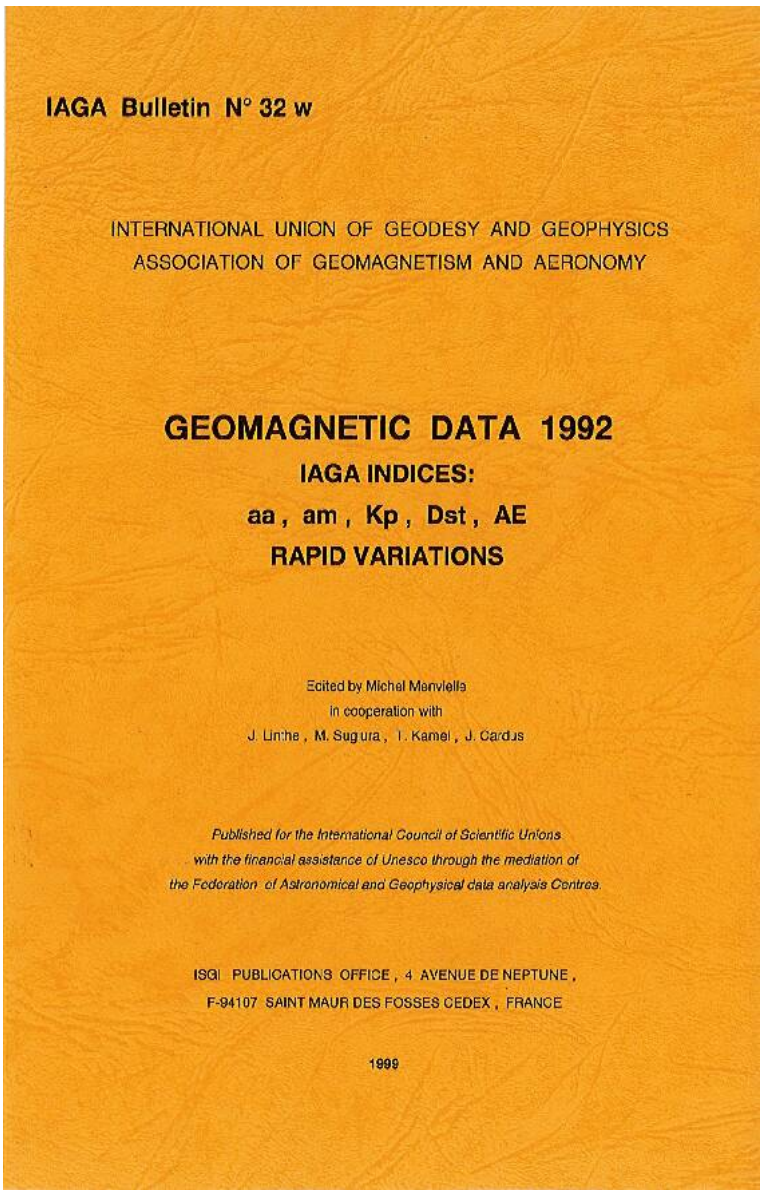

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IAGA Bulletin N° 32 w

INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
ASSOCIATION OF GEOMAGNETISM AND AERONOMY

GEOMAGNETIC DATA 1992

IAGA INDICES:

aa , am , Kp , Dst , AE

RAPID VARIATIONS

Edited by Michel Menvielle
in cooperation with
J. Linthe , M. Sugiura , T. Kamei , 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.

ISGI PUBLICATIONS OFFICE , 4 AVENUE DE NEPTUNE ,
F-94107 SAINT MAUR DES FOSSES CEDEX , FRANCE

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FOREWORD

While keeping the Bulletin series as homogeneous as possible, the general information is updated in each issue, and we try to improve contents and presentation as well.

The Bulletin 32 series aims at providing a reference publication with all definitive values of indices and rapid variation data for the year. It however may happen that difficulties in the derivation of some indices could cause significant delays so that it is desirable to issue the Bulletin 32 for the year before their definitive values become available. It has already been the case in the past, and it is unfortunately the case for the AE indices this year. Because of the long delays in delivering the necessary records on the part of some of the observatories the derivation of the definitive AE indices has been significantly delayed for 1992. Therefore, we regretfully present provisional AE indices for 1992 in this issue.

A floppy with the same content as the Bulletin (except for the rapid variations) is included, with a software for visualising the tables. The floppies corresponding to the years 1981-1991 have been prepared, and are available on request at the ISGI Publication Office (c/o CETP, 4 Avenue de Neptune, F-94107 SAINT MAUR DES FOSSES CEDEX, FRANCE)

Michel Menvielle

ACKNOWLEDGEMENTS

We wish to acknowledge J.O. CARDUS, M. SIEBERT, H.-J. LINTHE, T. KAMEI and M. SUGIURA for their collaboration in preparing the data published in this Bulletin. Thanks are also due to all the organisations, which support efficiently the preparation and distribution of these geomagnetic data (as listed in Table 1, pages 9-10).

Let us add that M. SUGIURA And T. KAMEI wish specially to acknowledge the valuable assistance of T. ARAKI (Data Analysis Centre for Geomagnetism and Space Magnetism, Kyoto University) in the preparation of the Dst indices.

As for me, I am pleased to express our thanks to all those who helped in its elaboration, and in particular to D. HOVNANIAN for her valuable assistance in preparing the manuscript.

Michel Menvielle

Saint Maur, July 1999

CONTENTS

SECTION 1

PRESENTATION OF THE BULLETIN

1.1. INTRODUCTION

1.1.1. The IAGA Bulletin 32 series

The IAGA Bulletin N°32 series is a yearly compilation of geomagnetic 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 Publications Office of 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, Indices and Data. Since 1956, it belongs to the Federation of Astronomical and Geophysical Data Analysis Services. Its present address is :

ISGI, CETP - CNRS/IPSL/UVSQ, 4 Avenue de Neptune,
F - 94107 Saint-Maur des Fossés CEDEX, FRANCE.

As for 1992, the elaborated data were provided by the following Institutes, under the responsability of the adjoining collaborators :

- Institut für Geophysik, Göttingen (M. SIEBERT),
  moved in 1996 to GeoForschungZentrum, Potsdam (J. LINTHE):
  Kp, ap, Ap, Cp, Q-days and D-days.
- CETP - CNRS/IPSL/UVSQ, Saint Maur (M. MENVIELLE):
  aa, C-days and K-days, an, Kn, An, as, Ks, As, and am, Km, Am.
- Data Analysis Center for Geomagnetism and Spacemagnetism, Kyoto (M. SUGIURA and T.KAMEI)
  Dst, AL, AU, AE.
- Observatori de l'Ebre, Roquetes (J.O. CARDUS):
  Rapid Variations.

The collection and the publication of the daily character figure C and of the international character figure Ci, together with the lists of selected quiet and disturbed days began in 1906.

The three-hourly K indices (scale 0-9) were introduced by Bartels in 1938, and, a few years later, planetary indices Kp were designed. They are computed from the K indices of 12 observatories which were routinely providing data at the time. The K indices of the selected stations for these early years were published in IAGA Bulletins N°12g and 12l. In addition to Kp, the corresponding range values ap and related daily indices Ap and Cp have been regularly published in the IAGA Bulletin N°12.

In accordance with the recommendations of the IAGA Assemblies in Madrid (1969) and in Moscow (1971), the publication of C and K indices of individual observatories in the IAGA Bulletins ended with the 1969 data, while other indices (Dst, an, Kn, as, Ks, am, Km) 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. Since 1976, the new index aa is published instead of Ci and the C figures are no longer compiled, according to a recommendation of the IAGA Assembly in Grenoble (1975).

A short recall of the definition of the published indices is given in the section 1.3 below. For more details, including the definition of the K indices, one can refer to the following reports:

- M. Siebert, in '*Handbuch der Physik*', vol.49/3, 206-275, Springer Verlag, 1971;
- P. N. Mayaud, *Derivation, Meaning and Use of Geomagnetic Indices*, Geophysical Monograph 22, Am. Geophys. Union, Washington D.C., 1980, gives a complete review of the present IAGA indices;
- G.K. Rangarajan, *Indices of geomagnetic activity*, in '*Geomagnetism*', edited by J.A. Jacobs, Academic, San Diego, 1989;
- M. Menvielle and A. Berthelier, *The K-derived planetary indices: description and availability*, Rev. Geophys., **29**, 3, 415-432, 1992;
- A. Berthelier, *The geomagnetic indices : derivation, meaning and uses in solar - terrestrial physics*, in '*STPW Proceedings*', ed. by J. HRUSKA et al, vol 3, 3-20, US Gov. Publications Office, 1994.

1.1.2. Data Availability

The whole series of geomagnetic indices are available at the World Data Centers (list and addresses in Table 1-a), and the IAGA Bulletins where they are published are available at the ISGI Publications Office (Table 1-c). More detailed information on the length of each series, and on the publication and availability of each index, and of the rapid variations are given below.

- The *K indices* of individual observatories are available for the years 1969-1974, at the World Data Center A (WDC-A, Table 1-a). Besides, the tables of local K indices can be found in the bulletins or yearbooks of many observatories. An extensive study on the K index by P. N. Mayaud and the practical rules for its determination are given in the "Atlas des indices K", IAGA Bulletin N°21, 1967.

- The *aa indices* constitute a series of indices beginning in the year 1868. Its description can be found in the IAGA Bulletin N°33, which contains tables and graphs of aa for the years 1868-1967. The values for the years 1968-1975 are published in the IAGA Bulletin N°39. These indices are regularly published in the IAGA Bulletins N°32 since 1976. Provisional values are regularly published in the ISGI Monthly Bulletins, in the monthly tables edited by H. Coffey in the Journal of Geophysical Research, and in the Solar Geophysical Data Publications (Table 1-c). aa indices are available at the ISGI WWW homepage (ISGI Publications Office, Table 1-c).

- 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 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. Provisional values are regularly published in the ISGI Monthly Bulletins, in the monthly tables edited by H. Coffey in the Journal of Geophysical Research, and in the Solar Geophysical Data Publications (Table 1-c). They can be sent on request before the end of the next month by the GeoForschungZentrum, Potsdam (Table 1-b). Kp indices are available at the WWW homepage of this Institute.

- The *three-hourly indices an, Kn,* and *as, Ks,* for the Northern and Southern hemispheres and the *planetary 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 Bulletins N°32 from 1968 onwards. Provisional values are regularly published in the ISGI Monthly Bulletin, in the monthly tables edited by H. Coffey in the Journal of Geophysical Research, and in the Solar Geophysical Data Publications (Table 1-c). an, as, and am indices are available at the ISGI WWW homepage (ISGI Publications Office, Table 1-c).

- The *equatorial Dst index* is published in the IAGA Bulletin N°32 since 1970. The 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. The 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 the three-hourly values of Dst for the IGY as determined by Kertz in a somewhat different way. Recently, M. Sugiura and T. Kamei recomputed an homogeneous series of Dst values, using the data of four stations. These Dst indices values for 1957-1986 are now published in the IAGA Bulletin N° 40 where is inserted a floppy disk containing the hourly Dst values for these 30 years. This report supersedes earlier Dst publications by Sugiura and co-workers. Provisional Dst indices are regularly published in the ISGI Monthly Bulletin, and in the Solar Geophysical Data Publications (Table 1-c). Dst indices are available at the WDC-C WWW homepage (see Tabla 1-b).

- 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 the 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. The hourly mean values are published in the IAGA Bulletins N°32 since 1981. AE indices are available at the WDC-C WWW homepage (see Tabla 1-b)

- Data on *rapid variations* are collected and prepared for publication at the Observatorio del Ebro (Table 1-b), according to the decisions made at the IAGA Assemblies in Madrid (1969) and in Grenoble (1975). They are thus given less extensively than in the former IAGA Bulletins. Provisional lists are published in the ISGI Monthly Bulletin (Table 1-c).

Tables 1-a, 1-b, and 1-c give present addresses of the ISGI, of the World Data Centers, and of the National Institutes and Data Centers related to this bulletin.

TABLE 1

a - Bulletins and publications

• Solar Geophysical Data monthly publications :

NOAA National Geophysical Data Center
325, Broadway E/GC4, Dept. 961
BOULDER, Colorado 80303-3328 U.S.A.

• IAGA Bulletins and ISGI Monthly Bulletins :

ISGI Publications Office
CETP - 4, avenue de Neptune
94107 SAINT MAUR DES FOSSES CEDEX, France
E-mail automatic service : ISGI.DATA@cetp.ipsl.fr
http://tango.cetp.ipsl.fr/~isgi/homepag1.htm

TABLE 1 (continued)

b - ISGI and World Data Centers

ISGI

International Service of Geomagnetic Indices
Service International des Indices Géomagnétiques
CETP -CNRS/UVSQ, 4, Avenue de Neptune
F-94107 SAINT MAUR DES FOSSES CEDEX, France
Telephone 33 1 45 11 42 30
Telefax 33 1 48 89 44 33
http://tango.cetp.ipsl.fr/~isgi/homepag1.htm

WDC-A

World Data Center-A for Solar-Terrestrial Physics
NOAA code E/GC2, 325 Broadway
BOULDER, Colorado 80303-3328 U.S.A.
Telephone 1 303 497 6324
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

WDC-C

World Data Center-C2 for Geomagnetism
Data Analysis Center for Geomagnetism and Space Magnetism
Faculty of Science, Kyoto University
KYOTO 606-01, Japan
Telephone 81 75 753 3929
Telefax 81 75 722 7884
http://swdcdb.kugi.kyoto-u.ac.jp/

c - ISGI Collaborating Institutes

M. MENVIELLE

Centre d'études des Environnements Terrestre et Planétaires
4, Avenue de Neptune
F-94107 SAINT MAUR DES FOSSES CEDEX, FRANCE

J. LINTHE

GeoForschungZentrum, Potsdam
Adolf-Schmidt-Observatorium für Geomagnetismus
Lindenstr. 7
D-14823 NIEMEGK, GERMANY
http://www.gfz-potsdam.de/pb2/pb23/gm/kp_index/

J. O. CARDUS

Observatori del'Ebre
c/ Horta Alta, 38,
E-43520 ROQUETES, SPAIN

M. SUGIURA

Working Group on World Data Centers
National Committee on Solar-Terrestrial Physics
Science Council of Japan
Research Institute of Science and Technology
Tokai University, 2 -28 Tomigaya, Shibuya-ku
TOKYO 151.0063, Japan

1.2. LIST OF OBSERVATORIES

A list of the magnetic observatories where continuous recordings have been made during at least five consecutive years is given pages 29-35. 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 the networks used in Kp, am or aa calculation. (see section 1.3 for the description of these networks in 1992);
- 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 the former 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 deinen 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 36-37. 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 only indicated in this table the opening and closing years, as the other parameters can be found in the preceeding list.

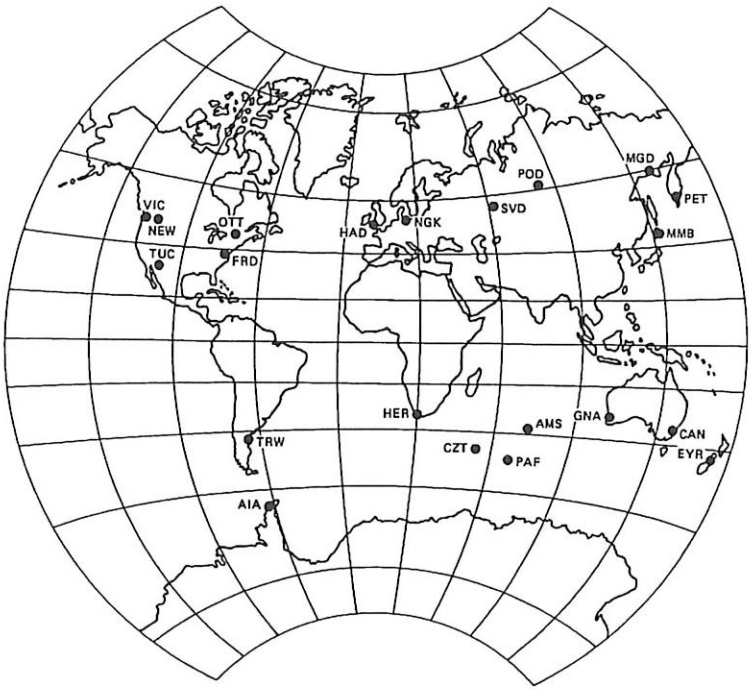


Figure 1: Distribution of am observatories

Figure 2: Distribution of Kp observatories

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 used to derive aa are given in Table 2-a (next page), with weighting coefficients given in brackets.

The aa index is in nanotesla (nT) and it represents the activity level at an invariant magnetic latitude of about 50°. The half-daily and daily mean values of aa are very close to the corresponding values of the am indices. The values for 1992 are given pages 44-46 as follows :

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 noon and after noon.

Aa = daily value of aa

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

The letters C and K indicate the quiet 24-hour 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, that on the right one refers to a period of 48 hours centered on the Greenwich noon. The asterisks mark the five international quietest days of the month (as deduced from Kp, see section 4).

A musical diagram of aa indices (logarithmic scale) is drawn page 43 for the whole year. The monthly and yearly mean values of aa for the years from 1868 onwards are listed pages 47-49. A graph of 12-month running mean values of aa is drawn page 50, covering the full period over which aa has been calculated so far, i.e. 1868-1992. 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 (see Table 2-b, next page). The corrected geomagnetic latitude indicated in this Table has been calculated by Mayaud for taking into account the actual topography of the main field.

TABLE 2

a - List of aa observatories

Northern Hemisphere				Southern Hemisphere			
Observatory			Corr. Geom. Lat	Observatory			Corr. Geom. Lat.
1868-1925	Greenwich	*(1.007)*		1868-1919	Melbourne	*(0.967)*	
1926-1956	Abinger	*(0.934)*		1920-1979	Toolangui	*(1.033)*	
1957- ...	Hartland	*(1.059)*	50.0°	1980- ...	Canberra	*(1.084)*	45.2°

b - List of am observatories

Northern Hemisphere				Southern Hemisphere			
	Observatory		Corr. Geom. Lat.		Observatory		Corr. Geom. Lat.
G1	MGD	Magadan	53.8°	G6	EYR	Eyrewell	50.2°
	PET	Petropavlosk	46.4°		CAN	Canberra	45.2°
	MMB	Memambetsu	37.4°				
G2	POD	Podkammenkaya	57.2°	G7	GNA	Gnangara	44.1°
	SVD	Sverdlovsk[1]	52.2°		AMS	Amsterdam	48.3°
G3	HAD	Hartland	50.0°	G8	PAF	Kerguelen	58.8°
	NGK	Niemegk	48.8°		CZT	Crozet	52.4°
					HER	Hermanus	41.1°
G4	OTT	Ottawa	58.9°	G9	AIA	Argentine Isl.	49.7°
	FRD	Frederiksburg	51.8°		TRW	Trelew[2]	27.8°
G5	NEW	Newport	55.2°				
	VIC	Victoria	53.9°				
	TUC	Tucson	39.7°				

[1] *Present name : Ekaterinburg*

[2] *Missing data: January–April and December*

c - List of Kp observatories

Northern Hemisphere			Southern Hemisphere		
Observatory		Corr. Geom. Lat.	Observatory		Corr. Geom. Lat.
MEA	Meanook	62.5°	EYR	Eyrewell	50.2°
SIT	Sitka	60.0°	CAN	Canberra	45.2°
LER	Lerwick	58.9°			
OTT	Ottawa	58.9°			
LOV	Lovö	56.5°			
ESK	Eskdalemuir	54.3°			
BJE	Brorfelde	52.7°			
FRD	Fredericksburg	51.8°			
WNG	Wingst	50.9°			
HAD	Hartland	50.0°			
NGK	Niemegk[4]	48.8°			

[3] *Niemegk has replaced Witteveen in the Kp network since April 1st, 1988.*

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 a conversion table (see below); they are as usually expressed by values from 0o to 9o, corresponding to the given interval of am (or an, or as).

am	0.0	1.4	3.4	5.4	7.4	10.4	13.4	16.4	20.4	26.4
Km	0o	0+	1-	1o	1+	2-	2o	2+	3-	
am	26.4	33.4	40.4	50.4	60.4	70.4	86.4	103.4	120.4	146.4
Km	3o	3+	4-	4o	4+	5-	5o	5+	6-	
am	146.4	173.4	200.4	243.4	286.4	330.4	386.4	443.4	500.4	611.4
Km	6o	6+	7-	7o	7+	8-	8o	8+	9-	9o

Monthly tables of an, and as are given pages 54-65, 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;
- an (as) 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 the 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 (pages 66-71) are displayed in a similar way

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

Km values are displayed as "musical diagram" according to Bartels solar rotations (page 53).

A compilation of the musical diagrams from 1959 onwards is available on request at ISGI Publication Office (Table 1-a). The monthly and yearly mean values of Am from 1959 onwards are given page 72.

1.3.3. *Kp* Indices

The planetary three-hour-range index Kp is the mean standardized K-index from 13 observatories between 44° and 60° northern or southern geomagnetic latitude (Figure 2, and Table 2-c). 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 has been designed to measure solar particle radiation by its

magnetic effects. The other indices derived from Kp are the three-hour index ap (the equivalent range), the daily indices Ap, the Cp and C9 characters that are related to the daily sum of ap.

The three-hour equivalent amplitude ap is deduced from 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 two horizontal components in a three-hour interval can be taken as 2 ap (for instance, for Kp = 3+, ap=18, ie 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. It is recommended to use Ap in preference to the sum of the indices Kp.

The last column gives the daily planetary character figure Cp, as defined in Bulletin 12e, page 111. It should be noted that Cp, introduced for a standardization 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, page 111, their 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 76-81. Kp values are displayed as "musical diagrams" according to Bartels solar rotation page 75. These diagrams are also available on request at GeoForschungZentrum, Potsdam (Table 1-b). The frequencies of Kp indices is given by month page 82. Monthly and yearly mean values of Ap from 1932 onwards are given pages 83-84.

Note - Observatories wishing to compute local equivalent amplitudes ak from their local K indices, may use the conversion table given below, which consists in the amplitudes (in nT) of the middle of each K class, as firstly proposed by Bartels (IATME Bull. 12e, 1951), and following a IAGA WG 5.5 recommandation (Buenos Aires, 1993).

K	0	1	2	3	4	5	6	7	8	9
ak	2.5	7.5	15	30	55	95	160	265	415	666

These values are given here for a K = 9 lower limit L9 = 500 nT; at stations having a different value of L9, they should be multiplied by L9/500, in order to have ak in nT (see IAGA News 32, page 23).

1.3.4. *Dst* index

The Dst index for 1992 are derived using the data from the four magnetic observatories given in Table 3.

These observatories were chosen on the basis of the quality of observation and for the reason that their locations are sufficiently distant from the auroral and equatorial electrojets and that they are distributed in longitude as evenly as possible. A map of the network is given in Figure 3.

The baseline

The baseline for H is defined for each observatory in a manner that takes into account the secular variation. For each observatory, the annual mean values of H, calculated from the "five quietest day" for each month, form the data base for the baseline.

It should be remembered that the final Dst values are determined after each calendar year and that therefore in this determination the annual mean values are available only up to and including the year (referred to below as the current year) for which the Dst is to be deduced.

The baseline is expressed by a power series in time and the coefficients for terms up to the quadratic are determined by the method of least squares, using the annual means for the current year and the four preceding years. Thus, the baseline, H_{base} is expressed as

$$H_{base}(\tau) = A + B\tau + C\tau^2 \qquad (1)$$

where τ is time years measured from a reference epoch.

It is noted here that if the polynomial expansion of the annual means is made in a straighforward manner as described above, an artificial discontinuity, although seldom large enough to be recognized by a casual inspection, can be introduced between the baseline value for the last hour of one year and that for the first hour of the following year, because these two baseline values are calculated from two different polynomials. To minimize such a discontinuity the polynomial determination is actually made in two steps.

From the polynomial expansion determined in the first step, the baseline value at the end of current year is calculated. In the second step, this value is included as an additional data point in the polynomial fitting. This procedure has been found to be satisfactory.

The baseline value $H_{base}(T)$ calculated from (1) for each UT hour of the current year is subtracted from the observed H value, $H_{obs}(T)$:

$$\Delta H(T) = H_{obs}(T) - H_{base}(T) \qquad (2)$$

The deviations, $\Delta H(T)$, form the data base in the following derivation for each of the observatories.

TABLE 3

List of Dst observatories

Observatory	*Acronym*	*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°

Figure 3: Distribution of the Dst observatories;
the solid line marks the dip equator.

The Sq elimination

The solar quiet daily variation, Sq, is derived for each observatory as follows. The average Sq variation for each month is determined from the values of H(T) for the internationally selected five quietest days of the month.

These quietest days are determined in UT. In order to define an average Sq variation for the local day of each observatory, we form the averages for the local hours using five quietest days. Also, using hourly values immediately before and immediately after the local days selected, we evaluate the linear change and subtract it from the Sq variation. In this manner we remove from Sq the noncyclic change, which is part of Dst variation, and also evaluate Sq from the midnight level.

The 12 sets of the monthly average Sq so determined for the year are expanded in a double Fourier series with local time, t, and month number, s, as two variables:

$$Sq(t,s) = \sum_n \sum_m A_{mn} \cos(mt + \alpha_m) \cos(ns + \beta_n)$$

This representation allows us to calculate Sq(T) at any UT hour, T, of the year. This procedure is applied to each observatory.

The Hourly Equatorial Dst Index.

For each observatory the disturbance variation, D(T), is defined by :

$$D(T) = \Delta H(T) - Sq(T) \qquad (4)$$

Then D(T) is averaged over the four observatories and normalized to the dipole equator by :

$$Dst(T) = D(T) / \cos \phi \qquad (5)$$

where the denominator is the average of the cosines of the dipole latitudes, ϕ_i (i=1,4), of the observatories contributing to the average. This normalization procedure has been found to minimize undesired effects from missing hourly values.

Monthly tables of hourly Dst-values are given pages 90-101, followed by a table of mean values (page 102). The graph of hourly values for the whole year is given pages 87-89; the table of monthly and yearly mean values from 1959 onwards is given page 103.

TABLE 4

List of AE (12) observatories

Observatory	*Acronym*	*Geographic*		*Geomagnetic*	
		Lat. (°N)	*Long. (°E)*	*Lat. (°N)*	*Long. (°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
Narssarssuaq	NAQ	61.20	314.16	71.21	36.79
Leirvogur	LRV	64.18	338.30	70.22	71.04

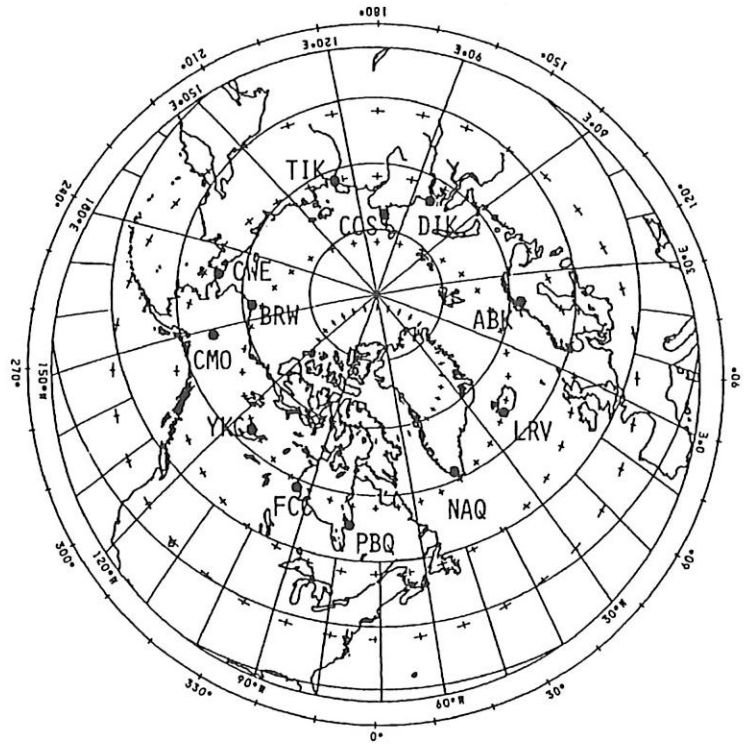


Figure 3: Distribution of AE (12) observatories.

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 4, Table 4). 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-a) and 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-a).

Because of the long delays in delivering the necessary records on the part of some of the observatories the derivation of the definitive AE indices has been significantly delayed for 1992. Regrettably, therefore, provisional AE indices for 1992 are given in this Bulletin.

Tables of hourly average of AU, AL and AE are given pages 108-131; graph is given page 107. 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. The monthly and yearly mean values from 1957 until 1992 are given page 132.

1.4. CLASSIFICATION OF DAYS

The list of the international five quietest days and the selection of the 24-hour and 48-hour intervals which are really quiet (C) or very quiet (K) are given month by month pages 136-137. They are presented on an annual diagram for 1992 page 135. The list of the international quietest and of the more disturbed days, and a list of magnetic storms are also given page 138. These classifications are made according to the following.

1.4.1. Classification deduced from *Kp* indices

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

(a) = the sum of the eight values of Kp;

(b) = the sum of the squares of these values;

(c) = the greatest of the eight values of Kp.

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 138, 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 Kp value greater than 3 or two Kp values greater than 2+.
- A selected "disturbed day" is considered "not really disturbed" and marked by an asterisk if Ap is lower than 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 $aa < 13$nT and for which Σp is higher than, or equal to 4 is a quiet K-day ; if Σp 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 Σp equal to 6. One must 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*)

The old definition, that said that "an ssc is a sudden commencement of a magnetic storm", is now changed into "sudden commencements followed by a magnetic storm *or* by an increase in activity lasting at least one hour".

The change was introduced by P. N. Mayaud (IAGA Bulletin 33 : "*A Hundred Years Series of Geomagnetic Data, 1868-1967. Indices aa and storm sudden commencements*"; see also IAGA Bulletin 39 : "*Supplementary Geomagnetic Data 1957-1975*", including a new list of ssc's 1968-1975). In this new definition more importance is given to the change of rhythm in the magnetic activity, than to the amplitude of the magnetic storm, and therefore some ssc's included in the list are not followed by a real magnetic storm.

The routine procedure of the Service in establishing the final list consists essentially of several steps, following as much as possible the instructions given by Mayaud in order to get a continuous series of homogeneous data.

Step 1. From the monthly reports of Rapid Variations prepared by 42 magnetic observatories (see list page 143), a combined list of all events is compiled.

Step 2. This list is checked against the magnetograms of two low latitude observatories (HON and EBR), and cases reported by only a very few observatories and that are clearly not an ssc in the magnetograms of HON and EBR, are eliminated.

Step 3. All other cases are then included in a new list, and copies of the magnetograms for all of them are requested from the five collaborating low latitude observatories, that are regularly spaced in longitude (Table 5a), or from their supplementary observatories (Table 5b).

Step 4. From the copies of the magnetograms sent by the five observatories as a reply to Step 3, every ssc is evaluated independently for each observatory and a number (0 to 3) is assigned to each event, in the following scale:

0. the event could have escaped the attention of the observers or does not deserve to be called an ssc,

1. the event is possibly an ssc, but is not clear enough in itself to be identified as a true ssc without inspection of other records at different longitudes,

2. the event can be unmistakably identified as an ssc from the single record on consideration,

3. is assigned, instead of 2, when the event presents a very sharp change of rhythm in the agitation, has a large amplitude and its general morphology is remarkable.

If an event gets three codes 0 out of the five observatories, it is rejected from the list.

Step 5. Finally the duration in minutes, and the amplitude in nT are measured on the copies from the five observatories and their mean values are calculated.

TABLE 5

a - Collaborating Observatories for Rapid Variations (*ssc*)

Observatory	Symbol	Geographic		Geomagnetic	
		Lat. (°N)	Long. (°E)	Lat. (°N)	Long. (°E)
MBOUR	MBO	14.40	343.02	20.68	56.80
FUQUENE	FUQ	5.47	286.27	16.47	357.07
HONOLULU	HON	21.32	202.00	21.46	268.57
PORT MORESBY	PMG	-9.40	147.15	-17.99	219.75
ALIBAG	ABG	18.63	72.87	9.64	145.39

b - Supplementary Observatories

Observatory	Symbol	Geographic		Geomagnetic	
		Lat. (°N)	Long. (°E)	Lat. (°N)	Long. (°E)
TENERIFE	SZT	28.48	343.72	34.60	60.30
SAN JUAN	SJG	18.38	293.88	29.36	5.21
APIA	API	-13.80	188.22	-15.61	261.99
KANOYA	KNY	31.42	130.88	21.12	199.85
HYDERABAD	HYB	17.42	78.55	7.86	150.69

In the list of storm sudden commencements (section 5.1, pages 143-145) the following indications are given for each event:

a) day, hour and minute (mean value taken from the monthly reports); first and last minutes thus reported are given in brackets at the end of the line,

b) the five number codes (one for each collaborating observatory) ; if some figures are underlined, it means that the replacement observatory was used,

c) the mean average duration, in minutes, of the event and its average amplitude, in nT,

d) the following figures indicate the number of observatories that in the monthly reports have characterized the ssc by each of the three letters A, B, or C, their meaning being:

A = very remarkable

B = fair, ordinary but unmistakable

C = very poor, doubtful.

Please note that the 0 to 3 qualification is given by the Service on Rapid Variations, independently from these A, B, C, qualifications which are given by the observatories, although some sort of correlation must exist among them.

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

si = sudden impulse, but not an ssc,

sfe = solar flare effect

b = bay-like disturbance.

1.5.2 Solar flare effects (*sfe*).

The aim of the Service is to provide a reliable list of times when a magnetic solar flare effect did occur. Unfortunately, the reports on solar flare effects are not provided by all the observatories sending regularly the monthly reports on Rapid Magnetic Variations to the Service. As the sfe is a phenomenon dependent of longitude, it is not an easy task to provide a complete round the world coverage.

Step 1. The list of all times given in the monthly reports from observatories as possible occurrences of sfe's are checked with data taken mainly from Solar Geophysical Data, on the occurrence of alpha-flares, radio bursts or SID's, as, by definition, the crochet-like disturbance in the magnetograms must be an effect from solar activity and more precisely of a light emission from the Sun.

Times that are not correlated with any of these solar or ionospheric phenomena are eliminated from the list except in the cases when they were reported by more than one observatory or when a single observatory gave the time with the indication that it was confirmed. These exceptions try to take into account the fact that the correlation between solar events and magnetic crochets is not hundred percent.

Step 2. The list prepared in such a way is sent to all magnetic observatories, as a *checking list*, and they are asked to inspect their magnetograms and provide their judgement in two steps:

First : Do the magnetic records show a movement at the time given ? The answer is given by the following letters:

A = very clear movement

B = fair, ordinary movement

C = very poor movement

D = movement not observed, although records are satisfactory

E = movement cannot be observed due to heavy disturbance

X = record missing

Note : Please note that this letter index refers only to the existence of a movement in the curves and not to the opinion of this movement being or not being a sfe.

Second : The opinion of this movement being or not a sfe is given after letters A, B, and possibly C, by a number index:

3 = certainly a sfe

2 = probably a sfe

1 = probably not a sfe

0 = certainly not a sfe

The answers from observatories are plotted into world maps for each event ; in these maps are also drawn times showing the sunlit hemisphere and the twilight zones.

Step 3. From these maps a judgement is made about the event being or not a sfe. A simultaneous judgment is done about the existence or not of a solar, ionospheric and radio-sun event that could be the cause of the magnetic disturbance. And finally each event is classified as a sfe, a doubtful sfe or a rejected sfe.

Tables for solar flare effects and for doubtful solar flare effects are given in Section 5.2. of the present Bulletin for the year 1992 (pages 149-158). The format is the following:

a) A summary list gives for each month, the day and time of the beginning of sfe; if the sfe is confirmed the letter C follows the time of the event. Then are indicated the number of observatories having reported a movement (letters A, B, C, see explanation in Step 2 above), and the number of observatories having not reported any movement (letters D, E, X, see Step 2 above).

b) It is followed by detailed tables giving for each event the list of observatories reporting it with the number-index, arranged according to the classifying letter and to longitude.

Stations in the twilight zone, reporting a movement (A, B, 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 lists.

The separation into such two tables of sfe and "doubtful" sfe may be rather subjective, due to the fact that we do not really know the mechanism linking the radiation emission from a flare and its effect on the magnetic records.

For instance, if we accept that the link is an ionising radiation from a solar flare producing an electric current in some region of the sunlit ionosphere, can this current extend its effect into the night hemisphere of the earth? And can all flares, observed in the alpha-light, produce such ionisation ? We are aware, from observations of solar flux, that not all frequencies produce similar magnetic effects. Satellite observations of X-ray flares may help in solving these and similar questions, but until now we have a fairly good coverage of alpha-flares and a rather limited of X-flares. Moreover it must be taken into account that not all flares have the same emission of energy and that their effects on the earth therefore may be limited to a smaller, or to a larger region of the earth.

Following the same kind of reasoning, we may find different effects due to the geometric relative position of the angle of emission in the Sun and the angle of reception at the earth.

For all these reasons, the tables of solar-flare-effects do not appear to be directly usable for detailed statistical studies, but they may be a good indication for researchers, where to look in the magnetic records when they study some particular event.

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	APATITY	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
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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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		1973
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
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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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	GORNOTAYEZHNAYA	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
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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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
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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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	MOLODEZHNAYA	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	314.6O	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
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
OGY	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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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 STROMFJORD	67.02	309.28	76.83	36.25			1972
SSH	SHE-SHAN	31.10	121.19	20.30	191.03	100		1934
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	TEOLOYUCAN	19.75	260.82	29.35	329.24	2280		1923
TAA	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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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
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 - ... (1894 - 1901 and 1923 - 1928 missing)		
APIA	1905 - …		
ASO	1940 - ...		
BATAVIA	1884 - 1944 (1899 - 1902 missing)	KUYPER TANGERANG	1950 – 1962 1964 - …
CAPE CHELYUSKIN	1935 -... (1946-1950 and 1952-1953 missing)		
CAPE TOWN	1932 - 1940	HERMANUS	1941 - …
CAPE WELLEN	1933 - … (1944 - 1949 missing)		
CHELTENHAM	1901 - 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 - …		
FURSTENFELDBRUCK		1939 - ...	
GODHAVN	1926 - …		
GREENWICH	1846 - 1925	ABINGER HARTLAND	1925 – 1957 1957 - …
HELWAN	1903 - 1959 (1952 - 1955 missing)	MISSALAT	1960 - …
HURBANOVO	1938 -...		
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 MUNTINLUPA	1910 – 1938 1951 - …

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
MAURITIUS	1892 - 1965		
MEANOOK	1916 - ...		
MELBOURNE	1865 - 1921	TOOLANGUI	1922 – 1980
		CANBERRA	1980 - ...
OSLO	1843 - 1930		
PILAR	1905 - ...		
POTSDAM	1890 - 1907	SEDDEN	1908 – 1931
		NIEMEGK	1932 - ...
RUDE SKOV	1907 - 1978	BJORFELDE	1978 - ...
SAINT MAUR	1883 - 1900	VAL JOYEUX	1901 – 1936
		CHAMBON LA FORÊT	1936 - ...
SAN FERNANDO	1891 - ...		
SAN JUAN (PUERTO RICO)	(1925 missing)	1903 – 1924	
SAN MIGUEL	1911 - ...		
SITKA	1902 - ...		
SODANKYLA	1914 - ... (1945 missing)		
STONYHURST	1865 – 1967 (1944 - 1960 missing)		
SVERDLOVSK	1887 - 1978	VYSOKAYA - DUBRAVA	1932 - ...
SWIDER	1921 - ...		
TEOLOYUCAN	1923 - ...		
TIFLIS	1879 - 1905	KARSANI	1905 – 1934
		DUSHETI	1938 - ...
TIKHAYA BAY	1932 - 1958 (1947 - 1950 missing)	HEISS ISLAND	1959 - ...
TOKYO	1897 - 1912	KAKIOKA	1913 - ...
TROMSÖ	1930 - ...		
TUCSON	1910 - ...		
UCCLE	1896 - 1919 (1943 - 1945 missing)	MANHAY	1936 – 1971
		DOURBES	1955 - ...
UTRECHT	1891 - 1896	DE BILT	1899 – 1938
		WITTEVEEN	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	1908 – 1933
		ZO - SE	1933 - 1974

SECTION 3

I A G A INDICES

SECTION 3

3.1 aa INDICES

MUSICAL DIAGRAM OF **aa** 1992

aa INDICES 1992

JAN. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	24	23	14	33	23	
2	35	51	70	16	43	
3	32	24	22	35	28	
4	31	36	40	26	33	
5	22	21	22	21	22	
6	32	18	20	30	25	
7	17	14	12	19	16	
8	31	41	38	34	36	
9	13	13	12	14	13	K *
10	31	22	23	31	27	
11	45	36	23	58	40	
12	42	34	42	34	38	
13	45	46	57	35	46	
14	40	44	35	49	42	
15	29	30	28	31	29	
16	63	37	27	74	50	
17	20	19	20	19	20	
18	12	12	18	6	12	C
19	10	15	13	12	13	C *
20	29	23	23	29	26	
21	17	13	9	21	15	
22	12	16	16	12	14	
23	8	7	8	7	7	C C *
24	7	9	7	10	8	C C *
25	12	7	12	8	10	C C *
26	16	14	4	26	15	
27	41	32	46	27	36	
28	30	16	27	20	23	
29	36	22	24	35	29	
30	45	28	37	37	37	
31	31	22	29	24	27	
Mean values	27.7	24.1			25.9	

FEB. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	55	44	21	78	50	
2	87	62	58	91	75	
3	138	124	149	114	131	
4	46	43	42	48	45	
5	10	11	12	9	11	C *
6	13	15	11	17	14	*
7	30	34	34	31	32	
8	50	98	37	111	74	
9	104	122	137	89	113	
10	45	44	37	52	45	
11	14	13	12	15	14	C *
12	21	19	22	17	20	
13	18	17	29	7	18	
14	24	19	16	27	22	
15	9	7	8	8	8	C K *
16	10	5	7	9	8	C *
17	27	43	38	33	35	
18	29	20	31	19	25	
19	36	20	26	31	28	
20	99	115	92	123	107	
21	66	122	151	36	94	
22	43	39	48	35	41	
23	31	19	21	29	25	
24	46	52	27	72	49	
25	71	66	88	49	68	
26	87	62	29	119	74	
27	79	90	109	61	85	
28	16	11	14	13	14	
29	60	63	32	91	62	
Mean values	47.1	48.3			47.7	

MAR. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	24	20	28	16	22	
2	24	13	20	17	19	
3	26	16	19	23	21	
4	28	23	17	34	26	
5	27	18	17	28	23	
6	14	11	17	8	12	K *
7	23	14	11	26	19	
8	23	19	20	22	21	
9	41	41	42	39	41	
10	34	26	29	31	30	
11	42	33	44	32	38	
12	25	17	26	16	21	
13	11	12	15	8	12	C K *
14	9	7	8	8	8	C C *
15	16	18	17	17	17	
16	24	26	18	32	25	
17	54	41	31	64	48	
18	34	35	47	22	35	
19	7	5	5	8	6	C K *
20	7	7	6	8	7	C K *
21	42	35	29	49	39	
22	34	24	29	29	29	
23	50	30	40	39	40	
24	43	29	26	46	36	
25	38	21	31	28	29	
26	28	20	21	27	24	
27	26	15	11	31	21	
28	20	18	17	21	19	
29	33	28	24	37	30	
30	22	15	18	19	19	
31	29	19	20	28	24	
Mean values	27.7	21.2			24.4	

APR. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	25	25	35	15	25	
2	12	9	7	14	10	K
3	49	57	40	65	53	
4	23	24	23	25	24	
5	32	22	25	29	27	
6	36	26	46	16	31	
7	31	24	38	17	28	
8	40	34	35	39	37	
9	13	10	9	14	12	C
10	9	7	9	7	8	C C *
11	7	5	6	6	6	C C *
12	9	7	8	8	8	C C *
13	12	12	14	10	12	C C
14	15	9	9	14	12	C K
15	19	14	19	14	17	
16	10	7	7	9	8	C C *
17	10	6	4	12	8	C K *
18	28	33	24	38	31	
19	36	24	24	36	30	
20	33	26	33	26	30	
21	20	16	20	16	18	
22	26	20	20	26	23	
23	18	15	9	25	17	
24	29	15	22	22	22	
25	22	12	17	17	17	
26	21	15	15	21	18	
27	13	11	9	16	12	C
28	18	18	19	16	18	
29	15	10	12	13	13	C
30	19	21	28	13	20	
Mean values	21.6	17.8			19.7	

aa INDICES 1992 (continued)

MAY 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	30	19	18	32	25	
2	26	17	33	11	22	
3	19	15	13	21	17	
4	24	22	28	18	23	
5	11	13	11	13	12	K K
6	12	6	7	11	9	C C *
7	29	19	14	35	24	
8	54	53	52	56	54	
9	59	39	14	84	49	
10	180	199	168	210	189	
11	85	69	95	60	77	
12	27	18	20	25	23	
13	34	31	37	29	33	
14	9	5	9	5	7	C K *
15	11	8	8	11	9	C C *
16	8	4	6	6	6	C C *
17	8	3	5	6	5	C C *
18	32	17	10	39	24	
19	32	16	22	26	24	
20	20	10	12	18	15	
21	19	11	12	18	15	
22	71	41	58	54	56	
23	33	18	13	37	25	
24	17	10	17	10	13	C
25	27	18	20	24	22	
26	18	8	7	19	13	K
27	22	20	18	24	21	
28	28	22	27	23	25	
29	45	29	31	44	37	
30	34	25	27	32	30	
31	19	16	20	15	18	
Mean values	33.6	25.8			29.7	

JUNE 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	19	15	23	11	17	
2	11	7	8	10	9	C C *
3	16	7	7	16	12	K K
4	10	5	6	9	7	C K *
5	17	8	9	16	12	K C
6	11	7	6	12	9	C C *
7	24	15	10	30	20	
8	62	62	62	63	62	
9	36	20	35	22	28	
10	40	32	46	26	36	
11	51	30	26	54	40	
12	48	47	40	56	48	
13	25	19	18	26	22	
14	14	11	13	12	13	C
15	24	16	14	26	20	
16	11	5	10	6	8	C K *
17	13	6	7	13	10	C C *
18	54	31	9	77	43	
19	28	13	14	28	21	
20	17	13	13	17	15	
21	20	8	16	13	14	
22	27	10	25	13	19	
23	30	10	16	24	20	
24	44	29	44	28	36	
25	31	29	30	30	30	
26	19	13	16	16	16	
27	23	19	17	25	21	
28	31	21	30	22	26	
29	66	58	52	72	62	
30	60	34	68	26	47	
Mean values	29.4	20.1			24.7	

JULY 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	38	28	20	45	33	
2	29	36	51	14	33	
3	12	10	12	10	11	C C
4	10	7	7	10	9	C C
5	20	12	18	14	16	C
6	15	6	10	11	10	C C
7	9	5	5	9	7	C C *
8	14	7	8	13	11	C C
9	15	5	14	6	10	K C *
10	14	6	10	11	10	C C
11	8	5	7	5	6	C C *
12	29	15	16	28	22	
13	50	25	32	43	37	
14	30	20	31	19	25	
15	18	7	16	9	12	C
16	26	25	21	31	26	
17	13	6	10	10	10	C
18	11	5	9	7	8	C C
19	10	3	5	8	7	C C *
20	22	11	6	27	17	K
21	29	21	10	41	25	
22	52	53	58	47	52	
23	36	28	37	27	32	
24	16	13	12	17	15	
25	29	12	8	32	20	
26	10	6	7	9	8	C K *
27	17	5	6	17	11	K
28	34	18	33	20	26	
29	8	7	8	7	8	C K
30	24	11	13	22	18	
31	25	14	12	28	20	
Mean values	21.7	14.0			17.8	

AUG. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	24	10	20	14	17	
2	10	6	6	10	8	C C *
3	11	8	6	13	9	C C *
4	27	24	9	42	26	
5	48	43	67	25	46	
6	27	35	36	26	31	
7	43	43	39	47	43	
8	28	28	33	23	28	
9	28	14	20	23	21	
10	14	14	13	15	14	
11	34	22	28	28	28	
12	12	16	18	10	14	
13	22	14	6	30	18	
14	32	31	23	39	31	
15	16	12	14	14	14	
16	17	15	19	13	16	K
17	10	5	8	8	8	C C *
18	15	5	10	10	10	C C
19	20	15	7	28	17	
20	52	42	68	26	47	
21	38	34	18	55	36	
22	56	60	19	97	58	
23	83	71	117	38	77	
24	27	14	15	26	21	
25	10	8	8	10	9	C *
26	20	18	21	17	19	
27	28	24	17	35	26	
28	15	8	12	10	11	C
29	29	16	34	12	23	
30	10	14	7	17	12	K K
31	7	9	8	9	8	C K *
Mean values	26.2	21.9			24.1	

aa INDICES 1992 (continued)

SEP. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	6	2	4	4	4	C K *
2	42	34	23	54	38	
3	62	83	63	83	73	
4	47	64	60	51	55	
5	45	39	55	29	42	
6	29	23	23	29	26	
7	42	32	37	37	37	
8	32	32	36	29	32	
9	88	136	144	80	112	
10	104	85	91	98	94	
11	44	46	48	42	45	
12	12	7	10	10	10	C *
13	9	11	13	7	10	C C *
14	17	12	12	17	15	
15	19	14	19	14	17	
16	23	18	16	25	21	
17	104	80	102	82	92	
18	50	39	49	39	44	
19	24	22	25	21	23	
20	14	13	12	15	14	C
21	15	9	8	17	12	K
22	36	17	33	20	27	
23	14	12	16	10	13	C K
24	11	5	5	11	8	C K *
25	31	12	19	24	22	
26	16	16	15	17	16	
27	9	6	7	9	8	C K *
28	35	26	10	51	31	
29	79	78	81	77	79	
30	59	51	42	68	55	
Mean values	37.2	34.2			35.7	

OCT. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	54	32	47	39	43	
2	22	10	20	12	16	
3	14	9	8	15	12	C K *
4	14	9	17	6	11	K K
5	12	9	7	13	10	C K *
6	22	15	23	14	19	
7	15	15	15	15	15	
8	15	13	12	17	14	
9	48	43	46	45	45	
10	16	19	19	16	18	
11	45	38	23	61	42	
12	50	47	46	51	49	
13	51	30	18	63	40	
14	48	33	29	52	41	
15	52	57	63	45	54	
16	36	34	42	28	35	
17	31	19	21	29	25	
18	26	16	11	31	21	
19	41	33	29	46	37	
20	26	14	30	11	20	
21	16	9	9	16	13	K K *
22	19	17	15	21	18	
23	11	8	10	9	9	C K *
24	7	3	4	6	5	C K *
25	20	13	21	12	17	
26	30	26	28	29	28	
27	66	53	56	63	59	
28	40	28	35	33	34	
29	54	28	37	45	41	
30	30	24	22	33	27	
31	17	15	16	16	16	
Mean values	30.6	23.3			26.9	

NOV. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	35	27	12	50	31	
2	37	32	46	23	34	
3	33	16	33	17	25	
4	34	47	26	56	41	
5	27	26	31	23	27	
6	28	18	15	31	23	
7	27	20	22	25	24	
8	27	13	18	22	20	
9	62	60	68	54	61	
10	29	28	29	28	29	
11	33	26	33	26	30	
12	33	20	24	29	27	
13	34	26	28	33	30	
14	26	17	19	24	22	
15	41	30	16	56	36	
16	29	13	18	24	21	
17	19	13	15	17	16	
18	20	11	10	21	15	*
19	14	15	16	13	15	
20	10	7	7	10	8	C K *
21	12	13	18	7	12	K
22	34	41	22	52	37	
23	50	39	46	44	45	
24	21	26	18	29	24	
25	24	27	25	27	26	
26	16	13	18	11	15	
27	10	9	10	10	10	C C *
28	14	16	14	15	15	C *
29	11	11	11	11	11	C C *
30	27	29	10	46	28	
Mean values	27.3	23.1			25.1	

DEC. 1992	Day N	Day S	Half Day am	Half Day pm	Daily aa	Quiet Days
1	34	26	27	33	30	
2	17	16	18	15	17	
3	31	26	21	37	29	
4	34	21	26	29	28	
5	13	14	17	10	13	K *
6	14	15	8	21	15	*
7	30	45	22	54	38	
8	56	39	39	56	48	
9	36	39	30	45	37	
10	36	30	22	43	33	
11	20	15	14	21	18	
12	18	21	11	28	19	
13	19	15	20	14	17	
14	22	19	15	25	20	
15	30	26	27	29	28	
16	13	14	19	8	14	*
17	52	61	30	82	56	
18	22	16	13	25	19	
19	23	23	12	34	23	
20	21	24	21	24	23	
21	34	27	17	44	31	
22	18	13	14	17	16	
23	16	19	17	18	18	
24	20	14	16	18	17	
25	14	8	6	17	11	C K *
26	11	7	7	11	9	C C *
27	14	22	7	30	18	
28	72	56	20	108	64	
29	64	54	62	57	59	
30	21	19	22	18	20	
31	20	24	22	22	22	
Mean values	27.3	24.8			26.0	

MONTHLY and YEARLY **aa** 1868 - 1992

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	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	21.4
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	18.8	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	5.6	6.2	5.9	5.8	8.0	8.9	7.0	7.1	9.3	7.1
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	17.6
1884	9.1	14.3	17.5	15.6	12.8	13.1	15.5	13.0	13.5	16.0	16.9	13.2	14.2
1885	13.2	15.5	13.3	14.0	21.2	14.2	13.0	17.7	22.1	15.9	13.7	12.1	15.5
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	20.7
1887	16.9	22.9	15.2	20.6	17.3	12.6	12.5	17.2	18.9	14.1	14.6	15.2	16.4
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	9.9	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	24.3
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	20.7
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	18.1
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	13.6	9.4	8.7	12.1	13.1
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	15.0
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	12.5
1907	16.5	25.3	14.3	12.1	16.8	14.9	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	12.6	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	19.8	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

MONTHLY and YEARLY aa 1868 - 1992 (continued)

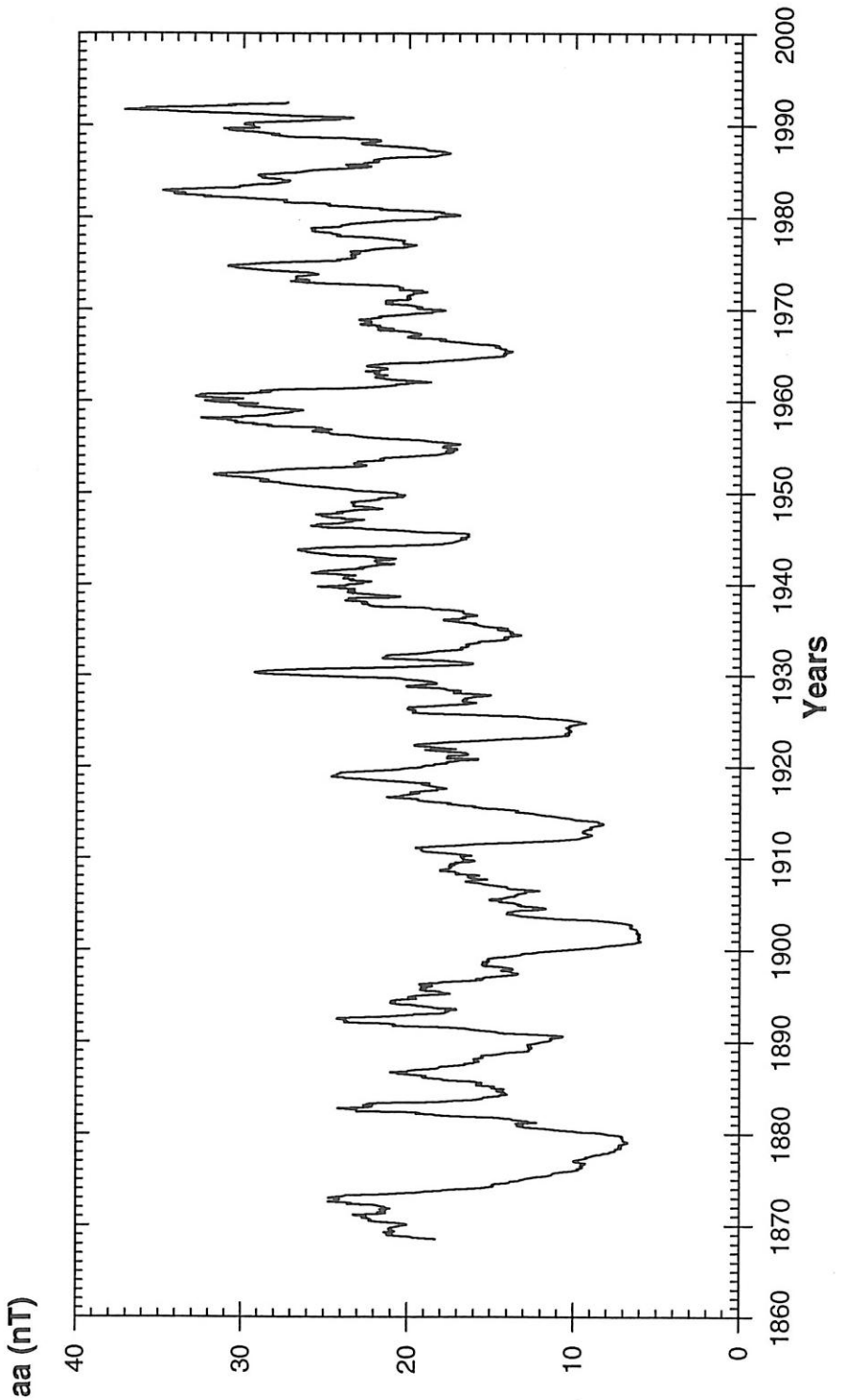
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1913	10.3	9.5	9.9	9.8	9.0	7.0	7.0	6.7	10.0	10.7	7.6	6.6	8.7
1914	7.1	7.3	10.1	13.5	8.1	10.3	12.9	14.9	11.8	13.3	13.4	9.3	11.0
1915	10.9	13.5	15.0	15.3	13.9	17.9	11.2	14.7	17.0	21.3	24.9	12.4	15.7
1916	16.0	11.6	25.0	19.2	20.2	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	16.6
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	19.9
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	16.7
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	16.3
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	20.8	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	19.4	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	14.6	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	23.6
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	25.9
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	16.4
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	25.3
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	25.3
1948	20.8	21.0	24.2	17.8	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	32.8	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	28.7
1952	28.5	34.3	40.1	38.0	33.1	23.8	20.8	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	17.2
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	29.3

MONTHLY and YEARLY **aa** 1868 - 1992 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
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	28.4
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	14.8	16.8	17.5	13.1	11.7	13.8	14.0
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	17.4
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	22.5
1969	17.8	25.8	27.3	23.6	25.2	16.7	15.0	15.3	23.9	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	20.0
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	24.6	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	19.3	17.6	12.8	18.7	15.7	20.3	17.1	16.0	14.4	22.3	23.7	22.1	18.3
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	24.8
1982	23.5	49.3	27.6	32.2	26.2	31.5	42.4	32.0	45.9	28.9	33.7	34.5	33.8
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	29.5
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	22.5
1986	22.7	40.5	21.3	14.4	18.9	16.0	16.5	22.6	25.0	18.8	21.5	15.4	21.0
1987	14.8	16.8	17.8	13.0	14.8	13.3	19.2	24.3	30.3	25.7	22.3	15.9	19.0
1988	22.4	23.3	24.8	25.2	20.5	19.9	20.1	20.5	22.5	23.1	23.2	25.5	22.6
1989	33.9	27.4	60.0	32.7	25.7	24.9	14.3	28.3	26.6	31.3	34.6	31.3	31.0
1990	27.4	37.7	33.8	37.4	25.1	24.5	21.5	28.1	25.0	25.1	17.4	15.1	26.4
1991	17.1	20.0	37.3	24.3	27.3	56.2	35.1	40.8	30.6	44.0	49.6	27.9	34.2
1992	25.9	47.7	24.4	19.7	29.7	24.7	17.8	24.1	35.7	26.9	25.1	26.0	27.3

Unit : nT

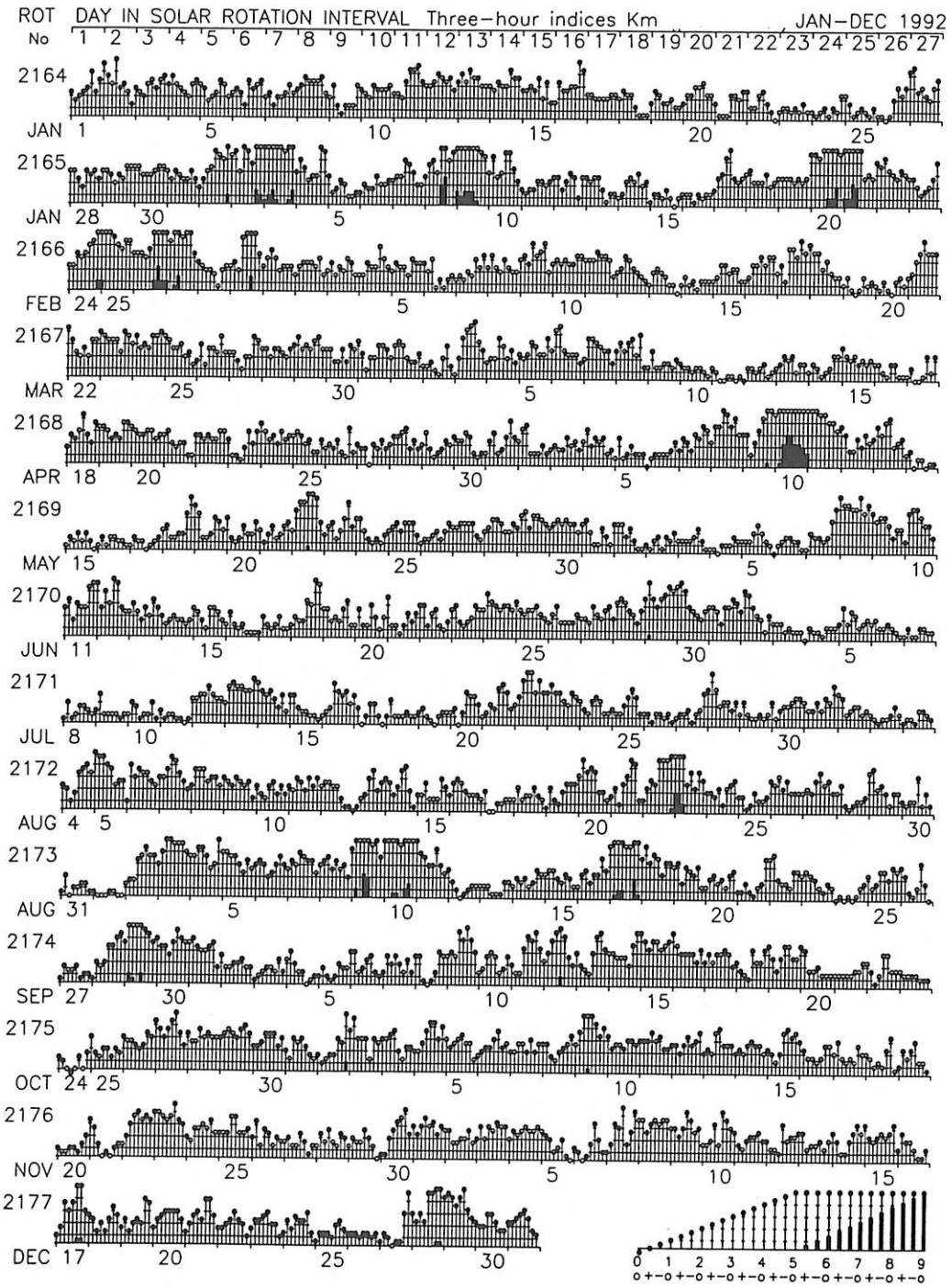
TWELVE - MONTH RUNNING MEAN VALUES OF **aa** 1868 - 1992



SECTION 3

3.2 an, as, am INDICES

MUSICAL DIAGRAM OF **Km** 1992



an, as INDICES 1992

January 1992																				
	Kn								σn		an									An
1	2o	1+	2+	3-	3-	4o	2o	3o	5123	3313	14	9	18	22	26	54	15	28		23
2	5-	4-	3o	4+	2+	3o	2+	1o	1232	1223	71	43	32	70	17	28	18	7		36
3	3-	2o	2o	3o	3+	3-	3+	4-	4320	6343	21	16	15	30	40	21	40	43		28
4	3-	3o	3-	2+	2+	2+	3-	3+	3123	3224	24	31	22	19	19	17	24	37		24
5	3o	2o	1+	2o	2o	3+	3o	2-	4222	1243	27	16	10	14	15	37	31	11		20
6	2o	3-	2+	1+	3o	3o	3-	3o	1322	0244	14	21	20	9	30	27	24	29		22
7	1+	2-	1+	2o	2o	3-	3o	2o	2222	3244	10	11	8	15	15	21	28	15		15
8	2o	2+	3+	3o	3+	4-	4-	2+	2123	2334	16	17	34	29	35	41	47	17		30
9	2-	2o	1o	0+	1+	1+	1+	3o	4112	3732	11	15	7	2	10	9	9	27		11
10	2+	2+	2o	3o	3-	3o	3-	3+	2135	2553	20	18	14	30	23	28	26	34		24
11	2+	3-	2o	4-	5o	5-	5-	4-	5432	5365	18	22	16	42	92	75	75	42		48
12	3+	3o	3+	4-	4-	3o	3o	2+	4313	3112	39	27	38	42	41	31	33	20		34
13	3o	4o	3+	5-	4-	4o	3-	3o	3233	4524	28	57	34	81	46	51	26	29		44
14	3o	2+	3o	3-	3o	4+	4-	4-	5123	3223	27	17	28	25	28	66	41	42		34
15	3-	2o	3+	3o	4o	3-	3o	2-	4233	4342	21	16	38	28	60	21	31	12		28
16	1+	3o	3o	3-	3o	3o	5+	5-	1322	1335	8	27	31	25	28	30	104	81		42
17	2+	2-	2+	2+	2o	3-	2+	2+	2242	2224	20	11	19	18	15	21	20	18		18
18	2o	2o	2+	3-	2o	1o	0+	0+	4233	4212	15	14	20	22	16	6	3	3		12
19	1-	2-	2-	2o	1+	2o	1+	1o	1431	2221	5	11	13	14	9	14	9	7		10
20	2-	3-	3-	3+	3o	4-	2+	2+	5545	1423	12	23	23	39	31	45	17	18		26
21	1+	0+	0+	0+	2+	2+	2-	3o	2222	2335	8	3	3	2	19	19	13	29		12
22	2+	1+	1o	2+	3-	1+	1o	0o	5211	3211	19	9	7	18	24	10	6	1		12
23	0+	1+	1+	1-	1+	1+	2-	1-	2332	3323	3	9	9	4	10	8	11	5		7
24	0+	0+	1o	1+	1-	1+	1-	2o	2341	4223	3	2	7	8	5	9	5	14		7
25	2o	1+	1-	1-	2-	1-	1-	1o	2332	3232	15	8	4	4	11	5	4	6		7
26	0o	0+	0o	1-	2+	3o	3-	3o	1113	1132	1	2	1	4	18	33	22	28		14
27	5-	4+	3-	3-	2-	2+	3o	4-	1232	2323	77	64	22	21	13	18	30	41		36
28	3+	3o	2o	2-	3o	3-	3-	2+	3412	2231	35	27	14	12	27	25	26	17		23
29	3-	2+	2+	2o	3-	3-	3o	3+	1231	5233	25	20	19	16	25	23	31	35		24
30	3o	3+	2+	3-	3o	3+	3+	3+	4322	3122	32	39	20	23	27	36	38	35		31
31	3o	3-	3o	2+	3-	3-	3o	2+	1232	2212	33	21	29	18	21	23	33	19		25
											Monthly mean value of An									23.5

