

IAGA Bulletin N° 32 y

INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS
ASSOCIATION OF GEOMAGNETISM AND AERONOMY

GEOMAGNETIC DATA 1994

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.*

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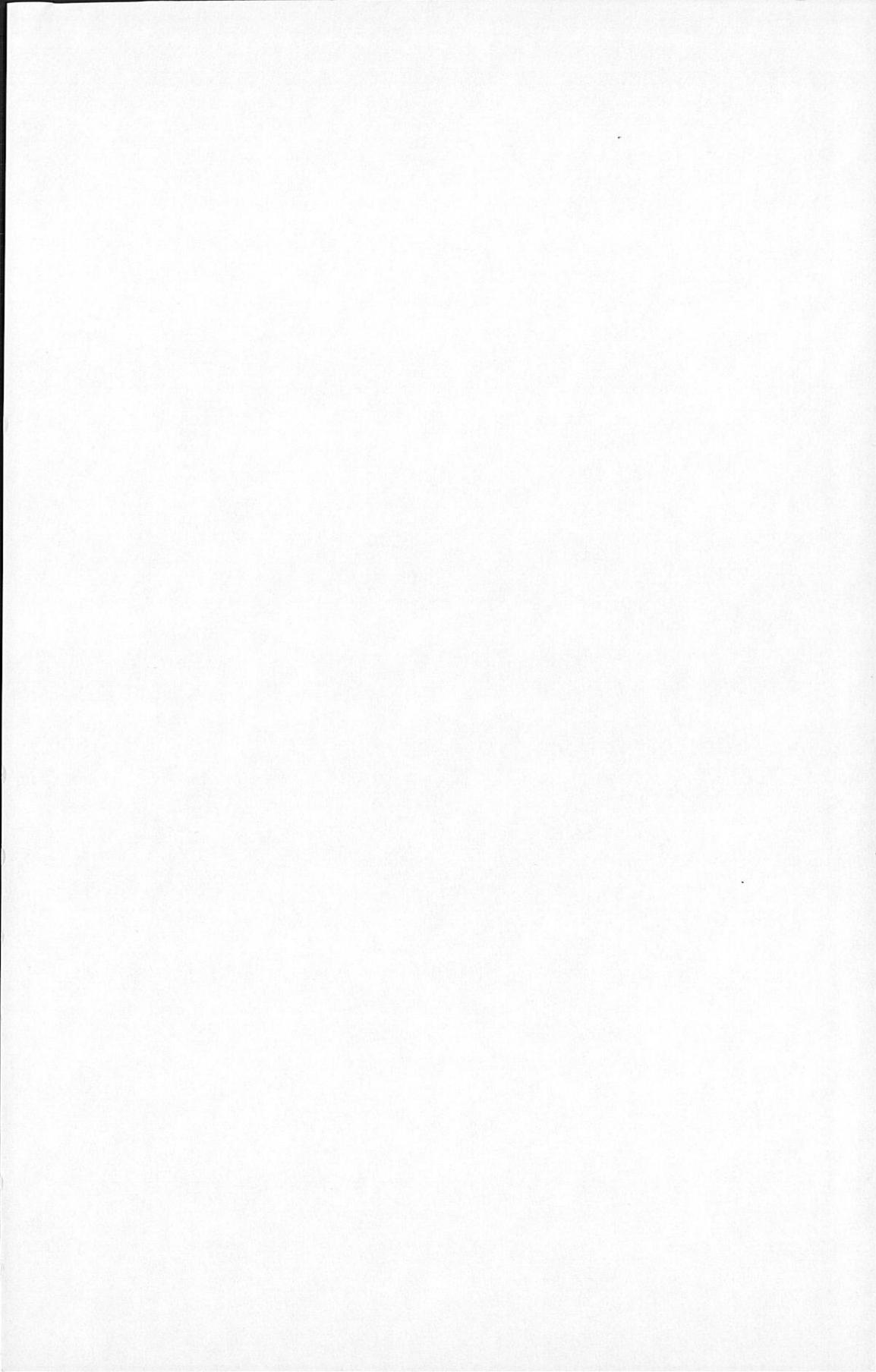
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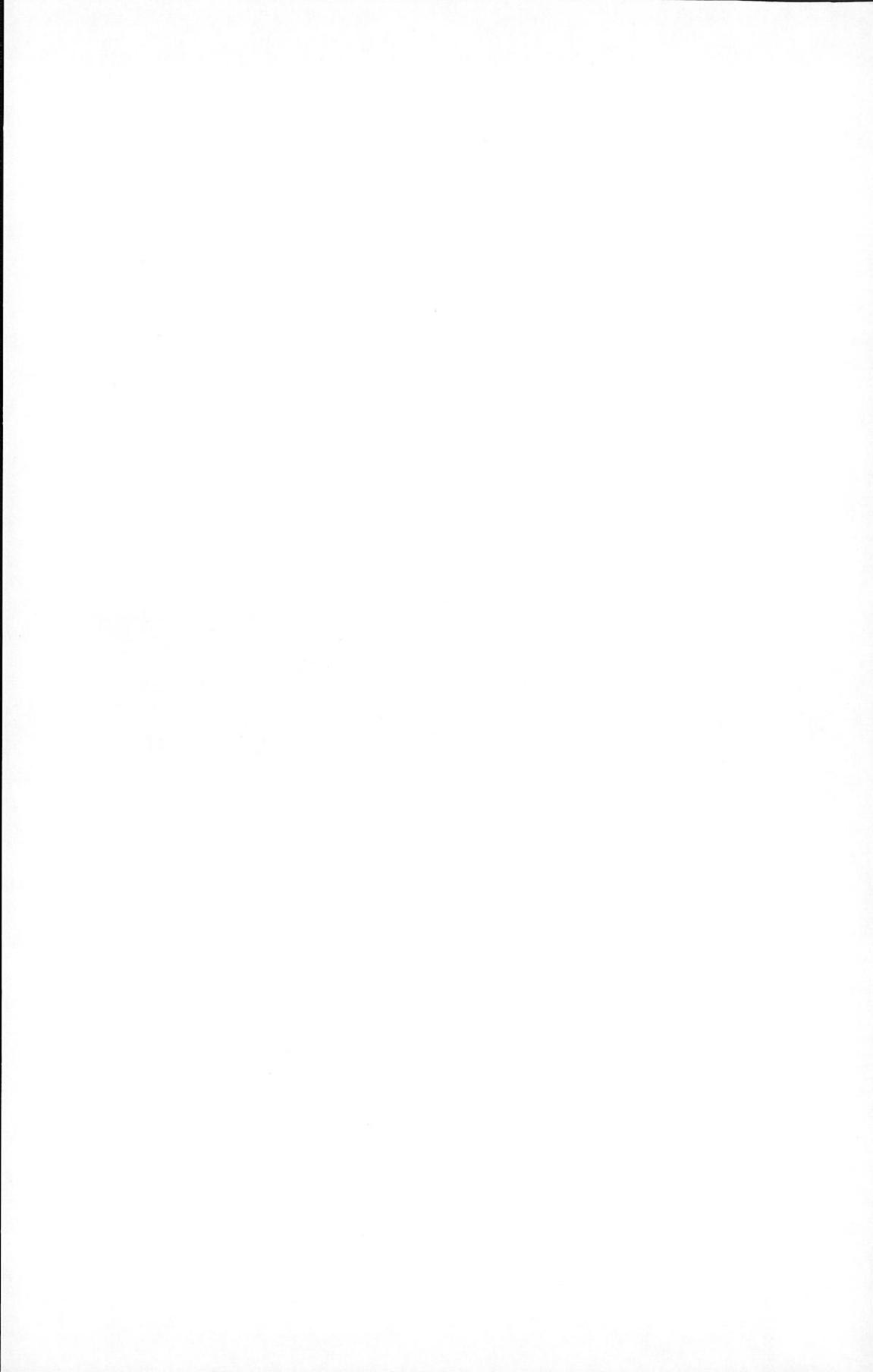
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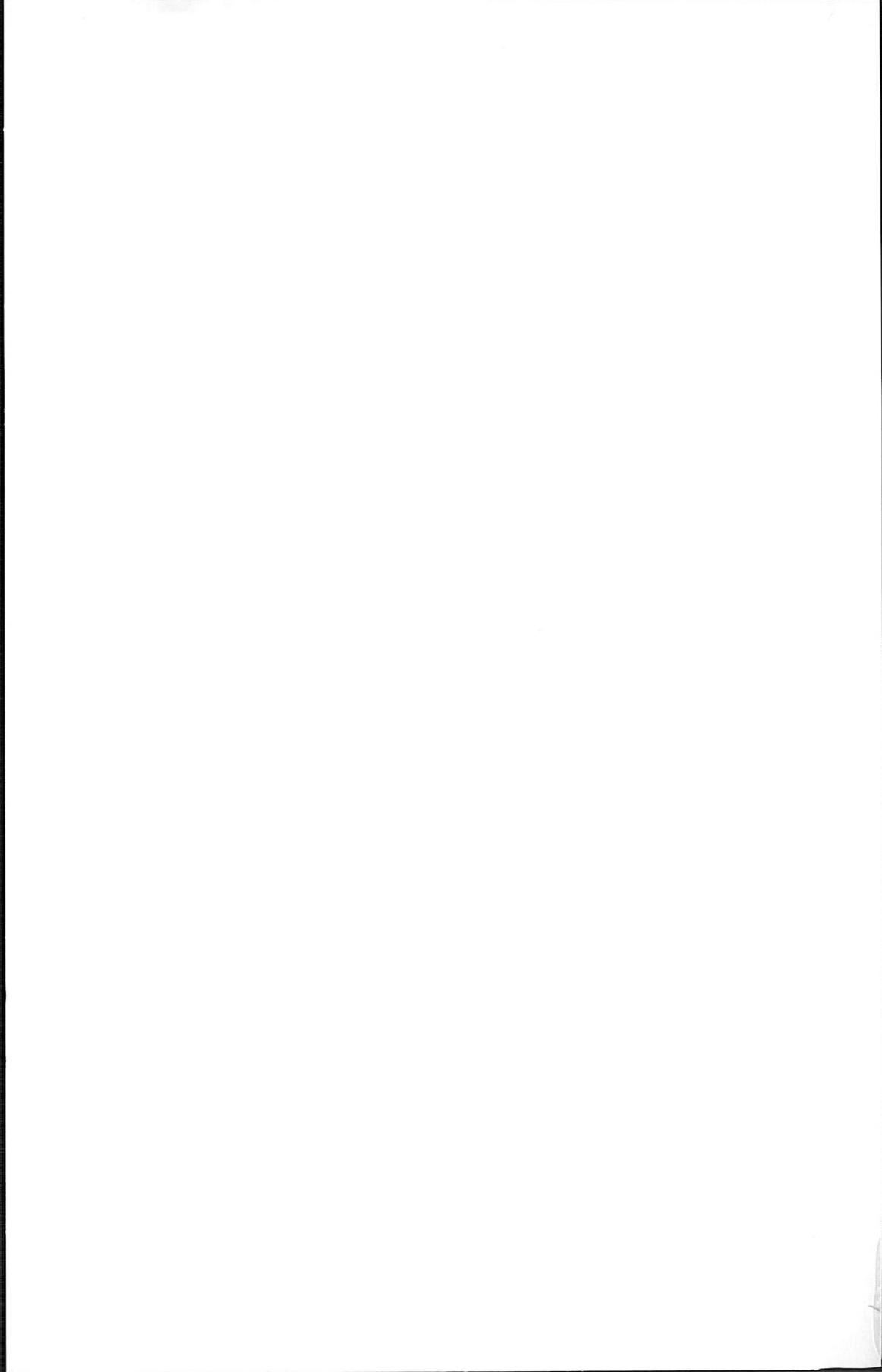
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FOREWORD

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 1994. Therefore, we regretfully present provisional AE indices for 1994 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 1981-1993 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 2000

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SECTION 1

PRESENTATION OF THE BULLETIN

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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 1994, the elaborated data were provided by the following Institutes, under the responsibility 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, 1991;
- 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@cftp.ipsl.fr
<http://tango.cftp.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/GeoMag/niemegk/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 1994);
- 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 denen eine Zeitlang erdmagnetische Beobachtungen Stattfanden, Geophysikalisches Institut Postdam Abhandlungen n° 8, Postdam, 1948;
- Annual mean values of Geomagnetic elements, Geomagnetic Bulletin n°10, Institut of Geological Sciences, Edinburgh, 1981 ;
- Yearbooks of individual observatories.

A list of the stations having provided continuous recordings over at least fifty years is given on pages 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.

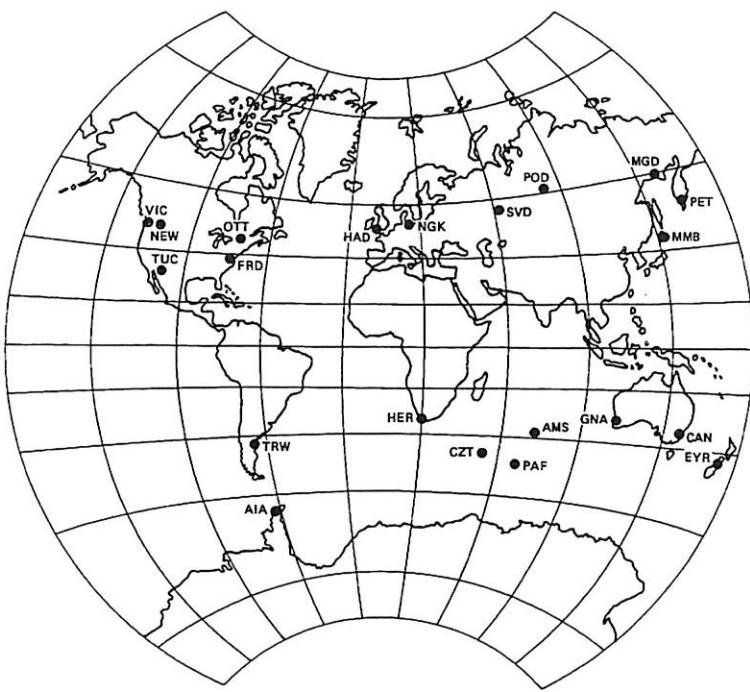


Figure 1: Distribution of am observatories

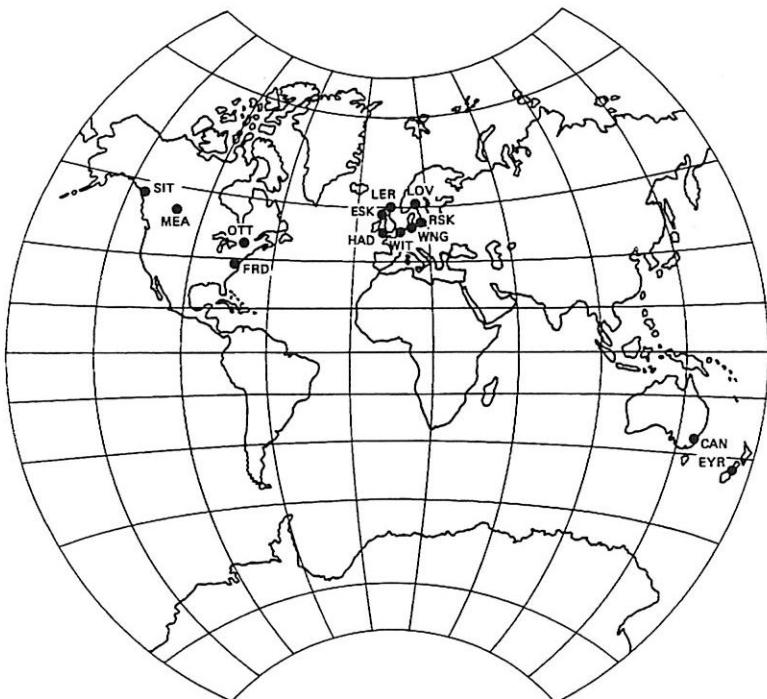


Figure 2: Distribution of Kp observatories

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 1994 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. 1868-1994. 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)	1980- ... Canberra	(1.084)		
	50.0°		45.2°		

b - List of am observatories

Northern Hemisphere			Southern Hemisphere		
Observatory	Corr. Geom. Lat.	Observatory	Corr. Geom. Lat.		
G1 MGD Magadan ⁽¹⁾	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 ⁽²⁾	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 ⁽³⁾	27.8°		
G5 NEW Newport	55.2°				
VIC Victoria	53.9°				
TUC Tucson	39.7°				

⁽¹⁾ Missing data: April, July, and September–December

⁽²⁾ Present name: Ekaterinburg

⁽³⁾ Missing data: January–May

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 1994 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

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

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 straightforward 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, $H_{obs}(T)$:

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

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

TABLE 3

List of Dst observatories

<i>Observatory</i>	<i>Acronym</i>	<i>Dipole Lat.</i>	<i>Dipole Long.</i>
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°

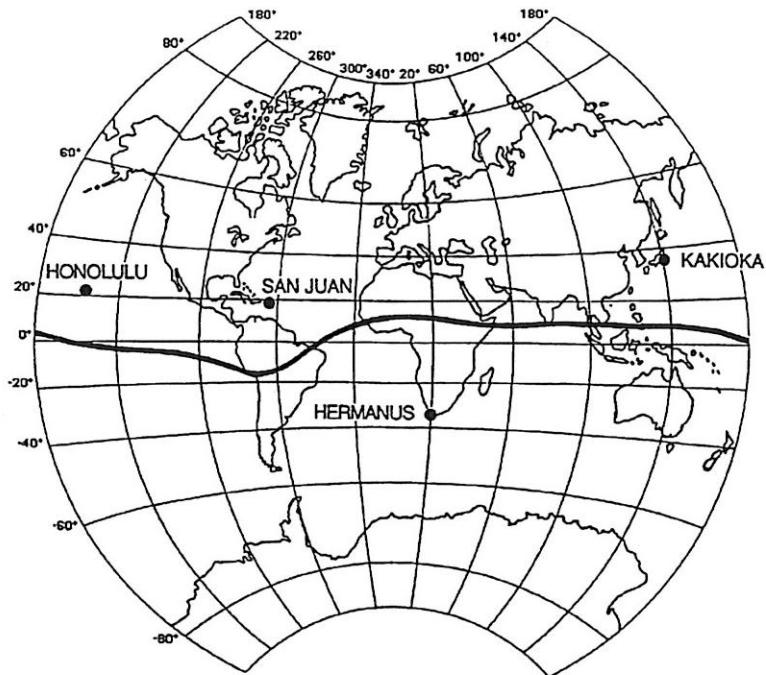


Figure 3: Distribution of the Dst observatories;
the solid line marks the dip equator.

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 :

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

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

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

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

<i>Observatory</i>	<i>Acronym</i>	<i>Geographic</i>		<i>Geomagnetic</i>	
		<i>Lat. (°N)</i>	<i>Long. (°E)</i>	<i>Lat. (°N)</i>	<i>Long. (°E)</i>
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

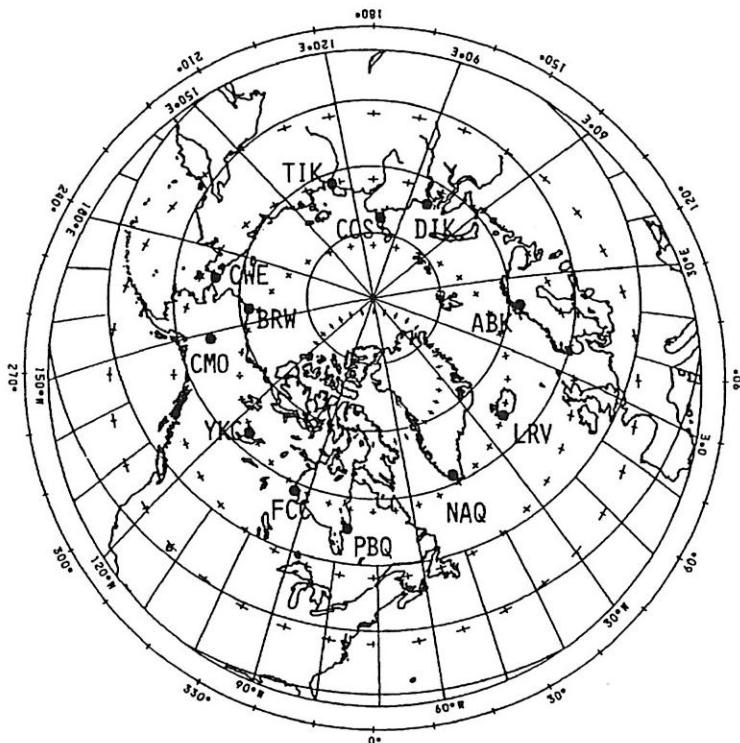


Figure 3: Distribution of AE (12) observatories.

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 1994. Regrettably, therefore, provisional AE indices for 1994 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 1994 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 1994 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 K_p 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 K_p ;
- (b) = the sum of the squares of these values;
- (c) = the greatest of the eight values of K_p .

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 K_p value greater than 3 or two K_p 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 45 magnetic observatories (see list page 146), 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 1994 (pages 149-171). 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.

Note: For technical reasons, the 1994 Rapid Variations Data were not available at the date of publication of the present Bulletin. They will be published in further regular issues of the IAGA Bulletin N°32:

- list of ssc, with 1996 data, in IAGA Bulletin N°32aa;
- list of sfe, with 1996 data, in IAGA Bulletin N°32aa.

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
BTB	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	BORGА	-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
CAN	CANBERRA	-35.30	149.00	-43.38	226.09	850	420	1980

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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	CHAMON 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
FTN	FREETOWN	8.46	346.79	14.21	59.59			1961-1967
FUQ	FUQUEENE	5.47	286.27	16.47	357.07	2543		1954

LIST OF OBSERVATORIES (continued)

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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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
MIZ	MIZUSAWA	39.01	141.08	29.47	208.21			1969
MFP	MOCA	3.35	8.67	5.27	80.39	1949		1958-1971
MOL	MOLODEZHNAIA	67.67	45.85	70.10	87.50	854		1965
MOS	MOSCOW	55.48	37.32	50.79	121.62	190		1880-1888

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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	NAGYCENT	47.63	16.72	46.93	99.59	160		1961
NAI	NAIROBI	-1.28	36.83	-4.60	107.19	1673		1964
NTS	NANTES	47.25	358.44	50.10	81.70	35		1923-1958
NAQ	NARSSARSSUAQ	61.20	314.60	70.60	38.66	4		1973
NL	NEW ALESUND	78.92	11.93	75.43	130.70	12		1966
NEW	NEWPORT	48.27	242.88	55.14	302.78	780	700	1966
NYI	NEW YEAR ISLAND	54.65	295.85	43.30	5.20			1902-1916
NCE	NICE	43.72	7.30	45.00	89.00			1889-1901
NGK	NIEMEGK	52.07	12.68	51.94	97.77	78	500	1932
NSM	NITSANIM	31.73	34.60	28.21	111.55	150		1963-1967
NOK	NORILSK	69.20	88.00	58.68	165.77			1969
NKK	NOVOKAZALINSK	45.77	62.12	37.76	139.83			1974
NVL	NOVOLAZAREVSKAYA	-70.77	11.82	-66.76	55.88	460		1961
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
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

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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
SIJ	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			
SSH	SHE-SHAN	31.10	121.19	20.30	191.03	100		1972
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
TAU	TERRE ADELIE	-66.67	140.02	-75.07	232.18	40		1957
TMP	THOMPSON	55.72	262.12	65.09	322.65			1969
THU	THULE/CAMP TUTO	76.55	291.17	87.53	11.26	480		1932-1952
THL	THULE/QANAQ	77.48	290.83	88.46	14.10	57		1956
TFS	TIFLIS	42.08	44.70	36.62	123.49	982		1879-1905
THY	TIHANY	46.90	17.90	46.01	100.41	187		1949
TKH	TIKHAYA BAY	80.30	52.80	71.74	153.42	10		1932-1958
TIP	TIRUCHIRAPALLI	10.80	78.70	1.26	150.19			1975
TIK	TIXIE BAY	71.58	129.00	60.99	192.81	40		1944
KAK	TOKYO	35.75	139.72	26.10	207.41	20		1897-1912
TOL	TOLEDO	39.88	355.95	43.39	76.18	501		1947
TMK	TOMSK	56.47	84.93	46.21	160.93	200	510	1958-1969
TOO	TOOLANGI	-37.53	145.47	-46.05	222.66	457	510	1922-1980
AGN	TORONTO	43.67	280.50	54.80	349.10			1872-1898
TLE	TOULOUSE	43.61	1.46	46.00	83.20	190		1894-1905
TGO	TOUNGOO	18.93	96.45	7.90	167.80	300		1905-1923
TOH	TOYOHARANEW	46.95	142.75	37.20	208.30	70		1932-1941
TRW	TRELEW	-43.25	294.68	-32.28	4.81		290	1957-1970
TRD	TRIVANDRUM	8.48	76.95	-0.88	148.24	300		1957

LIST OF OBSERVATORIES (continued)

IAGA Code	Name	Geographic		Geomagnetic		Alt (m)	K=9 lower limit	Open -Closed
		Lat	Long	Lat	Long			
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			
VLA	VLADIVOSTOK	43.12	131.90	32.84	199.68			1903-1924
LNN	VOEIKOVO	59.95	30.70	56.00	118.50	70		1932
VOR	VOROSHILOV	43.78	132.03	33.20	199.60	30		1947
VOS	VOSTOK	-78.45	106.87	-89.31	139.62	3500		1952-1957
SVD	VYSOKAYA	56.73	61.07	48.40	141.90	290		1958
WAT	WATHEROO	-30.30	115.90	-41.23	187.82	240		1932
WES	WESTON	42.38	288.68	53.40	359.49			1919-1958
WHS	WHITE SHELL	49.80	264.80	59.56	328.39			1960
WIK	WIEN	48.25	16.36	47.60	69.70			1975
WIA	WIEN-AUHOF	48.20	16.24	47.50	69.60	2050		1892-1898
WIK	WIEN-KOBENZL	48.27	16.32	47.62	69.48	400		1929-1950
WLH	WILHELMSHAVEN	53.53	8.15	54.20	94.50	10		1954
WIL	WILKES	-66.25	110.58	-77.26	182.71			1884-1911
WNG	WINGST	53.75	9.07	54.22	95.21	50	550	1939
WNP	WINNIPEG	49.63	262.87	59.19	326.02			1957-1966
WIT	WITTEVEEN	52.82	6.67	53.79	92.39	17	540	1969-1975
YAK	YAKUTSK	62.02	129.72	51.53	195.40	100		1938-1988
TKT	YANGI BAZAR	41.33	69.62	32.30	145.60	500		1931
YAU	YAUCA	-15.53	285.33	-4.54	356.36			1964
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)		
ESKDALE MUIR	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 MUNTINGLUPA	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 CANBERRA	1922 - 1980 1980 - ...
OSLO	1843 - 1930		
PILAR	1905 - ...		
POTSDAM	1890 - 1907	SEDDEN NIEMEGK	1908 - 1931 1932 - ...
RUDE SKOV	1907 - 1978	BJORFELDE	1978 - ...
SAINT MAUR	1883 - 1900	VAL JOYEUX CHAMBON LA FORêt	1901 - 1936 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 DUSHETI	1905 - 1934 1938 - ...
TIKHAYA BAY	1932 - 1958 (1947 - 1950 missing)	HEISS ISLAND	1959 - ...
TOKYO	1897 - 1912	KAKIOKA	1913 - ...
TROMSÖ	1930 - ...		
TUCSON	1910 - ...		
UCCLE	1896 - 1919 (1943 - 1945 missing)	MANHAY	1936 - 1971
UTRECHT	1891 - 1896	DOURBES DE BILT WITTEVEEN	1955 - ... 1899 - 1938 1938 - 1988
VALENTIA	1899 - ...		
VASSOURAS	1915 - ...		
WATHEROO	1919 - 1958	GNANGARA	1959 - ...
WILHELMSHAFEN	1884 - 1911	WINGST	1939 - ...
YAKUTSK	1931 - ...		
ZAIMISHCHE	1914 - 1972		
ZI - KA - WEI	1875 - 1907	LUKIAPANG ZO - SE	1908 - 1933 1933 - 1974

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SECTION 3

3.1 aa INDICES

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MUSICAL DIAGRAM OF aa 1994



aa INDICES 1994

JAN. 1994	Day N S		Half Day am pm		Daily aa	Quiet Days
1	42	39	46	35	40	
2	40	32	31	41	36	
3	32	25	21	36	29	
4	11	11	15	8	11	C
5	9	8	7	10	8	C C *
6	23	26	20	29	25	
7	13	7	5	15	10	C *
8	16	11	14	13	14	C
9	6	5	6	6	6	C C *
10	6	8	10	4	7	C K *
11	52	46	22	77	49	
12	50	47	46	52	49	
13	52	37	29	59	44	
14	48	34	30	52	41	
15	36	31	25	42	34	
16	35	39	37	37	37	
17	43	43	47	39	43	
18	40	33	26	47	36	
19	41	44	49	36	42	
20	32	18	24	26	25	
21	20	11	11	20	16	
22	20	15	22	13	18	
23	15	15	16	14	15	C
24	7	7	10	4	7	C C *
25	12	9	10	11	10	C
26	45	49	46	49	47	
27	36	37	28	46	37	
28	29	22	31	20	26	
29	21	25	21	25	23	
30	24	15	12	27	20	
31	20	15	13	22	18	

Mean values 28.4 24.7

26.5

FEB. 1994	Day N S		Half Day am pm		Daily aa	Quiet Days
1	13	10	15	8	12	C *
2	23	27	22	28	25	
3	24	25	16	33	25	
4	32	20	12	40	26	
5	52	45	38	59	49	
6	87	83	60	111	85	
7	93	78	80	91	86	
8	99	87	95	91	93	
9	64	49	39	75	57	
10	68	49	51	66	59	
11	76	60	60	77	68	
12	59	43	39	63	51	
13	68	43	42	68	55	
14	61	51	39	74	56	
15	52	37	35	54	44	
16	45	26	43	28	35	
17	22	13	15	20	18	
18	13	18	13	19	16	
19	50	33	37	47	42	
20	25	25	27	23	25	
21	146	100	75	171	123	
22	66	51	89	27	58	
23	25	19	19	25	22	
24	9	10	9	10	10	C *
25	24	25	27	22	24	
26	14	14	14	14	14	*
27	15	13	16	13	14	
28	20	15	15	20	18	

Mean values 47.9 38.3

43.1

MAR. 1994	Day N S		Half Day am pm		Daily aa	Quiet Days
1	27	18	26	19	23	
2	37	30	25	41	33	
3	34	39	58	15	36	
4	9	10	12	7	9	C C *
5	23	13	11	25	18	
6	22	20	18	24	21	
7	90	92	69	114	91	
8	79	55	63	72	67	
9	88	64	63	89	76	
10	66	60	60	66	63	
11	57	57	55	60	57	
12	66	66	60	72	66	
13	40	33	36	37	36	
14	57	57	51	63	57	
15	60	62	58	64	61	
16	45	33	31	47	39	
17	57	47	56	49	52	
18	33	32	35	31	33	
19	34	21	39	16	28	
20	25	21	17	29	23	
21	48	46	46	49	47	
22	34	34	34	35	35	
23	36	29	31	34	33	
24	31	29	31	30	30	
25	39	32	22	49	36	
26	19	12	21	10	15	*
27	23	15	8	31	19	
28	23	23	17	29	23	
29	11	11	13	9	11	C *
30	29	23	16	37	26	
31	11	11	14	8	11	C *

Mean values 40.5 35.3

37.9

APR. 1994	Day N S		Half Day am pm		Daily aa	Quiet Days
1	15	19	12	22	17	
2	68	53	35	86	60	
3	104	92	91	105	98	
4	76	57	82	51	66	
5	62	58	49	72	60	
6	71	75	67	79	73	
7	64	51	58	57	57	
8	66	66	63	68	66	
9	74	60	77	58	67	
10	62	54	56	60	58	
11	66	75	81	60	70	
12	52	39	39	53	46	
13	54	57	39	72	55	
14	40	43	40	42	41	
15	34	30	30	35	32	
16	55	34	26	63	45	
17	107	87	159	35	97	
18	38	28	33	33	33	
19	27	28	38	17	28	
20	14	16	19	11	15	
21	17	11	13	15	14	C
22	17	12	11	18	15	
23	27	19	13	33	23	
24	14	15	15	14	15	
25	19	13	21	11	16	
26	10	9	11	8	10	C C *
27	10	9	9	10	10	C C *
28	9	7	9	7	8	C C *
29	12	9	13	9	11	C C *
30	6	2	4	5	4	C K *

Mean values 43.0 37.6

40.3

aa INDICES 1994 (continued)

MAY 1994	Day N S	Half Day am pm	Daily aa	Quiet Days
1	67 44	20 91	55	
2	68 49	58 60	59	
3	68 55	69 54	61	
4	40 32	33 38	36	
5	59 60	42 77	60	
6	59 55	58 56	57	
7	59 60	77 42	60	
8	58 51	58 52	55	
9	57 46	56 48	52	
10	52 49	48 54	51	
11	50 44	49 46	47	
12	23 18	30 11	20	
13	14 10	15 9	12	C *
14	41 30	36 35	35	
15	57 66	60 63	62	
16	48 42	49 41	45	
17	29 27	35 21	28	
18	36 31	36 31	33	
19	23 21	28 16	22	
20	15 10	11 14	12	K K *
21	16 6	7 15	11	C K *
22	16 7	8 15	11	C K *
23	21 11	12 20	16	
24	45 24	42 27	35	
25	32 28	35 25	30	
26	22 26	30 18	24	
27	13 8	9 13	11	C K *
28	65 54	8 112	60	
29	57 66	72 51	61	
30	79 70	70 80	75	
31	50 52	51 51	51	
Mean values	43.2 37.2		40.2	

JUNE 1994	Day N S	Half Day am pm	Daily aa	Quiet Days
1	42 43	48 37	48	42
2	43 36	37 42	39	
3	47 39	36 51	43	
4	29 37	35 31	33	
5	38 44	37 45	41	
6	36 32	32 37	34	
7	28 34	30 32	31	
8	19 17	18 18	18	
9	22 15	23 14	18	
10	39 30	32 37	34	
11	31 24	29 26	27	
12	45 39	43 40	42	
13	34 16	20 30	25	
14	31 23	28 26	27	
15	12 11	13 10	12	C *
16	11 7	7 11	9	C C *
17	17 14	11 20	16	
18	27 15	24 18	21	
19	34 28	30 33	31	
20	34 21	19 36	28	
21	20 14	18 16	17	
22	17 12	17 12	14	K
23	8 4	5 7	6	C C *
24	9 5	10 4	7	C C *
25	9 3	5 8	6	C *
26	48 43	39 52	46	
27	27 32	40 19	30	
28	34 30	15 49	32	
29	55 43	51 47	49	
30	40 34	37 37	37	
Mean values	29.5 24.9			27.1

JULY 1994	Day N S	Half Day am pm	Daily aa	Quiet Days
1	42 44	49 37	43	
2	47 39	49 37	43	
3	20 34	31 24	27	
4	24 14	14 24	19	
5	11 9	9 10	10	C
6	20 13	14 19	17	
7	36 34	35 36	35	
8	10 5	7 8	8	C *
9	15 4	5 14	9	C C
10	12 6	8 10	9	C C *
11	11 5	4 12	8	C C
12	8 4	7 5	6	C C *
13	11 3	5 9	7	C K *
14	40 34	21 54	37	
15	40 24	31 33	32	
16	54 44	60 38	49	
17	28 25	25 28	26	
18	25 18	25 17	21	
19	26 22	23 25	24	
20	11 11	9 13	11	C
21	20 14	17 17	17	
22	14 8	13 9	11	C C
23	16 10	11 15	13	C C
24	16 9	10 15	13	C
25	24 17	21 20	21	
26	9 9	9 9	9	C *
27	26 21	25 22	24	
28	32 25	32 25	29	
29	23 24	23 24	24	
30	18 23	20 21	21	
31	20 16	15 21	18	
Mean values	22.8 18.4		20.6	

AUG. 1994	Day N S	Half Day am pm	Daily aa	Quiet Days
1	17 9	15 10	13	C
2	10 4	8 6	7	C C *
3	11 5	8 7	8	C C
4	8 4	5 7	6	C C *
5	11 8	12 7	9	C C
6	11 6	8 9	8	C C
7	11 6	5 12	8	C C *
8	6 2	4 4	4	C C *
9	12 8	8 12	10	C C
10	29 19	16 32	24	
11	40 19	31 28	29	
12	36 28	31 33	32	
13	46 44	42 49	45	
14	53 48	61 40	51	
15	28 27	24 31	28	
16	19 15	16 18	17	
17	12 10	11 11	11	C C
18	12 15	11 15	13	C C
19	10 8	8 10	9	C C
20	17 10	12 15	14	C
21	17 19	9 27	18	
22	24 15	10 30	20	
23	13 9	11 11	11	C
24	17 10	8 19	14	K
25	21 13	21 13	17	
26	13 11	11 13	12	C
27	19 11	17 13	15	
28	14 12	18 8	13	K C
29	9 10	7 12	9	C C
30	10 7	7 10	8	C C *
31	15 8	7 16	11	C
Mean values	18.3 13.5			15.9

aa INDICES 1994 (continued)

SEP. 1994	Day		Half Day		Daily aa	Quiet Days
	N	S	am	pm		
1	26	14	26	15	20	
2	13	6	11	8	9	C C
3	14	9	12	10	11	C C
4	11	5	9	8	8	C K *
5	19	17	21	15	18	
6	29	22	28	23	25	
7	66	53	42	77	59	
8	50	36	43	43	43	
9	59	51	42	68	55	
10	31	28	37	22	29	
11	26	25	31	20	25	
12	26	19	17	28	22	
13	25	13	17	21	19	
14	15	15	14	16	15	
15	16	9	10	15	13	C
16	22	13	19	16	18	
17	15	18	18	14	16	
18	12	6	9	9	9	C C
19	13	7	9	11	10	C C *
20	11	7	7	11	9	C C *
21	15	9	9	14	12	C C
22	14	7	13	8	10	C C *
23	11	4	8	7	7	C C *
24	15	6	14	7	11	C C
25	34	24	12	46	29	
26	32	30	37	25	31	
27	34	21	29	26	27	
28	25	17	29	12	21	
29	15	10	13	12	13	C C
30	8	9	8	9	9	C C *
Mean values		23.4	16.9		20.1	

OCT. 1994	Day		Half Day		Daily aa	Quiet Days
	N	S	am	pm		
1	9	10	12	7	9	
2	32	20	7	45	26	C C *
3	99	96	118	77	97	
4	54	55	49	60	54	
5	66	51	54	63	59	
6	57	46	46	58	52	
7	69	48	43	74	59	
8	35	23	37	22	29	
9	22	15	17	20	19	
10	34	25	22	37	29	
11	36	29	29	37	33	
12	28	19	23	24	24	
13	20	22	24	18	21	
14	25	12	14	24	19	
15	24	27	37	14	25	
16	10	11	13	8	11	C C
17	9	9	9	9	9	C C *
18	11	5	5	11	8	C C
19	16	17	8	24	16	
20	21	12	13	20	17	
21	8	5	8	5	6	C
22	42	46	25	63	44	
23	79	71	97	54	76	
24	54	32	37	49	43	
25	19	18	30	8	19	
26	16	13	16	13	15	C
27	9	7	8	8	8	C C *
28	11	9	8	12	10	C
29	56	79	51	84	68	
30	79	75	77	77	77	
31	54	51	51	54	53	
Mean values		35.5	31.0		33.3	

NOV. 1994	Day		Half Day		Daily aa	Quiet Days
	N	S	am	pm		
1	36	30	36	29	33	
2	32	26	26	33	29	
3	24	23	16	31	24	
4	45	23	33	35	34	
5	48	20	23	45	34	
6	71	38	66	42	54	
7	18	11	13	16	15	
8	10	13	9	14	12	K K *
9	32	28	11	49	30	
10	27	31	40	18	29	
11	14	16	17	13	15	
12	9	9	11	7	9	C C *
13	12	13	10	15	13	C C
14	21	16	16	21	19	
15	24	19	15	29	22	
16	9	11	9	11	10	C
17	13	12	13	12	12	K K
18	12	16	11	17	14	
19	31	38	34	35	34	
20	36	46	48	34	41	
21	12	10	14	8	11	C
22	16	7	9	15	12	C C
23	11	6	7	10	8	C C *
24	10	11	11	10	11	C C *
25	7	8	8	7	7	C C *
26	54	78	61	72	66	
27	48	35	37	47	42	
28	22	19	21	20	21	
29	19	11	11	19	15	
30	42	26	40	27	34	
Mean values		25.5	21.7		23.6	

DEC. 1994	Day		Half Day		Daily aa	Quiet Days
	N	S	am	pm		
1	33	30	32	31	31	
2	56	35	32	59	45	
3	28	19	25	22	24	
4	14	13	13	14	14	
5	15	20	11	24	18	
6	45	55	51	49	50	
7	34	22	22	35	28	
8	26	30	32	24	28	
9	19	15	16	18	17	
10	22	14	16	20	18	
11	24	19	9	34	21	
12	34	24	25	33	29	
13	28	29	34	23	28	
14	15	10	9	16	13	
15	46	33	26	53	40	
16	27	24	29	23	26	
17	14	13	15	12	14	C
18	14	13	11	16	14	C *
19	11	15	16	10	13	K
20	20	21	19	22	21	
21	14	11	12	13	13	C *
22	8	5	9	4	6	C C *
23	22	16	18	20	19	
24	68	62	58	72	65	
25	30	26	29	27	28	
26	36	28	24	40	32	
27	36	20	15	41	28	
28	19	21	15	25	20	
29	24	24	30	18	24	
30	12	11	13	10	12	C K
31	13	8	9	12	11	C C *
Mean values		25.9	22.3		24.1	

MONTHLY and YEARLY aa 1868 - 1994

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 – 1994 (continued)

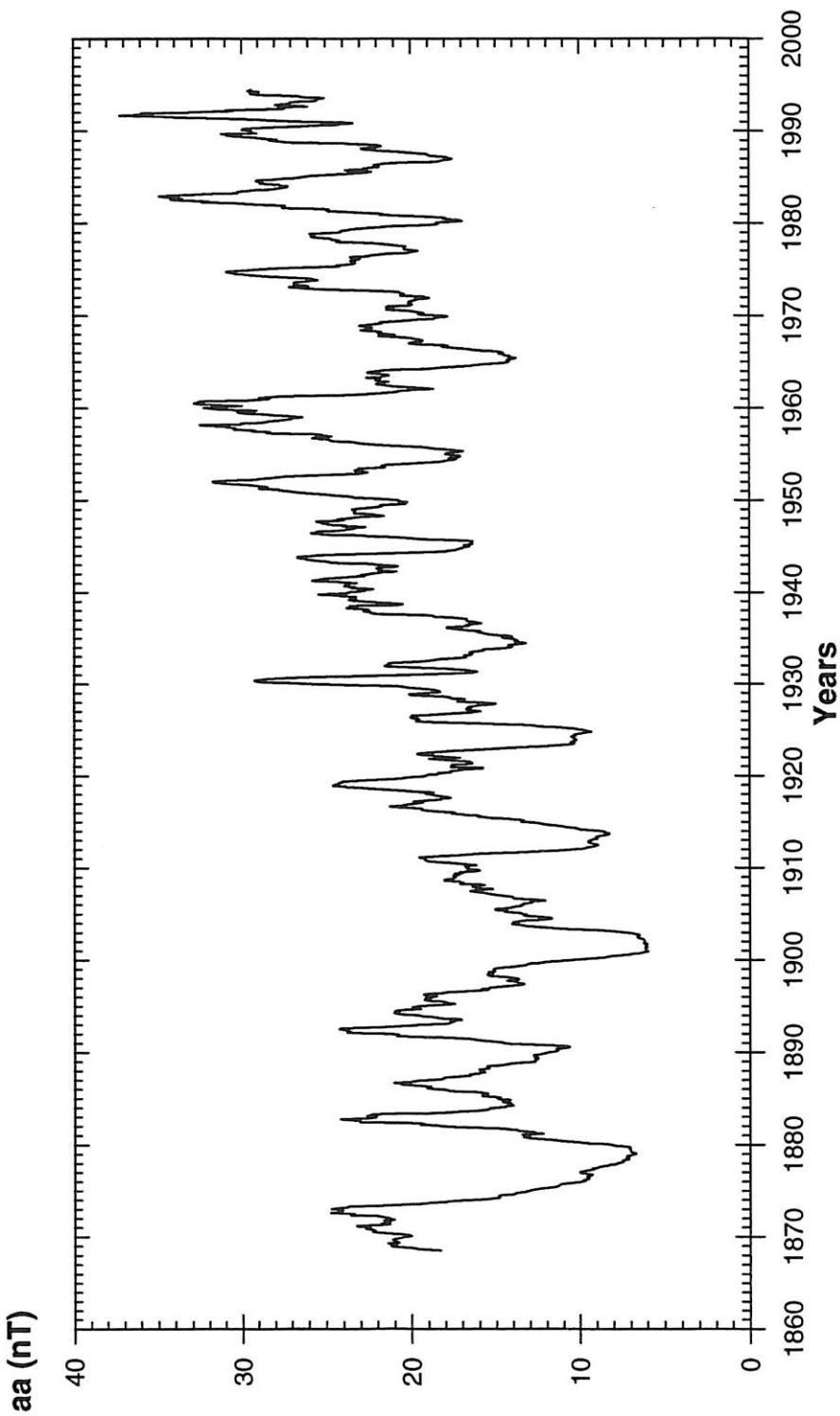
Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1913	10.3	9.5	9.9	9.8	9.0	7.0	7.0	6.7	10.0	10.7	7.6	6.6	8.7
1914	7.1	7.3	10.1	13.5	8.1	10.3	12.9	14.9	11.8	13.3	13.4	9.3	11.0
1915	10.9	13.5	15.0	15.3	13.9	17.9	11.2	14.7	17.0	21.3	24.9	12.4	15.7
1916	16.0	11.6	25.0	19.2	20.2	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 – 1994 (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
1993	31.2	27.1	37.8	29.1	22.1	21.7	18.2	19.1	23.8	24.6	25.4	25.2	25.4
1994	26.5	43.1	37.9	40.3	40.2	27.1	20.6	15.9	20.1	33.3	23.6	24.1	29.4

Unit : nT

TWELVE - MONTH RUNNING MEAN VALUES OF aa 1868 - 1994

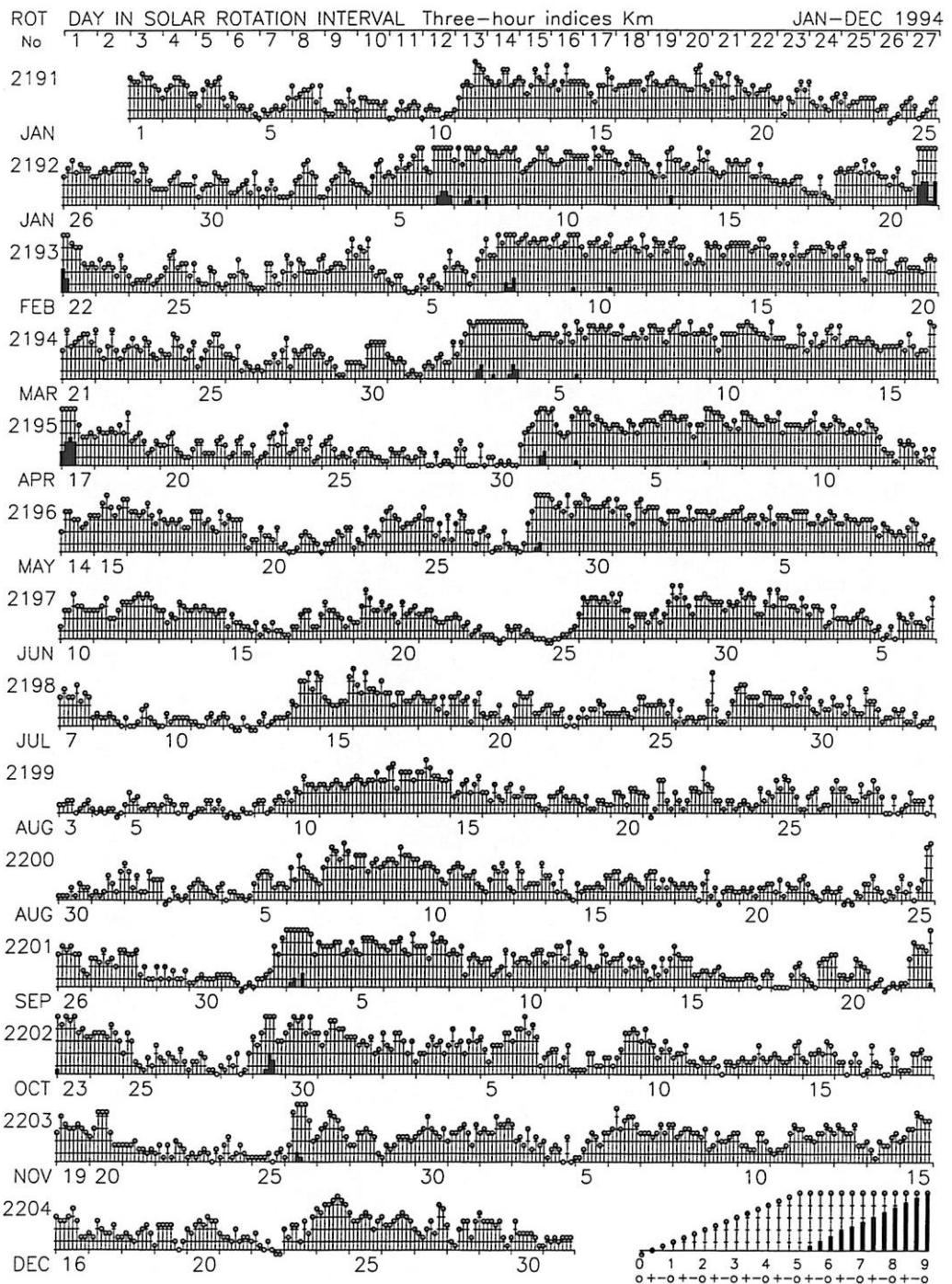


SECTION 3

3.2 an, as, am INDICES

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MUSICAL DIAGRAM OF Km 1994



an, as INDICES 1994

January 1994															An				
	Kn							σn		an							An		
1	3+	3o	3+	4+	4-	4o	3o	3-	2123	3446	38	33	39	65	45	54	29	23	41
2	2o	3-	3+	4-	4o	4-	3o	2+	3313	3453	14	24	35	42	60	44	29	17	33
3	2+	1+	3-	3+	3o	4-	4-	2-	2333	3562	20	10	24	35	28	45	47	11	28
4	1+	3-	2-	1+	1+	1o	1+	0+	1322	2131	8	23	13	8	9	7	10	2	10
5	0o	1-	1-	1-	1+	1+	1+	2-	1222	3223	1	5	4	4	8	9	8	12	6
6	3-	2-	2+	3-	3o	4-	2-	3o	3234	4224	21	12	17	23	29	41	12	27	23
7	1o	0+	0+	2-	2o	1+	3-	2-	3133	2234	6	2	3	11	14	8	22	12	10
8	1o	2-	2+	2o	2-	2o	1+	1+	4244	3444	7	12	17	14	13	16	9	9	12
9	0o	0o	1-	1+	1+	1+	2-	1-	2123	3143	1	1	5	9	9	9	13	5	7
10	0o	1-	1-	1-	1o	1-	0+	0o	1222	3320	1	5	5	4	6	4	2	0	3
11	1-	1+	2+	3-	3o	5+	5-	4o	2233	2353	5	10	20	24	27	108	83	52	41
12	4-	3o	3o	4-	5-	4+	3o	3+	1104	6323	49	33	29	44	73	70	29	39	46
13	4-	4-	3-	3o	5-	4o	3+	5-	2423	3332	43	42	22	33	80	53	35	73	48
14	3o	4-	3-	4-	5o	4-	3+	3+	1233	5433	31	41	25	43	92	43	36	36	43
15	3+	3+	2+	2-	3+	3o	5-	3+	3112	2341	35	36	17	12	35	32	71	34	34
16	3-	3o	3+	3+	3+	3+	3+	2+	3342	3333	22	29	37	35	35	37	36	20	31
17	4-	4o	3+	3+	3o	3+	3+	3+	3423	1344	47	56	37	35	32	39	39	37	40
18	3+	3+	3-	3-	5-	5-	3o	2+	2322	3342	34	34	23	25	74	85	32	20	41
19	3+	4o	4o	3o	4o	2o	4-	3o	3344	4043	37	52	55	31	51	15	50	33	41
20	3o	3-	3+	3-	3-	3o	3+	2-	3323	2463	28	23	36	21	26	27	35	12	26
21	2-	2o	1o	1+	1+	3-	4-	3-	3233	2553	12	16	7	10	10	24	42	21	18
22	3+	2o	1+	2o	1+	1+	2-	2-	3125	0323	37	14	9	16	9	8	13	13	15
23	2-	2-	1+	1+	1+	2+	1+	2-	2312	1532	12	12	8	10	8	17	10	13	11
24	2-	1o	1o	1+	0o	0+	0+	1-	3223	1322	12	6	7	10	1	2	2	5	6
25	1o	2o	1+	0+	1-	1+	1+	2o	3432	2125	7	15	10	2	4	8	9	16	9
26	2+	3o	4o	3-	4+	4-	4-	3-	3143	3352	18	28	57	25	63	46	46	23	38
27	3-	3o	4-	3-	4-	4-	4-	3+	3323	3343	26	29	42	26	41	45	45	40	37
28	4-	3o	2+	4o	3+	2+	2-	2o	2135	2335	46	28	18	52	39	17	13	14	28
29	1+	2-	2+	3-	3+	2+	2o	2o	2143	3354	8	13	20	23	35	17	15	16	18
30	3-	1o	2-	2+	2o	3+	3-	2+	3134	2534	24	6	12	17	15	38	25	20	20
31	3-	1+	2-	2-	2+	3-	1+	3o	3222	4424	21	10	12	13	17	21	10	28	17

Monthly mean value of An

25.2

January 1994															As				
	Ks							σs		as							As		
1	4o	3+	4-	4o	4-	3+	3o	3-	5322	2342	54	36	42	56	46	39	30	23	41
2	2o	3o	3-	4-	3+	3o	3o	3-	1332	3422	14	27	23	46	35	29	29	21	28
3	3-	2-	3-	3+	3-	3o	3+	2+	2232	2233	21	11	23	39	26	31	39	18	26
4	2-	2o	2o	1o	1+	1o	1-	1+	2241	2122	12	15	15	7	10	6	10	5	10
5	1-	1+	1-	1+	2-	1-	1+	2+	2321	2222	4	9	4	8	12	5	10	20	9
6	3+	2o	2o	3-	2+	3-	2-	3+	3012	1223	34	15	16	21	18	24	13	37	22
7	1+	1-	1-	2-	1+	1+	3-	2o	3231	2345	9	5	5	12	10	9	22	14	11
8	1o	2o	2o	1+	2o	1+	2-	2+	2232	1224	6	15	14	10	14	8	11	17	12
9	1-	0+	1o	2o	1-	1+	1+	2o	3204	2425	4	3	7	16	5	8	10	14	8
10	1o	1+	2-	1o	1o	0+	1-	1o	1231	0254	6	9	11	7	7	3	5	7	7
11	1+	2+	3-	4-	3+	5o	5-	5-	2333	2152	10	20	34	46	40	89	71	76	48
12	4o	3+	3+	3+	4o	4o	3-	3+	1333	4432	51	36	36	35	58	54	26	39	42
13	4-	3o	2+	3o	4o	4-	3+	4+	3231	4243	41	27	19	28	52	42	34	69	39
14	3o	3o	3-	3o	4o	3+	3+	3o	1030	4554	32	30	23	30	58	37	38	33	35
15	4-	3-	3-	2-	3o	3o	4+	4-	3234	3433	41	25	23	12	29	29	61	48	34
16	2+	3o	3o	3o	3+	3+	4-	3-	2133	2124	20	28	27	27	38	34	44	21	30
17	4-	4o	3+	3o	3+	3+	4-	3+	2141	2134	42	52	40	32	34	34	44	37	39
18	3o	3-	3-	3-	4o	4+	3o	3o	1322	2231	28	24	21	22	56	68	32	28	35
19	3+	4+	4-	3o	4-	2-	3+	3+	2132	2125	40	64	42	27	50	13	36	38	39
20	3-	2o	2+	2+	3-	3-	3o	2o	2233	3334	25	15	19	19	23	22	28	16	21
21	2-	2-	0+	2+	2-	3-	3o	3-	2122	1442	13	13	3	18	12	23	33	25	18
22	4-	2-	1+	2o	1o	1-	2+	3-	2124	3332	41	12	8	14	7	5	19	21	16
23	2-	3-	2-	2o	2o	2o	2+	2o	1521	2131	13	24	12	16	15	14	18	14	16
24	2+	1+	1+	1+	0o	0+	1o	2o	4221	0356	17	8	10	8	0	2	6	15	8
25	2+	2-	1o	0o	1-	1-	2+	2o	3112	2341	18	13	7	1	4	5	17	16	10
26	3-	4-	4o	3o	3+	3o	3-	3-	3421	1201	26	41	56	32	36	35	30	26	35
27	2+	3-	3o	3o	3o	4-	4-	4-	1421	1232	17	26	31	29	32	45	49	41	34
28	4-	3o	3-	3+	3o	2+	2-	2-	3223	1332	41	27	21	38	29	18	13	12	25
29	2o	2o	3-	2+	3o	2o	2-	2-	3322	3113	14	14	21	19	31	14	13	12	17
30	3-	1+	1+	2o	2o	3-	2+	2+	4122	1324	21	8	10	15	14	25	19	19	16
31	2+	1+	1+	2-	2o	2o	2-	3o	4331	1231	19	10	9	13	14	15	11	29	15

Monthly mean value of As

24.1

an, as INDICES 1994 (continued)

