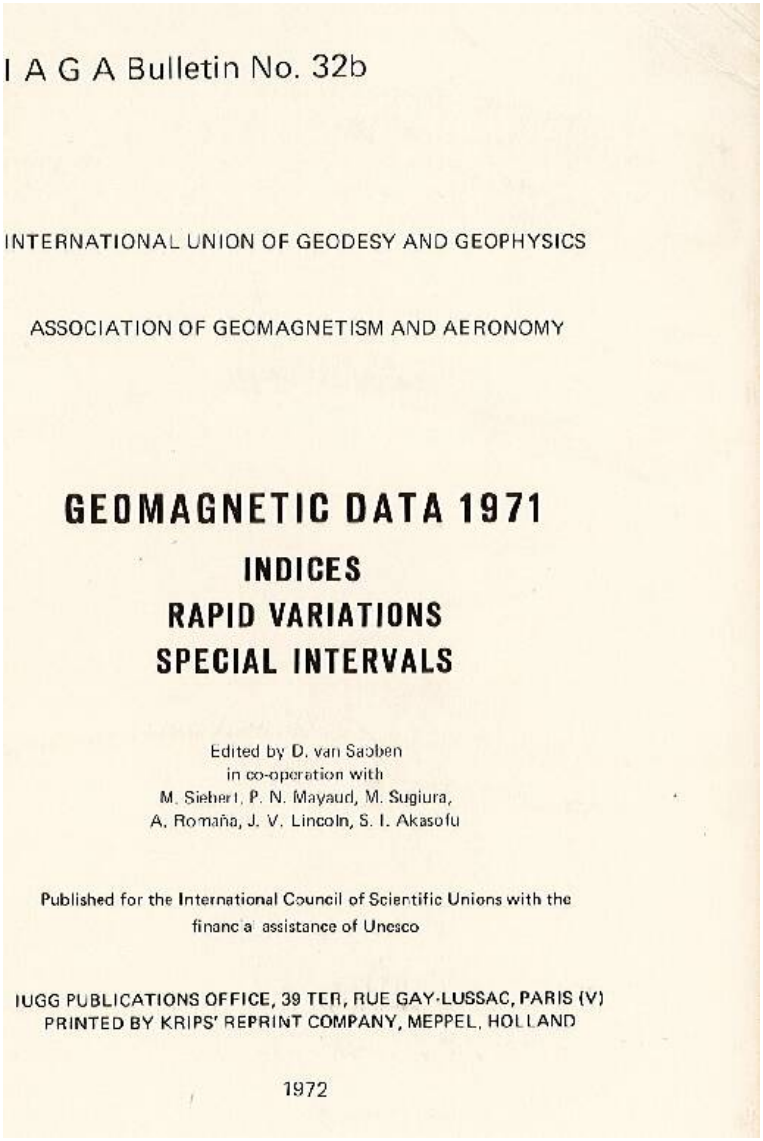


I A G A Bulletin No. 32b

INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS

ASSOCIATION OF GEOMAGNETISM AND AERONOMY

GEOMAGNETIC DATA 1971

INDICES
RAPID VARIATIONS
SPECIAL INTERVALS

Edited by D. van Sabben
in co-operation with
M. Siebert, P. N. Mayaud, M. Sugiura,
A. Romaña, J. V. Lincoln, S. I. Akasofu

Published for the International Council of Scientific Unions with the
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INTRODUCTION

The yearly IAGA-Bulletin 32 is the continuation of the series IAGA-Bulletins 12.1 (Indices K and C) and 12.2 (Rapid Variations). In accordance with recommandations of the IAGA-Assemblies in Madrid (1969) and Moscow (1971), the publication of C and K-indices of individual observatories is discontinued, whereas planetary indices like Dst, AE, Kn, Ks, Km and a survey of magnetic storms are included instead. The compilation of C and K-indices at the data center in De Bilt and the publication of the derived indices Ci, Kp etc. continues as before, as well as the determination of the international quiet and disturbed days. The K-indices of individual observatories are put on magnetic tape in De Bilt. These are made available through the World Digital Data Centers for Geomagnetism from 1969 onwards. Besides, tables of local K-indices can be found in the bulletins of many observatories.

The IAGA-Bulletin 32 is prepared for publication by the International Service of Geomagnetic Indices (ISGI) at De Bilt. The data, based on the reports of more than 100 observatories, are provided by the following institutes (under the responsibility of the following collaborators):

Kon. Nederlands Meteorol. Inst., De Bilt (D. van Sabben): Ci, Q- and D-days.
Institut für Geophysik, Göttingen (M. Siebert): Kp, ap, Ap, Cp.
Institut de Physique du Globe, Paris (P.N. Mayaud): Kn, Ks, etc.
NASA-Goddard Space Flight Center, Greenbelt (M. Sugiura): Dst.
Observatorio del Ebro, Roquetas (A. Romaña): Rapid Variations.
WDC-A, Solar Terr. Physics, NOAA, Boulder (J.V. Lincoln): Magnetic storm data.
Geophysical Institute, College (S.I. Akasofu): Magnetograms. *)

The ISGI, formerly called Permanent Service or "C- and K Center", operates under the supervision of IAGA-Commission IV on Magnetic Variations and Disturbances. Since 1954 it forms part of the Federation of Astronomical and Geophysical Services. The work began in 1906 with the collection and publication of the daily character figure C (as reported by the observatories in a scale 0 - 2) and its daily mean value Ci, in the series "Caractère Magnétique des Jours" (et des Années) and in the Journal "Terrestrial Magnetism", together with lists of selected quiet and disturbed days. In 1938, this work was extended backwards to 1890. For the years 1884 - 1890 Ci figures were published in Terr. Magn. vol. 52, pp. 33 - 38, 1947 (see also Transacts. Washington Meeting 1939, IATME-Bull. 11, pp. 183 - 195). In 1940, the C-data and the selected days became part of the IATME-Bulletin 12, later IAGA-Bulletin 12.

The three-hourly K-index (scale 0 - 9) was introduced by Bartels in 1938. From the K-figures of 12 selected stations, planetary indices Kp were derived. Both K and Kp were officially adopted by the IAGA in 1951 and the series of Kp was extended backwards to 1932 during the subsequent period. The K-figures of the selected stations for these early years were published as supplementary (table 1b) in Bulletins 12g and 12l. In addition to Kp, the corresponding range figures ap and other derived indices Ap and Cp have been published regularly in the IAGA-Bulletins 12.

The meaning of C, Ci, K and Kp, is explained in textbooks, e.g.: Landolt-Börnstein, Zahlenwerte und Funktionen, Band 3, pp. 731 - 744 (Berlin 1952, Springer-Verlag), and in Terrestrial Magnetism and Atmospheric Electri-

*) The magnetogram-project for 1971 was completed by W. Paulishak and K. Kawasaki (NOAA, Boulder) and F. Yasuhara (Geoph. Inst., College).

city 44, pp. 411 - 433 (1939) and 46, pp. 301 - 303 (1941). The results of an extensive study on the index K by P. N. Mayaud are given, together with practical rules for its determination, in the "Atlas of Indices K", IAGA-Bulletin No. 21 (1967). The exact definition of Kp is given in IATME-Bulletin No. 12b, reprinted at the end of the IAGA-Bulletin No. 12i, and in the Journal of Geophysical Research, Vol. 54, pp. 295 - 299, Sept. 1949. The indices have also been described, for use in correlation studies in other geophysical fields, in the Annals of the IGY, Vol. 4, pp. 227 - 236 (London, Pergamon Press 1957).

A collection of diagrams for Kp, 1932/33 and 1940 to 1950, together with diagrams for the daily characters 1884 - 1950, is given in: Abhandlungen Akad. Wiss. Göttingen, Math. - Phys. Klasse, Sonderheft 1 (1951). A second collection from 1937 (up to 1958) has appeared in: Abhandlungen Akad. Wiss. Göttingen, Math. -Phys. Klasse, Beiträge zum Geophysikalischen Jahr, Heft 3 (1958). A discussion on time variations of geomagnetic activity, indices Kp and Ap, 1932 - 1961 has appeared in Annales de Géophysique, Tome 19, pp. 1 - 20, 1963. Tables and diagrams of these planetary indices for the whole period 1932 - 1961 are printed in IAGA-Bulletin No. 18.

Other planetary indices derived from the K-indices, are the three-hourly indices Kn and Ks for the Northern- and Southern hemisphere and their mean value Km. These indices are published in the IAGA-Bulletin 32 from 1968*) onwards: They are discribed in a publication of the Centre National de la Recherche Scientifique (Paris 1968: "Indices Kn, Ks et Km, 1964 - 1967", by P. N. Mayaud. The complete series of these indices and the related quantities an, as etc. for the years 1959 through 1971 is available on punched cards at WDC - A for Geomagnetism, Boulder, in the same format as in the above publication.

The equatorial Dst-index for ring current intensity is also published in the IAGA-Bulletin 32 from 1970 onwards. A description of this index is given in the reports for earlier years. 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 No. X - 645 - 71 - 278 of the Goddard Space Flight Center. This report supersedes earlier Dst-publications by Sugiura and co-workers. Recently, these Dst values have been recomputed, using the data of four stations. Hourly Dst-values for the IGY, based on the data of eight stations, are given in Annals of the IGY, Vol. 35. The same volume contains three-hourly values of Dst for the IGY as determined by W. Kertz in a somewhat different way. The hourly values from 1957 onwards are available on magnetic tape at WDC - A for Geomagnetism in Boulder.

The auroral electrojet index AE cannot yet be included in the IAGA-Bulletin. At present this index is not available in time. References to AE are given at the end of part B of this Bulletin, together with references to the indices Q and R from individual observatories.

A description of all indices mentioned in this introduction is given by M. Siebert in "Handbuch der Physik", Vol. 49/3, pp. 206 - 275 (Springer Verlag, 1971).

Data on rapid variations are given as before in the IAGA-Bulletin 12. 2, except that, according to decisions made at the IAGA-Assembly in Madrid, 1969, certain less important cases are no longer published. The list of so called minor distur-

*) For Kn, Ks etc. 1969 and 1968 see Supplementary Tables in Part E of the IAGA-Bulletins 32a and 32b.

bances and rejected solar-flare effects are omitted; ssc's, si's, bays and pulsations, are given only if reported by a sufficient number of stations; pulsations without bays are published in the quarterly bulletins and their yearly supplement. Checklists are sent to the observatories for the reported pg's and sfe's only.

The Bulletin 32a further contains a data survey for special intervals (mostly magnetic storms) consisting of a survey of indices over the selected time intervals, data on sc's, ranges etc. from individual observatories and magnetograms of selected stations, reduced to the same time scale and comparable intensity scales.

Most data appearing in the yearly IAGA-Bulletin 32 have been given earlier in monthly and quarterly bulletins, partly in a preliminary form.

The values of Kp, Ap and Cp for a calendar month are usually available, in a table and in graphical representation, before the end of the next month, and they are distributed, in time for 27-day recurrence forecasts, to about 350 institutions in many countries. This service is carried out by the Institut für Geophysik, Herzberger Landstrasse 180, 34 Göttingen, Germany. Requests may be directed to this address.

Monthly tables of Kn, Ks, Km and related quantities are distributed by the Institut de Physique du Globe, 9 Quai Saint Bernard - Tour 14, Paris V^{e}, France.

Monthly bulletins on Ci, selected quiet and disturbed days and preliminary data on rapid geomagnetic variations, as well as threemonthly bulletins on pulsations, are sent to about 160 observatories and institutions by the International Service of Geomagnetic Indices, c/o Royal Netherlands Meteorological Institute, De Bilt, Netherlands. A yearly supplement to the threemonthly bulletins is distributed in the same way.

The data on rapid variations, including pulsations, are collected and prepared for publication at the Observatorio del Ebro, Roquetas, Spain.

Much of the data published in these bulletins can also be found in the monthly publication "Solar Geophysical Data" issued by the NOAA Environmental Data Service, Boulder, Colorado, USA.

IAGA - Commission IV on Magnetic Variations and Disturbances

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EXPLANATION OF THE TABLES AND DIAGRAMS

Part A. List of Observatories.

The observatories are arranged according to their geographic latitudes. The two letter symbols have been chosen as far as possible in accordance with the List of Observatories, compiled by G. Fanselau (IAGA-Bulletin No. 20, 1965). For observatories which have removed over a small distance, the old name is sometimes maintained, but the coordinates correspond always with the new site. The symbols are used in the tables of K-figures (now on magnetic tape, formerly in IAGA-Bulletin 12.1) and in the lists of rapid variations (Part C of this Bulletin). Observatories taking into consideration certain data from ionospheric or solar observatories for their reports of solar-flare effects, are marked by an asterisk.

The last three columns contain the scale value of the H-records in γ/mm, the lower limit for K = 9 used by the observatory in scaling K-indices and the period of time for which the observatory reported K-indices. Of this period, the first and, if the reporting has ended, the last year are given. A letter indicates whether the reporting has been continuous or almost continuous (C) or with interruptions (I). Details of the reporting-periods can be found in IAGA-Bulletin 12, page 12 (up to 1947) and corresponding places in later IAGA-Bulletins.

Part B. Indices.

B. 1, 2 The daily international character figure Ci is defined as the mean value of the C figures of about 30 observatories. These are the observatories from which the C-figures are generally received within four weeks after the end of the month.

B. 3 The selection of the quiet and disturbed days is made on the basis of three criteria: (a) the sum of the eight values of Kp. (b) the sum of the squares of these values. (c) the greatest of the eight values of Kp. According to each of these criteria, a relative "order number" is assigned to each day of a month, the three order numbers are averaged and the days with the lowest and the highest mean order numbers are selected as the five quietest, the ten quietest and the five most disturbed days.

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 even for different months of the same year, the selected quiet 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 marked by the letter A if for that day: $Ap > 6$, or marked by the letter K if $Ap \leqslant 6$, but one $Kp \geqslant 3o$ or two Kp values are $\geqslant 3-$.

A selected "disturbed day" is considered "not really disturbed" and marked by an asterisk if $Ap < 20$. (Ref.: P.N. Mayaud, Ann. Géophysique t. 26, 1969, pp. 901 - 921).

B. 4 The planetary three-hour-range index Kp is the mean standardized K-index from 13 observatories between 46° and 63° northern or southern geomagnetic latitude. The scale is 0 to 9, expressed in thirds of a unit, e.g., 5- is 4 2/3, 5o is 5, 5+ is 5 1/3. This planetary index is designed to measure solar particle radiation by its magnetic effects, especially to meet the need of research workers in the ionospheric field. Several other indices are derived from Kp, namely the 3 hour index ap (the equivalent range) and the daily indices Ap and Cp.

The Kp-stations are: Meanook (Canada), Sitka (Alaska), Lerwick (Shetlands), Eskdalemuir (Scotland), Lovö (Sweden), Rude Skov (Denmark), Wingst (Germany), Witteveen (Netherlands), Hartland (England), Ottawa (Canada), Fredericksburg (Virginia), Amberley (New Zealand), Toolangi (Australia).

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

Kp =	0o	0+	1-	1o	1+	2-	2o	2+	3-	3o	3+	4-	4o	4+
ap =	0	2	3	4	5	6	7	9	12	15	18	22	27	32

Kp =	5-	5o	5+	6-	6o	6+	7-	7o	7+	8-	8o	8+	9-	9o
ap =	39	48	56	67	80	94	111	132	154	179	207	236	300	400

In order to use ap as an equivalent amplitude, it is considered in relation to the conditions at a standard station, which is a station having the lower limit of 500 γ for K = 9. At such a station the average range in γ's of the most disturbed of the three force components in a three hour-interval can be taken as 2·ap (for instance, for Kp = 3+, as 36γ). In other words ap is an equivalent amplitude in the unit 2γ.

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 2γ for a standard station.

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

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

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

Use of the daily Ap (planetary) or Ak (local value) is recommended in preference to the sum of the indices Kp or K.

The last column gives the daily planetary character figure Cp, as defined in Bulletin 12e, p. 111. It should be noted that Cp, introduced for a 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, p. 111, Table 2) may be used:

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

B. 5 -8 These tables give the frequencies of occurrence of Kp-values during the year, the monthly average values of Ap and Cp and lists of magnetic storms and of very quiet intervals, based on the successive occurrence of certain Kp-values.

B. 9 The diagrams of Kp show the values of Kp from the table B 4 in a "musical note script" as defined in the key. The arrangement in solar rotations is made in order to show the 27-day recurrence tendency.

B. 10 The three-hourly indices Kn and Ks for the Northern and Southern hemispheres are derived from the K-indices of observatories in the sub-auroral zones, 11 in the Northern and 7 in the Southern hemisphere, namely: Memambetsu (Japan), Petropavlovsk, Magadan, Tomsk, Sverdlovsk (USSR), Niemegk (Germany), Witteveen (Netherlands), Hartland (England), Fredericksburg (USA), Victoria (Canada), Tucson (USA), Amberley (New Zealand), Toolangi, Gnangara (Australia), Kerguelen (Indian Ocean), Hermanus (South africa), Argentine Isl. and Orcadas del Sur (Argentine). *) These K-indices are standardized according to the distances of the stations to the auroral zones. The stations are arranged in groups, each group representing a longitude sector in one of the hemispheres. The mean standardized K for each sector is converted into an equivalent amplitude and the weighted means an and as of these amplitudes are converted back into Kn and Ks. Km is derived in the same way from am, the mean of an and as. (This method is different from the method followed in the case of Kp, where ap is derived from Kp).

The tables are printed mechanically. As the indices are determined with an accuracy of one third of a unit, the values of 3Kn, 3Ks and 3Km are tabulated. An, As and Am are the daily mean values of the amplitudes an, as and am, Am2 is the mean of am over a 48-hour period centered in the middle of the day. σ n and σ s indicate the standard deviations of the sector values of K in the N. - and S. hemispheres. Monthly mean values of An, As and Am are given at the bottom of the tables.

B. 11, 12 The equatorial Dst-index for the intensity of the ring current is the deviation of the horizontal component H from its quiet time value, averaged over a number of low latitude stations. These stations are: Honolulu (Pacific), San Juan (USA), Hermanus (South Africa) and Kakioka (Japan). The exact definition of Dst is given in earlier data publications (see Introduction, for references). Monthly tables of hourly Dst-values are given, followed by a table of daily mean values and a graph of hourly values for the whole year.

Part C. Rapid Variations.

C. 1 Sudden commencements followed by a magnetic storm or by an increase in activity lasting at least one hour (ssc). This list is based upon the data as reported monthly by the observatories. Only the cases reported by at least ten stations

*) For the determination of the indices Kn, Ks etc. for 1971, the data from the stations Orcadas del Sur and Tomsk could not be included.

are given. Stations in isolated regions are thereby counted morefold, depending on the local density of the stations' network. The times in the column at the left are mean values; but the earliest and latest times reported by the observatories for the beginning of the phenomenon are added in brackets. For printing reasons only the minutes are given. These minutes generally belong to the hour of the phenomenon; but if they are underlined, they belong to the preceding hour. The observatories are mentioned in six groups under the letters A, B, C, D, E, X, as follows:

A... when the phenomenon in their magnetograms is very remarkable

B... when it is a fair, ordinary, but unmistakable

C... when it is a poor or doubtful case

D... when it was decidedly not recorded in the magnetograms although the records were satisfactory

E... when the phenomenon cannot be discerned because of heavy disturbance

X... when the record is missing

In some cases one or more observatories preferred another qualification (si, b, bp, etc); these observatories are included in parentheses.

C. 2 Bays or pulsational disturbances associated with bays. The times at the left-hand side of the table have the same meaning as in table C. 1. The observatories are mentioned in groups, according to the qualification (b, bs, bp, etc) which they have attributed to the phenomenon in accordance with the definitions given by the Copenhagen- and Berkeley meetings. The classification symbols A, B, C, D, E, X, are the same as mentioned in C. 1. The meaning of the symbols b, bs, etc. is:

b.... clear and isolated bay appearing during a calm period without pulsations or sharp beginning

bs... bay with sharp beginning without pulsations

bp... bay with pulsations without sharp beginning

bps.. bay with pulsations and sharp beginning

pi2.. train of pulsations of irregular shape and beginning mostly impulsive, with period 40 - 150 sec., consisting of several series of oscillations, each series lasting about 10 minutes (pi2 corresponds with the former pt)

pg... giant pulsations, viz., exceptional pulsations of very great period and regularity, with sufficient relative amplitude

If pulsations precede or follow the beginning of the bay with a time lag of not more than about ten minutes, then symbols bp and bps are used. If the interval is greater, both phenomena are reported separately. As for the ssc's, this list contains only the cases reported by at least ten stations (isolated stations counted morefold). Moreover it may be that a bay has been selected by the observatories out of a group of many similar disturbances all occurring on the same day. Therefore the list is not complete and it seems better not to use this table for statistical purposes without caution. This holds also for the other tables.

C. 3 Sudden impulses (si). These are sudden magnetic changes which could not be classified as ssc, bs, etc. As for the ssc's, this list contains only the cases reported by at least ten stations (isolated stations counted morefold). The mean times and extreme times of the beginning of the phenomena are given as in table C. 1.

C. 4 Giant pulsations (pg) are given, which were reported originally by at least two stations (or by one station, if situated in a very isolated region and if the pg was classified as A). These pg's were checked by the observatories, mentioned in the heading of the table. It is very probable that several cases included in the Table are not real pg's in the sense given to the former classical polar pg's. Nevertheless, in order to clarify the actual signification of this denomination for the different observatories and to know the world distribution of this phenomenon, the table gives the answers to the checking-lists for all the cases in which a positive answer was given by some observatories, situated in regions where typical pg's have been observed in the past. Period and amplitude of the pg's as reported by the individual observatories are also included, as well as the times of beginning and ending of the phenomenon if these deviate from the times given in the left column.

C. 5a Solar-flare effects (sfe) were reported by many observatories. A check of the reported cases has been made by the observatories, mentioned in the heading of the table. In some cases data from the monthly reports of other stations have also been used, in order to get a better idea of the reported effects. The symbols of such stations are included in square brackets. The times tabulated in the column at the left are mean values of the times given for the beginning of a phenomenon. In cases where a clear simultaneous disturbance from an ionospheric or solar observatory or from a radio service, which gives support to the geomagnetic solar-flare effect, has been well established, the indicated time has been underlined. Stations in the daylight hemisphere have been written behind the indicated times and grouped in the same way as in Table C. 1. Observatories near the subsolar point are underlined. Stations lying in the twilight-zone, which reported a clear disturbance are indicated by dotted brackets. Stations under the same circumstances in full dark have been given in parentheses. Stations on the night-side of the earth, which gave a negative or doubtful answer, have been omitted.

C. 5b Doubtful solar-flare effects. In general, the following cases have been considered as doubtful: those where well located stations (with respect to the subsolar point) did not report such an effect, (although several other stations have reported it), and those where some stations in full dark mentioned a disturbance which, considering the hour and their geographic position, was probably no night-side bay coexisting with a sfe at the day-side of the earth. Further some cases were considered doubtful because the interpretation of the totality of data was hindered by simultaneous world wide perturbation and also when the solar, radioelectric and ionospheric records were available, but did not show any clear effect at the time of the presumed sfe. Nevertheless it is very probable that several of these cases are real solar-flare effects.

Part D. Data on special intervals.

The first lines give a survey of indices Kp, Kn and Ks for the selected periods. Dst is given in a graphical form as follows: A single horizontal line indicates that Dst is negative, a double line means Dst $<$ -50, a triple line means Dst $<$ -100, etc. In the list of data from individual observatories, the sign of the amplitude of an ssc

is to be taken algebraically for D and Z, D reckoned positive if towards the East and Z reckoned positive if downwards. sc* means that the sc-movement (for which the amplitudes are given) was preceded by a small reverse impuls. The ranges of D, H and Z are the differences between the highest and the lowest values of these components attained during the storm. The end of the storm is indicated by the cessation time of reasonably marked disturbance movements in the traces, more specifically when the K-index diminishes to 2 or less for a reasonable period.

The stations for which K-indices are given, are selected on the basis of a representative distribution over all parts of the world.

Magnetograms are given for three groups of stations, namely for stations inside the polar caps (upper diagram), for stations in the auroral zones (middle diagram) and for stations in lower latitudes (lower diagram). The selected stations may not always be the same, depending on the availability of the magnetograms. The magnetograms have been reduced to the same time scale and comparable intensity scales. *)

Part E. Supplementary Tables.

Supplementary tables for Kn, Ks etc. for the year 1968 are given in the same form as in Part B, table 9. The data of the stations Petropavlovsk and Orcadas del Sur could not be included in the computation of these indices.

*) Stations used in Part D, which are not included in the List of Observatories (Part A) are the following:

Abisko	68° 21' N	18° 49' E
Annamalanaigar (AN)	11° 24' N	79° 41' E
Trivandrum (TV)	8° 29' N	76° 57' E

Errata IAGA-Bulletin 32a, 1970

p. ix Change "Note" at bottom of page as follows:
For the determination of the indices Kn, Ks etc. for 1970, the data from the observatory Orcadas del Sur could not be included. Moreover the station Tomsk stopped reporting in August 1970.

p. 86 In the table "Data from Individual Observatories", station SJUA, column "UT End": Change Day 15 into Day 09.

LIST OF OBSERVATORIES

Symbol	Observatory	Collaborator	Geographic		Geomagnetic		S_H	K=9 lower limit	K rep.
			Lat.	Long.	Lat.	Long.	γ/mm		
	Alert		+82° 30'	297° 30'	+85.7°	168.7°			
BT	Cheisa (B. Tikhaya)	V. Y. Danilov	+80 37	58 03	+71.3	156.0	5	2000	34I -
CC	Cape Chelyuskin	V. A. Smirnov	+77 43	104 17	+66.2	176.5	10	2500	55C -
TH	Thule	K. Lassen	+77 29	290 50	+89.0	358.0	8	1000	55C -
	Mould Bay		+76 12	240 36	+79.1	284.7			
RB	Resolute Bay	R. G. Madill	+74 41	265 10	+83.0	289.6		1500	52C55
B4	Bear Island	S. Berger	+74 31	19 01	+71.1	124.0	17	2000	57C59
DI	Dikson	A. M. Denisova	+73 33	80 34	+63.0	161.6	10	1500	34I -
MS	Matoshkin Shar	N. D. Medvedev	+73 16	56 24	+64.8	146.5		2500	55C56
TI	Tiksy	T. L. Kaplan	+71 35	129 00	+60.4	191.4	5	1000	55C67
PB	Point Barrow	T. L. Hardiman	+71 18	203 15	+68.5	241.1	30	2500	57C -
TR	Tromsø	S. Berger	+69 40	18 57	+67.2	116.8	5	2000	47C -
GO	Godhavn	K. Lassen	+69 14	306 29	+79.9	32.5	10	1800	43I -
MM	Murmansk	M. I. Pudovkin	+68 15	33 05	+63.5	126.2	7	2500	57C -
KI	Kiruna	N. Ambolt	+67 50	20 25	+65.3	115.8	11		52I -
SO	Sodankylä *	E. Kataja	+67 22	26 38	+63.8	120.0	9	1500	14I -
WE	Welen	N. I. Zueva	+66 10	190 10	+61.8	237.1	8	1250	55C -
CO	College *	J. B. Townsend	+64 52	212 10	+64.6	256.5	8	2500	41C -
BL	Baker Lake	R. G. Madill	+64 20	263 58	+73.8	315.2	6	2500	52C55
RY	Leirvogur (Reykj.)	Th. Saemundsson	+64 11	338 18	+70.2	71.0	15	1500	64C -
SR	Srednikan	N. W. Savangeewa	+62 26	152 19	+53.2	210.6	4	550	40I -
DO	Dombås	E. Gjøen	+62 04	9 07	+62.3	100.1	9	750	25C -
YA	Yakutsk	A. A. Danilov	+62 01	129 40	+51.0	193.8	6	550	41I -
NU	Nurmijärvi *	M. Kivinen	+60 30	24 39	+57.8	112.6	8	750	58C -
LE	Lerwick *	B. R. Leaton	+60 08	358 49	+62.5	88.6	4	1000	32C -
MG	Magadan *	T. A. Vinychova	+60 07	151 01	+50.6	210.1	2	550	67C -
LN	Leningrad		+59 57	30 42	+56.2	117.4	3	600	55C -
LO	Lovö	F. Eleman	+59 21	17 50	+58.1	105.8	4	600	30C -
	Churchill		+58 48	265 54	+68.8	322.5			
SI	Sitka *	R. J. Main, Jr.	+57 04	224 40	+60.0	275.4	7	1000	32C -
SV	Sverdlovsk	T. N. Panov	+56 44	61 04	+48.5	140.7	5	550	41I -
TM	Tomsk	O. K. Gordeew	+56 28	84 56	+45.9	159.6	4	350	58C70
RS	Rude Skov	A. Lundbak	+55 51	12 27	+55.8	98.5	10	600	40C -
KN	Kazan	M. F. Monachova	+55 50	48 51	+49.3	130.4	5	550	41I -
MO	Moskva	W. N. Bodrov	+55 28	37 19	+50.8	120.5	2	550	45I -
ES	Eskdalemuir *	B. R. Leaton	+55 19	356 48	+58.5	82.9	4	750	32C -
	Great Whale River		+55 16	282 13	+66.8	347.2			
ME	Meanook	Anne B. Cook	+54 37	246 34	+61.8	301.0	11	1500	32C -
HL	Helu	W. Czyszek	+54 37	18 49	+53.4	103.7	4	550	56C -
MN	Minsk	M. S. Babuchnikov	+54 04	27 08	+50.6	113.8	4	550	62C -
ST	Stonyhurst	J. E. Worthy S. J.	+53 51	357 32	+56.9	82.7	6	600	60C66
WN	Wingst *	O. Meyer	+53 44	9 04	+54.5	94.0	6	500	40C -
PK	Petropavlovsk		+53 06	158 38	+44.4	218.2			
WI	Witteveen *	D. van Sabben	+52 49	6 40	+54.2	91.0	10	500	40C -
IR	Irkutsk	W. S. Pirozjkov	+52 10	104 27	+41.0	176.9	6	350	41I -
SW	Swider	Z. Kalinowska	+52 07	21 15	+50.6	104.6	4	500	42I -
NI	Niemegk *	K. Lengning	+52 04	12 40	+52.2	96.3	2	500	37C -
VL	Valentia *	S. Mc Williams	+51 56	349 45	+56.6	73.4	3	500	58C -
BE	Belsk	J. Marianiuk	+51 50	20 48	+50.4	104.1	1	500	60C -
GT	Göttingen	M. Siebert	+51 33	9 58	+52.3	93.7	3	500	
CM	Collmberg *	B. Tittel	+51 19	13 00	+51.5	96.5	1	500	54I67
HA	Hartland *	H. F. Finch	+51 00	355 31	+54.6	79.0	4	500	29C -
KV	Kiev	A. S. Jaworskij	+50 43	30 18	+47.3	112.2	2	350	58C -
MA	Manhay	L. Koenigsfeld	+50 18	5 41	+52.0	88.8	2	500	40C -
DB	Dourbes *	A. de Vuyst	+50 06	4 36	+51.7	88.7	4	500	55C -
RA	Racibórz	W. Kraiński	+50 05	18 11					
PR	Pruhonice *	V. Bucha	+49 59	14 32	+49.9	97.3	4	500	53C -
LV	Lvov	W. M. Litinskij	+49 54	23 45	+48.0	105.8	3	550	55C -

LIST OF OBSERVATORIES - continued

Symbol	Observatory	Collaborator	Geographic		Geomagnetic		S_H	K=9 lower limit	K rep.
			Lat.	Long.	Lat.	Long.	γ/mm		
KD	Karaganda		+49° 49'	73° 05'	+40.0°	148.4°	2	350	66C -
BV	Budkov	J. Bouška	+49 04	14 01	+49.1	96.2	1		69C -
VI	Victoria	B. Caner	+48 31	236 35	+54.3	292.7	2	500	57C -
NE	Newport	A. H. Travis	+48 10	242 32	+55.1	300.0			68C -
FU	Fürstenfeldbruck *	K. Wienert	+48 10	11 17	+48.8	93.3	3	500	48C -
CF	Chambon-la-Forêt*	J. P. le Mouel	+48 01	2 16	+50.4	83.9	6	500	40I -
HB	Hurbanovo *	S. Pintér	+47 54	18 12	+47.1	99.8	4	350	51C -
UB	Ulan Bator		+47 51	103 03	+36.4	173.4	1	300	56C -
JO	St. Johns	G. A. Brown	+47 36	307 19	+58.7	21.4	6	750	69C -
NA	Nantes	O. Noblanc	+47 15	358 27	+50.5	80.1	6	500	50C59
SA	Yushno-Sakhalinsk	I. N. Petrov	+46 57	142 43	+36.9	206.7	3	350	54C -
TY	Tihany		+46 54	17 53	+46.4	99.1	4		58C -
OD	Odessa	A. I. Storosjinskij	+46 47	30 53	+43.8	111.1	2	350	55C -
KK	Novo Kazalinsk		+45 46	62 07	+39.9	138.6	1	350	66C -
OT	Ottawa	W. R. Darker	+45 24	284 27	+57.0	351.5	6	750	32C -
SU	Surlari		+44 41	26 15	+42.5	106.0	2	350	57C -
GC	Grocka *	M. Stojković	+44 38	20 46	+43.6	100.9	3	350	58I -
RT	Roburent *	M. Bossolasco	+44 18	7 53	+45.8	88.5			56C -
MT	Memambetsu *	T. Yoshimatsu	+43 55	144 12	+34.0	208.4	2	350	57C -
AG	Agincourt	A. A. Onhauser	+43 47	280 44	+55.0	347.0	5	600	40C69
VK	Vladivostok	S. A. Negaev	+43 41	132 10	+33.0	198.0	4	300	55C -
AT	Alma Ata		+43 16	77 23	+33.4	152.0			64C -
LG	Logroño *	T. Miguel Lafuente	+42 27	357 30	+46.1	77.0	4	350	57C -
AQ	Aquila *	F. Molina	+42 23	13 19	+42.9	92.9	5	350	58C -
TF	Tbilisi (Tiflis)	N. A. Katziachwili	+42 05	44 42	+36.7	122.1	1	350	40I -
TK	Tashkent	M. G. Antzilevitch	+41 25	69 12	+32.4	143.7	2	300	41I -
MD	Maddalena	M. Giorgi	+41 13	9 24	+42.7	88.5	3	350	58C63
IK	Istanbul-Kandili	O. Uyar	+41 04	29 04	+38.5	107.5	4	300	52C -
EB	Ebro *	J. O. Cardus	+40 49	0 30	+43.9	79.7	3	350	42C -
CI	Coimbra	V. Seiça	+40 13	351 35	+44.8	71.3	4	350	51C -
BD	Boulder		+40 02	254 42	+48.9	316.4			
TL	Toledo	R. Gómez-Menor	+39 53	355 57	+43.6	75.7	6	350	48C -
ON	Onagawa		+38 36	141 28	+28.4	206.7			
FR	Fredericksburg	R. Kuberry	+38 12	282 38	+49.6	349.8	2	500	32C -
PE	Pendeli *	A. Stavrou	+38 03	23 52	+36.2	102.0	4	300	59C -
GI	Gibilmanna *	M. Georgi	+37 59	14 01	+38.5	92.2	2	350	54C57
AK	Ashkhabad	W. G. Dubrovskij	+37 57	58 06	+30.5	133.4	2	300	58C -
SM	San Miguel	A. Silva de Sousa	+37 46	334 21	+45.6	50.9	4	350	51C -
AE	Almeria	G. Vazquez	+36 51	357 32	+40.6	75.3	5	350	64C -
SF	San Fernando	M. Catalán	+36 28	353 48	+41.0	71.3	3	350	40C -
KA	Kakioka *	T. Yoshimatsu	+36 14	140 11	+26.0	206.0	3	300	36C -
TP	Teheran (Persia) *	H. K. Afshar	+35 44	51 23	+29.3	126.4	2	300	57I -
KS	Ksara	J. Plassard	+33 50	35 54	+30.4	112.0	6	300	49C -
SS	Simosato	K. Kawakami	+33 34	135 56	+23.0	202.4	2	300	57C59
AV	Averroes (Maroc)	P. Stahl	+33 18	352 35	+38.1	69.1	3	350	70C -
DS	Dallas	Lavon Posey	+32 59	263 15	+43.0	327.7			69C -
AS	Aso *	Y. Tamura	+32 53	131 01	+22.1	198.1	3	300	57I57
TU	Tuscon	Clyde J. Beers	+32 15	249 10	+40.4	312.2	3	350	38C -
KY	Kanoya *	T. Yoshimatsu	+31 25	130 53	+20.5	198.1	2	300	58C -
QU	Quetta *	S. M. Ishaque	+30 11	66 57	+21.6	139.7	3	300	55I -
ML	Misallat	M. Fahim	+29 45	30 54	+26.7	105.8	2	300	56C -
SZ	Santa Cruz (Ten.)	C. Marzán	+28 29	343 43	+35.0	58.6	4	300	64C -
LP	Lunping *	P. H. Kong	+25 00	121 10	+13.8	189.5	2	300	68C -
TA	Tamanrasset	B. Lepretre a. o.	+22 48	5 31	+25.4	80.6	4	300	52I -
HO	Honolulu	R. C. Munson	+21 19	202 00	+21.1	266.5	3	300	38I -
TE	Teoloyucan *	C. Cañón Amaro	+19 45	260 49	+29.6	327.1	3	300	51I -
AL	Alibag		+18 38	72 52	+ 9.5	143.6	4	300	40C -
SJ	San Juan	M. Vazquez	+18 07	293 51	+29.9	3.2	2	300	38C -

LIST OF OBSERVATORIES - continued

Symbol	Observatory	Collaborator	Geographic		Geomagnetic		S_H	K=9 lower limit	K rep.
			Lat	Long.	Lat.	Long.	γ/mm		
HD	Hyderabad	N. Geoph. Res. I.	+17° 25'	78° 33'	+ 7.6°	148.9°	5	300	69C -
MB	M'Bour *	H. G. Barsczus	+14 24	343 03	+21.3	55.0	7	350	52C -
MU	Muntinlupa *	C. Palma	+14 22	121 01	+ 3.0	189.7	4	300	64C -
GU	Guam	K. Cravens	+13 35	144 52	+ 4.0	212.9	3	300	58C -
AA	Addis Ababa	E. Cambron	+09 02	38 46	+ 5.3	109.2		300	
KR	Koror	K. Gravens	+07 20	134 30	+ 3.2	203.4		300	58
PA	Paramaribo	D. van Sabben	+05 49	304 47	+17.0	14.5	7		57C58
FQ	Fdquene	J. del C. Quintero	+05 28	286 16	+16.9	355.1	4	300	57C60
BA	Bangui	A. Lapouille	+04 26	18 34	+ 4.6	88.5	2	350	52I -
MC	Moca	A. G. Cogollor	+03 21	8 40	+ 5.7	78.6	3	300	64C -
BN	Bunia	P. Herrinck	+01 32	30 11	- 0.4	99.3	2		
TT	Tatuoca	J. A. Ferreira	-01 12	311 29	+ 9.6	20.8	3		
LR	Lwiro *	G. Bonnet	-02 15	28 48	- 4.0	98.2	5	350	58C60
HN	Hollandia	D. van Sabben	-02 34	140 31	-12.6	210.3	5	300	57C58
BI	Binza	(P. Herrinck (G. Lesambo	-04 23	15 16	- 3.4	83.2	4		65C -
TG	Tangerang	R. Susanto	-06 10	106 38	-17.6	175.4	4	300	40I -
LU	Luanda	V. S. Moreira	-08 55	13 10	- 7.2	80.5	3	350	61C -
PM	Port Moresbey *	I. B. Everingham	-09 24	147 09	-18.7	218.0	3	300	58C -
KC	Karavia (Congo)	(P. Herrinck (G. Lesambo	-11 39	27 28	-12.7	94.1	5		
HU	Huancayo *	A. A. Giesecke M.	-12 02	284 41	- 6.6	353.8	3	600	37C -
DA	Darwin	L. S. Prior	-12 20	131 00	-22.0	201.3			
AP	Apia *	A. L. Cullington	-13 48	188 14	-16.0	260.2	4	300	40C57
PP	Papeete-Pamatai	F. Janet	-17 34	210 25	-15.3	282.8	2	350	68C -
TN	Tananarive *	(Kakoto (Hee	-18 55	47 33	-23.1	112.1	1	300	50C -
MR	Mauritius	B. M. Badya	-20 06	57 33	-26.6	122.4	3	500	56C60
LQ	La Quiaca	R. P. J. Hernández	-22 06	294 24	-10.6	3.2	3	350	64C -
VA	Vassouras	L. I. Gama	-22 24	316 21	-11.9	23.9	4	600	52C64
LM	Lourenco Marques	F. Augusto Leal	-25 55	32 35	-27.7	95.8	3	300	67C68
BR	Brisbane	R. F. Thyer	-27 32	152 55	-35.8	226.9		500	57C64
WA	Watheroo	P. M. Mc Gregor	-30 19	115 53	-41.8	185.6	3	350	37C59
PI	Pilar	R. P. J. Hernández	-31 40	296 07	-20.2	4.0	3	300	40I -
GN	Gnangara *	P. J. Gregson	-31 47	115 57	-43.2	185.8	3	350	59C -
HR	Hermanus *	A. M. van Wijk	-34 25	19 14	-33.7	81.7	2	300	40C -
AC	Las Acacias	H. A. Hartmann	-35 00	302 19	-24.0	10.3	2	350	64C -
TO	Toolangi *	L. S. Prior	-37 32	145 28	-46.7	220.8	4	500	41C -
AM	Amberley *	A. L. Cullington	-43 09	172 43	-47.7	252.5	5	500	37C -
TW	Trelew *	O. P. Pelliciuoli	-43 15	294 41	-31.7	3.2	3	350	57C -
KG	Kerguelen	R. Schlich	-49 21	70 12	-56.5	127.8	6	750	57I -
MI	Macquarie Island	L. S. Prior	-54 30	158 57	-60.7	243.0	25	1500	52C -
OR	Orcadas del Sur		-60 44	315 13	-50.1	18.2		400	
AR	Argentine Island	C. N. Horton	-65 15	295 44	-53.8	3.3			57I -
OA	Oasis		-66 06	92 09	-77.2	160.8	8	2000	57C58
WK	Wilkes *		-66 15	110 35	-77.2	179.2	25	2500	58C66
MY	Mirny	U. N. Oviannikov	-66 33	93 01	-77.0	146.8	6	2000	57C -
DU	Dumont d'Urville	R. Schlich	-66 40	140 01	-75.6	230.9	8	1800	57C -
MW	Mawson *	L. S. Prior	-67 36	62 53	-73.2	103.1	10	1500	55C -
CT	Charcot		-69 23	139 01	-78.3	234.5		1500	57C58
PO	Pionerskaya		-69 44	95 30	-80.3	146.5	12	2000	57C58
NL	Novolazarevskaya	V. A. Kazarin	-70 46	11 50	-66.2	53.6	15	1500	60C -
BB	Base Baudouin		-70 26	24 19	-69.	63.			64C66
HT	Hallett		-72 19	170 13	-74.7	278.2	31	2500	57C62
HY	Halley Bay	J. C. Farman	-75 31	333 24	-65.8	24.3	7	2000	57C58
SB	Scott Base *	A. L. Cullington	-77 51	166 47	-79.0	294.4	22	2000	57C -
LA	Little America	J. J. Gniewek	-78 11	197 50	-74.0	312.0		2500	57C58
VO	Vostok	I. N. Babakov	-78 27	106 52	-89-2	91.4	11	2000	58I -
BY	Byrd Island		-80 01	240 29	-70.6	336.3	24	2500	58C60
SP	South Pole		-90		-78.5	0.0	29	2000	60

TABLE 1 INTERNATIONAL CHARACTER-FIGURES, Ci, 1900 - 1970

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Mean for the year
1900	0.6	0.5	0.6	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.42
01	0.4	0.4	0.5	0.4	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.45
02	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.4	0.44
03	0.4	0.4	0.4	0.6	0.5	0.6	0.6	0.7	0.7	0.8	0.8	0.6	0.59
04	0.7	0.6	0.4	0.6	0.6	0.5	0.6	0.5	0.5	0.6	0.5	0.5	0.55
1905	0.7	0.7	0.6	0.6	0.5	0.6	0.5	0.7	0.7	0.5	0.7	0.4	0.59
06	0.4	0.9	0.7	0.6	0.6	0.6	0.7	0.6	0.8	0.6	0.6	0.7	0.65
07	0.7	0.8	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.6	0.5	0.66
08	0.6	0.7	0.9	0.7	0.8	0.7	0.5	0.8	0.9	0.5	0.6	0.5	0.68
09	0.8	0.6	0.8	0.5	0.6	0.5	0.5	0.6	0.7	0.7	0.5	0.6	0.62
1910	0.6	0.7	0.8	0.7	0.7	0.5	0.6	0.8	0.8	1.0	0.8	0.8	0.72
11	0.8	0.9	0.8	0.8	0.7	0.5	0.6	0.5	0.5	0.6	0.5	0.4	0.63
12	0.4	0.5	0.4	0.4	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.4	0.46
13	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.6	0.6	0.4	0.4	0.48
14	0.5	0.5	0.6	0.5	0.4	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.54
1915	0.5	0.6	0.7	0.6	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.5	0.62
16	0.6	0.6	0.9	0.7	0.8	0.7	0.6	0.8	0.8	0.8	0.8	0.6	0.71
17	0.8	0.7	0.6	0.6	0.7	0.6	0.6	0.8	0.6	0.7	0.5	0.7	0.66
18	0.6	0.8	0.7	0.8	0.7	0.6	0.7	0.8	0.9	0.8	0.8	0.9	0.75
19	0.8	0.8	0.9	0.7	0.8	0.6	0.5	0.7	0.8	0.9	0.5	0.7	0.72
1920	0.6	0.5	0.8	0.6	0.6	0.4	0.5	0.6	0.9	0.6	0.6	0.6	0.62
21	0.5	0.5	0.7	0.7	0.8	0.6	0.5	0.6	0.5	0.6	0.6	0.6	0.61
22	0.6	0.7	0.8	0.8	0.6	0.6	0.7	0.7	0.7	0.7	0.5	0.4	0.64
23	0.5	0.6	0.5	0.4	0.5	0.5	0.4	0.4	0.5	0.6	0.4	0.5	0.48
24	0.6	0.6	0.6	0.4	0.5	0.6	0.6	0.4	0.7	0.5	0.5	0.4	0.54
1925	0.4	0.4	0.4	0.5	0.5	0.7	0.6	0.6	0.7	0.8	0.5	0.6	0.56
26	0.8	0.8	0.8	0.8	0.6	0.5	0.5	0.5	0.8	0.7	0.5	0.5	0.65
27	0.6	0.7	0.8	0.6	0.6	0.5	0.6	0.6	0.8	0.8	0.4	0.6	0.63
28	0.4	0.6	0.5	0.5	0.8	0.7	0.7	0.6	0.8	0.8	0.6	0.5	0.63
29	0.5	0.8	0.8	0.5	0.6	0.6	0.7	0.6	0.8	0.8	0.7	0.7	0.67
1930	0.7	0.9	0.9	1.0	0.9	0.9	0.9	0.9	0.8	0.9	0.6	0.5	0.83
31	0.5	0.6	0.6	0.4	0.5	0.6	0.6	0.7	0.8	1.0	0.8	0.7	0.66
32	0.8	0.8	1.0	0.9	0.8	0.4	0.5	0.7	0.7	0.7	0.6	0.7	0.70
33	0.6	0.6	0.7	0.8	0.6	0.6	0.5	0.6	0.8	0.6	0.6	0.5	0.64
34	0.5	0.6	0.8	0.4	0.5	0.4	0.4	0.7	0.7	0.5	0.4	0.7	0.56
1935	0.7	0.7	0.7	0.6	0.5	0.7	0.6	0.5	0.9	0.9	0.6	0.7	0.67
36	0.7	0.8	0.6	0.8	0.7	0.7	0.7	0.4	0.5	0.7	0.7	0.5	0.65
37	0.6	0.9	0.8	0.8	0.7	0.7	0.8	0.5	0.6	1.0	0.7	0.6	0.74
38	1.1	0.8	0.6	0.8	0.7	0.5	0.7	0.7	0.8	0.8	0.6	0.6	0.74
39	0.5	0.9	1.0	1.0	0.9	0.8	0.8	0.7	0.7	0.9	0.5	0.6	0.76
1940	0.8	0.7	0.8	0.7	0.7	0.7	0.6	0.6	0.7	0.7	0.8	0.8	0.73
41	0.7	0.8	1.0	0.6	0.6	0.6	0.7	0.7	0.8	0.6	0.7	0.6	0.70
42	0.5	0.6	0.9	0.7	0.4	0.5	0.7	0.7	0.7	0.9	0.7	0.6	0.65
43	0.5	0.5	0.7	0.6	0.6	0.6	0.7	1.0	0.9	0.9	0.8	0.6	0.70
44	0.6	0.5	0.8	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.3	0.6	0.53
1945	0.5	0.5	0.7	0.6	0.4	0.3	0.4	0.4	0.4	0.5	0.3	0.6	0.47
46	0.6	0.7	0.8	0.6	0.6	0.6	0.7	0.4	0.8	0.5	0.5	0.4	0.61
47	0.6	0.5	1.0	0.6	0.6	0.7	0.6	0.8	1.0	0.8	0.6	0.5	0.69
48	0.6	0.7	0.7	0.6	0.8	0.5	0.6	0.8	0.7	1.0	0.7	0.7	0.71
49	0.7	0.7	0.8	0.6	0.7	0.6	0.5	0.6	0.6	0.9	0.7	0.5	0.65
1950	0.7	0.7	0.7	0.8	0.8	0.6	0.7	0.8	0.8	0.9	0.8	0.7	0.74
51	0.8	0.9	0.9	1.0	0.8	0.8	0.8	0.9	1.1	0.8	0.8	0.8	0.89
52	0.8	0.9	1.0	1.0	0.9	0.7	0.6	0.6	0.9	0.8	0.6	0.7	0.81
53	0.7	0.6	0.8	0.7	0.6	0.5	0.7	0.8	0.8	0.7	0.6	0.4	0.67
54	0.5	0.8	0.8	0.7	0.4	0.4	0.5	0.6	0.9	0.7	0.5	0.4	0.59
1955	0.6	0.7	0.8	0.7	0.6	0.5	0.4	0.6	0.6	0.6	0.6	0.5	0.59
56	0.9	0.7	0.9	0.9	0.8	0.8	0.6	0.7	0.7	0.6	0.9	0.5	0.76
57	0.7	0.7	1.0	0.9	0.6	0.8	0.6	0.6	1.0	0.7	0.8	0.8	0.77
58	0.8	1.0	1.1	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.4	0.8	0.77
59	0.7	1.0	0.7	0.7	0.8	0.8	1.0	0.9	1.1	0.8	0.8	0.8	0.83
1960	0.7	0.7	0.8	1.1	0.9	0.8	0.8	0.8	0.8	1.0	0.9	0.9	0.84
61	0.6	0.7	0.6	0.6	0.7	0.6	0.9	0.6	0.6	0.5	0.4	0.5	0.61
62	0.3	0.6	0.4	0.7	0.4	0.6	0.7	0.8	0.8	1.0	0.6	0.6	0.63
63	0.5	0.4	0.4	0.5	0.7	0.6	0.6	0.7	1.0	0.6	0.6	0.5	0.61
64	0.6	0.7	0.6	0.7	0.6	0.5	0.5	0.4	0.6	0.5	0.4	0.3	0.53
1965	0.4	0.6	0.5	0.4	0.4	0.5	0.5	0.5	0.6	0.4	0.4	0.4	0.45
66	0.4	0.4	0.6	0.4	0.4	0.4	0.5	0.6	0.9	0.5	0.5	0.6	0.52
67	0.5	0.5	0.4	0.5	0.8	0.7	0.5	0.5	0.7	0.6	0.6	0.7	0.58
68	0.6	0.8	0.7	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.65
69	0.4	0.6	0.8	0.7	0.6	0.5	0.4	0.5	0.6	0.5	0.5	0.4	0.54
1970	0.4	0.4	0.6	0.7	0.4	0.5	0.8	0.5	0.5	0.6	0.6	0.4	0.52

TABLE 2 INTERNATIONAL CHARACTER-FIGURES, Ci, 1971

Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.3	0.9	0.1	0.6	0.4	1.3	0.7	0.3	0.7	1.1	0.2	0.3
2	1.1	0.4	0.1	0.4	1.0	1.3	1.0	1.1	0.0	1.1	0.1	0.2
3	1.5	0.0	0.6	1.1	0.5	1.3	0.4	0.2	0.2	1.1	0.0	0.8
4	0.8	0.1	0.9	1.3	0.4	0.5	0.5	0.4	0.8	0.8	0.2	0.5
5	0.6	0.0	0.2	0.7	0.6	0.3	0.4	0.8	1.0	0.9	0.1	0.2
6	0.2	0.2	0.1	0.5	1.6	0.3	0.6	0.0	0.7	1.2	0.0	0.0
7	0.0	0.3	0.2	0.1	1.4	0.0	0.2	0.3	1.3	1.0	0.2	0.0
8	0.0	0.7	1.0	0.3	0.9	0.3	0.5	0.8	0.6	1.3	0.8	0.1
9	0.0	0.6	0.3	1.6	0.6	0.1	0.4	0.5	0.4	1.4	0.1	0.4
10	0.4	0.7	0.7	1.3	0.7	0.2	0.1	0.7	0.3	0.4	0.3	0.0
11	0.4	0.3	0.2	1.3	0.1	0.4	0.4	0.8	0.4	0.7	1.0	0.3
12	0.1	0.2	1.2	0.5	0.1	0.1	0.5	0.5	0.5	0.6	0.4	0.5
13	0.4	0.1	1.5	0.4	0.1	0.7	0.7	0.4	1.1	0.7	0.1	0.9
14	0.3	1.1	1.3	1.4	1.0	0.4	0.5	0.2	0.4	0.6	0.1	0.1
15	0.4	1.4	1.1	1.4	0.8	0.3	0.4	0.3	0.5	0.5	0.0	0.0
16	0.4	1.3	0.8	0.8	0.3	0.4	0.3	0.6	0.7	0.2	0.0	0.7
17	0.3	0.7	0.6	0.4	1.7	0.6	0.2	0.7	0.8	0.1	0.0	1.8
18	1.1	1.0	0.3	0.6	1.5	0.5	0.5	1.0	1.5	0.0	0.4	1.2
19	0.9	0.3	1.1	0.3	0.6	0.0	0.5	0.1	0.5	0.0	0.6	0.6
20	1.3	0.6	0.7	0.1	0.1	0.0	0.2	0.2	1.0	0.1	0.4	0.2
21	0.7	0.2	0.0	1.0	0.3	0.3	1.3	0.6	0.3	0.4	0.8	0.8
22	0.5	0.0	0.0	0.9	0.1	0.3	0.5	0.7	0.1	0.6	1.5	1.0
23	0.2	0.9	0.2	0.7	0.6	0.5	0.6	1.0	0.0	0.4	1.6	0.9
24	0.7	0.8	0.9	0.0	0.5	0.4	0.4	0.5	0.6	1.0	1.5	0.4
25	0.4	1.5	0.7	0.0	0.4	1.3	0.2	0.4	1.3	0.3	1.6	0.3
26	0.1	1.3	0.8	0.1	0.6	0.9	1.1	0.7	1.2	0.1	1.0	0.5
27	1.4	0.7	0.4	0.3	0.0	0.2	0.6	0.1	1.5	0.1	0.4	0.1
28	1.5	0.2	0.0	1.2	0.1	0.6	0.2	0.4	0.5	1.2	0.5	0.1
29	1.0		0.0	0.6	0.3	1.2	0.5	0.3	0.2	1.3	0.3	0.9
30	1.3		0.7	0.5	1.1	0.7	0.6	0.5	1.3	0.7	0.2	1.0
31	0.9		1.3		0.1		0.6	1.3		0.2		0.4
Mean	0.62	0.59	0.58	0.68	0.60	0.51	0.50	0.53	0.68	0.65	0.48	0.49

Mean for the Year 0.58

TABLE 3 INTERNATIONAL QUIET AND DISTURBED DAYS 1971

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

TABLE 4 PLANETARY THREE-HOUR-INDICES Kp, EQUIVALENT RANGES ap, DAILY AVERAGE RANGES Ap, AND PLANETARY DAILY CHARACTER FIGURES Cp.

	Kp	Sum	Jan. 1971 ap								Sum	Ap	Cp
1	3o 2- 1o 1+ 1- 2- 2- 0+	11+	15	6	4	5	3	6	6	2	47	6	0.3
2	3- 4- 4o 4- 4o 3o 3o 3-	27-	12	22	27	22	27	15	15	12	152	19	1.0
3	4- 4+ 4o 5- 4o 4+ 5+ 4+	35-	22	32	27	39	27	32	56	32	267	33	1.3
4	4o 3o 4- 3- 3+ 3o 3- 2-	24o	27	15	22	12	18	15	12	6	127	16	0.9
5	2o 2+ 3- 2o 3- 2o 2+ 3-	19-	7	9	12	7	12	7	9	12	75	9	0.5
6	2o 1o 2- 1- 1o 1- 1+ 1o	9+	7	4	6	3	4	3	5	4	36	4	0.2
7	0+ 0o 0+ 0+ 0+ 0+ 0o 0o	2-	2	0	2	2	2	2	0	0	10	1	0.0
8	0o 0o 0o 0o 0o 0+ 0o 0o	0+	0	0	0	0	0	2	0	0	2	0	0.0
9	0o 0o 0o 0o 0o 0+ 1- 0o	1o	0	0	0	0	0	2	3	0	5	1	0.0
10	1- 0+ 1o 1o 1+ 1o 3+ 2o	11-	3	2	4	4	5	4	18	7	47	6	0.3
11	1+ 1+ 2+ 2- 2- 3o 1- 3-	15-	5	5	9	6	6	15	3	12	61	8	0.4
12	2- 0+ 0+ 1- 0+ 1+ 1- 0+	6-	6	2	2	3	2	5	3	2	25	3	0.1
13	1+ 2- 1+ 2o 2+ 1o 1o 2o	13-	5	6	5	7	9	4	4	7	47	6	0.3
14	2o 3- 3- 2o 3- 3- 0+ 1+	16+	7	12	12	7	12	12	2	5	69	9	0.5
15	2o 2o 3+ 2o 2o 2- 1+ 2o	16+	7	7	18	7	7	6	5	7	64	8	0.4
16	3- 1o 3- 2o 2- 1+ 1- 2o	14o	12	4	12	7	6	5	3	7	56	7	0.4
17	0+ 1o 1+ 2+ 3- 2- 2- 2-	13-	2	4	5	9	12	6	6	6	50	6	0.3
18	2o 1+ 2- 3+ 5- 4- 3- 3-	22o	7	5	6	18	39	22	12	12	121	15	0.9
19	3- 2o 1+ 2- 3- 3o 3+ 4o	21-	12	7	5	6	12	15	18	27	102	13	0.7
20	4+ 5+ 4o 5- 4- 4o 3- 3o	32-	32	56	27	39	22	27	12	15	230	29	1.3
21	3- 3- 4- 3- 3- 3o 2o 2o	21+	12	12	22	12	12	15	7	7	99	12	0.7
22	3o 3o 3o 2- 0+ 0+ 2- 3o	16o	15	15	15	6	2	2	6	15	76	10	0.5
23	3- 2+ 2o 1o 1- 1+ 2- 1+	13o	12	9	7	4	3	5	6	5	51	6	0.3
24	2- 2+ 1o 2+ 2+ 1- 3+ 4-	17+	6	9	4	9	9	3	18	22	80	10	0.6
25	4o 3- 2o 2- 1+ 2o 2- 1-	16o	27	12	7	6	5	7	6	3	73	9	0.5
26	1- 0o 0o 0o 0+ 1- 0+ 0+	2+	3	0	0	0	2	3	2	2	12	2	0.0
27	0+ 5- 6o 4+ 5- 5o 4o 4o	33o	2	39	80	32	39	48	27	27	294	37	1.4
28	5- 5- 4o 4o 4- 5o 4o 6o	36o	39	39	27	27	22	48	27	80	309	39	1.4
29	5o 4o 2- 3o 2+ 2o 2- 2o	22-	48	27	6	15	9	7	6	7	125	16	0.9
30	3+ 5o 3+ 5o 3o 2o 4- 4+	30-	18	48	18	48	15	7	22	32	208	26	1.2
31	3o 3- 5- 3- 3o 3- 4- 3-	25o	15	12	39	12	15	12	22	12	139	17	0.9

	Kp	Sum	Feb. 1971 ap								Sum	Ap	Cp
1	3o 3- 4o 3+ 3o 4o 2- 1+	23o	15	12	27	18	15	27	6	5	125	16	0.9
2	3o 2o 1- 2- 2- 2o 3o 3-	17-	15	7	3	6	6	7	15	12	71	9	0.5
3	2+ 2- 1+ 1- 1- 1- 1- 0+	8+	9	6	5	3	3	3	3	2	34	4	0.1
4	0+ 0+ 0+ 1o 1o 2o 1+ 2-	8o	2	2	2	4	4	7	5	6	32	4	0.1
5	1+ 1+ 1- 2- 1- 0+ 1- 1o	8-	5	5	3	6	3	2	3	4	31	4	0.1
6	2+ 1o 2+ 2- 2- 2- 1+ 1+	13+	9	4	9	6	6	6	5	5	50	6	0.3
7	1+ 2+ 2o 1+ 1o 2- 1+ 2+	13+	5	9	7	5	4	6	5	9	50	6	0.3
8	3- 3- 1+ 2+ 2- 2+ 3o 3o	19o	12	12	5	9	6	9	15	15	83	10	0.6
9	2o 3o 3o 2+ 3o 3o 0+ 2-	18+	7	15	15	9	15	15	2	6	84	10	0.6
10	2o 0+ 1+ 1+ 2+ 3+ 3+ 3-	17-	7	2	5	5	9	18	18	12	76	10	0.5
11	1+ 0o 0+ 2o 0+ 2+ 2- 3-	11-	5	0	2	7	2	9	6	12	43	5	0.2
12	1+ 1+ 2o 1o 2+ 2+ 2o 2-	14o	5	5	7	4	9	9	7	6	52	6	0.3
13	3- 1o 1- 1- 0o 0+ 0+ 0+	6o	12	4	3	3	0	2	2	2	28	4	0.1
14	0+ 1o 2+ 3+ 4+ 4o 4o 3-	22o	2	4	9	18	32	27	27	12	131	16	0.9
15	3+ 3o 4- 3+ 3+ 5o 5- 5+	32-	18	15	22	18	18	48	39	56	234	29	1.3
16	6o 4+ 3+ 3+ 3- 4- 4- 4-	31-	80	32	18	18	12	22	22	22	226	28	1.2
17	4- 3- 3o 3- 3- 2+ 2o 3+	22+	22	12	15	12	12	9	7	18	107	13	0.8
18	2+ 3o 3- 2o 3- 3- 2+ 4-	21+	9	15	12	7	12	12	9	22	98	12	0.7
19	3- 4- 3- 2o 1o 1+ 1- 2-	16-	12	22	12	7	4	5	3	6	71	9	0.5
20	3- 3o 1+ 2o 1+ 1+ 3- 2o	16+	12	15	5	7	5	5	12	7	68	8	0.5
21	2- 2o 3- 2- 2+ 2o 1- 1o	14o	6	7	12	6	9	7	3	4	54	7	0.3
22	2- 1- 2+ 2- 0o 0o 0+ 0o	7-	6	3	9	6	0	0	2	0	26	3	0.1
23	1o 2o 2o 1o 2- 3+ 4+ 4o	19+	4	7	7	4	6	18	32	27	105	13	0.8
24	2o 1- 1+ 2- 2+ 2+ 2+ 5+	18o	7	3	5	6	9	9	9	56	104	13	0.7
25	5o 3o 3+ 4- 6- 5+ 6o 5-	37-	48	15	18	22	67	56	80	39	345	43	1.5
26	5+ 6+ 4- 4o 3o 3+ 2+ 2+	30+	56	94	22	27	15	18	9	9	250	31	1.3
27	3+ 2+ 1o 1o 3- 2+ 2+ 3+	18+	18	9	4	4	12	9	9	18	83	10	0.6
28	2o 3+ 2- 1o 1o 1- 1- 0+	11-	7	18	6	4	4	3	3	2	47	6	0.3

TABLE 4 PLANETARY THREE-HOUR-INDICES Kp, EQUIVALENT RANGES ap, DAILY AVERAGE RANGES Ap, AND PLANETARY DAILY CHARACTER FIGURES Cp.

