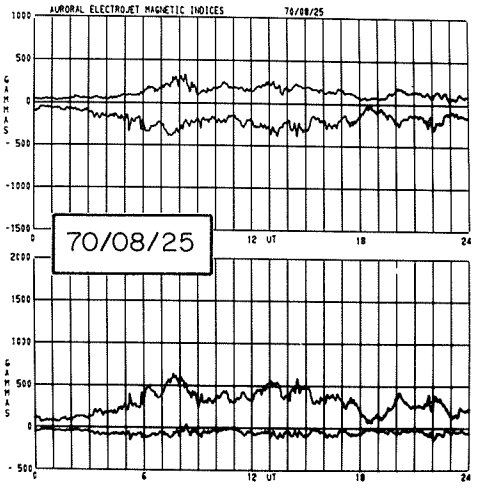
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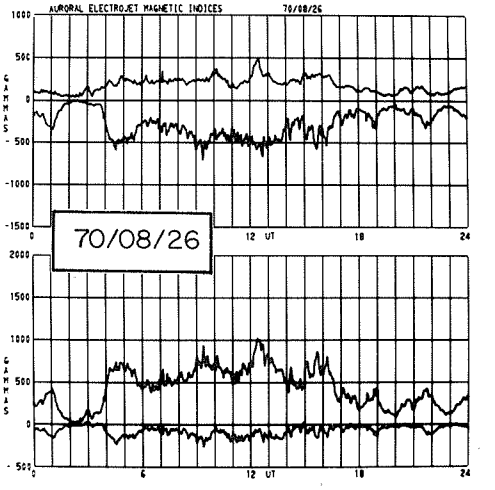
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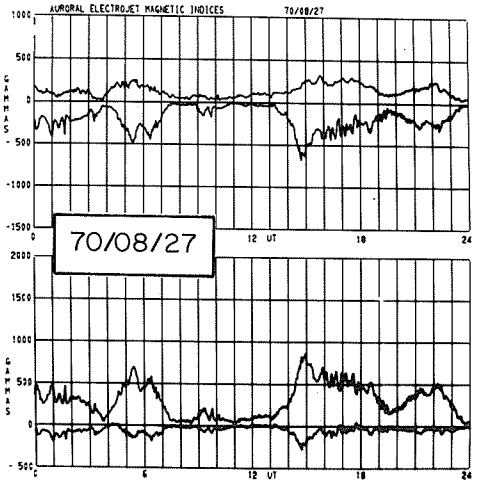
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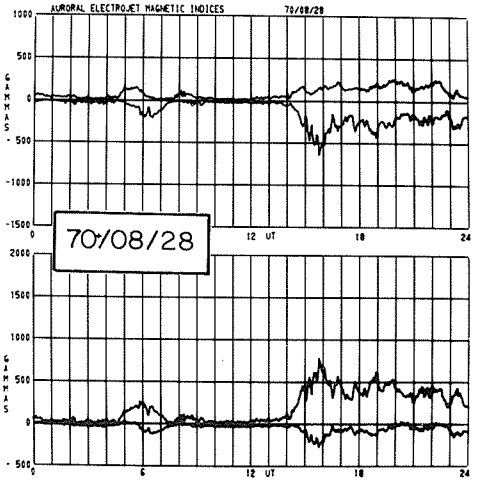
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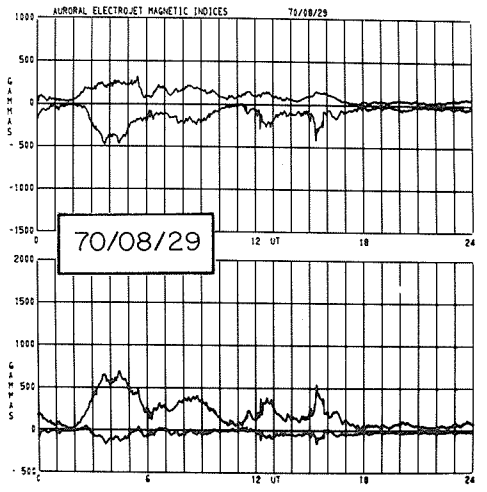
70/08/28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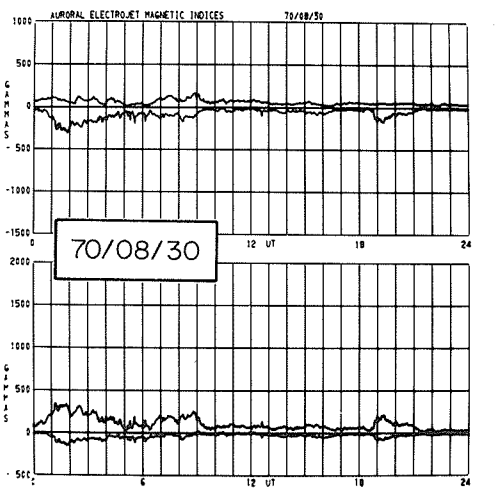
70/08/29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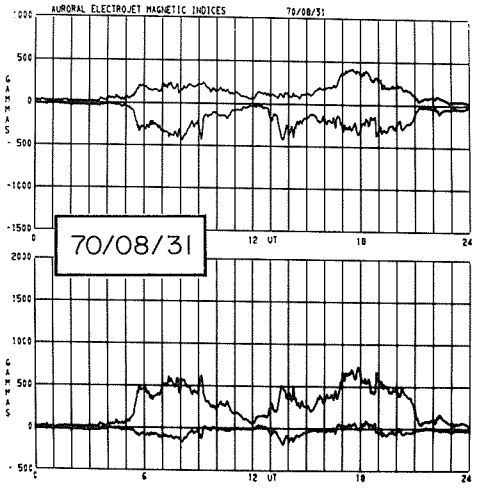
70/08/30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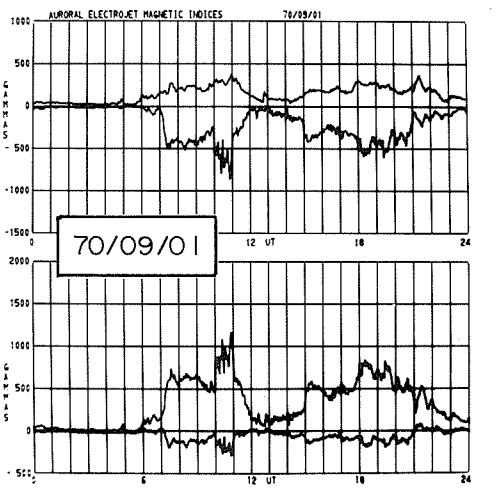
70/08/31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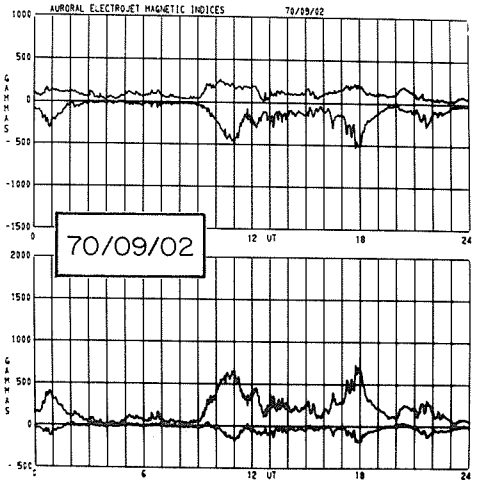
70/09/01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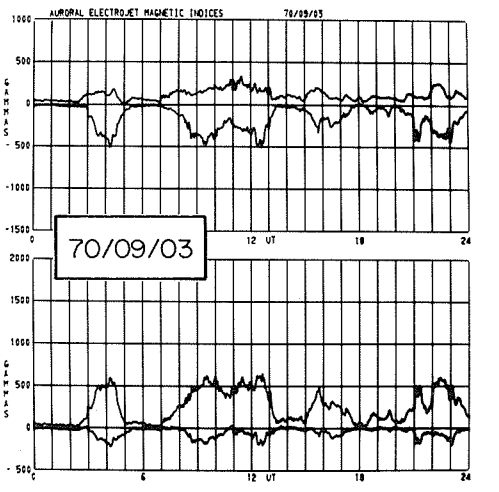
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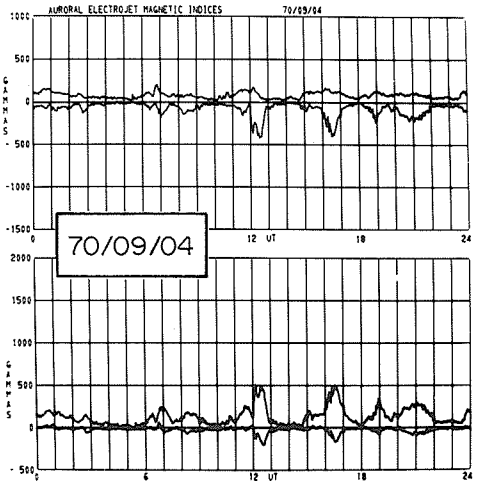
70/09/03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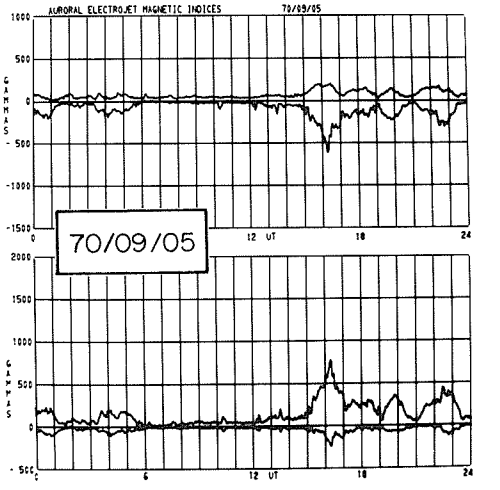
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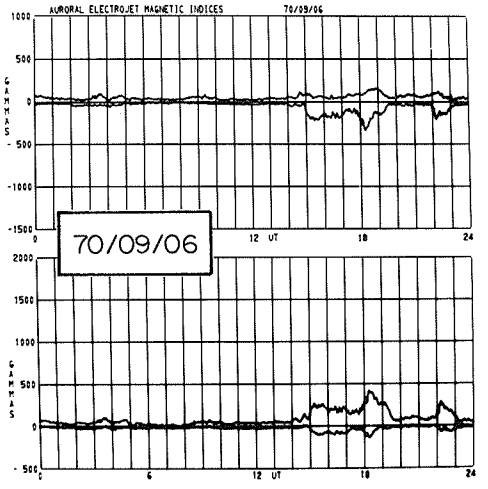
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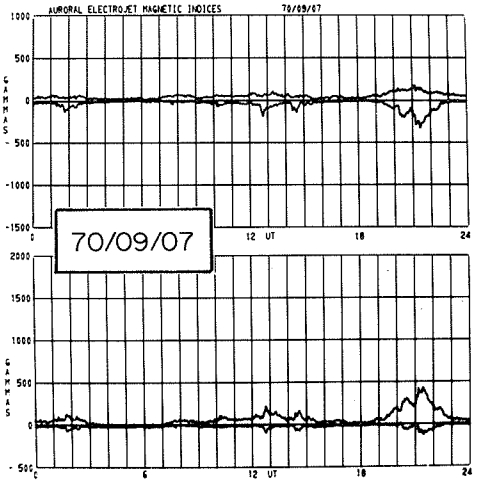
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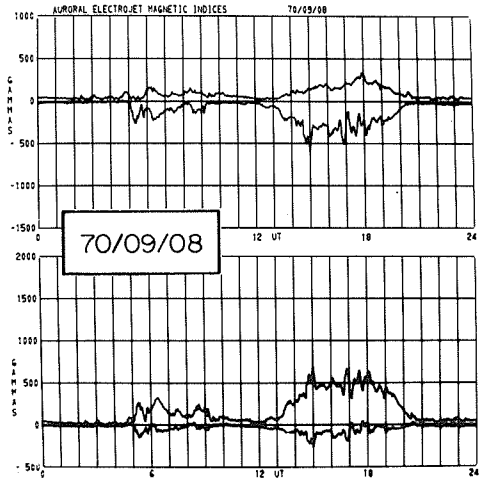
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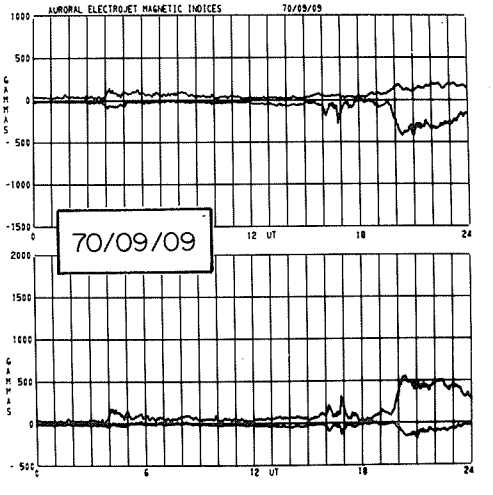
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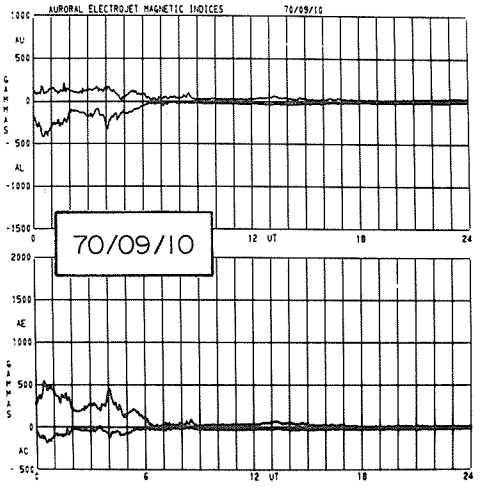
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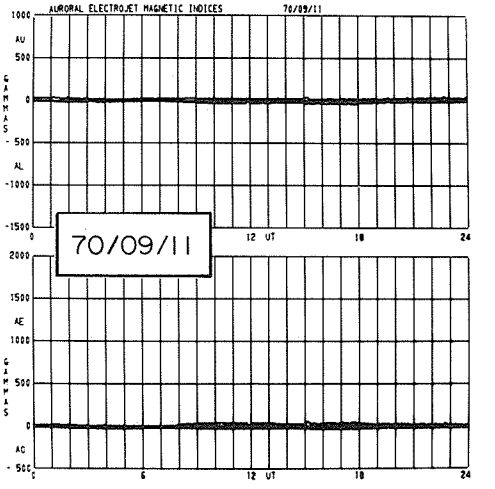
