

IAGA Bulletin N° 32 p

INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS  
ASSOCIATION OF GEOMAGNETISM AND AERONOMY

**GEOMAGNETIC DATA 1985**

**IAGA INDICES :**

**aa , Am , Kp , Dst , AE**

**RAPID VARIATIONS**

Edited by Michel Menvielle and Annick Berthelier  
in cooperation with  
M. Siebert , M. Sugiura , J. Cardus

*Published for the International Council of Scientific Unions  
with the financial assistance of Unesco through the mediation of  
the Federation of Astronomical and Geophysical data analysis Centres.*

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## **ACKNOWLEDGEMENTS**

*We wish to acknowledge J. O. CARDUS, M. SIEBERT, and M. SUGIURA for their cooperation in preparing the data published in this Bulletin. Thanks are also due to all the organisms, that are listed in Tables 1 and 2, page 8, which support efficiently the preparation and distribution of these geomagnetic data.*

*Let us add that M. SUGIURA, who moved from the Goddard Space Flight Center (Maryland, U.S.A.) to the WDC-C (Kyoto, Japan ; see Table 1) in 1985 and is now at the Tokai University (Tokyo, Japan), wishes specially to acknowledge the valuable assistance of R. S. KENNON (Goddard Space Flight Center) and T. KAMEI and T. ARAKI (Data Analysis Center for Geomagnetism and Space Magnetism, Kyoto University) in the derivation of the indices and in the preparation of the published tables and figures, respectively for the Dst and for the AE indices.*

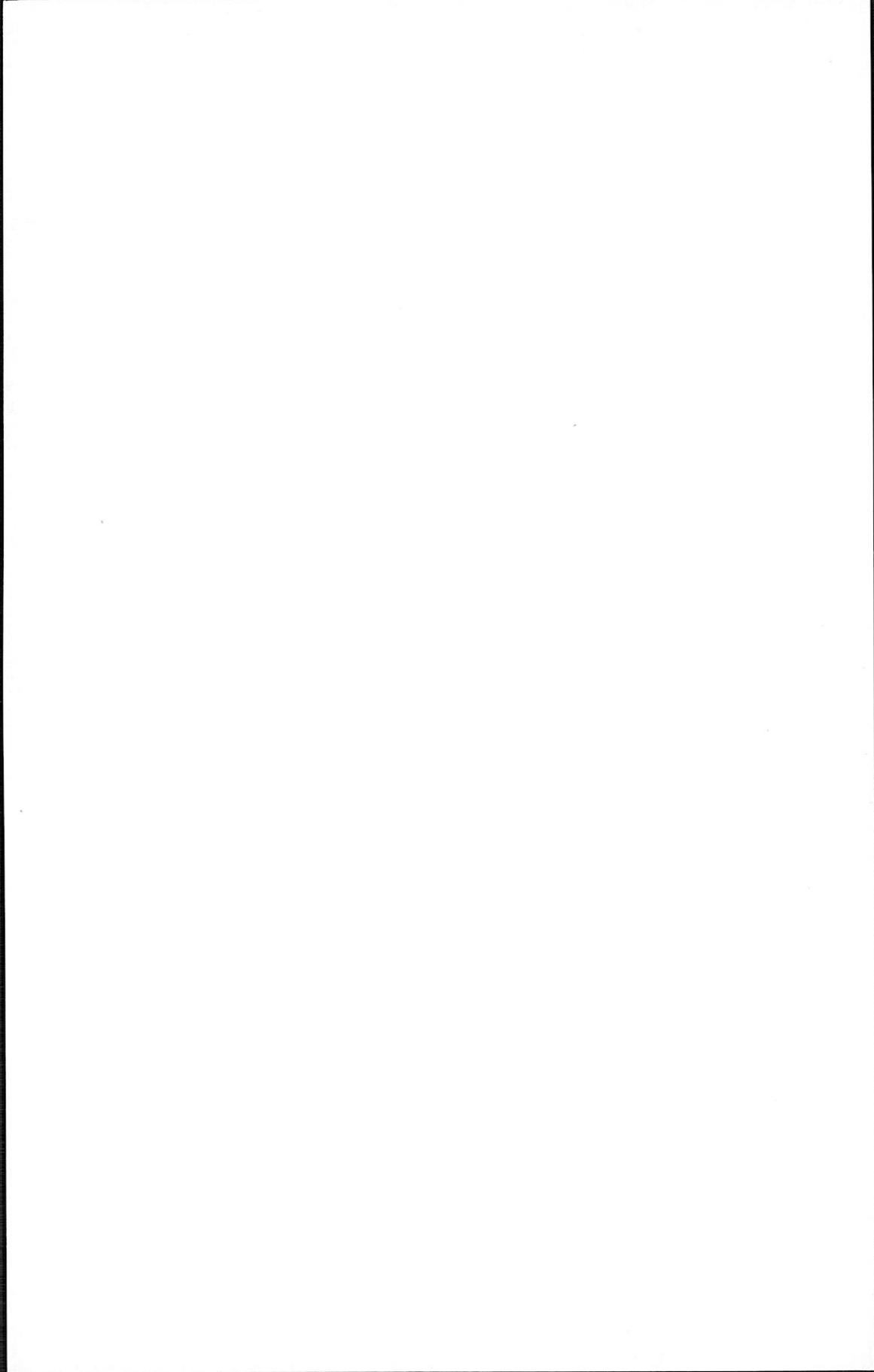
*As for us, we are pleased to express our thanks to Hélène ROBIC (IPGP) and Christine GUERIN (CRPE) for their contribution to this Bulletin.*

*A. Berthelier, M. Menvielle*

*Saint-Maur, Paris, Septembre 1990*

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## **SECTION 1**

# **PRESENTATION OF THE BULLETIN**

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## 1.1. INTRODUCTION

The IAGA-Bulletin N°32 series is a yearly compilation of magnetic indices and other geomagnetic data, based on the report of a great number of magnetic observatories. The series is the continuation of the former IAGA-Bulletin N°12 and is prepared for publication by the International Service of Geomagnetic Indices (ISGI). The ISGI, formerly called Permanent Service or "C- and K-center" operates under the supervision of IAGA-Division V : Observatories, Instruments, Surveys and Analysis. Since 1954, it forms part of the Federation of Astronomical and Geophysical Data Analysis Centers. Its present address is :

ISGI, CRPE - CNRS, 4 Avenue de Neptune,  
F - 94107 Saint-Maur des Fossés CEDEX, FRANCE.

As for 1985, the elaborated data were provided by the following Institutes, under the responsibility of the adjoining collaborators :

- Institut für Geophysik, Göttingen (M. SIEBERT) :  
Kp, ap, Ap, Cp, Q- and D-days.
- Institut de Physique du Globe de Paris, Paris (M. MENVIELLE) :  
aa, C- and K-days, an, Kn, An, as, Ks, As, and am, Km, Am.
- Data Analysis Center for Geomagnetism and Spacemagnetism, Kyoto (M. SUGIURA) :  
Dst, AL, AU, AE.
- Observatorio del Ebro, Roquetas (J.O. CARDUS) :  
Rapid Variations.

The work began in 1906 with the collection and publication of the daily character figure C and the international character figure Ci, together with the lists of selected quiet and disturbed days. In 1938, this work was extended backwards to 1890.

The three-hourly K-index (scale 0-9) was introduced by Bartels in 1938. From the K-figures of 12 selected stations, planetary indices Kp were derived. Both K and Kp were officially adopted by the IAGA in 1951 and the series of Kp was extended backwards to 1932 during the subsequent period. The K-figures of the selected stations for these early years were published in IAGA-Bulletins N°12g and 12l. In addition to Kp, the corresponding range figures ap and related daily indices Ap and Cp have been regularly published in the IAGA-Bulletin N°12.

In accordance with recommendations of the IAGA-Assemblies in Madrid (1969) and Moscow (1971), the publication in the IAGA-Bulletins of C- and K-indices of individual observatories ended with the 1969 data, whereas planetary indices (Dst, an, Kn, An, as, Ks, As, am, Km, Am) and a survey of magnetic storms were included since 1970.

This change marked the end of the IAGA-Bulletin N°12 series and the beginning of the new IAGA-Bulletin N°32 series. The publication of the Ci, Kp, ap, Ap indices, and of the international quiet and disturbed days, Q- and D-days, continued in the new series. According to a recommendation of the IAGA-Assembly in Grenoble (1975) a new index aa is published instead of Ci since 1976 and the C-figures are no longer compiled.

A short recall of the definition of the published indices is given in the section 1.3 below (pages 11-16). For more details, one can refer to the following two reports :

- M. Siebert, in "Handbuch der Physik", vol.49/3, 206-275, Springer Verlag, 1971, for the description of several indices .
- P. N. Mayaud, Derivation, Meaning and Use of Geomagnetic Indices, Geophysical Monograph 22, Am. Geophys. Union, Washington D.C., 1980, for an up to date complete review of the present IAGA indices.

Indications concerning their availability are given below, together with some more references.

- The *K-indices* of individual observatories are available on magnetic tape for the years 1969-1974, at the World Data Center A (WDC-A, Table 1). Besides, tables of local K-indices can be found in the bulletins or yearbooks of many observatories. The results of an extensive study on the K index by P. N. Mayaud are given together with practical rules for its determination in the "Atlas des indices K", IAGA-Bulletin N°21, 1967.
- The *aa-indices* form a series of indices beginning in the year 1868. A full description can be found in the IAGA-Bulletin N°33, which contains tables and graphs of aa for the years 1868-1967. Values for the years 1968-1975 are published in the IAGA-Bulletin N°39 ; this index is regularly published in the IAGA-Bulletin N°32 since 1976. The whole serie is available on magnetic tape at World Data Center A (Table 1), and in France through CRPE-CNRS (Table 2). They also regularly appear in Geomagnetic and Solar Data monthly tables edited by H. Coffey in Journal of Geophysical Research and in Solar Geophysical Data Publications (Table 2). They can be sent on request by ISGI, by mail before the end of the next month, or by telex within 1 week (Table 1).
- The meaning of *C, Ci, K and Kp* is explained in textbooks (e.g. Landolt-Börnstein, Zahlenwerte und Funktionen, Band 3, 731-744, Springer Verlag, 1952), in Terrestrial Magnetism and Atmospheric Electricity (44, 411, 1939; 45, 309, 1941) and in the IAGA-Bulletin N°12i. Tables and diagrams of these planetary indices for the whole period 1932-1961 are printed in the IAGA-Bulletin N°18. Kp, Ap, Cp are published in the IAGA-Bulletin N°32, and also in the Geomagnetic and Solar Data monthly tables edited by H. Coffey in Journal of Geophysical Research and in Solar Geophysical Data Publications (Table 2). They are sent on request before the end of the next month by the Institut für Geophysik, Göttingen (Table 2). They are available on magnetic tape at the World Data Centers (Table 1).

- The *three-hourly indices an, Kn, and as, Ks*, for the Northern and Southern hemispheres and the *mondial indices am, Km*, are described by P. N. Mayaud in "Indices Kn, Ks and Km, 1964-1967" (Editions du CNRS, Paris 1968). The indices for the years 1959-1963 are published in the IAGA-Bulletin N°39, and for 1964-1967 in the above quoted publication. They are published in the IAGA-Bulletin N°32 from 1968 onwards, and also appear in the Geomagnetic and Solar Data monthly tables edited by H. Coffey in Journal of Geophysical Research and in Solar Geophysical Data Publications (Table 2). They are available on magnetic tape at World Data Centers (Table 1) and in France through CRPE-CNRS (Table 2). They can be sent on request by mail from ISGI within 6 weeks after the end of the month (Table 1).
- The *equatorial Dst-index* for ring current intensity is published in the IAGA-Bulletin N°32 from 1970 onwards. Hourly values of Dst for the years 1957-1970, based on the data of three stations, have been published by M. Sugiura and D. J. Poros in the report X-645-71-278 of the Goddard Space Flight Center. This report supersedes earlier Dst publications by Sugiura and co-workers. Recently, those Dst values have been recomputed, using the data of four stations. Hourly Dst values for the IGY, based on the data of eight stations, are given in the Annals of the IGY, vol. 35. The same volume contains three-hourly values of Dst for the IGY as determined by Kertz in a somewhat different way. The hourly values from 1957 onwards are available on magnetic tape at the World Data Center (Table 1).
- The *auroral electrojet index AE* was originally introduced by Davis and Sugiura in 1966 (J. Geophys. Res., 71, 785). It was first derived at the Geophysical Institute of the University of Alaska, and hourly values were published for the years 1957-1964 in the University of Alaska Reports prepared by T. N. Davis, Y. S. Wang and C. Echols and published in 1967 and 1968. The data for 1965 were prepared by NASA ; from 1966 to 1976, they were prepared by WDC-A. Values from 1978 onwards are computed by the Data Analysis Center for Geomagnetism and Spacemagnetism of Kyoto University and published in the data books of this Institute. They are available on magnetic tape at the World Data Centers (Table 1). Hourly mean values are published in IAGA-Bulletin N°32 since 1981.
- Data on *rapid variations* are collected and prepared for publication at the Observatorio del Ebro (Table 2), according to the decisions made at the IAGA-Assemblies in Madrid (1969) and Grenoble (1975). They are given less extensively than in the former IAGA-Bulletins. Provisional lists are available on request at ISGI within 6 weeks after the end of the month (Table 2).

Table 1 and 2 (next page) give present address of the ISGI, of the World Data Centers, and of the National Institutes and Data Centers related to this bulletin.

TABLE 1  
**ISGI and World Data Centers**

ISGI	International Service of Geomagnetic Indices Service International des Indices Géomagnétiques CRPE -CNRS, 4, Avenue de Neptune F-94107 SAINT MAUR DES FOSSES CEDEX, France Telephone      33 1 48 86 12 63 Telex            264 498 OBSMAUR Telefax         33 1 48 89 44 33
WDC-A	World Data Center-A for Solar-Terrestrial Physics NOAA code E/GC2, 325 Broadway BOULDER, Colorado 80303, U.S.A. Telephone      1 303 497 6324 Telex            592 811 NOAA MASC BDR Telefax         1 303 497 6513
WDC-B	World Data Center-B Soviet Geophysical Committee, Academy of Sciences of the U.S.S.R. Molodezhnaya 3 MOSCOW 117296, U.S.S.R. Telephone      7 095 130 05 46 7 095 228 67 88 Telex            411 478 SGC SU
WDC-C	World Data Center-C for Geomagnetism Data Analysis Center for Geomagnetism and Spacemagnetism Faculty of Science, Kyoto University KYOTO 606, Japan Telephone      81 75 751 2111 ext. 3939 Telex            5422 693 LIB KYO J Telefax         81 75 722 7884

TABLE 2  
**National Institutes and Data Centers**

M. MENVIELLE	Laboratoire de Géophysique Batiment 504 - Université PARIS-XI F-91405 ORSAY CEDEX, France
M. SIEBERT	Geophysical Institute, Göttingen University Institut für Geophysik der Universität Göttingen Postfach 2341, Herzberger Landstrasse 180 D-3400 GOTTINGEN, Federal Republic of Germany
J. O. CARDUS	Observatorio del Ebro Roquetas, TARRAGONA, Espagne
M. SUGIURA	Working Group on World Data Centers National Committee on Solar-Terrestrial Physics Science Council of Japan Institute of Research and Development Tokai University, 2 -28 Tomigaya, Shibuya-ku TOKYO 151, Japan

• For access to CRPE available data, one has to contact :  
Christine GUERIN

CRPE-CNRS  
4, Avenue de Neptune  
F-94107 SAINT MAUR CEDEX, France  
Telephone      33 1 48 86 12 63  
Telex            264 498 OBSMAUR  
Telefax         33 1 48 89 44 33

• Solar Geophysical Data monthly publications are issued by :  
NOAA National Geophysics Data Center  
NOAA, NESDIS E/GC4  
325, Broadway  
BOULDER, Colorado 80303, U.S.A.

## 1.2. LIST OF OBSERVATORIES

A list of the magnetic observatories at which continuous recordings have been made during at least five consecutive years is given pages 23-30. In this table, the observatories are listed according to the alphabetic order and one has indicated for each station, from left to right :

- its name and three-letter IAGA international code ;
- the geographic and geomagnetic coordinates, and altitude ;
- the K=9 lower limit, given only for the stations which belong to Kp, am or aa networks (see section 1.3 for the description of these networks in 1985) ;
- the opening and closing years.

Note that temporary stations do not appear in this table, as for instance those operating during the International Polar and Geophysical years, but they can be found in the more extensive list published in IAGA-Bulletin n° 20 (1965).

The values of the parameters given in the table has been obtained from the following publications :

- C.R. Bock and R.W. Schumann : *Katalog der Jahres mittel der Magnetischen Elemente der Observatorien und der Stationen an denen eine Zeitlang erdmagnetische Beobachtungen Stattfanden*, Geophysikalisches Institut Postdam Abhandlungen n° 8, Postdam, 1948;
- Annual mean values of Geomagnetic elements, *Geomagnetic Bulletin n°10*, Institut of Geological Sciences, Edinburgh, 1981 ;
- Yearbooks of individual observatories.

A list of the stations having provided continuous recordings over at least fifty years is given on pages 31-32. When one observatory has moved, the names of the different consecutive sites are indicated. The stations are listed following the alphabetic order of the oldest observatory. One has indicated in this table the opening and closing years, as the other parameters can be found in the preceding list.

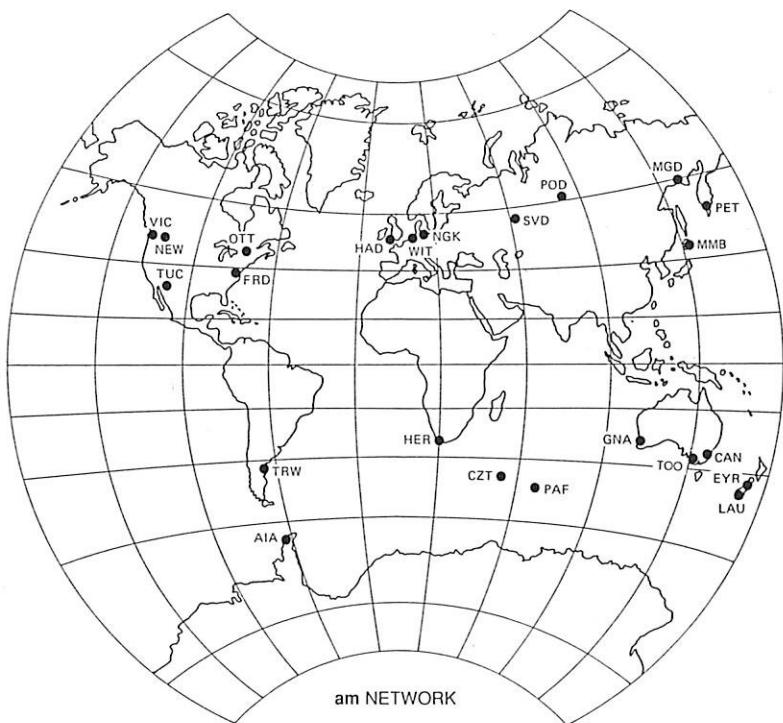


Figure 1



Figure 2

## 1.3. IAGA INDICES

### 1.3.1. aa indices

The aa indices are derived using data from two nearly antipodal observatories, where magnetograms were available since 1868. For each three hour interval, K indices are measured at the two stations and converted back into amplitude ; an individual aa index is the average of the northern and southern values, weighted to account for the small difference in latitude of the two stations, or for the slight changes in the very place of the observatory. The observatories and weighting coefficients used to derive aa are the followings :

<i>Northern Hemisphere</i>			<i>Southern Hemisphere</i>		
1868-1925	Greenwich	1.007	1868-1919	Melbourne	0.967
1926-1956	Abinger	0.934	1920-1979	Toolangui	1.033
1957-...	Hartland	1.059	1980- ...	Canberra	1.084

Half-daily and daily mean values give an estimate of the activity level very close to the corresponding values derived from am indices. aa is in nanotesla (nT) and it represents the activity level at an invariant magnetic latitude of about 50°. The following values are given pp. 38-39 :

- N = daily values for the Northern observatory (Greenwich day)  
S = same for the Southern observatory  
am, pm = half-daily values of aa indices for the half Greenwich day  
before, and after noon.

For each month, the average value of daily N, S and aa, are given at the bottom of the tables.

The five international quietest days of the month (see section 4) are indicated by the letter Q. Letters C and K refer to the classification of the quiet 24 and 48 hour intervals as obtained from aa : C = really quiet, K = quiet, but with one or a few slightly disturbed three-hourly intervals (see section 4). The letter on the left column refers to the 24 hour Greenwich day, the right one to a period of 48 hours centered on the Greenwich noon.

A graph of 12-hour running mean values of aa indices is drawn page 37 for the whole year. Monthly and yearly mean values of aa for the years from 1868 onwards are listed pp. 40-41. A graph of 12-month running mean values of aa is drawn page 42, covering the full period when aa has been calculated so far, i.e. 1868-1985. In this graph, the point plotted at the abscissa of a given year corresponds to the average of aa from January to December of that year (unit : nT).

### 1.3.2. am indices

am, an and as indices are derived from K indices scaled at observatories located in the subauroral zones of the Northern and Southern hemispheres (Figure 1). The stations are arranged in groups (G1 to G9), each group representing a longitude sector in one of the hemisphere. The corrected geomagnetic latitude indicated in the lists below has been calculated by Mayaud for taking into account the actual topography of the main field.

<i>Northern Hemisphere</i>				<i>Southern Hemisphere</i>			
	<i>Observatory</i>	<i>Corr. Geom. Lat.</i>		<i>Observatory</i>	<i>Corr. Geom. Lat.</i>		
G1	Magadan	MGD 53.8°		G6	Eyrewell	EYR 50.2°	
	Petropavlovsk	PET 46.4°			Lauder	LAU 37.7°	
	Memabetsu	MMB 37.4°					
G2	Podkammenkaya	POD 57.2°		G7	Canberra	CAN 45.2°	
	Sverdlovsk	SVD 52.2°			Gnangara	GNA 44.1°	
G3	Witteveen	WIT 50.2°		G8	Kerguelen	PAF 58.8°	
	Hartland	HAD 50.0°			Crozet	CZT 52.4°	
	Niemegk	NGK 48.8°			Hermanus	HER 41.1°	
G4	Ottawa	OTT 58.9°		G9	Argentine Islands	AIA 49.7°	
	Frederiksburg	FRD 51.8°			Trelew	TRW 27.8°	
G5	Victoria	VIC 53.9°					
	Tucson	TUC 39.7°					

For a given time interval, the K values measured at the observatories of one group are averaged and converted back to amplitude. These amplitudes are weighted for balancing the differences in longitude width of the sectors, and the hemispheric averages of these weighted amplitudes give rise to the three-hour an and as indices respectively ; am is equal to  $(an + as)/2$ . Am, An and As are the daily mean values of am, an and as. They are all expressed in nanoteslas. For the sake of tradition and convenience, Km, Kn, Ks equivalent values are also made available by means of conversion table; they are as usually expressed by values from 0 to 9, and 3Km, 3Kn, 3Ks by values from 0 to 27.

Monthly tables of an, and as are given pages 46 to 57, each line corresponding to a Greenwich UT day. Following values are displayed from left to right :

- Kn (Ks) values for the 8 three-hour intervals ;
- σn (σs) values for the 8 three-hour intervals represent, by a code using one digit from 0 to 9, the variance of the sector values of K in Northern (Southern) hemisphere calculated for each given three-hour interval;
- an (as) values for the 8 three-hour intervals ;
- An (As) daily mean value.

At the end of each table, one can find the monthly mean value.

Monthly tables of am (pp. 58 to 63) are displayed in a similar way :

- Km values for the 8 three-hour intervals ;
- daily sum  $\Sigma$  Km ;
- am values for the 8 three-hour intervals ;
- Am, daily mean value ;
- Am2, mean value of am over a 48 hours period centered at the middle of the Greenwich day.

Km values are displayed as "musical diagram" according to Bartels solar rotations (page 45). The musical diagrams from 1959 onwards are available on request at CRPE-CNRS (Table 2). Monthly and yearly mean values of Am from 1959 onwards are given page 64.

### 1.3.3. Kp indices

The planetary three-hour-range index Kp is the mean standardized K-index from 13 observatories between  $44^{\circ}$  and  $60^{\circ}$  northern or southern geomagnetic latitude (Figure 2). The scale is 0o to 9o, expressed in thirds of a unit, e.g. 5- is 4 2/3, 5o is 5, 5+ is 5 1/3. This planetary index is designed to measure solar particle radiation by its magnetic effects. Several other indices are derived from Kp, namely the three-hour index ap (the equivalent range) and the daily indices Ap as well as C1p and C9 from the daily sum of ap.

The Kp-stations are :

Northern Hemisphere			Southern Hemisphere		
Observatory	Corr. Geom. Lat.		Observatory	Corr. Geom. Lat.	
Meanook	MEA	62.5°	Eyrewell	EYR	50.2°
Sitka	SIT	60.0°	Canberra	CAN	45.2°
Lerwick	LER	58.9°			
Ottawa	OTT	58.9°			
Lovö	LOV	56.5°			
Eskdalemuir	ESK	54.3°			
Brorfelde	BJE	52.7°			
Fredericksburg	FRD	51.8°			
Wingst	WNG	50.9°			
Witteveen	WIT	50.2°			
Hartland	HAD	50.0°			

The three-hour equivalent amplitude ap is related to Kp as follows :

Kp	= 0o	0+	1-	1o	1+	2-	2o	2+	3-	3o	3+	4-	4o	4+
ap	= 0	2	3	4	5	6	7	9	12	15	18	22	27	32
Kp	= 5-	5o	5+	6-	6o	6+	7-	7o	7+	8-	8o	8+	9-	9o
ap	= 39	48	56	67	80	94	111	132	154	179	207	236	300	400

In order to use ap as an equivalent amplitude, it is considered in relation to the conditions at a standard station, which is a station having the lower limit of 500 nT for K = 9. At such a station the average range in nT of the most disturbed of the three force components in a three-hour interval can be taken as 2.ap (for instance, for Kp = 3+, as 36 nT). In other words ap is an equivalent amplitude in the unit 2 nT. The column headed Ap gives the daily average for the eight values ap per day. Therefore, Ap may be called the "equivalent daily amplitude Ap", expressed in the unit 2 nT for a standard station.

Observatories wishing to compute, from their own K indices, a local equivalent amplitude ak, may proceed as follows :

K =	0	1	2	3	4	5	6	7	8	9
ak =	0	3	7	15	27	48	80	140	240	400

This table is valid for all observatories. Using the values of the table, ak has the meaning of an index. If it is desired to convert the index ak into an equivalent amplitude in the unit nT, the conversion factor is obtained from the lower limit for K = 9 valid at the station by dividing the limit by 250. For instance, at Sodankylä, where the lower limit for K = 9 is 1500 nT, the factor is 6, so that, for K = 3, the equivalent amplitude is 90 nT, or, in other words the index ak for Sodankylä expresses equivalent amplitudes in the unit 6 nT. Similary, Ak is the daily average of the ak. Use of the daily Ap (planetary) or Ak (local value) is recommended in preference to the sum of the indices Kp or K.

The last column gives the daily planetary character figure Cp, as defined in Bulletin 12e, p. 111. It should be noted that Cp, introduced for a standardisation of the international character figures Ci, has not been approved by the Association. Instead, Ap was preferred. For a rough conversion of Ci figures (prior to 1932) into Ap, the following table (derived from Bulletin 12e, p.111, Table 2) may be used :

10.Ci =	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ap =	2	4	5	6	8	9	11	12	14	16	19	22	26	31	37	44	52	63	80	110	160

Monthly tables of Kp and derived indices are given pages 68-73. Kp values are displayed as "musical diagrams" according to Bartels solar rotation page 67. These diagrams are also available on request at Geophysical Institute, Göttingen (Table 2). The frequencies of Kp indices is given by month page 74. Monthly and yearly mean values of Ap from 1932 onwards are given page 75.

### 1.3.4. Dst index

The equatorial Dst-index for the intensity of the ring current is the deviation of the horizontal component H from its quiet time value, averaged over a four low latitude stations network given in the following table.

Observatory	Symbol	Dipole Lat.	Dipole Long.
Honolulu	HON	21.0°N	266.4°
San Juan	SJG	29.9°N	3.2°
Hermanus	HER	33.3°S	80.3°
Kakioka	KAK	26.0°N	206.0°

The exact definition of Dst is given in earlier data publications (see references page 7). Monthly tables of hourly Dst-values are given pages 82 to 93, followed by a table of daily mean values (page 94). The graph of hourly values for the whole year is given pages 79-81; the table of monthly and yearly mean values from 1959 onwards is given page 95.

*Note : In the Dst plot given page 81 of this Bulletin, the solar rotation number assignement is correct. Rotation 2068 does start on December 26th, 1984, and rotation 2069 on January 23rd, 1985. In the 1984 Bulletin the Dst values are plotted correctly against the calendar days, but there is a shift by one day in the solar rotation number assignement.*

*The corrected plots for 1984 are available on request at ISGI, and will be published in IAGA-Bulletin n°40.*

### 1.3.5. AE index

The AE indices are derived from geomagnetic variations in the horizontal component observed at selected observatories along the auroral zone in the northern hemisphere (Figure 3, Table 3). These variations are measured from a base line determined for each of the observatories. For each given time (UT), at one minute intervals the AU and AL indices are respectively defined as the maximum and minimum values among the one minute values of the variations from all the AE observatories at this UT. The AE index is defined by AU-AL, A0 is (AU+AL)/2.

For the sake of simplicity the term "AE (Auroral Electrojet) indices" is generally used to mean all the AE-associated indices, i.e. AU, AL, AE and A0. In a superposed plot of one minute values of H from all the AE observatories with a common time axis the AU and AL indices represent the upper and lower envelopes of the plotted points, respectively, and the AE value gives the separation of these envelopes. The AU and AL indices are intended to represent a measure of the maximum current density of the eastward and westward auroral electrojets, respectively. The AE index represents a measure of global auroral electrojet activity.

One minute values of the AE indices (AU, AL, AE and A0) are calculated at the Data Analysis Center for Geomagnetism and Spacemagnetism, (same address as WDC-C, Table 1) and more detailed plots and tables are given in the Data Book series of the World Data Center C2 for Geomagnetism. One minute values of these indices are available on magnetic tape at the World Data Center-A for Solar Terrestrial Physics in Boulder, Colorado and at the World Data Center-C2 for Geomagnetism in Kyoto (See Table 1).

Tables of hourly averages of AU, AL and AE are given pages 100 to 123. The hourly averages of AU, AL and AE are computed from the one minute values of the respective indices, therefore they may not necessarily satisfy the relationship  $AU - AL = AE$  exactly. Similarly the daily mean indices are averages of the one minute values for the whole day and are not the daily means of the hourly averages.

Monthly and yearly mean values from 1957 onwards are given page 124.

TABLE 3  
List of AE observatories

Observatory	Symbol	Geographic		Geomagnetic	
		Lat. ( $^{\circ}$ N)	Long. ( $^{\circ}$ E)	Lat. ( $^{\circ}$ N)	Long. ( $^{\circ}$ E)
Abisko	ABK	68.36	18.82	66.04	115.08
Dixon Island	DIK	73.55	80.57	63.02	161.57
Cape Chelyuskin	CCS	77.72	104.28	66.26	176.46
Tixie Bay	TIK	71.58	129.00	60.44	191.41
Cape Wellen	CWE	66.17	190.17	61.79	237.10
Barrow	BRW	71.30	203.25	68.54	241.15
College	CMO	64.87	212.17	64.63	256.52
Yellowknife	YKC	62.40	245.60	69.00	292.80
Fort Churchill	FCC	58.80	265.90	68.70	322.77
Poste de la Baleine	PBQ	55.27	282.22	66.58	347.36
Narssarsuaq	NAQ	61.20	314.16	71.21	36.79
Leirvogur	LRV	64.18	338.30	70.22	71.04

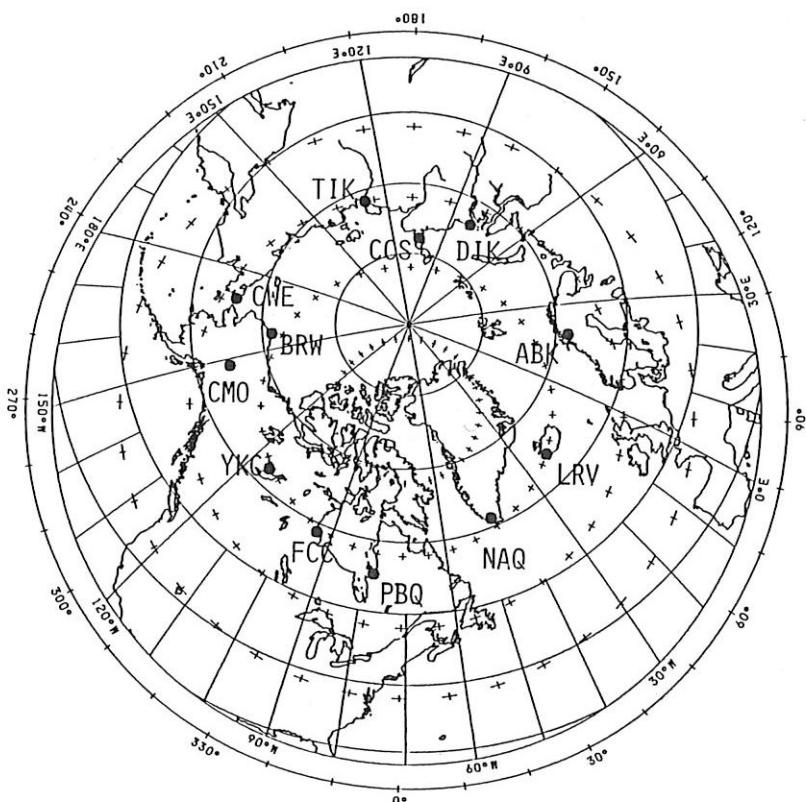


Figure 3 : Distribution of AE(12) stations

## 1.4. CLASSIFICATION OF DAYS

The international five quietest days and the selection of the 24-hour and 48-hour intervals which are really quiet or very quiet are listed month by month pages 127 to 129. The extensive list of international quietest and more disturbed days and a list of magnetic storms are given page 130. These classifications are made according to the following.

### 1.4.1. Classification deduced from K<sub>p</sub> indices

The selection of the quietest and most disturbed days is made on the basis of three criteria:

- (a) = the sum of the eight values of K<sub>p</sub> ;
- (b) = the sum of the squares of these values ;
- (c) = the greatest of the eight values of K<sub>p</sub>.

According to each of these criteria, a relative "order number" is assigned to each day of a month, the three order numbers are averaged and the days with the lowest and the highest mean order numbers are selected as the five quietest, the ten quietest and the five most disturbed days (Table page 130, with a list of magnetic storms).

It should be noted that these selection criteria give only a relative indication of the character of the selected days with respect to the other days of the same month. As the general disturbance level may be quite different for different years and also for different months of the same year, the selected quietest days of a month may sometimes be rather disturbed or vice versa. In order to indicate such a situation, selected days which do not satisfy certain absolute criteria are marked as follows :

- a selected "quiet day" is considered "not really quiet" and is marked by the letter A if for that day : Ap > 6, or marked by the letter K if Ap ≤ 6, with one K<sub>p</sub> value greater than 3 or two K<sub>p</sub> values greater than 2+;
- a selected "disturbed day" is considered "not really disturbed" and marked by an asterisk if Ap < 20. (see P.N. Mayaud, Ann. Géophys., 26, 901, 1969).

### 1.4.2. Classification deduced from aa indices

The selection of the quiet 24-hour intervals is made firstly on the basis of the mean value of aa which must be lower than the fixed value : 13 nT. Then, each individual aa value of the day is represented by a weight p, namely :

p	0	1	2	4	6
aa	≤ 17	17 < aa ≤ 21	21 < aa ≤ 28	28 < aa ≤ 32	> 32

A day with a mean value of aa ≤ 13nT and for which  $\sum p$  is higher than, or equal to 4 is a quiet K-day ; if  $\sum p$  is lower than 4, the day is a really quiet C-day.

The same rules are applied to select the 48-hour quiet or really quiet intervals, with the same limit for the aa mean value (13 nT) and a limit for  $\sum p$  equal to 6. One has to note that in these intervals every local day (0 h to 24 h in local time) is really quiet, at any longitude. For further details, see P. N. Mayaud, Derivation, Meaning and Use of Geomagnetic Indices, Geophys. Monograph 22, Am. Geophys. Union, Washington 1980.

## 1.5. RAPID VARIATIONS

### 1.5.1. Storm sudden commencements (ssc)

Sudden commencements followed by a magnetic storm or by an increase in activity lasting at least one hour are listed according to the data reported monthly by the observatories mentioned in the heading of the list. The final identification of the storm sudden commencements (ssc) is made from copies of records supplied to the Service of Rapid Variations (J.O. CARDUS, Director ; see Table 2 p. 8) by five low-latitude observatories or their supplementary observatories, also listed in the heading of the list. The copies are requested for all events, also for those reported by other observatories only. Furthermore all events are checked on the microfilm-copies of magnetograms of two low latitude observatories. In doubtful cases, attention is especially given to the monthly reports of all observatories. See IAGA-Bulletin N° 39, pp. 103-111 for a full explanation of this method, and some statistical results concerning the years 1968-1975.

In the list of ssc (pages 135-155), the time in the column at the left is the mean value obtained from all observatories ; but the earliest and latest times reported by the observatories for the beginning of the event are added in parenthesis. For printing reasons only the minutes are given. These minutes generally belong to the hour of the event ; but if they are underlined they belong to the preceding hour. The next five figures indicate the qualification given to the event by the Service of Rapid Variations, using the above mentioned copies of low latitude stations (if a figure is underlined, it means that the supplementary station is used). The meaning of these numbers is as follows:

- 2 or 3 the event can be unmistakably identified as being an ssc from the single record under consideration ; 3 is imposed instead of 2 when the following three features are present : very sharp change of rythm, large amplitude of the sudden move, remarkably morphology of it ;
- 1 means that the event seen in this particular record is possibly an ssc, but is not sufficiently clear by itself for stating that it is a true ssc; one needs records from other longitudes for getting a firm judgement ;
- 0 means that, from the record under consideration, the event could escape from the attention of the observer or does not deserve to be called an ssc.

After these numbers are given the average duration of the event in minutes (time-interval between the beginning and the maximum of the sudden move) and its average amplitude in nT at the five selected observatories. The next group indicate the number of observatories which have characterised the ssc event by either letter A, or B, or C, in their monthly reports. A, B, C have the following meaning :

- A = very remarkable
- B = fair, ordinary but unmistakable
- C = very poor, doubtful

Note that the 0 to 3 qualification is given by the Service of Rapid Variations independently of these A, B, C, quality indications.

The last group indicates the number of observatories which have classified the event other than ssc namely :

- si = sudden magnetic change which could not be classified as ssc ;
- pg = giant pulsations, i.e. exceptional pulsations of very great period and regularity, with sufficient relative amplitude ;
- pi = train of pulsations of irregular shape, consisting of several series of oscillations, each series lasting about 10 minutes ; period of the pulsations pi1 : shorter than 40 s, pi2 : 40-150s, pi3 : longer than 150s ;
- pc = pulsation of more continuous character, generally with long duration ; period : pcl : 0,2-5s, pc2 : 5,1-10s, pc3 : 10-45s, pc4 : 45-150s, pc5 : 150-600s, pc6 longer than 600s ;
- b = bay-like disturbance in the magnetogram ;
- ncl = no classification given in the report ;
- cr = crochet-like disturbance ;

### 1.5.2. SOLAR FLARE EFFECTS (sfe)

Solar flare effects (sfe) were reported by many observatories. A check of the reported case has been made by the Service of Rapid Variations (Table 2, p. 8) using reports of the observatories mentioned in the heading of the list. In the list of sfe (pages 157-163), the time indicated is the mean value of the times given for the beginning of the phenomenon. The stations that reported the sfe are listed after the indicated time, grouped in accordance with the quality-indications A, B, C, D, E or X given in their reports. This letter index refers only to the existence of a movement in the curve, not to its being an sfe :

- A = very clear movement,
- B = fair, ordinary movement,
- C = very poor movement,
- D = movement not observed, although records are satisfactory,
- E = the movement cannot be observed because of heavy disturbance
- X = record missing.

Following the three-letter symbol for each station reporting a movement of class A, B, or C, a number is attached that refers to the opinion of the collaborating observatory about the type of movement :

- 3 = certainly a sfe
- 2 = probably a sfe
- 1 = probably not a sfe
- 0 = decidedly not a sfe

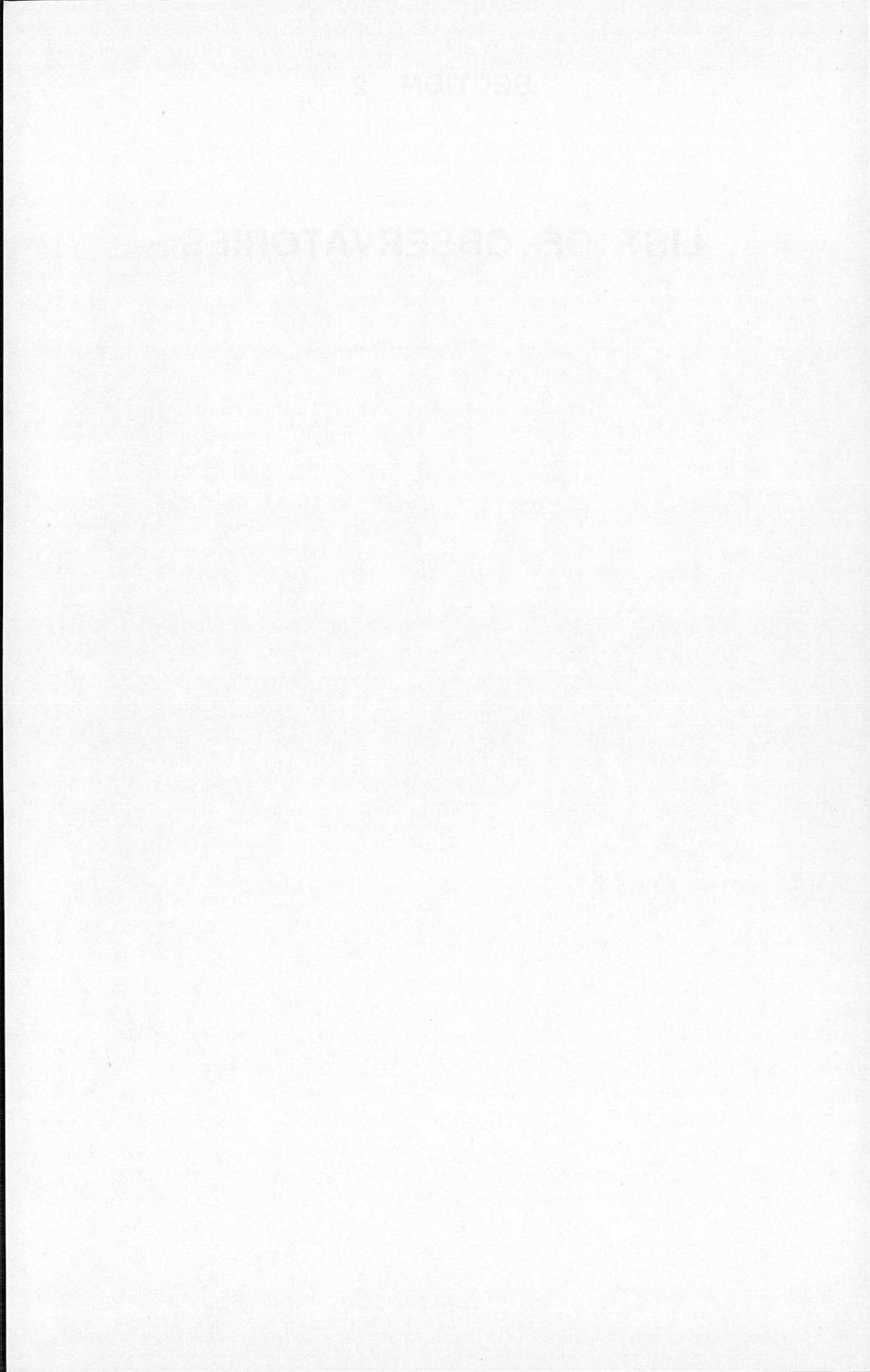
However some observatories did not follow the instructions given in the checking list and only reported "Yes" or "No". As the Service did not know whether these indications refer to the existence (or non existence) of a movement in the curves or to the opinion that the existing movement was (or was not) a sfe, we added these observatories, following the two letters Y and N, respectively. When some observatory identified the movement as a phenomenon different from a sfe they have been reported at the end of the list.

Stations in the twilight-zone reporting a movement (A, B or C and also E and X) are indicated by normal brackets ; those in the night-side of the earth by square brackets. Station in these two zones reporting D have been omitted from the list.

Doubtful solar-flare effects are also listed. They were considered as doubtful when most of the well located stations (with respect to the sub-solar point) did not report any movement, or when almost all stations around the world reported a clear movement. Further, some cases were considered doubtful because the totality of data was hindered by simultaneous world wide perturbation, and also when the solar, radio-electric and ionospheric records were available but did not show clear effect that could be associated with the sfe. Nevertheless it is probable that some of these cases are real solar-flare effects.

## **SECTION 2**

### **LIST OF OBSERVATORIES**



**LIST OF OBSERVATORIES**

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
ABN	ABINGER	51.18	359.61	53.58	84.55	244	520	1925-1957
ABK	ABISKO	68.36	18.82	65.88	115.50	380		1945
AAE	ADDIS ABABA	9.03	38.77	5.19	110.97	2442		1958
ADE	ADELAIDE	-34.60	138.40	-43.99	214.06			1973
AGN	AGINCOURT	43.78	280.73	54.65	349.54	175	700	1881-1969
AHM	AHMEDABAD	23.02	72.60	14.03	145.65			1973
ALE	ALERT	82.50	297.50	86.24	163.08	2260		1961
ABG	ALIBAG	18.63	72.87	9.64	145.39	10		1904
AAA	ALMA ATA	43.25	76.92	33.69	152.21	1300		1963
ALM	ALMERIA	36.85	357.53	40.16	76.83	65		1955
ALU	ALOUSHTA	44.68	34.42	40.86	114.94			1957
AML	AMBERLEY	-43.15	172.72	-47.16	254.00	40	530	1929-1977
AWS	ANDREWS AFB	38.20	282.63	49.13	352.23			1972
ANN	ANNAMALAINAGAR	11.40	79.68	1.77	151.20	0		1957
TAN	ANTANANARIVO	-18.92	47.55	-23.85	114.58	1375		1902
ANO	ANTIPOLO	14.60	121.17	3.50	191.60	220		1910-1938
APA	APATITTY	67.55	33.33	62.78	125.99			1973
API	APIA	-13.80	188.22	-15.61	261.99	2		1905
ART	ARCTOWSKI	-62.16	301.52	-51.33	9.25	16		1978
ARE	AREQUIPA	-16.47	288.52	-5.45	359.45			1958
AIA	ARGENTINE ISLAND	-65.20	295.70	-54.23	4.73	10	490	1957
SV3	ARTI	56.43	58.43	48.50	139.90			1973
ASH	ASHKHABAD	37.95	58.10	30.58	134.62		300	1958
ASO	ASO	32.88	131.02	22.58	199.85	570		1940
PEG	ATHENS	37.97	23.72	32.60	121.60	110		1900-1908
AUT	AU-TAU	22.45	114.05	11.20	184.60	60		1928-1939
AVE	AVERROES	37.99	14.02	38.13	93.59	230		1970
BKC	BACK	57.69	265.77	67.43	326.54			1978
BAG	BAGUIO	16.42	120.60	5.61	191.08	440		1967
BAL	BALDWIN	38.78	264.83	48.90	330.60	340		1901-1909
BLC	BAKER LAKE	64.33	263.97	73.67	319.15	30		1951
BNG	BANGUI	4.43	18.57	4.45	90.33	390		1952
BAP	BARRACKPORE	22.78	88.36	12.20	160.30	10		1904-1914
BRW	BARROW	71.30	203.25	69.10	243.67	7		1949
BTH	BARTH	54.37	12.75	55.00	99.90	20		1898-1903
BTV	BATAVIA	-6.18	106.83	-17.19	177.64	10		1884-1944
BJI	BEI-JING	40.06	116.18	29.12	186.20	43		1957
KGD	BEREZNIAKI	49.82	73.08	40.30	150.00			1965
BEL	BELSK	51.83	20.80	50.19	105.24	180		1960
BIN	BINZA	-4.38	15.26	-3.57	85.40	300		1953
BJN	BJORNOYA	74.50	19.20	71.06	124.67	80		1951
BOC	BOCHUM	51.49	7.23	52.42	92.24	120		1893-1912
BGA	BORGA	-72.97	356.20	-66.46	42.49			1975
BOX	BOROK	58.03	38.97	52.97	324.23			1977
BOU	BOULDER	40.13	254.77	48.88	319.04	1675		1964
BZR	BOUZAREAH	36.80	3.02	39.20	82.40	340		1912-1920

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
BJE	BRORFELDE	55.63	11.67	55.80	97.60	80		1978
BVZ	BUDAKESZI	47.52	18.90	46.40	101.80	410		1949-1955
BDV	BUDKOV	49.07	14.02	48.82	97.64	496		1967
BY1	BYRD STATION 1	-79.98	240.00	-70.60	336.60	1515		1957-1961
BY2	BYRD STATION 2	-80.01	240.51	-70.60	336.90	1515		1962-1965
CBB	CAMBRIDGE BAY	69.10	255.00	76.77	299.13	17		1972
CAN	CANBERRA	-35.30	149.00	-43.38	226.09	850	420	1980
CCS	CAPE CHELYUSKIN	77.72	104.28	66.72	177.41	10		1935
CGH	CAPE OF GOOD HOPE	-33.93	18.48	-33.10	81.80			1842-1846
CTO	CAPE TOWN	-33.95	18.47	-33.12	82.06	20		1932-1940
CWE	CAPE WELLEN	66.17	190.17	62.36	239.37	10		1933
CY.	CAPO DI MONTE	40.86	14.26	40.90	94.80	160		1883-1911
CPI	CAPRI	40.55	14.22	40.58	94.60			1957
CAO	CASTELLACCIO	44.43	8.93	45.34	90.82	1175	350	1933
CRC	CASTLE ROCK	37.23	237.87	43.56	301.06		460	1970
HVN	CENTRO GEOFISICO	22.97	277.86	34.00	347.40			1965
CPA	CHA-PA	22.35	103.83	11.38	175.03	1550		1957
CLF	CHAMBON LA FORET	48.02	2.27	50.06	85.71			1936
CLH	CHELTENHAM	38.70	283.20	49.65	352.89	72	530	1901-1956
CBI	CHICHIJIMA	27.15	142.30	17.80	210.78	154		197
CHR	CHRISTCHURCH	43.54	172.62	47.60	254.3	10		1902-1928
COI	COIMBRA	40.22	351.58	44.53	71.78	140		1866
BOM	COLABA	18.90	72.82	9.70	145.30	10		1846-1905
CMO	COLLEGE 2	64.87	212.17	65.10	259.23	200		1948
CLL	COLLMBERG	51.32	13.00	51.16	97.70			1935
CSS	COLORADO SPRINGS	38.50	255.51	47.36	320.27			1973
COP	COPENHAGEN	55.69	12.58	55.39	99.64			1892-1900
CZT	CROZET	-46.43	51.87	-51.49	111.46	500		1974
DAL	DALLAS	32.98	263.25	42.73	330.14	210		1964-1974
DRS	DAR ES SALAAM	-6.51	39.18	-10.17	108.56			1896-1900
DAV	DAVAO	7.08	125.58	-3.49	196.39			1968
DVS	DAVIS	-68.60	78.00	-76.81	124.34			1973
DBN	DE BILT	52.10	5.18	53.40	90.56			1899-1938
DDI	DEHRA DUN	30.32	78.06	20.50	151.60	680		1903-1943
DIK	DIXON	73.55	80.57	63.36	162.45	20		1933
DOB	DOMBAS	62.07	9.12	61.97	100.94	660		1916
DOU	DOURBES	50.10	4.60	51.60	88.99	208		1955
DL	DUBLIN	53.35	353.73	56.90	80.00			1841-1850
DRV	DUMONT DURVILLE	-66.66	140.01	-75.06	232.15	40		1957
TFS	DUSHETI	42.08	44.70	36.50	23.50	982		1938
KIV	DYMER	50.72	30.30	47.30	113.60	100		1964
EAA	EAST ANGLIA	52.63	1.30	54.64	87.01			1973
EIC	EASTER ISLAND	-27.17	250.58	-18.37	324.28			1959-1963
EP.	EASTPORT	44.90	293.02	56.20	4.80			1860-1867
EBR	EBRO	40.82	0.50	43.45	81.13	50		1910
ENB	EIELSON AFB	64.67	212.92	65.06	260.11			1966

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
ELI	ELIZABETHVILLE	-11.63	27.42	-13.00	95.93	1230		1932-1957
ESK	ESKDALEMUIR	55.32	356.80	58.04	84.07	245	660	1908
EKP	ESKIMO POINT	61.10	265.93	70.78	324.73			1973
EYR	EYREWELL	-43.41	172.35	-47.48	253.71	390	540	1979
FAL	FALMOUTH	50.15	354.92	53.60	79.40	50		1892-1912
FCC	FORT CHURCHILL 1	58.80	265.90	68.53	325.60	15		1964
FCC	FORT CHURCHILL 2	58.77	265.73	68.70	325.20	15		1964
FMM	FORT MCMURRAY	56.70	248.60	64.18	305.05			1973
FSV	FORT SEVERN	55.98	272.35	66.34	336.32			1977
FSM	FORT SMITH	58.00	246.00	65.01	301.02			1973
FYU	FORT YUKON	66.57	214.70	67.08	259.59			1957
FRD	FREDERICKSBURG	38.20	282.63	49.13	352.23	69	520	1956
FTN	FREETOWN	8.46	346.79	14.21	59.59			1961-1967
FUQ	FUQUENE	5.47	286.27	16.47	357.07	2543		1954
FUR	FURSTENFELDBRUCK	48.17	11.28	48.48	94.62	572		1939
GEN	GENOVA MC	44.55	8.96	45.50	91.00	700		1958-1962
GEN	GENOVA C	44.43	8.93	45.50	91.00	350		1933-1969
GIT	GILGIT	35.93	74.30	26.67	148.86	1494		1967
GIM	GILLAM	56.40	265.30	66.11	326.54			1975
GIR	GIRARDVILLE	49.00	287.40	60.01	357.77			1973
GNA	GNANGARA	-31.78	115.95	-42.71	187.94	60	440	1959
GDH	GODHAVN	69.23	306.48	79.25	34.62	8		1926
GOT	GOTTINGEN	51.55	9.97	51.97	95.00	270		1957
GVD	GONZALES VIDELA	-64.82	297.15	-53.88	5.80	60		1961
VLA	GORNOTAYEZHNAIA	43.68	132.17	30.10	199.60	200		1958
GRM	GRAHAMSTOWN	-33.28	26.48	-34.01	90.04	650		1974
GWC	GREAT WHALE RIVER	55.30	282.25	66.21	350.32	25		1965
GRW	GREENWICH	51.48	0.00	53.79	85.10	50		1846-1925
GCK	GROCKA	44.63	20.77	43.28	102.27	231		1958
GUA	GUAM	13.58	144.87	4.57	214.76	150		1957
HLL	HALLET	-72.32	170.22	-74.42	278.16			1957-1963
HBA	HALLEY BAY	-75.50	333.40	-66.36	25.85	30		1957
HBK	HARTEBEESTHOEK	-25.88	27.71	-27.01	93.14			1980
HAD	HARTLAND	50.98	355.52	54.17	80.29	95	530	1957
HTY	HATIZYO	33.07	139.83	23.45	207.83			1978
HVN	HAVANA	22.97	277.85	33.75	347.53			1964
HII	HEARD ISLAND	-53.03	73.37	-61.50	132.30	10		1950-1954
HIS	HEISS ISLAND	80.62	58.05	71.60	156.33	20		1959
HLP	HEL	54.60	18.82	53.19	104.80	4		1957
HLW	HELWAN	29.87	31.33	26.98	108.01	120		1903-1959
HCR	HERCHMER	57.40	265.90	67.16	326.86			1973
HER	HERMANUS	-34.42	19.23	-33.73	82.67	26	300	1941
HNA	HOLLANDIA	-2.57	140.52	-11.94	212.17	98		1957-1962
HKC	HONG KONG 1	22.30	114.18	11.00	184.70	30		1884-1928
HKC	HONG,KONG 2	22.20	114.20	11.22	184.82	555		1972
HON	HONOLULU 1-2-3	21.32	202.00	21.46	268.57	4		1902

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
HUA	HUANCAYO	-12.05	284.67	-1.06	355.67	3313		1922
HRB	HURBANOVO	47.87	18.18	46.89	101.07	120		1938
HYB	HYDERABAD	17.42	78.55	7.86	150.69	500		1965
IBD	IBADAN	7.43	3.90	10.17	76.46	300		1956
IRT	IRKUTSK	52.17	104.45	41.18	176.22	470		1887-1914
ISL	ISLAND LAKE	53.90	265.30	63.65	327.61			1976
ISK	ISTANBUL KANDILLY	41.07	29.07	38.31	108.87	130		1947
JSS	JASSY	47.18	27.53	44.40	109.60			1935-1957
KAK	KAKIOKA	36.23	140.18	26.62	207.77	28		1913
KNG	KALININGRAD	54.60	20.20	52.94	106.06			1964
KNY	KANOYA	31.42	130.88	21.12	199.85	105		1957
KNZ	KANOZAN	35.25	139.97	25.63	207.70	342		1961
KGD	KARAGANDA	49.82	73.08	40.56	150.04			1966
TFS	KARSANI	41.83	42.70	36.20	123.50	1100		1905-1934
KZN	KAZAN	55.83	48.85	49.36	131.52	80		1909
KEL	KELES	41.42	69.20	32.40	145.20	450		1936-1963
KEM	KEM	65.00	34.40	60.26	124.74			1973
KEW	KEW	51.47	359.68	54.10	85.10	10		1857-1924
KHB	KHABAROVSK	48.48	135.07	38.39	201.74			1972
KIV	KIEV	50.72	30.30	47.42	113.40	100		1963
KIR	KIRUNA	67.83	20.42	65.14	116.19	390		1950
KLY	KLYUCHI	55.03	82.90	44.70	159.00			1967
KOD	KODAIKANAL	10.23	77.47	0.81	148.93	2323		1902
KTS	KORETS	50.60	61.07	42.64	140.10			1968
KOR	KOROR	7.33	134.50	-2.64	205.21	10		1957-1966
MOS	KRASNAYA	55.47	37.32	50.70	121.70	190		1930
KSA	KSARA	33.82	35.88	30.03	113.26	920		1937-1968
KUY	KUYPER	-6.03	106.73	-17.04	177.54	1		1950-1962
KWJ	KWAJALEIN	9.05	167.20	3.13	237.11			1973
AQU	L'AQUILA	42.38	13.32	42.52	94.35	682		1960
LQA	LA QUIACA	-22.10	294.40	-11.13	5.01	3464		1920
LAS	LAS ACACIAS	-35.00	302.32	-24.24	11.86	20		1964
LDR	LAUDER	-43.03	169.41	-37.70	232.10	370		1977
LRV	LEIRVOGUR	64.18	338.30	69.71	71.98	30		1957
LNN	LENINGRAD	59.95	30.70	56.14	118.32	70		1869-1877
LER	LERWICK	60.13	358.82	62.15	89.55	105	920	1923
LIS	LISBON	38.72	350.85	43.30	70.60			1890-1900
LGR	LOGRONO	42.45	357.50	45.59	78.66	445		1957
MMK	LOPARSKAYA	68.25	33.08	63.30	126.70	200		1961
LOB	LORING AFB	46.95	292.12	57.95	3.89			1966
LA.	LOS ANGELES	34.05	241.74	41.20	305.70			1882-1889
LMM	LOURENCO MARQUES	-25.92	32.58	-27.98	97.96	40		1957
LOV	LOVO	59.35	17.83	57.84	106.75	25	720	1928
LOZ	LOVOZERO	67.97	35.02	62.90	127.64			1957
LUA	LUANDA	-8.92	13.17	-7.63	82.48	53		1956
LB	LUBECK	53.86	10.69	54.00	97.00			1885-1893

**LIST OF OBSERVATORIES (continued)**

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
LUK	LUKIAPANG	31.32	121.03	20.20	190.80	100		1908-1933
LNP	LUNPING	25.00	121.17	14.21	191.28		100	1965
LVV	LVOV	49.90	23.75	47.80	107.10	400		1952
LWI	LWIRO	-2.25	28.80	-4.06	99.10	1680		1958-1970
MBO	MBOUR	14.40	343.02	20.68	56.80	10		1952
MCQ	MACQUARIE ISLAND	-54.50	158.95	-60.54	244.48	4		1951
MGD	MAGADAN	60.12	151.02	51.28	212.15		610	1966
MSC	MAISACH	48.20	11.26	48.50	94.90	480		1927-1932
MQ	MAKERSTOUN	55.58	357.48	52.20	85.30			1841-1849
MAB	MANHAY	50.30	5.68	51.60	90.15	440		1936-1971
MAN	MANILA	14.58	120.98	3.50	191.40			1891-1904
MRN	MARION ISLAND	-46.85	37.87	-49.30	96.75	45		1972
AMS	MARTIN DE VIVIES	-37.83	77.57	-46.94	142.78			1981
MSR	MATOCHKIN SHAR	73.26	56.40	64.80	147.40	250		1937-1944
MRI	MAURITIUS	-20.09	57.55	-26.80	124.40	50		1892-1965
MAW	MAWSON	-67.60	62.88	-73.32	106.62	6		1955
MEA	MEANOOK	54.62	246.67	61.88	304.02	686	1360	1916
MEL	MELBOURNE	-37.83	144.98	46.60	222.30	30		1865-1921
MEV	MELVILLE AFB	53.28	299.47	64.05	14.25			1966
MMB	MEMAMBETSU	43.90	144.20	34.61	210.23	39	340	1950
MNK	MINSK	54.10	26.52	51.32	111.51			1961
MIR	MIRNY	-66.55	93.02	-76.80	151.15		20	1956
MLT	MISALLAT	29.52	30.90	26.72	107.52	120		1960
MIU	MIYAZU	35.32	135.11	25.30	203.32			1973
MIZ	MIZUSAWA	39.01	141.08	29.47	208.21			1969
MFP	MOCA	3.35	8.67	5.27	80.39	1949		1958-1971
MOL	MOLODEZHNAIA	67.67	45.85	70.10	87.50	854		1965
MOS	MOSCOW	55.48	37.32	50.79	121.62	190		1880-1888
MBC	MOULD BAY	76.30	240.60	79.62	259.89	150		1962
MWC	MT WILSON	34.14	241.97	41.19	306.30			1926-1958
MNH	MUNCHEN	48.15	11.61	48.40	95.20	530		1842-1926
MUT	MUNTINLUPA	14.37	121.02	3.58	191.57	62		1951
MMK	MURMANSK	68.25	33.08	63.45	126.43	210		1958-1960
NCK	NAGYCENK	47.63	16.72	46.93	99.59	160		1961
NAI	NAIROBI	-1.28	36.83	-4.60	107.19	1673		1964
NTS	NANTES	47.25	358.44	50.10	81.70	35		1923-1958
NAQ	NARSSARSSUAQ	61.20	314.60	70.60	38.66	4		1973
NL	NEW ALESUND	78.92	11.93	75.43	130.70	12		1966
NEW	NEWPORT	48.27	242.88	55.14	302.78	780	700	1966
NYI	NEW YEAR ISLAND	54.65	295.85	43.30	5.20			1902-1916
NCE	NICE	43.72	7.30	45.00	89.00			1889-1901
NGK	NIEMEGK	52.07	12.68	51.94	97.77	78	500	1932
NSM	NITSANIM	31.73	34.60	28.21	111.55	150		1963-1967
NOK	NORILSK	69.20	88.00	58.68	165.77			1969
NKK	NOVOKAZALINSK	45.77	62.12	37.76	139.83			1974
NVL	NOVOLAZAREVSKAYA	-70.77	11.82	-66.76	55.88	460		1961

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
NVS	NOVOSIBIRSK	55.03	82.90	44.92	159.07		480	1967
NUR	NURMIJARVI	60.52	24.65	57.71	113.51	105		1953
ODE	ODESSA	46.78	30.88	43.52	112.42	50		1896-1925
OYG	O'GYALIA	47.88	18.19	46.80	101.30	110		1906-1912
OKN	OKINAWA	24.75	125.33	14.14	195.18			1977
ORC	ORCADAS DEL SUR	-60.74	315.22	-50.30	20.00	4		1931-1962
OSL	OSLO	59.98	10.72	59.60	101.10			1843-1930
OTT	OTTAWA	45.40	284.45	56.37	354.11	75	790	1968
PAG	PANAGYURISHTE	42.52	24.18	40.61	104.75	556		1948
PPT	PAPEETE	-17.55	210.38	-15.09	284.44			1958
PAB	PARAMARIBO	5.82	304.78	16.41	16.28	2		1957
PET	PARATUNKA	53.10	158.63	44.80	220.00	110		1973
IRK	PATRONY	52.17	104.45	40.90	176.10	500		1959
PEB	PELLY BAY	68.50	270.20	78.39	323.86			1977
PEK	PEKING 1	39.95	116.47	28.70	186.30			1870-1883
PEK	PEKING 2	40.04	116.18	28.80	186.10			1957-1964
PEG	PENDELI	38.03	23.52	36.38	102.73	495		1958
PRF	PERPIGNAN	42.70	2.88	44.90	84.30	30		1890-1900
PIL	PILAR	-31.67	296.12	-20.73	6.39	336		1905
PLS	PLAISANCE	-20.43	57.67	-27.02	124.68	123		1966
PZ	PLESHCHENITZI	54.50	27.88	51.40	113.10	200		1961
POD	PODKAMENAYA TUNG	61.40	90.00	50.84	165.64		670	1968
POL	POLA	44.86	13.26	44.80	95.90	30		1883-1922
PAF	PORT AUX FRANCAIS	-49.35	70.22	-57.31	130.79	50	750	1957
PMG	PORT MORESBY	-9.40	147.15	-17.99	219.75	80		1957
PBQ	POSTE DE LA BALEINE	55.30	287.25	66.31	357.38			1984
POT	POSTDAM	52.38	13.06	52.16	98.28	80		1890-1907
PRU	PRUHONICE	49.98	14.55	49.59	98.55	329		1946
QUE	QUETTA	30.18	66.95	21.77	141.35	1737		1953
RIT	RANKIN INLET	62.80	267.90	72.64	326.36			1975
REG	REGENSBERG	47.48	8.44	48.40	91.70	605		1957-1969
RES	RESOLUTE BAY	74.70	265.10	83.14	295.98	25		1954
RDJ	RIO DE JANEIRO	-22.91	316.83	-12.80	26.00	60		1899-1906
ROB	ROBURENT	44.30	7.88	45.41	89.74	815		1964
RSV	RUDE SKOV	55.85	12.45	55.56	99.61	48	600	1907-1978
SAB	SABHAWALA	30.33	77.80	20.78	151.34	498		1964
SFS	SAN FERNANDO	36.47	353.80	40.47	72.90	28		1891
SJG	SAN JUAN 1-2-3	18.38	293.88	29.36	5.21	100		1903
SNA	SANAE	-70.30	357.65	-64.23	46.20	52		1962
STJ	SAINT JOHNS	47.59	307.32	58.20	23.30			1968
PSM	SAINT MAUR	48.81	2.49	50.80	86.60			1883-1900
SMG	SAN MIGUEL	37.77	334.35	45.04	52.61	175		1911
SBA	SCOTT BASE	-77.85	166.78	-78.84	293.24	15		1957
SED	SEDDEN	52.28	13.01	52.10	98.50	40		1908-1931
STF	SDR STROMFIORD	67.02	309.28	76.83	36.25			1972
SSH	SHE-SHAN	31.10	121.19	20.30	191.03	100		1934

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
SHB	SHEPERD BAY	68.75	266.25	78.14	316.78			1966
SHL	SHILLONG	25.55	91.88	14.99	163.95			1975
SSO	SIMOSATO	33.57	135.93	23.62	204.24	59		1954-1978
SIT	SITKA	57.07	224.67	60.31	278.12	22	1020	1902
SOD	SODANKYLA	67.37	26.63	63.68	120.64	178		1914
SLU	SLUTSK	59.68	30.48	55.80	118.30			1878-1941
SGG	SOUTH GEORGIA	-54.28	323.52	-44.82	27.73		350	1974-1982
SPA	SOUTH POLE	-90.00	0.00	-78.98	0.00	2820		1959
SRE	SREDNIKAN	62.43	152.32	53.67	212.35	61		1936-1966
MGD	STEKOLNI	60.12	151.02	51.00	211.80			1966
ODE	STEPANOVKA	46.78	30.88	43.40	112.50	140		1948
STO	STONYHURST	53.85	357.53	56.52	83.91	116		1865-1967
SUA	SURLARI	44.68	26.25	42.32	107.42	84		1949
SVD	SVERDLOVSK	56.73	61.07	48.64	141.89	290	530	1887-1931
SWI	SWIDER	52.12	21.25	50.38	105.79	100		1921
SYO	SYOWA BASE	-69.03	39.60	-70.10	79.70	15		1958-1970
TAM	TAMANRASSET	22.80	5.53	24.94	81.23	1395		1932
TNG	TANGERANG	-6.17	106.63	-17.18	177.43	14		1964
TKT	TASHKENT	41.33	69.62	32.51	145.52	500		1883
TTB	TATUOCA	-1.20	311.48	8.98	220.50	10		1957-1971
TEH	TEHERAN	35.73	51.38	29.36	128.05	1367		1960-1973
SZT	TENERIFE	28.48	343.72	34.60	60.30	310		1959
TEO	TELOYUCAN	19.75	260.82	29.35	329.24	2280		1923
TAU	TERRE ADELIE	-66.67	140.02	-75.07	232.18	40		1957
TMP	THOMPSON	55.72	262.12	65.09	322.65			1969
THU	THULE/CAMP TUTO	76.55	291.17	87.53	11.26	480		1932-1952
THL	THULE/QANAQ	77.48	290.83	88.46	14.10	57		1956
TFS	TIFLIS	42.08	44.70	36.62	123.49	982		1879-1905
THY	TIHANY	46.90	17.90	46.01	100.41	187		1949
TKH	TIKHAYA BAY	80.30	52.80	71.74	153.42	10		1932-1958
TIP	TIRUCHIRAPALLI	10.80	78.70	1.26	150.19			1975
TIK	TIXIE BAY	71.58	129.00	60.99	192.81	40		1944
KAK	TOKYO	35.75	139.72	26.10	207.41	20		1897-1912
TOL	TOLEDO	39.88	355.95	43.39	76.18	501		1947
TMK	TOMSK	56.47	84.93	46.21	160.93	200	510	1958-1969
TOO	TOOLANGI	-37.53	145.47	-46.05	222.66	457	510	1922-1980
AGN	TORONTO	43.67	280.50	54.80	349.10			1872-1898
TLE	TOULOUSE	43.61	1.46	46.00	83.20	190		1894-1905
TGO	TOUNGOO	18.93	96.45	7.90	167.80	300		1905-1923
TOH	TOYOHARANEW	46.95	142.75	37.20	208.30	70		1932-1941
TRW	TRELEW	-43.25	294.68	-32.28	4.81		290	1957-1970
TRD	TRIVANDRUM	8.48	76.95	-0.88	148.24	300		1957
TRO	TROMSO	69.67	18.95	67.00	117.16	105		1930
TSN	TSINGTAO	36.07	120.32	25.00	189.90	80		1924-1936
TSU	TSUMEB	-19.22	17.70	-18.59	84.83	1300		1964
TUC	TUCSON	32.25	249.17	40.37	314.57	770	380	1910

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt. (m)	K=9 lower limit	Open -Closed
		Lat.	Long.	Lat.	Long.			
TUL	TULSA	35.92	264.22	45.75	330.78	257		1961
UCC	UCCLE	50.80	4.36	52.30	89.40	100		1896-1919
UBA	ULAN BATOR	47.85	106.75	36.84	178.03			1966
WIT	UTRECHT	52.00	5.12	53.40	90.80			1891-1896
VLJ	VAL JOYEUX	48.82	2.02	50.87	85.83			1901-1936
VAL	VALENTIA	51.93	349.75	56.15	74.79	14		1899
VSS	VASSOURAS	-22.40	316.35	-12.53	25.70	457		1915
VIC	VICTORIA	48.52	236.58	54.33	295.66	185	660	1956
VQS	VIEQUES	18.15	294.55	29.11	5.93			1903-1924
VLA	VLADIVOSTOK	43.12	131.90	32.84	199.68			1932
LNN	VOEIKOVO	59.95	30.70	56.00	118.50	70		1947
VOR	VOROSHILOV	43.78	132.03	33.20	199.60	30		1952-1957
VOS	VOSTOK	-78.45	106.87	-89.31	139.62	3500		1958
SVD	VYSOKAYA	56.73	61.07	48.40	141.90	290		1932
WAT	WATHEROO	-30.30	115.90	-41.23	187.82	240		1919-1958
WES	WESTON	42.38	288.68	53.40	359.49			1960
WHS	WHITE SHELL	49.80	264.80	59.56	328.39			1975
WIK	WIEN	48.25	16.36	47.60	69.70			1892-1898
WIA	WIEN-AUHOF	48.20	16.24	47.50	69.60	2050		1929-1950
WIK	WIEN-KOBENZL	48.27	16.32	47.62	69.48	400		1954
WLH	WILHELMSHAVEN	53.53	8.15	54.20	94.50	10		1884-1911
WIL	WILKES	-66.25	110.58	-77.26	182.71			1957-1966
WNG	WINGST	53.75	9.07	54.22	95.21	50	550	1939
WNP	WINNIPEG	49.63	262.87	59.19	326.02			1969-1975
WIT	WITTEVEEN	52.82	6.67	53.79	92.39	17	540	1938-1988
YAK	YAKUTSK	62.02	129.72	51.53	195.40	100		1931
TKT	YANGI BAZAR	41.33	69.62	32.30	145.60	500		1964
YAU	YAUCA	-15.53	285.33	-4.54	356.36			1957-1960
YKC	YELLOWKNIFE	62.47	245.53	69.14	296.56	198		1958
YSS	YUZHNO SAKHALINSK	46.95	142.72	37.49	208.45			1948
KNK2	ZAIMISHCHE	55.83	48.85	49.20	131.60	80		1914-1972
ZAR	ZARIA	11.15	7.65	13.12	80.89			1964
ZKW	ZI KA WEI	31.22	121.43	20.20	191.20	10		1875-1907
ZIN	ZINZEN	37.48	126.63	26.60	195.30	50		1921-1941
ZSC	ZO SE	31.10	121.19	20.00	190.80	100		1933-1974
ZUY	ZUY	52.47	104.03	41.20	17.80	430		1915-1958

LIST OF OBSERVATORIES (continued)

*Sites of observatories having provided records over 50 years or more*

First Observatory Name	Open -Closed	Further Observatories, if any Name	Open -Closed
AGINCOURT	1881 - 1969	OTTAWA	1968 - ...
ALIBAG	1904 - ...		
AMBERLEY	1929 - 1977	LAUDER	1977 - ...
ANTANANARIVO	1890 - 1893	same	1902 - 1922
		same	1929 - ...
APIA	1905 - ...		
BATAVIA	1884 - 1944 (1899 - 1902 missing)	KUYPER TANGERANG	1950 - 1962 1964 - ...
CAPE TOWN	1932 - 1940	HERMANUS	1941 - ...
CAPE WELLEN	1933 - ... (1944 - 1949 missing)		
CHELTENHAM	1904 - 1956	FREDERICKSBURG	1956 - ...
COIMBRA	1866 - ...		
COLABA	1846 - 1905	ALIBAG	1904 - ...
DIXON	1933 - ... (1945 and 1947 missing)		
DOMBAS	1916 - ...		
EBRO	1910 - ... (1938 - 1942 missing)		
ESKDALEMUIR	1908 - ...		
FÜRSTENFELDBRUCK	1939 - ...		
GODHAVN	1926 - ...		
GREENWICH	1846 - 1925	ABINGER HARTLAND	1925 - 1957 1957 - ...
HELWAN	1903 - 1959 (1952 - 1955 missing)	MISSALAT	1960 - ...
HONG KONG	1884 - 1928	AU TAU HONG KONG	1928 - 1939 1972 - ...
HONOLULU	1902 - ...		
HUANCAYO	1922 - ...		
KAZAN	1909 - ...		
KELES	1936 - 1963	YANGI BAZAR	1964 - ...
KEW	1858 - 1924		
KODAIKANAL	1902 - ...		
KRASNAYA	1930 - ... (1934 - 1937 and 1939 - 1945 missing)		
LA QUIACA	1920 - ...		
LENINGRAD	1869 - 1877 (1871 missing)	SLUTSK VOEIKOVO	1878 - 1941 1947 - ...
LERWICK	1923 - ...		
LOVÖ	1928 - ...		
MANILA	1891 - 1904	ANTIPOLO MUNTINGLUPA	1910 - 1938 1951 - ...
MAURITIUS	1892 - 1965		

LIST OF OBSERVATORIES (continued)

*Sites of observatories having provided records over 50 years or more*

First Observatory Name	Open -Closed	Further Observatories, if any Name	Open -Closed
MEANOOK	1916 - ...		
MELBOURNE	1865 - 1921	TOOLANGUI CANBERRA	1922 - 1980 1980 - ...
OSLO	1843 - 1930		
PILAR	1905 - ...		
POSTDAM	1890 - 1907	SEDDEN NIEMEGK	1908 - 1931 1932 - ...
RUDE SKOV	1907 - 1978	BJORFELDE	1978 - ...
SAINT MAUR	1883 - 1900	VAL JOYEUX CHAMBON LA FORET	1901 - 1936 1936 - ...
SAN FERNANDO	1891 - ...		
SAN JUAN (PUERTO RICO)	1903 - 1924	same same	1926 - 1964 1965 - ...
SAN MIGUEL	1911 - ...		
SITKA	1902 - ...		
SODANKYLA	1914 - 1931 (1945 missing)		
STONYHURST	1865 - 1943	SAME	1961 - 1967
SVERDLOVSK	1887 - 1978	VYSOKAYA - DUBRAVA	1932 - ...
SWIDER	1921 - ...		
TEOLOYUCAN	1923 - ...		
TIFLIS	1879 - 1905	KARSANI DUSHETI	1905 - 1934 1938 - ...
TIKHAYA BAY	1932 - 1958 (1947 - 1950 missing)	HEISS ISLAND	1959 - ...
TOKYO	1897 - 1912	KAKIOKA	1913 - ...
TROMSÖ	1930 - ...		
TUCSON	1910 - ...		
UCCLE	1896 - 1919	MANHAY	1936 - 1971 (1943 - 1945 missing)
UTRECHT	1891 - 1896	DOURBES DE BILT WITTEVEEN	1955 - ... 1899 - 1938 1938 - 1988
VALENTIA	1899 - ...		
VASSOURAS	1915 - ...		
WATHEROO	1919 - 1958	GNANGARA	1959 - ...
WILHELMSHAFEN	1884 - 1911	WINGST	1939 - ...
YAKUTSK	1931 - ...		
ZAIMISHCHE	1914 - 1972		
ZI - KA - WEI	1875 - 1907	LUKIAPANG ZO - SE	1908 - 1933 1933 - 1974

## **SECTION 3**

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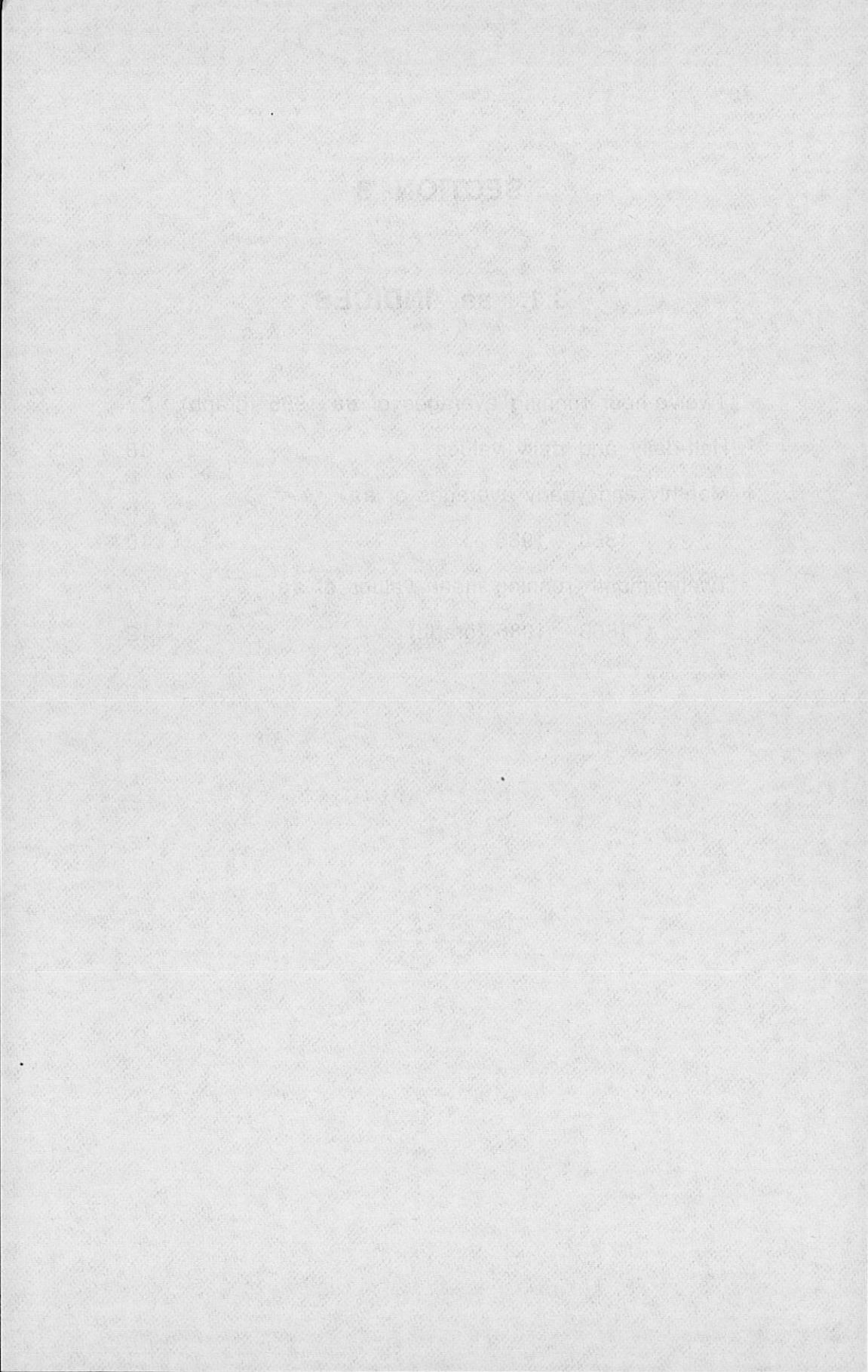
## RECOMMENDATION

RECOMMENDATION  
TO THE  
COMMISSIONER OF  
THE BUREAU OF  
ALCOHOL, SMOKE AND FIRE  
DEPARTMENT OF THE  
TERRITORY OF HAWAII  
FOR THE APPROVAL  
OF THE  
REGULATIONS  
PROVIDED  
IN THE  
ACT  
APPROVED  
JULY 2, 1933.