February 1994														An						
	Kn						o II			an										
1	2-	1-	2o	3-	2-	1-	1o	1-		5233	3101	11	5	16	24	13	5	6	4	11
2	1-	2o	3o	4-	4o	3o	3-	1-		3424	3252	5	14	27	44	51	31	26	5	25
3	0+	2-	2o	2+	4-	4-	3o	2+		2421	4552	2	12	16	17	46	44	33	17	23
4	1+	2-	2-	1+	3-	4-	4o	3-		2322	4463	9	12	13	9	26	46	59	24	25
5	3-	2+	3+	5-	3+	4-	4+	5o		3243	3665	25	19	37	79	37	46	66	101	51
6	5-	3+	3o	5+	6-	6o	6o	6o		2215	4464	74	39	28	109	142	159	163	149	108
7	4o	5o	4-	6-	6o	5o	6-	4-		3233	3042	55	90	41	133	152	92	127	42	92
8	6-	5-	5-	5-	5o	5o	5-	4+		2245	2642	127	74	79	77	87	88	85	69	86
9	4o	3+	4-	4-	4+	5o	5-	5o		2243	3633	54	35	42	43	63	93	85	97	64
10	4+	4o	4-	4+	5-	5-	4+	4o		2334	3452	67	53	43	66	76	76	62	56	62
11	4o	4+	4-	5o	4+	5o	5-	5-		3333	2553	54	61	42	102	69	101	71	71	71
12	4-	4-	3o	4-	5o	4+	4+	4o		4634	4434	49	50	33	42	90	68	70	57	57
13	4-	3o	3-	4-	3-	5o	6-	4o		5313	1444	50	29	26	48	26	87	125	52	55
14	4o	3+	4-	3-	3o	5+	4+	5-		2233	1224	53	39	48	26	32	105	63	73	55
15	3o	3o	3-	3+	4o	4-	4-	4-		2214	3453	32	28	26	35	60	48	45	48	40
16	4o	4-	3-	3o	4-	3-	3o	2+		4133	3323	51	44	21	29	48	24	27	18	33
17	2+	2-	3-	2o	3-	3-	3-	2-		3321	2252	17	13	22	16	22	24	21	11	18
18	1+	1o	1o	3-	1+	1o	1-	3o		2123	2324	10	7	7	23	9	6	4	27	12
19	3o	3-	4-	3+	4-	3-	4o	3+		3234	2333	33	26	45	37	47	24	58	38	39
20	4o	3o	3-	3-	2o	3-	3+	2o		1123	2334	57	33	23	26	16	23	35	16	29
21	2-	2-	3o	7-	7-	7o	5+	6+		5311	1453	12	13	28	204	203	255	117	181	127
22	6+	6+	5-	4o	4o	3-	3-	3-		5652	4232	200	197	76	59	57	26	21	25	83
23	2+	3o	3-	3o	3-	2o	3+	2o		1324	4245	17	33	23	27	21	15	39	14	24
24	1+	1-	1+	1+	2-	2-	1-	1+		3242	4322	8	4	10	9	11	13	5	8	9
25	2-	2o	4-	3o	2+	3-	3o	2-		2123	2323	11	15	42	33	20	26	29	13	24
26	2+	1+	1+	1+	2+	2o	1-	0+		4341	1132	19	10	8	8	17	16	5	3	11
27	1-	2-	2-	3+	2+	2-	1o	1-		2333	1221	5	11	12	39	17	11	7	4	13
28	0+	0+	3o	3-	2-	1-	2+	3+		2121	1133	3	2	29	22	11	5	17	36	16

Monthly mean value of An

45.1

February 1994														As						
	Ks						oS			as										
1	2-	1o	2-	2o	2-	1o	1o	1o	1+	2221	2211	13	7	11	15	13	6	7	8	10
2	1+	2+	3-	4-	4o	3-	3-	1+		2534	2324	10	19	25	42	53	26	22	8	26
3	1+	2o	2+	3-	3+	3+	3-	3-		3313	3123	9	14	18	25	39	35	26	21	23
4	2+	2o	2-	1+	3-	4-	4-	2+		3222	2322	20	16	12	10	26	43	46	20	24
5	3o	3-	3+	4o	3o	4-	4+	5o		4333	2434	31	25	35	51	31	45	65	100	48
6	5+	3o	3+	5-	5+	6o	6o	6-		4312	3543	107	28	38	79	114	157	152	130	101
7	4+	5o	4-	5o	6-	5-	5o	4o		5442	4243	65	103	41	103	139	79	91	60	85
8	6-	5-	5-	4-	5-	5o	5o	5+		4254	2145	136	72	73	50	73	95	87	106	87
9	4+	3o	3o	4-	4o	5o	4o	5o		5143	2414	62	28	28	44	53	87	60	93	57
10	4-	4-	4-	4-	5-	5-	4+	5-		2232	3352	43	46	46	42	72	76	65	72	58
11	4+	5-	3+	5o	4+	5o	5o	5-		3523	1754	69	71	34	89	61	97	99	75	74
12	4o	3+	3-	4-	5-	4o	4+	4o		5423	3662	59	36	26	46	80	58	61	53	52
13	4-	3-	3-	3+	3-	5-	6-	4o		4331	2364	43	25	25	38	24	85	127	57	53
14	4+	3o	3+	3o	3+	5o	4-	5o		3131	1114	63	28	39	28	35	95	48	93	54
15	3+	3o	3-	3o	4o	4-	4o	4-		1024	2343	36	32	21	27	53	43	57	43	39
16	4-	4+	3-	3-	4-	3-	3-	3-		4422	4232	50	62	22	22	47	26	26	21	35
17	2+	2o	2o	2o	2+	3-	2+	2-		3211	2242	20	16	14	14	18	21	20	12	17
18	1+	1+	1+	2+	2-	1o	1-	3o		2323	2522	10	10	10	20	11	6	5	31	13
19	3+	3o	3+	3o	4-	3o	4o	3o		3353	2152	36	28	36	31	41	33	57	27	36
20	4-	3-	3-	3-	2-	3-	3+	2-		3223	4212	43	25	22	25	13	21	35	13	25
21	2-	1+	3o	6o	7-	7-	5+	7o		3221	2345	13	10	27	153	237	213	105	284	130
22	7-	6-	4-	4o	4-	3-	2+	3-		4620	2213	232	126	50	58	46	24	17	24	72
23	2+	3-	2o	3-	2+	1+	3o	2+		1212	3424	17	21	15	21	17	10	29	20	19
24	2-	1+	1+	2-	1o	1+	1+	1+		2132	0233	13	8	9	12	7	9	8	10	10
25	2o	3-	3+	4-	2+	3-	3-	2-		1242	1222	14	21	37	50	18	22	21	13	25
26	3o	1+	1o	1o	2+	2o	1+	1-		5220	2122	30	9	7	7	18	15	8	5	12
27	1+	1+	1+	3o	2-	2-	1-	1o		2222	2221	8	10	10	27	11	13	5	6	11
28	1-	1o	3-	2+	2-	1o	2-	3+		3322	3133	5	7	21	20	12	6	12	39	15

Monthly mean value of As

43.3

an, as INDICES 1994 (continued)

March 1994																			
	Kn							σn		an									
1	3o	2-	3o	2+	2o	2+	2o	3o	4232	2323	29	12	29	20	14	18	15	33	21
2	3+	2-	2o	3o	3-	3-	4-	5-	4323	2143	37	13	14	27	24	24	43	71	32
3	3o	4-	4o	5o	3o	2+	2-	2o	3226	4323	32	49	51	94	27	17	13	14	37
4	1o	1o	1+	1+	1-	1-	1-	1o	2113	2221	6	7	8	8	5	4	4	6	6
5	2-	1-	1+	1+	1+	1-	2+	4-	2213	1256	11	4	8	9	8	4	17	47	14
6	2o	3-	2+	2+	1+	2-	3o	3+	2243	2152	16	22	19	17	10	11	33	40	21
7	5-	3+	3+	5-	4+	6-	5o	6o	4324	2344	74	37	37	86	65	130	99	164	87
8	4o	4+	5o	4+	5-	5-	5-	4+	1342	6343	60	70	90	68	81	73	75	69	73
9	4o	5-	5+	4o	4+	5o	5o	5-	1434	4532	60	80	108	57	68	91	88	81	79
10	4-	3+	4+	4+	4+	4o	4+	5o	2233	4322	47	39	67	69	70	60	66	101	65
11	4-	4o	4-	4+	4+	4o	3+	5-	2323	5323	44	51	49	65	69	53	40	83	57
12	4+	3+	5o	4+	4+	4-	4+	4+	2244	3353	62	40	87	63	67	46	64	66	62
13	4o	4o	3-	3+	3-	3o	3-	4o	2323	2314	56	57	26	37	25	33	23	57	39
14	4-	4+	4-	3+	4o	4+	4o	4o	2233	6531	49	66	49	35	57	62	57	52	53
15	4o	4+	4-	4+	5-	5-	4o	3+	2333	3333	58	64	43	62	80	81	54	39	60
16	4-	3-	3+	3-	3+	4+	3+	3o	4233	3342	42	26	35	21	35	63	37	30	36
17	3+	4+	4+	4+	4-	4-	4-	3o	3333	4631	38	62	63	63	48	65	45	31	52
18	4-	4+	4-	2+	3+	3o	2-	4-	1132	3522	46	62	41	18	35	29	11	42	36
19	4-	3o	3o	4-	2+	2+	3-	3-	3213	3332	45	29	28	41	17	17	22	26	28
20	3-	2+	2+	2+	2o	3-	3o	3-	2335	0434	24	18	17	17	15	25	32	25	22
21	3o	4+	3o	3+	4-	4o	4-	3+	3314	3624	27	66	33	38	41	60	50	39	44
22	4o	3-	2+	3-	4+	3-	2+	3-	3233	3324	60	21	17	25	63	22	20	26	32
23	3o	4-	3+	3-	4-	3+	2+	2o	1224	5324	30	49	35	26	48	40	20	16	33
24	3o	3-	2+	4o	4-	3o	2o	3-	4322	3533	29	21	17	56	45	33	14	24	30
25	3+	1+	2o	2+	3+	4-	4-	3-	4223	3533	36	10	16	20	37	47	45	26	30
26	2+	2+	2o	3o	1+	2-	2-	1o	2321	3341	20	20	16	31	9	12	12	7	16
27	1+	1o	2o	2-	2+	2o	3-	4-	2251	3325	10	7	15	12	19	16	24	48	19
28	1+	2+	2-	3-	3o	3+	2+	2+	2113	2422	9	17	17	23	29	36	19	20	21
29	2o	1+	2o	1+	1o	1o	2-	2o	2213	1231	15	10	16	10	7	7	11	14	11
30	1+	1+	2-	3o	3+	4-	3+	3+	2222	2442	9	9	11	27	37	41	39	37	26
31	2+	2-	1+	2o	2-	1o	1o	1-	2130	2101	18	13	8	15	11	7	6	5	10
Monthly mean value of An															37.2				

March 1994																			
	Ks							σs		as							As		
1	2+	2o	3-	3-	2o	2o	2+	3o	3222	3244	19	14	26	26	14	15	18	31	20
2	3+	2+	2+	3-	3-	2o	3+	5-	4133	3024	37	17	19	25	23	16	40	82	32
3	3+	4o	4-	5-	2-	1+	2+	2+	3535	2133	38	59	46	75	13	8	19	18	35
4	2-	1o	2o	2+	1-	0+	0+	1-	3104	3232	12	7	16	17	4	3	3	5	8
5	2o	1-	2-	2-	1o	1-	2+	4-	1222	1234	14	5	11	13	6	4	18	46	15
6	3-	3-	3-	2o	0+	2-	3o	4-	2363	2244	22	23	21	16	3	12	32	47	22
7	5-	3+	3+	5o	4+	6-	6-	6o	2333	1536	75	40	40	99	64	123	128	159	91
8	5-	5-	5-	4+	4+	4+	5o	5o	4422	1144	79	73	84	65	63	61	87	87	75
9	4o	4+	5-	4o	4+	5o	6-	6-	1533	4655	53	62	83	52	63	96	130	123	83
10	4+	3+	4o	4+	5-	4+	4+	6-	4324	4133	64	37	60	68	71	61	67	127	69
11	3+	4o	4o	4+	5-	4o	4-	5+	3044	3337	39	58	60	68	75	56	48	104	64
12	4-	3+	4o	4+	4+	4o	5-	5-	2344	2444	47	39	60	63	63	51	72	78	59
13	4o	4o	3-	4-	3-	3o	3-	5-	3522	3124	53	57	22	41	25	30	26	73	41
14	4+	4o	4+	3+	4-	4+	4+	5-	3343	4554	67	60	61	40	48	65	68	71	60
15	5-	5-	4-	4-	5-	5-	4+	3+	4434	2234	75	71	46	50	73	81	64	38	62
16	3+	3-	3+	3-	4-	4+	4-	4-	3242	3455	39	24	37	26	46	68	43	41	41
17	4o	4o	4-	4-	4-	5-	4+	3+	5144	2245	59	55	51	47	48	71	64	40	54
18	4+	4+	3+	2+	3+	3-	1+	4o	4431	2224	62	68	40	17	35	24	9	57	39
19	4o	3o	3+	4-	2-	2o	2+	3o	5442	2234	54	31	34	41	12	16	19	32	30
20	3o	2+	2+	2-	2-	3o	3+	3+	5373	2133	31	20	17	20	13	30	38	37	26
21	3-	5-	3o	3+	4-	4o	4o	3o	2501	2234	26	74	32	34	41	59	53	31	44
22	4+	3-	2-	3o	4+	3o	2-	3-	4311	4112	67	23	13	29	66	30	13	25	33
23	3o	3+	3-	3-	4-	3o	2+	2-	4342	4222	33	40	24	22	47	30	18	12	28
24	3-	2+	2o	4-	3+	3o	2o	3-	2303	2212	23	19	16	46	40	28	15	21	26
25	3+	1+	2-	3-	3o	4o	4+	3+	4122	2445	36	8	13	26	32	56	64	40	34
26	3-	2+	2-	3o	1o	1+	1o	1o	2420	5341	21	18	11	32	6	9	7	6	14
27	1+	1o	1+	1+	3-	1+	3-	4-	4123	2332	10	6	10	9	21	9	22	48	17
28	2-	3-	2+	3o	3o	3o	2+	3-	3333	3322	12	25	19	28	28	29	19	25	23
29	2+	2-	2o	2-	1-	0+	1+	1+	3212	2232	19	13	15	11	4	3	10	10	11
30	2o	2-	1+	3-	3o	3+	3+	3+	3212	2551	15	13	8	26	32	34	36	34	25
31	3-	2+	2+	2+	2-	0+	1o	0+	3331	2222	22	19	18	17	11	3	6	3	12
Monthly mean value of As															38.5				

an, as INDICES 1994 (continued)

April 1994													An	
	Kn						σn		an					An
1	1-	1+	2-	1+	2o	2+	2o	2o	4	10	12	9	15	13
2	3o	2+	3+	4o	5o	5-	6-	6-	31	17	36	57	91	72
3	5-	5+	5o	5o	5o	5o	5o	6-	3621	2632	84	104	102	98
4	6-	5-	5o	4+	4-	4-	4o	4o	2475	3440	141	78	91	93
5	4o	3+	3+	4-	4+	4+	3+	5o	4222	5432	53	38	38	41
6	4o	4-	5-	5-	4+	5-	4o	5-	3232	4553	58	41	78	69
7	4+	4o	5-	4o	4-	4o	3+	4-	5442	2532	64	59	72	54
8	4-	4-	5-	4o	4o	3+	4o	4o	3424	3354	41	70	72	60
9	5o	4o	4o	5o	4o	4o	4+	4-	5232	3242	96	56	57	92
10	4o	4o	3o	4+	4o	4o	4-	4o	4325	0432	59	51	27	61
11	4o	5o	5-	4+	4-	4o	3+	5-	2531	5624	53	95	79	66
12	4-	4-	3o	3o	3+	4+	4-	4-	2333	1344	46	46	47	32
13	3-	3o	4o	3-	4-	4o	4-	4-	2143	2433	24	33	57	26
14	4+	3o	3o	4-	3+	3+	3+	3o	5224	5442	65	29	30	45
15	3-	3-	3o	3o	3+	3+	3o	3o	4124	4541	40	25	21	32
16	3-	4+	3o	2+	3-	3-	5-	4+	2552	2343	21	61	32	20
17	6-	7-	7-	7-	4o	3o	3-	3+	3656	2422	141	208	290	225
18	3o	3+	3+	3o	3+	3o	4-	3-	3222	3123	28	40	34	33
19	5-	2+	3-	3o	2+	1+	2+	3-	2211	3213	72	20	25	33
20	2o	2o	3-	3o	2o	1+	1o	1+	3223	2202	14	15	23	32
21	2-	2+	2+	1+	1+	2-	3-	3o	2333	2321	13	20	19	9
22	2o	1o	2-	2+	3-	1+	1+	2+	2233	3323	15	6	12	18
23	1-	1o	1+	3o	3o	2o	3o	4-	3123	2345	5	7	9	27
24	2-	2-	2+	2+	2o	3-	1+	1o	3224	1232	11	11	18	20
25	2o	2o	3-	2o	1+	2-	1+	2o	4123	2333	14	16	23	14
26	1o	1+	2-	2-	2-	1o	1o	1+	1312	2422	6	9	13	13
27	1o	2o	1+	2-	2o	1+	1o	1+	3123	1111	6	14	9	12
28	2-	1+	0+	1-	2-	1-	1o	1o	1213	2222	13	9	2	4
29	1-	2-	2+	2o	0+	1-	1-	24	1151	1213	5	13	18	14
30	0+	1-	1o	0+	1o	0+	1o	0+	3122	2202	3	5	6	2
Monthly mean value of An													39.6	

April 1994													As	
	Ks						σs		as					As
1	1o	1+	2-	1+	2+	2o	1+	2-	3222	2422	6	10	13	10
2	3+	3-	3+	4o	5o	5o	6o	6o	3234	3478	36	21	40	58
3	5+	5o	5+	5o	5o	5o	6-	6+	7433	3625	110	102	120	97
4	6o	5o	5-	4-	4-	4-	4o	4+	5455	2445	150	103	73	50
5	4o	4-	5-	3+	5-	4o	3+	6-	6453	4432	52	46	72	39
6	4+	4-	4+	4+	4+	5-	5-	5-	4543	5245	64	43	65	70
7	4o	4o	5-	4-	4-	4+	4o	5o	5453	3536	57	58	75	47
8	4-	5-	5o	4+	5-	3o	5-	5o	2364	3143	48	73	95	63
9	5o	4o	4o	5+	4+	4+	4+	4o	6544	1244	96	55	60	106
10	5o	4-	3-	4-	4-	4+	4+	4o	6433	2446	90	44	22	47
11	5o	5-	5o	4o	4+	4o	4o	5+	6244	3326	90	84	89	56
12	4-	3+	4-	3o	3o	3o	5o	4+	3331	2434	45	39	46	28
13	3o	4-	4o	3o	3o	5-	5-	4o	3352	2221	28	41	51	28
14	5-	3o	3-	4-	4-	4-	4-	4o	6233	4344	86	28	39	47
15	3+	3+	3-	3+	3o	3o	3o	3+	4224	3203	36	40	23	35
16	3o	4-	3+	2+	3-	3-	5+	5o	4252	2544	32	46	35	18
17	6+	7-	7o	7-	4-	2+	3-	3-	3453	2322	193	207	276	204
18	3-	3o	3o	3o	4-	3+	4-	3o	1212	3132	25	31	30	28
19	5-	2+	3-	3o	2+	1o	1+	2o	2333	1223	80	20	25	29
20	2+	2o	3-	3-	1+	1+	1-	1-	4232	2222	17	15	24	26
21	1+	2o	2o	1o	1o	1o	2o	2+	1030	0125	9	16	16	7
22	2+	1o	1o	2o	3-	1o	1-	2o	4122	2134	17	6	7	16
23	0+	1o	1o	3-	3o	2o	3-	4-	2312	1233	3	6	6	23
24	1+	2o	3-	2o	1+	2+	0+	1+	1520	2222	8	14	22	16
25	2+	2+	3-	1+	1-	1-	0+	1+	4322	3123	18	19	23	10
26	1-	1+	2-	2-	1+	1o	1-	0+	2223	2121	4	10	13	12
27	0+	2-	1+	1o	1o	1-	1-	0+	3211	3222	3	13	8	6
28	2-	1+	1-	0o	1-	0o	0o	0o	2311	3011	11	9	5	1
29	0+	2-	3-	2-	0o	0o	0o	2-	1643	1102	2	12	23	12
30	0o	1+	1-	0o	0o	0o	0o	0+	0451	1132	0	8	5	1
Monthly mean value of As													42.4	

an, as INDICES 1994 (continued)

May 1994													An						
	Kn						σn		an										
1	0+	2o	3o	3o	4-	4+	6-	6-	2033	3434	2	15	27	32	44	64	123	135	55
2	5-	5o	4-	3o	3o	3o	4o	5+	2532	2445	72	88	48	29	30	32	51	104	57
3	4+	5o	5-	4-	4+	4o	4-	3o	2534	4541	67	97	71	47	65	57	43	32	60
4	4-	4-	3o	3o	4-	4-	3o	3+	3413	4323	45	47	31	28	47	43	28	39	39
5	4-	4o	4o	3+	4+	5-	4+	4o	3323	4433	48	60	53	39	61	74	63	57	57
6	4o	4+	4-	4-	3-	3+	3+	5-	1423	2332	54	62	50	41	26	39	37	82	49
7	5-	4+	5-	4+	4-	3o	4o	3+	2333	3132	86	66	78	66	49	28	52	37	58
8	4o	4o	4+	4o	4-	4-	4o	4-	1322	4332	60	57	70	53	47	46	54	47	54
9	4-	4+	3o	4-	4-	4-	3+	3o	3422	3530	47	61	31	47	41	48	39	29	43
10	4-	4-	4+	3o	4-	3o	4-	4o	2313	4331	45	49	68	33	49	33	46	55	47
11	4-	4-	3o	3+	3+	4o	3-	4-	3213	4413	46	48	28	35	34	51	26	42	39
12	3o	3o	3-	2o	1+	1+	1-	2+	3333	2222	33	31	24	14	8	10	4	19	18
13	2o	2+	2o	1+	1-	2-	1+	2o	3212	3133	15	19	16	9	4	11	8	15	12
14	2-	3+	4o	3o	3o	3-	3-	3+	2224	3313	12	39	51	30	33	24	24	40	32
15	3+	3+	4+	5-	4-	3+	4o	4o	2333	4453	36	39	70	74	49	36	57	52	52
16	4-	4o	4o	4-	4+	4+	3+	3-	4433	2421	49	55	53	46	66	68	37	24	50
17	4-	3o	3o	3+	3-	3o	2+	3-	2213	3422	43	33	28	35	25	27	18	22	29
18	3+	3+	3+	3-	3+	3-	2o	3+	3232	4325	35	39	34	24	39	22	15	38	31
19	3-	3+	3o	3o	3-	2-	1o	2-	2321	1123	23	37	29	33	23	13	7	12	22
20	2-	3-	2o	2-	2-	3-	1o	1+	2222	2422	11	22	15	13	11	22	7	9	14
21	1-	1-	1-	2o	2+	2o	2-	1+	2224	3421	5	4	5	16	18	15	13	9	11
22	1-	1+	1o	2-	2+	2o	3-	3-	2332	3231	5	9	6	11	17	16	23	21	14
23	1o	2-	1o	3-	2-	2+	2o	3o	2223	4302	7	11	6	21	20	20	15	33	17
24	3+	4o	3+	3+	3-	3o	3o	3+	3441	2522	39	57	36	34	23	31	27	35	35
25	3+	4+	3o	4-	2-	3-	2-	4-	2523	4223	38	62	29	41	12	26	13	41	33
26	2-	3-	4-	3+	2+	2+	1+	2+	2144	3213	12	22	42	37	19	18	8	17	22
27	2o	1+	0+	1o	1o	2+	1+	1o	1322	3323	15	10	3	6	6	18	9	6	9
28	1-	1-	1o	3-	4-	6-	6-	5-	1224	2432	5	4	6	22	50	135	121	72	52
29	5-	5-	4-	4+	4-	5o	4-	4-	2431	3212	74	75	49	62	48	91	41	45	61
30	4o	5o	4+	4-	4o	4o	4o	4+	2541	4353	54	95	67	44	60	60	52	69	63
31	3+	5-	4+	4-	4-	3o	4o	4o	4353	3132	40	76	63	46	45	28	59	56	52

Monthly mean value of An

38.3

May 1994													As						
	Ks						σs		as										
1	0+	2-	3o	3+	4-	5-	6o	6+	1344	3686	2	12	33	36	43	80	162	181	69
2	5-	5+	4-	3o	2+	3+	5-	6-	3522	1167	80	112	50	28	17	34	86	136	68
3	5o	5-	5-	4-	5-	4-	4o	4-	5332	4443	97	77	73	41	76	46	57	43	64
4	3+	4o	3+	3-	4o	3+	3+	4-	1632	2344	36	51	37	26	59	40	36	44	41
5	4o	4o	4o	4-	4+	5-	5-	4+	5534	2223	55	55	53	45	63	81	83	65	63
6	4+	5-	5-	4-	3-	4-	4o	6-	4532	2333	64	75	71	48	26	44	51	129	64
7	5o	5-	5-	4o	3+	4-	4o	3o	4235	2331	102	76	79	59	35	41	53	33	60
8	5o	5o	4+	4o	4-	4-	4+	4+	6534	4425	94	94	67	60	49	46	67	61	67
9	4o	5-	3o	4o	4-	3+	4-	3+	4213	3243	58	80	30	51	50	40	48	38	49
10	4o	4o	5o	3o	3+	3+	4o	5-	5521	2422	52	55	88	30	40	36	53	72	53
11	5-	4-	3+	3+	3o	4-	3o	5-	5244	2433	71	50	38	38	28	50	33	76	48
12	4-	3+	3-	2-	1+	1o	0+	2o	2432	5134	48	38	25	13	10	6	3	16	20
13	2o	2+	2o	1o	1-	2-	1o	2-	5313	1323	16	18	15	7	5	13	6	11	11
14	2+	4o	4-	3-	3o	2+	2+	3o	3452	3121	19	60	41	26	28	17	19	33	30
15	3o	3+	4+	5o	4+	3+	4o	5o	5345	2154	32	39	68	101	63	34	59	103	62
16	5o	3+	3+	3o	3+	4+	3+	3o	4334	1441	102	39	37	32	34	64	40	29	47
17	4-	3o	3-	3o	3-	3o	2+	2o	3225	3132	43	27	23	29	23	33	20	15	27
18	4o	4o	4-	3-	3-	2o	2o	4o	6123	3025	54	52	50	25	24	16	15	56	37
19	3-	3+	3+	3-	3o	2-	0+	1o	2332	3222	22	39	37	25	31	13	3	6	22
20	1+	2+	2-	1+	1+	2+	0o	1-	2322	3212	10	19	11	9	10	18	1	5	10
21	0+	0o	0+	1o	2-	1+	1o	1o	2030	4242	2	0	3	7	13	9	6	6	6
22	0o	0+	1o	1o	1+	2-	2-	2o	1220	2232	1	3	7	7	10	11	11	15	8
23	0+	1+	1o	2o	1o	1+	1+	3-	2340	5233	3	9	7	16	7	10	10	23	11
24	4-	4o	3+	3o	2+	2+	2o	2+	7561	1203	44	55	39	30	17	20	16	20	30
25	3+	4o	3o	3-	1+	3-	1o	3o	3542	2202	36	56	27	26	10	21	7	30	27
26	1o	2+	4-	3+	2-	2o	1o	2-	0326	3313	7	20	43	36	13	14	7	12	19
27	3-	2o	0+	0+	0+	2-	1-	1-	4533	4233	21	14	2	3	3	12	4	4	8
28	1-	0+	1-	3-	3+	5-	6o	5+	3225	1245	5	3	5	22	34	80	154	118	53
29	6-	5o	4+	5-	3+	5o	3o	5o	4255	1037	122	88	62	75	34	100	33	89	75
30	5-	5-	5o	4o	4o	4-	5-	5-	3355	3333	76	81	98	58	51	50	80	84	72
31	4-	4+	4o	4o	3o	2+	5-	5o	6433	3336	49	69	53	56	33	18	76	87	55

Monthly mean value of As

41.2

an, as INDICES 1994 (continued)

June 1994																			
	Kn							σn			an					An			
1	4-	40	40	4+	30	3-	3+	4-	3435	1243	42	52	57	64	32	23	40	42	44
2	4-	30	3+	4-	30	4-	3+	4-	3321	2322	48	33	37	46	29	47	38	46	41
3	30	4-	30	30	3+	30	40	4-	1424	2242	33	42	31	28	38	31	53	46	38
4	4-	3+	4-	3+	3-	4-	3-	3+	4334	1314	44	34	41	37	24	41	26	40	36
5	3-	3+	3+	3+	30	4-	4-	4-	2343	3342	22	35	38	35	33	41	45	47	37
6	30	3-	3-	3+	30	3+	3+	3+	2322	2333	33	26	24	37	27	35	37	39	32
7	3-	30	3+	30	30	3-	3-	30	2234	1332	23	29	39	33	31	21	23	30	29
8	30	2+	2-	30	2+	2+	2-	2-	2333	3321	27	19	13	27	17	18	11	13	18
9	2-	2+	30	30	1+	20	1+	1+	2332	4433	13	20	29	29	10	15	10	10	17
10	2-	3-	30	4+	3+	4-	30	3-	2236	2453	12	23	28	66	35	49	29	25	33
11	30	30	30	4-	2+	2+	2+	30	1133	2321	28	27	33	48	18	19	20	31	28
12	30	3+	4-	4+	4-	40	3+	30	2212	4221	32	36	41	63	46	53	38	40	42
13	3-	3-	2-	3-	2+	30	3+	2+	2323	2422	22	23	13	23	17	32	38	20	24
14	3-	30	30	30	30	30	3-	3-	1133	3332	26	33	27	32	28	28	22	25	28
15	3-	2-	2+	2-	2-	1+	1+	1+	3433	3203	24	12	20	13	13	10	9	8	14
16	2-	1-	10	1-	2-	1+	1+	1+	3322	2342	11	5	10	6	11	8	8	9	9
17	10	2-	2-	3-	3-	30	2-	1+	0245	2432	6	12	13	22	23	28	13	10	16
18	2+	3+	3-	3-	3-	3-	1+	20	3322	2320	18	40	24	23	21	21	10	15	22
19	2-	2-	30	5-	40	3-	30	4-	3222	4102	12	12	29	80	56	24	29	47	36
20	3-	30	3-	20	3+	3-	3-	30	2224	3322	23	31	21	14	38	22	25	29	25
21	2+	2+	30	3-	2+	2-	2-	2+	2322	2211	18	18	28	24	20	13	13	17	19
22	2+	2+	2+	1+	20	1+	1+	2-	2232	3342	17	18	19	9	15	9	9	12	14
23	10	10	0+	0+	0+	1-	1+	1+	0244	1322	6	7	6	3	2	4	9	9	6
24	1+	1+	1-	10	1+	1-	1-	10	1212	3223	10	10	5	7	8	5	4	6	7
25	00	00	1-	1-	1+	10	1+	20	1232	2320	1	1	4	5	10	6	9	15	6
26	2+	4-	3+	4-	4-	4-	3+	3+	2222	2442	20	42	37	47	48	42	35	35	38
27	40	3+	40	30	30	2-	2-	2+	2243	2231	52	39	54	27	29	11	18	17	31
28	2+	20	3-	3-	20	3-	4-	5-	3143	1432	19	16	21	25	14	22	41	76	29
29	4-	5-	4-	3+	3-	4-	4-	40	3433	3431	47	75	45	38	25	47	41	51	46
30	3+	3+	3+	3+	30	4-	30	3+	2333	3332	39	39	35	35	28	42	28	40	36

Monthly mean value of An

26.7

June 1994																			
	Ks							σs			as					As			
1	40	4+	40	40	3-	3-	4-	40	4455	2323	53	66	57	56	26	21	47	54	48
2	3+	3-	30	4+	30	3+	40	4-	3212	1345	38	26	30	61	27	35	53	50	40
3	3+	4-	30	30	3+	3+	4-	3+	3312	2253	40	47	28	29	40	38	47	40	39
4	40	30	3+	3+	3-	3+	30	4+	5344	2235	57	29	35	38	21	38	28	66	39
5	3-	3+	3+	30	3-	4-	4-	40	4334	4434	25	40	40	32	26	46	41	53	38
6	4-	3-	3-	3+	3-	3-	4-	3+	4223	2313	49	23	23	38	26	21	49	40	34
7	3-	3-	3+	30	3-	3-	30	30	3244	4222	22	22	38	32	25	21	32	30	28
8	3+	2+	1+	3-	2+	2-	2-	2+	4323	4224	35	17	9	23	19	13	11	17	18
9	2-	2+	3+	3-	1-	2-	0+	10	2344	2212	13	19	34	21	4	11	2	6	14
10	1+	3-	3-	4-	3-	2+	3-	3-	4535	3162	9	24	21	50	21	17	24	22	24
11	3-	2+	30	4-	1+	1+	3-	4-	5322	2223	24	20	28	44	10	10	22	45	25
12	4-	3+	4-	4-	40	4+	4-	30	5443	3131	43	37	45	48	51	64	46	29	45
13	3-	2+	2-	20	2-	3+	30	30	2231	4435	22	18	12	14	13	38	29	27	22
14	30	30	3-	3-	2+	2+	2+	3-	3323	2242	27	29	23	23	17	20	17	23	22
15	2+	1+	2+	2-	1+	1-	1+	1-	2242	2232	18	8	17	11	10	5	8	4	10
16	2-	1-	10	10	1+	1-	1-	0+	3321	3232	12	4	7	6	10	4	5	2	6
17	0+	10	1+	2+	3-	20	1+	1+	2135	3132	3	6	8	18	23	15	8	8	11
18	2+	3+	2+	2+	2-	2-	10	20	3521	3233	19	34	19	20	13	11	6	16	17
19	1+	1+	30	40	4-	2+	3-	30	2244	4333	9	10	31	52	41	17	21	30	26
20	2+	30	2+	1+	30	2+	2+	30	2231	4113	18	29	17	10	30	18	18	30	21
21	2+	20	2+	3-	2-	1+	2-	2-	4523	2133	17	15	19	26	12	10	12	13	16
22	20	3-	2-	10	2-	0+	1-	1+	1322	2242	14	21	13	7	12	2	5	8	10
23	1-	0+	1-	0+	00	00	10	1-	2122	0062	4	2	4	2	0	0	6	4	3
24	10	1+	0+	1-	00	00	00	00	2313	1100	7	9	3	4	1	1	0	0	3
25	00	00	00	00	00	0+	1-	1-	1000	1133	1	0	0	0	1	2	5	5	2
26	2+	40	4-	4-	3+	3+	40	3+	3454	5331	20	51	44	44	40	39	55	36	41
27	40	3+	40	3-	2+	10	3-	2+	5474	3033	58	37	52	23	20	7	21	17	29
28	2+	1+	2-	2+	2-	2+	3+	50	4223	4223	17	9	13	20	13	18	38	96	28
29	40	5-	4-	3-	2-	3+	4-	40	1232	2323	52	78	41	26	13	37	46	54	43
30	40	3+	3+	4-	2+	30	3-	3+	5223	2225	53	35	35	42	20	32	26	39	35

Monthly mean value of As

24.6

an, as INDICES 1994 (continued)

July 1994																		
	Kn							σn		an							An	
1	4o	4-	4o	3+	3-	3-	3+ 4o	3443	2333	52	42	56	39	23	24	36	56	41
2	3-	4+	4-	3+	3+	3+	3- 3o	3656	7745	26	64	49	38	37	39	23	28	38
3	3-	2+	3o	3o	3-	1+	2o 2+	4454	5243	22	19	31	29	21	9	15	20	21
4	2-	2o	2+	2o	2+	2+	3- 2o	2344	4344	11	15	18	15	18	19	15	21	16
5	2-	1o	1+	1-	1o	1+	1- 2+	3134	2323	11	7	10	5	6	10	5	19	9
6	2o	2-	2+	2-	2o	2-	2+ 4-	3333	4435	14	13	18	13	16	12	19	50	19
7	3-	3+	3o	3-	3+	3-	3o 3-	4455	4455	23	36	28	23	34	22	33	26	28
8	1o	1+	1+	1o	1+	1+	1o 1-	3322	3213	7	8	8	7	10	9	6	5	8
9	1o	1-	0+	1o	2+	3-	1+ 1o	3122	4421	7	4	3	6	17	23	9	6	9
10	1-	0+	2-	1-	2-	1+	1+ 1+	2331	4232	4	3	12	5	11	9	10	9	8
11	1o	1o	0+	0+	2-	2o	1o 1+	2222	4413	7	6	3	3	12	16	7	10	8
12	1+	1o	0+	0o	0+	1+	0+ 0o	2221	1231	10	6	3	1	2	10	3	1	5
13	0+	1-	1+	0+	1-	2-	1+ 1+	1322	2222	2	5	10	2	5	11	10	9	7
14	2-	2+	2+	4+	4+	5-	4- 5-	3323	2211	11	18	17	61	70	78	45	78	47
15	4o	3-	3-	2+	3-	3-	3- 4+	4212	3232	59	24	25	20	21	23	22	69	33
16	5-	4o	3o	5-	3+	3+	3o 4-	4113	3343	78	51	28	84	40	39	33	47	50
17	3o	3o	2+	3o	3+	2+	2+ 3-	1312	3232	31	30	17	31	34	20	20	23	26
18	3o	3-	3-	3-	3o	2o	2+ 1+	2233	3444	29	26	22	23	28	15	20	10	22
19	3-	3-	3-	3-	3-	1o	2o 3-	3143	3324	26	25	29	22	25	6	16	24	22
20	1+	1o	2-	1+	2+	1+	1o 1o	2132	3222	9	7	12	10	17	8	7	6	10
21	2o	3+	3o	3-	3o	2-	2- 2o	1442	2321	14	34	29	24	29	11	13	14	21
22	2o	2+	1+	2o	2-	1-	1o 1-	4411	2413	15	18	8	14	13	5	7	4	11
23	1+	2o	1+	2o	2+	3-	2o 2-	2302	3433	10	14	10	15	17	22	15	11	14
24	2-	1+	2-	2o	2-	1+	2- 3-	2223	2234	13	10	11	15	13	10	13	26	14
25	3-	2o	2o	2o	3-	2+	2- 2o	3334	5433	22	16	15	15	23	20	11	15	17
26	1o	1+	1o	1o	1+	1o	1+ 1+	0222	2433	7	9	6	7	9	7	9	10	8
27	2o	4o	2-	1o	1o	1+	2+ 3o	2632	3365	16	52	13	7	6	8	20	33	19
28	3o	3+	3-	3o	3-	2+	3o 3-	4653	5444	28	39	25	27	25	17	28	25	27
29	3-	3-	3-	2-	2-	3o	2+ 3-	3334	4643	24	24	21	13	13	27	17	24	20
30	3o	2+	1+	1+	2+	2-	2- 2+	4434	5234	28	17	10	10	18	12	13	20	16
31	2o	2+	1+	3-	2o	2-	1+ 3o	2435	3235	14	18	9	24	16	11	10	31	17

 Monthly mean value of An 19.7

July 1993																		
	Ks							σs		as							As	
1	5o	4o	4-	4o	2+	1+	3+ 5-	3134	2253	89	56	47	52	18	10	36	81	49
2	3o	5-	4-	4-	3o	3o	3o 4o	2353	3535	30	74	50	45	28	28	27	56	42
3	3+	3-	3+	3+	3-	1+	1+ 3+	1254	4211	34	21	36	38	23	10	10	36	26
4	2+	2o	2-	1o	2o	2+	3o 2+	1222	3232	18	15	13	7	14	20	27	17	16
5	2o	1o	1o	0+	0+	1+	0+ 2o	4111	2331	16	6	6	2	2	9	2	15	7
6	2o	1+	2+	2-	1+	1+	1+ 3o	2353	2523	15	9	17	12	9	9	10	31	14
7	3-	4-	3-	3-	4-	2+	3- 2+	4422	4224	23	41	22	22	49	19	26	17	27
8	1-	1+	1o	1-	1-	0+	0+ 0o	3213	2212	5	8	7	5	5	3	2	1	5
9	1-	0o	0o	0o	1+	1+	1- 0+	2113	2221	4	1	1	1	9	10	5	2	4
10	0o	0o	1o	0+	0+	1o	1- 0+	1002	2122	1	0	7	3	3	6	5	3	4
11	0+	1-	0o	0o	0+	1-	1- 1-	2411	2224	3	4	1	1	2	5	4	4	3
12	1+	1o	0o	0o	0o	0+	0o 0o	3211	1110	9	7	1	1	1	2	1	0	3
13	0o	1-	1o	0o	0+	0+	0- 1-	1221	1222	1	4	6	1	2	2	3	5	3
14	1o	2o	2-	4-	4-	4+	3o 4+	1333	2215	7	15	13	47	41	64	33	67	36
15	4+	3-	2o	2-	2-	2+	2+ 4+	4212	1215	67	23	15	13	11	11	17	66	28
16	5o	4-	3o	4+	3+	3o	3+ 4o	5515	3344	100	43	27	62	37	31	34	55	49
17	3+	3-	2+	3+	2+	2+	3- 3-	4415	2314	35	25	12	34	19	20	17	23	23
18	3o	3-	2o	2o	3-	1+	3- 1o	3231	2333	30	23	15	14	23	9	21	6	18
19	3-	3-	3o	2+	2+	0+	2+ 3o	5323	3254	25	25	27	17	17	3	20	32	21
20	1o	1-	1+	1+	2-	0+	1o 0o	2223	3211	7	4	8	9	13	2	6	1	6
21	2+	3-	3-	2+	3-	1+	1o 2-	5222	2122	17	22	23	19	25	8	7	11	17
22	2-	2-	1+	1o	1+	0o	1o 0o	4331	3031	12	12	9	6	9	0	6	1	7
23	1-	1+	1-	2-	1+	2-	2o 1+	2212	2221	4	10	4	11	9	12	15	8	9
24	1+	1o	1+	1+	1o	0+	2- 2+	1222	1121	8	7	9	9	6	3	11	18	9
25	3o	2+	2+	2o	2+	1+	1- 3-	4441	3232	27	17	17	15	18	10	9	22	17
26	1-	2o	1-	1o	1-	0o	1- 1-	2405	2022	4	14	4	6	4	0	5	5	5
27	2+	5o	2-	1-	0+	1o	2+ 3+	3422	2333	19	92	13	4	2	7	19	38	24
28	4o	4o	2+	3-	2+	2o	3+ 3+	4312	1213	54	58	19	23	17	15	35	38	32
29	3-	3-	3-	2o	2o	3o	2o 3-	3535	3202	25	22	21	16	16	31	16	25	22
30	4-	3o	2o	1+	2+	1+	2- 3o	4532	4222	42	30	15	8	17	9	12	29	20
31	2o	2-	1o	3-	2-	1o	1+ 4-	2202	2122	15	13	7	22	11	7	10	46	16

 Monthly mean value of As 18.1

an, as INDICES 1994 (continued)

	Kn										σΠ		an								As
1	2+	2+	2-	1o	1+	1+	2-	1+	4431	2232	17	17	12	7	8	9	11	9	11	11	
2	2-	1o	1-	1+	1-	1o	1o	1+	3212	2221	11	6	5	9	5	6	6	8	8	7	
3	1+	1o	1+	1+	1-	1+	1+	1+	2433	2322	8	7	8	8	5	8	9	10	8	8	
4	1o	1-	1-	1-	1o	1-	0+	0+	2232	2312	7	4	4	4	7	5	2	2	4	4	
5	1+	2o	2-	2-	1o	1-	1+	1+	1323	2232	8	16	11	11	6	5	10	8	9	9	
6	1-	1o	2-	1+	1+	1o	1o	1+	1432	3322	5	7	12	9	10	6	7	8	8	8	
7	0+	0+	1-	1-	1+	1+	1-	1+	1114	3222	2	2	5	5	10	9	5	9	6	6	
8	1o	0+	1-	0+	0+	1o	1o	1o	3132	3112	6	2	4	2	2	6	6	6	4	4	
9	1o	1o	1+	0+	1o	1+	2o	1+	3322	2343	7	7	8	3	6	9	16	9	8	8	
10	2o	1+	2+	2+	3+	3-	3o	2+	4244	4422	15	9	19	19	35	23	28	20	21	21	
11	3o	3-	2+	3o	3+	3o	3-	3-	5512	3333	29	26	17	29	39	31	21	21	27	27	
12	3+	3+	3-	3-	3o	3o	4-	3o	4232	2442	35	35	36	23	31	30	45	28	33	33	
13	3+	4+	4-	3-	4o	4o	3+	3o	4432	2333	34	64	67	21	56	52	40	31	46	46	
14	4-	4o	5-	4o	3o	3+	3+	3+	3342	4334	47	51	78	56	32	38	38	34	47	47	
15	3+	2-	2o	3-	3o	2o	3-	3+	3113	3356	35	13	16	24	27	14	23	34	23	23	
16	2-	2-	1+	3-	2-	1+	3-	3-	1224	2254	13	12	9	21	12	9	21	22	15	15	
17	1+	2-	2+	1+	2-	2o	1+	1o	2232	2321	10	12	20	10	13	14	8	6	12	12	
18	1-	2-	1+	2+	2+	2-	1o	2-	1323	3212	5	11	9	17	17	12	7	12	11	11	
19	1+	1+	1+	1o	1o	2-	1+	1o	2123	2222	10	9	10	6	7	11	9	6	9	9	
20	1o	2o	2o	2-	1+	2+	2+	2+	2112	2463	6	15	16	13	10	17	17	18	14	14	
21	2o	2-	0+	1o	3+	3o	1+	1o	3311	2122	15	13	2	7	34	30	10	6	15	15	
22	2o	1+	1-	1+	3-	3-	2+	4-	4412	3333	16	9	4	10	21	25	18	45	19	19	
23	3-	2+	1o	1+	1o	2-	2-	1o	5412	3231	21	20	7	10	7	12	11	6	12	12	
24	1o	2-	1+	1o	1o	3-	2-	2+	1224	1233	7	12	8	7	8	23	13	19	12	12	
25	2-	3o	2+	4-	3o	3-	2-	1+	2533	3323	12	28	20	41	33	21	13	8	22	22	
26	1-	2-	2+	3-	0+	1+	1+	3-	1224	2422	5	13	17	22	3	9	10	22	13	13	
27	3o	2+	2+	2o	2-	2-	3-	2-	1230	2253	31	20	18	15	13	11	24	13	18	18	
28	2o	3o	2+	2-	1-	1-	2-	1-	1232	2241	16	27	19	13	5	4	12	5	13	13	
29	1o	1o	2+	1+	2-	1+	1-	2-	1133	3225	7	6	17	10	12	10	5	12	10	10	
30	1-	1-	1o	2-	1+	2-	1o	1+	1233	1213	5	5	6	11	8	12	7	9	8	8	
31	1o	1+	1-	1+	3-	2o	1+	3o	2213	2321	7	9	5	8	23	16	9	28	13	13	
Monthly mean value of An																			15.4		

	Ks										σS		as								As
1	3-	2+	2-	0+	1o	1o	1-	1+	1+	5221	3222	23	17	11	2	6	4	10	8	10	
2	2-	1-	1-	1o	0o	0+	0o	1o	3212	1113	11	4	4	7	1	2	1	7	5	5	
3	1-	1o	1+	1+	0o	0o	1-	1o	4122	0132	5	6	9	8	0	1	5	6	5	5	
4	1-	0o	0+	0+	0+	1-	0o	0o	1122	2201	4	1	3	2	3	5	0	1	2	2	
5	1o	2+	1+	2-	0+	1-	1-	0+	0122	2232	7	17	9	12	2	4	4	3	7	7	
6	1-	1o	2-	1+	1-	0o	1-	0+	3222	2032	5	7	12	8	4	0	5	3	6	6	
7	0o	0+	0+	0+	1+	1+	0+	1o	1122	4223	1	2	3	2	9	8	3	6	4	4	
8	0+	0o	0o	0o	0o	0+	0o	0o	2011	0101	3	0	1	1	0	2	0	1	1	1	
9	1-	1+	1+	0o	0o	1o	1+	1+	2221	2223	5	9	10	1	1	6	10	8	6	6	
10	2o	2-	2+	2-	4-	3-	3-	2-	3441	3243	14	11	20	13	46	21	21	13	20	20	
11	3-	2+	2+	2+	3-	2+	2-	2+	5343	2135	22	19	17	20	21	17	12	20	20	19	
12	3o	3-	3o	3-	3o	3o	4-	3-	3411	1242	31	36	28	21	27	32	50	25	31	31	
13	3o	4-	4+	2+	4-	4-	4-	3+	2341	2333	29	49	61	17	41	41	43	35	40	40	
14	4-	4-	4+	4o	3+	3+	3o	3o	3354	2215	44	42	64	52	38	36	29	32	42	42	
15	4o	2o	2o	3o	3+	2o	3-	4-	4113	4124	51	14	14	28	38	15	26	43	29	29	
16	2+	2o	1+	3-	2o	1o	2-	3o	2322	1124	19	16	9	23	14	7	19	27	17	17	
17	2-	2-	2-	2-	2-	2-	1o	0+	3442	3322	11	12	13	11	11	12	6	3	10	10	
18	1o	2-	2-	2-	2+	2-	1+	1+	2222	4125	6	11	13	13	19	13	9	9	12	12	
19	1+	1o	2-	0+	0+	1-	1-	1o	2320	2221	9	6	12	3	2	5	8	7	7	7	
20	1+	2+	2o	1o	1-	2o	2+	2-	1423	1444	8	17	16	9	4	16	20	13	13	13	
21	2+	2-	0o	0+	3-	3-	1o	0+	1212	3522	17	11	1	2	26	26	7	3	12	12	
22	2-	1o	1-	1o	2-	2-	2-	4o	4322	2322	11	7	5	7	13	13	12	57	16	16	
23	3-	2+	1+	1+	0+	1+	1o	1-	5413	2202	22	18	8	9	3	9	7	5	10	10	
24	1o	1+	1o	0+	1-	2o	1o	2-	3122	2333	6	8	7	2	4	16	7	13	8	8	
25	2-	3o	2+	3+	3-	2-	2-	0+	2623	2321	11	27	19	34	23	13	11	2	18	18	
26	0+	2-	2-	2-	1-	1-	0+	2o	2223	2213	3	13	12	13	4	4	3	16	9	9	
27	3o	2+	2+	1+	1o	1+	2-	2-	2112	0252	33	19	17	9	7	9	19	12	16	16	
28	2o	3o	2o	2-	0o	0+	1+	0+	1312	2141	14	28	15	11	1	2	9	2	10	10	
29	1-	1o	2-	1o	1+	1+	0o	2-	2221	6315	4	7	13	6	8	8	1	12	7	7	
30	0+	1-	0+	1+	0+	2o	1+	1+	2124	1344	3	4	3	9	2	14	9	10	7	7	
31	0+	1o	0+	1-	2-	1+	1-	2o	2111	2223	2	6	2	5	13	10	5	16	7	7	
Monthly mean value of As																			13.1		

an, as INDICES 1994 (continued)

September 1994														An					
	Kn							σn			an								
1	3+	3o	1+	2+	1o	1o	2+	2+	3435	2054	39	27	9	18	7	6	20	17	18
2	2-	2+	0+	1-	1+	1o	0+	1o	4521	3141	12	19	2	5	10	6	3	7	8
3	1+	2-	2o	2-	2o	1+	1o	1+	3223	1222	10	12	15	12	14	9	6	10	11
4	2-	0+	1-	1o	1o	1+	1-	1o	5023	1320	12	3	5	6	6	9	5	6	7
5	2-	2+	2+	3-	3o	1+	2-	2-	3342	3323	12	18	19	26	27	8	13	11	17
6	1+	3o	2o	4o	3o	3-	2+	2+	3321	6364	9	30	16	60	32	22	18	17	26
7	2-	3o	4o	5-	5-	4-	5o	4o	2213	3574	12	29	51	78	72	49	90	58	55
8	3o	4o	4+	4+	3o	3+	4-	3o	2553	1434	31	59	62	70	33	37	41	31	46
9	3+	4-	4o	4-	5-	4+	4o	4-	4513	4432	34	46	57	41	77	66	56	43	53
10	4-	3o	3+	3+	3o	3-	2o	2o	3124	4241	49	33	36	36	33	23	14	14	30
11	3-	3o	3+	3o	3-	2+	3-	2-	2445	3242	25	29	40	31	21	18	25	13	25
12	1+	1-	2o	3o	3-	3+	3o	2-	2202	5665	10	5	15	30	26	36	30	11	20
13	1-	3+	3-	2-	2-	2o	2-	3+	2423	3535	5	38	25	11	13	15	13	39	20
14	3-	2+	2-	1+	3-	1+	1-	1-	5122	3112	21	18	11	8	24	8	5	4	12
15	1+	1o	1+	2-	2-	2-	2-	2+	2423	2323	10	6	9	12	11	11	11	20	11
16	2+	3o	3-	2o	2+	2+	2o	2o	1322	2310	17	29	24	15	17	20	16	15	19
17	1+	3-	2+	3-	2-	2o	1+	2+	3322	2123	10	21	19	23	11	16	10	17	16
18	2-	1+	2-	1+	2-	2-	1-	2-	3212	2224	11	9	13	9	13	11	5	11	10
19	3-	1-	1+	0+	1+	1+	1+	1o	3132	1343	23	5	10	2	8	10	10	7	9
20	1+	1+	1o	1+	1o	1+	2-	2o	2213	1224	8	10	7	10	7	9	12	16	10
21	2-	1-	2o	1o	2o	1+	2-	2+	2252	1223	11	5	16	6	14	10	11	17	11
22	2o	1+	1o	1o	0+	1o	1+	1o	4221	2234	16	9	6	6	3	7	9	7	8
23	1o	1+	0o	0+	0o	1o	1o	2-	2312	1232	6	10	1	3	1	7	6	13	6
24	2-	3-	2-	1+	1-	1+	1-	1+	5243	1224	12	21	11	8	5	9	4	9	10
25	2+	1o	1+	1-	2-	2o	5-	5-	3131	2225	18	6	10	4	12	15	75	80	28
26	3o	4-	3+	4-	3o	3o	2-	1+	2224	2722	29	41	40	47	29	30	11	9	30
27	3o	3-	3-	3+	3-	3o	2+	4-	5334	4535	29	25	22	37	21	31	18	43	28
28	3+	3o	3o	3+	1+	2+	1o	1o	5243	2523	36	27	28	39	10	18	6	7	21
29	2o	1o	2+	1o	2+	1o	1o	2o	5242	5145	14	7	18	7	17	7	7	14	11
30	1-	1-	1+	1+	1o	1+	1o	1+	3414	2112	4	4	8	9	7	9	7	9	7

Monthly mean value of An

19.4

September 1994														As					
	Ks							σs			as								
1	3+	2+	1+	2o	1-	1o	3-	2-	4315	1123	37	19	10	16	5	7	22	13	16
2	2o	2-	0o	0	1+	1-	0o	0+	6312	4201	16	12	1	1	9	4	0	2	6
3	1+	2-	2o	1+	1o	1-	1-	1+	3423	1222	8	11	16	9	6	4	5	8	8
4	2-	1-	1o	1-	0+	0+	0+	1-	7202	2212	11	4	7	5	2	2	2	4	5
5	1+	2+	3-	3-	2-	1+	1+	1+	3343	2113	9	20	23	24	13	8	9	10	15
6	1+	3+	2o	4-	3-	3-	2+	2o	2723	3233	9	36	15	48	24	23	18	14	23
7	2-	3+	4-	5-	4+	4-	5o	5-	4434	1353	11	35	49	74	66	45	88	71	55
8	3o	4-	4-	4-	2+	3+	4-	3+	5333	1224	30	47	48	45	17	38	46	34	38
9	4-	4-	4-	4-	3+	5-	4o	4o	3333	2134	44	43	42	39	71	54	54	51	50
10	4-	3-	3o	4-	3+	3o	2o	2-	4422	1313	49	26	33	41	34	27	14	12	30
11	2+	3o	3+	3-	2o	2o	3-	2-	3452	2232	19	27	36	23	16	15	23	13	22
12	1+	1o	2o	3o	3-	3+	2+	1+	2212	2135	9	7	14	33	22	34	19	9	18
13	1+	3o	3-	1+	1+	2-	2-	3+	1641	2236	8	29	25	8	9	12	13	39	18
14	2+	3-	2o	1o	3o	1o	1-	0o	4212	3121	19	21	15	7	28	6	4	1	13
15	2-	1o	1+	1+	1o	2-	1+	3-	1231	1312	13	7	9	9	6	11	9	21	11
16	3-	3-	2+	1+	2-	2o	2-	2-	5422	2113	22	24	18	10	13	15	12	11	16
17	1+	2+	3-	2+	1o	2o	1+	2-	4343	1321	10	19	23	19	7	14	9	13	14
18	2-	1+	1+	1o	1+	1-	0o	2-	2222	2217	12	9	9	7	9	5	1	11	8
19	3o	1-	1+	0o	1-	1+	1+	1-	3121	4132	27	5	9	1	4	8	9	4	8
20	1o	1+	1o	1o	0+	1o	1o	1o	2301	3120	7	9	7	6	3	7	6	7	7
21	2-	1o	2o	1-	2-	1+	1o	2-	3111	3422	13	6	14	4	12	8	6	13	10
22	2+	2o	1-	0+	0o	1-	1o	1-	2332	1234	20	16	5	3	1	5	7	5	8
23	1o	1+	0o	0o	0o	1o	1-	1+	2212	0323	7	10	1	1	0	6	4	8	5
24	2o	2+	1+	1-	0o	1-	1-	1o	3313	1323	14	20	10	5	1	4	4	7	8
25	3-	1+	2-	0+	1o	2o	5o	5o	3123	1543	21	8	12	2	6	16	95	93	32
26	3o	4o	3-	4-	3-	3-	1+	2-	5412	3212	33	52	34	44	24	24	10	11	29
27	3-	3-	2+	3o	2+	3-	2o	3o	3434	3444	22	21	17	33	17	21	14	29	22
28	3+	3-	3-	3o	1o	2o	1-	1o	6522	1422	39	34	26	32	7	14	5	7	21
29	2o	1o	2-	1o	1+	1-	1o	2-	4140	6144	16	6	13	7	8	5	6	11	9
30	1-	1-	1o	1+	1o	1-	1o	1+	0213	1242	4	5	7	9	6	5	7	10	7

Monthly mean value of As

17.7

an, as INDICES 1994 (continued)

