REPORT UAG - 29

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for
Solar-Terrestrial Physics

AURORAL ELECTROJET MAGNETIC ACTIVITY INDICES AE (11) FOR 1968

OCTOBER 1973

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TABLE OF CONTENTS

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ABSTRACT

The Auroral Electrojet index (AE) is discussed and a detailed description is given of the derivation of 11-station 2.5-min AE indices for 1968. Tables are given of hourly average indices for each day of the year, of the stations making the main contribution to the hourly indices, and of the average monthly quiet-time level of horizontal field (H) at each magnetic observatory. Graphs of the index variations 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 below and within the auroral oval. Ideally it is the total range of deviation at an instant of time 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 usefully employed both qualitatively and quantitatively as a correlative index in studies of substorm morphology, behavior of communication satellites of radio propagation in high and middle latitudes, and of the coupling between the interplanetary magnetic field and the earth's magnetosphere. For these various uses AE possesses advantages over other geomagnetic indices or at least shares their advantageous properties, 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 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.

These indices are derived in response to indications of need as voiced by the scientific user community in journal articles, at meetings, in resolutions of national and international groups, and in personal communications. This report is one means of communicating a summary of the derived indices for a year and is the second such compilation published by the World Data Center A for Solar-Terrestrial Physics (Allen, 1972). Listings or digital magnetic tapes of detailed 2.5-min indices and microfilm of the daily graphs of variations can be obtained from WDC-A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado 80302, U.S.A.

1.1 Prior Derivations of AE

Auroral electrojet indices (AU, AL, AE, and AO) have been derived for years before 1968 and these are available in some of the formats described above. For years 1957 through 1964 they were calculated and published on a systematic basis by the Geophysical Institute of the University of Alaska (T. N. Davis et al., 1967, 1968). These values are hourly indices only, since they were based upon the standard tabulations of hourly-average scalings of H taken from magnetograms. The group of observatories used were in both the northern and southern hemispheres and changed from time to time.

For the period from September 1964 through December 1968, the indices were derived at the NASA Goddard Spaceflight Center from 2.5-min digital H values (King 1971). The stations whose magnetograms were used for these derivations changed as new observatories became operational and were incorporated into the network, or as blocks of stations were deleted because their magnetograms were not available in time. For the last third of 1964 and the first half of 1965 magnetograms from eleven northern hemisphere stations were used to derive AE; however indices for following years were derived from fewer stations until for the last two months of 1968, records from only three stations were used. These indices were recognized as "preliminary" at best and it was expected that the missing data would be added to the derivations as they became available. The present data report is the first step in this direction.

1.2 Definition and Computation of AE

AE was originally derived from digitized 2.5-min horizontal magnetic field records from a group of seven auroral zone magnetic observatories (Davis and Sugiura, 1966). A quiet-time H level was adopted for each contributing observatory on an event-by-event basis and this value was subtracted from the instantaneous H values. The result was a time series of deviations from undisturbed H levels, $\pm \Delta H(t)$. Superposition of the seven time series upon a common zero level produced a set of interwoven lines bounded by an upper and lower envelope formed by connecting extreme ΔH values. The amplitudes of the upper and lower envelopes were designated AU and AL, respectively, and at any instant the range between them, AU minus AL, was defined as AE for that time. In general, AU is a function of the current flowing in the eastward auroral electrojet while AL is similarly related to the westward auroral electrojet current. A secondary index, AO, is defined as the mean of AU and AL and reflects the high-latitude effects of the ring current and of zonal currents whether flowing in the ionosphere or magnetosphere. All indices, AU, AL, AE, and AO, are given in units of gammas (1 gamma = 1 nanotesla).

1.3 Observatory Selection for 1968 AE (11)

Records from eleven northern hemisphere observatories were used in the derivation of AE indices for 1968, AE(11) in our nomenclature. These are the same stations used for the 1970 derivation and they are given in Table 1 along with their abbreviations, geographic coordinates, geomagnetic coordinates, and the time of Local Geomagnetic Midnight (LGM) for each site. Also, their locations are shown in Figure 1 on a map of the northern hemisphere centered on the geomagnetic pole (extended geocentric dipole axis); the geomagnetic coordinates of the grid are indicated.

TABLE 1

Observatories Used for the Derivation of 1968 AE(11)

	Observatory	Abbreviation	Geographic Coord. N. Lat.°	Geographic Coord. E. Long.°	Geomagnetic Coord. N. Lat.°	Geomagnetic Coord. E. Long.°	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 Wellen #	UE	66.17	190.17	61.79	237.10	1250
8.	Tixie 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.	Dixon 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 Uelen, Tiksi Bay, and Dikson Island, respectively.

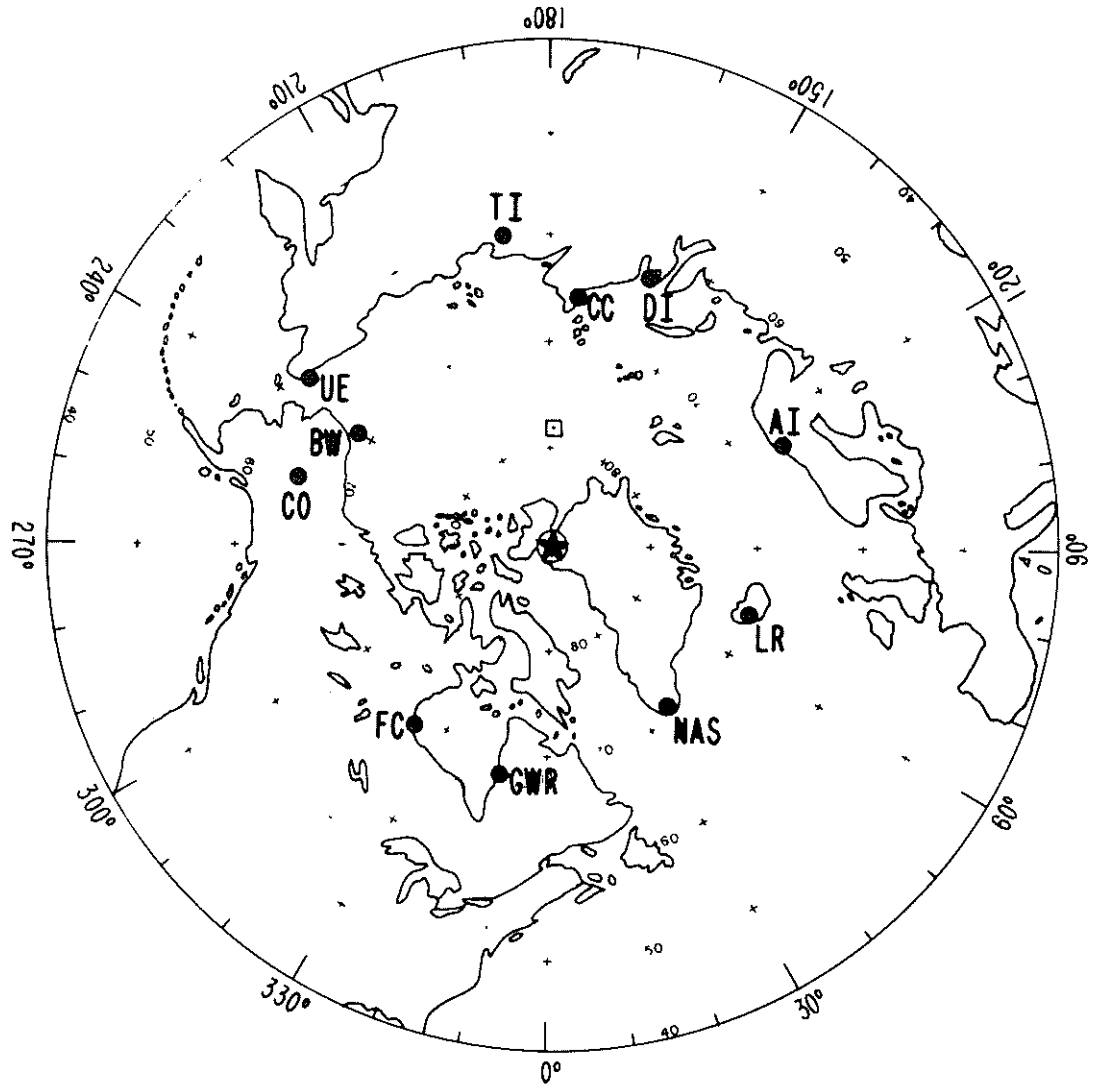

Figure 1 Observatories whose records were used in the derivation of 1968 AE(11) are shown as filled circles. Their abbreviations correspond to the list given in Table 1. The map is a polar equal-area projection centered on the north geomagnetic pole (extended geocentric dipole axis). The north geographic pole is indicated by the square.

Only geomagnetic coordinates are shown. Geomagnetic latitude is indicated by the concentric rings of plus signs (+) every 10°. Geomagnetic longitude is given by the outer ring of values every 30° with hatch-marks every 10°.

The network of stations selected for 1968 and 1970 AE derivations represents an attempt to achieve a relatively uniform longitude distribution of stations and a range of latitude coverage providing reasonable assurance of detection of even small events localized in spatial extent and of short duration and of larger events when the auroral oval is greatly expanded. It is, of course, a compromise between the desire to use as much data as possible and the high cost of digitizing magnetograms. We have tried to restrict the derivations to using data from established observatories so that indices for different years will be comparable, and timely availability of station records was a factor when there were several nearby observatories in one area.

Because we have encountered periods of one or more months during which one or two observatories were not operating and because the number of observatories used for future derivations may change, we have chosen to designate the number of contributing observatories parenthetically following the index letters, e.g. AE(11). The daily graphs of variations in 2.5-min AU, AL, AE, and AO indices which are a part of this report (Section III) show in the upper right corner the number of stations contributing to the derivations during that month, such as AE(10) or AE(11). Checking the average monthly quiet-time H values given in Section II will confirm which stations were active and which were not included during each month of 1968. Shorter intervals of lost records from critically located observatories are not indicated.

Analysis of the 1970 AE(11) index data indicates that an optimum station distribution would include stations lying equatorward of the instantaneous auroral oval during the evening hours which most often supply AU (about 1800 LGT) and others lying under the auroral oval during the early morning hours following local geomagnetic midnight when most AL values are supplied (about 0300 LGT).

The apparent longitude gaps between Fort Churchill (FC) and Barrow (BW) and between Barrow (BW) and Tixie Bay (TI) may subsequently be filled by the creation of new observatories. At that time the AE network will be supplemented by inclusion of data from these locations, resulting in AE(12) or AE(13). It should be noted that AE(12) or AE(13) for any instant can only be greater, not smaller than, AE(11).

1.4 Computation of AE Indices

The same technique of computation used for 1970 AE(11) and described in UAG-22 (Allen, 1972) has been followed with the 1968 derivation. Briefly, a constant quiet-time reference level for each month is computed for each station. The value used is the mean of all 2.5-min H values for the 5 Quiet Days of that station-month. No attempt is made to remove high-latitude Sq effects in deriving the reference level although low amplitude AU and AL indices have been noted to peak on quiet days at UT times when high-latitude Sq contributions are probably present. Some month-end discontinuities may arise due to steps in the monthly reference level at different stations but these are considered negligible relative to the amplitude of effects generally studied with AE indices.

Monthly quiet-time station reference levels of H are subtracted from the 2.5-min H values of each station for that month and the resulting eleven H-deviation time series are compared. The extreme deviations are identified at each 2.5-min interval and designated AU (most positive) and AL (most negative) for that time. AE and AO are computed according to their definitions. These are the basic AE data. In addition, hourly averages of all indices are computed. The 2.5-min indices, as well as the H-deviations, are recorded on digital magnetic tape to be available upon request.

Daily graphs of all four 2.5-min indices (AU, AL, AE, and AO) are produced on 35mm microfilm and are reproduced in this report (Section III). Monthly summaries (Section II) are derived which contain hourly average values of the indices, daily averages, and averages by hour of the UT-day for all days, for the 5 Quiet Days, and for the 5 Disturbed Days. Simple statistics are kept on the frequency and time of contribution of extreme values by each station and these are the basis for the listings of stations supplying AU and AL by hour for each month. Brief comments are given at the beginning of Sections II and III to describe the reproduced data and graphs.

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 indices;

(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 an increased deviation from quiet time H may be the same for either an enhanced electrojet current or for a constant current which moves closer to the fixed observatory. Given the limited number of contributing observatories and using an index based exclusively upon variations in the H component, it is impossible to distinguish between these two alternatives unless the event is of a sufficient magnitude and duration to be monitored at several observatories.

Low amplitude electrojet variations of short duration occurring over those sectors between widely separated observatories may result in imperfectly recorded AE events. During quiet times it is known that the auroral oval contracts about the geomagnetic pole and during large disturbances that it may expand equatorward, extending well below the high-latitude ring of stations selected for deriving AE. Thus, times of low AE may not guarantee a total absence of magnetic activity over the polar cap and during large magnetic storms the indices are of questionable reliability.

2.2 Data and Recording Problems

The operating problems which may arise at an auroral zone magnetic observatory are technical and logistical. Difficulties in transmitting data may affect the timeliness with which records are made available, and inability to replace injured observatory staff at one station resulted in data loss for five weeks of 1970. However, those observatory problems which most often 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 move off the edge of the photographic paper during times of moderate or large excursions.

The technique of deriving AE is such that the baseline is subtracted out and is not a source of significant error provided it remains approximately constant throughout the month or else its changes are known so that they can be included in computing the reference level and 2.5-min H values. For most months and most observatories there appears to be adequate stability so that arbitrary baselines can be assumed even if no quantitative measurements are available. However, some instances of baseline drift have been encountered in every year of data already processed. For earlier years such as 1968, final adopted baselines are often available and are used but for some observatories we have had to assume that older baselines were adequate and to hope that the presence of short-term drift during a month would be detected so that the subject magnetograms could be excluded from the derivation. Although this problem was probably greatest for years before 1968, continuing baseline stability problems have been encountered in special index derivations performed for parts of 1971 and 1972.

A few of the magnetograms processed in the derivation of 1968 AE(11) had irregularly spaced time-marks arising from erratic time drives in the magnetographs. Such records cause unique processing problems for our semi-automatic digitizing equipment. At other times the magnetograms appear to have been left on the recording drum more than one day so that a complex network of overlapping traces results. Some magnetograms are produced as records of variations recorded by electronic or atomic magnetometers. When these instruments are equipped with automatic range-changing electronics to compensate for the great range of deviations during disturbed times, it is difficult to track the number of range changes during the largest events and sometimes these systems require a manual resetting which is not always documented on the magnetograms or accompanying information sheets.

The most serious recording problem which affects the derivation of AE is any that causes loss of a recorded H-trace when no back-up record is available. Sometimes the H and other traces simply fade away even though geomagnetic conditions are quiet. However, usually loss of H is associated with higher levels of activity and such loss generally occurs at a time of maximum deviation when the disturbed record at that observatory would be the most important in the derivation of AU or AL. If the H-trace is located too near either edge of the magnetogram, even moderate magnetic activity can send it off the edge. Not all observatory variometers are equipped with secondary H-mirrors to protect against such loss of record. Most frequently the H-trace is lost during very disturbed conditions of magnetic storms when it may either be off the magnetogram or so mixed with the other traces that it cannot be distinguished for purposes of digitization. During such times unless there exists a low sensitivity storm magnetogram from the same observatory, the data are lost.

When the H trace is suddenly lost at a critical station that was supplying AU or AL, then the station supplying the next most extreme H-deviation at that instant becomes the key to the index. Sometimes after a few minutes the more extreme deviation record is again available and the critically located station again becomes the key to the affected index. This sequence of events may have the effect of placing a large, bay-like feature in the AU or AL trace. Such an artificial event changes the character of the derived AE index but may not be apparent in the AE variations graph. A perfect example is to be seen in the AU trace for 21 July 1970 beginning around 1330 UT (cf. UAG-22) and such characteristically shaped spurious events have been dubbed "missing data effects" (mde). Suspected mde's in the 1968 indices can be checked best by reference to the original magnetograms of the critical stations as listed in Section II.

Practically all problems arising from missing data could be eliminated by the following steps: suitable adjustment of the H trace on the magnetogram, use of variometers having secondary mirrors, and (most importantly) operation of low-sensitivity auxiliary storm magnetographs. Availability of these auxiliary storm magnetograms even during quiet times would also help in detecting and correcting the records during times of baseline drift on the normal magnetograph systems.

2.3 Digitizing Process Problems

Quality control of the digitizing process has proved to be more difficult than expected. A list of errata for Report UAG-22 (AE(11) for 1970) is included at the end of this report and it illustrates the fact that not all errors were caught before publication. Despite thorough quality control steps, we cannot be sure there are no accidental errors in the data in this report for 1968 or in the archived 2.5-min values.

Our first attempts to derive 1970 AE demonstrated that the plotting of continuous AU and AL traces was an excellent but expensive form of quality control over both the curve-following step and the application of calibration data. Since then, the quality control programs have been considerably supplemented and now involve extensive use of computer graphics. Immediately after completing the semi-automatic magnetogram curve-following process, synthesized magnetograms are plotted from the raw millimeter variations data recorded on digital magnetic tape. These plots are examined for unnatural appearing discontinuities typical of use of an incorrect baseline, selection of the wrong trace, etc. Reruns are performed on the curve-following equipment to correct detected errors and the corrected variations values are combined with calibration data to produce digital H values. Another set of synthesized magnetograms are then produced and compared with the original magnetogram copies.

Only after passing these visual tests and other computer examinations are the data submitted to the AE derivation program.

In spite of these quality control efforts, we expect that some errors will escape notice and be published or otherwise distributed. We request that anyone detecting questionable values in 1968 AE(11) or AE indices of other times please communicate with WDC-A concerning this matter. As necessary, corrections will be distributed to the user community on either a case-by-case basis or in future UAG reports in this series.

3. Acknowledgements

In the earlier Report UAG-22, the helpful support and advice given by many administrators and scientists was greatfully acknowledged. Our initial indebtedness to that group has not decreased but has enlarged as many of the same individuals have similarly contributed to the work of deriving the AE indices for 1968. This is especially true of the scientist-users who have encountered errors and brought them to our attention. We also wish to collectively acknowledge the help of those who have communicated with us concerning the importance of these indices in their work. Such continuing contact provides a basis for evaluation of this data product, suggests ways in which it may be improved, and documents the importance of the effort and money dedicated to this program. The data used in deriving AE indices are the responsibility of many people. From the staffs at the high-latitude observatories and those concerned with different stages of processing to the final availability of magnetograms and calibration data from the World Data Center system, each is essential. In particular, we wish to acknowledge the excellent work that has been done by the operators of the curve-following magnetogram digitization equipment. They have developed proficiency in their work and have willingly cooperated in the implementation of additional quality-control procedures.

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SECTION II

TABLES

Table of Monthly Quiet-Time H Reference Values

The monthly quiet-time H reference values are given for each observatory. These values are the base from which H-deviations were derived and they were computed as the average of all 2.5-min digitized H values from the internationally adopted 5 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 eliminates the H baseline value provided it is constant for the month (see discussion in Section I).

Tables of Hourly Mean Indices

These 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. 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. Occasionally, hourly values of AE or AU may require four digits and eliminate the space between successive values. AE is always positive and AU is positive most of the time but may become negative during the main phase period of large storms when H is depressed globally by an enhanced ring current. Sometimes AU may be negative as a result of missing data effects (See Section I). AL is almost always negative and seldom exceeds three digits; however, during large magnetic disturbances there occur bays which may cause hourly AL to be more negative than -1000γ. AO is usually negative, but is rarely less than -999γ (three hours during 1968).

Tables of Observatories 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 arises from H-deviations at only two stations and the station-pair contributing these extremes may change from one 2.5-min interval to the next. In order to associate a single station with values 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 H-deviation during an hour as the source of hourly AU. Likewise, the station having the most negative H-deviation is designated as the source of hourly AL. Within a disturbed hour it is common for one station pair to be the most frequent contributors of AU and AL and also to provide the greatest average deviations in H. However, there are times when this does not hold. This is the case during an hour which is quiet until near the end or which has only the first few values disturbed. Here the table will list the stations which provide AU and AL for the short disturbed portion of the hour rather than the stations providing AU and AL for the longer undisturbed portion of the hour.

These tables serve to illustrate the nonuniform frequency of contribution of AU and AL for different stations of the network. Also, they illustrate the systematic grouping in Universal Time of the time of most frequent station contribution of AU and AL.

TABLE OF MONTHLY QUIET-TIME H REFERENCE VALUES

UNITS: GAMMAS

OBSERVATORY	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ABISKO	1968	11718	11716	11713	11717	11719	11731	11724	11725	11716	11722	11718	11731
BARROW	1968	9684	9699	9697	9689	9714	9703	9723	9718	9713	9716	9710	9706
CAPE CHELYUSKIN	1968	3399	3407	3412	3422	3430	3433	3436	3430	3421	3428	3416	3428
COLLEGE	1968	12897	12896	12897	12900	12910	12907	12915	12913	12908	12911	12913	12918
DIXON ISLAND	1968	6399	6394	6402	6417	6414	6425	6420	6424	6414	6425	6412	6419
FORT CHURCHILL	1968	6950	6951	6943	6971	6986	6963	6968	6970	6959	6943	6949	6948
GREAT WHALE RIVER	1968	9823	9831	9838	9856	9861	9863	9875	9886	9879	9878	9889	9895
LEIRVOGUR	1968	12108	12113	12114	12104	12113	12125	12114	12128	12121	12119	12125	12132
NARSSARSSUAQ	1968	11611	11613	11609	11668	11626	11629	11616	11626		11640	11635	11645
TIXIE BAY	1968			7654		7644	7643	7670	7685	7668	7697	7684	7687
CAPE WELLEN	1968	14115	14119	14122	14122		14132	14135	14137	14132	14130	14124	14130

JANUARY 1968 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	340	514	559	451	487	383	365	370	320	286	314	562	524	435	469	560	385	116	106	177	213	187	187	146	352
D	2	86	78	159	213	281	323	391	634	729	621	463	837	266	457	565	541	494	484	270	379	383	282	241	171	390
	3	275	223	166	108	132	187	217	227	100	74	58	58	81	65	143	119	89	114	144	102	39	57	119	208	129
Q	4	113	88	69	37	38	49	38	46	68	114	190	209	125	79	49	48	56	148	320	262	223	328	248	495	143
	5	159	90	109	134	144	143	133	119	142	102	68	101	63	72	265	440	111	71	51	91	205	179	268	134	141
D	6	127	240	315	195	90	88	114	100	113	186	140	136	118	250	718	636	481	382	360	215	249	231	195	119	242
	7	177	198	159	138	235	71	90	85	84	88	126	155	127	139	137	119	172	153	49	41	31	70	161	137	123
Q	8	112	107	67	54	67	97	72	69	70	113	227	135	102	83	60	248	288	86	40	45	34	35	32	39	95
Q	9	29	32	31	36	46	35	25	34	47	48	39	40	47	66	53	104	142	228	99	67	42	43	37	43	59
Q	10	66	62	53	91	61	93	124	119	104	143	146	155	166	346	223	197	72	40	75	129	74	73	60	54	114
	11	44	45	74	75	67	69	57	62	62	51	83	96	97	243	330	400	284	495	553	362	289	446	266	205	198
	12	192	96	104	151	192	92	136	137	117	195	115	101	269	170	200	466	485	259	518	602	472	253	89	172	233
	13	125	40	35	95	103	247	181	166	241	169	371	272	217	272	256	226	84	89	104	74	206	438	335	279	193
	14	274	259	154	164	199	183	227	154	184	217	211	196	151	94	73	96	108	72	204	537	432	291	298	158	206
	15	153	172	143	107	136	107	117	107	129	194	178	157	375	444	263	193	411	242	447	457	430	329	342	284	247
	16	275	87	60	59	75	102	106	155	147	108	92	109	74	131	238	138	284	603	636	295	191	123	265	131	187
	17	87	87	105	194	302	121	240	259	478	260	175	237	234	142	120	400	220	159	182	331	437	253	101	191	221
	18	376	347	143	131	76	197	301	248	162	107	159	307	251	208	251	202	66	78	90	55	50	47	42	37	164
	19	35	41	54	50	85	208	215	317	375	235	194	320	99	87	163	265	693	627	417	222	181	252	492	549	257
D	20	405	326	252	267	159	93	144	319	230	183	620	333	314	251	416	150	91	100	175	420	167	45	41	46	231
	21	52	64	48	56	119	289	384	230	259	302	231	228	218	285	211	78	241	132	73	51	167	192	77	72	169
	22	135	52	38	62	212	95	166	77	68	73	229	145	137	117	198	398	623	223	205	106	145	137	70	36	157
	23	82	166	182	113	50	155	373	266	167	74	36	73	68	63	49	64	234	214	217	171	514	205	66	53	152
	24	77	110	71	33	35	32	61	164	219	251	168	205	445	258	124	254	286	135	265	561	452	226	176	116	197
Q	25	66	119	122	52	60	75	67	41	53	75	95	152	130	94	230	193	51	51	42	132	141	190	31	31	96
	26	38	65	76	141	82	54	67	108	246	132	49	115	230	282	309	961	836	294	103	57	49	45	52	66	186
	27	42	78	58	175	112	81	112	194	199	73	37	51	45	167	65	85	236	194	358	336	228	352	570	406	178
	28	363	428	252	149	89	40	21	18	24	34	42	42	60	196	283	181	409	456	366	472	334	263	290	388	217
D	29	495	419	377	430	371	237	239	155	122	125	143	145	107	82	111	31	53	86	454	453	293	464	291	355	252
	30	285	313	238	289	275	352	302	92	35	43	113	111	121	100	76	97	260	180	92	81	62	52	88	80	156
	31	137	204	277	223	220	85	102	171	231	202	91	69	91	71	245	210	103	39	43	43	29	29	37	75	126
	MEAN	169	157	147	144	148	141	167	169	178	157	168	189	173	185	222	261	269	211	228	236	218	197	180	170	187
5Q	MEAN	77	82	58	54	54	70	65	62	68	99	139	138	114	134	123	158	122	111	115	127	103	134	82	132	101
5D	MEAN	291	315	334	311	278	225	251	316	303	280	336	403	266	295	456	384	301	234	273	323	261	242	191	167	293

FEBRUARY 1968 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	65	41	38	31	56	96	207	106	97	117	66	73	187	147	138	123	61	86	300	340	53	169	162	274	126
	2	344	259	111	89	54	40	54	68	211	416	204	183	256	477	389	336	312	614	258	396	512	350	489	342	282
	3	446	91	105	62	69	93	139	384	282	159	253	205	119	150	427	646	643	271	117	271	111	204	329	239	242
	4	126	280	287	203	406	413	402	474	459	495	633	330	253	255	161	186	163	89	74	46	73	49	51	36	248
	5	34	40	38	36	34	38	36	41	87	95	103	135	90	148	261	176	211	160	261	470	421	267	284	199	153
Q	6	115	56	61	48	26	19	18	34	35	43	34	45	47	43	42	32	51	60	36	48	38	32	31	30	43
Q	7	27	26	27	21	15	23	25	23	19	22	25	26	41	44	41	45	121	85	75	56	172	143	158	170	60
	8	174	162	139	88	153	47	60	71	111	149	100	265	385	339	253	359	210	246	374	489	207	463	484	267	233
	9	346	429	313	308	385	368	341	355	330	484	485	446	538	438	219	166	178	214	367	490	493	366	412	388	369
D	10	327	321	264	147	283	320	248	219	234	683	436	314	301	214	78	48	456	837	1005	711	269	177	493	512	371
D	11	403	372	450	405	639	476	572	514	441	425	961	815	996	710	706	730	417	436	180	126	473	555	373	384	523
	12	336	392	352	189	192	242	223	276	84	75	207	317	269	132	126	135	107	235	203	90	52	41	42	36	181
	13	33	35	32	31	84	205	333	345	391	292	332	321	756	299	105	154	705	434	61	46	36	48	45	44	215
Q	14	98	105	30	25	19	21	23	23	27	39	36	31	38	36	32	44	33	31	29	34	45	48	167	75	45
D	15	46	100	119	75	219	214	250	223	379	287	839	500	277	2299	1635	483	438	800	377	159	119	144	271	212	436
	16	113	147	109	99	172	156	310	224	122	209	440	497	494	253	279	471	120	122	307	174	145	75	78	305	226
	17	204	89	77	84	103	149	279	310	288	393	284	472	656	333	384	343	139	181	306	348	412	741	300	295	299
	18	234	143	60	56	59	74	131	362	625	762	614	480	488	622	422	185	360	717	553	262	203	296	182	252	339
	19	471	363	305	349	284	235	192	170	104	104	93	106	75	81	101	79	83	82	83	71	73	64	66	60	154
D	20	50	179	123	66	71	115	313	705	740	599	242	797	913	579	712	419	560	418	483	537	461	599	384	517	441
	21	372	423	348	404	331	218	254	229	331	558	349	368	229	270	464	469	496	414	361	415	354	647	409	264	374
	22	116	108	89	134	210	386	181	104	128	187	258	342	174	123	111	287	385	294	98	104	95	82	80	76	173
	23	73	72	70	62	86	165	183	120	62	71	67	81	90	92	107	107	285	217	83	84	172	151	82	76	111
	24	79	61	72	120	178	225	278	165	166	144	126	137	65	62	89	166	110	73	80	96	56	28	30	38	110
Q	25	38	33	80	41	32	33	161	157	121	83	38	38	58	80	78	139	170	130	89	304	67	38	37	38	87
Q	26	29	39	65	57	75	37	22	20	31	42	44	39	51	54	47	40	50	56	65	90	303	171	249	341	84
	27	154	52	43	33	41	102	83	33	72	61	44	52	75	66	115	219	129	84	245	473	681	522	483	361	176
D	28	314	233	324	117	102	131	142	152	150	169	184	209	787	819	729	949	573	512	426	472	363	269	479	267	370
	29	167	298	415	327	323	307	240	333	239	201	328	415	254	212	78	126	391	192	300	444	218	64	70	172	255
	MEAN	184	171	157	128	162	171	197	215	220	254	270	277	309	323	287	264	274	279	248	264	230	235	232	216	232
	5Q MEAN	61	52	53	38	33	27	50	51	47	46	35	36	47	51	48	60	85	72	59	106	125	86	128	131	64
	5D MEAN	228	241	256	162	263	251	305	363	389	433	532	527	655	924	772	526	489	601	494	401	337	349	400	378	428

MARCH 1958 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	235	314	151	141	114	122	178	121	140	178	184	356	415	442	429	723	752	387	155	92	92	67	56	43	245
	2	40	48	91	299	230	122	181	268	262	222	262	295	149	218	326	295	222	305	199	131	417	343	280	301	229
	3	210	152	96	66	74	87	78	285	419	306	269	461	460	411	437	225	407	662	741	706	546	432	432	311	345
	4	260	266	147	118	242	195	212	352	376	606	734	548	399	284	338	521	646	623	440	532	493	469	534	527	411
	5	467	294	112	156	366	222	138	140	361	648	638	644	597	677	329	171	86	116	236	295	460	370	399	340	344
	6	143	97	77	85	52	58	88	185	229	155	213	224	206	134	101	122	110	117	258	192	208	352	270	128	159
Q	7	99	80	94	163	157	56	52	105	241	182	164	138	100	153	155	78	140	165	121	196	152	210	177	111	137
Q	8	135	176	74	84	78	72	52	55	56	47	50	126	76	48	47	52	74	153	135	125	184	338	188	89	105
Q	9	52	51	99	65	106	69	32	56	82	130	116	58	52	51	48	35	41	73	89	95	78	64	69	151	73
	10	229	152	115	117	334	434	274	183	170	104	81	92	280	331	493	639	361	313	279	304	288	242	156	62	251
	11	56	59	118	86	237	324	318	338	227	188	82	52	41	34	31	30	29	35	24	33	65	133	155	103	117
	12	72	53	45	50	53	50	44	47	48	66	209	493	416	316	349	196	236	355	453	614	586	371	197	87	225
Q	13	74	79	171	117	199	83	41	51	78	64	54	40	40	36	33	38	37	34	29	38	47	44	76	171	70
D	14	355	258	240	213	111	135	129	134	183	298	510	324	230	403	468	533	435	687	321	365	384	535	633	354	343
D	15	275	256	180	127	238	354	520	574	510	349	550	482	769	613	213	122	221	489	690	603	543	696	286	200	411
D	16	308	354	308	395	426	486	326	401	309	402	316	434	898	838	170	89	88	116	202	326	151	501	711	553	380
	17	230	197	122	130	437	337	177	169	183	95	117	174	281	253	110	72	55	119	143	245	172	139	188	255	183
	18	149	97	252	151	293	215	170	229	319	236	137	106	113	85	74	112	245	362	107	64	46	63	69	93	158
	19	62	87	97	113	73	63	161	377	418	338	463	420	242	230	325	160	270	513	313	156	72	80	60	72	215
	20	65	121	297	557	177	55	37	57	49	66	323	868	416	445	346	126	87	62	57	179	119	138	250	237	214
	21	96	113	200	163	135	150	136	183	117	161	83	72	100	216	479	364	174	195	386	262	56	48	56	54	167
Q	22	68	125	100	58	37	63	119	70	50	49	76	178	338	246	151	165	144	55	64	105	92	102	55	59	107
	23	68	63	59	64	58	50	31	56	60	65	62	122	179	186	132	234	84	43	105	223	314	526	586	242	151
D	24	226	155	157	189	244	467	568	520	432	595	315	346	517	406	480	440	378	423	338	308	614	499	158	153	373
	25	213	364	479	333	250	308	420	347	447	242	140	159	594	429	166	131	406	324	353	524	395	427	448	157	336
	26	157	130	145	144	158	229	256	242	148	265	783	638	529	358	315	402	381	408	572	338	153	215	428	556	331
	27	527	469	344	249	296	470	510	359	242	386	353	162	146	107	237	473	514	251	455	626	723	535	533	438	392
	28	258	185	216	339	430	214	249	355	336	213	186	215	338	202	204	187	188	160	378	340	248	444	451	191	272
	29	186	248	470	686	508	433	304	409	452	615	598	552	377	431	473	273	101	241	427	272	188	176	647	677	406
D	30	463	608	396	330	362	566	744	385	205	95	99	293	283	159	172	697	1142	1069	830	685	718	356	224	111	458
	31	109	117	60	128	55	184	155	335	373	151	128	163	177	359	469	212	244	617	836	772	595	503	530	757	335
	MEAN	190	187	178	191	211	215	216	238	243	242	268	298	315	294	261	255	268	306	314	315	297	304	300	245	256
5Q	MEAN	86	102	108	97	115	69	59	67	101	94	92	108	121	107	87	74	87	96	88	112	111	152	113	116	98
5D	MEAN	325	330	258	251	276	402	457	403	328	348	358	376	539	484	301	376	453	557	476	459	482	517	402	274	393

APRIL 1958 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	554	711	423	487	437	349	239	366	534	360	310	338	506	481	391	492	180	373	615	368	303	574	264	174	410
	2	406	309	162	167	68	152	367	309	174	103	200	310	166	144	285	243	91	190	345	670	526	535	507	610	293
	3	320	255	237	314	373	132	286	293	315	319	369	304	248	491	461	315	175	77	86	70	54	78	220	479	261
	4	515	486	480	382	329	299	248	309	241	203	254	271	225	244	343	273	278	201	125	109	95	113	261	282	274
D	5	295	309	241	277	272	341	345	296	213	181	107	152	73	75	207	451	431	469	1089	1214	581	430	349	324	363
D	6	140	102	188	330	130	324	185	813	860	461	351	464	589	454	332	306	554	726	301	244	470	322	350	237	385
	7	96	114	128	247	247	136	129	321	340	221	321	227	153	286	381	184	77	62	59	39	40	63	45	69	166
Q	8	92	81	152	195	175	159	66	74	62	115	113	149	256	118	51	81	96	71	63	59	47	42	44	39	100
Q	9	44	43	35	28	28	33	40	42	50	51	54	70	66	62	64	70	71	70	73	60	56	60	139	89	58
	10	99	155	136	112	124	181	285	250	223	172	174	176	167	103	84	71	127	229	459	198	123	149	136	80	167
	11	79	138	155	269	177	83	144	238	174	171	219	277	171	81	64	90	67	63	60	55	46	56	43	49	124
	12	43	39	40	34	46	49	56	60	66	56	69	72	74	90	97	67	96	121	220	249	123	334	591	495	133
	13	212	209	182	565	391	210	116	95	129	251	511	504	447	360	310	498	722	538	387	203	262	639	326	178	344
D	14	252	177	410	430	324	417	137	57	55	56	252	757	610	224	121	266	465	486	385	266	92	102	209	351	288
	15	111	93	46	40	43	72	139	85	206	411	397	157	204	302	333	386	394	434	472	359	280	290	440	456	256
	16	321	333	225	298	337	225	93	104	290	319	251	181	148	143	166	153	135	74	116	130	338	827	467	329	250
	17	207	108	56	71	223	217	313	304	237	292	560	307	111	258	316	141	253	461	600	208	80	177	253	130	245
	18	118	232	212	136	117	319	318	279	203	366	295	331	210	53	91	154	185	200	300	169	122	117	90	164	199
Q	19	65	74	85	90	94	109	109	117	132	133	139	142	145	133	107	95	151	121	74	63	60	78	76	81	103
Q	20	79	79	71	61	52	56	52	48	47	38	46	48	72	61	49	47	56	61	44	41	34	41	40	47	53
Q	21	45	42	36	38	44	47	66	61	70	87	103	129	270	236	132	82	46	53	45	47	49	53	58	74	80
	22	153	159	157	129	128	119	239	451	500	234	80	60	63	87	232	383	350	222	156	312	392	315	367	283	232
	23	418	625	359	437	485	511	485	158	106	234	122	148	239	181	198	136	110	147	352	511	467	353	313	404	312
	24	405	260	317	506	506	422	113	66	81	105	188	179	143	85	130	272	217	262	186	109	86	111	93	63	204
	25	63	48	41	30	30	67	115	115	132	77	63	61	46	60	131	248	353	269	62	130	363	656	563	621	181
D	26	661	487	350	228	258	427	467	384	353	214	290	509	544	474	634	717	336	235	470	806	774	570	562	547	471
	27	609	292	118	270	205	90	114	341	708	479	121	47	59	115	111	101	174	111	316	574	501	279	232	120	254
	28	150	355	522	358	575	285	269	176	121	161	340	95	92	80	147	318	208	186	277	320	438	466	593	445	291
	29	529	397	405	290	395	345	449	494	489	260	192	125	364	392	316	391	445	194	97	81	298	440	682	567	360
	30	260	131	98	113	48	45	82	206	331	289	169	83	55	46	83	150	244	302	223	86	83	266	363	223	166
	MEAN	245	228	203	231	222	207	202	230	248	214	222	222	217	197	212	239	236	234	269	258	239	285	289	267	234
5Q	MEAN	65	64	78	82	79	81	67	68	72	85	91	108	162	122	81	75	84	75	60	54	49	55	71	66	79
5D	MEAN	380	357	324	350	284	372	275	383	403	254	262	444	464	342	337	446	393	458	572	580	444	400	347	327	383

MAY 1968 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	253	122	54	65	85	48	47	68	141	190	186	243	214	327	520	742	374	632	686	367	477	721	466	544	316
	2	294	355	289	172	346	229	188	231	259	528	562	382	252	258	305	93	61	63	55	43	67	82	84	149	223
	3	171	358	157	276	459	529	272	128	118	185	136	147	258	153	144	242	152	73	56	51	57	71	88	81	182
Q	4	75	92	151	116	45	63	50	100	130	145	106	113	87	79	69	99	192	235	183	76	137	54	66	67	105
Q	5	46	51	35	82	53	71	57	74	47	78	200	144	69	105	103	90	133	136	75	52	74	45	54	51	80
Q	6	49	42	36	51	52	55	51	47	39	50	55	79	70	83	61	57	44	73	66	64	59	63	60	72	57
D	7	63	85	99	94	267	749	660	643	511	858	674	369	831	1019	1243	704	661	429	180	174	294	495	376	390	495
	8	247	140	74	99	54	136	108	93	87	126	267	266	94	74	45	78	149	271	297	312	208	157	253	272	163
D	9	338	543	672	713	525	421	391	381	347	365	572	592	662	676	701	645	722	668	642	680	705	586	425	308	553
	10	230	176	112	325	356	132	140	149	133	134	156	151	134	100	87	98	101	111	83	92	81	89	121	125	142
	11	133	154	378	428	178	223	369	410	574	430	268	237	154	210	278	154	202	147	128	137	161	225	308	483	265
D	12	603	601	537	577	430	641	463	210	185	277	732	543	402	417	293	303	287	271	323	352	709	585	273	329	431
	13	277	486	208	162	276	272	233	188	197	363	601	358	250	261	178	270	421	461	248	269	273	166	158	112	279
	14	125	258	361	259	135	139	183	108	85	99	231	277	306	358	389	264	131	181	350	334	134	101	118	136	211
	15	205	220	258	197	163	333	393	438	267	164	197	88	50	48	54	75	108	114	111	107	129	212	345	318	192
	16	274	313	321	257	434	187	333	348	268	247	346	524	569	569	649	672	686	610	562	504	373	293	286	298	413
	17	70	78	176	355	420	322	490	354	306	361	381	243	183	224	557	395	524	729	738	399	313	564	224	163	357
	18	156	141	232	220	210	181	285	422	399	229	175	214	167	65	194	796	952	711	531	300	136	390	425	224	323
	19	144	112	174	256	163	65	94	243	463	196	108	173	334	230	167	230	481	486	533	446	460	647	289	124	276
D	20	300	685	719	459	478	197	371	528	651	618	614	490	376	320	149	248	397	423	157	103	237	352	536	558	415
D	21	480	474	341	202	113	86	111	351	378	323	241	247	430	563	664	979	962	1020	859	789	704	678	731	462	508
	22	463	528	716	701	525	585	508	328	265	153	250	277	203	208	201	228	339	382	196	64	61	56	352	249	327
	23	104	334	341	74	65	46	66	70	131	174	300	267	218	276	199	250	470	686	763	452	342	481	568	704	308
	24	753	678	630	488	260	351	570	567	292	284	367	260	367	197	138	139	186	258	342	427	168	315	214	301	359
	25	268	93	62	74	93	83	111	79	188	383	374	275	94	85	118	407	530	299	308	354	452	248	177	123	220
Q	26	115	198	299	320	386	191	85	54	75	121	195	106	112	154	112	128	128	65	56	67	90	120	103	97	141
Q	27	81	67	73	88	93	98	92	95	94	84	91	96	73	58	55	54	49	73	106	126	76	76	138	164	88
	28	115	88	87	76	92	134	129	127	82	68	61	62	74	79	73	124	283	277	452	534	283	266	249	201	167
	29	226	347	410	452	495	433	431	515	582	481	328	184	232	245	281	435	537	514	507	214	204	181	136	138	355
	30	158	144	268	440	133	65	109	420	593	306	121	140	101	349	455	204	128	108	68	113	234	499	311	337	242
	31	280	320	411	394	202	112	107	103	337	339	250	438	507	274	92	122	293	469	233	112	131	138	112	107	245
	MEAN	229	267	282	273	245	232	242	254	265	270	295	258	254	260	277	301	345	354	319	262	253	289	260	248	272
5Q	MEAN	73	30	119	131	126	96	67	74	77	96	129	108	82	96	80	86	109	116	97	77	87	72	84	90	94
5D	MEAN	357	478	474	409	363	419	399	423	414	488	567	448	540	599	610	576	606	562	432	420	530	539	468	409	480

JUNE 1958 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	115	138	109	97	252	179	107	96	183	388	398	223	421	271	426	470	524	491	705	512	252	206	455	570	319
	2	450	461	456	497	682	607	475	306	203	227	267	256	189	227	362	277	138	195	493	588	440	458	450	358	378
	3	321	416	262	146	217	255	322	250	167	149	305	402	347	338	251	369	627	616	144	168	218	396	229	230	298
	4	277	328	353	190	153	213	74	141	346	267	133	142	199	183	257	314	272	322	323	187	288	196	519	381	252
Q	5	201	116	75	77	227	248	171	83	61	79	81	132	76	115	124	102	135	284	247	147	191	167	84	57	137
Q	6	40	32	34	42	38	59	124	78	49	86	147	252	372	377	180	159	87	63	43	39	77	60	78	77	108
	7	54	132	171	213	204	227	427	457	346	213	261	456	520	258	100	283	554	377	260	122	71	59	71	58	246
	8	91	97	68	82	233	210	140	158	144	143	113	162	175	125	107	444	637	500	201	409	250	158	177	191	209
	9	110	79	84	72	422	358	300	149	96	91	76	80	82	74	67	53	125	266	552	541	568	725	641	445	252
D	10	550	735	710	725	760	848	920	930	933	474	408	746	930	433	433	576	418	188	150	148	343	688	1184	855	629
D	11	993	1195	1107	968	1088	796	260	473	897	823	702	705	419	258	655	775	303	137	267	599	806	468	476	700	661
D	12	607	558	655	797	910	676	762	732	790	741	997	755	929	781	990	750	934	915	715	718	571	587	529	352	740
D	13	302	497	752	883	1005	821	888	781	1092	1181	953	970	1275	1150	1141	1258	1163	1100	903	845	850	673	339	267	879
D	14	321	318	206	161	132	202	279	482	1094	1160	919	655	991	797	745	775	305	333	560	372	281	346	276	271	499
	15	180	56	55	64	118	155	259	377	290	154	220	290	192	125	69	51	110	204	128	257	209	90	207	287	174
	16	152	70	88	55	74	43	58	61	85	168	329	454	391	287	220	393	432	451	419	432	493	861	472	531	292
	17	412	455	113	329	248	542	859	697	729	650	625	176	86	153	137	54	88	103	129	204	231	184	203	86	312
	18	129	198	192	136	155	111	343	594	506	244	183	336	320	304	234	140	465	684	703	752	461	305	187	396	337
	19	348	526	487	330	765	623	508	586	475	426	411	324	295	192	441	221	401	480	419	304	633	638	624	447	454
	20	297	183	166	139	259	272	105	103	93	74	58	63	72	68	57	79	92	94	53	79	116	147	103	69	119
Q	21	55	43	31	27	34	35	32	35	45	54	68	70	67	57	44	43	49	46	46	49	49	45	61	59	48
	22	60	58	50	65	115	280	546	680	771	750	733	780	579	369	112	99	74	72	82	100	209	334	318	132	307
	23	161	177	233	342	297	368	433	556	372	278	190	172	154	97	159	214	132	68	88	102	133	182	162	191	219
Q	24	118	81	76	82	61	86	75	64	63	93	101	74	95	67	43	43	33	39	38	56	91	97	72	56	71
Q	25	64	70	59	60	53	52	53	121	78	68	63	49	49	46	33	37	94	94	73	110	88	62	65	183	72
	26	403	572	150	60	51	63	67	60	57	75	139	234	281	287	179	255	218	121	92	103	133	285	409	192	187
	27	130	157	134	99	275	313	251	231	109	142	306	239	512	238	161	202	258	225	154	230	238	308	280	245	227
	28	341	326	95	62	42	60	83	96	89	79	89	107	110	182	170	151	247	227	215	231	225	248	99	147	155
	29	173	159	70	111	172	157	165	76	67	68	64	62	55	56	73	143	298	269	143	358	628	336	548	377	193
	30	138	212	602	478	350	348	166	192	235	173	161	133	153	254	177	196	221	336	307	420	442	414	474	588	299
	MEAN	253	284	256	246	313	307	308	322	349	317	317	317	345	272	272	298	314	310	289	306	320	324	326	293	302
	5Q MEAN	96	68	55	58	83	96	91	76	59	76	92	115	132	132	85	77	80	105	83	80	99	86	72	86	87
	5D MEAN	555	663	636	707	779	669	622	680	961	876	796	766	909	684	793	827	625	535	513	536	570	552	561	489	682

JULY 1958 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	450	382	375	492	409	310	373	380	407	201	261	311	375	355	233	144	126	114	302	251	138	85	192	277	289
	2	230	467	267	151	118	152	209	332	475	551	401	258	167	217	260	237	244	195	188	187	69	113	220	478	258
D	3	293	355	578	212	443	710	561	618	743	138	266	171	180	176	162	104	96	179	185	287	348	141	126	136	301
	4	194	162	146	221	341	249	365	746	678	344	220	236	309	249	124	142	185	167	259	565	316	230	148	99	279
	5	212	332	245	313	239	66	57	72	232	544	313	113	181	96	75	167	266	149	172	147	89	84	75	75	180
	6	99	143	247	206	153	276	244	155	170	348	415	246	165	112	99	91	77	82	116	161	216	110	79	74	170
	7	57	78	114	103	106	210	413	476	532	484	198	97	56	36	50	147	177	137	129	74	89	73	89	65	166
	8	95	84	111	185	232	384	324	307	305	493	226	193	108	73	55	92	67	100	86	88	158	124	73	58	168
Q	9	47	72	66	84	191	359	311	278	134	150	86	101	70	52	46	78	94	68	71	74	86	88	115	165	120
D	10	225	182	183	322	666	673	545	424	436	714	633	594	947	1072	259	111	153	229	635	746	587	456	789	655	510
	11	469	389	501	369	280	235	348	286	192	117	127	146	191	123	140	260	282	339	414	506	515	459	639	678	334
	12	658	569	563	286	216	123	55	51	49	50	47	53	62	79	44	155	359	175	73	44	43	60	61	58	164
D	13	60	95	114	101	325	354	303	171	70	57	60	46	35	36	38	41	455	884	1017	990	800	761	585	549	331
D	14	630	1042	936	800	618	195	97	123	87	58	168	274	175	119	137	144	150	250	624	460	157	156	193	162	326
	15	115	273	343	233	212	239	97	42	57	59	134	161	35	41	30	20	31	64	177	158	217	225	237	261	144
	16	337	278	33	93	164	408	95	56	112	157	118	64	53	105	280	103	447	438	130	114	74	78	107	124	168
	17	95	73	56	52	39	74	73	52	70	94	190	265	475	199	57	41	49	51	123	203	326	205	92	134	129
	18	190	276	406	516	441	183	221	105	63	86	150	356	334	368	461	277	120	199	173	93	82	53	67	165	224
	19	129	109	129	322	346	187	169	221	177	276	189	281	177	76	119	180	302	90	52	125	278	639	465	534	232
Q	20	420	150	90	83	62	49	42	40	40	48	53	46	42	44	50	51	55	69	93	120	134	157	98	113	90
	21	123	113	52	69	59	57	43	106	157	91	75	105	208	255	129	114	134	261	596	178	120	208	454	439	173
D	22	313	467	359	161	196	410	302	395	675	756	777	538	274	240	200	284	167	248	467	429	360	274	262	191	365
	23	221	121	139	400	393	437	365	599	436	68	161	157	158	155	137	322	174	75	95	64	103	110	125	182	219
Q	24	77	60	56	55	54	135	239	214	97	91	87	71	100	91	108	94	66	81	96	134	106	94	87	73	99
	25	67	81	94	78	118	173	278	151	88	108	120	132	89	78	175	188	112	182	136	94	86	119	98	92	122
	26	91	80	136	282	303	167	67	128	135	366	387	256	186	280	121	165	210	346	266	450	280	538	541	463	260
	27	510	491	378	388	385	278	294	230	329	307	231	332	321	348	221	155	90	103	121	223	209	145	120	123	264
	28	295	239	215	200	254	119	49	42	47	60	142	151	97	63	155	309	361	260	395	359	145	88	97	273	184
Q	29	331	316	253	88	120	273	119	54	70	59	53	68	59	43	93	70	65	126	102	141	98	77	105	97	120
	30	88	90	74	110	52	49	66	59	63	49	47	51	49	40	93	131	147	121	156	102	332	323	207	175	111
Q	31	175	200	89	90	124	132	90	208	90	52	141	277	137	111	102	92	78	75	57	89	84	109	86	60	115
	MEAN	235	251	243	228	247	247	220	230	233	225	209	198	188	172	137	145	172	189	242	247	214	206	214	227	213
	5Q MEAN	210	160	111	80	110	190	160	159	86	80	84	113	82	68	80	77	72	84	84	112	102	105	98	102	109
	5D MEAN	304	430	448	319	450	468	362	346	402	345	381	325	322	329	159	137	204	358	586	582	450	358	391	339	367

AUGUST 1958 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	63	63	71	80	89	86	63	93	299	281	221	68	70	74	88	148	171	116	79	63	85	99	84	61	109
Q	2	68	78	78	74	81	60	66	76	71	110	166	352	152	133	112	60	66	45	43	72	115	82	86	103	98
	3	111	155	261	543	674	283	265	436	512	273	154	212	132	91	70	102	208	280	149	115	133	119	104	81	228
	4	93	82	93	66	75	140	72	59	47	51	46	55	50	39	38	27	39	38	39	47	66	98	56	128	64
	5	94	123	87	89	412	139	58	53	82	337	518	187	360	405	292	331	365	84	54	46	84	207	211	247	203
	6	102	151	256	562	437	185	249	116	109	160	129	128	176	144	133	116	40	151	342	320	327	175	106	189	201
	7	382	534	501	192	142	386	293	205	257	234	179	450	551	341	276	247	306	86	88	127	94	81	161	208	263
	8	440	509	431	127	437	304	334	522	250	60	55	57	74	157	115	67	53	107	60	70	199	187	272	317	217
	9	385	342	357	131	101	138	240	79	62	59	75	83	174	69	61	108	200	590	258	340	414	191	371	314	214
	10	182	208	119	85	68	151	306	144	109	307	265	109	56	59	63	93	179	206	52	63	196	286	293	252	160
	11	240	450	278	180	189	318	270	75	59	60	70	63	45	52	39	38	92	93	60	109	59	47	45	50	124
	12	128	270	96	57	47	85	102	100	72	65	146	123	89	62	78	148	126	64	93	270	226	64	76	51	110
	13	48	53	56	63	42	53	57	62	59	62	60	61	70	72	136	278	366	459	198	239	474	224	343	500	168
D	14	631	381	375	375	300	387	505	459	654	423	530	536	438	282	405	168	145	409	711	416	274	415	738	534	437
D	15	264	205	247	518	676	394	283	599	400	753	348	399	557	643	582	715	727	555	562	270	414	548	408	370	477
D	16	500	354	127	86	574	495	365	420	257	263	244	136	172	379	649	991	821	951	607	370	893	782	180	181	450
D	17	693	358	245	653	663	437	216	393	214	709	300	362	858	1199	1081	1005	723	366	331	255	366	417	108	322	511
	18	304	113	141	356	642	518	285	465	547	424	383	273	327	454	579	553	306	359	371	274	403	422	267	335	379
	19	550	341	230	226	181	195	214	241	396	509	435	262	95	76	90	112	314	509	276	93	88	74	68	64	235
	20	91	83	79	73	47	39	55	69	146	112	117	114	128	101	250	385	411	228	93	115	178	128	127	187	140
	21	134	113	113	107	203	162	132	251	109	53	81	60	60	75	58	45	65	69	120	131	75	65	60	95	102
	22	61	41	37	36	39	40	49	52	60	58	93	250	184	75	61	65	62	60	56	67	72	126	462	541	110
	23	342	331	329	420	592	304	126	190	303	250	214	207	163	180	132	147	153	237	242	416	410	247	342	274	273
D	24	182	277	222	85	215	550	616	320	515	504	370	493	132	103	202	181	211	234	253	193	180	344	192	139	280
	25	123	91	58	55	49	67	59	47	49	49	42	31	32	37	34	40	74	76	32	154	178	123	89	74	69
	26	47	46	43	58	59	41	49	64	150	176	65	45	58	159	234	154	70	51	125	87	65	71	80	83	87
	27	68	84	185	143	36	32	59	100	58	108	162	116	45	50	55	52	42	42	61	114	86	41	39	45	76
Q	28	65	68	56	45	94	117	49	53	69	73	63	59	51	46	47	59	52	35	53	107	137	75	54	51	66
Q	29	48	55	48	49	45	39	50	53	63	70	67	59	69	95	62	72	46	30	31	62	73	71	63	55	57
Q	30	53	100	128	59	57	46	44	63	82	76	57	47	74	49	39	39	41	50	54	61	59	65	53	39	60
	31	46	82	104	159	203	130	56	64	63	67	155	409	648	631	858	954	888	593	302	427	331	165	151	154	318
	MEAN	211	198	176	186	241	204	180	191	198	217	187	187	196	204	223	242	237	231	187	177	218	195	184	195	203
5Q	MEAN	61	73	78	61	73	70	54	68	117	122	115	117	83	79	70	76	75	55	52	73	94	78	68	62	78
5D	MEAN	454	315	243	343	486	453	397	438	408	530	358	385	431	521	584	612	525	503	493	301	425	501	325	309	431

SEPTEMBER 1968 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	148	197	319	230	379	272	209	163	160	353	535	381	497	362	181	131	179	160	93	49	48	87	100	157	225
	2	185	134	83	65	53	42	99	90	307	418	766	435	324	342	205	182	262	294	364	203	99	152	139	211	227
	3	185	245	158	92	117	99	263	149	168	289	249	290	174	93	83	180	604	208	41	268	287	457	128	112	206
	4	343	142	112	295	334	140	85	106	99	252	315	653	553	407	521	433	204	83	107	214	144	145	288	66	252
	5	39	76	100	121	249	410	428	189	114	224	208	258	334	202	78	96	115	146	84	113	260	218	312	336	196
	6	420	206	236	123	198	286	423	330	115	48	38	54	77	132	95	200	238	402	78	64	279	742	531	463	241
	7	317	154	53	49	46	61	47	57	64	76	59	87	97	59	74	119	347	251	421	574	641	428	468	531	212
D	8	612	884	525	589	556	533	728	755	568	1032	681	879	909	698	760	887	733	690	390	138	90	66	58	84	577
	9	446	340	358	193	281	210	66	59	115	123	138	258	252	41	106	126	159	240	220	128	96	63	59	62	172
	10	103	152	200	173	82	38	48	59	49	69	115	298	151	130	120	284	328	187	75	42	53	110	117	120	129
	11	193	230	210	94	271	142	68	64	89	89	71	71	88	78	54	47	47	69	130	53	52	57	57	49	99
	12	42	42	94	234	192	160	225	422	449	394	460	418	457	437	982	605	429	454	548	493	271	270	394	470	373
D	13	531	598	508	395	450	575	455	323	154	135	277	805	710	570	573	757	703	556	726	454	128	192	453	386	476
D	14	446	592	670	749	236	88	343	576	417	634	764	569	856	844	344	512	535	349	195	217	498	626	220	204	479
D	15	323	433	597	526	480	277	336	338	305	161	187	512	486	345	441	902	446	574	710	324	174	198	214	411	404
	16	309	243	279	546	380	286	256	211	199	230	267	157	185	182	145	200	61	121	180	100	118	137	100	55	206
	17	112	121	159	66	133	76	93	180	222	101	171	121	131	101	61	25	58	104	177	93	55	42	39	36	103
Q	18	32	29	51	55	80	87	33	33	52	50	50	48	47	55	76	136	172	208	134	84	80	57	81	160	79
	19	112	47	102	296	641	238	266	429	279	616	169	48	60	30	65	198	126	50	46	47	42	54	54	69	170
	20	66	94	191	448	111	34	37	36	36	35	37	32	28	29	33	28	36	36	97	180	159	131	61	49	84
	21	78	46	35	45	78	286	339	209	82	46	35	56	275	399	166	413	685	238	47	155	165	49	50	43	168
	22	171	187	66	35	36	39	41	89	101	89	62	177	400	386	269	187	107	53	64	72	321	458	568	230	175
D	23	165	335	628	640	268	101	183	220	331	590	232	104	134	377	877	938	275	128	59	51	41	34	59	46	284
Q	24	58	29	24	24	23	17	18	24	27	39	40	41	35	30	36	42	46	35	49	284	165	41	40	38	50
Q	25	30	27	30	29	22	18	24	26	32	39	37	40	48	36	43	66	97	66	31	35	44	56	54	51	41
Q	26	46	66	40	47	34	32	51	139	163	51	44	48	56	62	89	248	234	102	46	42	49	47	38	34	75
Q	27	33	31	23	51	105	103	40	36	35	43	54	60	88	58	45	51	55	83	36	30	32	41	36	36	50
	28	39	35	70	36	35	27	32	62	69	123	112	270	169	122	179	194	280	134	138	289	193	198	74	60	123
	29	69	168	162	59	96	345	209	149	135	141	119	52	52	46	74	137	201	207	324	273	403	256	64	68	159
	30	58	45	38	40	28	27	27	40	44	46	121	148	129	85	76	180	299	67	45	303	558	315	323	416	144
	MEAN	190	198	204	212	200	168	182	185	166	218	214	246	260	225	228	283	269	210	189	179	185	191	173	168	206
5Q	MEAN	40	36	34	41	53	51	33	52	62	44	45	47	55	48	58	109	121	99	59	95	74	48	50	64	59
5D	MEAN	415	568	586	580	398	315	409	442	355	510	428	574	619	567	599	799	538	459	416	237	186	223	201	226	444

OCTOBER 1958 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	556	436	364	464	82	81	59	62	140	343	279	70	70	117	227	101	208	533	737	514	345	436	392	405	293
D	2	439	995	422	105	439	848	792	146	82	292	1046	879	593	700	908	604	312	187	486	283	116	225	298	401	483
	3	413	942	753	414	345	559	483	657	745	700	354	114	94	161	98	84	86	88	83	77	84	84	78	85	316
	4	108	99	96	96	89	85	83	76	76	84	72	59	56	53	62	173	269	248	123	83	78	78	77	71	100
Q	5	55	51	46	47	52	45	129	209	265	258	86	49	70	96	42	44	29	18	22	33	45	43	37	36	75
	6	37	44	58	60	54	59	66	88	142	118	120	161	105	68	44	98	121	70	65	208	136	70	96	112	92
	7	263	208	239	329	123	121	160	116	50	51	98	45	43	44	46	43	41	152	598	634	427	407	167	196	192
	8	445	204	78	102	88	128	124	95	115	96	126	189	137	117	101	218	204	42	59	208	196	131	183	172	148
	9	347	355	460	238	90	46	43	36	37	44	47	40	38	33	189	255	243	275	76	65	122	235	404	341	169
	10	263	266	91	53	48	83	185	144	110	196	127	42	53	47	87	92	45	34	33	23	24	26	31	37	89
Q	11	42	38	39	46	47	44	29	101	72	39	43	39	41	61	40	29	26	30	25	30	39	48	57	54	44
D	12	196	521	473	580	693	545	271	382	628	625	451	576	379	300	617	336	281	670	943	594	727	469	431	445	506
D	13	466	432	419	233	420	274	414	467	462	696	468	466	563	347	604	467	460	480	202	175	222	298	545	441	418
	14	374	250	354	353	362	326	169	248	293	162	79	177	503	308	232	454	447	216	288	294	188	255	259	108	279
	15	68	52	39	45	48	56	72	111	167	211	168	46	46	56	89	191	154	191	81	31	72	100	47	35	91
	16	29	36	62	120	81	116	197	306	266	116	53	58	53	132	261	341	102	43	32	31	31	37	27	35	107
	17	126	206	195	135	63	73	46	83	156	116	120	60	46	107	268	307	108	62	86	87	303	357	202	267	149
	18	215	121	183	184	73	55	48	164	294	176	102	124	87	61	40	34	50	90	66	42	50	62	181	257	115
	19	166	131	68	63	56	40	33	57	99	63	44	90	337	63	47	44	38	31	86	368	588	325	200	351	141
	20	136	67	45	53	44	23	83	274	343	280	188	176	58	218	73	54	222	288	60	24	24	23	21	19	117
Q	21	22	20	20	29	31	28	35	24	56	85	84	42	44	37	40	40	35	44	23	30	35	36	35	26	38
Q	22	21	20	23	24	36	39	28	29	37	42	42	39	42	38	38	47	46	46	43	31	40	42	46	36	36
Q	23	29	27	29	30	30	28	25	27	29	33	39	45	47	58	52	60	52	102	118	35	32	25	24	24	42
	24	29	25	24	29	41	42	50	61	73	89	71	109	76	58	71	175	153	416	723	549	160	78	49	47	133
	25	37	34	40	52	167	150	166	97	218	604	655	463	271	282	247	78	61	42	47	91	128	186	126	55	179
	26	62	41	59	39	32	39	34	68	194	263	184	68	51	43	42	37	36	39	103	187	188	112	108	297	97
	27	145	51	39	41	32	46	94	261	245	56	41	49	61	69	162	93	67	73	214	180	66	38	45	60	93
	28	75	34	32	33	33	35	198	119	42	36	37	41	43	42	86	132	60	38	51	49	48	59	168	336	76
D	29	434	271	112	82	129	110	134	70	52	96	105	77	243	158	192	253	426	1154	664	473	480	219	118	105	259
	30	118	194	145	120	72	72	70	67	68	247	509	463	409	642	528	247	173	185	118	144	310	257	326	487	249
D	31	515	401	470	487	544	437	660	835	814	511	656	882	310	845	1237	465	808	685	575	870	445	366	162	149	589
	MEAN	203	212	177	151	143	149	161	177	205	217	209	185	160	173	218	181	173	212	220	208	185	165	159	177	184
5Q	MEAN	34	31	31	35	39	37	49	78	92	91	59	43	49	58	42	44	38	48	46	32	38	39	40	35	47
5D	MEAN	422	524	379	297	445	443	454	380	408	444	545	576	418	470	712	425	457	635	574	479	398	315	311	308	451

NOVEMBER 1958 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	421	654	340	183	107	133	82	93	81	122	232	1045	1907	863	820	472	618	348	520	711	503	602	518	483	494
D	2	707	879	635	507	650	595	659	608	615	682	685	703	887	869	1022	780	753	511	186	221	479	655	807	757	662
D	3	657	836	347	126	179	258	493	493	200	172	114	99	594	651	529	732	442	465	535	286	324	404	222	125	387
D	4	130	199	122	132	203	482	394	572	520	433	460	433	939	660	600	226	75	90	78	299	426	256	95	62	329
	5	42	69	107	162	44	44	69	170	246	257	212	237	286	134	84	102	79	49	42	46	140	189	37	29	120
	6	42	44	40	81	71	30	42	50	25	45	71	124	53	47	82	85	60	110	402	247	229	126	315	483	121
	7	386	426	446	344	401	437	607	385	362	362	371	417	292	650	255	82	59	54	65	50	43	44	49	41	276
	8	25	27	23	30	41	99	244	415	306	440	495	455	330	289	786	632	433	293	85	171	235	211	341	436	285
D	9	353	519	495	430	530	323	150	285	456	678	637	291	413	530	669	356	378	190	189	266	91	60	68	55	351
	10	72	53	88	202	216	113	126	104	206	234	252	603	601	178	127	425	525	492	242	187	240	211	182	304	249
	11	364	398	344	293	212	216	208	332	503	281	495	576	430	484	207	135	73	54	54	46	48	34	40	76	246
Q	12	103	74	41	24	36	32	26	25	19	22	37	91	108	67	36	39	110	75	40	20	23	28	27	27	47
	13	25	25	52	59	44	23	17	20	48	69	198	142	123	87	67	54	122	82	92	169	332	323	96	52	97
Q	14	31	29	19	21	28	26	26	25	31	29	31	34	45	40	43	47	81	50	76	62	55	130	74	47	45
Q	15	38	33	32	42	49	54	40	22	28	27	32	32	37	41	38	38	47	65	25	22	19	25	40	49	36
	16	45	59	48	54	36	22	24	28	31	66	39	58	126	256	213	222	257	307	225	172	133	271	143	80	121
	17	82	58	132	114	78	76	107	255	133	154	80	104	350	547	568	767	717	449	715	723	530	474	454	386	338
	18	283	471	413	369	647	586	451	480	430	784	355	171	64	51	75	81	235	423	532	370	236	227	458	266	352
	19	154	202	180	238	260	268	200	226	151	117	188	242	439	287	109	203	81	51	52	57	52	63	46	47	163
	20	39	40	50	40	62	82	73	62	104	590	407	376	412	600	1072	760	413	327	327	290	96	52	68	71	267
	21	50	95	42	49	57	47	24	26	39	15	29	45	67	135	112	92	362	454	374	171	94	137	282	184	124
	22	81	42	47	37	26	25	25	54	46	85	77	35	57	158	163	80	41	32	98	127	130	193	255	132	85
	23	87	93	89	218	157	67	55	43	36	39	59	59	121	39	35	39	36	29	27	19	17	24	25	34	60
	24	37	40	29	37	20	48	59	21	29	30	51	55	53	37	45	57	61	57	172	84	54	41	63	58	52
	25	178	132	122	70	69	85	78	78	60	128	138	107	160	363	323	134	82	52	122	442	144	60	94	89	138
	26	54	48	87	64	50	35	40	48	42	77	96	100	90	91	220	291	264	246	223	200	85	91	167	117	118
	27	190	253	246	153	105	88	89	64	70	55	147	82	102	80	86	220	154	104	185	325	427	420	147	113	163
	28	103	83	89	84	66	56	36	34	58	130	319	450	197	78	52	41	50	86	347	186	77	103	111	123	123
Q	29	100	54	31	50	54	40	26	26	37	47	49	60	39	53	190	230	101	51	23	25	24	16	21	18	57
Q	30	18	15	14	26	22	17	14	16	25	31	29	37	96	109	38	28	51	122	39	56	109	52	81	151	50
	MEAN	163	198	151	141	151	147	149	169	165	207	213	242	314	282	289	248	225	191	203	202	180	184	178	163	199
	5Q MEAN	58	41	27	33	38	34	26	23	28	31	36	51	65	62	69	76	78	73	41	37	46	50	49	58	47
	5D MEAN	454	617	394	276	334	358	356	410	374	417	426	514	948	715	728	513	453	321	302	357	365	395	342	296	445

DECEMBER 1958 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	126	124	94	132	242	108	31	76	131	288	337	435	510	397	557	462	309	479	199	107	92	75	70	73	227
	2	68	65	53	51	47	43	84	108	117	101	285	223	265	277	140	192	215	351	257	112	78	162	94	87	145
D	3	108	81	116	271	513	365	104	123	220	309	300	305	524	631	485	498	580	451	485	427	426	417	557	299	358
D	4	348	315	54	47	43	69	279	487	518	487	498	616	498	371	255	532	731	194	338	477	284	187	256	152	335
D	5	167	55	132	263	382	182	124	186	588	752	570	322	681	273	497	339	140	355	335	751	522	533	501	418	378
	6	314	250	295	245	498	344	265	150	201	336	191	102	83	48	61	86	59	39	37	44	151	91	71	111	170
Q	7	83	77	42	33	25	29	47	78	94	65	62	177	260	112	128	213	303	320	77	61	114	138	153	148	118
	8	127	158	209	175	251	213	304	291	565	267	230	291	320	521	216	110	50	85	356	418	222	196	339	228	256
	9	90	113	140	69	84	72	65	32	38	92	123	123	147	142	128	184	237	176	286	371	362	164	173	345	157
	10	291	134	146	261	373	275	350	405	352	271	264	385	268	51	33	33	32	52	38	67	176	274	131	92	198
	11	56	106	91	94	109	78	68	60	60	48	61	50	43	37	64	153	440	194	484	502	181	160	133	121	141
	12	115	194	374	295	229	119	99	55	54	40	45	40	54	92	258	135	59	54	160	274	141	74	60	65	129
	13	97	100	71	48	39	44	23	25	26	32	65	55	36	25	82	258	342	384	381	199	201	69	57	58	113
Q	14	43	39	44	39	34	31	44	74	94	85	80	56	61	119	139	67	42	42	49	31	34	24	24	25	55
	15	24	27	40	60	59	79	147	142	127	58	44	63	44	44	46	109	148	93	53	129	403	310	79	38	99
	16	41	51	79	56	200	276	157	118	144	130	118	155	122	324	203	104	127	218	94	72	439	263	144	103	156
Q	17	170	210	78	47	55	85	93	145	100	79	73	75	80	54	28	38	42	32	69	41	19	23	25	31	71
	18	41	77	96	95	53	38	52	35	38	89	134	192	120	148	371	232	81	68	115	298	237	195	164	96	128
	19	123	199	93	66	47	158	137	201	112	101	86	142	382	71	33	69	57	302	288	54	37	110	293	221	141
Q	20	66	46	49	42	75	60	92	101	39	39	36	34	33	44	32	33	34	30	21	22	29	23	24	32	43
	21	119	133	105	44	38	54	60	72	89	61	96	430	342	137	103	75	287	347	117	140	362	358	446	416	185
	22	368	287	178	148	102	94	76	86	80	107	83	87	49	122	155	118	112	459	171	52	19	22	22	22	126
D	23	24	41	54	58	71	76	115	69	155	111	198	136	157	354	449	183	129	534	391	244	265	388	335	216	198
	24	184	137	90	103	137	141	73	99	118	31	23	26	39	124	211	360	319	104	26	15	54	94	278	384	132
D	25	69	37	174	584	709	590	376	151	150	84	93	48	44	55	34	55	91	129	137	33	81	50	166	70	167
Q	26	37	37	31	33	26	52	21	33	24	21	29	20	21	22	29	28	29	22	18	18	23	22	25	22	27
	27	25	77	75	217	73	136	357	272	429	573	714	507	447	433	168	134	138	78	63	25	49	89	39	44	215
	28	64	58	37	33	42	30	77	71	43	30	79	91	102	180	41	202	106	82	206	71	66	60	112	83	82
	29	43	27	52	41	44	34	26	25	55	130	166	151	288	254	161	217	399	474	286	248	245	482	355	187	183
	30	119	117	202	140	104	89	87	96	135	288	137	248	494	278	93	37	59	156	199	237	290	61	101	141	163
	31	222	287	174	148	95	25	23	26	45	41	68	72	55	40	66	232	295	573	530	514	321	357	362	121	196
	MEAN	122	118	112	127	155	129	124	126	159	166	171	182	212	186	170	177	193	222	202	195	191	176	180	144	164
5Q	MEAN	80	82	49	39	43	51	59	86	70	58	56	72	91	70	71	76	90	89	47	35	44	46	50	52	63
5D	MEAN	143	106	106	245	344	256	200	203	326	349	332	285	381	337	344	321	334	333	337	386	316	315	363	231	287