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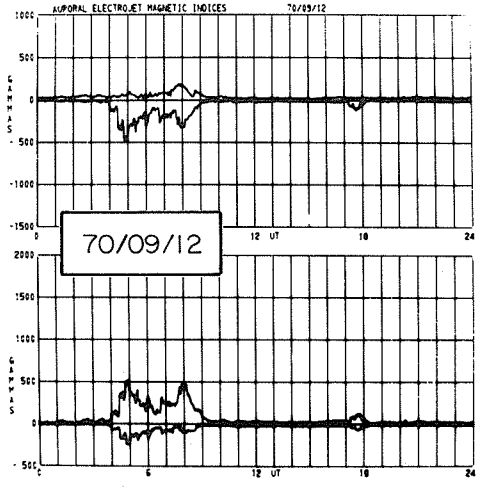
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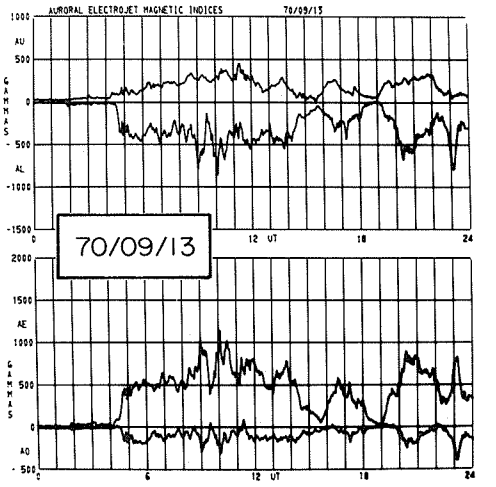
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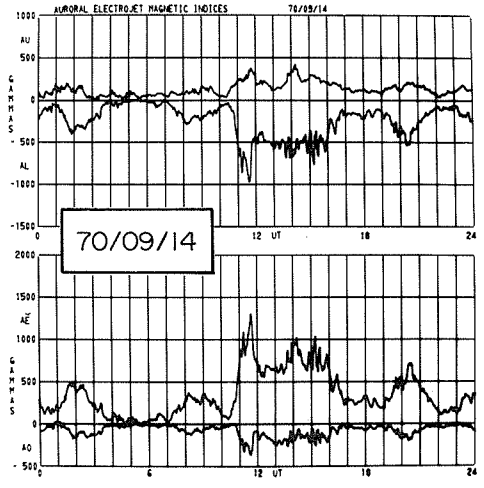
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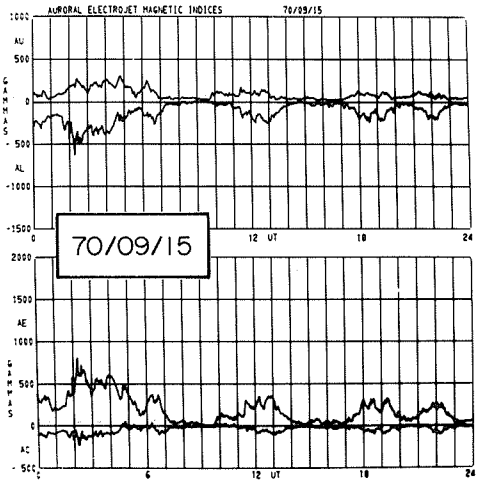
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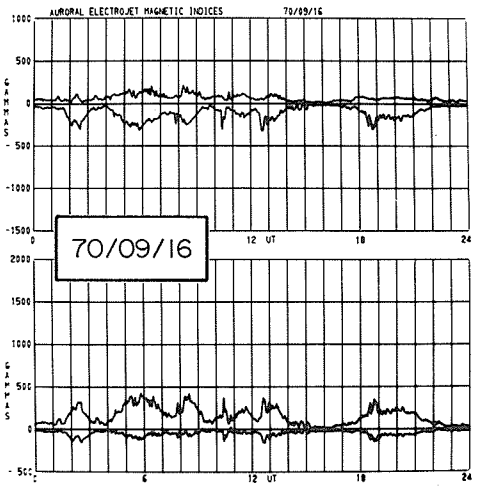
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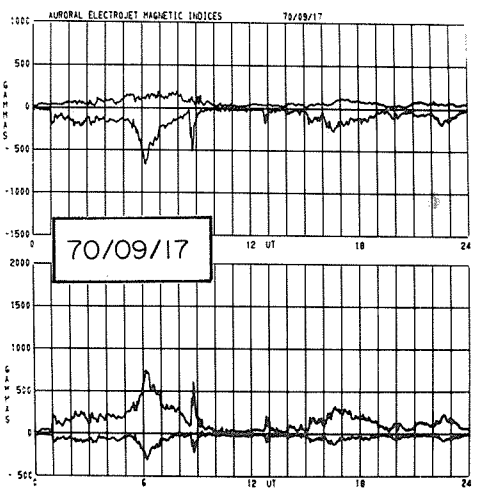
70/09/16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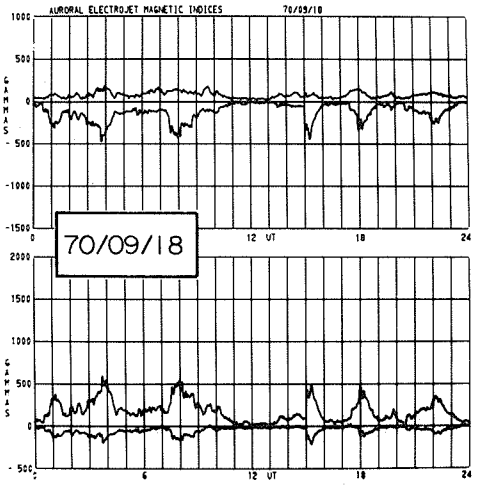
70/09/17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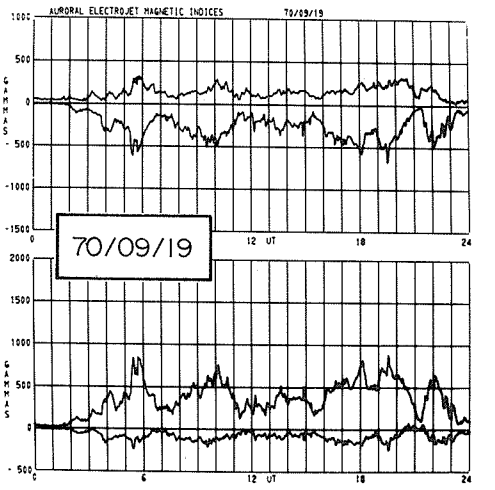
70/09/18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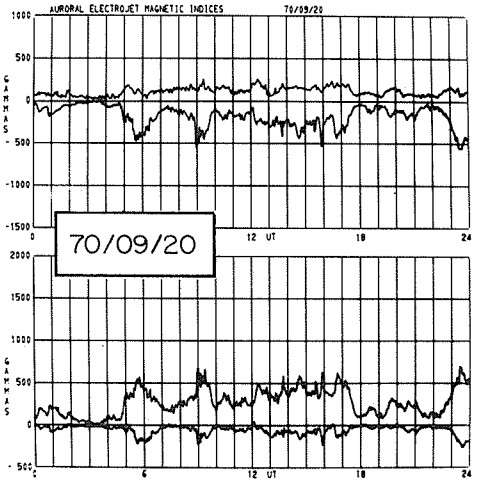
24
6
70/09/19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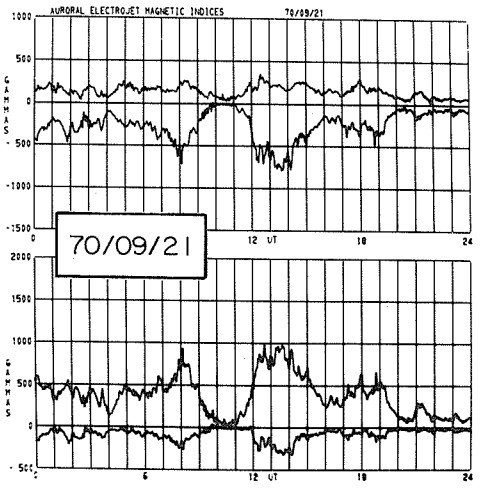
70/09/20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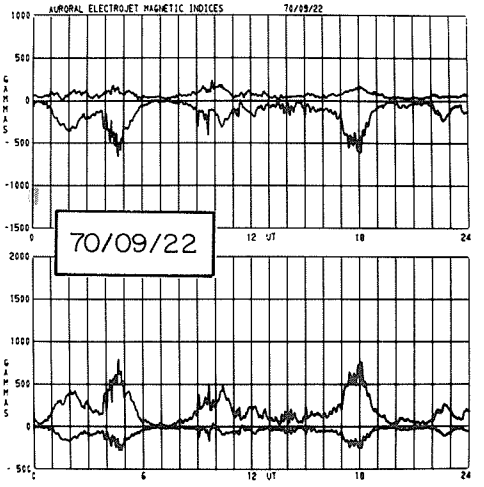
70/09/21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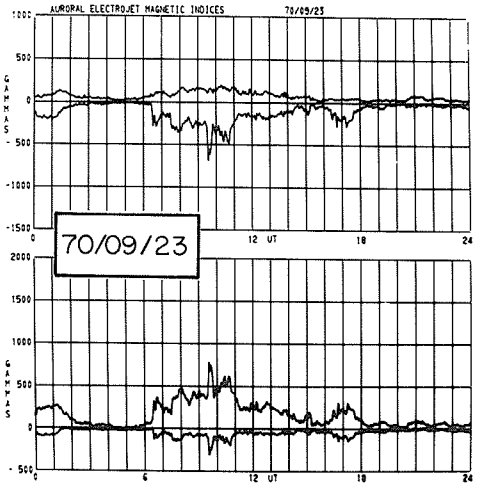
70/09/22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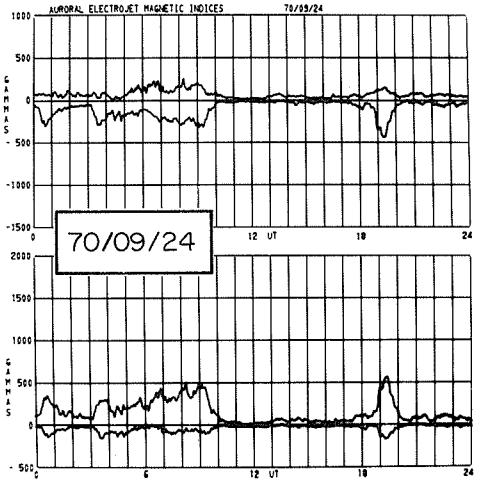
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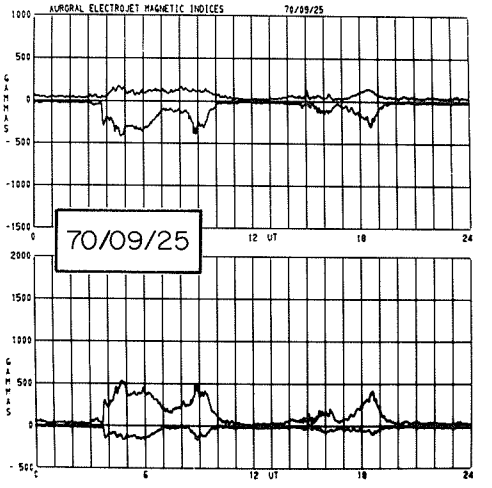
70/09/24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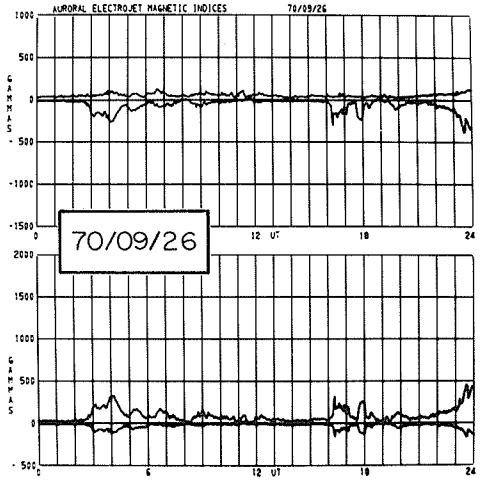
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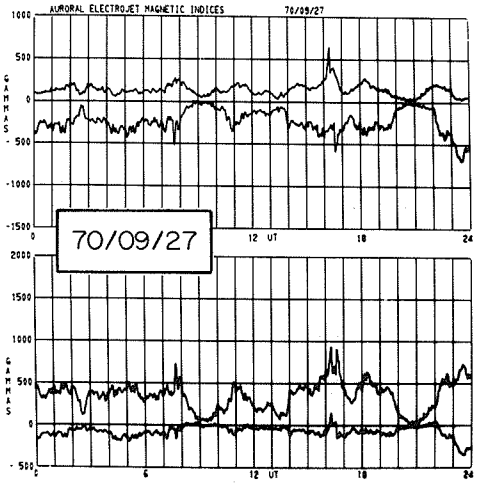
70/09/26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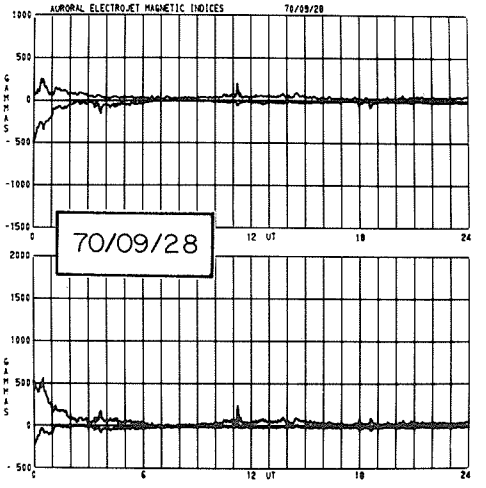
70/09/27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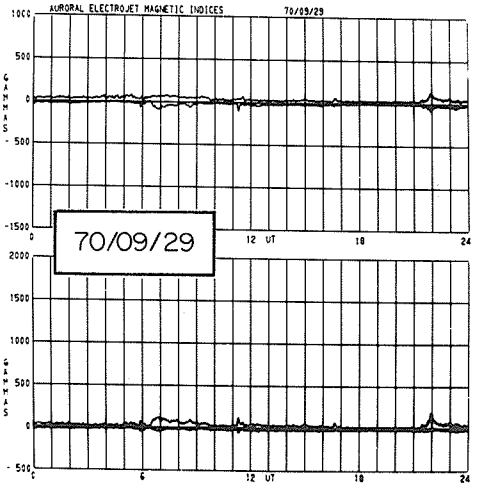