October 1994															
	Kn						or n			an					An
1	1o	1+	1o	1o	1-	0o	1-	1-	4111	2131	7	8	7	7	6
2	0+	1o	1-	1+	2-	4-	3o	4+	2214	2432	2	7	5	9	22
3	5+	6-	6-	5o	6o	5o	4+	3+	2433	6663	110	124	144	91	102
4	4-	4-	4o	4-	4+	4o	3o	3o	1444	4541	48	49	57	43	47
5	4o	3+	3o	4o	5-	4+	4o	4-	3221	4544	52	40	30	59	54
6	3+	4-	4o	4-	4+	3+	3o	4+	4343	4232	37	45	57	66	51
7	4-	4-	4-	3-	5-	4o	4+	4o	3422	5444	46	48	47	26	54
8	3-	3+	3o	4-	2-	3-	3o	3-	1221	2533	25	36	29	45	28
9	2+	3-	3-	2-	2-	2o	3+	2-	2332	2253	20	23	23	11	19
10	3o	2+	3-	3o	3-	3o	4-	3+	4333	5334	30	19	26	28	29
11	3-	3o	3+	4-	4-	3o	4o	20	2754	3663	21	27	37	48	34
12	2+	3+	3o	2+	2-	2-	4-	3o	3332	3352	18	37	31	17	26
13	2+	2-	3-	3o	2o	3-	2+	3-	3234	2122	18	20	21	31	21
14	2+	2o	1-	2-	1+	3o	2o	3o	3213	2505	18	14	5	12	16
15	3+	3o	2+	3-	3-	1+	1-	2-	1023	3232	35	29	17	25	20
16	2o	1o	2-	2+	1+	1o	1o	10	4223	2111	15	7	11	17	10
17	1o	1-	1+o	1o	1+	1-	1+	2o	0121	1111	6	5	9	7	8
18	1+	0o	0+	0+	0+	1o	2o	2+	3112	2143	10	1	2	2	7
19	1o	1-	1-o	2o	3-	3-	3-	3-	2111	1213	7	5	4	1	13
20	3-	1+	1+o	1o	1+	3-	3-	2o	1322	2333	24	10	8	7	16
21	1+	0+	0+	1-	0+	1-	1-	1-	3221	1112	10	3	3	5	5
22	1-	1-	2o	4-	4o	4-	3+	5+	1333	2433	4	5	16	42	39
23	5o	4+	5+	5-	5o	4-	4+	3+	3364	3464	100	69	116	74	76
24	4-	4o	4-	4o	3+	5-	4-	3o	3434	2354	47	51	49	56	49
25	2o	4-	3+	1+	1o	1o	2-	1-	1533	1132	14	50	37	10	18
26	3-	2-	2-	2+	2o	1+	3-	1+	3134	2324	23	13	11	19	15
27	1-	1o	1+	2o	2-	1-	1-	1-	2324	2222	4	7	9	15	8
28	1+	1-	2o	10	2+	1-	1o	2o	2122	5145	8	5	15	6	10
29	3o	3-	4-	5+	6+	6o	3-	3-	0232	5524	29	21	44	107	74
30	3+	4o	5o	5o	5o	4-	5+	4-	2433	4333	37	60	95	100	73
31	4-	3o	4-	5o	5-	4o	4o	3+	4152	4443	50	28	47	92	56

Monthly mean value of An

32.4

October 1994															
	Ks						as			as					As
1	2-	1+	1+	1o	1-	0o	0o	0+	2312	2012	11	9	8	7	5
2	0+	1+	1+	1+	2-	4-	3o	4+	2121	3334	2	8	8	8	23
3	5o	5o	6-	5+	6o	5+	5-	3o	4534	6464	90	98	130	112	99
4	4o	3+	4-	4-	4-	4o	3+	4-	2242	3333	60	35	41	41	45
5	4o	3+	3o	5-	4-	4o	4o	4o	3314	1224	54	34	29	81	53
6	4o	3o	4-	4-	4+	3+	3o	5-	3222	1334	58	33	45	49	49
7	4-	4-	4-	3-	4+	4+	4+	4o	3032	4534	41	44	43	24	50
8	3o	3o	3o	4-	1+	3-	3o	2+	2212	1443	29	32	27	44	27
9	2+	3-	3-	1o	2-	2o	3o	1+	3322	2143	19	21	23	7	17
10	3o	2o	3-	3-	2o	3o	3+	3o	5332	3120	31	16	21	21	26
11	2+	3-	3o	3+	4-	2+	4-	2o	5445	3214	20	26	27	37	30
12	2+	3o	3-	2o	1+	2o	4-	3o	3553	2123	19	33	23	15	23
13	2+	3o	3o	3o	1+	2+	2-	2+	3133	3123	18	28	29	31	21
14	3-	2-	1o	2+	1+	3-	2-	3-	4212	2426	23	13	7	18	16
15	4-	3+	3-	3-	3-	1o	1+	1+	5232	2313	50	37	25	22	23
16	1+	1-	2-	2o	2-	1-	1o	10	3223	3121	10	8	12	14	9
17	1+	1o	1+	1+	1o	0+	1+	1+	2121	2233	8	7	8	10	8
18	1+	0o	0+	1-	0+	1+	2-	3-	2122	1333	10	2	2	4	8
19	2-	1o	1o	0+	2+	3-	3-	3+	2112	1221	11	7	6	2	16
20	3o	1+	1+o	1o	1+	2+	2+	2-	4212	3144	33	8	8	7	14
21	2-	1-	1-	1o	0o	0o	1-	0+	1211	0122	12	4	5	7	5
22	0+	1-	3-	4+	4-	4-	3+	5+	2324	2334	3	4	26	67	43
23	6-	4+	4+	5-	5o	4-	4o	3o	3343	1227	126	65	70	75	69
24	3o	3+	3-	3o	3o	4+	4-	3-	6442	1124	30	37	34	31	37
25	2o	3o	3-	1+	1-	2-	1o	1o	4542	2343	16	33	24	10	14
26	2+	2-	1+	1+	2-	1+	2o	1o	3213	2224	20	13	8	9	11
27	1-	1+	2-	2-	1+	0+	0+	0+	2224	3222	5	8	9	13	7
28	1-	1o	1o	1o	2-	0+	1-	2o	1142	4126	4	6	7	7	7
29	4-	3-	4o	5+	7-	6-	3o	3o	2334	5534	44	26	51	104	86
30	4-	5-	5o	4+	5-	4-	5o	4-	2264	1234	47	80	96	65	69
31	3+	3-	3+	4+	4+	4o	4o	3+	3341	4235	39	25	36	70	48

Monthly mean value of As

30.9

an, as INDICES 1994 (continued)

November 1994														An					
	Kn							σn			an					An			
1	3+	4-	3-	3o	3o	3+	2o	2+	6225	1514	38	41	24	29	27	34	16	17	28
2	3+	3o	3-	4o	4-	3o	2o	3o	3337	3126	34	31	23	51	46	31	16	28	33
3	1+	2+	2o	3-	4-	3o	3o	2+	1325	4463	8	17	15	25	47	29	30	18	24
4	3-	4+	3-	3o	2+	3o	4o	3o	2333	1574	24	62	21	28	17	30	51	29	33
5	3+	2+	1+	3o	3-	3-	4o	4o	2134	2464	40	17	10	29	23	24	53	51	31
6	4-	4o	4+	5+	4-	5-	4-	1o	3334	2764	43	59	66	109	46	78	42	7	56
7	1+	2+	3o	3-	1o	1+	3o	0+	3555	2373	10	18	27	25	7	9	27	3	16
8	1-	0+	1o	2o	2o	1o	1-	2-	3235	5226	5	2	7	15	15	7	4	13	9
9	1+	1-	2-	2o	4-	4-	4-	4-	4432	2333	9	5	13	15	41	45	45	41	27
10	3-	4o	3o	3-	2-	3-	3o	2o	3333	2652	22	52	30	24	12	21	30	14	26
11	1+	2o	2o	3-	1+	1+	1o	2-	0013	1206	10	15	16	21	9	9	6	12	12
12	1+	1+	2-	1-	1-	1-	2-	1o	4232	1211	8	8	13	5	4	8	11	7	8
13	1o	1+	2-	1+	2-	3-	1+	1+	4221	4433	6	9	11	8	12	21	10	10	11
14	2-	1+	2-	1+	1+	2o	2+	3-	2222	2445	11	10	11	10	9	14	19	26	14
15	2o	1o	2o	2o	2+	2o	3-	3o	2242	3155	14	7	16	15	19	14	25	27	17
16	2o	1+	1o	0+	1o	2o	1+	0o	3212	1511	15	8	7	3	7	15	8	1	8
17	0+	2+	1+	1o	0+	0+	2+	1+	2322	1265	3	20	10	6	3	3	19	10	9
18	0+	0+	1-	2+	2+	2+	2-	1+	4223	4532	3	3	4	18	17	18	11	10	11
19	2+	4-	3+	3o	3+	4-	3-	3-	3334	4743	20	49	34	29	35	42	26	25	33
20	2+	3o	5o	5o	5-	3-	2-	2o	4256	5334	17	29	88	87	75	24	12	14	43
21	2o	2o	2o	2o	1+	1+	1o	1o	2225	3313	14	14	14	16	10	9	7	7	11
22	1-	2o	1-	2o	1o	2o	2o	1+	4524	2647	5	16	4	14	6	14	14	10	10
23	0+	1-	0+	1o	1o	1+	0+	2-	4332	1226	3	4	3	6	7	9	3	12	6
24	1-	1+	2+	1-	1o	2-	1-	0+	3341	3643	4	8	19	5	6	12	5	3	8
25	0+	1-	0+	0+	1o	0+	0+	1o	2423	4234	2	5	2	3	6	3	3	7	4
26	0+	1+	4-	5+	5o	5-	3+	2-	3499	9995	3	10	48	112	100	79	36	13	50
27	2+	3-	3o	4+	4+	4o	3o	2-	6789	9995	17	21	31	61	63	51	32	13	36
28	2-	1+	3-	3o	3-	3-	2o	1o	5588	7843	12	9	26	31	22	23	16	6	18
29	0+	2-	1+	2-	2+	2+	2+	2o	2322	5554	3	13	8	11	18	18	18	15	13
30	3-	2+	3o	4o	3o	3-	2+	3o	4445	5555	21	20	33	56	29	24	18	33	29

Monthly mean value of An

21.1

November 1994														As						
	Ks							σs			as					As				
1	3+	3+	3-	3-	3-	3-	3+	2o	2+	4213	2321	35	35	25	25	23	35	16	19	27
2	4-	3-	2+	3+	4-	3o	2o	3o	5214	2325	48	21	17	38	45	32	16	33	31	
3	1+	2o	2o	2+	3o	3-	3-	2o	1224	2211	8	16	14	18	28	23	24	14	18	
4	3-	4-	3-	3o	2o	3+	4o	3o	2421	2153	22	46	23	33	15	34	56	29	32	
5	3o	2+	1+	3-	2+	3-	3o	4-	5222	2335	28	18	10	22	19	21	32	48	25	
6	3-	4-	4o	5-	4-	4-	3+	1+	2344	2352	22	44	52	80	43	46	38	8	42	
7	2-	2-	2-	2-	1o	2o	2+	1o	3344	1142	11	12	11	12	7	14	20	7	12	
8	1o	1o	0+	2o	2o	1o	1+	1+	1125	5212	6	6	3	15	14	6	8	10	9	
9	2-	1+	2-	2-	4-	4-	4+	4o	2222	2013	13	9	13	20	41	44	64	58	33	
10	3o	4o	3-	3-	2o	2o	3o	3-	0353	3033	32	58	36	24	14	16	29	21	29	
11	2o	2o	2o	3-	1+	1o	1o	2o	2122	1223	15	15	16	21	8	7	7	14	13	
12	1+	2-	2-	1o	0+	2-	1+	1o	2340	1322	10	12	13	7	2	11	10	7	9	
13	1+	2+	1+	1+	2o	3-	2-	1+	1121	2222	10	17	9	8	14	22	12	10	13	
14	2o	2-	2-	1+	1+	2-	3-	3o	1313	2244	15	20	13	9	9	13	24	29	17	
15	2-	2-	2-	2o	2+	2o	3o	3-	2233	2132	11	11	13	15	19	14	29	22	17	
16	2o	2-	1+	0o	1+	2+	1+	0+	4422	3112	16	12	10	1	9	17	8	3	10	
17	1o	3-	1+	1o	0+	0+	2+	2-	0242	2234	7	21	8	7	3	3	18	13	10	
18	1o	1-	1o	2o	2o	3-	2o	2+	2215	3232	6	4	6	15	14	22	15	17	12	
19	3-	4o	3+	3+	3o	3+	3o	3-	4142	2131	24	56	40	35	30	34	32	25	35	
20	3-	3+	4-	4-	4o	2+	2o	2-	5362	3222	22	35	50	41	53	19	15	12	31	
21	2-	2-	2-	2-	1o	1+	1-	1+	1323	2331	13	12	12	13	7	9	5	8	10	
22	1o	1+	0+	2-	1-	2o	1+	1o	1224	3134	6	8	3	12	5	14	10	7	8	
23	1-	1+	1-	1o	1+	1-	0+	1o	1220	1215	5	8	4	7	8	5	2	7	6	
24	1o	2o	2o	1o	1+	1+	1+	1-	2353	2311	7	15	16	6	8	10	8	5	9	
25	1+	1o	1-	1o	1+	0o	1+	2-	2131	1113	8	6	5	6	8	1	9	11	7	
26	1o	2o	5-	6+	6-	5o	4-	2+	2143	3123	7	15	78	175	140	97	46	19	72	
27	3-	3+	3+	4+	4o	4-	3o	2+	3421	3323	23	34	37	68	51	41	27	20	38	
28	2o	2-	3-	3-	3o	3-	2+	1+	1424	0341	14	13	22	22	32	24	18	9	19	
29	1o	2-	1+	2o	2o	2+	2o	2o	2222	0422	6	11	10	15	16	17	16	14	13	
30	2+	3o	3o	4-	3-	3-	3-	3-	3424	2232	19	29	32	46	24	22	21	26	27	

Monthly mean value of As

21.1

an, as INDICES 1994 (continued)

December 1994														An					
	Kn						σn			an									
1	2-	3-	3-	3-	3+	3o	1+	3+	5456	6437	13	22	25	23	35	27	8	37	24
2	2+	3-	3-	3o	4o	4-	3+	3+	7445	9868	17	23	23	29	57	41	35	39	33
3	3+	2-	3-	1+	3+	1+	2+	2o	6434	6166	37	12	22	10	36	8	17	16	20
4	2o	1-	1o	1+	1+	0+	3-	0+	5323	1352	16	4	6	10	8	3	23	2	9
5	0+	1-	1+	2o	3-	2+	2-	2+	2334	6533	2	4	8	15	22	18	12	18	12
6	2o	2+	4o	3-	3o	4o	4-	3o	3464	5687	16	17	58	22	33	54	48	31	35
7	3-	3o	3o	3-	3-	3o	3-	3+	4213	3543	26	29	28	21	22	32	21	35	27
8	3+	2o	3-	3o	3-	3-	2+	2+	2124	4333	34	16	23	28	23	22	19	17	23
9	3o	1+	2-	3-	2o	2-	2o	2+	4113	1253	31	8	12	22	16	13	15	18	17
10	3-	2-	1+	1+	1+	3-	3-	2o	2232	3354	25	12	8	9	8	22	25	15	16
11	1+	1o	1o	1+	1+	3-	3+	3o	3203	3445	8	7	6	8	10	26	35	27	16
12	3-	2o	2o	2-	3-	3-	3+	3o	6103	4465	25	14	15	12	26	21	37	29	22
13	3-	3o	3+	3-	3-	3+	2-	1+	5433	2422	21	31	37	22	24	34	13	9	24
14	2-	1o	0+	2o	2-	1+	2o	2+	2324	2354	12	6	3	15	12	10	15	19	12
15	2o	2-	3-	3+	5-	4+	3+	4-	4235	4544	14	13	26	35	77	62	37	49	39
16	3o	3o	3o	3o	4-	3o	1+	1+	4444	5413	31	29	31	31	47	28	9	8	27
17	1+	1o	3-	2+	2-	2o	2+	1-	2265	3373	9	7	25	17	11	15	19	5	14
18	1o	1+	1+	1-	2-	2+	2+	2-	3321	2646	7	10	8	5	11	19	18	13	11
19	0+	2+	2o	2+	2+	1o	0o	0+	3444	4112	3	18	14	20	19	6	1	3	11
20	2-	1+	2-	2o	3o	3-	2+	3-	2222	1335	13	10	13	15	16	24	18	22	16
21	1+	1o	1+	1o	2o	1o	1o	1o	2331	0344	9	7	10	6	15	6	7	7	8
22	1o	2-	0+	0o	1o	0o	0o	0o	4321	1110	6	12	3	1	6	1	1	0	4
23	2+	1+	2o	2+	1-	3-	1+	2+	5242	2325	17	9	16	20	4	21	9	19	14
24	3o	3o	4o	4o	4o	4+	4o	4o	3014	1553	33	29	60	54	60	70	60	51	52
25	4-	3-	2+	3-	3+	3o	2-	3-	3243	4535	44	22	20	26	37	30	13	26	27
26	3o	2o	2+	3-	3o	3+	3o	3-	4213	5445	29	14	17	21	31	37	28	25	25
27	2-	2-	1+	2o	3-	2o	4o	4o	2244	5564	17	11	9	16	25	14	57	54	25
28	2+	1o	0+	2-	3-	3-	1+	2+	4233	2324	19	6	3	13	23	25	10	20	15
29	3o	2+	3-	3o	3-	3-	1o	0+	1331	3423	33	20	24	28	22	21	7	3	20
30	1+	3o	2-	2-	2-	1+	1o	0+	6633	4412	8	30	11	12	11	10	7	2	11
31	0+	1+	1+	2-	1+	1+	2-	1+	2313	3556	3	10	8	11	8	9	11	10	9

Monthly mean value of An

19.9

December 1994										As									
	Ks				as			as											
1	2+	2+	3-	3o	3+	3-	2o	3+	1322	2334	18	19	26	31	35	25	14	36	26
2	3-	3+	3-	3-	4o	3+	3o	4-	5522	4123	24	36	26	21	54	34	32	46	34
3	3+	2o	2+	2o	3o	1+	2+	1+	4242	2331	39	16	19	15	28	9	20	10	20
4	2o	1-	2-	2-	1+	0+	2+	0+	3242	2311	14	5	11	12	10	3	17	3	9
5	1-	1-	1+	2o	2+	2+	2o	3o	3322	3215	5	5	10	15	20	18	15	31	15
6	3o	4-	5+	3o	4o	4+	4o	3+	3332	1344	28	49	111	32	53	62	55	39	54
7	3-	3-	2o	2+	3-	3+	3-	3+	2221	1331	26	22	16	17	21	37	21	34	24
8	3+	3-	3-	3+	3o	3-	3o	2+	1233	1211	36	24	22	34	30	24	27	19	27
9	3-	1+	2-	3-	2o	2+	2+	3-	2233	2322	22	10	12	21	14	18	20	24	18
10	3-	2o	2o	1+	1+	2+	3-	2+	4212	1331	25	15	15	9	8	20	21	17	16
11	1+	1o	1+	2-	2-	3-	4-	3+	2212	2225	10	7	9	11	12	26	42	34	19
12	3+	3-	3-	2+	3-	3-	3-	3o	4331	3352	36	25	25	17	24	25	37	32	28
13	3-	3+	3-	3-	3o	3+	1+	2o	2432	1432	22	39	25	23	27	36	9	15	25
14	2o	1+	1o	2o	2o	2o	2+	3-	2211	1255	16	10	6	15	14	15	20	23	15
15	2+	3-	3o	3o	4+	4-	4-	4-	1213	2255	17	21	30	27	61	49	46	48	37
16	3+	3-	2+	3o	4-	3-	1+	1+	4312	4423	34	21	18	30	41	21	10	10	23
17	2-	2o	2-	2-	1+	2-	2+	2-	2141	3244	13	14	18	13	10	11	18	11	14
18	2-	2-	2-	1o	1+	2o	2+	2-	1212	2112	13	13	13	7	10	14	17	11	12
19	1o	2o	2+	2+	2+	1+	1-	1+	1231	3333	6	16	20	19	20	8	4	9	13
20	2+	2o	3o	3o	3-	3o	3-	3-	1212	2514	19	15	28	27	24	30	27	23	24
21	2-	1+	1+	2o	1o	2-	1+	1+	3121	0223	13	9	10	8	16	7	11	9	10
22	1+	1+	1o	1-	1+	1-	0o	0+	1212	2212	8	10	6	5	8	5	1	2	6
23	2-	1+	2+	2+	1+	3-	2-	3+	2232	3224	13	10	20	18	8	26	13	36	18
24	4o	4-	4o	4+	4+	5-	4-	4o	1321	2233	53	43	55	61	66	82	69	51	60
25	3+	3-	3-	3o	3+	3-	2o	3-	1221	2224	34	22	26	28	37	24	16	21	26
26	3o	3-	3-	3o	3-	3o	3o	3-	2431	2314	28	24	21	27	26	31	29	26	27
27	2-	2-	2-	2o	3-	2-	4o	3o	2322	4133	13	13	12	16	23	13	51	30	21
28	3-	1+	1o	2o	2+	3-	2-	3-	3212	4222	21	9	6	16	19	23	11	22	16
29	4-	3-	3-	3-	2+	3-	1+	1o	4222	2421	41	22	23	21	19	24	8	6	21
30	1+	2o	2o	1+	2-	2-	1+	1o	1342	2432	10	16	14	10	13	12	9	7	11
31	1+	1o	1o	1+	1-	1+	1o	1+	2011	2223	8	7	6	9	4	10	7	9	8

Monthly mean value of As

21.8

am INDICES 1994

January 1994																			
	Km							Σ Km	am										
1	4-	3+	3+	4o	4-	4-	3o	3-	27.3	46	35	40	60	46	46	30	23	41	30
2	2o	3-	3o	4-	4-	3+	3o	2+	23.7	14	25	29	44	47	36	29	19	30	30
3	2+	1+	3-	3+	3o	3+	4-	2o	21.7	20	10	23	37	27	38	43	15	27	25
4	1+	2+	2o	1+	1+	1o	1+	1-	11.3	10	19	14	8	9	7	10	4	10	14
5	0+	1o	1-	1o	1+	1o	1+	2o	8.7	2	7	4	6	10	7	9	16	8	11
6	3o	2o	2+	3-	3-	3o	2-	3o	20.3	28	14	17	22	23	33	12	32	23	16
7	1o	1-	1-	2-	2-	1+	3-	2-	11.3	7	4	4	12	12	9	22	13	10	15
8	1o	2o	2o	2-	2-	2-	1+	2-	13.0	7	14	16	12	13	12	10	13	12	11
9	0+	0+	1o	2-	1o	1+	2-	1+	8.7	3	2	6	13	7	8	11	9	7	8
10	0+	1o	1+	1o	1o	0+	1-	1-	6.3	3	7	8	6	7	3	4	4	5	10
11	1o	2o	3o	3+	3o	5o	5-	4+	26.3	7	15	27	35	33	98	77	64	45	33
12	4-	3+	3o	3+	4+	4+	3o	3+	28.3	50	35	33	40	66	62	28	39	44	47
13	4-	3+	2+	3o	4+	4-	3+	5-	28.3	42	34	20	31	66	47	34	71	43	42
14	3o	3+	3-	3+	5-	3+	3+	3-	27.0	31	35	24	37	75	40	37	34	39	40
15	3+	3o	2+	2-	3o	3o	4+	4-	24.3	38	31	20	12	32	31	66	41	34	36
16	3-	3o	3o	3o	3+	3+	3+	3-	24.3	21	28	32	31	37	35	40	21	31	37
17	4-	4o	3-	3o	3o	3+	4-	3+	27.3	45	54	39	33	33	36	41	37	40	35
18	3o	3o	3-	3-	4+	5-	3o	3-	26.0	31	29	22	24	65	77	32	24	38	39
19	3+	4o	4-	3o	4o	2o	4-	3+	27.0	38	58	48	29	51	14	43	35	40	38
20	3-	2+	3o	2+	3-	3-	3o	2o	20.7	26	19	28	20	24	24	32	14	23	23
21	2-	2o	1-	2o	2-	3-	3+	3-	16.7	12	14	5	14	11	23	37	23	17	19
22	3+	2-	1+	2o	1+	1o	2o	2+	15.0	39	13	9	15	8	7	16	17	16	17
23	2-	2+	1+	2-	2-	2o	2o	2o	14.7	13	18	10	13	12	15	14	14	14	12
24	2o	1o	1+	1+	0o	0+	1-	1+	8.0	15	7	8	9	1	2	4	10	7	9
25	2-	2o	1+	0+	1-	1o	2-	2o	10.7	13	14	9	2	4	6	13	16	10	15
26	3-	3+	4o	3o	4-	3+	3+	3-	26.0	22	34	57	28	49	40	38	25	37	28
27	3-	3o	3+	3o	3+	4-	4-	4-	26.3	22	27	37	27	37	45	47	41	35	36
28	4-	3o	2+	4-	3+	2+	2-	2-	21.7	44	27	19	45	34	18	13	13	27	28
29	2-	2-	2+	3-	3o	2o	2o	2o	17.3	11	13	20	21	33	16	14	14	18	17
30	3-	1o	2-	2o	2o	3o	3-	2+	17.3	22	7	11	16	14	31	22	19	18	17
31	2+	1+	1+	2-	2o	2+	1+	3o	15.3	20	10	10	13	16	18	10	28	16	16
Monthly mean value of Am														24.7					

February 1994																			
	Km							Σ Km	am							Am	Am2		
1	2-	1o	2-	2+	2-	1o	1o	1o	11.3	12	6	13	19	13	6	7	6	10	16
2	1+	2+	3-	4-	4o	3o	3-	1o	20.7	8	17	26	43	52	29	24	6	26	18
3	1o	2-	2+	3-	4-	3+	3o	2+	20.0	6	13	17	21	43	40	29	19	24	22
4	2o	2o	2-	1+	3-	4-	4o	3-	20.0	15	14	12	10	26	44	52	22	24	30
5	3o	3-	3+	4+	3+	4-	4+	5o	29.7	28	22	36	65	34	46	66	101	50	50
6	5o	3+	3o	5o	6-	6o	6o	6-	39.7	91	34	33	94	128	158	157	139	104	87
7	4o	5o	4-	5+	6-	5-	5+	4o	37.7	60	97	41	118	145	86	109	51	88	102
8	6-	5-	5-	4+	5-	5o	5-	5o	38.7	131	73	76	64	80	91	86	87	86	78
9	4o	3o	3+	4-	4o	5o	5-	5o	32.7	58	31	35	44	58	90	72	95	60	64
10	4o	4-	4-	4o	5-	5-	4+	4+	33.3	55	49	45	54	74	76	63	64	60	66
11	4+	4+	3+	5o	4+	5o	5-	5-	35.7	62	66	38	96	65	99	85	73	73	65
12	4o	4-	3o	4-	5-	4+	4+	4o	31.7	54	43	30	44	85	63	66	55	55	57
13	4-	3o	3-	4-	3-	5-	6-	4o	30.0	47	27	26	43	25	86	126	54	54	54
14	4o	3+	4-	3o	3+	5o	4o	5-	31.0	58	34	43	27	34	100	56	83	54	53
15	3+	3o	3-	3o	4o	4-	4o	4-	27.3	34	30	24	31	56	45	51	45	40	46
16	4-	4o	3-	3-	4-	3-	3-	2+	24.3	50	53	22	25	47	25	26	20	34	33
17	2+	2o	2+	2o	2+	3-	3-	2-	18.0	19	15	18	15	20	22	21	12	18	19
18	1+	1+	1-	3-	1+	1o	1-	3o	12.7	10	8	9	22	10	6	5	29	12	19
19	3+	3o	3+	3+	4-	3o	4o	3o	26.7	34	27	40	34	44	29	57	32	37	30
20	4-	3o	3-	3-	2o	3-	3+	2o	22.0	50	29	22	25	15	22	35	15	27	38
21	2-	2o	3o	6+	7-	7-	5+	7-	38.0	13	11	27	179	220	234	111	233	129	101
22	7-	6o	4+	4o	4o	3-	2+	3-	32.7	216	161	63	58	52	25	19	24	77	94
23	2+	3o	2+	3-	2+	2-	3-	2+	20.0	17	27	19	24	19	13	34	17	21	20
24	2-	1o	1+	1+	1+	2-	1o	1+	10.7	11	6	9	10	9	11	7	9	9	17
25	2-	2+	3-	4-	2+	3-	3-	2-	20.3	12	18	39	41	19	24	25	13	24	17
26	3-	1+	1o	1o	2+	2o	1o	1-	12.0	24	10	7	7	18	16	7	4	12	15
27	1o	2-	2-	3o	2o	2-	1o	1-	12.7	7	11	11	33	14	12	6	5	12	12
28	1-	1-	3-	3-	2-	1o	2o	3+	14.7	4	4	25	21	12	6	14	37	15	15
Monthly mean value of Am														44.1					

am INDICES 1994 (continued)

March 1994															Am	Am2			
	Km							Σ Km	am							Am	Am2		
1	3-	2-	3o	3-	2o	2o	2o	3o	19.0	24	13	27	23	14	16	16	32	21	21
2	3+	2o	2+	3-	3-	2+	4-	5-	23.7	37	15	17	26	24	20	42	77	32	35
3	3+	4o	4-	5-	2+	2-	2o	2o	23.7	35	54	48	84	20	13	16	16	36	31
4	1+	1o	2-	2-	1-	0+	0+	1-	7.7	9	7	12	12	4	3	3	5	7	10
5	2-	1-	1+	2-	1o	1-	2+	4-	13.0	13	5	9	11	7	4	17	47	14	13
6	2+	3-	2+	2o	1o	2-	3o	4-	18.7	19	23	20	16	6	12	33	43	22	31
7	5-	3+	3+	5o	4+	6-	5+	6o	37.7	74	38	39	92	65	127	114	161	89	69
8	4+	5-	5o	4+	5-	4+	5-	5-	36.7	69	71	87	67	72	67	81	78	74	84
9	4o	5-	5o	4o	4+	5o	5+	5o	37.3	57	71	96	54	66	93	109	102	81	73
10	4o	3+	4+	4+	5-	4o	4+	5+	34.3	56	38	63	68	71	60	66	114	67	70
11	4-	4o	4o	4+	5-	4o	4-	5o	33.3	41	55	54	66	72	54	44	93	60	64
12	4o	3+	5-	4+	4+	4-	4-	5-	33.3	55	39	74	63	65	49	68	72	61	58
13	4o	4o	3-	3+	3-	3o	3-	4+	26.7	54	57	24	39	25	31	24	65	40	49
14	4o	4+	4o	3+	4o	4+	4+	4+	32.7	58	63	55	38	53	63	62	62	57	52
15	4+	4+	4-	4o	5-	5-	4o	3+	33.0	67	67	44	56	76	81	59	39	61	53
16	3-	3-	3-	3-	3+	4+	3+	3+	26.3	40	25	36	24	40	66	40	35	38	49
17	4-	4o	4o	4-	4-	4+	4o	3+	31.0	49	58	57	55	48	68	55	36	53	49
18	4o	4+	3+	2+	3+	3o	1+	4-	25.3	54	65	40	17	35	27	10	49	37	41
19	4-	3o	3o	4-	2o	2o	3-	3o	23.0	49	30	31	41	14	16	21	29	29	27
20	3o	2+	2+	2+	2o	3o	3+	3o	21.3	28	19	17	19	14	28	35	31	24	27
21	3-	4+	3o	3+	4-	4o	4o	3+	28.3	26	70	32	36	41	59	52	35	44	37
22	4+	3-	2o	3o	4+	3-	2o	3-	23.7	63	22	15	27	65	26	16	25	32	36
23	3o	4-	3o	3-	4-	3+	2+	2o	23.7	31	45	29	24	47	35	19	14	31	31
24	3-	2+	2+	4o	4-	3o	2o	3-	22.7	26	20	17	51	42	31	14	23	28	26
25	3+	1+	2o	3-	3+	4o	4o	3o	23.7	36	9	15	23	34	51	55	33	32	28
26	2+	2+	2o	3o	1o	2-	1+	1o	14.7	20	19	14	31	7	11	10	6	15	21
27	1+	1o	2-	2-	2+	2-	3-	4-	16.0	10	6	13	11	20	12	23	48	18	16
28	1+	3-	2+	3-	3o	3o	2+	3-	20.0	10	21	18	26	28	32	19	22	22	21
29	2+	2-	2o	1+	1-	1-	2-	2-	12.0	17	11	15	10	5	5	11	12	11	15
30	2-	2-	1+	3o	3+	3+	3+	3+	21.0	12	11	9	27	35	37	37	35	25	19
31	2+	2o	2-	2o	2-	1-	1-	1o	12.0	20	16	13	16	11	5	6	4	11	17
Monthly mean value of Am															37.8				

April 1994

Km							Σ Km	am							Am	Am2			
1	1-	1+	2-	1+	2o	2+	2-	2-	12.7	5	10	13	10	16	17	12	13	12	17
2	3+	2+	3+	4o	5o	5-	6-	6o	34.3	34	19	38	58	90	84	144	151	77	68
3	5o	5o	5-	5o	5o	5+	6-	6o	41.7	97	103	111	97	94	90	107	162	108	106
4	6-	5o	5-	4o	4-	4-	4o	4o	34.7	145	90	82	56	47	43	55	60	72	76
5	4o	4-	4o	3+	5-	4o	3+	5+	32.3	52	42	55	40	77	59	36	106	58	57
6	4+	4-	5-	5-	4+	5-	4+	5-	35.3	61	42	71	73	65	78	69	72	66	66
7	4o	4o	5-	4-	4-	4o	4-	4+	32.0	60	58	73	50	49	59	46	68	58	63
8	4-	5-	5-	4+	4+	3+	4+	5-	34.0	45	72	83	61	63	34	67	73	62	64
9	5o	4o	4o	5o	4o	4o	4+	4o	34.3	96	56	59	99	59	60	65	52	68	62
10	5-	4-	3-	4o	4o	4o	4o	5-	31.7	75	48	25	54	58	60	52	73	56	62
11	5-	5o	5-	4+	4o	4o	4-	5o	35.3	72	89	84	61	53	58	45	95	70	60
12	4-	4-	4-	3o	3o	5-	4o	4o	28.7	46	42	47	30	32	31	79	56	45	47
13	3-	3+	4o	3o	3+	4+	5-	4-	29.0	26	37	54	27	36	64	72	50	46	47
14	5-	3o	3+	4-	4-	3+	3+	4-	28.7	76	29	34	46	44	39	40	41	44	44
15	3+	3o	3-	3o	3o	3o	3o	3+	24.3	38	33	22	33	30	33	33	34	32	35
16	3-	4o	3o	2+	3-	3-	5o	5-	27.0	26	54	33	19	21	23	95	83	44	85
17	6o	7-	7o	7-	4-	3-	3-	3o	38.3	167	208	283	215	49	25	23	32	125	84
18	3-	3+	3o	3o	3+	3o	4-	3o	25.0	26	36	32	31	38	32	47	28	34	34
19	5-	2+	3-	3o	2+	1+	2-	2+	20.3	76	20	25	31	18	9	13	18	26	27
20	2o	2-	3-	3o	2-	1+	1-	1o	14.7	15	15	23	29	12	9	6	7	15	14
21	2-	2+	2+	1+	1+	2+	3-	3-	15.3	11	18	17	8	9	8	20	22	14	12
22	2o	1o	1+	2+	3-	1+	1+	2o	14.0	16	6	9	17	21	8	8	16	13	13
23	1-	1o	1+	3-	3o	2o	3o	4-	17.3	4	7	8	25	31	16	28	48	21	18
24	1+	2-	2+	2+	2-	3-	1-	1o	13.7	10	13	20	18	12	21	5	7	13	19
25	2o	2+	3-	2-	1o	1+	1o	2-	13.7	16	17	23	12	7	8	6	13	13	12
26	1-	1+	2-	2-	1+	1o	1o	1-	9.3	5	9	13	12	10	7	6	5	8	9
27	1-	2-	1+	1+	2-	1o	1-	1o	9.3	5	13	9	9	11	6	5	6	8	7
28	2-	1+	0+	0+	1+	0+	1-	1-	6.7	12	9	3	2	8	2	4	4	6	8
29	0+	2-	2+	2-	0-	0+	0+	2o	9.0	3	13	20	13	2	3	3	15	9	7
30	0+	1o	1o	0+	1-	0+	1-	0+	4.7	2	6	6	2	4	2	5	2	4	8
Monthly mean value of Am															40.9				

am INDICES 1994 (continued)

May 1994																				
	Km						Σ Km	am												
1	0+	2o	3o	3+	4-	5-	6-	6o	28.7	2	14	30	34	43	72	143	158	62	48	
2	5-	5o	4-	3o	3-	3o	4+	5+	31.7	76	100	49	29	23	33	69	120	62	75	
3	5-	5o	5-	4-	4+	4o	4-	4+	33.3	82	87	72	44	70	52	50	38	62	56	
4	4-	4-	3+	3o	4o	4-	3o	4-	28.0	41	49	34	27	53	41	32	42	40	46	
5	4o	4o	4o	4-	4+	5-	5-	4+	33.7	51	57	53	42	62	78	73	61	60	55	
6	4o	4+	4+	4-	3-	4-	4-	5+	31.7	59	68	61	44	26	42	44	105	56	64	
7	5o	5-	5-	4+	4-	3+	4o	3+	33.0	94	71	78	62	42	34	52	35	59	60	
8	5-	5-	4+	4o	4-	4-	4+	4o	33.3	77	75	68	56	48	46	61	54	61	53	
9	4o	5-	3o	4-	4-	4-	4-	4+	29.7	52	71	30	49	46	44	43	34	46	49	
10	4-	4o	5-	3o	4-	3+	4-	4+	30.3	49	52	78	31	44	34	50	63	50	47	
11	4o	4-	3o	3+	3o	4-	3o	4o	27.7	58	49	33	36	31	50	29	59	43	41	
12	4-	3+	3-	2-	2+	1+	1+	1-	2+	17.0	41	35	24	13	9	8	4	18	19	24
13	2o	2+	2o	1+	1-	2-	1o	2-	12.7	15	19	15	8	5	12	7	13	12	17	
14	2o	4-	4-	3o	3o	2+	3-	3+	23.7	16	49	46	28	31	20	22	36	31	32	
15	3+	3+	4+	5o	4o	3+	4o	5-	32.0	34	39	69	87	56	35	58	78	57	48	
16	5-	4-	4-	3+	4-	4+	3+	3-	29.3	76	47	45	39	50	66	38	26	48	47	
17	4-	3o	3-	3o	3-	3o	2+	2+	22.7	43	30	25	32	24	30	19	19	28	35	
18	4-	4-	4-	3-	3o	2+	2o	4-	24.7	44	46	42	24	31	19	15	47	34	30	
19	3-	3+	3o	3o	3o	2-	1-	1+	18.7	22	38	33	29	27	13	5	9	22	21	
20	1+	2+	2-	2-	1+	2+	1-	1o	12.3	10	20	13	11	10	20	4	7	12	11	
21	0+	0+	1-	2-	2o	2-	1+	1o	9.0	3	2	4	12	15	12	9	7	8	8	
22	0+	1o	1o	1+	2o	2-	2+	2+	12.0	3	6	6	9	14	13	17	18	11	11	
23	1-	1+	1o	2+	2-	2o	2-	3o	13.7	5	10	7	18	13	15	12	28	14	21	
24	4-	4o	3+	3o	2+	3-	3-	3o	24.7	42	56	38	32	20	26	21	27	33	30	
25	3+	4o	3o	3o	2-	3-	1+	3+	22.3	37	59	28	33	11	23	10	36	30	28	
26	1+	3-	4-	3+	2o	2o	1o	2o	18.0	9	21	43	36	16	16	7	14	20	18	
27	2+	2-	0+	1-	1-	2o	1o	1-	9.3	18	12	3	5	5	15	7	5	9	10	
28	1-	0+	1o	3-	4-	5+	6-	5o	24.3	5	3	6	22	42	107	137	95	52	47	
29	5o	5-	4o	4-	4-	5o	3+	4+	34.3	98	81	55	68	41	95	37	67	68	76	
30	4+	5o	5-	4o	4o	4o	4-	5-	35.0	65	88	82	51	56	55	66	76	67	63	
31	4-	5-	4o	4o	3+	3-	4-	5-	31.3	44	72	58	51	39	23	67	71	53	56	
Monthly mean value of Am													39.6							

June 1994																			
	Km						Σ Km	am											
1	4-	4o	4o	4o	3o	3-	4-	4-	28.7	48	59	57	60	29	22	44	48	46	45
2	4-	3o	3o	4o	3o	4-	4-	4-	27.7	43	29	33	53	28	41	45	48	40	38
3	3+	4-	3o	3o	3+	3+	4-	4-	27.0	36	45	29	28	39	35	50	43	38	39
4	4o	3o	3+	3+	3-	3-	3+	3o	26.7	51	32	38	37	23	40	27	53	38	38
5	3-	3+	3+	3+	3o	4-	4-	4-	26.7	23	38	39	34	30	44	43	50	38	36
6	4-	3-	3-	3+	3-	3o	4-	3+	25.0	41	24	23	37	26	28	43	39	33	34
7	3-	3-	3+	3o	3o	3-	3o	3o	23.3	23	25	39	33	28	21	27	30	30	28
8	3o	2+	2-	3-	2+	2o	2-	2o	17.7	31	18	11	25	18	15	11	15	18	21
9	2-	2+	3o	3-	1o	2-	1o	1+	14.7	13	20	31	25	7	13	6	8	15	19
10	1+	3-	3-	4o	3o	3o	3-	3-	22.0	10	23	24	58	28	33	26	23	28	24
11	3-	3-	3o	4-	2o	2o	3-	3+	22.0	26	24	31	46	14	15	21	38	27	31
12	3+	3+	4-	4o	4-	4o	4-	3o	28.7	38	36	43	56	49	59	42	28	44	32
13	3-	3-	2-	2+	2o	3+	3o	3-	20.3	22	21	12	19	15	35	33	24	23	29
14	3-	3o	3-	3o	3-	3-	2+	3-	21.7	26	31	25	28	22	24	19	24	25	23
15	3-	1+	2+	2-	2-	1+	1+	1o	13.3	21	10	18	12	12	8	9	6	12	14
16	2-	1-	1+	1o	2-	1o	1o	1-	9.0	12	5	8	6	11	6	7	5	8	9
17	1-	1+	1+	2+	3-	1-	1+	1+	13.7	5	9	10	20	23	22	10	9	14	15
18	2+	3+	3-	3-	2+	2o	1+	2o	18.7	18	37	21	21	17	16	8	15	19	21
19	2-	2-	3o	4+	4-	3-	3-	3+	23.0	11	11	30	66	48	21	25	38	31	24
20	3-	3o	2+	2-	3+	2+	3-	3o	21.0	21	30	19	12	34	20	21	29	23	25
21	2+	2+	3-	3-	2o	2-	2-	2o	17.3	17	17	24	25	16	12	12	15	17	19
22	2o	2+	2o	1+	2-	1-	1o	1+	12.3	15	20	16	8	13	5	7	10	12	10
23	1-	1-	0+	0o	0+	1+	1o	0-	5.0	5	5	5	2	1	2	8	7	4	6
24	1+	1+	1-	1o	1-	0+	0+	0+	6.0	9	10	4	6	5	3	2	3	5	4
25	0o	0o	0+	0+	1-	1-	1o	1+	4.3	1	1	2	2	5	4	7	10	4	12
26	2+	4-	3+	4-	4-	3+	4-	3+	27.0	20	47	40	46	44	40	45	35	40	32
27	4o	3+	4o	3-	3-	1+	2+	2+	22.7	55	38	53	25	24	9	20	17	30	30
28	2+	2-	2+	3-	2-	2+	3+	5-	21.0	18	13	17	23	13	20	39	86	29	31
29	4-	5-	4-	3o	2+	4-	4-	4o	28.7	49	76	43	32	19	42	43	52	45	42
30	4-	3+	3+	3+	3-	3+	3o	3+	26.0	46	37	35	39	24	37	27	39	36	41
Monthly mean value of Am													25.7						

am INDICES 1994 (continued)

July 1994														Am	Am2				
	Km							Σ Km	am										
1	4+	4-	4o	4-	2+	2+	3+	4+	28.0	70	49	51	46	20	17	36	69	45	42
2	3o	4+	4-	4-	3o	3o	3-	4-	27.0	28	69	49	42	32	33	25	42	40	36
3	3o	2+	3o	3o	3-	1+	2-	3o	20.0	28	20	33	33	22	10	12	28	23	23
4	2o	2o	2o	2-	2o	2+	3-	2o	16.7	14	15	15	11	16	19	24	16	16	15
5	2-	1o	1+	0+	1-	1+	0+	2+	9.0	13	6	8	3	4	9	3	17	8	12
6	2o	2-	2+	2-	2-	1+	2o	4-	16.3	15	11	17	12	12	10	14	41	17	17
7	3-	3-	3-	3-	4-	2+	3o	3-	23.0	23	38	25	22	41	20	29	22	28	20
8	1o	1+	1o	1o	1+	1o	1-	0+	7.7	6	8	7	6	8	6	4	3	6	11
9	1o	0+	0+	1-	2-	2o	1o	1-	7.7	6	2	2	4	13	16	7	4	7	6
10	0+	0+	1+	1-	1o	1o	1o	1o	6.7	3	2	9	4	7	7	7	6	6	6
11	1-	1-	0+	0+	1o	1+	1-	1o	6.0	5	5	2	2	7	10	5	7	5	6
12	1+	1o	0+	0o	0o	1o	0+	0o	4.0	9	7	2	1	1	6	2	1	4	5
13	0o	1-	1+	0+	1-	1o	1o	1o	6.0	1	4	8	2	4	7	6	7	5	9
14	1+	2+	2o	4o	4o	5-	3+	5-	26.3	9	17	15	54	55	71	39	72	42	30
15	4+	3-	2+	2o	2o	2+	2+	4+	22.3	63	23	20	16	16	17	19	67	30	45
16	5o	4-	3o	5-	3+	3+	3o	4o	30.0	89	47	27	73	39	35	33	51	49	39
17	3o	3o	2o	3o	3o	2+	2+	3-	21.3	33	27	15	33	27	20	18	23	25	28
18	3o	3-	2+	2+	3-	2-	3-	1+	18.7	30	24	18	19	25	12	21	8	20	21
19	3-	3-	3o	2+	3-	1-	2+	3o	19.3	26	25	28	19	21	4	18	28	21	17
20	1+	1o	1+	1+	2o	1-	1o	1-	9.3	8	6	10	10	15	5	6	4	8	14
21	2o	3o	3-	3-	3o	1+	1+	2-	17.7	15	28	26	22	27	10	10	12	19	14
22	2o	2o	1+	1+	2-	0+	1o	0+	10.0	14	15	9	10	11	3	6	2	9	11
23	1o	2-	1o	2-	2-	2+	2o	1+	12.7	7	12	7	13	13	17	15	10	12	10
24	1+	1+	1+	2-	1+	1o	2-	3-	12.3	10	9	10	12	9	6	12	22	11	14
25	3-	2o	2o	2o	2+	2o	1+	2+	16.7	24	16	16	15	20	15	10	19	17	13
26	1-	2-	1-	1o	1o	1-	1o	10	7.7	5	11	5	6	7	4	7	7	7	14
27	2+	5-	2-	1-	1-	1+	2+	3+	17.0	18	72	13	5	4	8	19	35	22	21
28	4-	4-	3-	3-	3-	2o	3o	3o	23.3	41	48	22	25	21	16	31	31	29	24
29	3-	3-	3-	2o	2o	3o	2o	3-	19.7	24	23	21	14	14	29	16	24	21	22
30	3+	3-	2-	1+	2+	2-	2-	3-	17.3	35	24	13	9	17	11	13	25	18	18
31	2o	2o	1+	3-	2-	1+	1+	3+	15.7	14	15	8	23	13	9	10	38	16	16

Monthly mean value of Am

18.9

August 1994

August 1994														Am	Am2				
	Km							Σ Km	am										
1	2+	2+	2-	1-	1o	1o	2-	1+	12.0	20	17	12	5	7	7	11	9	11	12
2	2-	1-	1-	1+	0+	1-	1-	1o	7.0	11	5	5	8	3	4	4	7	6	7
3	1o	1o	1+	1+	0+	1-	1o	1+	8.0	6	7	8	8	3	4	7	8	6	5
4	1-	0+	1-	0+	1-	1-	0o	0+	3.7	5	2	4	3	5	5	1	2	3	6
5	1o	2o	1+	2-	1-	1-	1o	1o	9.3	7	16	10	11	4	4	7	6	8	7
6	1-	1o	2-	1+	1o	0+	1o	1o	8.0	5	7	12	8	7	3	6	6	7	5
7	0o	0+	1-	1-	1+	1+	1-	1+	6.3	1	2	4	4	9	8	4	8	5	4
8	1-	0o	0+	0o	0o	1-	0+	0+	2.3	4	1	2	1	1	4	3	3	2	5
9	1o	1+	1+	0+	1-	1+	2-	1+	9.0	6	8	9	2	4	8	13	9	7	8
10	2o	1+	2+	2o	3+	3-	3-	2+	18.7	14	10	20	16	40	22	25	17	21	18
11	3-	3-	2+	3-	3o	3-	2+	3-	21.0	26	22	17	25	30	24	17	21	23	26
12	3o	3+	3o	3-	3o	3o	4-	3o	24.7	33	35	32	22	29	31	47	27	32	32
13	3o	4o	4+	2+	4-	4-	4-	3o	27.7	32	56	64	19	49	46	41	33	43	43
14	4-	4-	5-	4o	3+	3+	3o	3o	28.7	46	47	71	54	35	37	33	33	45	39
15	4-	2-	2o	3-	3o	2o	3-	3+	21.0	43	13	15	26	32	15	24	39	26	25
16	2o	2o	1+	3-	2-	1+	2+	3-	16.0	16	14	9	22	13	8	20	24	16	18
17	2-	2-	2+	2-	2-	2-	1o	1-	12.3	11	12	17	11	12	13	7	4	11	12
18	1-	2-	2-	2o	2+	2-	1+	2-	13.0	5	11	11	15	18	12	8	11	11	10
19	1+	1o	2-	1-	1-	1+	1+	1o	9.0	9	7	11	5	5	8	8	6	7	10
20	1o	2o	2o	2-	1o	2+	2+	2o	14.3	7	16	16	11	7	17	18	15	13	10
21	2o	2-	0o	1-	3o	3o	1+	1-	12.3	16	12	1	4	30	28	8	5	13	12
22	2o	1+	1-	1+	2+	2+	2o	4o	16.0	14	8	4	8	17	19	15	51	17	17
23	3-	2+	1+	1+	1-	1+	1-	1-	11.7	22	19	8	9	5	10	9	5	11	14
24	1o	1+	1o	1-	1o	2+	1+	2o	10.7	7	10	7	5	6	20	10	16	10	13
25	2-	3o	2+	3+	3o	2+	2-	1-	18.0	12	27	19	38	28	17	12	5	20	16
26	1-	2-	2o	2+	1-	1o	1o	2+	11.7	4	13	14	17	4	7	7	19	11	14
27	3o	2+	2-	2-	1+	1-	3-	2-	16.3	32	19	18	12	10	10	22	12	17	15
28	2o	3o	2-	2-	0+	0+	2-	0+	11.7	15	28	17	12	3	3	11	3	12	11
29	1-	1o	2o	1+	1+	1-	0+	2-	9.7	5	6	15	8	10	9	3	12	9	7
30	1-	1-	1-	1+	1-	2-	1+	1+	8.3	4	5	4	10	5	13	8	9	7	7
31	1-	1o	1-	1o	2+	2-	1o	3-	11.0	5	7	4	7	18	13	7	22	10	13

Monthly mean value of Am

14.2

am INDICES 1994 (continued)

September 1994													Am	Am2					
	Km						Σ Km	am											
1	3+	3-	1+	2+	1o	1o	3-	2o	16.3	38	23	9	17	6	7	21	15	17	14
2	2o	2o	0o	0+	1+	1-	0+	1-	7.3	14	16	1	3	10	5	2	5	7	10
3	1+	2-	2o	2-	1+	1o	1-	1+	11.0	9	12	16	11	10	6	5	9	10	8
4	2-	0+	1o	1o	1-	1-	0+	1-	6.3	12	3	6	6	4	5	3	5	6	9
5	2-	2+	3-	3-	2+	1+	2-	2-	16.3	11	19	21	25	20	8	11	11	16	16
6	1+	3o	2o	4o	3o	3-	2+	2o	20.3	9	33	16	54	28	22	18	16	25	26
7	2-	3o	4-	5-	4+	4-	5o	4+	30.3	11	32	50	76	69	47	89	64	55	45
8	3o	4o	4o	4o	3-	3+	4-	3o	27.7	31	53	55	58	25	38	43	32	42	49
9	3+	4-	4-	3+	5-	4o	4o	4-	30.3	39	44	50	40	74	60	55	47	51	44
10	4-	3o	3+	3+	3o	3-	2o	2-	22.7	49	30	34	38	33	25	14	13	30	37
11	3-	3o	3+	3o	2+	2+	3-	2-	21.0	22	28	38	27	19	17	24	13	24	21
12	1+	1o	2o	3o	3-	3+	3-	1+	17.3	10	6	15	31	24	35	25	10	20	19
13	1o	3+	3-	1+	2-	2-	2-	3+	16.7	6	34	25	9	11	13	13	39	19	19
14	2+	2+	2-	1o	3-	1o	1-	0+	12.0	20	19	13	7	26	7	4	3	12	13
15	2-	1o	1+	1+	1+	2-	1+	2+	12.0	11	7	9	10	9	11	10	20	11	13
16	2+	3-	3-	2-	2o	2+	2o	2-	17.3	19	26	21	12	15	17	14	13	17	16
17	1+	2+	3-	3-	1+	2o	1+	2o	15.7	10	20	21	21	9	15	10	15	15	14
18	2-	1+	2-	1+	2-	1+	0+	2-	11.0	12	9	11	8	11	8	3	11	9	10
19	3-	1-	1+	0o	1o	1+	1+	1o	9.3	25	5	9	1	6	9	9	6	9	8
20	1o	1+	1o	1+	1-	1+	1+	2-	9.7	7	9	7	8	5	8	9	11	8	8
21	2-	1o	2o	1-	2-	1+	1+	2o	11.7	12	6	15	5	13	9	8	15	10	10
22	2-	2-	1o	1-	0+	1o	1+	1o	9.3	18	12	6	5	2	6	8	6	8	8
23	1o	1+	0o	0+	0o	1o	1-	2-	6.0	7	10	1	2	1	7	5	11	6	7
24	2-	2+	1+	1o	0+	1o	1-	1+	9.7	13	20	10	6	3	6	4	8	9	8
25	2+	1o	2-	0+	1+	2o	5-	5o	18.3	19	7	11	3	9	15	85	87	30	26
26	3o	4-	3+	4-	3o	3o	2-	1+	22.7	31	46	37	45	27	27	11	10	29	33
27	3-	3-	2+	3+	2+	3-	2o	3+	21.3	25	23	19	35	19	26	16	36	25	25
28	3+	3o	3o	3+	1+	2o	1o	1o	18.0	37	30	27	35	8	16	6	7	21	19
29	2o	1o	2o	1o	2-	1o	1o	2-	11.3	15	7	16	7	13	6	6	12	10	9
30	1-	1-	1o	1+	1o	1o	1o	1+	8.0	4	4	7	9	7	7	7	10	7	8
Monthly mean value of Am													18.6						

October 1994													Am	Am2					
	Km						Σ Km	am											
1	1+	1+	1+	1o	1-	0o	0+	1-	6.7	9	9	8	7	5	1	2	4	6	6
2	0+	1o	1o	1+	2-	4-	3o	4+	16.3	2	7	6	9	12	42	33	67	22	40
3	5o	5+	6-	5o	6o	5o	5-	3o	39.7	100	111	137	101	149	101	73	31	100	72
4	4o	4-	4-	4-	4o	4o	3o	3+	29.3	54	42	49	42	54	56	33	37	46	57
5	4o	3+	3o	4+	4+	4+	4o	4-	31.0	53	37	29	70	67	65	55	50	53	50
6	4-	3+	4o	4o	4+	3+	3o	5-	30.3	48	39	51	57	65	39	29	72	50	50
7	4-	4-	4-	3-	5-	4o	4+	4o	30.7	44	46	45	25	73	59	69	55	52	47
8	3o	3+	3o	4-	1+	3-	3o	3-	22.7	27	34	28	45	10	24	31	21	28	34
9	2+	3-	3-	1+	2-	2o	3+	1+	17.3	20	22	23	9	12	15	35	10	18	21
10	3o	2+	3-	3-	2+	3o	3+	3+	22.7	30	18	24	25	18	28	39	35	27	26
11	2+	3o	3o	4-	4-	3-	4o	2o	24.3	20	27	32	42	43	24	52	15	32	29
12	2+	3+	3o	2o	2-	2o	4-	3o	21.0	18	35	27	16	11	14	45	29	24	27
13	2+	3-	3-	3o	2-	3-	2o	3-	19.7	18	24	25	31	12	21	16	21	21	20
14	2+	2-	1o	2o	1+	3-	2-	3-	15.3	20	13	6	15	10	24	13	26	16	20
15	4-	3o	3-	3-	3-	1+	1+	2-	19.0	42	33	21	23	21	8	10	11	21	18
16	2-	1+	2-	2o	1+	1o	1o	1o	11.0	12	8	11	15	10	7	6	6	9	10
17	1o	1o	1+	1+	1o	0+	1+	2-	9.0	7	6	8	8	7	3	9	12	8	7
18	1+	0+	0+	0+	0+	1+	2+	2-	8.3	10	2	2	3	2	8	15	19	8	7
19	1+	1o	1-	0+	2+	3-	3-	3o	14.0	9	6	5	2	17	23	23	30	14	13
20	3o	1+	1+	1o	1+	3-	2+	2o	15.0	28	9	8	7	10	21	20	15	15	15
21	2-	0+	1-	1o	0o	0+	1-	0+	5.0	11	3	4	6	1	2	4	3	4	11
22	1-	1-	3-	4o	4-	4-	3+	5+	24.0	4	4	21	54	50	46	36	111	41	43
23	5+	4+	5o	5-	5o	4-	4o	3+	35.3	113	67	93	75	93	43	58	35	72	62
24	3+	4-	4-	4-	3+	4+	4-	3o	28.7	39	44	41	43	34	67	46	28	43	42
25	2o	4-	3o	1+	1o	1-	2-	1o	14.3	15	42	30	10	6	5	12	6	16	23
26	3-	2-	1+	2o	2-	1+	2+	1+	14.3	22	13	10	14	13	9	19	8	14	11
27	1-	1+	1+	2o	2-	1-	1-	0+	8.7	5	8	9	14	11	4	4	3	7	8
28	1o	1-	2-	1o	2o	0+	1-	2o	9.3	6	5	11	6	14	3	5	14	8	19
29	3+	3-	4-	5+	6+	6o	3o	3o	33.3	37	23	47	106	199	171	27	28	80	60
30	4-	4+	5o	5-	5o	4-	5o	4-	35.0	42	70	96	83	87	45	97	46	71	74
31	4-	3-	4-	5-	5-	4o	4o	3+	30.7	45	26	41	81	75	53	56	35	52	51
Monthly mean value of Am													31.5						

am INDICES 1994 (continued)