JANUARY 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-292	-408	-446	-335	-309	-226	-232	-197	-130	-165	-216	-509	-369	-309	-305	-390	-198	-53	-55	-121	-134	-127	-109	-77	-240
D	2	-25	-18	-58	-113	-172	-198	-305	-542	-662	-579	-356	-716	-205	-358	-419	-412	-390	-304	-118	-271	-247	-169	-157	-101	-287
	3	-170	-114	-116	-41	-61	-110	-123	-99	-27	-24	-33	-35	-52	-35	-78	-70	-51	-87	-120	-85	-19	-34	-91	-160	-76
Q	4	-56	-9	-11	-6	-5	-8	-10	-17	-26	-50	-122	-124	-76	-33	-20	-21	-37	-119	-223	-121	-72	-235	-196	-341	-81
	5	-55	-26	-39	-26	-34	-35	-55	-41	-68	-19	-17	-47	-10	-36	-201	-306	-57	-14	-7	-40	-118	-95	-187	-87	-68
D	6	-64	-165	-216	-38	-1	-7	-43	-45	-57	-103	-60	-87	-78	-203	-600	-510	-334	-226	-218	-125	-140	-137	-82	-22	-148
	7	-93	-120	-69	-68	-16	-1	-36	-29	-35	-46	-68	-94	-87	-99	-66	-96	-105	-41	-27	-23	-17	-45	-140	-108	-64
Q	8	-71	-34	-3	6	-12	-38	-21	-24	-38	-59	-176	-60	-30	-45	-32	-181	-247	-39	-21	-21	-10	-12	-11	-13	-50
Q	9	-5	-3	-2	-2	-5	-8	-5	-7	-10	-14	-10	-14	-22	-47	-23	-51	-104	-193	-78	-46	-20	-14	-8	-12	-29
Q	10	-19	-13	-4	-16	-9	-11	-26	-31	-24	-39	-46	-37	-75	-239	-101	-67	-23	-15	-45	-96	-35	-33	-16	-9	-43
	11	-8	-11	-39	-26	-10	-8	-10	-7	-8	-10	-44	-38	-17	-142	-226	-185	-83	-270	-309	-191	-143	-314	-128	-37	-94
	12	-35	-29	-57	-84	-41	-32	-40	-59	-21	-74	-35	-56	-182	-78	-119	-354	-315	-145	-386	-330	-283	-85	-26	-112	-124
	13	-79	-8	-12	-42	-60	-188	-123	-89	-98	-87	-294	-193	-139	-162	-140	-134	-32	-41	-75	-42	-132	-309	-208	-134	-118
	14	-139	-141	-75	-94	-138	-107	-119	-72	-56	-67	-122	-109	-60	-37	-46	-67	-57	-27	-144	-423	-270	-139	-222	-63	-116
	15	-53	-65	-56	-38	-25	-7	-37	-25	-39	-63	-54	-87	-192	-231	-158	-133	-299	-143	-298	-261	-312	-250	-290	-149	-136
	16	-188	-19	-16	-19	-33	-43	-49	-71	-77	-41	-32	-62	-32	-65	-140	-55	-180	-467	-461	-15	-77	-56	-211	-85	-104
	17	-33	-29	-39	-125	-233	-65	-132	-134	-360	-150	-104	-170	-172	-77	-80	-340	-142	-90	-103	-228	-346	-159	-46	-112	-147
	18	-330	-271	-35	-29	-4	-66	-164	-103	-61	-49	-95	-217	-130	-102	-193	-138	-29	-48	-48	-23	-14	-9	-7	-7	-91
	19	-4	-7	-20	-16	-47	-142	-151	-193	-185	-117	-103	-257	-22	-30	-103	-213	-556	-458	-224	-106	-72	-175	-341	-351	-162
D	20	-302	-193	-141	-139	-97	-56	-77	-248	-149	-111	-427	-197	-214	-204	-324	-54	-41	-68	-137	-329	-119	-6	-6	-9	-152
	21	-18	-25	-12	-16	-66	-209	-308	-162	-158	-205	-137	-149	-167	-206	-119	-48	-211	-87	-34	-24	-125	-141	-39	-32	-113
	22	-103	-31	-11	-24	-166	-61	-122	-29	-12	-25	-143	-57	-63	-56	-173	-315	-519	-144	-145	-50	-88	-83	-22	-5	-102
	23	-48	-139	-161	-67	-22	-101	-278	-153	-61	-25	-14	-45	-35	-32	-26	-35	-204	-186	-189	-113	-432	-167	-24	-13	-107
	24	-24	-65	-33	1	-7	-5	-15	-105	-149	-172	-78	-147	-377	-204	-64	-234	-212	-90	-208	-469	-363	-138	-115	-67	-139
Q	25	-11	-83	-76	-12	-13	-36	-37	-5	-13	-29	-46	-84	-67	-57	-202	-165	-22	-17	-18	-111	-114	-150	-6	-5	-57
	26	-19	-53	-59	-112	-35	-25	-26	-61	-148	-58	-15	-57	-193	-204	-233	-741	-601	-149	-48	-22	-5	-10	-19	-44	-122
	27	-25	-44	-39	-148	-74	-52	-54	-126	-104	-13	-9	-16	-17	-141	-47	-65	-212	-166	-295	-238	-122	-255	-467	-295	-126
	28	-290	-392	-203	-109	-34	-12	-8	-3	-11	-18	-23	-22	-35	-135	-243	-146	-354	-347	-212	-337	-138	-127	-174	-305	-153
D	29	-473	-372	-306	-316	-202	-64	-80	-45	-51	-52	-82	-95	-64	-39	-57	-15	-32	-53	-330	-305	-161	-361	-209	-289	-169
	30	-247	-233	-167	-183	-167	-139	-106	-8	-1	-11	-52	-53	-38	-70	-43	-42	-228	-135	-42	-23	-12	-15	-17	-16	-87
	31	-85	-164	-234	-165	-180	-23	-21	-54	-148	-123	-23	-21	-45	-39	-200	-160	-57	-13	-5	-8	-8	-6	-6	-35	-76
	MEAN	-103	-105	-89	-77	-74	-67	-91	-91	-98	-64	-93	-124	-107	-120	-154	-185	-191	-137	-149	-148	-134	-124	-115	-100	-116
5Q	MEAN	-32	-23	-19	-6	-9	-20	-20	-17	-22	-38	-80	-64	-54	-84	-76	-97	-87	-77	-77	-79	-50	-89	-47	-76	-52
5D	MEAN	-232	-231	-233	-168	-156	-109	-147	-215	-220	-202	-228	-321	-186	-223	-341	-276	-199	-141	-172	-230	-160	-160	-113	-100	-199

FEBRUARY 1968 AL INDICES

AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-25	-12	-8	-4	-23	-71	-157	-14	-17	-14	-13	-23	-111	-50	-36	-41	-9	-48	-209	-211	-13	-74	-81	-193	-61
	2	-247	-106	-19	-15	-5	-2	-12	-29	-138	-330	-97	-114	-178	-270	-281	-229	-208	-448	-165	-253	-377	-284	-314	-268	-183
	3	-258	-32	-33	-7	-16	-37	-76	-284	-178	-76	-161	-112	-39	-106	-369	-491	-466	-171	-63	-208	-61	-124	-207	-98	-153
	4	-32	-195	-234	-119	-295	-278	-230	-277	-242	-433	-428	-170	-168	-169	-107	-154	-108	-39	-44	-20	-42	-23	-27	-20	-161
	5	-16	-17	-13	-8	-8	-14	-18	-16	-50	-43	-49	-95	-72	-122	-219	-115	-185	-140	-227	-401	-345	-166	-188	-114	-110
Q	6	-47	-21	-27	-9	-4	-4	-6	-21	-16	-19	-10	-33	-34	-34	-32	-21	-34	-41	-29	-38	-23	-18	-20	-16	-23
Q	7	-13	-12	-13	-7	0	-7	-7	-5	-5	-7	-11	-8	-18	-25	-24	-22	-86	-56	-35	-19	-105	-15	-54	-108	-28
	8	-86	-108	-44	-18	-48	-12	-17	-23	-50	-91	-56	-230	-318	-248	-183	-270	-140	-200	-264	-340	-101	-324	-345	-156	-153
	9	-250	-327	-236	-224	-314	-253	-206	-189	-227	-350	-384	-356	-391	-285	-102	-96	-145	-159	-235	-315	-325	-207	-355	-247	-257
D	10	-187	-233	-181	-91	-114	-161	-113	-90	-138	-532	-327	-175	-227	-147	-35	-13	-257	-782	-744	-520	-181	-64	-513	-579	-267
D	11	-250	-276	-309	-271	-427	-296	-490	-459	-405	-301	-794	-559	-692	-441	-441	-436	-181	-220	-83	-56	-361	-403	-257	-315	-363
	12	-262	-326	-271	-128	-92	-125	-108	-95	-10	-23	-131	-217	-146	-80	-79	-86	-52	-157	-137	-62	-17	-18	-22	-20	-111
	13	-18	-19	-18	-16	-70	-154	-238	-239	-280	-203	-258	-223	-620	-196	-50	-80	-499	-304	-3	-9	-11	-19	-19	-20	-149
Q	14	-51	-71	-12	-7	-8	-6	-7	-4	-6	-14	-17	-19	-22	-17	-15	-11	-9	-5	-4	-9	-15	-23	-117	-40	-21
D	15	-17	-77	-93	-48	-188	-190	-208	-177	-299	-142	-650	-234	-145	-2039	-1379	-285	-241	-596	-287	-92	-61	-89	-230	-171	-331
	16	-53	-60	-62	-54	-133	-105	-236	-182	-81	-145	-357	-398	-413	-184	-213	-395	-82	-80	-252	-131	-103	-51	-53	-243	-169
	17	-164	-46	-38	-34	-60	-102	-217	-250	-208	-291	-181	-321	-518	-238	-274	-212	-57	-135	-195	-236	-323	-611	-196	-193	-212
	18	-169	-89	-26	-27	-33	-36	-75	-274	-466	-539	-386	-283	-406	-463	-304	-89	-229	-490	-421	-147	-92	-213	-131	-193	-233
	19	-429	-285	-231	-230	-141	-124	-73	-87	-27	-23	-24	-21	-9	-36	-31	-32	-33	-29	-21	-15	-14	-11	-15	-16	-82
D	20	-31	-152	-82	-21	-38	-81	-264	-607	-532	-333	-122	-625	-772	-373	-436	-231	-302	-212	-316	-399	-340	-490	-329	-409	-314
	21	-312	-306	-222	-292	-217	-121	-166	-134	-218	-397	-270	-271	-160	-189	-375	-385	-367	-281	-223	-288	-225	-434	-291	-130	-260
	22	-41	-18	-39	-83	-101	-288	-92	-24	-18	-78	-93	-268	-55	-25	-51	-232	-337	-235	-10	-5	-3	-3	-3	-9	-88
	23	-12	-15	-19	-11	-50	-128	-91	-41	-2	-13	-17	-24	-29	-27	-22	-64	-248	-187	-7	-2	-124	-116	-30	-21	-54
	24	-47	-35	-47	-97	-147	-182	-206	-90	-118	-83	-78	-91	-44	-42	-56	-119	-79	-44	-58	-82	-40	-13	-17	-22	-77
Q	25	-21	-17	-51	-14	-3	-18	-120	-113	-86	-38	-23	-26	-41	-52	-52	-89	-121	-96	-51	-240	-38	-14	-14	-17	-56
Q	26	-11	-20	-44	-37	-52	-17	-8	-7	-11	-21	-25	-27	-35	-37	-29	-19	-24	-27	-32	-40	-204	-82	-156	-225	-50
	27	-74	-25	-17	-8	-18	-84	-53	-10	-46	-30	-23	-28	-32	-36	-62	-175	-71	-54	-53	-219	-472	-283	-295	-193	-98
D	28	-138	-110	-242	-14	5	-1	1	-3	-3	-3	-22	-73	-679	-640	-486	-472	-159	-210	-306	-344	-308	-167	-443	-214	-210
	29	-138	-245	-294	-210	-167	-106	-101	-209	-150	-132	-221	-230	-163	-116	-50	-94	-319	-142	-206	-287	-102	-29	-41	-134	-162
	MEAN	-117	-112	-101	-73	-95	-104	-124	-136	-139	-162	-180	-181	-225	-231	-201	-171	-174	-193	-161	-172	-153	-151	-163	-151	-153
	5QMEAN	-29	-28	-29	-15	-13	-10	-30	-30	-25	-20	-17	-23	-30	-33	-30	-32	-55	-45	-30	-69	-77	-30	-72	-81	-36
	5DMEAN	-125	-170	-181	-89	-152	-146	-215	-267	-275	-262	-383	-333	-503	-728	-561	-287	-228	-404	-347	-282	-250	-243	-354	-338	-297

MARCH 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-167	-169	-62	-92	-69	-62	-101	-67	-91	-98	-122	-203	-209	-270	-312	-524	-535	-192	-72	-39	-43	-43	-39	-33	-151
	2	-29	-32	-34	-233	-181	-55	-79	-193	-196	-113	-181	-210	-100	-132	-231	-194	-151	-205	-122	-61	-280	-226	-153	-153	-148
	3	-83	-31	-23	-24	-34	-49	-36	-150	-238	-180	-163	-232	-203	-215	-298	-136	-230	-517	-590	-458	-283	-239	-256	-103	-199
	4	-135	-127	-47	-53	-151	-66	-83	-220	-249	-347	-351	-224	-166	-127	-213	-325	-363	-380	-249	-348	-302	-260	-388	-271	-227
	5	-199	-118	-26	-43	-228	-111	-41	-69	-229	-483	-478	-475	-385	-480	-194	-95	-37	-68	-143	-144	-302	-152	-155	-184	-202
	6	-98	-43	-30	-39	-23	-31	-33	-109	-129	-92	-109	-137	-119	-92	-76	-85	-69	-71	-163	-98	-92	-233	-143	-59	-91
Q	7	-52	-23	-53	-101	-115	-29	-17	-51	-150	-76	-90	-53	-61	-107	-69	-36	-95	-124	-73	-125	-94	-106	-102	-47	-77
Q	8	-59	-81	-13	-30	-34	-22	-10	-13	-11	-12	-19	-66	-30	-14	-19	-27	-38	-113	-77	-43	-87	-216	-58	-20	-46
Q	9	-11	-17	-48	-15	-66	-26	-7	-14	-34	-73	-42	-17	-16	-21	-20	-16	-19	-45	-47	-54	-39	-31	-24	-62	-32
	10	-104	-48	-30	-47	-217	-222	-72	-43	-51	-24	-10	-27	-185	-251	-429	-472	-264	-206	-151	-137	-120	-106	-106	-23	-139
	11	-24	-18	-58	-63	-136	-242	-151	-126	-73	-75	-21	-28	-25	-21	-18	-13	-15	-18	-8	-8	-16	-77	-113	-71	-59
	12	-41	-32	-25	-29	-30	-31	-29	-27	-26	-21	-129	-286	-266	-247	-263	-111	-163	-217	-264	-410	-385	-194	-59	-24	-138
Q	13	-13	-30	-132	-89	-162	-58	-18	-15	-31	-30	-24	-20	-19	-14	-12	-15	-13	-15	-9	-9	-13	-14	-37	-102	-37
D	14	-246	-138	-121	-104	-24	3	3	-8	-26	-136	-268	-129	-104	-253	-271	-254	-196	-457	-167	-156	-202	-343	-457	-248	-179
D	15	-181	-153	-120	-82	-157	-254	-310	-377	-323	-194	-375	-299	-594	-416	-122	-66	-138	-337	-544	-474	-364	-529	-199	-118	-280
D	16	-207	-299	-204	-300	-245	-343	-229	-252	-158	-231	-176	-279	-722	-599	-56	-53	-50	-77	-149	-256	-63	-367	-574	-438	-264
	17	-121	-122	-48	-60	-306	-223	-128	-87	-100	-45	-66	-102	-226	-191	-72	-48	-38	-83	-111	-183	-106	-76	-138	-203	-120
	18	-87	-33	-213	-100	-232	-166	-105	-129	-234	-154	-81	-48	-62	-55	-37	-69	-188	-282	-70	-19	-9	-20	-25	-53	-103
	19	-26	-45	-58	-92	-58	-41	-113	-300	-314	-208	-302	-332	-172	-105	-247	-107	-182	-375	-214	-62	-22	-34	-27	-35	-145
	20	-32	-80	-243	-446	-111	-22	-14	-24	-17	-25	-184	-677	-265	-304	-226	-64	-49	-27	-30	-124	-87	-74	-201	-175	-146
	21	-63	-72	-172	-123	-105	-114	-72	-121	-68	-100	-44	-42	-55	-145	-349	-284	-141	-149	-279	-190	-26	-21	-22	-25	-116
Q	22	-36	-81	-71	-33	-16	-32	-96	-44	-25	-24	-36	-113	-257	-186	-97	-125	-120	-30	-34	-72	-50	-57	-20	-23	-70
	23	-28	-26	-25	-24	-39	-21	-13	-14	-25	-20	-25	-59	-93	-118	-59	-163	-45	-15	-48	-133	-212	-302	-383	-128	-84
D	24	-94	-63	-66	-119	-167	-336	-387	-347	-263	-295	-162	-167	-372	-270	-306	-250	-177	-207	-175	-170	-396	-304	-16	-23	-214
	25	-42	-209	-324	-222	-87	-156	-142	-164	-275	-120	-47	-43	-423	-290	-65	-48	-305	-201	-195	-288	-201	-205	-245	-48	-181
	26	-28	-32	-29	-29	-52	-121	-192	-156	-59	-138	-601	-424	-326	-175	-187	-232	-199	-275	-382	-207	-19	-41	-213	-340	-186
	27	-390	-367	-234	-167	-131	-254	-208	-198	-79	-238	-221	-69	-43	-30	-138	-318	-372	-117	-240	-414	-460	-235	-269	-218	-225
	28	-67	-28	-48	-188	-363	-77	-101	-242	-229	-73	-24	-67	-203	-88	-27	-30	-31	-19	-213	-186	-56	-189	-253	-40	-118
	29	-25	-43	-348	-540	-346	-273	-162	-257	-310	-382	-319	-311	-233	-262	-293	-158	-31	-135	-307	-193	-84	-48	-342	-391	-242
D	30	-306	-517	-293	-193	-198	-342	-476	-202	-75	-40	-35	-211	-206	-95	-80	-488	-945	-757	-535	-435	-436	-153	-84	-33	-297
	31	-43	-62	-37	-76	-27	-116	-85	-232	-281	-70	-50	-82	-77	-197	-304	-125	-158	-419	-615	-532	-362	-260	-337	-530	-212
	MEAN	-98	-101	-104	-121	-133	-126	-113	-137	-141	-133	-153	-175	-201	-186	-164	-159	-173	-198	-202	-195	-168	-166	-175	-136	-152
5Q	MEAN	-35	-46	-63	-54	-79	-33	-30	-27	-50	-43	-42	-54	-77	-68	-43	-44	-57	-65	-48	-61	-57	-85	-48	-51	-52
5D	MEAN	-207	-234	-161	-160	-158	-254	-280	-237	-169	-179	-203	-217	-400	-327	-167	-222	-301	-367	-314	-299	-292	-339	-266	-172	-247

APRIL 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-430	-626	-299	-303	-230	-204	-129	-215	-382	-237	-172	-193	-298	-319	-258	-348	-95	-235	-485	-240	-150	-419	-162	-103	-272
	2	-313	-192	-86	-110	-33	-78	-253	-175	-69	-44	-99	-207	-73	-81	-185	-167	-44	-135	-256	-531	-363	-378	-321	-439	-193
	3	-180	-167	-132	-196	-229	-77	-139	-130	-172	-229	-201	-149	-132	-307	-314	-168	-118	-28	-11	-13	-12	-30	-130	-333	-150
	4	-319	-379	-352	-268	-229	-181	-139	-139	-132	-86	-104	-123	-126	-170	-219	-188	-168	-124	-46	-39	-33	-62	-196	-153	-166
D	5	-147	-180	-153	-169	-136	-131	-125	-109	-76	-67	-54	-69	-39	-38	-110	-305	-296	-220	-738	-907	-452	-207	-189	-245	-215
D	6	-87	-56	-126	-191	-78	-149	-66	-590	-675	-337	-227	-336	-455	-321	-226	-201	-318	-473	-144	-87	-352	-215	-260	-171	-256
	7	-49	-65	-73	-157	-173	-54	-64	-207	-223	-116	-209	-164	-103	-208	-285	-123	-43	-14	-11	-8	-11	-30	-16	-20	-101
Q	8	-59	-47	-129	-150	-142	-110	-33	-23	-32	-33	-29	-71	-212	-96	-34	-68	-71	-39	-24	-14	-13	-19	-21	-26	-63
Q	9	-33	-33	-29	-22	-22	-24	-28	-28	-33	-30	-32	-36	-43	-36	-30	-29	-31	-24	-12	-5	-11	-20	-74	-40	-29
	10	-52	-88	-82	-56	-47	-38	-138	-110	-82	-65	-72	-95	-99	-58	-44	-39	-56	-138	-315	-101	-39	-56	-93	-41	-84
	11	-35	-72	-113	-201	-92	-13	-34	-108	-43	-52	-131	-160	-94	-36	-24	-30	-14	-10	-6	-1	-6	-12	-17	-20	-55
	12	-23	-27	-22	-18	-14	-24	-28	-32	-26	-23	-19	-25	-10	-6	-17	-6	6	-14	-138	-116	-45	-212	-383	-300	-63
	13	-144	-146	-76	-375	-207	-80	-33	-38	-49	-115	-322	-334	-217	-240	-200	-311	-466	-289	-211	-57	-112	-412	-200	-100	-197
D	14	-144	-119	-315	-325	-209	-256	-78	-28	-32	-27	-127	-601	-466	-122	-77	-127	-269	-270	-197	-134	-31	-37	-143	-267	-183
	15	-74	-30	-18	-23	-20	-33	-70	-37	-76	-314	-298	-110	-110	-201	-211	-254	-223	-294	-320	-201	-135	-184	-331	-358	-164
	16	-222	-236	-155	-195	-222	-163	-44	-47	-175	-233	-154	-76	-83	-73	-100	-94	-107	-24	-54	-43	-218	-623	-323	-220	-162
	17	-140	-62	-29	-43	-142	-126	-176	-189	-130	-157	-376	-185	-49	-160	-230	-82	-139	-282	-420	-109	-17	-95	-184	-69	-150
	18	-71	-173	-151	-56	-55	-190	-234	-167	-100	-221	-147	-192	-112	-32	-39	-103	-140	-118	-191	-78	-58	-50	-31	-112	-118
Q	19	-22	-21	-16	-11	-17	-21	-24	-27	-28	-34	-38	-39	-41	-38	-26	-34	-77	-64	-17	-8	-7	-15	-22	-28	-28
Q	20	-25	-25	-21	-15	-18	-25	-26	-26	-32	-22	-26	-26	-42	-40	-25	-22	-21	-14	-6	-8	-11	-20	-24	-28	-23
Q	21	-26	-23	-17	-19	-25	-32	-39	-31	-34	-32	-37	-43	-146	-154	-88	-59	-23	-17	-4	-8	-12	-19	-16	-18	-38
	22	-76	-86	-79	-80	-47	-30	-108	-256	-210	-109	-36	-26	-30	-31	-162	-249	-249	-139	-44	-165	-231	-153	-147	-119	-119
	23	-302	-489	-228	-269	-324	-276	-206	-59	-36	-150	-42	-55	-140	-79	-105	-84	-72	-63	-204	-284	-243	-157	-137	-229	-176
	24	-305	-164	-216	-335	-289	-186	-25	-5	-23	-25	-55	-76	-55	-30	-73	-189	-122	-143	-84	-23	-24	-45	-26	-20	-106
	25	-29	-28	-24	-11	-13	-46	-68	-38	-58	-23	-29	-28	-26	-33	-63	-173	-284	-185	-13	-39	-212	-374	-274	-298	-99
D	26	-422	-318	-207	-97	-132	-253	-205	-137	-145	-70	-106	-334	-436	-312	-331	-379	-192	-111	-253	-474	-508	-335	-419	-322	-271
	27	-465	-152	-37	-135	-119	-35	-27	-187	-489	-361	-59	-16	-28	-46	-38	-57	-109	-44	-124	-378	-261	-171	-157	-70	-149
	28	-58	-253	-385	-208	-370	-160	-176	-58	-40	-52	-210	-35	-24	-27	-77	-228	-137	-81	-133	-155	-216	-200	-304	-163	-156
	29	-226	-101	-122	-85	-231	-204	-269	-331	-357	-123	-44	-46	-246	-240	-195	-243	-292	-96	-32	-21	-154	-286	-429	-335	-195
	30	-151	-79	-60	-82	-19	-21	-18	-87	-204	-138	-64	-34	-18	-12	-39	-84	-177	-213	-111	-14	-27	-159	-256	-129	-91
	MEAN	-154	-148	-125	-140	-128	-107	-100	-121	-139	-118	-117	-129	-132	-118	-128	-148	-145	-130	-153	-142	-132	-167	-176	-159	-136
5Q	MEAN	-33	-30	-42	-43	-45	-42	-30	-28	-32	-30	-32	-43	-97	-73	-41	-42	-45	-32	-13	-9	-11	-19	-31	-28	-36
5D	MEAN	-246	-260	-220	-217	-157	-199	-121	-216	-262	-148	-137	-307	-339	-222	-200	-272	-234	-262	-363	-368	-299	-243	-235	-222	-239

MAY 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-142	-59	-26	-24	-69	-37	-41	-48	-90	-144	-121	-141	-132	-213	-371	-559	-256	-453	-476	-186	-242	-404	-350	-428	-209
	2	-212	-235	-192	-131	-167	-120	-66	-130	-132	-295	-364	-246	-170	-152	-205	-47	-16	-11	-23	-7	-10	-22	-30	-57	-127
	3	-108	-327	-74	-130	-201	-351	-164	-54	-60	-104	-71	-69	-144	-81	-78	-161	-85	-31	-22	-13	-11	-23	-34	-39	-101
Q	4	-33	-50	-132	-106	-34	-47	-32	-53	-87	-93	-68	-70	-60	-56	-60	-74	-131	-171	-121	-40	-69	-31	-28	-25	-70
Q	5	-23	-32	-23	-59	-40	-48	-45	-52	-35	-30	-108	-102	-44	-58	-67	-47	-88	-85	-31	-15	-36	-24	-28	-28	-48
Q	6	-26	-24	-20	-28	-32	-39	-41	-32	-24	-24	-27	-37	-36	-38	-18	-27	-8	-28	-16	-23	-21	-30	-30	-43	-28
D	7	-32	-40	-40	-37	-100	-536	-532	-494	-400	-569	-384	-330	-735	-696	-801	-394	-321	-201	-48	-54	-137	-291	-186	-265	-318
	8	-176	-53	-34	-54	-38	-97	-86	-69	-63	-65	-161	-170	-48	-54	-38	-56	-94	-177	-190	-216	-140	-91	-166	-165	-104
D	9	-246	-429	-509	-509	-337	-300	-202	-203	-220	-218	-316	-403	-402	-388	-411	-373	-333	-368	-293	-309	-444	-316	-168	-119	-326
	10	-120	-81	-50	-132	-238	-98	-89	-114	-107	-113	-129	-125	-94	-66	-50	-64	-65	-64	-55	-45	-48	-42	-46	-54	-87
	11	-55	-108	-241	-244	-118	-111	-151	-67	-313	-310	-124	-110	-78	-124	-190	-103	-110	-54	-44	-32	-66	-123	-193	-352	-143
D	12	-517	-438	-412	-408	-217	-379	-264	-92	-77	-124	-475	-355	-224	-228	-116	-104	-73	-51	-75	-64	-330	-296	-63	-92	-228
	13	-144	-460	-150	-65	-171	-217	-165	-109	-82	-163	-332	-235	-180	-173	-122	-188	-207	-274	-117	-110	-147	-87	-80	-63	-169
	14	-70	-220	-298	-180	-86	-93	-80	-73	-56	-52	-152	-152	-221	-267	-289	-182	-84	-124	-254	-236	-64	-55	-51	-54	-142
	15	-108	-127	-220	-112	-93	-163	-232	-261	-127	-60	-119	-34	-25	-34	-40	-44	-57	-57	-61	-54	-54	-97	-222	-205	-109
	16	-198	-209	-217	-172	-259	-89	-183	-217	-155	-72	-161	-318	-410	-350	-371	-356	-397	-305	-269	-225	-95	-43	-30	-37	-214
	17	-36	-36	-81	-139	-197	-145	-282	-139	-97	-152	-167	-74	-37	-100	-289	-241	-297	-438	-504	-170	-87	-258	-128	-75	-174
	18	-79	-102	-194	-148	-116	-105	-118	-239	-240	-106	-104	-137	-37	-11	-87	-511	-680	-418	-291	-123	-42	-255	-256	-122	-190
	19	-79	-62	-82	-150	-113	-34	-33	-108	-323	-138	-60	-97	-193	-158	-99	-115	-225	-156	-269	-188	-154	-396	-176	-51	-144
D	20	-163	-542	-571	-252	-254	-69	-144	-342	-467	-417	-387	-306	-249	-211	-83	-118	-232	-270	-52	-37	-102	-166	-348	-378	-257
D	21	-323	-283	-137	-96	-54	-37	-34	-169	-246	-179	-101	-115	-243	-350	-415	-591	-570	-704	-592	-505	-491	-445	-413	-192	-304
	22	-279	-324	-564	-492	-331	-429	-313	-171	-146	-51	-147	-186	-140	-135	-121	-147	-244	-242	-116	-21	-31	-30	-186	-147	-208
	23	-65	-225	-229	-41	-33	-23	-39	-36	-49	-73	-87	-90	-59	-166	-132	-159	-321	-461	-517	-238	-112	-205	-369	-545	-178
	24	-557	-451	-476	-260	-103	-205	-349	-388	-210	-155	-225	-155	-191	-84	-83	-55	-121	-139	-188	-268	-43	-106	-78	-151	-210
	25	-120	-24	-14	-14	-51	-51	-35	-30	-83	-212	-201	-139	-40	-36	-68	-278	-356	-188	-147	-175	-210	-103	-61	-33	-111
Q	26	-38	-44	-127	-156	-198	-102	-31	-13	-22	-44	-96	-41	-33	-60	-40	-89	-107	-38	-20	-20	-32	-42	-34	-30	-61
Q	27	-17	-10	-11	-21	-23	-28	-31	-36	-32	-29	-25	-22	-12	-9	-12	-9	-1	-6	-39	-60	-20	-33	-54	-83	-26
	28	-42	-34	-32	-40	-30	-43	-98	-92	-56	-40	-35	-39	-49	-54	-55	-76	-166	-180	-227	-293	-123	-117	-114	-70	-88
	29	-72	-163	-240	-224	-187	-152	-160	-248	-240	-201	-139	-96	-112	-120	-152	-220	-157	-154	-220	-88	-77	-25	-30	-59	-148
	30	-99	-73	-128	-175	-71	-33	-39	-205	-342	-149	-49	-95	-43	-233	-337	-109	-41	-46	-13	-34	-79	-293	-166	-150	-125
	31	-207	-244	-259	-271	-145	-82	-78	-44	-188	-246	-155	-253	-319	-197	-49	-74	-136	-236	-98	-31	-60	-57	-59	-59	-148
	MEAN	-141	-178	-187	-157	-132	-138	-135	-140	-154	-149	-164	-153	-155	-158	-170	-180	-193	-198	-174	-125	-116	-145	-135	-135	-155
5Q	MEAN	-27	-32	-63	-74	-65	-53	-36	-37	-40	-44	-65	-54	-37	-44	-41	-49	-67	-66	-45	-33	-36	-32	-35	-42	-47
5D	MEAN	-256	-346	-334	-260	-192	-264	-235	-260	-282	-301	-333	-302	-371	-375	-365	-316	-306	-319	-212	-194	-303	-303	-236	-209	-287

JUNE 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-100	-69	-58	-184	-111	-58	-40	-64	-217	-213	-58	-243	-184	-282	-310	-271	-243	-456	-248	-95	-73	-227	-434	-178
	2	-285	-311	-267	-268	-416	-387	-253	-107	-52	-88	-155	-140	-98	-130	-243	-192	-96	-77	-281	-328	-227	-193	-205	-245	-210
	3	-211	-252	-139	-76	-96	-143	-163	-111	-51	-46	-91	-232	-181	-191	-152	-206	-406	-420	-61	-57	-74	-249	-107	-109	-159
	4	-179	-235	-220	-139	-96	-144	-45	-48	-182	-165	-71	-70	-126	-87	-167	-238	-156	-162	-194	-70	-134	-72	-287	-211	-146
Q	5	-77	-53	-37	-28	-122	-158	-126	-42	-32	-35	-34	-73	-40	-55	-83	-71	-84	-189	-141	-73	-101	-100	-33	-25	-76
Q	6	-16	-14	-16	-21	-26	-30	-65	-48	-32	-39	-73	-129	-221	-251	-106	-111	-59	-45	-20	-20	-46	-40	-47	-39	-63
	7	-23	-56	-80	-101	-86	-61	-230	-263	-142	-75	-95	-247	-313	-145	-38	-146	-291	-192	-134	-36	-8	-10	-20	-17	-117
	8	-34	-26	-15	-50	-110	-91	-56	-48	-48	-44	-50	-43	-85	-57	-39	-249	-268	-213	-33	-153	-53	-37	-52	-69	-80
	9	-24	-26	-50	-24	-193	-194	-118	-54	-43	-27	-32	-40	-31	-20	-19	-15	-61	-144	-311	-296	-306	-379	-399	-248	-127
D	10	-310	-573	-476	-486	-355	-464	-541	-527	-418	-206	-145	-440	-624	-236	-206	-327	-249	-86	-48	-61	-140	-381	-826	-650	-366
D	11	-493	-736	-682	-465	-760	-435	-132	-174	-562	-507	-440	-385	-237	-83	-289	-490	-166	-46	-133	-331	-566	-287	-271	-463	-381
D	12	-385	-362	-355	-455	-616	-367	-346	-457	-428	-450	-603	-555	-508	-388	-626	-428	-468	-454	-321	-303	-252	-318	-276	-158	-412
D	13	-176	-319	-465	-613	-604	-537	-610	-410	-629	-740	-630	-564	-743	-713	-643	-831	-720	-697	-523	-448	-460	-384	-124	-45	-526
D	14	-127	-224	-116	-43	-34	-58	-127	-202	-667	-664	-525	-387	-607	-415	-383	-399	-142	-206	-340	-224	-112	-163	-157	-164	-270
	15	-90	-23	-23	-13	-44	-68	-77	-255	-194	-66	-118	-166	-104	-62	-38	-19	-42	-111	-71	-134	-122	-38	-82	-142	-88
	16	-71	-26	-38	-28	-32	-31	-43	-42	-38	-49	-143	-261	-203	-201	-131	-254	-294	-286	-227	-147	-193	-509	-255	-251	-156
	17	-262	-315	-38	-137	-125	-284	-530	-323	-401	-329	-379	-104	-55	-118	-113	-32	-46	-45	-63	-119	-128	-90	-90	-35	-173
	18	-61	-118	-135	-99	-91	-43	-194	-394	-386	-138	-100	-213	-203	-165	-174	-61	-259	-380	-437	-439	-205	-170	-85	-198	-198
	19	-216	-384	-298	-193	-498	-410	-315	-369	-285	-278	-258	-231	-189	-105	-276	-122	-281	-309	-255	-151	-381	-401	-408	-271	-287
	20	-187	-89	-80	-84	-131	-183	-50	-42	-28	-28	-26	-34	-37	-29	-25	-42	-52	-53	-21	-35	-63	-80	-51	-29	-62
Q	21	-22	-19	-17	-18	-23	-25	-25	-25	-32	-32	-36	-36	-20	-16	-8	-11	-19	-17	-12	2	-2	-10	-18	-21	-19
	22	-21	-13	-19	-26	-28	-147	-306	-368	-461	-439	-386	-462	-355	-234	-52	-30	-25	-27	-30	-42	-81	-159	-174	-48	-164
	23	-71	-78	-133	-245	-175	-200	-260	-312	-195	-132	-103	-87	-71	-17	-110	-165	-94	-33	-41	-42	-53	-68	-76	-69	-118
Q	24	-32	-25	-33	-36	-29	-57	-41	-28	-32	-40	-38	-32	-29	-21	-17	-16	-8	-10	-10	-22	-44	-51	-33	-15	-29
Q	25	-18	-23	-19	-22	-35	-33	-27	-49	-38	-39	-32	-23	-29	-26	-15	-21	-30	-41	-20	-62	-28	-17	-21	-62	-30
	26	-190	-419	-53	-15	-21	-39	-40	-40	-31	-33	-48	-77	-146	-132	-51	-135	-126	-20	-21	-29	-27	-109	-232	-78	-88
	27	-44	-54	-53	-30	-152	-177	-115	-111	-44	-42	-91	-67	-347	-144	-69	-79	-149	-154	-57	-87	-110	-151	-134	-124	-108
	28	-231	-229	-43	-29	-25	-30	-41	-46	-38	-39	-35	-30	-37	-85	-93	-120	-186	-118	-102	-116	-107	-130	-41	-50	-83
	29	-58	-72	-27	-46	-79	-109	-80	-45	-38	-44	-38	-30	-30	-27	-32	-79	-178	-132	-51	-151	-397	-178	-234	-187	-98
	30	-41	-73	-410	-334	-153	-174	-80	-66	-135	-72	-48	-52	-64	-169	-106	-136	-134	-206	-131	-207	-250	-189	-268	-391	-162
	MEAN	-133	-175	-147	-139	-178	-173	-170	-168	-191	-170	-168	-176	-199	-150	-153	-178	-179	-171	-152	-148	-159	-168	-174	-162	-166
5Q	MEAN	-33	-27	-24	-25	-47	-61	-57	-38	-33	-37	-43	-59	-68	-74	-46	-46	-40	-60	-41	-35	-44	-44	-30	-32	-43
5D	MEAN	-298	-443	-419	-412	-474	-372	-351	-354	-541	-513	-469	-466	-544	-367	-429	-495	-349	-298	-273	-273	-306	-307	-331	-296	-391

JULY 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-247	-227	-200	-277	-217	-174	-157	-210	-263	-92	-129	-189	-226	-196	-125	-94	-76	-62	-185	-147	-60	-34	-85	-146	-159
	2	-108	-307	-141	-59	-64	-80	-97	-178	-209	-292	-259	-142	-81	-98	-187	-117	-152	-122	-110	-101	-23	-39	-86	-288	-139
D	3	-138	-226	-414	-97	-225	-424	-346	-387	-461	-50	-138	-84	-104	-92	-46	-16	-8	-92	-61	-122	-162	-58	-53	-38	-160
	4	-82	-89	-65	-158	-203	-146	-193	-437	-386	-187	-117	-119	-174	-165	-46	-79	-99	-87	-120	-335	-182	-96	-56	-31	-153
	5	-107	-221	-182	-176	-146	-26	-17	-20	-97	-278	-167	-54	-85	-36	-22	-76	-147	-48	-62	-56	-37	-14	-20	-17	-88
	6	-28	-52	-167	-137	-68	-183	-123	-47	-44	-175	-196	-131	-61	-29	-40	-31	-18	-9	-34	-67	-90	-34	-25	-34	-77
	7	-26	-36	-70	-44	-38	-81	-234	-281	-275	-266	-83	-39	-33	-17	-21	-83	-112	-39	-49	-23	-30	-25	-38	-26	-82
	8	-38	-37	-45	-150	-164	-232	-212	-159	-169	-270	-125	-91	-49	-9	-17	-44	-27	-6	-25	-21	-69	-51	-28	-25	-86
Q	9	-18	-33	-30	-39	-119	-225	-188	-128	-78	-73	-26	-40	-23	-17	-19	-41	-48	-23	-19	-23	-30	-27	-33	-46	-56
D	10	-80	-67	-100	-117	-332	-271	-262	-190	-187	-373	-326	-285	-615	-645	-153	-64	-68	-112	-438	-480	-321	-151	-486	-372	-271
	11	-294	-195	-294	-216	-167	-101	-182	-180	-82	-31	-27	-51	-114	-70	-93	-180	-190	-213	-203	-254	-274	-244	-306	-371	-181
	12	-397	-424	-359	-165	-139	-60	-22	-31	-34	-32	-32	-27	-24	-25	-9	-50	-254	-110	-27	-26	-28	-36	-34	-27	-99
D	13	-33	-51	-44	-56	-157	-250	-185	-95	-54	-41	-45	-35	-24	-18	-26	-22	-325	-572	-552	-568	-520	-434	-367	-351	-201
D	14	-353	-683	-687	-498	-423	-107	-34	-69	-55	-43	-112	-148	-102	-61	-86	-75	-62	-128	-393	-285	-70	-68	-89	-86	-197
	15	-52	-136	-229	-104	-138	-164	-72	-24	-45	-38	-56	-100	-12	-20	-13	-9	-13	-21	-68	-66	-119	-126	-141	-138	-79
	16	-210	-204	-48	-29	-69	-252	-61	-40	-44	-109	-80	-32	-23	-44	-203	-39	-224	-224	-29	-29	-28	-38	-47	-51	-90
	17	-38	-35	-34	-38	-33	-41	-41	-28	-30	-31	-106	-135	-294	-136	-7	-11	-14	-16	-43	-102	-179	-112	-32	-48	-66
	18	-67	-158	-242	-297	-261	-102	-90	-47	-37	-39	-79	-229	-210	-209	-309	-150	-30	-104	-108	-19	-9	-7	-18	-59	-120
	19	-64	-37	-48	-185	-207	-117	-98	-87	-87	-146	-62	-161	-108	-47	-54	-98	-223	-21	2	-30	-101	-400	-251	-300	-122
Q	20	-278	-91	-60	-55	-39	-32	-24	-23	-22	-30	-36	-32	-27	-17	-20	-22	-24	-28	-39	-52	-67	-69	-36	-34	-48
	21	-50	-64	-28	-35	-35	-38	-24	-41	-93	-39	-29	-39	-92	-145	-64	-41	-77	-99	-325	-61	-31	-78	-274	-230	-85
D	22	-160	-320	-211	-61	-46	-145	-177	-202	-386	-452	-428	-310	-121	-167	-94	-149	-94	-120	-290	-278	-183	-137	-141	-80	-198
	23	-100	-48	-106	-247	-208	-149	-185	-326	-227	-11	-49	-70	-80	-67	-51	-197	-63	-9	-28	-9	-31	-54	-67	-90	-103
Q	24	-40	-37	-36	-36	-21	-76	-152	-133	-51	-26	-43	-40	-38	-31	-34	-40	-25	-23	-27	-50	-59	-52	-47	-43	-48
	25	-31	-39	-42	-34	-49	-89	-162	-75	-25	-27	-51	-62	-26	-25	-75	-108	-50	-92	-44	-26	-30	-44	-46	-37	-54
	26	-41	-39	-58	-142	-239	-122	-17	-47	-42	-139	-229	-137	-118	-152	-62	-88	-142	-211	-108	-223	-140	-222	-325	-249	-137
	27	-355	-333	-233	-230	-202	-127	-169	-108	-152	-161	-102	-182	-192	-255	-126	-102	-45	-40	-58	-133	-106	-55	-58	-55	-149
	28	-158	-147	-126	-104	-132	-59	-23	-29	-23	-22	-78	-77	-32	-11	-72	-201	-243	-145	-235	-183	-60	-32	-46	-173	-101
Q	29	-207	-199	-172	-38	-68	-181	-86	-22	-20	-26	-26	-29	-37	-28	-41	-44	-20	-58	-35	-62	-34	-29	-64	-70	-67
	30	-53	-56	-41	-85	-20	-35	-37	-35	-30	-27	-24	-25	-26	-17	-44	-79	-102	-62	-72	-27	-185	-192	-81	-71	-59
Q	31	-80	-151	-69	-36	-96	-99	-54	-102	-36	-11	-47	-173	-85	-61	-75	-63	-42	-37	-20	-34	-40	-50	-42	-31	-64
	MEAN	-127	-153	-149	-127	-140	-135	-120	-122	-121	-114	-107	-105	-104	-94	-72	-78	-97	-95	-123	-126	-106	-97	-110	-117	-114
	5Q MEAN	-125	-102	-73	-41	-69	-123	-101	-82	-41	-33	-36	-63	-42	-31	-38	-42	-32	-34	-28	-48	-46	-45	-44	-45	-57
	5D MEAN	-153	-269	-291	-166	-237	-239	-201	-189	-229	-192	-210	-172	-193	-197	-81	-65	-111	-205	-347	-347	-251	-170	-227	-185	-205

AUGUST 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-37	-43	-46	-47	-50	-60	-25	-30	-202	-193	-149	-35	-33	-28	-31	-96	-122	-62	-36	-19	-33	-44	-35	-31	-62
Q	2	-31	-39	-43	-49	-45	-36	-35	-37	-30	-28	-52	-201	-81	-49	-43	-33	-39	-21	-19	-21	-43	-39	-32	-38	-45
	3	-46	-64	-189	-321	-380	-156	-92	-259	-230	-75	-43	-121	-36	-20	-2	-15	-96	-147	-42	-33	-34	-30	-43	-32	-104
	4	-43	-43	-46	-31	-27	-117	-37	-19	-22	-28	-25	-28	-24	-17	-10	-5	-11	-3	-4	-14	-23	-47	-28	-54	-30
	5	-44	-79	-37	-48	-243	-88	-24	-27	-30	-167	-293	-109	-236	-278	-161	-174	-217	-25	3	0	-21	-80	-125	-148	-110
	6	-44	-81	-163	-396	-287	-122	-87	-52	-35	-57	-36	-60	-93	-72	-74	-67	-13	-50	-153	-135	-181	-106	-42	-78	-103
	7	-255	-415	-367	-126	-79	-293	-213	-120	-103	-120	-78	-278	-353	-236	-178	-167	-200	-40	-34	-68	-44	-34	-67	-99	-165
	8	-318	-371	-318	-55	-318	-169	-155	-275	-167	-17	-23	-27	-27	-89	-64	-38	-16	-36	-13	-30	-101	-96	-155	-172	-127
	9	-194	-201	-223	-56	-57	-72	-158	-61	-28	-33	-36	-37	-117	-36	-20	-58	-69	-397	-167	-164	-263	-137	-175	-188	-122
	10	-91	-138	-64	-51	-35	-102	-227	-95	-42	-168	-142	-63	-28	-35	-38	-53	-120	-148	-27	-33	-110	-188	-186	-142	-97
	11	-100	-258	-180	-78	-103	-166	-160	-24	-19	-29	-35	-32	-22	-21	-18	-17	-43	-33	-12	-54	-20	-22	-28	-27	-63
	12	-47	-179	-64	-34	-28	-33	-75	-67	-28	-31	-53	-68	-55	-32	-46	-97	-94	-25	-26	-145	-130	-30	-36	-25	-60
	13	-25	-31	-32	-26	-30	-40	-31	-32	-27	-36	-38	-38	-33	-30	-59	-172	-201	-286	-96	-88	-233	-113	-149	-304	-90
D	14	-385	-204	-264	-230	-160	-227	-325	-280	-354	-212	-310	-324	-252	-155	-229	-89	-81	-186	-478	-248	-131	-239	-464	-301	-255
D	15	-130	-110	-166	-314	-432	-182	-139	-377	-277	-491	-150	-215	-362	-366	-361	-419	-441	-337	-322	-147	-220	-350	-262	-241	-285
D	16	-393	-227	-61	-50	-371	-356	-192	-212	-112	-131	-155	-86	-89	-222	-470	-713	-427	-550	-381	-203	-555	-492	-90	-82	-276
D	17	-579	-250	-141	-459	-461	-258	-93	-214	-92	-461	-165	-239	-629	-849	-685	-608	-364	-205	-214	-124	-217	-289	-55	-204	-326
	18	-229	-72	-105	-241	-484	-374	-148	-281	-352	-295	-278	-110	-181	-313	-399	-394	-163	-225	-244	-163	-266	-287	-135	-194	-247
	19	-403	-211	-159	-143	-136	-145	-142	-128	-259	-329	-284	-167	-41	-38	-41	-51	-145	-307	-142	-35	-36	-31	-34	-28	-143
	20	-43	-41	-47	-39	-30	-30	-24	-27	-80	-49	-70	-61	-71	-55	-150	-264	-289	-144	-30	-54	-79	-61	-84	-122	-81
	21	-76	-65	-55	-61	-145	-122	-69	-154	-81	-25	-35	-35	-33	-49	-39	-32	-43	-44	-86	-86	-43	-37	-32	-43	-62
	22	-40	-30	-26	-25	-27	-25	-29	-26	-35	-36	-39	-138	-104	-41	-40	-46	-27	-32	-37	-33	-33	-50	-260	-330	-63
	23	-180	-190	-231	-252	-317	-123	-27	-99	-134	-98	-67	-80	-94	-109	-90	-89	-106	-137	-135	-201	-193	-113	-177	-129	-140
D	24	-66	-158	-76	-25	-73	-368	-409	-154	-276	-290	-221	-310	-61	-45	-138	-147	-149	-145	-147	-84	-73	-239	-94	-60	-159
	25	-55	-43	-35	-28	-26	-28	-27	-30	-32	-34	-27	-20	-26	-27	-26	-29	-37	-38	-14	-83	-129	-74	-41	-38	-39
	26	-33	-33	-27	-26	-32	-25	-28	-34	-77	-122	-30	-25	-32	-103	-181	-113	-55	-27	-90	-55	-35	-34	-37	-38	-54
	27	-33	-38	-125	-90	-14	-16	-20	-59	-30	-31	-58	-57	-21	-27	-34	-35	-26	-19	-20	-54	-61	-25	-22	-20	-39
Q	28	-23	-30	-27	-22	-45	-77	-19	-24	-29	-42	-37	-36	-29	-25	-27	-36	-28	-23	-27	-67	-96	-38	-30	-28	-36
Q	29	-29	-28	-24	-24	-25	-24	-24	-23	-36	-41	-43	-32	-28	-58	-36	-51	-29	-21	-20	-34	-37	-40	-36	-32	-32
Q	30	-25	-40	-47	-30	-28	-27	-23	-24	-33	-40	-29	-20	-36	-21	-19	-19	-22	-24	-28	-28	-23	-29	-25	-17	-27
	31	-11	-27	-52	-94	-94	-48	-8	-20	-24	-30	-41	-216	-365	-380	-432	-545	-474	-291	-144	-261	-192	-64	-85	-74	-166
	MEAN	-130	-121	-112	-112	-148	-126	-99	-105	-106	-121	-93	-104	-116	-123	-134	-151	-134	-130	-103	-89	-118	-111	-99	-107	-116
	5Q MEAN	-30	-36	-37	-34	-39	-45	-25	-28	-66	-69	-62	-65	-41	-36	-31	-47	-48	-30	-26	-34	-47	-38	-32	-29	-40
	5D MEAN	-311	-190	-146	-216	-299	-278	-232	-247	-222	-317	-200	-229	-279	-327	-377	-395	-292	-285	-308	-161	-239	-322	-193	-178	-260

SEPTEMBER 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-71	-139	-220	-111	-196	-89	-113	-106	-85	-169	-345	-238	-322	-259	-117	-61	-102	-65	-28	-2	-3	-11	-24	-90	-124
	2	-129	-69	-21	-20	-12	-6	-72	-43	-191	-265	-530	-234	-173	-247	-107	-86	-158	-172	-205	-84	-27	-69	-55	-91	-128
	3	-81	-115	-104	-13	-48	-32	-100	-33	-45	-131	-113	-123	-73	-25	-29	-96	-395	-126	-14	-144	-150	-345	-71	-33	-102
	4	-244	-102	-48	-207	-246	-61	-12	-34	-7	-86	-132	-400	-359	-266	-347	-279	-127	-37	-54	-145	-90	-68	-212	-25	-159
	5	-7	-26	-43	-67	-105	-280	-259	-74	-30	-135	-117	-171	-221	-147	-31	-45	-68	-85	-24	-55	-191	-122	-185	-214	-113
	6	-297	-112	-140	-92	-83	-175	-273	-210	-57	-18	-22	-24	-22	-86	-34	-110	-139	-272	-32	-13	-122	-511	-336	-344	-147
	7	-192	-34	-18	-12	-12	-14	-12	-16	-18	-22	-21	-33	-33	-23	-35	-52	-247	-160	-269	-306	-304	-239	-395	-460	-122
D	8	-482	-717	-365	-379	-350	-290	-490	-513	-423	-774	-377	-585	-564	-319	-356	-656	-594	-504	-211	-47	-32	-16	-21	-28	-379
	9	-368	-287	-277	-132	-198	-161	-27	-20	-39	-43	-66	-196	-194	-15	-45	-87	-103	-171	-130	-73	-45	-26	-32	-30	-115
	10	-57	-117	-154	-145	-63	-20	-26	-34	-23	-19	-29	-221	-101	-74	-53	-200	-229	-132	-46	-11	-25	-63	-55	-50	-81
	11	-120	-180	-195	-72	-189	-108	-47	-24	-51	-56	-29	-39	-61	-27	-23	-24	-27	-39	-103	-25	-20	-28	-27	-26	-64
	12	-20	-14	-61	-202	-133	-82	-95	-268	-260	-219	-250	-151	-253	-275	-597	-294	-193	-201	-335	-338	-151	-77	-182	-311	-207
D	13	-449	-432	-368	-244	-192	-286	-249	-152	-46	-42	-125	-531	-431	-333	-332	-487	-490	-387	-538	-356	-55	-106	-364	-254	-303
D	14	-346	-429	-494	-632	-141	-22	-175	-397	-266	-434	-523	-369	-607	-629	-241	-360	-378	-265	-109	-127	-363	-473	-145	-115	-335
D	15	-237	-316	-499	-353	-322	-158	-171	-172	-155	-52	-91	-338	-315	-247	-266	-675	-328	-386	-525	-200	-101	-128	-142	-348	-272
	16	-242	-164	-223	-423	-274	-185	-130	-110	-117	-130	-166	-85	-129	-119	-106	-163	-27	-91	-141	-68	-77	-105	-57	-27	-140
	17	-70	-69	-110	-16	-104	-36	-54	-119	-130	-61	-132	-75	-90	-66	-41	-15	-33	-58	-144	-66	-30	-17	-17	-19	-66
Q	18	-21	-20	-18	-18	-59	-71	-6	-10	-23	-29	-32	-32	-27	-25	-30	-88	-127	-155	-85	-15	-13	-18	-28	-102	-44
	19	-79	-16	-51	-212	-431	-104	-113	-248	-142	-410	-84	-18	-29	-17	-41	-139	-94	-28	-22	-17	-12	-26	-29	-30	-100
	20	-15	-44	-122	-304	-69	-14	-21	-16	-17	-11	-14	-13	-10	-13	-17	-18	-23	-20	-56	-114	-107	-68	-24	-19	-48
	21	-45	-19	-12	-9	-41	-205	-264	-92	-30	-23	-17	-23	-144	-263	-95	-284	-537	-159	-13	-65	-84	-16	-9	-9	-102
	22	-91	-119	-11	-4	-4	-8	-11	-23	-26	-29	-26	-95	-258	-253	-204	-134	-65	-17	-24	-23	-223	-276	-436	-171	-105
D	23	-78	-278	-490	-537	-168	-21	-96	-115	-192	-419	-141	-59	-80	-289	-646	-745	-195	-90	-23	-20	-13	-18	-24	-25	-199
Q	24	-34	-15	-6	-3	-5	-6	-10	-13	-20	-26	-25	-25	-27	-21	-30	-31	-31	-19	-22	-221	-134	-19	-15	-15	-32
Q	25	-13	-12	-16	-18	-11	-10	-13	-15	-19	-29	-27	-29	-31	-21	-25	-45	-72	-51	-19	-13	-25	-38	-35	-31	-26
Q	26	-24	-42	-17	-19	-13	-11	-12	-85	-103	-20	-17	-24	-32	-21	-30	-183	-175	-65	-22	-19	-27	-29	-20	-14	-43
Q	27	-12	-11	-5	-8	-58	-51	-11	-11	-15	-22	-31	-30	-42	-32	-25	-28	-31	-64	-16	-12	-15	-18	-13	-5	-24
	28	-5	-8	-38	-12	-10	-4	-5	-20	-30	-77	-64	-208	-78	-57	-93	-128	-204	-74	-50	-203	-104	-143	-26	-12	-69
	29	-13	-126	-111	-10	-51	-257	-136	-63	-47	-66	-63	-25	-23	-15	-19	-52	-137	-138	-212	-155	-298	-206	-22	-28	-95
	30	-20	-11	-8	-7	-9	-8	-10	-12	-9	-14	-62	-85	-93	-50	-26	-133	-248	-34	-6	-187	-431	-201	-179	-237	-87
	MEAN	-129	-135	-142	-143	-120	-93	-101	-102	-87	-128	-122	-149	-161	-141	-135	-190	-186	-136	-116	-104	-109	-116	-106	-105	-127
5Q	MEAN	-21	-20	-12	-13	-29	-30	-10	-27	-36	-25	-26	-28	-32	-24	-28	-75	-87	-71	-33	-56	-43	-24	-22	-33	-34
5D	MEAN	-318	-434	-447	-429	-235	-155	-237	-270	-216	-344	-251	-376	-399	-363	-368	-585	-397	-326	-281	-150	-114	-148	-139	-154	-298

OCTOBER 1968 AL INDICES

AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-395	-350	-166	-184	-30	-49	-39	-26	-62	-194	-161	-20	-32	-60	-184	-64	-109	-348	-433	-254	-158	-317	-234	-219	-170
D	2	-356	-686	-245	-58	-271	-538	-441	-66	-41	-179	-915	-755	-477	-486	-598	-396	-200	-98	-295	-159	-49	-101	-221	-313	-331
	3	-294	-818	-597	-252	-203	-371	-242	-397	-515	-534	-211	-33	-20	-106	-38	-22	-26	-39	-30	-13	-26	-18	-15	-15	-201
	4	-18	-16	-19	-19	-20	-24	-28	-29	-37	-37	-38	-34	-30	-24	-30	-135	-203	-172	-83	-25	-19	-23	-23	-23	-46
Q	5	-19	-20	-18	-15	-17	-25	-86	-160	-174	-165	-46	-19	-48	-79	-24	-26	-28	-16	-13	-15	-22	-23	-22	-19	-46
	6	-18	-19	-35	-27	-25	-24	-12	-1	-39	-35	-27	-27	-39	-30	-22	-65	-81	-49	-34	-132	-90	-24	-47	-76	-42
	7	-224	-162	-174	-269	-41	-44	-75	-58	-23	-32	-89	-36	-30	-30	-28	-39	-21	-69	-452	-488	-253	-273	-100	-123	-131
	8	-374	-140	-27	-61	-67	-93	-78	-52	-96	-68	-92	-143	-88	-73	-59	-179	-175	-18	-24	-155	-158	-77	-126	-115	-106
	9	-281	-272	-383	-160	-33	-17	-15	-21	-23	-26	-29	-23	-17	-12	-146	-215	-180	-219	-44	-31	-63	-173	-317	-233	-122
	10	-189	-183	-23	-23	-29	-62	-129	-106	-69	-138	-88	-20	-25	-23	-67	-63	-32	-21	-18	-11	-11	-14	-19	-17	-57
Q	11	-18	-16	-20	-25	-24	-18	-10	-73	-50	-19	-22	-21	-23	-44	-26	-16	-14	-12	-9	-10	-16	-23	-26	-24	-23
D	12	-146	-500	-401	-425	-467	-336	-75	-165	-271	-358	-330	-426	-248	-227	-389	-211	-166	-521	-854	-365	-560	-310	-388	-386	-355
D	13	-326	-269	-328	-152	-299	-162	-278	-326	-355	-508	-334	-344	-451	-277	-476	-385	-372	-406	-135	-129	-154	-225	-447	-346	-312
	14	-296	-158	-236	-235	-234	-214	-82	-125	-185	-85	-38	-133	-407	-199	-176	-387	-360	-156	-183	-230	-122	-186	-196	-42	-194
	15	-21	-18	-20	-15	-16	-39	-35	-85	-112	-132	-103	-17	-21	-36	-64	-158	-118	-172	-62	-14	-46	-61	-27	-16	-59
	16	-12	-13	-34	-90	-65	-82	-164	-224	-223	-81	-26	-29	-26	-90	-229	-292	-66	-14	-10	-4	-3	-13	-7	-9	-75
	17	-75	-144	-112	-63	-37	-21	-16	-54	-90	-46	-75	-34	-27	-72	-196	-240	-59	-24	-57	-44	-191	-206	-82	-140	-88
	18	-91	-38	-98	-89	-27	-17	-10	-93	-187	-78	-36	-84	-34	-40	-27	-22	-20	-51	-34	-8	-15	-27	-129	-217	-62
	19	-107	-78	-19	-21	-21	-12	-8	-15	-61	-31	-17	-51	-276	-10	-14	-27	-21	-16	-43	-255	-429	-179	-103	-228	-85
	20	-73	-21	-16	-19	-15	-9	-12	-208	-270	-212	-117	-90	-32	-158	-34	-26	-163	-217	-38	-9	-11	-11	-8	-7	-74
Q	21	-8	-7	-6	-13	-13	-10	-17	-12	-35	-60	-54	-21	-24	-25	-30	-32	-29	-35	-15	-18	-20	-23	-20	-10	-22
Q	22	-5	-3	-7	-5	-9	-11	-12	-13	-14	-20	-22	-24	-27	-28	-29	-40	-39	-34	-29	-20	-22	-23	-23	-15	-20
Q	23	-10	-9	-10	-10	-13	-10	-8	-10	-11	-16	-18	-23	-23	-37	-34	-38	-32	-73	-80	-8	-4	-4	-4	-3	-20
	24	-6	-4	-1	-6	1	-3	-8	-8	-8	-10	-12	-23	-11	-13	-19	-106	-92	-275	-470	-254	-50	-22	-17	-18	-60
	25	-15	-12	-13	-15	-81	-71	-39	-24	-134	-338	-320	-228	-153	-247	-154	-40	-19	-15	-19	-58	-82	-138	-93	-19	-97
	26	-27	-12	-33	-15	-7	-9	-6	-42	-160	-182	-89	-25	-20	-20	-20	-19	-17	-18	-72	-116	-57	-10	-13	-113	-46
	27	-43	-1	0	-7	-3	-9	-39	-172	-166	-9	-8	-17	-16	-22	-98	-62	-44	-44	-172	-135	-34	-14	-14	-28	-48
	28	-38	-7	-7	-5	-4	-8	-152	-78	-6	-5	-7	-10	-15	-17	-36	-86	-26	-7	-15	-11	-12	-12	-102	-237	-38
D	29	-312	-110	-26	-17	-43	-31	-59	-3	3	-12	-22	-13	-125	-102	-114	-111	-240	-925	-456	-316	-362	-131	-87	-43	-152
	30	-26	-24	-15	-17	-24	-31	-23	-26	-30	-186	-437	-346	-355	-533	-415	-188	-145	-135	-91	-100	-244	-187	-259	-422	-177
D	31	-402	-283	-404	-414	-480	-352	-488	-523	-597	-260	-456	-761	-126	-616	-1300	-466	-685	-755	-597	-953	-487	-323	-60	-53	-493
	MEAN	-136	-142	-113	-88	-84	-87	-87	-103	-130	-131	-137	-125	-105	-121	-164	-134	-122	-160	-157	-140	-122	-102	-104	-114	-121
	5QMEAN	-12	-11	-12	-14	-15	-15	-27	-54	-57	-56	-32	-22	-29	-43	-29	-30	-28	-34	-29	-14	-17	-19	-19	-14	-26
	5DMEAN	-308	-370	-281	-213	-312	-284	-268	-217	-252	-263	-411	-460	-285	-342	-575	-314	-333	-541	-467	-384	-322	-218	-241	-228	-329

NOVEMBER 1968 AL INDICES

AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-327	-543	-271	-94	-53	-63	-55	-70	-61	-67	-143	-827	-2009	-894	-726	-339	-319	-159	-404	-539	-364	-741	-486	-461	-417
D	2	-534	-819	-495	-293	-324	-325	-379	-312	-432	-497	-488	-519	-682	-658	-809	-546	-505	-394	-101	-119	-284	-373	-539	-522	-456
D	3	-382	-659	-220	-25	-61	-126	-295	-340	-130	-116	-68	-65	-517	-526	-405	-523	-312	-328	-398	-188	-230	-318	-191	-103	-272
D	4	-108	-179	-84	-101	-172	-377	-284	-404	-370	-299	-360	-319	-767	-491	-326	-84	-7	-52	-36	-191	-324	-177	-32	-30	-232
	5	-27	-42	-87	-154	-17	-17	-38	-146	-213	-215	-142	-178	-216	-85	-74	-88	-69	-51	-37	-37	-114	-171	-32	-22	-95
	6	-31	-34	-32	-70	-59	-17	-27	-39	-17	-23	-51	-97	-31	-22	-61	-67	-48	-83	-343	-194	-158	-69	-211	-402	-91
	7	-278	-297	-290	-245	-300	-336	-370	-225	-212	-222	-205	-256	-200	-550	-160	-12	-24	-29	-35	-33	-14	-15	-21	-17	-181
	8	-15	-15	-10	-11	-20	-68	-198	-260	-197	-336	-313	-267	-248	-226	-537	-417	-261	-172	-52	-101	-150	-127	-263	-375	-193
D	9	-295	-466	-337	-292	-313	-166	-65	-146	-347	-543	-387	-186	-289	-385	-460	-266	-261	-128	-138	-195	-54	-42	-43	-30	-243
	10	-43	-30	-58	-174	-161	-73	-72	-64	-151	-135	-196	-518	-446	-118	-84	-359	-406	-323	-128	-91	-117	-123	-122	-234	-176
	11	-271	-298	-272	-181	-118	-107	-108	-255	-386	-176	-276	-220	-297	-332	-130	-81	-41	-33	-16	-12	-10	-13	-14	-42	-154
Q	12	-72	-54	-24	-11	-16	-24	-19	-14	-9	-7	-10	-56	-87	-56	-25	-29	-102	-71	-36	-15	-13	-18	-13	-13	-33
	13	-10	-10	-33	-35	-20	-3	-1	-4	-10	-17	-135	-84	-36	-17	-19	-31	-80	-59	-55	-83	-173	-135	-12	-13	-45
Q	14	-13	-10	-6	-1	0	-1	-4	-1	-5	-11	-11	-15	-20	-22	-21	-32	-61	-32	-51	-33	-20	-85	-37	-7	-21
Q	15	-13	-6	-9	-12	-28	-20	-19	-6	-6	-9	-14	-16	-22	-14	-14	-27	-28	-46	-10	-8	-11	-15	-15	-17	-17
	16	-15	-13	-7	-6	1	4	0	-6	-7	-6	3	3	-67	-144	-115	-148	-83	-116	-102	-56	-51	-164	-86	-20	-50
	17	-28	-26	-103	-8	-5	-12	-32	-80	-33	-70	-4	-49	-223	-346	-367	-532	-499	-327	-621	-598	-476	-472	-379	-234	-230
	18	-202	-428	-303	-247	-492	-377	-305	-250	-207	-617	-128	-53	-32	-34	-39	-45	-160	-320	-347	-177	-96	-144	-372	-190	-232
	19	-75	-134	-95	-95	-118	-131	-90	-101	-93	-27	-71	-161	-292	-175	-62	-166	-55	-32	-30	-32	-27	-28	-20	-20	-89
	20	-19	-13	-14	-10	-8	-5	-9	-5	-9	-311	-215	-198	-202	-409	-692	-360	-159	-139	-238	-132	-27	-12	-12	-12	-134
	21	-11	-24	-6	-13	-20	-35	-7	-10	-13	-8	-14	-22	-41	-102	-74	-60	-312	-349	-247	-105	-56	-74	-202	-90	-79
	22	-26	-10	-8	-2	-3	-4	-4	-11	-23	-21	-5	-7	-23	-101	-99	-30	-15	-13	-57	-99	-90	-92	-109	-45	-37
	23	-18	-24	-23	-115	-73	-3	-4	-12	-10	-14	-32	-29	-95	-19	-18	-23	-22	-14	-11	-8	-7	-11	-9	-8	-25
	24	-2	-4	2	3	5	-26	-36	5	0	-4	-17	-14	-14	-5	-19	-30	-22	-17	-120	-36	-16	-5	-16	-16	-17
	25	-76	-46	-20	3	-4	-11	-10	-26	-7	-37	-62	-61	-84	-204	-173	-55	-48	-23	-69	-285	-100	-29	-48	-27	-63
	26	-9	-5	-26	-11	3	4	-1	-4	0	-15	-25	-7	-8	-38	-186	-255	-154	-162	-125	-79	-28	-31	-113	-49	-55
	27	-91	-179	-181	-67	-28	-2	9	-4	-25	-26	-88	-33	-65	-53	-58	-159	-115	-78	-136	-213	-322	-269	-78	-51	-96
	28	-27	-7	1	-6	-3	1	1	-3	-11	-65	-234	-268	-109	-47	-31	-24	-23	-40	-248	-117	-30	-41	-73	-88	-62
Q	29	-58	-5	-3	-8	-25	-15	-2	-2	-10	-19	-24	-34	-19	-38	-176	-199	-74	-23	-3	-3	0	-2	-5	-3	-31
Q	30	-3	-3	-2	-9	-5	-1	0	-2	-10	-15	-11	-19	-72	-81	-21	-19	-41	-109	-19	-40	-99	-41	-51	-104	-32
	MEAN	-103	-146	-101	-76	-81	-78	-81	-93	-100	-131	-124	-152	-240	-207	-200	-167	-144	-124	-140	-127	-115	-128	-120	-108	-129
	5QMEAN	-32	-16	-9	-8	-15	-14	-9	-5	-8	-12	-14	-28	-44	-44	-53	-61	-61	-56	-24	-20	-29	-32	-24	-29	-27
	5DMEAN	-329	-533	-281	-161	-185	-211	-216	-254	-268	-304	-289	-383	-853	-591	-545	-352	-281	-210	-215	-246	-251	-330	-258	-229	-324

DECEMBER 1968 AL INDICES AL INTENSITY IS 0 PLUS TABULAR VALUES, 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	-70	-78	-34	-53	-180	-52	-11	-39	-92	-219	-298	-323	-358	-290	-410	-364	-204	-384	-152	-36	-9	-23	-15	-12	-154
	2	-11	-10	-11	-21	-15	-15	-30	-55	-73	-64	-238	-184	-197	-202	-97	-156	-167	-286	-191	-76	-38	-99	-42	-51	-97
D	3	-80	-41	-70	-204	-426	-219	-42	-49	-140	-263	-217	-208	-378	-404	-281	-298	-372	-260	-296	-345	-332	-281	-474	-221	-246
D	4	-268	-223	3	-6	-16	-27	-202	-403	-424	-351	-377	-489	-330	-275	-179	-350	-495	-114	-235	-394	-191	-118	-177	-96	-239
D	5	-93	-13	-69	-192	-294	-118	-37	-93	-448	-561	-366	-209	-614	-208	-353	-261	-94	-266	-247	-541	-330	-367	-393	-353	-272
	6	-259	-149	-146	-116	-255	-160	-111	-76	-98	-244	-119	-28	-38	-28	-37	-65	-47	-35	-35	-31	-108	-58	-51	-71	-99
Q	7	-32	-42	-19	-12	-12	-16	-24	-59	-52	-29	-34	-124	-193	-69	-103	-172	-251	-239	-48	-43	-86	-112	-118	-107	-83
	8	-77	-97	-106	-45	-111	-109	-212	-204	-424	-162	-167	-204	-215	-459	-133	-73	-26	-54	-280	-314	-146	-107	-248	-159	-172
	9	-33	-46	-26	-10	-42	-37	-28	-15	-15	-51	-68	-71	-108	-102	-75	-166	-201	-140	-195	-196	-183	-73	-100	-257	-93
	10	-235	-67	-37	-107	-195	-88	-123	-214	-212	-137	-141	-223	-174	-15	-22	-28	-28	-28	-21	-44	-108	-223	-87	-43	-108
	11	-26	-71	-52	-31	-28	-20	-18	-17	-17	-20	-28	-23	-23	-25	-37	-102	-384	-129	-332	-349	-55	-32	-51	-68	-81
	12	-98	-129	-228	-166	-103	-55	-24	-22	-25	-23	-23	-28	-28	-52	-161	-69	-14	-34	-134	-240	-110	-45	-37	-41	-79
	13	-65	-50	-22	-10	-10	-13	-9	-11	-12	-12	-33	-33	-20	-18	-59	-211	-302	-292	-274	-125	-109	-34	-30	-30	-74
Q	14	-14	-16	-16	-13	-8	-9	-16	-48	-66	-46	-13	-28	-33	-79	-89	-34	-32	-29	-39	-24	-23	-18	-17	-17	-30
	15	-10	-8	-10	-24	-13	-28	-80	-70	-17	-12	-11	-25	-15	-11	-17	-63	-93	-48	-26	-78	-289	-134	-24	-12	-47
	16	-4	-4	-25	-31	-110	-157	-53	-52	-32	-20	-62	-42	-55	-210	-95	-43	-69	-178	-63	-33	-343	-118	-54	-42	-79
Q	17	-86	-88	-14	-5	-12	-35	-39	-39	-21	-17	-23	-16	-33	-20	-5	-16	-23	-16	-56	-27	-3	1	-1	-7	-25
	18	-13	-35	-66	-30	-1	-2	-14	-9	-6	-39	-72	-125	-70	-81	-229	-137	-23	-20	-57	-205	-149	-72	-22	-22	-62
	19	-57	-99	-24	-6	-4	-59	-88	-109	-24	-37	-38	-84	-265	-12	-4	-44	-41	-255	-235	-5	-11	-66	-217	-164	-81
Q	20	-13	-10	-4	-4	-12	-22	-46	-48	-8	-5	-9	-12	-12	-22	-12	-15	-16	-12	-6	-10	-17	-6	-7	-12	-14
	21	-83	-93	-62	-13	-5	-10	-19	-46	-46	-22	-45	-235	-194	-60	-20	-28	-176	-199	-32	-51	-244	-275	-419	-259	-110
	22	-183	-129	-134	-88	-26	-51	-14	-36	-35	-41	-31	-42	-20	-84	-132	-84	-89	-383	-128	0	-4	-5	-9	-10	-73
D	23	-3	-13	-10	-4	-8	-15	-45	-18	-74	-50	-88	-26	-77	-227	-383	-100	-63	-462	-315	-115	-120	-286	-239	-107	-119
	24	-53	-44	-10	-44	-95	-86	-18	-47	-71	-3	-2	-9	-19	-88	-168	-289	-262	-60	-4	-7	-32	-70	-227	-291	-84
D	25	-16	-10	-123	-553	-573	-406	-173	-35	-32	-40	-21	-5	-9	-22	-13	-28	-59	-75	-92	-8	-48	-23	-127	-41	-106
Q	26	-11	-15	-8	-7	-5	-35	-8	-11	-11	-9	-14	-9	-6	-8	-16	-19	-20	-14	-13	-7	-9	-10	-8	-6	-12
	27	-7	-55	-56	-177	-39	-103	-312	-226	-356	-419	-457	-300	-366	-356	-104	-93	-116	-65	-58	-15	-27	-52	-22	-26	-159
	28	-48	-41	-20	-20	-33	-18	-62	-45	-28	-12	-54	-76	-65	-135	-22	-170	-80	-59	-189	-58	-52	-41	-97	-60	-62
	29	-23	-7	-35	-27	-34	-22	-15	-15	-33	-97	-126	-111	-232	-186	-117	-186	-305	-362	-165	-117	-177	-389	-265	-93	-131
	30	-60	-87	-181	-100	-63	-55	-66	-65	-86	-208	-90	-188	-393	-144	-38	-17	-42	-135	-156	-184	-207	-27	-55	-96	-114
	31	-175	-221	-124	-108	-56	-7	-6	-6	-13	-11	-35	-42	-26	-21	-49	-192	-208	-355	-316	-263	-165	-256	-295	-35	-124
	MEAN	-71	-64	-56	-72	-90	-66	-63	-79	-96	-104	-106	-114	-147	-126	-112	-125	-139	-161	-142	-127	-120	-110	-127	-91	-104
	5Q MEAN	-31	-34	-12	-8	-10	-23	-27	-39	-32	-21	-19	-38	-55	-40	-45	-51	-68	-62	-32	-22	-28	-29	-30	-30	-33
	5D MEAN	-94	-63	-54	-192	-263	-157	-100	-121	-224	-253	-214	-187	-282	-227	-242	-207	-217	-235	-237	-281	-204	-215	-282	-164	-196