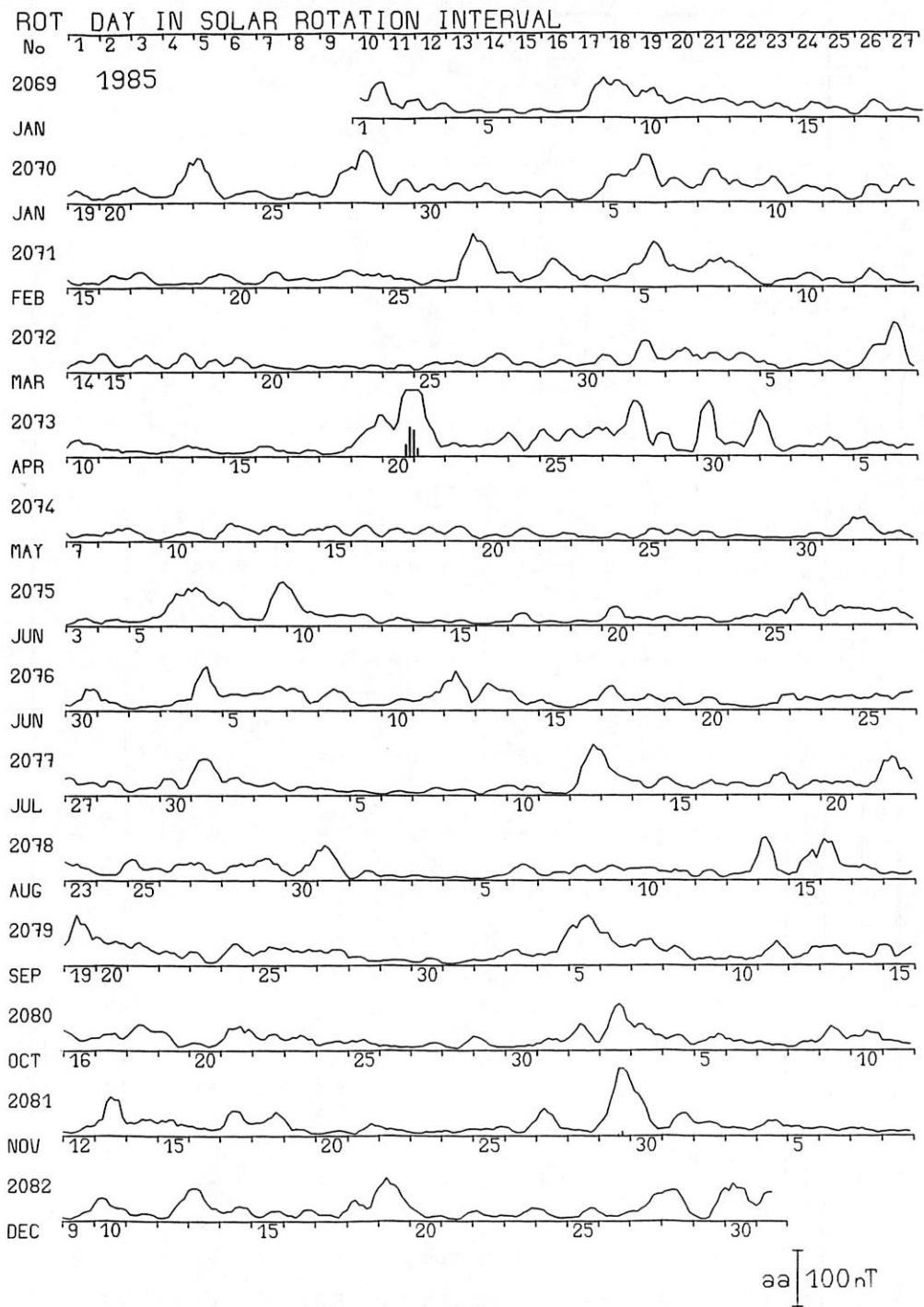
## **SECTION 3**

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TWELVE-HOUR RUNNING AVERAGES aa 1985



12-HOUR RUNNING AVERAGES OF THE THREE-HOUR-RANGE  
INDICES aa 1985

**aa INDICES 1985**

JANUARY				FEBRUARY				MARCH				APRIL				MAY									
DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY	DAY	HALF DAY						
N	S	am	pm	N	S	am	pm	N	S	am	pm	N	S	am	pm	N	S	am	pm						
1	56	41	36	61	29	23	28	24	25	14	26	13	38	21	54	21	17	22	15	36	41	31			
2	32	24	26	31	21	14	16	19	41	30	23	49	37	21	37	49	50	83	16	19	7	10			
3	31	16	22	24	17	13	8	22	25	12	22	16	41	21	29	33	16	14	13	17	12	5			
4	17	7	13	11	C	5	5	5	QC	19	13	20	30	20	19	32	19	25	19	25	14	6			
5	14	9	9	14	QCC	44	31	26	50	73	39	40	71	14	11	15	10	K	20	12	11	12	7		
6	16	7	9	14	QCC	81	62	60	84	47	29	46	30	14	6	7	13	QCC	21	14	20	15			
7	13	8	10	11	QCC	40	29	33	36	45	31	32	44	10	14	14	11	CC	19	9	15	13	57		
8	34	35	11	58	51	39	30	60	38	34	46	27	29	14	7	36	19	12	12	19	32	44			
9	68	47	58	57	28	32	31	30	9	5	5	8	QCK	49	67	48	69	21	12	25	9	36			
10	54	35	49	40	43	30	29	44	23	14	13	24	18	25	18	26	12	5	4	13	CC	54			
11	33	27	33	28	17	16	30	13	8	10	12	CK	23	12	21	14	12	10	16	6	C	23			
12	33	27	33	21	17	19	18	20	19	6	33	12	8	11	9	QCC	27	21	20	28	25	13			
13	28	19	20	27	23	12	4	31	8	8	11	6	QC	13	8	8	13	CC	26	18	17	27			
14	18	18	18	36	18	15	38	15	14	8	21	19	12	17	14	K	19	8	14	12	C	15			
15	21	17	13	25	17	7	14	10	C	22	25	33	14	9	5	7	QCC	34	17	23	28	34	17		
16	14	14	16	12	16	14	8	23	Q	25	19	12	32	19	13	18	K	25	14	10	29	6	2		
17	21	18	12	26	25	18	19	23	Q	20	8	11	18	12	5	8	10	QCK	20	12	8	24	20	11	
18	14	11	11	14	QC	7	5	6	7	QCK	29	15	25	19	11	3	8	6	QCK	25	14	13	26	9	4
19	10	21	15	16	17	5	8	18	QK	18	19	11	26	32	34	18	49	21	18	12	27	11	3		
20	15	11	9	17	QK	19	15	23	11	9	10	9	11	QCK	68	70	75	63	13	5	7	11	CK	30	
21	20	22	26	16	19	13	7	26	10	5	6	9	QCC	21	16	19	18	13	5	9	9	QCK	20		
22	23	23	60	62	54	18	15	13	20	13	8	10	11	CC	27	13	19	21	15	5	13	7	QCC	17	
23	24	14	10	7	17	C	23	31	24	16	5	9	13	KK	32	21	43	9	12	5	4	13	CC	17	
24	25	17	15	22	10	23	13	20	16	QCC	12	6	5	14	CK	40	33	46	28	17	7	4	20	KK	26
25	26	14	14	10	19	K	14	6	11	9	19	13	15	17	23	49	38	22	9	12	18	34	31	47	
26	27	21	20	11	30	33	23	10	46	23	15	11	27	49	41	46	45	14	10	10	14	KH	29		
27	28	38	23	25	36	91	55	83	42	27	13	24	17	60	59	100	28	11	5	7	9	QCC	38		
28	30	34	22	23	33	18	8	14	13	K	69	42	26	85	9	3	7	5	QCC	25	24	27	22		
29	31	31	25	24	32	19	23	30	12	19	23	12	17	6	12	11	C	21	13	12	12	22			
N	28.6		28.4			23.0							33.7				19.3				24.1				
S	23.7		20.4			15.5							26.4				12.2				16.3				
M	26.1		24.4			19.2							30.0				15.7				20.1				

**aa INDICES 1985 (continued)**

	JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER								
	DAY		HALF DAY		DAY		HALF DAY		DAY		HALF DAY		DAY		HALF DAY		DAY		HALF DAY		DAY		HALF DAY						
	N	S	am	pm	N	S	am	pm	N	S	am	pm	N	S	am	pm	N	S	am	pm	N	S	am	pm					
1	30	21	35	16	40	19	25	34	13	8	4	17	K	4	5	4	4	QCC	39	28	22	45	31	17	12	36			
2	9	4	5	8	QCC	23	18	19	8	6	7	8	QCC	14	9	11	12	CK	54	39	14	78	32	17	24	25			
3	14	10	8	17	CK	18	10	11	16	8	7	9	6	QCC	19	24	22	21	45	42	49	38	15	13	15	13			
4	52	50	21	80	15	9	13	11	CC	6	5	4	6	QCC	22	23	20	24	36	16	24	28	23	18	15	26	26		
5	30	26	26	30	11	4	7	8	QCC	5	5	4	6	QCC	72	78	65	66	18	15	10	23	15	16	18	13			
6	36	32	32	37	7	12	2	5	9	QCC	22	19	11	29	48	47	58	38	23	15	20	18	12	13	15	10	CC		
7	7	38	33	37	34	12	7	11	11	CC	16	10	12	14	C	48	34	37	45	13	11	15	9	12	12	14	11	QCC	
8	35	23	17	40	15	12	4	6	10	QCC	22	17	11	27	C	34	23	26	32	14	8	7	16	CK	5	9	7	7	QCC
9	9	15	11	16	K	12	4	6	10	QCC	23	18	17	24	13	10	9	14	C	27	29	17	39	9	9	9	7	10	QC
10	21	8	10	19	15	12	18	9	K	27	16	21	22	13	11	13	CK	36	22	24	35	29	28	31	28	31	28		
11	27	14	17	24	12	6	15	4	OKK	19	12	16	16	KK	28	22	15	35	16	16	17	15	21	13	20	14	K		
12	62	44	49	58	47	23	6	63	13	11	6	18	KK	23	15	19	19	9	9	8	10	QCC	16	10	7	19	K		
13	31	33	20	46	68	51	81	38	10	9	7	12	C	34	31	35	49	40	19	70	52	44	56	40	40				
14	14	28	20	35	14	18	20	26	12	50	45	50	50	19	14	20	13	31	22	22	31	25	18	25	25				
15	15	14	13	18	9	KK	24	25	31	18	24	27	21	9	39	24	27	35	16	31	22	23	30	19	10	14			
16	15	4	5	14	QC	24	15	12	27	52	56	59	49	30	25	37	18	18	15	18	15	17	12	15	12	K			
17	31	29	29	32	21	17	16	21	25	22	24	24	24	30	22	23	29	32	27	13	45	17	12	17	12	K			
18	27	20	19	28	32	17	14	35	12	7	10	10	C	41	32	27	47	31	22	22	31	23	26	21	29	K			
19	19	16	13	15	15	26	12	22	16	66	47	38	75	24	26	35	16	23	20	31	12	62	62	60	64				
20	20	22	12	22	27	18	22	23	50	43	52	41	12	10	12	10	C	6	7	5	8	QCC	15	18	26	7			
21	12	5	10	6	QCK	19	18	22	15	40	32	35	37	33	25	17	41	9	10	7	12	QCK	8	5	10	4	QCC		
22	22	13	6	7	12	QCK	59	46	61	24	21	21	23	31	29	33	28	15	13	17	11	K	12	15	17	10	KC		
23	30	21	28	23	33	26	34	25	12	20	25	7	25	22	19	28	8	6	7	8	QCC	10	11	11	11	QC			
24	25	14	17	22	17	22	17	7	13	C	34	22	16	40	15	12	11	16	K	7	8	7	QCC	14	20	23	11	K	
25	25	27	20	26	29	29	26	35	20	29	24	18	35	19	16	15	20	11	14	12	13	CC	13	10	7	16	KK		
26	32	20	24	29	30	19	22	27	32	24	33	23	6	10	8	QCC	11	12	17	6	K	15	11	17	9	K			
27	31	22	32	22	25	33	20	28	31	24	27	29	10	6	6	11	QCC	31	35	29	38	21	22	17	26	K			
28	30	18	22	26	25	18	16	27	12	15	14	13	K	9	6	11	4	QCK	12	10	13	9	C	62	41	49	54		
29	15	6	8	13	QC	34	33	28	39	9	8	10	QCC	18	19	26	10	K	54	55	21	88	9	9	11	7	C		
30	26	19	19	26	22	12	16	18	12	8	7	13	CC	7	7	8	QCC	74	71	97	49	71	48	60	59	M			
31	52	51	37	66	48	53	54	47	15	16	12	19	15	16	12	19	24.0	24.0	26.1	23.7	22.0	21.2	21.4	21.5	21.4				
N	27.3				26.0				23.7																				
S	20.1				18.6				19.3																				
M	23.7				22.3																								

**MONTHLY AND YEARLY aa 1868 - 1985**

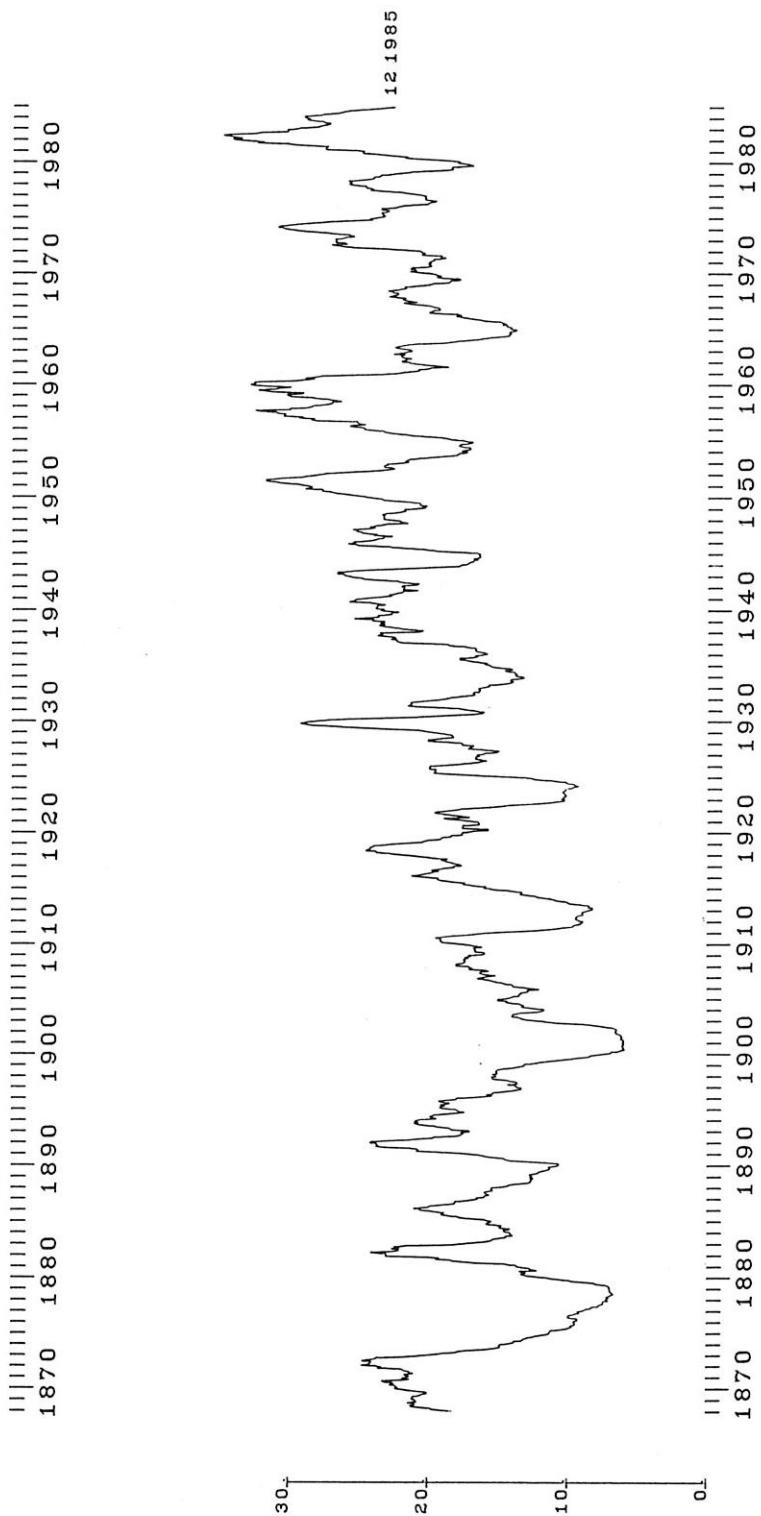
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1868	10.6	16.0	19.7	21.0	16.4	17.9	21.5	19.4	24.0	25.9	13.3	13.7	18.3
1869	19.2	23.6	22.3	29.5	23.1	19.2	17.4	19.9	29.8	17.9	14.7	14.6	20.9
1870	21.6	23.2	21.2	25.8	20.9	16.4	14.1	21.4	35.2	26.2	21.9	19.9	22.3
1871	19.3	24.8	21.4	31.2	17.2	17.1	21.5	23.5	17.7	20.0	28.1	15.7	21.5
1872	17.0	28.0	23.0	23.4	20.4	17.7	25.3	25.2	20.7	38.6	25.0	20.5	23.7
1873	29.4	20.6	24.1	20.8	20.8	25.8	20.6	18.7	19.3	16.6	14.6	12.1	20.3
1874	17.8	16.1	12.7	19.1	14.0	12.8	13.1	13.0	15.7	17.8	14.3	10.1	14.7
1875	10.0	13.5	12.7	12.7	13.0	10.1	11.8	8.7	13.1	11.9	9.8	8.5	11.3
1876	9.8	12.6	11.0	6.5	7.6	7.7	9.1	10.2	10.1	10.5	10.2	10.1	9.6
1877	9.3	9.6	10.4	8.9	13.0	8.9	7.8	7.6	7.4	6.9	11.6	6.8	9.0
1878	7.4	7.5	6.2	8.5	7.3	8.6	4.8	6.4	7.9	6.8	7.1	9.3	7.3
1879	6.2	5.8	8.6	5.5	6.2	5.9	5.8	8.0	8.9	7.0	7.1	9.3	7.0
1880	7.3	4.7	9.8	8.9	13.1	7.3	9.9	23.1	11.4	14.4	14.5	14.6	11.6
1881	15.1	12.8	13.2	11.4	8.5	10.7	12.2	7.8	17.9	14.0	20.2	20.3	13.7
1882	15.7	19.5	16.5	35.9	20.6	19.0	14.5	19.7	15.0	25.0	55.0	20.1	23.0
1883	15.4	26.7	23.3	17.8	13.9	18.5	21.5	12.4	19.5	13.7	17.6	12.0	17.7
1884	9.1	14.3	17.5	15.6	12.8	13.1	14.2	13.0	17.7	22.1	15.9	13.7	12.1
1885	13.2	15.5	13.3	14.0	21.2	14.2	13.0	21.7	22.1	15.9	20.7	20.6	20.6
1886	17.7	17.1	27.6	21.6	22.6	21.6	19.3	18.1	19.0	21.7	20.7	20.6	20.6
1887	16.9	22.9	15.2	20.6	17.3	12.6	12.5	17.2	18.9	14.1	14.5	15.2	16.5
1888	18.2	15.9	15.2	16.4	19.3	14.5	12.9	13.7	15.1	15.0	15.3	14.0	15.5
1889	9.8	11.0	13.9	11.6	10.2	9.8	13.5	12.6	14.6	13.6	18.5	11.8	12.6
1890	11.7	11.8	10.0	8.4	8.4	7.3	10.0	10.3	13.8	15.6	13.3	8.3	10.7
1891	10.4	14.2	20.6	22.5	23.7	11.7	11.2	15.0	22.3	20.7	16.5	16.2	17.1
1892	19.5	35.1	36.3	20.4	25.1	17.7	33.7	22.1	20.1	23.1	15.7	22.1	24.2
1893	18.2	19.1	18.4	14.0	12.0	17.1	14.5	18.5	19.5	20.9	18.5	13.9	17.0
1894	19.2	33.9	20.0	17.4	19.0	20.0	26.3	21.0	22.5	17.0	21.9	12.0	20.8
1895	15.4	20.8	23.0	20.7	16.6	17.6	17.9	10.5	15.9	22.7	22.5	14.5	18.2
1896	25.4	23.6	21.8	17.2	20.6	11.7	15.6	18.1	17.8	17.5	13.1	13.8	18.0
1897	12.0	14.0	14.2	22.2	14.6	12.0	9.3	10.7	11.0	13.8	12.6	17.2	13.6
1898	13.5	15.1	20.5	13.4	15.1	14.3	13.5	14.6	21.5	14.1	13.6	13.0	15.2
1899	14.3	17.8	15.6	14.2	15.9	13.5	11.6	11.4	13.5	9.4	8.7	12.1	13.2
1900	13.5	8.9	12.5	7.2	9.6	4.7	5.2	6.0	5.2	7.1	5.4	5.4	7.6
1901	7.3	7.0	6.5	5.2	6.2	6.0	5.6	6.1	6.0	5.4	5.6	6.4	6.1
1902	6.1	7.6	5.9	7.9	5.6	5.4	6.3	6.2	7.0	7.2	7.6	6.1	6.6
1903	6.5	5.9	6.7	10.3	7.8	11.3	10.8	14.1	14.0	26.3	16.3	13.5	12.0
1904	15.1	12.6	8.7	13.1	13.0	10.5	10.8	10.2	11.2	13.0	11.6	10.6	11.7
1905	16.0	20.3	16.6	16.6	10.6	13.8	11.8	16.8	16.3	11.2	20.1	10.7	15.1
1906	7.6	17.5	14.0	11.6	11.4	11.3	12.4	12.0	14.2	12.7	9.6	16.4	12.6
1907	16.5	25.3	14.3	12.1	16.8	14.8	16.9	15.5	16.8	18.5	14.6	11.5	16.1
1908	13.6	17.0	23.2	15.6	18.9	12.5	10.4	18.2	31.6	15.8	17.4	11.4	17.1
1909	24.8	17.0	19.8	12.1	18.3	11.5	12.6	17.6	27.6	19.4	11.6	13.8	17.2
1910	12.8	14.6	20.9	19.7	17.2	13.7	10.8	20.2	19.2	24.4	17.9	19.5	17.6
1911	21.3	23.7	21.5	21.1	16.6	13.6	15.3	11.9	12.2	12.5	10.6	11.0	15.9
1912	7.6	8.0	7.7	9.4	9.6	8.4	7.8	10.5	9.8	9.5	9.4	9.4	8.9
1913	10.3	9.5	9.9	9.8	9.0	7.0	7.0	6.7	10.0	10.7	7.6	6.6	8.7
1914	7.1	7.3	10.1	13.5	8.1	10.3	12.9	14.9	11.8	13.3	13.4	9.3	11.0
1915	10.9	13.5	15.0	15.3	13.9	17.9	11.2	14.7	17.0	21.3	24.9	12.4	15.7
1916	16.0	11.6	25.0	19.2	20.2	15.7	19.7	21.4	22.4	24.5	24.0	18.9	19.9
1917	25.1	19.1	16.2	16.7	15.9	12.7	14.6	28.1	16.1	20.2	14.8	19.8	18.3
1918	17.8	21.3	19.7	20.5	18.8	15.6	17.4	22.2	28.4	26.4	23.1	28.1	21.6
1919	27.8	26.5	30.7	21.3	27.5	13.9	14.9	22.7	25.3	26.9	14.3	18.4	22.5
1920	16.7	14.1	28.5	17.8	17.7	12.4	14.0	14.8	25.7	17.3	15.1	17.0	17.6
1921	11.7	10.6	15.6	17.2	40.5	12.4	13.3	14.6	12.4	16.2	16.2	17.8	16.5
1922	18.0	18.6	24.1	23.5	18.3	18.6	20.0	20.7	19.7	20.1	13.1	10.4	18.8
1923	10.2	13.7	12.1	10.0	10.1	11.1	8.4	7.3	10.7	12.6	7.8	9.6	10.3
1924	13.6	10.9	12.9	7.3	10.2	12.3	9.7	6.9	12.6	8.7	9.3	7.9	10.2
1925	9.4	8.6	8.6	10.8	11.0	17.7	11.8	13.6	18.0	21.7	13.2	12.9	13.1
1926	27.1	26.2	27.6	27.1	19.6	16.2	11.4	13.2	22.7	23.3	11.9	13.3	20.0

MONTHLY AND YEARLY aa 1868 - 1985 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1927	15.5	15.2	20.7	15.6	16.8	11.2	16.5	18.5	20.9	24.7	8.0	15.8	16.6
1928	10.1	13.5	11.3	12.8	23.6	20.2	27.8	15.9	19.6	23.4	18.2	15.6	17.7
1929	13.0	24.0	26.2	13.9	16.3	14.7	18.6	15.9	21.5	25.5	22.7	21.0	19.4
1930	20.9	27.9	30.9	38.2	36.4	33.3	28.3	33.3	28.8	29.3	18.8	17.2	28.6
1931	13.0	15.4	12.9	9.9	12.0	14.7	13.1	17.7	21.2	27.3	23.7	21.1	16.8
1932	20.2	21.4	27.9	28.2	22.2	11.8	12.4	19.1	19.1	17.2	13.8	15.3	19.0
1933	15.9	18.4	19.2	21.1	17.5	13.6	12.3	14.2	18.4	16.8	16.0	13.0	16.4
1934	11.5	14.9	20.0	11.3	11.4	10.0	10.3	17.4	17.6	11.6	9.5	15.5	13.4
1935	15.6	16.5	17.8	13.6	11.6	16.4	12.5	9.9	20.7	20.2	15.6	17.7	15.7
1936	17.4	19.8	15.5	22.1	17.5	19.8	18.0	10.2	9.8	15.4	18.0	12.0	16.3
1937	12.2	22.2	18.6	26.3	18.6	18.9	18.8	14.7	14.7	27.8	19.3	16.5	19.0
1938	46.6	26.0	20.4	26.1	23.7	14.8	19.7	19.9	24.7	24.0	17.8	19.5	23.6
1939	13.5	21.7	27.0	36.1	27.8	22.8	26.1	23.0	19.2	28.4	14.5	18.6	23.2
1940	24.8	20.1	43.9	22.4	20.0	23.6	18.4	18.4	20.1	21.9	25.1	23.7	23.5
1941	21.9	27.6	42.9	21.6	19.1	17.4	27.9	22.3	38.2	17.5	23.6	19.3	24.9
1942	14.6	18.8	32.4	24.4	14.2	14.6	23.0	21.9	25.8	30.3	22.8	18.4	21.8
1943	18.1	17.1	21.0	21.9	24.5	21.2	24.4	41.0	35.3	32.8	29.6	23.3	25.8
1944	21.2	17.9	26.6	21.6	16.1	14.9	11.1	16.5	17.5	17.2	11.2	21.8	17.8
1945	16.1	16.4	25.0	19.1	15.4	11.1	15.3	12.1	15.6	17.9	12.0	20.2	16.3
1946	19.2	30.2	43.5	25.0	24.1	22.3	28.6	16.7	41.7	19.6	19.3	14.3	25.4
1947	20.6	17.1	37.9	23.3	19.1	21.1	21.4	32.9	39.1	31.3	20.7	17.9	25.2
1948	20.8	21.0	24.2	17.7	23.7	15.0	16.2	28.3	22.0	36.1	23.1	23.0	22.6
1949	29.8	20.4	24.7	17.6	22.4	17.9	11.8	19.2	17.8	32.7	24.6	15.1	21.2
1950	19.5	23.2	20.6	23.8	21.7	19.0	19.5	30.2	29.3	34.5	28.0	24.0	24.4
1951	23.1	29.2	28.5	32.1	25.5	23.2	25.2	29.7	44.4	30.3	25.7	28.2	28.8
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.7	19.0	28.5	26.4	18.9	23.4	27.9
1953	22.3	21.2	27.4	22.7	21.4	18.4	22.5	26.1	29.0	22.4	20.2	12.6	22.2
1954	13.9	24.5	25.5	20.6	12.0	9.7	13.1	16.5	25.4	21.1	14.5	10.9	17.3
1955	19.3	18.2	23.6	21.1	16.7	15.1	12.3	14.3	19.1	17.8	19.9	14.1	17.6
1956	28.7	23.3	27.6	31.7	29.3	23.5	19.8	20.7	22.4	19.3	32.3	18.2	24.7
1957	28.7	26.8	36.7	28.8	18.1	29.1	21.7	20.7	57.0	24.0	29.5	31.7	29.4
1958	25.5	43.2	36.1	27.6	25.2	29.7	36.0	25.1	26.5	24.7	15.0	27.2	28.5
1959	24.3	35.9	29.9	24.2	25.7	21.6	42.5	31.2	36.1	28.2	32.1	30.8	30.2
1960	25.2	23.5	27.6	51.5	31.6	27.6	28.1	27.2	26.4	45.6	45.9	34.5	32.9
1961	20.6	25.1	22.0	21.8	22.3	20.1	36.0	18.5	20.7	23.3	17.3	21.1	22.4
1962	13.2	19.2	15.5	22.6	13.4	18.1	21.0	26.2	29.8	33.3	22.5	23.5	21.5
1963	19.3	15.3	14.9	18.2	20.4	20.5	20.8	22.5	40.2	23.5	20.7	18.9	21.3
1964	20.1	20.1	21.0	21.7	17.5	15.1	16.9	14.8	18.2	16.9	13.8	10.3	17.2
1965	11.8	16.3	14.3	12.6	10.5	15.7	14.7	16.8	17.5	13.1	11.7	13.8	14.1
1966	14.2	14.8	18.6	12.0	14.8	12.5	17.1	20.0	29.4	17.5	16.8	20.5	17.3
1967	18.9	19.8	13.8	15.5	33.1	18.6	14.4	17.5	24.7	17.8	18.9	24.5	19.8
1968	21.1	26.5	23.3	22.2	21.4	24.9	18.0	20.1	22.0	24.8	26.2	20.3	22.6
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.8	17.2	18.7	13.8	20.0
1970	14.4	12.7	26.4	23.1	16.6	18.3	28.4	21.0	19.7	20.6	21.6	16.5	19.9
1971	23.5	21.2	21.1	23.9	21.1	17.0	15.2	17.1	21.4	22.2	18.8	18.6	20.1
1972	21.9	18.3	21.5	18.1	16.6	21.5	14.0	34.2	20.4	20.4	21.8	18.9	20.6
1973	26.1	32.7	36.9	39.6	26.1	27.3	20.9	20.6	22.8	28.2	20.7	19.9	26.8
1974	25.8	26.4	33.7	32.9	29.2	29.2	32.0	30.2	33.7	37.3	26.8	27.5	30.4
1975	27.6	31.1	32.0	24.3	22.7	20.7	21.7	18.1	16.9	20.2	29.3	21.1	23.8
1976	23.3	28.5	33.4	25.4	23.7	17.5	18.4	17.7	23.7	20.4	16.9	18.6	22.3
1977	18.7	21.0	19.9	24.9	20.1	14.2	22.9	23.2	23.0	20.9	17.3	17.0	20.3
1978	25.0	26.2	25.9	31.3	31.2	28.3	19.9	25.6	27.0	20.8	24.6	22.0	25.6
1979	27.3	23.7	26.9	33.5	21.0	18.3	17.9	26.0	22.0	19.3	17.1	16.8	22.5
1980	19.0	17.3	12.7	18.4	15.6	20.0	17.0	15.9	14.2	21.9	23.3	21.7	18.1
1981	16.8	22.9	27.1	33.4	27.3	18.1	27.6	24.3	20.8	34.4	24.5	19.7	24.7
1982	23.5	49.3	27.6	32.2	26.2	31.4	42.4	32.0	45.9	28.9	33.7	34.5	34.0
1983	26.6	40.8	34.2	36.3	32.1	25.1	21.4	25.2	24.0	28.8	34.1	26.4	29.6
1984	23.8	26.5	31.3	33.1	27.5	24.0	26.7	26.2	33.2	33.7	31.5	29.4	28.9
1985	26.1	24.4	19.2	30.0	15.7	20.1	23.7	22.3	21.4	22.5	24.0	21.5	22.6

Unit : nT

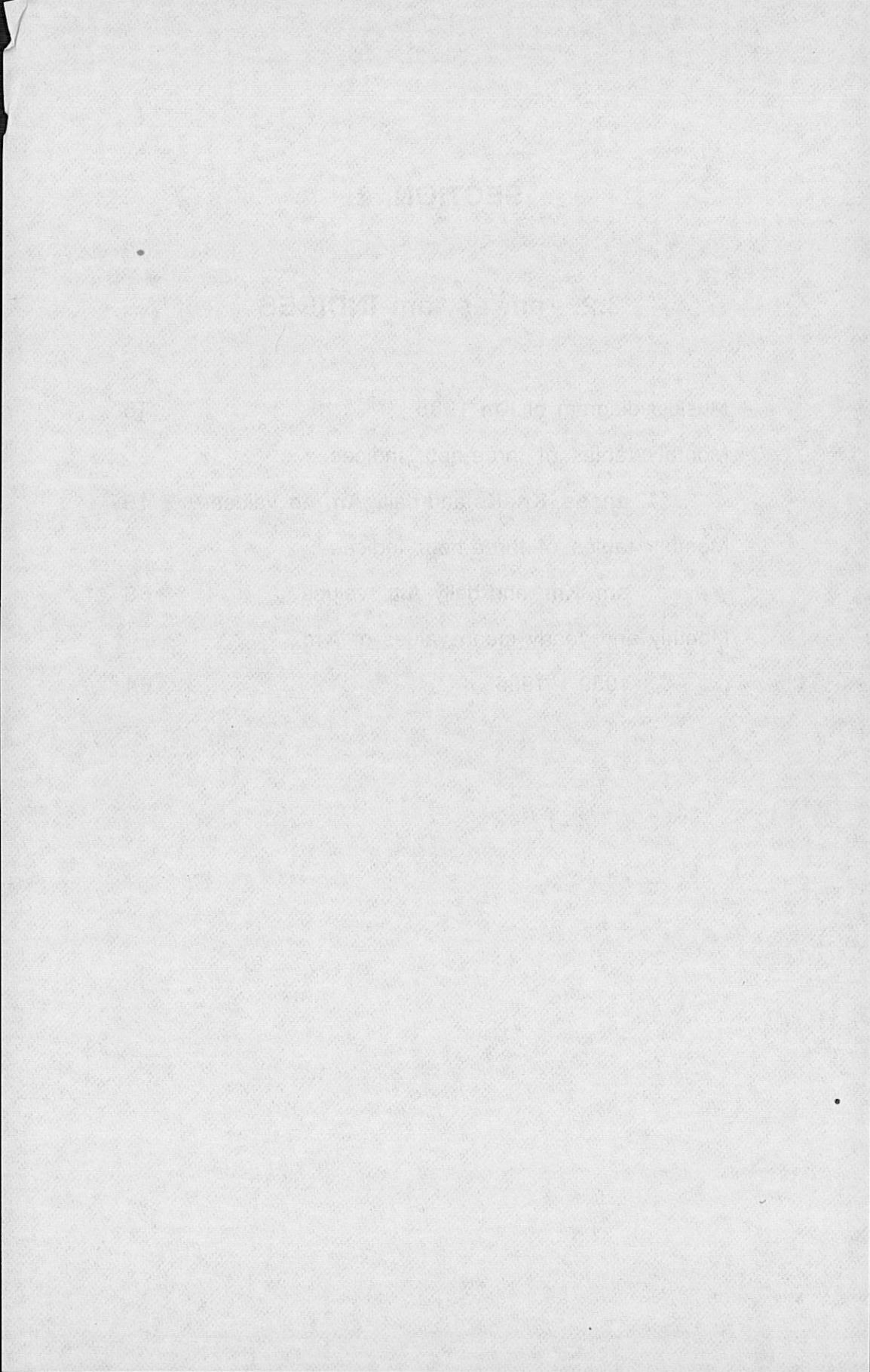
TWELVE-MONTH RUNNING MEAN VALUES OF aa 1868 - 1985



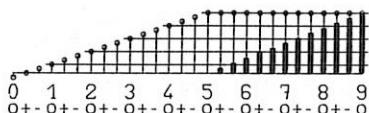
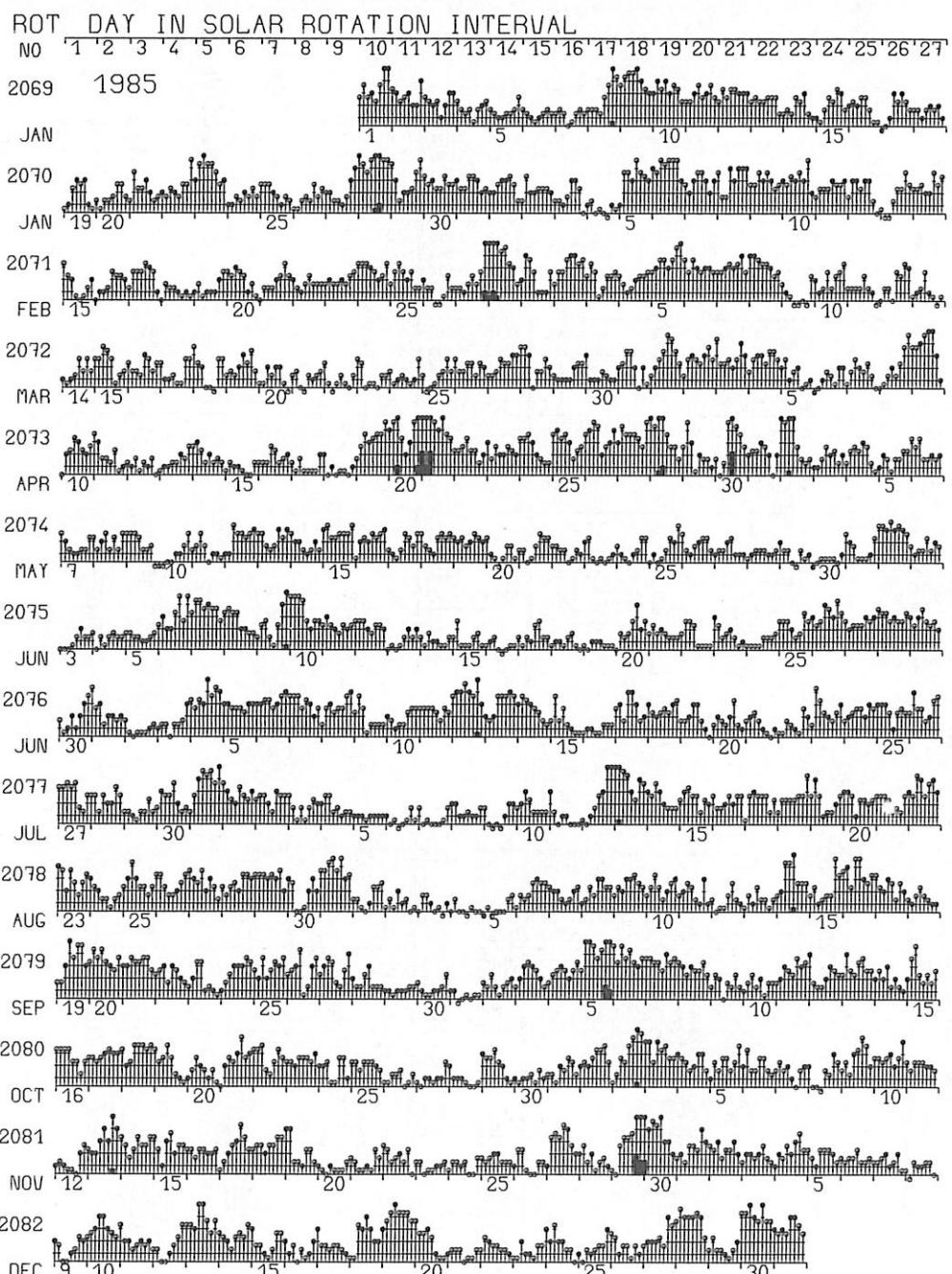
## **SECTION 3**

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# MUSICAL DIAGRAM OF Km 1985



THREE-HOUR-RANGE INDICES

Km 1985

an, as INDICES 1985

JANUARY 1985

	Kn										$\sigma$	an										An
1	3-	4o	3o	3+	3-	4-	5+	5-	5o		3423	4254	21	53	27	36	24	46	113	82	50	
2	3+	3o	3-	2+	3-	2o	2+	4+			3142	3136	35	31	22	18	26	15	18	61	28	
3	3o	2+	2o	3-	1+	2o	3o	3+			4233	2234	30	17	15	23	9	15	33	39	23	
4	3-	2-	1o	2-	1o	1+	2-	3-			5322	1214	21	11	7	11	7	10	13	24	13	
5	2-	1+	1-	1o	1+	2-	1+	3-			2221	1323	11	9	4	6	8	12	10	21	10	
6	2-	1+	1-	0+	1o	2-	2o	2-			3312	1365	13	10	4	3	7	11	16	12	10	
7	1+	2-	1+	0+	1-	2-	2-	2-			4332	2343	9	11	9	2	4	11	13	11	89	
8	2-	1+	2o	1o	2+	4-	5+	4o			2451	1434	11	9	15	7	17	45	110	53	33	
9	4o	5-	5-	5o	5+	5-	3+	3+			1345	2217	51	79	82	97	107	77	37	35	71	
10	3+	4+	3+	5-	3+	4o	4-	3-			3533	2543	39	61	35	75	36	52	45	21	46	
11	2+	3-	4-	4-	3-	3o	4-	3o			4243	2453	17	21	41	48	25	31	48	27	32	
12	2+	3+	3o	4-	4-	3+	3o	3o			3243	4335	17	37	29	43	47	36	33	32	34	
13	2+	3-	3-	3-	3o	3o	3o	2-			3433	2334	19	25	25	21	30	32	27	11	24	
14	1o	2-	1+	3o	3-	3+	2-	1o			2144	2521	6	13	9	27	22	35	11	7	16	
15	1o	1-	2+	3-	3-	4-	3+	2-			4154	3642	6	5	17	24	22	49	34	12	21	
16	2o	3-	2o	3-	3o	2o	1o	1o			3212	3222	14	21	15	24	27	16	7	6	16	
17	0+	0+	1-	3o	3-	3+	3-	2-			2221	2743	2	2	5	30	22	39	25	13	17	
18	2-	1+	1o	2-	2o	2-	2o	1+			2123	2264	11	10	7	11	14	12	15	9	11	
19	1-	1-	2-	3o	3o	3+	1o	0+			1224	5622	4	4	12	28	27	35	6	3	15	
20	1+	1-	1+	1o	1+	3o	3-	2-			3241	2543	8	4	8	7	10	31	26	11	13	
21	1o	4o	2+	3-	3-	2o	2-	2-			2313	2012	7	53	18	22	26	14	13	11	21	
22	2-	1o	2+	2o	2-	3-	2+	5-			5132	3521	12	7	20	14	13	24	19	72	23	
23	3-	5-	5-	5-	4+	4o	3o	3o			2423	4546	26	72	75	73	64	51	27	32	53	
24	1o	1+	2o	1+	2+	2o	2+	2o			2343	2223	6	8	14	9	17	15	17	14	13	
25	2+	3-	2+	2-	2-	1o	2-	1o			3211	2112	20	21	19	13	12	7	12	7	14	
26	1-	1-	1o	2-	1+	3-	2-	2+			2423	1222	4	5	7	11	9	24	13	20	12	
27	2o	2o	1o	1o	1+	2+	3+	4-			2413	3432	15	14	7	7	8	17	36	50	19	
28	5o	5-	4-	5-	6-	6o	5-	5-			2363	5454	95	72	47	79	127	148	71	83	90	
29	4o	3o	1+	2o	2+	2+	4o	5o			3231	4444	58	33	8	14	17	20	51	90	36	
30	3+	3o	3+	3-	3-	3o	3+	3-			3243	3714	37	27	34	21	22	40	23	26	29	
31	3o	2+	3-	4-	4-	3o	2+	3-			4453	2335	27	17	23	48	47	33	19	24	30	

26.8

JANUARY 1985

	Ks										$\sigma$	as										As
1	3-	3o	3-	3o	2o	3+	5-	5o			3124	2145	23	28	25	31	16	36	82	95	42	
2	3+	3o	2+	3-	3-	2-	2o	4-			2032	1423	36	30	20	21	26	13	15	45	26	
3	3-	2+	2-	2o	2o	1o	2-	3o	3-		3230	2246	23	20	17	15	6	12	27	26	18	
4	2o	1+	1+	1+	1-	2-	2o	2o			3431	1554	15	9	9	10	4	12	16	16	11	
5	2-	1+	1o	1o	1+	1o	2-	3-			1121	2312	12	9	7	6	8	7	12	22	10	
6	2-	1+	1o	1-	1-	1+	2-	1o			1422	3244	13	9	7	4	4	8	11	7	8	
7	1o	2o	1+	1-	1o	1+	1+	1+			4113	0241	7	14	10	5	7	9	9	8	9	
8	1+	2-	2-	1+	3-	4o	5+	5-			4422	2523	10	13	12	9	25	51	108	74	38	
9	4-	4o	4+	4o	5-	4-	3o	2+			2330	2213	43	59	68	56	75	48	33	20	50	
10	3-	4-	3o	4-	3-	3+	3o	2+			1425	1423	24	43	32	42	21	40	28	18	31	
11	2+	2+	3-	3o	3-	3o	3+	3-			2322	3043	18	19	24	29	26	30	40	24	26	
12	2+	3o	2+	3o	3+	3o	3o	3o			4021	4431	18	30	20	28	34	29	27	28	27	
13	2+	2o	2o	2o	2+	3-	3-	1o			1122	2331	17	16	14	15	20	22	24	7	17	
14	1+	2-	1+	2o	2o	2+	3o	1+	1o		2113	1312	9	11	8	15	18	27	8	7	13	
15	1-	1-	1+	2+	2-	3-	2+	2-			2223	2322	5	5	10	19	13	24	20	13	14	
16	2o	2+	2-	2+	2+	1+	1-	1-			1221	6311	16	18	13	18	17	10	4	5	13	
17	0o	1-	1+	3o	2+	3-	2o	1+			1323	4232	1	4	9	29	17	25	16	10	14	
18	2-	2-	1o	2-	2o	2-	2o	1-			3223	2343	13	13	7	12	14	13	14	5	11	
19	1o	1+	3-	3o	3-	3-	1o	1-			2221	4224	6	8	21	28	21	26	6	4	15	
20	1+	1-	1+	1+	2-	2+	2o	2o			2322	2445	8	4	8	10	11	18	15	15	11	
21	2-	4-	2+	2+	3o	2o	1+	2-			2313	3224	13	41	19	19	29	16	8	11	20	
22	2+	2o	2+	2-	2-	2+	3-	5-			1223	1424	19	15	18	13	12	17	21	76	24	
23	3+	4o	5o	4+	4-	4-	3-	3-			3332	3232	38	53	100	64	68	50	23	23	52	
24	1o	1o	1+	1-	2o	2-	2o	2-			0122	1311	7	6	8	4	14	12	16	13	10	
25	3o	3-	3-	2o	2-	1o	2-	1+			1221	3233	28	24	24	16	13	7	13	9	17	
26	1-	1-	1+	2-	1o	3o	2-	2+			2121	2422	5	5	10	11	7	27	12	19	12	
27	2o	2-	2-	1+	1-	1+	3o	4o			3112	1534	14	13	12	9	5	8	27	56	18	
28	5o	4o	4-	5-	6-	6-	5o	5-			3343	1766	91	52	43	84	121	143	89	83	88	
29	4+	3-	1-	2+	2o	2o	4-	5-			6233	1246	64	24	8	17	14	16	43	73	32	
30	3o	3-	3-	2o	2+	3o	3-	3-			5423	5633	33	25	21	16	19	31	23	23	24	
31	3+	3-	2o	3o	3o	3-	2-	2-			4222	4243	35	23	15	31	30	22	12	11	22	

23.3

an , as INDICES 1985 (continued)

FEBRUARY 1985

	Kn								σ n		an								An
1	2 o	2 o	3 o	3+	3 o	4-	3-	2-	3333	4543	15	15	27	34	28	43	21	11	24
2	1 o	3+	2+	2 o	3-	3-	2+	2 o	0222	4222	6	39	18	16	22	23	20	15	20
3	1+	1+	1 o	1+	3+	3 o	3-	1-	3222	3532	9	8	6	8	34	29	23	4	15
4	1 o	1+	0+	1-	0+	0 o	1+	1 o	1221	2134	7	8	3	4	2	1	8	6	5
5	1+	3 o	4-	3 o	5 o	4-	4-	3+	4252	2344	10	30	50	32	88	46	47	38	43
6	5-	3+	5-	4+	5 o	5 o	5 o	3 o	3224	4323	71	36	73	62	103	102	92	31	71
7	3-	2-	4-	4+	5-	3+	2 o	3 o	3453	5333	21	12	42	66	72	38	15	31	37
8	4-	2-	2-	4+	3+	4+	4 o	4+	5134	3443	46	13	12	65	36	61	60	63	45
9	3-	3-	4+	3+	4+	3 o	2+	3-	2242	5333	22	23	63	35	61	31	19	22	35
10	3 o	3-	4-	3+	4-	3+	5 o	2 o	3223	3230	30	24	43	35	49	38	88	14	40
11	2-	3-	2+	3-	3+	3 o	3 o	3 o	2233	3244	11	21	20	23	35	29	30	31	25
12	1+	3 o	3 o	2+	3+	3+	2-	1-	2354	6623	10	32	30	19	36	37	12	5	23
13	1-	0 o	0+	2-	3-	3-	4 o	3-	2013	3352	5	0	2	11	21	25	56	26	18
14	2+	3-	3+	2 o	2+	4 o	3-	4-	4332	2434	20	22	34	16	17	53	26	43	29
15	3+	3-	3-	1 o	0+	1 o	2-	3-	2131	3224	37	22	22	6	3	7	11	21	16
16	0+	1 o	1 o	1+	3-	3-	3-	2 o	2112	2351	3	6	7	9	25	24	25	16	14
17	2-	3-	3-	4 o	3 o	3 o	1+	1-	3433	3341	11	23	21	23	51	33	29	8	25
18	0+	2-	2-	2-	1+	1 o	1+	1-	2322	3232	3	11	11	11	9	6	9	5	8
19	1 o	2 o	1-	1 o	1+	1+	2+	3 o	1422	2354	6	14	4	6	9	9	18	28	12
20	3-	3-	3-	2+	2+	1 o	2-	1 o	3313	2223	23	21	26	19	20	6	11	7	17
21	0+	1+	1+	1 o	2 o	3-	3+	3-	2132	3332	3	8	10	7	16	23	40	23	16
22	2+	1+	1 o	2-	2+	2 o	2 o	2 o	2411	3213	18	9	7	13	19	14	15	14	14
23	2-	2-	2-	2-	2+	2 o	3-	3-	2223	4442	11	12	11	12	17	15	21	22	15
24	3+	3 o	3 o	3 o	3 o	2+	3-	3+	4233	3134	34	33	32	27	28	17	21	37	29
25	2-	3 o	4-	3 o	2+	3 o	1+	2-	3544	3424	13	28	43	30	19	32	10	13	24
26	2+	2-	1+	0+	0+	1-	3-	2-	2332	2143	19	12	9	2	2	5	22	11	10
27	1+	1+	1 o	2-	3-	2-	3-	5+	5411	4313	10	8	7	11	22	13	23	120	27
28	6-	6-	6-	5-	5-	4-	3+	2 o	5843	3662	127	140	124	74	82	47	36	14	81

26.4

FEBRUARY 1985

	Ks								σ s		as								As
1	2 o	2-	3-	3-	3 o	3-	2+	1+	2223	1221	16	11	21	26	27	26	20	8	19
2	1+	3 o	2-	2 o	2 o	2 o	2 o	2-	2321	3223	10	30	12	14	15	16	15	3	16
3	1+	2-	1 o	2-	3-	3-	2-	0+	1221	4432	8	12	7	13	24	24	13	3	13
4	1+	1+	0 o	1-	0+	0 o	1 o	1-	1412	2033	8	9	1	4	3	0	6	4	4
5	1-	4 o	3+	3 o	5-	3+	3 o	3-	1541	3242	5	51	34	28	71	38	27	24	35
6	4-	4-	5-	4+	4+	4 o	4 o	3 o	2323	3104	47	49	75	63	66	58	56	27	55
7	3-	2 o	3-	3 o	3 o	3-	2-	3-	3223	4223	24	16	21	28	31	24	13	26	23
8	4-	2-	2-	2-	4-	3-	4-	4 o	2323	3412	45	12	12	41	26	48	51	55	36
9	3-	3-	3+	3-	3+	3-	2+	3-	3331	3323	24	23	37	23	34	26	18	22	26
10	3 o	3-	3 o	3-	3+	3 o	4 o	2 o	5232	3041	33	21	33	22	38	30	53	16	31
11	2-	2 o	2 o	2+	3-	2+	2+	3-	2322	3234	11	15	15	17	26	17	18	24	18
12	2-	3-	3-	2 o	3-	2+	1+	0 o	1312	3421	13	24	24	15	22	17	9	1	16
13	1-	0 o	0 o	1+	2-	2 o	3+	3-	2112	4253	5	1	1	8	13	15	37	23	13
14	2+	2 o	2+	2 o	2 o	4-	3-	3 o	4223	0364	18	15	20	14	15	45	25	33	23
15	3 o	2+	2-	1-	0 o	0+	1-	2-	3331	0132	30	19	13	4	0	2	5	11	11
16	0 o	1 o	1 o	2-	2+	2 o	2 o	2 o	1222	3232	1	6	7	12	18	14	15	14	11
17	1+	3-	3-	2+	3-	3-	2+	1-	2522	6122	9	23	22	20	25	26	19	5	19
18	0 o	2-	1+	1 o	0+	1-	1 o	1-	1212	0332	1	12	8	6	3	4	6	5	6
19	1 o	2-	0+	1 o	1-	1-	2-	2+	0122	3153	7	13	3	6	5	5	12	19	9
20	2+	2 o	3 o	3 o	2 o	1-	1+	0+	4135	1322	18	16	33	29	16	5	10	3	16
21	0+	1+	1 o	1+	2-	2+	3+	2 o	2102	4324	3	8	7	9	11	17	34	15	13
22	2-	1 o	1-	2-	2+	2-	1+	1+	2233	3233	13	7	5	13	19	12	8	10	11
23	2 o	2-	2-	2 o	2-	2 o	2-	3-	2231	2255	15	15	11	11	15	11	15	26	15
24	4-	4-	3+	3 o	3-	2-	2-	3+	5212	2335	43	46	36	31	22	13	13	37	30
25	2-	2+	3 o	2+	2-	2+	1 o	1 o	3344	3335	13	20	27	17	13	18	6	7	15
26	1+	1+	1+	0 o	0 o	1-	2 o	1 o	5122	1123	10	9	8	1	1	4	15	7	7
27	1+	1+	1+	2-	2 o	1+	2+	5+	3212	3234	8	10	8	11	14	9	19	114	24
28	5 o	5+	5 o	4 o	4+	3 o	3-	2-	6515	3441	91	104	102	60	62	31	24	11	61

20.6

an , as INDICES 1985 (continued)

MARCH 1985

	Kn										σ n		an										An	
1	2 o	4 -	4 -	3 -	1 +	1 +	1 +	3 -	3242	1135	15	49	49	26	8	8	9	25	24	24	24	24		
2	2 -	3 -	3 o	4 -	4 +	4 +	4 -	4 -	2333	4622	12	25	27	43	62	67	41	44	40	40	40	40	40	
3	2 o	4 -	3 o	1 o	2 -	3 -	3 -	3 -	1420	3323	16	49	29	6	13	22	22	24	23	23	23	23	23	
4	2 +	2 -	1 +	1 +	2 +	3 -	2 +	3 -	3223	4223	19	13	8	9	18	24	18	25	25	25	25	25	25	
5	3 o	3 o	4 o	4 o	3 o	4 o	5 -	5 +	2343	2353	29	32	56	56	29	54	81	113	56	56	56	56	56	
6	4 o	3 o	4 o	3 o	3 o	3 +	3 o	3 o	4433	1332	53	30	55	33	31	39	33	28	38	38	38	38	38	
7	3 -	2 +	3 -	4 -	3 +	4 -	4 +	3 o	4234	4443	22	17	26	42	36	43	61	30	35	35	35	35	35	
8	4 o	4 +	4 -	4 -	3 +	3 +	3 -	3 -	3423	4443	58	67	43	41	40	34	25	25	42	42	42	42	42	
9	2 o	1 -	1 -	0 o	0 +	1 -	0 +	2 +	1111	2223	14	5	5	1	3	5	2	20	7	7	7	7	7	
10	2 -	1 o	1 +	3 -	2 -	3 -	3 o	3 +	1113	1225	13	6	8	23	12	22	27	38	19	19	19	19	19	
11	1 +	1 o	1 +	1 +	3 -	2 -	1 +	0 +	2221	2222	9	6	9	10	25	12	10	2	10	10	10	10	10	
12	0 +	1 +	1 o	0 +	3 -	2 o	3 +	3 +	2322	5423	3	8	7	3	23	16	36	35	35	35	35	35	35	
13	1 -	1 +	1 +	2 +	1 +	1 -	0 +	1 o	2323	3213	4	9	9	20	8	5	2	6	8	8	8	8	8	
14	1 o	1 -	1 o	2 -	3 -	2 o	3 o	2 -	1113	1142	6	4	7	11	22	14	29	11	13	13	13	13	13	
15	2 +	2 +	4 o	3 +	3 -	1 o	2 -	2 -	5253	3232	17	20	53	34	24	6	12	12	22	22	22	22	22	
16	2 +	1 +	2 o	1 +	3 +	3 -	2 o	3 -	2242	4335	17	10	14	9	36	26	15	25	25	25	25	25	25	
17	2 +	1 o	1 o	1 +	1 -	1 o	3 -	3 -	5212	2064	18	7	6	8	5	6	26	13	26	26	26	26	26	
18	3 +	3 -	2 -	0 +	1 o	0 +	3 o	3 o	2221	1144	38	23	12	3	6	2	27	29	18	18	18	18	18	
19	1 +	2 -	1 +	2 +	3 o	2 +	4 -	2 -	1233	6352	10	13	8	17	29	18	42	12	19	19	19	19	19	
20	1 -	1 -	2 -	1 +	2 +	2 o	1 o	0 +	2122	2322	4	4	12	9	17	15	7	3	9	9	9	9	9	
21	1 +	2 -	0 +	0 +	2 -	1 +	1 +	2 o	4432	3322	9	13	3	2	11	10	9	15	9	9	9	9	9	
22	2 +	1 o	0 +	1 o	2 -	1 o	1 o	2 -	3111	3132	20	7	2	7	11	6	6	11	11	11	11	11	11	
23	2 +	2 +	1 -	1 -	1 o	1 -	1 +	1 +	5302	1333	18	19	4	5	7	5	5	10	9	10	9	10	10	
24	2 o	1 -	1 +	1 +	1 +	1 +	1 +	3 o	3222	1125	14	5	8	10	9	8	10	10	29	12	12	12	12	
25	2 -	0 o	0 +	1 o	1 +	2 o	3 o	2 -	4122	2012	11	1	3	7	10	15	28	13	11	11	11	11	11	
26	2 +	2 -	2 +	2 +	2 -	2 +	2 o	2 o	3222	2133	20	13	12	20	20	11	20	20	14	16	16	16	16	
27	2 o	1 +	2 -	2 +	2 o	3 -	3 +	3 o	5532	1341	14	8	11	19	15	24	37	28	20	20	20	20	20	
28	4 -	4 -	3 o	1 -	2 o	2 o	3 -	2 +	2632	1333	43	48	27	5	15	16	16	26	17	25	25	25	25	25
29	1 +	1 o	1 +	1 +	1 +	3 -	3 -	3 -	2222	1342	10	6	9	8	9	21	22	22	22	13	13	13	13	
30	3 +	1 o	1 o	1 +	2 o	2 -	2 -	1 +	5112	2212	34	7	6	8	14	12	12	12	9	13	13	13	13	
31	2 +	2 o	4 -	3 o	3 -	1 o	2 +	1 o	2452	2222	18	16	42	30	22	6	19	7	20	20	20	20	20	

19.5

MARCH 1985

	Ks										σ s		as										As
1	2 o	4 o	3 +	2 +	1 +	1 -	1 o	3 -	2321	1235	15	56	38	17	8	4	6	23	21	21	21	21	21
2	2 -	3 -	3 -	4 -	4 -	4 -	3 +	3 +	2223	3423	12	22	22	44	50	50	39	40	35	35	35	35	35
3	2 o	3 o	3 -	0 +	1 +	2 o	2 o	2 o	2352	1335	16	28	24	3	9	15	14	17	16	16	16	16	16
4	2 +	2 -	1 o	1 o	2 -	2 o	3 -	3 -	3123	3423	20	11	6	6	12	15	21	25	25	25	25	25	25
5	2 +	3 +	4 -	3 +	3 -	4 -	5 -	5 -	1234	3443	18	34	45	38	25	50	74	73	45	45	45	45	45
6	3 +	3 -	4 -	3 -	2 +	3 o	2 +	3 -	2342	3122	37	24	43	26	19	28	19	22	27	27	27	27	27
7	3 -	3 -	3 o	3 o	3 o	3 +	4 o	3 -	3113	2462	24	25	30	33	30	37	56	21	32	32	32	32	32
8	4 o	4 o	3 +	3 +	3 o	3 -	2 o	2 +	3313	1244	55	58	39	35	28	22	16	20	20	20	20	20	20
9	2 o	1 o	0 +	0 o	0 o	0 o	0 o	2 +	1111	0104	14	6	2	1	0	1	0	17	5	5	5	5	5
10	2 +	1 +	1 +	3 -	1 +	2 +	3 -	3 +	4112	2135	20	8	8	21	9	17	21	40	18	18	18	18	18
11	1 o	2 -	1 +	1 +	2 o	1 +	0 +	0 o	2314	0220	7	11	8	9	16	8	3	0	8	8	8	8	8
12	0 +	1 +	2 -	0 o	3 -	2 +	3 o	3 o	2122	5445	2	10	12	1	23	19	32	28	16	16	16	16	16
13	1 o	1 -	1 +	3 -	1 -	0 +	0 o	1 -	1312	4234	6	5	10	21	4	3	1	5	7	7	7	7	7
14	1 +	1 o	1 +	1 +	2 +	1 +	3 -	2 -	3113	5245	8	6	8	10	20	10	10	26	11	12	12	12	12
15	3 -	3 -	4 -	3 +	2 +	1 -	1 o	2 -	5333	3313	24	22	50	38	20	5	6	13	22	22	22	22	22
16	3 -	2 -	1 +	1 o	3 o	2 +	2 -	2 o	4210	6353	21	12	8	7	27	19	11	15	15	15	15	15	15
17	2 +	1 -	1 o	1 o	0 +	0 +	2 +	2 +	4111	3354	17	4	6	6	3	3	19	20	10	10	10	10	10
18	4 -	2 +	2 o	0 o	0 +	0 o	3 -	2 +	1132	1065	44	18	14	1	2	0	23	20	15	15	15	15	15
19	1 +	2 -	1 +	2 o	3 o	2 +	3 o	1 o	2223	5444	10	13	9	14	31	19	31	7	7	17	17	17	17
20	1 -	1 -	2 o	1 +	2 o	2 -	0 +	0 o	2211	2122	4	5	15	8	4	13	3	1	1	1	1	1	1
21	1 o	1 +	0 o	0 o	1 o	1 o	1 o	1 +	2111	2342	7	8	1	1	6	6	6	8	8	5	5	5	5
22	2 o	0 +	0 o	0 o	2 -	0 +	0 o	1 o	3111	5204	16	2	1	1	11	2	0	6	6	5	5	5	5
23	3 o	2 +	0 o	1 -	1 -	0 o	1 o	0 +	8423	3153	28	20	1	4	4	1	6	6	6	6	6	6	6
24	1 +	1 -	1 o	1 +	1 o	0 +	1 -	2 +	3302	2225	9	4	7	10	6	3	3	5	5	19	8	8	8
25	1 +	0 o	0 o	0 +	1 o	1 +	3 -	1 +	2113	1122	8	1	1	2	6	8	24	8	7	7	7	7	7
26	3 -	2 -	1 +	2 +	2 +	1 +	2 o	2 -	5113	5147	26	12	8	17	18	8	16	11	15	15	15	15	15
27	1 o	1 o	2 o	3 o	3 -	2 +	3 -	3 -	3346	4436	6	6	15	27	23	18	24	25	18	18	18	18	18
28	4 -	4 o	3 o	0 o	1 o	1 +	2 +	2 -	3361	3243	48	53	28	1	6	9	18	11	22	22	22	22	22
29	1 +	1 +	1 o	1 o	1 -	2 -	2 o	2 -	1132	2543	8	9	7	6	4	13	15	13	9	9	9	9	9
30	3 o	1 o	1 -	0 +	1 +	1 -	1 -	1 -	5113	1213	30	6	4	3	10	5	5	5	5	5	5	5	5
31	2 o	2 +	3 +	3 +	2 -	0 +	2 -	0 +	1342	2132	15	18	40	35	11	2	13	3	17	17	17	17	17

16.2

an , as INDICES 1985 (continued)

APRIL 1985

	Kn										$\sigma$	n	an										An
1	1+	2 o	3-	3+	5-	4+	3+	3-			2232	2342	10	14	26	35	74	67	38	22		36	
2	1+	3 o	3+	3 o	3-	3+	4 o	3 o			3555	2242	10	28	36	30	23	36	51	27		30	
3	4+	3-	3-	3-	3-	3 o	4 o	3-			3223	2423	61	23	23	25	22	31	58	26		34	
4	2-	3 o	3+	3 o	3-	4-	3+	3-			2254	2331	12	29	35	33	22	43	39	23		30	
5	2 o	3-	1+	2 o	2+	1 o	1+	1 o			4333	4211	16	23	10	16	17	7	8	7		13	
6	0+	0 o	1+	2-	2-	1 o	2+	2+			2121	3123	2	1	9	12	13	7	18	18		10	
7	1 o	2-	3-	2+	2-	3-	2-	1-			1434	2222	6	12	21	18	13	22	12	4		14	
8	0+	1-	2-	2+	2 o	3-	4-	5-			2242	0221	2	4	11	17	15	25	46	7		24	
9	4-	3+	4 o	5-	5 o	5 o	3 o	1+			2343	1132	41	40	58	76	96	91	27	9		55	
10	0+	2-	3-	3+	3+	3-	2+	3-			4353	3141	3	13	22	37	36	21	20	26		22	
11	4-	3 o	2-	2+	2-	3-	1+	1+			6211	1211	47	27	13	17	11	22	8	9		19	
12	1+	1+	1+	1+	2+	1+	2-	1-			2222	2211	9	8	10	8	12	9	13	4		9	
13	1 o	1+	1+	2-	2-	2+	2 o	3-			4322	2322	6	9	10	12	12	19	14	26		14	
14	2+	3 o	2 o	1+	2-	1+	2-	2-			4431	3223	19	27	15	8	13	10	13	13		15	
15	1 o	1+	1+	1+	1 o	1 o	1-	2-			3431	1222	6	9	8	8	6	6	5	12		8	
16	2-	2-	1+	3-	2+	2-	2-	2+			1334	3223	12	11	9	24	19	12	13	20		15	
17	1+	1-	2 o	1+	1+	1 o	1 o	2+			3122	3224	9	5	15	9	9	6	7	17		10	
18	2 o	0+	1 o	1-	1 o	1 o	1-	1+			5222	2133	15	3	7	5	6	7	5	9		7	
19	2 o	3-	3 o	3-	3+	3+	4-	4+			2422	4413	14	22	32	25	35	37	45	65		34	
20	4 o	5 o	6 o	3+	2+	3 o	5-	6 o			5744	4445	56	91	152	34	18	30	77	170		79	
21	7 o	6+	7 o	5 o	4+	5-	4 o	3+			8543	2332	258	179	259	90	65	81	51	39		128	
22	3-	2+	3-	4-	2+	3-	2-	2+			4543	2321	22	20	25	41	18	21	13	18		22	
23	3+	2 o	3-	2+	2+	3 o	3-	2+			3221	2133	34	15	23	18	18	27	21	19		22	
24	3-	4-	4-	3+	2 o	2+	2-	2-			3423	1233	40	43	47	35	16	17	12	11		28	
25	4-	4 o	4-	4-	3 o	2 o	3-	3 o			3222	1224	42	58	44	49	27	16	21	32		36	
26	4-	4+	5-	4+	2+	3+	3+	4 o			2363	1223	48	67	76	64	17	4	36	57		50	
27	3+	4+	4 o	4 o	4-	4-	3 o	5-			2445	4222	36	61	51	56	50	43	28	80		51	
28	5 o	5-	5 o	6 o	4 o	3-	3-	2-			5324	2323	97	77	118	153	58	24	25	13		71	
29	3 o	5 o	3 o	1+	2+	2 o	2-	2-			4233	2312	30	90	32	9	18	14	13	11		27	
30	2-	0+	1+	5 o	7-	5-	4-	3 o			1324	3422	13	3	10	87	205	72	50	33		59	

32.4

APRIL 1985

	Ks										$\sigma$	s	as										As
1	1+	2 o	3-	3+	5-	4+	3 o	2 o			2032	4510	9	16	24	40	83	64	33	16		36	
2	1+	3-	3 o	3-	2 o	3-	3+	2+			3322	3433	8	25	31	22	16	25	38	20		23	
3	4 o	2+	2 o	3-	2-	3-	4-	3 o			5131	2434	58	18	16	22	11	23	46	28		28	
4	2-	3-	3-	3 o	2 o	3+	3+	3-			1235	2243	12	22	25	27	16	35	36	21		24	
5	2 o	2+	0+	2-	2+	0 o	0+	1-			3313	5123	14	20	2	12	17	1	2	4		9	
6	0+	0+	1-	2-	1+	0+	2-	1+			2222	2133	2	2	4	11	8	2	11	10		6	
7	1-	2-	3 o	2 o	1+	2 o	1 o	0 o			3333	2320	4	13	29	14	8	15	7	0		11	
8	0+	1-	1 o	2-	1 o	2 o	3+	4+			1222	2134	2	4	7	12	7	16	40	67		19	
9	4-	4-	4+	5 o	5+	5 o	3 o	1-			7443	3132	46	49	68	88	115	93	27	5		61	
10	0+	2 o	2 o	3+	3-	2+	2-	2+			1245	4325	2	16	16	40	26	19	11	19		19	
11	4-	3 o	1+	1+	1 o	2+	0+	0+			5421	3412	44	30	9	9	6	20	2	3		15	
12	1 o	1 o	2-	0+	1+	1-	1+	0 o			0022	1231	7	7	11	3	8	5	10	1		7	
13	0+	1 o	1-	1 o	1-	2-	1+	3-			2132	3223	3	6	5	7	5	11	9	25		9	
14	3+	4-	2+	1+	2 o	1+	2-	1 o			5532	4214	34	41	18	10	15	8	11	7		18	
15	1-	2-	1-	0+	0 o	0 o	0+	1-			2322	3114	4	12	5	5	2	1	2	5		5	
16	1 o	1+	1+	3-	2+	1 o	1 o	2-			3434	4433	6	10	9	24	18	7	7	12		12	
17	1+	1-	2-	0+	0+	0+	0+	2-			2331	3125	8	4	11	2	2	2	2	13		6	
18	2-	0+	1-	0-	0+	0+	0 o	0 o			5221	2205	13	2	4	2	3	3	0	6		4	
19	1+	3-	4 o	3 o	3+	4-	4 o	5-			3564	5438	9	26	53	30	39	47	53	85		43	
20	4 o	5-	6-	4-	2-	3 o	5 o	5 o			8315	1334	55	79	126	45	13	29	89	102		67	
21	7-	5+	6+	5 o	4 o	5+	4-	3+			7521	2646	227	110	198	93	57	107	45	36		109	
22	2+	2+	3+	2+	2 o	1 o	2-	2-			4333	4223	18	18	20	35	17	15	7	11		18	
23	3 o	2-	2+	2 o	2-	2+	2 o	2-			6331	3241	27	11	20	15	12	19	16	13		17	
24	3+	4-	4 o	3-	2-	1+	1+	1-			5313	5212	34	41	56	26	13	10	9	5		24	
25	4-	4 o	3 o	4-	3+	1+	2 o	2+			5213	3445	46	53	33	47	38	10	14	19		33	
26	4 o	4-	5-	4+	2-	2+	3 o	4-			4234	3133	51	49	79	70	13	18	30	48		45	
27	3 o	4+	4-	4 o	3+	2 o	4+	4+			2622	5234	31	65	50	48	51	35	16	61		45	
28	5+	4+	5+	6-	4-	2+	2+	2-			3423	2132	104	70	113	141	44	19	18	12		65	
29	3-	5-	3 o	0+	2-	1+	2-	0+			2222	4412	22	83	29	2	12	8	11	3		21	
30	1+	0+	1+	4+	7-	4 o	3+	2+			2143	3421	9	2	10	63	210	60	35	19		51	

28.3

an , as INDICES 1985 (continued)

MAY 1985

	Kn										$\sigma$	n	an								An
1	2+	3-	3-	3+	3o	2+	1-	2+	1421	3322	18	21	25	37	29	17	4	19	21		
2	4+	5-	5+	5o	3o	2o	2-	2o	2533	2233	70	86	113	90	29	14	11	14	53		
3	1+	1+	2o	3o	2o	3-	1+	2+	1124	1322	8	8	16	29	16	21	10	17	16		
4	2-	2+	3-	2+	3o	3-	2-	1o	2322	4211	11	20	25	20	29	22	12	7	18		
5	1+	2o	2o	1+	2-	2o	3-	3-	2342	2322	8	14	14	9	12	14	22	24	15		
6	3+	3-	3+	2-	2o	2+	2+	2+	2231	0212	39	21	37	11	15	17	18	19	22		
7	3-	2-	1+	1+	1+	1+	2-	3-	4322	1132	25	13	10	10	9	10	12	24	14		
8	2+	2-	2+	3-	1+	3-	2-	2+	4322	2322	17	13	18	26	10	22	12	18	17		
9	2+	3-	3-	3-	1+	1+	2-	0+	5734	2243	19	26	22	23	9	10	13	3	16		
10	0o	0o	0+	1-	1+	1+	2o	3-	1011	2323	1	0	3	5	8	9	15	26	8		
11	2-	2-	3-	2o	1-	1+	2-	1+	2224	2123	12	13	23	15	5	10	11	8	12		
12	1+	3+	3-	3o	2+	3-	3-	3-	3322	4221	8	8	40	25	30	19	22	23	22		
13	3-	3-	2-	2-	2-	3-	2+	3+	6631	1235	24	23	11	12	13	25	18	34	20		
14	3-	2o	2-	1+	1+	2-	2o	2-	4431	2334	23	16	13	9	9	11	16	11	14		
15	3o	3+	2+	2+	3-	3o	3-	3+	5522	1223	33	38	17	19	23	27	25	34	27		
16	1+	2-	2o	2o	3o	3-	3-	3+	3233	2332	8	13	15	16	28	26	25	39	21		
17	2-	1+	1o	2-	3-	3-	2o	3-	3213	3324	11	8	7	12	26	21	14	25	16		
18	3-	2o	2o	1+	3-	3-	3-	3-	3321	2232	21	15	14	8	23	22	21	26	19		
19	3-	2+	2-	2o	2o	3-	3-	2+	5332	2231	24	18	17	12	15	23	22	18	19		
20	2+	1+	1o	0o	1+	2+	2o	1+	2341	1412	20	9	6	0	8	17	15	9	11		
21	1+	2-	1-	1o	2o	3-	3-	3-	2431	0531	10	13	5	7	15	25	23	26	16		
22	2-	2o	2-	2-	1o	1+	2o	1+	3133	2112	11	14	13	11	7	8	15	10	11		
23	2o	2+	1o	1-	1o	1o	1+	2-	5513	1123	16	19	7	4	7	6	9	11	10		
24	2-	1o	1o	1-	1+	1+	3-	2+	5322	2223	12	7	6	5	8	10	23	18	11		
25	1-	1o	1-	1o	2-	3o	3-	4o	2111	2324	4	6	5	7	13	27	21	52	17		
26	3o	1+	1+	2o	2+	3-	3-	2-	2221	3323	30	10	9	16	20	21	22	13	18		
27	1+	2-	2-	3-	3-	1+	1+	1+	2324	3332	10	11	12	23	22	9	10	10	13		
28	1+	1-	2-	2-	2o	1+	2-	2-	2233	2211	8	10	11	12	14	10	12	13	11		
29	2o	2-	2o	1-	0+	2-	1o	1+	2121	2223	16	11	14	4	3	12	7	9	10		
30	0o	0+	1o	1o	1+	1+	1-	2-	2212	2223	2	3	7	7	10	8	4	11	7		
31	3-	2o	1o	1o	1o	1+	2-	2+	2442	3322	26	21	15	7	6	10	12	19	15		