	Kp	Sum	March 1971	ap				Sum	Ap	Cp
1	2- 2o 2o 1o 1- 1o 0+ 1-	9+	6	7	7	4	3	4	2	3	36	4	0.2
2	0+ 2+ 1- 0o 1- 1o 1+ 2-	8o	2	9	3	0	3	4	5	6	32	4	0.1
3	2+ 2o 2+ 1+ 1+ 2o 4- 2+	17+	9	7	9	5	5	7	22	9	73	9	0.5
4	4o 3+ 3- 3+ 3- 2+ 3- 1o	22o	27	18	12	18	12	9	12	4	112	14	0.8
5	2+ 2o 2- 1o 2- 1+ 0+ 0+	11-	9	7	6	4	6	5	2	2	41	5	0.2
6	1o 2- 0+ 2- 1o 1- 1+ 1+	9o	4	6	2	6	4	3	5	5	35	4	0.2
7	2- 1- 1- 0+ 1- 2- 1+ 1o	8o	6	3	3	2	3	6	5	4	32	4	0.1
8	4o 4o 2- 3o 3o 3o 2+ 2+	23+	27	27	6	15	15	15	9	9	123	15	0.9
9	1o 2+ 3- 3- 1- 1o 1+ 1-	12+	4	9	12	12	3	4	5	3	52	6	0.3
10	3o 2o 4- 3+ 4- 4- 2- 2-	23-	15	7	22	18	22	22	6	6	118	15	0.8
11	1- 3o 2- 3- 2+ 1+ 0o 1-	12+	3	15	6	12	9	5	0	3	53	7	0.3
12	1o 1+ 1o 2o 3+ 3+ 4o 6o	22o	4	5	4	7	18	18	27	80	163	20	1.0
13	3+ 4- 4+ 5o 5- 6- 5+ 4+	36+	18	22	32	48	39	67	56	32	314	39	1.4
14	3+ 3+ 4+ 5o 4- 3+ 4o 5o	32o	18	18	32	48	22	18	27	48	231	29	1.3
15	5o 5- 4+ 2+ 3- 4- 2+ 2o	27o	48	39	32	9	12	22	9	7	178	22	1.1
16	4o 3o 2o 2+ 2+ 3+ 3- 3o	23-	27	15	7	9	9	18	12	15	112	14	0.8
17	3o 2o 3- 2+ 1o 3- 2o 2+	18o	15	7	12	9	4	12	7	9	75	9	0.5
18	3- 2o 1o 1+ 1- 1+ 2o 2o	13o	12	7	4	5	3	5	7	7	50	6	0.3
19	2- 3- 1o 3o 4- 3o 3- 5-	22+	6	12	4	15	22	15	12	39	125	16	0.9
20	4- 4o 4o 2+ 1o 1+ 1- 2o	19o	22	27	27	9	4	5	3	7	104	13	0.7
21	1o 0o 1o 1o 0+ 0+ 1o 1o	6-	4	0	4	4	2	2	4	4	24	3	0.1
22	1- 1o 0+ 0o 1- 0+ 1+ 0+	5-	3	4	2	0	3	2	5	2	21	3	0.0
23	0o 0o 0+ 0+ 1- 2- 2o 1+	6+	0	0	2	2	3	6	7	5	25	3	0.1
24	1+ 2o 4- 3o 2- 2+ 4- 4-	21+	5	7	22	15	6	9	22	22	108	14	0.8
25	3- 2o 4o 4- 2- 2+ 2o 2o	20+	12	7	27	22	6	9	7	7	97	12	0.7
26	3+ 2+ 4+ 3o 3- 3o 3- 1+	23-	18	9	32	15	12	15	12	5	118	15	0.8
27	2o 2+ 3- 2o 3o 2- 2o 2o	18-	7	9	12	7	15	6	7	7	70	9	0.5
28	1+ 0+ 0o 0o 0+ 0+ 1o 1-	4o	5	2	0	0	2	2	4	3	18	2	0.0
29	0+ 0o 1+ 0+ 0+ 0o 1- 1-	4-	2	0	5	2	2	0	3	3	17	2	0.0
30	1+ 1+ 0+ 1o 2o 2- 4- 4-	15o	5	5	2	4	7	6	22	22	73	9	0.5
31	5- 4+ 4o 2+ 4+ 4+ 4+ 2-	30o	39	32	27	9	32	32	32	6	209	26	1.2

	Kp	Sum	April 1971	ap				Sum	Ap	Cp
1	3+ 3o 5- 2+ 1o 1+ 2- 1o	18+	18	15	39	9	4	5	6	4	100	12	0.7
2	0+ 1- 1+ 2+ 3- 3- 1+ 2-	13o	2	3	5	9	12	12	5	6	54	7	0.3
3	4- 2+ 3- 4- 1+ 2- 3+ 4+	23o	22	9	12	22	5	6	18	32	126	16	0.9
4	5+ 4o 3+ 2o 3+ 5- 4+ 4-	31-	56	27	18	7	18	39	32	22	219	27	1.2
5	2o 1+ 1o 2o 2- 3o 4+ 3o	18+	7	5	4	7	6	15	32	15	91	11	0.7
6	3+ 4- 3+ 3+ 2- 2o 2+ 3-	22+	18	22	18	18	6	7	9	12	110	14	0.8
7	2o 3o 2o 1- 0+ 1- 1- 2o	11+	7	15	7	3	2	3	3	7	47	6	0.3
8	1o 1- 1+ 1+ 2o 1+ 2o 2+	12o	4	3	5	5	7	5	7	9	45	6	0.3
9	2o 4o 6- 6- 6o 6- 6o 4o	39o	7	27	67	67	80	67	80	27	422	53	1.6
10	4+ 5+ 4o 3+ 4o 4- 4+ 4o	33o	32	56	27	18	27	22	32	27	241	30	1.3
11	3o 5o 4+ 5- 3+ 4o 4- 3-	31-	15	48	32	39	18	27	22	12	213	27	1.2
12	4- 2+ 2- 2- 3- 2- 3o 2o	19-	22	9	6	6	12	6	15	7	83	10	0.6
13	2- 2o 2+ 3- 3- 2o 1+ 1+	16o	6	7	9	12	12	7	5	5	63	8	0.4
14	3+ 2o 1o 1+ 4+ 4o 5- 8-	28+	18	7	4	5	32	27	39	179	311	39	1.4
15	7- 5- 3- 4+ 5- 3- 3+ 4o	33o	111	39	12	32	39	12	18	27	290	36	1.4
16	4o 4- 3o 2+ 3o 2o 2+ 3o	23+	27	22	15	9	15	7	9	15	119	15	0.8
17	2o 3o 3- 2+ 0+ 0+ 1- 3o	14+	7	15	12	9	2	2	3	15	65	8	0.4
18	3o 2+ 1+ 2- 2- 3o 2o 4-	19-	15	9	5	6	6	15	7	22	85	11	0.6
19	3o 3o 2+ 2- 1o 1+ 1+ 2-	15+	15	15	9	6	4	5	5	6	65	8	0.4
20	1- 2o 1+ 1+ 1- 1- 2o 0+	9o	3	7	5	5	3	3	7	2	35	4	0.2
21	0o 1- 2- 2o 3- 4- 4+ 6+	21+	0	3	6	7	12	22	32	94	176	22	1.1
22	5- 3o 2- 2o 3- 2+ 3+ 2+	22o	39	15	6	7	12	9	18	9	115	14	0.8
23	1- 2+ 2o 3o 1+ 2- 4- 3o	18-	3	9	7	15	5	6	22	15	82	10	0.6
24	1+ 1o 0+ 0+ 1- 0+ 0+ 0+	5-	5	4	2	2	3	2	2	2	22	3	0.0
25	0o 0+ 0o 0o 0+ 0+ 1- 0o	2-	0	2	0	0	2	2	3	0	9	1	0.0
26	1- 0+ 0+ 0+ 2+ 2+ 1o 2o	9+	3	2	2	2	9	9	4	7	38	5	0.2
27	1+ 2+ 3- 2+ 1+ 1+ 2o 2+	16-	5	9	12	9	5	5	7	9	61	8	0.4
28	3- 4- 3o 2+ 5o 5o 2- 2-	25o	12	22	15	9	48	48	6	6	166	21	1.1
29	3o 2o 2- 2- 2o 2- 1+ 3+	17-	15	7	6	6	7	6	5	18	70	9	0.5
30	4- 3- 2+ 1+ 2- 2o 1- 0+	15-	22	12	9	5	6	7	3	2	66	8	0.4

TABLE 4 PLANETARY THREE-HOUR-INDICES Kp, EQUIVALENT RANGES ap, DAILY AVERAGE RANGES Ap, AND PLANETARY DAILY CHARACTER FIGURES Cp.

	Kp	Sum	May 1971 ap								Sum	Ap	Cp
1	1+ 3- 1+ 1- 1+ 1+ 3- 2o	13+	5	12	5	3	5	5	12	7	54	7	0.3
2	5- 5- 4+ 2o 2- 1+ 2- 1+	22-	39	39	32	7	6	5	6	5	139	17	0.9
3	1+ 2+ 1o 0+ 2o 2+ 2+ 4-	15+	5	9	4	2	7	9	9	22	67	8	0.5
4	4- 3+ 1- 1- 1+ 1o 1o 1-	12+	22	18	3	3	5	4	4	3	62	8	0.4
5	2o 1o 0o 1o 1o 3o 3+ 2+	14-	7	4	0	4	4	15	18	9	61	8	0.4
6	4- 3+ 5- 6+ 5+ 5+ 6- 5o	39+	22	18	39	94	56	56	67	48	400	50	1.6
7	5o 6- 4+ 4o 3+ 5- 4o 4o	35o	48	67	32	27	18	39	27	27	285	36	1.4
8	2o 2+ 3+ 3+ 2+ 3o 3+ 3-	22+	7	9	18	18	9	15	18	12	106	13	0.8
9	3o 3o 2+ 2+ 2- 3o 3- 3-	21-	15	15	9	9	6	15	12	12	93	12	0.7
10	4- 3+ 3o 2- 2- 2- 2+ 1+	19-	22	18	15	6	6	6	9	5	87	11	0.6
11	2- 3- 1o 0+ 1- 0+ 0+ 1o	8o	6	12	4	2	3	2	2	4	35	4	0.2
12	1o 1- 1- 0o 1o 0+ 1- 2+	7-	4	3	3	0	4	2	3	9	28	4	0.1
13	2o 1o 1- 0o 1o 1+ 1+ 1o	8+	7	4	3	0	4	5	5	4	32	4	0.1
14	3- 3- 1o 3o 3- 4- 3+ 3+	22+	12	12	4	15	12	22	18	18	113	14	0.8
15	4+ 3o 3- 1+ 2- 3- 1+ 2+	19+	32	15	12	5	6	12	5	9	96	12	0.7
16	1o 1- 0+ 0+ 0+ 1o 2+ 3o	9o	4	3	2	2	2	4	9	15	41	5	0.2
17	5o 4- 6o 6o 6+ 7- 6+ 5+	45+	48	22	80	80	94	111	94	56	585	73	1.8
18	6o 5+ 5- 5- 4+ 5- 4- 2-	35o	80	56	39	39	32	39	22	6	313	39	1.4
19	3o 2o 3- 2+ 2+ 2+ 2o 2+	19o	15	7	12	9	9	9	7	9	77	10	0.5
20	2o 0+ 1+ 3o 1+ 1- 0+ 1o	10o	7	2	5	15	5	3	2	4	43	5	0.2
21	2- 0+ 0o 2o 2o 3- 1o 0+	10o	6	2	0	7	7	12	4	2	40	5	0.2
22	2o 2- 1+ 1+ 1- 1o 1o 1+	10+	7	6	5	5	3	4	4	5	39	5	0.2
23	4- 2+ 2+ 2- 1- 2+ 3+ 2+	19-	22	9	9	6	3	9	18	9	85	11	0.6
24	2- 1+ 1o 1+ 1+ 2+ 3o 2+	14+	6	5	4	5	5	9	15	9	58	7	0.4
25	1+ 2- 2- 1+ 2- 2- 2+ 2+	14o	5	6	6	5	6	6	9	9	52	6	0.3
26	3o 3- 3- 2- 2- 2o 2- 2o	17+	15	12	12	6	6	7	6	7	71	9	0.5
27	1- 0o 0+ 1- 0+ 0+ 0+ 1-	3+	3	0	2	3	2	2	2	3	17	2	0.0
28	0o 0+ 0+ 0+ 1+ 1o 2+ 1o	7-	0	2	2	2	5	4	9	4	28	4	0.1
29	2o 1o 1- 0+ 1o 1+ 2o 3-	11o	7	4	3	2	4	5	7	12	44	6	0.2
30	3- 2o 3+ 4+ 5o 3o 3- 2+	25+	12	7	18	32	48	15	12	9	153	19	1.0
31	2- 1o 1+ 1o 1o 1- 1o 0+	8o	6	4	5	4	4	3	4	2	32	4	0.1

	Kp	Sum	June 1971 ap								Sum	Ap	Cp
1	1- 1o 4+ 4o 4o 4+ 4o 4o	26+	3	4	32	27	27	32	27	27	179	22	1.1
2	4o 4+ 4- 4+ 4o 4- 5+ 4o	33+	27	32	22	32	27	22	56	27	245	31	1.3
3	5o 5- 5- 2o 3o 3+ 4- 2+	29-	48	39	39	7	15	18	22	9	197	25	1.2
4	2+ 2+ 3+ 2- 1+ 2o 2- 3-	17+	9	9	18	6	5	7	6	12	72	9	0.5
5	2+ 2+ 1+ 1+ 1o 1+ 2+ 2-	14-	9	9	5	5	4	5	9	6	52	6	0.3
6	2- 2o 2+ 1+ 1+ 1+ 1o 0+	11+	6	7	9	5	5	5	4	2	43	5	0.2
7	0+ 1o 0+ 0+ 1- 1o 1- 2-	6o	2	4	2	2	3	4	3	6	26	3	0.1
8	2+ 3- 2+ 2- 1+ 1+ 2- 1o	14+	9	12	9	6	5	5	6	4	56	7	0.4
9	0+ 0+ 1- 1- 1- 2- 1o 1-	6o	2	2	3	3	3	6	4	3	26	3	0.1
10	0o 0+ 1- 2o 2- 1+ 1+ 1o	8+	0	2	3	7	6	5	5	4	32	4	0.1
11	1+ 2o 2- 2o 2- 1+ 1- 1+	12o	5	7	6	7	6	5	3	5	44	6	0.2
12	1- 1+ 1o 1+ 0+ 0+ 1- 1-	6+	3	5	4	5	2	2	3	3	27	3	0.1
13	0+ 0+ 1+ 0+ 4- 3+ 3- 1+	13+	2	2	5	2	22	18	12	5	68	8	0.5
14	1+ 2+ 2- 1o 2- 1+ 1- 1o	11o	5	9	6	4	6	5	3	4	42	5	0.2
15	1- 1+ 2+ 1+ 1- 1- 1+ 2o	10+	3	5	9	5	3	3	5	7	40	5	0.2
16	1+ 1- 1o 2- 2o 1+ 1+ 2+	12-	5	3	4	6	7	5	5	9	44	6	0.2
17	1+ 2- 3o 4- 3o 2+ 1- 1o	17-	5	6	15	22	15	9	3	4	79	10	0.6
18	2- 2- 3o 2- 1+ 1- 1o 2-	13-	6	6	15	6	5	3	4	6	51	6	0.3
19	1o 1o 1- 0+ 0+ 0+ 0+ 0o	4o	4	4	3	2	2	2	2	0	19	2	0.0
20	1- 1o 1+ 2- 0+ 0+ 1- 1-	7-	3	4	5	6	2	2	3	3	28	4	0.1
21	0o 1- 1+ 1+ 2- 1+ 1+ 2-	9+	0	3	5	5	6	5	5	6	35	4	0.2
22	1o 2o 0o 1o 2+ 2o 1+ 2-	11+	4	7	0	4	9	7	5	6	42	5	0.2
23	2o 2o 2+ 3- 2+ 2o 1- 0+	14+	7	7	9	12	9	7	3	2	56	7	0.4
24	1- 1- 1o 0+ 1+ 1- 3- 2o	9+	3	3	4	2	5	3	12	7	39	5	0.2
25	3- 3+ 4- 4o 5o 5+ 4o 5o	33o	12	18	22	27	48	56	27	48	258	32	1.3
26	3+ 3o 3+ 4- 2+ 1+ 1o 1+	19+	18	15	18	22	9	5	4	5	96	12	0.7
27	2- 1o 1o 1o 1+ 1o 1- 1o	9-	6	4	4	4	5	4	3	4	34	4	0.1
28	0+ 1- 1o 2- 3o 3- 3o 3o	15+	2	3	4	6	15	12	15	15	72	9	0.5
29	2o 3+ 2+ 3+ 4o 4o 5o 4+	28+	7	18	9	18	27	27	48	32	186	23	1.1
30	3+ 2- 2o 2- 3- 2+ 2o 3o	19-	18	6	7	6	12	9	7	15	80	10	0.6

TABLE 4 PLANETARY THREE-HOUR-INDICES Kp, EQUIVALENT RANGES ap, DAILY AVERAGE RANGES Ap, AND PLANETARY DAILY CHARACTER FIGURES Cp.

	Kp	Sum	July 1971				ap				Sum	Ap	Cp
1	3o 3+ 2+ 2+ 2+ 1+ 2+ 2+	19+	15	18	9	9	9	5	9	9	83	10	0.6
2	4- 3o 3- 3o 4- 2+ 2- 3o	23o	22	15	12	15	22	9	6	15	116	14	0.8
3	2+ 1+ 2- 1+ 2o 2- 1+ 3-	14+	9	5	6	5	7	6	5	12	55	7	0.3
4	3o 2o 1+ 1- 1+ 1+ 2- 3-	14o	15	7	5	3	5	5	6	12	58	7	0.4
5	2- 2- 2- 2- 1+ 1+ 3- 2+	14+	6	6	6	6	5	5	12	9	55	7	0.3
6	4- 2- 1o 1- 1o 2+ 3- 2+	15+	22	6	4	3	4	9	12	9	69	9	0.5
7	1- 1- 0+ 1- 1- 1- 1o 1o	6-	3	3	2	3	3	3	4	4	25	3	0.1
8	1o 3o 2o 1+ 1- 2+ 2+ 3o	16-	4	15	7	5	3	9	9	15	67	8	0.5
9	3+ 2+ 2o 0+ 0+ 0+ 1+ 1+	11+	18	9	7	2	2	2	5	5	50	6	0.3
10	1+ 1- 0o 0o 0+ 1- 1o 0+	4+	5	3	0	0	2	3	4	2	19	2	0.0
11	1o 2- 1- 1o 1+ 3- 2- 1+	11+	4	6	3	4	5	12	6	5	45	6	0.3
12	2+ 1o 1o 1+ 1+ 2o 3o 2+	14+	9	4	4	5	5	7	15	9	58	7	0.4
13	3- 2- 3o 2- 2- 2+ 3- 1+	17o	12	6	15	6	6	9	12	5	71	9	0.5
14	2- 2o 2+ 3- 3- 2o 1+ 1+	16o	6	7	9	12	12	7	5	5	63	8	0.4
15	2o 3+ 2o 2o 2o 1+ 1+ 1+	15+	7	18	7	7	7	5	5	5	61	8	0.4
16	2- 1+ 2- 2- 2o 2- 1+ 2-	13o	6	5	6	6	7	6	5	6	47	6	0.3
17	2+ 1+ 1o 0+ 2- 1- 0+ 0+	8o	9	5	4	2	6	3	2	2	33	4	0.1
18	0+ 2+ 1+ 2- 3o 2o 1+ 1+	13+	2	9	5	6	15	7	5	5	54	7	0.3
19	3o 3- 1+ 1- 1+ 1+ 1+ 2-	13+	15	12	5	3	5	5	5	6	56	7	0.4
20	1- 0+ 0o 1- 2o 2o 1- 1-	7o	3	2	0	3	7	7	3	3	28	4	0.1
21	2- 2- 1+ 3- 4- 5+ 5- 4-	25-	6	6	5	12	22	56	39	22	168	21	1.1
22	4+ 3o 1+ 0+ 1- 1- 1+ 1-	12+	32	15	5	2	3	3	5	3	68	8	0.5
23	1o 1o 1+ 2o 2+ 2o 2+ 3+	15+	4	4	5	7	9	7	9	18	63	8	0.4
24	3o 1o 1- 1- 1+ 1+ 1- 1-	9+	15	4	3	3	5	5	3	3	41	5	0.2
25	1- 1- 0+ 0+ 2- 1o 1- 1-	6o	3	3	2	2	6	4	3	3	26	3	0.1
26	0o 0o 0+ 1o 1+ 4- 6- 5-	17-	0	0	2	4	5	22	67	39	139	17	0.9
27	3+ 1+ 2o 3- 2o 2+ 1+ 2-	17-	18	5	7	12	7	9	5	6	69	9	0.5
28	2+ 3o 2+ 1+ 0+ 1- 0+ 0+	11-	9	15	9	5	2	3	2	2	47	6	0.3
29	0o 0o 1- 1+ 1+ 2o 2+ 4-	11+	0	0	3	5	5	7	9	22	51	6	0.3
30	3- 2o 2o 3o 2+ 1o 2- 1+	16o	12	7	7	15	9	4	6	5	65	8	0.4
31	2- 2- 2+ 2+ 2+ 1o 4- 2o	17o	6	6	9	9	9	4	22	7	72	9	0.5

	Kp	Sum	Aug. 1971				ap				Sum	Ap	Cp
1	2- 1o 1+ 1o 1o 1+ 2+ 2+	12o	6	4	5	4	4	5	9	9	46	6	0.3
2	4o 5- 4+ 3- 2+ 1o 2- 2-	22+	27	39	32	12	9	4	6	6	135	17	0.9
3	2o 1- 0+ 0+ 1+ 1o 1o 1o	8-	7	3	2	2	5	4	4	4	31	4	0.1
4	2- 2o 2- 2+ 2o 1+ 2+ 1+	15-	6	7	6	9	7	5	9	5	54	7	0.3
5	4o 4+ 4+ 1+ 1- 0+ 1- 2o	18-	27	32	32	5	3	2	3	7	111	14	0.8
6	0o 0o 0o 0o 0+ 1- 1o 1+	3+	0	0	0	0	2	3	4	5	14	2	0.0
7	0+ 0o 1- 1+ 1o 2- 2- 3-	9+	2	0	3	5	4	6	6	12	38	5	0.2
8	3- 4- 2+ 2+ 2+ 2+ 1+ 3-	20-	12	22	9	9	9	9	5	12	87	11	0.6
9	2+ 2- 2- 1+ 2+ 3o 2+ 3o	18-	9	6	6	5	9	15	9	15	74	9	0.5
10	3+ 3o 3- 1o 2o 3- 2o 3o	20-	18	15	12	4	7	12	7	15	90	11	0.6
11	3o 4o 2+ 4o 3+ 2+ 2- 2-	22+	15	27	9	27	18	9	6	6	117	15	0.8
12	2+ 2o 4- 2+ 3+ 2o 1- 1o	17+	9	7	22	9	18	7	3	4	79	10	0.6
13	2+ 2o 3- 1o 1o 1+ 1- 2-	13-	9	7	12	4	4	5	3	6	50	6	0.3
14	2- 1o 0+ 1- 1o 1+ 1- 1+	8o	6	4	2	3	4	5	3	5	32	4	0.1
15	0+ 1- 1o 1+ 2+ 1+ 1+ 2+	11-	2	3	4	5	9	5	5	9	42	5	0.2
16	2- 4- 1+ 2+ 2- 2o 1+ 1+	15+	6	22	5	9	6	7	5	5	65	8	0.4
17	1- 1- 1- 2- 2- 2- 2- 5+	14o	3	3	3	6	6	6	6	56	89	11	0.6
18	4+ 4- 1+ 3- 2+ 3+ 1+ 2o	21o	32	22	5	12	9	18	5	7	110	14	0.8
19	2+ 1+ 1o 1- 0+ 1o 0+ 0+	7+	9	5	4	3	2	4	2	2	31	4	0.1
20	0+ 1o 0+ 0o 0+ 2- 1+ 2o	7o	2	4	2	0	2	6	5	7	28	4	0.1
21	1+ 2+ 2o 2- 2- 2+ 3- 3-	17-	5	9	7	6	6	9	12	12	66	8	0.4
22	3- 2- 2+ 2o 2- 2+ 1+ 3+	17+	12	6	9	7	6	9	5	18	72	9	0.5
23	4+ 3o 3- 2+ 2+ 2- 2o 1+	20-	32	15	12	9	9	6	7	5	95	12	0.7
24	2o 2- 1+ 1+ 2- 2o 2+ 3-	15o	7	6	5	5	6	7	9	12	57	7	0.4
25	2- 2- 1o 2- 2- 2o 1+ 3o	14o	6	6	4	6	6	7	5	15	55	7	0.3
26	3+ 2- 3+ 3- 1+ 1+ 3- 2-	18o	18	6	18	12	5	5	12	6	82	10	0.6
27	2- 1- 1- 0o 0+ 1o 1- 1+	6+	6	3	3	0	2	4	3	5	26	3	0.1
28	1o 0+ 0+ 1o 2o 3o 2o 1+	11o	4	2	2	4	7	15	7	5	46	6	0.3
29	3- 1o 1+ 1- 2+ 2o 1- 1+	12o	12	4	5	3	9	7	3	5	48	6	0.3
30	3- 1- 1o 1o 1- 2- 1o 3o	12-	12	3	4	4	3	6	4	15	51	6	0.3
31	5o 5- 4+ 4o 3- 3- 5- 5o	33o	48	39	32	27	12	12	39	48	257	32	1.3

TABLE 4 PLANETARY THREE-HOUR-INDICES Kp, EQUIVALENT RANGES ap, DAILY AVERAGE RANGES Ap, AND PLANETARY DAILY CHARACTER FIGURES Cp.

	Kp	Sum	Sept. 1971 ap								Sum	Ap	Cp
1	4- 3o 3- 2o 2- 2- 2+ 2o	19o	22	15	12	7	6	6	9	7	84	10	0.6
2	0+ 0+ 0+ 0o 0o 0+ 0+ 1-	2+	2	2	2	0	0	2	2	3	13	2	0.0
3	2+ 1+ 2- 1+ 2o 1- 1o 0+	11-	9	5	6	5	7	3	4	2	41	5	0.2
4	0+ 0o 1- 1- 0+ 2+ 3+ 4+	12o	2	0	3	3	2	9	18	32	69	9	0.5
5	3o 3+ 3o 3- 3o 3o 3o 2+	23+	15	18	15	12	15	15	15	9	114	14	0.8
6	1o 1+ 3o 3- 4- 3o 1+ 3o	19o	4	5	15	12	22	15	5	15	93	12	0.7
7	4+ 4- 3o 3- 2o 3o 4- 4+	27-	32	22	15	12	7	15	22	32	157	20	1.0
8	3o 4- 3- 3+ 2- 1+ 2+ 2-	20-	15	22	12	18	6	5	9	6	93	12	0.7
9	2- 1- 1o 2+ 3o 2+ 1o 2+	14+	6	3	4	9	15	9	4	9	59	7	0.4
10	3- 2+ 2- 1o 1+ 0+ 0+ 1+	11o	12	9	6	4	5	2	2	5	45	6	0.3
11	1+ 2o 1+ 2o 2- 1+ 1+ 1+	12+	5	7	5	7	6	5	5	5	45	6	0.3
12	2o 3- 2+ 3o 0+ 1o 2- 2o	15o	7	12	9	15	2	4	6	7	62	8	0.4
13	5- 4- 4+ 2o 3- 2o 3- 2-	24-	39	22	32	7	12	7	12	6	137	17	0.9
14	2o 2+ 3- 2o 1- 2o 2+ 3o	17o	7	9	12	7	3	7	9	15	69	9	0.5
15	2+ 1+ 2o 3+ 3- 2- 2+ 1+	17o	9	5	7	18	12	6	9	5	71	9	0.5
16	3- 2o 3- 3o 2- 1+ 1+ 4o	19-	12	7	12	15	6	5	5	27	89	11	0.6
17	3- 2- 1+ 2o 2o 1o 3- 5o	18+	12	6	5	7	7	4	12	48	101	13	0.7
18	6o 7- 5+ 6- 3o 4- 3o 2o	35+	80	111	56	67	15	22	15	7	373	47	1.5
19	1+ 3- 3o 2- 1+ 3- 2o 2o	17-	5	12	15	6	5	12	7	7	69	9	0.5
20	3o 3+ 3- 4- 3+ 2+ 4o 2+	25-	15	18	12	22	18	9	27	9	130	16	0.9
21	2o 1o 0+ 0+ 1o 1+ 2+ 1+	10-	7	4	2	2	4	5	9	5	38	5	0.2
22	2- 2o 0+ 1- 1- 1- 1o 1+	8+	6	7	2	3	3	3	4	5	33	4	0.1
23	0o 0+ 1o 0+ 0+ 1+ 0o 0+	4-	0	2	4	2	2	5	0	2	17	2	0.0
24	0o 0o 0o 0o 1- 2- 4- 3+	9+	0	0	0	0	3	6	22	18	49	6	0.3
25	3+ 6- 5- 5- 4o 3o 2o 2o	29+	18	67	39	39	27	15	7	7	219	27	1.2
26	2+ 2- 1+ 1+ 1+ 3- 4+ 6+	21+	9	6	5	5	5	12	32	94	168	21	1.1
27	6+ 5+ 5- 5- 4o 4- 4- 2+	35-	94	56	39	39	27	22	22	9	308	38	1.4
28	3o 2+ 3o 3o 2o 1+ 2o 1+	18o	15	9	15	15	7	5	7	5	78	10	0.5
29	3- 1o 1+ 1- 1o 1o 2o 2o	12-	12	4	5	3	4	4	7	7	46	6	0.3
30	2- 2+ 3o 3+ 4o 5- 5- 4+	28o	6	9	15	18	27	39	39	32	185	23	1.1

	Kp	Sum	Oct. 1971 ap								Sum	Ap	Cp
1	5- 4+ 4o 3- 3- 3o 2+ 4-	27+	39	32	27	12	12	15	9	22	168	21	1.1
2	4o 4- 4- 4- 3o 3+ 3- 4o	28o	27	22	22	22	15	18	12	27	165	21	1.1
3	5o 4+ 3- 2+ 3+ 4- 2- 2+	25+	48	32	12	9	18	22	6	9	156	20	1.0
4	3+ 3- 2+ 3- 2+ 1+ 3o 4-	21+	18	12	9	12	9	5	15	22	102	13	0.7
5	4o 4- 3+ 2- 3o 2+ 2o 4-	24-	27	22	18	6	15	9	7	22	126	16	0.9
6	5- 3+ 1+ 3+ 3o 5o 1o 2+	24o	39	18	5	18	15	48	4	9	156	20	1.0
7	2- 2- 0+ 1+ 1o 2o 5o 5o	18o	6	6	2	5	4	7	48	48	126	16	0.9
8	4+ 5+ 3- 4- 4+ 3o 2+ 2o	28-	32	56	12	22	32	15	9	7	185	23	1.1
9	4+ 6o 5+ 4o 4+ 4o 4- 4-	35+	32	80	56	27	32	27	22	22	298	37	1.4
10	2+ 3o 2+ 2o 1- 2- 2o 2-	16-	9	15	9	7	3	6	7	6	62	8	0.4
11	2- 1+ 2+ 2- 4- 3+ 2+ 2+	19-	6	5	9	6	22	18	9	9	84	10	0.6
12	1+ 2- 0o 0+ 2o 4- 3- 3o	15-	5	6	0	2	7	22	12	15	69	9	0.5
13	3+ 3o 3o 3o 2- 4- 3o 2+	23o	18	15	15	15	6	22	15	9	115	14	0.8
14	3- 1+ 1+ 1o 3o 2- 2+ 3+	17-	12	5	5	4	15	6	9	18	74	9	0.5
15	3+ 2+ 1- 2o 2o 2- 1o 2o	15o	18	9	3	7	7	6	4	7	61	8	0.4
16	1+ 1+ 0+ 1o 2o 1o 2- 0o	9-	5	5	2	4	7	4	6	0	33	4	0.1
17	0+ 0+ 1+ 1o 1- 0+ 1o 1+	6+	2	2	5	4	3	2	4	5	27	3	0.1
18	1- 1o 0+ 0+ 0o 1- 1o 0o	4o	3	4	2	2	0	3	4	0	18	2	0.0
19	1o 0+ 1- 0o 0+ 0+ 0o 1o	4-	4	2	3	0	2	2	0	4	17	2	0.0
20	1- 0+ 1o 1o 2- 1o 2- 1+	9-	3	2	4	4	6	4	6	5	34	4	0.1
21	2- 1o 1- 1o 1- 1o 2- 2o	10-	6	4	3	4	3	4	6	7	37	5	0.2
22	1- 1o 4- 1+ 1o 3- 3o 2-	15o	3	4	22	5	4	12	15	6	71	9	0.5
23	0+ 0o 1- 1- 3- 2+ 2+ 2o	11o	2	0	3	3	12	9	9	7	45	6	0.3
24	2+ 3- 3- 3- 4+ 2o 3- 2-	21o	9	12	12	12	32	7	12	6	102	13	0.7
25	3- 2- 1+ 1- 2o 2- 2o 2-	14-	12	6	5	3	7	6	7	6	52	6	0.3
26	0o 0o 0o 0o 0o 1- 1- 2o	3+	0	0	0	0	0	3	3	7	13	2	0.0
27	2- 1o 1- 1- 0+ 1- 1- 1o	7-	6	4	3	3	2	3	3	4	28	4	0.1
28	0+ 2- 3- 3o 3- 3o 4+ 5-	22+	2	6	12	15	12	15	32	39	133	17	0.9
29	5o 5- 3+ 3+ 2+ 4- 4+ 4o	31-	48	39	18	18	9	22	32	27	213	27	1.2
30	4+ 4+ 4- 2o 2- 2+ 1- 0+	19+	32	32	22	7	6	9	3	2	113	14	0.8
31	2o 1+ 1+ 1- 1- 2o 1+ 1-	10o	7	5	5	3	3	7	5	3	38	5	0.2

TABLE 4 PLANETARY THREE-HOUR-INDICES Kp, EQUIVALENT RANGES ap, DAILY AVERAGE RANGES Ap, AND PLANETARY DAILY CHARACTER FIGURES Cp.

	Kp	Sum	Nov. 1971	ap								Sum	Ap	Cp
1	3- 3- 1+ 1o 1o 1o 1- 1o	11+	12	12	5	4	4	4	3	4	48	6	0.3
2	0+ 0o 0+ 1- 1- 1o 2- 1-	5+	2	0	2	3	3	4	6	3	23	3	0.1
3	1- 1o 1- 1- 1o 0+ 1- 0+	5+	3	4	3	3	4	2	3	2	24	3	0.1
4	2+ 2- 1+ 1o 1+ 2- 2- 1-	12-	9	6	5	4	5	6	6	3	44	6	0.2
5	1o 1o 1o 1+ 2- 1+ 1o 1+	10-	4	4	4	5	6	5	4	5	37	5	0.2
6	1+ 0o 1- 0+ 1- 0+ 1- 1o	5o	5	0	3	2	3	2	3	4	22	3	0.0
7	2- 3+ 2o 2- 3- 1+ 0o 0+	13o	6	18	7	6	12	5	0	2	56	7	0.4
8	2- 2- 2- 2- 2o 2+ 3+ 2+	17-	6	6	6	6	7	9	18	9	67	8	0.5
9	2- 1o 1- 1- 1- 1+ 1o 0+	7+	6	4	3	3	3	5	4	2	30	4	0.1
10	1+ 1+ 1- 0+ 1- 2- 2o 2o	10o	5	5	3	2	3	6	7	7	38	5	0.2
11	4o 4o 2o 2o 3- 2o 4+ 3-	24-	27	27	7	7	12	7	32	12	131	16	0.9
12	3+ 2o 3+ 1o 1o 2- 2+ 2+	17o	18	7	18	4	4	6	9	9	75	9	0.5
13	1- 1- 1+ 1- 1- 1o 0+ 0+	6-	3	3	5	3	3	4	2	2	25	3	0.1
14	0+ 0o 0o 0o 0o 0o 0+ 1+	2o	2	0	0	0	0	0	2	5	9	1	0.0
15	1+ 0+ 0o 0+ 0o 0o 1- 1-	3+	5	2	0	2	0	0	3	3	15	2	0.0
16	1o 0+ 0+ 1- 0o 0+ 0+ 0+	3+	4	2	2	3	0	2	2	2	17	2	0.0
17	0o 0o 0o 0o 0o 0o 1o 1-	2-	0	0	0	0	0	0	4	3	7	1	0.0
18	3- 3+ 2- 1+ 2- 1+ 0+ 1o	13+	12	18	6	5	6	5	2	4	58	7	0.4
19	1o 2- 1o 1- 3- 3o 1+ 2-	13o	4	6	4	3	12	15	5	6	55	7	0.3
20	1- 2- 1+ 2+ 1- 2o 2+ 2o	13o	3	6	5	9	3	7	9	7	49	6	0.3
21	2- 2- 3- 3- 3o 2- 3o 3+	20-	6	6	12	12	15	6	15	18	90	11	0.6
22	4+ 4o 5- 4o 3o 3+ 4+ 5+	33o	32	27	39	27	15	18	32	56	246	31	1.3
23	6- 5o 6o 3+ 4o 4+ 4+ 5+	38o	67	48	80	18	27	32	32	56	360	45	1.5
24	5+ 5o 4+ 3+ 5o 4o 3+ 5-	35o	56	48	32	18	48	27	18	39	286	36	1.4
25	5- 6o 6- 5o 4o 4+ 4o 4o	38-	39	80	67	48	27	32	27	27	347	43	1.5
26	4- 4o 4+ 4o 3o 3- 3o 0+	25o	22	27	32	27	15	12	15	2	152	19	1.0
27	2o 2+ 1+ 2- 2- 3- 2o 2+	16o	7	9	5	6	6	12	7	9	61	8	0.4
28	3- 2o 2+ 3+ 2+ 1+ 3o 1+	18+	12	7	9	18	9	5	15	5	80	10	0.6
29	2o 1+ 1- 1- 1+ 2- 2o 1+	11o	7	5	3	3	5	6	7	5	41	5	0.2
30	2- 1+ 1o 1+ 2- 0+ 1- 2o	10o	6	5	4	5	6	2	3	7	38	5	0.2

	Kp	Sum	Dec. 1971	ap								Sum	Ap	Cp
1	2- 2- 2- 2- 1- 2- 2o 2+	13+	6	6	6	6	3	6	7	9	49	6	0.3
2	1- 1o 0o 1- 2o 3- 1o 2-	10-	3	4	0	3	7	12	4	6	39	5	0.2
3	2- 2o 4- 3- 2+ 3+ 3+ 1o	20o	6	7	22	12	9	18	18	4	96	12	0.7
4	2o 3- 2- 2o 1- 2o 2- 3-	15+	7	12	6	7	3	7	6	12	60	8	0.4
5	2- 1o 2- 1+ 2o 1- 0+ 1o	10-	6	4	6	5	7	3	2	4	37	5	0.2
6	1+ 2- 0+ 0+ 0o 0o 1- 1-	5o	5	6	2	2	0	0	3	3	21	3	0.0
7	0o 1- 0o 0o 0o 1- 1- 0o	2o	0	3	0	0	0	3	3	0	9	1	0.0
8	2- 0+ 0+ 1- 1o 1o 0+ 1-	6o	6	2	2	3	4	4	2	3	26	3	0.1
9	2- 3- 1o 2+ 1- 2o 2+ 2+	15o	6	12	4	9	3	7	9	9	59	7	0.4
10	2- 0o 0o 0o 1+ 1+ 1- 0+	5+	6	0	0	0	5	5	3	2	21	3	0.0
11	1- 0o 0o 1o 1o 3- 2+ 3-	10+	3	0	0	4	4	12	9	12	44	6	0.2
12	2- 1o 1- 1- 0o 3- 3o 4o	14-	6	4	3	3	0	12	15	27	70	9	0.5
13	3+ 2+ 3o 3- 2+ 3- 3- 3+	22+	18	9	15	12	9	12	12	18	105	13	0.8
14	1- 1o 1- 1+ 1o 0+ 0o 0+	5+	3	4	3	5	4	2	0	2	23	3	0.1
15	2o 1- 1- 1- 1- 1o 1o 0o	7-	7	3	3	3	3	4	4	0	27	3	0.1
16	0+ 0+ 0o 1o 0+ 1- 3+ 4+	10+	2	2	0	4	2	3	18	32	63	8	0.4
17	5+ 5+ 4+ 3+ 4+ 7o 7+ 5+	42+	56	56	32	18	32	132	154	56	536	67	1.7
18	4- 4o 3o 5o 4+ 3- 3- 2o	27+	22	27	15	48	32	12	12	7	175	22	1.1
19	1- 1+ 3+ 4- 2+ 3o 2+ 1o	18-	3	5	18	22	9	15	9	4	85	11	0.6
20	0+ 0o 0o 0o 0+ 1- 2o 3-	6o	2	0	0	0	2	3	7	12	26	3	0.1
21	1+ 1o 1o 1o 2+ 2o 4o 4-	16+	5	4	4	4	9	7	27	22	82	10	0.6
22	3o 3+ 3+ 3o 4o 3+ 4- 3+	27o	15	18	18	15	27	18	22	18	151	19	1.0
23	3+ 3+ 2+ 2o 3o 3- 3+ 1-	21-	18	18	9	7	15	12	18	3	100	12	0.7
24	2+ 2+ 2+ 2o 2- 1- 2- 1o	14o	9	9	9	7	6	3	6	4	53	7	0.3
25	2- 2+ 2- 1o 1+ 2- 1o 2+	13o	6	9	6	4	5	6	4	9	49	6	0.3
26	4- 4- 3- 1+ 1o 2o 2o 3o	19+	22	22	12	5	4	7	7	15	94	12	0.7
27	2o 2+ 2+ 1o 0o 0o 0o 0o	8-	7	9	9	4	0	0	0	0	29	4	0.1
28	0o 1o 1- 0+ 0+ 1o 2- 2o	7o	0	4	3	2	2	4	6	7	28	4	0.1
29	2- 3o 3o 4- 3+ 3- 2o 4-	23o	6	15	15	22	18	12	7	22	117	15	0.8
30	4+ 4- 4- 3+ 3- 2+ 2o 1+	23+	32	22	22	18	12	9	7	5	127	16	0.9
31	3- 3- 1+ 1- 1- 2- 2- 3-	14o	12	12	5	3	3	6	6	12	59	7	0.4

TABLE 5 FREQUENCIES OF Kp INDICES, 1971

Kp	Jan	Feb	Mch	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0o	19	5	10	5	6	4	7	7	9	12	18	25
+	21	15	20	17	21	21	18	16	18	16	23	16
-	14	16	20	15	18	30	30	21	11	23	31	31
1o	13	16	24	8	29	27	18	27	14	22	24	27
+	17	21	21	23	26	38	46	35	29	17	26	11
-	24	22	19	22	21	27	30	35	18	25	27	25
2o	26	20	25	27	17	17	23	21	28	19	16	20
+	10	26	22	22	26	19	29	30	21	21	11	20
-	30	21	17	16	18	8	14	19	20	18	12	21
3o	17	16	14	20	14	9	15	9	25	16	7	10
+	8	16	11	13	12	9	5	7	9	12	11	16
-	11	9	15	13	8	7	8	4	11	17	1	11
4o	15	6	10	10	3	11	.	5	5	7	11	4
+	6	3	9	9	5	5	1	6	6	11	8	5
-	8	2	4	7	7	2	2	3	7	4	3	.
5o	5	2	4	3	4	4	.	2	1	5	4	1
+	2	4	1	2	4	2	1	1	2	2	3	3
-	.	1	1	3	2		1		2	.	2	.
6o	2	2	1	2	3				1	1	2	.
+		1		1	3				2			.
-				1	1				1			.
7o				.								1
+				.								1
-				1								
8o												
+												
9- o												
	248	224	248	240	248	240	248	248	240	248	240	248

TABLE 6 MONTHLY AVERAGES OF Ap (unit 2 gammas) AND Cp, 1971

	Jan	Feb	Mch	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Ap	12	12	11	15	13	9	8	9	13	12	11	10	11
Cp	0.59	0.57	0.55	0.69	0.55	0.43	0.39	0.44	0.61	0.58	0.44	0.45	0.52

TABLE 7 LIST OF MAGNETIC STORMS, 1971

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

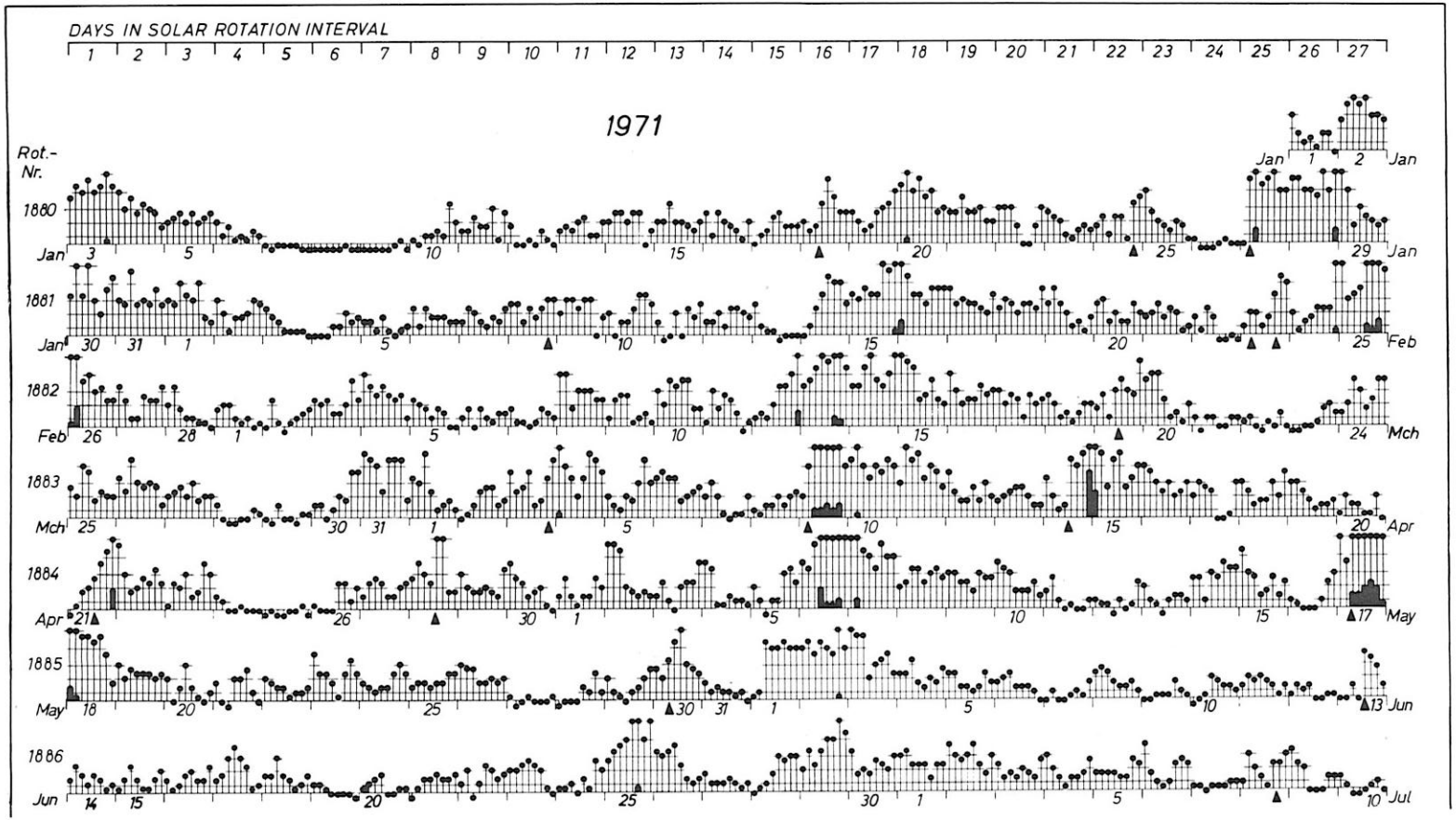
Beginning	s.c. d. GMT	Duration Eighths	Number of Eighths with Kp= 7- 7o 7+	8- 8o 8+	9- 9o
Apr. 14 E7	14 12.43	4	1 . .	1 . .	. .
Dec. 17 E6	17 14.18	3	. 1 1	. . .	. .

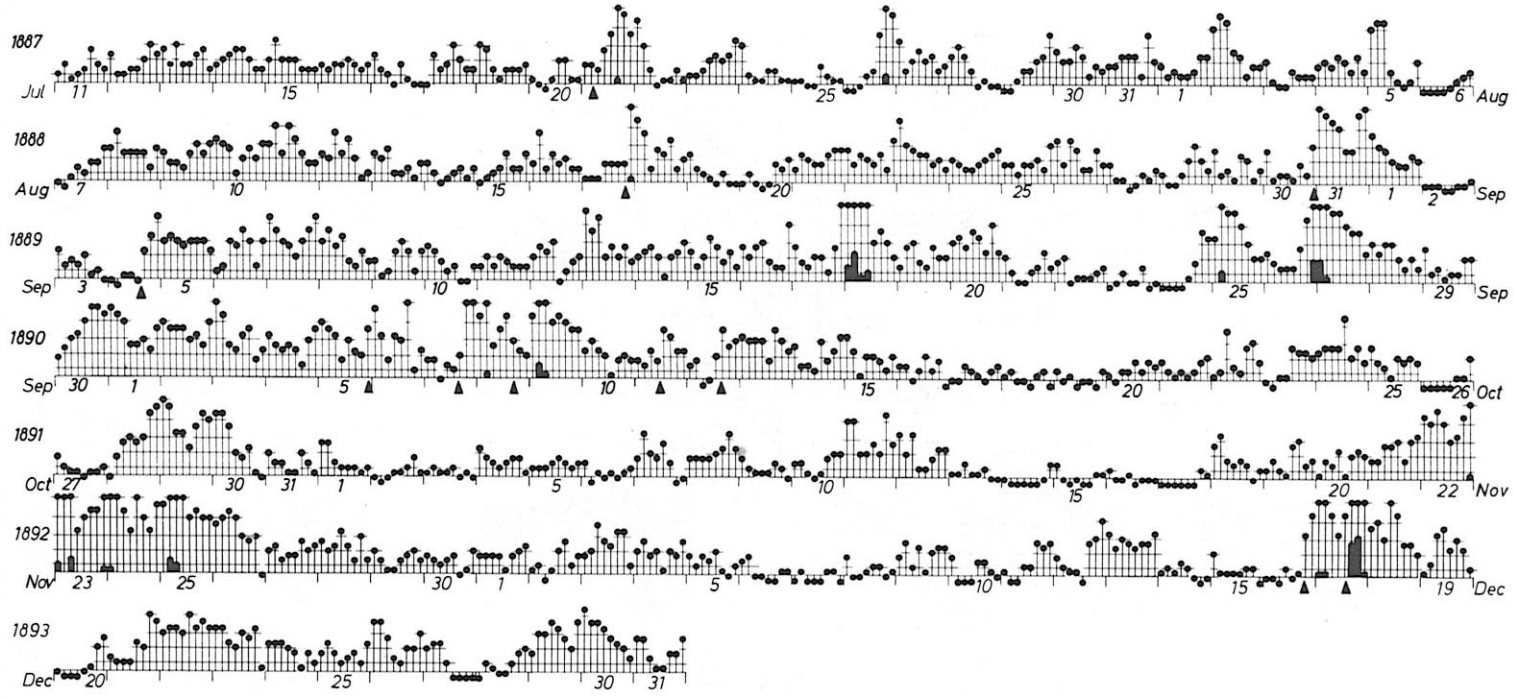
TABLE 8 VERY QUIET INTERVALS, 1971

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

First. . . . . last Eighth		Duration Eighths
71 Jan. 06 E4	10 E6	35
12 E2	13 E1	8
25 E8	27 E1	10
Feb. 03 E3	04 E5	11
13 E2	14 E2	9
Mch. 21 E1	23 E5	21
28 E1	30 E4	20
Apr. 24 E1	26 E4	20
May 11 E3	12 E7	13
27 E1	28 E6	14
31 E2	Jun. 01 E2	9
Jun. 06 E4	07 E7	12
11 E6	13 E4	15
19 E1	20 E3	11
20 E5	21 E4	8
23 E7	24 E6	8
27 E2	28 E3	10
Jul. 07 E1	08 E1	9
09 E4	11 E1	14
22 E3	23 E3	9
24 E2	25 E4	11

First. . . . . last Eighth		Duration Eighths
25 E6	26 E5	8
28 E4	29 E5	10
Aug. 06 E1	07 E5	13
14 E2	15 E4	11
19 E2	20 E5	12
27 E2	28 E4	11
Sep. 02 E1	02 E8	8
03 E6	04 E5	8
22 E3	24 E5	19
Oct. 16 E8	20 E4	29
27 E2	28 E1	8
Nov. 01 E3	02 E6	12
02 E8	03 E8	9
09 E2	10 E5	12
13 E1	17 E8	40
Dec. 06 E3	07 E8	14
10 E2	11 E5	12
14 E1	14 E8	8
15 E2	16 E6	13
27 'E4	28 E6	11


DAYS IN SOLAR ROTATION INTERVAL
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
1971
Rot.-Nr.
1880
Jan 3 5 10 15 20 25 29 Jan
Jan 1 2 Jan
1881
Jan 30 31 1 5 10 15 20 25 Feb
1882
Feb 26 28 1 5 10 15 20 24 Mch
1883
Mch 25 30 31 1 5 10 15 20 Apr
1884
Apr 21 26 30 1 5 10 15 17 May
1885
May 18 20 25 30 31 1 5 10 13 Jun
1886
Jun 14 15 20 25 30 1 5 10 Jul


1887
Jul 11 15 20 25 30 31 1 5 6 Aug
1888
Aug 7 10 15 20 25 30 31 1 2 Sep
1889
Sep 3 5 10 15 20 25 29 Sep
1890
Sep 30 1 5 10 15 20 25 26 Oct
1891
Oct 27 30 31 1 5 10 15 20 22 Nov
1892
Nov 23 25 30 1 5 10 15 19 Dec
1893
Dec 20 25 30 31
KEY
0 1 2 3 4 5 6 7 8 9
0 + - 0 + - 0 + - 0 + - 0 + - 0 + - 0 + - 0 + - 0 + - 0
▲ = sudden commencement
Kp (after Bartels)
1971

JAN. 1971

	3 Kn								σn		an						An
1	8	4	2	5	2	7	6	1	3123	1553	21	8	5	11	5	18	16	3	11
2	9	9	11	11	12	10	8	8	1435	5333	27	29	44	43	59	39	21	24	36
3	9	11	11	13	12	13	14	12	2333	3532	30	42	48	64	51	69	82	56	55
4	9	8	9	7	9	8	8	5	3322	3334	31	23	28	19	28	26	26	11	24
5	5	6	8	6	9	7	8	8	2533	5372	12	16	25	15	32	19	26	25	21
6	5	2	4	1	5	4	2	2	4242	4343	11	5	8	3	11	9	5	4	7
7	0	0	0	0	1	0	0	0	1111	3101	0	0	1	1	3	0	0	0	1
8	0	0	0	0	0	1	0	0	1111	1201	0	1	1	0	0	2	0	1	1
9	0	0	0	0	0	1	2	0	1110	1321	1	1	1	0	1	3	5	0	2
10	1	1	3	4	4	4	10	5	3222	3332	3	3	6	9	10	10	38	13	12
11	3	3	7	4	5	9	3	6	1342	2533	7	6	19	8	12	33	6	16	13
12	2	1	1	2	1	6	1	1	4233	2422	4	2	2	5	3	15	2	2	4
13	2	3	5	5	8	4	4	7	2332	2312	5	6	11	13	25	8	8	18	12
14	5	6	6	6	8	8	1	4	2341	2222	13	14	15	16	22	22	2	9	14
15	5	5	8	8	6	4	4	7	4533	3345	11	11	26	23	16	10	9	17	15
16	7	2	9	7	5	3	2	7	3345	2224	20	4	27	20	12	7	5	19	14
17	1	2	4	8	9	6	6	4	2243	3355	2	5	9	21	27	14	16	9	13
18	3	2	6	9	12	11	8	7	5242	3232	7	4	15	33	56	42	25	20	25
19	7	4	4	4	8	9	10	12	4333	4534	19	9	9	10	22	32	40	52	24
20	11	11	11	13	11	12	8	9	2224	5342	46	49	43	67	41	51	23	28	44
21	7	7	11	8	7	8	6	5	3334	2412	19	20	41	26	18	23	14	13	22
22	7	7	9	3	0	2	5	9	3553	1225	17	17	27	6	1	5	11	30	14
23	6	4	4	2	2	5	6	4	3332	3343	15	10	9	4	4	13	16	9	10
24	3	4	4	8	8	3	10	11	3534	3454	6	9	8	23	25	7	39	41	20
25	10	7	5	6	5	7	7	2	1322	3435	36	18	13	15	11	19	17	4	17
26	1	1	0	0	0	1	0	0	2210	1210	3	2	0	0	1	2	0	0	1
27	1	11	14	12	13	13	13	11	1233	3524	2	47	76	51	67	69	61	41	52
28	11	12	10	12	10	15	14	16	3256	3897	49	54	36	54	40	91	71	108	63
29	15	10	5	9	8	8	7	6	3435	4454	91	34	13	31	25	22	18	14	31
30	9	13	7	14	10	8	12	13	1132	3261	28	61	18	76	35	21	56	61	45
31	8	5	13	7	10	8	11	7	3351	5342	23	12	62	17	40	25	43	19	30
																			21.1

JAN. 1971

	3 Ks								σs		as						As
1	7	6	6	4	4	6	6	4	4033	3325	20	15	14	10	10	14	16	10	14
2	10	9	8	8	10	8	8	10	3113	1134	38	32	26	24	37	23	24	35	30
3	8	10	10	12	12	11	13	11	1411	1432	26	37	34	53	57	49	64	47	46
4	9	8	9	9	9	7	7	6	0243	2335	29	21	29	28	32	20	19	16	24
5	6	5	7	6	8	7	5	8	1412	2413	16	12	17	15	21	19	13	24	17
6	4	4	5	3	4	4	4	2	3113	1442	10	8	12	6	8	9	9	4	8
7	0	2	1	1	3	0	1	1	1234	1033	1	4	2	3	6	0	2	2	3
8	1	0	0	2	2	0	1	1	3014	2133	3	0	1	5	5	1	2	3	3
9	1	1	0	0	1	2	2	2	3311	3222	3	3	1	1	3	4	4	4	3
10	2	3	4	7	7	6	11	9	2124	4626	4	6	10	18	18	16	43	27	18
11	5	5	8	5	5	8	4	7	1115	5343	12	12	26	12	12	26	9	20	16
12	4	2	2	3	1	4	3	3	3312	2251	10	4	5	7	3	10	7	6	7
13	5	5	7	9	8	4	4	7	1113	1234	12	13	18	28	26	10	9	20	17
14	6	7	4	7	7	5	2	7	5424	4224	16	17	10	17	17	12	5	18	14
15	5	5	7	7	7	5	6	6	1234	4362	12	11	20	20	17	12	16	15	15
16	7	2	7	7	7	4	6	7	4331	4364	17	5	20	17	18	9	14	18	15
17	3	4	6	8	6	4	5	5	2422	2342	7	10	15	25	16	9	11	11	13
18	4	4	6	11	13	11	10	9	3303	1141	9	10	15	46	62	45	38	29	32
19	8	7	7	5	5	8	8	13	3311	1433	21	19	17	13	13	26	24	66	25
20	13	13	11	11	11	11	6	8	1121	2222	65	65	41	49	41	41	15	25	43
21	6	6	8	8	7	6	4	7	2022	4235	16	15	22	22	20	16	9	17	17
22	6	6	7	5	2	3	6	8	1234	6302	16	14	20	11	4	6	15	25	14
23	6	5	6	3	4	6	5	4	0212	4023	15	11	16	7	9	15	12	9	12
24	5	5	2	8	8	3	11	12	1122	1155	12	13	4	21	23	7	41	54	22
25	12	6	8	7	5	7	7	1	5223	4332	59	15	22	20	11	19	20	3	21
26	4	1	0	0	0	0	1	2	4211	0031	8	2	1	1	0	0	2	5	2
27	3	11	15	11	15	14	10	11	2324	5455	6	50	92	41	96	79	40	46	56
28	10	9	9	12	11	14	12	16	4252	2457	38	29	30	56	41	85	56	104	55
29	12	9	7	10	6	8	4	6	1211	5215	57	31	17	37	16	22	8	16	26
30	10	14	8	11	10	7	10	11	3311	3431	40	71	26	49	36	20	36	45	40
31	8	6	9	8	9	8	11	8	3204	2341	21	15	29	23	31	21	42	23	26
																			21.1

JAN. 1971

	3 Km								Σ Km	am							Am	Am 2
1	7	5	4	4	3	6	6	3	12.7	20	11	9	10	7	16	16	7	12	16
2	9	9	10	10	11	9	8	9	25.0	32	30	35	34	48	31	23	29	33	30
3	9	10	11	12	12	12	14	12	30.7	28	39	41	58	54	59	73	52	51	40
4	9	8	9	8	9	8	8	5	21.3	30	22	29	23	30	23	23	13	24	31
5	6	6	8	6	8	7	7	8	18.7	14	14	21	15	26	19	20	25	19	17
6	5	3	4	2	4	4	3	2	9.0	11	6	10	4	9	9	7	4	8	10
7	0	1	1	1	2	0	0	0	1.7	0	2	2	2	4	0	1	1	2	3
8	1	0	0	1	1	0	0	1	1.3	2	0	1	3	3	1	1	2	2	2
9	1	1	0	0	1	1	2	1	2.3	2	2	1	0	2	3	4	2	2	3
10	1	2	4	6	6	5	11	7	14.0	3	4	8	14	14	13	41	20	15	11
11	4	4	8	4	5	9	3	7	14.7	9	9	23	10	12	30	7	18	15	14
12	3	1	2	3	1	5	2	2	6.3	7	3	4	6	3	13	4	4	6	10
13	4	4	6	8	8	4	4	7	15.0	8	9	15	21	26	9	9	19	15	12
14	6	6	5	6	7	7	1	5	14.3	14	15	13	16	20	17	3	13	14	15
15	5	5	8	8	7	5	5	6	16.3	11	11	23	21	17	11	12	16	15	15
16	7	2	8	7	6	4	4	7	15.0	18	4	24	19	15	8	10	19	15	14
17	2	3	5	8	8	5	5	4	13.3	4	7	12	23	21	12	13	10	13	14
18	4	3	6	10	12	11	9	8	21.0	8	7	15	39	59	44	31	24	28	21
19	7	6	5	5	7	9	9	12	20.0	20	14	13	12	17	29	32	59	25	35
20	12	12	11	12	11	11	7	9	28.3	55	57	42	58	41	46	19	27	43	36
21	7	7	9	8	7	7	5	6	18.7	17	17	32	24	19	19	12	15	19	22
22	6	6	8	4	1	2	5	9	13.7	16	16	24	9	3	5	13	28	14	14
23	6	5	5	3	3	6	6	4	12.7	15	11	12	6	6	14	14	9	11	12
24	4	5	3	8	8	3	10	11	17.3	9	11	6	22	24	7	40	47	21	19
25	11	7	7	7	5	7	7	2	17.7	47	17	18	18	11	19	18	4	19	17
26	2	1	0	0	0	0	0	1	1.3	5	2	1	0	0	1	1	2	2	15
27	2	11	14	11	14	14	11	11	29.3	4	49	84	46	81	74	50	44	54	38
28	11	11	9	12	10	15	13	16	32.3	43	42	33	55	40	88	63	106	59	55
29	14	9	6	10	7	8	5	6	21.7	74	32	15	34	20	22	13	15	28	44
30	10	13	8	13	10	7	11	12	28.0	34	66	22	63	36	20	46	53	43	32
31	8	6	11	7	10	8	11	8	23.0	22	14	45	20	36	23	42	21	28	31
																		21.1	

FEB. 1971

	3 Km								Σ Km	am							Am	Am 2
1	8	8	10	9	9	11	4	5	21.3	24	23	37	30	28	48	10	11	26	23
2	8	4	1	4	5	5	8	7	14.0	21	10	2	9	12	12	21	18	13	15
3	5	3	2	3	3	2	2	1	7.0	13	7	5	7	7	5	4	3	6	8
4	0	1	1	4	3	6	5	6	8.7	0	2	2	8	7	16	12	16	8	8
5	4	4	2	7	2	0	2	2	7.7	8	8	5	18	4	0	4	5	7	9
6	5	2	6	4	4	6	6	4	12.3	12	4	15	9	10	15	14	8	11	9
7	4	5	7	5	4	4	5	7	13.7	9	11	17	12	8	10	11	17	12	13
8	8	6	4	7	6	7	8	8	18.0	23	14	9	18	14	18	24	25	18	17
9	6	8	8	7	9	7	2	5	17.3	15	22	24	17	31	18	4	11	18	16
10	5	2	4	4	8	9	9	8	16.3	11	4	10	9	22	30	32	21	17	14
11	2	0	1	5	1	7	6	8	10.0	5	0	3	12	3	17	15	21	10	14
12	4	3	5	4	7	7	6	4	13.3	8	7	11	9	18	20	16	9	12	11
13	7	3	1	1	0	1	0	1	4.7	17	6	3	2	1	2	1	3	4	10
14	3	3	7	10	12	11	10	8	21.3	6	6	20	37	55	49	37	24	29	21
15	8	7	8	9	9	14	13	14	27.3	24	20	26	29	32	71	66	72	43	42
16	15	9	9	8	7	10	11	10	26.3	89	33	29	22	20	36	44	35	39	40
17	10	7	8	8	7	7	6	9	20.7	35	18	21	23	19	18	14	28	22	23
18	6	7	6	6	7	7	7	10	18.7	14	19	16	14	20	20	20	38	20	20
19	7	8	8	5	2	3	1	4	12.7	17	24	24	12	5	7	2	10	13	16
20	8	7	4	5	3	5	9	6	15.7	21	18	8	11	6	11	30	15	15	12
21	4	4	7	6	8	6	2	2	13.0	10	10	19	15	24	14	4	4	13	12
22	3	2	7	3	0	0	0	0	5.0	6	5	18	6	0	0	0	0	4	8
23	2	6	6	4	5	9	12	11	18.3	4	14	15	8	11	29	54	43	22	14
24	6	2	4	4	5	6	6	13	15.3	16	4	9	10	12	15	16	67	19	27
25	12	7	8	10	16	14	15	13	31.7	60	19	26	37	109	79	100	67	62	54
26	14	16	8	10	9	9	7	7	26.7	86	113	25	37	31	33	19	17	45	48
27	9	5	2	3	8	6	6	9	16.0	29	11	5	7	24	16	15	29	17	18
28	5	8	3	2	3	2	1	1	8.3	12	26	7	5	7	4	2	3	8	12
																		19.0	

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	3 Kn								σn				an								An
1	8	7	10	9	9	12	4	5	2242	1522	24	17	35	33	31	60	10	11	28
2	8	4	1	3	6	6	8	8	4322	2443	22	8	2	7	16	16	26	21	15
3	6	3	3	2	3	3	2	1	2132	4522	14	6	6	5	7	6	5	2	6
4	0	0	0	4	4	7	5	5	0215	1542	0	1	1	9	8	20	11	12	8
5	3	3	2	6	2	0	2	3	3323	2024	6	6	4	15	5	0	4	6	6
6	4	2	6	4	4	6	6	4	3344	2423	10	4	16	9	10	16	15	9	11
7	3	5	5	5	4	4	5	7	4233	2223	7	11	12	11	10	10	12	20	12
8	8	6	4	6	6	7	8	8	2711	2324	22	15	8	16	15	19	24	25	18
9	6	7	9	7	9	8	2	4	1442	1322	14	20	27	18	31	21	4	10	18
10	4	0	4	4	9	10	10	8	3222	4323	10	1	10	8	30	40	36	24	20
11	2	0	1	5	1	7	7	8	3122	2245	5	0	3	12	3	20	17	21	10
12	3	2	4	3	8	8	6	4	2252	2533	7	5	10	6	21	24	16	9	12
13	7	2	2	0	0	1	0	1	5232	1312	17	5	5	1	1	3	0	2	4
14	1	3	7	10	12	12	11	8	3322	1542	3	6	18	34	58	54	43	26	30
15	8	7	9	10	10	14	13	14	5212	3232	24	19	29	34	35	81	69	74	46
16	14	10	9	8	7	10	11	11	2143	3254	85	35	32	25	20	40	49	43	41
17	9	6	8	8	8	7	6	9	4323	3331	32	15	21	25	25	20	14	30	23
18	5	7	6	6	8	8	7	10	3213	3653	12	18	16	14	23	24	19	40	21
19	7	9	8	5	2	4	1	5	3222	4422	18	28	22	13	5	9	3	12	14
20	8	8	3	5	2	5	9	7	5522	3374	25	24	7	11	5	12	31	18	17
21	4	4	8	5	8	7	2	2	2455	5434	9	8	23	13	24	19	5	4	13
22	3	2	8	3	0	0	0	0	4223	0010	6	4	21	7	0	0	1	0	5
23	2	5	5	3	5	9	12	11	3232	3354	4	13	13	7	11	31	55	43	22
24	6	2	4	4	6	6	7	14	2222	2125	14	4	10	8	14	16	19	77	20
25	12	7	9	10	16	15	16	13	4353	2565	58	19	31	37	115	91	107	67	66
26	14	17	9	10	10	10	8	7	6613	4342	83	137	29	40	34	39	23	18	50
27	9	5	3	3	9	8	7	10	4232	2322	27	13	6	6	28	22	18	34	19
28	5	9	4	2	4	1	0	0	1242	1312	13	28	9	5	8	3	1	1	9
																			20.1