January 1992																				
	Ks								σs		as									As
1	3-	2o	2o	2o	3-	4+	3-	4o	3111	2325	22	14	16	16	24	63	22	54		29
2	5+	4-	3o	6-	3-	3o	3-	1+	1222	3422	104	45	30	130	23	32	21	10		49
3	3-	3-	2+	3o	3o	3-	3o	4o	3231	1343	23	23	19	32	32	23	32	54		30
4	3+	4o	4-	3-	2o	2o	3o	4-	3532	2422	34	53	45	24	15	16	31	43		33
5	3o	3o	2o	2o	2+	3+	3+	2+	0322	3333	30	27	14	14	19	37	35	18		24
6	3-	2o	2+	1+	4-	3-	3o	3+	2135	3234	25	16	19	8	41	24	30	39		25
7	2+	2+	2-	2+	2o	3-	3+	2+	2231	1233	20	19	13	17	14	21	36	19		20
8	3+	3-	4o	3+	3+	3o	4-	2+	4232	2223	37	24	57	40	34	33	42	19		36
9	2+	2+	2o	1+	2-	2-	1+	3+	3233	3623	19	20	14	9	11	12	10	37		17
10	3o	2+	2o	3o	3-	3-	2+	3o	1211	1220	32	17	16	32	24	25	20	30		25
11	2+	2+	2+	3+	4o	4o	5-	3+	1222	0133	18	20	17	40	55	60	74	34		40
12	3+	3o	4-	4+	4-	4-	4o	3o	4422	2241	34	31	43	69	46	47	58	28		45
13	4-	4-	3+	4+	4-	4-	3o	3o	4222	3341	42	47	40	70	41	46	33	32		44
14	3o	3-	4o	3+	3+	4+	4-	4o	1453	4340	32	21	51	37	39	66	43	55		43
15	3-	3-	3o	3o	4-	2o	3+	2o	2411	2221	24	23	28	28	42	14	40	14		27
16	2+	3+	3-	3o	3o	3-	5-	4o	3420	3221	19	36	24	30	28	26	76	52		36
17	2+	2+	2-	2o	2-	2-	2+	3-	2432	2333	20	17	13	14	13	12	18	22		16
18	2o	2-	3-	2+	1o	1-	1-	1o	3223	3141	14	13	21	18	6	5	5	6		11
19	3-	2-	3-	2-	2-	2+	1o	1+	4341	1345	21	12	21	13	12	18	7	10		14
20	2-	3-	2o	3o	3-	3o	2+	2+	2221	2233	13	21	15	28	24	31	20	20		22
21	2-	1-	1+	1o	2+	2o	2+	3-	4231	3133	12	5	8	6	18	16	18	23		13
22	3-	1+	2-	3-	3-	2-	1o	1-	2114	2352	24	8	12	21	22	11	6	5		14
23	1+	1o	1+	1+	1+	1o	2-	1+	3223	2433	9	6	9	8	10	7	12	9		9
24	1+	0+	1+	2o	1-	1+	1+	3-	2231	1343	10	3	9	14	5	9	8	24		10
25	2+	1+	1-	1+	1+	1+	1-	2-	2214	3853	20	9	5	10	9	9	5	13		10
26	1o	0o	1-	1o	2o	3+	3-	4-	3111	2224	6	1	5	6	15	39	22	42		17
27	4+	4+	3-	4-	2+	2o	3o	4-	3222	4112	66	70	24	44	18	14	28	46		39
28	3-	3-	2+	2-	3-	3-	3o	3-	2221	3311	25	21	20	13	26	26	28	24		23
29	3o	3-	3-	2o	3-	2o	3+	4-	2112	2132	28	26	24	15	22	16	39	46		27
30	3+	3+	3-	3o	3-	3+	4-	4-	2121	3132	37	34	25	28	22	36	41	45		34
31	3o	2+	3+	3-	2+	2+	3o	3-	1221	2413	32	17	39	26	17	18	28	21		25
											Monthly mean value of As									26.0

an, as INDICES 1992 (continued)

February 1992																			
	Kn								σn		an								An
1	2-	2o	3o	3o	4-	4o	4o	5+	2222	3476	11	16	30	33	50	57	60	118	47
2	5-	4+	3o	4+	4+	4-	6-	5+	3423	2655	71	61	27	70	63	50	144	120	76
3	6-	6o	7-	5o	5-	5-	5+	6o	2283	3266	124	147	206	88	82	80	116	153	125
4	3o	4+	3o	2o	3-	3-	5-	4+	2322	3332	29	70	30	15	22	24	83	69	43
5	2+	1-	1+	2o	2o	1+	1o	1o	2132	3242	20	4	10	15	14	9	6	6	11
6	1o	1+	1+	2-	3-	2o	2-	2o	2332	2123	6	10	10	12	24	16	11	15	13
7	3-	2o	3-	4o	4o	3o	2-	2-	3334	2133	22	15	21	55	54	33	12	11	28
8	2+	3o	4-	3o	6+	7-	4o	4o	2134	4533	20	27	44	27	186	223	52	59	80
9	6o	5o	6o	6o	6o	5+	5-	4+	0145	3674	155	89	166	173	150	110	73	61	122
10	3o	4-	3-	3o	5-	5o	3o	2+	2332	5312	27	46	21	27	85	89	31	17	43
11	2-	1+	1+	2o	2+	3-	2o	2o	3223	3214	12	9	8	14	18	23	15	15	14
12	2+	2+	2-	2o	3o	3-	1-	3-	2231	5223	18	19	11	14	28	25	5	21	18
13	3-	2+	3o	3-	2-	1-	1o	2-	3402	3222	21	17	30	24	11	5	7	11	16
14	1o	1+	2-	2+	3-	4-	2o	2+	1221	2364	6	9	13	17	23	41	16	18	18
15	1-	1o	1+	1o	2o	1+	0+	1o	1421	2324	4	7	8	7	15	8	3	6	7
16	1o	1o	1+	1-	1o	1+	1+	1+	2122	4421	7	7	9	5	7	8	9	9	8
17	1+	2o	3o	4o	4+	2+	2o	3-	1223	2213	8	16	27	55	69	19	14	21	29
18	3o	3o	2+	3-	3-	3+	2o	2o	4223	2222	30	28	19	25	21	35	14	16	24
19	3-	2o	2+	3-	3-	3-	3-	3-	3323	3435	22	15	18	21	21	24	21	26	21
20	4o	4o	4o	5o	5+	6o	6+	5-	2143	5894	53	58	56	89	110	150	174	73	95
21	5o	6o	7-	7-	5o	2+	3o	2+	2676	3211	88	164	216	212	89	19	28	18	104
22	4o	3+	4+	3+	3o	2+	3o	3o	2252	2232	53	40	70	35	28	19	30	27	38
23	3-	3-	3-	1+	1+	2+	3-	4-	2331	1125	26	24	21	9	10	17	23	45	22
24	2+	2+	3+	3+	3o	4o	4+	5o	3212	2234	18	17	34	34	28	51	63	102	43
25	6-	5+	5+	5-	4o	4-	4o	4+	1755	3222	125	113	114	84	58	49	56	65	83
26	3o	3o	3+	3+	4-	6o	7-	6-	0222	2674	30	27	36	35	50	172	238	126	89
27	5+	4-	5+	6+	5-	5o	5o	3o	2225	3342	119	48	116	185	73	103	102	32	97
28	2o	2-	2o	2-	2-	1o	2o	3-	1223	2333	16	12	14	12	12	6	16	21	14
29	2o	2-	2o	5-	5o	6o	5o	3+	1233	2541	14	13	14	81	88	170	87	37	63
											Monthly mean value of An								48.0

February 1992																			
	Ks								σs		as								As
1	2o	3-	3+	4-	5o	5-	4o	6-	0215	5432	16	23	34	43	97	73	57	141	61
2	5-	5o	3+	5+	5o	4-	6o	6o	2712	3266	71	95	34	115	88	50	167	151	96
3	6-	6o	6+	6-	5+	5-	5+	6o	2142	4234	123	162	185	135	105	79	116	168	134
4	3o	4o	4-	3-	3o	3-	5+	5o	1323	3232	33	53	45	21	28	26	117	92	52
5	3o	1+	2o	3-	2o	1o	1o	2-	1212	0252	27	9	14	21	16	6	6	13	14
6	1+	2o	2-	2o	3-	2o	2+	3-	4333	2142	10	15	13	15	21	15	17	22	16
7	3-	3-	3-	4o	4-	3o	2o	2+	4225	2254	21	22	26	57	45	28	15	20	29
8	3o	4-	4+	3o	7-	8-	4-	5+	2332	4533	27	46	64	33	207	344	50	111	110
9	6+	5+	6+	6o	6-	6-	5o	5-	4511	5338	176	118	186	160	146	130	92	79	136
10	3+	5-	3-	3+	4+	5-	3+	2+	4434	4223	40	83	22	35	64	72	40	20	47
11	2-	2-	2o	2o	2+	2+	2+	2+	2213	3244	13	11	14	14	20	18	17	20	16
12	3o	3o	2o	3-	3o	3-	1o	3-	2224	3252	27	27	15	21	28	26	6	25	22
13	3-	2+	3-	3o	2-	1-	1+	2-	2442	2532	24	18	25	28	12	5	8	11	16
14	1+	1+	3-	3o	2+	3-	2o	3-	2322	3323	8	10	21	27	17	24	14	21	18
15	1-	1o	1+	1+	2-	1-	0+	1o	1121	3523	5	6	9	8	12	5	3	6	7
16	1+	1o	1o	1o	1+	1o	1+	1+	3202	4431	9	7	7	6	8	6	9	8	8
17	2+	2+	3+	5-	5+	3-	2+	3-	4312	5233	19	19	36	83	118	24	19	25	43
18	3o	3o	3-	2o	2o	3o	2+	3-	2120	3142	30	29	22	16	15	30	17	23	23
19	3-	3-	3-	3-	2+	3-	2+	3-	2232	1343	21	22	25	26	17	21	20	23	22
20	5o	5o	5-	5o	6-	6-	6+	5o	1422	2254	96	91	84	103	141	124	194	100	117
21	6+	6o	7o	6+	5+	3o	3o	3-	8311	1312	176	160	254	194	104	27	29	25	121
22	5-	4o	4+	3+	3o	3-	3+	3+	6533	1232	73	56	69	39	29	25	35	36	45
23	3o	3-	2o	1+	2-	2o	3o	4+	1323	2117	28	24	16	10	13	15	27	68	25
24	2+	2+	4-	3o	4-	4o	5-	6o	3120	2442	18	18	43	32	42	57	80	154	56
25	6-	5o	5+	5-	4o	4-	4+	5-	2432	4234	141	100	110	74	60	41	68	71	83
26	4-	3o	3+	3o	4-	6-	7-	6o	7422	2656	46	32	38	30	45	134	242	159	91
27	6o	5-	6-	6o	5-	5o	5o	3+	2224	2333	154	72	124	158	72	87	92	39	100
28	3-	2-	2o	2+	2-	1-	2-	2+	2111	3231	26	13	15	17	13	5	12	18	15
29	3-	2o	2o	5-	5+	6-	5o	4-	2032	4342	25	16	14	80	107	143	94	46	66
											Monthly mean value of As								54.8

an, as INDICES 1992 (continued)

March 1992																				
	Kn								σn		an									An
1	2o	3+	4o	3o	2o	2+	2+	2+	2345	1213	14	38	52	32	14	20	19	19		26
2	1+	2+	3-	3-	3-	3-	3o	2-	4213	2343	10	20	21	25	23	22	29	13		20
3	2o	3-	2o	2o	2+	3+	3-	2-	3231	5321	15	23	14	16	20	40	23	12		20
4	1+	1+	2o	2-	2+	4o	3+	3-	1212	2423	10	9	14	13	20	58	38	23		23
5	2o	2+	2+	2+	2-	3+	3-	3-	1213	2322	14	18	18	20	13	36	24	24		21
6	3-	1+	3o	1o	1+	1+	1+	2-	3121	2212	24	8	27	6	10	8	10	11		13
7	1+	1o	1+	2o	2o	4-	3-	3o	1132	4334	9	7	10	16	16	41	22	33		19
8	2o	3-	2+	2o	3+	3-	2o	2+	2431	3332	15	23	18	14	35	23	14	17		20
9	3o	2+	3-	4+	4-	4o	4+	2o	3332	2343	30	19	22	70	43	59	62	15		40
10	3o	3+	2+	3o	3-	3o	3o	4-	3212	2113	28	34	19	30	23	31	31	42		30
11	3o	3o	3o	4o	3+	3+	3o	2-	3302	2443	30	32	30	51	37	40	32	12		33
12	2-	3-	3+	3o	2+	2+	1+	1+	2563	3223	12	25	36	32	20	20	8	10		20
13	1+	2o	2+	2+	2-	1+	1o	0+	1222	2312	8	15	17	17	13	8	7	2		11
14	1o	1+	1+	1+	1o	1+	1o	1+	2132	2223	6	8	8	9	7	10	7	10		8
15	2-	1+	3-	3o	2+	3-	2o	2-	4212	2212	11	8	24	29	19	21	15	12		17
16	1+	1+	3-	3-	3+	3o	3+	3o	2233	4354	9	8	24	24	40	27	36	33		25
17	2o	2o	1+	4+	4+	4o	5o	4-	3111	2132	15	16	9	63	64	52	87	48		44
18	4o	3o	4-	2+	3o	2+	2o	2+	3322	2112	60	31	41	20	29	18	14	17		29
19	1o	0+	1-	0+	1-	2+	1+	1+	2211	2432	6	3	5	3	5	17	10	8		7
20	1-	1-	2-	0+	1-	1+	2o	1+	3121	2322	5	4	11	3	5	10	14	8		8
21	1+	2-	3-	4-	5-	4-	4-	4-	2142	2232	10	13	26	47	76	47	47	43		39
22	4o	3+	3-	2+	3-	2o	3o	3o	5223	4242	56	37	23	17	22	15	27	33		29
23	4-	4o	4-	3+	3+	3-	4o	3o	2533	2224	47	57	44	35	37	21	54	32		41
24	3-	3+	3o	3o	3-	4o	3+	4o	2340	2235	23	34	29	30	25	55	37	51		36
25	3+	3+	3-	3-	3+	2+	2+	2-	3523	3253	37	40	25	24	35	20	20	12		27
26	2o	2+	2o	3o	3-	3-	3+	2+	5622	3332	15	19	14	29	21	22	39	18		22
27	2+	1+	2-	1+	2o	2+	4-	3+	2223	1245	17	10	13	8	15	17	42	34		20
28	3-	2-	2o	3-	3-	3-	2o	3-	4215	3243	21	12	16	26	24	21	15	25		20
29	3-	3+	3-	3o	3-	4-	4-	3-	3733	2242	23	36	26	28	21	41	43	22		30
30	2+	3-	2-	2o	3-	2o	3-	3-	5512	3221	20	23	13	14	21	16	26	26		20
31	3o	2-	1o	2o	2o	3+	3o	3o	4112	3221	28	13	6	15	15	36	30	27		21
											Monthly mean value of An									23.8

March 1992																				
	Ks								σs		as									As
1	3-	3o	3+	3+	2o	2o	2+	3-	3011	1213	25	32	34	36	14	16	17	23		25
2	2o	2+	3-	2+	3-	2o	3-	2-	2133	2022	15	18	24	20	23	16	26	12		19
3	2o	3-	2-	2+	2-	3-	3-	2-	2213	4333	15	22	13	19	13	24	25	12		18
4	2-	2-	3o	3-	2+	4-	3o	2o	2314	2210	12	12	30	21	18	48	29	16		23
5	2o	3-	3-	2o	1+	3o	2+	3-	3231	2112	15	22	21	15	10	30	18	26		20
6	3o	1+	3+	1o	1o	0+	1+	2-	4231	1232	31	10	35	6	6	3	10	11		14
7	2-	2-	1+	2o	2-	3o	2+	3+	2223	2312	13	11	10	14	12	27	17	40		18
8	3-	3o	2+	2+	3o	2o	2+	2o	2533	0143	23	32	19	18	32	15	17	16		22
9	3o	3o	3o	5-	3+	3+	4+	2o	0012	2323	32	32	29	77	40	35	64	15		41
10	3-	3o	3-	3o	2+	3-	3+	3+	2333	3241	26	28	24	28	19	22	37	35		27
11	3o	3o	3+	4-	3+	3o	3o	2o	1212	4353	29	31	36	50	35	31	27	14		32
12	2o	2+	3+	3o	2+	2o	1+	1o	4352	3132	16	19	36	27	19	15	10	7		19
13	1o	2o	2+	2+	2-	1o	1-	0+	1131	2232	6	14	19	17	13	6	4	3		10
14	1-	1+	1o	1+	0+	1o	1+	1+	3321	2142	5	10	7	8	3	6	8	10		7
15	1+	2-	3-	3-	2o	2+	3-	1+	2312	1122	8	12	25	24	14	18	21	10		17
16	2-	1+	3-	3o	3+	3-	4-	4-	2223	2333	11	8	26	28	40	26	43	41		28
17	2+	2-	1+	4o	4o	3+	5-	4-	1222	1122	17	13	9	57	55	34	79	46		39
18	5-	4-	4-	2+	3o	2-	2-	1+	3323	0232	75	46	50	20	32	13	11	10		32
19	1o	0+	1-	1-	0+	2-	1-	1+	3133	2254	6	2	5	4	3	11	5	8		6
20	1+	1-	2-	1-	0+	1+	1+	1o	3332	3333	9	5	11	5	2	9	9	7		7
21	2o	2+	3+	4-	5-	3+	4-	4-	1312	2252	15	19	35	42	79	38	41	50		40
22	5-	3+	2o	2o	3-	2-	4-	4-	7211	2564	81	40	14	15	23	13	42	41		34
23	4+	4-	3+	3+	3o	2+	4o	4o	5333	2146	69	43	40	40	32	18	56	58		45
24	3+	4-	2+	3+	3-	4-	4-	4+	3731	4335	35	49	19	34	24	50	45	61		40
25	4o	3+	2+	3-	3o	2-	2-	1+	6433	3332	58	34	20	24	31	13	13	8		25
26	2-	3o	1+	3o	3-	2+	4-	3-	2633	2152	11	27	8	27	23	17	47	24		23
27	2+	2o	2-	1-	2-	2o	4-	4-	3532	2235	20	15	12	5	13	16	42	43		21
28	3-	2o	2+	3o	3-	2+	2o	3o	4543	3513	24	15	18	29	25	20	14	29		22
29	3+	3-	3o	3+	3o	4-	4o	3-	3253	1553	36	22	30	37	30	42	53	24		34
30	3-	3o	2-	2-	2+	1+	3o	3-	7733	3242	24	33	11	12	20	10	28	25		20
31	4-	3-	1o	2o	2-	3o	3o	3o	3612	2113	45	26	6	16	13	29	30	27		24
											Monthly mean value of As									24.3

an, as INDICES 1992 (continued)

April 1992																		
	Kn								σn		an								An
1	2o	3o	3+	3o	3-	2o	1+	2+	1333	2222	14	32	35	31	21	14	10	20	22
2	1o	1+	2-	1+	1+	3-	3o	2-	2121	5112	7	9	12	8	8	23	31	11	14
3	1o	2o	4-	4+	5-	5o	3+	3o	3015	3522	6	15	42	70	85	103	36	29	48
4	2-	2-	2o	3+	3o	2+	3-	2-	3222	2222	13	12	14	40	33	18	23	13	21
5	2+	2-	2o	3+	3+	3-	2o	4o	2222	2311	20	13	16	36	35	25	16	51	27
6	3o	4+	4+	3o	2+	3-	2+	2o	5453	2212	29	70	70	28	20	25	17	15	34
7	2+	4-	4-	4-	3o	3o	3-	2o	1323	1212	18	41	49	45	30	27	23	14	31
8	3-	3o	3o	3+	4-	3-	4o	2-	2334	3242	25	27	27	38	41	21	57	12	31
9	2-	2-	1+	1+	2-	2o	1o	2+	2111	2223	12	13	9	9	11	15	7	19	12
10	2-	2-	1+	1-	1+	1+	1o	1-	2212	2222	12	12	8	5	9	8	6	5	8
11	2-	1-	0o	0+	1o	1o	0+	1-	3211	2331	11	4	1	2	6	6	3	5	5
12	0+	1o	1+	1+	1+	2-	1o	1o	1221	2222	3	7	8	8	10	13	7	7	8
13	1o	2-	2+	2o	3-	1o	2-	2o	1222	2231	7	12	20	15	21	7	12	14	14
14	1o	2-	1+	1o	1+	2o	3o	3-	2211	1322	7	11	10	7	8	14	27	21	13
15	3o	2o	2o	3-	2o	2+	2-	2o	2122	2221	29	16	16	23	14	19	12	15	18
16	2-	1+	1+	1o	2o	2o	1o	1o	3221	2222	12	9	9	7	16	16	7	6	10
17	1-	1-	0+	0+	1-	3-	1o	3-	2223	3324	5	4	2	3	4	26	7	24	9
18	2o	2o	3-	3+	4+	3o	2o	4o	1131	1221	14	16	23	35	67	28	16	56	32
19	3o	3o	3o	2+	3-	3-	4-	3o	2242	2244	32	29	30	18	23	26	43	32	29
20	3+	3o	3-	3o	3o	3o	3-	3o	3322	1121	35	27	22	31	33	33	21	28	29
21	3o	3o	2o	2-	2+	2+	1o	1o	4122	1232	27	32	14	12	18	17	6	7	17
22	3-	3-	3-	3-	2+	3-	3-	3o	3433	2332	22	21	25	24	17	23	26	31	24
23	2+	1o	1o	1-	2o	3o	2+	3+	1221	2324	17	6	7	4	16	29	17	40	17
24	3+	2+	2o	3-	2+	3+	3-	2+	2222	2122	34	20	14	23	19	34	21	20	23
25	2+	3-	3-	2o	3-	2-	2-	2+	2434	1223	19	23	24	16	21	13	11	19	18
26	2-	2-	2o	2-	1+	1o	3+	2-	2202	2333	13	12	15	12	10	7	39	11	15
27	2-	1-	2-	0+	2-	2o	2+	1+	2232	3214	12	4	11	2	13	15	17	10	11
28	2o	2o	3-	3+	3+	1+	2+	2-	3232	2221	16	14	24	35	36	10	17	13	21
29	2o	2+	2-	1o	1+	2-	3-	2o	1241	1132	14	20	13	7	8	12	21	15	14
30	3-	2o	3-	3o	3-	2-	1+	2o	3132	2132	25	16	24	29	25	13	9	14	19
											Monthly mean value of An								19.8

April 1992																			
	Ks								σs		as								As
1	2o	3+	4-	3+	2-	1+	2-	2o	2373	2360	16	37	49	37	12	9	13	16	24
2	1+	1+	2-	1o	0+	2-	3+	2-	3321	2423	8	9	12	6	3	13	38	11	13
3	1-	2o	4-	5-	5o	5o	3+	3-	3145	3722	5	14	46	73	93	89	36	24	48
4	2-	2o	2o	4-	3o	2+	3-	2o	2033	5441	13	16	15	46	31	17	21	14	22
5	2o	2-	3-	3+	3o	2+	3-	4-	2233	1122	15	12	21	36	33	17	21	47	25
6	3-	4o	5-	3-	2-	2+	2o	2-	2532	2322	25	55	83	25	12	17	14	11	30
7	2+	4-	4-	3+	3o	3-	2+	1+	1222	2411	17	42	45	37	27	24	17	9	27
8	3o	3-	2+	3+	4-	3-	4o	1+	3314	4213	27	25	18	35	45	21	53	8	29
9	1+	1+	1+	2-	2o	2-	1+	2o	2212	5223	10	10	8	11	15	12	10	14	11
10	2-	1+	2-	1+	1+	1+	1-	1-	1224	3325	13	10	11	8	9	8	5	5	9
11	1+	1o	0+	0+	1-	0+	0+	1-	2032	5232	9	7	3	3	5	3	2	4	5
12	0+	2-	1+	1+	1+	2-	1-	1o	2334	3724	3	12	9	8	9	12	4	6	8
13	1+	2-	2+	2-	2+	1o	1+	1+	4223	4532	9	11	20	13	20	6	9	10	12
14	1o	1+	1+	1-	1-	1o	2o	2o	2322	5113	6	9	9	4	4	7	14	16	9
15	3-	2o	2o	2+	1+	1+	1+	2o	3011	3331	25	16	15	18	9	9	10	14	15
16	2-	1o	1o	1-	1+	1+	0+	1-	2012	3232	11	7	7	4	9	10	2	4	7
17	0+	1-	1-	0+	1-	1+	1-	2+	2122	5353	3	5	4	3	5	10	4	19	7
18	2-	2+	3-	3o	4+	2+	2-	3+	2451	1423	13	17	22	28	68	18	12	37	27
19	4-	3-	3+	2+	2+	2+	4-	4o	7343	3137	48	21	36	19	20	17	47	57	33
20	3+	3+	3o	3-	3o	3o	2+	3o	2342	2112	40	37	27	22	27	30	18	28	29
21	3o	3o	2o	2-	2-	2o	1o	1o	3412	2223	27	32	14	13	12	15	6	6	16
22	3o	3o	2+	3o	2+	2+	3+	3+	5545	3314	31	27	17	30	20	19	35	34	27
23	3-	1o	1o	0+	1+	3-	2+	3-	2202	3211	21	6	7	3	9	26	17	25	14
24	4o	3+	3-	3-	2-	3+	2+	3-	6422	3134	52	34	21	24	12	34	20	24	28
25	3-	3o	3-	2o	2+	1+	1-	3-	2522	2334	23	27	23	14	18	8	5	21	17
26	1+	2-	2-	3-	1+	1-	3+	1+	2224	3222	10	11	12	23	9	5	38	9	15
27	2+	1+	2o	0+	2+	2-	3-	2o	6432	4245	18	8	14	3	17	13	21	16	14
28	2+	2-	2+	3-	3o	2-	2+	1+	4332	4642	17	12	19	24	33	13	18	10	18
29	2o	2+	2-	1o	1o	2-	2o	2+	1422	2634	14	19	12	7	6	13	14	18	13
30	3-	2+	2+	3o	3-	1o	1-	1o	3333	3550	25	19	18	29	25	6	4	7	17
											Monthly mean value of As								19.0

an, as INDICES 1992 (continued)

May 1992																				
	Kn								σn		an									An
1	1+	2+	3o	2-	2o	3o	4+	3o	2311	3122	10	19	28	12	14	28	61	27		25
2	3-	4-	4-	2-	1+	2o	2o	2-	3342	2012	21	50	50	12	10	15	16	12		23
3	2-	2o	2-	2-	3o	2+	3-	2-	2333	1222	13	16	12	11	31	17	24	13		17
4	3-	3+	2o	3-	3-	3-	1+	2+	3233	3123	21	39	15	25	23	22	9	17		21
5	1+	2+	1+	2-	2+	1+	1+	2-	2322	2222	9	19	8	11	20	10	10	12		12
6	1-	1-	2-	2-	2o	2-	2o	3-	2222	2213	5	4	12	12	15	12	16	23		12
7	2o	3-	2+	2o	3+	3o	4-	3+	0323	3154	15	24	20	16	40	28	47	35		28
8	3-	3+	4-	5o	4+	4o	4+	3o	4217	3532	22	34	48	97	69	53	61	27		51
9	3o	2+	1+	3-	3+	5-	6-	5+	4522	2332	32	18	8	25	37	80	135	111		56
10	5+	5+	7o	8-	7+	7-	7o	7-	4329	9844	105	116	267	360	309	209	252	216		229
11	6o	6-	6-	5o	4+	4+	4o	3o	4544	4222	164	123	121	89	64	61	53	29		88
12	3o	3-	2-	2o	3-	2o	3-	2o	3234	2324	32	21	13	16	21	16	24	15		20
13	3-	4-	3+	4o	4+	2+	2+	3o	2324	4212	26	44	34	60	65	18	18	27		37
14	2-	2-	1-	1+	1+	1-	1o	1o	2323	2442	12	12	4	10	9	5	7	7		8
15	1o	1+	1+	2o	2-	2+	1+	1-	2142	2323	7	9	9	16	12	19	10	4		11
16	1+	1o	1o	2-	2-	2-	2-	1o	2112	3332	8	7	6	12	12	11	11	7		9
17	1-	1o	1+	1o	1-	1o	1+	2-	3221	3223	5	6	8	7	5	7	9	13		8
18	2+	2-	2-	1+	2o	2+	4-	5-	3432	3322	18	13	11	9	16	18	48	79		27
19	4-	3-	1+	2-	2o	3o	3o	3-	3311	1332	42	23	8	12	14	33	31	22		23
20	3o	2-	1+	2-	3-	2o	2+	3o	3122	2232	27	12	8	13	26	15	19	27		18
21	2-	1+	2-	2+	1+	2+	3-	3o	1123	4320	13	8	12	17	10	17	22	30		16
22	2o	4+	5-	5-	5+	5o	4+	3+	3321	5742	14	62	72	75	116	89	70	34		67
23	2o	3-	3o	2o	3-	3+	4o	3-	2244	3233	16	23	27	15	22	38	57	24		28
24	3+	3o	2+	2-	1+	2-	1o	3-	2422	2233	34	33	20	12	9	13	7	21		19
25	2o	3-	3-	2+	3-	3o	3-	2o	4343	2421	16	22	25	19	25	29	24	15		22
26	1+	1-	1+	2+	3-	2-	3-	3o	1223	2332	8	5	9	17	22	13	21	29		16
27	2+	2o	3-	3-	3o	3-	2+	2-	1233	1232	18	15	26	25	28	24	18	13		21
28	2o	2-	3+	3+	3o	2+	2+	3o	1222	3420	14	13	39	35	28	19	17	30		24
29	2+	3o	3+	3-	3+	4-	3o	3o	2332	2531	19	31	38	23	38	47	32	31		32
30	3-	3o	3+	3-	3o	3+	3-	2+	2222	1322	23	30	35	26	28	34	23	19		27
31	3-	3+	2o	2-	1+	2+	2+	2-	2212	2212	25	34	14	11	9	20	18	12		18
											Monthly mean value of An									32.7

May 1992																				
	Ks								σs		as									As
1	1o	2+	3+	1+	1+	2+	4-	2o	0312	2130	7	20	34	9	10	18	48	16		20
2	2o	3+	4-	1+	1o	1o	1+	1o	4231	1310	15	34	47	8	7	7	8	7		17
3	2-	2o	2-	2-	2o	2o	2+	1+	2123	3112	13	14	13	11	16	14	17	10		14
4	2+	4-	2o	2+	2o	3-	1o	1o	4451	2223	17	42	15	20	15	21	7	6		18
5	1o	2+	1-	1+	2-	1o	1o	1+	2122	5212	6	19	5	8	13	6	6	8		9
6	0+	0o	1+	1+	1-	1-	1+	2o	2122	2223	2	1	9	8	5	5	9	15		7
7	2-	2+	2+	1+	3-	2+	4-	4-	3212	2253	12	19	17	9	23	20	47	41		24
8	2+	3+	4o	5o	5-	4-	4+	3+	6336	3134	19	34	53	88	80	50	65	34		53
9	3+	3-	1+	2+	3o	4o	5+	5o	6642	2511	38	22	10	17	31	58	110	92		47
10	5-	6-	7-	8-	8-	7o	6+	6+	2334	3665	74	121	212	340	352	274	199	200		222
11	6+	5+	5o	4+	5-	4+	4o	4-	5532	4234	174	110	96	64	76	61	53	48		85
12	4o	4-	2-	1+	2+	2-	3o	3-	6631	3315	55	47	12	10	20	13	29	21		26
13	3-	4o	3+	4o	4+	2o	2o	2+	5653	4114	26	59	35	53	68	15	15	19		36
14	1+	1+	0+	1-	0+	0o	0o	0+	2211	2111	9	9	2	4	3	1	1	3		4
15	1-	1-	0+	1+	0+	1o	1-	0+	2222	2211	4	5	3	10	3	7	5	3		5
16	0+	0+	0+	1o	1-	0+	0+	0+	2221	2212	2	3	3	6	5	3	2	2		3
17	0+	0+	1-	1-	0o	0+	1-	1o	2132	1122	3	2	4	4	1	2	5	6		3
18	2o	1o	1o	1+	1+	1+	3o	5-	2521	4114	15	7	7	8	10	9	27	76		20
19	4+	3o	1+	1o	2-	3-	2o	2-	5414	2321	67	33	9	7	11	22	16	11		22
20	3o	1+	1o	1o	2o	1+	1+	2+	3333	2223	28	9	6	6	15	10	9	20		13
21	2+	1-	2-	2+	1-	1-	2+	3-	3114	4253	17	5	11	19	5	5	19	26		13
22	2o	4-	5-	4+	5o	5o	5-	3-	2254	4551	14	44	76	66	103	94	74	24		62
23	2-	2o	2+	1o	1+	3o	5-	2o	2013	2161	11	16	17	6	10	29	81	14		23
24	3o	3-	2o	1o	0+	1o	0+	1o	1211	2212	29	22	14	6	3	7	2	7		11
25	2o	2o	3-	2o	2+	2+	2+	1+	4113	1242	14	14	25	14	17	18	20	9		16
26	0+	0+	1+	1+	2-	1o	2-	3-	2221	2323	3	2	9	10	11	6	13	26		10
27	2o	2-	3-	3-	3-	3-	1+	1o	3122	3220	16	12	23	22	23	21	9	7		17
28	2o	2-	3o	3-	2+	2o	2-	2+	1233	2121	15	11	29	26	18	14	11	17		18
29	2+	2+	4o	2o	3+	3o	3o	2+	2141	3131	18	20	54	14	38	30	29	17		28
30	2o	2+	3-	2+	3o	2+	2+	2-	3233	4124	15	18	26	18	32	17	19	13		20
31	3o	3-	2o	1-	1-	2+	1o	1-	3332	2322	27	25	16	4	4	19	6	5		13
											Monthly mean value of As									28.4

an, as INDICES 1992 (continued)

June 1992																				
	Kn								σn		an									An
1	3-	3-	3o	2o	2+	2-	1o	1o	2333	1322	23	25	28	16	20	11	7	7		17
2	1+	1o	2-	2-	1+	2-	2-	2o	3033	2323	8	7	13	13	8	12	12	15		11
3	1+	2-	2-	2-	2+	3-	2-	1o	2332	1333	10	11	11	12	17	24	12	6		13
4	1+	0+	1-	1+	1+	1+	2o	2-	1111	3302	9	3	4	8	9	8	15	12		9
5	2-	1o	1+	3-	3o	3-	2-	1+	3213	3322	11	7	10	23	29	22	13	9		16
6	1-	1-	1+	2+	2+	2o	2-	1o	3212	2231	4	4	10	17	18	14	11	7		11
7	1+	1+	2o	2o	2-	2+	3+	4o	3242	5331	8	10	16	15	12	17	39	59		22
8	5o	4o	5-	4o	4-	5o	4-	4o	2544	2413	87	56	85	58	49	95	43	53		66
9	4-	3-	4-	4-	3-	2o	3-	3-	7264	2422	49	22	47	46	22	16	24	24		31
10	2-	4o	5-	4+	4-	3o	3-	3-	2333	4123	11	51	76	65	46	28	23	21		40
11	3-	4-	2o	3+	3-	3o	4+	5-	2231	2332	26	43	14	34	25	29	69	86		41
12	5-	3-	4+	4-	5+	5-	3o	3o	4243	4325	72	25	62	44	107	83	30	31		57
13	3-	3+	3-	2-	3-	2+	3+	3-	3233	2242	23	38	22	13	26	17	37	26		25
14	2o	1+	2+	2+	2o	2-	2-	2o	3343	2212	16	9	17	19	14	12	13	16		15
15	3-	2o	2o	1+	3-	3-	3-	2-	3122	1322	22	14	14	10	26	24	23	13		18
16	1+	2o	2-	2-	2-	1+	1+	1o	3233	3222	10	15	12	12	12	9	9	6		11
17	1+	1+	2-	1+	2-	2+	2-	2-	2341	1323	8	10	11	9	13	19	11	11		12
18	1+	1+	2o	2o	4-	4-	5+	5-	1142	3366	10	10	15	15	43	42	105	72		39
19	3o	2-	2o	2+	2+	3o	4-	2o	2132	5422	27	13	15	17	18	31	43	14		22
20	1+	3-	2o	2-	3o	2+	1+	3-	3233	4324	10	23	14	11	32	18	8	24		18
21	4-	2-	2-	1o	2-	3-	2o	3-	2233	2212	45	12	12	7	11	23	15	25		19
22	3o	3+	2-	3-	3o	2-	1+	2+	4433	2121	32	39	13	22	28	13	8	17		22
23	3-	3+	2o	2-	2+	2+	3o	3o	2331	2243	23	35	15	12	18	20	30	27		23
24	3o	4-	4-	3+	3+	4-	3o	3o	4233	2322	28	50	41	34	34	41	33	29		36
25	3+	3-	3-	3-	3o	3o	3o	3-	2222	2433	37	23	23	22	29	33	27	22		27
26	2o	2o	3+	2o	2o	2o	2+	2+	0133	1121	15	16	36	15	16	16	17	18		19
27	2+	2-	2o	3o	2+	2+	3+	3+	2143	2232	19	11	16	32	20	18	40	37		24
28	2o	3+	4o	4-	3o	3-	2o	3o	1434	2333	16	34	55	41	27	22	14	30		30
29	4-	5+	4-	3o	4o	4+	5-	4o	3653	4353	47	107	49	30	56	64	74	59		61
30	5-	5+	5-	3+	3-	3-	2-	3-	5654	3322	86	112	83	34	23	24	13	24		50
											Monthly mean value of An									26.8

June 1992																				
	Ks								σs		as									As
1	3-	3-	3-	2-	2+	1o	0+	0+	4523	5322	25	21	23	11	17	7	2	3		14
2	1o	1-	1o	1+	0+	2-	1+	2o	2234	1213	7	4	7	9	2	12	8	14		8
3	1+	1+	1o	1o	1o	2o	1o	0+	3422	3331	8	8	7	6	6	14	6	2		7
4	0+	0+	0+	1o	1-	1-	1+	1+	2211	2134	2	2	2	6	4	5	10	10		5
5	1o	1-	1o	1+	2o	2-	1o	1-	3212	3343	6	4	7	9	15	12	6	4		8
6	0+	0o	1o	1+	1o	1o	1o	0o	2121	3331	2	1	7	10	7	6	7	1		5
7	0+	1+	2-	2-	1o	1+	3o	4o	1434	4525	2	8	12	13	7	8	30	58		17
8	5+	4o	4+	4o	4+	5o	4o	5-	2243	1337	106	51	67	51	62	91	51	85		71
9	4o	2+	4-	3+	2+	1+	2-	2+	6165	2332	55	17	42	37	18	9	12	18		26
10	1+	4-	4-	4o	3o	2+	2o	1o	1330	2123	10	47	49	59	28	18	16	7		29
11	3-	3+	2o	3-	2+	3-	4+	5o	3412	2255	25	37	14	26	18	24	70	90		38
12	5o	3-	4o	3-	5o	5-	2+	2o	7221	2412	97	23	51	22	95	76	18	16		50
13	2o	3o	2o	1+	2+	2o	3o	3-	3333	4142	14	30	15	10	20	14	33	21		20
14	2o	1-	1+	1+	1+	2-	1-	2-	5223	4332	14	5	10	10	10	12	5	11		10
15	3-	2+	2-	1-	3-	3-	2o	1+	5322	2212	26	19	11	4	23	21	14	10		16
16	1o	2-	1+	1-	0+	0+	0o	0+	2322	2212	7	12	8	4	3	3	1	2		5
17	0+	1o	1+	1-	1o	2o	1-	0+	2122	2131	2	7	9	5	6	15	4	2		6
18	1o	1o	1+	1+	3+	3-	5+	5o	2223	1236	7	7	9	10	34	26	110	91		37
19	3o	2o	2-	2-	1o	2-	3o	1+	3311	2224	28	14	12	11	7	12	32	8		16
20	1o	3-	1o	1o	3-	2-	1-	1+	2300	2232	7	21	7	7	26	11	4	9		12
21	4-	1+	1o	0+	0+	2o	1+	2-	5210	0313	48	8	6	3	3	15	8	12		13
22	3o	3o	1+	2o	2o	1o	0+	1+	6522	3302	33	30	8	14	14	6	3	10		15
23	3-	3o	1+	1o	1+	2-	3-	3-	2622	2453	21	33	10	7	9	11	21	23		17
24	3-	4o	3+	3-	2+	3-	3o	2+	2331	1233	22	58	40	24	17	26	27	19		29
25	4-	3-	3-	3-	2+	3o	2-	2-	5234	3322	44	23	21	25	20	28	13	11		23
26	1+	2-	3o	2-	2-	2-	1o	3-	2441	2222	9	11	27	11	11	12	6	24		14
27	2-	1+	1+	3o	2o	2-	2+	3-	4225	0223	12	8	9	28	16	12	18	22		16
28	2-	3-	4-	3+	3o	2+	1+	2+	2121	3123	13	21	42	39	27	17	10	19		24
29	3+	4+	4-	3o	3+	4-	5o	5-	4545	4013	38	70	43	29	39	44	94	73		54
30	5-	5o	4+	3-	2+	2o	1+	3o	6652	3223	85	94	65	26	20	15	8	31		43
											Monthly mean value of As									21.6

an, as INDICES 1992 (continued)

July 1992																				
	Kn								σn		an									An
1	3-	3o	3-	2+	3o	3+	4-	4-	4231	1222	24	30	24	18	33	37	43	50		32
2	3+	4+	4o	3o	3-	2+	1o	3-	3223	3142	34	64	51	32	21	18	6	22		31
3	2-	2-	2o	1+	2o	2-	1+	1+	2141	2224	13	11	15	9	15	11	9	10		12
4	1-	2-	1+	1+	1+	2-	1+	2o	1331	3333	5	12	10	8	9	13	10	14		10
5	2o	3+	2-	3-	3-	2-	2-	3-	1223	2323	15	36	11	25	23	13	12	22		20
6	2o	2-	1+	2o	2+	2o	1+	1o	2133	3422	15	13	10	14	18	14	9	7		13
7	1-	1-	1-	1o	2-	2-	2-	1+	3212	2332	5	4	5	7	11	13	11	8		8
8	1o	1+	1+	1+	2+	2+	2-	1+	2232	2332	7	9	8	9	19	19	12	8		11
9	2-	2-	1o	2-	1+	2-	1+	2-	2213	2313	12	12	7	11	10	13	8	12		11
10	1+	2+	2o	1o	2-	2-	2+	1o	2222	2243	9	17	14	6	11	11	19	6		12
11	1+	1o	1+	1+	1+	1o	1-	1+	2231	3332	8	6	9	9	8	6	5	10		8
12	3o	2+	3-	3+	3+	3+	3o	3o	2223	2311	27	19	25	35	37	34	27	28		29
13	2+	3+	4o	4o	4-	3+	3o	4+	2134	1324	17	35	56	51	47	38	32	65		43
14	4-	3o	3o	3+	3-	2o	3o	2-	4224	2222	48	33	31	34	21	15	28	12		28
15	3-	2o	2o	2-	2-	2-	1+	1o	1322	2322	24	16	14	13	12	12	10	7		14
16	1+	1+	2o	4o	3+	3o	3+	3-	2236	2342	9	8	16	53	37	29	35	21		26
17	3-	1+	1-	1+	2+	2+	1o	1-	4212	1132	23	8	4	8	18	17	7	4		11
18	2-	2o	1+	1+	2-	2o	1+	1+	4212	2432	11	14	10	10	11	15	8	9		11
19	2-	1-	1+	1o	1-	2-	2-	2-	3221	3331	11	5	9	7	4	12	13	11		9
20	2-	2-	1-	2-	3o	3o	3o	2+	4233	4412	11	11	4	12	31	29	28	20		18
21	1o	2-	2+	2+	4-	4-	3+	2o	1331	2243	7	12	19	17	43	41	38	14		24
22	2o	3o	4o	5o	5-	3+	4+	3o	3333	2220	16	27	55	89	77	38	63	30		49
23	3+	3+	3o	3o	3-	2+	3o	3-	4312	3352	37	39	31	31	21	17	29	25		29
24	2+	2o	1+	3-	2+	3-	2-	2o	3325	2222	17	14	9	24	19	25	12	14		17
25	2-	1+	2o	2+	3o	4-	3o	2-	3122	3331	12	8	14	18	33	45	33	13		22
26	2-	1+	1o	2-	1+	1+	1+	1o	2211	2221	11	8	6	11	10	10	10	7		9
27	1+	1o	2-	2+	1+	2o	2+	3o	1233	2343	8	6	11	17	9	14	18	30		14
28	3+	4+	3+	2+	3-	3-	2o	2+	2223	2232	40	62	40	19	23	23	14	18		30
29	1+	2-	1+	1+	1+	1+	1+	1+	1233	3332	9	12	10	10	10	10	9	9		10
30	2+	1+	2-	3-	3-	3o	3-	3-	3244	3345	18	9	13	23	26	30	21	25		21
31	2+	2-	2o	3o	2+	3+	2+	4-	2222	2332	18	13	15	27	17	35	18	48		24
											Monthly mean value of An									19.5

July 1992																				
	Ks								σs		as									As
1	3o	3o	3-	1+	3o	3-	4-	3o	4521	4231	32	31	21	10	32	23	49	29		28
2	2+	4+	4o	3o	2-	2-	1-	2o	2452	2241	19	66	56	28	13	13	5	15		27
3	2-	1+	2-	1-	1o	0+	1-	1-	3132	2212	12	9	11	5	6	3	5	4		7
4	0+	1o	1-	1-	0+	1o	1-	1o	1321	2313	2	6	5	5	3	6	5	7		5
5	2-	3-	2o	2+	2o	1-	1+	2-	2443	4222	13	25	14	19	14	4	9	12		14
6	1+	2-	1+	1+	1o	1o	0+	0+	1411	0221	8	11	8	8	7	6	3	2		7
7	0+	0+	1-	0+	1o	1+	1-	1-	2221	2122	3	3	4	2	6	8	5	4		4
8	1-	1o	0+	1o	1+	1o	1+	1-	2111	1132	4	6	2	6	8	7	8	5		6
9	1o	1+	1o	0+	0+	0+	0+	0+	1221	1422	7	10	6	2	2	3	2	3		4
10	1-	2o	2-	0+	0+	0+	1+	0+	2331	1241	4	15	13	2	3	3	10	2		7
11	1+	1-	1o	1-	0+	0+	0+	0o	1221	1111	8	4	6	4	2	2	2	1		4
12	2o	3-	2+	3-	3+	2o	2-	2o	3332	1221	16	21	20	22	34	16	13	14		20
13	2o	3o	3+	3o	3-	3o	3o	4o	2231	2133	15	32	40	30	23	29	30	54		32
14	3+	3-	2+	3-	2-	1+	3-	1+	3213	2122	40	25	17	25	13	10	21	9		20
15	3-	3-	1+	1+	1-	1-	1-	0+	4511	2230	23	21	9	8	4	5	4	3		10
16	0+	1o	1+	4-	3o	2+	3o	2o	2313	3141	3	6	8	48	27	17	30	15		19
17	3-	1-	0+	1-	2o	2o	1-	0+	4121	1221	21	4	2	5	14	16	4	2		9
18	1-	2-	1-	1-	0+	1-	1-	1-	3322	2312	4	11	5	4	3	5	4	5		5
19	1+	0+	1-	0+	0o	0o	1o	1+	2122	1113	10	2	4	2	1	1	7	8		4
20	1+	2-	0+	1-	3-	2o	2o	2-	5511	4125	10	11	2	4	26	14	15	13		12
21	0+	1-	1+	1+	4-	4-	3-	2-	2122	4422	3	5	10	10	41	48	26	11		19
22	2o	3-	4+	5o	5-	3-	4o	3o	3355	3234	16	22	64	96	76	23	54	30		48
23	3o	4-	3o	3o	2o	2o	3o	3-	5512	2342	32	49	28	30	15	16	27	21		27
24	2+	1+	1o	2+	3-	2o	1+	1o	4322	3113	18	10	7	18	26	14	9	7		14
25	1+	1-	1+	2o	2+	3o	3-	1o	5211	2223	10	4	8	14	18	32	22	7		14
26	1o	1-	0+	1o	1-	1-	1-	0+	3222	3322	6	5	2	6	5	5	5	3		5
27	0+	0+	1o	1+	0+	1-	1+	3o	2431	1224	3	3	7	10	2	4	8	28		8
28	3+	4+	3+	2-	2-	2+	1+	2+	4441	4313	38	66	38	13	13	17	9	20		27
29	1o	1o	1o	1-	1-	1o	1o	1+	2342	2213	6	7	7	4	4	6	6	10		6
30	3-	1-	2-	2-	1+	1+	3-	2+	5252	1342	21	5	12	11	8	10	23	20		14
31	2o	1+	2-	2-	1+	2o	2+	4-	2322	2214	16	10	12	12	8	16	17	45		17
											Monthly mean value of As									14.3

an, as INDICES 1992 (continued)

August 1992																				
	Kn								σn		an									An
1	3o	3o	2-	2o	2+	2+	2-	2o	2421	1232	29	28	12	16	19	19	12	14		19
2	1+	1+	1o	2-	2-	2-	2o	2-	2212	4222	9	8	6	11	11	13	14	11		10
3	1o	1o	1+	1o	2o	2-	2-	1+	3243	2131	6	6	8	7	15	13	11	8		9
4	3-	2+	1+	2o	3+	4-	4o	3+	4453	3342	21	18	9	15	39	49	54	34		30
5	5+	5o	5-	4o	4o	2+	3o	3o	6653	2112	115	89	83	51	51	20	27	27		58
6	1+	4-	3+	4o	4-	4-	3-	3-	3133	2522	10	46	36	52	47	41	21	21		34
7	3o	3-	4o	5-	4o	3+	3o	2+	3234	2122	30	26	58	80	58	38	30	17		42
8	3-	3+	4-	4-	3-	3o	3+	3-	2223	2222	22	40	46	50	26	29	37	21		34
9	3+	2-	3-	3+	3-	3-	3o	1+	2222	1312	38	13	23	39	25	23	27	9		25
10	3-	2-	2o	2+	3-	2o	2+	2o	2441	2223	23	13	15	17	23	15	19	16		18
11	2+	2+	3o	3-	2+	3o	3-	3o	3133	2423	19	18	28	25	18	30	23	33		24
12	2+	3-	3-	3-	3-	2-	1o	1-	2333	5443	20	24	24	24	22	12	6	5		17
13	1-	1o	1+	2+	3+	4o	2+	3o	5323	3122	5	6	8	17	40	59	20	28		23
14	3o	3-	2-	3-	4-	4o	2-	1+	2222	5423	31	24	13	21	43	51	13	8		26
15	2o	2-	3o	2-	1+	2-	3o	2+	0241	3422	15	13	29	11	10	12	29	20		17
16	2-	2+	3+	3-	2+	2+	2-	2o	1322	1231	13	19	35	24	17	18	11	16		19
17	2-	2-	0+	1-	1+	1o	1+	1+	2324	3422	12	12	3	4	9	7	9	10		8
18	1+	2-	2-	2o	2o	2+	2o	2-	3112	2222	9	13	12	16	16	18	16	13		14
19	1o	1+	2-	1+	2+	3o	3-	3o	3141	3310	7	10	13	8	20	27	25	30		18
20	3o	5o	4-	4o	4-	3-	2-	2-	4232	2242	31	93	45	56	43	21	13	12		39
21	2-	2+	1o	3-	3+	5-	4+	2-	1321	2571	13	17	7	26	36	76	67	12		32
22	2-	2+	3+	3o	5-	5-	5-	6-	2321	3541	12	20	36	28	72	80	77	121		56
23	7-	7-	6o	3+	4o	3-	3+	3+	3442	2124	239	217	152	35	52	22	35	38		99
24	2o	2o	2o	3-	1+	3-	3o	3o	3003	1254	16	15	15	21	8	21	27	28		19
25	2-	1+	1-	1o	2+	2-	2-	2o	2341	1230	11	10	5	7	20	11	12	15		11
26	3+	2o	4o	3-	3o	2o	2o	2o	3243	3121	36	16	54	22	28	16	16	15		25
27	2o	2o	2+	3o	4o	3o	3+	2+	1333	2342	16	14	17	33	57	27	36	17		27
28	2o	2+	1o	1+	1+	2-	2-	2o	0212	3225	15	20	7	8	9	11	11	14		12
29	4-	4-	2+	3-	2o	1+	2-	2o	6523	2224	48	48	20	26	15	8	13	16		24
30	1+	1+	2-	2-	4-	1+	2+	1+	3123	5433	8	8	11	13	46	8	17	8		15
31	1-	2+	1-	1+	1+	2-	1+	1o	3532	1122	5	18	4	8	8	13	10	7		9
											Monthly mean value of An									26.2

August 1992																				
	Ks								σs		as									As
1	3o	3o	1+	2-	2-	2-	1o	1+	4622	3322	30	27	9	11	12	12	7	10		15
2	1+	1o	1-	1-	0+	1+	2o	1+	2223	3122	8	6	5	4	3	8	15	9		7
3	0+	1-	1-	1-	1+	1+	1-	1-	3312	2221	2	5	5	5	8	9	5	5		6
4	2+	1+	0+	1+	3o	4-	4+	4-	3202	4254	20	10	3	8	32	46	62	43		28
5	5o	5-	5o	4o	3+	2+	2+	3-	4573	1424	101	78	95	60	39	20	18	23		54
6	1-	4o	3o	4-	3o	3o	2+	2o	2224	3343	5	54	28	45	31	31	17	14		28
7	3+	3-	4-	5o	5-	3+	3-	2o	3435	2131	36	24	41	88	78	36	21	14		42
8	2o	3+	4-	4-	2+	3o	3o	3-	3633	3224	16	37	47	42	19	27	32	21		30
9	3-	1+	2o	3-	3-	2+	2+	1+	4223	2222	23	9	15	26	22	18	19	9		18
10	2+	1+	1o	3-	2+	2-	2o	1+	3332	2301	19	10	7	21	20	12	16	8		14
11	2o	2-	3o	3-	2-	3o	2+	3+	6252	2034	15	13	33	22	12	32	19	37		23
12	2o	3-	3-	2o	2o	1o	0+	1-	3324	5021	16	25	22	14	16	7	3	4		13
13	0+	0+	1+	1+	3-	3+	2-	3o	2222	2323	2	3	9	9	26	38	13	28		16
14	3o	3-	1+	2+	4-	4+	2-	0+	2223	5123	29	22	10	19	45	61	12	2		25
15	1+	1+	3o	1o	1-	1-	3-	3-	2222	2343	10	8	27	7	4	5	26	22		14
16	1+	2o	3o	2+	2+	1o	1o	1o	1563	4220	10	16	29	20	17	6	7	7		14
17	1+	1+	0+	0+	1-	1-	1o	1o	1112	2313	9	8	2	3	4	5	7	7		6
18	1+	1+	1+	1+	1o	2o	1+	1o	3232	1332	8	10	9	10	7	16	10	7		10
19	0+	1o	1+	0+	2o	3-	3-	2+	2032	5422	3	7	9	3	14	25	26	18		13
20	3+	5o	4o	4o	4-	2-	1+	1o	3232	3231	40	93	52	51	47	12	9	6		39
21	2-	2+	1o	3-	3+	5o	5-	1+	3204	3522	11	18	7	24	37	87	77	8		34
22	1o	2+	3-	3-	5-	5-	5o	6-	2122	3323	7	17	22	25	81	77	98	143		59
23	6+	7-	6o	3-	3+	2+	4-	3+	3341	2422	197	202	151	21	34	17	49	35		88
24	2-	2o	2-	2o	1o	2o	3-	3o	4240	3423	12	15	13	16	6	16	24	32		17
25	2-	1+	1-	1o	2-	1-	1+	1+	4221	2222	11	10	5	6	13	5	8	10		9
26	3+	2+	3+	2+	3-	2o	2-	2o	4351	3230	35	18	36	17	22	14	13	16		21
27	2-	2o	2o	3o	4-	2+	3o	2o	3322	2232	12	15	15	27	41	20	27	16		22
28	2-	2o	1o	0+	0+	1-	1+	2-	2121	2312	13	14	6	2	3	5	9	11		8
29	4-	3+	2+	3-	2o	1-	2-	2o	7632	1325	50	34	20	22	14	4	12	15		21
30	1o	1-	1o	1+	3+	1-	2o	1o	1122	4222	6	5	7	8	35	5	16	7		11
31	0+	2+	0+	1-	0+	1+	1+	0+	1501	2212	3	17	3	5	3	8	8	2		6
											Monthly mean value of As									22.9

an, as INDICES 1992 (continued)

September 1992																				
	Kn								σn		an									An
1	1o	1-	1-	0+	1o	1o	1-	0+	3122	3421	6	5	4	3	6	6	4	3		5
2	1+	1+	2o	4-	4o	5-	4-	4-	2224	2323	9	10	14	44	55	78	49	45		38
3	3+	4+	6-	5o	4+	5-	4+	4o	2274	2453	34	64	124	95	69	76	70	52		73
4	4-	4-	5-	5-	4-	3o	3o	5o	2446	4312	47	47	81	80	48	27	31	93		57
5	4+	4+	4-	4-	3o	2+	3+	3o	4532	2232	64	61	48	47	30	17	38	27		42
6	3-	3o	3+	2+	3-	3o	4-	3+	2453	2222	25	33	37	17	23	31	45	36		31
7	3o	3o	3o	4+	4o	3+	4-	3-	4524	3253	27	31	29	61	52	34	42	24		38
8	3+	3o	5-	3-	4-	3-	3o	2o	5562	5133	36	33	72	23	46	25	31	16		35
9	5-	6-	6-	7o	7-	5o	5+	4o	2524	6655	77	141	121	246	204	89	107	60		131
10	5-	6-	6o	6-	5-	6-	6o	5o	1958	2673	84	145	165	146	80	137	151	91		125
11	5+	4-	4+	3o	3-	4+	3o	2+	4452	3513	106	47	64	31	25	69	33	17		49
12	2+	2-	1+	1-	1-	1+	1+	2-	3213	3322	18	13	8	5	5	8	10	11		10
13	2-	1+	2-	1o	1o	1o	2-	2o	2232	2224	11	8	11	6	7	7	13	14		10
14	1+	2o	2-	2+	2-	2o	3-	2+	2423	2333	9	16	13	18	12	16	21	18		15
15	3-	3-	3-	2o	2o	3-	2+	1+	3131	1212	23	22	24	16	16	25	17	10		19
16	2-	2-	3o	2o	3-	2+	4-	3-	2342	3163	11	12	30	14	22	20	47	22		22
17	5o	5+	6o	6o	5-	5-	6-	5-	4245	2454	92	105	161	169	77	73	132	80		111
18	3+	4o	4-	4+	4o	2+	3+	3+	2314	3122	39	59	45	68	54	19	38	35		45
19	3o	3-	2-	3+	3-	2+	3o	1+	2435	4232	30	25	13	35	25	20	32	9		24
20	1+	2o	2+	2o	2+	2-	2o	3-	3341	2233	10	15	18	14	17	12	16	21		15
21	1o	1o	2-	1o	1-	1+	2-	4-	0111	3123	7	7	11	6	5	10	11	41		12
22	4-	4-	2o	2o	2-	2-	3-	3o	3322	2123	48	44	15	14	12	11	22	27		24
23	2+	3o	3-	2o	2-	1+	2-	1+	2421	1223	20	27	22	14	11	9	13	10		16
24	0+	0+	0+	1-	1-	1o	1+	2+	2111	1222	3	2	2	5	4	7	10	18		6
25	2+	1+	2-	3-	3-	2o	3+	3-	3134	3123	18	8	12	25	24	16	37	24		21
26	3-	2o	1+	1o	1o	3+	2-	0+	2222	1222	24	16	8	6	7	38	12	3		14
27	1-	1o	1+	1+	2o	1+	1o	1o	2223	2222	4	6	9	10	16	8	7	7		8
28	1-	1o	2-	2o	4-	3+	4-	4o	0232	5244	4	7	12	14	43	36	49	58		28
29	4-	6-	6-	5o	6o	5-	4+	4o	2643	9751	44	129	125	102	156	79	62	52		94
30	4o	4-	4-	3o	4-	5o	4o	4-	0431	4433	54	43	46	31	49	89	57	45		52
											Monthly mean value of An									39.0

September 1992																				
	Ks								σs		as									As
1	1-	0o	0+	0+	0+	0+	0+	0+	2111	3222	4	1	2	2	2	3	3	2		2
2	1+	2-	2-	3o	3+	4+	3+	4-	2432	2323	9	13	13	33	38	62	36	43		31
3	3o	4-	5o	5o	5-	5o	5o	4o	2543	2323	29	44	90	95	78	97	90	58		73
4	4-	4-	4+	4+	3+	3-	3-	6-	3345	3223	46	43	65	62	39	23	24	121		53
5	4+	4-	4-	3+	3-	3-	3+	3-	4431	2242	66	45	49	39	26	22	35	25		38
6	3o	3-	3o	2o	2o	3-	4-	3+	6352	2143	33	25	30	15	15	24	43	38		28
7	3o	3-	3o	4-	4-	3+	3+	2+	6403	3232	27	26	32	49	44	38	35	18		34
8	3+	3o	3+	3-	3-	2+	3-	2o	7764	3344	35	28	37	25	26	20	25	14		26
9	5-	5-	5-	6+	6o	4+	5-	3+	6777	9796	75	80	79	190	168	66	82	40		98
10	5o	5-	5o	5o	5-	6-	6o	6-	9967	8999	102	72	94	93	82	123	154	121		105
11	6-	4+	3+	3-	2+	4+	3o	3-	9944	3544	126	63	34	25	20	65	30	21		48
12	3-	2-	1o	0+	0+	1-	1+	1o	7232	3432	25	12	6	3	2	4	9	7		9
13	1+	1+	1+	1-	1-	1-	1+	1+	1131	4435	9	10	10	5	4	4	9	10		8
14	1+	2-	2-	2-	1o	1+	3-	2+	2342	1556	8	13	13	13	6	9	21	20		13
15	2+	2+	3-	2o	1+	2o	2o	1o	3331	2221	20	19	21	15	10	16	15	6		15
16	1o	2-	3-	2-	2o	3-	3+	3-	2342	0232	7	12	24	12	16	22	37	25		19
17	5-	5+	5+	5+	4+	5-	7-	6o	5453	3287	81	104	120	120	65	85	223	168		121
18	4o	4+	3+	4o	4-	3-	3+	4-	4633	2335	56	64	36	53	45	21	34	44		44
19	3+	2+	1+	3o	2+	2o	3o	1+	3425	3142	34	17	9	29	20	14	28	9		20
20	1+	2o	2+	2-	2-	1+	2+	3-	2142	2234	10	14	20	13	12	8	18	22		15
21	1+	1o	1+	1o	0+	1+	2o	4-	1221	1326	8	7	10	6	2	8	14	49		13
22	4o	4+	2o	2-	1+	1+	3-	3-	7532	2222	58	67	16	11	9	8	26	24		27
23	2+	2+	2+	2o	1+	1o	2-	1+	2242	2221	19	18	17	14	8	6	11	8		13
24	0+	0+	0+	1-	0+	0+	1o	1+	2211	2202	2	3	2	5	2	2	7	9		4
25	2+	1o	2-	3-	2+	2-	3-	3-	2034	2232	17	7	12	24	18	13	24	22		17
26	3+	2o	1o	1-	1o	3+	1+	0+	1112	1232	34	15	6	4	6	37	10	2		14
27	0+	1-	1+	1-	2-	0+	1o	1-	2214	2312	3	5	8	5	12	3	6	5		6
28	1-	1+	2-	2o	3+	3+	4o	4+	2220	3245	4	8	13	16	38	37	55	70		30
29	4-	5o	6-	5o	5o	5-	4o	4o	6565	3334	47	98	126	102	101	77	54	55		83
30	4o	3o	4-	3-	4-	5-	4+	4-	2222	2115	60	33	41	25	47	83	61	46		50
											Monthly mean value of As									35.2

an, as INDICES 1992 (continued)

October 1992																				
	Kn								σn		an									An
1	4-	5-	3+	3+	3+	4-	4-	2+	2625	2443	50	77	36	37	35	41	50	17		43
2	3+	2o	2o	2+	2o	2+	2o	2o	3522	3245	37	16	16	20	16	19	14	15		19
3	1-	1+	2o	2o	2-	1+	2+	2-	2323	2224	4	9	14	15	13	10	19	11		12
4	2+	3o	2o	1+	1+	1-	1o	1+	2222	2333	20	29	16	8	10	4	6	8		13
5	1o	1+	1o	1-	1+	2o	2-	2-	2212	2222	7	9	7	5	10	15	12	13		10
6	3o	3-	1+	2o	2+	2+	2-	1+	3333	2221	31	21	10	14	20	20	11	8		17
7	1+	2+	2+	3-	2o	2-	2+	1+	2344	1453	9	18	17	26	16	12	17	10		16
8	3-	2-	1-	0+	1-	1+	3o	3-	5311	3213	25	13	5	2	4	9	31	25		14
9	2+	2o	3-	5-	4o	5o	4o	3o	2323	3733	19	14	24	81	56	101	52	33		48
10	1o	1+	3-	3+	3-	2-	2-	3o	2224	3330	6	9	23	35	26	11	11	30		19
11	2+	2-	1+	4-	4+	4o	4+	3+	3213	2365	17	11	8	41	62	55	67	36		37
12	2+	3+	4o	5-	6-	4+	3-	2o	3436	4613	19	37	60	83	132	61	25	16		54
13	3o	2+	2-	1+	3-	4+	5-	4-	2321	2342	31	17	13	9	26	70	83	45		37
14	3o	3o	3o	3-	3-	2+	4-	5-	3212	3153	28	30	28	25	22	17	50	74		34
15	4+	4o	3+	5-	4o	3+	4-	4-	3213	2332	62	57	37	71	52	36	45	47		51
16	4+	4-	3+	3o	3o	3o	2+	3+	4413	2423	69	44	34	33	27	30	18	37		37
17	2+	3-	3-	3o	3o	3o	3o	2o	2352	2242	20	22	25	29	30	31	29	14		25
18	2+	1o	1+	1o	4-	2+	2+	3+	3220	4222	18	6	9	7	43	19	20	38		20
19	3+	2o	2-	2+	4o	4-	3o	3-	2234	4333	37	16	11	20	51	47	28	22		29
20	4-	3+	1+	2o	2-	1+	1+	1+	3323	2132	41	40	9	14	12	9	9	8		18
21	1o	1+	1+	1o	1+	2o	2-	3-	1221	2215	7	8	10	7	9	16	12	21		11
22	2+	1+	0+	1+	3o	3o	2-	2-	2422	1122	19	10	3	9	28	31	12	12		16
23	1+	1+	1+	1+	1+	1o	1o	1+	1221	1241	10	8	10	9	10	7	7	8		9
24	1+	1-	0+	0o	1-	1+	0+	2-	1111	1133	9	5	2	1	4	10	3	11		6
25	3-	1o	1+	2-	2o	1+	2-	2o	3123	2231	24	7	8	12	15	9	13	14		13
26	3o	3-	3-	2+	2o	2+	4-	3+	2232	2232	27	21	24	18	14	20	45	38		26
27	4+	4-	3o	4o	4+	5o	3+	3-	2222	3845	62	41	29	58	70	99	39	23		53
28	4-	2+	3o	4+	3o	4-	3o	3o	5335	5345	48	20	30	62	28	42	30	32		37
29	3+	3o	4o	4o	3+	4o	4o	3+	5233	2365	36	29	51	53	38	51	56	34		44
30	2o	2+	3o	4-	4-	3+	2+	3o	2256	3515	16	17	27	45	44	38	18	29		29
31	2o	1+	3o	3o	3+	3-	2o	1+	1543	2352	15	10	30	28	36	24	14	9		21
											Monthly mean value of An									26.4