November 1994													Am	Am2					
	Km						Σ Km	am											
1	3+	3+	3-	3o	3-	3+	2o	2+	22.7	37	38	25	27	25	35	16	18	28	36
2	4-	3-	2+	4-	4-	3o	2o	3o	24.0	41	26	20	44	46	32	16	30	32	26
3	1+	2o	2o	3-	3+	3-	3o	2o	19.0	8	16	14	22	38	26	27	16	21	26
4	3-	4o	3-	3o	2o	3o	4o	3o	24.3	23	54	22	31	16	32	53	29	33	28
5	3+	2+	1+	3-	3-	3-	4-	4-	22.3	34	18	10	26	21	22	42	50	28	37
6	3o	4o	4o	5o	4-	4+	3+	1o	28.3	33	51	59	95	45	62	40	7	49	37
7	2-	2o	2+	2+	1o	2-	3-	1-	14.3	11	15	19	19	7	11	23	5	14	18
8	1-	1-	2o	2o	1o	1o	2-	2-	9.7	5	4	5	15	14	7	6	12	9	10
9	2-	1o	2-	2+	4-	4-	4o	4-	21.7	11	7	13	17	41	45	54	49	30	26
10	3o	4o	3o	3-	2-	2+	3o	2+	22.0	27	55	33	24	13	18	29	18	27	29
11	2-	2o	2o	3-	1+	1+	1o	2-	13.7	12	15	16	21	9	8	7	13	13	14
12	1+	1+	2-	1o	0+	1+	1+	1o	9.3	9	10	13	6	3	9	10	7	8	9
13	1+	2-	1+	1+	2-	3-	2-	1+	13.0	8	13	10	8	13	22	11	10	12	11
14	2-	2o	2-	1+	1+	2-	3-	3o	15.3	13	15	12	10	9	13	21	27	15	14
15	2-	1+	2o	2o	2+	2o	3o	3-	17.0	12	9	14	15	19	14	27	24	17	15
16	2o	1+	1+	0+	1+	2o	1+	0+	10.0	16	10	8	2	8	16	8	2	9	12
17	1-	3-	1+	1o	0+	0+	2+	2-	10.3	5	21	9	7	3	3	19	11	10	9
18	1-	1-	2o	2o	2+	2-	2-	2-	11.7	5	4	5	16	16	20	13	13	12	17
19	3-	4o	3+	3o	3o	3+	3o	3-	25.0	22	52	37	32	32	38	29	25	33	32
20	2+	3o	4+	4+	4+	3-	2-	2-	24.3	19	32	69	64	64	21	13	13	37	30
21	2-	2-	2-	2o	1+	1o	1o	1+	12.0	13	13	13	14	8	9	6	8	11	14
22	1o	2-	1-	2-	1-	2o	2-	1+	10.7	6	12	4	13	5	14	12	9	9	8
23	1-	1o	1-	1o	1+	1o	0+	1+	7.3	4	6	4	6	8	7	3	9	6	8
24	1-	2-	2+	1-	1o	2-	1o	1-	9.7	5	12	18	5	7	11	6	4	9	7
25	1-	1-	1-	1-	1o	0+	1o	1+	6.3	5	5	4	4	7	2	6	9	5	18
26	1-	2-	4+	6-	5+	5o	4-	2o	28.3	5	12	63	143	120	88	41	16	61	41
27	2+	3o	3+	4+	4o	4-	3o	2+	26.0	20	27	34	65	57	46	29	17	37	40
28	2-	2-	3-	3-	3o	3-	2o	1o	17.7	13	11	24	26	27	24	17	7	19	21
29	1-	2-	1+	2-	2+	2+	2+	2o	14.3	4	12	9	13	17	17	17	15	13	19
30	2+	3-	3o	4o	3o	3-	2+	3o	23.0	20	24	33	51	27	23	20	29	28	24
Monthly mean value of Am													21.1						

December 1994													Am	Am2					
	Km						Σ Km	am											
1	2o	3-	3-	3o	3+	3-	2-	3+	21.3	15	21	25	27	35	26	11	37	25	25
2	3-	3o	3-	3-	4o	3+	3+	4-	25.3	21	29	25	25	56	37	34	43	34	29
3	3+	2o	2+	2-	3o	1+	2+	2-	17.7	38	14	20	12	32	8	19	13	20	23
4	2o	1-	1-	2-	1+	0+	2+	0+	10.0	15	5	8	11	9	3	20	3	9	11
5	1-	1-	1+	2o	3-	2+	2-	3-	14.0	4	4	9	15	21	18	13	24	14	19
6	3-	3o	5-	3o	4-	4o	4o	3+	28.3	22	33	85	27	43	58	51	35	44	33
7	3-	3-	3-	2+	3-	3+	3-	3+	22.3	26	26	22	19	21	34	21	35	26	31
8	3+	2+	3-	3o	3o	3-	3-	2+	22.0	35	20	22	31	27	23	23	18	25	24
9	3o	1+	2-	3-	2o	2o	2+	3-	17.7	27	9	12	21	15	15	17	21	17	18
10	3-	2-	2-	1+	1+	3-	3-	2o	16.0	25	13	12	9	8	21	23	16	16	14
11	1+	1o	1+	1+	2-	3-	3+	3o	15.7	9	7	8	10	11	26	38	30	17	18
12	3o	2+	2+	2o	3-	3-	3+	3o	21.3	31	20	20	14	25	23	37	30	25	26
13	3-	3+	3o	3-	3-	3+	2-	2-	21.0	21	35	31	23	26	35	11	12	24	22
14	2o	1+	1-	2o	2-	2-	2-	3-	14.3	14	8	4	15	13	13	18	21	13	18
15	2o	2+	3o	3o	4+	4o	4-	4-	26.0	16	17	28	31	69	56	41	48	38	30
16	3o	3-	3-	3o	4-	3-	1+	1+	20.3	32	25	24	30	44	24	9	9	25	29
17	2-	1+	3-	2o	2-	2+	2-	1+	14.7	11	10	21	15	11	13	18	8	13	14
18	1+	2-	1-	1o	2-	2o	2+	2-	13.0	10	11	10	6	11	16	17	12	12	13
19	1-	2+	2+	2+	2+	1o	0+	1o	12.3	4	17	17	20	19	7	2	6	12	14
20	2o	2-	2-	3-	2+	3o	3-	3-	19.3	16	12	20	21	20	27	23	22	20	14
21	2-	1+	1o	2o	1o	1+	1+	1-	11.0	11	8	10	7	15	7	9	8	9	12
22	1o	2-	1-	0+	1o	0+	0o	0o	5.0	7	11	5	3	7	3	1	1	5	9
23	2o	1+	2+	2+	1o	3-	2-	3o	16.3	15	10	18	19	6	23	11	28	16	21
24	4-	3+	4o	4o	4+	5-	4+	4o	32.3	43	36	58	58	63	76	64	51	56	39
25	3+	3-	3-	3o	3o	2o	3-	3-	22.7	39	22	23	27	37	27	15	23	27	35
26	3o	2+	2-	3-	3o	3+	3o	3-	22.3	28	19	19	24	28	34	28	25	26	23
27	2o	2-	1+	2o	3-	2-	4o	4-	19.0	15	12	10	16	24	13	54	42	23	22
28	2+	1o	1-	2o	3-	3-	1+	3-	15.3	20	7	4	15	21	24	10	21	15	23
29	3+	3-	3-	3-	2+	3-	1+	1-	18.3	37	21	23	24	20	23	8	5	20	18
30	1+	3-	2-	2-	2-	2-	1+	1-	12.7	9	23	12	11	12	11	8	5	11	11
31	1-	1+	1o	1+	1o	1+	1+	1+	9.3	5	8	7	10	6	9	9	10	8	8
Monthly mean value of Am													20.8						

MONTHLY and YEARLY am 1959 - 1994

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
1993	28.6	25.9	37.7	28.8	21.1	20.0	17.4	19.3	24.0	24.0	23.6	24.6	24.5
1994	24.7	44.1	37.8	40.9	39.6	25.7	18.9	14.2	18.6	31.5	21.1	20.8	28.2

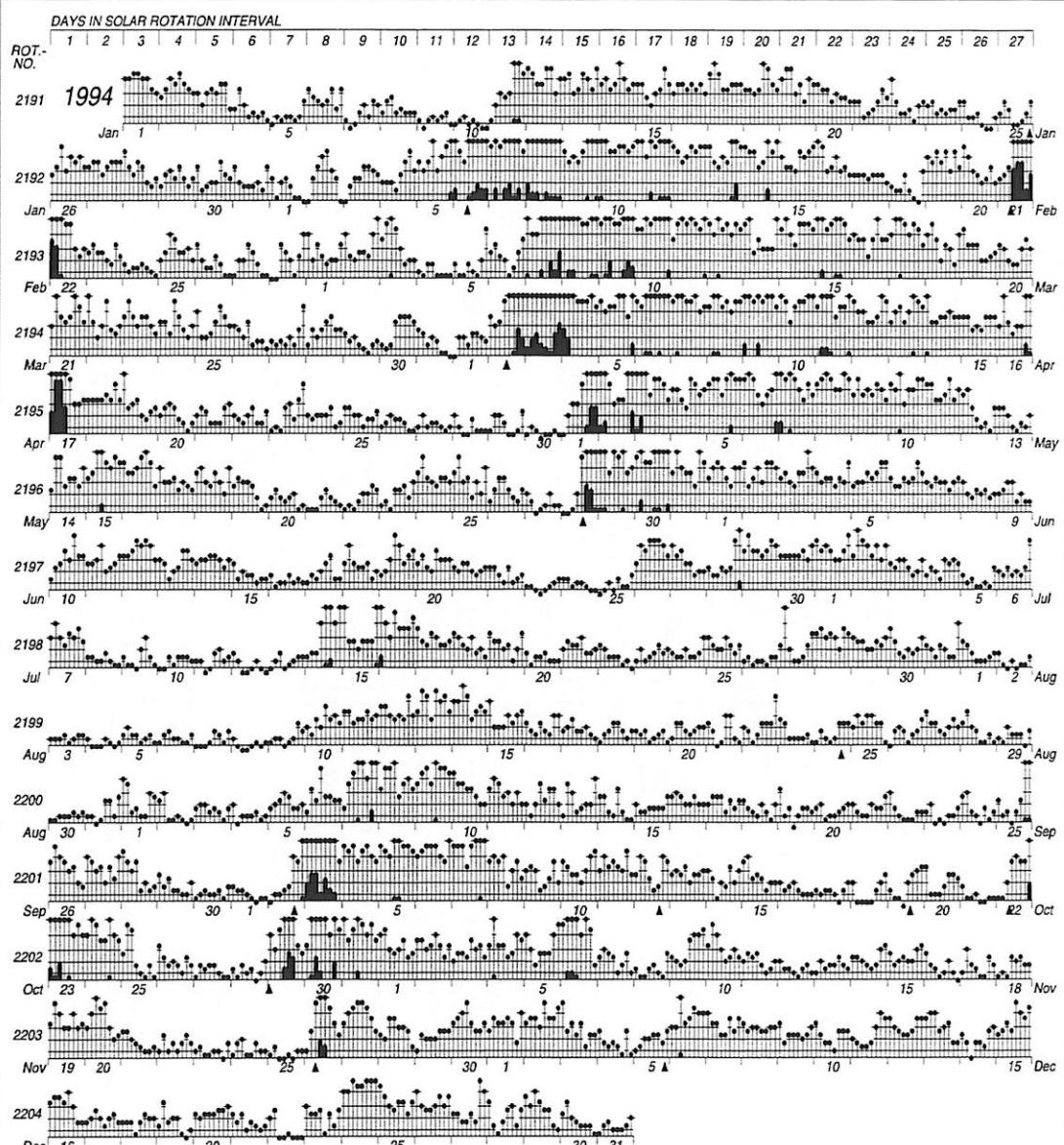
Unit : nT

SECTION 3

3.3 Kp INDICES

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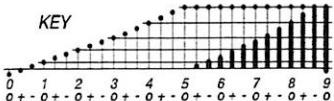
MUSICAL DIAGRAM OF K_p 1994



K_p (after Bartels)

▲ = sudden
commencement

1994



Kp INDICES 1994

	Kp								Sum	Jan 1994				ap	Sum	Ap	Cp			
	4o	4o	4+	4+	4o	4o	3+	3o		27	27	32	32							
1	4o	4o	4+	4+	4o	4o	3+	3o	31o	27	27	32	32	27	27	18	15	205	26	1.2
2	3-	3+	4o	4-	4+	4-	3+	3o	28o	12	18	27	22	32	22	18	15	166	21	1.1
3	3o	2o	3o	3+	3o	4-	4-	2-	23+	15	7	15	18	15	22	22	6	120	15	0.8
4	2-	3+	2o	1o	1+	1o	1+	1-	12+	6	18	7	4	5	4	5	3	52	6	0.3
5	0+	1o	1-	1o	1o	1-	1o	2+	8o	2	4	3	4	4	3	4	9	33	4	0.1
6	3+	3-	2+	2o	2+	3+	2-	3+	21o	18	12	9	7	9	18	6	18	97	12	0.7
7	1-	0o	0+	1+	2o	1o	2+	2o	10-	3	0	2	5	7	4	9	7	37	5	0.2
8	1+	2+	3-	1+	2-	1+	1+	1+	13+	5	9	12	5	6	5	5	5	52	6	0.3
9	1-	0o	1-	1o	1-	1o	1+	0+	6-	3	0	3	4	3	4	5	2	24	3	0.1
10	0+	1-	1o	0+	1-	0+	0o	0o	3+	2	3	4	2	3	2	0	0	16	2	0.0
11	1-	2o	3o	3-	3o	5+	5+	4+	26+	3	7	15	12	15	56	56	32	196	24	1.2
12	5-	4+	4-	4-	5-	5-	3o	4o	33-	39	32	22	22	39	39	15	27	235	29	1.3
13	4o	4+	3o	3+	4+	4o	3+	5-	31o	27	32	15	18	32	27	18	39	208	26	1.2
14	4-	4o	3+	4-	5o	4o	3+	4-	31-	22	27	18	22	48	27	18	22	204	26	1.2
15	4-	4-	3-	2o	3o	3-	5-	4-	27-	22	22	12	7	15	18	39	22	157	20	1.0
16	3o	4-	4-	3+	4-	3+	4-	3o	27+	15	22	22	18	22	18	22	15	154	19	1.0
17	4+	5o	4+	3+	3+	4-	4-	4-	31+	32	48	32	18	18	22	22	22	214	27	1.2
18	3+	3o	3o	3-	5o	5-	4-	3+	30-	18	18	15	18	48	39	22	18	196	24	1.2
19	4o	5-	5-	3o	4-	2+	4o	4-	30o	27	39	39	15	22	9	27	22	200	25	1.2
20	4-	3+	3+	2+	3o	3-	3-	2+	23+	22	18	18	9	15	12	12	9	115	14	0.8
21	2+	2+	1o	1+	2-	2+	3+	3-	17o	9	9	4	5	6	9	18	12	72	9	0.5
22	4o	2+	1+	1+	2-	1-	2o	2+	16-	27	9	5	5	6	3	7	9	71	9	0.5
23	2o	2+	1+	2-	1+	2-	2-	2+	14+	7	9	5	6	5	6	6	9	53	7	0.3
24	2+	1o	1o	1+	0+	0o	0o	0o	10	7o	9	4	4	2	0	0	4	28	4	0.1
25	1+	2+	2-	0+	0+	1-	1+	2+	10+	5	9	6	2	2	3	5	9	41	5	0.2
26	3-	3+	5-	3o	4o	4-	4o	3+	29-	12	18	39	15	27	22	27	18	178	22	1.1
27	3+	4-	4-	3-	3+	4-	4-	4-	28-	18	22	22	12	18	22	22	22	158	20	1.0
28	4+	3+	3-	4-	3+	2o	2-	2+	23+	32	18	12	22	18	7	6	9	124	16	0.9
29	2-	3-	3o	2+	3+	2+	2-	2+	19+	6	12	15	9	18	9	6	9	84	10	0.6
30	3+	1+	2-	2o	2o	4-	3-	2+	19o	18	5	6	7	7	22	12	9	86	11	0.6
31	3+	2o	2-	2-	2-	2o	1+	3+	17o	18	7	6	6	6	7	5	18	73	9	0.5

	Kp								Sum	Feb 1994				ap	Sum	Ap	Cp			
	2+	1-	2o	2+	2-	1-	1-	0+		9	3	7	9							
1	2+	1-	2o	2+	2-	1-	1-	0+	11-	9	3	7	9	6	3	3	2	42	5	0.2
2	0+	2+	3+	4o	4+	3o	2+	0+	20o	2	9	18	27	32	15	9	2	114	14	0.8
3	0+	2-	2+	2+	3+	3+	3o	3-	19o	2	6	9	9	18	18	15	12	89	11	0.6
4	2o	2o	2+	1o	3-	4-	4+	3o	21o	7	7	7	5	12	22	32	15	107	13	0.8
5	4-	3o	4-	5o	3o	4o	5-	6-	33-	22	15	22	48	15	27	39	67	255	32	1.3
6	6o	4+	4-	5-	6-	6+	6o	6o	43+	80	32	22	56	67	94	80	80	511	64	1.7
7	5-	6o	5-	6o	6+	5o	6+	4+	43+	39	80	39	80	94	56	80	32	500	62	1.7
8	6+	6-	6-	5o	6-	5+	5+	5+	44+	94	67	67	48	67	56	56	56	511	64	1.7
9	4+	4-	4o	4-	4+	4-	5o	5o	36-	32	22	27	22	32	56	48	56	295	37	1.4
10	5+	5o	4+	4+	5-	5-	4+	5+	37+	56	48	32	32	39	39	32	39	317	40	1.4
11	5o	5o	4o	6-	5-	5+	5+	5+	40+	48	48	27	67	39	56	56	56	397	50	1.6
12	5-	4+	4-	4o	5-	4+	5-	5-	35o	39	32	22	27	39	32	39	39	269	34	1.3
13	5-	4-	3+	4o	4-	5+	6+	5-	36-	39	22	18	27	22	56	94	39	317	40	1.4
14	5-	4+	4+	3+	4-	6o	4o	5o	36-	39	32	32	18	22	80	32	48	303	38	1.4
15	4o	3+	3+	3o	4+	4o	4+	5-	31o	27	18	18	15	32	27	32	39	208	26	1.2
16	5o	5-	3o	3+	4o	3o	3+	3-	29o	48	39	15	18	27	15	18	12	192	24	1.2
17	3-	3-	3-	2o	3-	3-	3-	3-	20+	12	12	12	9	12	12	12	12	88	11	0.6
18	2-	1+	1+	3-	1+	1-	0+	3o	12+	6	5	5	12	5	3	2	15	53	7	0.3
19	4o	4-	4+	4-	4+	3o	4+	3+	31-	27	22	32	22	32	15	32	18	200	25	1.2
20	5-	4o	3o	3-	2o	2+	3-	2o	24o	39	27	15	12	7	9	18	7	134	17	0.9
21	2+	3-	3+	7+	8-	8-	6o	7o	44o	9	12	18	154	179	179	80	132	763	95	1.9
22	8-	7+	5+	5-	5-	5-	3o	2+	38o	179	154	56	39	39	15	9	15	506	63	1.7
23	3-	3-	3-	3-	2o	2-	3+	2+	21-	12	18	12	12	7	6	18	9	94	12	0.7
24	2-	1o	1+	1+	2-	1+	1-	1o	10o	6	4	5	5	6	5	4	3	38	5	0.2
25	2o	3-	4o	4-	3-	3-	3o	2o	23-	7	12	27	22	12	12	15	7	114	14	0.8
26	3+	2o	1+	1+	2+	2-	1-	1-	13+	18	7	5	5	9	6	3	3	56	7	0.4
27	1-	2o	2o	3+	3-	2-	1-	1-	14-	3	7	7	18	12	7	6	3	59	7	0.4
28	0+	0+	3+	3-	2o	1-	2+	4o	16-	2	2	18	12	7	3	9	27	80	10	0.6

Kp INDICES 1994 (continued)

	Kp												Sum	Mar 1994				ap				Sum	Ap	Cp
1	4o	2o	3+	2+	2-	2o	2o	3+	21-	27	7	18	9	6	7	7	18	99	12	0.7				
2	4o	2+	2o	3-	3-	2+	4o	5o	25o	27	9	7	12	12	9	27	48	151	19	1.0				
3	4-	5-	5+	4+	3o	2-	2o	2o	27-	22	39	56	32	15	6	7	7	184	23	1.1				
4	1o	1-	2-	2-	1-	1-	1-	1-	8-	4	3	6	6	3	3	3	3	31	4	0.1				
5	2-	1-	1-	2-	1o	1-	2o	4+	13-	6	3	3	6	4	3	7	32	64	8	0.4				
6	3-	3+	2+	2o	1-	1+	3-	4-	19-	12	18	9	7	3	5	12	22	88	11	0.6				
7	5+	4o	4o	6-	5o	6+	6-	7o	43o	56	27	27	67	48	94	67	132	518	65	1.7				
8	5o	6-	6-	5o	5-	5-	5+	5+	41+	48	67	67	48	39	39	56	56	420	52	1.6				
9	5-	5+	6+	5-	5-	6-	6+	6o	44-	39	56	94	39	39	67	94	80	508	64	1.7				
10	4+	4+	5o	5-	5o	5o	5o	6-	39o	32	32	48	39	48	48	48	67	362	45	1.5				
11	4-	5-	5o	5-	5o	5-	4+	5+	37+	22	39	48	39	48	39	32	56	323	40	1.5				
12	5-	4o	5+	4+	5-	4o	5-	4+	36o	39	27	56	32	39	27	39	32	291	36	1.4				
13	5-	5o	3-	4-	3o	3o	3o	5o	30o	39	48	12	22	15	15	15	48	214	27	1.2				
14	4+	5o	4o	3+	5-	5-	5-	4-	35o	32	48	27	18	39	39	39	32	274	34	1.4				
15	5o	6-	4+	5-	5-	5+	5-	4-	39-	48	67	32	39	56	56	39	22	359	45	1.5				
16	4o	4-	4-	2+	4-	5o	4-	4-	30-	27	22	22	9	22	48	22	22	194	24	1.2				
17	4o	5o	5+	5-	4o	5-	4+	3+	35+	27	48	56	39	27	39	32	18	286	36	1.4				
18	4o	5-	4-	2o	3+	3o	2-	4o	26+	27	39	22	7	18	15	6	27	161	20	1.0				
19	4+	3+	3+	3+	2o	2o	2+	3-	23+	32	18	18	18	7	7	9	12	121	15	0.9				
20	3+	3o	2o	2-	2-	3o	4-	3o	21+	18	15	7	6	6	15	22	15	104	13	0.7				
21	3o	5o	4-	3+	4-	5o	4+	3+	31+	15	48	22	18	22	48	32	18	223	28	1.2				
22	5o	3+	2o	3o	5-	3-	2+	3o	26o	48	18	7	15	39	12	9	15	163	20	1.0				
23	4-	5-	4-	3o	4-	4-	3o	2+	28-	22	39	22	15	22	22	15	9	166	21	1.1				
24	3+	3+	2+	5-	4-	3-	2o	3o	25o	18	18	9	39	22	12	7	15	140	18	1.0				
25	4o	2o	2o	2+	3+	4+	4-	3o	25-	27	7	7	9	18	32	22	15	137	17	0.9				
26	3o	3-	2o	3+	1+	2-	2-	1o	17-	15	12	7	18	5	6	6	4	73	9	0.5				
27	2-	1+	2-	1+	2o	1+	3-	4+	16+	6	5	6	5	7	5	12	32	78	10	0.5				
28	1+	3-	2o	3-	3+	4-	3-	3-	21o	5	12	7	12	18	22	12	12	100	12	0.7				
29	2+	2-	2o	1+	1o	1-	1+	2-	12o	9	6	7	5	4	3	5	6	45	6	0.3				
30	1+	1o	1+	3+	4-	4-	4-	3+	21+	5	4	5	18	22	22	22	18	116	14	0.8				
31	3-	2+	1+	2o	2-	1-	1-	0+	12-	12	9	5	7	6	3	3	2	47	6	0.3				

	Kp												Sum	Apr 1994				ap				Sum	Ap	Cp
1	0+	2o	2o	1+	2+	2+	2+	2o	2-	14o	2	7	7	5	9	9	7	6	52	6	0.3			
2	4-	3o	3+	5-	5o	5+	7o	6+	38+	22	15	18	39	48	56	132	94	424	53	1.6				
3	6-	7-	6o	6-	5-	5+	7-	7+	50-	67	94	111	80	67	56	111	154	740	92	1.9				
4	7o	6+	5o	5-	5-	5-	5o	4+	42-	132	94	48	39	39	48	32	471	59	1.7					
5	5-	4o	4+	4+	5o	5o	4-	6o	37o	39	27	32	32	48	48	22	80	328	41	1.5				
6	5-	4+	5+	5+	5o	5+	5o	5o	40o	39	32	56	56	48	48	48	48	383	48	1.6				
7	5-	5+	5o	5-	5-	5-	5o	4o	4+	38-	39	56	48	39	39	48	27	328	41	1.5				
8	4+	5+	5+	4+	5-	4o	5-	5-	37+	32	56	56	32	39	27	39	39	320	40	1.4				
9	6o	5o	5-	6o	5-	5-	5o	5o	4+	41-	80	48	39	80	39	48	48	32	414	52	1.6			
10	5o	5-	3+	4+	5-	5-	5-	5o	37-	48	39	18	32	39	39	48	48	311	39	1.4				
11	4+	6-	6-	5+	4-	4+	4+	5+	39-	32	67	67	56	22	32	32	56	364	46	1.5				
12	5-	4o	4o	3+	3+	4-	5-	5o	5-	33-	39	27	27	18	18	22	48	39	238	30	1.3			
13	3+	4o	4+	3+	4-	5-	4+	3-	33+	18	27	32	18	27	56	39	32	249	31	1.3				
14	5+	3+	3+	4-	4-	4o	4-	4-	31-	56	18	18	18	22	27	22	22	207	26	1.2				
15	4-	4-	3-	3o	3-	4-	4-	4-	27-	22	22	12	15	12	22	22	22	149	19	1.0				
16	3o	5o	3+	2+	3o	3o	6o	5+	31o	15	48	18	9	15	15	80	56	256	32	1.3				
17	7-	8+	8+	7o	5-	3o	3o	3+	44+	111	236	236	132	39	15	15	18	802	100	1.9				
18	3+	3+	3+	3-	4-	3+	4+	3+	28o	18	18	18	18	22	18	32	18	162	20	1.0				
19	5o	3-	3o	3+	2o	2-	2+	3-	23-	48	12	15	18	7	6	9	12	127	16	0.9				
20	2o	3-	3o	3-	2-	1+	1-	1+	15+	7	12	15	12	6	5	3	5	65	8	0.4				
21	2o	3-	2+	1+	1+	1-	3-	3o	17-	7	12	9	5	5	5	12	15	70	9	0.5				
22	2o	2-	1+	2o	3-	1+	1+	2+	15-	7	6	5	7	12	5	5	9	56	7	0.4				
23	1-	1o	1-	3-	3o	2-	3+	4+	17+	3	4	3	12	15	6	18	32	93	12	0.7				
24	2o	2-	2o	2o	2o	3-	1o	1+	15-	7	6	7	7	7	12	4	5	55	7	0.3				
25	3-	3-	2o	2o	1o	2-	2-	2+	16o	12	12	7	7	4	6	6	9	63	8	0.4				
26	1o	1+	2o	2-	2-	1+	1-	1-	10+	4	5	7	6	6	5	3	3	39	5	0.2				
27	1o	2o	1o	1+	1-	1o	1-	1o	9+	4	7	4	5	5	4	3	4	36	4	0.2				
28	2o	1o	0+	2-	1-	1-	1-	1-	7+	7	4	2	2	6	3	3	3	30	4	0.1				
29	1-	2o	2o	1+	0+	0+	1-	2+	10-	3	7	7	5	2	2	3	3	38	5	0.2				
30	0+	1o	1-	0o	0+	0+	1-	0+	4-	2	4	3	0	2	2	2	2	18	2	0.0				

Kp INDICES 1994 (continued)

	Kp								Sum		May 1994					ap				Sum			Ap	Cp
	0+	20	30	30	4+	6-	70	70	32+	2	7	15	15	32	67	132	132	402	50	1.6				
1	0+	20	30	30	4+	6-	70	70	32+	2	7	15	15	32	67	132	132	402	50	1.6				
2	6-	60	4+	30	3+	3+	50	7-	37+	67	80	32	15	18	18	48	111	389	49	1.6				
3	5+	6+	50	4-	5-	5-	4+	3+	37+	56	94	48	22	39	39	32	18	348	44	1.5				
4	40	40	3+	3-	5-	4+	4-	40	31-	27	27	18	12	39	32	22	27	204	26	1.2				
5	4+	5-	5-	4-	5-	6-	5-	5-	370	32	39	39	22	39	67	39	39	316	40	1.4				
6	5-	50	5-	4-	30	4-	40	60	35-	39	48	39	22	15	22	27	80	292	36	1.4				
7	60	5-	5+	5-	40	3+	4+	4-	360	80	39	56	39	27	18	32	32	313	39	1.4				
8	4+	5-	50	5-	40	40	50	5-	36+	32	39	48	39	27	27	48	39	299	37	1.4				
9	4-	5-	4-	40	4-	4+	40	3+	31+	22	39	22	27	22	32	27	18	209	26	1.2				
10	4+	40	5+	30	40	40	5-	5-	340	32	27	56	15	27	27	39	39	262	33	1.3				
11	4+	4+	3+	3+	4-	5-	3+	40	310	32	32	18	18	22	39	18	27	206	26	1.2				
12	4-	40	3-	2-	10	1+	1-	3-	18-	22	27	12	6	4	5	3	12	91	11	0.7				
13	3-	3-	20	10	1-	1+	10	20	13+	12	12	7	4	3	5	4	7	54	7	0.3				
14	2+	5-	5-	3-	3+	3-	4-	40	28-	9	39	39	12	18	18	12	27	174	22	1.1				
15	3+	4-	50	6-	4+	40	5-	4+	350	18	22	48	67	32	27	39	32	285	36	1.4				
16	4+	4-	4-	40	5-	50	4+	3-	32+	32	22	22	27	39	48	32	12	234	29	1.3				
17	40	30	30	3+	2+	30	3-	2+	24-	27	15	15	18	9	15	12	9	120	15	0.8				
18	4-	40	30	3-	4-	30	20	40	260	22	27	15	12	22	15	7	27	147	18	1.0				
19	3-	3+	30	30	3-	2-	1-	10	180	12	18	15	15	12	6	3	4	85	11	0.6				
20	2-	2+	2-	1+	2-	20	1-	10	12+	6	9	6	5	6	7	3	4	46	6	0.3				
21	1-	1-	1-	2-	2+	2-	1+	10	100	3	3	3	6	9	6	5	4	39	5	0.2				
22	1-	10	1-	1+	20	20	3-	2+	13-	3	4	3	5	7	7	12	9	50	6	0.3				
23	10	1+	1-	2+	2+	3-	2-	30	150	4	5	3	9	9	12	6	15	63	8	0.4				
24	4-	5-	3+	30	3-	3+	3-	30	270	22	39	18	15	12	18	18	15	157	20	1.0				
25	4-	5-	30	3+	2-	30	20	40	25+	22	39	15	18	6	15	7	27	149	19	1.0				
26	1+	2+	3+	3+	2+	2-	1+	2+	180	5	9	18	18	9	6	5	9	79	10	0.6				
27	20	1+	0+	1-	10	20	10	10	9+	7	5	2	3	4	7	4	4	36	4	0.2				
28	0+	0+	1-	20	5-	70	7-	5+	270	2	2	3	7	39	132	111	56	352	44	1.5				
29	5+	5+	4-	50	5-	5-	4-	40	370	56	56	22	48	39	56	22	27	326	41	1.5				
30	5-	60	4+	4+	5+	5+	50	6-	41-	39	80	32	32	56	56	48	48	410	51	1.6				
31	4-	50	40	4-	4-	3-	3-	50	4+	320	22	48	27	22	22	12	48	32	233	29	1.3			

	Kp								Sum		Jun 1994									Sum			Ap	Cp
	3+	40	4+	40	3+	3-	40	40	30-	18	27	32	27	18	12	27	27	188	24	1.1				
1	3+	40	4+	40	3+	3-	40	40	30-	18	27	32	27	18	12	27	27	188	24	1.1				
2	4+	3-	3+	40	30	4+	4+	40	300	32	12	18	27	15	32	32	27	195	24	1.2				
3	3-	4-	30	3-	4-	4-	50	40	290	18	22	15	12	22	22	48	27	186	23	1.1				
4	4-	4-	30	3+	3+	3-	3-	30	4-	22	15	18	18	12	18	15	32	150	19	1.0				
5	3-	30	30	4-	3-	4-	4+	4+	280	12	15	15	22	18	22	32	32	168	21	1.1				
6	3+	3-	3-	3+	30	3+	4+	4-	26+	18	12	12	18	15	18	32	22	147	18	1.0				
7	30	3-	3+	30	30	2+	30	3+	24-	15	12	18	15	15	9	15	18	117	15	0.8				
8	30	20	2-	2-	20	2+	2-	20	170	15	7	6	9	7	9	6	7	66	8	0.4				
9	20	2+	30	30	1+	2+	1-	1+	16+	7	9	15	15	5	7	5	5	68	8	0.5				
10	1+	2+	3-	4-	30	5-	3-	3+	24+	5	9	12	22	15	39	18	18	138	17	0.9				
11	3-	3-	30	40	20	2+	3-	3+	23-	12	12	15	27	7	9	12	18	112	14	0.8				
12	3+	3+	4-	4+	40	4+	40	30	300	18	18	22	32	27	32	27	15	191	24	1.2				
13	30	3-	1+	20	2+	4-	4-	30	22-	15	12	5	7	9	22	22	15	107	13	0.8				
14	3-	30	30	3-	3-	3-	2+	30	24-	12	15	15	18	18	15	9	15	117	15	0.8				
15	3-	1+	20	2-	2-	10	1-	1+	130	12	5	7	6	6	4	5	5	50	6	0.3				
16	2-	1-	10	10	2-	10	1+	10	9+	6	3	4	4	6	4	5	4	36	4	0.2				
17	10	2-	1+	20	3-	3+	1+	1+	15-	4	6	5	7	12	18	5	5	62	8	0.4				
18	3-	40	3-	2-	20	2+	3-	1+	200	12	27	12	9	9	12	5	5	93	12	0.7				
19	2-	20	30	5-	40	3-	3-	4-	250	6	7	15	39	27	12	18	22	146	18	1.0				
20	3-	3+	2+	20	4-	3-	30	30	230	12	18	9	7	22	15	15	15	113	14	0.8				
21	2+	20	3-	3-	20	2-	20	2+	18-	9	7	12	12	7	6	7	9	69	9	0.5				
22	2+	2+	2-	10	2+	10	1+	2-	14-	9	9	6	4	9	4	5	6	52	6	0.3				
23	1-	1-	0+	00	0+	1-	10	1+	50	5	3	3	2	0	2	3	4	5	22	3	0.0			
24	1+	1-	1-	10	10	1-	0+	0+	5-	0	5	5	3	4	4	3	2	28	4	0.1				
25	00	0+	10	0+	1+	1-	1-	2-	60	0	2	4	2	5	3	3	6	25	3	0.1				
26	3-	40	4-	4+	4+	4-	40	30	31-	12	27	22	32	32	32	27	18	202	25	1.2				
27	40	3-	4-	3-	3-	2-	20	20	220	27	18	22	12	12	6	7	7	111	14	0.8				
28	2+	2-	2-	2+	20	2+	4+	6-	22+	9	6	6	9	7	9	32	67	145	18	1.0				
29	4-	5-	4-	4-	3-	4-	4-	40	310	22	39	22	22	18	22	32	27	204	26	1.2				
30	3-	3-	3-	3-	3-	4-	3-	40	27+	18	18	18	18	18	22	15	27	154	19	1.0				

Kp INDICES 1994 (continued)

	Kp	Sum	Jul 1994	ap					Sum	Ap	Cp
1	4+ 4- 40 4- 3o 3o 4- 5-	300	32 22 27 22	15	15	22	39	194	24	1.2	
2	3+ 50 4+ 40 3+ 40 3o 40	310	18 48 32 27	18	27	15	27	212	26	1.2	
3	3- 2+ 3o 3o 2+ 2- 20 3o	200	12 9 15 15	9	6	7	15	88	11	0.6	
4	2- 2+ 2o 1+ 3o 3- 3o 3-	19-	6 9 7 5	15	12	15	12	81	10	0.6	
5	2- 1o 1+ 1- 1- 1o 1- 2+	9+	6 4 5 3	3	4	3	9	37	5	0.2	
6	2o 2- 2+ 2- 2o 2- 2+ 4+	180	7 6 9 6	7	6	9	32	82	10	0.6	
7	3o 4o 3o 2+ 3+ 3o 4- 3-	250	15 27 15 9	18	15	22	12	133	17	0.9	
8	1+ 1+ 1o 1o 2- 1o 1- 1-	9-	5 5 4 4	6	4	3	3	34	4	0.1	
9	1+ 1- 0+ 2o 3o 1+ 1-	100	5 3 3 2	7	15	5	3	43	5	0.2	
10	0+ 0+ 1+ 1- 1+ 1+ 1o	8-	2 2 5 3	5	5	5	4	31	4	0.1	
11	1o 1o 0o 0+ 2- 2o 1o 1+	8+	4 4 0 2	6	7	4	5	32	4	0.1	
12	2- 1o 0o 0o 0+ 1o 0+ 0o	4+	6 4 0 0	2	4	2	0	18	2	0.0	
13	0+ 1o 2- 0+ 1- 1o 1+ 1-	8-	2 4 6 2	3	4	5	5	31	4	0.1	
14	1+ 2- 2- 4o 5+ 6- 4o 5o	29-	5 6 6 27	56	67	27	48	242	30	1.3	
15	5o 3- 3- 2o 3- 3- 3- 5+	26-	48 12 12 7	12	12	12	56	171	21	1.1	
16	6o 4o 3o 5- 4- 4- 4+	330	80 27 15 39	22	22	22	32	259	32	1.3	
17	4- 3- 2+ 3+ 3o 2+ 2+ 3-	22+	22 12 9 18	15	9	12	106	13	0.8		
18	3+ 3o 2+ 2o 3o 2- 2o 1+	19-	18 15 9 7	15	6	7	5	82	10	0.6	
19	3+ 3- 3- 2o 2+ 1o 2o 3+	19+	18 12 12 7	9	4	7	18	87	11	0.6	
20	2- 1- 1+ 1+ 2- 1o 1o 1o	10-	6 3 5 5	6	4	4	4	37	5	0.2	
21	2o 3- 2+ 2+ 3o 2- 2- 2o	18-	7 12 9 9	15	6	6	7	71	9	0.5	
22	2+ 2o 1+ 1+ 1+ 1- 1o 0+	10+	9 7 5 5	5	3	4	2	40	5	0.2	
23	1o 2o 1o 1+ 2- 2+ 2- 2o	130	4 7 4 5	5	6	9	7	48	6	0.3	
24	2- 1+ 1+ 2o 1+ 1+ 2- 3o	14-	6 5 5 7	5	6	9	15	54	7	0.3	
25	3o 2+ 2o 2o 3o 2+ 2- 2+	19-	15 9 7 7	15	9	6	9	77	10	0.5	
26	1o 1+ 1- 1o 1o 1- 1+ 1+	8+	4 5 3 4	4	3	5	5	33	4	0.1	
27	2+ 5o 2o 1o 1o 1+ 2+ 3+	18+	9 48 7 4	4	5	9	18	104	13	0.7	
28	3+ 4- 3o 3+ 3o 2o 4- 3+	25+	18 22 15 18	15	7	22	18	135	17	0.9	
29	3o 3- 3- 2o 2o 3- 2+ 3o	20+	15 12 12 7	7	12	9	15	89	11	0.6	
30	4- 3- 2+ 1+ 2- 1o 2o 3o	18o	22 12 6 5	7	6	7	15	80	10	0.6	
31	2+ 2o 1+ 2+ 2o 1+ 1+ 4o	17-	9 7 5 9	7	5	5	27	74	9	0.5	

	Kp	Sum	Aug 1994	ap					Sum	Ap	Cp
1	3- 2+ 2- 1o 1o 1o 1+ 2-	13-	12 9 6 4	4	4	5	6	50	6	0.3	
2	2- 1- 0+ 1o 0+ 1- 1- 1+	7-	6 3 2 4	2	3	3	5	28	4	0.1	
3	1o 1o 1o 1+ 1- 1o 1+ 1+	9-	4 4 4 4	5	3	4	5	34	4	0.1	
4	1o 0+ 0+ 0+ 1o 1- 0+ 1-	1-	4 2 2 2	2	4	3	2	22	3	0.0	
5	1+ 2o 1+ 1+ 1- 1o 1+ 1-	10-	5 7 5 5	3	4	5	3	37	5	0.2	
6	1- 1+ 2- 1o 1o 1- 1- 1+	8+	3 5 6 4	4	3	3	5	33	4	0.1	
7	0+ 0+ 0+ 1- 2- 1+ 1- 1-	70-	2 2 2 3	6	5	3	6	29	4	0.1	
8	1o 0o 0o 0o 0+ 1- 0+ 1-	3+	4 2 0 0	2	3	2	3	16	2	0.0	
9	1- 1o 1o 0+ 1- 1o 2o 2-	9-	3 4 4 2	2	3	4	9	35	4	0.2	
10	2o 1+ 3- 2o 4- 3- 3o 2+	20-	7 5 12 7	22	12	15	9	89	11	0.6	
11	3+ 3+ 2+ 3- 3- 3+ 3- 3o	23+	18 18 9 12	12	18	12	15	114	14	0.8	
12	4- 4- 3o 3- 3o 3- 3- 4o	260	22 22 15 12	15	12	32	15	145	18	1.0	
13	3+ 5- 4+ 3- 5- 4o 4+ 3+	31+	18 39 32 12	39	27	32	18	217	27	1.2	
14	4o 4o 5o 4+ 3- 3+ 4- 3+	30+	27 27 48 32	12	18	22	18	204	26	1.2	
15	4o 2o 2o 2o 3o 2+ 3o 3+	22-	27 7 7 7	15	9	15	18	105	13	0.8	
16	2+ 2- 1+ 2+ 2- 1+ 3o 3o	17-	9 6 5 9	6	5	15	15	70	9	0.5	
17	2- 2o 3- 2- 2- 2o 1+ 1o	140	6 7 12 6	6	7	5	4	53	7	0.3	
18	1- 1+ 2- 2+ 2- 2+ 1o 2o	13-	3 5 6 9	9	6	4	6	48	6	0.3	
19	2- 1+ 2- 2- 1o 1+ 2- 1-	100	6 5 6 3	4	5	6	3	38	5	0.2	
20	1o 2+ 2- 2- 1+ 2- 2o 2o	14+	4 9 9 6	5	6	7	7	53	7	0.3	
21	2+ 2- 0+ 1- 3o 3o 1o 1-	13-	9 6 2 3	15	15	4	3	57	7	0.4	
22	2o 2- 1+ 1+ 2+ 2+ 4+ 4-	170	7 6 3 5	9	9	32	80	10	0.6		
23	3- 2+ 1o 1o 1o 1o 1+ 1-	110	12 9 4 4	4	4	5	3	45	6	0.3	
24	1- 2- 1o 1- 1o 2+ 2+ 2+	120	3 6 4 3	4	4	9	9	47	6	0.3	
25	2o 3o 2+ 3o 3o 2+ 2+ 1-	19-	7 15 9 15	15	9	9	3	82	10	0.6	
26	0+ 2- 2o 2- 1- 1+ 2- 3-	120	2 6 7 6	3	5	6	12	47	6	0.3	
27	3+ 2+ 2+ 2- 1+ 2o 3- 2o	18-	18 9 9 6	5	7	12	7	73	9	0.5	
28	2+ 3+ 2o 2o 1- 1- 1+ 1-	13-	9 18 7 6	3	3	5	3	54	7	0.3	
29	1o 1- 2o 1+ 1+ 1+ 0+ 2-	10-	4 3 7 5	5	5	6	6	37	5	0.2	
30	1- 1+ 1o 1o 1o 1+ 1o 1+	80	3 3 4 4	4	4	5	5	32	4	0.1	
31	1o 1o 0+ 1- 2+ 2+ 1o 3-	11+	4 4 2 3	9	9	4	12	47	6	0.3	

Kp INDICES 1994 (continued)

	Kp										Sum	Sep 1994					ap							Sum	Ap	Cp
	1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	18	19	20	21	22	23		
1	40	4-	1+	2-	10	10	30	3-	18+	27	22	5	6	4	4	15	12	95	12	0.7						
2	2+	30	1-	1-	10	1-	0+	1-	9+	9	15	3	3	4	3	2	3	42	5	0.2						
3	2-	20	20	1+	2-	1+	1-	2-	12+	6	7	7	5	6	5	3	6	45	6	0.3						
4	20	0+	10	10	10	1+	1-	1-	8+	7	2	4	4	4	5	3	4	33	4	0.1						
5	2-	20	2+	30	3-	2-	2-	20	170	6	7	9	15	12	6	6	7	68	8	0.5						
6	1+	3+	2+	5-	3-	3-	2+	2+	22-	5	18	9	39	12	12	9	9	113	14	0.8						
7	2-	4-	4+	5+	50	40	60	50	350	6	22	32	56	48	27	80	48	319	40	1.4						
8	3+	5-	5-	50	3-	4-	40	3+	31+	18	39	39	48	12	22	27	18	223	28	1.2						
9	4-	4+	5-	4-	5+	5-	5-	4+	35+	22	32	39	22	56	39	39	32	281	35	1.4						
10	4+	4-	4-	3+	3+	3-	20	20	250	32	22	22	18	18	12	7	7	138	17	0.9						
11	3+	40	4-	3-	30	20	30	20	24-	18	27	22	12	15	7	15	7	123	15	0.9						
12	20	10	20	4-	2+	3+	3+	20	20-	7	4	7	22	9	18	18	7	92	12	0.7						
13	10	4-	30	1+	2-	20	20	40	19-	4	22	15	5	6	7	7	27	93	12	0.7						
14	3-	3-	1+	10	3+	1+	1-	1-	14-	12	12	5	4	18	5	3	3	62	8	0.4						
15	20	1+	1+	2-	2-	2-	2-	3-	140	7	5	5	6	6	6	6	12	53	7	0.3						
16	3-	30	3-	20	20	3-	20	20	190	12	15	12	7	7	12	7	7	79	10	0.6						
17	20	3-	3-	3-	1+	2+	2-	2+	18-	7	12	12	12	5	9	6	9	72	9	0.5						
18	2+	2-	1+	10	20	1+	1-	20	12+	9	6	5	4	7	5	3	3	46	6	0.3						
19	3+	10	2-	00	10	2-	2-	1+	12-	18	4	6	0	4	6	6	5	49	6	0.3						
20	2-	20	1-	10	10	1+	2-	20	11+	6	7	3	4	4	5	6	7	42	5	0.2						
21	20	1+	10	10	20	2-	2-	3-	13+	7	5	4	4	7	6	6	6	51	6	0.3						
22	30	2-	10	1-	1-	1-	1+	1+	10+	15	6	4	3	3	3	5	5	44	6	0.2						
23	21	0+	1-	0+	10	1-	2-	8+	5	7	2	3	2	4	4	4	6	33	4	0.1						
24	3-	30	1+	10	0+	2-	1-	1+	120	12	15	5	4	2	6	3	5	52	6	0.3						
25	2+	10	1+	0+	1+	2+	5+	5+	19+	9	4	5	2	5	9	56	56	146	18	1.0						
26	4-	5-	40	4-	30	3+	20	2-	260	22	39	27	22	15	18	7	6	156	20	1.0						
27	40	4-	30	3+	20	3+	2+	40	26-	27	22	15	18	7	18	9	27	143	18	1.0						
28	4-	4-	30	4-	1+	20	1-	2-	210	32	22	15	22	5	7	5	6	114	14	0.8						
29	3-	2-	2+	1+	1+	10	10	20	13+	12	6	9	5	5	4	4	7	52	6	0.3						
30	1-	10	1+	10	10	1+	1-	2-	9-	3	4	5	4	4	5	3	6	34	4	0.1						

	Kp										Sum	Oct 1994					ap							Sum	Ap	Cp	
	1	2	3	4	5	6	7	8	9	10		11	12	13	14	15	16	17	18	19	20	21	22	23			
1	2-	1+	1+	10	1-	0+	1-	1-	8-	6	5	5	4	3	2	3	3	31	4	0.1							
2	0+	10	10	1+	2-	40	4-	5+	18+	2	4	4	5	6	27	22	56	126	16	0.9							
3	6+	70	70	6-	7-	60	6-	4-	480	94	132	132	67	111	80	67	22	705	88	1.8							
4	5-	4+	5-	4-	4+	5-	40	4-	340	39	32	39	22	32	39	27	22	252	32	1.3							
5	5-	4+	40	5+	5+	5-	5-	4+	37+	39	32	27	56	56	39	39	32	320	40	1.4							
6	40	4+	5-	5-	5-	40	4-	50	350	27	32	39	39	39	39	27	22	48	273	34	1.3						
7	5-	5-	5-	3+	5-	50	5+	50	37+	39	39	39	18	39	48	56	48	326	41	1.5							
8	4-	40	4-	40	2-	30	4-	2+	260	22	27	27	22	27	6	15	22	9	150	19	1.0						
9	30	3+	30	1+	2-	2+	2-	4-	20+	15	18	15	5	6	9	22	7	97	12	0.7							
10	4-	3+	3-	3-	20	30	40	4+	26-	22	18	12	12	7	15	27	32	145	18	1.0							
11	30	40	3+	4-	3+	30	4+	3-	27+	15	27	18	22	18	15	32	12	159	20	1.0							
12	3-	40	4-	2+	1+	2-	40	4-	23+	12	27	27	22	9	5	6	27	130	16	0.9							
13	3-	30	3-	3-	20	3-	3-	30	220	12	15	12	18	7	12	12	15	103	13	0.7							
14	30	2+	1-	20	2-	3-	20	30	180	15	9	3	7	6	18	7	15	80	10	0.6							
15	4-	40	2+	3-	2+	1+	20	20	20+	22	27	9	12	9	7	7	98	12	0.7								
16	20	1+	2-	20	1+	10	10	10	11+	7	5	6	7	5	4	4	4	42	5	0.2							
17	1+	10	1+	1-	10	0+	1+	20	10-	5	4	5	4	2	5	5	7	37	5	0.2							
18	20	0+	0+	0+	0+	1+	20	3-	9+	7	2	2	2	2	5	5	7	12	39	5	0.2						
19	1+	1-	1-	00	20	3-	3-	30	14+	5	3	3	0	7	12	15	18	63	8	0.4							
20	3+	10	10	10	2-	3-	3-	2+	16-	18	4	4	4	6	6	12	12	69	9	0.5							
21	2-	1-	1-	10	0+	0+	1-	1-	60	6	3	3	4	2	2	3	3	26	3	0.1							
22	5-	6+	50	5+	40	5-	40	4-	25-	3	3	3	7	22	22	22	94	200	25	1.2							
23	60	5+	6+	50	5+	40	5-	40	41-	80	56	94	48	56	27	39	27	427	53	1.6							
24	40	50	5-	4-	4-	5+	40	4-	340	27	48	39	22	22	56	27	22	263	33	1.3							
25	3-	5-	4+	2-	10	1-	2-	1-	17+	12	39	32	6	4	3	6	3	105	13	0.8							
26	3+	2+	2-	20	2-	10	2+	2-	160	18	9	6	7	6	4	9	6	65	8	0.4							
27	1-	2-	1-	2-	2-	2-	1-	1-	9+	3	6	5	6	6	4	4	3	36	4	0.2							
28	1+	1-	2-	10	1+	0+	10	20	9+	5	3	6	4	5	2	4	7	36	4	0.2							
29	40	30	4+	60	70	7-	3-	3-	370	27	15	32	80	132	111	18	12	427	53	1.6							
30	3+	5-	7-	6-	50	40	6+	4-	41-	18	56	111	67	48	27	94	32	453	57	1.6							
31	50	4-	4+	6-	5-	40	5-	4-	36-	48	22	32	67	39	27	39	22	296	37	1.4							

Kp INDICES 1994 (continued)

	Kp						Sum	Nov 1994					ap					Sum	Ap	Cp	
1	4o	4+	3o	3-	3o	4-	2+	3-	26-	27	32	15	12	15	22	9	12	144	18	1.0	
2	4-	4-	3o	3+	4o	3+	2+	3+	27-	22	22	15	18	27	18	9	18	149	19	1.0	
3	2o	3-	3-	2+	4-	3o	3+	2+	22o	7	12	12	9	22	15	18	9	104	13	0.7	
4	3+	5+	3+	3+	2+	3-	4o	4-	28o	18	56	18	18	9	12	27	22	180	22	1.1	
5	4o	3o	2-	3-	3-	3-	4o	5-	25+	27	15	6	12	12	12	27	39	150	19	1.0	
6	5-	6-	6-	5+	4o	5o	4+	2-	36+	39	67	67	56	27	48	32	6	342	43	1.5	
7	2+	3o	3-	2+	1o	1o	2-	3-	1o	17-	9	15	12	9	4	6	12	4	71	9	0.5
8	1+	1-	1-	1+	2-	1o	1-	3-	1o	5	3	3	5	6	4	3	12	41	5	0.2	
9	2+	2o	2-	2o	4-	4o	4o	4+	24o	9	7	6	7	22	27	27	32	137	17	0.9	
10	3+	5-	4o	3o	2o	2o	2+	3o	2+	25-	18	39	27	15	7	9	15	9	139	17	0.9
11	2o	3-	2+	3-	2-	1o	1+	2o	16-	7	12	9	12	6	4	5	7	62	8	0.4	
12	2o	1+	1+	1o	1-	1+	2-	1o	10+	7	5	5	4	3	5	6	4	39	5	0.2	
13	1o	2o	1+	2-	2-	2+	2-	1-	13o	4	7	5	6	6	9	6	5	48	6	0.3	
14	2+	2+	2o	2-	1+	2-	3o	3+	18-	9	9	7	6	5	6	15	18	75	9	0.5	
15	3-	2-	2o	2+	2o	2o	2o	3o	19o	12	6	7	9	7	7	15	18	81	10	0.6	
16	3-	2-	1+	1-	1o	2o	1o	0+	11-	12	6	5	3	4	7	4	2	43	5	0.2	
17	1o	3o	2-	1+	1-	1-	2+	2-	12+	4	15	6	5	3	3	9	6	51	6	0.3	
18	1-	1o	2+	2o	2-	2+	2-	1-	12+	3	4	3	3	7	9	6	6	47	6	0.3	
19	3+	5-	4o	3o	3o	4o	3o	3+	28+	18	39	27	15	15	27	15	18	174	22	1.1	
20	3o	4o	5o	4+	5-	3o	2o	2+	28+	15	27	48	32	39	15	7	9	192	24	1.2	
21	3-	3-	2o	2-	1+	1o	1o	1+	14-	12	12	7	6	5	4	4	5	55	7	0.3	
22	1o	2+	1o	2-	1o	2-	2+	2-	13-	4	9	4	6	4	6	9	6	48	6	0.3	
23	1o	1+	1-	1-	1o	1o	1o	0+	8-	4	5	3	3	4	4	2	6	31	4	0.1	
24	1-	2-	1o	1-	2-	1o	1o	1-	9+	3	6	7	3	3	6	4	4	36	4	0.2	
25	1-	1+	0+	0+	1-	0+	1o	1o	6-	3	5	2	2	3	2	4	4	25	3	0.1	
26	1o	3-	5-	6+	6o	4+	3+	2+	31-	4	12	39	94	80	32	18	9	288	36	1.4	
27	3+	4o	4+	5-	5-	4+	4-	3-	32-	18	27	32	39	39	32	22	12	221	28	1.2	
28	2+	2o	4-	4-	3o	3o	3-	1+	22-	9	7	22	22	15	15	12	5	107	13	0.8	
29	1o	2+	2o	2o	2o	3-	3-	3-	17+	4	9	7	7	7	12	12	12	70	9	0.5	
30	3+	4-	4o	5-	3+	3-	3-	3+	28-	18	22	27	39	18	12	12	18	166	21	1.1	