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	3 Ks								σs				as								As
1	8	9	10	8	8	10	4	5	3051	2131	25	29	38	26	25	37	9	12	25
2	7	5	0	4	4	4	6	6	3313	1120	20	12	1	10	8	8	16	15	11
3	5	4	1	4	3	2	2	2	2126	2223	12	8	3	9	7	5	4	5	7
4	0	1	2	3	3	5	5	7	1220	1313	1	3	4	6	6	13	13	20	8
5	4	5	2	7	1	0	2	2	3244	3042	10	11	5	20	2	0	4	4	7
6	6	2	6	4	4	6	5	3	0303	2022	15	4	15	9	10	15	12	7	11
7	4	5	8	5	3	4	4	6	3233	2333	10	11	21	12	7	9	10	14	12
8	8	5	4	7	6	6	8	8	3124	1222	24	13	10	20	14	16	25	25	18
9	6	8	8	7	9	6	2	5	1125	2521	16	23	21	17	31	16	4	12	18
10	5	3	4	4	6	7	9	7	1134	2311	12	6	10	10	15	20	29	18	15
11	3	0	1	5	1	5	5	8	1022	3123	6	0	3	12	2	13	12	21	9
12	4	4	5	5	6	6	6	4	3313	0153	9	9	12	12	15	16	15	9	12
13	7	4	0	1	0	0	1	2	4113	1133	18	8	1	3	1	1	2	5	5
14	4	3	8	10	12	11	9	8	3012	1323	9	6	23	40	53	44	32	21	29
15	8	7	8	8	9	13	13	14	3313	1133	24	20	23	24	29	62	64	71	40
16	15	9	8	7	7	9	10	8	2111	3231	93	32	26	18	20	32	39	26	36
17	10	8	7	8	6	6	5	8	4332	4111	38	21	20	21	14	16	13	26	21
18	6	8	6	5	7	6	8	10	2321	5223	16	21	16	13	17	16	21	36	20
19	6	8	8	5	2	2	0	4	2313	2115	16	21	26	12	4	5	1	8	12
20	7	5	4	5	4	5	9	5	4233	4225	18	12	9	12	8	11	29	12	14
21	4	5	6	7	8	4	1	1	3121	4234	10	12	14	17	24	10	3	3	12
22	3	3	6	2	0	0	0	0	3151	0000	6	6	15	5	0	0	0	0	4
23	2	6	7	4	4	8	12	11	2213	2152	5	14	17	9	10	26	52	43	22
24	7	2	4	5	5	5	5	12	5113	2122	18	5	9	12	11	13	12	57	17
25	13	7	8	10	15	13	15	13	4134	6675	61	18	21	38	102	67	94	68	59
26	15	15	7	10	9	8	6	6	6631	4452	89	89	20	34	29	26	16	16	40
27	9	4	2	4	7	5	5	8	6124	3223	31	9	4	8	20	11	12	24	15
28	5	8	3	3	3	2	1	2	2311	2232	11	24	6	6	7	4	2	4	8
																			18.1

MAR. 1971

	3 Kn								σn		an						An
1	3	4	5	4	2	4	2	2	3455	2222	7	8	12	10	5	9	4	4	7
2	1	6	2	0	3	2	4	4	3131	3233	3	16	5	0	6	5	10	10	7
3	4	4	7	4	5	7	10	8	3252	3452	10	9	18	9	11	18	39	22	17
4	10	9	8	9	9	8	8	3	3331	2343	36	28	22	31	33	21	24	6	25
5	7	5	5	3	6	5	1	1	3433	4422	18	12	12	6	14	12	2	3	10
6	2	4	1	4	3	2	4	4	4532	1244	5	8	3	10	7	5	8	10	7
7	4	1	2	1	4	5	4	4	4222	4232	9	2	5	3	9	13	9	8	7
8	11	11	5	9	9	9	8	8	4433	4223	43	41	13	28	30	29	25	21	29
9	3	6	7	7	4	3	5	4	1442	2142	7	15	17	19	8	6	11	8	11
10	8	5	10	9	11	11	6	5	2452	2312	22	12	40	28	43	42	16	11	27
11	2	8	5	7	7	5	0	3	3232	2313	4	25	11	19	19	12	1	6	12
12	2	4	2	7	11	10	11	15	2224	5426	4	10	5	17	50	34	48	100	34
13	9	8	12	13	13	14	14	11	3264	3553	28	26	55	65	63	84	75	48	56
14	9	10	12	12	10	9	11	12	1544	3344	27	38	52	59	34	27	45	56	42
15	12	12	12	6	8	10	6	6	4131	3211	54	54	52	16	24	36	16	14	33
16	10	7	6	9	8	9	8	8	5615	4453	40	17	15	31	23	28	23	26	25
17	8	5	8	7	5	9	6	5	5222	6644	23	11	23	20	11	29	16	13	18
18	8	5	3	5	1	4	6	6	3242	2553	21	12	7	11	2	10	15	14	12
19	3	7	3	8	10	9	8	12	4412	4425	7	19	7	22	35	32	26	51	25
20	10	10	10	7	3	4	3	6	5653	1324	34	39	38	20	6	8	6	14	21
21	2	0	4	4	0	0	3	4	2113	1142	4	1	8	10	1	0	6	9	5
22	1	2	1	0	2	1	4	2	2331	3353	2	4	3	1	5	2	9	5	4
23	0	0	1	2	3	5	7	4	1123	3222	0	1	3	4	6	13	19	8	7
24	5	6	10	8	5	7	11	10	3422	3343	11	14	38	26	13	18	44	39	25
25	7	4	11	9	4	7	7	6	3343	3254	20	9	49	29	10	20	17	15	21
26	8	6	11	9	8	8	7	4	4164	2543	24	16	47	32	23	26	18	9	24
27	5	6	7	6	9	4	6	6	5444	3142	11	15	19	14	29	9	16	15	16
28	3	1	0	0	0	1	3	3	3211	1133	6	3	1	0	0	2	7	7	3
29	1	0	5	2	1	0	1	2	2263	3023	2	1	12	4	3	0	3	4	4
30	3	3	1	4	6	5	11	10	4433	2236	6	6	3	10	14	11	43	38	16
31	11	11	11	8	11	12	13	5	4544	4763	42	50	49	21	46	58	63	11	43
																			19.1

MAR. 1971

	3 Ks								σs		as						As
1	3	4	5	3	3	3	2	2	1321	1031	6	10	11	6	6	6	4	5	7
2	2	8	3	0	1	2	3	6	2210	2233	4	22	6	0	3	4	6	14	7
3	5	4	4	5	4	4	9	8	2134	3321	12	8	10	11	9	9	29	26	14
4	12	8	6	8	7	7	7	2	5221	1451	56	22	16	26	18	17	20	5	23
5	7	4	6	4	5	4	0	0	5354	3111	17	9	16	9	13	9	1	1	9
6	2	3	0	4	3	2	4	4	1513	1233	5	7	1	10	6	5	9	9	7
7	5	0	2	1	3	4	4	4	6123	5355	12	1	4	2	7	10	9	8	7
8	9	10	5	8	9	7	8	7	5411	2533	33	34	13	23	29	20	21	20	24
9	3	7	6	6	3	2	3	4	2411	2213	7	18	16	16	7	5	6	10	11
10	7	4	9	9	9	9	5	4	3303	4234	20	10	29	28	29	32	12	9	21
11	4	8	4	6	7	4	0	1	1232	1202	8	22	9	16	17	8	0	3	10
12	3	4	3	6	11	9	11	17	1312	3558	6	10	6	16	42	31	50	126	36
13	8	8	13	13	12	14	13	12	1132	4255	26	26	68	66	53	72	68	58	55
14	8	8	11	11	10	8	11	13	2114	2345	25	26	45	48	40	23	48	65	40
15	12	12	11	6	6	9	4	4	2232	2223	54	54	46	16	16	29	10	9	29
16	10	7	3	8	7	8	7	10	4413	3346	34	18	7	22	20	23	17	34	22
17	7	4	8	6	5	7	4	8	5331	3535	18	10	21	16	11	18	10	22	16
18	9	5	4	4	0	4	6	5	4141	1154	27	13	9	8	1	8	16	11	12
19	5	7	3	8	10	8	8	13	4511	2325	11	17	7	26	40	26	25	65	27
20	8	10	8	7	0	2	2	5	5424	0222	25	34	22	18	0	4	4	12	15
21	3	0	3	5	1	0	1	4	5112	3024	6	1	6	11	2	0	3	8	5
22	2	0	0	0	0	1	2	1	1110	1243	5	1	1	0	1	2	4	2	2
23	0	2	2	1	2	3	5	4	0223	1233	0	4	5	3	5	7	12	10	6
24	5	7	10	8	5	4	9	11	1511	4224	13	17	37	23	11	10	31	42	23
25	7	5	11	11	4	5	6	6	4113	2115	18	13	45	41	10	13	14	16	21
26	7	5	11	8	8	7	6	4	5111	2423	19	13	45	26	21	18	16	9	21
27	5	6	6	7	7	4	5	5	2521	3144	12	15	16	17	20	8	12	11	14
28	2	1	0	0	0	0	3	1	2300	0113	5	3	0	0	0	1	6	3	2
29	0	1	3	1	1	0	1	0	1313	2030	1	2	6	3	3	0	2	0	2
30	5	1	1	4	5	3	10	11	7231	1034	13	3	2	8	12	6	36	42	15
31	14	12	11	7	11	12	13	6	9524	3850	78	56	42	19	44	55	68	15	47
																			17.7

MAR. 1971

	3 Km								Σ Km	am							Am	Am2
1	3	4	5	4	2	4	2	2	8.7	6	9	11	8	5	8	4	4	7	6
2	2	7	3	0	2	2	4	5	8.3	4	19	6	0	4	4	8	12	7	8
3	5	4	6	4	4	5	10	8	15.3	11	8	14	10	10	13	34	24	16	17
4	11	8	7	9	8	7	8	3	20.3	46	25	19	29	26	19	22	6	24	20
5	7	5	6	3	5	5	0	1	10.7	17	11	14	7	13	11	1	2	10	11
6	2	3	1	4	3	2	4	4	7.7	5	7	2	10	6	5	9	10	7	6
7	4	0	2	1	4	5	4	4	8.0	10	1	4	2	8	11	9	8	7	12
8	10	10	5	8	9	8	8	7	21.7	38	37	13	26	29	24	23	20	26	19
9	3	6	6	7	3	3	4	4	12.0	7	16	16	18	7	6	8	9	11	17
10	8	5	10	9	10	10	6	4	20.7	21	11	35	28	36	37	14	10	24	18
11	3	8	4	7	7	4	0	2	11.7	6	24	10	18	18	10	1	4	11	14
12	2	4	2	7	11	9	11	16	20.7	5	10	5	17	46	32	49	113	35	31
13	9	8	13	13	12	14	14	12	31.7	27	26	61	66	58	78	71	53	55	53
14	8	9	11	12	10	8	11	12	27.0	26	32	49	53	37	25	47	60	41	48
15	12	12	11	6	7	9	5	5	22.3	54	54	49	16	20	32	13	11	31	32
16	10	7	5	8	8	8	7	9	20.7	37	18	11	26	21	26	20	30	24	21
17	8	4	8	7	5	8	5	7	17.3	21	10	22	18	11	23	13	18	17	18
18	8	5	4	4	0	4	6	5	12.0	24	13	8	9	1	9	15	13	12	13
19	4	7	3	8	10	9	8	12	20.3	9	18	7	24	38	29	26	58	26	23
20	9	10	9	7	1	3	2	5	15.3	30	36	30	19	3	6	5	13	18	20
21	2	0	3	4	1	0	2	4	5.3	5	1	7	10	2	0	5	8	5	5
22	1	1	1	0	1	1	3	2	3.3	3	2	2	1	3	2	6	4	3	3
23	0	1	2	1	3	4	6	4	7.0	0	3	4	3	6	10	15	9	6	10
24	5	6	10	8	5	6	10	10	20.0	12	16	37	25	12	14	38	40	24	22
25	7	5	11	10	4	7	6	6	18.7	19	11	47	35	10	17	15	15	21	24
26	8	6	11	9	8	8	7	4	20.3	21	14	46	29	22	22	17	9	23	19
27	5	6	7	6	8	4	6	5	15.7	12	15	18	16	25	8	14	13	15	12
28	2	1	0	0	0	0	3	2	2.7	5	3	0	0	0	1	6	5	3	6
29	1	1	4	2	1	0	1	1	3.7	2	2	9	4	3	0	3	2	3	4
30	4	2	1	4	5	4	10	10	13.3	9	4	3	9	13	9	39	40	16	20
31	12	12	11	7	11	12	13	5	27.7	60	53	46	20	45	57	65	13	45	36
																		18.5	

APR. 1971

	3 Km								Σ Km	am							Am	Am2
1	9	7	11	5	3	4	6	4	16.3	31	20	48	13	7	8	14	8	19	22
2	1	1	3	7	9	8	3	4	12.0	2	3	6	19	33	24	7	10	13	16
3	10	6	7	10	4	7	10	13	22.3	36	15	19	39	10	19	35	66	30	29
4	14	10	9	6	9	14	11	11	28.0	76	36	27	15	29	74	46	43	43	33
5	4	4	4	7	6	8	11	8	17.3	9	9	10	17	16	23	41	24	19	28
6	8	8	8	10	5	4	5	7	18.3	24	21	26	38	11	10	11	19	20	19
7	5	7	4	3	2	0	1	5	9.0	11	19	10	7	4	1	2	13	8	9
8	1	3	6	4	6	4	8	7	13.0	3	6	14	10	14	9	21	20	12	26
9	5	10	16	17	15	14	14	13	34.7	12	37	107	146	99	82	86	61	79	55
10	12	14	9	9	11	10	10	10	28.3	56	73	28	32	43	35	39	35	43	53
11	8	12	11	13	10	11	9	8	27.3	22	53	42	64	37	47	31	25	40	34
12	10	5	6	7	8	4	8	7	18.3	34	12	14	18	22	10	23	17	19	22
13	4	7	6	8	7	5	4	4	15.0	10	17	14	24	19	13	9	8	14	15
14	8	3	4	4	12	11	15	18	25.0	26	7	8	10	51	44	88	168	50	44
15	17	12	8	11	11	8	9	11	29.0	122	57	21	50	49	22	27	42	49	54
16	10	9	9	9	8	5	6	8	21.3	38	32	27	27	26	13	16	22	25	26
17	5	7	8	7	1	0	0	8	12.0	12	17	23	17	3	1	1	25	12	14
18	8	6	4	4	4	9	5	9	16.3	21	15	8	10	9	31	12	30	17	15
19	8	8	7	4	2	2	3	4	12.7	21	25	19	10	5	5	7	10	13	14
20	2	6	4	4	2	1	5	1	8.3	5	14	9	9	4	2	13	2	7	8
21	0	1	5	8	8	10	12	15	19.7	1	3	13	22	22	38	57	100	32	24
22	11	8	7	5	6	5	10	7	19.7	49	23	19	13	14	12	34	17	23	29
23	1	6	6	9	4	3	9	8	15.3	3	14	16	27	10	7	30	26	17	14
24	3	3	1	2	1	1	1	0	4.0	6	6	3	4	3	2	3	0	3	7
25	0	1	1	0	0	0	1	0	1.0	1	2	3	1	0	1	2	0	1	2
26	1	0	1	1	6	5	2	5	7.0	3	1	3	2	16	13	5	11	7	8
27	5	6	8	9	4	4	5	6	15.7	11	16	23	28	9	8	11	14	15	18
28	8	11	9	9	12	12	5	6	24.0	22	41	31	33	60	54	12	16	34	24
29	8	7	6	6	6	4	4	9	16.7	25	18	16	14	15	10	10	28	17	23
30	10	9	7	5	6	4	2	1	14.7	37	28	18	12	16	9	5	3	16	15
																		23.2	

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	3 Kn								σn		an						An
1	8	7	12	6	4	4	6	4	4333	2262	26	20	53	16	9	9	15	9	20
2	1	1	3	7	10	9	4	5	2241	6533	2	2	7	17	37	30	10	13	15
3	10	6	7	11	5	7	10	13	4745	3542	38	15	19	44	12	18	35	66	31
4	14	10	9	6	9	14	11	12	5421	3533	77	35	33	16	31	84	47	51	47
5	5	3	4	6	6	8	12	8	2343	3345	12	6	9	15	16	22	53	26	20
6	8	8	8	9	5	6	6	8	3543	2213	26	22	23	30	11	14	15	21	20
7	5	8	5	3	1	1	2	6	3523	3224	11	22	11	6	3	2	4	16	9
8	2	3	5	4	6	4	8	7	3332	2454	4	6	13	10	15	8	22	20	12
9	5	11	16	17	16	14	15	12	6555	3433	11	45	107	129	107	74	93	51	77
10	11	14	9	9	11	10	10	10	6313	3243	48	75	31	30	44	38	34	38	42
11	8	12	11	13	10	11	9	8	2523	4242	21	59	47	67	38	49	30	25	42
12	9	6	5	7	8	4	8	6	4224	3244	32	15	13	17	22	10	24	15	19
13	5	7	6	9	8	6	4	4	2433	2232	12	17	16	30	21	15	10	9	16
14	8	3	4	4	12	12	14	17	4452	2435	21	7	8	10	54	57	72	132	45
15	17	12	7	12	12	8	9	10	6333	5553	130	51	20	53	52	22	30	38	50
16	10	9	8	9	8	6	6	7	5455	3245	34	31	22	30	26	14	15	19	24
17	5	6	8	7	1	1	1	8	2244	3223	12	16	23	18	3	2	3	26	13
18	8	6	4	5	4	10	6	9	3622	3425	21	15	9	11	10	35	14	32	18
19	8	9	7	4	4	3	4	5	2142	2434	21	28	17	10	8	6	9	11	14
20	2	6	5	5	3	2	7	2	4352	2322	5	15	11	12	6	4	18	4	9
21	0	1	5	8	8	10	12	14	1224	4543	0	3	13	24	25	40	58	74	30
22	12	8	7	6	7	6	9	7	1451	2554	57	24	18	14	17	14	33	20	25
23	2	5	6	9	5	5	10	9	3541	3325	4	12	16	28	12	11	34	29	18
24	3	3	1	2	1	1	1	0	3442	2231	6	6	3	4	3	2	3	1	4
25	0	0	1	0	0	1	1	0	1022	1231	0	0	2	1	1	2	3	0	1
26	1	0	1	1	7	7	4	6	2122	3332	3	1	3	2	20	17	9	14	9
27	4	6	8	9	4	4	6	6	2156	4224	10	16	23	27	9	9	14	15	15
28	8	9	9	9	13	13	6	6	2144	2211	22	31	27	27	64	70	14	15	34
29	9	8	7	6	6	5	5	10	2321	1222	27	22	17	16	16	13	13	39	20
30	11	8	7	5	5	5	3	2	2344	4312	43	26	19	13	13	12	7	5	17
																			23.9

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	3 Ks								σs		as						As
1	10	7	11	4	3	3	6	3	5322	1032	37	20	43	10	6	6	14	7	18
2	1	1	2	8	9	7	2	3	3232	5232	2	3	5	21	29	19	4	7	11
3	10	6	7	10	4	7	10	13	4643	1513	35	15	18	34	9	19	34	66	29
4	14	10	8	6	8	13	11	10	4320	3311	74	38	21	15	26	64	45	34	40
5	3	5	5	7	6	8	9	8	0111	4325	6	12	12	18	16	23	29	22	17
6	8	7	9	11	4	3	4	7	2303	4015	22	20	29	46	10	6	8	17	20
7	5	6	4	3	2	0	0	5	3142	3114	12	16	8	7	4	1	1	11	8
8	1	3	6	4	6	4	7	7	3003	2434	3	6	15	10	14	10	20	20	12
9	6	9	16	18	15	15	14	14	7045	1545	14	29	106	164	91	91	79	71	81
10	13	14	8	10	11	9	11	9	5313	2232	65	71	26	34	41	32	45	31	43
11	8	11	10	13	10	11	9	8	1211	1323	23	47	37	61	37	44	31	24	38
12	10	4	6	7	8	4	8	7	5353	2145	35	10	15	18	21	9	22	19	19
13	4	6	5	7	7	4	3	3	1513	5222	9	16	12	18	17	10	7	7	12
14	9	3	4	5	11	9	16	20	7542	1455	30	7	8	11	49	32	104	205	56
15	16	13	8	11	11	8	8	11	7523	4245	115	63	22	47	45	21	24	46	48
16	11	9	9	8	8	5	6	8	4543	1323	42	33	32	24	26	12	16	24	26
17	5	7	8	6	1	0	0	8	1442	2103	13	18	24	15	3	1	0	24	12
18	8	6	3	4	3	8	4	9	3521	1431	21	15	6	9	7	26	10	29	15
19	8	8	8	4	1	1	2	4	4232	2333	21	22	21	10	3	3	4	9	12
20	2	5	3	3	1	0	3	0	3112	1121	5	12	7	7	2	1	7	1	5
21	0	2	5	7	7	10	12	17	1213	5554	1	4	12	20	19	36	56	126	34
22	11	8	7	5	4	4	10	6	4241	2133	42	22	19	12	10	9	36	14	21
23	1	7	6	8	4	1	8	8	2451	3214	2	17	16	26	9	3	26	23	15
24	3	3	1	1	1	0	1	0	0033	2130	6	7	2	3	2	1	2	0	3
25	0	2	1	0	0	0	0	0	1230	0100	1	4	3	0	0	1	0	0	1
26	1	0	1	1	5	4	1	4	3131	3133	3	1	2	2	12	9	2	9	5
27	5	6	8	9	4	3	4	6	1525	1043	12	15	22	28	8	6	8	14	14
28	8	12	10	10	12	10	5	7	2643	1345	22	51	35	40	57	38	11	18	34
29	8	6	6	5	6	3	3	6	1003	0002	23	15	15	12	15	6	6	16	14
30	9	9	7	5	7	3	1	0	1554	3031	32	30	17	12	18	6	3	1	15
																			22.6

MAY 1971

	3 Kn								σn		an						An
1	3	7	6	4	6	4	8	6	3422	1233	6	20	14	8	15	9	25	14	14
2	12	12	13	5	6	5	5	4	4372	1344	54	51	62	13	15	13	12	9	29
3	2	6	4	1	6	6	7	9	2622	3322	5	16	10	2	15	16	18	28	14
4	10	8	2	3	4	3	4	2	4333	2233	36	23	5	6	8	7	8	5	12
5	5	2	1	4	4	9	10	7	4332	2371	11	5	3	10	9	27	38	18	15
6	10	10	13	16	13	13	12	12	3453	2542	34	37	65	108	63	66	52	52	60
7	14	14	13	11	10	11	10	9	5264	1542	75	80	61	50	36	50	40	30	53
8	4	7	10	9	7	8	9	7	2432	2323	10	19	40	33	19	26	27	19	24
9	8	9	7	8	6	8	7	7	2733	4543	22	28	18	25	14	26	18	18	21
10	9	8	8	4	6	4	7	4	6435	5351	28	22	23	10	16	10	18	8	17
11	5	8	3	1	3	1	2	3	2432	3234	11	21	6	2	6	3	5	7	8
12	5	3	3	0	3	1	4	6	3331	3423	11	6	6	1	7	3	8	15	7
13	6	3	3	0	4	5	4	3	2431	2323	14	7	6	1	8	12	9	7	8
14	7	8	5	10	9	11	9	9	4333	1333	19	22	11	34	29	43	31	27	27
15	10	7	8	5	6	9	5	8	5452	4434	35	19	22	12	15	27	12	22	21
16	4	4	3	1	1	5	7	8	4522	2352	9	10	6	2	2	11	18	22	10
17	13	11	16	15	15	16	14	14	5741	1243	62	43	108	97	100	110	83	72	84
18	14	14	14	13	11	12	10	5	4764	3422	85	83	71	69	48	54	36	12	57
19	8	5	8	8	6	8	7	7	4233	1442	24	12	26	23	16	25	17	18	20
20	5	2	4	8	4	2	2	4	5333	5254	11	4	10	23	8	4	4	9	9
21	6	1	0	6	6	8	3	2	3323	1334	14	3	1	15	14	21	7	5	10
22	7	5	5	4	3	4	3	5	1232	2242	18	13	11	9	6	8	7	11	10
23	10	8	8	7	4	7	9	7	2342	2333	40	22	25	18	8	17	27	18	22
24	5	5	4	5	5	8	8	8	2343	3233	13	13	8	12	13	23	24	21	16
25	5	5	6	5	6	6	7	7	3233	2332	13	13	14	13	15	16	20	20	16
26	8	8	8	7	5	7	6	6	4235	4544	26	23	22	18	13	20	16	14	19
27	2	0	1	1	0	0	0	2	3133	1113	4	1	3	3	0	0	1	4	2
28	1	1	1	1	5	3	7	3	2423	3343	2	3	2	3	12	6	18	6	7
29	5	4	3	1	3	4	6	8	3453	3212	13	9	7	3	6	9	16	24	11
30	8	5	12	12	13	8	8	8	3243	3343	23	13	52	59	65	23	25	22	35
31	5	3	5	3	4	3	4	2	5331	3143	11	7	11	6	8	6	8	4	8
																			21.5

MAY 1971

	3 Ks								σs		as						As
1	3	7	5	1	1	1	7	5	2412	2254	6	18	12	3	3	3	20	11	10
2	12	9	12	6	3	4	4	2	5343	5213	59	28	59	14	7	10	8	5	24
3	4	6	4	3	3	3	5	8	3631	1141	9	15	9	6	7	7	11	23	11
4	9	6	3	3	3	0	2	0	5522	1111	33	16	7	7	6	1	5	1	10
5	6	3	0	4	1	6	10	8	5511	2163	16	7	1	8	3	16	37	24	14
6	12	10	11	14	13	12	14	14	6412	1446	56	35	45	71	62	53	76	79	60
7	15	14	12	12	8	11	10	12	7354	3456	94	78	60	59	26	45	40	60	58
8	3	7	10	8	5	7	9	8	0314	1123	6	20	34	26	13	18	31	24	22
9	7	8	8	7	7	7	6	7	4335	3124	18	21	21	19	20	17	16	20	19
10	9	9	6	4	6	4	6	3	6321	5142	31	28	14	8	16	8	14	7	16
11	4	7	4	1	3	0	0	1	4331	5012	9	20	10	2	6	0	1	3	6
12	3	3	2	0	1	0	2	4	2020	3044	6	6	5	0	2	0	5	9	4
13	6	5	1	0	1	0	3	2	5730	2121	15	13	2	0	2	1	7	5	6
14	9	9	3	8	7	9	9	9	6542	1244	28	33	7	21	17	31	33	32	25
15	12	7	9	5	6	7	4	8	7461	4137	59	18	29	13	14	18	9	24	23
16	3	3	0	0	0	5	7	9	2110	0355	6	7	1	0	0	13	18	30	9
17	15	10	17	14	15	15	15	15	8431	5253	92	35	121	84	87	98	87	89	87
18	17	12	11	14	10	12	9	5	4414	2422	126	59	50	76	37	56	31	12	56
19	9	5	8	8	4	6	4	7	7333	2414	27	12	21	25	10	16	8	17	17
20	7	1	4	8	2	1	0	1	5333	1303	17	2	9	22	5	2	0	2	7
21	4	0	0	4	5	3	0	0	3003	1010	9	0	0	10	13	6	1	0	5
22	7	4	3	3	1	0	3	3	4422	3021	18	9	6	6	3	0	7	6	7
23	12	6	9	6	1	3	8	4	5560	3113	59	16	28	15	3	7	26	9	20
24	4	4	3	3	1	7	8	7	3450	2114	10	8	6	6	3	17	26	18	12
25	4	4	4	4	3	5	6	6	3431	1335	10	9	9	9	6	12	14	16	11
26	9	9	8	7	5	7	3	5	5623	4504	33	31	22	20	12	18	6	13	19
27	2	0	1	1	0	0	0	1	2013	0003	4	0	2	2	0	0	0	2	1
28	0	0	0	0	3	0	5	4	0000	1144	0	0	0	0	6	1	11	8	3
29	5	3	2	0	0	2	4	4	4530	1213	11	7	5	0	1	4	8	10	6
30	5	6	9	11	10	6	7	7	1601	2044	13	14	29	49	37	15	17	17	24
31	6	2	4	1	0	2	0	0	5333	1210	15	5	9	2	1	4	1	0	5
																			19.3

MAY 1971

	3 Km								Σ Km	am							Am	Am2
1	3	7	5	3	4	3	8	5	12.7	6	19	13	6	9	6	23	13	12	19
2	12	10	12	5	5	5	4	3	18.7	56	39	60	13	11	12	10	7	26	18
3	3	6	4	2	5	5	6	8	13.0	7	15	10	4	11	12	15	26	13	13
4	10	7	3	3	3	2	3	1	10.7	34	19	6	7	7	4	6	3	11	11
5	5	3	1	4	3	8	10	8	14.0	13	6	2	9	6	21	37	21	14	23
6	11	10	12	15	13	12	13	13	33.0	45	36	55	89	62	59	64	65	59	52
7	14	14	13	12	9	11	10	11	31.3	84	79	61	54	31	48	40	45	55	49
8	4	7	10	9	6	8	9	8	20.3	8	19	37	29	16	22	29	22	23	27
9	7	8	7	8	7	8	7	7	19.7	20	25	19	22	17	22	17	19	20	21
10	9	8	7	4	6	4	6	3	15.7	30	25	19	9	16	9	16	7	16	15
11	4	7	4	1	3	0	1	2	7.3	10	20	8	2	6	1	3	5	7	8
12	4	3	2	0	2	1	3	5	6.7	8	6	5	0	4	2	6	12	5	5
13	6	4	2	0	2	3	4	3	8.0	15	10	4	0	5	6	8	6	7	10
14	8	9	4	9	8	10	9	9	22.0	23	27	9	28	23	37	32	30	26	21
15	11	7	8	5	6	8	5	8	19.3	47	18	26	13	15	23	11	23	22	20
16	4	4	1	0	0	5	7	8	9.7	8	9	3	1	1	12	18	26	10	29
17	14	10	16	15	15	16	14	14	38.0	77	39	114	90	94	104	85	80	85	66
18	16	14	12	14	11	12	9	5	31.0	106	71	60	72	43	55	33	12	57	56
19	8	5	8	8	5	7	5	7	17.7	26	12	23	24	13	20	12	18	19	21
20	6	1	4	8	3	1	1	3	9.0	14	3	10	23	7	3	2	6	9	10
21	5	1	0	5	6	6	2	1	8.7	12	2	1	12	14	14	4	3	8	8
22	7	5	4	3	2	2	3	4	10.0	18	11	8	7	5	4	7	8	9	13
23	11	7	8	6	3	5	8	6	18.0	49	19	26	16	6	12	26	14	21	14
24	5	4	3	4	4	7	8	7	14.0	12	10	7	9	8	20	25	20	14	13
25	5	5	5	5	4	6	7	7	14.7	12	11	12	11	10	14	17	18	13	17
26	9	9	8	7	5	7	5	6	18.7	29	27	22	19	13	19	11	14	19	14
27	2	0	1	1	0	0	0	1	1.7	4	0	2	3	0	0	0	3	2	5
28	0	1	0	1	4	1	6	3	5.3	1	2	1	2	9	3	15	7	5	4
29	5	4	3	1	2	3	5	7	10.0	12	8	6	2	4	7	12	17	9	14
30	7	6	10	12	12	7	8	7	23.0	18	14	40	54	51	19	21	20	30	19
31	5	3	4	2	2	2	2	1	7.0	13	6	10	4	4	5	5	2	6	17
																		20.4	

JUNE 1971

	3 Km								Σ Km	am							Am	Am2
1	2	4	11	11	9	10	10	11	22.7	5	8	50	46	33	37	40	46	33	30
2	11	12	10	11	11	10	13	10	29.3	50	54	40	50	49	38	67	37	48	45
3	13	11	12	8	9	8	9	8	26.0	67	44	51	22	32	21	29	21	36	35
4	7	7	9	4	4	6	4	8	16.3	17	19	29	10	8	15	10	22	16	18
5	7	7	4	4	2	2	5	5	12.0	18	19	9	8	5	4	11	12	11	12
6	5	6	7	3	4	5	3	1	11.3	11	16	19	7	8	11	6	2	10	8
7	1	2	0	1	2	2	2	5	5.0	3	5	1	3	4	4	5	13	5	8
8	6	8	7	5	3	2	5	3	13.0	16	22	18	11	7	5	11	6	12	9
9	1	1	4	3	2	4	4	2	7.0	3	3	9	7	4	9	9	5	6	6
10	0	1	2	6	4	2	3	3	7.0	0	2	4	14	10	5	7	6	6	8
11	4	6	5	7	4	4	1	4	11.7	8	16	13	19	10	9	3	10	11	10
12	2	4	5	5	1	2	2	1	7.3	5	8	11	12	2	4	4	3	6	6
13	2	1	4	2	11	9	6	4	13.0	5	3	8	5	41	27	16	10	14	11
14	4	8	5	5	5	5	2	4	12.7	10	22	12	11	11	11	4	9	11	15
15	3	5	7	5	1	2	4	6	11.0	7	13	17	11	3	4	9	15	10	10
16	5	4	4	5	6	5	4	6	13.0	12	8	9	12	14	11	9	15	11	14
17	4	6	9	11	9	5	1	3	16.0	10	15	27	47	27	11	3	6	18	16
18	5	7	9	4	4	1	3	6	13.0	11	17	29	9	9	3	6	15	12	10
19	2	3	2	0	1	0	0	1	3.0	5	6	4	0	2	1	1	2	3	5
20	1	3	4	4	1	0	2	1	5.3	3	7	10	10	2	1	5	2	5	5
21	0	1	6	5	4	3	3	5	9.0	1	3	15	13	10	6	7	11	8	7
22	3	7	0	4	5	6	4	5	11.3	7	19	1	8	12	14	8	11	10	12
23	5	7	9	8	7	7	0	1	14.7	12	19	28	25	20	17	1	2	16	12
24	2	2	3	2	3	1	8	6	9.0	5	4	7	4	6	3	26	14	9	15
25	7	8	11	12	12	12	10	12	28.0	19	25	41	51	51	54	37	51	41	33
26	10	9	9	11	6	4	3	4	18.7	37	33	29	45	16	8	6	9	23	26
27	4	4	3	4	4	2	2	2	8.3	10	10	7	9	10	5	5	4	8	8
28	1	1	4	5	6	6	8	8	13.0	3	3	9	12	16	14	23	23	13	14
29	5	10	8	10	12	12	12	11	26.7	11	35	24	34	53	53	58	44	39	30
30	11	7	5	5	8	7	6	8	19.0	50	17	11	11	26	17	16	26	22	31
																		15.8	

JUNE 1971

	3 Kn								σn								An
1	2	4	11	11	11	11	11	11	3533 3332	5	9	46	43	44	47	42	42	35
2	11	12	10	12	11	11	13	11	2333 3342	42	51	40	51	49	42	61	41	47
3	13	11	11	8	9	8	9	7	4332 3432	69	43	47	22	29	25	28	20	35
4	6	7	9	5	5	6	5	8	1422 4223	15	19	28	12	11	15	13	21	17
5	7	8	4	4	4	4	5	5	4323 3766	18	23	10	10	8	8	13	13	13
6	5	7	7	4	5	5	3	1	1441 4232	13	17	18	8	11	11	6	3	11
7	2	3	1	3	3	3	3	6	3323 2242	5	6	2	6	7	7	7	15	7
8	6	8	7	5	3	4	4	4	3343 3434	16	23	17	11	7	8	10	8	13
9	1	1	4	3	3	5	4	2	2264 3432	3	3	10	7	6	13	10	5	7
10	0	1	3	7	6	4	5	4	1434 4525	0	3	6	18	15	10	12	10	9
11	4	8	6	7	5	5	2	4	2324 4533	9	21	16	19	13	13	4	10	13
12	2	3	5	5	1	3	3	2	4332 3333	5	7	11	12	3	6	6	5	7
13	2	2	4	3	11	9	7	5	2314 3432	5	5	9	6	44	28	19	11	16
14	5	7	4	4	6	5	2	4	2555 2332	12	17	9	8	14	12	4	10	11
15	3	4	7	5	2	4	5	7	3534 4222	6	10	17	11	5	8	12	19	11
16	6	4	5	7	6	4	4	7	3453 1222	14	9	13	18	15	10	10	19	14
17	5	7	9	11	9	6	3	4	2325 3332	12	19	33	48	28	16	6	9	21
18	5	7	10	5	4	3	4	5	2444 3343	12	18	37	12	10	6	9	13	15
19	3	4	2	0	1	1	1	1	3231 3212	6	8	5	1	3	2	2	3	4
20	3	4	5	5	1	1	3	2	1442 2312	6	8	13	12	2	3	6	4	7
21	1	3	7	7	6	4	4	7	3333 3423	2	6	18	19	14	8	10	17	12
22	5	7	1	4	7	6	5	6	3333 3431	11	19	3	10	17	15	11	15	13
23	6	7	9	9	8	8	1	2	1233 3322	14	19	30	28	23	21	3	5	18
24	4	3	5	3	5	2	8	4	4332 3235	8	7	11	6	12	5	23	10	10
25	7	8	9	11	11	12	10	14	4543 3332	19	23	33	44	50	52	36	72	41
26	11	9	9	11	7	4	3	5	2534 2242	42	31	32	44	18	8	7	12	24
27	4	5	5	4	4	3	3	4	2643 5444	10	12	11	10	10	7	7	8	9
28	3	3	5	6	8	7	8	9	2352 3531	6	6	12	14	24	19	26	27	17
29	5	10	8	11	13	11	13	11	3335 5333	12	34	26	42	62	42	61	41	40
30	11	6	6	6	9	7	7	8	2331 4233	41	16	15	15	29	20	17	26	22
																		17.3

JUNE 1971

	3 Ks								σs								As
1	2	3	12	11	8	8	10	11	1021 2351	5	6	53	49	22	26	38	49	31
2	12	12	10	11	11	10	14	10	5521 3144	59	56	40	49	49	34	74	34	49
3	13	11	12	8	10	7	9	8	5123 1443	65	45	56	21	34	17	29	21	36
4	7	7	9	4	2	6	3	8	5443 3024	18	18	30	9	5	15	7	23	16
5	7	6	4	3	1	0	4	5	6540 1043	17	15	8	6	2	0	10	12	9
6	4	6	7	3	2	4	3	0	4530 3220	9	15	20	7	5	10	7	0	9
7	0	2	0	0	0	0	1	5	1200 1133	1	4	0	0	1	1	2	12	3
8	6	8	7	4	3	1	5	2	5344 1322	15	21	18	10	7	2	12	4	11
9	2	2	4	4	1	2	3	2	2241 2323	4	4	8	8	2	4	7	5	5
10	0	0	1	4	3	0	1	0	0122 1131	0	1	3	10	6	1	2	1	3
11	3	5	5	7	3	2	1	4	2225 1323	6	11	11	19	7	4	2	10	9
12	2	4	4	5	1	1	0	0	6332 2211	5	9	10	11	2	2	1	1	5
13	3	1	4	2	10	8	5	4	1242 1311	6	2	8	4	37	26	13	8	13
14	3	9	6	5	4	4	1	3	1757 1222	7	27	16	13	8	10	3	7	11
15	4	6	7	5	0	0	2	4	4544 0013	9	16	17	11	0	0	5	10	9
16	4	3	2	3	5	5	3	4	3560 4323	9	6	5	6	13	12	7	10	9
17	3	5	8	11	8	3	0	1	1221 3113	7	11	22	45	26	6	1	2	15
18	4	7	8	3	4	0	1	6	3420 1035	9	17	22	6	8	0	2	16	10
19	2	2	1	0	0	0	0	0	1130 0000	5	5	2	0	0	0	0	0	2
20	0	3	4	4	0	0	2	0	0144 1030	0	6	8	8	1	0	4	0	3
21	0	0	5	4	3	2	2	2	0014 4322	0	0	13	8	7	4	4	5	5
22	2	7	0	3	3	5	2	3	2301 2422	4	20	0	6	7	12	4	7	8
23	4	7	8	8	7	5	0	0	3412 1100	9	18	26	22	17	13	0	0	13
24	1	1	2	0	0	0	9	7	2331 1035	3	2	4	1	1	0	28	19	7
25	7	9	11	12	12	12	10	9	5775 1230	18	27	49	59	53	57	39	29	41
26	9	10	8	11	6	3	2	2	5417 2112	33	35	26	46	14	7	5	5	21
27	4	4	2	4	5	2	1	0	3423 3231	9	8	4	9	11	4	2	1	6
28	0	0	3	4	4	4	7	7	1003 1155	1	0	7	10	9	9	20	19	9
29	4	10	8	8	11	13	12	11	4521 3352	9	37	22	26	45	64	56	47	38
30	12	7	3	4	8	6	6	8	5421 3201	59	18	7	8	22	14	15	26	21
																		14.2

JULY 1971

	3 Kn								σn		an						An
1	9	9	8	8	8	4	7	7	2323	3232	32	32	26	25	21	9	17	18	23
2	10	9	9	10	10	6	6	10	3153	3224	36	30	31	37	39	15	15	34	30
3	6	5	6	5	5	5	4	8	1223	2433	16	12	14	13	13	13	9	24	14
4	8	6	5	3	4	6	7	8	3131	3132	23	14	11	7	9	15	18	25	15
5	5	5	7	6	5	4	8	8	3231	3432	13	13	17	16	11	10	21	22	15
6	9	6	5	4	4	7	9	8	4223	4222	32	14	13	8	9	19	27	24	18
7	4	4	3	4	3	2	3	3	2333	3234	8	10	6	10	6	5	6	7	7
8	4	9	7	5	3	7	6	9	1324	2334	8	27	17	11	6	19	16	31	17
9	10	8	8	2	2	0	5	4	1363	3225	34	22	22	4	4	1	13	10	14
10	6	3	1	0	1	2	4	2	2421	2332	16	7	2	0	2	5	8	5	6
11	5	5	3	4	5	9	6	4	3233	3324	12	13	6	10	12	28	14	8	13
12	8	4	4	6	6	7	9	8	2253	3322	22	8	10	14	14	17	29	24	17
13	8	6	10	6	6	6	7	6	2434	2331	25	15	39	15	16	15	20	15	20
14	7	6	8	9	8	7	5	4	2131	2234	18	15	21	29	26	17	11	9	18
15	7	9	5	8	7	4	5	4	2322	2333	17	30	12	22	20	10	12	10	17
16	4	5	5	5	7	5	4	6	4232	4422	10	12	12	13	19	13	10	14	13
17	6	4	3	1	5	2	1	1	4333	4422	16	9	6	3	11	4	2	3	7
18	2	7	6	8	9	8	5	5	3433	2223	5	18	14	22	32	22	11	11	17
19	10	8	6	4	4	5	4	6	3232	3351	34	26	14	8	10	11	10	14	16
20	3	0	1	3	6	6	2	4	3123	2633	6	1	2	7	15	14	4	8	7
21	4	7	6	9	11	13	10	10	3323	2223	10	18	15	28	42	66	37	34	31
22	11	8	4	1	3	1	5	3	2342	3323	43	25	9	3	6	3	12	6	13
23	5	5	7	7	8	7	8	9	3533	3322	11	11	20	19	25	17	22	32	20
24	9	4	3	4	3	4	3	4	1315	2334	31	9	7	8	7	10	6	8	11
25	4	1	0	1	5	4	3	2	1312	2232	8	3	1	3	13	8	6	4	6
26	1	0	1	3	4	10	14	13	2133	4433	3	0	3	7	9	36	82	62	25
27	9	5	6	8	5	7	5	6	2343	3122	27	13	14	21	13	17	12	14	16
28	7	8	6	4	2	2	0	1	4223	3213	19	24	16	10	4	5	1	3	10
29	0	0	2	4	4	7	8	10	1135	4433	1	1	5	10	8	17	22	40	13
30	8	6	6	9	7	3	7	4	2373	2354	22	14	15	28	19	6	17	8	16
31	6	7	7	7	7	4	9	7	1222	5223	16	17	17	18	19	9	27	17	18
																			15.6

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	3 Ks								σs		as						As
1	9	10	7	6	6	2	5	5	5412	2344	33	35	17	15	15	4	11	13	18
2	10	9	9	8	9	7	6	9	3252	4326	38	29	31	22	30	18	15	31	27
3	4	2	5	3	6	0	0	7	3320	2105	10	5	11	6	14	1	0	17	8
4	8	7	4	1	1	5	4	8	5452	2314	22	17	8	3	2	13	9	23	12
5	5	4	5	4	3	0	7	5	3322	1142	12	10	11	10	6	1	17	12	10
6	10	5	5	2	0	5	5	4	4211	1321	34	11	12	5	1	11	11	8	12
7	2	3	1	0	0	0	0	2	2221	0003	4	6	2	1	0	0	0	4	2
8	4	9	6	6	3	3	5	8	4657	1043	8	28	16	15	6	6	13	21	14
9	10	8	7	1	0	0	3	2	3353	0023	36	21	19	2	0	0	7	4	11
10	4	2	0	0	0	0	3	0	1200	0020	8	4	0	0	0	0	7	0	2
11	2	4	1	2	5	4	7	4	3433	3111	5	9	3	4	13	8	18	8	9
12	6	2	5	3	5	5	5	5	0282	1212	15	4	11	7	13	11	13	12	11
13	6	5	8	8	4	5	7	3	1123	1342	16	12	21	25	9	12	17	7	15
14	4	7	6	7	7	6	5	3	1415	1220	8	18	16	20	17	15	11	6	14
15	5	9	4	7	3	3	3	3	1534	2102	13	31	9	18	7	6	6	7	12
16	4	3	3	5	5	3	4	5	3102	3134	10	6	6	11	12	6	9	11	9
17	7	1	2	1	1	1	0	0	5223	2211	18	2	4	2	2	3	1	1	4
18	1	6	5	4	4	4	4	4	2632	2333	2	14	12	10	10	9	10	9	10
19	10	10	6	2	1	3	1	5	5462	2424	37	34	14	5	2	6	2	11	14
20	1	0	0	0	1	3	0	2	3001	2512	2	0	0	1	2	7	1	5	2
21	5	8	5	7	11	13	12	12	2211	3323	11	22	13	17	44	64	53	51	34
22	14	11	7	0	1	0	3	1	4731	2012	74	47	20	1	2	0	6	3	19
23	1	4	5	4	4	2	5	7	2113	3444	3	8	13	9	9	5	13	18	10
24	8	3	1	0	0	3	0	0	1231	1111	23	6	3	1	1	6	1	1	5
25	1	1	0	0	2	1	1	1	3200	3222	3	2	0	0	5	3	2	2	2
26	1	0	1	2	2	9	13	11	2021	2032	2	0	2	5	4	29	64	47	19
27	9	4	4	6	4	5	3	2	5412	2352	30	8	9	16	10	12	6	5	12
28	8	9	5	2	0	0	0	0	3431	0100	24	32	12	5	0	1	0	0	9
29	0	1	1	4	2	6	7	11	0331	4443	0	3	3	8	5	14	18	44	12
30	7	7	6	9	8	1	7	3	4554	1212	18	17	15	30	23	3	17	7	16
31	8	7	6	8	6	2	10	7	3402	2114	21	18	15	22	15	5	34	20	19
																			12.0

JULY 1971

	3 Km								Σ Km	am							Am	Am2
1	9	9	8	7	7	3	6	6	18.3	32	33	21	20	18	6	14	15	20	23
2	10	9	9	9	10	7	6	9	23.0	37	29	31	30	34	17	15	33	28	20
3	5	4	5	4	6	3	2	8	12.3	13	8	13	9	14	7	5	21	11	15
4	8	6	4	2	3	6	5	8	14.0	22	15	10	5	6	14	13	24	14	13
5	5	5	6	5	4	3	7	7	14.0	12	12	14	13	8	6	19	17	13	14
6	9	5	5	3	2	6	7	6	14.3	33	13	13	6	5	15	19	16	15	12
7	3	4	2	2	1	1	1	2	5.3	6	8	4	5	3	2	3	5	5	10
8	4	9	6	5	3	5	6	8	15.3	8	27	16	13	6	13	15	26	16	14
9	10	8	7	1	1	0	4	3	11.3	35	22	20	3	2	1	10	7	13	11
10	5	2	0	0	0	1	4	1	4.3	12	5	1	0	1	3	8	2	4	5
11	4	5	2	3	5	7	6	4	12.0	8	11	4	7	12	18	16	8	11	9
12	7	3	5	5	6	6	8	7	15.7	18	6	11	11	14	14	21	18	14	16
13	7	6	9	7	5	5	7	5	17.0	20	14	30	20	13	13	19	11	18	17
14	5	6	7	8	8	6	5	4	16.3	13	16	18	24	22	16	11	8	16	16
15	6	9	5	7	6	4	4	4	15.0	15	31	11	20	14	8	9	9	15	13
16	4	4	4	5	6	4	4	5	12.0	10	9	9	12	15	9	10	13	11	10
17	7	3	2	1	3	2	0	1	6.3	17	6	5	2	7	4	1	2	6	9
18	1	6	5	6	8	6	5	4	13.7	3	16	13	16	21	15	11	10	13	13
19	10	9	6	3	3	4	3	5	14.3	35	30	14	6	6	9	6	12	15	12
20	2	0	0	2	4	5	1	3	5.7	4	1	1	4	9	11	2	7	5	9
21	4	7	6	8	11	13	11	11	23.7	10	20	14	22	43	65	45	43	33	25
22	12	10	6	1	2	0	4	2	12.3	59	36	14	2	4	1	9	4	16	23
23	3	4	7	6	7	5	7	8	15.7	7	9	17	14	17	11	18	25	15	11
24	9	4	2	2	2	4	2	2	9.0	27	8	5	4	4	8	4	4	8	9
25	2	1	0	0	4	3	2	1	4.3	5	2	1	1	9	6	4	3	4	4
26	1	0	1	3	3	9	14	12	14.3	2	0	2	6	7	33	73	54	22	17
27	9	4	5	7	5	6	4	4	14.7	28	10	12	19	12	15	9	9	14	22
28	8	9	6	4	1	1	0	0	9.7	22	28	14	8	2	3	0	1	10	9
29	0	1	2	4	3	6	7	11	11.3	0	2	4	9	6	16	20	42	12	12
30	7	6	6	9	8	2	7	3	16.0	20	15	15	29	21	5	17	7	16	18
31	7	7	6	7	7	3	9	7	17.7	18	17	16	20	17	7	30	18	18	15
																		13.9	

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	3 Km								Σ Km	am							Am	Am2
1	5	5	4	4	4	3	6	6	12.3	12	12	9	10	8	7	14	15	11	22
2	11	13	13	8	8	3	5	4	21.7	45	64	64	25	21	7	11	10	31	20
3	6	2	0	0	4	2	2	4	6.7	15	4	1	1'	8	4	5	10	6	11
4	6	7	6	8	7	3	8	4	16.3	16	20	15	21	19	7	21	9	16	18
5	10	11	11	4	3	1	2	6	16.0	38	49	44	9	7	3	4	15	21	14
6	0	0	0	0	0	1	2	3	2.0	1	1	1	1	1	3	4	7	2	4
7	1	1	3	5	3	4	5	8	10.0	3	2	6	11	6	10	13	24	9	13
8	9	10	8	9	8	5	4	8	20.3	27	36	21	29	23	13	8	23	23	19
9	7	6	6	7	7	9	7	8	19.0	18	15	15	18	18	27	17	21	19	19
10	9	8	8	4	5	8	7	8	19.0	31	25	24	8	13	23	17	25	21	24
11	10	11	7	11	8	6	6	4	21.0	35	42	18	46	21	15	14	10	25	24
12	6	7	11	8	10	7	2	3	18.0	16	17	41	24	39	18	4	7	21	18
13	7	6	8	5	3	5	2	5	13.7	17	16	23	11	7	13	4	11	13	12
14	4	3	2	2	2	4	0	3	6.7	10	6	4	5	5	9	1	7	6	7
15	1	3	2	4	6	3	3	7	9.7	3	7	5	10	15	7	7	18	9	11
16	5	11	5	8	5	7	4	3	16.0	12	43	11	22	11	17	10	7	17	13
17	4	4	3	4	5	3	4	13	13.3	10	8	6	10	11	7	10	62	16	20
18	13	11	6	8	5	8	4	6	20.3	70	49	14	21	12	25	8	14	27	22
19	6	5	6	2	1	1	1	2	8.0	16	11	16	4	2	3	2	4	7	8
20	1	2	1	0	1	3	4	5	5.7	3	5	3	0	2	7	10	13	5	8
21	4	8	6	7	5	6	7	8	17.0	9	23	16	19	12	14	17	24	17	15
22	7	6	8	7	6	8	5	9	18.7	20	15	22	17	15	21	11	30	19	22
23	12	9	8	7	7	5	6	4	19.3	55	30	25	18	17	12	16	9	23	19
24	6	6	5	4	6	6	7	8	16.0	16	14	12	10	14	14	17	26	15	14
25	5	7	3	5	5	6	4	8	14.3	12	17	7	11	12	14	9	24	13	18
26	9	4	10	9	6	5	9	4	18.7	30	10	34	31	14	11	27	10	21	15
27	4	2	2	0	0	2	2	5	5.7	10	4	5	0	1	4	4	11	5	8
28	4	1	2	3	5	9	5	4	11.0	8	2	4	7	11	30	13	9	11	9
29	7	3	5	3	6	5	2	3	11.3	17	7	11	7	16	11	5	7	10	12
30	8	2	4	3	2	5	4	9	12.3	25	5	10	6	5	11	10	29	13	21
31	13	11	12	10	6	8	13	12	28.3	68	42	51	37	16	22	70	52	45	33
																		16.0	

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	3 Kn								σn								An
1	5	6	5	4	4	4	6	6	2333 1541	13	14	11	10	9	9	15	16	12
2	12	13	13	8	8	4	5	5	4352 5433	53	62	62	23	23	8	13	13	32
3	6	2	1	1	4	4	4	4	6222 3423	14	4	2	2	9	8	8	10	7
4	6	7	5	8	7	4	8	5	6642 3432	15	17	13	22	18	8	21	11	16
5	10	11	11	4	4	2	3	7	3472 1342	37	43	48	9	8	5	6	19	22
6	1	1	1	1	0	3	3	4	2222 2334	2	2	2	2	1	6	7	8	4
7	2	2	4	5	4	6	6	8	4543 4352	5	4	8	12	9	14	16	25	12
8	8	10	7	9	8	6	5	8	2542 3432	24	37	19	27	22	16	11	24	23
9	7	6	6	7	8	9	6	9	4434 3432	20	14	15	17	22	27	15	28	20
10	9	9	9	4	6	8	7	9	4273 3423	30	27	28	9	16	24	19	28	23
11	10	11	7	12	8	7	6	5	2421 4312	37	50	17	51	26	17	16	11	28
12	7	7	11	8	11	8	3	4	3333 3732	19	17	44	22	47	22	6	8	23
13	6	6	9	6	3	5	3	5	2343 3522	16	15	27	14	6	12	7	12	14
14	4	4	2	4	3	5	1	4	3442 2522	10	8	4	8	7	11	2	9	7
15	1	3	3	5	7	5	5	8	2432 4423	3	7	6	12	20	11	11	21	11
16	5	10	5	9	6	7	6	4	1333 4422	13	38	12	28	15	18	14	9	18
17	3	4	3	6	5	5	5	14	3221 2332	6	10	7	14	13	11	13	81	19
18	12	11	6	9	7	10	4	6	1313 2231	54	44	14	28	18	36	10	15	27
19	6	5	6	3	2	2	1	2	3331 3322	15	13	15	6	4	5	3	5	8
20	2	2	2	0	2	4	5	6	3341 2333	4	5	4	0	4	10	12	14	7
21	4	7	6	7	6	7	7	8	2342 3453	9	20	16	18	14	17	20	25	17
22	8	6	8	7	7	8	5	10	2243 5233	22	15	24	19	20	23	11	39	22
23	11	9	8	7	7	5	7	5	3133 3352	50	31	26	20	18	13	20	12	24
24	6	5	5	4	7	7	7	9	4232 2431	15	12	12	10	18	18	19	29	17
25	6	7	4	6	6	7	5	9	3322 3221	14	18	9	14	15	19	12	28	16
26	10	5	9	10	5	5	8	5	3235 2354	38	12	30	34	12	13	25	13	22
27	5	2	2	0	1	3	2	5	2441 2133	12	5	5	0	2	7	5	12	6
28	4	1	2	4	6	10	7	5	2444 1432	9	3	5	9	14	35	18	11	13
29	6	3	6	4	8	6	4	4	3212 2413	16	7	14	8	22	16	8	9	13
30	8	3	4	3	2	6	5	9	2433 3331	26	6	10	6	5	15	11	33	14
31	14	11	11	11	8	8	12	12	4333 4234	71	42	43	46	22	22	57	52	44
																		17.5

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	3 Ks								σs								As
1	5	4	3	4	3	3	5	6	2303 5142	11	10	6	9	7	6	13	15	10
2	10	13	13	8	7	3	4	4	3341 5044	38	66	67	26	19	6	10	8	30
3	6	1	0	0	3	0	1	4	5301 5023	15	3	0	1	6	0	3	9	5
4	7	8	7	8	7	3	7	3	5843 3030	17	24	17	21	20	6	20	6	16
5	10	12	10	4	3	1	0	4	3633 2313	40	56	40	10	6	2	1	10	21
6	0	0	0	0	0	0	0	3	1100 0113	1	1	0	0	0	1	1	6	1
7	0	0	2	4	1	3	5	8	1111 2164	1	1	5	9	2	6	11	23	7
8	9	10	8	9	8	5	3	8	6415 3212	31	35	23	31	24	11	6	22	23
9	6	7	6	7	5	8	7	6	5453 4430	15	17	15	18	13	26	19	15	17
10	9	8	8	3	4	8	6	8	6142 2224	31	23	21	7	10	21	15	23	19
11	9	10	7	10	6	5	5	4	5443 2313	33	35	18	40	16	13	12	10	22
12	6	7	10	8	9	5	0	3	6431 4313	14	18	38	26	32	13	1	6	19
13	7	7	7	4	3	5	0	4	5451 1313	19	17	19	8	7	13	1	10	12
14	4	2	2	1	1	3	0	3	3122 3111	10	5	4	2	2	7	1	6	5
15	1	3	2	3	4	1	2	6	3532 1322	2	7	5	7	9	2	4	15	6
16	4	11	4	6	3	6	3	3	3732 2123	10	47	9	16	7	16	7	6	15
17	6	3	2	3	4	1	3	11	6110 3102	14	6	5	6	9	2	6	42	11
18	15	12	6	6	3	5	2	5	7660 0113	87	53	14	15	6	13	5	12	26
19	7	4	7	1	0	0	0	1	5443 1013	17	9	18	2	1	0	1	2	6
20	1	2	1	0	0	1	4	5	3330 1214	2	5	3	0	1	3	8	11	4
21	4	8	6	7	4	4	6	8	4755 2224	8	26	16	20	10	10	15	23	16
22	7	6	7	6	5	7	4	8	4542 3545	18	16	19	14	11	19	10	21	16
23	13	9	8	6	6	4	5	3	4020 1341	61	29	25	15	16	10	12	6	22
24	7	6	5	4	5	4	6	8	4533 3303	18	15	12	9	11	10	15	23	14
25	5	6	2	4	4	4	3	8	2511 3223	11	16	5	8	10	10	7	21	11
26	8	4	10	9	6	4	9	3	5455 1114	22	8	38	28	16	9	29	7	20
27	4	1	2	0	0	0	1	4	4210 0135	8	3	5	0	0	1	2	10	4
28	3	0	1	2	4	8	3	3	0012 1424	6	0	2	5	8	26	7	7	8
29	7	3	3	3	4	3	1	3	5010 2433	17	6	7	6	10	6	3	6	8
30	8	2	4	3	3	3	4	8	2332 1132	25	5	10	7	6	7	9	25	12
31	13	11	12	9	4	8	14	12	5254 2623	65	43	59	29	10	21	82	51	45
																		14.5

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	3 Kn								σn		an						An
1	11	8	8	6	5	5	8	6	2323	4351	43	26	24	15	13	12	22	16	21
2	2	0	1	0	0	1	1	3	3121	1225	4	1	2	0	0	2	2	6	2
3	6	3	5	6	7	1	3	2	4334	2332	15	6	11	15	18	3	6	4	10
4	0	1	2	2	0	7	9	12	2433	1231	1	3	5	4	1	18	33	58	15
5	9	10	9	11	10	9	9	7	3325	4533	27	35	28	42	38	33	31	20	32
6	4	5	9	9	9	8	5	9	4332	1431	10	12	28	30	33	26	12	29	23
7	11	9	10	7	7	9	9	11	4443	3435	42	32	35	20	20	30	33	46	32
8	8	10	9	11	6	5	7	5	2455	1453	22	34	32	46	16	11	19	12	24
9	5	2	5	7	9	9	4	7	2432	2533	11	5	11	18	28	32	8	20	17
10	7	5	6	4	4	2	0	4	2253	3314	18	13	16	10	9	4	1	8	10
11	4	5	6	8	5	4	6	5	4445	3533	9	11	14	21	13	10	14	11	13
12	4	7	6	10	1	5	6	6	4425	2213	10	20	15	35	3	11	16	14	16
13	12	11	12	6	8	6	8	6	6261	3331	55	45	57	16	24	15	21	14	31
14	5	6	8	7	3	5	8	8	2432	3442	12	15	24	19	6	13	22	25	17
15	8	5	7	10	8	5	7	6	2322	3343	22	11	19	34	25	11	19	15	20
16	7	5	8	9	5	4	5	11	4531	2224	19	11	26	32	12	10	12	44	21
17	7	5	4	7	7	5	8	14	4332	3232	17	11	10	17	17	12	23	78	23
18	14	14	14	14	9	11	8	6	3463	1422	86	76	83	82	29	41	25	16	55
19	6	8	9	4	4	6	8	7	4242	2132	14	21	29	10	8	15	21	17	17
20	7	9	9	10	10	8	11	7	2732	5243	20	27	31	38	40	22	43	20	30
21	4	2	2	1	3	5	8	4	2232	1232	10	5	4	3	7	11	21	9	9
22	5	5	0	2	2	2	1	4	2213	3334	11	12	1	4	5	4	3	10	6
23	0	1	4	1	3	6	0	1	1232	4512	1	3	9	2	7	15	0	2	5
24	1	0	0	0	3	4	10	9	2120	1266	2	1	1	0	7	10	34	31	11
25	8	14	11	12	11	9	5	7	4322	4313	24	81	44	57	50	29	13	18	40
26	6	4	5	5	5	8	11	17	2423	2334	14	9	13	12	11	22	48	124	32
27	15	13	12	12	11	10	9	7	4543	3353	93	64	58	57	42	40	32	17	50
28	8	7	8	8	7	5	6	4	3342	2342	24	19	25	21	17	12	15	10	18
29	7	3	5	3	4	4	8	6	4141	2332	19	7	13	7	8	9	21	14	12
30	4	5	8	10	12	12	13	12	2225	4441	10	13	26	37	53	51	64	59	39
																			21.7

SEP. 1971

	3 Ks								σs		as						As
1	11	9	8	5	3	4	7	7	3523	2144	45	29	22	12	7	9	17	20	20
2	0	1	0	0	0	0	0	1	1210	0002	1	2	1	0	0	0	0	3	1
3	7	4	5	4	7	0	3	0	4323	5041	18	10	11	10	18	0	6	1	9
4	0	0	1	0	0	4	7	12	1021	1133	1	0	3	1	1	9	20	51	11
5	8	10	8	10	10	8	9	7	3422	1224	24	34	22	40	34	21	29	18	28
6	3	5	9	8	8	7	3	8	2352	3102	6	12	31	21	24	17	6	25	18
7	9	9	8	6	7	9	8	12	5411	2448	33	32	26	16	19	29	24	53	29
8	7	7	8	9	5	3	5	4	4433	1241	18	19	21	27	13	7	12	8	16
9	3	1	2	4	6	8	1	6	0233	1223	6	3	4	10	16	21	3	14	10
10	5	4	5	4	2	1	2	2	2421	3224	12	9	11	8	4	2	4	5	7
11	3	4	4	7	4	3	5	3	0324	2132	6	10	10	18	10	6	12	7	10
12	4	7	5	8	3	2	5	5	3411	3413	10	17	13	23	6	5	12	12	12
13	11	11	13	7	6	3	5	5	7144	0145	50	49	62	19	15	7	11	12	28
14	4	5	8	8	4	3	7	8	3233	1234	9	11	21	22	8	7	19	23	15
15	7	5	6	8	6	3	4	3	4123	0230	19	12	16	24	15	7	9	6	14
16	7	5	8	8	3	3	3	11	3211	1104	20	11	23	26	7	7	6	42	18
17	7	4	3	4	5	3	8	12	4412	3151	18	10	7	10	12	6	21	53	17
18	16	12	12	14	8	8	8	6	5223	2422	112	58	56	80	25	26	25	15	50
19	5	7	10	5	2	5	8	6	1342	3142	13	20	37	11	4	13	23	15	17
20	8	9	7	10	10	7	9	7	1543	1124	23	31	18	38	34	18	32	17	26
21	5	3	3	0	1	3	7	3	2011	3541	12	6	6	1	2	7	17	6	7
22	4	5	0	3	3	1	2	1	4314	0244	9	12	1	6	6	3	4	3	6
23	1	1	3	1	2	4	0	1	2201	2101	2	3	6	2	4	9	0	2	4
24	1	1	0	0	1	3	7	8	3201	2254	2	2	0	1	3	6	20	23	7
25	6	11	10	14	11	8	7	7	2213	3214	15	47	34	71	49	21	17	17	34
26	7	4	4	6	3	7	13	16	5332	2113	19	10	10	16	7	17	62	110	31
27	16	14	13	12	11	10	8	5	6414	4222	107	74	62	52	49	40	25	12	53
28	8	7	8	8	6	4	4	4	4412	4131	23	18	23	22	14	8	10	8	16
29	7	3	5	4	3	3	8	7	4131	1435	18	7	13	8	7	6	21	17	12
30	7	5	8	9	11	9	11	11	5112	4422	17	13	26	31	48	32	47	43	32
																			18.6

SEP. 1971

	3 Km								Σ Km	am							Am	Am2
1	11	9	8	6	4	4	7	7	18.7	44	28	23	14	10	10	19	18	21	21
2	1	0	0	0	0	0	0	2	1.0	2	1	1	0	0	1	1	5	1	7
3	6	4	5	5	7	1	3	1	10.7	16	8	11	13	18	2	6	3	10	6
4	0	0	2	1	0	6	8	12	9.7	1	1	4	2	1	14	26	55	13	16
5	8	10	8	11	10	9	9	7	24.0	25	34	25	41	36	27	30	19	30	26
6	4	5	9	8	9	8	4	9	18.7	8	12	29	26	28	21	9	27	20	24
7	10	9	9	7	7	9	9	11	23.7	37	32	31	18	20	29	28	50	31	28
8	7	9	8	10	6	4	6	4	18.0	20	27	26	37	14	9	15	10	20	20
9	4	2	3	6	8	8	3	7	13.7	9	4	7	14	22	26	6	17	13	13
10	6	5	5	4	3	1	1	3	9.3	15	11	13	9	7	3	3	7	9	12
11	3	4	5	7	5	4	5	4	12.3	7	10	12	20	12	8	13	9	11	11
12	4	7	6	9	2	4	6	5	14.3	10	19	14	29	5	8	14	13	14	21
13	12	11	12	7	7	5	6	5	21.7	52	47	59	17	19	11	16	13	29	21
14	4	5	8	8	3	4	7	8	15.7	10	13	22	21	7	10	20	24	16	17
15	8	5	7	9	7	4	6	5	17.0	21	12	17	29	20	9	14	11	17	17
16	7	5	8	9	4	4	4	11	17.3	19	11	25	29	10	9	9	43	19	16
17	7	4	4	5	6	4	8	13	17.0	17	10	9	13	14	9	22	65	20	34
18	15	13	13	14	9	10	8	6	29.3	99	67	70	81	27	34	25	15	52	38
19	6	7	9	4	3	6	8	6	16.3	14	20	33	10	6	14	22	16	17	22
20	8	9	8	10	10	7	10	7	23.0	22	29	25	38	37	20	37	19	28	19
21	5	3	2	1	2	4	7	3	9.0	11	6	5	2	5	9	19	7	8	13
22	4	5	0	2	3	2	2	3	7.0	10	12	1	5	6	4	4	7	6	7
23	1	1	4	1	2	5	0	1	5.0	2	3	8	2	5	12	0	2	4	4
24	1	1	0	0	2	4	9	9	8.7	2	2	1	0	5	8	27	27	9	17
25	7	13	10	13	11	8	6	7	25.0	19	64	39	64	50	25	15	18	37	26
26	7	4	5	6	4	7	12	16	20.3	17	10	11	14	9	20	55	117	32	40
27	15	13	12	12	11	10	9	6	29.3	100	69	60	54	45	40	29	15	52	44
28	8	7	8	8	6	4	5	4	16.7	23	19	24	21	15	10	12	9	17	19
29	7	3	5	3	3	3	8	6	12.7	19	7	13	7	7	7	21	15	12	14
30	6	5	8	10	12	11	12	12	25.3	14	13	26	34	51	41	56	51	36	32
																		20.1	