JANUARY 1968 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	49	105	113	116	178	156	132	172	140	121	98	53	155	126	164	169	187	64	51	56	79	60	77	69	112
D	2	62	60	111	100	110	125	86	92	67	41	107	120	61	99	146	129	104	180	151	108	135	114	84	70	103
	3	106	109	49	67	71	76	94	128	73	50	24	23	29	30	65	48	38	26	24	17	20	23	28	48	53
Q	4	57	78	58	31	33	41	28	29	42	64	68	85	48	46	29	28	19	29	97	141	151	93	52	154	63
	5	104	64	71	108	110	109	77	78	74	83	51	54	45	36	64	134	54	58	44	51	87	84	81	47	74
D	6	53	75	99	158	89	80	72	54	56	83	80	49	40	48	118	126	147	157	142	90	108	94	113	97	93
	7	85	78	90	70	217	70	55	55	49	42	58	61	40	40	71	23	67	112	22	18	14	25	21	29	59
Q	8	40	73	65	59	56	59	51	45	31	55	51	75	71	38	28	67	41	47	19	24	24	23	21	26	45
Q	9	24	28	29	33	41	26	20	27	37	35	29	26	25	19	30	54	38	34	20	20	22	30	29	31	29
Q	10	48	48	49	75	52	83	96	88	80	103	100	118	91	107	122	131	49	25	30	33	39	40	45	44	71
	11	36	34	35	50	57	62	47	55	53	41	39	58	80	100	104	215	201	224	244	171	146	132	138	168	104
	12	156	67	47	67	152	60	96	77	96	121	80	44	88	92	82	113	170	114	132	272	189	168	64	60	109
	13	46	32	22	53	44	59	58	77	144	82	78	79	78	110	116	91	52	48	30	32	74	129	127	144	75
	14	134	128	82	70	62	76	108	82	127	150	89	87	91	57	27	29	51	45	60	113	163	151	76	95	90
	15	109	108	93	71	111	100	79	82	90	132	124	71	183	213	105	60	112	99	149	196	118	79	52	134	111
	16	87	69	42	40	43	59	57	84	70	67	59	47	43	66	98	83	105	136	175	280	114	66	54	47	83
	17	54	58	56	69	69	56	108	75	118	111	72	67	62	65	41	60	78	69	79	103	91	95	55	78	75
	18	45	77	108	102	72	131	117	145	101	58	64	89	121	106	58	65	37	30	42	32	36	38	35	30	72
	19	31	34	34	34	37	66	63	124	191	118	90	63	78	57	60	52	137	169	193	117	109	77	151	198	95
D	20	104	133	111	128	62	43	67	72	81	72	193	136	100	47	92	95	49	32	38	90	48	39	35	37	79
	21	35	39	36	39	52	79	75	68	101	97	93	79	51	80	92	30	31	44	39	27	42	51	37	39	57
	22	31	31	26	37	46	33	44	49	56	48	86	87	74	61	25	83	104	79	60	56	57	54	48	32	54
	23	34	27	22	46	29	54	96	113	106	49	22	28	34	30	24	30	30	29	29	57	82	38	42	39	45
	24	53	45	38	34	28	28	46	58	70	79	90	58	69	55	60	19	74	45	57	92	88	88	61	49	58
Q	25	55	36	46	40	48	40	30	36	40	46	50	68	63	37	28	28	29	34	23	21	27	40	25	26	38
	26	19	12	17	29	48	29	40	48	98	74	34	58	37	78	76	220	235	145	55	36	44	35	33	22	63
	27	17	34	29	27	38	29	59	68	94	60	29	35	28	27	18	20	24	28	63	99	107	97	103	111	52
	28	73	36	49	40	55	28	14	16	14	16	20	20	26	61	40	34	55	108	154	136	196	136	116	82	64
D	29	20	47	71	114	169	172	159	111	72	73	61	50	43	42	54	16	21	33	124	147	132	103	82	66	83
	30	38	80	71	106	109	213	196	84	35	33	61	58	33	29	33	55	32	45	50	57	50	37	72	64	68
	31	52	39	43	58	40	62	81	116	83	79	68	48	46	32	45	50	46	26	38	36	21	23	31	40	50
	MEAN	60	61	59	67	75	74	76	78	80	74	70	64	66	66	68	76	78	75	79	88	84	73	64	70	72
5Q	MEAN	45	53	49	48	46	50	45	45	46	61	60	74	60	49	47	62	35	34	38	48	53	45	34	56	49
5D	MEAN	60	84	101	123	122	115	103	100	83	78	108	82	80	72	115	107	102	93	101	98	100	82	78	68	94

FEBRUARY 1958 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	40	29	30	27	33	25	50	91	80	102	53	49	76	97	101	82	52	38	91	129	40	95	81	81	66
	2	96	153	92	75	48	38	41	39	73	87	106	69	78	207	108	106	104	166	93	143	134	65	175	74	99
	3	188	59	72	55	53	56	63	100	104	83	92	94	80	45	59	154	177	100	54	63	49	81	122	142	89
	4	94	85	53	85	110	135	172	194	217	62	205	160	85	86	54	32	55	50	30	26	31	26	23	16	87
	5	18	23	25	28	26	24	18	26	37	52	53	39	19	26	41	61	26	20	34	69	76	101	97	85	43
Q	6	68	35	34	39	22	14	12	13	19	25	24	13	12	9	11	11	17	19	7	9	15	14	11	14	19
Q	7	14	14	14	15	14	15	18	18	14	15	14	17	22	19	17	23	35	29	40	36	66	127	104	63	32
	8	88	55	95	71	105	35	43	48	61	59	43	36	66	91	70	90	71	45	111	148	106	139	140	111	80
	9	95	102	77	83	71	115	135	166	103	134	101	90	147	153	117	70	32	56	131	175	167	160	57	140	112
D	10	140	38	83	56	169	159	135	128	97	151	109	140	74	67	43	35	199	56	261	190	87	113	-20	-67	104
D	11	153	95	140	134	212	180	82	55	36	124	167	256	304	269	264	294	236	216	97	70	113	152	116	69	160
	12	74	67	81	61	99	117	115	181	74	51	77	99	123	51	47	49	55	78	65	28	35	23	19	16	70
	13	15	15	14	15	14	51	96	106	112	89	74	98	136	103	55	74	206	130	58	36	26	29	27	24	67
Q	14	47	34	18	17	12	14	15	19	20	25	19	12	16	20	17	33	24	25	25	24	30	25	50	35	24
D	15	29	24	25	27	31	24	42	46	80	145	189	266	131	260	255	198	197	204	90	68	58	56	40	41	105
	16	60	87	47	45	40	51	74	42	41	64	83	99	80	69	66	76	38	43	55	43	42	24	25	62	57
	17	39	43	39	50	43	47	62	60	80	103	103	151	138	95	109	131	82	46	110	112	89	130	105	102	86
	18	65	54	35	29	26	37	56	88	159	223	227	197	82	159	118	97	131	227	132	115	110	83	50	59	107
	19	42	78	74	113	124	97	78	76	50	40	24	26	16	20	32	14	14	13	16	9	9	8	8	9	41
D	20	19	27	41	46	33	34	49	99	208	266	120	172	141	206	246	189	258	206	167	138	121	109	55	108	127
	21	60	117	125	112	114	97	88	95	113	161	79	97	70	81	89	84	130	133	138	127	129	213	159	135	114
	22	60	52	30	47	62	78	73	52	58	74	79	67	80	51	27	55	48	59	51	43	36	25	21	18	52
	23	19	17	18	19	20	32	59	40	33	24	16	16	20	18	29	34	36	31	34	29	44	34	25	28	28
	24	32	26	25	23	31	44	72	75	49	61	48	45	21	20	34	46	30	30	22	13	16	15	13	16	34
Q	25	17	16	29	28	29	15	41	44	35	45	15	12	17	28	26	50	49	34	38	65	29	24	23	21	30
Q	26	19	19	20	21	22	20	14	13	20	21	20	11	16	17	19	21	25	29	32	51	99	89	94	116	35
	27	80	37	25	24	19	18	30	24	26	32	21	24	42	31	53	44	58	30	191	254	209	239	188	168	78
D	28	176	123	82	92	75	87	88	93	99	98	98	118	108	179	243	370	304	299	120	129	55	103	35	53	134
	29	30	52	121	117	156	201	139	124	89	70	106	186	90	97	28	32	73	50	94	157	115	35	29	38	93
	MEAN	65	56	54	54	63	64	68	74	75	86	82	92	79	89	82	88	95	85	82	86	74	81	65	61	75
	5Q MEAN	33	24	23	24	20	16	20	21	22	26	18	13	17	19	18	28	30	27	28	37	48	56	56	50	28
	5D MEAN	103	71	74	71	104	97	79	84	104	157	137	190	152	196	210	217	239	196	147	119	87	107	45	41	126

MARCH 1968 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	69	144	89	49	45	60	77	54	48	80	62	153	206	172	116	199	217	195	83	53	49	24	17	10	95
	2	11	15	57	67	49	67	102	69	66	109	81	85	49	86	95	101	71	100	77	70	137	117	127	148	82
	3	127	132	73	42	40	38	42	136	180	126	106	228	257	195	139	89	177	146	151	248	266	193	176	208	146
	4	125	139	100	65	91	129	129	132	128	259	383	324	233	157	125	196	284	243	191	184	191	208	146	256	184
	5	268	176	86	113	138	111	96	71	132	166	160	169	212	197	134	75	49	48	93	150	158	218	244	156	143
	6	46	54	48	46	29	27	55	76	100	64	104	87	88	42	24	37	42	46	94	94	115	118	127	69	68
Q	7	47	57	41	62	41	27	35	54	91	106	73	85	39	46	86	42	45	41	49	71	58	104	75	64	60
Q	8	76	95	61	54	44	50	42	42	45	35	31	60	47	35	28	25	36	40	58	82	97	123	130	69	59
Q	9	41	34	51	50	40	43	25	42	49	58	74	41	35	30	28	19	23	27	42	40	39	33	45	89	42
	10	125	104	86	70	117	212	202	140	119	80	70	65	95	80	64	167	97	107	128	167	168	136	51	39	112
	11	32	41	60	24	101	82	167	212	155	113	61	24	16	13	13	17	15	16	15	26	48	56	42	31	58
	12	31	21	19	21	23	19	16	20	22	45	79	208	150	69	86	86	72	138	189	205	202	177	138	64	88
Q	13	56	49	39	28	38	25	23	36	47	34	30	20	22	22	20	23	24	19	20	30	34	30	39	69	32
D	14	108	120	119	110	87	137	131	126	157	162	241	195	126	150	197	279	239	230	153	207	182	192	176	106	164
D	15	93	102	60	45	80	100	210	197	187	155	175	183	175	197	92	56	83	152	146	135	179	167	87	83	131
D	16	101	55	104	95	181	143	97	149	151	170	140	155	176	240	114	36	38	39	54	70	88	134	137	115	116
	17	108	75	75	70	132	114	49	82	83	50	50	73	55	62	38	24	17	36	32	62	66	63	49	52	63
	18	63	64	39	51	60	49	65	99	85	82	56	58	51	30	37	43	57	79	37	45	37	42	44	39	55
	19	36	42	39	21	15	21	48	77	104	130	161	89	70	125	78	53	88	138	100	95	50	46	33	37	71
	20	33	41	53	111	66	32	23	32	32	41	139	191	151	141	119	62	39	35	27	55	32	64	49	62	68
	21	33	41	28	39	30	36	64	62	48	60	39	30	45	72	130	80	33	47	107	72	30	27	34	29	51
Q	22	32	44	29	25	21	32	23	26	25	25	40	66	81	60	54	41	25	25	29	34	42	46	35	36	37
	23	40	37	34	40	19	29	18	42	35	45	37	63	86	68	74	70	39	27	56	90	102	224	203	114	66
D	24	132	103	101	71	77	131	181	173	169	299	154	179	144	136	174	190	200	216	163	138	218	195	142	130	159
	25	171	155	135	110	163	152	279	183	172	122	93	116	171	139	101	82	102	123	158	236	194	223	203	108	155
	26	129	98	116	115	107	108	64	86	89	127	182	215	203	184	128	170	182	133	190	131	133	175	215	215	146
	27	137	101	110	81	164	215	302	160	163	148	133	93	104	77	98	154	143	135	215	212	263	301	265	220	166
	28	191	157	157	152	67	138	147	113	107	140	161	148	135	114	177	157	157	141	164	154	192	255	199	151	154
	29	161	200	121	146	163	159	142	152	141	233	279	241	144	169	180	115	70	106	120	79	103	128	305	286	164
D	30	158	91	103	137	164	223	268	183	130	55	64	82	78	64	92	209	197	312	295	250	282	204	140	78	161
	31	66	56	24	52	28	66	70	103	91	81	78	81	99	162	165	88	86	198	221	241	233	244	193	227	123
	MEAN	92	86	74	70	78	90	103	101	102	110	114	123	114	108	97	96	95	108	112	120	129	138	125	108	104
5Q	MEAN	50	56	44	44	37	35	30	40	51	52	50	54	45	39	43	30	31	30	40	51	54	67	65	65	46
5D	MEAN	118	96	97	92	118	147	177	166	159	168	155	159	140	157	134	154	151	190	162	160	190	178	136	102	146

APRIL 1968 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	123	86	125	185	207	145	111	151	151	122	138	145	207	162	133	145	85	139	131	128	152	155	102	71	137
	2	93	116	75	47	34	71	113	126	97	44	91	99	81	50	98	73	32	51	89	139	163	157	186	171	96
	3	141	88	104	118	144	55	144	163	142	90	164	139	101	172	137	140	57	40	64	42	29	44	90	146	106
	4	196	107	127	114	100	118	109	169	108	108	136	131	84	57	108	85	107	71	64	54	48	45	65	129	102
D	5	148	129	38	107	135	211	220	187	128	106	38	67	20	21	80	146	135	248	352	308	130	222	160	79	144
D	6	53	45	62	139	52	174	120	223	185	123	124	128	134	133	104	105	237	253	157	156	118	107	90	66	129
	7	47	49	55	86	69	82	64	114	114	98	111	62	46	77	96	61	34	48	49	31	29	34	29	48	64
Q	8	33	34	33	45	32	50	33	47	31	70	68	69	41	19	12	11	22	25	24	30	25	21	18	10	33
Q	9	11	11	6	5	6	9	12	14	17	21	23	30	22	22	20	15	14	15	26	31	36	38	65	49	22
	10	47	67	54	56	77	139	147	135	125	92	86	67	52	29	24	22	58	89	144	97	84	94	43	39	78
	11	44	66	42	68	84	69	110	129	128	119	88	111	64	30	25	54	40	37	38	41	30	36	25	29	63
	12	20	13	17	14	30	25	28	28	40	32	44	41	47	46	44	54	46	58	82	132	71	121	208	196	60
	13	68	53	105	189	184	124	72	44	69	135	189	169	220	112	103	187	256	249	176	143	147	227	127	78	143
D	14	108	59	95	105	115	161	60	28	23	28	124	156	139	92	39	138	197	216	188	132	60	65	66	84	103
	15	37	64	28	17	22	38	68	47	129	97	93	36	88	101	121	132	172	140	153	158	145	105	109	98	92
	16	99	97	70	99	114	61	49	57	116	85	94	94	50	60	64	59	28	47	59	86	120	204	145	109	86
	17	67	46	27	26	78	90	137	115	107	136	183	114	46	93	85	59	115	179	180	99	63	82	69	61	94
	18	47	59	61	80	62	126	83	110	103	143	133	123	85	21	40	51	45	82	109	91	64	67	58	52	79
Q	19	43	53	69	78	77	88	86	90	104	100	101	103	104	95	82	61	73	57	57	55	54	63	54	53	75
Q	20	54	54	50	45	33	31	27	22	15	16	20	22	30	20	16	17	22	31	23	24	19	20	16	18	27
Q	21	19	19	19	20	19	15	18	30	32	45	55	71	109	77	45	22	19	30	39	39	37	34	42	55	38
	22	77	73	78	49	82	89	128	195	289	125	45	34	33	49	70	134	101	82	112	147	161	163	220	164	113
	23	116	137	131	168	161	235	279	99	70	85	80	93	100	102	93	53	38	81	149	228	224	196	176	175	136
	24	100	96	100	170	217	237	87	55	56	78	128	87	73	42	57	83	96	119	103	86	62	66	67	43	96
	25	34	20	18	19	16	16	41	66	61	53	34	33	20	23	56	75	69	85	48	91	152	282	290	323	80
D	26	239	169	153	131	126	173	261	247	208	144	184	172	108	153	303	338	144	124	217	332	266	234	143	225	200
	27	144	141	82	135	86	53	87	153	219	118	62	28	22	53	66	43	65	67	193	196	240	108	76	51	104
	28	92	112	136	152	205	125	93	118	80	109	130	60	68	53	70	91	71	106	144	165	222	266	288	283	135
	29	303	297	283	204	194	142	180	163	132	137	142	78	117	152	121	148	152	98	65	60	144	154	253	232	165
	30	109	53	38	31	29	24	64	119	127	151	105	49	36	34	41	59	67	89	112	68	56	107	107	94	74
	MEAN	90	81	78	90	93	99	101	108	107	94	100	87	78	72	78	89	87	99	112	113	105	117	113	108	96
5Q	MEAN	32	34	35	39	33	39	35	41	40	50	53	59	61	47	35	25	30	32	34	36	34	35	39	37	39
5D	MEAN	134	98	105	133	127	173	154	167	139	105	122	134	122	112	132	174	160	196	209	211	145	157	112	105	143

MAY 1968 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	111	64	28	41	16	11	6	20	51	46	65	102	82	114	148	183	118	178	210	180	235	317	116	116	107
	2	83	119	37	40	179	110	122	101	127	233	199	136	83	106	99	46	45	53	32	36	56	60	54	92	96
	3	63	30	83	146	258	178	108	74	58	82	65	79	114	72	66	81	67	42	34	38	47	49	54	42	80
Q	4	42	43	19	10	11	16	18	47	43	52	38	43	27	23	8	25	61	64	62	36	68	23	38	42	36
Q	5	24	19	11	24	13	23	13	22	12	48	91	42	24	47	37	43	45	51	43	37	39	21	25	23	32
Q	6	23	18	16	24	20	17	11	15	15	26	28	43	34	46	43	30	36	45	50	41	37	33	30	28	30
D	7	30	45	59	57	166	213	128	149	112	288	290	39	96	323	443	309	340	228	132	119	158	204	190	125	177
	8	71	88	40	46	16	38	22	23	25	60	106	96	46	20	7	22	55	94	107	96	67	66	87	106	59
D	9	92	114	163	204	188	121	189	178	127	147	257	189	260	289	290	271	389	300	349	370	261	270	257	189	228
	10	110	94	62	193	118	34	51	35	26	21	28	27	40	34	38	34	36	47	28	46	33	46	75	71	55
	11	78	47	137	184	60	112	219	343	261	121	144	127	76	86	88	51	92	93	84	105	96	103	115	131	123
D	12	80	156	125	169	213	217	174	104	104	153	257	189	178	189	177	200	214	219	249	288	370	289	210	237	198
	13	133	26	58	97	105	55	48	79	115	200	269	124	71	88	57	83	214	187	131	160	126	79	78	50	110
	14	55	38	62	71	48	46	103	35	30	47	79	125	85	90	100	82	47	68	95	99	70	46	67	81	70
	15	97	93	48	85	70	170	162	177	140	104	79	54	25	14	13	31	51	58	50	52	75	115	123	113	83
	16	76	104	104	85	175	97	110	132	100	160	185	206	159	208	254	316	289	305	293	278	278	250	256	261	195
	17	34	41	95	216	223	178	208	215	209	209	214	170	146	124	268	155	227	291	234	203	210	306	96	88	182
	18	78	39	38	72	93	76	166	183	158	122	71	77	79	55	107	285	273	294	240	177	94	135	169	102	133
	19	65	51	92	106	50	30	60	135	140	58	48	76	141	72	68	115	256	329	264	258	306	251	113	73	132
D	20	137	143	148	208	224	127	227	186	184	201	226	185	127	109	66	130	165	153	105	66	135	186	188	180	159
D	21	157	191	204	106	59	49	76	183	132	143	140	131	186	212	249	388	393	316	268	285	213	233	317	270	204
	22	185	203	151	208	194	156	195	158	119	102	104	92	63	73	80	81	95	140	80	43	30	26	166	102	119
	23	39	109	112	33	32	24	26	35	83	101	213	177	159	110	67	91	150	224	246	214	230	276	200	159	130
	24	196	227	214	227	157	145	221	179	82	129	142	106	176	113	55	84	65	118	155	158	125	210	136	151	149
	25	148	69	47	60	42	33	76	49	105	171	173	135	53	49	50	129	174	112	161	179	242	144	116	91	109
Q	26	77	153	172	163	188	88	54	41	53	77	99	65	79	94	63	39	21	27	37	47	58	77	69	67	80
Q	27	63	57	53	67	70	70	62	60	62	55	66	73	61	48	44	44	49	67	67	57	56	43	84	81	61
	28	73	54	55	36	62	91	32	35	27	28	26	22	25	25	18	48	117	97	225	241	160	149	134	131	80
	29	154	183	170	228	308	281	251	266	342	280	188	87	120	125	128	215	380	360	287	126	127	155	106	80	206
	30	59	71	140	266	62	32	70	215	252	157	72	45	58	116	118	95	87	62	55	79	155	206	145	187	117
	31	72	75	152	122	56	30	29	59	150	93	95	186	188	77	43	49	157	233	135	81	71	81	53	48	97
	MEAN	87	89	96	116	112	93	104	114	111	120	131	105	99	102	106	121	152	157	145	135	136	144	125	113	117
5Q	MEAN	46	58	56	58	60	43	32	37	37	52	64	53	45	52	39	36	42	51	52	44	52	39	49	48	48
5D	MEAN	99	130	140	149	170	145	159	160	132	186	234	147	169	224	245	260	300	243	221	226	227	236	232	200	193

JUNE 1958 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	82	98	40	39	68	68	49	56	119	171	184	165	178	86	144	160	253	248	249	264	157	133	227	135	141
	2	165	151	198	230	266	220	222	199	151	139	112	117	90	97	120	85	41	118	212	260	213	265	245	113	168
	3	110	163	123	70	121	112	160	139	116	104	213	170	166	147	99	164	221	196	83	111	144	147	122	120	138
	4	98	93	133	51	57	69	29	92	165	103	62	72	73	96	90	76	116	161	130	116	154	124	233	170	107
Q	5	124	53	38	49	105	89	45	41	29	44	47	59	36	60	41	31	51	95	106	74	90	67	51	32	61
Q	6	24	18	17	21	12	29	59	30	18	47	73	123	151	126	74	49	28	18	23	19	31	19	32	37	45
	7	31	76	91	112	118	166	198	194	205	138	166	209	207	113	62	138	262	185	126	86	64	49	51	41	129
	8	56	71	53	32	122	119	85	110	97	99	63	119	90	68	69	195	369	287	168	256	197	121	126	122	129
	9	85	53	34	47	229	164	182	95	53	63	44	40	52	53	48	38	64	122	241	246	262	346	242	197	125
D	10	240	161	233	238	405	384	378	403	515	268	264	306	307	197	227	248	169	102	102	87	202	307	359	205	263
D	11	501	459	425	503	328	361	128	300	335	316	261	320	182	176	366	286	137	90	133	269	239	180	205	237	281
D	12	222	206	300	342	295	309	416	275	362	291	395	200	420	393	364	321	466	461	394	414	319	269	253	194	328
D	13	126	178	287	271	401	284	277	372	463	442	323	406	532	437	498	427	444	403	380	396	389	289	215	222	353
D	14	194	95	90	119	99	144	152	280	427	496	394	268	384	382	362	376	163	127	221	148	169	183	120	106	229
	15	89	42	42	51	74	87	183	122	95	87	103	123	88	63	31	32	69	93	57	123	87	51	126	145	86
	16	80	44	50	27	41	12	15	20	47	119	185	193	189	86	88	139	138	165	192	285	300	352	217	280	136
	17	150	140	75	192	123	258	329	374	328	321	246	72	31	35	25	22	41	57	67	85	103	94	113	51	139
	18	68	80	57	37	63	68	149	200	120	106	84	123	117	138	61	79	206	304	266	313	256	135	102	198	139
	19	132	142	188	137	267	213	193	217	190	148	153	94	106	87	165	100	120	171	164	153	253	237	216	176	168
	20	110	93	86	55	128	89	54	61	65	46	32	29	35	39	32	37	39	41	37	44	53	68	52	40	57
Q	21	32	24	15	9	11	11	7	10	13	22	32	34	47	41	36	32	30	29	34	51	48	35	43	39	29
	22	39	45	42	39	87	133	239	312	310	312	347	318	224	135	61	69	49	45	52	58	128	176	144	84	144
	23	90	99	100	98	122	168	174	244	177	146	88	85	84	80	49	49	38	35	47	60	80	114	86	122	101
Q	24	86	56	43	46	32	29	35	36	31	54	62	42	66	46	26	27	25	29	29	34	48	47	39	41	42
Q	25	46	47	40	38	19	19	26	72	41	29	30	27	20	20	19	16	64	53	54	47	60	45	44	121	42
	26	214	153	96	45	30	24	27	19	26	42	92	157	135	155	128	121	91	101	72	73	106	175	176	114	99
	27	86	102	81	69	124	135	137	120	66	99	216	172	165	94	91	122	109	71	96	143	128	158	146	122	119
	28	110	98	51	33	17	30	42	50	51	40	54	76	73	97	77	32	60	109	114	115	119	119	59	97	72
	29	115	87	43	65	92	47	85	32	29	24	26	32	25	29	42	64	120	138	92	207	231	159	314	190	95
	30	97	139	192	144	197	174	86	126	100	101	113	82	89	85	71	60	87	130	176	213	192	225	205	197	137
	MEAN	120	109	109	107	135	134	139	153	158	147	149	141	145	122	119	120	136	139	137	158	161	156	152	132	137
	5Q MEAN	62	42	31	33	36	35	34	38	26	39	49	57	64	59	39	31	40	45	49	45	55	43	42	54	44
	5D MEAN	257	220	267	295	306	296	270	326	420	363	327	300	365	317	363	332	276	237	246	263	264	246	230	193	291

JULY 1968 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	203	155	175	215	192	136	216	170	145	109	131	122	149	159	108	50	50	51	117	105	78	51	107	131	130
	2	122	160	125	93	54	72	112	154	266	259	142	116	86	119	73	119	92	73	79	86	46	74	134	190	119
D	3	155	139	164	115	218	285	215	231	281	88	128	87	76	84	116	88	88	87	124	164	186	83	73	98	141
	4	111	74	61	63	138	103	172	309	292	158	103	117	135	84	79	64	87	81	133	229	134	133	93	69	126
	5	105	111	63	137	93	40	40	52	135	265	146	59	96	60	53	91	118	101	110	91	52	70	55	59	92
	6	71	91	59	69	85	93	122	108	126	174	219	114	104	83	59	60	59	73	83	94	126	76	55	40	93
	7	31	42	44	60	68	129	179	195	258	219	116	58	22	20	30	64	65	98	80	51	59	48	51	39	84
	8	57	47	67	34	67	152	111	149	136	224	101	102	59	64	38	48	41	94	61	67	88	74	46	33	82
Q	9	29	39	37	46	72	134	123	149	56	77	60	62	47	36	27	37	45	46	53	51	56	61	81	119	64
D	10	145	115	83	205	334	402	283	234	249	341	307	309	332	427	106	47	85	117	196	266	266	305	303	283	239
	11	176	195	207	154	113	133	166	106	109	86	100	95	76	52	46	80	92	126	211	253	241	215	333	307	153
	12	261	145	204	120	78	62	33	20	15	18	15	26	39	54	35	105	105	65	46	15	14	24	26	31	65
D	13	29	43	71	45	168	104	119	76	16	17	15	11	11	18	12	20	129	312	465	423	279	327	218	198	130
D	14	272	358	309	301	196	87	63	55	33	15	56	126	73	58	51	69	88	122	231	175	88	88	104	75	129
	15	64	136	113	129	74	74	25	18	12	21	78	62	22	21	18	12	18	43	109	92	99	99	96	123	65
	16	127	74	45	64	95	157	35	16	68	48	38	32	30	61	77	64	223	215	101	85	46	40	60	73	78
	17	57	37	22	14	6	33	32	24	41	62	84	130	180	63	50	30	35	36	80	100	148	93	61	86	63
	18	123	118	163	219	179	81	132	58	27	48	71	127	124	160	153	127	90	95	66	74	72	46	49	106	105
	19	65	72	81	136	140	70	72	134	90	130	126	121	69	29	65	82	79	69	54	94	178	238	214	233	110
Q	20	142	60	30	28	23	17	19	17	18	18	17	14	15	28	30	29	31	41	54	68	67	88	62	79	41
	21	73	50	24	35	24	19	19	66	63	53	46	65	116	111	65	73	57	163	271	116	88	130	181	209	88
D	22	154	148	158	99	148	264	126	193	290	304	349	229	153	73	106	135	73	128	177	151	177	137	122	111	167
	23	111	73	83	153	185	287	179	273	208	57	112	86	78	87	86	125	110	66	67	54	72	56	58	93	115
Q	24	37	24	20	20	33	58	87	80	47	65	44	31	61	60	74	54	42	58	69	84	47	42	40	30	50
	25	36	42	53	44	69	84	115	76	63	82	70	70	63	53	100	80	62	90	92	68	56	75	52	55	69
	26	50	41	78	140	64	45	50	82	93	227	158	120	68	128	59	77	68	135	158	226	141	316	216	214	123
	27	155	158	145	158	184	151	124	122	177	146	129	150	129	93	95	53	44	63	62	90	103	90	62	68	115
	28	137	91	86	96	122	60	27	13	24	38	64	74	65	52	83	109	118	116	161	176	85	56	51	100	84
Q	29	124	117	81	50	52	92	34	32	50	33	27	39	22	15	52	26	45	69	66	59	64	48	41	27	53
	30	35	34	33	25	32	15	29	24	33	22	23	26	23	22	49	53	46	59	83	75	147	131	126	104	52
Q	31	96	50	19	52	29	33	36	106	55	41	94	104	51	51	27	29	36	38	37	55	44	59	44	29	51
	MEAN	108	98	94	101	108	112	100	108	112	111	102	93	83	78	65	68	75	95	113	121	108	109	104	110	99
	5Q MEAN	86	58	37	39	42	67	60	77	45	47	48	50	39	38	42	35	40	50	56	63	56	60	54	57	52
	5D MEAN	151	161	157	153	213	228	161	158	174	153	171	152	129	132	78	72	93	153	239	236	199	188	164	153	161

AUGUST 1958 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	25	21	25	33	39	26	39	64	96	88	72	32	37	47	57	52	48	54	44	44	51	55	48	30	47
Q	2	37	39	35	25	36	24	31	40	41	82	114	151	71	84	69	27	28	24	24	51	67	43	55	65	53
	3	65	91	72	222	294	126	173	177	282	198	110	91	96	72	68	88	113	133	108	82	100	89	61	49	123
	4	45	38	45	35	48	22	35	40	25	23	21	28	26	22	28	23	28	36	35	33	39	51	28	74	35
	5	50	45	51	40	169	50	34	26	52	170	225	78	125	127	131	157	148	59	58	46	64	127	86	99	92
	6	58	70	104	166	150	63	162	64	73	103	93	68	83	72	60	49	27	102	190	184	147	69	64	111	97
	7	127	119	133	67	63	93	81	85	154	114	101	171	198	105	97	80	107	46	54	59	50	47	94	109	98
	8	121	138	113	71	119	135	180	247	84	43	32	30	47	68	51	28	37	71	47	40	98	91	117	145	90
	9	191	141	134	75	45	66	82	19	34	27	39	47	58	33	40	50	131	193	91	177	146	84	196	127	93
	10	91	70	55	34	33	50	79	49	67	139	123	45	28	25	25	40	59	58	25	33	86	98	107	110	64
	11	140	192	98	102	86	152	111	51	40	30	35	31	23	31	21	21	48	61	48	55	39	25	17	23	62
	12	81	91	33	23	20	52	27	33	43	34	93	55	33	30	32	51	32	39	67	125	96	34	39	26	50
	13	22	22	24	37	12	13	26	29	32	26	22	23	37	43	77	107	165	173	102	151	241	111	194	197	79
D	14	246	177	112	146	140	160	179	180	300	211	220	212	186	127	176	79	64	223	233	168	143	176	274	233	182
D	15	134	96	61	205	244	212	144	222	123	263	198	184	195	277	221	295	286	218	240	123	194	198	146	129	192
D	16	107	127	56	37	202	138	173	208	145	132	89	50	83	157	179	278	395	401	226	167	338	291	89	100	174
D	17	114	108	104	194	201	179	123	179	121	248	135	153	229	350	396	397	359	161	118	131	149	129	53	118	185
	18	75	41	36	115	158	144	137	184	195	129	105	163	145	141	180	159	142	134	127	111	137	136	133	141	132
	19	147	130	71	83	45	50	73	113	138	180	151	95	53	39	49	61	169	202	135	58	52	42	34	36	92
	20	48	42	32	34	17	9	30	42	65	63	47	53	57	46	100	121	122	84	63	61	100	67	43	64	59
	21	58	49	57	47	58	40	63	97	29	28	46	26	27	26	18	13	23	25	35	45	32	28	27	52	40
	22	21	12	11	11	12	15	20	26	25	22	54	113	80	34	21	18	35	28	19	34	39	76	202	210	47
	23	162	141	98	168	274	181	99	91	168	153	147	126	69	71	43	59	47	100	108	215	217	134	165	145	133
D	24	116	119	144	59	143	182	207	166	240	215	149	183	72	58	64	34	61	89	106	110	106	105	98	79	121
	25	69	48	23	27	23	39	31	17	17	16	15	11	6	9	8	11	37	38	18	71	49	49	48	37	30
	26	13	13	16	32	27	17	20	30	74	54	35	20	26	56	53	40	15	24	36	32	30	37	43	45	33
	27	35	46	50	53	22	16	39	41	28	77	104	59	25	23	21	16	17	23	41	60	25	16	17	24	37
Q	28	36	38	39	23	49	41	30	29	41	31	26	23	23	21	20	23	24	13	25	39	41	37	24	23	30
Q	29	19	27	24	25	20	15	26	29	27	29	24	27	40	37	26	20	17	10	11	28	36	32	27	23	25
Q	30	39	60	81	28	29	19	21	39	49	36	28	28	38	28	19	20	19	27	27	33	37	36	28	22	33
	31	35	55	52	65	109	82	48	44	39	37	114	193	283	250	426	409	414	302	159	166	139	100	66	80	153
	MEAN	82	78	65	74	93	78	81	86	92	97	89	83	81	81	90	91	104	102	85	88	100	84	85	88	86
5Q	MEAN	31	37	41	27	35	25	29	40	51	53	53	52	42	43	38	28	27	26	26	39	46	41	36	33	38
5D	MEAN	143	125	97	128	186	174	165	191	186	214	158	156	153	194	207	217	233	218	185	140	186	180	132	132	171

SEPTEMBER 1968 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	77	58	99	120	183	183	96	57	75	184	190	143	176	103	65	70	77	97	68	43	48	78	76	67	102
	2	56	66	63	45	41	38	27	47	116	153	236	201	151	96	98	96	105	122	162	120	72	83	84	121	100
	3	104	130	54	78	69	67	163	117	124	159	136	166	101	68	54	85	210	83	27	124	138	115	58	80	105
	4	98	40	54	89	88	81	76	72	92	165	183	253	194	142	175	154	79	48	56	72	57	79	76	41	103
	5	32	50	57	53	144	131	169	115	85	89	92	86	113	55	47	51	48	63	60	61	71	97	128	122	84
	6	124	94	96	31	115	111	150	120	60	33	17	30	55	46	61	90	99	130	46	52	158	232	196	120	94
	7	126	120	45	37	35	49	37	42	46	54	38	53	64	36	39	67	100	91	152	268	337	189	73	72	90
D	8	131	168	150	210	205	243	237	242	146	258	304	294	344	379	404	231	139	186	178	91	58	50	38	56	198
	9	78	52	81	62	83	49	40	40	76	80	72	62	58	26	61	38	56	69	91	56	52	37	27	31	57
	10	46	35	46	31	19	21	24	25	26	50	86	77	50	56	67	84	99	56	31	31	30	49	63	70	49
	11	73	50	15	22	82	34	22	41	38	33	43	33	27	51	31	23	20	29	29	28	31	29	29	23	35
	12	22	29	33	32	59	79	130	154	188	174	211	267	204	162	385	311	236	253	215	157	121	194	211	159	166
D	13	82	167	120	150	258	290	206	171	109	92	152	275	279	238	241	270	213	169	190	99	74	87	90	134	173
D	14	100	163	176	117	96	66	168	179	151	200	241	199	249	215	103	154	158	86	87	91	137	155	76	89	144
D	15	86	117	98	173	158	118	165	166	150	109	96	174	171	98	175	227	118	188	187	124	75	71	72	64	133
	16	67	79	56	124	106	101	126	101	82	99	101	72	56	63	39	37	34	32	40	35	44	35	44	28	67
	17	42	52	49	50	29	39	38	61	92	41	39	46	41	35	20	10	25	47	34	29	26	26	22	16	38
Q	18	12	9	7	11	15	16	21	16	28	21	18	16	20	30	47	48	44	53	49	45	41	37	51	58	30
	19	33	31	52	84	210	135	153	181	137	206	86	32	32	13	23	59	32	22	24	31	30	28	26	39	71
	20	51	51	70	144	43	22	18	20	21	24	23	19	18	16	16	11	13	17	41	68	54	65	36	29	37
	21	33	26	23	36	37	81	75	118	54	24	18	33	131	135	72	128	148	79	35	90	83	34	40	34	65
	22	81	67	55	31	32	34	31	66	75	60	36	82	142	133	65	53	42	36	40	50	101	184	134	60	70
D	23	87	58	138	103	100	81	85	105	139	172	91	45	54	87	231	193	81	40	35	31	23	16	35	20	85
Q	24	24	14	19	21	19	12	9	13	7	12	15	16	8	9	6	10	15	16	28	65	31	21	26	24	18
Q	25	17	15	14	11	11	10	14	14	14	10	10	11	18	15	17	20	25	15	12	22	19	19	18	21	16
Q	26	22	24	23	28	21	23	41	53	60	31	27	25	24	41	58	66	60	36	24	23	22	19	18	19	33
Q	27	20	20	18	43	48	52	31	28	23	22	23	30	46	25	20	23	24	20	20	19	17	23	23	30	27
	28	33	27	32	24	25	23	29	44	39	46	48	61	91	65	86	66	76	60	89	90	90	55	48	48	54
	29	57	42	52	50	45	88	74	86	88	76	57	27	28	32	55	85	65	69	114	119	107	53	42	40	65
	30	38	34	30	34	20	19	20	31	37	33	58	62	37	36	50	47	53	33	40	119	131	115	145	179	58
	MEAN	62	63	52	68	80	77	83	84	79	90	92	96	99	84	94	94	83	75	73	75	76	76	67	63	79
5Q	MEAN	19	16	16	23	23	23	23	25	26	19	19	20	23	24	30	33	34	28	27	35	26	24	27	30	25
5D	MEAN	97	135	138	151	163	160	172	173	139	166	177	197	219	203	231	215	142	134	135	87	73	76	62	73	147

OCTOBER 1958 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	151	85	138	280	53	32	20	35	78	148	121	50	43	61	44	39	99	185	304	260	187	119	158	186	123
D	2	84	309	177	44	168	299	331	72	41	113	131	124	116	214	311	208	112	89	191	125	68	124	78	89	151
	3	120	125	156	144	102	186	181	174	222	155	144	66	51	56	26	24	24	27	31	28	35	35	30	33	91
	4	40	36	33	33	28	25	28	26	27	41	29	19	13	8	17	36	66	65	34	32	31	33	33	30	32
Q	5	35	31	29	32	35	21	48	49	92	96	42	31	23	18	19	17	1	3	9	18	23	19	16	17	30
	6	19	26	23	33	29	35	54	87	104	84	93	96	67	38	22	33	40	22	31	76	46	46	50	36	50
	7	39	46	55	60	82	79	85	57	27	19	9	9	13	14	18	8	21	85	146	146	174	134	67	73	62
	8	71	54	50	41	22	35	48	43	23	32	36	46	51	44	43	40	29	24	35	53	38	54	57	58	43
	9	66	83	77	78	57	29	27	16	14	19	18	17	21	21	43	40	64	56	32	34	59	62	88	108	47
	10	74	83	58	30	19	22	57	40	43	58	41	23	28	23	20	28	12	12	15	14	14	11	12	20	32
Q	11	23	22	19	22	24	27	20	30	21	19	21	18	18	16	14	13	12	19	18	22	22	25	31	30	21
D	12	50	21	73	155	226	209	196	217	357	267	121	150	131	73	228	125	115	150	89	229	167	159	43	59	150
D	13	140	163	91	82	120	112	136	141	108	189	134	122	112	70	128	82	88	74	67	46	68	73	98	95	106
	14	78	92	118	118	128	112	87	123	108	78	42	44	96	109	56	67	88	61	104	64	66	68	63	66	85
	15	47	34	20	30	32	18	37	26	55	79	65	29	25	20	24	33	36	20	19	17	26	40	20	19	32
	16	17	23	28	30	16	34	33	82	43	35	27	29	27	42	32	48	36	29	23	26	28	24	20	26	32
	17	51	62	83	72	27	52	30	28	66	70	45	25	19	35	72	66	48	37	29	43	112	151	120	127	61
	18	124	82	85	94	47	38	38	69	105	97	66	40	33	21	13	12	30	39	32	35	36	36	53	41	53
	19	58	54	49	42	35	28	25	42	37	30	28	37	61	36	24	16	17	14	42	113	159	146	97	123	55
	20	53	46	29	34	26	13	52	61	73	67	69	83	26	60	39	28	59	72	22	15	13	13	13	12	41
Q	21	14	13	13	16	17	18	18	12	18	22	28	21	20	11	10	8	6	8	8	12	15	12	16	16	15
Q	22	16	16	17	19	27	28	16	15	23	23	20	15	16	10	9	7	8	10	15	11	17	20	23	21	17
Q	23	18	17	19	20	17	18	18	17	18	17	21	21	24	21	18	22	21	29	38	26	28	21	20	21	21
	24	23	21	23	23	43	38	42	53	65	79	58	84	64	43	50	69	61	140	253	295	110	57	33	29	73
	25	23	22	26	36	85	78	127	73	83	262	331	232	114	35	93	38	41	27	27	33	46	48	33	36	81
	26	35	29	27	24	26	30	28	25	32	78	91	42	31	24	22	18	18	20	31	71	131	101	95	184	51
	27	102	49	39	34	29	37	55	87	77	47	33	32	45	47	64	31	23	29	43	44	32	25	31	32	44
	28	37	27	26	28	28	27	47	42	34	31	30	31	28	25	50	46	34	29	35	37	36	48	66	99	38
D	29	182	161	86	65	86	78	74	67	54	84	81	63	116	56	79	141	186	229	208	157	118	88	31	62	106
	30	92	170	129	103	48	41	48	40	37	60	71	113	54	109	112	60	28	51	27	44	66	70	67	65	71
D	31	114	118	65	73	64	85	172	313	217	250	200	122	184	229	-62	-1	123	-70	-22	-83	-42	44	101	95	95
	MEAN	65	69	63	61	56	61	70	70	74	85	72	59	54	51	53	45	50	51	62	66	62	61	54	62	62
	5Q MEAN	21	20	19	22	24	22	24	25	34	35	26	21	20	15	14	13	10	14	18	18	21	19	21	21	21
	5D MEAN	114	154	98	84	133	157	182	162	155	181	133	116	132	128	137	111	125	94	107	95	76	98	70	80	122

NOVEMBER 1958 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	94	113	71	89	54	76	32	24	20	55	90	217	-101	-30	94	133	299	189	116	171	138	-139	32	23	78
D	2	174	60	172	215	327	271	283	302	183	186	197	184	205	211	214	233	248	127	84	103	195	282	268	236	207
D	3	275	177	127	102	118	135	199	154	71	56	47	34	77	125	123	209	130	136	137	98	94	86	31	22	115
D	4	24	24	42	41	38	106	117	169	153	135	100	114	172	169	274	142	68	38	42	109	102	78	63	31	98
	5	15	25	15	6	24	23	30	23	33	42	71	59	70	49	10	15	10	-2	5	9	26	19	6	7	25
	6	11	9	8	11	11	13	15	11	8	22	19	27	22	24	20	17	12	27	59	53	71	57	104	82	30
	7	108	129	156	99	101	101	237	160	150	140	166	161	93	100	95	70	35	25	30	17	29	29	28	24	95
	8	10	12	13	19	21	31	46	156	109	104	183	188	82	63	249	215	172	121	34	70	85	83	78	61	92
D	9	59	53	158	138	217	157	85	139	109	135	250	105	124	145	210	90	117	61	51	70	37	17	25	25	107
	10	30	23	30	27	55	40	53	39	55	99	56	85	155	60	43	67	119	169	114	96	123	88	60	70	73
	11	94	99	72	112	94	109	100	76	117	105	219	356	134	152	76	54	32	21	38	33	38	21	26	34	92
Q	12	30	20	18	14	20	8	8	11	10	15	27	36	21	12	12	9	8	4	5	5	9	10	13	14	14
	13	15	15	18	25	24	20	16	16	38	52	63	58	87	70	48	23	41	23	37	86	159	188	83	38	52
Q	14	18	19	13	20	28	25	22	24	26	19	19	19	25	18	22	15	20	18	24	29	35	45	37	40	24
Q	15	25	27	23	30	21	24	22	15	22	18	19	16	15	16	14	11	19	19	15	14	8	11	25	32	19
	16	30	46	42	48	37	27	24	22	24	59	42	61	59	112	98	74	174	191	122	116	82	107	57	60	71
	17	53	32	89	107	73	64	75	174	100	84	76	55	127	201	201	235	218	123	94	124	55	3	75	152	108
	18	81	44	110	123	155	209	146	230	223	167	228	119	32	17	37	36	75	103	185	193	140	82	86	76	121
	19	79	68	85	143	142	137	110	125	58	91	117	81	146	112	45	37	26	19	22	25	25	35	26	27	74
	20	21	27	36	30	55	77	64	57	95	279	192	178	210	191	380	400	254	188	89	157	69	40	55	58	133
	21	39	71	36	37	37	12	17	16	26	7	15	22	26	31	38	32	51	105	127	66	39	63	80	95	45
	22	55	32	40	36	23	21	19	37	20	61	69	26	34	57	64	50	26	19	40	29	41	101	146	87	47
	23	69	69	67	103	84	65	52	31	27	25	27	30	26	20	17	16	14	15	16	12	10	13	16	27	35
	24	35	36	31	40	25	22	23	26	29	27	34	42	39	32	26	27	39	40	52	48	38	36	47	42	35
	25	102	85	103	73	65	74	67	52	53	91	76	47	76	159	151	79	34	29	53	157	43	32	47	62	75
	26	45	43	61	53	53	39	39	44	43	62	71	93	82	53	34	36	110	85	97	121	58	60	55	68	63
	27	99	74	65	86	77	86	98	60	45	30	59	50	37	27	28	62	40	27	49	112	105	151	70	61	67
	28	75	76	89	78	64	57	38	31	47	65	84	182	88	31	21	18	27	46	99	69	47	63	38	36	61
Q	29	41	50	28	42	29	24	24	24	28	28	25	27	20	15	14	31	27	29	21	22	24	14	16	15	26
Q	30	15	12	12	17	17	16	14	14	15	16	18	17	24	28	17	9	9	14	20	16	11	11	30	47	17
	MEAN	61	52	61	65	70	69	69	75	65	76	89	90	74	76	89	82	82	67	63	74	65	56	57	55	70
5Q	MEAN	26	26	19	25	23	19	18	18	20	19	22	23	21	18	16	15	17	17	17	17	17	18	24	30	20
5D	MEAN	125	85	114	117	151	149	143	158	107	113	137	131	95	124	183	161	172	110	86	110	113	65	84	67	121

DECEMBER 1968 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	56	47	60	79	63	56	20	34	35	66	37	110	149	105	147	99	105	95	47	71	83	52	55	61	72
	2	57	55	41	30	32	26	53	50	44	36	46	37	65	74	42	36	48	65	65	35	40	63	52	36	47
D	3	28	40	46	67	87	146	63	74	80	46	82	97	146	227	204	200	208	191	190	82	93	136	83	79	112
D	4	80	92	57	41	27	42	77	78	94	135	120	126	167	95	75	182	237	80	103	83	93	69	79	56	95
D	5	68	42	63	71	88	65	86	93	140	191	203	112	67	64	143	78	46	88	88	210	192	166	108	65	106
	6	55	101	150	128	243	184	153	74	103	92	70	72	45	20	24	21	12	4	1	13	42	32	20	40	71
Q	7	51	35	23	20	13	13	22	25	39	34	26	52	67	43	25	40	52	81	29	17	28	26	35	40	35
	8	51	61	103	129	139	104	92	86	141	104	62	84	103	62	82	37	24	31	75	104	75	89	90	69	83
	9	57	67	108	58	39	34	36	17	23	39	52	50	39	40	53	18	36	35	91	175	178	91	73	88	62
	10	51	57	106	111	166	147	173	147	137	127	123	162	93	35	10	5	5	23	18	23	68	52	43	49	81
	11	30	35	39	62	81	58	50	43	43	27	32	26	20	12	28	51	56	65	152	153	127	128	82	53	61
	12	18	55	145	126	126	64	75	33	30	17	22	12	26	40	97	66	45	19	26	33	31	28	23	24	50
	13	32	51	48	37	29	31	14	14	14	20	31	22	16	8	23	47	40	92	107	74	92	35	26	28	39
Q	14	29	23	28	26	26	22	28	25	26	38	66	27	26	40	49	33	9	13	9	7	11	6	7	8	24
	15	14	20	30	36	46	51	67	72	109	46	33	37	29	32	30	46	55	45	27	52	114	176	55	26	52
	16	37	46	54	25	90	118	104	66	111	110	55	113	66	114	108	61	58	41	31	39	96	145	90	61	77
Q	17	85	122	64	42	43	50	54	107	79	63	49	58	47	34	23	22	18	16	13	14	16	24	24	25	46
	18	28	41	30	65	52	36	39	26	32	50	63	67	50	67	142	96	58	48	59	93	88	123	143	74	65
	19	66	100	69	59	42	99	49	92	88	65	49	58	118	59	29	25	16	47	53	49	26	44	76	57	60
Q	20	53	36	45	38	63	38	44	53	31	35	27	23	21	22	20	18	18	18	15	12	13	17	17	19	29
	21	36	41	43	31	34	45	42	27	45	40	53	196	149	79	84	47	110	147	85	89	117	83	26	158	75
	22	185	159	44	68	76	43	61	50	45	65	53	45	29	37	23	34	24	77	43	52	15	16	14	12	53
D	23	16	27	45	54	63	61	72	51	81	62	111	111	82	130	66	83	66	72	76	129	145	102	96	109	80
	24	131	92	73	59	43	55	54	52	48	28	21	18	20	36	44	71	57	44	21	8	21	24	52	93	49
D	25	53	28	51	31	136	185	204	116	119	44	72	44	34	34	21	28	32	54	45	26	34	26	39	30	62
Q	26	26	22	24	26	21	17	14	21	13	12	15	12	14	14	13	10	9	9	8	13	14	12	17	16	16
	27	17	23	19	40	35	35	47	49	74	153	257	209	82	77	66	41	22	14	5	10	21	37	17	18	57
	28	16	17	17	13	10	12	18	28	19	19	30	21	39	44	19	33	27	23	16	12	13	19	15	23	21
	29	24	20	18	14	11	12	11	11	27	37	45	45	58	70	44	31	94	112	121	131	68	93	90	94	53
	30	59	30	21	39	41	34	22	31	49	81	52	62	100	136	58	22	17	22	43	53	83	33	46	45	49
	31	48	66	50	40	40	18	17	23	36	32	37	33	33	21	18	40	87	218	214	250	156	101	67	86	72
	MEAN	50	54	55	54	65	61	60	54	63	62	64	69	65	60	58	52	55	61	61	68	71	66	54	53	60
	5Q MEAN	49	48	37	30	33	28	32	46	38	36	37	34	35	31	26	25	21	27	15	13	16	17	20	22	30
	5D MEAN	49	46	52	53	80	100	100	82	103	96	118	98	99	110	102	114	118	97	100	106	111	100	81	68	91

JANUARY 1958 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	-121	-151	-166	-109	-65	-35	-50	-12	-19	-22	-58	-228	-107	-91	-70	-110	-6	5	-2	-33	-28	-34	-16	-4	-64
D	2	18	21	26	-7	-31	-36	-109	-225	-297	-269	-124	-298	-72	-130	-136	-141	-143	-62	16	-81	-56	-27	-37	-15	-92
	3	-32	-2	-33	13	5	-17	-15	15	23	13	-5	-6	-11	-2	-6	-11	-6	-30	-48	-34	0	-5	-31	-56	-12
Q	4	1	35	23	12	14	16	8	6	8	7	-27	-20	-14	6	5	3	-9	-45	-62	10	39	-70	-72	-93	-9
	5	24	19	16	41	38	37	11	18	3	31	17	3	13	0	-68	-85	-1	22	19	6	-15	-6	-53	-20	3
D	6	0	-45	-59	61	43	36	14	4	-1	-10	10	-19	-19	-77	-241	-192	-94	-34	-38	-18	-16	-22	15	37	-28
	7	-4	-21	11	1	99	34	9	13	7	-2	-5	-17	-23	-29	2	-36	-19	35	-3	-2	-2	-10	-59	-39	-3
Q	8	-15	19	31	32	22	10	15	11	-4	-2	-62	7	20	-4	-2	-56	-103	4	-1	2	6	6	4	7	-2
Q	9	9	12	14	15	17	9	7	10	13	10	9	6	1	-14	3	1	-33	-79	-29	-13	1	8	10	9	-0
Q	10	14	17	23	30	21	36	34	28	28	32	27	40	8	-65	10	32	13	4	-7	-31	2	4	14	17	14
	11	13	11	-2	12	23	27	19	24	22	15	-3	10	31	-21	-61	15	58	-23	-32	-10	2	-91	5	65	5
	12	60	19	-5	-8	55	13	28	9	37	24	23	-6	-47	7	-19	-120	-73	-16	-127	-29	-47	41	19	-26	-8
	13	-17	12	5	6	-8	-64	-32	-6	23	-2	-108	-57	-30	-26	-12	-21	10	3	-22	-5	-29	-90	-40	5	-21
	14	-2	-7	4	-12	-38	-15	-5	5	35	41	-16	-11	15	10	-9	-19	-3	9	-42	-155	-53	6	-73	16	-13
	15	28	21	21	18	42	46	21	29	25	34	34	-8	-4	-9	-27	-36	-93	-22	-74	-32	-97	-85	-119	-8	-12
	16	-51	25	12	11	5	8	4	7	-3	12	13	-7	6	1	-21	14	-37	-165	-143	132	18	5	-78	-19	-10
	17	11	14	13	-28	-82	-4	-12	-55	-121	-19	-16	-51	-55	-6	-19	-140	-32	-11	-12	-62	-127	-32	4	-17	-36
	18	-142	-97	36	36	34	33	-34	21	19	5	-15	-64	-5	2	-68	-36	4	-9	-3	4	11	14	14	11	-10
	19	14	13	7	9	-5	-38	-44	-34	3	0	-6	-97	28	13	-21	-81	-209	-144	-15	6	18	-49	-95	-76	-33
D	20	-99	-30	-15	-5	-17	-3	-5	-88	-34	-19	-117	-30	-57	-78	-116	20	4	-18	-50	-119	-35	16	15	14	-36
	21	8	6	12	10	-7	-65	-116	-47	-29	-54	-22	-34	-58	-63	-14	-9	-90	-21	2	1	-41	-45	-1	4	-28
	22	-36	0	7	6	-60	-14	-39	10	21	11	-28	15	5	2	-74	-116	-208	-32	-42	3	-15	-14	13	13	-24
	23	-7	-56	-69	-10	3	-24	-91	-20	22	12	4	-9	-1	-1	-1	-3	-87	-78	-80	-28	-174	-65	9	13	-31
	24	14	-10	3	17	11	11	15	-23	-39	-46	6	-44	-154	-74	-2	-107	-69	-22	-75	-188	-137	-25	-26	-9	-41
Q	25	22	-24	-15	14	17	2	-3	16	13	8	2	-8	-2	-10	-87	-68	3	8	2	-45	-44	-55	9	10	-10
	26	0	-20	-21	-41	6	2	7	-6	-25	8	9	0	-78	-63	-78	-260	-183	-2	4	7	19	13	7	-11	-29
	27	-4	-5	-5	-60	-18	-11	2	-29	-5	23	10	10	5	-57	-14	-22	-94	-69	-116	-69	-7	-79	-182	-92	-37
	28	-108	-178	-77	-34	11	8	3	6	1	-1	-1	-1	-4	-37	-101	-56	-149	-119	-29	-100	29	5	-29	-111	-45
D	29	-228	-152	-117	-101	-16	54	40	33	10	10	-10	-22	-10	1	-2	0	-6	-10	-103	-79	-14	-129	-63	-111	-43
	30	-105	-76	-48	-38	-29	37	45	38	17	11	4	2	-28	-20	-5	6	-98	-44	4	17	19	10	27	24	-10
	31	-16	-62	-95	-53	-70	20	30	31	-32	-22	22	13	1	-3	-77	-55	-6	6	16	14	6	8	12	3	-13
	MEAN	-24	-23	-15	-5	1	4	-8	-7	-9	-5	-14	-30	-21	-27	-43	-54	-57	-31	-35	-30	-25	-26	-26	-15	-22
5Q	MEAN	6	12	15	21	18	15	12	14	12	11	-10	5	3	-17	-14	-18	-26	-22	-19	-15	1	-21	-7	-10	-1
5D	MEAN	-86	-73	-66	-32	-17	3	-22	-58	-68	-62	-60	-119	-53	-75	-113	-85	-49	-24	-35	-66	-30	-39	-17	-16	-53

FEBRUARY 1968 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	8	11	11	5	-23	-53	38	31	44	20	13	-17	24	32	21	21	-5	-58	-40	13	11	0	-56	2
	2	-75	23	37	30	21	17	14	5	-32	-121	4	-23	-50	-31	-86	-61	-51	-141	-36	-55	-121	-109	-69	-97	-42
	3	-35	13	19	24	18	9	-7	-92	-37	3	-34	-9	21	-31	-155	-168	-144	-35	-4	-72	-6	-22	-42	22	-32
	4	31	-55	-91	-17	-92	-71	-29	-43	-12	-185	-112	-5	-41	-41	-26	-61	-27	5	-7	3	-5	1	-2	-2	-37
	5	1	3	6	10	9	5	0	5	-6	4	2	-28	-26	-48	-89	-27	-79	-60	-96	-166	-134	-32	-45	-14	-34
Q	6	10	7	3	15	9	5	3	-4	1	3	6	-10	-11	-13	-10	-5	-8	-11	-11	-14	-4	-2	-4	-1	-2
Q	7	1	1	1	4	7	4	6	6	4	4	1	5	2	-3	-3	0	-25	-14	3	8	-20	56	25	-22	2
	8	1	-26	25	26	28	11	13	12	5	-16	-6	-97	-126	-78	-56	-90	-34	-77	-76	-96	3	-92	-102	-22	-36
	9	-77	-112	-80	-70	-121	-69	-35	-12	-62	-107	-141	-133	-121	-66	7	-13	-56	-51	-52	-70	-79	-23	-149	-54	-73
D	10	-23	-72	-49	-17	27	-1	11	19	-20	-190	-109	-17	-76	-40	4	11	-29	-363	-242	-165	-47	24	-266	-322	-81
D	11	-48	-90	-84	-68	-107	-58	-204	-202	-184	-89	-314	-151	-194	-85	-88	-71	27	-2	7	7	-124	-126	-70	-123	-102
	12	-94	-129	-95	-33	3	-4	4	43	32	14	-27	-59	-11	-14	-16	-18	1	-39	-36	-17	9	2	-1	-2	-20
	13	-1	-2	-2	-1	-28	-51	-71	-67	-84	-56	-92	-62	-241	-46	3	-3	-146	-87	27	13	7	5	4	2	-41
Q	14	-2	-18	3	5	2	4	4	7	7	5	1	-3	-2	1	1	10	7	10	10	7	7	1	-33	-3	1
D	15	6	-26	-34	-10	-78	-82	-83	-65	-109	1	-231	16	-7	-89	-562	-43	-22	-196	-99	-12	-1	-17	-95	-65	-113
	16	3	14	-8	-4	-46	-26	-81	-70	-20	-40	-137	-149	-166	-57	-73	-160	-22	-18	-98	-44	-30	-14	-14	-90	-56
	17	-52	-1	0	8	-8	-27	-77	-95	-64	-94	-39	-85	-190	-71	-82	-40	12	-44	-42	-62	-117	-240	-45	-45	-63
	18	-52	-17	4	1	-3	1	-9	-93	-153	-158	-79	-43	-162	-152	-93	4	-49	-131	-144	-16	9	-65	-40	-67	-63
	19	-193	-103	-78	-61	-18	-20	-18	-8	-2	-11	-22	-27	-21	-20	-18	-25	-28	-28	-25	-27	-27	-24	-25	-20	-35
D	20	-6	-62	-20	12	-2	-23	-107	-254	-162	-33	-1	-227	-315	-83	-109	-21	-22	-3	-74	-130	-109	-190	-136	-150	-93
	21	-126	-94	-48	-90	-51	-12	-39	-19	-52	-118	-95	-86	-45	-53	-143	-151	-118	-74	-42	-80	-48	-110	-46	3	-72
	22	2	-2	-14	-20	-43	-115	-18	1	-6	-19	-50	-104	-7	-11	-28	-89	-145	-88	2	-8	-12	-15	-19	-20	-35
	23	-18	-18	-16	-12	-23	-50	-33	-20	2	-12	-17	-25	-24	-27	-24	-19	-106	-78	-7	-12	-42	-42	-16	-9	-27
	24	-7	-5	-11	-37	-58	-69	-67	-7	-34	-11	-15	-23	-11	-11	-11	-36	-24	-7	-17	-34	-12	1	-2	-2	-21
Q	25	-2	-1	-11	7	12	-1	-39	-35	-25	3	-4	-7	-12	-12	-13	-19	-35	-31	-6	-87	-4	5	4	2	-13
Q	26	4	-1	-12	-8	-15	2	3	3	4	0	-2	-8	-9	-10	-5	1	0	1	0	5	-53	4	-31	-54	-8
	27	3	5	4	8	-2	-33	-11	7	-10	1	-1	-2	5	-2	-4	-65	-7	-11	69	17	-132	-22	-53	-12	-10
D	28	19	6	-80	34	24	21	16	17	24	14	6	14	-285	-230	-122	-104	18	43	-93	-108	-126	-32	-204	-80	-50
	29	-54	-96	-87	-47	-6	47	19	-42	-31	-31	-57	-22	-36	-10	-11	-31	-123	-46	-55	-65	6	3	-6	-48	-35
	MEAN	-27	-29	-24	-10	-18	-21	-31	-33	-34	-41	-53	-47	-75	-73	-61	-44	-42	-55	-41	-46	-41	-37	-51	-47	-41
	5Q MEAN	2	-2	-3	5	3	3	-5	-5	-2	3	0	-5	-6	-7	-6	-3	-12	-9	-1	-16	-15	13	-8	-16	-4
	5D MEAN	-10	-49	-53	-10	-27	-29	-73	-97	-90	-59	-130	-73	-175	-266	-175	-46	-6	-104	-100	-82	-81	-68	-154	-148	-88

MARCH 1958 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	-13	13	-21	-12	-1	-12	-6	-21	-9	-30	-25	-1	-49	-98	-162	-159	1	6	7	3	-10	-11	-11	-28
	2	-9	-8	11	-83	-66	6	11	-65	-65	-2	-50	-62	-25	-23	-68	-46	-40	-53	-22	4	-72	-55	-13	-2	-33
	3	22	50	24	9	3	-5	3	-7	-29	-27	-29	-2	27	-10	-79	-23	-27	-185	-219	-105	-7	-23	-40	53	-26
	4	-5	6	26	6	-30	32	23	-44	-60	-43	16	50	33	15	-44	-64	-39	-68	-29	-82	-55	-26	-121	-8	-21
	5	34	28	29	35	-44	0	27	1	-48	-158	-159	-153	-86	-141	-30	-10	6	-10	-25	3	-71	33	44	-14	-30
	6	-26	6	9	3	3	-2	11	-16	-14	-14	-2	-25	-15	-25	-26	-24	-13	-13	-34	-2	11	-57	-8	5	-11
Q	7	-2	17	-6	-19	-37	-1	9	2	-29	15	-8	16	-11	-30	8	3	-25	-41	-12	-27	-18	-1	-13	8	-8
Q	8	8	7	24	12	5	14	16	15	16	11	5	-4	8	10	5	-1	-1	-36	-9	19	5	-46	35	24	6
Q	9	15	9	1	17	-13	8	8	14	7	-7	16	12	9	4	3	2	2	-9	-2	-7	0	1	11	14	5
	10	10	28	28	12	-50	-5	65	48	33	28	30	19	-45	-85	-182	-152	-83	-49	-11	15	24	15	-27	8	-14
	11	4	11	1	-19	-17	-80	8	43	41	19	20	-2	-4	-4	-2	2	0	-1	3	9	16	-10	-36	-20	-1
	12	-5	-5	-3	-4	-4	-6	-6	-3	-2	12	-25	-39	-58	-89	-88	-12	-45	-39	-37	-102	-91	-8	40	20	-25
Q	13	19	10	-46	-31	-62	-16	2	10	8	2	3	0	1	4	4	4	5	2	5	10	10	8	1	-16	-3
D	14	-59	-9	-1	3	31	70	67	59	65	13	-13	33	11	-52	-37	12	22	-113	-7	25	-10	-75	-140	-70	-8
D	15	-44	-25	-30	-18	-38	-76	-49	-90	-68	-20	-100	-58	-210	-109	-15	-5	-28	-92	-199	-169	-92	-181	-56	-17	-75
D	16	-53	-117	-50	-103	-32	-100	-66	-51	-4	-30	-18	-62	-273	-180	29	-9	-6	-19	-47	-93	12	-116	-218	-161	-74
	17	-6	-23	13	5	-87	-54	-39	-3	-9	2	-8	-15	-86	-64	-17	-12	-10	-24	-41	-60	-20	-7	-44	-75	-28
	18	-12	15	-87	-24	-86	-58	-20	-15	-74	-35	-12	5	-5	-13	0	-13	-65	-101	-16	12	14	11	9	-7	-24
	19	5	-1	-9	-35	-21	-10	-32	-111	-105	-39	-70	-121	-51	10	-84	-27	-47	-118	-57	16	14	6	2	1	-37
	20	1	-19	-95	-167	-23	5	5	4	7	8	-22	-242	-57	-82	-54	-1	-5	4	-1	-35	-28	-5	-76	-56	-39
	21	-15	-15	-71	-42	-38	-39	-4	-30	-10	-20	-3	-6	-5	-37	-109	-102	-53	-51	-86	-59	2	3	6	2	-33
Q	22	-2	-18	-21	-4	2	0	-36	-9	0	0	2	-24	-87	-63	-21	-42	-47	-2	-3	-19	-4	-5	7	7	-16
	23	6	5	4	8	-10	4	2	14	5	13	6	2	-3	-25	8	-46	-3	6	4	-21	-55	-39	-90	-7	-9
D	24	19	20	17	-24	-45	-102	-103	-87	-47	2	-4	6	-114	-67	-66	-30	12	5	-6	-16	-89	-55	62	53	-27
	25	64	-27	-34	-56	38	-2	68	9	-52	1	23	36	-126	-76	18	17	-101	-39	-18	-26	-4	9	-21	30	-13
	26	50	33	44	43	27	-6	-64	-35	15	-6	-209	-104	-61	5	-29	-31	-8	-71	-96	-38	57	67	1	-62	-20
	27	-126	-133	-61	-43	16	-19	47	-19	42	-45	-44	12	30	24	-20	-82	-114	9	-13	-101	-98	33	-2	1	-29
	28	62	64	59	-18	-148	30	23	-64	-61	33	68	40	-34	13	75	63	63	61	-24	-16	68	33	-27	55	17
	29	68	75	-113	-197	-91	-57	-10	-52	-84	-75	-20	-35	-44	-47	-56	-22	19	-14	-93	-57	9	40	-18	-52	-39
D	30	-74	-213	-95	-28	-17	-59	-104	-10	27	8	14	-65	-64	-15	6	-139	-374	-222	-120	-92	-76	25	28	22	-68
	31	12	-3	-6	-12	1	-26	-8	-64	-95	5	14	-1	11	-18	-69	-18	-36	-111	-197	-145	-65	-8	-72	-151	-44
	MEAN	-3	-8	-15	-26	-27	-18	-5	-18	-20	-12	-20	-26	-43	-39	-33	-31	-39	-45	-45	-37	-20	-14	-25	-14	-24
	5Q MEAN	8	5	-10	-5	-21	1	-0	6	0	4	4	0	-16	-15	-0	-7	-13	-17	-4	-5	-1	-9	8	7	-3
	5D MEAN	-44	-69	-32	-34	-20	-53	-51	-36	-5	-5	-24	-29	-130	-85	-17	-34	-75	-88	-76	-69	-51	-80	-65	-35	-50