16.8

MAY 1985

	Ks										$\sigma$	s	as								As
1	2o	2+	2o	3o	2o	2-	0o	1+	3332	2212	15	17	16	28	16	12	1	10	14		
2	5+	4+	6-	5o	3-	2-	1o	1o	3653	5411	106	65	129	96	21	12	6	5	55		
3	1o	1-	1+	3-	2o	2o	1+	2-	1123	3333	6	5	9	23	14	14	9	13	12		
4	1+	2+	3o	2o	3+	3-	1+	0+	3350	4422	8	18	27	16	37	26	8	2	18		
5	1o	2o	2-	0o	2-	1+	2+	2o	2541	2222	7	15	12	1	11	9	19	15	11		
6	4-	2+	3+	1+	2-	2-	1+	2o	5352	2514	43	20	37	9	13	13	8	15	20		
7	3-	2-	1o	1-	1-	1+	1+	2+	5313	3326	26	13	6	5	5	8	8	17	11		
8	2+	1+	1+	2+	1o	2+	1o	3o	6233	4525	20	8	10	19	7	17	7	33	15		
9	3-	3o	3-	2+	1o	1o	2-	0o	9722	6430	26	27	22	18	7	7	11	0	15		
10	0o	0o	0o	0o	1-	0+	1+	2+	0011	2234	0	0	1	1	5	2	9	20	5		
11	1+	2-	3-	2-	0o	0+	0+	0+	3333	0212	10	12	25	13	0	3	2	2	8		
12	1o	1o	3+	3-	2+	2o	3o	3+	2322	5035	7	6	36	25	17	16	27	37	21		
13	3o	3-	2o	1o	2-	3o	2+	3o	6540	4536	31	22	15	7	11	31	18	30	21		
14	2+	2o	2o	1o	1-	1o	2-	1o	6534	1243	20	14	16	7	5	7	13	6	11		
15	3o	4-	2+	2+	2+	3-	2+	4-	3531	3544	28	41	19	17	20	25	18	42	26		
16	1-	2+	2+	2o	3-	2o	3-	3-	2463	4434	5	18	19	14	26	14	21	24	18		
17	1+	1o	0o	1o	2+	2o	1+	3-	6223	6635	8	7	1	7	20	16	9	21	11		
18	3-	2o	1+	1o	2o	3-	2o	3-	6524	3425	23	14	8	7	14	22	16	24	16		
19	2+	2o	2+	2-	2+	3-	3-	2o	5522	4224	19	16	18	11	19	25	21	15	18		
20	2+	1-	0o	0o	0+	1-	1+	0+	4410	1311	18	4	1	0	2	5	8	2	5		
21	1+	1+	0+	0+	1+	3-	2+	2-	2331	4424	8	8	2	2	8	21	17	13	10		
22	2-	1+	1o	1o	0o	0+	1-	1-	5202	1221	11	8	7	6	1	3	5	5	6		
23	2o	2+	0o	0o	0+	0o	0+	0+	5420	1122	15	18	1	0	2	1	2	3	5		
24	2-	1o	0+	0o	0+	1o	2o	2o	7210	1344	11	6	2	0	2	6	14	16	7		
25	0o	1o	0o	0o	0+	0o	0+	2-	0210	2223	0	6	1	0	3	11	12	25	7		
26	3-	1+	1-	1o	1+	2-	2+	1o	3212	3232	23	8	5	6	9	12	17	6	11		
27	1-	1o	1+	1+	2+	1-	0+	0+	1321	5321	5	7	9	10	17	4	3	2	7		
28	0+	0+	1-	1-	1o	1-	0+	0+	3232	3312	2	3	5	5	6	5	2	3	4		
29	2-	1o	1+	0o	0o	1-	0+	1o	3220	0221	11	6	8	1	0	5	3	6	5		
30	0o	0o	0o	0o	0+	0o	0+	0o	1222	0201	1	1	1	2	0	2	0	1	1		
31	2+	1+	1o	0+	0o	0o	0+	2o	5332	1115	18	10	7	2	1	1	2	15	7		

12.9

an , as INDICES 1985 (continued)

JUNE 1985

	Kn									$\sigma$ n		an									An
1	3+	3+	3 o	4 o	3 o	3+	3 o	3 o	3255	5312	39	38	33	54	31	34	28	29	29	36	
2	2-	1+	1+	2-	3-	2-	3-	2+	2334	3133	12	9	10	13	22	13	21	17	17	15	
3	1-	1-	0+	1+	2-	2+	2 o	2-	3332	2432	5	4	3	8	12	17	14	11	11	9	
4	2 o	1-	2-	1+	1+	2+	2-	2-	3252	2342	14	5	11	8	10	17	13	11	11	11	
5	2-	1+	2-	2-	1+	2-	2-	2 o	2533	1223	11	10	13	11	9	11	13	14	12	12	
6	2+	3 o	2+	3-	4-	5 o	3 o	5-	4234	4423	19	31	17	23	48	88	30	73	25	41	
7	3+	4+	4+	4 o	4 o	4-	4-	3-	4231	2441	37	61	68	58	56	48	49	26	50	50	
8	3+	4-	4-	4-	2+	2+	2 o	2 o	4343	3222	37	48	42	41	17	18	16	15	29	29	
9	1+	2+	3-	2-	1+	3-	4 o	5+	2232	1333	9	17	26	11	8	24	55	106	32	32	
10	5-	4+	4+	3-	2 o	3 o	3-	3-	2433	3132	71	73	65	67	24	15	27	25	46	46	
11	3-	3 o	3-	2+	2 o	3-	3-	3-	1432	1311	22	30	21	18	14	24	23	25	25	22	
12	3-	3-	3-	2 o	2 o	2+	2+	2+	4434	3432	24	24	22	14	14	19	18	18	19	19	
13	1 o	1 o	1-	1+	2-	2 o	2-	2+	2113	3133	6	7	5	8	12	16	12	18	11	11	
14	2-	1-	2 o	1+	2-	1+	1 o	2-	2243	2124	11	5	16	9	11	8	7	13	10	10	
15	2-	3 o	1+	1 o	1-	1+	2 o	1-	2322	2331	13	30	8	7	5	10	16	5	12	12	
16	1 o	1 o	2-	1-	0+	1-	1+	1+	1221	2133	6	7	11	5	2	4	8	8	6	6	
17	2-	1 o	2 o	2-	3 o	3 o	2 o	2-	2233	3542	12	7	14	13	27	28	14	12	16	16	
18	1-	1+	1+	1+	2-	2 o	1+	1 o	2321	2432	5	9	9	9	12	16	9	6	9	9	
19	1+	1-	1+	2-	2-	1+	1 o	1+	2223	2423	8	5	9	11	12	8	6	8	8	8	
20	1-	2 o	2-	2 o	3 o	4+	3-	3 o	2233	1332	5	14	11	15	31	67	22	31	25	25	
21	2-	2+	2 o	2+	2+	2-	2-	2-	1221	2323	12	20	14	18	17	13	13	12	12	15	
22	2 o	3-	3 o	3-	1 o	1+	1 o	1+	2242	1222	16	24	30	24	7	9	7	8	16	16	
23	3-	2+	1+	2 o	3-	2 o	1 o	2-	2323	5123	25	18	9	14	22	14	7	11	15	15	
24	1+	1 o	1 o	1+	2-	2-	2-	2+	3312	3223	8	6	7	9	13	12	11	18	11	11	
25	3 o	3 o	2 o	2-	2 o	3+	3-	3-	2304	2122	32	27	29	16	13	16	39	24	25	25	
26	3-	3-	3-	4-	4-	3 o	4 o	3+	2215	3212	23	23	22	50	47	31	56	34	36	36	
27	3-	2 o	3-	2+	2+	3+	3 o	3 o	3134	2243	23	16	24	20	20	34	27	33	25	25	
28	3+	4-	3+	3 o	3+	3 o	3-	3+	2232	3222	37	41	36	27	35	27	26	39	34	34	
29	3 o	2+	3 o	4-	3 o	3-	3 o	2 o	2442	2332	27	19	32	43	27	22	29	16	27	27	
30	2-	1 o	1+	2 o	1+	2 o	3 o	4-	3323	3222	13	6	8	16	10	16	31	48	19	19	

21.4

JUNE 1985

	Ks									$\sigma$ s		as									As
1	4-	4-	3-	4-	3 o	3+	3+	3-	5424	5427	44	42	22	47	31	37	35	24	35	35	
2	2 o	1-	1 o	1-	2-	1+	2-	1-	5332	4343	15	4	7	4	13	8	12	5	9	9	
3	0 o	0+	0 o	0+	1-	2-	1 o	1+	2024	1535	0	3	0	3	5	11	6	10	5	5	
4	1+	0 o	1 o	0 o	1 o	1+	1-	1 o	5031	4313	8	0	6	1	6	9	5	7	5	5	
5	2-	2 o	1+	1 o	1-	1-	1-	1+	4544	3433	13	14	9	6	4	4	4	8	8	8	
6	2+	3 o	2-	1+	3-	5-	2+	5-	4533	4334	20	30	13	10	24	82	20	80	35	35	
7	3-	4+	5-	4-	4 o	4-	3+	3-	4231	3433	36	69	76	41	52	43	39	21	47	47	
8	4-	4 o	4-	4-	2 o	1+	1 o	2-	5333	3411	41	56	50	44	15	10	6	11	29	29	
9	1+	2+	2+	1 o	0+	2-	4+	6-	2431	1222	9	20	19	6	2	11	66	131	33	33	
10	5-	5-	4+	3 o	2 o	2+	3-	3-	5555	6334	76	82	84	67	30	16	20	21	50	50	
11	2+	3+	2+	2-	1+	2-	1+	2 o	3432	3423	20	37	20	13	8	13	10	15	17	17	
12	3 o	3-	3-	2 o	1+	2+	2+	2 o	7423	2443	30	24	25	15	10	17	17	15	19	19	
13	0 o	0+	0 o	0+	1+	2 o	1 o	2 o	1203	5244	1	3	0	2	9	15	6	15	6	6	
14	1 o	0+	1+	1-	0+	0 o	0 o	1 o	5332	0023	7	2	10	5	3	0	1	7	4	4	
15	1 o	2+	0 o	0+	0+	1 o	1 o	1-	5412	2531	7	17	1	2	3	6	7	4	6	6	
16	1-	1-	1+	0 o	0 o	0 o	0 o	0+	3341	0012	5	5	8	1	0	0	1	2	3	3	
17	1 o	0+	1 o	0+	2-	2+	1-	1+	2122	3434	7	2	6	2	13	17	5	8	8	8	
18	0+	1-	0+	0+	1 o	1 o	0 o	0 o	1221	2320	2	4	3	2	6	6	1	0	3	3	
19	0 o	0+	1-	0+	0+	0 o	0 o	0+	1110	2111	1	2	4	3	3	1	2	2	2	2	
20	0+	1+	1 o	2-	2+	3+	1+	2+	3433	3422	2	9	6	13	18	37	8	17	14	14	
21	1+	2+	1+	1+	1+	1-	0+	1-	3622	3322	10	20	9	9	8	5	3	5	9	9	
22	2-	2+	2+	2 o	0+	0 o	0+	0+	5344	2021	11	18	17	16	2	0	2	2	2	9	
23	3+	3-	1+	1+	1+	0+	0 o	0+	6333	4212	40	21	10	8	9	3	1	3	12	12	
24	0+	0+	0+	0+	0+	1 o	1-	1+	2121	2235	3	2	3	2	3	6	5	10	4	4	
25	2+	3-	2+	2-	1 o	1+	3+	3-	2334	2452	17	21	20	12	7	8	37	21	18	18	
26	3+	2+	3-	4+	4-	3 o	5-	4-	5328	4433	35	17	21	62	49	30	73	41	41	41	
27	3 o	2+	2+	2+	2+	3 o	3-	3 o	6114	3122	31	17	19	18	20	28	21	27	23	23	
28	4 o	3+	4-	3-	3-	2+	2+	3+	4332	2224	52	39	45	22	25	18	19	38	32	32	
29	3 o	2+	3+	4-	3-	2+	3-	2+	5432	3235	33	19	38	48	23	19	25	17	28	28	
30	2-	0+	1-	2 o	1 o	2-	3 o	3+	5236	2352	12	3	4	14	6	13	31	37	15	15	

17.6

an , as INDICES 1985 (continued)

JULY 1985

	Kn								$\sigma$ n		an								An
1	4+	3-	3 o	2 o	2+	2+	2+	2+	2223	1222	62	21	33	14	20	20	18	18	26
2	2-	1+	1-	1 o	1 o	1+	1+	2-	3122	2223	13	8	4	7	7	8	10	12	9
3	1+	2-	2-	1 o	2 o	2 o	2+	3 o	2233	2231	9	11	11	7	14	14	18	31	14
4	3+	3-	3+	4-	5 o	4-	4+	4 o	2433	1231	37	26	37	41	99	45	67	51	50
5	3 o	3+	3 o	3 o	3 o	2+	3 o	4-	0132	1212	29	35	28	29	33	20	30	41	31
6	3 o	3 o	4-	3+	3-	3 o	4-	4 o	4324	3233	31	33	46	37	26	28	42	59	38
7	4-	4-	4-	3-	3+	3 o	2+	3 o	3222	3423	48	47	42	25	40	32	19	30	35
8	2 o	3 o	3-	3-	3 o	3 o	4-	4-	3222	1334	14	27	24	23	28	30	43	46	29
9	2+	4 o	3-	1+	2-	1+	1+	1+	2431	1323	18	55	26	8	12	10	8	8	18
10	2-	2 o	1+	2-	2-	3-	3+	3 o	2223	1333	13	14	9	12	11	24	34	31	19
11	3-	3 o	3-	3-	3-	2 o	3 o	3-	4323	2342	25	31	23	26	22	14	31	24	25
12	4 o	4+	4 o	5-	4 o	4 o	5 o	3+	3431	3231	52	68	53	83	60	52	102	34	63
13	2+	2 o	2+	4-	4-	4 o	4 o	3+	1334	3522	18	15	18	48	44	53	54	40	36
14	3+	4 o	4 o	3 o	3 o	2+	2-	1+	2322	1222	35	53	53	29	28	19	13	10	30
15	2-	3+	2 o	3-	2-	1+	1 o	1 o	2325	1221	11	38	14	26	12	10	7	7	16
16	1 o	1+	1+	1+	1 o	2 o	2-	2 o	1321	2311	7	9	9	8	7	14	12	15	10
17	3 o	3+	2 o	4 o	4 o	3 o	2 o	2+	2422	1222	28	35	14	56	58	31	15	19	32
18	3 o	3-	2+	3-	3 o	3-	3 o	3 o	1323	3223	30	22	19	24	29	25	31	31	26
19	2 o	2-	2+	3 o	3 o	2-	1+	1-	3232	2222	14	12	20	30	29	13	9	5	17
20	1+	3-	2-	2-	2+	3+	2-	1+	3522	2342	10	21	13	12	20	37	12	9	17
21	2 o	2 o	2+	2+	1+	1+	1 o	2-	4553	1233	16	14	18	18	10	8	6	11	13
22	1+	1 o	2-	2 o	1+	1 o	3-	2 o	2323	1111	8	7	12	14	10	7	26	16	13
23	2-	4+	4-	3-	2+	2-	3-	3-	2323	2343	12	63	41	24	19	12	22	25	27
24	2 o	2 o	3-	3 o	3 o	2+	3+	3-	0232	4242	15	15	25	29	30	18	34	25	24
25	3 o	3 o	3 o	3-	1+	3-	3-	2+	3212	1312	33	31	32	22	9	22	25	20	24
26	2+	4 o	3-	3 o	2 o	2+	3+	4-	3332	1224	17	57	22	28	15	19	37	49	31
27	3 o	3+	4-	3+	4-	2 o	2-	3-	1332	3124	29	38	50	38	43	15	13	23	31
28	3 o	3-	2 o	3-	2 o	3-	3 o	2+	3232	2342	27	22	14	25	16	21	32	20	22
29	2-	2-	1+	1+	2-	2 o	3-	2-	2123	2322	11	11	8	9	11	16	22	12	13
30	2 o	3 o	3-	3-	4-	2+	2-	2+	2243	2233	14	31	22	26	50	19	13	19	24
31	2-	3-	4 o	5 o	5-	5-	4-	5-	1252	5231	12	24	60	87	75	75	43	79	57

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	Ks								$\sigma$ s		as								As
1	5-	2+	3-	1-	2-	2 o	1+	2-	3331	4323	73	20	25	5	12	14	9	12	21
2	1+	0+	0 o	0 o	0 o	0+	1-	0+	2301	1341	10	2	0	1	1	2	5	2	3
3	1 o	1+	1 o	0 o	1 o	1-	1+	3-	4311	3215	7	10	6	1	7	5	10	25	9
4	3 o	3-	3+	3-	5 o	4 o	5-	4+	2522	4146	32	24	34	24	100	51	72	65	50
5	3 o	3-	3-	3-	3-	2+	3-	3 o	5523	2333	31	30	26	24	21	19	25	27	25
6	3+	3+	3+	3+	2 o	3 o	4-	4 o	4214	2344	35	35	34	34	15	29	48	52	35
7	4-	4-	4-	3 o	3+	3 o	2-	3-	4233	4436	49	48	49	27	39	31	13	25	35
8	1-	3-	3 o	2 o	3-	2+	4-	4 o	3222	3235	5	26	33	15	23	19	46	57	28
9	2+	4-	3-	0 o	0+	1+	2-	1 o	3242	3465	19	41	24	1	3	10	12	7	15
10	3-	2-	1 o	1-	1-	2 o	2+	2+	6221	2441	21	12	6	5	5	14	17	12	12
11	2+	3-	2+	2+	2 o	1+	2+	2 o	6423	2245	20	25	20	17	15	9	17	15	17
12	3+	4 o	3+	5-	4-	4-	6-	3-	4335	3232	37	54	38	72	47	49	123	24	56
13	2-	1 o	2-	4 o	4 o	4-	4 o	4 o	2323	3334	13	6	11	52	52	44	51	55	36
14	3 o	4-	3 o	3 o	2+	2 o	1+	1 o	5432	1111	32	49	31	28	19	16	10	6	24
15	2-	4 o	2-	2+	1+	0+	0+	0+	4425	5112	12	51	13	20	8	2	2	2	14
16	0+	0+	1-	0 o	0 o	1-	1 o	1-	2221	2213	3	3	4	1	1	4	6	5	3
17	2+	3 o	2-	4-	4-	3 o	2-	2-	1524	3262	18	30	11	48	49	32	13	12	27
18	3 o	3-	2-	2 o	2+	2+	3-	4-	5321	3343	33	21	11	14	18	18	21	46	23
19	2 o	1+	1+	3-	3-	1+	1-	0 o	4323	2231	14	10	10	25	25	9	5	1	12
20	1 o	2-	2-	1+	1+	3+	1-	1-	4351	2312	7	12	12	8	10	38	5	5	12
21	1+	2 o	2 o	1 o	0+	0 o	0 o	0+	5652	2102	9	14	16	7	3	1	0	2	7
22	0 o	0+	2-	1 o	1-	0+	2 o	2-	1233	3334	1	3	11	6	4	2	14	11	7
23	1 o	4+	3 o	2+	2-	2-	2+	3 o	2333	3135	7	68	32	19	12	13	18	31	25
24	1+	2+	2 o	2+	2+	2-	3-	3-	1421	2226	9	17	14	20	20	12	22	26	18
25	3+	3+	3 o	2+	0+	2 o	3-	2+	5352	2235	34	37	32	17	3	16	23	19	23
26	2+	4 o	3-	3-	2-	2-	3+	4-	6332	3246	18	58	21	21	12	12	39	49	29
27	3+	3+	4-	3+	4-	1+	1+	3-	3443	2336	37	39	50	37	45	9	8	26	31
28	3-	3-	1+	3-	2-	2-	3+	3-	3543	2243	24	24	8	25	13	12	37	21	21
29	1+	1 o	1-	0 o	1 o	1 o	2-	1-	2040	3332	8	7	4	0	7	6	12	4	6
30	2-	3 o	3-	3-	4-	2 o	0+	1+	4354	3211	11	29	23	22	42	16	2	8	19
31	1 o	2+	4-	5-	4 o	5-	4-	5 o	2343	3345	7	19	50	81	53	74	48	92	53

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an , as INDICES 1985 (continued)

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	Kn										$\sigma$	an										An
1	3+	3 o	3-	2+	4-	3 o	3-	3 o	2132	3211	37	32	22	20	44	30	22	33	30	33	30	
2	2+	3-	3-	2+	2-	3 o	3 o	3-	3323	2221	17	26	24	18	12	31	27	26	23	23	23	
3	2+	2 o	1 o	2 o	1+	2 o	2+	2 o	2021	2212	19	15	7	14	9	16	18	16	14	16	14	
4	2 o	2+	3-	1+	2 o	2-	2+	2 o	2433	2234	14	19	24	10	16	11	11	15	15	15	15	
5	1 o	1+	1+	1 o	1+	1+	1+	1+	1222	2232	7	8	9	7	9	9	9	9	8	8	8	
6	1+	1-	1 o	0+	0+	1 o	2-	1 o	4212	2223	9	4	6	2	3	7	13	6	6	6	6	
7	1+	0+	1 o	1-	1 o	1-	1 o	1 o	3232	1134	10	3	6	4	6	4	7	14	7	7	7	
8	2 o	2 o	1 o	1+	1+	2-	2-	2+	2111	1233	14	16	7	8	10	11	13	17	12	12	12	
9	2-	1-	0 o	1-	0+	1+	2+	2+	4212	1332	11	4	1	5	3	9	20	18	9	9	9	
10	2-	2 o	3+	2+	1+	2 o	2-	2-	1343	2032	13	16	34	19	10	15	11	12	16	16	16	
11	3 o	2-	1-	1+	1+	0+	1-	0+	2222	1122	33	11	4	9	8	3	5	3	10	10	10	
12	1 o	1-	1+	2+	3 o	3 o	5+	5 o	1332	4322	7	4	9	19	28	33	105	92	37	37	37	
13	5+	6-	5-	5-	3 o	3-	4-	4-	5623	1254	111	129	79	75	31	24	49	41	67	67	67	
14	3 o	3 o	4-	3+	2+	2 o	2-	2+	4535	2233	30	31	48	36	19	14	13	17	26	26	26	
15	2+	3+	4-	3 o	3 o	2-	3-	2+	5234	2222	18	35	42	30	28	12	21	18	26	26	26	
16	3-	2-	2 o	3-	3-	2 o	3-	3-	3322	3145	21	12	14	23	25	16	26	25	20	20	20	
17	1-	3 o	3 o	3-	3-	3 o	2-	2 o	3555	3534	4	28	29	26	23	30	13	16	21	21	21	
18	2-	2+	2+	3-	3-	3-	3-	4+	2222	3213	11	17	19	21	24	26	26	26	26	26	26	
19	3-	4 o	3-	1+	1+	1+	2+	3 o	1441	2231	26	55	21	8	10	10	20	31	23	23	23	
20	3 o	3 o	3-	1+	3-	3-	2+	3-	2211	2222	29	31	26	8	24	24	19	21	23	23	23	
21	3-	3-	3-	3-	1+	2 o	2-	3-	4232	1023	22	24	25	24	10	15	11	23	19	19	19	
22	3 o	3-	4 o	4+	3-	4-	4 o	3 o	3333	1543	32	22	58	62	23	48	56	30	41	41	41	
23	4 o	4-	2 o	4-	3-	2+	3 o	3+	2213	1322	55	43	15	47	26	17	27	36	33	33	33	
24	3 o	2+	2+	2 o	2-	1+	2-	2-	3352	2325	28	20	19	14	12	8	12	12	16	16	16	
25	2+	3+	4+	3 o	3-	2+	2 o	3-	3434	2322	18	39	66	31	23	20	14	21	29	29	29	
26	3 o	4-	2+	2 o	2+	2+	3 o	3+	4322	3222	30	42	19	14	18	19	30	39	26	26	26	
27	4-	3-	3-	4-	2+	3-	2 o	2 o	3222	2311	41	26	23	47	18	24	16	14	26	26	26	
28	2+	2-	3-	3 o	2+	3+	3+	3 o	3132	2321	19	13	21	29	19	40	40	31	27	27	27	
29	3-	4-	3+	3 o	3 o	3+	3 o	4-	1422	2131	26	42	35	30	39	31	44	19	33	33	33	
30	3 o	3 o	1-	1 o	1 o	3-	3 o	2 o	4231	1232	31	29	4	6	7	21	27	16	18	18	18	
31	3 o	4 o	4+	5-	4-	4+	3 o	3 o	2785	1333	32	52	63	74	48	70	32	31	50	50	50	

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	Ks										$\sigma$	as										As
1	4 o	3 o	2+	1+	3 o	3-	2 o	2+	7541	2223	60	32	19	10	31	23	14	20	26	26	26	
2	2+	3 o	3 o	2 o	1-	3-	3 o	3-	3323	2333	20	27	29	14	4	25	27	24	21	21	21	
3	3-	2-	0+	1+	0 o	1+	2+	2+	5423	1435	26	11	3	10	1	8	20	17	12	12	12	
4	2 o	3-	3 o	1+	2-	1-	1 o	1 o	3431	3413	14	26	28	8	12	4	6	7	13	13	13	
5	1 o	1 o	0+	0 o	1 o	0+	0+	0+	2022	2422	7	7	3	1	6	3	3	3	4	4	4	
6	0+	0 o	0+	0 o	0+	0+	2-	1-	2110	2133	3	1	2	0	2	2	13	4	3	3	3	
7	2-	0 o	1-	0 o	0 o	0 o	0+	2-	6120	0115	11	1	4	0	0	1	2	11	4	4	4	
8	2 o	2 o	1 o	1 o	1+	0 o	0+	1 o	3542	3313	14	15	6	6	8	2	2	7	8	8	8	
9	2-	0+	0 o	0 o	0 o	0+	1 o	1+	7201	0222	13	3	0	1	0	3	7	10	5	5	5	
10	1+	2 o	3-	2 o	1 o	1 o	1+	1 o	3524	2152	10	16	25	16	6	6	9	6	12	12	12	
11	3 o	1+	0 o	1 o	1-	0 o	0 o	0 o	4421	1110	30	8	1	6	4	1	1	0	6	6	6	
12	0+	0 o	1-	1+	2+	3-	5-	5+	1114	3248	2	1	4	10	20	23	77	105	30	30	30	
13	5-	5-	4 o	3 o	2 o	2 o	4 o	4-	5343	0285	85	85	83	58	31	14	55	44	57	57	57	
14	3 o	3-	3+	3-	2 o	1+	1+	1+	2243	2224	32	22	38	24	14	9	8	8	19	19	19	
15	2+	3 o	3+	3-	2+	1+	2-	2-	5444	4334	18	31	37	21	18	8	12	12	20	20	20	
16	3-	2 o	1+	2-	2+	2 o	3-	3-	7512	4535	25	14	8	11	17	15	21	21	17	17	17	
17	1-	3-	3-	2+	3-	2+	1 o	2+	3734	4326	5	25	23	20	21	20	7	18	17	17	17	
18	1-	3-	2 o	2+	2-	2+	3-	4+	3411	2323	5	24	15	17	11	17	21	70	23	23	23	
19	3-	4 o	3-	1-	1 o	1 o	2-	2+	2352	3335	24	52	22	4	7	6	12	20	18	18	18	
20	3+	3+	3-	1 o	2 o	2 o	2-	2+	4442	5414	36	36	22	7	16	15	12	20	21	21	21	
21	3-	3-	2+	2 o	1 o	2-	1-	3 o	1311	4315	25	21	19	14	7	11	5	27	16	16	16	
22	3 o	3-	5-	4 o	3-	4-	4+	3 o	5412	4153	32	23	80	54	22	44	67	27	44	44	44	
23	4 o	4-	2 o	4-	2+	1+	3-	4-	5344	3334	56	44	14	47	20	10	24	41	32	32	32	
24	3+	2+	2-	1 o	1+	0+	1 o	1+	5322	3224	35	19	12	6	8	3	6	10	12	12	12	
25	3-	3 o	4+	3 o	2+	2 o	2-	2+	4232	2512	24	28	67	31	18	15	11	17	26	26	26	
26	4-	3+	2+	1+	1+	2-	3-	4-	4132	2423	49	38	20	9	9	11	21	44	25	25	25	
27	4 o	3 o	3-	3+	2-	3 o	2+	1+	4314	2212	51	31	24	37	13	32	19	8	27	27	27	
28	2+	2-	2+	3-	2 o	3+	3+	3 o	4324	1324	17	12	20	25	15	37	35	36	25	25	25	
29	4-	4-	3+	3-	3+	3 o	3+	2 o	3342	3334	46	41	39	25	37	27	40	15	34	34	34	
30	3+	3-	0+	0 o	0+	2-	3 o	2 o	3230	1531	37	25	3	0	2	12	30	16	16	16	16	
31	4 o	3 o	4+	5 o	4 o	5-	3-	3+	4442	3136	53	31	68	88	53	78	24	39	54	54	54	

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an , as INDICES 1985 (continued)

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	Kn									$\sigma$ n		an									An
1	1+	2-	1o	1-	1+	2+	3-	3-	1532	2434	9	12	6	4	8	19	21	22		13	
2	1-	1+	1o	2o	1+	1+	1+	1-	3224	2222	5	10	6	16	9	10	5	8		9	
3	1-	1+	2o	1+	1o	1o	0+	1o	2332	2113	4	10	15	9	6	7	2	2		8	
4	0+	1+	1-	0+	0+	1o	1-	1-	1302	1223	2	10	4	3	2	6	5	4		5	
5	0o	1-	0o	1o	1-	1-	1+	2o	1212	1312	1	5	0	6	4	5	9	15		6	
6	1-	2-	1+	2-	3-	3+	3o	3-	3225	3423	5	12	10	13	24	35	27	26		19	
7	3-	2+	2o	1+	1+	1+	2o	3-	4733	1314	22	19	16	10	9	10	16		22	16	
8	1+	1+	3-	2-	3o	3o	2+	3-	3232	2225	8	9	21	13	28	31	20		22	19	
9	2o	2+	2+	3+	3o	3+	3-	3-	1333	1523	15	20	18	37	28	40	26		23	26	
10	2-	3-	4-	2+	1+	2+	3o	3o	3431	1244	11	25	44	19	10	19	33		28	24	
11	2o	2+	3o	2+	2-	1+	3+	1+	2642	1153	14	18	28	18	11	9	35	10		18	
12	1+	1-	1+	1o	2+	3-	2-	1+	2230	2632	10	4	9	6	17	25	12	9		12	
13	1o	2o	1o	3-	2-	2-	1-	2-	2743	4223	6	15	6	22	12	11	5		13	11	
14	2o	2o	4o	4+	5+	3o	3-	3-	3623	5123	16	16	56	65	117	28	24		21	43	
15	2-	3-	1o	1+	2o	2o	5-	3+	2322	1332	11	21	7	10	15	15	82		37	25	
16	4-	4o	3-	5-	5-	3+	3o	3+	4432	3322	48	60	22	83	79	39	27		36	49	
17	3+	2+	2+	3o	3o	2-	3o	2+	5322	3242	34	20	19	29	30	12	29		19	24	
18	2-	1o	2-	2o	2o	2-	1+	1+	2232	0111	11	6	13	16	15	11	8		9	11	
19	2-	2-	3-	5+	3+	5-	5-	3o	2224	3154	11	11	25	104	37	77	80		31	47	
20	3+	4+	4-	5-	3+	3-	3-	4-	2423	3325	37	69	44	75	40	25	25		44	45	
21	3o	3o	4-	4-	3+	4-	4-	3-	2342	2442	32	31	50	42	36	43	41		24	37	
22	2+	3+	2o	3o	3-	2o	2-	2-	4431	4221	19	20	36	15	32	23	16		13	22	
23	1+	2o	3+	4-	1o	2-	1+	1o	3254	1232	8	14	37	42	7	12	9		6	17	
24	1o	2o	2+	3o	3+	3+	4o	3+	1222	4424	6	15	19	32	40	37	55		39	30	
25	2+	2o	4-	2+	3-	4-	3-	4-	2221	1332	18	16	44	17	25	43	37		41	30	
26	2+	3-	3o	4+	1o	2-	3o	4-	4321	2352	17	25	33	69	7	11	30		46	30	
27	2o	3+	4-	4-	2-	1+	3o	4-	1363	2254	16	34	47	41	13	10	28		48	30	
28	2-	1+	1+	2+	3o	2-	1+	1+	2223	5322	12	9	9	18	30	11	8		10	13	
29	1o	1o	0+	1+	1o	1o	1+	2-	4233	1122	6	6	2	10	7	7	10		11	7	
30	2-	1-	1o	1o	1o	1o	1+	2-	4131	0232	11	5	6	6	6	9	11		18	9	

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	Ks									$\sigma$ s		as									As
1	1+	1+	0+	0+	1-	3-	3-	3-	3332	5332	9	8	3	3	5	21	21	23		12	
2	0+	1+	0+	1+	1o	1o	0+	0+	2225	2223	3	8	3	9	6	6	2	3		5	
3	0+	1+	2-	1-	0o	1-	0o	1-	3242	1202	2	10	12	5	1	4	0	5		5	
4	0+	1+	0o	0+	0o	0	0o	0o	1312	0223	2	9	1	2	0	4	1	1		3	
5	0o	1-	0o	0o	0o	0o	0o	1+	1301	0331	1	4	0	1	0	1	8	9		3	
6	1-	2-	1o	2-	3-	3-	2+	2+	2404	5334	5	11	7	13	22	26	17	20		15	
7	2+	2-	2-	1o	1o	1+	2o	2+	4431	2114	17	12	12	6	6	8	15		17	12	
8	1+	1+	2-	2-	3o	3o	2+	2+	4342	3123	8	9	13	12	28	27	20		18	17	
9	2-	3-	2o	3o	3o	3o	3o	2+	3621	4124	13	21	14	29	27	31	17		16	21	
10	1+	2o	3o	2o	1o	2o	3-	3o	2122	1133	10	15	28	16	6	14	23		32	18	
11	2-	2o	2+	2+	1+	1-	3-	1-	3324	1223	11	14	18	20	8	5	24		5	13	
12	1+	0o	0+	0+	2-	3-	1+	1-	3132	3622	9	1	2	3	11	24	9		4	8	
13	0+	2-	1-	2o	1+	1o	0+	1o	2735	3334	2	12	4	15	8	6	3		6	7	
14	2-	2o	5-	5-	6-	2+	2+	3-	3543	2335	11	16	78	75	128	19	20		23	46	
15	2o	2o	1o	1o	2-	1+	5o	3o	1312	3143	14	15	6	6	11	8	93		33	23	
16	4o	4o	2o	5o	5o	3o	3o	3+	3437	5144	56	52	16	94	96	31	28		34	51	
17	3+	2+	2o	3+	3-	1o	3-	2o	4415	4223	37	19	15	40	22	6	24		15	22	
18	1+	1o	2-	2+	2-	1+	1-	1o	3231	2225	8	6	12	17	13	10	5		6	10	
19	2o	2o	3o	5o	4o	5o	5-	3o	2323	3134	15	15	32	98	52	90	74		33	51	
20	4-	5-	3+	4o	4-	3o	3o	4-	3335	3115	44	73	39	54	41	31	27		58	46	
21	3+	3o	4-	3+	3+	4-	4-	3o	4142	3234	37	27	45	40	37	45	45		28	38	
22	2+	3o	3o	1+	3-	3-	2+	2o	6442	2133	17	27	27	9	25	24	17		14	20	
23	1o	2+	3+	3+	1o	1+	1-	0+	3444	1423	7	19	36	40	7	9	5		2	16	
24	1o	2-	2+	3o	3-	3o	4-	3+	2343	3524	6	13	18	27	24	31	45		34	25	
25	3-	2+	4-	2o	3-	4-	3o	4-	5123	2343	25	17	48	14	22	41	31		44	30	
26	3-	3-	3o	4o	0o	1-	3o	3+	5233	1434	23	22	31	53	1	5	29		38	25	
27	2+	3o	3o	4-	1+	1+	3-	4+	3254	2236	18	28	32	41	9	8	24		65	28	
28	2o	1+	1+	2+	3o	1+	1+	1+	3232	4233	15	9	8	20	27	10	9		10	14	
29	1+	1o	1o	1-	1-	1o	1+	1+	3222	4322	15	7	7	5	4	6	8		10	7	
30	1+	1o	0+	0+	1-	1-	1+	1-	2022	3225	10	7	3	3	5	4	8		21	8	

20.0

an , as INDICES 1985 (continued)

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	Kn								$\sigma$ n		an								An
1	1+	1 o	0+	0 o	1 o	1-	1 o	1-	1212	2122	8	6	2	1	7	5	6	5	5
2	2-	1 o	2+	1+	1 o	1+	2 o	2 o	3232	2233	13	7	18	10	6	10	14	14	12
3	1 o	2-	3 o	4-	3+	3-	2+	2-	2366	3134	7	13	32	42	34	26	18	12	23
4	2 o	2+	3 o	3-	3 o	2+	3 o	3+	5263	6424	15	19	28	26	29	18	27	38	25
5	2+	5 o	5+	5 o	4 o	5-	6 o	6-	1353	2343	20	100	104	95	56	71	147	122	89
6	5-	3+	5 o	4+	5-	4-	3 o	4 o	4331	5222	75	40	98	61	81	42	32	52	60
7	4-	4-	4-	4-	3 o	4+	3+	3+	2424	3653	49	47	44	45	32	69	37	39	45
8	3 o	3+	3-	3+	3 o	3 o	3+	2+	3422	5543	33	34	25	35	32	30	38	18	31
9	1+	2+	2+	0+	2-	2-	2+	1+	2442	3253	9	19	17	3	12	12	20	9	13
10	1+	2 o	2+	1+	2 o	1 o	2 o	2 o	3342	2445	8	14	19	10	15	6	16	13	13
11	2-	2-	3-	3-	2+	4-	3+	3+	6462	2333	12	13	38	25	19	46	35	39	28
12	4 o	1+	1+	2-	2+	3 o	3-	3-	2222	2244	54	10	8	12	20	28	21	22	22
13	2+	4 o	3-	3-	3+	4 o	3-	3-	1633	3334	18	57	22	22	40	51	24	24	32
14	2 o	3-	2-	3 o	2-	2+	2-	1+	2212	2432	14	21	13	30	12	18	11	8	16
15	1+	4 o	5 o	2+	2 o	2+	2 o	3-	2551	2213	10	52	90	17	15	18	14	24	30
16	3+	4-	3+	3+	3-	3-	2-	2+	4234	3132	34	43	40	39	23	21	12	17	29
17	3-	3 o	2 o	2+	3 o	3+	3 o	3-	2622	0412	24	28	16	18	29	37	28	26	26
18	3+	2-	2+	4-	4-	4-	3+	4-	4233	2233	34	13	17	42	47	47	39	46	36
19	3+	3-	3 o	4-	3-	1+	1+	1-	5323	4232	34	21	29	47	25	10	8	5	22
20	1 o	2-	2+	2 o	2 o	1+	2 o	0+	1230	4322	7	11	20	15	14	8	15	2	12
21	0+	2-	2+	2+	3 o	4+	3-	3 o	2213	1321	3	12	20	19	31	70	24	31	26
22	3+	4-	4-	2-	2-	3-	3+	3-	2342	2324	35	46	48	13	12	21	36	22	29
23	2+	2 o	2 o	3-	3-	3-	2+	3 o	3012	3243	20	15	15	25	23	23	18	29	21
24	2 o	2-	2+	1 o	1 o	3-	3-	1 o	2242	1434	16	12	19	6	6	23	23	7	14
25	2+	2+	2 o	2 o	2+	2+	2+	2-	4452	3333	18	20	15	16	19	19	19	11	17
26	1-	1-	1+	1+	2-	0+	1 o	1 o	2213	3112	5	5	9	9	11	2	6	7	7
27	0+	0+	1 o	1-	1 o	1 o	1 o	2+	1211	1145	3	3	7	5	6	7	7	18	7
28	2+	1-	1 o	1+	1-	0+	1-	1-	4112	1222	17	5	7	8	5	2	4	4	7
29	3 o	3-	3-	4-	3-	2 o	1 o	1-	3324	3222	31	22	23	42	23	15	7	5	21
30	1-	0+	1 o	1 o	1+	1 o	2-	1-	2321	2242	5	3	6	6	8	6	12	5	6
31	1 o	1+	1-	2 o	2-	3 o	2+	1+	3312	3643	7	8	4	14	13	28	19	8	13

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	Ks								$\sigma$ s		as								As
1	1 o	1 o	0 o	0 o	1-	0 o	0+	0+	0311	2112	7	6	1	1	5	1	2	3	3
2	2 o	1+	2 o	1+	0+	1 o	2-	2 o	1251	2413	14	9	14	8	3	7	12	16	10
3	1+	2 o	2+	3+	3 o	3-	2 o	1+	1343	3243	9	16	20	37	28	21	15	8	19
4	1+	2+	3-	3 o	2+	2 o	3 o	4-	5424	4214	10	20	22	31	18	14	27	41	23
5	3-	5 o	5 o	5 o	4-	4+	6 o	6 o	2315	2357	23	91	97	89	46	69	153	160	91
6	5-	3+	4+	3+	4 o	3 o	3 o	4-	3233	4446	73	34	66	39	54	32	28	42	46
7	3+	4-	3+	3 o	3-	4-	3 o	4-	5435	3535	34	46	34	33	23	47	33	42	37
8	3+	2+	2 o	2+	3-	3-	3 o	2+	4413	7253	35	20	15	19	26	24	30	20	24
9	1 o	2+	1+	0+	2-	1+	2 o	1-	2422	4243	7	18	10	3	13	9	16	9	11
10	1-	1+	2+	1+	2-	0+	1+	1+	2132	4244	5	10	19	8	13	3	10	8	10
11	2-	2-	3-	3-	2 o	4-	3 o	3+	5342	4233	11	12	25	23	15	43	33	39	25
12	4 o	1+	1+	1+	2-	3 o	3-	2+	4221	2343	60	10	10	9	13	29	25	20	22
13	3-	4 o	3-	2 o	3+	4 o	3-	3-	2343	3424	22	56	24	14	34	56	21	24	31
14	2 o	3-	2 o	3-	1+	2-	1+	1 o	2212	1232	15	22	15	25	8	13	9	7	14
15	2 o	4-	4 o	2 o	2-	2-	2-	3 o	3643	3333	16	44	64	16	11	19	12	29	26
16	3+	3+	3+	3+	2+	2+	1+	3-	5432	3333	34	37	34	40	17	19	10	22	27
17	3 o	2+	2+	3-	3 o	3+	3 o	3 o	4313	1322	28	20	17	25	27	37	30	32	27
18	3+	2-	2+	4 o	4-	4-	4-	4-	2344	3334	37	13	17	55	46	41	41	43	37
19	4-	2+	3-	4 o	3-	2-	1-	1-	4235	5323	45	18	21	52	26	11	5	4	23
20	1 o	2 o	3-	2+	1+	1 o	2-	1-	4133	3322	6	14	24	18	9	7	13	5	12
21	0+	2+	3+	2+	3 o	5-	3-	3 o	2423	4442	3	20	34	20	31	73	26	32	30
22	4-	4-	4-	2-	1+	3-	4-	3-	2244	2232	44	42	44	13	10	21	41	23	30
23	2+	2+	2 o	2+	3-	3 o	2+	3+	3113	3431	19	18	15	20	23	29	18	36	22
24	2 o	2+	2+	0+	0+	3-	3+	1+	4252	3263	16	18	17	3	3	23	35	8	15
25	2 o	2+	2-	2 o	2 o	2+	2 o	2 o	1422	2211	15	17	11	16	15	20	14	14	15
26	1-	1-	1+	1+	2-	0+	1-	2-	2312	6332	4	5	8	10	13	2	4	12	7
27	1 o	0+	1 o	1+	1-	1 o	1 o	2+	3212	3544	6	3	7	8	5	6	7	17	7
28	2 o	1+	1 o	1 o	0+	0+	1+	1+	4412	3333	16	8	7	3	2	2	8	7	7
29	3-	3-	2+	3 o	2 o	2-	1 o	1 o	5546	4344	25	22	18	28	15	12	7	7	9
30	1+	1 o	1+	1+	1+	1-	2-	1 o	3013	2720	9	7	8	8	10	9	13	7	9
31	2-	1+	1-	2+	2-	3-	2+	1+	3111	3342	11	8	5	17	12	21	17	9	13

22.3

**an , as INDICES 1985 (continued)**

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	Kn									$\sigma$	n	an									An
1	2 o	2 +	2 o	3 -	3 +	4 -	4 o	3 -		4502	6444	15	20	14	25	40	43	57	22	30	
2	1 -	1 +	3 o	2 +	4 o	5 -	5 +	5 o		2342	2843	4	10	27	20	53	79	119	89	50	
3	5 -	4 o	2 +	4 o	4 -	4 -	3 -	3 o		2422	5433	72	55	19	58	43	49	23	28	43	
4	3 +	3 o	3 -	2 -	2 +	3 +	3 +	2 o		5123	3654	37	29	24	13	17	36	34	16	26	
5	1 o	1 -	2 -	3 -	3 o	2 o	3 -	4 -		3143	4455	6	5	13	25	28	16	23	46	20	
6	2 +	4 -	2 -	2 -	3 -	3 o	2 -	1 +		3321	3433	20	44	11	13	26	28	13	10	21	
7	2 -	3 -	2 -	2 +	1 +	0 +	2 o	2 o		3224	2142	12	22	12	20	9	3	14	15	13	
8	2 o	0 +	0 o	1 +	2 -	3 o	2 +			5220	1342	16	2	0	10	11	29	20	11		
9	1 +	2 o	1 +	3 -	3 o	4 o	4 -	2 o		1122	2451	10	16	8	21	28	57	42	15	25	
10	3 -	3 -	3 -	3 o	2 o	3 -	4 +			2233	5134	23	24	21	23	29	15	23	64	28	
11	3 -	2 -	2 +	3 -	2 +	2 o	2 o	2 -		3252	2213	21	13	17	21	17	16	16	12	17	
12	1 o	1 +	1 o	1 -	1 -	0 +	2 o	2 +		0111	2212	6	8	7	5	5	3	14	17	8	
13	2 +	2 -	2 o	3 -	4 +	3 o	5 +	4 o		3233	2241	18	12	16	25	65	29	105	56	41	
14	4 -	3 -	2 -	3 -	3 o	3 -	3 -	3 o		3333	3332	43	22	11	21	29	21	26	39	27	
15	3 o	2 +	1 +	3 o	4 o	2 o	3 -	3 o		3113	4242	29	18	8	33	56	16	25	27	27	
16	2 +	2 +	2 o	3 -	2 +	2 o	2 o	3 -		3213	2123	18	17	14	21	19	14	16	24	18	
17	0 +	1 +	2 o	3 -	3 +	5 -	4 -	2 o		2223	3731	3	8	15	21	34	75	44	15	27	
18	2 +	3 o	2 +	2 o	3 o	3 o	3 +	3 +		2420	5234	17	28	19	14	28	27	40	37	26	
19	4 o	4 o	1 +	1 +	1 o	2 +	2 o	1 +		5422	1322	53	59	10	10	7	18	15	8	23	
20	1 o	1 -	0 +	1 o	1 -	1 -	1 o	2 -		1220	1212	7	4	2	6	5	4	6	11	6	
21	2 -	1 o	1 -	1 o	1 -	1 -	2 o	2 -		2021	3222	13	6	5	6	5	4	14	12	8	
22	3 -	2 +	1 o	1 +	2 -	1 +	2 +	0 +		2413	2222	24	19	6	8	13	10	19	2	13	
23	1 o	1 +	1 -	1 -	1 o	1 o	1 -	1 +		1312	0113	7	8	5	4	6	7	5	10	7	
24	0 +	1 +	1 o	1 o	2 -	0 +	1 -	2 -		2312	2124	3	10	7	6	11	3	4	13	7	
25	2 -	1 o	1 +	2 -	2 o	1 +	1 +			2122	0223	13	6	8	13	14	9	8	8	10	
26	1 +	2 +	2 -	1 -	1 -	1 +	1 +	1 +		2322	2224	9	17	13	4	4	4	9	9	9	
27	1 o	3 o	4 -	3 +	5 -	4 +	2 +	2 +		0233	4523	6	31	42	36	76	66	19	17	37	
28	2 +	3 -	1 +	2 o	1 -	1 +	2 -	1 +		3410	3332	18	25	8	14	5	10	11	8	12	
29	1 -	0 +	3 -	3 o	3 +	4 -	6 +	6 -		1211	2436	5	3	21	27	38	46	183	144	58	
30	6 +	5 -	5 -	6 -	4 -	3 +	2 +			5344	5432	198	75	78	75	121	42	36	18	80	

24.3

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	Ks									$\sigma$	s	as									As
1	2 o	2 o	2 +	3 -	3 +	3 +	4 -	2 +		2233	6224	15	16	19	23	40	36	47	17	27	
2	1 -	1 +	2 +	3 -	4 -	4 o	5 o	4 +		2342	3545	4	9	19	21	50	53	102	64	40	
3	4 o	4 -	2 +	4 o	3 +	4 -	3 -	3 -		2415	5444	51	49	18	54	40	43	21	21	37	
4	3 o	2 +	2 o	2 -	2 -	2 +	3 -	1 +		4223	2433	28	20	16	12	13	20	23	9	18	
5	1 o	3 o	1 +	2 +	2 +	2 -	2 o	4 o		2924	3127	6	32	10	19	19	12	15	44	20	
6	2 -	3 +	2 -	2 -	3 -	3 -	2 -	1 +		3522	2122	11	34	11	11	26	24	12	10	17	
7	2 o	2 o	2 -	2 -	1 o	0 +	1 +	2 o		4544	3331	15	15	11	13	7	2	10	14	11	
8	2 -	0 o	0 +	0 o	2 o	1 +	3 o	2 o		5220	2312	13	1	3	0	14	9	29	16	11	
9	2 o	3 -	2 -	4 -	4 -	5 -	4 -	2 -		2423	3222	16	24	13	48	44	74	41	13	34	
10	3 -	3 -	2 +	3 o	3 o	2 o	3 o	4 o		3211	5111	26	25	17	30	32	14	27	54	28	
11	2 +	1 +	2 +	2 +	2 +	2 o	2 +	2 -		3311	5112	18	9	17	17	20	14	17	13	16	
12	1 +	1 o	1 +	1 -	0 +	0 +	2 o	3 o		3212	3203	9	7	8	5	3	3	16	27	10	
13	2 -	2 o	2 -	3 o	4 o	3 o	5 +	4 o		2220	0423	22	16	13	32	59	29	109	52	42	
14	3 +	3 -	2 o	2 +	3 +	3 -	3 o	3 +		2223	3343	34	23	14	20	39	24	29	38	28	
15	3 +	3 -	1 o	3 o	4 -	2 o	3 -	3 o		4201	2123	40	22	7	29	48	14	26	27	27	
16	2 +	3 -	2 -	2 o	2 +	2 o	2 o	2 o		2222	3114	18	22	11	15	19	14	14	15	16	
17	1 -	2 -	2 o	3 -	3 o	4 +	3 +	3 -		1232	4332	4	11	16	25	31	69	38	22	27	
18	3 -	2 -	3 -	2 o	3 -	3 -	3 +	3 o		2231	3245	21	13	25	15	23	21	38	33	24	
19	4 -	4 o	1 +	1 +	1 +	2 +	3 -	1 +		4322	3343	48	57	8	10	8	19	21	10	23	
20	1 +	1 o	0 +	1 +	1 o	1 -	1 -	1 +		3221	4232	8	6	2	8	7	5	5	10	6	
21	1 +	1 +	0 +	1 -	1 +	1 o	3 -	2 o		1212	2322	10	9	2	5	8	6	25	14	10	
22	2 +	2 +	2 -	2 -	2 o	2 -	2 +	1 o		2134	2321	19	17	12	13	16	11	20	6	14	
23	2 o	1 +	0 +	1 -	1 o	1 o	1 o	1 +		3113	5141	14	8	2	4	6	6	7	8	7	
24	1 -	1 +	2 -	1 +	2 -	0 +	0 +	2 -		2232	3432	5	8	11	10	11	3	2	12	8	
25	2 o	1 +	2 o	2 +	2 +	1 +	1 +	1 +		1521	1423	14	10	14	17	18	9	10	9	13	
26	1 o	3 -	3 -	1 o	0 +	0 +	1 o	1 +		2232	4225	6	26	23	7	3	2	7	9	10	
27	1 +	4 -	3 +	4 -	4 -	4 -	3 -	2 o		4333	2222	8	43	44	38	48	46	22	16	33	
28	2 o	2 +	1 +	2 o	1 -	2 -	2 -	1 o		1311	2222	14	20	8	14	5	12	13	7	12	
29	1 -	0 +	3 o	4 -	3 o	4 o	6 +	6 +		2232	0342	5	3	32	44	32	51	180	180	66	
30	6 -	3 +	4 +	4 +	4 +	3 o	3 o	2 -		6156	4443	144	36	70	65	65	29	27	12	56	

23.0

an , as INDICES 1985 (continued)

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	Kn									σ n	an									An
1	1+	2+	2-	3 o	3-	2+	4 o	3 o	2433	4263	10	19	11	30	26	18	57	30	25	
2	3+	3-	3 o	2-	3-	3-	3+	2 o	3221	3352	34	24	30	12	23	21	35	16	24	
3	1+	2 o	2+	2-	2+	3 o	2 o	1 o	3543	3443	8	15	19	13	20	31	14	7	16	
4	1 o	2+	2-	3-	2 o	3 o	4-	2+	1532	2342	6	17	11	23	16	31	45	18	21	
5	3-	2-	1 o	2+	3-	2+	2+	1 o	3113	3442	21	12	7	20	21	20	18	7	16	
6	2-	1+	2-	2 o	3-	1+	1+	1+	3112	5022	12	8	13	14	21	9	10	10	12	
7	1 o	1 o	2-	2 o	1 o	2-	2+	1-	2131	0242	6	7	12	14	6	12	19	5	10	
8	1-	0 o	1-	1-	1 o	1+	1+	1-	1113	2234	5	1	5	4	6	10	10	4	6	
9	2-	1+	0+	0 o	1 o	1+	2+	2-	2211	2232	12	10	2	0	6	9	17	11	8	
10	2 o	2+	3-	4 o	4 o	3 o	2 o	2+	2133	3331	16	17	21	59	56	31	16	20	30	
11	3+	2+	2-	1+	2 o	2+	2-	2+	4323	2223	34	20	12	9	15	19	13	17	17	
12	1+	2-	1-	1-	1 o	2 o	2 o	3 o	2232	0123	10	11	5	4	6	14	16	29	12	
13	3+	3+	3 o	5 o	5 o	4-	3-	4-	4332	3314	34	37	32	96	98	42	21	42	50	
14	3 o	2+	2 o	2-	2+	3-	2 o	3+	4252	3313	28	17	14	11	19	23	15	37	21	
15	3 o	2 o	2 o	1 o	1-	2-	2+	3-	2322	2334	29	15	14	7	4	12	20	24	16	
16	2 o	1-	2-	0+	1+	1-	1+	2 o	5231	5343	14	5	13	3	9	5	8	16	9	
17	3 o	2-	2-	1+	2-	2 o	1+	2 o	5332	2413	33	11	11	9	13	14	8	6	13	
18	0+	1-	3+	3-	4 o	3-	2-	2 o	2333	2135	3	4	35	25	58	26	13	16	23	
19	3-	4-	4+	5+	4+	5-	5-	3+	2435	3633	26	50	70	107	63	74	72	35	62	
20	4-	2+	3-	3+	3-	2+	1 o	1 o	6254	3222	41	19	23	35	18	7	6	4	19	
21	1 o	2-	1 o	2-	1-	1 o	1 o	1+	3312	1223	7	11	7	12	4	6	7	8	8	
22	1 o	2 o	2-	1+	2-	1+	1+	1 o	3323	2311	6	14	13	10	12	10	9	6	10	
23	0+	0+	1+	1 o	1 o	1 o	2-	2 o	2133	2144	3	2	10	6	6	6	12	15	8	
24	3 o	2 o	3+	2 o	2 o	1+	1+	0+	3451	4233	27	15	39	14	16	9	8	2	16	
25	1 o	0 o	1-	1 o	1+	2-	2-	3 o	0121	3133	6	1	5	6	10	11	11	32	10	
26	3-	2+	1-	2-	2-	1-	2-	1-	2323	1322	23	19	5	13	13	4	12	4	12	
27	1 o	2-	2-	2+	2+	2-	4 o	3 o	2213	3232	7	12	11	18	19	11	51	30	20	
28	4-	5-	5-	4+	4 o	4+	4 o	2+	4435	3545	42	78	72	61	60	70	56	17	57	
29	1+	2+	1+	1+	1 o	1 o	1 o	2-	3413	3222	10	18	10	9	8	6	7	13	10	
30	5-	4+	5+	4-	4 o	5 o	3+	4-	2232	4533	74	68	119	44	52	96	40	47	68	
31	3+	3-	3 o	3 o	4+	4 o	4 o	2+	4331	3642	34	25	33	27	63	59	53	20	39	

21.5

DECEMBER 1985

	Ks									σ s	as									As
1	2 o	2-	1+	2 o	2+	3-	4 o	3 o	1242	3241	14	13	9	16	19	23	51	29	22	
2	2+	2-	3-	2-	2+	2+	3 o	2 o	3223	3332	18	13	25	11	20	18	31	16	19	
3	1+	2 o	2-	2-	1+	3-	2-	1+	2243	2243	10	14	13	11	10	23	12	8	13	
4	1 o	2-	2 o	3-	2 o	3-	4-	2+	2313	0234	6	12	15	23	16	24	42	18	20	
5	2+	1+	1 o	2 o	2 o	2 o	2-	2-	3222	0232	20	10	7	16	16	16	13	11	14	
6	2 o	1+	2-	2-	2 o	1+	1+	2 o	2422	1133	14	8	13	13	14	8	9	14	12	
7	1+	2 o	2 o	2-	1 o	1+	2 o	1-	4314	2443	10	14	15	12	7	10	16	5	11	
8	1 o	0+	1+	1+	1 o	2-	1 o	0+	4224	2323	7	2	10	8	7	11	7	2	7	
9	2 o	2 o	0+	0+	1 o	1+	2+	2+	2323	2433	16	16	3	3	6	8	20	19	11	
10	2+	3-	3+	4+	4+	3+	3 o	3-	3422	1212	20	26	36	61	61	34	27	23	36	
11	4-	2-	2+	1+	2 o	2-	2-	2 o	2311	5433	44	12	17	8	14	13	12	14	17	
12	1+	1 o	0 o	0+	1 o	2-	2+	4-	2122	1333	8	7	1	2	7	12	19	41	12	
13	3+	3+	3 o	5 o	5 o	4 o	3-	4-	2211	2624	37	38	29	90	90	51	26	43	51	
14	3-	2 o	2 o	1+	2+	3-	2+	4-	2322	2233	26	16	16	10	20	21	20	46	22	
15	3 o	2-	1+	1-	1-	1+	3-	3-	1323	3254	27	11	10	5	4	10	25	23	14	
16	2+	2-	2-	0+	1+	1 o	1 o	2 o	4333	3331	17	11	13	3	9	6	7	14	10	
17	3-	2 o	2-	2-	2-	2 o	1+	1+	3322	2242	25	16	11	11	12	14	9	8	13	
18	1-	1-	4-	3 o	4-	3+	2+	4-	3221	2643	5	4	48	30	47	37	19	13	25	
19	3 o	4-	4+	5+	5-	5-	5-	4-	5855	5334	30	41	69	107	71	74	71	66	66	
20	4-	3 o	2+	3 o	2+	1 o	1-	1-	3531	3422	49	27	19	30	18	7	5	5	20	
21	1+	1+	1+	1 o	0 o	0+	1-	1+	1113	0223	8	8	8	7	0	3	4	9	6	
22	2-	3-	2+	2-	2 o	1+	1+	1 o	3232	3243	11	22	20	12	14	10	10	6	13	
23	1-	1 o	3-	1 o	1+	0+	1+	1+	2143	4232	5	7	22	6	10	2	10	10	9	
24	3 o	2+	3 o	2 o	2 o	1+	1+	0+	1230	5432	29	18	31	16	16	10	8	3	16	
25	1+	1 o	2-	1+	2-	2-	2-	3 o	4132	3343	10	6	11	8	11	11	13	31	13	
26	3-	2+	1 o	2 o	2-	1-	2-	1+	2124	2331	23	19	7	16	11	5	11	8	13	
27	2 o	2 o	2+	2 o	2 o	2 o	4+	4-	4421	1334	15	14	19	15	15	16	69	45	26	
28	4-	4+	4-	4-	4+	4+	4 o	3-	3242	3435	45	66	43	49	63	62	54	23	51	
29	2-	2 o	1+	1+	1-	2-	2+	2+	2224	3344	12	16	10	10	4	4	13	19	11	
30	4+	4+	5-	4+	4+	3+	5-	4-	5223	3344	65	61	71	65	37	85	48	53	61	
31	3-	2 o	3-	2+	4-	4-	3 o	3 o	4233	2123	24	16	25	20	49	48	31	29	30	

21.4

**am INDICES 1985**

JANUARY 1985

	Km										$\Sigma$ Km	am									Am	Am2
1	3-	4-	3-	3+	2+	4-	5 o	5 o			28.3	22	41	26	34	20	41	97	88	46	42	
2	3+	3 o	3-	2+	3-	2 o	2 o	4 o			22.0	36	30	21	20	26	14	16	53	27	34	
3	3-	2+	2 o	2+	1 o	2-	3 o	3 o			18.0	26	19	16	19	7	13	30	32	20	20	
4	2+	1+	1+	1+	1-	2-	2 o	2+			13.0	18	10	8	10	5	11	14	20	12	13	
5	2-	1+	1 o	1 o	1+	1+	2-	3-			12.0	12	9	6	6	8	9	11	21	10	10	
6	2-	1+	1 o'	1-	1 o	1+	2-	1+			10.0	13	9	6	4	6	10	13	10	9	10	
7	1+	2-	1+	1-	1-	1+	2-	1+			10.0	8	13	10	4	5	10	11	9	9	10	
8	2-	2-	2 o	1+	3-	4-	5+	4+			22.7	11	11	14	8	21	48	109	64	36	37	
9	4-	4+	5-	5-	5 o	4+	3+	3 o			33.0	47	69	75	77	91	62	35	27	60	56	
10	3 o	4 o	3+	4 o	3 o	4-	3+	2+			26.7	31	52	34	59	29	46	36	19	38	39	
11	2+	2+	3 o	3+	3-	3 o	4-	3-			23.0	17	20	33	39	25	30	44	26	29	30	
12	2+	3+	3-	3+	3+	3 o	3 o	3 o			24.0	17	34	24	36	40	32	30	30	30	28	
13	2+	3-	2+	2+	3-	3 o	3-	1+			19.3	18	21	20	18	25	27	26	9	21	22	
14	1+	2-	1+	3-	2+	3 o	1+	1 o			14.7	8	12	9	21	20	31	9	7	15	16	
15	1 o	1-	2-	3-	2+	3+	3 o	2-			16.3	6	5	13	22	18	36	27	13	18	17	
16	2 o	2+	2 o	3-	3-	2-	1 o	1-			15.0	15	19	14	21	22	13	6	5	14	16	
17	0 o	0+	1 o	3 o	2+	3 o	2+	2-			13.7	1	3	7	29	20	32	20	12	16	13	
18	2-	2-	1 o	2-	2 o	2-	2 o	1 o			12.7	12	12	7	12	14	12	15	7	11	14	
19	1-	1 o	2+	3 o	3-	3 o	1 o	1-			14.3	5	6	17	28	24	30	6	4	15	12	
20	1+	1-	1+	1+	1+	3-	3-	2-			13.0	8	4	8	8	10	24	21	13	12	16	
21	1+	4-	2+	2+	3 o	2 o	1+	2-			17.7	10	47	18	20	28	15	10	11	20	18	
22	2 o	2-	2+	2-	2-	3-	2+	5-			19.0	16	11	19	13	12	21	20	74	23	31	
23	3 o	4+	5 o	4+	4+	4 o	3-	3 o			30.7	32	62	87	69	66	51	25	27	52	36	
24	1 o	1 o	2-	1 o	2 o	2-	2+	2-			12.3	6	7	11	7	16	13	17	13	11	21	
25	3-	3-	2 o	2-	1 o	2-	1+				15.7	24	22	21	15	12	7	12	8	15	13	
26	1-	1-	1+	2-	1+	3-	2-	2+			12.3	4	5	8	11	8	26	12	19	12	11	
27	2 o	2 o	1+	1+	1 o	2-	3 o	4 o			16.3	14	14	10	8	7	13	31	53	19	31	
28	5 o	4+	4-	5-	6-	6-	5-	5-			38.3	93	62	45	82	124	145	80	83	89	58	
29	4+	3 o	1+	2 o	2 o	2+	4-	5-			23.3	61	29	8	15	15	18	47	82	34	51	
30	3+	3-	3 o	2+	2+	3+	3-	3-			22.3	35	26	27	19	20	36	23	25	26	30	
31	3 o	2+	2+	3+	3+	3 o	2 o	2+			21.7	31	20	19	39	39	27	15	18	26	25	

25.0

FEBRUARY 1985

	Km										$\Sigma$ Km	am									Am	Am2
1	2 o	2-	3-	3 o	3 o	3+	3-	1+			19.7	16	13	24	30	27	35	21	9	22	22	
2	1+	3+	2 o	2 o	2+	2+	2+	2 o			17.7	8	34	15	15	18	20	18	14	18	17	
3	1+	1+	1 o	2-	3 o	3 o	2+	0+			14.0	8	10	7	11	29	27	18	3	14	13	
4	1 o	1+	0+	1-	0+	0 o	1 o	1-			5.3	7	8	2	4	2	1	7	5	5	15	
5	1+	3+	4-	3 o	5-	4-	3+	3 o			26.0	8	40	42	30	30	42	37	31	39	35	
6	4 o	4-	5-	4+	5-	5-	5-	3 o			33.7	59	43	74	62	84	80	74	29	63	51	
7	3-	2 o	3 o	4-	4 o	3 o	2 o	3 o			23.3	23	14	32	47	51	31	14	28	30	39	
8	4-	2-	2-	4 o	3 o	4 o	4 o	4 o			26.0	45	12	12	53	31	54	56	59	40	36	
9	3-	3-	4-	3 o	4-	3 o	2+	3-			23.7	23	23	50	29	47	29	18	22	30	35	
10	3 o	3-	3+	3 o	4-	3+	5-	2 o			25.7	31	23	38	28	44	34	71	15	36	29	
11	2-	2+	2+	2+	3 o	3-	3-	3 o			20.0	11	18	17	20	30	23	24	27	21	26	
12	2-	3 o	3 o	2+	3 o	3 o	2-	0+			18.0	11	28	27	17	29	27	11	3	19	17	
13	1-	0 o	0 o	1+	2+	2+	4-	3-			13.0	5	0	1	9	17	20	46	25	15	17	
14	2+	2+	3 o	2 o	2 o	4-	3-	3+			21.3	19	19	27	15	16	49	25	38	26	24	
15	3 o	2+	2+	1-	0+	1-	1+	2 o			12.7	33	20	17	5	2	5	8	16	13	16	
16	0+	1 o	1 o	1+	3-	2+	2+	2 o			13.0	2	6	7	10	21	19	20	15	13	13	
17	1+	3-	3-	3-	3 o	3-	3-	1 o			19.3	10	23	21	21	38	29	24	7	22	17	
18	0+	2-	1+	1+	1 o	1-	1+	1-			8.3	2	11	9	9	6	5	8	5	7	11	
19	1 o	2 o	1-	1 o	1 o	1 o	2 o	3-			11.3	6	14	4	6	7	7	15	23	10	12	
20	3-	2+	3 o	3-	2+	1-	2-	1-			16.0	21	18	29	24	18	5	11	5	16	13	
21	0+	1+	1+	1+	2-	2+	3+	2+			14.0	3	8	8	8	13	20	37	19	15	12	
22	2 o	1+	1 o	2-	2+	2-	2-	2-			13.3	16	8	6	13	19	13	12	12	12	15	
23	2-	2 o	2-	2-	2 o	2-	2+	3-			15.7	13	14	11	11	16	13	18	24	15	20	
24	3+	3+	3+	3 o	3-	2 o	2+	3+			23.3	38	39	34	29	25	15	17	37	29	25	
25	2-	3-	3+	3-	2 o	3-	1+	1+			17.7	13	24	35	23	16	25	8	10	19	18	
26	2 o	1+	1+	0+	0 o	1-	2+	1+			9.3	15	10	9	2	1	5	18	9	9	10	
27	1+	1+	1 o	2-	2+	2-	3-	5+			17.3	9	9	7	11	18	11	21	117	25	40	
28	5+	6-	5+	4+	5-	3+	3 o	2-			33.3	109	122	113	67	72	39	30	13	71	54	

23.4

**am INDICES 1985 (continued)**

MARCH 1985

	Km												$\Sigma$ Km	am												Am	Am2
1	2 o	4 o	4 -	3 -	1 +	1 o	1 o	3 -					18.3	15	52	44	22	8	6	7	24				22	27	
2	2 -	3 -	3 -	4 -	4 o	4 o	3 +	4 -					25.7	12	23	24	43	56	59	40	42				37	27	
3	2 o	3 +	3 -	1 -	2 -	2 +	2 +	3 -					17.7	16	39	26	7	5	11	18	18	21			19	25	
4	2 +	2 -	1 o	1 o	2 o	2 +	2 +	3 -					15.3	19	12	7	7	15	19	19	25				15	22	
5	3 -	3 o	4 o	4 -	3 o	4 o	5 -	5 o					30.0	24	33	51	47	27	52	78	93				51	40	
6	4 -	3 o	4 -	3 o	3 -	3 +	3 -	3 -					24.7	45	27	49	30	25	34	26	25				33	39	
7	3 -	3 -	3 o	3 +	3 o	3 +	4 o	3 -					24.7	23	21	28	38	33	40	58	25				33	36	
8	4 o	4 +	4 -	3 +	3 +	3 o	3 -	3 -					27.0	57	63	41	38	34	28	21	22				38	30	
9	2 o	1 o	0 +	0 o	0 o	0 +	0 o	2 +					6.0	14	6	3	1	1	3	1	19				6	13	
10	2 +	1 o	1 -	3 -	2 -	2 +	3 -	3 +					17.3	17	7	8	22	11	20	24	39				19	13	
11	1 +	1 +	1 +	1 +	2 +	1 +	1 o	0 o					10.0	8	8	9	9	20	10	7	1				9	12	
12	0 +	1 +	1 +	0 +	3 -	2 +	3 +	3 o					14.7	2	9	9	2	23	17	34	31				16	13	
13	1 -	1 o	1 +	3 -	1 o	1 -	0 +	1 -					8.3	5	7	9	21	6	4	2	5				7	12	
14	1 o	1 -	1 +	1 +	3 -	2 -	3 o	2 -					13.3	7	5	8	10	21	12	27	11				13	15	
15	2 +	3 -	4 o	3 +	3 -	1 o	1 +	2 -					19.0	20	21	52	36	22	6	9	12				22	19	
16	2 +	2 -	2 -	1 +	3 o	3 -	2 -	2 +					16.7	19	11	11	8	31	22	13	20				17	14	
17	2 +	1 -	1 o	1 o	1 -	1 -	3 -	3 -					11.7	18	5	6	7	4	4	22	23				11	16	
18	4 -	2 +	2 -	0 +	1 -	0 o	3 -	3 -					14.0	41	20	13	2	4	1	25	25				16	14	
19	1 +	2 -	1 +	2 o	3 o	2 +	3 +	1 +					16.3	10	13	9	15	30	18	37	10				18	14	
20	1 -	1 -	2 -	1 +	2 o	2 o	1 -	0 +					9.3	4	4	13	9	16	14	5	2				8	12	
21	1 +	2 -	0 +	0 o	1 +	1 +	1 +	2 -					9.0	8	11	2	1	9	8	8	11				7	8	
22	1 +	1 -	0 o	1 -	2 -	1 -	0 +	1 +					7.7	18	5	1	4	11	4	3	8				7	9	
23	3 -	2 +	0 +	1 -	1 o	0 +	1 +	1 +					10.0	23	19	3	5	6	3	8	8				9	8	
24	2 -	1 -	1 o	1 +	1 +	1 -	1 o	3 -					10.3	11	4	7	10	8	5	7	24				10	7	
25	1 +	0 o	0 +	1 -	1 +	2 -	3 -	1 +					9.3	9	1	2	5	8	11	26	10				9	11	
26	3 -	2 -	1 +	2 +	2 +	1 +	2 +	2 -					15.7	23	13	10	18	19	10	18	12				15	14	
27	1 +	1 o	2 -	3 -	2 +	3 -	3 o	3 -					17.3	10	7	13	23	19	21	31	26				19	21	
28	4 -	4 -	3 o	0 +	2 -	2 -	2 -	3 -	2 o				18.7	46	50	27	3	11	13	22	14				23	20	
29	1 +	1 o	1 +	1 o	1 o	2 +	2 +	2 +					12.7	9	7	8	7	6	17	18	18				11	13	
30	3 o	1 o	1 -	1 o	2 -	1 +	1 +	1 o					11.0	32	7	5	6	12	9	8	7				11	16	
31	2 o	2 +	4 -	3 o	2 +	1 -	2 o	1 -					16.7	16	17	41	32	17	4	16	5				19	17	

17.7

APRIL 1985

	Km												$\Sigma$ Km	am												Am	Am2
1	1 +	2 o	3 -	3 +	5 -	4 +	3 +	2 +					24.0	9	15	25	37	78	66	35	19				36	26	
2	1 +	3 -	3 o	3 -	2 +	3 o	4 -	3 -					21.3	9	26	33	26	20	31	44	23				27	33	
3	4 o	3 -	2 +	3 -	2 o	3 o	4 o	3 o					23.7	60	21	19	23	16	27	52	27				31	29	
4	2 -	3 -	3 o	3 o	2 +	3 +	3 +	3 -					22.0	12	26	30	30	19	39	37	22				27	25	
5	2 o	3 -	1 o	2 o	2 +	1 -	1 -	1 o					12.3	15	22	6	14	17	4	5	6				11	14	
6	0 +	0 +	1 o	2 -	2 -	1 -	2 o	2 o					9.7	2	2	7	11	11	5	14	14				8	10	
7	1 -	2 -	3 -	2 o	1 +	2 +	1 +	0 +					12.3	5	13	25	16	10	18	10	2				12	11	
8	0 +	1 -	1 +	2 o	2 -	3 -	4 -	5 -					17.0	2	4	9	15	11	21	43	71				22	28	
9	4 -	4 -	4 +	5 -	5 +	5 o	3 o	1 o					30.7	43	44	63	82	106	92	27	7				58	43	
10	0 +	2 o	2 +	3 +	3 o	2 +	2 o	3 -					18.0	3	14	19	38	31	20	15	23				20	31	
11	4 -	3 o	2 -	2 -	1 +	3 -	1 -	1 o					15.7	46	28	11	13	8	21	5	6				17	16	
12	1 +	1 o	2 -	1 o	1 +	1 o	2 -	0 +					9.3	8	7	11	6	10	7	12	3				8	8	
13	1 -	1 +	1 o	1 +	1 +	2 o	2 -	3 -					12.0	5	8	7	9	8	15	12	26				11	13	
14	3 o	3 +	2 +	1 +	2 o	1 +	2 -	1 +					16.3	27	34	17	9	14	9	12	10				17	14	
15	1 -	1 +	1 o	1 o	1 -	1 -	0 +	1 +					7.0	5	10	6	6	4	4	3	9				6	9	
16	1 +	2 -	1 +	3 -	2 +	1 +	1 +	2 o					14.0	9	11	9	24	18	9	10	16				13	10	
17	1 +	2 -	1 -	1 -	1 -	1 -	1 -	2 o					8.3	8	4	13	5	5	4	4	15				7	9	
18	2 o	0 +	1 -	1 -	1 -	1 -	0 +	1 o					6.3	14	3	5	4	4	5	2	7				6	11	
19	2 -	3 -	4 -	3 o	3 +	4 -	4 -	5 -					26.3	12	24	42	28	37	42	49	75				39	40	
20	4 o	5 -	6 -	3 +	2 o	3 o	5 -	6 -					33.0	55	85	139	40	16	29	83	136				73	93	
21	7 -	6 -	7 -	5 o	4 +	5 o	4 -	3 +					40.3	242	145	228	92	61	94	48	37				118	82	
22	2 +	2 +	3 -	3 +	2 +	2 +	1 +	2 o					18.7	20	19	22	38	18	18	10	14				20	30	
23	3 o	2 -	3 -	2 o	2 o	3 -	2 +	2 o					18.3	30	13	22	16	15	23	18	16				19	23	
24	3 +	4 -	4 o	3 o	2 o	2 o	1 +	1 +					20.7	37	42	52	31	15	14	10	8				26	29	
25	4 -	4 o	3 +	4 -	3 o	2 -	2 +	3 -					24.3	44	56	38	48	33	13	17	26				34	36	
26	4 -	4 o	5 -	4 +	2 o	3 -	3 o	4 o					28.3	49	58	78	67	15	26	33	52				47	42	
27	3 o	4 +	4 o	4 o	3 +	3 -	5 -	5 -					30.0	33	63	51	52	51	39	22	71				48	59	
28	5 o	5 -	5 +	6 o	4 o	3 -	3 -	2 -					32.0	100	73	115	147	51	22	22	13				68	55	
29	3 -	5 -	3 o	1 -	2 o	2 -	2 -	1 o					17.3	26	86	30	5	15	11	12	7				24	25	
30	2 -	0 +	1 -	5 -	7 -	4 +	1 -	3 -					25.3	11	3	10	75	207	66	43	26				55	36	

30.3

**am INDICES 1985 (continued)**

MAY 1985

	Km										$\Sigma$ Km	am										Am	Am2
1	2+	2+	2+	3o	3-	2o	0+	2o	17.0	17	19	20	33	22	14	3	14	18	54				
2	5o	5-	6-	5o	3-	2-	1+	1+	27.3	88	75	121	93	25	13	8	10	54	34				
3	1o	1o	2-	3-	2o	2+	1+	2o	14.0	7	6	12	26	15	17	10	15	14	15				
4	1+	2+	3-	2+	3o	3-	1+	1-	16.3	10	19	26	18	33	24	10	5	18	15				
5	1o	2o	2-	1-	2-	2-	3-	2+	13.7	7	14	13	5	12	11	21	20	13	18				
6	4-	2+	3+	1+	2o	2o	2-	2+	18.7	41	20	37	10	14	15	13	17	21	18				
7	3-	2-	1+	1o	1o	1+	1+	2+	12.7	25	13	8	7	7	9	10	20	12	14				
8	2+	2-	2o	3-	1+	2+	1+	3-	16.3	18	11	14	22	9	20	9	26	16	17				
9	3-	3-	2+	1+	1+	2-	0o	0o	14.7	22	26	22	20	8	9	12	1	15	12				
10	0o	0o	0+	0+	1o	1-	2-	3-	6.7	0	0	2	3	6	5	12	23	6	9				
11	2-	2-	3-	2o	0+	1o	1o	1-	11.0	11	13	24	14	3	7	7	5	11	13				
12	1+	1o	3+	3-	3-	2+	3-	3o	19.0	8	7	38	25	23	17	25	30	22	17				
13	3o	3-	2-	1+	2-	3o	2+	3o	18.7	27	23	13	10	12	28	18	32	20	20				
14	3-	2o	2o	1+	1o	1+	2o	1+	13.7	22	15	14	8	7	9	15	8	12	18				
15	3o	3+	2+	2+	3-	3-	3-	3+	22.3	30	40	18	18	21	26	21	38	27	19				
16	1o	2o	2+	2o	3o	2+	3-	3o	18.3	7	15	17	15	27	20	23	32	20	18				
17	1+	1-	1+	3-	2+	2-	3-	3-	14.0	8	4	10	23	18	12	23	14	17					
18	3-	2o	2-	1+	2+	3-	2+	3-	17.7	22	14	11	8	18	22	19	25	17	18				
19	3-	2+	2+	2-	2+	3-	3-	2o	18.7	22	17	17	12	17	24	21	16	18	16				
20	2+	1o	1-	0o	1-	2-	2-	1o	9.0	19	6	4	0	5	11	12	6	8	11				
21	1+	2-	0+	1-	2-	3-	2+	2+	13.0	9	11	3	4	11	23	20	20	13	11				
22	2-	2-	1+	1+	1-	1-	1+	1+	10.0	11	11	10	8	4	5	10	8	8	11				
23	2o	2+	1-	0+	1-	0+	1o	1o	8.3	15	18	4	2	4	3	6	7	7	7				
24	2-	1o	1-	0+	1-	1+	2+	2+	10.3	12	6	4	3	5	8	18	17	9	7				
25	0+	1o	0+	1-	1+	2+	2o	3+	11.3	2	6	3	4	8	19	16	39	12	12				
26	3-	1+	1o	2-	2o	2+	2+	1+	14.7	26	9	7	11	14	17	20	9	14	15				
27	1o	1+	2-	2+	2+	1o	1o	1o	11.7	7	9	11	17	20	7	7	6	11	11				
28	1-	1o	1+	1+	1+	1o	1o	1+	9.0	5	7	8	8	10	7	7	8	8	8				
29	2-	1+	2-	0+	0o	1+	1-	1+	8.3	13	8	11	3	1	8	5	8	7	6				
30	0o	0+	1-	1-	1-	1-	0+	1o	4.3	1	2	4	5	5	5	2	6	4	7				
31	3-	2o	2-	1-	0+	1-	1o	2+	11.3	22	16	11	4	3	5	7	17	11	17				