October 1992																				
	Ks								σs		as									As
1	4-	4o	3+	3o	3o	3+	4-	1+	3555	2422	46	51	39	30	28	34	43	10		35
2	2+	2-	1+	2-	2-	2+	2-	1+	4414	3314	20	11	10	13	11	18	13	10		13
3	1-	1-	1o	1+	1+	1+	2o	1o	3323	3122	4	5	7	10	10	9	16	7		9
4	2o	3-	2o	1+	1+	0+	0+	1o	1211	2433	15	24	15	9	8	3	2	6		10
5	1o	1+	1o	1-	1-	2+	2-	2-	2311	4432	6	10	6	5	5	17	13	13		9
6	3o	3-	1+	2o	2+	3-	1+	1o	5311	1411	31	25	9	14	20	25	9	6		17
7	1+	2o	2-	3-	2o	2-	2+	1+	2332	3431	9	16	13	21	16	11	18	10		14
8	3-	1+	1-	1-	0+	2-	3+	3-	5402	3412	26	10	4	4	2	11	34	26		15
9	3o	3-	3o	5o	4-	5-	4+	3+	3321	2454	30	24	28	92	49	77	70	37		51
10	1+	2-	3-	3o	3-	1+	2-	3-	3211	2322	9	13	25	29	23	9	12	21		18
11	2o	1+	1+	4-	5-	4+	5-	3+	1232	2423	14	10	9	41	73	61	77	40		41
12	3-	3o	4o	5-	6-	5-	3-	2o	2412	3433	21	29	53	82	126	73	22	14		53
13	3o	2o	2-	1+	3+	4+	5o	3+	3121	4232	31	14	13	9	34	66	93	36		37
14	3+	3o	2+	2+	3-	2o	4o	5+	2213	1332	35	28	18	20	21	16	54	108		38
15	5+	4-	3+	4o	4-	4-	4-	5-	4332	2236	105	49	37	52	49	45	49	71		57
16	5o	4-	3o	3o	3-	3+	2o	3+	4321	2123	94	47	27	29	26	35	14	38		39
17	2+	2+	2+	3o	3o	3+	3o	2+	2341	1333	18	20	18	29	30	38	27	19		25
18	2+	1o	1+	1-	3o	3-	2+	3+	3231	3234	17	7	9	5	28	21	20	37		18
19	4-	2o	2o	3-	4-	4-	3-	3-	4023	2212	49	16	14	24	49	45	24	25		31
20	4-	3+	2o	2-	2-	1+	1+	2-	1422	3432	47	35	15	11	13	8	9	12		19
21	2-	1+	1+	1+	2-	2-	2-	2+	2312	4344	11	9	8	10	11	12	11	17		11
22	3-	2-	1o	1+	3o	3o	2-	2-	2312	3232	22	12	6	9	30	33	12	12		17
23	2-	1+	1+	1o	1o	1-	1-	1o	2212	1522	12	9	10	7	6	4	4	7		7
24	1+	1-	0+	0o	0o	1o	0o	2-	3111	1215	9	4	2	1	1	7	1	11		5
25	3o	2-	1+	2+	2o	1+	2o	2-	3212	3422	33	11	9	17	14	10	16	13		15
26	3+	3-	3-	3-	2-	2+	3+	3o	2232	3345	36	22	23	22	12	19	36	32		25
27	4+	4-	3+	4-	4o	5-	3o	2+	2332	0334	67	49	37	44	58	85	29	17		48
28	3o	2o	3-	4-	3o	3o	3-	3-	3324	3331	30	15	22	44	28	33	23	24		27
29	3o	3o	4-	3o	3-	4-	4+	3+	1320	2143	27	30	45	32	26	47	62	40		39
30	2+	3-	3-	3o	3+	4-	3-	3o	3421	1353	17	24	22	30	34	41	22	27		27
31	2-	2-	3o	3-	3o	2+	1+	1+	2432	1124	13	12	29	23	30	17	10	8		18
											Monthly mean value of As									25.4

an, as INDICES 1992 (continued)

November 1992																				
	Kn								σn		an									An
1	1+	1-	1+	1+	2-	3o	3-	6-	1231	2122	9	5	9	9	13	31	22	125		28
2	4-	4o	3+	3+	3o	1+	3o	3-	3343	4343	43	60	38	36	28	9	33	21		34
3	3+	3o	4o	4-	2-	1+	2+	3-	4363	1245	39	27	53	47	13	9	20	24		29
4	2-	2-	3-	4-	5-	5-	3o	4-	1444	5343	13	13	26	49	79	76	28	50		42
5	3+	2-	3o	3+	3o	3-	3-	2-	5134	4533	35	13	28	35	31	24	21	13		25
6	2-	1+	3-	2+	4-	4o	3-	3-	5333	4743	13	10	21	17	42	60	24	21		26
7	2+	1+	3o	3-	2o	3+	2o	3o	4343	0544	18	9	30	26	15	35	14	29		22
8	3-	2-	2o	1+	2+	3-	3-	3o	5241	4343	25	12	16	8	18	22	23	31		19
9	2+	3o	5o	6-	5-	4+	3+	4-	3224	3622	17	29	92	121	81	68	34	50		62
10	3o	2o	2+	3-	2+	3o	3o	3-	2123	3232	29	16	17	21	17	33	27	23		23
11	3o	3+	3+	4o	3+	3+	2+	2o	3533	3331	30	38	38	51	34	36	19	16		33
12	2+	3-	2o	3o	3+	2+	3-	4-	3212	4122	17	26	16	29	38	20	25	47		27
13	2+	2o	2o	4o	5-	3o	3-	2+	3415	4232	17	16	16	54	71	27	26	20		31
14	2+	2o	2o	3-	3o	3-	3-	2+	4113	3332	17	14	16	24	33	25	25	18		22
15	2+	2-	1+	2o	4o	4o	3+	4o	3213	3534	18	13	9	16	54	56	35	54		32
16	3o	2-	2-	2-	1o	2-	3-	3-	4122	1155	30	12	12	12	7	11	26	25		17
17	2o	3-	2-	2-	2o	1+	3-	2-	3513	2232	14	24	11	11	15	9	23	13		15
18	2o	1-	1-	1+	1o	3-	3o	1-	4122	2352	16	4	4	8	6	23	33	4		12
19	1o	1+	2-	2+	3-	1+	1+	1-	1312	3223	6	10	11	18	26	9	9	4		12
20	1o	0+	1-	1o	1o	1-	1+	2o	1122	3143	6	3	5	7	7	5	10	14		7
21	4-	3-	1+	0o	0+	1-	1-	1o	7421	3332	42	21	9	1	3	4	5	7		12
22	1o	1+	2+	4-	4-	4-	4-	3+	1216	3333	6	10	17	41	48	48	42	39		31
23	4o	4+	4o	3+	4-	5-	3+	3o	2545	4633	58	68	51	40	43	84	36	31		51
24	2-	1+	2+	3-	3o	3o	4-	3-	3223	4343	11	8	20	23	33	32	44	22		24
25	2+	2-	2o	4-	4-	2+	3-	3o	3233	3233	19	12	15	49	50	20	21	27		27
26	2o	3+	1+	3o	2+	1+	2o	1+	4324	2132	16	34	8	27	19	9	14	10		17
27	1+	1+	1+	1+	2+	2-	1-	1+	2132	2223	9	9	8	8	20	12	4	8		10
28	1o	1+	2-	3-	1+	2-	2o	2+	2244	2224	7	9	12	23	9	13	15	17		13
29	1-	1-	2-	2-	3-	2o	2o	0+	3213	4242	5	5	11	11	24	14	14	2		11
30	0+	0+	2-	2+	3+	4-	4+	3-	2143	5563	3	3	12	17	35	48	68	21		26
											Monthly mean value of An									24.7

November 1992																				
	Ks								σs		as									As
1	2-	1+	1+	2-	2-	3o	3-	6-	2133	2225	12	8	8	11	11	32	24	146		32
2	4o	5o	3+	3o	3-	1+	3-	3-	3223	4211	56	88	35	28	26	10	22	24		36
3	3+	3o	3+	4-	2-	1+	2+	2o	4543	3222	36	32	37	41	12	8	17	15		25
4	2+	2o	2+	4-	4+	4+	3o	5-	2325	2206	18	15	19	42	62	69	32	71		41
5	3+	2o	3o	3o	3+	3-	3o	1+	4132	3251	36	15	28	30	40	21	29	8		26
6	2-	1+	2o	2+	3-	3+	2+	3-	1311	2312	13	10	15	17	26	35	17	22		19
7	2o	2-	3-	3-	2o	3-	2o	3o	2333	1214	16	12	25	21	15	21	14	27		19
8	3-	2-	1+	2-	2-	2-	3-	4-	4212	2223	21	13	9	12	13	13	26	42		19
9	3-	3+	5+	6-	5+	4+	4-	4+	3413	1234	25	37	108	143	105	61	41	61		73
10	4-	3-	3o	3o	2o	3+	3o	3o	4232	2221	46	22	29	27	16	37	29	27		29
11	3o	3+	3o	4-	2+	3+	2+	2+	2432	1322	32	36	29	42	20	36	20	18		29
12	3-	3-	2o	3o	3+	3-	3o	4-	4212	1133	26	23	15	27	34	24	27	48		28
13	2o	2o	2o	4-	4-	3-	3-	3-	2022	4222	16	16	16	43	50	21	26	26		27
14	2o	2+	2o	3-	3o	3-	3-	2+	1222	2231	14	19	14	21	30	23	22	17		20
15	3-	1+	1+	2o	4-	4o	3+	4o	2220	3351	23	10	10	16	46	59	37	54		32
16	3o	2o	2-	1+	1o	2-	3-	3-	1023	0234	29	16	12	10	7	12	21	24		16
17	2o	2+	2-	1+	2-	1+	3-	2+	2222	2141	15	18	12	10	11	8	23	18		14
18	2o	1o	1o	1+	1-	2o	3+	1o	4202	2243	15	7	7	10	4	16	38	6		13
19	1o	2-	2o	3-	3o	1+	1+	1o	3422	2212	7	12	15	25	32	10	9	7		15
20	1-	1-	1o	1o	1o	0+	2-	2o	4112	1322	5	5	7	7	6	3	12	16		8
21	3+	3+	1+	1-	0+	0+	1o	2o	3430	2211	40	34	10	4	2	3	7	14		14
22	2-	2+	3+	4o	4+	3+	4-	3+	1113	1231	12	17	36	54	64	37	49	38		38
23	4-	4o	4o	3+	4-	5-	3o	3o	2441	2521	46	53	54	38	42	72	31	27		45
24	2+	2o	3-	3-	3-	3-	3+	2+	1212	2241	17	15	24	26	26	26	38	20		24
25	2+	2+	2+	4-	3+	2o	2+	3-	4132	1232	17	17	20	44	38	16	19	26		25
26	2+	3-	2-	3-	3-	1o	2o	2o	2222	2223	18	26	12	23	21	7	14	15		17
27	2o	2o	2-	1+	3-	2-	1-	1+	1421	2422	14	14	11	10	21	12	5	8		12
28	2-	2o	2o	3o	2-	1+	3-	2o	2141	2222	11	15	14	27	13	10	21	15		16
29	2-	1+	2o	2o	2+	2o	1o	0+	2212	3141	12	10	15	15	20	15	6	2		12
30	1-	1o	2o	3-	3+	4o	5-	2+	3222	2332	4	6	16	21	38	51	73	18		28
											Monthly mean value of As									25.1

an, as INDICES 1992 (continued)

December 1992																		
	Kn								σn		an								An
1	3+	2o	3+	4-	3o	4-	2+	3o	4323	1844	38	14	36	44	31	49	18	27	32
2	3-	2+	2-	2-	2+	2+	3-	1+	5233	3353	25	20	11	12	18	17	24	10	17
3	2+	3-	1+	3o	3-	4-	3o	3o	4321	2546	18	25	10	31	23	41	27	32	26
4	2+	3-	3-	2+	3o	3o	3o	3o	4232	2456	20	26	21	17	29	27	28	31	25
5	3o	2-	2+	1+	1+	2+	1-	0+	3263	3523	27	13	20	10	10	18	5	3	13
6	1o	0o	0+	1-	2+	3+	2+	1o	2111	3532	6	1	2	4	17	36	20	6	12
7	1-	1-	3-	3-	4o	2-	2+	4o	2323	1312	4	5	23	22	58	11	17	51	24
8	4-	3o	3-	4-	3+	3+	4-	4+	4123	2552	43	29	23	46	39	37	48	64	41
9	3o	2+	3-	3+	4+	4o	3-	3o	2233	6535	27	20	22	35	66	52	22	27	34
10	2-	2-	2o	3+	2o	5-	4-	3+	2212	2534	11	12	15	36	14	73	41	37	30
11	3-	2-	2-	2o	2+	2+	2+	2+	3122	2323	25	13	12	14	18	20	19	17	17
12	2o	1+	1-	1o	3+	2o	2+	2+	1211	4234	14	8	5	6	37	14	19	19	15
13	3-	3o	1+	2-	2o	2-	1+	1+	4521	1233	24	27	8	13	14	13	9	10	15
14	3-	2-	1-	1o	2-	3-	3o	3-	2221	2443	22	11	5	6	12	25	28	21	16
15	3+	2+	2o	3-	2+	3-	2+	3+	4214	2242	38	19	16	25	19	23	20	38	25
16	1o	2o	2-	2-	1+	1+	1-	1o	3431	3323	7	16	11	13	10	9	4	7	10
17	0+	1-	3o	3-	4-	6-	5o	3-	1313	4432	3	5	29	21	47	122	102	23	44
18	2+	1+	1o	2-	1+	3-	3o	3-	2221	1255	18	8	7	13	8	22	33	23	17
19	1+	1o	1+	2o	2+	2o	4-	3+	1212	1232	8	7	8	14	17	14	50	35	19
20	2-	2+	3o	3+	3o	3o	3o	2o	1235	5441	11	19	31	37	33	30	33	15	26
21	1-	2-	2+	3o	2+	4+	4o	3-	1233	3545	5	12	17	33	20	64	56	24	29
22	1+	1o	2-	3-	3-	3-	2+	1o	3133	3334	10	7	11	21	23	21	17	7	15
23	1+	2o	2o	3-	3o	2+	2o	1o	2433	3322	8	15	14	23	29	19	14	6	16
24	1-	2-	2-	3-	2o	2+	3+	1o	3333	1232	5	12	12	25	16	18	34	7	16
25	1-	0+	1o	1+	1+	2+	3-	2-	2133	2236	4	3	6	10	8	18	21	11	10
26	1+	1-	1+	1+	2-	1+	1+	1+	3231	3226	8	4	9	9	11	10	8	9	9
27	1-	0+	0+	0o	1-	1o	2+	4o	2112	2222	4	3	3	1	4	6	20	54	12
28	3-	1+	3o	2+	5-	5+	6-	5+	2242	3345	22	9	28	18	84	107	129	114	64
29	5-	5-	5-	4o	4+	5o	4-	3-	3574	5432	72	79	83	55	64	96	41	23	64
30	2+	2+	1+	3+	3o	2+	2-	1o	4523	4442	20	18	10	34	33	20	11	7	19
31	2o	2-	3-	3o	4-	3o	1+	1o	4354	3221	16	12	23	31	42	29	9	7	21
											Monthly mean value of An								23.6

December 1992																			
	Ks								σs		as								As
1	3o	3-	3-	4-	3o	3+	2o	3o	2322	2302	28	21	22	46	27	39	16	31	29
2	3o	3o	2-	2o	2-	2o	2+	2+	6321	2134	32	30	13	14	13	14	19	17	19
3	2o	3o	2+	3o	3o	3o	3o	3-	3653	3122	14	32	18	33	30	29	28	26	26
4	2-	3-	2+	3-	3o	3-	2+	3o	2522	1321	13	21	17	25	29	21	19	29	22
5	3-	2+	2-	1o	1+	2o	0+	0+	2420	4332	25	17	13	7	8	14	2	3	11
6	1+	1o	0+	1o	1+	3+	2o	1+	3421	2554	9	6	3	6	9	34	14	8	11
7	1+	2-	4-	3+	5o	2-	3o	5o	3651	2252	8	13	46	35	96	12	31	87	41
8	4o	4-	3o	3+	4o	4-	4-	4-	1201	0333	51	42	32	38	58	43	43	50	45
9	3o	3-	2+	3-	4+	4-	3-	3o	0332	2222	32	25	19	24	65	46	24	30	33
10	2-	2o	2+	4-	2-	4o	4-	3o	1333	2442	13	14	19	41	11	60	46	27	29
11	3-	2-	1+	2o	2+	2+	3-	2+	2220	2223	24	12	9	16	18	18	24	18	17
12	2+	2-	2-	1o	3o	2o	3-	3-	1340	3124	17	12	12	7	33	14	21	21	17
13	3-	2+	2-	2o	2-	2+	1+	2+	4121	2324	23	17	13	14	11	19	9	20	16
14	3o	2o	1+	1+	2-	3-	4-	3o	1134	2234	30	15	9	8	13	23	41	32	21
15	4-	2+	2o	3-	3-	2o	3o	3+	2102	2313	42	18	16	21	21	15	29	39	25
16	2-	2+	2+	2o	1o	0+	0+	2-	3332	1322	12	20	19	16	6	3	3	13	12
17	2-	2-	4+	4-	4o	5+	6-	4-	2212	2432	11	12	64	46	57	120	128	42	60
18	3-	2-	2-	2+	1+	2+	3+	2+	1431	3342	25	13	11	17	10	19	40	19	19
19	2o	2-	2-	2+	3-	2o	4+	4o	1233	2135	14	11	12	20	25	14	63	55	27
20	2o	3-	3-	3-	3-	3-	3-	3-	1223	3212	15	22	26	25	24	26	25	22	23
21	2o	2o	3o	3+	3-	4o	4-	3o	3211	5445	15	16	28	35	23	51	50	28	31
22	2o	2-	2o	2o	3o	2o	2-	1+	3201	1333	14	13	16	15	33	15	13	8	16
23	2o	2o	3-	3o	3o	2-	2o	1+	3221	0213	14	16	21	29	32	13	14	9	19
24	1+	2o	2o	3-	3-	2+	3-	2-	3022	3442	9	16	16	26	24	18	26	12	18
25	1o	1+	2-	2-	1o	2+	2+	2-	2123	1443	6	8	11	12	6	17	20	13	12
26	1+	1o	1o	1o	1+	1o	1-	1+	3332	2033	10	7	7	7	8	7	5	8	7
27	1-	0+	1+	1-	1-	0+	3+	5o	3313	2234	5	3	8	4	5	3	37	101	21
28	3o	2-	3-	3-	5-	5-	5o	6-	0232	2603	32	13	24	25	79	86	100	135	62
29	5-	4o	5-	4o	4+	5o	3+	3o	4454	4613	75	58	72	51	65	90	34	27	59
30	3-	2o	3-	3-	3o	2o	1+	2+	2322	2134	21	16	21	22	32	14	9	17	19
31	2+	2o	3-	3+	3+	3-	2o	2-	2225	1232	18	14	21	36	34	25	14	11	22
											Monthly mean value of As								25.5

am INDICES 1992

January 1992																				
	Km								Σ Km	am									Am	Am2
1	2+	2-	2+	2+	3-	4o	2+	4-	21.3	18	11	17	19	25	58	19	41		26	36
2	5o	4-	3o	5o	2+	3o	2+	1+	25.7	87	44	31	100	20	30	20	8		43	36
3	3-	2+	2+	3o	3+	3-	3+	4-	23.3	22	19	17	31	36	22	36	49		29	27
4	3o	4-	3+	3-	2+	2o	3o	3+	23.3	29	42	34	22	17	16	27	40		28	28
5	3o	3-	2-	2o	2+	3+	3o	2o	20.0	28	21	12	14	17	37	33	15		22	21
6	2+	2+	2+	1+	3+	3-	3o	3+	20.7	19	19	19	8	36	26	27	34		24	22
7	2o	2o	2-	2o	2o	3-	3o	2+	17.7	15	15	11	16	14	21	32	17		18	24
8	3-	2+	4-	3+	3+	3+	4-	2+	24.7	26	20	45	34	35	37	44	18		32	24
9	2o	2+	1+	1-	1+	2-	1+	3o	13.7	15	18	10	5	10	11	10	32		14	21
10	3-	2+	2o	3o	3-	3-	3-	3o	21.0	26	18	15	31	23	26	23	32		24	22
11	2+	3-	2o	4-	5-	4+	5-	3+	27.7	18	21	16	41	74	68	74	38		44	39
12	3+	3o	4-	4o	4-	3+	4-	3-	27.3	37	29	41	55	43	39	45	24		39	48
13	3+	4o	3+	5-	4-	4-	3o	3o	28.7	35	52	37	76	44	49	29	30		44	39
14	3o	2+	3+	3o	3+	4+	4-	4-	26.7	29	19	40	31	34	66	42	48		39	35
15	3-	2+	3o	3o	4o	2+	3+	2-	22.3	23	20	33	28	51	17	35	13		28	32
16	2-	3o	3o	3o	3o	3o	5o	4+	26.0	13	32	27	28	28	28	90	66		39	31
17	2+	2o	2o	2o	2o	2o	2+	2+	17.0	20	14	16	16	14	16	19	20		17	26
18	2o	2-	2+	2+	2-	1-	1-	1-	12.0	14	13	20	20	11	5	4	4		11	13
19	2-	2-	2+	2-	2-	2o	1+	1+	13.7	13	11	17	13	11	16	8	8		12	13
20	2-	3-	2+	3+	3o	3+	2+	2+	21.0	12	22	19	34	28	38	18	19		24	16
21	1+	1-	1o	1-	2+	2+	2o	3-	13.0	10	4	6	4	19	17	16	26		13	17
22	3-	1+	1+	2+	3-	2-	1o	0+	13.3	22	8	10	19	23	11	6	3		13	13
23	1o	1+	1+	1o	1+	1o	2-	1o	9.7	6	8	9	6	10	7	11	7		8	8
24	1o	0+	1+	2-	1-	1+	1o	2+	9.7	7	2	8	11	5	9	7	19		9	9
25	2+	1+	1-	1o	1+	1o	1-	1+	9.7	18	9	4	7	10	7	4	9		9	8
26	1-	0+	0+	1-	2o	3+	3-	3+	13.3	4	2	3	5	16	36	22	35		15	22
27	5-	4+	3-	3o	2o	2o	3o	4-	25.3	71	67	23	32	15	16	29	44		37	31
28	3o	3-	2+	2-	3o	3-	3o	2+	20.7	30	24	17	13	27	26	27	20		23	23
29	3o	3-	3-	2o	3-	2+	3+	3+	22.0	27	23	21	16	23	20	35	40		26	26
30	3+	3+	3-	3-	3-	3+	3+	3+	24.7	34	36	22	25	24	36	40	40		32	30
31	3o	2+	3+	3-	2+	3-	3o	2+	21.7	33	19	34	22	19	21	30	20		25	28
										Monthly mean value of Am									24.7	

February 1992																				
	Km								Σ Km	am									Am	Am2
1	2-	2+	3o	3+	5-	4+	4o	6-	29.0	13	19	32	38	74	65	58	129		54	49
2	5-	5-	3o	5o	5-	4-	6o	6-	37.3	71	78	30	93	75	50	155	135		86	100
3	6-	6o	6+	5+	5o	5-	5+	6o	44.3	123	154	195	112	93	80	116	160		129	100
4	3o	4+	3+	2+	3-	3-	5o	5-	28.0	31	62	37	18	25	25	100	81		47	56
5	3-	1o	2-	2+	2o	1+	1o	1+	13.3	24	7	12	18	15	8	6	10		13	24
6	1+	2-	2-	2-	3-	2o	2o	2+	15.3	8	12	12	13	23	16	14	18		15	17
7	3-	2+	3-	4o	4-	3o	2o	2o	22.3	22	19	23	56	50	31	14	15		29	28
8	3-	3+	4o	3o	6+	7o	4o	5-	35.0	23	36	54	30	197	283	51	85		95	93
9	6o	5o	6+	6o	6o	5+	5-	4+	43.7	166	103	176	166	148	120	82	70		129	112
10	3o	4+	3-	3o	5-	5-	3+	2+	28.0	33	65	21	31	75	80	36	19		45	52
11	2-	1+	2-	2o	2+	3-	2o	2+	16.0	13	10	11	14	19	21	16	17		15	25
12	3-	3-	2-	2+	3o	3-	1-	3-	18.3	22	23	13	18	28	25	5	23		20	20
13	3-	2+	3o	3-	2-	1-	1+	2-	16.0	22	18	27	26	11	5	8	11		16	17
14	1o	1+	2+	3-	2+	3o	2o	2+	17.0	7	9	17	22	20	33	15	20		18	13
15	1-	1o	1+	1o	2o	1o	0+	1o	8.3	5	7	9	7	14	7	3	6		7	11
16	1+	1o	1+	1-	1+	1o	1+	1+	9.3	8	7	8	5	8	7	9	8		8	14
17	2-	2+	3o	4+	5o	3-	2+	3-	24.0	13	18	31	69	94	22	17	23		36	26
18	3o	3o	2+	2+	2+	3o	2o	2+	20.3	30	28	20	20	18	33	15	19		23	26
19	3-	2+	3-	3-	2+	3-	2+	3-	20.3	21	18	22	23	19	22	20	24		21	36
20	5-	5-	4+	5o	6-	6-	6+	5-	41.0	75	74	70	96	125	137	184	86		106	104
21	6-	6o	7-	7-	5o	3-	3o	3-	38.3	132	162	235	203	96	23	29	22		113	103
22	4+	4-	4+	3+	3o	3-	3o	3o	27.3	63	48	69	37	28	22	33	31		41	36
23	3o	3-	2+	1+	2-	2o	3-	4o	19.7	27	24	18	9	11	16	25	57		23	26
24	2+	2+	3+	3o	3+	4o	5-	6-	28.7	18	18	39	33	35	54	72	128		50	59
25	6-	5+	5+	5-	4o	4-	4+	4+	37.3	133	106	112	79	59	45	62	68		83	68
26	3+	3o	3+	3o	4-	6o	7-	6-	34.7	38	30	37	33	47	153	240	142		90	90
27	6-	4o	5+	6o	5-	5o	5o	3+	39.0	137	60	120	171	72	95	97	36		99	90
28	3-	2-	2o	2o	2-	1-	2o	2+	15.0	21	12	15	14	13	5	14	19		14	34
29	2+	2o	2o	5-	5o	6o	5o	4-	30.7	19	15	14	81	98	157	91	41		65	44
										Monthly mean value of Am									51.4	

am INDICES 1992 (continued)

March 1992																				
	Km								Σ Km	am									Am	Am2
1	2+	3+	4-	3+	2o	2+	2+	3-	22.0	20	35	43	34	14	18	18	21	25	42
2	2-	2+	3-	3-	3-	2+	3o	2-	19.0	13	19	23	23	23	19	27	12	20	19
3	2o	3-	2-	2+	2+	3o	3-	2-	18.3	15	22	13	17	17	32	24	12	19	18
4	2-	1+	3-	2+	2+	4o	3o	2+	19.7	11	10	22	17	19	53	33	19	23	21
5	2o	2+	2+	2+	2-	3o	3-	3-	19.0	15	20	20	17	11	33	21	25	20	22
6	3o	1+	3o	1o	1+	1-	1+	2-	13.3	27	9	31	6	8	5	10	11	13	15
7	2-	1+	1+	2o	2o	3+	2+	3+	17.3	11	9	10	15	14	34	20	36	19	17
8	2+	3o	2+	2o	3o	2+	2o	2+	19.3	19	28	19	16	33	19	15	17	21	27
9	3o	3-	3-	5-	4-	4-	4+	2o	26.7	31	25	25	74	42	47	63	15	40	32
10	3o	3o	3-	3o	3-	3-	3+	3+	23.7	27	31	22	29	21	26	34	38	29	34
11	3o	3o	3o	4o	3+	3+	3o	2-	24.3	29	32	33	51	36	35	30	13	32	30
12	2o	3-	3+	3o	2+	2+	1+	1+	18.3	14	22	36	29	20	17	9	8	19	20
13	1o	2o	2+	2+	2-	1o	1-	0+	11.3	7	14	18	17	13	7	5	2	10	11
14	1o	1+	1+	1+	1-	1+	1+	1+	9.7	6	9	8	8	5	8	8	10	8	10
15	1+	1+	3-	3-	2o	2+	2+	2-	16.3	10	10	25	26	16	20	18	11	17	15
16	1+	1+	3-	3-	3+	3-	3+	3+	20.7	10	8	25	26	40	26	39	37	26	24
17	2o	2o	1+	4o	4o	4-	5-	4-	25.3	16	15	9	60	59	43	83	47	42	40
18	4+	3+	4-	2+	3o	2o	2-	2o	22.3	68	38	46	20	30	16	13	14	31	31
19	1o	0+	1-	0+	1-	2o	1o	1+	7.3	6	3	5	3	4	14	7	8	6	9
20	1o	1-	2-	1-	0+	1+	2-	1o	8.3	7	5	11	4	3	9	12	7	7	12
21	2-	2o	3o	4-	5-	4-	4-	4-	26.0	12	16	31	45	78	43	44	47	40	31
22	4+	3+	2+	2o	3-	2o	3+	3+	23.3	69	39	19	16	22	14	34	37	31	41
23	4o	4-	4-	3+	3+	2+	4o	4-	28.0	58	50	42	37	35	19	55	45	43	36
24	3o	4-	3-	3o	3-	4o	4-	4o	26.7	29	41	24	32	24	53	41	56	38	37
25	4-	3+	3-	3-	3o	2+	2+	1+	21.3	48	37	22	24	33	17	17	10	26	29
26	2-	3-	2-	3o	3-	2+	4-	3-	20.3	13	23	11	28	22	19	43	21	23	19
27	2+	2-	2-	1o	2o	2+	4-	3+	18.0	19	13	13	6	14	17	42	38	20	22
28	3-	2o	2+	3o	3-	2+	2o	3o	20.0	22	14	17	27	24	20	14	27	21	25
29	3o	3o	3o	3o	3-	4-	4-	3-	24.7	29	29	28	33	25	42	48	23	32	26
30	3-	3o	2-	2-	3-	2-	3o	3-	19.0	22	28	12	13	21	13	27	26	20	24
31	3+	2+	1o	2o	2o	3o	3o	3o	19.7	37	20	6	15	14	32	30	27	23	25
										Monthly mean value of Am									24.0	

April 1992																				
	Km								Σ Km	am									Am	Am2
1	2o	3+	4-	3+	2o	2-	2-	2+	20.0	15	34	42	34	16	12	11	18	23	20
2	1+	1+	2-	1o	1o	2+	3+	2-	13.7	8	9	12	7	6	18	34	11	13	19
3	1-	2o	4-	5-	5o	5o	3+	3-	27.0	5	14	44	72	89	96	36	26	48	34
4	2-	2o	2o	4-	3o	2+	3-	2o	19.3	13	14	15	43	32	17	22	14	21	31
5	2+	2-	2+	3+	3+	3-	2+	4-	21.7	17	12	19	36	34	21	18	49	26	30
6	3o	4+	5-	3o	2o	3-	2o	2-	23.3	27	63	77	27	16	21	15	13	32	33
7	2+	4-	4-	4-	3o	3-	2+	2-	23.0	17	41	47	41	28	26	20	12	29	26
8	3-	3-	3-	3+	4-	3-	4o	1+	23.0	26	26	23	36	43	21	55	10	30	23
9	2-	2-	1+	1+	2-	2-	1+	2+	13.0	11	12	8	10	13	13	9	17	12	16
10	2-	2-	1+	1o	1+	1+	1o	1-	10.0	12	11	9	6	9	8	6	5	8	9
11	1+	1o	0+	0+	1-	1-	0+	1-	5.3	10	6	2	2	5	5	3	5	5	6
12	0+	1+	1+	1+	1+	2-	1-	1o	9.0	3	10	9	8	10	12	5	7	8	9
13	1+	2-	2+	2o	2+	1o	2-	2-	14.0	8	12	20	14	20	6	11	12	13	11
14	1o	1+	1+	1o	1o	1+	3-	2+	12.0	7	10	10	6	6	10	21	18	11	13
15	3o	2o	2o	2+	2-	2o	2-	2o	16.7	27	16	15	20	12	14	11	14	16	14
16	2-	1+	1+	1o	2-	2-	1-	1-	10.0	12	8	8	6	13	13	4	5	9	8
17	1-	1-	0+	0+	1-	2+	1o	3-	8.7	4	5	3	3	5	18	6	22	8	12
18	2o	2o	3-	3o	4+	3-	2o	4-	22.3	14	16	22	31	67	23	14	47	29	25
19	3+	3-	3o	2+	3-	3-	4-	4-	24.0	40	25	33	19	22	21	45	45	31	33
20	3+	3o	3-	3-	3o	3o	2+	3o	23.0	38	32	25	26	30	31	20	28	29	28
21	3o	3o	2o	2-	2o	2o	1o	1o	15.7	27	32	14	13	15	16	6	7	16	21
22	3o	3-	3-	3o	2+	3-	3o	3o	22.3	27	24	21	27	18	21	30	33	25	18
23	2+	1o	1o	1-	2-	3o	2+	3o	15.0	19	6	7	4	12	27	17	32	16	21
24	4-	3o	2+	3-	2o	3+	2+	3-	22.0	43	27	18	23	15	34	20	22	25	23
25	3-	3-	3-	2o	2+	1+	1+	2+	17.3	21	25	24	15	19	10	8	20	18	18
26	2-	2-	2-	2+	1+	1o	3+	1+	14.3	12	11	13	17	9	6	39	10	15	13
27	2o	1o	2-	0+	2o	2o	2+	2-	13.0	15	6	12	3	15	14	19	13	12	15
28	2o	2-	3-	3o	3+	2-	2+	2-	18.3	16	13	21	29	34	11	17	12	19	17
29	2o	2+	2-	1o	1o	2-	2+	2o	14.0	14	19	13	7	7	13	18	16	13	17
30	3-	2+	3-	3o	3-	1+	1o	1+	17.0	25	17	21	29	25	10	7	10	18	17
										Monthly mean value of Am									19.3	

am INDICES 1992 (continued)

May 1992																				
	Km								Σ Km	am									Am	Am2
1	1+	2+	3o	2-	2-	3-	4o	3-	19.3	8	20	31	11	12	23	55	22	23	22
2	2+	4-	4-	1+	1+	2-	2-	1+	17.0	18	42	49	10	8	11	12	9	20	20
3	2-	2o	2-	2-	3-	2o	2+	2-	15.7	13	15	13	11	23	15	20	11	15	16
4	2+	3+	2o	3-	2+	3-	1+	2-	18.3	19	40	15	23	19	22	8	12	20	17
5	1+	2+	1o	1+	2o	1+	1+	1+	12.0	8	19	7	9	16	8	8	10	11	11
6	0+	0+	1+	1+	1+	1+	2-	2+	10.0	3	2	10	10	10	9	13	19	10	12
7	2o	3-	2+	2-	3o	3-	4-	3+	21.3	14	21	18	13	32	24	47	38	26	29
8	3-	3+	4o	5o	5-	4o	4+	3o	31.0	21	34	51	92	74	51	63	30	52	40
9	3+	2+	1+	3-	3+	4+	6-	5o	28.0	35	20	9	21	34	69	123	102	52	89
10	5o	5+	7-	8-	7+	7-	7-	7-	52.0	90	119	239	350	330	242	226	208	226	163
11	6o	5+	5+	5-	4+	4+	4o	3+	37.3	169	117	109	76	70	61	53	39	87	113
12	4-	3+	2-	2-	2+	2o	3-	2+	19.7	43	34	13	13	20	15	26	18	23	36
13	3-	4o	3+	4o	4+	2+	2+	3-	25.7	26	52	34	56	66	17	17	23	36	25
14	2-	1+	0+	1o	1o	0+	1-	1-	7.0	11	10	3	7	6	3	4	5	6	13
15	1-	1o	1o	2-	1o	2-	1o	1-	8.7	5	7	6	13	7	13	7	4	8	6
16	1-	1-	1-	1+	1+	1o	1o	1-	7.3	5	5	4	9	9	7	7	4	6	6
17	1-	1-	1o	1o	0+	1-	1o	1+	6.7	4	4	6	6	3	4	7	10	6	7
18	2+	1+	1+	1+	2-	2o	3+	5-	18.0	17	10	9	8	13	14	37	77	23	19
19	4o	3o	1+	1+	2-	3o	3-	2+	19.3	54	28	8	10	13	28	24	17	23	24
20	3o	1+	1o	1+	2+	2-	2o	3-	15.3	28	10	7	9	20	13	14	24	16	16
21	2o	1o	2-	2+	1+	2-	3-	3o	15.7	15	6	12	18	8	11	21	28	15	25
22	2o	4o	5-	5-	5+	5o	5-	3o	33.3	14	53	74	71	109	92	72	29	64	40
23	2-	2+	3-	1+	2o	3+	4+	2+	20.0	13	19	22	10	16	34	69	19	25	37
24	3o	3o	2+	1+	1o	1+	1-	2o	14.7	31	27	17	9	6	10	5	14	15	21
25	2o	2+	3-	2o	3-	3-	3-	2-	18.7	15	18	25	16	21	24	22	12	19	14
26	1o	1-	1+	2-	2o	1+	2+	3o	13.3	6	4	9	13	16	9	17	27	13	16
27	2+	2o	3-	3-	3-	3-	2-	1+	18.0	17	14	25	23	26	22	13	10	19	19
28	2o	2-	3+	3o	3-	2+	2o	3-	19.7	14	12	34	31	23	17	14	23	21	22
29	2+	3-	4-	2+	3+	3+	3o	3-	23.3	18	26	46	18	38	39	30	24	30	26
30	2+	3-	3o	3-	3o	3-	3-	2o	21.0	19	24	30	22	30	26	21	16	24	25
31	3-	3o	2o	1o	1o	2+	2-	1+	15.0	26	29	15	7	6	19	12	8	15	19
										Monthly mean value of Am								30.6	

June 1992																				
	Km								Σ Km	am									Am	Am2
1	3-	3-	3-	2-	2+	1+	1-	1-	14.7	24	23	26	13	18	9	5	5	15	13
2	1+	1-	1+	2-	1-	2-	1+	2o	10.7	8	5	10	11	5	12	10	15	10	9
3	1+	1+	1+	1+	2-	2+	1+	1-	11.3	9	9	9	9	12	19	9	4	10	9
4	1-	0+	0+	1o	1o	1o	2-	2-	7.7	5	3	3	7	7	7	12	11	7	9
5	1+	1o	1+	2o	3-	2+	1+	1o	13.0	9	6	8	16	22	17	9	6	12	10
6	0+	0+	1+	2-	2-	1+	1+	1-	8.7	3	2	8	13	13	10	9	4	8	10
7	1-	1+	2o	2o	1+	2-	3+	4o	16.3	5	9	14	14	9	13	35	58	20	30
8	5o	4o	5-	4o	4o	5o	4-	4+	34.7	96	54	76	55	56	93	47	69	68	51
9	4o	2+	4-	4-	2+	2-	2+	3-	22.7	52	19	44	42	20	12	18	21	29	42
10	1+	4-	4+	4+	3+	3-	2+	2o	24.0	10	49	63	62	37	23	20	14	35	29
11	3-	3+	2o	3o	3-	3-	4+	5o	25.7	26	40	14	30	21	26	70	88	39	38
12	5-	3-	4o	3o	5o	5-	3-	3-	29.3	84	24	56	33	101	80	24	23	53	44
13	2+	3+	2+	2-	3-	2o	3+	3-	20.3	18	34	18	11	23	15	35	23	22	29
14	2o	1o	2o	2o	2-	2-	1+	2o	13.7	15	7	14	15	12	12	9	14	12	16
15	3-	2o	2-	1o	3-	3-	2+	2-	16.7	24	16	13	7	24	23	18	12	17	14
16	1+	2o	1+	1+	1+	1o	1-	1-	9.7	9	14	10	8	8	6	5	4	8	11
17	1-	1+	1+	1o	1+	2+	1+	1o	10.3	5	8	10	7	10	17	8	7	9	9
18	1+	1+	2-	2-	3+	3+	5+	5-	22.7	9	8	12	12	39	34	108	81	38	26
19	3o	2o	2-	2o	2-	3-	3+	2-	18.0	28	14	13	14	12	21	37	11	19	29
20	1+	3-	1+	1+	3o	2o	1o	2o	14.7	8	22	10	9	29	14	6	16	14	17
21	4-	1+	1+	1-	1o	2+	2-	2+	14.3	47	10	9	5	7	19	11	18	16	18
22	3o	3+	1+	2+	3-	1+	1-	2-	16.3	33	34	10	18	21	10	5	13	18	17
23	3-	3+	2-	1+	2-	2o	3-	3-	18.0	22	34	13	10	13	16	26	25	20	22
24	3-	4o	3+	3o	3-	3o	3o	3-	24.3	25	54	40	29	26	33	30	24	33	28
25	3+	3-	3-	3-	3-	3o	2+	2o	21.3	40	23	22	23	24	30	20	16	25	24
26	2-	2-	3o	2-	2-	2o	2-	3-	16.0	12	13	32	13	13	14	11	21	16	18
27	2o	1+	2-	3o	2+	2o	3o	3o	18.3	15	9	13	30	18	15	29	30	20	22
28	2o	3o	4-	3+	3o	2+	2-	3-	21.7	15	27	49	40	27	19	12	25	27	32
29	4-	5o	4-	3o	4-	4o	5-	4+	32.0	42	88	46	30	47	54	84	66	57	52
30	5-	5o	5-	3o	3-	2+	1+	3o	26.7	86	103	74	30	21	20	10	27	46	45
										Monthly mean value of Am								24.1	

am INDICES 1992 (continued)

July 1992																				
	Km								Σ Km	am									Am	Am2
1	3o	3o	3-	2o	3o	3o	4-	3+	23.7	28	30	23	14	33	30	46	39		30	31
2	3-	4+	4o	3o	2+	2o	1o	2+	21.7	26	65	53	30	17	16	6	19		29	26
3	2-	1+	2-	1o	1+	1o	1o	1o	10.0	13	10	13	7	10	7	7	7		9	10
4	1-	1+	1+	1o	1o	1+	1+	1+	9.3	4	9	8	6	6	10	8	10		8	11
5	2o	3o	2-	3-	2+	1+	2-	2+	17.0	14	30	13	22	19	9	11	17		17	13
6	2-	2-	1+	2-	2-	1+	1o	1-	11.0	11	12	9	11	12	10	6	5		10	9
7	1-	1-	1-	1-	1+	2-	1+	1o	8.0	4	4	4	5	9	11	8	6		6	7
8	1o	1o	1-	1o	2o	2-	1+	1o	9.7	6	7	5	7	14	13	10	7		9	8
9	1+	2-	1o	1o	1o	1+	1-	1+	9.3	9	11	6	6	6	8	5	8		7	9
10	1o	2o	2o	1-	1o	1o	2o	1-	10.3	6	16	14	4	7	7	15	4		9	8
11	1+	1-	1o	1o	1-	1-	1-	1-	6.7	8	5	7	6	5	4	4	5		6	11
12	3-	2+	3-	3o	3+	3-	2+	3-	21.7	21	20	22	28	36	25	20	21		24	22
13	2o	3+	4-	4-	3+	3o	3o	4o	26.0	16	34	48	41	35	33	31	59		37	33
14	4-	3o	3-	3o	2+	2-	3-	1+	20.3	44	29	24	30	17	12	24	10		24	26
15	3-	2+	2-	1+	1+	1+	1o	1-	12.3	24	19	12	10	8	8	7	5		12	15
16	1o	1o	2-	4o	3o	3-	3o	2+	18.7	6	7	12	51	32	23	33	18		23	15
17	3-	1o	0+	1o	2o	2o	1o	0+	10.3	22	6	3	6	16	16	6	3		10	14
18	1+	2-	1o	1o	1o	1+	1o	1o	9.3	8	13	7	7	7	10	6	7		8	8
19	1+	1-	1o	1-	0+	1o	1+	1+	7.7	10	4	6	4	3	7	10	9		7	7
20	1+	2-	0+	1+	3o	3-	3-	2+	15.3	10	11	3	8	29	22	21	17		15	12
21	1-	1+	2o	2o	4-	4-	3o	2-	18.0	5	9	14	14	42	45	32	12		22	28
22	2o	3-	4o	5o	5-	3o	4o	3o	28.3	16	25	59	92	77	31	58	30		49	41
23	3+	4-	3o	3o	2+	2o	3o	3-	23.0	35	44	30	30	18	16	28	23		28	30
24	2+	2-	1+	3-	3-	2+	1+	1+	15.7	18	12	8	21	22	20	10	10		15	16
25	2-	1o	2-	2o	3-	3+	3o	1+	16.7	11	6	11	16	26	39	27	10		18	15
26	1+	1o	1-	1+	1+	1+	1+	1-	9.0	9	6	4	9	8	8	8	5		7	12
27	1-	1-	1+	2-	1-	1+	2-	3o	11.0	5	4	9	13	5	9	13	29		11	17
28	3+	4+	3+	2o	2+	2+	2-	2+	21.7	39	64	39	16	18	20	12	19		28	20
29	1+	1+	1+	1o	1o	1+	1o	1+	9.7	8	10	9	7	7	8	7	9		8	12
30	2+	1o	2-	2+	2+	2+	3-	3-	17.3	19	7	13	17	17	20	22	22		17	14
31	2+	2-	2o	2+	2-	3-	2+	4-	18.7	17	11	14	19	12	25	17	46		20	20
										Monthly mean value of Am									16.9	

August 1992																				
	Km								Σ Km	am									Am	Am2
1	3o	3o	1+	2o	2o	2o	1+	2-	16.3	29	27	10	14	16	15	9	12		17	16
2	1+	1o	1-	1o	1o	1+	2o	1+	9.7	8	7	5	7	7	10	15	10		9	9
3	1-	1-	1o	1o	2-	2-	1+	1o	9.0	4	5	7	6	11	11	8	6		7	10
4	3-	2o	1o	2-	3+	4-	4o	3+	21.7	21	14	6	11	36	48	58	38		29	38
5	5+	5-	5o	4o	4-	2+	3-	3-	30.3	108	84	89	55	45	20	23	25		56	48
6	1+	4-	3o	4-	3+	3+	2+	2+	23.0	8	50	32	49	39	36	19	17		31	35
7	3o	3-	4-	5-	4+	3+	3-	2o	26.3	33	25	50	84	68	37	26	16		42	38
8	2+	3+	4-	4-	3-	3o	3+	3-	24.7	19	39	46	46	23	28	35	21		32	31
9	3o	2-	2+	3o	3-	3-	3-	1+	19.3	30	11	19	33	23	21	23	9		21	21
10	3-	2-	2-	2+	3-	2-	2+	2-	16.7	21	12	11	19	22	13	17	12		16	18
11	2+	2o	3o	3-	2o	3o	3-	3+	21.0	17	16	31	23	15	31	21	35		24	21
12	2+	3-	3-	2+	2+	1+	1-	1-	15.0	18	24	23	19	19	9	4	4		15	16
13	1-	1-	1+	2-	3o	4-	2+	3o	16.3	4	5	9	13	33	49	17	28		20	17
14	3o	3-	2-	2+	4-	4o	2-	1-	19.7	30	23	12	20	44	56	13	5		25	24
15	2-	2-	3o	1+	1o	1+	3o	3-	15.7	12	11	28	9	7	9	28	21		16	20
16	2-	2+	3o	3-	2+	2-	1+	2-	16.7	11	18	32	22	17	12	9	12		17	14
17	1+	1+	0+	1-	1o	1o	1+	1+	8.3	10	10	3	4	6	6	8	8		7	9
18	1+	2-	2-	2-	2-	2+	2-	1+	13.3	9	12	11	13	12	17	13	10		12	10
19	1-	1+	2-	1o	2+	3-	3-	3-	15.0	5	8	11	6	17	26	25	24		15	25
20	3+	5o	4-	4o	4-	2o	2-	1+	24.7	35	93	48	53	45	16	11	9		39	29
21	2-	2+	1o	3-	3+	5-	5-	1+	21.7	12	17	7	25	37	81	72	10		33	27
22	1+	2+	3o	3o	5-	5-	5o	6-	29.7	9	18	29	27	76	79	87	132		57	79
23	7-	7-	6o	3o	4-	2+	4-	3+	35.3	218	210	151	28	43	19	42	36		93	74
24	2o	2o	2o	2+	1o	2+	3-	3o	17.3	14	15	14	18	7	18	26	30		18	20
25	2-	1+	1-	1o	2o	1+	1+	2-	11.0	11	10	5	7	16	8	10	12		10	17
26	3+	2+	4-	2+	3-	2o	2o	2o	20.3	35	17	45	19	25	15	15	16		23	19
27	2o	2o	2o	3o	4-	3-	3o	2o	20.3	14	14	16	30	49	24	32	16		24	19
28	2o	2+	1o	1-	1o	1+	1+	2-	11.3	14	17	7	5	6	8	10	12		10	21
29	4-	4-	2+	3-	2o	1o	2-	2o	19.0	49	41	20	24	14	6	12	16		23	16
30	1o	1o	1+	1+	3+	1o	2+	1+	12.7	7	6	9	10	40	7	17	8		13	11
31	1-	2+	1-	1o	1o	1+	1+	1-	9.0	4	17	4	6	6	10	9	5		8	9
										Monthly mean value of Am									24.6	

am INDICES 1992 (continued)

September 1992																				
	Km								Σ Km	am									Am	Am2
1	1-	0+	0+	0+	1-	1-	0+	0+	3.7	5	3	3	2	4	5	3	2		3	8
2	1+	2-	2o	3+	4-	4+	4-	4-	23.7	9	12	14	39	47	70	42	44		35	36
3	3o	4o	5+	5o	5-	5-	5-	4o	35.3	32	54	107	95	74	86	80	55		73	64
4	4-	4-	5-	5-	4-	3-	3o	5+	31.3	47	45	73	71	44	25	28	107		55	59
5	4+	4o	4-	4-	3o	2+	3+	3-	27.0	65	53	49	43	28	19	37	26		40	40
6	3o	3o	3+	2o	2+	3o	4-	3+	23.7	29	29	34	16	19	28	44	37		30	30
7	3o	3o	3o	4o	4-	3+	3+	3-	26.0	27	29	30	55	48	36	38	21		36	35
8	3+	3o	4o	3-	3+	3-	3o	2o	24.0	35	31	55	24	36	22	28	15		31	56
9	5-	5+	5o	7-	6+	5-	5o	4-	41.3	76	110	100	218	186	77	94	50		114	91
10	5o	5+	6-	5+	5-	6-	6o	5+	43.0	93	108	129	120	81	130	153	106		115	98
11	5+	4o	4-	3o	3-	4+	3o	2+	28.3	116	55	49	28	23	67	31	19		49	56
12	3-	2-	1o	1-	1-	1o	1+	1+	10.3	21	12	7	4	4	6	10	9		9	16
13	1+	1+	1+	1o	1-	1o	2-	2-	10.0	10	9	10	6	5	6	11	12		9	9
14	1+	2o	2-	2o	1+	2-	3-	2+	15.0	8	15	13	15	9	13	21	19		14	14
15	3-	3-	3-	2o	2-	2+	2o	1+	17.3	22	21	22	15	13	20	16	8		17	16
16	1+	2-	3o	2-	2+	3-	4-	3-	19.0	9	12	27	13	19	21	42	23		21	44
17	5o	5+	6-	6-	5-	5-	6+	6-	43.0	87	105	140	144	71	79	177	124		116	78
18	4-	4+	4-	4+	4-	2+	3+	3+	28.7	48	61	41	61	50	20	36	39		45	56
19	3o	3-	2-	3o	3-	2+	3o	1+	19.7	32	21	11	32	22	17	30	9		22	23
20	1+	2o	2+	2-	2o	1+	2+	3-	15.7	10	14	19	13	14	10	17	21		15	14
21	1o	1o	2-	1o	1-	1+	2-	4-	12.0	7	7	11	6	4	9	12	45		13	19
22	4o	4o	2o	2-	1+	1+	3-	3-	19.7	53	55	15	12	10	9	24	26		26	22
23	2+	3-	2+	2o	1+	1o	2-	1+	14.7	19	22	20	14	9	7	12	9		14	12
24	0+	0+	0+	1-	0+	1-	1+	2o	6.0	3	3	2	5	3	4	8	14		5	9
25	2+	1o	2-	3-	3-	2o	3o	3-	18.0	17	7	12	24	21	14	31	23		19	15
26	3o	2o	1o	1-	1o	3+	2-	0+	13.0	29	15	7	5	7	37	11	2		14	14
27	0+	1o	1+	1+	2o	1-	1o	1o	8.7	3	6	9	8	14	5	7	6		7	10
28	1-	1o	2-	2o	3+	3+	4o	4+	20.3	4	7	13	15	40	36	52	64		29	41
29	4-	5+	6-	5o	6-	5-	4o	4o	38.0	46	113	125	102	129	78	58	54		88	66
30	4o	3+	4-	3o	4-	5-	4o	4-	30.0	57	38	43	28	48	86	59	46		51	57
										Monthly mean value of Am									37.2	

October 1992																				
	Km								Σ Km	am									Am	Am2
1	4-	4+	3+	3+	3o	3+	4-	2o	26.7	48	64	38	34	32	37	47	14		39	39
2	3o	2-	2-	2+	2o	2+	2-	2-	16.3	28	13	13	17	14	19	13	12		16	18
3	1-	1o	1+	2-	2-	1+	2+	1+	11.3	4	7	10	12	11	10	17	9		10	13
4	2+	3-	2o	1+	1+	0+	1-	1o	11.7	17	26	15	8	9	3	4	7		11	10
5	1o	1+	1o	1-	1o	2o	2-	2-	10.3	6	9	6	5	7	16	13	13		9	11
6	3o	3-	1+	2o	2+	3-	1+	1o	16.3	31	23	10	14	20	22	10	7		17	16
7	1+	2+	2o	3-	2o	2-	2+	1+	15.7	9	17	15	24	16	11	17	10		15	14
8	3-	2-	1-	0+	0+	1+	3o	3-	12.7	25	12	5	3	3	10	33	25		15	20
9	3-	2+	3-	5-	4o	5o	4+	3+	29.0	25	19	26	86	52	89	61	35		49	34
10	1+	2-	3-	3o	3-	1+	2-	3-	17.0	8	11	24	32	24	10	11	25		18	29
11	2o	2-	1+	4-	4+	4o	5-	3+	25.0	15	11	9	41	68	58	72	38		39	36
12	2+	3o	4o	5-	6-	4+	3-	2o	28.7	20	33	57	83	129	67	24	15		54	46
13	3o	2o	2-	1+	3o	4+	5o	3+	23.7	31	16	13	9	30	68	88	40		37	40
14	3o	3o	3-	3-	3-	2o	4o	5o	25.0	31	29	23	23	21	16	52	91		36	47
15	5-	4o	3+	4+	4o	3+	4-	4o	31.3	83	53	37	61	51	40	47	59		54	50
16	5-	4-	3o	3o	3-	3o	2o	3+	25.3	81	46	30	31	26	33	16	37		38	37
17	2+	3-	3-	3o	3o	3+	3o	2o	22.0	19	21	22	29	30	35	28	16		25	22
18	2+	1o	1+	1o	3+	2+	2+	3+	17.0	17	7	9	6	35	20	20	37		19	22
19	4-	2o	2-	3-	4-	4-	3-	3-	22.7	43	16	13	22	50	46	26	24		30	29
20	4-	3+	2-	2-	2-	1+	1+	1+	16.0	44	37	12	12	13	9	9	10		18	21
21	1+	1+	1+	1+	1+	2o	2-	2+	12.7	9	9	9	9	10	14	12	19		11	11
22	2+	2-	1-	1+	3o	3o	2-	2-	15.3	20	11	5	9	29	32	12	12		16	14
23	2-	1+	1+	1+	1+	1o	1o	1+	10.3	11	8	10	8	8	6	6	8		8	10
24	1+	1-	0+	0o	0+	1+	0+	2-	6.0	9	4	2	1	2	8	2	11		5	8
25	3o	1+	1+	2o	2o	1+	2o	2-	14.7	28	9	8	15	14	10	14	13		14	14
26	3o	3-	3-	2+	2-	2+	4-	3+	21.7	31	22	24	20	13	20	41	35		26	28
27	4+	4-	3o	4o	4+	5o	3+	2+	30.0	64	45	33	51	64	92	34	20		50	40
28	3+	2+	3-	4o	3o	3+	3o	3o	24.7	39	17	26	53	28	38	27	28		32	39
29	3o	3o	4-	4-	3o	4-	4o	3+	27.3	31	29	48	42	32	49	59	37		41	34
30	2o	2+	3-	3+	3+	3+	2+	3o	22.3	16	20	25	38	39	40	20	28		28	30
31	2o	2-	3o	3-	3o	2+	2-	1+	17.7	14	11	29	26	33	20	12	8		19	20
										Monthly mean value of Am									25.8	

am INDICES 1992 (continued)

November 1992																				
	Km								Σ Km	am									Am	Am2
1	1+	1o	1+	1+	2-	3o	3-	6-	18.0	10	7	8	10	12	32	23	136		30	32
2	4-	5-	3+	3o	3o	1+	3o	3-	24.7	50	74	37	32	27	10	27	23		35	40
3	3+	3o	4-	4-	2-	1+	2+	2+	21.3	37	30	45	44	13	8	18	20		27	25
4	2o	2o	3-	4-	4+	5-	3o	4o	26.3	16	14	22	45	70	73	30	60		41	31
5	3+	2o	3o	3o	3+	3-	3-	2-	21.7	36	14	28	33	35	22	25	11		26	31
6	2-	1+	2+	2+	3+	4-	2+	3-	19.7	13	10	18	17	34	48	20	22		23	22
7	2+	2-	3o	3-	2o	3o	2o	3o	19.7	17	11	27	24	15	28	14	28		21	22
8	3-	2-	2-	1+	2o	2+	3-	3+	17.7	23	13	12	10	15	18	24	37		19	33
9	3-	3o	5o	6-	5o	4+	3+	4o	33.0	21	33	100	132	93	64	38	56		67	46
10	3+	2+	3-	3-	2+	3+	3o	3-	22.3	38	19	23	24	17	35	28	25		26	38
11	3o	3+	3o	4-	3o	3+	2+	2+	24.0	31	37	33	46	27	36	19	17		31	28
12	3-	3-	2o	3o	3+	3-	3-	4-	22.7	22	25	15	28	36	22	26	47		28	26
13	2o	2o	2o	4-	4o	3-	3-	3-	21.7	16	16	16	49	60	24	26	23		29	27
14	2o	2o	2o	3-	3o	3-	3-	2+	19.3	15	16	15	22	32	24	23	18		21	22
15	2+	2-	1+	2o	4-	4o	3+	4o	22.3	20	12	10	16	50	58	36	54		32	26
16	3o	2o	2-	2-	1o	2-	3-	3-	16.3	29	14	12	11	7	12	23	25		17	24
17	2o	3-	2-	2-	2-	1+	3-	2o	15.7	15	21	12	11	13	8	23	16		15	14
18	2o	1-	1o	1+	1-	2+	3+	1-	12.0	16	5	6	9	5	19	35	5		13	13
19	1o	2-	2-	3-	3o	1+	1+	1o	13.7	7	11	13	22	29	10	9	6		13	12
20	1o	1-	1o	1o	1o	1-	2-	2o	9.0	6	4	6	7	6	4	11	15		7	12
21	4-	3o	1+	0+	0+	0+	1o	1+	11.3	41	27	9	3	3	3	6	10		13	15
22	1+	2o	3-	4-	4o	4-	4-	3+	24.3	9	14	26	47	56	43	45	39		35	32
23	4o	4+	4o	3+	4-	5-	3o	3o	30.0	52	61	52	39	43	78	33	29		48	40
24	2o	2-	3-	3-	3o	3o	4-	3-	21.3	14	12	22	24	29	29	41	21		24	29
25	2+	2o	2+	4-	4-	2+	2+	3-	21.3	18	14	17	46	44	18	20	26		25	25
26	2+	3o	1+	3-	2+	1+	2o	2-	16.7	17	30	10	25	20	8	14	12		17	18
27	2-	2-	1+	1+	2+	2-	1-	1+	12.0	11	12	10	9	20	12	5	8		11	13
28	1+	2-	2-	3-	2-	2-	2+	2o	15.0	9	12	13	25	11	12	18	16		15	13
29	1+	1o	2-	2-	3-	2o	1+	0+	12.0	9	7	13	13	22	14	10	2		11	12
30	0+	1-	2o	2+	3+	4-	4+	2+	19.0	3	4	14	19	36	50	70	19		27	24
										Monthly mean value of Am									24.9	

December 1992																				
	Km								Σ Km	am									Am	Am2
1	3o	2+	3o	4-	3o	4-	2+	3o	24.0	33	17	29	45	29	44	17	29		30	31
2	3o	3-	2-	2-	2o	2o	3-	2o	17.7	28	25	12	13	15	15	22	14		18	22
3	2o	3o	2o	3o	3-	3+	3o	3o	22.0	16	28	14	32	26	35	28	29		26	22
4	2+	3-	2+	3-	3o	3-	3-	3o	21.3	17	23	19	21	29	24	24	30		23	23
5	3-	2o	2+	1+	1+	2o	0+	0+	12.3	26	15	17	8	9	16	3	3		12	14
6	1+	1-	0+	1-	2-	3+	2+	1o	11.3	8	4	2	5	13	35	17	7		11	12
7	1o	1+	3+	3o	5-	2-	3-	4+	22.0	6	9	34	28	77	11	24	69		32	30
8	4-	3+	3o	4-	4-	3+	4-	4o	28.3	47	36	27	42	48	40	46	57		43	39
9	3o	3-	2+	3o	4+	4-	3-	3o	24.7	29	22	20	29	66	49	23	28		33	34
10	2-	2-	2+	3+	2-	4+	4-	3o	21.7	12	13	17	38	12	67	43	32		29	29
11	3-	2-	2-	2o	2+	2+	3-	2+	17.7	24	12	11	15	18	19	21	17		17	21
12	2o	1+	1+	1o	3+	2o	2+	2+	15.7	15	10	8	7	35	14	20	20		16	17
13	3-	3-	1+	2o	2-	2o	1+	2o	15.7	23	22	10	14	12	16	9	15		15	16
14	3-	2-	1o	1o	2-	3-	3+	3-	16.7	26	13	7	7	12	24	35	26		19	19
15	3+	2+	2o	3-	2+	2+	3-	3+	21.0	40	18	16	23	20	19	25	38		25	22
16	1+	2+	2o	2o	1+	1o	0+	1+	11.7	10	18	15	15	8	6	3	10		11	18
17	1o	1+	4-	3+	4o	6-	5+	3o	27.3	7	8	47	34	52	121	115	33		52	31
18	3-	1+	1+	2o	1+	2+	3+	3-	17.0	22	10	9	15	9	20	37	21		18	32
19	2-	1+	1+	2+	3-	2o	4o	4-	19.0	11	9	10	17	21	14	56	45		23	23
20	2-	2+	3o	3o	3o	3o	3o	2+	21.3	13	20	29	31	29	28	29	19		25	26
21	1+	2o	3-	3+	3-	4o	4o	3-	22.7	10	14	22	34	22	58	53	26		30	25
22	2-	1+	2-	2+	3o	2+	2o	1+	15.7	12	10	13	18	28	18	15	8		15	22
23	2-	2o	2+	3-	3o	2o	2o	1o	16.7	11	16	17	26	30	16	14	7		17	17
24	1o	2o	2o	3-	2+	2+	3o	1+	16.7	7	14	14	25	20	18	30	10		17	15
25	1-	1-	1+	2-	1o	2+	2+	2-	11.7	5	5	8	11	7	18	20	12		11	12
26	1+	1o	1+	1+	1+	1+	1o	1+	10.0	9	6	8	8	9	9	6	8		8	9
27	1-	0+	1o	0+	1-	1-	3o	5-	11.3	4	3	6	3	4	4	28	78		16	16
28	3o	2-	3-	3-	5-	5o	5+	6-	30.7	27	11	26	22	82	97	114	125		63	56
29	5-	4+	5-	4o	4+	5o	3+	3-	33.0	74	68	77	53	65	93	37	25		62	62
30	3-	2+	2o	3o	3o	2+	1+	2-	18.3	21	17	16	28	33	17	10	12		19	29
31	2+	2-	3-	3o	3+	3o	2-	1+	19.0	17	13	22	33	38	27	11	9		21	22
										Monthly mean value of Am									24.4	