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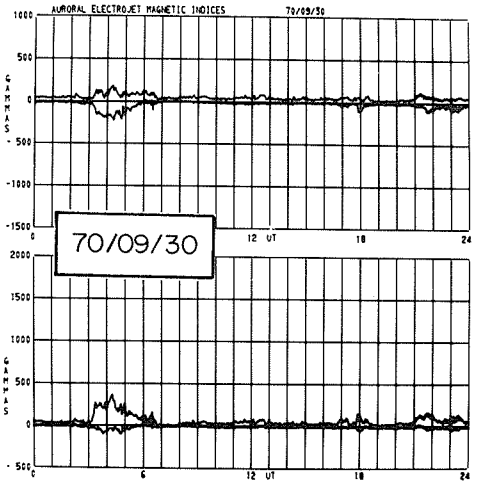
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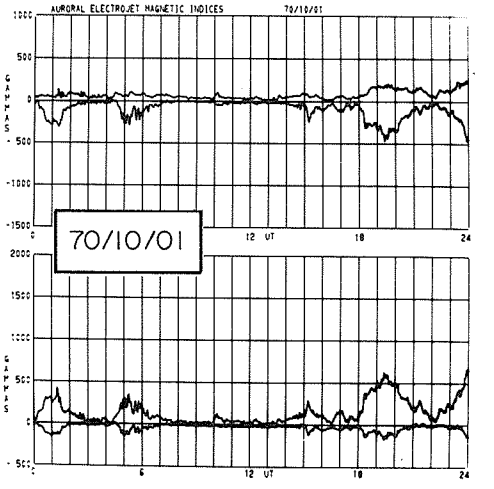
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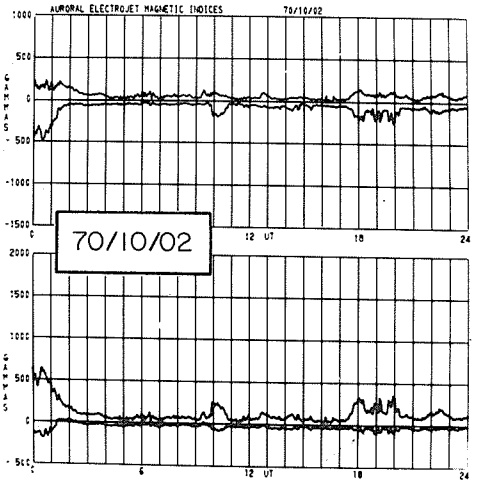
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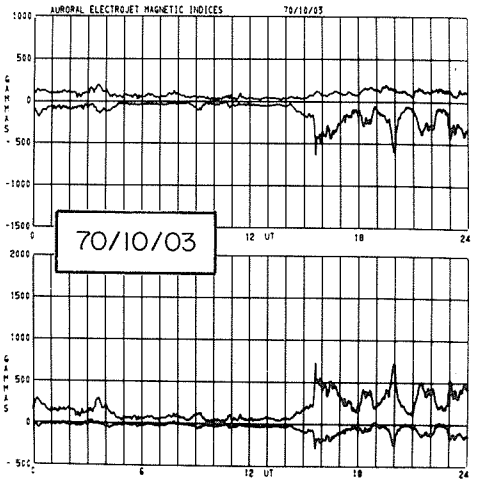
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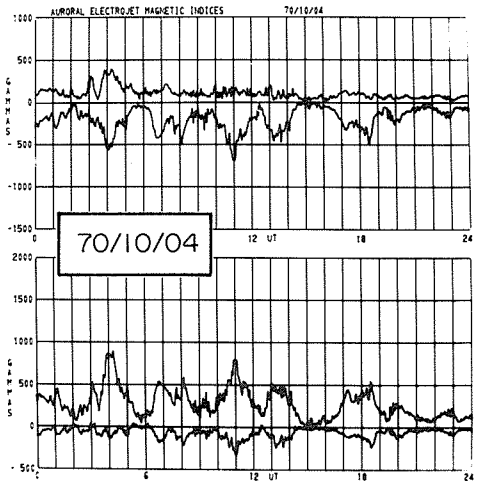
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GAMMAS
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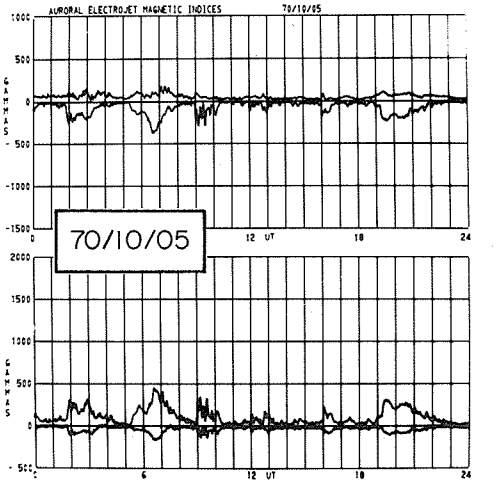
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GAMMAS
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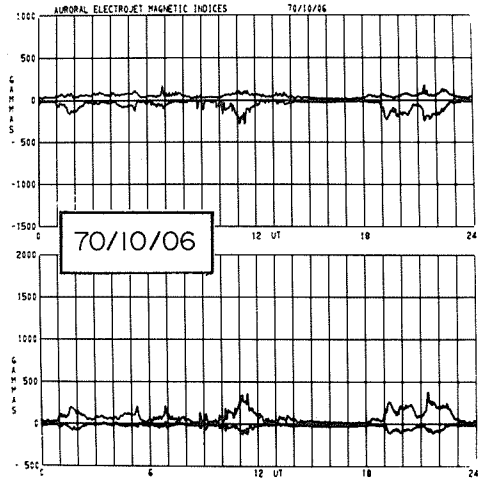
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GAMMAS
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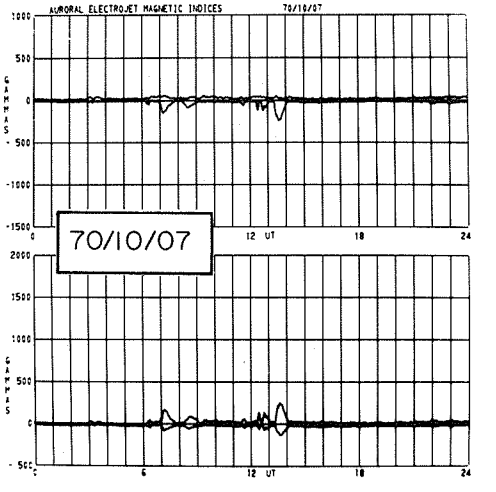
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GAMMAS
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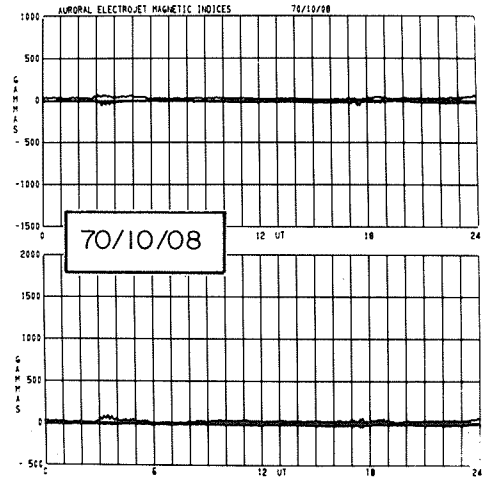
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GAMMAS
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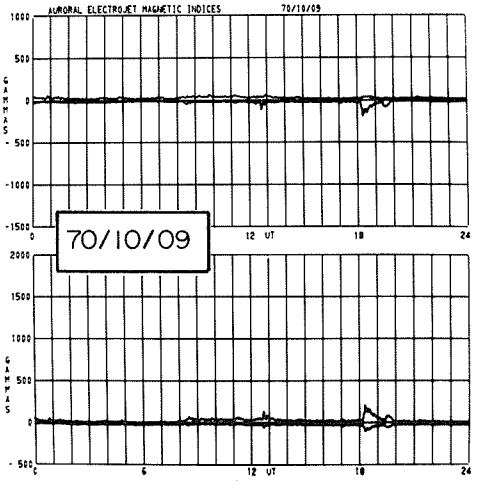
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GAMMAS
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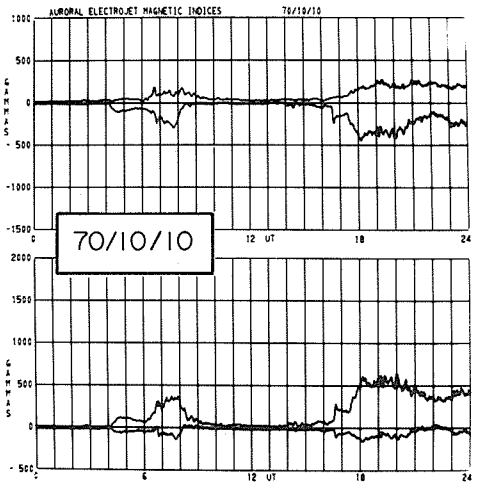
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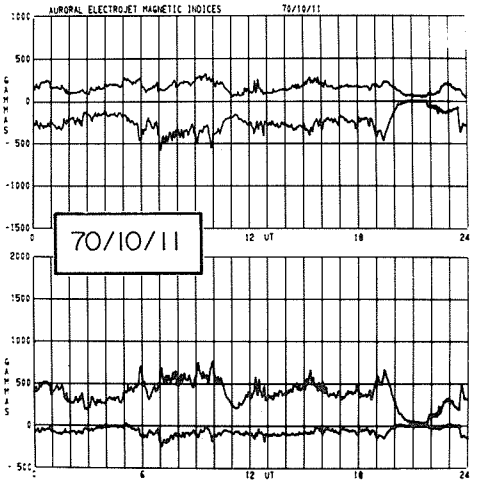
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GAMMAS
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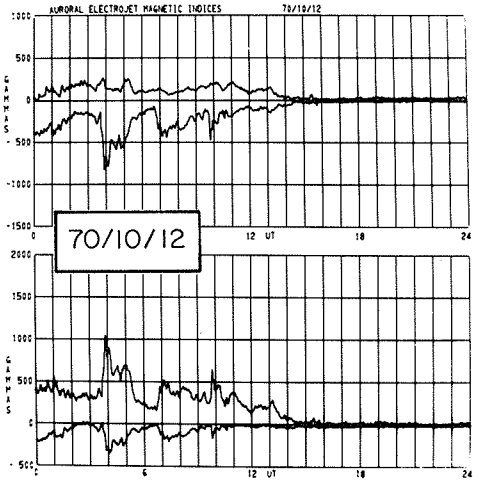
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GAMMAS