	Kp						Sum	Dec 1994					ap					Sum	Ap	Cp	
1	3-	4-	3+	3+	4-	3+	2-	4o	26-	12	22	18	18	22	18	6	27	143	18	1.0	
2	3+	4-	4-	3o	5-	4-	4-	4-	30o	18	22	22	15	39	22	22	32	192	24	1.2	
3	5-	3-	3+	2+	3+	1+	2+	2+	22+	39	12	18	9	18	5	9	9	119	15	0.8	
4	3-	2-	1+	2-	1+	1-	3-	1-	13-	12	6	5	6	5	3	12	3	52	6	0.3	
5	1o	1+	2o	2o	2+	2+	2-	3-	15+	4	5	7	7	9	9	6	12	59	7	0.4	
6	3o	3o	5+	3+	4-	4+	4o	4o	31-	15	15	56	18	22	32	27	27	212	26	1.2	
7	4o	3+	3+	2+	2+	4-	3-	4-	25+	27	18	18	18	9	22	12	22	137	17	0.9	
8	3+	3-	3o	3o	3-	3-	3o	3o	23+	18	12	15	15	12	12	15	15	114	14	0.8	
9	3+	2-	2+	2+	2+	2o	2o	2+	3o	19+	18	6	9	9	7	9	15	82	10	0.6	
10	3+	2+	2-	2-	1o	3-	3-	3-	18o	18	9	6	6	4	12	12	12	79	10	0.6	
11	2o	2-	1+	1+	2-	3o	4o	4-	19-	7	6	5	5	6	15	27	22	93	12	0.7	
12	4-	3o	3-	2+	2+	3-	4-	4-	24o	22	15	12	9	12	22	22	22	123	15	0.9	
13	4-	4o	4-	3-	3o	3+	2-	2-	24o	22	27	27	12	15	18	6	6	133	17	0.9	
14	2+	2-	0+	2-	2-	2-	1+	3-	15-	9	6	2	6	6	5	12	15	61	8	0.4	
15	2+	3-	3+	3-	5-	4o	4-	4+	28-	9	12	18	12	39	27	22	32	171	21	1.1	
16	3+	4-	4-	3+	4o	3o	2-	2-	24+	18	22	22	18	27	15	6	6	134	17	0.9	
17	2-	2o	3-	2o	1+	2o	2+	2-	16-	6	7	12	7	5	7	9	6	59	7	0.4	
18	2-	2-	2-	1-	2-	2+	2o	2o	14-	6	6	6	3	6	9	7	7	50	6	0.3	
19	1+	3+	2-	2o	2o	2o	1-	0+	1o	12+	5	18	12	7	7	3	2	4	52	6	0.3
20	2+	2o	2+	2+	2+	3-	3-	3o	20-	9	7	9	9	9	12	12	15	82	10	0.6	
21	2+	2-	2+	1o	2-	1+	1o	1+	13-	9	6	9	4	6	5	4	5	48	6	0.3	
22	2o	3-	0+	1-	0+	0+	0+	0+	7o	7	12	2	2	3	2	2	2	32	4	0.1	
23	3o	2+	2-	3-	1-	2+	1+	3-	17+	15	9	9	12	3	9	5	12	74	9	0.5	
24	4o	4o	5-	4+	4+	5-	5-	5-	35+	27	27	39	32	32	39	39	39	274	34	1.4	
25	4+	4-	3o	3-	3+	3+	2+	3+	26o	32	22	15	12	18	18	9	18	144	18	1.0	
26	4o	3o	3-	3-	3o	4-	3o	4-	26-	27	15	12	12	15	22	15	22	140	18	1.0	
27	2+	2-	2-	2+	2-	2-	5-	4o	21-	9	9	6	6	9	6	39	27	111	14	0.8	
28	3+	1-	1-	2-	3-	3o	1+	3-	17-	18	5	3	6	12	15	5	12	76	10	0.5	
29	4-	3o	4o	3+	3-	3-	1-	1o	22-	22	15	27	18	12	12	5	4	115	14	0.8	
30	2+	3+	2o	2-	1+	1+	1+	1-	14o	9	18	27	18	12	12	5	5	58	7	0.4	
31	1-	1-	2-	1o	1o	1o	1+	2o	10o	3	5	6	4	4	4	5	7	38	5	0.2	

FREQUENCIES OF K_p INDICES 1994

FREQUENCIES OF K _p INDICES, 1994												
K _p	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
00	6	.	.	1	2	4	2	1	1	.	.	.
+	9	7	1	9	4	6	9	17	6	10	5	7
-	12	11	12	13	12	8	14	35	17	18	16	9
10	14	2	5	10	11	12	25	36	27	17	25	9
+	19	9	11	15	9	18	33	30	29	17	16	20
-	17	8	16	11	10	15	24	29	29	18	25	31
20	14	14	21	19	11	18	27	17	31	16	21	15
+	23	13	12	8	11	19	24	27	13	9	24	32
-	13	20	15	13	16	26	18	15	19	15	25	31
30	17	14	16	11	17	28	25	14	12	12	18	21
+	34	17	20	18	20	31	11	10	13	12	17	23
-	31	13	24	14	23	20	11	4	15	22	10	21
40	15	13	14	8	23	17	9	4	8	20	14	14
+	10	19	15	16	18	15	4	5	5	11	7	6
-	9	19	25	21	28	3	2	2	7	18	9	8
50	3	8	19	19	11	1	4	1	3	7	2	.
+	2	13	10	13	9	.	2		4	8	2	1
-	6	7	4	5	1	1			.	4	2	
60	8	1	5	4		1			1	3	1	
+	4	3	3	1						4	1	
-	.	.	3	2						3		
70	1	1	3	3						3		
+	2		1									
-	3		.									
80			.									
+			2									
-	90											
	248	224	248	240	248	240	248	248	240	248	240	248

MONTHLY AVERAGES OF Ap AND Cp 1994

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Ap	15	30	24	29	26	14	11	8	12	22	14	13	18.1
Cp	0.72	1.05	1.00	0.98	1.04	0.74	0.55	0.39	0.58	0.86	0.66	0.69	0.77

MONTHLY AND YEARLY Ap 1932 - 1994

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1932	11	12	18	17	15	7	7	12	12	10	8	9	11.5
1933	10	11	12	12	12	8	7	9	12	10	9	7	10.1
1934	6	8	11	6	7	5	6	9	10	6	5	8	7.2
1935	9	10	10	8	6	9	7	5	13	12	8	9	8.9
1936	9	11	9	15	10	12	11	5	5	9	10	5	9.1
1937	7	13	12	20	13	12	12	10	9	20	12	10	12.5
1938	28	16	13	18	18	9	13	12	17	16	10	11	15.3
1939	7	15	19	28	21	15	19	19	13	22	9	11	16.5
1940	15	12	36	18	13	16	12	11	14	14	16	15	16.1
1941	14	18	33	15	11	11	19	16	27	11	16	11	16.8
1942	9	12	22	17	8	8	13	13	17	22	15	11	13.8
1943	11	9	13	14	14	12	15	31	25	24	20	14	17.0
1944	13	12	17	15	9	8	6	9	10	11	6	14	10.8
1945	10	10	17	13	9	7	9	7	10	11	8	13	10.4
1946	12	22	33	20	18	16	22	11	34	13	12	9	18.6
1947	12	12	32	18	14	16	16	25	32	23	14	11	18.8
1948	12	13	17	13	19	10	10	20	15	27	16	13	15.4
1949	20	14	19	14	18	14	8	14	13	25	15	9	15.4
1950	12	18	14	18	16	14	14	25	22	28	20	16	18.1
1951	16	22	21	27	20	17	20	22	40	24	18	20	22.3
1952	19	26	33	34	27	18	15	13	23	20	12	15	21.2
1953	15	15	21	16	16	13	16	19	21	16	14	7	15.6
1954	9	16	16	14	7	6	8	10	17	15	9	6	11.0
1955	12	12	14	14	11	9	8	9	13	11	13	8	11.3
1956	18	15	20	27	26	17	13	15	18	14	24	10	18.0
1957	17	17	26	21	11	22	16	14	49	14	18	18	20.1
1958	15	27	26	20	17	24	25	18	20	16	8	15	19.2
1959	14	24	24	17	19	15	32	23	28	19	22	19	21.3
1960	15	14	18	42	24	20	20	20	20	36	32	21	23.6
1961	12	16	14	14	13	14	28	11	13	16	10	12	14.4
1962	7	11	8	14	7	9	12	15	19	20	13	13	12.3
1963	11	9	8	10	11	11	12	13	28	15	12	11	12.6
1964	12	12	13	13	10	9	9	8	11	10	7	5	9.9
1965	6	9	8	8	6	10	8	9	10	7	6	7	7.7
1966	7	8	13	7	9	6	9	11	21	11	9	11	10.2
1967	11	11	7	9	25	12	8	9	16	10	10	14	12.0
1968	11	16	13	13	13	17	10	12	14	16	17	10	13.5
1969	8	15	17	14	17	9	8	8	15	9	10	7	11.3
1970	7	7	17	16	9	10	19	13	11	12	12	9	11.9
1971	12	12	11	15	13	9	8	9	13	12	11	10	11.3
1972	13	10	12	11	10	14	8	24	13	12	14	10	12.6
1973	16	20	25	30	17	17	12	12	14	18	12	11	17.0
1974	15	16	23	21	18	17	24	19	23	26	18	15	19.6
1975	16	18	20	16	13	11	12	10	10	12	18	12	13.9
1976	13	17	23	17	14	10	9	9	13	12	9	10	12.9
1977	10	11	11	16	11	8	14	13	16	13	10	10	11.9

MONTHLY AND YEARLY Ap 1932 - 1994 (continued)

Year	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul	Aug.	Sep.	Oct.	Nov.	Dec.	Annual mean
1978	15	16	16	23	25	20	13	17	18	12	15	13	16.9
1979	16	15	19	25	14	12	12	18	14	12	10	9	14.5
1980	10	11	8	11	10	13	11	10	8	14	13	13	11.1
1981	9	14	18	28	20	12	19	15	12	23	15	10	16.3
1982	12	33	18	22	17	22	30	21	36	18	21	21	22.4
1983	16	27	23	24	22	15	12	16	14	17	21	15	18.5
1984	13	17	21	25	17	15	16	16	24	23	21	18	18.8
1985	16	15	11	21	9	11	14	13	13	14	15	13	13.7
1986	14	27	13	8	12	8	8	12	17	11	13	8	12.5
1987	8	10	10	7	8	7	11	14	19	16	13	9	11.0
1988	13	15	14	16	12	11	10	10	12	13	12	13	12.7
1989	19	15	41	23	16	17	8	20	17	21	19	16	19.5
1990	14	23	23	27	16	16	14	19	14	15	9	7	16.3
1991	8	10	27	17	18	44	27	30	20	31	33	15	23.4
1992	14	31	14	11	21	15	10	15	25	15	14	13	16.5
1993	17	16	24	19	12	12	10	12	15	14	15	14	15.0
1994	15	30	24	29	26	14	11	8	12	22	14	13	18.1

Unit: 2 nT

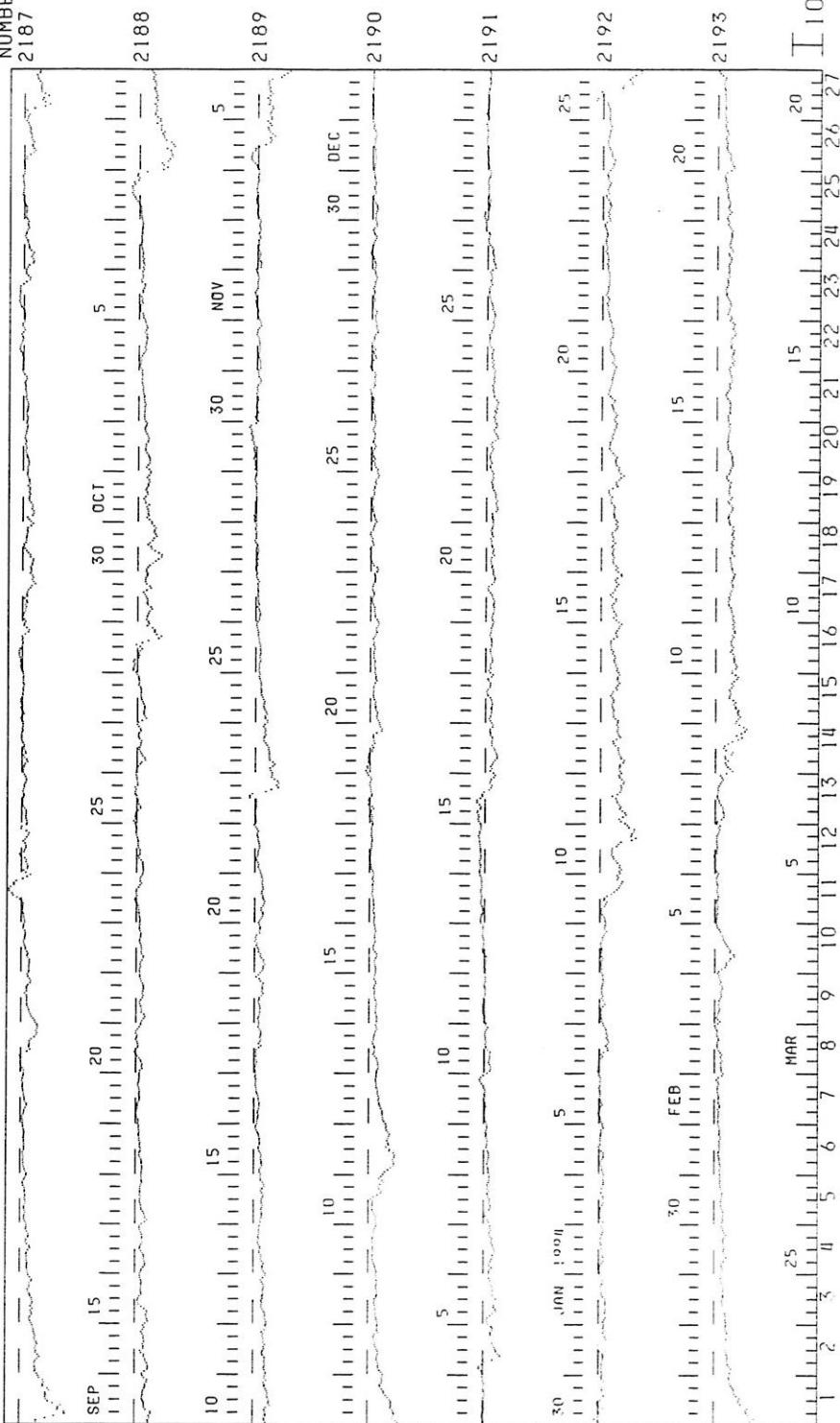
SECTION 3

3.4 Dst INDICES

Hourly values of Dst 1994 (graph)	87
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Tables of daily means of Dst	102
Monthly and yearly mean values 1957 - 1994	103

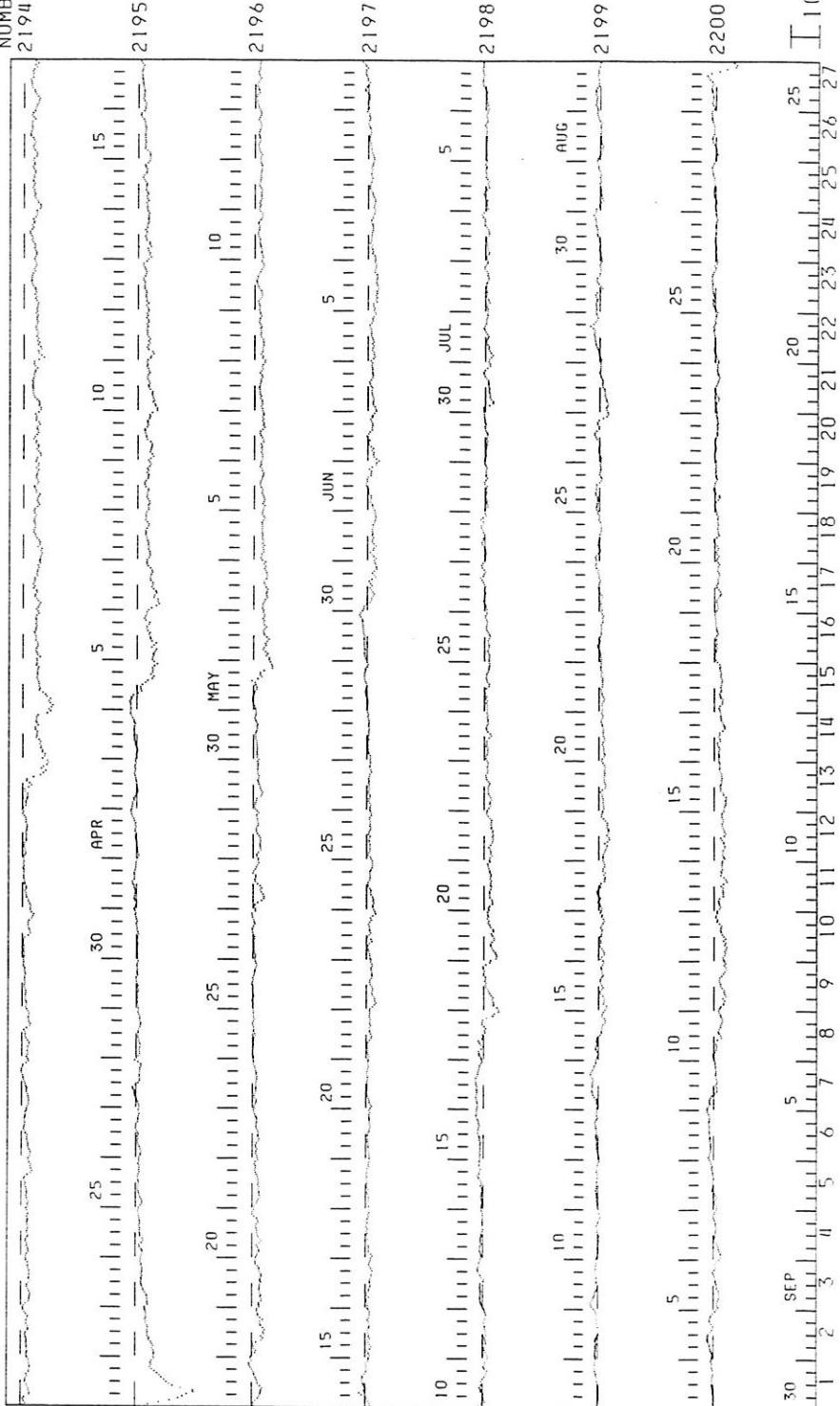
SOL. ROT.
NUMBER
2187

HOURLY VALUES OF Dst 1994



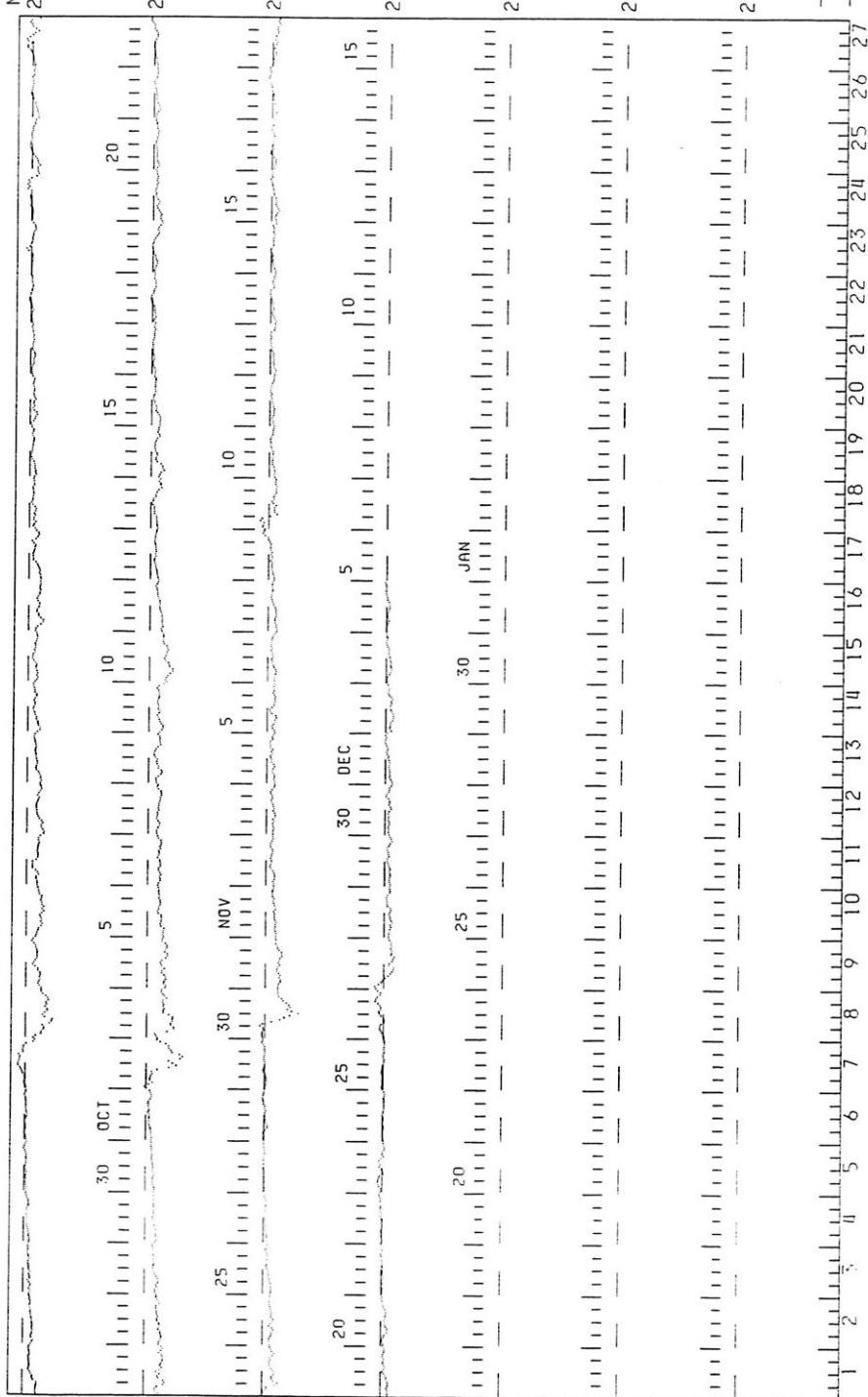
SOL. ROT.
NUMBER
2194

HOURLY VALUES OF Dst 1994 (continued)



HOURLY VALUES OF Dst 1994 (continued)

SOL. ROT.
NUMBER
2201



Dst INDICES 1994

		JANUARY 1994												U.T.													
UNIT=NT		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
DAY																											
1	-19	-16	-14	-17	-26	-34	-45	-44	-38	-44	-43	-45	-37	-33	-31	-33	-36	-32	-26	-27	-25	-22	-22	-22	-22		
2	-21	-21	-23	-30	-23	-21	-26	-30	-35	-33	-38	-40	-38	-35	-33	-30	-31	-26	-21	-23	-27	-24	-24	-25	-25		
3	-24	-20	-16	-12	-9	-8	-12	-22	-26	-22	-23	-20	-16	-17	-15	-21	-16	-15	-19	-21	-21	-21	-21	-22	-22		
4	-22	-19	-18	-17	-16	-14	-16	-17	-19	-20	-19	-16	-12	-12	-13	-14	-13	-10	-11	-9	-11	-13	-13	-13	-13		
5	-12	-9	-5	-4	-4	-5	-5	-7	-9	-7	-6	-3	-3	-5	-4	-6	-6	-3	0	5	10	12	8	0	0		
6	-13	-22	-24	-25	-22	-18	-20	-21	-21	-21	-23	-15	-9	-8	-7	-7	-5	-6	-7	-11	-14	-8	-8	-8	-8		
7	-8	-4	-4	0	2	2	2	2	2	1	-1	-5	-6	-5	-6	-4	-3	-3	-6	-6	-6	-6	-6	-6	-6	-6	
8	-5	-4	-2	-4	-8	-9	-10	-9	-9	-2	2	3	1	0	0	0	2	4	3	2	3	2	2	2	2		
9	9	11	11	9	7	4	3	4	6	9	10	9	8	9	11	10	7	8	8	9	9	9	9	9	9		
10	15	15	14	12	12	15	15	12	11	11	12	12	13	14	14	16	16	17	18	16	15	12	11	11	11		
11	13	18	21	18	20	24	22	13	12	16	25	13	7	7	1	-16	-22	-25	-18	-20	-23	-32	-36	-36	-36	-36	
12	-30	-20	-24	-21	-26	-29	-35	-41	-42	-40	-37	-33	-31	-24	-24	-24	-26	-25	-20	-19	-18	-18	-26	-28	-28	-28	
13	-23	-19	-15	-20	-21	-22	-23	-22	-24	-25	-24	-22	-19	-11	-8	-7	-10	-17	-19	-19	-13	-11	-23	-27	-27	-27	
14	-18	-13	-20	-18	-19	-24	-25	-24	-21	-19	-18	-19	-18	-22	-22	-23	-21	-18	-17	-20	-21	-21	-25	-26	-26	-26	
15	-29	-25	-23	-24	-27	-29	-30	-30	-28	-29	-31	-27	-24	-22	-17	-11	-9	-12	-22	-29	-32	-32	-32	-30	-26	-26	
16	-27	-25	-22	-23	-20	-19	-21	-21	-29	-24	-26	-28	-23	-21	-20	-18	-25	-22	-22	-19	-22	-24	-32	-36	-36	-36	
17	-25	-25	-23	-23	-22	-35	-40	-39	-36	-35	-39	-34	-33	-31	-27	-23	-23	-23	-20	-23	-23	-23	-23	-23	-23	-23	
18	-21	-18	-15	-15	-20	-17	-14	-14	-13	-17	-21	-24	-20	-17	-21	-31	-40	-38	-33	-28	-27	-33	-37	-34	-34	-34	
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20	-30	-24	-21	-24	-20	-24	-19	-19	-19	-21	-23	-16	-12	-10	-9	-11	-11	-10	-17	-21	-24	-24	-24	-24	-24	-24	
21	-24	-26	-28	-27	-25	-20	-21	-20	-17	-14	-12	-11	-8	-8	-8	-12	-16	-16	-14	-18	-16	-15	-12	-12	-12	-12	
22	-19	-29	-28	-27	-23	-22	-24	-22	-20	-20	-21	-17	-11	-7	-5	-5	-8	-10	-7	2	2	4	4	4	4	4	4
23	4	7	9	8	6	-6	-8	-9	-8	-11	-11	-5	-5	-4	-4	-5	-4	-3	-4	-5	-9	-11	-12	-12	-12	-12	
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27	-16	-14	-13	-12	-15	-13	-15	-18	-19	-19	-18	-8	-2	0	-3	-15	-30	-29	-25	-20	-19	-23	-23	-23	-23	-23	-23
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30	-18	-18	-13	-8	-5	-6	-9	-7	-8	-14	-18	-20	-19	-17	-15	-11	-10	-12	-15	-18	-19	-18	-17	-20	-20	-20	-20
31	-19	-16	-13	-13	-11	-5	-10	-14	-17	-18	-18	-11	-4	-2	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7	-7

Dst INDICES 1994 (continued)

FEBRUARY 1994

	UNIT-INT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	U.T.
DAY																										
1	-14	-10	-8	-6	-2	-1	-4	-4	-8	-13	-11	-8	-5	-6	-5	-4	-3	-5	-7	-6	-7	-6	-7	-3	-3	
2	-1	-2	0	-2	-2	-2	-10	-13	-10	-18	-32	-31	-25	-31	-35	-32	-28	-31	-28	-27	-25	-22	-17	-17	-17	
3	-15	-11	-10	-8	-9	-7	-9	-14	-15	-11	-14	-11	-11	-11	-11	-11	-10	-12	-13	-16	-15	-13	-13	-13	-13	
4	-10	-10	-10	-8	-8	-10	-13	-9	-5	-9	-10	-9	-7	-6	-8	-12	-12	-12	-17	-21	-27	-20	-20	-21	-21	
5	-23	-21	-20	-17	-11	-7	-8	-10	-19	-23	-27	-17	-19	-27	-42	-53	-62	-68	-73	-78	-81	-63	-66	-63		
6	-72	-70	-77	-71	-71	-71	-63	-58	-50	-48	-42	-42	-44	-44	-45	-61	-67	-75	-112	-126	-111	-113	-120	-121	-103	
7	-89	-75	-69	-82	-92	-88	-80	-71	-74	-69	-62	-61	-57	-62	-62	-71	-75	-76	-75	-83	-86	-78	-78	-70	-68	
8	-75	-71	-68	-70	-71	-82	-85	-75	-72	-68	-66	-65	-54	-48	-47	-58	-71	-66	-63	-61	-63	-64	-60	-60	-60	
9	-62	-63	-54	-48	-48	-47	-46	-45	-43	-42	-47	-48	-44	-38	-42	-46	-59	-57	-62	-68	-63	-61	-62	-68	-68	
10	-65	-59	-60	-55	-55	-50	-49	-53	-51	-44	-46	-40	-38	-37	-37	-38	-47	-59	-57	-55	-59	-65	-68	-75	-75	
11	-65	-56	-47	-56	-54	-48	-45	-42	-41	-47	-55	-55	-42	-36	-44	-51	-51	-57	-63	-56	-52	-59	-74	-73	-73	
12	-62	-60	-54	-45	-45	-44	-44	-48	-44	-41	-44	-46	-40	-44	-51	-43	-45	-43	-40	-41	-51	-56	-59	-54	-54	
13	-58	-54	-48	-48	-46	-46	-47	-49	-45	-47	-46	-47	-34	-36	-36	-39	-31	-28	-28	-41	-57	-54	-63	-70	-69	
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16	-46	-50	-51	-45	-45	-44	-44	-43	-38	-33	-30	-29	-30	-32	-31	-31	-38	-40	-40	-39	-40	-35	-34	-33	-33	
17	-29	-28	-26	-25	-23	-20	-21	-21	-19	-24	-25	-21	-15	-19	-21	-23	-23	-26	-25	-26	-25	-27	-26	-25	-25	
18	-21	-21	-19	-22	-22	-22	-21	-18	-13	-17	-19	-16	-14	-14	-14	-14	-17	-19	-17	-16	-14	-11	-10	-16	-16	
19	-28	-25	-21	-25	-21	-25	-28	-31	-28	-28	-22	-15	-14	-20	-19	-23	-26	-30	-24	-20	-21	-18	-20	-20	-20	
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21	-25	-24	-25	-26	-25	-25	-21	-19	-17	-21	16	-2	-3	-86	-70	-73	-103	-101	-95	-103	-114	-135	-135	-135		
22	-125	-144	-128	-139	-118	-122	-115	-112	-118	-102	-95	-89	-90	-92	-82	-75	-73	-73	-69	-64	-59	-55	-57	-56		
23	-56	-59	-63	-63	-57	-52	-50	-49	-51	-50	-48	-47	-43	-44	-43	-42	-44	-47	-53	-52	-49	-46	-44	-45		
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Dst INDICES 1994 (continued)

	MARCH 1994												U.T.											
UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
DAY																								
1	-34	-28	-27	-26	-25	-30	-26	-24	-29	-23	-18	-14	-12	-13	-17	-16	-12	-11	-13	-11	-11	-6	-4	
2	-15	-22	-15	-10	-13	-16	-19	-21	-18	-17	-19	-19	-23	-27	-26	-31	-29	-22	-25	-22	-18	-17		
3	-14	-17	-28	-40	-44	-53	-53	-57	-70	-69	-56	-57	-47	-43	-38	-34	-32	-30	-23	-19	-12	-10		
4	-9	-8	-9	-10	-11	-12	-14	-13	-13	-9	-11	-15	-15	-13	-11	-10	-12	-13	-11	-9	-8	-12		
5	-15	-9	-5	-2	-3	-1	-3	0	-1	-9	-10	-11	-9	-8	-8	-9	-9	-13	-16	-19	-15	-20		
6	-8	-11	-25	-33	-35	-33	-31	-30	-29	-23	-18	-16	-12	-11	-11	-13	-13	-13	-16	-20	-25	-31	-27	
7	-42	-62	-53	-46	-41	-38	-46	-38	-37	-58	-63	-40	-32	-36	-47	-61	-81	-93	-75	-91	-103	-109	-99	
8	-73	-75	-81	-87	-81	-79	-82	-73	-71	-66	-71	-64	-50	-51	-55	-53	-51	-58	-63	-59	-67	-76	-80	
9	-60	-60	-72	-75	-72	-67	-67	-66	-68	-62	-54	-59	-63	-57	-56	-56	-60	-64	-61	-69	-67	-62	-62	
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11	-60	-59	-57	-54	-55	-53	-51	-51	-65	-58	-57	-58	-55	-59	-56	-58	-63	-62	-57	-60	-63	-58	-61	
12	-47	-47	-44	-45	-47	-53	-57	-58	-53	-46	-43	-52	-56	-47	-46	-45	-46	-49	-47	-52	-43	-38	-45	
13	-49	-49	-53	-57	-58	-57	-55	-56	-55	-52	-48	-41	-41	-41	-41	-41	-43	-43	-45	-46	-53	-52	-47	
14	-42	-42	-41	-41	-41	-48	-47	-48	-49	-48	-45	-40	-36	-34	-38	-43	-48	-45	-46	-53	-54	-52	-51	
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16	-47	-51	-49	-39	-41	-44	-44	-49	-48	-46	-42	-38	-35	-35	-32	-36	-39	-39	-38	-37	-43	-42	-42	
17	-43	-42	-41	-43	-48	-49	-49	-43	-41	-45	-43	-47	-42	-45	-47	-49	-51	-51	-50	-53	-48	-44	-42	
18	-39	-36	-37	-43	-49	-42	-39	-41	-43	-44	-42	-38	-37	-37	-35	-33	-35	-35	-32	-32	-29	-28	-34	
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27	-23	-27	-27	-28	-27	-25	-24	-20	-20	-21	-17	-15	-12	-9	-8	-6	-2	-1	-2	-5	-7	-18	-24	
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29	-16	-18	-18	-16	-13	-14	-16	-16	-13	-11	-11	-13	-12	-12	-12	-12	-14	-13	-12	-12	-8	-8	-8	
30	-8	-9	-11	-10	-8	-10	-9	-7	-6	-7	-12	-12	-24	-31	-30	-27	-23	-23	-26	-36	-40	-43	-31	
31	-31	-32	-29	-24	-23	-17	-16	-15	-12	-16	-16	-12	-11	-9	-8	-7	-7	-8	-6	-8	-7	-8		

Dst INDICES 1994 (continued)

APRIL 1994

	UNIT=NT												U.T.											
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-8	-11	-14	-13	-12	-10	-9	-11	-16	-16	-16	-16	-15	-17	-18	-18	-15	-14	-9	-4	-6	-2		
2	-5	-14	-15	-14	-18	-21	-21	-21	-12	-12	-24	-24	-27	-17	-18	-42	-67	-86	-71	-77	-96	-92		
3	-74	-82	-83	-74	-74	-69	-69	-65	-67	-61	-51	-54	-54	-48	-47	-58	-54	-50	-52	-52	-58	-91	-103	
4	-97	-106	-111	-101	-97	-103	-89	-84	-75	-63	-65	-62	-61	-59	-56	-54	-55	-55	-57	-59	-51	-53	-54	
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30	1	-1	-3	-6	-5	0	2	3	5	5	6	7	6	5	3	6	8	12	16	19	19	19		

Dst INDICES 1994 (continued)

	MAY 1994																								
	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	24	U.T.
1	18	18	19	19	21	17	15	9	-6	-18	-16	-15	-21	-33	-40	-55	-61	-51	-57	-58	-57	-63	-73	-62	
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Dst INDICES 1994 (continued)

DAY	JUNE 1994																							
	UNIT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
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7	-18	-20	-22	-20	-22	-26	-25	-25	-25	-28	-24	-19	-19	-21	-22	-24	-23	-24	-25	-26	-28	-27	-24	-23
8	-22	-23	-23	-18	-17	-15	-15	-18	-17	-16	-19	-18	-16	-16	-17	-20	-23	-21	-16	-19	-23	-24	-22	
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10	-21	-19	-16	-12	-10	-5	-10	-18	-1	-6	-8	0	4	6	9	7	0	-5	-7	-7	-6	-5	-12	-14
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Dst INDICES 1994 (continued)

	JULY 1994																								
	U.T.																								
UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
DAY																									
1	-13	-22	-26	-24	-23	-17	-19	-22	-19	-23	-20	-17	-14	-14	-13	-10	-9	-15	-19	-19	-22	-29	-28		
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7	20	11	0	-10	-8	-5	-4	-4	4	4	8	3	0	2	-3	-8	-13	-14	-17	-9	-5	-8	-11	-16	
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9	-5	-1	3	5	6	7	6	5	5	6	6	6	-4	-6	3	6	11	14	15	13	9	10	7		
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20	-12	-9	-10	-12	-14	-14	-11	-11	-11	-12	-19	-26	-23	-14	-10	-9	-12	-16	-15	-15	-15	-13	-14	-12	
21	-12	-12	-12	-10	-12	-8	-10	-4	-4	-5	-3	-10	-18	-19	-13	-11	-9	-11	-15	-17	-18	-20	-20		
22	-18	-18	-19	-16	-13	-16	-18	-17	-16	-15	-18	-21	-19	-15	-11	-8	-9	-11	-12	-9	-6	-6	-10		
23	-10	-10	-8	-8	-2	-2	-3	-3	-5	-2	-3	-5	-1	-2	2	6	11	2	-1	-5	0	5	4		
24	-3	-4	-5	-6	-8	-6	-4	0	5	7	4	2	-1	-2	2	5	9	9	1	3	11	4	-3		
25	-1	-3	-11	-12	-9	-10	-7	-3	-7	-8	-4	-7	-9	-2	-1	-6	-10	-6	-6	-7	-8	-6	-2		
26	-1	-2	-4	-6	-5	-4	-6	-7	-9	-9	-11	-9	-10	-11	-9	-5	-3	-3	-5	-3	-2	0	1		
27	1	2	2	-17	-29	-22	-19	-19	-17	-15	-16	-15	-14	-14	-13	-13	-7	-2	1	2	-2	-10	-19		
28	-14	-16	-23	-28	-22	-18	-14	-15	-11	-8	-8	-8	-9	-4	-1	2	-1	-6	-7	-9	-11	-10			
29	-11	-11	-8	-10	-17	-13	-12	-6	-10	-8	-8	-5	-6	-7	-9	-13	-13	-11	-7	-1	0	-5	-10		
30	-10	-7	-7	-13	-15	-12	-11	-10	-9	-7	-5	-6	-13	-15	-14	-12	-7	-1	-1	0	5	9	3		
31	-5	-10	-8	-7	-8	-8	-2	0	4	-1	-7	-14	-12	-10	-14	-8	-4	-6	-4	-3	-4	-6	-2		

Dst INDICES 1994 (continued)

AUGUST 1994

	UNIT-INT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	U.T.
DAY																										
1	-7	-4	-5	-6	-6	-5	-4	-5	-5	-5	-7	-7	-6	-5	-6	-5	-4	-4	-8	-8	-6	-5	-5	-5	-8	
2	-10	-12	-10	-11	-9	-5	-6	-5	-5	-7	-3	1	5	7	7	6	6	3	5	7	5	5	5	5		
3	5	3	-2	-4	-6	5	5	5	4	-6	-4	-5	-4	-5	-4	-3	-1	4	5	7	8	7	8	6		
4	5	5	7	6	5	5	5	4	5	5	4	-1	-5	-4	-3	-1	1	1	1	1	1	1	1	6		
5	13	20	22	18	14	11	9	8	3	-2	-1	1	2	1	2	1	2	4	6	7	5	6	5	3		
6	2	1	-2	-3	-4	-3	-3	-3	-4	-7	-9	-7	-3	0	0	1	2	-2	-4	-7	-10	-10	-7	-5		
7	-4	-2	-1	0	2	2	2	3	3	4	4	4	3	4	3	4	3	0	0	2	1	0	-2	-6		
8	-7	-7	-4	-2	0	2	3	3	4	12	17	19	20	19	18	18	16	24	25	23	18	14	12	7		
9	3	1	-2	2	0	3	4	2	4	3	1	-8	-12	-12	-14	-15	-17	-24	-26	-22	-13	-15	-19	-19		
10	6	2	0	-3	2	6	7	4	2	4	3	1	-8	-12	-14	-15	-17	-24	-26	-22	-13	-15	-19	-19		
11	-24	-29	-29	-20	-21	-22	-21	-17	-10	-8	-13	-17	-13	-10	-8	-9	-13	-18	-15	-14	-12	-11	-16	-20		
12	-17	-10	-13	-21	-21	-18	-13	-8	-4	-10	-10	-6	-11	-12	-13	-14	-10	-13	-17	-21	-19	-13	-14	-8		
13	-11	-12	-7	0	-7	-5	-8	-2	-2	3	-2	-8	-6	-6	-7	-23	-24	-20	-24	-22	-22	-22	-20			
14	-17	-17	-19	-23	-25	-29	-31	-31	-23	-32	-39	-37	-31	-34	-36	-35	-31	-32	-32	-25	-19	-12	-15			
15	-16	-20	-19	-18	-17	-18	-16	-14	-13	-10	-14	-24	-26	-24	-22	-21	-20	-22	-23	-21	-23	-24	-22			
16	-12	-13	-20	-23	-20	-20	-19	-18	-14	-17	-22	-21	-19	-17	-17	-18	-16	-14	-13	-11	-11	-15	-16	-12		
17	-12	-14	-13	-12	-13	-19	-21	-18	-13	-12	-11	-10	-13	-15	-14	-15	-15	-11	-10	-12	-9	-8	-9	-10		
18	-10	-11	-10	-8	-8	-4	-4	-2	-2	-4	-6	-6	-7	-10	-10	-10	-11	-10	-15	-14	-17	-12	-12			
19	-10	-12	-11	-10	-10	-10	-11	-13	-11	-11	-5	-2	0	0	-4	-6	-2	-2	-1	1	1	1	8			
20	6	8	10	8	1	-5	-6	-2	2	1	0	-4	-4	-7	-8	-9	-9	-8	-5	-1	-2	-3	2			
21	4	7	8	6	5	4	4	5	10	11	8	7	7	3	-8	-10	-7	-3	-4	-6	-7	-6	-5			
22	-8	-8	-5	-5	-3	0	-1	-2	-3	-3	-2	6	10	14	7	-1	-1	4	4	0	-15	-27	-32			
23	-30	-27	-25	-29	-31	-28	-26	-23	-21	-21	-20	-19	-13	-12	-13	-12	-10	-7	-5	-3	-6	-6	-6			
24	-7	-8	-4	-2	-1	1	4	7	10	11	13	14	14	17	15	14	20	30	19	12	6	4	6			
25	10	9	10	10	7	6	10	12	7	12	7	-4	-11	-7	1	6	8	6	-2	-3	-5	-4	-3			
26	-9	-8	-6	-5	-5	-1	-2	-3	-4	-3	0	1	5	6	6	6	8	10	10	11	13	14	11			
27	11	10	-2	-1	-7	-14	-11	-8	-8	-6	-7	-4	-3	-6	-5	-4	-6	-5	-1	2	2	4	6			
28	6	4	1	-5	-4	-11	-13	-9	-7	-7	-5	-4	-6	-5	-5	-5	-8	-3	1	3	6	7				
29	5	6	9	12	10	10	8	8	13	12	8	3	2	1	3	6	6	8	3	-1	-3	-4				
30	-5	-4	-2	-4	-3	-4	-3	0	-1	2	2	2	2	3	2	-1	-1	0	1	3	3	5				
31	4	2	1	3	7	9	11	11	15	18	18	17	15	8	3	-2	-1	5	10	11	9	6	-8			

Dst INDICES 1994 (continued)

SEPTEMBER 1994

	UNIT=NT												U.T.											
DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-15	-19	-15	-15	-17	-20	-22	-22	-21	-20	-14	-14	-12	-10	-9	-8	-6	-3	0	-6	-11	-9	-8	-14
2	-22	-27	-28	-27	-23	-20	-19	-16	-12	-8	-6	-8	-9	-10	-11	-12	-11	-10	-9	-6	-3	-2	-5	-7
3	-12	-14	-13	-9	-7	-11	-13	-10	-3	0	2	0	-2	0	-2	0	1	3	4	2	5	8		
4	12	15	12	11	8	8	7	8	6	10	10	12	12	13	13	13	14	14	13	12	12	15	19	
5	20	19	14	14	10	13	12	9	4	-5	-13	-15	-13	-10	-13	-15	-12	-11	-9	-10	-10	-9	-7	-7
6	-4	-3	0	0	-6	-11	-12	-12	-10	-3	-15	-28	-26	-20	-18	-20	-25	-25	-29	-32	-31	-27	-24	-21
7	-19	-22	-26	-35	-36	-39	-33	-43	-40	-37	-38	-30	-25	-25	-22	-21	-23	-29	-35	-40	-45	-43	-38	-42
8	-38	-35	-33	-39	-41	-40	-44	-46	-40	-42	-35	-42	-36	-31	-27	-25	-26	-28	-21	-14	-15	-9	-10	-13
9	-14	-22	-24	-21	-19	-19	-21	-33	-33	-33	-32	-32	-27	-34	-46	-43	-36	-25	-28	-27	-31	-29	-29	-30
10	-31	-38	-35	-32	-32	-33	-39	-39	-36	-35	-29	-25	-37	-42	-38	-36	-32	-30	-33	-32	-29	-28	-30	
11	-36	-36	-38	-41	-43	-41	-44	-44	-35	-32	-24	-24	-23	-25	-28	-28	-29	-28	-27	-23	-20	-21	-21	-21
12	-19	-19	-19	-19	-18	-19	-20	-19	-14	-14	-14	-23	-22	-18	-20	-21	-31	-38	-34	-31	-26	-25	-24	-24
13	-23	-21	-19	-22	-29	-30	-31	-25	-23	-21	-24	-26	-24	-26	-26	-24	-28	-24	-25	-23	-21	-23		
14	-13	-8	-3	-5	-5	-9	-9	-12	-9	-11	-10	-9	-8	-11	-12	-12	-10	-10	-7	-7	-6	-5	-4	
15	-6	-11	-14	-13	-12	-11	-11	-16	-21	-24	-22	-22	-17	-11	-10	-14	-15	-14	-16	-19	-17	-13	-15	-19
16	-14	-10	-12	-16	-11	-9	-12	-15	-11	-4	0	-1	-10	-17	-15	-14	-12	-12	-13	-12	-14	-12	-14	
17	-9	-6	-4	-3	-7	-14	-18	-17	-6	0	3	1	-2	-3	-7	-10	-7	-10	-7	-6	-5	-7	-6	
18	-5	-6	-2	-1	-1	-5	-6	-5	-5	-3	-4	-3	-7	-10	-11	-10	-11	-11	-10	-9	-7			
19	-9	-8	-8	-6	-6	-8	-14	-14	-11	-6	-3	-3	-3	-3	-3	-12	-15	-17	-14	-12	-10	-11	-10	
20	-13	-13	-10	-7	-4	0	1	0	-2	-3	-1	-2	-2	-1	-1	2	1	3	-1	-3	-2	-4	-6	
21	-10	-5	1	4	6	4	5	0	2	5	6	7	8	7	9	9	6	2	-2	-3	0	-7		
22	-9	-8	-4	-5	-4	-3	-5	-5	-3	-1	0	-2	-3	-4	-4	-4	-4	-6	-8	-7	-5	-4		
23	-4	-3	-2	-1	-6	-5	-2	2	3	4	3	2	0	0	1	2	6	7	9	11	10	7	4	
24	-1	-3	-6	-9	-8	-7	-5	-2	3	7	8	9	7	4	2	3	2	3	5	8	10	11	13	
25	11	3	1	7	10	8	7	7	10	12	13	11	7	10	19	24	28	14	-14	-40	-69	-73	-64	
26	-53	-49	-47	-49	-50	-51	-51	-40	-36	-37	-32	-29	-23	-25	-27	-26	-25	-25	-24	-27	-27	-25	-24	-25
27	-30	-35	-39	-32	-31	-34	-36	-35	-35	-36	-34	-34	-31	-30	-29	-30	-27	-26	-28	-29	-26	-27	-24	
28	-24	-28	-23	-26	-28	-24	-19	-25	-23	-23	-28	-23	-22	-22	-20	-21	-24	-22	-20	-18	-19	-20	-19	
29	-22	-23	-23	-21	-21	-20	-18	-16	-14	-15	-13	-13	-13	-13	-13	-13	-13	-13	-18	-18	-14	-12	-9	
30	-10	-11	-11	-10	-8	-10	-9	-11	-8	-9	-11	-8	-10	-9	-9	-9	-9	-10	-8	-5	-1	-4	-7	

Dst INDICES 1994 (continued)

OCTOBER 1994

	UNIT=NT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	U.T.	
DAY																											
1	-9	-8	-6	-3	-3	-5	-7	-6	-4	-3	-8	-11	-12	-9	-8	-7	-7	-7	-6	-5	-2	-5	-7	-5	-7		
2	-7	-5	-1	-2	-3	-0	-5	-0	-8	12	16	22	18	17	16	20	4	5	4	3	-6	-30	-35	-30	-35		
3	-30	-38	-56	-58	-64	-66	-61	-84	-91	-93	-68	-52	-69	-77	-76	-70	-75	-73	-80	-79	-72	-62	-57	-56	-57		
4	-56	-49	-45	-48	-52	-50	-53	-52	-44	-44	-34	-34	-27	-30	-35	-41	-42	-41	-42	-40	-37	-36	-30	-24	-28		
5	-35	-38	-40	-43	-46	-54	-58	-53	-55	-53	-50	-56	-63	-58	-57	-56	-53	-55	-56	-47	-46	-44	-42	-42			
6	-39	-39	-39	-36	-36	-41	-40	-34	-24	-24	-24	-24	-24	-41	-42	-41	-39	-41	-42	-43	-46	-43	-43	-50			
7	-60	-62	-58	-53	-52	-57	-53	-46	-42	-38	-37	-37	-37	-34	-35	-36	-39	-42	-45	-39	-43	-49	-53	-51	-48		
8	-48	-51	-49	-49	-45	-42	-34	-33	-33	-33	-33	-33	-33	-33	-33	-31	-30	-31	-33	-32	-30	-29	-27	-26	-29		
9	-37	-45	-46	-40	-38	-37	-33	-33	-29	-27	-23	-22	-22	-24	-28	-27	-25	-25	-28	-33	-33	-27	-25	-22	-22		
10	-27	-33	-36	-33	-35	-35	-31	-30	-32	-28	-22	-18	-19	-21	-26	-25	-28	-28	-28	-27	-30	-33	-33	-31			
11	-27	-29	-34	-45	-53	-53	-45	-45	-38	-37	-31	-33	-38	-41	-40	-34	-32	-35	-40	-42	-43	-41	-42	-44	-43		
12	-44	-43	-42	-38	-38	-38	-34	-34	-32	-26	-18	-18	-17	-20	-22	-24	-25	-19	-14	-26	-33	-37	-35	-28			
13	-23	-17	-21	-25	-18	-18	-19	-23	-21	-24	-26	-22	-15	-11	-14	-15	-16	-17	-17	-16	-15	-20	-19	-17			
14	-20	-25	-23	-23	-21	-21	-20	-17	-12	-12	-9	-7	-10	-11	-12	-13	-14	-15	-17	-13	-12	-15	-16	-10			
15	-9	-7	-15	-20	-22	-27	-25	-17	-13	-18	-16	-17	-22	-18	-16	-15	-17	-18	-16	-13	-15	-18	-18	-12			
16	-9	-9	-8	-9	-12	-14	-14	-14	-18	-19	-17	-12	-9	-11	-12	-13	-15	-13	-14	-12	-10	-8	-11	-11			
17	-8	-6	-5	-6	-5	-5	-6	-5	-6	-6	-4	0	3	1	-2	-3	-6	-8	-10	-8	-7	-7	-6	-3			
18	-4	-4	-4	-5	-5	-5	-6	-5	-6	-8	-4	7	13	2	-2	-5	-7	-9	-10	-13	-18	-17	-15				
19	-2	-5	-6	-8	-8	-5	-0	-5	-1	-1	0	2	2	-2	10	5	11	5	8	-2	-19	-26	-24				
20	-22	-30	-24	-22	-19	-13	-8	-4	-1	2	4	3	1	-2	-2	-1	-2	-6	-5	-8	-13	-13	-16				
21	-24	-23	-24	-21	-19	-16	-13	-12	-10	-7	-4	1	1	-3	-4	-6	-5	-5	-3	-8	-9	-8	-9				
22	-10	-11	-9	-7	-5	-5	-4	-1	2	6	15	15	1	14	17	8	-4	-11	-22	-13	-4	0	5	2			
23	-44	-51	-41	-40	-46	-67	-71	-67	-51	-49	-55	-44	-55	-62	-58	-60	-65	-65	-62	-53	-60	-66	-60				
24	-51	-53	-57	-59	-57	-55	-50	-52	-54	-52	-46	-46	-46	-46	-45	-44	-44	-43	-43	-43	-47	-43	-43				
25	-40	-38	-43	-42	-48	-50	-47	-43	-38	-34	-32	-32	-33	-34	-33	-33	-34	-33	-34	-33	-32	-30	-29				
26	-37	-41	-44	-40	-39	-41	-38	-33	-34	-34	-32	-28	-29	-32	-32	-31	-32	-31	-31	-32	-33	-32	-31				
27	-31	-33	-32	-29	-26	-27	-30	-32	-28	-27	-29	-28	-27	-25	-24	-24	-23	-24	-24	-22	-22	-22	-22				
28	-21	-23	-21	-20	-19	-17	-14	-13	-14	-14	-14	-14	-14	-13	-13	-12	-11	-12	-11	-12	-21	-18	-15				
29	-4	-2	-12	-23	-15	-16	-18	-22	-21	-39	-78	-102	-90	-77	-115	-123	-113	-88	-84	-78	-77	-67	-49	-38			
30	-39	-31	-71	-94	-92	-83	-88	-88	-89	-89	-76	-58	-61	-58	-59	-56	-57	-69	-62	-56	-51	-52					
31	-63	-65	-58	-60	-64	-64	-59	-51	-52	-60	-51	-50	-47	-52	-65	-71	-70	-63	-68	-69	-63	-52	-54				

Dst INDICES 1994 (continued)

NOVEMBER 1994

	UNIT=NT		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	U.T.
DAY																											
1	-56	-54	-55	-55	-58	-48	-46	-48	-46	-48	-49	-49	-48	-46	-48	-41	-45	-41	-45	-41	-42	-41	-40	-41	-40	-39	
2	-37	-39	-44	-44	-42	-46	-42	-39	-45	-43	-39	-45	-43	-42	-36	-39	-41	-40	-45	-43	-46	-47	-46	-38	-35	-35	
3	-33	-32	-36	-41	-41	-41	-36	-32	-32	-32	-33	-34	-33	-32	-32	-32	-38	-41	-43	-46	-45	-46	-37	-33	-35	-35	
4	-30	-29	-28	-36	-44	-48	-45	-36	-36	-32	-36	-32	-32	-32	-26	-22	-21	-24	-28	-34	-42	-41	-40	-41	-39	-34	
5	-39	-46	-50	-50	-44	-40	-37	-34	-32	-37	-39	-34	-34	-34	-31	-32	-34	-35	-37	-36	-34	-30	-35	-35	-52	-52	
6	-60	-56	-59	-64	-64	-72	-80	-80	-70	-69	-66	-56	-53	-57	-60	-61	-65	-62	-60	-52	-48	-49	-49	-49	-49	-47	
7	-43	-41	-46	-44	-43	-44	-44	-43	-42	-39	-37	-35	-36	-36	-35	-33	-33	-30	-29	-29	-27	-25	-25	-22	-22	-30	
8	-29	-27	-25	-25	-23	-23	-21	-20	-17	-16	-18	-21	-20	-20	-22	-21	-21	-20	-20	-19	-17	-18	-19	-20	-22	-24	
9	-26	-25	-24	-24	-23	-23	-23	-22	-16	-16	-15	-15	-11	-5	-11	-12	-20	-20	-23	-29	-38	-36	-35	-30	-30	-34	
10	-29	-32	-36	-46	-42	-41	-36	-23	-19	-20	-23	-22	-22	-17	-16	-14	-14	-16	-16	-20	-23	-31	-29	-25	-27	-28	
11	-31	-31	-33	-32	-32	-28	-23	-18	-20	-19	-13	-10	-9	-11	-15	-16	-15	-15	-15	-15	-15	-17	-17	-17	-13	-13	
12	-13	-14	-15	-12	-8	-7	-8	-11	-11	-9	-7	-7	-6	-6	-6	-5	-7	-10	-11	-11	-12	-14	-11	-11	-12	-12	
13	-13	-8	-11	-15	-13	-12	-11	-11	-9	-4	-1	1	0	0	-8	-10	-14	-15	-14	-13	-9	-10	-10	-10	-10	-10	
14	-10	-9	-12	-14	-17	-14	-17	-14	-12	-11	-5	-4	-3	-2	-2	-5	-7	-12	-17	-22	-23	-22	-29	-35	-35	-35	
15	-32	-28	-30	-26	-22	-17	-15	-21	-23	-19	-14	-12	-13	-10	-12	-12	-15	-15	-19	-15	-17	-19	-16	-15	-15	-15	
16	-12	-15	-21	-19	-16	-14	-14	-14	-14	-15	-13	-12	-11	-11	-14	-15	-16	-18	-19	-16	-15	-15	-17	-17	-13	-11	
17	-11	-11	-12	-17	-23	-22	-20	-16	-12	-12	-13	-11	-11	-10	-8	-7	-5	-7	-10	-11	-12	-14	-11	-11	-12	-12	
18	-13	-13	-11	-12	-10	-9	-7	-6	-5	-4	-3	-2	-4	-4	-8	-13	-13	-13	-9	-4	-3	-3	-3	-8	-7	-7	
19	4	-3	-8	-16	-16	-19	-47	-56	-42	-36	-37	-43	-47	-41	-35	-31	-31	-29	-32	-39	-45	-37	-34	-30	-30	-30	
20	-29	-26	-26	-26	-32	-34	-36	-41	-37	-25	-31	-31	-39	-41	-34	-35	-33	-33	-30	-30	-27	-26	-27	-28	-29	-29	
21	-30	-32	-32	-32	-30	-26	-25	-23	-23	-23	-23	-23	-22	-17	-15	-17	-18	-18	-20	-20	-17	-13	-13	-18	-18	-18	
22	-15	-13	-14	-16	-15	-13	-12	-11	-12	-11	-11	-10	-7	-6	-8	-10	-11	-12	-13	-13	-10	-7	-7	-7	-7	-7	
23	-6	-6	-6	-8	-7	-5	-5	-4	-5	-4	-5	-5	-1	-3	-2	-2	-4	-4	-6	-5	-4	-3	-3	-3	-3	-3	
24	-2	-1	-1	0	0	-7	-14	-15	-10	-8	-7	-5	-5	-6	-5	-6	-5	-5	-1	0	2	3	1	-1	-2	-2	
25	-3	-4	-8	-10	-9	-7	-5	0	2	-1	-3	-4	-1	-1	-1	-1	-3	-4	-3	-3	-3	-3	1	1	7	4	
26	4	6	7	6	2	4	14	6	-26	-55	-70	-88	-117	-95	-81	-90	-86	-77	-66	-61	-51	-47	-48	-47	-47	-47	
27	-47	-47	-50	-56	-57	-52	-55	-50	-44	-44	-47	-53	-49	-52	-54	-61	-60	-59	-51	-46	-44	-39	-39	-39	-39	-39	
28	-36	-39	-37	-35	-37	-37	-39	-35	-33	-33	-33	-33	-31	-37	-36	-33	-31	-29	-32	-27	-25	-27	-30	-30	-30	-30	
29	-30	-30	-28	-32	-33	-33	-31	-28	-21	-17	-19	-23	-22	-20	-22	-24	-26	-25	-20	-18	-19	-24	-24	-26	-26	-26	
30	-26	-27	-29	-26	-25	-25	-26	-24	-24	-24	-24	-24	-24	-24	-24	-24	-25	-25	-25	-25	-25	-25	-25	-25	-25	-25	