14.8

JUNE 1985

	Km										$\Sigma$ Km	am										Am	Am2
1	4-	3+	3o	4o	3o	3+	3o	3o	26.3	42	40	28	51	31	35	32	27	36	22				
2	2o	1o	1+	1+	2+	2-	2+	2-	13.7	14	7	8	8	18	11	17	11	12	15				
3	0+	0+	1o	1+	2o	1+	1+	1+	8.0	2	3	2	6	8	14	10	10	7	9				
4	2-	0+	1+	1-	1+	2-	1+	1+	9.7	11	2	9	4	8	13	9	9	8	9				
5	2-	2-	2-	1+	1o	1o	1+	2-	11.3	12	12	11	9	6	7	8	11	10	12				
6	2+	3o	2o	2o	3+	5-	3-	5-	24.7	19	31	15	16	36	85	25	77	38	35				
7	3+	4+	5-	4-	4o	4-	4-	3-	30.0	37	65	72	50	54	46	44	23	49	50				
8	3+	4o	4-	4-	2o	2o	2-	2-	22.0	39	52	46	42	16	14	11	13	29	29				
9	1+	2+	3-	1+	1-	2+	4o	5+	20.0	9	18	22	9	5	18	60	119	33	38				
10	5-	5-	4+	3o	2o	2o	3-	3-	28.7	74	78	75	67	27	16	23	23	48	42				
11	3-	3+	3-	2o	2-	2+	2o	2+	19.0	21	34	21	15	11	18	16	20	20	21				
12	3o	3-	3-	2o	2-	2+	2+	2o	18.7	27	24	24	15	12	18	18	16	19	15				
13	1-	1-	0+	1-	2-	2o	1+	2o	9.3	4	5	3	5	11	15	9	16	9	10				
14	1+	1-	2-	1o	1o	1-	1-	1+	8.3	9	4	13	7	7	4	4	10	7	9				
15	1+	3-	1-	1-	1-	1+	2-	1-	9.7	10	24	4	4	4	8	12	5	9	7				
16	1-	1o	1+	0+	0o	0+	1-	1-	5.0	5	6	9	3	1	2	5	5	5	6				
17	1+	1-	1o	1-	2+	3-	1+	1+	12.0	10	5	10	7	20	22	10	10	12	8				
18	1-	1o	1o	1-	1+	2-	1-	0+	7.3	4	7	6	5	9	11	5	3	6	8				
19	1-	0+	1o	1o	1+	1-	1-	1-	6.3	4	3	6	7	8	4	4	5	5	7				
20	0+	2-	1+	2o	3-	4o	2o	3-	16.7	3	11	8	14	24	52	15	24	19	14				
21	2-	2+	2-	2o	2-	1+	1+	1+	13.3	11	20	11	14	13	9	8	9	12	18				
22	2-	3-	3-	2+	1-	1-	1-	1-	12.0	13	21	24	20	5	4	4	5	12	13				
23	3o	2+	1+	2-	2o	1+	1-	1o	13.3	33	20	9	11	15	9	4	7	14	9				
24	1-	1-	1-	1-	1+	1+	1+	2o	8.7	5	4	5	5	8	9	8	14	7	11				
25	3-	3-	3-	2o	1+	2-	3+	3-	19.0	24	24	25	14	10	12	38	22	21	21				
26	3o	2+	3-	4o	4-	3o	4+	3+	26.3	29	20	22	56	48	30	64	38	38	30				
27	3o	2+	3-	2+	2+	3o	3-	3o	21.3	27	17	21	19	20	31	24	30	24	32				
28	4-	3+	4-	3-	3o	3-	3-	3+	25.0	44	40	41	25	30	22	22	39	33	31				
29	3o	2+	3+	4-	3-	3-	3o	2+	23.0	30	19	35	46	25	21	27	17	28	23				
30	2-	1-	1o	2o	1+	2o	3o	4-	15.3	13	4	6	15	8	14	31	42	17	22				

19.6

**am INDICES 1985 (continued)**

JULY 1985

	Km										$\Sigma$ Km	am										Am	Am2
1	4+	2+	3o	1+	2o	2+	2-	2o	19.0	68	20	29	10	16	17	13	15	24	19				
2	2-	1-	0+	1-	1-	1-	1+	1o	7.0	12	5	2	4	4	5	8	7	6	9				
3	1+	1+	1-	1-	2-	1+	2o	3o	12.7	8	10	9	4	11	9	14	28	12	15				
4	3+	3-	3+	3o	5o	4-	4+	4o	29.3	35	25	35	33	99	48	70	58	50	36				
5	3o	3o	3o	3o	3o	2+	3o	3+	23.7	30	33	27	27	27	19	27	34	28	40				
6	3o	3+	3+	3+	3-	3o	4-	4o	26.3	33	34	40	35	21	28	45	56	37	35				
7	4-	4-	4-	3-	3+	3o	2o	3o	25.0	48	47	45	26	40	31	16	27	35	32				
8	1+	3o	3o	2+	3-	3-	4-	4o	22.7	10	27	29	19	25	25	45	52	29	28				
9	2+	4-	3-	1-	1o	1+	1+	1+	14.3	19	48	25	4	7	10	10	8	16	20				
10	2+	2-	1o	1+	1+	2+	3-	3-	15.3	17	13	7	8	8	19	26	24	15	16				
11	3-	3o	3-	3-	2+	2-	3-	2+	20.0	22	28	22	21	19	11	24	20	21	30				
12	4-	4+	4-	5-	4o	4-	5+	3o	32.3	45	61	45	77	53	50	112	29	59	40				
13	2o	2-	2o	4-	4-	4-	4o	4-	24.3	15	11	15	50	48	48	52	47	36	43				
14	3+	4o	4-	3o	3-	2+	2-	1+	22.0	34	51	42	29	23	18	12	8	27	32				
15	2-	4-	2-	3-	1+	1o	1-	1-	13.3	11	45	13	23	10	6	5	5	15	13				
16	1-	1o	1o	1-	1-	1+	1+	1+	8.0	5	6	7	4	4	9	9	10	7	13				
17	3-	3o	2-	4o	4o	3o	2o	2o	22.3	23	33	12	52	53	31	14	16	29	22				
18	3o	3-	2o	2+	3-	3-	3-	3+	21.3	32	22	15	19	24	21	26	39	25	24				
19	2o	2-	2o	3o	3o	2-	1o	0+	14.7	14	11	15	27	27	11	7	3	14	17				
20	1+	2o	2-	1+	2o	3+	1+	1o	14.0	8	16	12	10	15	37	8	7	14	14				
21	2-	2o	2+	2-	1o	1-	0+	1o	10.7	13	14	17	12	6	4	3	6	9	11				
22	1-	1-	2-	1+	1o	1-	2+	2o	10.3	5	5	11	10	7	4	20	14	10	14				
23	1+	4+	3+	3-	2o	2-	2+	3o	20.7	10	65	37	21	15	13	20	28	26	20				
24	2-	2o	2+	3-	3-	2o	3o	3-	19.0	12	16	19	24	25	15	28	25	21	22				
25	3o	3+	3o	2+	1o	2+	3-	2+	20.0	33	34	32	19	6	19	24	20	23	25				
26	2+	4o	3-	3-	2o	2o	3+	4-	22.7	18	58	22	25	14	15	38	49	30	29				
27	3o	3+	4-	3+	4-	2-	2-	3-	23.0	33	39	50	37	44	12	11	25	31	28				
28	3-	3-	2-	3-	2o	2o	3+	3-	19.7	25	23	11	25	14	16	35	21	21	18				
29	1+	1+	1o	1-	1+	2-	2+	1+	11.0	9	9	6	4	9	11	17	8	9	15				
30	2-	3o	3-	3-	4-	2+	1+	2o	19.3	12	30	22	24	46	18	8	14	22	24				
31	1+	3-	4o	5-	4+	5-	4-	5-	30.0	10	22	55	84	64	74	45	86	55	40				

24.4

AUGUST 1985

	Km										$\Sigma$ Km	am										Am	Am2
1	4-	3o	2+	2o	3+	3-	2+	3o	22.3	49	32	20	15	37	26	18	27	28	36				
2	2-	3-	3o	2o	1+	3o	3o	3-	20.0	19	26	27	16	8	28	27	25	22	21				
3	3-	2-	1-	2-	1-	2-	2+	2o	13.3	22	13	5	12	5	12	19	16	13	17				
4	2o	3-	3-	1+	2o	1o	1+	2-	14.7	14	23	26	9	14	7	9	11	14	12				
5	1o	1o	1o	1-	1o	1o	1o	1o	7.7	7	7	6	4	7	6	6	6	6	6				
6	1o	0+	1-	0o	0+	1-	2-	1-	5.3	6	2	4	1	2	4	13	5	5	5				
7	2-	0+	1-	0+	0+	0+	1-	2-	6.0	11	2	5	2	3	2	4	13	5	5				
8	2o	2o	1o	1o	1+	1o	1+	2-	11.3	14	15	6	7	9	7	8	12	10	7				
9	2-	0+	0o	0+	0o	0+	1o	2o	7.3	12	3	1	3	1	6	14	14	7	10				
10	2-	2o	3o	2+	2+	1-	2+	1+	14.7	11	16	30	18	8	11	10	9	14	12				
11	3o	1+	0+	1o	1o	0+	0+	0+	7.7	31	10	3	7	6	2	3	2	8	8				
12	1-	0+	1o	2o	3-	3o	5o	5o	19.7	5	2	6	14	24	28	91	98	34	40				
13	5o	5+	5-	4+	3o	2+	4o	4-	32.3	98	107	81	67	31	19	52	42	62	54				
14	3o	3-	4-	3o	2o	2-	2-	2-	19.3	31	26	43	30	16	12	11	12	23	28				
15	2+	3o	3+	3-	3-	1+	2+	2o	19.7	18	33	40	26	23	10	17	15	23	19				
16	3-	2-	2-	2+	3-	2o	3-	3-	18.3	23	13	11	17	21	16	23	23	18	18				
17	1-	3o	3-	3-	3-	1+	2+	2+	18.0	5	27	26	23	22	25	10	17	19	19				
18	1+	2+	2+	2+	2+	3-	3-	4+	20.3	8	20	17	19	17	21	23	66	24	23				
19	3-	4o	3-	1o	1+	1+	2o	3-	17.7	25	53	21	6	8	8	16	26	20	24				
20	3o	3+	3-	1+	2+	2+	2o	2+	19.3	33	34	24	8	20	19	15	20	22	20				
21	3-	3-	3-	2+	1+	2-	1+	3-	17.3	24	23	22	19	9	13	8	25	18	25				
22	3o	3-	4+	4o	3-	4-	4+	3o	27.7	32	22	69	58	23	46	61	28	42	35				
23	4o	4-	2o	4-	3-	2-	3-	3+	23.7	55	43	15	47	23	13	25	38	32	31				
24	3o	2+	2o	1+	1+	1-	1+	2-	13.7	32	20	16	10	10	5	9	11	14	23				
25	3-	3+	4+	3o	3-	2+	2-	2+	22.3	21	34	66	31	21	18	13	19	28	23				
26	3+	3+	2+	2-	2o	3-	4-	4-	20.7	39	40	20	11	13	15	25	41	26	26				
27	4-	3o	3-	4-	2o	3o	2+	2-	22.0	46	28	23	42	15	28	17	11	26	24				
28	2+	2-	2+	3o	2+	3+	3+	3+	21.7	18	13	20	27	17	38	38	34	26	26				
29	3+	4-	3+	3o	3+	3o	4-	2+	25.7	36	41	37	28	38	29	42	17	34	29				
30	3+	3o	1-	0+	1-	2o	3o	2o	15.0	34	27	4	3	4	16	29	16	17	31				
31	4-	4-	4+	5-	4-	5-	3o	3+	31.0	43	41	65	81	50	74	28	35	52	32				

22.3

**am INDICES 1985 (continued)**

SEPTEMBER 1985

	Km									ΣKm	am										Am	Am2
1	1+	1+	1-	1-	1o	2+	3-	3-		12.7	9	10	4	4	6	20	21	22		12	20	
2	1-	1+	1-	2-	1+	1+	1-	1o		8.7	4	9	4	13	8	8	4	6		7	10	
3	0+	1+	2o	1o	1-	1-	0o	1o		7.0	3	10	14	7	4	5	1	6		6	6	
4	0+	1+	0+	0+	0o	1-	0+	0+		3.7	2	9	2	3	1	5	3	3		4	3	
5	0o	1-	0o	0+	0+	0+	1+	2-		4.7	1	4	0	3	2	3	8	12		4	5	
6	1-	2-	1+	2-	3-	3o	3-	3-		16.3	5	11	8	13	23	30	22	23		17	14	
7	2+	2o	2o	1+	1+	1+	2o	2+		14.7	19	16	14	8	8	9	16	19		14	16	
8	1+	1+	2+	2-	3o	3o	2+	2+		17.3	8	9	17	13	28	29	20	20		18	17	
9	2o	2+	2o	3o	3o	3+	3-	2+		20.7	14	20	16	33	27	35	21	19		23	23	
10	2-	2+	3+	2+	1+	2o	3o	3o		19.0	11	20	36	18	8	16	28	30		21	21	
11	2-	2o	3-	2+	1+	1o	3o	1+		15.3	12	16	23	19	10	7	30	8		16	14	
12	1+	0+	1o	1-	2o	3-	1+	1o		10.3	10	2	6	5	14	24	10	7		10	11	
13	1-	2o	1-	2+	1+	1+	1-	1+		10.3	4	14	5	19	10	9	4	10		9	19	
14	2o	2o	4+	4+	6-	3-	3-	3-		26.3	14	16	67	70	123	24	22	22		45	27	
15	2-	2+	1o	1+	2-	2-	5o	3+		18.0	12	18	6	8	13	12	87	35		24	37	
16	4o	4o	2+	5o	5o	3+	3o	3+		30.0	52	56	19	88	87	35	27	35		50	41	
17	3+	2+	2+	3+	3-	1+	3-	2+		20.3	35	19	17	34	26	9	26	17		23	26	
18	1+	1o	2-	2o	2o	1+	1o	1o		11.3	9	6	13	16	14	10	6	7		10	20	
19	2-	2-	3o	5o	4-	5-	5-	3o		27.3	13	13	29	101	44	83	77	32		49	41	
20	4-	5-	4+	3+	3o	3-	4-			29.3	41	71	42	65	40	28	26	51		46	47	
21	3+	3o	4-	4-	3+	4-	4-	3-		27.0	34	29	48	41	36	44	43	26		38	33	
22	2+	3-	3o	2-	3o	3-	2o	2o		19.3	18	23	32	12	28	23	16	14		21	26	
23	1+	2o	3+	4-	1o	1+	1o	1-		14.3	8	16	36	41	7	10	7	4		16	17	
24	1o	2o	2+	3o	3o	3+	4-	3+		21.7	6	14	18	30	32	34	50	36		28	22	
25	3-	2o	4-	2o	3-	4-	3+	4-		23.7	22	16	46	15	23	42	34	42		30	33	
26	2+	3-	3o	4+	1-	1+	3o	4-		21.0	20	23	32	61	4	8	29	42		27	31	
27	2+	3o	3+	4-	2-	1+	3-	4o		22.0	17	31	40	41	11	9	26	57		29	23	
28	2o	1+	1+	2+	3o	2-	1+	1+		14.3	14	9	8	19	29	11	8	10		14	15	
29	1o	1o	1-	1o	1o	1o	1+	1+		8.3	7	7	4	7	6	6	9	10		7	9	
30	2-	1o	1-	1-	1o	1o	1+	2+		9.7	11	6	5	5	6	7	10	20		9	7	

20.9

OCTOBER 1985

	Km									ΣKm	am										Am	Am2
1	1o	1o	0o	0o	1o	0+	1-	1-		4.7	7	6	1	1	6	3	4	4		4	8	
2	2-	1+	2o	1+	1-	1+	2-	2o		12.0	13	8	16	9	4	9	13	15		11	12	
3	1+	2o	3-	3+	3o	3-	2o	1+		18.3	8	14	26	39	31	24	16	10		21	18	
4	2-	2+	3-	3o	3-	2o	3o	3-		20.7	13	19	25	28	24	16	27	40		24	36	
5	3-	5o	5o	5o	4o	4+	6o	6-		37.7	21	95	101	92	51	70	150	141		90	67	
6	5-	3+	5-	4-	4+	3+	3o	4-		30.7	74	37	82	50	68	37	30	47		53	63	
7	4-	4-	3+	3+	3o	4o	3+	4-		28.0	42	47	39	39	27	58	35	41		41	39	
8	3+	3o	2+	3o	3o	3o	3+	2+		23.3	34	27	20	27	29	27	34	19		27	26	
9	1+	2+	2o	0+	2-	1+	2+	1+		12.7	8	19	14	3	12	10	18	9		12	16	
10	1o	2-	2+	1+	2o	1-	2-	2-		12.3	7	12	19	9	14	5	13	12		11	14	
11	2-	2-	3o	3-	2+	4-	3+	3+		21.7	12	13	32	24	17	45	34	39		27	22	
12	4o	1+	1+	2o	3o	3-	3-			18.3	57	10	9	10	16	29	23	21		22	22	
13	2+	4o	3-	2+	3+	4o	3-	3-		24.0	20	56	23	18	37	53	22	24		32	26	
14	2o	3-	2o	3o	1+	2o	1+	1o		15.3	15	21	14	27	10	16	10	7		15	26	
15	2-	4-	5-	2o	2-	2+	2-	3-		20.3	13	48	77	16	13	19	13	26		28	26	
16	3+	3+	3+	3+	2+	2+	2-	2+		22.0	34	40	37	39	20	20	11	20		28	24	
17	3-	3-	2+	3-	3o	3+	3o	3o		22.7	26	24	17	21	28	37	29	29		26	25	
18	3+	2-	2+	4-	4-	4-	3+	4-		25.3	36	13	17	48	46	44	40	45		36	34	
19	3+	2+	3-	4-	3-	1+	1o	1-		17.7	39	19	25	50	25	10	6	4		22	26	
20	1o	2-	3-	2o	2-	1+	2o	0+		12.7	7	12	22	16	12	8	14	3		12	13	
21	0+	2o	3o	2+	3o	5-	3-	3o		21.0	3	16	27	20	31	72	25	31		28	25	
22	3+	4-	4-	2-	2-	3-	3+	3-		22.7	39	44	46	13	11	21	38	22		29	29	
23	2+	2o	2o	3-	3-	3-	2+	3o		19.7	20	16	15	23	23	26	18	33		22	20	
24	2o	2o	2+	1-	1-	3-	3o	1o		14.3	16	15	18	5	5	23	29	7		15	18	
25	2+	2+	2-	2o	2+	2+	2+	2-		17.0	17	19	13	16	17	19	17	13		16	14	
26	1-	1-	1+	1+	2-	0+	1-	1+		8.0	4	5	8	9	12	2	5	10		7	9	
27	1-	0+	1o	1o	1-	1o	1o	2+		8.0	4	3	7	6	5	6	7	18		7	8	
28	2o	1o	1o	1+	1-	0+	0+	1o		7.7	16	7	7	8	4	2	3	6		7	12	
29	3o	3-	2+	3+	2+	2o	1o	1o		17.7	28	22	20	35	19	14	7	6		19	12	
30	1o	1-	1o	1o	1+	1o	2-	1o		8.7	7	5	7	7	9	7	12	6		8	9	
31	1+	1+	1-	2o	2-	3-	2+	1+		13.3	9	8	4	16	12	24	18	8		12	13	

23.0

am INDICES 1985 (continued)

NOVEMBER 1985

	Km										$\Sigma$ Km	am										Am	Am2
1	2 o	2 +	2 +	3 -	3 +	3 +	4 o	2 +		22.3	15	18	17	24	40	39	52	19	28	21			
2	1 -	1 +	3 -	2 +	4 o	4 +	5 +	5 -		25.3	4	9	23	20	52	66	110	76	45	44			
3	4 +	4 o	2 +	4 o	4 -	4 -	3 -	3 -		27.3	61	52	18	56	41	46	22	24	40	45			
4	3 o	3 -	2 +	2 -	2 o	3 o	3 o	2 -		19.3	33	24	20	12	15	28	28	13	22	23			
5	1 o	2 +	2 -	3 -	3 -	2 o	2 +	4 -		18.3	6	18	12	22	23	14	19	45	20	20			
6	2 o	3 +	2 -	2 -	3 -	3 -	2 -	1 +		17.0	16	39	11	12	26	26	12	10	19	20			
7	2 -	2 +	2 -	2 o	1 +	0 +	2 -	2 o		13.0	13	18	12	16	8	3	12	14	12	12			
8	2 o	0 +	0 +	2 -	1 +	3 o	2 +			11.0	14	2	3	0	12	10	29	18	11	13			
9	2 -	2 +	1 +	3 +	3 +	4 +	4 -	2 o		22.0	13	20	10	35	36	65	41	14	29	25			
10	3 -	3 -	2 +	3 -	3 o	2 o	3 -	4 o		22.0	24	24	19	26	31	15	25	59	28	28			
11	2 +	2 -	2 +	2 +	2 o	2 +	2 -			17.0	19	11	17	19	18	15	17	13	16	18			
12	1 +	1 o	1 -	1 -	0 +	2 o	3 -			9.7	8	7	7	5	4	3	15	22	9	13			
13	2 +	2 o	2 o	3 o	4 +	3 o	5 +	4 o		26.0	20	14	15	28	62	29	107	54	41	29			
14	3 +	3 -	2 -	2 +	3 +	3 -	3 o	3 +		22.3	38	22	13	20	34	22	28	38	27	35			
15	3 +	2 +	1 o	3 o	4 o	2 o	3 -	3 o		21.3	35	20	7	31	52	15	25	27	27	25			
16	2 +	2 +	2 -	2 +	2 +	2 o	2 o	2 +		17.3	18	19	12	18	19	14	15	19	17	19			
17	1 -	1 +	2 o	3 -	3 o	5 -	4 -	2 +		20.3	4	9	15	23	33	72	41	18	27	22			
18	2 +	3 -	3 -	2 o	3 o	3 -	3 +	3 +		21.7	19	21	22	15	25	24	39	35	25	31			
19	4 -	4 o	1 +	1 +	1 o	2 +	2 +	1 +		17.3	50	58	9	10	7	19	18	9	23	20			
20	1 o	1 -	0 +	1 o	1 o	1 -	1 o	1 +		7.0	7	5	2	7	6	5	6	10	6	8			
21	2 -	1 +	0 +	1 -	1 o	1 -	2 +	2 -		9.7	11	8	3	5	6	5	20	13	9	10			
22	3 -	2 +	1 +	1 +	2 o	2 -	2 +	1 -		14.3	21	18	9	10	14	11	19	4	13	11			
23	1 +	1 o	0 +	1 -	1 o	1 o	1 +	8.0		10	8	3	4	6	6	6	9	7	8				
24	1 -	1 +	1 +	1 +	2 -	0 +	0 +	2 -		8.7	4	9	9	8	11	3	3	13	8	8			
25	2 o	1 +	2 -	2 o	2 o	1 +	1 +			13.0	14	8	11	15	16	9	9	9	11	11			
26	1 o	3 -	2 +	1 o	0 +	0 +	1 +	1 +		10.3	7	21	18	6	3	3	8	9	9	9	15		
27	1 o	3 +	4 -	3 +	4 +	4 o	3 -	2 +		24.7	7	37	43	37	62	56	21	17	35	23			
28	2 o	3 -	1 +	2 o	1 -	2 -	2 -	1 o		13.0	16	22	8	14	5	11	12	7	12	20			
29	1 -	0 +	3 o	3 +	3 +	4 -	6 +	6 o		26.7	5	3	27	36	35	49	182	162	62	57			
30	6 o	4 o	5 -	4 +	5 o	3 +	3 o	2 o		32.3	171	55	74	70	93	36	31	15	68	65			

23.5

DECEMBER 1985

	Km										$\Sigma$ Km	am										Am	Am2
1	2 -	2 o	1 +	3 -	3 -	2 +	4 o	3 o		19.7	12	16	10	23	22	20	54	~ 29	23	28			
2	3 -	2 +	3 o	2 -	3 -	2 +	3 o	2 o		19.7	26	18	28	11	21	19	33	16	22	22			
3	1 +	2 o	2 o	2 -	2 o	3 o	2 -	1 +		15.0	9	14	16	12	15	27	13	8	14	16			
4	1 o	2 o	2 -	3 -	2 o	3 o	4 -	2 +		18.3	6	15	13	23	16	27	43	18	20	18			
5	2 +	2 -	1 o	2 +	2 +	2 +	2 o	1 +		15.3	20	11	7	18	18	18	15	9	15	17			
6	2 -	1 +	2 -	2 -	2 +	1 +	1 +	2 -		13.0	13	8	13	13	17	9	9	12	12	12			
7	1 +	2 -	2 -	2 -	1 o	2 -	2 +	1 -		12.0	8	11	13	13	7	11	18	5	11	10			
8	1 o	0 o	1 +	1 o	1 o	1 +	1 +	0 +		7.3	6	1	8	6	6	10	8	3	6	8			
9	2 o	2 -	0 +	0 +	1 o	1 +	2 +	2 o		11.0	14	13	2	2	6	9	18	15	10	15			
10	2 +	3 -	3 o	4 o	4 o	3 o	3 o	3 -		24.3	18	22	28	60	58	33	22	21	33	24			
11	3 +	2 o	2 o	1 +	2 o	2 o	2 -	2 o		16.3	39	16	15	8	15	16	12	15	17	18			
12	1 +	1 +	0 +	0 +	1 o	2 -	2 +	3 +		11.7	9	9	3	3	6	13	17	35	12	22			
13	3 +	3 +	3 o	5 o	5 o	4 -	3 -	4 -		29.7	35	38	30	93	94	46	23	42	50	34			
14	3 o	2 o	2 o	1 +	2 +	3 -	2 +	4 -		19.3	27	16	15	10	19	22	18	42	21	27			
15	3 o	2 -	2 -	1 o	1 -	2 -	3 -	3 -		15.0	28	13	12	6	4	11	22	23	15	16			
16	2 o	1 +	2 -	0 +	1 +	1 o	1 o	2 o		10.7	16	8	13	3	9	6	7	15	10	13			
17	3 o	2 -	2 -	1 +	2 -	2 +	1 +	1 o		13.7	29	13	11	10	12	14	8	7	13	14			
18	1 -	1 -	4 -	3 o	4 o	3 o	2 o	2 o		19.0	4	4	41	28	52	31	16	15	24	30			
19	3 o	4 -	4 +	5 +	4 +	5 -	5 -	4 o		34.0	28	46	70	107	67	74	72	51	64	47			
20	4 -	3 -	3 -	3 o	2 +	1 o	1 -	1 -		16.7	45	23	21	33	18	7	5	4	20	28			
21	1 o	1 +	1 o	1 +	0 +	1 -	1 -	1 +		7.7	7	10	7	9	2	4	5	8	7	9			
22	1 +	2 +	2 +	2 -	2 -	1 +	1 +	1 o		13.0	9	18	17	11	13	10	9	6	12	9			
23	1 -	1 -	2 o	1 o	1 +	1 -	2 -	2 -		9.7	4	4	16	6	8	4	11	12	8	12			
24	3 o	2 o	3 +	2 o	2 o	1 +	1 +	0 +		15.3	28	16	35	15	16	10	8	2	16	12			
25	1 +	0 +	1 +	1 o	2 -	2 -	2 -	3 o		12.0	8	3	8	7	11	11	12	32	12	12			
26	3 -	2 +	1 o	2 o	2 -	1 -	2 -	1 o		13.0	23	19	6	15	12	5	11	6	12	14			
27	2 -	2 -	2 o	2 o	2 +	2 o	4 o	3 +		19.0	11	13	15	16	17	14	60	37	23	28			
28	4 -	5 -	4 o	4 o	4 +	4 +	4 o	2 +		31.3	43	72	58	55	61	66	55	20	54	38			
29	2 -	2 +	1 +	1 o	1 -	1 +	2 o			11.7	11	17	10	10	6	5	10	16	11	36			
30	4 +	4 +	5 o	4 o	4 -	5 o	4 -	4 -		33.7	69	65	95	55	44	91	44	50	64	41			
31	3 o	3 -	3 o	3 -	4 o	4 o	4 -	3 -		25.7	29	21	29	24	56	53	42	25	35	39			

21.5

MONTHLY AND YEARLY Am 1959 - 1985

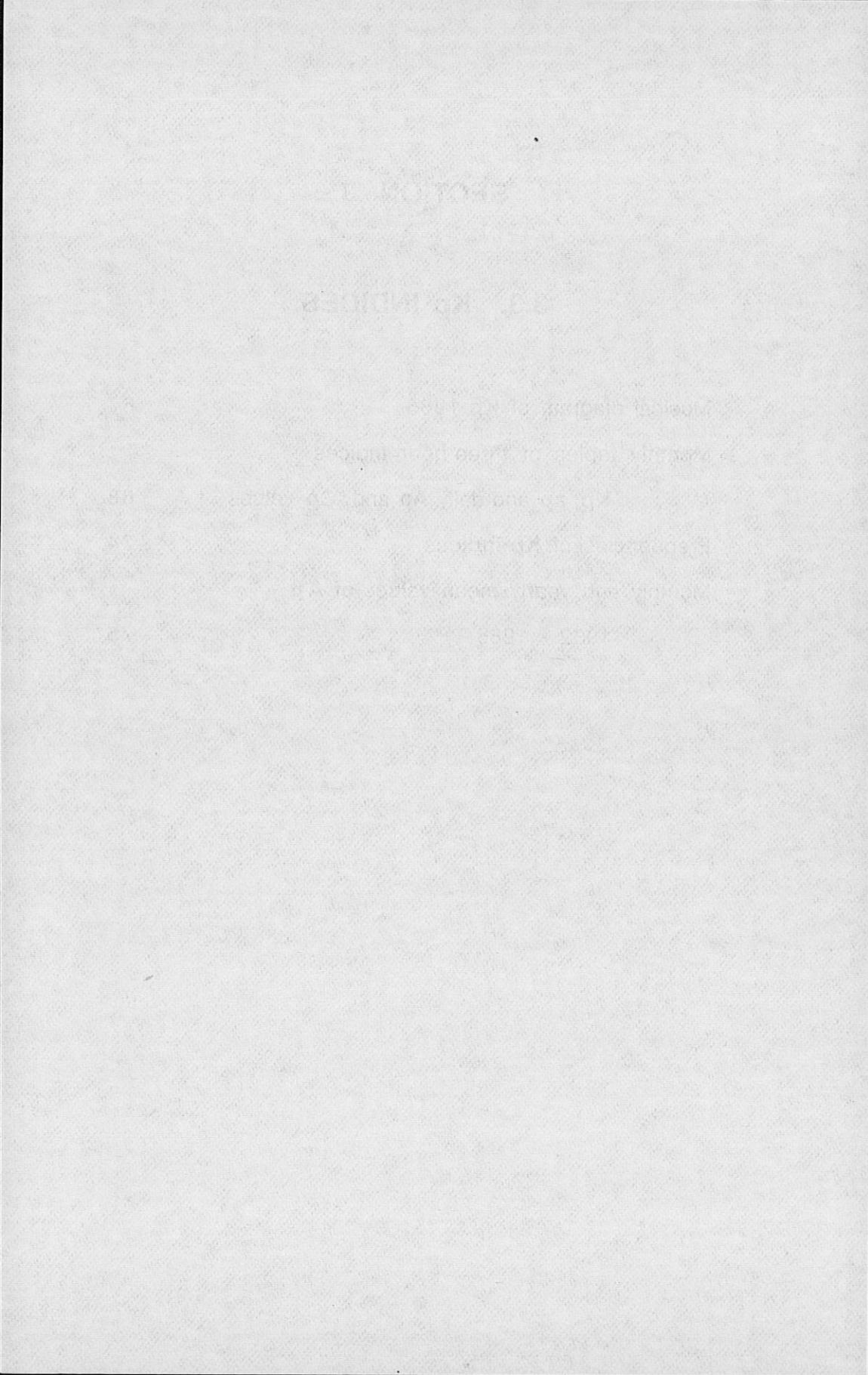
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1959	25.5	35.7	30.1	24.1	25.5	22.7	42.1	31.5	36.9	28.2	33.0	31.6	30.6
1960	25.7	23.5	27.3	53.4	31.5	27.3	27.3	27.8	27.0	45.0	44.4	32.1	32.7
1961	19.4	24.0	21.3	20.6	21.1	20.3	34.4	17.8	19.4	21.9	15.7	19.6	21.3
1962	12.9	18.3	14.0	21.6	12.7	17.0	19.8	24.9	27.8	29.8	20.4	21.1	20.0
1963	17.2	13.9	13.2	15.4	17.8	17.9	19.4	21.2	38.0	22.2	19.0	16.8	19.3
1964	17.8	17.5	19.0	19.7	15.9	13.7	15.3	13.3	16.1	15.0	12.4	9.2	15.4
1965	10.8	14.6	13.2	11.5	9.7	14.8	13.6	14.8	16.1	11.8	10.8	12.2	12.8
1966	12.8	13.2	17.8	11.0	14.0	11.6	15.4	18.2	28.2	16.1	15.3	18.5	16.0
1967	17.6	18.4	11.9	14.0	32.7	17.7	12.8	15.3	23.9	16.7	17.4	23.2	18.5
1968	19.3	25.0	21.8	20.2	21.5	24.2	16.3	18.5	21.0	24.0	25.1	17.7	21.2
1969	15.2	23.5	26.0	22.4	23.5	15.6	12.3	13.4	21.6	14.4	16.8	11.9	18.0
1970	12.5	11.1	24.9	20.9	14.0	16.2	25.4	18.4	17.6	19.1	19.8	14.9	17.9
1971	20.9	19.0	18.3	23.2	20.3	15.7	13.7	15.9	20.0	19.4	16.9	18.1	18.4
1972	20.5	16.8	18.9	17.3	16.2	20.9	12.8	32.2	19.3	19.4	21.1	16.9	19.4
1973	24.9	29.8	34.8	39.4	25.9	26.5	20.4	20.0	21.8	27.3	20.0	19.1	25.8
1974	24.1	25.2	33.6	31.5	28.0	27.2	33.1	30.3	33.4	37.1	27.1	26.0	29.7
1975	25.8	29.5	30.7	24.7	23.2	19.8	21.3	17.8	15.9	18.4	28.8	20.2	23.0
1976	21.9	26.7	33.4	26.3	22.9	16.8	16.2	15.9	21.8	19.2	15.2	18.0	21.2
1977	18.4	19.9	18.7	25.0	18.8	13.8	22.9	22.5	23.8	20.7	16.8	16.8	19.8
1978	24.6	25.3	25.9	32.2	32.5	28.2	18.8	24.3	26.8	19.7	24.2	22.0	25.4
1979	26.5	24.2	27.6	35.3	21.7	17.5	18.0	25.8	21.2	18.7	17.0	16.3	22.5
1980	18.1	18.0	11.9	17.4	15.1	19.4	16.2	16.0	13.8	22.6	22.5	22.6	17.8
1981	16.4	23.3	28.5	35.9	28.5	17.8	28.7	24.2	19.9	34.6	25.0	18.6	25.1
1982	20.7	48.3	26.9	31.8	26.0	32.1	43.7	32.3	50.5	29.2	34.6	35.5	34.3
1983	25.7	39.4	34.5	35.3	32.1	24.2	21.8	25.9	23.1	27.4	32.0	24.2	28.8
1984	20.6	25.7	30.6	34.2	26.6	23.8	26.9	25.8	33.1	33.5	31.5	28.1	28.4
1985	25.0	23.4	17.7	30.3	14.8	19.6	24.4	22.3	20.9	23.0	23.5	21.5	22.2

Unit : nT

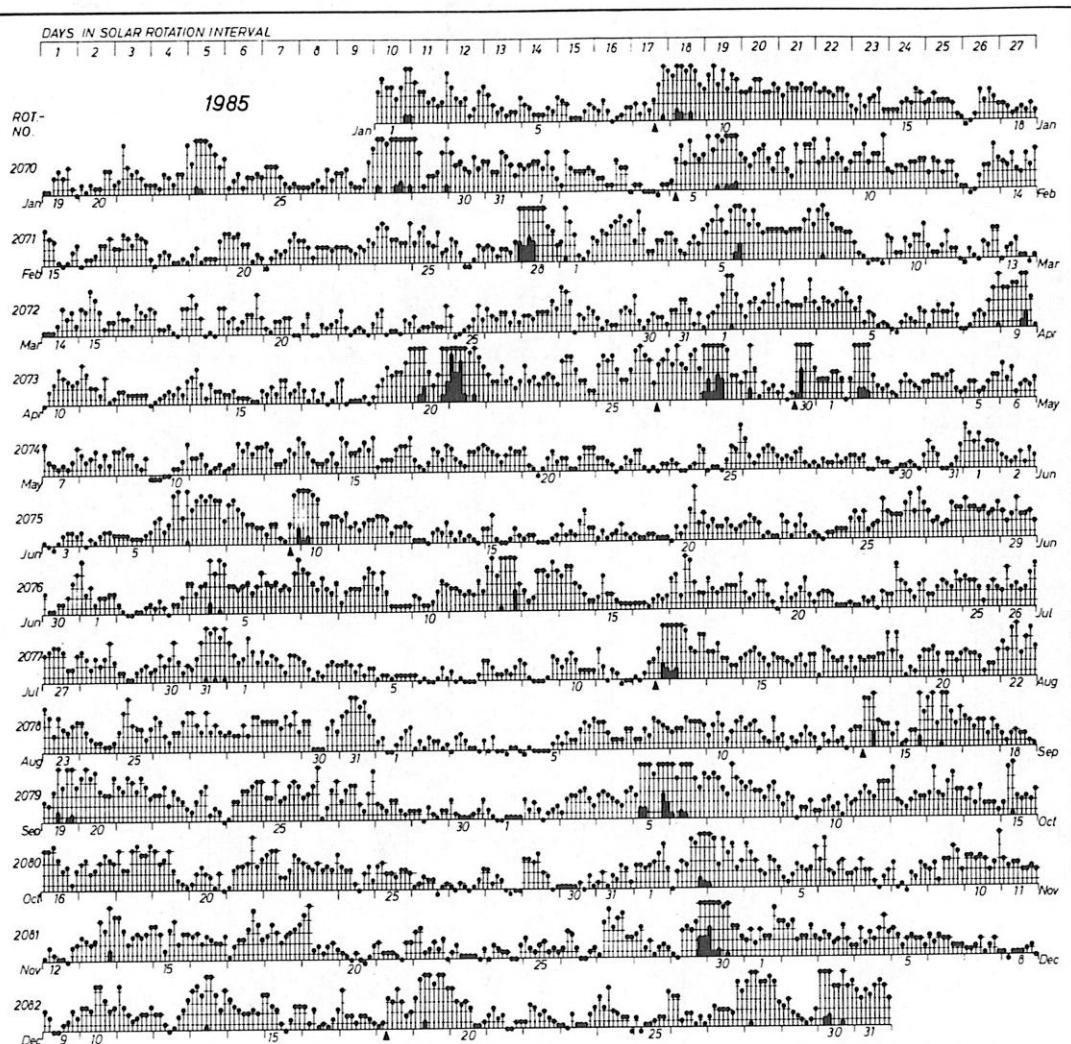
## **SECTION 3**

### **3.3. Kp INDICES**

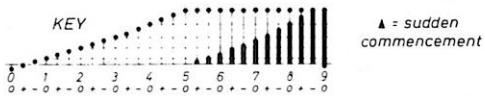
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- Monthly tables of three-hour indices :	
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1932 - 1985	75



# MUSICAL DIAGRAM OF Kp 1985



Kp (after Bartels)



1985

# Kp INDICES 1985

	Kp	Sum	Jan 1985	ap	Sum	Ap	Cp
1	3+ 4+ 4- 4-	3- 4- 6- 6-	33-	18 32 22 22	12 22 67 67	262	33 1.3
2	4o 3+ 3+ 2+	3- 2o 2+ 5-	25-	27 18 18 9	12 7 9 39	139	17 0.9
3	4- 3- 2+ 3-	1o 2- 3+ 4-	21o	22 12 9 12	4 6 18 22	105	13 0.8
4	3o 2o 1+ 2-	1o 1+ 1+ 3-	14+	15 7 5 6	4 5 5 12	59	7 0.4
5	2o 2- 1o 1o	1o 2- 1+ 3-	12+	7 6 4 4	4 6 5 12	48	6 0.3
6	2+ 2o 1- 1-	1- 1+ 2o 2-	11+	9 7 3 3	3 5 7 6	43	5 0.2
7	1+ 2+ 1+ 0+	1- 1o 2- 2-	10+	5 9 5 2	3 4 6 6	40	5 0.2
8	2o 1o 2o 1+	2+ 4- 5+ 5-	22+	7 4 7 5	9 22 56 39	149	19 1.0
9	4+ 6o 6- 5-	6- 5- 4- 3+	38o	32 80 67 39	67 39 22 18	364	46 1.5
10	4+ 5o 4- 5-	3+ 4+ 4o 3o	32+	32 48 22 39	18 32 27 15	233	29 1.3
11	3o 3+ 4o 4o	3o 3o 4- 3+	27+	15 18 27 27	15 15 22 18	157	20 1.0
12	3- 4- 3+ 3+	4- 3+ 3+ 4-	27o	12 22 18 18	22 18 18 22	150	19 1.0
13	3o 3+ 3o 3-	3- 3+ 3- 2-	23o	15 18 15 12	18 18 12 6	114	14 0.8
14	1+ 3- 2- 2-	3- 3+ 1+ 1+	17-	5 12 6 9	12 18 5 5	72	9 0.5
15	1+ 1+ 2o 2+	2o 3+ 3o 2o	17+	5 5 7 9	7 18 15 7	73	9 0.5
16	2+ 3o 2+ 2+	2+ 2o 1o 1-	16o	9 15 9 9	9 7 4 3	65	8 0.4
17	0o 0+ 1o 3+	2+ 3+ 3- 2o	15o	0 2 4 18	9 18 12 7	70	9 0.5
18	2o 2- 1o 1+	2- 1+ 2o 1+	12+	7 6 4 5	6 5 7 5	45	6 0.3
19	1- 1- 2o 3-	2o 3o 1o 0+	12+	3 3 7 12	7 15 4 2	53	7 0.3
20	1+ 1- 1+ 1o	1o 3- 3- 1+	12o	5 3 5 4	4 12 12 5	50	6 0.3
21	2- 5- 3o 2+	3- 2o 1+ 1+	19o	6 39 15 9	12 7 5 5	98	12 0.7
22	1+ 1o 2+ 2o	1+ 2+ 2+ 5-	17+	5 4 9 7	5 9 9 39	87	11 0.6
23	3+ 6- 5+ 5o	5- 4o 3o 4-	35-	18 67 56 48	39 27 15 22	292	36 1.4
24	1o 2- 2+ 1o	2o 2o 2+ 2o	14+	4 6 9 4	7 7 9 7	53	7 0.3
25	3o 3o 3o 2o	1+ 1o 1+ 1o	16-	15 15 15 7	5 4 5 4	70	9 0.5
26	1o 1o 1+ 2-	1o 3- 2- 2+	13-	4 4 5 6	4 12 6 9	50	6 0.3
27	2+ 3- 1+ 1o	1o 2- 3+ 4+	18-	9 12 5 4	4 6 18 32	90	11 0.6
28	6- 5o 5- 5o	6- 6o 5o 6-	43-	67 48 39 48	67 80 48 67	464	58 1.7
29	5o 4o 1o 2o	2o 2+ 4o 6-	26o	48 27 4 7	7 9 27 67	196	24 1.2
30	4o 3o 3+ 3-	2+ 4- 3- 3+	25o	27 15 18 12	9 22 12 18	133	17 0.9
31	3+ 2+ 2+ 4o	4- 3o 2o 3o	24-	18 9 9 27	22 15 7 15	122	15 0.9

	Kp	Sum	Feb 1985	ap	Sum	Ap	Cp
1	3- 3o 3+ 3+	3- 4o 3- 2-	23+	12 15 18 18	12 27 12 6	120	15 0.8
2	1o 4o 3- 2+	2+ 2+ 3- 2+	20-	4 27 12 9	9 9 12 9	91	11 0.7
3	2- 2- 1o 1o	3+ 3- 3- 0+	14+	6 6 4 4	18 12 12 2	64	8 0.4
4	1o 1o 0+ 0+	0+ 0o 1o 1o	5o	4 4 2 2	2 0 4 4	22	3 0.0
5	1+ 3+ 4+ 3o	5- 4- 3+ 4-	27+	5 18 32 15	39 22 18 22	171	21 1.1
6	5o 4o 5+ 5-	5+ 5+ 6- 4-	39o	48 27 56 39	56 56 67 22	371	46 1.5
7	3+ 3- 4- 4o	4+ 3+ 2+ 5-	27+	18 12 22 27	32 18 9 22	160	20 1.0
8	4o 2+ 2- 4+	3o 4+ 4+ 5-	29-	27 9 6 32	15 32 32 39	192	24 1.2
9	3o 3+ 5- 3+	4- 3+ 2+ 3o	27-	15 18 39 18	22 18 9 15	154	19 1.0
10	4- 4- 4+ 3o	4- 4- 5o 2+	29+	22 22 32 15	22 22 48 9	192	24 1.2
11	2o 3- 3- 2+	3o 3o 3+ 3+	22+	7 12 12 9	15 15 18 18	106	13 0.8
12	2o 3+ 3o 2o	3o 3o 2- 1-	19-	7 18 15 7	15 15 6 3	86	11 0.6
13	1- 0o 0+ 2-	3- 3- 4+ 3+	16-	3 0 2 6	12 12 32 18	85	11 0.6
14	3o 3- 4- 2+	2o 4- 3- 4o	24o	15 12 22 9	7 22 12 27	126	16 0.9
15	4- 3o 3- 1-	0+ 1- 2- 2+	15o	22 15 12 3	2 3 6 9	72	9 0.5
16	0+ 1o 1o 1+	2+ 2+ 3o 2o	13+	2 4 4 5	9 9 15 7	55	7 0.3
17	2o 3+ 3o 2+	3+ 3o 3- 1o	21-	7 18 15 9	18 15 12 4	98	12 0.7
18	0+ 1+ 2- 1-	1- 1- 1o 1-	8-	2 5 6 5	3 3 4 3	31	4 0.1
19	1+ 2o 1- 1o	1o 1o 3- 3+	13o	5 7 3 4	4 4 12 18	57	7 0.4
20	3+ 3o 3+ 2+	2+ 1- 1+ 1o	17+	18 15 18 9	9 3 5 4	81	10 0.6
21	0o 1o 2- 1+	2- 3- 3+ 3-	14+	0 4 6 5	6 12 18 12	63	8 0.4
22	3- 2o 1o 2o	2o 2o 2- 2o	15+	12 7 4 7	7 7 6 7	57	7 0.4
23	2o 2o 2- 1+	2o 2- 3- 2+	16-	7 7 6 5	7 6 12 9	59	7 0.4
24	4- 4o 4- 3-	3- 2+ 2+ 4o	25+	22 27 22 12	12 9 9 27	140	18 1.0
25	2+ 3+ 4- 2+	2o 3+ 1+ 2-	20o	9 18 22 9	7 18 5 6	94	12 0.7
26	3- 2+ 1+ 0o	0o 1- 2o 2-	11-	12 9 5 0	0 3 7 6	42	5 0.2
27	2o 2- 1o 2-	2- 1+ 2+ 7-	18+	7 6 4 6	6 5 9 111	154	19 1.0
28	6+ 7o 7- 5o	5o 4- 3+ 2o	39o	94 132 111 48	48 22 18 7	480	60 1.7

**Kp INDICES 1985 (continued)**

	Kp		Sum	Mar 1985			ap			Sum	Ap	Cp	
1	2+	5+	4o	3o	1o	1-	1+	3-	20+	9	56	27	15
2	2+	3+	3o	4-	4o	4+	4-	4o	28+	9	18	15	22
3	2+	5-	3+	1+	1+	2+	2+	3o	21-	9	39	18	5
4	3o	2+	1+	1o	2o	3-	2o	3+	18-	15	9	5	4
5	4-	4o	5o	4o	3o	5-	6-	6+	36+	22	27	48	27
6	5-	4-	5-	4-	3o	3+	3+	3+	30-	39	22	39	22
7	3+	3o	3+	3+	3+	4o	5-	4-	29-	18	15	18	18
8	5-	5+	4+	4-	3+	3+	3o	3o	31-	39	56	32	22
9	2o	1o	1-	0o	0+	0+	0o	3-	7o	7	4	3	0
10	2+	1o	1o	2+	2-	3-	3-	4-	17+	9	4	4	9
11	2-	1o	1o	2-	3o	1+	1+	0+	11+	6	4	4	6
12	0o	1+	1-	0+	2o	2-	3+	3+	13-	0	5	3	2
13	0+	1+	2-	2+	1-	1-	0o	1-	8-	2	5	6	9
14	1-	1-	1+	1+	3o	2o	3-	1+	12+	3	3	3	5
15	3o	3-	4+	4-	3-	1o	2-	2-	21-	15	12	32	22
16	3-	2o	2o	1+	3+	3-	2+	3o	19+	12	7	7	5
17	3-	1o	1o	1+	1-	0+	3o	3o	13o	12	4	4	5
18	4o	3+	2o	0+	1-	0+	3o	3o	17-	27	18	7	2
19	2-	2o	1o	2-	2+	2+	4o	2o	17o	6	7	4	6
20	1o	1-	2-	2-	2o	2o	0+	0+	10-	4	3	6	6
21	1+	2+	0+	0+	1+	1o	1+	2-	10-	5	9	2	2
22	3-	1o	0+	1-	1o	1-	0+	1+	8o	12	4	2	3
23	2+	3-	0+	1-	1-	0+	2-	1+	10o	9	12	2	3
24	2o	1-	1o	1o	1+	1o	1o	3o	11o	7	3	4	4
25	2o	0o	0+	1-	1o	2-	3o	2-	10+	7	0	2	3
26	3-	2o	2-	2+	2+	1+	2+	1+	16o	12	7	6	9
27	2o	2-	2+	2+	2+	3+	3-	3-	19-	7	7	6	9
28	4+	4o	3+	0+	2o	2-	3-	2+	21-	32	27	18	2
29	2-	1-	1o	1o	1o	2+	3-	2+	13o	6	3	5	4
30	4-	1+	1-	1+	2o	2-	2-	1o	13+	22	5	3	5
31	2+	2+	3+	3+	2+	1o	2o	1-	17+	9	9	18	18

	Kp		Sum	Apr 1985			ap			Sum	Ap	Cp	
1	2-	2o	3-	4-	5o	5+	4-	3-	27-	6	7	12	22
2	2-	3o	3+	2+	3o	4-	4+	3-	24o	6	15	18	9
3	5-	3o	3-	3-	3-	3+	5-	3o	27-	39	15	12	12
4	2+	3+	3o	3-	3o	4o	4-	3o	25o	9	18	15	12
5	2+	3+	1o	2o	2-	1-	1o	1-	13-	9	18	4	7
6	0+	0o	1o	2-	1+	1o	2+	2o	10-	2	0	4	6
7	1-	2o	3-	2o	2o	3-	2-	0-	14o	3	7	12	7
8	0+	1-	2-	2o	2-	3o	4o	5+	19-	2	3	6	7
9	4o	4o	4+	4+	6-	6+	3+	1-	33-	27	27	32	32
10	0+	2-	2+	4-	3o	3-	2+	3-	19-	2	6	9	22
11	4o	3+	2o	2o	1+	3o	1-	1o	17+	27	18	7	7
12	2-	2-	1+	1+	1+	1+	0+	1o	10+	6	6	5	5
13	1-	1o	1+	2-	+1	2o	1+	3-	12o	3	4	5	6
14	3o	4-	2+	1o	2+	2-	2-	1+	17o	15	22	9	4
15	1+	2-	1o	1o	1o	1-	1-	2-	9o	5	6	4	4
16	1+	2o	1+	3-	-3-	1+	2-	2+	15+	5	7	5	12
17	2-	1-	2-	1-	1+	0+	1-	2+	9+	6	3	6	3
18	3-	0+	1-	1-	1-	1o	0+	1o	7+	12	2	3	3
19	2o	3-	4-	3o	3+	3+	4o	5o	27o	7	12	22	15
20	5o	6-	6+	3+	2o	3o	6-	7-	38-	48	67	94	18
21	8+	7+	8o	6-	5-	6-	4+	4-	48-	236	154	207	67
22	3o	2+	2+	4-	2+	3-	2-	2+	20+	15	9	9	22
23	4-	2+	3-	2o	3-	3o	3-	2o	21o	22	9	12	7
24	4o	4+	4+	3+	2+	2+	1+	1+	23+	27	32	32	18
25	4-	4+	4o	4+	3+	2+	2+	3+	28-	22	32	27	32
26	5-	5o	4+	4o	2o	4-	4o	5-	32+	39	48	32	27
27	4-	5o	4-	3+	4+	5-	3+	6-	34-	22	48	22	18
28	7-	6-	7o	7-	5-	3-	3-	2o	38o	111	67	132	111
29	3o	6o	3+	1-	2o	1+	2-	1o	19o	15	80	18	3
30	2-	0+	1o	5+	7+	5o	5o	3+	29o	6	2	4	56

**Kp INDICES 1985 (continued)**

	Kp	Sum	May 1985			ap						Sum	Ap	Cp
			May	1985										
1	2+ 2+ 2+ 3o 3o 2+ 0+ 2+	18o	9	9	9	15	15	9	2	9	77	10	0.5	
2	5o 6o 6o 6- 3- 2- 1+ 2-	30o	48	80	80	67	12	6	5	6	304	38	1.4	
3	1o 1- 2o 3- 2o 2- 1+ 2o	13+	4	3	7	12	7	6	5	7	51	6	0.3	
4	2o 3- 3- 2+ 3- 3o 1+ 1o	18-	7	12	12	9	12	15	5	4	76	10	0.5	
5	1+ 2o 2o 1o 1+ 2o 3- 3-	15o	5	7	7	4	5	7	12	12	59	7	0.4	
6	4- 2+ 3+ 1o 2- 2o 2- 2+	18o	22	9	18	4	6	7	6	9	81	10	0.6	
7	3+ 2- 1+ 1o 1+ 1o 2- 3o	14+	18	6	5	4	5	4	6	15	63	8	0.4	
8	2+ 2- 2o 3- 1+ 2+ 1+ 3-	16+	9	6	7	12	5	9	5	12	65	8	0.4	
9	3- 3o 2+ 2+ 1+ 1o 2o 0o	15-	12	15	9	9	5	4	7	0	61	8	0.4	
10	0o 0o 0+ 0+ 1o 1o 2- 3+	8-	0	0	2	2	4	4	6	18	36	4	0.2	
11	2o 2o 2+ 1+ 1- 1o 1+ 1-	11+	7	7	9	5	3	4	5	3	43	5	0.2	
12	1o 1+ 3+ 3- 3+ 2+ 3o 3o	20o	4	5	18	12	18	9	15	15	96	12	0.7	
13	3+ 3- 1+ 1+ 2- 3- 2+ 4-	19o	18	12	5	5	6	12	9	22	89	11	0.6	
14	3+ 2+ 2- 1+ 1+ 2- 2+ 1+	15+	18	9	6	5	5	6	9	5	63	8	0.4	
15	4- 3+ 2+ 2+ 3- 3+ 3- 4-	24o	22	18	9	9	12	18	12	22	122	15	0.9	
16	1o 2- 2- 2- 3- 3o 3o 4-	18+	4	6	6	6	12	15	15	22	86	11	0.6	
17	2- 1o 1- 1+ 3- 2+ 2- 3o	14+	6	4	3	5	12	9	6	15	60	8	0.4	
18	3- 2- 1+ 1o 2+ 2+ 3- 3o	17o	12	6	5	4	9	9	12	15	72	9	0.5	
19	3- 2+ 2o 1+ 2o 3- 2+ 2+	18-	12	9	7	5	7	12	9	9	70	9	0.5	
20	3- 1o 1- 0o 1- 2- 2+ 1+	10+	12	4	3	0	3	6	9	5	42	5	0.2	
21	2- 2- 1- 1- 2- 3- 3- 3-	14+	6	6	3	3	6	12	12	12	60	8	0.4	
22	2- 2- 1+ 1o 0+ 1- 2- 1+	10-	6	6	5	4	2	3	6	5	37	5	0.2	
23	2+ 2+ 1- 0+ 1- 0+ 1o 1o	9-	9	9	3	2	3	2	4	4	36	4	0.2	
24	1+ 1o 0+ 0+ 1- 1o 3- 2+	10-	5	4	2	2	3	4	12	9	41	5	0.2	
25	0+ 1- 1- 0+ 1+ 3- 2+ 4+	13-	2	3	3	2	5	12	9	32	68	8	0.5	
26	3+ 2- 1o 2- 2+ 3- 2+ 2-	17-	18	6	4	6	9	12	9	6	70	9	0.5	
27	1+ 2- 1+ 2o 2+ 1o 1- 1o	11+	5	6	5	7	9	4	3	4	43	5	0.2	
28	1- 1+ 1o 1o 2- 1o 1+ 2-	10-	3	5	4	4	6	4	5	6	37	5	0.2	
29	2- 1+ 2- 0+ 0+ 1+ 1o 1o	9-	6	5	6	2	2	5	4	4	34	4	0.1	
30	0o 0+ 1- 1- 1o 1- 0+ 2-	5+	0	2	3	3	4	3	2	6	23	3	0.1	
31	3o 2+ 2o 0+ 0+ 1- 1+ 3-	12+	15	9	6	2	2	3	5	12	54	7	0.3	

	Kp	Sum	Jun 1985			ap						Sum	Ap	Cp
			Jun	1985										
1	4+ 4- 3o 4- 2+ 3o 3o 3-	26-	32	22	15	22	9	15	15	12	142	18	1.0	
2	2- 1+ 1o 1+ 2o 1o 2+ 2-	12+	6	5	4	5	7	4	9	6	46	6	0.3	
3	1- 0+ 0o 1- 1+ 2- 2- 1+	8-	3	2	0	3	5	6	6	5	30	4	0.1	
4	2- 0+ 1o 1- 1+ 2- 2- 1+	10-	6	2	4	3	5	6	6	5	37	5	0.2	
5	1+ 1+ 1+ 1o 1o 1o 1+ 2-	10o	5	5	5	4	4	5	6	6	38	5	0.2	
6	3- 3o 2- 2+ 5- 5o 3o 5+	28-	12	15	6	9	39	48	15	56	200	25	1.2	
7	4- 4+ 5- 4+ 5- 4+ 4+ 3-	33o	22	32	39	32	39	32	32	12	240	30	1.3	
8	4o 4+ 4- 3+ 2+ 2+ 2o 2o	24o	27	32	22	18	9	9	7	7	131	16	0.9	
9	1+ 2+ 2+ 1o 1- 2+ 5- 6+	21o	5	9	9	4	3	9	39	94	172	22	1.1	
10	5+ 6- 5- 4+ 2+ 2+ 3o 3o	31-	56	67	39	32	9	9	15	15	242	30	1.3	
11	3- 3+ 2o 2+ 2- 2+ 3- 3-	20-	12	18	7	9	6	9	12	12	85	11	0.6	
12	3o 3o 3- 1+ 2o 2o 2+ 2o	18+	15	15	12	5	7	7	9	7	77	10	0.5	
13	1- 1- 1- 0+ 1+ 2- 1+ 2+	9o	3	3	3	2	5	6	5	9	36	4	0.2	
14	1+ 1- 1+ 1- 1o 1- 0+ 2-	8-	5	3	5	3	4	3	2	6	31	4	0.1	
15	2- 3o 1- 0+ 0+ 1- 2- 1o	9+	6	15	3	2	2	3	6	4	41	5	0.2	
16	1- 1o 1o 0+ 0+ 0+ 1- 1o	5+	3	4	4	2	2	2	3	4	24	3	0.1	
17	2o 1o 1+ 1o 2+ 3+ 2- 2-	14+	7	4	5	4	9	18	6	6	59	7	0.4	
18	1- 1+ 1- 1o 1+ 2o 1o 1-	9-	3	5	3	4	5	7	4	3	34	4	0.1	
19	1o 1- 1- 1o 1o 1- 1- 1-	6+	4	3	3	4	4	3	3	3	27	3	0.1	
20	0+ 2- 1o 2- 3+ 5o 2o 3o	18o	2	6	4	6	18	48	7	15	106	13	0.8	
21	2- 2+ 2- 2- 2+ 2- 1+ 2-	14+	6	9	6	6	9	6	5	6	53	7	0.3	
22	2o 3- 2+ 2o 1- 1o 1- 1-	12o	7	12	9	7	3	4	3	3	48	6	0.3	
23	3- 2o 1- 2- 3- 2- 1- 1o	13o	12	7	3	6	12	6	3	4	53	7	0.3	
24	1- 0+ 1o 1o 1+ 1+ 1+ 2+	9+	3	2	4	4	5	5	5	9	37	5	0.2	
25	3o 2+ 3o 1+ 2- 2o 4o 3o	20+	15	9	15	5	6	7	27	15	99	12	0.7	
26	3- 3- 3- 4- 4+ 3o 5- 4-	27+	12	12	12	22	32	15	39	22	166	21	1.1	
27	3o 2o 2+ 2- 2o 4- 3+ 3+	21+	15	7	9	6	7	22	18	18	102	13	0.7	
28	4o 3+ 3+ 3o 3- 3- 3o 4-	26+	27	18	18	15	18	12	15	22	145	18	1.0	
29	3o 2o 3- 4o 3- 3- 3o 2o	22o	15	7	12	27	12	12	15	7	107	13	0.8	
30	2+ 1- 1- 1+ 1+ 2o 3+ 4o	16-	9	3	3	5	5	7	18	27	77	10	0.5	

**Kp INDICES 1985 (continued)**

	Kp		Sum	Jul 1985		ap				Sum	Ap	Cp	
1	5o	2+	3o	1+	2o	2o	2+	2+	20+	48	9	15	5
2	1+	1-	0+	0+	1-	1-	1o	1+	6+	5	3	2	2
3	1o	2-	1o	0+	1+	1+	2o	3+	12o	4	6	4	2
4	3+	2+	3o	3+	6o	4o	5+	5-	32o	18	9	15	18
5	3o	3o	3-	3o	3+	2+	3o	4o	24+	15	15	12	15
6	3+	3o	3+	3-	3o	3-	4o	5o	27o	18	15	18	12
7	4+	4o	3+	3-	4-	3-	2+	3+	26+	32	27	18	12
8	1+	2+	3-	3-	3-	4-	4+	4o	24-	5	9	12	12
9	3-	4o	2+	1o	1o	1o	1o	1o	14o	12	27	9	4
10	2o	2-	1o	1o	1+	2+	3+	3o	16-	7	6	4	4
11	3-	3-	2+	2o	2+	2o	3+	2+	20-	12	12	9	7
12	4+	5o	4-	5+	5-	5o	5o	7-	38o	32	48	22	56
13	2+	1+	2-	4o	4o	4-	5-	4o	26-	9	5	6	27
14	4-	4+	4+	3o	3-	2o	1+	1+	23-	22	32	32	15
15	2-	4-	2o	2o	1+	1o	1o	1o	14-	6	22	7	7
16	1o	1o	1o	1-	1+	2-	1+	2-	10-	4	4	4	3
17	3+	4-	2-	5o	5-	3o	2o	2o	25+	18	22	6	48
18	3+	2+	2o	2+	3-	3-	3-	4-	22-	18	9	7	9
19	2o	1+	2-	3o	3o	2-	1o	0+	14o	7	5	6	15
20	1+	3-	1+	2-	2+	3+	2-	1o	15+	5	12	5	6
21	2-	2o	2o	2-	1-	1-	1-	1o	10+	6	7	7	6
22	1-	1-	1+	1o	1+	0+	2o	2-	9o	3	3	5	4
23	2-	4+	3o	3-	2o	1+	3-	3o	21-	6	32	15	12
24	2-	2+	2o	3o	3-	2+	4-	3o	20+	6	6	9	15
25	3+	3o	3o	2+	1o	2+	3o	2+	20+	18	15	15	9
26	2o	4o	2+	3-	2o	2+	4-	4+	23+	7	27	9	12
27	3o	3+	4-	4-	3+	2+	2-	3o	23+	15	18	22	22
28	3+	3-	2-	3-	2o	3-	4o	2+	21+	18	12	6	12
29	1+	1+	1-	1-	1+	2-	2o	1+	10+	5	5	3	3
30	2-	3o	2o	3-	4o	2+	1+	2o	19o	6	15	7	12
31	2-	3-	4o	5+	5-	5+	4+	5+	33+	6	12	27	56

	Kp		Sum	Aug 1985		ap				Sum	Ap	Cp	
1	4o	3o	2+	3-	4+	3+	2+	3+	25+	27	15	9	12
2	2+	3o	3-	2o	1+	3o	3o	3-	20o	9	15	12	7
3	2+	2-	1-	1+	1o	2o	2+	2o	13+	9	6	3	5
4	2o	2+	2o	1+	2o	1o	2-	2-	14o	7	9	7	5
5	1-	1o	1o	1-	1o	1o	1o	1o	7+	3	4	4	3
6	1o	0+	1-	0+	0+	1-	2-	1-	6-	4	2	3	2
7	1+	0+	1-	0+	0+	1o	2+	-	7-	5	2	3	2
8	2+	2-	1o	1o	1+	1o	2-	2-	12+	9	6	4	4
9	2o	1-	0+	0+	0+	1-	3-	2+	9+	7	3	2	2
10	2-	2+	3o	2+	1+	1+	1+	1+	15-	6	9	15	9
11	3+	2-	0+	1+	1o	0o	0+	0+	8+	18	6	2	5
12	1-	0+	1o	2o	2+	3+	6+	6o	22o	3	2	4	7
13	6-	6o	5o	5-	3+	3o	4+	4+	36+	67	80	48	39
14	3o	3o	4-	2-	2+	2-	2-	2+	20o	15	15	22	9
15	3-	3o	3+	3-	2+	2-	3-	2+	21-	12	15	18	12
16	2+	2o	2-	2+	3-	2-	3-	3-	18o	9	7	6	9
17	1-	3+	3o	2+	2o	2+	1+	2+	17+	3	18	15	9
18	1+	2+	2o	2+	2+	3-	3-	4+	20o	5	9	7	9
19	3o	4+	2+	1-	1+	1o	2+	3o	18o	15	32	9	3
20	3o	3+	3-	1o	3-	3-	2o	3-	20o	15	18	12	4
21	3o	3-	3-	2+	1o	2-	2-	3o	18o	15	12	12	9
22	4-	3o	5-	5o	3-	4o	5-	3+	31o	22	15	39	48
23	4+	4-	2o	4-	3-	2+	3o	3+	25o	32	22	7	22
24	3+	2+	2-	1+	1+	1o	1o	1+	13+	18	9	6	5
25	2+	4o	5o	3o	3-	3-	2-	3-	24o	9	27	48	15
26	4-	3+	2o	1+	2+	2+	3+	4o	22+	22	18	7	5
27	4o	3o	2+	4o	2+	3o	2+	2o	23o	27	15	9	27
28	2+	2o	2o	3o	2o	4-	4-	3+	22o	9	7	7	15
29	3+	3+	3-	3-	4-	3o	4o	2+	26-	18	18	18	12
30	3+	3+	1-	1-	1-	3-	3-	2+	17o	18	18	3	3
31	4-	4o	5o	5o	4+	5-	4-	3+	34-	22	27	48	48

Kp INDICES 1985 (continued)

	Kp		Sum	Sep 1985			ap					Sum	Ap	Cp						
1	1+	2-	0+	0+	1o	2-	2+	3-	11+	5	6	2	2	4	6	9	12	46	6	0.3
2	1-	1-	1-	2-	1+	1+	1-	1o	9-	3	5	3	6	5	5	3	4	34	4	0.1
3	0+	2-	2o	1+	1-	1-	0+	1+	8+	2	6	7	5	3	3	2	5	33	4	0.1
4	0+	2-	0+	0+	0o	1-	1-	0+	4+	2	6	2	2	0	3	3	2	20	2	0.0
5	0o	1-	0+	0+	0+	0+	1o	2-	5-	0	3	2	2	2	2	4	6	21	3	0.0
6	1o	2o	1+	1+	2+	3o	3-	3+	17o	4	7	5	5	9	15	12	18	75	9	0.5
7	3o	2o	2o	1+	1+	2+	2+	2+	17-	15	15	7	5	5	5	9	9	70	9	0.5
8	1+	1+	2+	2-	3+	3o	3-	2+	18o	5	5	9	6	18	15	12	9	79	10	0.6
9	2o	2+	2+	3+	3o	3o	3o	3-	22-	7	9	9	18	15	15	15	12	100	12	0.7
10	2-	3-	4-	3-	1+	2o	3o	3+	20+	6	12	22	12	5	7	15	18	97	12	0.7
11	2+	3-	3o	2o	1+	1o	3+	1+	17o	9	12	15	7	5	4	18	5	75	9	0.5
12	2-	0+	1+	1o	2-	2+	2-	1+	11+	6	2	5	4	6	9	6	5	43	5	0.2
13	0+	2-	1o	2+	1o	1+	0+	2o	10o	2	6	4	9	4	5	2	7	39	5	0.2
14	2+	2+	5-	5-	6+	3o	3-	3-	29-	9	9	39	39	94	15	12	12	229	29	1.3
15	2-	3-	1-	1o	2o	2o	6o	4-	20-	6	12	3	4	7	7	80	22	141	18	1.0
16	5-	5o	3-	5+	5o	4-	3-	4o	33o	39	48	12	56	48	22	12	27	264	33	1.3
17	3+	3o	2+	3o	3o	2-	3o	2+	22-	18	15	9	15	15	6	15	9	102	13	0.7
18	2-	1o	2-	2o	2-	2-	1o	1-	11+	6	4	6	7	6	6	4	3	42	5	0.2
19	2+	2o	3+	6o	4-	5+	6-	4-	32o	9	7	18	80	22	56	67	22	281	35	1.4
20	4+	5o	4-	5-	3+	3o	3o	4+	32o	32	48	32	39	18	15	15	32	231	29	1.3
21	4-	3+	4+	4o	3+	4+	4-	3-	29+	22	18	32	27	18	32	22	12	183	23	1.1
22	3o	3o	4-	2o	3+	3-	2-	2+	22-	15	15	22	7	18	12	9	6	104	13	0.7
23	1+	2+	3+	4-	1o	2-	1+	0+	15o	5	9	18	22	4	6	5	2	71	9	0.5
24	1-	2+	2+	3+	3+	4-	4o	4o	24-	3	9	9	18	18	22	27	27	133	17	0.9
25	3-	3-	4o	2o	3-	3-	4-	4o	26-	12	12	27	9	12	22	27	22	143	18	1.0
26	3-	3o	4-	5o	1-	2-	3+	4o	24o	12	15	22	48	3	6	18	27	151	19	1.0
27	2+	3+	4-	4-	2o	1+	3o	5-	24o	9	18	22	22	7	5	15	39	137	17	0.9
28	2o	2-	1+	2+	2+	1+	1o	1+	13+	7	6	5	9	9	5	4	5	50	6	0.3
29	1+	1+	0+	2-	1o	1-	1-	1+	9o	5	5	2	6	4	3	5	5	35	4	0.2
30	2+	1o	1-	1-	1-	1o	1+	2+	10o	9	4	3	3	3	4	5	9	40	5	0.2

	Kp		Sum	Oct 1985			ap					Sum	Ap	Cp						
1	1+	1-	0+	0+	1-	1-	1-	1-	5+	5	3	2	2	3	3	3	3	24	3	0.1
2	2+	1+	2o	1+	0+	1o	1+	2-	11+	9	5	7	5	2	4	5	6	43	5	0.2
3	1o	2+	3-	3-	3o	3+	2+	2-	19o	4	9	12	12	15	18	9	6	85	11	0.6
4	3-	3o	3-	2+	2o	2-	3o	3+	21-	12	15	12	9	7	6	15	18	94	12	0.7
5	3-	6o	6o	5o	4+	5o	7o	6+	42+	12	8o	8o	48	32	48	132	94	526	66	1.7
6	5+	4o	6-	5+	5o	4o	3+	4+	37o	56	27	67	56	48	27	18	32	331	41	1.5
7	4o	4+	4o	3+	3-	5o	4o	4-	31o	27	32	27	18	12	48	27	22	213	27	1.2
8	3+	4-	3o	3o	2+	3+	4-	2+	25-	18	22	15	15	9	18	22	9	128	16	0.9
9	2-	3-	2+	0+	1+	1+	2o	1o	13-	6	12	9	2	5	5	7	4	50	6	0.3
10	1o	2o	2+	1+	2-	1-	2-	2+	13o	4	7	9	5	6	3	9	6	49	6	0.3
11	2o	3-	3-	3-	2+	4-	4-	4-	24o	7	12	18	12	9	22	22	22	124	16	0.9
12	5-	2o	2-	1+	2o	3-	2+	2+	19o	39	7	6	5	7	12	9	9	94	12	0.7
13	3-	5-	3-	2+	4-	4+	3o	3o	26+	12	39	12	9	22	32	15	15	156	20	1.0
14	2o	3o	2-	3+	2-	2-	2-	1o	16o	7	15	6	18	6	6	6	4	68	8	0.5
15	2-	5-	5+	2+	2o	2+	2o	3o	23+	6	39	56	9	7	9	7	15	148	18	1.0
16	4o	4o	4+	3+	2+	3-	1o	2+	24o	27	27	32	18	9	12	4	9	138	17	0.9
17	3o	3+	2o	2+	3o	4-	3+	3o	24-	15	18	7	9	15	22	18	15	119	15	0.8
18	4o	2+	2+	4o	4+	4-	4-	4+	29-	27	9	9	27	32	22	22	32	180	22	1.1
19	4o	3o	3+	4o	2+	1+	1o	1-	20-	27	15	18	27	9	5	4	3	108	14	0.8
20	1o	2o	3-	2o	2-	1-	2o	0+	12+	4	7	12	7	6	3	7	2	48	6	0.3
21	1-	2+	3-	3-	3o	5o	3-	3+	22+	3	9	12	12	15	48	12	18	129	16	0.9
22	4-	4o	4o	2-	2-	2+	4-	3+	24+	22	27	27	6	6	9	22	18	137	17	0.9
23	3o	3-	2+	3o	2+	3-	2-	4-	22o	15	12	9	15	9	12	9	22	103	13	0.7
24	3-	2+	2+	1o	0+	2o	3-	1+	15-	12	9	9	4	2	7	12	5	60	8	0.4
25	3-	3o	2o	2o	2-	2+	2+	2o	18o	12	15	7	7	6	9	9	7	72	9	0.5
26	1-	1o	2-	1+	1+	0o	1-	1o	8-	3	4	6	5	5	0	3	4	30	4	0.1
27	1-	0+	1o	1-	0+	1-	1+	2+	7+	3	2	4	3	2	3	5	9	31	4	0.1
28	2+	1o	2-	1+	0+	0o	0+	0+	7+	9	4	6	.5	2	0	2	2	30	4	0.1
29	3+	3+	3o	4-	2o	2-	0+	1-	18o	18	18	15	22	7	6	2	3	91	11	0.7
30	1-	1-	1-	1-	1o	0+	2-	1-	6+	3	3	3	3	4	2	6	3	27	3	0.1
31	1o	2o	1-	2-	1+	3-	2+	1o	13-	4	7	3	6	5	12	9	4	50	6	0.3

**Kp INDICES 1985 (continued)**

	Kp	Sum	Nov 1985			ap			Sum	Ap	Cp	
			Nov	1985			ap					
1	3- 3- 2+ 3- 3o 4- 4+ 2+	24-	12	12	9	12	15	22	32	9	123	15 0.9
2	0+ 2o 3o 3- 5- 4+ 6o 6-	29-	2	7	15	12	39	32	80	67	254	32 1.3
3	5+ 5- 3- 5- 4- 4+ 2+ 3o	31-	56	39	12	39	22	32	9	15	224	28 1.2
4	4+ 4- 3o 2o 2- 3+ 3o 2+	23+	32	22	15	7	6	18	15	9	124	16 0.9
5	1+ 1o 2- 3- 2+ 2o 2+ 4o	17+	5	4	6	12	9	7	9	27	79	10 0.6
6	3o 5- 2o 2- 3- 3o 2- 2-	20+	15	39	7	6	12	15	6	6	106	13 0.8
7	2o 3o 2o 2o 1o 0+ 1+ 2o	14-	7	15	7	7	4	2	5	7	54	7 0.3
8	3- 0+ 1- 0o 2- 1+ 3- 2+	12-	12	2	3	0	6	5	12	9	49	6 0.3
9	2o 3- 1o 3o 3o 4o 4- 2o	21+	7	12	4	15	15	27	22	7	109	14 0.8
10	3+ 3+ 3o 3+ 3o 2o 3- 5o	26-	18	18	15	18	15	7	12	48	151	19 1.0
11	3o 2+ 3- 3- 2o 2o 2+ 2o	19o	15	9	12	12	7	7	9	7	78	10 0.5
12	1- 2- 1o 1- 1- 0+ 2- 2o	9-	3	6	4	3	3	2	6	7	34	4 0.1
13	3- 2+ 2o 2+ 4o 3+ 6o 4+	27o	12	9	7	9	27	18	80	32	194	24 1.2
14	4+ 3+ 2o 3- 3o 3- 3o 4-	25-	32	18	7	12	15	12	15	22	133	17 0.9
15	4- 3o 1+ 3+ 4o 2o 3o 3o	23+	22	15	5	18	27	7	15	15	124	16 0.9
16	3- 3o 2o 3- 2+ 2o 2o 3-	19+	12	15	7	12	9	7	7	12	81	10 0.6
17	1- 2- 2+ 2+ 3+ 5- 4- 2+	21o	3	6	9	9	18	39	22	9	115	14 0.8
18	3- 4- 3o 2o 3- 3o 3+ 4-	24o	12	22	15	7	12	15	18	22	123	15 0.9
19	4+ 5o 1+ 2- 1o 2- 2o 1+	18+	32	48	5	6	4	6	7	5	113	14 0.8
20	1o 1- 0+ 1o 0+ 0o 1- 2-	6-	4	3	2	4	2	0	3	6	24	3 0.1
21	2o 1o 1o 1o 1- 0+ 2o 2o	10o	7	4	4	4	3	2	7	7	38	5 0.2
22	3o 3+ 1o 1+ 2o 1+ 2+ 0+	15-	15	18	4	5	7	5	9	2	65	8 0.4
23	1o 2- 1- 1- 1- 0+ 1+ 1-	7o	4	6	3	3	3	3	2	5	29	4 0.1
24	0+ 2- 1+ 1o 1o 0+ 0+ 2-	8-	2	6	5	4	4	2	2	6	31	4 0.1
25	2+ 1+ 1o 2- 2o 1o 1+ 1o	12-	9	5	4	6	7	4	5	4	44	6 0.2
26	1+ 3o 3- 1+ 0+ 0+ 1o 1+	11+	5	15	12	5	2	2	4	5	50	6 0.3
27	1- 4- 5- 3+ 4o 4+ 2+ 2+	25+	3	22	39	18	27	32	9	9	159	20 1.0
28	3- 3+ 1+ 2o 2o 1- 1+ 2- 1+	14+	12	18	5	7	3	5	6	5	61	8 0.4
29	1- 0+ 3o 3+ 3o 4- 7- 7-	27+	3	2	15	18	15	22	111	111	297	37 1.4
30	7+ 5+ 6- 5- 5+ 3+ 3+ 2+	37+	154	56	67	39	56	.18	18	9	417	52 1.6

	Kp	Sum	Dec 1985			ap			Sum	Ap	Cp	
			Dec	1985			ap					
1	2o 3o 2- 3o 2+ 2+ 5- 4-	23-	7	15	6	15	9	9	39	22	122	15 0.9
2	4- 3+ 4- 2o 2+ 2+ 3+ 2+	23o	22	18	22	7	9	9	18	9	114	14 0.8
3	2o 3- 2+ 2- 2o 3+ 2o 1+	17+	7	12	9	6	7	18	7	5	71	9 0.5
4	1+ 3o 2- 3- 2o 3o 4o 3-	20+	5	15	6	12	7	15	27	12	99	12 0.7
5	3o 2+ 1+ 2o 2+ 2o 2o 1+	16+	15	9	5	7	9	7	7	5	64	8 0.4
6	2+ 2- 2+ 2o 2o 1+ 1+ 1+	14+	9	6	9	7	7	5	5	5	53	7 0.3
7	1o 1o 1+ 2o 1- 1+ 2o 1-	10o	4	4	5	7	3	5	7	3	38	5 0.2
8	1- 0o 1- 1- 1- 1o 1+ 0+	5+	3	0	3	3	3	4	5	2	23	3 0.1
9	2+ 2- 0+ 0+ 1o 1+ 2+ 2-	11o	9	6	2	2	4	5	9	6	43	5 0.2
10	3- 3- 2+ 4+ 4+ 3+ 2+ 3-	25-	12	12	9	32	32	18	9	12	136	17 0.9
11	4+ 3- 2o 1+ 2- 2o 2o 3-	19-	32	12	7	5	6	7	7	12	88	11 0.6
12	2o 2o 1o 0+ 1- 2- 2+ 3+	13+	7	7	4	2	3	6	9	18	56	7 0.4
13	4o 4+ 4- 5- 5o 4- 2+ 4o	32+	27	32	22	56	48	22	9	27	243	30 1.3
14	3+ 3- 2+ 2o 2o 2+ 2o 4-	20+	18	12	9	7	7	9	7	22	91	11 0.7
15	4- 3- 2+ 1o 0+ 1+ 3- 3-	17-	22	12	9	4	2	5	12	12	78	10 0.5
16	3- 1o 2+ 1- 1o 1- 1+ 2+	12o	12	4	9	3	4	3	5	9	49	6 0.3
17	4o 2- 2- 1o 1- 2- 1+ 1o	14o	27	6	6	4	6	6	5	4	64	8 0.4
18	1- 1o 3+ 3o 4o 3o 2- 2o	19-	3	4	18	15	27	15	6	7	95	12 0.7
19	3+ 5- 6- 5o 4+ 5o 5o 4o	37o	18	39	67	48	32	48	48	27	327	41 1.5
20	4o 3o 3- 3o 2+ 1- 1- 1o	17+	27	15	12	15	9	3	3	4	88	11 0.6
21	2- 2+ 1+ 2- 0+ 0+ 1o 1o	10-	6	9	5	6	2	2	4	4	38	5 0.2
22	1o 3- 2+ 2- 2o 1+ 1o 1-	13-	4	12	9	6	7	5	4	3	50	6 0.3
23	1- 0+ 2- 1- 1- 1- 2- 2+	9-	3	2	6	3	3	3	6	9	35	4 0.2
24	3+ 2+ 4o 2o 2- 1+ 1+ 0o	16o	18	9	27	7	6	5	5	0	77	10 0.5
25	1+ 0o 1- 1- 1o 1+ 1+ 4-	10o	5	0	3	3	4	5	5	22	47	6 0.3
26	3+ 3+ 1o 2- 2- 1- 1+ 1-	14-	18	18	4	6	6	3	5	3	63	8 0.4
27	1+ 2+ 2o 2o 2o 2- 4+ 4-	19+	5	9	7	7	7	6	32	22	95	12 0.7
28	4+ 5+ 5o 4+ 4+ 5- 4+ 3-	35o	32	56	48	32	32	39	32	12	283	35 1.4
29	2+ 3o 2- 1+ 1o 1- 1o 2o	13o	9	15	6	5	4	3	4	7	53	7 0.3
30	5o 6- 6o 4o 4o 5+ 4o 4+	38+	48	67	80	27	27	56	27	32	364	46 1.5
31	4- 3o 4- 3+ 4o 4+ 4o 3o	29o	22	15	22	18	27	32	27	15	178	22 1.1

# FREQUENCIES OF Kp INDICES 1985

Kp	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0 <sup>o</sup>	1	5	5	1	5	1	.	1	2	2	2	3
0 <sub>+</sub>	3	8	18	9	16	11	5	14	17	13	15	8
-	8	10	21	16	20	30	11	15	16	21	15	22
1 <sub>o</sub>	24	18	24	14	29	24	21	20	16	16	18	20
+	27	11	23	19	33	26	24	17	30	15	18	25
-	16	18	21	21	35	27	23	17	23	21	17	23
2 <sub>o</sub>	25	19	20	18	15	19	23	18	14	20	29	28
+	25	23	26	19	34	22	25	40	26	33	20	28
-	20	24	17	22	29	17	25	25	18	23	23	16
3 <sub>o</sub>	18	17	19	16	12	20	24	22	20	18	25	12
+	24	23	20	16	10	10	17	21	16	16	15	12
-	15	17	10	14	5	8	12	10	15	14	11	11
4 <sub>o</sub>	9	8	9	10	.	5	13	8	7	13	5	13
+	5	7	4	10	1	8	8	7	5	7	8	12
-	9	4	6	7	.	6	4	4	5	3	7	3
5 <sub>o</sub>	6	4	1	7	1	2	6	5	4	5	2	6
+	2	3	2	3	.	2	5	.	2	3	3	3
-	9	1	1	7	1	1	.	1	1	1	2	2
6 <sub>o</sub>	2	.	.	1	2	.	1	2	2	2	2	1
+		1	1	2		1	.	1	1	1	.	
-		2		3			1			.	2	
7 <sub>o</sub>		1		1						1	.	1
+				2								
-				.								
8 <sub>o</sub>				1								
+				1								
9 <sub>o</sub>												
	248	224	248	240	248	240	248	248	240	248	240	248

Reduction of Kp to Kp' due to solar flare effects  
as far as data were available.