OCT. 1971

	3 Km								Σ Km	am							Am	Am2
1	13	10	11	8	8	9	7	11	25.7	64	40	44	25	25	27	17	45	36	40
2	11	9	9	11	8	8	7	11	24.7	43	27	33	47	25	26	19	44	33	33
3	13	10	7	8	9	9	4	6	22.0	68	39	18	22	30	31	9	15	29	27
4	8	7	7	8	8	4	9	9	20.0	24	18	18	24	24	10	27	31	22	23
5	11	8	9	5	9	6	5	10	21.0	44	24	28	11	30	14	12	38	25	27
6	14	8	6	9	8	13	5	8	23.7	71	24	14	28	22	68	11	25	33	25
7	6	6	1	4	3	6	13	13	17.3	14	14	2	8	6	15	61	64	23	30
8	11	12	7	11	12	9	7	6	25.0	43	59	19	47	51	27	19	15	35	42
9	11	14	13	11	11	11	10	9	30.0	47	80	67	45	48	41	36	32	50	36
10	6	7	6	7	1	4	5	5	13.7	15	19	15	19	3	10	12	12	13	19
11	4	4	6	5	10	8	8	6	17.0	10	9	15	12	37	25	22	16	18	13
12	4	4	0	0	6	9	9	9	13.7	9	8	1	1	14	30	28	33	16	20
13	10	8	8	7	8	9	8	7	21.7	37	22	25	17	21	30	22	18	24	21
14	7	2	5	4	10	5	7	9	16.3	18	5	11	8	35	13	17	31	17	18
15	8	6	3	5	7	5	4	6	14.7	26	15	6	13	19	13	9	16	15	15
16	3	3	2	3	6	4	6	0	9.0	7	7	5	6	16	8	15	1	8	9
17	1	2	4	3	4	1	2	5	7.3	2	4	9	6	9	2	5	11	6	6
18	2	2	1	0	0	4	2	0	3.7	5	4	3	1	1	8	5	1	4	4
19	2	1	1	0	0	0	0	3	2.3	4	3	2	1	1	1	0	7	2	4
20	2	2	3	5	7	4	6	4	11.0	4	4	7	11	17	8	16	10	10	7
21	3	3	3	3	3	3	4	7	9.7	6	6	6	6	7	7	10	17	8	11
22	2	4	10	5	2	8	8	5	14.7	5	9	34	12	5	21	26	12	16	12
23	0	1	3	4	8	8	7	7	12.7	1	2	7	9	22	21	19	20	13	16
24	7	7	9	8	12	5	8	6	20.7	18	19	29	24	59	12	25	15	25	20
25	7	3	4	5	6	5	7	4	13.7	17	6	8	12	15	13	17	9	12	13
26	0	0	0	0	0	2	2	6	3.3	1	1	1	0	0	5	5	15	4	7
27	4	3	2	3	2	3	3	3	7.7	8	6	4	6	5	6	6	7	6	9
28	3	4	8	10	9	9	12	13	22.7	6	10	21	37	30	27	57	66	32	28
29	12	11	9	9	8	10	11	11	27.0	57	48	31	33	21	37	50	45	40	39
30	10	10	8	8	6	8	2	1	17.7	39	40	22	22	16	21	4	3	21	22
31	6	2	4	1	2	6	4	3	9.3	15	5	8	3	4	14	10	7	8	10
																		19.5	

OCT. 1971

	3 Kn								σn		an						An
1	13	11	11	9	9	9	7	11	3334	4543	66	47	46	29	28	29	20	47	39
2	12	9	10	11	9	9	8	12	7423	4443	53	31	39	48	28	32	24	52	38
3	13	11	8	8	10	9	5	7	3222	3324	70	41	21	26	37	33	11	19	32
4	8	7	8	9	8	5	9	10	4443	4356	25	19	21	27	25	12	31	36	25
5	11	8	10	5	9	6	6	10	2242	3142	48	26	34	12	33	16	14	36	27
6	13	8	4	9	8	14	4	8	3221	3232	68	22	10	29	23	84	10	26	34
7	5	5	1	4	3	6	13	14	2321	1233	13	11	2	8	6	15	61	71	23
8	11	14	7	11	12	9	8	6	2322	1135	45	75	18	42	53	31	21	16	38
9	12	14	14	11	12	10	10	9	2433	1333	52	78	72	48	55	40	40	32	52
10	6	8	6	8	2	5	6	5	3313	2244	15	22	15	22	5	13	15	13	15
11	4	4	6	6	11	9	9	8	3133	4345	8	8	14	14	44	29	28	21	21
12	4	4	0	1	5	9	9	9	1412	2422	8	8	1	2	13	30	31	28	15
13	9	7	8	6	8	9	8	7	1231	5553	31	20	24	16	26	33	24	20	24
14	7	2	4	4	10	5	7	10	5233	2334	18	5	9	9	36	12	18	34	18
15	9	5	3	5	7	6	4	7	3224	3322	30	12	7	13	19	14	9	18	15
16	4	3	2	3	7	4	6	0	3433	3361	8	6	5	6	17	9	16	1	9
17	1	1	4	3	4	1	3	4	2221	3233	2	2	10	7	10	2	6	9	6
18	2	2	2	0	0	4	3	0	1221	1121	5	4	4	1	0	8	7	0	4
19	3	1	1	0	0	1	0	3	4221	2204	6	3	2	0	1	2	0	7	3
20	2	1	3	4	6	4	7	4	2212	4433	4	3	6	10	16	8	18	10	9
21	3	3	2	3	4	4	5	7	3333	5553	6	6	4	6	8	9	11	20	9
22	2	4	10	5	3	8	9	5	2343	1334	4	8	35	12	6	22	28	13	16
23	1	0	3	4	8	8	8	7	2233	2332	3	1	6	10	25	22	21	19	13
24	6	6	8	8	12	5	8	6	2133	1331	16	16	26	25	58	13	21	14	24
25	7	3	4	5	7	6	7	5	3244	2534	17	7	9	11	17	14	17	11	13
26	0	0	0	0	0	2	3	6	1210	1213	0	1	1	0	1	5	6	16	4
27	4	3	2	2	2	3	3	3	3122	3113	8	6	5	4	4	6	7	7	6
28	2	4	8	10	9	9	12	14	3322	4352	5	10	24	36	28	28	56	85	34
29	13	11	9	9	8	10	12	12	3224	2513	64	49	33	33	21	39	58	52	44
30	11	11	8	7	7	8	2	1	4223	5523	44	43	25	18	18	24	4	3	22
31	7	4	4	3	2	7	4	3	5423	3533	17	8	10	6	5	19	10	6	10
																			20.7

OCT. 1971

	3 Ks								σs		as						As
1	13	10	11	7	8	8	6	11	5423	3433	63	34	42	20	22	26	14	44	33
2	10	8	8	11	8	8	6	10	4113	2223	34	23	26	46	21	21	15	37	28
3	13	10	6	7	8	9	3	4	5423	3202	65	38	15	18	24	29	6	10	26
4	8	7	6	8	8	3	8	8	2522	3132	22	17	15	21	22	7	24	25	19
5	11	8	8	4	8	5	5	11	3222	3343	41	22	22	10	26	12	11	41	23
6	14	8	7	8	8	12	5	8	2141	2121	75	26	18	26	21	53	11	23	32
7	6	7	1	4	3	6	13	12	2121	0112	14	17	2	8	6	16	61	57	23
8	10	11	8	12	11	8	6	6	3236	1123	40	43	21	53	49	23	16	14	32
9	11	14	13	11	11	11	9	9	2242	2225	43	82	63	42	41	43	32	33	47
10	6	7	6	6	1	4	4	4	0401	1432	15	17	15	16	2	8	9	10	12
11	5	5	6	4	9	8	7	5	2212	4643	12	11	16	10	29	21	17	12	16
12	4	4	0	0	6	9	8	10	3410	0213	10	8	1	0	15	29	26	38	16
13	11	8	8	7	6	8	7	6	2111	2362	43	23	26	17	16	26	20	16	23
14	7	3	5	4	10	6	7	9	4131	1214	18	6	12	8	34	14	17	27	17
15	8	7	3	5	7	5	4	5	4401	5331	23	18	6	13	18	12	9	13	14
16	3	4	3	3	6	3	6	0	0412	2211	6	8	6	6	15	7	14	1	8
17	1	3	4	3	3	0	2	5	2111	1132	2	6	8	6	7	1	4	12	6
18	2	2	1	1	0	3	2	1	1221	1233	5	4	3	2	1	7	4	2	4
19	1	2	1	0	0	0	0	3	3321	0002	3	4	3	1	0	0	0	7	2
20	1	2	3	5	7	4	6	4	2122	6103	3	5	7	11	18	8	15	10	10
21	2	3	3	3	2	2	4	6	1110	3332	5	7	7	6	5	4	9	15	7
22	3	4	10	5	1	7	8	5	2452	2332	7	10	34	11	3	19	24	11	15
23	0	1	4	4	7	7	7	8	0311	1343	0	3	8	9	18	20	17	21	12
24	7	8	9	8	13	5	9	7	3112	1234	20	23	32	22	61	11	28	17	27
25	7	3	3	5	6	5	7	3	1113	2241	17	6	7	12	14	12	17	7	12
26	0	0	0	0	0	2	2	6	1011	0211	1	0	1	1	0	4	5	14	3
27	4	3	2	3	3	2	2	3	3032	2120	9	6	4	7	6	5	5	6	6
28	3	4	7	10	9	8	12	11	2314	4142	6	10	17	38	32	26	59	47	29
29	11	11	9	9	8	10	11	10	1422	2124	49	48	29	32	21	34	43	38	37
30	10	10	7	8	5	7	2	1	4433	3113	34	38	20	25	13	18	5	3	20
31	5	1	3	0	1	4	4	4	1201	2334	12	2	7	1	2	10	10	9	7
																			18.3

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	3 Kn								σn	an							An
1	7	6	4	3	4	3	3	3	3432 2133	17	16	9	7	8	7	6	6	10
2	0	0	2	2	2	4	5	2	1122 4553	0	0	4	5	5	9	11	5	5
3	2	1	2	3	4	2	2	2	3333 1222	5	3	4	6	8	4	5	4	5
4	5	4	4	3	4	6	5	3	2221 2132	13	9	10	6	9	15	11	6	10
5	3	2	3	5	7	4	3	5	1413 4355	7	5	7	11	17	10	7	11	9
6	4	1	1	1	2	0	3	3	2332 3232	9	2	3	3	4	1	6	7	4
7	5	7	4	6	8	3	0	2	2422 3122	11	17	10	16	25	7	1	4	11
8	5	4	4	6	7	9	9	8	2421 2454	12	8	10	15	18	27	31	23	18
9	5	3	1	2	4	4	3	1	4343 3532	11	6	3	5	8	9	6	2	6
10	4	2	3	2	4	5	7	7	4333 3333	8	5	6	4	8	12	20	20	10
11	11	9	5	6	7	8	12	7	3421 3543	41	33	13	16	19	24	54	17	27
12	8	5	9	3	3	5	7	7	4252 3355	24	11	29	6	6	13	19	18	16
13	2	3	4	3	4	4	1	1	2531 2322	5	6	8	7	8	10	2	2	6
14	1	0	0	0	0	0	2	4	2111 1125	2	1	1	1	1	0	4	8	2
15	3	1	0	1	0	0	3	2	3312 1155	6	2	0	2	1	1	6	5	3
16	2	0	2	1	0	0	0	0	3132 1211	4	1	4	3	1	1	1	1	2
17	0	0	0	0	0	1	4	3	1110 1331	0	1	1	0	1	3	9	7	3
18	8	8	5	5	7	5	0	4	2232 3322	22	25	11	11	18	12	1	8	14
19	4	5	4	3	8	10	5	5	3331 3524	8	12	8	7	25	36	12	12	15
20	1	4	5	7	2	5	8	7	3234 2263	3	8	11	18	5	13	26	18	13
21	4	3	7	9	9	6	9	9	2325 5533	9	6	19	31	32	15	28	30	21
22	11	9	12	11	9	9	13	13	5134 3434	41	32	52	42	28	33	70	63	45
23	13	11	16	9	12	13	14	15	6241 4432	70	50	109	31	54	63	77	88	68
24	14	13	12	9	14	13	10	12	2343 6655	76	65	60	30	75	62	35	60	58
25	12	15	14	14	13	12	10	11	2235 5544	52	89	81	77	67	59	35	45	63
26	9	11	12	11	8	9	8	2	3333 5543	31	42	52	44	25	30	24	4	32
27	4	6	4	7	6	8	6	7	3313 3335	10	14	8	17	16	25	15	18	15
28	7	4	8	9	6	4	9	4	3222 3353	18	9	21	30	16	8	28	10	18
29	5	3	1	3	5	5	7	4	2423 2564	11	7	2	7	11	13	20	10	10
30	3	2	3	4	6	0	2	6	3231 2135	7	5	7	8	14	1	4	14	8
																		17.6

NOV. 1971

	3 Ks								σs	as							As
1	7	4	4	2	3	3	2	2	5433 0121	19	10	10	4	6	6	4	5	8
2	0	0	1	2	1	3	4	2	1012 2241	1	0	2	4	2	7	8	5	4
3	2	3	1	2	3	3	4	3	3233 4135	5	7	3	4	7	6	9	7	6
4	8	5	4	4	3	7	5	3	2121 0311	22	13	10	8	6	20	12	7	12
5	3	3	3	4	6	5	3	4	1411 5323	7	6	7	8	15	12	7	9	9
6	4	2	0	1	1	2	4	4	1213 2243	8	4	1	2	3	4	9	10	5
7	6	8	6	6	7	4	1	2	2111 1431	14	23	16	16	18	8	3	5	13
8	5	3	5	7	7	9	7	8	3111 1234	12	7	13	17	17	32	19	23	18
9	5	1	1	1	2	2	2	0	2332 3311	11	3	3	3	5	4	5	1	4
10	3	1	1	1	3	5	8	8	0322 2132	6	3	3	3	7	13	21	25	10
11	11	10	5	7	8	6	12	6	3311 3230	45	40	12	17	21	16	51	15	27
12	8	6	7	3	3	4	7	7	3032 2154	21	15	19	7	6	9	19	18	14
13	3	2	3	4	3	2	1	2	1314 2433	7	5	7	8	7	4	3	5	6
14	1	0	0	1	0	0	2	3	3102 0011	2	1	0	3	0	0	5	6	2
15	2	2	0	3	0	0	2	3	1302 0031	5	4	0	7	0	0	4	6	3
16	2	0	1	1	0	0	0	2	2133 0001	4	1	2	2	0	0	0	5	2
17	0	0	0	0	1	2	4	5	1110 2231	1	1	1	0	2	4	10	12	4
18	8	9	6	6	7	4	2	8	2320 1323	22	27	15	15	18	10	4	21	17
19	5	7	5	4	6	10	7	5	1113 4141	13	17	13	9	16	34	18	13	17
20	4	4	4	7	4	8	6	7	3221 1224	10	10	10	17	8	22	16	18	14
21	4	7	9	8	8	8	8	8	2311 3323	9	20	32	26	26	21	22	24	23
22	11	9	11	10	8	9	14	14	2111 1255	43	32	45	34	26	32	82	71	46
23	13	12	13	11	11	12	13	13	4213 1241	67	53	61	45	49	57	67	62	58
24	11	10	10	8	12	11	10	11	2121 5412	47	34	40	26	56	49	34	47	42
25	10	15	12	14	11	14	10	9	1222 2734	34	92	56	74	41	82	39	33	56
26	6	9	10	10	8	8	9	3	0412 3142	15	30	34	40	24	26	27	6	25
27	6	5	5	7	6	7	7	5	2111 2241	14	13	13	18	15	19	18	13	15
28	7	4	5	9	7	4	8	4	4142 1323	18	8	13	29	17	10	22	10	16
29	5	3	1	3	3	3	6	6	2020 1220	11	6	3	6	7	7	15	15	9
30	3	3	4	5	6	1	4	4	1111 0333	7	7	8	13	15	3	10	10	9
																		16.5

NOV. 1971

	3 Km								Σ Km	am							Am	Am2
1	7	5	4	2	3	3	2	3	9.7	18	13	10	5	7	6	5	6	9	7
2	0	0	1	2	1	4	4	2	4.7	0	0	3	4	3	8	9	5	4	5
3	2	2	1	2	3	2	3	2	5.7	5	5	3	5	7	5	7	5	5	7
4	7	5	4	3	4	7	5	3	12.7	17	11	10	7	8	17	11	7	11	9
5	3	3	3	4	6	5	3	4	10.3	7	6	7	9	16	11	7	10	9	8
6	4	1	1	1	2	1	3	4	5.7	8	3	2	3	4	3	7	8	5	9
7	5	7	5	6	8	3	1	2	12.3	13	20	13	16	22	7	2	4	12	10
8	5	4	5	6	7	9	8	8	17.3	12	8	11	16	18	30	25	23	18	13
9	5	2	1	2	3	3	3	0	6.3	11	4	3	4	6	7	6	1	5	10
10	3	2	2	2	4	5	7	8	11.0	7	4	5	4	8	13	20	22	10	13
11	11	10	5	6	7	7	12	6	21.3	43	36	13	16	20	20	53	16	27	22
12	8	5	8	3	3	5	7	7	15.3	22	13	24	7	6	11	19	18	15	16
13	3	2	4	4	3	3	1	1	7.0	6	5	8	8	7	7	2	3	6	7
14	1	0	0	1	0	0	2	3	2.3	2	1	0	2	0	0	5	7	2	3
15	2	1	0	2	0	0	2	2	3.0	5	3	0	5	0	0	5	5	3	3
16	2	0	1	1	0	0	0	1	1.7	4	1	3	3	0	1	0	3	2	2
17	0	0	0	0	1	1	4	4	3.3	1	1	1	0	2	3	10	10	4	7
18	8	8	5	5	7	5	1	6	15.0	22	26	13	13	18	11	3	14	15	12
19	5	6	5	4	7	10	6	5	16.0	11	15	11	8	20	35	15	13	16	14
20	3	4	5	7	3	7	8	7	14.7	6	9	11	17	7	18	21	18	13	17
21	4	5	8	9	9	7	8	9	19.7	9	13	25	29	29	18	25	27	22	25
22	11	9	11	10	9	9	14	13	28.7	42	32	48	38	27	32	76	67	45	44
23	13	12	14	10	12	12	14	14	33.7	68	51	85	38	52	60	72	75	63	56
24	13	11	11	9	13	12	10	12	30.3	61	49	50	28	65	55	35	54	50	58
25	11	15	13	14	12	13	10	10	32.7	43	91	69	76	54	70	37	39	60	52
26	8	10	11	11	8	9	8	2	22.3	23	36	43	42	24	28	25	5	28	30
27	5	6	5	7	6	8	7	6	16.7	12	14	11	18	15	22	17	16	16	17
28	7	4	7	9	6	4	8	4	16.3	18	8	17	29	16	9	25	10	17	14
29	5	3	1	3	4	4	7	5	10.7	11	7	3	7	9	10	17	12	10	10
30	3	3	4	4	6	1	3	5	9.7	7	6	8	10	14	2	7	12	8	9
																		17.0	

DEC. 1971

	3 Km								Σ Km	am							Am	Am2
1	3	4	4	6	4	6	8	7	14.0	6	8	8	14	8	14	24	20	13	10
2	3	5	1	3	6	8	4	5	11.7	6	11	3	6	16	23	9	12	11	14
3	5	5	9	8	8	10	10	4	19.7	11	11	30	23	22	37	35	10	22	19
4	6	6	7	5	4	6	7	8	16.3	15	15	17	12	8	14	17	24	15	17
5	4	3	5	5	6	1	1	4	9.7	9	7	13	11	14	2	3	9	9	9
6	4	3	1	0	0	0	2	3	4.3	8	7	2	1	0	1	5	6	4	5
7	1	3	2	1	1	4	2	1	5.0	3	6	4	2	2	9	5	3	4	4
8	3	2	2	2	4	4	2	4	7.7	7	4	4	5	9	9	5	10	7	10
9	7	8	4	9	4	6	7	7	17.3	18	24	10	30	8	16	18	18	18	12
10	5	1	1	3	6	4	4	2	8.7	11	2	3	6	14	8	8	5	7	9
11	2	2	1	4	4	8	9	9	13.0	4	5	2	8	10	25	30	29	14	12
12	5	4	4	4	3	8	10	10	16.0	13	8	8	8	6	26	35	38	18	20
13	8	4	8	8	7	8	8	10	20.3	24	10	23	23	19	24	26	34	23	20
14	2	3	3	4	5	1	1	2	7.0	5	6	7	10	12	2	2	4	6	11
15	5	2	3	3	3	4	3	2	8.3	12	4	7	6	7	10	7	5	7	6
16	3	2	2	3	1	4	10	11	12.0	7	4	4	6	3	8	37	44	14	22
17	14	12	11	10	14	19	19	15	38.0	74	59	42	39	72	183	192	102	95	66
18	9	9	9	16	15	9	8	7	27.3	33	30	31	109	93	27	24	18	46	63
19	2	4	10	11	8	9	7	5	18.7	4	10	39	48	24	29	19	13	23	23
20	3	1	1	1	1	2	5	6	6.7	6	3	2	3	3	5	12	16	6	10
21	4	3	2	4	8	7	11	11	16.7	8	7	5	9	21	18	49	41	20	19
22	8	8	9	9	10	10	9	9	24.0	24	23	29	30	40	35	31	32	31	28
23	8	7	7	6	8	9	10	3	19.3	23	20	19	15	22	29	40	7	22	23
24	6	6	6	7	8	2	6	4	15.0	14	15	15	18	21	4	15	10	14	15
25	4	4	4	4	6	6	4	7	13.0	8	10	9	10	14	16	10	19	12	14
26	8	8	7	3	4	6	8	8	17.3	26	26	17	7	8	16	21	25	18	16
27	5	4	6	4	1	1	1	1	7.7	12	10	15	8	3	2	3	2	7	9
28	1	2	3	2	2	5	7	7	9.7	3	4	6	4	4	12	17	19	9	11
29	4	6	9	11	10	7	7	11	21.7	9	16	30	41	38	20	19	44	27	26
30	11	9	10	11	7	8	7	6	23.0	41	32	35	43	19	24	18	14	28	25
31	6	6	5	2	4	6	7	7	14.3	15	15	11	5	8	14	17	20	13	13
																		18.2	

DEC. 1971

	3 Kn								σn								An
1	3	3	4	5	4	6	7	7	4442	4454	7	6	8	13	8	14	19-	19	12
2	2	4	0	2	6	9	3	5	3323	1422	5	8	1	4	15	31	7	12	10
3	4	5	10	8	7	11	10	4	3344	3452	9	11	34	22	18	45	40	9	24
4	6	6	5	5	5	6	5	8	3332	3515	15	15	11	12	11	16	13	24	15
5	4	3	5	6	6	1	0	4	2333	3322	8	6	12	14	14	3	1	8	8
6	3	4	1	0	0	0	2	2	2521	0042	7	9	2	1	0	0	4	4	3
7	1	2	1	0	0	4	2	0	2432	2531	2	5	2	1	1	8	4	1	3
8	4	1	1	1	4	4	1	4	2323	4232	8	3	3	3	9	8	3	8	6
9	6	8	4	8	3	5	6	7	1323	1113	15	21	9	24	7	13	15	17	15
10	5	1	0	1	7	4	3	2	3322	5423	13	2	1	2	18	9	7	4	7
11	1	1	0	4	4	8	8	8	3223	2442	3	2	1	8	9	25	21	23	12
12	5	3	1	2	1	9	9	11	3232	3633	12	7	3	4	3	29	28	43	16
13	8	5	9	9	7	8	9	10	3224	1235	22	12	30	27	18	23	28	39	25
14	2	2	2	3	5	0	0	1	3234	4212	5	5	4	7	12	1	1	3	5
15	4	1	3	2	3	4	2	0	3312	4221	8	3	6	4	6	8	5	1	5
16	2	1	0	2	1	4	9	11	3322	2425	5	3	1	5	2	8	32	44	13
17	14	13	12	10	12	19	20	13	3325	2273	85	70	53	34	60	185	206	70	95
18	9	9	8	14	14	9	8	5	4442	6323	32	32	24	86	81	28	21	13	40
19	2	3	9	11	9	10	8	4	4423	4341	4	7	30	44	27	35	22	8	22
20	2	1	0	0	1	3	5	7	4322	3153	5	2	1	1	2	6	13	17	6
21	4	3	2	4	8	6	12	11	2323	2135	8	6	5	9	21	16	54	48	21
22	8	9	9	9	11	10	10	9	2443	3341	25	28	32	28	44	40	34	30	33
23	8	8	6	6	8	9	11	3	3213	3444	26	26	16	16	26	32	45	7	24
24	6	7	7	8	8	1	7	5	4332	6356	15	17	18	21	24	3	18	11	16
25	3	5	4	4	6	5	4	7	4422	4324	7	11	9	8	14	13	9	18	11
26	9	9	7	4	5	7	8	9	3434	3466	28	33	20	8	11	18	25	31	22
27	6	5	7	4	1	1	0	0	3445	5221	14	12	19	10	3	2	1	1	8
28	0	1	2	1	2	4	5	6	2233	3436	1	3	5	3	4	10	12	16	7
29	4	7	9	11	11	7	6	11	3225	3212	10	19	30	44	47	20	16	42	29
30	11	9	10	10	7	8	7	5	4113	3453	46	28	36	40	20	24	17	13	28
31	6	7	4	2	4	5	7	8	3523	3354	16	19	9	4	8	13	18	22	14
																			17.9

DEC. 1971

	3 Ks								σs								As
1	2	4	3	6	3	5	9	8	3414	1153	5	9	7	15	7	13	30	21	13
2	3	5	2	3	7	6	5	5	2132	4121	6	13	4	7	17	16	11	12	11
3	5	5	8	8	8	9	9	5	2331	1222	12	11	26	23	26	29	29	11	21
4	6	6	8	5	3	5	8	8	0133	1233	15	16	22	12	6	12	21	24	16
5	4	3	6	4	5	1	2	4	4101	1113	9	7	15	9	13	2	5	10	9
6	4	2	1	0	0	1	3	4	3331	0334	10	5	2	1	0	2	6	8	4
7	2	3	2	1	2	5	3	3	2212	2205	4	6	5	2	4	11	6	6	6
8	3	2	2	3	4	4	3	5	0330	1322	6	5	4	6	8	9	7	12	7
9	8	8	5	10	4	7	8	7	3133	3433	21	26	12	36	9	18	21	20	20
10	4	1	2	4	4	4	4	3	3233	2130	10	2	4	10	10	8	10	6	8
11	2	4	1	4	4	8	10	10	1131	4334	5	8	2	8	10	25	38	35	16
12	6	4	5	5	4	8	11	10	2313	4421	14	9	12	12	8	24	43	34	20
13	8	4	6	7	7	8	8	9	1313	3314	26	9	16	20	19	24	23	29	21
14	2	3	4	5	5	1	1	3	1212	1331	5	7	9	12	12	3	3	6	7
15	6	2	4	3	3	5	4	4	5312	4234	16	4	9	7	7	12	9	10	9
16	4	2	3	4	2	4	11	11	3324	1421	10	5	7	8	5	8	42	45	16
17	13	11	9	11	14	19	19	17	3121	1616	64	49	32	45	84	180	177	134	96
18	10	9	10	17	16	8	8	8	4223	1112	34	29	37	132	106	26	26	22	52
19	2	5	11	12	8	8	6	7	2311	2255	4	12	49	53	21	22	16	19	25
20	4	2	1	2	2	2	5	6	5222	2231	8	4	3	5	4	5	12	16	7
21	4	4	3	4	8	7	11	10	1113	2331	8	8	6	9	21	20	44	34	19
22	8	7	8	9	10	9	9	10	2112	1234	22	18	26	32	37	29	28	35	28
23	8	6	8	5	7	8	10	3	3221	1112	21	15	21	13	18	26	34	7	19
24	5	5	5	6	7	2	5	4	1240	1353	13	13	13	15	18	4	12	10	12
25	4	4	4	5	6	7	5	7	3432	4423	10	10	9	11	14	18	11	20	13
26	8	7	6	3	3	6	7	7	1102	5213	23	18	15	7	6	15	17	19	15
27	4	3	5	3	1	1	2	1	3224	2223	9	7	11	7	3	3	4	3	6
28	3	3	3	2	2	5	8	8	1114	4423	6	6	7	4	4	13	22	21	10
29	4	5	9	10	9	8	8	11	1103	2221	9	13	29	39	29	21	22	45	26
30	10	10	10	11	7	8	7	6	1113	3241	37	37	34	45	19	25	20	16	29
31	6	5	5	3	4	6	6	7	0211	1221	15	11	13	6	8	14	16	17	13
																			18.5

JANUARY 1971

Table 10 Dst

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	G.M.T. 23	24
1	-7	-10	-10	-6	-9	-11	-11	-9	-10	-11	-15	-10	-5	-1	-0	-0	3	3	-0	-3	-3	-8	-10	-6
2	2	-4	0	4	-5	-2	1	5	-3	-7	-8	-6	-1	0	-1	-4	-7	-7	-7	-6	-5	-7	-10	-12
3	-19	-16	-14	-13	-16	-20	-16	-13	-10	-16	-23	-19	-17	-23	-20	-15	-11	-16	-28	-22	-23	-21	-27	-26
4	-25	-23	-21	-19	-16	-17	-22	-24	-18	-18	-16	-14	-17	-24	-26	-24	-21	-19	-17	-16	-14	-15	-16	-18
5	-19	-20	-19	-19	-15	-13	-13	-12	-12	-10	-13	-12	-12	-17	-17	-16	-17	-14	-13	-9	-7	-5	-9	-16
6	-17	-16	-14	-15	-13	-15	-15	-15	-10	-10	-13	-13	-14	-15	-15	-15	-16	-17	-15	-11	-7	-7	-8	-9
7	-11	-11	-11	-12	-12	-12	-12	-9	-7	-10	-9	-7	-9	-8	-6	-5	-6	-6	-3	-3	-5	-8	-7	-7
8	-7	-5	-5	-7	-8	-6	-3	-1	2	3	1	-1	-1	-2	0	-2	-2	-2	1	3	2	1	-1	-1
9	-1	1	2	-0	-2	-1	2	7	11	13	13	10	7	8	9	9	8	8	8	8	7	8	8	6
10	5	6	8	9	9	7	7	11	16	17	14	7	5	7	11	12	9	9	9	3	5	2	1	6
11	5	6	6	5	0	-5	-13	-7	-2	-2	-3	-6	-7	-8	-11	-13	-9	-6	-2	0	-2	-1	-2	-5
12	-4	-3	-3	-4	-3	-3	-5	-7	-8	-9	-9	-5	-3	-4	-5	-5	-1	3	4	2	0	3	5	6
13	7	12	14	13	13	10	2	0	0	2	5	8	6	2	19	11	13	13	12	14	17	17	8	7
14	3	3	8	7	1	-3	-8	-9	-7	-14	-21	-20	-16	-20	-24	-26	-23	-16	-13	-14	-11	-8	-6	-4
15	-7	-6	-5	-4	-7	-17	-24	-27	-26	-27	-28	-29	-25	-24	-24	-24	-22	-16	-10	-12	-10	-10	-5	-5
16	-5	-3	-2	-0	1	-2	-8	-14	-13	-12	-18	-16	-13	-13	-12	-13	-7	-3	-2	-3	-5	-5	1	3
17	2	12	7	7	6	7	6	2	5	4	-1	1	5	-4	-8	-8	-5	-0	1	-3	-6	-4	-1	-1
18	3	5	5	5	8	8	10	17	27	38	33	18	11	0	-21	-29	-22	-17	-17	-20	-22	-20	-17	-16
19	-16	-16	-12	-10	-10	-9	-7	-2	-3	-5	-9	-11	-14	-19	-22	-21	-19	-15	-10	-9	-10	-6	-4	-13
20	-13	-23	-19	-26	-27	-38	-24	-15	-10	-14	-21	-23	-22	-24	-31	-37	-38	-34	-27	-25	-25	-26	-30	-31
21	-32	-29	-24	-22	-18	-20	-22	-13	-11	-16	-15	-18	-19	-19	-16	-14	-11	-8	-8	-5	0	-2	-4	-4
22	-2	-5	-7	-10	-12	-12	-13	-10	-10	-8	-3	-1	-0	-2	-3	-2	1	2	-3	-11	-14	-15	-9	-8
23	-11	-15	-14	-12	-10	-12	-11	-8	-3	-4	-7	-8	-8	-9	-9	-8	-6	-8	-13	-17	-15	-16	-14	-14
24	-13	-14	-15	-13	-12	-14	-12	-6	-3	-2	-1	3	6	4	4	4	2	-2	-9	-11	-16	-5	-7	-8
25	-20	-16	-12	-11	-16	-24	-19	-16	-14	-14	-20	-18	-13	-9	-9	-12	-15	-15	-13	-13	-8	-2	-1	1
26	-2	-5	-5	-3	-2	-3	-2	1	1	-1	-2	2	4	5	4	5	4	4	1	-0	2	4	4	5
27	8	8	8	9	18	15	-11	-35	-47	-39	-36	-30	-32	-39	-57	-61	-70	-52	-75	-79	-84	-82	-75	-66
28	-59	-61	-62	-64	-56	-58	-60	-61	-63	-69	-67	-64	-57	-53	-58	-60	-59	-68	-75	-81	-88	-86	-71	-70
29	-60	-50	-43	-51	-52	-46	-42	-44	-44	-46	-51	-42	-34	-23	-21	-24	-27	-22	-27	-31	-31	-28	-25	-20
30	-20	-21	-28	-25	-38	-42	-26	-20	-18	-27	-37	-42	-31	-22	-22	-24	-25	-24	-24	-26	-25	-15	-29	-34
31	-30	-21	-23	-23	-24	-26	-27	-25	-22	-22	-19	-21	-19	-15	-15	-13	-9	-11	-17	-20	-16	-10	-9	-8

FEBRUARY 1971

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	G.M.T. 23	24
1	-12	-10	-4	-16	-21	-22	-29	-27	-26	-29	-29	-25	-22	-22	-25	-23	-17	-16	-16	-18	-16	-14	-15	-18
2	-21	-24	-25	-24	-24	-23	-21	-20	-19	-17	-19	-19	-19	-18	-18	-17	-15	-18	-19	-15	-13	-11	-11	-13
3	-17	-20	-17	-11	-12	-12	-9	-6	-6	-5	-2	-2	-6	-8	-10	-8	-5	-5	-8	-9	-9	-9	-11	-12
4	-11	-10	-11	-11	-10	-8	-6	-4	-2	-1	-2	-1	-3	-4	-8	-11	-9	-3	-2	0	2	8	14	7
5	-0	-1	-1	1	1	1	3	6	10	9	2	1	4	3	2	3	3	1	-1	-2	-3	-2	0	2
6	2	-1	-3	-5	-4	-5	-10	-13	-13	-12	-8	-5	-5	-7	-7	-7	-2	-9	-12	-13	-15	-14	-9	2
7	4	7	0	-3	-4	-3	-3	-5	-7	-8	-8	-3	-0	3	5	5	8	10	9	9	8	5	3	6
8	18	13	1	-7	-7	-5	-4	-1	1	2	5	3	3	4	3	1	0	-1	-2	-2	1	9	8	5
9	10	10	7	4	-3	1	0	-8	-14	-9	-3	2	0	-8	-11	-9	-5	-4	-6	-6	-7	-6	-3	-7
10	-10	-6	-3	-3	-5	-6	-10	-9	-9	-11	-6	-2	-3	-3	-2	-8	-6	-6	-8	-10	-20	-28	-30	-28
11	-25	-24	-21	-19	-18	-18	-18	-19	-18	-19	-10	-8	-6	-6	-4	-2	-4	-7	-9	-10	-9	-6	-6	-1
12	2	4	5	6	4	0	-5	-6	-1	2	1	0	1	1	-2	-5	-3	-3	-4	-6	-8	-8	-10	-7
13	-4	-3	-2	-2	-1	-3	-4	-3	-5	-9	-10	-9	-5	-3	1	3	2	1	-1	-2	-4	-6	-6	-2
14	2	8	10	13	16	22	28	23	23	13	0	5	5	-16	-24	-30	-33	-30	-35	-36	-33	-40	-42	-35
15	-34	-30	-32	-31	-25	-21	-22	-21	-21	-18	-20	-14	-14	-14	-5	-9	-17	-25	-30	-31	-40	-39	-49	-43
16	-54	-57	-45	-38	-37	-39	-42	-53	-45	-40	-34	-31	-28	-27	-28	-32	-26	-25	-28	-26	-29	-30	-31	-29
17	-30	-34	-32	-27	-25	-31	-34	-30	-27	-24	-25	-23	-26	-23	-24	-24	-24	-26	-28	-28	-29	-30	-34	-36
18	-33	-32	-34	-32	-29	-23	-24	-28	-29	-30	-25	-24	-25	-26	-25	-22	-21	-18	-18	-21	-19	-20	-20	-26
19	-28	-29	-32	-32	-29	-27	-28	-32	-29	-23	-19	-21	-20	-17	-16	-16	-17	-16	-15	-14	-14	-16	-19	-20
20	-19	-19	-24	-25	-21	-17	-16	-15	-17	-17	-13	-10	-11	-11	-9	-7	-12	-14	-16	-20	-22	-28	-28	-24
21	-22	-26	-26	-25	-25	-28	-29	-31	-32	-30	-28	-23	-23	-21	-17	-15	-18	-19	-20	-16	-15	-17	-15	-13
22	-10	-9	-12	-13	-16	-16	-15	-17	-19	-16	-12	-9	-7	-7	-6	-7	-8	-8	-6	-5	-6	-8	-7	-5
23	-5	-7	-11	-11	-11	-5	-4	-7	-5	-1	1	1	6	11	11	8	4	7	-0	-13	-29	-45	-48	-52
24	-46	-43	-43	-41	-37	-32	-28	-26	-23	-19	-15	-17	-15	-9	-5	-4	-2	-0	-1	-1	-5	-12	-28	-39
25	-47	-52	-48	-44	-45	-42	-38	-40	-34	-25	-19	-19	-18	-5	-28	-45	-34	-46	-55	-61	-66	-76	-56	-51
26	-46	-45	-52	-51	-61	-58	-52	-56	-55	-53	-44	-42	-42	-39	-40	-43	-38	-35	-36	-33	-33	-33	-32	-32
27	-26	-25	-27	-29	-27	-28	-26	-27	-24	-22	-21	-23	-23	-22	-19	-19	-21	-23	-23	-27	-33	-33	-29	-33
28	-35	-36	-38	-38	-37	-32	-27	-25	-24	-22	-20	-20	-21	-18	-17	-14	-12	-10	-10	-9	-10	-10	-11	-12

MARCH 1971

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	G.M.T. 24
1	-15	-14	-14	-16	-20	-21	-18	-17	-19	-14	-11	-10	-10	-6	-7	-7	-9	-7	-6	-3	-3	-3	-2	1
2	2	4	5	4	-8	-8	-9	-11	-9	-4	-3	-3	-4	-6	-5	-2	-5	-6	-5	-4	-5	-8	-9	-7
3	-5	-2	-3	-6	-8	-11	-16	-14	-12	-6	-5	-8	-6	-5	-3	-4	-4	-2	-2	-9	-11	-10	-13	-24
4	-25	-18	-20	-20	-15	-14	-17	-23	-19	-13	-10	-10	-17	-23	-30	-33	-37	-36	-32	-26	-24	-23	-21	-17
5	-15	-14	-15	-22	-21	-18	-19	-21	-18	-11	-8	-9	-12	-8	-9	-12	-15	-12	-8	-7	-10	-9	-6	-4
6	-7	-9	-12	-16	-16	-12	-10	-10	-6	-5	-3	-2	-3	-3	-3	-6	-8	-10	-11	-10	-11	-13	-12	-11
7	-9	-6	-6	-7	-8	-9	-11	-11	-7	-4	0	3	0	-4	-5	-6	-8	-9	-7	-4	1	7	9	13
8	12	8	-2	-3	1	5	8	8	6	8	9	4	-2	4	7	4	-3	-12	-12	-9	-11	-12	-8	-8
9	-9	-7	-5	-7	-11	-13	-11	-13	-10	-10	-9	-8	-5	-0	3	2	1	0	0	3	2	3	3	4
10	5	2	12	5	1	0	-6	-10	-8	-8	-11	-15	-12	-7	-10	-11	-11	-11	-8	-10	-7	-6	-5	-2
11	0	0	1	-3	-9	-11	-9	-10	-5	-1	2	-3	-2	5	3	2	-3	-4	-2	-2	1	7	8	6
12	9	10	9	4	0	1	0	1	3	2	-4	-13	-12	-10	-6	-7	-8	-15	-23	-36	-52	-55	-37	-31
13	-33	-24	-21	-27	-25	-24	-25	-39	-46	-43	-42	-35	-38	-46	-42	-34	-42	-40	-39	-49	-51	-41	-39	-32
14	-27	-28	-31	-32	-31	-32	-41	-54	-51	-49	-59	-46	-40	-46	-47	-41	-37	-38	-37	-37	-37	-35	-30	-33
15	-42	-42	-38	-39	-43	-39	-39	-37	-38	-38	-38	-36	-34	-30	-29	-30	-32	-30	-29	-26	-31	-30	-26	-25
16	-23	-21	-26	-27	-28	-25	-25	-25	-23	-24	-25	-27	-23	-23	-24	-26	-22	-19	-17	-19	-23	-23	-21	-19
17	-17	-18	-21	-22	-23	-21	-19	-21	-20	-22	-20	-21	-23	-21	-19	-22	-24	-25	-26	-28	-29	-25	-28	-30
18	-31	-29	-28	-26	-25	-27	-25	-22	-17	-17	-18	-16	-16	-15	-15	-17	-19	-19	-19	-16	-14	-9	-6	-7
19	-10	-11	-10	-14	-18	-20	-16	-15	-16	-17	-13	-10	-0	-3	-14	-19	-18	-22	-26	-30	-38	-35	-36	-43
20	-49	-51	-51	-52	-55	-50	-44	-41	-35	-29	-25	-23	-20	-18	-19	-16	-15	-12	-13	-16	-16	-19	-21	-20
21	-17	-15	-13	-12	-11	-11	-11	-11	-13	-16	-16	-15	-16	-16	-17	-15	-13	-11	-11	-12	-8	-9	-11	-12
22	-14	-14	-15	-15	-16	-14	-12	-10	-6	-3	-4	-5	-7	-5	-5	-4	-3	-2	-3	-4	-4	-4	-4	-2
23	-2	-2	-1	3	5	7	10	13	17	20	18	18	13	10	7	9	11	7	5	3	8	6	9	9
24	7	8	2	4	1	1	8	4	-12	-9	2	0	-0	-0	-3	-6	-4	-9	-16	-17	-18	-14	-12	-11
25	-12	-11	-6	-2	-2	-3	-10	-21	-23	-11	-4	-8	-9	-10	-15	-15	-16	-16	-18	-18	-16	-11	-4	-4
26	-8	-7	-5	-9	-10	-11	-15	-23	-22	-18	-14	-13	-8	-7	-10	-13	-11	-12	-13	-18	-20	-16	-13	-12
27	-14	-12	-10	-8	-13	-15	-16	-11	-6	-4	-7	-8	-11	-8	-5	-8	-8	-6	-8	-7	-6	-6	-7	-8
28	-6	-5	-5	-6	-9	-8	-6	-3	-2	-2	-4	-4	-0	1	0	-0	0	3	3	2	-0	-1	3	4
29	5	5	4	3	1	-2	-3	-2	1	-2	-2	2	7	7	5	4	4	3	4	5	7	9	10	9
30	6	3	4	7	5	2	1	3	3	-2	-5	-5	1	3	-2	-4	-5	-3	-10	-10	-8	-11	-7	-7
31	-15	-17	-26	-29	-24	-27	-30	-36	-29	-27	-31	-29	-20	-17	-19	-22	-37	-41	-43	-47	-43	-37	-36	-33

APRIL 1971

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	G.M.T. 24
1	-32	-31	-33	-34	-41	-40	-46	-46	-40	-35	-31	-27	-24	-22	-19	-19	-16	-17	-17	-18	-17	-13	-11	-13
2	-14	-16	-18	-21	-21	-20	-19	-16	-15	-14	-15	-10	-11	-16	-21	-21	-19	-15	-14	-14	-15	-11	-11	-13
3	-16	-17	-17	-17	-24	-31	-35	-29	-22	-21	-17	-13	-8	-6	-10	-16	-19	-19	-18	-16	-19	-9	4	-24
4	-28	-36	-39	-33	-35	-34	-16	-20	-12	-10	-3	-5	-4	-2	-10	-13	-13	-32	-49	-38	-29	-22	-35	-40
5	-36	-31	-27	-27	-25	-25	-23	-21	-21	-16	-14	-13	-12	-13	-16	-17	-22	-19	-18	-21	-17	-18	-20	-24
6	-30	-29	-26	-30	-37	-33	-29	-22	-18	-25	-22	-16	-10	-10	-13	-13	-13	-13	-13	-13	-9	-11	-11	-9
7	-12	-12	-13	-12	-15	-19	-14	-13	-10	-8	-10	-10	-6	-3	-4	-7	-8	-7	-8	-9	-6	-4	-6	-2
8	0	1	-1	-2	-1	-3	-3	-1	1	5	5	-0	-6	-9	-10	-11	-12	-15	-20	-22	-21	-22	-25	-24
9	-19	-13	-9	-7	2	13	-3	-24	-44	-66	-68	-68	-67	-64	-68	-64	-67	-79	-81	-77	-82	-89	-77	-71
10	-66	-58	-64	-69	-71	-70	-59	-54	-54	-53	-47	-44	-35	-33	-35	-31	-34	-36	-39	-40	-41	-43	-42	-41
11	-37	-38	-42	-42	-45	-44	-43	-29	-28	-40	-47	-48	-33	-30	-37	-39	-41	-39	-38	-42	-41	-43	-45	-44
12	-44	-45	-43	-37	-36	-34	-31	-28	-27	-30	-26	-21	-19	-18	-21	-22	-22	-23	-27	-24	-26	-28	-36	-38
13	-35	-36	-33	-27	-25	-26	-22	-19	-20	-22	-24	-21	-18	-23	-24	-23	-23	-23	-24	-25	-21	-17	-16	-14
14	-18	-21	-22	-23	-22	-20	-21	-21	-18	-17	-13	-10	-2	9	-5	-3	-10	-17	-31	-51	-73	-85	-106	-110
15	-126	-132	-119	-112	-101	-94	-86	-84	-81	-81	-86	-89	-79	-64	-60	-59	-56	-57	-52	-50	-50	-53	-53	-53
16	-57	-61	-62	-64	-63	-61	-58	-52	-50	-54	-55	-48	-46	-43	-40	-37	-36	-36	-36	-35	-33	-33	-32	-37
17	-38	-40	-39	-41	-42	-46	-42	-33	-33	-35	-36	-31	-26	-25	-25	-25	-22	-21	-19	-17	-15	-16	-18	-20
18	-23	-23	-22	-22	-24	-24	-16	-8	-6	-9	-8	-9	-5	-6	-8	-6	-11	-17	-20	-15	-11	-19	-27	-27
19	-29	-31	-31	-28	-25	-26	-25	-21	-17	-11	-12	-9	-7	-4	-3	-3	-4	-6	-8	-7	-8	-11	-9	-6
20	-6	-7	-7	-7	-8	-4	-3	-3	-6	-6	-7	-9	-11	-12	-11	-10	-9	-5	-1	-0	-1	1	1	-0
21	-1	-3	-4	-4	-4	-2	-1	-5	-4	-7	-15	-22	-26	-24	-19	-19	-19	-20	-35	-50	-54	-49	-67	-67
22	-74	-82	-77	-67	-61	-59	-55	-49	-43	-46	-47	-46	-42	-39	-41	-38	-33	-30	-28	-35	-37	-34	-35	-32
23	-33	-32	-29	-29	-31	-36	-35	-36	-32	-32	-27	-20	-18	-19	-21	-20	-22	-20	-20	-22	-25	-23	-21	-18
24	-19	-22	-22	-25	-25	-25	-24	-20	-18	-17	-14	-14	-12	-11	-13	-13	-11	-11	-12	-10	-8	-9	-11	-12
25	-13	-14	-14	-16	-18	-19	-18	-16	-15	-14	-14	-13	-10	-8	-5	-6	-6	-7	-5	-5	-7	-8	-9	-8
26	-10	-12	-10	-6	-6	-7	-7	-5	-3	2	2	4	6	8	9	5	3	0	-1	-1	-1	-3	-3	-0
27	1	-3	-6	-7	-12	-16	-19	-21	-24	-22	-20	-14	-11	-13	-14	-13	-12	-9	-9	-10	-13	-8	-6	-4
28	-5	-8	-4	-4	-9	-10	-12	-18	-26	-27	-26	-17	-11	4	-11	-13	-23	-22	-27	-29	-25	-18	-9	-4
29	0	1	3	3	3	-2	-10	-11	-8	-10	-11	-8	-5	1	9	16	21	29	22	17	19	15	11	17
30	13	17	19	10	5	-8	-20	-17	-15	-15	-16	-12	-6	-3	-2	1	-1	1	-2	-0	-1	1	3	4

MAY 1971

UNIT=GAMMAS

DAY	G.M.T. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	4	3	0	-3	1	3	-1	1	4	4	4	5	5	5	4	1	-1	1	4	7	8	10	7	-0
2	-6	-15	-23	-33	-41	-47	-56	-55	-39	-32	-27	-22	-21	-20	-24	-26	-28	-24	-19	-21	-22	-18	-15	-14
3	-14	-15	-17	-20	-21	-19	-18	-15	-13	-11	-10	-9	-8	-9	-11	-10	-8	-5	-1	2	-2	-3	-5	-13
4	-23	-31	-27	-21	-17	-17	-16	-15	-12	-7	-5	-7	-8	-5	-7	-9	-9	-8	-8	-7	-4	-4	-4	-4
5	-6	-7	-9	-8	-12	-12	-7	-4	-3	-3	-4	0	4	5	5	11	7	6	2	-6	-7	0	4	-4
6	-7	-12	-10	-9	-12	-5	-10	-17	-35	-41	-31	-27	-21	-30	-40	-41	-40	-48	-48	-45	-38	-37	-34	-36
7	-41	-38	-37	-34	-40	-57	-56	-54	-53	-46	-43	-45	-41	-37	-40	-44	-43	-40	-38	-40	-38	-39	-35	-22
8	-17	-17	-18	-22	-22	-24	-27	-27	-26	-30	-29	-29	-28	-26	-28	-28	-26	-27	-27	-23	-23	-26	-26	-27
9	-22	-22	-21	-21	-24	-22	-23	-28	-31	-36	-37	-34	-32	-33	-33	-26	-24	-22	-20	-20	-20	-19	-21	-23
10	-24	-24	-22	-20	-26	-32	-35	-32	-28	-24	-21	-22	-24	-24	-23	-25	-23	-18	-17	-23	-24	-22	-25	-26
11	-26	-24	-19	-17	-21	-26	-25	-22	-21	-22	-20	-18	-19	-20	-21	-24	-26	-24	-23	-21	-18	-14	-10	-4
12	-3	1	4	2	-2	-3	-7	-9	-10	-9	-9	-9	-10	-9	-9	-8	-9	-10	-9	-7	-6	-9	-15	-21
13	-21	-20	-18	-19	-21	-21	-20	-17	-15	-13	-11	-12	-13	-14	-16	-16	-18	-16	-16	-12	-8	-4	-2	1
14	1	-5	-10	-12	-13	-11	-8	-12	-6	-6	-16	-19	-16	-9	-7	-7	-14	-29	-33	-36	-32	-31	-29	-29
15	-29	-24	-28	-30	-32	-40	-44	-40	-30	-24	-21	-19	-23	-25	-25	-21	-25	-27	-27	-29	-29	-23	-13	-8
16	-6	-5	-1	-2	-3	-4	-4	-3	0	0	0	2	0	-3	-8	-11	-15	-14	-11	-8	-6	-4	-7	-25
17	-41	-45	-44	-42	-34	-36	-30	-34	-20	-21	-17	-51	-60	-49	-62	-80	-68	-68	-71	-51	-45	-57	-58	-63
18	-69	-59	-63	-59	-63	-73	-75	-70	-77	-79	-66	-60	-66	-71	-67	-70	-64	-57	-57	-59	-51	-47	-41	-34
19	-34	-37	-37	-37	-36	-37	-36	-33	-35	-36	-36	-32	-31	-29	-30	-30	-30	-26	-26	-29	-32	-33	-31	-29
20	-23	-21	-21	-23	-23	-26	-25	-23	-22	-20	-21	-21	-22	-22	-23	-24	-25	-25	-26	-28	-26	-21	-19	-13
21	-10	-7	-4	-4	-5	-9	-11	-11	-9	-7	-9	-17	-20	-18	-14	-14	-14	-14	-13	-12	-12	-9	-5	-1
22	1	-0	3	2	-4	-9	-9	-10	-10	-6	-4	-8	-12	-11	-12	-11	-7	-6	-7	-6	-4	-1	3	2
23	2	-6	-12	-6	-3	-4	-7	-9	-5	2	4	-3	-6	-2	-6	-9	-8	-6	-9	-15	-19	-16	-10	-7
24	-6	-9	-12	-13	-8	-6	-4	-1	2	4	4	-0	-1	-3	-3	-3	-6	-7	-9	-14	-13	-18	-17	-13
25	-8	-3	-3	-5	-5	-5	-7	-7	-5	-5	-1	-3	-5	-6	-5	-7	-13	-15	-16	-17	-11	-7	-9	-9
26	-6	-3	-6	-11	-15	-15	-11	-9	-11	-11	-11	-9	-10	-11	-13	-17	-14	-14	-13	-15	-17	-19	-19	-14
27	-11	-9	-7	-6	-6	-5	-5	-4	-5	-4	-2	-3	-5	-5	-3	-3	-1	-2	-5	-8	-10	-9	-7	-8
28	-9	-10	-8	-6	-3	-1	1	3	3	4	4	1	5	4	4	5	6	4	2	1	-2	-1	-2	-6
29	-4	-5	-7	-5	-2	3	14	16	17	16	15	13	10	9	10	10	10	11	20	22	22	22	26	30
30	21	13	14	21	18	13	11	13	26	10	-3	-3	-9	-10	-17	-17	-15	-14	-18	-20	-21	-19	-19	-17
31	-15	-12	-11	-9	-8	-5	-8	-7	-5	-5	-8	-8	-8	-8	-6	-8	-8	-6	-2	0	1	-1	1	4

JUNE 1971

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	G.M.T. 23	24
1	7	8	11	11	11	15	15	10	-5	-19	-20	-29	-29	-31	-34	-40	-37	-30	-29	-23	-24	-32	-23	-12
2	-9	-7	-6	-19	-20	-18	-15	-13	-18	-28	-24	-27	-21	-31	-33	-33	-35	-32	-30	-28	-28	-30	-27	-21
3	-26	-39	-38	-29	-27	-23	-27	-24	-23	-20	-16	-19	-24	-25	-20	-15	-17	-18	-20	-26	-26	-25	-19	-17
4	-18	-15	-17	-16	-13	-11	-11	-16	-12	-10	-9	-11	-15	-13	-11	-8	-4	-6	-6	-7	-8	-10	-16	-18
5	-17	-16	-18	-21	-19	-16	-13	-11	-9	-10	-9	-11	-14	-16	-15	-14	-14	-12	-11	-9	-7	-15	-13	-10
6	-10	-12	-13	-15	-16	-15	-13	-14	-13	-12	-13	-15	-17	-16	-15	-17	-15	-17	-16	-16	-14	-13	-9	-10
7	-11	-12	-11	-10	-8	-8	-6	-4	-3	-4	-4	-5	-7	-7	-5	-5	-5	-4	-2	-0	1	-1	0	1
8	3	-1	-6	-9	-13	-10	-10	-11	-15	-17	-17	-15	-14	-13	-13	-11	-9	-5	-5	-11	-9	-7	-9	-11
9	-13	-13	-10	-8	-7	-7	-7	-7	-7	-7	-8	-8	-9	-10	-9	-10	-12	-10	-7	-7	-9	-8	-9	-8
10	-7	-7	-6	-3	2	5	6	8	8	7	2	0	-3	-3	-0	2	1	3	6	6	7	6	6	9
11	11	12	11	7	2	1	-1	-6	-8	-11	-15	-16	-16	-13	-11	-10	-8	-6	-7	-7	-9	-10	-14	-11
12	-6	-0	2	2	4	2	-0	-1	1	1	-0	2	3	6	10	8	6	6	4	-0	-1	-5	-6	-3
13	-1	-2	-3	1	5	7	7	6	3	3	6	8	7	10	2	-9	-14	-13	-15	-17	-20	-23	-26	-22
14	-17	-11	-7	-7	-12	-16	-17	-15	-15	-14	-14	-16	-20	-22	-19	-17	-16	-17	-19	-19	-18	-18	-17	-16
15	-15	-13	-11	-9	-6	-4	-3	-4	-4	-6	-4	-3	-3	-4	-6	-3	1	4	4	3	4	4	6	6
16	6	5	0	-1	-0	3	6	7	10	11	10	5	0	-2	-6	-5	-4	-3	-1	-1	-1	-4	-5	-6
17	-2	-4	-2	1	0	1	1	-8	-7	-0	-2	-13	-15	-11	-7	-8	-8	-5	-4	-4	-4	-3	-0	1
18	0	-4	-5	-3	-1	-2	-6	-5	-0	-0	-1	-1	-4	-5	-4	-4	-3	-3	-3	-3	-6	-6	-1	1
19	-1	-2	-1	2	2	2	4	6	8	6	7	9	9	8	9	10	11	12	12	12	12	12	14	15
20	13	11	10	8	6	9	8	4	3	5	7	9	8	7	6	6	5	5	5	8	11	12	13	14
21	14	14	14	14	15	16	18	14	10	11	14	16	13	4	3	6	9	10	12	16	14	6	2	4
22	6	5	3	4	10	11	12	11	10	11	14	13	13	6	10	10	8	6	8	9	10	9	5	11
23	10	13	11	9	15	15	13	5	10	1	-9	-17	-19	-17	-12	-8	-3	-1	-1	-1	-2	-4	-5	-4
24	-4	-5	-3	-2	2	5	9	10	6	8	8	9	11	9	13	19	21	20	16	5	-3	-5	-9	-13
25	-22	-29	-32	-34	-35	-36	-25	-28	-31	-38	-42	-51	-65	-67	-58	-34	-60	-48	-42	-31	-13	-10	-30	-32
26	-29	-31	-36	-37	-28	-22	-22	-29	-26	-20	-15	-18	-22	-22	-21	-19	-17	-16	-17	-18	-17	-15	-16	-19
27	-22	-22	-17	-16	-15	-13	-11	-11	-12	-14	-18	-20	-19	-17	-14	-8	-3	1	2	3	4	2	-1	-1
28	-1	-1	3	4	6	9	12	10	4	2	7	8	5	3	4	9	6	9	9	5	0	-8	-12	-16
29	-15	-14	-13	-9	-14	-13	-7	1	8	6	8	13	-1	-14	-13	-4	-10	-21	-30	-31	-38	-45	-40	-39
30	-42	-42	-36	-34	-30	-27	-23	-21	-21	-23	-22	-20	-17	-15	-16	-16	-16	-16	-17	-20	-18	-19	-18	-14

JULY 1971

UNIT=GAMMAS

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
																			G.M.T.					
1	-13	-18	-16	-14	-15	-8	-5	-8	-13	-20	-18	-15	-17	-20	-19	-19	-16	-12	-10	-8	-8	-7	-8	-10
2	-11	-15	-18	-19	-14	-14	-13	-14	-18	-16	-13	-9	-11	-11	-11	-12	-12	-10	-7	-5	-4	-2	-9	-15
3	-18	-21	-18	-13	-11	-11	-8	-6	-6	-7	-6	-7	-9	-10	-11	-9	-6	-6	-7	-10	-10	-11	-18	-28
4	-30	-24	-26	-28	-26	-21	-17	-16	-13	-12	-12	-11	-13	-12	-14	-13	-11	-9	-6	-7	-2	0	2	0
5	-1	-5	-8	-9	-8	-5	-2	-0	-4	-8	-10	-8	-5	-4	-7	-6	-4	2	7	2	2	3	-1	-2
6	-2	3	3	3	3	2	1	1	1	2	3	4	3	1	-4	1	7	13	11	11	7	12	10	14
7	11	10	8	8	8	10	11	11	11	9	9	8	11	14	15	15	17	16	14	11	11	11	8	5
8	5	0	-4	-9	-10	-9	-10	-10	-10	-8	-8	-5	-4	-7	-10	-10	-9	-4	-3	-1	-1	-6	-14	-16
9	-12	-9	-5	-5	-8	-9	-11	-13	-11	-9	-9	-12	-11	-10	-10	-9	-10	-9	-7	-9	-8	-8	-10	-11
10	-8	-3	1	1	4	4	2	0	-1	-3	-2	0	2	2	4	7	8	8	6	5	6	2	0	1
11	-1	-0	5	7	7	7	8	8	12	13	12	10	13	11	10	17	18	11	5	2	3	5	5	4
12	5	4	11	12	12	13	10	8	8	11	16	11	14	24	31	31	35	30	30	27	27	21	23	27
13	27	22	20	16	17	14	12	-2	-0	-3	1	-0	-3	-5	-3	-1	1	1	1	-3	-1	3	6	6
14	3	6	5	1	2	3	-0	-7	-2	-1	-2	-5	-5	-4	-4	-3	-2	0	1	-2	-0	4	4	4
15	4	4	8	3	4	-0	-0	-1	-3	-7	-6	-5	-8	-7	-6	-6	-4	-6	-10	-6	-1	-3	-1	0
16	-0	-1	-1	-0	2	1	1	1	1	-0	-0	-2	-3	2	-1	-4	-4	-3	-6	-5	-3	-0	2	1
17	-1	-0	5	7	6	1	0	1	2	3	3	-1	-2	-0	1	-1	-1	1	2	4	7	9	13	12
18	11	8	10	11	5	-2	-2	2	1	8	10	6	6	5	10	14	14	4	-3	-5	-5	-3	-2	3
19	11	17	10	8	9	5	1	0	1	3	5	5	3	2	-1	-2	-10	-4	-0	1	3	0	-3	-2
20	1	1	2	3	4	4	4	5	6	6	4	3	1	2	-1	-5	-10	-9	-7	-7	-7	-5	-4	-4
21	-3	-1	-1	-1	-1	8	11	10	12	21	17	13	8	6	-8	-29	-44	-49	-50	-55	-58	-61	-58	-53
22	-51	-33	-35	-37	-33	-37	-29	-26	-25	-24	-22	-22	-19	-18	-17	-15	-12	-12	-13	-13	-12	-15	-12	-8
23	-12	-12	-10	-12	-8	-8	-5	-6	1	5	7	4	7	8	16	17	15	13	9	3	1	-1	-5	-4
24	-4	-4	-1	1	-1	-4	-2	-2	-0	-1	1	0	-2	-1	3	4	5	5	4	4	18	8	4	-1
25	-5	-4	-3	-3	-1	-0	-1	-1	-1	-2	0	1	1	-4	-8	-5	-3	-1	-3	-4	1	3	3	
26	1	3	4	3	3	5	6	3	1	2	-1	-2	2	6	12	18	18	25	35	15	3	4	-2	-8
27	-5	-1	-4	-0	1	2	4	2	3	4	6	7	-2	-1	3	1	-1	-4	-4	-5	-3	-2	-2	-2
28	-5	-4	-6	-9	-10	-7	-8	-8	-8	-8	-8	-10	-10	-11	-11	-9	-8	-5	-6	-7	-5	-2	2	2
29	-2	-2	-2	-4	-2	1	1	-0	-1	1	2	-5	-6	-3	1	-0	-8	-9	-9	-10	-11	-18	-24	-23
30	-23	-19	-20	-22	-25	-28	-24	-19	-17	-14	-11	-8	-16	-22	-19	-14	-14	-17	-19	-20	-15	-9	-3	-1
31	-7	-10	-11	-11	-9	-8	-7	-8	-6	-5	-9	-13	-11	-11	-7	-5	-1	-1	-3	-13	-20	-19	-20	-15

AUGUST 1971

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	G.M.T. 24
1	-7	-9	-9	-6	-4	-4	-4	-6	-6	-7	-3	0	2	2	4	4	6	7	6	3	4	16	26	24
2	23	24	16	7	-2	-6	-19	-20	-30	-36	-34	-33	-34	-27	-21	-19	-20	-20	-20	-22	-21	-19	-10	-8
3	-10	-10	-10	-11	-14	-12	-12	-11	-12	-13	-13	-10	-9	-8	-6	-5	-6	-6	-7	-5	-4	-5	-6	-9
4	-11	-12	-8	-10	-10	-11	-11	-11	-6	-4	-3	-10	-12	-8	-3	1	0	-4	-9	-12	-5	0	7	10
5	0	-14	-21	-27	-25	-33	-39	-35	-33	-31	-28	-26	-23	-23	-23	-23	-20	-17	-15	-14	-15	-15	-16	-11
6	-11	-13	-13	-12	-10	-8	-7	-8	-9	-8	-6	-4	-3	-2	-3	-6	-7	-5	-6	-2	0	1	-2	-4
7	-3	-3	-0	1	2	3	5	4	6	9	7	11	10	10	12	14	14	14	14	13	7	-6	-8	-10
8	-15	-21	-24	-24	-23	-20	-23	-25	-31	-32	-32	-31	-30	-27	-23	-21	-14	-9	-14	-19	-21	-26	-22	-15
9	-12	-11	-7	-2	-5	-6	-7	-7	-8	-15	-18	-19	-16	-10	-8	-9	-13	-11	-11	-16	-18	-13	-9	-7
10	-7	-8	-14	-20	-19	-24	-17	-10	-11	-11	-7	-5	-6	-5	-5	-4	-5	-4	-7	-13	-14	-12	-12	-16
11	-24	-29	-23	-19	-18	-22	-16	-11	-11	-16	-20	-20	-20	-13	-8	-10	-13	-14	-14	-14	-15	-15	-10	-6
12	-4	-8	-2	2	3	1	-2	-8	-18	-17	-13	-8	-12	-14	-14	-11	-8	-7	-8	-7	-7	-5	-5	-5
13	-8	-11	-11	-10	-8	-7	-8	-7	-6	-8	-8	-7	-6	-6	-5	-4	-4	-2	-5	-2	-2	-5	-6	-12
14	-14	-14	-13	-9	-7	-3	-1	-1	-1	-1	-2	-2	-2	-1	-1	-2	-3	-1	0	0	-2	-6	-9	-5
15	-3	-0	2	3	4	5	4	1	-3	-3	4	5	9	8	8	9	10	9	7	0	1	-2	-3	2
16	9	14	10	4	3	3	7	7	2	-0	5	0	0	-0	-2	-2	2	9	8	4	-6	-7	-4	-1
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18	-4	-10	-17	-16	-8	-4	-1	-0	-1	-5	-6	-9	-12	-11	-5	5	8	3	0	-5	-8	-9	-8	-9
19	-11	-12	-9	-4	-3	-9	-11	-14	-14	-12	-10	-11	-11	-12	-11	-10	-9	-8	-7	-7	-7	-7	-4	-3
20	-5	-2	-1	0	4	5	6	5	4	4	4	2	1	2	4	5	3	4	4	6	8	8	9	7
21	6	5	3	2	-5	-8	-9	-12	-14	-19	-21	-21	-21	-19	-15	-16	-16	-20	-20	-23	-22	-21	-18	-19
22	-21	-20	-16	-11	-13	-17	-17	-12	-15	-16	-17	-21	-22	-23	-24	-23	-22	-17	-18	-24	-27	-29	-24	-21
23	-18	-8	2	8	15	7	7	4	1	-6	-4	-1	-3	-12	-15	-10	-5	-8	-14	-16	-14	-14	-15	-18
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25	-11	-14	-11	-8	-3	-2	-2	1	2	2	0	-3	-3	-0	1	1	-1	1	-1	-2	-1	-8	-20	-27
26	-37	-29	-22	-20	-16	-17	-22	-23	-21	-22	-24	-25	-27	-25	-26	-26	-22	-22	-27	-29	-29	-24	-21	-19
27	-16	-14	-10	-8	-6	-6	-6	-6	-5	-3	-4	-3	-3	-5	-4	-5	-4	-2	-4	-7	-9	-10	-10	-7
28	-6	3	4	4	4	4	5	9	13	12	15	16	15	14	8	-1	-5	-6	-9	-6	-6	-3	-3	-2
29	-8	-6	-2	3	3	2	5	7	9	7	8	8	4	2	2	1	3	6	7	4	1	-1	2	-2
30	-4	-4	-3	-3	-4	-5	-5	-3	-1	3	3	2	3	2	-0	-2	1	7	6	3	-0	-3	-3	8
31	10	-4	-20	-25	-19	-20	-17	-19	-13	-2	-3	-8	-10	-9	-8	-9	-9	-14	-14	-16	-20	-20	-18	-19