Dst INDICES 1994 (continued)

DECEMBER 1994

	UNIT-NUT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	U.T.	
DAY																										
1	-31	-28	-30	-29	-23	-22	-26	-30	-27	-20	-20	-17	-16	-21	-19	-23	-15	-16	-13	-16	-23	-22	-22	-25		
2	-30	-28	-22	-20	-25	-31	-30	-35	-33	-19	-13	-12	-19	-26	-28	-30	-31	-27	-24	-26	-26	-25	-25	-29		
3	-27	-26	-26	-29	-30	-33	-30	-25	-23	-18	-18	-21	-20	-18	-16	-18	-15	-16	-17	-19	-26	-22	-28			
4	-33	-34	-31	-31	-28	-27	-31	-31	-30	-28	-23	-21	-18	-16	-16	-14	-15	-16	-15	-18	-17	-17	-19			
5	-22	-23	-21	-19	-17	-15	-15	-15	-11	-15	-12	-15	-12	-10	-10	-11	-11	-7	-3	-1	9	17	13			
6	12	19	17	15	26	21	-9	-32	-23	-22	-22	-28	-18	-13	-20	-20	-23	-28	-28	-30	-25	-25	-27			
7	-22	-21	-22	-22	-21	-19	-14	-13	-14	-14	-15	-16	-16	-12	-10	-7	-8	-7	-6	-10	-14	-15	-16	-17		
8	-18	-15	-15	-13	-12	-16	-17	-17	-19	-16	-13	-12	-12	-9	-7	-9	-5	-5	-8	-12	-16	-17	-17			
9	-19	-21	-22	-19	-15	-16	-14	-15	-14	-14	-14	-11	-7	-8	-5	-6	-4	-5	-6	-6	-17	-19	-21			
10	-20	-23	-18	-14	-11	-9	-12	-13	-12	-12	-11	-10	-5	-4	-2	-2	-4	-13	-15	-11	-11	-14	-15	-18		
11	-19	-18	-15	-12	-11	-9	-9	-8	-9	-6	-7	-2	-2	-8	-11	-11	-11	-15	-14	-11	-13	-12	-9			
12	-20	-18	-15	-19	-24	-29	-27	-21	-18	-20	-18	-13	-12	-10	-9	-8	-6	-5	-2	0	-6	-4	-7			
13	-8	-12	-12	-17	-16	-17	-10	-4	1	1	-9	-10	-7	-8	-6	-8	-11	-10	-7	-2	-4	-8	-12			
14	-12	-13	-16	-17	-12	-9	-12	-12	-10	-9	-12	-11	-7	-3	-3	-1	1	4	10	9	7	5	2	6		
15	5	-2	-5	-8	-6	-8	-13	-14	-10	-9	-13	-15	-16	-12	-13	-14	-20	-22	-20	-20	-27	-23	-27			
16	-27	-26	-26	-24	-27	-28	-26	-22	-22	-19	-14	-9	-14	-18	-14	-11	-11	-12	-13	-10	-11	-14	-15	-15		
17	-10	-11	-8	-8	-11	-13	-23	-24	-24	-19	-16	-15	-14	-16	-18	-20	-17	-12	-9	-8	-7	-7	-6			
18	-6	-6	-5	-6	-8	-8	-9	-9	-11	-10	-7	-7	-5	-6	-5	-5	-4	-2	-1	-6	-6	-4	-3			
19	-1	-4	-4	-2	-1	-2	0	-3	-4	-4	-4	-5	-1	-1	-2	0	3	2	1	1	3	2	5			
20	5	1	3	8	11	13	12	9	6	-6	-6	-5	7	4	8	8	1	-3	-4	-9	-10	-6	-6			
21	-7	-5	-3	-3	-3	-3	-6	-5	-2	-3	-5	-4	-2	-4	-5	-7	-7	-7	-7	-6	-8	-6				
22	-1	2	1	-1	0	-1	-1	1	2	1	-1	-1	-4	-5	-6	-4	-3	-5	-6	-5	-6	-7	-6			
23	-5	-5	-5	-2	3	7	10	9	5	-5	-6	-3	5	11	13	8	6	9	16	25	23	18	9			
24	24	27	15	5	1	-7	-25	-24	-31	-30	-35	-37	-20	-21	-30	-34	-38	-28	-29	-26	-27	-28	-21			
25	-18	-18	-19	-21	-22	-25	-24	-31	-27	-23	-22	-19	-22	-25	-23	-14	-13	-12	-11	-10	-14	-21	-22	-21		
26	-21	-22	-20	-19	-20	-22	-21	-20	-21	-20	-16	-13	-12	-17	-16	-15	-12	-12	-17	-21	-28	-25	-21			
27	-17	-15	-15	-14	-14	-17	-17	-14	-15	-14	-17	-24	-21	-16	-18	-18	-14	-7	-8	-15	-17	-18	-18			
28	-27	-25	-21	-18	-18	-18	-18	-16	-15	-15	-16	-15	-12	-14	-9	-7	-10	-12	-7	-4	-1	-3	-5			
29	-10	-21	-16	-17	-19	-20	-26	-29	-28	-24	-20	-18	-19	-22	-21	-26	-21	-15	-12	-13	-12	-9				
30	-6	-5	-5	-8	-14	-17	-21	-20	-18	-20	-18	-16	-15	-13	-11	-12	-12	-8	-5	-3	-5	-7	-5			
31	-3	-3	-4	-8	-11	-10	-7	-7	-8	-12	-13	-13	-11	-6	-5	-4	-2	-1	-2	-2	-1	-1	2			

DAILY MEAN VALUES OF Dst 1994

DAILY MEANS OF EQUATORIAL DST FOR 1994

DAY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
1	-31	-6	-19	-13	-23	-31	-19	-6	-13	-6	-46	-23
2	-28	-18	-21	-40	-49	-31	-30	-1	-13	4	-42	-26
3	-18	-12	-38	-64	-56	-27	-18	0	-3	-67	-38	-22
4	-15	-12	-11	-72	-37	-27	-18	2	12	-41	-34	-24
5	-3	-37	-9	-52	-38	-21	-11	8	-3	-51	-38	-10
6	-14	-78	-21	-52	-42	-22	1	-4	-17	-38	-60	-13
7	-3	-73	-61	-53	-48	-23	-3	1	-33	-46	-36	-15
8	-1	-66	-68	-52	-40	-20	-12	2	-30	-36	-22	-13
9	9	8	-53	-64	-53	-29	6	13	-29	-30	-22	-13
10	14	-53	-57	-45	-38	-4	2	-7	-33	-29	-26	-12
11	3	-53	-57	-55	-32	-15	6	-16	-31	-39	-19	-11
12	-28	-48	-48	-43	-28	-16	13	-13	-23	-29	-10	-14
13	-19	-49	-48	-40	-20	-12	18	-12	-25	-19	-9	-8
14	-21	-46	-45	-44	-15	-10	-3	-26	-9	-16	-14	-5
15	-25	-40	-56	-37	-26	-13	-19	-19	-15	-17	-19	-14
16	-23	-38	-41	-42	-28	-10	-29	-17	-11	-12	-15	-18
17	-29	-23	-46	-104	-20	-13	-23	-13	-6	-6	-13	-14
18	-24	-17	-37	-49	-19	-22	-25	-8	-7	-6	-6	-6
19	-29	-23	-39	-30	-17	-15	-17	-4	-9	-3	-32	-1
20	-19	-30	-26	-19	-13	-18	-14	-2	-3	-9	-31	-2
21	-17	-49	-25	-15	-6	-14	-12	1	3	-10	-22	-5
22	-13	-94	-22	-11	-5	-13	-14	-3	-4	-2	-11	-3
23	-4	-50	-28	-8	-6	-9	-1	-17	2	-57	-5	7
24	-2	-36	-25	-13	-19	-1	1	9	3	-50	-4	-18
25	-6	-36	-25	-7	-20	9	-6	3	-2	-37	-3	-20
26	-10	-29	-20	-5	-20	-17	-5	3	-34	-44	-18	-18
27	-16	-21	-16	3	-14	-24	-12	-3	-31	-27	-50	-16
28	-19	-17	-22	1	-20	-12	-11	-4	-23	-16	-33	-13
29	-11	0	-13	3	-44	-16	-9	6	-16	-56	-25	-19
30	-14	0	-20	5	-43	-19	-7	0	-8	-65	-26	-11
31	-11	0	-14	0	-33	0	-6	7	0	-60	0	-6
MEAN	-14	-40	-34	-34	-27	-16	-9	-4	-14	-29	-25	-12
ANNUAL MEAN												-22

MONTHLY and YEARLY Dst 1957 - 1994

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
1993	-16.8	-23.7	-33.5	-20.1	-10.8	-8.2	-3.2	-11.5	-19.3	-21.4	-21.6	-22.5	-17.8
1994	-13.8	-39.5	-33.6	-33.5	-27.4	-16.0	-8.9	-3.9	-13.7	-29.4	-25.2	-12.3	-21.5

Unit : nT

SECTION 3

3.5 AU, AL, AE INDICES

Provisional Hourly Values of **AU** and **AL** for **1994** (graph) 107

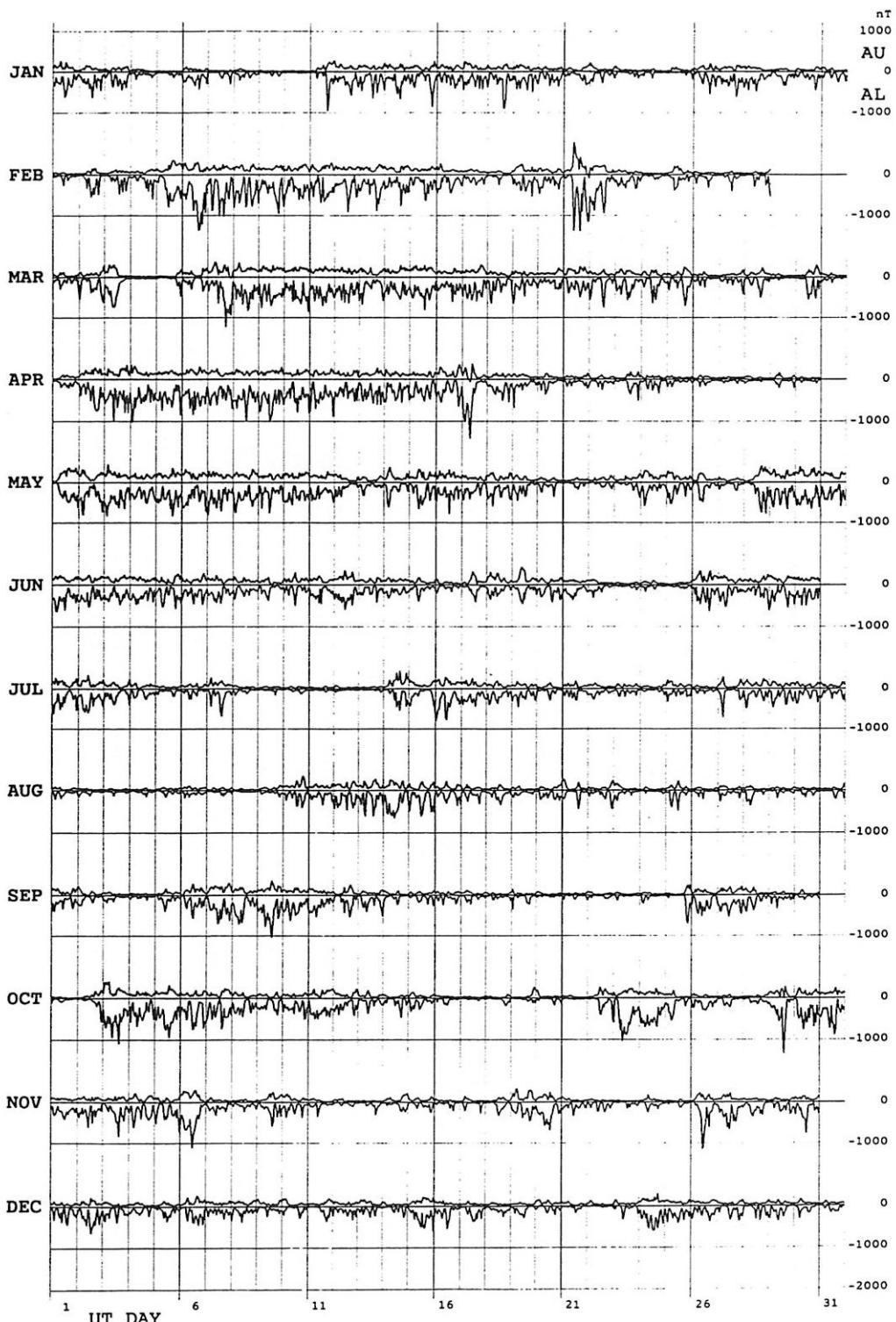
Provisional Hourly values of **AU**, **AL** and **AE** indices

Jan - Dec 1994 108

Monthly and yearly mean values of **AE**

1957 - 1994 132

PROVISIONAL HOURLY VALUES OF AU AND AL 1994



PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES

JANUARY 1994

16	104	93	104	149	193	170	111	95	139	132	56	114	133	46	61	55	100	156	167	153	119	90	79	72	112	
17	-137	-54	-23	-228	-271	-101	-36	-94	-167	-146	-56	-184	-332	-59	-126	-125	-410	-300	-326	-161	-236	-117	-105	-164	-159	
18	-183	-34	-18	-40	-164	-198	-81	-72	-317	-61	-202	-167	-185	-186	-182	-190	-661	-661	-91	-34	-87	-251	-174	-206	-157	
19	-127	73	114	178	93	115	182	172	149	127	133	80	79	100	141	63	36	32	73	72	85	76	83	125	105	
20	-186	-102	-202	-435	-236	-203	-204	-170	-144	-144	-144	-235	-302	-67	-106	-106	-106	-434	-209	-134	-100	-206	-174	-128	-223	
21	-172	-24	-4	-14	-43	-161	-188	-17	-46	-84	-145	-84	59	40	84	49	38	85	57	70	41	102	115	46	54	73
22	-272	90	69	46	133	258	333	102	118	143	396	290	109	220	366	257	267	166	473	294	295	216	74	98	42	138
23	-84	-120	-89	-27	-106	-78	-81	-11	-27	-42	-48	-41	15	35	48	-64	-79	-50	-172	-193	-238	-84	-128	-336	-274	-284
24	131	178	137	92	206	172	94	66	69	77	94	123	80	97	72	192	252	335	185	229	448	433	438	470	195	
25	-222	158	119	93	83	82	50	36	36	46	47	43	66	51	32	33	37	54	38	39	50	118	123	71	71	88
26	-214	-178	-263	-91	-15	-29	-20	-44	-18	-18	-18	-290	-137	-8	-4	-10	-26	-93	-100	-26	-32	-48	-167	-94	218	159
27	-67	86	61	56	35	29	23	34	54	43	32	32	41	31	38	21	22	33	33	14	28	24	27	28	39	
28	-66	85	56	67	38	42	28	42	77	63	57	46	107	91	64	36	70	180	51	22	195	134	100	99	80	
29	-39	41	38	40	39	38	46	39	64	87	37	26	28	27	14	22	20	18	17	15	13	14	18	32		
30	-43	-105	-8	-6	-7	-9	-2	-20	-49	-171	-35	-8	-10	-13	-14	-15	-16	-11	-11	-3	-11	-12	-17	-25		
31	84	148	47	44	48	41	67	88	235	123	46	37	41	42	29	39	32	30	18	19	25	27	37	58		
32	33	16	28	106	90	64	79	126	59	65	75	43	44	44	34	14	104	42	17	24	25	32	85	48	52	
33	-23	-10	-5	-19	-8	-7	-18	-13	-2	-3	-4	-7	-30	-52	-12	-11	-14	-45	-25	-6	-14	-36	-189	-5	25	
34	58	28	35	126	99	71	98	140	62	68	80	51	75	56	45	28	153	68	24	28	40	69	274	94	78	
35	-58	-46	-5	0	-144	-144	-144	-297	-297	-22	-83	-179	-285	-550	-291	-291	-138	-138	-105	-62	-62	-34	91	-155		
36	142	111	87	71	114	256	279	433	455	96	71	143	273	361	757	467	112	129	190	532	328	171	210	146		
37	71	92	85	107	134	82	103	117	132	113	99	99	29	32	38	148	163	120	160	82	111	119	136	81		
38	-166	-109	154	117	95	89	114	104	141	157	68	54	58	92	75	207	175	53	32	165	123	165	132	272		
39	-166	-280	-160	-210	-172	-133	-322	-133	-122	-116	-116	-116	-232	-102	-68	-62	-128	-206	-162	-138	-123	-59	-124	-94	-198	
40	243	390	615	327	268	222	436	382	275	601	464	281	333	174	115	103	160	239	189	164	157	91	165	132	272	
41	-123	-126	-21	-8	-30	-30	-42	-74	-87	-59	-59	-59	-74	-67	-467	-615	-480	-61	-226	-279	-144	-340	-406	-256		
42	-197	209	72	60	49	77	148	183	205	80	92	247	240	186	101	148	153	552	468	360	360	544	337	360		
43	95	110	105	56	28	43	41	39	86	88	61	28	17	30	20	33	30	28	22	40	18	41	32	40		
44	-125	-154	-23	-1	-2	-13	-44	-161	-129	-37	-16	-19	-50	-204	-258	-161	-80	-58	-25	-22	-89	-251	-107	-85		
45	222	266	129	58	30	45	55	83	248	217	99	45	37	81	224	293	192	109	81	66	41	131	284	148		

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

JANUARY 1994

16	104	93	104	149	193	170	111	95	139	132	56	114	133	46	61	55	100	156	167	153	119	90	79	72	112
	-137	-54	-23	-228	-271	-101	-36	-49	-273	-94	-83	-184	-332	-59	-126	-215	-100	-300	-434	-209	-134	-84	-105	-164	-169
	243	148	128	378	464	271	148	144	413	226	139	300	467	106	188	270	511	457	497	316	356	168	184	237	282
17	92	260	215	231	167	210	211	168	87	98	100	166	145	81	51	69	111	56	80	57	79	67	106	174	126
	-533	508	484	569	338	190	-108	-165	-276	-116	-229	-285	-371	-240	-172	-492	-207	225	-514	266	214	169	314	556	352
18	133	99	77	70	92	86	79	72	109	116	98	105	85	58	153	169	167	213	128	76	84	94	74	65	105
	-183	-34	-18	-40	-164	-198	-81	-72	-317	-66	-130	-202	-167	-185	-862	-906	-661	-191	-34	-87	-235	-181	-94	-230	
19	127	73	114	178	93	115	182	172	149	127	133	80	79	100	141	63	36	42	73	72	85	76	83	125	105
	-166	-102	-202	-335	-236	-303	-421	-170	-144	-147	-285	-302	-67	-106	-59	-80	-32	-498	-187	-89	-266	-312	-218		
20	99	65	64	31	89	96	145	84	71	59	40	84	49	38	85	57	70	41	102	62	102	115	46	54	73
	-172	-24	-4	-14	-43	-161	-188	-17	-46	-354	-206	-60	-181	-221	-192	-200	-196	-124	-231	-219	-100	-27	-42	-138	
21	46	57	64	100	94	81	55	41	35	48	41	15	17	21	19	58	95	101	100	111	126	164	184	72	
	-84	-120	-99	-27	-106	-78	-3	-11	-27	-42	-45	-82	-64	-79	-50	-172	-193	-238	-84	-128	-336	-307	-74	-284	-122
22	222	158	119	93	83	82	50	36	46	47	43	43	61	32	33	37	54	38	39	118	123	71			
	-114	-178	-263	-91	-29	-20	-44	-18	-26	-178	-91	-137	-24	-10	-30	-93	-100	-26	-32	-68	-167	-86			
23	97	86	61	56	35	29	23	34	54	43	32	41	31	38	21	22	33	33	14	28	24	27	28	39	
	-67	1	4	-10	-3	-12	-4	-7	-22	-19	-24	-13	-64	-59	-24	-14	-46	-145	-17	-16	-110	-72	-69	-40	
24	39	41	38	40	39	38	46	39	64	87	37	26	28	27	14	22	20	18	17	15	13	14	18	32	
	-438	338	382	185	99	112	71	80	55	72	226	335	181	74	56	42	54	131	156	65	71	99	286	218	159
25	33	16	28	106	90	64	79	126	59	65	75	43	44	44	34	48	42	17	25	32	107	146	246		
	-23	-10	-5	-19	-8	-6	-18	-13	-2	-3	-4	-7	-30	-12	-11	-14	-104	-25	-6	-4	-14	-36	-89	-45	-25
26	83	66	42	71	96	111	124	141	157	67	52	58	92	75	207	175	53	92	52	152	105	62	34	91	
	-58	-46	-5	-6	-7	-9	-2	-20	-49	-111	-35	-8	-10	-13	-14	-15	-16	-11	-1	-3	-11	-12	-17	-25	
27	71	92	85	107	134	82	103	117	132	113	99	99	29	32	38	148	163	120	160	82	111	119	136	81	102
	-168	-316	-163	-249	-213	-264	-182	-370	-328	-197	-297	-368	-74	-179	-67	-416	-615	-416	-236	-279	-144	-240	-106	-256	-257
28	75	109	154	117	95	89	114	104	89	111	67	88	100	71	66	41	32	32	26	26	33	31	39	36	73
	-166	-880	-460	-110	-172	-133	-322	-778	-185	-489	-396	-192	-232	-102	-48	-62	-128	-206	-162	-138	-123	-59	-124	-94	-198
29	48	35	41	56	42	74	72	46	52	44	37	34	27	46	44	53	47	36	90	135	107	101	58	66	114
	-10	-9	-10	-32	-80	-117	-116	-117	-103	-148	-90	-343	-242	-36	-215	-105	-84	-54	-145	-53	-50	-182	-15	-64	-120
30	73	81	50	52	40	46	52	44	44	44	44	45	45	45	45	45	46	46	46	46	46	46	46	46	
	-123	-126	-201	-8	-30	-95	-139	-167	-65	-197	-194	-132	-52	-117	-116	-461	-333	-131	-461	-328	-179	-105	-108	-125	
31	95	110	105	56	28	43	39	86	88	61	28	17	30	20	33	30	28	22	40	18	41	32	40	47	
	-125	-154	-23	-1	-2	-13	-44	-161	-129	-37	-16	-19	-50	-204	-258	-161	-80	-58	-25	-22	-89	-251	-107	-85	
	222	266	129	58	30	45	55	83	248	217	99	45	37	81	224	293	192	109	81	66	41	131	284	148	133

PROVISIONAL HOURLY VALUES OF AU, AL AND AE INDICES

(continued)

FEBRUARY 1994

DAYUT	Provisional Hourly Values (nT) of AU, AL and AE Indices												FEBRUARY 1994											
	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	43	61	47	33	39	46	45	59	46	30	19	23	17	32	25	26	22	26	35	28	27	31	35	-46
AL	-52	-30	-37	-28	-7	-11	-14	-21	-127	-263	-49	-12	-14	-132	-83	-43	-35	-25	-19	-25	-38	-9	-12	-8
AE	96	73	99	76	40	45	54	68	172	323	96	42	34	156	102	76	60	51	42	52	75	39	40	40
2	25	27	30	30	36	41	206	88	103	80	70	33	152	101	153	63	49	72	29	40	41	36	64	
	-55	-79	-41	-37	-44	-81	-106	-328	-92	-86	-340	-546	-476	-299	-482	-107	-80	-116	-490	-98	-150	-10	-167	
26	28	33	37	81	122	127	417	195	148	411	581	629	400	637	465	144	167	564	128	65	49	52	47	
3	29	32	38	37	47	51	77	68	84	105	122	50	81	101	84	54	103	76	52	95	69	72	50	47
	-5	-5	-4	-6	-16	-18	-90	-169	-45	-169	-169	-85	-18	-474	-163	-424	-77	-76	-224	-48	-65	-125	-125	
35	37	46	53	66	142	248	115	203	276	208	69	267	576	248	162	527	154	129	492	294	121	79	113	
4	76	65	58	57	44	85	83	78	35	51	66	32	19	29	73	84	111	94	131	141	124	98	108	128
	-132	145	100	94	85	218	230	149	63	78	132	136	86	205	402	194	520	324	118	-200	596	-122	-156	-144
5	145	120	98	75	79	81	89	95	134	123	106	244	134	225	346	363	493	439	455	242	225	275	267	191
	-164	-186	-71	-51	-16	-50	-56	-111	-356	-315	-638	-786	-439	-631	-644	-633	-439	-405	-277	-302	-397	-587	-349	-348
309	306	170	77	96	133	146	217	492	439	746	1031	574	888	992	997	839	685	631	515	578	676	855	540	538
6	137	263	290	201	157	118	101	134	206	146	133	283	228	286	309	231	173	84	107	57	147	89	177	166
	-447	-519	-453	-605	-463	-219	-151	-226	-326	-333	-873	-655	-629	-642	-1110	-1356	-1320	-916	-1207	-753	-839	-292	-625	
585	782	743	806	621	339	254	361	343	460	1006	939	858	90	1421	1598	1394	1001	1314	810	587	1028	469	385	
7	126	99	135	157	170	230	133	138	93	128	175	94	153	250	136	193	173	212	169	150	123	126	142	165
	-225	-120	-87	-79	-869	-882	-102	-139	-373	-1009	-663	-576	-573	-1024	-676	-224	-193	-431	-602	-314	-49	-106	-333	-423
352	220	222	1036	1039	513	237	278	240	522	1108	758	731	849	1162	871	398	407	711	752	438	176	249	498	
8	95	195	175	205	154	144	219	242	197	110	92	101	117	92	81	66	214	176	258	195	145	137	121	162
	-805	573	-380	-443	-393	-699	-584	-373	-348	-11	-96	-766	-761	-233	-67	-589	-775	-645	-503	-74	-131	-68	-702	-439
901	769	556	649	547	844	804	615	446	152	190	898	879	333	150	134	805	952	905	699	620	269	290	865	595
9	179	112	117	157	146	121	132	471	173	134	121	107	147	153	183	232	188	185	163	230	228	65	151	
	-409	-355	-201	-119	-248	-144	-190	-116	-243	-338	-311	-310	-180	-458	-516	-621	-500	-595	-150	-69	-388	-792	-380	
589	467	318	277	406	291	313	449	609	379	473	433	419	327	613	700	855	942	1144	554	381	192	796	858	
10	132	111	96	220	179	119	79	97	121	155	132	133	88	190	147	213	163	243	222	262	205	177	131	153
	-494	-432	-316	-126	-288	-108	-205	-124	-433	-339	-315	-328	-614	-327	-591	-591	-234	-425	-485	-232	-354	-631	-351	
676	543	413	347	468	227	132	222	555	415	449	462	439	806	475	713	719	835	457	688	553	410	486	696	
11	106	168	250	188	139	133	112	74	67	110	102	193	139	224	135	235	222	219	147	235	301	229	98	127
	-391	-171	-280	-544	-236	-139	-210	-24	-122	-547	-537	-695	-461	-54	-662	-600	-590	-544	-474	-544	-423	-444	-553	-293
498	339	531	733	376	273	324	100	190	547	799	655	194	888	737	827	671	765	572	742	525	552	420	538	
12	220	207	125	181	167	138	116	137	209	103	132	108	157	198	175	187	128	147	123	122	143	204	177	
	-269	-278	-214	-258	-222	-219	-209	-205	-114	-94	-229	-319	-919	-673	-483	-287	-119	-193	-22	-134	-553	-529	-343	
430	485	340	440	390	358	343	326	198	363	488	1078	873	659	476	248	342	146	258	697	734	407	528	455	
13	96	189	154	111	148	175	195	156	102	173	79	82	69	91	105	186	155	240	251	180	231	141	192	
	-411	-314	-214	-118	-116	-193	-234	-211	-99	-220	-87	-274	-123	-120	-886	-575	-718	-517	-318	-327	-141	149	-307	
508	504	369	230	265	369	431	369	202	673	300	310	357	165	215	412	1073	731	958	769	499	559	555	341	
14	197	147	107	127	155	147	199	138	156	100	67	41	66	66	51	195	201	107	176	205	187	238	176	
	-359	-277	-317	-272	-61	-167	-310	-189	-213	-210	-148	-310	-182	-224	-224	-970	-693	-333	-556	-685	420	690	506	
557	424	425	399	216	315	510	319	345	280	281	79	215	788	234	967	693	-112	-631	-211	-481	-280	-154	-383	
15	102	100	92	141	161	132	130	81	90	87	139	123	86	139	103	88	155	97	134	211	177	144	120	
	-62	-108	-272	-229	-67	-58	-85	-61	-103	-188	-119	-204	-112	-615	-631	-211	-481	-280	-154	-383	-329	-119	-336	
165	209	364	370	228	191	217	143	195	277	258	329	199	755	735	301	638	378	289	596	506	264	270	515	

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

FEBRUARY 1994

16	205	104	127	272	201	107	79	66	96	83	79	93	93	95	124	119	101	80	-110	73	66	82	89	81	109	
	-457	333	-357	-341	-69	-188	-39	-28	-62	-20	-58	-184	-443	-446	-315	-237	-377	288	178	-112	-54	-120	-252	-285	-208	
	662	438	479	613	271	296	118	96	160	205	139	248	537	542	440	377	288	178	224	127	188	223	341	366	318	
17	71	80	85	68	86	103	105	128	124	106	93	84	111	125	78	75	54	51	67	55	-278	63	47	40	82	
	166	93	156	187	129	171	231	-125	-193	-178	-90	-61	-117	-268	-159	-159	-111	-163	-121	182	326	112	98	73	-116	
18	45	47	61	63	64	62	55	62	63	94	81	77	77	49	26	25	26	25	27	33	32	36	49	97	53	
	55	52	71	75	115	114	88	100	116	154	154	165	180	75	36	34	36	28	45	32	29	39	81	175	93	
19	81	83	143	174	184	182	239	204	262	224	91	110	80	77	119	111	69	102	193	75	73	132	64	68	131	
	-239	-98	-178	-174	-205	-171	-174	-400	-370	-23	-57	-379	-423	-302	-225	-130	-162	-174	-538	-128	-43	-119	-134	-173	-213	
	320	182	321	448	389	353	414	605	634	247	149	489	504	379	346	242	232	278	733	204	116	252	198	241	345	
20	139	149	160	68	99	103	106	126	133	109	78	86	38	42	45	50	77	55	146	123	131	84	54	43	94	
	-268	-470	-304	-299	-330	-94	-36	-150	-177	-54	-20	-131	-26	-64	-126	-77	-247	-374	-126	-77	-119	-134	-173	-213		
	407	620	464	368	430	198	144	277	311	188	133	307	171	69	111	328	224	264	395	499	258	162	126	60	-271	
21	46	85	97	109	114	82	87	174	188	784	667	471	398	375	121	427	292	183	188	135	216	-3	11	-87	215	
	-26	-101	-74	-28	-15	-3	-58	-227	-130	-965	-438	-295	-496	-880	-1333	-463	-907	-212	-59	-491	-889	-116	-1070	-483		
	72	187	172	138	130	85	89	234	417	2155	1633	900	694	877	1002	1811	757	1092	402	195	708	866	1171	981	698	
22	158	153	79	197	190	198	229	199	315	175	166	194	206	239	189	89	65	44	48	45	43	122	54	71	140	
	-533	-626	-748	-639	-885	-198	-328	-322	-353	-155	-415	-757	-592	-653	-191	-78	-77	-183	-126	-13	-124	-82	-193	-384		
	693	780	827	836	1076	697	558	599	503	4520	349	603	964	1193	843	281	144	122	233	172	57	246	136	264	525	
23	60	64	98	113	88	73	67	71	95	88	51	41	53	42	50	39	34	39	92	56	47	49	44	50	63	
	-141	-174	-300	-218	-256	-63	-184	-70	-231	-163	-163	-140	-131	-23	-29	-17	21	29	23	25	21	26	27	25	27	
	201	239	399	333	345	137	252	343	327	428	215	166	234	149	100	73	94	204	441	378	86	128	216	134	235	
24	38	28	30	27	26	33	25	19	40	26	24	31	31	23	29	17	21	29	23	25	21	26	27	25	27	
	-36	-16	-8	-9	-8	-13	-13	-22	-45	-20	-24	-100	-131	-74	-62	-56	-28	-12	-37	-6	-11	-39	37	67		
	75	45	39	37	35	47	71	42	59	48	49	132	163	98	99	136	84	86	52	38	39	64	35	37	67	
25	30	44	55	63	63	114	210	160	184	216	89	143	140	68	31	41	43	51	109	54	55	49	26	26	96	
	-16	-26	-42	-78	-88	-77	-389	-341	-308	-271	-40	-116	-143	-95	-78	-133	-114	-14	-48	-185	-45	-44	-38	-37	-115	
	47	71	98	132	151	192	600	503	493	488	130	260	284	164	110	175	159	66	158	241	100	93	65	65	202	
26	34	73	67	45	38	39	26	27	27	24	36	38	35	47	47	33	56	44	42	33	27	25	22	38		
	-222	-77	-222	-53	-27	-20	-34	-39	-42	-45	-98	-40	-129	-323	-139	-125	-91	-5	-6	-15	-26	-9	-10	-11	-67	
	57	151	289	99	65	60	61	68	70	70	136	79	165	371	186	148	50	49	49	35	36	34	34	106		
27	22	23	26	32	41	43	48	33	61	59	93	35	22	29	38	37	27	36	38	31	27	27	21	37		
	-13	-13	-9	-10	-7	-59	-19	-92	-192	-165	-189	-412	-125	-34	-37	-106	-87	-76	-47	-21	-23	-22	-17	-15		
	36	37	36	43	113	100	63	68	126	228	249	506	161	57	66	145	125	104	84	60	55	50	45	37	108	
28	29	36	33	28	29	30	34	39	63	75	46	40	26	33	43	42	31	24	33	45	37	55	89	119	44	
	-9	-7	-4	-5	-4	-8	-19	-16	-300	-188	-51	-95	-133	-23	-16	-39	-13	-21	-224	-188	-39	-117	-540	-97		
	40	44	39	34	34	39	53	56	56	365	264	99	136	160	65	66	58	71	38	55	320	226	95	381	660	

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES

(continued)

MARCH 1994

DAYUT	0	Provisional Hourly Values (nT) of AU, AL and AE Indices											MARCH 1994												
		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	68	58	41	26	20	56	126	65	99	121	50	27	25	15	14	24	29	26	22	29	44	41	32	85	48
AL	-140	-79	-75	-58	-50	-49	-301	-222	-176	-84	-51	-118	-140	-25	-26	-36	-139	-137	-54	-29	-44	-83	-35	-310	-102
AE	210	138	117	74	71	106	428	288	275	206	102	146	166	41	59	168	164	77	59	88	125	68	396	150	
2	110	122	59	34	22	41	81	80	47	67	106	87	66	62	98	104	62	38	42	119	139	173	276	87	
	-545	-250	-53	-42	-32	-22	-41	-102	-31	-20	-120	-385	-289	-355	-257	-320	-67	-41	-46	-183	-595	-627	-627	656	
	656	373	114	77	55	66	85	184	112	67	188	492	376	422	341	371	424	229	80	89	409	623	770	904	313
3	115	137	112	205	312	339	218	269	308	233	229	121	48	22	30	29	20	16	27	32	19	21	26	20	117
	-185	-244	-252	-363	-362	-570	751	571	744	1007	1042	951	738	505	364	172	152	129	118	94	78	56	45	54	47
4	14	12	14	12	14	13	15	28	11	8	9	17	7	9	8	13	13	16	14	14	12	13	11	13	
	-23	-17	-12	-8	-30	-25	-45	-52	-41	-28	-29	-35	-19	-35	-33	-37	-43	-36	-26	-20	-23	-25	-26	-25	-25
	39	30	27	41	45	39	38	41	38	36	40	40	40	40	40	40	40	40	40	34	33	37	39	39	
5	19	19	20	28	20	15	18	19	15	12	10	9	13	12	12	12	13	16	36	90	101	102	168	178	
	-12	-12	-8	-3	-1	2	-2	-4	2	-2	-13	-19	-14	-39	-18	-18	-16	-12	-55	-216	-182	-107	-475	-357	
	46	32	28	32	16	17	18	23	16	17	26	29	24	57	31	30	28	28	92	307	284	210	644	99	
6	108	97	85	101	107	62	82	164	86	63	40	18	20	18	20	18	21	30	73	220	153	160	223	168	
	-147	-56	-133	-91	-120	-190	-80	-98	-209	-72	-73	-39	-7	-9	-18	-16	-12	-32	-120	-355	-215	-109	-100	-111	
	156	155	259	178	221	298	143	182	474	262	136	80	25	30	37	51	34	63	193	576	409	377	334	270	
7	111	105	130	147	224	267	367	347	233	43	180	117	126	120	251	294	152	143	251	31	-4	-29	24	136	
	-347	-211	-169	-96	-227	-178	-83	-111	-64	-54	-394	-111	-269	-269	-122	-129	-794	-808	-901	-686	-938	-468	-428	459	
	317	300	244	320	496	547	430	345	687	475	228	423	390	572	822	916	1372	937	1060	933	682	909	494	270	
8	158	147	179	179	266	343	226	133	132	131	154	145	186	222	210	174	249	182	204	187	190	167	150	133	
	-163	-205	-560	-317	-302	-457	-501	-186	-676	-508	-302	-365	-461	-832	-764	-386	-545	-340	-564	-201	-358	-326	-245	-339	
	322	353	741	497	569	801	728	319	808	640	457	511	649	1056	975	561	795	523	769	389	549	495	396	574	
9	146	193	137	223	276	213	189	232	160	153	178	116	174	288	163	191	203	252	229	213	150	222	196		
	-176	-163	-75	-50	-293	-177	-298	-608	-357	-173	-228	-107	-618	-515	-555	-450	-465	-419	-402	-436	-504	-291	-454	-440	
	323	658	891	731	570	391	488	841	518	327	701	822	793	805	619	719	654	718	620	597	667	719	443	637	
10	118	118	149	132	157	138	170	215	134	239	234	140	163	147	253	234	220	188	225	195	186	214	133	149	
	-269	-155	-271	-288	-302	-457	-501	-214	-606	-93	-568	-539	-539	-565	-641	-411	-139	-431	-182	-106	99	151	172	150	
	389	274	421	391	526	349	384	823	228	808	560	679	646	704	838	907	642	327	657	683	784	697	990	614	
11	198	127	108	94	128	194	181	155	180	228	166	200	134	183	270	216	192	177	144	157	190	199	172	138	
	-242	-106	-213	-562	-729	-452	-423	-370	-411	-253	-781	-581	-702	-472	-508	-633	-362	-336	-67	-390	-273	-339	-454	-125	
	442	414	323	356	527	647	413	526	722	482	538	782	837	656	778	849	555	514	312	548	465	540	627	664	
12	143	167	170	126	165	252	203	126	148	148	98	96	224	169	93	56	140	163	182	106	99	151	172	-553	
	-395	-283	-372	-240	-221	-381	-581	-299	-180	-632	-314	-405	-430	-651	-334	-163	-147	-459	-323	-445	-257	-118	-239	-602	
	540	451	566	411	349	547	833	502	306	781	463	503	527	875	504	203	203	600	486	629	364	218	392	776	
13	187	232	126	195	130	144	97	87	114	226	133	56	55	62	55	57	53	74	111	141	116	191	182		
	-451	-391	-676	-442	-202	-128	-102	-181	-164	-233	-304	-114	-64	-142	-148	-61	-86	-112	-225	-113	-208	-577	-558	-245	
	639	624	803	639	333	272	199	250	251	349	485	438	170	121	205	204	99	139	187	225	316	325	769	742	
14	220	136	131	207	107	76	105	166	144	93	136	86	109	129	174	285	195	212	237	147	216	152	184		
	-358	-337	-192	-443	-361	-133	-301	-313	-115	-614	-153	-388	-388	-547	-547	-288	-288	-438	-117	-338	-309	-259	-325		
	579	474	324	652	469	210	221	467	464	246	469	476	514	600	722	830	494	334	676	344	676	491	486	417	
15	152	209	165	255	219	290	185	180	150	232	147	209	190	286	155	238	204	240	227	168	140	117	90		
	-329	-443	-529	-447	-202	-360	-282	-241	-380	-476	-392	-514	-474	-817	-314	-282	-282	-467	-284	-223	-229	-331	-110	-811	
	483	653	695	703	422	650	467	421	530	709	540	724	664	1104	469	436	665	790	512	393	371	449	201	573	

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

MARCH 1994

16	94	114	159	130	78	103	129	146	121	107	95	94	100	153	110	110	220	177	117	143	140	136	79	149	121	
	-237	-349	-309	-265	-175	-161	-244	-264	-133	-106	-95	-94	-203	-153	-610	-198	-435	-168	-330	-140	-160	-227	-360	-262	-360	
	332	464	469	396	254	265	353	411	255	214	191	174	355	304	226	720	299	639	614	286	474	481	237	308	510	384
17	144	108	116	180	146	143	123	121	180	141	181	113	96	135	118	215	192	302	277	267	194	157	115	56	159	
	625	314	311	566	684	592	317	408	577	659	591	246	336	739	474	595	511	766	774	565	256	291	415	133	497	
18	82	82	151	137	69	103	124	107	85	48	58	57	111	85	68	72	52	41	30	24	26	32	52	141	77	
	-115	-91	-524	-646	-288	-101	-331	-337	-105	-25	-65	-111	-386	-271	-148	-189	-255	-49	-32	-61	-81	-438	-202			
19	86	85	152	144	101	82	116	104	34	41	131	125	45	46	34	51	103	101	106	80	56	59	94	134	580	280
	-667	-553	-165	-198	-237	-242	-333	-264	-62	-30	-199	-418	-154	-87	-52	-179	-213	-181	-231	-80	58	53	65	100	85	
20	74	640	318	342	339	324	449	369	97	72	331	605	200	134	87	211	316	284	338	122	121	198	208	389	302	
	-220	-111	-44	-145	-149	-81	-24	-127	-115	-89	-175	-112	-140	-132	-91	-80	-305	-268	-301	-152	-301	-90	-45		-148	
21	76	40	45	127	219	182	198	173	172	138	158	66	107	96	93	259	217	192	142	253	203	130	86	79	144	
	-21	-17	-14	-123	-414	-369	-243	-134	-209	-281	-329	-92	-124	-207	-293	-477	-393	-283	-101	-234	-352	-239	-154	-219	-225	
22	98	58	60	251	634	552	412	308	381	420	487	159	231	304	387	57	610	486	244	489	556	430	242	300	370	
23	140	121	75	76	93	94	56	53	48	94	94	135	122	186	76	88	44	43	39	63	73	58	46	35	80	
	-581	-464	-157	-44	-89	-124	-59	-45	-39	-44	-120	-135	-60	-58	-325	-132	-91	-70	-33	-57	-70	-176	-82	-18		
24	722	586	234	121	183	234	116	99	87	139	82	339	724	944	402	257	136	115	72	122	144	235	129	55	260	
	-111	-350	-310	-559	-206	-194	-215	-100	-55	-67	-285	-152	-140	161	127	80	115	80	68	55	74	60	42	51	105	
25	78	125	102	108	176	199	154	115	55	62	77	285	518	375	510	369	-126	-202	-66	-87	-131	-49	-129	-129	334	
	-221	477	413	368	383	644	369	216	86	140	438	731	516	672	497	429	323	136	118	162	193	92	129			
26	40	126	132	137	82	46	20	58	166	149	91	148	166	68	66	52	29	29	47	82	78	70	58	83		
	-19	-172	-172	-172	-26	-23	-41	-15	-21	-165	-645	-229	-457	-207	-178	-224	-276	-122	-54	-105	-138	-211	206	-179		
27	71	71	83	33	20	23	52	56	47	138	105	81	33	21	102	240	229	214	161	156	134	91	38	93		
	-98	-329	-119	-21	-28	-25	-87	-144	-64	-283	-142	-93	-22	-32	-299	-515	-719	-568	-230	-243	-253	-190	-26	-33	-191	
28	170	401	204	56	49	49	139	201	112	422	248	174	56	53	402	786	949	783	392	401	389	282	64	72	286	
29	64	48	63	26	22	73	61	46	47	137	98	61	44	24	30	32	33	41	32	44	24	22	17	46		
	-66	-109	-108	-57	-19	-172	-226	-66	-27	-69	-267	-87	-23	-107	-34	-15	-42	-42	-32	-25	-32	-28	-22	-29		
30	48	31	28	46	56	111	89	99	65	53	49	84	88	91	124	158	225	150	87	90	83	64	70	61	85	
	-39	-36	-38	-24	-114	-108	-203	-113	-16	-7	-18	-68	-298	-331	-514	-413	-236	-72	-43	-46	-102	-28	-334	-42	-127	
31	90	73	63	53	36	23	41	102	64	45	48	43	21	19	22	31	27	29	25	26	27	22	42			
	-122	-106	-40	-31	-83	-82	-62	-10	-53	-151	-52	-40	-23	-14	-18	-13	-16	-48	-43	-6	-8	-14	-44			

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES

(continued)

APRIL 1994

Provisional Hourly Values (nT) of AU, AL and AE Indices																	APRIL 1994									
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	15	14	15	18	17	19	45	68	100	121	49	76	121	86	74	59	70	77	46	33	59	66	54	57	
	AL	-22	-24	-20	-17	-16	-45	-172	-187	-149	-108	-68	-106	-175	-130	-203	-66	-90	-168	-131	-55	-27	-48	-88	-93	-89
	AE	38	40	36	36	64	65	118	256	250	230	119	183	296	217	278	127	150	239	210	101	108	154	148	147	
2		87	124	143	142	162	143	297	354	-195	174	46	152	133	294	124	262	297	225	216	110	258	251	111	133	135
		-125	-375	-216	-156	-82	-43	-354	-195	-190	-324	-503	-212	-146	-506	-678	-753	-725	-718	-413	-176	-413	-11	-372	-339	
		213	500	360	299	187	316	589	383	196	366	477	636	462	270	769	976	970	926	863	669	427	525	445	508	514
3		158	120	92	260	233	176	185	182	123	119	116	125	68	89	261	220	284	283	194	355	153	96	219	181	
		-572	-492	-475	-421	-331	-255	-383	-341	-992	-204	-285	-675	-576	-280	-410	-79	-789	-798	-798	-655	-528	-324	-457	-457	
		732	613	568	682	566	433	569	524	1116	324	402	801	644	370	553	586	766	498	1072	665	729	952	624	544	
4		353	146	251	330	292	229	157	176	150	158	130	114	122	109	185	114	69	123	165	144	126	131	145	151	170
		-621	-1027	-797	-431	-688	-440	-183	-301	-451	-732	-675	532	561	463	686	422	188	335	-710	-355	-309	-513	-324	-462	-451
		975	1174	999	762	962	670	619	361	452	732	452	732	732	732	732	732	732	732	732	380	436	646	470	613	
5		143	132	154	148	158	116	179	140	197	178	174	183	212	225	183	142	181	122	142	89	129	149	100	149	156
		-776	-507	-503	-287	-42	-728	-381	-304	-284	-182	-582	-417	-451	-501	-657	-542	-210	-266	-120	-275	-129	-166	-148	-425	-416
		619	640	678	436	611	846	561	445	483	662	757	548	635	703	882	726	353	468	243	418	219	316	998	526	
6		167	127	148	141	244	173	161	249	228	217	149	176	160	149	162	317	246	155	199	244	184	153	162	188	
		-371	-382	-349	-268	-838	-255	-226	-692	-493	-416	-833	-282	-717	-416	-312	-372	-627	-386	-408	-404	-595	-337	-173	-428	
		539	510	498	410	584	429	389	942	754	645	1051	452	894	517	462	535	945	869	542	607	648	780	491	335	
7		126	153	165	239	209	172	197	198	262	127	165	192	82	81	89	126	152	146	107	148	143	127	183	127	
		-384	-560	-862	-378	-378	-327	-329	-294	-425	-612	-348	-235	-177	-466	-381	-281	-509	-755	-132	-180	-285	-694	-509	-376	
		511	714	789	619	609	501	492	625	875	477	401	259	260	548	321	408	662	621	239	329	515	373	878	637	
8		128	142	236	245	165	228	187	156	173	110	103	126	196	187	115	83	155	170	198	191	215	219	207	118	
		-502	-513	-513	-688	-694	-374	-392	-477	-487	-483	-230	-283	-140	-988	-538	-310	-135	-214	-383	-460	-285	-540	-320	-445	
		630	656	725	941	540	621	666	644	657	341	387	667	1184	725	426	220	370	554	658	477	756	750	545	414	
9		115	144	194	178	93	168	94	172	192	166	182	190	212	192	172	157	199	229	179	134	214	185	301	203	
		-614	-766	-821	-384	-388	-395	-477	-587	-584	-471	-352	-1012	-914	-829	-578	-427	-53	-583	-597	-244	-219	-245	-453	-604	
		729	911	817	564	434	458	490	650	780	519	1194	1134	1042	801	620	406	813	609	376	811	444	601	656		
10		144	160	151	127	158	154	121	56	105	127	100	127	243	97	131	147	137	173	195	189	254	228	187	181	
		-421	-439	-395	-336	-211	-455	-455	-80	-567	-567	-639	-639	-784	-401	-402	-199	-199	-199	-431	-125	-337	-391	-354	-798	
		566	600	447	463	370	610	343	102	186	657	666	667	1027	500	533	648	359	361	611	615	592	620	543	980	
11		112	133	102	59	202	209	232	179	100	130	122	133	157	196	108	106	138	145	125	144	261	245	185		
		-769	-467	-109	-52	-78	-705	-471	-497	-584	-538	-416	-686	-78	-628	-126	-193	-373	-666	-432	-161	-329	-139	-887		
		882	601	212	112	482	915	704	677	685	416	619	635	626	237	300	512	512	556	405	591	684	1072	668		
12		158	142	140	214	131	94	115	127	163	113	65	87	172	103	77	96	118	223	189	234	104	42	133		
		-295	-338	-15	-346	-214	-169	-324	-211	-417	-160	-65	-79	-461	-377	-263	-320	-246	-208	-431	-224	-519	-196	-67		
		454	481	555	561	376	265	440	340	581	274	167	633	480	340	417	327	654	711	396	753	301	110	420		
13		68	115	129	137	121	135	168	117	147	88	93	107	104	134	130	148	225	284	142	222	157	110	98		
		-87	-146	-79	-520	-224	-188	-682	-410	-238	-76	-66	-576	-376	-295	-260	-213	-164	-230	-183	-292	-143	-498			
		156	263	608	658	408	361	651	408	558	328	171	276	570	710	507	444	486	892	357	318	826	488	402	643	
14		66	246	195	142	137	69	79	156	115	127	204	148	150	129	72	56	126	158	123	105	108	107	74	129	
		-499	-542	-83	-79	-182	-144	-108	-249	-92	-420	-720	-587	-611	-266	-64	-61	-557	-284	-164	-230	-183	-498			
		566	789	278	222	319	215	188	475	366	420	720	587	612	396	137	183	684	443	285	336	292	243	217	628	
15		120	107	131	181	109	93	145	114	100	115	98	130	132	95	96	58	97	191	189	69	41	51	166	161	
		-351	-444	-398	-429	-217	-42	-175	-323	-333	-212	-204	-397	-441	-524	-275	-126	-221	-330	-478	-128	-15	-19	-152	-355	
		472	552	611	327	136	321	439	435	328	303	528	574	620	372	185	319	622	668	198	58	71	320	516	396	

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

APRIL 1994

16	149	156	122	301	282	250	164	196	153	79	73	92	119	82	140	204	62	35	55	185	316	360	286	165	168	
	-411	-294	-299	-457	-559	-410	-229	-322	-266	-67	-24	-104	-169	-307	-114	-200	-31	-13	-38	-193	-446	-493	-344	-265	-265	
	561	451	422	759	842	662	394	519	420	148	98	197	288	389	454	405	93	49	94	379	962	854	630	341	434	
17	93	171	283	274	88	-2	0	-53	69	385	285	141	120	37	42	29	31	45	56	83	105	102	58	51	104	
	-467	-93	-1012	-875	-565	-629	-1010	-1413	-804	-586	-234	-78	-50	-116	-113	-78	-84	-74	-29	-58	-143	-164	-139	98	158	-102
	562	1085	1296	1146	654	627	1010	1359	972	472	354	116	113	110	113	78	84	74	86	143	164	139	98	158	507	
18	59	36	59	48	65	116	112	113	162	95	85	90	95	84	163	111	53	44	96	123	140	103	75	55	91	
	-151	-159	-118	-168	-164	-250	-309	-375	-174	-109	-268	-269	-268	-307	-306	-343	-115	-57	-108	-283	-141	-121	-94	-143	-229	
	211	196	177	217	230	367	422	471	348	271	395	358	364	392	670	455	170	102	204	406	682	225	170	199	321	
19	126	124	133	83	58	72	116	82	112	134	125	93	105	64	85	47	31	58	38	45	65	37	57	83		
	-238	-675	-202	-145	-111	-131	-197	-119	-76	-260	-159	-84	-72	-166	-147	-104	-62	-19	-32	-69	-22	-61	-140	-64	-140	
	364	799	336	229	170	204	314	202	190	395	286	179	167	271	212	187	111	51	91	108	68	128	178	122	223	
20	432	38	51	51	46	38	73	128	150	121	48	69	70	73	33	59	36	47	37	34	34	26	31	57		
	-138	-42	-120	-262	-104	-31	-106	-363	-90	-219	-57	-37	-80	-75	-95	-54	-46	-46	-12	-27	-18	-19	-31	-45	-97	
	180	82	172	314	152	69	180	492	441	341	106	106	151	149	130	105	104	95	50	61	53	46	58	77	155	
21	19	41	60	89	59	43	55	93	60	49	33	60	50	29	30	34	41	27	37	87	84	59	144	98	58	
	-35	-31	-63	-178	-115	-42	-42	-163	-95	-43	-75	-42	-45	-45	-24	-66	-44	-44	-51	-137	-184	-59	-210	-175	-80	
	55	73	124	269	175	86	97	258	156	94	66	137	93	76	63	60	88	72	89	225	236	114	356	274	139	
22	71	30	12	23	9	11	21	31	50	54	72	109	78	44	26	25	19	10	18	40	51	59	59	33	40	
	-101	-43	-18	-41	-23	-40	-32	-86	-180	-72	-37	-124	-249	-80	-33	-43	-50	-93	-71	-55	-47	-89	-116	-35	-73	
	173	74	32	66	52	53	118	231	127	110	124	328	126	60	70	71	105	90	96	99	148	176	69	114	137	
23	27	21	19	21	16	24	20	21	20	27	37	121	122	72	186	96	75	68	62	122	186	54	78	65		
	-32	-49	-36	-54	-30	-20	-27	-26	-20	-33	-55	-37	-290	-360	-176	-191	-83	-119	-73	-158	-509	-51	-41	-111		
	60	72	56	76	47	44	48	47	48	60	178	360	363	547	273	267	152	182	135	251	696	107	120	177		
24	68	40	33	15	22	96	63	48	57	38	95	38	69	44	59	87	32	39	38	15	22	40	52	48		
	-61	-46	-50	-13	-25	-169	-231	-64	-22	-28	-262	-189	-29	-121	-102	-169	-326	-15	-25	-29	-15	-20	-39	-89	-137	
	129	88	85	29	38	266	295	113	80	67	358	228	67	192	147	229	414	118	55	63	44	38	62	92	137	
25	83	52	40	65	90	32	31	49	18	18	53	49	41	23	13	34	19	39	45	29	26	23	60	48	41	
	-173	-114	-34	-48	-100	-102	-34	-23	-34	-23	-29	-37	-80	-64	-30	-39	-69	-49	-62	-22	-11	-15	-47	-97	-57	
	256	167	75	115	272	136	65	73	53	42	84	87	123	69	45	74	69	83	115	52	37	40	107	146	99	
26	24	24	11	16	25	65	103	87	37	30	69	80	64	65	50	51	18	30	38	19	18	24	23	30		
	-26	-17	-13	-23	-27	-175	-58	-52	-23	-35	-50	-60	-31	-68	-55	-49	-48	102	138	64	54	51	96	79	116	
	52	42	26	40	53	123	278	143	60	55	173	235	141	132	94	116	55	44	71	40	38	43	54	89		
27	27	25	24	52	43	25	17	49	53	59	33	35	44	40	29	35	27	35	33	35	34	43	45	42		
	-26	-23	-14	-57	-95	-35	-35	-50	-60	-26	-30	-31	-23	-13	-20	-12	-73	-02	-31	-18	-52	-34	-49	-38		
	55	49	39	111	61	53	99	114	86	65	68	68	55	49	48	102	138	64	54	51	96	79	116			
28	47	65	65	61	80	52	42	20	11	8	16	26	35	48	28	22	24	25	19	19	15	18	23	32		
	-97	-62	-47	-28	-32	-25	-31	-20	-22	-26	-26	-30	-20	-31	-69	-20	-9	-15	-10	-15	-16	-14	-29	107		
	144	128	114	90	108	85	68	52	31	30	36	43	57	50	57	80	97	42	34	30	35	32	34	38		
29	20	23	18	22	35	84	99	89	171	78	64	38	14	11	11	12	17	-30	-30	-25	25	25	74	90		
	-21	-17	-17	-29	-58	-120	-80	-152	-268	-71	-31	-33	-28	-25	-27	-31	-43	-25	-25	-21	-16	-66	-201	-59		
	43	41	36	51	94	204	181	242	380	150	96	72	43	37	39	45	47	68	52	47	41	141	292	117		
30	27	18	12	20	44	52	40	18	18	17	15	13	9	19	29	36	20	25	33	23	26	24	22			
	-15	-17	-9	-39	-88	-39	-23	-16	-20	-23	-27	-30	-24	-29	-39	-50	-69	-87	-60	45	126	73	-13	-16		
	43	37	29	85	142	80	42	35	38	39	42	43	34	50	69	87	60	45	126	73	40	38	39	56		

PROVISIONAL HOURLY VALUES OF AU, AL AND AE INDICES

(continued)