MONTHLY and YEARLY am 1959 - 1992

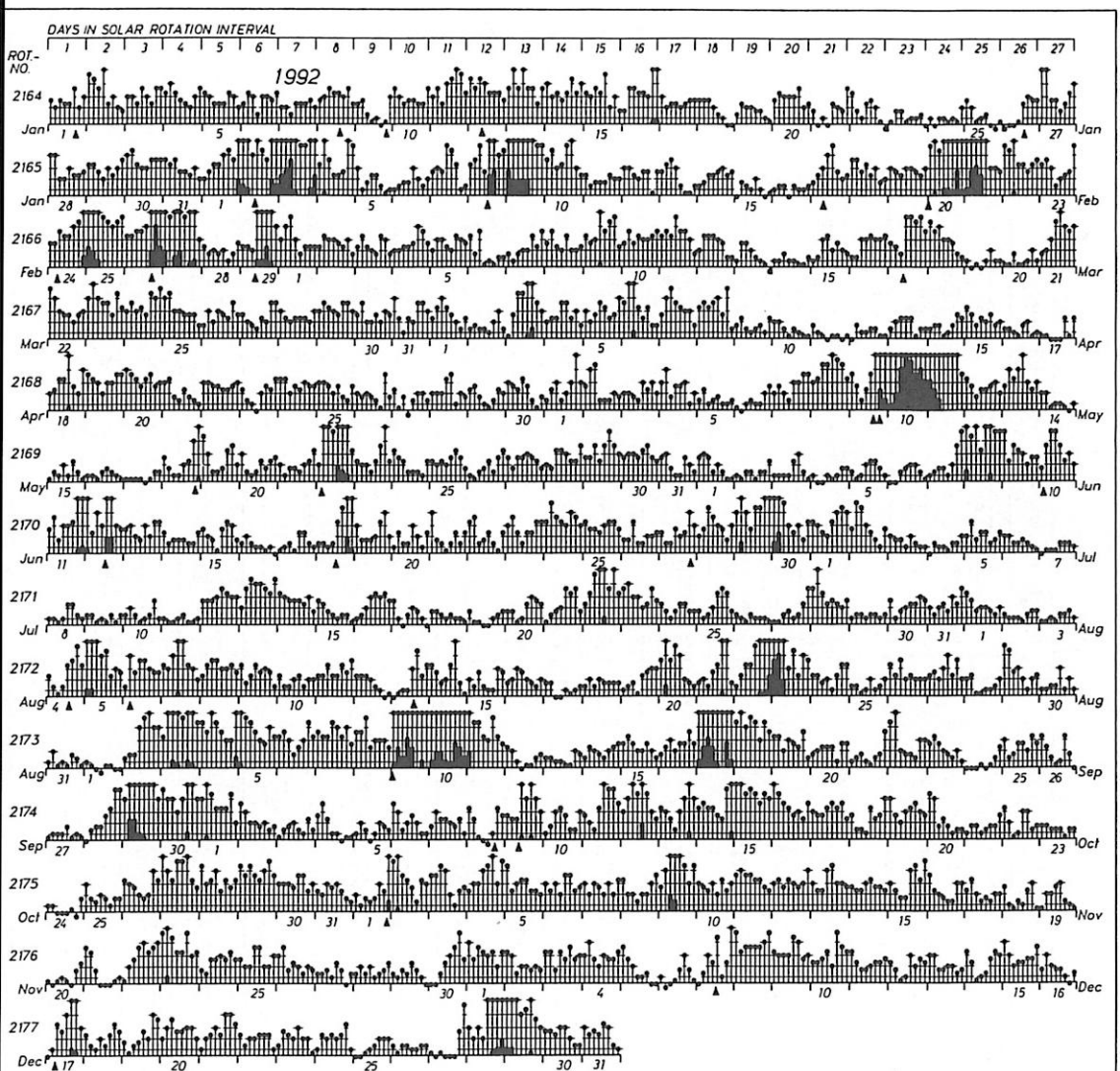
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1959	25.5	35.8	30.2	24.2	25.6	22.8	42.2	31.6	37.0	28.3	33.0	31.7	30.6
1960	25.7	23.5	27.3	53.5	31.5	27.4	27.4	27.9	27.1	45.0	44.5	32.2	32.7
1961	19.5	24.1	21.3	20.7	21.1	20.3	34.4	17.8	19.4	22.0	15.7	19.6	21.3
1962	13.0	18.4	14.0	21.6	12.8	17.1	19.9	24.9	27.8	29.9	20.4	21.1	20.1
1963	17.3	13.9	13.2	15.4	17.9	17.9	19.5	21.2	38.0	22.2	19.0	16.9	19.4
1964	17.9	17.5	19.0	19.7	15.9	13.7	15.4	13.3	16.2	15.0	12.5	9.3	15.4
1965	10.9	14.7	13.2	11.5	9.8	14.9	13.6	14.8	16.2	11.8	10.9	12.3	12.9
1966	12.8	13.2	17.8	11.1	14.0	11.6	15.4	18.2	28.2	16.2	15.4	18.5	16.1
1967	17.7	18.4	12.0	14.0	32.8	17.8	12.8	15.3	24.0	16.8	17.4	23.2	18.5
1968	19.3	25.1	21.9	20.2	21.5	24.3	16.4	18.5	21.1	24.1	25.1	17.7	21.2
1969	15.3	23.5	26.1	22.4	23.6	15.7	12.4	13.5	21.7	14.5	16.9	11.9	18.1
1970	12.5	11.2	24.9	21.0	14.1	16.2	25.5	18.5	17.6	19.2	19.9	14.9	18.0
1971	21.0	19.0	18.4	23.2	20.3	15.8	13.8	15.9	20.1	19.4	17.0	18.2	18.5
1972	20.6	16.9	18.9	17.3	16.2	21.0	12.9	32.2	19.4	19.4	21.1	16.9	19.4
1973	25.0	29.8	34.9	39.5	25.9	26.5	20.4	20.1	21.9	27.4	20.1	19.2	25.8
1974	24.1	25.2	33.7	31.5	28.0	27.2	33.2	30.3	33.5	37.2	27.1	26.1	29.8
1975	25.9	29.5	30.8	24.7	23.3	19.8	21.4	17.9	15.9	18.4	28.8	20.3	23.0
1976	22.0	26.8	33.4	26.4	22.9	16.9	16.2	16.0	21.8	19.2	15.2	18.1	21.2
1977	18.5	20.0	18.7	25.0	18.9	13.9	22.9	22.6	23.9	20.7	16.9	16.8	19.9
1978	24.6	25.4	25.9	32.2	32.5	28.3	18.9	24.3	26.8	19.7	24.3	22.1	25.4
1979	26.5	24.2	27.6	35.3	21.6	17.4	17.9	25.9	21.1	18.6	16.9	16.2	22.4
1980	18.0	17.9	11.8	17.3	15.1	19.4	16.1	15.8	13.7	22.6	22.4	22.5	17.7
1981	16.4	23.3	28.4	35.9	28.3	17.7	28.7	24.2	19.8	34.5	24.9	18.6	25.1
1982	20.7	48.2	26.8	31.8	26.0	32.1	43.7	32.2	50.4	29.0	34.5	35.6	34.1
1983	25.7	39.3	34.3	35.2	32.0	24.1	21.8	25.8	23.0	27.3	32.0	24.1	28.6
1984	20.6	25.7	30.5	34.1	26.5	23.8	26.8	25.7	33.1	33.3	31.5	28.0	28.3
1985	25.0	23.3	17.8	30.3	14.8	19.4	24.4	22.3	20.8	23.0	23.5	21.4	22.1
1986	21.3	40.5	20.7	13.4	18.4	15.2	15.0	22.5	25.6	18.0	20.7	14.7	20.4
1987	13.5	16.6	16.9	11.8	13.5	12.8	17.3	23.5	29.7	24.7	21.3	14.9	18.0
1988	21.0	22.4	23.3	24.4	18.7	18.1	18.4	19.1	20.0	20.9	22.1	24.6	21.1
1989	32.6	25.9	61.8	33.7	25.6	24.9	13.2	30.4	25.9	32.6	33.3	29.2	30.8
1990	23.4	36.3	33.7	40.4	24.5	23.0	20.5	28.2	22.7	24.2	16.1	13.5	25.5
1991	14.9	18.9	39.6	25.7	27.4	58.0	37.5	44.0	30.7	47.6	48.9	26.3	35.0
1992	24.7	51.4	24.0	19.3	30.6	24.1	16.9	24.6	37.2	25.8	24.9	24.4	27.3

Unit : nT

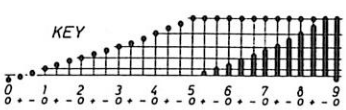
SECTION 3

3.3 Kp INDICES

MUSICAL DIAGRAM OF **Kp** 1992



Kp (after Bartels)



▲ = sudden commencement

1992

Kp INDICES 1992

	Kp								Sum	Jan 1992				ap				Sum	Ap	Cp
1	3-	2o	3-	2+	2+	4-	2o	3o	21-	12	7	12	9	9	22	7	15	93	12	0.7
2	5-	4+	4-	5o	2+	3o	2o	2-	27-	39	32	22	48	9	15	7	6	178	22	1.1
3	3o	3o	2+	4-	3o	2+	4-	4-	25-	15	15	9	22	15	9	22	22	129	16	0.9
4	3+	4o	3+	3-	2+	2o	3o	4-	24+	18	27	18	12	9	7	15	22	128	16	0.9
5	3+	3o	2+	2+	2+	3+	3o	2o	22-	18	15	9	9	9	18	15	7	100	12	0.7
6	2+	3+	3o	1+	3o	3o	3-	3+	22o	9	18	15	5	15	15	12	18	107	13	0.8
7	2o	2o	1+	2+	2+	2+	3-	2o	17o	7	7	5	9	9	9	12	7	65	8	0.4
8	3-	3o	4-	3+	3+	3o	4-	2+	25o	12	15	22	18	18	15	22	9	131	16	0.9
9	2+	3-	1+	1-	1o	0+	1-	3o	12o	9	12	5	3	4	2	3	15	53	7	0.3
10	4-	3o	2+	3-	3-	2+	2+	4-	23-	22	15	9	12	12	9	9	22	110	14	0.8
11	3o	4-	2+	4o	4+	5o	5-	3+	30+	15	22	9	27	32	48	39	18	210	26	1.2
12	4+	4-	4+	4o	3+	3+	3+	3-	29o	32	22	32	27	18	18	18	12	179	22	1.1
13	4-	5o	4-	5o	4-	4-	2+	4-	31-	22	48	22	48	22	22	9	22	215	27	1.2
14	4o	3o	3+	3-	3+	4+	3+	4o	28o	27	15	18	12	18	32	18	27	167	21	1.1
15	3+	3o	4-	3+	5-	2o	3o	2-	25-	18	15	22	18	39	7	15	6	140	18	1.0
16	2-	4-	4-	3+	3+	3o	5+	5+	29+	6	22	22	18	18	15	56	56	213	27	1.2
17	3o	2o	2+	2+	2o	2+	3-	3-	19+	15	7	9	9	7	9	12	12	80	10	0.6
18	3-	3-	3-	2o	1+	1o	0+	0+	13o	12	12	12	7	5	4	2	2	56	7	0.4
19	1+	2+	2o	2o	2-	2-	1o	1-	13-	5	9	7	7	6	6	4	3	47	6	0.3
20	3-	3+	3o	3o	3o	4-	2o	2+	23o	12	18	15	15	15	22	7	9	113	14	0.8
21	2-	0+	1o	0+	2+	2o	2-	4-	13o	6	2	4	2	9	7	6	22	58	7	0.4
22	3+	2-	1o	2+	3-	2o	1-	0o	14-	18	6	4	9	12	7	3	0	59	7	0.4
23	1-	2-	2-	1-	1o	1o	1+	0+	8+	3	6	6	3	4	4	5	2	33	4	0.1
24	1o	0+	1o	1o	1-	1o	1-	2o	8-	4	2	4	4	3	4	3	7	31	4	0.1
25	3-	2o	1-	1o	1+	0+	0o	1-	9-	12	7	3	4	5	2	0	3	36	4	0.2
26	0o	0+	0+	1-	2+	3o	3-	3-	12o	0	2	2	3	9	15	12	12	55	7	0.3
27	5o	5o	3-	3-	2-	2+	3+	4o	27-	48	48	12	12	6	9	18	27	180	22	1.1
28	4o	4o	2o	2o	3o	2+	2+	3-	22+	27	27	7	7	15	9	9	12	113	14	0.8
29	3+	3+	3-	2o	3o	2+	3o	4-	23+	18	18	12	7	15	9	15	22	116	14	0.8
30	4o	4+	3+	3o	3o	4-	4-	4-	29-	27	32	18	15	15	22	22	22	173	22	1.1
31	4-	3+	4-	3-	3-	2+	3o	2o	23+	22	18	22	12	12	9	15	7	117	15	0.8

	Kp								Sum	Feb 1992				ap				Sum	Ap	Cp
1	2o	3-	3+	3+	4o	4+	4-	6+	30-	7	12	18	18	27	32	22	94	230	29	1.3
2	6o	6-	4o	5o	4+	4-	6+	6o	41o	80	67	27	48	32	22	94	80	450	56	1.6
3	7-	7o	8-	5+	5-	5-	6-	7-	48+	111	132	179	56	39	39	67	111	734	92	1.9
4	3+	5+	4-	2+	2+	3-	5o	5-	29+	18	56	22	9	9	12	48	39	213	27	1.2
5	3o	1o	2-	2+	2+	1+	1-	1o	13+	15	4	6	9	9	5	3	4	55	7	0.3
6	1o	1+	2-	2-	3o	2o	1+	2o	14o	4	5	6	6	15	7	5	7	55	7	0.3
7	3-	3o	3-	5-	4+	3+	1o	1+	23o	12	15	12	39	32	18	4	5	137	17	0.9
8	3+	4-	5-	3-	7-	7o	4o	4+	36+	18	22	39	12	111	132	27	32	393	49	1.6
9	7o	6+	6+	6+	6+	5o	5-	5-	47-	132	94	94	94	94	48	39	39	634	79	1.8
10	4-	4+	3o	3+	5-	5o	3o	2+	29+	22	32	15	18	39	48	15	9	198	25	1.2
11	2+	1+	2-	2-	2-	2+	2o	2o	15o	9	5	6	6	6	9	7	7	55	7	0.3
12	3o	3o	2+	2o	3-	3-	1-	3-	19o	15	15	9	7	12	12	3	12	85	11	0.6
13	3-	3+	4-	3o	1+	1-	1-	1+	17-	12	18	22	15	5	3	3	5	83	10	0.6
14	1+	2-	2+	2+	3-	3o	2+	3-	18+	5	6	9	9	12	15	9	12	77	10	0.5
15	0+	2-	1+	1o	2o	1o	0+	1-	8+	2	6	5	4	7	4	2	3	33	4	0.1
16	1o	1+	1+	0+	1+	1o	1o	1+	9-	4	5	5	2	5	4	4	5	34	4	0.1
17	2-	2+	3o	4o	5-	3-	2o	2+	23-	6	9	15	27	39	12	7	9	124	16	0.9
18	4-	4-	3-	3+	2+	3o	2-	2o	22+	22	22	12	18	9	15	6	7	111	14	0.8
19	3o	3-	2+	3o	3o	3-	2+	3o	22o	15	12	9	15	15	12	9	15	102	13	0.7
20	5-	5+	4+	6-	6-	5+	7o	5+	43+	39	56	32	67	67	56	132	56	505	63	1.7
21	6-	7o	7+	7-	5o	3o	3o	3-	40+	67	132	154	111	48	15	15	12	554	69	1.7
22	5-	4+	5+	3+	3+	3-	3+	4-	31-	39	32	56	18	18	12	18	22	215	27	1.2
23	3+	4-	3o	1+	2o	2+	3-	5-	23o	18	22	15	5	7	9	12	39	127	16	0.9
24	3-	3-	4-	3+	3+	4o	4+	6o	30o	12	12	22	18	18	27	32	80	221	28	1.2
25	7-	6+	6-	5-	4+	4o	4+	5-	41-	111	94	67	39	32	27	32	39	441	55	1.6
26	3+	3+	4-	4-	4o	6+	8o	7-	39o	18	18	22	22	27	94	207	111	519	65	1.7
27	6+	5-	6o	6+	5-	5+	6-	3o	42o	94	39	80	94	39	56	67	15	484	60	1.7
28	2+	2-	2o	2-	2o	1o	2-	3-	15o	9	6	7	6	7	4	6	12	57	7	0.4
29	2+	2+	2o	6-	6-	7-	5+	4o	34o	9	9	7	67	67	111	56	27	353	44	1.5

Kp INDICES 1992 (continued)

	Kp								Sum	Mar 1992 ap								Sum	Ap	Cp
1	3o	4o	5-	3o	2-	2+	2+	2+	23+	15	27	39	15	6	9	9	9	129	16	0.9
2	2+	3+	3o	3o	3-	2+	3o	2-	21+	9	18	15	15	12	9	15	6	99	12	0.7
3	2+	3+	2+	2o	2-	3+	3o	2-	20-	9	18	9	7	6	18	15	6	88	11	0.6
4	2o	2o	2+	2+	3-	4o	4-	3-	22-	7	7	9	9	12	27	22	12	105	13	0.8
5	2o	3o	3o	2+	2o	3+	3o	3-	21+	7	15	15	9	7	18	15	12	98	12	0.7
6	3+	2-	4-	1-	1o	1-	1+	1+	14-	18	6	22	3	4	3	5	5	66	8	0.4
7	2-	1o	2-	2o	2o	3+	2+	4-	18-	6	4	6	7	7	18	9	22	79	10	0.6
8	3-	4-	2+	2o	3+	2o	2o	2+	20+	12	22	9	7	18	7	7	9	91	11	0.7
9	3+	3-	3o	5+	4-	4+	5-	2+	29+	18	12	15	56	22	32	39	9	203	25	1.2
10	3-	4-	3-	3+	3o	3o	3+	4-	25+	12	22	12	18	15	15	18	22	134	17	0.9
11	3+	4-	3+	5-	4-	4-	3o	2-	27o	18	22	18	39	22	22	15	6	162	20	1.0
12	2o	3+	3+	3+	3o	3-	1+	1+	20+	7	18	18	18	15	12	5	5	98	12	0.7
13	1o	3-	3-	2o	1+	1o	1-	0o	11+	4	12	12	7	5	4	3	0	47	6	0.3
14	1o	1o	2-	1o	1o	1-	1-	1+	8+	4	4	6	4	4	3	3	5	33	4	0.1
15	1o	1+	3o	3+	2o	3-	2o	2-	17o	4	5	15	18	7	12	7	6	74	9	0.5
16	1+	1+	3o	3o	3+	3o	3o	3+	21+	5	5	15	15	18	15	15	18	106	13	0.8
17	3-	2+	2-	5-	5-	4+	5-	4-	29-	12	9	6	39	39	32	39	22	198	25	1.2
18	4+	4-	4o	3o	3o	3-	2-	1+	24-	32	22	27	15	15	12	6	5	134	17	0.9
19	1o	0+	1-	0+	1o	2o	1o	1o	7+	4	2	3	2	4	7	4	4	30	4	0.1
20	1-	1-	2-	1-	1-	1o	2o	1o	8+	3	3	6	3	3	4	7	4	33	4	0.1
21	2-	2o	3o	4+	5o	4o	4-	4o	28-	6	7	15	32	48	27	22	27	184	23	1.1
22	5-	4o	3o	3-	3-	2o	3-	3o	25-	39	27	15	12	12	7	12	15	139	17	0.9
23	4o	5o	4o	4-	4-	3-	4+	3+	31-	27	48	27	22	22	12	32	18	208	26	1.2
24	3o	4-	3o	3+	3-	4+	4o	5-	29-	15	22	15	18	12	32	27	39	180	22	1.1
25	4o	4+	3o	3o	3-	3-	2-		24o	27	32	15	15	12	12	12	6	131	16	0.9
26	2-	3o	2o	3o	3-	2+	4-	3-	21o	6	15	7	15	12	9	22	12	98	12	0.7
27	3-	2o	2-	1+	2+	2o	4-	4-	19+	12	7	6	5	9	7	22	22	90	11	0.6
28	3o	2+	2o	2+	2+	2+	2o	3o	19+	15	9	7	9	9	9	7	15	80	10	0.6
29	3o	4-	3+	3o	3-	4-	4-	3o	26o	15	22	18	15	12	22	22	15	141	18	1.0
30	3-	4-	2o	2o	3-	2o	3o	3-	21-	12	22	7	7	12	7	15	12	94	12	0.7
31	4o	2+	1o	2+	2o	4-	4-	3o	22o	27	9	4	9	7	22	22	15	115	14	0.8

	Kp								Sum	Apr 1992 ap								Sum	Ap	Cp
1	2+	3+	4o	3+	3-	2o	1+	2+	21+	9	18	27	18	12	7	5	9	105	13	0.8
2	1+	2-	1+	1+	1o	2o	3o	1+	13o	5	6	5	5	4	7	15	5	52	6	0.3
3	1-	3-	4+	4+	5+	6o	4-	3o	30o	3	12	32	32	56	80	22	15	252	32	1.3
4	2o	2+	2+	4-	4-	2+	3o	2-	21o	7	9	9	22	22	9	15	6	99	12	0.7
5	3o	2o	3-	4-	3+	2+	3-	4o	24-	15	7	12	22	18	9	12	27	122	15	0.9
6	4-	5o	6-	3+	2+	3+	2-	2-	27-	22	48	67	18	9	18	6	6	194	24	1.2
7	3-	4o	5-	4-	3+	3o	3o	2-	26o	12	27	39	22	18	15	15	6	154	19	1.0
8	3+	4-	3+	4-	4o	3-	5-	1+	27-	18	22	18	22	27	12	39	5	163	20	1.0
9	2-	2+	1+	1o	1+	2-	1o	2+	13-	6	9	5	4	5	6	4	9	48	6	0.3
10	2o	2o	1+	1-	1+	1o	1-	1-	10-	7	7	5	3	5	4	3	3	37	5	0.2
11	2-	1o	1-	0+	1-	1-	0+	1-	6o	6	4	3	2	3	3	2	3	26	3	0.1
12	0+	2-	1o	1o	1+	1+	1-	1-	8o	2	6	4	4	5	5	3	3	32	4	0.1
13	1+	2o	2+	2+	2+	1-	1+	1+	14-	5	7	9	9	9	3	5	5	52	6	0.3
14	1+	2-	2-	1-	1o	2-	3-	2+	13o	5	6	6	3	4	6	12	9	51	6	0.3
15	3+	3-	2-	2+	2o	3-	2-	2o	18+	18	12	6	9	7	12	6	7	77	10	0.5
16	1+	1+	1o	1-	2-	2o	1-	1o	10-	5	5	4	3	6	7	3	4	37	5	0.2
17	1-	1-	0+	0+	0+	2+	1-	2+	8-	3	3	2	2	2	9	3	9	33	4	0.1
18	2o	2+	3+	3+	5+	3-	2o	4o	25o	7	9	18	18	56	12	7	27	154	19	1.0
19	4-	3+	3o	2o	3o	3o	4-	4-	25+	22	18	15	7	15	15	22	22	136	17	0.9
20	4o	4-	3+	3-	3+	4-	3-	3o	26+	27	22	18	12	18	22	12	15	146	18	1.0
21	3o	3+	2-	1+	2+	2-	1+	1o	16-	15	18	6	5	9	6	5	4	68	8	0.5
22	3o	3o	3-	3-	2+	2+	3-	3o	22-	15	15	12	12	9	9	12	15	99	12	0.7
23	2+	1+	1o	0+	2o	3-	2+	3+	15+	9	5	4	2	7	12	9	18	66	8	0.4
24	3+	3+	2o	3-	2+	3o	3-	3-	22o	18	18	7	12	9	15	12	12	103	13	0.7
25	3o	3o	3-	2o	3-	2-	1+	3-	19o	15	15	12	7	12	6	5	12	84	10	0.6
26	2o	2-	2o	2-	1+	1-	4-	2-	15-	7	6	7	6	5	3	22	6	62	8	0.4
27	2+	1-	2-	0o	1+	2o	2o	1+	11+	9	3	6	0	5	7	7	5	42	5	0.2
28	2o	2o	2o	3+	4-	1o	2o	2-	18-	7	7	7	18	22	4	7	6	78	10	0.5
29	2+	3-	2-	1o	1-	1+	2+	2o	14o	9	12	6	4	3	5	9	7	55	7	0.3
30	3o	3-	2+	3+	3-	1+	1-	2-	18-	15	12	9	18	12	5	3	6	80	10	0.6

Kp INDICES 1992 (continued)

	Kp								Sum	May 1992				ap				Sum	Ap	Cp
1	1+	2+	3o	1+	2o	3o	5o	3o	21o	5	9	15	5	7	15	48	15	119	15	0.8
2	3-	4o	4+	1+	1+	1+	2o	2-	19-	12	27	32	5	5	5	7	6	99	12	0.7
3	2o	2o	2-	1+	3o	2+	3o	2o	17+	7	7	6	5	15	9	15	7	71	9	0.5
4	3o	4o	2-	3-	3-	3o	1o	2o	20o	15	27	6	12	12	15	4	7	98	12	0.7
5	1+	2+	1o	1+	2-	1o	1o	1+	11o	5	9	4	5	6	4	4	5	42	5	0.2
6	1-	0+	1o	1+	1o	1o	2o	3-	10o	3	2	4	5	4	4	7	12	41	5	0.2
7	2o	3-	2o	1+	3o	3o	4-	4-	21+	7	12	7	5	15	15	22	22	105	13	0.8
8	3o	3+	4+	4+	5o	5-	4+	3+	32+	15	18	32	32	48	39	32	18	234	29	1.3
9	4-	3-	1+	2+	4-	5o	7-	6o	31+	22	12	5	9	22	48	111	80	309	39	1.4
10	5+	6+	8o	9-	8+	8-	8o	7+	60-	56	94	207	300	236	179	207	154	1433	179	2.1
11	7+	7-	6o	5o	5o	5o	5o	4-	44-	154	111	80	48	48	48	48	22	559	70	1.7
12	3+	3-	2-	2+	2+	3-	3o	2o	20o	18	12	6	9	9	12	15	7	88	11	0.6
13	3-	4o	3+	4o	5o	3o	2+	3o	27+	12	27	18	27	48	15	9	15	171	21	1.1
14	2o	2o	1-	1o	1o	1-	0+	1o	9-	7	7	3	4	4	3	2	4	34	4	0.1
15	1-	1+	1o	2o	1o	2+	1+	1-	10+	3	5	4	7	4	9	5	3	40	5	0.2
16	1o	1o	1-	1+	2-	1+	1o	1-	9-	4	4	3	5	6	5	4	3	34	4	0.1
17	1-	1-	1-	1-	0+	1-	1+	1+	6+	3	3	3	3	2	3	5	5	27	3	0.1
18	3-	2-	1o	1o	2o	2+	4o	5+	20o	12	6	4	4	7	9	27	56	125	16	0.9
19	4+	3o	1+	1+	2-	3+	4-	2o	21-	32	15	5	5	6	18	22	7	110	14	0.8
20	3o	1+	1o	1+	2+	2-	2+	3-	16-	15	5	4	5	9	6	9	12	65	8	0.4
21	2o	1o	2-	2-	1+	2o	2+	3+	15+	7	4	6	6	5	7	9	18	62	8	0.4
22	2o	5o	5o	5-	6+	6o	6-	3+	38o	7	48	48	39	94	80	67	18	401	50	1.6
23	2+	2o	2o	1+	2+	4-	5o	2+	21o	9	7	7	5	9	22	48	9	116	14	0.8
24	3+	3-	2+	1+	1+	1+	1o	2+	16-	18	12	9	5	5	5	4	9	67	8	0.5
25	2+	2o	2+	2o	3-	3+	3-	2-	19o	9	7	9	7	12	18	12	6	80	10	0.6
26	1o	1-	1+	2-	2+	1+	3-	3+	14+	4	3	5	6	9	5	12	18	62	8	0.4
27	3-	2-	3-	3-	3o	3-	2+	2-	19+	12	6	12	12	15	12	9	6	84	10	0.6
28	2o	2-	3+	3+	3o	2+	2+	4-	22-	7	6	18	18	15	9	9	22	104	13	0.7
29	3-	3-	4-	2+	4-	5-	4-	3o	26+	12	12	22	9	22	39	22	15	153	19	1.0
30	3-	3o	3o	3-	3+	4-	3-	2+	23+	12	15	15	12	18	22	12	9	115	14	0.8
31	3-	3o	2-	1o	1o	3-	2o	1+	15+	12	15	6	4	4	12	7	5	65	8	0.4

	Kp								Sum	Jun 1992				ap				Sum	Ap	Cp
1	3-	3o	3-	1+	2o	1+	1-	1-	14+	12	15	12	5	7	5	3	3	62	8	0.4
2	1o	1-	1+	1+	1-	1+	1+	2+	10o	4	3	5	5	3	5	5	9	39	5	0.2
3	1o	1o	1o	1o	2+	3o	1+	1-	11+	4	4	4	4	9	15	5	3	48	6	0.3
4	1o	0+	0+	1o	1-	1o	2-	2-	8-	4	2	2	4	3	4	6	6	31	4	0.1
5	1+	1-	1o	2o	2+	2+	2-	1o	12+	5	3	4	7	9	9	6	4	47	6	0.3
6	0+	0+	1+	2-	2o	2o	1+	1-	10-	2	2	5	6	7	7	5	3	37	5	0.2
7	1o	1+	2-	2-	1o	2o	4-	5-	17o	4	5	6	6	4	7	22	39	93	12	0.7
8	6o	4+	5o	3+	5o	6-	5-	5-	39-	80	32	48	18	48	67	39	39	371	46	1.5
9	5-	2+	4-	3+	3o	2o	3-	3-	24+	39	9	22	18	15	7	12	12	134	17	0.9
10	2-	4-	5-	5-	4-	2+	3o	2o	26-	6	22	39	39	22	9	15	7	159	20	1.0
11	3-	4-	2-	3o	3o	3+	5+	6-	28+	12	22	6	15	15	18	56	67	211	26	1.2
12	5+	2+	4o	3o	6+	6+	3o	3-	33o	56	9	27	15	94	94	15	12	322	40	1.5
13	3-	3o	2o	2-	3o	2o	3+	3+	21o	12	15	7	6	15	7	18	18	98	12	0.7
14	2+	1+	2-	2-	2-	1+	1+	2+	14-	9	5	6	6	6	5	5	9	51	6	0.3
15	3-	2o	2-	1-	3-	3+	3o	2-	18-	12	7	6	3	12	18	15	6	79	10	0.6
16	1+	2o	1+	1o	1o	1-	1o	0+	9-	5	7	5	4	4	3	4	2	34	4	0.1
17	1-	1o	1+	1-	2+	2+	1+	1o	11-	3	4	5	3	9	9	5	4	42	5	0.2
18	1+	1+	1o	1+	3+	4+	6+	5+	24+	5	5	4	5	18	32	94	56	219	27	1.2
19	3o	2-	2-	2-	2o	3+	4o	2o	19+	15	6	6	6	7	18	27	7	92	12	0.7
20	1o	2+	1+	1+	3o	2o	1o	2+	14+	4	9	5	5	15	7	4	9	58	7	0.4
21	4o	2-	1+	1-	1+	2+	1+	2+	15o	27	6	5	3	5	9	5	9	69	9	0.5
22	3+	4-	1+	2-	2+	1+	1-	2+	17-	18	22	5	6	9	5	3	9	77	10	0.5
23	3o	4-	2+	1+	2+	2+	3+	3+	22-	15	22	9	5	9	9	18	18	105	13	0.8
24	3+	5-	4-	3+	3o	4o	4-	3o	29-	18	39	22	18	15	27	22	15	176	22	1.1
25	3+	3-	3-	2+	3o	3+	3+	3-	23+	18	12	12	9	15	18	18	12	114	14	0.8
26	2-	2-	3+	1+	1+	2o	2o	2+	16-	6	6	18	5	5	7	7	9	63	8	0.4
27	2+	1+	1+	3-	2o	2+	4o	3o	19o	9	5	5	12	7	9	27	15	89	11	0.6
28	2o	3-	4+	4-	3o	3-	2-	3o	23o	7	12	32	22	15	12	6	15	121	15	0.9
29	4o	6o	4o	3-	4+	4+	5o	5o	35+	27	80	27	12	32	32	48	48	306	38	1.4
30	6o	7-	5-	3o	2+	3o	2-	3+	31-	80	111	39	15	9	15	6	18	293	37	1.4

Kp INDICES 1992 (continued)

	Kp								Sum	Jul 1992	ap				Sum	Ap	Cp
1	3+	3o	2+	2o	3+	4o	4+	4o	26+	18 15 9 7	18	27	32	27	153	19	1.0
2	3-	5-	4+	3o	2+	2-	1o	3-	22+	12 39 32 15	9	6	4	12	129	16	0.9
3	2o	2-	2-	1o	2o	1+	1o	1o	12-	7 6 6 4	7	5	4	4	43	5	0.2
4	0+	1+	1o	1o	1-	1+	1+	2o	9o	2 5 4 4	3	5	5	7	35	4	0.2
5	2o	3+	2-	2+	2+	1+	2-	2+	17o	7 18 6 9	9	5	6	9	69	9	0.5
6	2o	2o	1+	1+	2-	1+	1o	1-	11+	7 7 5 5	6	5	4	3	42	5	0.2
7	0+	1-	1-	1-	1+	1+	1+	1o	7+	2 3 3 3	5	5	5	4	30	4	0.1
8	1o	1o	1-	1o	2+	2+	1+	1o	11-	4 4 3 4	9	9	5	4	42	5	0.2
9	1+	1+	1-	1o	1-	1+	1-	1+	8+	5 5 3 4	3	5	3	5	33	4	0.1
10	1+	2o	1+	1-	1o	1+	3-	1o	11+	5 7 5 3	4	5	12	4	45	6	0.3
11	1o	1-	1-	1o	1+	1-	1-	1o	7o	4 3 3 4	5	3	3	4	29	4	0.1
12	3-	3-	3-	3o	4-	3+	3o	3o	24o	12 12 12 15	22	18	15	15	121	15	0.9
13	2o	4-	4+	4o	4o	4-	3+	4+	29+	7 22 32 27	27	22	18	32	187	23	1.1
14	3+	3o	3-	3-	3-	2+	3o	2-	21+	18 15 12 12	12	9	15	6	99	12	0.7
15	3-	2+	2-	1+	1o	1+	1+	1-	12+	12 9 6 5	4	5	5	3	49	6	0.3
16	1o	1+	2o	3o	3+	3o	3+	3-	20-	4 5 7 15	18	15	18	12	94	12	0.7
17	3-	1o	0+	1+	2o	2-	1o	0+	10+	12 4 2 5	7	6	4	2	42	5	0.2
18	2-	2-	1+	1o	1+	1o	1o	1-	10-	6 6 5 4	5	4	4	3	37	5	0.2
19	2-	1-	1-	0+	0+	1o	1+	2-	8-	6 3 3 2	2	4	5	6	31	4	0.1
20	2-	2-	1-	1o	2+	3o	3-	2+	15+	6 6 3 4	9	15	12	9	64	8	0.4
21	1-	1+	2-	2o	4-	3+	4-	2-	18o	3 5 6 7	22	18	22	6	89	11	0.6
22	2+	3+	5-	5o	6-	4-	5o	3+	33o	9 18 39 48	67	22	48	18	269	34	1.3
23	4-	4o	3o	3o	2o	2+	4-	3-	24+	22 27 15 15	7	9	22	12	129	16	0.9
24	2+	2-	1o	2-	2+	2+	2-	2-	15-	9 6 4 6	9	9	6	6	55	7	0.3
25	2-	1o	1+	2o	3+	4-	3+	2-	18o	6 4 5 7	18	22	18	6	86	11	0.6
26	1+	1o	1-	1+	1o	1o	1o	1-	8o	5 4 3 5	4	4	4	3	32	4	0.1
27	1-	1-	1+	2-	1o	1+	2+	4-	13-	3 3 5 6	4	5	9	22	57	7	0.4
28	4-	5o	3+	2+	3-	2+	2o	3-	24o	22 48 18 9	12	9	7	12	137	17	0.9
29	1o	1+	1+	1o	1+	1+	1o	1+	10-	4 5 5 4	5	5	4	5	37	5	0.2
30	3-	1o	2-	2o	2+	2+	3o	3-	18-	12 4 6 7	9	9	15	12	74	9	0.5
31	2o	1+	2o	2+	2-	3o	2+	4-	18+	7 5 7 9	6	15	9	22	80	10	0.6

	Kp								Sum	Aug 1992	ap				Sum	Ap	Cp
1	3+	3-	2-	2o	2o	2-	1+	2o	17-	18 12 6 7	7	6	5	7	68	8	0.5
2	1+	1o	1o	1o	1-	1+	2-	2-	10-	5 4 4 4	3	5	6	6	37	5	0.2
3	1-	1-	1o	1-	1+	1+	2-	1o	8+	3 3 4 3	5	5	6	4	33	4	0.1
4	2+	1+	1-	1+	3+	4-	5-	3+	21-	9 5 3 5	18	22	39	18	119	15	0.8
5	6-	6-	5o	4o	4+	2+	3o	3-	33-	67 67 48 27	32	9	15	12	277	35	1.4
6	1+	4o	3-	4-	4-	3o	3-	3-	24-	5 27 12 22	22	15	12	12	127	16	0.9
7	3+	3o	4o	5+	5o	3+	3o	2o	29o	18 15 27 56	48	18	15	7	204	26	1.2
8	2+	3+	4-	4-	3o	3o	3+	3-	25o	9 18 22 22	15	15	18	12	131	16	0.9
9	3+	2-	2+	3+	3-	3o	3-	1+	20+	18 6 9 18	12	15	12	5	95	12	0.7
10	2+	1+	1+	2o	2+	1+	2o	2o	15-	9 5 5 7	9	5	7	7	54	7	0.3
11	2+	2+	3+	2+	2+	3+	3-	4-	22+	9 9 18 9	9	18	12	22	106	13	0.8
12	2+	2+	2+	2o	1+	1o	0+	1-	12+	9 9 9 7	5	4	2	3	48	6	0.3
13	0+	1-	1o	1o	3o	4+	2+	3+	16o	2 3 4 4	15	32	9	18	87	11	0.6
14	3+	3-	2-	2o	3+	5o	2-	1-	20+	18 12 6 7	18	48	6	3	118	15	0.8
15	2o	1+	3-	1+	1o	1o	3o	3-	15o	7 5 12 5	4	4	15	12	64	8	0.4
16	2-	2o	3o	3-	2o	2-	1+	2o	16+	6 7 15 12	7	6	5	7	65	8	0.4
17	2-	2-	0+	0+	1o	1-	1o	1+	8o	6 6 2 2	4	3	4	5	32	4	0.1
18	1+	2o	1+	2o	2-	2-	2-	2-	13+	5 7 5 7	6	6	6	6	48	6	0.3
19	1o	1+	2-	1-	2+	3-	3o	3o	16-	4 5 6 3	9	12	15	15	69	9	0.5
20	4-	6o	4-	5-	4o	2o	2-	1+	27o	22 80 22 39	27	7	6	5	208	26	1.2
21	2-	2o	1+	3-	3+	5+	5o	2-	23o	6 7 5 12	18	56	48	6	158	20	1.0
22	1+	2+	3+	3+	5-	5+	5+	7-	32+	5 9 18 18	39	56	56	111	312	39	1.4
23	8-	8o	6+	3o	4+	2+	4o	4-	39+	179 207 94 15	32	9	27	22	585	73	1.8
24	2+	2+	2-	2o	1o	2+	3+	3+	18+	9 9 6 7	4	9	18	18	80	10	0.6
25	1+	1+	1-	1o	2o	1o	1+	2o	11-	5 5 3 4	7	4	5	7	40	5	0.2
26	3+	2+	4-	2o	2+	2o	2o	2o	20-	18 9 22 7	9	7	7	7	86	11	0.6
27	2+	3-	2o	3o	4o	2+	4-	2o	22o	9 12 7 15	27	9	22	7	108	14	0.8
28	2o	2+	1-	1-	1o	1o	1+	2o	11o	7 9 3 3	4	4	5	7	42	5	0.2
29	5-	4+	3-	3o	2o	1o	2o	2+	22o	39 32 12 15	7	4	7	9	125	16	0.9
30	1o	1o	1+	1+	3o	1o	2o	1o	12-	4 4 5 5	15	4	7	4	48	6	0.3
31	1o	2o	1-	1o	1-	2-	1+	1-	9o	4 7 3 4	3	6	5	3	35	4	0.2

Kp INDICES 1992 (continued)

	Kp								Sum	Sep 1992	ap				Sum	Ap	Cp
1	1o	1-	0+	0o	1-	1-	0+	0+	4o	4	3	2	0	3	3	2	2	19	2	0.0
2	1+	2-	2-	4o	5-	5o	4o	4o	26+	5	6	6	27	39	48	27	27	185	23	1.1
3	3+	5o	6-	5+	5-	6-	5+	4+	39+	18	48	67	56	39	67	56	32	383	48	1.6
4	4+	4-	5o	4+	4-	3o	3o	6o	33o	32	22	48	32	22	15	15	80	266	33	1.3
5	5+	5-	4+	4-	3o	3-	4o	3+	31o	56	39	32	22	15	12	27	18	221	28	1.2
6	3+	4-	3o	2-	2+	3o	4+	3+	25-	18	22	15	6	9	15	32	18	135	17	0.9
7	4-	3+	3+	4+	4o	3+	4o	3-	29-	22	18	18	32	27	18	27	12	174	22	1.1
8	4-	4-	5-	2+	3o	3o	3o	2+	26-	22	22	39	9	15	15	15	9	146	18	1.0
9	5+	7-	6o	7+	7-	5o	6-	5o	48-	56	111	80	154	111	48	67	48	675	84	1.8
10	6-	6+	6+	6-	5+	7o	7-	6o	49o	67	94	94	67	56	132	111	80	701	88	1.8
11	6+	4+	4+	3+	3o	5-	3+	3-	32o	94	32	32	18	15	39	18	12	260	32	1.3
12	2+	2o	1o	0+	1-	1-	1+	2-	10o	9	7	4	2	3	3	5	6	39	5	0.2
13	1+	1+	1o	1o	1-	1-	2o	2-	10-	5	5	4	4	3	3	7	6	37	5	0.2
14	1+	2+	2o	2-	1+	2o	2+	3-	16-	5	9	7	6	5	7	9	12	60	8	0.4
15	3-	3+	3-	2o	2o	3-	2o	1+	19-	12	18	12	7	7	12	7	5	80	10	0.6
16	2-	2+	3o	2o	3-	3-	4-	3-	21-	6	9	15	7	12	12	22	12	95	12	0.7
17	6-	7-	7+	7-	5+	5o	7o	6-	49+	67	111	154	111	56	48	132	67	746	93	1.9
18	4+	5o	4o	5-	4+	3o	4+	4-	33+	32	48	27	39	32	15	32	22	247	31	1.3
19	3+	3+	2o	3o	3-	2+	4-	1+	22-	18	18	7	15	12	9	22	5	106	13	0.8
20	2-	2o	2+	2+	2+	1o	3-	3-	17o	6	7	9	9	9	4	12	12	68	8	0.5
21	1o	1+	2-	1o	1-	1+	2-	4-	12+	4	5	6	4	3	5	6	22	55	7	0.3
22	4+	5o	2o	2-	2-	1+	3o	3o	22o	32	48	7	6	6	5	15	15	134	17	0.9
23	3-	3+	3-	2o	2-	1+	2o	1o	17-	12	18	12	7	6	5	7	4	71	9	0.5
24	0+	0+	0+	1-	0+	1-	1+	2+	6+	2	2	2	3	2	3	5	9	28	4	0.1
25	3o	1+	2-	3-	3-	2o	3+	3-	19+	15	5	6	12	12	7	18	12	87	11	0.6
26	3+	2+	1+	1-	1o	3+	2-	0+	14o	18	9	5	3	4	18	6	2	65	8	0.4
27	1-	1o	1o	1o	2-	1-	1o	1-	8-	3	4	4	4	6	3	4	3	31	4	0.1
28	0+	1+	2-	2-	3-	3+	5-	5-	20+	2	5	6	6	12	18	39	39	127	16	0.9
29	4o	7-	7-	6-	5+	5o	5o	4o	42+	27	111	111	67	56	48	48	27	495	62	1.7
30	5-	4o	4o	3o	4o	6-	5o	4o	34+	39	27	27	15	27	67	48	27	277	35	1.4

	Kp								Sum	Oct 1992	ap				Sum	Ap	Cp
1	4o	5+	4+	3+	3+	3+	4+	2o	30o	27	56	32	18	18	18	32	7	208	26	1.2
2	4-	3o	2o	2o	2-	2o	1+	2-	17+	22	15	7	7	6	7	5	6	75	9	0.5
3	1-	1+	2-	2o	1+	1o	2+	1+	12-	3	5	6	7	5	4	9	5	44	6	0.2
4	3-	4-	2+	1o	1o	0+	1-	1-	12+	12	22	9	4	4	2	3	3	59	7	0.4
5	1o	2o	1+	0+	1o	2o	2-	1+	11-	4	7	5	2	4	7	6	5	40	5	0.2
6	4-	3o	1+	2o	3-	2o	1o	1o	17-	22	15	5	7	12	7	4	4	76	10	0.5
7	2-	3o	2+	2+	2o	2-	2+	1o	16+	6	15	9	9	7	6	9	4	65	8	0.4
8	3+	2+	1-	0+	0o	1o	3+	3-	14-	18	9	3	2	0	4	18	12	66	8	0.4
9	3-	2+	2+	5+	4o	5+	4o	3o	29o	12	9	9	56	27	56	27	15	211	26	1.2
10	1o	2-	3o	3+	3-	1+	1+	3o	17+	4	6	15	18	12	5	5	15	80	10	0.6
11	3-	2o	1+	3+	5o	5-	5-	4-	27+	12	7	5	18	48	39	39	22	190	24	1.1
12	3o	4o	5o	4+	6+	4+	3o	2+	32+	15	27	48	32	94	32	15	9	272	34	1.3
13	3+	3o	2+	1+	3o	4o	6-	4o	27-	18	15	9	5	15	27	67	27	183	23	1.1
14	3+	4-	3+	3+	3-	2+	5-	6-	29o	18	22	18	18	12	9	39	67	203	25	1.2
15	5o	5o	4+	5-	4+	4-	4+	4o	35+	48	48	32	39	32	22	32	27	280	35	1.4
16	5o	4+	4-	3+	3-	3o	2+	4-	28o	48	32	22	18	12	15	9	22	178	22	1.1
17	3o	3-	3-	3+	4-	3+	4-	2+	25-	15	12	12	18	22	18	22	9	128	16	0.9
18	3-	1+	1+	1o	3+	2+	3-	4o	19-	12	5	5	4	18	9	12	27	92	12	0.7
19	4o	3-	2o	3o	3+	4-	3o	3-	24+	27	12	7	15	18	22	15	12	128	16	0.9
20	4+	4o	2-	2+	2-	1o	1+	1+	18-	32	27	6	9	6	4	5	5	94	12	0.7
21	1o	2-	2-	1o	1+	2-	2-	3-	13-	4	6	6	4	5	6	6	12	49	6	0.3
22	3+	2o	1-	1o	3o	3o	1+	2-	16o	18	7	3	4	15	15	5	6	73	9	0.5
23	2-	2-	1+	1+	1+	1-	1+	1+	11-	6	6	5	5	5	3	5	5	40	5	0.2
24	1o	1o	0+	0+	0+	1-	0o	2-	5+	4	4	2	2	2	3	0	6	23	3	0.1
25	3o	2-	1+	2o	2-	1o	2-	2-	14o	15	6	5	7	6	4	6	6	55	7	0.3
26	3+	3o	3-	2o	2-	2o	4o	3+	22o	18	15	12	7	6	7	27	18	110	14	0.8
27	5o	4o	3+	5-	5-	5o	3+	3-	33-	48	27	18	39	39	48	18	12	249	31	1.3
28	4+	3o	3+	4o	2+	3+	3-	3+	26+	32	15	18	27	9	18	12	18	149	19	1.0
29	4+	4-	4+	4-	3+	4o	5-	4-	32-	32	22	32	22	18	27	39	22	214	27	1.2
30	3o	3o	3o	3-	4-	4-	2+	3o	24+	15	15	15	12	22	22	9	15	125	16	0.9
31	2+	2o	3o	3-	3o	2+	2-	1+	18+	9	7	15	12	15	9	6	5	78	10	0.5

Kp INDICES 1992 (continued)

	Kp								Sum	Nov 1992				ap				Sum	Ap	Cp
1	2o	1o	2-	1+	2-	3o	2+	6o	19o	7	4	6	5	6	15	9	80	132	16	0.9
2	5-	5+	4-	3+	3-	1+	3+	3o	27+	39	56	22	18	12	5	18	15	185	23	1.1
3	4-	4-	4+	4o	2o	1o	2+	3-	24-	22	22	32	27	7	4	9	12	135	17	0.9
4	2+	3o	3o	4o	4+	5o	3o	5-	29+	9	15	15	27	32	48	15	39	200	25	1.2
5	4+	2+	3o	3+	3+	2+	2+	2o	23o	32	9	15	18	18	9	9	7	117	15	0.8
6	3o	2+	3o	2o	4-	4-	2+	3-	23-	15	9	15	7	22	22	9	12	111	14	0.8
7	3o	2o	3o	3-	2o	3o	2o	3+	21o	15	7	15	12	7	15	7	18	96	12	0.7
8	3+	2o	2o	1+	2o	2o	3o	4-	19+	18	7	7	5	7	7	15	22	88	11	0.6
9	3-	4o	6+	6o	5o	4+	3o	4+	36-	12	27	94	80	48	32	15	32	340	42	1.5
10	3o	3-	2+	3o	2o	3+	2+	3o	22-	15	12	9	15	7	18	9	15	100	12	0.7
11	4-	4o	4-	4-	3+	3+	3-	2+	27-	22	27	22	22	18	18	12	9	150	19	1.0
12	3o	3+	3-	3+	3o	3-	3o	4o	25o	15	18	12	18	15	12	15	27	132	16	0.9
13	3o	2+	2+	4o	4+	3o	3o	3-	25-	15	9	9	27	32	15	15	12	134	17	0.9
14	3-	2+	2+	3o	3+	3-	3-	2+	21+	12	9	9	15	18	12	12	9	96	12	0.7
15	3o	2+	2-	2-	4o	4+	3+	5-	25o	15	9	6	6	27	32	18	39	152	19	1.0
16	4-	2+	2o	2-	1+	1+	3o	3o	18+	22	9	7	6	5	5	15	15	84	10	0.6
17	2+	3+	2o	1+	2-	1+	2o	2o	16o	9	18	7	5	6	5	7	7	64	8	0.4
18	3-	1o	1-	1+	1o	2+	3o	1-	13-	12	4	3	5	4	9	15	3	55	7	0.3
19	1-	2o	2o	3-	3o	1+	1o	1-	13+	3	7	7	12	15	5	4	3	56	7	0.4
20	1-	0+	1-	1o	1-	0+	2-	2+	8-	3	2	3	4	3	2	6	9	32	4	0.1
21	4-	3+	2-	0+	0+	0+	1-	1o	11+	22	18	6	2	2	2	3	4	59	7	0.4
22	1-	2o	3-	4-	4o	3+	4-	4o	24o	3	7	12	22	27	18	22	27	138	17	0.9
23	5-	6-	4+	3+	3+	5-	3o	3+	32+	39	67	32	18	18	39	15	18	246	31	1.3
24	2-	1+	3-	3-	3o	3-	3+	3-	20o	6	5	12	12	15	12	18	12	92	12	0.7
25	3-	2o	2o	4-	4-	2o	2o	3o	21o	12	7	7	22	22	7	7	15	99	12	0.7
26	3o	4-	2-	2+	2o	1+	2o	2-	18-	15	22	6	9	7	5	7	6	77	10	0.5
27	1+	1+	2-	1o	2+	2-	0+	1+	11o	5	5	6	4	9	6	2	5	42	5	0.2
28	1+	2o	1+	2o	1o	1+	2-	2+	13o	5	7	5	7	4	5	6	9	48	6	0.3
29	1+	1o	2-	1+	2+	2-	1o	0+	11-	5	4	6	5	9	6	4	2	41	5	0.2
30	0+	0+	1+	2+	3o	4-	5-	3-	18+	2	2	5	9	15	22	39	12	106	13	0.8

	Kp								Sum	Dec 1992				ap				Sum	Ap	Cp
1	4o	3-	4-	3+	3o	3+	2o	3+	25+	27	12	22	18	15	18	7	18	137	17	0.9
2	3+	3o	1+	2o	2o	2-	2o	2-	17o	18	15	5	7	7	6	7	6	71	9	0.5
3	3+	3+	2-	3+	3-	4-	3-	3o	24-	18	18	6	18	12	22	12	15	121	15	0.9
4	3o	4o	3-	2o	3o	3-	3-	3+	23+	15	27	12	7	15	12	12	18	118	15	0.8
5	4-	3-	2o	1o	1o	1+	0+	0+	12+	22	12	7	4	4	5	2	2	58	7	0.4
6	1o	0o	0+	1-	2-	3o	2-	1-	9o	4	0	2	3	6	15	6	3	39	5	0.2
7	0+	1+	3o	2+	4+	1o	2+	5o	20-	2	5	15	9	32	4	9	48	124	16	0.9
8	5-	3+	4-	4-	4-	4-	4o	5-	31+	39	18	22	22	22	22	27	39	211	26	1.2
9	3+	3o	3o	3o	4+	4o	3-	3o	26+	18	15	15	15	32	27	12	15	149	19	1.0
10	2+	2+	3-	3+	2o	5-	4-	3+	24+	9	9	12	18	7	39	22	18	134	17	0.9
11	3+	2+	2-	2-	2o	2+	2+	3-	18+	18	9	6	6	7	9	9	12	76	10	0.5
12	2+	2-	1-	1o	3o	2o	3-	2+	16-	9	6	3	4	15	7	12	9	65	8	0.4
13	3o	3o	2-	2-	2o	2o	1+	2-	16+	15	15	6	6	7	7	5	6	67	8	0.5
14	3+	2+	1-	1o	1+	3-	3+	3o	18-	18	9	3	4	5	12	18	15	84	10	0.6
15	4o	3o	2o	2+	2+	3-	3-	4-	23-	27	15	7	9	9	12	12	22	113	14	0.8
16	2-	3o	2o	2-	2-	1o	0+	1+	13-	6	15	7	6	6	4	2	5	51	6	0.3
17	0+	1o	3+	3-	4o	6-	5+	3o	25+	2	4	18	12	27	67	56	15	201	25	1.2
18	2+	1+	1o	2o	1+	2+	3+	3-	16+	9	5	4	7	5	9	18	12	69	9	0.5
19	2-	1-	1+	2-	3-	2o	4o	4-	18-	6	3	5	6	12	7	27	22	88	11	0.6
20	2o	3o	4-	3-	3-	3o	3o	2o	22o	7	15	22	12	12	15	15	7	105	13	0.8
21	1o	2o	2+	3o	2+	4o	4o	3+	22o	4	7	9	15	9	27	27	18	116	14	0.8
22	2+	1+	2o	2o	2+	2+	2+	1o	16-	9	5	7	7	9	9	9	4	59	7	0.4
23	1+	3-	2+	2o	3o	2o	2o	1-	16o	5	12	9	7	15	7	7	3	65	8	0.4
24	1o	2+	2o	2+	2o	2+	3+	1o	16+	4	9	7	9	7	9	18	4	67	8	0.5
25	0+	0+	1-	1o	1+	2o	2o	2o	10-	2	2	3	4	5	7	7	7	37	5	0.2
26	1+	1-	1+	1+	1o	1o	1+	1+	9+	5	3	5	5	4	4	5	5	36	4	0.2
27	1-	0+	1-	0+	0+	0+	3-	5-	10o	3	2	3	2	2	2	12	39	65	8	0.4
28	3o	2o	3o	2o	5o	5+	6-	6+	32+	15	7	15	7	48	56	67	94	309	39	1.4
29	6-	6-	5o	4o	4+	5+	4-	3o	37-	67	67	48	27	32	56	22	15	334	42	1.5
30	3-	3-	2+	3o	3o	2o	1+	1+	18+	12	12	9	15	15	7	5	5	80	10	0.6
31	3o	2+	3-	2+	3+	3o	1+	1o	19o	15	9	12	9	18	15	5	4	87	11	0.6

FREQUENCIES OF Kp INDICES 1992

FREQUENCIES OF Kp INDICES, 1992

Kp	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0 o	3	.	1	1	.	.	.	.	1	2	.	1
+	10	3	2	7	3	5	6	4	10	6	9	12
-	11	5	10	21	13	14	24	16	14	7	9	10
1 o	12	10	16	14	23	20	38	25	13	18	11	17
+	7	14	11	27	30	33	40	30	16	24	20	20
-	11	13	17	25	17	23	26	22	18	23	16	16
2 o	23	13	27	25	24	18	18	32	14	17	27	31
+	33	20	23	27	25	25	23	26	13	19	26	27
-	27	21	29	25	26	16	18	17	19	20	22	24
3 o	31	19	37	18	21	22	14	16	16	25	33	30
+	26	16	21	20	13	18	14	20	17	25	20	20
-	28	13	25	15	12	10	12	11	11	16	17	12
4 o	9	8	11	6	5	7	5	6	13	14	9	10
+	6	10	7	2	5	5	4	4	12	12	8	3
-	3	16	8	2	3	8	2	4	9	7	6	4
5 o	6	5	2	1	11	4	3	4	11	7	2	3
+	2	8	1	2	2	3	.	4	7	3	1	3
-		9		1	1	2	1	2	9	2	1	4
6 o		4		1	3	3		1	3	.	2	.
+		10			2	3		1	3	1	1	1
-		7			2	1		1	7			
7 o		5			.			.	2			
+		1			2			.	2			
-		1			1			1				
8 o		1			2			1				
+					1							
9 - o					1							
	248	232	248	240	248	240	248	248	240	248	240	248

LIST OF Kp', 1992

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

Month	Day	Eighth	Kp	Kp'
Jan	03	4	4-	3+

MONTHLY AVERAGES OF Ap AND Cp, 1992

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Ap	14	31	14	11	21	15	10	15	25	15	14	13	16.5
Cp	0.73	1.04	0.74	0.57	0.73	0.70	0.48	0.66	0.89	0.75	0.72	0.67	0.72

MONTHLY and YEARLY Ap 1932 - 1992

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1932	10	11	18	17	14	6	6	11	12	10	8	9	11.5
1933	9	11	12	12	11	8	7	9	11	10	9	7	10.1
1934	5	8	10	6	6	5	5	9	10	5	4	8	7.2
1935	8	9	9	8	6	9	6	5	12	12	8	9	8.9
1936	8	10	8	14	10	11	10	5	4	8	9	5	9.1
1937	7	12	11	20	12	11	12	10	9	19	11	9	12.5
1938	28	15	13	18	17	8	13	12	16	16	10	11	15.3
1939	7	15	19	27	21	15	18	18	13	21	8	11	16.5
1940	15	12	36	17	13	16	11	10	13	14	15	14	16.1
1941	14	17	32	14	10	10	19	16	26	11	16	11	16.8
1942	9	11	22	17	7	7	12	12	16	22	14	10	13.8
1943	10	9	13	14	14	12	14	31	25	23	20	14	17.0
1944	12	11	17	15	9	7	5	9	10	11	6	13	10.8
1945	10	10	16	13	9	6	9	7	9	11	7	13	10.4
1946	12	22	33	19	17	16	22	11	34	13	12	9	18.6
1947	12	11	32	17	14	15	15	25	32	23	14	10	18.8
1948	11	12	17	12	18	9	10	20	14	27	15	13	15.4
1949	20	14	19	14	18	14	7	14	12	25	15	8	15.4
1950	11	17	14	18	16	14	13	24	22	27	19	15	18.1
1951	15	21	21	27	20	17	19	21	39	24	18	20	22.3
1952	19	26	33	33	27	17	14	12	22	19	12	15	21.2
1953	15	15	20	15	15	12	15	18	21	16	13	6	15.6
1954	8	16	16	13	7	5	7	9	16	14	8	6	11.0
1955	12	11	14	13	11	9	8	8	12	11	13	8	11.3
1956	17	15	20	27	25	16	13	15	17	13	23	10	18.0
1957	16	16	26	21	10	22	15	13	49	13	17	17	20.1
1958	14	26	26	19	17	24	24	17	20	16	7	15	19.2
1959	13	24	23	16	18	15	31	23	28	18	21	19	21.3
1960	14	13	18	41	24	20	20	20	20	36	32	21	23.6
1961	11	15	13	14	13	13	27	11	12	16	9	12	14.4
1962	7	10	8	14	7	9	11	14	18	20	12	12	12.3
1963	10	8	8	9	10	10	11	13	28	15	12	10	12.6
1964	11	11	12	13	10	8	9	7	11	9	7	5	9.9
1965	6	9	8	7	5	9	7	8	10	6	5	7	7.7
1966	7	8	12	6	9	6	8	11	21	10	9	11	10.2
1967	11	11	7	8	25	11	8	8	16	9	10	14	12.0
1968	11	16	13	13	13	16	10	11	13	15	16	9	13.5
1969	8	14	16	14	17	9	7	7	14	8	9	6	11.3
1970	7	6	17	15	9	10	19	13	10	12	11	8	11.9
1971	12	12	11	14	13	9	7	8	12	11	10	9	11.3
1972	12	10	12	10	9	14	7	24	12	12	14	9	12.6
1973	15	20	25	29	16	17	11	12	14	18	12	11	17.0
1974	14	16	22	21	17	17	23	19	23	25	17	15	19.6
1975	15	18	20	15	13	11	11	10	9	11	17	11	13.9
1976	13	16	22	17	14	9	8	8	13	11	8	10	12.9

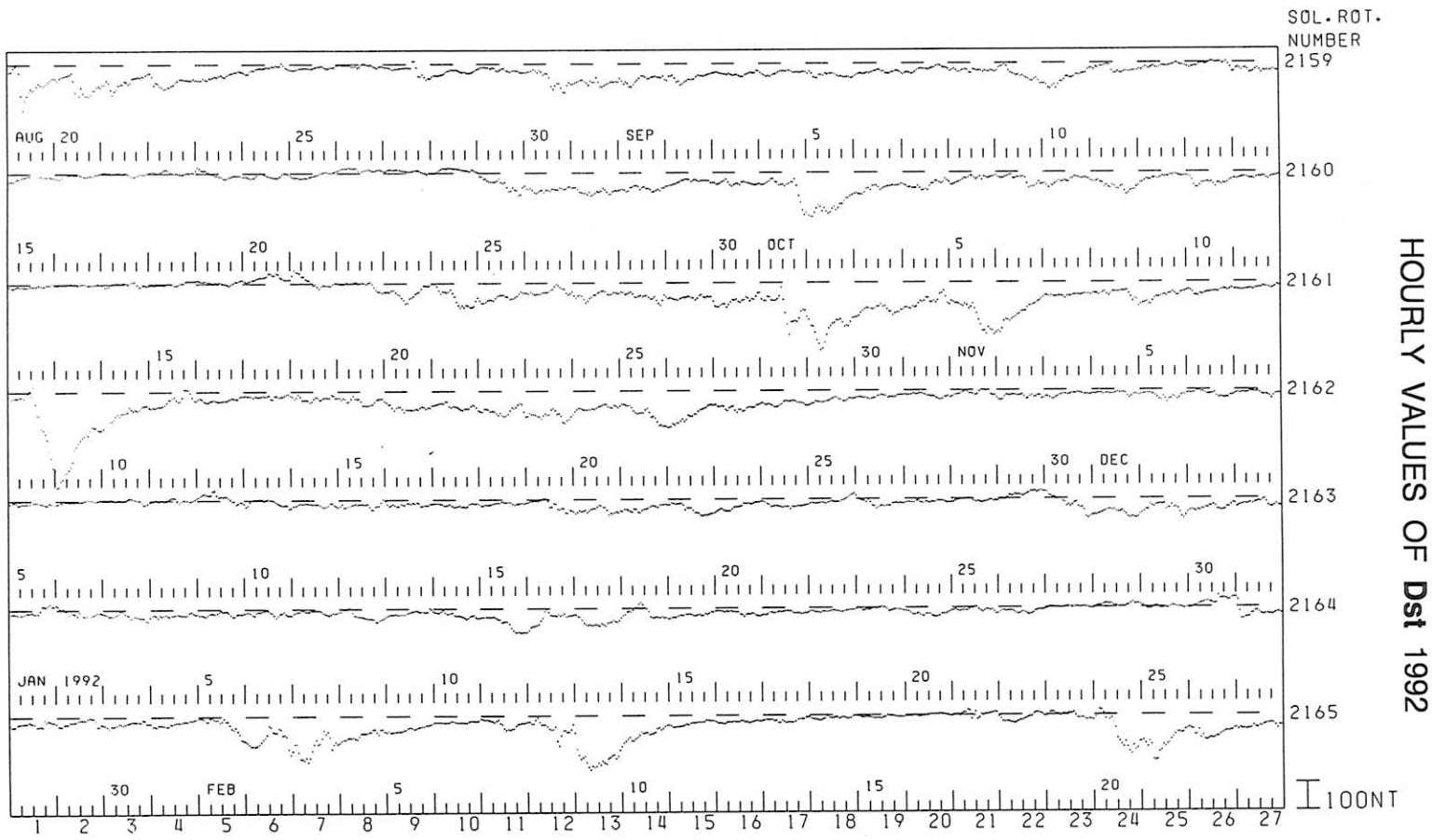
MONTHLY and YEARLY **Ap** 1932 - 1992 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1977	10	11	10	15	11	7	13	13	15	12	9	10	11.9
1978	15	15	16	23	24	19	13	16	18	11	15	13	16.9
1979	16	14	18	25	13	11	11	17	13	11	9	8	14.5
1980	10	10	7	11	10	13	10	10	8	14	13	12	11.1
1981	9	14	17	27	19	11	19	15	12	23	14	10	16.3
1982	11	32	17	21	17	21	30	21	35	18	20	20	22.4
1983	15	26	23	24	22	15	12	16	14	17	20	14	18.5
1984	13	16	21	25	16	15	15	16	23	23	20	17	18.8
1985	15	15	11	21	8	11	14	12	12	14	14	13	13.7
1986	13	27	12	7	11	8	8	12	16	10	13	8	12.5
1987	8	9	10	6	7	7	10	13	19	15	12	9	11.0
1988	13	14	16	12	10	10	10	12	12	11	14	0	12.7
1989	18	15	41	22	16	16	7	19	17	21	19	16	19.5
1990	13	22	23	27	15	16	13	18	13	14	8	7	16.3
1991	8	10	27	16	17	44	27	30	20	30	32	14	23.4
1992	14	31	14	11	21	15	10	15	25	15	14	13	16.5