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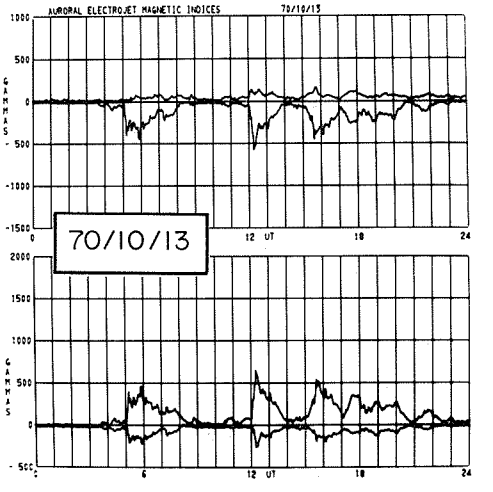
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GAMMAS
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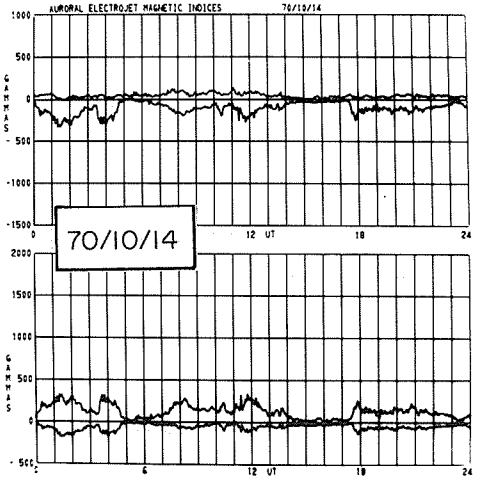
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GAMMAS
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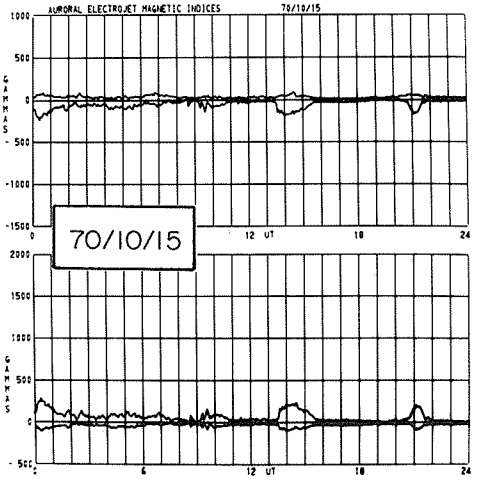
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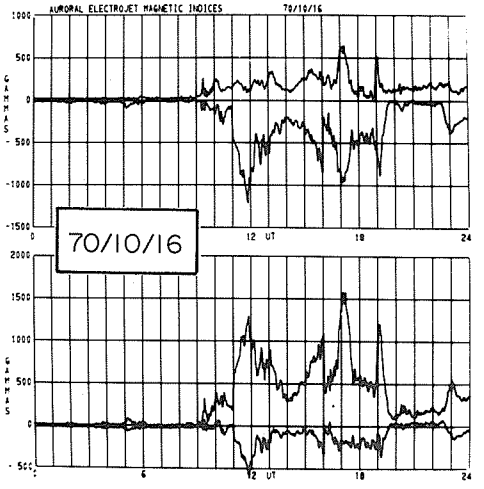
GAMMAS
12 UT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GAMMAS
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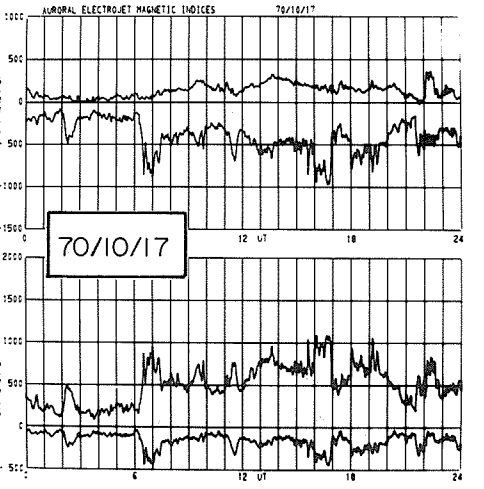
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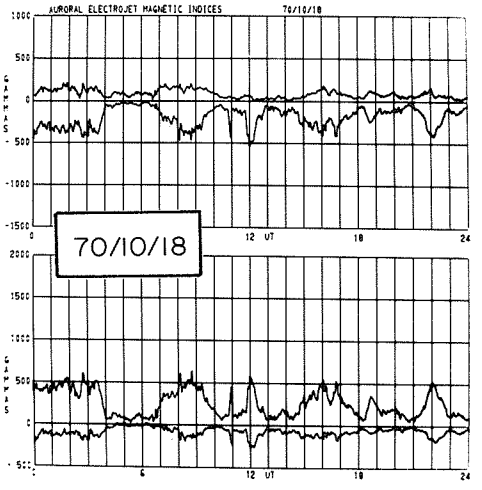
GAMMAS
12 UT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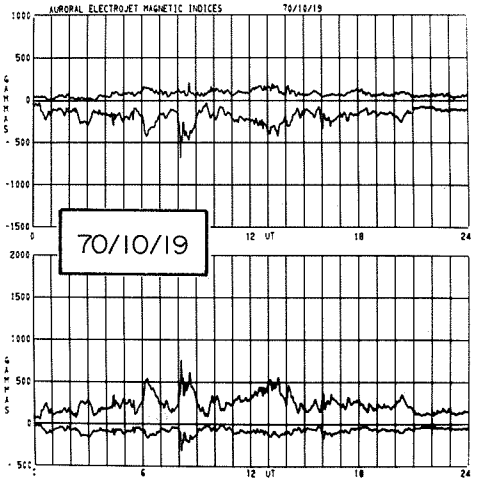
GAMMAS
12 UT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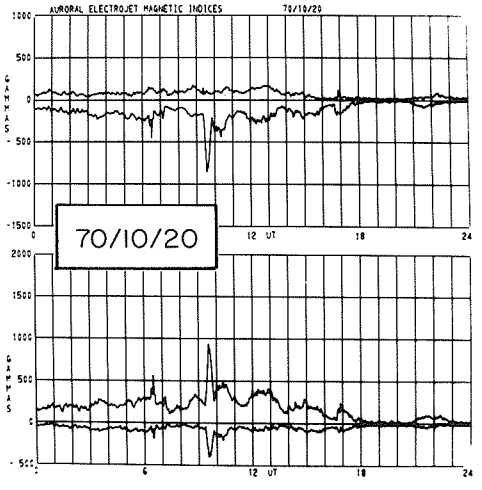
70/10/19
GAMMAS
12 UT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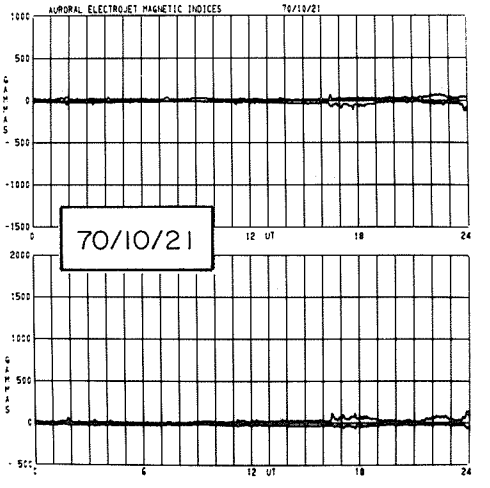
70/10/20
GAMMAS
12 UT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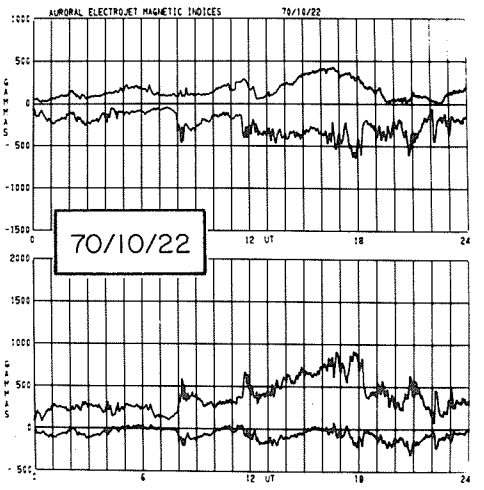
70/10/21
GAMMAS
12 UT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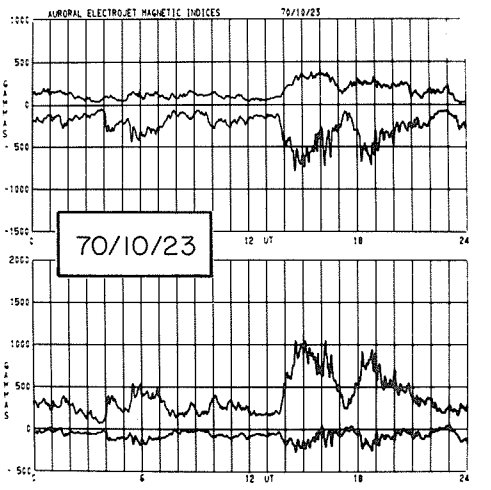
12 UT
18
24
6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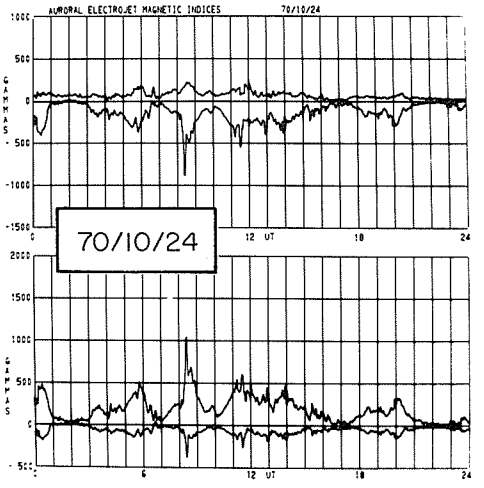
12 UT
18
24
6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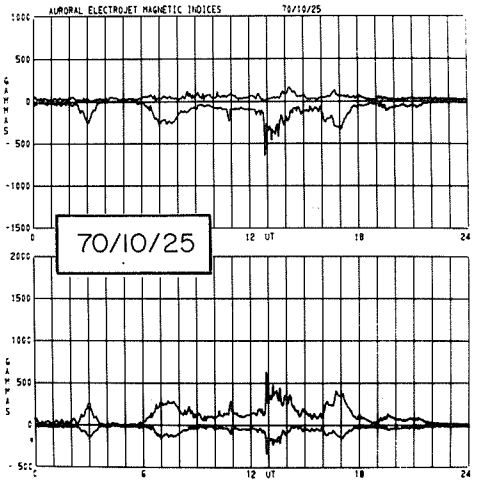
18
24
6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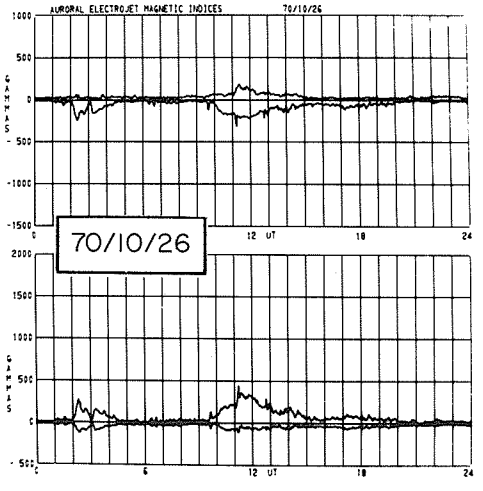
12 UT
18
24
6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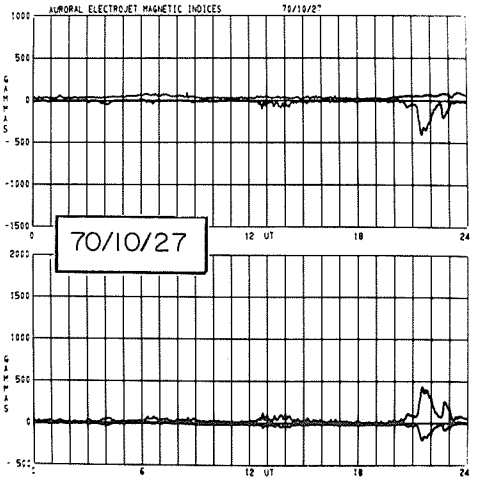