MAY 1994

DAYUT	Provisional Hourly Values (nT) of AU, AL and AE Indices												MAY 1994												
	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	22	24	29	36	50	95	156	232	221	254	287	305	351	268	293	306	262	307	366	220	244	214	-214	
	AL	-9	-3	5	0	-6	-89	-250	-301	-336	-391	-228	-205	-389	-477	-501	-480	-22	-291	-367	-225	-459	-318	-623	-283
	AE	3	28	36	56	164	406	534	558	647	516	491	541	753	858	832	690	586	675	518	733	826	548	867	498
2	AU	169	157	229	325	226	304	196	152	123	121	58	43	67	69	49	82	119	150	196	180	212	257	192	239
	AL	-406	-434	-359	-395	-806	-341	-291	-152	-206	-360	-99	-122	-90	-160	-40	-111	-368	-257	-221	-364	-455	-734	-466	-343
3	AU	209	153	239	447	243	302	225	204	190	280	188	152	112	236	125	191	174	174	173	206	173	101	96	134
	AL	-503	-600	-830	-593	-515	-87	-328	-297	-312	-530	-556	-474	-60	-195	-447	-454	-652	-320	-210	-116	-82	-445	-435	-435
4	AU	137	186	143	233	109	102	125	106	116	176	86	80	101	155	213	159	164	113	104	108	139	179	198	141
	AL	-376	-278	-329	-420	-392	-316	-226	-184	-213	-409	-318	-205	-25	-245	-508	-428	-304	-419	-545	-708	-712	927	705	507
5	AU	138	190	240	189	230	165	101	169	178	158	122	107	117	201	165	360	293	151	133	249	238	226	183	173
	AL	-492	-400	-518	-415	-467	-558	-88	-400	-421	-272	-248	-189	-681	-428	-619	-384	-194	-383	-620	-333	-554	-273	-403	
6	AU	631	590	759	604	698	424	190	601	580	580	396	357	308	883	594	1154	913	536	329	633	859	595	537	591
	AL	-581	-634	-584	-564	-491	-563	-327	-111	-414	-192	-175	-390	-110	-122	-53	-125	-211	-176	-151	243	227	218	169	173
7	AU	792	830	818	893	747	845	550	571	568	277	410	568	198	250	104	307	691	584	344	518	454	452	877	909
	AL	-141	277	175	135	223	269	145	225	240	181	189	144	199	129	89	121	95	177	168	184	176	123	91	168
8	AU	946	780	607	322	573	820	525	682	890	614	382	525	912	602	265	423	223	483	645	361	417	394	400	252
	AL	-173	161	223	329	255	261	222	259	153	84	233	176	86	126	53	125	205	176	151	243	227	226	174	190
9	AU	500	843	913	772	628	381	514	671	599	664	448	355	209	333	51	86	439	448	604	649	621	646	385	395
	AL	-865	-503	-412	-187	-349	-550	-379	-556	-448	-227	-192	-172	-127	-379	-170	-205	-286	-107	-423	-459	223	157	358	689
10	AU	483	221	334	809	364	433	264	394	380	420	976	772	406	197	222	376	409	377	423	459	228	149	186	223
	AL	-165	236	194	211	118	162	160	231	122	84	155	130	107	105	238	169	148	221	172	193	255	238	221	177
11	AU	645	738	648	706	371	467	646	800	320	166	281	543	483	444	497	403	362	447	394	660	672	536	557	647
	AL	-124	152	137	156	95	173	138	147	151	134	214	203	150	66	67	95	153	186	200	162	115	85	137	209
12	AU	203	213	169	122	119	193	85	75	92	98	87	105	67	41	39	30	31	32	34	34	27	36	133	108
	AL	-293	-213	-313	-311	-290	-300	-129	-129	-86	-73	-120	-101	-116	-92	-38	-20	-16	-16	-43	-46	-31	-25	-125	-135
13	AU	496	391	543	436	230	484	446	205	179	272	208	185	134	78	70	53	50	78	81	60	72	253	234	227
	AL	-52	70	84	137	123	112	114	68	29	39	30	23	29	44	56	42	25	55	89	110	166	139	116	85
14	AU	128	132	290	128	94	103	92	196	320	311	271	117	255	94	58	70	78	167	260	145	177	167	135	241
	AL	-49	-57	-164	-521	-629	-462	-190	-218	-98	-104	-110	-118	-183	-246	-217	-74	-22	-35	-40	-14	-37	-6	-224	-40
15	AU	140	111	125	128	94	103	92	196	320	311	271	117	255	94	58	70	78	167	260	145	177	167	135	241
	AL	-24	-29	-90	-285	-141	-77	-59	-365	-669	-556	-339	-477	-491	-394	-394	-394	-394	-394	-461	-222	-154	-105	-99	-435	-259
16	AU	145	140	215	413	235	180	151	562	990	768	612	674	748	494	453	156	77	364	721	438	332	273	235	676
	AL	-172	-176	-668	-316	-418	-336	-412	-172	-82	-114	-273	-102	-220	-159	-135	-176	-264	-227	-206	-193	-147	-101	-29	-102

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES

(continued)

MAY 1994

16	-181	88	147	286	162	186	-320	110	85	202	207	213	305	132	151	233	263	106	137	146	163	127	123	95		
	-483	-168	-135	-312	598	484	496	546	259	-148	-119	-207	-287	-184	-201	-151	-152	-162	-105	-162	-163	-189	-196	-286		
17	196	144	118	168	124	77	82	114	91	106	106	98	122	96	77	54	103	142	94	55	48	29	45	161	102	
	-369	-454	-169	-281	-146	-158	-232	-423	-334	-287	-220	-204	-201	-51	-150	-357	-341	-58	-30	-137	-168	-25	-18	-31	-109	-191
18	163	148	185	232	205	251	161	102	60	51	36	53	149	145	111	73	72	122	124	97	107	227	224	175	136	
	-394	-415	-553	-278	-308	-596	-63	-101	-146	-114	-86	-54	-359	-373	-251	-167	-126	-180	-128	-59	-103	-409	-446	-354	-53	
19	557	563	539	511	513	848	424	203	207	167	124	108	509	520	363	242	200	304	253	158	211	637	670	529	390	
	-134	-48	-182	-255	-297	-463	-103	-216	-302	-81	-170	-137	-156	-131	-59	-58	-50	-33	-17	-37	38	62	35	84	-149	
20	50	79	89	128	101	72	74	83	39	28	28	38	54	55	91	106	74	40	51	28	30	40	33	30	60	
	-62	-118	-207	-378	-355	-126	-88	-143	-106	-117	-158	-112	-128	-105	-195	-195	-267	-74	-73	-36	-36	-8	-16	-15	-13	-85
21	34	31	28	24	35	31	36	36	50	51	34	71	92	104	74	44	54	58	55	48	81	42	51	-47	-47	
	-14	-12	-8	-6	-5	-14	-20	-23	-29	-31	-16	-116	-137	-118	-188	-92	-12	-10	-24	-106	-82	0	-24	-14	-47	
22	47	40	34	33	103	47	32	55	61	70	74	106	110	108	57	44	58	57	88	161	143	107	74	73	-41	
	-13	-15	-2	2	-3	-27	-61	-23	-27	-33	-96	-100	-133	-123	-106	-33	6	-15	-69	-125	-178	-41	-56	-130	-130	
23	46	44	34	40	43	65	52	43	41	153	86	102	81	63	47	107	114	91	98	109	189	207	83	83		
	-6	-4	-9	-16	-29	-45	-51	-15	-19	-25	-69	-58	-57	-56	-20	-20	-59	-218	-127	-70	-36	-182	-331	-390	164	
24	158	95	162	261	296	268	269	230	136	187	176	82	80	137	111	79	71	81	165	158	144	183	160	117	159	
	-182	-87	-203	-594	-592	-315	-161	-74	-127	-222	-68	-53	-93	-153	-234	-107	-133	-58	-169	-124	-41	-66	-149	-168	-220	
25	196	278	214	227	240	229	116	54	142	167	143	121	61	56	75	82	83	137	64	70	74	158	108	77	132	
	-187	-395	-219	-518	-542	-407	-247	-69	-103	-111	-228	-79	-41	-28	-27	-45	-142	-369	-59	-21	-52	-185	-191	-143	-194	
26	60	29	33	28	19	174	225	226	207	211	145	111	68	31	52	57	77	91	83	71	41	40	68	45	57	
	-54	-10	-8	-20	14	-15	-442	-396	-448	-503	-124	-174	-76	-115	-163	-62	-10	-17	-58	-76	46	67	-90	-90	-327	
27	119	70	58	70	70	61	42	12	19	35	38	41	46	51	63	57	77	91	83	71	41	40	68	45	57	
	-187	-124	-84	-52	-58	-24	-24	-24	-24	-24	-24	-24	-18	-26	-26	-26	-208	-206	-208	-209	-30	-74	-32	-32	-73	
28	28	21	20	29	31	38	55	68	133	142	165	149	162	249	382	405	253	298	379	250	308	220	247	170	170	
	-15	-12	-5	-12	-11	-38	-73	-25	-57	-101	-307	-193	-141	-106	-544	-730	-758	-443	-305	-64	-793	-132	-220	-383	-244	
29	177	189	208	318	127	178	186	194	151	144	150	74	84	255	295	170	146	181	153	181	238	158	179	-		
	-199	-429	-609	-627	-293	-177	-173	-179	-301	-85	-503	-229	-305	-226	-164	-129	-680	-277	-154	-279	-121	-96	-390	-262	-327	
30	237	245	187	222	259	294	289	149	148	134	159	145	128	162	181	203	328	400	354	214	143	166	267	219	226	
	-376	596	426	547	587	-465	-348	-458	-343	-203	-354	-565	-461	-568	-566	-404	-386	-185	-144	-361	-624	-404	-424	-424	-507	
31	178	177	154	254	215	233	194	196	202	136	229	167	107	100	90	95	89	78	91	189	253	193	188	210	167	
	-316	-122	-237	-420	-452	-105	-465	-225	-121	-464	-377	-231	-264	-180	-180	-200	-64	-83	-669	-416	-209	-373	-454	-303	-294	
495	300	391	675	668	639	659	534	428	257	694	545	340	365	271	354	290	143	175	799	669	402	561	665	472	-	

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES

(continued)

JUNE 1994

DAY/UT	Provisional Hourly Values (nT) of AU, AL and AE Indices												JUNE				1994						
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1 AU AL -332 -310 -388 -623 -633 -457 627 627 852 852 454 572	149 143 184 228 157 168 224 231 176 196 184 137 117 87 110 64 98 124 128 120 180 206 143 218 157	-408 -381 -235 -326 -312 -385 -402 -364 -519 -514 -393 -190 -232 -205 -605 -232 -190 -70 -111 -281 255 -327 -194 -250 -425 -225 -380	-591 536 431 449 528 545 538 339 763 743 560 207 93 117 499 459 203 429 274 394 598 501 505	-3.8 3.2 -3.0 -3.88 -6.23 -6.33 -4.57 6.27 6.27 8.52 8.52 4.54 5.72	-3.69 3.66 4.72 -3.72 -3.96 -5.17 -5.21 -5.25 -17.9 -25.7 -17.4 -22.2 -22.7 -17.9 -26.8 -48.0 -36.5 -21.1 -5.9 4.31 6.31 3.69 5.99	-4.86																	
2 183 154 157 104 135 142 142 174 168 224 231 176 196 184 137 117 87 110 64 98 124 128 120 180 206 143 218	-326 -312 -385 -402 -364 -519 -514 -393 -190 -542 -572 524 475 743 350 278 181 176 379 380 456 314 431 631 369 599	-3.55 3.58 3.39 4.99 4.57 609 447 560 508 528 399 464 413 351 221 243 518 343 161 183 313 578 239 468	-4.14																				
3 166 192 164 213 172 124 100 82 68 39 165 124 90 103 171 162 199 184 248 186 147 175 181 206 153	-230 -351 -306 -372 -396 -527 -179 -261 -52 -52 -25 -17.4 -22.2 -17.9 -26.8 -48.0 -36.5 -21.1 -5.9 4.31 6.31 3.69 5.99	-3.60 3.54 4.72 5.86 5.69 382 281 344 121 65 340 422 270 652 572 565 397 559 408 241 360 470 548 414																					
4 201 195 135 204 164 147 117 112 197 195 144 120 142 137 63 94 142 92 108 105 144 169 115 188	-329 -292 -461 -346 -446 -519 -514 -393 -190 -520 -479 -82 54 28 147 66 92 142 92 -375 -250 -52 -77 -168 -409 -124 -279	-3.64 5.65 5.38 3.39 4.99 4.57 609 447 560 508 528 399 464 413 351 221 243 518 343 161 183 313 578 239 468	-2.70																				
5 154 114 104 59 113 201 50 107 82 54 28 147 66 92 142 92 108 105 144 169 115 188	-329 -292 -461 -346 -446 -519 -514 -393 -190 -520 -479 -82 54 28 147 66 92 142 92 -375 -250 -52 -77 -168 -409 -124 -279	-3.57 2.57 2.30 1.29 2.20 588 611 588 365 148 65 371 317 88 107 117 119 526 788 466 562 616 421 667	-1.43																				
6 173 108 82 149 97 85 83 42 52 110 139 120 126 139 149 89 67 124 128 223 270 254 143 232	-240 -117 -112 -270 -168 -219 -84 -52 -328 -451 -181 -270 -227 -166 -206 -106 -116 -112 -461 -375 -216 -277 -130 -116	-3.35 5.09 3.50 2.22 1.96 261 368 254 304 128 101 439 592 302 353 439 356 197 184 238 662 663 444 325	-2.22																				
7 169 160 124 120 167 127 102 117 234 165 106 123 144 79 31 62 87 99 136 139 128 126	-304 -219 -170 -178 -247 -385 -317 -422 -427 -517 -447 -289 -70 -45 -31 -67 -208 -117 -236 -347 -176 -207	-3.79 3.79 4.10 3.39 2.91 3.46 3.75 4.89 4.35 662 488 265 353 593 370 84 64 130 296 216 375 375 303 343	-1.25																				
8 113 205 162 111 84 51 58 93 73 69 187 145 82 105 128 127 87 63 95 78 66 85 113 109	-348 -298 -96 -42 -8 -34 -107 -17 -149 -277 -234 -102 -131 -166 -255 -90 -136 -115 -85 -129 -124 -137 -141	-1.27 2.41 5.55 4.61 2.07 1.27 60 93 201 248 220 465 381 185 237 296 384 178 200 201 163 195 209 251 250	-1.46																				
9 78 48 68 111 108 74 124 140 124 186 89 29 14 60 62 57 43 49 47 37 43 63 88 73	-209 -139 -111 -134 -220 -311 -374 -212 -68 -34 -51 -60 -32 -2 -21 -36 -52 -102 -184 -198 -137 -257	-1.55 1.54 5.9 3.20 3.29 3.23 4.49 4.08 5.00 370 440 663 285 609 214 95 135 82 116 203 226 240 315 251 406	-1.03																				
10 159 119 69 127 155 81 77 81 14 195 300 158 86 64 69 81 170 153 117 108 170 167 109 74	-192 -98 -28 -144 -255 -84 -21 -14 -94 -308 -395 -60 -39 -39 -29 -66 -81 -71 -25 -176 -216 -137 -134 -55	-1.35 2.17 1.97 2.71 4.11 1.65 9.9 240 434 796 464 147 104 79 111 236 299 189 133 347 338 243 130 250	-1.23																				
11 141 144 94 120 164 145 148 110 197 228 189 155 112 51 77 61 65 73 91 132 131 125 113 148	-203 -285 -263 -350 -325 -370 -422 -434 -95 -452 -100 -42 -56 -20 -51 -129 -134 -107 -184 -198 -137 -257	-2.55 2.50 4.03 3.29 3.23 4.49 4.08 5.00 370 440 663 285 609 214 95 135 82 116 203 226 240 315 251 406	-1.92																				
12 146 140 147 139 176 221 169 213 116 277 355 227 130 163 206 189 206 324 182 109 93 95 122 104	-353 -353 -199 -378 -294 -423 -281 -334 -596 -473 -338 -297 -378 -291 -209 -488 -255 -70 -94 -149 -243 -210	-3.36 2.17 1.97 2.71 4.11 1.65 9.9 240 434 796 464 147 104 79 111 236 299 189 133 347 338 243 130 250	-1.77																				
13 142 121 130 102 79 65 72 88 91 172 149 114 93 48 41 63 169 126 175 239 -145 -145 -187 -202 -153 -168	-220 -317 -163 -53 -60 -42 -74 -41 -217 -141 -205 -70 -18 -49 -420 -213 -97 -124 -63 -100 -189	-1.65 2.61 3.82 2.98 3.19 2.65 1.33 1.15 1.63 1.13 1.03 349 332 168 80 113 590 244 279 136 203 285	-1.37																				
14 118 92 117 156 178 151 87 71 148 129 92 93 85 113 142 158 134 115 87 132 146 113 116	-147 -147 -189 -244 -353 -199 -378 -294 -423 -281 -334 -596 -473 -338 -297 -378 -291 -209 -488 -255 -70 -94 -149 -243 -210	-4.82 3.30 3.92 4.93 3.76 600 465 399 613 952 702 469 461 584 481 415 812 439 180 138 245 365 315	-1.73																				
15 86 63 112 82 45 37 68 113 178 163 101 80 83 80 57 40 26 45 54 59 48 61 51 108	-211 -147 -188 -218 -269 -66 -129 -197 -82 -141 -93 -175 -235 175 235 179 287 -374 -399 325 262 137 180 334 216	-1.21 3.33 2.63 2.64 3.56 4.98 4.21 3.21 1.38 2.78 3.27 1.38 2.78 3.27 1.38 2.78 3.27 1.38 2.78 3.27 2.78 2.78 2.78 2.78	-1.68																				
16 -121 -81 -112 -65 -33 -23 -27 -212 -394 -287 -120 -72 -91 -156 -74 -66 -31 -51 -104 -55 -36 -34 -42 -94 -99	-145 2.25 1.48 1.48 1.79 61 97 326 572 451 223 153 176 237 132 107 58 96 115 85 97 94 203	-1.15 1.15	-1.77																				

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

JUNE 1994

16	144	133	57	33	19	23	25	46	66	74	70	64	45	64	22	40	55	55	33	29	20	51			
	-194	-172	-76	-30	-22	-15	-14	-15	-90	-94	-61	-47	-69	-57	-159	-57	-55	-38	-30	-84	-56	-60			
	339	133	65	42	39	40	61	157	169	132	112	115	123	230	87	28	52	94	86	118	87	43			
17	35	55	56	56	14	19	39	101	142	208	319	251	230	177	24	106	81	85	66	78	68	69	94		
	-27	-35	-52	-40	-39	-39	-39	-138	-226	-245	-596	-589	-132	-232	-190	-114	-100	-107	-33	-30	-51	-34	-65		
	63	92	108	96	54	60	79	239	396	394	546	497	190	114	100	105	160	121	105	105	105	105	112		
18	146	209	313	205	186	197	120	157	285	271	189	132	66	100	150	174	99	82	49	45	56	102	113		
	-81	-178	-281	-352	-131	-177	-267	-56	61	-283	-194	-220	-177	-82	-121	-147	-99	-7	-17	-18	4	-38	-127	-69	
	228	388	495	665	337	364	465	177	220	569	466	410	311	149	222	297	273	107	100	67	40	96	230	183	
19	76	68	82	86	67	114	130	250	377	428	406	343	354	102	77	89	76	104	120	169	154	160	109	158	
	-336	-19	-58	-98	-81	-65	-127	-239	-365	-408	-58	-179	-348	-120	-76	-34	-25	-102	-72	-48	-135	-57	-69	-244	-144
	114	88	140	184	149	181	259	490	743	838	865	523	704	223	154	124	102	207	193	218	290	218	179	402	316
20	99	70	103	155	180	128	105	80	46	44	45	43	76	144	121	76	86	100	114	87	110	163	177	110	103
	-157	-87	-277	-289	-238	-204	-132	-58	-40	-29	-23	-59	-134	-521	-121	-64	-161	-161	-104	-104	-373	-325	-227	-173	-173
	257	158	187	433	470	367	309	213	106	85	75	67	136	494	544	212	233	262	304	151	214	536	503	337	277
21	122	91	69	99	83	93	110	117	95	108	131	75	95	82	70	63	55	54	96	78	60	80	111	107	89
	-163	-133	-82	-171	-209	-230	-226	-298	-248	-364	-292	-191	-273	-84	-133	-87	-89	-91	-54	-22	-53	-74	-157	-173	-162
	285	224	151	270	293	325	338	417	345	473	424	268	370	168	204	152	145	146	151	101	114	154	270	280	253
22	106	120	100	137	111	100	94	49	20	32	48	55	33	49	37	43	43	42	35	42	47	33	16	62	
	-138	-133	-142	-143	-109	-110	-145	-124	-40	-69	-136	-187	-45	-32	-41	-12	-15	-48	-66	-55	-36	-22	-92	-92	-92
	237	240	263	244	447	222	247	240	174	61	60	185	244	79	82	79	50	59	91	102	97	84	63	40	156
23	35	42	46	54	39	39	20	40	18	17	24	13	22	23	32	36	36	45	44	57	61	46	25	34	
	-22	-15	-15	-31	-23	-20	-61	-30	-35	-30	-26	-20	-18	-14	-69	-90	-57	-125	-83	-142	-29	-41	-41	-41	
	59	58	61	94	72	62	41	102	48	52	54	46	34	41	39	103	127	104	75	116	186	131	68	76	
24	34	61	63	77	88	73	60	63	43	33	50	115	100	83	47	39	27	33	39	37	36	40	32	22	
	-20	-64	-38	-60	-167	-84	-27	-45	-36	-19	-18	-31	-83	-107	-38	-20	-17	-15	-23	-27	-28	-18	-43	-43	-43
	54	125	102	137	256	157	88	109	81	52	68	147	186	190	85	60	45	44	55	60	61	67	61	42	97
25	18	19	16	14	14	21	23	32	30	28	55	59	41	53	52	36	36	46	50	41	46	56	101	38	
	-16	-12	-12	-26	-31	-35	-43	-42	-29	-26	-29	-32	-48	-85	-59	-43	-92	-58	-82	-45	-17	-15	-25	-82	-41
	36	32	30	40	46	56	65	67	62	56	58	88	107	127	114	96	129	96	59	62	82	184	80	80	
26	103	115	115	150	204	236	321	339	179	53	215	138	92	69	145	310	345	146	113	241	211	208	144	183	
	-71	-69	-34	-55	-204	-284	-170	-468	-579	-46	-187	-138	-326	-437	-74	-226	-629	-421	-106	-154	-247	-338	-73	-109	-126
	174	184	350	206	601	521	692	807	439	100	355	465	531	144	372	94	765	243	220	358	489	350	281	254	410
27	187	162	219	159	179	240	168	188	118	89	110	130	121	105	66	43	41	68	90	133	158	97	86	93	
	-225	-403	-351	-212	-163	-329	-524	-497	-117	-29	-88	-108	-270	-199	-70	-45	-73	-56	-184	-171	-91	-170	-116	-154	-193
	413	566	570	371	343	570	694	686	236	119	200	239	392	306	137	89	116	125	275	304	250	268	203	248	322
28	120	134	111	98	84	161	120	97	77	64	134	75	67	36	70	68	111	163	220	105	118	176	200	119	
	-139	-183	-158	-103	-67	-129	-166	-73	-46	-41	-266	-171	-61	-28	-48	-306	-253	-205	-133	-105	-303	-809	-166	-166	
	259	318	270	202	152	292	288	172	124	107	402	247	128	65	120	376	365	369	554	173	251	282	564	809	287
29	208	215	154	185	119	168	129	66	148	125	95	50	42	45	83	11	170	223	154	194	166	172	135	189	
	-539	-259	-134	-342	-116	-214	-212	-16	-150	-201	-130	-56	-45	-38	-107	-268	-407	-342	-155	-245	-183	-239	-61	-335	
	747	475	288	528	536	383	341	82	239	327	226	77	68	85	192	381	579	767	311	418	411	455	374	650	
30	132	180	121	199	114	164	101	89	112	157	111	104	114	114	190	156	180	134	140	179	126	135	135		
	-132	-200	-143	-316	-259	-491	-206	-73	-107	-161	-93	-167	-91	-167	-91	-182	-296	-362	-353	-309	-115	-100	-340	-82	-238
	416	381	265	517	382	656	308	164	220	658	429	273	209	297	487	519	535	443	253	241	520	160	160	375	

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

JULY 1994

Provisional Hourly Values (nT) of AU, AL and AE Indices												JULY					1994									
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	166	171	123	272	213	97	200	166	193	215	108	177	79	89	69	35	39	86	99	176	155	205	261	98	
	AL	-372	-613	-382	-331	-320	-112	-302	-510	-338	-189	-316	-145	-128	-59	-36	-25	-83	-143	-269	-182	-144	-333	-193	-257	
	AE	558	784	486	604	534	210	503	676	532	654	298	523	225	217	129	71	66	170	244	446	338	350	795	292	
2	AU	116	77	64	193	217	178	214	236	199	108	48	67	125	49	78	115	125	185	160	143	221	221	148		
	AL	-168	-149	-124	-226	-525	-484	-579	-395	-508	-503	-312	-645	-425	-24	-240	-223	-166	-121	-192	-255	-392	-431	-309		
	AE	285	227	188	419	743	703	758	591	733	702	421	143	253	550	274	320	339	288	247	378	420	436	652	458	
3	AU	131	96	92	54	82	109	74	138	168	177	106	88	116	43	23	30	28	37	53	52	71	80	147	236	93
	AL	-216	-92	-190	-92	-135	-58	-106	-337	-322	-389	-187	-83	-93	-25	-44	-44	-67	-30	-106	-97	-166	-389	-158	-257	
	AE	348	190	283	147	219	368	182	377	491	567	445	249	304	126	117	56	73	54	83	71	178	315	627	252	
4	AU	99	49	84	109	138	145	33	21	11	28	25	57	43	67	57	99	92	81	63	137	97	73	75	74	
	AL	-104	-18	-52	-213	-229	-200	-154	-44	-24	-17	-15	-29	-65	-144	-248	-255	-161	-156	-93	-130	-120	-86	-97	-159	-117
	AE	205	68	136	322	368	347	188	66	36	46	41	88	108	212	306	355	254	238	157	268	218	159	173	257	192
5	AU	56	79	52	35	44	48	67	54	59	31	42	34	40	31	41	72	-180	-165	-67	-30	-33	-34	-39	-45	-60
	AL	-47	-117	-142	-35	-42	-30	-48	-54	-52	-27	-32	-44	-30	-54	-52	-43	-34	-39	-41	-46	47	87	46	-	
	AE	105	198	195	71	87	79	117	116	92	58	74	81	75	55	66	109	233	209	102	70	75	82	88	133	107
6	AU	80	83	52	33	73	54	98	106	127	96	50	66	62	80	148	51	27	35	42	49	60	112	107	78	
	AL	-50	-55	-114	-22	-64	-44	-50	-258	-143	-256	-44	-43	-79	-115	-176	-54	-78	-15	-18	-58	-58	-29	-32	-76	
	AE	132	140	167	56	138	99	150	365	272	354	96	111	142	195	325	95	54	78	58	68	116	171	136	112	
7	AU	69	77	146	273	166	69	105	169	132	86	95	150	159	206	148	129	90	58	88	127	81	102	82	75	
	AL	-24	-33	-107	-427	-223	-41	-31	-179	-143	-173	-37	-173	-570	-688	-408	-669	-186	-97	-87	-56	-68	-61	-161	-136	-180
	AE	94	110	254	700	391	111	137	350	277	158	170	324	730	895	557	400	278	156	176	184	150	164	244	212	301
8	AU	55	63	82	73	59	49	36	15	43	9	26	23	40	46	36	37	28	42	49	42	34	22	13	39	
	AL	-39	-50	-164	-122	-77	-26	-28	-29	-23	-71	-38	-59	-117	-95	-65	-55	-29	-24	-22	-20	-28	-22	-22	-53	
	AE	95	114	246	196	136	76	66	45	67	80	100	62	99	115	78	47	131	103	59	68	72	64	45	36	93
9	AU	9	15	32	17	32	44	48	54	55	40	23	23	25	47	48	38	47	49	51	39	28	25	19	35	
	AL	-24	-18	-15	-6	-11	-24	-34	-28	-30	-32	-25	-41	-44	-40	-44	-40	-159	-30	-12	-24	-24	-31	-31	-31	
	AE	34	34	49	25	45	69	83	84	86	72	56	49	67	72	85	111	199	78	56	65	49	53	44	67	
10	AU	25	15	16	23	28	32	55	59	41	20	13	6	19	57	56	46	41	40	35	31	35	24	24	32	
	AL	-21	-13	-4	-1	-16	-25	-26	-28	-29	-32	-72	-57	-34	-32	-35	-53	-126	-103	-80	-53	-35	-30	-25	-43	
	AE	47	30	21	25	45	58	89	91	115	78	47	39	54	111	82	145	169	144	117	85	75	60	54	77	
11	AU	50	34	37	34	24	21	27	19	23	17	9	15	28	40	40	64	61	31	26	24	24	29	32	31	
	AL	-34	-35	-30	-27	-28	-9	-14	-23	-30	-32	-31	-24	-18	-24	-44	-84	-44	-44	-20	-22	-26	-31	-38	-32	
	AE	63	70	69	72	53	31	37	51	43	53	50	41	40	47	65	123	145	77	47	47	50	60	71	62	
12	AU	50	82	71	62	51	26	20	16	13	20	21	22	30	34	35	30	24	24	23	29	35	37	34	34	
	AL	-33	-94	-43	-53	-28	-34	-41	-32	-27	-26	-30	-22	-13	-10	-14	-21	-22	-17	-16	-20	-27	-31	-28	-21	
	AE	88	177	115	116	80	61	61	48	41	47	51	45	44	51	51	47	42	40	50	63	68	66	57	65	
13	AU	29	22	27	38	41	37	34	21	29	24	26	27	42	41	47	53	38	18	24	33	51	42	35	35	
	AL	-24	-15	-6	-26	-30	-20	-26	-23	-22	-24	-20	-19	-16	-14	-34	-51	-23	-22	-32	-45	67	84	154	105	
	AE	54	38	35	64	71	58	55	48	52	47	50	48	62	58	61	87	89	42	45	67	84	154	105	64	
14	AU	36	36	58	62	90	209	184	94	57	188	202	227	387	190	242	436	159	100	127	141	204	387	251	180	
	AL	-24	-29	-15	-23	-21	-107	-121	-45	-45	-32	-22	-26	-20	-19	-16	-14	-34	-51	-23	-52	-103	-274	-342	-355	
	AE	60	66	73	86	111	317	306	140	74	274	493	320	842	545	536	973	424	155	216	195	308	828	528	353	
15	AU	158	194	181	148	161	83	108	80	96	46	87	58	44	95	83	67	66	64	86	-23	-44	-86	-201	-425	-116
	AL	-421	-426	-300	-195	-173	-107	-112	-128	-187	-58	-43	-47	-52	-57	-17	-24	-11	-37	-23	-44	-86	-201	-425	-116	
	AE	580	621	382	343	335	191	221	210	284	105	132	106	97	152	100	91	57	104	88	132	199	384	594	619	

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

JULY 1994

16	201	170	222	224	104	110	63	62	167	281	256	198	145	190	86	127	121	111	96	161	164	164	149	166		
	-795	-665	-524	-506	-213	-225	-92	-90	-172	-768	-634	-418	-148	-190	-256	-123	-121	-64	-79	-209	-245	-239	-192	-140		
	997	835	746	731	318	337	156	153	340	1019	1024	533	563	648	346	351	245	176	177	372	456	404	542	458		
	287	568	422	390	545	412	313	257	239	460	614	311	488	620	251	143	166	255	192	154	177	321	383	381	348	
17	101	166	163	118	209	111	64	93	105	174	254	88	167	177	90	53	74	66	59	83	99	142	145	119	122	
	-186	-402	-268	-272	-300	-335	-163	-132	-248	-285	-360	-222	-321	-443	-161	-90	-91	-188	-131	-70	-76	-178	-237	-261	-226	
	287	67	83	125	83	100	61	-56	-136	-247	-183	169	61	124	-196	-72	-46	-28	23	47	91	63	64	65	83	
	-248	-119	-359	-377	-202	-113	-56	-136	-247	-103	-377	-193	-217	-196	-190	-78	-107	-79	-64	-31	-205	-116	-60	-102	-176	
18	-309	-193	-162	-150	-133	-221	-453	-174	-94	-75	-225	-174	-120	-114	-39	-19	-24	-58	-44	-32	-133	-185	-66	-102	-295	-232
	404	279	247	221	262	403	586	292	186	147	320	269	338	388	99	64	56	114	225	310	116	174	400	319	259	
19	94	85	64	70	108	182	133	118	91	71	95	95	120	114	39	19	24	53	91	124	49	72	103	86	87	
	-127	51	98	57	31	55	73	103	83	84	156	304	449	235	94	74	143	150	59	49	47	44	44	58	111	
20	49	26	34	18	8	25	43	40	52	53	107	106	154	93	56	27	31	24	27	31	22	16	11	17	45	
	-78	-24	-62	-38	-23	-30	-62	-31	-30	-48	-198	-194	-142	-37	-45	-111	-124	-30	-16	-25	-26	-32	-40	-66		
	127	51	98	57	31	55	73	103	83	84	156	304	449	235	94	74	143	150	59	49	47	44	44	58	111	
21	51	90	101	58	96	140	68	59	104	80	63	96	188	138	24	31	36	36	39	58	74	68	58	73	76	
	-54	-151	-162	-44	-44	-130	-243	-48	-40	-245	-132	-86	-283	-287	-56	-24	-56	-40	-36	-68	-55	-84	-150	-107	-151	
	105	241	283	103	141	271	282	108	145	327	197	184	472	426	82	56	93	77	77	127	143	125	143	224	185	
22	96	75	107	82	79	103	146	110	115	65	63	73	178	43	30	43	38	21	18	51	48	42	40	32	26	
	-551	-135	-116	-136	-252	-190	-107	-58	-109	-61	-93	-167	-132	-30	-26	-43	-21	-30	-43	78	-125	-80	-68	-65	-109	
	248	210	243	218	332	367	337	223	123	137	247	154	91	136	121	52	44	86	131	173	134	121	101	91	112	
23	35	27	76	127	93	65	37	20	40	125	83	44	50	86	86	62	48	48	60	89	128	89	51	49	67	
	-40	-36	-43	-88	-194	-196	-52	-52	-28	-89	-199	-63	-31	-76	-112	-62	-49	-72	-83	-127	-38	-28	-55	-177	-151	
	76	64	120	215	285	261	89	73	69	215	294	108	82	162	199	183	97	124	134	174	306	128	80	77	151	
24	28	28	40	59	53	42	61	63	43	23	46	31	16	16	35	18	32	57	47	28	41	91	95	72	44	
	-36	-30	-48	-63	-60	-83	-134	-81	-101	-40	-19	-8	-27	-36	-20	-22	-16	-35	-36	-35	-33	-63	-160	-76	-47	
	65	59	89	123	134	83	101	83	61	51	82	61	54	39	51	40	68	135	129	64	75	155	256	148	92	
25	91	209	135	176	179	169	77	78	101	53	47	60	100	121	83	62	37	51	46	81	90	110	82	41	95	
	-85	-326	-165	-133	-154	-115	-24	-35	-140	-201	-47	-31	-62	-173	-69	-135	-72	-39	-22	-204	-182	-147	-187	-31	-115	
	177	536	282	310	332	284	102	114	243	256	95	92	163	294	153	198	110	91	69	286	274	258	270	73	211	
26	29	23	25	52	62	60	41	-48	-39	33	24	38	43	56	35	17	21	22	24	29	19	15	24	44	35	
	-16	-8	-17	-52	-118	-60	-31	-48	-55	-39	-42	-119	-70	-51	-57	-35	-35	-32	-30	-90	-53	-42	-36	-21	-51	
	46	32	43	105	201	169	73	93	95	73	67	178	115	109	94	53	57	55	56	120	73	58	60	67	87	
27	93	102	131	202	286	147	51	50	18	11	29	27	15	26	46	41	24	28	68	74	152	233	153	84	87	
	-10	-116	-178	-402	-709	-299	-62	-52	-32	-33	-48	-39	-28	-23	-16	-15	-53	-49	-56	-35	-297	-235	-69	-131	-220	
	164	219	310	605	939	447	114	104	51	46	58	66	44	50	64	57	78	78	125	110	450	493	389	154	220	
28	77	150	176	225	148	128	103	59	53	112	84	164	113	76	67	50	52	139	243	193	194	185	133	73	125	
	-47	-278	-491	-439	-146	-334	-108	-111	-47	-66	-118	-224	-179	-81	-41	-34	-86	-201	-321	-295	-72	-182	-235	-46	-166	
	125	429	666	665	295	262	212	172	102	180	203	389	292	158	109	86	140	342	565	489	267	388	369	119	292	
29	57	68	124	179	156	112	79	44	106	83	39	36	39	80	120	84	84	28	43	67	83	154	113	81		
	-56	-79	-314	-466	-350	-239	-266	-131	-42	-20	-129	-104	-23	-27	-78	-104	-393	-180	-90	-54	-61	-378	-221	-182	-145	
	115	148	439	645	506	395	379	211	88	327	214	145	61	68	159	525	519	266	176	77	255	403	477	331	289	
30	73	154	161	125	52	83	-18	-176	-82	-19	-17	-65	-83	-176	-264	-224	-29	36	43	67	83	154	113	81		
	-79	-367	-375	-283	-50	-83	-118	-176	-82	-19	-17	-65	-83	-176	-264	-224	-58	-37	-54	-61	-378	-221	-182	-145		
	152	521	537	409	105	124	208	275	147	43	147	145	275	384	261	89	75	98	130	142	504	336	295	227		
31	148	122	95	51	102	50	39	23	47	99	76	82	35	48	61	33	35	30	28	53	76	158	144	92		
	-249	-226	-123	-45	-118	-73	-42	-29	-14	-48	-111	-268	-103	-119	-147	-127	-62	-32	-52	-53	-226	-290	-146	-115		
	395	348	216	96	222	124	82	53	62	148	188	350	139	168	140	164	93	60	106	129	375	435	238	188		

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

AUGUST 1994

DAYUT	Provisional Hourly Values (nT) of AU, AL and AE Indices													AUGUST 1994											
	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 RL AE	80 -36 -71	43 -27 -131	79 -206 -295	88 -65 -123	53 -19 -68	48 -22 -188	62 -25 -206	89 -52 -153	25 -37 -119	32 -62 -114	12 -36 -76	15 -21 -76	33 -25 -21	12 -19 -15	23 -20 -19	20 -14 -19	37 -17 -19	47 -17 -12	64 -45 -17	72 -36 -17	49 -34 -26	52 -47 -17	46 -58 -21	52 -63 -111	46
2	62 -139 -202	39 -98 -138	43 -65 -79	38 -40 -36	29 -30	42 -27	45 -25	62 -52	36 -87	23 -125	37 -64	25 -20	20 -19	14 -19	19 -17	18 -12	20 -11	16 -17	32 -29	34 -26	44 -47	46 -58 -28	46		
3	26 -21	23 -19	11 -16	41 -13	30 -13	47 -14	51 -58	40 -122	26 -12	22 -19	20 -21	25 -15	20 -16	18 -12	30 -17	31 -12	30 -17	21 -14	39 -46	36 -45	23 -21	36 -25	29		
4	32 -14 -47	16 -5 -23	20 -1 -18	19 -0	22 -28	20 -29	31 -32	28 -24	16 -24	29 -24	25 -27	34 -45	57 -141	58 -81	30 -6	24 -14	27 -24	23 -14	17 -14	15 -17	16 -18	16 -13	26		
5	32 -2	28 -8	38 -9	27 -2	54 -6	70 -39	75 -43	83 -44	65 -141	32 -134	30 -51	45 -15	56 -15	54 -30	56 -67	24 -76	30 -12	44 -12	44 -16	36 -56	50 -56	64 -64	43 -64	47	
6	45 -9 -50	51 -32 -177	80 -177	76 -94	47 -31	101 -65	109 -156	103 -90	53 -77	32 -64	46 -59	57 -45	75 -99	33 -86	48 -22	35 -37	48 -44	53 -88	65 -75	61 -83	72 -75	69 -72	55 -52	61	
7	25 -3	13 -6	14 -11	9 -16	20 -32	47 -32	69 -35	49 -36	27 -28	20 -28	30 -30	29 -30	74 -62	67 -67	33 -35	14 -12	21 -23	18 -21	32 -21	61 -61	74 -74	36 -36	-38		
8	38 -24	15 -1	11 -0	7 -6	17 -10	22 -13	40 -20	46 -32	31 -24	21 -25	18 -25	16 -27	14 -29	16 -31	14 -31	20 -31	30 -31	18 -21	18 -26	18 -25	18 -18	17 -14	21 -20	-21	
9	17 -6 -23	30 -5 -36	48 -4 -123	53 -76	64 -50	71 -86	69 -86	58 -54	39 -42	27 -42	24 -32	25 -30	51 -51	77 -71	42 -39	44 -39	44 -42	68 -66	106 -108	127 -127	99 -98	91 -84	55 -55	55	
10	101 -81 -166	96 -70 -347	120 -227	111 -131	100 -153	67 -86	88 -109	116 -132	120 -99	85 -137	128 -186	67 -31	128 -370	116 -352	89 -79	104 -75	288 -173	356 -402	289 -320	134 -237	54 -124	44 -36	90 -83	115 -119	
11	68 -109 -178	104 -82 -186	73 -199 -273	87 -201 -288	90 -113	136 -142	146 -138	160 -164	81 -113	102 -133	122 -133	117 -133	121 -134	73 -134	59 -136	101 -123	126 -102	70 -65	65 -71	65 -71	94 -86	160 -148	155 -151	102 -129	
12	163 -427	119 -134	127 -146	161 -404	150 -313	145 -362	95 -268	94 -44	82 -82	70 -128	73 -117	112 -106	207 -456	77 -134	40 -33	36 -35	69 -57	171 -290	219 -418	192 -289	115 -342	129 -187	96 -113	127 -206	
13	113 -144	138 -245	113 -338	70 -110	93 -52	232 -461	186 -601	118 -76	53 -9	89 -60	52 -106	97 -94	150 -226	247 -602	75 -333	157 -288	192 -119	132 -212	52 -46	60 -62	58 -104	142 -348	129 -232		
14	63 -286	61 -108	105 -200	91 -562	133 -553	119 -312	253 -582	237 -654	118 -681	89 -681	219 -787	100 -721	168 -654	152 -654	104 -124	44 -58	60 -297	638 -418	522 -349	535 -346	94 -124	141 -163	133 -455		
15	165 -484	85 -374	61 -106	51 -29	53 -104	32 -40	27 -161	18 -182	44 -117	113 -120	202 -304	91 -603	134 -54	149 -315	75 -63	47 -29	32 -46	83 -198	135 -503	149 -322	207 -505	72 -197	89 -237		

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

AUGUST 1994

16	63	103	92	40	47	29	53	64	-83	129	224	91	98	70	31	28	32	32	56	148	140	119	134	-81
	66	-34	-146	-111	-43	-26	-43	-67	-183	-236	-294	-178	-184	-88	-6	-19	-11	-46	-63	-157	-161	-153	-327	-123
	69	138	241	152	91	56	97	133	267	366	518	269	282	158	38	47	44	79	96	214	510	318	213	463
17	75	32	18	51	75	148	55	98	54	34	24	37	52	52	65	67	57	78	48	30	28	23	41	30
	76	-23	-25	-44	-135	-200	-261	-83	-18	-20	-104	-193	-95	-118	-115	-73	-167	-320	-55	-35	-15	-16	-21	-29
	140	55	43	97	211	349	317	181	74	55	129	134	147	171	181	141	224	399	105	67	45	40	63	143
18	30	32	29	35	48	56	61	35	73	48	29	83	147	125	113	62	55	34	35	39	34	21	26	35
	47	-50	-44	-67	-92	-164	-47	-6	-27	-200	-215	-148	-251	-333	-270	-145	-93	-60	-46	-71	-25	-23	-96	-109
	79	84	74	103	141	220	108	43	102	250	244	232	399	459	383	207	148	128	96	86	106	47	50	133
19	58	67	60	37	52	66	91	112	47	22	20	17	14	19	30	21	25	27	29	29	27	27	25	37
	108	-150	-149	-49	-57	-114	-100	-118	-61	-59	-33	-20	-18	-21	-25	-40	-41	-51	-70	-42	-97	-39	-23	-18
	166	217	210	86	110	182	192	231	109	82	54	40	36	45	71	78	74	101	72	124	68	49	56	104
20	31	28	34	84	85	86	65	61	26	29	43	24	18	20	25	41	69	75	62	61	106	126	157	61
	-7	-22	-21	-204	-161	-62	-91	-46	-181	-137	-59	-17	-23	-38	-18	-217	-217	-217	-217	-217	-217	-217	-217	-115
	49	52	42	296	290	248	127	220	118	77	224	162	78	38	48	80	266	293	235	123	255	353	256	321
21	261	263	235	133	51	27	20	17	18	25	21	23	33	47	94	201	108	32	39	52	28	45	27	25
	-166	-203	-160	-69	-16	-18	-19	-13	-16	-20	-24	-24	-21	-30	-88	-434	-284	-35	-19	-50	-47	-38	-23	-28
	428	467	395	202	68	46	41	32	35	46	46	48	55	77	282	635	393	69	59	103	76	85	62	54
22	75	73	35	47	61	38	30	29	22	19	21	29	65	64	66	69	68	30	27	40	75	129	206	234
	-69	-144	-28	-23	-87	-61	-34	-51	-19	-19	-117	-27	-65	-143	-160	-216	-48	-27	-11	-40	-48	-319	-436	-278
	144	217	63	71	149	100	45	82	49	43	40	138	57	130	207	226	285	78	38	55	124	450	644	514
23	162	114	155	170	108	122	83	75	44	34	28	20	22	20	20	30	24	28	31	44	33	22	17	20
	-187	-114	-150	-252	-179	-63	-57	-32	-39	-57	-45	-24	-16	-14	-23	-23	-120	-26	-54	-30	-22	-24	-19	-68
	351	229	356	424	188	186	141	109	83	90	126	45	39	35	44	82	14	55	87	76	56	47	42	41
24	19	16	18	21	46	81	70	39	29	22	19	20	17	9	13	14	26	29	18	30	39	46	35	28
	-12	-8	-6	-8	-19	-76	-23	-10	-10	-15	-17	-19	-20	-23	-17	-20	-23	-20	-23	-18	-32	-23	-64	-24
	33	26	25	30	65	158	94	50	40	39	38	34	38	32	33	46	53	38	64	63	136	136	101	44
25	44	55	60	75	116	123	70	45	37	64	140	239	166	69	49	37	38	39	97	59	28	17	20	59
	-18	-51	-33	-18	-327	-399	-247	-46	-16	-44	-261	-477	-195	-53	-37	-26	-54	-58	-121	-76	-23	-18	-25	-110
	63	107	95	94	444	524	318	92	54	109	402	718	361	123	87	64	93	98	219	136	53	48	44	46
26	23	22	31	42	63	64	60	69	62	30	24	38	19	19	14	18	20	18	27	44	61	45	35	
	-21	-17	-17	-56	-63	-63	-160	-69	-20	-88	-205	-16	-10	-16	-25	-25	-19	-15	-20	-18	-26	-27	-21	-42
	45	40	50	99	106	129	222	138	84	120	230	56	30	36	41	43	39	34	33	28	46	72	90	78
27	19	75	107	86	99	106	87	88	74	24	19	11	19	29	31	18	34	46	36	66	93	52	35	
	-115	-256	-76	-110	-115	-130	-110	-138	-23	-54	-32	-94	-37	-27	-33	-67	-41	-49	-187	-91	-19	-31	-73	
	31	191	363	163	179	222	218	199	113	49	74	43	113	67	58	42	88	114	78	116	282	144	55	129
28	55	30	61	83	71	83	122	64	79	27	16	20	9	4	11	16	27	25	29	20	18	19	18	
	-62	-2	-32	-267	-339	-207	-361	-290	-150	-90	-28	-40	-30	-44	-17	-29	-38	-31	-117	-62	-22	-15	-12	-92
	118	53	94	351	311	291	484	355	230	118	45	40	49	29	46	66	59	143	92	43	34	35	31	132
29	26	28	39	49	35	32	57	75	47	38	25	31	36	57	46	27	23	21	18	22	24	52	69	
	-8	-10	-25	-28	-5	-6	-50	-197	-135	-15	-27	-31	-51	-76	-44	-15	-20	-19	-21	-23	-39	-44	-52	-41
	35	40	66	78	42	40	68	274	183	55	53	63	88	133	90	43	38	42	40	42	63	70	125	139
30	-20	-10	-16	-12	-24	-32	-15	-45	-52	-57	-74	-173	-33	-29	-21	-17	-28	-34	-51	-40	33	-27	28	
	83	49	56	66	49	66	165	165	95	206	65	54	44	38	59	91	185	153	84	55	51	55	81	
31	36	24	25	33	39	33	28	20	28	27	25	40	69	49	28	27	21	24	21	23	36	84	162	
	-18	-9	-5	-38	-6	-13	-14	-19	-14	-21	-18	-40	-82	-180	-195	-101	-36	-15	-26	-23	-25	-40	-48	
	55	34	31	73	47	46	43	39	43	49	45	44	64	151	229	129	58	41	40	51	60	140	356	87

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

SEPTEMBER 1994

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	186	148	150	143	112	171	138	79	60	33	96	46	24	64	88	47	31	32	75	162	163	81	117	179	101	
	AL	-386	-163	-389	-290	-147	-204	-175	-131	-132	-56	-77	-98	-79	-49	-20	-196	-321	-201	-81	-79	-151	-190	-173	-190	-275	
	AE	573	332	540	434	260	375	313	211	192	165	431	171	81	142	187	127	81	54	272	485	365	160	269	369	275	
2	AU	223	168	140	87	88	-112	-112	-62	-10	-11	-5	-17	-25	-67	-136	-179	-25	-16	-10	-53	-33	-14	-12	-50	-57	
	AL	-217	-225	-58	-226	-88	-112	-112	-36	-24	-20	-11	-14	-20	-55	-133	-242	-272	-49	-40	33	82	61	34	54	87	138
	AE	440	394	314	146	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96
3	AU	71	53	54	57	65	93	64	58	20	23	41	20	17	24	46	24	21	19	23	25	24	23	29	28	38	
	AL	-121	-121	-125	-180	-67	-90	-78	-76	-58	-13	-18	-16	-35	-38	-29	-41	-42	-36	-31	-21	-19	-45	-64	-64	-64	
	AE	193	174	179	237	133	173	155	136	97	183	100	34	36	41	81	64	52	65	63	60	57	47	44	75	103	
4	AU	35	44	39	41	35	24	21	52	30	28	24	25	26	36	52	30	20	27	24	25	28	26	23	31	31	
	AL	-100	-67	-14	-39	-6	-9	-7	-71	-56	-35	-70	-25	-21	-25	-27	-34	-113	-25	-20	-26	-31	-28	-20	-17	-37	
	AE	136	112	53	81	42	33	29	125	88	64	99	49	47	51	63	87	144	47	49	52	58	58	46	42	69	
5	AU	22	23	36	44	37	23	34	54	50	50	133	163	71	76	80	70	47	31	75	85	66	47	65	47	59	
	AL	0	0	-10	-100	-93	-27	-66	-155	-212	-386	-275	-118	-79	-129	-137	-41	-49	-43	-125	-64	-40	-26	-64	-95	-95	
	AE	23	24	46	144	130	52	101	211	263	520	439	191	156	210	208	89	52	93	198	150	107	74	129	113	155	
6	AU	17	21	16	87	112	132	122	102	58	104	202	282	174	77	155	142	146	101	190	171	94	97	62	36	112	
	AL	-111	-3	-4	-63	-41	-41	-155	-105	-50	-54	-54	-411	-275	-219	-54	-375	-303	-127	-17	-21	-21	-180	-180	-180	-180	
	AE	30	26	20	151	354	455	277	208	110	159	673	853	455	253	432	435	367	156	373	475	223	365	132	57	293	
7	AU	41	82	130	184	203	179	151	224	222	192	170	190	131	214	184	70	85	189	170	209	278	279	199	127	171	
	AL	-15	-92	-367	-352	-354	-204	-301	-349	-332	-305	-669	-669	-444	-444	-444	-444	-340	-340	-479	-304	-380	-622	-375	-224	-446	
	AE	57	175	386	551	556	533	355	525	525	525	876	860	473	798	798	212	163	531	650	514	658	902	575	352	518	
8	AU	69	86	148	155	110	145	111	195	131	197	163	90	50	39	34	65	78	112	76	47	107	103	83	79	103	
	AL	-182	-228	-390	-483	-535	-505	-709	-648	-363	-686	-516	-225	-72	-24	-43	-142	-264	-139	-50	-232	-288	-203	-90	-299	-299	
	AE	251	315	538	639	645	650	820	844	496	884	710	317	123	63	78	209	207	377	217	98	340	391	287	170	403	
9	AU	113	108	134	152	101	81	130	142	170	176	1134	139	209	237	295	207	133	85	230	182	215	81	114	158		
	AL	-375	-377	-316	-289	-225	-256	-609	-609	-433	-614	-534	-872	-1035	-689	-320	-316	-154	-92	-575	-491	-220	-160	-328	-438		
	AE	507	490	424	594	327	337	890	752	604	792	654	1082	1384	985	529	471	287	178	806	673	435	175	242	452	597	
10	AU	140	125	102	56	119	95	106	105	85	62	165	174	128	180	146	77	71	81	91	128	103	68	73	123		
	AL	-423	-368	-340	-92	-179	-629	-179	-179	-88	-27	-88	-196	-53	-78	-75	-136	-221	-252	-176	-121	-245	-380	-519	-519		
	AE	564	494	442	149	285	481	736	582	366	242	471	672	580	635	557	287	242	380	305	298	343	171	150	481		
11	AU	172	157	137	154	145	101	94	115	82	59	87	105	60	61	129	101	52	40	89	77	55	58	76	96		
	AL	-452	-177	-407	-433	-371	-250	-323	-658	-304	-234	-309	-91	-143	-889	-207	-205	-89	-85	-219	-62	-85	-153	-181	-252		
	AE	625	535	544	587	516	352	418	654	387	293	339	416	152	205	420	310	258	131	175	298	118	143	229	349		
12	AU	71	35	21	22	9	16	38	34	27	88	196	53	78	75	136	221	252	176	121	34	45	42	34	143		
	AL	-180	-30	-4	-5	-7	-8	-22	-179	-88	-27	-42	-162	-86	-56	-49	-90	-257	-258	-248	-124	-26	-115	-34	-143		
	AE	152	65	26	28	17	25	61	214	117	199	629	210	194	210	464	760	739	445	370	41	73	158	68	43		
13	AU	24	29	36	85	108	75	82	67	42	145	181	54	46	34	48	55	29	46	30	40	96	117	125	58		
	AL	-7	-11	-11	-115	-308	-293	-147	-313	-415	-151	-162	-86	-56	-49	-90	-257	-258	-18	-49	-135	-121	-245	-380	-519		
	AE	32	40	48	261	416	373	230	441	458	233	208	142	102	84	139	313	85	48	96	117	162	341	497	645		
14	AU	95	104	74	66	59	28	25	16	29	32	20	13	41	89	103	25	18	20	16	15	12	20	40	40		
	AL	-217	-91	-41	-42	-40	-6	-8	-13	-17	-63	-99	-53	-46	-236	-191	-83	-17	-18	-17	-11	-14	-5	-6	-54		
	AE	313	195	115	108	100	35	34	30	46	96	120	67	89	326	294	63	36	39	39	29	31	29	27	95		
15	AU	41	69	72	33	15	18	16	48	58	78	89	53	29	25	19	27	25	42	45	51	37	55	99	115		
	AL	-221	-56	-33	-12	-11	-12	-12	-30	-120	-178	-149	-139	-35	-23	-24	-37	-84	-230	-82	-9	-31	-49	-265	-197		
	AE	62	126	129	47	28	30	29	79	179	257	240	193	64	49	43	65	111	273	129	62	69	105	364	127		

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

SEPTEMBER 1994

16	55	67	94	67	32	18	62	47	34	22	19	45	83	48	30	38	13	39	53	64	69	82	78	52	
	-12	-19	-89	-150	-17	-10	-60	-249	-88	-13	-23	-43	-72	-48	-42	-67	-86	-121	-65	-219	-146	-72	-14	-72	
	69	87	184	218	49	30	123	297	123	36	43	90	156	98	73	127	101	133	120	284	217	155	101	67	
17	41	58	49	65	74	124	104	89	79	67	52	22	20	29	11	49	29	23	18	23	19	35	55	63	
	-20	-3	-92	-168	-267	192	267	192	209	294	69	45	34	33	112	140	88	46	52	40	64	84	145	111	
18	60	46	27	22	27	30	64	31	29	16	21	20	34	33	23	21	20	17	18	24	22	27	56	63	
	-25	-15	-28	-1	-3	-15	-113	-104	-12	-11	-100	-63	-55	-30	-24	-37	-15	-24	-43	-72	-72	-142	-44	-44	
	86	61	55	24	31	46	178	136	42	27	122	84	90	64	48	87	58	34	44	66	47	72	130	205	
19	77	141	62	14	12	32	62	33	39	34	17	4	1	7	49	29	22	28	31	31	24	18	22	40	
	-58	-346	-66	-10	-7	-21	-65	-24	-19	-13	-16	-16	-22	-18	-200	-228	-82	-44	-26	-11	-9	-26	-66	-66	
	135	487	129	25	21	54	128	58	59	43	31	21	18	30	138	215	224	257	115	76	51	29	33	66	
20	59	87	63	34	39	22	17	17	16	6	3	12	9	16	26	13	16	17	27	34	42	40	29		
	-48	-51	-12	-22	-5	-50	-8	-6	-6	-7	-21	-22	-22	-22	-59	-33	-64	-20	-20	-19	-26	-32	-15	-27	
	108	139	76	86	41	90	30	24	25	38	28	26	35	68	49	68	78	37	39	35	47	64	75	57	
21	27	24	19	26	29	14	44	14	16	9	16	19	44	41	26	15	21	14	20	36	30	21	41	64	
	-44	-123	-20	0	-5	-7	-29	-14	-15	-14	-24	-88	-109	-71	-32	-18	-17	-9	-12	-23	-30	-6	-32	-132	
	72	148	40	26	34	21	74	29	32	24	41	108	154	114	59	34	39	25	34	60	61	28	74	196	
22	79	71	62	74	41	21	10	6	11	13	8	4	3	3	14	21	17	18	23	34	34	28	20		
	-103	-33	-84	-154	-56	34	24	19	24	33	32	26	24	26	41	66	105	104	123	114	93	36	11	-40	
	182	104	84	154	56	34	24	19	24	33	32	26	24	26	41	66	105	104	123	114	96	43	32	67	
23	14	24	45	70	42	45	24	26	18	20	6	7	8	5	6	7	9	20	17	22	24	27	50	33	
	-5	-1	-56	-134	-68	-11	-5	-8	-10	-9	-33	-23	-15	-20	-25	-26	-23	-15	-9	-14	-27	-15	-26	-26	
	21	25	96	205	111	57	30	36	30	70	40	31	24	25	32	34	36	45	34	35	42	78	50	51	
24	24	26	40	46	58	51	45	38	48	58	29	10	11	10	10	16	25	19	35	115	176	236	245	127	
	-12	-25	-173	-305	-102	-24	-16	-124	-80	-98	-49	-33	-38	-46	-60	-49	-40	-41	-51	-53	-36	-34	-34	-45	
	38	52	214	252	161	76	62	163	129	98	129	98	33	38	46	60	49	40	51	53	36	34	34	53	
25	38	33	35	40	17	18	14	12	10	8	8	11	10	10	10	10	11	10	13	1164	-614	-707	-376	-242	
	-9	-22	-78	-32	-1	-8	-24	-7	-7	-7	-11	-10	-8	-10	-10	-11	-10	-13	-164	-614	-707	-376	-242	-107	
	48	56	114	73	18	28	40	20	18	16	19	21	19	20	26	36	30	49	280	792	944	520	443	370	
26	36	33	45	132	62	131	141	102	85	94	50	95	136	76	49	49	41	40	41	34	28	23	14	36	
	-228	-29	-30	-139	-268	-448	-460	-168	-511	-50	-387	-305	-305	-174	-119	-193	-239	-311	-366	-298	-67	-32	-28	-42	-117
	265	64	76	271	330	519	602	271	293	627	339	490	550	226	195	401	407	341	102	62	52	22	79	153	283
27	63	67	101	169	78	155	102	110	65	112	142	198	155	39	41	38	69	92	101	135	133	134	201	100	
	-251	-268	-411	-387	-212	-237	-258	-200	-262	-373	-540	-393	-461	-275	-217	-158	-264	-332	-282	-282	-278	261	534	669	
	314	335	512	556	290	392	360	310	328	466	684	592	461	275	217	158	264	332	-180	-142	-128	-399	-268	-137	
	261	397	540	547	202	117	105	218	316	567	451	300	64	27	42	115	216	186	56	29	81	149	65	52	
29	15	34	27	37	56	44	64	7	21	20	23	39	47	79	65	18	19	31	24	21	29	28	20	28	
	-54	-54	-222	-83	-35	-58	-347	-146	-25	-82	-80	-88	-110	-80	-38	-112	-87	-134	-105	-9	-118	-94	-147	33	
	69	89	249	121	126	80	123	354	168	67	107	121	136	220	145	57	132	119	40	165	134	30	147	129	
30	19	11	10	16	24	34	92	-46	63	31	13	15	9	4	27	13	15	11	12	16	20	29	38	43	
	-23	-9	-16	-70	-63	-62	-139	-226	-381	-340	-193	-50	-33	-25	-90	-174	-149	-31	-7	-47	-110	-36	-21	-145	
	43	21	19	32	94	98	163	160	132	161	107	66	36	24	54	41	89	53	29	25	28	50	99	147	