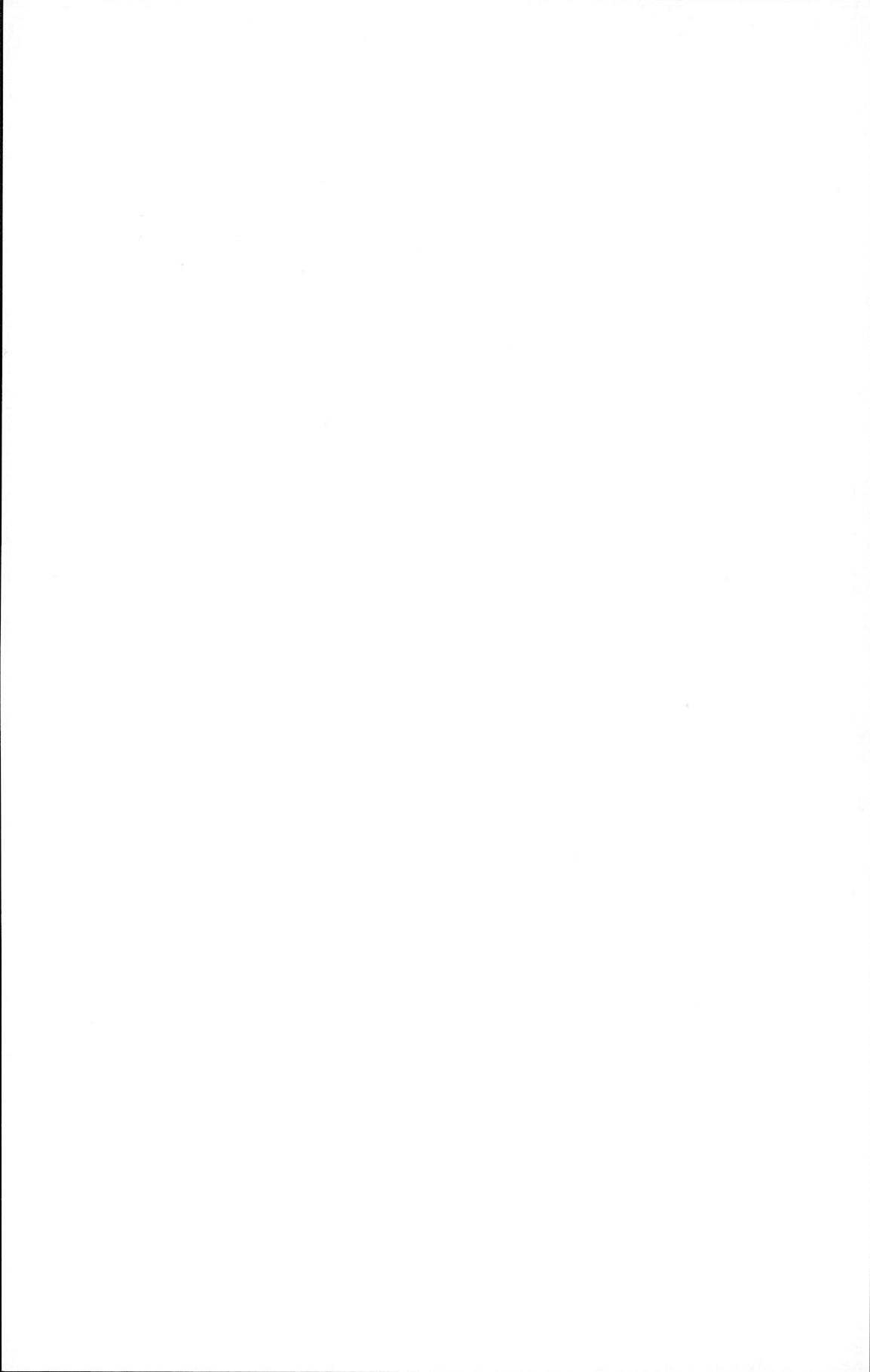
Month	Day	Eighth	Kp	Kp'
—	—	—	—	—

# MONTHLY MEAN VALUES Ap Cp 1985

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Ap	16	15	11	21	9	11	14	13	13	14	15	13	13.7
Cp	0.73	0.72	0.55	0.83	0.42	0.55	0.70	0.65	0.61	0.65	0.69	0.61	0.64

MONTHLY AND YEARLY Ap 1932 - 1985

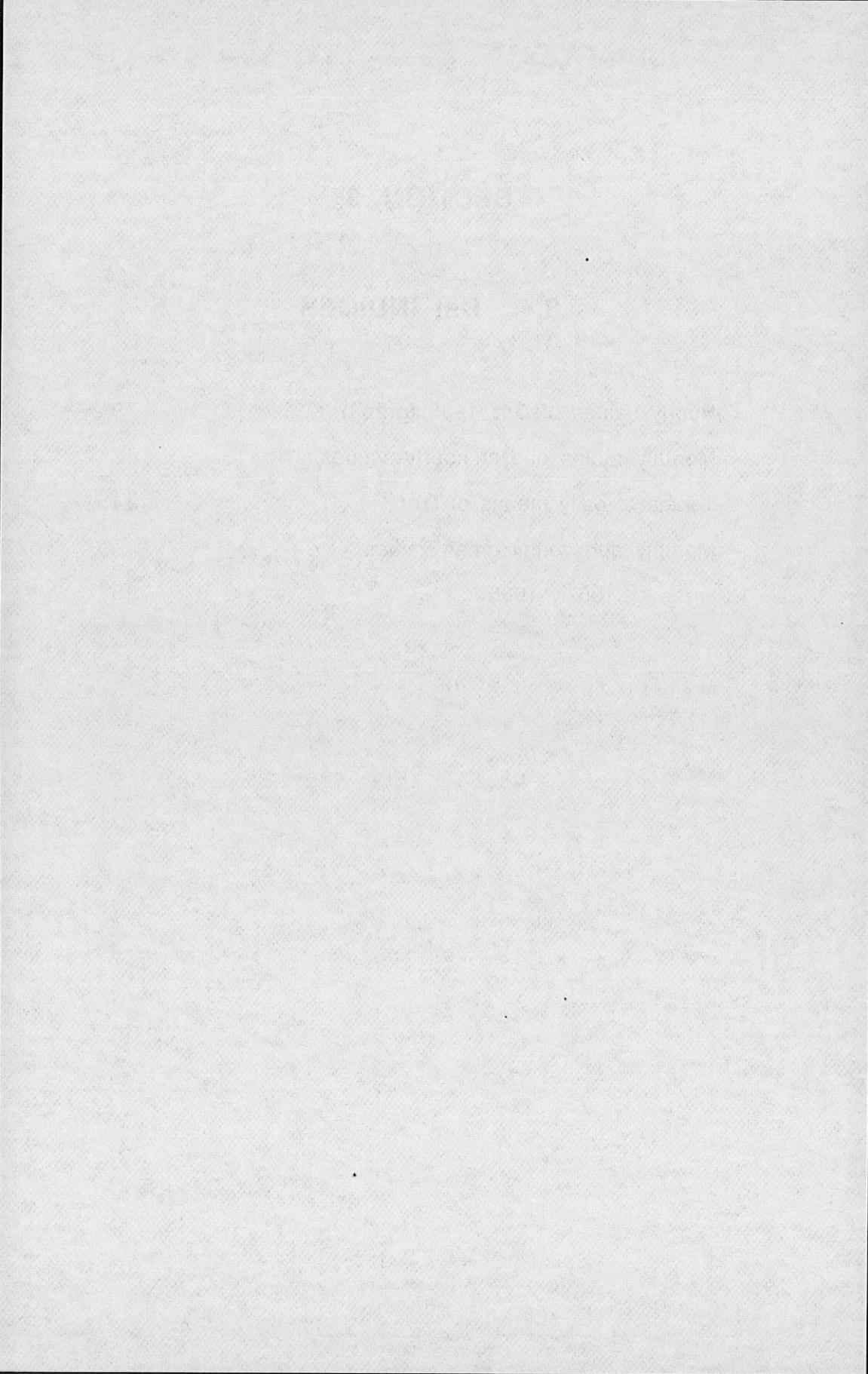
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
1932	11	12	18	17	15	7	7	12	12	10	8	9	11.5
1933	10	11	12	12	12	8	7	9	12	10	9	7	10.1
1934	6	8	11	6	7	5	6	9	10	6	5	8	7.2
1935	9	10	10	8	6	9	7	5	13	12	8	9	8.9
1936	9	11	9	15	10	12	11	5	5	9	10	5	9.1
1937	7	13	12	20	13	12	12	10	9	20	12	10	12.5
1938	28	16	13	18	18	9	13	12	17	16	10	11	15.3
1939	7	15	19	28	21	15	19	19	13	22	9	11	16.5
1940	15	12	36	18	13	16	12	11	14	14	16	15	16.1
1941	14	18	33	15	11	11	19	16	27	11	16	11	16.8
1942	9	12	22	17	8	8	13	13	17	22	15	11	13.8
1943	11	9	13	14	14	12	15	31	25	24	20	14	17.0
1944	13	12	17	15	9	8	6	9	10	11	6	14	10.8
1945	10	10	17	13	9	7	9	7	10	11	8	13	10.4
1946	12	22	33	20	18	16	22	11	34	13	12	9	18.6
1947	12	12	32	18	14	16	16	25	32	23	14	11	18.8
1948	12	13	17	13	19	10	10	20	15	27	16	13	15.4
1949	20	14	19	14	18	14	8	14	13	25	15	9	15.4
1950	12	18	14	18	16	14	14	25	22	28	20	16	18.1
1951	16	22	21	27	20	17	20	22	40	24	18	20	22.3
1952	19	26	33	34	27	18	15	13	23	20	12	15	21.2
1953	15	15	21	16	16	13	16	19	21	16	14	7	15.7
1954	9	16	16	14	7	6	8	10	17	15	9	6	11.0
1955	12	12	14	14	11	9	8	9	13	11	13	8	11.3
1956	18	15	20	27	26	17	13	15	18	14	24	10	18.0
1957	17	17	26	21	11	22	16	14	49	14	18	18	20.1
1958	15	27	26	20	17	24	25	18	20	16	8	15	19.2
1959	14	24	24	17	19	15	32	23	28	19	22	19	21.3
1960	15	14	18	42	24	20	20	20	20	36	32	21	23.6
1961	12	16	14	14	13	14	28	11	13	16	10	12	14.4
1962	7	11	8	14	7	9	12	15	19	20	13	13	12.3
1963	11	9	8	10	11	11	12	13	28	15	12	11	12.6
1964	12	12	13	13	10	9	9	8	11	10	7	5	9.9
1965	6	9	8	8	6	10	8	9	10	7	6	7	7.7
1966	7	8	13	7	9	6	9	11	21	11	9	11	10.2
1967	11	11	7	9	25	12	8	9	16	10	10	14	12.0
1968	11	16	13	13	13	17	10	12	14	16	17	10	13.5
1969	8	15	17	14	17	9	8	8	15	9	10	7	11.3
1970	7	7	18	15	9	10	19	13	11	12	12	9	11.9
1971	12	12	11	15	13	9	8	9	13	12	11	10	11.3
1972	13	10	12	11	10	14	8	24	13	12	14	10	12.6
1973	16	20	25	30	17	17	12	12	14	18	12	11	17.0
1974	15	16	23	21	18	17	24	19	23	26	18	15	19.6
1975	16	18	20	16	13	11	12	10	10	12	18	12	13.9
1976	13	17	23	17	14	10	9	9	13	12	9	10	12.9
1977	10	11	11	16	11	8	14	13	16	13	10	10	11.9
1978	15	16	17	24	25	20	13	17	18	12	15	13	17.0
1979	16	15	19	25	14	12	12	18	14	12	10	9	14.5
1980	10	11	8	11	10	13	11	10	8	14	13	13	11.1
1981	9	14	18	28	20	12	19	15	12	23	15	10	16.3
1982	12	33	18	22	17	22	30	21	36	18	21	21	22.4
1983	16	27	23	24	22	15	12	16	14	17	21	15	18.5
1984	13	17	21	25	17	15	16	16	24	23	21	18	18.8
1985	16	15	11	21	9	11	14	13	13	14	15	13	13.7



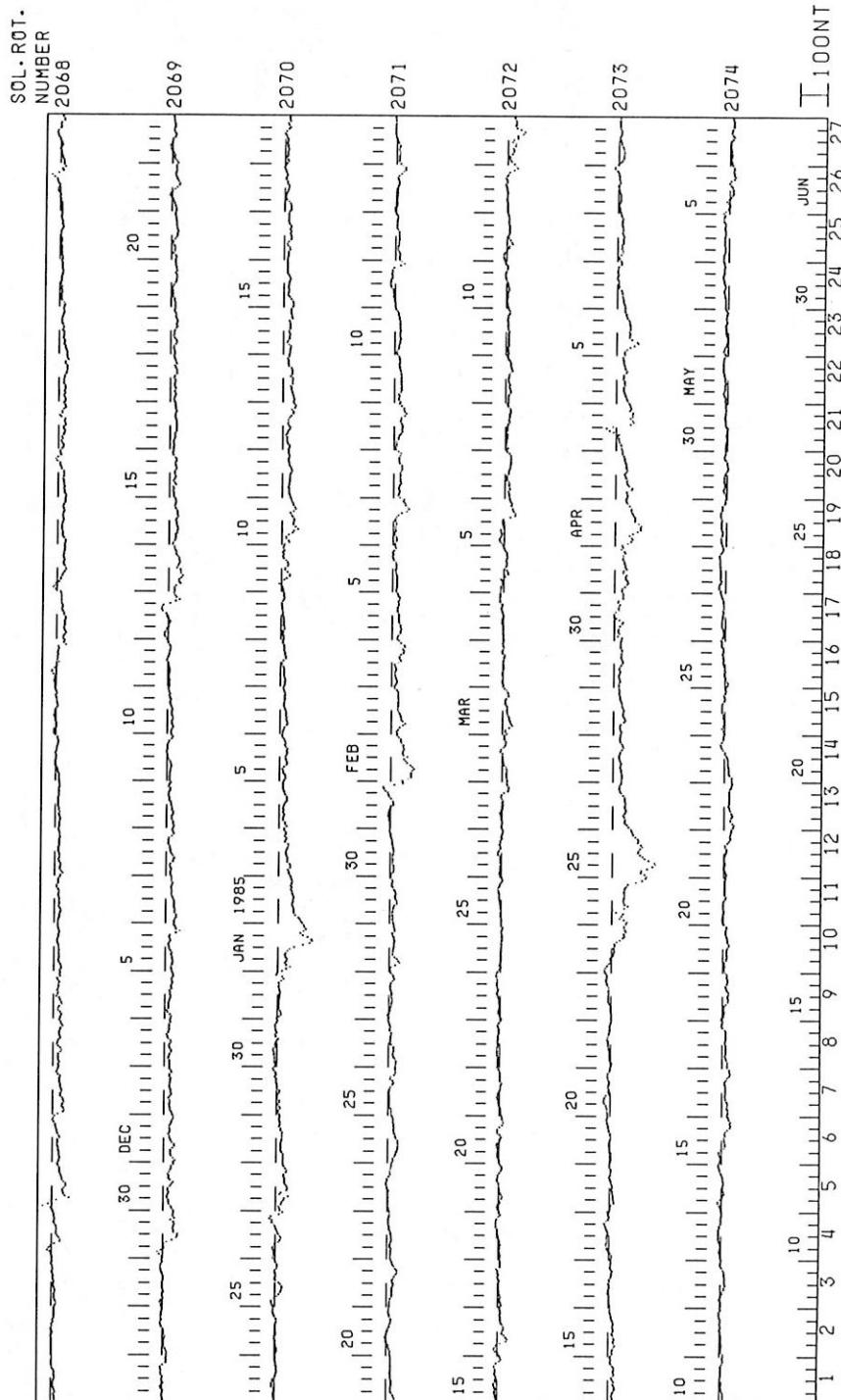
## **SECTION 3**

### **3.4. Dst INDICES**

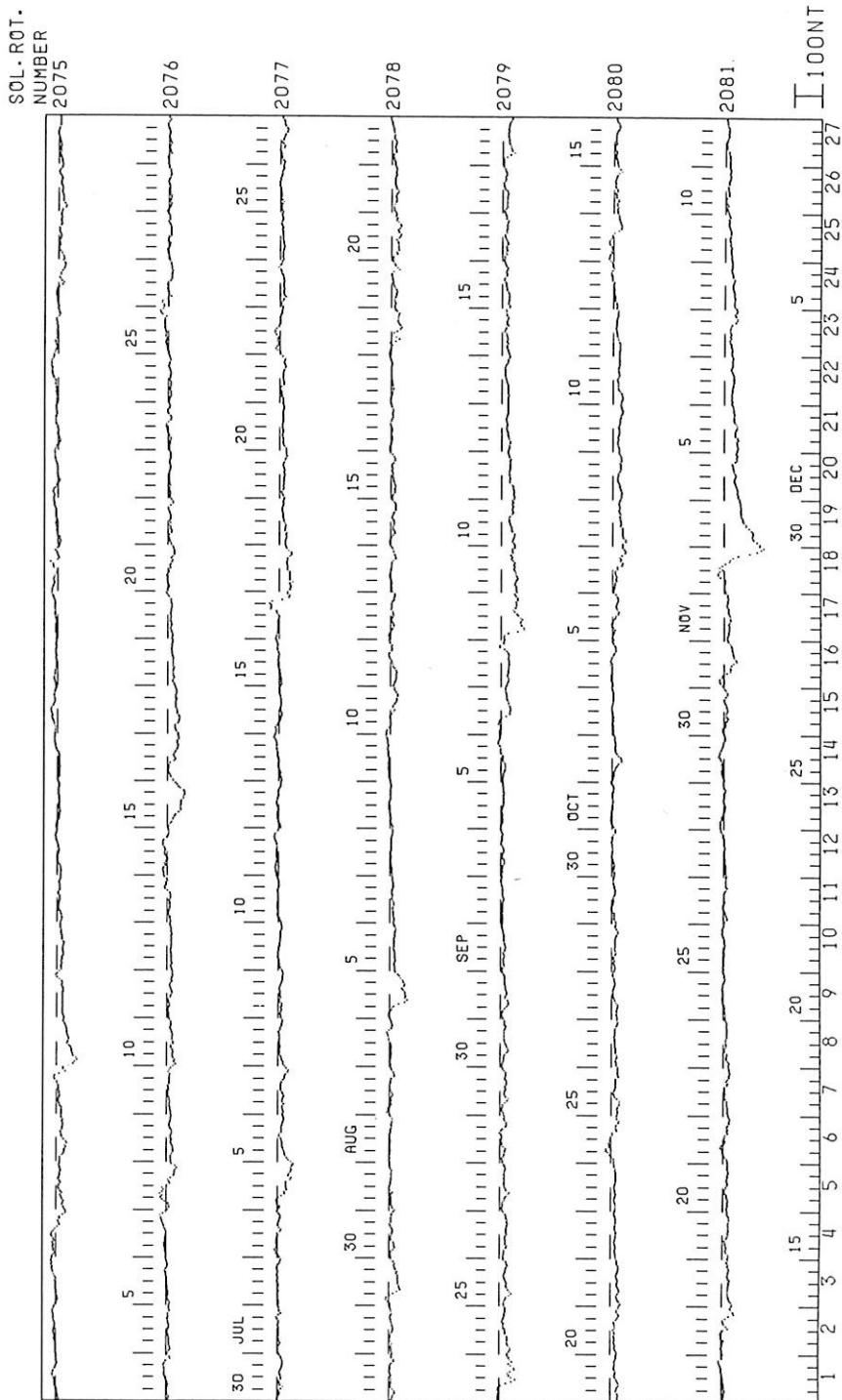
- Hourly values of <b>Dst</b> 1985 (graph)	79
- Monthly tables of <b>Dst</b> hourly values	82
- Tables of daily means of <b>Dst</b>	94
- Monthly and yearly mean values	
1957 - 1985	95



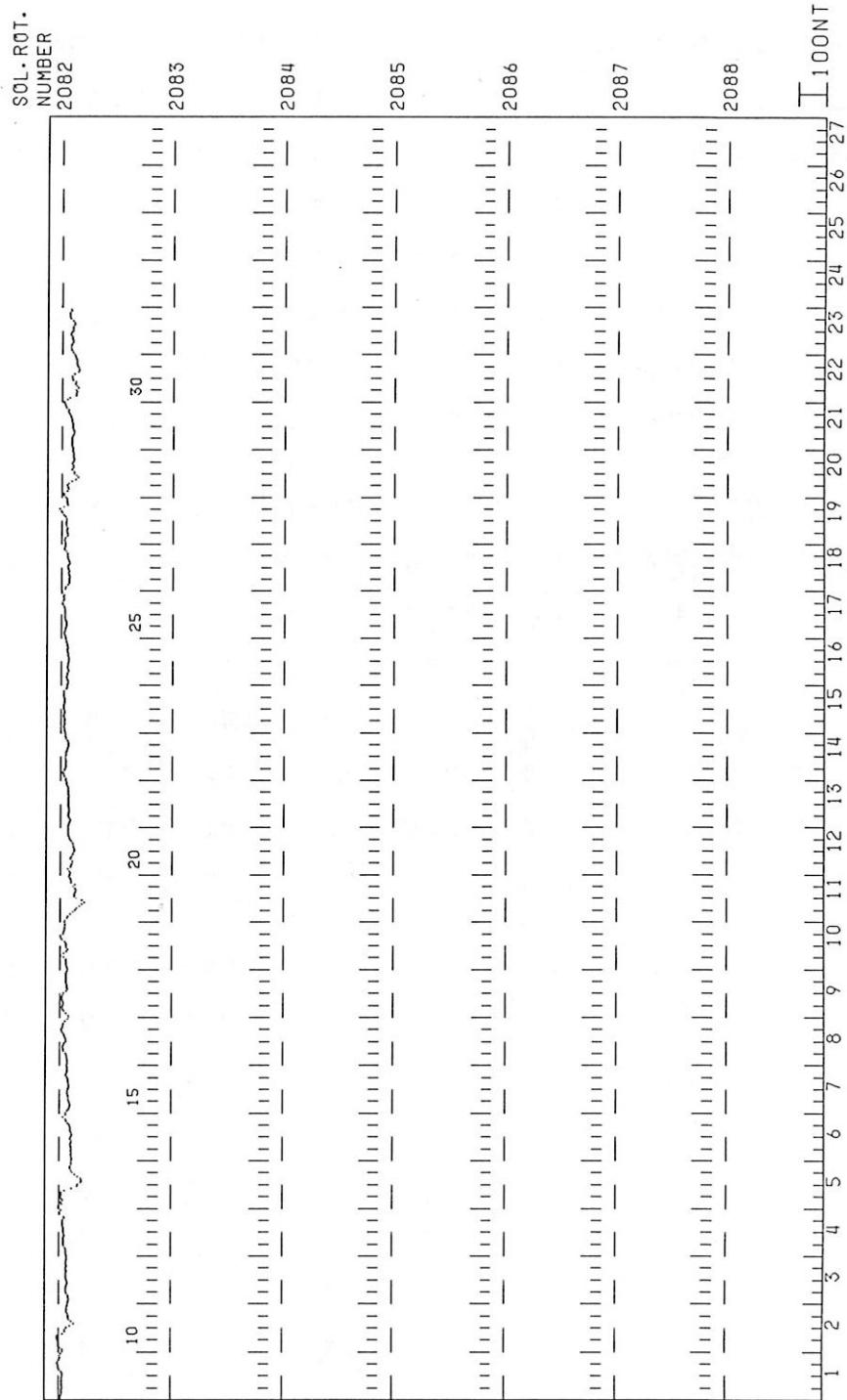
# HOURLY VALUES OF Dst 1985



HOURLY VALUES OF Dst 1985 (continued)



HOURLY VALUES OF Dst 1985 (continued)



**Dst INDICES 1985**

JANUARY 1985

DAY	UNIT=NT 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	U.T. 24
1	-24	-23	-21	-25	-27	-28	-26	-24	-22	-25	-19	-14	-15	-12	-13	-19	-18	-15	-18	-40	-53	-39	-37	-31
2	-32	-32	-35	-40	-38	-33	-34	-34	-30	-32	-30	-27	-26	-21	-21	-19	-18	-22	-21	-24	-21	-21	-21	-21
3	-18	-16	-17	-20	-17	-13	-18	-25	-21	-19	-20	-24	-24	-20	-16	-17	-15	-9	-9	-10	-21	-24	-26	-22
4	-25	-29	-26	-25	-21	-19	-13	-14	-17	-16	-13	-12	-7	-4	-2	-1	0	-4	-3	-2	-6	-8	-18	-18
5	-12	-11	-12	-12	-12	-13	-14	-17	-16	-13	-12	-12	-7	-4	-2	-1	0	-4	-3	-2	-6	-8	-18	-18
6	-15	-15	-18	-22	-19	-17	-18	-21	-21	-18	-17	-17	-17	-19	-17	-15	-11	-12	-13	-10	-9	-10	-7	-5
7	7	-8	-7	-9	-7	-6	-7	-8	-9	-8	-5	-4	-3	-2	-1	-3	-6	-7	-9	-10	-8	-10	-2	-1
8	2	9	12	11	7	3	-2	-3	-7	-8	-4	2	4	6	18	22	21	16	8	-28	-42	-32	-26	-21
9	-23	-23	-22	-29	-45	-39	-40	-47	-52	-46	-46	-45	-32	-35	-38	-42	-39	-38	-33	-29	-29	-25	-21	-21
10	-15	-17	-23	-25	-24	-25	-32	-32	-34	-32	-28	-28	-24	-27	-34	-32	-30	-30	-25	-25	-21	-22	-25	-24
11	-18	-16	-16	-15	-16	-15	-15	-24	-20	-15	-19	-23	-21	-19	-20	-24	-24	-22	-21	-25	-26	-21	-14	-14
12	-14	-14	-16	-15	-15	-16	-20	-19	-19	-19	-25	-24	-26	-26	-25	-25	-22	-19	-20	-21	-26	-22	-20	-20
13	-18	-15	-16	-20	-21	-17	-21	-19	-18	-18	-19	-19	-15	-18	-24	-24	-20	-18	-24	-21	-19	-16	-15	-15
14	-17	-17	-15	-12	-13	-20	-24	-22	-17	-11	-13	-13	-13	-16	-21	-25	-23	-24	-25	-23	-20	-21	-18	-16
15	-16	-16	-17	-15	-15	-13	-8	-8	-8	-5	-9	-9	-11	-18	-19	-21	-23	-22	-18	-22	-21	-20	-18	-16
16	-18	-20	-17	-17	-9	-13	-14	-10	-7	-8	-15	-20	-23	-23	-24	-22	-22	-21	-19	-20	-19	-18	-17	-15
17	-17	-16	-14	-12	-9	-6	-1	-1	6	4	-4	-1	-2	-20	-28	-30	-24	-20	-18	-15	-14	-18	-18	-18
18	-22	-18	-12	-9	-10	-5	0	4	7	5	1	-2	-3	-11	-14	-12	-12	-7	-7	-10	-11	-9	-8	-5
19	-3	-2	-1	-1	-1	0	-1	-2	7	6	7	4	3	-4	-7	-10	-11	-9	-10	-8	-7	-4	-5	
20	-4	-8	-11	-10	-8	-6	-6	-5	-3	-3	-9	-7	-6	-5	-5	-6	-8	-9	-7	-2	0	3	2	
21	3	7	9	10	-1	-11	-17	-22	-14	-10	-7	-8	-15	-20	-23	-23	-24	-21	-3	-3	-9	-11	-10	-4
22	5	5	1	3	6	5	-2	-13	-18	-23	-20	-14	-10	-7	-4	-3	-3	-2	9	9	18	13	-15	
23	-18	-15	-14	-21	-24	-29	-32	-46	-15	-22	-41	-43	-41	-35	-32	-33	-34	-30	-31	-38	-40	-36	-31	-26
24	-26	-26	-27	-27	-26	-22	-19	-19	-19	-18	-20	-21	-23	-23	-23	-24	-19	-20	-14	-15	-15	-12	-13	-15
25	-13	-8	-10	-16	-14	-9	-12	-12	-4	-6	-7	-12	-12	-6	-5	-4	-1	-1	-2	3	-1	0	7	10
26	3	1	4	5	5	6	7	9	8	2	3	1	-3	-8	1	4	-3	1	2	3	4	-2	-6	
27	-3	-11	-16	-15	-12	-9	-7	-8	-9	-10	-11	-11	-12	-11	-9	-9	-7	-17	-24	-20	1	-3	-3	
28	-18	-34	-46	-34	-28	-34	-35	-30	-27	-31	-37	-45	-61	-92	-116	-125	-122	-107	-92	-83	-95	-103	-96	-95
29	-89	-84	-80	-75	-63	-59	-58	-57	-56	-52	-54	-56	-59	-55	-52	-50	-47	-50	-47	-50	-47	-52	-49	-47
30	-43	-39	-38	-35	-43	-45	-42	-34	-33	-34	-30	-28	-28	-29	-33	-37	-36	-24	-26	-29	-23	-26	-26	-21
31	-22	-29	-25	-24	-17	-16	-19	-21	-17	-19	-15	-19	-21	-25	-30	-30	-30	-25	-22	-18	-17	-15	-15	-16

**Dst INDICES 1985 (continued)**

FEBRUARY 1985

DAY	UNIT=NT		U.T.																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-20	-24	-25	-22	-16	-15	-13	-19	-28	-30	-27	-24	-23	-27	-30	-28	-29	-25	-22	-18	-12	-11	-11	-11
2	-12	-13	-16	-19	-21	-18	-17	-16	-28	-25	-24	-25	-22	-19	-17	-17	-17	-20	-19	-22	-19	-15	-15	-14
3	-17	-19	-21	-11	-11	-11	-15	-15	-16	-16	-15	-13	-9	-9	-13	-21	-22	-20	-19	-15	-17	-15	-11	-11
4	-14	-13	-11	-11	-11	-11	-12	-12	-12	-12	-13	-13	-12	-10	-10	-9	-8	-7	-6	-9	-12	-15	-13	-12
5	-11	-10	-8	-4	-4	-4	-12	-12	-22	-33	-33	-24	-16	-17	-25	-28	-25	-19	-10	-7	-10	-8	-13	-9
6	-14	-31	-28	-20	-18	-28	-40	-46	-61	-53	-45	-45	-47	-47	-41	-37	-33	-45	-52	-49	-45	-42	-37	-35
7	-33	-30	-27	-26	-27	-25	-28	-26	-29	-30	-31	-30	-31	-30	-33	-39	-35	-32	-28	-27	-25	-26	-28	-25
8	-24	-27	-28	-22	-19	-19	-18	-14	-19	-22	-22	-26	-31	-25	-22	-23	-23	-28	-34	-40	-42	-35	-46	-49
9	-42	-44	-42	-40	-38	-36	-34	-33	-30	-37	-37	-30	-37	-38	-38	-30	-35	-36	-36	-33	-24	-22	-22	-24
10	-24	-26	-27	-29	-30	-23	-17	-20	-24	-25	-27	-24	-23	-27	-26	-28	-26	-24	-35	-32	-32	-30	-29	-31
11	-36	-39	-39	-35	-31	-25	-19	-20	-22	-21	-20	-22	-22	-22	-22	-25	-28	-25	-22	-17	-15	-15	-15	-15
12	-15	-16	-20	-20	-20	-24	-23	-16	-14	-20	-26	-26	-29	-26	-25	-26	-24	-26	-26	-21	-18	-19	-20	-19
13	-22	-27	-28	-26	-24	-18	-11	-8	-8	-10	-14	-18	-18	-18	-14	-12	-8	-8	-12	-11	-8	-6	-4	
14	-11	-16	-12	-8	-13	-14	-14	-14	-13	-11	-12	-13	-11	-12	-9	-7	-2	-7	-16	-21	-15	-14	-21	
15	-20	-25	-31	-30	-26	-21	-17	-18	-19	-21	-20	-20	-19	-18	-17	-16	-17	-18	-18	-18	-17	-18	-17	
16	-16	-16	-16	-12	-10	-9	-5	-2	-1	-1	-2	-5	-7	-8	-12	-14	-17	-19	-18	-13	-10	-10	-11	
17	-12	-12	-12	-14	-16	-16	-21	-22	-20	-21	-21	-23	-27	-24	-21	-25	-29	-34	-39	-33	-28	-23	-21	-19
18	-16	-14	-15	-16	-15	-17	-13	-12	-16	-18	-17	-17	-15	-15	-15	-12	-10	-8	-7	-7	-8	-10	-11	-11
19	-9	-7	-4	-4	-4	-4	-29	-32	-36	-37	-38	-39	-37	-37	-32	-30	-28	-24	-23	-23	-23	-22	-20	-18
20	-17	-22	-22	-26	-29	-32	-36	-37	-38	-39	-37	-38	-37	-37	-32	-30	-28	-23	-22	-18	-14	-10	-13	-11
21	-14	-14	-14	-13	-8	-7	-6	-7	-8	-8	-6	-5	-5	-7	-7	-11	-17	-21	-18	-10	-11	-23	-28	-26
22	-26	-28	-29	-25	-21	-18	-18	-20	-21	-13	-13	-12	-11	-12	-13	-10	-8	-12	-12	-8	-8	-7	-3	-1
23	-2	0	2	-3	-6	-6	-9	-11	-12	-14	-14	-14	-11	-10	-10	-8	-8	-10	-16	-16	-18	-16	-9	
24	-6	-4	-10	-23	-39	-34	-29	-22	-14	-14	-15	-15	-15	-19	-19	-21	-19	-18	-14	-12	-20	-21	-19	-17
25	-16	-14	-13	-14	-12	-11	-12	-14	-16	-19	-28	-28	-23	-20	-22	-23	-22	-18	-14	-10	-10	-13	-11	-5
26	-4	-7	-14	-16	-16	-15	-11	-11	-12	-11	-11	-13	-14	-15	-13	-12	-11	-5	-10	-9	-9	-6	-5	-1
27	0	0	-1	2	1	5	5	5	4	1	0	-4	-13	-12	-11	-5	-49	-61	-47	-44	-45	-48	-46	-45
28	-44	-64	-74	-73	-74	-78	-84	-79	-72	-60	-54	-54	-54	-49	-49	-45	-48	-46	-45	-39	-38	-37	-30	-24

Dst INDICES 1985 (continued)

	MARCH 1985												U.T.											
UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-23	-22	-27	-32	-44	-52	-44	-38	-37	-35	-31	-28	-25	-25	-26	-27	-27	-28	-26	-26	-27	-27	-22	-14
2	-13	-17	-22	-22	-18	-16	-14	-14	-17	-15	-13	-25	-34	-30	-30	-35	-43	-45	-41	-48	-47	-35	-28	-28
3	-22	-22	-25	-31	-32	-35	-33	-31	-28	-27	-26	-27	-25	-22	-20	-22	-25	-25	-23	-28	-29	-24	-21	-21
4	-16	-16	-17	-18	-19	-18	-18	-19	-18	-16	-14	-13	-15	-16	-15	-14	-14	-8	-4	-1	-3	-2	-6	-14
5	-9	-11	-15	-16	-14	-6	-8	-12	-11	-11	-14	-14	-10	-10	-14	-10	-32	-50	-56	-53	-47	-44	-38	-40
6	-25	-19	-22	-22	-23	-20	-20	-24	-26	-26	-25	-25	-26	-25	-28	-31	-31	-31	-23	-22	-21	-25	-28	-19
7	7	-9	-7	-12	-12	-11	-17	-19	-21	-26	-31	-30	-33	-32	-29	-31	-28	-40	-46	-40	-37	-37	-30	-22
8	-23	-18	-17	-20	-18	-25	-30	-26	-30	-30	-27	-27	-27	-28	-26	-26	-25	-23	-21	-19	-22	-21	-18	-18
9	-12	-9	-11	-16	-17	-17	-20	-22	-23	-21	-20	-20	-23	-22	-21	-20	-20	-19	-17	-16	-15	-12	-6	-6
10	-3	-3	-3	-4	-2	-1	2	2	3	3	5	10	12	14	12	7	7	9	8	6	2	-21	-34	-25
11	-17	-16	-17	-17	-16	-11	-11	-12	-14	-14	-16	-16	-16	-15	-16	-11	-6	-7	-7	-7	-8	-10	-9	-5
12	0	2	1	-5	-7	-6	-5	-7	-7	-8	-7	-7	-8	-9	-13	-13	-10	-8	-12	-20	-28	-35	-34	-25
13	-17	-11	-12	-12	-13	-14	-14	-11	-13	-15	-11	-11	-11	-11	-11	-11	-1	-1	-1	-1	0	0	0	-1
14	2	2	3	4	6	8	8	5	8	10	11	6	4	3	6	8	6	6	9	9	9	-9	-14	-13
15	-9	-4	6	11	7	2	-13	-33	-36	-31	-25	-17	-19	-24	-23	-19	-15	-13	-12	-11	-10	-11	-12	-9
16	-10	-15	-12	-9	-10	-12	-10	-7	-6	-5	-4	-5	-4	-6	-4	-1	-4	0	-1	4	-8	-10	-8	-4
17	-6	-10	-8	-7	-5	-7	-7	-8	-6	-6	-3	-3	-2	-3	-2	-3	-7	7	7	4	-2	-8	-4	-4
18	-3	-2	5	3	-6	-5	-11	-14	-11	-11	-8	-5	-3	-2	-1	-5	5	3	1	-4	-10	-13	-12	-7
19	-3	-3	0	6	6	4	3	2	5	8	4	-3	-7	-3	-4	-4	6	4	-3	-13	-16	-13	-11	
20	-9	-7	-7	-7	-3	-1	1	2	5	7	4	0	-5	-5	-7	-8	-4	-3	-4	-3	-4	-2	-2	
21	7	6	5	6	4	4	7	7	8	9	7	4	5	7	5	5	5	2	2	3	5	7	3	
22	-6	-4	0	5	4	2	0	-1	1	2	3	5	7	10	7	6	9	10	9	9	12	13	12	
23	8	2	-3	-3	-2	-3	-2	-2	-1	0	1	2	5	5	6	7	9	9	5	-1	-3	-6	-4	
24	-3	-3	4	2	2	1	0	1	2	2	2	10	7	3	3	4	3	3	-4	-1	-3	-6	-6	
25	2	5	4	2	2	1	0	1	2	2	2	10	7	3	3	4	3	3	4	3	3	3	3	
26	-5	-1	-2	-4	-3	-1	0	2	4	0	-4	-6	-3	-6	-2	2	0	-9	-22	-26	-21	-19	-19	
27	-20	-19	-17	-17	-19	-18	-16	-16	-10	-7	-5	-5	-2	-3	-5	-6	-6	-7	-13	-15	-15	-9	-9	
28	-17	-11	-13	-26	-36	-32	-29	-27	-26	-22	-19	-18	-19	-17	-13	-11	-11	-13	-15	-22	-23	-20	-16	-9
29	-3	-4	-1	-2	-2	-1	-1	-1	-2	-5	-5	-3	-2	-3	-5	-6	-8	-1	-2	-5	-2	-1	-4	
30	-3	-2	-3	-1	-2	-1	-1	-1	-2	-2	-3	0	-3	-1	2	6	5	2	1	10	11	12	10	11
31	9	9	8	8	8	2	3	5	9	-6	-18	-17	-13	-5	-10	-12	-13	-10	-11	-15	-13	-12	-7	-4

**Dst INDICES 1985 (continued)**

APRIL 1985

UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	3	8	13	15	11	7	8	11	10	0	2	6	6	2	-22	-40	-41	-35	-32	-30	-27	-28	-23	-20
2	-19	-18	-17	-14	-20	-19	-17	-18	-16	-9	-10	-10	-10	-13	-17	-15	-21	-23	-23	-24	-23	-17	-10	
3	-7	-12	-5	-5	-6	-7	-9	-9	-8	-5	-10	-10	-10	-13	-17	-15	-16	-17	-21	-21	-19	-13	-9	
4	-12	-13	-12	-12	-14	-21	-20	-18	-15	-17	-14	-11	-12	-14	-15	-19	-26	-24	-21	-20	-17	-12	-10	
5	-10	-12	-9	-9	-10	-13	-11	-11	-13	-12	-13	-12	-14	-10	-10	-9	-10	-9	-7	-8	-10	-15	-16	
6	-9	-7	-6	-4	-4	-6	-6	-6	-8	-11	-13	-10	-8	-5	-2	0	1	1	0	-5	-7	-6	0	
7	4	7	9	7	5	-2	-9	-11	-22	-20	-14	-9	-6	-8	-11	-11	-11	-12	-10	-8	-9	-8	3	
8	-5	-3	-4	-3	-3	-1	0	-3	-2	-2	-4	-1	0	2	4	-1	-1	4	-1	-5	-10	-25	-33	
9	-27	-16	-12	-10	-9	-18	-22	-22	-20	-29	-30	-18	-22	-37	-56	-62	-48	-35	-29	-31	-32	-30	-26	
10	-21	-19	-20	-20	-17	-19	-22	-27	-28	-26	-30	-21	-25	-19	-17	-24	-26	-22	-25	-20	-14	-12	-11	
11	-13	-19	-18	-19	-24	-28	-24	-23	-25	-24	-21	-17	-21	-23	-20	-20	-22	-20	-17	-15	-13	-11	-9	
12	-10	-10	-7	-5	-5	-6	-5	0	-3	-4	-6	-7	-7	-3	-7	-6	-11	-14	-15	-17	-9	-10	-11	
13	-12	-15	-15	-9	-2	3	4	7	6	4	4	5	3	1	2	6	8	11	13	7	1	-3	-1	
14	3	-6	-7	-10	-19	-18	-18	-18	-16	-15	-13	-12	-14	-13	-10	-8	-5	-4	-5	-7	-9	-8	-4	
15	-4	-7	-8	-8	-10	-8	-10	-8	-3	-1	-1	-2	-1	-2	-7	-6	-5	0	1	2	3	5	7	
16	5	5	7	7	8	11	17	20	19	17	11	0	2	1	4	3	-1	-1	4	6	7	6	-1	
17	-4	-7	-8	-4	-1	-1	0	1	0	2	4	5	5	6	8	7	4	2	0	-1	1	0	-6	
18	-5	-7	-7	-5	-4	-3	-2	-2	2	5	5	6	5	4	6	4	4	9	12	14	12	12	15	
19	20	21	16	10	5	-2	-1	0	-9	-12	-15	-13	-12	-16	-15	-23	-34	-45	-50	-49	-54	-49	-49	
20	-55	-58	-47	-33	-39	-45	-20	-6	-49	-61	-50	-46	-44	-47	-49	-49	-47	-49	-50	-55	-62	-89	-113	-124
21	-127	-119	-106	-108	-128	-147	-158	-155	-133	-119	-113	-103	-96	-98	-104	-112	-106	-96	-97	-94	-86	-78	-76	
22	-70	-61	-56	-48	-48	-49	-46	-43	-47	-54	-50	-47	-49	-51	-48	-48	-48	-42	-35	-31	-28	-29	-34	
23	-35	-35	-37	-36	-35	-34	-33	-30	-32	-33	-31	-27	-26	-25	-29	-30	-36	-41	-39	-36	-30	-28	-29	
24	-31	-34	-31	-28	-27	-31	-43	-47	-45	-40	-39	-38	-41	-39	-37	-35	-34	-30	-28	-27	-26	-25	-24	
25	-24	-22	-24	-29	-23	-26	-27	-23	-25	-23	-30	-30	-36	-37	-34	-32	-32	-35	-33	-32	-29	-28	-28	
26	-30	-33	-17	-24	-19	-19	-21	-25	-33	-36	-23	-11	-4	-10	-21	-19	-21	-26	-18	-19	-36	-35	-37	
27	-35	-32	-33	-42	-49	-54	-51	-45	-47	-35	-37	-47	-43	-43	-40	-38	-34	-35	-42	-39	-27	-34	-34	
28	-30	-50	-61	-68	-63	-57	-68	-85	-94	-98	-88	-74	-76	-75	-71	-67	-63	-61	-56	-49	-44	-42	-42	
29	-45	-48	-46	-45	-62	-65	-52	-47	-45	-46	-43	-40	-36	-42	-42	-43	-42	-39	-36	-33	-29	-27	-27	
30	-27	-24	-22	-18	-15	-13	-10	-13	-13	-20	5	21	7	-56	-63	-63	-63	-65	-65	-52	-58	-53		

**Dst INDICES 1985 (continued)**

MAY 1985

DAY	UNIT=NT												U.T.										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-49	-42	-39	-36	-34	-31	-31	-32	-35	-34	-29	-31	-40	-42	-37	-35	-33	-32	-32	-28	-28	-29	
2	-35	-34	-41	-52	-67	-81	-77	-58	-51	-50	-52	-49	-52	-52	-50	-47	-42	-39	-38	-34	-34	-33	
3	-33	-30	-29	-28	-26	-24	-24	-22	-19	-10	-12	-9	-10	-8	-4	-5	-8	-6	-7	-9	-9	-10	
4	-17	-12	-10	-18	-24	-24	-24	-20	-26	-26	-27	-26	-25	-21	-24	-22	-20	-20	-20	-22	-19	-17	
5	-14	-12	-11	-9	-7	-11	-13	-13	-14	-12	-9	-7	-6	-6	-11	-10	-7	-9	-6	-5	0	8	8
6	-2	-12	-18	-22	-23	-24	-25	-24	-22	-19	-15	-11	-7	-9	-13	-15	-10	-9	-9	-8	-9	-10	
7	-8	-17	-16	-17	-17	-14	-11	-10	-9	-10	-10	-6	-5	-5	-4	-2	-5	-7	-8	-8	-12	-17	-14
8	-17	-17	-9	-7	-9	-11	-10	-7	-8	-9	-5	-4	-2	-5	-4	-3	-4	-3	-4	-1	0	-4	
9	-3	-4	-5	-4	-1	-1	-1	-1	-5	-10	-8	-15	-16	-16	-16	-18	-18	-17	-16	-15	-12	-7	-3
10	-5	-3	-1	2	3	1	-1	-2	0	3	7	6	6	7	6	4	3	-2	-3	-1	-3	-4	-6
11	-4	-1	2	3	9	9	2	-8	-13	-10	-8	-8	-9	-11	-10	-9	-9	-4	-1	2	4	6	8
12	7	3	0	2	4	6	5	-1	-12	-16	-16	-14	-13	-12	-15	-14	-17	-24	-34	-35	-34	-35	-27
13	-22	-25	-26	-24	-21	-23	-24	-17	-17	-15	-14	-15	-15	-15	-15	-15	-13	-13	-18	-23	-32	-31	-30
14	-22	-23	-23	-23	-20	-17	-13	-16	-17	-16	-16	-17	-14	-13	-15	-15	-15	-16	-17	-13	-4	0	-4
15	2	0	-7	-9	-10	-7	-8	-10	-15	-23	-25	-25	-22	-22	-26	-24	-18	-15	-13	-18	-22	-19	-18
16	-12	-8	-7	-10	-9	-9	-15	-17	-18	-17	-17	-16	-19	-19	-25	-25	-20	-18	-15	-13	-13	-16	-15
17	-7	-1	2	0	-2	-2	-4	-4	-3	-3	-1	-2	-6	-11	-13	-7	-7	-8	-8	-7	-9	-8	-10
18	-11	-13	-11	-7	-4	-4	-7	-7	-4	-5	-6	-7	-10	-13	-9	-9	-16	-22	-27	-25	-26	-28	-29
19	-31	-35	-38	-32	-26	-31	-33	-31	-26	-23	-21	-21	-21	-21	-22	-21	-21	-21	-21	-23	-27	-32	-32
20	-30	-30	-29	-23	-19	-19	-20	-19	-17	-17	-16	-15	-13	-11	-6	-6	2	5	8	12	6	2	0
21	-1	-1	2	5	1	-1	-3	-1	2	1	2	5	7	6	5	6	4	-1	-4	-1	0	-6	-6
22	-8	-14	-15	-12	-6	-5	-3	-2	-4	-3	-3	0	3	3	1	3	4	6	4	2	4	9	9
23	12	6	4	3	3	4	6	8	9	9	8	7	6	5	4	5	2	2	3	4	5	9	13
24	15	15	20	21	20	15	12	16	15	14	14	15	16	17	18	18	17	20	21	15	10	6	7
25	10	13	14	15	16	11	9	9	13	15	14	15	14	13	16	17	18	17	11	11	12	4	1
26	-2	-2	0	6	9	7	4	4	5	6	6	5	3	0	-5	-7	-6	-4	-4	1	6	7	3
27	3	3	3	3	2	-1	-2	0	1	-3	-3	-4	1	4	4	4	6	5	4	3	2	4	3
28	4	5	4	5	9	1	9	7	6	5	4	5	5	6	9	10	11	11	13	12	11	8	
29	3	7	13	10	8	4	2	-3	-1	2	4	4	4	4	6	4	0	2	3	2	0	-1	3
30	6	7	7	7	6	6	9	10	11	11	9	7	8	12	13	15	17	15	13	13	11	10	13
31	15	16	15	15	13	8	8	9	12	13	13	13	10	8	9	11	11	10	10	15	16	15	13

**Dst INDICES 1985 (continued)**

JUNE 1985		U.T.																										
DAY	UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	17	10	1	-2	-4	1	5	0	-8	-10	-8	-3	-14	-16	-15	-16	-14	-8	-3	-8	-20	-24	-18	-17	-19	-18		
2	-14	-11	-8	-5	-8	-3	-6	-4	-1	-6	-4	-1	-2	-5	-5	-7	-13	-18	-13	-9	-10	-12	-16	-17	-17	-14		
3	-13	-11	-9	-8	-6	-6	-4	-1	0	-1	-5	-4	-3	-1	-1	-1	0	3	8	3	-2	-4	-6	-4	-3	-3		
4	-2	-2	-1	0	-1	2	4	-3	-2	-1	-1	0	-1	-3	1	1	6	6	9	9	11	13	11	15	13	14		
5	0	-4	-6	-7	-6	-5	-4	-3	-2	-1	-1	0	-1	-3	1	1	6	6	9	9	11	13	11	15	13	14		
6	12	7	3	7	8	10	8	10	-23	-21	-17	-17	-12	-9	-12	-18	-16	-16	-7	-16	-13	-10	-14	-14	-27	-36	-37	
7	-32	-28	-23	-26	-30	-32	-31	-32	-31	-28	-31	-32	-33	-41	-38	-30	-23	-20	-19	-17	-22	-24	-25	-26	-24	-12	-14	
8	8	-15	-16	-16	-22	-28	-21	-20	-15	-11	-10	-8	-12	-15	-13	-12	-9	-9	-9	-5	-4	4	7	5	-12	-35	-27	-26
9	-20	-20	-21	-20	-15	-11	-10	-8	-11	-7	-9	-8	-11	-11	-10	-8	-43	-47	-46	-43	-39	-39	-39	-36	-34	-31	-26	-29
10	-47	-62	-69	-77	-72	-62	-59	-56	-56	-54	-54	-48	-41	-43	-41	-43	-47	-46	-43	-39	-39	-39	-39	-36	-34	-31	-26	
11	-29	-27	-22	-23	-22	-24	-24	-23	-24	-23	-24	-24	-24	-23	-24	-23	-22	-22	-22	-23	-20	-22	-21	-13	-3	2	-4	-11
12	-19	-18	-18	-21	-18	-21	-20	-25	-20	-25	-20	-25	-26	-24	-23	-24	-23	-24	-26	-26	-21	-20	-18	-17	-19	-16	-15	-14
13	-16	-16	-19	-20	-19	-17	-15	-10	-6	-7	-8	-10	-11	-11	-11	-11	-11	-7	-6	-12	-13	-11	-10	-12	-14	-16	-16	
14	-15	-16	-16	-17	-16	-14	-11	-6	-4	-4	-3	-3	-3	-6	-6	-6	-9	-8	-7	-6	-4	-1	-3	3	5	3	3	3
15	2	1	1	-2	-7	-9	-8	-3	-11	-11	-10	-8	-10	-10	-8	-9	-10	-10	-10	-8	-7	-7	-7	-9	-9	-9	-7	-7
16	-5	-5	-8	-8	-9	-10	-10	-11	-10	-10	-9	-8	-8	-10	-9	-10	-9	-6	-2	1	4	5	7	7	9	8	8	
17	7	6	6	9	10	13	16	19	16	18	21	21	19	14	10	7	8	9	10	9	7	5	2	12	12	12	12	
18	4	5	7	10	9	7	6	3	2	3	1	3	4	2	4	4	5	3	3	3	3	4	4	4	4	4	2	
19	1	1	3	5	5	4	4	4	2	3	5	6	8	7	6	7	7	7	7	7	11	13	16	20	20	20	20	
20	19	18	16	14	10	11	12	11	9	3	-2	-2	12	14	15	24	0	-6	-3	-2	-1	8	0	-6	-5	-2		
21	-8	-12	-11	-8	-10	-9	-10	-9	-10	-11	-10	-11	-10	-9	-10	-9	-10	-9	-6	-2	1	4	5	7	11	10	12	12
22	13	10	12	15	13	7	2	0	2	0	-6	-9	-5	-1	0	-1	-1	0	0	2	4	6	8	9	9	10	10	
23	9	6	2	-4	-10	-13	-7	-4	-7	-4	-1	-3	-4	-2	0	5	6	6	5	3	3	3	4	4	4	4	2	
24	3	2	0	1	3	4	3	5	6	8	6	8	13	17	18	19	20	19	23	21	23	21	21	15	12	12	12	
25	12	9	7	2	3	6	8	9	3	0	2	2	1	0	0	3	1	5	5	-5	-9	-6	-5	-5	-5	-2	-2	
26	-3	-2	-1	1	2	2	5	5	4	2	-7	-17	-22	-15	-8	-5	-11	-11	-18	-23	-26	-29	-26	-26	-19	-19	-19	-19
27	-23	-22	-19	-15	-10	-5	-5	-8	-7	-5	-8	-11	-13	-10	-7	-7	-5	-12	-15	-13	-11	-14	-13	-11	-11	-11	-11	
28	-16	-17	-30	-32	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-21	-16	-17	-18	-14	-11	-15	-15	-15	-15	-15	-18	
29	-18	-15	-12	-9	-7	-8	-8	-9	-11	-11	-8	-6	-4	-3	-2	-3	-3	-5	-8	-9	-10	-9	-9	-9	-9	-9	-9	
30	-7	-8	-10	-7	-4	-7	-4	-7	-8	-8	-7	-4	-7	-8	-3	-3	-2	5	7	9	5	0	-18	-14	-14	-13		

Dst INDICES 1985 (continued)

JULY 1985

	UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	U.T.
DAY																										
1	-7	-10	-17	-13	-10	-10	-10	-12	-8	-5	-7	-9	-12	-11	-8	-7	-5	-8	-7	-7	-13	-12	-10	-10	-10	
2	-12	-14	-10	-7	-7	-8	-8	-8	-7	-6	-3	-4	-4	-2	-2	0	0	4	-5	-6	-5	-3	-1	-1	-1	
3	1	0	1	2	3	5	6	5	3	2	2	0	-1	-1	2	7	8	11	13	17	18	21	10	10	-1	
4	-7	-10	-10	-8	6	13	20	15	-22	13	9	15	-2	-15	-10	-7	-17	-27	-32	-30	-34	-38	-33	-20	-19	-19
5	-17	-18	-16	-17	-21	-26	-24	-26	-23	-19	-17	-20	-17	-20	-21	-21	-19	-14	-11	-12	-14	-18	-18	-18	-19	-19
6	-18	-17	-15	-15	-11	-11	-13	-10	-10	-7	-7	-7	-5	-8	-5	-10	-11	-12	-11	-12	-13	-7	-10	-17	-17	-17
7	-24	-33	-28	-30	-24	-22	-23	-25	-23	-17	-16	-24	-24	-21	-21	-22	-23	-20	-16	-14	-16	-18	-17	-17	-17	-17
8	-9	-9	-8	-6	-5	-8	-11	-10	-8	-7	-7	-13	-16	-16	-16	-15	-12	-15	-19	-17	-20	-23	-21	-21	-22	-22
9	-20	-17	-15	-20	-18	-18	-17	-17	-17	-15	-14	-14	-17	-18	-18	-18	-18	-20	-18	-20	-18	-17	-16	-14	-12	-12
10	-14	-13	-11	-11	-6	-5	-8	-10	-12	-11	-11	-10	-9	-13	-14	-14	-11	-2	6	8	3	3	-3	-1	9	9
11	1	1	13	14	11	5	8	2	-3	0	6	8	7	5	8	13	14	15	11	0	-4	-7	-7	-6	-6	
12	-4	-7	-12	-17	-21	-23	-27	-31	-42	-51	-49	-49	-51	-50	-52	-60	-60	-64	-65	-61	-49	-42	-37	-31	-31	-31
13	-23	-21	-15	-10	-7	-4	-5	-6	-7	-11	-24	-32	-32	-32	-32	-36	-36	-40	-38	-37	-43	-41	-40	-40	-40	
14	-39	-33	-31	-28	-29	-38	-42	-44	-45	-41	-36	-37	-35	-35	-30	-30	-32	-34	-31	-32	-33	-33	-33	-33	-33	-33
15	-27	-24	-19	-21	-25	-22	-21	-21	-22	-26	-21	-21	-21	-21	-22	-20	-18	-17	-16	-16	-16	-18	-20	-20	-20	-20
16	-17	-19	-20	-18	-14	-11	-14	-16	-14	-12	-13	-12	-12	-12	-14	-15	-17	-18	-15	-13	-14	-7	-4	3	3	3
17	7	0	-5	-6	-2	0	0	0	3	4	-6	-4	-6	-4	-11	-9	-11	-11	-18	-20	-15	-19	-25	-25	-25	-25
18	-15	-12	-9	-7	-3	-7	-5	-17	-11	-10	-7	-10	-7	-10	-12	-12	-8	-6	-4	-2	-10	-20	-20	-20	-20	-20
19	-9	-8	-10	-9	-7	-7	-10	-8	-6	-5	-5	-7	-5	-6	-9	-10	-10	-8	-6	-9	-10	-12	-12	-9	-9	-9
20	-5	-6	-7	-8	-9	-11	-10	-6	-4	-1	2	4	6	4	-2	-10	-13	-10	-4	0	0	-6	-8	-5	-5	-5
21	-4	-6	-8	-12	-10	-9	-9	-11	-12	-10	-7	-9	-9	-10	-10	-9	-9	-5	-3	-7	-9	-12	-9	-8	-4	-3
22	-3	-2	2	2	4	6	8	6	4	8	7	6	9	11	12	12	10	10	6	20	26	27	18	18	18	
23	14	15	21	20	0	-11	-4	-4	1	3	-1	2	0	-8	-13	-14	-14	-15	-16	-13	-14	-12	-11	-7	-7	-7
24	-6	-4	-2	-1	2	4	-2	-7	-8	0	-1	-7	-10	-11	-12	-1	-10	-9	-5	-1	-6	-5	0	0	0	
25	5	0	-6	-9	-10	-5	-9	-12	-12	-6	-7	-7	-6	-5	-3	-1	-3	-7	-9	-12	-9	-8	-4	-3	-3	
26	0	-1	0	3	-1	-10	-9	-6	-4	-6	-11	-9	-6	-2	-3	-5	-6	-3	-5	-7	-10	-9	-6	-3	-3	
27	-1	-3	-4	-10	-9	-17	-23	-13	-10	-8	-16	-16	-16	-13	-11	-12	-17	-20	-21	-22	-21	-20	-16	-11	-11	
28	-7	-6	-5	-10	-12	-10	-7	-5	-8	-8	-7	-7	-7	-6	-8	-8	-20	-20	-18	-16	-16	-16	-16	-16	-16	
29	-5	-7	-8	-4	-4	-5	-7	-6	-6	-8	-6	-3	-4	-5	-2	-4	-5	-2	-2	-5	-11	-14	-15	-15	-15	
30	-11	-8	2	5	7	0	-3	0	2	2	-1	-6	-3	-12	-17	-9	-5	-6	-7	-10	-12	-12	-8	-3	-3	
31	-4	-11	-11	-3	-1	-6	-17	-28	-26	-35	-33	-32	-32	-33	-48	-52	-41	-44	-50	-52	-51	-55	-55	-58	-58	

Dst INDICES 1985 (continued)

AUGUST 1985

	UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	U. T.
DAY																									
1	-51	-42	-35	-30	-28	-26	-23	-21	-19	-18	-19	-17	-12	-7	-9	-16	-17	-15	-17	-19	-22	-24	-24	-22	
2	-20	-24	-21	-19	-18	-24	-20	-19	-22	-25	-22	-18	-14	-13	-12	-4	-17	-21	-26	-31	-38	-38	-33	-33	
3	-28	-22	-17	-15	-12	-9	-9	-10	-9	-10	-11	-8	-7	-8	-9	-8	-6	-1	-1	-11	-16	-18	-16	-19	
4	-14	-14	-11	-13	-15	-12	-16	-16	-9	-9	-12	-10	-10	-10	-8	-7	-11	-14	-15	-18	-20	-21	-20	-19	
5	-15	-11	-8	-8	-6	-6	-2	-1	-2	-4	-6	-8	-7	-6	-8	-9	-10	-11	-11	-12	-15	-15	-14		
6	-13	-10	-8	-2	1	-1	-1	0	0	0	0	-2	-2	-2	-1	-1	0	0	-1	-2	-6	-10	-11		
7	7	4	6	7	8	7	6	3	2	3	3	4	3	2	2	0	-1	-1	-2	-1	-2	-6	-4		
8	-10	-11	-9	-3	-1	1	1	1	2	-1	-1	1	3	4	2	0	-1	-1	-2	-3	-7	7	11		
9	-13	-12	-10	-9	-10	-7	-7	-4	-2	-1	-2	-4	-2	0	1	0	-8	-11	-11	-10	-11	-6	-4		
10	9	7	7	8	4	0	-5	-9	-10	-12	-12	-10	-10	-8	-8	-8	-11	-11	-10	-11	-9	-7	-4		
11	-8	-12	-11	-11	-11	-9	-7	-6	-5	-3	0	0	-1	1	-1	-2	-4	-1	-1	2	3	2	4		
12	8	7	5	3	2	0	0	2	1	0	-1	-4	-1	4	6	28	27	26	32	22	-13	-38	-40		
13	-34	-42	-45	-44	-41	-51	-41	-42	-40	-42	-40	-32	-32	-32	-31	-29	-32	-33	-41	-46	-46	-37	-34		
14	-25	-24	-28	-29	-27	-29	-23	-24	-25	-26	-25	-23	-20	-18	-16	-16	-16	-16	-14	-13	-15	-18	-16		
15	-21	-17	-13	-11	-15	-18	-17	-19	-18	-19	-19	-19	-22	-19	-21	-19	-17	-17	-19	-23	-25	-31	-27		
16	-28	-26	-21	-17	-17	-17	-15	-12	-12	-15	-16	-14	-13	-13	-16	-17	-17	-15	-15	-17	-20	-19	-16		
17	-15	-15	-15	-11	-11	-11	-9	-6	-11	-18	-19	-15	-15	-15	-17	-16	-18	-23	-25	-22	-8	-22	-23		
18	-9	-4	5	1	7	1	0	5	3	2	10	14	8	0	-3	-6	-6	-6	-5	-4	-7	-1	-12		
19	-13	-7	-8	-12	-15	-25	-19	-17	-17	-18	-17	-15	-17	-18	-17	-15	-13	-9	-7	-5	2	-5	-9		
20	-15	-12	-13	-12	-13	-17	-19	-18	-15	-16	-13	-14	-13	-12	-13	-11	-13	-10	-7	-9	-12	-14	-11		
21	-14	-10	-7	-9	-11	-16	-10	-6	-8	-7	-8	-5	-5	-2	-1	-2	-4	-4	-8	-10	-9	-12	-15		
22	-15	-9	-13	-9	-9	-9	-4	-2	-15	-20	-13	-8	-13	-15	-19	-21	-27	-31	-28	-22	-18	-20	-16		
23	-10	-13	-16	-18	-23	-23	-16	-9	-7	-9	-11	-11	-8	-9	-6	-5	-7	-6	-8	-12	-10	-12	-13		
24	-15	-12	-12	-10	-11	-14	-8	-5	-6	-8	-11	-16	-18	-17	-16	-14	-11	-9	-10	-14	-11	-9			
25	-6	-6	-2	9	6	-8	-18	-33	-43	-40	-39	-36	-36	-34	-35	-36	-30	-31	-27	-24	-22	-23	-17		
26	-10	-9	-7	-10	-17	-24	-22	-18	-9	-8	-11	-13	-15	-16	-12	-8	-4	-10	-10	-11	-13	-17	-17		
27	-23	-16	-13	-10	-10	-7	-7	-10	-15	-5	0	-3	-8	-8	-9	-10	-11	-10	-11	-12	-8	-5	-4		
28	-4	-2	-3	-2	-4	-4	-8	-4	-5	-4	-6	-4	-4	-4	-8	-7	-9	-11	-10	-13	-14	-14	-8		
29	-3	6	1	-4	-1	-4	-10	-7	-10	-8	-12	-16	-12	-8	-4	-4	-5	-6	-8	-10	-21	-18	-13		
30	-8	-6	-5	-6	-8	-10	-9	-8	-9	-10	-8	-9	-10	-8	-5	0	3	5	6	-1	-9	-13	-12		
31	-4	1	1	-2	-9	-11	-18	-36	-56	-65	-58	-61	-58	-58	-51	-46	-54	-56	-51	-48	-42	-38	-31		

**Dst INDICES 1985 (continued)**

SEPTEMBER 1985

UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	U.T.
DAY	-21	-20	-21	-19	-22	-23	-22	-21	-20	-22	-19	-16	-17	-17	-18	-17	-17	-20	-20	-21	-23	-25	-21	-17	
1	-16	-17	-16	-15	-15	-14	-13	-14	-14	-17	-14	-10	-11	-12	-10	-10	-12	-15	-15	-15	-13	-13	-12	-12	
2	-11	-11	-12	-9	-10	-5	-6	-4	-4	-6	-6	-5	-4	-7	-8	-8	-8	-8	-9	-9	-11	-12	-12	-12	
3	-11	-12	-9	-5	-5	-2	2	3	4	0	2	1	2	1	-4	-5	-5	-4	-5	-5	-6	-7	-5		
4	-11	-12	-9	-5	-5	-2	2	3	4	3	3	3	3	5	4	5	6	7	5	6	7	8	10		
5	-3	-1	-1	-2	-2	-2	-2	-2	-3	-4	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3	-3		
6	12	12	10	3	-4	-5	-3	-3	-1	-2	-8	-14	-17	-11	-13	-18	-23	-26	-25	-30	-30	-24	-17		
7	-13	-16	-18	-22	-23	-23	-23	-23	-23	-23	-18	-13	-11	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10		
8	3	3	4	2	-4	-10	-14	-15	-12	-6	-5	-10	-14	-13	-11	-5	-13	-20	-22	-18	-14	-14	-14		
9	-10	-7	-7	-4	-7	-7	-3	0	-1	3	0	-4	-5	-6	-6	-7	-13	-15	-20	-20	-21	-21	-16		
10	-1	2	-1	-6	-12	-19	-17	-12	-11	-14	-15	-16	-13	-8	-9	-9	-13	-15	-20	-21	-21	-21	-9		
11	-8	-9	-12	-17	-18	-19	-20	-18	-15	-13	-12	-9	-11	-9	-8	-9	-7	-6	-13	-19	-19	-16	-9		
12	2	2	2	-1	-5	-8	-8	-6	-5	-5	-7	-6	-4	-1	0	-4	-8	-11	-9	-9	-12	-11	-8		
13	-1	-1	-3	-6	-8	-11	-12	-11	-11	-9	-8	-5	-5	-4	-5	-4	-3	-5	-7	-7	-4	-1	-1		
14	5	4	2	-2	-3	-6	3	-19	-33	-21	-5	-13	-24	-36	-41	-34	-30	-26	-28	-28	-30	-31	-24		
15	-15	-15	-17	-15	-15	-14	-18	-20	-24	-20	-15	-12	-10	-9	-8	-6	-4	-4	-11	-33	-33	-17	-10		
16	-8	-10	-11	-23	-22	-30	-28	-28	-28	-26	-22	-29	-36	-27	-27	-33	-38	-38	-35	-38	-28	-22	-19		
17	-19	-13	-12	-11	-14	-18	-21	-20	-19	-21	-26	-28	-21	-18	-16	-15	-16	-16	-16	-17	-21	-20	-19		
18	-15	-16	-13	-10	-7	-9	-17	-19	-16	-16	-17	-20	-17	-12	-12	-14	-11	-10	-9	-8	-5	-4	-1		
19	3	6	5	4	2	-1	4	3	-7	-27	-46	-60	-46	-36	-33	-42	-57	-55	-55	-44	-41	-36	-31		
20	-31	-38	-42	-41	-35	-31	-30	-31	-32	-30	-24	-23	-22	-17	-16	-17	-11	-14	-17	-20	-21	-24	-23		
21	-19	-17	-19	-22	-27	-37	-45	-40	-34	-29	-26	-29	-27	-22	-20	-18	-20	-23	-24	-26	-31	-28	-26		
22	-15	-14	-17	-19	-26	-28	-23	-23	-23	-26	-23	-28	-26	-26	-27	-27	-29	-31	-27	-25	-23	-16	-16		
23	-11	-10	-11	-11	-13	-19	-20	-25	-33	-38	-26	-23	-19	-18	-18	-19	-18	-19	-21	-23	-20	-17	-16		
24	-12	-11	-10	-15	-18	-19	-21	-22	-14	-9	-9	-7	-10	-9	-7	-1	-6	-12	-23	-27	-25	-21	-17		
25	-16	-14	-10	-9	-11	-13	-21	-28	-33	-23	-18	-17	-20	-23	-20	-25	-26	-25	-20	-21	-24	-17	-11		
26	-9	-8	-11	-14	-15	-15	-17	-25	-31	-30	-25	-23	-19	-17	-16	-16	-16	-16	-21	-23	-17	-17	-18		
27	-11	-9	-6	-9	-11	-18	-25	-31	-28	-19	-20	-25	-26	-22	-21	-20	-18	-17	-18	-18	-14	-8			
28	-7	-9	-16	-15	-13	-13	-16	-14	-11	-17	-20	-17	-16	-15	-15	-14	-15	-15	-13	-13	-10	-7			
29	-8	-10	-10	-9	-7	-8	-9	-8	-10	-12	-14	-12	-10	-9	-10	-9	-10	-9	-8	-7	-5	-4	-6		
30	-7	-5	-8	-7	-8	-10	-14	-16	-15	-8	-7	-8	-13	-14	-11	-9	-4	-3	-6	-7	-7	-8	-3		

**Dst INDICES 1985 (continued)**

OCTOBER 1985

UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	U.T.	
DAY	-1	-2	-5	-8	-9	-8	-7	-8	-6	-4	-7	-9	-11	-12	-12	-12	-13	-14	-12	-11	-11	-10	-10	-10	
1	-1	-2	-5	-8	-9	-11	-14	-17	-19	-19	-18	-13	-10	-10	-9	-4	0	0	-2	1	8	8	4	1	
2	-9	-8	0	0	0	7	5	2	-4	-21	-35	-35	-36	-36	-35	-30	-30	-26	-23	-22	-21	-19	-18	-18	
3	3	4	2	0	-20	-27	-30	-26	-28	-29	-30	-30	-32	-31	-28	-30	-32	-28	-22	-14	1	3	-12	-13	
4	4	-24	-27	-30	-30	-30	-26	-28	-26	-29	-30	-32	-31	-28	-30	-31	-34	-35	-37	-31	-29	-27	-27	-27	
5	-14	-13	-14	-29	-63	-86	-85	-77	-72	-73	-79	-72	-65	-59	-52	-46	-53	-58	-58	-56	-63	-63	-56	-52	
6	-60	-56	-57	-56	-52	-53	-57	-61	-59	-55	-55	-50	-48	-48	-50	-45	-40	-42	-38	-44	-43	-43	-43	-51	
7	7	-50	-48	-42	-45	-47	-47	-45	-45	-41	-33	-32	-34	-33	-32	-30	-31	-34	-34	-45	-42	-41	-45	-42	
8	8	-49	-50	-46	-47	-45	-47	-45	-45	-40	-32	-32	-26	-23	-21	-24	-22	-20	-18	-21	-23	-21	-25	-25	
9	9	-27	-29	-31	-30	-34	-35	-30	-28	-25	-30	-28	-25	-26	-24	-21	-19	-16	-15	-15	-14	-14	-26	-27	
10	10	-25	-26	-25	-27	-28	-27	-25	-26	-27	-26	-22	-22	-21	-19	-16	-15	-15	-15	-14	-14	-17	-24	-31	
11	11	-31	-29	-26	-24	-20	-21	-25	-20	-24	-24	-21	-19	-11	-15	-17	-27	-20	-21	-22	-27	-21	-19	-18	
12	12	-30	-32	-26	-27	-29	-29	-28	-25	-21	-20	-18	-18	-18	-15	-10	-11	-19	-20	-18	-21	-22	-18	-14	
13	13	-9	-11	-11	-19	-16	-21	-18	-17	-23	-23	-19	-15	-11	-12	-19	-18	-21	-20	-23	-25	-17	-18	-15	
14	14	-12	-10	-15	-21	-19	-21	-19	-20	-20	-22	-23	-20	-12	-8	-6	-7	-13	-14	-13	-17	-15	-11	-7	
15	15	-6	-7	-6	-18	-32	-45	-38	-34	-33	-30	-26	-26	-26	-26	-23	-22	-22	-25	-24	-25	-26	-28	-33	-38
16	16	-37	-31	-32	-34	-30	-24	-27	-29	-35	-32	-29	-22	-20	-22	-24	-20	-17	-19	-21	-20	-23	-25	-25	
17	17	-29	-27	-23	-19	-22	-20	-16	-19	-19	-17	-21	-19	-14	-21	-21	-19	-17	-26	-32	-37	-34	-28	-35	
18	18	-37	-41	-36	-31	-27	-26	-30	-37	-36	-33	-29	-28	-30	-32	-27	-26	-27	-30	-33	-34	-34	-29	-27	
19	19	-24	-23	-23	-20	-22	-22	-20	-18	-20	-22	-20	-18	-18	-18	-21	-22	-20	-21	-23	-22	-20	-16	-17	
20	20	-20	-21	-21	-19	-16	-17	-20	-22	-20	-20	-18	-18	-18	-18	-21	-22	-22	-23	-23	-22	-21	-17	-16	
21	21	-15	-15	-14	-6	1	7	15	15	2	3	5	0	-1	-3	-9	-9	-25	-22	-21	-23	-32	-33	-26	
22	22	-25	-28	-27	-26	-29	-34	-35	-35	-25	-18	-14	-11	-14	-18	-19	-19	-20	-20	-21	-23	-29	-27	-28	
23	23	-29	-23	-22	-19	-21	-25	-24	-20	-19	-20	-17	-17	-16	-16	-17	-14	-18	-17	-17	-18	-21	-25	-24	
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25	25	-15	-18	-17	-13	-12	-15	-12	-11	-16	-21	-17	-15	-17	-18	-16	-16	-18	-19	-23	-28	-23	-17	-19	
26	26	-21	-19	-15	-13	-15	-14	-7	-3	-2	-6	-10	-11	-12	-10	-13	-16	-17	-18	-14	-12	-10	-12	-12	
27	27	-13	-15	-14	-10	-11	-13	-11	-9	-5	-4	-5	-6	-7	-7	-5	-5	-3	-5	-6	-6	-10	-16	-18	
28	28	-17	-12	-7	-3	1	0	-1	-2	-3	-3	-6	-6	-7	-8	-7	-6	-6	-8	-10	-11	-9	-13	-13	
29	29	-9	-6	-10	-12	-12	-15	-17	-22	-29	-38	-39	-36	-38	-28	-22	-18	-16	-15	-16	-18	-16	-14	-15	
30	30	-9	-8	-10	-10	-10	-7	-8	-10	-10	-6	-5	-2	-3	-3	-5	-7	-9	-8	-9	-8	-8	-6	-4	
31	31	-4	-7	-5	-1	0	0	-1	-2	-3	-4	-2	4	1	2	0	-3	-8	-12	-18	-18	-14	-9	-4	