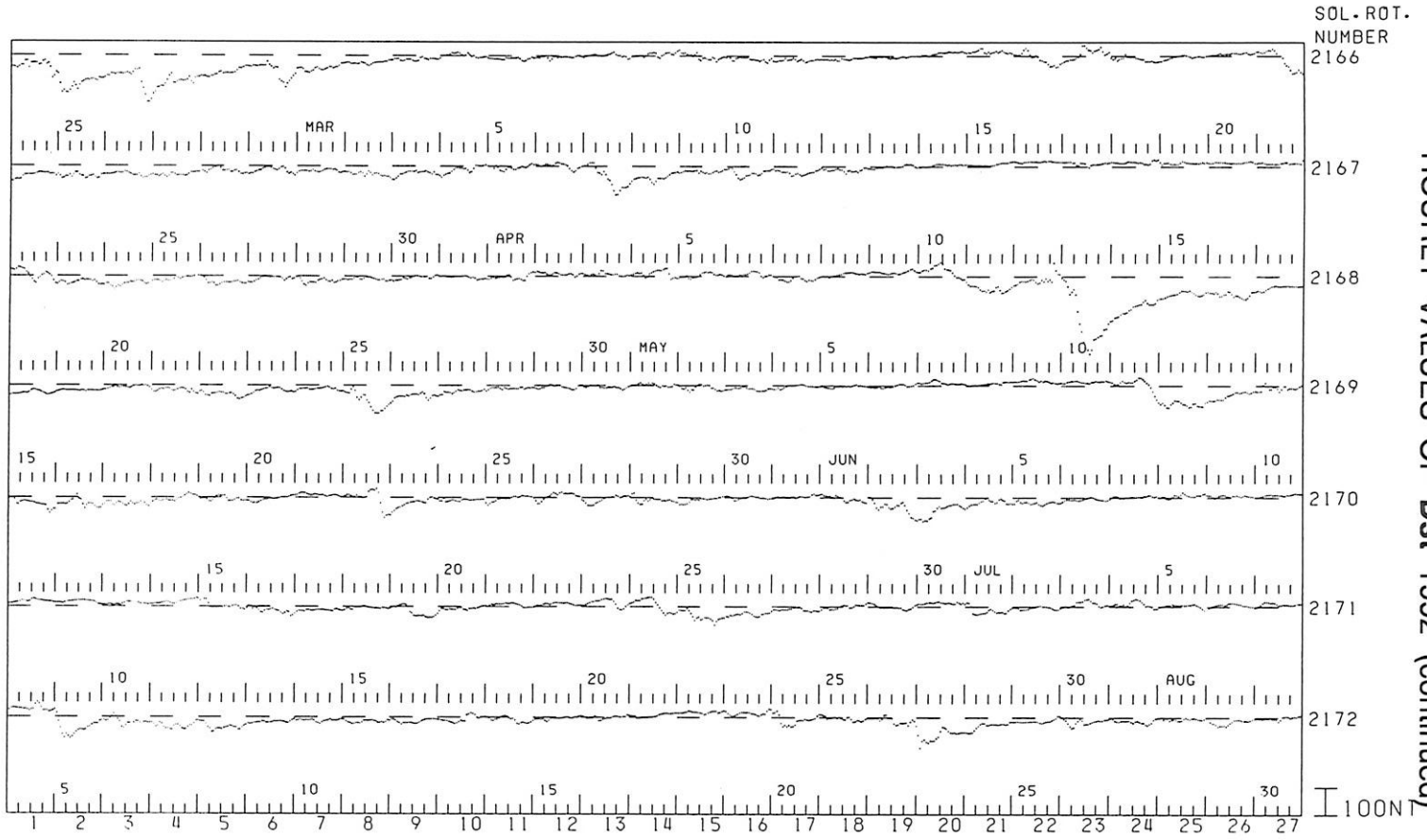
Unit : 2 nT

SECTION 3

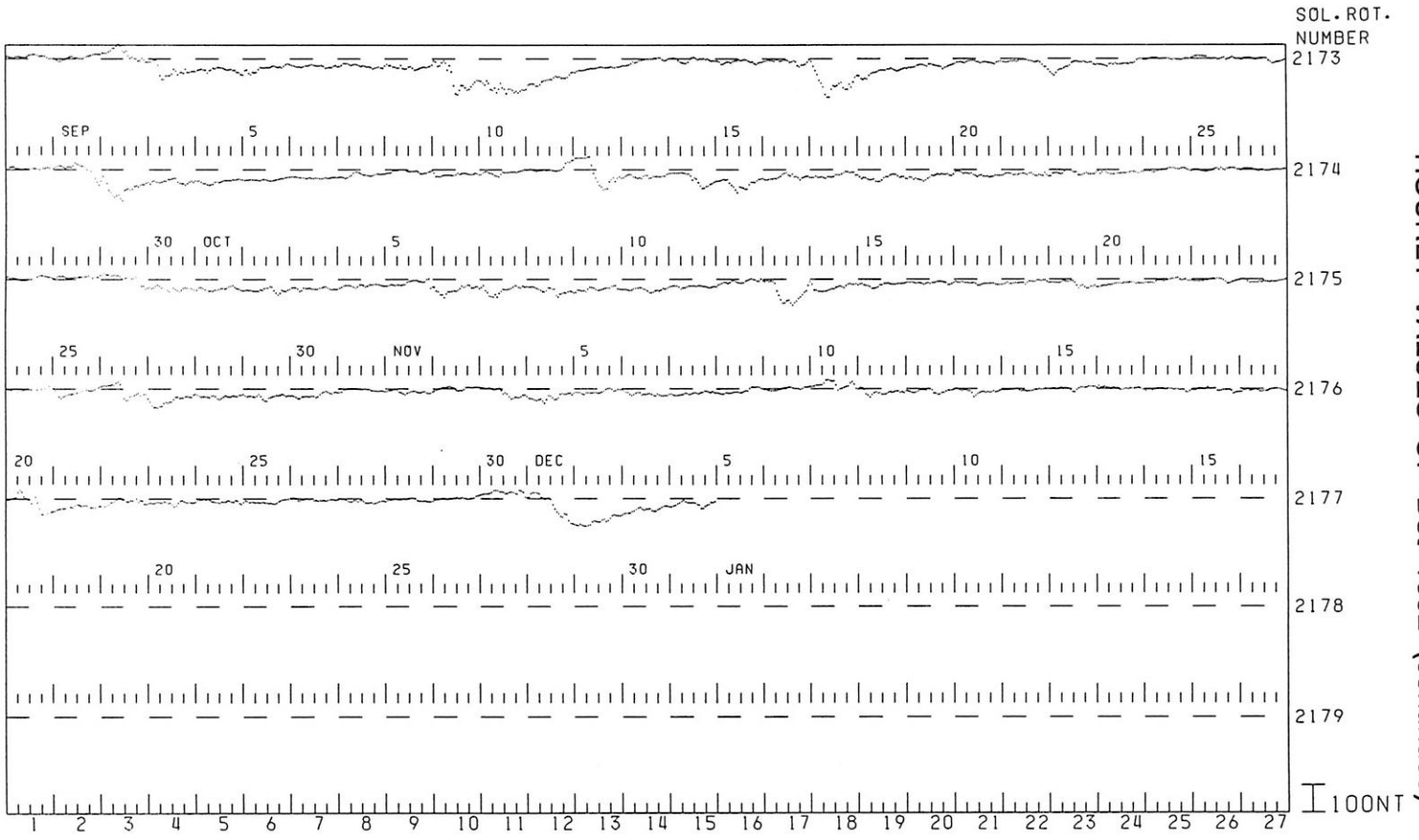
3.4 Dst INDICES



HOURLY VALUES OF **Dst** 1992



HOURLY VALUES OF **Dst** 1992 (continued)



HOURLY VALUES OF **Dst** 1992 (continued)

JANUARY 1992

UNIT=NT

DAY	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	-26	-19	-17	-19	-20	-24	-22	-23	-19	-15	-15	-13	-12	-18	-18	-16	-6	11	10	9	14	19	11	10
2	15	11	2	-2	3	-7	-23	-20	-13	-16	-19	-25	-11	-18	-25	-28	-25	-24	-26	-23	-19	-14	-13	-14
3	-17	-19	-21	-27	-27	-28	-25	-21	-16	-8	-10	-17	-21	-24	-35	-34	-27	-29	-32	-33	-33	-35	-44	-46
4	-32	-25	-22	-27	-34	-24	-28	-24	-22	-27	-30	-25	-25	-23	-21	-23	-25	-24	-26	-24	-15	-12	-18	-22
5	-20	-25	-24	-26	-30	-25	-20	-18	-18	-21	-17	-13	-8	-12	-11	-11	-16	-24	-30	-30	-22	-20	-21	-21
6	-18	-15	-14	-18	-24	-27	-16	-13	-14	-11	-9	-7	-9	-15	-17	-25	-35	-28	-21	-18	-13	-21	-27	-26
7	-27	-20	-17	-14	-13	-8	-9	-12	-13	-12	-9	-10	-10	-8	-8	-11	-17	-22	-24	-27	-23	-18	-20	-18
8	-15	-12	-5	-4	-4	1	-1	-16	-28	-29	-32	-32	-33	-36	-37	-40	-40	-40	-42	-52	-51	-45	-42	-38
9	-33	-29	-26	-24	-25	-23	-26	-25	-24	-24	-24	-20	-17	-14	-13	-10	-11	-15	-15	-14	-17	-15	0	-5
10	-12	-16	-18	-19	-13	-9	-17	-23	-23	-20	-18	-28	-31	-29	-30	-33	-36	-41	-38	-32	-29	-28	-35	-40
11	-38	-36	-36	-35	-35	-35	-36	-33	-37	-43	-44	-55	-53	-52	-52	-61	-76	-86	-94	-92	-91	-95	-93	-93
12	-93	-86	-74	-70	-69	-66	-62	-49	-39	-13	-6	-17	-28	-30	-29	-32	-24	-31	-28	-23	-34	-32	-30	-29
13	-26	-27	-34	-36	-46	-57	-63	-66	-63	-67	-66	-63	-66	-69	-60	-64	-69	-58	-56	-54	-48	-52	-55	-49
14	-38	-30	-26	-16	-13	-16	-10	-2	1	13	19	11	-1	-4	-15	-35	-39	-38	-36	-37	-38	-34	-39	-37
15	-43	-41	-37	-37	-37	-33	-29	-30	-30	-26	-26	-25	-27	-31	-32	-29	-26	-31	-31	-24	-27	-22	-17	-18
16	-14	-12	-13	-13	-15	-18	-14	-16	-13	-16	-16	-18	-17	-26	-28	-35	-27	-25	-27	-23	-24	-30	-32	-33
17	-30	-28	-29	-25	-20	-19	-21	-21	-19	-16	-18	-16	-15	-13	-15	-15	-21	-23	-22	-22	-25	-24	-22	-22
18	-19	-14	-14	-18	-19	-20	-21	-16	-16	-18	-17	-14	-12	-12	-15	-15	-18	-18	-15	-13	-12	-10	-10	-10
19	-7	-3	-6	-12	-12	-8	-11	-9	-4	-4	-6	-2	1	0	-2	-7	-15	-14	-11	-8	-8	-9	-10	-12
20	-13	-15	-16	-22	-28	-29	-26	-23	-29	-33	-34	-26	-26	-27	-33	-36	-37	-36	-33	-26	-25	-26	-22	-18
21	-14	-12	-9	-13	-16	-15	-12	-13	-14	-10	-6	-3	0	-1	-9	-15	-19	-14	-9	-10	-12	-10	-17	-25
22	-24	-18	-13	-13	-16	-14	-14	-14	-18	-23	-27	-25	-20	-18	-22	-27	-29	-26	-22	-15	-12	-11	-11	-11
23	-8	-6	-2	-2	-2	-3	-2	-4	-4	-4	-1	2	1	-2	-3	0	0	-2	-2	0	0	-1	-4	-6
24	-6	-2	3	4	5	8	11	12	10	11	7	4	3	-1	-1	0	-1	4	6	12	17	10	10	11
25	6	4	-2	-8	-9	-9	-4	0	2	-2	-8	-8	-4	-6	-6	-1	2	1	-2	-3	-3	-5	-8	-5
26	-5	-8	-4	1	3	7	10	13	16	18	19	15	13	9	11	40	28	30	30	28	23	25	32	34
27	33	22	-20	-47	-48	-42	-41	-40	-28	-26	-18	-16	-23	-29	-32	-30	-28	-30	-31	-32	-26	-23	-23	-27
28	-33	-40	-40	-38	-31	-29	-28	-27	-27	-26	-21	-25	-26	-28	-39	-38	-36	-39	-13	-21	-16	-19	-22	-23
29	-27	-36	-37	-37	-31	-29	-30	-23	-23	-23	-20	-16	-14	-14	-14	-15	-9	-5	-7	-8	-16	-39	-37	-30
30	-32	-34	-39	-45	-37	-38	-36	-33	-28	-29	-33	-29	-26	-25	-22	-20	-21	-21	-22	-23	-14	-16	-28	-28
31	-28	-38	-38	-41	-34	-33	-35	-36	-39	-38	-30	-31	-28	-25	-25	-25	-24	-20	-21	-21	-17	-18	-15	-13

FEBRUARY 1992

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	-11	-8	-9	-13	-21	-21	-9	-7	-13	-16	-14	-24	-20	-10	-21	-21	-33	-47	-52	-44	-57	-68	-88	-91
2	-94	-99	-106	-112	-112	-114	-111	-106	-97	-88	-81	-70	-37	-42	-60	-62	-62	-47	-51	-73	-71	-77	-123	-143
3	-130	-106	-105	-134	-159	-159	-164	-154	-170	-155	-129	-106	-89	-106	-102	-83	-55	-68	-60	-79	-123	-107	-97	-105
4	-101	-94	-89	-90	-85	-82	-83	-81	-86	-87	-77	-67	-66	-66	-66	-62	-61	-52	-51	-62	-70	-52	-51	-60
5	-63	-58	-64	-63	-63	-61	-60	-60	-58	-55	-53	-48	-44	-47	-52	-49	-45	-44	-42	-41	-37	-37	-35	-32
6	-28	-26	-27	-26	-27	-28	-28	-28	-27	-22	-23	-25	-28	-27	-28	-27	-28	-29	-24	-21	-22	-23	-23	-21
7	-13	-15	-18	-17	-19	-20	-23	-27	-22	-17	-30	-34	-49	-56	-52	-55	-51	-49	-40	-33	-32	-30	-30	-28
8	-25	-25	-32	-32	-19	-11	-26	-36	-35	-36	-42	-51	-54	-53	-43	-96	-114	-76	-58	-57	-64	-63	-54	-35
9	-66	-126	-148	-162	-157	-152	-174	-191	-201	-187	-192	-188	-176	-184	-169	-175	-179	-161	-155	-149	-146	-160	-152	-129
10	-116	-104	-98	-90	-82	-95	-95	-88	-83	-75	-64	-69	-67	-65	-73	-71	-69	-65	-51	-48	-56	-51	-43	-39
11	-37	-40	-45	-46	-44	-44	-43	-42	-39	-35	-37	-32	-30	-30	-30	-28	-28	-28	-27	-20	-21	-22	-23	-23
12	-26	-31	-31	-31	-34	-32	-27	-27	-28	-25	-26	-27	-27	-23	-22	-27	-26	-30	-29	-26	-24	-22	-23	-24
13	-22	-20	-18	-19	-19	-18	-23	-22	-30	-30	-21	-25	-30	-28	-28	-29	-28	-25	-19	-16	-16	-16	-11	-10
14	-9	-14	-16	-18	-19	-21	-20	-17	-14	-6	-11	-12	-13	-10	-9	-15	-12	-9	-11	-15	-14	-12	-6	-4
15	-6	-7	-10	-11	-10	-8	-10	-11	-13	-14	-12	-13	-14	-11	-8	-3	-4	-4	-5	-7	-8	-8	-8	-9
16	-7	-7	-5	-6	-5	-2	-5	-8	-8	-5	-4	-4	-2	0	0	0	1	0	2	1	0	-2	-3	-5
17	-6	-2	0	0	-4	2	6	6	16	13	-16	-5	9	-18	-12	-1	-3	1	0	2	4	6	9	6
18	-8	-16	-25	-28	-26	-26	-29	-31	-33	-30	-26	-22	-22	-18	-15	-11	-8	-7	2	6	6	4	1	-6
19	-7	-3	6	9	6	1	-1	-6	-3	2	-2	2	3	2	6	-4	-13	-15	-12	-13	-19	-20	-17	-19
20	-21	-11	-5	17	14	4	-17	0	-20	-14	-32	-51	-90	-100	-112	-121	-103	-122	-138	-147	-116	-132	-126	-102
21	-102	-98	-109	-121	-102	-113	-168	-171	-168	-140	-134	-114	-120	-112	-107	-94	-86	-76	-68	-68	-71	-69	-58	-55
22	-50	-54	-57	-78	-75	-60	-89	-80	-95	-97	-93	-88	-92	-89	-84	-83	-76	-71	-67	-63	-65	-63	-61	-54
23	-52	-58	-52	-56	-56	-58	-57	-55	-53	-44	-50	-52	-45	-46	-41	-38	-36	-36	-34	-36	-44	-54	-42	-43
24	-45	-44	-46	-50	-45	-39	-39	-24	-23	-49	-31	-30	-30	-30	-38	-37	-25	-22	-36	-32	-47	-85	-78	-64
25	-70	-106	-138	-131	-139	-140	-131	-119	-104	-114	-128	-112	-102	-98	-93	-91	-94	-90	-89	-93	-96	-84	-87	-86
26	-82	-76	-77	-69	-69	-72	-68	-69	-69	-71	-68	-66	-69	-74	-65	-55	-56	-53	-102	-123	-148	-174	-174	-164
27	-143	-137	-121	-119	-115	-116	-108	-93	-77	-69	-103	-104	-99	-95	-93	-96	-94	-91	-81	-99	-106	-84	-80	-80
28	-76	-78	-77	-81	-82	-77	-76	-72	-71	-64	-62	-68	-67	-66	-67	-67	-67	-64	-57	-49	-50	-46	-41	-41
29	-42	-44	-40	-41	-42	-40	-38	-40	-39	-25	-37	-43	-50	-46	-47	-91	-97	-102	-118	-105	-96	-86	-77	-69

MARCH 1992

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	-50	-48	-47	-52	-62	-63	-65	-60	-57	-49	-46	-51	-55	-56	-53	-49	-44	-44	-49	-46	-44	-39	-31	-30
2	-29	-27	-28	-32	-32	-31	-33	-32	-26	-29	-31	-37	-40	-35	-30	-28	-27	-26	-26	-26	-24	-24	-19	-19
3	-18	-13	-14	-13	-21	-22	-20	-16	-16	-16	-20	-23	-23	-21	-10	-7	-13	-14	-17	-13	-13	-13	-15	-16
4	-12	-3	-1	-2	-1	3	8	6	7	9	6	0	-3	-1	7	0	-5	-3	-9	-12	-9	-9	-8	-7
5	-11	-13	-13	-14	-14	-14	-15	-17	-17	-11	-12	-12	-11	-12	-11	-9	-14	-21	-24	-21	-15	-13	-8	-11
6	-11	-9	-11	-7	-6	-4	-11	-21	-14	-6	-6	-10	-7	-8	-7	-6	-7	-8	-9	-9	-5	-2	-3	-5
7	-9	-5	-3	-2	0	3	2	-1	-2	-4	-3	0	2	3	7	10	2	-2	-2	-7	-4	-6	-15	-13
8	-7	-6	-5	-4	-2	-3	-9	-3	5	8	7	9	7	-7	-11	-2	1	7	8	9	3	2	8	14
9	18	8	7	8	3	0	0	-4	2	9	-14	-19	-11	-9	-13	-16	-16	-8	-12	-23	-16	-12	-8	-6
10	-9	-5	-10	-20	-21	-12	-9	-7	-10	-9	-10	-8	-14	-16	-15	-17	-18	-22	-18	-16	-24	-28	-17	-12
11	-21	-23	-22	-20	-20	-18	-12	-18	-17	-16	-11	-15	-22	-18	-14	-20	-26	-24	-21	-19	-19	-16	-14	-16
12	-15	-15	-15	-15	-18	-16	-18	-14	-20	-20	-12	-13	-14	-16	-17	-14	-10	-10	-11	-10	-11	-10	-7	-7
13	-6	-8	-9	-9	-5	-5	-7	-4	-7	-10	-12	-9	-10	-11	-9	-7	-5	-5	-8	-6	-4	-3	-4	-3
14	-3	-4	0	0	0	-3	-1	3	4	5	9	10	9	9	10	13	12	11	12	11	11	14	14	11
15	8	10	9	13	12	16	19	25	25	10	7	12	7	10	11	16	10	14	18	12	9	7	10	7
16	3	3	-1	1	8	19	25	18	3	-8	-6	-1	-5	-17	-19	-23	-24	-32	-40	-40	-36	-43	-41	-32
17	-27	-24	-20	-19	-16	-16	-14	-11	-6	4	35	35	27	20	17	9	16	18	22	29	13	1	5	11
18	-10	-15	-11	-20	-14	-12	-11	4	-5	-7	-7	-7	-10	-11	-13	-15	-15	-22	-22	-23	-20	-24	-25	-24
19	-22	-22	-18	-17	-14	-11	-9	-5	-6	-4	-2	0	1	-1	-3	-5	-9	-7	-5	-4	-4	-6	-6	-3
20	-2	-1	2	1	2	4	7	3	4	4	4	5	8	8	8	6	5	7	9	10	5	3	5	7
21	12	13	10	8	10	16	18	17	23	17	7	-3	-3	-9	-29	-37	-41	-53	-66	-64	-61	-52	-60	-66
22	-56	-57	-52	-50	-52	-50	-40	-35	-34	-34	-34	-34	-33	-30	-27	-26	-28	-29	-28	-29	-33	-31	-32	-38
23	-32	-38	-48	-46	-40	-41	-35	-43	-34	-27	-26	-35	-39	-40	-49	-46	-41	-39	-37	-43	-48	-46	-34	-33
24	-33	-32	-33	-32	-31	-29	-26	-27	-29	-28	-23	-25	-29	-32	-36	-37	-36	-31	-41	-47	-44	-43	-39	-35
25	-33	-36	-37	-41	-36	-33	-39	-43	-38	-29	-29	-33	-37	-36	-36	-36	-38	-37	-31	-25	-26	-25	-24	-24
26	-21	-20	-24	-28	-19	-16	-11	-7	-5	-3	-10	-19	-20	-18	-17	-24	-24	-20	-18	-25	-31	-32	-29	-28
27	-32	-29	-29	-24	-21	-19	-17	-12	-9	-8	-7	-9	-13	-15	-18	-13	-8	-6	-12	-25	-30	-26	-31	-36
28	-28	-22	-20	-20	-20	-20	-22	-21	-16	-21	-23	-25	-23	-20	-16	-13	-13	-13	-16	-14	-18	-25	-27	-23
29	-22	-24	-23	-27	-33	-32	-32	-26	-24	-28	-39	-31	-21	-26	-34	-29	-28	-30	-36	-38	-37	-39	-39	-44
30	-50	-51	-46	-39	-32	-31	-28	-25	-21	-21	-21	-22	-19	-25	-24	-23	-22	-20	-24	-26	-31	-24	-32	-33
31	-37	-42	-35	-31	-29	-27	-21	-15	-10	-9	-10	-10	-12	-11	-17	-25	-22	-11	0	0	-2	-2	0	2

APRIL 1992

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	-2	-4	-4	-11	-1	-7	-17	-20	-22	-14	-6	-6	-10	-14	-15	-9	-8	-4	-6	-8	-4	2	7	3
2	4	2	-2	-3	0	5	4	2	-3	1	8	12	10	6	5	3	-1	-11	-18	-23	-18	-10	-7	-4
3	-2	-1	5	9	10	9	-10	-24	-27	-32	-21	-32	-48	-53	-67	-90	-105	-104	-89	-78	-79	-78	-74	-65
4	-55	-48	-46	-43	-42	-41	-42	-44	-41	-48	-60	-66	-55	-45	-45	-45	-46	-42	-37	-32	-26	-25	-24	-22
5	-26	-24	-21	-18	-19	-19	-20	-20	-17	-17	-26	-19	-23	-27	-24	-29	-28	-24	-20	-18	-23	-21	-17	-13
6	-13	-11	-7	-10	-21	-31	-43	-49	-46	-42	-35	-34	-32	-26	-26	-28	-34	-32	-27	-19	-18	-17	-17	-13
7	-12	-17	-16	-18	-22	-22	-22	-21	-26	-36	-34	-29	-26	-30	-35	-33	-30	-27	-25	-23	-22	-17	-16	-12
8	-8	-13	-12	-17	-18	-16	-16	-12	-10	-13	-14	-20	-27	-17	-16	-20	-20	-18	-22	-16	-14	-7	-7	-9
9	-10	-12	-12	-8	-6	-7	-7	-4	-1	-3	-2	-3	-5	-5	-4	-4	-1	4	5	5	5	3	-3	-6
10	-5	-5	-3	-4	-4	-3	-2	3	4	6	7	6	6	5	3	4	2	3	4	3	5	5	3	4
11	4	4	4	3	2	3	3	2	1	2	2	1	1	2	3	6	8	10	11	11	11	11	14	15
12	16	15	12	11	10	13	14	15	16	15	15	15	14	14	16	18	16	18	18	16	16	14	14	14
13	14	13	14	14	15	11	12	4	3	11	11	9	-2	-5	3	5	5	5	6	7	9	12	10	12
14	14	13	12	12	10	9	10	12	16	16	14	14	13	12	13	12	7	7	5	8	20	23	20	23
15	13	5	10	11	12	7	6	7	6	6	12	17	15	12	12	10	10	9	10	9	11	13	10	13
16	11	9	11	14	14	13	14	13	13	12	11	10	11	11	10	11	10	12	13	14	16	17	15	10
17	9	12	12	13	10	7	8	8	8	7	7	7	10	11	13	13	8	9	9	10	10	9	8	21
18	23	21	18	22	29	28	25	21	12	5	-9	-16	-25	-31	-13	-8	-1	2	10	7	1	-5	-20	-31
19	-33	-27	-21	-24	-27	-37	-34	-32	-30	-27	-23	-22	-17	-16	-20	-17	-18	-19	-23	-20	-27	-35	-36	-35
20	-36	-31	-31	-39	-44	-52	-46	-40	-44	-37	-32	-30	-30	-25	-26	-26	-22	-20	-21	-24	-31	-34	-32	-29
21	-22	-19	-19	-19	-22	-26	-21	-19	-21	-21	-17	-13	-10	-10	-14	-10	-7	-5	-5	-6	-5	-3	-4	-1
22	-1	-3	-9	-18	-30	-30	-26	-30	-39	-39	-34	-29	-27	-26	-27	-28	-26	-24	-23	-21	-26	-30	-31	-31
23	-25	-27	-27	-24	-19	-16	-11	-7	-5	-5	-7	-8	-6	-5	-6	-6	-7	-12	-20	-14	-8	-6	-14	-12
24	-7	-5	-12	-23	-34	-39	-30	-25	-26	-26	-28	-20	-16	-14	-11	-17	-23	-24	-20	-28	-26	-22	-20	-16
25	-14	-14	-17	-15	-16	-11	-8	-7	-15	-16	-12	-7	-7	-6	-9	-12	-15	-17	-18	-16	-15	-22	-22	-19
26	-17	-22	-19	-19	-17	-16	-9	-12	-14	-10	-9	-5	-1	-1	-3	-5	-4	-5	-4	-12	-12	-6	0	1
27	-3	-4	-2	-3	-5	-5	-7	-6	-4	-4	-4	-4	-3	-1	-3	-7	-9	-7	-10	-17	-15	-13	-14	-12
28	-13	-14	-11	-8	-11	-9	-9	-7	-7	-7	2	3	-7	-19	-16	-13	-12	-15	-20	-19	-3	6	10	13
29	12	15	13	11	10	11	5	2	2	6	11	10	7	3	2	2	2	6	7	3	-6	-2	5	8
30	7	4	2	0	4	5	3	-1	7	18	17	7	7	5	3	3	5	4	-2	-3	-4	-2	1	0

MAY 1992

UNIT=NT

DAY	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	2	5	8	10	8	9	1	-9	-5	6	10	14	17	20	20	18	22	26	27	7	-14	-10	-7	-10
2	-11	-7	-7	-5	-1	-11	-13	-8	-7	-6	-3	4	10	12	14	12	13	12	5	2	2	5	3	-1
3	-4	3	4	3	-1	-2	0	3	3	4	4	6	10	16	17	16	15	11	-2	-7	-3	-1	2	2
4	-2	-5	-8	-16	-15	-16	-20	-24	-24	-18	-9	-3	-2	-1	-10	-12	-17	-21	-16	-18	-19	-14	-8	-6
5	-4	-2	-3	-1	-6	-2	-1	0	3	4	5	9	11	11	12	13	12	9	8	6	8	7	5	9
6	12	16	16	14	14	14	10	9	8	6	8	10	11	9	7	7	10	13	16	19	24	26	20	15
7	13	13	19	22	22	19	26	29	38	40	45	50	44	27	24	23	21	12	1	-5	-5	-9	-14	-13
8	-23	-33	-38	-38	-38	-39	-43	-51	-56	-55	-59	-52	-62	-57	-56	-43	-40	-54	-64	-63	-58	-54	-49	-42
9	-37	-35	-31	-23	-20	-21	-22	-20	-16	-12	-14	-23	-29	-26	-16	-21	-10	-20	-14	-22	49	21	8	6
10	-9	-14	-20	-40	-68	-59	-50	-70	-132	-178	-205	-243	-266	-273	-288	-273	-235	-232	-226	-221	-220	-199	-196	-178
11	-169	-166	-156	-154	-151	-144	-138	-140	-136	-128	-124	-114	-112	-110	-107	-105	-96	-91	-100	-106	-106	-106	-101	-89
12	-85	-84	-84	-81	-76	-74	-72	-71	-70	-67	-62	-56	-56	-57	-58	-55	-60	-64	-70	-74	-75	-72	-69	-62
13	-59	-63	-63	-66	-60	-65	-76	-75	-70	-69	-58	-59	-67	-78	-73	-74	-78	-83	-86	-87	-82	-73	-61	-60
14	-59	-56	-57	-61	-58	-52	-48	-44	-40	-38	-37	-39	-40	-39	-38	-38	-37	-38	-38	-39	-38	-40	-39	-39
15	-39	-37	-34	-35	-34	-34	-33	-30	-30	-32	-28	-22	-19	-19	-22	-23	-27	-30	-33	-37	-37	-35	-33	-30
16	-25	-24	-22	-20	-20	-21	-21	-21	-21	-21	-21	-23	-24	-21	-22	-26	-22	-22	-22	-23	-23	-23	-23	-21
17	-18	-18	-16	-13	-10	-9	-8	-10	-12	-9	-9	-10	-12	-13	-10	-6	-4	-5	-5	-3	-5	-3	-6	-11
18	-20	-27	-27	-23	-18	-15	-17	-13	-13	-15	-21	-23	-21	-18	-15	-13	-14	-18	-27	-30	-18	-26	-32	-33
19	-25	-23	-28	-38	-39	-41	-33	-32	-32	-29	-27	-29	-29	-34	-34	-32	-31	-35	-41	-50	-53	-49	-47	-42
20	-39	-37	-34	-29	-24	-21	-22	-20	-16	-14	-13	-9	-12	-14	-13	-12	-12	-17	-22	-25	-27	-25	-24	-28
21	-25	-20	-15	-15	-14	-14	-13	-18	-19	-18	-16	-14	-14	-13	-12	-9	-7	-10	-15	-16	-14	-21	-24	-24
22	-23	-28	-29	-31	-17	-9	-21	-46	-54	-46	-37	-38	-56	-65	-80	-92	-101	-102	-102	-94	-93	-86	-78	-71
23	-66	-60	-49	-45	-42	-42	-42	-43	-38	-41	-37	-35	-35	-34	-37	-32	-27	-33	-47	-56	-49	-40	-37	-41
24	-42	-37	-36	-25	-28	-28	-29	-33	-29	-24	-19	-21	-23	-20	-19	-18	-19	-24	-27	-26	-24	-24	-21	-17
25	-23	-19	-13	-11	-11	-11	-10	-14	-18	-11	-13	-16	-14	-14	-14	-14	-15	-10	-9	-16	-13	-11	-12	-10
26	-11	-13	-16	-14	-11	-11	-6	-4	1	0	-5	-4	-2	-3	-8	-9	-11	-12	-14	-18	-18	-14	-4	-3
27	-3	-8	-10	-7	-3	-4	-4	-4	-3	-10	-10	-12	-12	-9	-9	-9	-7	-10	-10	-14	-19	-16	-12	-7
28	-5	-2	-2	-1	4	7	2	-2	1	6	0	6	4	-2	-7	-9	-4	-5	-4	-8	-8	-6	2	0
29	0	-6	-13	-15	-11	-20	-26	-18	-18	-8	-2	2	1	-5	-3	-1	-3	-12	-12	-16	-21	-20	-23	-21
30	-18	-17	-17	-16	-13	-11	-12	-13	-11	-7	-6	-11	-14	-13	-13	-16	-22	-23	-23	-22	-22	-20	-14	-13
31	-15	-16	-16	-12	-17	-15	-10	-7	-3	-2	-3	-2	-1	-1	1	1	0	-4	-5	-5	-5	-7	-7	-7

JUNE 1992

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	-6	-6	-8	-10	-11	-12	-13	-11	-7	-6	-5	-6	-4	-5	-4	-5	-4	-1	1	-3	-2	-4	-4	-5
2	-7	-9	-8	-10	-9	-7	-11	-12	-9	-8	-8	-8	-6	-3	0	3	3	3	0	-5	-5	-4	-2	4
3	8	8	5	6	8	8	10	15	20	21	17	14	7	6	5	1	4	5	5	4	4	4	5	4
4	3	-2	-4	-1	0	1	0	1	2	3	3	5	4	6	8	7	6	3	2	10	11	11	10	12
5	11	12	11	12	14	16	15	15	19	21	25	20	17	12	15	12	15	14	12	8	9	7	5	7
6	8	6	6	10	12	13	14	15	15	12	9	9	8	7	6	10	11	14	12	12	13	13	16	13
7	11	9	4	1	3	9	15	11	8	11	9	9	15	19	26	26	21	15	8	2	-8	-23	-39	-52
8	-62	-68	-63	-71	-80	-81	-69	-63	-55	-56	-57	-62	-68	-69	-73	-79	-78	-66	-65	-74	-75	-76	-77	-63
9	-60	-55	-56	-56	-56	-51	-52	-53	-52	-44	-38	-37	-34	-30	-25	-25	-29	-27	-24	-23	-26	-30	-27	-24
10	-22	-24	-24	-22	0	8	-4	-15	-14	-6	-6	-12	-23	-14	-4	-4	-15	-11	-11	-12	-13	-10	-5	-1
11	-8	-4	-4	-10	-26	-27	-20	-16	-15	-16	-18	-20	-20	-21	-25	-26	-28	-29	-29	-32	-49	-60	-51	-45
12	-45	-27	-26	-26	-25	-28	-25	-20	-13	-11	-3	7	-8	-12	-28	-42	-31	-25	-24	-27	-34	-40	-41	-39
13	-30	-26	-17	-16	-17	-29	-31	-24	-19	-21	-26	-32	-33	-27	-18	-24	-28	-24	-24	-18	-16	-23	-31	-34
14	-24	-18	-13	-11	-14	-16	-14	-12	-11	-14	-15	-14	-17	-12	-7	-5	-2	4	9	13	10	6	6	2
15	-1	-8	-8	-7	-9	-16	-17	-12	-5	2	5	4	4	4	-6	-15	-15	-15	-11	-6	-6	-13	-15	-13
16	-13	-14	-19	-22	-21	-22	-19	-15	-12	-10	-9	-7	-7	-7	-7	-6	-4	-2	-2	-2	-2	1	4	5
17	6	7	11	15	14	14	10	7	5	7	9	8	6	6	7	3	0	3	4	6	7	5	2	-1
18	-1	3	7	7	4	1	1	5	1	-1	-4	-2	0	18	24	26	23	29	14	-22	-57	-76	-68	-65
19	-66	-57	-51	-44	-40	-37	-33	-29	-24	-23	-20	-19	-18	-15	-15	-16	-18	-21	-21	-9	-3	-1	-4	-7
20	-9	-15	-15	-6	-18	-17	-15	-12	-12	-14	-16	-17	-12	-8	-9	-10	-12	-12	-11	-10	-9	-10	-8	-9
21	-22	-30	-24	-20	-18	-14	-9	-8	-6	-7	-7	-7	-6	-2	1	1	-3	0	4	3	2	2	1	0
22	-4	-14	-24	-24	-17	-10	-3	0	4	9	15	12	7	13	17	11	12	11	12	13	10	4	2	1
23	-11	-14	-22	-30	-31	-31	-29	-23	-20	-16	-12	-7	-3	-2	-2	-1	-1	5	2	-3	-1	3	2	4
24	1	10	13	-12	-22	-27	-26	-13	-9	-15	-11	-4	-8	-8	-9	-8	-14	-13	-15	-12	-10	-14	-16	-20
25	-20	-28	-26	-28	-26	-24	-18	-10	-9	-11	-9	-11	-6	-6	-7	-9	-8	-7	-7	-5	-5	-2	-1	1
26	2	4	3	0	-5	-13	-13	-10	-6	-4	-4	-3	0	3	3	1	-1	-1	-4	-4	-4	-6	-8	-6
27	-7	-6	-2	1	-1	0	1	0	-2	-3	0	0	-4	-2	1	1	0	-2	0	1	8	11	6	6
28	8	10	5	4	2	4	0	-3	6	3	-1	-3	-13	-20	-19	-12	-10	-7	-11	-12	-10	-16	-20	-21
29	-1	-1	-10	-21	-39	-46	-36	-35	-24	-26	-38	-43	-41	-35	-29	-30	-22	-18	-29	-48	-60	-74	-78	-83
30	-86	-81	-80	-89	-86	-87	-79	-75	-53	-50	-40	-33	-40	-39	-37	-33	-30	-29	-26	-26	-25	-30	-35	-40

JULY 1992

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	-44	-38	-32	-28	-26	-25	-26	-21	-16	-13	-6	-3	-10	-15	-15	-22	-20	-9	-6	-11	-13	-24	-25	-23
2	-25	-24	-14	-11	-19	-22	-19	-18	-21	-26	-24	-22	-20	-26	-30	-32	-27	-23	-20	-18	-16	-18	-21	-22
3	-21	-17	-12	-9	-10	-12	-11	-10	-12	-13	-12	-10	-6	-4	-2	0	-2	-6	-8	-10	-11	-12	-13	-12
4	-8	-3	2	3	1	-4	-4	-5	-1	-3	0	0	-1	-1	0	0	-1	2	2	5	5	1	0	3
5	-2	-3	1	0	-6	-8	-7	0	6	6	4	8	16	11	6	4	1	1	1	5	6	5	10	12
6	6	5	5	0	-5	-1	4	6	7	6	2	1	0	4	4	5	2	0	3	6	4	2	1	1
7	-2	-2	-1	1	4	6	8	8	9	6	7	7	6	6	4	4	7	6	8	10	13	11	11	10
8	9	9	9	11	12	13	15	19	18	16	14	17	23	26	23	20	19	19	17	17	16	15	15	12
9	12	11	13	11	9	13	14	16	16	17	18	18	20	19	20	20	18	18	17	17	15	10	5	5
10	4	4	3	5	6	4	2	5	5	4	7	10	14	14	14	14	12	11	11	7	8	7	6	5
11	6	6	8	8	8	9	11	13	15	14	10	7	7	9	14	16	18	20	21	22	25	24	26	30
12	27	20	22	26	25	9	-4	-7	-6	-6	-5	-5	-5	-3	0	-4	-5	0	1	2	-3	-11	-11	-14
13	-8	1	0	-11	-7	-9	-15	-23	-24	-18	-13	-15	-12	-10	-14	-17	-19	-24	-29	-25	-20	-23	-37	-33
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15	-17	-15	-11	-9	-12	-13	-5	-4	-6	-4	-2	-1	-3	-5	-6	-7	-8	-8	-8	-10	-7	-7	-8	-11
16	-8	-5	-3	-4	-1	3	6	7	5	-3	-21	-26	-35	-37	-36	-36	-36	-34	-40	-42	-41	-41	-39	-33
17	-28	-18	-10	-11	-14	-14	-11	-12	-13	-13	-10	-7	-7	-12	-14	-17	-10	-10	-8	-10	-7	-4	-2	0
18	1	-3	2	6	4	7	7	7	7	8	10	9	9	11	10	8	5	4	-1	-6	-7	-6	-5	-5
19	-5	-1	3	1	2	6	9	9	5	8	10	13	12	11	11	10	11	12	9	7	4	1	2	3
20	3	3	5	9	12	16	16	18	18	19	23	25	27	26	24	25	17	6	-8	-13	-14	-11	-3	4
21	9	11	14	20	20	20	26	27	29	31	32	31	25	13	4	-7	-16	-25	-33	-27	-24	-26	-29	-28
22	-23	-14	-16	-16	-16	-10	-17	-27	-38	-52	-43	-40	-49	-47	-41	-42	-42	-47	-53	-69	-55	-48	-45	-43
23	-43	-37	-39	-33	-36	-33	-30	-29	-32	-28	-21	-21	-22	-26	-30	-36	-39	-40	-37	-30	-29	-27	-27	-25
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25	-18	-13	-8	-7	-8	-13	-12	-13	-11	-10	-3	1	4	1	1	-7	-6	-2	4	3	2	2	2	8
26	13	12	10	7	2	-3	-6	-6	-6	-5	-6	-5	-5	-6	-5	-7	-7	-12	-15	-16	-12	-10	-4	2
27	5	8	7	7	9	11	13	13	11	13	16	16	13	12	10	11	13	10	8	8	15	12	8	12
28	7	13	11	-1	-27	-29	-31	-29	-27	-26	-26	-22	-14	-11	-15	-20	-24	-23	-23	-22	-26	-25	-16	-11
29	-7	-6	-8	-9	-14	-14	-13	-12	-11	-8	-7	-5	-2	0	1	-2	-2	-3	-4	-6	-9	-13	-13	-13
30	-8	-5	-2	-2	-4	-2	1	4	14	15	15	17	22	24	26	19	13	12	9	0	-4	-3	1	3
31	1	2	4	7	7	1	2	5	0	3	12	19	22	26	24	21	14	8	0	1	0	-3	-10	-10

AUGUST 1992

UNIT=NT

DAY	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	-10	-4	0	0	2	3	3	6	5	4	3	4	4	2	2	4	4	6	7	3	0	-4	-10	-15
2	-12	-8	-5	-1	2	4	5	6	6	3	5	10	10	11	10	9	7	6	2	1	1	-1	-2	-3
3	-6	-6	-2	4	10	15	15	14	12	13	12	7	3	3	5	5	5	4	3	3	5	8	8	8
4	8	23	29	30	30	29	28	27	25	26	23	19	24	25	43	51	44	31	19	21	20	15	17	20
5	25	11	-18	-41	-65	-77	-63	-71	-78	-73	-64	-56	-50	-47	-48	-49	-47	-40	-37	-31	-26	-26	-26	-17
6	-14	-13	-16	-15	-7	0	9	-2	-11	-19	-38	-41	-32	-24	-24	-28	-23	-17	-18	-23	-26	-21	-20	-23
7	-22	-22	-28	-37	-33	-22	-26	-39	-44	-42	-46	-47	-34	-30	-30	-35	-43	-46	-45	-38	-32	-32	-25	-15
8	-14	-16	-17	-18	-26	-38	-44	-55	-53	-45	-43	-43	-45	-41	-39	-37	-32	-34	-38	-39	-47	-46	-39	-33
9	-29	-24	-26	-25	-22	-22	-20	-21	-17	-18	-22	-22	-21	-20	-17	-18	-17	-16	-18	-19	-22	-23	-18	-13
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11	-9	-11	-16	-20	-22	-26	-26	-23	-23	-24	-20	-14	-14	-15	-14	-12	-15	-16	-22	-22	-19	-22	-19	-12
12	-14	-10	-10	-13	-19	-23	-28	-23	-23	-23	-21	-22	-24	-25	-24	-21	-17	-13	-11	-9	-9	-9	-8	-9
13	-11	-11	-12	-14	-14	-15	-18	-20	-22	-25	-23	-19	-14	-16	-16	5	9	13	10	6	-3	-7	-3	-2
14	0	-2	-5	-12	-14	-10	-10	-7	-1	2	4	1	-5	-8	-7	-12	-24	-27	-22	-20	-23	-24	-23	-19
15	-14	-9	-9	-8	-10	-9	-14	-18	-13	-7	-4	-6	-6	-6	-5	-4	-3	-2	-3	-5	-4	-2	-3	1
16	3	1	-2	-6	-5	-4	-5	2	-3	-15	-14	-10	-8	-4	-5	-4	-1	1	1	-2	-2	-1	0	6
17	4	4	2	2	-6	-6	-4	-3	-3	-3	-1	-1	0	0	2	6	9	10	11	12	10	10	11	13
18	13	13	13	13	15	16	20	19	16	16	16	14	13	11	7	9	13	16	18	19	19	13	14	18
19	21	18	11	6	3	2	5	9	13	15	15	14	15	14	11	10	8	4	2	6	10	9	20	27
20	26	13	15	20	6	-23	-35	-30	-35	-30	-36	-34	-29	-15	-13	-12	-13	-8	-11	-12	-10	-8	-6	2
21	8	8	5	3	-8	-6	-4	-3	-2	-4	-2	-6	-9	-10	-3	-1	-8	-18	-17	-12	-13	-17	-14	-8
22	-6	-7	-6	-5	-5	-6	-13	-8	5	6	-3	-4	-6	-24	-30	-28	-22	-22	-22	-21	-31	-18	-10	-15
23	-32	-65	-111	-86	-81	-89	-92	-85	-86	-84	-77	-70	-51	-36	-38	-42	-50	-56	-57	-56	-58	-57	-56	-55
24	-55	-56	-57	-57	-56	-48	-39	-32	-26	-22	-23	-29	-30	-27	-26	-27	-27	-28	-27	-24	-25	-28	-26	-19
25	-18	-19	-18	-17	-18	-19	-19	-18	-18	-17	-17	-16	-16	-18	-21	-23	-20	-18	-16	-16	-12	-9	-5	2
26	3	-3	-9	-12	-23	-33	-40	-37	-22	-14	-8	-12	-27	-25	-25	-22	-19	-16	-15	-12	-15	-14	-11	-10
27	-8	-7	-8	-14	-17	-18	-15	-14	-15	-14	-13	-18	-22	-16	-14	-18	-21	-21	-27	-30	-25	-21	-11	-6
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29	-3	-3	-18	-23	-23	-27	-34	-31	-31	-30	-33	-28	-22	-16	-11	-10	-10	-10	-13	-14	-14	-15	-12	-9
30	-8	-7	-7	-6	-8	-8	-5	-4	-4	-7	-8	-9	-16	-10	0	1	2	1	-3	-1	1	0	3	4
31	4	6	3	2	0	4	5	5	3	2	2	5	10	12	13	13	11	7	7	8	7	1	-3	-2

SEPTEMBER 1992

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	-1	-3	-9	-13	-12	-9	-6	-2	2	5	5	1	0	-2	-3	-3	1	5	7	9	12	14	14	13
2	13	18	18	17	22	27	35	37	42	50	44	26	21	25	8	-1	3	-2	-3	-11	-9	-1	-7	-15
3	-15	-14	-13	-8	-8	-26	-63	-77	-77	-64	-64	-63	-58	-41	-47	-60	-54	-51	-55	-41	-52	-52	-49	-48
4	-49	-45	-43	-41	-44	-44	-54	-46	-43	-37	-39	-34	-34	-36	-37	-41	-44	-42	-41	-45	-45	-51	-53	-59
5	-61	-46	-43	-55	-59	-51	-53	-51	-42	-34	-35	-36	-34	-35	-34	-30	-29	-32	-34	-32	-36	-30	-24	-21
6	-24	-27	-28	-31	-33	-32	-34	-31	-29	-29	-26	-24	-26	-28	-29	-29	-27	-30	-37	-36	-34	-35	-30	-27
7	-32	-31	-27	-21	-21	-21	-24	-27	-24	-23	-25	-28	-31	-28	-30	-33	-32	-34	-40	-37	-34	-33	-37	-37
8	-29	-23	-28	-28	-33	-33	-37	-36	-27	-38	-40	-39	-33	-31	-37	-44	-43	-40	-37	-34	-33	-35	-33	-30
9	-25	-11	-14	-30	-28	-17	-11	-18	-44	-28	-50	-99	-127	-131	-115	-98	-99	-106	-114	-111	-102	-94	-87	-80
10	-81	-83	-89	-96	-82	-90	-112	-115	-107	-123	-111	-91	-106	-111	-127	-111	-110	-115	-123	-118	-124	-118	-113	-115
11	-112	-97	-93	-92	-93	-100	-100	-95	-85	-81	-80	-78	-77	-77	-71	-65	-68	-67	-72	-72	-72	-69	-60	-53
12	-51	-53	-48	-45	-46	-45	-43	-41	-40	-38	-38	-38	-36	-34	-33	-34	-35	-35	-34	-32	-34	-35	-33	-33
13	-30	-28	-28	-27	-25	-21	-13	-17	-15	-10	-9	-7	-5	-4	-4	-4	-3	-1	-1	1	0	-6	-10	-8
14	-4	-2	-1	0	-3	-10	-15	-17	-20	-20	-15	-5	1	2	-1	-6	-3	-4	-3	-6	-4	-8	-11	-10
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16	-15	-12	-12	-8	-9	-10	-12	-7	-5	-12	-11	-8	-8	-9	-16	-14	-10	-14	-28	-33	-26	-26	-23	-16
17	-8	-13	-30	-46	-60	-80	-90	-104	-130	-140	-140	-112	-99	-102	-98	-92	-88	-106	-112	-112	-94	-104	-86	-70
18	-63	-64	-74	-77	-73	-75	-63	-56	-53	-52	-50	-46	-44	-44	-45	-41	-41	-37	-41	-44	-48	-46	-42	-39
19	-37	-38	-35	-35	-34	-33	-28	-25	-24	-25	-28	-30	-22	-22	-25	-27	-29	-30	-32	-40	-35	-33	-29	-26
20	-24	-21	-16	-15	-14	-16	-18	-14	-11	-10	-9	-10	-13	-15	-19	-16	-14	-15	-17	-17	-20	-22	-16	-13
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22	-42	-51	-58	-63	-54	-46	-42	-41	-37	-33	-32	-27	-17	-14	-12	-13	-15	-15	-13	-16	-18	-16	-16	-23
23	-25	-22	-24	-24	-26	-28	-31	-22	-21	-24	-19	-23	-23	-23	-21	-21	-21	-22	-18	-19	-16	-8	-4	-2
24	-5	-7	-6	-3	-1	1	0	0	-3	-4	-2	-2	-1	-2	-5	-6	-4	-5	-5	-7	-5	-4	-2	-3
25	-1	2	6	7	8	7	7	6	5	-1	-3	-4	-2	-2	-5	-4	-1	1	-7	-4	-1	3	-1	-4
26	-2	-5	-7	-1	0	1	0	-2	-5	-5	-3	-1	-1	-1	-2	-9	-14	-20	-19	-16	-15	-13	-11	-7
27	-5	0	5	8	7	3	1	0	-1	-1	0	-1	-1	2	2	1	0	-2	0	2	3	5	3	1
28	2	6	9	12	10	6	2	7	8	6	12	21	17	14	10	9	5	-3	-13	-9	-15	-35	-49	-59
29	-45	-27	-32	-53	-78	-86	-96	-103	-98	-95	-108	-115	-79	-75	-72	-78	-74	-64	-62	-66	-59	-57	-58	-52
30	-49	-55	-46	-43	-48	-49	-50	-48	-44	-45	-38	-39	-37	-34	-34	-48	-52	-54	-54	-59	-54	-48	-45	-50

OCTOBER 1992

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	-44	-45	-44	-49	-54	-54	-58	-60	-58	-56	-49	-47	-50	-48	-44	-42	-43	-42	-43	-40	-41	-39	-37	-39
2	-40	-42	-41	-41	-39	-40	-41	-41	-42	-42	-39	-38	-40	-42	-44	-44	-42	-40	-38	-37	-35	-35	-32	-30
3	-30	-29	-30	-29	-30	-32	-32	-33	-35	-34	-32	-34	-36	-33	-34	-35	-37	-34	-32	-34	-34	-32	-31	-31
4	-32	-30	-30	-31	-35	-32	-28	-24	-16	-12	-12	-14	-18	-22	-22	-24	-25	-26	-24	-21	-18	-19	-20	-19
5	-18	-16	-15	-14	-8	-6	-6	-3	-2	-3	-3	-8	-10	-9	-9	-9	-7	-12	-17	-18	-16	-16	-12	-10
6	-6	-15	-28	-28	-29	-25	-23	-23	-22	-23	-24	-24	-21	-16	-20	-17	-16	-16	-18	-20	-21	-19	-16	-17
7	-21	-21	-13	-10	-10	-14	-16	-19	-24	-26	-29	-20	-12	-13	-13	-13	-11	-11	-11	-13	-10	-8	-6	-3
8	-4	-4	-1	-3	-7	-9	-8	-6	-5	-4	-5	-5	-4	-5	-7	-8	-7	-5	-1	6	21	25	24	30
9	33	39	39	40	40	40	39	43	44	13	-16	-33	-47	-60	-66	-76	-74	-72	-47	-39	-32	-46	-34	-29
10	-34	-32	-27	-22	-20	-21	-29	-30	-34	-32	-35	-27	-23	-24	-34	-33	-28	-28	-27	-29	-29	-26	-26	-20
11	-17	-16	-15	-15	-15	-15	-13	-14	-16	-18	-18	-25	-41	-33	-37	-50	-62	-71	-71	-64	-63	-57	-54	-50
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14	-31	-31	-31	-26	-31	-31	-29	-32	-34	-29	-29	-30	-28	-21	-21	-22	-19	-14	-9	-10	-14	-12	-12	-22
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22	-8	-4	-2	-2	-5	-7	-8	-10	-9	-7	-6	-3	2	3	-2	4	-1	-4	1	2	4	4	3	-1
23	-1	-3	2	3	3	2	2	-1	-2	-6	-7	-4	-4	-5	-5	-5	-3	-3	-2	-1	-3	-2	0	1
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27	-35	-32	-37	-34	-28	-24	-28	-35	-35	-36	-42	-48	-41	-35	-39	-44	-49	-43	-36	-33	-35	-36	-37	-39
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29	-44	-44	-42	-43	-43	-45	-46	-46	-46	-41	-43	-37	-35	-34	-29	-31	-44	-53	-59	-53	-42	-46	-46	-42
30	-39	-34	-33	-33	-38	-47	-44	-35	-37	-37	-35	-38	-39	-39	-39	-35	-34	-32	-30	-34	-38	-41	-39	-40
31	-39	-36	-32	-27	-25	-25	-25	-28	-32	-36	-31	-24	-23	-25	-31	-28	-24	-23	-23	-21	-22	-23	-25	-27

NOVEMBER 1992

	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
DAY																								
1	-28	-28	-25	-22	-24	-25	-24	-24	-25	-23	-22	-13	-11	-9	-6	-7	-6	-11	-11	-13	-12	-4	-1	-36
2	-31	-32	-46	-49	-59	-59	-70	-56	-49	-49	-47	-45	-46	-43	-37	-27	-32	-29	-24	-25	-34	-34	-30	-30
3	-37	-33	-25	-44	-51	-63	-66	-67	-58	-67	-54	-47	-39	-40	-41	-39	-36	-31	-26	-26	-32	-34	-28	-32
4	-30	-31	-32	-30	-32	-36	-39	-43	-48	-49	-45	-34	-35	-39	-39	-62	-67	-57	-55	-52	-53	-49	-46	-48
5	-53	-51	-42	-43	-46	-45	-48	-39	-32	-33	-35	-40	-44	-43	-41	-38	-36	-34	-35	-29	-28	-26	-38	-39
6	-40	-40	-40	-42	-45	-43	-38	-36	-35	-33	-34	-38	-41	-46	-52	-52	-50	-45	-43	-46	-42	-37	-39	-36
7	-32	-29	-27	-27	-28	-32	-39	-35	-34	-31	-28	-28	-27	-28	-29	-26	-27	-29	-30	-31	-34	-34	-31	-29
8	-31	-24	-21	-18	-13	-15	-19	-15	-10	-8	-12	-15	-17	-17	-16	-10	-7	-4	0	-4	-5	-10	-10	-2
9	-8	-11	-8	-12	-10	-12	-18	-46	-62	-78	-91	-89	-82	-79	-89	-97	-88	-83	-73	-67	-59	-51	-46	-26
10	-12	-21	-43	-43	-47	-47	-49	-47	-47	-44	-41	-38	-39	-33	-31	-28	-31	-34	-27	-21	-19	-21	-22	-20
11	-24	-20	-19	-24	-25	-27	-30	-37	-37	-34	-31	-24	-24	-19	-18	-17	-20	-21	-21	-21	-19	-19	-19	-18
12	-16	-13	-14	-13	-15	-18	-16	-16	-19	-22	-19	-16	-20	-16	-16	-13	-12	-11	-12	-14	-15	-23	-23	-20
13	-15	-11	-14	-14	-12	-13	-16	-15	-17	-17	-15	-19	-25	-26	-22	-20	-19	-19	-19	-18	-18	-21	-23	-23
14	-22	-21	-18	-13	-20	-20	-18	-16	-17	-16	-15	-16	-22	-15	-10	-10	-12	-11	-6	-6	-8	-6	-6	-11
15	-15	-14	-14	-15	-15	-16	-13	-9	-9	-12	-12	-9	-9	-15	-26	-36	-28	-25	-32	-37	-36	-30	-29	-26
16	-32	-32	-29	-27	-26	-27	-23	-24	-22	-20	-18	-17	-18	-19	-16	-16	-16	-14	-14	-15	-19	-17	-18	-18
17	-19	-14	-16	-15	-15	-17	-11	-7	-7	-8	-10	-8	-6	-4	-1	-1	1	3	-4	-7	-5	-3	-8	-8
18	-8	-9	-10	-10	-10	-9	-9	-6	-6	-4	-3	-1	-3	0	-1	-2	-6	-12	-19	-18	-15	-12	-9	-7
19	-5	-3	-2	-5	-10	-15	-14	-14	-15	-14	-10	-13	-9	-11	-12	-13	-11	-12	-12	-10	-8	-7	-6	-3
20	-2	-5	-8	-9	-10	-13	-14	-12	-10	-9	-5	-4	-5	-5	-7	-8	-6	-4	-4	-4	-1	6	7	6
21	-2	-11	-16	-32	-38	-32	-30	-26	-24	-23	-21	-20	-18	-16	-12	-10	-8	-7	-9	-10	-9	-5	-2	1
22	5	7	9	7	10	10	13	10	18	22	13	-4	-38	-46	-45	-32	-30	-27	-23	-19	-28	-29	-24	-24
23	-40	-51	-65	-71	-72	-74	-69	-67	-57	-52	-55	-52	-50	-42	-33	-33	-38	-36	-37	-32	-31	-33	-34	-25
24	-22	-25	-29	-33	-32	-32	-33	-35	-29	-28	-31	-39	-42	-38	-33	-28	-31	-33	-32	-28	-31	-31	-26	-26
25	-23	-28	-32	-30	-29	-32	-33	-29	-23	-31	-41	-47	-49	-37	-35	-32	-30	-27	-28	-25	-22	-25	-30	-28
26	-29	-28	-30	-33	-39	-38	-33	-32	-30	-32	-32	-29	-30	-35	-32	-24	-18	-15	-12	-15	-19	-21	-16	-15
27	-17	-16	-14	-7	-7	-4	-3	-3	-3	-2	-4	-5	-5	-4	-4	-5	-5	-9	-10	-11	-12	-12	-10	-12
28	-13	-12	-10	-9	-6	-5	-10	-15	-17	-21	-25	-19	-16	-13	-12	-12	-15	-17	-17	-13	-13	-19	-20	-19
29	-14	-11	-8	-5	-1	2	2	2	5	5	3	0	-8	-10	-8	-9	-5	2	3	3	1	2	3	3
30	3	2	1	0	-1	1	-1	-7	-6	-2	0	-9	-21	-17	-21	-32	-40	-38	-33	-34	-35	-32	-26	-25

DECEMBER 1992

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	-31	-37	-39	-40	-44	-46	-43	-41	-49	-56	-42	-28	-29	-36	-43	-41	-36	-23	-20	-22	-22	-20	-19	-25
2	-19	-15	-16	-16	-21	-24	-17	-17	-18	-18	-16	-16	-19	-18	-15	-12	-5	-2	-1	-5	-12	-10	-5	-6
3	-7	-11	-15	-16	-23	-28	-24	-19	-16	-17	-25	-23	-24	-21	-20	-23	-28	-29	-22	-26	-29	-29	-28	-28
4	-23	-22	-25	-28	-28	-26	-25	-24	-19	-20	-24	-23	-20	-16	-20	-21	-17	-16	-12	-12	-15	-17	-13	-17
5	-18	-19	-21	-23	-21	-18	-19	-20	-18	-15	-15	-14	-17	-17	-13	-10	-11	-2	2	3	3	4	3	-1
6	-4	-5	-8	-9	-11	-10	-10	-10	-7	-4	0	2	1	3	3	0	-2	-2	-3	-5	-1	3	3	4
7	5	5	7	10	10	11	12	17	29	30	27	25	26	11	-8	-4	-1	2	5	7	18	23	14	-2
8	-4	3	1	-5	-21	-26	-33	-24	-17	-14	-20	-16	-23	-23	-21	-16	-13	-16	-14	-11	-11	-16	-14	-17
9	-10	-11	-13	-16	-17	-15	-12	-7	-6	-7	-8	-2	-3	-8	-19	-20	-24	-23	-17	-16	-12	-8	-8	-8
10	-5	-1	-3	-8	-10	-7	-7	-10	-11	-17	-33	-28	-21	-17	-14	-13	-16	-14	-16	-15	-11	-15	-13	-9
11	-7	-7	-6	-7	-6	-6	-5	-3	-2	-8	-11	-9	-10	-12	-11	-10	-8	-5	-6	-3	-5	-4	-3	-2
12	-3	-4	-2	-3	-4	0	2	0	1	0	-2	-8	-14	-15	-7	-1	3	3	1	2	6	5	5	5
13	2	8	2	3	6	2	1	-1	1	3	1	0	-7	-6	-4	-1	-4	-1	-1	-1	0	2	0	-4
14	-7	-10	-5	-4	-8	-5	-2	-2	-2	0	-3	-5	-2	-2	-3	-5	-4	-4	-6	-5	-6	-14	-16	-11
15	-7	-8	-8	-3	0	-2	-4	-3	4	-2	-2	0	0	-9	-10	-8	-6	-6	-6	-6	-9	-20	-16	-15
16	-14	-13	-8	-6	-4	-10	-9	-6	-4	-7	-12	-12	-10	-11	-9	-5	-3	-3	-2	-2	-3	-5	-8	-9
17	-10	-7	-5	-3	0	3	21	29	22	5	0	-4	-6	-20	-10	4	-17	-39	-59	-60	-64	-57	-54	-51
18	-49	-47	-43	-41	-39	-39	-38	-38	-34	-33	-35	-28	-24	-25	-29	-28	-27	-28	-37	-34	-35	-35	-34	-31
19	-29	-31	-31	-28	-24	-17	-16	-12	-6	0	-1	-7	-8	-13	-13	-9	-10	-7	-3	-15	-9	-10	-22	-23
20	-20	-18	-20	-20	-16	-15	-18	-18	-13	-15	-20	-18	-24	-32	-28	-19	-12	-9	-13	-16	-17	-16	-18	-17
21	-14	-9	-8	-7	-4	-7	-4	-8	-13	-14	-16	-16	-19	-14	-15	-14	-9	-11	-15	-15	-9	-11	-20	-23
22	-16	-11	-12	-16	-15	-15	-17	-16	-17	-17	-15	-17	-18	-20	-19	-21	-22	-19	-14	-10	-7	-6	-5	-4
23	-1	1	1	-2	-11	-10	-7	-6	-3	-4	-5	-3	-10	-8	-12	-9	-9	-9	-11	-8	-6	-5	-7	-8
24	-6	-3	-4	-5	-8	-12	-15	-14	-10	-10	-14	-10	-8	-13	-19	-19	-18	-17	-21	-20	-16	-13	-12	-12
25	-13	-10	-7	-7	-7	-5	-6	-7	-6	-4	-6	-5	-2	-1	-1	-3	-9	-12	-12	-12	-11	-13	-14	-14
26	-12	-8	-7	-6	-4	-3	-4	-4	-5	-3	-2	0	1	-2	-1	1	-1	-3	-4	-3	-2	0	6	8
27	10	13	15	15	15	17	21	27	28	27	23	22	21	16	17	21	22	20	16	14	27	26	21	3
28	2	3	16	19	19	18	15	2	-1	-4	-1	0	-6	-25	-41	-51	-58	-68	-71	-58	-61	-84	-94	-96
29	-98	-101	-103	-98	-102	-104	-105	-103	-100	-89	-85	-87	-90	-88	-82	-79	-87	-84	-75	-66	-62	-65	-66	-66
30	-62	-58	-57	-57	-55	-50	-48	-42	-37	-35	-41	-45	-41	-41	-40	-47	-49	-48	-43	-40	-35	-31	-29	-31
31	-33	-33	-30	-28	-22	-19	-13	-9	-15	-18	-18	-19	-18	-20	-25	-27	-39	-39	-32	-27	-24	-17	-17	-14

DAILY MEANS OF EQUATORIAL DST FOR 1992

DAY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
1	-9	-30	-50	-8	7	-6	-20	1	1	-47	-17	-35
2	-14	-85	-29	-2	1	-5	-22	3	15	-39	-41	-13
3	-26	-114	-16	-44	4	8	-10	6	-46	-33	-42	-22
4	-24	-73	-2	-43	-13	4	0	26	-44	-23	-44	-20
5	-20	-50	-14	-21	5	14	3	-42	-39	-10	-39	-12
6	-18	-26	-8	-26	13	11	3	-19	-30	-20	-41	-3
7	-15	-32	-2	-24	18	5	6	-34	-30	-14	-30	12
8	-28	-47	1	-15	-49	-69	16	-37	-34	0	-13	-15
9	-19	-162	-6	-3	-15	-39	15	-20	-68	-13	-54	-12
10	-26	-73	-14	2	-162	-11	8	-14	-107	-28	-34	-13
11	-58	-33	-18	6	-123	-25	14	-18	-80	-35	-24	-7
12	-41	-27	-14	15	-69	-25	2	-17	-39	-55	-16	-1
13	-55	-22	-7	8	-70	-25	-17	-9	-11	-30	-18	0
14	-19	-13	7	13	-44	-7	-16	-11	-7	-24	-14	-5
15	-30	-9	12	10	-31	-7	-8	-7	-14	-32	-20	-6
16	-21	-3	-12	12	-22	-9	-21	-3	-14	-30	-21	-7
17	-21	1	5	10	-9	7	-11	3	-88	-21	-8	-16
18	-15	-15	-14	3	-21	-6	3	15	-52	-19	-8	-35
19	-7	-5	-8	-26	-36	-25	6	11	-30	-15	-10	-14
20	-27	-64	5	-33	-21	-12	10	-12	-16	-14	-5	-18
21	-12	-105	-16	-13	-16	-7	4	-6	-14	-3	-16	-12
22	-18	-74	-37	-25	-58	2	-37	-13	-30	-2	-10	-15
23	-2	-47	-39	-12	-42	-10	-31	-65	-20	-2	-48	-6
24	6	-41	-33	-21	-26	-11	-14	-34	-3	3	-31	-12
25	-3	-106	-33	-14	-13	-12	-4	-16	1	5	-31	-8
26	16	-88	-20	-9	-9	-3	-4	-18	-7	2	-27	-2
27	-25	-100	-19	-7	-9	0	11	-16	1	-37	-8	19
28	-29	-65	-20	-8	-1	-6	-17	-8	-1	-38	-15	-26
29	-23	-61	-31	6	-11	-36	-8	-18	-72	-43	-2	-87
30	-28	0	-29	4	-15	-51	7	-4	-47	-37	-16	-44
31	-28	0	-16	0	-7	0	7	5	0	-27	0	-23
MEAN	-21	-54	-15	-9	-27	-12	-4	-12	-31	-22	-23	-15