APRIL 1968 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	-153	-270	-87	-59	-12	-30	-9	-32	-115	-58	-17	-24	-45	-78	-63	-101	-5	-48	-177	-56	1	-132	-30	-16	-67
	2	-110	-38	-7	-37	0	-5	-71	-28	10	-7	-10	-56	-2	-22	-44	-48	-13	-44	-83	-196	-100	-110	-68	-134	-51
	3	-19	-39	-15	-39	-42	-11	1	16	-15	-69	-20	-13	-23	-73	-94	-18	-30	2	21	6	2	4	-20	-93	-24
	4	-51	-136	-112	-77	-64	-31	-15	14	-12	6	9	-4	-29	-64	-63	-51	-32	-29	1	0	0	-12	-65	-12	-35
D	5	1	-25	-32	-31	-1	40	47	39	21	16	-15	-9	-16	-16	-23	-79	-80	14	-193	-299	-161	8	-14	-83	-37
D	6	-17	-6	-32	-26	-13	12	27	-183	-245	-107	-51	-104	-160	-93	-62	-48	-41	-110	6	34	-117	-54	-85	-52	-64
	7	-1	-8	-9	-38	-54	14	-1	-47	-56	-12	-49	-51	-31	-66	-94	-31	-5	17	19	11	9	2	6	14	-19
Q	8	-13	-6	-48	-52	-55	-30	0	9	0	12	12	-6	-87	-39	-13	-30	-26	-11	-8	0	1	0	-4	-9	-17
Q	9	-10	-11	-11	-8	-8	-8	-8	-7	-8	-5	-4	-5	-11	-9	-12	-20	-21	-20	-11	1	8	8	-4	4	-8
	10	-2	-10	-14	0	15	49	4	10	13	5	-1	-21	-31	-23	-18	-13	-6	-25	-85	-2	22	19	-25	-1	-6
	11	4	-3	-35	-66	-4	27	37	10	41	34	-21	-27	-21	-11	-6	9	7	5	8	13	7	7	3	5	1
	12	-2	-7	-3	-3	7	1	0	-2	7	4	9	5	10	1	-5	20	-3	-3	-28	7	9	-46	-87	-52	-7
	13	-38	-41	14	-93	-11	19	14	-4	5	10	-66	-82	-3	-68	-51	-62	-105	-21	-17	42	16	-93	-36	-11	-28
D	14	-18	-30	-110	-110	-46	-47	-9	0	-5	0	-2	-222	-165	-20	-21	5	-36	-27	-4	-1	14	14	-38	-91	-40
	15	-18	17	5	-3	1	1	-1	5	26	-108	-105	-42	-14	-50	-45	-61	-25	-77	-83	-22	5	-39	-111	-130	-36
	16	-61	-69	-42	-50	-54	-51	3	5	-29	-75	-31	3	-24	-11	-19	-18	-40	9	0	20	-49	-209	-89	-56	-39
	17	-36	-8	-1	-9	-33	-18	-20	-37	-11	-11	-96	-39	-10	-36	-72	-11	-12	-51	-120	-5	23	-7	-58	-4	-28
	18	-12	-57	-45	12	4	-33	-76	-29	2	-40	-15	-42	-20	-6	-5	-26	-47	-18	-41	7	3	8	13	-30	-21
Q	19	10	16	26	33	30	33	31	32	38	33	31	32	31	28	28	13	-2	-3	19	23	23	24	16	13	23
Q	20	14	14	14	15	7	3	1	-2	-8	-3	-3	-2	-6	-10	-8	-7	-6	0	1	3	3	0	-4	-5	0
Q	21	-3	-2	1	0	-3	-8	-15	0	-3	2	3	6	-26	-41	-21	-18	-4	4	16	15	12	8	13	18	-2
	22	1	-7	-1	-15	17	29	9	-30	39	8	4	4	1	6	-46	-57	-74	-28	34	-9	-34	5	36	23	-4
	23	-93	-176	-48	-50	-81	-20	37	20	17	-32	19	19	-20	12	-6	-15	-17	7	-27	-28	-10	19	19	-27	-20
	24	-103	-34	-58	-83	-36	25	30	22	15	26	33	-2	1	-1	-8	-53	-12	-12	10	31	18	10	20	12	-6
	25	2	-3	-3	4	1	-17	-16	9	-5	14	3	2	-3	-7	-9	-48	-107	-50	17	26	-30	-46	8	12	-10
D	26	-91	-74	-27	17	-3	-40	28	55	31	37	39	-82	-164	-83	-14	-20	-24	6	-17	-70	-121	-50	-138	-48	-36
	27	-160	-6	22	0	-16	8	30	-17	-135	-122	1	5	-7	-4	10	-8	-22	11	34	-91	-11	-31	-40	-9	-23
	28	17	-70	-124	-27	-83	-17	-42	30	20	28	-40	12	22	13	-3	-68	-33	12	5	5	3	33	-8	60	-11
	29	39	98	80	59	-4	-31	-44	-84	-113	7	46	15	-65	-44	-37	-48	-70	1	16	19	-5	-66	-88	-52	-15
	30	-21	-12	-11	-26	5	1	23	16	-38	6	21	8	9	11	-1	-16	-55	-62	0	24	14	-26	-75	-17	-9
	MEAN	-32	-33	-24	-25	-18	-5	-0	-7	-17	-13	-11	-24	-30	-27	-28	-31	-32	-18	-23	-16	-15	-25	-32	-26	-21
5Q	MEAN	-0	2	-4	-2	-6	-2	2	6	4	8	8	5	-20	-14	-5	-12	-12	-6	3	8	9	8	3	4	-1
5D	MEAN	-56	-81	-58	-42	-15	-13	17	-24	-63	-22	-9	-88	-110	-58	-37	-49	-37	-33	-77	-78	-77	-43	-61	-58	-49

MAY 1958 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	-15	2	1	8	-26	-13	-17	-14	-20	-49	-28	-19	-25	-49	-111	-188	-69	-137	-133	-3	-4	-44	-116	-156	-51
	2	-64	-58	-47	-45	6	-5	27	-14	-2	-31	-82	-55	-43	-23	-53	0	14	21	4	14	23	19	12	17	-15
	3	-22	-148	4	8	28	-86	-28	10	-1	-11	-3	5	-15	-4	-6	-39	-9	5	6	13	18	13	10	1	-10
Q	4	4	-4	-57	-48	-11	-15	-6	-3	-22	-20	-15	-14	-17	-17	-26	-24	-35	-53	-30	-2	-1	-4	5	8	-17
Q	5	1	-7	-6	-17	-13	-12	-16	-15	-11	9	-8	-30	-10	-5	-15	-2	-21	-17	6	11	2	-1	-1	-3	-8
Q	6	-1	-3	-2	-2	-6	-11	-15	-9	-4	1	1	3	-1	4	12	2	13	9	17	9	8	1	0	-7	1
D	7	-1	3	10	10	33	-161	-202	-172	-144	-140	-47	-145	-319	-186	-179	-42	9	13	42	32	10	-44	2	-70	-70
	8	-52	17	3	-4	-11	-29	-31	-23	-19	-2	-27	-37	-1	-17	-15	-17	-19	-41	-41	-60	-36	-12	-39	-29	-23
D	9	-77	-157	-173	-152	-74	-89	-6	-12	-46	-35	-29	-107	-71	-49	-60	-51	28	-34	28	31	-92	-23	44	34	-49
	10	-5	7	6	30	-59	-32	-19	-39	-40	-46	-50	-49	-27	-16	-6	-15	-14	-9	-14	1	-7	2	14	8	-16
	11	11	-30	-52	-30	-29	1	34	137	-26	-94	10	8	-1	-19	-51	-26	-9	19	19	36	15	-10	-39	-110	-10
D	12	-221	-145	-143	-119	-2	-103	-57	-1	11	15	-109	-83	-23	-19	30	48	70	84	87	112	16	-3	73	73	-17
	13	-6	-217	-46	16	-33	-81	-68	-15	17	18	-31	-55	-54	-42	-32	-52	3	-43	7	25	-11	-4	-2	-6	-30
	14	-7	-91	-118	-58	-19	-23	11	-19	-13	-2	-36	-13	-68	-88	-94	-49	-18	-28	-79	-68	3	-4	8	13	-36
	15	-5	-17	-86	-13	-11	3	-35	-42	6	22	-19	10	0	-10	-13	-6	-3	1	-5	-1	11	9	-49	-46	-12
	16	-61	-52	-56	-43	-42	3	-56	-42	-34	36	12	-56	-126	-77	-70	-20	-54	0	12	26	91	103	113	112	-12
	17	-1	3	7	38	13	16	-37	37	56	28	24	48	54	12	-11	-43	-35	-73	-135	3	53	24	-16	7	3
	18	-1	-32	-78	-38	-12	-14	24	-28	-41	8	-16	-30	-4	22	10	-113	-203	-62	-25	27	26	-60	-43	-10	-29
	19	-7	-5	5	-22	-32	-2	13	13	-91	-40	-6	-10	-26	-43	-15	0	16	86	-2	35	76	-72	-32	11	-6
D	20	-13	-200	-212	-22	-15	29	41	-78	-141	-108	-80	-60	-61	-51	-8	6	-33	-59	26	14	16	10	-80	-99	-49
D	21	-83	-46	33	5	3	6	21	7	-57	-18	19	8	-28	-69	-82	-101	-88	-194	-162	-110	-139	-106	-48	39	-50
	22	-47	-50	-206	-142	-68	-136	-59	-6	-13	25	-22	-47	-38	-31	-20	-32	-74	-50	-18	11	0	-2	-10	-22	-44
	23	-12	-58	-58	-4	-1	0	-6	-1	17	14	63	43	50	-28	-32	-34	-85	-118	-136	-12	58	35	-84	-193	-24
	24	-180	-111	-131	-16	27	-30	-63	-104	-64	-13	-41	-25	-7	15	-14	14	-28	-10	-16	-55	41	52	29	0	-30
	25	14	23	16	23	-5	-9	21	10	11	-20	-13	-2	6	7	-9	-74	-91	-38	7	2	16	20	27	29	-1
Q	26	19	54	22	4	-5	-7	11	14	15	16	2	12	23	17	7	-25	-43	-6	8	13	13	17	17	18	9
Q	27	23	23	26	23	23	21	15	12	14	13	20	25	24	19	16	17	24	31	14	-6	18	5	15	-1	17
	28	15	9	11	-2	16	24	-33	-28	-14	-6	-4	-8	-12	-15	-18	-14	-24	-41	-1	-25	18	16	10	30	-4
	29	41	10	-35	2	60	64	36	9	51	39	24	-5	4	2	-12	-3	111	103	33	19	25	65	38	10	29
	30	-20	-1	6	45	-4	0	15	5	-45	4	11	-25	8	-59	-109	-7	23	8	21	23	38	-44	-10	18	-4
	31	-67	-84	-53	-74	-44	-26	-24	7	-19	-76	-30	-33	-65	-59	-3	-12	10	-2	18	25	5	12	-3	-6	-25
	MEAN	-27	-44	-45	-21	-10	-23	-16	-13	-22	-15	-16	-24	-28	-28	-32	-29	-20	-20	-14	5	10	-1	-5	-11	-19
5Q	MEAN	9	13	-3	-8	-2	-5	-2	-0	-2	4	0	-1	4	4	-1	-6	-12	-7	3	5	8	4	7	3	
5D	MEAN	-79	-109	-97	-56	-11	-64	-41	-51	-75	-57	-49	-77	-100	-75	-60	-28	-3	-38	4	16	-38	-33	-2	-5	-47

JUNE 1958 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	24	-1	-14	-9	-58	-21	-4	8	27	-23	-14	53	-33	-49	-69	-74	-9	2	-103	8	30	29	0	-149	-19
	2	-60	-80	-34	-19	-75	-83	-15	46	49	25	-21	-11	-4	-17	-61	-53	-27	20	-35	-34	-7	36	20	-66	-21
	3	-50	-44	-8	-3	13	-15	-2	14	32	29	61	-31	-7	-22	-26	-21	-93	-112	11	27	34	-51	7	5	-11
	4	-41	-71	-43	-44	-19	-37	-8	22	-8	-31	-4	1	-27	4	-38	-81	-20	0	-32	23	10	26	-27	-20	-19
Q	5	24	5	0	11	-8	-34	-40	0	-2	4	6	-7	-2	3	-21	-20	-16	-47	-18	1	-6	-16	9	4	-7
Q	6	4	2	0	0	-7	0	-3	-9	-7	4	0	-3	-35	-63	-16	-31	-15	-14	2	0	-7	-10	-7	-1	-9
	7	4	10	5	5	16	52	-16	-35	31	31	35	-19	-53	-16	12	-4	-15	-3	-4	25	28	20	15	12	6
	8	11	22	19	-9	6	14	14	31	24	27	7	38	2	5	15	-27	50	37	68	51	72	41	37	27	24
	9	30	14	-8	11	18	-15	32	20	5	18	6	0	10	16	15	11	2	-11	-35	-25	-22	-17	-78	-26	-1
D	10	-35	-206	-121	-124	25	-40	-81	-62	49	30	59	-67	-158	-20	10	-39	-40	8	26	13	31	-37	-233	-222	-51
D	11	4	-139	-128	19	-216	-37	-2	63	-113	-96	-90	-32	-28	46	38	-102	-14	22	0	-31	-163	-53	-33	-113	-50
D	12	-81	-77	-27	-57	-160	-29	35	-91	-33	-79	-104	-177	-44	3	-131	-53	-1	3	37	55	33	-25	-12	18	-42
D	13	-25	-70	-89	-171	-101	-126	-166	-19	-83	-149	-153	-79	-105	-138	-72	-202	-138	-147	-71	-26	-35	-47	46	88	-87
D	14	33	-64	-13	38	32	43	12	39	-120	-84	-65	-59	-112	-16	-11	-12	10	-39	-59	-38	29	10	-18	-29	-21
	15	0	9	9	18	15	9	53	-67	-49	10	-7	-21	-8	1	-3	6	13	-9	-7	-6	-17	7	22	1	-1
	16	4	9	6	0	4	-10	-14	-11	5	34	21	-34	-7	-58	-21	-57	-78	-60	-18	69	53	-78	-19	14	-10
	17	-56	-88	19	27	-1	-14	-100	25	-37	-4	-66	-16	-12	-41	-44	-5	-3	6	2	-17	-13	2	12	8	-17
	18	4	-19	-39	-31	-14	12	-23	-97	-133	-16	-8	-44	-43	-14	-56	9	-26	-38	-85	-63	25	-17	8	0	-30
	19	-42	-121	-55	-28	-115	-98	-61	-76	-47	-64	-52	-68	-41	-9	-56	-11	-80	-69	-46	1	-64	-82	-96	-47	-59
	20	-39	2	3	-15	-2	-47	2	9	18	9	3	-3	-1	5	3	-2	-6	-6	8	4	-5	-6	0	5	-3
Q	21	5	2	-1	-4	-6	-7	-9	-7	-10	-5	-2	-1	14	12	13	11	6	6	11	26	23	12	13	9	5
	22	9	16	11	6	29	-7	-33	-28	-75	-63	-19	-72	-65	-50	4	19	12	9	11	7	23	9	-15	18	-10
	23	10	10	-17	-73	-26	-16	-43	-34	-9	6	-7	-1	6	31	-30	-58	-28	1	3	9	14	22	5	26	-8
Q	24	27	15	5	4	1	-14	-3	4	-1	7	12	5	18	12	5	5	9	9	9	6	2	-2	3	12	6
Q	25	14	12	10	8	-8	-6	-1	12	1	-5	-1	2	-4	-3	2	-2	17	6	17	-7	16	14	12	29	6
	26	12	-133	21	14	4	-7	-7	-10	-3	5	22	40	-6	11	38	-7	-17	41	25	22	39	33	-28	18	5
	27	21	24	14	19	-14	-21	11	4	11	28	62	52	-91	-25	11	21	-20	-41	19	28	9	3	6	-1	5
	28	-61	-65	4	2	-4	0	1	2	6	0	9	23	18	6	-8	-44	-63	-4	6	-1	6	-6	9	24	-6
	29	28	7	8	9	6	-31	2	-6	-5	-10	-5	1	-3	1	5	-7	-29	3	20	28	-83	-10	40	2	-1
	30	28	33	-109	-95	22	0	3	30	-17	14	32	15	12	-41	-17	-38	-23	-38	23	3	-29	18	-31	-97	-13
	MEAN	-6	-33	-19	-16	-21	-20	-16	-7	-16	-12	-9	-17	-27	-14	-17	-29	-21	-16	-7	5	1	-6	-11	-15.	-15
5Q	MEAN	15	7	3	4	-6	-12	-11	0	-4	1	3	-1	-2	-8	-3	-7	0	-8	4	5	6	-0	6	11	
5D	MEAN	-21	-111	-76	-59	-84	-38	-40	-14	-60	-76	-71	-83	-89	-25	-33	-82	-37	-31	-13	-5	-21	-30	-50	-52	-50

JULY 1968 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	-22	-36	-12	-31	-12	-19	29	-20	-59	9	1	-34	-38	-19	-8	-22	-13	-5	-34	-21	9	8	11	-7	-14
	2	7	-73	-8	17	-5	-4	8	-12	28	-17	-58	-13	3	10	-57	1	-30	-24	-16	-8	11	17	24	-49	-10
D	3	9	-43	-125	9	-3	-69	-66	-78	-90	19	-5	1	-14	-4	35	36	40	-2	31	21	12	12	10	29	-10
	4	14	-7	-11	-47	-32	-21	-11	-64	-47	-14	-7	-1	-19	-40	17	-7	-6	-3	9	-53	-24	18	19	19	-13
	5	-1	-55	-59	-20	-26	7	11	16	19	-6	-11	2	5	12	15	7	-15	26	24	17	7	28	17	21	2
	6	21	19	-64	-34	9	-45	0	31	41	0	11	-8	21	26	9	14	20	32	24	13	18	21	15	3	8
	7	2	3	-13	8	15	24	-27	-42	-8	-23	16	9	-5	1	4	-10	-24	30	15	14	14	11	6	6	1
	8	9	5	11	-58	-48	-40	-50	-5	-16	-23	-12	6	5	27	10	2	7	44	18	23	9	11	9	4	-2
Q	9	6	3	3	3	-23	-45	-32	10	-11	2	17	11	12	9	4	-2	-2	11	17	14	13	17	24	36	4
D	10	32	24	-9	44	1	65	10	22	31	-16	-9	12	-141	-109	-23	-8	8	3	-121	-107	-27	77	-91	-45	-16
	11	-59	0	-44	-31	-27	16	-8	-36	13	27	37	22	-19	-9	-23	-50	-49	-43	4	-1	-16	-14	13	-32	-14
	12	-68	-139	-77	-22	-30	1	5	-5	-9	-7	-8	-1	7	15	12	28	-74	-23	9	-5	-7	-6	-4	2	-17
D	13	0	-4	14	-6	6	-73	-33	-9	-19	-12	-15	-11	-6	0	-6	-1	-98	-130	-43	-72	-120	-54	-74	-76	-35
D	14	-43	-162	-189	-98	-113	-10	14	-7	-11	-14	-28	-11	-14	-2	-17	-3	13	-3	-81	-55	9	10	7	-6	-34
	15	6	0	-58	12	-32	-45	-24	-3	-17	-9	10	-19	5	0	2	2	2	10	20	13	-10	-13	-22	-7	-7
	16	-41	-65	-2	18	13	-48	-13	-12	12	-30	-21	0	3	8	-63	12	-1	-5	36	28	9	1	7	11	-6
	17	9	1	-6	-12	-13	-4	-5	-2	5	15	-11	-2	-57	-36	21	9	10	10	19	-1	-15	-9	14	19	-2
	18	27	-20	-39	-39	-41	-10	21	6	-5	5	-4	-51	-43	-24	-78	-12	30	-4	-21	27	31	19	15	24	-8
	19	0	18	16	-24	-33	-23	-13	24	1	-8	32	-20	-19	-9	6	-8	-72	24	28	32	38	-81	-19	-33	-6
Q	20	-67	-15	-15	-14	-8	-7	-2	-3	-2	-6	-9	-8	-6	5	5	4	3	7	8	8	0	9	13	23	-3
	21	11	-7	-2	0	-5	-9	-3	12	-15	7	9	13	12	-17	0	16	-10	32	-27	27	28	25	-46	-11	2
D	22	-3	-86	-26	19	49	59	-25	-4	-48	-73	-39	-40	16	-47	6	-7	-10	4	-57	-63	-3	0	-9	15	-16
	23	1	13	-12	-47	-12	69	-3	-26	-10	23	32	8	-1	10	17	-36	23	29	19	22	20	1	-4	1	6
Q	24	-1	-6	-8	-8	6	-9	-33	-26	-2	20	0	-5	11	14	19	7	8	17	20	16	-6	-5	-4	-6	1
	25	2	2	5	5	9	-3	-23	1	19	27	9	4	18	14	12	-14	6	-1	24	20	13	15	3	9	7
	26	5	1	10	-1	-87	-38	17	17	25	44	-35	-8	-25	-12	-2	-5	-37	-38	25	1	0	47	-54	-17	-7
	27	-99	-87	-43	-36	-9	12	-22	7	13	-8	13	-16	-31	-80	-15	-24	0	11	2	-21	-2	17	2	6	-17
	28	-11	-28	-21	-4	-5	1	2	-8	1	8	-7	-1	16	20	6	-46	-62	-15	-37	-4	13	12	2	-36	-9
Q	29	-41	-41	-46	6	-8	-44	-26	5	15	3	0	5	-7	-6	5	-9	12	5	15	-11	14	9	-11	-21	-7
	30	-9	-11	-4	-30	6	-10	-4	-5	2	-2	0	1	-2	3	2	-13	-28	-2	6	24	-19	-30	23	16	-4
Q	31	8	-50	-25	7	-33	-33	-9	2	9	15	23	-34	-17	-5	-24	-17	-3	1	8	10	2	4	1	-1	-7
	MEAN	-10	-27	-28	-13	-16	-11	-10	-7	-4	-1	-2	-6	-11	-8	-4	-5	-11	-0	-2	-3	1	6	-3	-3	-7
	5Q MEAN	-19	-22	-18	-1	-13	-28	-20	-2	2	7	6	-6	-1	3	2	-3	4	8	14	7	5	7	5	6	-2
	5D MEAN	-1	-54	-67	-6	-12	-6	-20	-15	-27	-19	-19	-10	-32	-32	-1	3	-9	-26	-54	-55	-26	9	-31	-17	-22

AUGUST 1958 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	-11	-10	-7	-5	-17	7	17	-53	-53	-38	-2	2	9	13	-22	-37	-4	4	12	9	5	6	0	-8
Q	2	3	0	-4	-11	-4	-5	-2	2	6	27	31	-25	-5	17	13	-3	-5	2	2	15	9	2	11	13	4
	3	9	13	-58	-49	-43	-15	41	-41	26	61	33	-15	30	26	33	36	8	-7	33	24	33	29	9	8	9
	4	-1	-2	-1	2	10	-47	-1	11	2	-2	-2	0	1	2	9	9	9	16	15	10	5	2	0	10	2
	5	3	-17	7	-4	-37	-19	5	-1	11	1	-34	-16	-55	-75	-15	-8	-34	17	30	23	21	23	-19	-24	-9
	6	6	-6	-30	-115	-69	-29	37	6	19	23	28	4	-5	0	-7	-9	7	26	18	24	-17	-18	11	16	-3
	7	-64	-148	-117	-29	-8	-100	-66	-17	25	-3	11	-53	-77	-65	-40	-43	-46	3	10	-5	3	7	13	5	-34
	8	-98	-116	-102	8	-99	-16	12	-14	-41	13	4	2	10	-11	-7	-5	10	17	17	5	-1	-2	-19	-13	-19
	9	-2	-30	-44	10	-6	-3	-38	-21	3	-3	2	5	-29	-2	10	-4	31	-102	-38	6	-61	-11	10	-30	-14
	10	0	-34	-5	-9	-1	-26	-74	-23	12	-15	-9	-9	0	-5	-6	-6	-30	-45	-1	1	-12	-45	-39	-16	-17
	11	20	-33	-40	12	-8	-7	-25	13	10	1	0	-1	0	4	1	2	3	14	17	1	9	2	-5	-2	-1
	12	17	-44	-15	-5	-4	9	-24	-17	7	1	20	-7	-11	-1	-7	-23	-31	7	21	-10	-17	2	1	0	-5
	13	-1	-4	-4	5	-9	-13	-2	-1	2	-4	-8	-7	2	7	8	-32	-18	-57	3	32	4	-1	22	-53	-5
D	14	-70	-13	-76	-42	-10	-33	-73	-50	-27	-1	-45	-56	-33	-14	-26	-5	-9	18	-122	-40	6	-32	-95	-34	-37
D	15	2	-7	-62	-54	-93	15	2	-77	-77	-114	24	-16	-83	-45	-70	-62	-77	-59	-41	-12	-13	-76	-58	-56	-46
D	16	-143	-50	2	-6	-84	-109	-9	-2	16	0	-33	-18	-3	-32	-145	-217	-16	-75	-77	-18	-108	-100	0	9	-51
D	17	-233	-70	-18	-132	-130	-39	15	-18	14	-106	-15	-28	-200	-249	-145	-105	-3	-22	-48	4	-34	-80	-1	-43	-70
	18	-77	-15	-34	-63	-163	-115	-6	-49	-78	-83	-86	26	-18	-85	-109	-117	-10	-46	-59	-26	-64	-75	-1	-26	-57
	19	-127	-40	-44	-30	-45	-48	-34	-8	-60	-74	-66	-36	6	1	3	5	12	-52	-4	11	8	5	0	4	-26
	20	2	1	-7	-3	-6	-10	3	7	-7	7	-11	-4	-7	-5	-25	-71	-84	-30	16	4	10	3	-20	-29	-11
	21	-9	-8	1	-7	-43	-41	-3	-29	-26	1	5	-4	-3	-11	-11	-9	-10	-9	-25	-20	-5	-4	-2	4	-11
	22	-9	-9	-7	-7	-7	-5	-5	0	-5	-7	8	-13	-12	-3	-9	-14	4	-2	-9	1	3	13	-29	-60	-8
	23	-9	-25	-66	-42	-21	29	35	-4	17	27	40	23	-12	-19	-23	-15	-29	-18	-13	7	12	10	-6	8	-4
D	24	25	-19	33	17	35	-93	-101	6	-18	-37	-36	-64	6	6	-37	-56	-44	-28	-20	13	16	-67	2	9	-19
	25	7	3	-5	0	-1	5	2	-6	-7	-9	-6	-5	-10	-9	-9	-9	0	0	2	-6	-40	-12	3	0	-5
	26	-10	-9	-5	3	-3	-3	-4	-2	-1	-34	2	-3	-3	-23	-64	-36	-20	-2	-27	-11	-2	1	3	4	-10
	27	1	4	-32	-18	4	0	9	-9	-1	23	23	1	2	-2	-6	-9	-4	2	10	3	-18	-4	-2	2	-1
Q	28	4	4	6	0	2	-18	5	3	6	-5	-5	-6	-3	-2	-3	-6	-2	-5	-1	-14	-27	-1	-3	-3	-3
Q	29	-5	-1	0	1	-2	-5	1	3	-4	-6	-9	-3	6	-10	-5	-15	-6	-5	-4	-3	0	-4	-5	-5	-4
Q	30	7	10	17	-1	0	-4	-1	8	8	-2	-1	4	1	3	0	0	-1	1	-1	2	7	3	1	2	3
	31	12	14	0	-15	8	17	20	12	7	3	36	-11	-41	-65	-3	-68	-30	6	7	-48	-26	18	-9	3	-6
	MEAN	-24	-21	-23	-19	-27	-24	-9	-10	-7	-12	-4	-11	-18	-21	-22	-30	-15	-14	-9	-0	-9	-13	-7	-10	-15
5Q	MEAN	1	0	2	-4	-2	-10	2	7	-7	-8	-4	-6	0	3	4	-9	-10	-2	0	2	-0	1	2	1	-2
5D	MEAN	-84	-32	-24	-43	-56	-52	-33	-28	-18	-52	-21	-36	-63	-67	-85	-89	-30	-33	-62	-11	-27	-71	-30	-23	-45

SEPTEMBER 1968 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	3	-41	-60	4	-7	47	-9	-24	-5	7	-77	-47	-73	-78	-26	4	-12	17	21	24	24	34	26	-12	-11
	2	-37	-2	21	12	14	17	-22	2	-37	-56	-147	-17	-11	-75	-5	5	-26	-25	-20	18	23	7	14	15	-14
	3	12	8	-25	32	10	18	31	42	39	14	11	21	14	22	12	-6	-92	-21	6	-10	-6	-113	-6	23	2
	4	-73	-31	8	-59	-78	11	33	19	42	39	26	-73	-82	-62	-86	-62	-23	6	2	-35	-15	6	-68	8	-23
	5	12	12	7	-7	19	-74	-44	21	27	-23	-12	-42	-54	-46	8	3	-9	-10	18	4	-58	-12	-28	-45	-14
	6	-86	-9	-22	-30	16	-32	-61	-45	2	8	-2	3	16	-20	14	-10	-19	-71	7	20	18	-138	-70	-111	-26
	7	-33	43	13	13	11	18	13	13	14	16	9	10	15	6	2	7	-74	-35	-59	-19	16	-25	-160	-193	-16
D	8	-175	-273	-103	-84	-72	-23	-126	-135	-138	-258	-36	-145	-110	30	24	-212	-227	-159	-16	22	13	17	8	14	-90
	9	-145	-117	-98	-35	-57	-56	7	10	18	18	3	-67	-68	5	8	-24	-23	-51	-19	-8	4	6	-2	0	-29
	10	-5	-41	-54	-56	-21	2	0	-4	2	15	28	-72	-25	-9	7	-58	-65	-37	-6	10	3	-5	5	9	-16
	11	-23	-55	-90	-24	-53	-37	-12	8	-7	-12	7	-3	-17	12	4	0	-3	-5	-36	2	5	0	1	-2	-15
	12	1	7	-14	-85	-37	-1	18	-57	-36	-22	-19	58	-25	-56	-106	8	22	26	-59	-90	-15	59	14	-76	-20
D	13	-183	-132	-133	-47	33	2	-21	9	31	25	13	-128	-76	-47	-46	-108	-138	-109	-173	-128	9	-10	-137	-59	-65
D	14	-123	-133	-159	-257	-22	21	-4	-109	-57	-117	-141	-85	-179	-207	-69	-102	-109	-88	-10	-18	-111	-158	-34	-12	-95
D	15	-75	-99	-200	-89	-82	-20	-3	-3	-3	28	3	-82	-72	-75	-46	-224	-105	-99	-168	-38	-12	-28	-34	-142	-70
	16	-88	-42	-83	-149	-84	-41	-2	-5	-17	-15	-32	-6	-36	-28	-34	-62	4	-28	-49	-15	-15	-34	-6	1	-36
	17	-14	-9	-30	17	-37	1	-8	-29	-19	-10	-47	-14	-24	-16	-10	-3	-4	-5	-55	-18	-2	5	3	-1	-14
Q	18	-4	-5	-18	-16	-24	-28	4	-1	2	-4	-7	-8	-3	3	8	-20	-41	-51	-18	3	1	8	11	-22	-10
	19	-23	8	0	-64	-110	15	20	-34	-3	-102	1	7	1	-2	-9	-40	-31	-3	1	7	9	1	-1	4	-15
	20	18	4	-26	-79	-13	4	-1	2	2	6	4	3	3	1	-1	-3	-4	-2	-7	-22	-25	-1	6	5	-5
	21	-6	3	6	14	-2	-62	-94	13	13	1	1	5	-7	-64	-11	-78	-195	-40	11	13	1	9	15	12	-18
	22	-5	-26	22	13	14	14	10	21	24	15	5	-6	-58	-60	-69	-40	-11	9	8	14	-59	-45	-150	-54	-17
D	23	5	-110	-176	-217	-34	30	-7	-5	-26	-124	-25	-7	-13	-101	-207	-276	-57	-24	6	6	3	-1	5	-2	-57
Q	24	-5	-1	6	8	7	3	0	1	-6	-7	-5	-4	-9	-6	-12	-10	-8	-2	3	-77	-51	1	5	4	-7
Q	25	2	1	-1	-3	0	0	1	1	-2	-10	-8	-9	-6	-3	-4	-12	-23	-18	-3	4	-3	-9	-8	-5	-5
Q	26	-1	-9	3	4	3	6	15	-16	-21	5	5	0	-3	10	14	-58	-57	-14	1	2	-3	-5	-1	2	-5
Q	27	4	4	6	17	-5	1	11	10	5	0	-4	0	2	-3	-2	-2	-3	-21	2	3	1	2	5	12	2
	28	14	9	-3	6	7	10	13	13	5	-15	-8	-73	6	4	-4	-31	-64	-7	20	-55	-6	-44	10	18	-7
	29	22	-42	-30	20	-3	-84	-31	12	20	5	-3	1	2	8	18	17	-36	-34	-48	-18	-94	-75	10	6	-15
	30	9	11	11	13	5	5	6	11	14	9	-2	-11	-28	-7	12	-43	-96	0	17	-33	-148	-42	-17	-29	-14
	MEAN	-33	-36	-41	-38	-20	-8	-9	-9	-4	-19	-15	-26	-31	-29	-21	-48	-51	-30	-21	-14	-16	-20	-19	-21	-24
	5Q MEAN	-1	-2	-1	2	-4	-4	6	-1	-4	-3	-4	-4	-4	0	1	-20	-26	-21	-3	-13	-11	-1	2	-2	-5
	5D MEAN	-110	-149	-154	-139	-35	2	-32	-49	-39	-89	-37	-89	-90	-80	-69	-184	-127	-96	-72	-31	-20	-36	-38	-40	-75

OCTOBER 1968 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	-117	-132	16	48	13	-8	-9	4	8	-23	-19	15	8	3	-70	-11	-4	-81	-64	3	14	-99	-38	-17	-23
D	2	-136	-188	-34	-8	-51	-125	-65	-1	0	-33	-392	-315	-180	-136	-143	-94	-44	-4	-52	-17	9	11	-71	-112	-91
	3	-87	-346	-220	-62	-70	-93	-60	-154	-151	-195	-33	10	4	-25	-23	-18	-19	-17	-10	-10	-6	-6	-9	-10	-67
	4	-13	-13	-15	-15	-16	-18	-13	-12	-11	-1	-6	-10	-14	-18	-14	-50	-68	-59	-27	-9	-8	-5	-5	-5	-18
Q	5	8	6	5	8	8	-1	-17	-55	-40	-33	-1	6	-12	-30	-2	-4	-13	-6	-2	1	0	-2	-3	-1	-8
	6	0	3	-6	3	2	5	21	43	32	25	33	15	14	4	0	-15	-20	-13	-2	-28	-22	11	1	-20	4
	7	-92	-57	-54	-104	20	19	5	-1	2	-6	-40	-14	-9	-8	-5	-13	0	9	-153	-171	-39	-69	-17	-25	-34
	8	-152	-38	11	-10	-22	-29	-14	-4	-35	-15	-27	-48	-18	-14	-8	-69	-73	3	5	-51	-60	-11	-34	-28	-31
	9	-107	-94	-152	-41	12	5	6	-2	-5	-3	-5	-3	2	4	-51	-87	-58	-82	-6	1	-2	-55	-114	-62	-37
	10	-58	-50	22	3	-5	-20	-35	-32	-12	-39	-22	1	2	0	-23	-17	-10	-4	-2	2	2	-1	-3	1	-13
Q	11	2	3	0	-1	0	4	5	-21	-14	0	-1	-1	-2	-14	-6	-1	0	4	5	7	3	1	2	3	-1
D	12	-48	-239	-154	-135	-120	-63	61	26	43	-45	-104	-138	-58	-77	-80	-42	-25	-185	-383	-68	-197	-75	-172	-163	-102
D	13	-93	-53	-118	-35	-89	-25	-71	-92	-123	-159	-100	-111	-169	-103	-174	-151	-142	-166	-33	-42	-43	-76	-174	-125	-103
	14	-109	-33	-58	-58	-53	-51	3	-1	-38	-3	2	-44	-155	-45	-60	-159	-136	-47	-39	-82	-28	-59	-66	12	-54
	15	13	7	0	7	8	-10	1	-29	-28	-26	-19	6	2	-7	-20	-62	-41	-76	-22	2	-10	-10	-4	1	-13
	16	2	5	-3	-30	-24	-24	-65	-71	-90	-22	0	0	0	-24	-98	-122	-15	7	6	11	12	6	6	9	-22
	17	-12	-40	-14	5	-5	15	7	-13	-12	11	-15	-4	-4	-18	-62	-87	-6	6	-14	0	-39	-28	19	-7	-13
	18	16	22	-7	2	10	11	14	-13	-41	9	15	-22	-11	-9	-7	-5	5	-6	-1	13	10	4	-38	-88	-5
	19	-24	-12	14	10	7	8	8	13	-13	-2	5	-8	-107	4	0	-6	-2	-1	-1	-71	-135	-17	-3	-53	-16
	20	-5	13	6	7	3	2	10	-76	-98	-72	-25	-5	-3	-49	2	1	-52	-72	-8	3	1	1	3	2	-17
Q	21	3	3	3	1	2	4	1	0	-10	-20	-14	0	-2	-7	-10	-11	-11	-13	-3	-2	-2	-6	-2	3	-4
Q	22	5	6	5	7	9	9	2	1	5	1	-1	-4	-5	-8	-10	-16	-15	-12	-7	-4	-2	-1	0	3	-1
Q	23	4	4	4	5	2	4	5	3	3	1	1	-1	0	-7	-8	-8	-5	-22	-21	8	12	8	8	8	0
	24	8	8	11	8	22	17	17	22	28	35	23	30	25	13	15	-18	-16	-67	-109	21	30	17	7	5	6
	25	4	5	6	10	2	3	43	24	-26	-39	4	0	-21	-105	-31	-1	11	6	4	-13	-18	-45	-30	8	-8
	26	4	8	-3	4	9	10	11	-9	-65	-54	-1	8	5	2	1	0	0	1	-20	-22	37	45	41	35	2
	27	30	24	19	13	13	14	8	-43	-45	19	12	8	14	12	-17	-15	-11	-8	-64	-45	-1	5	8	2	-2
	28	-1	10	9	11	12	9	-52	-18	13	13	12	10	7	4	7	-20	4	10	10	13	12	18	-18	-68	0
D	29	-65	25	29	24	21	23	7	32	28	36	28	25	-6	-23	-17	14	-27	-347	-124	-79	-122	-22	-27	9	-23
	30	32	73	57	43	12	5	12	7	3	-63	-183	-118	-151	-212	-152	-64	-59	-42	-32	-28	-89	-59	-95	-178	-53
D	31	-144	-82	-169	-170	-208	-133	-158	-105	-190	-5	-128	-319	29	-194	-681	-233	-281	-412	-309	-517	-265	-139	20	21	-199
	MEAN	-37	-37	-26	-15	-15	-14	-10	-19	-28	-23	-32	-33	-26	-35	-56	-45	-37	-55	-48	-38	-31	-21	-26	-27	-31
	5Q MEAN	4	4	3	4	4	4	-1	-14	-11	-10	-3	0	-4	-13	-7	-8	-9	-10	-6	2	2	0	1	3	-3
	5D MEAN	-97	-107	-91	-65	-89	-65	-45	-28	-48	-41	-139	-172	-77	-107	-219	-101	-104	-223	-180	-145	-124	-60	-85	-74	-104

NOVEMBER 1958 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	-116	-214	-99	-3	0	9	-9	-22	-20	-5	-26	-305	-1055	-462	-316	-103	-10	15	-144	-184	-113	-439	-227	-219	-128
D	2	-179	-379	-160	-38	2	-26	-46	-2	-125	-155	-146	-167	-238	-223	-297	-156	-129	-128	-8	-8	-44	-46	-135	-142	-124
D	3	-53	-241	-47	39	28	6	-47	-93	-29	-30	-10	-15	-219	-200	-141	-157	-91	-96	-130	-45	-68	-115	-80	-40	-78
D	4	-40	-75	-19	-25	-63	-134	-80	-117	-107	-81	-130	-102	-297	-161	-26	29	30	-7	3	-41	-110	-49	15	0	-66
	5	-6	-10	-39	-75	2	2	-4	-61	-90	-86	-35	-59	-73	-18	-32	-36	-30	-26	-16	-14	-44	-76	-13	-7	-35
	6	-10	-12	-12	-29	-24	-2	-6	-14	-4	-1	-16	-35	-4	1	-20	-25	-18	-28	-142	-71	-43	-6	-53	-160	-31
	7	-85	-84	-57	-73	-99	-117	-66	-32	-31	-41	-20	-47	-53	-225	-32	29	5	-2	-3	-8	7	7	4	4	-43
	8	-3	-1	1	4	1	-18	-76	-52	-43	-116	-65	-40	-83	-82	-144	-101	-44	-25	-9	-15	-32	-23	-92	-157	-51
D	9	-118	-206	-89	-77	-48	-4	10	-3	-119	-204	-68	-41	-83	-120	-125	-88	-72	-33	-43	-62	-8	-12	-9	-3	-68
	10	-6	-3	-14	-73	-52	-16	-9	-12	-47	-18	-69	-217	-145	-29	-21	-146	-144	-77	-7	2	3	-18	-31	-82	-51
	11	-88	-99	-99	-34	-12	1	-4	-89	-134	-35	-28	68	-81	-90	-27	-14	-5	-6	11	10	13	4	6	-4	-31
Q	12	-21	-17	-3	1	2	-8	-5	-2	0	4	8	-10	-33	-22	-6	-10	-47	-33	-15	-5	-2	-4	0	1	-9
	13	3	3	-7	-5	2	8	8	6	14	17	-36	-13	25	26	14	-4	-19	-17	-9	1	-7	26	35	12	3
Q	14	2	4	3	9	14	11	8	11	10	4	4	2	3	-2	1	-8	-20	-6	-13	-2	7	-20	0	16	2
Q	15	6	10	7	9	-4	-3	2	4	8	5	2	0	-4	-4	-4	-8	-5	-14	2	3	-1	-2	4	7	1
	16	8	16	17	21	19	15	11	8	8	26	22	32	-4	-16	-9	-37	45	37	10	29	15	-29	-15	20	10
	17	12	3	-7	49	34	26	21	47	33	7	35	3	-48	-72	-83	-148	-141	-102	-263	-237	-210	-234	-152	-40	-61
	18	-60	-192	-96	-62	-169	-83	-79	-10	8	-225	50	33	0	-8	-1	-4	-42	-108	-81	8	22	-31	-143	-57	-55
	19	2	-33	-5	24	12	3	10	12	-17	32	22	-40	-73	-31	-9	-64	-14	-6	-4	-4	-1	4	3	3	-7
	20	1	7	11	10	23	36	27	26	43	-16	-11	-10	4	-109	-156	20	47	24	-74	12	21	14	21	23	-0
	21	13	24	15	12	9	-11	5	3	7	0	0	0	-7	-36	-17	-14	-130	-122	-60	-20	-8	-5	-61	3	-17
	22	15	11	16	17	10	8	6	10	-3	18	30	8	6	-22	-17	10	5	2	-8	-35	-24	5	19	21	5
	23	25	22	22	-6	6	31	24	9	8	5	-2	0	-34	1	0	-3	-4	0	3	2	1	1	3	9	5
	24	16	16	17	21	15	-2	-6	15	14	11	8	14	12	13	3	-1	8	11	-34	6	11	15	15	13	9
	25	13	19	41	38	30	31	28	13	23	27	7	-7	-4	-22	-11	12	-7	3	-8	-63	-28	2	0	17	6
	26	18	19	17	21	28	22	19	20	21	23	23	43	36	7	-76	-110	-22	-38	-14	21	15	14	-29	10	4
	27	4	-52	-58	9	24	42	53	28	10	2	-14	8	-14	-13	-15	-48	-37	-25	-43	-50	-109	-59	-4	5	-15
	28	23	34	45	35	30	29	19	14	18	0	-75	-43	-11	-8	-5	-3	2	3	-74	-24	8	11	-17	-26	-1
Q	29	-9	22	12	16	2	4	11	10	9	4	0	-4	0	-12	-81	-84	-23	3	9	9	12	6	5	6	-3
Q	30	6	5	5	4	6	7	7	6	2	0	3	-1	-24	-26	-2	-4	-16	-47	1	-12	-44	-14	-11	-28	-7
	MEAN	-21	-47	-20	-5	-6	-4	-6	-9	-18	-28	-18	-32	-50	-66	-55	-43	-31	-28	-39	-27	-25	-36	-31	-27	-28
	5Q MEAN	-3	5	5	8	4	2	5	6	6	3	3	-3	-12	-13	-18	-23	-22	-19	-3	-1	-6	-7	-0	0	-3
	5D MEAN	-101	-223	-83	-21	-16	-30	-34	-47	-80	-95	-76	-126	-178	-233	-181	-95	-54	-50	-64	-68	-69	-132	-87	-81	-93

DECEMBER 1968 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	-15	13	13	-58	2	4	-4	-30	-78	-132	-108	-106	-94	-132	-132	-49	-145	-52	18	37	14	20	24	-42
	2	23	23	15	4	8	5	11	-4	-14	-14	-96	-75	-67	-64	-28	-60	-59	-111	-63	-20	1	-18	5	-8	-25
D	3	-26	0	-12	-68	-169	-36	10	12	-30	-108	-67	-55	-116	-88	-38	-49	-82	-34	-53	-131	-119	-72	-195	-71	-67
D	4	-94	-65	29	17	6	7	-63	-165	-165	-108	-129	-181	-81	-91	-53	-84	-129	-17	-66	-155	-49	-25	-49	-20	-72
D	5	-15	14	-3	-61	-103	-26	24	-1	-153	-185	-82	-49	-273	-73	-105	-91	-24	-89	-79	-165	-69	-100	-142	-143	-83
	6	-102	-24	2	6	-6	12	21	-1	2	-76	-25	21	3	-4	-6	-22	-17	-15	-17	-9	-33	-13	-15	-15	-14
Q	7	9	-3	2	4	0	-2	-2	-14	-8	2	-5	-36	-63	-13	-39	-66	-100	-79	-10	-13	-29	-43	-41	-33	-24
	8	-13	-18	-2	42	14	-2	-60	-59	-141	-29	-52	-61	-57	-198	-25	-18	-1	-11	-102	-104	-35	-9	-79	-44	-44
	9	12	10	38	23	-3	-2	4	1	3	-7	-9	-12	-35	-31	-11	-74	-82	-52	-52	-11	-3	9	-13	-85	-16
	10	-94	0	33	-20	-21	9	-2	-55	-39	-9	-9	-31	-41	10	-6	-12	-11	-3	-1	-10	-19	-85	-22	3	-18
	11	2	-18	-7	15	26	19	16	13	13	3	2	1	-1	-6	-5	-25	-164	-32	-90	-98	36	48	16	-8	-10
	12	-40	-32	-41	-21	11	4	25	6	2	-3	-1	-8	-2	-6	-32	-2	16	-7	-54	-103	-40	-8	-7	-8	-15
	13	-16	0	13	13	9	9	2	1	1	3	-2	-5	-2	-5	-18	-81	-131	-100	-83	-25	-9	0	-2	-1	-18
Q	14	7	3	6	6	8	6	5	-12	-21	-5	26	-1	-4	-20	-20	-1	-11	-8	-15	-8	-6	-6	-5	-4	-3
	15	2	6	10	6	16	11	-6	1	46	17	11	6	7	10	6	-8	-19	-1	1	-13	-87	21	16	7	3
	16	16	21	15	-3	-10	-19	26	6	39	44	-4	35	5	-48	6	9	-6	-68	-16	2	-123	13	17	9	-1
Q	17	-1	17	25	18	15	7	7	34	29	23	13	21	7	7	8	3	-3	0	-21	-6	7	12	12	9	10
	18	7	3	-18	17	25	17	13	8	12	5	-4	-29	-10	-7	-43	-20	17	14	1	-56	-30	26	60	26	1
	19	4	1	22	26	19	20	-19	-9	32	14	6	-12	-73	23	12	-10	-13	-104	-90	22	7	-11	-70	-53	-11
Q	20	20	13	20	17	25	8	-2	2	11	15	9	5	4	0	4	1	1	3	4	1	-2	5	5	3	7
	21	-23	-26	-10	9	15	18	12	-9	1	9	5	-19	-22	10	32	9	-33	-26	26	19	-63	-96	-196	-50	-17
	22	1	15	-45	-6	24	-4	23	7	5	12	11	2	5	-23	-54	-24	-32	-153	-42	26	5	5	2	1	-10
D	23	4	7	17	25	27	23	14	17	4	6	12	43	4	-47	-158	-8	2	-195	-119	7	13	-91	-72	1	-19
	24	39	24	28	8	-25	-15	18	3	-11	12	9	4	1	-26	-62	-109	-102	-8	8	0	-6	-23	-87	-99	-17
D	25	18	9	-36	-261	-218	-110	15	41	43	2	26	19	12	6	4	0	-13	-11	-23	9	-7	1	-43	-6	-22
Q	26	8	4	8	9	8	-9	3	5	1	1	0	1	4	3	-2	-4	-5	-2	0	4	2	0	4	5	2
	27	5	-16	-18	-68	-2	-33	-131	-87	-140	-133	-100	-44	-141	-139	-17	-25	-47	-25	-27	-2	-3	-8	-2	-4	-50
	28	-16	-11	-2	-4	-11	-3	-20	-8	-2	3	-9	-25	-12	-45	-2	-68	-26	-18	-86	-23	-19	-11	-41	-18	-20
	29	2	6	-8	-6	-11	-5	-2	-1	-1	-27	-38	-30	-86	-57	-36	-77	-105	-125	-22	7	-54	-147	-88	0	-38
	30	-1	-29	-80	-30	-11	-11	-21	-17	-19	-63	-17	-62	-146	-3	12	3	-12	-56	-56	-65	-62	3	-5	-25	-32
	31	-63	-77	-37	-34	-8	5	6	9	13	12	3	-3	5	1	-15	-76	-60	-68	-51	-7	-5	-77	-114	25	-26
	MEAN	-11	-5	-1	-10	-13	-3	-2	-9	-17	-21	-21	-22	-41	-33	-27	-36	-42	-50	-40	-29	-25	-22	-36	-19	-22
	5Q MEAN	9	7	12	11	11	2	2	3	2	7	9	-2	-10	-5	-10	-13	-24	-17	-8	-4	-6	-6	-5	-4	-2
	5D MEAN	-23	-7	-1	-70	-91	-28	0	-19	-60	-79	-48	-45	-91	-59	-70	-46	-49	-69	-68	-87	-46	-57	-100	-48	-53

TABLE OF OBSERVATORIES SUPPLYING HOURLY AU AND AL

JANUARY 1968 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	CO	CO	CO	CO	CO	CO	UE	CO	UE	UE	UE	AI	DI	AI	AI	AI	AI	NAS	NAS	NAS	NAS	BW	FC	NAS
2	BW	BW	BW	BW	BW	BW	CC	UE	AI	AI	AI	AI	AI	AI	AI	LR	LR	LR	LR	GWR	GWR	GWR	GWR	GWR
3	GWR	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	DI	DI	BW	BW	FC	BW	LR	FC	FC
4	LR	LR	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	BW	AI	AI	AI	LR	LR	LR	GWR	GWR
5	GWR	FC	BW	GWR	FC	BW	BW	BW	BW	BW	BW	CC	CC	DI	LR	AI	DI	BW	BW	LR	LR	LR	GWR	GWR
6	GWR	BW	BW	GWR	BW	BW	BW	BW	CC	CO	CC	CC	DI	AI	AI	AI	AI	AI	AI	LR	LR	NAS	NAS	FC
7	FC	GWR	BW	BW	GWR	FC	BW	CC	CC	CC	CC	CC	CC	DI	DI	AI	AI	DI	AI	BW	FC	FC	FC	FC
8	FC	NAS	FC	FC	BW	BW	BW	CC	CC	CC	CC	CC	CC	CC	DI	DI	FC	DI	LR	BW	BW	BW	BW	BW
9	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	AI	AI	FC	BW	BW	BW	FC	FC
10	FC	FC	FC	BW	FC	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	DI	DI	BW	LR	LR	LR	BW	BW	BW
11	BW	FC	FC	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	DI	AI	AI	AI	LR	LR	LR	LR	GWR	NAS	GWR
12	GWR	GWR	BW	BW	GWR	BW	CO	CO	CO	BW	BW	CO	DI	DI	DI	AI	AI	NAS	LR	LR	LR	NAS	LR	GWR
13	BW	BW	BW	BW	BW	BW	BW	CC	BW	CO	DI	DI	DI	DI	DI	DI	NAS	AI	AI	AI	LR	LR	LR	GWR
14	GWR	GWR	GWR	BW	BW	BW	BW	CO	CO	BW	DI	DI	DI	DI	DI	AI	DI	DI	LR	LR	LR	LR	GWR	NAS
15	FC	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI	LR	AI	AI	AI	LR	LR	GWR	GWR	GWR
16	GWR	GWR	BW	BW	BW	BW	BW	BW	CC	CO	CC	CO	DI	DI	DI	DI	NAS	AI	LR	LR	NAS	NAS	BW	BW
17	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	DI	AI	AI	AI	AI	LR	LR	NAS	LR	BW	FC
18	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	CC	CC	DI	DI	DI	DI	DI	NAS	BW	BW	BW	BW	BW	BW	BW
19	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	DI	DI	CC	CC	DI	AI	AI	AI	AI	AI	LR	FC	GWR	FC
20	BW	BW	BW	BW	AI	BW	BW	CC	CC	CC	DI	DI	DI	AI	AI	DI	CO	CC	NAS	NAS	LR	BW	BW	BW
21	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	DI	DI	DI	AI	AI	NAS	BW	BW	NAS	NAS	BW	BW
22	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	LR	AI	AI	AI	NAS	BW	NAS	NAS	BW	NAS
23	BW	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	AI	AI	NAS	LR	NAS	FC	BW	BW
24	CC	BW	CC	CC	BW	BW	BW	BW	CC	CC	BW	CC	DI	DI	DI	NAS	DI	NAS	LR	NAS	NAS	NAS	NAS	BW
25	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	CC	CC	DI	DI	CC	BW	CO	NAS	NAS	NAS	NAS	BW
26	CC	GWR	BW	BW	BW	CC	CC	CC	CC	CC	CC	CC	DI	DI	NAS	LR	LR	AI	CO	CO	AI	NAS	NAS	NAS
27	CC	FC	FC	BW	BW	CC	BW	CC	CC	BW	CC	CC	CC	DI	CC	NAS	NAS	NAS	LR	NAS	NAS	NAS	GWR	GWR
28	GWR	BW	GWR	GWR	DI	CC	CC	CC	CC	CC	CC	CC	CC	DI	DI	NAS	AI	AI	NAS	NAS	NAS	NAS	GWR	GWR
29	CC	BW	CO	CO	CO	BW	BW	BW	CO	CO	CC	CC	DI	DI	DI	DI	DI	NAS	LR	LR	LR	GWR	GWR	GWR
30	BW	BW	GWR	BW	CO	CO	BW	BW	LR	BW	CC	CC	DI	DI	DI	DI	NAS	AI	AI	AI	LR	BW	LR	LR
31	FC	GWR	GWR	BW	BW	GWR	BW	BW	CC	CO	CO	CC	CC	DI	DI	DI	DI	DI	BW	BW	FC	FC	FC	NAS

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.CHELYJSKIN	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 = DIXON ISLAND	73 32.6	80 33.7	63.0	161.5

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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 = TIXIE BAY	71 35.0	129 00.0	60.4	191.4
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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU AND AL

JANUARY 1968 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	AI	DI	DI	AI	AI	LR	LR	NAS	NAS	GWR	BW	FC	FC	FC	CO	CO	CO	CC	BW	DI	AI	AI	AI	AI
2	CO	CO	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	NAS	UE	CO	UE	DI	BW	BW	DI	DI	AI	AI	AI
3	AI	AI	AI	NAS	NAS	NAS	NAS	GWR	NAS	NAS	NAS	NAS	BW	CO	CC	CC	NAS	NAS	NAS	NAS	UE	CC	DI	DI
4	CO	UE	AI	UE	LR	GWR	LR	LR	GWR	GWR	BW	FC	FC	BW	GWR	GWR	BW	CC	BW	BW	DI	DI	DI	AI
5	CC	CO	CC	NAS	NAS	NAS	NAS	NAS	GWR	NAS	GWR	FC	NAS	FC	CO	BW	BW	FC	NAS	BW	DI	CC	DI	DI
6	CC	CC	LR	CC	AI	LR	NAS	NAS	NAS	GWR	FC	FC	FC	CO	CC	BW	BW	BW	BW	BW	AI	DI	DI	CC
7	DI	CC	CC	CC	DI	AI	NAS	NAS	GWR	GWR	FC	CO	FC	BW	BW	DI	BW	CC	DI	DI	NAS	DI	DI	CC
8	CC	CO	AI	UE	LR	NAS	NAS	NAS	NAS	BW	BW	BW	FC	BW	NAS	CC	CC	BW	FC	GWR	DI	CO	CO	LR
9	LR	LR	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	NAS	LR	NAS	BW	GWR	BW	BW	CC	CC	CC	CC	CO	CO	CC
10	AI	CC	UE	LR	LR	LR	LR	FC	GWR	FC	FC	FC	FC	BW	BW	BW	GWR	GWR	DI	DI	CC	DI	CO	CO
11	UE	AI	LR	LR	LR	LR	UE	UE	UE	FC	FC	FC	LR	FC	CC	CO	BW	DI	BW	BW	BW	DI	CC	CC
12	CO	DI	AI	LR	CC	FC	LR	NAS	LR	NAS	NAS	GWR	CO	FC	FC	BW	BW	BW	DI	BW	BW	BW	AI	DI
13	DI	UE	NAS	LR	LR	NAS	NAS	NAS	NAS	NAS	BW	FC	FC	FC	FC	BW	CC	BW	BW	CC	DI	DI	DI	AI
14	AI	AI	NAS	LR	LR	NAS	NAS	NAS	GWR	GWR	BW	FC	FC	FC	BW	CC	CC	BW	BW	DI	BW	DI	DI	AI
15	CO	CC	CC	CC	NAS	NAS	NAS	NAS	FC	FC	FC	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	DI	DI	DI
16	AI	CO	LR	NAS	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	BW	BW	BW	BW	BW	BW	BW	UE	BW	DI	DI	AI
17	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	BW	GWR	FC	CO	FC	FC	CO	CC	CC	BW	BW	DI	DI	CC	CC	CC
18	AI	LR	AI	LR	NAS	LR	NAS	NAS	NAS	FC	FC	CO	CO	CO	CC	CC	DI	DI	DI	FC	FC	FC	UE	UE
19	UE	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	FC	CO	LR	FC	CO	BW	CC	BW	BW	DI	DI	AI	AI	DI
20	CC	AI	LR	FC	GWR	FC	GWR	FC	FC	GWR	CO	FC	FC	CO	CO	BW	BW	BW	DI	DI	CC	FC	AI	LR
21	LR	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	BW	BW	BW	BW	BW	BW	BW	DI	DI	DI	DI	DI	DI	DI	AI
22	AI	LR	LR	NAS	NAS	GWR	GWR	FC	LR	FC	FC	FC	FC	CO	CO	CO	BW	BW	DI	DI	DI	DI	CC	CO
23	LR	LR	LR	LR	NAS	FC	GWR	FC	GWR	FC	LR	BW	BW	BW	FC	BW	CC	CC	CC	DI	DI	DI	CC	LR
24	LR	LR	NAS	LR	LR	LR	FC	FC	FC	FC	FC	FC	BW	BW	BW	CC	BW	BW	DI	DI	DI	AI	AI	AI
25	LR	NAS	LR	LR	NAS	FC	FC	FC	FC	FC	FC	BW	BW	BW	BW	BW	GWR	GWR	DI	DI	CC	DI	LR	LR
26	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	GWR	AI	BW	BW	BW	CO	CO	BW	UE	DI	GWR	GWR	DI	AI	AI
27	LR	LR	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR	AI	LR	LR	BW	BW	BW	CC	BW	DI	BW	AI	AI	AI	CC
28	AI	AI	LR	LR	NAS	FC	FC	FC	LR	FC	FC	LR	FC	BW	BW	BW	BW	BW	BW	BW	DI	DI	DI	AI
29	AI	AI	AI	LR	LR	NAS	NAS	GWR	GWR	GWR	FC	FC	BW	BW	BW	LR	BW	BW	BW	BW	BW	DI	BW	AI
30	CC	LR	LR	LR	LR	NAS	GWR	GWR	CO	DI	FC	FC	CO	BW	FC	BW	CC	BW	BW	CC	DI	DI	AI	CO
31	AI	AI	LR	LR	NAS	AI	NAS	NAS	FC	FC	FC	GWR	FC	CO	CC	CC	BW	CO	LR	GWR	CO	CO	CO	AI

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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU AND AL

FEBRUARY 1968

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

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

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

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

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

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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APRIL 1968 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	DI	AI	AI	LR	LR	LR	LR	GWR	GWR	GWR	CO	GWR	CO	CO	CO	BW	BW	BW	DI	DI	AI	DI	CC	CC
2	LR	LR	LR	FC	GWR	GWR	GWR	FC	FC	FC	FC	BW	FC	FC	CO	BW	FC	DI	DI	DI	DI	DI	DI	AI
3	AI	AI	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	FC	FC	CO	DI	DI	FC	FC	FC	UE	DI	DI
4	CO	AI	AI	AI	LR	LR	LR	NAS	NAS	FC	FC	FC	FC	FC	FC	CO	BW	BW	FC	FC	FC	DI	DI	CC
5	CC	LR	LR	LR	LR	NAS	NAS	NAS	FC	FC	FC	FC	FC	FC	FC	CO	BW	BW	BW	BW	BW	UE	AI	AI
6	LR	CC	GWR	LR	NAS	LR	GWR	BW	GWR	GWR	GWR	CO	CO	CO	CO	CO	DI	DI	DI	AI	DI	DI	AI	AI
7	AI	LR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	FC	CO	CO	CO	CO	CC	BW	BW	GWR	GWR	DI	CC	DI	CO	UE
8	LR	NAS	NAS	NAS	NAS	NAS	DI	DI	DI	FC	FC	FC	BW	BW	FC	CC	CC	FC	FC	FC	FC	FC	FC	FC
9	UE	UE	UE	UE	CC	CC	CC	DI	DI	AI	AI	FC	LR	FC	FC	FC	FC	FC	FC	FC	FC	CO	CC	CC
10	LR	LR	LR	LR	LR	FC	GWR	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	DI	DI	DI	DI	DI	DI	CC
11	CC	LR	LR	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	CO	UE
12	CO	UE	UE	FC	CC	CC	DI	DI	DI	AI	FC	AI	FC	FC	FC	FC	FC	FC	DI	DI	DI	AI	AI	AI
13	LR	LR	LR	LR	LR	LR	FC	FC	FC	GWR	GWR	GWR	FC	FC	CO	CO	CO	BW	DI	UE	AI	DI	AI	CC
14	AI	LR	NAS	NAS	NAS	NAS	NAS	DI	DI	AI	GWR	BW	GWR	FC	FC	FC	CO	BW	BW	DI	UE	DI	AI	AI
15	LR	UE	UE	CC	CC	FC	GWR	DI	GWR	GWR	GWR	FC	CO	CO	CO	CO	DI	BW	BW	BW	AI	AI	AI	AI
16	LR	LR	LR	FC	GWR	GWR	GWR	GWR	GWR	BW	BW	FC	FC	FC	BW	BW	BW	DI	DI	DI	DI	DI	AI	LR
17	LR	LR	UE	GWR	GWR	GWR	GWR	GWR	GWR	CO	CO	FC	FC	CO	CC	BW	BW	BW	BW	BW	UE	AI	AI	AI
18	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	CO	FC	FC	FC	AI	FC	BW	BW	DI	DI	DI	DI	CC	AI	LR
19	UE	UE	UE	CC	GWR	CC	DI	DI	AI	AI	AI	AI	LR	LR	LR	GWR	CC	CC	CC	CC	CO	CO	CO	CO
20	CO	UE	UE	CC	CC	CC	CC	DI	DI	AI	AI	LR	BW	BW	FC	FC	FC	FC	FC	FC	FC	CO	CO	CO
21	UE	UE	UE	CC	CC	CC	FC	DI	DI	FC	FC	FC	FC	BW	BW	BW	FC	FC	CO	CO	CO	CO	UE	CO
22	LR	LR	LR	NAS	NAS	NAS	NAS	GWR	NAS	NAS	DI	AI	NAS	FC	CO	BW	BW	BW	BW	DI	DI	DI	CC	CC
23	AI	LR	LR	LR	LR	LR	NAS	NAS	GWR	BW	CO	GWR	CO	BW	BW	BW	BW	BW	BW	BW	DI	DI	CC	AI
24	AI	AI	LR	LR	GWR	LR	FC	FC	DI	FC	FC	FC	FC	FC	CC	CC	BW	BW	BW	DI	DI	AI	AI	CO
25	UE	UE	UE	UE	CC	FC	FC	FC	FC	AI	LR	AI	LR	FC	FC	BW	BW	BW	CO	BW	DI	AI	CC	AI
26	CC	AI	AI	LR	LR	GWR	GWR	NAS	NAS	NAS	DI	DI	CI	CO	CO	CO	BW	BW	BW	AI	BW	DI	DI	AI
27	AI	LR	CO	LR	GWR	NAS	NAS	NAS	NAS	GWR	NAS	NAS	FC	FC	FC	CO	BW	BW	BW	BW	AI	AI	AI	AI
28	LR	LR	LR	LR	LR	NAS	NAS	GWR	GWR	GWR	CO	GWR	DI	GWR	GWR	BW	BW	BW	DI	DI	DI	DI	DI	AI
29	LR	LR	LR	GWR	GWR	NAS	NAS	GWR	GWR	GWR	FC	CO	CO	CO	CO	CO	BW	BW	CC	CC	DI	DI	CC	AI
30	LR	LR	GWR	GWR	GWR	CC	NAS	GWR	GWR	GWR	GWR	AI	LR	GWR	FC	BW	BW	BW	BW	FC	CO	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	GWR	GWR	DI	BW	BW	GWR	AI	BW	BW	BW	CC	CC	CC	DI	AI	AI	NAS	LR	NAS	NAS	GWR	GWR	GWR	GWR
2	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	DI	DI	CC	DI	DI	DI	CO	NAS	NAS	NAS	NAS	NAS	NAS	FC
3	GWR	BW	BW	BW	BW	CC	BW	BW	CC	CC	CC	CC	DI	DI	DI	AI	LR	NAS	LR	NAS	NAS	GWR	GWR	GWR
4	GWR	GWR	DI	AI	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	LR	LR	LR	LR	LR	NAS	NAS	GWR	GWR
5	DI	DI	GWR	GWR	AI	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	DI	NAS	NAS	NAS	GWR	GWR	GWR	GWR
6	DI	DI	DI	GWR	AI	AI	CO	NAS	CO	BW	CC	CC	CC	CC	CC	CC	CC	LR	LR	LR	LR	LR	LR	DI
7	DI	GWR	GWR	AI	BW	CO	CO	DI	DI	DI	DI	DI	LR	AI	AI	AI	NAS	LR	LR	NAS	GWR	GWR	GWR	GWR
8	GWR	GWR	DI	GWR	GWR	BW	BW	BW	CC	CC	CC	DI	CC	CC	NAS	LR	LR	LR	NAS	NAS	NAS	NAS	FC	FC
9	FC	BW	BW	BW	BW	CO	CC	CC	CC	DI	DI	DI	AI	AI	AI	AI	LR	LR	LR	GWR	GWR	GWR	GWR	GWR
10	GWR	GWR	DI	BW	BW	GWR	LR	GWR	GWR	GWR	CC	CC	CC	CC	CC	CO	LR	LR	NAS	LR	LR	NAS	NAS	LR
11	GWR	BW	BW	BW	BW	BW	CC	CC	CC	DI	CC	CC	DI	DI	DI	AI	LR	LR	NAS	LR	NAS	GWR	GWR	GWR
12	BW	BW	BW	BW	CO	CC	CO	CO	CC	CC	DI	DI	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS
13	NAS	BW	BW	NAS	BW	BW	BW	NAS	CC	CC	DI	CC	CC	DI	DI	AI	LR	LR	LR	LR	GWR	GWR	GWR	GWR
14	GWR	CO	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	DI	DI	DI	LR	LR	LR	GWR	LR	FC	FC
15	FC	FC	BW	BW	BW	BW	CC	CC	CC	CO	CC	CC	CC	CO	CO	LR	LR	LR	LR	LR	NAS	NAS	GWR	GWR
16	GWR	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	AI	AI	LR	LR	LR	FC	FC	FC	FC	FC	FC
17	DI	GWR	FC	FC	FC	BW	FC	FC	FC	FC	FC	CC	CC	DI	FC	LR	FC	NAS	LR	LR	GWR	GWR	GWR	GWR
18	GWR	GWR	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	TI	BW	LR	LR	LR	LR	LR	NAS	BW	GWR	GWR	GWR
19	BW	GWR	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	DI	DI	CC	LR	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR
20	FC	BW	BW	BW	CO	BW	BW	CC	DI	DI	DI	DI	DI	DI	DI	LR	LR	NAS	NAS	NAS	NAS	GWR	GWR	GWR
21	BW	BW	BW	BW	FC	FC	BW	CC	CC	CC	CC	TI	AI	LR	AI	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	FC
22	FC	BW	CO	CO	BW	TI	TI	CC	CC	CC	CC	CC	CC	CC	DI	AI	NAS	LR	LR	LR	NAS	GWR	GWR	GWR
23	GWR	BW	BW	GWR	GWR	GWR	GWR	BW	BW	CC	CC	CC	DI	DI	DI	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR	GWR
24	BW	BW	CO	BW	BW	BW	CC	DI	CC	CC	DI	DI	AI	AI	FC	LR	FC	NAS	NAS	FC	FC	FC	FC	FC
25	FC	FC	FC	FC	FC	FC	FC	BW	CC	CC	CC	CC	CC	FC	AI	LR	LR	NAS	NAS	NAS	FC	FC	FC	FC
26	FC	FC	FC	BW	BW	BW	FC	FC	BW	CC	CC	CC	CC	CC	CC	CC	DI	FC	FC	FC	FC	FC	FC	FC
27	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	NAS	NAS	NAS	LR	FC	NAS	NAS	NAS
28	NAS	GWR	GWR	GWR	BW	BW	BW	BW	TI	TI	BW	BW	CO	CO	CO	LR	LR	LR	NAS	NAS	NAS	NAS	NAS	FC
29	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	DI	AI	AI	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR
30	GWR	GWR	BW	BW	BW	LR	BW	CC	CC	CC	CC	CC	CC	DI	DI	AI	AI	AI	LR	LR	NAS	GWR	FC	FC
31	GWR	BW	BW	BW	BW	BW	LR	CC	CC	CC	CC	CC	DI	AI	CC	LR	LR	LR	LR	NAS	NAS	NAS	NAS	GWR

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

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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU AND AL

JUNE 1968

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

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

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

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2	AI	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	BW	BW	BW	BW	DI	DI	DI	CC	CC	DI
3	CC	LR	LR	NAS	NAS	NAS	NAS	GWR	NAS	NAS	FC	FC	FC	CO	BW	FC	GWR	BW	BW	DI	DI	CC	CC	CC
4	LR	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	CO	FC	BW	BW	DI	DI	DI	DI	CC	CC	UE
5	LR	NAS	NAS	LR	NAS	DI	DI	FC	GWR	GWR	FC	FC	FC	BW	CO	CO	BW	BW	BW	BW	CC	CO	CO	UE
6	TI	CC	NAS	NAS	NAS	GWR	GWR	GWR	GWR	FC	FC	FC	FC	FC	BW	BW	BW	CC	DI	DI	DI	CC	BW	BW
7	UE	CC	NAS	NAS	NAS	NAS	GWR	GWR	GWR	GWR	FC	FC	AI	LR	CC	CC	BW	BW	CC	CC	CO	CO	BW	UE
8	NAS	BW	CC	NAS	NAS	GWR	FC	GWR	GWR	GWR	FC	FC	FC	LR	BW	BW	CC	DI	CC	CC	CC	CC	CO	UE
9	CC	CC	CC	CC	GWR	NAS	NAS	GWR	GWR	CO	FC	FC	AI	BW	BW	BW	BW	BW	CO	CO	CO	UE	UE	UE
10	AI	AI	LR	LR	LR	LR	NAS	NAS	NAS	GWR	GWR	CO	CO	CO	CO	BW	BW	BW	BW	BW	TI	TI	AI	AI
11	AI	AI	LR	LR	GWR	NAS	NAS	NAS	GWR	GWR	GWR	CO	CO	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	AI
12	AI	AI	LR	LR	GWR	GWR	CO	DI	DI	DI	AI	AI	AI	GWR	GWR	CO	BW	BW	CC	CO	CO	CO	CO	UE
13	TI	TI	TI	TI	NAS	NAS	FC	FC	DI	CC	AI	AI	AI	NAS	BW	BW	BW	BW	BW	BW	CC	DI	DI	DI
14	AI	AI	AI	AI	LR	NAS	GWR	GWR	GWR	CO	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	AI
15	TI	LR	LR	NAS	NAS	NAS	NAS	DI	DI	AI	FC	BW	AI	NAS	NAS	FC	FC	BW	BW	DI	DI	DI	CC	CC
16	LR	NAS	NAS	TI	NAS	NAS	NAS	DI	GWR	FC	FC	FC	AI	BW	BW	BW	BW	BW	CC	CC	CC	CO	UE	UE
17	UE	UE	TI	TI	CC	CC	DI	DI	AI	AI	FC	FC	FC	BW	GWR	GWR	CC	CC	BW	DI	DI	CC	UE	CC
18	CC	LR	LR	LR	NAS	NAS	NAS	DI	DI	AI	FC	FC	FC	FC	CO	CO	FC	BW	BW	CC	CO	CO	UE	CC
19	AI	CC	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	FC	FC	BW	BW	BW	CC	BW	CC	BW	BW	DI	DI	AI
20	AI	AI	TI	NAS	GWR	CC	CC	CC	AI	AI	AI	AI	AI	GWR	GWR	GWR	FC	FC	BW	BW	DI	CC	CC	UE
21	LR	LR	TI	TI	CC	CC	CC	GWR	GWR	FC	AI	FC	FC	FC	BW	BW	BW	TI	BW	CC	UE	DI	DI	CC
22	AI	LR	LR	NAS	NAS	LR	NAS	NAS	GWR	GWR	GWR	CO	CO	FC	CO	CO	TI	TI	TI	DI	DI	AI	AI	AI
23	LR	LR	LR	LR	LR	LR	GWR	GWR	GWR	AI	FC	FC	FC	FC	FC	CO	BW	TI	CC	CC	CO	CC	CC	CC
24	LR	TI	TI	TI	TI	GWR	GWR	FC	FC	AI	FC	FC	FC	FC	BW	BW	FC	FC	BW	CC	CC	UE	UE	UE
25	TI	TI	NAS	TI	NAS	GWR	GWR	NAS	DI	GWR	FC	FC	FC	BW	FC	BW	BW	BW	CC	CO	BW	BW	CC	UE
26	CC	CC	CC	FC	NAS	NAS	AI	GWR	GWR	GWR	GWR	FC	FC	CO	BW	BW	CC	BW	BW	TI	DI	AI	AI	CC
27	AI	LR	LR	LR	NAS	GWR	GWR	NAS	FC	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	CO	UE
28	LR	LR	LR	LR	GWR	NAS	BW	DI	DI	LR	FC	BW	BW	BW	BW	BW	BW	BW	BW	DI	AI	CO	CC	LR
29	LR	LR	LR	CC	GWR	GWR	NAS	DI	AI	AI	AI	FC	BW	BW	BW	BW	GWR	BW	BW	CC	CC	BW	BW	BW
30	BW	BW	CC	NAS	CC	DI	DI	DI	AI	AI	BW	BW	BW	BW	GWR	BW	BW	BW	BW	BW	DI	DI	CC	CC
31	LR	LR	NAS	NAS	GWR	NAS	FC	GWR	FC	AI	FC	FC	FC	BW	BW	BW	FC	FC	FC	BW	CO	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
CC = C.CHELYJSKIN	77 43.0	104 17.0	66.2	176.4
CO = COLLEGE	64 51.6	-147 50.2	64.6	256.5
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1	FC	FC	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	LR	NAS	NAS	AI	NAS	FC	FC	FC
2	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	NAS	NAS	NAS	NAS	NAS	NAS	FC	FC
3	FC	FC	FC	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	DI	AI	AI	AI	LR	LR	AI	NAS	NAS	FC	FC
4	FC	FC	FC	FC	BW	BW	BW	BW	BW	FC	GWR	FC	FC	CO	CO	CO	LR	LR	LR	GWR	NAS	FC	NAS	FC
5	FC	FC	FC	BW	BW	BW	FC	FC	CC	CC	CC	CC	DI	DI	AI	AI	AI	NAS	BW	AI	NAS	NAS	FC	GWR
6	FC	FC	BW	BW	BW	BW	BW	CO	CC	CC	CC	TI	TI	TI	DI	LR	LR	NAS	NAS	NAS	GWR	GWR	NAS	FC
7	FC	CO	FC	FC	CO	CO	CO	CC	CC	CC	CC	DI	DI	DI	DI	AI	LR	NAS	NAS	NAS	NAS	NAS	FC	FC
8	FC	BW	BW	BW	BW	BW	CC	CC	CC	CO	CC	CC	DI	DI	DI	NAS	NAS	NAS	LR	NAS	NAS	NAS	FC	FC
9	FC	FC	BW	FC	AI	BW	BW	CO	FC	CC	CC	CC	CC	CC	CC	LR	LR	LR	NAS	NAS	NAS	NAS	FC	FC
10	FC	FC	FC	GWR	FC	BW	BW	BW	CC	CC	CC	CC	FC	BW	CC	LR	LR	AI	AI	NAS	NAS	NAS	FC	FC
11	FC	FC	FC	BW	BW	BW	BW	TI	TI	TI	FC	TI	TI	CC	TI	CO	NAS	NAS	NAS	NAS	NAS	NAS	DI	FC
12	FC	FC	GWR	AI	FC	BW	BW	TI	TI	BW	CC	CC	TI	TI	AI	AI	AI	NAS	NAS	NAS	NAS	DI	FC	DI
13	DI	FC	FC	FC	CO	UE	TI	TI	TI	TI	TI	TI	CC	CC	AI	AI	LR	LR	AI	NAS	NAS	NAS	FC	FC
14	FC	FC	BW	BW	BW	BW	BW	CC	TI	TI	TI	TI	DI	DI	AI	AI	AI	LR	LR	LR	LR	FC	FC	FC
15	FC	FC	BW	BW	CO	BW	BW	CC	CC	DI	CC	TI	DI	AI	LR	LR	LR	LR	LR	LR	GWR	GWR	FC	FC
16	FC	BW	BW	BW	BW	BW	CO	UE	CC	CC	CC	CC	CC	DI	AI	LR	LR	LR	GWR	LR	GWR	GWR	FC	FC
17	CO	FC	BW	BW	CO	UE	CO	TI	CC	DI	CC	DI	DI	AI	AI	LR	LR	LR	LR	LR	GWR	GWR	BW	GWR
18	BW	DI	CO	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	AI	LR	LR	LR	LR	LR	GWR	FC	FC	FC
19	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	TI	DI	LR	LR	LR	LR	LR	FC	FC	FC	FC
20	FC	FC	FC	BW	GWR	TI	BW	BW	BW	CC	CC	CC	DI	DI	AI	LR	LR	LR	GWR	GWR	FC	FC	FC	FC
21	FC	FC	FC	FC	BW	BW	BW	BW	TI	TI	CC	CC	CC	CC	TI	TI	LR	LR	LR	LR	LR	FC	FC	FC
22	DI	DI	FC	FC	FC	FC	TI	TI	TI	TI	CC	CC	CC	CC	CC	LR	LR	LR	LR	LR	LR	FC	FC	FC
23	FC	FC	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	CC	DI	DI	DI	LR	LR	LR	GWR	GWR	FC	FC	GWR
24	GWR	BW	FC	LR	BW	CO	CO	CC	TI	TI	TI	DI	CC	TI	TI	LR	LR	LR	LR	FC	LR	FC	FC	FC
25	FC	FC	FC	FC	FC	FC	FC	FC	FC	FC	TI	FC	DI	FC	CO	CO	LR	LR	LR	GWR	LR	FC	FC	FC
26	FC	FC	FC	FC	FC	TI	TI	TI	CC	CC	FC	FC	DI	DI	DI	AI	LR	LR	LR	LR	GWR	FC	FC	FC
27	FC	FC	BW	BW	FC	UE	TI	BW	TI	CC	CC	CC	TI	TI	CC	TI	CO	LR	LR	LR	LR	DI	FC	FC
28	FC	FC	FC	FC	BW	BW	FC	FC	TI	BW	TI	TI	TI	TI	TI	TI	DI	TI	LR	LR	LR	LR	LR	DI
29	FC	FC	FC	FC	FC	UE	TI	TI	TI	TI	TI	TI	CC	CC	TI	TI	LR	LR	TI	GWR	GWR	GWR	GWR	FC
30	FC	FC	FC	FC	BW	FC	BW	BW	BW	BW	BW	TI	CC	TI	TI	TI	LR	LR	LR	LR	LR	LR	LR	DI
31	FC	GWR	GWR	BW	BW	BW	FC	GWR	TI	TI	CC	DI	DI	AI	AI	AI	LR	LR	LR	GWR	GWR	FC	FC	FC