**Dst INDICES 1985 (continued)**

NOVEMBER 1985

DAY	UNIT=NT		U.T.																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	-8	-4	-5	-9	-11	-12	-13	-13	-14	-9	-3	-1	-5	-10	-14	-18	-26	-28	-24	-20	-18	-20	-23	-25	
2	-10	-9	-11	-12	-12	-13	-13	-13	-14	-19	-16	-1	-1	-17	-14	-15	-23	-23	-22	-39	-42	-36	-36	-38	
3	-42	-42	-52	-52	-45	-43	-41	-41	-42	-41	-34	-37	-37	-34	-37	-34	-32	-32	-32	-35	-30	-30	-28	-28	
4	-35	-37	-37	-38	-36	-33	-31	-30	-27	-23	-22	-23	-25	-25	-26	-32	-35	-35	-34	-34	-34	-37	-37	-31	
5	-29	-29	-27	-24	-23	-23	-23	-25	-25	-29	-28	-28	-25	-25	-27	-30	-30	-31	-34	-35	-39	-39	-37	-34	
6	-35	-37	-39	-41	-38	-36	-31	-26	-24	-24	-24	-23	-20	-24	-29	-28	-26	-24	-25	-29	-28	-29	-29	-29	
7	-29	-27	-28	-31	-30	-30	-31	-28	-24	-24	-19	-19	-17	-17	-16	-16	-15	-15	-16	-17	-18	-19	-22	-22	
8	-18	-9	-18	-16	-16	-12	-11	-12	-9	-7	-8	-9	-7	-7	-8	-1	0	0	0	3	4	0	-7	-4	
9	7	13	10	9	3	4	1	2	9	12	5	0	1	-7	-24	-33	-34	-34	-32	-32	-32	-28	-26	-25	
10	-19	-19	-18	-21	-16	-18	-23	-22	-14	-14	-12	-18	-18	-12	-10	-11	-9	-12	-15	-17	-24	-35	-35	-27	
11	-19	-18	-16	-15	-11	-12	-13	-14	-8	-6	-10	-14	-12	-12	-12	-12	-14	-17	-23	-25	-25	-23	-17	-15	
12	-12	-10	-9	-10	-11	-13	-13	-11	-11	-11	-9	-9	-8	-5	-4	-3	-3	-2	0	3	6	7	-4	-4	
13	-8	-4	-5	-2	-4	-6	-7	-10	-3	-3	-2	-2	-2	-9	-19	-19	-19	-9	-7	-7	-27	-48	-44	-37	-34
14	-38	-40	-36	-30	-27	-23	-23	-23	-23	-24	-24	-25	-27	-27	-30	-24	-22	-23	-24	-28	-26	-22	-23	-19	
15	-21	-24	-23	-15	-14	-16	-15	-13	-13	-11	-17	-20	-23	-21	-21	-24	-23	-23	-22	-23	-26	-26	-25	-20	
16	-18	-17	-18	-20	-19	-21	-20	-16	-16	-10	-9	-11	-13	-18	-20	-16	-17	-18	-18	-21	-21	-20	-19	-20	
17	-20	-18	-17	-11	-5	-3	-3	-2	6	3	-7	-11	-7	-7	-7	-10	-19	-19	-15	-19	-15	-24	-24	-24	
18	-21	-19	-18	-20	-18	-15	-15	-15	-11	-7	-9	-10	-7	-8	-8	-8	-19	-14	-18	-24	-24	-27	-25	-24	
19	-22	-21	-25	-20	-14	-13	-17	-15	-9	-7	-12	-13	-12	-12	-12	-15	-17	-17	-17	-15	-15	-15	-15	-13	
20	-11	-10	-12	-10	-8	-8	-7	-3	-2	0	-2	-2	-2	-2	-2	0	-2	-3	-6	-9	-10	-9	-8	-5	
21	-3	-4	-3	-5	-4	-5	-4	-6	-7	-7	-6	-7	-6	-7	-9	-10	-9	-8	-7	-6	-6	-2	0	-1	
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23	-13	-12	-10	-11	-10	-9	-10	-9	-9	-8	-6	-5	-5	-6	-5	-6	-6	-6	-4	-5	-5	-2	2	5	
24	7	9	8	9	8	4	4	2	-2	-5	-7	-9	-8	-4	-3	-3	-4	-4	-5	-8	-10	-5	-3	-2	
25	-3	-4	-3	0	3	4	4	2	1	4	2	5	9	15	11	11	6	3	1	-1	-2	-7	-8	-7	
26	-5	-1	1	1	-8	-10	-8	-14	-19	-13	-12	-13	-16	-14	-12	-8	-4	-6	-11	-15	-12	-7	-6	-6	
27	-3	2	8	12	11	3	0	-13	-26	-27	-26	-31	-38	-50	-47	-40	-38	-36	-35	-33	-33	-30	-26	-19	
28	-17	-14	-16	-19	-20	-22	-22	-22	-20	-23	-27	-26	-26	-22	-20	-19	-19	-14	-15	-17	-17	-18	-17	-16	
29	-11	-8	-4	-5	-6	-7	-9	-7	10	18	13	3	3	3	3	3	-21	-26	-36	-55	-96	-123	-138	-147	
30	-134	-134	-122	-111	-107	-106	-109	-108	-102	-94	-83	-82	-76	-71	-71	-67	-65	-66	-66	-63	-63	-64	-64	-61	

DECEMBER 1985

## Dst INDICES 1985 (continued)

	UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	U.T.	
DAY																											
1	-60	-56	-54	-52	-53	-52	-49	-48	-44	-41	-44	-47	-45	-40	-39	-36	-32	-43	-51	-50	-52	-48					
2	-50	-52	-54	-53	-51	-50	-54	-53	-44	-43	-47	-51	-47	-41	-38	-39	-40	-42	-38	-38	-37	-35					
3	-31	-33	-30	-31	-30	-32	-32	-32	-34	-36	-37	-39	-38	-39	-35	-33	-27	-29	-34	-33	-34	-36					
4	-34	-30	-32	-30	-28	-27	-23	-23	-21	-27	-25	-28	-24	-23	-26	-31	-44	-50	-42	-48	-50						
5	-46	-40	-39	-40	-41	-39	-39	-38	-35	-33	-33	-34	-35	-38	-40	-34	-32	-29	-28	-28	-29	-30					
6	-29	-27	-27	-25	-25	-25	-27	-27	-22	-23	-21	-20	-21	-23	-25	-24	-22	-20	-17	-16	-18	-17	-21	-19			
7	-15	-14	-11	-9	-13	-10	-4	-6	-8	-16	-17	-15	-13	-14	-12	-15	-15	-16	-20	-22	-20	-21	-20				
8	-19	-20	-19	-20	-19	-17	-17	-12	-12	-12	-12	-10	-7	-10	-12	-15	-14	-15	-15	-15	-12	-10	-8				
9	-7	-6	-9	-12	-13	-12	-14	-13	-12	-12	-13	-13	-13	-16	-16	-11	-4	-2	0	3	-6	-5	-8				
10	-14	-15	-7	-2	-2	0	3	4	4	-15	-22	-22	-28	-41	-54	-45	-38	-34	-35	-33	-28	-29	-30	-31			
11	-33	-35	-36	-35	-34	-34	-28	-27	-26	-29	-31	-31	-29	-27	-26	-26	-29	-27	-27	-29	-27	-28	-29				
12	-28	-26	-25	-27	-24	-19	-17	-17	-17	-18	-18	-20	-19	-18	-17	-18	-16	-14	-14	-15	-20	-19	-4	-3	-8		
13	-2	-2	-12	-10	-15	-10	-6	-9	-9	-2	-2	-45	-66	-69	-79	-82	-78	-67	-57	-48	-44	-40	-41	-44			
14	-44	-46	-44	-43	-44	-43	-44	-43	-41	-43	-44	-41	-42	-44	-44	-41	-41	-37	-31	-27	-22	-15	-24				
15	-24	-29	-34	-37	-39	-38	-35	-33	-31	-30	-30	-32	-34	-34	-33	-32	-32	-28	-23	-25	-29	-30	-30				
16	-25	-29	-29	-28	-27	-23	-16	-14	-12	-14	-17	-23	-23	-21	-18	-16	-10	-7	-11	-13	-15	-20	-28				
17	-33	-31	-24	-17	-12	-10	-12	-14	-13	-10	-9	-11	-15	-24	-24	-26	-25	-23	-23	-23	-22	-24	-27				
18	-28	-26	-24	-22	-22	-15	-4	-15	-24	-29	-24	-22	-22	-18	-8	-4	-3	-13	-15	-17	-18	-19	-19				
19	-17	-19	-25	-28	-38	-46	-53	-60	-70	-78	-87	-79	-58	-51	-52	-55	-58	-54	-47	-53	-40	-41	-38	-32			
20	-35	-36	-33	-28	-38	-39	-44	-44	-37	-39	-44	-47	-52	-51	-49	-47	-45	-40	-35	-33	-30	-28	-29				
21	-30	-31	-31	-35	-36	-32	-30	-29	-32	-32	-31	-29	-29	-30	-30	-31	-29	-29	-29	-30	-27	-24	-22				
22	-21	-15	-13	-9	-14	-13	-15	-15	-16	-11	-12	-14	-15	-13	-11	-12	-14	-15	-13	-11	-13	-10	-19				
23	-17	-15	-14	-13	-15	-15	-16	-16	-11	-11	-12	-14	-15	-13	-11	-12	-14	-15	-13	-11	-13	-10	-19				
24	-22	-27	-27	-23	-21	-24	-22	-28	-27	-24	-25	-27	-28	-29	-28	-26	-26	-24	-23	-26	-24	-22	-20	-19			
25	-18	-16	-13	-13	-16	-17	-20	-21	-20	-17	-15	-15	-16	-15	-14	-11	-6	-5	-10	-12	-8	-12	-3				
26	-5	-16	-17	-24	-28	-30	-31	-28	-27	-28	-26	-24	-26	-31	-29	-26	-23	-24	-22	-19	-13	-16					
27	-15	-14	-12	-15	-15	-22	-23	-21	-20	-22	-19	-17	-18	-19	-16	-9	-4	-1	4	-9	-23	-21	-20				
28	-6	-9	-10	-20	-25	-23	-20	-27	-36	-50	-59	-53	-46	-45	-38	-42	-38	-42	-46	-43	-42	-43	-41				
29	-41	-40	-36	-36	-36	-38	-41	-44	-45	-42	-39	-39	-39	-37	-36	-34	-32	-28	-24	-25	-18	-14	-11				
30	-8	-20	-30	-51	-52	-54	-51	-53	-49	-50	-40	-37	-36	-46	-60	-63	-61	-56	-53	-55	-55	-51	-49				
31	-45	-40	-34	-33	-33	-34	-39	-41	-36	-36	-32	-34	-40	-40	-45	-46	-40	-32	-30	-28	-29	-34	-33				

DAILY MEAN VALUES OF Dst 1985

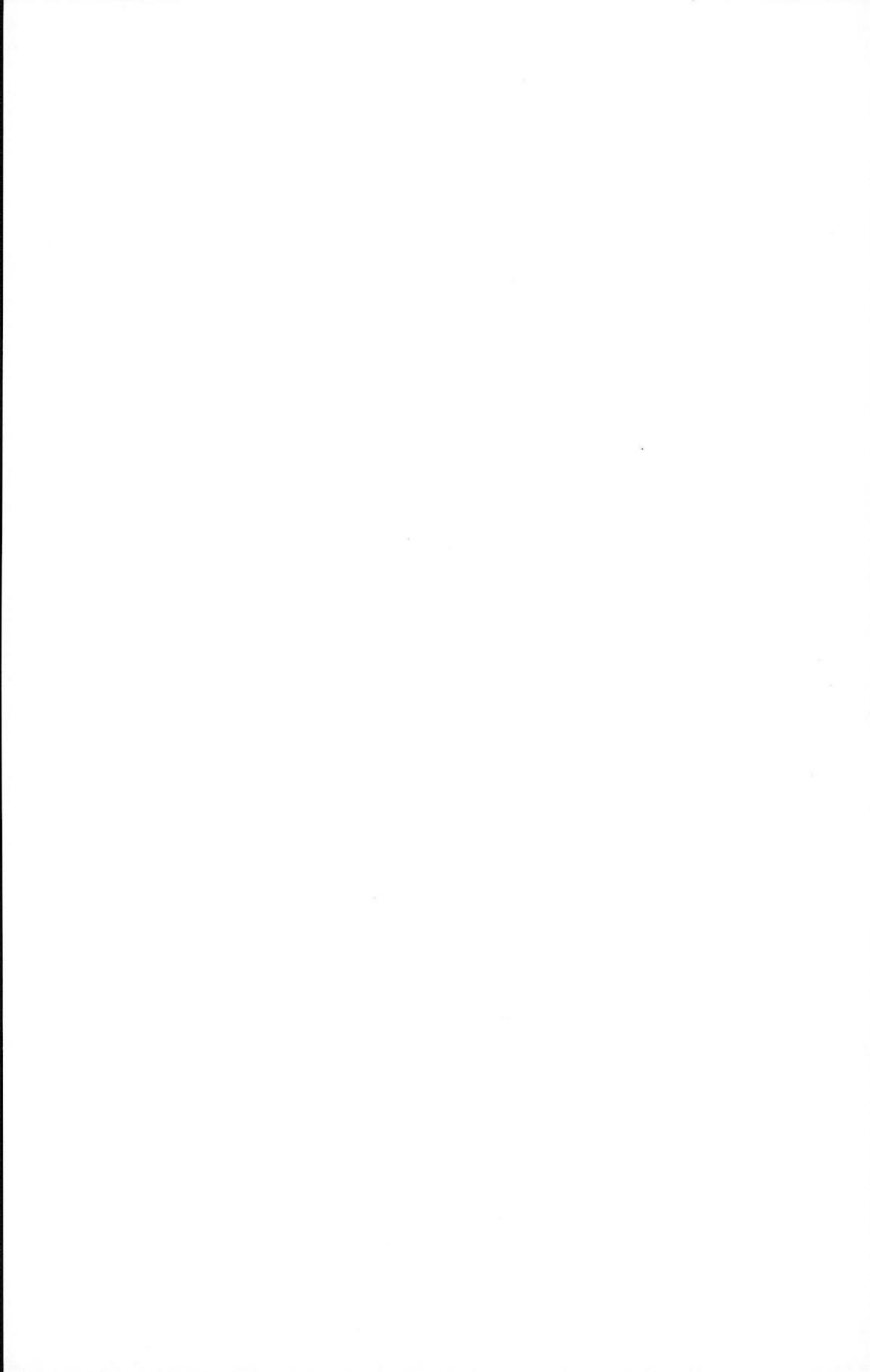
DAILY MEANS OF EQUATORIAL DST FOR 1985

DAY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL MEAN
1	-25	-22	-30	-8	-35	-9	-10	-22	-20	-9	-15	-46	
2	-28	-20	-27	-17	-49	-11	-5	-22	-14	-7	-26	-46	
3	-19	-16	-26	-12	-17	-1	6	-13	-8	-16	-37	-34	
4	-17	-11	-13	-16	-21	4	-8	-13	-4	-24	-32	-33	
5	-10	-15	-15	-23	-11	-8	3	-19	-8	-4	-57	-30	-35
6	-15	-39	-25	-5	-14	-2	-1	-3	-11	-51	-29	-23	
7	-6	-29	-26	-7	-11	-18	-21	5	-11	-41	-23	-15	
8	-2	-28	-23	-6	-6	-25	-14	-3	-8	-37	-7	-14	
9	-35	-33	-18	-28	-10	-12	-17	-1	-8	-26	-8	-8	
10	-26	-27	-1	-21	-1	-48	-6	-5	-12	-22	-18	-21	
11	-19	-23	-12	-19	-3	-20	6	-3	-12	-22	-15	-29	
12	-20	-21	-11	-8	-13	-21	-40	2	-5	-21	-6	-18	
13	-19	-14	-6	1	-21	-12	-24	-38	-5	-18	-14	-38	
14	-18	-13	4	-10	-15	-6	-34	-21	-18	-15	-26	-39	
15	-15	-15	-20	-13	-2	-15	-7	-21	-20	-15	-25	-31	
16	-17	-10	-7	6	-15	-3	-13	-17	-13	-26	-17	-19	
17	-14	-23	-2	-2	0	-5	1	-10	-16	-18	-24	-12	
18	-7	-13	-4	4	-13	5	-10	0	-12	-31	-16	-18	
19	-2	-6	-2	-18	-26	7	-8	-13	-26	-21	-15	-49	
20	-5	-28	-2	-54	-11	7	-5	-13	-26	-20	-6	-39	
21	-8	-13	5	-110	1	2	-8	-8	-26	-10	-5	-30	
22	-3	-15	5	-45	-1	4	9	-16	-24	-24	-9	-21	
23	-30	-10	-3	-32	6	1	-3	-12	-20	-7	-14		
24	-20	-18	1	-34	16	1	-5	-11	-14	-17	-1	-25	
25	-6	-16	2	-29	12	2	-6	-22	-20	-18	2	-14	
26	2	-10	-7	-23	2	-9	-4	-13	-18	-12	-10	-23	
27	-10	-1	-10	-40	2	-1	-14	-9	-18	-9	-21	-16	
28	-66	-55	-20	-67	8	-17	-7	-7	-14	-6	-19	-36	
29	-58	0	-3	-43	3	-8	-6	-8	-9	-18	-26	-34	
30	-33	0	3	-31	10	-2	-5	-6	-9	-7	-87	-47	
31	-21	0	-5	0	12	0	-30	-36	0	-5	0	-36	
MEAN	-18	-20	-10	-23	-8	-6	-11	-12	-14	-21	-19	-28	-16

**MONTHLY AND YEARLY Dst 1957 - 1985**

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1957	- 19.8	- 24.1	- 41.3	- 27.8	- 5.2	- 10.0	- 11.7	- 3.5	- 64.0	- 14.4	- 20.7	- 18.5	- 21.7
1958	- 18.3	- 28.1	- 32.3	- 19.6	- 10.8	- 22.8	- 27.5	- 13.8	- 24.9	- 17.7	- 1.1	- 18.9	- 19.6
1959	- 10.5	- 31.5	- 25.1	- 22.6	- 14.3	- 6.5	- 35.6	- 32.0	- 39.2	- 25.3	- 35.1	- 30.1	- 25.7
1960	- 17.7	- 11.8	- 11.5	- 58.3	- 28.6	- 18.2	- 20.7	- 21.9	- 30.8	- 53.9	- 54.5	- 42.3	- 30.9
1961	- 17.2	- 21.5	- 13.6	- 11.8	- 7.0	- 6.5	- 28.3	- 7.2	- 8.8	- 28.3	- 17.5	- 10.9	- 14.9
1962	- 3.1	- 5.4	0.5	- 7.6	2.1	0.2	1.1	- 7.4	- 19.6	- 17.9	- 11.6	- 12.3	- 6.8
1963	- 6.1	- 2.2	1.8	2.0	1.1	0.0	1.9	- 4.2	- 29.5	- 23.3	- 15.4	- 7.9	- 6.8
1964	- 8.8	- 9.2	- 9.8	- 10.1	- 4.0	- 0.2	1.8	2.3	- 0.3	- 6.2	- 0.2	6.1	- 3.2
1965	5.7	- 1.0	0.8	- 3.4	5.7	0.3	1.4	2.5	- 2.2	5.3	4.6	2.4	1.8
1966	4.2	0.1	- 8.2	- 1.6	- 3.4	0.2	- 3.2	- 2.1	- 25.2	- 10.7	- 8.1	- 13.9	- 6.0
1967	- 18.6	- 19.3	- 2.7	- 6.1	- 32.6	- 25.7	- 9.7	- 5.0	- 20.6	- 14.1	- 11.8	- 18.1	- 15.4
1968	- 20.4	- 26.8	- 20.8	- 13.9	- 12.6	- 13.0	- 5.4	- 6.2	- 11.8	- 16.6	- 32.5	- 13.7	- 16.1
1969	- 7.2	- 21.6	- 29.1	- 19.8	- 16.3	- 2.5	3.6	- 0.3	- 8.3	- 10.8	- 4.1	2.3	- 9.5
1970	- 3.0	0.0	- 28.5	- 25.8	- 10.2	- 12.1	- 20.4	- 21.4	- 13.2	- 20.1	- 21.5	- 17.3	- 16.1
1971	- 15.0	- 17.9	- 15.0	- 26.6	- 17.2	- 8.7	- 3.5	- 9.4	- 16.8	- 15.6	- 14.9	- 24.2	- 15.4
1972	- 19.8	- 17.9	- 16.9	- 15.1	- 8.2	- 16.4	- 10.1	- 36.4	- 22.7	- 22.2	- 24.2	- 9.9	- 18.3
1973	- 12.8	- 20.4	- 23.9	- 46.3	- 17.0	- 10.1	- 1.3	- 2.9	- 10.8	- 13.7	- 7.3	- 0.2	- 13.9
1974	- 4.2	- 5.6	- 16.3	- 13.7	- 8.4	- 5.7	- 26.6	- 13.3	- 20.8	- 23.0	- 17.1	- 12.0	- 13.9
1975	- 10.4	- 13.4	- 18.2	- 10.4	- 6.3	0.5	- 7.0	- 9.0	- 4.2	- 9.9	- 21.4	- 9.5	- 9.9
1976	- 12.3	- 11.3	- 24.1	- 24.6	- 13.2	- 4.4	- 5.7	- 7.5	- 12.2	- 16.2	- 14.9	- 16.1	- 13.5
1977	- 13.6	- 14.6	- 10.9	- 23.3	- 13.7	- 3.6	- 13.7	- 19.3	- 23.5	- 25.4	- 19.4	- 22.4	- 17.0
1978	- 19.4	- 26.1	- 28.1	- 30.8	- 34.5	- 14.9	- 9.2	- 12.1	- 27.1	- 22.7	- 27.4	- 13.9	- 22.2
1979	- 28.8	- 26.2	- 30.4	- 33.4	- 12.7	- 4.3	1.8	- 10.8	- 19.3	- 18.9	- 11.6	- 2.5	- 16.4
1980	- 13.1	- 18.5	- 3.1	- 9.4	- 6.6	- 11.7	- 6.6	- 4.3	- 4.8	- 22.2	- 18.1	- 19.9	- 11.5
1981	- 8.5	- 21.6	- 35.0	- 43.6	- 29.9	- 2.9	- 21.6	- 26.6	- 19.9	- 42.5	- 27.5	- 12.5	- 24.3
1982	- 3.9	- 50.0	- 18.8	- 25.0	- 2.7	- 12.5	- 31.0	- 23.4	- 47.8	- 23.9	- 26.1	- 20.1	- 23.8
1983	- 21.2	- 37.9	- 35.5	- 23.2	- 18.4	- 10.1	- 1.8	- 9.9	- 5.0	- 15.5	- 17.6	- 10.5	- 17.2
1984	- 7.5	- 18.5	- 26.1	- 24.8	- 17.5	- 10.8	- 9.5	- 12.3	- 22.6	- 22.2	- 20.5	- 16.4	- 17.4
1985	- 18.5	- 19.6	- 9.6	- 22.8	- 7.6	- 6.2	- 11.1	- 12.0	- 14.2	- 21.3	- 18.5	- 28.1	- 15.8

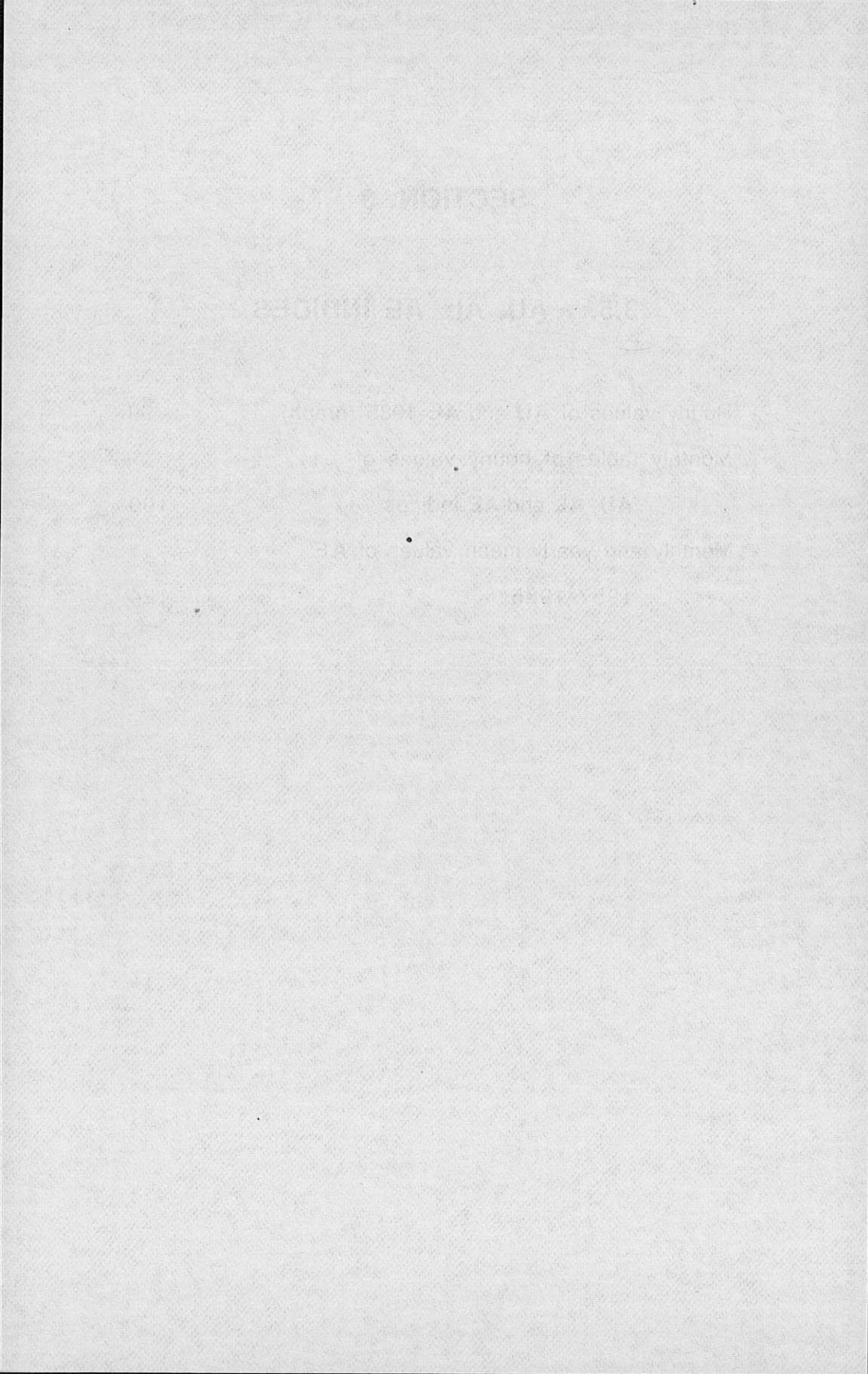
Unit : nT



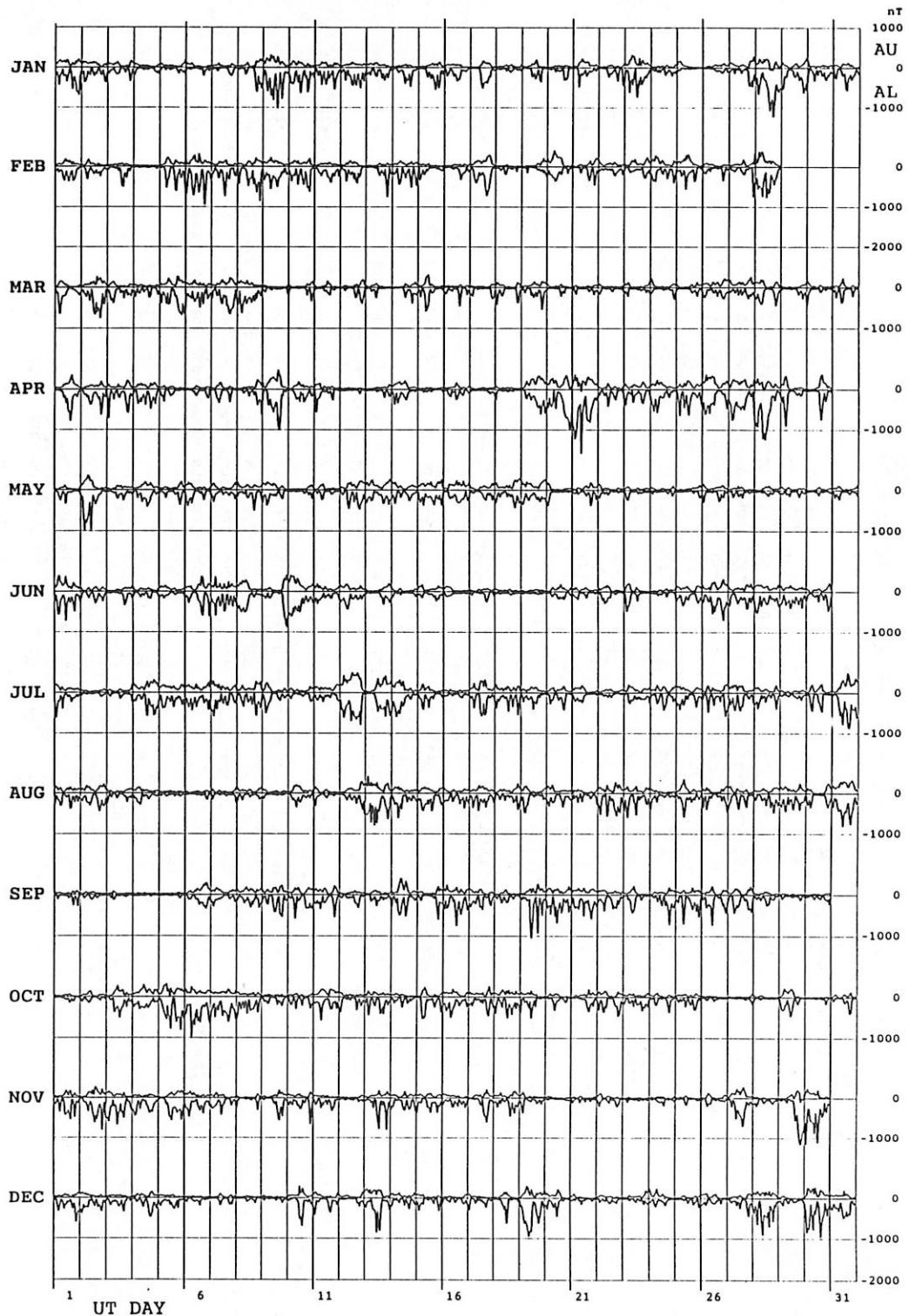
## **SECTION 3**

### **3.5. AU, AL, AE INDICES**

- Hourly values of <b>AU</b> and <b>AL</b> 1985 (graph)	99
- Monthly tables of hourly values of <b>AU</b> , <b>AL</b> and <b>AE</b> indices	100
- Monthly and yearly mean values of <b>AE</b> 1957-1985	124



# HOURLY VALUES OF AU AND AL 1985



AE INDICES 1985

DAY\UT	HOURLY VALUES (nT) OF AU, AL AND AE INDICES												JANUARY 1985												
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1 AU	95	145	166	196	133	149	145	174	119	191	172	64	35	45	129	79	66	166	102	200	201	138	110	130	
AL	-204	-123	-430	-185	-148	-55	-212	-210	-178	-345	-224	-92	-32	-126	-535	-284	-224	-383	-595	-615	-686	-238	-100	-269	
AE	309	218	366	598	382	283	206	358	384	298	537	397	156	68	171	665	384	292	549	698	816	888	377	211	400
2	97	154	120	147	104	99	93	131	107	109	148	107	134	105	61	84	32	19	29	67	81	48	106	92	
	-168	-100	-357	-347	-233	-100	-150	-185	-151	-181	-207	-116	-170	-101	-51	-56	-163	-187	-71	-140	-347	-360	-155	-164	
	266	255	479	496	339	200	244	317	134	146	312	316	250	276	143	99	89	197	207	101	208	429	409	262	257
3	40	79	112	82	69	53	100	100	106	150	77	36	28	23	25	24	20	57	17	21	124	173	122	112	77
	-143	-141	-68	-83	-60	-11	-74	-126	-165	-149	-38	-41	-18	-25	-72	-134	-23	-32	-80	-336	-212	-52	-152	-100	
	284	221	181	166	131	65	175	226	273	307	227	75	70	42	51	97	155	81	51	102	460	385	174	265	
4	84	89	84	63	51	33	34	44	39	49	30	43	37	26	29	20	19	22	17	3	18	42	65	69	42
	-189	-105	-30	-41	-18	-7	-15	-32	-40	-58	-28	-50	-48	-28	-16	-22	-31	-23	-88	-143	-87	-156	-58	-156	
	275	196	116	105	70	40	49	77	79	107	62	72	89	75	58	36	42	53	43	92	128	186	153	225	
5	83	88	73	49	31	57	37	40	34	50	32	51	35	22	23	19	12	27	9	29	81	83	120	185	53
	-65	-40	-4	-6	-18	-73	-21	-20	-22	-57	-40	-44	-31	-14	-24	-24	-96	-151	-61	-66	-93	-130	-148	-56	
	149	129	77	56	51	132	59	61	56	108	73	95	67	36	43	44	109	179	71	95	175	214	215	333	
6	125	84	83	73	79	103	76	25	28	22	26	23	25	19	11	4	2	17	28	32	32	45	32	42	
	-14	-34	-36	-22	-51	-20	-18	-25	-15	-15	-21	-15	-31	-24	-45	-22	-104	-51	-43	-35	-88	-112	-18	-41	
	140	118	120	96	132	124	95	61	45	38	46	39	57	74	37	57	207	107	70	72	69	122	58	50	
7	32	48	43	52	45	76	109	49	46	45	32	31	24	28	29	21	45	94	68	62	34	37	38	47	
	-26	-47	-27	-24	-45	-87	-36	-11	-10	-9	-8	-7	-11	-10	-9	-7	-52	-158	-187	-198	-116	-50	-25	-50	
	58	95	64	81	71	165	146	61	57	56	41	39	32	41	50	138	180	233	293	185	113	61	53	98	
8	37	38	41	44	40	43	51	58	98	125	49	15	13	19	33	35	34	163	141	134	178	216	168	213	
	-36	-42	-28	-24	-33	-25	-171	-130	-130	-130	-130	-130	-15	-19	-19	-19	-20	-169	-559	-598	-217	-425	-518	-410	-161
	75	81	71	69	59	77	230	229	170	170	58	22	19	30	53	56	204	723	740	352	605	572	687	624	
9	145	98	173	232	223	170	170	312	224	289	193	124	145	277	169	78	124	152	101	89	39	51	58	39	
	-132	-67	-125	-418	-590	-275	-275	-692	-517	-799	-338	-160	-676	-1049	-459	-142	-776	-321	-147	-109	-137	-126	-130	-364	
	278	166	299	652	813	447	429	1004	741	1089	533	820	820	1294	640	221	434	928	423	237	149	189	185	170	518
10	84	68	109	168	157	127	58	85	170	113	112	124	85	68	41	38	50	102	47	57	37	50	48	85	
	-212	-397	-368	-418	-339	-139	-91	-266	-365	-180	-624	-480	-220	-97	-80	-259	-204	-601	-462	-97	-215	-145	-128	-247	
	298	467	476	587	498	267	150	352	535	294	737	605	305	166	121	298	254	704	510	156	253	183	179	296	
11	61	45	53	57	54	91	140	118	102	125	129	55	28	51	71	46	40	126	66	118	84	59	37	77	
	-77	-103	-215	-63	-123	-233	-570	-345	-198	-399	-549	-322	-123	-320	-263	-198	-120	-424	-664	-336	-319	-205	-130	-275	
12	50	42	57	56	80	64	85	54	94	91	135	92	75	89	75	65	86	70	57	69	104	73	67	77	
	-126	-92	-38	-105	-322	-109	-74	-196	-176	-268	-425	-144	-171	-368	-448	-187	-160	-388	-511	-233	-130	-336	-167	-105	
	177	134	96	-162	-404	-175	160	251	270	360	561	555	264	445	538	262	225	476	583	292	200	441	241	310	
13	72	75	78	118	89	94	69	114	104	127	91	59	58	55	68	60	77	45	36	57	24	21	29	69	
	-184	-139	-110	-192	-84	-1	-35	-221	-56	-84	-37	-149	-372	-149	-322	-237	-183	-315	-283	-174	-315	-68	64	112	
14	31	28	21	33	39	44	44	33	36	62	65	63	33	57	59	41	19	16	22	29	19	23	39		
	-39	-23	-14	-24	-60	-134	-100	-69	-74	-67	-179	-402	-226	-327	-303	-161	-465	-229	-70	-63	-74	-26	-21	-134	
	71	51	36	58	100	179	145	102	111	130	236	467	309	361	361	221	519	272	90	80	97	88	46	174	
15	27	23	25	35	27	29	33	43	45	66	54	78	102	110	57	100	87	50	125	141	84	35	47		
	-26	-18	-13	-25	-31	-19	-19	-145	-242	-111	-133	-278	-171	-198	-315	-543	-387	-178	-502	-393	-105	-71	-173	-174	
	54	42	39	62	59	49	52	188	288	177	188	356	273	308	373	645	475	228	628	534	190	106	221	115	

**AE INDICES 1985 (continued)**

16	39	55	78	89	74	60	89	76	82	83	44	86	81	48	89	33	29	12	20	18	15	21	20	
-44	-50	-213	-165	-79	-18	-45	-113	-218	-152	-179	-342	-275	-299	-183	-54	-78	-69	-72	-96	-56	-54	-17	-26	
84	107	293	256	154	79	134	189	301	235	224	429	356	347	273	88	108	82	94	116	75	71	39	48	
17	20	18	20	19	21	21	22	30	29	70	167	165	137	104	132	96	127	80	47	17	25	25	27	
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37	28	33	30	32	31	48	48	208	500	676	535	509	443	519	411	340	305	108	47	74	100	80	215	
18	29	26	36	33	34	31	37	44	62	80	42	48	46	78	84	24	44	27	18	23	31	19	47	
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75	40	73	74	62	51	57	60	75	160	66	85	123	194	156	91	43	48	67	90	59	59	164	87	
19	51	36	27	27	31	36	46	51	66	106	86	95	163	207	87	22	41	33	22	25	19	14	56	
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96	41	30	42	54	60	63	129	328	286	224	438	178	76	305	384	102	37	33	36	28	23	144	144	
20	17	15	18	27	33	43	54	40	46	64	42	44	37	41	43	67	46	59	31	43	28	23	38	
-12	-21	-39	-37	-26	-10	-23	-104	-31	-70	-82	-81	-73	-29	-33	-306	-251	-303	-239	-28	-12	-9	-6	-77	
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21	35	43	39	40	61	134	149	177	233	170	159	122	153	147	143	54	53	71	65	52	55	101	44	
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22	19	24	21	26	34	32	27	30	56	65	51	83	54	41	32	24	33	62	28	26	32	40	61	
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25	28	25	36	42	43	43	70	126	290	185	241	174	131	68	68	197	396	103	52	42	70	500	148	
23	115	63	81	101	233	201	325	296	298	161	117	75	81	240	69	171	206	123	93	119	132	93	66	
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27	121	150	130	110	88	76	57	63	38	38	65	70	82	76	59	55	29	31	94	197	179	191	104	
-100	-75	-75	-30	-2	-61	-143	-7	-29	-50	-17	-35	-131	-130	-62	-42	-46	-83	-17	-93	-438	-297	-155	-125	
222	226	161	114	149	220	64	93	89	55	101	201	165	120	106	83	46	125	532	650	477	655	355	230	
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-394	-244	-646	-500	-320	-133	-106	-250	-298	-313	-426	-510	-910	-1074	-804	-768	-1221	-888	-450	-396	-569	-601	-98	-515	
494	362	771	736	539	268	244	490	468	560	649	726	1025	1037	781	718	1190	983	625	511	651	589	557	647	
29	158	120	90	64	66	47	20	14	48	51	72	105	127	96	39	50	44	67	111	106	105	230		
-528	-474	-191	-240	-213	-47	-41	-28	-45	-69	-176	-223	-194	-88	-154	-305	-230	-229	-358	-615	-533	-336	-535		
686	594	282	304	279	95	61	43	48	93	121	249	334	322	185	194	357	275	297	470	722	686	617	338	
30	197	62	28	59	48	70	49	34	52	59	43	42	61	69	92	35	73	49	44	42	71	83	62	
-150	-23	-18	-39	-68	-17	-320	-92	-37	-178	-71	-39	-75	-102	-159	-102	-275	-302	-162	-216	-83	-124	-131		
348	85	47	99	117	228	369	128	89	239	115	82	137	271	251	138	350	352	208	252	197	167	191		
31	71	76	84	73	58	38	41	45	120	102	95	94	99	150	98	45	92	56	31	16	15	21		
-51	-224	-256	-60	-16	-46	-46	-16	-69	-193	-183	-135	-496	-560	-272	-225	-162	-302	-252	-168	-38	-42	-112	-154	
122	301	341	134	69	55	88	115	314	287	232	591	659	422	323	208	395	309	199	185	54	64	139	184	

**AE INDICES 1985 (continued)**

DAY\UT	0	HOURLY VALUES (nT) OF AU, AL AND AE INDICES												FEBRUARY 1985												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
1	AU	33	42	65	71	74	46	72	83	152	190	122	150	103	155	100	54	124	51	58	60	57	47	43	45	83
AL	-103	-84	-61	-16	-105	-86	-137	-279	-345	-178	-120	-255	-359	-244	-139	-118	-348	-321	-101	-33	-66	-21	-5	-161	-161	
AE	137	127	217	179	133	209	362	498	243	369	407	463	410	241	173	473	373	270	162	91	114	65	51	246	246	
2	AU	41	32	38	38	84	140	178	99	64	85	74	63	45	45	45	40	29	24	31	30	41	58	58	58	
AL	-9	-5	-15	-59	-228	-302	-123	-72	-26	-93	-122	-182	-141	-86	-176	-155	-138	-234	-123	-93	-63	-30	-64	-79	-109	
AE	51	40	54	98	313	443	302	171	90	179	197	246	187	134	199	235	184	275	153	122	87	62	96	121	168	
3	AU	32	36	43	33	40	42	51	54	46	37	67	54	56	83	49	44	49	57	50	33	27	29	25	23	44
AL	-64	-61	-15	-9	-25	-16	-32	-39	-31	-108	-36	-465	-490	-190	-168	-276	-69	-45	-117	-13	-10	-14	-103	-103		
AE	98	98	59	43	66	59	84	97	87	69	175	91	187	550	540	236	180	334	120	79	144	42	36	38	148	
4	AU	26	28	28	28	23	23	26	21	22	20	20	24	23	16	19	23	25	21	18	22	23	17	23	23	23
AL	-12	-14	-8	-11	-17	-27	-12	-19	-6	-16	-17	-17	-20	-15	-16	-12	-8	-6	-28	-24	-36	-79	34	39	39	
AE	40	43	36	40	46	51	36	47	28	29	33	38	41	46	36	35	36	33	28	24	36	79	28	34	39	
5	AU	35	39	38	52	63	92	192	230	204	156	82	70	45	60	157	139	95	63	103	91	88	52	106	98	
AL	-10	-36	-8	-13	-43	-131	-508	-315	-289	-99	-12	-22	-26	-132	-556	-596	-206	-170	-72	-274	-252	-116	-188	-188	-188	
AE	46	76	47	67	106	224	700	546	494	256	93	72	193	714	736	265	136	378	343	205	185	595	287	287		
6	AU	173	55	93	50	152	163	176	255	277	129	119	105	321	188	87	69	88	147	137	109	118	90	60	136	
AL	-683	-468	-114	-52	-102	-243	-551	-704	-488	-184	-188	-451	-527	-474	-127	-81	-225	-931	-533	-171	-114	-134	-173	-301	-338	
AE	858	525	209	104	255	407	727	961	767	313	308	556	663	216	152	314	1079	670	280	207	253	264	367	475		
7	AU	84	65	51	42	53	46	83	124	97	107	79	106	139	158	59	53	44	37	42	30	31	79	65	72	
AL	-186	-198	-96	-22	-82	-108	-274	-269	-90	-101	-145	-406	-716	-215	-148	-285	-305	-74	-41	-71	-35	-208	-226	-186		
AE	271	234	149	65	136	359	394	188	208	225	514	857	474	208	339	350	111	84	102	67	287	302	126	259		
8	AU	50	90	69	36	39	43	52	91	137	123	120	53	51	105	93	217	168	156	134	145	132	72	96		
AL	-44	-410	-211	-44	-88	-104	-276	-475	-294	-284	-284	-428	-428	-498	-627	-377	-393	-836	-165	-268	-268	-268	-268			
AE	95	500	280	115	101	79	78	115	156	376	611	419	407	339	161	534	389	715	795	534	528	982	154	365		
9	AU	83	116	101	81	111	152	139	233	140	118	103	164	121	140	79	98	86	67	67	35	38	56	63	101	
AL	-128	-219	-241	-148	-230	-184	-238	-539	-331	-222	-262	-271	-388	-494	-281	-263	-223	-123	-167	-73	-38	-110	-101	-237		
AE	213	436	344	230	341	337	379	773	472	341	366	437	511	635	361	309	190	235	109	76	228	265	194	339		
10	AU	49	89	111	80	136	147	116	92	146	71	67	56	92	91	116	90	86	146	209	62	72	33	97		
AL	-94	-226	-352	-207	-184	-238	-61	-168	-433	-236	-77	-55	-260	-436	-419	-126	-227	-512	-492	-612	-93	-52	-23	-234		
AE	144	315	463	287	321	386	178	261	579	308	146	113	354	528	535	217	313	646	638	622	157	125	57	332		
11	AU	43	53	49	53	88	59	67	78	79	75	58	99	91	69	54	71	52	51	44	55	28	60	60		
AL	-45	-30	-33	-89	-155	-163	-227	-139	-99	-96	-89	-156	-252	-253	-342	-180	-171	-240	-127	-92	-534	-124	-157			
AE	76	61	77	143	205	230	316	199	166	174	168	234	311	353	434	449	232	225	312	180	143	104	153	218		
12	AU	41	50	33	37	49	99	55	105	141	135	103	76	131	111	91	43	35	18	23	23	16	22	65		
AL	-9	-23	-66	-110	-62	-351	-77	-170	-133	-144	-202	-133	-301	-153	-346	-403	-267	-192	-177	-30	-3	-3	-144			
AE	52	74	100	148	112	451	248	182	311	337	237	220	433	265	438	495	202	303	210	71	53	27	23	209		
13	AU	24	26	27	28	24	23	23	29	27	41	56	91	54	39	50	55	34	56	96	51	43	51	43		
AL	-8	-13	-11	-7	-6	-11	-26	-15	-46	-21	-162	-162	-214	-124	-82	-165	-211	-66	-72	-43	-208	-171	-165			
AE	34	40	40	36	31	36	50	45	74	64	219	307	179	122	216	267	101	429	840	260	67	237	165			
14	AU	54	66	78	69	97	115	148	113	94	96	62	54	46	92	63	99	131	72	50	88	109	97	85		
AL	-119	-200	-167	-114	-36	-436	-596	-398	-194	-11	-126	-198	-276	-138	-89	-54	-274	-504	-132	-30	-122	-162	-144			
AE	175	267	246	183	99	348	551	546	307	105	223	661	331	185	182	118	374	635	204	81	212	467	287			
15	AU	52	81	42	54	83	53	43	48	50	84	31	35	23	29	32	27	15	26	19	33	40	80			
AL	-28	-326	-248	-113	-78	-198	-146	-59	-109	-52	-22	-30	-24	-20	-18	-21	-15	-65	-65	-97	-83	-18	-80			
AE	81	407	291	168	163	253	190	108	160	138	54	66	47	49	46	47	54	78	41	92	81	123	103			

**AE INDICES 1985 (continued)**

16	31	35	32	31	32	24	32	46	53	59	47	47	46	55	61	38	36	35	68	58	41	27	38	77	44
	-16	-14	-8	-11	-9	-31	-40	-58	-28	-25	-22	-22	-52	-67	-193	-146	-152	-121	-9	-33	-112	-116	-74		
	49	53	47	40	43	34	65	86	113	88	73	70	99	124	232	229	181	220	179	52	61	152	194	119	
17	80	41	63	75	131	108	149	159	141	146	91	108	170	138	141	222	260	290	285	223	86	67	40	29	135
	-127	-21	-57	-155	-318	-395	-364	-230	-141	-205	-195	-133	-188	-227	-546	-709	-643	-533	-351	-187	-43	-28	-21	-28	-240
	129	62	121	230	450	503	513	390	282	352	243	360	367	687	931	903	825	637	411	130	97	62	58	376	
18	31	29	31	33	30	24	27	28	34	40	59	23	21	20	26	19	17	14	11	18	20	24	20	17	26
	-26	-18	-24	-36	-87	-81	-15	-6	-168	-180	-48	-17	-18	-33	-39	-54	-20	-15	-29	-111	-20	-10	-5	-9	-45
	58	48	57	70	118	107	43	34	203	221	108	40	40	54	67	74	38	30	41	129	41	35	27	28	71
19	22	16	24	26	34	35	32	24	30	33	25	32	30	39	85	96	59	52	133	132	218	147	130	185	68
	-15	-19	-20	-22	-34	-143	-1	0	-3	-5	-8	-15	-16	-64	-66	-55	-93	-69	-149	-66	-18	-238	-18	-58	
	38	36	45	49	71	179	34	24	33	38	33	47	46	54	150	163	115	146	231	202	368	234	244	127	
20	214	132	106	165	193	297	416	357	291	235	246	239	225	217	84	27	21	23	33	43	20	21	41	52	154
	-162	-90	-188	-182	-206	-260	-266	-325	-221	-221	-110	-110	-179	-179	-21	-19	-15	-15	-35	-58	-18	-39	-18	-137	
	378	224	234	347	401	559	683	704	617	457	403	350	407	398	127	49	40	39	69	199	79	40	81	71	292
21	33	21	16	23	33	50	53	65	49	34	38	38	45	53	70	110	157	59	98	136	208	216	187	77	
	-11	-32	-9	-7	-4	-8	-22	-143	-68	-22	-11	-26	-26	-52	-201	-331	-238	-88	-15	-115	-447	-250	-88	-113	
	45	32	26	38	56	76	210	119	56	53	50	50	107	272	442	395	148	69	214	584	460	306	302	174	
22	174	102	79	61	35	48	76	70	88	106	89	71	65	130	103	95	40	35	57	44	48	62	57	74	
	-110	-80	-44	-51	-78	-51	-36	-55	-64	-59	-52	-86	-47	-63	-198	-213	-150	-118	-88	-62	-47	-57	-106	-67	
	285	184	124	113	113	87	84	132	134	147	158	175	119	129	330	318	246	159	124	119	91	106	250	164	
23	66	41	40	46	41	76	155	164	129	195	136	76	77	85	82	62	47	108	177	233	226	123	107	106	
	-25	-3	-3	-27	-72	-134	-98	-113	-92	-79	-64	-49	-68	-58	-73	-34	-21	-164	-268	-255	-139	-136	-167		
	92	44	37	74	114	211	253	278	221	275	200	125	126	137	157	117	84	212	377	432	373	362	189	276	
24	134	201	189	152	289	242	250	169	98	105	161	91	64	51	58	62	54	45	31	85	162	137	97	129	
	-162	-237	-342	-299	-356	-127	-70	-57	-51	-31	-141	-177	-58	-47	-10	-80	-281	-187	-60	-44	-143	-388	-270	-65	-156
	297	440	531	451	646	370	321	227	149	137	323	329	151	112	158	340	94	106	76	239	551	408	164	286	
25	103	143	148	98	153	205	165	295	199	322	264	184	145	109	64	77	57	50	48	35	35	29	42	130	
	-93	-84	-99	-65	-226	-183	-78	-129	-543	-298	-177	-149	-119	-130	-70	-70	-302	-302	-38	-8	-29	-37	-44	-139	
	198	228	248	164	380	337	284	296	840	498	501	415	304	276	180	136	434	359	89	57	37	64	67	87	
26	42	80	90	114	92	53	79	59	77	53	39	30	28	25	25	23	31	28	57	65	51	49	55	54	
	-120	-141	-169	-93	-55	-30	-103	-32	-24	-22	-15	-11	-14	-36	-29	-17	-19	-62	-333	-162	-51	-30	-73	-51	
	163	222	259	208	148	84	182	92	102	75	55	41	43	62	55	40	51	91	390	227	103	79	131	108	
27	55	40	39	55	62	69	67	79	80	49	68	74	102	194	133	49	37	48	71	92	115	79	341	85	
	-31	-18	-66	-91	-117	-74	-22	-9	-7	-20	-103	-172	-177	-77	-37	-55	-40	-12	-20	-29	-728	-479	-106		
	87	59	106	126	154	142	102	91	56	88	176	206	367	311	126	75	89	84	113	145	808	821	192		
28	225	113	203	401	265	396	383	277	158	117	174	112	166	91	170	142	131	78	66	68	37	38	36	167	
	-327	-261	-541	-451	-520	-718	-371	-205	-130	-507	-603	-189	-294	-435	-288	-222	-40	-52	-32	-32	-32	-32	-32		
	553	375	745	853	730	917	1102	649	364	249	921	620	823	770	281	294	436	567	377	329	194	77	64	70	521

**AE INDICES 1985 (continued)**

DAY\UT	0	HOURLY VALUES (nT) OF AU, AL AND AE INDICES												MARCH						MEAN						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	AU	34	34	52	93	144	162	137	114	101	52	77	41	31	19	16	11	9	10	11	18	19	42	58	38	55
	AL	-122	-126	-368	-637	369	208	-218	-187	-126	-57	-20	-38	-37	51	-48	-63	-77	-96	-117	-172	-183	-120	-151	-151	207
	AE	72	157	179	462	782	346	332	304	240	204	99	48	37	37	51	58	74	89	115	137	214	242	159	207	
2	AU	41	44	53	90	50	75	79	72	129	86	135	154	66	92	265	172	214	239	170	98	145	153	85	61	115
	AL	-76	-142	-170	-226	-90	-120	-319	-208	-116	-84	-62	-17	-49	-237	-216	-59	-12	-18	-8	-15	-69	-176	-103	-87	-302
3	AU	52	41	90	84	131	138	125	67	45	27	18	29	28	19	14	40	21	10	27	40	80	68	57	64	55
	AL	-67	-200	-320	-258	-376	-284	-86	-34	-57	-23	-42	-132	-92	-98	-255	-80	-54	-197	-175	-211	-53	-113	-144	-144	207
4	AU	68	57	58	33	45	50	58	48	40	40	31	22	16	29	53	37	30	30	32	28	30	70	31	39	41
	AL	-20	-110	-28	-126	-146	-81	-37	-19	-116	-84	-62	-17	-49	-237	-216	-59	-12	-18	-8	-15	-69	-176	-103	-87	-87
5	AU	64	103	66	74	76	76	98	140	228	169	131	78	56	49	44	81	271	258	156	168	175	106	130	122	122
	AL	-374	-207	-119	-173	-230	-398	-152	-400	-382	-122	-76	-18	-39	-94	-218	-193	-323	-500	-592	-635	-661	-397	-562	-649	-315
6	AU	191	478	273	194	249	307	498	293	629	552	524	95	95	145	263	275	595	758	750	805	837	504	693	782	438
	AL	-241	-171	-168	-230	-213	-266	-104	-248	-350	-313	-246	-131	-244	-470	-190	-191	-131	-393	-129	-51	-34	-233	-160	-144	-215
7	AU	68	52	62	42	47	104	80	72	102	158	185	121	126	58	98	118	140	234	221	196	158	112	61	78	112
	AL	-266	-83	-53	-21	-92	-211	-181	-221	-386	-386	-386	-190	-211	-431	-431	-444	-606	-642	-520	-507	-456	-236	-223	-280	-300
8	AU	154	112	113	171	127	123	94	110	168	86	72	83	107	104	46	51	50	44	41	37	40	52	37	89	
	AL	-423	-302	-98	-454	-608	-419	-315	-220	-395	-369	-368	-242	-249	-368	-286	-195	-327	-150	-265	-86	-88	-159	-204	-18	-271
9	AU	577	414	212	625	737	537	439	315	506	538	315	334	476	391	243	380	202	309	128	126	200	258	56	361	361
	AL	-42	46	46	27	18	13	20	12	9	9	8	12	9	4	7	6	7	8	10	15	27	62	18	37	
10	AU	46	-91	-109	-19	-22	-38	-54	-14	-17	-17	-17	-35	-33	-16	-35	-26	-27	-22	-12	-10	-17	-25	-166	-36	
	AL	34	17	14	12	15	13	16	17	19	21	25	21	29	24	24	24	49	47	10	130	144	85	44	44	
11	AU	-56	-15	-13	-12	-9	-8	-7	-12	-16	-17	-10	-7	-11	-20	-62	-186	-69	-20	-66	-120	-157	-140	-52	-52	
	AL	119	49	31	28	26	25	23	24	30	36	25	32	33	29	42	45	103	281	137	68	168	454	302	226	97
12	AU	47	28	12	8	10	13	11	27	30	44	44	65	155	109	95	65	15	15	21	16	18	14	10	10	37
	AL	-16	-29	-31	-13	-16	-14	-13	-7	-13	-7	-13	-7	-17	-120	-161	-179	-42	-39	-65	-30	-8	-11	-14	-46	-46
13	AU	38	27	10	23	34	46	47	57	74	101	71	43	29	21	27	17	14	7	8	9	12	17	14	13	32
	AL	-13	-13	-12	-13	-42	-97	-61	-48	-66	-247	-71	-13	-17	-25	-12	-13	-11	-7	-5	-6	-11	-10	-10	-25	-25
14	AU	13	11	11	11	11	13	15	17	16	26	40	96	63	60	28	27	52	78	95	88	137	80	65	44	44
	AL	-15	-15	-12	-12	-10	-7	-3	-1	0	-30	-120	-233	-130	-61	-58	-63	-119	-378	-143	-148	-156	-182	-131	-85	-85
15	AU	54	41	42	24	25	22	21	19	18	17	57	162	330	195	123	87	92	173	457	239	236	294	197	130	130
	AL	-52	-79	-229	-42	-49	84	121	258	282	315	120	36	-124	-136	-107	-40	-11	-23	-39	-11	-21	-50	-39	-127	-78
16	AU	108	121	273	65	69	363	836	785	744	256	81	219	196	153	72	28	42	62	26	40	49	104	82	206	206

**AE INDICES 1985 (continued)**

16	38	31	34	38	40	19	29	40	24	27	32	19	35	62	69	29	18	20	22	53	52	38	36	
	-154	-152	-135	-50	-21	-54	-54	-91	-36	-17	-31	-37	-15	-101	-442	-243	-38	-11	-13	-22	-40	-180	-62	-74
	154	185	170	90	62	73	84	121	77	42	59	70	35	137	505	314	34	45	94	233	100	111	121	
17	38	38	30	25	24	17	20	26	24	30	25	32	23	16	12	13	18	18	45	94	75	88	65	
	-188	-159	-203	-34	-15	-10	-20	-47	-23	-25	-8	-24	-16	-12	-13	-16	-20	-15	-28	-213	-274	-245	-77	
	228	199	234	60	40	28	40	73	48	56	34	57	39	30	26	32	33	34	39	74	307	349	333	
18	56	133	119	66	61	60	72	54	44	18	32	11	10	13	11	11	17	53	128	99	98	42	52	
	-80	-402	-200	-44	-77	-185	-194	-96	-13	-15	-14	-25	-19	-8	-16	-13	-10	-17	-359	-359	-98	-100	-53	
	137	535	320	111	139	246	266	150	73	32	27	33	58	31	28	31	27	25	28	141	487	458	186	96
19	41	30	34	50	54	34	37	53	51	70	78	119	147	88	78	86	48	49	77	156	121	153	101	
	-54	-23	-36	-128	-35	-14	-15	-16	-35	-185	-123	-238	-202	-107	-218	-167	-56	-78	-136	-521	-303	-130	-79	
	97	54	72	178	89	49	52	69	87	255	202	358	355	196	297	255	105	129	215	677	426	284	195	
20	90	59	27	16	23	16	15	33	38	35	34	41	64	91	38	28	35	32	31	20	17	12	13	
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	129	71	41	25	32	26	23	49	52	48	55	62	167	303	149	117	174	60	42	27	24	22	26	29
21	20	36	47	58	26	19	16	14	15	18	17	13	22	28	52	30	27	17	23	55	63	58	72	
	-14	-24	-110	-158	-11	-10	-14	-22	-25	-19	-20	-16	-17	-19	-23	-90	-78	-25	-23	-84	-163	-137	145	
	34	62	158	216	39	30	32	37	38	38	37	29	41	48	76	121	106	44	49	139	227	137	145	
22	80	88	48	39	28	33	25	23	27	25	34	37	23	17	24	27	22	19	23	28	39	49	33	
	-122	-156	-73	-15	-8	-8	-23	-28	-21	-25	-23	-30	-70	-98	-19	-27	-22	-21	-21	-24	-227	-23	-78	
	204	245	123	55	37	42	48	52	49	48	48	65	109	122	37	52	50	43	41	45	51	56	63	
23	67	96	71	126	116	32	18	15	16	13	24	21	17	25	34	21	14	28	59	48	97	134	48	
	-139	-92	-127	-202	-20	-18	-21	-24	-16	-18	-23	-51	-31	-35	-66	-57	-38	-32	-46	-117	-53	-97	-131	
	207	189	199	328	142	50	40	40	33	32	48	74	62	102	79	54	61	107	165	101	168	266	110	
24	224	207	129	47	36	34	31	25	22	16	18	45	20	13	19	23	24	43	53	78	96	88	62	
	-150	-115	-64	-42	-22	-24	-18	-19	-14	-14	-15	-36	-55	-20	-59	-20	-23	-24	-63	-59	-47	-195	-205	
	375	323	193	89	59	58	50	43	42	30	34	82	77	35	67	49	47	49	107	113	126	291	163	
25	78	44	29	13	11	8	13	11	17	19	19	24	61	86	37	31	28	103	135	63	62	75		
	-43	-26	-23	-17	-18	-18	-21	-17	-18	-21	-17	-25	-24	-48	-108	-102	-93	-62	-131	-206	-84	-62	-51	
	121	72	53	31	30	27	31	32	33	37	39	48	49	109	204	141	92	92	235	342	147	81	96	
26	91	89	110	105	98	52	31	70	151	122	73	111	148	130	55	49	80	145	202	229	178	197	117	
	-161	-224	-226	-147	-51	-53	-54	-13	-19	-103	-127	-59	-65	-208	-109	-59	-75	-160	-250	-269	-219	-136	-109	
	254	314	336	252	159	152	107	44	90	256	250	133	177	357	271	115	125	241	396	473	450	315	283	
27	193	189	113	79	73	61	83	98	129	137	78	128	129	72	56	93	135	168	223	264	127	88		
	-131	-84	-94	-47	-41	-64	-125	-48	-42	-178	-74	-42	-181	-136	-64	-14	-130	-191	-269	-160	-205	-175		
	326	274	207	126	115	126	209	124	141	309	212	121	310	269	119	70	225	327	438	384	470	275	237	
28	122	154	118	123	108	150	199	89	38	20	11	7	23	38	20	17	43	103	152	151	101	43		
	-255	-270	-140	-205	-321	-393	-378	-241	-55	-38	-20	-22	-24	-35	-23	-42	-95	-144	-433	-300	-127	-73	-159	
	377	425	274	324	445	602	529	441	145	77	44	33	29	47	74	45	60	139	348	586	452	229	117	
29	50	24	24	17	14	12	18	27	26	18	13	22	16	21	23	23	34	50	70	79	68	88		
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	96	43	38	27	30	24	33	38	44	58	29	27	38	31	42	115	202	153	119	176	345	202	100	
30	166	131	93	61	26	21	46	31	20	22	21	40	76	49	30	29	22	26	37	25	27	47		
	-390	-149	-73	-31	-27	-16	-21	-13	-15	-20	-18	-100	-93	-57	-11	-24	-56	-11	-19	-10	-15	-27	-34	
	557	282	167	93	54	39	74	52	34	38	42	59	177	143	58	42	46	85	37	57	37	44	68	
31	31	39	48	56	44	38	41	85	136	235	123	56	32	19	19	14	37	66	53	35	28	18		
	-59	-93	-36	-234	-137	-30	-15	-141	-365	-334	-76	-35	-26	-22	-17	-11	-28	-208	-153	-32	-12	-15	-87	
	91	133	84	291	181	69	56	226	502	569	206	91	60	42	43	32	31	66	274	183	67	41	37	

**AE INDICES 1985 (continued)**

DAY/UT	HOURLY VALUES (nT) OF AU, AL AND AE INDICES																								MEAN
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1 AU	37	45	35	33	39	63	63	121	101	140	122	148	171	267	347	244	133	128	93	108	58	48	33	109	-16
AL	-17	-24	-20	-24	-50	-43	-74	-208	-164	-341	-236	-522	-534	-777	-475	-193	-165	-126	-138	-96	-84	-45	-53	-190	-56
AE	55	70	56	70	57	91	107	139	330	267	482	358	710	705	1045	823	438	300	256	233	306	144	94	87	300
2	30	25	17	51	47	66	67	76	94	91	89	72	66	85	96	66	107	96	189	129	85	58	47	52	75
	-18	-34	-99	-144	-123	-198	-154	-303	-374	-363	-189	-111	-82	-82	-122	-181	-257	-197	-628	-429	-171	-180	-14	-190	-49
	59	117	196	171	265	221	380	468	456	280	184	149	168	219	247	365	295	819	560	188	231	239	68	266	-130
3	86	124	64	56	42	50	46	41	41	44	122	57	50	55	48	21	64	135	225	190	156	74	45	79	-120
	-130	-708	-215	-47	-54	-128	-256	-98	-30	-12	-25	-156	-119	-78	-61	-62	-103	-309	-183	-109	-12	-151	-190	-217	
	217	832	280	104	98	178	303	140	71	70	292	276	171	135	110	84	169	446	786	772	311	185	205	270	
4	45	44	46	73	126	94	113	144	83	115	91	92	49	38	48	74	144	94	99	156	143	96	47	41	87
	-64	-23	-22	-170	-324	-209	-323	-214	-374	-385	-129	-186	-125	-52	-91	-256	-476	-312	-201	-209	-312	-138	-8	-195	-110
	69	69	244	491	420	323	469	298	245	279	478	175	92	140	331	621	407	301	366	506	236	91	50	284	
5	43	41	43	55	81	44	30	22	32	39	68	46	64	49	24	14	11	10	18	33	21	14	25	20	35
	-109	-109	-162	-154	-301	-64	-17	-16	-28	-80	-163	-150	-132	-82	-25	-37	-26	-33	-31	-20	-16	-18	-19	-23	-73
	64	151	226	210	384	109	48	39	61	121	232	198	132	50	51	38	44	50	54	58	32	45	45	109	
6	18	15	11	9	8	7	9	20	30	43	83	56	57	34	28	22	24	24	35	45	58	51	34	45	32
	-19	-18	-18	-17	-21	-20	-15	-61	-63	-120	-167	-85	-54	-22	-31	-24	-43	-23	-32	-108	-284	-215	-21	-59	-19
	39	34	30	26	29	27	25	82	95	164	251	143	111	58	60	47	68	47	67	155	263	267	58	67	92
7	31	29	27	22	31	81	80	107	165	144	66	31	21	28	29	39	74	47	34	25	21	14	15	50	
	-20	-18	-19	-20	-89	-209	-251	-330	-205	-91	-28	-19	-20	-19	-26	-55	-123	-309	-28	-9	-11	-20	-23	-138	
	53	48	47	43	120	291	332	439	371	237	96	52	42	48	56	84	163	385	195	63	35	33	39	138	
8	15	17	21	16	25	20	47	38	42	31	44	60	40	44	66	38	30	55	141	232	193	180	83	67	-23
	-23	-18	-17	-22	-19	-18	-10	-31	-17	-17	-168	-79	-70	-34	-41	-144	-66	-66	-19	-22	-238	-613	-125	-193	
	40	36	39	38	45	39	148	109	74	49	97	229	120	112	101	80	175	122	291	624	498	419	697	193	
9	163	57	33	48	124	176	169	250	265	293	288	255	209	192	475	357	344	89	65	43	62	45	27	169	
	-134	-19	-27	-43	-385	-394	-413	-498	-500	-400	-307	-340	-873	-974	-781	-143	-159	-32	-70	-20	-15	-287	-457	-298	
	77	61	74	169	562	564	490	679	791	859	656	516	532	1348	1332	1126	233	226	76	101	117	48	41	-132	
10	21	18	14	23	58	87	87	105	104	183	135	96	75	111	51	60	72	60	59	34	48	80	50	70	
	-24	-17	-20	-20	-41	-82	-149	-247	-221	-191	-305	-76	-139	-113	-312	-279	-181	-175	-97	-34	-30	-161	-92	-132	
	47	36	34	44	101	170	237	354	326	374	440	172	215	224	364	340	254	235	157	70	79	242	215	144	
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	-27	-202	-562	-235	-220	-176	-82	-67	-16	-50	-62	-31	-43	-98	-41	-177	-266	-215	-5	-10	-11	-30	-105	-69	
	317	691	351	320	123	95	44	132	117	69	90	156	107	85	252	319	60	31	32	51	64	165	-34		
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	-34	-22	-29	-34	-32	-29	-15	-23	-12	-25	-19	-13	-13	-24	-24	-21	-21	-21	-52	-9	-12	-19	-28	-68	
	68	48	50	51	58	46	48	58	32	48	44	35	39	30	35	45	70	139	76	32	27	31	50		
13	13	9	11	13	15	16	22	27	31	45	36	43	35	38	49	45	55	41	34	53	111	112	59	-39	
	-26	-34	-29	-22	-18	-26	-10	-23	-11	-66	-47	-23	-20	-37	-23	-118	-205	-46	-28	-163	-178	-46	-54	-69	
	41	44	41	36	39	34	43	33	44	56	112	85	68	56	76	72	163	261	88	120	275	290	106	-94	
14	77	84	131	127	131	161	173	178	127	128	158	155	208	158	76	31	33	47	49	50	50	56	33	24	
	-54	-106	-274	-236	-95	-346	-261	-185	-81	-96	-108	-178	-217	-261	-132	-79	-38	-43	-35	-16	-62	-29	-10	-128	
	133	192	507	227	508	436	365	210	225	267	333	425	420	210	111	71	90	83	86	67	119	63	35	231	
15	21	23	19	25	21	18	20	40	45	29	46	27	24	16	12	15	15	21	28	31	30	55	36	27	
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	39	48	49	54	43	94	40	92	113	60	63	76	93	48	39	23	22	25	34	35	36	93	56		

**AE INDICES 1985 (continued)**

16	42	33	37	35	39	44	40	49	54	67	63	163	118	90	45	35	36	42	58	40	23	39	64	75	
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	84	60	66	70	158	185	228	77	138	129	102	413	356	220	70	91	153	197	161	48	37	62	130	181	
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	116	69	54	41	40	31	31	44	40	53	62	63	58	52	50	105	95	148	110	83	123	169	72		
18	98	54	45	35	27	16	41	34	27	31	30	57	38	46	42	25	24	25	21	23	22	23	33	36	
	-24	-59	-33	-17	-19	-35	-30	-23	-24	-26	-53	-47	-27	-38	-46	-10	-6	-11	-8	-11	-12	-17	-35		
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19	40	40	32	75	152	209	121	108	171	253	263	174	126	217	304	328	323	241	295	218	227	139	177	187	
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	52	46	47	105	367	434	236	190	384	517	434	426	347	394	531	739	775	699	848	707	527	486	716	733	
20	146	117	144	249	230	286	153	172	231	138	76	50	53	105	107	154	238	312	355	279	151	11	61	160	
	-308	-450	-207	-392	-455	-348	-666	-635	-182	-344	702	276	132	131	146	242	335	498	765	962	1065	963	908	1001	565
21	195	226	373	213	78	184	110	-4	225	193	192	102	236	300	300	244	250	248	183	159	118	156	116	194	
	-894	-950	-1220	-1130	-764	-461	-388	-364	-1582	-605	-365	-244	-164	-680	-765	-772	-809	-551	-435	-322	-252	-176	-204	-599	
	109	1176	1593	1344	1065	540	573	475	1537	831	558	437	267	917	1065	1072	1055	802	683	506	413	308	434	321	794
22	55	50	41	27	43	123	-155	-174	-408	-232	-37	-47	-74	-134	-215	-249	-71	-31	51	28	26	28	81	52	
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	184	182	76	54	64	177	213	109	293	561	312	69	82	104	179	293	311	106	46	80	39	42	52	171	158
23	132	130	81	58	35	54	85	59	117	125	107	86	86	59	67	80	130	197	156	80	53	45	42	89	
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	485	515	238	143	82	162	200	96	434	294	234	201	164	94	166	184	302	344	433	542	352	156	83	70	157
24	99	114	153	129	92	158	231	146	128	186	174	111	113	96	78	30	51	80	66	60	57	39	42	44	103
	-209	-342	-387	-525	-228	-248	-570	-421	-198	-184	-154	-206	-186	-81	-54	-27	-127	-193	-101	-47	-63	-24	-28	-194	
	309	456	541	655	322	408	802	568	328	341	365	317	309	178	134	58	179	274	168	108	121	65	72	71	
25	44	61	115	141	87	65	70	159	89	126	226	207	194	140	97	51	35	60	121	142	108	82	114	158	
	-32	-142	-357	-642	-138	-51	-59	-449	-285	-133	-403	-624	-401	-107	-115	-68	-92	-101	-155	-201	-111	-66	-201	-70	
	76	204	473	785	225	117	130	609	376	260	630	831	596	347	213	120	129	163	277	344	220	150	316	529	338
26	188	166	215	369	227	301	317	259	333	319	306	158	127	118	42	31	61	78	117	152	120	207	214	157	
	-476	-298	-610	-585	-389	-384	-588	-342	-361	-317	-308	-90	-94	-18	-42	-37	-43	-112	-122	-93	-285	-474	-266		
	665	465	826	955	617	686	907	602	695	626	685	248	222	136	57	69	95	122	270	275	215	494	395	459	
27	123	55	121	193	253	243	201	207	205	140	134	208	160	215	234	250	119	64	65	47	144	86	101	247	
	-247	-336	-378	-758	-722	-505	-339	-289	-422	-413	-416	-498	-422	-388	-533	-369	-189	-139	-51	-48	-159	-163	-41	-346	
	371	391	500	953	978	749	541	497	628	554	552	707	583	603	738	621	309	204	117	96	304	251	144	506	
28	167	167	167	281	198	113	171	205	65	-18	53	118	194	217	194	164	83	78	50	147	143	90	58	127	
	-881	-821	-919	-554	-370	-325	-574	-1217	-1050	-1246	-1088	-907	-598	-573	-459	-160	-164	-140	-270	-165	-33	-52	-102	-529	
	1049	989	1201	753	484	497	780	1282	1030	1300	1207	1102	817	768	623	244	219	215	418	310	124	98	103	167	
29	132	148	112	303	343	274	317	333	306	319	306	158	127	118	42	32	59	16	45	45	63	45	31	27	
	-206	-309	-157	-507	-583	-111	-33	-38	-27	-24	-22	-34	-17	-147	-83	-81	-163	-130	-19	-24	-24	-159	-241		
	339	458	270	811	1235	858	189	73	58	44	38	47	67	132	120	193	130	127	177	51	52	48	47	241	
30	25	19	19	15	11	15	31	24	63	54	85	245	361	370	189	158	174	106	47	99	60	34	33		
	-32	-32	-25	-22	-20	-18	-32	-23	-20	-18	-19	-19	-59	-49	-44	-44	-199	-78	-292	-188	-31	-35	-58	-121	
	58	53	48	41	34	36	52	49	96	75	145	709	1097	785	389	238	467	296	93	131	96	84	87	217	

**AE INDICES 1985 (continued)**

DAY\UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	1985	MAY
1	AU	27	24	13	10	32	52	58	57	56	116	88	19	42	20	32	14	11	23	20	17	12	13	18	63	35	
1	AL	-42	-36	-47	-16	-247	-146	-47	-55	-114	-330	-92	-49	-74	-52	-56	-47	-25	-24	-27	-28	-34	-77	-78	-77		
1	AE	70	59	49	59	199	300	206	106	112	232	419	112	92	94	85	72	59	53	47	42	40	41	53	140	114	
2	128	132	176	219	249	268	356	339	225	236	218	120	54	59	51	25	23	23	31	45	36	25	53	46	131		
2	-161	-169	-56	-975	-706	-799	-700	-436	-521	-320	-134	-242	-346	-285	-193	-121	-112	-99	-40	-23	-29	-47	-33	-324	-456		
2	289	302	723	1196	952	1068	1057	775	523	1203	540	255	297	406	337	219	145	135	131	87	60	55	102	80	145		
3	27	41	27	14	22	30	39	36	40	95	111	66	90	98	42	61	77	67	56	58	64	50	60	82	56		
3	-28	-43	-33	-25	-42	-59	-58	-58	-167	-213	-101	-119	-85	-110	-247	-171	-89	-36	-93	-49	-48	-121	-88	-88			
3	55	85	60	40	64	91	99	115	99	263	225	168	210	184	154	309	248	156	93	92	159	100	108	204	145		
4	36	25	39	49	42	64	71	73	131	125	144	198	169	102	132	180	119	123	86	50	47	79	64	39	91		
4	-46	-25	-30	-42	-197	-115	-89	-88	-286	-238	-188	-220	-239	-411	-332	-291	-177	-126	-75	-24	-43	-123	-94	-37	-147		
4	83	51	71	92	240	180	161	163	418	365	333	420	409	513	451	412	358	249	161	75	91	203	159	77	239		
5	35	39	34	32	46	64	67	40	53	25	23	32	27	36	53	34	34	55	98	208	160	71	60	62	56		
5	-87	-34	-31	-54	-94	-81	-192	-59	-52	-44	-36	-39	-27	-40	-94	-121	-79	-61	-216	-354	-197	-86	-31	-40	-89		
5	123	73	65	86	141	145	260	101	107	71	60	72	55	78	148	156	113	117	315	514	407	247	103	101	152		
6	98	130	124	183	134	153	130	173	56	28	21	45	48	44	57	40	37	70	48	18	21	22	37	59	70		
6	-84	-273	-392	-310	-210	-203	-324	-65	-67	-57	-37	-33	-19	-44	-46	-90	-37	-95	-235	-102	-26	-31	-34	-53	-122		
6	182	404	516	494	344	356	456	456	238	56	55	65	93	92	149	78	132	307	151	45	53	55	72	112	193		
7	95	126	164	121	77	66	30	22	15	38	53	72	53	44	26	26	32	36	33	60	79	122	187	128	71		
7	-170	-126	-296	-153	-107	-85	-66	-39	-45	-31	-26	-120	-80	-47	-62	-80	-132	-123	-63	-69	-87	-106	-222	-122	-102		
7	266	252	450	275	185	152	98	63	61	71	80	193	134	92	89	107	164	160	97	130	168	229	410	251	174		
8	199	155	66	98	46	54	58	81	77	117	113	93	63	54	59	60	119	117	93	86	64	71	83	89			
8	355	241	114	159	95	97	148	174	92	253	314	253	144	131	144	273	613	379	172	125	108	117	134	313	206		
9	144	159	142	120	190	174	172	133	128	104	161	140	113	59	36	24	74	97	60	43	21	13	9	98			
9	-293	-138	-116	-137	-367	-306	-367	-91	-124	-110	-96	-146	-105	-31	-25	-97	-164	-218	-81	-15	-24	-29	-128	-228			
9	438	298	258	558	369	481	225	253	224	302	238	261	165	68	50	148	239	317	141	59	37	38	39	228			
10	11	15	14	21	15	11	19	15	21	29	14	18	21	19	18	19	22	36	57	94	80	127	110	57			
10	-31	-32	-26	-23	-22	-30	-35	-30	-28	-27	-21	-19	-14	-66	-76	-35	-30	-69	-119	-46	-87	-207	-55	-48			
10	43	48	40	47	38	34	50	52	53	59	42	40	34	85	95	57	67	127	215	128	215	318	113	85			
11	27	22	20	27	45	90	120	123	149	86	17	12	24	24	31	30	52	40	30	28	28	27	25	46			
11	-21	-29	-41	-93	-31	-54	-81	-226	-112	-73	-27	-22	-34	-22	-41	-101	-77	-62	-36	-25	-26	-24	-59				
11	49	52	61	120	77	145	202	350	160	45	40	51	59	47	73	132	130	103	67	55	54	54	49				
12	52	80	61	58	31	38	55	155	167	144	200	98	120	143	74	41	87	151	213	206	224	190	179	165			
12	-30	-53	-120	-94	-24	-18	-24	-306	-449	-235	-136	-47	-71	-285	-213	-60	-109	-413	-337	-282	-215	-112	-144	-181			
12	83	134	181	153	55	57	80	463	618	380	338	147	193	429	287	102	297	565	681	543	506	406	310				
13	152	194	124	109	176	231	251	131	124	103	115	104	56	62	35	41	107	127	141	190	181	213	269	233			
13	-317	-281	-203	-168	-164	-260	-242	-67	-72	-59	-49	-62	-121	-115	-107	-165	-324	-300	-175	-143	-196	-347	-241	-228			
13	469	476	328	278	342	492	199	152	163	166	168	179	198	143	207	432	428	317	334	378	560	510	462	328			
14	172	200	148	196	134	79	50	99	103	65	41	21	25	29	52	70	94	117	131	98	75	56	93				
14	-157	-123	-222	-145	-27	-42	-44	-181	-129	-43	-12	-79	-113	-127	-54	-20	-94	-109	-95	-94	-64	-47	-35	-113			
14	329	323	369	520	280	106	94	145	285	195	86	51	58	109	166	198	345	293	227	183	161	124	92	207			
15	83	117	104	154	146	164	100	139	137	147	134	202	109	95	89	62	105	-170	-194	225	115	193	262	138			
15	-61	-212	-109	-162	-366	-159	-90	-148	-181	-173	-147	-135	-170	-109	-277	-85	-62	-119	-194	-225	-116	-230	-366	-134			
15	145	329	404	365	309	532	259	188	289	356	325	270	373	313	373	445	231	225	383	440	273	424	629	227			