ANNUAL MEAN -20

DAILY MEAN VALUES OF **Dst** 1992

MONTHLY and YEARLY **Dst** 1957 - 1992

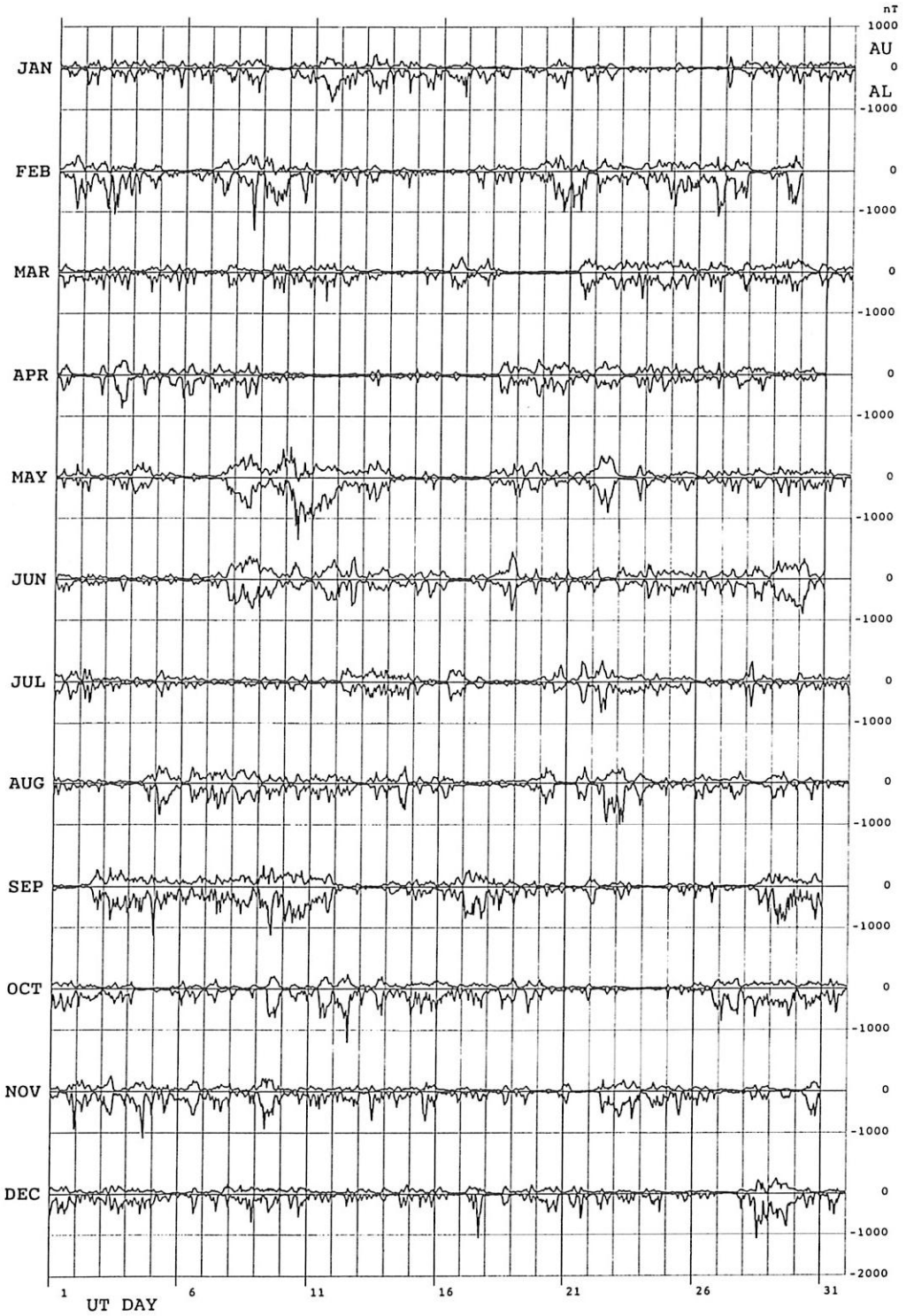
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1957	-19.8	-24.1	-41.3	-27.8	-5.2	-10.0	-11.7	-3.5	-64.0	-14.4	-20.7	-18.5	-21.6
1958	-18.3	-28.1	-32.3	-19.6	-10.8	-22.8	-27.5	-13.8	-24.9	-17.7	-1.1	-18.9	-19.6
1959	-10.5	-31.5	-25.1	-22.6	-14.3	-6.5	-35.6	-32.0	-39.2	-25.3	-35.1	-30.1	-25.6
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	-6.7
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	1.9	2.3	-0.3	-6.2	-0.2	5.9	-3.2
1965	5.7	-1.0	0.8	-3.4	5.7	0.3	1.5	2.5	-2.2	5.3	4.6	2.4	1.9
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	-15.3
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	-9.4
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	-16.2
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	-1.2	-2.9	-10.8	-13.7	-7.3	-0.2	-13.8
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	-22.1
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	-16.3
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	-43.5	-29.9	-2.9	-21.6	-26.6	-19.9	-42.5	-27.5	-12.5	-24.4
1982	-4.0	-50.0	-18.8	-25.0	-2.7	-12.4	-31.2	-23.5	-47.8	-23.9	-26.0	-20.0	-23.5
1983	-21.2	-38.0	-35.6	-23.2	-18.5	-10.0	-1.8	-9.9	-4.8	-15.7	-17.5	-10.5	-17.1
1984	-7.5	-18.5	-26.0	-24.8	-17.6	-10.7	-9.5	-12.2	-22.6	-22.2	-20.6	-16.4	-17.4
1985	-18.5	-19.6	-9.6	-22.8	-7.7	-6.2	-11.1	-12.0	-14.2	-21.2	-18.5	-28.1	-15.8
1986	-15.5	-44.9	-26.0	-11.4	-12.4	-2.7	-1.7	-10.9	-23.1	-13.5	-18.7	-8.9	-15.6
1987	-4.5	-8.0	-9.0	-4.0	-2.0	-3.6	-5.3	-15.7	-22.3	-27.9	-22.8	-15.8	-11.8
1988	-24.0	-23.1	-19.9	-23.4	-17.7	-7.8	-10.8	-16.7	-19.0	-23.6	-23.4	-29.6	-19.9
1989	-31.7	-24.1	-64.9	-39.7	-23.5	-25.7	0.4	-25.5	-34.0	-29.0	-37.0	-22.0	-29.7
1990	-20.3	-40.6	-41.7	-51.7	-23.8	-13.2	-4.2	-26.3	-11.5	-14.2	-5.7	-0.1	-21.0
1991	-4.9	-11.8	-35.1	-20.6	-16.5	-45.5	-33.3	-42.7	-29.5	-45.7	-61.1	-20.5	-30.8
1992	-20.6	-54.1	-15.4	-8.8	-27.2	-11.9	-4.0	-12.0	-30.8	-22.0	-23.4	-14.8	-20.4

Unit : nT

SECTION 3

3.5 AU, AL, AE INDICES

PROVISIONAL HOURLY VALUES OF **AU** AND **AL** 1992



Provisional Hourly Values (nT) of AU, AL and AE Indices JANUARY 1992

DAYUT		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	90	62	44	48	67	35	31	41	56	53	54	95	151	159	53	78	81	41	27	22	27	32	65	25	60
	AL	-38	-6	-1	-5	-26	-16	-34	-57	-211	-68	-62	-162	-200	-113	-176	-96	-40	-41	-10	-15	-21	-21	-62	-15	-62
	AE	129	70	46	54	95	53	67	99	267	122	117	259	353	273	230	174	122	83	38	38	49	54	129	41	123
2		48	8	112	116	67	102	155	64	69	72	200	173	50	15	10	14	61	48	37	4	5	9	12	24	61
		-34	-391	-378	-297	-138	-73	-152	-198	-112	-131	-391	-224	-23	-24	-22	-27	-66	-43	-37	-14	-16	-16	-26	-49	-120
		83	400	491	414	206	176	308	263	181	204	591	397	75	40	32	41	128	92	75	19	22	26	40	75	183
3		25	84	172	205	104	53	67	95	144	147	111	172	192	150	113	48	74	50	39	80	163	118	112	141	111
		-78	-171	-228	-101	-50	-60	-46	-92	-198	-57	-103	-123	-134	-351	-197	-72	-60	-26	-123	-175	-222	-326	-213	-99	-138
		103	256	401	308	154	113	114	188	344	205	215	296	328	502	311	121	135	77	164	256	385	445	326	240	249
4		130	107	55	69	61	133	199	139	106	55	52	48	32	75	101	86	51	49	92	160	92	188	140	150	99
		-118	-41	-32	-47	-175	-104	-133	-33	-16	-24	-117	-33	-25	-68	-56	-36	-90	-70	-105	-262	-127	-112	-122	-265	-92
		250	149	89	117	237	239	333	173	123	81	170	83	58	144	157	124	141	120	197	422	219	301	262	416	192
5		148	162	112	87	44	54	56	70	75	59	75	54	42	46	40	63	77	171	179	102	50	56	58	63	81
		-254	-38	-23	-58	-82	-37	-21	-1	-7	-44	-161	-29	-38	-30	-59	-30	-191	-467	-393	-128	-26	-21	-15	-27	-91
		404	202	136	146	128	92	78	71	84	105	237	84	81	77	100	94	269	638	572	231	76	78	74	92	173
6		66	58	49	57	75	106	109	72	35	28	24	22	31	66	87	64	32	28	32	41	159	125	93	33	62
		-40	-24	-28	-37	-67	-208	-74	-21	-2	0	-9	-31	-61	-281	-161	-136	-180	-75	-57	-35	-202	-363	-116	-43	-94
		108	83	79	95	144	316	185	95	37	28	33	54	93	347	249	200	213	105	90	77	361	490	210	76	157
7		29	34	54	51	63	82	101	73	62	83	83	49	45	58	78	52	70	70	121	150	180	177	121	62	81
		-43	-67	-93	-30	-13	-6	-1	0	-43	-60	-30	-39	-72	-157	-123	-89	-284	-332	-191	-300	-223	-110	-12	-8	-97
		74	102	148	82	78	89	103	75	107	144	113	88	118	216	201	141	354	403	312	451	403	287	134	71	179
8		62	59	101	110	94	80	157	181	189	135	113	56	73	153	175	206	215	181	138	215	141	95	101	71	129
		-38	-38	-59	-146	-59	-26	-15	-97	-285	-177	-125	-284	-397	-267	-250	-222	-180	-242	-578	-358	-209	-178	-91	-30	-181
		101	98	161	256	154	107	174	279	475	313	240	341	471	420	426	428	395	423	716	573	350	274	193	102	311
9		49	68	79	39	24	62	17	23	12	8	11	7	7	16	13	10	7	8	6	5	4	11	36	43	23
		-26	-78	-94	-18	-9	-32	-12	-6	-6	-10	-10	-11	-16	-21	-28	-35	-37	-27	-17	-11	-9	-7	-16	-36	-24
		77	147	173	58	34	96	30	30	19	18	21	19	24	38	42	46	44	35	25	17	15	19	53	80	48
10		40	52	75	129	65	65	64	45	80	144	112	171	116	45	26	30	67	95	67	38	40	63	74	53	73
		-170	-221	-229	-178	-50	-34	-41	-97	-158	-214	-164	-240	-223	-225	-189	-155	-234	-336	-346	-118	-35	-55	-330	-257	-179
		211	274	306	309	116	100	106	143	239	358	278	412	340	270	216	185	302	432	414	157	76	119	405	312	253
11		76	52	28	173	163	143	107	119	210	289	233	249	234	230	207	235	117	78	144	136	141	129	100	68	153
		-187	-256	-232	-198	-166	-208	-153	-207	-272	-319	-498	-379	-518	-630	-807	-758	-604	-651	-421	-416	-508	-269	-267	-246	-382
		263	310	261	372	330	352	262	327	484	609	732	629	753	861	1015	993	722	730	565	553	649	399	367	315	536
12		32	45	120	59	27	37	72	85	81	65	86	176	68	9	12	25	16	47	32	48	52	58	118	77	60
		-253	-231	-378	-208	-170	-193	-492	-296	-134	-108	-197	-381	-300	-47	-36	-130	-105	-131	-192	-122	-79	-40	-131	-29	-183
		287	278	500	268	199	231	566	382	216	173	284	557	369	58	49	156	122	179	224	171	132	98	251	107	244
13		73	81	29	49	129	305	303	352	220	87	166	69	109	107	125	104	151	238	96	55	42	45	39	79	127
		-66	-20	-121	-114	-358	-433	-377	-303	-311	-428	-363	-607	-406	-259	-320	-291	-288	-478	-144	-61	-28	-67	-109	-370	-263
		140	102	151	164	489	740	681	655	531	517	531	677	516	367	446	395	440	717	240	117	71	113	149	450	392
14		77	85	74	90	64	101	183	177	135	70	72	94	44	36	34	172	154	116	66	92	156	136	87	78	100
		-278	-79	-51	-74	-11	-81	-165	-187	-198	-56	-16	-85	-33	-41	-138	-592	-267	-221	-118	-191	-212	-207	-160	-232	-154
		355	166	126	165	76	183	349	365	334	127	90	181	78	78	173	764	421	338	185	284	368	345	248	311	255
15		32	54	30	17	34	27	43	59	85	118	93	104	71	78	74	60	33	27	40	67	64	28	38	30	54
		-64	-168	-133	-88	-142	-149	-161	-252	-456	-367	-244	-310	-346	-512	-280	-22	-124	-208	-135	-155	-271	-34	-62	-44	-197
		97	223	164	106	177	177	205	312	542	485	337	414	418	590	355	83	157	235	176	223	337	63	102	75	252

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)

JANUARY 1992

16	27	42	42	40	69	38	53	78	85	76	82	70	71	69	79	42	38	71	93	76	160	130	83	88	71
	-20	-22	-69	-52	-176	-199	-148	-208	-220	-238	-170	-147	-292	-311	-256	-194	-194	-393	-397	-195	-681	-290	-94	-151	-213
	48	65	112	93	247	239	202	287	307	315	253	218	364	381	335	237	233	464	490	271	841	421	178	240	285
17	77	59	56	36	24	19	25	29	40	76	50	26	16	32	25	28	33	36	36	30	37	42	40	50	38
	-231	-42	-23	-5	-18	-21	-42	-106	-177	-238	-159	-83	-61	-125	-245	-365	-323	-237	-274	-152	-126	-121	-188	-66	-143
	308	101	80	42	43	41	68	137	217	315	210	109	77	157	271	393	356	274	311	183	164	164	229	117	182
18	45	42	28	34	27	39	66	68	59	36	44	60	30	21	26	24	13	16	12	13	12	7	6	3	30
	-49	-25	-81	-59	-27	-128	-196	-67	-159	-222	-199	-246	-182	-42	-20	-15	-16	-18	-13	-11	-22	-10	-9	-12	-76
	95	68	111	94	55	169	263	135	219	259	244	307	212	63	47	41	30	35	27	25	36	18	16	16	108
19	5	10	19	22	36	34	27	55	84	33	31	49	36	19	12	22	5	19	17	17	15	11	8	8	25
	-14	-15	-12	-36	-103	-11	-29	-118	-58	-54	-161	-229	-98	-27	-22	-52	-101	-87	-38	-68	-24	-57	-21	-16	-61
	20	25	31	59	140	46	58	174	144	88	192	279	135	47	35	75	107	107	57	86	41	69	30	25	86
20	27	28	35	59	55	79	124	85	52	110	170	226	181	78	60	90	144	118	65	53	85	33	37	59	85
	-64	-185	-133	-143	-153	-248	-149	-103	-222	-336	-322	-278	-213	-160	-237	-321	-495	-350	-103	-41	-125	-69	-64	-205	-197
	92	214	168	203	209	328	274	189	275	448	493	505	394	239	298	412	640	468	169	94	211	103	103	265	283
21	27	17	22	19	14	14	13	20	17	6	7	6	17	54	13	51	38	25	53	55	24	67	75	114	32
	-43	-11	-7	-7	-9	-6	-16	-51	-43	-32	-8	-25	-37	-232	-303	-295	-126	-134	-192	-132	-18	-64	-170	-374	-97
	71	29	31	28	24	20	30	72	61	38	16	32	54	287	316	346	165	160	246	188	43	132	246	489	130
22	83	40	40	40	39	42	33	36	54	65	115	116	110	96	69	50	44	23	15	11	14	18	18	17	49
	-165	-50	-105	-81	-109	-57	-18	-18	-53	-116	-157	-168	-272	-281	-153	-140	-134	-78	-31	-22	-12	-3	-1	-3	-93
	248	92	146	121	150	101	53	55	108	182	273	285	382	378	223	191	179	102	47	34	28	22	19	20	143
23	14	15	16	19	19	27	42	41	40	34	12	12	11	10	37	41	13	9	13	19	16	15	12	18	21
	-6	-9	-9	-20	-9	-74	-98	-27	-47	-27	-14	-15	-14	-17	-70	-81	-25	-19	-18	-75	-104	-15	-9	-17	-34
	21	25	26	39	29	102	142	70	89	62	27	27	26	28	108	123	39	30	32	95	122	31	22	36	56
24	16	19	16	13	13	17	21	22	17	39	27	23	16	13	13	16	16	20	19	18	17	14	19	31	19
	-27	-29	-5	-3	-1	3	3	-23	-77	-87	-22	-22	-23	-18	-22	-22	-51	-46	-12	-6	-2	-2	-6	-17	-21
	44	48	21	17	15	13	17	46	95	128	50	46	39	32	36	39	67	66	32	25	19	17	26	49	41
25	52	97	129	132	93	49	34	29	18	16	20	25	40	40	38	49	16	13	12	14	14	13	17	14	41
	-72	-86	-40	-7	3	-10	-7	-3	0	-2	-14	-61	-107	-72	-69	-51	-27	-25	-20	-10	-7	-6	-18	-12	-30
	125	183	170	140	90	60	43	33	18	19	34	87	147	112	108	101	44	39	33	26	22	20	36	27	71
26	14	14	21	24	24	24	24	20	23	24	18	16	16	11	13	50	36	36	34	27	17	17	24	25	23
	-15	-11	-10	-8	-4	0	0	0	0	-1	0	-2	-9	-15	-17	-50	-18	-16	-17	-13	-5	-2	-3	-14	-10
	29	26	31	33	29	25	25	20	23	25	19	19	26	27	32	101	55	53	52	41	23	20	28	40	33
27	26	59	54	292	210	43	42	34	28	18	29	21	12	11	50	92	68	46	159	188	153	90	107	113	81
	-4	-106	-456	-445	-311	-47	-29	-24	-29	-30	-25	-31	-24	-25	-61	-58	-73	-77	-106	-134	-103	-209	-104	-90	-108
	32	166	511	738	522	92	72	59	58	49	55	53	36	36	112	150	142	124	266	322	256	299	213	204	190
28	94	119	127	121	124	107	89	70	31	20	39	99	147	148	60	31	29	89	50	31	36	32	37	71	75
	-132	-266	-165	-79	-45	-10	-17	-29	-13	-16	-26	-90	-88	-142	-79	-67	-42	-175	-225	-23	-37	-17	-40	-121	-81
	227	386	293	201	169	118	107	101	45	36	66	190	236	291	140	98	72	265	275	55	74	50	78	193	157
29	101	187	165	93	65	72	37	79	131	78	41	42	46	60	30	62	52	25	55	83	91	123	95	66	78
	-295	-233	-153	-42	-17	-28	-30	-120	-129	-73	-29	-17	-36	-148	-317	-173	-22	-33	-175	-300	-371	-275	-167	-98	-137
	397	420	319	135	83	102	69	201	261	152	71	60	83	208	348	235	75	59	231	384	462	398	263	165	216
30	95	69	40	35	111	122	157	70	35	40	105	62	63	50	41	109	100	52	93	118	75	139	147	131	86
	-119	-93	-207	-193	-123	-206	-107	-14	-30	-38	-69	-62	-99	-91	-50	-258	-323	-166	-195	-121	-122	-215	-236	-179	-138
	216	164	248	230	235	329	266	85	66	79	176	126	162	141	92	368	424	219	289	240	198	354	384	311	225
31	57	102	159	104	84	128	115	71	87	112	83	108	127	127	28	21	42	35	55	94	50	22	47	51	80
	-287	-267	-106	-72	-57	-97	-86	-308	-240	-116	-116	-198	-219	-158	-53	-58	-160	-164	-147	-337	-147	-44	-58	-45	-147
	346	370	266	177	141	226	203	379	328	229	200	306	347	285	82	79	203	200	203	432	198	66	106	98	228

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)

FEBRUARY 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices FEBRUARY 1992

DAYUT		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	65	56	67	79	100	142	184	159	167	174	183	245	154	119	214	371	393	383	282	228	208	132	61	15	174
	AL	-25	-18	-12	-18	-55	-143	-71	-52	-148	-112	-176	-150	-48	-132	-327	-721	-923	-791	-335	-420	-174	-522	-406	-675	-269
	AE	90	74	79	98	156	285	255	212	317	287	360	396	203	252	542	1094	1317	1175	617	648	384	656	468	690	444
2		135	102	130	133	79	165	219	93	79	51	41	40	113	105	166	208	185	165	255	153	151	14	-29	10	115
		-659	-244	-254	-323	-495	-366	-151	-117	-41	-74	-48	-77	-254	-221	-307	-223	-189	-145	-343	-449	-452	-853	-927	-580	-325
		795	347	385	457	575	531	371	211	121	126	89	118	368	328	474	433	376	311	599	602	604	869	896	591	441
3		-28	82	141	70	30	13	48	124	85	42	108	132	112	94	120	84	92	52	92	100	22	102	192	49	82
		-436	-87	-165	-406	-1066	-830	-530	-899	-501	-248	-146	-71	-127	-245	-434	-353	-176	-72	-20	-507	-591	-390	-242	-73	-359
		407	169	306	477	1097	844	578	1024	587	291	255	204	240	340	555	437	269	124	112	608	614	492	435	123	441
4		16	34	57	54	84	55	54	39	39	36	30	36	36	13	35	44	36	58	160	144	87	139	114	91	62
		-58	-100	-217	-543	-172	-50	-39	-24	-47	-68	-111	-129	-101	-102	-255	-205	-176	-233	-423	-369	-208	-111	-224	-90	-169
		74	135	275	598	257	106	94	64	87	104	143	166	138	115	291	250	212	292	584	514	297	251	339	182	232
5		48	23	17	20	18	19	27	30	16	28	42	18	24	25	40	15	11	12	14	11	11	10	17	13	21
		-86	-41	-25	-20	-31	-18	-76	-139	-54	-86	-158	-42	-30	-49	-116	-40	-32	-34	-32	-25	-44	-18	-15	-17	-51
		135	65	43	41	50	38	103	170	71	116	202	61	54	74	156	56	43	46	47	36	56	29	33	31	73
6		18	16	18	18	25	26	30	31	53	62	32	40	65	51	29	46	40	42	41	36	37	26	34	30	35
		-19	-18	-12	-5	-9	-89	-62	-47	-130	-74	-52	-63	-194	-203	-236	-159	-108	-72	-16	-13	-95	-39	-44	-21	-74
		37	35	31	23	35	116	92	78	183	136	85	104	260	255	266	207	150	115	58	50	133	66	78	51	110
7		33	51	81	88	87	85	104	110	106	188	191	248	180	230	299	185	168	107	65	42	37	59	62	64	120
		-13	-84	-286	-195	-44	-42	-139	-197	-165	-218	-537	-605	-511	-242	-466	-321	-199	-120	-48	-47	-11	-22	-49	-57	-193
		46	137	369	285	132	128	243	308	272	407	729	855	692	473	766	507	368	228	114	90	48	82	112	121	313
8		83	132	127	184	206	144	182	210	301	321	365	406	221	183	175	365	373	286	211	121	68	46	79	94	203
		-67	-124	-277	-132	-106	-109	-157	-271	-292	-356	-326	-248	-177	-314	-1312	-1460	-350	-302	6	-52	-95	-64	-45	-40	-278
		150	258	405	317	312	254	340	482	594	679	692	655	399	498	1488	1826	724	589	204	174	164	111	125	135	482
9		239	254	361	213	139	244	324	229	8	-4	-79	-23	39	23	90	97	28	160	81	4	-6	80	20	120	110
		-83	-315	-656	-361	-247	-275	-494	-540	-366	-497	-745	-771	-848	-469	-542	-694	-517	-729	-443	-470	-610	-402	-181	-206	-478
		323	570	1018	575	387	521	820	770	375	492	664	748	888	493	633	792	546	890	525	475	603	483	202	327	588
10		109	83	59	129	115	129	61	56	58	35	72	76	53	61	150	222	97	93	61	66	51	25	24	27	80
		-107	-77	-127	-56	-80	-98	-44	-56	-40	-31	-126	-184	-447	-450	-783	-691	-196	-31	-20	-85	-275	-42	-20	-29	-171
		217	161	186	186	195	227	106	114	100	67	199	261	501	512	934	914	294	125	81	152	327	68	45	57	251
11		25	33	39	33	42	27	31	23	18	27	22	17	15	28	20	32	42	45	34	38	58	58	40	31	32
		-60	-69	-67	-23	-17	-8	-11	-3	-6	-11	-43	-66	-28	-23	-137	-59	-63	-270	-213	-145	-88	-53	-22	-43	-64
		86	103	107	58	61	36	43	26	26	39	66	84	44	53	159	93	107	317	248	184	147	112	62	74	97
12		51	39	73	77	78	51	62	58	37	43	56	66	92	65	128	72	35	20	30	22	20	30	45	41	54
		-116	-29	-195	-216	-202	-93	-11	-2	-9	-35	-65	-158	-128	-202	-352	-101	-16	-32	-18	-7	-3	-18	-95	-57	-90
		168	68	269	294	280	144	73	61	46	78	123	225	222	268	481	174	52	53	48	30	24	49	140	98	145
13		64	43	43	58	74	114	135	158	112	101	82	58	26	31	26	30	41	33	32	25	23	17	23	21	57
		-163	-28	-18	-59	-210	-274	-166	-225	-157	-241	-31	-76	-23	-18	-17	-18	-26	-10	-7	-11	-20	-42	-20	-15	-78
		227	71	61	119	284	388	302	384	271	344	115	135	50	50	43	50	69	45	40	36	43	60	44	36	136
14		27	28	33	42	48	38	29	37	44	92	96	82	43	51	46	33	40	43	28	25	42	29	28	31	43
		-21	-27	-70	-86	-84	-26	-24	-98	-91	-163	-181	-54	-17	-13	-97	-391	-173	-40	-13	-14	-64	-103	-14	-15	-78
		48	56	104	130	133	65	54	136	136	256	278	136	61	64	144	426	215	84	42	40	107	133	43	47	122
15		24	25	29	46	47	45	31	47	36	52	40	25	28	35	31	45	41	28	27	20	19	18	19	20	32
		-9	-10	-32	-118	-19	-1	1	-19	-88	-26	-9	-11	-76	-37	-40	-79	-8	-4	-16	0	0	-1	-2	-4	-25
		33	35	62	165	67	46	29	67	125	79	50	36	105	73	73	125	51	32	43	21	19	20	22	25	58

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)

FEBRUARY 1992

16	21	20	28	42	34	33	36	37	64	56	40	27	31	31	31	30	34	30	31	24	22	25	43	52	34
	-6	-3	-1	-29	1	-6	-8	-41	-68	-49	-14	-14	-13	-9	-13	-14	-17	-10	3	6	9	1	-58	-92	-18
	28	23	28	72	32	40	45	79	132	105	55	43	45	41	46	46	52	40	26	17	12	24	101	144	53
17	55	40	42	49	43	51	71	87	109	149	141	59	108	151	84	77	40	57	30	30	39	46	57	54	70
	-37	-9	-1	-21	-13	-1	-28	-37	-165	-258	-180	-156	-293	-418	-17	-14	-16	-19	-5	2	0	0	0	-10	-71
	92	49	43	71	57	52	99	124	275	409	323	216	402	571	102	92	58	76	36	26	38	46	57	64	141
18	57	65	78	135	175	97	100	108	145	133	78	62	57	85	55	108	84	65	51	43	49	51	69	46	83
	-32	-212	-310	-166	-51	-76	-91	-206	-238	-58	-11	-16	-14	-84	-204	-286	-40	-3	-14	-4	0	-3	-14	-87	-92
	90	279	389	302	227	173	192	315	384	191	90	79	73	170	260	396	124	68	66	47	48	54	83	134	176
19	83	91	112	73	68	45	86	58	53	53	68	74	62	67	80	47	74	116	106	187	189	167	172	235	99
	-190	-239	-97	-20	-8	3	-42	-18	-8	0	-186	-139	-80	-23	-36	-89	-100	-90	-95	-248	-125	-63	-272	-218	-99
	274	332	210	94	76	42	129	76	61	52	256	215	143	92	117	136	175	208	202	437	314	230	445	453	199
20	293	199	250	179	190	102	114	155	212	342	186	79	243	397	311	278	233	57	45	65	133	121	59	-2	177
	-179	-273	-18	-89	-226	-40	-62	-207	-458	-694	-607	-319	-267	-426	-545	-609	-430	-971	-888	-621	-746	-571	-395	-383	-418
	473	473	269	269	417	143	177	363	670	1037	794	398	511	825	857	887	664	1029	934	687	880	694	455	381	595
21	30	66	65	136	147	118	14	45	40	217	282	142	68	100	75	60	23	36	27	16	25	21	46	41	77
	-246	-297	-900	-593	-572	-588	-573	-347	-502	-964	-452	-165	-263	-428	-136	-37	-41	-43	-33	-42	-42	-33	-81	-42	-309
	276	363	967	730	721	707	588	394	542	1182	735	308	332	528	212	97	65	80	62	59	68	55	127	84	387
22	66	84	95	99	170	252	203	315	219	130	131	109	151	132	74	81	69	78	53	54	112	211	168	58	130
	-51	-187	-527	-382	-256	-170	-271	-305	-191	-96	-184	-148	-219	-192	-134	-141	-109	-87	-117	-108	-228	-273	-95	-35	-188
	119	271	623	481	427	423	475	622	411	226	317	259	371	325	210	224	179	166	171	164	341	485	263	94	319
23	149	68	112	127	77	111	87	97	73	70	59	45	62	54	63	73	57	44	94	112	179	191	191	195	100
	-127	-173	-123	-112	-328	-182	-199	-103	-48	-12	-44	-73	-36	-37	-79	-174	-88	-132	-184	-133	-289	-321	-447	-196	-152
	277	243	236	241	406	295	288	202	122	84	105	119	99	92	143	248	147	177	280	246	469	514	640	392	253
24	108	46	102	66	97	105	117	115	198	284	264	148	116	109	214	156	121	212	209	225	197	24	216	215	153
	-73	-38	-134	-158	-78	-30	-92	-276	-252	-224	-95	-34	-26	-176	-261	-164	-57	-196	-149	-417	-571	-690	-398	-216	-200
	183	84	237	225	176	135	211	393	450	509	360	183	143	286	476	321	179	410	359	643	770	715	616	432	354
25	173	163	94	90	145	240	227	116	176	53	84	143	111	71	105	157	182	199	203	227	143	178	128	50	144
	-534	-871	-474	-328	-389	-181	-202	-206	-442	-529	-439	-491	-110	-125	-193	-490	-251	-390	-420	-267	-422	-199	-392	-255	-358
	708	1035	569	419	535	422	431	323	619	583	525	635	222	197	298	649	434	589	624	496	566	377	521	306	503
26	58	72	60	88	116	162	128	118	164	145	217	150	156	100	85	145	351	115	25	41	37	110	32	218	121
	-143	-199	-116	-69	-145	-234	-199	-286	-260	-153	-140	-118	-287	-131	-227	-293	-489	-1117	-1005	-744	-805	-868	-745	-363	-381
	202	271	178	158	262	397	328	405	425	299	358	269	444	232	312	440	842	1233	1030	785	843	980	777	582	502
27	111	140	120	72	43	53	43	38	82	243	208	303	208	138	122	159	245	169	203	149	228	144	81	49	140
	-274	-103	-182	-245	-151	-165	-182	-179	-187	-688	-563	-490	-488	-445	-327	-244	-545	-409	-346	-662	-482	-138	-40	-27	-315
	386	244	302	318	196	218	225	217	270	932	772	794	697	584	450	403	790	579	550	813	712	282	122	77	456
28	46	34	29	17	17	22	14	30	20	13	20	18	17	17	7	9	9	4	27	68	57	104	63	70	31
	-32	-36	-31	-26	-21	-21	-22	-19	-29	-32	-38	-52	-47	-48	-35	-32	-33	-27	-94	-197	-174	-122	-77	-45	-54
	78	70	61	44	39	44	36	50	50	46	59	71	65	65	43	41	43	32	122	266	232	227	140	116	85
29	83	138	92	80	85	95	90	117	81	128	121	204	126	79	187	73	301	376	213	164	231	115	84	67	139
	-52	-143	-37	-38	-119	-26	-27	-27	-31	-144	-456	-711	-298	-346	-806	-753	-589	-814	-631	-471	-373	-147	-49	-84	-299
	136	281	130	119	205	123	118	145	113	273	578	916	425	427	994	828	891	1191	845	636	605	262	134	151	439

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)
MARCH 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices MARCH 1992

DAYUT		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	51	42	40	49	126	161	211	127	99	98	90	57	59	45	35	8	18	45	51	35	38	31	35	59	67
	AL	-71	-69	-88	-93	-113	-375	-287	-211	-265	-246	-71	-111	-106	-65	-70	-218	-116	-108	-116	-109	-116	-78	-127	-226	-144
	AE	123	111	130	143	240	538	498	339	365	345	163	168	166	112	106	228	136	154	169	146	155	111	163	287	212
2		39	30	39	28	27	34	40	29	67	37	105	74	85	43	52	44	34	75	143	68	59	34	28	38	52
		-154	-183	-173	-207	-31	-37	-134	-189	-160	-124	-176	-301	-209	-71	-122	-196	-65	-186	-419	-145	-73	-37	-59	-127	-149
		195	215	213	236	59	72	175	219	228	161	281	376	295	115	175	241	100	262	563	214	132	73	88	166	202
3		33	47	56	77	118	56	25	33	14	86	55	126	136	129	50	39	59	119	57	42	24	31	42	37	62
		-160	-77	-54	-42	-131	-239	-96	-50	-27	-51	-128	-246	-317	-180	-67	-75	-137	-424	-231	-44	-21	-26	-62	-32	-121
		194	125	111	120	250	296	122	84	42	138	183	373	455	311	119	115	198	543	290	87	45	59	106	70	185
4		22	17	31	22	19	20	18	62	29	25	41	49	85	78	53	129	128	62	95	112	105	101	46	33	58
		-18	-17	-82	-35	-14	-8	-7	-38	-64	-27	-20	-87	-149	-146	-85	-256	-481	-134	-120	-114	-243	-198	-39	-26	-100
		42	35	115	59	35	29	26	102	94	54	62	137	234	225	139	386	610	197	216	228	348	300	86	60	159
5		46	42	41	63	88	136	182	144	114	97	51	27	24	27	35	38	102	193	108	48	23	21	64	55	74
		-107	-84	-42	-74	-146	-161	-85	-95	-124	-244	-158	-88	-29	-33	-25	-43	-213	-452	-264	-39	-13	-17	-57	-183	-116
		155	128	85	138	235	298	268	240	240	341	210	116	54	62	61	82	317	647	373	88	37	39	122	240	191
6		85	84	95	34	24	32	67	92	71	23	18	19	19	15	18	16	10	22	34	21	21	33	30	34	38
		-135	-281	-49	-18	-15	-14	-100	-296	-120	-7	-13	-10	-9	-13	-15	-12	-18	-42	-99	-77	-23	-15	-32	-51	-61
		221	366	145	54	40	48	169	389	191	30	32	30	29	29	35	29	30	65	134	99	45	48	64	86	100
7		29	24	31	49	31	20	20	20	35	67	29	25	28	23	32	61	173	139	180	131	106	116	186	115	70
		-49	-21	-18	-38	-12	-8	-9	-8	-5	-96	-66	-20	-18	-24	-27	-48	-372	-267	-297	-324	-144	-147	-308	-292	-109
		79	46	51	88	45	29	30	29	40	164	96	46	47	47	61	110	546	407	479	457	251	265	495	407	180
8		74	71	87	68	55	88	100	75	49	64	40	28	70	70	43	50	34	41	40	33	29	30	35	40	55
		-98	-47	-72	-220	-184	-133	-106	-30	-21	-27	-22	-23	-43	-202	-233	-114	-23	-19	-28	-11	-18	-27	-33	-38	-74
		174	119	160	290	240	222	208	106	71	93	63	51	114	272	276	165	58	61	69	45	47	58	69	79	130
9		74	57	48	56	46	44	32	29	31	92	193	180	94	72	44	207	92	57	195	149	54	49	41	42	82
		-55	-156	-144	-59	-114	-60	-37	-51	-39	-47	-390	-243	-89	-162	-189	-394	-291	-96	-328	-490	-68	-28	-34	-42	-150
		131	214	192	116	161	105	70	81	71	140	584	424	184	235	234	602	384	154	523	640	123	78	76	85	234
10		38	39	67	81	89	99	62	61	99	152	92	84	50	35	38	44	61	107	90	94	169	130	92	75	81
		-43	-39	-78	-136	-295	-119	-31	-45	-222	-235	-114	-233	-61	-44	-44	-117	-200	-197	-201	-180	-377	-325	-143	-98	-149
		82	79	146	218	385	219	94	107	322	388	207	318	112	80	84	162	262	305	292	276	548	457	236	174	231
11		85	76	58	59	121	180	149	96	117	54	100	196	197	96	89	129	72	159	234	90	49	60	45	63	107
		-237	-116	-114	-64	-136	-231	-147	-287	-199	-80	-72	-696	-251	-187	-215	-244	-162	-152	-360	-104	-15	-18	-21	-58	-174
		323	193	173	124	258	412	297	384	317	135	173	894	449	285	305	374	235	312	595	196	65	79	67	122	282
12		44	29	42	88	98	119	164	140	107	86	92	166	72	73	32	59	58	36	21	33	23	36	31	22	70
		-31	-33	-84	-207	-254	-262	-205	-331	-315	-150	-91	-193	-89	-103	-56	-195	-90	-18	-15	-19	-49	-28	-11	-15	-119
		76	63	127	297	353	383	370	472	424	237	185	361	162	177	89	256	150	56	37	53	72	64	43	38	189
13		24	20	28	43	29	56	53	51	54	71	81	51	60	37	30	32	22	24	22	24	27	26	26	26	38
		-16	-17	-41	-165	-104	-68	-114	-130	-133	-191	-102	-54	-55	-79	-58	-24	-12	-25	-44	-10	-9	-10	-20	-22	-63
		41	39	71	210	135	125	168	182	188	263	183	105	116	118	89	57	35	50	67	35	36	37	46	49	102
14		24	20	19	19	28	25	33	30	36	34	40	30	24	24	22	22	18	22	27	37	31	31	34	39	28
		-20	-20	-14	-16	-8	-50	-34	-29	-29	-107	-64	-24	-21	-19	-18	-14	-22	-22	-37	-15	-7	-12	-18	-20	-27
		45	40	34	36	37	77	69	60	66	142	104	55	47	44	42	38	42	45	64	53	38	44	52	59	56
15		28	27	25	30	24	27	29	48	87	135	66	55	37	55	55	50	46	61	54	68	45	40	42	43	49
		-18	-22	-17	-8	-6	-7	-29	-31	-65	-293	-99	-44	-32	-20	-53	-81	-148	-175	-60	-61	2	-7	-13	-17	-54
		47	50	43	40	31	36	59	80	154	429	167	100	70	76	109	132	195	237	115	129	42	47	55	60	104

16	38	35	28	27	28	34	35	36	118	216	175	86	121	108	173	223	309	360	371	245	228	166	115	56	139
	-18	-13	-14	-9	-5	0	0	0	-97	-352	-189	-87	-176	-204	-410	-259	-284	-348	-355	-190	-191	-275	-150	-22	-152
	57	48	43	38	33	34	34	35	217	569	365	174	298	313	584	483	594	709	728	436	421	442	266	80	292
17	70	70	57	53	53	96	54	31	23	42	98	145	179	114	100	104	184	202	349	312	132	74	71	85	112
	-66	-144	-35	-91	-29	-108	-76	-32	-11	-21	-37	-59	-98	-112	-116	-97	-188	-117	-209	-339	-102	-41	-41	-42	-92
	137	214	93	146	84	205	132	64	35	65	136	205	279	227	217	202	374	321	560	652	235	116	112	128	206
18	119	71	37	31	95	82	34	61	35	34	20	20	22	15	3	9	17	10	17	16	24	17	18	20	34
	-92	-168	-50	-30	-84	-95	-21	-42	-17	-26	-23	-22	-30	-25	-31	-23	-35	-36	-26	-23	-28	-25	-33	-35	-42
	212	240	89	62	180	179	56	104	53	61	43	42	53	40	35	33	53	47	43	40	53	42	51	56	78
19	17	16	20	21	21	18	15	14	13	14	11	15	15	14	12	12	9	21	15	23	27	31	27	27	18
	-32	-32	-29	-26	-22	-17	-16	-19	-26	-29	-33	-34	-37	-27	-24	-25	-32	-37	-37	-29	-20	-28	-29	-31	-28
	50	48	51	49	44	36	32	34	40	44	45	51	53	42	37	39	42	58	52	53	48	59	57	59	47
20	21	20	23	23	25	20	22	22	25	21	16	16	15	15	16	18	17	18	19	24	43	22	27	27	21
	-36	-33	-23	-24	-24	-18	-15	-20	-17	-22	-29	-33	-37	-32	-22	-22	-25	-24	-19	-18	-36	-14	-22	-30	-25
	58	53	47	49	50	39	37	42	43	43	46	50	54	48	40	42	43	43	39	43	79	37	49	58	47
21	26	25	26	38	28	32	30	28	43	101	171	166	166	285	291	197	266	332	223	218	119	195	197	302	146
	-30	-28	-23	-27	-25	-17	-18	-16	-6	-12	-316	-335	-269	-496	-668	-312	-259	-492	-413	-299	-192	-181	-330	-210	-207
	56	53	51	67	54	50	49	45	50	114	488	501	436	782	959	509	526	825	637	518	312	378	528	513	354
22	176	65	157	138	159	151	125	91	39	74	80	101	157	90	113	86	65	82	126	162	187	209	231	247	130
	-128	-280	-261	-127	-150	-174	-61	-22	-16	-45	-133	-173	-164	-95	-141	-180	-140	-215	-331	-414	-392	-303	-240	-153	-181
	304	346	419	266	310	325	187	114	56	120	214	275	321	187	255	267	206	298	459	577	580	513	472	401	311
23	220	87	113	152	303	224	226	205	140	113	143	161	250	208	209	67	46	96	178	217	272	166	93	199	170
	-133	-350	-443	-217	-222	-161	-184	-142	-275	-101	-93	-187	-217	-337	-323	-89	-33	-103	-273	-636	-421	-75	-73	-328	-226
	354	438	558	370	525	386	410	348	415	215	237	350	469	545	533	157	81	200	452	854	695	242	167	528	397
24	241	148	118	144	134	197	166	129	118	77	187	240	242	173	200	247	257	252	293	201	225	283	163	111	189
	-256	-97	-77	-328	-203	-131	-149	-217	-138	-76	-249	-226	-284	-311	-311	-450	-408	-303	-340	-269	-355	-400	-121	-120	-242
	498	246	196	473	338	329	316	346	257	154	438	467	527	485	512	697	667	557	634	471	581	684	286	233	433
25	151	140	141	144	136	154	297	277	147	116	110	109	181	241	133	87	103	74	36	91	116	55	30	23	129
	-185	-237	-423	-301	-300	-207	-172	-212	-62	-71	-81	-151	-369	-415	-219	-129	-105	-86	-41	-65	-207	-63	-25	-32	-173
	338	378	565	446	438	361	471	491	210	188	192	260	550	657	352	216	210	161	79	157	324	119	56	57	303
26	18	52	72	57	61	71	47	47	47	77	173	251	126	89	110	108	78	94	162	201	247	170	128	175	111
	-39	-51	-129	-195	-117	-25	-18	-17	-41	-56	-156	-359	-148	-65	-190	-279	-202	-97	-173	-279	-482	-118	-80	-135	-144
	58	105	202	253	180	97	66	64	89	134	331	612	276	155	301	387	282	192	335	481	729	290	209	311	256
27	148	110	149	36	76	98	99	64	28	23	19	20	21	50	53	41	45	47	167	209	190	258	205	174	97
	-106	-63	-69	-25	-27	-42	-86	-58	-15	-21	-25	-26	-29	-48	-90	-165	-59	-48	-185	-438	-298	-469	-278	-152	-118
	255	175	220	62	104	141	186	123	44	45	45	46	50	99	144	208	105	96	353	649	490	728	484	327	216
28	141	86	64	68	62	152	146	128	127	128	147	171	140	52	68	123	100	111	92	113	201	185	164	90	119
	-236	-97	-36	-31	-51	-209	-180	-109	-79	-160	-225	-154	-144	-37	-171	-266	-137	-166	-180	-78	-143	-289	-120	-49	-139
	378	185	101	101	114	362	327	238	207	289	373	325	285	90	240	390	239	278	272	192	346	475	284	140	260
29	115	130	184	116	134	138	260	126	129	209	310	106	89	94	134	269	212	194	241	242	327	268	270	188	187
	-150	-307	-183	-251	-240	-274	-135	-76	-130	-296	-219	-41	-66	-187	-274	-471	-257	-229	-226	-465	-340	-251	-207	-199	-228
	266	438	368	367	375	413	397	204	260	506	529	147	156	282	408	742	470	424	468	708	668	521	478	387	416
30	265	214	171	144	139	197	141	111	102	82	75	52	58	40	27	18	15	89	137	209	172	195	174	134	123
	-234	-166	-107	-93	-187	-112	-74	-68	-42	-22	-38	-24	-38	-45	-28	-9	-16	-111	-178	-341	-230	-177	-173	-87	-108
	499	382	279	238	327	309	217	180	145	105	114	77	97	86	55	28	31	201	316	551	403	374	348	222	233
31	47	90	119	108	83	50	37	22	20	84	53	76	68	80	94	128	35	43	92	91	101	138	93	62	76
	-388	-203	-146	-130	-46	-28	-37	-39	-42	-19	-56	-88	-55	-77	-199	-254	-114	-50	-50	-36	-44	-180	-192	-82	-106
	436	294	265	240	130	79	75	61	63	103	110	165	124	159	293	383	151	94	143	127	146	319	287	145	183

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES (continued)

APRIL 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices APRIL 1992

DAYUT		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	45	33	63	36	154	177	141	235	271	144	185	88	84	30	35	34	26	22	19	12	17	20	20	19	80
	AL	-45	-35	-44	-79	-209	-371	-347	-313	-128	-41	-246	-180	-31	-30	-41	-53	-22	-18	-17	-16	-15	-13	-17	-22	-97
	AE	91	69	109	116	364	549	488	549	400	187	433	268	116	61	77	88	49	41	37	29	33	34	38	43	178
2		31	43	25	14	14	14	15	26	38	45	30	22	17	13	13	30	76	181	221	247	164	84	44	46	60
		-18	-22	-25	-26	-24	-26	-32	-30	-32	-48	-57	-49	-44	-45	-43	-58	-109	-265	-482	-215	-93	-34	-30	-31	-77
		50	66	51	41	39	41	48	57	70	93	87	72	62	59	58	89	186	447	703	463	259	119	75	78	138
3		32	23	22	26	25	58	123	215	207	202	277	186	252	371	338	355	355	309	133	74	75	59	23	22	157
		-33	-30	-24	-25	-21	-27	-120	-342	-373	-235	-450	-426	-460	-797	-595	-647	-632	-610	-138	-69	-90	-139	-72	-70	-268
		65	54	47	52	47	86	243	558	580	439	729	614	713	1169	934	1003	987	920	271	143	166	199	96	93	425
4		38	24	26	31	25	49	19	16	27	167	265	149	144	51	5	24	31	37	59	106	50	16	29	59	60
		-86	-41	-42	-27	-27	-56	-34	-37	-43	-140	-449	-481	-207	-132	-88	-79	-87	-43	-54	-95	-37	-23	-39	-57	-100
		126	66	69	59	54	107	54	54	71	308	715	631	351	183	94	104	119	81	114	202	87	40	69	117	162
5		91	44	28	41	28	18	32	22	40	81	158	122	175	75	117	84	36	24	25	59	77	94	160	113	73
		-242	-128	-42	-42	-25	-26	-20	-55	-37	-50	-229	-187	-265	-210	-261	-265	-126	-90	-45	-52	-63	-90	-556	-359	-144
		334	173	71	84	55	45	53	79	78	133	388	310	441	287	378	350	164	116	71	111	141	184	717	473	218
6		107	69	36	104	230	208	275	270	149	108	43	50	35	32	36	62	143	89	44	59	47	37	29	25	95
		-268	-247	-131	-174	-493	-479	-473	-469	-156	-113	-148	-80	-110	-86	-43	-69	-197	-204	-122	-30	-16	-23	-27	-36	-175
		377	317	168	279	724	687	748	740	306	223	192	131	146	119	80	132	341	294	167	90	64	60	57	63	271
7		45	45	30	160	78	92	143	196	277	199	118	115	53	86	107	99	112	142	92	58	77	36	35	31	101
		-52	-89	-63	-228	-331	-207	-185	-211	-432	-253	-160	-276	-95	-107	-238	-117	-171	-294	-109	-81	-154	-47	-24	-59	-166
		98	135	94	389	411	301	329	408	710	453	280	392	149	195	346	216	284	437	202	140	233	83	60	91	268
8		85	49	47	114	129	70	106	60	99	126	174	299	123	50	56	35	55	77	245	194	65	54	42	26	99
		-243	-147	-154	-184	-253	-132	-163	-67	-83	-337	-554	-467	-425	-155	-58	-109	-245	-180	-463	-319	-39	-21	-18	-7	-201
		329	196	203	300	384	203	271	128	183	463	729	767	549	205	115	146	301	257	709	514	105	76	62	35	301
9		23	24	32	35	28	23	32	47	33	58	75	49	43	40	54	24	42	31	29	23	42	55	85	83	42
		-20	-44	-70	-74	-79	-30	-34	-49	-34	-103	-141	-97	-41	-53	-55	-105	-184	-75	-24	-21	-36	-39	-122	-69	-67
		44	68	103	110	108	54	68	98	68	162	216	147	86	94	109	130	227	107	54	45	80	96	208	153	110
10		48	39	43	23	52	62	41	50	34	30	38	57	52	58	25	17	19	18	23	23	17	15	19	20	34
		-29	-54	-55	-32	-116	-76	-34	-35	-40	-40	-45	-35	-26	-57	-63	-21	-24	-29	-8	-13	-12	-11	-15	-26	-37
		79	94	100	57	169	140	76	86	75	71	83	92	78	116	89	40	44	48	32	37	30	28	35	48	73
11		39	29	17	12	20	16	15	9	11	12	14	10	12	11	23	19	16	13	16	14	12	13	18	19	16
		-41	-31	-39	-31	-30	-29	-33	-36	-34	-40	-39	-33	-31	-28	-29	-37	-24	-17	-15	-13	-17	-14	-21	-28	-29
		82	61	57	45	51	46	49	47	46	52	54	44	44	40	53	56	40	30	32	29	30	28	40	49	46
12		18	17	14	19	20	23	21	17	20	26	29	31	35	38	51	36	18	25	24	23	24	20	19	20	24
		-35	-35	-32	-33	-30	-24	-29	-30	-31	-37	-37	-31	-28	-18	-18	-35	-43	-14	-8	-12	-12	-8	-20	-30	-26
		54	53	47	53	51	49	52	49	52	64	66	63	63	57	70	73	61	39	32	36	37	30	40	51	52
13		18	14	26	22	22	18	88	69	51	30	28	88	134	40	33	27	30	21	19	34	29	37	25	25	39
		-27	-25	-26	-24	-22	-61	-97	-145	-123	-26	-32	-39	-248	-101	-32	-32	-36	-24	-14	-30	-13	-15	-19	-27	-51
		47	40	53	47	45	80	186	216	175	57	60	127	383	141	65	60	67	46	34	65	43	53	45	54	91
14		28	22	27	23	26	29	29	44	38	57	30	34	25	25	21	23	25	58	38	18	50	34	32	46	33
		-32	-29	-45	-40	-27	-76	-27	-43	-79	-64	-42	-39	-30	-22	-19	-28	-39	-67	-112	-34	-17	-12	-15	-29	-40
		61	52	73	64	54	106	58	88	118	122	73	73	55	48	41	53	65	125	152	54	69	47	47	76	74
15		169	69	41	43	27	23	14	13	16	26	88	54	41	32	36	22	17	32	42	91	60	57	39	25	45
		-115	-178	-34	-31	-23	-26	-30	-33	-35	-42	-60	-39	-27	-16	-13	-13	-22	-30	-79	-123	-62	-14	-11	-20	-45
		285	248	76	75	51	50	45	47	51	68	149	94	68	49	50	36	40	62	122	215	123	72	51	45	91

16	19	15	13	12	13	11	13	12	13	19	20	22	56	84	59	28	31	31	22	20	20	23	23	19	25
	-25	-25	-23	-20	-23	-28	-32	-42	-38	-44	-43	-39	-32	-115	-122	-66	-48	-20	-16	-14	-14	-16	-16	-24	-37
	46	41	36	34	37	40	47	55	52	64	64	62	89	200	181	95	79	52	39	35	35	40	41	44	63
17	14	16	14	14	12	9	9	9	12	18	17	14	12	9	19	46	42	19	15	24	13	13	21	40	18
	-30	-31	-27	-34	-35	-30	-29	-38	-36	-41	-43	-40	-35	-38	-36	-51	-127	-45	-17	-20	-21	-29	-30	-29	-37
	45	47	43	49	48	41	39	47	49	59	61	54	48	48	56	97	169	65	33	45	35	43	51	70	56
18	24	26	24	25	31	31	47	77	131	218	268	319	247	264	341	142	91	45	69	140	225	197	205	158	139
	-28	-26	-27	-29	-26	-22	-26	-85	-364	-439	-324	-272	-319	-369	-451	-190	-129	-43	-52	-130	-255	-149	-114	-222	-170
	53	53	52	56	58	54	74	164	495	658	593	593	566	633	793	333	221	89	122	271	481	347	319	380	311
19	76	152	206	168	156	182	160	167	155	105	139	115	70	66	50	39	103	179	270	386	353	256	266	200	167
	-260	-120	-151	-91	-223	-160	-98	-183	-250	-45	-45	-91	-141	-97	-59	-54	-146	-262	-466	-481	-521	-448	-235	-254	-203
	337	273	358	261	380	343	258	351	406	150	186	208	212	163	109	94	250	442	736	867	874	705	501	454	372
20	231	159	146	127	207	177	33	39	121	219	242	262	185	166	236	151	216	204	297	325	274	216	254	176	194
	-291	-64	-186	-317	-321	-133	-63	-46	-103	-406	-323	-253	-163	-154	-207	-223	-279	-283	-482	-375	-344	-152	-123	-153	-227
	522	224	333	445	528	310	97	85	225	626	565	516	349	321	444	375	496	487	780	701	619	369	377	330	422
21	77	72	133	195	178	117	50	92	62	111	38	28	54	104	77	112	140	73	50	32	25	20	13	19	78
	-120	-61	-78	-238	-150	-71	-24	-26	-60	-58	-48	-39	-33	-64	-112	-120	-184	-103	-11	-8	-10	-20	-28	-26	-71
	199	135	212	434	329	189	75	120	123	170	86	67	88	169	191	233	326	177	62	41	36	41	41	47	150
22	61	130	158	164	189	204	167	196	302	340	314	253	159	126	153	184	187	206	162	181	242	225	207	162	195
	-46	-153	-322	-291	-270	-178	-135	-204	-245	-129	-242	-188	-200	-191	-292	-340	-159	-126	-122	-132	-290	-223	-152	-104	-197
	108	283	482	456	459	383	303	400	547	470	558	442	360	318	446	526	346	332	286	314	532	449	359	268	393
23	100	92	42	19	11	8	9	17	19	18	18	18	23	19	63	52	152	202	100	46	73	137	188	137	65
	-68	-106	-49	-42	-28	-26	-27	-28	-34	-39	-38	-33	-33	-34	-59	-81	-191	-306	-274	-92	-49	-104	-250	-121	-88
	169	198	91	61	39	35	38	46	54	57	57	52	57	54	122	133	343	509	376	140	123	242	439	259	154
24	66	114	177	241	273	199	64	33	76	152	153	106	68	43	40	150	218	169	179	194	132	93	64	43	127
	-50	-63	-383	-426	-331	-138	-40	-26	-33	-145	-176	-93	-65	-25	-39	-225	-400	-364	-272	-277	-133	-138	-164	-51	-169
	118	178	561	667	604	339	105	60	110	298	330	200	133	69	80	376	619	533	452	472	267	232	229	94	297
25	66	117	137	284	149	46	22	106	107	82	83	116	151	92	57	77	47	21	14	33	112	159	144	154	99
	-49	-109	-211	-185	-143	-33	-18	-51	-189	-100	-55	-57	-133	-168	-100	-127	-154	-101	-19	-17	-71	-198	-178	-94	-107
	116	226	349	471	294	80	41	158	297	183	139	174	285	262	158	204	202	122	34	51	184	358	323	250	207
26	230	185	144	203	232	105	58	88	53	55	116	82	68	38	19	22	30	40	116	299	161	37	31	45	102
	-161	-123	-110	-131	-112	-46	-11	-24	-105	-53	-56	-131	-78	-38	-50	-48	-74	-59	-88	-330	-220	-27	-32	-39	-89
	392	309	256	335	346	152	69	113	158	108	173	214	147	77	70	70	104	100	204	630	382	65	64	85	193
27	82	69	29	16	12	32	94	49	54	33	23	19	50	99	129	99	85	132	181	200	178	149	150	198	90
	-53	-64	-35	-29	-21	-18	-48	-62	-47	-40	-37	-32	-34	-145	-304	-341	-184	-261	-246	-184	-139	-181	-124	-143	-116
	137	134	64	45	34	51	143	112	102	73	60	52	85	244	434	442	271	394	428	386	319	331	275	343	207
28	205	177	70	38	65	153	144	83	176	170	83	154	138	182	106	71	45	62	66	49	47	46	38	35	100
	-158	-112	-37	-31	-48	-112	-131	-63	-133	-228	-55	-94	-391	-373	-232	-91	-61	-49	-70	-92	-12	-5	-18	-18	-109
	364	290	108	70	114	267	276	147	310	399	139	248	531	556	338	163	108	112	137	143	59	52	57	53	210
29	32	32	30	76	23	16	26	101	112	31	32	43	68	45	35	20	18	33	91	134	162	86	60	58	57
	-23	-18	-28	-29	-22	-31	-29	-46	-140	-42	-35	-25	-17	-19	-58	-22	-8	-6	-74	-81	-121	-102	-50	-38	-44
	56	50	59	107	46	48	56	147	253	74	68	68	85	65	94	43	27	39	167	216	285	189	111	98	102
30	57	73	93	45	106	90	110	88	94	67	158	191	131	52	54	42	33	35	27	30	41	32	33	29	71
	-31	-94	-164	-73	-82	-140	-115	-115	-58	-17	-48	-160	-149	-135	-44	-7	-6	-10	-3	0	-3	-9	-14	-21	-62
	89	168	258	118	189	232	227	205	153	84	207	352	280	187	99	51	40	46	30	29	45	43	48	51	135

Provisional Hourly Values (nT) of AU, AL and AE Indices MAY 1992

DAYUT		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	26	36	29	35	80	78	158	216	89	43	36	44	34	49	45	99	85	61	72	324	191	121	72	122	89
	AL	-27	-24	-12	-19	-25	-26	-204	-256	-47	-18	-19	-21	-21	-9	-8	-73	-76	-54	-16	-179	-186	-46	-30	-92	-62
	AE	54	60	41	55	106	105	363	472	137	62	57	66	56	59	53	173	162	116	90	505	379	169	103	215	152
2		87	57	59	33	74	220	156	62	39	41	20	42	40	30	33	37	37	67	71	65	53	36	34	30	59
		-257	-89	-81	-107	-108	-308	-344	-43	-12	-25	-17	-10	-17	-16	-20	-8	-15	-59	-42	-51	-31	-7	-14	-24	-71
		344	147	140	141	183	529	501	106	52	67	39	53	59	47	55	47	54	127	113	117	84	44	50	55	131
3		26	36	32	58	36	78	86	52	35	79	88	99	114	111	111	81	73	116	184	168	69	49	49	102	80
		-24	-25	-52	-36	-48	-81	-203	-49	-19	-16	-22	-57	-90	-201	-288	-141	-97	-125	-305	-206	-21	-4	-17	-126	-94
		51	61	84	95	85	160	291	102	55	96	111	158	205	313	400	223	170	242	490	376	91	53	68	228	175
4		177	193	169	262	316	269	260	205	190	369	222	164	119	149	155	260	262	121	60	37	33	47	84	56	174
		-234	-294	-404	-329	-347	-245	-240	-155	-118	-277	-172	-131	-146	-204	-270	-212	-155	-121	-23	-13	-15	-21	-50	-22	-175
		412	488	573	592	663	515	501	361	309	648	396	296	267	354	426	472	418	243	84	51	49	69	134	79	350
5		49	59	33	110	89	64	40	23	31	54	125	113	97	84	77	43	40	41	42	44	41	38	30	25	58
		-21	-19	-9	-32	-89	-63	-36	-21	-26	-24	-32	-68	-73	-56	-157	-19	-16	-9	-11	6	6	2	2	-3	-32
		71	79	42	142	179	128	77	44	59	80	158	181	172	142	235	63	57	51	53	36	35	35	27	29	91
6		23	21	17	14	14	17	16	29	54	103	55	31	49	37	36	28	31	31	36	39	45	43	36	51	36
		-4	-10	-12	-13	-18	-20	-22	-19	-29	-97	-57	-23	-20	-18	-41	-21	-4	-9	0	0	-6	-4	-11	-27	-20
		29	32	29	28	32	38	38	49	84	201	113	55	70	55	79	50	36	41	35	39	52	48	49	80	57
7		46	40	39	40	34	24	36	38	51	47	50	72	145	123	65	115	103	210	260	294	222	219	280	304	119
		-14	-41	-21	-22	-21	-20	-13	-12	-10	-17	-18	-28	-78	-55	-21	-14	-206	-311	-220	-232	-417	-249	-330	-378	-114
		62	82	61	63	56	45	49	50	63	65	68	100	224	179	87	130	310	523	481	528	640	468	611	682	235
8		308	316	266	296	331	445	368	500	364	182	264	289	367	517	568	428	281	362	287	363	320	186	228	158	333
		-394	-371	-384	-371	-374	-457	-610	-571	-524	-448	-555	-754	-687	-737	-745	-293	-183	-265	-344	-340	-228	-143	-100	-160	-418
		703	688	651	668	705	902	978	1072	889	631	821	1044	1055	1256	1314	721	465	628	632	704	549	330	329	319	752
9		113	122	168	221	220	186	184	73	62	141	150	201	160	128	127	330	331	179	365	326	701	535	272	484	241
		-253	-191	-198	-245	-202	-154	-144	-44	-20	-41	-103	-192	-241	-192	-193	-307	-416	-124	-329	-239	-429	-339	-52	-148	-200
		367	315	368	467	422	340	329	117	83	183	254	394	402	322	322	639	749	303	695	567	1132	875	325	633	442
10		436	363	358	743	347	369	493	222	-7	-6	-96	-46	102	109	48	104	371	191	97	172	2	116	84	124	196
		-73	-102	-187	-306	-559	-270	-397	-650	-1181	-764	-1518	-1001	-603	-596	-719	-669	-967	-1076	-828	-849	-915	-725	-903	-629	-687
		508	466	547	1050	907	639	891	873	1173	757	1421	954	706	706	768	774	1340	1268	927	1023	917	841	987	754	883
11		116	238	304	345	260	239	214	209	160	205	174	204	212	255	287	253	252	177	187	243	304	249	161	246	229
		-1022	-966	-742	-714	-760	-623	-603	-822	-597	-418	-455	-395	-429	-618	-767	-618	-494	-651	-529	-496	-493	-378	-261	-230	-587
		1139	1204	1047	1060	1020	863	818	1032	758	624	631	601	642	874	1056	872	747	829	718	740	798	627	422	476	817
12		190	177	164	144	106	86	124	99	148	133	110	123	144	180	118	107	50	81	144	205	157	145	129	133	133
		-224	-184	-322	-230	-121	-81	-90	-100	-195	-187	-124	-145	-210	-196	-178	-91	-140	-121	-236	-364	-160	-185	-125	-228	-176
		414	361	487	374	227	167	215	200	344	321	235	269	355	377	297	199	192	203	382	571	318	331	255	361	311
13		141	168	167	90	258	335	333	282	252	184	226	219	413	347	333	239	183	179	176	123	93	129	231	225	222
		-141	-132	-325	-146	-395	-527	-402	-319	-239	-125	-282	-579	-517	-498	-426	-295	-185	-103	-213	-207	-94	-126	-320	-266	-286
		283	301	492	236	654	863	736	602	492	310	509	799	932	846	760	535	369	284	391	331	188	255	553	492	509
14		131	50	39	72	21	8	8	11	23	23	31	80	53	32	19	9	4	13	25	29	22	21	21	16	32
		-83	-44	-48	-50	-107	-29	-29	-32	-33	-33	-38	-57	-68	-36	-34	-25	-29	-21	-20	-19	-18	-19	-20	-23	-38
		214	95	88	122	129	38	38	44	57	58	70	138	121	69	53	36	33	35	45	49	41	41	42	40	71
15		9	7	9	10	5	7	2	50	69	172	132	36	23	31	26	39	62	96	56	49	39	17	23	21	41
		-29	-33	-33	-35	-36	-34	-40	-32	-35	-111	-130	-33	-28	-33	-34	-42	-85	-292	-139	-43	-62	-34	-27	-27	-59
		39	41	42	45	42	42	43	84	105	284	263	71	51	65	61	83	148	388	196	93	102	52	51	49	102

16	19	25	23	21	15	8	15	19	15	14	44	85	79	76	40	44	22	29	25	31	39	16	14	19	31
	-32	-34	-27	-25	-27	-36	-36	-29	-32	-30	-42	-65	-97	-112	-40	-59	-34	-18	-17	-21	-36	-30	-33	-29	-39
	52	59	50	47	44	46	52	49	49	46	86	151	178	189	82	103	57	49	44	53	76	47	48	49	71
17	19	13	11	7	10	10	13	25	34	24	22	22	19	20	17	17	24	21	30	44	45	38	77	155	30
	-18	-30	-31	-37	-41	-46	-41	-35	-29	-33	-34	-30	-23	-15	-11	-13	-18	-21	-25	-28	-32	-32	-64	-133	-34
	39	43	42	45	52	57	55	61	65	59	57	53	42	35	30	32	44	44	56	74	79	72	141	289	65
18	138	136	145	148	207	165	98	109	110	143	168	238	183	110	69	35	43	94	95	71	124	346	233	161	140
	-158	-193	-109	-84	-102	-135	-56	-30	-29	-68	-133	-171	-161	-182	-105	-75	-72	-188	-102	-47	-67	-121	-426	-348	-132
	297	330	254	233	310	302	154	139	139	211	303	411	345	293	176	110	117	283	199	119	193	467	660	511	273
19	165	190	201	280	312	245	43	38	37	88	121	173	177	152	193	280	339	366	356	281	172	119	72	78	187
	-199	-151	-476	-289	-254	-139	-46	-35	-29	-31	-43	-94	-224	-300	-282	-237	-304	-215	-304	-361	-188	-68	-38	-41	-181
	366	342	677	570	566	385	90	74	67	120	165	268	402	453	475	518	644	583	662	643	362	189	111	120	369
20	175	182	145	78	65	70	47	32	23	62	38	77	192	116	68	35	46	61	96	98	144	77	151	136	92
	-97	-167	-156	-41	-31	-73	-40	-46	-32	-35	-24	-39	-212	-212	-89	-79	-104	-80	-74	-103	-99	-50	-112	-136	-89
	273	350	302	120	97	144	87	78	56	98	63	117	405	329	158	115	152	143	172	201	243	128	263	272	182
21	102	30	53	36	21	25	65	110	110	123	131	139	66	31	26	23	34	106	73	75	166	143	191	159	85
	-107	-41	-44	-36	-35	-38	-28	-82	-109	-123	-180	-118	-42	-28	-44	-45	-39	-136	-102	-62	-282	-256	-156	-193	-97
	209	72	98	74	58	65	94	193	221	248	313	258	109	60	71	70	74	243	177	138	449	400	347	352	183
22	181	220	208	207	259	353	481	547	384	487	357	371	352	420	534	488	467	434	315	243	123	116	84	48	320
	-151	-158	-213	-235	-329	-465	-492	-661	-518	-566	-274	-446	-565	-866	-613	-493	-489	-343	-225	-76	-152	-104	-40	-17	-354
	332	380	422	443	589	819	973	1208	902	1054	633	819	919	1288	1149	983	958	779	542	320	276	221	125	66	675
23	43	41	31	35	27	34	25	19	31	21	36	30	20	32	27	31	54	186	278	295	185	56	57	35	68
	-31	-34	-35	-36	-38	-35	-31	-38	-40	-37	-41	-45	-33	-43	-47	-56	-72	-237	-395	-572	-320	-45	-35	-36	-97
	74	75	67	72	65	71	57	58	73	59	78	77	54	77	75	88	128	425	675	868	507	102	93	72	166
24	88	156	128	181	87	133	104	55	43	22	41	51	31	26	22	25	54	74	48	31	23	25	24	103	66
	-70	-252	-171	-200	-121	-87	-51	-92	-36	-27	-35	-48	-38	-64	-49	-89	-104	-123	-51	-20	-27	-30	-35	-80	-79
	159	409	299	381	209	221	156	149	81	50	78	101	71	91	72	115	159	199	100	52	52	56	61	184	146
25	80	51	63	81	84	62	85	142	42	67	102	147	108	151	137	100	100	114	111	97	114	71	52	41	92
	-87	-88	-120	-111	-65	-31	-58	-181	-98	-51	-46	-87	-133	-266	-337	-285	-196	-148	-66	-74	-189	-56	-37	-26	-118
	167	139	184	192	149	95	145	324	141	120	149	235	243	418	475	386	297	264	178	173	304	128	90	69	211
26	39	35	25	16	14	21	37	37	63	164	175	133	100	101	33	17	26	37	48	136	154	127	97	53	70
	-30	-30	-26	-21	-28	-27	-21	-28	-24	-83	-140	-139	-90	-73	-85	-53	-30	-21	-14	-119	-104	-138	-119	-50	-62
	70	65	52	37	42	49	59	65	88	248	316	273	191	176	120	71	57	60	64	257	260	266	217	103	134
27	93	169	136	93	58	43	51	62	164	138	131	119	84	130	231	127	94	61	65	64	48	64	59	94	99
	-64	-157	-226	-135	-29	-26	-27	-46	-242	-342	-203	-152	-71	-101	-391	-258	-110	-49	-29	-16	-21	-24	-31	-94	-118
	158	327	363	228	88	70	79	109	407	481	335	273	156	233	622	386	205	111	96	81	70	89	90	188	219
28	79	90	81	66	56	74	138	207	131	173	243	161	156	156	112	125	95	68	76	83	78	59	102	120	114
	-67	-132	-137	-69	-28	-69	-37	-256	-267	-81	-261	-246	-218	-159	-132	-81	-47	-25	14	-10	-10	-9	-62	-125	-105
	147	222	219	136	85	145	176	464	399	255	505	408	375	316	245	206	143	94	61	94	88	70	164	245	219
29	96	119	97	96	230	275	192	204	132	99	62	126	193	170	116	60	182	128	70	151	165	110	114	101	137
	-60	-38	-53	-163	-166	-296	-388	-222	-170	-64	-23	-43	-181	-465	-263	-42	-104	-138	-61	-137	-243	-92	-80	-87	-149
	157	158	150	260	397	572	582	427	304	164	87	170	375	637	380	104	288	267	132	289	409	202	195	189	287
30	71	57	91	95	133	74	157	100	122	111	202	207	182	119	62	151	133	93	98	108	142	114	76	124	118
	-25	-46	-78	-187	-313	-212	-145	-69	-130	-41	-224	-183	-281	-281	-130	-244	-283	-145	-118	-137	-210	-129	-56	-99	-157
	96	104	170	284	448	286	302	170	253	153	427	391	464	402	192	397	418	239	217	245	352	243	133	223	275
31	152	91	45	101	197	95	92	29	35	38	52	73	77	57	71	49	66	74	68	63	50	45	56	32	71
	-304	-89	-62	-120	-358	-228	-58	-16	-20	-23	-31	-34	-34	-26	-36	-34	-56	-242	-83	-14	-5	-3	-16	-7	-79
	458	181	107	221	556	325	150	45	56	62	84	108	112	84	108	84	123	316	152	78	56	49	73	40	151