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

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

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2	LR	LR	LR	CO	CO	CO	GWR	GWR	GWR	GWR	CO	CO	FC	CO	CO	CO	BW	BW	DI	CC	CC	CC	CC	CC
3	CC	LR	GWR	LR	LR	DI	LR	GWR	GWR	GWR	GWR	GWR	CO	BW	FC	FC	TI	TI	UE	BW	TI	DI	CC	BW
4	LR	LR	LR	FC	FC	FC	LR	FC	FC	CO	CO	BW	FC	FC	CO	TI	DI	DI	DI	DI	DI	DI	LR	LR
5	UE	LR	LR	LR	LR	GWR	GWR	GWR	GWR	BW	BW	BW	CO	BW	GWR	BW	DI	DI	BW	DI	DI	DI	CC	AI
6	LR	LR	LR	GWR	LR	GWR	GWR	GWR	GWR	DI	LR	LR	GWR	BW	GWR	BW	BW	CC	CO	UE	DI	CC	TI	CC
7	LR	CC	CO	CO	CC	DI	DI	LR	LR	LR	LR	FC	GWR	GWR	GWR	FC	BW	BW	BW	BW	BW	TI	TI	TI
8	TI	AI	AI	LR	LR	LR	LR	LR	LR	CO	GWR	CO	CO	CO	CO	CO	CO	CO	BW	TI	AI	AI	UE	UE
9	LR	LR	LR	LR	GWR	GWR	LR	CO	GWR	GWR	GWR	BW	BW	FC	GWR	BW	BW	BW	BW	AI	DI	UE	UE	UE
10	LR	LR	LR	LR	GWR	DI	GWR	GWR	AI	LR	LR	CO	BW	BW	FC	TI	TI	BW	DI	CO	CO	DI	CC	LR
11	LR	LR	LR	LR	GWR	GWR	GWR	GWR	BW	BW	LR	BW	BW	BW	GWR	BW	BW	BW	DI	BW	CO	BW	BW	UE
12	UE	TI	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	GWR	FC	CO	CO	CO	TI	TI	DI	TI	TI	DI	AI	LR
13	LR	AI	AI	LR	LR	LR	GWR	GWR	GWR	BW	GWR	CO	GWR	UE	UE	UE	CO	BW	DI	DI	CC	CC	AI	AI
14	AI	AI	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	BW	CO	CO	CO	CO	DI	DI	DI	TI	DI	DI	DI	AI	AI
15	LR	LR	AI	LR	GWR	LR	LR	GWR	GWR	GWR	CO	CO	CO	FC	CO	CO	BW	BW	DI	BW	DI	AI	AI	LR
16	LR	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	BW	BW	FC	BW	CC	CC	BW	DI	DI	DI	DI	DI	AI	UE
17	AI	AI	FC	TI	GWR	GWR	FC	GWR	FC	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	DI	CC	DI	UE	UE
18	BW	UE	DI	DI	FC	FC	DI	DI	FC	AI	LR	LR	LR	FC	FC	BW	BW	BW	BW	DI	DI	DI	CC	LR
19	LR	LR	LR	LR	LR	LR	GWR	GWR	GWR	BW	FC	DI	FC	LR	BW	BW	BW	BW	CC	UE	UE	CC	CC	CC
20	CC	LR	LR	LR	LR	CC	CC	AI	AI	AI	LR	LR	LR	LR	FC	FC	FC	BW	BW	DI	DI	CC	CC	UE
21	LR	CC	CC	CC	GWR	GWR	GWR	GWR	DI	AI	AI	FC	FC	FC	FC	CO	BW	BW	UE	BW	DI	UE	UE	UE
22	LR	LR	UE	UE	CC	DI	FC	GWR	AI	AI	FC	FC	FC	FC	CC	TI	BW	FC	CO	CO	DI	AI	DI	CC
23	LR	LR	LR	LR	LR	GWR	GWR	GWR	GWR	GWR	GWR	FC	CO	CO	CO	BW	FC	CC	FC	AI	AI	AI	TI	AI
24	AI	AI	TI	TI	TI	TI	CC	AI	AI	AI	AI	AI	LR	GWR	GWR	GWR	FC	FC	CO	DI	CC	CO	UE	UE
25	UE	TI	TI	TI	TI	CC	DI	DI	AI	AI	AI	LR	LR	LR	GWR	FC	BW	CC	FC	CO	CO	CO	CO	UE
26	UE	LR	TI	TI	TI	TI	GWR	GWR	FC	AI	AI	LR	LR	LR	GWR	BW	BW	BW	FC	CO	CO	CO	CO	UE
27	UE	UE	TI	LR	LR	GWR	DI	DI	DI	AI	AI	AI	LR	LR	GWR	GWR	GWR	DI	FC	CO	CO	CO	UE	UE
28	UE	TI	LR	TI	TI	CC	DI	DI	AI	FC	FC	BW	FC	BW	BW	BW	BW	BW	DI	DI	AI	AI	CO	UE
29	LR	LR	LR	TI	FC	GWR	GWR	FC	FC	FC	FC	AI	AI	LR	GWR	GWR	BW	BW	DI	TI	DI	DI	CO	CC
30	UE	UE	UE	TI	TI	TI	DI	DI	AI	AI	FC	FC	FC	BW	GWR	TI	TI	TI	DI	DI	DI	DI	CC	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
CC = C.CHELYJSKIN	77 43.0	104 17.0	66.2	176.4
CO = COLLEGE	64 51.6	-147 50.2	64.6	256.5
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IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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NAS= NASSARSSUAQ	61 06.0	-45 12 0	71.0	37.0
TI = TIXIE BAY	71 35.0	129 00.0	60.4	191.4
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TABLE OF OBSERVATORIES SUPPLYING HOURLY AU AND AL

OCTOBER 1968 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	LR	FC	BW	CC	UE	TI	CO	CC	DI	DI	DI	LR	LR	LR	NAS	NAS	GWR	GWR	GWR
2	BW	CO	BW	FC	CO	UE	CO	CO	LR	CC	DI	AI	AI	AI	AI	LR	AI	NAS	NAS	NAS	BW	FC	FC	FC
3	BW	CO	BW	CO	CO	UE	CO	TI	TI	TI	DI	CO	LR	DI	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS
4	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	FC	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS	NAS
5	NAS	NAS	NAS	NAS	NAS	NAS	BW	CC	CC	CC	NAS	NAS	DI	DI	CC	CC	AI	BW	FC	FC	FC	FC	FC	FC
6	FC	FC	FC	FC	FC	FC	FC	FC	BW	CO	CC	CC	CC	CC	DI	DI	DI	LR	NAS	LR	NAS	FC	FC	FC
7	FC	FC	GWR	BW	BW	BW	BW	FC	FC	FC	GWR	CC	FC	FC	DI	UE	LR	NAS	NAS	GWR	NAS	FC	FC	FC
8	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	AI	AI	BW	NAS	NAS	NAS	NAS	FC	FC
9	FC	BW	BW	BW	FC	LR	LR	LR	FC	FC	FC	GWR	CC	DI	DI	DI	LR	AI	NAS	BW	NAS	FC	GWR	FC
10	FC	BW	FC	FC	FC	BW	BW	BW	CC	CC	CC	CC	CC	FC	DI	DI	DI	UE	BW	LR	AI	TI	LR	GWR
11	GWR	GWR	GWR	GWR	GWR	GWR	GWR	BW	BW	BW	GWR	FC	CC	CC	UE	UE	UE	DI	TI	LR	LR	TI	FC	LR
12	FC	BW	BW	CO	CO	UE	UE	TI	TI	TI	AI	DI	AI	AI	AI	AI	LR	LR	GWR	GWR	GWR	GWR	FC	BW
13	CO	CO	BW	GWR	CO	CC	CC	TI	DI	DI	TI	DI	AI	LR	AI	AI	NAS	NAS	NAS	NAS	FC	FC	FC	GWR
14	BW	BW	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	DI	LR	AI	LR	NAS	NAS	NAS	NAS	FC	FC	NAS
15	NAS	NAS	FC	FC	BW	BW	BW	BW	CC	CC	CC	CC	CC	DI	DI	NAS	LR	NAS	AI	BW	NAS	NAS	FC	FC
16	FC	FC	FC	GWR	BW	BW	CO	CC	CC	CO	GWR	FC	FC	DI	AI	DI	DI	BW	BW	BW	BW	FC	GWR	GWR
17	GWR	GWR	GWR	GWR	CO	GWR	GWR	BW	CC	CO	CC	GWR	GWR	DI	DI	LR	DI	LR	NAS	LR	NAS	NAS	NAS	FC
18	GWR	GWR	GWR	BW	GWR	FC	BW	CC	CO	CO	CC	CC	CC	CC	DI	DI	DI	NAS	AI	CC	BW	NAS	FC	FC
19	NAS	FC	FC	FC	FC	FC	FC	BW	CO	CO	CC	CC	DI	CO	UE	UE	BW	DI	LR	GWR	GWR	GWR	GWR	GWR
20	FC	FC	FC	GWR	FC	FC	CC	CO	CO	TI	CC	CC	TI	DI	CC	LR	NAS	AI	AI	GWR	NAS	GWR	GWR	GWR
21	FC	FC	FC	FC	FC	FC	GWR	UE	BW	CC	CO	GWR	FC	FC	DI	UE	UE	DI	AI	GWR	NAS	GWR	GWR	GWR
22	GWR	GWR	GWR	FC	FC	FC	FC	BW	FC	BW	FC	GWR	BW	BW	BW	UE	AI	AI	LR	LR	GWR	GWR	NAS	GWR
23	GWR	GWR	GWR	FC	FC	GWR	GWR	GWR	FC	FC	FC	FC	BW	BW	BW	BW	BW	LR	NAS	DI	LR	BW	BW	GWR
24	FC	FC	FC	FC	BW	BW	FC	BW	BW	BW	CC	CC	CC	DI	DI	DI	LR	LR	LR	LR	LR	LR	BW	BW
25	BW	FC	BW	GWR	BW	BW	BW	BW	CO	TI	TI	TI	DI	AI	DI	DI	BW	BW	NAS	NAS	NAS	NAS	FC	FC
26	FC	FC	FC	FC	FC	FC	FC	BW	CO	CC	CC	CC	FC	TI	TI	TI	TI	NAS	NAS	AI	LR	LR	LR	GWR
27	GWR	FC	FC	FC	FC	FC	BW	CO	CO	CO	CO	CO	BW	DI	DI	DI	DI	NAS	AI	LR	LR	FC	FC	FC
28	FC	FC	FC	FC	FC	FC	BW	BW	GWR	FC	TI	FC	FC	DI	TI	DI	TI	TI	TI	TI	TI	TI	FC	GWR
29	GWR	FC	FC	LR	BW	BW	BW	BW	TI	TI	CO	TI	TI	LR	TI	TI	LR	FC	LR	NAS	GWR	FC	FC	LR
30	LR	LR	NAS	NAS	BW	TI	TI	TI	TI	TI	TI	TI	AI	AI	AI	LR	NAS	NAS	NAS	TI	FC	FC	FC	BW
31	BW	BW	BW	TI	TI	DI	TI	TI	TI	DI	AI	AI	LR	LR	AI	CC	FC	LR	LR	NAS	NAS	CO	BW	BW

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OCTOBER 1968 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	AI	AI	AI	LR	TI	TI	TI	GWR	GWR	GWR	GWR	AI	GWR	CO	BW	BW	TI	TI	BW	TI	TI	AI	AI	AI
2	AI	AI	LR	TI	LR	LR	LR	DI	TI	GWR	CO	GWR	GWR	UE	UE	TI	TI	TI	TI	TI	TI	DI	AI	AI
3	AI	LR	LR	LR	NAS	LR	NAS	NAS	GWR	GWR	GWR	TI	TI	CC	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI
4	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI	CO	BW	CC	CC	TI	TI	TI	TI	TI
5	UE	BW	BW	BW	CC	CC	FC	GWR	GWR	FC	FC	LR	BW	BW	GWR	GWR	GWR	CO	CO	CO	CO	CO	UE	UE
6	UE	UE	NAS	TI	TI	TI	TI	DI	GWR	AI	AI	BW	LR	NAS	GWR	TI	BW	BW	BW	DI	DI	CO	AI	LR
7	CO	LR	LR	LR	NAS	FC	NAS	NAS	DI	AI	BW	BW	NAS	NAS	GWR	FC	GWR	BW	DI	TI	BW	AI	AI	LR
8	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	FC	BW	BW	BW	BW	BW	BW	BW	GWR	DI	DI	DI	CC	AI	AI
9	LR	LR	LR	LR	NAS	TI	DI	DI	AI	AI	AI	LR	NAS	NAS	CC	BW	BW	DI	TI	DI	DI	AI	AI	AI
10	LR	LR	NAS	TI	NAS	NAS	FC	FC	FC	BW	FC	LR	BW	BW	BW	BW	NAS	NAS	GWR	GWR	CO	CO	CO	CO
11	UE	UE	TI	TI	TI	TI	DI	FC	GWR	AI	AI	LR	LR	BW	NAS	GWR	GWR	FC	FC	FC	CO	CO	CO	CO
12	NAS	LR	LR	LR	LR	LR	NAS	NAS	GWR	GWR	GWR	CO	UE	UE	UE	BW	BW	CO	BW	AI	CC	TI	AI	DI
13	AI	LR	LR	LR	LR	NAS	NAS	CO	GWR	CO	FC	FC	CO	CC	TI	TI	TI	DI	TI	AI	AI	DI	DI	CC
14	AI	LR	LR	LR	LR	NAS	NAS	GWR	GWR	GWR	BW	CO	BW	BW	BW	TI	BW	TI	DI	DI	DI	DI	AI	LR
15	UE	TI	TI	TI	NAS	GWR	GWR	GWR	GWR	GWR	FC	LR	NAS	CC	BW	CC	TI	CC	CC	CO	DI	DI	LR	UE
16	UE	TI	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	AI	AI	NAS	BW	BW	BW	BW	FC	FC	DI	CC	CC	CO	UE
17	LR	LR	LR	NAS	NAS	DI	DI	NAS	NAS	GWR	BW	AI	BW	CC	BW	BW	BW	GWR	DI	DI	DI	DI	CC	CC
18	AI	AI	NAS	LR	TI	TI	DI	FC	FC	FC	AI	BW	BW	BW	BW	BW	GWR	BW	DI	TI	CC	CC	AI	LR
19	LR	LR	TI	TI	TI	TI	DI	GWR	GWR	FC	AI	FC	BW	NAS	NAS	GWR	GWR	GWR	BW	TI	DI	TI	AI	LR
20	AI	CO	TI	TI	NAS	NAS	NAS	GWR	GWR	GWR	FC	FC	BW	CC	BW	GWR	BW	BW	TI	CO	CC	CO	TI	TI
21	UE	CO	TI	TI	TI	TI	DI	DI	FC	FC	FC	AI	LR	NAS	NAS	GWR	GWR	CC	CC	CO	CO	CO	CO	CO
22	CO	UE	CC	CC	CC	CC	DI	DI	DI	AI	AI	LR	LR	NAS	NAS	GWR	GWR	FC	CC	CO	CO	CO	CC	UE
23	UE	TI	TI	TI	TI	TI	DI	DI	DI	AI	AI	LR	LR	NAS	NAS	GWR	GWR	CC	CC	BW	CO	CO	CO	UE
24	UE	UE	TI	TI	DI	DI	DI	DI	DI	AI	AI	FC	FC	FC	FC	BW	BW	BW	BW	BW	TI	CC	UE	UE
25	UE	UE	TI	TI	NAS	GWR	GWR	GWR	GWR	FC	FC	FC	FC	CO	CC	CC	GWR	DI	DI	DI	DI	DI	AI	AI
26	LR	UE	NAS	NAS	TI	DI	DI	GWR	FC	FC	FC	LR	LR	NAS	GWR	GWR	GWR	BW	CC	DI	BW	CO	UE	CC
27	AI	UE	UE	DI	DI	LR	NAS	GWR	GWR	AI	AI	LR	NAS	GWR	CO	BW	BW	DI	DI	DI	DI	CO	CC	AI
28	LR	UE	UE	TI	TI	NAS	GWR	NAS	DI	DI	DI	LR	NAS	NAS	BW	BW	CC	FC	BW	DI	DI	BW	AI	AI
29	AI	LR	CC	BW	LR	DI	GWR	DI	DI	LR	FC	BW	FC	CO	BW	FC	CO	BW	BW	BW	AI	TI	AI	CC
30	CO	CO	UE	AI	LR	NAS	AI	FC	GWR	BW	BW	FC	UE	BW	DI	BW	BW	BW	DI	AI	AI	AI	AI	AI
31	AI	LR	LR	LR	LR	NAS	NAS	GWR	GWR	CC	BW	BW	CC	DI	BW	AI	DI	BW	CO	BW	BW	TI	AI	GWR

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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NOVEMBER 1968

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

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

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.CHELYJSKIN	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 = DIXON ISLAND	73 32.6	80 33.7	63.0	161.5

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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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 = TIXIE BAY	71 35.0	129 00.0	60.4	191.4
UE = CAPE WELLEN	66 09.8	-163 50.1	61.7	237.0

TABLE OF OBSERVATORIES SUPPLYING HOURLY AU AND AL

DECEMBER 1968 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	GWR	GWR	BW	BW	BW	CC	CC	CO	CC	TI	TI	TI	TI	AI	AI	AI	LR	NAS	BW	BW	BW	BW	BW
2	BW	BW	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	DI	AI	AI	AI	NAS	NAS	BW	NAS	BW	BW
3	BW	BW	BW	BW	BW	BW	BW	CC	CC	CC	DI	DI	TI	AI	LR	AI	LR	LR	LR	NAS	NAS	GWR	GWR	FC
4	BW	BW	BW	BW	BW	CC	CC	UE	DI	DI	DI	AI	DI	DI	AI	AI	LR	AI	NAS	NAS	NAS	FC	GWR	FC
5	GWR	BW	BW	BW	BW	CC	CC	CC	DI	DI	TI	TI	AI	LR	AI	AI	AI	AI	LR	NAS	NAS	GWR	GWR	GWR
6	BW	GWR	BW	BW	BW	BW	BW	BW	CO	CC	CC	CC	CC	FC	DI	DI	DI	BW	BW	FC	NAS	NAS	NAS	FC
7	NAS	FC	FC	FC	FC	FC	CC	BW	BW	BW	CC	CC	CC	CC	DI	DI	AI	LR	CO	LR	AI	NAS	FC	FC
8	FC	FC	GWR	BW	BW	BW	CC	CO	DI	CC	DI	DI	DI	AI	DI	CO	BW	NAS	LR	LR	NAS	FC	FC	GWR
9	FC	FC	FC	FC	BW	BW	BW	BW	BW	CC	BW	CC	CC	DI	DI	LR	FC	LR	LR	NAS	NAS	NAS	FC	FC
10	GWR	BW	BW	BW	BW	BW	BW	CC	CO	CC	DI	TI	TI	CO	BW	AI	AI	NAS	AI	NAS	NAS	NAS	FC	NAS
11	FC	FC	BW	FC	FC	FC	BW	BW	BW	BW	CC	CC	CC	CC	DI	LR	LR	LR	LR	AI	AI	AI	AI	FC
12	FC	BW	BW	BW	BW	BW	FC	CC	BW	BW	CC	CC	CC	DI	DI	DI	DI	CO	NAS	NAS	AI	DI	BW	FC
13	FC	NAS	BW	BW	BW	BW	CO	CC	CO	CC	CC	CC	CC	DI	DI	DI	AI	LR	LR	NAS	LR	LR	FC	FC
14	CO	BW	BW	BW	BW	BW	BW	BW	BW	CC	BW	CC	CC	DI	DI	DI	DI	BW	BW	LR	GWR	GWR	GWR	CC
15	FC	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	CC	CC	FC	CC	DI	DI	DI	DI	AI	LR	LR	NAS	DI
16	CO	FC	BW	BW	BW	BW	BW	BW	BW	BW	DI	CC	DI	DI	DI	DI	DI	AI	NAS	FC	NAS	NAS	NAS	FC
17	FC	FC	FC	FC	BW	TI	BW	BW	BW	CC	CC	BW	CC	DI	TI	TI	TI	TI	TI	TI	TI	TI	TI	TI
18	FC	FC	GWR	FC	FC	TI	BW	TI	TI	CC	CC	CC	CC	DI	TI	DI	DI	FC	NAS	LR	LR	LR	NAS	NAS
19	GWR	GWR	GWR	BW	BW	BW	CO	BW	BW	CC	CC	TI	DI	CC	FC	NAS	LR	LR	NAS	DI	NAS	LR	AI	LR
20	NAS	FC	BW	BW	BW	BW	BW	BW	FC	CC	TI	TI	CC	TI	TI	TI	TI	BW	BW	TI	TI	TI	TI	FC
21	FC	GWR	NAS	LR	CC	CC	CC	TI	CC	CC	TI	DI	DI	DI	TI	TI	AI	AI	AI	NAS	NAS	FC	GWR	GWR
22	GWR	GWR	GWR	GWR	GWR	TI	CC	CC	CC	CC	CC	TI	TI	DI	DI	DI	NAS	LR	LR	DI	DI	CC	GWR	GWR
23	FC	FC	FC	GWR	GWR	GWR	GWR	FC	CO	CC	CO	CO	DI	TI	AI	DI	LR	NAS	LR	LR	NAS	FC	FC	LR
24	LR	GWR	AI	CO	CO	CC	FC	CC	CO	TI	TI	AI	CC	DI	DI	DI	DI	DI	DI	AI	FC	NAS	FC	FC
25	NAS	TI	CO	GWR	CO	CC	CO	CC	CO	CC	CC	CC	TI	TI	DI	NAS	AI	AI	AI	AI	AI	NAS	GWR	FC
26	LR	NAS	FC	NAS	NAS	TI	CC	CC	CC	CC	CC	CC	AI	AI	AI	AI	AI	AI	NAS	AI	AI	NAS	AI	FC
27	FC	FC	FC	GWR	GWR	CC	CC	CC	CO	TI	TI	DI	DI	DI	AI	NAS	CO	CO	CO	FC	FC	FC	FC	FC
28	FC	FC	FC	FC	AI	CC	CC	CC	CO	CC	CC	CC	TI	DI	FC	DI	NAS	AI	AI	NAS	NAS	NAS	FC	FC
29	NAS	CO	CC	AI	AI	AI	TI	CC	CC	CC	CC	CC	DI	DI	DI	NAS	AI	LR	NAS	LR	LR	GWR	FC	GWR
30	FC	FC	CC	CC	CC	CC	CC	CC	CC	CC	CC	TI	DI	DI	DI	CO	AI	AI	AI	LR	LR	NAS	FC	GWR
31	GWR	FC	FC	FC	FC	FC	GWR	CC	CC	CC	CC	CC	NAS	CC	TI	AI	AI	AI	LR	LR	LR	GWR	GWR	NAS

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.CHELYJSKIN	77 43.0	104 17.0	66.2	176.4
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GWR= GREAT WHALE R.	55 16.0	-77 47.0	66.5	347.4
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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
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TI = TIXIE BAY	71 35.0	129 00.0	60.4	191.4
UE = CAPE WELLEN	66 09.8	-169 50 1	61.7	237.0

TABLE OF OBSERVATORIES SUPPLYING HOURLY AU AND AL

DECEMBER 1968 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	CC	CO	NAS	NAS	NAS	NAS	TI	FC	FC	FC	FC	FC	FC	FC	CO	TI	BW	DI	TI	TI	AI	CC	CC	AI
2	LR	LR	LR	NAS	NAS	FC	FC	FC	GWR	GWR	BW	FC	FC	BW	FC	TI	TI	DI	TI	TI	CC	DI	AI	AI
3	LR	LR	NAS	LR	NAS	NAS	NAS	GWR	GWR	GWR	GWR	CO	CO	CO	CO	TI	TI	TI	TI	TI	TI	TI	AI	CC
4	NAS	LR	CO	CO	CO	NAS	GWR	NAS	GWR	GWR	GWR	CO	CO	CO	FC	FC	DI	BW	BW	BW	DI	CC	CC	AI
5	CC	CO	LR	LR	NAS	NAS	GWR	GWR	GWR	GWR	GWR	CO	BW	FC	TI	TI	TI	TI	BW	TI	DI	DI	DI	AI
6	AI	AI	LR	LR	NAS	NAS	NAS	GWR	GWR	BW	BW	FC	BW	BW	BW	CC	CC	CC	CC	TI	DI	DI	CC	CC
7	CC	TI	TI	TI	TI	TI	TI	FC	FC	FC	FC	BW	BW	BW	BW	BW	BW	TI	CC	CC	DI	DI	CC	CC
8	CC	LR	LR	NAS	GWR	NAS	NAS	NAS	CO	CO	CO	FC	FC	TI	BW	TI	TI	TI	DI	BW	CC	DI	AI	CC
9	CO	LR	LR	TI	GWR	GWR	GWR	TI	TI	FC	FC	FC	BW	BW	BW	TI	CC	BW	BW	BW	BW	TI	AI	AI
10	AI	CO	LR	NAS	NAS	NAS	NAS	NAS	GWR	GWR	GWR	BW	BW	GWR	TI	TI	TI	TI	TI	DI	DI	DI	CC	TI
11	TI	LR	TI	TI	TI	TI	TI	TI	TI	TI	FC	TI	TI	TI	BW	BW	BW	BW	BW	BW	TI	TI	CC	CC
12	CC	LR	LR	AI	AI	AI	TI	TI	TI	TI	TI	TI	BW	BW	BW	BW	BW	TI	DI	DI	TI	TI	TI	TI
13	CC	CC	TI	TI	TI	AI	TI	TI	TI	TI	FC	BW	TI	BW	BW	BW	BW	BW	DI	BW	DI	CC	TI	TI
14	TI	TI	TI	TI	TI	FC	FC	FC	FC	GWR	GWR	TI	FC	BW	BW	CC	TI	TI	CC	TI	TI	TI	TI	TI
15	AI	NAS	AI	LR	TI	NAS	NAS	GWR	NAS	NAS	TI	FC	TI	TI	GWR	BW	BW	BW	TI	DI	DI	CC	TI	TI
16	TI	TI	LR	GWR	GWR	GWR	NAS	NAS	NAS	NAS	FC	CO	FC	CC	BW	CC	BW	BW	BW	BW	DI	CC	CC	CC
17	CO	CO	CC	LR	LR	NAS	GWR	GWR	GWR	GWR	FC	FC	BW	BW	GWR	GWR	GWR	GWR	CC	CC	CC	LR	CO	CC
18	CO	LR	LR	LR	LR	NAS	NAS	GWR	NAS	FC	FC	BW	FC	BW	BW	BW	GWR	CC	BW	DI	CC	DI	CC	CC
19	CO	CO	CC	LR	LR	NAS	NAS	GWR	GWR	FC	FC	FC	CO	FC	DI	BW	BW	TI	BW	CO	CC	DI	DI	CC
20	CO	LR	AI	LR	LR	NAS	FC	NAS	NAS	AI	FC	AI	LR	BW	GWR	GWR	GWR	FC	CO	CO	DI	CO	CO	CC
21	AI	CO	CC	CC	AI	LR	NAS	NAS	FC	NAS	FC	CO	CO	FC	CC	CC	CO	CO	TI	TI	DI	DI	DI	NAS
22	CO	CO	CC	CC	CC	NAS	CO	GWR	GWR	GWR	FC	CO	CO	CO	CC	CC	CO	DI	TI	TI	NAS	CO	CO	CO
23	CO	CO	DI	DI	DI	LR	NAS	NAS	GWR	GWR	GWR	FC	FC	FC	CO	CC	CC	DI	TI	CC	TI	DI	CC	CC
24	CO	CO	UE	GWR	GWR	GWR	NAS	GWR	FC	GWR	CO	CO	CO	CC	CC	CC	CC	CC	GWR	GWR	CC	DI	DI	DI
25	CO	LR	NAS	LR	LR	NAS	NAS	DI	CO	GWR	GWR	UE	CO	CO	CO	TI	DI	TI	DI	CO	DI	DI	AI	AI
26	CO	CO	DI	DI	DI	NAS	LR	LR	NAS	NAS	NAS	CO	CO	NAS	GWR	GWR	GWR	GWR	FC	CO	CO	CO	CO	CC
27	CO	LR	LR	NAS	NAS	FC	GWR	NAS	GWR	GWR	GWR	CO	CO	CO	TI	TI	TI	DI	DI	DI	DI	DI	AI	AI
28	LR	NAS	NAS	DI	DI	DI	FC	GWR	FC	LR	FC	FC	CO	CC	TI	CC	CC	TI	DI	DI	DI	AI	AI	DI
29	CO	CO	NAS	NAS	NAS	NAS	DI	DI	FC	FC	FC	FC	CO	CO	CC	TI	TI	TI	TI	TI	DI	AI	AI	CC
30	NAS	LR	NAS	LR	NAS	GWR	GWR	GWR	GWR	GWR	FC	CO	CO	CO	FC	GWR	CC	CC	TI	DI	DI	CC	CC	DI
31	CO	LR	LR	NAS	NAS	DI	DI	DI	FC	NAS	FC	FC	FC	LR	DI	CO	TI	TI	TI	TI	TI	AI	DI	CC

IDENTIFICATION	GEOGRAPHIC LAT	GEOGRAPHIC LONG	GEOMAGNETIC LAT	GEOMAGNETIC LONG
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CO = COLLEGE	64 51.6	-147 50.2	64.6	256.5
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TI = TIXIE BAY	71 35.0	129 00.0	60.4	191.4
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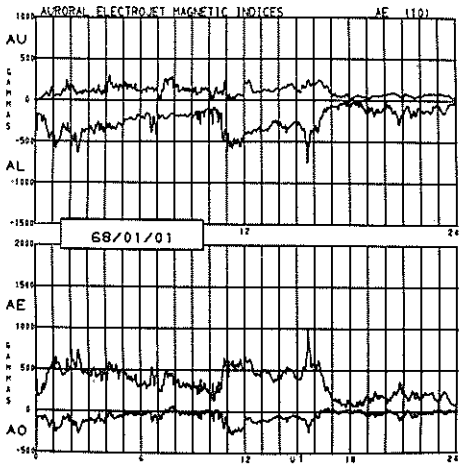
SECTION III

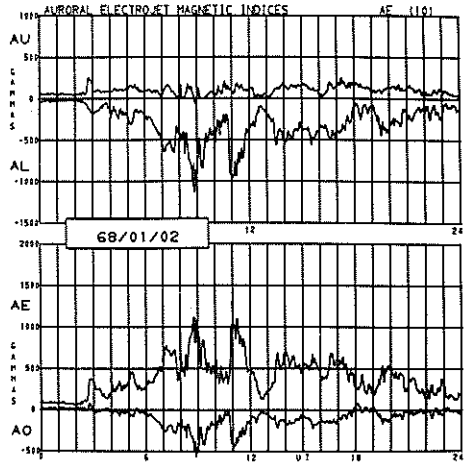
Graphs of Indices

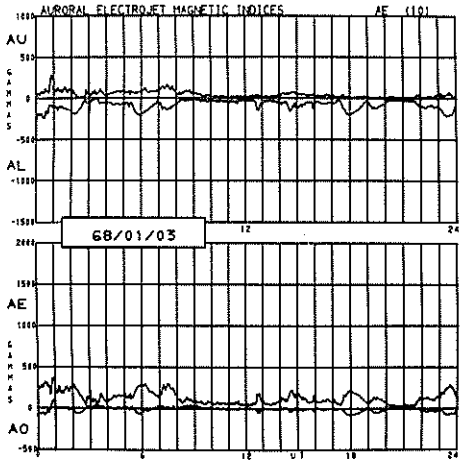
Daily Graphs of 2.5-min Auroral Electrojet Indices

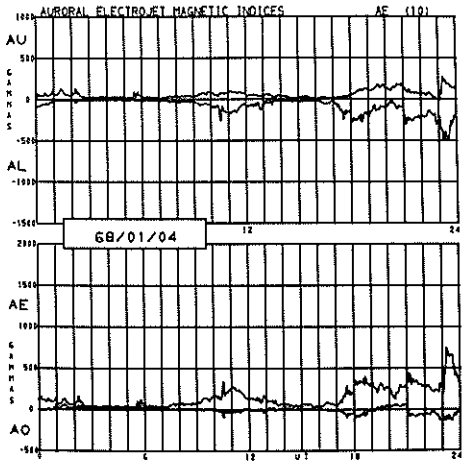
The following graphs are prints of computer drawn plots of variations of the 2.5-min indices AU, AL, AE, and AO for each day of 1968. The dates are given as year/month/day (68/04/12 is 12 April 1968). The number of stations used for index derivations during each month is indicated in the upper right corner as, for example, AE(10). Universal Time is indicated along the horizontal axis. (Note that hour "1" in the tables in Section II refers to the interval 0000-0001 UT on the graphs.)

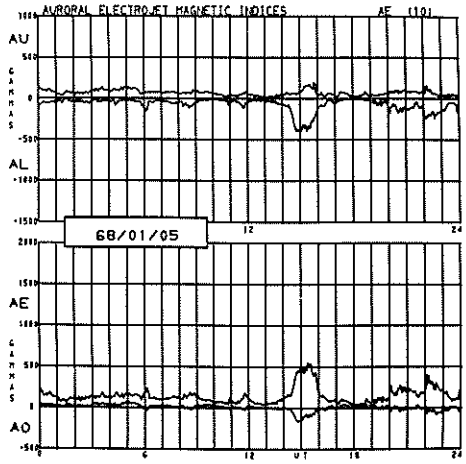
During some very disturbed times (cf. graph for 1 November) the AO trace reached the microfilm frame limit of the plotting area and has been drafted in by hand. Also at such times it is common for the AL and AE traces to overlap and become intermixed, making them difficult to distinguish. It was not practical to change graph scales for such short, disturbed intervals.