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

OCTOBER 1994

Provisional Hourly Values (nT) of AU, AL and AE Indices																OCTOBER 1994											
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	44	37	32	25	33	34	46	44	20	16	28	23	12	5	6	10	14	17	15	17	28	15	25			
	AL	-105	-19	-3	0	-1	-7	-14	-49	-74	-76	-74	-46	-17	-18	-16	-13	-11	-10	-12	-5	0	-1	-24			
	AE	150	64	33	27	41	49	97	97	120	103	96	63	46	41	29	19	18	21	27	24	15	16	30	17		
2		22	17	15	22	28	33	45	51	55	72	46	43	41	67	82	44	166	178	122	83	94	145	200	78		
		-7	1	2	-12	-27	-30	-34	-26	-8	-56	-58	-50	-51	-19	-57	-62	-91	-113	-117	-155	-150	-157	-164	-464		
		31	15	12	23	40	61	76	86	82	89	54	54	52	107	140	107	258	252	310	199	160	296	747	650		
3		139	392	341	402	337	410	150	120	114	65	125	91	177	235	264	203	212	193	154	192	142	119	109	106	200	
		-255	-556	-701	-641	-412	-604	-441	-633	-1044	-629	-675	-485	-757	-967	-1355	-565	-771	-663	-411	-233	-265	-128	-305	-515	-716	
		394	950	1043	1044	751	1015	592	754	1044	629	675	485	757	967	1355	565	771	663	566	426	400	385	538	412	-	
4		80	123	85	67	103	56	85	183	162	79	107	92	148	102	92	165	69	124	110	82	64	54	103	127	103	
		-190	-563	-148	-97	-368	-423	-332	-663	-514	-222	-354	-467	-532	-475	-325	-332	-92	-255	-320	-113	-7	-77	-971	-501	-322	
		271	687	234	165	473	481	418	847	676	502	462	560	681	578	419	488	162	380	431	197	71	132	474	629	426	
5		107	186	144	108	118	142	149	136	153	121	163	107	155	322	224	214	237	171	187	134	105	91	68	145	154	
		-194	-518	-401	-193	-467	-554	-373	-49	-302	-591	-749	-663	-614	-528	-696	-500	-581	-496	-383	-292	-499	-224	-182	-447	-465	-
		302	705	56	302	586	597	522	387	456	813	913	771	771	1251	920	765	820	668	572	427	605	317	251	593	619	
6		157	90	100	85	101	117	147	97	60	43	102	54	93	147	197	82	88	51	97	84	94	185	190	166	109	
		-301	-198	-257	-319	-235	-507	-493	-105	-406	-90	-321	-738	-819	-712	-856	-467	-339	135	200	179	222	894	746	769	355	
		519	288	358	404	337	625	641	202	106	134	424	793	819	712	179	167	207	179	222	194	222	894	746	769	465	
7		152	115	73	64	146	84	105	96	83	98	49	32	31	76	165	183	159	252	199	216	211	198	112	154	127	
		-498	-140	-91	-211	-503	-334	-164	-453	-551	-209	-209	-88	-16	-729	-608	-243	-447	-470	-138	-454	-291	-206	-394	-332	-	
		651	576	213	156	358	588	439	261	537	450	259	121	50	255	895	792	402	700	671	555	666	490	319	549	461	
8		61	89	152	158	109	99	58	79	82	75	146	67	42	33	26	35	20	63	51	58	69	67	63	74	74	
		-104	-143	-322	-359	-338	-236	-212	-391	-249	-232	-443	-289	-52	-30	-22	-25	-40	-296	-342	-101	-255	-210	-105	-214	-209	
		166	233	475	518	448	336	272	471	332	308	589	356	95	64	49	61	60	360	394	161	325	279	169	279	283	
9		74	97	109	100	80	74	82	114	74	39	26	24	22	49	32	66	113	156	75	38	29	72	68	-		
		-221	-230	-266	-242	-179	-552	-213	-61	-270	-93	-15	-10	-36	-24	-49	-158	-298	-249	-351	-391	-51	-31	-15	-83	-162	
		296	328	375	343	259	328	289	244	385	168	55	38	61	47	85	190	364	363	508	468	91	68	45	156	231	
10		101	104	74	95	97	66	70	24	41	100	106	48	62	66	51	86	64	65	57	99	123	145	96	79		
		-319	-144	-181	-237	-293	-271	-258	-298	-314	-470	-104	-140	-186	-212	-201	-279	-179	-179	-44	-109	-153	-218	-258	-230		
		421	249	255	332	298	360	342	278	298	314	470	104	140	186	212	408	343	244	102	209	626	619	315	310		
11		74	100	115	93	169	232	99	93	104	67	40	29	69	211	121	109	130	184	214	173	201	198	222	238	137	
		-31	-182	-376	-375	-383	-330	-592	-453	-291	-488	-363	-361	-375	-279	-323	-211	-428	-285	-320	-447	-237	-247	-270	-324	-	
		106	282	492	470	553	563	593	547	596	556	404	390	444	491	442	343	341	613	501	494	650	437	471	509	462	
12		194	159	107	108	128	90	108	58	66	79	78	34	87	89	38	14	27	69	144	155	153	228	196	102		
		-259	-319	-219	-148	-231	-398	-152	-133	-293	-271	-364	-363	-78	-115	-177	-73	-70	-47	-14	-68	-129	-416	-156	-253	-194	
		454	479	327	256	361	489	261	193	358	335	266	117	203	268	112	108	62	41	138	474	573	310	485	451	297	
13		92	54	43	52	76	62	38	100	201	138	77	38	32	33	24	34	26	33	81	71	78	96	66	-		
		-42	-15	-22	-59	-52	-61	-40	-53	-146	-364	-267	-97	-45	-40	-188	-49	-89	-21	-1	-48	-60	-139	-161	-		
		135	69	66	91	129	124	80	132	246	566	406	175	84	45	74	222	74	124	48	35	131	60	219	258	154	
14		89	72	84	53	45	26	15	16	23	28	27	20	23	28	27	23	44	55	69	68	42	33	55	74	52	
		-157	-40	-127	-13	-5	-7	-3	-5	-6	-15	-17	-78	-131	-43	-124	-297	-65	-42	-3	-69	-176	-104	-91	-		
		248	157	124	180	59	32	23	20	29	36	44	197	102	160	81	169	353	536	111	46	35	126	252	156	137	
15		34	72	106	141	151	123	55	32	42	52	62	78	44	54	57	46	34	23	14	12	16	50	66	88	62	
		-52	-317	-266	-168	-257	-107	-23	-64	-90	-264	-233	-154	-103	-31	-25	-31	-6	-88	-61	-42	-61	-129	-93	-110	-	
		40	125	424	408	319	380	163	56	108	144	326	312	199	161	73	66	30	104	74	59	112	196	183	94	173	

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

OCTOBER 1994

16	72	77	53	49	62	35	33	42	38	51	24	55	43	30	24	34	38	20	18	17	21	20	24	21	38	
	-18	-7	-5	-7	-9	-11	-6	-8	-11	-17	-167	-130	-174	-63	-41	-17	-24	-19	-3	-14	-30	-1	-2	-3	-32	
	92	86	148	57	71	46	39	51	157	206	142	223	63	41	63	41	22	32	52	42	29	24	82	82		
17	27	25	29	31	30	37	33	33	47	34	23	15	19	20	14	15	12	11	17	17	20	21	28	59	26	
	-19	0	28	33	31	46	64	62	61	43	36	25	35	30	35	-14	-14	-50	-3	-3	-2	0	-2	-37	-13	
18	43	32	32	40	44	36	23	16	21	20	16	16	13	8	15	19	18	24	42	92	79	68	39	32	32	
	-19	-2	-1	-1	-2	-5	-11	-9	-10	-20	-12	-16	-18	-18	-20	-19	-39	-65	-176	-172	-127	-78	-107	-4	-32	
	53	36	34	41	41	41	34	26	33	32	30	33	32	28	35	54	84	109	201	215	221	158	176	44	75	
19	27	18	21	19	23	21	24	19	22	26	16	14	16	11	19	17	33	-84	-39	41	40	66	105	185	265	
	3	0	-1	-3	-2	-2	-6	-7	-10	-8	-21	-21	-21	-21	-21	-17	-33	-65	-56	-2	-41	-127	35	-122	-13	
	23	18	22	22	26	28	32	27	34	44	36	37	38	33	37	65	124	81	97	69	148	313	325	342	84	
20	173	197	100	43	28	26	33	35	32	37	33	46	24	36	21	28	26	49	36	44	36	25	28	47	49	
	-14	-65	3	0	-3	-9	-9	-5	-8	-8	-8	-9	-16	-15	-16	-36	-127	-173	-25	-8	-55	-121	-32	-32	-32	
21	56	52	34	47	38	36	53	60	58	39	35	20	21	23	13	10	10	18	16	16	15	15	14	30	30	
	-22	-12	-9	-5	0	-4	-11	-20	-12	-17	-9	-30	-22	-16	-16	-18	-14	-23	-14	-28	-1	-4	-2	-4	-4	
	60	66	44	52	36	41	65	81	71	57	46	51	44	40	29	29	26	34	33	29	45	28	18	19	44	
22	19	28	36	29	26	38	50	72	66	75	112	270	229	144	61	178	225	159	145	105	90	97	106	53	101	
	-6	-13	-29	-2	-7	-6	-14	-29	-10	-40	-360	-409	-154	-221	-118	-125	-100	-5	-24	-64	-81	-482	-109	-109	-109	
	26	42	66	40	29	46	56	86	96	103	153	630	639	446	216	400	344	284	247	111	115	162	188	535	211	
23	136	87	30	18	82	87	95	107	131	159	151	191	116	166	206	227	205	234	178	130	154	165	115	78	135	
	-56	-39	-13	-16	-95	-455	-764	-523	-1043	-656	-690	-886	-870	-808	-785	-752	-783	-732	-613	-378	-543	-457	-496	-392	-278	-478
	71	127	44	35	178	542	860	632	1175	1015	842	1058	987	792	853	732	613	378	543	457	496	392	278	614		
24	156	119	117	110	94	65	130	125	137	165	136	107	149	100	112	233	182	73	142	129	97	110	87	75	123	
	-34	-614	-492	-602	-613	-649	-631	-409	-613	-731	-838	-658	-620	-600	-492	-683	-288	-288	-356	-222	-213	-288	-171	-475	-475	
	490	734	600	717	639	760	762	535	751	838	658	620	605	605	644	865	292	499	552	311	400	326	248	599		
25	88	84	104	91	66	105	191	80	48	22	18	14	20	21	26	23	18	36	33	26	23	20	37	53		
	-107	-158	-156	-342	-345	-541	-511	-590	-188	-48	-42	-51	-86	-44	-21	-18	-25	-201	-112	-64	-4	-8	-14	-146	-146	
	196	247	241	447	436	607	617	582	269	98	65	70	100	65	43	45	41	44	238	146	92	29	29	51	200	
26	65	74	113	57	71	60	37	33	28	12	29	48	67	86	52	43	49	19	28	34	44	26	30	33	46	
	-111	-219	-233	-29	-68	-80	-110	-56	-80	-130	-274	-263	-284	-287	-233	-199	-108	-88	-93	-217	-156	-68	-126	-44	-149	
	177	295	347	87	140	168	89	108	144	303	312	353	374	286	242	136	108	128	263	184	94	157	78	196		
27	32	33	25	26	32	54	51	47	37	39	62	90	36	19	16	19	20	13	18	11	17	23	26	24		
	-13	-18	-19	-6	-4	-66	-182	-107	-140	-161	-216	-201	-48	-40	-48	-36	-19	-15	-31	-11	-5	-6	-11	-65		
	46	51	44	33	37	122	234	224	145	180	224	307	237	68	58	46	57	33	34	44	29	32	36	98		
28	23	32	31	27	31	32	35	23	34	23	10	19	25	68	57	31	21	17	32	53	65	59	93	36		
	-27	-33	-33	-7	-4	-8	-48	-125	-105	-81	-84	-94	-78	-149	-132	-39	-41	-89	-94	-108	-87	-89	-153	-72		
	52	66	46	34	36	41	84	149	140	106	95	113	105	218	190	70	48	55	107	128	162	153	149	247	108	
29	122	150	132	125	95	97	150	165	157	104	18	201	215	136	-14	277	153	99	59	18	14	26	35	106		
	-113	-174	-206	-54	-188	-197	-307	-118	-281	-565	-524	-227	-118	-1340	-723	-311	-49	-51	-126	-33	-49	-64	-32	-326		
	236	325	338	381	284	296	458	584	440	670	543	628	443	1323	1325	1001	465	149	101	145	49	66	91	69	434	
30	26	38	89	154	234	145	115	100	100	176	59	69	67	127	91	56	109	153	148	210	126	118	103	118		
	-17	-11	-52	-89	-500	-458	-243	-449	-768	-703	-336	-59	-580	-262	-495	-163	-244	-184	-687	-358	-604	-169	-407	-436	-380	
	44	50	14	545	735	678	388	565	869	804	513	634	649	330	624	255	300	294	842	507	814	296	526	540	499	
31	72	119	120	109	107	76	109	116	111	153	120	113	141	158	247	164	61	177	151	118	91	141	136	126		
	-428	-472	-343	-335	-277	-288	-338	-417	-716	-705	-191	-621	-614	-880	-771	-282	-37	-256	-388	-366	-169	-224	-389	-389		
	500	592	466	345	385	315	388	344	534	828	859	312	734	757	1040	1019	447	100	434	441	485	261	440	361	516	

PROVISIONAL HOURLY VALUES OF AU, AL, AND AE INDICES

(continued)

NOVEMBER 1994

DAYUT	Provisional Hourly Values (nT) of AU, AL and AE Indices												NOVEMBER 1994													
	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	94	110	109	106	80	67	102	59	78	108	84	86	85	98	82	66	52	87	46	38	55	71	75	67	79	
AL	-133	-83	-291	-310	-284	-167	-91	-191	-218	-209	-300	-356	-406	-342	-225	-297	-193	-165	-145	-128	-204	-242	-127	-219	-246	
AE	228	194	401	417	365	235	195	251	297	319	316	444	492	442	308	364	280	281	212	184	276	315	194	300	339	
2	99	105	85	92	103	121	159	87	80	72	61	107	42	62	133	46	54	124	90	125	120	89	92	58	92	
	-289	-163	-229	-276	-131	-282	-248	-155	-197	-364	-607	-372	-90	-508	-245	-179	-348	-214	-140	-157	-207	-49	-246			
3	63	52	58	47	101	106	81	90	75	52	61	154	49	66	136	106	95	138	124	138	74	40	45	81	85	
	-257	-100	-82	-380	-619	-436	-212	-129	-92	-142	-183	-402	-96	-17	-29	-40	79	110	149	152	151	167	112	75	102	
4	104	94	87	112	121	212	200	126	95	34	46	88	33	23	26	40	79	110	149	152	151	167	112	75	102	
	362	194	170	492	741	710	414	256	188	178	231	491	130	41	56	160	407	459	576	553	510	457	170	205	237	
5	103	104	74	124	64	25	-37	-15	-82	-418	-325	-410	-329	-90	-50	-279	-331	-311	-181	-368	-154	-412	-717	-231	-317	
	-293	-118	-323	-146	-23	-16	-37	-15	-82	-418	-325	-410	-329	-90	-30	-279	-331	-311	-181	-368	-154	-412	-717	-244		
6	206	172	196	270	248	254	234	241	187	100	115	187	195	279	296	215	135	190	86	46	60	43	9	15	166	
	-486	-295	-371	-418	-667	-664	-907	-795	-780	511	-885	-1296	-1019	-984	-830	-626	-435	-595	353	109	169	112	46	52	451	693
7	14	62	42	84	116	97	38	48	38	52	61	36	54	61	34	5	32	13	26	36	60	66	68	56	75	
	-31	-73	-140	-209	-180	-141	-107	-161	-249	-323	-81	-171	-164	-117	-104	-143	-123	-235	-150	-29	28	19	20	46		
8	27	40	34	27	28	40	38	35	44	61	49	32	59	79	45	22	24	33	31	20	21	22	25	30	36	
	-48	-105	-47	-14	-17	-65	-44	-70	-107	-82	-84	-106	-238	-115	-102	-53	-75	-30	-34	-30	-58	-81	-171	-80		
9	58	43	35	44	53	68	59	57	85	95	165	212	113	223	134	56	98	95	106	147	161	199	107			
	446	136	182	293	297	239	147	211	289	377	144	124	227	226	153	110	176	176	284	181	58	63	56	177		
10	139	125	122	183	197	131	166	88	50	51	81	98	55	46	43	33	26	48	77	117	82	71	78	59	90	
	-134	-81	-98	-372	-556	-451	253	362	125	90	123	312	384	-176	-53	-38	-46	-72	-369	-114	-88	-50	-65	-53	-128	
11	53	46	65	66	82	90	52	38	50	56	41	35	26	22	17	12	14	11	11	14	22	28	40			
	-35	-34	-96	-118	-95	-81	-51	-51	-355	-223	-101	-78	-24	-26	-25	-19	-12	-72	-71	-44	-51	-47	-51	-76		
12	33	63	65	51	51	56	81	60	73	90	29	16	22	34	17	29	27	27	32	32	32	32	32	85		
	-32	-27	-4	-1	-1	-15	-60	-83	-17	-15	-10	-12	-11	-17	-49	-56	-71	-97	-114	-122	-144	-113	-220			
13	31	34	23	20	41	34	42	29	20	21	24	22	27	40	31	17	34	21	10	19	15	32	24	26		
	38	42	23	20	50	41	46	40	113	104	69	38	54	122	123	97	343	212	124	110	100	42	32	85		
14	23	41	57	34	87	73	74	113	62	39	44	25	24	18	37	41	27	53	136	139	178	164	202	78		
	-2	-6	-14	-12	-93	-25	-41	-48	-49	-48	-6	-8	-24	-16	-47	-39	-129	-220	-219	-120	-170	-244	-198	-123		
15	112	64	48	34	33	38	65	74	93	103	81	42	38	40	25	43	42	61	82	82	133	104	45	61		
	-22	-12	-2	0	-6	-16	-47	-60	-159	-74	-2	-3	-31	-17	-34	-35	-116	-318	-244	-216	-89	-11	-67			
	134	77	51	34	41	55	113	135	253	178	83	45	70	90	148	110	126	144	179	90	321	378	193	129		

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

NOVEMBER 1994

16	42	91	69	40	43	38	52	42	32	33	26	46	25	36	49	45	21	28	43	20	16	15	17	20	37
	-9	-5	-58	-12	0	1	-31	-25	-53	-37	-8	-9	-9	-34	-159	-45	-213	-66	-11	-8	-16	-2	-39	-39	
	51	136	128	52	42	37	84	68	86	71	35	55	35	72	210	95	103	242	109	32	25	26	33	23	77
17	23	22	37	53	141	91	87	74	57	58	39	29	19	27	23	29	40	25	17	52	20	45	20	26	44
	-3	-7	-12	-26	-83	-218	-108	-26	-7	-10	-16	-47	-42	-35	-8	-12	-13	-13	-28	-269	-98	-42	-14	-45	-45
	26	29	49	137	360	200	113	81	67	75	42	41	35	36	45	82	46	322	119	88	30	40	30	40	89
18	30	26	31	27	24	23	32	36	35	34	35	67	104	94	67	117	105	60	63	37	29	34	43	52	52
	-19	-7	-3	-7	-2	0	-1	-18	-58	-53	-201	-334	-245	-216	-149	-164	-107	-108	-46	-10	-4	-9	-36	-75	
	50	33	34	35	26	22	32	38	54	93	90	270	440	340	285	236	282	213	169	109	47	33	44	80	127
19	76	145	218	131	208	325	310	85	58	44	89	38	41	85	105	97	88	286	257	296	249	108	69	52	144
	-71	-219	-182	-234	-508	-285	-212	-20	-9	-14	-66	-390	-273	-305	-381	-169	-149	-209	-464	-442	-559	-100	-183	-209	
	148	364	401	366	466	612	523	107	68	59	156	430	315	390	387	239	567	722	740	509	209	252	193	354	
20	31	78	99	119	119	115	109	169	185	162	153	39	112	242	100	142	114	54	23	33	55	75	96	84	105
	-86	-196	-260	-276	-322	-358	-365	-474	-765	-686	-562	-540	-500	-696	-556	-283	-175	-65	-38	-26	-99	-269	-158	-291	
	117	274	380	395	442	358	365	474	765	686	562	426	426	939	458	426	290	120	62	60	155	371	366	243	397
21	119	102	90	72	48	43	88	73	53	18	34	41	31	35	39	52	16	26	20	32	28	25	49	38	49
	-200	-161	-106	-117	-51	-66	-159	-40	-28	-15	-180	-339	-185	-664	-75	-133	-137	-54	-10	-25	-71	-156	-82	-109	
	320	263	197	190	99	110	248	113	82	215	381	217	100	115	186	176	163	75	43	53	97	206	120	158	
22	36	47	4	37	52	79	52	37	36	43	49	24	17	20	31	54	38	25	28	21	23	30	30	35	37
	-23	-29	-6	-147	-52	-16	-6	-4	-13	-211	-233	-77	-18	-21	-31	-175	-258	-166	-52	-29	-95	-170	-85	-35	84
	59	77	112	212	132	69	43	41	53	261	259	95	38	53	87	215	284	195	74	53	123	201	115	66	122
23	30	31	33	31	40	37	31	24	22	26	19	23	16	25	19	26	14	26	17	20	22	28	24	23	25
	-6	-1	-5	-4	-32	-7	-4	23	25	22	21	1	5	-42	-161	-136	-70	-33	-38	-47	-25	-72	-98	-33	-36
	37	32	39	36	72	44	35	27	28	29	21	30	59	187	48	163	86	60	56	67	48	100	122	57	62
24	26	28	31	35	75	75	47	92	176	90	61	41	49	64	71	32	34	50	40	29	26	27	21	20	50
	-9	-1	-2	-15	-24	-84	-200	-250	-127	-127	-127	-139	-43	-60	-96	-96	-178	-102	-56	-48	-27	-34	-21	-68	
	36	29	39	30	35	100	132	294	427	219	124	82	93	145	169	93	124	228	143	86	75	54	56	41	119
25	21	27	32	37	32	37	32	27	25	21	18	23	17	12	11	62	56	38	19	12	23	24	24	31	27
	-113	-8	-17	-56	-3	-7	-22	-11	-4	-3	-3	-15	-25	-115	-142	-86	-71	-29	-38	-20	-42	-17	-13	-30	-32
	34	35	49	93	35	34	48	32	22	21	28	38	178	200	125	91	41	61	45	66	41	44	35	59	
26	22	29	33	53	90	139	177	183	224	103	175	123	63	43	88	147	188	88	72	98	29	41	66	53	97
	-2	1	2	-15	-50	-123	-164	-448	-413	-127	-127	-127	-652	-518	-126	-608	-247	-257	-209	-87	-23	-65	-65	-97	-271
	19	26	29	69	185	301	349	474	517	1320	1219	716	563	216	449	808	336	330	308	116	64	131	110	368	
27	63	73	74	56	102	140	179	108	125	181	104	174	214	56	64	73	52	78	38	68	43	52	68	47	93
	-70	-134	-274	-172	-200	-305	-379	-626	-592	-675	-696	-66	-197	-484	-309	-499	-443	-177	-118	-159	-117	-89	-295		
	133	208	349	229	303	447	560	415	400	809	608	851	711	124	262	558	361	578	481	246	161	212	185	136	389
28	65	73	72	49	45	54	57	44	48	67	66	58	88	73	40	51	39	46	41	59	45	34	30	24	53
	-136	-100	-45	-20	-24	-83	-79	-206	-298	-356	-265	-191	-218	-103	-149	-149	-289	-208	-323	-123	-42	-15	-22	-25	-145
	201	173	118	70	138	137	252	348	424	332	251	307	177	190	201	339	254	365	183	88	49	52	49	199	
29	24	29	36	27	39	64	83	92	51	55	64	42	24	43	56	17	48	51	32	35	60	88	73	48	
	-14	-6	-8	-16	-47	-161	-57	-35	-35	-26	-25	-251	-205	-194	-98	-120	-223	-30	-31	-23	-304	-149	-113	-110	
	38	35	45	43	87	225	141	127	59	82	280	294	229	238	156	137	272	122	63	54	339	338	238	187	
30	72	114	78	56	73	109	53	60	139	112	137	43	93	52	41	47	34	39	-19	-223	-193	-68	110	138	
	-149	-316	-48	-36	-117	-228	-157	-312	-412	-388	-137	-62	-455	-106	-90	-73	-96	-55	-19	-223	-193	-115	-163	-217	
	222	431	127	93	191	338	210	394	552	501	571	811	484	200	144	115	144	90	59	269	233	184	274	295	

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

DECEMBER 1994

DAYUT	Provisional Hourly Values (nT) of AU, AL and AE Indices												DECEMBER 1994												
	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	83	61	87	128	84	47	53	66	41	85	114	47	30	37	68	75	41	42	37	29	40	59	80	74	63
AU	-147	-18	-136	-319	-69	-3	-17	-172	-264	-131	-361	-100	-8	-128	-267	-435	-212	-22	-21	-53	-48	-200	-176	-234	-148
AL	131	61	224	449	154	52	71	238	306	217	476	149	40	167	435	511	253	64	58	82	89	260	257	310	211
AE																									
2	85	51	43	134	79	139	72	79	57	35	213	134	171	141	42	68	54	78	79	67	54	89			
	-158	-62	-32	-212	-280	-206	-324	-300	-443	-63	-60	-424	-639	-115	-462	-322	-431	-613	-30	-174	-413	-208	-140	-56	
	244	115	76	348	361	346	398	373	523	121	96	477	853	649	634	574	282	85	253	493	276	195	346		
3	86	87	123	105	109	84	72	84	45	41	35	31	56	12	82	38	17	29	33	36	31	37	42	57	57
	-87	-312	-346	-151	-178	-146	-266	-57	-33	-9	-38	-187	-378	-157	-10	-17	-51	-44	-84	-173	-179	-200	-138		
	175	401	471	258	289	231	339	142	80	51	45	70	244	390	240	50	35	80	77	120	235	211	221	258	196
4	65	62	57	54	47	52	89	85	106	104	68	66	86	62	38	28	20	25	18	39	16	38	40	26	54
	-128	-149	-127	-60	-44	-27	-83	-132	-140	-148	-198	-146	-131	-71	-15	-10	-8	-23	-74	-233	-113	-1	31	-86	
	194	213	185	116	93	80	173	217	247	253	268	214	218	135	55	39	29	48	93	272	130	40	39	28	141
5	23	27	28	40	37	43	58	70	80	132	116	69	67	104	38	55	43	26	23	29	25	55	58	52	54
	-7	-16	-46	-59	-34	-9	-48	-84	-102	-115	-168	-356	-251	-186	-247	-117	-41	-15	-146	-26	-24	-67	-101	-105	
	31	44	75	100	52	52	106	154	184	404	231	238	424	357	225	303	161	68	38	175	51	80	126	155	160
6	35	42	53	64	83	87	137	221	110	58	100	57	58	73	111	178	254	201	91	136	126	96	143	156	111
	-57	-45	-17	-8	-3	-231	-332	-112	-59	-98	-71	-365	-389	-223	-215	-399	-440	-201	-167	-226	-268	-428	-260	-40	-179
	94	68	71	83	92	369	555	222	88	199	129	424	463	335	394	564	641	293	304	384	524	403	197	291	
7	89	102	123	113	85	104	108	82	46	70	61	47	62	89	41	39	93	59	82	64	68	98	139	79	81
	-73	-68	-24	-124	-46	-68	-147	-150	-42	-66	-203	-80	-38	-159	-151	-62	-269	-297	-118	-51	-208	-131	-205	-121	
	102	171	361	239	132	172	256	233	88	136	265	128	100	250	193	102	302	357	201	116	193	307	271	203	
8	133	92	110	64	85	103	96	137	95	102	94	99	56	66	50	38	33	52	98	68	122	133	141	132	92
	-327	-171	-51	-16	-51	-85	-84	-148	-229	-154	-315	-140	-100	-168	-40	-37	-147	-135	-83	-53	-166	-96	-111	-28	-125
	461	264	162	81	137	189	182	285	326	256	471	240	156	235	91	76	181	187	182	121	289	254	160	217	
9	144	181	109	80	74	77	96	61	38	44	68	30	35	94	64	54	55	25	47	48	34	34	115	125	75
	-146	-87	-10	-11	-2	-14	-13	-108	-250	-69	-30	-135	-94	-54	-54	-54	-54	-85	-98	-50	-176	-107	-78	-70	
	291	269	120	92	77	113	122	74	147	295	138	55	130	119	80	133	132	101	291	258	204	147			
10	174	157	167	110	67	40	25	27	22	27	26	39	25	29	59	43	76	81	51	43	47	40	59	67	
	-126	-205	-90	-81	-8	-3	-5	-19	-23	-31	-11	-17	-10	-11	-20	-23	-134	-140	-39	-49	-30	-59	-30	-72	
	301	363	259	119	70	45	30	46	42	51	51	43	40	155	327	315	215	192	83	98	100	90	140		
11	64	45	61	55	71	55	41	50	44	44	44	47	42	65	65	32	104	83	106	153	183	165	124	128	
	-10	-1	-5	-7	-8	-6	-1	-6	-13	-21	-58	-133	-81	-54	-54	-54	-54	-85	-98	-50	-176	-124	-82		
	74	47	67	64	61	60	54	42	57	58	44	50	102	200	166	114	325	382	467	363	450	196	143	253	161
12	99	61	118	91	102	86	50	51	50	70	43	30	56	40	111	71	21	41	71	48	67	103	80	67	
	-225	-22	-34	-47	-95	-152	-51	-49	-48	-73	-174	-116	-61	-127	-242	-174	-81	-80	-127	-322	-100	-117	-251	-52	-118
	325	85	153	140	199	239	102	101	98	127	246	160	92	184	283	153	102	168	394	149	184	354	133	186	
13	71	89	92	150	136	112	131	75	91	95	109	100	39	21	64	35	25	33	24	30	33	73	79		
	-53	-69	-156	-81	-5	-204	-138	3	-67	-94	-173	-267	-73	-10	-17	-185	-240	-50	-12	-11	-13	-11	-45	-82	
	125	159	249	232	142	317	300	128	78	158	190	283	377	174	49	39	250	276	75	46	36	43	44	119	162
14	103	95	93	46	32	29	30	27	33	66	38	34	31	45	46	34	33	28	26	57	30	53	43	45	
	101	134	94	61	41	33	30	35	31	65	192	189	90	56	111	191	38	34	33	108	326	232	67	53	
15	30	42	59	82	104	99	58	133	126	92	131	72	112	207	194	200	148	184	161	106	113	197	119		
	-9	-73	-101	-163	-102	-100	-317	-152	-161	-327	-109	-428	-500	-159	-98	-531	-662	-210	-220	-298	-99	-256	-592	-260	
	40	116	161	247	208	209	416	212	296	455	403	560	574	272	705	563	358	404	460	383	205	371	381		

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

DECEMBER 1994

16	-136	91	-92	84	87	111	-84	63	128	57	25	85	47	40	64	73	62	39	38	47	41	41	32	31	67	
	-193	-136	-187	-71	-108	-137	-194	-323	-151	-74	-57	-247	-542	-409	-283	-78	-61	-100	-13	-31	-47	-59	-17	-143	-143	
	331	132	229	273	159	219	222	365	131	83	333	590	450	348	161	80	101	139	60	72	114	92	49	211	211	
17	-44	33	46	43	44	45	52	111	101	44	59	39	72	7	87	30	48	35	34	35	57	37	29	39	49	
	-34	-22	-19	-7	-18	-11	-117	-166	-100	-23	-196	-272	-373	-340	-348	-175	-311	-108	-73	-107	-294	-86	-47	-41	-139	
	80	57	67	61	63	56	169	309	202	68	257	312	447	347	436	206	359	144	108	143	352	123	76	81	188	
18	28	34	35	38	40	61	67	70	84	67	62	84	-83	-84	-146	-129	-100	-80	-140	-255	-119	-170	-109	-88	-101	-90
	-49	-19	-14	-22	-40	-25	-56	-93	-52	-65	-62	-84	-87	-31	-19	-34	-40	-34	-22	-34	-38	34	37	39	49	43
	79	55	51	61	66	139	163	136	123	151	137	133	178	171	154	119	160	289	159	205	132	123	140	94	134	
19	38	43	42	40	59	46	50	50	65	85	72	48	43	55	56	33	22	33	37	31	24	30	33	54	45	
	-25	-29	-41	-30	-181	-68	-51	-116	-166	-208	-180	-233	-288	-142	-64	-66	-44	-44	45	31	22	33	40	93	135	
	65	73	84	71	242	96	102	167	231	282	281	230	278	345	199	99	91	44	45	31	22	33	40	93	135	
20	87	121	131	139	133	68	46	49	86	68	63	134	126	81	50	26	37	66	49	80	53	57	64	84	79	
	-82	-61	-25	-7	10	12	7	4	-29	-58	-46	-172	-95	-23	-4	-23	-116	-88	-214	-31	-24	-31	-111	-58	-58	
	170	183	157	147	122	55	37	44	115	126	211	308	222	105	54	49	153	154	264	111	78	88	155	196	138	
21	99	62	56	75	68	72	102	82	54	34	21	18	12	15	13	15	15	31	56	54	31	32	29	34	45	
	-111	-12	-5	-19	-16	-8	-31	0	-4	-7	-44	-31	-12	-175	-144	-66	-75	-55	-71	-17	-5	-5	-21	-34	-34	
	110	75	63	96	85	82	134	83	58	42	66	51	25	181	158	82	91	86	127	72	36	38	30	42	80	
22	51	58	84	132	101	50	44	37	43	42	28	24	19	26	59	34	13	19	16	17	18	24	26	25	41	
	-55	-8	-18	-5	6	5	1	1	0	-2	-3	-8	-19	-38	-29	-11	-14	-21	-17	-2	0	0	0	0	50	
	58	68	103	138	95	44	43	36	43	44	32	28	29	45	98	65	25	34	38	35	21	25	26	25	50	
23	21	66	133	128	66	41	43	54	43	50	56	47	26	35	65	23	39	49	57	56	50	34	50	79	55	
	-5	-67	-74	-16	4	4	12	-48	-329	-286	-70	-12	-32	-65	-23	-59	-21	-41	2	5	-11	-203	-203	-203	-203	
	28	134	209	145	61	36	41	67	92	380	343	118	40	49	113	94	95	71	98	53	44	45	78	284	113	
24	97	93	114	156	168	134	153	104	171	94	115	115	146	102	209	119	164	290	81	87	105	108	116	91	130	
	-164	-101	-306	-114	-146	-311	-190	-539	-591	-232	-526	-597	-665	-286	-304	-543	-439	-161	-98	-276	-437	-110	-313	-313		
	263	195	414	463	284	281	464	295	651	630	406	348	672	700	774	405	468	834	521	249	203	385	555	202	444	
25	109	121	119	108	97	87	76	89	91	69	80	73	107	59	64	28	47	49	35	63	68	140	-140	-141	-201	
	-76	-50	-390	-68	-67	-139	-177	-178	-179	-276	-290	-413	-321	-154	-59	-24	-342	-179	-303	-333	-359	221	172	243		
	186	372	517	208	166	227	254	397	270	248	341	361	495	396	262	124	153	390	228	125	204	208	418	241	283	
26	93	108	106	106	74	86	87	93	98	80	45	66	82	47	50	51	62	51	76	106	132	120	109	107	85	
	-185	-324	-192	-74	-55	-107	-176	-43	-33	-205	-96	-40	-16	-165	-143	-382	-373	-262	-185	-201	-238	-111	-63	-157		
	280	413	299	110	143	195	269	103	114	252	318	179	87	98	218	206	333	449	369	303	333	359	221	172	243	
27	85	66	63	58	41	40	32	40	41	17	23	44	53	21	81	31	16	8	22	35	57	97	101	90	48	
	-89	-35	-174	-94	-4	-8	-9	-6	-33	-13	-66	-225	-339	-283	-153	-79	-62	-122	-87	-40	-349	-362	-187	-228	-125	
	175	102	239	98	45	48	42	47	75	31	90	271	394	305	235	111	79	130	110	76	407	459	289	319		
28	146	R1	39	44	49	29	27	31	34	39	34	64	42	33	19	26	29	41	31	44	39	66	95	47		
	-271	-43	-8	-28	-12	-6	-4	-4	-48	-65	-93	-313	-108	-4	-45	-382	-170	-15	-20	-14	-216	-265	-162	-95		
	418	125	48	55	79	42	33	36	39	87	105	128	378	151	38	65	378	200	57	52	59	59	256	331	258	
29	123	78	69	56	76	73	44	32	95	128	65	25	31	24	48	91	74	50	47	37	34	31	60			
	-299	-304	-25	-88	-109	-172	-133	-126	-302	-360	-139	-68	-80	-213	-216	-171	-123	-61	-38	-27	-8	-3	-10	-127		
	423	384	95	96	187	246	178	158	397	490	205	94	112	238	325	263	198	68	88	77	56	40	36	42	187	
30	31	30	3	35	60	98	152	126	61	75	38	31	36	56	46	40	34	29	33	31	33	29	35	50		
	-7	-3	-54	-88	-107	-318	-182	-113	-51	-76	-58	-166	-116	-166	-51	-51	-39	-37	33	31	31	30	0	-80		
	39	44	89	65	169	416	338	240	155	152	90	108	95	224	233	207	99	81	76	74	61	34	31	40	131	
31	24	26	28	35	42	57	103	79	38	18	23	51	45	46	43	42	14	28	38	35	43	48	56	44	42	
	-3	-2	-5	-12	-61	-5	-19	-31	-107	-186	-110	-95	-125	-143	-159	-146	-16	-82	-16	-2	-16	-82	-16	-68		
	28	30	32	41	55	152	165	85	58	49	130	238	157	142	170	202	188	185	85	85	59	132	73	47		

MONTHLY and YEARLY AE 1957 - 1994

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
1993	229	211	326	260	216	216	191	194	211	209	203	203	222.5
1994	214	350	332	348	382	287	209	154	199	285	218	187	263.7

Unit: nT

The definitive indices for July 1988 to December 1989 were not available at the date of publication of this Bulletin. The values for 1990 to 1994 correspond to provisional indices (see IAGA Bulletins 32u to 32x, page 21, and this Bulletin, page 21).

SECTION 4

CLASSIFICATION OF DAYS

CLASSIFICATION OF DAYS

Quiet days 1994

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

C: indicates very quiet period

K: indicates quiet period

This characterisation 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 1994

Five international quietest days (from Kp) :	5 7 9 10 24
24-hours quiet intervals (from aa) C – very quiet : K – quiet :	4 5 7 9 10 24 25 NONE
48-hours quiet intervals (from aa) C – very quiet : K – quiet :	5 8 9 23 24 10

FEBRUARY 1994

Five international quietest days (from Kp) :	1 18 24 26 27
24-hours quiet intervals (from aa) C – very quiet : K – quiet :	1 24 NONE
48-hours quiet intervals (from aa) C – very quiet : K – quiet :	NONE NONE

MARCH 1994

Five international quietest days (from Kp) :	4 5 26 29 31
24-hours quiet intervals (from aa) C – very quiet : K – quiet :	4 29 31 NONE
48-hours quiet intervals (from aa) C – very quiet : K – quiet :	4 NONE

APRIL 1994

Five international quietest days (from Kp) :	26 27 28 29 30
24-hours quiet intervals (from aa) C – very quiet : K – quiet :	26 27 28 29 30 NONE
48-hours quiet intervals (from aa) C – very quiet : K – quiet :	21 26 27 28 29 30

MAY 1994

Five international quietest days (from Kp) :	13 20 21 22 27
24-hours quiet intervals (from aa) C – very quiet : K – quiet :	13 21 22 27 20
48-hours quiet intervals (from aa) C – very quiet : K – quiet :	NONE 20 21 22 27

JUNE 1994

Five international quietest days (from Kp) :	15 16 23 24 25
24-hours quiet intervals (from aa) C – very quiet : K – quiet :	15 16 23 24 25 NONE
48-hours quiet intervals (from aa) C – very quiet : K – quiet :	16 23 24 22

CLASSIFICATION OF DAYS (continued)

JULY 1994

Five international quietest days (from Kp) :	8 10 12 13 26
24-hours quiet intervals (from aa) C - very quiet :	5 8 9 10 11 12 13 20 22 23 24 26
K - quiet :	NONE
48-hours quiet intervals (from aa) C - very quiet :	9 10 11 12 22 23
K - quiet :	13

AUGUST 1994

Five international quietest days (from Kp) :	2 4 7 8 30
24-hours quiet intervals (from aa) C - very quiet :	1 2 3 4 5 6 7 8 9 17 18 19 23 26 29 30 31
K - quiet :	24 28
48-hours quiet intervals (from aa) C - very quiet :	2 3 4 5 6 7 8 9 17 18 19 20 28 29 30
K - quiet :	NONE

SEPTEMBER 1994

Five international quietest days (from Kp) :	4 20 22 23 30
24-hours quiet intervals (from aa) C - very quiet :	2 3 4 15 18 19 20 21 22 23 24 29 30
K - quiet :	NONE
48-hours quiet intervals (from aa) C - very quiet :	2 3 18 19 20 21 22 23 24 29 30
K - quiet :	4

OCTOBER 1994

Five international quietest days (from Kp) :	1 17 21 27 28
24-hours quiet intervals (from aa) C - very quiet :	1 16 17 18 21 27 28
K - quiet :	NONE
48-hours quiet intervals (from aa) C - very quiet :	1 16 17 18 26 27
K - quiet :	NONE

NOVEMBER 1994

Five international quietest days (from Kp) :	8 12 23 24 25
24-hours quiet intervals (from aa) C - very quiet :	12 13 16 21 22 23 24 25
K - quiet :	8 17
48-hours quiet intervals (from aa) C - very quiet :	12 13 22 23 24
K - quiet :	8 17

DECEMBER 1994

Five international quietest days (from Kp) :	4 18 21 22 31
24-hours quiet intervals (from aa) C - very quiet :	14 17 21 22 30 31
K - quiet :	4 19
48-hours quiet intervals (from aa) C - very quiet :	22 31
K - quiet :	30

CLASSIFICATION OF DAYS 1994 (continued)

INTERNATIONAL QUIETEST AND MOST DISTURBED DAYS, 1994

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

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

VERY QUIET INTERVALS, 1994

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

First	Eighth	last	Duration		Duration
			Eighth	Eighths	
Jan	4 E4	5 E7	12		8
	8 E6	11 E1	20		9
	24 E2	25 E1	8		14
Apr	30 E1	May	1 E1	9	12
Jun	23 E1		25 E7	23	
Jul	9 E7		11 E4	14	
	12 E2		13 E2	9	
	26 E1		26 E8	8	
Aug	2 E2		5 E1	24	11

First	Eighth	last	Duration		Duration
			Eighth	Eighths	
Aug	5 E3		6 E2		8
	6 E4		7 E4		9
	8 E1		9 E6		14
	30 E1		31 E4		11
Oct	1 E2		2 E4		11
	16 E5		17 E7		11
	21 E2		22 E2		9
Nov	24 E7		26 E1		11

LIST OF MAGNETIC STORMS, 1994

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

Beginning	s.s.c. d. UT	Duration Eighths	Number of Eighths with K _p =						
			7-	7o	7+	8-	8o	8+	
Feb 21 E4	21 09.01	10	.	1	2	3	.	.	.
Apr 2 E4	2 11.44	20	2	2	1	.	.	.	.
16 E7	-	7	1	1	.	.	.	2	.

SECTION 5

RAPID VARIATIONS

STORM SUDDEN COMMENCEMENTS (ssc)

For technical reasons, the 1994 rapid variations data were not available at the date of publication of the present Bulletin (see page 26). As example of the presentation of these data, we give hereafter the beginning of the 1993 list.

LIST OF ssc 1993:

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 DOB NUR LER ESK WNG NGK VAL HAD DOU BDV CLF HRB NAG GCK MMB AQU EBR COI
BJI SPT FRD PEG (PEN) KAK HTY KNY QUE SZT (TEN) LNP HYB ETT LUA PMG TAN MPO 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 1993

1901	1022	22222	4.5	27	7A	6B	5C	3si	(1018-1024)
------	------	-------	-----	----	----	----	----	-----	-------------

FEBRUARY 1993

1702	0301	22222	3.5	46	25A	13B	2C	(0300-0303)	
2002	0029	22222	5.9	11	1A	4B	8C	(0024-0030)	
2702	2220	-2222	4.7	17	3A	11B	13C	(2217-2222)	

SOLAR FLARE EFFECTS (sfe)

For technical reasons, the 1994 rapid variations data were not available at the date of publication of the present Bulletin (see page 26). As example of the presentation of these data, we give hereafter the beginning of the 1993 list.

LIST OF sfe 1993:

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 30 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 MPO GNA HER CNB EYR

JANUARY

none

FEBRUARY

C

10/02

08:52

A	WNG2	VAL3	HRB0	SUA3	SOF3	COI2	SPT1	PEN2	LNP3	MPO2
B	LER2	ESK2	HAD2	CLF3	NAG1	AQU1	TEN2			
C	NGK0	BDV1	(MMB1)	(KAK1)	(HTY2)	(KNY1)	QUE1	[API0]	GNA1	HER0
D										
E										
X		EBR								

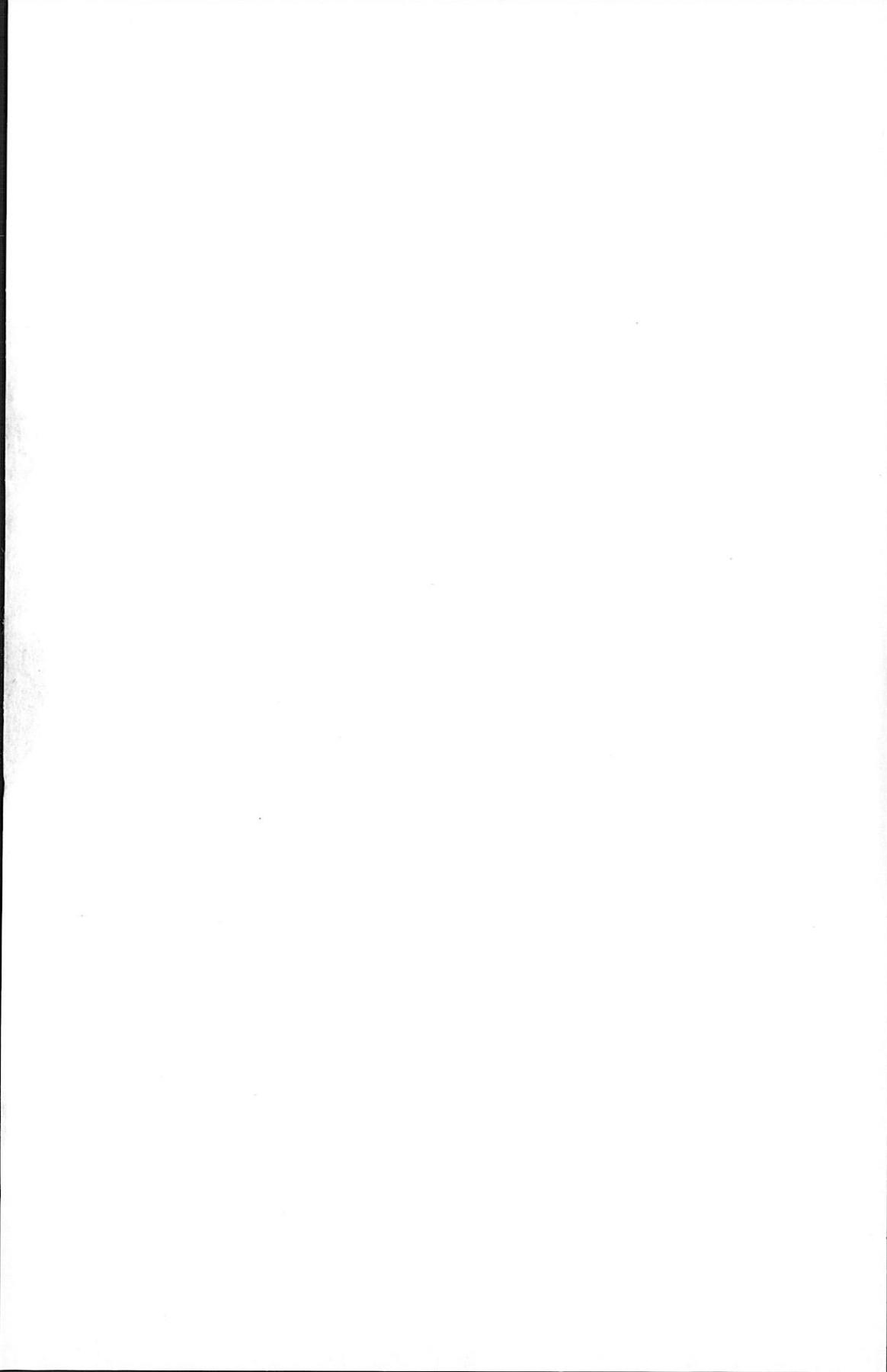
FEBRUARY

C

14/02

12:52

A	SOF3	TEN3								
B	WNG2	SUA2	SPT1	MPO2						
C	LER3	ESK3	NGK2	VAL1	HAD3	CLF1	HRB1	NAG1	[MMB0]	AQU1
	PEN2	[KAK0]	[HTY2]	[KNY0]						
D	BDV	EBR	COI	QUE	HER					
E										
X										



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
Paleomagnétisme 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
Transactions of the St Gall Meeting, 1967	No. 25
Programme and abstracts of the General Scientific Assembly, Madrid, 1969	No. 26
Transactions of the General Scientific Assembly, Madrid, 1969	No. 27
The World Magnetic Survey, 1957-1969	No. 28
Grid values for the IGRF 1965	No. 29
Transactions of the XV General Assembly, Moscow, 1971	No. 31
Programme and abstracts for the Second General Scientific Assembly, Kyoto, 1971	No. 34
Transactions of the Second General Scientific Assembly, Kyoto, 1973	No. 35
Programme and Abstracts of the XVI General Assembly, Grenoble, 1975	No. 36
Transactions of the XVI General Assembly, Grenoble, 1975	No. 37
Grid values and charts of the IGRF 1975	No. 38
Transactions of the III General Scientific Assembly, Seattle, 1977	No. 41
Transactions of the XVII General Assembly, Canberra, 1979	No. 44
Program and abstracts of the IV General Scientific Assembly, Edimbourg, 1981	No. 45
Transactions of the IV General Scientific Assembly, Edimbourg, 1981	No. 46
Program and abstracts of the XVIII General Assembly, Hambourg, 1983	No. 48a
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 São José dos Campos (Brésil), 1967	
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 Aeronomical Interest, Toronto, 1963	
IAGA Symposium No. 9, Symposium on Multidisciplinary Studies of Unusual Regions of the Upper Mantle, Madrid, 1969	

Users Information Indices 1994 on Diskette ("README")

The included diskette contains files of IAGA indices presented following the same formats as those of the tables published in the IAGA Bulletin n°32y for 1994, 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:\ind94.

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

- ◆ ...94.dat for hourly or three hourly, and daily values
- ◆ ...94.mya for monthly and yearly values since the inception of the series
- ◆ ...94.dmv for daily and monthly values (only Dst)

You can use the visualization software in two ways :

1 - Directly from the diskette :

Hit the command : INTERAA, then give the current year : 1994

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 : 1994

If you have diskettes for previous years (1982 to 1993 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 93 years, respectively)

INTERNATIONAL ASSOCIATION OF GEOMAGNETISM AND AERONOMY

The following IAGA Publications are available at the ISGI Publications Office,
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Geomagnetic Indices and Geomagnetic Data

	Bulletin
Geomagnetic Indices, K and C, 1940-1946	No. 12
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
Geomagnetic Indices, K and C, 1952	No. 12g
Geomagnetic Indices, K and C, 1953	No. 12h
Geomagnetic Indices, K and C, 1954	No. 12i
Geomagnetic Indices, K and C, 1955	No. 12j
Geomagnetic Indices, K and C, 1956	No. 12k
Geomagnetic Data, 1957, Indices K and C, Rapid Variations	No. 12l
Geomagnetic Data, 1958, Indices K and C	No. 12m1, Rapid Variations
Geomagnetic Data, 1959, Indices K and C	No. 12n1, Rapid Variations
Geomagnetic Data, 1960, Indices K and C	No. 12o1, Rapid Variations
Geomagnetic Data, 1961, Indices K and C	No. 12p1, Rapid Variations
Geomagnetic Data, 1962, Indices K and C	No. 12q1, Rapid Variations
Geomagnetic Data, 1963, Indices K and C	No. 12r1, Rapid Variations
Geomagnetic Data, 1964, Indices K and C	No. 12s1, Rapid Variations
Geomagnetic Data, 1965, Indices K and C	No. 12t1, Rapid Variations
Geomagnetic Data, 1966, Indices K and C	No. 12u1, Rapid Variations
Geomagnetic Data, 1967, Indices K and C	No. 12v1, Rapid Variations
Geomagnetic Data, 1968, Indices K and C	No. 12w1, Rapid Variations
Geomagnetic Data, 1969, Indices K and C	No. 12x1, Rapid Variations
Geomagnetic Planetary Indices Kp, Ap and Cp, 1932 to 1961	No. 18
List of Geomagnetic Observatories	No. 20
Atlas of K Indices (Vol. 1 : Text ; Vol. 2 : Figures)	No. 21
Geomagnetic Data, 1970, Indices, Rapid Variations, Magnetic Storms	No. 32a
Geomagnetic Data, 1971, Indices, Rapid Variations, Special Intervals	No. 32b
Geomagnetic Data, 1972, Indices, Rapid Variations, Special Intervals	No. 32c
Geomagnetic Data, 1973, Indices, Rapid Variations, Special Intervals	No. 32d
Geomagnetic Data, 1974, Indices, Rapid Variations, Special Intervals	No. 32e
Geomagnetic Data, 1975, Indices, Rapid Variations, Special Intervals	No. 32f
Geomagnetic Data, 1976, Indices, Rapid Variations, Special Intervals	No. 32g
Geomagnetic Data, 1977, Indices, Rapid Variations, Special Intervals	No. 32h
Geomagnetic Data, 1978, Indices, Rapid Variations, Special Intervals	No. 32i
Geomagnetic Data, 1979, Indices, Rapid Variations, Special Intervals	No. 32j
Geomagnetic Data, 1980, Indices, Rapid Variations, Special Intervals	No. 32k
Geomagnetic Data, 1981, IAGA indices : aa, Am, Kp, Dst, AE, Rapid Variations	No. 32l
Geomagnetic Data, 1982, IAGA indices : aa, Am, Kp, Dst, AE	No. 32m
Geomagnetic Data, 1983, IAGA indices : aa, Am, Kp, Dst, AE	No. 32n
Geomagnetic Data, 1984, IAGA indices : aa, Am, Kp, Dst, AE	No. 32o
Geomagnetic Data, 1985, IAGA indices : aa, Am, Kp, Dst, AE, Rapid Variations	No. 32p
Geomagnetic Data, 1986, IAGA indices : aa, am, Kp, Dst, AE, Rapid Variations	No. 32q
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Geomagnetic Data, 1988, IAGA indices : aa, am, Kp, Dst, AE, Rapid Variations	No. 32s
Geomagnetic Data, 1989, IAGA indices : aa, am, Kp, Dst, AE, Rapid Variations	No. 32t
Geomagnetic Data, 1990, IAGA indices : aa, am, Kp, Dst, AE, Rapid Variations	No. 32u
Geomagnetic Data, 1991, IAGA indices : aa, am, Kp, Dst, AE, Rapid Variations	No. 32v
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