AE INDICES 1985 (continued)

16	36	45	57	31	41	144	139	129	138	112	120	185	236	115	200	164	95	131	226	136	79	119	122	163
-17	-17	-25	-44	-28	-43	157	-208	-178	-134	-145	-145	-285	-243	-194	-227	-152	-29	-105	-252	-159	-159	-159	-159	
54	70	101	59	84	302	347	278	326	248	217	332	492	416	513	449	339	326	454	290	110	225	374	394	283
17	125	63	48	60	35	14	23	15	23	34	91	55	86	106	98	83	71	53	57	66	122	176	113	174
-51	-43	-28	-68	-57	-17	-19	-22	-23	-28	-66	-114	-172	-106	-155	-101	-145	-129	-72	-103	-241	-120	-191	-93	
177	106	77	128	92	32	42	38	47	63	135	123	201	279	318	322	175	119	187	140	227	418	233	366	168
18	160	189	94	54	76	73	65	88	59	72	114	110	62	131	72	38	91	183	251	244	194	254	277	296
-312	-248	-89	-62	-17	-121	-50	-66	-29	-34	-62	-154	-80	-110	-278	-425	-307	-132	-153	-314	-274	-161	-161	-161	
473	437	184	116	247	196	117	155	89	107	177	266	143	242	228	140	237	462	677	552	328	408	591	570	298
19	238	133	180	142	89	168	153	164	170	108	92	61	46	138	154	200	207	242	261	225	151	151	188	
-270	-345	-331	-184	-80	-205	-211	-245	-149	-117	-120	-74	-67	-108	-203	-231	-153	-153	-148	-204	-203	-176	-264	-188	
509	479	512	327	170	299	380	399	314	289	230	168	140	194	296	293	200	410	428	350	412	446	438	490	341
20	142	185	148	72	24	42	70	47	46	27	29	36	73	103	116	69	57	106	200	167	75	83	75	71
-367	-362	-187	-62	-36	-40	-31	-25	-36	-28	-35	-40	-29	-31	-35	-32	-27	-35	-29	-19	-37	-74	-221	-118	-90
510	548	337	134	60	64	49	40	56	44	52	55	42	41	50	45	69	67	54	82	79	77	88	65	113
21	42	29	23	28	42	70	47	46	27	29	36	73	103	116	69	57	106	200	167	75	83	75	40	45
-37	-71	-81	-58	-14	-89	-65	-42	-24	-30	-32	-38	-95	-137	-65	-110	-368	-267	-33	-77	-26	-34	-24	-67	
79	101	105	67	58	160	114	89	53	60	69	112	199	254	136	114	216	568	434	109	115	158	213	162	
22	159	149	116	42	33	54	47	42	62	24	18	21	22	17	21	19	25	68	45	34	41	33	48	
-164	-177	-67	-84	-28	-45	-85	-45	-54	-110	-80	-18	-11	-16	-26	-20	-12	-50	-44	-32	-32	-26	-53		
324	326	184	127	63	79	141	93	97	174	106	37	32	40	44	51	40	38	119	91	67	74	61	103	
23	37	49	78	86	74	51	23	20	28	24	61	50	24	23	30	33	30	34	35	55	49	40	42	
-30	-72	-204	-240	-166	-41	-35	-30	-32	-23	-22	-46	-77	-37	-58	-68	-43	-39	-34	-36	-33	-35	-61		
67	122	282	327	240	92	59	55	54	59	48	64	108	127	62	82	101	74	74	64	91	87	73	104	
24	54	64	60	46	24	17	13	17	14	28	37	45	47	29	25	26	28	32	42	91	105	46	26	
-29	-27	-85	-23	-17	-26	-36	-35	-32	-32	-24	-23	-24	-24	-14	-24	-39	-78	-41	-14	-27	-110	-27	-39	
84	92	146	69	42	43	49	52	47	61	62	69	69	44	50	64	105	69	48	64	220	217	74	46	
25	16	13	22	27	26	15	14	18	24	30	38	39	53	37	40	69	59	53	69	80	69	139	90	
-25	-25	-28	-27	-25	-28	-30	-22	-23	-21	-21	-14	-12	-13	-14	-38	-70	-8	-22	-29	-167	-179	-109		
42	42	49	53	44	45	41	48	54	61	54	65	50	55	108	129	62	93	111	96	307	270	228	90	
26	136	163	84	54	41	25	22	38	49	36	48	53	66	79	64	86	88	129	112	68	52	54	24	
-131	-285	-99	-34	-29	-40	-28	-18	-35	-53	-23	-18	-20	-43	-121	-267	-232	-86	-146	-167	-26	-42	-60	-34	
268	446	183	89	70	67	51	57	85	90	72	72	87	124	186	354	309	174	277	280	94	95	114	58	
27	20	26	37	43	50	57	53	42	44	55	112	52	75	74	69	37	13	14	18	23	28	26	24	
-22	-22	-38	-21	-60	-153	-74	-34	-16	-132	-139	-76	-88	-122	-38	-38	-24	-38	-24	-62	-52	-34	-29		
43	49	75	65	210	211	129	78	72	245	192	153	163	251	76	51	53	43	46	92	83	62	53		
28	19	14	12	14	10	7	62	51	81	98	90	92	115	72	63	36	33	45	34	37	50	65		
-26	-27	-18	-20	-24	-25	-46	-21	-30	-69	-73	-128	-121	-63	-63	-87	-55	0	-11	-15	-24	-70	-44		
46	42	40	28	35	33	109	73	112	168	164	221	237	114	127	124	92	34	57	50	62	83	136	93	
29	88	85	57	36	23	74	78	50	42	23	24	27	25	24	44	54	47	42	47	55	34	19	44	
-69	-79	-73	-31	-80	-141	-29	-20	-16	-19	-12	-20	-19	-12	-20	-24	-163	-96	-23	-66	-67	-35	-56		
158	165	130	55	110	156	159	193	72	45	42	47	38	45	50	141	218	113	66	72	122	101	54		
30	15	14	9	13	8	11	21	22	24	37	55	92	74	43	35	47	28	32	35	45	54	60	36	
-29	-27	-22	-18	-14	-18	-37	-32	-61	-120	-122	-47	-17	-22	-16	-11	-14	-20	-54	-59	-28	-31	-44		
44	41	31	28	26	36	42	62	70	117	121	61	58	84	45	40	45	51	66	109	121	68	68		
31	53	47	81	52	70	109	107	77	61	25	37	41	19	25	35	37	42	46	63	79	81	136	57	
-27	-32	-181	-88	-90	-220	-109	-26	-23	-21	-22	-19	-31	-65	-89	-31	-42	-21	-22	-54	-117	-64	-127	122	
81	80	263	141	169	255	329	187	89	49	41	46	57	59	54	91	125	70	64	69	94	134	127	254	

**AE INDICES 1985 (continued)**

DAY\UT		HOURLY VALUES (nT) OF AU, AL AND AE INDICES												JUNE 1985										
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1	AU	116	174	353	396	241	218	152	156	228	365	183	144	87	136	66	100	220	185	121	110	119	76	102
	AL	-224	-87	-242	-547	-552	-202	-97	-106	-90	-208	-711	-317	-193	-149	-134	-152	-314	-179	-64	-111	-89	-102	-175
	AE	371	203	417	901	948	443	416	258	248	437	1077	501	338	237	414	202	253	535	665	246	175	239	166
2		88	44	21	22	15	31	77	89	43	36	28	47	95	116	110	70	30	30	51	94	108	86	54
		-139	-39	-15	-9	-11	-27	-101	-150	-146	-192	-69	-53	-83	-248	-400	-359	-221	92	85	175	229	339	-27
3		29	21	27	25	17	18	19	17	24	48	39	42	37	31	39	71	73	106	71	84	100	66	79
		-23	-22	-31	-46	-23	-14	-17	-19	-23	-30	-45	-52	-29	-53	-96	-319	-261	-127	-60	-55	-50	-65	-151
5		53	43	59	72	41	34	36	37	47	79	70	88	90	62	93	168	139	368	145	156	117	145	297
4		106	41	30	24	27	30	70	80	62	52	58	51	50	59	97	56	62	42	34	33	25	37	72
		-93	-26	-22	-25	-27	-47	-106	-130	-57	-73	-95	-34	-31	-34	-150	-137	-172	-69	-6	-19	-22	-33	-78
201		68	52	49	55	79	177	211	119	126	153	86	83	94	247	194	235	112	40	53	42	55	71	152
5		105	103	140	115	116	130	138	87	98	82	50	46	54	58	84	57	30	28	44	43	42	53	80
		-143	-99	-92	-85	-169	-139	-95	-94	-89	-65	-30	-24	-20	-21	-64	-74	-41	-31	-27	-38	-34	-31	-94
250		203	234	202	286	270	235	183	188	149	80	71	75	81	148	132	71	59	72	82	77	85	88	175
6		92	100	123	127	109	141	69	53	26	40	56	104	167	184	154	374	357	129	99	69	116	194	194
		-147	-97	-126	-278	-186	-121	-55	-37	-60	-71	-203	-231	-209	-509	-562	-132	-20	-37	-82	-189	-62	-89	-182
241		198	251	406	236	263	125	92	44	58	93	175	371	416	454	884	940	262	120	107	199	383	798	318
7		116	148	103	184	366	96	126	99	205	116	65	81	193	116	68	96	239	113	130	205	152	120	113
		-175	-227	-284	-564	-504	-91	-152	-120	-361	-308	-79	-85	-433	-388	-92	-74	-355	-268	-105	-247	-364	-104	-140
292		376	388	480	951	298	279	220	567	425	144	166	677	504	162	171	575	383	236	452	518	225	370	278
8		162	130	171	226	183	256	263	223	291	273	214	123	65	47	39	48	60	48	54	40	50	54	67
		-405	-405	-337	-455	-498	-426	-392	-515	-477	-417	-281	-135	-80	-70	-21	-81	-137	-87	-221	-63	-61	-109	-234
568		536	509	681	681	682	657	739	769	691	496	259	146	118	61	130	198	135	76	104	122	120	116	
9		33	40	53	60	44	71	85	89	65	33	31	31	23	22	24	29	21	30	72	240	329	281	321
		-73	-105	-177	-161	-98	-53	-141	-154	-115	-40	-31	-18	-17	-45	-49	-81	-54	-50	143	583	929	1009	1284
10		146	182	222	143	108	226	245	181	73	63	50	41	45	49	56	78	84	148	124	111	126	131	
		-527	-525	-598	-360	367	367	220	214	335	288	196	164	129	132	103	85	41	63	108	125	128	136	197
762		822	1007	957	767	865	574	624	820	620	703	593	325	289	299	291	142	221	366	350	263	258	366	473
11		141	91	136	202	95	154	89	96	41	65	133	83	61	44	59	72	57	46	27	57	64	78	88
		-277	-167	-157	-296	-84	-213	-169	-150	-74	-38	-157	-105	-115	-68	-73	-144	-158	-46	-47	-33	-26	-31	-165
419		260	291	499	368	368	260	247	115	104	291	188	177	113	132	217	216	93	76	91	90	110	167	
12		164	129	125	101	118	170	187	162	126	46	64	81	70	98	49	56	68	78	84	148	124	111	
		-232	-226	-190	-153	-217	-414	-422	-271	-73	-67	-175	-165	-165	-93	-98	-184	-183	-137	-77	-188	-125	-71	-179
337		357	316	255	335	468	603	585	399	120	131	256	242	264	144	155	253	263	223	226	313	189	145	
13		62	34	24	15	34	5	14	18	21	20	19	26	40	55	48	56	68	78	84	148	124	111	
		-48	-29	-21	-24	-38	-25	-15	-23	-27	-42	-40	-19	-22	-44	-122	-130	-307	-115	-126	-125	-168	-194	-285
111		63	46	40	54	60	21	38	46	42	44	46	64	99	170	188	413	335	210	253	313	396	452	
14		82	66	34	22	22	11	45	72	67	40	17	15	14	14	14	14	21	16	19	28	35	31	
		-141	-106	-31	-18	-44	-25	-30	-28	-28	-23	-24	-17	-23	-23	-23	-23	-21	-18	-25	-25	-25	-54	-37
225		173	66	41	43	56	70	103	138	69	41	41	38	32	40	37	42	54	62	56	81	154	172	109
15		90	133	143	135	179	81	23	29	42	46	45	53	66	70	63	60	82	92	148	106	109	103	
		-54	-73	-55	-122	-46	-27	-21	-24	-38	-63	-59	-56	-64	-80	-133	-99	-224	-158	-181	-71	-87	-44	
145		208	200	258	321	128	52	51	67	84	108	113	123	128	150	197	160	196	131	331	197	181	191	

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**AE INDICES 1985 (continued)**

16	59	127	129	125	126	117	83	30	32	24	28	27	24	12	19	27	30	29	35	33	36	42	55
	-24	-91	-113	-105	-97	-75	-37	-50	-32	-28	-36	-32	-25	-31	-33	-28	-21	-35	-32	-34	-34	-48	
	85	220	243	230	224	211	159	67	83	57	55	65	60	50	43	52	55	52	53	71	67	71	103
17	49	41	32	24	19	16	19	64	58	43	42	51	59	68	64	70	85	54	52	43	30	46	81
	-39	-30	-86	-31	-7	-5	-11	-14	-24	-32	-27	-19	-49	-53	-222	-238	-151	-54	-50	-100	-100	-52	
	89	72	119	56	27	25	28	34	82	83	76	70	71	117	122	288	310	237	109	63	44	39	69
18	68	52	36	38	38	36	25	45	40	36	29	38	69	52	33	26	31	32	41	31	26	20	39
	-36	-33	-28	-26	-47	-47	-30	-27	-24	-27	-24	-22	-23	-50	-61	-67	-30	-44	-29	-29	-23	-27	
	106	102	81	63	86	86	67	53	69	68	61	52	62	119	113	101	57	77	69	70	60	48	51
19	24	42	29	15	12	14	24	34	42	32	43	30	57	50	60	53	46	44	45	41	30	29	27
	-37	-35	-48	-17	-22	-28	-23	-28	-23	-30	-24	-21	-19	-37	-39	-41	-51	-28	-42	-35	-17	-19	-24
	61	78	38	28	38	52	58	73	57	74	53	77	88	100	95	99	75	87	80	77	48	49	52
20	25	22	34	51	118	91	66	48	60	112	83	142	190	113	68	112	59	51	42	34	50	112	73
	-25	-28	-21	-17	-55	-115	-75	-40	-64	-62	-137	-171	-120	-151	-157	-109	-186	-120	-15	0	-14	-32	-77
	50	50	43	52	107	234	167	107	103	123	250	254	262	342	271	179	300	180	67	43	49	83	190
21	57	102	48	123	77	49	26	32	65	59	75	77	108	95	58	48	30	47	33	41	41	59	59
	-44	-93	-103	-130	-137	-180	-28	-21	-33	-26	-30	-35	-83	-144	-49	-10	-47	-21	-4	-8	-13	-21	-13
	102	196	153	254	215	230	55	54	69	87	105	112	192	240	108	68	41	68	37	50	55	101	73
22	26	101	46	83	91	120	128	110	171	133	128	52	34	25	16	29	42	45	45	37	32	26	23
	-22	-46	-25	-109	-208	-143	-275	-232	-213	-135	-134	-136	-3	-7	-11	-31	-53	-27	-6	-5	-8	-15	-25
	48	149	72	193	299	264	404	363	385	269	264	190	38	32	27	61	96	73	53	43	38	36	51
23	34	100	158	189	209	193	54	36	36	29	26	34	126	81	53	35	36	25	27	24	21	16	14
	-31	-98	-474	-384	-337	-234	-66	-21	-16	-26	-33	-61	-216	-66	-46	-29	-21	-21	-10	-19	-24	-15	-95
	66	199	633	573	547	427	121	58	46	54	68	189	299	119	83	66	49	47	38	44	45	33	44
24	14	23	30	37	20	14	36	49	56	50	23	28	47	65	89	42	39	50	62	49	47	49	71
	-29	-29	-25	-37	-40	-26	-89	-48	-42	-68	-22	-14	-13	-9	-110	-44	-7	0	-5	-2	-23	-61	-32
	44	52	59	68	78	61	41	125	98	99	119	45	43	62	75	200	87	47	50	61	43	49	73
25	150	134	136	116	64	93	107	95	108	131	142	95	69	53	26	21	27	26	102	151	158	145	100
	-215	-158	-132	-78	-81	-239	-338	-290	-177	-96	-180	-86	-63	-31	-48	-26	-28	-95	-182	-207	-131	-167	-145
	366	293	269	195	146	333	446	386	287	228	314	276	155	117	58	81	54	55	198	334	430	346	240
26	167	119	80	84	76	106	120	53	158	243	214	261	170	101	59	100	124	139	263	316	214	200	164
	-268	-212	-51	-74	-102	-215	-107	-151	-526	-298	-483	-174	-269	-150	-261	-150	-282	-494	-693	-576	-580	-594	-471
	436	333	133	160	183	322	369	161	311	570	514	745	516	371	197	254	275	423	759	1010	576	580	428
27	129	84	63	34	42	86	92	86	112	90	72	109	49	42	132	192	182	128	152	223	106	86	
	-323	-319	-149	-65	-35	-40	-129	-212	-285	-303	-144	-118	-184	-177	-123	-175	-410	-381	-147	-130	-254	-128	-178
	454	404	226	129	74	127	222	29	397	303	216	192	294	227	166	308	604	564	275	283	478	234	280
28	137	156	186	190	174	180	155	123	124	137	151	153	83	57	76	85	87	112	101	83	133	124	
	-246	-464	-515	-449	-273	-81	-342	-267	-135	-140	-227	-297	-281	-207	-65	-120	-163	-157	-160	-222	-132	-357	-239
	384	621	701	639	447	256	523	423	259	266	365	448	434	291	123	197	249	246	273	325	216	267	500
29	167	132	60	53	112	120	133	113	126	179	114	114	115	73	80	65	79	106	114	97	143	86	
	-280	-268	-165	-57	-173	-312	-242	-123	-390	-166	-219	-273	-106	-143	-224	-305	-156	-112	-383	-135	-70	-124	-209
	448	402	227	111	286	434	376	337	305	571	418	280	335	346	187	208	304	413	272	210	528	222	149
30	94	75	47	15	4	9	59	62	72	51	69	103	84	56	36	51	61	86	108	165	229	175	
	-199	-66	-31	-75	-85	-17	-80	-58	-117	-75	-52	-227	-53	-20	-45	-88	-168	-65	-179	-461	-393	-105	-121
	295	143	83	47	23	38	140	148	189	126	122	331	137	87	62	124	240	108	152	288	628	623	426

**AE INDICES 1985 (continued)**

DAY\UT	HOURLY VALUES (nT) OF AU, AL AND AE INDICES												JULY 1985														
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN		
1	AU	198	183	160	116	42	134	114	64	42	40	88	101	94	107	84	72	79	71	101	79	103	68	38	99		
	AL	-201	-190	-226	-85	-108	-389	-111	-36	-15	-59	-108	-68	-86	-225	-135	-146	-117	-115	-49	-106	-59	-35	-153	-153		
	AE	393	803	555	351	343	127	243	504	176	78	56	148	209	163	193	310	208	227	189	217	129	211	128	74	253	
2	AU	64	37	35	37	51	37	16	14	12	17	27	24	32	35	27	24	22	41	48	50	58	82	67	41	37	
	AL	-75	-32	-26	-21	-32	-41	-29	-24	-22	-28	-35	-34	-13	-14	-13	-25	-38	-69	-87	-53	-69	-53	-23	-37	-37	
	AE	140	70	62	59	83	79	45	38	35	46	62	59	53	49	41	38	48	79	145	137	128	136	114	66	76	
3	AU	35	40	72	61	36	27	31	19	20	24	31	69	85	55	39	30	39	26	37	44	41	79	77	218	51	
	AL	-17	-25	-85	-88	-25	-28	-24	-17	-14	-14	-23	-29	-143	-119	-62	-65	-26	-27	-18	-46	-42	-60	-225	-53	-53	
	AE	53	67	158	149	62	56	56	37	34	39	55	99	127	116	101	95	65	54	56	91	94	128	137	444	105	
4	AU	229	165	177	113	109	76	88	117	132	106	55	138	218	270	127	190	267	248	225	300	282	220	233	142	176	
	AL	-220	-171	-244	-106	-69	-69	-72	-161	-163	-52	-38	-58	-548	-571	-154	-214	-324	-353	-301	-544	-523	-349	-393	-277	-248	-248
	AE	451	337	393	220	178	145	160	279	296	160	94	196	767	843	282	405	590	602	527	846	807	570	627	420	425	425
5	AU	112	130	144	177	169	179	127	143	140	122	146	94	117	151	104	81	129	-133	-168	-90	-84	110	182	191	177	
	AL	-125	-74	-170	-75	-61	-365	-230	-98	-127	-155	-232	-105	-101	-344	-229	-133	-168	-171	-103	-298	-26	-298	-157	-332	-196	
	AE	238	205	316	553	531	546	359	242	268	278	379	200	219	495	333	215	246	152	213	221	389	490	284	532	329	
6	AU	164	133	179	197	134	123	137	87	91	116	208	94	128	97	60	56	83	138	107	140	179	244	135	303	139	
	AL	-279	-145	-53	-358	-61	-153	-279	-564	-396	-277	-564	-401	-257	-235	-557	-318	-209	-181	-150	-92	-85	-259	-153	-417	-182	-378
	AE	444	279	433	556	396	277	564	401	257	235	557	318	318	318	318	318	318	323	294	366	662	318	682	366	366	
7	AU	287	199	280	153	173	187	107	201	116	54	158	135	107	63	120	124	56	51	55	83	130	145	182	127		
	AL	-456	-428	-572	-279	-178	-411	-188	-202	-233	-45	-165	-267	-110	-98	-291	-304	-166	-164	-57	-95	-218	-264	-233	-220	-220	
	AE	744	628	853	433	600	295	404	349	300	100	323	403	218	163	412	429	223	223	55	70	141	225	364	447	361	358
8	AU	44	76	76	115	123	91	36	37	53	75	38	37	37	48	32	23	35	42	48	74	179	275	218	215	204	118
	AL	-42	-63	-26	-94	-189	-152	-342	-107	-50	-43	-39	-38	-38	-38	-86	-74	-23	-18	-29	-55	-161	-223	-183	-100	-190	
	AE	86	140	68	172	304	418	448	150	105	126	319	317	260	162	375	255	99	538	837	479	425	475	640	227	309	
9	AU	58	91	130	205	241	192	124	116	37	17	15	26	29	53	48	36	37	40	59	109	72	36	37	74	74	
	AL	-46	-92	-214	-500	-422	-301	-249	-203	-170	-17	-16	-19	-31	-120	-186	-67	-43	-71	-132	-111	-62	-59	-134	-134	-202	
	AE	105	145	34	706	664	494	375	321	107	34	39	34	46	60	173	209	224	104	83	130	241	184	98	97	209	
10	AU	144	85	113	91	36	37	34	53	75	38	37	37	48	32	23	35	42	48	74	179	275	218	215	204	118	
	AL	-54	-108	-46	-72	-34	-27	-21	-12	-11	-7	-16	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-11	-100	
	AE	99	194	260	164	71	65	55	67	104	76	81	77	106	119	97	67	62	61	78	130	319	329	282	226		
11	AU	133	120	154	128	99	58	122	115	81	101	127	94	95	86	112	81	56	49	74	126	180	203	181	185		
	AL	-97	-62	-152	-194	-126	-51	-116	-87	-220	-141	-57	-97	-66	-64	-110	-117	-21	-19	-21	-63	-44	-152	-190	-202	-103	
	AE	232	184	306	323	226	109	240	203	302	243	185	192	162	150	223	199	78	69	96	190	225	356	372	219		
12	AU	205	184	200	424	274	329	300	309	311	369	488	445	409	425	498	417	323	406	422	329	363	128	71	41	301	
	AL	-194	-40	-388	-602	-500	-341	-300	-281	-188	-283	-688	-447	-455	-581	-593	-655	-568	-593	-449	-780	-213	-16	-35	-400	-400	
	AE	400	604	588	1027	776	675	540	582	498	595	1058	937	901	991	1029	1081	1066	1010	779	1144	342	88	67	702		
13	AU	—	112	27	24	20	38	56	40	31	23	344	231	223	245	145	203	206	370	323	412	206	217	222	283		
	AL	—	29	25	17	21	10	34	31	34	31	-148	-279	-455	-297	-396	-402	-392	-326	-598	-184	-186	-323	-558	-526	-232	
	AE	63	43	36	32	34	46	73	72	103	274	511	799	578	443	600	609	762	650	991	392	405	542	781	811	402	
14	AU	191	157	125	212	245	265	238	316	205	161	286	173	59	83	60	44	93	106	57	29	41	69	59	33	138	
	AL	—	571	-205	-303	-361	-474	-417	-514	-307	-210	-324	-276	-136	-89	-42	-106	-160	-160	-42	-38	-48	-31	-219	-358	-358	-358
	AE	81	152	224	602	130	128	260	307	510	202	176	195	102	43	37	48	48	48	48	48	48	48	48	48	195	

**AE INDICES 1985 (continued)**

16	60	53	53	55	31	30	82	59	34	47	37	25	31	40	50	64	39	37	49	58	40	71	45	52	
	-75	-83	-69	-68	-50	-17	-20	-55	-69	-28	-29	-11	-22	-64	-90	-112	-52	-43	-37	-41	-47	-37	-52	-48	
17	137	123	124	82	47	103	115	104	76	68	53	43	63	114	154	150	102	102	78	114	93	90	101	-52	
17	100	106	114	124	231	121	91	85	42	161	293	282	289	157	327	236	128	90	78	100	71	52	94	121	145
	-90	-135	-77	-141	-368	-130	-43	-38	-20	-39	-486	-572	-479	-261	-549	-482	-180	-70	-118	-103	-52	-94	-121	-145	-195
191	242	191	266	601	252	134	123	63	200	780	854	768	419	877	719	309	162	160	220	175	88	182	228	342	
18	214	198	98	111	69	107	126	49	77	122	78	157	144	103	50	44	90	141	78	52	129	179	160	58	110
	-301	-367	-139	-212	-143	-94	-69	-51	-10	-142	-148	-450	-500	-300	-300	-73	-339	-181	-67	-39	-154	-537	-290	-80	-179
515	566	238	324	214	202	151	179	265	166	306	594	264	105	119	431	323	147	92	284	717	451	139	290		
19	44	97	109	71	65	28	50	66	101	150	134	110	111	134	133	92	53	61	56	40	42	43	39	28	
	-31	-80	-216	-125	-85	-60	-152	-128	-91	-125	-398	-204	-243	-204	-243	-129	-53	-111	-31	-45	-75	-23	-23	-118	-118
77	178	327	197	151	89	233	235	230	242	260	508	316	377	406	222	108	173	93	86	75	70	63	47	198	
20	25	45	58	96	96	130	123	38	25	42	87	68	72	92	84	160	170	79	44	57	36	35	57	73	
	-21	-44	-54	-267	-172	-182	-106	-22	-34	-23	-101	-180	-107	-98	-152	-356	-413	-161	-20	-11	-13	-27	-26	-36	-109
48	90	113	364	268	312	230	60	59	66	189	248	180	191	237	517	584	241	65	69	50	62	63	94	183	
21	83	80	133	120	119	123	113	143	159	162	174	124	115	42	20	20	13	19	16	24	30	31	32	53	51
	-53	-118	-198	-192	-114	-136	-113	-143	-159	-177	-237	-113	-62	-48	-23	-20	-34	-20	-19	-17	-20	-15	-32	-53	51
137	199	332	314	234	260	328	257	340	411	238	178	92	44	41	48	41	36	43	50	47	55	109	82	163	
22	39	29	29	36	55	51	66	83	80	67	73	96	70	52	38	27	32	32	36	42	59	71	85	55	
	-29	-32	-36	-33	-76	-53	-48	-71	-100	-70	-107	-107	-107	-107	-107	-107	-107	-16	-6	-7	-19	-27	-26	-39	
68	62	67	70	89	128	120	132	158	169	104	167	178	105	71	46	49	39	35	50	78	99	112	68	94	
23	65	41	35	112	207	166	134	155	120	92	55	79	68	50	21	35	37	89	107	109	91	86	109	137	
	-55	-12	-14	-21	-219	-256	-153	-193	-168	-62	-159	-137	-137	-137	-137	-137	-137	-150	-152	-107	-91	-76	-91	-137	
122	55	50	136	428	423	288	350	289	155	145	239	158	188	114	194	166	240	260	251	183	162	202	216		
24	80	64	87	83	59	126	194	125	92	46	76	148	166	141	82	34	30	25	47	66	150	112	152	184	
	-79	-41	-28	-92	-263	-213	-118	-200	-44	-347	-244	-106	-106	-106	-106	-106	-106	-155	-95	-82	-213	-116	-142	-127	
161	106	133	123	88	219	459	339	211	64	93	349	488	346	142	60	55	60	103	163	234	325	289	327	227	
25	177	149	157	164	96	109	149	117	67	91	82	58	41	40	18	26	56	83	123	131	118	93	98	98	
	-316	-251	-278	-408	-325	-140	-294	-271	-73	-63	-155	-51	-22	-32	-27	-38	-37	-143	-343	-238	-88	-82	-86	-151	-159
495	401	436	573	322	250	444	389	141	156	238	110	65	73	46	65	94	226	468	370	207	176	181	250		
26	64	46	29	38	152	189	88	36	48	133	99	50	91	58	53	63	36	42	65	79	178	202	214	95	
	-140	-32	-37	-36	-173	-149	-83	-47	-21	-99	-295	-155	-72	-80	-70	-80	-80	-207	-66	-41	-28	-568	-427	-443	-165
205	79	67	76	276	659	220	83	70	233	391	226	170	138	124	149	244	110	108	451	67	69	658	260		
27	165	110	125	183	124	204	161	204	71	131	189	141	178	173	65	44	47	39	51	71	70	60	109		
	-267	-138	-288	-214	-15	-321	-254	-294	-73	-37	-434	-312	-312	-325	-63	-40	-41	-41	-94	-143	-72	-42	-39	-229	-184
433	249	414	398	241	526	588	500	112	205	562	576	490	499	129	85	69	81	147	216	144	103	107	339		
28	127	137	120	159	120	80	49	69	58	100	105	83	74	45	38	54	33	39	59	145	200	83	64	86	
	-287	-251	-191	-374	-259	-145	-36	-129	-79	-67	-227	-113	-53	-29	-64	-114	-24	-19	-50	-131	-389	-163	-34	-137	
415	389	313	533	379	226	86	199	137	169	327	198	127	74	102	169	57	59	110	277	590	248	125	224		
29	52	74	49	37	23	31	47	44	15	16	17	25	56	57	71	47	39	51	71	70	60	66	109		
	-53	-70	-43	-29	-29	-45	-81	-63	-23	-22	-21	-61	-66	-87	-118	-107	-47	-47	-96	-168	-87	-53	-42	-63	
107	145	93	67	53	76	97	126	78	40	47	128	144	159	154	97	136	232	166	127	93	79	110			
30	32	21	47	80	179	220	124	34	40	61	108	117	143	201	229	70	62	26	29	35	30	43	64		
	-38	-32	-32	-101	-369	-442	-131	-16	-17	-24	-32	-226	-211	-592	-459	-66	-6	-18	-20	-29	-32	-25	-49	-117	
71	54	80	181	549	662	256	50	57	87	142	344	374	594	690	137	69	50	49	50	65	63	69	114		
31	69	43	29	54	39	102	152	116	432	312	336	237	180	267	503	426	245	172	246	208	234	378	336		
	-53	-28	-24	-25	-43	-104	-334	-544	-432	-760	-576	-191	-384	-686	-661	-268	-173	-406	-317	-54	-581	-381	-381		

**AE INDICES 1985 (continued)**

HOURLY VALUES (nT) OF AU, AL AND AE INDICES

1985

DAY\UT	AUGUST												AUGUST												MEAN	
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1 AU	196	143	147	81	103	136	72	43	21	51	73	110	119	76	153	110	77	68	121	85	83	110	99	97	99	
AL	-261	-70	-87	-165	-166	-294	-271	-40	-8	-32	-76	-92	-60	-47	-51	-347	-95	-89	-216	-85	-52	-202	-131	-131	-139	
AE	459	214	235	247	270	430	343	84	29	84	149	202	180	124	514	457	173	157	337	171	136	313	184	230	239	
2	83	116	89	60	140	185	140	147	140	77	81	83	43	32	47	87	111	168	184	163	158	225	157	102	117	
	-158	-183	-103	-72	-73	-204	-236	-219	-291	-207	-93	-41	-34	-19	-73	-159	-361	-436	-301	-164	-278	-310	-245	-128	-183	
242	301	194	133	24	390	390	377	367	432	284	174	125	77	51	121	247	473	605	485	328	437	536	404	232	301	
3	78	56	24	58	51	19	20	13	31	48	42	29	29	40	32	27	40	67	78	89	91	111	105	85	53	
	-232	-106	-25	-36	-95	-18	-11	-21	-39	-114	-82	-9	-13	-22	-28	-42	-78	-74	-201	-102	-94	-81	-119	-42	-70	
312	163	50	96	147	39	32	36	70	163	125	38	43	62	61	70	118	141	280	192	187	193	225	129	124		
4	67	75	71	116	129	136	127	194	29	93	54	63	67	63	55	35	48	32	34	55	60	61	62	52	69	
	-62	-113	-119	-160	-223	-272	-194	-21	-47	-82	-44	-56	-66	-147	-107	-123	-203	143	112	67	58	92	97	125	127	80
130	190	191	277	359	360	399	289	51	141	137	107	123	129	203	143	112	67	58	92	97	125	127	80	166		
5	43	35	29	19	40	31	31	38	32	43	50	39	29	33	36	15	24	37	29	37	27	30	22	25	32	
	-17	-55	-18	-40	-27	-70	-43	-35	-39	-21	-80	-21	-21	-80	-21	-34	-34	-44	-28	-73	-56	-36	-28	-25	-39	
61	91	86	37	55	59	95	108	75	79	89	60	54	55	117	45	59	81	57	111	84	67	52	51	72		
6	24	38	30	14	14	14	17	16	34	21	37	54	36	30	20	13	18	38	44	64	63	33	26	39	31	
	-23	-29	-29	-17	-16	-22	-19	-17	-17	-20	-30	-39	-39	-33	-43	-46	-46	-37	-38	-31	-121	-150	-30	-26	-28	
48	69	60	32	31	36	36	38	35	53	42	68	94	55	64	64	60	56	76	75	186	214	64	54	68		
	-48	-14	-15	-18	-10	-30	-52	-18	-21	-23	-23	-24	-49	-64	-37	-30	-36	-30	-39	-38	-31	-35	-79	-220	-47	
81	246	127	33	31	38	47	94	104	47	38	56	67	88	82	48	51	59	58	66	74	89	162	359	89		
8	136	103	49	55	69	86	53	77	48	41	52	76	84	67	29	27	19	29	34	61	84	118	111	140	69	
	-190	-81	-28	-40	-121	-168	-65	-37	-26	-30	-23	-42	-95	-63	-26	-44	-25	-27	-30	-66	-71	-94	-127	-98	-69	
328	186	77	96	191	255	118	115	75	72	76	119	180	131	56	71	45	57	65	128	156	253	239	239	139		
9	100	84	82	68	46	13	8	19	20	27	31	40	50	49	29	22	18	23	41	50	48	45	40	36	41	
	-94	-125	-59	-37	-26	-32	-24	-13	-22	-30	-28	-25	-32	-46	-37	-26	-27	-34	-38	-31	-35	-79	-220	-47	-35	
195	211	142	106	68	47	33	43	33	43	58	60	66	82	96	67	48	45	57	80	90	62	54	53	47	77	
10	30	36	44	49	98	182	168	211	177	168	168	144	95	65	37	57	64	45	41	65	84	51	42	58	91	
	-10	-17	-54	-118	-163	-128	-193	-338	-145	-94	-215	-201	-130	-130	-130	-130	-130	-130	-130	-49	-57	-117	-35	-19	-104	
41	55	100	168	262	310	363	549	322	262	383	262	383	262	383	262	383	262	383	140	91	123	201	86	50	78	
11	135	162	108	115	44	19	15	22	28	30	72	91	67	46	41	24	20	25	36	35	30	26	21	52		
	-231	-297	-107	-80	-71	-44	-30	-17	-21	-32	-58	-98	-104	-41	-41	-29	-27	-26	-60	-48	-14	-15	-17	-63		
368	460	216	196	116	64	46	40	50	63	131	190	172	87	71	52	46	46	97	84	45	42	39	115			
12	19	20	30	53	84	100	114	110	120	119	75	66	61	91	61	98	100	211	218	252	149	84	60	175		
	-14	-23	-31	-45	-35	-82	-164	-118	-50	-41	-139	-169	-103	-69	-89	-242	-161	-57	-67	-179	-298	-391	-198	-499	-136	
740	704	927	615	438	994	473	592	1000	501	988	515	577	358	218	134	135	239	499	560	872	647	345	137	550		
14	52	98	112	163	137	121	174	81	126	111	60	51	37	63	78	59	45	57	77	53	82	89	87			
	-54	-110	-202	-273	-248	-594	-327	-245	-382	-75	-54	-40	-201	-105	-93	-170	-58	-127	-146	-203	-175					
107	210	315	436	355	370	769	409	371	494	136	85	92	104	281	165	140	228	249	112	156	217	207	293	262		
15	78	45	63	103	113	156	131	111	129	99	99	72	75	65	42	28	55	48	123	111	142	125	91			
	-134	-163	-125	-399	-416	-257	-265	-160	-265	-155	-134	-422	-272	-56	-33	-37	-33	-41	-67	-194	-267	-196	-267	-196		
213	209	334	542	530	433	389	376	289	364	255	208	498	338	85	81	62	116	90	191	306	422	393	288			

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**AE INDICES 1985 (continued)**

16	148	105	81	58	52	35	22	60	50	101	60	45	36	47	57	42	49	52	69	107	92	73	93	100	68	
	-205	-184	-158	-177	-116	-29	-27	-194	-167	-81	-48	-28	-38	-144	-258	-154	-123	-96	-355	-171	-73	-205	-234	-143		
	354	290	241	237	220	152	51	88	245	268	142	93	65	86	202	300	204	177	166	462	263	147	299	336	212	
17	58	62	64	98	87	63	84	92	148	201	126	160	175	164	96	142	115	78	62	75	95	94	102	102	102	
	-71	-57	-89	-346	-232	-63	-52	-44	-117	-304	-136	-160	-237	-164	-129	-337	-222	-170	-69	-50	-40	-81	-133	-223	-160	
	130	121	154	444	321	145	137	137	566	505	263	321	413	313	226	480	338	249	131	125	136	177	194	284	263	
18	35	19	38	58	82	105	61	73	114	84	51	67	47	76	30	30	49	94	106	129	137	246	152	125	84	
	-29	-26	-31	-42	-14	-124	-25	-36	-162	-45	-66	-36	-36	-62	-62	-62	-62	-62	-195	-384	-384	-184	-184	-107	-107	
	64	46	69	101	230	231	87	100	151	246	97	133	83	174	92	92	145	305	302	213	189	631	518	310	192	
19	105	70	77	166	163	192	107	96	41	30	24	62	44	24	18	29	27	41	49	41	70	101	122	150	77	
	-77	-175	-83	-448	-461	-293	-284	-92	-26	-32	-39	-85	-36	-51	-32	-36	-61	-41	-49	-148	-110	-136	-119	-119	-119	
	183	246	161	614	625	486	392	189	64	57	56	102	129	61	69	62	54	78	111	82	120	249	233	288	196	
20	129	187	158	103	126	209	128	61	43	47	46	46	40	75	66	82	80	61	78	66	53	92	55	83	88	
	-149	-230	-309	-112	-94	-218	-219	-194	-64	-23	-25	-30	-43	-105	-171	-327	-238	-63	-73	-90	-54	-120	-142	-160	-135	
	279	419	469	216	221	427	348	256	107	71	72	77	83	180	237	410	320	125	152	157	108	213	199	244	225	
21	77	33	90	60	55	106	80	55	85	62	62	42	25	19	18	20	26	38	53	22	20	35	72	101	51	
	-134	-29	-128	-71	-39	-217	-123	-12	-60	-192	-32	-28	-19	-28	-44	-40	-56	-125	-93	-25	-23	-37	-73	-277	-79	
	212	63	220	132	95	323	204	68	146	205	55	71	44	48	63	62	83	163	147	47	44	73	147	380	131	
22	143	144	148	124	79	123	42	61	205	147	78	71	76	34	43	125	276	214	135	225	190	114	88	95		
	-232	-329	-474	-654	-341	-122	204	60	92	759	656	142	153	259	157	206	453	733	761	425	631	465	212	199	378	
23	115	105	149	170	79	58	52	72	67	120	117	182	48	73	56	57	61	30	47	83	147	127	89	139	94	
	-422	-149	-310	-582	-324	-111	-34	-52	-29	-210	-240	-517	-95	-71	-160	-63	-102	-46	-37	-87	-226	-264	-103	-219	-185	
	539	255	466	753	405	170	86	124	96	331	358	700	144	145	71	121	164	76	84	170	374	393	194	359	280	
24	126	95	89	73	40	82	60	27	45	48	46	34	33	24	18	23	37	37	35	38	42	54	38	49	49	
	-370	-178	-113	-111	-51	-80	-206	-48	-47	-32	-49	-49	-54	-98	-45	-34	-26	-32	-32	-85	-67	-37	-63	-82	-31	-83
	497	275	203	185	92	164	266	76	93	81	96	84	88	123	65	59	64	70	121	107	80	118	121	61	133	
25	39	48	87	84	14	223	248	357	186	143	91	29	20	59	69	106	87	55	32	69	69	53	55	103		
	-28	-46	-131	-69	-100	-200	-254	-567	-398	-146	-85	-160	-130	-73	-202	-137	-98	-160	-35	-18	-75	-148	-74	-28	-140	
	68	96	219	155	245	423	502	926	585	290	210	252	160	93	262	206	206	247	91	51	145	228	128	84	245	
26	89	120	73	82	162	89	112	39	40	34	26	27	27	24	42	31	21	60	117	57	96	143	178	188		
	-75	-331	-78	-67	-82	-236	-69	-66	-115	-42	-112	-12	-15	-18	-79	-62	-58	-177	-69	-175	-249	-437	-124	-124		
	165	453	152	150	544	326	182	105	155	76	39	40	42	42	122	94	91	119	295	135	166	319	429	627	203	
27	148	173	194	116	66	41	28	25	130	110	85	50	64	51	37	62	84	98	54	23	30	35	40	75		
	-369	-243	-194	-101	-39	-31	-22	-23	-107	-265	-375	-102	-35	-45	-9	-102	-240	-328	-74	-30	-33	-32	-37	-121		
	518	417	389	218	106	74	51	50	238	376	461	152	100	96	87	164	325	427	128	53	65	68	69	90	197	
28	85	78	76	59	72	72	56	92	88	136	97	81	92	50	35	49	63	58	138	141	158	136	134	103	91	
	-77	-154	-85	-85	-7	-30	-31	-64	-159	-155	-96	-94	-284	-113	-24	-51	-332	-219	-195	-466	-297	-140	-175	-295	-200	-156
	163	234	146	79	104	88	157	247	292	193	175	376	163	59	101	395	278	319	605	438	299	313	430	304	248	
29	180	148	112	124	193	156	67	132	100	71	85	110	69	43	69	43	69	43	246	169	130	95	91	63	117	
	-275	-327	-165	-126	-341	-438	-205	-74	-267	-150	-114	-246	-389	-188	-77	-98	-184	-189	-395	-205	-198	-204	-173	-211	-211	
	456	476	279	251	535	595	360	142	400	250	186	333	499	257	91	168	292	297	641	374	329	300	266	122	329	
30	60	139	107	78	120	60	29	19	13	19	14	13	16	16	14	11	20	37	101	208	249	244	159	133	78	
	-59	-265	-238	-133	-341	-192	-29	-14	-20	-13	-20	-22	-17	-17	-14	-30	-30	-33	-27	-234	-245	-154	-110	-114	-114	
	120	406	366	212	461	253	60	34	28	39	28	34	39	44	44	41	51	71	219	446	584	490	315	245	193	
31	166	206	136	127	161	185	160	256	295	243	286	305	275	281	171	173	278	335	292	199	102	111	72	212		
	-257	-322	-95	-167	-115	-311	-426	-390	-361	-558	-795	-465	-406	-459	-246	-224	-574	-754	-437	-407	-138	-80	-249	-189	-351	
	425	529	232	295	277	497	587	647	658	802	1083	771	682	741	408	398	852	1033	772	700	337	183	361	263	564	

**AE INDICES 1985 (continued)**

DAY\UT	HOURLY VALUES (INT) OF AU, AL AND AE INDICES												SEPTEMBER 1985												
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
1 AU	53	40	38	36	42	49	24	23	19	17	20	25	34	40	11	13	56	86	26	33	85	75	26	37	38
AL	-19	-11	-114	-32	-23	-20	-26	-31	-37	-42	-36	-66	-263	-92	-41	-101	-284	-66	-17	-32	-119	-64	-184	-63	
AE	73	53	68	151	75	73	42	43	44	45	51	57	72	138	55	50	122	349	119	75	187	360	93	55	102
2	20	14	21	23	51	42	35	26	31	43	41	67	49	31	17	25	26	19	22	19	21	18	16	29	
	-12	-14	-34	-91	-56	-38	-12	-12	-45	-105	-126	-106	-29	-28	-65	-80	-58	-33	-29	-21	-20	-19	-16	-44	
3	19	15	17	33	28	29	81	53	32	18	20	12	17	14	11	14	14	23	24	23	26	25	25	75	
	-20	-24	-19	-31	-91	-26	-120	-107	-21	-28	-36	-36	-29	-20	-13	-30	-34	-55	-41	-21	-18	-11	-17	-20	-36
4	41	41	37	65	120	56	202	161	55	47	58	49	48	36	25	45	49	79	67	45	47	39	44	46	63
	24	18	20	19	32	27	26	18	20	17	28	26	21	18	15	16	15	16	23	16	13	15	20	20	
5	51	56	47	71	49	46	36	44	46	62	48	34	25	18	26	56	53	37	40	39	32	35	43	43	
	16	15	14	21	20	20	19	16	14	17	16	16	25	19	17	15	21	36	44	39	30	27	23	22	
6	-19	-20	-21	-21	-21	-17	-17	-10	-15	-18	-24	-23	-20	-16	-13	-12	-12	-44	-42	-15	-12	-10	-22	-22	
	37	36	37	38	42	37	27	28	30	36	41	40	46	35	34	30	35	59	88	127	73	42	36	33	
7	21	30	61	73	89	45	46	53	95	79	139	122	97	104	148	181	251	215	282	272	145	131	96	116	
	27	29	83	177	182	195	99	68	70	148	195	257	246	350	286	350	373	537	496	623	509	233	198	218	
8	17	21	30	61	73	89	45	46	53	95	79	139	122	97	104	148	181	251	215	282	272	145	131	96	
	-9	-7	-52	-115	-108	-106	-53	-21	-16	-51	-115	-117	-122	-253	-182	-212	-192	-286	-280	-339	-236	-88	-66	-121	-131
9	72	82	82	117	165	137	110	80	61	42	47	23	48	28	30	67	84	78	110	91	89	93	81		
	-191	-158	-294	-173	-134	-134	-119	-104	-83	-81	-49	-25	-22	-27	-101	-91	-64	-70	-91	-64	-167	-154	-100		
10	264	242	398	248	251	300	258	210	220	165	143	92	74	46	75	52	58	169	176	143	141	132	258	182	
	130	97	64	51	50	59	71	117	117	145	179	112	88	91	139	100	122	72	47	42	128	84	94	121	
11	-148	-77	-66	-46	-59	-76	-113	-212	-157	-157	-157	-75	-139	-314	-161	-161	-222	-153	-106	-18	-102	-105	-324	-145	
	279	175	110	97	109	166	185	330	297	338	188	228	306	454	262	375	226	154	60	231	189	419	356	357	
12	64	28	51	103	119	83	64	54	69	164	146	172	120	49	88	180	213	210	97	69	95	51	65	103	
	-143	-54	-60	-41	-242	-73	-13	-24	-51	-231	-422	-262	-163	-164	-455	-499	-455	-499	-146	-35	-141	-157	-124	-186	
13	258	119	89	93	303	362	158	77	80	121	396	570	584	383	134	153	635	713	748	245	106	238	209	190	
	48	59	46	34	80	86	159	128	114	170	103	59	34	17	18	34	62	95	137	175	134	129	145	105	
14	-36	-65	-106	-32	-81	-128	-582	-280	-51	-156	-137	-85	-39	-15	-18	-62	-281	-345	-306	-337	-203	-307	-339	-244	
	85	126	153	66	161	742	410	167	327	241	75	23	38	96	343	440	444	513	338	437	486	351	268		
15	82	126	158	98	73	121	85	65	136	150	126	65	16	15	23	63	113	211	183	117	42	37	94		
	-152	-213	-217	-141	-228	-174	-337	-167	-43	-197	-198	-152	-111	-55	-34	-12	-73	-200	-537	-230	-115	-33	-20	-153	
16	235	340	376	241	302	296	466	253	109	334	349	279	178	72	50	50	37	137	313	748	413	233	77	248	
	42	38	25	21	19	20	31	38	38	50	53	58	47	74	91	56	48	69	59	44	31	41	46	45	
17	-42	-75	-70	-9	-12	-80	-66	-64	-53	-53	-50	-53	-47	-74	-91	-202	-264	-318	-134	-42	-28	-46	-46	-84	
	86	115	96	32	29	33	113	106	134	105	130	129	86	131	293	258	294	388	193	88	60	89	93	57	
18	29	23	19	24	29	48	55	81	96	94	93	57	78	52	25	18	35	41	36	28	29	44	68		
	-10	-8	-7	-26	-161	-119	-51	-69	-119	-137	-137	-119	-47	-74	-62	-135	-74	-95	-89	-63	-38	-45	-84		
19	48	52	74	69	40	23	30	22	20	26	20	26	22	27	32	22	27	37	149	201	85	158	101	97	
	-35	-83	-146	-37	-23	-14	-11	-15	-16	-20	-24	-30	-30	-45	-97	-77	-360	-593	-178	-196	-203	-105	-105		
20	84	85	158	217	111	63	38	42	37	40	42	51	54	59	78	120	60	510	795	264	354	308	312	167	

**AE INDICES 1985 (continued)**

16	164	108	96	240	134	90	88	74	76	109	94	132	182	84	46	63	147	86	73	40	48	114	123	144	106	
	-247	-351	-156	-328	-306	-191	-47	-45	-60	-175	-120	-492	-744	-287	-159	-327	-477	-325	-219	-80	-58	-135	-375	-325	-251	
	412	461	242	569	442	282	135	121	137	285	215	624	927	372	206	390	624	413	293	121	107	250	499	470	358	
17	150	128	119	68	56	62	54	111	131	126	52	44	29	26	17	21	55	54	75	45	31	68	68	31	148	
	-201	-304	-219	-171	-141	-211	-65	-19	-96	-301	-288	-363	-53	-32	-39	-86	-44	-28	-183	-259	-125	-72	-33	-148	-148	
	353	433	339	247	210	267	300	128	74	208	433	415	417	99	62	66	107	62	50	239	314	201	117	64	217	
18	28	19	19	15	17	38	60	166	53	-75	-148	-188	-170	-37	-29	-40	-53	-102	-53	-20	-12	-19	-37	-37	-37	
	-228	-47	-93	-18	-7	-59	-206	-166	-53	-75	-148	-188	-170	-37	-29	-40	-53	-102	-53	-20	-12	-19	-37	-37	-37	
	58	67	118	35	25	98	267	215	114	183	273	267	202	73	54	61	70	126	78	41	36	44	33	70	109	
19	33	31	25	30	34	74	80	98	130	145	56	163	135	51	41	157	263	160	105	145	155	80	73	100	98	
	-95	-113	-46	-91	-63	-88	-141	-128	-116	-741	-1046	-603	-325	-125	-53	-332	-927	-129	-71	-205	-497	-129	-98	-125	-125	
	129	145	71	121	98	163	223	227	247	887	1102	767	369	177	95	489	1191	290	177	351	652	209	173	226	357	
20	78	121	167	150	155	84	46	128	115	111	141	134	83	49	96	46	47	63	71	110	124	213	124	152	109	
	-172	-334	-260	-255	-213	-42	-173	-132	-20	-270	-676	-76	-200	-195	-444	-340	-94	-122	-206	-206	-472	-278	-284	-273	-383	
	206	457	428	407	628	297	88	302	636	382	817	534	284	245	540	386	142	185	273	233	228	638	402	437	383	
21	66	110	105	117	108	131	164	102	111	79	118	174	108	57	75	57	79	126	121	152	133	109	98	78	107	
	-83	-85	-268	-332	-262	-304	-348	-102	-109	-96	-104	-168	-511	-166	-156	-205	-120	-297	-378	-577	-327	-263	-156	-226	-278	-242
	149	196	375	450	371	436	514	212	209	185	287	686	275	214	281	178	376	504	699	481	396	266	325	358	351	
22	67	117	94	96	110	114	118	94	73	28	51	60	50	56	53	76	105	65	62	72	59	28	68	80	75	
	-175	-126	-105	-111	-170	-195	-390	-118	-31	-20	-47	-83	-150	-338	-250	-310	-317	-125	-146	-30	-39	-73	-53	-152	-152	
	244	245	200	209	281	310	510	214	105	50	100	109	134	206	392	326	416	384	188	303	205	67	142	133	228	
23	49	44	31	32	51	62	80	137	149	142	120	66	47	15	12	11	22	17	26	19	25	17	16	53	53	
	-37	-15	-14	-15	-108	-96	-155	-354	-442	-378	-272	-52	-27	-16	-38	-121	-72	-22	-16	-24	-22	-11	-12	-98	-98	
	87	60	46	48	160	159	236	492	593	596	393	119	76	42	29	49	144	91	49	36	50	39	27	28	152	
24	19	19	22	48	86	63	57	46	65	59	75	68	57	51	28	43	55	143	187	96	125	105	92	97	71	
	-16	-17	-13	-50	-61	-15	-48	-159	-72	-19	-190	-264	-75	-261	-138	-227	-395	-719	-317	-205	-309	-191	-170	-240	-240	
	36	37	36	99	148	79	106	159	209	79	267	334	132	73	290	182	283	538	907	415	330	410	401	290	244	
25	74	88	75	61	48	66	97	126	82	42	51	60	53	72	73	185	132	69	106	122	88	135	79	55	85	
	-116	-128	-184	-32	-14	-36	-235	-692	-279	-37	-56	-48	-76	-136	-208	-351	-167	-211	-401	-204	-57	-309	-46	-207	-207	
	192	217	260	95	63	104	334	819	363	80	108	109	130	209	281	336	464	237	319	524	292	664	389	103	287	
26	47	47	46	37	85	67	71	84	129	216	107	65	28	15	8	29	24	19	57	123	104	103	112	80	71	
	-33	-126	-63	-53	-309	-264	-209	-279	-250	-721	-221	-61	-17	-13	-22	-75	-63	-29	-129	-273	-204	-364	-440	-259	-187	
	61	174	110	92	395	332	282	365	380	939	329	126	45	28	31	104	88	49	187	397	309	469	552	341	259	
27	68	47	37	33	55	85	109	163	121	158	81	103	24	17	10	18	29	32	69	143	112	202	152	108	82	
	-118	-45	-16	-33	-19	-201	-440	-347	-227	-311	-268	-168	-68	-34	-34	-67	-140	-93	-108	-362	-312	-665	-414	-115	-178	
	187	94	47	75	287	550	512	349	471	351	268	93	43	46	86	170	126	177	505	425	425	568	567	224	261	
28	56	31	36	32	27	29	46	51	35	49	87	72	81	58	47	26	19	64	105	110	101	33	34	22	43	
	-24	-30	-72	-103	-42	-57	-129	-79	-31	-22	-77	-115	-259	-243	-36	-64	-105	-110	-101	-23	-23	-33	-8	-84	-84	
	82	62	109	136	70	88	177	132	68	72	165	187	312	303	282	85	92	125	136	132	62	67	68	31	128	
29	24	20	33	44	36	30	21	25	18	9	16	27	31	21	10	18	29	11	17	24	22	25	25	22	22	
	-4	-8	-95	-76	-20	-10	-14	-15	-18	-15	-30	-52	-51	-31	-16	-26	-29	-32	-40	-124	-112	-10	-34	-35	-35	
	30	29	128	120	56	40	36	38	34	28	33	58	84	53	28	31	43	58	148	135	36	34	60	58	58	
30	15	15	19	12	19	23	18	33	22	38	23	28	34	18	12	15	22	30	43	36	57	50	29	26	26	
	-77	-28	-36	-33	-14	-17	-16	-34	-102	-68	-20	-18	-60	-86	-92	-28	-32	-106	-110	-140	-93	-218	-63	-63		
	93	44	57	45	34	34	68	125	107	45	47	95	105	111	41	42	55	137	153	176	150	259	89	90		

**AE INDICES 1985 (continued)**

DAY\UT	HOURLY VALUES (nT) OF RU, AL AND AE INDICES												OCTOBER				1985								
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN
1 AU	39	32	24	20	32	16	17	27	29	50	50	51	61	27	23	11	9	12	11	11	13	16	17	27	
AL	-9	-5	-8	-12	-12	-15	-17	-27	-40	-55	-72	-50	-58	-145	-98	-45	-104	-97	-7	-4	-7	-8	-18	-38	
AE	50	38	34	29	45	29	33	46	57	73	100	122	80	110	208	126	68	115	106	20	17	18	21	36	
2	23	26	52	53	47	50	55	106	128	134	47	31	20	14	10	14	30	38	51	43	50	55	34	48	
-62	-121	-99	-19	-77	-85	-143	-91	-24	-12	-14	-19	-18	-49	-59	-87	-30	-16	-24	-26	-59	-16	-24	-59	-104	
87	148	152	73	72	127	141	249	272	226	72	48	32	29	32	80	97	139	73	66	80	61	100	104		
3	24	22	22	28	31	38	55	118	154	180	281	139	127	131	172	162	48	44	113	60	43	58	46	89	
-11	-8	-17	-69	-80	-37	-38	-372	-267	-241	-500	-331	-500	-335	-244	-91	-105	-40	-119	-105	-81	-168	-105	-81	-168	
37	31	40	98	112	76	95	491	484	448	523	471	629	467	431	406	139	150	359	166	83	178	152	131	258	
4	68	67	74	101	111	86	132	159	180	209	299	241	142	84	163	184	168	104	77	58	175	137	173	97	137
-238	-245	-174	-189	-170	-115	-296	-286	-432	-252	-278	-272	-202	-178	-281	-233	-180	-109	-105	-41	-133	-111	-136	-116	-191	
307	314	249	291	282	201	430	445	432	462	579	515	346	263	445	418	349	214	183	100	309	250	310	214	329	
5	78	59	66	128	222	277	280	315	133	193	9	203	145	82	50	109	165	204	192	189	151	201	131	155	
-51	-52	-91	-186	-310	-373	-473	-448	-229	-440	-525	-777	-220	-36	-45	-299	-615	-523	-482	-496	-803	-377	-338	-159	-368	
130	113	158	316	533	651	754	864	362	634	535	981	366	120	96	409	780	728	675	685	955	579	470	675	524	
6	141	184	84	121	91	93	246	192	156	163	85	73	108	115	147	96	97	93	83	118	157	145	133	125	
-450	-406	-188	-232	-200	-199	-960	-628	-543	-691	-362	-312	-596	-495	-626	-331	-255	-203	-256	-187	-150	-288	-548	-631	-405	
592	591	273	354	293	1208	822	701	855	448	386	706	610	773	428	322	296	350	271	269	446	694	766	531		
7	132	98	85	77	119	92	86	81	101	87	114	120	109	115	78	129	187	170	99	88	80	81	84	149	
-356	-332	-196	-291	-214	-341	-139	-104	-212	-463	-339	-400	-417	-601	-507	-470	-325	-164	-217	-310	-317	-523	-325	-325		
489	431	281	256	611	384	301	423	241	192	327	585	450	476	546	788	678	425	253	298	392	401	674	432		
8	106	111	106	63	58	57	60	75	57	68	39	46	64	64	67	80	98	42	34	62	103	89	48	68	
-537	-410	-136	-147	-189	-117	-281	-178	-117	-130	-190	-93	-89	-350	-358	-302	-208	-186	-151	-91	-373	-224	-72	-19	-223	
645	523	243	210	361	248	178	358	165	198	448	140	155	415	386	382	395	250	186	154	477	314	121	56	292	
9	24	19	33	38	32	42	40	53	30	25	23	20	37	37	52	43	20	32	61	27	13	16	15	31	
-19	-25	-120	-95	-103	-162	-63	-156	-63	-77	-13	-23	-19	-18	-38	-191	-94	-105	-145	-212	-121	-48	-15	-11	-76	
44	46	153	134	135	205	117	39	39	47	40	56	77	244	139	127	178	150	62	32	28	38	108	108		
10	26	43	59	36	35	56	77	76	36	23	21	52	45	22	15	13	12	20	44	55	51	101	41		
-26	-98	-170	-193	-30	-49	-291	-137	-37	-22	-25	-80	-207	-49	-34	-13	-19	-11	-41	-134	-275	-182	-181	-101		
53	142	229	128	66	107	369	214	75	46	47	133	253	73	51	47	32	32	67	178	331	283	142			
11	62	57	55	61	78	141	177	188	180	156	133	103	54	4	164	195	171	155	172	98	125	103	138		
-138	-153	-126	-135	-153	-288	-561	-220	-163	-85	-58	-63	-59	-80	-187	-283	-157	-105	-296	-130	-236	-174	-297			
201	211	182	194	214	259	430	739	410	343	242	192	168	94	124	351	488	455	296	309	205	408	234	297		
12	112	101	101	48	28	30	59	28	40	56	58	43	35	52	23	28	62	34	45	46	57	34	43	51	
-359	-356	-102	-26	-15	-47	-63	-61	-61	-82	-19	-24	-26	-36	-43	-313	-151	-54	-90	-216	-144	-88	-101	-102		
472	458	204	75	46	108	92	54	118	141	63	60	79	60	72	375	186	100	137	274	179	132	153			
13	59	36	92	146	90	59	52	66	125	109	95	82	53	55	74	57	103	99	47	57	57	61	45		
-151	-35	-54	-432	-257	-66	-58	-164	-221	-73	-14	-120	-404	-71	-176	-478	-345	-513	-157	-98	-195	-114	-80	-160		
211	72	147	579	348	125	73	124	290	331	169	97	71	176	478	428	345	513	205	133	185	257	182	126		
14	45	55	63	44	86	83	74	39	35	68	53	63	38	34	28	17	15	20	27	16	25	23	42		
-11	-26	-77	-150	-84	-87	-60	-8	-13	-38	-251	-140	-41	-26	-149	-130	-40	-98	-64	-40	-29	-5	-4	-66		
57	82	141	195	170	131	48	48	107	304	79	62	53	167	146	61	126	81	66	54	31	30	109-			
15	22	27	20	30	81	172	187	241	164	62	54	36	19	34	64	34	40	31	19	48	88	93	67		
-4	-5	-19	-301	-521	-505	-491	-161	-46	-84	-64	-63	-69	-32	-136	-248	-161	-91	-30	-24	-63	-362	-312	-158		
26	33	26	49	383	694	693	734	327	108	138	100	82	105	53	156	312	196	132	62	44	112	451	406		

**AE INDICES 1985 (continued)**

16	132	124	88	115	113	87	103	107	91	196	138	108	125	117	58	60	34	32	28	64	127	89	92			
	-170	-167	-158	-337	-293	-187	-130	-499	-404	-294	-238	-134	-55	-79	-123	-216	-161	-106	-70	-94	-50	-240	-151	-184		
30	292	247	453	406	275	234	607	496	491	387	243	182	197	181	276	195	142	103	123	85	119	369	241	277		
17	97	128	73	103	83	70	78	106	83	93	84	86	67	122	42	14	44	127	188	272	103	46	106	94	96	
	-208	-174	-125	-215	-117	-26	-15	-83	-53	-36	-69	-125	-51	-145	-63	-47	-112	-4	-372	-450	-295	-54	-146	-261	-137	
306	304	200	319	201	97	94	190	138	130	154	212	119	268	107	62	157	500	639	567	162	91	252	356	234		
18	103	102	91	61	49	116	181	168	114	164	183	78	104	134	86	80	76	154	103	79	80	107				
	-218	-396	-157	-10	-46	-148	-246	-53	-27	-58	-332	-176	-179	-509	-253	-422	-267	-281	-128	-174	-221	-197				
323	499	250	73	96	191	265	428	223	142	130	498	606	360	259	58	557	353	293	209	436	233	254	302	306		
19	94	115	77	74	80	77	89	114	92	74	160	81	75	71	45	66	20	14	21	15	10	13	19	20	63	
	-366	-50	-35	-21	-125	-112	-93	-194	-263	-104	-506	-275	-167	-83	-224	-24	-22	-34	-21	-12	-9	-6	-116			
462	166	113	96	206	189	184	309	355	180	668	357	242	155	270	91	33	37	56	44	24	25	28	27	180		
20	17	18	44	68	100	43	59	39	80	85	78	74	40	33	18	16	13	8	12	25	16	11	19	14	39	
	-6	-9	-18	-31	-112	-54	126	162	396	245	177	157	106	60	33	44	4	81	130	140	29	24	36	27	100	
23	28	63	99	112	54	31	63	77	90	100	102	116	111	195	380	550	322	219	231	334	130	88	138			
21	12	14	15	45	60	39	29	38	54	64	58	75	42	44	92	200	79	68	116	119	69	65	75	64		
	-7	-5	-7	-8	-4	-2	-24	-22	-25	-46	-42	-39	-68	-150	-288	-350	-242	-151	-114	-233	-60	-22	-62	-81		
20	20	19	23	54	65	42	31	63	77	90	100	102	116	111	195	380	550	322	219	231	334	130	88	138	146	
22	86	139	128	79	86	109	116	167	134	73	41	27	32	38	14	12	26	26	84	152	99	78	74	80		
	-108	-308	-136	-57	-101	-347	-366	-202	-256	-74	-19	-11	-32	-20	-18	-68	-179	-229	-209	-453	-419	-210	-86	-126	-166	
195	449	265	137	188	456	483	370	391	98	61	39	65	59	33	80	205	256	284	606	518	309	165	201	247		
23	65	51	54	44	46	46	84	71	64	103	43	58	40	53	36	34	37	51	35	85	113	76	59			
	-170	-115	-25	-18	-22	-124	-139	-89	-57	-221	-221	-55	-183	-170	-123	-89	-327	-260	-154	-168	-224	-77	-136			
236	167	80	63	68	216	225	160	121	325	120	65	242	212	222	178	126	362	265	311	189	254	337	154	196		
24	83	49	42	38	85	87	104	51	31	42	32	10	13	13	20	58	71	38	41	30	24	38	46			
	-40	-27	-32	-33	-17	-168	-192	-70	-21	-22	-26	-12	-14	-26	-86	-262	-311	-90	-61	-39	-22	-12	-71			
125	77	62	76	56	253	280	197	70	54	69	55	23	27	39	107	321	433	128	102	70	47	51	117			
25	43	43	80	64	59	58	67	73	91	57	30	31	37	73	23	22	45	90	98	69	42	45	37	55		
	-13	-19	-94	-102	-92	-78	-19	-53	-228	-102	-16	-54	-162	-187	-187	-88	-299	-282	-80	-204	-80	-24	-69	-31	-99	
57	63	175	93	152	134	87	127	99	159	47	86	200	261	64	111	346	383	303	150	67	115	70	156			
26	33	42	30	22	31	33	42	42	26	27	34	29	23	27	11	5	6	7	7	6	8	10	11	13	22	
	-112	-11	-9	-24	-64	-58	-22	-1	-16	-39	-91	-47	-50	-33	-18	-15	-12	-18	-17	-16	-16	-19	-19	-26	-22	
46	54	40	47	95	65	44	27	43	64	121	71	78	45	25	22	19	26	24	24	27	32	33	49			
27	12	16	17	8	9	8	14	16	18	18	16	20	11	7	19	13	17	12	16	28	30	34	31	42		
	-10	-4	-5	-4	-5	-8	-9	-17	-16	-19	-10	-12	-16	-14	-15	-23	-45	-49	-14	-17	-28	-30	-34	-31	-42	
23	21	24	13	15	17	18	31	34	38	30	31	37	25	23	43	59	67	67	26	34	57	84	167	267	49	
28	61	38	27	17	28	37	52	55	50	29	19	13	9	6	5	10	8	9	8	12	11	15				
	-90	-54	-35	-27	-31	-64	-88	-92	-65	-41	-28	-27	-24	-22	-21	-27	-20	-26	-30	-30	-34	-31	-42			
153	33	61	93	216	159	148	108	174	224	188	122	36	27	27	44	24	11	12	14	9	9	90				
29	25	33	61	93	216	218	159	148	108	174	224	188	122	36	27	27	44	24	11	12	14	9	9	90		
	-43	-191	-84	-317	-291	-190	-163	-50	-116	-244	-456	-415	-248	-74	-14	-114	-165	-85	-24	-10	-11	-12	-11	-148		
69	225	345	410	508	409	323	199	227	419	641	438	197	50	53	142	210	110	36	23	26	21	239				
30	11	8	9	10	6	10	15	7	9	24	15	14	9	21	19	10	10	20	22	27	17	18	14			
	-11	-11	-10	-10	-15	-8	-6	-7	-8	-11	-27	-8	-11	-10	-13	-24	-30	-37	-159	-80	-21	-8	-3	-23		
23	21	20	21	15	18	18	23	13	21	52	24	26	20	35	44	37	41	62	183	108	40	27	19	38		
31	15	26	43	64	93	58	26	12	15	17	54	103	59	54	21	43	108	142	36	31	24	37	47			
	-4	-10	-93	-50	-8	-2	-3	-5	-10	-7	-19	-129	-137	-69	-73	-157	-397	-352	-56	-7	-8	-2	-67			
21	37	137	114	101	59	28	16	20	27	24	75	233	197	125	95	201	506	494	93	32	40	27	46	114		

**AE INDICES 1985 (continued)**

DAY\UT	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	MEAN	
<b>HOURLY VALUES (nT) OF AU, AL AND AE INDICES</b>																										
1	AU	44	54	39	20	46	53	46	41	58	85	126	193	126	63	175	172	58	34	84	124	50	51	45	29	76
AL	-111	-157	-104	-23	-73	-341	-127	-28	-11	-134	-413	-416	-416	-375	-298	-528	-58	-111	-49	-111	-111	-108	-129	-111	-46	-196
AE	156	212	143	44	120	394	173	69	70	220	539	610	501	362	587	700	116	94	286	592	145	161	176	76	273	
2	30	26	21	29	30	32	68	143	145	155	104	197	86	248	222	143	145	80	94	219	153	83	116	119		
	-5	-10	-19	-93	-119	-104	-179	-329	-185	-246	-331	-318	-404	-606	-431	-526	-344	-214	-162	-281	-1010	-231	-113	-395	-258	
3	127	136	172	134	130	110	55	51	53	92	102	77	91	95	56	43	130	43	37	36	27	32	37	15	78	
	-512	-482	-522	-401	-205	-211	-65	-217	-170	-244	-659	-363	-356	-151	-373	-325	-491	-192	-28	-22	-103	-207	-305	-282	-378	
4	63	618	755	535	336	322	121	269	225	337	762	440	44	247	431	368	622	237	65	59	122	124	245	322	361	
	57	58	69	67	49	52	77	43	35	27	40	48	46	73	27	97	56	85	59	63	55	36	32	35	54	
5	-295	-315	-439	-412	-212	-77	-124	-272	-107	-41	-88	-73	-185	-206	-329	-370	-304	-349	-242	-142	-126	-64	-82	-205	-259	
	353	373	508	479	262	130	202	316	142	68	100	137	120	258	234	426	437	390	410	306	198	164	96	118		
6	26	19	15	16	12	10	22	20	58	60	107	88	140	106	55	81	170	149	155	130	182	160	88	83		
	-3	-18	-16	-9	-10	-25	-49	-167	-111	-221	-467	-552	-266	-252	-231	-207	-377	-332	-288	-26	-542	-371	-179	-230		
7	58	38	32	25	22	42	72	188	169	281	575	535	693	373	308	313	379	527	503	445	417	725	533	268		
	81	113	77	114	124	170	112	72	122	117	64	29	78	38	47	45	50	90	90	39	36	57	83	56		
8	-145	-243	-256	-256	-462	-292	-116	-106	-90	-68	-68	-47	-158	-241	-313	-183	-200	-381	-195	-116	-84	-94	-205	-183		
	227	356	354	371	587	462	228	153	229	208	133	76	237	280	361	230	251	473	199	153	148	168	151	277		
9	70	78	53	46	78	130	110	45	63	68	50	85	78	31	10	13	9	8	26	17	12	25	35	48		
	-163	-246	-665	-219	-217	-187	-230	114	202	459	272	230	101	35	36	33	20	47	214	165	75	61	122	-179		
10	107	87	86	63	70	60	37	52	65	92	79	104	14	9	17	14	16	27	46	101	84	30	33	26		
	-160	-168	-74	-122	-176	-43	-50	-19	-25	-16	-14	-31	-12	-14	-15	-32	-15	-10	-15	-76	-289	-114	-13	-47		
11	70	64	56	45	59	42	50	59	52	37	35	68	41	18	18	36	34	26	24	31	30	29	44			
	-40	-167	-146	-33	-30	-243	-152	-240	-156	-108	-42	-159	-49	-111	-317	-214	-49	-56	-34	-22	-106					
12	24	19	31	18	24	22	13	8	10	12	10	16	12	20	12	13	24	48	38	79	62	48	25			
	-36	-22	-12	-16	-30	-22	-11	-11	-8	-34	-31	-18	-13	-14	-13	-11	-11	-89	-53	-39	-70	-42	-31			
13	53	45	33	27	33	52	61	71	60	76	83	88	194	124	58	49	77	89	83	142	172	86	93			
	-67	-52	-26	-38	-42	-52	-113	-70	-247	-28	-43	-274	-570	-756	-162	-69	-184	-74	-110	-275	-774	-324	-141	-191		
14	87	76	68	99	65	76	44	42	28	35	28	74	78	168	81	38	52	72	116	95	67	49	111			
	-288	-203	-214	-105	-20	-53	-52	-21	-54	-51	-54	-200	-279	-293	-111	-46	-190	-279	-247	-82	-23	-61	-181	-337		
15	86	70	74	110	121	13	7	6	-36	-38	-59	104	100	107	75	48	34	353	364	177	92	111	216			
	-345	-125	-84	-110	-121	-66	-65	-53	-50	-79	87	274	358	462	193	85	244	353	392	480	185	174	120	219		

**AE INDICES 1985 (continued)**

16	93	112	106	89	72	70	74	49	54	74	68	51	55	46	50	65	16	12	7	20	39	45	33	55				
	-161	-119	-62	-40	-62	-87	-54	-23	-84	-215	-216	-63	-119	-132	-201	-37	-56	-135	-162	-64	-82	-230	-170	-52	-109			
	255	232	169	130	134	158	129	72	139	289	285	115	174	179	252	103	74	148	175	73	104	271	217	86	165			
17	19	14	11	14	27	60	63	80	89	59	58	106	48	24	43	138	113	224	126	122	56	67	49	43	69	65		
	-9	-10	-9	-5	-10	-16	-15	-8	-29	-41	-162	-159	-21	-303	-438	-45	-588	-379	-166	-29	-60	-37	-105	-127	-127			
	28	24	21	20	37	76	86	96	98	88	99	268	208	46	346	577	549	813	506	290	85	129	87	149	197	197		
18	68	72	80	61	73	79	156	66	60	45	31	29	24	93	81	66	159	181	176	121	89	71	83					
	-102	-83	-85	-225	-90	-49	-129	-12	-77	-82	-30	-27	-57	-139	-437	-106	-367	-367	-207	-211	-89	-137	-137	-137	-137	-137		
	172	156	166	287	164	129	286	78	61	138	142	75	58	86	163	531	318	172	439	550	329	329	302	162	221	221		
19	53	96	107	161	93	34	24	26	42	41	52	25	27	50	37	43	34	32	22	36	35	28	31	28	48	48	48	
	-66	-95	-267	-365	-32	-7	-16	-26	-51	-57	-34	-27	-46	-192	-102	-44	-45	-139	-66	-52	-18	-77	-77	-77	-77	-77	-77	
	121	192	374	527	126	42	41	52	93	99	138	60	56	73	84	93	167	135	67	82	176	95	84	46	126	126		
20	29	36	45	61	35	41	30	16	17	39	46	66	35	24	16	17	16	13	22	16	20	28	52	38	27	27	27	
	-8	-14	-32	-26	-9	-9	0	-4	-7	-15	-14	-17	9	9	11	14	9	8	10	19	34	27	24	22	22	22		
	38	51	78	87	44	51	31	20	22	37	32	26	22	21	21	27	28	25	22	31	59	67	72	79	83	44	44	
21	19	28	40	28	30	16	17	39	46	66	66	35	24	16	17	16	13	13	13	16	13	10	10	10	10	10		
	-17	-118	-64	-40	-10	-1	-2	-16	-107	-44	-8	-9	-27	-87	-13	-16	-11	-10	-72	-19	-24	-20	-28	-28	-28	-28	-28	
	37	146	105	69	41	18	21	55	154	110	43	33	45	104	30	32	25	24	95	36	46	49	82	63	61	61	61	
22	55	75	110	133	110	23	21	22	28	43	67	67	41	28	37	12	12	17	42	38	18	15	16	11	43	43	43	
	-39	-71	-196	-97	-53	-11	-12	-8	-33	-76	-119	-119	-53	-57	-72	-34	-34	-34	-21	-36	-86	-205	-198	-135	-18	-12	-63	-63
	95	147	307	230	164	35	24	30	36	76	143	187	53	57	72	34	49	104	248	237	154	34	25	24	107	107		
	23	9	10	18	19	44	19	16	12	11	13	12	12	15	14	27	25	10	12	8	7	7	7	13	20	15	15	
	-11	-10	-10	-24	-92	-23	-13	-12	-12	-15	-32	-21	-24	-13	-55	-46	-11	-13	-45	-11	-9	-35	-46	-8	-25	-25	-25	
	-21	20	29	41	111	67	33	29	24	25	45	34	39	27	82	71	22	26	54	19	17	50	61	29	41	41	41	
24	16	25	41	26	18	25	29	44	49	43	42	39	41	45	12	9	8	19	11	7	8	15	43	52	28	28	28	
	-8	-13	-24	-26	-7	-16	-18	-64	-68	-92	-60	-66	-72	-22	-29	-20	-23	-28	-19	-23	-24	-15	-40	-85	-44	-44	-44	
	25	41	25	22	30	31	39	23	32	29	70	70	27	25	26	23	16	12	9	8	6	12	7	23	23	23		
	-40	-9	-12	-10	-18	0	-2	-11	-126	-163	-46	-6	-5	-10	-7	-6	-10	-17	-17	-17	-56	-34	-33	-31	-28	-28		
	82	34	41	50	39	26	43	40	196	234	74	32	32	34	24	18	17	19	24	69	42	46	55	54	54	54	54	
26	28	27	19	27	30	86	151	105	83	33	21	32	21	6	9	10	11	25	15	31	56	93	97	68	45	45		
	-30	-8	-5	-9	-196	-114	-132	-130	-18	-8	-22	-27	-46	-19	-19	-47	-48	-59	-59	-74	-74	-74	-74	-74	-74	-74	-74	
	60	36	25	36	80	283	266	238	213	52	29	55	49	53	29	30	59	74	76	79	111	169	134	77	96	96		
27	43	34	49	94	136	127	111	194	248	158	206	101	187	244	288	208	121	56	59	57	51	48	60	126	126	126		
	-15	-10	-5	-65	-119	-28	-60	-166	-502	-295	-281	-388	-451	-590	-60	-307	-200	-73	-116	-168	-80	-77	-133	-225	-225	-225	-225	
	59	45	55	160	339	163	187	278	697	544	440	595	519	639	935	949	516	322	130	177	226	133	127	194	351	351		
28	45	47	33	44	43	24	12	19	23	31	27	23	8	8	16	6	15	17	16	13	11	10	15	13	22	22	22	
	-124	-135	-93	-192	-137	-11	-9	-17	-16	-70	-115	-73	-34	-21	-42	-18	-12	155	155	88	68	41	69	48	91	91	91	
	171	183	126	236	181	35	23	36	40	101	143	98	42	30	58	24	72	124	155	88	68	41	69	48	91	91	91	
29	11	12	20	16	13	12	15	21	56	59	75	111	122	51	181	217	186	149	-88	7	-29	-7	54	54	54	54	54	
	-9	-28	-59	-22	9	-7	-96	-13	-19	-16	-54	-34	-42	-158	-448	-478	-48	-157	-48	-137	-74	-52	-34	-69	-318	-318	-318	-318
	22	40	79	38	22	20	58	118	69	79	92	166	95	170	627	630	597	1004	1232	1054	1012	782	796	373	373	373		
30	150	175	260	195	129	133	128	164	128	89	125	224	73	28	53	32	27	25	53	59	47	12	29	104	104	104	104	
	-590	-1138	-482	-259	-558	-529	-593	-593	-853	-54	-588	-534	-534	-246	-266	-385	-92	-263	-30	-111	-133	-141	-451	-451	-451	-451	-451	
	740	1314	744	447	408	688	663	722	758	981	444	714	1324	609	275	320	482	413	119	318	350	160	146	171	171	171	171	