SEPTEMBER 1971

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	G.M.T. 24
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2	-18	-16	-14	-13	-11	-8	-7	-6	-7	-7	-8	-8	-7	-6	-6	-6	-4	-3	-4	-8	-9	-9	-9	-10
3	-11	-11	-9	-8	-9	-11	-13	-16	-18	-17	-16	-19	-18	-14	-13	-11	-10	-10	-15	-17	-16	-15	-13	-12
4	-12	-11	-9	-9	-8	-7	-5	-4	-1	-2	-2	-1	-0	-2	-4	-3	1	7	3	1	6	-19	-16	-16
5	-9	-4	-2	-1	-7	-15	-23	-24	-21	-21	-28	-19	-15	-20	-20	-30	-30	-30	-27	-30	-36	-29	-21	-11
6	-6	-4	-0	-0	-3	-3	-6	-11	-12	-5	-7	-13	-13	-12	-11	-13	-10	-6	-6	-12	-15	-13	-15	-21
7	-29	-22	-14	-11	-17	-16	-12	-10	-10	-10	-7	-9	-7	-8	-11	-19	-22	-24	-24	-27	-36	-37	-34	-40
8	-40	-35	-28	-25	-25	-16	-14	-19	-18	-12	-12	-10	-7	-7	-11	-14	-13	-11	-10	-12	-11	-12	-11	-9
9	-7	-4	-7	-8	-10	-11	-10	-7	-2	-3	-3	1	3	3	-1	-3	1	3	2	-1	-5	-14	-13	-13
10	-8	-4	-4	-8	-12	-13	-5	-1	-1	-1	1	4	5	4	2	-1	1	3	4	4	4	3	2	2
11	-0	-4	-4	-2	-2	-4	-7	-8	-8	-10	-9	-5	-3	-5	-11	-11	-8	-5	-3	-3	-10	-12	-8	-3
12	5	5	3	2	2	-3	-5	-6	-9	-8	3	11	10	-0	-5	-10	-6	-0	6	14	14	14	13	11
13	13	13	21	18	15	-1	-20	-32	-31	-25	-24	-18	-14	-10	-11	-5	-2	3	2	-3	-7	-9	-5	-6
14	-11	-9	-8	-9	-7	-6	-7	-11	-8	-6	-4	-5	-4	-1	1	2	2	4	0	-3	-8	-9	-8	-2
15	8	10	2	3	3	10	14	4	1	-1	-11	-14	-8	-9	-9	-11	-13	-13	-16	-17	-14	-10	-11	-12
16	-10	-9	-8	-6	-6	-5	-2	-4	1	7	7	6	4	2	-0	-3	-3	1	5	7	5	1	-6	-4
17	2	0	3	5	1	-2	-4	-5	-4	-2	1	6	9	7	8	11	13	20	19	18	19	23	16	2
18	-17	-46	-39	-57	-67	-72	-74	-74	-71	-62	-58	-59	-57	-53	-47	-40	-40	-43	-37	-34	-31	-35	-34	-30
19	-21	-18	-22	-33	-35	-34	-35	-34	-28	-25	-21	-20	-19	-18	-16	-17	-21	-22	-25	-32	-35	-31	-29	-26
20	-27	-27	-34	-33	-30	-26	-25	-24	-26	-29	-26	-21	-17	-20	-25	-24	-23	-20	-21	-22	-23	-26	-27	-28
21	-27	-26	-25	-24	-24	-25	-23	-20	-17	-13	-9	-10	-14	-15	-15	-16	-17	-20	-20	-24	-22	-18	-16	-13
22	-14	-15	-16	-16	-15	-14	-15	-14	-17	-18	-19	-21	-21	-20	-19	-17	-19	-18	-13	-9	-7	-6	-5	-3
23	-4	-3	-5	-7	-7	-7	-7	-7	-5	-7	-8	-6	-5	-6	-5	-6	-8	-8	-3	0	-1	-5	-6	-4
24	-2	-1	1	1	-1	-2	1	1	2	2	4	6	7	6	7	9	7	8	4	-6	-8	-5	-4	-3
25	-4	-8	-3	-13	-29	-36	-42	-44	-36	-38	-40	-57	-48	-40	-42	-43	-45	-41	-35	-28	-29	-36	-36	-30
26	-26	-19	-18	-19	-21	-20	-18	-15	-13	-16	-12	-5	0	4	1	-5	-11	-9	-9	-9	-24	-37	-56	-72
27	-71	-62	-53	-61	-66	-69	-69	-68	-69	-60	-48	-41	-49	-44	-44	-39	-42	-48	-42	-34	-30	-31	-33	-31
28	-31	-34	-36	-35	-33	-30	-30	-29	-28	-27	-21	-19	-20	-20	-22	-26	-28	-26	-21	-19	-17	-17	-19	-18
29	-18	-14	-13	-15	-18	-22	-26	-25	-20	-17	-13	-14	-16	-17	-16	-17	-21	-23	-18	-16	-6	-10	-9	-9
30	-10	-8	-8	-6	-5	-4	-4	-2	-15	-26	-26	-23	-16	-23	-36	-40	-41	-38	-40	-33	-27	-25	-33	-33

OCTOBER 1971

UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	G.M.T. 24
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2	-27	-27	-27	-25	-29	-28	-26	-28	-32	-33	-20	-24	-21	-16	-12	-17	-24	-31	-26	-19	-19	-28	-35	-27
3	-24	-25	-38	-40	-34	-28	-28	-31	-30	-23	-17	-18	-18	-22	-20	-19	-23	-28	-22	-16	-16	-20	-24	-23
4	-25	-17	-13	-11	-20	-25	-22	-17	-17	-23	-20	-15	-11	-11	-15	-15	-19	-22	-20	-19	-31	-39	-36	-29
5	-24	-32	-36	-31	-33	-34	-34	-35	-34	-27	-24	-19	-18	-17	-15	-20	-25	-25	-18	-13	-15	-16	-13	-0
6	-11	-16	-5	2	-8	-12	-15	-17	-18	-19	-18	-13	-12	-7	-3	-7	-17	-46	-31	-23	-21	-21	-10	-23
7	-17	-12	-9	-13	-13	-16	-16	-16	-17	-16	-14	-10	-13	-14	-13	-12	-16	-22	-24	-19	-20	-37	-47	-49
8	-39	-38	-37	-40	-42	-34	-32	-35	-39	-39	-39	-41	-46	-29	-20	-19	-26	-19	-21	-18	-20	-25	-26	-22
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11	-12	-16	-17	-12	-11	-13	-9	-8	-7	-9	-11	-12	-5	-4	-6	-17	-31	-39	-40	-37	-37	-34	-33	-31
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13	-13	-11	-8	-13	-14	-12	-13	-19	-19	-21	-15	-13	-19	-17	-11	-12	-18	-29	-22	-13	-12	-13	-8	-4
14	-3	-4	-4	-4	-7	-6	-5	-6	-8	-6	-2	-3	-7	-10	-13	-8	-11	-13	-12	-9	-7	-6	-8	-13
15	-11	-7	-8	-8	-10	-9	-6	-2	-7	-9	-8	-10	-9	-6	-6	-7	-10	-13	-10	-6	-7	-10	-9	-6
16	-3	-0	0	2	-0	-1	-0	1	-1	-3	-4	-5	-9	-8	-6	-7	-13	-20	-14	-4	-4	-6	-6	-2
17	-1	-3	-5	-4	-5	-5	-5	-7	-7	-4	-0	-2	-5	-4	-1	-0	-5	-8	-4	0	-2	-5	-5	-4
18	-4	-2	-2	-1	-1	-1	-2	-2	-1	3	3	3	0	1	2	1	-3	44	-8	-1	1	-0	-0	3
19	3	1	2	3	4	3	5	5	3	1	2	2	2	4	8	10	12	10	2	6	7	3	2	3
20	2	2	4	5	5	4	5	4	2	-2	-2	-2	-1	-0	5	5	4	1	1	-2	-3	-4	-4	-4
21	-6	-6	-3	-0	1	-0	-0	1	1	4	4	0	-5	-2	2	-3	-13	-18	-16	-14	-13	-14	-15	-11
22	-8	-6	-3	-4	-8	-12	-18	-24	-24	-24	-23	-23	-22	-19	-15	-15	-20	-34	-33	-25	-18	-23	-20	-16
23	-13	-10	-5	1	5	7	4	4	1	1	3	9	21	21	27	31	9	-4	-7	-2	-2	-1	3	8
24	7	4	3	9	16	10	-0	1	-6	-10	-7	-7	-14	-18	-13	-11	-19	-24	-22	-24	-33	-33	-26	-26
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28	12	10	9	9	10	11	13	14	7	2	1	-10	-6	-3	5	5	6	8	-3	-2	10	10	-10	-15
29	-12	-23	-32	-36	-41	-38	-45	-46	-43	-32	-25	-24	-21	-20	-23	-27	-28	-28	-24	-26	-25	-28	-21	-16
30	-15	-20	-19	-23	-33	-33	-28	-25	-28	-32	-32	-28	-29	-31	-29	-27	-29	-31	-27	-24	-21	-20	-15	-11
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NOVEMBER 1971

UNIT=GAMMAS

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
																				G.M.T.				
1	-6	-8	-11	-12	-13	-16	-16	-18	-17	-17	-17	-17	-17	-15	-14	-14	-19	-21	-18	-16	-14	-14	-12	-11
2	-9	-8	-6	-6	-5	-5	-5	-7	-10	-11	-9	-9	-9	-8	-7	-8	-11	-14	-14	-11	-11	-10	-9	-7
3	-5	-4	-3	-4	-3	-5	-6	-9	-10	-9	-8	-6	-2	-5	-4	-3	-4	-1	4	6	4	3	8	9
4	3	1	2	2	-1	-3	-2	1	2	-2	-2	-0	-0	-3	-2	-3	-9	-13	-7	-8	-6	-5	-3	-4
5	-3	-3	-1	-2	-2	-1	-3	-5	-5	-5	-8	-12	-14	-14	-13	-15	-18	-19	-15	-9	-9	-12	-13	-9
6	-6	-6	-5	-3	-3	-2	-1	-1	-1	-2	-5	-8	-8	-8	-5	-4	-3	-4	-3	2	5	6	6	6
7	6	1	-1	2	1	0	-3	-4	-3	-1	-0	-4	-8	-11	-9	-6	-7	-8	-8	-6	-5	-3	-1	-2
8	-2	-1	-2	-1	-1	-0	0	-1	5	5	7	10	11	15	13	2	-4	-13	-21	-18	-11	-12	-17	-17
9	-13	-12	-10	-11	-11	-12	-9	-7	-5	-5	-7	-12	-16	-16	-14	-14	-15	-15	-14	-11	-9	-10	-11	-12
10	-12	-10	-7	-2	-1	0	-0	2	7	8	4	2	3	4	6	13	21	25	28	24	20	17	16	5
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16	-5	-4	-3	-4	-3	-2	-3	-4	-3	-3	-5	-5	-7	-7	-7	-7	-6	-5	-3	-3	-3	-2	-1	-1
17	-1	1	2	2	2	2	1	2	4	6	5	4	4	5	4	3	3	1	-0	-1	3	5	11	13
18	15	15	8	-1	-8	-2	-2	4	1	2	-3	-5	-1	-5	-6	-8	-7	-7	-6	-5	-4	1	0	-1
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23	-49	-46	-41	-33	-18	-24	-49	-44	-46	-36	-30	-36	-32	-31	-33	-31	-26	-25	-28	-40	-33	-39	-42	-48
24	-48	-42	-39	-45	-46	-44	-47	-44	-37	-40	-41	-36	-33	-33	-28	-27	-31	-31	-30	-27	-31	-41	-37	-42
25	-46	-45	-39	-33	-45	-42	-45	-36	-48	-54	-61	-59	-49	-56	-62	-68	-68	-65	-53	-48	-45	-45	-48	-45
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27	-23	-23	-24	-25	-26	-25	-26	-26	-24	-23	-23	-25	-25	-25	-26	-27	-26	-21	-17	-15	-16	-21	-27	-30
28	-26	-23	-25	-26	-24	-26	-26	-23	-15	-12	-17	-21	-25	-28	-31	-30	-25	-17	-16	-14	-16	-17	-19	-21
29	-22	-24	-24	-25	-25	-21	-18	-19	-19	-20	-21	-19	-17	-17	-19	-19	-19	-19	-24	-24	-24	-22	-22	-22
30	-20	-17	-16	-14	-13	-14	-17	-23	-16	-12	-16	-15	-15	-17	-17	-16	-14	-12	-10	-9	-10	-13	-17	-17

DECEMBER 1971

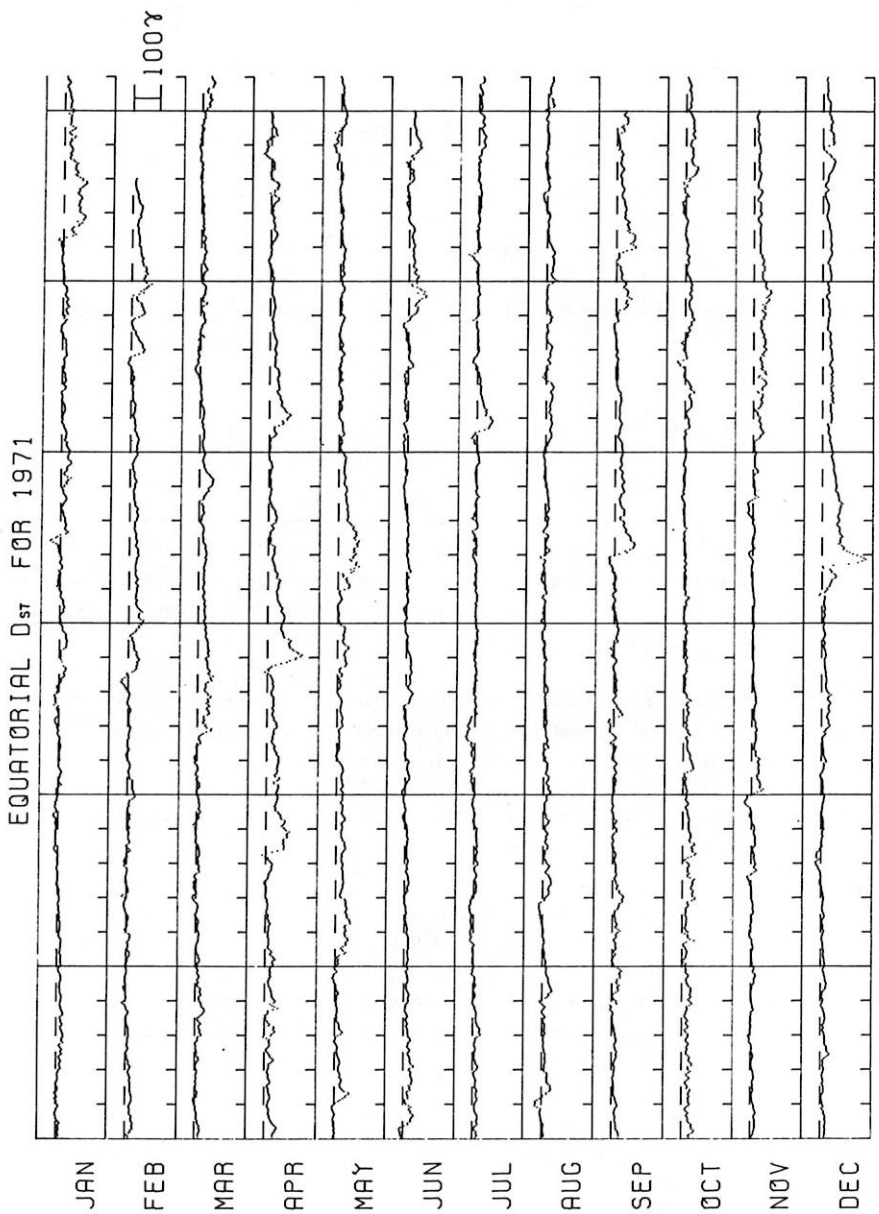
UNIT=GAMMAS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	G.M.T. 24
1	-16	-17	-18	-18	-19	-20	-19	-17	-18	-20	-21	-20	-18	-19	-20	-18	-14	-14	-14	-9	-6	-13	-10	-8
2	-7	-6	-5	-4	-3	-6	-9	-12	-13	-12	-13	-13	-10	-6	-11	-11	-10	-8	-7	-6	-8	-10	-12	-14
3	-14	-11	-9	-11	-11	-9	-12	-18	-26	-33	-36	-29	-25	-24	-24	-23	-18	-17	-16	-18	-17	-16	-17	-15
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8	-9	-8	-7	-6	-3	-2	-1	-1	3	5	5	5	1	0	0	2	2	3	6	10	12	15	19	21
9	22	13	6	16	19	18	16	14	6	7	-0	-5	-2	-0	-2	-2	-3	-4	-8	-3	-4	-4	-7	-11
10	-8	-8	-8	-8	-9	-8	-6	-5	-3	0	-1	-3	-3	-4	-4	-6	-5	-7	-9	-10	-10	-12	-13	-11
11	-7	-6	-6	-7	-8	-7	-6	-7	-6	-4	-3	2	4	3	0	-5	-6	-10	-8	-11	-11	-9	-19	-18
12	-15	-12	-10	-8	-9	-8	-7	-9	-6	-5	-6	-5	-4	-3	-3	-2	-8	-13	-17	-10	-16	-18	-25	-31
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31	-27	-25	-25	-27	-28	-27	-24	-22	-17	-15	-16	-14	-15	-17	-18	-16	-16	-15	-16	-16	-16	-12	-13	-16

DAILY MEANS OF EQUATORIAL DST FOR 1971

DAY	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
1	-6	-20	-10	-27	3	-14	-13	2	-17	-29	-15	-16
2	-4	-18	-4	-16	-27	-23	-12	-15	-9	-25	-9	-9
3	-19	-9	-8	-17	-11	-23	-11	-9	-13	-24	-2	-19
4	-19	-4	-22	-23	-11	-12	-13	-6	-5	-21	-3	-12
5	-14	2	-13	-21	-2	-13	-3	-22	-20	-23	-9	-13
6	-13	-7	-9	-19	-28	-14	5	-6	-9	-15	-2	-9
7	-8	2	-4	-9	-42	-5	11	5	-19	-19	-3	-8
8	-2	2	0	-8	-25	-10	-7	-23	-16	-31	-2	3
9	6	-3	-4	-50	-26	-9	-10	-11	-5	-31	-11	3
10	8	-10	-6	-48	-24	2	2	-11	-1	-18	7	-7
11	-3	-12	-1	-40	-20	-6	8	-16	-6	-19	-28	-6
12	-2	-2	-11	-29	-7	1	18	-7	3	-18	-16	-10
13	9	-3	-37	-23	-14	-4	5	-7	-6	-15	-11	-28
14	-10	-8	-39	-30	-16	-16	-0	-4	-5	-7	-5	-15
15	-16	-25	-34	-78	-27	-3	-2	3	-5	-8	-3	-10
16	-7	-36	-23	-47	-6	1	-1	3	-1	-5	-4	-9
17	1	-28	-23	-29	-48	-4	3	6	7	-4	3	-66
18	-1	-25	-19	-15	-62	-3	4	-6	-49	1	-1	-74
19	-11	-22	-19	-14	-33	7	3	-9	-26	4	5	-64
20	-25	-17	-30	-5	-23	8	-1	4	-25	1	-7	-44
21	-15	-22	-13	-22	-10	11	-15	-13	-19	-5	-20	-29
22	-7	-10	-7	-47	-5	9	-23	-20	-15	-18	-27	-35
23	-11	-9	8	-26	-7	-0	1	-6	-5	5	-36	-34
24	-6	-20	-4	-16	-7	5	1	-9	1	-10	-38	-26
25	-13	-41	-11	-11	-7	-37	-2	-5	-33	-20	-50	-22
26	1	-44	-13	-2	-12	-22	7	-24	-18	-8	-34	-29
27	-38	-25	-9	-12	-6	-10	-0	-7	-50	-2	-24	-26
28	-65	-21	-2	-15	-0	3	-7	3	-25	4	-22	-15
29	-37	0	4	5	11	-14	-6	3	-16	-29	-21	-27
30	-27	0	-2	-2	-2	-23	-17	-0	-22	-25	-15	-33
31	-19	0	-30	0	-6	0	-10	-13	0	-14	0	-19
MEAN	-12	-16	-13	-23	-16	-7	-3	-7	-14	-14	-13	-23

ANNUAL MEAN -13


EQUATORIAL Dst FØR 1971
100γ
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
ØCT
NØV
DEC
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15
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REFERENCES TO OTHER INDICES

Q QUARTER HOURLY DISTURBANCE INDEX FOR HIGH LATITUDE STATIONS

The Q-index was introduced in order to enable a precise correlation of geomagnetic activity with ionospheric, auroral and other observations for stations at latitudes higher than 58°. (Ref.: IAGA-resolutions Toronto 1957 and Helsinki 1960). It is a quarter hourly measure, on a quasi logarithmic scale, of the maximum deviation in γ's of the most disturbed horizontal component from its normal quiet-day value (the highest value of either ΔH and ΔD, or ΔX and ΔY). When the trace shows both positive and negative deviations during a 15 minute-interval, however, the total range is used instead.

The relation between Q and this deviation (or range) Δ is as follows:

Q =	0	1	2	3	4	5	6	7	8	9	10(T)	11(E)
$\Delta \leq$	10	20	40	80	140	240	400	660	1000	1500	2200	$>$2200

The details of the scaling technique of the Q-indices are explained in:

J. Bartels and N. Fukushima, Abh. Akad. Wiss. Göttingen, Math.-Phys. Klasse, Sonderheft 3 (1956).

or: J. Bartels, Annals of the IGY, 4, 220 - 236 (1957).

Since the IGY Q-indices have been determined and published for certain periods of time by 26 stations. In recent years only Sodankylä seems to have continued this practice. Mimeographed publications are available directly from this observatory.

The following data are available through the World Data Centers for Geomagnetism: (IGY = 7.57 - 12.58).

Arctica III	5.59 - 3.60	Welen	7.57 - 11.59, 64, 65
Heiss Isl.	64, 65	College	7.57, 6 - 9.58
Tikhaya Bay	7.57 - 2.59	Baker Lake 1)	IGY
Murchison Bay	7.57 - 7.59	Yellowknife 1)	7.57 - 7.58
C. Chelyuskin	IGY, 59, 64, 65	Nurmijärvi	5 - 6.61
Thule	IGY	Lerwick	IGY
Resolute Bay 1)	IGY	Eskdalemuir	IGY
Dikson	7.57 - 9.59, 64, 65	Macquarie Isl.	IGY
Tiksy	IGY, 64, 65	Mirny	IGY, 3 - 10.59, 64, 65
P. Barrow	7.57 - 8.58	Mawson	IGY
Godhavn	IGY	Novolazarevskaja	64, 65
Kiruna 2)	7.57 - 12.61	Halley Bay	IGY, 7.60 - 10.62
Sodankylä	1.57 - today	Vostok	64, 65

1) Publications of the Dominion Observatory, Ottawa, Vol. 27, No. 4 (1963)

2) Kiruna Geophysical Data, Data Report No. 631 (febr. 1963)

R HOURLY DISTURBANCE INDEX FOR HIGH LATITUDE STATIONS

For some observatories in geomagnetic latitudes higher than about 65^{o}, hourly R-indices are available. The R-index is defined as the absolute hourly range in each horizontal component, expressed in tens of gamma (Ref.: IAGA resolution, Berkeley 1963).

The hourly range in the horizontal component was introduced as a measure of magnetic activity by Russian workers (especially Nikolski).

R-indices for Canadian stations are given in the magnetic yearbooks (Publications of the Dominian Observatory, Ottawa, Canada up to and including Volume 39; thereafter Publications of the Earth Physics Branch), for the stations:

Resolute Bay and Baker Lake (IGY and from 1960 onwards).
Alert (starting 1 October 1961).
Mould Bay (starting 1 August 1962).
Fort Churchill (IGY and from 1966 onwards).
Great Whale River (starting 1 January 1967).

Prior to 1964 the hourly range was measured at the Canadian arctic observatories in the principal horizontal component only, from 1964 onwards it was measured in both components X and Y.

R-indices of the stations Thule and Godhavn (Greenland) are determined since 1964, for the components H, D and Z. They are published in the magnetic yearbooks for these stations, which are issued by the Meteorologisk Institut, Charlottenlund, Denmark.

Daily, monthly and yearly mean values of R-indices (based on the H-component) from arctic and antarctic USSR-stations for the period 1934 through 1967 are given in a publication of the Arctic and Antarctic Institute, Fontanka 34, Leningrad (1970). This concerns the following stations:

Welen (1935 - '47, 1951 - '67),
Tiksi (1944 - '67),
Dikson (1934 - '67),
C. Chelyuskin (1935 - 167),
B. Tikhaya (1934 - '58),
O. Cheisa (1958 - '67).
Arctic drifting stations:
NP 3 - 13 (1954 - '67).
Mirny (1956 - '67),
Molodezhnaya (1964 - '67),
Lazarev (1960 - '61),
Novolazarevskaya (1961 - '67),
Vostok (1958 - '67).

AE AURORAL ELECTROJET ACTIVITY INDEX

AE is determined from deviations from the quiet reference level of the horizontal component H (either instantaneous or mean) of a number of stations near the northern or the southern auroral zones. It is the largest positive deviation (AU) minus the largest negative deviation (AL) from the adopted quiet time value of H at each station. To be most useful, the index should have a time resolution of less than one hour.

(Ref: IAGA-resolution 2, Madrid 1969 and IAGA-resolution 13, Moscow 1971. For complete definition see: Davis, T.N. and Sugiura, M., J.G. Res. Vol. 71, 3, p. 786 - 792, 1966)

For the period Sept. 1964 through Dec. 1968, AE-indices were determined at 2.5 minute-intervals at NASA-Goddard Space Flight Center. They are available on magnetic tape at World Data Center A for Solar Terr. Physics, National Oceanic and Atmospheric Administration, NOAA, Boulder, Colorado 80302, U.S.A. Hourly means, computed from the 2.5 minute data, are also available at WDC-A as card images on magnetic tape and as a microfilm listing of tabular values and plots of AE, AU, and AL. Only the AE indices for 1964 and 1965 are based on a complete set of stations; values for 1966, 1967 and 1968 are preliminary and based on four (or more) northern hemisphere stations. These values are to be updated as additional data are available.

AE-indices for 1970 and other recent years are determined by the NOAA-Environmental Data Service and will be made available similarly through WDC-A.

Hourly values of AE were derived and published by the Geophisical Institute of the University of Alaska, College, Alaska, for the years 1957-1964. They are based on different sets of stations and include some southern hemisphere data. These values are also available from WDC-A and contain tables and plots of AE, AU, AL, and $\frac{AU + AL}{2}$. Some of these data are also available at other WDC's under the WDC exchange arrangements.

TABLE 1 STORM SUDDEN COMMENCEMENTS (ssc) 1971

Sudden commencements followed by a magnetic storm or period of storminess.

JANUARY

18 0900 (55-02) A: MG VI UB SU SF KS QU TE SJ GU BA MC LM AC AM; B: SO CO WN WI KV MA DB FU NE CF OD OT LG IK EB PE SM AE AV SZ TA LU TG PM HU AP PP TN GN HR TO; C: PR MT KA SS KY KG DU - (si: A: HO TW; B: HL IR HB).

24 1930 (22-36) A: OD OT SU FR SF KS QU SJ MC LU HU LM TW; B: HL VL HA KV MA VI HB IK EB PE SM AV TA GU BA PM PP HR; C: WN NI DB PR CF AE SZ TN - (si: A: SI IR UB HO TE; B: MG KN BE FU LG AQ DU; C: MT TK KA SS KY MB? - sfe: TL).

27 0430 (25-36) A: PB SO CO DO NU MG SI KN MO ES WN WI IR NI VL MA DB VI NE FU CF UB HB JO OT SU LG AQ TF TK IK EB TL FR PE SM AE SF KS AV DS SZ TA HO TE SJ MB GU BA MC LU HU AP TN LM AC TO TW KG DU; B: TR LE ME HL MN SW BE PR MT KA TU KY TG GN HR; C: SS-(si: A: OD).

FEBRUARY

08 2036 (31-38) A: HB SU SF KS AV HO SJ BA MC LU HU LM; B: MO MN KV MA FU LG AQ TK IK TL GU PM TN GN HR TO KG; C: LE ES WN NI VL DB PR VI CF MT SM AE KA SS KY SZ - (si: A: CO SI IR UB OD TA PP AC TW; B: HL BE OT MB; C: FR - bp: B: SO EB).

23 0514 (02-17) A: SO MG KN UB GU AC; B: TR CO HL MA CI SM QU HU GN TO TW; C: SI WI NI DB VI CF MT IK EB PE AE KA SS KY MB BA PP -(si:A:SU TE; B: VL BE KV PR FU UB AV TA HO PM; C: WN LG SZ LM KG).

25 1100 (58-01) A: SF; B: SW KV MA PR PE AV LM; C: WN TA - (si: A: OD LU; B: MB BA HR; C: CF).

MARCH

19 1150 (40-55) A: TR SO NU KN FU HB JO OD SU TK KS TA BA MC LU HU LM; B: LE MO ES HL WN WI SW NI VL BE HA KV MA DB PR VI CF MT LG AQ IK EB TL FR PE SM AE KA AV KY QU SJ MB GU PM TN HR TW KG; C: MN NE PP - (si: A: UB SF HO AM; B: DO IR OT TF SS TO - bs: A: MG AC - bps: A: AP DU).

31 1351 (50-55) B: WN; C: VL TA - (si: B: HU AC - bps: A: SO DU).

APRIL

03 2139 (28-45) A: IR KV MA FU UB HB LG AQ IK FR PE SM AE SF KS AV QU TA HO TE SJ MB GU BA MC LU HU AP PP TN LM AC TW DU; B: MO HL WN WI VL BE PR NE CF OT TF TK TL SZ TG PM HR TO KG; C: NI MT KA SS TU KY - (si: A: KN OD DS AM; C: DB).

09 0428 (25-30) A: TR NU MG IR MA UB SF KS QU TA HO TE SJ LU HU LM AC TW; B: SO CO KN HL WN WI VL KV DB VI NE FU HB OD MT LG AQ TK IK FR PE CI TL SM AE KA AV SS DS KY MB GU BA MC PM AP TN GN HR TO AM KG DU; C: LE ES NI HA PR CF TF EB SZ PP - (si: BE).

14 1243 (41-45) A: TR SO NU MG KN MO WN IR NI VL KV MA DB PR FU CF UB HB JO OD OT MT AQ TF TK CI TL FR PE AE SF KA KS AV KY QU HO SJ MB BA HU AP LM; B: LE ES MN WI SW BE HA VI LG IK SM SS SZ TA TE LU PM GN HR AM DU; C: DS TU TN.

21 1333 (32-35) A: OD SF KG; B: WN SW VL MA DB FU IK CI FR PE QU TA MB; C: NI PR CF EB LM HR - (si: A: JO; B: WI KV AQ HU; C: HA HB AV - bs: B: SO).

21 1628 (22-30) A: SM SF SJ TW; B: WI VL JO AV QU LM; C: SI TL SZ - (si: A: MA OD HO; B: WN PR CF; C: HA - bps: B: SS; C: MT KA KY).

28 1306 (00-09) A: MO PR CF UB HB JO OD AQ TK PE AE SF KS AV QU SZ TA SJ MB BA MC LU HU TN AC TW; B: LE HL WN WI SW NI VL BE KV MA VI IK SM GU HR; C: ES TL ? (si: NU KN IR FU? MT KA SS KY HO TE LM AM; B: BE DB OT LG EB PM - bp: B: LZ - bps: A: SO).

TABLE 1 STORM SUDDEN COMMENCEMENTS (ssc) 1971 - continued

(APRIL)

29 2131 (25-42) B: AV QU; C: LG SZ HR - (si: B: OD; C: PP DU).

MAY

17 0630 (18-32) A: TR SO MG MO WN UB TF PE SF QU GU BA MC TN? LM TW KG; B: HL WI NI VL BE KV MA PR LG AQ TK IK CI TL AE KA AV SZ MB PM AP PP HR DU; C: LE ES MT EB KY TA - (si: A: FU HB OD HO TE SJ AC AM; B: HA VI JO HU; C: CF.

29 1802 (56-06) B: DB TF KS; C: QU SZ TA - (si: B: FU LG; C: TL - bs: A: LU; B: AV? - sfe: CF AE).

30 0736 (25-39) A: MG VI UB JO OT TF TK FR SF KS QU TE SJ GU MC HU LM AC TW; B: TR SO LE KN ES WN WI VL KV MA NE HB LG AQ IK EB CI TL PE SM AE AV SZ TA MB TG LU PM AP PP GN TO KG; C: NI PR CF MT KA KY HR - (si: A: FU DS HO BA; B: DO AM).

JUNE

13 1325 (20-28) A: KN SF SJ; B: SO MG LE HL WN WI VL BE KV MA DB HB OD LG AQ IK EB SM EA AV QU LU PM AC; C: ES NI HA PR VI CF TL PE SZ TA MB HR - (si: A: JO KS; B: IR FU HU LM; C: MT TK KA SS KY BA).

24 1816 (12-20) B: MA JO; C: WN VL PR (si: B: QU; C: PP LM - b: A: OD - sfe: SZ).

JULY

05 1813 (07-24) A: SF; B: SJ ; C: MA QU BA PP? - (si: B: HL UB LG).

08 1728 (24-30) A: SF; B: ES HL WN VL MA HB LG AQ IK QU SJ BA; C: LE WI NI MA DB PR TF TK EB TL MB - (si: A: KN FU? UB; B: BE AV SZ HU; C: LM - bs: A: OD - bps: A: PE?; B: KV).

21 0522 (14-25) A: MG VI UB KS QU HO TE BA AC TW; B: CO IR KV NE HB MT LG AQ TK IK PE SM AE KA AV KY SZ TA SJ GU MC TG PM HU PP GN HR TO AM DU; C: CF JO EB PE SS - (si: A: LM).

26 1700 (42-14) A: SF; B: SM AV; C: AE TA HO BA - (si: B: LM; C: QU?).

AUGUST

01 2119 (16-23) A: SF; B: TF AV QU MC LM; C: MB BA - (si: A: TR; B: LG - bp: A: PE; B: KV MA HB; C: EB - bps: B: SO).

02 0021 (18-30) B: KV DB PR VI HB SU KS QU HO GU PM HU GN; C: WN VL NE MT KA SS KY PP - (si: A: TE MC; B: HL BE FU LG TA; C: BA - bp: B: MA).

07 1436 (29-40) A: SF; B: HL WN BE KV MA AV QU AC TW; C: LE ES NI VL HA PR CF LG TF - (si: B: FU; C: EB BA).

17 2043 (39-46) A: SU CI SF KS SJ LU; B: HL WN VL MA UB HB OT LG AQ TF TK AV QU HO BA MC PP LM AC TW; C: NI HA DB PR NE CF EB TL FR TA MB HR - (si: A: TE; B: IR BE FU).

30 2303 (00-06) A: HB SU TF KS QU SJ GU MC LU HU TW; B: HL WN VL BE KV DB PR NE AQ IK TL FR PE AV DS HO MB PM LM; C: NI MT TK EB KA SS KY - (si: A: KN FU LG TA TE BA; B: CF - bs: C: VI - bp: B: MA?).

SEPTEMBER

04 1646 (39-50) A: MG FU HB JO OD SU FR AE KS TA SJ BA LU HU AC TW; B: SO CO LE MO ES HL WN SW VL BE HA KV MA DB VI NE UB AQ TF TK IK EB PE SM AV QU SZ MB GU MC PM PP TN LM GN TO AM; C: WI NI PR CF MT TL KA SS KY HR - (si: A: DO NU KN OT; B: IR).

14 1548 (42-53) B: SM QU; C: WN KV MA PR BA - (si: B: KN HL IR FU; C: NI AE - sfe: OD SZ HU TN).

TABLE 1 STORM SUDDEN COMMENCEMENTS (ssc) 1971 - continued

(SEPTEMBER)

17 1125 (23-29) B: AV QU PM; C: VI MT KA KY - (si: B: TA; C: BA).

17 1845 (40-62) B: SW CI LU; C: MA DB CF BA PP - (si: B: BE QU MC).

24 1431 (29-37) A: SM; B: MG HB JO AQ QU MB PM HU AC; C: LE ES WN VL MA CF UB MT AE KA SS KY BA PP - (si: B: HL; C: AV LM).

26 1650 (45-55) B: BE CI AV; C: WI SW CF TF TA - (si: B: QU - bp: B: KY).

30 0749 (42-51) B: SW JO TF AE AV; C: BE SZ - (si: A: QU TE; B: FU; C: LM).

OCTOBER

05 2245 (38-50) A: MG KN MA FU UB HB OD SU LG AQ TF TK CI TL FR PE AE SF KS AV QU SZ HO TE SJ MB GU BA LU HU AP PP TN LM HR AC TW; B:LE MO ES HL WN WI SW NI VL BE HA KV DB PR NE CF IK EB SM TA PM TO KG DU; C: MT KA SS KY - (si: A: IR; B: NU HL OT; C: SI - bs: B; SO - bp: B: LZ - bps: B: DO).

07 1602 (00-03) A: TR MG; B: SO CO HL IR VL PR AE MB; C: LE ES WN CF LG AQ TK IK EB QU TA BA PP LM KG - (si: A: NU SU; B: BE MA FR; C: KV).

08 1703 (56-05) A: MA FU UB HB SU LG TF FR AE KS AV QU SJ MB BA LU HU TN AC TW; B: SO MO HL WN WI VL BE KV PR VI CF AQ IK EB TL PE SM TU PM LM HR; C: NI HA MT KA SS PP - (si: A: CO NU KN IR OD SZ HO TE; B: LE MG SI ES DB NE TK KY TA TO).

09 0037 (29-43) A: MG; B: HO BA TO; C: TF - (si: B: QU - sfe: MT? KA? SS).

11 1211 (01-14) A: TR SF TW; B: SO WN VL KV MA DB VI UB SZ HU PP AC KG DU; C: PR CF EB TL QU MB HR - (si: B: NU BE FU HB SU SM AE AV; C: NI MT KA KY TA HO BA LM - bp: A: AP - sfe: HL OD).

12 1618 (12-29) B: HL SW VL HA MA OD IK SU AQ TF SM AV QU LM AC; C: WN WI KV PR CF HB TK EB TL PE BA PP - (si: B: FU HU; C: LG AE - sfe: SZ).

23 1225 (59-09) B: MA BA LU; C: CF AV TA - (si: B: HL AC - sfe: HU).

NOVEMBER

18 0715 (10-16) A: TF; B: QU BA; C: UB DU - (si: B: LU PP LM).

22 0451 (45-54) B: QU; C: MT KA KY TN - (si: B: PP).

22 1904 (59-09) A: LG PE SF TE; B: SW MA CI SM QU HO BA LM; C: WN VL KV PR CF KS AV SZ - (si: A: FU AC; B: OD PP; C: TL).

DECEMBER

16 1904 (00-08) A: SO CO NU MG KN ME MA VI FU UB HB JO OD SU LG TF TK CI FR PE SM AE SF KS QU TA HO TE SJ MB BA HU AP PP TN LM GN HR TO AC TW KG DU; B: TR LE SI MO ES HL WN WI SW NI VL BE HA KV DB NE OT AQ IK EB TL AV SS TU SZ GU PM AM; C: CF MT KA KY - (si; A: DO).

17 1418 (12-22) A: TR SO DO NU MG KN MO WN IR VL MA VI NE JO OD SU OT? MT LG AQ TF TK IK CI FR PE SM SF KA KS AV SS KY SZ TA HO SJ MB GU BA PM AP PP TN LM GN HR AC TO AM KG DU; B: LE ES HL WI NI BE HA KV DB CF EB TL AE TU - (si: A: SI ME FU HB TE HU TW).

19 0642 (39-45) A: HO BA; B: MG MA QU LM TW; C: KG (si: C: PP - bp: B: AV).

TABLE 2 BAYS AND PULSATIONS 1971

Times of commencements of bays or pulsational disturbances associated with bays. Stations which reported other kinds of disturbances are included in parentheses.

JANUARY

01 0111 (00-16) bp: A: CI SF MC; B: LE ES WN WI VL KV MA PR FU HB EB SM; C: CF.

01 1735 (31-36) B; B: SW - bp: B: SO BE KV MA FU OD IK QU; C: WN EB TL - bps: A: UB - (ssc: B: KN).

02 0849 (48-50) b: A: MG - bp: B: VI - bps: A: HO; B: PP - (ssc: A: PB - si: A: CO).

02 1346 (40-52) bp: A: MG KN OD; B: AP - bps: A: UB MT KA KY; B: SS.

03 1822 (05-40) b: B: HL; C: BA - bp: A: MO PR SU TL MC; B: WN MA EB SM AE AV - bps: A: HB IK LM.

05 1344 (36-50) b: A: MG UB; B: IK - bp: A: OD; B: KV DU; C: MT TF KA SS KY.

05 1725 (21-32) b: B: SW - bp: A: KN OD; B: KV MA IK; C: MT KA KY.

10 1906 (51-10) b: A: MO; B: MG SW - bs: B: HL - bp: A: SO NU WN VL PR UB SU AQ TF IK CI SF; B: LZ LE ES WI HA MA DB FU EB TL PE SM AV LM GN KG; C: MT KA KY HR - bps: A: KN IR KV HB OD QU; B: DO NI BE TK AE KS.

11 1517 (00-28) b: B: IR SW - bs: B: HL - bp: A: KN UB OD; B: MG MO KV MA IK EB GN TO KG; C: LZ WN HB - bps: A: SO QU; B: TK; C: BE.

11 2314 (07-21) b: B: HL SW - bs: A: KS - bp: A: OD TF CI TL PE SF; B: SO NU LE ES MN WN WI VL HA KV MA DB PR CF FU HB LG AQ IK EB QU SZ TA BA MC LU; C: AV - bps: B: DO KN NI; C: BE.

15 2100 (57-03) b: B: HL - bs: A: SO NU; B: BE - bp: B: WI MA PR FU AQ IK PE QU MC KG; C: NI CF EB TL - bps: B: DO WN VL KV OD; C: TK LM - (ssc: A: TR).

16 2104 (00-06) bp: A: NU KN KV; B: SO FU OD IK; C: HB EB - bps: C: NI TK.

16 2145 (40-48) bp: B: LE ES WN WI VL MA PR HB OD IK EB QU; C: LM - bps: A: SO NU; B: DO KV - (si: B: TR).

17 2018 (14-21) b: A: IR; B: SW - bs: A: NU KS - bp: B: ES HL WN VI BE MA PR FU AQ TF IK EB PE QU - bps: A: SO KV; B: DO LE KN MN WI OD; C: NI TK - (ssc: B: HB; C: HA - si: B: TR; C: LG).

19 1654 (48-57) b: C: BA - bs: A: SO; B: HL - bp: B: MO WN VL MA PR HB TF EB KG - bps: A: PE QU; B: BE IK - (ssc: A: OD KS; B: SW; C: LM).

20 2221 (15-25) b: C: BA - bp: B: PR OD EB PE MC; C: WN TF TL - bps: B: VL.

22 2056 (42-78) b: A: PR SZ; B: WN HL IR SW - bs: A: SO - bp: B: KN NI KV MA HB OD IK EB TL; C: WI TF LM - bps: B: BE; C: TK.

23 0137 (24-39) b: A: PE; B: BA - bs: B: HL HB - bp: B: KN MA CF IK EB MC; C: WN - bps: A: KV LU; B: SO OD AE TA - (si: B: BE AV).

24 1131 (20-42) b: A: MG; B: ME - bp: A: UB; B: OD GU - bps: A: CO NE HO AP TO; B: MT KA KY PP; C: SS - (ssc: A: PB).

24 2025 (21-26) bs: A: KS - bp: A: PR IK TL; B: WN VL MA TF EB - bps: A: SO.

25 1736 (30-52) b: B: HL; C: BA? - bp: B: MO KV OD IK; C: TF EB - bps: B: TK QU LM.

28 0230 (28-34) b: A: BA - bp: A: PE SF MC TW; B: IK EB TL LU; C: HR.

28 2132 (25-36) b: B: AE - bp: B: MA TL; C: EB - bps: A: OT SZ MC; B: WN VL PR AV HR - (ssc: A: SF - si: A: OD; C: BA).

28 2155 (48-60) b: A: AE - bp: A: MO EB - bps: A: CF IK TL MC - (si: A: OD AV; B: TA BA.

29 0430 (24-33) b: A: HU - bp: A: SF; B: WN VL HA MA PR AQ EB SM AV SZ; C: TL.

30 0440 (25-53) b: A: LU; B: AE MB BA - bp: A: SO KN IK EB MC; B: TL AV SZ TA; C: HR - bps: A: CF.

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(JANUARY)

30 2003 (48-18) b: A: SZ; B: SW AE - bs: A: SO KS; B: HL - bp: A: FU EB TL MC; B: WN WI HA MA PR SM HR KG - bps: A: CF LG IK CI PE QU LM; B: VL; C: TK - (ssc: B: TR - si: B: BA).

31 0729 (25-30) b: B: MG - bp: A: UB; B: VI HO - bps: A: PP.

31 1300 (00-03) bp: A: KN UB; B: OD MT KA SS KY - bps: A: MG.

31 1742 (36-60) b: A: PR; B: WN SW AE - bp: A: KN UB OD; B: MO NI VL MA HB IK QU KG; C: MT TL KA KY - bps: B: HL BE; C: TK.

FEBRUARY

01 1513 (00-30) b: A: NU MO; B: SW - bs: A: SO KS; B: HL - bp: A: KN IR FU OD SU IK CI PE; B: LE ES WI BE HA MA DB MT TF EB KA KY LU HR KG; C: TL - bps: A: WN NI KV PR TK QU; B: VL HB SS GN TO.

02 0143 (35-58) b: A: SJ - bp: A: TE; B: FR SM HU; C: VI - bps: A: TW; C: SZ.

02 1820 (00-28) b: A: NU SU CI; B: WN IR SW PR FU; C: AE - bs: B: HL BE - bp: A: MO UB OD CI; B: LE ES NI VL KV MA DB HB IK EB TL QU KG; C: LM - bps: A: SO.

02 2128 (23-30) b: A: CI SF; B: HB; C: BA - bs: B: AE LU - bp: B: KV MA FU IK EB SM MB MC; C: TL - bps: A: SO TA; B: OD AV.

03 0015 (10-17) b: C: BA - bs: B: AE - bp: B: VL BE MA FU HB OD EB SM AV TA MC; C: CF TL - bps: A: SO; B: KV CI.

04 1407 (00-10) b: B: HL SW FU bp: A: SO OD; B: MO BE KV HB KG.

06 0022 (15-26) b: A: SF MC LU; B: FU AE; C: CF PE MB - bp: B: SO ES KV OD EB TA HR - bps: A: SU.

07 2319 (15-26) bp: A: CI TA MC; B: MA HB SM AV HR; C: BE CF EB TL BA - bps: A: SO; B: SZ - (ssc: C: QU).

09 2340 (36-44) bp: A: SO; B: MN KV MA OD; C: EB PE - (si: B: HL BE LG).

10 1440 (18-50) b: A: IR FU EB SU; B: NU HL SW AE - bs: A: CO - bp: A: SO MG KN KV UB HB OD SU IK PE SF; B: LZ LE ES MO NI PR MT TL KA AV KY TA HR; C: TF SS - bps: B: BE; C: TK.

10 2011 (05-15) b: B: HL IR SW - bs: A: KS; B: BE; C: AE - bp: A: NU KV WN KV UB OD SU AQ IK SF QU; B: LZ LE MO ES WI NI VL HA MA PR TF EB CI TL PE LM GN HR KG; C: MT KA KY - bps: A: SO FU; B: DO HB TK - ssc: B: TR).

11 2131 (29-33) b: B: SW - bs: B: HL - bp: A: SO; B: WI KV MA FU OD IK EB TL PE.

12 1528 (24-38) b: B: IR SW - bp: A: SO OD; B: KV KG; C: LZ BE - bps: B: MO; C: TK.

15 0102 (55-05) b: A: BA - bp: A: CF HB PE SF LU; B: MA PR AQ IK EB AV SZ; C: WN MB - bps: A: TA.

15 1755 (42-68) bp: A: MC LM HR; B: WN MA EB AE BA - bps: A: SO QU; B: VL CF TL.

15 2224 (15-38) b: A: EB AC - bs: A: CF BA LU; B: TL MB - bp: A: SF MC; B: MA - bps: B: IK AE - (si: A: AV; B: TA).

16 0117 (08-22) bs: A: CF; B: MB BA LU - bp: A: KN HR AC; B: MA EB SM SZ LM - bps: A: MC; B: AE - (si: A: AV; B: TA).

18 2217 (12-22) b: B: BA - bp: A: KN OD MC; B: MA EB CI AV QU TA - bps: A: SO; B: HL.

20 1901 (51-24) b: B: SW; C: BA - bs: B: HL - bp: A: VL CF IK PE QU MC; B: LZ WN WI KV MA PR HB AQ EB TL AV LM KG; C: TF - bps: A: FU OD; B: LG TA; C: TK - (ssc:: A: SO).

21 1418 (08-30) b: B: MG IR - bp: A: UB; B: KV OD AP TO DU; C: MT TF KA SS KY.

24 2124 (15-36) b: B: SW - bp: A: PR FU LM; B: WN EB TL - bps: A: SO; B: HL - (ssc: B: TR).

24 2200 (57-02) bp: A: SF MC; B: MA IK EB - bps: A: VL CF SZ HR; B: AV; C: LG.

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(FEBRUARY)

26 0242 (28-52) b: A: SJ; C: AE - bs: B: HL - bp: A: KN CF SF MC HU; B: WN VL MA PR IK EB TL SM TW - bps: A: MO SZ MB AC.

27 2240 (30-50) b: B: BA - bp: A: PE; B: KV MA PR HB OD EB TL AV TA MC; C: NI.

MARCH

01 0828 (24-33) bp: B: VI TE; C: PP - bps: A: CO - (si: A: SU).

02 0346 (40-50) bp: B: VL MA CI SM HU; C: EB SZ - (ssc: HB? - si: B: BE AE; C: PP).

03 1917 (09-26) b: A: CI; B: HL SW AE SZ - bp: A: NU WN PR OD TL PE; B: LE ES WI VL MA DB HB AQ IK EB MC LM KG; C: QU - bps: A: SO FU; B: NI BE; C: TK - (ssc: B: TR).

04 1809 (00-22) b: B: HB SU; C: WN - bs: B: HL BE - bp: A: OD; B: KV PR PE; C: NI - bps: A: MO.

05 0117 (10-26) bs: C: MB - bp: A: MC TW; B: SO MA IK SM LM; C: EB - bps: A: LU; B: AV SZ TA - (ssc: A: SU; C: AE - si: A: SF; B: HL BE? KV FU HB LG PE; C: BA).

08 0221 (00-28) b: B: HL SW - bs: A: KS - bp: A: SO NU KN DB PR CF HB JO OD SU LG AQ IK EB TL PE SZ TA SJ MC AC; B: LZ LE MO ES WN WI VL HA KV TF SM HU HR TW KG - bps: A: FU CI FR AE SF AV LU LM; B: NI BE - (si: B: BA).

10 1333 (20-44) bs: B: HL - bp: A: UB OD; B: DU; C: MT TF AE KA KY - bps: A: AC.

10 1632 (26-46) bs: B: HL - bp: A: SO UB OD SU; B: HB MT KA SS KY KG - bps: B: MO.

11 0357 (56-59) bp: A: SJ; B: SM TW; C: EB - bps: A: AC; B: HU.

12 1208 (07-15) bp: A: TO; B: SS DU - bps: A: MG MT KA KY.

12 2124 (15-38) b: A: MB - bs: A: LU - bp: A: SO EB AE SZ MC; B: FR - bps: A: WN CF LG IK TL PE QU HR; B: MO VL HA DB PR - (ssc: A: MA KS AV; B: HL BE - si: A: OD; C: TK).

13 1724 (17-40) bs: B: AE - bp: A: MO SU IK PE; B: WN MA EB TL - bps: A: PR HB QU LM HR; B: VL - (ssc: A: SO - si: A: OD; B: TK).

13 2301 (00-03) bs: A: LU - bp: A: MC; B: MA IK EB; C: TL - bps: A: PE; B: CF QU SZ HR - (si: A: LG; B: BA - sfe: TE).

14 2118 (16-20) bs: A: SO SF KS - bp: B: MA EB TL SZ - bps: A: CF LU HR; B: IK PE - (si: A: OD; C: BA).

14 2349 (40-50) b: B: HL - bs: A: KS - bp: A: CF MC HR; B: MA EB - bps: A: SO IK PE QU; B: HB - (si: B: BA).

15 1638 (25-45) bs: A: SO - bp: B: LE ES WN MA PR IK; C: MT EB KA SS KY - bps: C: BE.

16 1506 (00-12) b: B: KV; C: SS - bp: B: KN HB OD DU - bps: B: HL; C: MT KA KY.

16 2340 (30-46) b: B: HL KV BA; C: AE TN - bs: A: SF; B: MB - bp: A: OD PE MC AC; B: MA CF AQ IK EB CI HR - bps: B: HB - (si: B: AV).

17 1657 (54-66) b: A: SU; B: HL SW KV - bp: A: IR TO; B: MO HB IK PE QU LM DU; C: MT EB KA SS KY - bps: A: UB OD; B: TK - (ssc: B: TR).

18 0022 (11-30) b: A: AC; B: KV AE QU MB BA; C: TN - bp: A: OD LU; B: HB TF IK EB PE SM MC HR; C: BE.

18 2018 (15-27) bp: B: VL KV MA IK PE MC; C: EB - bps: A: SO OD; B: DO HL; C: BE - (si: A: TR).

19 2126 (18-35) bp: A: FU EB CI TL PE QU MC; B: WN VL MA PR TF AV SZ LM - bps: A: CF IK; B: HB - (ssc: B: TR - si: A: SF; B: BA).

20 0526 (24-27) b: A: HU AC; B: SJ - bp: A: TE TW.

24 1931 (24-38) b: A: SU; B: SW - bs: A: SO KS; B: HL - bp: A: IK PE; B: WN WI NI

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(MARCH)

VL HA MA DB PR CF HB EB TL QU LM HR; C: TF - bps: B: BE - (ssc: A: TR).

26 0031 (28-35) bp: A: FU CI; B: WN VL BE KV PR HB OD AQ EB SM MC HR AC; C: SZ MB.

27 2321 (18-23) b: C: BA - bp: B: SO VL MA IK EB CI PE SM MC; C: CF MB - bps: A: LU.

30 1851 (45-60) bp: A: SO KN UB; B: VL IK QU LM KG; C: EB - (ssc: B: TR).

30 2122 (09-26) bs: A: SO; B: HL - bp: A: KN PE; B: VL AQ EB TL HR - bps: A: FU B: MO WN PR HB IK - (si: B: OD).

31 1727 (25-35) bp: A: PE MC; B: EB TL QU LM HR - bps: A: AM; B: MO - (si: B: BA).

APRIL

01 0604 (00-12) b: B: NE AC - bp: A: SF; B: PE; C: VI - bps: A: HU; B: PP - (si: C: QU).

02 1437 (21-52) bp: A: MG; B: KN KV OD IK; C: MT KA KY QU - bps: A: UB; B: MO SS; C: TK - (sfe: BA).

03 0024 (05-38) b: A: SJ; B: SW - bs: B: BE - bp: A: OD IK PE MC; B: KN WN HA KV MA PR CF EB TL SM AE AV TA HR KG; C: QU - bps: A: FU CI SF SZ LU AC TW; B: VL HB LG AQ MB BA HU LM; C: NI.

03 0939 (30-45) bp: A: AP; B: VI NE TO DU - bps: A: HO PP.

03 1930 (17-34) bp: A: PE; B: WN VL KV MA PR QU HR; C: TL - bps: A: FU; B: HB LM - (ssc: B: SO - si: A: TR; B: BE).

05 1602 (00-06) bp: A: KV OD; B: MA IK PE QU; C: WN BE TF - bps: A: SO MO; B: KN HL TK LM - (si: A: FU).

05 1858 (40-68) b: A: CI; B: HL SW AE MB - bp: A: SO WN KV FU CF UB HB OD IK TL PE SF QU; B: KN WI NI VL HA MA DB PR AQ TF EB MC LM - bps: A: MO; B: BE TK AV - (si: C: BA).

08 1952 (45-67) b: B: SW KV - bp: A: SO KN IR UB; B: OD QU; C: EB.

09 0545 (42-46) bp: A: TE AC - (ssc: A: OT - si: B: BE QU).

11 1954 (48-66) bs: B: HL HB - bp: A: MO OD SF; B: WN VL MA AQ IK EB TL PE QU MC LM HR; C: CF - bps: A: SO; B: BE; C: NI PR.

12 1323 (19-30) bp: A: IR; B: OD GN DU; C: KV MT KA KY - bps: A: MG.

12 1846 (42-49) b: B: HL - bs: A: SO LU - bp: A: KV PE; B: HB OD EB QU MC LM; C: TL HR.

13 1222 (10-14) bp: A: UB AP; B: MT KA KY; C: SS.

13 1128 (25-30) b: B: IR - bs: A: MG - bp: B: OD GU TO DU.

14 0027 (15-43) b: B: SW - bp: A: FU PE AC TW; B: VL KV DB CF HB OD AQ IK EB CI TL SM TA LM HR; C: WN PR MB - bps: A: SF MC LU; B: LG AE AV; C: NI SZ - (ssc: B: BA).

16 2205 (52-15) b: C: AE BA - bp: B: LG EB CI TL SZ MC; C: CF - bps: A: SO - (ssc: A: TR).

17 2158 (55-60) b: B: SW - bs: A: KS; B: HL - bp: A: MA; B: LZ KV DB CF IK EB CI PE MC KG; C: WN NI PR AE - bps: A: SO FU OD LU LM; B: DO LE ES WI VL HB LG AQ TL TA HR; C: BE TK - (ssc: A: TR - si: A: KN; C: BA).

17 2251 (48-55) b: A: SF; B: AE - bp: A: SO CF OD PE MC; B: LE ES KV MA AQ IK EB CI HR; C: TL.

18 2153 (48-61) b: A: SF; B: KV AE - bs: A: KS; B: HL - bp: A: OD TF IK PE; B: WN WI VL MA PR CF HB AQ EB TL QU MC LM HR; C: NI - bps: A: SO; B: BE TK.

22 2008 (03-19) b: B: HL SW TN - bp: A: KN TF IK PE; B: LZ LE ES WI KV HA MA DB HB AQ EB CI TL QU GN HR - bps: A: SO DO NU MO FU OD; B: WN NI VL BE PR TK LM - (si: A: TR).

23 2030 (24-43) b: B: PE; C: AE BA - bs: B: HL - bp: A: CF SF; B: WN KV PR TF AV

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(APRIL)

QU MC LM; C: TL TA HR - bps: A: LU.

27 0823 (20-25) b: A: HU - bp: A: TE AC TW; B: SM.

MAY

02 0007 (00-17) b: A: SF TN; B: HL MB - bs: A: LU; C: BA - bp: A:MO FU CF OD AQ IK EB PE AV TA MC LM AC; B: WN NI VL HA KV PR LG CI TL SM SZ KG - bps: A: HR; C: BE.

05 2014 (12-18) bp: A: OD SF LU; B: VL MA CF HB IK EB SM MC - bps: A: SO FU PE LM; B: DO WN WI PR AQ HR; C: NI - (ssc: B: HL BE - si: C: KG).

06 0155 (42-60) b: A: SF - bs: B: LU - bp: A: MC HU LM AC TW; B: WN PR AQ EB TL - bps: A: HR; B: VL FU SZ - (ssc: B: CI SM - b: A: SJ).

09 1451 (45-59) bs: A: MG - bp: B: TO - bps: B: TF; C: MT TK KA KY - (si: B: BE GN).

10 0234 (20-41) b: A: CI SJ HU; B: CF MB - bp: A: AC TW; B: EB SM SZ MC HR DU; C: TL.

11 0417 (00-30) b: B: CF JO; C: AE MC - bp: A: AC TW; B: SM AV.

14 0250 (43-54) bp: A: TE SJ HU AC; B: MA HB JO SM MB LM; C: EB - bps: A: LU TW; B: HR.

14 2004 (00-06) bs: B: BA - bp: A: MC; B: MA OD PE QU HR; C: WN EB TL - bps: A: SO FU LG; B: LM - (ssc: B: TR).

14 2201 (56-04) bs: A: SO PE KS; B: LU; C: BA - bp: B: WN MA PR CI QU KG - bps: A: FU OD LG IK MC LM; B: KN VL CF EB TL AE AV - (si: B: KV HR).

16 1740 (36-45) bp: B: SO KN KV OD QU; C: MT KA KY - bps: C: TK.

17 0112 (02-18) b: B: HL - bs: A: LU - bp: B: MA AQ EB MB - bps: A: WN FU CI SF MC LM HR AC; B: VL PR AE SZ; C: TL - (ssc: B: SM AV; C: QU TA - si: B: OD LG; C: JO BA).

18 1940 (39-45) b: B: SW - bp: A: SO OD; B: KN WN VL MA PR EB TL - bps: A: TF.

19 1612 (02-21) b: A: GN; B: HL IK - bp: A: KN OD; B: KV TK QU.

19 2138 (30-46) bp: A: SO; B: LZ BE MA HB OD; C: CF EB QU.

20 1036 (35-40) b: A: MG - bp: B: PP TO DU - bps: A: AP; B: AM; C: HO - (si: A: CO).

22 0131 (18-42) bp: A: NU FU CI SF TA; B: VL MA HB LG EB SM AE AV MB MC HR; C: CF TL SZ - bps: A: LU; B: JO; C: BA.

23 0028 (20-36) B; B: SW - bp: A: SO NU CF HB OD IK EB TL PE AV TA MB MC HR; B: DO LZ WI NI VL BE MA DB AQ CI SM AE SZ LM KG - bps: A: FU JO LG SF; B: ES LU; C: BA - (ssc: B: TR).

23 2002 (53-06) b: A: LU; B: SW - bp: B: LZ DO MA FU OD IK QU LM HR; C: TL - bps: A: SO; C: NI AE - (si: BE).

25 2354 (42-61) b: A: SJ - bp: A: AC; B: SO MA JO EB LM - bps: B: VL SZ HR.

28 1857 (39-70) bp: B: SO VL KV HB OD PE KG; C: LZ CF EB TL HR.

28 2350 (43-60) bp: A: JO; B: SO MN VL KV MA FU HB LG EB CI PE LU; C: LZ BE CF TL LM HR.

30 2032 (29-33) bp: A: PE; B: LZ KN MA CF IK EB MC; C: TL HR - bps: A: SO FU; B: DO VL LG AQ LM.

JUNE

02 1946 (39-58) b: A: KV PE SF SZ; B: AE - bs: A: LU; B: HL - bp: A: KN FU OD EB TL MC; B: WN VL HA MA IK SM QU - bps: A: SO MO DB CF AV LM; B: BE PR HR - (ssc: B: TR - si: B: BA).

03 0704 (00-08) b: A: HU; B: AC - bs: A: HO - bp: A: TE - bps: A: AM; B: PP - (si: B: MG).

07 2321 (15-25) bp: A: SO; B: VL FU EB SM MC LU LM; C: KV CF HR - (si: B: JO).

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(JUNE)

18 2214 (12-17) bp: A: OD CI; B: VL BE IK EB AV TA MC; C: KV TL AE TN - bps: A: SO PE; B: LM; C: BA.

22 0314 (03-20) bp: A: SJ HU AC; B: SM SZ LM; C: MB HR - bps: A: JO TW - (si: BE).

26 0927 (26-27) b: B: HO - bp: A: TO; B: MT KA KY - bps: A: AM; B: PP.

28 2316 (10-20) bs: C: BA - bp: A: MC; B: VL HB SM AV HR - bps: A: SO CI SF SZ LU.

JULY

01 2022 (18-25) b: A: PE; B: HL - bs: B: SO - bp: A: OD; B: WN VL BE KV MC; C: PR EB TL LM HR.

02 2305 (00-10) bs: B: SO - bp: A: PE SF MC; B: DB FI CF HB OD AQ IK EB CI SM AE AV TA HR KG; C: WN TL MB - bps: B: LM - (si: B: BA).

04 0031 (25-38) b: A: CI; B: AV SZ HU - bp: A: HB; B: JO EB MB TW; C: TL MC.

06 0038 (30-43) b: B: SW AC - bs: B: AE - bp: A: TA MC; B: DB HB JO LG EB TL PE KG; C: WN MA MB LM HR - bps: B: AV - (si: B: BA).

08 0407 (00-15) B; B: SJ? - bp: A: JO FR TE HU AC TW; B: NE EB.

09 0059 (51-65) b: A: PE; B: KV - bp: A: OD; B: FU HB IK EB CI AV SZ TA MC LM - bps: B: BE - (si: B: BA).

15 0401 (58-05) bp: A: SF; B: VL EB TL SM MB; C: WN BE PR PP.

17 0123 (17-30) bp: A: CI SJ HU AC; B: VL CF SM AV SZ MC HR; C: EB MB - bps: A: TW.

18 0309 (06-10) bp: A: AC TW; B: VL SM HU HR; C: EB MB MC.

22 1957 (53-60) b: A: OD MC; B: HL AV; C: HO - bs: B: JO - bp: B: PE SM - bps: B: TF CI - (ssc: B: QU - si: A: TE; B: LG TA BA PP; C: EB AE MB - sfe: MG TL? HU).

23 2332 (26-45) b: B: SW bp: A: CI SF; B: WN WI VL MA PR FU CF HB AQ EB TL SM SZ LM HR - bps: A: SO; B: JO; C: BE - (ssc: B: TR).

26 1909 (05-12) bp: A: SO; B: WN PR KG - bps: A: KN MO; B: HR - (si: B: QU).