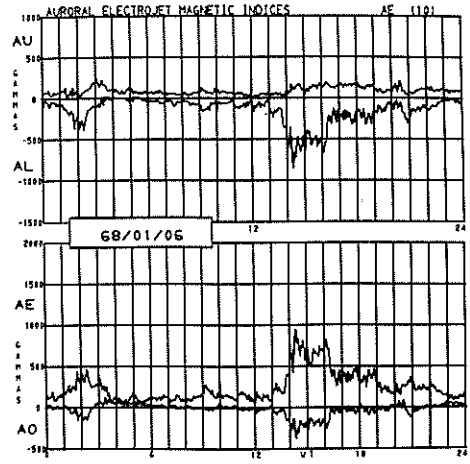

AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/01
AE
AO
GAMMAS

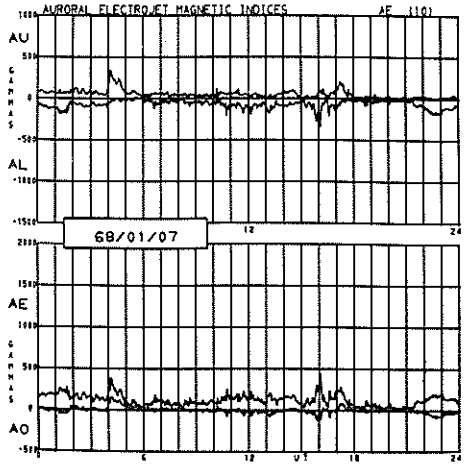

AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/02
AE
AO
GAMMAS

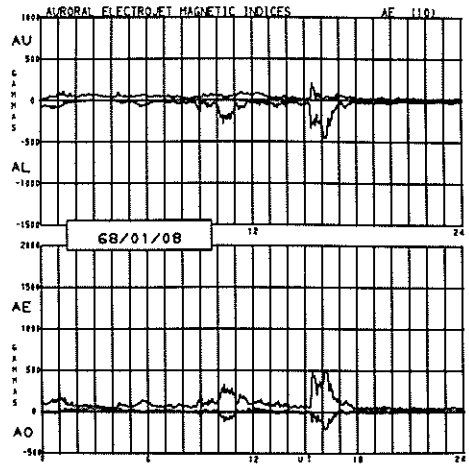

AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/03
AE
AO
GAMMAS

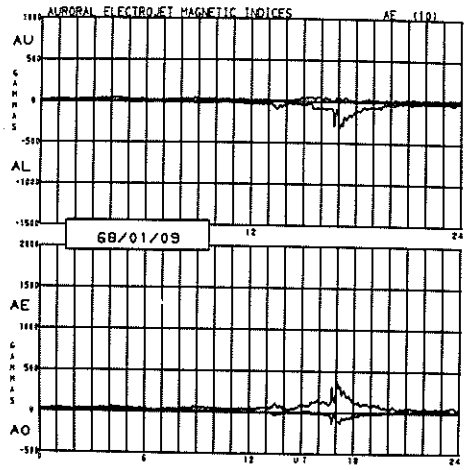

AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/04
AE
AO
GAMMAS

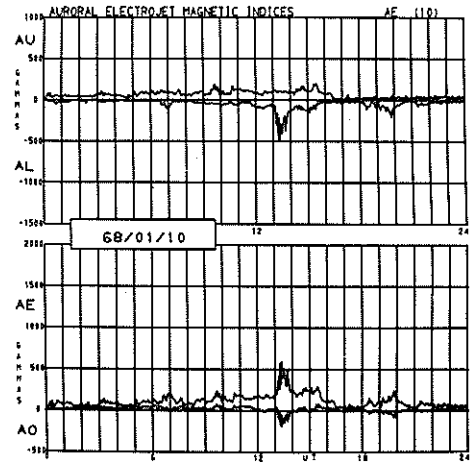

AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/05
AE
AO
GAMMAS

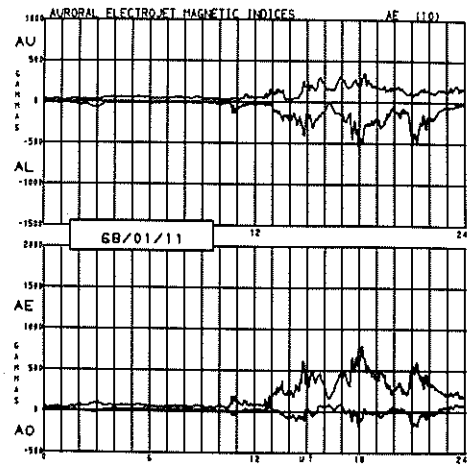

AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/06
AE
AO
GAMMAS

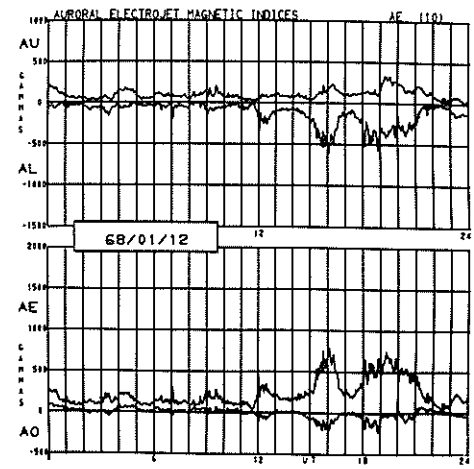

AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/07
AE
AO
GAMMAS
UT


AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/08
AE
AO
GAMMAS
UT


AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/09
AE
AO
GAMMAS
UT


AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/10
AE
AO
GAMMAS
UT


AURORAL ELECTROJET MAGNETIC INDICES
AE (10)
AU
AL
68/01/11
AE
AO
GAMMAS
UT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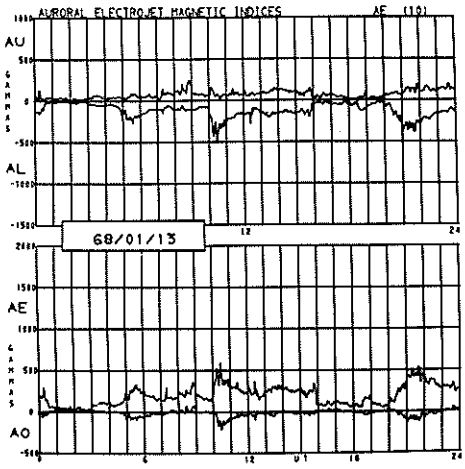
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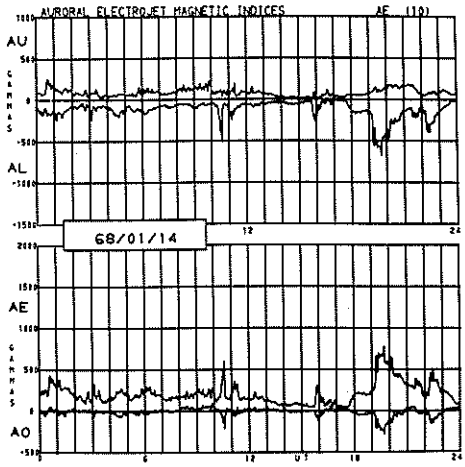
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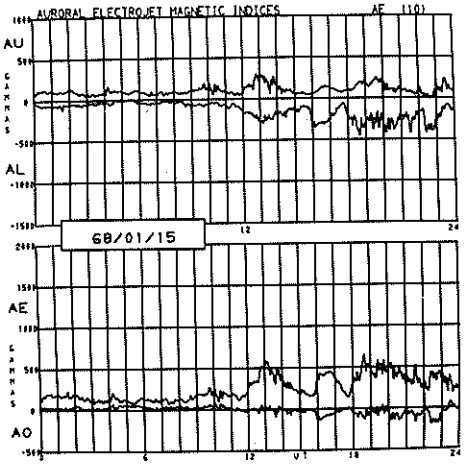
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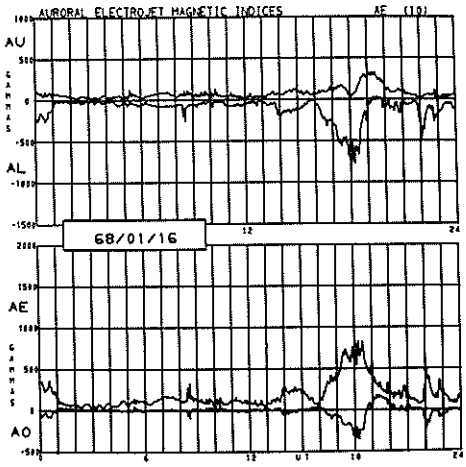
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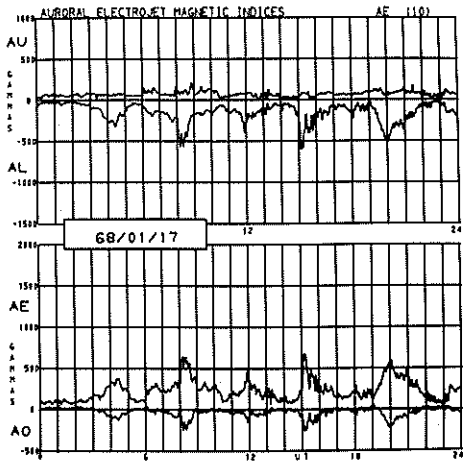
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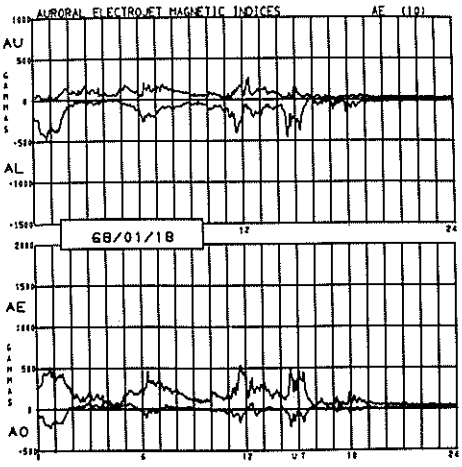
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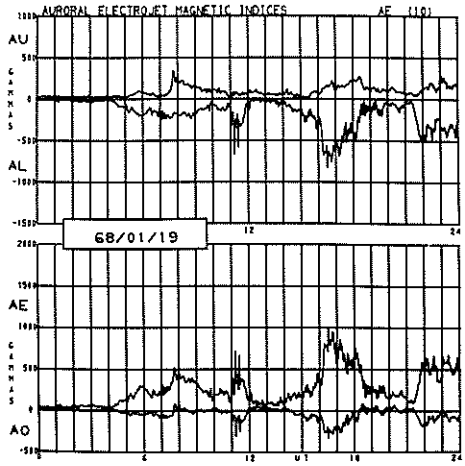
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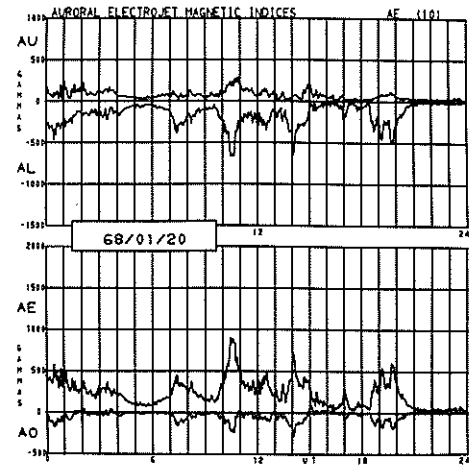
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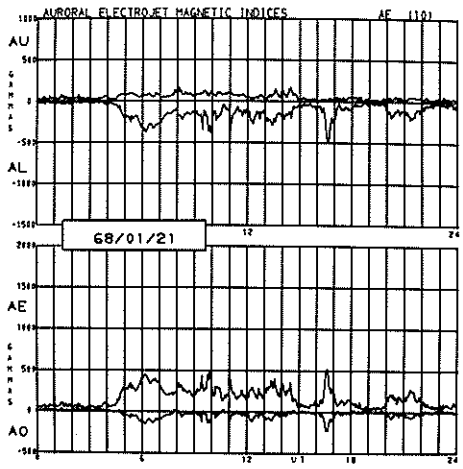
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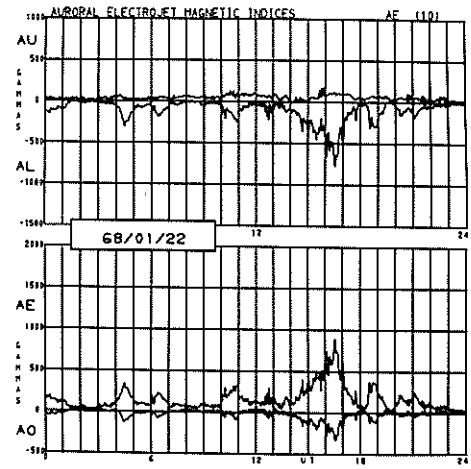
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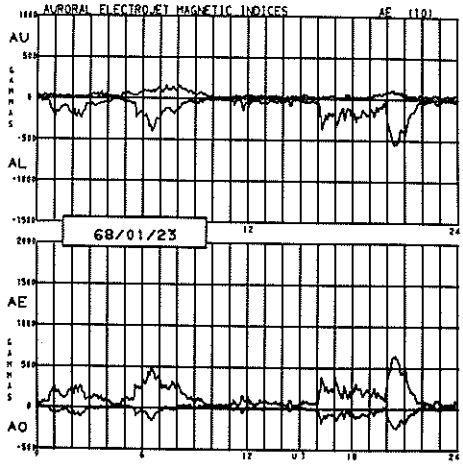
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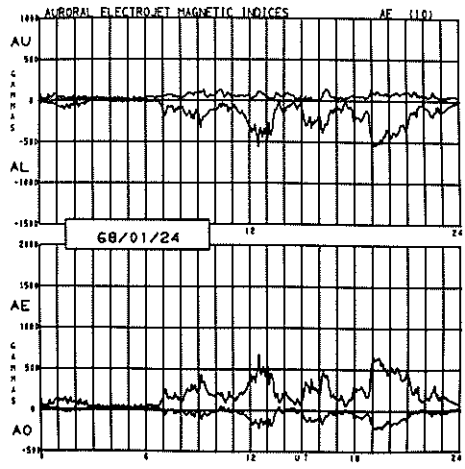
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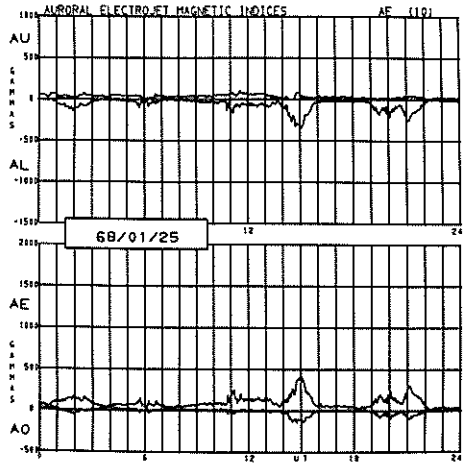
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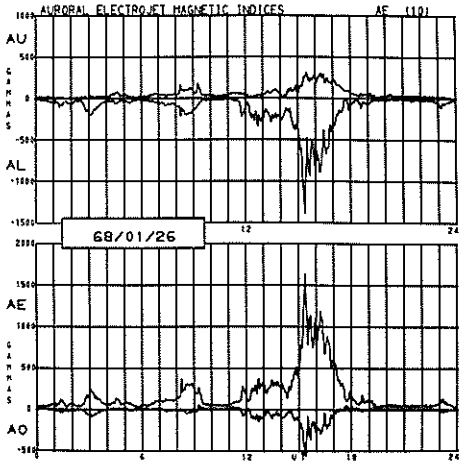
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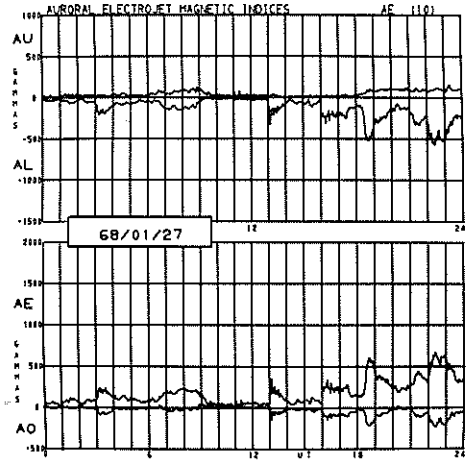
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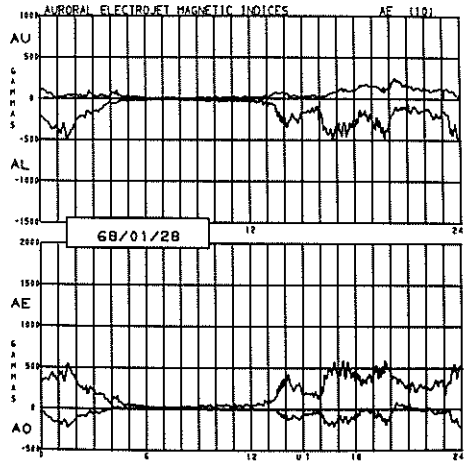
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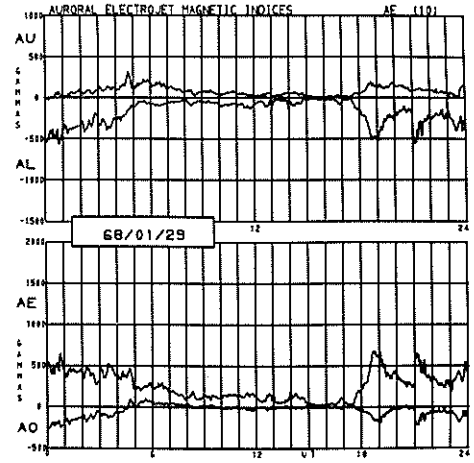
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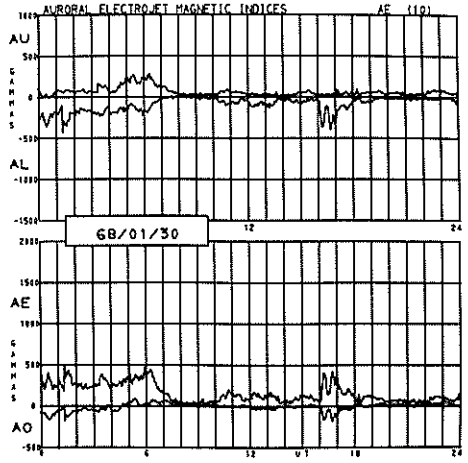
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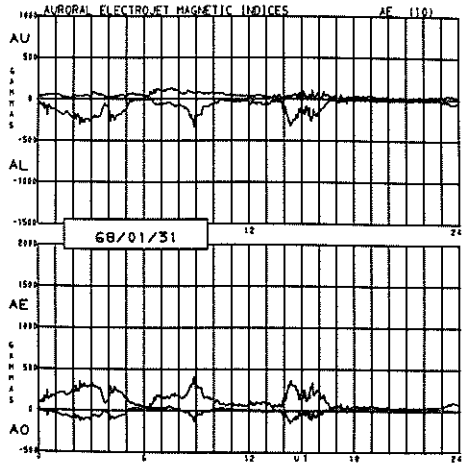
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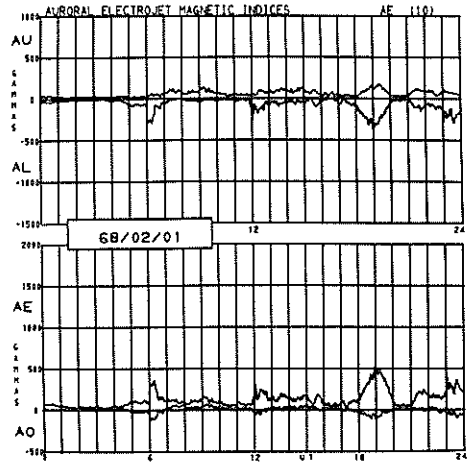
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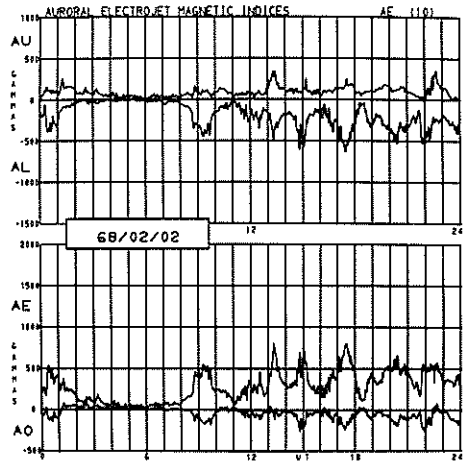
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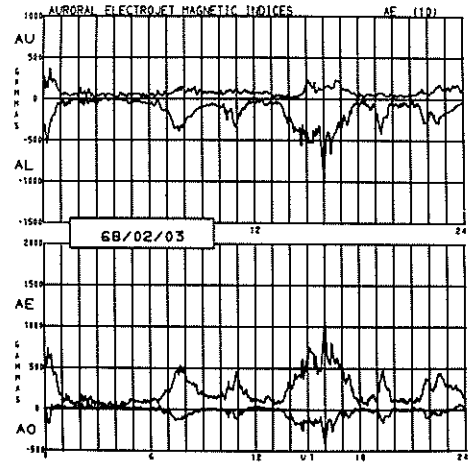
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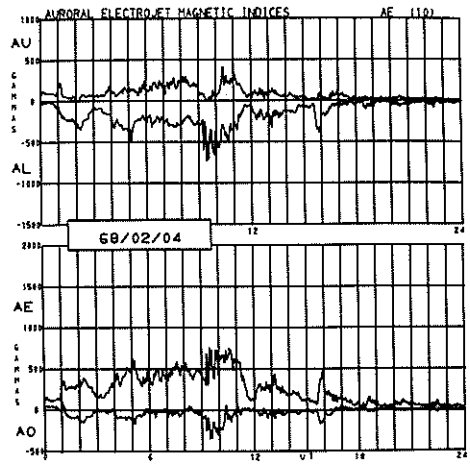
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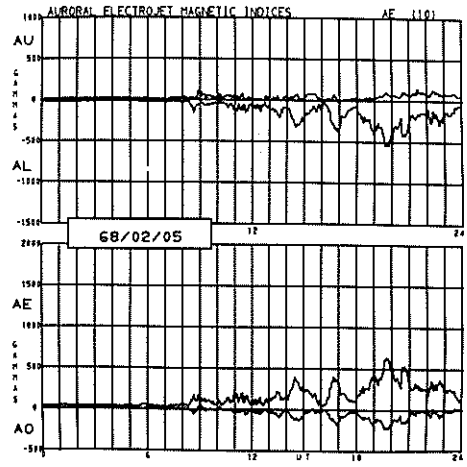
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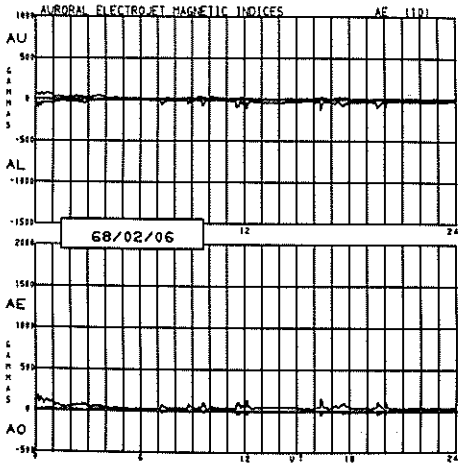
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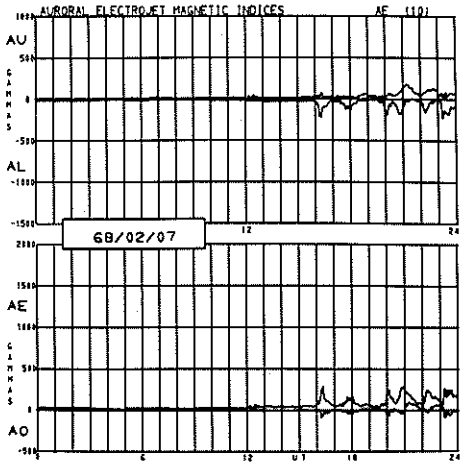
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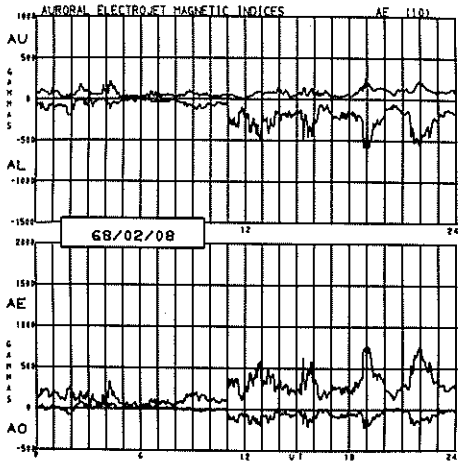
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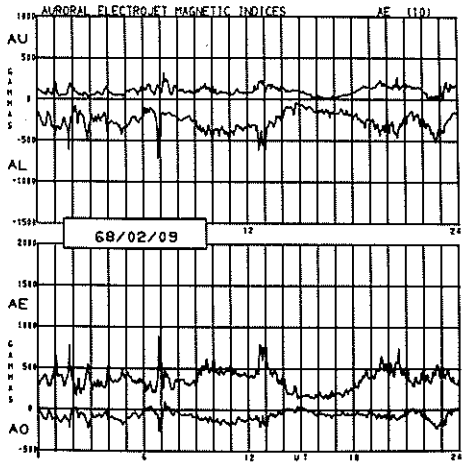
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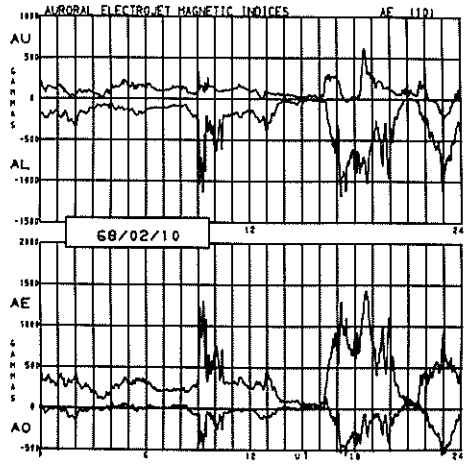
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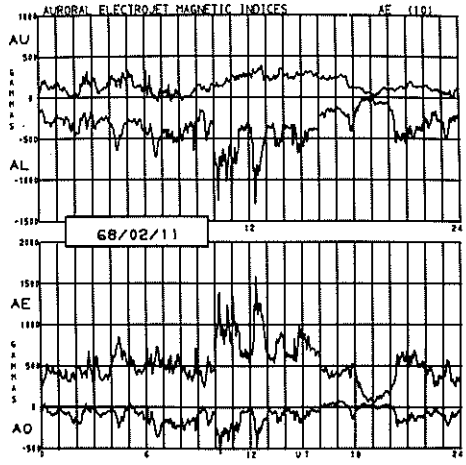
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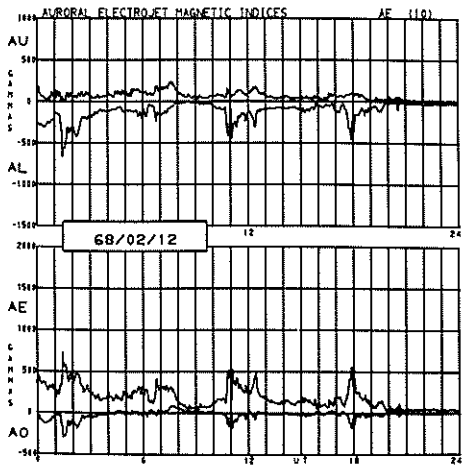
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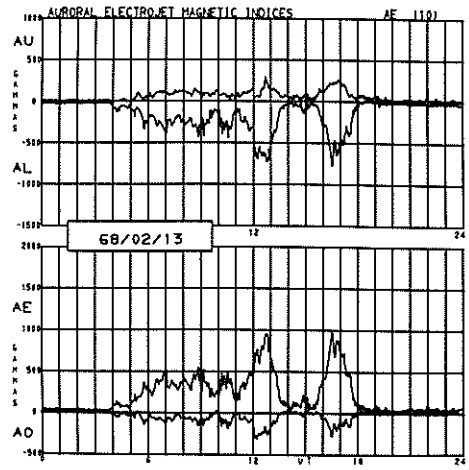
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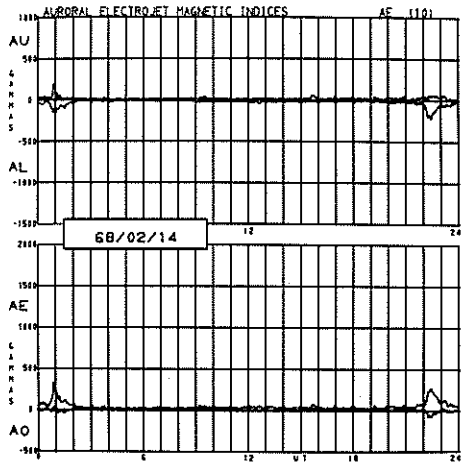
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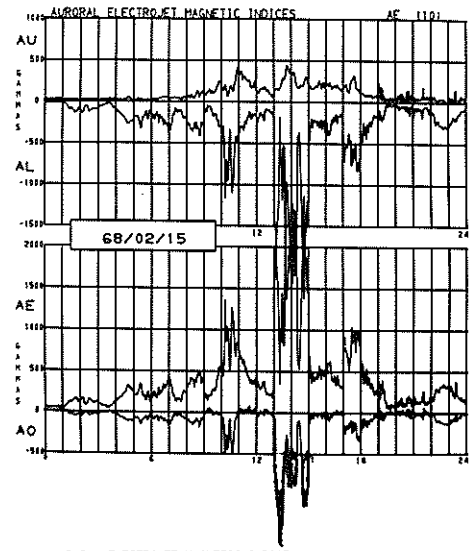
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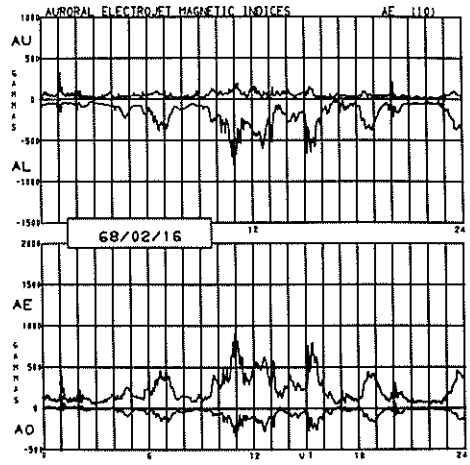
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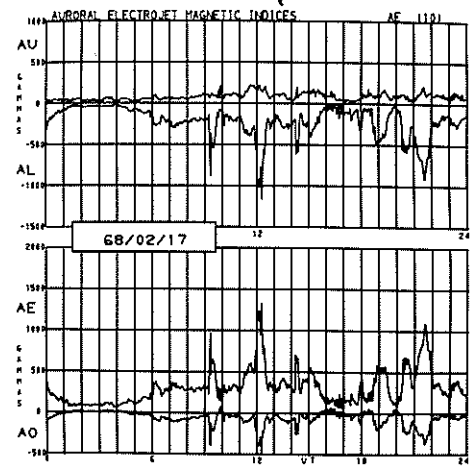
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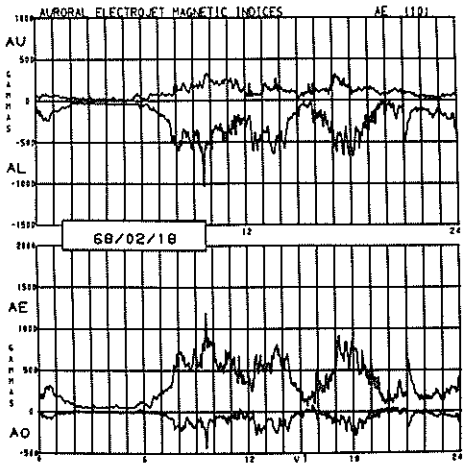
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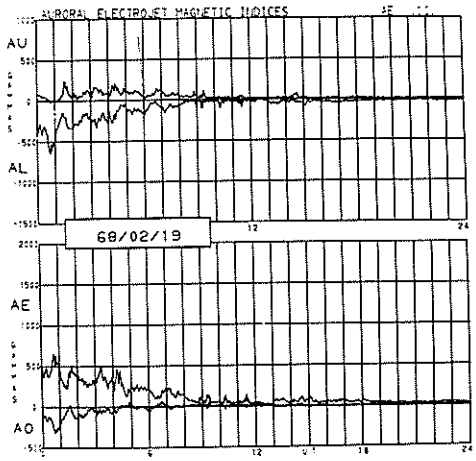
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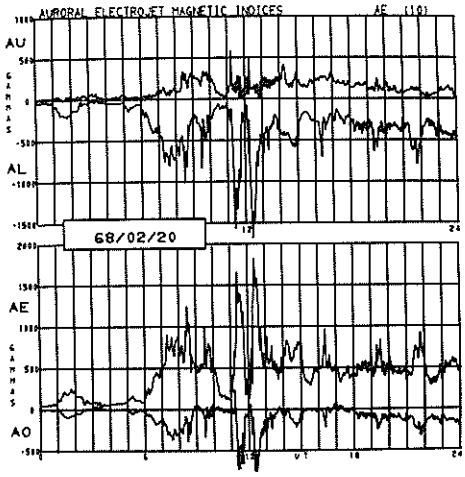
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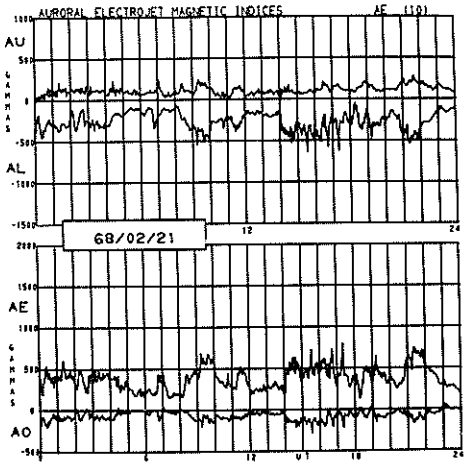
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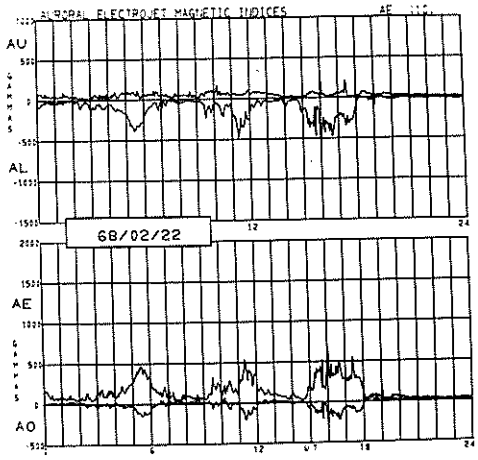
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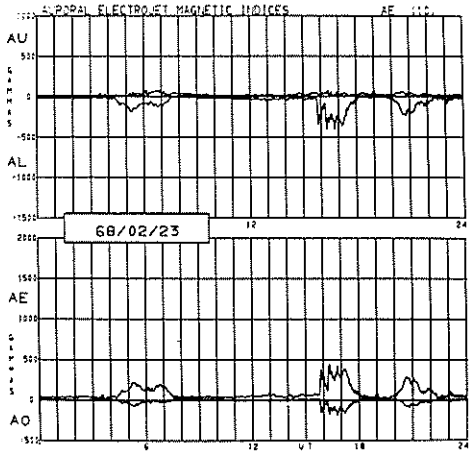
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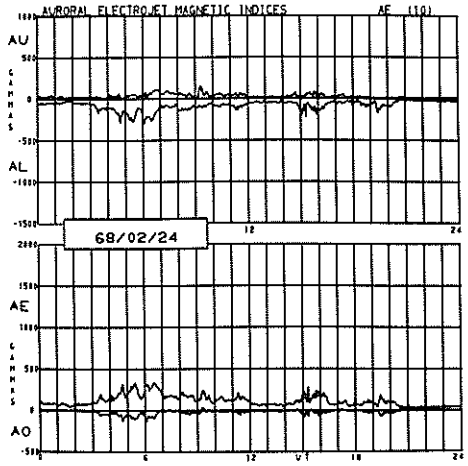
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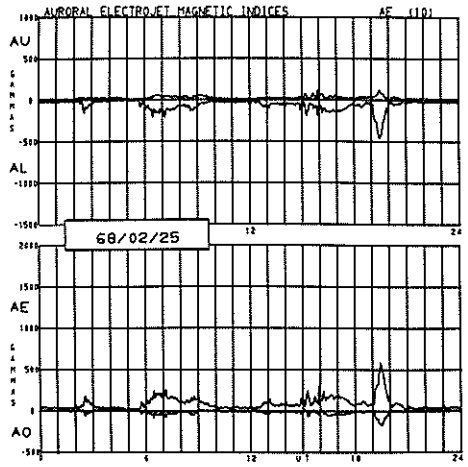
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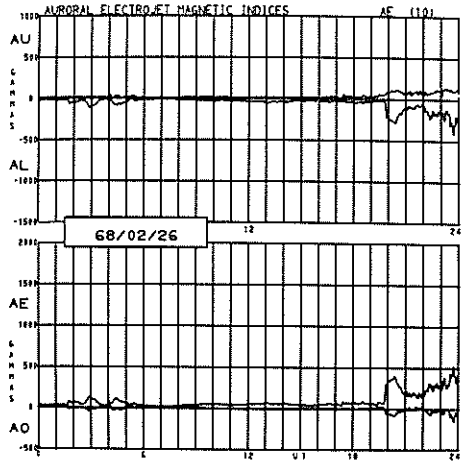
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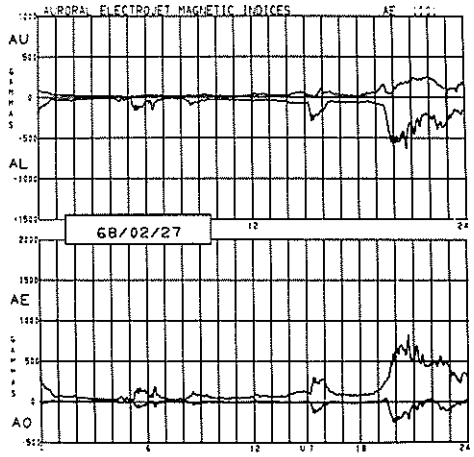
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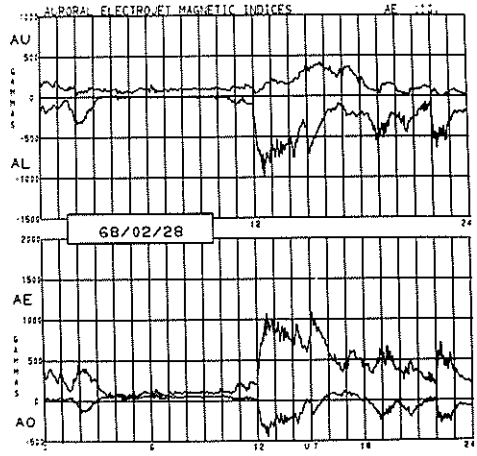
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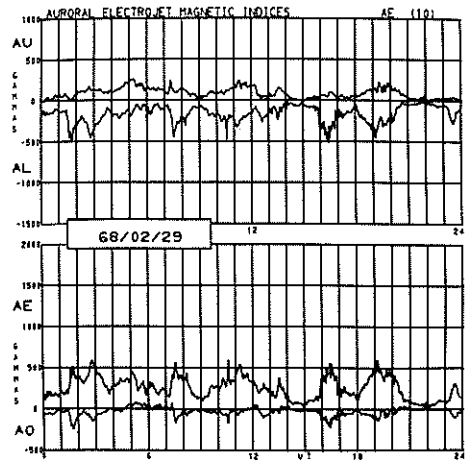
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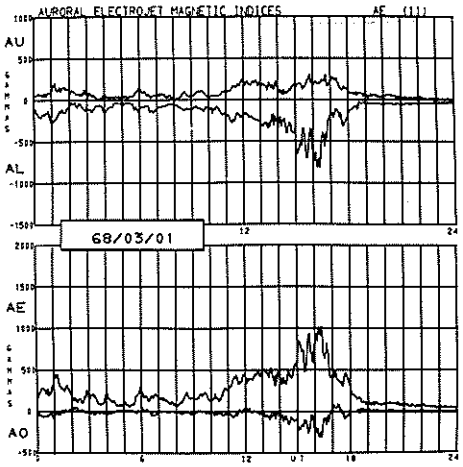
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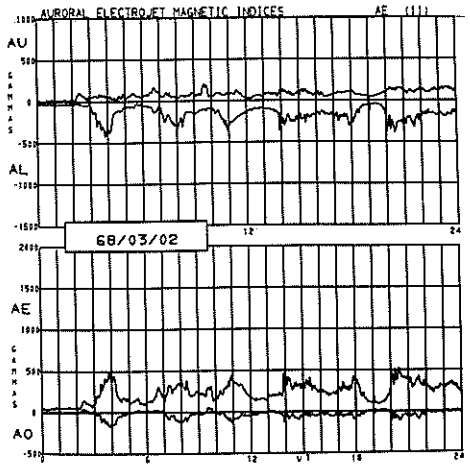
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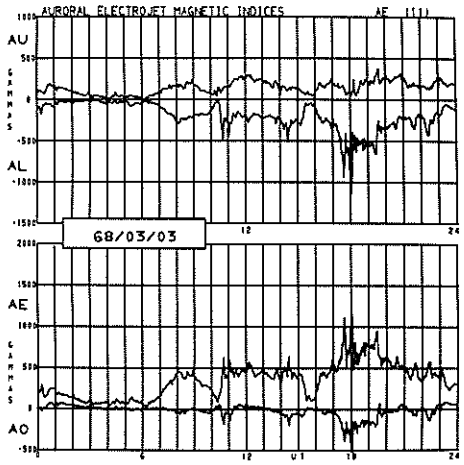
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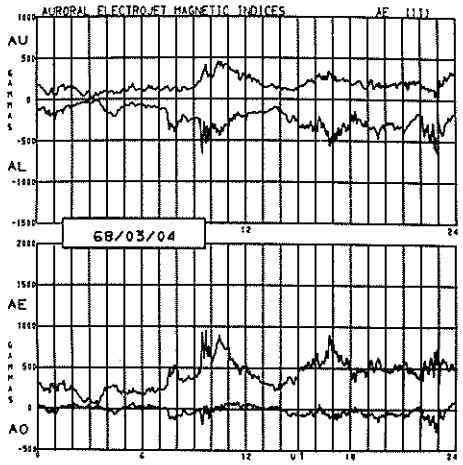
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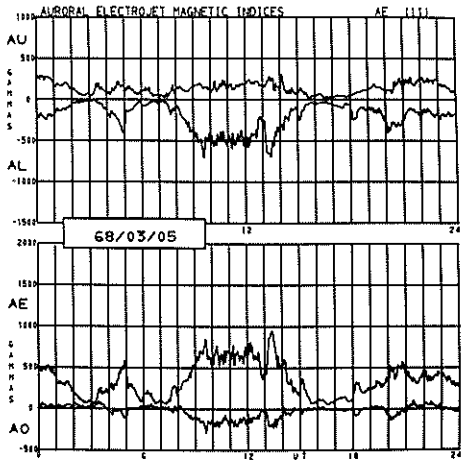
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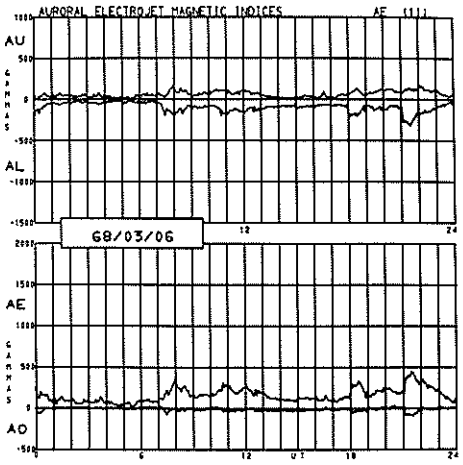
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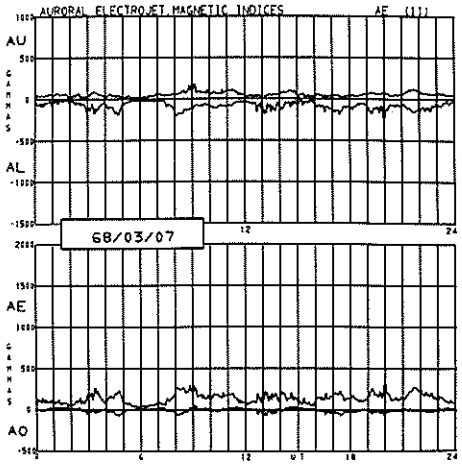
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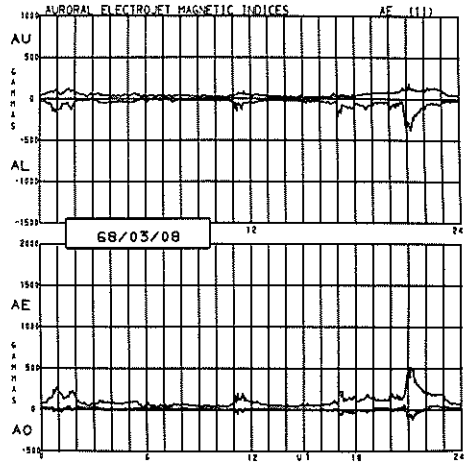
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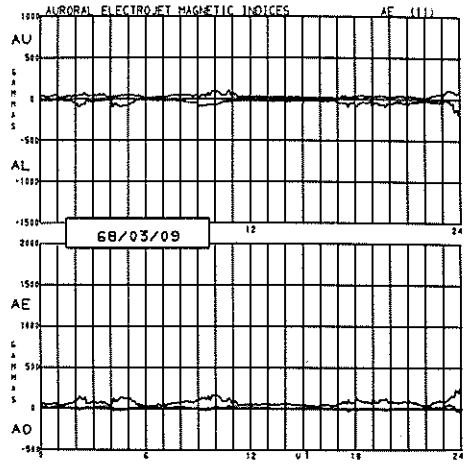
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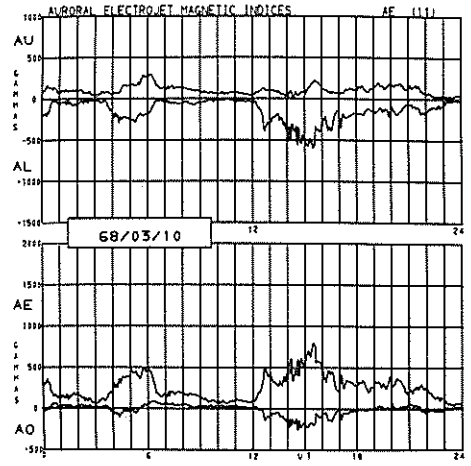
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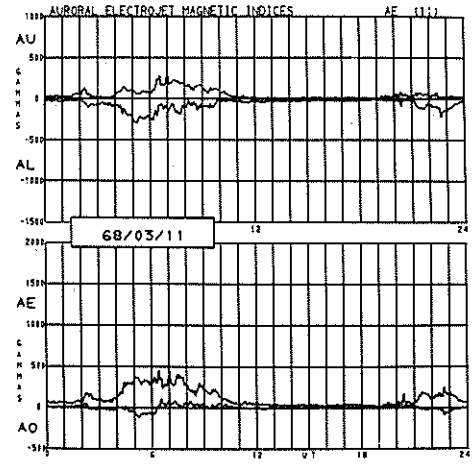
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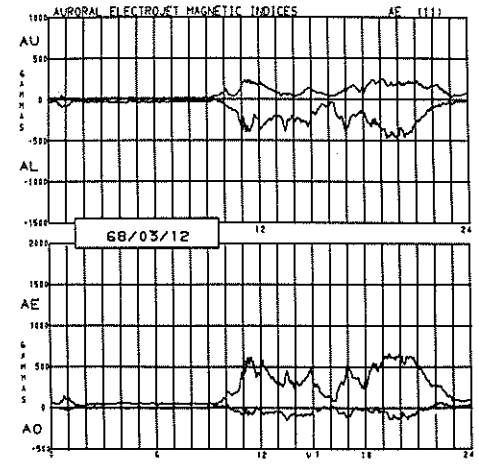
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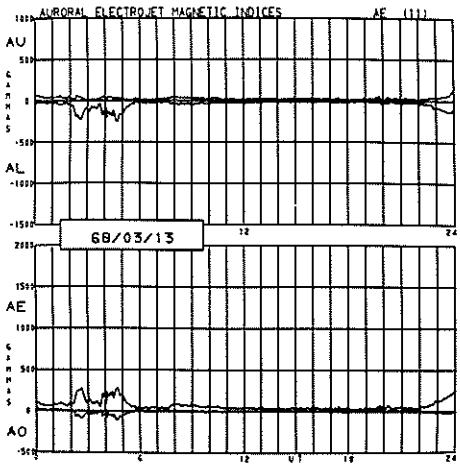
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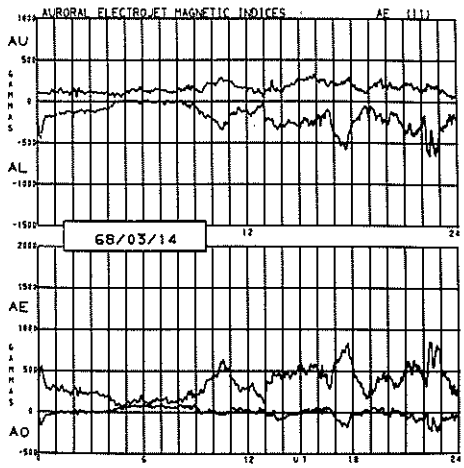
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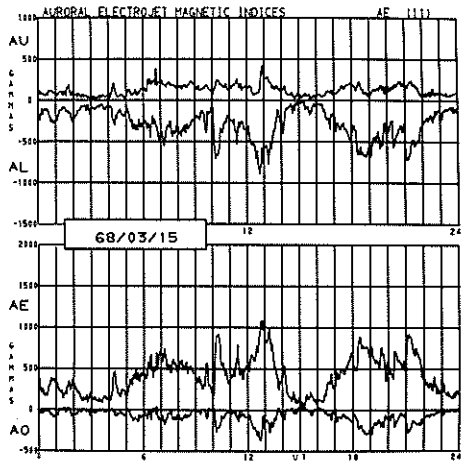
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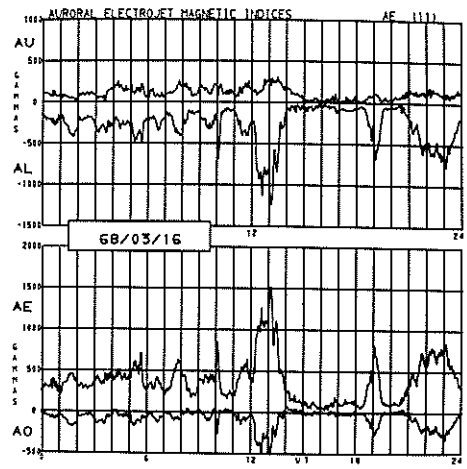
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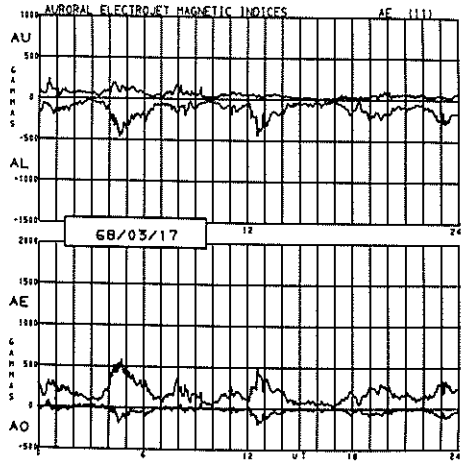
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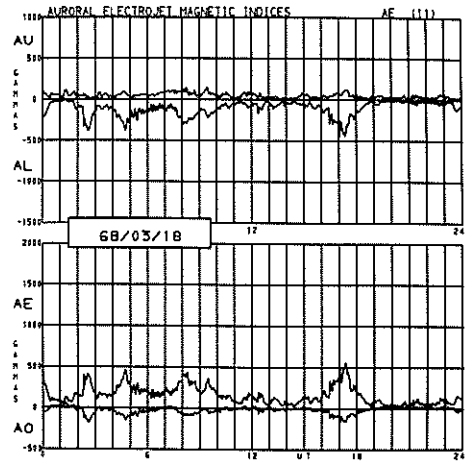
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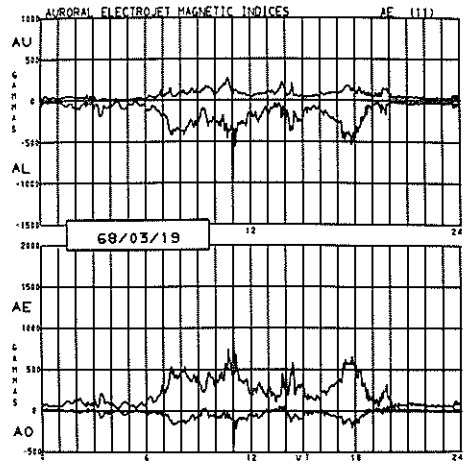
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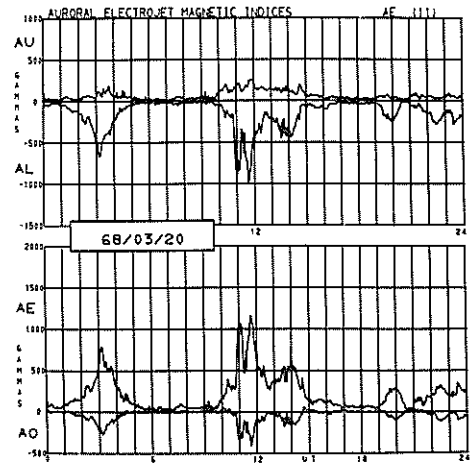
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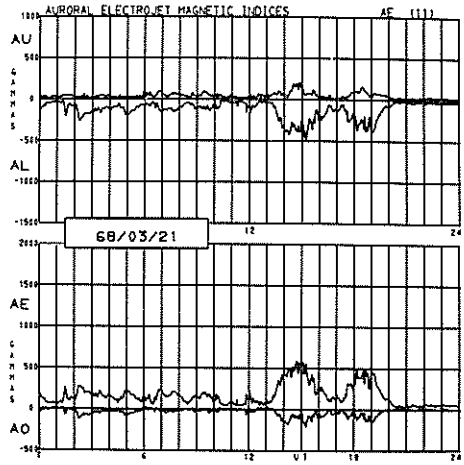
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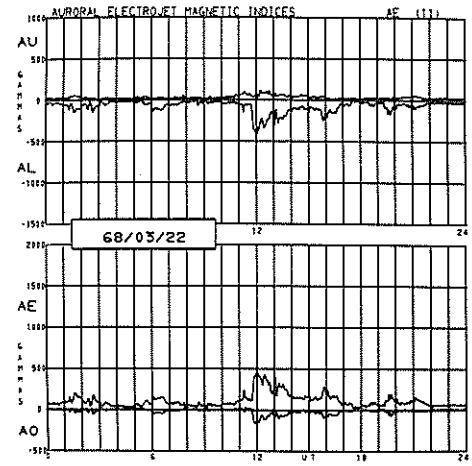
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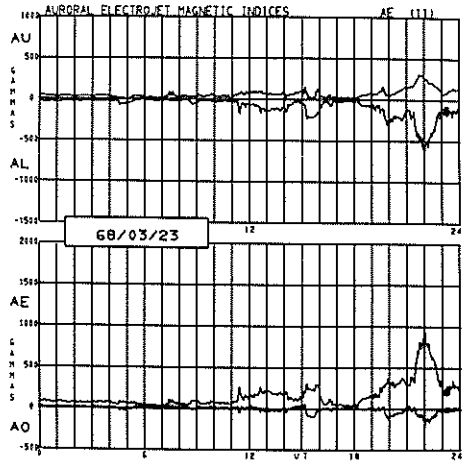
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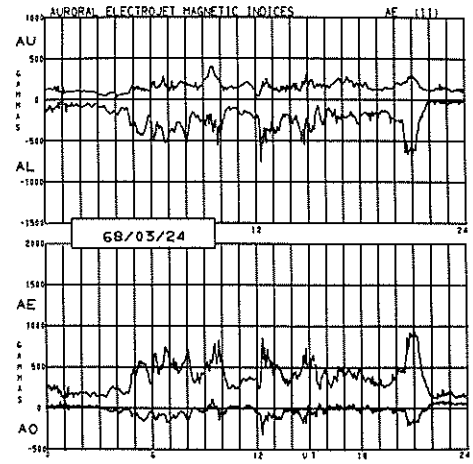
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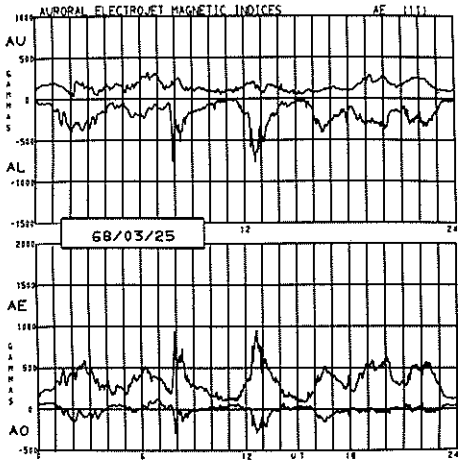
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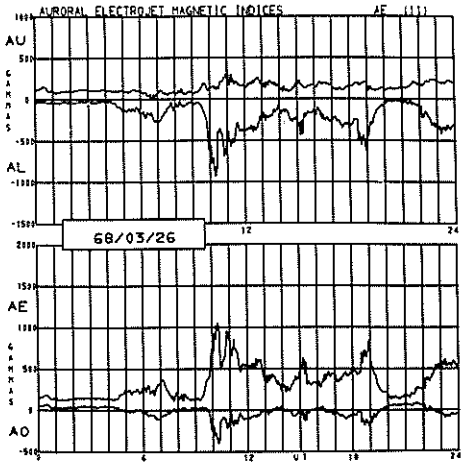
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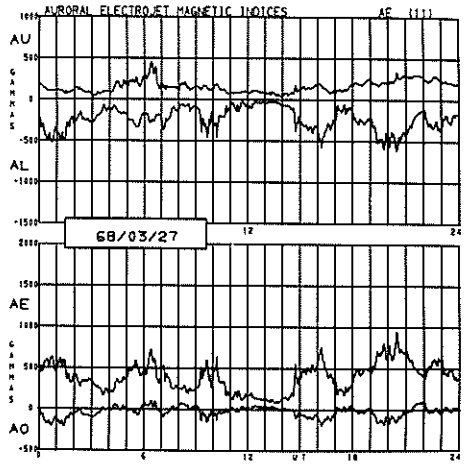
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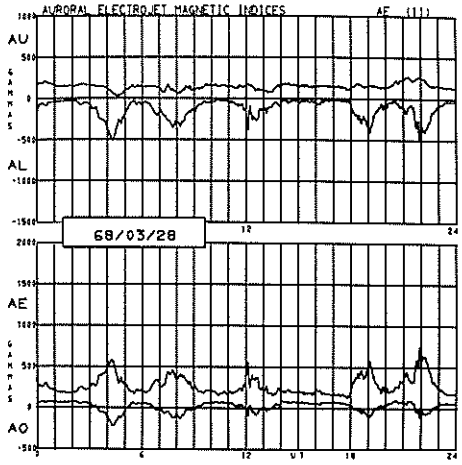
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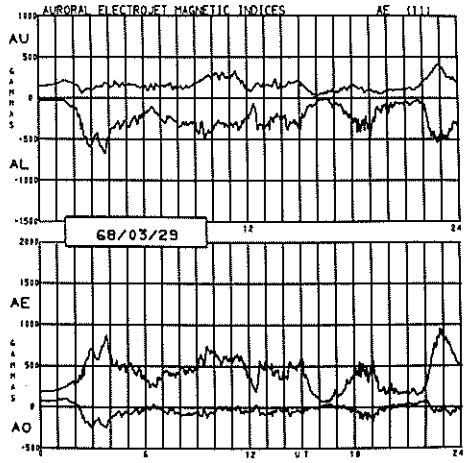
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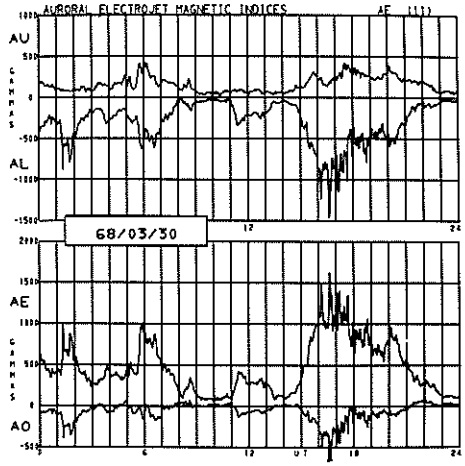
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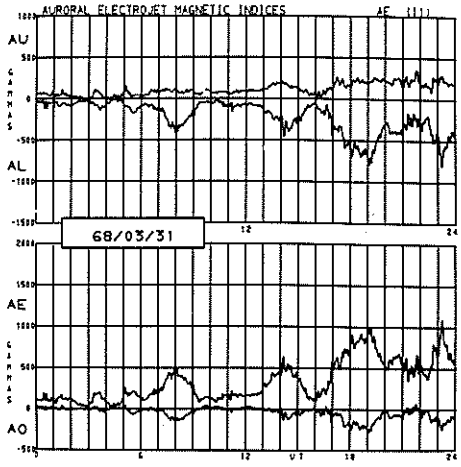
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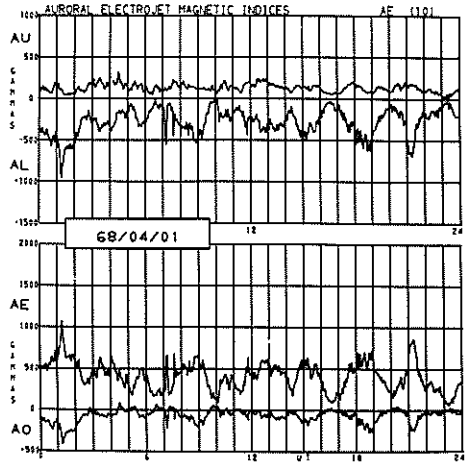
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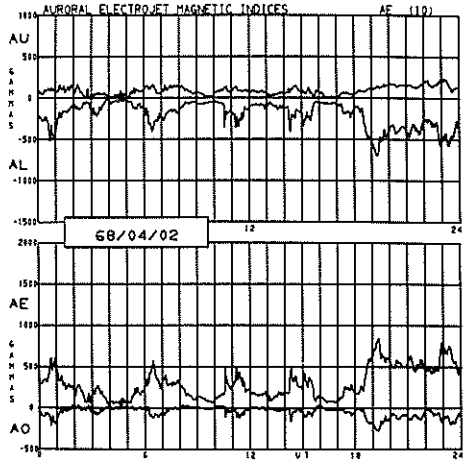
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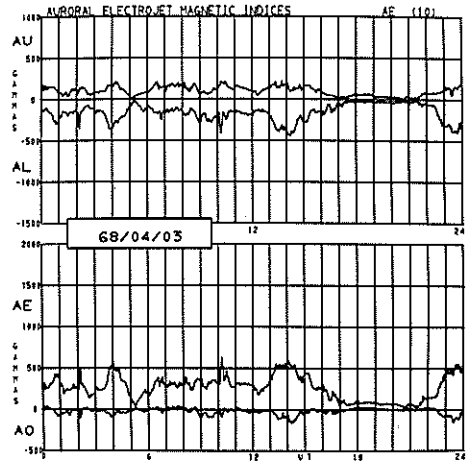
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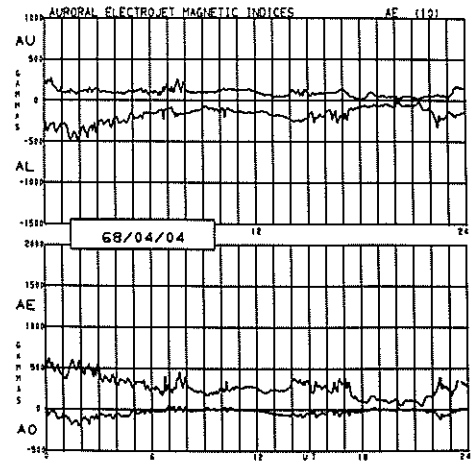
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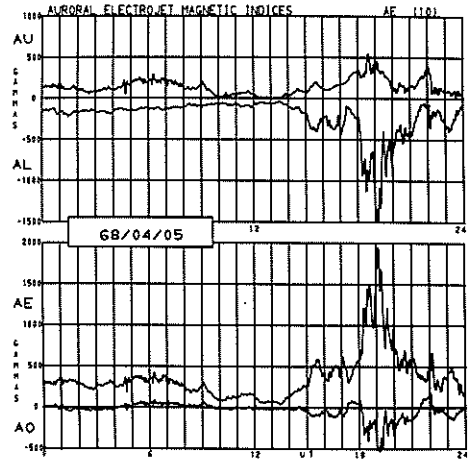
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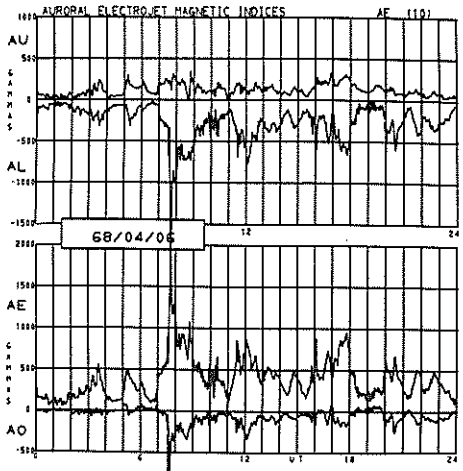
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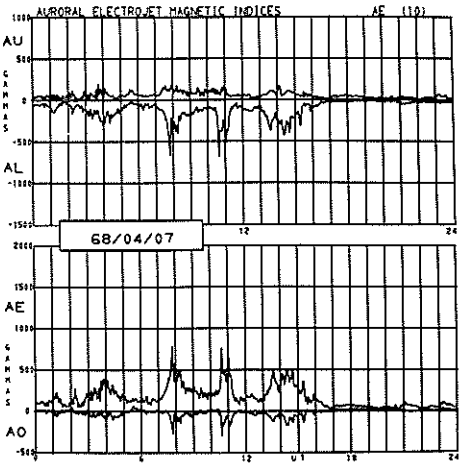
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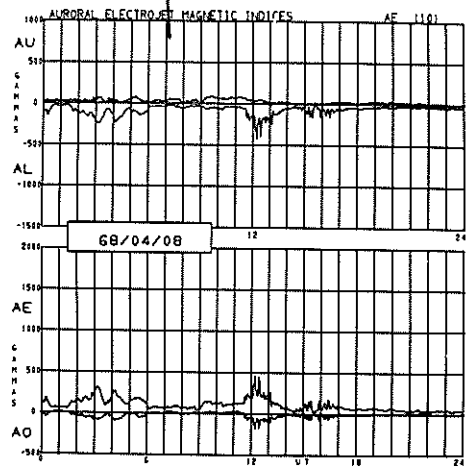
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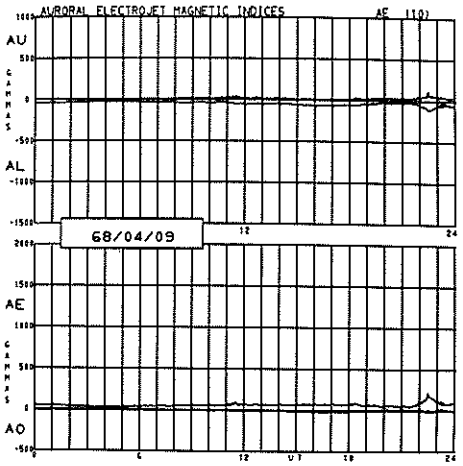
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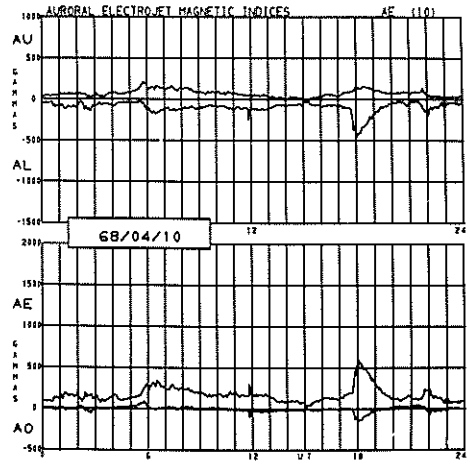
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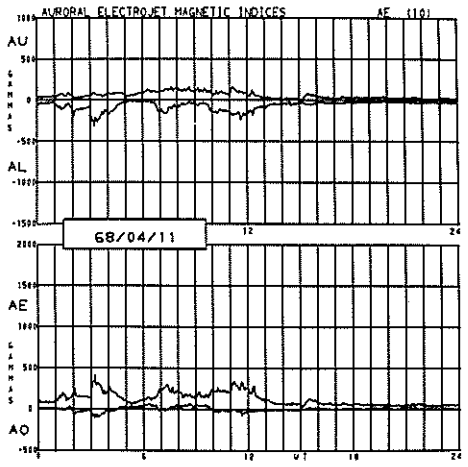
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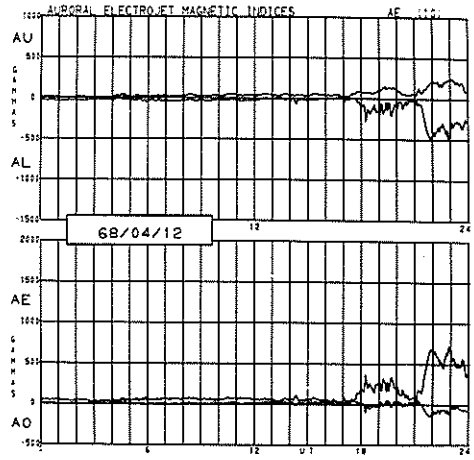
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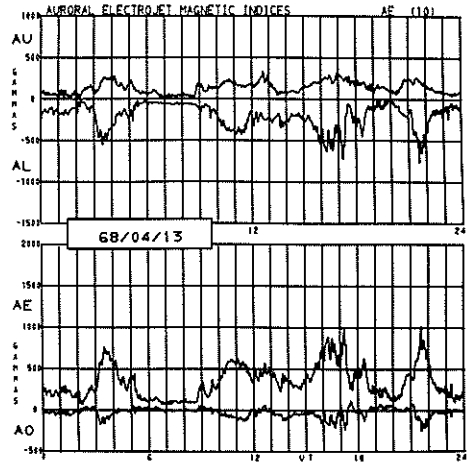
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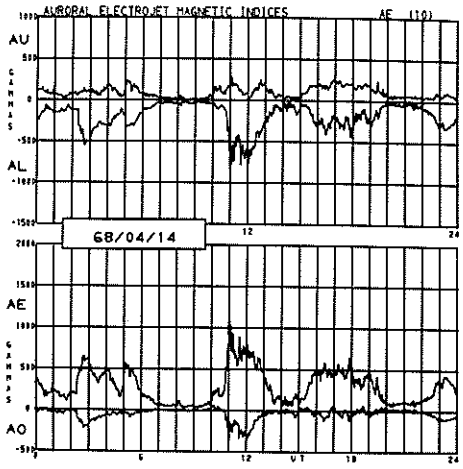
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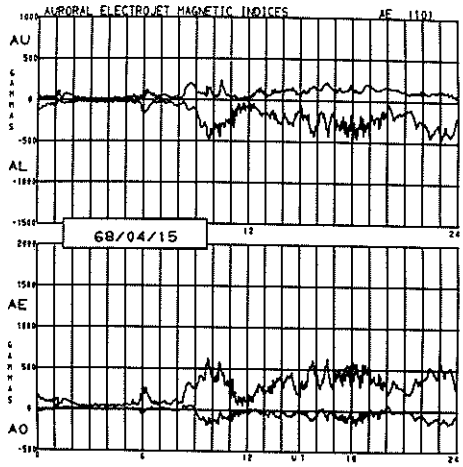
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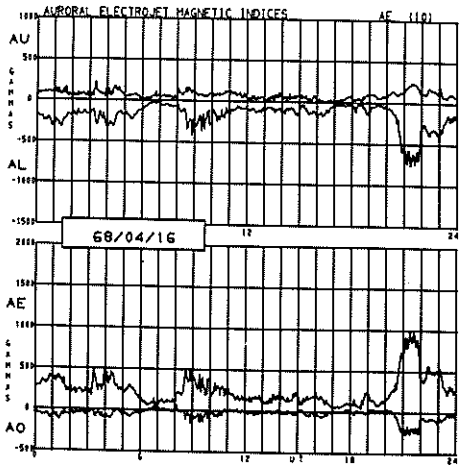
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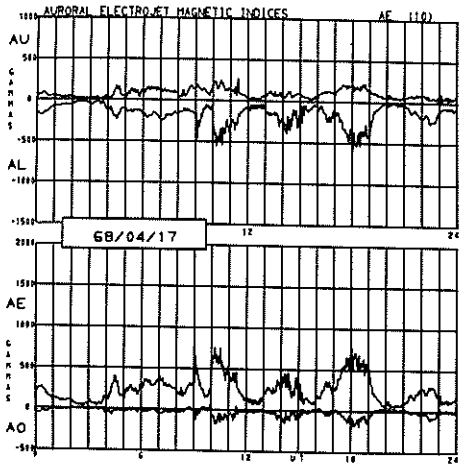
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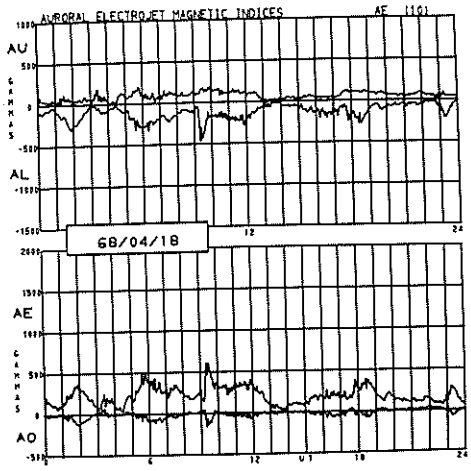
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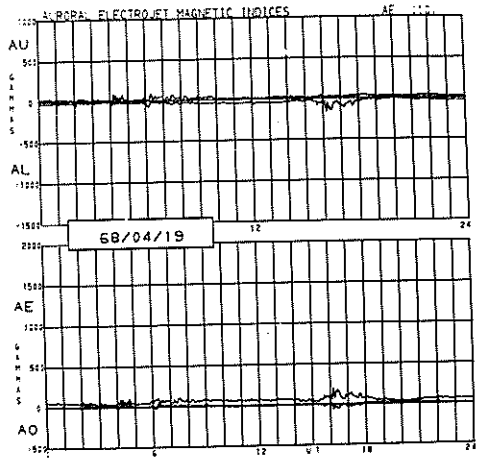
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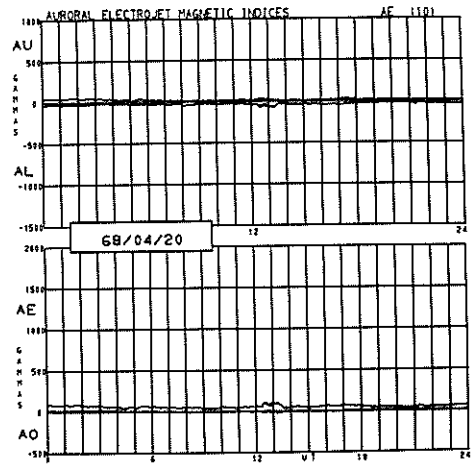
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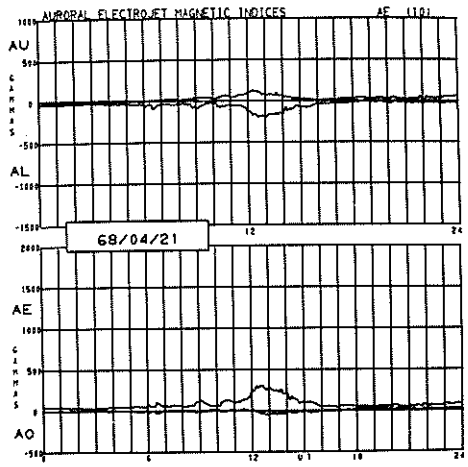
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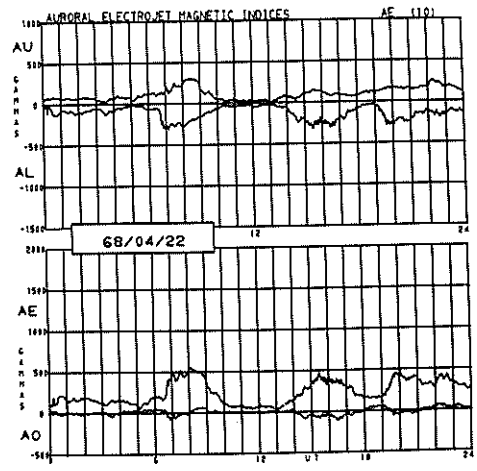
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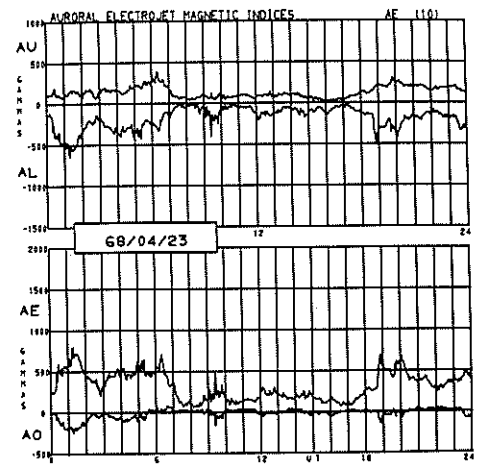
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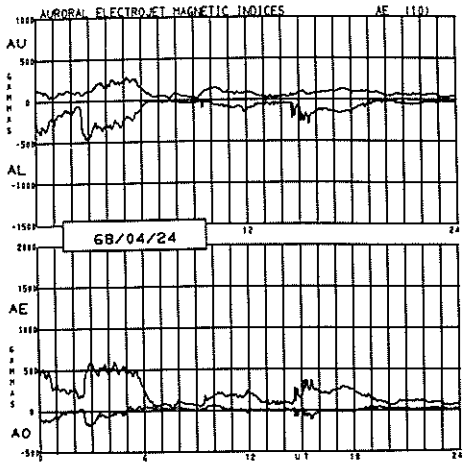
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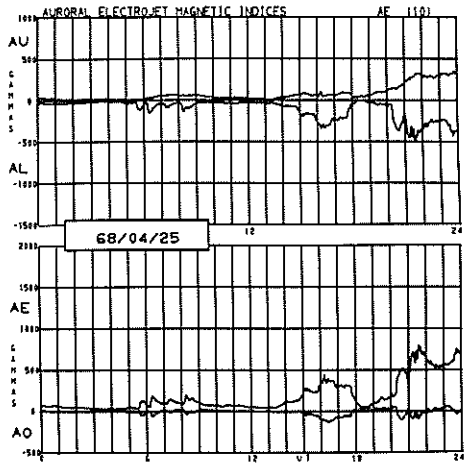
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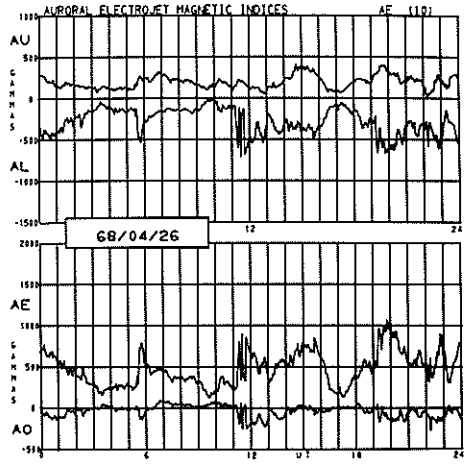
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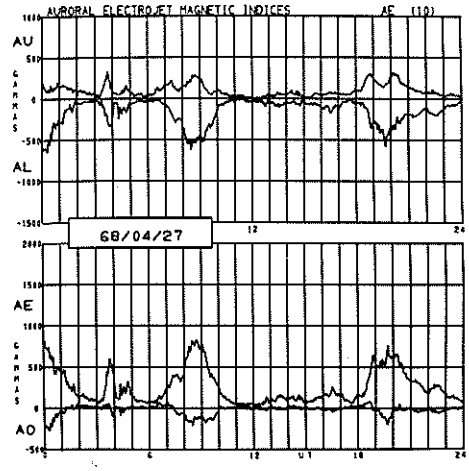
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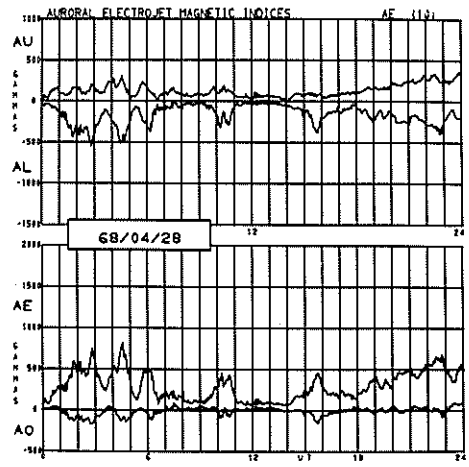
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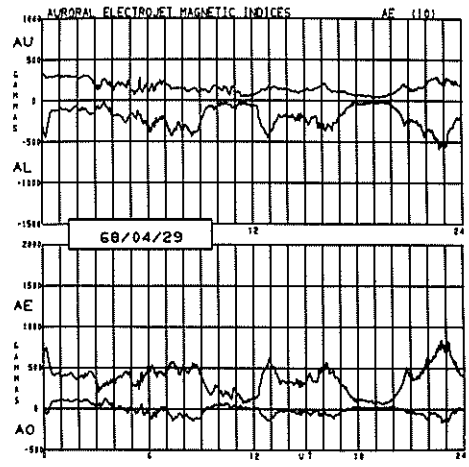
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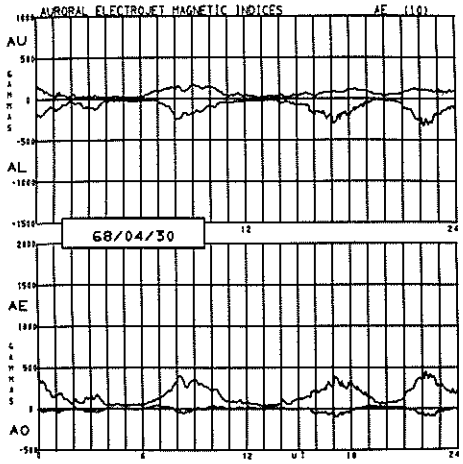
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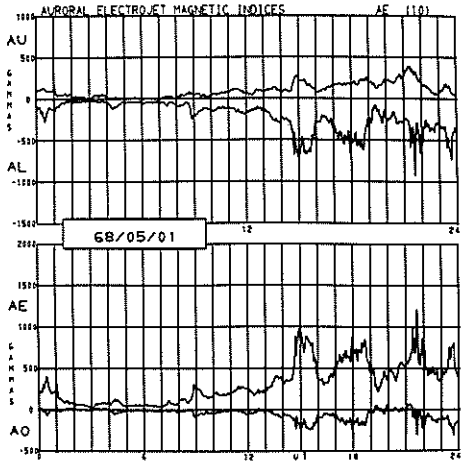
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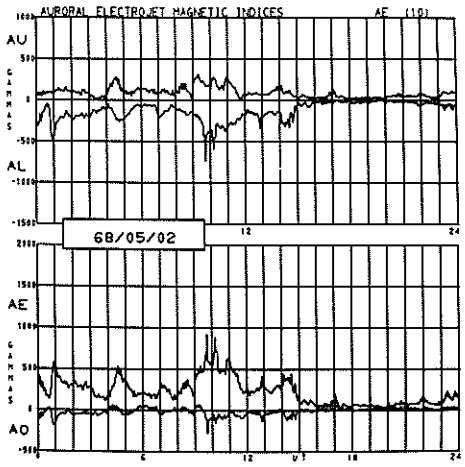
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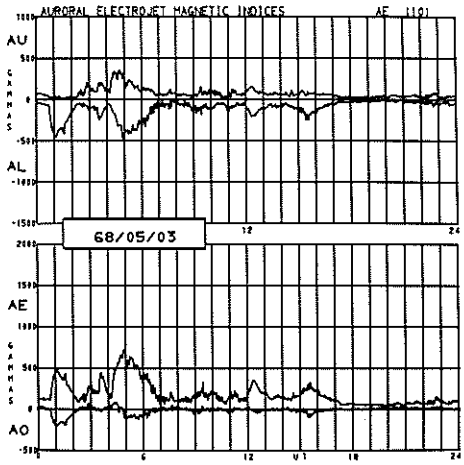
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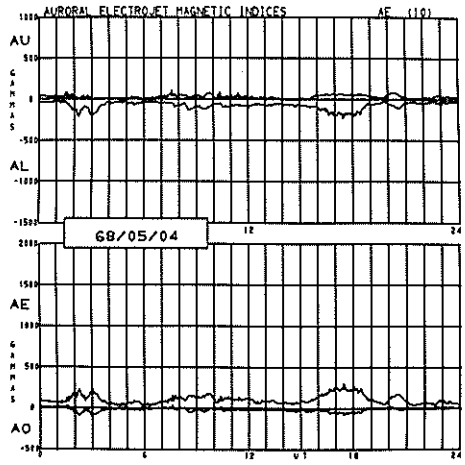
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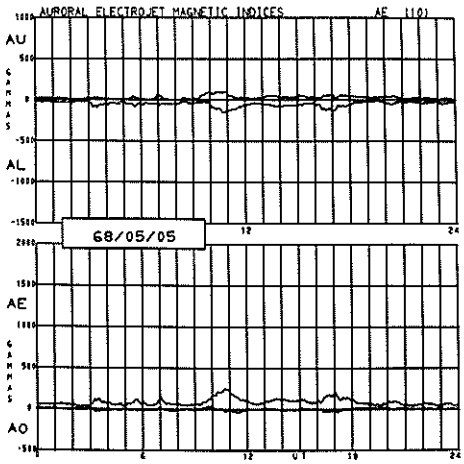
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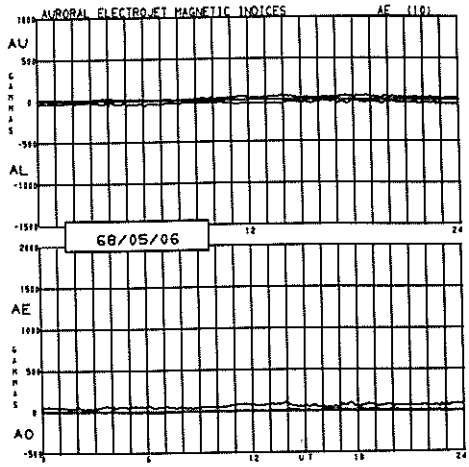
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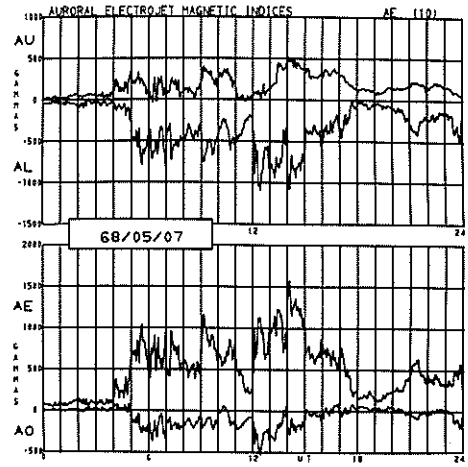
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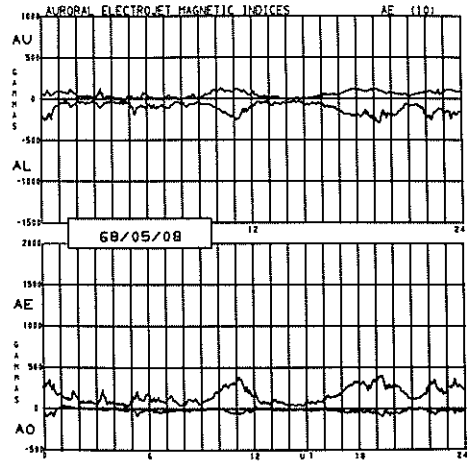
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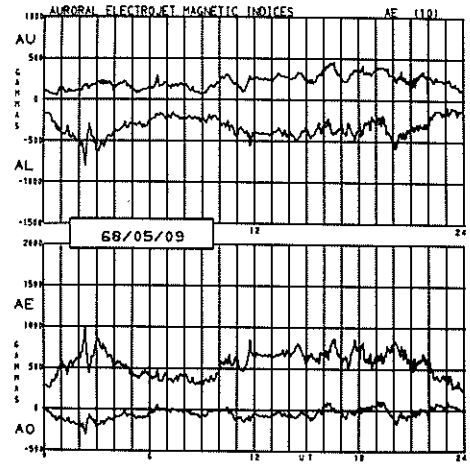
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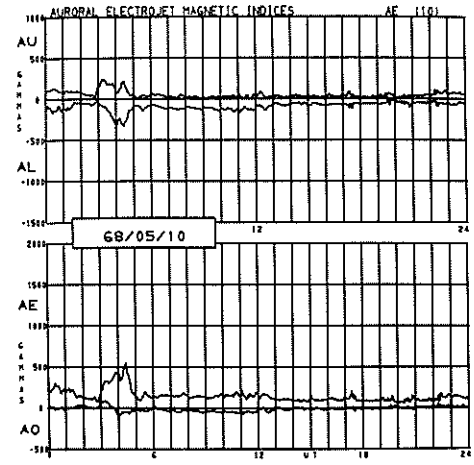
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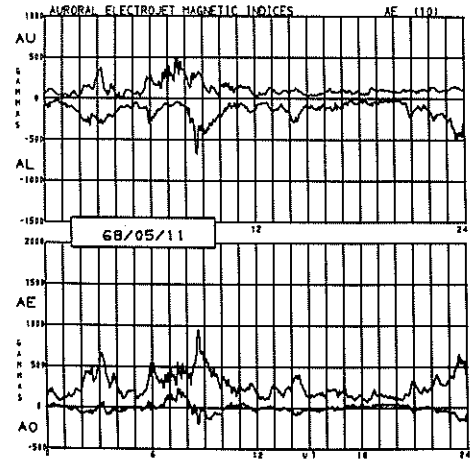
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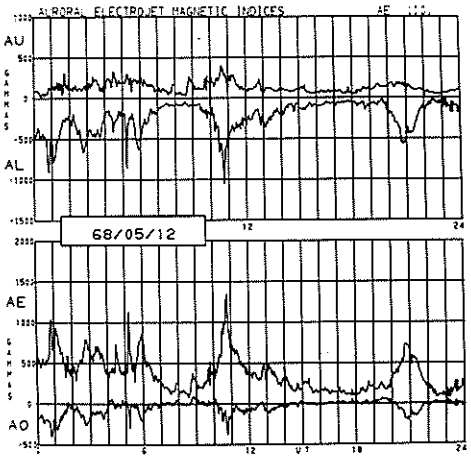
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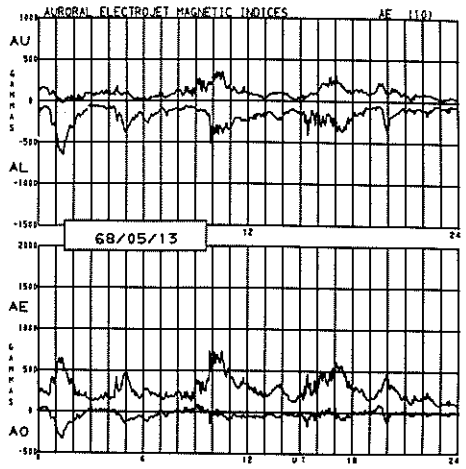
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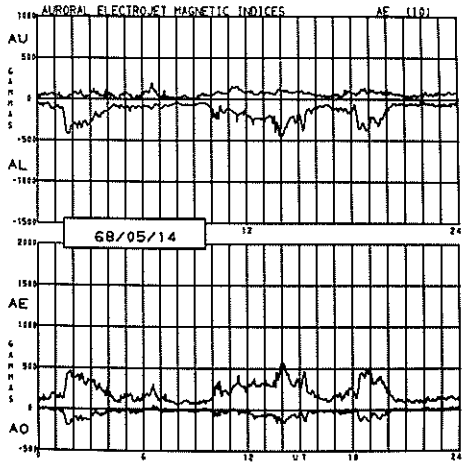
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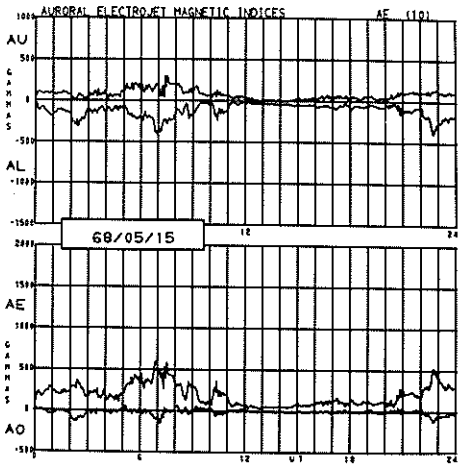
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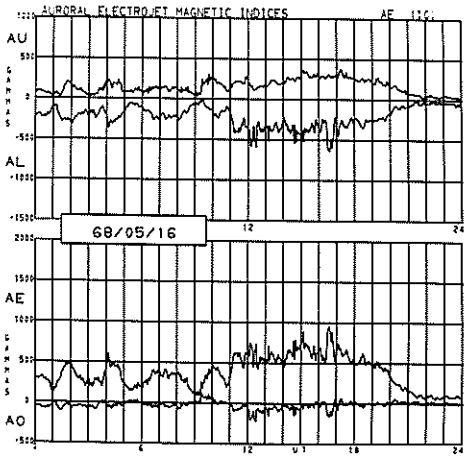
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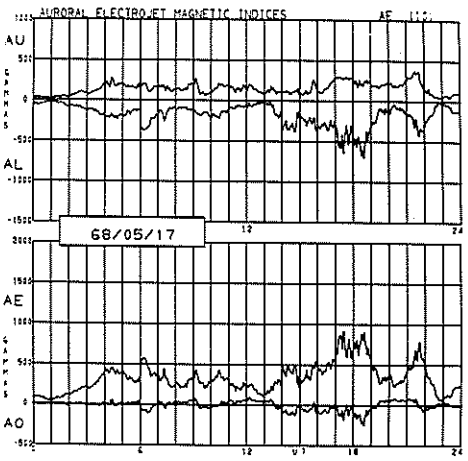
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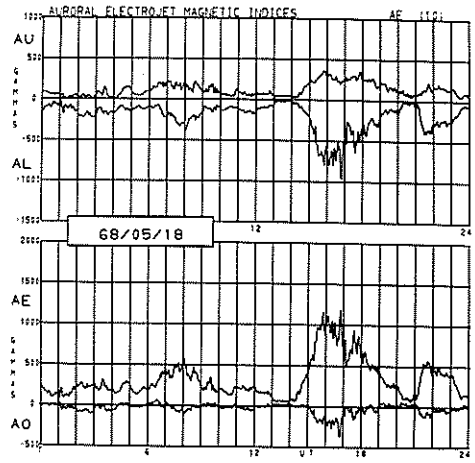
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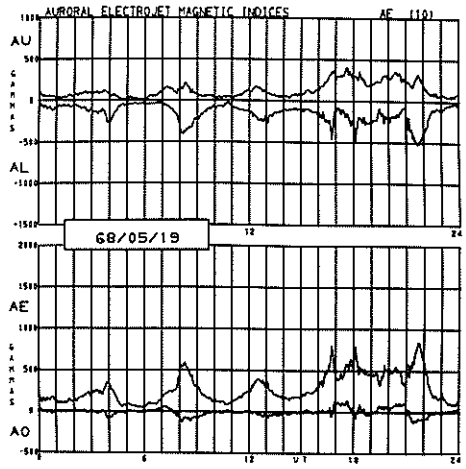
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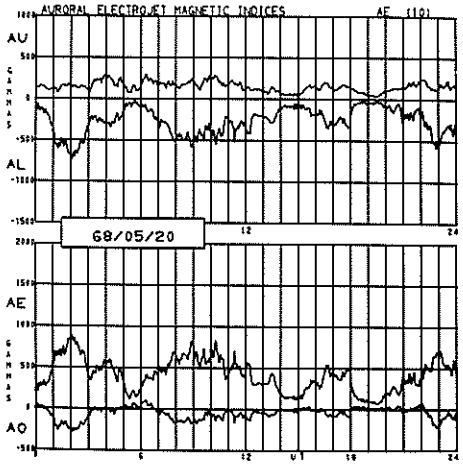
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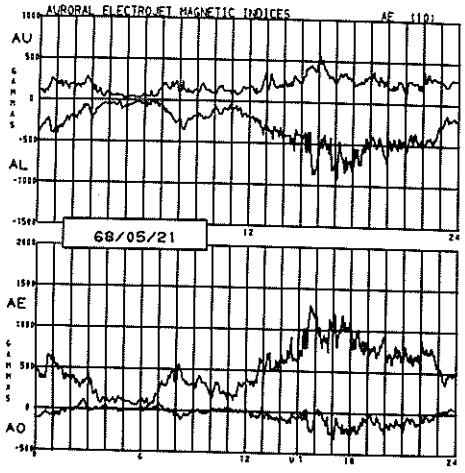
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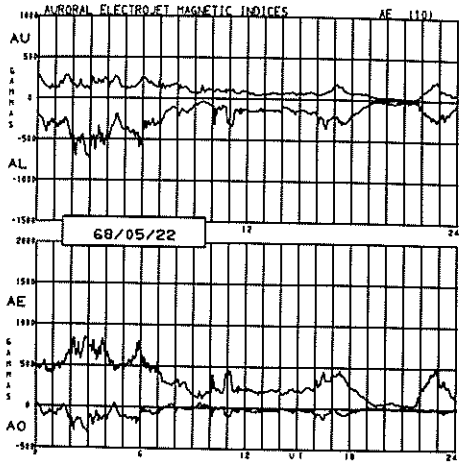
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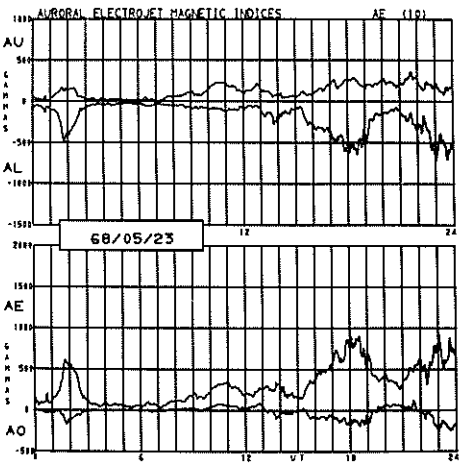
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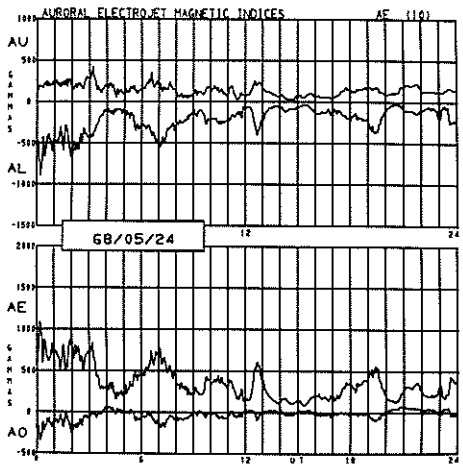
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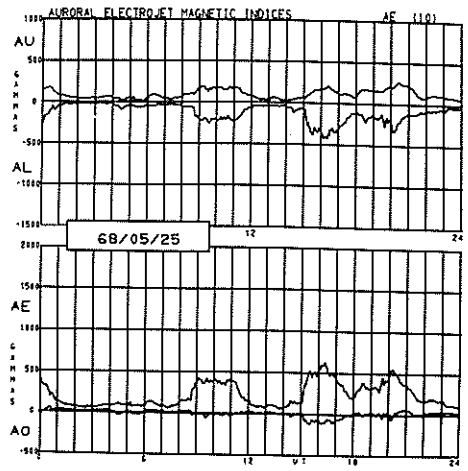
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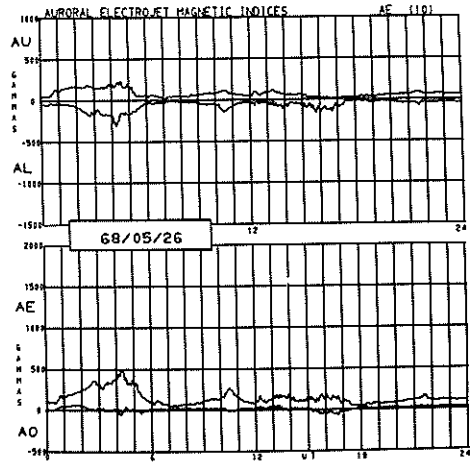
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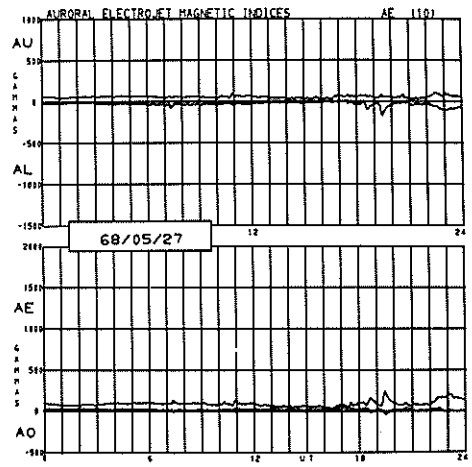
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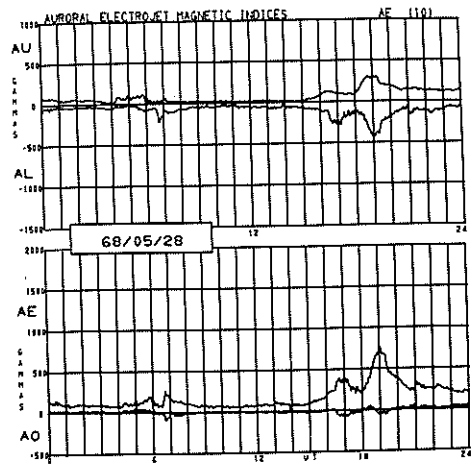
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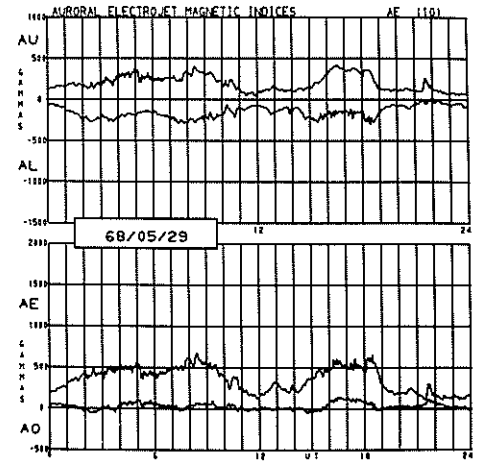
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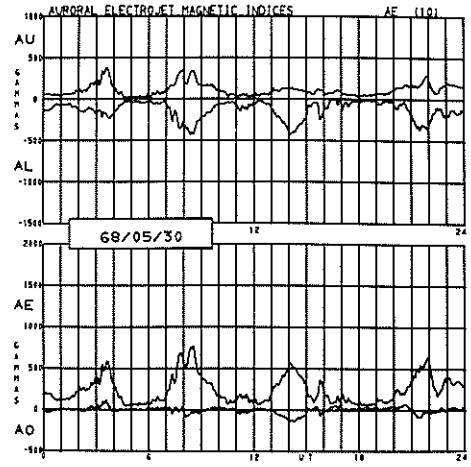
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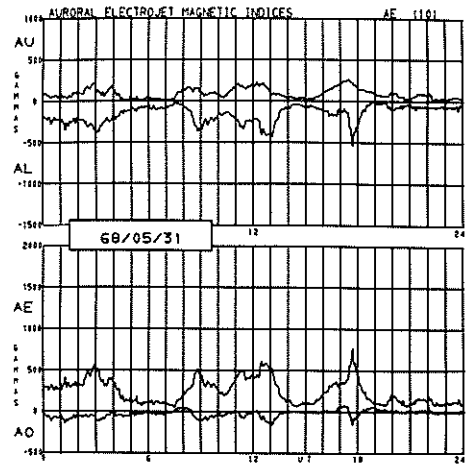
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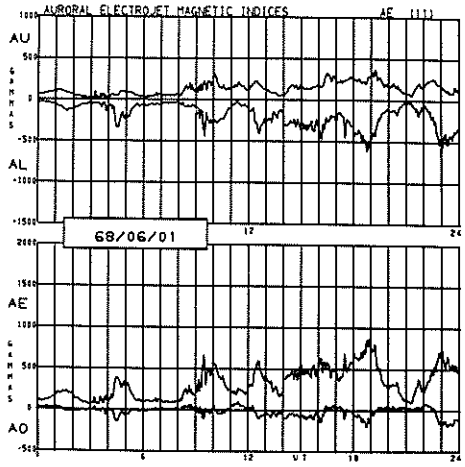
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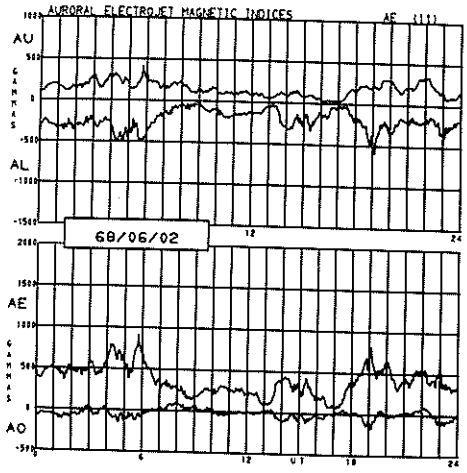
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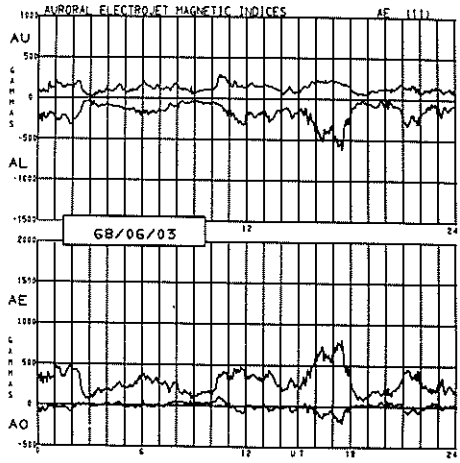
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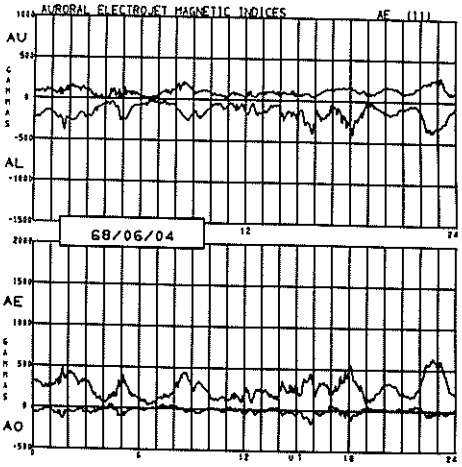
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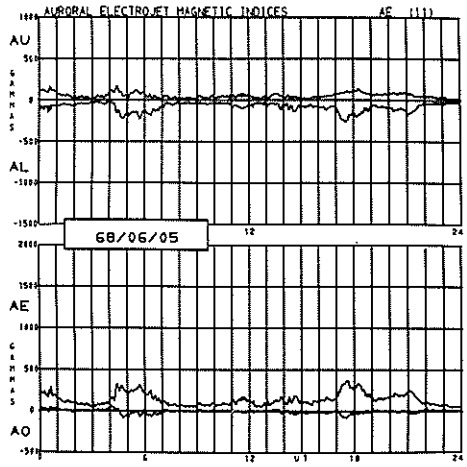
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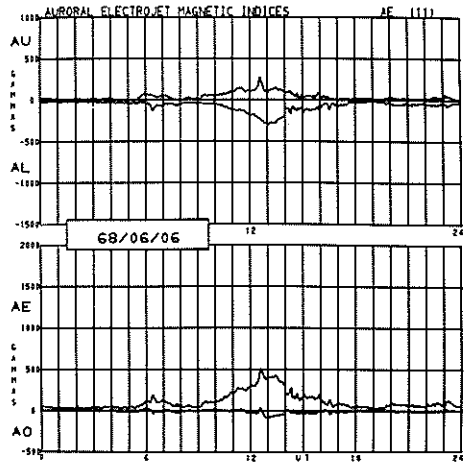
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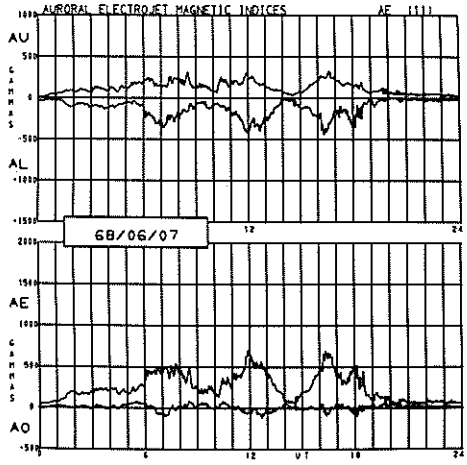
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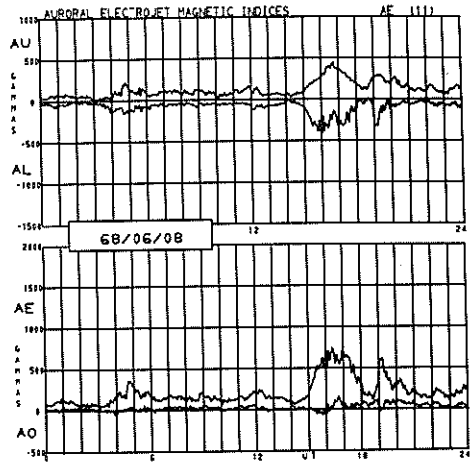
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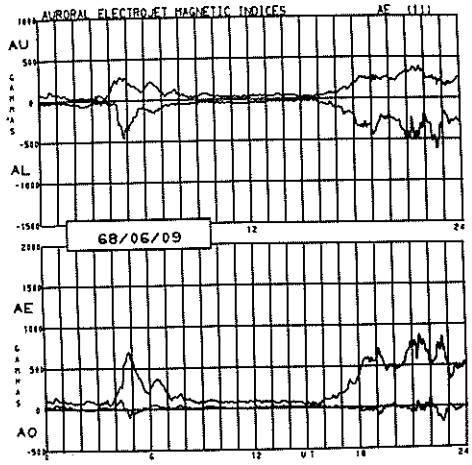
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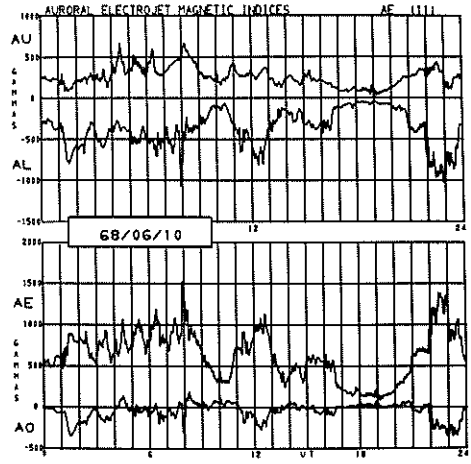
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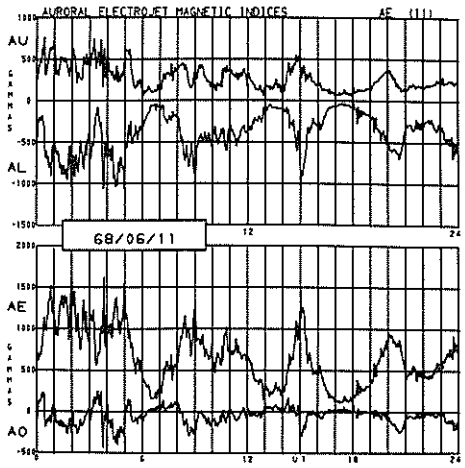
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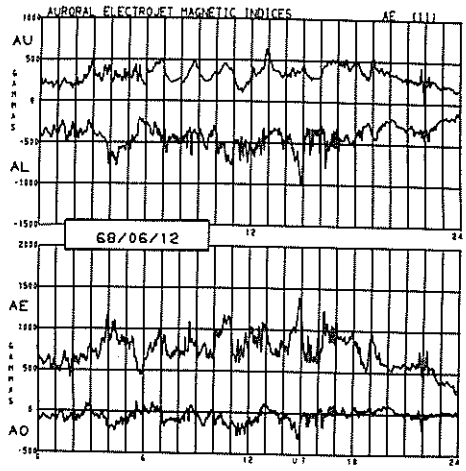
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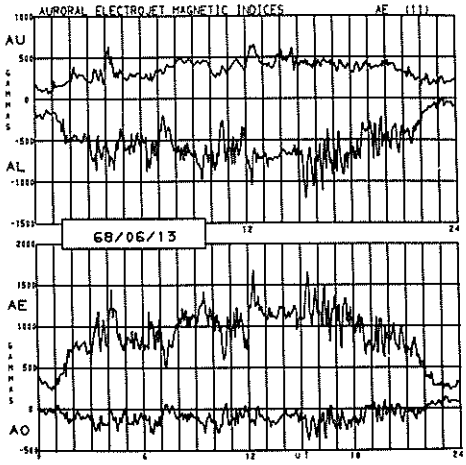
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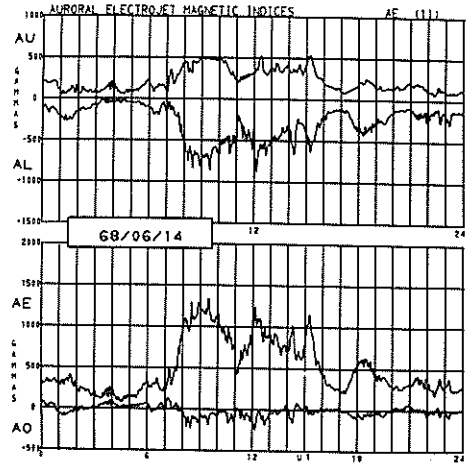
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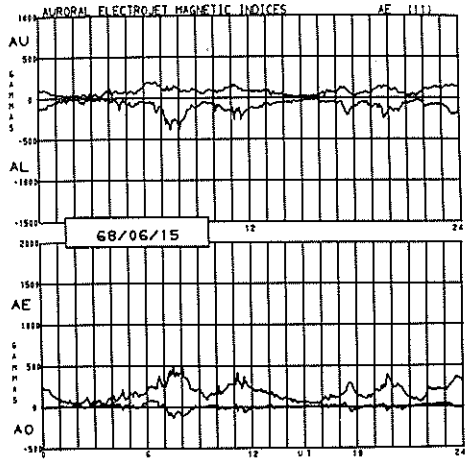
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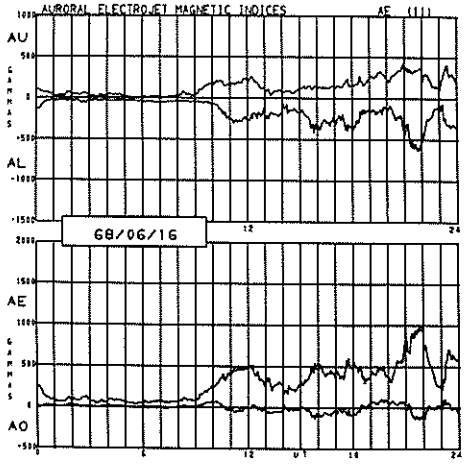
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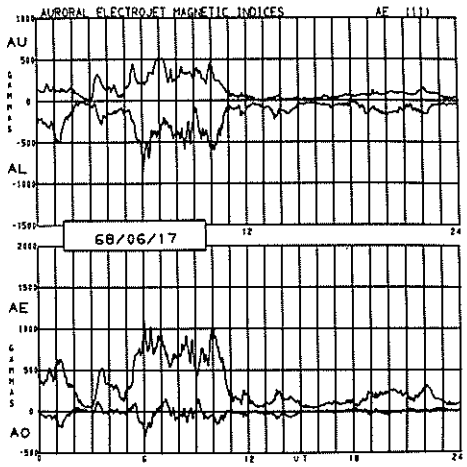
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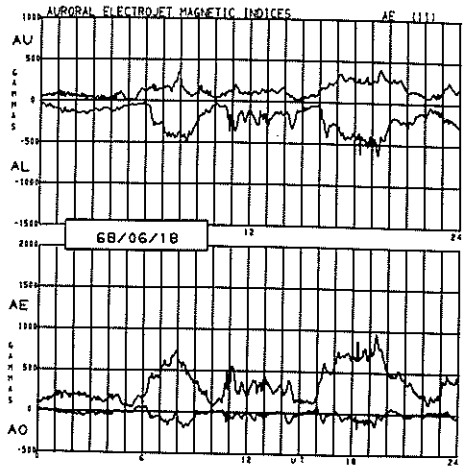
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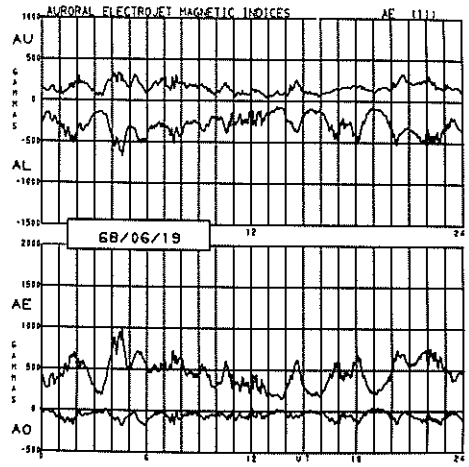
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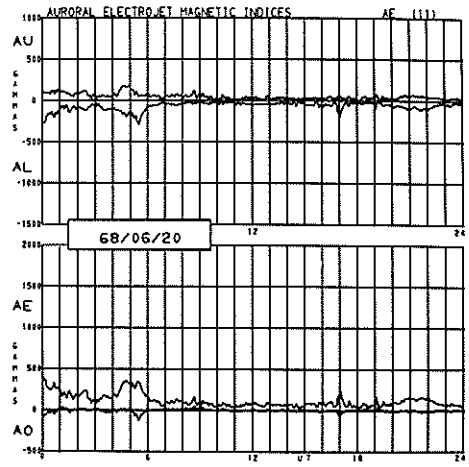
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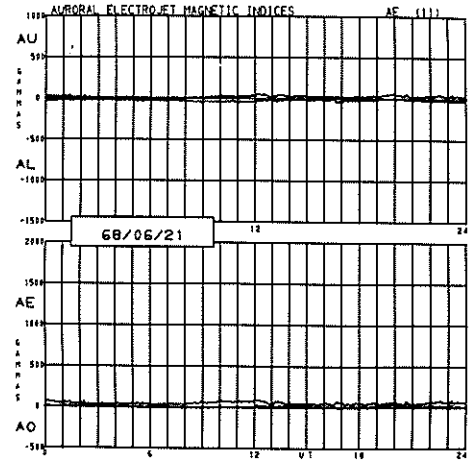
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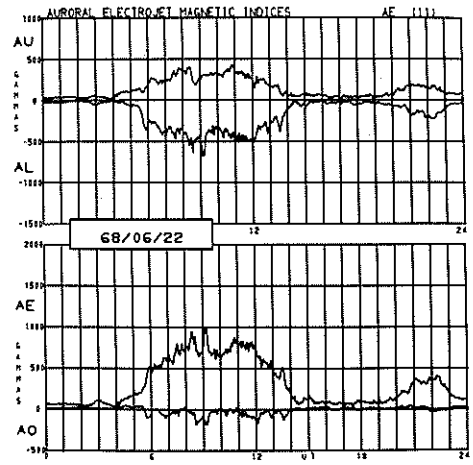
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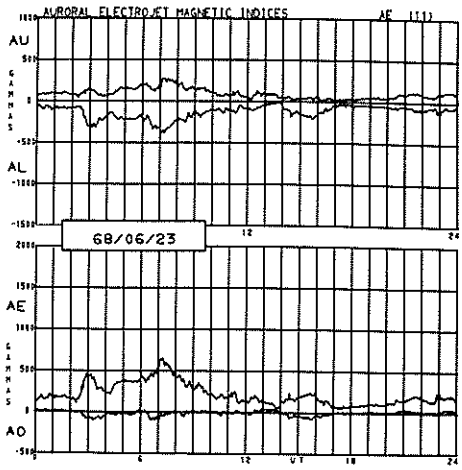
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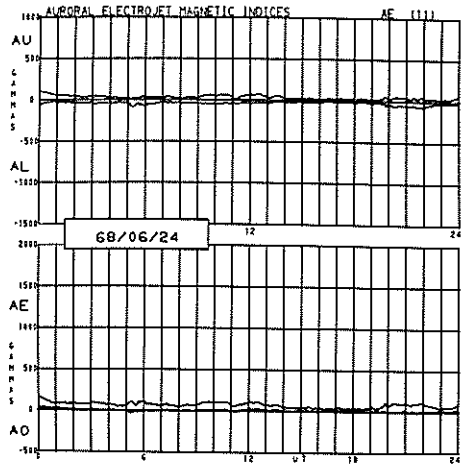
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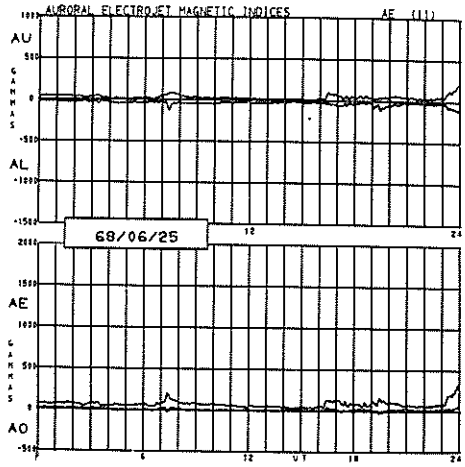
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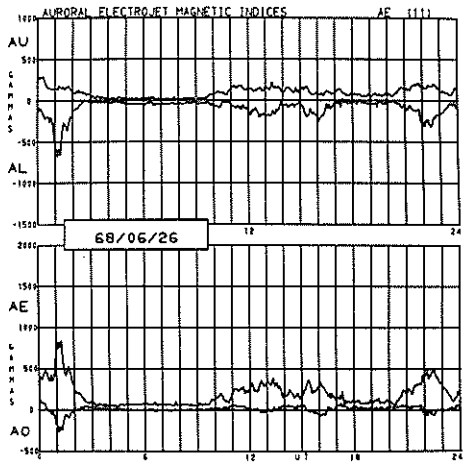
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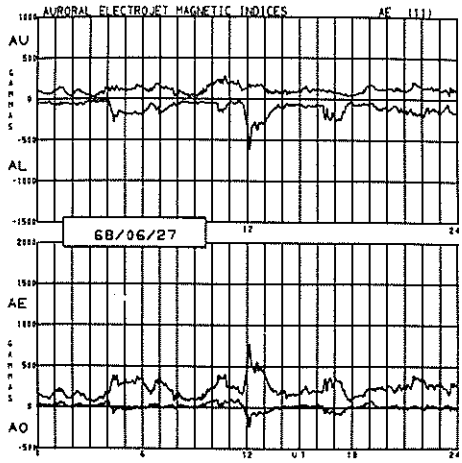
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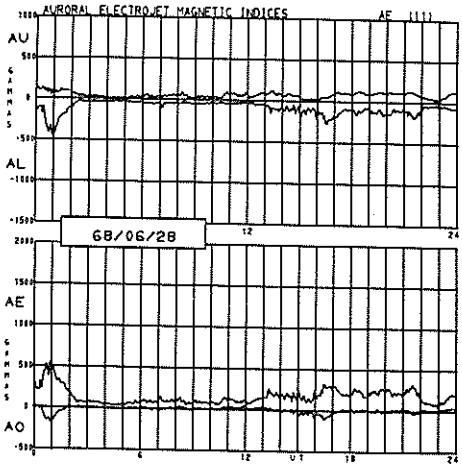
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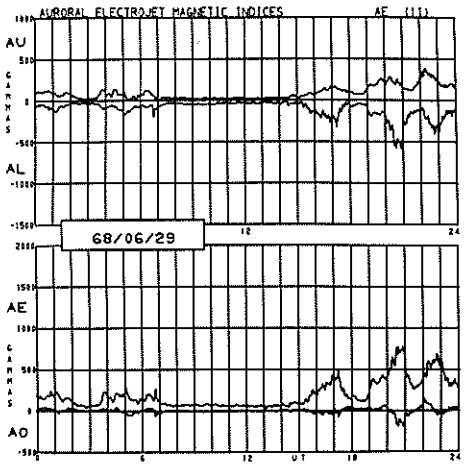
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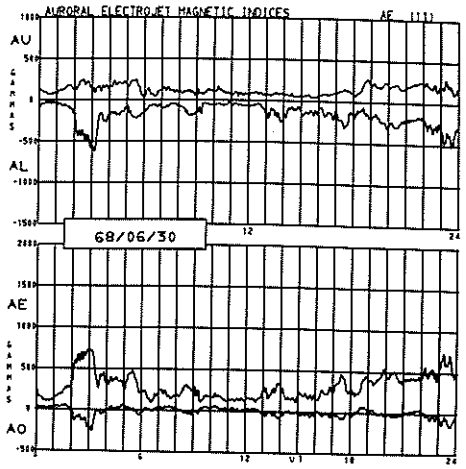
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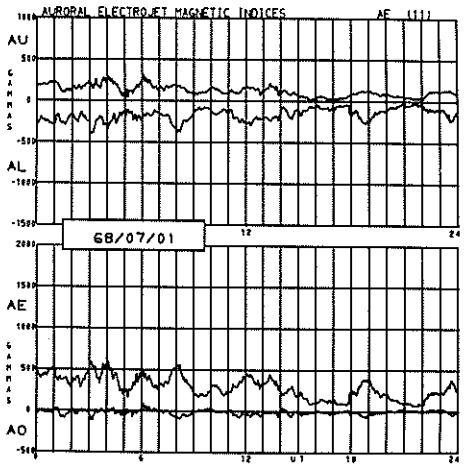
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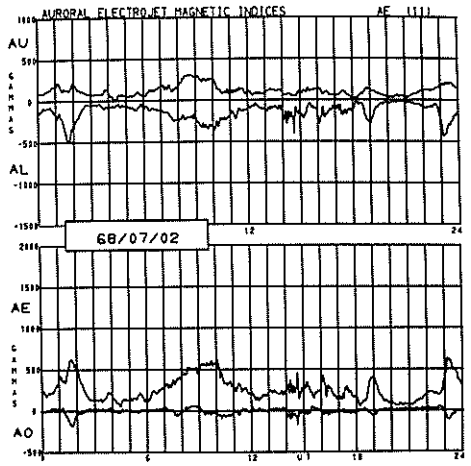