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)
JUNE 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices JUNE 1992

DAYUT		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	26	25	135	108	138	96	110	121	110	77	101	97	108	81	47	32	26	31	44	51	32	31	35	40	71
	AL	-20	-35	-181	-256	-219	-135	-134	-311	-220	-86	-87	-130	-278	-177	-132	-133	-70	-40	-35	-50	-18	-20	-25	-36	-118
	AE	48	61	317	365	359	233	244	433	330	164	188	228	387	259	180	167	97	72	81	102	51	51	61	77	190
2		84	67	51	48	18	42	136	53	62	58	131	105	58	26	35	34	62	95	90	56	44	57	62	57	64
		-72	-68	-40	-33	-32	-24	-88	-157	-98	-67	-125	-149	-43	-35	-40	-55	-150	-71	-73	-96	-47	-40	-45	-103	-73
		158	137	93	83	51	67	224	212	161	126	256	255	101	62	76	90	213	167	163	152	92	98	108	161	138
3		56	36	31	28	44	36	26	28	38	38	34	37	27	36	83	58	97	87	59	40	43	20	31	32	44
		-52	-23	-29	-29	-34	-34	-33	-28	-25	-32	-30	-26	-27	-26	-90	-198	-289	-176	-71	-34	-22	-22	-32	-32	-58
		110	60	61	59	79	72	60	57	64	71	66	64	56	64	174	257	387	265	131	75	66	43	64	65	103
4		27	25	24	33	34	40	57	28	24	45	98	95	66	63	46	43	34	34	33	40	48	57	62	84	48
		-29	-27	-23	-30	-37	-40	-46	-49	-38	-33	-57	-119	-37	-42	-31	-39	-157	-87	-21	-7	-19	-23	-22	-125	-47
		57	53	48	65	73	81	104	78	63	80	155	215	104	106	79	82	192	122	55	48	69	81	86	209	96
5		52	32	26	22	20	24	34	48	95	60	57	85	139	91	57	28	37	71	44	35	28	33	33	26	49
		-68	-27	-30	-28	-29	-29	-22	-27	-34	-34	-21	-38	-120	-105	-38	-41	-9	-66	-12	-7	-13	-14	-23	-30	-36
		121	60	57	50	51	54	57	76	131	95	79	124	261	197	95	70	47	138	56	43	41	48	57	56	86
6		17	17	15	13	12	14	18	30	54	93	151	101	117	118	78	46	28	29	44	43	49	53	63	59	53
		-29	-37	-35	-34	-39	-41	-40	-30	-25	-70	-134	-66	-80	-92	-113	-43	-65	-20	-35	-17	-45	-34	-30	-34	-49
		47	56	52	48	52	56	59	61	80	164	286	168	198	212	192	91	94	50	79	60	94	88	93	93	103
7		45	64	94	111	69	42	74	113	126	184	148	119	69	51	48	40	54	115	197	318	323	405	346	333	145
		-31	-40	-49	-168	-74	-35	-32	-90	-210	-142	-61	-36	-29	-13	-11	-22	-36	-60	-276	-517	-510	-493	-522	-353	-159
		77	105	144	281	144	77	107	203	336	327	210	157	100	66	60	63	90	176	473	835	834	899	869	687	305
8		225	242	336	302	357	417	392	167	292	338	487	350	387	557	569	469	383	531	444	431	519	456	340	165	381
		-346	-611	-568	-546	-529	-443	-392	-113	-120	-352	-485	-357	-286	-561	-514	-626	-709	-691	-470	-469	-423	-273	-168	-656	-446
		572	854	905	848	886	862	786	281	413	691	973	708	674	1119	1084	1096	1092	1222	915	901	943	730	509	822	829
9		155	214	288	287	283	243	215	205	272	271	281	191	163	129	146	82	60	50	52	77	146	117	113	100	173
		-354	-436	-371	-306	-256	-163	-209	-404	-264	-455	-383	-326	-236	-206	-196	-64	-19	-11	-50	-77	-181	-177	-116	-52	-221
		509	651	661	593	539	407	424	611	538	726	665	518	400	337	343	147	79	61	103	155	327	295	230	153	395
10		125	130	60	63	175	118	331	265	434	348	297	306	171	112	93	63	42	63	60	52	48	43	36	35	145
		-58	-120	-39	-39	-66	-69	-196	-164	-173	-231	-184	-237	-245	-113	-68	-135	-103	-95	-35	-33	-42	-30	-33	-32	-106
		184	252	100	104	242	188	529	430	608	579	481	544	417	227	163	200	145	159	95	86	90	74	70	68	252
11		41	70	101	200	124	79	38	70	85	146	233	182	216	232	298	330	304	306	291	393	484	483	291	340	222
		-28	-55	-84	-218	-224	-96	-35	-73	-137	-221	-208	-198	-296	-321	-492	-496	-490	-459	-278	-310	-509	-480	-498	-307	-271
		70	127	186	418	349	177	73	144	222	368	442	381	513	554	790	827	795	766	570	704	994	964	791	647	495
12		271	248	176	67	109	68	88	124	212	87	63	106	224	456	490	554	348	158	110	76	63	63	99	82	181
		-115	-424	-197	-63	-74	-57	-70	-149	-258	-86	-13	-22	-115	-637	-582	-568	-479	-112	-55	-51	-17	-20	-63	-57	-178
		387	674	374	131	184	127	158	274	471	174	77	129	340	1093	1072	1123	828	271	166	127	80	84	163	140	360
13		62	77	53	42	106	210	158	107	58	134	140	148	138	145	128	176	201	248	311	242	227	219	253	178	157
		-54	-62	-31	-46	-54	-153	-270	-158	-48	-78	-198	-192	-237	-235	-152	-227	-186	-223	-262	-266	-206	-120	-161	-277	-162
		117	141	86	89	160	363	428	266	106	212	339	341	376	382	281	403	388	472	574	509	434	339	416	456	320
14		96	66	49	55	51	84	86	99	71	131	141	130	138	111	96	52	43	28	51	70	124	135	81	62	85
		-228	-109	-58	-31	-40	-32	-49	-97	-60	-58	-176	-114	-154	-112	-145	-178	-115	-51	-29	-39	-91	-121	-96	-57	-93
		325	176	108	88	92	117	136	196	131	190	318	245	293	224	243	231	160	80	81	110	216	257	177	120	180
15		94	125	159	156	172	190	179	101	46	35	51	71	81	128	168	238	180	117	137	143	117	100	101	117	125
		-58	-114	-384	-315	-229	-270	-176	-79	-48	-32	-39	-32	-33	-114	-420	-436	-309	-241	-298	-139	-67	-63	-101	-134	-172
		153	240	545	473	402	461	356	181	95	68	91	103	115	244	590	674	489	359	436	283	185	163	203	252	298

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)
JUNE 1992

16	126	172	227	200	183	128	66	90	55	32	20	22	33	30	22	20	24	30	46	36	26	22	25	21	69
	-117	-149	-216	-261	-223	-192	-85	-51	-40	-32	-37	-35	-32	-24	-14	-21	-29	-11	-36	-26	-27	-25	-25	-22	-72
	244	322	445	462	407	321	151	141	96	65	58	59	67	56	37	42	54	42	83	63	55	49	51	45	142
17	22	21	21	22	34	43	98	99	96	34	25	58	68	120	96	123	141	80	83	54	30	20	53	60	63
	-25	-28	-34	-34	-27	-32	-25	-93	-98	-44	-41	-45	-44	-177	-173	-238	-269	-226	-140	-37	-38	-38	-38	-38	-83
	47	50	55	57	63	76	124	193	195	80	67	103	114	298	270	362	410	307	223	92	69	60	93	99	146
18	75	81	94	98	134	160	143	135	228	171	130	203	144	158	206	246	177	225	470	495	684	579	525	451	250
	-36	-46	-110	-86	-102	-128	-70	-77	-129	-172	-103	-141	-218	-395	-326	-295	-136	-43	-148	-721	-762	-533	-413	-268	-227
	111	129	206	185	237	288	213	212	357	344	234	346	364	554	533	541	313	269	618	1218	1447	1113	939	721	479
19	252	112	68	39	27	36	58	31	150	73	57	33	17	31	50	26	62	152	276	179	50	43	41	39	79
	-96	-189	-145	-138	-120	-58	-76	-57	-48	-49	-20	-17	-32	-50	-18	-50	-70	-235	-356	-207	-42	-32	-33	-21	-90
	349	303	214	178	148	95	134	88	198	123	78	51	50	83	69	76	133	388	633	386	93	77	76	61	170
20	36	28	29	33	23	16	22	30	50	76	30	15	58	182	127	46	44	34	29	39	25	24	27	85	46
	-19	-26	-30	-30	-52	-44	-37	-33	-37	-102	-108	-56	-65	-284	-233	-124	-155	-54	-59	-49	-43	-22	-24	-67	-73
	57	55	60	64	77	61	61	64	88	179	139	71	124	467	361	171	200	89	88	88	69	47	53	153	120
21	252	132	89	47	45	50	26	39	23	19	20	66	42	54	59	77	78	29	43	59	74	80	114	145	69
	-166	-306	-92	-45	-39	-37	-48	-58	-33	-30	-24	-64	-50	-40	-73	-150	-248	-69	-42	-121	-115	-47	-80	-128	-88
	419	440	182	93	84	88	75	97	57	50	45	131	93	95	132	228	327	99	86	181	190	128	196	273	158
22	221	196	208	241	309	99	52	29	24	31	36	51	41	47	46	43	33	28	28	28	19	36	82	182	88
	-312	-302	-175	-139	-207	-118	-34	-41	-38	-31	-30	-27	-20	-5	-8	-3	-22	-15	-5	-4	-15	-33	-74	-117	-74
	534	499	384	381	517	218	88	71	63	62	66	79	62	52	54	47	56	44	34	32	34	69	157	299	163
23	197	143	211	292	291	164	98	72	100	154	127	77	75	119	56	80	53	68	125	191	209	152	60	71	133
	-243	-300	-260	-236	-283	-159	-57	-111	-123	-102	-66	-58	-46	-105	-43	-48	-59	-80	-125	-128	-146	-178	-34	-38	-126
	441	444	472	530	575	324	156	183	224	257	194	136	122	225	101	130	113	148	251	319	355	331	95	111	260
24	57	54	196	378	234	353	211	151	108	71	35	164	215	135	99	118	171	222	241	149	185	132	139	162	166
	-45	-46	-156	-466	-423	-336	-208	-182	-57	-57	-38	-64	-391	-202	-151	-93	-170	-200	-282	-145	-145	-153	-225	-171	-184
	103	101	353	845	658	690	419	333	165	128	75	229	607	339	252	211	342	423	523	294	331	286	365	334	350
25	211	171	233	141	132	130	107	175	206	162	188	137	124	109	124	138	97	93	61	69	188	151	112	85	139
	-216	-391	-413	-359	-169	-266	-179	-270	-245	-178	-101	-145	-321	-134	-207	-342	-162	-88	-69	-67	-140	-264	-80	-59	-203
	428	563	647	500	301	396	287	445	452	340	290	284	446	244	333	481	259	183	131	136	329	415	193	145	343
26	51	45	69	60	113	217	164	185	185	84	53	36	34	50	37	58	60	66	76	87	98	113	172	174	95
	-86	-82	-110	-48	-137	-284	-230	-240	-404	-67	-66	-46	-27	-29	-32	-77	-172	-246	-133	-54	-92	-108	-369	-247	-141
	139	129	181	110	251	503	395	426	590	153	119	83	62	80	70	136	232	313	210	142	191	221	541	422	237
27	206	112	106	117	63	54	99	104	127	247	246	191	72	52	51	33	63	51	75	103	123	169	235	142	118
	-273	-127	-111	-142	-54	-28	-52	-128	-163	-287	-436	-368	-139	-47	-83	-112	-132	-97	-130	-148	-132	-197	-189	-113	-154
	480	241	218	261	118	82	152	232	291	534	683	561	213	100	136	146	196	149	206	252	255	367	425	257	273
28	70	76	106	88	74	196	232	326	212	157	310	220	209	206	161	85	72	81	75	35	31	73	157	160	142
	-58	-103	-114	-110	-91	-98	-123	-464	-339	-278	-392	-305	-376	-532	-227	-60	-97	-162	-55	-32	-33	-54	-214	-169	-187
	129	179	222	200	166	295	356	791	552	436	703	527	586	740	389	145	170	244	131	68	65	128	372	329	330
29	145	207	191	349	455	325	220	171	257	311	403	378	226	273	315	336	289	230	282	377	331	337	205	173	283
	-108	-445	-439	-443	-529	-370	-318	-263	-224	-337	-409	-513	-531	-503	-351	-407	-455	-559	-484	-487	-656	-643	-688	-626	-450
	255	653	630	793	984	696	539	436	481	648	812	892	757	777	668	744	745	790	767	865	989	981	895	800	733
30	216	339	391	356	512	395	374	329	168	61	52	100	106	102	118	127	91	58	33	29	52	93	122	187	184
	-655	-611	-791	-841	-398	-495	-420	-278	-293	-61	-15	-41	-90	-103	-247	-158	-47	-67	-20	-8	-49	-107	-128	-241	-257
	871	951	1183	1199	911	891	795	607	462	123	68	142	197	206	366	286	139	126	54	37	102	200	250	429	441

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)
JULY 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices JULY 1992

DAYUT		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	222	158	184	144	130	168	172	99	31	19	33	54	133	103	175	257	180	166	183	264	237	128	84	57	141
	AL	-436	-214	-197	-195	-295	-208	-185	-121	-43	-22	-14	-35	-123	-214	-424	-415	-243	-193	-237	-285	-252	-108	-32	-50	-189
	AE	658	373	381	339	426	377	358	221	74	42	48	91	257	319	601	674	424	361	422	550	490	236	118	109	331
2		50	25	34	312	301	77	72	175	289	169	55	23	34	64	58	34	73	62	46	26	25	54	102	59	92
		-49	-37	-27	-136	-411	-250	-81	-125	-499	-427	-104	-33	-72	-198	-171	-120	-159	-96	-42	-19	-25	-51	-135	-162	-143
		101	64	61	449	713	327	153	301	790	597	160	57	107	263	230	155	234	160	89	46	52	106	238	222	237
3		64	86	57	55	44	54	106	88	52	72	110	117	103	74	26	26	44	33	31	38	60	39	22	22	59
		-83	-82	-104	-55	-32	-29	-63	-238	-109	-75	-61	-63	-139	-170	-52	-29	-65	-45	-26	-73	-55	-46	-57	-45	-75
		148	169	162	111	77	84	169	327	163	149	172	181	243	246	79	56	111	79	58	112	117	86	80	67	135
4		21	18	24	32	97	99	112	49	46	53	44	27	29	40	28	34	40	49	44	46	29	29	15	29	43
		-35	-33	-29	-29	-77	-125	-67	-39	-18	-72	-66	-37	-36	-36	-35	-50	-120	-140	-62	-57	-20	-27	-34	-33	-53
		56	52	54	61	174	224	180	89	65	125	111	65	65	78	64	85	161	191	108	104	51	57	50	63	97
5		86	120	152	195	273	273	188	56	43	115	119	155	96	82	84	87	85	81	104	115	101	46	44	39	114
		-67	-120	-177	-216	-260	-374	-156	-30	-23	-47	-188	-208	-103	-34	-36	-19	-29	-42	-106	-60	-13	-17	-34	-32	-100
		154	241	330	411	533	647	344	87	67	163	309	364	200	117	121	107	114	124	211	176	116	64	80	73	215
6		28	79	60	126	68	45	98	86	85	110	123	154	116	61	53	43	42	71	77	63	47	33	29	28	72
		-41	-45	-55	-173	-124	-37	-19	-45	-21	-57	-114	-133	-163	-44	-21	-41	-77	-90	-62	-51	-32	-31	-24	-22	-63
		70	124	116	300	192	82	118	131	106	169	238	289	280	106	75	85	121	162	139	115	81	65	54	51	136
7		27	22	30	37	43	54	62	56	47	30	27	47	58	44	40	44	27	27	41	47	46	63	59	52	43
		-19	-20	-25	-22	-34	-65	-52	-48	-30	-32	-32	-34	-44	-41	-34	-40	-57	-31	-20	-18	-52	-94	-73	-79	-41
		47	43	56	59	78	119	115	104	77	62	60	82	103	86	75	85	86	60	62	66	99	158	134	131	85
8		46	33	24	37	40	34	23	39	71	85	116	98	58	59	80	64	33	44	65	53	59	45	38	36	53
		-38	-27	-21	-18	-30	-31	-28	-16	-22	-32	-46	-131	-77	-44	-53	-66	-122	-61	-63	-93	-51	-27	-30	-33	-48
		85	61	46	55	70	66	52	56	93	118	164	231	136	104	134	132	157	107	129	148	111	74	69	71	103
9		34	28	49	83	87	132	66	52	46	40	32	50	60	51	44	62	70	58	41	32	35	30	32	32	52
		-30	-35	-46	-45	-145	-178	-89	-66	-35	-35	-39	-35	-33	-26	-24	-115	-174	-107	-33	-24	-18	-23	-24	-20	-58
		66	65	95	128	232	311	155	118	81	76	72	86	94	78	69	179	246	166	75	57	54	55	58	54	111
10		22	25	49	62	116	106	142	118	62	63	53	44	33	25	19	33	57	82	182	140	50	37	29	24	65
		-23	-30	-43	-38	-179	-154	-115	-215	-63	-58	-48	-59	-39	-41	-60	-80	-100	-114	-175	-83	-27	-17	-24	-26	-75
		46	56	93	100	295	260	258	333	126	122	102	104	73	68	80	115	158	197	358	224	77	56	54	51	142
11		43	26	22	13	18	19	26	43	42	66	98	126	68	59	31	30	25	31	36	42	46	41	37	39	43
		-31	-29	-28	-29	-30	-32	-17	-18	-23	-39	-75	-129	-131	-51	-25	-16	-9	-5	-11	-19	-24	-23	-20	-20	-35
		75	55	51	42	49	52	43	62	66	107	174	256	200	111	57	48	36	38	49	62	70	65	58	61	79
12		33	28	31	32	137	279	201	210	179	334	321	241	254	145	136	172	169	136	103	141	124	163	144	163	161
		-19	-13	-10	-8	-26	-105	-221	-197	-190	-223	-231	-223	-346	-202	-79	-73	-232	-192	-67	-48	-48	-74	-123	-153	-129
		54	43	42	42	163	385	423	407	370	558	553	465	602	348	217	246	403	330	171	191	173	239	268	316	292
13		89	122	183	202	139	215	257	230	251	352	190	262	160	109	180	142	169	272	155	102	119	293	282	90	190
		-76	-58	-103	-301	-142	-128	-341	-377	-252	-368	-172	-130	-247	-114	-142	-60	-151	-323	-288	-85	-46	-319	-274	-91	-191
		165	180	287	503	281	344	598	607	503	722	363	394	408	225	323	203	322	597	444	188	167	613	557	181	382
14		195	104	113	169	70	179	118	77	100	152	156	54	178	143	92	90	105	124	221	126	72	52	34	30	115
		-178	-216	-161	-356	-228	-217	-254	-62	-91	-316	-301	-128	-257	-324	-209	-176	-116	-162	-422	-134	-26	-45	-41	-39	-186
		373	320	274	525	298	397	372	140	191	470	459	183	437	469	302	268	223	287	644	261	99	99	77	70	302
15		43	86	151	145	97	56	38	30	24	19	51	16	29	27	59	71	34	29	58	41	40	26	31	30	51
		-37	-68	-284	-309	-220	-130	-122	-72	-87	-36	-46	-55	-48	-31	-45	-68	-53	-89	-73	-40	-35	-33	-34	-37	-86
		82	154	435	454	317	187	161	102	112	56	98	72	78	58	106	141	88	119	132	82	76	60	66	68	138

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)
JULY 1992

16	31	19	19	21	18	21	21	30	96	160	287	231	297	296	194	191	150	264	267	283	237	164	144	207	152
	-32	-38	-28	-21	-19	-28	-33	-36	-47	-162	-391	-456	-324	-275	-260	-300	-279	-187	-235	-284	-345	-212	-137	-148	-178
	65	58	48	43	38	50	55	67	144	323	680	689	623	573	456	492	430	452	504	568	583	376	282	356	331
17	132	61	69	37	40	14	4	2	5	15	42	19	126	148	107	123	89	42	53	28	21	18	22	21	51
	-263	-62	-37	-52	-44	-32	-31	-37	-28	-41	-61	-107	-143	-161	-114	-138	-133	-102	-21	-20	-26	-25	-33	-35	-73
	396	123	107	90	84	46	35	39	33	57	104	127	270	310	223	263	224	145	74	49	48	44	56	58	125
18	18	14	21	38	29	39	50	40	31	17	14	11	9	20	48	51	31	28	31	40	28	14	13	55	29
	-37	-39	-37	-33	-20	-29	-52	-36	-32	-31	-36	-36	-32	-27	-47	-80	-87	-45	-20	-38	-58	-31	-34	-46	-40
	56	54	60	72	50	69	103	77	63	49	51	48	42	47	96	132	120	75	53	79	87	46	49	102	70
19	54	36	60	27	22	28	34	30	37	40	35	21	20	22	21	25	36	44	43	36	61	87	88	84	41
	-54	-39	-34	-27	-16	-14	-27	-33	-38	-45	-51	-42	-33	-22	-21	-38	-58	-62	-48	-40	-40	-60	-77	-42	-40
	109	76	95	55	38	42	61	63	76	86	87	64	55	44	42	65	96	107	92	78	103	148	166	127	82
20	97	134	138	134	61	53	37	26	51	47	46	92	244	174	129	128	174	347	416	352	193	115	97	62	139
	-44	-44	-144	-173	-32	-4	-15	-14	-13	-29	-31	-52	-276	-231	-203	-196	-161	-122	-163	-186	-120	-125	-82	-4	-103
	142	179	283	308	94	57	52	40	65	76	77	145	522	406	334	326	337	470	580	539	315	241	180	66	243
21	36	22	19	22	66	79	82	65	39	42	58	104	160	156	505	455	433	379	220	107	77	118	113	134	145
	-8	-13	-12	-7	-17	-24	-66	-48	-31	-22	-46	-69	-129	-230	-453	-507	-478	-416	-194	-51	-35	-121	-94	-90	-132
	45	37	32	30	84	103	149	113	70	64	104	174	291	388	960	963	912	796	415	159	113	240	208	225	278
22	96	116	119	258	275	172	236	348	452	520	375	256	272	115	92	96	118	216	302	234	129	127	121	159	217
	-85	-98	-145	-240	-170	-75	-198	-511	-747	-550	-383	-484	-678	-172	-131	-31	-54	-74	-161	-277	-186	-68	-109	-175	-242
	181	215	264	498	446	247	434	860	1200	1071	759	741	951	288	225	128	173	291	464	512	316	196	231	335	459
23	88	126	139	140	107	127	81	97	99	50	97	105	41	100	96	110	98	119	171	168	143	191	147	108	115
	-228	-141	-270	-301	-178	-252	-215	-170	-256	-250	-175	-311	-133	-185	-209	-292	-199	-253	-226	-189	-108	-181	-207	-199	-214
	316	268	410	442	285	380	297	268	357	301	274	418	175	286	306	404	299	373	399	359	252	373	354	308	329
24	86	45	59	79	52	29	50	72	50	73	141	217	171	79	60	48	93	83	81	97	91	74	94	85	84
	-272	-61	-81	-172	-150	-34	-40	-104	-136	-200	-190	-237	-346	-208	-70	-64	-146	-207	-153	-133	-46	-38	-95	-83	-136
	359	106	141	251	203	64	91	176	188	275	333	455	519	289	131	114	240	290	236	232	138	112	190	169	221
25	80	78	38	55	84	87	109	92	79	62	58	82	126	153	66	77	52	129	99	72	64	54	32	21	77
	-133	-121	-124	-136	-100	-104	-163	-129	-130	-83	-39	-95	-166	-193	-280	-312	-155	-251	-166	-10	-12	-21	-16	-14	-123
	214	200	162	191	185	192	273	222	209	147	99	179	294	348	348	390	208	381	266	83	77	76	49	36	201
26	25	24	17	14	7	0	-3	0	9	35	51	69	91	45	12	11	24	28	22	32	34	20	23	26	26
	-14	-15	-21	-22	-21	-24	-30	-31	-30	-36	-48	-76	-99	-133	-45	-60	-27	-37	-89	-111	-78	-35	-28	-28	-47
	40	41	39	37	29	23	26	30	39	72	100	147	192	180	58	72	51	66	113	144	113	57	53	54	74
27	44	34	13	16	12	22	48	62	49	43	40	44	40	38	33	38	31	49	59	57	51	81	138	230	53
	-32	-31	-25	-24	-14	-30	-30	-74	-66	-192	-14	-81	-23	-27	-27	-24	-50	-137	-96	-43	-28	-31	-104	-350	-65
	77	65	39	41	27	52	79	137	115	237	55	126	64	67	61	63	82	187	157	102	81	113	243	581	119
28	212	128	136	321	452	498	87	23	11	28	43	53	48	59	75	177	128	121	56	72	70	97	68	42	125
	-191	-93	-78	-268	-604	-421	-100	-54	-40	-39	-48	-60	-126	-80	-87	-219	-295	-181	-50	-48	-67	-82	-182	-68	-145
	404	222	215	590	1057	921	188	78	52	67	92	114	175	140	163	397	425	304	106	122	138	181	251	111	271
29	27	25	22	77	41	57	79	37	28	16	13	15	13	18	20	41	43	33	26	24	26	30	46	112	36
	-33	-30	-26	-28	-60	-53	-163	-109	-45	-22	-71	-31	-69	-25	-24	-46	-73	-71	-46	-29	-45	-50	-41	-114	-54
	61	55	49	106	101	110	242	147	73	38	85	47	83	45	46	88	118	105	74	54	72	80	89	227	91
30	218	191	194	116	71	59	106	71	84	87	99	82	108	136	139	65	84	72	79	159	182	121	68	47	110
	-330	-231	-177	-77	-56	-30	-27	-147	-99	-94	-100	-38	-50	-46	-40	-89	-205	-153	-64	-167	-208	-132	-63	-31	-111
	549	422	372	193	127	89	133	219	184	182	200	121	159	184	181	156	290	226	144	328	392	253	132	79	221
31	92	77	33	44	99	123	53	90	73	62	52	57	50	79	74	68	53	119	110	64	53	66	164	174	80
	-52	-125	-31	-22	-61	-123	-48	-41	-82	-140	-182	-31	-27	-49	-56	-34	-92	-205	-129	-52	-48	-47	-120	-333	-89
	146	202	64	67	161	246	102	132	156	203	236	89	78	129	131	103	147	326	240	117	102	114	285	508	170

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)

AUGUST 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices AUGUST 1992

DAYUT		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	183	83	66	106	155	76	45	40	61	60	73	83	104	119	93	86	82	48	38	58	59	60	105	104	83
	AL	-259	-41	-38	-144	-276	-141	-10	-8	-12	-25	-40	-135	-178	-130	-92	-168	-142	-25	-16	-25	-55	-115	-78	-103	-94
	AE	442	125	106	252	433	218	56	50	75	86	114	219	283	251	186	254	225	74	55	83	115	175	183	207	178
2		49	73	77	53	37	24	21	57	77	65	66	38	32	20	14	18	37	76	94	90	56	50	63	63	52
		-39	-59	-117	-77	-14	-11	-11	-33	-75	-95	-44	-39	-43	-37	-35	-33	-53	-89	-211	-82	-29	-32	-50	-41	-56
		88	133	195	132	52	37	33	92	154	161	112	78	77	59	50	52	90	166	305	173	85	83	114	106	109
3		51	41	27	17	22	53	27	46	26	27	30	32	35	64	47	77	46	51	38	57	38	36	39	44	41
		-29	-28	-22	-22	-9	2	-12	-13	-23	-27	-36	-39	-46	-57	-47	-43	-127	-107	-41	-24	-41	-19	-26	-27	-36
		82	71	50	40	32	51	40	60	50	56	68	73	83	122	95	120	174	159	80	81	80	56	66	71	77
4		39	39	35	35	29	33	35	36	37	64	51	34	54	90	124	126	156	209	169	106	219	218	87	65	87
		-22	-24	-15	-9	-1	3	4	-4	-13	-22	-41	-51	-30	-36	-177	-199	-100	-368	-445	-41	-140	-124	-68	-37	-82
		61	63	51	45	30	29	30	42	52	88	94	86	85	126	303	326	257	577	614	147	360	343	156	102	169
5		89	228	316	442	384	234	329	248	337	397	369	278	217	144	79	113	122	149	102	85	78	194	120	78	214
		-35	-126	-272	-735	-748	-406	-450	-343	-329	-523	-415	-496	-370	-261	-287	-196	-171	-175	-130	-50	-54	-117	-112	-131	-289
		125	354	589	1178	1133	641	781	592	668	921	784	775	587	406	367	310	293	324	233	137	134	312	233	211	504
6		37	22	16	18	49	48	43	54	133	251	409	374	156	219	285	251	244	99	109	101	163	127	130	158	146
		-36	-25	-21	-21	-20	-22	-18	-44	-48	-284	-461	-334	-151	-310	-388	-227	-306	-125	-101	-92	-226	-134	-111	-143	-152
		73	48	38	39	70	71	63	99	181	535	871	709	308	530	673	479	551	225	211	193	389	262	242	303	298
7		202	216	253	254	153	73	237	294	179	284	236	222	281	101	153	203	272	356	248	168	142	124	97	68	201
		-192	-477	-376	-347	-128	-34	-230	-427	-258	-240	-618	-573	-430	-118	-184	-263	-507	-413	-210	-222	-225	-109	-65	-40	-279
		395	693	630	602	282	108	469	722	438	525	855	795	711	220	338	467	779	769	458	391	368	234	164	108	480
8		112	127	92	157	273	307	252	340	330	296	352	226	202	139	116	104	168	217	224	303	299	231	171	148	216
		-69	-86	-94	-171	-254	-369	-481	-484	-321	-373	-371	-231	-271	-195	-210	-170	-179	-288	-331	-408	-450	-321	-199	-182	-271
		183	214	187	329	529	677	734	825	652	670	724	458	473	334	327	276	347	506	555	711	749	553	372	331	488
9		240	122	49	33	36	56	58	78	72	117	224	131	105	100	67	75	52	102	121	155	150	82	54	50	97
		-469	-108	-38	-25	-60	-68	-68	-261	-219	-119	-390	-274	-160	-110	-199	-212	-120	-148	-198	-295	-161	-66	-33	-22	-159
		710	231	88	59	97	124	126	340	292	236	615	407	266	210	266	288	172	250	319	450	312	150	89	73	257
10		154	159	88	34	25	21	34	18	17	53	70	232	238	193	101	105	66	39	56	94	94	97	51	55	87
		-89	-220	-109	-41	-10	-108	-61	-20	-42	-57	-79	-234	-383	-386	-169	-178	-148	-115	-53	-196	-121	-104	-68	-53	-127
		244	379	198	77	36	129	96	40	61	111	150	467	622	579	272	284	215	155	110	290	215	203	121	109	215
11		145	142	102	100	183	237	120	102	150	64	82	111	101	86	49	60	113	215	204	143	187	165	225	224	138
		-255	-258	-100	-155	-259	-222	-156	-386	-363	-114	-163	-163	-129	-151	-64	-42	-225	-442	-433	-149	-152	-281	-342	-290	-221
		401	400	203	257	443	460	277	490	514	179	246	275	231	238	115	103	338	658	637	292	340	447	568	515	360
12		208	73	61	136	154	171	85	82	88	69	35	138	196	92	51	47	29	28	22	24	20	19	28	20	78
		-187	-94	-29	-224	-244	-308	-154	-116	-231	-148	-57	-186	-285	-200	-165	-158	-105	-98	-65	-20	-20	-23	-33	-21	-132
		397	168	91	361	399	481	240	198	321	218	93	325	482	294	217	207	136	127	88	45	41	43	62	42	211
13		21	20	10	9	31	84	60	118	153	86	46	46	105	293	185	103	57	67	66	85	132	123	141	229	95
		-19	-16	-14	-18	-12	-22	-21	-69	-112	-75	-95	-61	-68	-377	-384	-242	-115	-97	-54	-48	-94	-214	-134	-357	-113
		41	36	25	27	44	107	82	187	265	162	142	108	173	670	570	346	173	165	120	134	227	339	277	588	209
14		155	63	118	56	50	110	84	41	50	49	86	190	238	186	268	316	440	198	51	34	24	34	33	42	122
		-243	-45	-155	-144	-63	-73	-108	-59	-91	-58	-55	-340	-484	-346	-596	-496	-628	-246	-89	-29	-24	-27	-25	-23	-185
		399	110	275	201	114	184	193	101	142	107	141	530	723	532	864	813	1068	446	140	64	49	62	59	66	308
15		54	41	30	30	51	147	179	104	94	52	22	38	38	32	34	14	31	34	89	174	158	135	145	93	76
		-43	-80	-22	-17	-85	-128	-264	-187	-58	-39	-40	-52	-50	-31	-40	-32	-41	-57	-184	-244	-184	-117	-205	-101	-96
		97	122	53	48	136	276	444	292	153	92	63	90	89	64	75	46	73	92	274	419	342	252	351	195	173

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)
AUGUST 1992

16	39	30	47	71	79	191	71	124	143	137	105	87	98	109	41	18	20	42	30	24	24	47	52	63	71
	-37	-25	-79	-89	-175	-222	-353	-346	-319	-215	-34	-64	-102	-172	-43	-41	-32	-51	-45	-38	-43	-42	-59	-57	-112
	77	56	127	162	255	414	425	470	463	353	141	152	201	282	85	60	53	93	76	62	68	90	112	122	183
17	59	29	22	45	38	14	13	23	27	20	17	22	34	27	18	18	24	46	50	55	37	28	38	58	32
	-71	-33	-22	-24	-31	-13	-21	-30	-25	-32	-33	-32	-39	-40	-49	-70	-39	-35	-61	-44	-20	-34	-34	-37	-36
	132	63	45	70	70	28	35	54	53	54	51	55	74	68	68	89	63	81	111	100	58	62	73	96	69
18	63	74	57	23	20	35	39	47	46	41	37	68	87	62	51	27	46	61	51	58	53	54	69	71	52
	-47	-62	-17	-10	-3	-9	-12	-18	-29	-35	-35	-68	-114	-63	-87	-53	-97	-59	-31	-28	-16	-19	-36	-70	-42
	111	138	75	33	24	45	52	66	76	78	74	138	202	126	139	81	144	121	82	87	70	74	106	143	95
19	51	50	52	50	59	40	67	62	69	57	50	31	37	75	87	86	127	96	110	113	70	91	132	123	74
	-16	-38	-45	-45	-46	-20	-63	-64	-99	-47	-25	-31	-40	-53	-85	-175	-146	-127	-202	-128	-24	-77	-149	-68	-76
	68	90	98	97	106	61	131	127	169	105	77	63	78	129	173	262	274	224	312	242	95	169	282	193	151
20	120	251	123	149	143	401	258	254	300	320	215	176	237	76	50	25	27	42	38	30	34	27	27	27	140
	-48	-181	-320	-288	-265	-499	-356	-276	-193	-154	-218	-371	-216	-29	-30	-28	-22	-20	-15	-6	-11	-12	-15	-27	-150
	169	432	444	438	409	902	615	531	494	476	435	548	454	106	81	54	49	63	54	37	46	41	42	55	291
21	29	19	15	22	15	18	17	21	24	27	58	150	180	114	102	107	238	414	304	135	129	53	34	30	94
	-23	-20	-18	-14	-21	-15	-18	-18	-18	-23	-44	-185	-384	-203	-210	-269	-311	-417	-335	-117	-43	-15	-20	-20	-115
	53	40	33	37	37	34	37	40	43	52	103	336	565	317	312	378	550	831	640	252	172	69	55	50	210
22	34	38	36	49	90	147	136	78	82	74	63	94	111	98	222	218	181	257	254	344	287	245	234	270	152
	-27	-23	-21	-41	-54	-37	-194	-281	-162	-39	-46	-63	-561	-898	-944	-664	-370	-528	-493	-342	-625	-730	-606	-278	-334
	62	63	58	91	146	185	331	360	246	115	110	158	672	997	1166	883	552	785	747	687	913	975	840	548	487
23	242	356	227	270	394	361	276	90	80	58	28	35	56	52	50	34	51	93	144	158	198	243	222	146	161
	-361	-510	-980	-585	-647	-945	-423	-104	-52	-99	-190	-129	-144	-42	-28	-19	-61	-129	-211	-309	-300	-539	-399	-271	-312
	604	867	1209	856	1043	1307	700	195	132	158	219	164	200	95	79	53	113	223	355	469	499	784	622	417	473
24	184	135	87	96	101	68	60	88	23	40	31	15	16	17	12	32	40	72	23	31	99	144	46	28	62
	-200	-202	-115	-101	-108	-35	-51	-113	-103	-25	-27	-24	-23	-25	-31	-61	-145	-158	-65	-47	-105	-312	-52	-18	-89
	385	338	203	199	211	105	112	202	128	66	60	40	40	44	45	94	186	231	88	79	204	457	98	46	152
25	13	13	48	53	52	30	22	30	20	25	19	11	58	113	113	69	18	26	31	39	54	54	58	83	44
	-19	-32	-104	-132	-74	-47	-22	-46	-17	-20	-24	-25	-45	-178	-120	-57	-42	-55	-56	-79	-91	-60	-26	-72	-60
	33	46	153	187	127	77	45	77	38	46	45	38	104	291	234	127	61	82	88	119	146	115	85	157	105
26	116	123	94	101	139	129	203	206	123	85	53	51	130	158	113	90	60	75	94	58	86	51	75	30	102
	-197	-387	-195	-177	-202	-300	-293	-393	-106	-21	-45	-83	-181	-252	-183	-253	-166	-113	-117	-65	-71	-104	-114	-15	-168
	314	511	290	279	343	430	498	601	229	108	99	135	312	410	296	344	227	188	211	124	158	155	190	46	271
27	88	42	93	102	67	104	82	59	66	60	122	137	137	151	128	88	116	213	291	220	171	87	75	65	115
	-36	-28	-134	-148	-90	-147	-140	-31	-36	-238	-72	-265	-335	-404	-250	-231	-199	-309	-276	-228	-127	-42	-55	-98	-163
	125	71	229	251	159	252	222	90	103	298	194	402	472	555	380	320	317	523	568	448	300	130	131	164	279
28	66	59	64	52	43	33	19	23	22	18	13	16	15	17	16	21	22	37	41	66	99	107	115	125	46
	-90	-50	-38	-5	-1	-13	-10	-4	-10	-20	-27	-30	-34	-24	-24	-32	-43	-111	-98	-106	-76	-73	-115	-123	-48
	158	110	103	57	45	47	31	28	34	39	42	47	50	42	41	53	66	149	139	173	175	180	231	249	95
29	174	188	167	188	125	178	171	142	85	152	288	194	141	89	33	25	19	37	44	56	77	71	57	56	115
	-377	-374	-307	-372	-175	-135	-192	-114	-73	-144	-352	-186	-175	-86	-46	-17	-19	-40	-34	-107	-71	-21	-182	-81	-153
	552	563	475	561	301	313	364	257	159	297	641	380	317	177	79	43	39	78	78	164	148	93	240	139	269
30	36	35	20	21	21	25	37	63	41	76	85	131	116	65	40	49	31	44	55	50	29	39	36	43	50
	-40	-16	-14	-11	-12	-35	-18	-49	-109	-177	-157	-205	-267	-422	-165	-19	-28	-67	-177	-87	-10	-21	-19	-20	-89
	77	51	35	32	33	61	57	113	152	253	243	337	383	488	206	70	59	111	233	137	40	62	55	63	140
31	25	17	21	46	63	47	24	27	30	24	32	27	29	33	45	38	33	20	31	32	23	39	28	23	32
	-10	-4	0	-6	-116	-139	-29	-16	-23	-26	-37	-61	-33	-33	-31	-98	-58	-77	-120	-31	-17	-20	-15	-20	-43
	37	23	22	53	180	187	54	44	55	51	70	90	63	68	77	137	91	98	152	64	41	60	44	45	75

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)
SEPTEMBER 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices SEPTEMBER 1992

DAYUT		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	38	38	26	26	29	31	31	47	46	35	17	15	22	28	19	26	25	23	22	20	19	20	20	22	27
	AL	-56	-83	-81	-52	-24	-31	-30	-27	-32	-22	-25	-29	-37	-33	-28	-30	-25	-27	-31	-27	-24	-17	-12	-2	-33
	AE	94	121	108	78	53	63	63	76	80	58	43	45	59	62	48	57	51	51	55	49	45	38	34	25	61
2		22	25	33	63	48	36	59	47	41	54	58	84	135	162	183	252	231	407	385	284	165	239	179	177	140
		3	5	11	-15	-6	-10	0	0	-4	-5	-17	-31	-46	-138	-302	-391	-249	-257	-552	-254	-91	-356	-175	-128	-125
		19	19	21	79	54	47	58	48	46	59	76	116	183	301	486	645	482	664	939	539	257	597	355	306	266
3		114	67	80	82	163	254	455	244	168	162	240	281	215	154	297	247	396	295	269	223	150	135	201	185	212
		-269	-116	-158	-255	-236	-361	-799	-626	-490	-293	-496	-377	-496	-254	-493	-471	-567	-511	-449	-464	-238	-229	-629	-564	-410
		385	184	239	337	400	615	1255	871	659	456	737	659	712	409	792	719	964	807	719	689	390	365	831	750	623
4		145	151	170	181	109	213	179	117	153	173	232	196	234	128	147	148	71	71	79	137	183	282	191	105	158
		-280	-516	-369	-298	-170	-209	-522	-268	-304	-604	-276	-617	-525	-265	-267	-286	-180	-88	-159	-182	-233	-424	-865	-1180	-379
		426	668	541	480	280	422	701	386	458	779	510	814	760	394	415	436	252	161	239	320	417	707	1057	1287	538
5		220	164	114	119	119	102	105	159	154	123	178	232	110	110	87	78	70	82	74	123	164	140	71	81	124
		-423	-302	-103	-301	-331	-427	-558	-386	-385	-179	-367	-426	-130	-259	-239	-135	-154	-217	-308	-184	-333	-246	-67	-58	-272
		643	467	218	421	451	530	664	546	541	304	546	658	242	370	327	214	225	299	383	308	499	386	138	140	397
6		77	115	171	83	136	104	72	75	95	78	43	85	118	129	108	127	178	206	265	240	92	195	184	208	133
		-73	-200	-364	-247	-270	-439	-226	-316	-203	-75	-39	-38	-94	-247	-198	-215	-178	-218	-304	-279	-36	-199	-345	-251	-211
		150	316	536	331	407	544	299	392	298	153	83	124	212	378	308	343	357	424	570	520	129	395	529	460	344
7		169	133	106	167	75	69	85	85	56	123	277	223	177	154	95	54	166	166	134	131	118	138	221	173	137
		-316	-227	-216	-351	-117	-48	-198	-330	-51	-127	-653	-376	-315	-613	-263	-151	-408	-303	-334	-183	-109	-232	-327	-277	-272
		486	361	323	518	193	118	284	416	108	252	931	601	493	767	359	207	575	471	469	316	229	371	549	450	410
8		170	140	136	170	164	168	156	156	257	250	275	263	120	214	191	252	228	115	140	86	49	71	82	189	169
		-380	-169	-177	-357	-329	-477	-284	-410	-656	-422	-334	-325	-390	-472	-433	-497	-402	-231	-323	-41	-48	-87	-175	-244	-319
		551	311	315	528	494	646	441	567	915	674	611	590	512	688	625	750	630	346	464	129	98	160	258	434	489
9		66	158	273	269	203	509	240	186	239	283	73	316	449	442	327	114	126	121	242	181	233	295	204	203	240
		-34	-60	-520	-503	-294	-503	-370	-347	-533	-451	-847	-949	-1167	-548	-346	-171	-156	-91	-128	-491	-388	-179	-213	-208	-396
		101	219	794	773	498	1014	611	533	773	734	920	1266	1617	992	675	286	284	213	372	672	622	476	419	411	636
10		285	309	261	338	343	265	293	273	146	95	134	324	264	288	251	220	391	235	137	61	99	82	173	114	224
		-515	-829	-718	-609	-426	-330	-421	-687	-870	-522	-722	-762	-609	-525	-440	-792	-600	-719	-748	-619	-402	-465	-391	-441	-590
		801	1139	979	947	769	595	714	961	1017	618	857	1087	875	815	692	1013	992	955	885	681	502	547	565	555	815
11		212	272	163	214	189	231	176	190	212	184	194	172	203	137	88	100	238	253	309	287	213	112	76	60	187
		-440	-554	-320	-295	-389	-364	-256	-396	-247	-222	-273	-304	-396	-253	-133	-137	-574	-619	-608	-361	-298	-83	-19	-8	-315
		653	828	485	510	579	595	433	587	459	407	468	478	601	392	223	238	813	873	919	649	512	196	97	69	503
12		84	77	35	37	73	40	65	32	7	7	4	5	2	5	1	11	23	14	17	41	83	68	51	36	34
		-26	-164	-56	-23	-95	-79	-33	-11	-13	-15	-21	-26	-29	-30	-31	-31	-50	-51	-48	-43	-174	-86	-35	-23	-50
		110	242	93	61	169	120	98	44	21	23	25	32	31	36	34	43	73	66	66	85	258	155	88	60	85
13		31	11	20	18	40	20	22	18	30	29	17	18	14	15	15	13	21	25	24	30	60	75	58	64	29
		-17	-11	-14	-21	-59	-11	-15	-14	-13	-16	-19	-15	-12	-15	-19	-19	-19	-16	-16	-15	-36	-51	-90	-49	-24
		50	24	35	40	99	31	38	33	44	45	37	33	27	32	35	34	41	42	41	47	97	128	149	115	54
14		47	46	76	114	91	134	128	95	92	60	82	81	48	26	35	31	41	32	49	91	118	138	74	42	74
		-12	-11	-28	-137	-166	-165	-153	-142	-122	-84	-103	-57	-41	-15	-19	-23	-42	-25	-20	-207	-98	-193	-97	-28	-83
		61	58	105	252	258	300	282	238	214	145	186	139	91	41	56	55	84	58	71	299	218	333	172	71	158
15		44	107	136	168	185	68	35	42	71	54	54	52	86	129	87	101	116	159	91	82	112	65	32	37	88
		-53	-160	-249	-325	-176	-82	-58	-78	-248	-205	-90	-89	-87	-178	-152	-159	-75	-159	-80	-34	-30	-28	-45	-63	-121
		97	268	386	494	361	151	94	121	319	261	145	143	174	308	240	261	192	319	171	116	144	95	78	100	210

PROVISIONAL HOURLY VALUES OF **AU**, **AL**, AND **AE** INDICES
(continued)

SEPTEMBER 1992

16	45	39	54	65	113	123	62	75	50	26	18	62	103	78	72	67	173	200	233	182	140	103	57	92
	-54	-71	-84	-85	-106	-319	-172	-83	-79	-65	-28	-56	-242	-224	-109	-56	-226	-255	-336	-255	-145	-109	-149	-141
	100	111	139	150	220	443	235	159	130	92	47	119	346	302	182	123	399	456	570	438	286	213	206	233
17	59	144	253	354	308	388	393	214	142	121	134	260	345	299	219	152	293	193	199	109	133	262	195	179	223
	-94	-379	-757	-708	-568	-620	-658	-646	-676	-395	-682	-346	-234	-211	-414	-274	-469	-771	-589	-618	-581	-313	-104	-139	-469
	154	524	1011	1063	877	1009	1052	862	819	518	816	607	580	511	635	427	764	965	789	728	715	576	300	320	693
18	117	83	105	67	68	207	75	52	48	104	85	68	106	87	28	42	34	75	71	140	187	109	93	140	91
	-103	-65	-226	-232	-212	-443	-269	-97	-53	-254	-564	-205	-406	-177	-46	-53	-82	-130	-125	-100	-196	-195	-135	-360	-197
	221	149	332	301	281	650	345	150	102	359	650	274	514	266	75	97	117	206	197	241	384	306	229	501	289
19	101	72	73	35	39	19	14	25	26	68	54	89	47	47	39	36	66	60	89	149	48	29	33	31	54
	-420	-221	-75	-196	-89	-19	-11	-20	-22	-50	-47	-264	-123	-79	-58	-77	-176	-153	-196	-207	-97	-35	-41	-19	-112
	522	295	149	231	128	39	26	46	48	118	101	355	171	127	98	115	242	214	286	357	146	65	75	51	167
20	19	25	19	19	10	48	81	67	60	50	33	48	34	37	28	20	22	30	28	40	108	87	89	64	45
	-32	-10	-16	-13	-15	-50	-206	-225	-38	-39	-47	-137	-138	-89	-78	-61	-72	-44	-32	-86	-114	-162	-52	-50	-75
	52	37	36	33	25	99	289	292	98	90	81	186	173	127	107	82	94	75	61	128	223	250	143	116	121
21	31	19	18	12	11	11	19	22	23	15	5	5	4	3	4	8	13	11	26	48	89	133	156	256	39
	-20	-17	-18	-15	-8	-10	-38	-16	-122	-66	-26	-30	-32	-24	-24	-27	-60	-101	-71	-54	-127	-141	-278	-307	-68
	52	38	37	28	20	21	59	40	146	81	32	36	37	28	29	36	73	113	98	103	217	275	435	564	108
22	127	147	144	183	108	85	55	43	18	19	33	23	42	44	42	23	27	42	41	81	105	65	97	77	70
	-414	-398	-411	-314	-63	-42	-64	-34	-36	-23	-22	-42	-42	-40	-49	-76	-34	-63	-53	-66	-62	-38	-178	-136	-113
	543	546	555	497	173	128	120	78	54	43	57	67	85	86	92	100	61	106	95	148	168	104	276	213	183
23	58	69	79	132	112	73	76	22	20	19	35	97	85	33	21	16	15	13	24	27	44	29	25	17	48
	-34	-32	-116	-205	-315	-259	-175	-49	-29	-26	-32	-211	-101	-52	-24	-24	-35	-36	-26	-28	-54	-35	-5	-9	-80
	93	103	196	338	427	333	252	71	50	46	69	309	188	86	46	41	50	50	52	57	98	66	32	27	128
24	11	14	9	26	21	17	15	10	10	8	14	11	9	10	6	15	18	15	22	17	18	26	47	47	17
	-13	-10	-9	-7	-5	-1	0	-5	-9	-15	-21	-21	-24	-23	-20	-16	-23	-15	-36	-29	-31	-31	-26	-50	-18
	26	26	20	33	26	18	14	16	20	24	36	33	34	34	27	33	42	31	60	47	50	59	74	99	37
25	64	72	59	28	18	17	25	16	28	70	60	64	46	90	70	69	21	33	27	63	55	44	27	18	45
	-132	-61	-15	-10	-2	-1	-7	-11	-8	-61	-150	-113	-24	-151	-225	-76	-24	-30	-42	-110	-19	-15	-18	-17	-55
	196	134	74	39	22	18	33	29	36	131	211	179	72	242	296	147	47	65	70	175	75	60	47	36	101
26	46	86	44	35	31	33	24	24	11	11	13	12	16	17	38	42	116	58	21	14	17	18	15	11	31
	-102	-288	-122	-24	-34	-126	-43	-25	-24	-23	-25	-38	-29	-24	-25	-82	-393	-250	-24	-44	-91	-15	-12	-12	-78
	150	375	168	60	66	160	68	51	37	35	39	51	45	42	65	125	509	309	46	60	110	34	29	25	111
27	14	24	22	24	26	23	40	28	28	30	18	23	32	31	29	19	14	13	19	26	20	23	23	19	24
	-8	-23	-12	-8	-13	-85	-83	-111	-63	-60	-41	-35	-112	-39	-43	-33	-31	-33	-27	-38	-13	-12	-14	-16	-40
	23	48	35	32	39	109	125	140	91	91	59	59	145	72	73	54	46	47	47	65	34	36	39	36	64
28	18	20	18	35	35	37	26	30	27	36	51	45	98	80	72	131	159	202	188	120	145	278	311	216	99
	-9	0	-7	-18	-92	-68	-51	-42	-11	-72	-86	-70	-119	-452	-327	-405	-274	-235	-131	-37	-281	-620	-304	-186	-162
	28	20	26	53	128	106	78	73	39	109	137	116	219	533	400	537	434	437	319	157	428	899	616	403	262
29	93	69	108	304	248	226	116	298	79	85	143	164	229	174	241	204	158	122	143	197	110	109	158	89	161
	-71	-46	-260	-603	-706	-524	-928	-452	-441	-808	-724	-604	-846	-794	-440	-265	-575	-201	-171	-511	-163	-74	-473	-248	-455
	165	117	369	908	956	751	1044	750	520	895	867	768	1076	969	683	470	733	324	315	709	275	185	633	338	617
30	107	163	143	170	131	66	120	116	93	41	64	126	101	83	194	225	282	313	200	149	144	100	127	114	140
	-268	-359	-75	-167	-380	-315	-237	-254	-328	-106	-282	-346	-326	-200	-452	-575	-499	-814	-566	-173	-158	-355	-420	-501	-340
	375	524	219	338	512	381	358	370	423	148	347	474	429	284	647	800	782	1128	767	323	303	456	547	616	481

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES (continued)

OCTOBER 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices OCTOBER 1992

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
1	AU	131	113	137	147	156	171	124	92	80	66	118	152	136	140	131	65	141	139	212	141	78	53	45	55	118
	AL	-443	-120	-215	-466	-460	-412	-309	-370	-101	-160	-351	-509	-539	-436	-331	-181	-379	-374	-452	-237	-204	-134	-32	-56	-303
	AE	575	234	353	614	617	584	434	463	183	228	469	662	676	576	464	248	521	514	666	380	284	188	79	112	422
2		53	83	127	82	47	57	41	42	61	109	51	76	119	69	53	71	89	57	53	42	44	30	36	34	64
		-144	-428	-194	-84	-155	-204	-208	-183	-219	-237	-165	-214	-300	-257	-246	-238	-233	-154	-209	-158	-113	-76	-148	-19	-191
		197	512	322	166	203	262	250	226	282	347	217	292	421	327	300	310	323	212	263	202	158	108	185	54	256
3		30	31	30	35	51	77	80	38	53	59	90	131	159	106	42	34	13	30	51	76	66	59	74	98	63
		-23	-31	-60	-129	-126	-152	-71	-171	-229	-163	-216	-353	-311	-225	-187	-225	-132	-44	-79	-325	-236	-160	-145	-155	-164
		55	64	90	164	177	230	151	210	283	222	306	484	471	332	230	259	146	75	131	403	304	220	219	253	228
4		98	83	104	178	72	54	38	21	26	22	19	19	16	15	15	11	12	12	16	17	18	26	18	19	39
		-140	-113	-333	-373	-163	-34	-28	-9	-6	-18	-21	-21	-24	-23	-25	-23	-20	-14	-10	-8	-9	-9	-15	-15	-61
		240	197	437	553	235	89	67	30	32	42	42	40	41	39	41	36	33	27	27	26	29	36	34	35	100
5		18	21	27	32	35	19	20	20	21	23	20	17	20	23	18	22	43	42	78	35	32	30	54	38	29
		-27	-31	-66	-77	-44	-35	-27	-16	-13	-16	-21	-25	-28	-27	-26	-23	-32	-150	-162	-65	-53	-56	-112	-60	-50
		46	54	94	109	80	55	48	37	35	41	42	43	49	51	45	46	76	194	241	101	86	88	167	100	80
6		61	74	124	200	157	41	27	19	30	58	60	55	32	70	60	100	93	83	77	64	55	29	27	35	68
		-76	-231	-404	-186	-184	-36	-40	-32	-41	-132	-204	-147	-57	-70	-148	-357	-227	-201	-170	-116	-67	-51	-10	-29	-134
		138	306	529	388	341	78	68	52	73	191	264	202	90	141	208	459	321	286	249	181	124	80	39	65	203
7		26	35	53	73	93	127	111	105	106	163	247	146	55	64	44	36	33	39	37	74	42	35	37	36	76
		-43	-26	-46	-158	-133	-139	-134	-146	-204	-339	-276	-133	-29	-31	-50	-70	-66	-66	-43	-57	-31	-10	-9	-18	-94
		70	62	100	231	226	266	245	253	311	503	524	279	84	96	95	108	100	107	82	132	73	47	48	55	171
8		47	55	55	92	49	67	63	43	39	40	25	17	18	21	27	27	27	33	31	58	87	102	102	84	50
		-96	-261	-115	-165	-91	-29	-25	-9	-11	-6	-11	-15	-16	-16	-21	-24	-39	-15	-25	-146	-216	-49	-15	-6	-59
		144	317	171	258	141	97	90	54	51	47	36	33	36	39	50	53	68	50	57	204	304	152	118	92	111
9		72	57	46	46	41	41	39	53	51	76	98	102	230	297	282	285	326	252	229	193	162	63	61	49	131
		1	1	-1	-2	-1	2	8	15	6	-29	-436	-636	-679	-571	-575	-577	-438	-702	-493	-418	-388	-108	-159	-70	-260
		71	55	48	49	43	39	31	37	45	107	535	739	910	869	858	862	765	956	723	613	551	172	220	120	392
10		40	26	22	37	32	21	23	61	96	95	116	121	93	76	57	49	31	30	31	35	26	49	99	75	56
		-9	-11	-15	-14	-16	-6	-19	-98	-186	-170	-177	-222	-296	-121	-90	-104	-114	-42	-46	-137	-37	-68	-288	-159	-102
		50	38	38	52	49	28	43	161	284	266	294	344	389	197	148	154	146	73	78	173	65	119	388	235	159
11		89	63	46	59	70	39	29	41	37	43	119	100	217	204	231	292	287	292	217	133	151	154	77	52	127
		-122	-98	-128	-179	-53	-13	-11	-10	-10	-29	-229	-706	-533	-346	-360	-694	-663	-409	-422	-403	-328	-326	-59	-49	-257
		212	162	174	238	124	53	42	52	48	74	349	806	750	551	591	987	951	702	640	537	480	480	137	102	385
12		59	77	87	73	161	179	195	233	273	154	195	216	366	286	208	121	138	85	97	52	49	55	42	27	143
		-146	-368	-338	-223	-455	-325	-356	-431	-555	-716	-559	-516	-1301	-711	-216	-126	-293	-225	-77	-41	-61	-174	-29	-15	-344
		207	446	426	297	616	505	552	665	829	871	755	733	1668	997	425	248	432	311	176	95	111	230	72	43	488
13		85	96	74	117	44	41	71	70	89	42	36	37	54	73	39	104	156	261	221	228	312	200	110	164	113
		-140	-393	-279	-116	-36	-17	-80	-59	-20	-9	-14	-14	-41	-85	-102	-139	-443	-499	-387	-357	-636	-176	-32	-187	-177
		226	489	354	234	81	58	152	130	109	52	51	53	97	159	141	243	600	762	609	586	949	378	143	352	292
14		156	131	99	85	64	78	64	85	93	141	81	58	82	62	54	41	41	42	57	100	127	93	96	111	85
		-268	-153	-57	-62	-7	-124	-103	-212	-139	-66	-16	-14	-108	-204	-80	-35	-73	-62	-76	-197	-313	-251	-184	-621	-143
		425	285	158	148	72	202	167	298	233	208	98	73	191	267	135	77	115	106	134	298	441	345	281	733	229
15		183	96	106	155	113	120	143	108	151	165	143	109	140	132	104	130	86	68	124	140	114	176	170	195	132
		-479	-430	-411	-107	-65	-377	-177	-106	-316	-605	-442	-240	-193	-277	-73	-281	-271	-125	-323	-537	-260	-268	-294	-470	-297
		663	526	518	263	178	498	322	215	468	771	586	350	334	410	178	412	358	194	448	679	375	446	465	666	430

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES

(continued)

OCTOBER 1992

16	190	198	166	145	155	145	115	142	151	167	153	79	90	86	78	31	77	66	54	49	32	82	121	99	111
	-497	-268	-272	-207	-343	-186	-175	-143	-114	-187	-84	-37	-116	-164	-29	-74	-253	-298	-130	-18	-13	-65	-241	-146	-169
	687	467	438	353	499	333	291	287	266	356	238	117	207	250	108	107	332	365	185	69	47	148	363	246	282
17	101	108	60	68	61	64	64	98	99	76	121	164	131	95	130	108	77	80	124	120	106	77	81	66	95
	-33	-55	-21	-29	-35	-139	-280	-76	-7	-37	-192	-399	-120	-92	-180	-310	-206	-272	-463	-204	-136	-107	-82	-39	-146
	136	163	82	97	97	204	345	174	107	114	313	563	251	188	311	420	285	354	589	325	244	185	165	106	242
18	75	94	117	115	88	76	70	60	49	45	23	42	85	77	103	76	82	114	85	76	145	118	131	252	92
	-116	-101	-32	-19	-18	-30	-5	-23	-60	-5	-11	-37	-113	-232	-493	-225	-253	-266	-194	-119	-192	-211	-220	-347	-138
	192	196	150	135	107	107	76	84	110	51	35	80	199	309	597	303	336	381	281	197	339	330	351	599	231
19	266	147	199	98	48	63	28	42	51	43	56	88	106	73	195	205	138	123	103	81	75	58	103	132	105
	-281	-280	-162	-2	5	-18	-4	-6	-16	-1	-20	-70	-104	-382	-586	-409	-232	-246	-261	-162	-45	-7	-58	-91	-143
	548	427	362	101	42	81	32	48	67	44	77	158	210	456	782	615	371	370	366	244	121	67	162	225	249
20	192	232	86	150	63	80	53	54	33	31	33	50	66	55	56	48	28	22	25	30	32	36	43	67	65
	-194	-143	-279	-92	10	-39	4	3	1	-7	-25	-50	-129	-90	-36	-27	-13	-37	-49	-33	-45	-38	-25	-54	-58
	387	375	366	243	52	119	48	49	32	40	59	100	196	146	93	76	42	60	75	64	78	75	69	122	124
21	54	48	43	31	37	46	57	63	65	58	44	41	40	52	57	32	34	47	32	32	38	66	104	134	52
	-72	-14	-2	0	2	-1	-53	-89	-5	1	-4	-12	-16	-14	-13	-25	-107	-112	-25	-23	-16	-190	-285	-245	-55
	128	63	46	31	34	48	111	152	70	57	49	53	57	67	70	57	142	161	58	56	55	258	390	381	108
22	114	51	36	55	49	33	31	35	38	40	40	38	50	58	46	54	59	44	33	34	44	51	52	53	47
	-45	-11	-7	-5	-6	3	4	4	1	-4	-5	-11	-16	-25	-18	-78	-147	-92	-9	-35	-14	-7	-1	-48	-24
	161	64	44	60	55	29	26	30	36	45	46	50	67	84	64	133	207	137	43	70	59	58	53	102	72
23	65	56	45	44	44	54	47	43	43	37	34	36	31	28	23	28	21	20	25	27	24	27	27	28	36
	-147	-85	-40	-9	-25	-31	0	-50	-39	-46	-23	-16	-16	-14	-14	-18	-14	-9	-6	1	-36	-7	-11	-8	-28
	213	142	86	54	70	85	48	94	82	84	57	53	47	42	38	47	36	30	31	25	61	34	38	37	64
24	30	28	23	23	33	34	33	30	34	32	28	29	30	30	33	32	36	42	27	27	27	30	30	47	31
	-9	-4	-5	1	5	7	6	2	-1	-4	-7	-10	-32	-24	-21	-11	-15	-27	1	4	1	0	-1	-59	-8
	41	34	29	22	28	26	26	27	35	36	36	39	63	55	55	44	52	70	25	22	25	30	32	108	40
25	102	54	37	28	22	40	57	44	33	33	34	41	97	65	35	33	33	27	25	41	26	32	58	58	44
	-244	-22	5	10	11	11	4	-26	-21	-19	-6	-16	-127	-151	-33	-15	-12	-7	-5	-108	-44	-6	-63	-29	-38
	347	77	31	18	11	28	52	70	55	52	41	57	225	217	69	49	45	34	31	150	71	40	122	88	82
26	129	144	109	89	66	116	158	99	80	61	50	37	61	59	41	35	26	22	65	75	155	170	201	220	95
	-89	-9	-35	-42	-22	-25	-54	-34	-163	-90	-28	-22	-41	-41	-29	-36	-23	-52	-226	-347	-447	-352	-479	-521	-134
	219	155	146	132	89	141	213	134	245	152	79	60	103	101	72	73	51	75	291	423	604	524	681	742	229
27	212	141	119	173	79	76	93	164	121	181	104	130	115	148	195	224	241	252	98	61	45	42	52	74	131
	-285	-334	-786	-454	-155	-126	-172	-272	-129	-261	-386	-518	-449	-539	-531	-545	-487	-627	-186	-63	-7	-58	-95	-263	-322
	499	476	905	627	234	203	266	438	251	443	491	649	565	687	727	770	728	880	285	126	53	101	148	339	454
28	85	98	115	57	75	111	110	104	128	185	113	153	71	104	113	139	130	148	81	112	137	105	132	122	114
	-398	-270	-226	-199	-188	-251	-184	-251	-281	-426	-688	-444	-332	-279	-208	-233	-317	-426	-177	-287	-249	-130	-403	-368	-301
	484	369	342	257	263	362	295	356	409	612	802	598	404	384	322	373	448	575	259	400	388	237	536	492	415
29	133	161	122	83	104	102	96	101	195	200	200	120	132	72	118	174	195	131	167	102	113	110	82	51	128
	-292	-258	-391	-415	-283	-290	-324	-260	-464	-333	-315	-462	-325	-259	-341	-328	-675	-659	-487	-404	-220	-107	-315	-78	-345
	427	420	513	499	387	393	420	362	659	534	515	583	457	331	459	503	872	791	654	508	334	218	397	130	474
30	54	52	51	52	103	94	76	85	80	126	85	190	124	157	151	104	135	122	92	103	161	141	101	77	105
	-15	-43	-194	-159	-265	-262	-146	-204	-152	-509	-382	-314	-307	-444	-380	-219	-373	-313	-169	-176	-258	-181	-298	-117	-245
	70	96	246	212	369	358	223	289	233	635	467	504	432	602	531	323	509	437	263	281	421	323	401	196	351
31	76	76	94	114	94	72	89	143	234	161	66	53	114	144	180	72	92	116	79	92	83	74	52	61	101
	-115	-132	-180	-188	-107	-49	-161	-293	-403	-297	-282	-40	-198	-576	-543	-157	-132	-158	-186	-157	-60	-74	-5	-6	-188
	192	209	275	303	202	121	250	437	639	460	349	94	314	722	724	231	225	275	266	250	145	149	57	68	290