26 2246 (42-48) bs: A: SO MO; B: NI - bp: A: WN HR; B: KN VL MA PR EB CI LM; C: TL - bps: A: TL; B: HB - (si: B: TR; C: HO).

27 1122 (20-26) b: A: SO; B: WN SW PR - bs: B: JO - bp: B: MO KV MA HB; C: HR - bps: B: LE ES HL - (si: C: LM).

29 2300 (55-05) b: A: AQ EB; B: IR TN - bs: A: BE PE KS SZ; B: HL KV MB; C: NI - bp: A: MA DB; B: SM QU - bps: A: KN MO WN FU CF HB OD TF IK CI TL AE SF MC; B: WI VL HA PR TK AV - (si: A: TA BA LM; B: LE ES LG).

AUGUST

01 2002 (59-05) b: B: SW? - bp: B: VL KV MA PR HB; C: WN EB - bps: A: SO - (ssc: C: LG - si: HL).

03 0044 (41-48) bp: A: SJ AC TW; B: VL MB HU; C: EB TL MC HR.

05 0027 (22-32) bs: A: KS; B: HL - bp: A: SO FU IK PE QU MC; B: WN MA PR CF AQ EB CI TL HR; C: TF - bps: A: VL OD LG SF TA LU LM; B: BE KV HB AV BA?; C: NI - (ssc: B: TR).

05 0549 (45-52) b: A: FR SJ - bs: A: TE - bp: A: HO AM; B: VI - bps: A: PP.

08 2117 (14-20) bp: A: SO; B: KV MA FU HB OD QU; C: EB HR.

09 1659 (50-66) b: B: SW - bs: A: IR bp: A: SO KV UB OD TK; B: LE WN MA PR TF IK PE QU LM KG; C: NI EB TL HR - bps: A: KN; B: MO HL BE HB.

10 2325 (15-30) b: A: CI - bp: A: SF; B: VL KV MA DB CF HB OD EB PE AV MC HR; C: BA LM - (ssc: B: TR).

12 1242 (24-58) b: A: IR GN - bs: A: MG - bp: A: KN UB; B: KV OD MT KA SS KY; C: TF - bps: B: HL.

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(AUGUST)

12 1530 (29-32) bp: A: KN UB; B: MG BE HB OD QU; C: MT KA SS KY - bps: B: IR KV GN.

15 2231 (29-36) bs: B: HL - bp: B: LE ES VL HA KV MA OD LM HR; C: WN PR CF EB TL - bps: A: SO; C: NI BE.

16 0341 (27-55) bs: A: LU - bp: A: CF HB TA MC LM; B: SO BE KV OD EB AV; C: NI TL - bps: A: SF HR - (si: B: BA).

18 2248 (45-50) bp: B: LZ VL MA; C: EB MC - bps: A: SO LU; B: KV LG LM.

21 1945 (42-48) bp: B: HL WN KV MA IK CI PE MC; C: PR EB TL - bps: A: SO.

23 0033 (30-36) bp: A: FU CF; B: EB - bps: A: PR OD LG IK PE TA MC LM HR; B: WN VL KV TL - (ssc: A: SF LU; B: AV QU; C: BE KS - si: B: BA).

26 2009 (53-21) b: A: NU SU SJ; B: IR SW LG; C: BA - bs: A: LU; B: HL - bp: A: SO HB OD TF CI PE QU; B: LE KN ES WN VL HA MA DB PR FU IK EB TL AV KG; C: NI MT KA SS KY - bps: A: SF LM; B: MO BE KV HR.

29 0044 (42-48) bp: A: VL CI SF MC; B: LE ES WN BE HA MA PR FU CF HB AQ EB TL PE BA HR bps: A: LU; B: KV LG AV.

30 0007 (00-17) b: B: HL - bp: A: LG CI PE SF TA MC; B: SO LE ES BE HA KV MA DB FU CF HB OD AQ IK EB TL MB HR KG - bps: A: BA LU; B: LM.

31 2003 (52-14) bs: A: KS - bp: A: KN MO MA PR FU CF IK TL MC LM HR; B: WN VL HB EB AV - bps: A: SO LG SF; B: HL KV QU TA - (ssc: B: TR - si: B: BA? - bps: B: KV).

SEPTEMBER

01 1906 (00-15) bp: A: MC; B: HL KV MA AQ OD IK TL PE TA BA; C: LZ EB LM HR - bps: B: SO - (ssc: B: TR).

04 2316 (12-23) bs: A: SO - bp: A: IK MC LU; B: KN MA EB TL LM - bps: A: CF PE BA; B: HB CI QU.

05 1949 (40-64) b: A: CI; B: SW - bp: B: LZ KN WI KV MA HB AQ IK QU KG; C: WN EB TL - bps: A: MO; B: SO BE.

07 1442 (36-50) bp: B: MG AP AM; C: MT KA KY - (ssc: C: DU).

07 2140 (35-48) bp: A: CI SM AE MC AC; B: VL MA HB AQ TL SJ; C: WN - bps: A: FU CF JO SZ MB; B: HL EB AV TA LM HR.

08 1930 (20-40) b: A: NU; B: HL WN SW - bp: B: KV MA DB HB OD TF TF EB KG; C: NI PR TL HR - bps: B: SO BE.

09 1549 (35-57) b: A: IR; B: KV WN SW - bs: B: MO - bp: A: MA OD TK IK; B: HB SS QU; C: EB - bps: A: SO MG KN UB GN; B: BE MT KA KY TO.

10 2215 (12-18) bp: A: SU; B: SO LE ES VL KV MA OD LG AQ IK PE; C: CF EB MC LM.

12 1841 (33-45) b: A: AC; B: OD LU - bs: B: HL - bp: A: MC; B: PE - bps: B: KY; C: TF - (ssc: B: QU BA - si: A: TE; B: TA; C: UB).

13 0153 (48-55) b: B: SW - bp: A: SO NU MA CF OD PE SM; C: WI SJ - bps: A: LE ES WN VL KV DB PR FU HB LG AQ IK EB CI TL AV SZ TA MB BA MC LU HU HR AC TW; B: DO NI BE HA AE - (ssc: A: JO - (si: B: LM; C: OT?).

13 0608 (06-10) bp: A: TE; B: SJ - bps: A: JO FR HU AC.

14 1041 (40-43) b: A: MG - bp: A: AP; B: VI PP DU - bps: B: AM.

16 0228 (26-30) bp: A: AC TW; B: EB SM SJ HU.

16 0804 (55-07) b: B: PE - bp: B: AP; C: VI - bps: C: PP (ssc: C: SZ MB - si: B: BA; C: AV TA).

16 2228 (25-35) b: B: SW - bp: A: SO FU TL; B: WN WI NI VL HA PR HB QU LM KG; C: EB - bps: B: BE.

16 2253 (45-57) b: B: HL - bs: A: KS - bp: A: NU JO OD SU LG AQ IK EB CI TA MB MC HR; B: LE KN ES KV SM AV - bps: A: PE LU; B: DB CF TF AE SZ - (si: A: BA?).

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(SEPTEMBER)

18 2120 (10-24) b: B: SW - bp: B: MA IK QU; C: WN BE EB - bps: B: SO DO HL.

20 1835 (15-54) b: B: SW - bp: A: FU TL TA MC; B: LZ WN WI NI VL KV MA PR HB AQ TK IK EB PE LM HR KG; C: TF QU - bps: A: SO; B: HL BA -(si: B:TR).

21 2009 (08-10) bp: B: KV MA LG AQ AE QU MC; C: CF TF EB TL - bps: B: SO LU.

24 2029 (14-39) b: B: SW - bp: A: CF OD SU IK MC; B: WI VL MA DB PR EB TL QU HR; C: AE - bps: A: SO FU; B: WN NI BE KV PR HB LM - (ssc: B: TR TF).

26 2145 (35-54) bs: A: KS; B: HL - bp: B: MA MT LG TL KA KY - bps: MO MC - (si: B: BA; C: PP).

28 2012 (03-16) b: B: HL SW - bp: A: OD; B: MA TF PE; C: LG EB TL MC - bps: B: KV.

29 0059 (55-61) bp: A: SM; B: VL FU HB AQ IK EB CI AE AV MB LM HR; C: WN CF MC - bps: A: JO LU; B: SZ.

OCTOBER

01 1439 (27-48) b: A: OD - bs: A: MG - bp: B: KN KV SU; C: HB KY - bps: A: MO; B: HL.

01 2220 (14-25) b: A: LU TN - bs: A: SO; B: HL - bp: A: OD IK PE; B: KN MA EB TL QU BA HR; C: NI - bps: A: FU.

02 1735 (25-41) b: A: SU; B: SW KV - bs: A: SO; B: HL - bp: A: NU WN OD PE; B: LE ES WI VL DB PR FU IK EB CI TL KG; C: NI TF - bps: A: MO; B: BE HB - (si: A: TR).

02 2154 (40-60) b: A: MB LU; B: HL - bs: A: KS; B: KV - bp: A: KN PR FU CF TL PE TA TE BA; B: SO LE ES WN VL MA DB UB AQ EB AV SZ LM HR - bps: A: LG IK SF AC; B: NI HB TF AE - (ssc: B: CI).

03 1714 (10-28) b: A: CI; B: SW - bs: B: SO HL - bp: A: NU KN FU OD SU IK PE SF QU; B: LE ES WN WI VL MA DB PR EB TL BA LM HR; C: NI TF - bps: A: MO; B: BE KV - (si: B: AE AV; C: TK).

05 0222 (15-24) bp: A: SJ HU AC - (ssc: C: PP - si: A: TE).

08 2152 (48-60) b: B: PE; C: BA - bs: A: LU - bp: B: SO LE ES MA IK EB; C: HR.

09 1511 (10-12) bp: A: OD; B: SO WN VL HA MA PR; C: HR - bps: A: MO; B: HL.

09 2310 (05-21) bs: B: BA - bp: A: SF; B: SO ES HA MA IK EB AV SZ LU HR; C: TL LM.

10 2045 (42-47) b: B: HL - bp: A: NU; B: ES VL MA DB FU OD IK TL PE; C: WN CF TF EB LM - bps: B: SO DO LE BE KV - (si: A: TR).

11 1333 (30-42) b: SW - bp: A: SO; B: KV OD IK - bps: A: KN; B: MO MT KA KY.

11 2215 (13-18) b: B: HL PE - bs: A: SO - bp: B: WN VL MA FU OD TF IK EB TL; C: PR CF QU - bps: B: BE KV.

14 1225 (18-30) bp: B: MG TO AM DU; C: LZ - bps: C: MT KA KY.

14 2333 (25-36) b: A: LG; B: HL SW - bp: A: WI VL FU CF OD AQ IK CI TL PE SF; B: SO KN MO WN WI HA KV MA DB PR HB AQ EB SM AE SZ; C: NI TA LM HR - bps: B: LE ES - (si: B: BA).

16 1255 (48-60) bs: B: UB - bp: B: DU; C: MT KA SS KY - bps: A: MG.

16 1808 (05-09) b: A: MO; B: SW - bp: A: SU; B: IR MA FU OD AQ TF IK KG; C: WN EB HR - bps: A: SO NU KN; B: HL BE KV UB TK LM GN.

20 1317 (16-18) bp: B: AP TO AM DU; C: MT KA SS KY - bps: A: MG.

21 1817 (08-20) b: B: SW - bp: A: PE; B: ES WN WI VL HA MA DB PR FU OD TK IK QU; C: LZ CF TF EB TL - bps: B: SO DO LE HL BE KV LG.

21 2203 (55-08) b: B: HL TN - bp: A: OD TK IK CI PE SF TA; B: SO LE ES WN WI VL HA KV FU MA DB PR CF LG AQ TF EB TL AV QU LM HR; C: LZ NI AE - bps: A: BA.

22 0805 (00-12) bs: A: MG - bp: A: AP; B: PP AM; C: VI - bps: B: HO.

TABLE 2 BAYS AND PULSATIONS 1971 - continued

(OCTOBER)

24 1237 (22-47) b: B: GN - bs: B: UB - bp: A: OD; B: MG - bps: A: AP TO; B: SO HL MT KA KY.

26 2230 (27-33) b: B: SW - bs: B: HL - bp: A: FU OD PE SF; B: SO WI VL KV MA PR CF UB AQ TF TK IK EB CI TL AE QU TA TN; C: WN NI - bps: B: BE HB SU LG; C: BA.

29 1854 (41-60) bp: A: IK PE; B: WN MA PR EB TL LM; C: AE - bps: A: SO; B: DO.

29 2055 (50-57) bs: A: KS - bp: A: SO KN WN CI; B: MA PR SM LM; C: AE - bps: A: IK TL PE SF; B: VL EB - (si: B: BA).

NOVEMBER

01 0010 (03-24) b: B: SW; C: BA - bs: B: HL; C: BE - bp: A: SO NU VL FU CI PE; B: WI HA DB OD AQ IK EB TL LU; C: LZ - bps: A: SF; B: DO KV CF AE AV TA LM - (ssc: B: TR).

02 1836 (29-43) bp: A: NU PE SF; B: VL KV FU UB OD IK AV QU TA - bps: B: SO; C: HB LG EB TU BA - (ssc: B: TR).

05 2234 (29-39) b: A: NU; B: SW PE; C: TN - bp: B: SO BE KV OD TF QU; C: HB IK EB TL.

07 1323 (19-30) b: B: IR - bp: A: MG; B: OD; C: MT KA KY AP.

08 1920 (18-21) b: B: HL - bs: A: SO - bp: A: FU; B: LE KN ES WN WI VL MA PR HB OD IK MB - bps: B: KV QU - (ssc: A: TR).

08 2242 (33-55) b: B: HL - bs: A: SO BA LU; B: MB - bp: A: OD IK CI MC; B: WI KV MA FU HB EB TL SM AE AV QU SZ; C: LM - bps: A: KN SF; B: LE ES CF TA - (si: A: LG).

11 1917 (05-24) bs: A: KS - bp: A: FU SF MC; B: WN WI VL HA KV MA PR EB TL SM TA LM - bps: A: SO - (si: B: BA).

12 0609 (05-16) b: A: TE - bp: A: AP; B: VI HO PP? - (si: HL).

12 2011 (09-15) bp: B: KN VL MA IK CI SM; C: CF TF EB - bps: A: SO - (si: B: TR).

14 2239 (38-41) bp: B: SO NU VL HA KV MA IK PE; C: CF EB AE MC - bps: B: SU - (si: B: LG).

18 0205 (00-10) bp: B: VL KV FU LG CI TL SM AV SZ; C: WN EB.

20 1738 (35-41) bs: A: SO NU - bp: A: KN; B: OD CI KG; C: SM - bps: B: MO KV - (ssc: B: TR LG - si: A: SF; C: WI AQ).

21 2338 (32-50) bs: B: HL BE CF - bp: A: FU TL PE; B: WN VL MA PR EB AE; C: NI MC - bps: A: SO; B: DO LE ES - (ssc: A: TR).

24 1439 (30-50) bs: A: WN VL PR - bp: B: MA - bps: A: KN MO HB IK; B: QU - (si: A: CF TK).

25 0632 (28-36) bp: A: AM - bps: A: HO PP - (si: A: SI TE).

25 1732 (23-40) bs: A: KS; B: WN PR AE - bp: A: MC; B: IK - bps: A: TL AV - (SI: A: LG; B: BA).

25 2208 (00-17) b: B: HL SZ TA - bs: B: BA - bp: A: SF MC; B: MA HB OD IK TL AV.

26 1543 (42-45) b: B: MG; C: TK - bp: B: SO OD IK; C: KV MT KA KY.

26 1831 (23-45) b: B: HL - bs: C: BE - bp: A: NU; B: LZ WN VL KV MA DB CF OD AQ IK EB TL AV MC KG; C: NI PR - bps: A: SO; B: DO LE ES HA AE.

28 1047 (40-50) bp: A: AP; B: NE UB AM; C: VI - bps: A: MG; C: MT KA SS KY HO PP? - (si: A: PB).

28 1910 (06-13) b: B: SW - bp: A: NU; B: LZ LE KN ES WN WI VL MA PR FU HB OD IK EB CI KG; C: NI TL - bps: A: SO DO; B: BE KV - (ssc: B: TR).

29 1850 (46-57) bs: B: HL BA - bp: A: PE MC; B: WN KV MA OD IK EB TL QU; C: PR TF LM - bps: A: SO - (si: A: TR).

TABLE 2 BAYS AND PULSATIONS 1971 - continued

DECEMBER

02 1502 (00-05) b: A: KV; B: SW IK - bs: B: HL - bp: A: OD; B: SO MA SU QU - bps: B: MO BE.

03 1722 (14-27) b: B: SW - bs: A: IR; B: HL - bp: A: NU AQ CI SF; B: LZ LE MG ES WN WI VL MA SU EB TL SM AE AV; C: TF SS HR - bps: A: SO MO FU UB OD TK IK PE; B: DO BE HB QU LM GN; C: NI VI MT KA KY.

03 1917 (01-30) b: B: HL SU - bs: A: NU KS - bp: A: MA; B: LZ WI AQ EB SM QU TA LM; C: TF HR - bps: A: SO WN KV FU OD IK CI TL PE SF; DO LE ES NI VL BE HA AE AV - (si: A: CF LG BA; B: TR; C: PP).

04 2109 (00-18) b: B: SW - bs: B: HL BE - bp: A: NU FU OD LG CI SF; B: LZ DO LE ES WN WI VL HA KV MA DB CF HB SU AQ TF IK EB TL PE AV QU TA BA LM KG; C: NI HR - bps: A: SO.

08 0052 (38-56) BS: B: BE - bp: A: CI; B: SO NU LE ES VL HA MA FU OD LG AQ IK EB PE SM AV; C: BE KV CF HB TL AE SZ TA BA - bps: A: SU.

09 2052 (46-63) b: B: SW; C: WN - bp: B: SO LE ES MA; C: KV EB TL - bps: B: HL.

12 2204 (57-18) b: B: HL SW TN - bs: A: NU - bp: A: SO KN FU TK IK TL SF LM; B: LE ES WN WI VL HA HB OD AQ EB CI AV SZ BA; C: KV CF TA HR - bps: B: NI BE - (ssc: B: TR).

13 2146 (39-55) b: A: SU TK LM; B: SW IR AV TA; C: TN - bs: A: KS; B: HL KV CF - bp: A: KN FU SF; B: ES WN WI HA MA HB EB SM SZ HR KG; - bps: A: SO OD IK TL PE; B: AE; C: NI - (si: A: BA; B: LE? LG).

17 0108 (04-12) b: A: MB - bs: C: SZ - bp: A: EB - bps: A: SF; B: VL TL - (si: A: KS PP; B: HO).

21 1950 (42-60) b: B: HL WN - bs: B: BE - bp: A: KV UB; B: WI VL HB MT TL SM KA KY - bps: A: SO - (ssc: B: TR).

23 1905 (57-18) b: B: HL TN - bs: B: HL CF AC - bp: A: FU OD SU PE SF TA: B: VL HA MA IK CI EB SM AE AV QU; C: HR - bps: A: SO; B: TL - (si: A: LG; B: BA).

24 1946 (42-47) bp: B: VL MA HB OD PE; C: WN TF EB - bps: A: SO; C: KV.

29 2319 (09-24) b: B: HL SW - bs: A: SO - bp: B: WN VL MA EB; C: TL - (ssc: A: TR - si: B: PP - sfe: SS).

31 2228 (15-33) b: A: PE; B: SW IK - bs: B: HL; C: BA - bp: A: NU; B: LZ LE ES WN VL MA DB HB OD TF EB TL; C: NI KV HR - bps: A: SO; B: BE.

TABLE 3 SUDDEN IMPULSES (si) 1971

Times of commencements of sudden magnetic changes or impulses (si) which could not be classified as ssc, bp, etc.

JANUARY

13 1241 (35-44) A: AQ AC TW; B: KN BE TA MB MC PP TN HR; C: MT TK TL KA KY - (ssc: A: SF).

FEBRUARY

09 1100 (59-06) A: TR; B: VL FU OT HR; C: FR - (ssc: A: SU; B: SO KV; C: MA VI).

14 0924 (10-30) A: MC; B: BE SM QU TA MB PP TN - (ssc: A: LU; B: SW HB AV? SZ; C: TL).

23 1727 (21-35) A: KN IR FU OD IK QU MC AC; B: LE SI ES LG AQ EB TA MB PP HR; C: OT MT TK KA KY - (ssc: A: JO SU SF LU LM; B: MO HL WN VL BE HA KV MA HB TL PE AV SZ KG; C: WI NI PR SS - bp: B: DU - sfe: HO?).

MARCH

11 1019 (15-22) A: PR; B: HL WN WI VL BE MA FU SM AV DU; C: HA EB SZ-(ssc: A: SU; B: KV HB LG AQ; C: IK PE - bp: B: LU - bps: B: OD - sfe: NI CF TL AE).

12 1456 (40-60) A: FU IK PE SF KS; B: VL BE MA PR HB LG TK AE QU MB HR AM; C: CF EB TL - (ssc: A: KN TA LM; B: MO HL NI KV SU CI SM AV SZ; C: BA KG).

APRIL

04 0418 (18) A: QU TE AC; B: MC LM; C: PP HR.

04 0603 (00-04) A: LM AM; B: BE TK PP; C: MT KA KY - (ssc: B: QU TN).

04 1748 (35-49) A: QU LU HU PP AC; B: OD HO - (bs: B: LM; bp: B: MA; C: HR).

04 2219 (08-25) A: TE LM; B: MG QU GU; C: PP - (b: HL).

20 1814 (08-16) A: SO IR FU LU AC TW; B: LE KN ES HL WN WI VL BE HA KV PR FU LG TK PE AV TA MB MC HU; C: EB TL SS SZ BA LM - (ssc: A: SF SJ; B: HB AQ KS QU; C: NI CF IK AE PP - bp: B: MA - sfe: OD).

23 0931 (30-33) B: WN VL BE PR HB AQ IK EB TA BA LM; C: HA MT LG TL KA SS KY - (ssc: B: HL KV MA VI TK QU; C: WI - bs: A: SO MG LU - bp: A: TW - bps: A: PE; B: KN OD HR - sfe: MC TN).

28 1544 (42-45) A: WN VL FU HB OD SF AV QU SZ HO BA MC HU AC AM; B: LE ES WI NI PR CF EB TL KA SS KY MB LM; C: MT - (bps: B: HR).

28 2028 (23-30) B: HL BE LG HO; C: EB - (ssc: B: HU; C: QU - bp: B: SO).

29 0128 (26-30) A: TE AC TW; B: KN HL BE OD EB; C: SZ LM - (ssc: B: QU).

29 0818 (14-22) A: FU TE BA LU AC TW; B: KN HL WI IR BE OD LG SM AV SZ TA HO MB TN LM HR; C: WN PR MT TK EB KA KY PP KG - (ssc: A: KS MC; B: IK QU; C: NI).

MAY

06 0911 (05-15) A: OD; B: QU; C: TK - (ssc: B: KV; C: WI CF - b: A: TE).

15 1527 (16-29) A: FU HU; B: LE ES WN VL PR OT AQ EB PE AE AV BA; C: HA DB CF MT TL KA KS TU KY MC LM- (ssc: A: HB; B: HL WI KV MA SM QU SJ MB; C: NI VI LG TK IK SZ TA - bs: A: OD).

17 1652 (38-57) A: MT KA KY; B: CF; C: TK - (ssc: A: QU; B: SZ).

17 1923 (18-30) A: QU TE SJ; B: HO - (ssc: C: MT KA KY - bp: A: MC - bps: A: AM).

18 0110 (01-18) A: CF HB OD TA BA LU AC TW; C: DU - (ssc: A: MG AV; B: GN - b: A: SJ - bs: A: MO HU - bp: A: KN EB; B: SM - bps: A: QU MC HR).

TABLE 3 SUDDEN IMPULSES (si) 1971 - continued

JUNE

01 818 (12-20) A: MC; B: SM QU; C: BA - (ssc: A: SF; B: DU; C: VL TF).

01 1121 (15-25) A: OD PE TE MC; B: TA PP - (ssc: B: SW BE AE AV).

18 0443 (40-44) B: HL KV FU KG; C: TL HR - (ssc: C: WN - sfe: GN).

22 2303 (57-18) A: SF; B: KN VL BE MA HB LG IK AV TA HU AC; C: WN EB PP TN - (ssc: A: SJ; B: HL QU MC; C: VI NE SM AE TU SZ BA - b: B: JO - bs: B: VL; C: CF - bp: A: PE?; B: KV CI - sfe: MG).

23 0853 (50-57) A: KN JO TE; B: HL DB FU TA; C: WN CF TF BA LM HR - (ssc: B: KV - bp: B: PE - sfe: WI MA HB OD LG).

23 1643 (39-46) A: MA FU IK TA LM; B: LE ES HL? WN WI HA DB UB EB CI SM AV MB?; C: BA PP - (ssc: A: HB HU; B: AQ; C: NI TU - b: A: OD TK; B: MO IR; bs: B: KV TF QU; C: HR - bp: A: NU - bps: A: PE; B: WI BE TW - sfe: SO MG PR CF LG AE SZ SJ? MC).

25 2141 (27-45) A: QU TE MC; B: MO BE PP LM; C: MT KA KY BA - (ssc: A: SF SZ LU; B: MG KV AV).

28 0854 (51-56) C: QU BA HR - (ssc: B: MG; C: TF - bs: A: CO - bp: B: DU - sfe: PE).

JULY

02 1325 (23-30) B: HL WN VL BE PR HB OD; C: BA - (ssc: PP).

06 1832 (24-45) A: MG KN HB JO LG EB TL TA TE; B: LE ES WN WI NI BE PR AE AV BA HU PP LM; C: MA UB MT PE KA KY QU - (ssc: A: SF - b: B: KV HO - bs: A: OD; B: VL; C: TF - cr: A: MB - sfe: HL LG? SZ).

11 1710 (00-14) B: FU LG SM AE KV QU - (bs: B: OD - bp: B: KV - sfe: TL? SZ).

13 0006 (03-10) A: HB; B: KN MO HL BE MA PR OD LG; C: WN TL PP HR - (ssc: A: MG; B: NE).

18 1342 (41-45) B: VL PR; C: WN HR - (bs: B: SO HL - bps: B: JO - sfe: MA HU).

18 2358 (52-60) B: KN HL BE KV MA FU LG; C: MC LM - (ssc: A: SF; B: VI NE IK AV; C: NI BA - bs: A: SO - bp: B: LZ HR; C: AE - bps: B: PE).

21 1541 (39-44) A: CF HB OD SF QU SZ TE; C: MT TL KA KY - (ssc: C: OT?).

23 0007 (05-09) A: SF; B: HL VL BE FU IK AV HO AM; C: EB TL? MB - (ssc: B: KV MA; C: NI AE - sfe: GN).

26 1925 (18-28) A: AV TE MC PP AC TW; B: MT PE KA KY QU TA MB BA; C: SS - (bp: B: VL TL - bps: A: HB).

31 1612 (08-23) B: WN VL FU SM AE; C: JO EB MB BA? MC LM - (ssc: B: KV MA TF SJ; C: NI VI - sfe: SZ).

AUGUST

02 0143 (39-45) A: SF TE AM; B: QU PP.

02 1439 (38-42) A: SF; B: VL FU HB KG?; C: LE ES WN PR EB - (ssc: B: MA - b: HL - sfe: HU).

07 1009 (07-12) A: MG; B: SU LG? QU MC LU; C: KS LM - (ssc: A: SF; B: KV HB TF).

17 2231 (24-34) A: TE; B: KN QU MC PP; C: MT KA KY - (ssc: A: MG; B: TR).

17 2304 (00-07) A: KN HB OD SU SF TA TE MB MC LU AC; B: LE ES BE MT AQ KA KY PM; C: SS BA - (ssc: B: KV GU).

18 1133 (24-40) A: WN FU LG? MC; B: ES MA PR HB QU BA LU; C: CF EB LM - (ssc: A: SF; B: KV - bs: B: MG - sfe: HL).

23 0447 (35-51) A: IR TE MC LU PP LM AM; B: MO VL KV SU MT TK KA KY BA PM; C: SS TN.

28 1523 (15-27) A: QU; B: BE; C: KV TK KS LM - (ssc: C: TF - bs: A: MG - bps: B: OD).

29 1217 (10-23) A: MG KN FU HB SU LG? IK SF TA LU; B: MO WN VL BE DB PR CF PE AV QU HO LM; C: LE ES MT EB KA SS KY PP - (sfe: HL MA CI TL KS BA).

TABLE 3 SUDDEN IMPULSES (si) 1971 - continued

(AUGUST)

31 1028 (19-32) A: MG KN MO FU HB OD SU LG SF KS QU TE MC LU; B: CF MT AQ TK IK KA KY TA BA PP LM; C: EB SS - (ssc: B: BE KV MA TF AV).

31 1055 (50-56) A: SU TE MC; B: AV QU TA BA PP; C: MT KA SS KY.

SEPTEMBER

04 1909 (08-12) A: TE HU; B: IR BA MC PP; C: LM - (ssc: A: MG HO; B: QU).

13 0532 (24-44) A: KN OD TE; B: BE QU LM; C: SS HR - (ssc: B: MO KV VI HB KG; C: TF).

13 1339 (34-41) A: SO KN FU OD LG MC HU HR AC; B: LE ES WN WI VL BE PR HB TK IK TL PE QU SZ TA MB BA; C: CF AE KS KY LM KG-(ssc:A:SU; B: MO HL HA KV MA TF AV; C: NI).

25 1031 (29-33) A: KN FU OD SU QU HO TE MC AM; B: MT KA KY BA; C: KY-(ssc: A: MO; B: LM; C: BE).

OCTOBER

06 0126 (24-27) A: KN LU AC TW; B: OD QU BA PP; C: CF - (ssc: B: LM).

06 1654 (50-55) A: KN IK PE TE BA HU PP AC; B: VL MT TL KA KY MB -(bs:B: SS).

07 2034 (25-38) A: FU SU MB AC; B: LE ES WI NI HA MA CF HB LG TL -(ssc: A: CI SJ LM; B: VL DB AQ AV SZ -(bp: A: KN; B: SM - bps: B: WN PR EB).

13 0125 (18-33) A: KN FU OD TE SJ AC TW; B: BE TK QU MB BA; C: TL -(ssc: B: MG MO MA IK HO GU LU PM AP PP TN).

15 1031 (27-32) A: SU; B: MO VL BE DB FU AE AV; C: CF LM -(ssc: B: MA; C: WN PR HR - bp: B: SO - sfe: HL OD QU).

16 1310 (06-12) A: SF; B: HL WN VL AV HO; C: HB EB HR - (sfe: MA AE SZ).

23 1422 (21-23) A: AC; B: VL BE MA FU; C: CF MT TL KA KY - (ssc: A: SU SF; C: KG).

NOVEMBER

11 0248 (43-51) A: MG SF; B: HL BE OD IK AV TA PP LM; C: TL BA.

17 1233 (30-35) B: SO; C: UB EB SM QU - (ssc: B: LG; C: BA PP?).

21 1232 (30-34) B: MT KA KY QU - (ssc: B: TF - bs: A: MG IR - bps: B: GN; C: SS).

23 0735 (31-40) A: MC AC; B: AV QU SZ TA PP; C: KY.

DECEMBER

09 0304 (02-06) A: TE BA AM - (ssc: B: HO PP - bs: B: HU).

09 1055 (52-58) A: MO SU LM; B: KV HB IK TL SM AV QU SZ TA HO MB BA PP KG; C: NI AE.

18 0758 (54-62) A: KB PE QU HO TE SJ MB BA AM; B: VL TK SM AV TA PM PP LM AC; C: CF EB - (ssc: B: SU).

18 1024 (20-27) A: QU HO TE MB; B: MG FU BA PP; C: EB - (ssc: B: MA LM; C: PE).

18 1056 (52-59) A: ME FU OD SS QU HO TE GU PP; B: MT TK EB TL KA KY PM; C: VI - (ssc: B: SZ).

18 1123 (21-24) A: FU HB OD SS QU SZ HO TE; B: WN WI MT EB KA KY GU PP.

18 1134 (34-36) A: TL SF SS PP; B: MT KA KY.

18 1204 (02-09) A: FU OD SF SS QU HO TE HU PP AM; B: MG MT TK EB KA KY GU PM.

26 1535 (32-39) A: TW; B: QU HU - (ssc: A: LG; C: TF BA - bs: A: AC).

TABLE 4 GIANT PULSATIONS (pg) 1971

Times of commencement and ending of giant pulsations (pg) checked by 55 observatories, namely, CO DO NU LE SI ES ME MN WN WI NI VL GT MA VI NE FU OD OT MT AQ TK IK LG EB CI BD FR PE SM AE SF KA SS DS TU KY QU LP HO TE SJ MU GU PA BA PM AP TN LM GN HR TO AM SB. Period in minutes and amplitude in γ's, as reported by some stations, are added in parentheses, e.g. (7.2 - 5) means: period 7.2 min., amplitude 5γ. For SS the amplitude is given in γ/sec. Beginning or ending times of the reported phenomenon are given in square-brackets, if deviating from the times at the left.

JANUARY

02 1144 -1420 A: KN [-1200] FU [-1200] LG PE [-1155] (6-11) MU LP(6-8.4) LM [-1157] (1.8-7) - B: CO(3) DO NU [-1200] (5-40) WN [-1200] (6-12) NE(6) OD(7-12) AQ(5-3) IK FR SM [1130-1300] QU [-1154] (6-8) GU(5) BA(6-6) PM [-1314] TN GN(5-5) HR [-1158] (5-5) - C: ES [-1246] MN OT TK CI BD AE SF SS (5-0.06γ/s) TU HO SJ TO - D: ME VL VI MT KA KY TE PA SB - (pc: A: MA; B: LE - pc4: C: AP AM - pc5: B: NI EB?).

02 1813 -1829 A: FU LG PE [-1817] (4-8) MU LM(1.8-7) - B: CO(3) DO LE(6) ES WN(5-8) NE(5) OD(5-6) OT AQ(5-3) CI BD(5) FR SM DS TU(5) BA(5-5) TN HR(5-4.5) - C: WI NI VL(1.7-10) MA IK EB? AE SF QU HO GU PA TO SB-D:NU KN ME WN VI MT TK KA KY PM GN - E: LP - (pc4: A: SI; B: AM; C: AP - pc5: SJ - pi1+pi2: B: SS - sfe: TE).

04 1205 -1430 A: FU [-1230] LG - B: CO(6) SI(6) NE(6) BD(6) DS(7) MU TN [-1229] - C: DO KN ES [-1230] WI NI MA OD AQ(5-3) CI FR SM AE SF SS(5-0.02γ/s)TU(5) QU LP BA(6-4) - D: NU LE MN VL VI OT MT TK IK EB KA KY HO GU PA LM GN TO - E: PM HR - (pc4: C: AP AM - pc5: B: SJ; C: WN - pi2: B: SB).

20 1035 -1145 A: FU [0655-] OT(5-25) LG DS(5) MU AP(2.1-4) - B: CO(5) ES MA NE(5) OD (4-8) CI BD(5) FR(7) SM QU BA TN [1000-] LM [0915-] (1.5-4) HR [0920-] (6-6.5) - C: LE [0910-] WI AQ(5-3) AE SF HO GU PA PM TO - D:MN VL VI MT EB KA KY TE - E: DO NU KN TK IK PE LP GN - (pc: B: ME - pc4: B: SI NI - pc5: B: WN TU SJ - pi2: A: SB; B: SS).

FEBRUARY

15 1905 -2000 A: CO(4) SI(4) AM(2-15) - B: NE(7) OT BD(4) FR DS SB(2.8-41) - C: MN WN (6-2) NI OD PE HO TE SJ GU BA TO - D: NU ES WI VL MA VI FU MT LG AQ TK IK EB CI SM AE SF KA TU KY MU PA LM GN HR - E: DO LE KN QU LP PM TN - (pc3: C: SS - pc4: B: NE AP - pi2: B: ME).

MARCH

none

APRIL

04 0546 -0728 A: FU [0610-] CI [0612] LP(10-31.5) LM [0548-] (1.9-19) - B: CO(8) DO WN [0658] (6-20) OD(8-8) FR DS MU GU(8) - C: LE SI ES(8) MN NE LG AQ IK BD SM SS(~7..5-0.08γ/s) TU BA - D: NU ME VL MA VI MT PE AE SF KA KY HO TE PM AP TN TO AM - E: KN TK QU HR X: EB PA - (pc5: B: SJ; C: NI - pi2: B: SB - si: C: WI).

29 0038 -0538 A: FU[-0310] DS(10) LM(2.9-12) - B:.CO(3) SI(3) ME NE(10) OD(10-8) AQ [0245 -0307] (10-3) CI BD(10) FR(10) PE [0244-0303] (12-8) SM TU(10) MU GU(10) PM - C: DO LE KN MA OT AE SF SS(~8.5-0.08γ/s) HO BA TN - D: NU ES VL VI MT TK IK EB KA KY TE PA HR TO - E: QU LP - X: LG - (pc5: B: NI SJ; C: WN? GN - pi2+pc4: A: AP - pi2: B: AM SB - si: C: WI - b: C: MN).

MAY

07 0523 -1535 A: FU [-0620] MU - B: CO DO WI VL(4-14) MA OD(6-7) LG AQ [0623] (3-4) IK CI FR SS(~4.5-0.24 /s) DS BA(5) TN [-1700] HR [0828-1520] (5-2)-C:LE ES(3) MN BD SM AE SF HO SJ GU LM TO - D: VI MT KA KY TE PA PM - E: NU KN ME NE OT TK PE QU LP GN - (pc3: A: VL - pc4: A: NI; B: SI (6); C: EB? - pc5: A: WN; B: TU - pi2+pc4: A: AM SB; B: AP).

08 0300 -0720 A: CO(4) NI MU - B: NU [0430-0500] (3.1-35) LG CI DS LP(5-8) PM AM(2.5 -9) - C: LE ES WI NE MT AQ IK AE SF KA SS(~5-0.08γ/s) TU KY HO GU

TABLE 4 GIANT PULSATIONS (pg) 1971 - continued

(MAY)

TN HR - D: DO KN ME MN MA VI OT EB PE SM TE PA LM - E: TK QU - X: BA SB (pc3: B: VL pc3+pc4: A: FU [0420-1600] - pc4: B: BD AP - pc4+pc5: B: SI - pc5: B: WN - pi2: B: OD FR SJ; C: GN).

JUNE

none

JULY

none

AUGUST

02 0118 -0222 A: FU [0021-] LP(12-7.5) TN AM(2-9) - B: CO NE OD(8-8) OT LG BD FR DS MU BA(10-10) PM - C: MN CI SF TU HO SJ(15) - D: LE ES ME WI VL MA VI MT EB KA KY PA LM TO - E: DO KN WN AQ TK IK PE AE QU GU HR - X: NU SM - (pc4: B: SI SB - pc5: B: NI; C: GN - pi2: B: AP - pi1+pi2: C: SS - si: A: TE).

SEPTEMBER

none

OCTOBER

06 1620 -1700 A: FU OD(4-8) OT LG CI LM [-1710] (2.2-9) - B: CO(3) DO SI(4) KN ES(3) WI NI VL(3.7-14.7) NE(4) AQ(4-5) IK BD(4) FR SM DS SJ(4) BA(4) - C: NU ME MN MA EB AE? HO(7) HR [-1651] - D: LE VI TE GU PA TO - E: TK PE SF QU LP PM TN GN SB - (pc4: B: AM; C: AP - pc5: B: WN TU - pi2: C: MT KA SS KY).

28 0805 -1925 A: DO NI LG - B: CO MA NE(5) OD(3-4) CI BD(3) FR DS BA(4) TN HR [0905 -1723] (5-2.5) - C: ES [1430-1700] ME WI OT SM SF SS(~7.5-0.08 /s) HO MU GU PA BA TO - D: NU LE MN VL VI MT EB KA KY TE LM - E: KN TK IK PE AE QU LP PM GN - (pc4: B: SI BD TU - pc5: WN SJ - pi2+pc4: A: AM SB; B: AP).

NOVEMBER

11 1210 -1235 A: OT(12-28) LP(11-8) - B: CO(15) SI(12) NE(12) LG BD(12) FR DS(11) TU(11) TE - C: NI VL(11.3-9) OD CI SF HO SJ MU GU BA PM TN HR - D: NU LE KN ES ME WN WI MA VI FU MT AQ IK EB SM AE KA SS KY QU LM TO AM SB - E: DO TK GN - X: PE PA - (pi2: C: AP - b; C: MN).

22 2345 -2400 A: SI(4) - B: CO LP(6-3.7) - C: NE OT CI FR AE SF HO MU GU - D: NU ES ME MN WI VL MA VI FU OD MT AQ IK EB BD SM KA SS DS KY QU TE SJ PA AP LM TO - E: DO LE KN WN LG TK BA TN GN HR - X: PM SB - (pc4: A: AM; B: TU - pc5: B: NI - ssc: PE).

23 1215 -1928 A: CO SI(5) BD(5) LP(12-6.2) AM(2.1-12) SB(2-112) - B: NE(5) OT LG FR DS TU(5) MU GU - C: LE [1400-1440] ME WI OD CI SM HO TE BA PM HR TO - D: NU ES MN VL MA VI FU MT AQ IK SF KA KY PA LM - E: DO KN TK PE AE QU TN GN - X: EB - (pc4: B: TU - pc5: B: WN SJ - pi2+pc3: B: SS - pi2: + pc4: B: AP).

25 1905 -2037 A: CO(5) - B: DO SI(5) NE BD(6) FR DS LP(6-4.6) MU - C: OT LG CI SS (5 -0.04 /s) TU HO SJ GU PM TO - D: NU LE KN ES ME MN WN WI VL MA VI FU OD MT AQ TK IK EB PE SM AE SF KA KY QU TE PA BA LM GN HR - E: TN - (pc4: B: AP).

DECEMBER

09 0300 -0500 A: LP(7-11.5) AM(3-19) - B: CO SI(5) NE(5) LG FR QU GU(5) BA(3) HR [-0550] - C: DO MN WI OD(5-3) OT TK IK CI BD SM SS(~5-0.14 /s) DS TU(7) HO TE SJ MU TO - D: NU ES ME VL MA VI FU MT AQ EB PE AE SF KA KY PA PM TN - (pc: B: KN [0339-0348] - pc4: B: LM - pc5: C: LE WN GN - pi2: A: AP SB).

TABLE 5a SOLAR-FLARE EFFECTS (sfe) 1971

Times of commencement of solar-flare effects (sfe) checked by 65 observatories, namely, CO DO NU LE SI KN ES ME MN WN WI NI VL GT MA PR VI NE FU HB OD OT MT AQ TK IK LG EB CI BD TL FR PE SM AE SF KA AV SS DS TU KY QU SZ LP HO TE AL SJ MU GU PQ BA PM HU AP TN LM GN HR AC TO AM TW SB. Stations from which the monthly reports have been used, although their check-lists were not received, are the following ones: SO MG HL JO SU KS TA MB MC. Strong effects are marked by an asterisk.

JANUARY

15 0402 A; MU LM - B: TK LP PM TO AM - C: MT KA SS KY AL GU GN SB - D: QU AP TN HR - X: (AV).

FEBRUARY

none

MARCH

none

APRIL

20 0517 A: LP BA LM - B: HB MT TK KA KY AL MU GU TO - C: KN RT AQ IK SS QU PM - D: CO DO NU LE ES WN WI MA PR FU PE AP TN GN AM - (b: C: MN - bp: B: OD).

MAY

03 1412 A: AV SZ HR - B: QT MA PR HB IK PE (MU) BA HU LM AC - C: NU SI KN ES MN WN VL FU OT EB CI BD SM AE SF TU TE SJ PA TW - D: DO LE ME WI VI NE AQ - E: CO (SS) DS TN - X: LG - (si: B: TL FR; C: OD).

05 1211 A: SZ - B: EB LM HR - C: KN WN MA HB AQ TK IK FR AE QU AL SJ BA HU - D: DO NU LE ES ME MN WI VL FU OD OT CI BD PE SM SF DS PA TN AC TW - X: LG - (ssc: TL? - si: C: AV).

JUNE

none

JULY

01 0131 A: LP GU - B: [MG] SI TK TU HO MU PM AP - C: NE MT KA SS KY AL GN - D: ME VI TO - E: CO KN {WN} {NI} (AV) DS QU AM - X: OT BD (TL) {FR} (SZ).

20 1058 A: OD OT - B: {CO} KN NI VL GT HB [JO] IK FR [KS] AV QU SJ {MU} BA - C: LE ES MN WN MA FU AQ TK EB SF SZ - D: NU WI PR LG CI TL PE SM AE DS AL TN LM HR AC - X: PA GN - (si: B: DO).

28 2111 B: NE FR DS TU HU - C: OT HO PM AM - D: CO SI ME VI MT KA SS KY TE SJ GU PA AP - E: (AV) - X: (LG) BD.

AUGUST

21 0933 A: PE LM - B: (ME) GT HB [SU] IK EB AV LP SZ BA HR - C: NU KN ES MN WN MA FU LG AQ TK CI SM SF QU MU TN - D: DO LE WI NI VL PR TL AE KY GN - E: (CO) (SI) (NE) (BD) SS (DS) - X: AC - (si: B: OD).

27 0307 A: MU GU - B: QU LP - C: SI KN MT TK KA SS KY HO AL GN TO - D: CO NU MN VI NE OD IK AP AM - E: PM - X: TN.

SEPTEMBER

none

OCTOBER

none

NOVEMBER

none

DECEMBER

none

TABLE 5b DOUBTFUL SOLAR-FLARE EFFECTS (sfe) 1971

Times of commencement of presumed solar-flare effects checked by 65 observatories, the same as for Table 5a. Effects which very probably are real sfe's are indicated by an asterisk.

JANUARY

24 2307* A: MT KA KY - C: VI BD MU GU - D: ME NE SS TU LP TE PM AP GN TO AM SB E: CO SI (NI) (FR) (AV) DS HO (TN) (HR) - X: {AC}.

FEBRUARY

03 1527* A: AC - B: ME EB VA SZ (AL) - C: WN VL GT NE LG BD FR SM AE SF TU HU LM HR TW - D: LE ES WI NI PR FU HB OT AQ CI TL PE TE SJ PA BA SB - E: (CO) {TN}.

11 1012 A: GT OD AC SB - B: NU MA (VI) FU (OT) IK EB CI (FR) AV QU SZ AL {SJ} LM TW C: WN NI LG AQ TK TL AE SF TN GN - D: WI PE PA - E: (ME) - (si: B: (CO) DO LE KN ES VL PR HB SM (DS) BA HR; C: (BD) (TE) TO - b: B: MN).

17 1417 A: LG AQ TW - B: NU [HL] PE AV SZ (AL) BA - C: WN GT MA FU OT IK CI FR SF TU SJ HU - D: DO LE ES WI VL PR EB TL TE PA TN LM HR - E: (CO) NI AQ (TK) BD SM AE DS (GN) - (si: B: OD {QU} -b: B: MN).

17 1606 A: HU - B: {NU} VI NE TU (AL) (MU) - C: ME OT SM SZ SJ AC TW - D: LE ES WI VL GT MA PR FU LG AQ EB CI TL FR AE SF TE PA BA HR SB - E: {CO} NI BD DS - X: AV - (b: B: MN; C: WN).

MARCH

none

APRIL

06 1422 A: GT MA OD AC TW - B: NU KN VL CI SZ - C: WN VI OT AQ IK TL AE SF SJ BA HU TN LM - D: EB PE TU TE PA - (si: B: {CO} DO LE SI ES ME WI NE FU LG BD FR SM DS; C: MN NI PR HB HR).

20 0902* A: LG - B: NU KN HB PE QU LP BA - C: WN NI GT MA TK SM SF SZ MU GN - D: DO WI PR FU MT AQ EB CI AE KA KY AL TN LM - E: (CO) IK TL SS (DS) (TU) HR - X: LE ES VL AV - (si: C: OD - b: C: MN).

22 0940 B: NU WN PR - C: ES NI GT MA HB LG MU - D: DO LE KN MN WI VL FU AQ TK IK EB CI TL PE SM AE SF QU LP SZ AL PA BA TN LM GN HR - E: (CO) (SI) AV (DS) - (b: B: OD).

MAY

14 1414* A: PE - B: HB SZ (MU) BA - C: NU KN ES MN GT BD FR SF AV QU LM - D: LE SI ME WI VL MA PR VI NE FU OT LG AQ CI TL TU TE SJ PA TN AC TW - E: CO DO WN NI TK IK EB AE (SS) DS HU HR - si: B: OD SM?).

15 0922 A: OD LG PE - B: DO NU LE VL GT (VI) (NE) HB TK IK EB (BD) (TU) LP (HO) AL {SJ} MU BA (PM) - C: MN WN NI MA FU AQ SM AE SF AV SS SZ LM GN HR - D: KN ES WI PR MT CI TL KA KY QU TN - E: (CO) (DS).

JUNE

none

JULY

none

AUGUST

30 1344 B: FR DS HU - C: MN WN GT HB OD LG TK EB BD SF QU SZ - D: DO NU LE KN ES ME WI VL MA PR NE FU OT AQ IK CI TL PE SM AE TU TE SJ PA BA PM AP TN LM HR AC TW - E: AV.

TABLE 5b DOUBTFUL SOLAR-FLARE EFFECTS (sfe) 1971 - continued

SEPTEMBER

06 0342 B: KN (GT) QU LP - C: OD MT TK KA SS KY HO AL MU GU PM LM GN - D: MN AP TN TO AM SB - E: CO (FR) (DS) - X: (LG).

09 1123 A: DO NU GT HB OD PE QU SZ (MU) - B: [HL] NI MA (VI) LG IK EB CI AV AL SJ BA [MC] (PM) - C: WN OT AQ TL SF DS HU AC - D: SM AE PA TN LM HR TW - E: (CO) (SS) - (si: B: LE KN ES WI [BE] [DB] FU [SU] TK; C: VL PR {BD} FR (TU) [TA] - b: B: MN - bs: [SO]).

09 1330 A: NU GT HB OT CI PE AV QU SZ SJ BA TN AC TW - B: {SI}[HL] NI MA {VI} IK EB BD FR DS TU TE {AL} [MB] (MU) (PM) HU [MC] HR - C: ME WN AQ TL SM SF LM - E: (CO) (SS) - (si: A: OD; B: DO LE KN ES WI [DB] NE FU [SU] LG TK [KS] (LP) [TA] PA; C: VL PR AE (TO) - b: B: MN (AP) (GN?) (AM) - bs: B: [SO]).

12 1619* A: AV - B: SI VL HB OD (TK) IK (QU) SZ (HO) SJ (MU) BA HU {LM} AC - C: NU ES ME WN GT MA NE FU LG AQ CI BD FR SM AE SF DS TU PA HR TW - D: DO LE WI PR VI EB TL - E: CO OT (SS) (PM) - (ssc: [SU] [TA] - si: B: KN - b: B: (GN); C: MN - pg: B: PE).

17 1544* A: HU - B: OT BD FR DS TU - C: SM SF AV SZ PA BA AC - D: CO DO NU LE SI ES ME MN WN WI NI VL GT MA PR VI NE FU HB OD LG AQ IK EB CI TL PE AE TE SJ HR TW.

OCTOBER

05 0949 A: KN OD LG - B: DO NU MA PR AQ PE AV QU SZ AL - C: LE ES MN WN NI FU HB IK CI AE SF MU BA LM AC - D: WI VL EB LP PA TN - E: (CO) GT TL SM HR - X: TK - (b: C: GN).

10 1534 A: AC TW - B: {KN} NE HB OT BD FR AV DS TU (QU) HU LM - C: NU SI ME VL VI IK CI TE SJ BA - D: LE ES MN WI MA PR FU LG EB TL SF SZ PA - E: {CO} DO WN NI GT AQ PE SM AE (SS) (MU) (PM) {TN} HR - (si: B: OD).

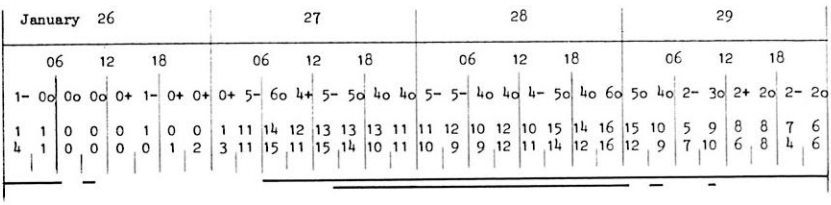
NOVEMBER

04 0825 B: NU AV QU TN - C: LE WN VL HB OD LG TK SZ AL MU LM HR - D: DO KN ES WI MA PR FU AQ IK EB CI PE AE KY LP TO - E: GT TL - X: SF (AP) GN - (si: B: BA; C: MN (TE)).

DECEMBER

none

Indices



Data from Individual Observatories:

January 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)		K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	27	0431	SC*	+22	+109	+32	27(5)	28(4)	7	337	1800	910	29	18
SI	60. N	27	0429	SC*	+ *	+ *	+ *	27(6)		8	90	880	650	29	05
NE	55.1N	27	0430	SC*	3	27	6	27(3)		6	40	190	236	29	06
WI	54.1N	27	0431	SC*	-10*	+42	+ 1	28(8)		7	30	230	90	29	06
FR	49.6N	27	0430	SC*	1	49	- 6	29(1)		5	21	165	80	29	06
BD	49.0N	27	0431	SC*	- 1	+27	- 5	27(3)		6	26	150	70	29	17
DS	43.0N	27	0430	SC*	+ 1	+42	- 4	29(1)		6	14	159	45	01	18
IR	40.8N	27	0430	SC	6.9	39	6	27(3)	28(6,8)	6	26	153	48	29	03
TU	40.4N	27	0430	SC*	+ 1	+30	+ 2	29(1)		6	14	150	30	31	09
MT	34.0N	27	0430	SC*	+ 3.2	+26	- 8	27(3)		6	15	117	30	29	02
SJ	29.9N	27	0430	SC	+ 1.0	+20	+ 7	27(7)		5	5	142	50	29	06
KA	26.0N	27	0430	SC*	+ 1.8	+22	+12	27(3)		6	8	117	73	29	02
MB	21.3N	27	0431	SC	- 2.	+30	- 5	28(8)		5	4	75	12	29	08
HO	21.1N	27	0430	SC	+ 0.5	+20	+ 7	27(3)		6	5	95	10	29	12
KY	20.5N	27	0430	SC*	+ 2.1	+27	+10	27(3)		6	8	132	72	29	02
AL	9.5N	27	0430	SC	- 1.1	+25	-11	27(3,5)		6	6	217	49	28	00
HD	7.6N	27	0429	SC	+ 0.8	+27	- 3	27(5,6)		6	7	225	22	28	01
AA	5.3N	27	0431	SC	- 1.3	27	+ 6					324	38	27	23
GU	4.0N	27	0430	SC*	1	26	- 8	27(3)		6	5	160	30	28	05
AN	1.5N	27	0430	SC	- 1.9	+44	+18				7	235	51	28	00
TV	1.1S	27	0430	SC	- 0.2	+41	+44				5	290	176	28	00
HU	6.6S	27	0430	SC	1	51	7	27(6)		6	10	260	24	27	21
AP	16.1S	27	0430	SC	+ 1	+23	- 8	27(3)		5	10	114	33	29	12
PM	18.6S	27	0431	SC*	+ 0.8*	+30	+32	27(3)		6	10	170	100	31	00
HR	33.3S	27	0430	SC*	+ 5*	+17	+16	28(8)		6	34	139	131	29	17
GN	43.2S	27	0430	SC	+ 2	+18	+10	27(5)	28(6)	6	26	170	200	29	12
TO	46.7S	27	0430	SC*	+ 1.6	+46	+ 7	27(3)		6	28	230	80	29	21
KG	57.3S	27	0430	SC	- 2	+32	+11	27(5,6)	28(6)	7	75	650	330	29	02

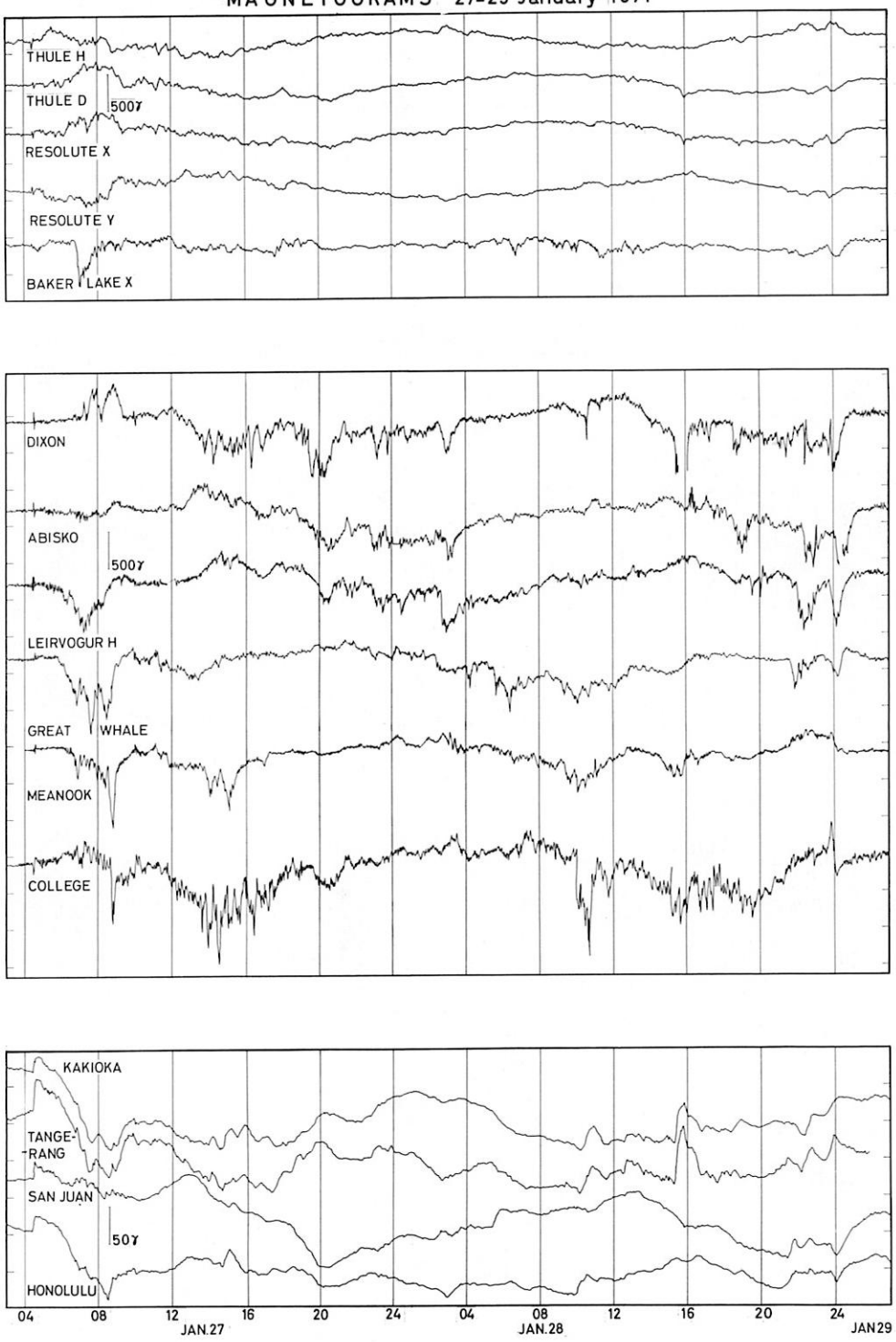
THREE-HOUR-RANGE INDICES K

JAN	26	27	28	29
BT	3313 2223	4665 5554	5534 4637	7544 4333
CC	2111 1212	2555 6665	4437 5766	6433 4543
DI	2211 1111	1466 7786	6646 6878	7334 4565
TI	2221 1211	2477 7988	4557 7989	6336 5665
PB	1111 1111	1564 6655	3457 5665	4426 4433
TR	0000 0101	1553 4465	5544 4556	6323 2244
GO	2222 1222	2454 5443	3444 4334	4323 3422
MM	1100 0000	0355 5675	6635 4677	7322 2254
KI	0000 0000	0454 5666	6644 5667	7322 2254
WE	1000 0000	0376 8865	3457 7777	5326 3311
CO	0000 0000	0375 7645	3447 5656	4326 4311
RY	1111 1221	1574 6676	7655 5567	7533 2335
DO	0000 0000	0454 6665	5534 3767	6323 2223
YA	2110 0011	2556 5666	5537 5867	7336 3543
NU	0000 0000	0443 4554	4323 3656	5312 2233
LE	0000 0000	0343 4555	5533 3556	5311 1112
MG	0210 0000	1355 5643	4436 4765	6335 4432
SI	0000 0000	0375 7844	3447 5645	4325 4211
SV	0000 0000	0444 4444	4423 4666	4212 2332
RS	0000 1100	1444 4554	4332 3556	5312 2223
ME	1110 1211	1497 6734	4556 5645	4325 3212
IR	1221 1111	2465 5555	4525 3656	5444 3433
VL	0010 1110	0344 4444	4432 2445	4422 2222
KV	1121 2110	1454 5454	5434 4656	5423 3333
DB	1001 1010	1444 4444	4333 3546	4423 2223
KD	0020 0000	0455 5554	5314 6666	5323 3333
VI	0000 0000	0355 5543	4555 5443	5424 3221
JO	0000 1100	0343 3334	3443 2337	4312 2211
OT	0000 0000	0453 4433	5454 4326	3312 3212
MT	1100 0000	1365 5543	3325 3545	5324 3322
VK	2222 2222	3565 5553	3435 4655	5443 3333
TK	0000 0000	0565 6554	4324 4656	5314 4323

THREE-HOUR-RANGE INDICES K

JAN	26	27	28	29
IK	1000 0000	0443 5444	5333 3555	4322 2232
TL	0100 0100	1333 2324	4422 2435	3211 1212
FR	1000 0100	0443 4343	4443 3325	4322 2212
SM	2122 2221	2344 4334	3533 2335	4322 2322
KS	2111 1111	1554 7535	5433 3556	5332 3312
DS	1000 0111	1454 5454	4544 4434	6423 3312
TU	1000 0000	1454 5443	3444 3323	6423 3211
KY	0100 0000	0465 4433	3334 3534	5323 3322
QU	---- ----	---- ----	---- ----	---- ----
TA	---- ----	---3 5444	43-- 3446	2312 2223
HO	1000 0000	0463 4432	4334 2333	4323 1212
AL	1111 1111	0464 6444	3213 4546	4332 3323
SJ	0000 0000	0443 4453	2423 2434	5322 2212
GU	1101 0001	1464 4332	3214 2533	3323 3322
BA	1000 0000	0444 6324	4322 2446	2322 2223
LU	0001 3320	0433 5554	3211 3455	1211 2222
PM	2210 0011	1464 4443	3315 3533	2323 3321
HU	1001 2332	0443 4655	4433 4455	5323 4422
PP	0100 0001	1352 3422	3313 2323	4323 223-
TN	2132 2201	2344 6335	3323 3555	3233 3313
PI	1000 0220	0454 4453	4433 3364	5422 3423
GN	1000 0001	2343 6544	3215 3654	5334 2322
HR	1001 0000	1345 5543	3323 4446	3224 3313
TO	-210 0001	1563 5533	3325 4544	4434 3321
AM	0000 0000	1563 4421	2334 4433	4423 1100
TW	1000 0120	1553 5443	3423 4344	5323 4433
MI	2111 0022	2585 7764	4447 6677	3426 3322
MY	2323 2223	3776 4344	5554 4635	5554 3423
MW	2211 1222	1584 4545	6564 5656	6433 3334
NL	0111 2212	1354 4456	6553 2577	5522 2323
SB	2211 2234	3454 4543	4434 3334	5333 4433
VO	2233 3222	2556 4442	4444 4334	5434 3312

MAGNETOGRAMS 27-29 January 1971



Indices

	February 23								24								25								26			
UT	06		12		18				06		12		18				06		12		18				06		12		18			
Kp	1o	2o	2o	1o	2-	3+	4+	4o	2o	1-	1+	2-	2+	2+	2+	5+	5o	3o	3+	4-	6-	5+	6o	5-	5+	6+	4-	4o	3o	3+	2+	2+
3Kn	2	5	5	3	5	9	12	11	6	2	4	4	6	6	7	14	12	7	9	10	16	15	16	13	14	17	9	10	10	10	8	7
3Ks	2	6	7	4	4	8	12	11	7	2	4	5	5	5	5	12	13	7	8	10	15	13	15	13	15	15	7	10	9	8	6	6
Dst																																

Data from Individual Observatories:

February 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)		K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	23	0514	SC*	+ 2	+16	--	25(5)		8	270	1980	1030	27	06
MB	21.3N	23	0514	SC	1	+ 5	--	25(5)		6	4	110	20	25	03
GU	4.0N	23	0514	SC*	--	03	- 1	25(8)		5	4	80	35	26	18
WI	54.1N	24	21--	..	..	..	..	24(8)	25(5,7)	6	40	150	130	26	19
FR	49.6N	24	21--	..	..	..	..	26(2)		7	45	123	58	26	15
DS	43.0N	24	16--	..				26(2)		6	30	98	55	27	03
IR	40.8N	24	21--	..	..	..	..	25(5,7)		6	27	123	44	26	19
TU	40.4N	24	21--	..	..	..	..	26(1,2)		6	26	120	40	26	14
HO	21.1N	24	21--	..	..	..	..	26(1)		5	5	110	40	26	12
HD	7.6N	24	1600	..				25(5)		7	4	167	26	26	19
AA	5.3N	24	0748	..							2	217	16		
HR	33.3S	24	21--	..	..	..	..	25(5)		6	29	122	128	27	02
GN	43.2S	24	08--	..				25(5)		6	18	130	160	26	18
TO	46.7S	24	18--	..				25(5)		5	13	150	50	26	21
KG	57.3S	24	2115	..	..	..	..	25(5,7)		7	53	490	310	26	18
NE	55.1N	25	00--	..	..	..	..	26(2)		7	68	159	210	26	18
BD	49.0N	25	01--	..	..	..	..	26(2)		7	50	110	75	26	18
AL	9.5N	25	01..	..	..	..	..	25(5)		7	4	163	40	26	19
AN	1.5N	25	01..	..	..	..	..	-- -		-	4	122	57	26	19
TV	1.1S	25	01..	..	..	..	..	-- -		-	3	247	150	26	19
HU	6.6S	25	1100	..	..	..	..	25(5,6)		6	9	310	30	26	05