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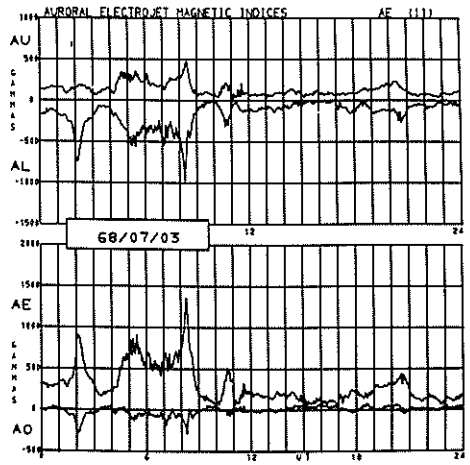
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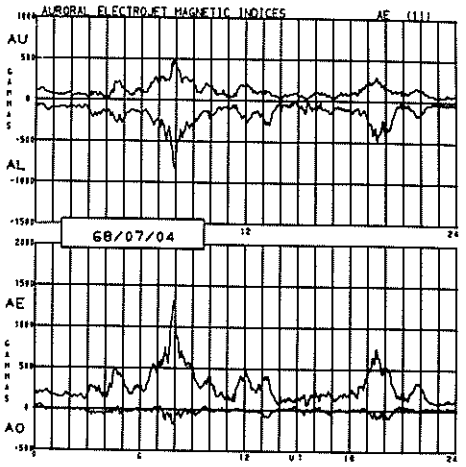
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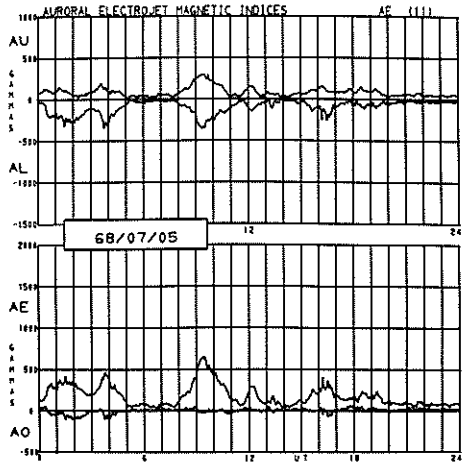
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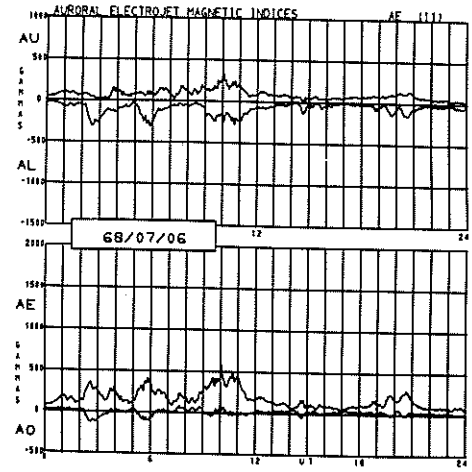
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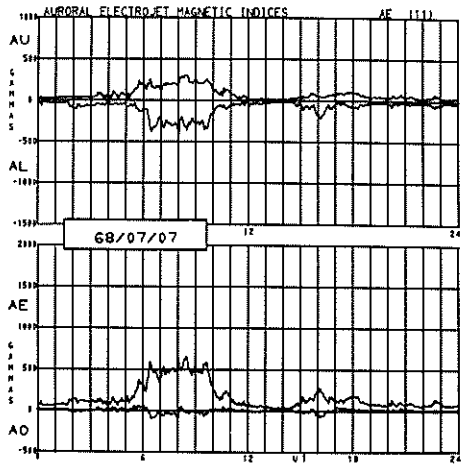
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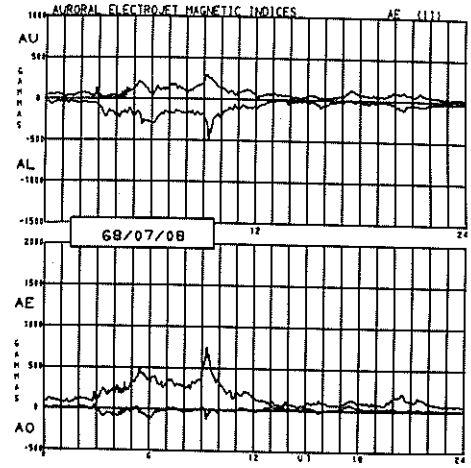
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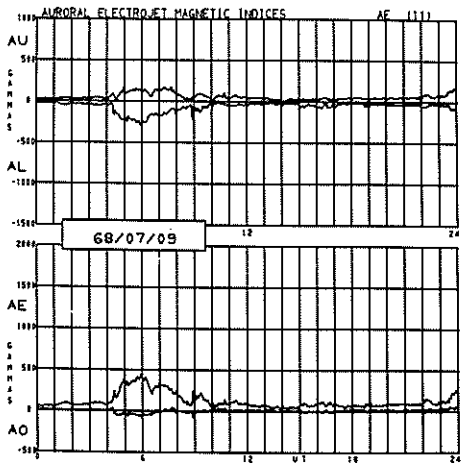
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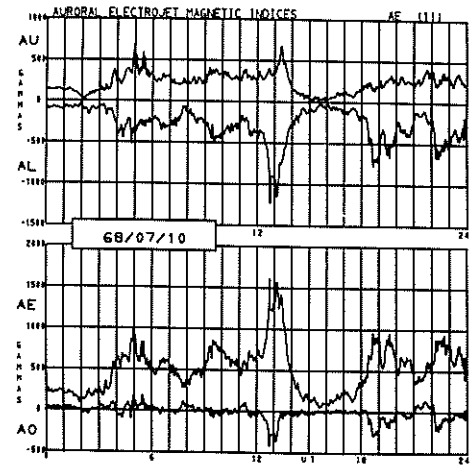
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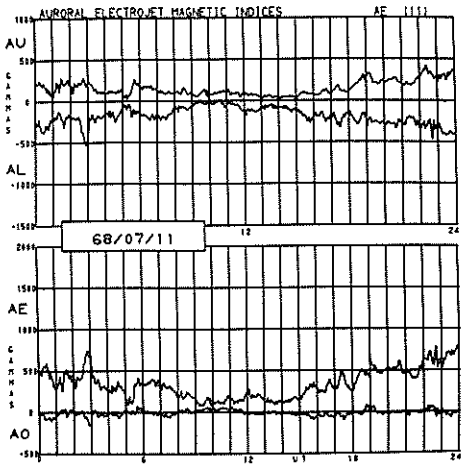
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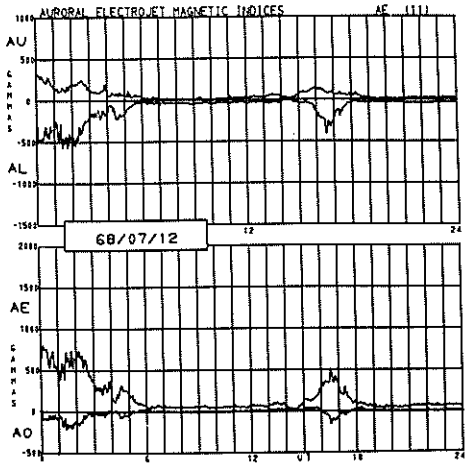
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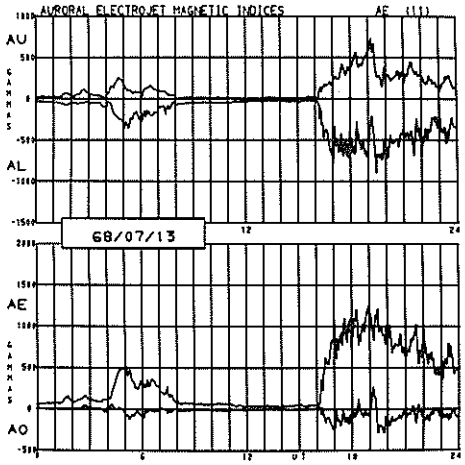
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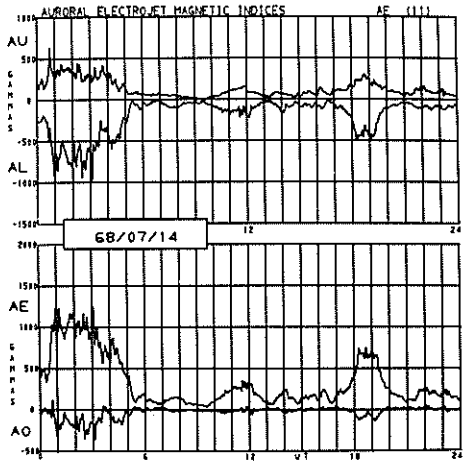
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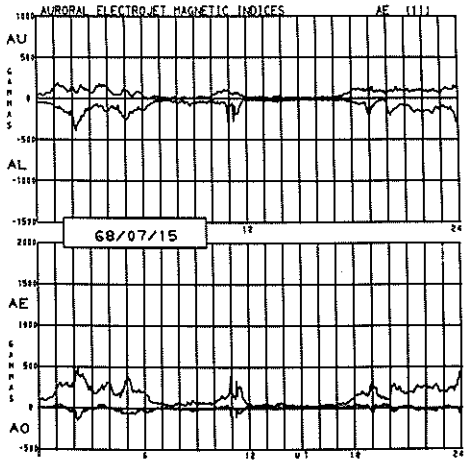
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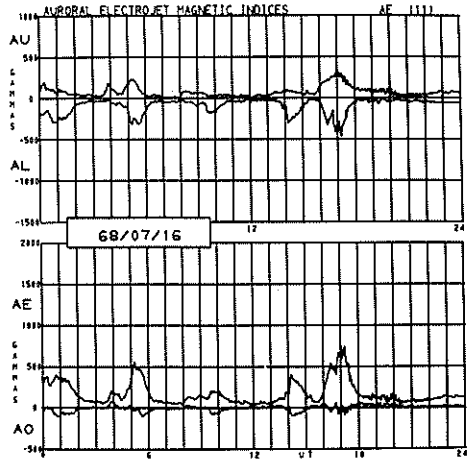
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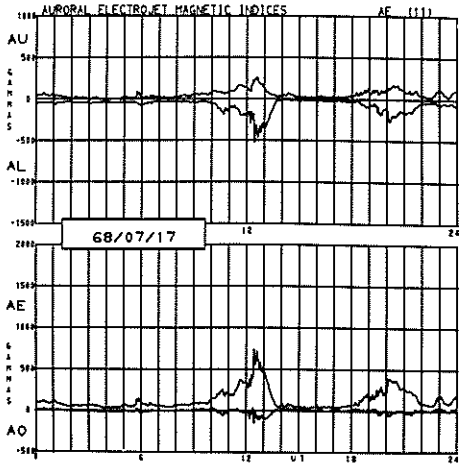
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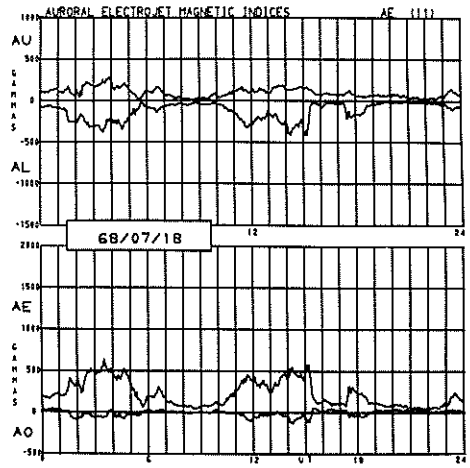
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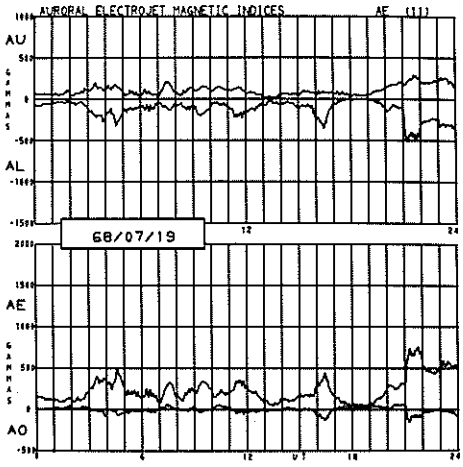
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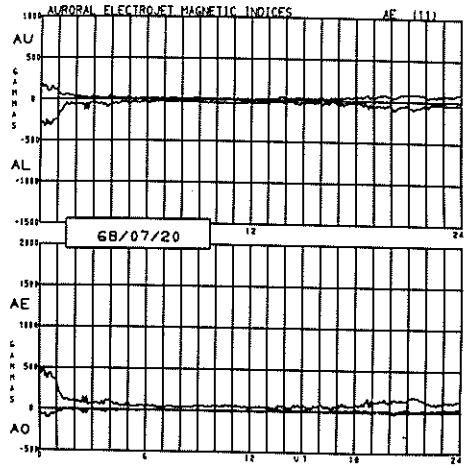
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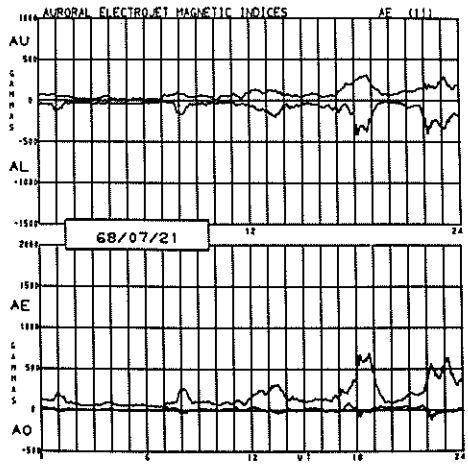
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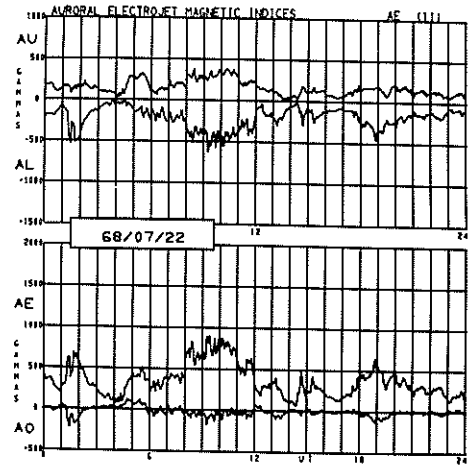
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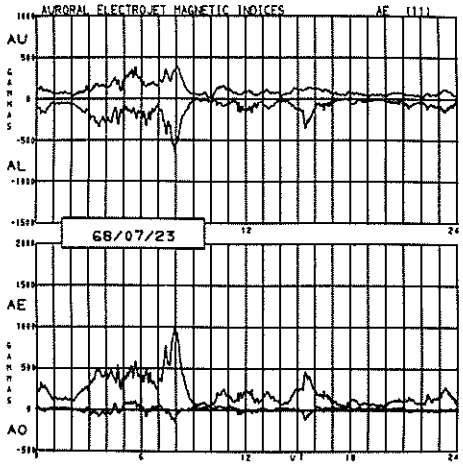
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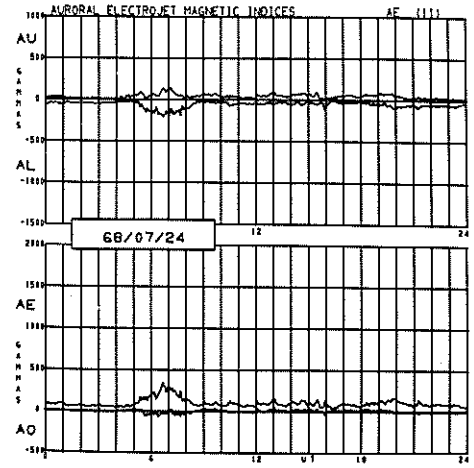
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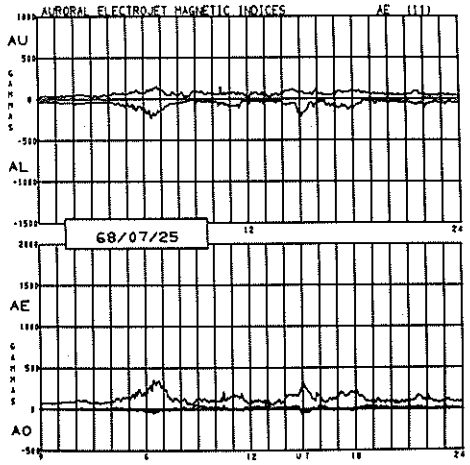
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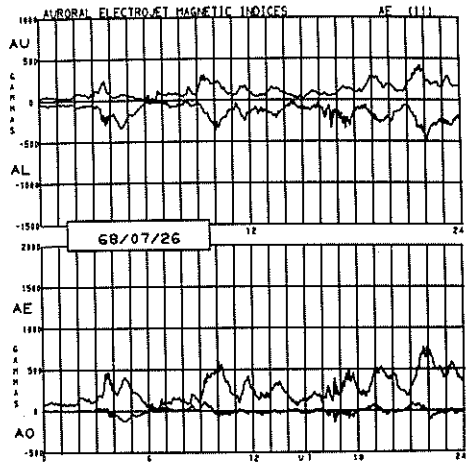
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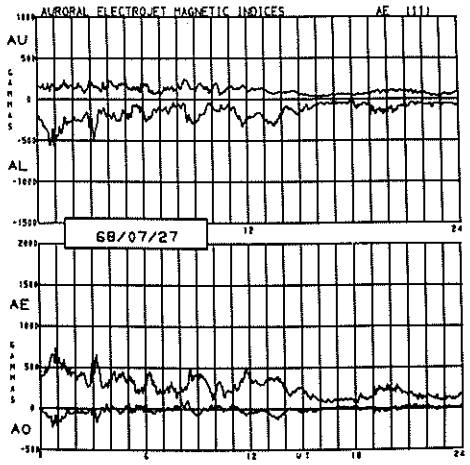
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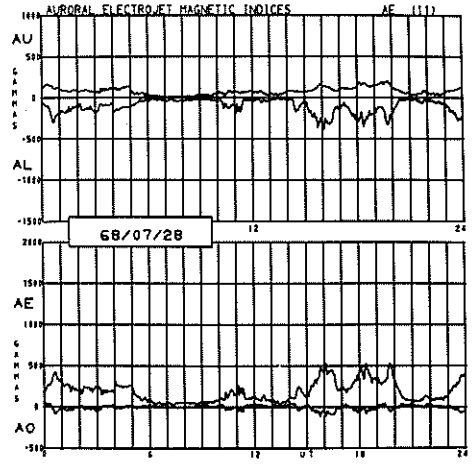
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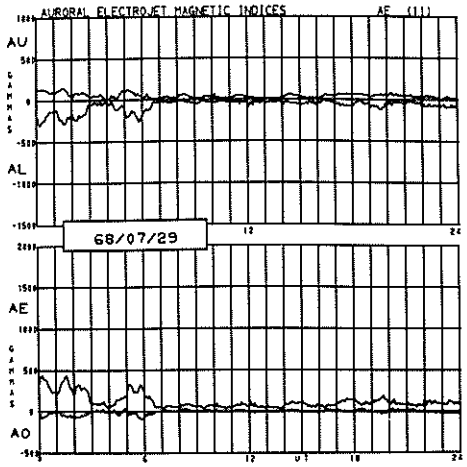
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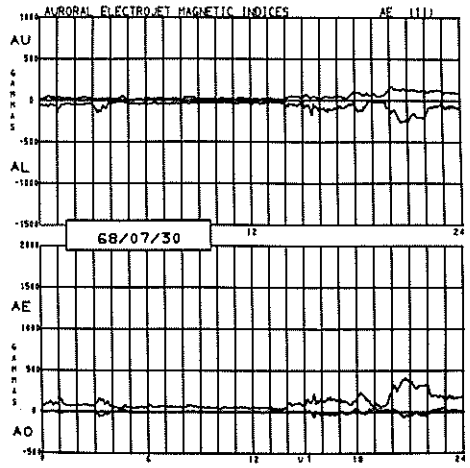
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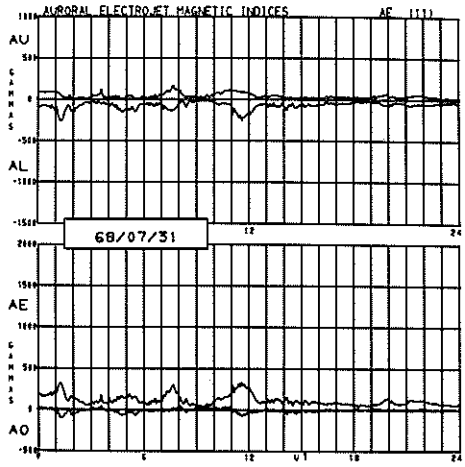
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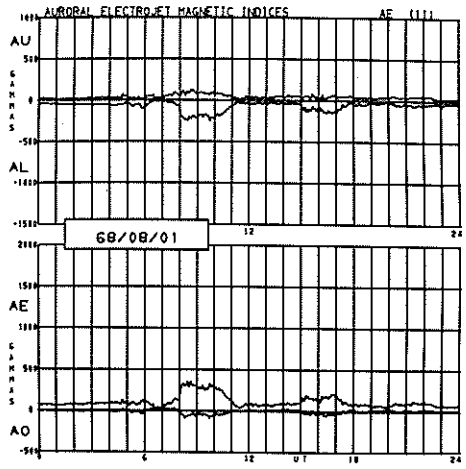
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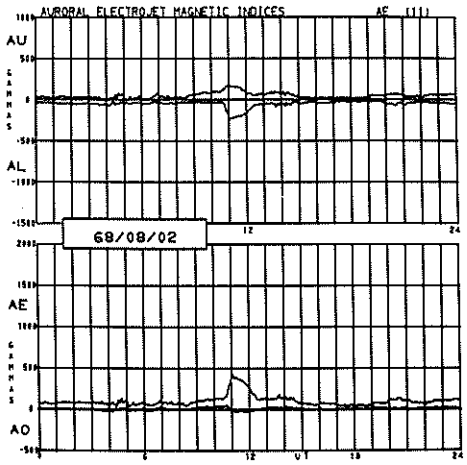
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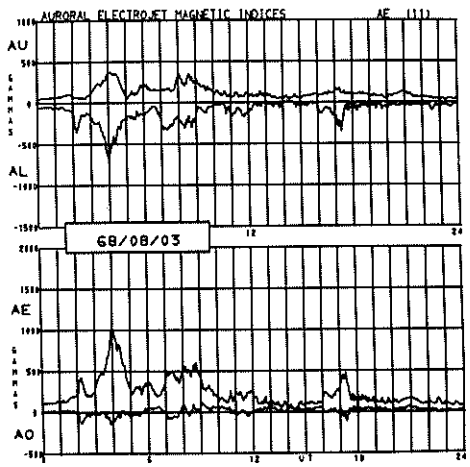
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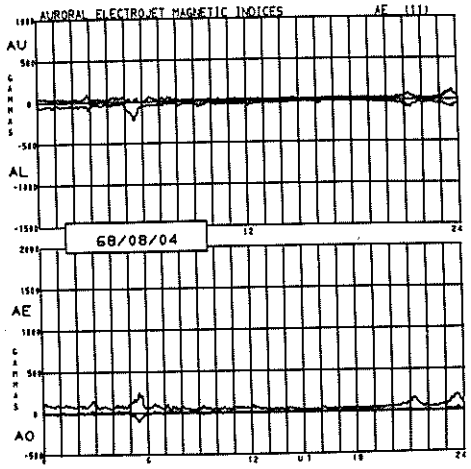
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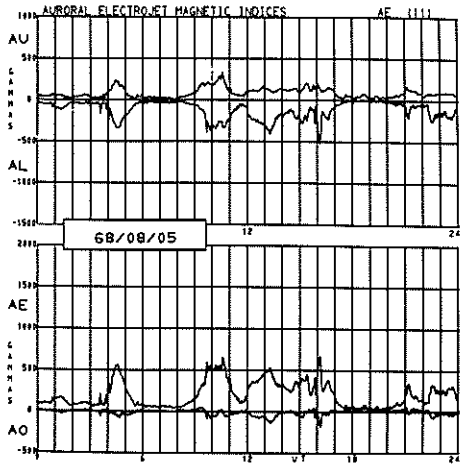
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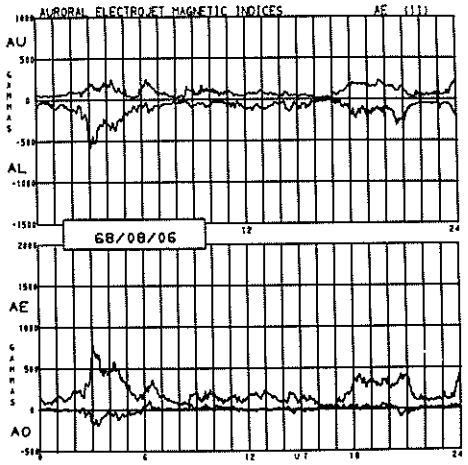
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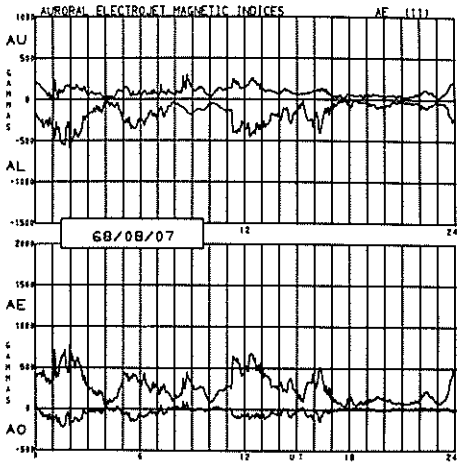
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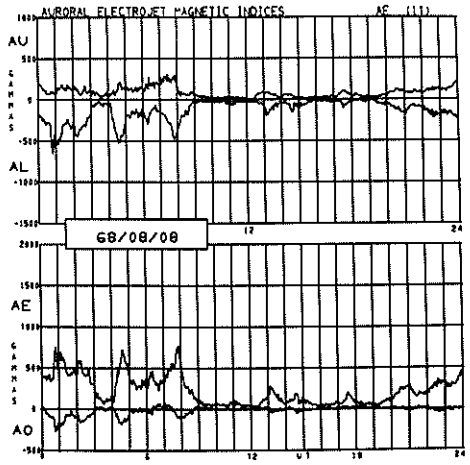
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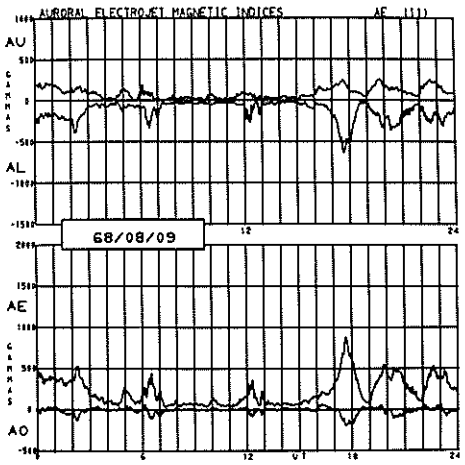
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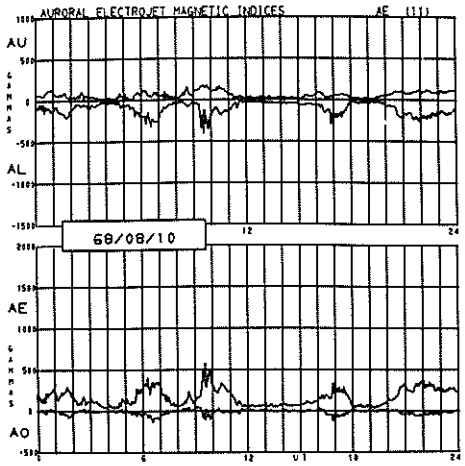
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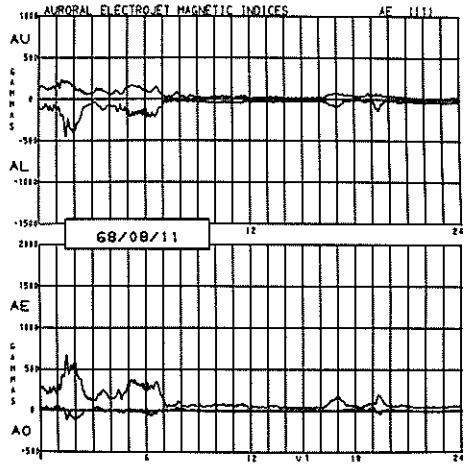
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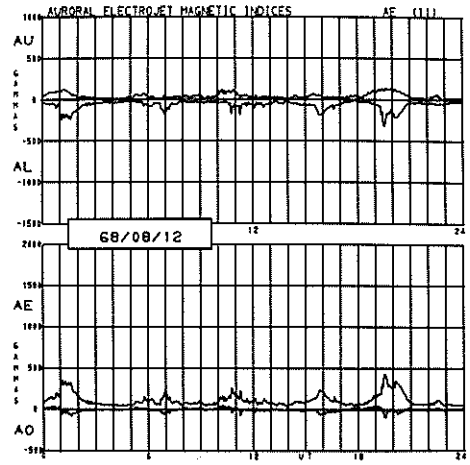
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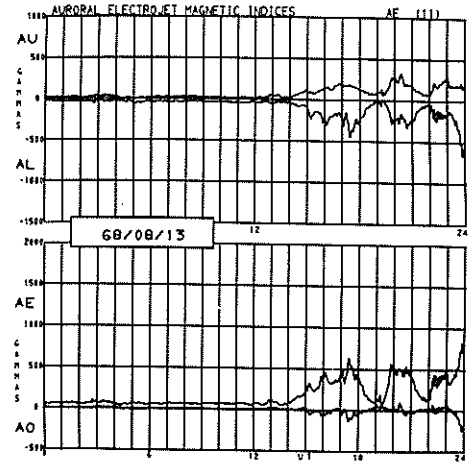
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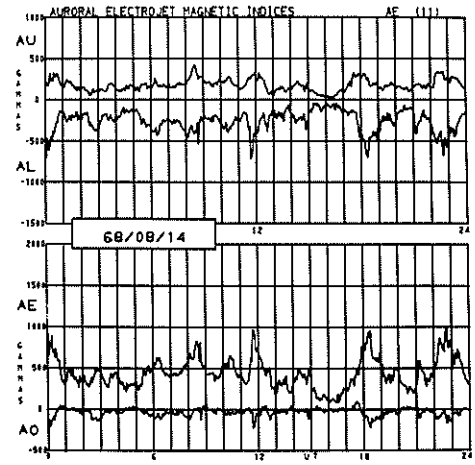
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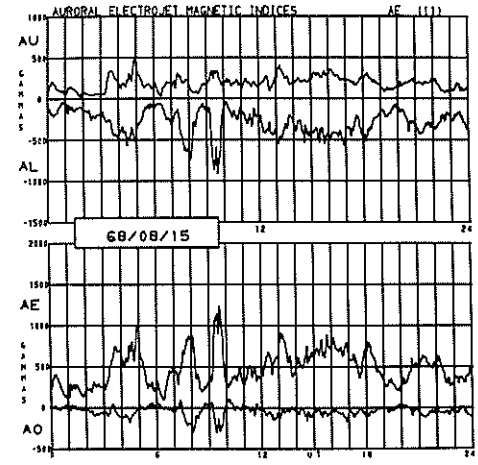
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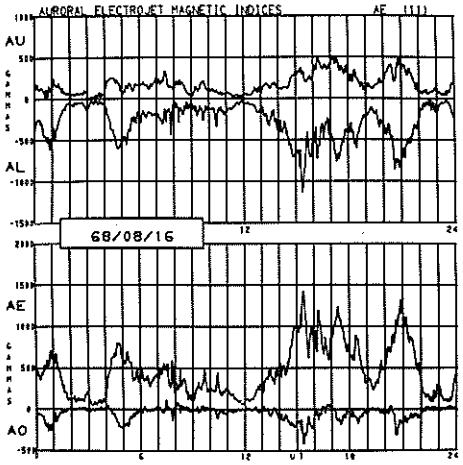
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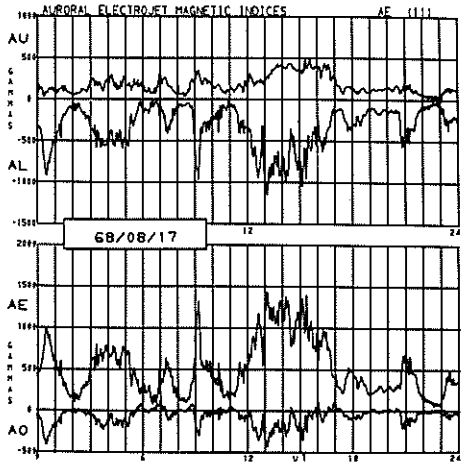
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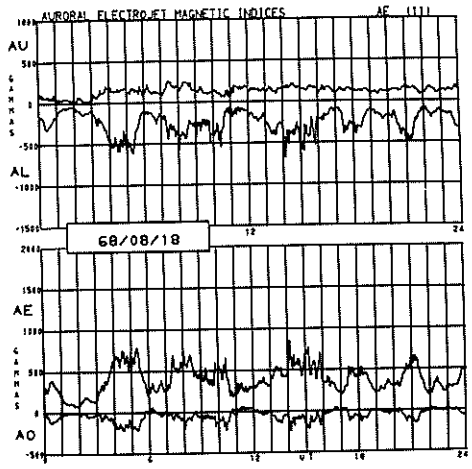
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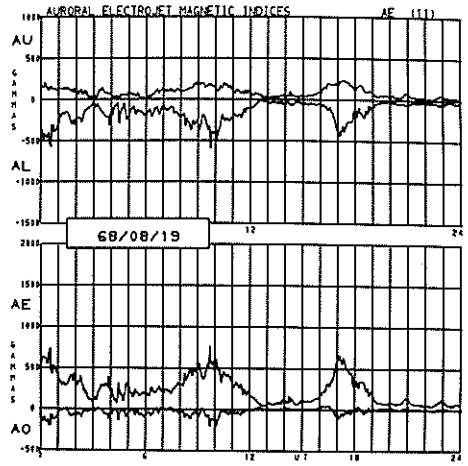
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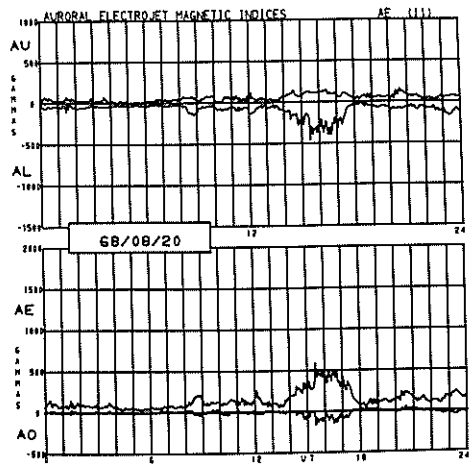
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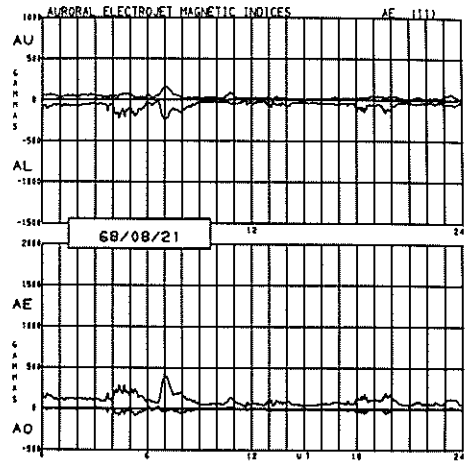
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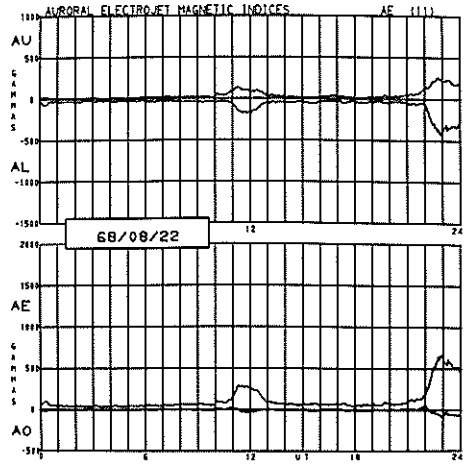
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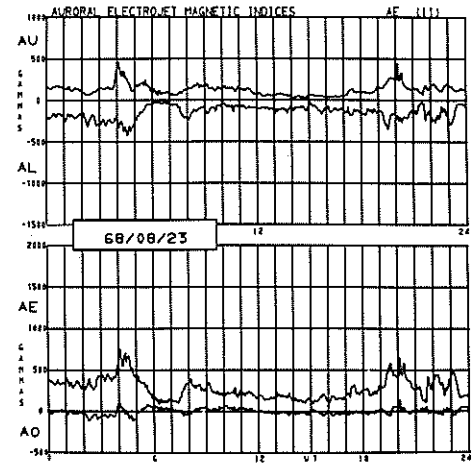
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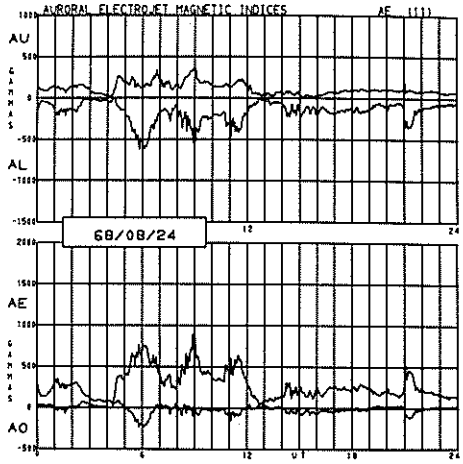
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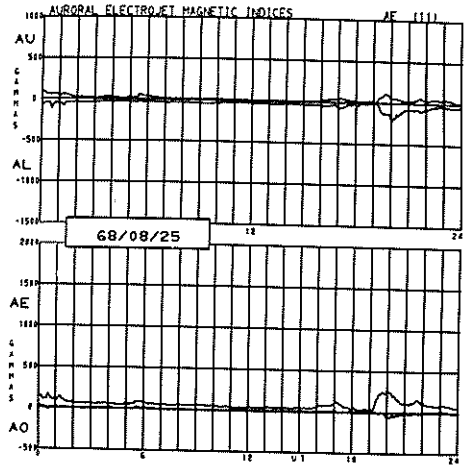
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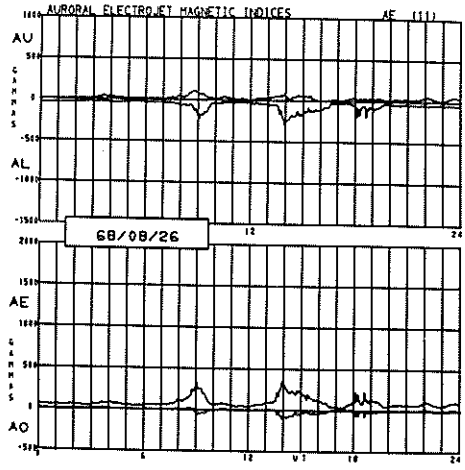
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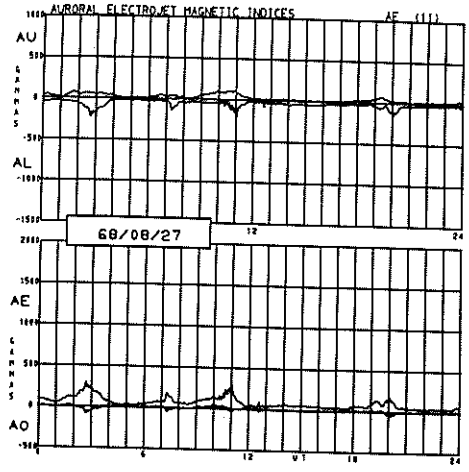
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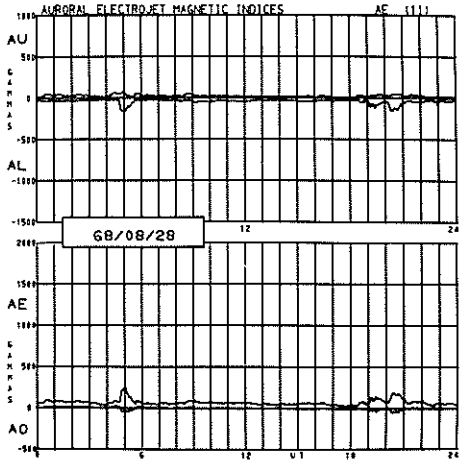
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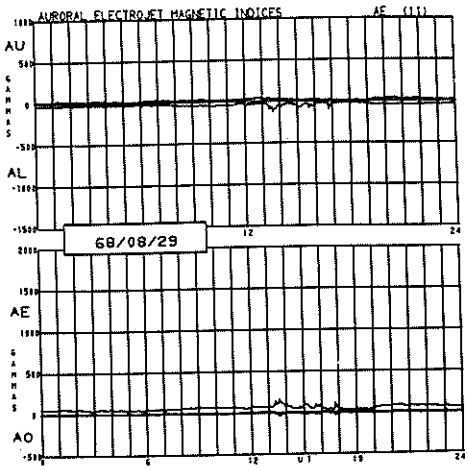
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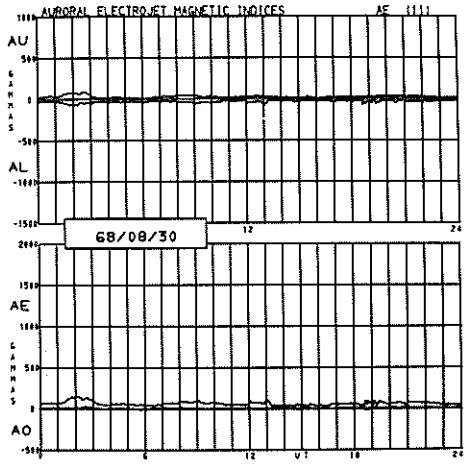
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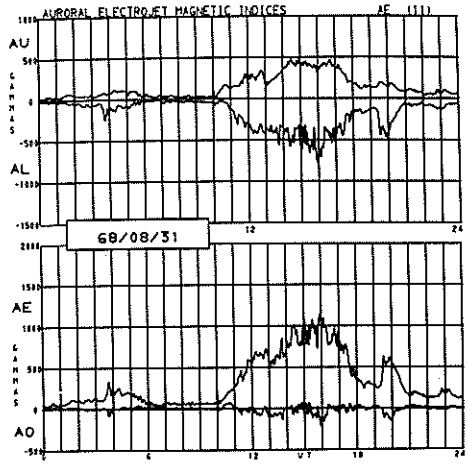
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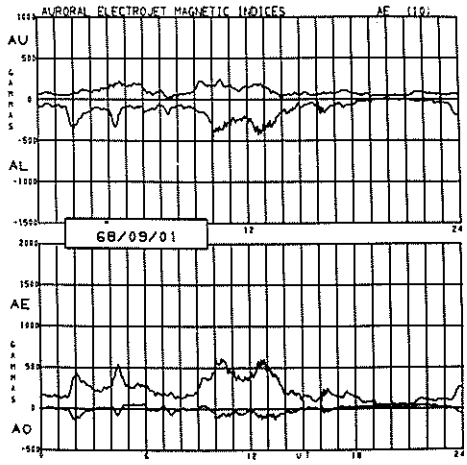
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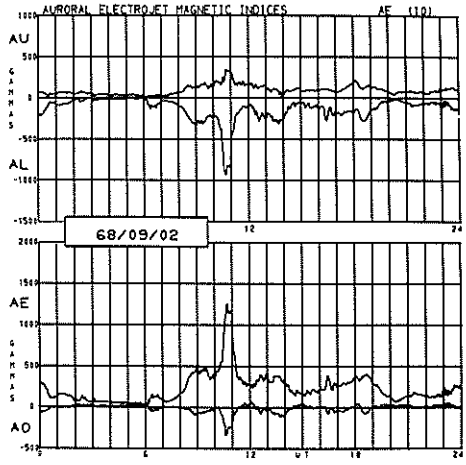
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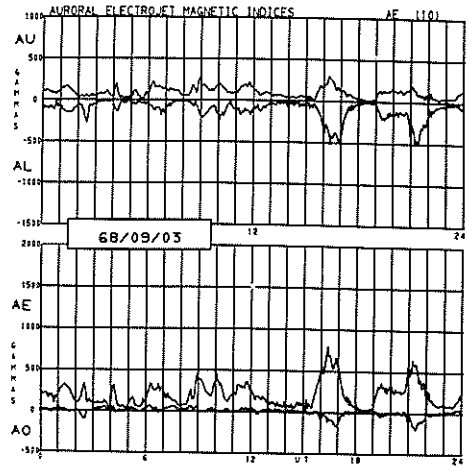
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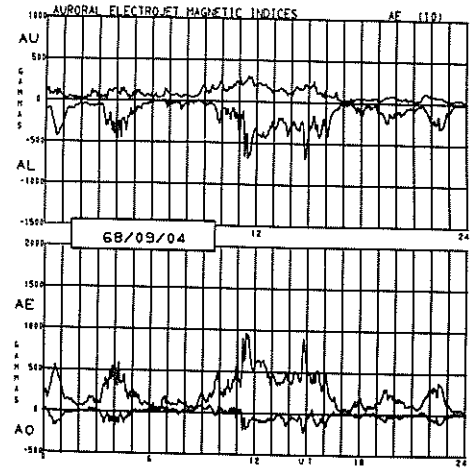
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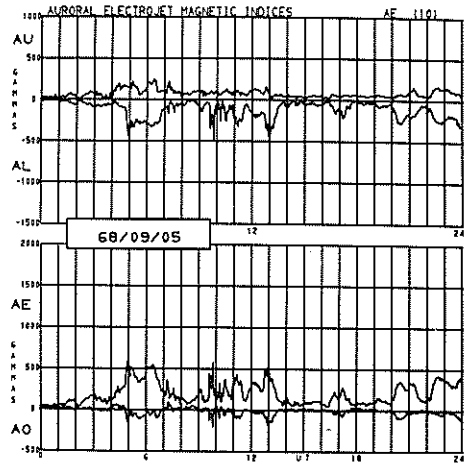
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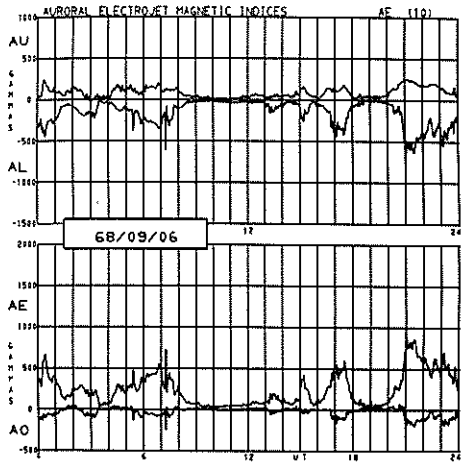
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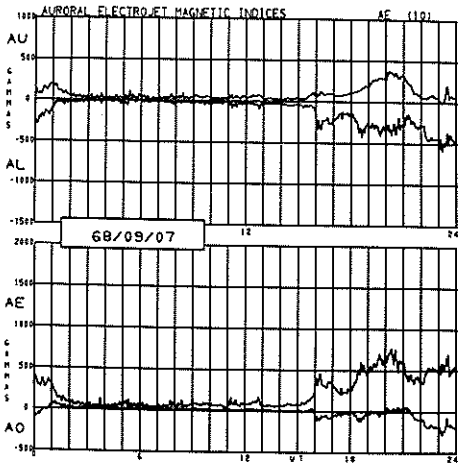
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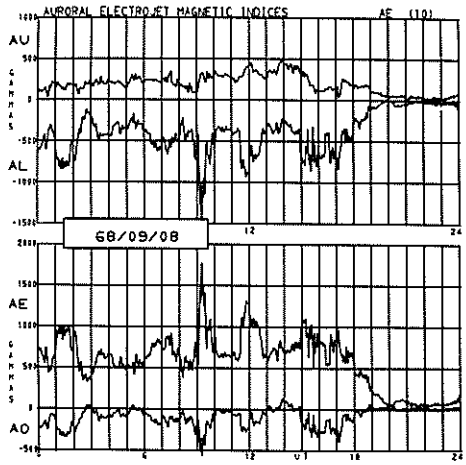
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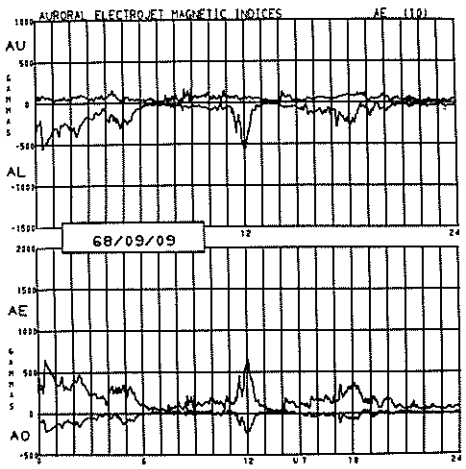
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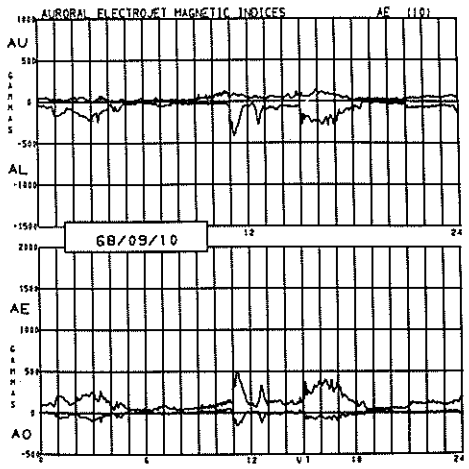
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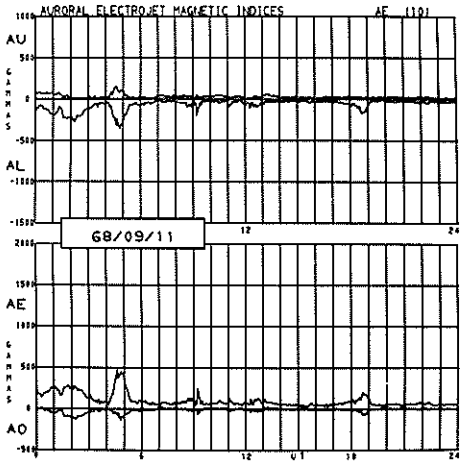
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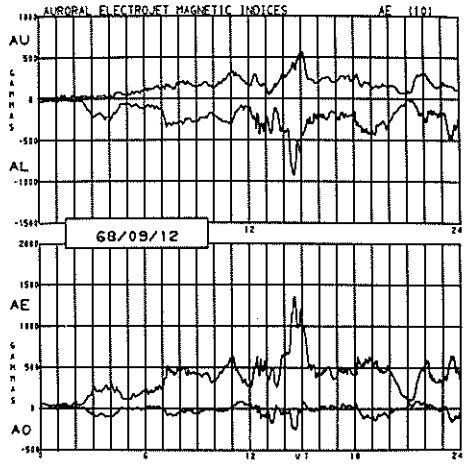
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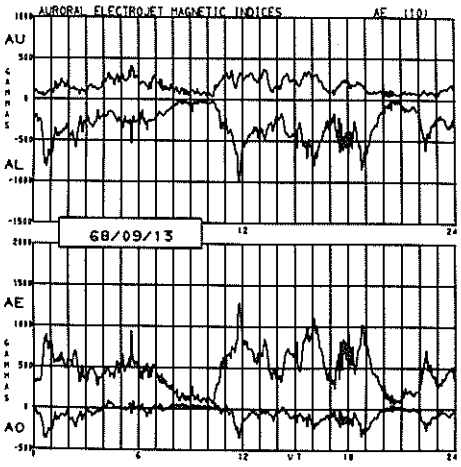
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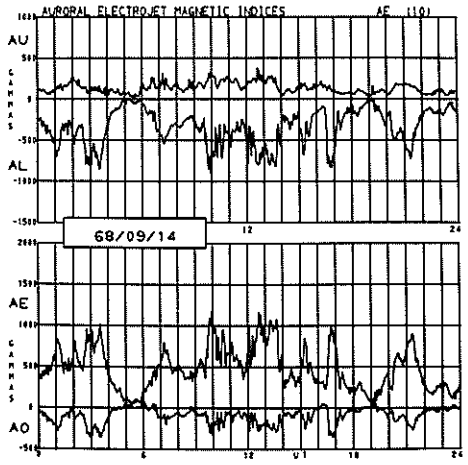
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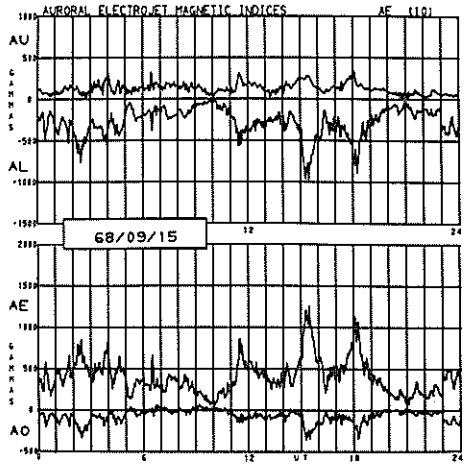
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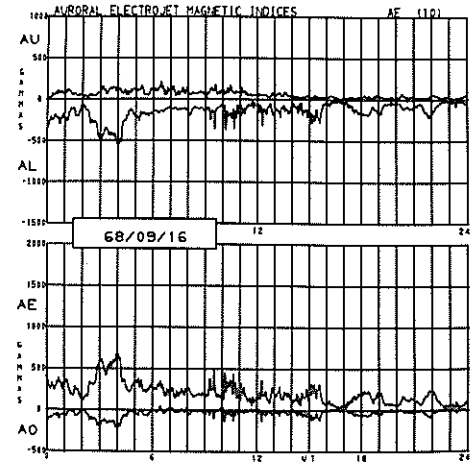
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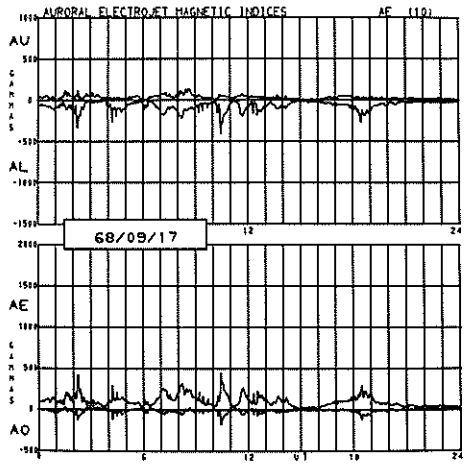
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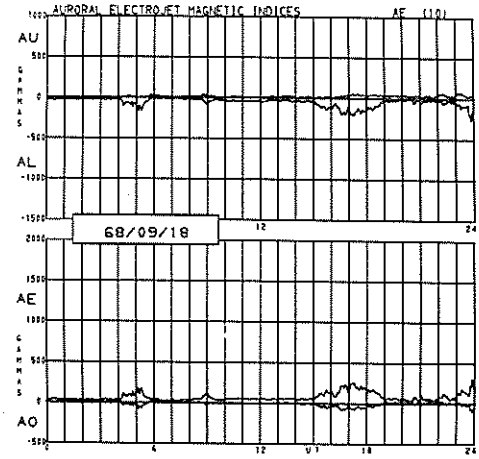
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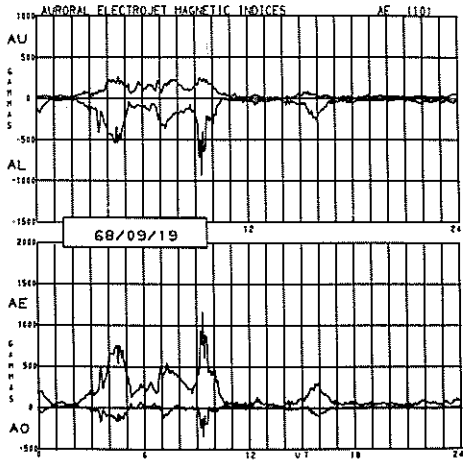
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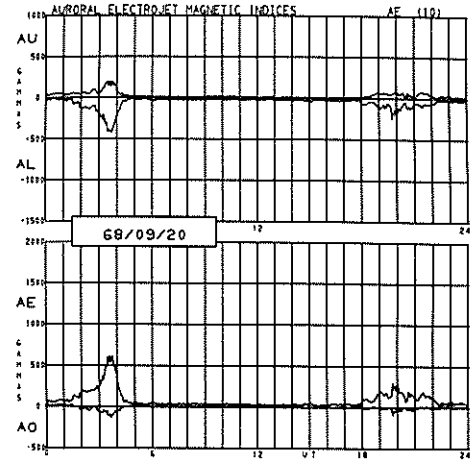
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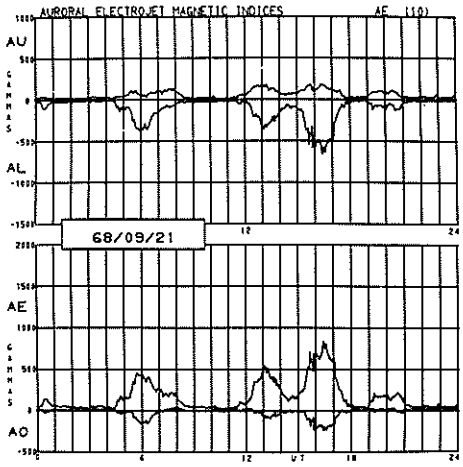
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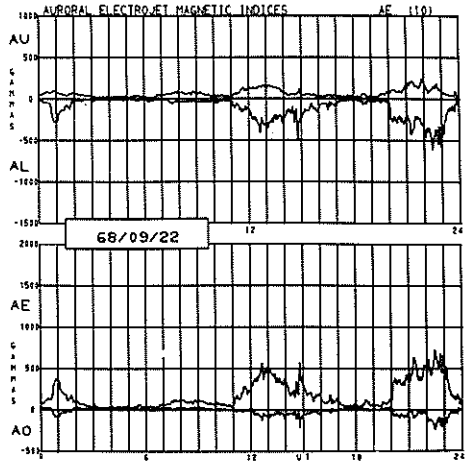
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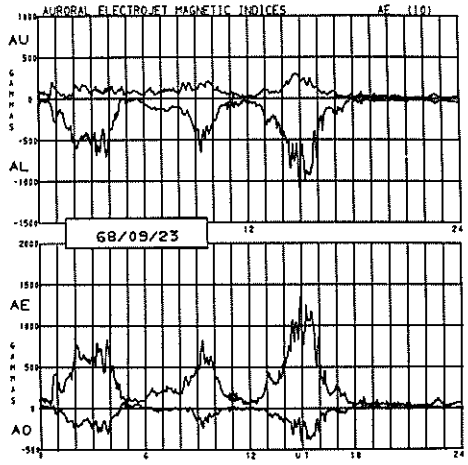
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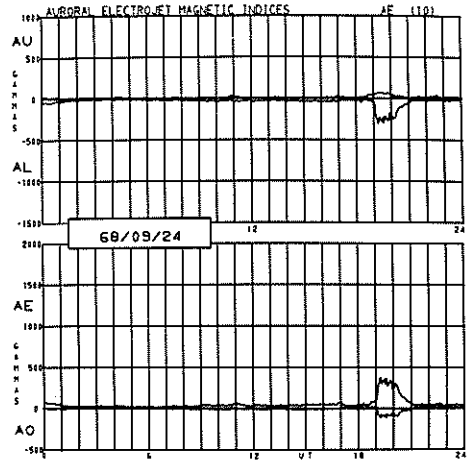
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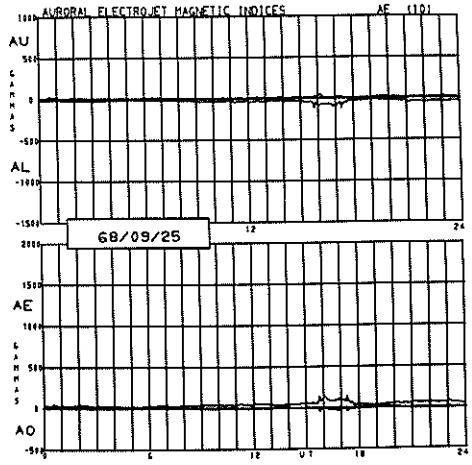
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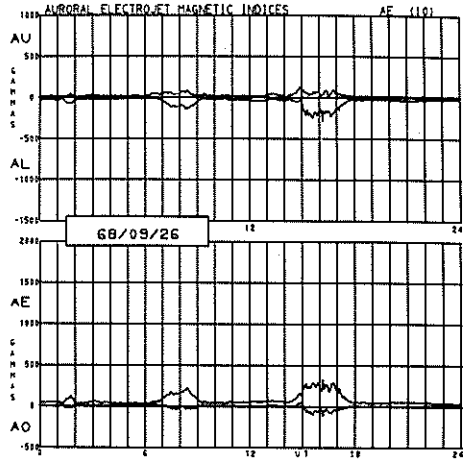
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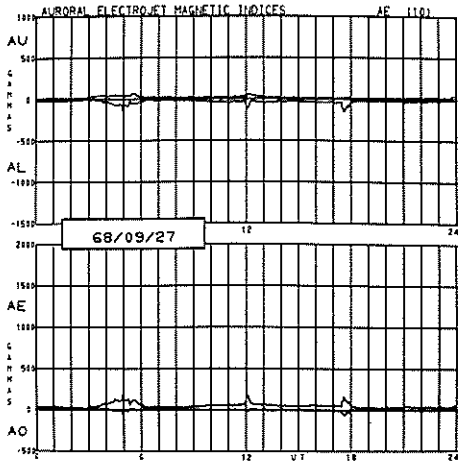
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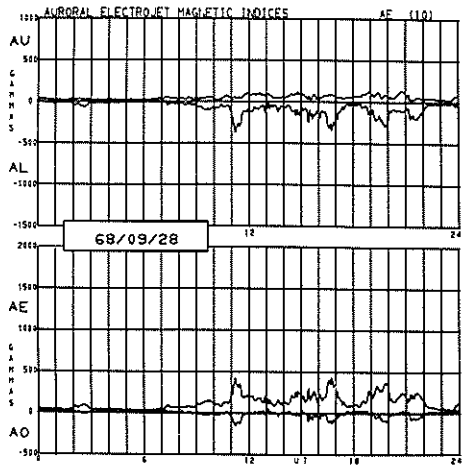
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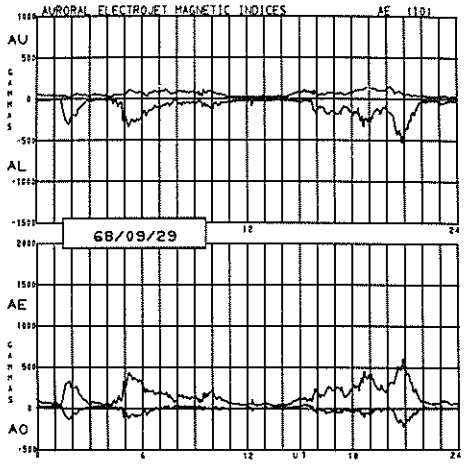
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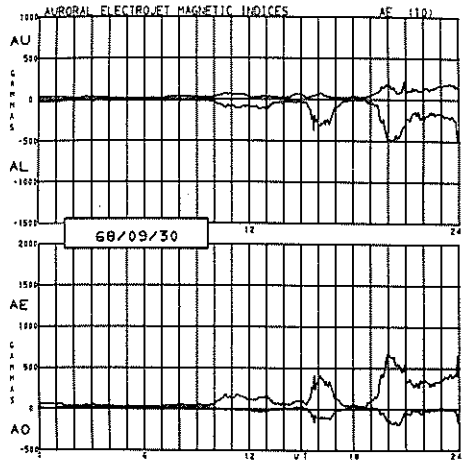
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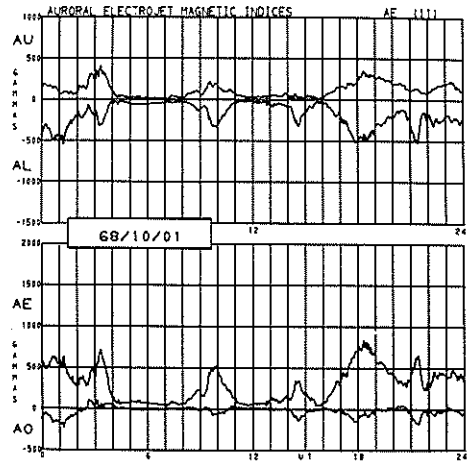
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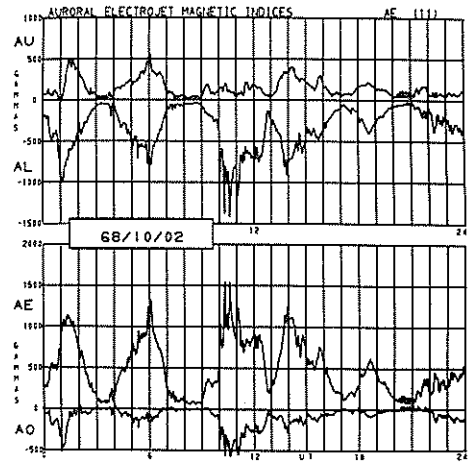
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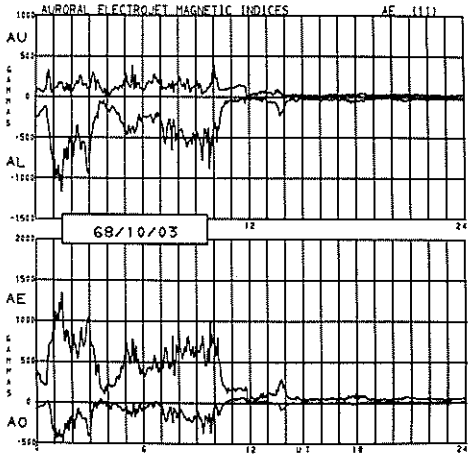
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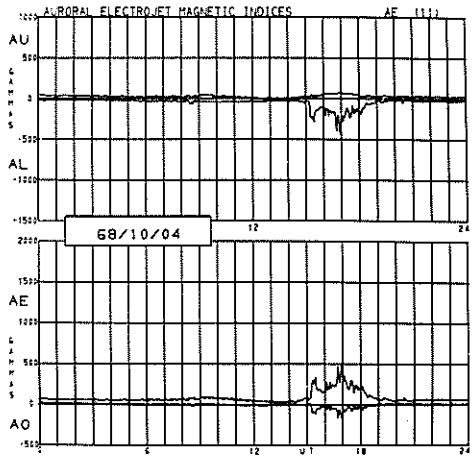
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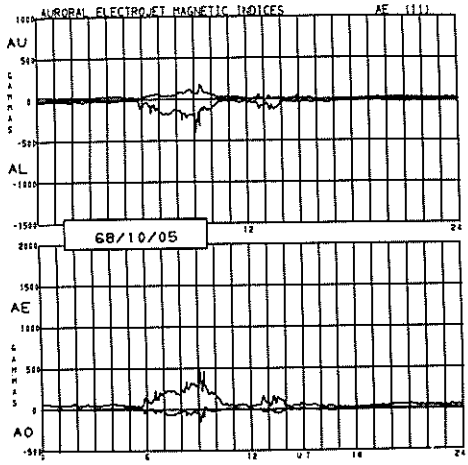
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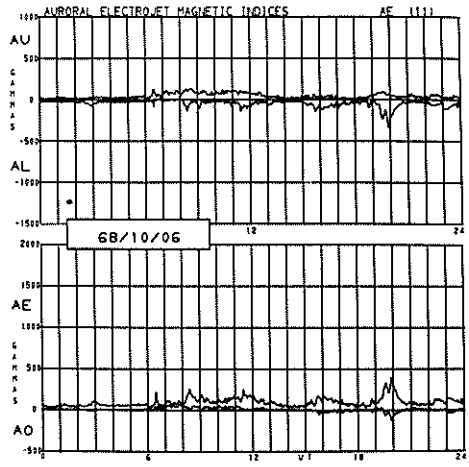
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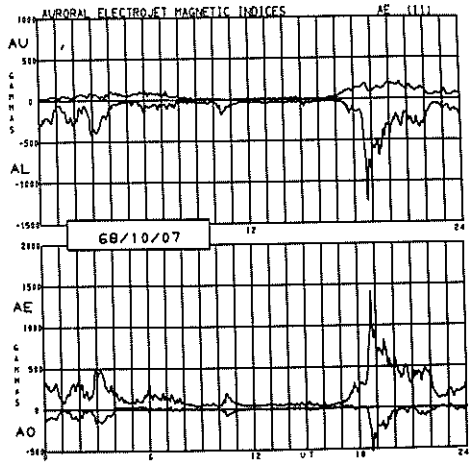
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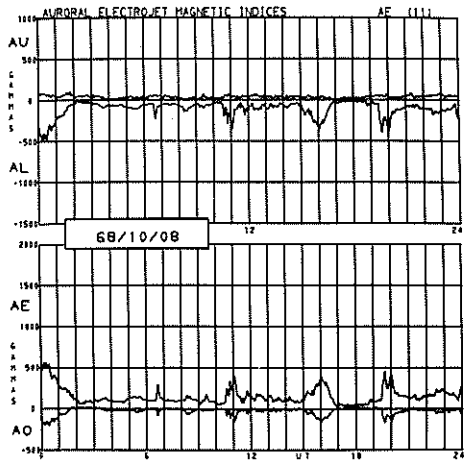
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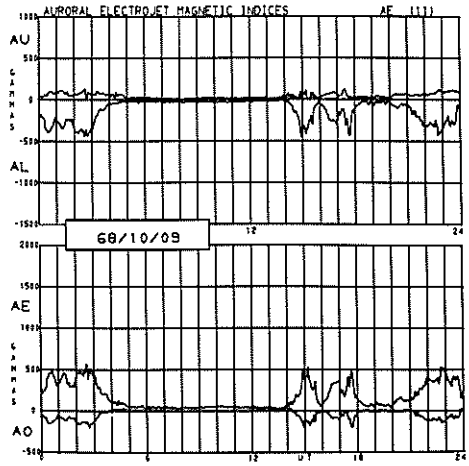
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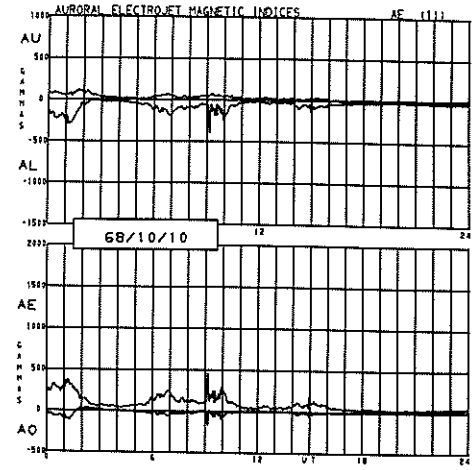
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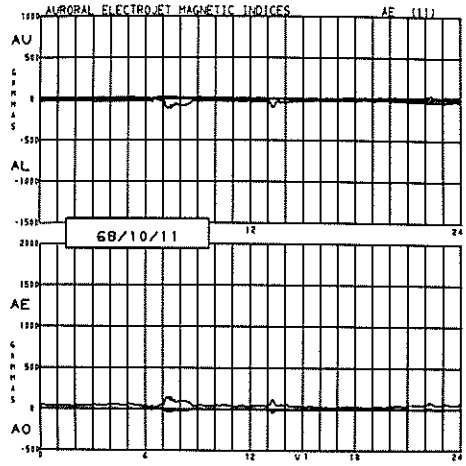
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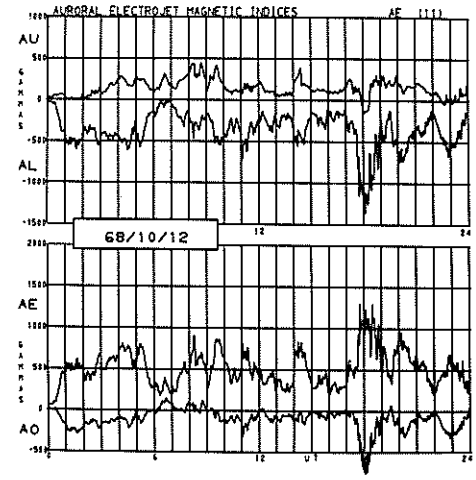
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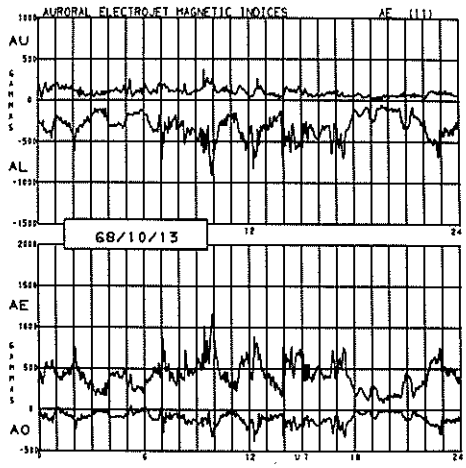
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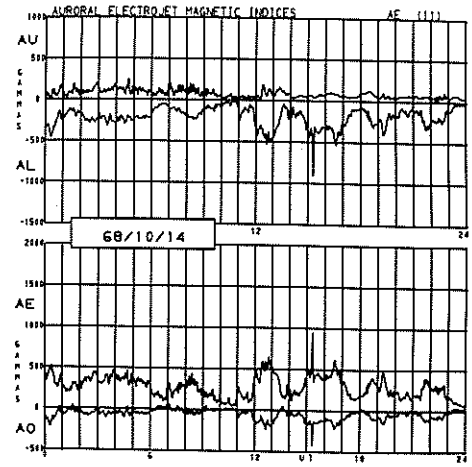
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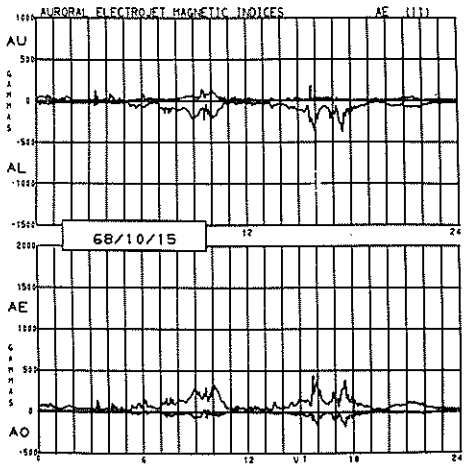
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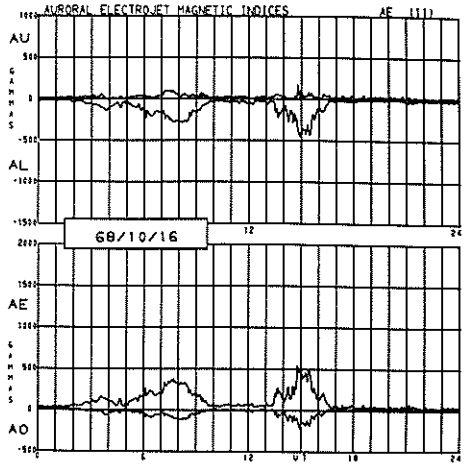
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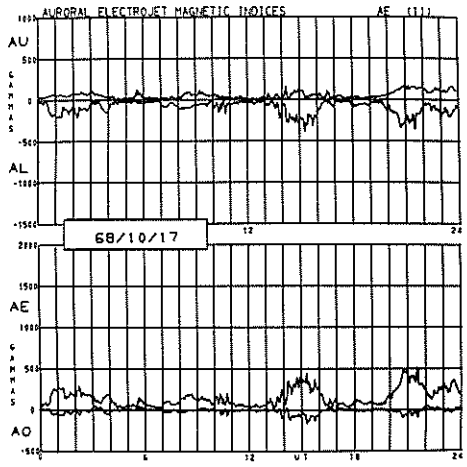
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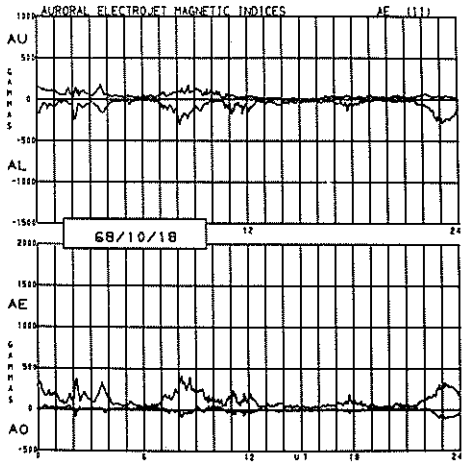
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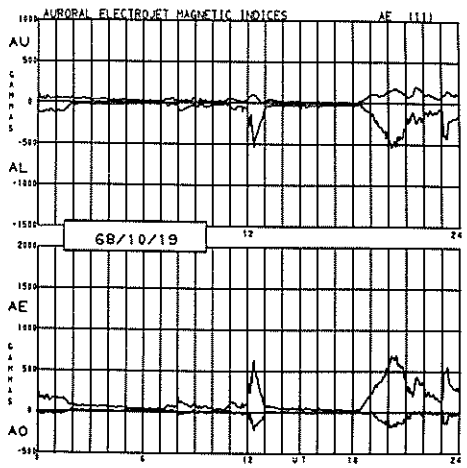
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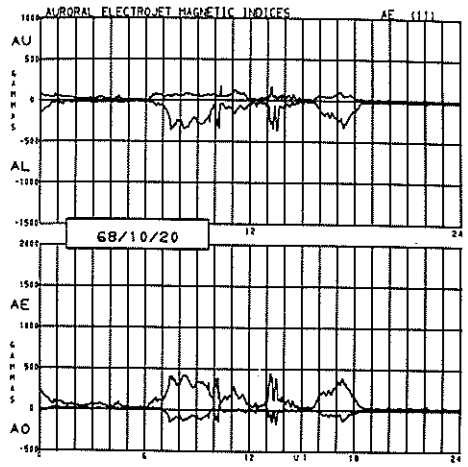
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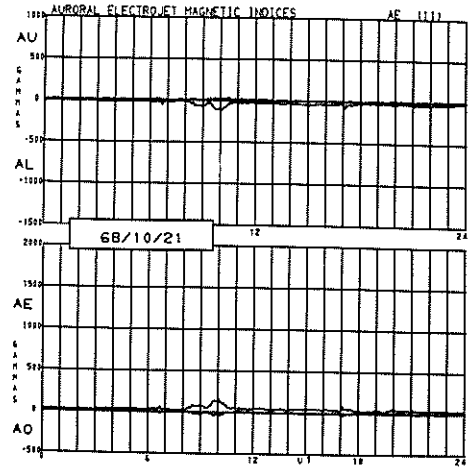
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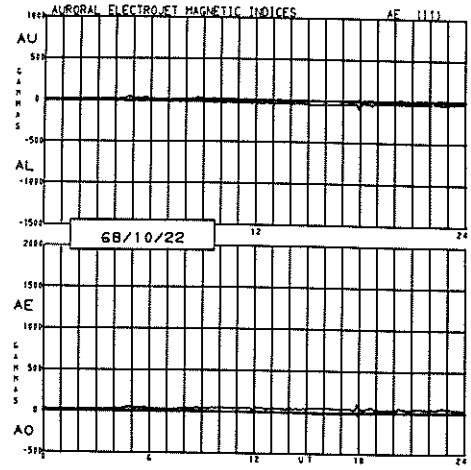
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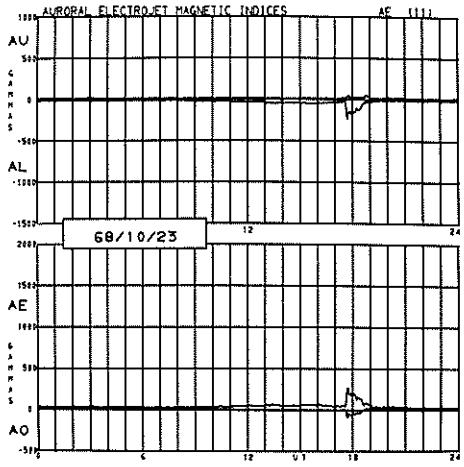
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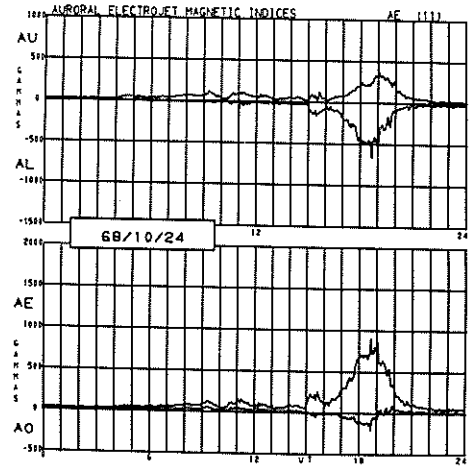
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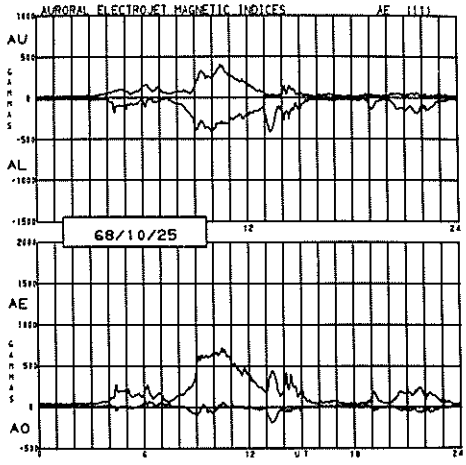
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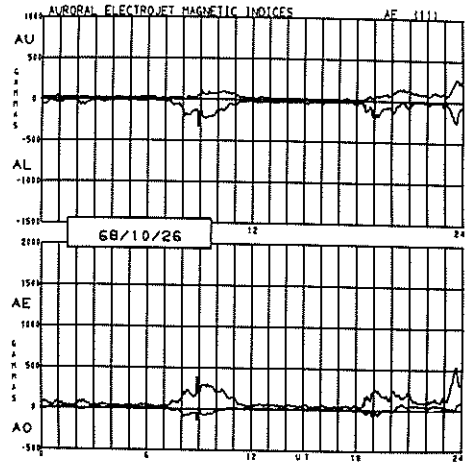
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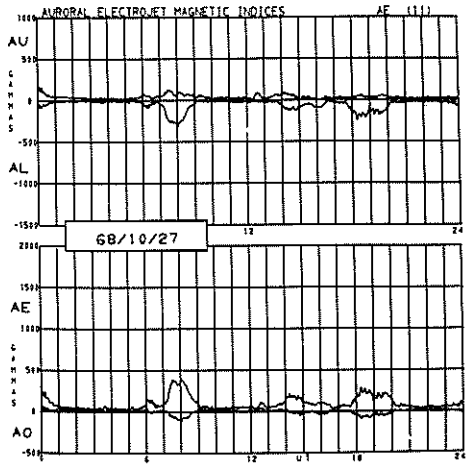
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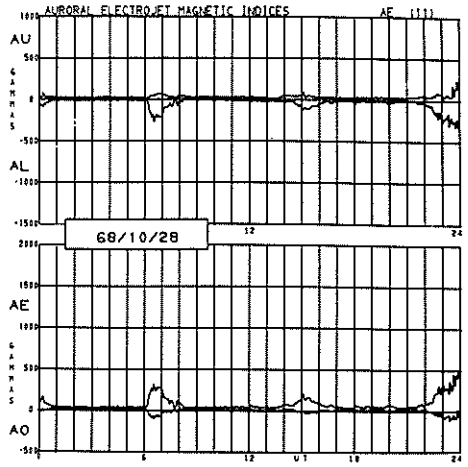
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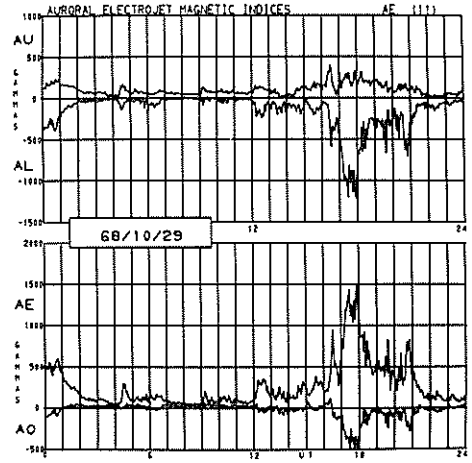
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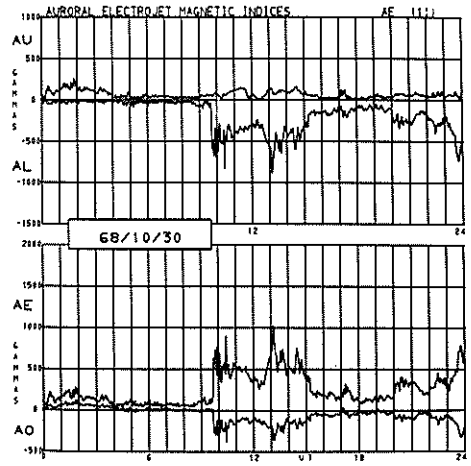
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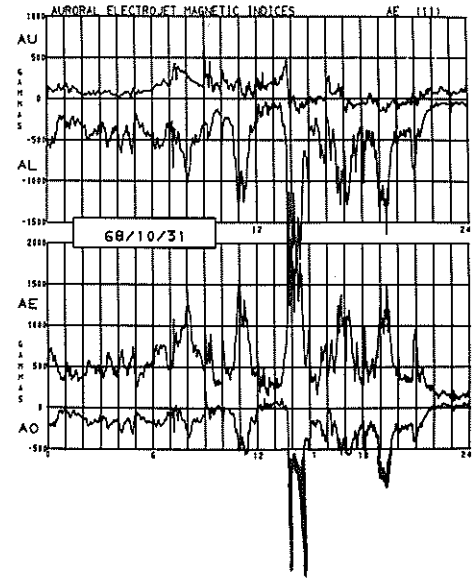
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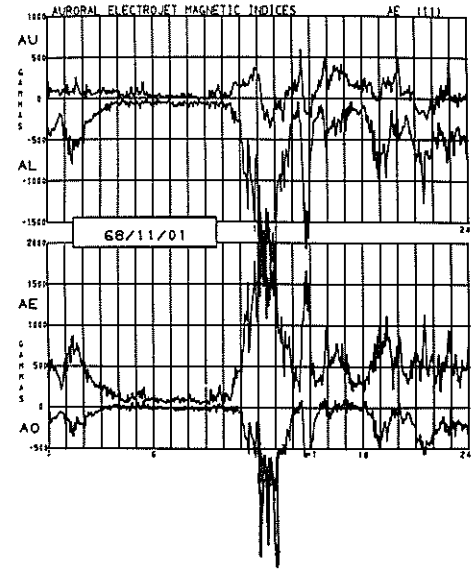
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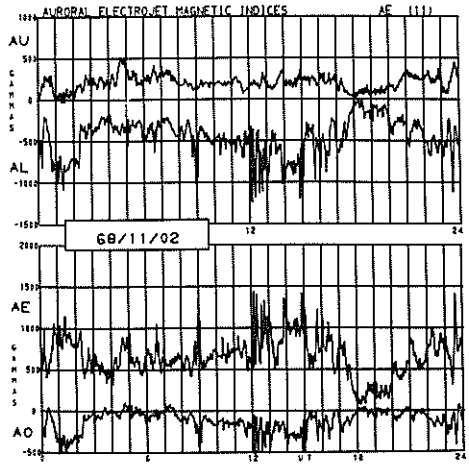
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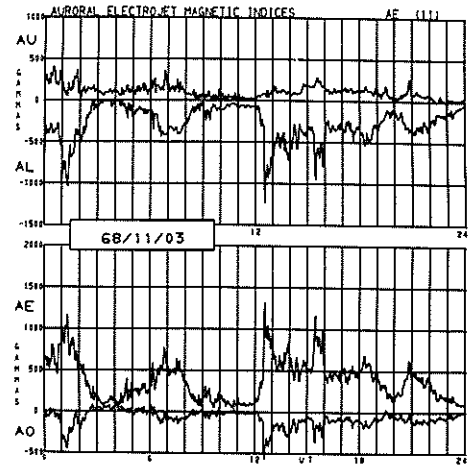
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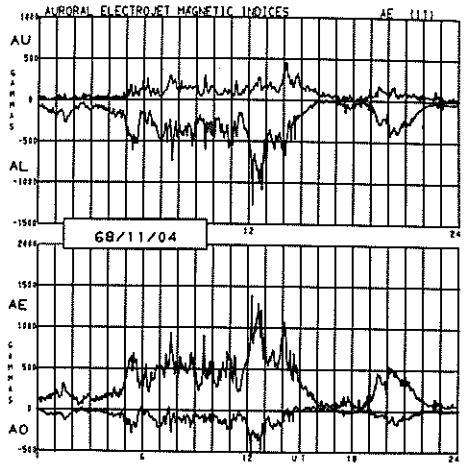
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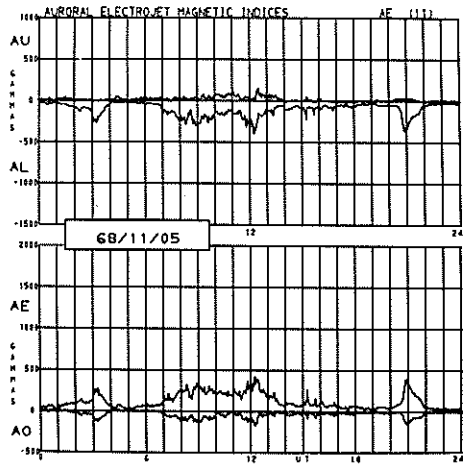
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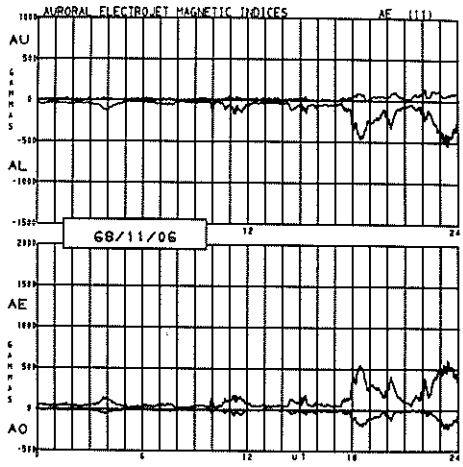
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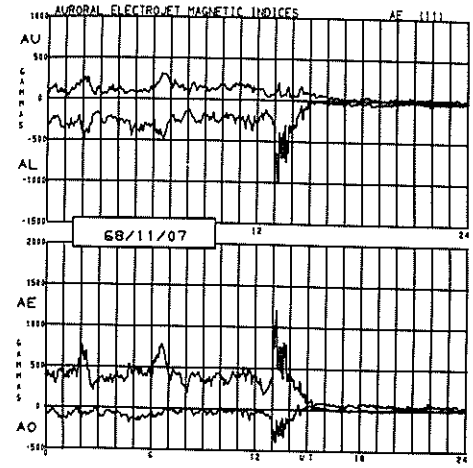
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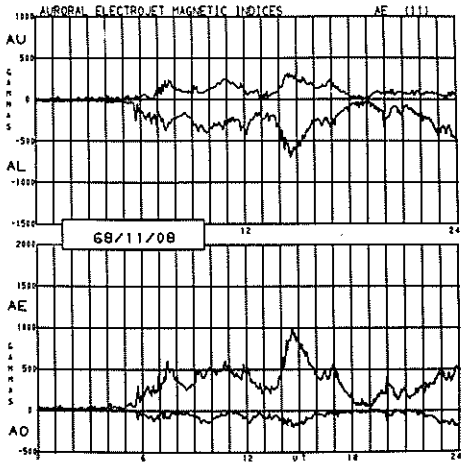
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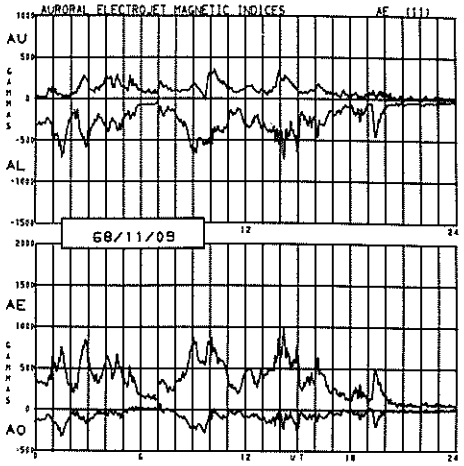
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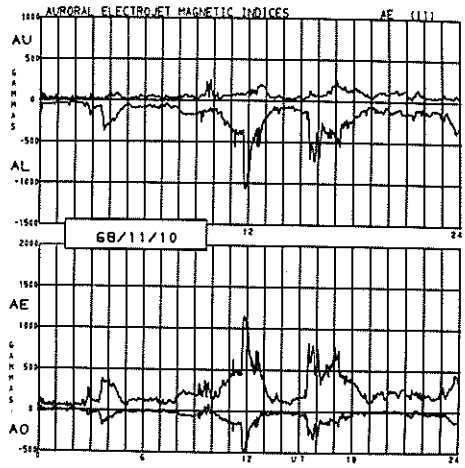
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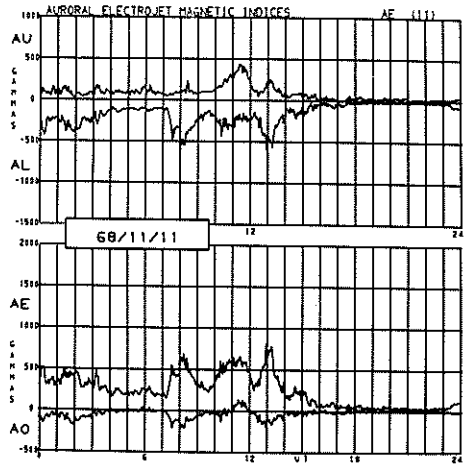
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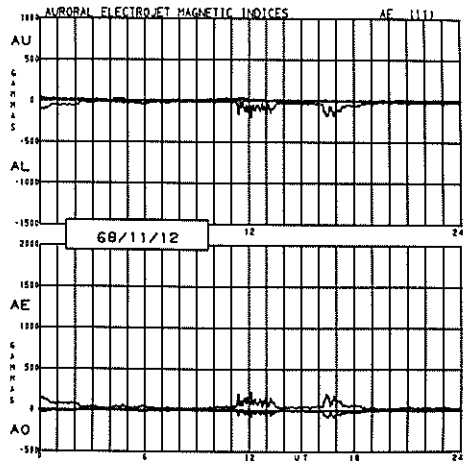
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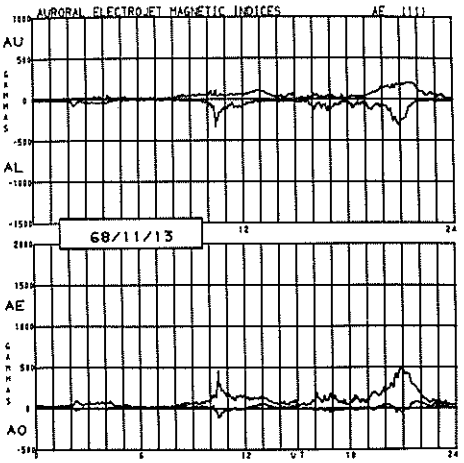
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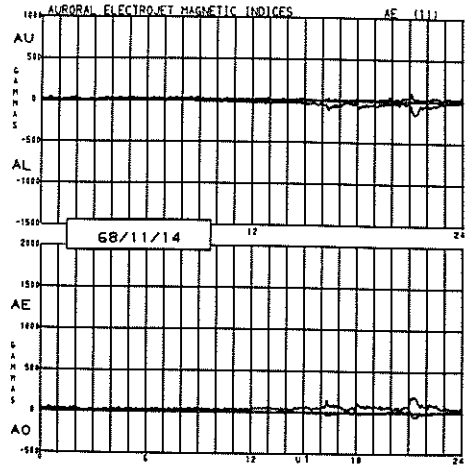
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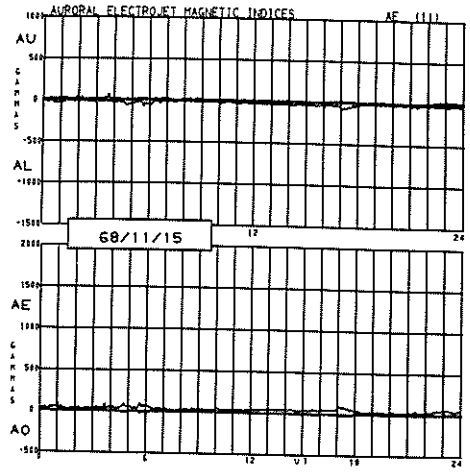
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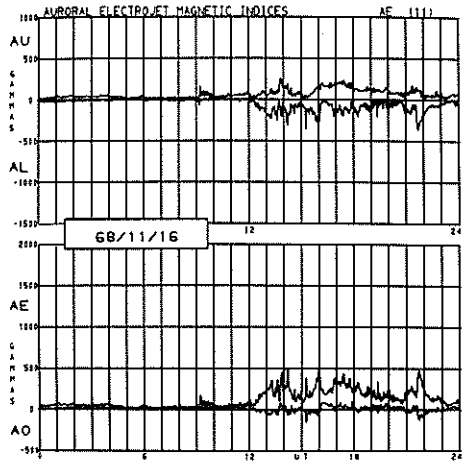
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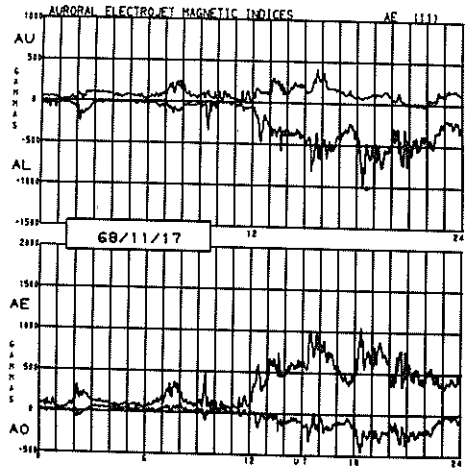
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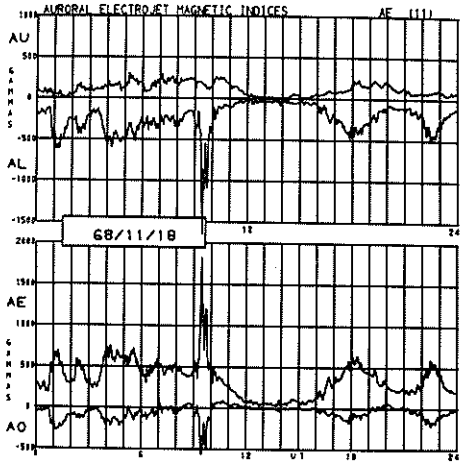
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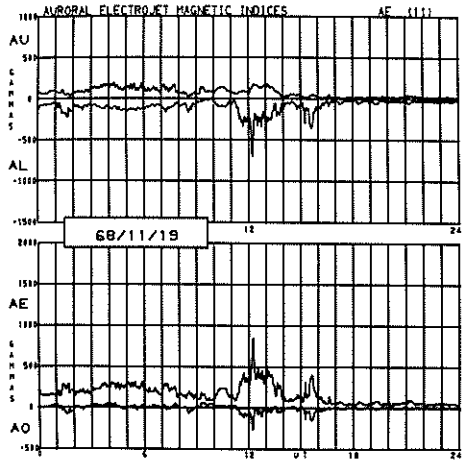
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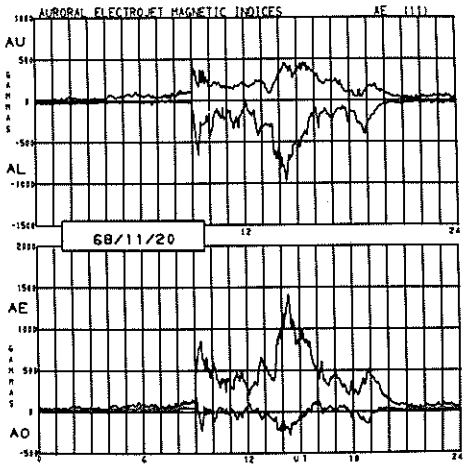
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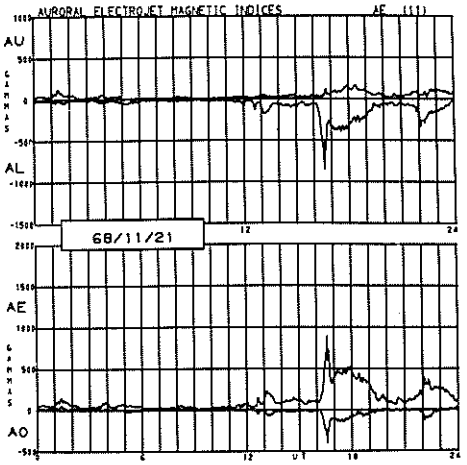
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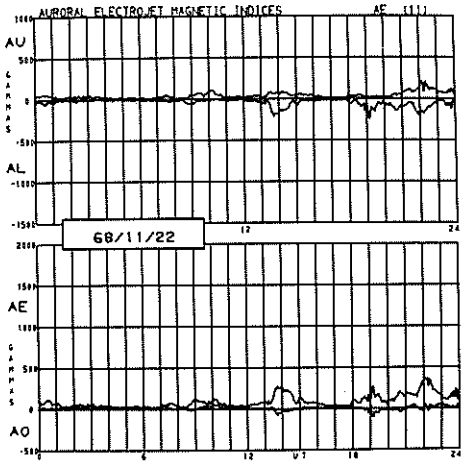
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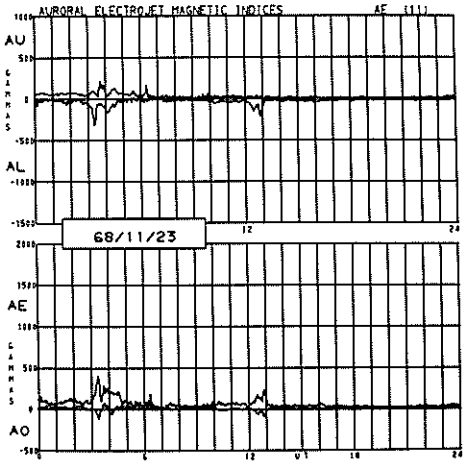
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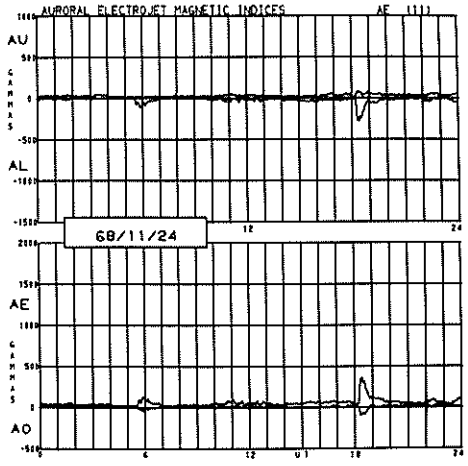
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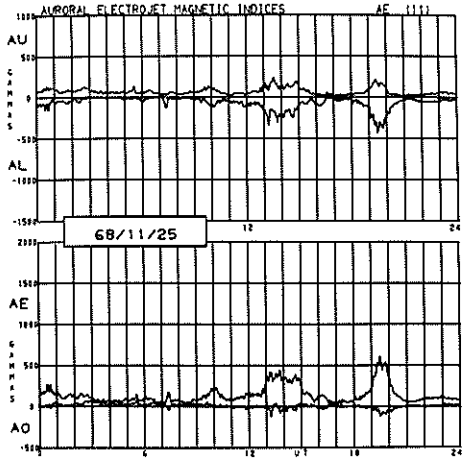
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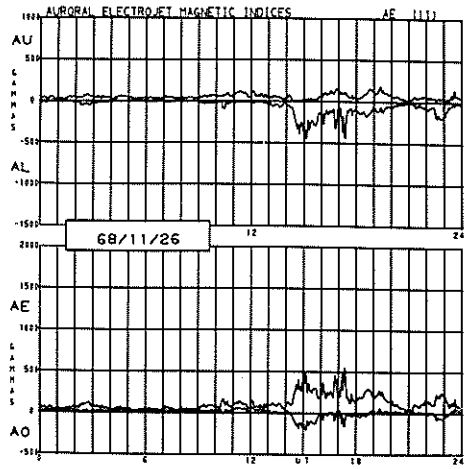
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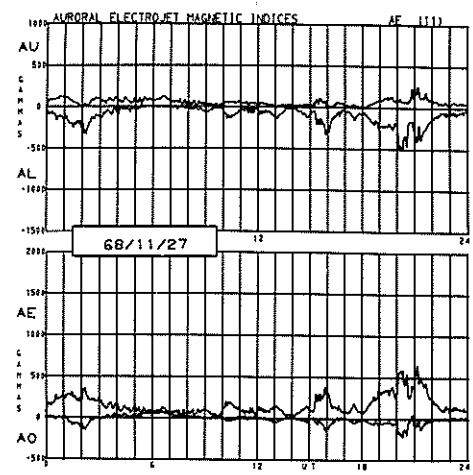
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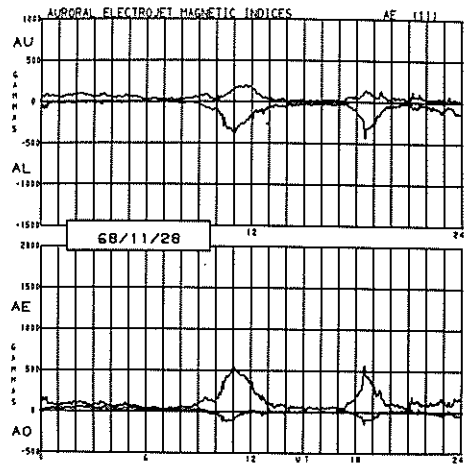
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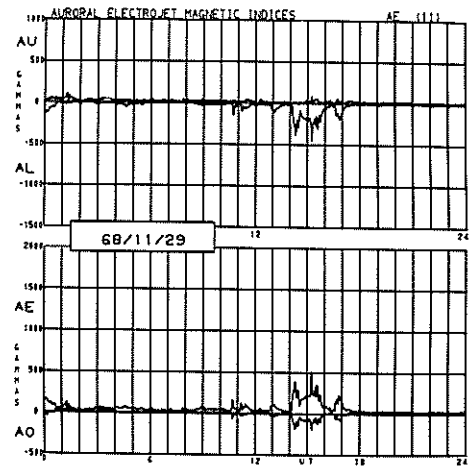
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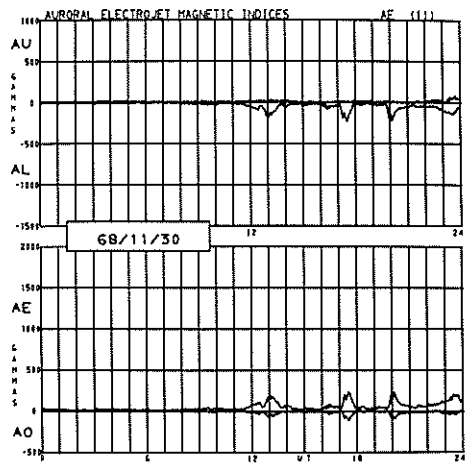
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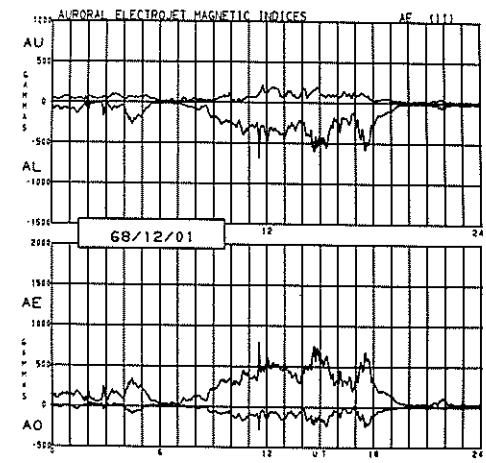
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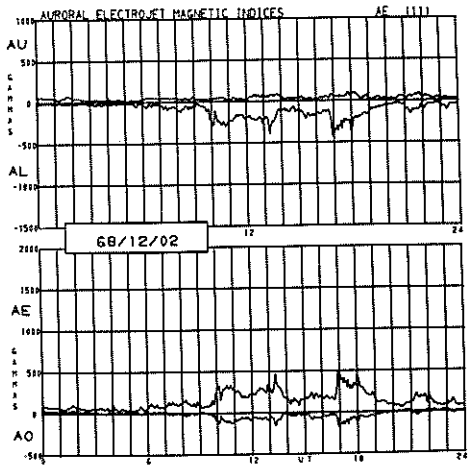
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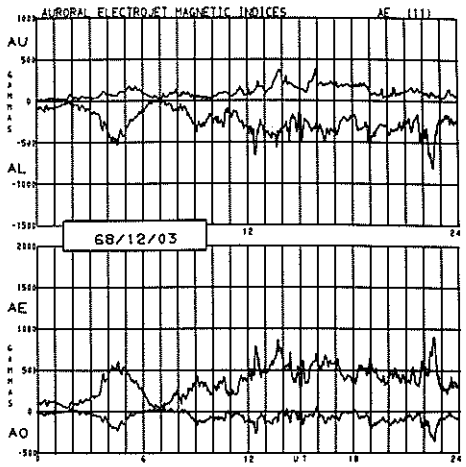
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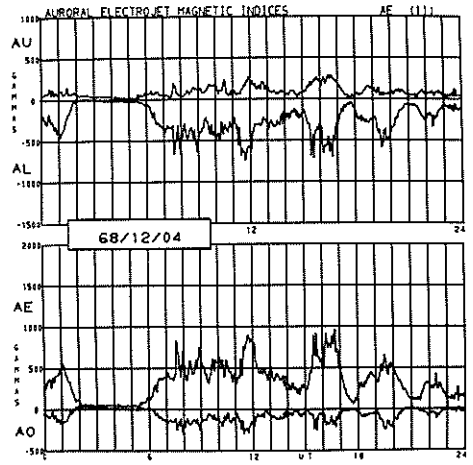
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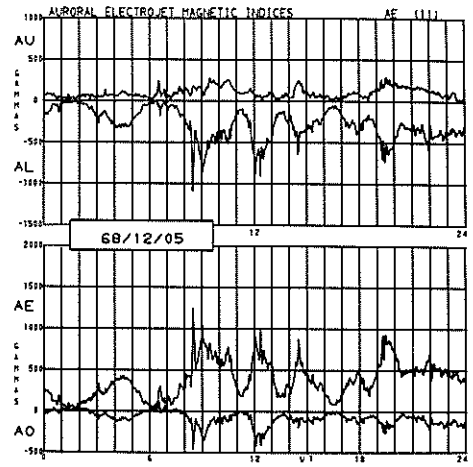
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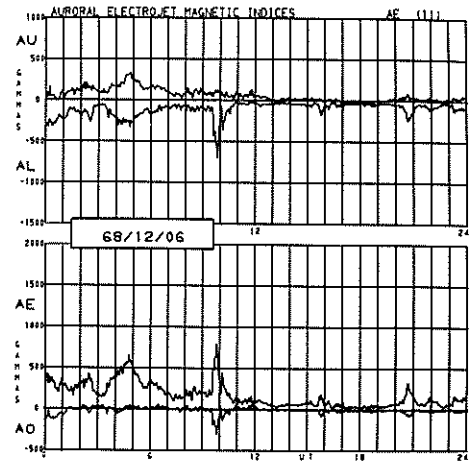
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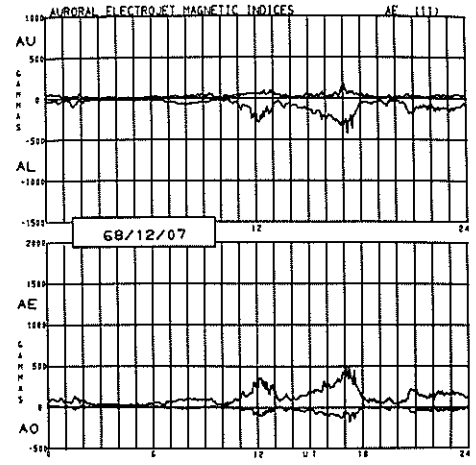
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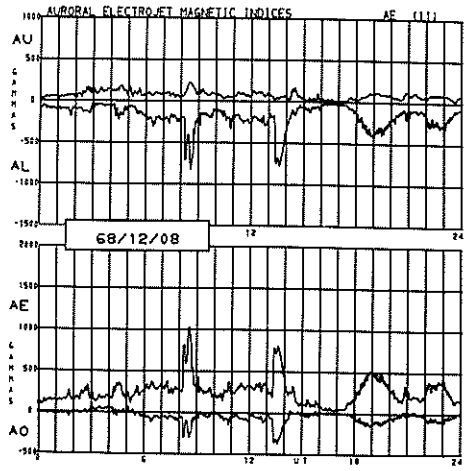
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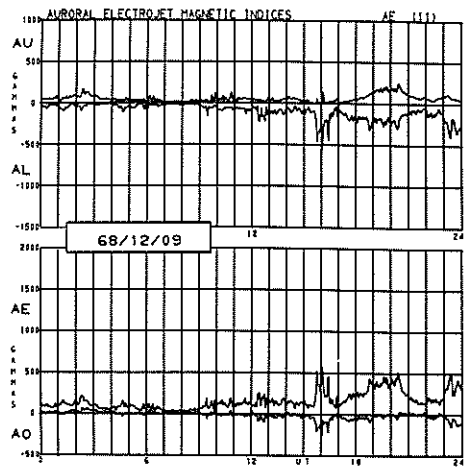
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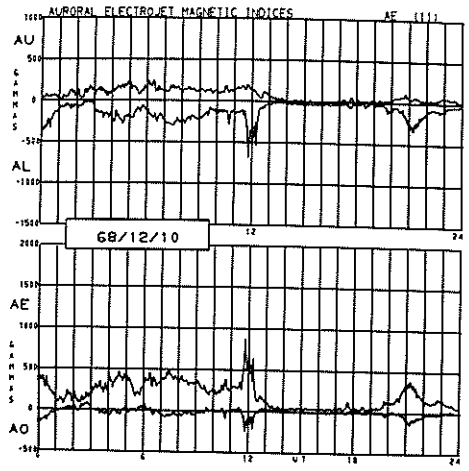
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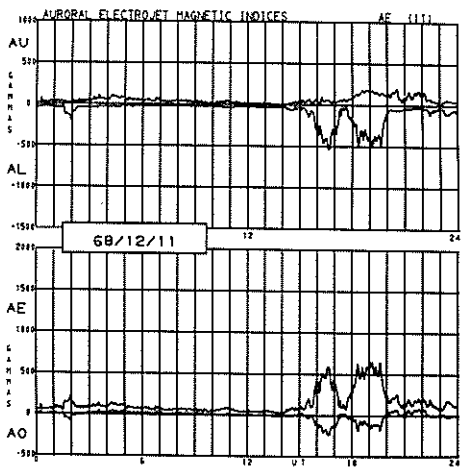
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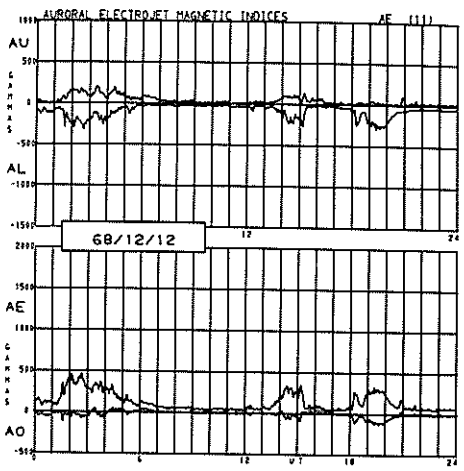
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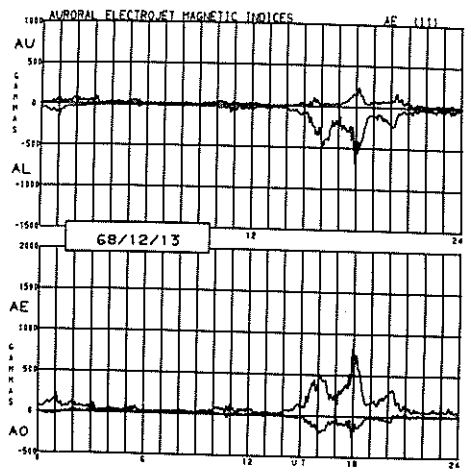
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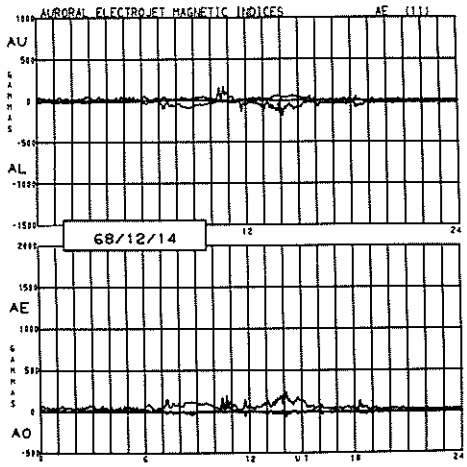
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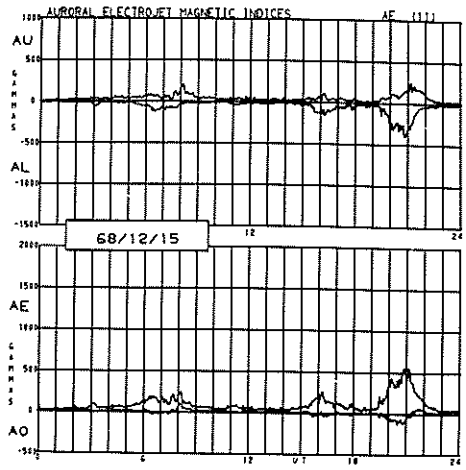
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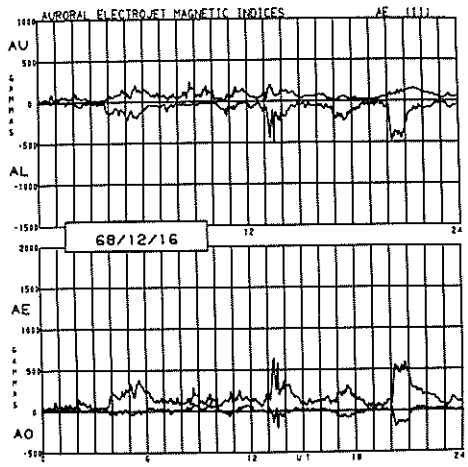
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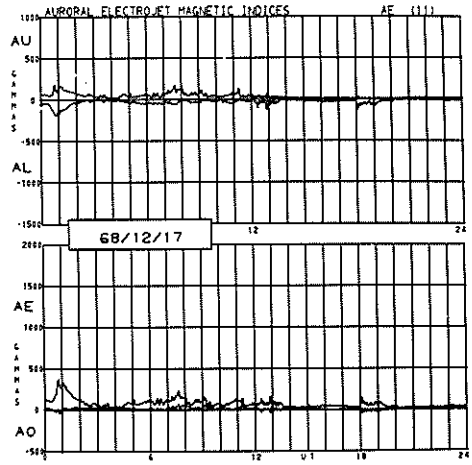
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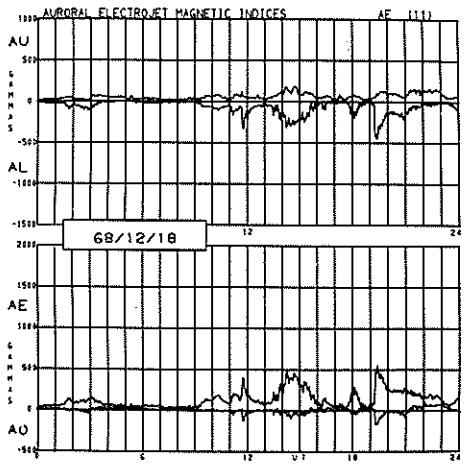
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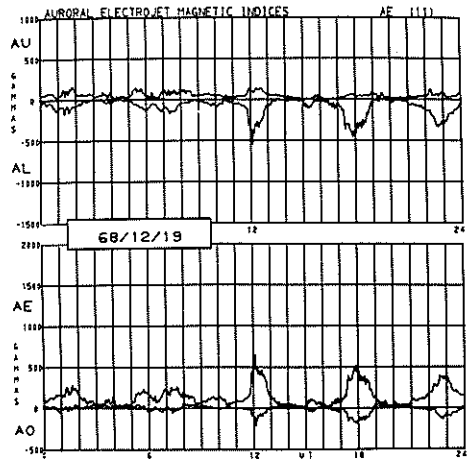
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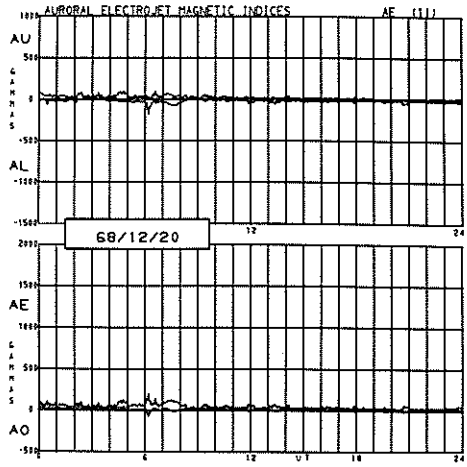
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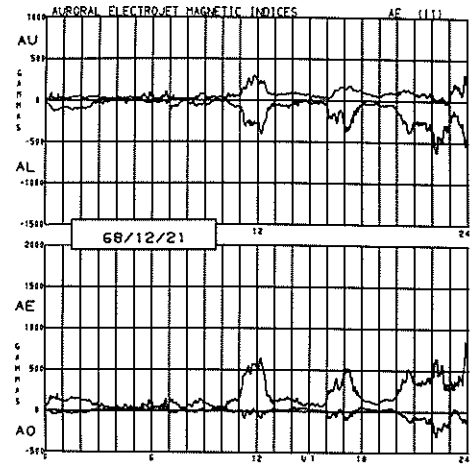
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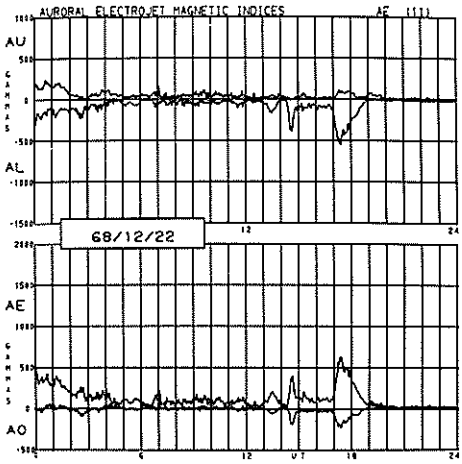
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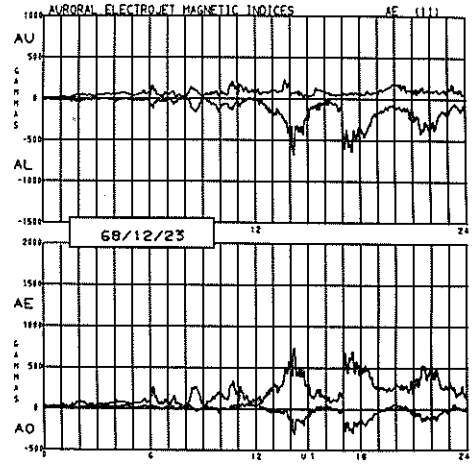
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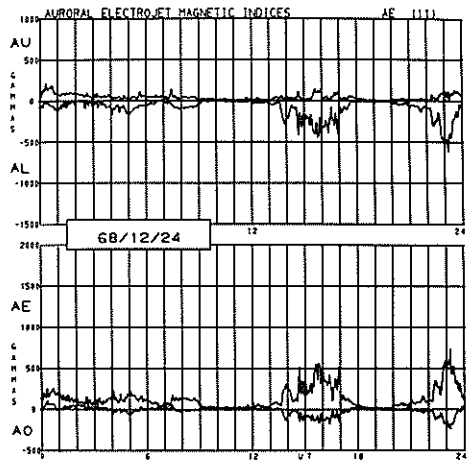
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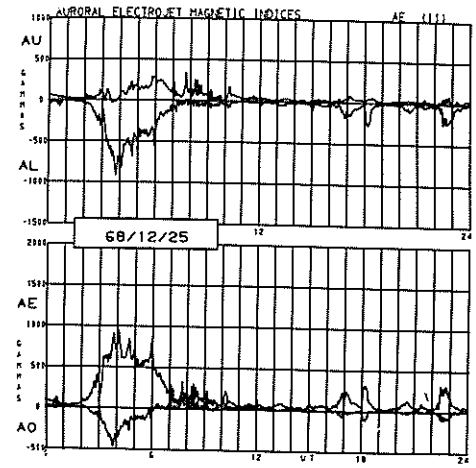
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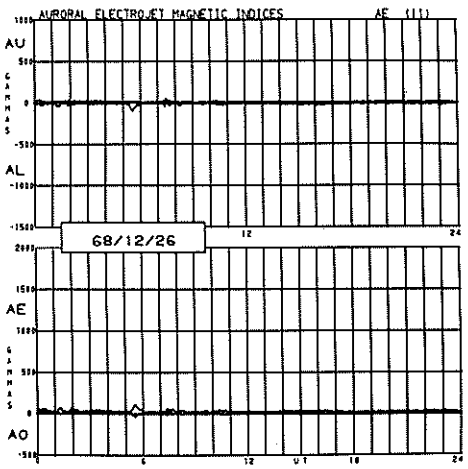
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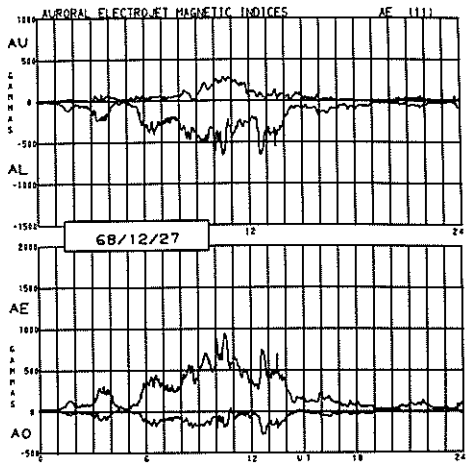
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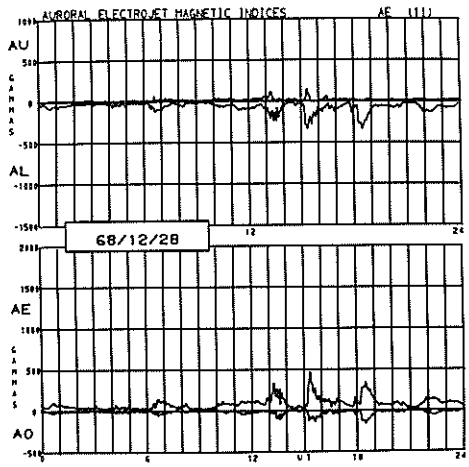
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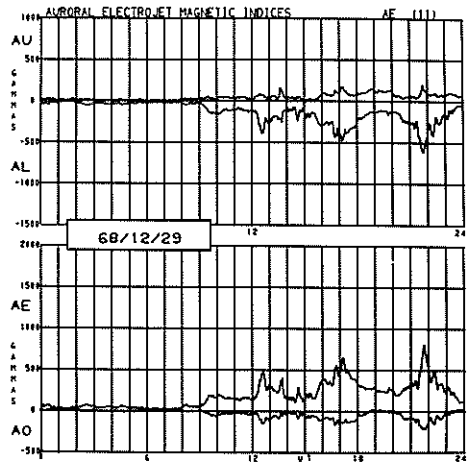
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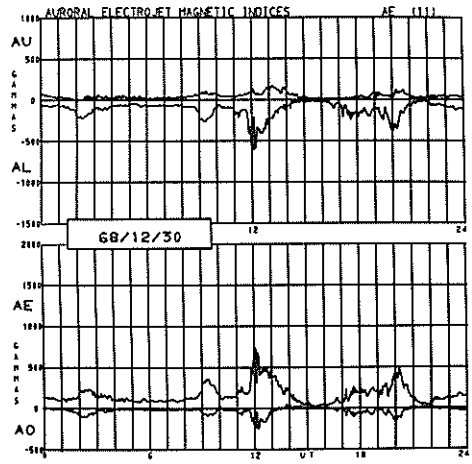
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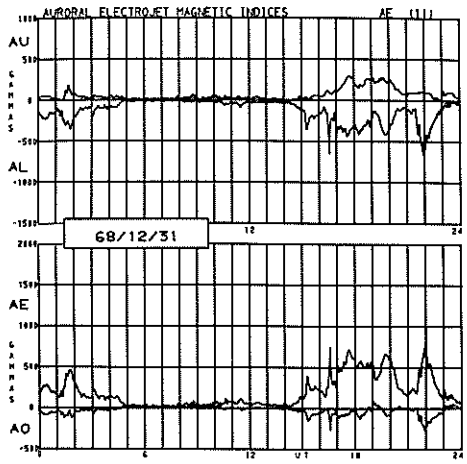
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CORRECTIONS TO REPORT UAG-22, Auroral Electrojet Magnetic Activity Indices (AE) for 1970