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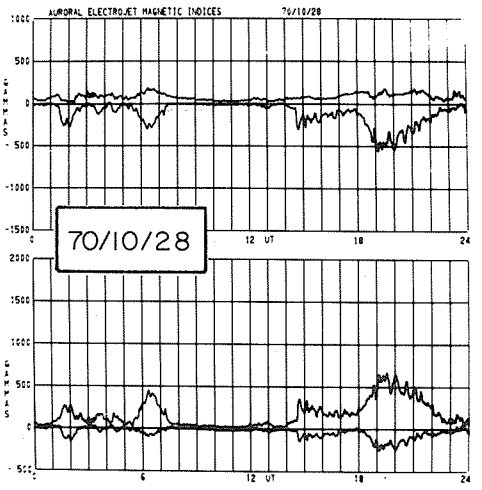
6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12 UT
18
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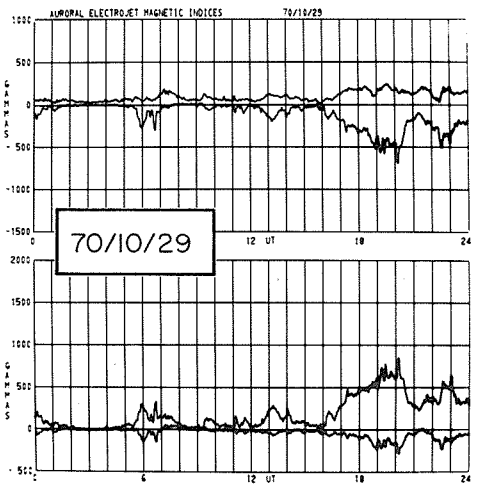
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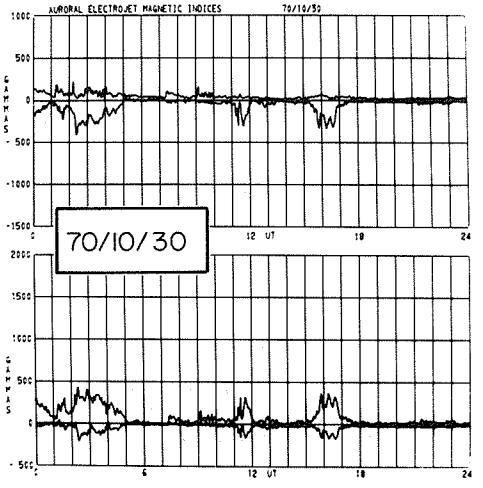
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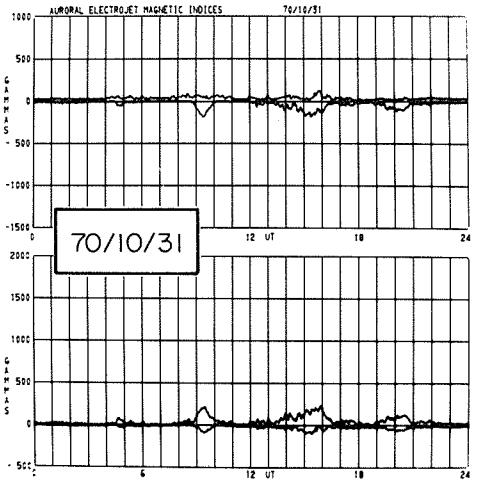
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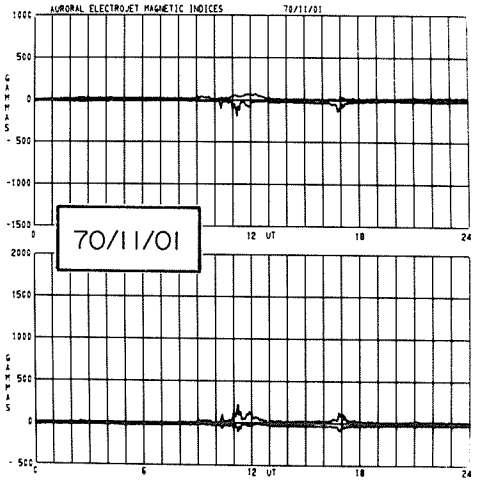
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70/11/01
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12 UT
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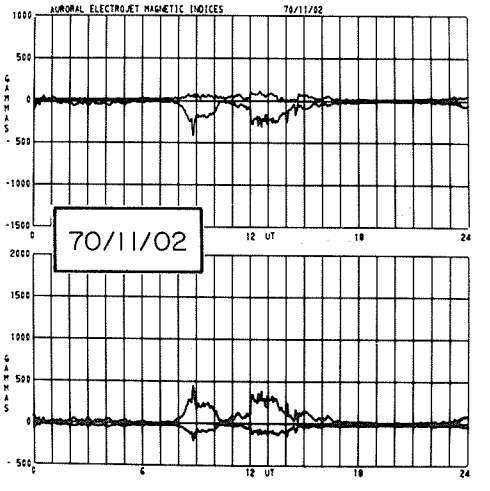
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GAMMAS
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18
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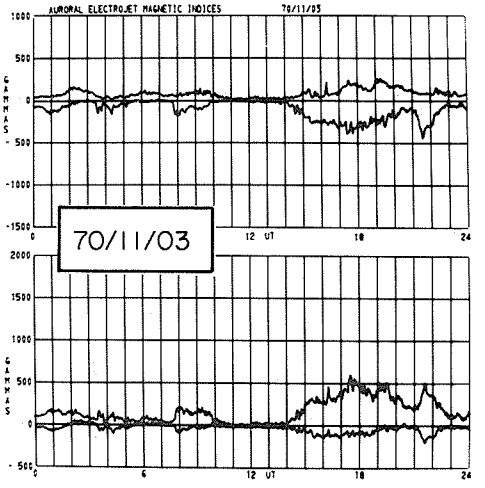
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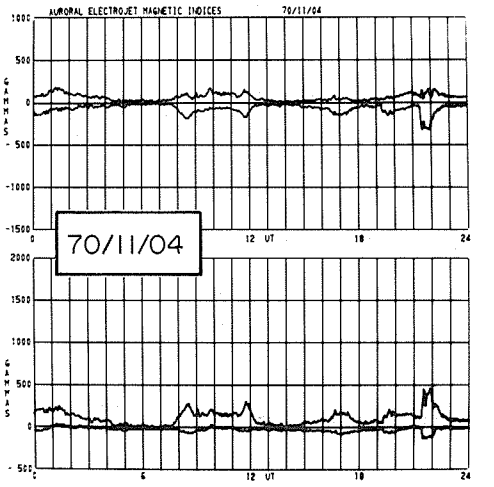
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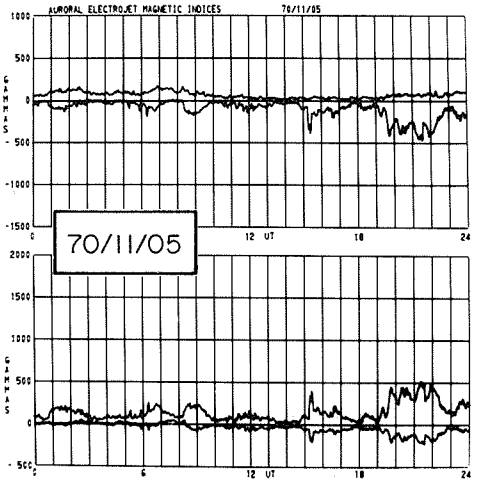
GAMMAS
12 UT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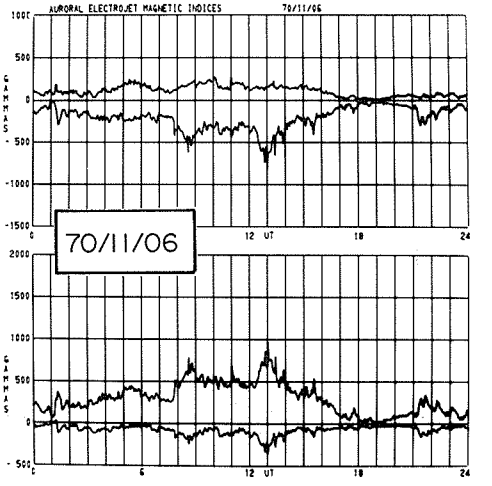
70/11/05
GAMMAS
12 UT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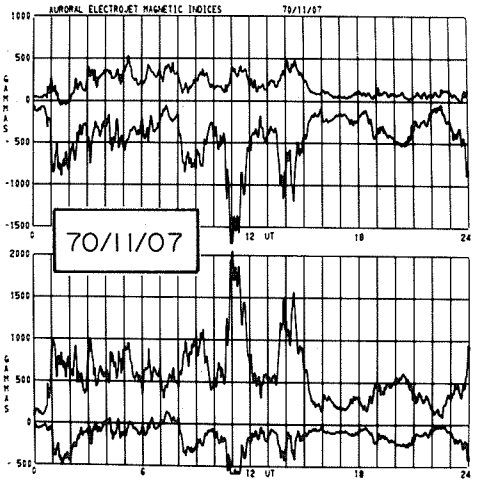
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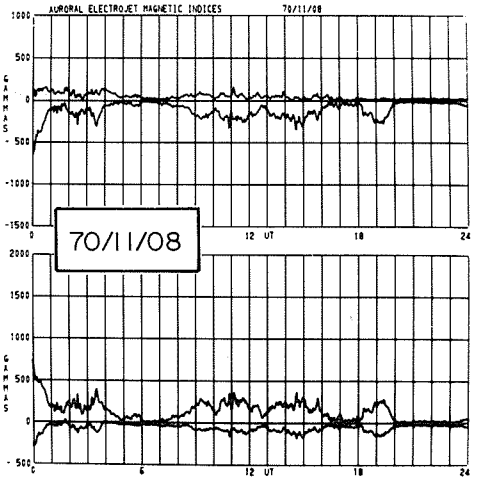
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GAMMAS
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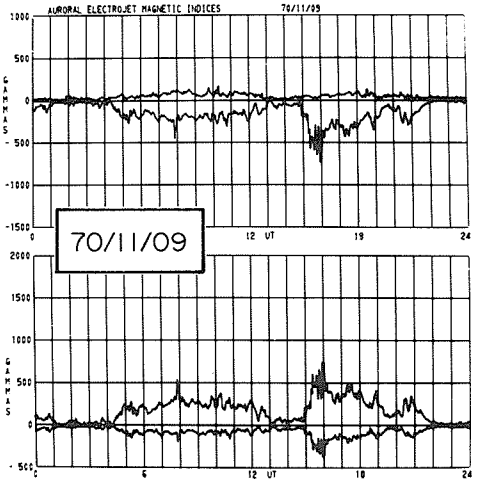
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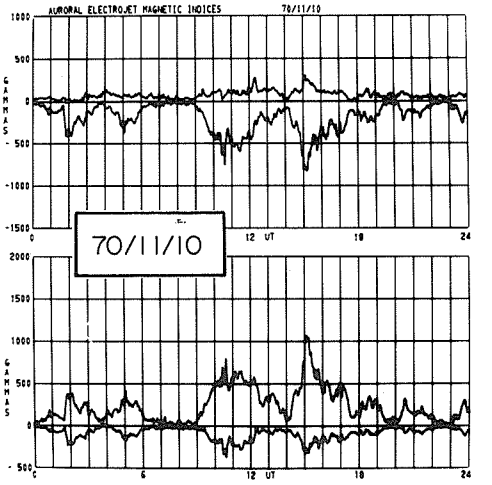