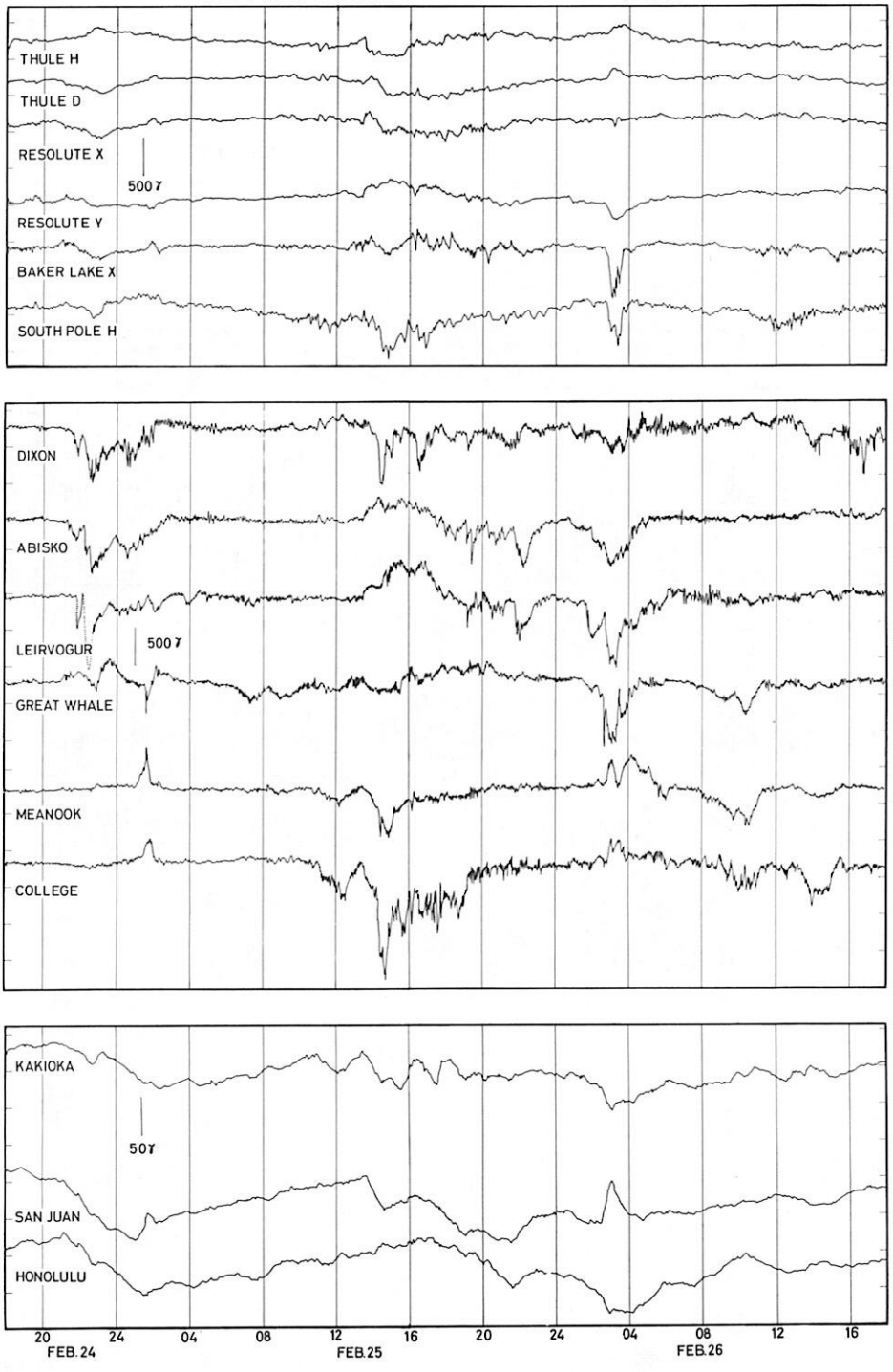
THREE-HOUR-RANGE INDICES, F

FEB	23		24		25		26	
BT	2333	1355	3223	3226	4534	5444	4644	3643
CC	1222	1466	3122	1116	5333	7654	5544	4644
DI	1222	2477	3222	2237	7434	8766	6645	6754
TI	2223	3588	3222	3327	5335	8897	6656	8974
PB	0342	3556	2011	5334	3434	7766	4467	5543
TR	2111	2366	3111	2217	6333	5556	6633	4454
GO	1122	3554	2122	4334	4224	5444	5634	4432
MM	1111	2377	3211	2137	6333	5667	7734	4454
KI	1111	2376	4112	2237	7333	6777	7743	4454
WE	1121	1454	2110	3115	4324	8875	3545	7432
CO	0143	2434	2112	4223	5235	8664	4445	6422
RY	3232	3465	5112	3338	5443	6667	6854	4445
DO	1100	1365	3012	2127	6323	5687	6633	3333
YA	2232	2466	3212	2226	4333	7886	6546	5442
NU	1111	2254	1022	2225	4223	4665	5533	3323
LE	1110	1354	2001	2126	5222	4685	5522	2322
MG	2321	2343	3111	2225	4223	7675	4535	4433
SI	0132	2344	2012	3223	5244	8743	3546	5322
SV	0111	1344	2111	1225	4323	5665	3533	4432
RS	0222	2355	2022	3226	4323	5455	4533	3433
ME	1132	1333	1112	3323	6244	7654	6656	4322
IR	1332	3454	2322	2234	4323	6565	5534	4432
VL	1221	3344	2022	3225	4223	4465	4523	2333
KV	1223	3465	2222	2235	4234	6556	4534	3433
DB	1222	2354	2122	2225	3223	5455	3534	3433
KD	0221	2244	1212	1124	4223	5563	3233	4432
VI	0231	2433	1011	3223	5243	7543	5744	4322
JO	1121	1334	1011	2224	5223	4354	5623	3222
OT	1121	2334	1111	2235	6243	5454	7734	3221
MT	0222	2354	2111	2224	3223	5554	4424	3322
VK	3443	3345	3332	3334	4334	6665	5534	4322
TK	0333	3454	2022	2334	4434	7553	3544	3532

THREE-HOUR-RANGE INDICES, K

FEB	23		24		25		26	
IK	1211	2353	2122	2225	4213	6555	4523	3422
TL	1211	1343	1011	2124	2212	6455	3423	2332
FR	1221	1233	2121	2234	5244	5444	6733	2322
SM	2223	2342	2222	3325	4233	4354	5533	2322
KS	1221	3454	2032	2335	3333	7656	4434	3422
DS	1331	2343	2121	2245	5244	6555	6733	3332
TU	0221	2333	2121	2234	4243	5443	6633	2322
KV	0222	2344	1112	2223	3324	5554	4333	3322
QU	1332	3344	2232	2223	3333	6554	2433	3432
TA	2201	2454	2021	1234	3113	6555	3433	2332
HO	1221	2443	2111	2224	4333	4334	5433	2312
AL	1322	3343	2122	2224	4323	7554	3323	3432
SJ	0223	2363	3010	1245	4223	5454	4522	2212
GU	1222	2335	2122	1223	4323	4433	4433	3322
BA	2211	22--	-021	112-	2224	654-	--23	5332
LU	1101	2334	1122	1223	2102	5554	2322	3331
PM	0222	2344	3222	1223	3333	4433	4333	3322
HU	2221	3654	3322	4345	4333	6655	3422	3433
PP	0211	2333	2110	2133	3232	3444	5533	2322
TN	1012	2321	1112	2223	2123	5454	2233	3222
PI	1120	0441	2111	3235	5323	6455	4523	2322
GN	0221	2344	1021	1124	4223	6554	3323	4413
HR	1221	2343	2022	1224	4224	6555	4433	3333
TO	0331	2343	1121	2214	3323	5444	4424	4322
AM	1231	1233	1111	2214	3322	3433	4434	3201
TW	1222	2453	3112	3235	5223	5554	4522	3322
MI	2342	1554	2212	411-	--34	7665	5546	6422
MY	3454	3364	3354	3225	4566	4445	4566	4433
MW	3442	3375	3332	2226	5543	6456	3653	4364
NL	1121	2355	4122	3126	6333	3565	7733	3333
SB	2232	2344	4212	3334	5333	4444	5533	3333
VO	2342	3344	3233	3224	4334	4434	5533	3223

MAGNETOGRAMS 24-26 February 1971



Indices

	March	12							13								14								15							
UT		06		12		18			06		12		18				06		12		18				06		12		18			
Kp	1o	1+	1o	2o	3+	3+	4o	6o	3+	4-	4+	5o	5-	6-	5+	4+	3+	3+	4+	5o	4-	3+	4o	5o	5o	5-	4+	2+	3-	4-	2+	2o
3Kn	2	4	2	7	11	10	11	15	9	8	12	13	13	14	14	11	9	10	12	12	10	9	11	12	12	12	12	6	8	10	6	6
3Ks	3	4	3	6	11	9	11	17	8	8	13	13	12	14	13	12	8	8	11	11	10	8	11	13	12	12	11	6	6	9	4	4
Dst					—														—													

Data from Individual Observatories:

March 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)	K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
MB	21.3N	11	1023	SC	- 0.7	+	- 3	12(8)	6	3	94	18	16	06
CO	64.6N	12	09--	..	..	..	..	14(4)	6	150	1090	700	16	18
SI	60.0N	12	1453	..	..	..	..	13(4)	7	90	420	470	15	12
NE	55.1N	12	09--	..	..	..	..	13(3) 14(2,4)15(2,3)	5	34	154	159	15	12
WI	54.1N	12	20--	..	..	..	..	12(8) 13(6,7)	6	40	210	80	15	08
FR	49.6N	12	20--	..	..	..	..	12(8)	5	20	115	85	15	08
BD	49.0N	12	09..	..				13(4)	5	19	130	60	15	11
DS	43.0N	12	18..	..				13(3)	5	15	106	45	15	18
IR	40.8N	12	09--	..	..	..	..	12(5,8) 13(3,5,6)	5	17	113	48	13	24
TU	40.4N	12	09--	..	..	..	..	13(3,4)	5	12	90	40	16	12
SJ	29.9N	12	1110	..	..	..	..	12(7)	5	6	110	36	13	24
HO	21.1N	12	20--	..	..	..	..	13(4)	4	5	70	30	15	09
AL	9.5N	12	1230	..	..	..	..	12(5,6,7)	5	5	105	48	14	00
HD	7.6N	12	1230	..	..	..	..	12(7,8)13(5,6,7) 14(4)	5	4	112	26	15	08
TV	1.1S	12	1230	..	..	..	..	-- -	-	2	179	110	14	00
HU	6.6S	12	1200	..				12(7,8)	5	7	272	29	15	01
HR	33.3S	12	14--	..	..	..	..	12(8)	6	22	106	64	15	11
GN	43.2S	12	12..	..				13(6)	6	16	110	110	15	08
TO	46.7S	12	09--	..	..	..	..	13(3,4,6) 14(4)	5	20	130	60	15	21
KG	57.3S	12	1458	SC*	- 1	-20	- 6	12(8)	7	60	390	240	14	03
PM	18.6S	13	06--	..	..	..	..	13(3,4) 14(4)	5	7	110	60	15	11
IR	40.8N	14	01--	..	..	..	..	14(4)	5	15	95	32	15	09

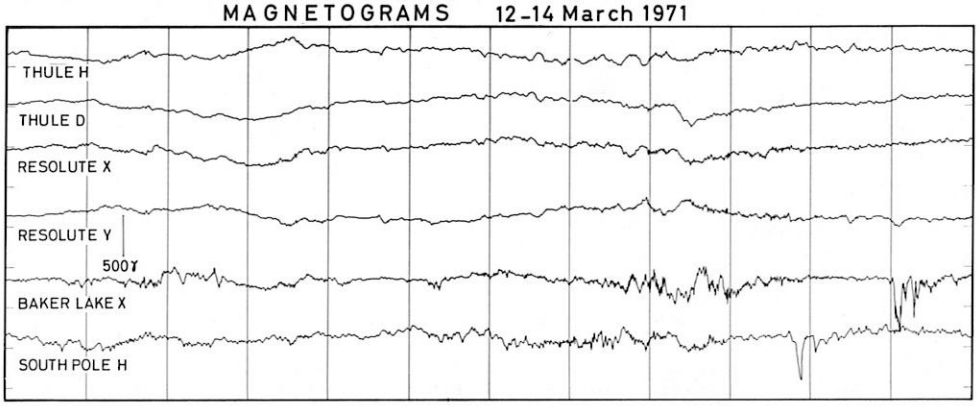
THREE-HOUR-RANGE INDICES, K

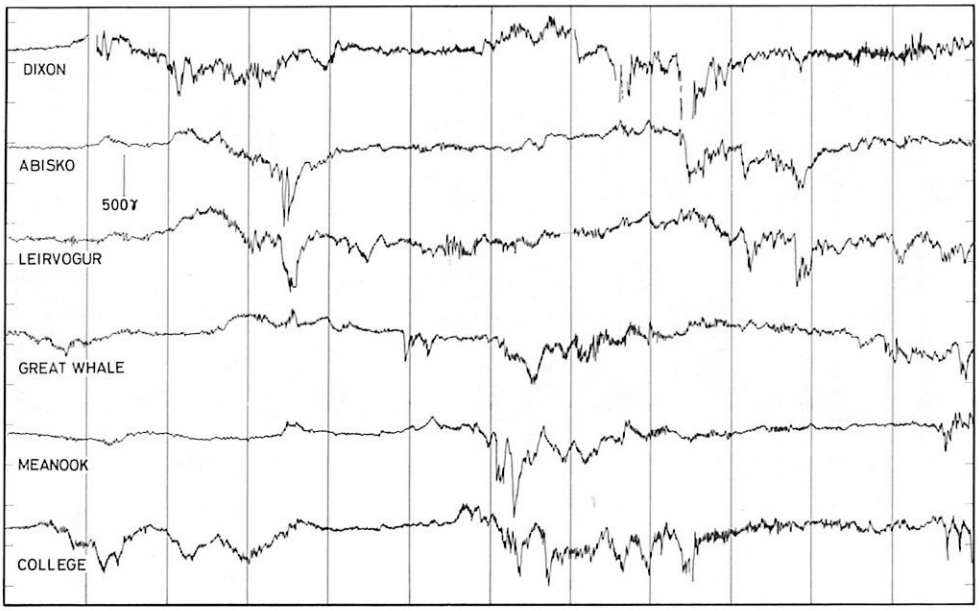
MAR	12				13				14				15			
BT	2434	5445	4454	5564	5555	5745	5654	5754								
CC	2223	7655	5345	5663	6655	6655	6553	5634								
DI	1224	6676	6456	8775	5656	7766	7654	4754								
TI	2215	7789	4366	8885	4477	7777	5454	6743								
PB	0315	4666	3345	4564	4466	6555	4465	4553								
TR	1112	3457	3334	3666	4443	3365	6643	3544								
GO	1114	5444	2333	4553	3334	5546	3535	4442								
MM	1122	4567	5335	5766	4345	4377	6653	3543								
KI	1022	4467	4334	5766	5444	3367	6643	3533								
WE	0103	7555	3267	7774	3367	6433	4353	3531								
CU	0105	5555	3356	5663	3366	6443	4354	3432								
RY	3224	4667	5555	5577	4666	4467	7764	3535								
DU	1012	3368	4333	4654	4334	3355	6442	3422								
YA	2214	6656	3356	7654	4456	5455	6453	3433								
NU	1122	3347	4234	5654	3334	3355	5432	3422								
LE	0011	2357	3233	3554	3234	3245	4331	2322								
MG	1113	5455	3245	5554	3455	4343	5453	3421								
SI	0103	5344	2357	5543	3366	5434	3453	2322								
SV	0101	4446	3324	5554	3233	3344	4432	3322								
RS	1112	3346	4334	4654	3234	3355	5433	3422								
ME	1114	4334	3578	6544	3467	6434	4564	3323								
IR	3224	5445	3355	5543	3345	4434	4343	3322								
VL	1122	2346	4333	4554	3234	3244	5431	2322								
KV	1222	4555	4334	5664	3344	4345	5443	3323								
DB	1113	3446	3333	4654	3234	3345	5442	3422								
KD	2342	5446	3334	5553	4344	4334	4333	3322								
VI	0113	4343	2355	4433	3555	4334	3553	2322								
JU	1112	3236	3343	3345	3344	3334	3432	2331								
OT	1102	3445	3356	4444	4445	3434	4442	3332								
MT	----	----	----	----	----	----	----	----								
VK	3324	5444	3355	5553	3456	4334	5442	3332								
TK	1112	4445	3344	5653	2234	4334	5432	2422								

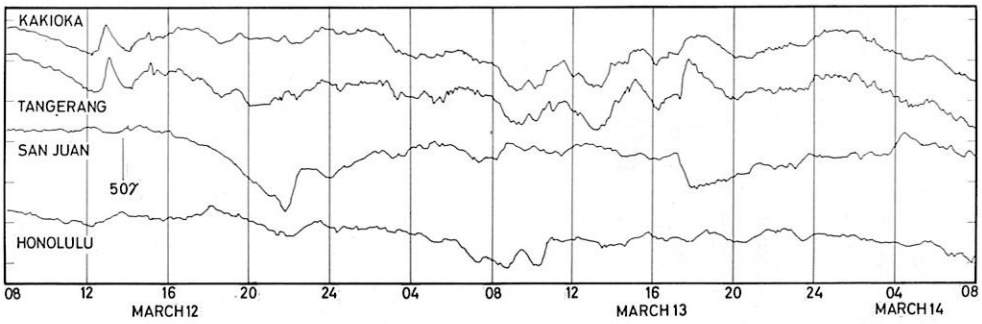
THREE-HOUR-RANGE INDICES, K

MAR	12				13				14				15			
IK	1212	3236	3234	4654	3223	3345	5432	2322								
TL	1102	3336	3233	3444	2224	7245	4331	1221								
FR	1212	3235	3344	4444	3444	3234	4442	2322								
SM	2232	4336	3343	3444	3344	4444	4333	4322								
KS	----	----	----	----	----	----	----	----								
DS	1213	3345	4355	4544	3445	3334	5442	3322								
TU	1212	3344	3355	4443	3444	2334	4442	2332								
KY	----	----	----	----	----	----	----	----								
QU	2333	4445	3253	5553	2244	4334	4333	2322								
TA	1212	2336	4333	3444	3233	2235	4331	1222								
HO	1212	3234	2344	3333	3244	3233	3442	1322								
AL	2212	3445	2333	5553	2234	4334	5333	2322								
SJ	0111	2255	4343	3523	2434	2233	4331	1222								
GU	2214	4233	3354	4443	3345	3323	3332	3322								
BA	1212	4526	3223	3344	2122	3234	3332	1221								
LU	1101	3455	3112	4442	1132	2224	3321	3311								
PM	1223	4334	2355	4343	3345	3232	3332	2321								
HU	0222	4455	3343	4543	3334	4434	4222	3433								
PP	0101	2223	2244	3332	2233	2233	3331	1321								
TN	1222	3345	2132	3443	2232	2233	3232	1211								
PI	1112	3356	4443	3544	3443	3234	3322	3432								
GN	1111	2444	3235	5644	3234	5444	5342	3312								
HR	1113	3556	3344	4554	3344	3345	5433	2322								
TO	1213	4333	3355	4542	2345	4333	3442	3321								
AM	0102	4234	2345	4333	2345	3223	3442	0220								
TK	1112	3355	3444	3434	3445	3334	4322	3332								
MI	1215	7555	3466	7674	3477	7543	4464	--32								
MY	3444	4334	5556	4664	5555	4655	5554	3843								
MW	2333	3547	4655	4776	5555	5678	7664	3555								
NL	1123	2477	5444	3556	5545	3357	7643	1311								
SB	3213	3433	4344	4444	4444	3344	5443	3333								
VO	2333	4433	3443	4443	3344	4334	4533	3333								

MAGNETOGRAMS 12-14 March 1971







Indices

	April 14				15				16				17			
UT	06	12	18		06	12	18		06	12	18		06	12	18	
Kp	3+	2o	1o	1+	4+	4o	5-	8-	7-	5-	3-	4+	5-	3-	3+	4o
3Kn	8	3	4	4	12	12	14	17	17	12	7	12	12	8	9	10
3Ks	9	3	4	5	11	9	16	20	16	13	8	11	11	8	8	11
Dst																

	16				17							
UT	06	12	18		06	12	18					
Kp	4o	4-	3o	2+	3o	2o	2+	3o	2o	3o	3-	2+	0+	0+	1-	3o
3Kn	10	9	8	9	8	6	6	7	5	6	8	7	1	1	1	8
3Ks	11	9	9	8	8	5	6	8	5	7	8	6	1	0	0	8
Dst																

Data from Individual Observatories:

April 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)	K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	14		..	..	..	..	14(5) 16(4)	6	143	1300	720	16	17
SI	60.0N	14	1242	SC*	-*	-*	-	15(1)	7	70	720	560	15	14
NE	55.1N	14	1243	SC	6	18	3	15(1)	6	39	231	376	16	13
WI	54.1N	14	1243	SC*	- 5*	+48*	0	14(8)	7	60	260	140	15	14
FR	49.6N	14	1243	SC*	+ 1	+10	- 1	15(1)	7	36	123	166	16	12
BD	49.0N	14	1243	SC	- 3	+ 9	--	15(1)	7	42	135	130	16	15
DS	43.0N	14	1243	SC	- 1	+ 8	+ 3	15(1)	6	24	154	81	15	13
IR	40.8N	14	1242	SC*	2.8	34	7	14(8)	6	28	201	63	15	15
TU	40.4N	14	1243	SC	+ 2	+15	--	15(1)	6	20	160	30	15	11
MT	34.0N	14	1243	SC	+ 1.0	+27	- 2	14(6,7,8)	5	14	187	41	15	20
SJ	29.9N	14	1243	SC	- 2.5	+ 5	+ 2	14(8) 15(1)	6	20	165	50	15	06
KA	26.0N	14	1243	SC	+ 0.8	+23	+13	14(6,7,8)	5	10	156	74	15	20
MB	21.3N	14	1243	SC*	- 1.8	+31	-10	15(1)	6	3	79	16	16	14
HO	21.1N	14	1242	SC	+ 0.5	+15	+ 5	14(8)	5	12	160	33	16	05
KY	20.5N	14	1243	SC*	+ 0.8	+22	+12	14(6,7,8) 15(5)	5	8	149	57	15	20
AL	9.5N	14	1242	SC	- 0.2	+17	- 3	14(5,7,8) 15(1,5)	5	7	127	48	15	14
HD	7.6N	14	1242	SC	- 0.2	+16	- 1	14(7,8) 15(1,4,5)	5	6	129	20	15	19
AA	5.3N	14		SC*	+ 0.3	35	9.5		6	7	152			
GU	4.0N	14	1243	SC	--	17	- 5	14(7)	5	7	135	13	15	14
AN	1.5N	14	1242	SC	- 0.7	+21	+10	-- -	-	5	127	45	15	14
TV	1.1S	14	1242	SC	+ 0.2	+16	+24	-- -	-	4	169	93	15	14
HU	6.6S	14	1243	SC*	3	70	4	14(7,8)	6	7	471	53	15	05
AP	16.1S	14	1242	SC	0	+13	- 1	14(7,8)	5	5	157	37	15	14
PM	18.6S	14	1243	SC	+ 0.2	+21	+17	15(5)	5	7	130	50	15	15
HR	33.3S	14	1243	SC*	+ 3	+16	+17	14(8)	6	26	116	136	15	14
GN	43.2S	14	1242	SC	+ 1	+19	+ 5	14(7,8) 15(5)	6	20	130	130	16	16
TO	46.7S	14	1243	SC	0	+32	+ 6	14(7,8)	5	24	190	60	16	00
AM	47.7S	14	1243	SC	+ 0.2	+28.2	+ 2.2	14(7,8) 15(4)	5	24	216	101	15	14
KG	57.3S	14	1242	SC*	+ 1.5	+13	+ 3	14(8)	8	90	780	450	16	04

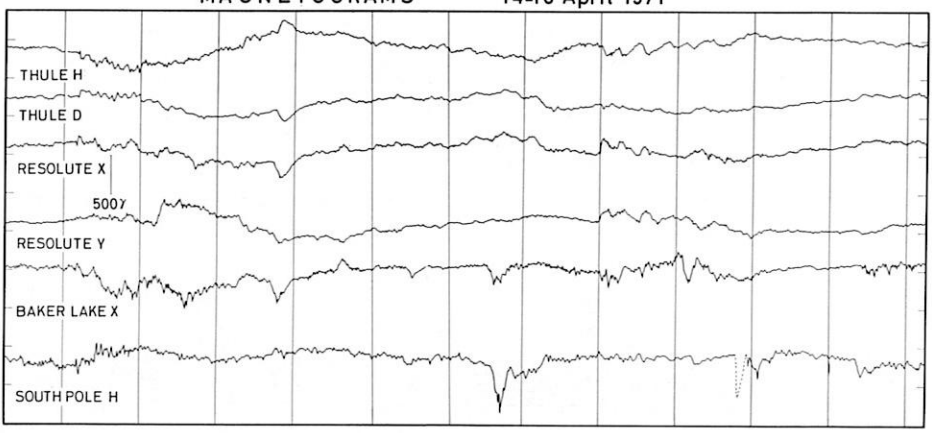
THREE-HOUR-RANGE INDICES, K

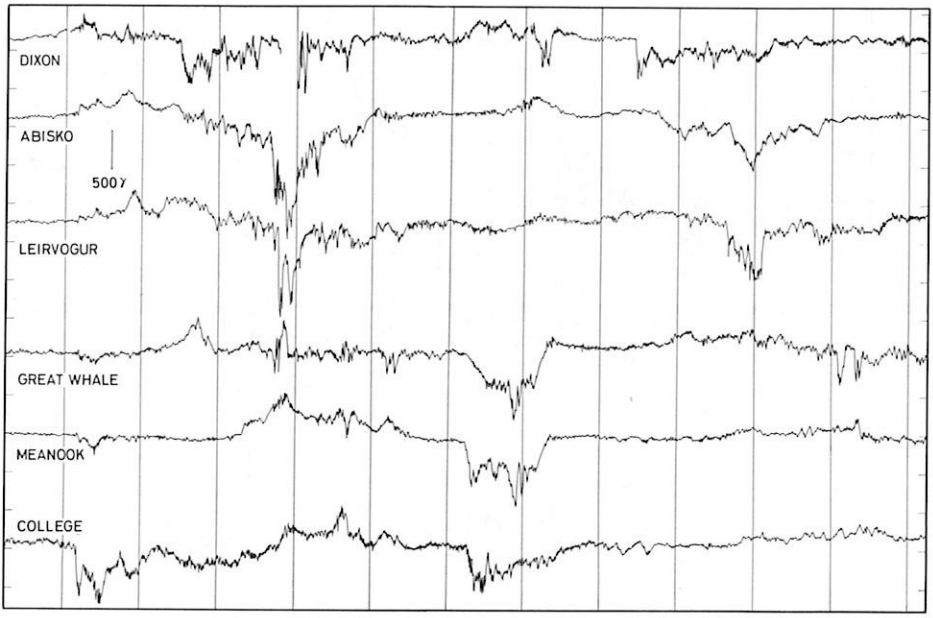
APR 14		15		16		17	
BT	5423 4556	5544 5444		5454 6554		1444 3214	
CC	3223 5557	5434 6444		5435 5544		3333 3315	
DI	3224 6579	8445 6656		6446 5665		4334 3326	
TI	3222 6699	8546 8555		4445 6453		3334 3323	
PB	2334 6567	5436 4344		3445 4433		3355 2322	
TR	5212 4455	5424 5345		5433 2245		3323 2115	
GO	5224 6535	4334 5444		4334 4434		2324 3213	
MM	4212 5568	7635 6466		6434 3344		3323 1115	
KI	4222 5568	7634 5366		6534 3335		3323 2004	
WE	2122 7656	4536 6232		3437 3322		2344 1112	
CO	2122 6545	5425 4233		3436 4312		2334 1101	
RY	6422 4568	6544 4447		7554 3335		5543 2226	
DO	3002 4469	6624 4345		5423 3324		2123 1003	
YA	3222 4668	6424 7444		3446 5243		4345 1214	
NU	3223 4458	7433 4334		4323 3322		2222 1103	
LE	3201 3349	7522 4235		4422 2223		1221 0003	
MG	2232 4556	5434 6233		3345 4223		2354 2312	
SI	2121 5346	7526 6233		3334 3222		2344 1012	
SV	2001 4455	4323 4443		3213 3222		1221 0003	
RS	3101 4447	6433 4334		4333 3333		2221 1203	
ME	2132 5336	5547 6334		3545 4223		2355 1112	
IR	3232 5556	5543 4543		3335 4322		3232 2213	
VL	3212 4456	5524 4233		4323 3133		2322 2213	
KV	3323 5556	5334 4344		4332 4233		2222 3213	
DB	3223 4446	5434 4233		4333 3233		2321 1113	
KD	1012 3244	4233 4333		3223 3222		1222 2112	
VI	2031 4444	6535 4223		3434 3211		2243 1002	
JO	3212 4337	8523 3234		3323 2123		2222 1013	
OT	3221 4447	8534 3344		4433 3133		3333 0013	
MT	1112 4555	4334 4222		1234 3211		1123 1002	
VK	3222 5556	5435 5334		3334 4323		4354 2224	
TK	1011 5455	5325 5443		1111 2222		1001 0002	

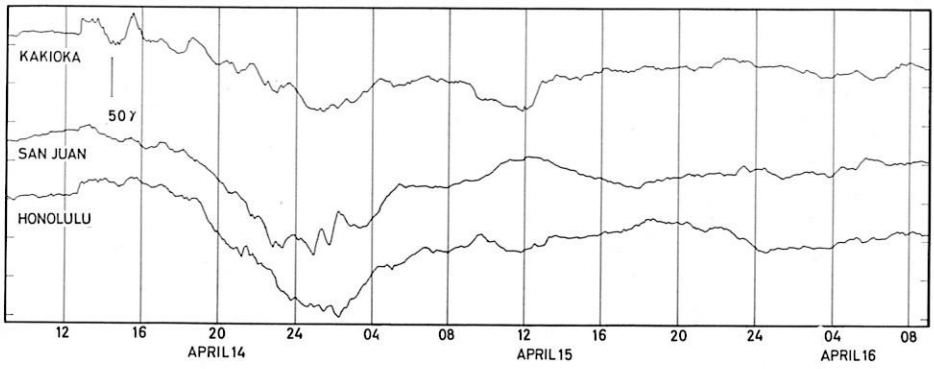
THREE-HOUR-RANGE INDICES, K

APR 14		15		16		17	
IK	3112 4346	4323 4233		3212 2223		2211 1113	
TL	3211 3336	5333 3134		3212 2123		2221 1103	
FR	3211 4346	7424 3234		4422 2223		2222 0013	
SM	3223 3335	4534 4222		3333 3233		3333 2223	
KS	3222 5557	4424 4334		1213 2223		2222 1114	
DS	3222 4435	6534 2234		3433 3233		2332 1013	
TU	2122 3445	6535 2223		2332 2111		2232 0003	
KY	1002 4555	4334 5223		2233 3211		1223 1002	
QU	2232 4445	5425 5333		2233 3232		2223 1113	
TA	3211 4456	5423 3334		4223 2123		2221 0113	
HO	2111 3455	4434 3333		3223 2222		2343 1012	
AL	1112 5455	5324 5333		2222 3232		1223 1113	
SJ	2001 3366	6523 2123		3422 1112		1221 0001	
GU	2111 4555	4434 5222		3223 3212		2222 1002	
BA	3002 4435	4333 3323		2222 2123		2100 0003	
LU	2002 4355	4423 3333		2113 2212		1111 2212	
PM	1101 4444	3324 5222		3333 3212		1223 1012	
HU	2222 5566	6544 4433		4323 4332		2221 2323	
PP	1021 3235	4433 2222		1122 1021		2341 0011	
TN	1122 4345	3123 4123		2121 3122		1111 1102	
PI	3211 5575	6534 3334		3433 3223		2232 1113	
GN	1011 4466	4333 6442		3224 3332		2122 0002	
HR	3112 4456	5433 3234		3333 3223		2222 0003	
TO	1011 4455	3324 4323		2234 3222		1233 0002	
AM	2012 4355	4325 4123		3232 3112		2243 0002	
TW	2102 4465	6513 3323		3432 3222		1120 1102	
MI	2123 7656	5425 5234		3346 4312		2333 0002	
MY	4444 4446	4454 3344		4455 3473		3444 2214	
MW	5522 4568	7644 4365		6664 3355		4553 2116	
NL	5311 2267	8634 3236		5653 2224		3342 1014	
SB	3122 3345	5434 3334		4333 3333		3332 1112	
VO	3322 3334	5443 3324		3333 2223		2323 2223	

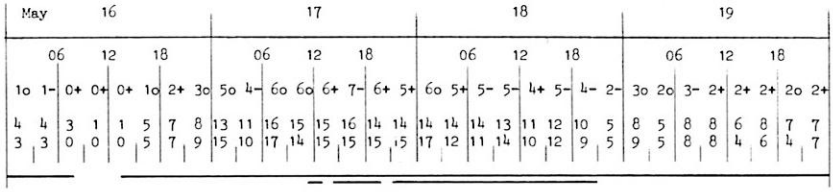
MAGNETOGRAMS 14-16 April 1971







Indices



Data from Individual Observatories:

May 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)	K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	16	22--	..	..	..	..	17(4)	7	184	1430	880	18	20
NE	55.1N	16	22--	..	..	..	..	18(3)	7	60	204	344	19	08
FR	49.6N	16	23--	..	..	..	..	18(2)	6	34	166	105	19	09
TU	40.4N	16	23--	..	..	..	..	17(3) 18(2)	6	20	210	30	18	18
HO	21.1N	16	23--	..	..	..	..	17(3)	5	10	58	33	19	12
HD	7.6N	16	2200	..	..	..	..	17(6)	7	5	201	37	18	21
GN	43.2S	16	22--	..	..	..	..	17(3,6,8)	6	24	90	130	18	21
TO	46.7S	16	1630	..	..	..	..	17(3,4,6) 18(4,6)	5	23	130	70	18	22
SI	60.0N	17	0551	..	..	..	..	17(4)	8	100	1000	630	18	18
WI	54.1N	17	0630	SC*	+ 4	-40	0	17(5,6,7) 18(1)	6	35	210	170	18	21
BD	49.0N	17	00--	..	..	..	..	18(2)	7	39	190	115	18	21
IR	40.8N	17	01--	..	..	..	..	17(3,4,6)	6	19	149	56	18	21
MT	34.0N	17	0629	SC*	- 2.5	+43	+ 7	17(3,4,5,6)	5	14	112	18	cont.	
MT	34.0N	17	1924	SC	+ 1.8	+24	- 4	17(7)	5	12	97	27	18	21
SJ	29.9N	17	0106	..	..	..	..	17(3) 18(1,2)	5	8	123	25	18	07
KA	26.0N	17	0629	SC	- 1.2	+28	+19	17(3,4)	5	10	94	94	cont.	
KA	26.0N	17	1924	SC*	+ 1.5	+21	+12	17(7,8) 18(3,4,5)	4	7	93	45	18	21
MB	21.3N	17	0628	SC	+ 1.5	+18	--	18(1)	6	6	88	30	19	03
KY	20.5N	17	0629	SC*	+ 1.3	+31	+12	17(4)	6	8	113	68	cont.	
KY	20.5N	17	1924	SC	+ 1.4	+26	+14	17(7)	5	6	93	49	18	21
AL	9.5N	17	0628	SC*	- 0.9	+34	-14	17(6)	6	5	193	47	18	21
GU	4.0N	17	0629	SC	01	19	- 6	17(4)	6	3	110	45	18	20
AN	1.5N	17	0628	SC*	- 0.2	+77	+38	-- -	-	5	283	101	18	21
TV	1.1S	17	0628	SC*	0.4	+84	+85	-- -	-	3	345	192	18	21
HU	6.6S	17	0100	..	--	--	--	17(6)	7	10	349	46	18	22
AP	16.1S	17	0629	SC	0	+18	- 7	17(4)	5	5	79	33	18	17
PM	18.6S	17	0630	SC	- 1.5	+17	+11	17(4)	6	5	120	70	18	18
HR	33.3S	17	0629	SC	+ 3	+ 9	+12	17(4) 18(1)	6	27	133	118	19	02
KG	57.3S	17	0631	SC	+ 3	+14	- 6	17(5,6,7)	7	60	640	420	18	22

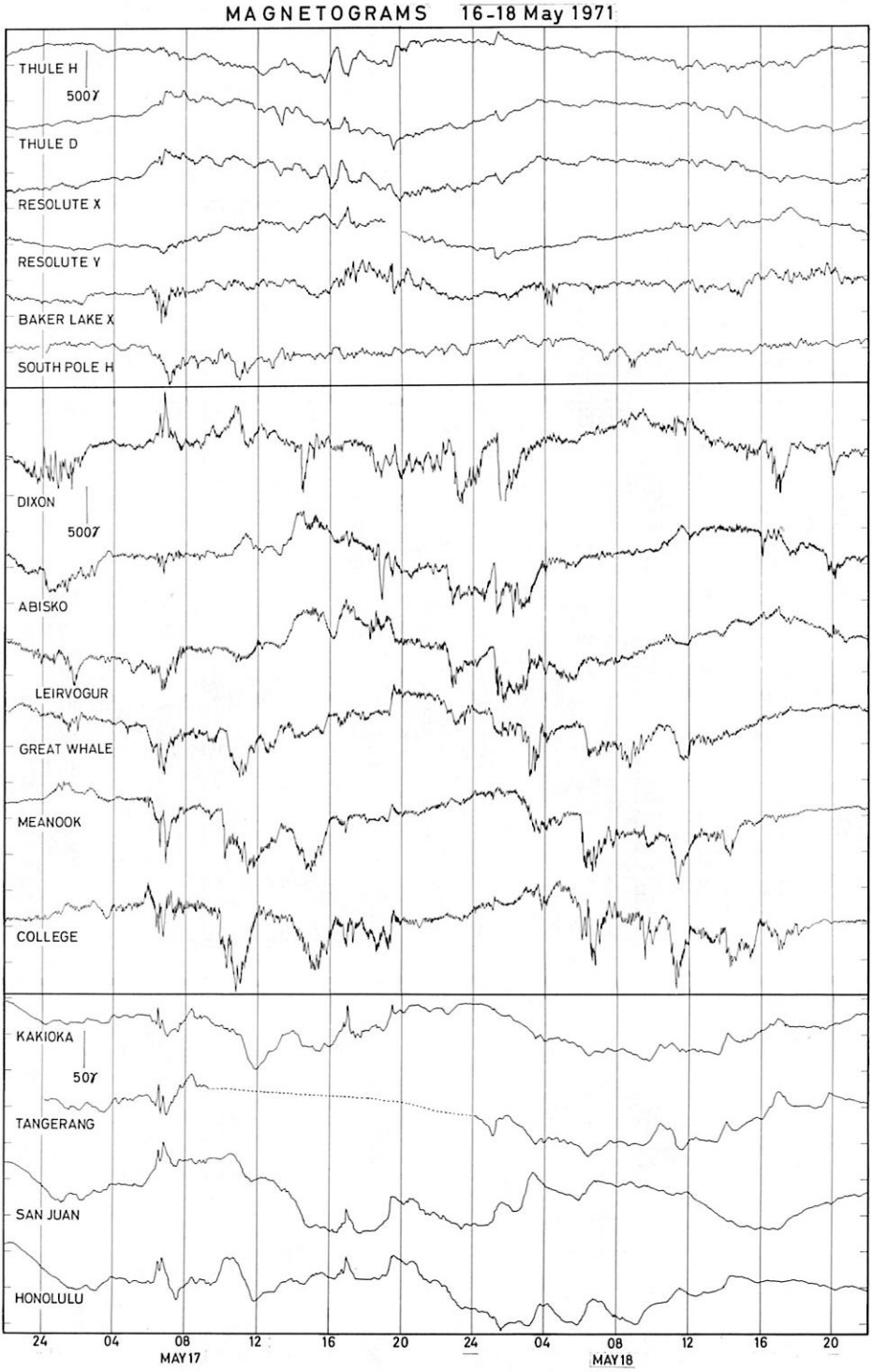
THREE-HOUR-RANGE INDICES, F

MAY	16		17		18		19	
BT	3222	2544	5587	5566	5545	5544	5455	4634
CC	2121	1444	6466	6556	6456	6554	4344	3524
DI	3221	2556	7476	8568	8566	6765	4334	4635
TI	2221	2664	4567	7788	6567	7764	3335	4343
PB	1110	1443	4466	6664	4576	6553	3354	3433
TR	1000	1334	5455	5567	6543	3553	4322	3234
GO	2122	2433	3355	6664	4344	6543	4133	4533
MM	--11	1346	7456	6677	8646	4674	4212	3434
KI	0011	1335	6555	7677	7736	4563	4222	3335
WE	1111	0231	4568	6563	4567	6642	2233	2321
CO	1110	0222	4567	5653	4466	5532	3234	3332
RY	1121	2345	6575	6667	7655	5565	5443	3435
DO	0000	0125	7455	7778	9634	56--	----	--13
YA	2212	1334	4465	6566	6557	6664	4323	3423
NU	0101	1124	4255	7665	5434	4541	2223	3323
LE	0000	0133	6453	5666	8543	4442	3312	3213
MG	2211	1324	4355	5555	4456	4442	4334	2443
SI	1100	0122	4368	7744	5567	6421	3243	3222
SV	0010	0232	4245	5545	5334	3431	1123	2312
RS	0000	1134	4355	6665	6534	4442	3222	3313
ME	1110	2223	5577	7755	5677	6433	3346	2223
IR	3233	2213	4366	5655	4445	4542	3334	3421
VL	0121	2233	4255	4644	5434	3541	3122	2322
KV	1132	2234	4356	6665	6444	4542	3233	3323
DB	1111	1123	425-	4655	5433	3532	2222	2323
KD	1221	1221	3244	4544	4---	----	-122	1201
VI	2210	0122	3466	6544	4675	5332	4243	3222
JO	0111	0122	5365	5545	5654	3422	4232	2232
OT	1100	0113	5676	5554	5765	3432	4243	2232
MI	1211	1221	2255	5554	3334	4431	2133	2222
VK	3322	1334	3356	5655	4545	4533	3433	2333
TK	1110	0332	3266	4754	5544	3542	2232	2312

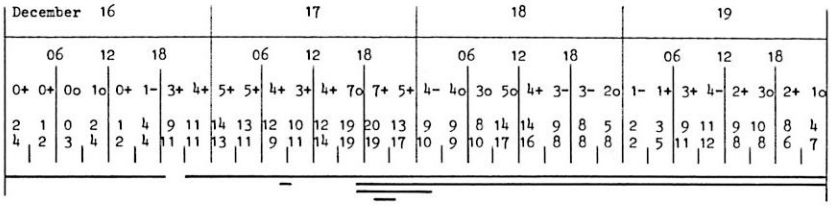
THREE-HOUR-RANGE INDICES, K

MAY	16		17		18		19	
IK	1111	0123	4255	5665	6434	3442	2222	2323
TL	1111	1122	3244	4554	5332	2431	2222	1322
FR	2210	0113	5565	5554	5655	4432	3232	2232
SM	2223	3323	3343	4544	3343	2232	3233	2323
KS	2222	1022	4256	6766	6355	4542	--12	2323
DS	2211	0124	5565	5555	5655	4433	3342	2222
TU	2210	0113	4565	5545	5654	4332	3232	2212
KY	1211	1221	3256	5554	3344	4331	2233	1211
GU	2222	2222	3356	5654	5343	4543	1233	2323
TA	1210	0123	3344	5555	6542	2443	2111	1223
HO	2210	0123	4355	4545	4445	4333	3323	2221
AL	2221	2223	3355	5655	5233	3432	2222	1212
SJ	1100	0014	4454	5544	5543	3323	2231	1113
GU	2211	1213	4346	5555	4334	4422	3233	1212
BA	2220	0023	3345	5555	6342	2442	2222	1322
LU	1100	0012	3134	3444	5311	1331	1011	1111
PM	-211	1224	2356	5433	3345	4321	2233	2211
HU	1111	2233	4345	6754	4433	4431	2232	3433
PP	1100	0011	3355	3443	3545	3321	2122	1111
TN	1112	2121	2244	4644	4222	2431	1121	1112
PI	2221	2225	5355	5645	5542	3333	3432	3333
GN	1100	0342	3265	5656	6235	4542	1223	2323
HR	1110	0123	5356	5455	6354	2432	3122	2213
TO	1200	0332	3355	4544	4445	4531	1233	2311
AM	2100	0122	3355	4443	4555	4421	2223	2220
TW	1210	1124	4354	5545	4543	3322	3232	1222
MI	1100	0242	3476	7753	4967	6541	2244	4211
MY	2332	2343	4465	4476	6444	3754	4343	3333
MW	2211	1255	5755	5577	8555	4674	5443	3335
NL	0100	1224	7664	4557	7654	4433	4432	1214
SB	1100	0223	3464	4443	3433	3332	2232	2222
VO	2222	2322	3354	4433	3323	3332	3322	3222

MAGNETOGRAMS 16-18 May 1971



Indices



Data from Individual Observatories:

December 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)	K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	16	1904	SC*	-10	-78	-15	17(6)	8	509	2980	1370	18	23
SI	60.0N	16	1903	SC	--	+	+	17(6) 18(4,5)	7	---	--	--	18	21
NE	55.1N	16	1904	SC*	4	14	3	17(2)	6	41	100	127	17	14
FR	49.6N	16	1904	SC*	+ 2	+34	- 9	17(6)	6	26	209	107	18	22
BD	49.0N	16	1905	SC*	+ 2	+12	+ 8	17(6)	7	35	210	55	18	22
DS	43.0N	16	1904	SC*	+ 1	+20	- 3	17(6)	7	18	220	51	18	22
TU	40.4N	16	1905	SC	+ 1	+12	+ 1	17(6)	7	19	180	30	18	23
SJ	29.9N	16	1905	SC	+ 0.2	+13	+ 3	17(1)	5	6	81	13	17	12
AL	9.5N	16	1903	SC	- 0.5	+26	- 6	16(7)	5	3	46	24	17	11
HD	7.6N	16	1904	SC	- 0.3	+23	- 1	17(1)	5	5	71	12	17	12
GU	4.0N	16	1904	SC	..	20	- 6	17(6)	6	5	170	38	18	23
AN	1.5N	16	1903	SC	- 1.1	+32	+18	-- -	-	5	78	49	17	11
TV	1.1S	16	1903	SC	+ 0.1	+28	+35	-- -	-	4	101	66	17	11
HU	6.6S	16	1905	SC*	3	95	6	17(7)	9	15	678	82	18	22
HR	33.3S	16	1904	SC	+ 3	+10	+10	17(5)	5	16	64	46	17	14
GN	43.2S	16	1805	SC*	+ 3*	+29	+23*	17(1)	5	17	90	100	17	12
KG	57.3S	16	1905	SC	+ 2	+32	+12	17(6)	8	70	580	270	18	22
WI	54.1N	17	1418	SC*	+ 5*	+20	0	17(6)	7	40	300	130	18	14
IR	40.8N	17	1418	SC*	4.9	64	9	17(6,7)	7	36	259	104	18	16
MT	34.0N	17	1417	SC*	+ 2.2	+47	- 6	17(6,7)	6	19	184	30	18	22
SJ	29.9N	17	1417	SC	+ 0.4	+ 8	+ 2	17(6)	7	8	230	88	18	22
KA	26.0N	17	1417	SC*	+ 1.7	+42	+26	17(6,7)	6	123	162	83	18	22
HO	21.1N	17	1418	SC	+ 1	+31	+14	17(7)	7	6	159	34	19	00
KY	20.5N	17	1417	SC*	+16	+46	+22	17(6,7) 18(4)	6	11	178	65	18	22
AL	9.5N	17	1414	SC	- 0.6	+46	- 8	17(6)	8	6	256	35	18	23
HD	7.6N	17	1417	SC	- 0.2	+46	- 3	17(6,7)	7	5	253	16	18	23
AA	5.3N	17	1417	SC	- 0.5	44	6	-- -	-	9	329	17	18	21
AN	1.5N	17	1414	SC	- 1.6	+56	+29	-- -	-	4	252	89	18	23
TV	1.1S	17	1414	SC	+ 0.5	+46	+62	-- -	-	4	245	197	18	23
PM	18.6S	17	1417	SC	+ 0.4	57	47	17(6) 18(4,5)	6	7	170	90	19	00
HR	33.3S	17	1417	SC*	+ 4	+30	+31	17(6)	7	43	196	251	19	18
GN	43.2S	17	1418	SC	+ 4	+60	+16	17(6,7)	7	25	180	150	18	22
TO	46.7S	17	1417	SC*	- 3	+85	+12	17(6,7)	6	25	260	120	19	13

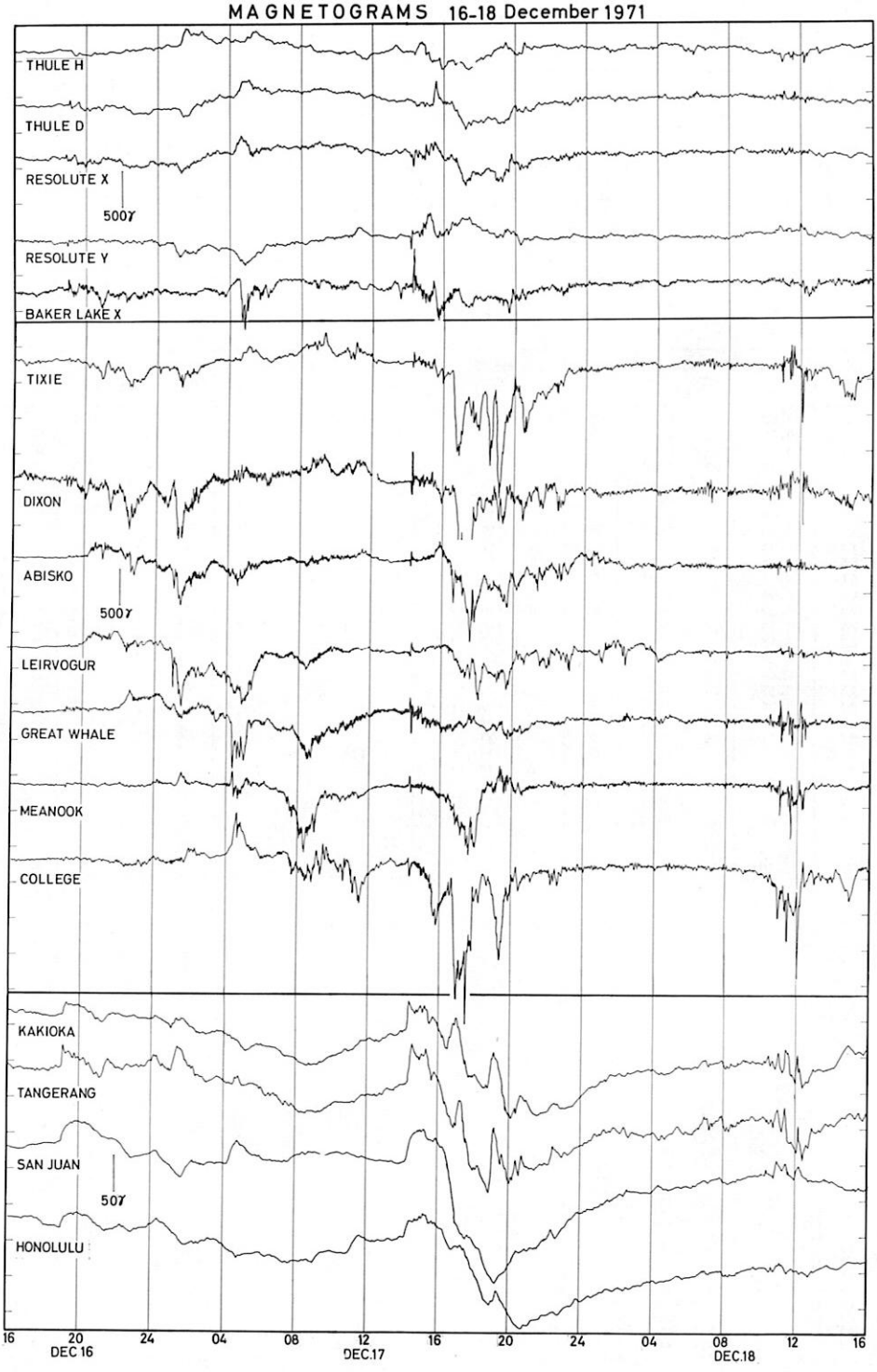
THREE-HOUR-RANGE INDICES, K

DEC	16				17				18				19			
BT	2222	2556			8654	6866			6446	6443			2244	4553		
CC	1111	3545			6444	5855			3345	6433			1145	5653		
DI	8565	3442			2122	6976			4456	7543			2245	4664		
TI	----	----			----	----			----	----			----	----		
PB	1123	3455			5555	4775			3325	6433			0156	4552		
TR	0000	0146			6534	4766			4333	3222			0023	3232		
GU	1112	2344			6653	5653			3525	3333			3243	3331		
MM	1011	1146			6434	4876			6325	4321			1123	3442		
KI	1011	0246			6534	4866			5335	3222			1023	2233		
WE	0101	1133			5656	4885			2238	7622			0136	5441		
CO	0001	0123			4656	4874			3336	7532			0056	5431		
RY	1111	1255			7755	5775			5545	4333			2244	3333		
DU	0001	1136			6533	3776			6325	4332			1133	2321		
YA	2111	1344			7434	5997			3336	6533			2235	5442		
NU	0000	0134			4432	3676			4224	4321			0022	2321		
LE	0000	0035			5542	3886			4223	3221			0022	1210		
MG	2311	1234			5434	4786			3335	5322			2334	4431		
SI	0001	0123			3555	4774			2227	7322			0135	4321		
SV	0000	0233			5442	4684			3335	4321			0033	3431		
RS	0001	0135			5433	3765			4334	3332			1023	2331		
ME	0101	1133			4554	5674			3525	5231			0134	2321		
IR	1212	2254			6443	5775			4345	5432			1134	5432		
VL	0001	1134			5541	3655			4233	3322			1032	2330		
KV	1111	1134			4332	3564			2224	3322			1122	3221		
DB	1001	1135			5442	4765			4325	3322			1033	2331		
KD	1222	0133			5432	4653			3234	4322			2133	3431		
VI	0001	0133			4654	5764			2225	6421			0134	4321		
JO	1100	1123			4542	4685			4425	4221			1122	1111		
OT	0101	1133			4554	5674			3525	5231			0134	2321		
MT	1001	1133			4443	5663			2235	5321			0033	3321		
VK	2222	2243			5444	5664			4335	5433			2244	5532		
TK	0001	0144			5443	5764			4366	5332			2234	3322		

THREE-HOUR-RANGE INDICES, K

DEC	16				17				18				19			
IK	1001	1244			6522	5875			3335	4332			1133	3332		
TL	0000	0032			5432	3775			2223	3221			1122	1221		
FR	1101	0033			5443	4654			3425	4232			0134	2321		
SM	2222	2233			5443	3554			3324	4222			2233	3222		
KS	1001	0154			6533	6874			2-3-	34--			----	----		
DS	1011	0143			5544	5764			2335	5333			0134	2212		
TU	0101	0233			5544	4754			2225	5232			0134	2311		
KY	1000	1143			4333	5663			2236	5322			0134	3321		
QU	1232	0143			5---	----			-445	5332			2144	4232		
TA	1211	1143			5443	6-65			4--6	5433			2--4	3332		
HO	0001	0144			3223	4476			1124	4232			0022	1221		
AL	1121	1254			5333	5864			3246	5332			1234	4232		
SJ	0000	0044			5432	5755			3334	5342			0033	3341		
GU	1100	1132			4223	5664			2236	5232			1133	4321		
BA	1102	2242			5433	5---			-346	5332			0134	2322		
LU	----	----			----	----			----	----			----	----		
PM	1111	1132			4334	5655			2336	6332			1134	3222		
HU	1112	2353			4433	5797			5436	6543			0124	4443		
PP	----	----			----	----			----	----			----	----		
TN	1321	2044			3343	5756			4235	5333			1334	4332		
PI	2311	1355			4433	6775			4336	5444			2234	3333		
GN	1011	0144			4334	5775			2245	6332			0144	3323		
HR	1000	0033			4443	5765			3336	5333			0144	2321		
TO	1131	1134			4434	5664			3345	5333			1344	3323		
AM	1210	1043			3433	5564			2345	5222			0244	3101		
TW	0102	1144			4433	5765			4235	4433			1133	2322		
MI	1121	1233			----	----			2235	6422			1235	5431		
MY	4443	2344			6665	5555			4455	5233			3464	4333		
MW	3322	2345			7655	5865			5535	5333			3244	4332		
NL	1111	1144			6633	3666			5325	4221			1134	2221		
SB	3323	3456			5543	5667			6445	5344			2344	3543		
VO	3334	4344			5544	5555			5577	6333			3554	5433		

MAGNETOGRAMS 16-18 December 1971



Indices

	April 8								9								10								11			
UT	06		12		18				06		12		18				06		12		18				06		12		18	
Kp	1o	1-	1+	1+	2o	1+	2o	2+	2o	4o	6-	6-	6o	6-	6o	4o	4+	5+	4o	3+	4o	4-	4+	4o	3o	5o	4+	5-	3+	4o	4-	3-
3Kn	2	3	5	4	6	4	8	7	5	11	16	17	16	14	15	12	11	14	9	9	11	10	10	10	8	12	11	13	10	11	9	8
3Ks	1	3	6	4	6	4	7	7	6	9	16	18	15	15	14	14	13	14	8	10	11	9	11	9	8	11	10	13	10	11	9	8
Dst																																

Data from Individual Observatories:

April 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)	K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	09	0428	SC*	+ 1	+41	+ 6	09(4)	7	334	1510	940	12	15
SI	60.0N	09	0427	SC*	-	+ *		09(4)	8	90	1160	590	12	03
ME	55.1N	09	0429	SC	1	18	--	10(2)	6	52	263	363	12	03
WI	54.1N	09	0428	SC	- 2	+10	0	09(7)	7	35	220	125	10	23
FR	49.6N	09	0429	SC	0	+15	- 2	09(3)	6	43	142	114	12	04
BD	49.0N	09	0428	SC	--	+15	--	09(3)	6	32	230	80	12	12
DS	43.0N	09	0429	SC		+16		09(3)	6	22	200	57	12	03
IR	40.8N	09	0428	SC	0.8	19	2	09(5)	7	30	184	74	11	21
TU	40.4N	09	0430	..	..	..	..	09(3,4)	6	16	180	40	12	03
MT	34.0N	09	0428	SC	+ 0.5	+17	- 2	09(3,4)	6	19	174	38	10	18
SJ	29.9N	09	0428	SC	--	+ 8	+ 2	09(4)	5	16	122	30	10	05
KA	26.0N	09	0428	SC	+ 0.5	+15	+ 9	09(3)	6	14	182	63	10	18
MB	21.3N	09	0429	SC	- 0.2	+10	- 1	09(5,6,7)	5	4	59	44	12	03
HO	21.1N	09	0427	SC	--	+10	+ 3	09(4)	6	5	140	30	12	03
KY	20.5N	09	0428	SC	+ 0.4	+18	+ 9	09(3)	6	11	214	63	10	18
AL	9.5N	09	0428	SC	- 0.4	+21	- 6	09(3,4,5)	6	6	266	68	09	23
HD	7.6N	09	0428	SC	- 0.2	+23	- 3	09(4,5)	7	7	280	36	11	22
AA	5.3N	09	0430	SC	- 0.7	20	3.4				147	34		
GU	4.0N	09	0428	SC*	--	19	-05	09(3)	6	8	135	40	12	04
AN	1.5N	09	0428	SC	- 0.9	+37	+ 9	-- -	-	5	324	85	09	23
TV	1.1S	09	0428	SC	+ 0.0	+37	+38	-- -	-	4	355	225	09	23
HU	6.6S	09	0428	SC		14	4	09(5,7)	6	7	286	45	10	20
AP	16.1S	09	0430	SC	+ 0	+10	- 4	09(3)	6	5	167	37	12	05
PM	18.6S	09	0428	SC*	+ 0.6*	+14	+15	09(5)	6	7	200	90	11	21
HR	33.3S	09	0427	SC	0	+10	+ 6	09(6)	6	32	171	144	12	01
GN	43.2S	09	0428	SC	- 0	+ 9	- 2	09(5,6)	6	20	140	190	11	18
TO	46.7S	09	0428	SC*	+ 1.2	+19	+ 3	09(4)	6	26	170	110	12	06
AM	47.7S	09	0429	SC*	+ 0.7	+18.8	+ 4.2	09(3,4,5)	5	34	151	78	11	17
KG	57.3S	09	0430	SC	+ 1	+ 3	- 2	09(6,7,8)	6	60	390	340	10	06

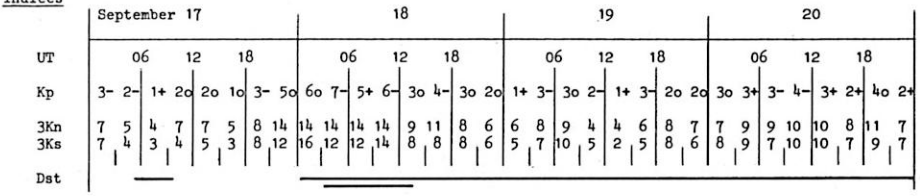
THREE-HOUR-RANGE INDICES, K

APR	8		9		10		11	
BT	3344	3444	4455	5000	0000	5645	5555	6663
CC	1233	4445	3355	6475	5544	7555	5443	6655
DI	2334	4566	4357	6776	6554	7767	5555	4765
TI	2444	6765	3457	8787	4544	7776	3567	7855
PB	0124	5552	2456	5575	4455	5664	4547	6654
TR	2012	2253	4244	5565	6633	3565	4544	4445
GO	2224	3332	2445	6544	5634	6445	3545	5433
MM	1122	2265	4247	6767	6634	6465	4445	4655
KI	1122	2265	4247	5766	6733	5466	4444	4545
WE	1112	3222	1468	6785	4545	6543	3655	7622
CO	0103	4211	0457	5764	3454	5532	3556	5632
RY	3222	3555	4566	5666	7754	4466	6665	4546
DO	1011	1133	2255	6675	6533	4455	2433	4443
YA	2221	3353	1467	6666	5544	5545	4446	6653
NU	1222	1133	2346	5665	3423	4444	3334	4433
LE	0011	1122	2243	5654	4432	3344	2332	3333
MG	2222	3343	2457	5564	3444	4434	3345	4533
SI	0023	3222	0467	5553	3744	4533	2557	5433
SV	0011	2133	1245	6554	2433	4433	2444	4432
RS	1111	1232	2344	5554	3433	4344	3334	3442
ME	1123	3222	2577	6533	3667	5454	4765	3433
IR	2323	2342	2455	7565	5444	4434	4445	4443
VL	1033	3232	2344	5555	4422	3344	2334	2332
KV	1322	2233	2355	5555	3423	4444	3444	3331
DB	1112	2232	1355	5554	4433	4344	3344	3443
KD	0112	2132	0334	5444	2432	3433	2333	3432
VI	0132	2112	1566	5454	4633	3423	3546	3423
JO	1022	2123	1466	5554	5533	2344	3544	3432
OT	1021	2123	2577	5455	5634	3344	3645	4333
MT	0122	2132	0466	5454	3433	4323	2344	4323
VK	3343	3243	2566	6554	4534	4434	3445	4434
TK	0112	2243	0456	7555	2344	4434	2445	3242

THREE-HOUR-RANGE INDICES, K

APR	8		9		10		11	
IK	1112	1232	1354	5555	3422	4344	2323	3332
TL	1111	1121	1343	4455	3421	2343	2333	2331
FR	1121	2023	3466	5453	5533	3333	3544	3433
SM	2223	2232	2345	4444	4432	3333	2334	3433
KS	0122	2232	1455	6666	3533	4444	2445	5441
DS	1232	2222	1566	6554	4533	3434	3535	3434
TU	0121	1111	0566	5444	4533	3333	2535	2323
KY	0223	2232	0465	5444	3333	4323	3345	3323
QU	2223	2232	3566	6545	3343	3323	2335	3341
TA	1112	0123	2445	5555	4422	3342	2343	2432
HO	1121	2222	1466	4343	5442	2334	3444	3333
AL	1222	2342	1566	6545	2333	4433	3335	3341
SJ	1121	1112	3355	5444	4322	2233	2323	2332
GU	1223	2112	0564	6353	3333	4322	3244	3422
BA	0222	0222	0445	5545	4433	3342	2333	3432
LU	1111	2222	1345	5555	4311	3332	1323	3431
PM	1122	2111	0555	6453	3533	4422	2345	4421
HU	2221	2323	3345	6565	4432	5433	3323	4532
PP	0111	1011	0366	3333	3442	1222	2344	2221
TN	1021	1221	1245	4444	3232	2232	1223	2331
PI	1121	1333	3455	5555	5432	4334	2434	3543
GN	1121	2232	1355	5655	3424	4334	2334	4442
HR	0123	1333	2455	5655	4433	4343	2445	4433
TO	0121	2022	0356	5454	3434	4333	3345	4432
AM	0122	3121	0355	5443	4444	3332	3445	3422
TW	1111	2112	3455	5554	5422	3333	2324	3423
MI	1113	4222	0457	6664	4544	6542	2367	6673
MY	2364	2333	3545	4564	4564	4456	4555	4754
MW	3232	3455	3576	5666	5753	3576	4665	3566
NL	1121	2234	2565	4555	7733	3354	4744	3334
SB	2121	3222	2445	5344	4533	3323	3634	3433
VO	2232	2323	2344	4443	4533	2233	3444	3422

Indices



Data from Individual Observatories:

September 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)		K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	17	22--	..	..	..	..	18(4)		7	175	1800	1130	18	19
SI	60.0N	17	22--	..	..	..	..	18(4)		8	120	1110	680	18	13
NE	55.1N	17	22--	..	..	..	..	18(3)		7	60	215	338	18	14
WI	54.1N	17	18--	..	..	..	..	17(8)	18(1,2)	5	25	185	100	18	19
FR	49.6N	17	18--	..	..	..	..	18(1)		5	20	145	52	18	23
BD	49.0N	17	22--	..	..	..	..	18(3)		6	35	140	60	19	19
DS	43.0N	17	18--	..				17(8)		6	13	144	42	18	23
IR	40.8N	17	17--	..	..	..	..	17(8)	18(1,3,4)	5	16	123	35	18	19
TU	40.4N	17	18--	..	..	..	..	18(1)		6	15	150	30	18	13
MT	34.0N	17	1125	SC	+ 0.3	+ 7	- 0	17(8)	18(1,4)	5	12	108	35	18	19
SJ	29.9N	17	1740	..	..	..	..	17(8)	18(1,3)	5	8	119	38	18	23
KA	26.0N	17	1125	SC	+ 0.2	+ 8	+ 5	17(8)	18(1)	5	11	117	71	18	19
MB	21.3N	17	18--	..	..	..	..	18(1,2)		5	3	70	6	19	05
HO	21.1N	17	19--					18(3)		4	8	151	58	19	00
KY	20.5N	17	1125	SC	+ 0.2	+ 8	+ 4	17(8)	18(1)	5	10	120	75	18	19
AL	9.5N	17	16--	..	..	..	..	18(1,4)		5	4	125	43	18	22
HD	7.6N	17	1800	..	..	..	..	18(1,4)		5	4	130	20	18	23
AA	5.3N											140			
GU	4.0N	17	1810	..	..	..	..	18(1)		5	5	155	22	19	09
AN	1.5N	17	16--	..	..	..	..	-- -		-	3	123	62	18	22
TV	1.1S	17	16--	..	..	..	..	-- -		-	2	143	81	18	22
HU	6.6S	17	2100	..	--	--	--	18(1,2,3)		5	5	270	33	18	20
PM	18.6S	17	1126	SC	+ 0.1	+ 7	- 6	17(8)	18(1)	5	5	120	40	18	17
HR	33.3S	17	18--	..	..	..	..	18(1,4)		5	16	104	63	18	23
GN	43.2S	17	18--	..	..	..	..	18(1,3,4)		5	15	120	120	18	19
TO	46.7S	17	21--	..	..	..	..	18(3,4)		5	18	130	40	18	20
AM	47.7S	17	2239	..	..	..	..	18(2,4)		5	20	107	74	18	13
KG	57.3S	17	1800	..	..	..	..	18(1)		6	22	260	210	18	19