Provisional Hourly Values (nT) of AU, AL and AE Indices NOVEMBER 1992

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
1	AU	77	70	77	81	76	82	138	101	34	32	40	34	28	30	49	34	92	152	151	80	63	198	153	155	85
	AL	-65	-137	-161	-123	-110	-106	-136	-46	-5	-14	-20	-23	-43	-29	-39	-43	-160	-244	-322	-63	-46	-358	-904	-524	-155
	AE	144	209	240	205	187	189	275	148	40	47	61	59	72	60	88	78	253	398	474	144	110	556	1058	681	241
2		191	262	134	141	192	290	215	116	72	97	159	142	159	73	42	28	35	44	48	76	148	131	79	111	124
		-178	-218	-211	-288	-254	-491	-348	-121	-65	-90	-356	-318	-200	-224	-79	-48	-40	-22	-39	-91	-215	-233	-86	-147	-182
		369	481	346	431	447	782	564	239	138	188	515	461	360	298	123	77	77	68	89	168	364	365	165	258	307
3		94	93	117	169	146	162	215	268	363	391	286	89	40	27	22	14	8	25	16	43	77	54	85	74	120
		-262	-334	-117	-311	-351	-498	-413	-506	-562	-553	-359	-45	-40	-84	-41	-88	-93	-46	-100	-88	-216	-188	-346	-134	-241
		357	429	235	481	498	661	629	775	926	945	646	134	81	112	63	103	102	73	117	132	294	243	432	209	362
4		44	46	41	98	104	111	100	133	212	213	170	211	117	155	224	241	205	129	62	72	54	56	78	139	126
		-57	-77	-132	-287	-180	-135	-184	-290	-297	-488	-369	-327	-341	-561	-832	-1129	-285	-72	-51	-111	-138	-234	-266	-569	-309
		102	125	174	386	285	247	285	424	510	702	539	538	458	717	1058	1370	491	203	115	184	193	291	345	710	435
5		168	66	108	93	37	43	106	61	37	27	113	75	75	72	163	63	25	31	65	37	50	105	79	62	73
		-292	-145	-40	-5	-12	-24	-193	-78	-37	-30	-205	-523	-465	-192	-317	-128	-33	-47	-76	-82	-179	-226	-181	-192	-154
		461	211	149	98	50	68	300	141	75	58	318	598	541	265	481	192	59	79	141	120	231	333	261	255	229
6		49	43	73	85	61	52	41	53	61	57	148	165	153	170	284	234	218	250	211	160	52	43	41	59	115
		-196	-162	-211	-201	-168	-144	-158	-277	-179	-180	-293	-365	-360	-564	-539	-575	-424	-312	-307	-207	-39	-56	-71	-188	-257
		246	207	285	288	230	196	199	331	241	238	441	530	514	735	825	810	642	562	518	368	92	99	113	248	373
7		58	73	59	28	33	63	61	39	56	84	87	80	119	146	68	112	188	154	126	121	106	118	104	137	93
		-134	-190	-177	-42	-16	-63	-212	-197	-108	-211	-428	-137	-228	-190	-174	-477	-474	-254	-217	-204	-176	-135	-176	-360	-208
		193	265	238	71	50	127	275	237	166	296	516	218	347	336	242	591	663	409	343	326	283	255	282	498	301
8		203	71	42	35	49	71	62	74	85	39	23	21	32	33	18	53	40	23	28	51	58	90	149	149	62
		-180	-30	-17	-8	-11	-25	-76	-116	-17	-5	-13	-17	-29	-45	-141	-118	-92	-19	-41	-292	-90	-66	-297	-43	-74
		384	101	59	44	60	97	139	191	103	44	37	39	62	79	160	172	132	43	69	345	149	157	447	192	138
9		60	42	94	117	146	134	314	322	224	327	101	281	319	273	276	291	167	63	49	45	47	159	72	43	165
		-29	-7	-29	-78	-228	-359	-297	-390	-893	-484	-528	-431	-607	-476	-519	-396	-565	-198	-77	-114	-98	-288	-310	-169	-315
		89	50	124	197	376	494	612	712	1117	812	630	713	927	751	796	687	733	262	127	159	145	447	383	213	482
10		64	75	25	58	66	53	73	47	52	41	19	50	44	52	29	22	93	92	104	85	77	76	59	53	59
		-146	-92	-39	-48	-59	-86	-102	-53	-31	-20	-17	-61	-90	-104	-33	-51	-304	-196	-172	-71	-44	-67	-101	-78	-86
		211	167	66	108	125	141	177	100	84	62	37	112	134	156	63	73	398	289	277	157	123	144	160	131	146
11		52	76	99	153	102	105	99	62	57	64	98	90	71	73	41	21	32	31	34	83	45	80	46	62	70
		-34	-111	-145	-347	-168	-72	-67	-105	-349	-343	-78	-420	-133	-63	-35	-112	-284	-262	-112	-84	-128	-64	-1	-76	-150
		86	189	244	500	271	178	166	168	406	407	178	510	204	137	77	134	317	295	148	169	174	145	48	139	220
12		81	63	64	87	94	96	120	68	30	45	53	68	103	67	67	121	42	38	41	49	69	86	152	129	76
		-146	-43	-24	-125	-250	-54	-20	-7	-49	-228	-211	-119	-209	-206	-182	-242	-154	-130	-195	-354	-174	-268	-316	-200	-163
		227	107	89	213	345	150	140	75	80	274	265	188	312	273	251	363	197	169	238	404	244	355	468	330	240
13		86	51	55	48	73	96	90	95	36	36	50	113	160	81	88	33	26	26	36	26	60	54	70	62	65
		-33	-17	-20	-39	-47	-41	-28	-27	-9	-32	-144	-495	-689	-328	-96	-60	-212	-202	-125	-275	-136	-17	-188	-142	-142
		119	70	76	89	122	138	118	123	45	69	195	609	850	409	184	94	239	229	162	302	197	72	260	205	207
14		82	71	52	82	104	92	68	79	30	28	58	100	128	111	98	30	25	90	39	86	66	65	75	67	72
		-32	-16	-47	-80	-178	-41	-20	-13	-25	-136	-212	-383	-256	-118	-83	-83	-177	-173	-132	-157	-83	-26	-88	-133	-112
		115	89	100	162	282	134	89	93	56	165	270	483	385	230	181	113	203	263	172	244	150	93	164	201	185
15		93	96	103	48	73	93	92	63	45	42	28	58	77	29	131	230	98	64	152	109	105	141	174	115	94
		-127	-18	-21	-18	-24	-74	-66	-6	0	-12	-28	-52	-531	-543	-715	-515	-99	-70	-238	-265	-117	-204	-373	-181	-179
		221	115	124	67	97	168	160	69	45	55	56	110	609	574	847	745	199	135	391	375	223	346	548	297	274

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)

NOVEMBER 1992

16	123	71	57	61	50	56	46	57	47	43	43	43	29	24	36	34	42	39	22	28	67	59	64	57	50
	-219	-124	-9	-10	-24	-42	-39	-38	-38	-38	-74	-20	-26	-27	-26	-108	-99	-54	-17	-46	-86	-276	-196	-170	-75
	343	196	66	72	75	99	86	96	85	82	118	64	56	51	63	143	143	94	40	76	153	336	261	228	126
17	65	84	64	72	78	111	103	59	46	30	33	50	43	44	35	44	29	21	67	58	29	49	51	30	54
	-58	-25	-21	-69	-28	-136	-19	-13	-6	-21	-55	-166	-98	-30	-31	-42	-171	-233	-178	-229	-93	-51	-114	-74	-82
	124	110	86	143	107	247	123	73	53	52	89	216	142	75	66	87	202	255	246	288	123	102	166	104	137
18	40	34	39	43	37	27	33	44	35	28	35	49	36	29	32	25	63	121	146	138	78	60	38	24	51
	-199	-69	-26	-7	-3	-4	-21	-12	-8	-17	-28	-48	-36	-26	-21	-42	-117	-322	-301	-241	-178	-7	-13	-14	-73
	240	105	66	51	41	31	55	56	43	46	63	97	73	55	54	68	181	444	447	380	258	68	52	39	126
19	22	22	44	63	78	53	34	57	67	54	61	81	111	140	101	61	44	22	16	23	21	24	20	17	51
	-15	-15	-12	-26	-124	-46	1	-22	-105	-124	-74	-112	-324	-239	-89	-71	-32	-24	-47	-52	-32	-5	-8	-5	-67
	38	38	57	91	202	100	33	79	174	178	135	194	436	379	190	133	77	48	65	76	54	31	29	23	119
20	22	17	16	17	29	28	23	27	35	40	57	43	36	25	21	26	14	16	14	18	27	30	39	106	30
	-10	-4	-5	-4	-11	-9	-3	-7	-11	-41	-50	-14	-16	-17	-17	-21	-13	-21	-18	-16	-151	-83	-61	-145	-31
	34	22	22	22	41	38	27	35	46	82	108	57	53	42	38	48	28	38	33	35	179	114	101	252	62
21	188	147	172	107	195	182	102	45	13	14	12	11	14	13	13	12	14	15	14	11	13	15	16	17	57
	-121	-144	-265	-289	-160	-36	-6	-6	-10	-13	-13	-15	-17	-23	-24	-26	-24	-18	-14	-11	-7	-11	-3	-2	-52
	310	291	439	397	357	218	109	52	24	27	26	27	32	37	38	39	38	33	28	23	21	27	20	21	110
22	25	22	21	24	31	39	55	38	73	112	66	35	91	288	67	94	65	91	40	103	83	121	158	154	79
	-7	-6	0	-3	-1	-8	-2	-10	-20	-30	-29	-258	-471	-528	-266	-258	-257	-340	-116	-300	-324	-341	-306	-290	-174
	34	29	22	29	33	47	58	49	94	143	96	293	564	817	333	352	323	431	158	404	408	463	465	445	254
23	71	107	159	165	178	208	152	218	297	203	118	86	54	81	92	135	155	248	203	159	95	59	115	94	144
	-501	-435	-428	-527	-626	-584	-475	-346	-278	-342	-262	-297	-234	-256	-135	-317	-665	-491	-283	-181	-260	-101	-220	-99	-348
	574	543	587	694	806	794	628	565	575	546	381	384	288	338	229	453	821	740	487	341	357	162	336	194	493
24	40	33	50	26	19	36	58	53	74	74	91	224	190	72	58	34	56	99	100	129	123	95	118	58	80
	-13	-16	-46	-47	-48	-51	-121	-178	-150	-245	-347	-401	-200	-244	-351	-113	-239	-364	-256	-360	-333	-81	-159	-143	-188
	54	50	96	73	67	88	180	231	225	320	438	626	390	317	410	148	296	465	357	491	456	177	278	202	268
25	94	103	104	43	72	24	46	30	38	68	107	143	107	77	51	40	16	24	6	11	37	55	38	43	57
	-130	-246	-103	-20	-47	-37	-156	-63	-48	-216	-474	-585	-486	-195	-20	-32	-34	-195	-206	-58	-36	-216	-197	-94	-162
	224	350	208	63	119	62	203	93	87	285	582	729	594	272	73	74	52	220	213	71	75	273	236	138	221
26	59	75	106	101	92	82	79	52	38	45	69	77	123	61	76	30	31	25	31	15	23	17	22	27	56
	-136	-222	-185	-158	-354	-198	-18	-17	-70	-103	-247	-170	-180	-275	-181	-44	-23	-21	-31	-17	-196	-94	-29	-53	-126
	196	299	292	261	447	281	98	70	109	148	316	247	303	337	257	75	56	47	63	34	220	112	52	81	183
27	28	34	36	55	35	29	41	46	24	25	28	28	25	35	21	22	23	17	13	11	9	7	16	17	26
	-53	-46	-55	-34	-8	-4	-10	-5	-14	-28	-30	-26	-17	-44	-63	-43	-35	-41	-21	-61	-9	-6	-11	-67	-30
	82	80	91	90	44	34	52	51	39	53	59	55	44	79	85	66	58	59	35	73	18	13	28	84	57
28	25	48	79	84	60	70	54	71	77	66	125	147	62	24	31	37	31	94	106	86	110	116	134	79	76
	-52	-43	-12	2	2	-6	-10	-88	-210	-139	-129	-167	-17	-13	-20	-27	-74	-162	-212	-80	-111	-215	-166	-57	-83
	78	92	92	82	57	77	65	160	288	205	255	315	80	38	52	65	107	257	320	167	222	332	301	137	160
29	50	57	56	55	51	50	33	30	30	26	21	39	25	61	39	47	49	47	41	18	23	25	23	19	38
	-15	-2	3	1	-14	0	-1	-1	-5	-5	-7	-102	-152	-182	-121	-174	-103	-166	-157	-26	-5	-13	-15	-13	-53
	66	59	52	54	65	50	36	31	36	32	28	142	178	244	161	223	154	215	200	46	28	39	39	34	92
30	19	19	23	20	20	21	33	25	44	42	60	113	56	64	90	203	189	230	210	180	197	79	70	107	88
	-6	-6	-15	-8	-2	-4	-26	-93	-125	-92	-148	-306	-339	-467	-435	-583	-428	-305	-613	-520	-260	-70	-71	-194	-213
	26	27	38	29	23	26	59	119	170	134	209	420	395	533	527	787	619	536	824	701	459	149	142	301	302

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)

DECEMBER 1992

Provisional Hourly Values (nT) of AU, AL and AE Indices DECEMBER 1992

DAYUT		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	117	170	158	135	115	102	91	81	94	105	149	191	139	72	143	203	175	106	65	39	45	48	55	67	111
	AL	-511	-407	-212	-160	-165	-119	-72	-148	-465	-370	-235	-341	-172	-365	-473	-326	-376	-281	-55	-42	-154	-196	-190	-247	-253
	AE	628	578	371	296	281	222	165	230	559	475	384	532	312	438	617	531	552	388	122	82	200	244	245	315	365
2		96	78	43	105	94	109	75	46	41	39	34	26	29	71	34	52	36	39	62	74	83	37	28	36	57
		-309	-55	-3	-47	-197	-204	-11	-17	-14	-121	-18	-11	-17	-75	-179	-73	-31	-164	-260	-217	-93	-89	-60	-128	-100
		406	133	46	153	293	315	87	64	55	160	53	37	47	147	214	126	68	204	323	292	177	127	89	164	157
3		41	56	47	118	133	157	73	29	30	101	189	195	174	82	70	79	123	208	148	182	134	114	107	73	111
		-98	-120	-164	-158	-252	-259	-25	-4	-10	-104	-393	-273	-363	-103	-99	-211	-283	-481	-285	-308	-216	-354	-193	-160	-205
		140	177	211	278	386	418	99	33	41	206	582	469	538	187	171	292	407	691	434	491	351	469	300	233	317
4		55	59	102	82	77	90	152	83	84	73	80	145	111	43	64	51	43	77	83	76	102	97	78	98	84
		-150	-122	-247	-248	-145	-161	-300	-136	-80	-147	-231	-248	-163	-483	-321	-89	-78	-268	-354	-148	-158	-120	-112	-326	-201
		206	182	349	331	224	252	452	220	164	221	312	395	275	528	387	141	123	347	438	225	261	217	190	425	286
5		74	81	122	88	31	54	50	49	67	85	61	40	31	20	8	9	16	17	19	32	30	31	32	32	45
		-262	-246	-220	-129	-5	-9	-54	-158	-167	-148	-78	-80	-64	-47	-85	-117	-193	-104	-30	-10	-2	-6	-9	-25	-94
		337	328	343	219	37	63	105	207	234	233	140	121	96	68	94	128	211	122	50	43	33	39	43	57	140
6		30	44	29	23	24	25	29	28	30	34	42	47	68	57	35	130	146	137	96	45	43	40	42	40	53
		-70	-71	-16	-1	0	0	-8	-38	-21	-11	-62	-92	-37	-42	-98	-469	-355	-274	-118	-42	-18	-11	-5	-4	-78
		101	116	46	26	23	24	37	67	51	45	104	140	105	100	134	601	503	413	216	88	61	51	48	45	131
7		38	37	40	50	42	46	44	55	93	80	76	96	58	81	56	41	30	27	38	90	153	176	143	247	77
		-4	-3	-21	-48	-16	-7	-21	-57	-153	-156	-69	-157	-415	-215	-50	-14	-1	-1	-27	-40	-7	-22	-191	-302	-83
		43	41	63	99	60	55	66	113	247	236	145	253	474	297	107	56	32	29	66	132	161	199	335	550	161
8		166	172	139	136	113	63	58	87	97	92	167	223	57	115	79	88	62	101	96	102	137	178	164	111	117
		-77	-48	-21	-84	-72	-54	-115	-162	-75	-55	-216	-205	-249	-93	-137	-118	-87	-361	-343	-126	-308	-675	-258	-84	-168
		244	221	161	221	185	118	174	249	173	148	383	428	307	209	218	207	151	463	440	229	445	854	422	196	285
9		100	132	154	132	117	79	93	125	66	90	115	89	150	83	133	133	90	133	89	82	74	78	125	152	109
		-142	-154	-163	-93	-143	-83	-209	-21	-15	-68	-110	-91	-435	-433	-349	-292	-296	-234	-132	-59	-63	-225	-139	-37	-166
		243	287	319	226	261	163	303	147	82	159	226	180	586	517	483	426	387	368	222	142	138	304	265	190	276
10		112	93	80	97	77	64	62	81	112	117	182	155	73	63	61	37	160	102	163	160	141	143	143	90	107
		-30	-16	-14	-9	-7	-16	-3	-27	-143	-350	-279	-127	-52	-13	-45	-72	-547	-373	-238	-189	-291	-172	-127	-143	-137
		143	110	95	107	86	80	65	109	255	467	461	283	125	77	108	111	709	476	402	350	433	316	272	234	245
11		90	98	129	93	58	60	43	59	58	79	53	57	37	34	38	62	44	47	30	35	63	46	48	41	58
		-101	-51	-145	4	-2	-4	-9	-27	-135	-115	-5	0	-11	-32	-162	-204	-95	-30	-13	-48	-169	-187	-58	-35	-68
		191	150	275	88	60	65	52	87	194	195	58	57	49	68	201	267	140	78	44	84	232	233	107	78	127
12		64	56	60	57	36	41	35	37	45	33	38	43	44	31	137	79	44	35	54	44	26	31	67	78	51
		-51	-57	-54	-1	1	2	2	0	-5	-8	-10	-40	-78	-288	-159	-15	-23	-47	-192	-124	-15	-14	-44	-194	-59
		116	115	116	58	34	38	32	37	51	42	49	83	122	320	298	96	68	83	248	169	42	46	112	272	110
13		93	108	135	107	129	90	64	53	47	116	114	80	64	57	62	45	26	23	36	27	26	31	60	141	72
		-151	-50	-18	-152	-72	-2	0	-46	-123	-69	-3	-37	-105	-67	-12	-26	-30	-52	-27	-14	-29	-51	-117	-153	-58
		245	159	154	260	202	92	63	100	170	185	117	117	169	125	75	73	57	76	64	42	55	83	178	294	132
14		150	155	91	110	90	67	67	52	39	29	43	33	36	29	31	37	108	94	48	88	162	243	214	76	87
		-161	-137	-26	-46	-23	0	-2	-2	-5	-10	-25	-24	-3	-10	-42	-194	-331	-243	-72	-100	-282	-195	-42	-8	-83
		312	294	117	157	115	67	69	54	45	40	68	58	40	40	74	232	441	338	121	190	445	439	257	86	171
15		78	124	130	119	105	76	54	44	74	87	120	72	114	84	45	35	39	41	28	37	86	84	113	47	76
		-24	-100	-166	-35	-9	-37	-20	-25	-27	-40	-317	-75	-53	-43	-83	-211	-127	-44	-20	-48	-202	-317	-102	-12	-89
		103	225	297	155	115	114	75	70	102	127	438	148	168	128	129	248	167	86	48	85	289	402	216	59	166

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES
(continued)

DECEMBER 1992

16	39	42	91	120	148	180	125	56	61	77	68	60	48	33	31	23	21	21	20	21	24	22	21	21	57
	-13	-9	-35	-89	-120	-77	-7	-8	-13	-26	-89	-129	-10	-5	-12	-15	-18	-16	-36	-13	-9	-21	-12	-11	-33
	53	52	127	210	270	258	132	65	75	103	158	190	59	39	44	39	41	37	56	34	34	44	34	34	91
17	24	25	25	32	31	39	64	103	133	189	142	118	131	152	161	106	143	22	129	133	60	89	111	59	93
	-2	-1	0	0	1	2	-4	-48	-81	-204	-133	-38	-330	-360	-21	-95	-466	-1080	-493	-482	-218	-25	-34	-41	-173
	27	26	24	32	29	36	68	151	215	395	275	157	462	513	182	201	611	1103	623	616	278	115	145	100	266
18	44	26	33	41	31	25	22	19	23	19	10	19	24	18	17	16	17	96	175	194	110	121	87	40	51
	-36	-29	-32	-25	-18	-11	-16	-18	-15	-21	-15	-25	-17	-12	-16	-21	-78	-252	-274	-212	-204	-217	-23	-13	-67
	81	56	66	67	49	36	39	37	38	41	26	46	41	31	34	39	97	349	450	407	314	339	111	54	119
19	48	40	63	40	40	57	64	52	54	44	53	81	92	93	118	64	39	29	121	232	139	112	62	51	74
	-32	-18	-14	-6	-5	-6	-10	-26	-58	-1	-16	-99	-166	-139	-80	-9	-27	-46	-167	-217	-57	-50	-96	-167	-63
	82	59	78	48	46	64	75	79	112	45	70	181	259	233	200	75	67	76	289	450	197	163	159	218	138
20	33	56	56	64	86	93	69	102	155	103	136	130	161	81	104	46	44	72	177	160	91	88	50	37	91
	-39	-71	-148	-166	-114	-220	-131	-174	-219	-119	-281	-450	-327	-334	-295	-201	-154	-366	-444	-217	-50	-8	-19	-9	-190
	74	128	205	232	201	313	201	278	374	222	418	580	488	416	401	249	199	439	622	378	141	96	70	47	282
21	27	34	35	37	63	45	55	70	81	67	162	189	100	35	25	23	33	153	145	60	66	76	65	37	70
	-3	-3	-2	-2	-7	-25	-21	-157	-262	-213	-334	-317	-225	-27	-64	-55	-142	-597	-454	-58	-11	-78	-154	-50	-136
	32	37	37	40	70	71	76	227	344	282	496	507	325	63	90	79	176	751	599	120	77	154	219	88	207
22	47	43	43	38	35	35	39	48	43	67	45	43	66	121	52	27	25	42	34	35	46	37	36	31	45
	-65	-39	-24	-15	-12	-4	-23	-55	-73	-273	-239	-225	-384	-175	-13	-20	-58	-164	-266	-90	-88	-15	-3	-5	-97
	113	82	68	54	49	39	63	104	116	341	284	268	451	298	66	48	85	207	301	127	136	53	40	36	143
23	29	30	32	31	51	88	64	59	52	83	56	51	54	43	61	61	38	28	30	39	33	29	27	23	45
	-3	-2	-3	-28	-71	-142	-103	-49	-63	-210	-172	-118	-36	-187	-249	-146	-34	-110	-177	-16	-11	-9	-8	-6	-81
	32	32	36	60	123	231	168	108	116	293	229	169	90	231	311	208	72	139	208	55	45	38	36	29	128
24	23	34	29	37	43	49	123	76	44	39	61	67	71	88	58	35	64	41	61	31	36	38	35	24	50
	-3	-8	-13	-97	-39	-90	-92	-56	-38	-28	-163	-256	-158	-273	-135	-184	-115	-66	-452	-177	-12	-12	-5	-4	-103
	27	42	43	135	84	140	216	133	83	68	224	324	230	362	194	220	181	109	513	210	49	51	41	28	154
25	22	24	27	29	24	30	46	38	28	23	32	26	31	26	21	20	13	18	53	37	32	54	62	36	31
	-6	-7	-7	-9	-7	-12	-25	-16	-10	-7	-54	-129	-15	-8	-14	-51	-84	-212	-172	-160	-33	-49	-60	-74	-51
	29	31	34	39	33	42	72	55	39	30	86	156	47	34	36	72	98	231	226	198	66	104	122	111	83
26	40	58	37	39	43	40	47	47	40	75	52	40	42	38	61	62	41	25	32	20	28	27	30	33	42
	-3	-32	-38	-22	-5	-9	-17	-26	-134	-88	-36	-27	-28	-29	-126	-133	-21	-27	-19	-6	-7	-78	-20	-7	-39
	44	91	76	62	48	50	65	74	174	164	88	68	70	69	189	196	64	53	51	26	35	105	52	41	81
27	37	31	30	31	32	30	31	36	35	33	32	28	29	27	30	29	29	24	24	34	65	85	91	69	38
	-2	0	-1	-1	0	2	5	8	7	8	7	7	6	2	-6	-15	-16	-12	-2	-83	-118	-81	-375	-110	-32
	39	31	32	33	31	27	25	26	27	23	23	20	22	25	37	45	46	37	26	118	184	167	467	181	71
28	86	61	56	44	37	53	73	86	79	75	55	75	34	203	341	288	273	84	268	117	115	11	28	-26	105
	-50	-148	-34	-12	-17	-21	-68	-317	-250	-139	-97	-140	-769	-1103	-658	-535	-690	-778	-655	-188	-489	-617	-539	-674	-374
	136	210	90	56	54	74	141	404	330	214	153	216	804	1307	1000	823	964	863	924	306	605	629	568	647	480
29	194	140	133	219	282	291	371	353	195	251	241	104	223	236	197	240	244	144	118	106	120	107	108	93	196
	-247	-318	-213	-401	-524	-510	-486	-371	-616	-395	-376	-408	-453	-545	-582	-787	-813	-322	-246	-310	-225	-248	-242	-248	-412
	441	458	346	621	808	802	858	725	812	646	618	514	677	781	779	1027	1059	467	365	417	346	356	350	341	609
30	105	73	49	47	62	54	78	40	32	60	88	37	124	116	75	15	14	35	13	21	26	19	21	23	51
	-246	-210	-95	-91	-153	-140	-103	-45	-22	-108	-255	-370	-335	-106	-103	-61	-104	-287	-73	-8	-10	-15	-29	-49	-126
	352	283	144	139	216	195	182	86	54	169	343	408	460	223	179	77	119	324	87	31	36	35	51	72	178
31	37	24	22	23	35	49	42	52	75	80	63	78	35	90	46	39	108	53	33	28	40	31	30	34	48
	-160	-47	-42	-46	-55	-91	-22	-45	-140	-433	-173	-160	-273	-524	-257	-143	-252	-135	-23	-12	-16	-15	-9	-4	-128
	198	72	66	71	91	141	64	97	215	514	236	239	309	615	304	184	361	189	57	41	57	46	40	39	177

MONTHLY and YEARLY AE 1957 - 1992

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1957							159	145	311	156	168	217	
1958	193	255	301	263	231	273	270	201	185	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	156.5
1967	135	139	121	168	278	205	177	172	204	123	161	196	173.4
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	197.5
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	198	246	283	227	238	542	240	220	188	197	244	180	250.3
1976													
1977													
1978	192	238	244	293	311	308	214	240	246	193	215	177	239.2
1979	213	196	248	298	253	255	224	255	217	189	153	158	221.7
1980	150	165	123	182	184	262	204	181	166	196	199	151	180.2
1981	148	196	239	325	320	219	280	280	207	253	218	159	237.0
1982	179	387	221	305	291	368	373	319	347	276	255	278	299.9
1983	219	321	318	382	292	284	262	265	230	264	283	238	279.8
1984	214	254	301	330	315	284	280	261	311	302	247	255	279.6
1985	226	235	176	271	183	220	265	224	202	204	200	186	216.0
1986	187	273	208	138	203	188	172	232	217	161	188	138	192.2
1987	123	155	164	115	167	160	195	255	271	254	201	147	183.9
1988	180	215	218	233	196	234							
1989													
1990	181	298	296	363	292	249	215	289	220	204	132	108	237.3
1991	120	151	275	270	304	477	364	389	320	332	319	206	294.1
1992	193	290	213	192	281	283	196	238	306	247	228	202	239.1

Unit: nT

The definitive indices for July 1988 to December1989 were not available at the date of publication of this Bulletin. The values for 1990, 1991, and 1992 correspond to provisional indices (see IAGA Bulletins 32u and 32v, page 21, and this Bulletin, page 21)

SECTION 4

CLASSIFICATION OF DAYS

CLASSIFICATION OF DAYS

Quiet days 1992

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	C K *	. . .	. . .	. . .
2	. . .	. . .	. . .	K . .	. . .	C C *	. . .	C C *	. . .	. . .	. . .	. . .
3	. . .	. . .	. . .	. . .	. . .	K K .	C C .	C C *	. . .	C K *	. . .	. . .
4	. . .	. . .	. . .	. . .	. . .	C K *	C C .	. . .	. . .	K K .	. . .	. . .
5	. . .	C . *	. . .	. . .	K K .	K C .	. C .	. . .	. . .	C K *	. . .	K . *
6	. . .	. . *	K . *	. . .	C C *	C C *	C C .	. . .	. . .	. . .	. . .	. . *
7	. . .	. . .	. . .	. . .	. . .	. . .	C C *	. . .	. . .	. . .	. . .	. . .
8	. . .	. . .	. . .	. . .	. . .	. . .	C C .	. . .	. . .	. . .	. . .	. . .
9	K . *	. . .	. . .	C . .	. . .	. . .	K C *	. . .	. . .	. . .	. . .	. . .
10	. . .	. . .	. . .	C C *	. . .	. . .	C C .	. . .	. . .	. . .	. . .	. . .
11	. . .	C . *	. . .	C C *	. . .	. . .	C C *	. . .	. . .	. . .	. . .	. . .
12	. . .	. . .	. . .	C C *	. . .	. . .	. . .	. . .	C . *	. . .	. . .	. . .
13	. . .	. . .	C K *	C C .	. . .	. . .	. . .	. . .	C C *	. . .	. . .	. . .
14	. . .	. . .	C C *	C K .	C K *	C . .	. . .	. . .	. . .	. . .	. . .	. . .
15	. . .	C K *	. . .	. . .	C C *	. . .	C . .	. . .	. . .	. . .	. . .	. . .
16	. . .	C . *	. . .	C C *	C C *	C K *	. . .	. K .	. . .	. . .	. . .	. . *
17	. . .	. . .	. . .	C K *	C C *	C C *	C . .	C C *	. . .	. . .	. . .	. . .
18	C . .	. . .	. . .	. . .	. . .	. . .	C C .	C C .	. . .	. . .	. . *	. . .
19	C . *	. . .	C K *	. . .	. . .	. . .	C C *	. . .	. . .	. . .	. . .	. . .
20	. . .	. . .	C K *	. . .	. . .	. . .	. K .	. . .	C . .	. . .	C K *	. . .
21	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	K . .	K K *	K . .	. . .
22	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .	. . .
23	C C *	. . .	. . .	. . .	. . .	. . .	. . .	. . .	C K .	C K *	. . .	. . .
24	C C *	. . .	. . .	. . .	C . .	. . .	. . .	. . .	C K *	C K *	. . .	. . .
25	C C *	. . .	. . .	. . .	. . .	. . .	. . .	C . *	. . .	. . .	. . .	C K *
26	. . .	. . .	. . .	. . .	K . .	. . .	C K *	. . .	. . .	. . .	. . .	C C *
27	. . .	. . .	. . .	C . .	. . .	. . .	K . .	. . .	C K *	. . .	C C *	. . .
28	. . .	. . .	. . .	. . .	. . .	. . .	. . .	C . .	. . .	. . .	. C *	. . .
29	. . .	. . .	. . .	C . .	. . .	. . .	C K .	. . .	. . .	. . .	C C *	. . .
30	. . .		. . .	. . .	. . .	. . .	. . .	K K .	. . .	. . .	. . .	. . .
31	. . .		. . .		. . .		. . .	C K *		. . .		. . .

C: indicates very quiet period
K: indicates quiet period
This characterization is deduced from aa values - see text p.13.
The first column is relative to the U.T.day,
the second column to the 48 hour interval centered on U.T.day.

An asterisk in the third column indicates that the U.T. day is one of
the five quietest days of the month - according to Kp, see text p.22

CLASSIFICATION OF DAYS (continued)

JANUARY 1992

Five international quietest days (from Kp)	:	9 19 23 24 25
24-hours quiet intervals (from aa) C - very quiet	:	18 19 23 24 25
K - quiet	:	9
48-hours quiet intervals (from aa) C - very quiet	:	23 24 25
K - quiet	:	NONE

FEBRUARY 1992

Five international quietest days (from Kp)	:	5 6 11 15 16
24-hours quiet intervals (from aa) C - very quiet	:	5 11 15 16
K - quiet	:	NONE
48-hours quiet intervals (from aa) C - very quiet	:	NONE
K - quiet	:	15

MARCH 1992

Five international quietest days (from Kp)	:	6 13 14 19 20
24-hours quiet intervals (from aa) C - very quiet	:	13 14 19 20
K - quiet	:	6
48-hours quiet intervals (from aa) C - very quiet	:	14
K - quiet	:	13 19 20

APRIL 1992

Five international quietest days (from Kp)	:	10 11 12 16 17
24-hours quiet intervals (from aa) C - very quiet	:	9 10 11 12 13 14 16 17 27 29
K - quiet	:	2
48-hours quiet intervals (from aa) C - very quiet	:	10 11 12 13 16
K - quiet	:	14 17

MAY 1992

Five international quietest days (from Kp)	:	6 14 15 16 17
24-hours quiet intervals (from aa) C - very quiet	:	6 14 15 16 17 24
K - quiet	:	5 26
48-hours quiet intervals (from aa) C - very quiet	:	6 15 16 17
K - quiet	:	5 14

JUNE 1992

Five international quietest days (from Kp)	:	2 4 6 16 17
24-hours quiet intervals (from aa) C - very quiet	:	2 4 6 14 16 17
K - quiet	:	3 5
48-hours quiet intervals (from aa) C - very quiet	:	2 5 6 17
K - quiet	:	3 4 16

CLASSIFICATION OF DAYS (continued)

JULY 1992

Five international quietest days (from Kp)	:	7 9 11 19 26
24-hours quiet intervals (from aa) C - very quiet	:	3 4 6 7 8 10 11 15 17 18 19 26 29
K - quiet	:	9 27
48-hours quiet intervals (from aa) C - very quiet	:	3 4 5 6 7 8 9 10 11 18 19
K - quiet	:	20 26 29

AUGUST 1992

Five international quietest days (from Kp)	:	2 3 17 25 31
24-hours quiet intervals (from aa) C - very quiet	:	2 3 17 18 25 28 31
K - quiet	:	30
48-hours quiet intervals (from aa) C - very quiet	:	2 3 17 18
K - quiet	:	16 30 31

SEPTEMBER 1992

Five international quietest days (from Kp)	:	1 12 13 24 27
24-hours quiet intervals (from aa) C - very quiet	:	1 12 13 20 23 24 27
K - quiet	:	21
48-hours quiet intervals (from aa) C - very quiet	:	13
K - quiet	:	1 23 24 27

OCTOBER 1992

Five international quietest days (from Kp)	:	3 5 21 23 24
24-hours quiet intervals (from aa) C - very quiet	:	3 5 23 24
K - quiet	:	4 21
48-hours quiet intervals (from aa) C - very quiet	:	NONE
K - quiet	:	3 4 5 21 23 24

NOVEMBER 1992

Five international quietest days (from Kp)	:	18 20 27 28 29
24-hours quiet intervals (from aa) C - very quiet	:	20 27 29
K - quiet	:	21
48-hours quiet intervals (from aa) C - very quiet	:	27 28 29
K - quiet	:	20

DECEMBER 1992

Five international quietest days (from Kp)	:	5 6 16 25 26
24-hours quiet intervals (from aa) C - very quiet	:	25 26
K - quiet	:	5
48-hours quiet intervals (from aa) C - very quiet	:	26
K - quiet	:	25

CLASSIFICATION OF DAYS (continued)

INTERNATIONAL QUIET AND DISTURBED DAYS 1992

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

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

VERY QUIET INTERVALS, 1992

Kp not exceeding 1+ for at least 8 intervals
(= one day) in succession

First Eighth			last Eighth		Duration Eighths
Jan	23	E4	24	E7	12
	25	E3	26	E4	10
Feb	15	E7	16	E8	10
Apr	11	E2	12	E9	8
May	05	E6	06	E6	9
	14	E3	15	E3	9
	16	E6	17	E8	11
Jun	01	E6	02	E7	10
	03	E7	04	E7	8
	16	E3	17	E4	10
Jul	03	E6	04	E7	10

First Eighth			last Eighth		Duration Eighths
Jul	06	E6	08	E4	15
	08	E7	09	E1	11
	10	E8	11	E8	9
	26	E1	27	E3	11
	29	E1	29	E8	8
Aug	31	E7	Sep 02	E1	11
Sep	23	E8	24	E7	8
Oct	23	E3	24	E7	13
Nov	19	E6	20	E6	9
Dec	05	E4	06	E4	9
	26	E1	27	E6	14

LIST OF MAGNETIC STORMS, 1992

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 7-	7o	7+	Eighths with 8-	8o	8+	Kp = 9-	9o
Feb	02	E7		-	10	1	1	.	1	.	.	.	.
	08	E5	8	14.27	2	1	1	.	.	.	.	.	.
	20	E4		-	10	1	2	1	.	.	.	.	.
	24	E8		-	4	1	.	.	.	.	.	.	.
	26	E6	26	16.57	10	1	.	.	.	1	.	.	.
	29	E4	29	09.20	4	1	.	.	.	.	.	.	.
Mar	17	E4	17	09.51	4	.	.	.	.	.	.	.	.
May	09	E6	09	15.57	18	2	.	2	1	2	1	1	.
	22	E2	22	04.12	6	.	.	.	.	.	.	.	.
Jun	12	E5	12	12.02	2	.	.	.	.	.	.	.	.
Sep	09	E1	09	01.39	17	3	1	1	.	.	.	.	.
Nov	01	E8	01	21.46	3	.	.	.	.	.	.	.	.

SECTION 5

RAPID VARIATIONS

SECTION 5

5.1 List of ssc 1992

STORM SUDDEN COMMENCEMENTS (ssc) 1992

Sudden commencements followed by a storm or a period of storminess, as selected from the monthly reports of the 42 observatories listed below by their three letter code. The name of observatories together with their geographical coordinates and operation dates are given on section 2 (pages 29-35). The alternative codes used by some observatories are given in brackets:

SOD CMO(COL) DOB NUR LER ESK WNG NGK VAL HAD DOU BDV CLF HRB NAG SUA GCK MMB AQU EBR COI BJI SPT FRD PEG (PEN) ALM KAK HTY KNY QUE SZT(TEN) LNP HYB ETT PMG GNA HER CNB AMS CZT PAF(KGL) DRV(DUM).

Events are checked with the records of HON and EBR. Measurements of quality, duration and amplitude are from copies provided by the five low-latitude observatories (MBO, FUQ, HON, PMG, ABG).

JANUARY 1992										
0101	1644	22-22	5.9	32	19A	14B	3C			(1643-1646)
0801	0242	22222	4.3	15	2A	10B	10C			(0240-0243)
0901	2153	21222	6.1	23	5A	14B	10C			(2151-2156)
2601	1459	-2222	6.2	28	20A	14B	3C			(1457-1500)

FEBRUARY 1992										
0102	0607	22222	4.7	17	1A	12B	10C			(0604-0609)
0202	1153	32333	4.6	40	34A	7B				(1148-1156)
0802	1428	22233	4.8	54	34A	7B	1C			(1426-1429)
1702	0520	-1122	5.1	12	1A	2B	7C			(0520-0522)
1702	0805	-2222	4.6	23	3A	14B	12C		1si	(0804-0809)
2002	0109	22--2	2.0	26	19A	17B	4C	1-		(0108-0111)
2402	0703	12-12	3.5	15	2A	9B	7C		1si	(0700-0704)
2402	1628	22122	3.3	27	1A	10B	9C			(1626-1630)
2602	1657	33232	3.6	56	27A	10B	1C	1-	1si	(1654-1659)
2902	0920	-2222	4.4	17	10A	21B	7C	1-		(0919-0926)

MARCH 1992										
0803	2314	12111	4.4	12		2B	2C			(2313-2315)
1703	0950	22222	3.3	35	20A	16B	1C			(0945-0952)

APRIL 1992										
1404	2025	22212	4.2	14	2A	7B	9C			(2023-2027)

STORM SUDDEN COMMENCEMENTS (**ssc**) 1992 (continued)

MAY 1992										
0905	1557	22101	4.4	25	7A	4B	2C		1si	(1553-1559)
0905	1957	33323	3.5	86	33A	2B	3C			(1954-1958)
1805	2021	22222	4.8	25	4A	14B	6C			(2019-2024)
2205	0413	22222	5.4	18	3A	11B	6C			(0412-0415)
JUNE 1992										
0906	1929	01011	6.6	8		1B	1C			(1928-1929)
1006	0403	22222	4.9	34	15A	13B	4C	1-		(0402-0407)
1806	1252	22222	5.4	25	16A	15B	1C			(1250-1257)
2706	2035	22212	4.4	19	3A	10B	5C			(2032-2036)
JULY 1992										
None										
AUGUST 1992										
0408	0109	12112	7.0	15		6B	4C			(0107-0110)
0408	1408	22222	6.5	24	11A	19B	5C			(1406-1411)
0508	0023	12221	4.3	23		4B	1C	1-		(0021-0024)
0608	0424	22222	5.2	24	2A	15B	5C	1-		(0421-0428)
1308	1514	22222	6.0	31	10A	15B	2C		3si	(1512-1518)
1908	2223	22122	5.0	16	2A	1B	11C			(2222-2225)
SEPTEMBER 1992										
0909	0139	22232	3.8	34	26A	12B	3C			(0137-0142)

STORM SUDDEN COMMENCEMENTS (**ssc**) 1992 (continued)

OCTOBER 1992									
0810	1839	22222	4.2	13	5A	15B	15C		(1837-1840)
0910	0911	22233*	6.5	62	2A	7B	7C	1si	(0906-0913)
		**reversed*							
2610	0001	21112	5.3	12		2B	5C		(0000-0003)

NOVEMBER 1992									
0111	2147	23332	6.1	60	27A	5B	4C		(2143-2150)
0911	0641	12222*	5.4	27	1A	3B			(0638-0643)
		**reversed*							

DECEMBER 1992									
0712	0754	12122	7.6	21	2A	12B	6C		(0754-0757)
0712	1346	22223*	5.7	46	5A	10B	1C		(1344-1348)
		**reversed*							
1712	0616	22222	3.5	28	13A	14B	4C	1-	(0615-0621)
2712	2010	22222	5.0	17	1A	7B	11C	1-	(2006-2014

* The five quality figures are given as these events were SUDDEN IMPULSES. It is very difficult to consider them as Storm Sudden COMMENCEMENTS.

SECTION 5

5.2 List of sfe 1992

SOLAR FLARE EFFECTS (**sfe**) – Summary list 1992

JANUARY		
C	04/01	11:09
C	09/01	12:40

FEBRUARY		
C	14/02	23:07
C	16/02	12:23

MARCH
none

APRIL		
C	01/04	00:52
C	04/04	10:49

MAY		
C	23/05	12:24

JUNE		
C	28/06	04:52

JULY		
C	07/07	16:06
C	08/07	09:44
C	09/07	03:53
C	14/07	12:18
C	16/07	16:55
C	18/07	13:39

AUGUST		
C	17/08	12:48
C	20/08	14:29

SEPTEMBER		
C	07/09	03:45
C	07/09	06:31

OCTOBER		
C	07/10	05:00
C	07/10	10:27
C	23/10	00:54

NOVEMBER		
C	01/11	10:31

DECEMBER
none

SOLAR FLARE EFFECTS (**sfe**) 1992

Times of commencements of solar-flare effects (*sfe*) selected from the monthly lists sent by 42 observatories, as reported in the list of *ssc* and checked by the following 29 observatories, identified by their IAGA three letter code (see section 2, pages 29-35):

LER ESK WNG NGK VAL HAD BDV CLF HRB NAG SUA MMB SOF AQU EBR COI SPT PEN KAK HTY KNY QUE TEN LNP API GNA HER CNB EYR

Note: The lack of monthly data reports from all the American observatories made impossible to include in the checking list the possible sfe's which may have occurred in the great span of 145° of longitude corresponding to the American longitudes. Because they are produced from the checking list, the final lists published in this bulletin are necessarily incomplete.

JANUARY **C** **04/01** **11:09**

A	SOF3	COI2								
B	WNG0	NAG0	EBR1	SPT1	TEN0					
C	LER3	ESK3	NGK0	VAL1	HAD3	BDV2	CLF0	HRB1	AQU1	PEN1
D	HER									
E	SUA	GNA								
X	QUE									

JANUARY **C** **09/01** **12:40**

A	WNG3	SOF3	HER3							
B	TEN1									
C	LER3	ESK3	NGK1	VAL2	HAD3	BDV3	CLF0	NAG0	SUA1	SPT1
	PEN2									
D	HRB	AQU	EBR	COI						
E	(GNA)									
X										

FEBRUARY **C** **14/02** **23:07**

A	API2	EYR2					
B	MMB2	KAK3	HTY3	KNY3	LNP3	CNB1	
C	[LER0]	[ESK0]	[WNG0]	[HAD0]	[AQU0]	QUE0]	GNA1
D							
E							
X	[SOF]						

FEBRUARY **C** **16/02** **12:23**

A	WNG3	NGK3	HRB3	SUA3	SOF3	AQU0	TEN2	
B	HER1							
C	LER2	ESK2	VAL1	HAD2	CLF1	[MMB0]	[KAK0]	[KNY0]
D	BDV	NAG	EBR	COI	SPT	PEN	QUE	
E								
X								

MARCH

none

APRIL **C** **01/04** **00:52**

A	LNP3					
B	[WNG0]	MMB3	KAK3	KNY3		
C	[LER0]	[ESK0]	[VAL1]	[HAD0]	[SUA1]	HTY2
D	GNA	CNB	EYR			
E						
X	[SOF]	API				

SOLAR FLARE EFFECTS (**sfe**) 1992 (continued)

APRIL **C** **04/04** **10:49**

A	SOF3	(LNP3)								
B	WNG1	SUA2	HER1							
C	LER2	ESK2	NGK0	VAL1	HAD2	BDV2	NAG0	[MMB0]	AQU0	EBR0
	SPT0	[KAK0]	(KNY0)	(GNA1)						
D	CLF	HRB	COI	QUE	TEN					
E	PEN									
X										

MAY **C** **23/05** **12:24**

A	WNG2	NGK3	SUA3	AQU1	QUE2				
B	NAG0	PEN2	TEN1	HER1					
C	LER2	ESK2	VAL1	HAD2	CLF1	EBR0	[KAK0]	[API0]	[CNB0]
D	HRB	COI	SPT						
E	BDV								
X	SOF								

JUNE **C** **28/06** **04:52**

A	MMB2	KAK2	KNY2							
B	WNG1	NAG0	SUA2	LNP2						
C	NGK1	VAL1	HAD0	AQU0	HTY2	GNA1	(HER1)	EYR1		
D	LER	ESK	BDV	CLF	HRB	SOF	EBR	PEN	API	CNB
E										
X	QUE	(TEN)								

JULY **C** **07/07** **16:06**

A	LER3	ESK3	WNG2	HAD3	HRB3	COI2	SPT0			
B	NGK2	VAL2	NAG1	SUA2	AQU1	PEN2	TEN2			
C	BDV1	CLF1	[MMB0]	EBR0	[KAK0]	[KNY0]	(QUE0)	[LNP1]	[API1]	(HER0)
D	SOF									
E										
X										

JULY **C** **08/07** **09:44**

A	HAD3	HRB3	NAG3	SUA2	SOF3	EBR3	SPT2	QUE2	TEN3	HER3
B	LER3	ESK3	WNG3	NGK2	VAL2	PEN1				
C	CLF2	MMB0	AQU1	KAK0	(HTY2)	KNY0				
D	BDV	COI	LNP							
E										
X										

JULY **C** **09/07** **03:53**

A										
B	WNG1	HTY3	[TEN2]							
C	MMB2	AQU0	PEN0	KAK2	KNY2	QUE0	API2	GNA1		
D	LER	ESK	NGK	BDV	HRB	NAG	SUA	LNP	CNB	EYR
E										
X	SOF									

SOLAR FLARE EFFECTS (sfe) 1992 (continued)

JULY **C** **14/07** **12:18**

A	SOF3	TEN2								
B	WNG3	HRB1	SUA1	AQU0						
C	LER2	ESK2	NGK1	HAD3	BDV2	EBR0	SPT0	PEN2	[KAK0]	[LNP1]
D	VAL	CLF	NAG	COI	QUE	HER				
E										
X										

JULY **C** **16/07** **16:55**

A	SOF3	PEN2	TEN3					
B	WNG1	HRB2	SUA2	SPT1				
C	LER2	ESK2	NGK2	VAL2	HAD3	BDV2	NAG2	AQU0
D	CLF	EBR	COI					
E								
X								

JULY **C** **18/07** **13:39**

A	SOF3								
B	LER3	WNG2	PEN0	TEN1					
C	ESK3	NGK1	VAL1	HAD3	BDV1	CLF0	NAG0	SUA1	AQU0	SPT0
	[HTY2]	HER0							
D	HRB	COI	QUE						
E	EBR								
X									

AUGUST **C** **17/08** **12:48**

A	WNG2									
B	LER2	ESK2	HAD2	SUA2	SPT1	PEN2				
C	NGK2	VAL0	CLF1	NAG1	[MMB0]	AQU0	EBR0	[KAK0]	[HTY0]	[KNY0]
	[LNP1]									
D	BDV	HRB	SOF	COI	QUE	TEN	HER			
E										
X										

AUGUST **C** **20/08** **14:29**

A	SOF3	COI2	TEN2							
B	WNG2	NAG1	SUA2	AQU1	EBR0	SPT1				
C	LER2	ESK2	NGK1	VAL1	HAD2	BDV2	CLF1	[MMB0]	[KAK0]	[KNY0]
D	HER									
E	HRB	PEN								
X										

SEPTEMBER **C** **07/09** **03:45**

A	KNY3								
B	(WNG0)	MMB3	[COI1]	KAK3	HTY3	[TEN1]			
C	(LER0)	(ESK0)	(NGK0)	[VAL0]	(NAG0)	(AQU0)	[EBR0]	[SPT0]	EYR1
D	QUE	LNP	API	GNA	CNB				
E	(SUA)								
X	(SOF)								

SOLAR FLARE EFFECTS (**sfe**) 1992 (continued)

SEPTEMBER **C** **07/09** **06:31**

A	SOF3	LNP3							
B	WNG1	MMB2	AQU0	KNY2					
C	LER0	ESK0	NGK0	VAL0	HRB1	SPT0	KAK2	HTY3	(TEN1)
D	HAD	BDV	CLF	NAG	EBR	COI	PEN	HER	CNB
E	SUA	GNA							
X	QUE								

OCTOBER **C** **07/10** **05:00**

A	KNY3						
B	(WNG0)	MMB2	KAK2	HTY3	LNP2	GNA2	CNB2
C	SOF3	[TEN1]					
D	PEN	API	HER	EYR			
E	SUA						
X	QUE						

OCTOBER **C** **07/10** **10:27**

A	SUA3	SOF3	(LNP3)							
B	WNG1	HRB1	NAG1	EBR1	TEN1					
C	LER1	ESK1	NGK2	VAL1	HAD1	CLF1	[MMB0]	AQU0	SPT0	PEN0
	[KAK0]	[HTY0]	(KNY0)	HER0						
D	BDV	COI	QUE	GNA						
E										
X										

OCTOBER **C** **23/10** **00:54**

A					
B	KAK2	KNY2	LNP3		
C	[LER0]	[WNG0]	[VAL0]	MMB2	HTY3
D	CNB				
E	[SUA]	EYR			
X	[SOF]	[TEN]	API	GNA	

NOVEMBER **C** **01/11** **10:31**

A	WNG2	SUA3	[API0]							
B	HRB1	NAG1	AQU0	EBR0	SPT0	PEN2	TEN2	HER0		
C	LER3	ESK3	NGK1	VAL2	HAD3	BDV2	CLF1	SOF2	[HTY1]	QUE1
	[CNB1]	[EYR0]								
D	COI	GNA								
E										
X										

DECEMBER

none

DOUBTFUL SOLAR FLARE EFFECTS – Summary list 1992

JANUARY		
C	07/01	04:07
C	30/01	09:34

FEBRUARY		
C	07/02	13:20
C	10/02	04:27
C	14/02	09:20

MARCH		
C	20/03	12:06

APRIL		
C	08/04	07:44

MAY		
C	04/05	11:24

JUNE
none

JULY		
C	09/07	16:08

AUGUST		
C	03/08	06:29
C	03/08	07:00
C	11/08	13:47
	15/08	11:10
C	20/08	09:04

SEPTEMBER		
C	06/09	05:14
C	28/09	06:36

OCTOBER		
C	05/10	09:25
C	08/10	04:32
C	20/10	09:11
C	29/10	07:31

NOVEMBER
none

DECEMBER
none

DOUBTFUL SOLAR FLARE EFFECTS (**sfe**) 1992

JANUARY **C** **07/01** **04:07**

A	[WNG0]									
B	MMB2	KAK3	KNY2	CNB2						
C										
D	HTY	QUE	LNP	API	GNA	HER	EYR			
E										
X	[SOF]									

JANUARY **C** **30/01** **09:34**

A	SOF3									
B	WNG0	SUA2	SPT1	PEN2	TEN1					
C	VAL1	BDV2	NAG0	[MMB0]	AQU0	[KAK0]	QUE1	HER1		
D	LER	ESK	NGK	HAD	CLF	HRB	EBR	COI	GNA	
E										
X										

FEBRUARY **C** **07/02** **13:20**

A	SOF3									
B	WNG0	NGK2	HRB2	NAG0	SUA2	TEN1				
C	LER2	ESK2	VAL1	HAD2	BDV2	AQU0	SPT0	[API0]	[EYR0]	
D	CLF	EBR	COI	HER						
E	PEN	[GNA]								
X										

FEBRUARY **C** **10/02** **04:27**

A	(AQU1)	[TEN3]	EYR1							
B	[WNG0]	MMB0	KAK0	KNY0	QUE1	LNP1	API0	GNA2	HER0	CNB1
C	[LER0]	[ESK0]	(NGK1)	[VAL2]	[HAD0]	(HRB1)	(NAG0)	(SUA2)	[SPT0]	
D										
E	(BDV)	HTY								
X	(SOF)									

FEBRUARY **C** **14/02** **09:20**

A	SOF3									
B	WNG1	LNP3								
C	LER3	VAL2	HAD3	BDV2	SUA2	AQU0	SPT1	(KAK0)	(KNY0)	QUE0
	GNA1									
D	ESK	NGK	CLF	HRB	NAG	EBR	COI	PEN	TEN	HER
E										
X										

MARCH **C** **20/03** **12:06**

A	SOF3									
B	WNG2	TEN2								
C	LER2	NGK2	BDV2	HRB1	NAG0	SUA1	SPT0			
D	ESK	VAL	HAD	CLF	AQU	EBR	COI	PEN	QUE	HER
E										
X										

DOUBTFUL SOLAR FLARE EFFECTS (sfe) 1992 (continued)

APRIL **C** **08/04** **07:44**

A	COI1	LNP3								
B	WNG1	NGK2	HRB1	NAG0	SUA2	TEN2	HER1			
C	LER2	ESK2	VAL1	BDV2	CLF1	SOF1	AQU0	SPT0	HTY1	QUE0
	[API0]	[EYR0]								
D	HAD	MMB	EBR	KAK	KNY					
E	PEN	GNA								
X										

MAY **C** **04/05** **11:24**

A	SUA3	SOF3	(LNP3)							
B	WNG2	NGK2	HRB2	NAG0	TEN1					
C	VAL0	BDV2	(MMB0)	AQU0	EBR0	SPT0	[KAK0]	[HTY2]	(KNY0)	QUE0
D	LER	ESK	HAD	CLF	COI	PEN	HER			
E										
X	[EYR]									

JUNE

none

JULY **C** **09/07** **16:08**

A	TEN2									
B	LER3	ESK3	WNG2	HAD3	NAG2	SUA2	AQU1	SPT0	PEN1	
C	NGK2	BDV1	CLF1	HRB1	[MMB1]	SOF2	EBR0	[KAK1]	[HTY2]	[KNY1]
	[QUE0]	(HER0)								
D	VAL	COI								
E										
X										

AUGUST **C** **03/08** **06:29**

A										
B	SOF3	LNP1								
C	LER1	WNG1	NGK0	MMB2	KAK2	HTY2	KNY2			
D	ESK	VAL	HAD	BDV	CLF	HRB	NAG	SUA	AQU	EBR
	COI	SPT	PEN	QUE	TEN	GNA	HER	CNB		
E										
X										

AUGUST **C** **03/08** **07:00**

A	MMB3	SOF3	KAK3	KNY3	LNP3					
B	WNG2									
C	LER1	ESK1	NGK0	VAL0	AQU0	HTY3	GNA1	HER0		
D	HAD	BDV	CLF	HRB	NAG	SUA	EBR	COI	SPT	PEN
	QUE	TEN	CNB							
E										
X										

DOUBTFUL SOLAR FLARE EFFECTS (sfe) 1992 (continued)

AUGUST **C** **11/08** **13:47**

A	SOF3									
B	WNG1									
C	ESK1	BDV2	[MMB0]	EBR0	SPT0	[KAK0]	[KNY0]	TEN1		
D	LER	NGK	VAL	HAD	CLF	HRB	NAG	SUA	AQU	COI
	PEN	QUE	HER							
E										
X										

AUGUST **15/08** **11:10**

A	WNG2									
B	LER1	ESK1	NGK2	NAG1	SUA2	EBR0				
C	HAD1	BDV2	CLF1	HRB2	(MMB0)	AQU0	SPT1	PEN2	[KAK0]	[HTY2]
	TEN2									
D	VAL	SOF	COI	QUE	HER					
E										
X										

AUGUST **C** **20/08** **09:04**

A	WNG3	SOF3	LNP3							
B	LER3	NGK2	VAL2	HAD3	CLF2	NAG1	SUA2	MMB0	AQU0	SPT1
	KAK0	HTY3	KNY0	QUE1	TEN2	[API0]	HER0	[EYR0]		
C	ESK3	[CNB0]								
D	BDV	EBR	COI							
E	HRB	PEN	GNA							
X										

SEPTEMBER **C** **06/09** **05:14**

A										
B	WNG1	KNY2	EYR1							
C	NGK0	(VAL1)	MMB2	SOF3	AQU0	(SPT0)	KAK2	HTY3	[TEN1]	LNP1
	GNA1	HER0	CNB1							
D	BDV	HRB	NAG	SUA	PEN	QUE	API			
E										
X										

SEPTEMBER **C** **28/09** **06:36**

A	LNP3									
B	WNG2	HRB1	SUA2	GNA2	HER0	CNB1				
C	NGK2	HAD0	BDV1	NAG1	MMB2	AQU0	PEN2	KAK2	HTY2	KNY2
	(TEN1)	(API1)	EYR1							
D	LER	ESK	CLF	SOF	EBR	SPT				
E										
X	QUE									

OCTOBER **C** **05/10** **09:25**

A	SOF3									
B	WNG2									
C	NGK2	BDV3	HRB2	NAG1	SUA1	SPT1	PEN2	TEN1	HER0	
D	LER	ESK	VAL	HAD	CLF	AQU	EBR	COI	QUE	LNP
	GNA									
E										
X										

DOUBTFUL SOLAR FLARE EFFECTS (**sfe**) 1992 (continued)

OCTOBER **C** **08/10** **04:32**

A									
B	LNP1								
C	(LER0)	[ESK0]	(WNG0)	(NGK2)	[VAL0]	[HAD0]	KAK2	HTY2	KNY2
D	MMB	QUE	API	GNA	HER	CNB	EYR		
E	(SUA)								
X	(SOF)								

OCTOBER **C** **20/10** **09:11**

A										
B	WNG1	SUA2	SOF3	TEN1						
C	LER0	ESK0	NGK1	VAL0	HAD0	BDV2	NAG0	AQU0	SPT0	PEN2
D	CLF	HRB	EBR	COI	QUE	LNP	HER			
E										
X	GNA									

OCTOBER **C** **29/10** **07:31**

A										
B	WNG2	SUA2	(TEN1)	LNP2						
C	(LER3)	(ESK2)	NGK0	(VAL0)	HAD2	BDV2	HRB1	(MMB0)	AQU0	KAK0
	HTY2	KNY0	QUE1	HER0						
D	CLF	NAG	SOF	EBR	COI	SPT	GNA	CNB		
E	PEN									
X										

NOVEMBER

none

DECEMBER

none

TRANSACTIONS OF IAGA MEETINGS

	Bulletin
Transactions of the Rome Meeting, 1922	No. 3
Transactions of the Madrid Meeting, 1924	No. 5
Comptes rendus de l'Assemblée de Stockholm, 1930	No. 8
Transactions of the Oslo Meeting, 1948	No. 13
Transactions of the Brussels Meeting, 1951	No. 14
Le Noyau Terrestre, Rome, 1954	No. 15a
Problèmes de la Physique de la haute atmosphère, 1954	No. 15b
Transactions of the Toronto Meeting, 1957	No. 16
Paléomagnétisme et Variation Séculaire, Toronto, 1957	No. 16a
Aéronomie, Toronto, 1957	No. 16b
Rapid Magnetic Variations, Utrecht, 1959	No. 16c
Transactions of the Helsinki and Berkeley Meetings 1960/1963	No. 19
Atlas of Indices K (Vol. 1 : Text ; Vol. 2 : Figures)	No. 21
Programme and Abstracts of the St Gall Meeting, 1957	No. 24
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Transactions of the XVI General Assembly, Grenoble, 1975	No. 37
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Transactions of the III General Scientific Assembly, Seattle, 1977	No. 41
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Program and abstracts of the IAGA/IAMAT Joint symposium on middle atmospheric sciences Hambourg, 1983	No. 48b
Transactions of the XVIII General Assembly, Hambourg, (1983-1985)	No. 49
Program and abstracts of the V Scientific Assembly, Prague, 1985	No. 50
Transactions of the V Scientific Assembly, Prague, 1985	No. 51
Grid-Point Values and Charts for the IGRF 1985	No. 52
Program and abstracts of the VI Scientific Assembly, Exeter, 1989	No. 53
Tables and Maps of the DGRF 1985 and IGRF 1990	No. 54

PROCEEDINGS OF IAGA SYMPOSIA

IAGA Symposium No. 2, Communications présentées à la Réunion de Berkeley, 1963
IAGA Symposium No. 3, Symposium on Magnetism of the Earth's Interior, Pittsburgh, 1964
IAGA Symposium No. 4, Communications présentées à la Réunion de Cambridge (Mass.),1965
IAGA Symposium No. 5, Communications présentées à la Réunion de Sao 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
IAGA Symposium No. 8, Symposium on Laboratory Measurements of Aeronomic Interest, Toronto, 1963
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The included diskette contains files of IAGA indices presented following the same formats as those of the tables published in the IAGA Bulletin n°32w for 1992, and a software for visualizing the tables. The software (interaa.exe) is installed at the root level on a: , and the data files used are in the directory a:\ind92.

The names of the files for indices aa, an(3Kn), as(3Ks), am(3Km), Kp(ap), Dst and AE are:

- ...92.dat for hourly or three hourly, and daily values
- ...92.mya for monthly and yearly values since the inception of the series
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You can use the visualization software in two ways :

1 - Directly from the diskette :
Hit the command : INTERAA, then give the current year : 1992

2 - Installation on a drive of your computer
Hit INSTAL <drive>: , then ENTER (Example : INSTAL C:)
Hit the command : INTERAA, then give the current year : 1992

If you have diskettes for previous years (1982 to 1991 are available), you can use the same software (interaa.exe), provided that the data files for the corresponding years are on the directories <drive>:\indAA (AA for 82 to 91 years, respectively)

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Geomagnetic Indices, K and C, 1947	No. 12a
Geomagnetic Indices, K and C, 1948	No. 12b
Geomagnetic Indices, K and C, 1949	No. 12c
Geomagnetic K-Indices, International Polar Year, August 1932 to 1933	No. 12d
Geomagnetic Indices, K and C, 1950	No. 12e
Geomagnetic Indices, K and C, 1951	No. 12f
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Geomagnetic Data, 1957, Indices K and C,Rapid Variations	No. 12l
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Geomagnetic Data, 1959, Indices K and C No. 12n1, Rapid Variations	No. 12n2
Geomagnetic Data, 1960, Indices K and C No. 12o1, Rapid Variations	No. 12o2
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Geomagnetic Data, 1962, Indices K and C No. 12q1, Rapid Variations	No. 12q2
Geomagnetic Data, 1963, Indices K and C No. 12r1, Rapid Variations	No. 12r2
Geomagnetic Data, 1964, Indices K and C No. 12s1, Rapid Variations	No. 12s2
Geomagnetic Data, 1965, Indices K and C No. 12t1, Rapid Variations	No. 12t2
Geomagnetic Data, 1966, Indices K and C No. 12u1, Rapid Variations	No. 12u2
Geomagnetic Data, 1967, Indices K and C No. 12v1, Rapid Variations	No. 12v2
Geomagnetic Data, 1968, Indices K and C No. 12w1, Rapid Variations	No. 12w2
Geomagnetic Data, 1969, Indices K and C No. 12x1, Rapid Variations	No. 12x2
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Geomagnetic Data, 1970, Indices, Rapid Variations, Magnetic Storms	No. 32a
Geomagnetic Data, 1971, Indices, Rapid Variations, Special Intervals	No. 32b
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Geomagnetic Data, 1973, Indices, Rapid Variations, Special Intervals	No. 32d
Geomagnetic Data, 1974, Indices, Rapid Variations, Special Intervals	No. 32e
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