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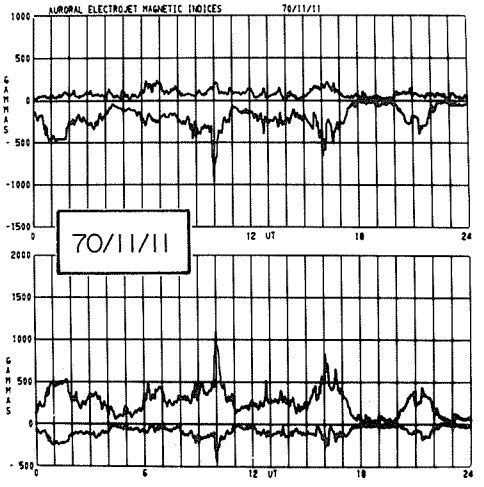
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GAMMAS
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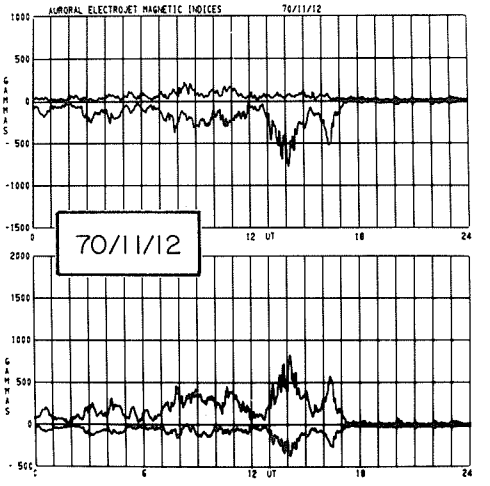
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70/11/12
GAMMAS
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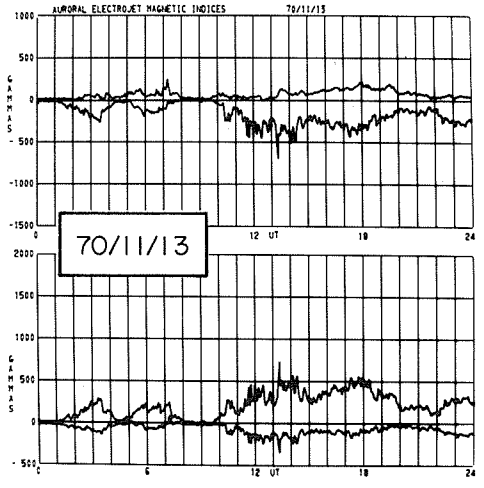
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70/11/13
GAMMAS
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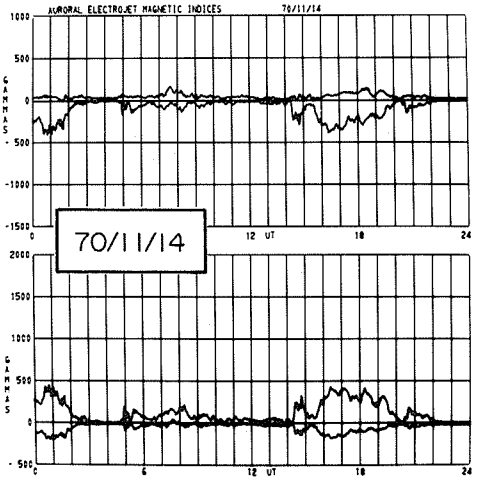
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GAMMAS
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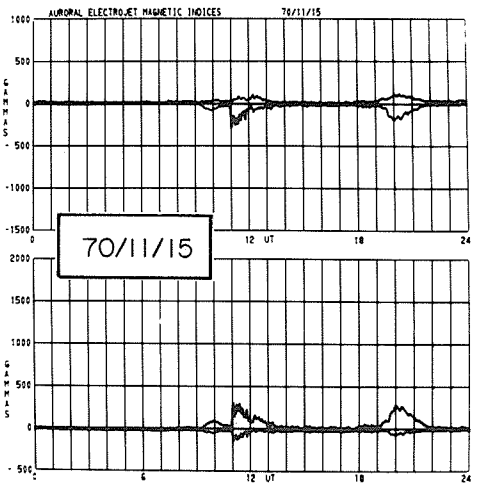
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GAMMAS
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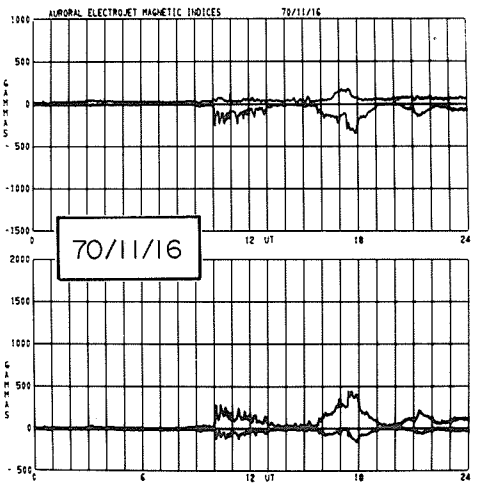
70/11/15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GAMMAS
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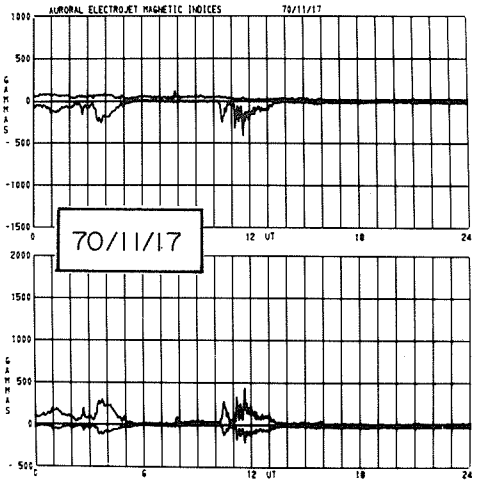
70/11/16


AURORAL ELECTROJET MAGNETIC INDICES
70/11/17
GAMMAS
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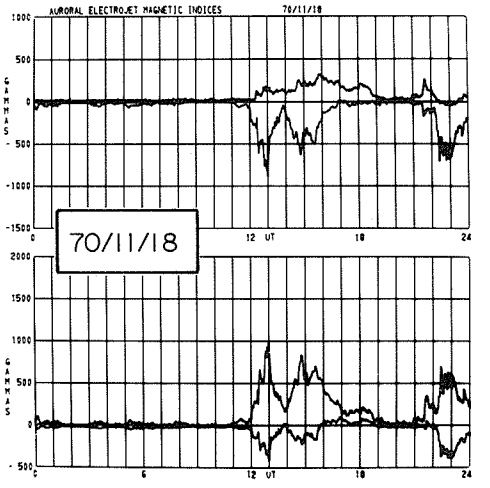
70/11/17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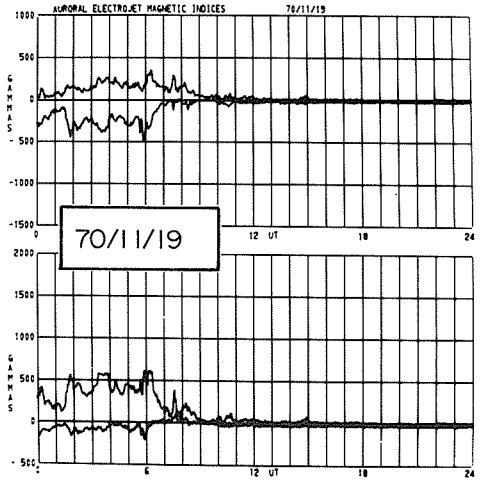
70/11/18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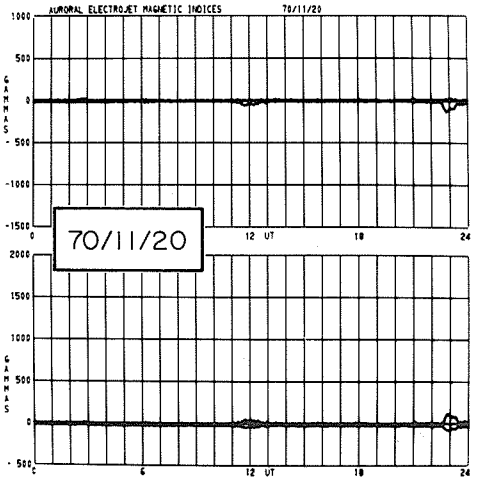
70/11/19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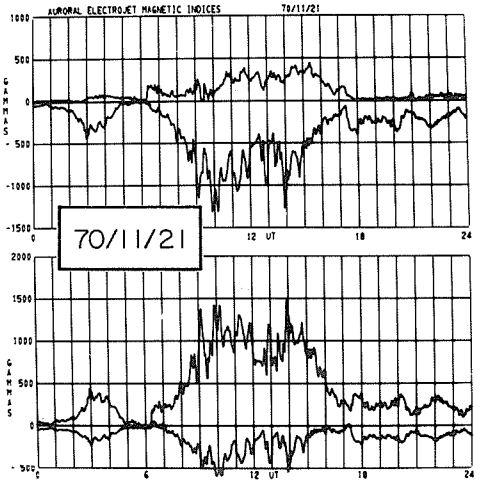
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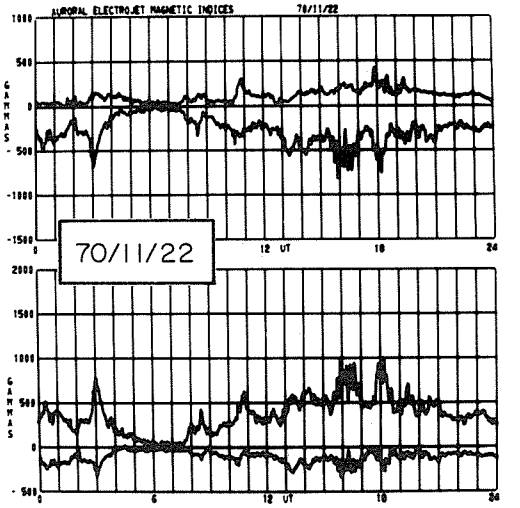
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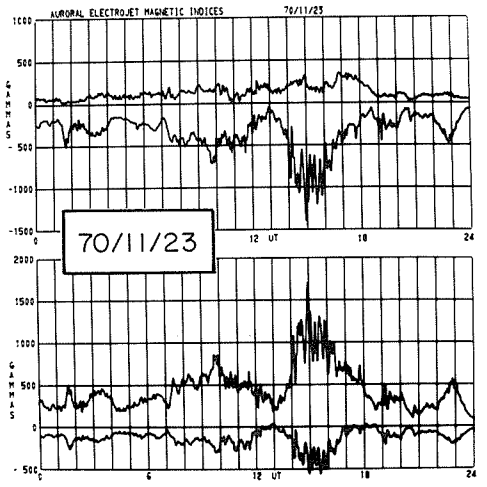