1. The graphs on pages 86-88 are correctly and prominently labeled along their vertical axis: AU, AL, AE, AO. The corresponding labels were inadvertently omitted from the graphs on pages 89-146.

2. On page 92, in the graph for 70/02/10 (10 Feb. 1970), the three hours of record shown for the interval 0420 to 0730 UT should be shifted one hour toward UT-noon. Thus, the two events in AL (also in AE and AO) occurred one hour later than shown. Corrected tabular hourly average values of AE, AL, and AO are given below.

ERRATA FOR 10 FEBRUARY 1970

	UAG-22 Page	Hour (UT)	5	6	7	8	9	DAILY MEAN
AE INDICES	13		21	42	39	75	59	108
		MONTHLY MEAN	74	73	69	95	94	
AL INDICES	25		2	-24	-11	-44	-26	-68
		MONTHLY MEAN	-39	-38	-37	-53	-51	
AO INDICES	49		12	-3	8	-7	4	-14
		MONTHLY MEAN	NO CHANGES					

3. On page 118, in the graph for 70/07/15 (15 July 1970), the seven hours of AU shown for the interval 1300 to 2000 UT are in error. The values should decrease smoothly from the peak at 1300 UT and connect to the quiet-time values at 2000 UT. AE and AO are similarly in error. Corrected hourly average index values are given below.

ERRATA FOR 15 JULY 1970

	UAG-22 Page	Hour (UT)	14	15	16	17	18	19	20	DAILY MEAN
AE INDICES	18		57	48	32	29	35	62	55	117
		MONTHLY MEAN	282	244	228	219	262	266	227	275
		5Q MEAN	58	50	61	74	118	85	95	116
AU INDICES	42		44	32	21	20	22	37	35	54
		MONTHLY MEAN	121	116	105	102	120	128	117	120
		5Q MEAN	37	29	34	38	55	48	55	57
AO INDICES	54		15	8	5	6	3	5	7	-4
		MONTHLY MEAN	-15	-3	-6	-6	-10	-4	3	-17
		5Q MEAN	7	4	3	1	-4	6	7	-1

4. On page 142, in the graph for 70/12/03 (3 December 1970), the AL values graphed for the hour from 1600 to 1700 UT are partially in error. The small event centered about 1630 UT is correct but the quiet-time values on either side are incorrect. For the 17th UT hour of 3 December 1970 the corrected hourly average indices are: AE = 89, AL = -70, and AO = 26.

5. The page containing the six graphs of indices for days 70/05/19 through 70/05/24 (19 May - 24 May 1970), should have come after page 108. It incorrectly appears as page 115.

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(Prepared by World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado)

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