**AE INDICES 1985 (continued)**

DAY\UT	0	HOURLY VALUES (INT) OF AU, AL AND AE INDICES												DECEMBER 1985												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
1	AU	17	37	30	40	50	45	36	30	49	68	84	74	43	67	40	11	22	53	31	78	59	97	114	131	
	AL	-57	-32	-53	-173	-324	-190	-59	-46	-112	-278	-180	-169	-94	-123	-100	-11	-134	-268	-188	-180	-413	-340	-359	-187	
	AE	76	70	84	214	376	237	96	77	161	346	265	244	138	190	140	58	158	322	174	266	660	510	455	491	
2	AU	114	93	137	111	81	103	64	78	69	33	67	23	62	30	32	20	34	30	47	67	39	21	22	35	
	AL	-279	-384	-317	-183	-260	-321	-303	-312	-129	-92	-54	-137	-208	-72	-47	-234	-186	-190	-313	-331	-80	-177	-142	-182	
	AE	394	479	456	296	342	321	303	312	125	96	77	19	239	105	68	270	218	239	381	372	103	101	178	242	
3	AU	33	30	48	36	45	56	57	58	36	47	55	43	49	69	38	37	38	48	25	18	22	16	23	39	
	AL	-62	-35	-48	-112	-187	-110	-79	-108	-60	-105	-204	-220	-151	-74	-200	-341	-86	-76	-33	-23	-25	-79	-54	-107	
	AE	96	66	98	150	233	166	166	96	153	161	247	269	221	113	238	380	135	46	53	4	42	98	79	148	
4	AU	24	43	38	36	92	88	53	36	89	92	68	48	38	21	37	18	71	138	146	128	55	72	43	64	
	AL	-17	-23	-29	-51	-112	-78	-25	-30	-75	-173	-226	-100	-45	-30	-132	-317	-452	-464	-364	-215	-115	-269	-161	-153	
	AE	42	68	69	89	205	167	79	68	165	265	294	149	84	51	169	335	523	602	510	344	172	228	342	206	
5	AU	51	61	68	56	43	50	42	49	50	55	52	67	59	30	22	15	26	27	19	21	23	12	41		
	AL	-84	-158	-205	-100	-98	-50	-53	-71	-92	-86	-66	-179	-119	-221	-227	-147	-66	-256	-38	-56	-54	-59	-31	-119	
	AE	137	220	273	160	156	125	97	115	142	135	99	236	171	289	331	169	82	284	66	76	77	83	44	161	
6	AU	22	29	30	29	28	19	25	31	38	27	16	19	26	17	29	37	22	18	6	10	16	26	16	23	
	AL	-33	-85	-101	-34	-13	-16	-17	-46	-79	-93	-86	-70	-71	-187	-71	-38	-24	-51	-50	-51	-28	-27	-5	-56	
	AE	56	116	133	64	43	36	44	79	118	121	103	89	98	115	217	109	60	43	59	61	46	45	21	80	
7	AU	22	17	18	22	15	17	23	24	57	106	76	51	28	15	20	12	15	25	54	64	42	27	33	34	
	AL	-6	-11	-7	-8	-13	-8	-11	-41	-70	-183	-108	-52	-16	-113	-17	-13	-17	-107	-174	-160	-21	-11	-15	-50	
	AE	29	29	26	31	28	25	35	66	128	289	185	103	45	33	33	33	29	36	133	230	168	204	49	42	
8	AU	20	21	25	19	17	22	28	33	37	49	37	29	26	28	20	19	15	11	22	22	18	19	24		
	AL	-18	-14	-15	-11	-12	-13	-12	-10	-15	-89	-84	-88	-58	-44	-22	-57	-67	-128	-27	-6	-8	-12	-32		
	AE	40	36	42	32	30	34	36	39	46	53	138	121	88	72	52	42	77	83	141	50	37	25	32		
9	AU	20	32	62	22	25	20	28	28	24	11	13	12	17	23	19	20	16	17	21	21	10	20	37		
	AL	-11	-58	-49	-24	-9	-12	-28	-8	-11	-13	-14	-57	-41	-9	-21	-16	-64	-125	-55	-10	-36	-33	-29		
	AE	32	44	122	88	28	33	57	39	33	23	26	27	75	64	29	41	33	83	148	77	25	57	72	54	
10	AU	42	79	49	71	71	69	71	52	75	60	69	291	119	190	242	103	87	64	42	40	41	52	48		
	AL	-49	-69	-29	-39	-70	-19	-56	-4	-48	-52	-159	-517	-471	-687	-76	-58	-74	-114	-40	-48	-47	-157	-116	-141	
	AE	92	150	79	112	90	85	78	58	124	113	229	808	591	878	716	171	164	123	116	155	80	100	216	166	
11	AU	106	107	161	139	76	64	99	57	49	41	30	26	20	37	23	25	51	32	12	15	13	31	134	59	
	AL	-217	-420	-328	-62	-103	-54	-29	-16	-22	-39	-10	-100	-100	-134	-685	-400	-839	-324	-405	-188	-67	-80	-172	-96	
	AE	324	528	491	202	164	154	88	57	47	48	60	73	158	312	405	188	61	96	82	115	250	231	182		
12	AU	63	45	36	23	46	52	60	62	58	49	29	26	24	25	28	18	15	14	16	30	11	75	140	162	
	AL	-7	-16	-29	-33	-28	-26	-35	-15	-11	-15	-38	-40	-51	-51	-39	-31	-141	-133	-237	-101	-162	-69	-130	-88	
	AE	72	62	67	57	75	80	96	79	69	62	45	38	40	51	51	39	31	141	133	237	101	162	293		
13	AU	180	202	233	191	128	211	110	133	181	199	197	85	191	204	177	197	99	39	26	28	43	55	31	80	
	AL	-210	-229	-120	-81	-99	-64	-31	-215	-283	-285	-400	-839	-515	-690	-805	-275	-41	-55	-66	-66	-83	-64	-141	-290	
	AE	391	433	354	274	228	277	142	349	466	485	598	926	515	890	979	473	142	95	92	115	250	231	182		
14	AU	79	105	119	72	89	68	83	93	123	63	57	24	15	25	70	35	25	24	72	36	33	61	69	140	100
	AL	-202	-198	-54	-35	-56	-22	-53	-61	-113	-31	-57	-23	-19	-45	-178	-32	-69	-135	-273	-96	-24	-49	-58	-135	-168
	AE	281	304	175	108	146	92	137	156	243	95	82	42	71	249	69	94	160	346	133	58	111	128	276	270	
15	AU	90	93	87	80	59	63	86	38	21	18	23	26	17	13	26	9	15	33	23	21	53	62	29	42	
	AL	-92	-115	-307	-197	-54	-122	-160	-9	-11	-20	-65	-35	-21	-17	-26	-14	-31	-34	-15	-21	-137	-139	-42	-94	
	AE	184	209	396	278	204	186	247	48	33	39	43	92	52	39	24	91	168	58	39	43	191	379	169	71	

**AE INDICES 1985 (continued)**

16	-31	22	27	35	29	33	35	46	33	24	24	22	17	20	14	14	17	-8	20	48	59	92	33		
	-14	-29	-24	-13	-28	-56	-69	-105	-8	-7	-11	-42	-108	-77	-15	-15	-12	-27	-119	-155	-124	-54	-143		
	176	52	51	48	59	91	105	151	42	32	35	66	131	94	36	25	29	30	37	141	204	184	154	236	
17	110	96	79	33	37	44	48	49	31	34	40	41	32	37	15	40	22	13	12	17	16	9	19	26	
	-191	-291	-65	-33	-9	-15	-27	-128	-60	-24	-63	-31	-76	-41	-107	-94	-152	-225	-74	-87	-56	-70	-25	37	
	302	389	145	36	46	60	77	178	92	59	103	73	108	79	122	135	175	239	87	49	43	66	90	52	
18	28	25	27	21	20	19	44	68	64	95	158	105	154	92	81	54	32	40	18	13	12	4	50		
	-16	-16	-23	-14	-33	-30	-24	-71	-192	-191	-611	-346	-332	-20	-36	-37	-22	-14	-21	-15	-80	-96	-56		
	45	42	51	36	55	50	69	140	204	288	450	297	766	438	115	75	69	78	42	34	35	39	86	147	
19	19	20	54	87	125	127	205	303	274	149	78	224	168	55	28	31	140	85	129	132	165	84	96	168	
	-38	-206	-177	-287	-504	-621	-554	-900	-940	-823	-905	-823	-328	-78	-121	-125	-359	-467	-612	-454	-268	-78	-93	-242	
	58	227	322	375	630	749	759	967	1104	1090	884	1047	498	134	500	157	500	553	741	586	433	163	190	411	527
20	176	86	139	100	58	57	83	81	81	62	68	117	226	197	133	58	22	17	21	18	12	15	20	78	
	-164	-172	-268	-55	-40	-62	-86	-152	-228	-120	-116	-446	-253	-84	-58	-32	-45	-72	-33	-14	-12	-20	-24	-32	-108
	341	259	409	156	99	120	171	234	310	183	184	563	480	283	192	90	68	90	56	30	25	39	42	53	187
21	59	47	81	116	71	31	23	37	25	34	23	18	49	51	14	12	7	4	2	12	11	20	25	30	
	-49	-65	-45	-33	-47	-14	-14	-67	-14	-60	-147	-63	-49	-51	-16	-13	-12	-10	-13	-38	-69	-20	-11	-39	
	109	114	127	151	119	47	29	52	92	75	170	81	67	68	32	28	25	18	17	41	83	51	41	37	
22	22	25	34	45	65	90	72	79	55	40	24	47	42	49	58	35	38	9	29	39	42	26	27	31	
	-13	-13	-14	-99	-56	-33	-24	-56	-74	-12	-49	-102	-129	-111	-62	-52	-89	-93	-116	-53	-27	-11	-13	-53	
	39	51	60	166	148	107	104	112	115	37	96	145	179	170	90	99	122	157	96	55	39	45	33	97	
23	24	25	31	30	27	37	85	51	45	46	41	47	48	59	43	63	70	21	32	77	87	204	144	162	
	-9	-8	-9	-16	-16	-38	-38	-56	-61	-69	-19	-12	-72	-76	-58	-151	-52	-99	-134	-140	-140	-148	-148	-148	
	33	34	44	37	55	134	91	51	54	53	117	144	79	55	111	143	48	91	230	140	304	280	303	111	
24	253	200	98	58	50	85	155	242	141	72	60	58	109	104	43	39	48	34	14	25	13	13	20	11	
	-102	-99	-62	-44	-41	-136	-311	-123	-49	-30	-63	-44	-77	-77	-129	-177	-79	-45	-42	-22	-21	-16	-15	-19	
	356	301	161	103	93	222	367	367	192	103	123	103	187	182	172	216	127	80	57	48	36	30	27	31	154
25	19	16	19	25	20	21	36	62	44	23	21	24	31	26	18	24	19	23	18	56	77	33	65	61	
	-20	-16	-22	-20	-14	-12	-22	-23	-50	-23	-53	-16	-53	-116	-49	-20	-9	-42	-103	-94	-18	-34	-220	-179	-56
	40	32	42	46	35	34	59	87	116	96	40	84	142	73	40	33	61	181	161	173	50	68	287	242	93
26	96	97	104	108	128	42	17	33	52	49	94	85	121	45	42	19	8	10	17	19	15	16	19	57	
	-175	-257	-227	-193	-294	-253	47	28	67	128	-128	-116	-126	-99	-55	-56	-14	-25	-132	-30	-10	-11	-18	-74	
27	21	23	26	30	34	48	45	44	40	51	61	90	59	27	25	20	12	21	110	129	114	121	128		
	-15	-15	-22	-14	-67	-106	-67	-67	-60	-61	-61	-98	-244	-97	-16	-17	-17	-37	-60	-340	-434	-155	-122	-126	
	37	46	41	91	141	116	114	119	106	225	132	160	335	157	44	43	37	50	82	451	563	270	245	159	
28	113	157	119	127	192	146	94	90	147	159	161	78	187	118	105	197	91	75	156	144	116	109	89	125	
	-233	-365	-166	-203	-635	-146	-50	-128	-671	-895	-410	-392	-458	-453	-416	-697	-180	-219	-300	-562	-146	-213	-91	-334	
	348	524	287	331	828	293	145	219	818	1054	572	471	646	572	422	895	272	295	456	708	263	322	180	460	
29	35	29	31	64	71	73	38	29	33	18	18	13	8	7	13	10	6	0	7	16	11	17	23		
	-69	-59	-51	-127	-165	-12	-11	-16	-69	-119	-44	-21	-23	-42	-91	-76	-53	-37	-40	-28	-16	-30	-66	-56	
	105	90	83	192	286	86	45	103	138	62	35	31	49	104	86	84	53	45	57	41	34	55	92	82	
30	30	73	104	268	268	207	160	239	271	126	281	153	71	59	115	236	197	185	118	95	86	127	78		
	-123	-306	-831	-732	-747	-373	-143	-437	-762	-282	-384	-175	-53	-111	-490	-945	-596	-445	-390	-99	-212	-420	-237	-168	
	154	381	937	1001	1016	581	304	677	1035	410	666	329	124	170	606	1181	793	630	509	195	300	548	331	248	
31	69	110	91	65	124	-144	-235	-212	-237	-309	-118	-86	-281	-477	-469	-428	-299	-433	-370	-398	-84	-38	-153	-117	
	-147	-258	-269	-124	-224	-222	337	318	318	400	206	166	377	558	679	517	423	554	446	468	109	60	123	189	177

# MONTHLY AND YEARLY AE 1957 - 1985

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1957							159.	145.	311.	156.	168.	217.	96.3
1958	193.	255.	302.	263.	231.	273.	270.	201.	186.	175.	132.	183.	221.9
1959	184.	256.	205.	193.	208.	206.	274.	225.	270.	217.	246.	236.	226.8
1960	171.	162.	183.	317.	207.	235.	225.	211.	212.	324.	277.	255.	231.6
1961	156.	168.	141.	166.	154.	163.	252.	145.	149.	143.	129.	149.	159.7
1962	90.	95.	100.	160.	110.	131.	140.	172.	198.	221.	152.	155.	143.6
1963	132.	95.	94.	109.	124.	142.	137.	156.	229.	153.	130.	115.	134.6
1964	116.	122.	133.	149.	124.	95.	99.	88.	137.	142.	97.	71.	114.4
1965	83.	121.	113.	93.	94.	178.	132.	130.	143.	89.	87.	101.	113.6
1966	108.	130.	152.	145.	162.	146.	180.	176.	223.	152.	148.	157.	156.4
1967	135.	139.	121.	168.	278.	205.	177.	172.	204.	123.	161.	196.	173.3
1968	187.	227.	256.	231.	268.	302.	213.	203.	206.	184.	198.	163.	219.9
1969	132.	169.	227.	255.	268.	225.	172.	175.	198.	161.	152.	110.	187.1
1970	118.	104.	210.	233.	199.	243.	276.	222.	203.	194.	192.	135.	194.1
1971	188.	177.	194.	245.	241.	230.	189.	195.	213.	189.	155.	153.	197.4
1972	192.	156.	203.	203.	193.	238.	177.	259.	196.	202.	180.	133.	194.3
1973	221.	262.	315.	337.	241.	273.	232.	223.	225.	261.	192.	183.	247.1
1974	201.	226.	324.	309.	297.	278.	322.	307.	306.	326.	248.	245.	282.3
1975													
1976													
1977	198.	246.	283.	227.	238.	542.	240.	220.	188.	197.	244.	180.	250.3
1978	191.	237.	243.	284.	310.	307.	213.	239.	245.	192.	214.	176.	237.6
1979	212.	195.	247.	297.	252.	254.	223.	254.	216.	188.	152.	157.	220.6
1980	149.	164.	122.	181.	183.	261.	203.	180.	165.	195.	198.	150.	179.3
1981	147.	195.	238.	324.	319.	218.	279.	279.	206.	252.	217.	158.	236.0
1982	178.	386.	220.	304.	290.	367.	372.	318.	346.	275.	254.	277.	298.9
1983	218.	320.	317.	381.	291.	283.	261.	264.	229.	263.	282.	237.	278.8
1984	213.	253.	300.	329.	314.	283.	279.	260.	310.	301.	246.	254.	278.5
1985	225.	234.	175.	270.	182.	219.	264.	223.	201.	203.	199.	185.	215.0

Unit : nT

## **SECTION 4**

# **CLASSIFICATION OF DAYS**

СОВЕТ  
ПО ТЕХНИЧЕСКОМУ РАЗВИТИЮ  
СОВЕТСКОГО Союза

## CLASSIFICATION OF DAYS 1985

### JANUARY

Five international quietest days (from Kp)	:	5 6 7 18 20
24-hours quiet intervals (from aa)		
C - very quiet	:	4 5 6 7 18 24
K - quiet	:	20
48-hours quiet intervals (from aa)		
C - very quiet	:	5 6 7
K - quiet	:	26

### FEBRUARY

Five international quietest days (from Kp)	:	4 16 18 19 26
24-hours quiet intervals (from aa)		
C - very quiet	:	4 15 18 26
K - quiet	:	19
48-hours quiet intervals (from aa)		
C - very quiet	:	26
K - quiet	:	3 18

### MARCH

Five international quietest days (from Kp)	:	9 13 20 21 22
24-hours quiet intervals (from aa)		
C - very quiet	:	9 11 13 20 21 22 23 25 29
K - quiet	:	24 30
48-hours quiet intervals (from aa)		
C - very quiet	:	21 22 23
K - quiet	:	9 11 20 24 25

### APRIL

Five international quietest days (from Kp)	:	6 12 15 17 18
24-hours quiet intervals (from aa)		
C - very quiet	:	6 7 12 13 15 17 18
K - quiet	:	5
48-hours quiet intervals (from aa)		
C - very quiet	:	6 7 12 13 15
K - quiet	:	14 16 17 18

## CLASSIFICATION OF DAYS 1985 (continued)

### MAY

Five international quietest days (from Kp)	:	22 23 28 29 30
24-hours quiet intervals (from aa)		
C - very quiet	:	10 11 14 20 22 23 24 28 29 30 31
K - quiet	:	25 27
48-hours quiet intervals (from aa)		
C - very quiet	:	10 23 24 28 29 30
K - quiet	:	20 21 22 25 27

### JUNE

Five international quietest days (from Kp)	:	3 14 16 18 19
24-hours quiet intervals (from aa)		
C - very quiet	:	2 3 4 5 13 14 15 16 18 19 21 22 24
K - quiet	:	23
48-hours quiet intervals (from aa)		
C - very quiet	:	3 4 14 15 16 19 22 23
K - quiet	:	5 13 17 18 24

### JULY

Five international quietest days (from Kp)	:	2 16 21 22 29
24-hours quiet intervals (from aa)		
C - very quiet	:	2 3 16 21 22 29
K - quiet	:	9 15
48-hours quiet intervals (from aa)		
C - very quiet	:	2
K - quiet	:	3 15 21 22

### AUGUST

Five international quietest days (from Kp)	:	5 6 7 9 11
24-hours quiet intervals (from aa)		
C - very quiet	:	4 5 6 7 8 9 24
K - quiet	:	11
48-hours quiet intervals (from aa)		
C - very quiet	:	4 5 6 7 8 9
K - quiet	:	10 11

## CLASSIFICATION OF DAYS 1985 (continued)

### SEPTEMBER

Five international quietest days (from Kp) : 2 3 4 5 29

24-hours quiet intervals (from aa)

C - very quiet	:	2	3	4	5	7	13	18	29	30
K - quiet	:	1	12	28						

48-hours quiet intervals (from aa)

C - very quiet	:	2	3	4	5	29	30			
K - quiet	:	12								

### OCTOBER

Five international quietest days (from Kp) : 1 26 27 28 30

24-hours quiet intervals (from aa)

C - very quiet	:	1	2	9	10	20	26	27	28	30
K - quiet	:	24								

48-hours quiet intervals (from aa)

C - very quiet	:	1	26	27	30					
K - quiet	:	2	10	28	29					

### NOVEMBER

Five international quietest days (from Kp) : 12 20 21 23 24

24-hours quiet intervals (from aa)

C - very quiet	:	7	8	12	20	21	23	24	25	28
K - quiet	:	26								

48-hours quiet intervals (from aa)

C - very quiet	:	12	20	23	24	25				
K - quiet	:	7	8	21	22					

### DECEMBER

Five international quietest days (from Kp) : 7 8 9 21 23

24-hours quiet intervals (from aa)

C - very quiet	:	6	7	8	9	21	23	29		
K - quiet	:	12	16	22	25	26				

48-hours quiet intervals (from aa)

C - very quiet	:	6	7	8	21	22				
K - quiet	:	24	25							

## CLASSIFICATION OF DAYS 1985 (continued)

Month	Quietest Days 1-5					Quietest Days 6-10					Most Disturbed Days 1-5				
Jan	7	6	18	5	20K	26	19A	24A	4A	16A	28	9	23	1	10
Feb	4	18	26	19A	16A	22A	23A	3A	21A	15A	28	6	10	8	5
Mar	13	9	22	20	21	23	24K	25K	11K	14A	5	8	6	7	2
Apr	15	18	17	12	6	13	5A	7A	16A	14A	21	28	20	30	9
May	30	29	28	22	23	10K	24	27	11	20	2	15*	12*	13*	16*
Jun	16	19	14	3	18	5	13	4	24	15K	10	7	6	26	28*
Jul	2	22	16	29	21	3K	19A	15A	20A	9A	12	31	4	6	13
Aug	6	5	7	9	11K	8	3	4	24A	10A	13	31	22	29*	12
Sep	4	5	2	3	29	30	13	18	12	1	19	16	14	20	21
Oct	1	30	26	27	28	2	20	31	10	9	5	6	7	18	13
Nov	20	23	24	12	21	25	26K	8K	7A	28A	30	29	2	3	13
Dec	8	23	7	21	9	16	25K	22	29A	6A	30	19	28	13	31

These days are arranged according to their degree of quietness or disturbance, respectively.

**VERY QUIET INTERVALS, 1985**  
**Kp not exceeding 1+ for at least 8 intervals**  
**(= one day) in succession**

First.....last Eighth				Duration Eighths	First.....last Eighth				Duration Eighths		
Feb	03	E8	05	E1	10	Aug	05	E1	06	E6	14
Mar	13	E5	14	E4	8		06	E8	07	E7	8
Apr	12	E3	13	E3	9		11	E3	12	E3	9
May	23	E3	24	E6	12	Sep	04	E3	05	E7	13
	29	E4	30	E7	12	Oct	01	E1	01	E8	8
Jun	04	E8	05	E7	8		26	E4	27	E7	12
	15	E8	16	E8	9		29	E7	30	E6	8
	18	E7	20	E1	11	Nov	19	E8	20	E7	8
	23	E7	24	E7	9	Dec	07	E8	08	E8	9
Jul	02	E1	03	E1	9		24	E6	25	E7	10
	15	E5	16	E5	9						
	21	E5	22	E6	10						

### LIST OF MAGNETIC STORMS, 1985

Gives consecutive sequences of three-hour-intervals (Eighths E of the Greenwich day) in which at least one Kp reached or surpassed 7+ and no Kp was smaller than 5-.

Beginning	s. c. d. GMT	Duration Eighths	Number of Eighths with Kp=		
			7- 7o	7+ 8-	8o 8+
Apr 20 E7			1	.	1
30 E4	30 09.23	4	.	.	1
Nov 29 E7		7	2	.	1
			.	.	.
			.	.	.

## **SECTION 5**

# **RAPID VARIATIONS**

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5.5.	<b>sfe</b>	157

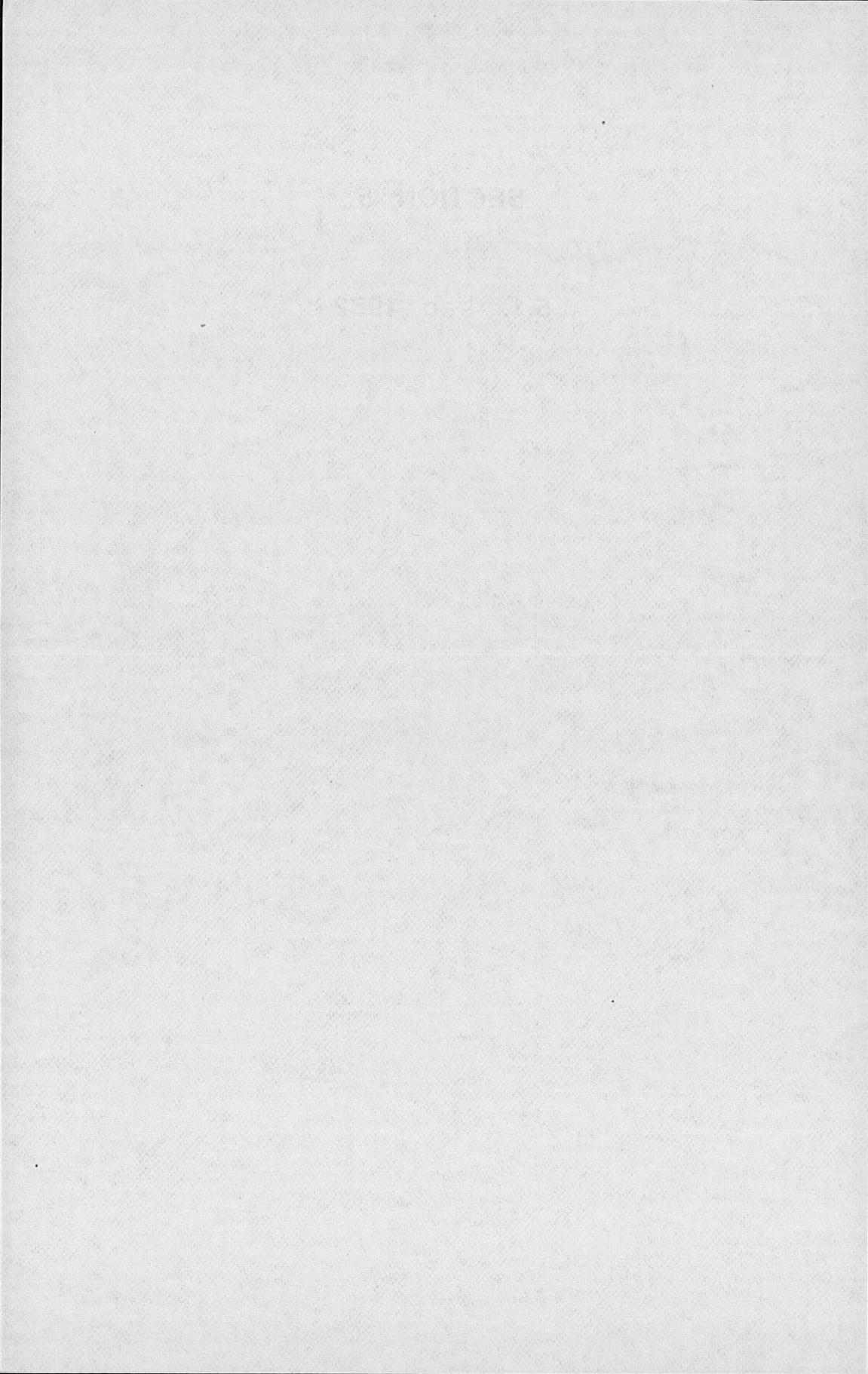
СМОЛЯНСКАЯ ОБЛАСТЬ

СОВЕТЫ МИНИСТРОВ

СОВЕТ МИНИСТРОВ СССР

## **SECTION 5**

**5.1. ssc 1982**



# STORM SUDDEN COMMENCEMENTS (ssc) 1982

Sudden commencements followed by a storm or period of storminess, as selected from reports of the following 46 observatories\*:

SOD DOB NUR MOS ESK WNG WIT IRK SWI NGK VAL HAD DOU BDV VIC CLF HRB SUR MMB  
 AQU TFS EBR COI TOL FRD PEN ALM KAK HTY KNY TEN LNP HVN BNG LUA PMG HUA NMP  
 MPO GNA ACS AMS TWA CZT KGL DUM, the records from HON and from copies of the magnetogrammes sent by five low-latitude observatories (MBO, FUQ, HON, PMG, ABG) or their five supplementary observatories (TEN, SJG, API, KNY, HYD).

\*For explanation of the three-letter symbol: see list in Section 2, pp 23-32

## JANUARY

06 1302 (02-03)	01111	2.2	4	1A	-	2C	
13 0410 (08-12)	11112	6.7	14	3A	7B	3C	1si

## FEBRUARY

01 1100 (58-63)	22222	6.2	30	18A	10B	2C	
03 0129 (27-32)	22332	4.9	36	6A	7B	3C	2si
11 1313 (12-15)	22222	4.0	19	7A	7B	6C	
12 0952 (51-53)	11121	2.7	7	-	2B	1C	
21 0727 (26-29)	12222	5.1	11	1A	10B	10C	

## MARCH

01 1138 (36-40)	33333	3.7	53	36A	2B	-	
29 1703 (02-04)	11111	3.6	5	-	4B	1C	1si

**STORM SUDDEN COMMENCEMENTS (ssc) 1982 (continued)**

**APRIL**

01 1305 (04-07)	22212	5.2	25	20A	11B	4C
16 1702 (00-06)	23322	3.9	32	23A	18B	-

**MAY**

None

**JUNE**

06 0244 (42-49)	22222	6.0	37	18A	13B	2C
09 0040 (38-43)	22222	4.6	50	27A	10B	1C
10 0155 (54-56)	11221	5.4	11	-	-	4C
12 1443 (41-45)	22222	5.5	33	26A	14B	1C
22 1336 (34-37)	11111	9.1	12	-	5B	2C

**JULY**

11 0953 (50-57)	22223	5.8	38	10A	9B	8C
13 1618 (16-20)	33333	5.2	80	35A	1B	-
16 1519 (18-20)	22222	3.7	41	21A	11B	3C
16 2108 (04-10)	32323	7.9	48	-	5B	1C
30 1422 (21-25)	11011 (reversed)	4.3	13	1A	7B	3C
						1si

**STORM SUDDEN COMMENCEMENTS (ssc) 1982 (continued)**

**AUGUST**

None

**SEPTEMBER**

05 2250 (45-51)	33333	2.7	55	33A	6B			
06 0753 (52-54)	32323	3.2	62	3A	3B	-	1si	
08 0314 (13-15)	11111	6.2	12	-	1B	1C	1si	
09 0105 (01-08)	33333	8.3	90	14A	6B	7C	2si	
21 0339 (37-42)	33333	3.0	55	18A	12B	-	2si	
24 0944 (35-45)	01111	5.1	16	-	2B	4C	1si	
25 2030 (29-32)	11111	4.6	19	3A	6B	5C	1si	

**OCTOBER**

21 2034 (34-35)	11111	5.3	16	-	1B	1C	1si	
26 0029 (28-31)	23333	5.7	56	21A	10B	1C		
31 1338 (35-40)	23222	2.3	25	19A	12B	1C	2si	

**NOVEMBER**

20 1841 (40-42)	12212	6.2	10	3A	4B	6C	1si	
23 0917 (15-18)	22222	6.7	24	9A	14B	10C		
24 0921 (18-30)	33233	3.0	43	23A	8B	-		
30 1211 (09-134)	12211	6.8	20	2A	5B	5C	5si	

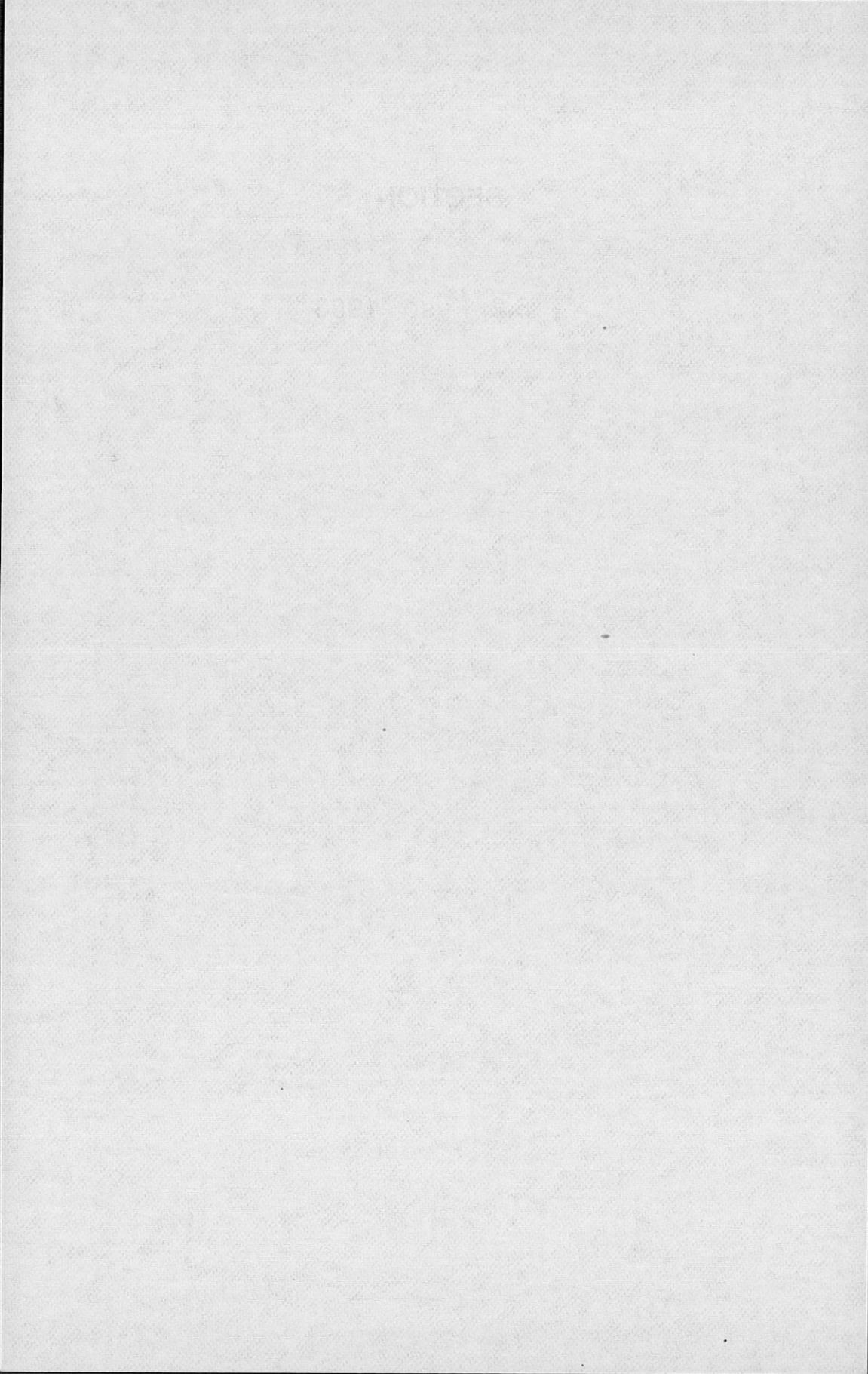
**STORM SUDDEN COMMENCEMENTS (ssc) 1982 (continued)**

**DECEMBER**

07 0329 (23-3b1)	22222	4.2	18	7A	19B	11C	
10 0721 (07-27)	22323	5.9	33	12A	17B	3C	
17 0806 (05-09)	22222	4.9	24	14A	15B	2C	
19 0254 (50-60)	22222	4.6	63	14A	15B	2C	1si
27 0715 (12-17)	22223	5.3	46	16A	13B	3C	

## **SECTION 5**

**5.2. ssc 1983**



## STORM SUDDEN COMMENCEMENTS (ssc) 1983

Sudden commencements followed by a storm or period of storminess, as selected from reports of the following 45 observatories\*:

SOD DOB NUR MOS MNK WNG WIT IRK NGK VAL HAD DOU BDV VIC CLF UBA HRB SUR GCK MMB AQU TFS EBR COI SPT FRD PEN KAK HTY KNY LNP LUA PMG HUA NMP TAN MPO GNA ACS CNB AMS TWA CZT KGL DUM, the records from HON and from copies of the magnetogrammes sent by five low-latitude observatories (MBO, FUQ, HON, FUQ, ABG) or their five supplementary observatories (TEN, SJG, API, KNY, HYD).

\*For explanation of the three letter symbol: see list in Section 2, pp 23-32

### JANUARY

09 1545 (34-51)	33333	4.3	47	33A	6B	-		
11 0305 (02-06)	12121	3.6	7	1A	2B	2C	-	1sfe
11 2309 (00-12)	22222	5.4	51	7A	11B	4C	2si	

### FEBRUARY

04 1614 (12-17)	33333	5.4	91	35A	7B			
19 0439 (38-46)	02101	6.2	11	-	6B	3C	1si	1b
28 2148 (45-53)	11211	6.1	15	-	4B	-	1si	

### MARCH

25 0544 (43-45)	00112	4.0	11	2A	6B	8C	1si	
--------------------	-------	-----	----	----	----	----	-----	--

**STORM SUDDEN COMMENCEMENTS (ssc) 1983 (continued)**

**APRIL**

12 1056 (54-57)	22112	4.4	17	5A	15B	6C	
13 1100 (55-07)	32223	4.4	43	12A	15B	-	1si

**MAY**

10 1854 (35-66)	22112	7.7	19	1A	9B	11C	
11 0733 (31-36)	11222	7.6	12	2A	7B	1C	
17 0021 (16-24)	22222	4.8	36	18A	17B	2C	
21 0418 (17-28)	01112	9.4	20	2A	3B	5C	2si
24 1239 (36-52)	22222	4.2	23	18A	10B	5C	
24 1707 (06-09)	33212	3.4	59	2A	-	-	2si

**JUNE**

08 1038 (37-40)	11011	6.6	8	-	2B	3C	
10 0453 (53-56)	01112	4.9	17	2A	3B	11C	2si
13 0118 (16-29)	23332	4.4	66	29A	7B	1C	

# STORM SUDDEN COMMENCEMENTS (ssc) 1983 (continued)

## JULY

08 1634 (33-37)	11111	3.8	11	1A	1B	1C	2si	1sfe
--------------------	-------	-----	----	----	----	----	-----	------

## AUGUST

07 0827 (24-29)	11112	6.1	13	5A	12B	16C		
19 1101 (57-03)	22222	6.4	14	1A	11B	13C	1si	

## SEPTEMBER

None

## OCTOBER

04 0542 (401-44)	01111	6.3	10	1A	5B	4C		
17 0452 (51-52)	11221	4.6	6	-	2B			

## NOVEMBER

07 1140 (38-45)	22222	7.1	17	6A	154B	12C		
11 1111 (03-24)	22222	4.2	17	3A	12B	7C		

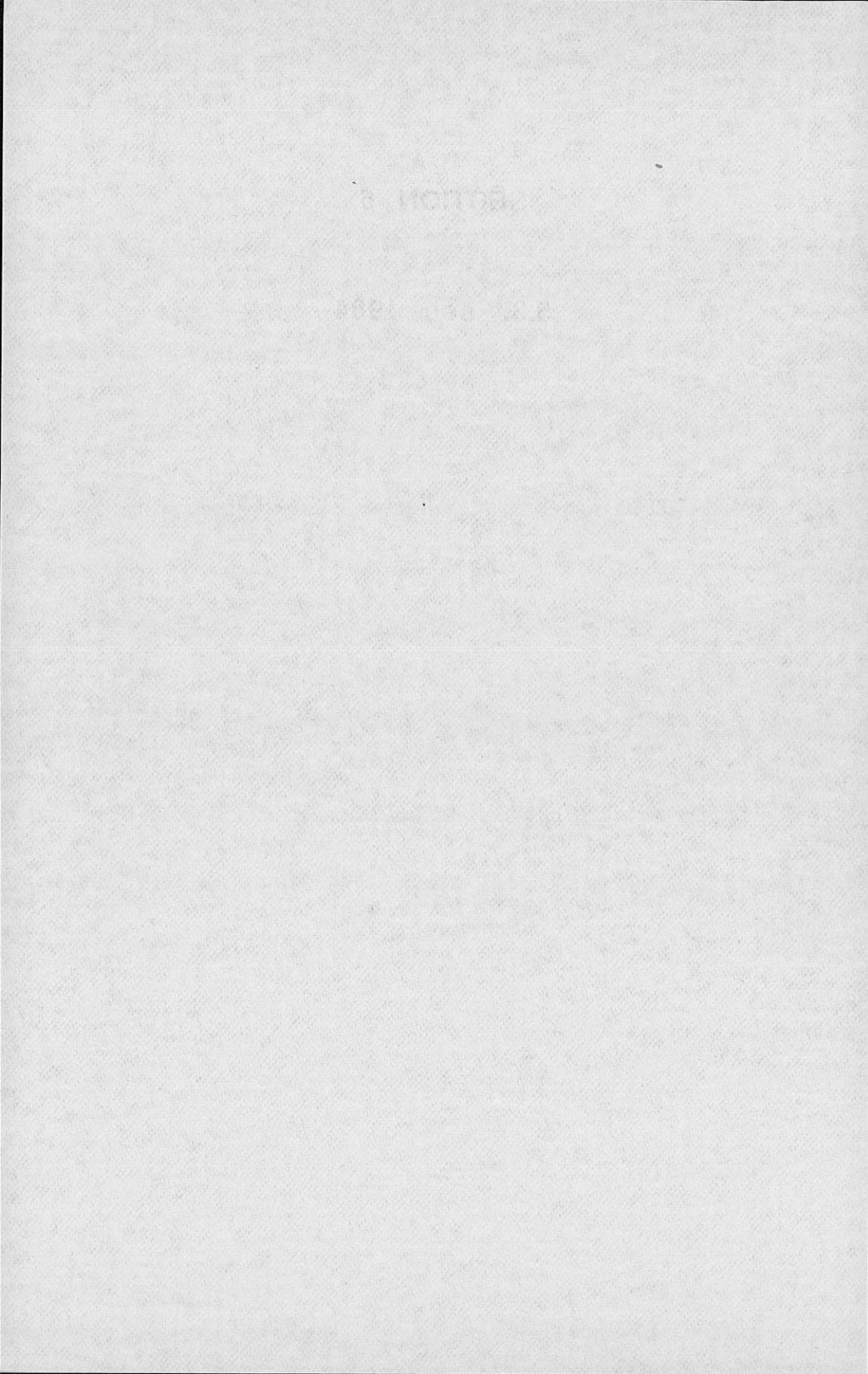
**STORM SUDDEN COMMENCEMENTS (ssc) 1983 (continued)**

**DECEMBER**

10 0313 (10-16)	22222	5.0	19	9A	15B	13C	1si
11 0852 (43-56)	21122	5.8	15	-	1B	9C	1si
30 0346 (34-48)	22222	5.2	26	12A	14B	11C	

## **SECTION 5**

**5.3. ssc 1984**



## STORM SUDDEN COMMENCEMENTS (ssc) 1984

Sudden commencements followed by a storm or period of storminess, as selected from reports of the following 44 observatories\*:

SOD COL DOB NUR MNK WNG WIT IRK NGK VAL HAD DOU BDV CLF HRB UBA GCK MMB AQU TFS EBR COI SPT FRD PEN ALM KAK HTY KNY QUE TEN LNP LUA PMG HUA MPO GNA ACS CBA AMS TWA CZT KGL DUM, the records from HON and from copies of the magnetogrammes sent by five low-latitude observatories (MBO, FUQ, HON, PMG, ABG) or their five supplementary observatories (TEN, SJG, API, KNY, HYD).

\*For explanation of the three-letter symbol: see list in Section 2, pp 23-32

### JANUARY

None

### FEBRUARY

12 1504 (00-08)	12122	6.6	16	3A	14B	13C		
20 1556 (52-60)	22222	3.7	25	8A	16B	2C	--	1sfe
29 0338 (36-40)	11111	5.3	4	1A	2B	2C	2si	1sfe

### MARCH

None

### APRIL

17 1442 (47-35)	22222	2.3	29	12A	13B	5C	--	1sfe
--------------------	-------	-----	----	-----	-----	----	----	------

# STORM SUDDEN COMMENCEMENTS (ssc) 1984 (continued)

MAY

24 0845 (43-47)b	12222	3.2	23	5A	9B	10C
---------------------	-------	-----	----	----	----	-----

JUNE

15 0434 (32-40)	11110	5.1	12	1A	1B	5C	1si
--------------------	-------	-----	----	----	----	----	-----

JULY

09 1639 (34-41)	11122	6.9	14	2A	6B	4C	2si
31 1451 (49-54)	01011 (reversed)	5.2	22	8A	5B	9C	

AUGUST

19 1306 (04-07)	11101	6.1	9	1A	3B	3C	2si
--------------------	-------	-----	---	----	----	----	-----

SEPTEMBER

04 0745 (36-51)	23233	4.1	29	17A	19B	2C
--------------------	-------	-----	----	-----	-----	----

# STORM SUDDEN COMMENCEMENTS (ssc) 1984 (continued)

## OCTOBER

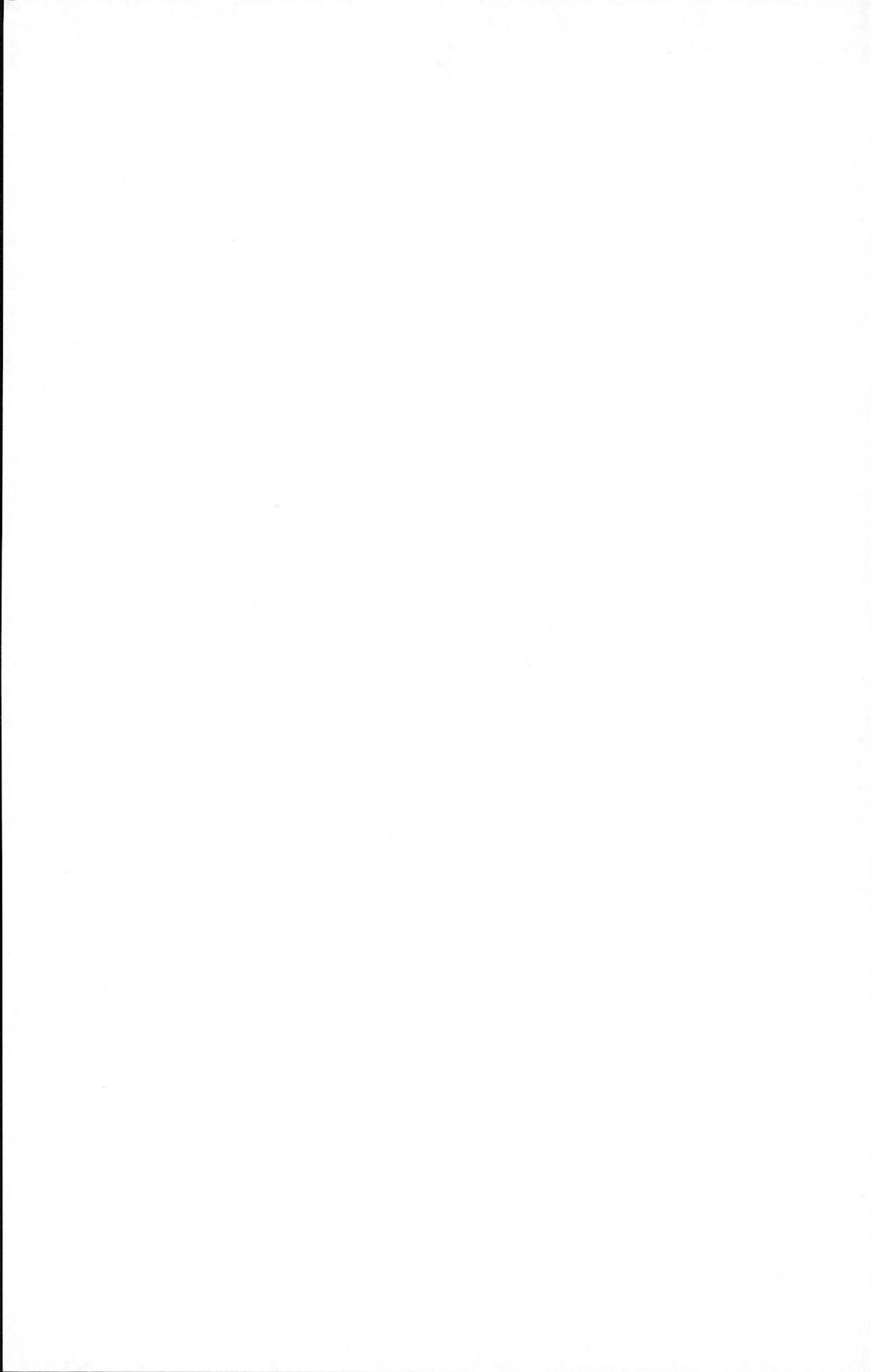
25 2127 (25-30)	22111	6.7	21	3A	3B	-
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## NOVEMBER

None

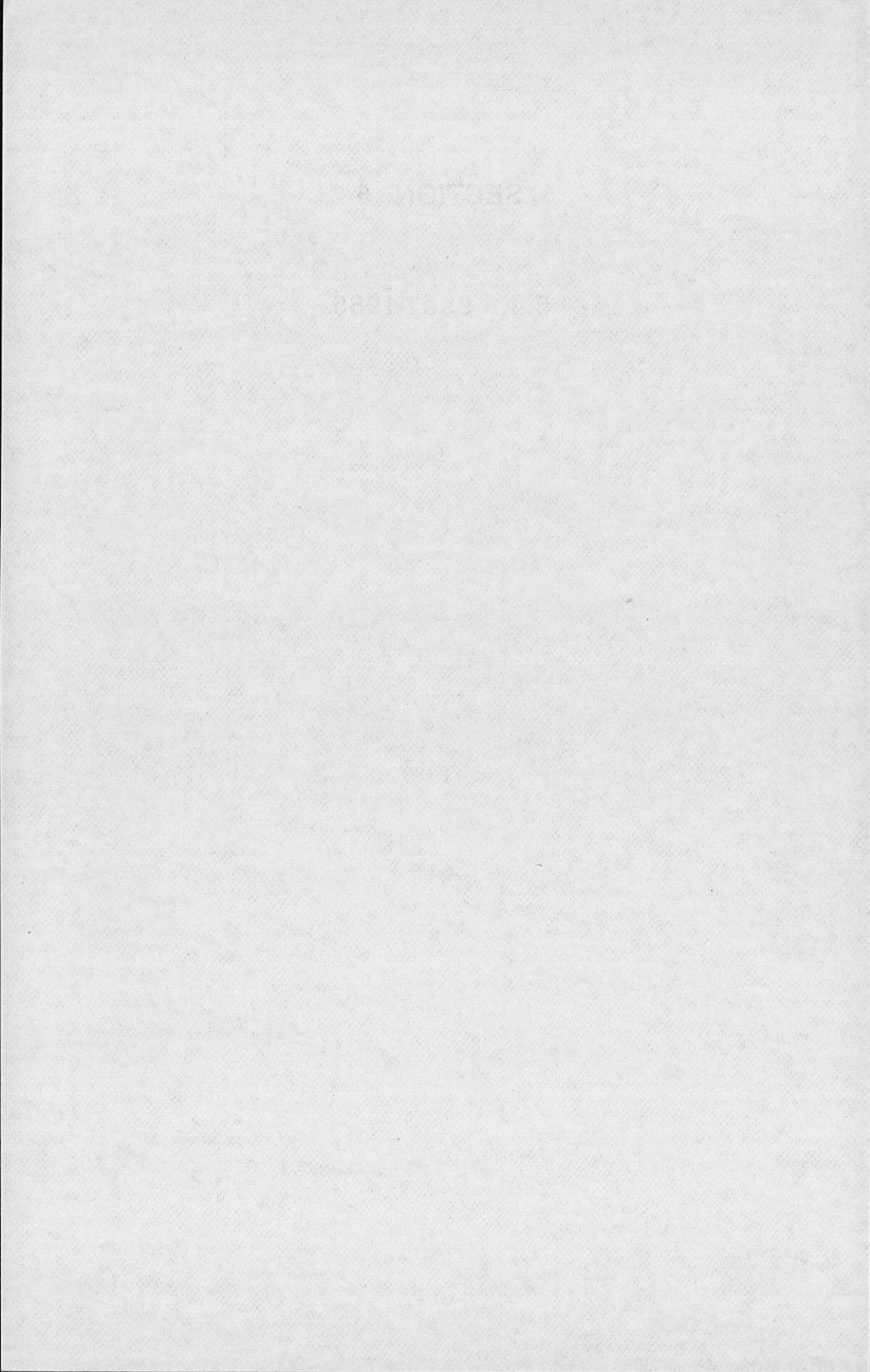
## DECEMBER

13 0103 (00-09)	22222	5.2	14	5A	7B	7C	1si
21 1720 (18-21)	11011	4.4	13	1A	2B	5C	



## **SECTION 5**

**5.4. ssc 1985**



## STORM SUDDEN COMMENCEMENTS (ssc) 1985

Sudden commencements followed by a storm or period of storminess, as selected from reports of the following 42 observatories\*:

SOD DOB NUR MNK WNG WIT IRK NGK VAL HAD DOU BDV CLF HRB UBA SUR GCK MMB AQU TFS  
EBR COI SPT FRD PEN ALM KAK HTY KNY QUE LNP LUA PMG MPO GNA ACS CBA AMS TWA CZT  
KGL DUM, the records from HON and from copies of the magnetogrammes sent by five low-latitude observatories (MBO, FUQ, HON, PMG, ABG) or their five supplementary observatories (TEN, SJG, API, KNY, HYD).

\*For explanation of the three-letter symbol: see list in Section 2, pp 23-32

### JANUARY

08 1412 (09-14)	22222	7.6	18	5A	14B	16C	
23 0805 (02-09)	23222	4.4	47	5A	7B	3C	1sl

### FEBRUARY

05 0348 (47-52)	22222	3.8	20	10A	10B	10C	
24 0233 (33-34)	12121	6.8	13	-	3B	4C	

### MARCH

None

**STORM SUDDEN COMMENCEMENTS (ssc) 1985 (continued)**

APRIL

20 0312 (10-16)	12222	4.1	18	3A	9B	10C	1si
26 0201 (58-65)	11222	7.1	27	4A	2B	2C	
30 0923 (18-28)	33333	3.5	31	10A	23B	1C	

MAY

02 0145 (43-48)	11122	5.7	12	1A	4B	4C	1si
--------------------	-------	-----	----	----	----	----	-----

JUNE

06 0545 (44-50)	11111 (reversed)	5.5	16	4A	7B	1C	2si	1sfe
09 1715 (12-19)	22122	5.6	13	14A	15B	6C		

JULY

22 1947 (39-50)	11011	7.1	9	1A	4B	6C	
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AUGUST

12 1451 (48-55)	22122	7.7	22	9A	5B	10C	
--------------------	-------	-----	----	----	----	-----	--

# STORM SUDDEN COMMENCEMENTS (ssc) 1985 (continued)

SEPTEMBER

14 0601 (54-65)	22222	6.3	24	12A	14B	12C
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OCTOBER

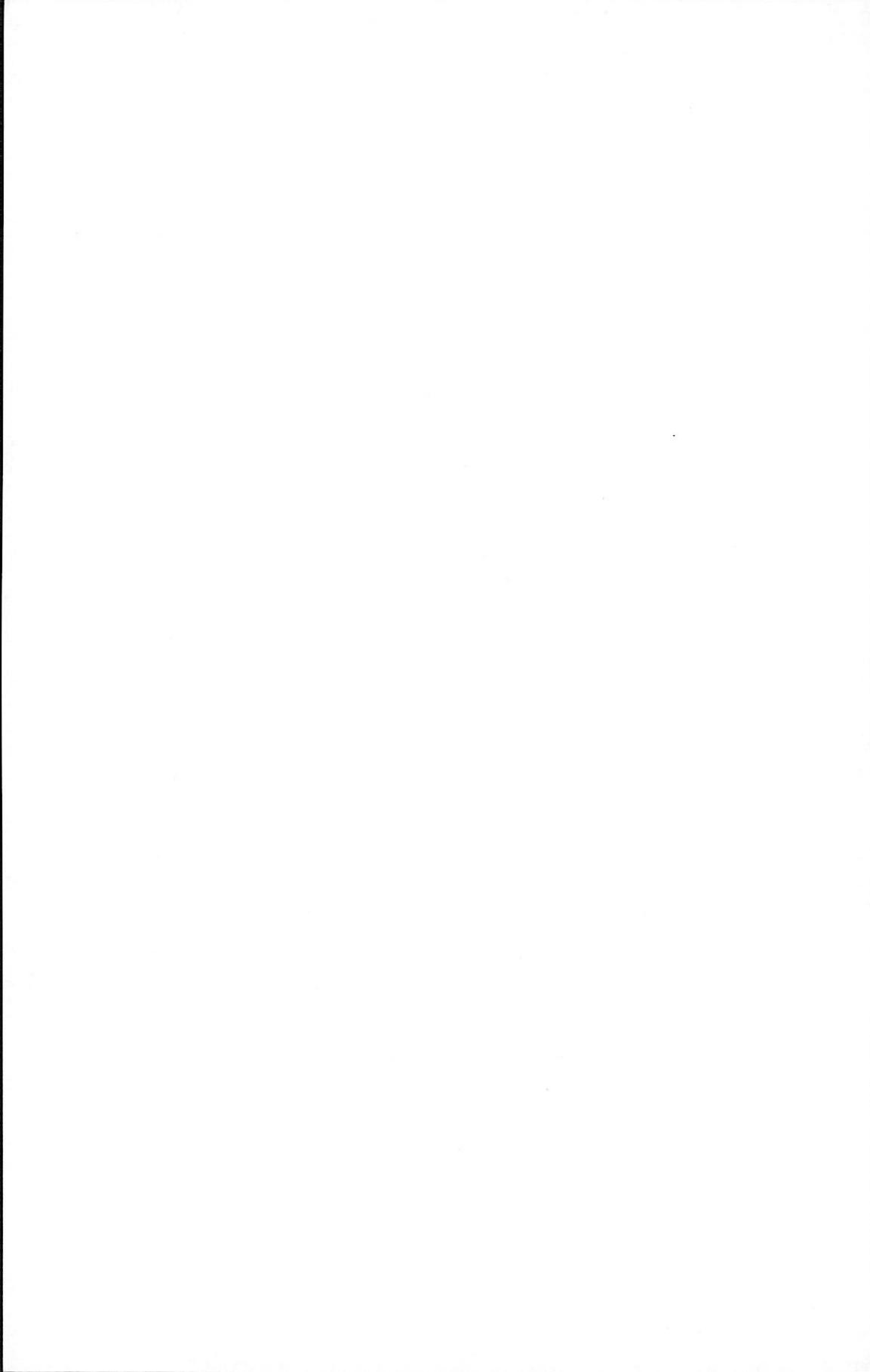
31 1059 (57-62)	11112	5.1	11	3A	5B	5C	4si
--------------------	-------	-----	----	----	----	----	-----

NOVEMBER

29 0807 (05-09)	22222	8.4	21	7A	12B	14C
--------------------	-------	-----	----	----	-----	-----

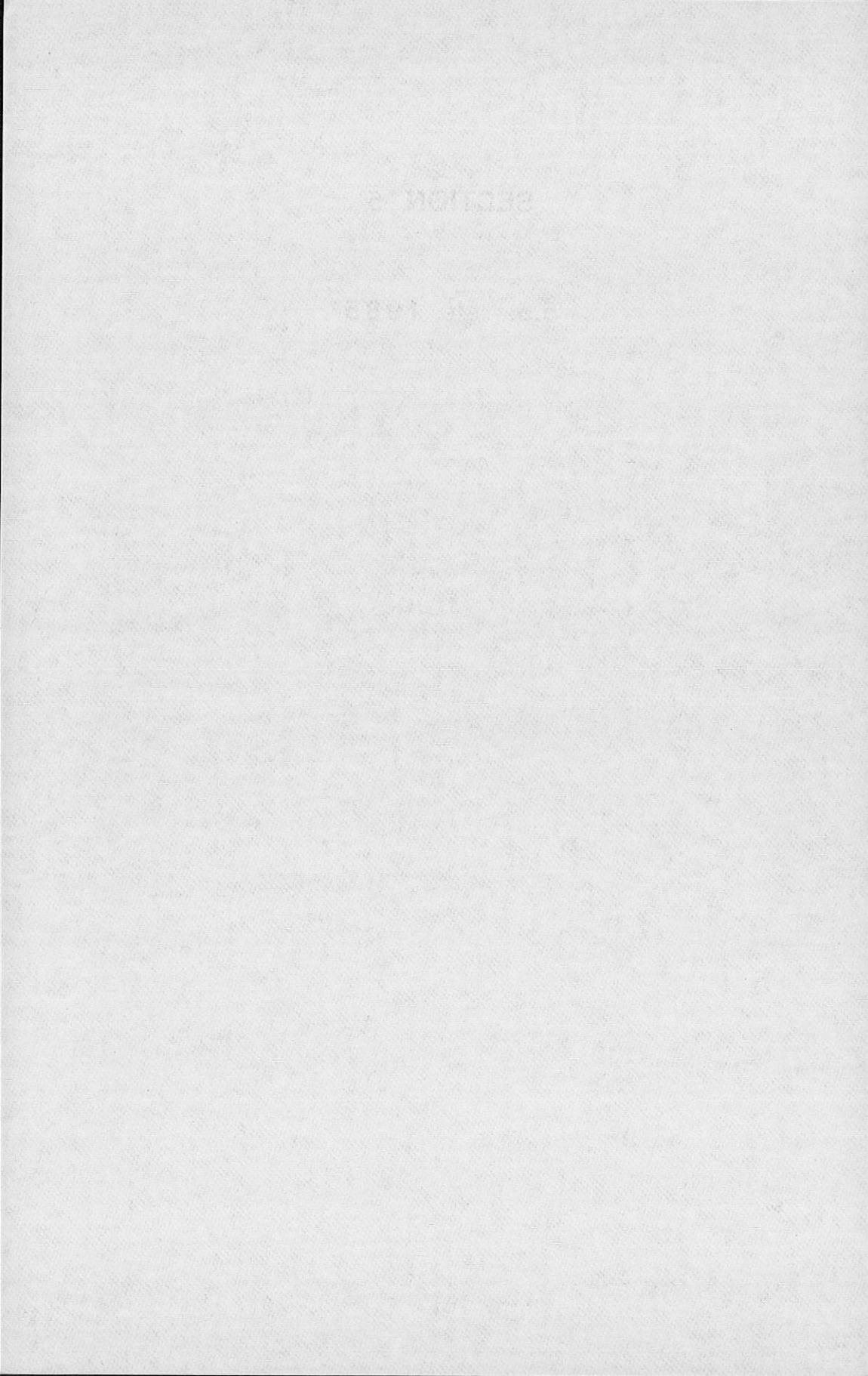
DECEMBER

09 2032 (30-34)	11111 (reversed)	4.3	10	4A	7B	5C	3si	1sfe
12 2119 (15-22)	12212	8.1	20	6A	9B	5C		
19 0847 (45-50)	22222	5.6	25	9A	13B	8C		



## **SECTION 5**

**5.5. sfe 1985**



## SOLAR - FLARE EFFECTS ( sfe ) 1985

Times of commencements of solar-flare effects (sfe) checked by the following 55 observatories, identified by their IAGA three letter code (pp 23-32 above):

SOD YAK NUR MGD LNN BOX SVD KNS KNG MNK WNG IRK NGK VAL GTT KIV DOU TYH HRB UBA  
NAG YSS ODE NKK GCK MMB AAA AQU EBR COI SPT FRD PEN KAK TUC KNY QUE LNP HON ABG  
SJG HYB MUT GUA ETT BNG PMG API PPT MPO GNA HER ACS TWA EYR

### JANUARY

none

### FEBRUARY

none

### MARCH

none

APRIL 24, 09:25

A	LNN2 AQU2	SVD2 EBR2	KNG3 LNP3	MNK1 ABG2	WNG3 HYB3	IRK3 MUT2	KIV2 ETT2	HRB3 BNG1	NKK2 HER0	AAA3
B	YAK1 ODE2	NUR2 GCK3	MGD1 (MMB0)	BOX3 COI1	KNS2 SPT1	NGK1 KNY0	VAL1 QUE1	GTT0 (GUA1)	DOU1 [PMG1]	NAG3 GNA2
C	TYH0	UBA3	YSS1	(FRD0)	PEN3	(KAK0)	[TUC0]	[HON0]	(SJG0)	
D										
E	SOD									
X	MPO									

### MAY

none

### JUNE

none

### JULY

none

### AUGUST

none

### SEPTEMBER

none

SOLAR - FLARE EFFECTS ( sfe ) 1985 (continued)

OCTOBER

none

NOVEMBER

none

DECEMBER

none

DOUBTFUL SOLAR - FLARE EFFECTS ( sfe ) 1985

JANUARY 21, 23:50

A	MGD3	GUA2	API3	PPT2	GNA0						
B	YSS2	MMB3	[AAA1]	[AQU2]	KAK3	KNY3	[QUE1]	(ETT1)	[HERO]		
C	[SVD1] [NAG0] [MPO1]	[KNG2] [ODE2] (TWA0)	[MNK1] [GCK0]	[WNG0] [FRD0]	[NGK0] [PEN2]	[VAL0] LNP3	[GTT0] [ABG2]	[KIV1] [HYB0]	[TYH0] [BNG1]	[HRB0] PMG1	
D	TUC	HON	MUT								
E											
X	(IRK)	(UBA)	EYR								

FEBRUARY 27, 09:36

A	KNG3	WNG1	ABG2	MUT1	BNG1						
B	SOD1 QUE1	NUR2 LNP3	SVD2 [GUA0]	MNK1 ETT1	IRK1 [PMG0]	UBA2 ACS1	ODE2 (TWA1)	NKK1	AAA1	AQU1	
C	(YAK1) PEN1	LNN1 (KAK0)	BOX1 (KNY0)	NGK1 HYB0	VAL0 [PPT1]	GTT2 MPO2	DOU1 GNA1	TYH1 HERO	GCK0	[MMB0]	
D	KNS	KIV	HRB	NAG	EBR	COI		SPT			
E											
X	(YSS)										

MARCH 6, 08:55

A	SVD2	IRK3	KIV2	DOU1	NAG2	AAA2					
B	(YAK2)	(MGD0)	BOX2	KNS1	KNG1	MNK1	WNG2	NGK0	VAL1	GTT0	
	UBA2	ODE2	NKK0	SPT1	KNY0	QUE1	(ACS1)	(TWA1)			
C	TYH2	(YSS2)	(MMB0)	AQU1	COI1	[FRD0]	(KAK0)	[TUC0]	LNP1	[HON1]	
	ABG0	[SJG0]	(GUA0)	BNG1	(PMG0)	HERO	[EYR0]				
D	EBR										
E	SOD	NUR	LNN	HRB	GCK	PEN	HYB	ETT	[PPT ]	MPO	GNA
X	MUT										

APRIL

none

DOUBTFUL SOLAR - FLARE EFFECTS ( sfe ) 1985 (continued)

MAY 02, 07:43

A	LNN3	SVD2	NKK2	BNG1	HER0	[EYR0]					
B	NUR2	MGD0	BOX1	VAL1	GTT1	ODE2	EBR1	QUE1	LNP3		
C	KNG1 KNY1	NGK1 ABG1	DOU0 [SJG0]	NAG2 HYB	MMB1 MUT1	AQU3 PMG1	SPT1 [API0]	[FRD0] [ACSO]	PEN3 [TWA0]	KAK1	
D	TYH	COI	GUA								
E	SOD GCK	YAK AAA2	KNS ETT	MNK [PPT ]	WNG GNA	IRK	KIV	HRB	UBA	YSS	
X	MPO										

MAY 21, 09:51

A	SVD3										
B	WNG3	ODE2									
C	SOD1 UBA2	LNN2 GCK0	BOX0 AAA2	MNK2 LNP1	IRK2 ETT0	NGK0 BNG	VAL0	GTT0	KIV1	DOU0	
D	YAK EBR	NUR COI	MGD SPT	KNS PEN	KNG KNY	TYH ABG	HRB HYB	NAG MUT	YSS MPO	NKK HER	AQU
E											
X	QUE	(GUA )									

JUNE

none

JULY

none

AUGUST

none

SEPTEMBER

none

OCTOBER

none

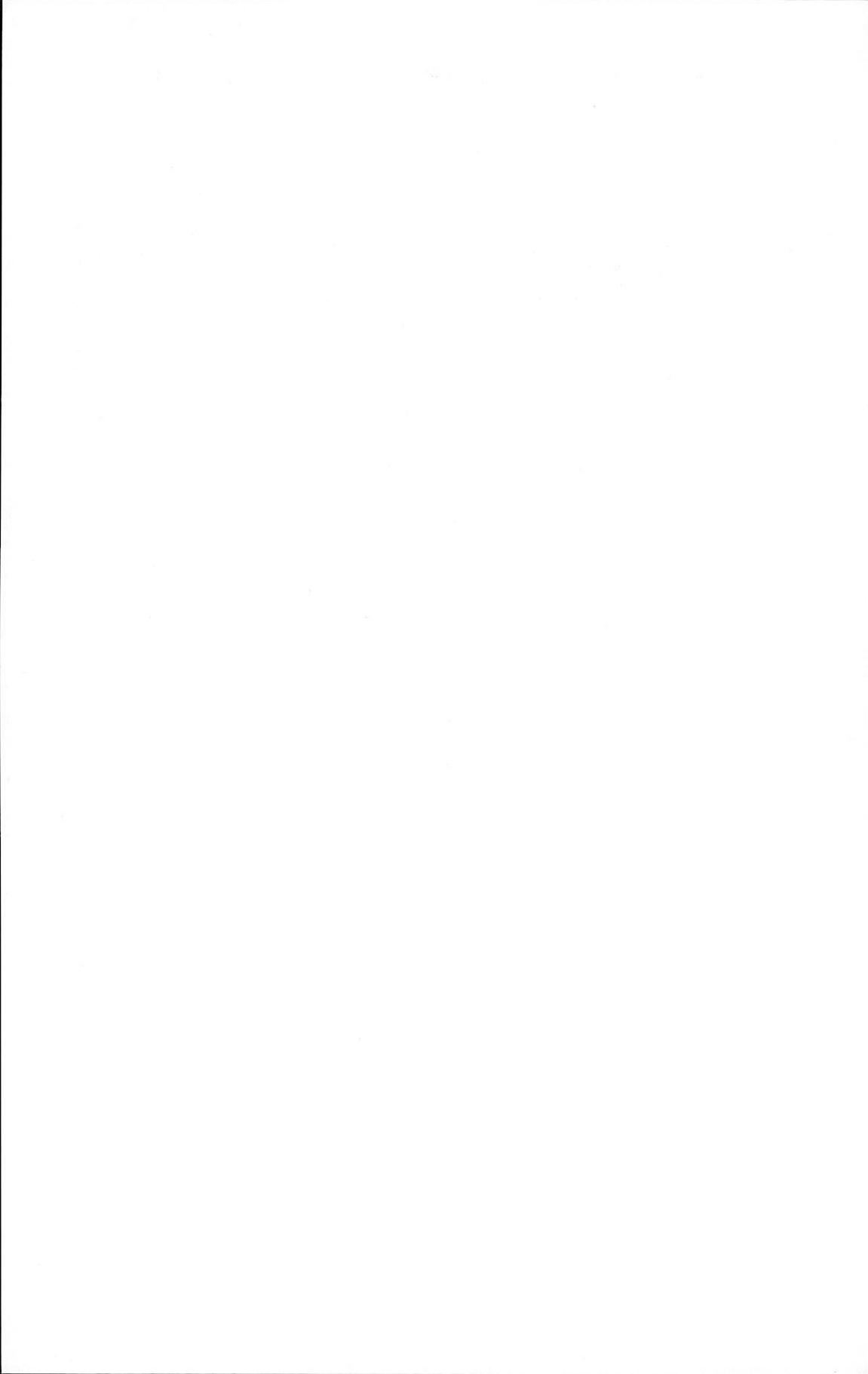
DOUBTFUL SOLAR - FLARE EFFECTS ( sfe ) 1985 (continued)

NOVEMBER 16, 05:20

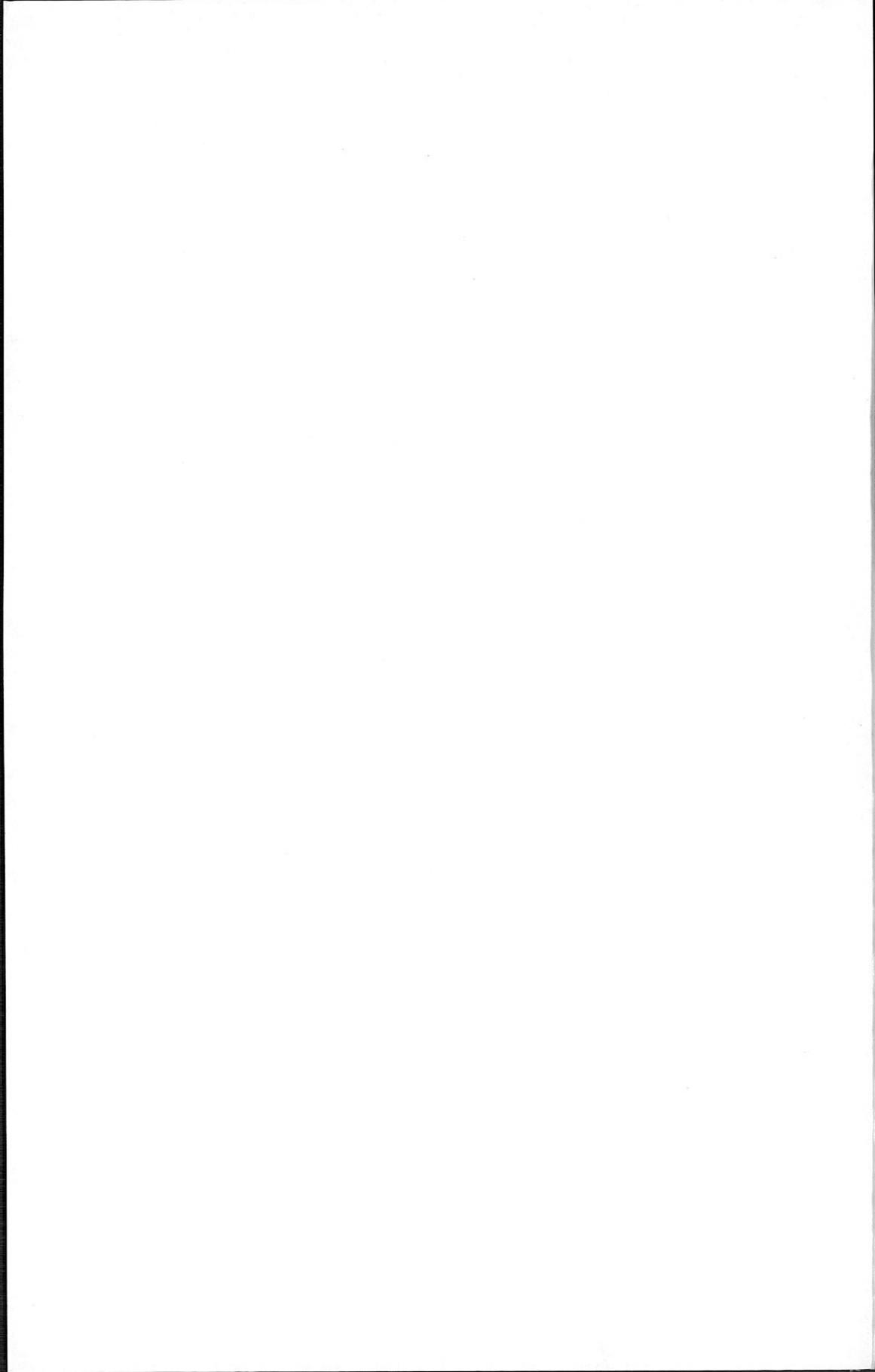
A	(KNG3)	IRK3	(KIV1)	AAA3	ABG1						
B	YAK1 (PEN1)	(LNN2) QUE1	(BOX1) LNP2	SVD2 PMG0	KNS1	(WNG0)	(NGK0)	(NAG0)	(ODE2)	[COI1]	
C	(NUR ) [SPT0] [TWA0]	MGD0 KAK0	[VAL0] [TUC0]	(GTT0) KNY0	(DOU1) MUTO	(TYH1) GUA0	YSS1 (PPT1)	NKK2 GNA1	MMB0 HERO	(AQU1) [ACSO]	
D	HYB	API									
E	(SOD )	(MNK )	(HRB )	(GCK )	ETT	BNG	MPO	EYR			
X	UBA										

DECEMBER 06, 08:22

A	LNN3	IRK3	AAA2	AQU2							
B	(YAK1) PEN1	NUR2 LNP2	BOX2 ABG1	SVD2 MUTO	KNS0	WNG2	(VAL1)	ODE2	COI1	[FRD1]	
C	(SOD1) GCK0 MPO2	[MGD0] (MMB0) GNA1	MNK1 SPT1 HERO	NGK0 (KAK0)	GTT2 [TUC0]	KIV1 (KNY0)	DOU1 QUE1	TYH0 [SJG0]	HRB1 ETT0	NAG2 PMG1	
D	UBA	NKK	EBR	HYB	BNG						
E											
X	KNG										



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No. 51 Transactions of the V Scientific Assembly, Prague, 1985

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IAGA Symposium No. 5, Communications présentées à la Réunion de São José dos Campos (Brésil),  
IAGA Symposium No. 6, Symposium on Aurora and Magnetic Storms, Birkeland, 1967  
IAGA Symposium No. 7, Symposium on Upper Atmospheric Winds, Waves and Ionospheric Drifts,  
St Gall, 1967  
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No. 32n Geomagnetic Data, 1983, IAGA indices : aa, Am, Kp, Dst, AE  
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