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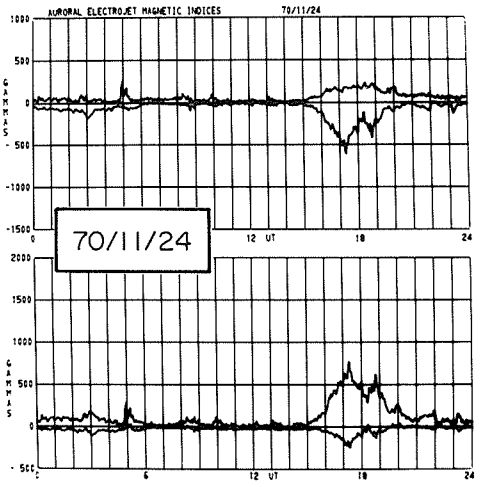
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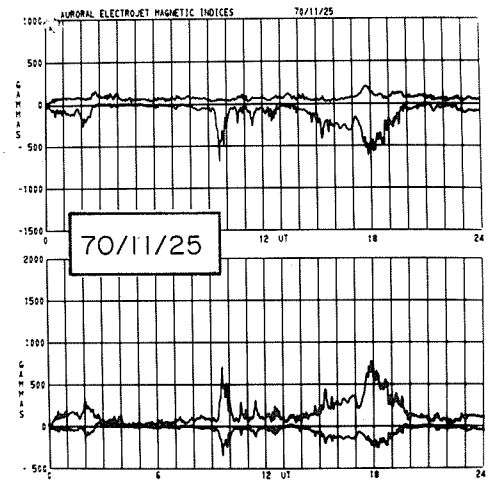
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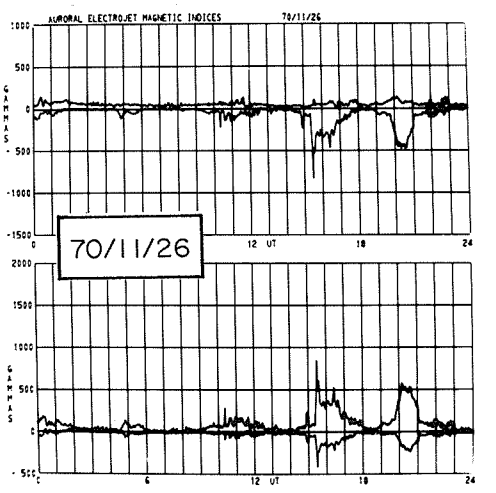
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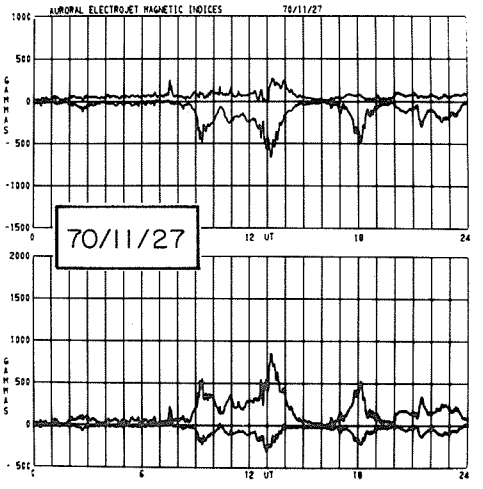
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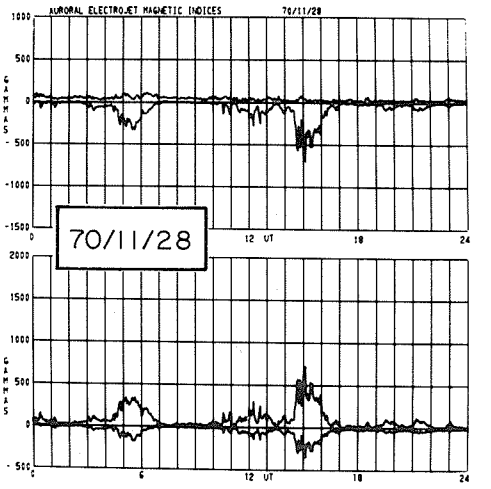
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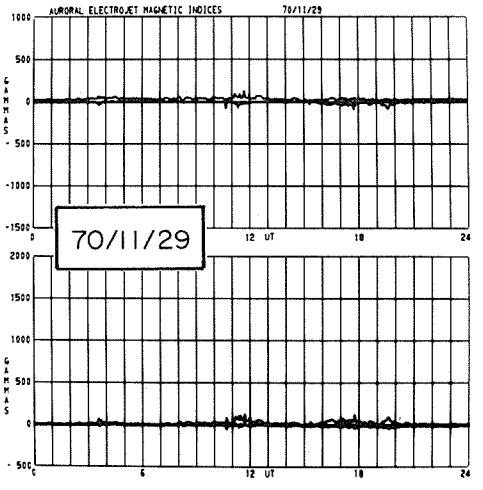
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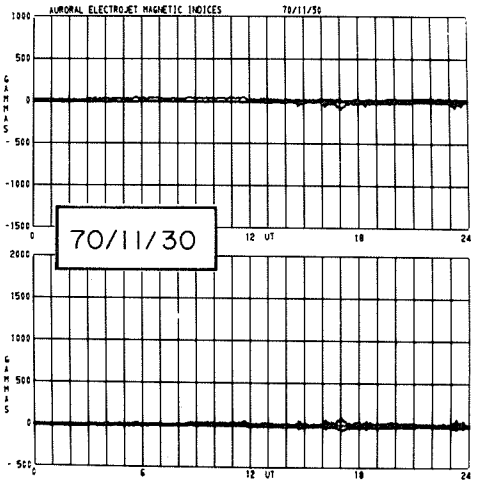
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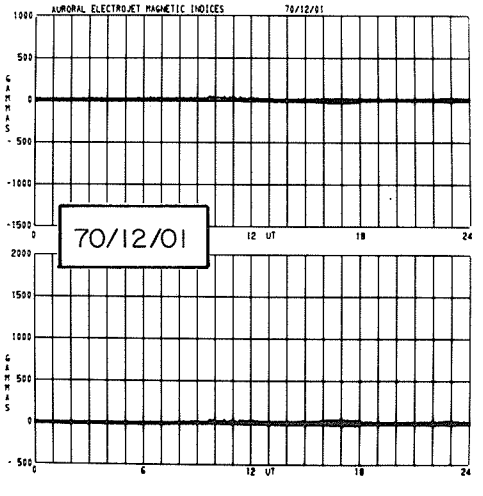
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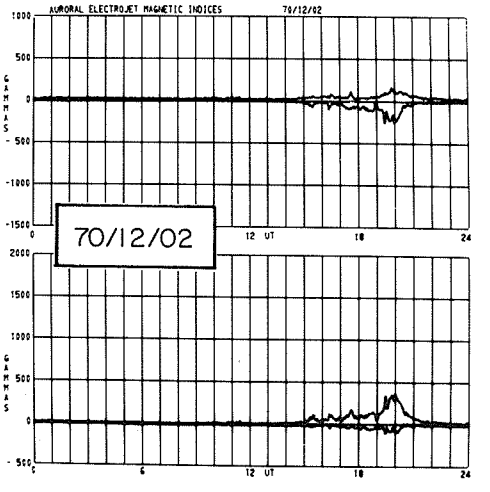
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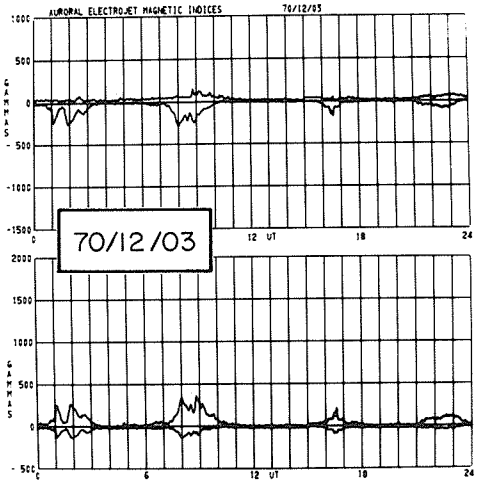
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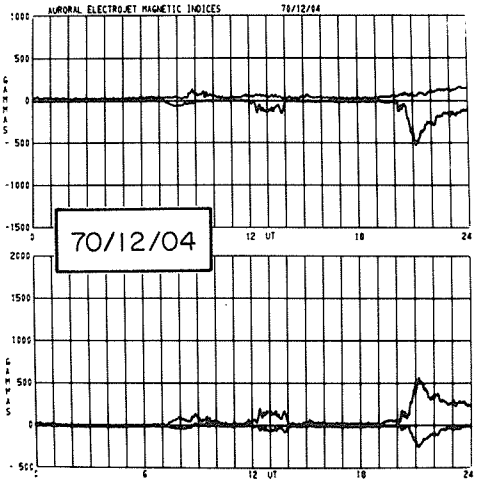
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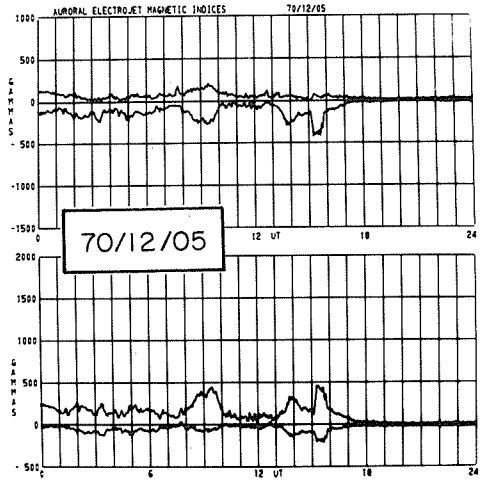
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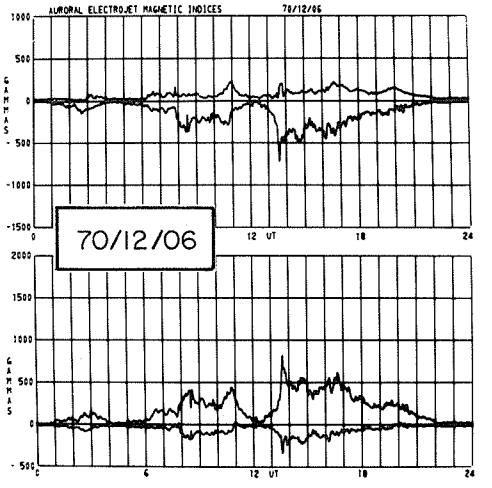
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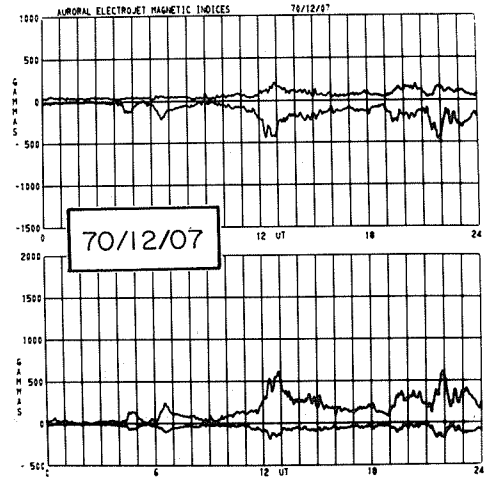
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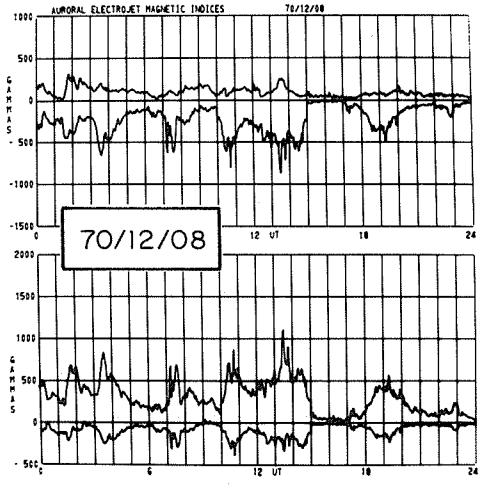
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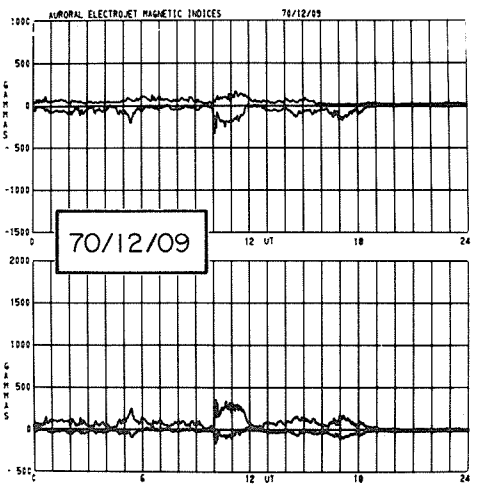
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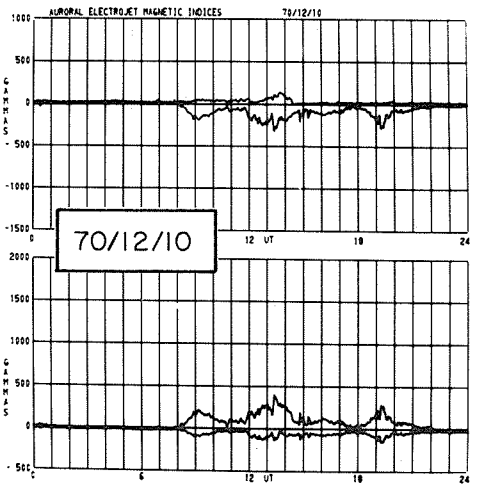
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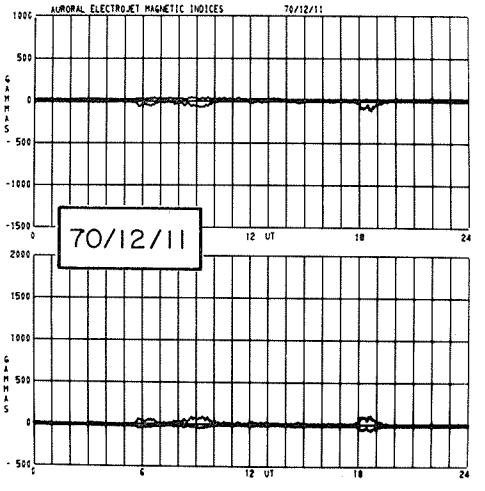
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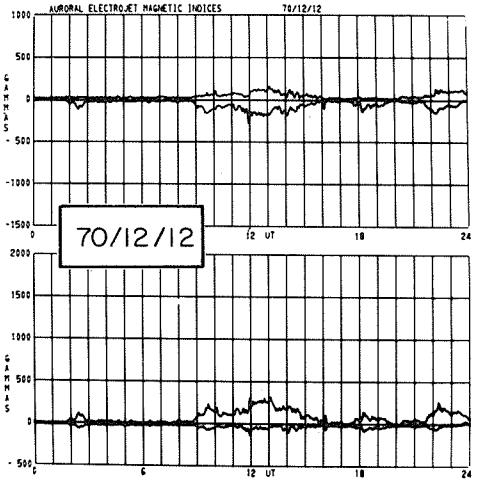
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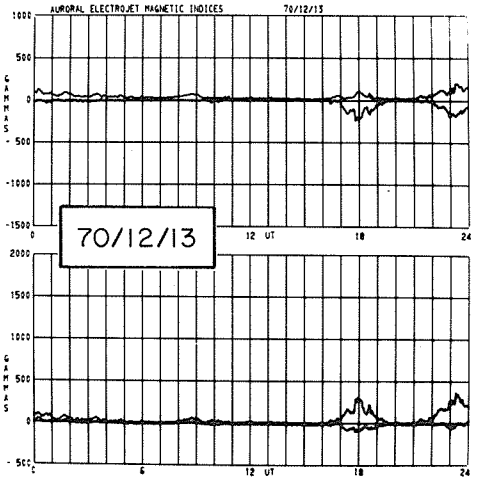
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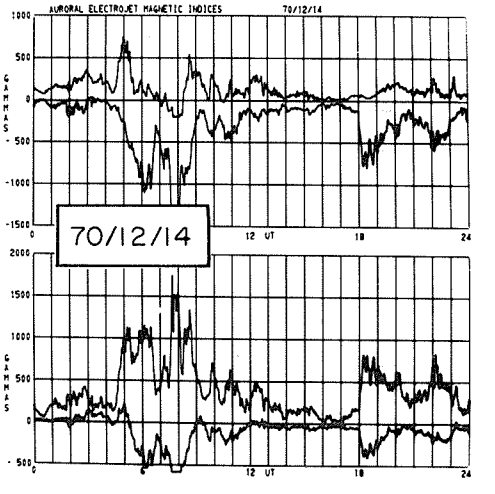
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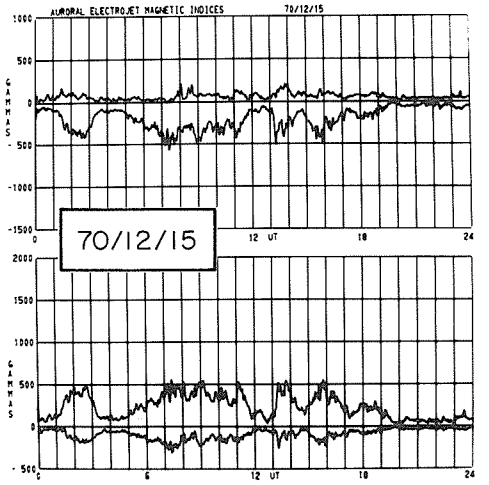
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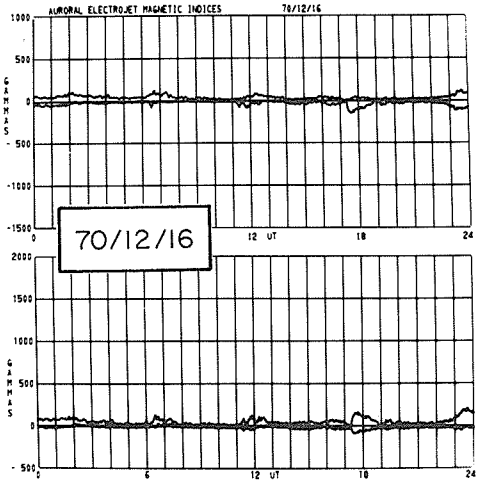
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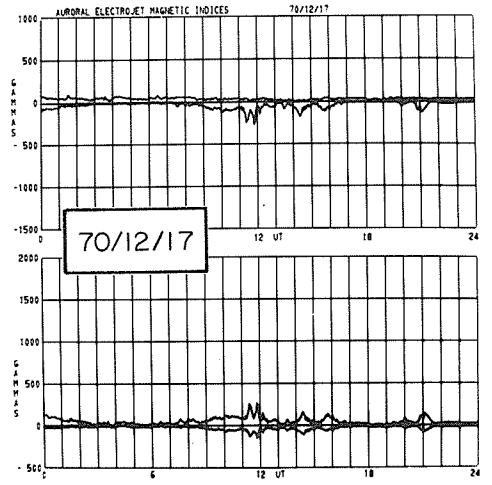
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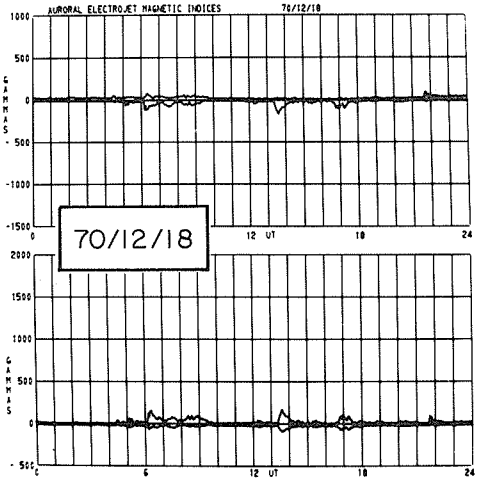
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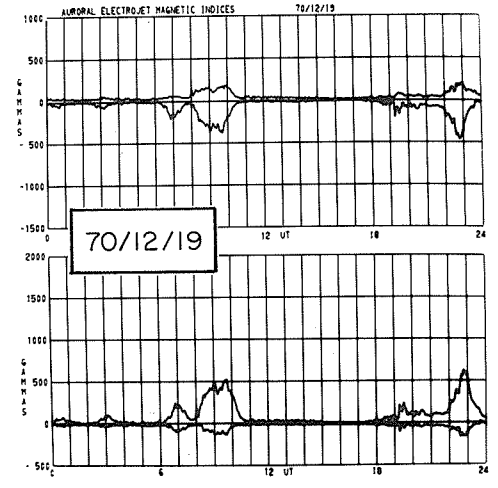
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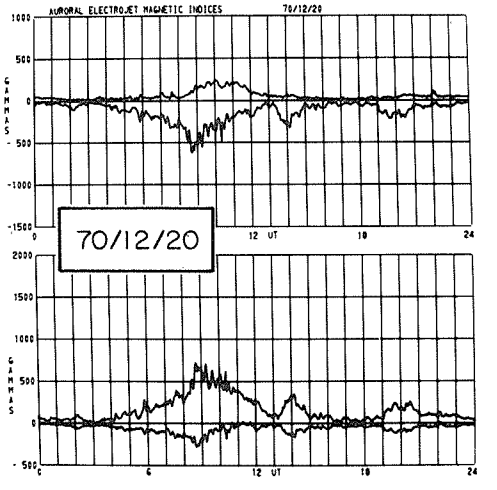
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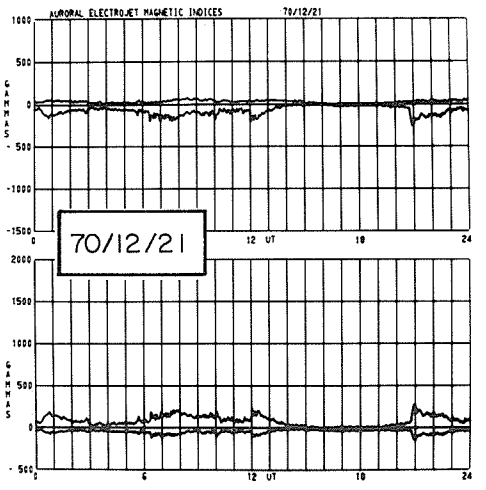
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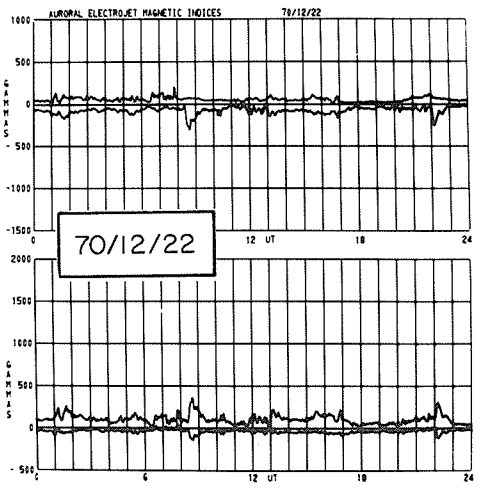
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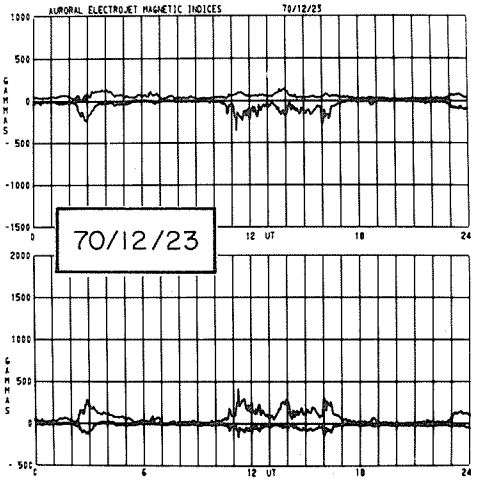
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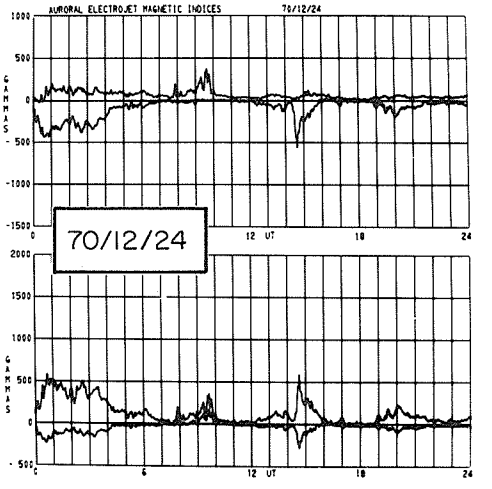
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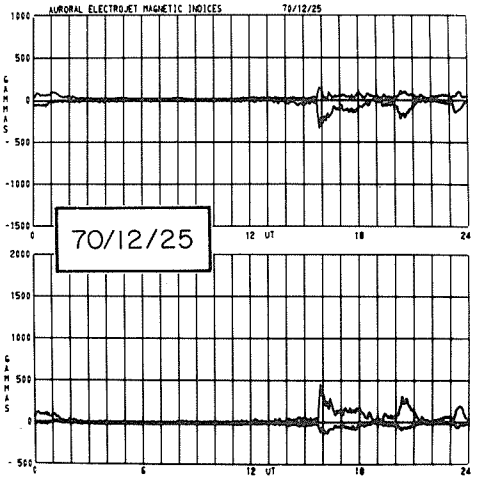
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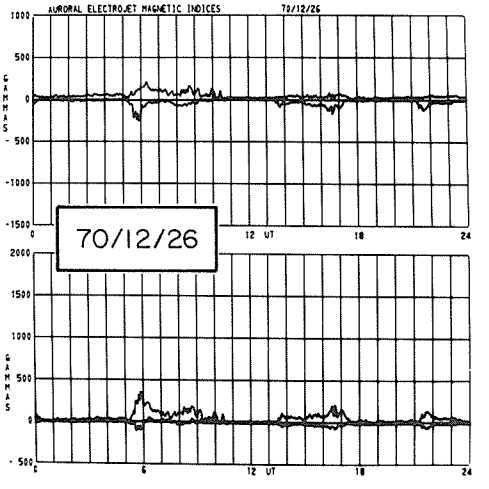
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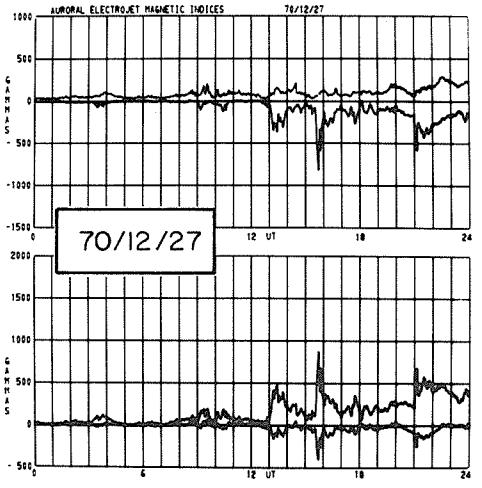
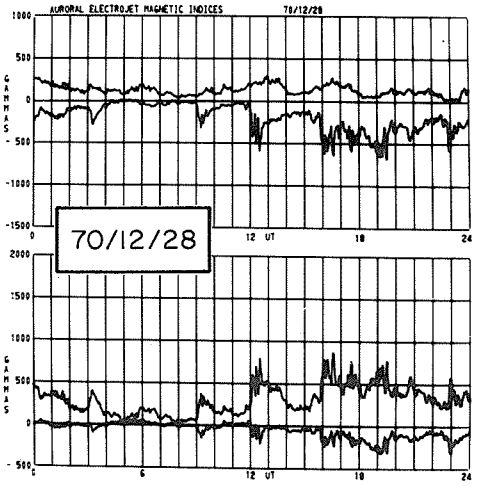
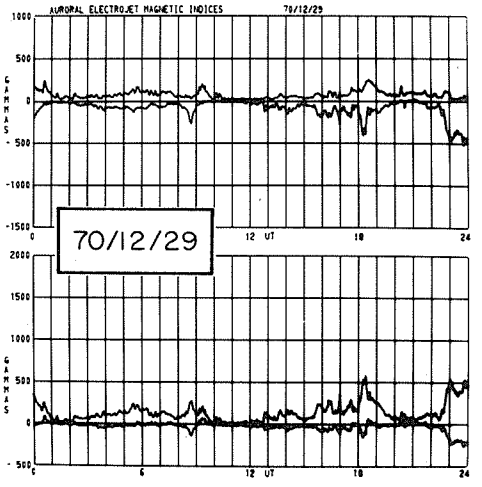
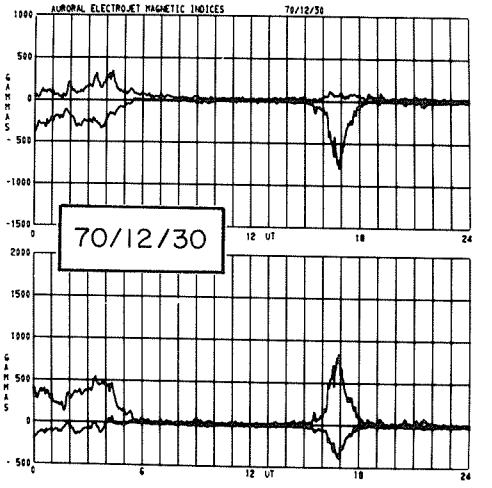
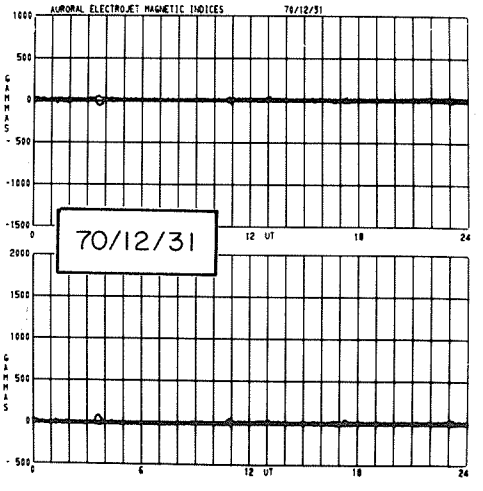
70/12/26











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