THREE-HOUR-RANGE INDICES, K

SEP	17		18		19		20	
BT	5344	4345	5454	4554	3553	3354	4544	5453
CC	4233	5535	5445	4643	3332	1453	5433	5544
DI	4233	3566	7555	5765	2343	3574	4444	6675
TI	2233	4454	6778	8884	3343	3554	3334	6664
PB	----	----	----	----	----	----	----	----
TR	4111	2256	6554	3434	2332	1344	5523	4364
GO	3224	3233	3344	5533	2234	3332	2234	4442
MM	4121	1146	7645	4534	1232	1354	4423	4353
KI	4122	2246	8734	3434	2322	1243	4423	4353
WE	1122	2225	5587	5532	2242	1332	2345	6332
CO	1132	3212	5577	4421	2252	1222	2355	6331
RY	5222	2236	7775	4544	3443	2344	5634	4354
DO	3122	3235	7644	3433	2332	2333	4334	3343
YA	4223	4246	5567	4543	2341	2334	3444	5454
NU	2112	2234	6433	2432	1222	1232	2223	3342
LE	3011	1124	6643	2332	0221	1222	3312	3242
MG	3223	3225	4466	4433	3342	2234	3334	5343
SI	1232	2124	7778	4321	1251	0222	2433	4232
SV	1112	2234	4434	3432	1221	1232	2133	4343
RS	2012	3134	5544	2432	1222	2232	3333	3243
ME	2232	2124	6887	5332	2263	2323	3455	5232
IR	3333	3235	5455	4422	3332	2243	3344	4343
VL	2112	2235	4544	3332	1232	2222	2233	3243
KV	2122	1223	4334	2322	2222	1132	1223	3232
DB	2122	2235	5544	3332	1232	2232	2233	3243
KD	2221	3224	4434	4422	2222	1222	2223	3243
VI	2332	2125	6674	3322	2342	1222	3444	3332
JO	2211	1134	6554	3222	1232	2232	2323	3232
OT	2212	1134	7865	4222	2432	1222	3434	3232
MT	1112	2225	5345	2422	3232	1232	2133	4231
VK	3233	3235	5345	4422	3332	1232	4444	5332
TK	1233	2234	5456	4333	3242	2232	3333	3342

THREE-HOUR-RANGE INDICES, K

SEP	17		18		19		20	
IK	2112	2235	5535	3433	2222	1232	2113	3253
TL	2112	2124	4433	2331	1221	1222	2222	2243
FR	3212	2135	5555	3332	2331	1222	2433	3232
SM	3223	3223	4453	3322	2334	3223	2323	3342
KS	1122	2245	5535	----	--33	2222	2225	3354
DS	2322	2236	6554	3232	2342	2222	3443	2343
TU	2222	1225	6555	3232	3341	1222	3444	2332
KY	1112	2235	5344	2421	3231	1232	2133	4231
QU	2223	2234	5445	4333	3232	2232	3333	3342
TA	3112	2235	4435	4333	2331	1233	2122	2232
HO	2122	1123	2343	2122	2232	1212	2233	2221
AL	----	----	----	----	----	----	----	----
SJ	2202	1235	5253	2223	2221	0112	3322	1132
GU	2212	2225	5233	3322	3331	1232	3233	3222
BA	1222	2234	4335	2332	3232	2232	2322	2332
LU	----	----	----	----	----	----	----	----
PM	3223	2225	5344	4322	3332	1232	3233	4223
HU	2112	3334	5554	4432	3321	3421	3322	4432
PP	1001	0125	6655	3221	3230	1112	4322	2121
TN	2121	1123	3334	3212	2131	1111	2123	2232
PI	3212	3336	5453	3333	3231	2333	3422	3333
GN	1111	2134	5355	2422	1121	1232	2113	4331
HR	2112	2134	5445	4332	2231	1233	2223	3233
TO	1222	3124	4455	3332	2342	1132	3333	4332
AM	2212	2004	4545	2221	2242	1211	3323	3231
TW	2211	2235	5443	3333	3222	2233	3312	3332
MI	1222	3213	6578	6521	2342	1221	2345	7232
MY	3444	2234	5455	4753	4554	3343	3454	3363
MW	2222	3366	6764	4534	2453	3265	3434	3375
NL	3212	2235	8754	2222	2322	1123	6622	2243
SB	3221	1133	4344	3333	2342	1322	3323	3332
VO	3222	2223	4343	3332	3343	2232	3333	3333

Indices

	September 24				25				26				27			
UT	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18
Kp	0o 0o	0o 0o	1- 2-	4- 3+	3+ 6-	5- 5-	4o 3o	2o 2o	2+ 2-	1+ 1+	1+ 3-	4+ 6+	6+ 5+	5- 5-	4o 4-	4- 2+
3Kn	1 0	0 0	3 4	10 9	8 14	11 12	11 9	5 7	6 4	5 5	5 8	11 17	15 13	12 12	11 10	9 7
3Ks	1 1	0 0	1 3	7 8	6 11	10 14	11 8	7 7	7 4	4 6	3 7	13 16	16 14	13 12	11 10	8 5
Dst	—	—														

Data from Individual Observatories:

September 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)		K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
CO	64.6N	26	15--	..	..	..	..	27(3)		7	244	1600	640	27	19
SI	60.0N	26	19--	..	..	..	..	27(1)		7	80	660	670	27	19
NE	55.1N	26	22--	..	..	..	..	27(1)		6	32	113	242	27	20
WI	54.1N	26	1651	SC	- 1	+12	0	26(8)		6	45	190	85	27	19
FR	49.6N	26	16--	..	..	..	..	27(1)		6	25	152	86	27	21
BD	49.0N	26	22--	..	..	..	..	26(8)		6	27	125	60	27	21
DS	43.0N	26	18--	..				26(8)		6	19	129	51	27	20
IR	40.8N	26	12--	..	..	..	..	26(8)	27(1)	5	18	147	52	27	19
TU	40.4N	26	18--	..	..	..	..	26(8)		6	13	120	45	27	19
SJ	29.9N	26	0700	..	..	..	..	27(1)		6	8	140	37	27	21
HO	21.1N	26	2201	SC	--	38.0	7.3	27(3)		5	8	88	45	27	18
AL	9.5N	26	15--	..	..	..	..	26(8)		5	7	107	62	27	20
AA	5.3N											163			
HD	7.6N	26	0700	..	..	..	..	26(8)		5	6	122	34	27	19
AN	1.5N	26	15--	..	..	..	..				5	113	73	27	20
TV	1.1S	26	15--	..	..	..	..				3	166	83	27	20
HU	6.6S	26	1300	..	--	--	--	27(1,2,5)		5	6	344	30	27	20
HR	33.3S	26	16--	..	..	..	..	27(1)		6	27	67	83	28	13
GN	43.2S	26	15--	..	..	..	..	26(7,8)	27(4,6)	5	16	100	110	27	19
TO	46.7S	26	15--	..	..	..	..	26(8)	27(4)	5	26	120	30	27	18
AM	47.7S	26	1926	..	..	..	..	26(8)	27(3)	5	23	165	35	27	19
KG	57.3S	26	1600	..	..	..	..	26(8)		8	60	320	310	27	20

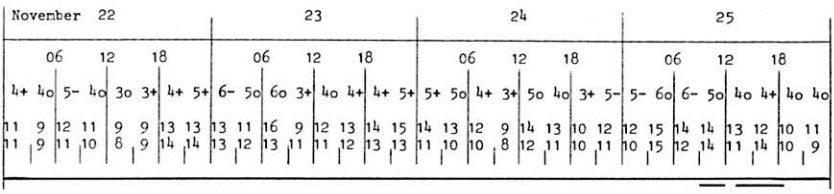
THREE-HOUR-RANGE INDICES, K

SEP	24				25				26				27			
BT	2212	1233	4544	4434	3443	3377	5554	5654								
CC	1111	1334	4434	5324	3243	2252	6553	5554								
DI	1111	2356	3456	6535	4333	2578	8655	8875								
TI	2222	3455	3577	8654	4355	4799	6588	8875								
PB	----	----	----	----	----	----	----	----								
TR	0010	1155	4344	4334	4222	1367	6644	4555								
GO	1111	2322	3445	6432	3324	3345	4434	4443								
MM	0001	1265	3345	4334	3122	1367	6644	5554								
KI	0011	2265	3434	5334	4213	1267	7644	5534								
WE	0000	1121	2556	7522	2112	1235	6557	6452								
CO	0000	0121	2456	5412	2123	2135	5477	5332								
RY	0122	2356	5565	5434	5322	2358	6764	4434								
DO	0022	2254	3444	3323	2123	2357	7544	4443								
YA	2121	1244	2356	6434	3323	2452	6546	6653								
NU	0011	1143	3334	4323	2122	1257	5444	4432								
LE	0000	1144	3443	3312	2110	1246	6533	3442								
MG	2210	1233	2445	5422	2132	2347	4445	4442								
SI	0000	1231	2647	5321	2012	1234	7666	5321								
SV	0000	1143	2434	4323	2222	1344	4334	4432								
RS	0000	1245	4544	4323	2222	1346	5344	4442								
ME	0000	1232	2666	4332	1122	2234	6576	6332								
IR	3322	2143	4545	5323	3233	2345	5444	4442								
VL	0021	2244	3544	3312	2221	1346	5434	3443								
KV	0121	1133	3433	3222	1122	2234	4332	3332								
DB	1001	1244	3443	4322	2111	2346	5444	4443								
KD	1111	1143	2433	4323	2222	1344	5333	4432								
VI	0000	1222	3644	4422	2012	1225	6665	3322								
JO	0001	1233	3444	3221	3112	1245	6533	3322								
OT	0000	1232	3644	3222	2111	2246	8544	4233								
MT	1000	1122	1434	4312	1112	2235	4344	4331								
VK	3321	2233	3544	5323	2323	3346	4444	4433								
TK	1111	2244	4444	5423	2122	2345	4254	5542								

THREE-HOUR-RANGE INDICES, K

SEP	24				25				26				27			
IK	0011	1144	3534	3322	2122	2345	4433	4442								
TL	1000	0133	3442	2322	2111	1135	4433	3432								
FR	0000	1122	3544	3222	2121	1246	6543	3322								
SM	2123	2333	3544	3322	2224	3345	4533	3333								
KS	0210	----	--44	4322	2012	2346	4444	4542								
DS	1111	2222	3554	4322	1122	2246	6554	4433								
TU	1000	2222	2544	4322	2122	2246	5554	3332								
KY	0000	2121	2435	4212	1112	2335	4444	4331								
QU	1322	2133	3534	4322	2222	2345	4333	5431								
TA	1111	1243	3444	4333	3112	2345	5443	3332								
HO	0000	1110	1343	3221	1111	1234	3354	2311								
AL	----	----	----	----	----	----	----	----								
SJ	0000	1112	2434	3222	1111	1356	6433	2431								
GU	2111	1132	4444	5322	2222	2345	4344	4211								
BA	1121	1232	3334	3232	2223	2345	4443	3332								
LU	----	----	----	----	----	----	----	----								
PM	1111	2131	4534	5322	2222	2344	4434	4312								
HU	0110	3343	2434	5532	1122	3545	5534	5422								
PP	0000	0022	1355	4321	2101	0334	5543	2211								
TN	1013	2132	2334	3222	1122	1234	3232	3321								
PI	1121	2223	2544	4433	----	-356	6434	4333								
GN	0001	1222	1324	4322	2112	1355	4345	4522								
HR	0000	1143	3445	4223	3223	2244	6554	4332								
TO	0100	1122	2344	5332	1112	1345	4445	4431								
AM	0100	1111	2444	4321	1112	1245	4454	4321								
TW	0101	1233	3444	4421	1122	2355	6333	3333								
MI	0010	0021	2556	6622	2213	1235	5567	5542								
MY	2322	1133	4444	3433	3454	3358	6655	4573								
MW	1111	1177	4565	3444	5433	2367	5654	3776								
NL	1112	1134	3664	3222	4321	1157	8753	3333								
SB	1100	0232	3444	2322	2122	1244	5533	4332								
VO	2211	1122	3443	3322	2233	2245	5543	3332								

Indices



Data from Individual Observatories:

November 1971

Obs.	Geomag. lat.	Commencement day	h.m.(UT)	type	SC - amplitudes D(')	H(γ)	Z(γ)	Max. 3 hr - index K day (3 hr - period)	K	Ranges D(')	H(γ)	Z(γ)	UT End day	hr
WI	54.1N	21	23--	..	..	..	..	22(7,8)23(1)24(5)	6	40	190	80	25	23
HD	7.6N	21	1000	..	..	..	..	22(8)23(3,6,8)24(5,6)	5	5	133	22	25	19
TO	46.7S	21	21--	..	..	..	..	25(2) \ 25(2,6)	6	20	170	60	26	18
CO	64.6N	22	06--	..	..	..	..	25(4)	7	290	1640	790	26	21
SI	60.0N	22	0633	SC	+ 8	+16	- 4	22(3)	7	100	640	430	26	13
NE	55.1N	22	00--	..	..	..	..	25(3)24(2)25(2,3)	6	59	177	191	26	13
FR	49.6N	22	18--	..	..	..	..	23(3)	6	36	115	80	26	12
BD	49.0N	22	18--	..	..	..	..	24(2)25(2)	6	34	150	65	26	21
DS	43.0N	22	18--	..				22(7)	6	20	135	37	26	12
IR	40.8N	22	17--	..	..	..	..	23(8).	6	29	123	38	24	17
TU	40.4N	22	18--	..	..	..	..	23(3)	6	18	140	35	26	12
MT	34.0N	22	0451	SC*	+ 0.7	+10	- 2	23(3)	5	12	106	26	24	19
SJ	29.9N	22	1730	..	..	..	..	22(7)23(1,3,7)24(1)	5	11	100	35	25	07
KA	26.0N	22	0451	SC*	+ 0.5	+10	+ 6	23(3)	5	9	85	62	24	09
HO	21.1N	22	18--	..	..	..	..	25(3)	5	9	91	32	25	14
KY	20.5N	22	0451	SC*	+ 0.4	+11	+ 6	23(3,8)	5	8	87	46	24	18
AL	9.5N	22	04--	..	..	..	..	22(6,7,8)23(3,6,8)	5	5	129	47	25	23
GU	4.0N	22	0015	..	..	..	..	25(2) \ 24(56)25(26)	5	7	125	40	26	17
AN	1.5N	22	04--	..	..	..	..	-- -	-	5	157	63	25	23
TV	1.1S	22	04--	..	..	..	..	-- -	-	5	187	144	25	23
HU	6.6S	22	1211	..	--	--	--	23(5,6,7)	6	14	253	59	26	20
AP	16.1S	22	0334	..	..	..	..	25(3)	5	9	90	22	26	13
PM	18.6S	22		..	..	..	..	25(2,3)	5	9	110	70	26	18
HR	33.3S	22	18--	..	..	..	..	22(7,8)25(6)	5	24	107	78	26	00
GN	43.2S	22	00--	..	..	..	..	23(1,3,6,8)24(5,6)	5	21	130	110	25	19
KG	57.3S	22	1800	..	..	..	..	25(6) \ 25(2,4,6)	7	45	500	310	25	20
IR	40.8N	24	20--	..	..	..	..	25(6)	6	26	138	36	25	19
MT	34.0N	25	0242	..	..	..	..	25(2,3,5)	5	10	81	21	25	20
KA	26.0N	25	0242	..	..	..	..	25(2,3,5)	5	7	68	45	25	20
KY	20.5N	25	0242	..	..	..	..	25(2,3)	5	6	78	45	25	20

THREE-HOUR-RANGE INDICES, K

NOV	22		23		24		25	
BT	6544	6656	5554	4877	5554	8865	6553	6656
CC	5454	5545	5443	5867	6544	7736	7544	7644
DI	6454	6578	8465	5888	7554	8776	7655	7776
TI	5477	8899	6456	7877	6576	9867	5777	----
PB	5365	5565	4473	6555	5566	5645	4577	7754
TR	5333	4565	6443	4456	5543	5465	6654	4665
GO	5234	3345	4354	5446	5445	4335	5655	3334
MM	5234	5577	6453	5567	6344	6466	6555	4875
KI	5334	5576	6553	5567	6454	6446	6654	5655
WE	3566	7843	4354	7765	5554	7733	4567	8843
CO	3276	5645	4355	6545	5465	6524	4567	6743
RY	6555	4487	6664	4567	7664	6447	6866	4555
DO	4333	3366	6543	4555	6343	5546	4544	4544
YA	5456	5565	6453	6677	5564	7755	4567	6655
NU	3333	3356	4443	3554	4433	5544	4443	3533
LE	4322	2255	5542	3444	5433	4435	3443	3444
MG	4455	4465	5453	6565	4453	6634	4556	5544
SI	3276	3334	4463	5534	5654	5423	3566	6632
SV	2333	3344	3343	3555	4432	5543	4443	5534
RS	4333	3356	5443	4555	5443	6545	4544	3544
ME	3276	3334	4574	5445	6654	5434	5676	6543
IR	3345	3445	4453	4556	4444	5544	3455	5634
VL	4342	2355	6454	4445	5432	4434	4543	2445
KV	3232	2344	4333	3444	3333	4433	3433	3433
DB	4343	3455	6443	3555	5432	5545	3543	3444
KD	2343	3354	3333	4445	2242	5443	4254	5524
VI	3355	4333	3463	5444	5664	4324	4666	5333
JO	4332	2245	3353	3344	5433	3334	3554	3233
OT	4344	3335	4463	4345	5542	4335	5665	4333
MT	2344	3343	4453	4445	4443	4423	3554	5423
VK	3345	3454	4554	5555	5455	5534	3555	5534
TK	2341	3455	3463	4645	3433	5543	2244	5333

THREE-HOUR-RANGE INDICES, K

NOV	22		23		24		25	
IK	4432	2456	5353	4556	4433	5544	4443	3545
TL	3321	1455	3342	3445	3322	4333	2332	2434
FR	4343	2244	4463	4345	5443	3335	4555	4333
SM	4443	2354	5352	4345	5433	3334	3554	3435
KS	--32	2565	4354	4556	3333	5543	3444	4645
DS	4444	3365	4553	4455	5553	4434	5554	3333
TU	4344	3354	4563	4455	5553	3324	5555	4323
KY	2334	3343	4453	4445	3344	4423	3554	4423
QU	3353	3455	3353	4545	3334	5543	2454	4523
TA	3432	3555	4353	4455	3322	4444	3443	4434
HO	3343	2233	3543	3334	2442	2223	3554	3232
AL	2343	4555	3454	4545	3333	5543	3544	4334
SJ	3323	3253	5453	4354	5433	3234	4544	4343
GU	3333	2333	4543	3433	3343	4423	3554	4312
BA	3432	2455	3253	3455	3332	3333	2233	2423
LU	2322	2344	3142	3343	3331	3333	3234	4533
PM	3443	3333	4444	3433	3443	4433	3554	4333
HU	3323	4554	4344	6664	4333	5543	4434	4553
PP	2332	1233	4442	3343	3332	3222	3443	3323
TN	2242	2344	2333	3434	2322	3332	1343	3423
PI	4433	3464	5454	5565	5433	4434	4534	3343
GN	4333	2344	5453	4545	3342	5544	3545	4533
HR	3343	3455	3344	4444	4433	4434	3434	4544
TO	3344	3444	4453	4444	4443	4444	4655	4543
AM	3444	3234	4543	3334	3443	3322	4554	3432
TW	4333	4443	4453	4554	5433	3334	4434	3333
MI	3365	3644	4553	6565	5454	7533	6656	7533
MY	5555	4445	5675	5466	4664	5544	4654	4433
MW	5554	4577	5674	5457	4664	6546	5665	5657
NL	4332	2255	7653	3456	7532	3335	4654	3544
SB	5444	3554	5444	4555	6543	3445	4454	3543
VO	4444	3454	4555	5434	5444	4434	4554	3343

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	3 Kn								σn		an						An
1	12	9	11	11	9	10	8	7	4454	4333	58	33	42	41	31	38	26	19	36
2	6	8	14	15	14	14	10	9	1233	4532	14	26	84	99	76	77	37	29	55
3	8	7	7	4	3	3	4	7	4323	2035	23	18	20	9	7	6	8	17	14
4	5	3	3	5	3	4	6	10	3111	4125	12	7	7	12	6	8	14	34	13
5	6	6	4	5	8	9	6	9	1032	2442	16	14	8	12	24	27	16	29	18
6	9	9	5	7	11	12	9	7	2422	5253	30	27	13	18	47	54	31	19	30
7	7	7	5	5	6	5	3	5	3332	2312	17	17	13	13	14	12	7	12	13
8	4	3	2	6	5	8	4	2	3233	3432	10	7	5	14	11	26	9	4	11
9	1	1	1	1	3	5	2	3	3233	3631	2	3	3	2	6	13	5	7	5
10	4	5	4	3	5	4	4	3	2224	3332	8	11	10	7	12	8	8	6	9
11	2	3	4	3	10	12	12	9	2135	2554	5	7	9	7	38	51	53	28	25
12	7	7	7	6	8	11	11	10	5221	4465	18	18	17	15	24	42	48	35	27
13	7	7	8	8	5	5	6	7	2243	3303	18	17	23	23	12	13	14	18	17
14	8	8	6	6	5	6	10	9	3342	3454	23	21	16	15	11	15	38	28	21
15	6	5	4	5	7	7	8	10	3222	5332	14	13	10	13	20	20	22	39	19
16	8	5	4	5	6	11	11	9	2223	1314	24	11	10	12	15	41	50	32	24
17	5	7	11	7	8	9	10	8	3322	4542	12	20	44	17	21	29	36	23	25
18	11	6	9	7	8	7	4	3	2123	4330	41	16	27	19	24	20	8	6	20
19	2	5	7	9	7	12	8	11	3214	3334	5	12	17	28	17	54	26	41	25
20	9	7	8	10	10	7	9	4	3533	2132	33	18	24	37	39	17	29	8	26
21	4	7	8	8	6	7	5	5	1343	1213	8	17	25	22	16	20	12	13	17
22	5	7	7	6	8	9	7	6	3333	3530	11	17	18	15	23	32	17	14	18
23	6	5	8	3	4	7	9	9	3332	2443	15	12	23	7	10	17	32	28	18
24	6	4	7	9	9	7	10	8	0233	1256	14	8	17	32	31	19	34	22	22
25	4	3	4	4	5	5	5	5	3124	3564	10	7	8	8	11	12	12	13	10
26	4	5	7	5	10	14	8	7	3333	3332	9	11	17	11	36	76	23	19	25
27	6	5	6	4	5	7	8	10	0222	2242	14	13	16	9	12	18	25	37	18
28	10	6	2	4	6	7	11	11	4133	1453	37	15	5	9	16	17	48	41	24
29	9	9	6	5	4	5	9	9	3423	2205	29	33	14	12	10	12	28	32	21
30	9	8	6	6	4	8	5	6	5422	2522	30	24	14	16	8	21	12	16	18
31	8	8	7	6	5	7	2	3	2222	4221	24	26	17	14	12	17	4	7	15
																			20.6

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	3 Ks								σs		as						As
1	10	7	10	11	7	9	10	8	1143	3543	34	17	35	44	20	31	34	21	30
2	8	12	14	16	14	12	9	9	1433	4754	26	56	78	117	79	51	31	33	59
3	8	7	8	4	3	1	2	5	2113	2213	21	17	26	9	7	2	5	12	12
4	6	3	3	4	1	4	7	10	2553	2346	16	6	7	10	3	9	20	40	14
5	6	4	4	5	8	8	7	10	2115	2644	16	9	9	12	21	26	20	38	19
6	11	8	7	8	10	10	8	8	2133	1463	43	26	20	24	34	35	26	24	29
7	8	6	6	5	4	5	2	6	3023	3211	24	15	16	12	10	11	5	14	13
8	4	1	6	7	4	5	4	2	3224	4142	10	3	15	18	8	13	8	4	10
9	1	2	2	0	1	4	3	4	3320	3114	2	5	4	0	3	9	6	8	5
10	5	6	5	4	4	4	4	4	1213	2343	13	15	12	9	10	9	9	10	11
11	3	3	4	1	11	10	10	9	0213	1433	6	6	8	2	49	38	36	28	22
12	8	9	9	7	7	9	9	8	1401	1423	26	30	29	18	17	27	31	24	25
13	4	5	5	7	4	5	7	5	6243	3254	9	11	13	20	9	11	18	13	13
14	7	8	4	5	3	4	9	9	3343	0325	19	21	9	12	6	10	31	27	17
15	5	2	4	5	6	6	7	9	2515	2243	11	5	8	12	16	14	20	28	14
16	6	4	3	4	4	11	12	8	3324	1222	14	9	7	8	9	41	57	25	21
17	3	7	10	7	7	6	8	10	1114	3124	7	17	34	17	20	16	25	34	21
18	9	6	8	6	6	5	2	4	2232	1324	29	15	22	16	16	12	5	8	15
19	3	4	6	7	6	8	8	8	1121	4212	7	8	16	17	14	21	26	25	17
20	8	5	8	9	9	6	7	3	4131	1041	24	13	26	32	29	15	20	7	21
21	3	6	8	8	5	6	4	4	0234	3333	6	15	21	23	12	14	9	10	14
22	5	6	4	8	8	8	7	6	4113	2341	11	16	9	21	25	24	18	14	17
23	5	6	6	2	3	5	7	7	3211	0134	12	14	16	5	6	13	19	18	13
24	6	4	5	7	7	5	8	5	2313	1112	15	9	13	19	17	13	26	12	16
25	3	1	3	2	2	1	3	4	0224	4213	6	3	7	5	5	3	6	9	6
26	3	4	4	4	11	13	8	8	0131	1111	6	8	9	9	49	65	23	26	24
27	8	7	6	5	5	8	6	7	1341	1333	26	20	16	12	12	21	14	19	18
28	9	5	1	6	7	5	9	8	1322	1342	29	12	3	15	17	12	33	25	18
29	8	7	6	5	4	6	8	8	3154	4612	21	18	15	13	8	14	26	25	18
30	8	8	5	5	4	5	7	7	5141	3353	25	23	13	13	10	12	17	20	17
31	8	8	7	5	3	4	1	4	3311	1333	24	25	17	12	7	9	2	10	13
																			18.1

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	3 Km								Σ Km	am							Am	Am2
1	11	8	10	11	8	10	9	7	24.7	46	25	38	43	26	35	30	20	33	58
2	7	11	14	16	14	13	10	9	31.3	20	41	81	108	77	64	34	31	57	40
3	8	7	8	4	3	2	3	6	13.7	22	17	23	9	7	4	6	14	13	22
4	6	3	3	5	2	4	7	10	13.3	14	6	7	11	5	9	17	37	13	12
5	6	5	4	5	8	8	7	9	17.3	16	11	9	12	22	26	18	33	18	20
6	10	8	7	8	11	11	9	8	24.0	37	26	17	21	41	44	28	22	30	25
7	7	6	6	5	5	5	3	5	14.0	20	16	15	12	12	11	6	13	13	18
8	4	2	4	6	4	7	4	2	11.0	10	5	10	16	10	19	8	4	10	8
9	1	2	1	0	2	5	2	3	5.3	2	4	3	1	4	11	5	7	5	8
10	5	5	5	4	5	4	4	4	12.0	11	13	11	8	11	9	8	8	10	8
11	2	3	4	2	11	11	11	9	17.7	5	6	8	4	44	44	45	28	23	19
12	8	8	8	7	7	10	10	9	22.3	22	24	23	17	20	35	40	29	26	27
13	6	6	7	8	4	5	6	6	16.0	14	14	18	22	10	12	16	16	15	20
14	8	8	5	6	4	5	10	9	18.3	21	21	13	14	9	12	35	28	19	16
15	5	4	4	5	7	7	8	9	16.3	12	9	9	13	18	17	21	33	17	16
16	7	4	4	4	5	11	12	9	18.7	19	10	8	10	12	41	54	29	23	22
17	4	7	10	7	8	8	9	9	20.7	10	18	39	17	21	23	30	28	23	26
18	10	6	8	7	7	6	3	3	16.7	35	16	25	18	20	16	6	7	18	19
19	3	4	6	8	6	10	8	9	18.0	6	10	16	22	16	38	26	33	21	20
20	9	6	8	10	10	6	8	4	20.3	28	15	25	34	34	16	24	8	23	23
21	3	6	8	8	6	7	5	5	16.0	7	16	23	22	14	17	11	12	15	16
22	5	6	5	7	8	9	7	6	17.7	11	16	13	18	24	28	17	14	18	15
23	6	5	7	3	4	6	8	8	15.7	14	13	19	6	8	15	25	23	15	17
24	6	4	6	8	8	6	9	7	18.0	15	9	15	25	24	16	30	17	19	16
25	4	2	4	3	4	4	4	5	10.0	8	5	8	6	8	8	9	11	8	12
26	4	4	5	4	11	13	8	8	19.0	8	10	13	10	43	70	23	22	25	19
27	7	7	6	4	5	7	7	9	17.3	20	17	16	10	12	20	19	28	18	23
28	9	5	2	5	6	6	11	9	17.7	33	13	4	12	16	15	41	33	21	20
29	8	8	6	5	4	5	9	9	18.0	25	26	14	13	9	13	27	28	19	21
30	9	8	6	6	4	6	6	7	17.3	28	24	14	15	9	16	15	18	17	19
31	8	8	7	5	4	5	1	4	14.0	24	26	17	13	9	13	3	9	14	14
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	3 Km								Σ Km	am							Am	Am2
1	3	5	7	6	7	6	8	8	16.7	7	12	17	15	19	16	21	26	17	18
2	10	7	8	10	9	11	9	10	24.7	36	20	23	34	28	41	27	40	31	26
3	10	5	7	6	8	11	7	7	20.3	38	11	19	16	26	46	17	19	24	31
4	9	10	10	13	8	7	4	4	21.7	33	38	35	66	21	18	8	9	29	23
5	0	2	4	6	5	6	9	8	13.3	1	4	10	14	12	14	33	25	14	11
6	3	1	1	2	0	1	0	1	3.0	6	2	2	4	0	3	0	2	2	7
7	0	0	1	1	0	6	7	9	8.0	1	1	3	3	0	16	18	33	9	11
8	10	10	6	6	6	8	9	9	21.3	36	34	16	15	14	23	31	31	25	25
9	11	9	10	7	9	3	7	10	22.0	42	28	37	19	31	7	19	36	27	26
10	9	8	7	9	9	15	16	17	30.0	30	25	17	33	28	97	118	130	60	58
11	14	14	14	16	15	10	10	9	34.0	80	72	86	116	92	37	40	31	69	64
12	10	6	8	6	5	8	8	1	17.3	39	16	23	15	13	24	21	2	19	28
13	1	7	10	9	12	12	4	4	19.7	3	19	34	31	55	57	8	10	27	20
14	6	4	2	5	5	2	3	8	11.7	16	8	5	11	12	4	6	21	10	21
15	4	7	9	13	13	13	10	7	25.3	9	19	32	68	61	65	35	20	39	27
16	6	5	7	9	10	9	8	8	20.7	15	12	18	30	34	30	24	23	23	28
17	8	5	6	9	12	6	11	11	22.7	23	11	16	29	54	16	45	47	30	30
18	7	5	11	11	11	11	12	8	25.3	19	13	46	43	42	46	54	24	36	34
19	9	9	8	5	4	1	0	2	12.7	33	32	23	11	8	2	1	5	14	31
20	5	4	13	17	16	9	9	11	28.0	12	8	62	137	111	31	30	50	55	37
21	11	9	9	9	8	9	10	10	25.0	47	28	27	29	24	28	36	35	32	34
22	5	7	7	8	4	7	4	1	14.3	12	20	18	21	10	17	9	2	14	16
23	1	5	5	2	2	6	5	5	10.3	2	11	11	4	4	14	12	11	9	10
24	4	6	6	4	4	4	3	1	10.7	9	15	16	10	9	9	6	2	10	9
25	4	2	5	1	3	4	6	2	9.0	8	5	11	3	6	9	15	5	8	6
26	3	3	1	0	0	4	5	8	8.0	7	6	2	0	1	8	11	21	7	8
27	6	2	2	3	3	5	11	9	13.7	16	4	4	7	7	11	43	32	16	16
28	10	8	6	8	13	12	14	13	28.0	35	22	14	24	61	58	71	70	44	37
29	13	9	8	7	8	7	8	6	22.0	61	31	26	18	26	19	21	16	27	34
																		25.1	

MOIS 2 1968

	3 Kn								σn								An
1	4	5	8	6	7	6	7	8	2241	2321	9	11	21	15	17	16	20	26	17
2	9	7	8	9	8	11	8	11	3242	2144	31	17	23	30	26	48	26	49	31
3	11	4	8	7	9	12	7	7	4322	4624	46	10	21	17	28	53	19	20	27
4	10	9	10	12	8	8	4	3	1123	2512	35	28	34	59	22	24	8	7	27
5	1	1	4	5	6	7	9	8	3231	2265	2	2	9	13	14	17	33	24	14
6	3	1	1	2	0	1	0	1	2322	0322	7	3	3	5	0	3	1	3	3
7	0	1	2	2	0	7	6	9	1333	2112	1	2	4	4	1	17	16	32	10
8	9	9	7	6	6	9	9	10	1111	1312	30	30	17	15	15	27	33	36	25
9	11	9	10	7	9	4	8	10	4555	1432	49	32	39	19	33	8	22	37	30
10	9	8	6	11	9	15	16	17	2325	4332	27	24	16	42	33	95	107	132	60
11	14	13	14	17	16	12	11	10	2536	5655	82	67	81	127	106	51	43	34	74
12	10	8	9	6	6	9	8	1	2451	2542	39	24	28	16	14	27	26	3	22
13	2	7	10	10	13	14	5	5	2342	3322	4	19	37	35	62	74	11	11	32
14	6	4	3	5	5	2	3	7	4322	2303	15	9	7	11	11	5	6	20	11
15	4	6	9	14	13	14	11	8	2123	3433	9	16	28	74	67	84	48	23	44
16	5	6	8	9	10	10	8	8	3142	2543	13	15	21	30	36	39	25	25	26
17	8	5	7	9	13	7	12	11	3153	5273	25	12	20	33	67	18	52	48	34
18	7	5	11	11	11	12	12	8	4324	2424	19	12	50	45	47	56	59	26	39
19	10	10	8	4	5	2	1	2	3422	3222	36	35	21	10	11	4	2	5	16
20	6	4	12	16	16	10	10	11	4214	2333	14	8	57	108	105	35	34	49	51
21	12	10	10	10	8	9	10	11	3422	3443	58	34	34	38	23	33	37	41	37
22	6	8	8	8	5	7	4	2	3223	2323	15	26	24	26	13	19	9	4	17
23	1	5	6	2	2	6	6	6	2223	3423	3	12	14	4	5	16	15	14	10
24	4	7	8	5	5	5	3	2	4332	3353	10	19	21	11	13	13	7	4	12
25	3	1	5	2	3	5	6	3	3313	3343	7	3	12	4	6	11	16	6	8
26	4	3	1	0	1	4	5	7	2422	3435	8	7	3	1	2	9	13	20	8
27	6	3	3	4	3	6	11	9	2325	4343	15	6	6	9	7	14	48	30	17
28	10	8	5	8	13	12	14	13	5222	6424	38	22	12	24	69	60	71	64	45
29	12	9	8	7	9	8	8	6	3222	4331	58	31	26	20	28	25	24	16	29
																			26.8

MOIS 2 1968

	3 Ks								σs								As
1	2	5	5	6	8	6	8	8	3132	3521	5	13	12	15	21	15	22	26	16
2	10	8	8	10	9	10	9	9	3313	0132	40	24	23	38	29	34	28	31	31
3	9	5	7	6	8	10	6	7	2310	4515	29	12	17	15	24	39	16	19	21
4	9	11	10	14	7	5	4	4	1112	3443	32	49	37	72	20	13	9	10	30
5	0	3	4	6	4	5	9	8	1122	1242	1	6	10	15	9	11	32	25	14
6	3	0	1	1	0	1	0	1	1112	0303	6	1	2	2	0	2	0	2	2
7	0	0	0	0	0	6	8	10	1111	0234	1	1	1	1	0	16	21	35	10
8	11	10	6	6	5	7	9	8	2302	3102	43	38	15	15	13	18	29	25	25
9	10	8	10	7	9	3	6	10	1353	4124	34	24	36	20	29	6	16	35	25
10	9	8	7	8	8	15	17	17	5143	3244	33	26	18	24	23	98	129	129	60
11	14	14	15	16	14	8	10	9	3321	6464	78	78	92	104	77	23	37	27	65
12	10	3	7	5	5	8	6	1	6241	1322	40	7	18	13	12	21	16	2	16
13	0	7	9	9	11	11	2	4	1455	1243	1	18	31	28	49	41	5	10	23
14	6	4	1	5	5	1	3	8	2123	2212	16	8	3	12	12	3	6	22	10
15	4	8	10	13	12	11	8	7	3211	5444	10	21	37	62	56	45	23	17	34
16	6	4	6	9	9	8	8	8	2300	1236	16	9	15	29	32	21	24	21	21
17	8	5	5	8	10	6	10	11	5213	2252	22	11	12	24	40	14	38	47	26
18	7	6	11	11	10	10	11	8	5022	1312	19	15	42	42	37	36	49	22	33
19	9	9	8	5	3	0	0	2	0022	1002	29	29	25	12	6	0	0	4	13
20	4	3	13	18	16	8	8	12	3141	3753	9	7	67	166	117	26	25	51	59
21	10	8	7	8	8	8	10	9	5332	3333	35	21	20	21	24	24	36	28	26
22	4	6	5	6	4	6	4	0	3031	1241	9	15	12	16	8	15	8	1	11
23	1	4	4	2	1	5	4	3	2343	3232	2	9	9	4	2	12	9	7	7
24	4	5	5	4	2	2	2	0	1213	1121	8	11	12	9	5	5	5	1	7
25	4	3	5	0	3	3	5	2	3021	1242	9	6	11	1	6	7	13	4	7
26	3	3	0	0	0	3	4	8	2110	0236	6	6	1	0	0	7	9	21	6
27	7	1	1	2	4	4	10	10	6221	4134	17	2	2	5	8	8	39	35	15
28	9	8	6	8	12	12	14	14	7222	4554	33	22	16	25	52	56	71	76	44
29	13	9	8	7	8	5	7	7	5111	3244	65	32	26	17	24	12	17	17	26
																			23.6

MOIS 3 1968

	3 Kn								σn		an						An
1	8	5	6	7	9	11	5	1	3311	3452	23	11	16	19	28	44	11	3	19
2	5	9	7	7	5	6	8	7	3212	3533	11	27	17	20	13	15	22	19	18
3	6	4	7	9	8	11	11	9	1333	3554	15	9	20	28	22	43	48	28	27
4	8	7	9	10	8	8	10	12	3225	3576	21	20	29	35	23	23	38	55	31
5	9	9	9	10	13	8	9	8	2334	6253	27	31	30	38	62	23	33	25	34
6	7	4	5	5	4	5	7	8	3323	2236	18	9	12	13	8	11	17	22	14
7	4	5	5	4	4	4	4	4	3132	2422	10	12	12	9	9	10	9	8	10
8	5	4	3	3	2	2	3	7	4344	3454	11	8	6	6	4	5	7	17	8
9	4	4	3	3	1	1	3	8	3434	2223	9	9	6	7	3	3	7	21	8
10	8	8	8	4	9	10	6	7	3224	4423	24	26	22	8	33	39	16	18	23
11	6	8	9	7	3	1	4	8	1232	4223	16	23	27	19	6	2	10	22	16
12	3	3	4	10	7	9	8	8	3335	3446	6	6	8	37	19	30	25	24	19
13	4	5	5	5	3	2	3	5	2133	4334	10	13	12	12	7	4	6	12	10
14	8	7	9	9	11	11	10	14	4212	1535	21	19	33	32	45	42	37	74	38
15	9	9	13	11	13	9	13	10	2243	3434	31	27	66	44	61	29	64	37	45
16	9	11	11	9	15	6	9	10	4344	1234	29	41	45	32	89	14	32	40	40
17	8	10	8	6	8	4	5	8	3331	4225	26	35	26	16	24	9	11	24	21
18	9	8	8	7	6	9	5	6	4241	3431	30	22	21	19	14	31	13	15	21
19	4	6	9	11	7	9	8	3	2423	2533	8	16	33	41	19	33	25	7	23
20	11	12	4	11	11	5	6	9	5423	3313	47	60	8	50	46	13	15	32	34
21	7	5	5	5	6	7	8	4	3222	4532	17	13	12	11	16	18	22	8	15
22	5	3	4	6	6	4	4	3	4132	4322	12	7	10	16	16	10	9	7	11
23	2	4	5	5	8	7	9	11	4332	3533	5	10	11	13	21	17	29	49	19
24	7	9	11	10	10	10	10	11	1232	2243	18	33	41	34	38	34	40	41	35
25	10	8	11	7	10	9	10	8	1163	4244	34	26	48	20	39	29	40	25	33
26	4	5	8	10	8	9	10	8	3122	4243	9	13	22	38	24	29	40	25	25
27	9	9	9	8	6	9	9	9	2341	2335	27	28	28	24	14	30	29	31	26
28	7	10	9	7	7	4	9	9	4313	2223	18	34	29	17	20	10	27	29	23
29	9	8	9	8	10	8	8	10	3253	5323	31	24	33	24	37	21	23	37	29
30	11	12	12	8	7	13	12	9	2513	1251	45	55	56	23	19	61	57	29	43
31	6	7	9	7	7	9	11	11	3215	2443	14	20	31	17	19	33	44	49	28
																			24.1

MOIS 3 1968

	3 Ks								σs		as						As
1	8	5	7	7	8	10	4	0	3234	3530	21	11	20	18	21	36	9	0	17
2	5	8	6	7	6	7	8	6	3224	4520	12	22	16	18	14	18	21	15	17
3	4	3	6	7	7	11	11	9	3121	1243	10	6	14	17	18	41	49	28	23
4	9	6	9	9	6	8	9	13	7065	1446	30	15	31	29	16	23	33	62	30
5	8	10	8	11	11	5	8	6	5412	3142	22	34	23	41	45	13	23	15	27
6	7	3	7	6	3	3	5	8	5140	2015	17	7	17	15	6	6	13	22	13
7	2	4	4	3	4	3	3	5	1342	1423	5	9	8	7	8	6	7	12	8
8	5	1	1	1	1	1	2	6	4222	2342	11	3	2	2	2	2	5	15	5
9	3	4	1	1	0	0	2	7	2122	0124	7	8	2	2	0	1	4	17	5
10	8	8	8	1	8	9	6	6	2332	6422	25	21	21	2	26	32	15	16	20
11	5	6	8	5	1	0	4	5	1223	3041	13	15	22	12	2	0	8	13	11
12	3	3	1	8	5	8	7	7	1123	1256	6	7	2	22	12	21	20	20	14
13	3	5	3	3	1	0	0	5	1212	2114	7	11	7	7	2	1	1	11	6
14	9	5	9	8	10	10	10	14	7111	1143	30	13	32	26	34	34	38	78	36
15	9	8	11	10	11	9	11	10	4112	3244	32	26	49	40	42	29	43	35	37
16	8	8	11	9	15	5	9	11	4321	3515	23	21	42	32	87	12	29	41	36
17	7	8	6	5	6	1	3	6	3201	5306	20	22	15	12	16	2	6	15	14
18	8	8	7	6	3	6	3	5	3230	2122	24	22	20	15	7	14	7	11	15
19	3	4	8	9	6	8	6	2	1324	0203	7	10	21	29	15	21	15	4	15
20	10	10	2	9	10	4	4	9	4312	1114	35	40	5	31	34	8	8	27	24
21	5	5	4	4	5	4	6	3	2111	3221	12	12	9	8	12	8	16	6	10
22	3	3	3	4	4	1	1	1	1111	3222	6	6	6	8	9	2	3	2	5
23	0	3	3	4	7	3	7	8	1124	1441	1	6	7	8	18	6	17	26	11
24	6	8	11	9	9	9	12	11	1220	2422	16	25	42	29	29	27	54	43	33
25	10	8	12	6	10	7	9	9	4372	3122	35	24	52	15	34	18	31	29	30
26	1	4	7	9	8	8	9	7	3342	1245	2	9	19	31	23	21	33	19	20
27	8	10	10	8	4	7	9	8	3432	3524	24	35	38	22	9	18	29	22	25
28	4	10	8	6	7	2	8	8	3411	4243	10	34	26	16	18	4	23	24	19
29	8	8	9	7	9	7	7	9	5351	4414	22	21	31	17	29	17	17	32	23
30	13	11	11	7	5	12	12	9	5311	1274	63	41	45	18	13	54	57	33	41
31	5	5	8	4	6	9	11	14	2132	1345	11	13	24	10	16	28	48	72	28
																			19.9

MOIS 3 1968

	3 Km								Σ Km	am							Am	Am2
1	8	5	7	7	8	10	4	0	16.3	22	11	18	18	24	40	10	1	18	19
2	5	8	6	7	6	7	8	7	18.0	12	25	16	19	14	17	22	17	18	17
3	5	3	7	8	7	11	11	9	20.3	12	7	17	22	20	42	48	28	25	23
4	8	7	9	9	7	8	10	12	23.3	25	17	30	32	19	23	36	58	30	31
5	8	9	9	10	12	7	9	7	23.7	24	32	27	39	53	18	28	20	30	27
6	7	4	6	6	3	4	6	8	14.7	17	8	14	14	7	8	15	22	13	16
7	4	5	4	4	4	4	4	4	11.0	8	11	10	8	8	8	8	10	9	9
8	5	3	2	2	1	2	3	6	8.0	11	6	4	4	3	4	6	16	7	7
9	4	4	2	2	1	1	3	7	8.0	8	8	4	5	2	2	6	19	7	10
10	8	8	8	2	9	10	6	7	19.3	24	24	21	5	29	35	15	17	21	17
11	6	7	8	6	2	0	4	7	13.3	14	19	25	15	4	1	9	18	13	16
12	3	3	2	9	6	8	8	8	15.7	6	7	5	29	15	25	22	22	16	13
13	4	5	4	4	2	1	2	5	9.0	8	12	10	10	4	3	4	12	8	16
14	8	6	9	9	10	10	10	14	25.3	26	16	32	29	40	38	37	76	37	30
15	9	9	12	11	12	9	12	10	28.0	31	27	57	42	51	29	54	36	41	41
16	8	9	11	9	15	5	9	10	25.3	26	31	43	32	88	13	30	40	38	35
17	8	9	7	6	7	2	4	7	16.7	23	28	20	14	20	5	9	19	17	25
18	9	8	7	7	5	8	4	5	17.7	27	22	20	17	11	22	10	13	18	17
19	4	5	9	10	7	9	7	3	18.0	8	13	27	35	17	27	20	6	19	22
20	11	11	3	10	10	5	5	9	21.3	41	50	7	40	40	11	11	30	29	22
21	6	5	4	4	6	5	7	3	13.3	15	12	10	10	14	13	19	7	13	14
22	4	3	4	5	5	3	3	2	9.7	9	6	8	12	13	6	6	5	8	9
23	1	4	4	5	7	5	8	10	14.7	3	8	9	11	20	11	23	37	15	17
24	7	9	11	9	10	9	11	11	25.7	17	29	42	32	34	31	47	42	34	31
25	10	8	11	7	10	8	10	9	24.3	34	25	50	17	37	24	35	27	31	30
26	3	5	8	10	8	8	10	8	20.0	6	11	21	34	24	25	36	22	22	26
27	8	9	9	8	5	8	9	8	21.3	26	31	33	23	12	24	29	26	26	25
28	6	10	9	6	7	3	8	8	19.0	14	34	28	16	19	7	25	26	21	23
29	8	8	9	8	9	7	7	10	22.0	26	22	32	21	33	19	20	34	26	29
30	12	11	12	8	6	12	12	9	27.3	54	48	51	21	16	57	57	31	42	32
31	5	6	9	6	7	9	11	12	21.7	12	16	28	14	17	31	46	60	28	34
																		21.9	

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	3 Km								Σ Km	am							Am	Am2
1	11	11	10	9	9	8	10	9	25.7	45	49	34	32	32	24	39	32	36	33
2	10	5	8	7	7	5	9	7	19.3	35	13	23	17	20	12	27	18	21	24
3	8	9	5	8	7	6	1	8	17.3	22	33	11	24	18	15	3	22	19	18
4	8	7	7	2	4	5	4	5	14.0	22	19	17	5	8	12	9	12	13	13
5	6	4	4	5	7	10	17	17	23.3	14	9	8	11	17	35	127	129	44	39
6	9	10	15	13	11	10	10	8	28.7	31	40	94	70	47	40	36	23	48	48
7	6	6	9	9	7	5	1	4	15.7	15	15	28	27	18	12	3	8	16	19
8	4	4	4	2	4	1	0	1	6.7	10	10	8	5	8	3	1	2	6	6
9	0	0	1	1	1	1	3	5	4.0	1	1	2	3	2	3	7	12	4	6
10	5	6	4	4	2	5	7	5	12.7	12	15	10	8	5	13	20	12	12	12
11	6	8	5	6	6	7	7	5	16.7	14	25	13	16	16	17	19	12	17	15
12	4	6	6	5	5	6	9	11	17.3	9	14	14	13	12	16	27	44	19	20
13	9	11	5	9	9	10	9	12	24.7	28	43	11	31	29	36	33	58	34	34
14	11	10	6	14	13	10	9	7	26.7	45	37	16	71	68	34	28	17	40	34
15	6	4	8	9	8	9	8	9	20.3	16	10	23	27	24	31	21	29	23	26
16	8	7	8	8	4	4	8	10	19.0	23	17	25	23	10	10	24	35	21	22
17	5	5	6	9	7	8	7	8	18.3	13	13	16	30	18	21	20	24	19	19
18	7	7	7	7	4	5	5	6	16.0	20	18	19	20	9	13	13	16	16	15
19	2	3	3	1	1	2	0	0	4.0	5	6	7	3	3	5	1	1	4	6
20	2	3	1	1	1	0	0	0	2.7	5	6	3	2	3	1	1	1	3	3
21	1	2	4	4	4	1	4	4	8.0	2	4	8	8	8	3	10	9	7	8
22	5	6	8	7	5	5	5	8	16.3	11	14	22	19	13	13	13	21	16	16
23	11	8	8	6	5	5	8	5	18.7	47	21	23	16	12	12	26	13	21	20
24	10	8	6	4	5	4	3	2	14.0	34	26	14	9	11	9	7	4	14	12
25	1	2	4	2	2	4	5	10	10.0	3	5	8	4	5	9	13	34	10	13
26	9	9	8	8	9	9	12	12	25.3	27	30	21	25	27	32	53	60	34	31
27	11	8	12	11	6	6	11	7	24.0	43	25	52	43	14	16	45	17	32	36
28	10	12	9	8	5	5	6	8	21.0	39	53	31	24	11	13	16	23	26	25
29	8	8	10	7	9	8	7	9	22.0	22	21	38	20	27	21	19	30	25	20
30	7	4	5	5	2	4	3	6	12.0	20	8	13	13	5	8	6	14	11	14
																		20.4	

MOIS 4 1968

	3 Kn								σn								An
1	11	12	9	10	9	8	10	10	3222	1222	48	52	33	34	31	26	39	38	38
2	9	6	8	7	8	6	9	8	2242	3133	31	16	25	19	23	16	29	23	23
3	8	9	5	8	8	7	3	9	4212	2224	22	29	13	23	21	19	6	28	20
4	8	8	7	3	4	6	5	6	4443	2323	25	22	18	7	10	14	12	15	15
5	6	4	4	5	8	11	16	17	2132	2254	15	8	9	13	23	41	111	125	43
6	8	11	16	14	12	11	10	9	3224	4442	26	44	104	76	55	46	37	30	52
7	6	6	9	8	8	6	3	5	1123	3122	15	16	30	25	21	14	6	11	17
8	4	5	4	4	5	2	1	1	2233	2222	10	11	10	9	11	4	2	3	8
9	1	1	2	2	1	2	4	6	3253	3232	2	2	4	5	2	5	9	16	6
10	5	6	5	4	3	6	8	6	1323	4432	13	15	11	8	7	16	24	16	14
11	5	8	5	7	7	8	8	6	3222	2321	11	23	13	18	20	25	26	16	19
12	5	6	6	6	7	8	9	11	3122	2312	13	14	15	16	18	22	31	48	22
13	9	12	4	9	9	11	10	13	2421	1232	27	51	10	31	31	42	35	64	36
14	10	10	6	13	13	10	9	8	3213	4342	39	36	16	67	62	37	30	23	39
15	7	4	8	9	9	10	8	9	1331	1323	18	10	23	28	29	38	26	27	25
16	8	7	9	8	6	5	8	10	2323	1422	25	20	29	26	15	11	24	38	24
17	5	6	7	9	8	7	7	8	3013	3323	12	14	17	32	22	19	20	26	20
18	7	7	8	8	5	6	7	6	4333	3134	20	20	23	22	12	16	17	14	18
19	4	4	4	2	2	4	1	1	2234	4322	8	8	10	5	5	8	2	2	6
20	3	4	2	1	2	1	1	1	3242	4222	6	8	4	3	4	2	3	2	4
21	2	3	4	4	5	3	6	5	4233	2322	4	7	10	10	11	6	14	13	9
22	5	6	8	8	6	7	6	8	3133	3522	12	15	23	22	16	17	16	24	18
23	10	8	8	7	5	7	9	7	3232	3434	39	21	23	18	13	17	27	18	22
24	8	8	5	5	6	6	4	3	5323	3432	25	26	13	11	15	14	9	7	15
25	2	3	5	3	3	5	6	9	5424	4226	5	7	13	7	7	11	15	31	12
26	8	9	8	8	9	10	12	13	2421	4353	26	33	26	26	31	36	52	66	37
27	11	9	11	10	7	8	11	7	2132	2342	45	29	48	37	18	22	46	18	33
28	10	12	9	8	5	6	7	9	2132	3331	40	54	31	22	13	16	19	29	28
29	8	8	10	7	9	8	8	9	4233	5321	21	25	39	20	29	23	23	30	26
30	8	5	6	6	4	6	5	7	2313	2223	24	11	16	16	9	15	11	19	15
																			22.1

MOIS 4 1968

	3 Ks								σs								As
1	11	11	10	9	9	8	10	8	2340	4231	43	45	35	29	32	21	39	26	34
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3	8	10	4	8	6	5	0	6	5513	4315	22	37	8	25	14	12	1	16	17
4	7	6	6	1	3	4	3	4	4522	4213	20	16	15	2	6	10	6	10	11
5	5	4	4	4	5	9	17	17	2343	3446	12	9	8	9	12	29	143	134	45
6	10	10	14	13	10	9	10	6	5111	6432	37	37	84	65	40	33	36	16	44
7	6	5	8	9	6	4	0	3	2110	2411	14	13	26	29	16	10	1	6	14
8	4	4	3	0	3	1	0	1	3311	1212	10	10	7	1	6	2	1	2	5
9	0	0	0	1	0	1	2	4	1101	1313	1	1	0	2	1	2	5	9	3
10	4	6	4	3	1	4	6	4	3532	2643	10	15	9	7	2	10	16	9	10
11	6	9	5	6	5	4	5	3	5810	4112	16	27	13	15	13	9	13	7	14
12	3	5	5	4	3	4	8	10	1112	1316	6	13	13	10	6	10	23	40	15
13	9	10	5	9	8	9	9	12	5412	1253	29	35	13	32	26	31	31	51	31
14	12	10	6	14	14	9	9	5	6352	2551	51	38	16	74	74	31	27	12	40
15	6	4	8	8	7	8	6	9	2311	1315	14	10	23	26	18	23	16	31	20
16	8	6	8	8	3	4	8	9	3024	1232	21	15	22	21	6	8	24	31	19
17	6	5	6	9	6	8	7	8	6100	0434	15	12	15	29	15	23	20	23	19
18	7	6	6	7	3	4	4	7	4123	0235	20	16	14	18	6	10	9	18	14
19	1	2	2	0	0	1	0	0	2111	0200	2	5	5	1	0	2	0	0	2
20	2	1	0	0	0	0	0	0	2311	1000	4	3	1	1	1	0	0	0	1
21	0	1	3	2	2	0	3	3	0214	1111	0	2	6	5	5	1	6	6	4
22	4	5	8	6	4	4	4	7	3146	2134	10	13	21	16	10	9	10	18	13
23	12	8	8	6	4	3	8	4	6312	2144	56	21	23	14	10	7	26	8	21
24	11	8	6	3	3	2	2	0	9750	2341	43	25	16	6	7	5	4	1	13
25	0	1	2	1	1	3	5	10	1323	4243	1	3	4	2	3	7	11	36	8
26	9	9	7	8	8	9	12	12	6741	3422	28	27	17	23	24	29	54	54	32
27	10	8	12	11	4	4	11	6	3321	5242	40	21	56	49	10	10	43	16	31
28	10	12	9	8	4	4	6	7	3141	3234	38	53	32	26	10	10	14	18	25
29	8	7	10	8	8	7	6	9	4453	4526	23	18	38	21	26	19	15	31	24
30	6	2	4	4	1	1	0	4	5133	1213	16	5	10	10	2	2	1	9	7
																			18.5

MOIS 5 1968

	3 Kn								σn		an						An
1	6	5	5	4	9	9	9	12	1434	4242	16	12	11	8	31	30	31	59	25
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3	8	12	9	6	7	5	3	5	1311	2413	26	60	27	16	20	13	7	13	23
4	8	5	5	4	3	4	4	5	2322	2223	21	12	12	10	7	10	9	11	12
5	3	3	5	5	3	4	4	4	3434	3233	7	7	12	11	6	10	8	9	9
6	4	6	3	1	1	6	6	5	3222	3015	9	15	7	3	3	14	16	11	10
7	10	17	18	13	16	12	9	8	2343	3433	36	128	167	64	113	53	27	25	77
8	8	6	7	6	3	4	5	5	3132	3322	25	16	18	16	7	9	11	11	14
9	11	8	10	11	9	10	11	8	6332	1343	47	26	38	42	28	36	43	22	35
10	7	9	6	6	7	9	7	10	2242	2134	20	33	16	14	18	29	20	34	23
11	11	10	11	10	9	8	8	8	3233	2322	43	40	49	38	29	21	23	26	34
12	13	13	11	11	8	6	9	9	4424	3323	66	64	42	48	24	16	27	30	40
13	11	8	8	9	7	9	8	8	3422	3332	43	23	24	32	18	33	26	25	28
14	9	8	7	7	8	6	8	7	4325	2323	32	26	19	19	22	16	24	20	22
15	7	7	10	7	4	6	7	8	3332	2232	18	20	36	17	9	14	20	26	20
16	8	8	5	9	9	9	6	5	1213	3513	26	25	13	27	29	27	16	11	22
17	4	9	7	6	10	10	8	11	4531	2322	8	28	17	15	38	37	24	43	26
18	7	7	9	6	10	12	8	9	3251	5431	20	18	31	16	36	57	26	29	29
19	6	7	7	7	8	10	9	9	2322	2402	14	19	20	18	21	34	28	32	23
20	12	11	11	9	8	8	8	9	1234	2223	53	48	43	28	26	23	21	33	34
21	10	7	11	8	11	12	9	9	3232	3241	34	18	49	21	47	58	32	31	36
22	9	11	9	7	7	7	4	9	3312	1322	31	48	29	18	17	20	10	32	26
23	8	5	4	5	8	8	8	11	1443	2333	26	12	10	11	21	22	24	49	22
24	12	10	10	8	8	7	8	6	5323	2214	56	36	34	24	26	18	26	15	29
25	5	4	5	5	5	8	6	6	2543	4324	13	9	12	13	11	21	14	15	14
26	5	7	4	4	4	2	1	4	2343	3423	11	20	8	10	9	5	2	8	9
27	2	3	6	5	4	4	6	6	4124	2523	5	7	15	11	8	9	14	16	11
28	7	6	5	3	6	7	8	5	2124	4343	18	16	12	7	15	20	25	12	16
29	5	5	7	8	6	7	6	9	2124	3523	13	12	20	25	14	20	16	28	19
30	8	10	8	6	7	8	8	8	2344	2332	23	34	24	16	17	22	22	26	23
31	8	8	7	6	8	8	7	6	2232	2341	26	23	19	16	22	22	20	16	21
																			24.5

MOIS 5 1968

	3 Ks								σs		as						As
1	7	4	2	4	9	9	8	12	5414	4222	17	8	5	8	32	29	21	54	22
2	14	8	8	9	5	4	2	3	8320	3311	85	25	22	29	13	10	5	7	25
3	9	10	8	5	5	3	0	1	5134	4113	33	34	21	11	12	6	1	3	15
4	7	4	3	3	0	1	1	1	4421	1222	18	9	7	6	1	3	3	3	6
5	0	2	1	3	0	3	0	1	1220	0012	1	4	3	6	0	6	1	2	3
6	1	4	0	0	0	3	3	1	2110	0012	2	8	1	0	0	6	6	2	3
7	9	16	19	14	16	12	9	12	1343	1428	32	113	178	71	104	56	31	53	80
8	8	7	4	5	3	3	4	7	3431	1015	24	17	10	13	6	6	8	17	13
9	10	9	9	10	8	8	12	9	4652	2323	34	31	31	37	22	24	54	28	33
10	5	9	4	3	4	5	4	6	1532	3140	13	31	10	7	9	13	8	15	13
11	10	10	11	9	7	5	5	5	4420	1122	35	35	42	29	18	13	12	12	25
12	14	13	9	10	7	4	8	8	4401	1121	74	63	29	34	17	9	25	26	35
13	12	4	7	8	4	8	7	4	6241	4442	56	10	18	26	10	23	17	10	21
14	9	8	5	6	5	5	6	3	5311	3220	33	21	13	16	12	11	16	6	16
15	8	6	8	4	1	3	3	7	3211	3204	21	14	26	9	2	7	6	17	13
16	7	7	7	8	8	6	4	1	5441	2832	19	18	18	26	21	16	10	3	16
17	3	5	4	4	8	8	6	10	5834	4424	6	12	9	10	24	23	16	35	17
18	7	7	10	5	4	11	8	9	5442	1266	19	18	35	11	8	41	26	31	24
19	3	6	6	3	4	8	7	8	1511	2431	7	15	16	7	10	26	19	26	16
20	13	8	11	10	6	8	4	10	4134	1234	63	26	41	39	16	21	10	35	31
21	9	6	10	6	10	12	8	11	5532	1124	33	15	40	15	34	57	25	42	33
22	10	11	10	7	3	4	2	5	4331	2241	34	41	38	17	7	10	5	13	21
23	10	4	3	4	4	4	6	10	5313	2106	35	10	6	10	10	9	15	34	16
24	12	10	9	8	7	5	7	6	8441	1147	53	34	32	23	17	13	18	14	26
25	6	1	3	4	1	5	5	1	6353	2622	15	3	6	9	2	11	12	2	8
26	4	6	0	1	0	0	0	0	4503	1000	9	15	0	3	1	0	0	0	4
27	0	0	3	0	0	0	1	3	0021	1121	0	0	7	1	1	1	2	6	2
28	2	1	3	0	1	0	5	1	1351	2141	5	3	7	1	3	1	13	2	4
29	5	6	6	8	5	5	6	5	7524	3852	13	15	15	21	13	11	15	11	14
30	5	10	7	4	3	4	4	6	3443	4343	12	34	18	10	6	10	10	14	14
31	9	7	5	3	8	7	4	3	8311	2522	27	20	12	7	21	17	10	7	15
																			18.8

MOIS 5 1968

	3 Km								Σ Km	am							Am	Am 2
1	6	4	4	4	9	9	8	12	18.7	16	10	8	8	31	29	26	56	23	23
2	13	9	8	10	6	6	4	5	20.3	67	28	22	34	16	14	9	13	25	29
3	9	11	8	5	6	4	2	4	16.3	29	47	24	13	16	9	4	8	19	16
4	7	4	4	4	2	3	3	3	10.0	20	10	10	8	4	7	6	7	9	8
5	2	2	4	4	1	4	2	2	7.0	4	5	8	9	3	8	5	5	6	6
6	2	5	2	0	1	4	5	3	7.3	5	11	4	1	2	10	11	6	6	29
7	10	17	18	13	16	12	9	10	35.0	34	121	173	67	109	54	29	39	78	45
8	8	6	6	6	3	4	4	6	14.3	24	16	14	14	6	8	10	14	13	30
9	10	9	10	10	8	9	11	8	25.0	40	29	34	39	25	30	48	25	34	24
10	6	9	5	5	5	8	6	8	17.3	16	32	13	11	13	21	14	24	18	27
11	10	10	11	10	8	7	7	7	23.3	39	37	45	34	24	17	18	19	29	32
12	13	13	10	11	7	5	8	9	25.3	70	64	35	41	20	12	26	28	37	31
13	11	7	8	9	6	9	8	7	21.7	49	17	21	29	14	28	22	17	25	23
14	9	8	6	7	7	5	7	5	18.0	32	24	16	17	17	13	20	13	19	20
15	7	7	9	5	2	5	5	8	16.0	19	17	31	13	5	11	13	21	16	17
16	8	8	6	8	8	8	5	3	18.0	22	22	16	26	25	21	13	7	19	16
17	3	7	5	5	9	9	7	10	18.3	7	20	13	12	31	30	20	39	22	20
18	7	7	9	5	8	11	8	9	21.3	19	18	33	13	22	49	26	30	26	24
19	4	7	7	5	6	9	8	9	18.3	10	17	18	12	16	30	23	29	19	28
20	12	10	11	10	8	8	6	10	25.0	58	37	42	34	21	22	15	34	33	30
21	9	7	11	7	10	12	9	10	25.0	33	17	45	18	40	58	29	36	35	31
22	9	11	9	7	5	6	4	8	19.7	32	44	33	17	12	15	8	22	23	25
23	9	5	4	5	6	6	7	11	17.7	31	11	8	11	16	15	20	42	19	22
24	12	10	9	8	8	6	8	6	22.3	54	35	33	24	21	15	22	14	27	22
25	6	3	4	5	3	6	5	4	12.0	14	6	9	11	7	16	13	9	11	12
26	4	7	2	3	2	1	0	2	7.0	10	18	4	6	5	2	1	4	6	7
27	1	1	5	3	2	2	4	5	7.7	3	3	11	6	4	5	8	11	6	6
28	5	4	4	2	4	5	7	3	11.3	11	9	9	4	9	11	19	7	10	11
29	5	6	7	8	5	6	6	7	16.7	13	14	18	23	13	16	16	19	17	17
30	7	10	8	5	5	6	6	7	18.0	18	34	21	13	11	16	16	20	19	18
31	8	8	6	5	8	7	6	5	17.7	26	21	16	12	21	20	15	12	18	18
																		21.5	

MOIS 6 1968

	3 Km								Σ Km	am							Am	Am 2
1	6	5	6	10	9	8	9	10	21.0	15	13	16	38	28	25	28	39	25	23
2	9	10	8	7	7	6	9	9	21.7	29	36	23	17	17	16	31	33	25	26
3	10	7	7	9	8	10	7	8	22.0	35	18	18	29	21	38	19	25	25	23
4	8	7	7	6	4	6	6	9	17.7	22	18	18	14	9	16	16	32	18	18
5	4	5	4	2	2	3	4	2	8.7	9	13	9	5	5	7	9	5	8	10
6	2	2	3	2	5	4	3	6	9.0	4	5	7	5	12	10	7	14	8	11
7	4	5	10	8	8	9	6	3	17.7	9	12	36	24	22	30	16	7	20	16
8	5	7	5	5	5	9	9	7	17.3	12	19	11	11	13	30	31	17	18	18
9	5	8	7	5	3	4	8	8	16.0	12	23	17	11	6	9	21	24	15	27
10	11	12	14	11	11	8	7	14	29.3	41	55	75	41	41	22	18	85	47	62
11	17	19	16	16	15	12	14	12	40.3	123	200	115	108	96	59	72	52	103	76
12	11	12	13	13	14	12	11	10	32.0	46	58	65	62	73	51	41	39	54	63
13	10	14	15	15	13	11	11	9	32.7	39	74	88	100	69	42	45	33	61	56
14	9	8	14	13	11	11	8	9	27.7	31	22	78	68	43	43	24	28	42	36
15	5	5	7	5	4	5	7	6	14.7	12	12	20	13	10	13	18	16	14	19
16	4	5	3	8	8	7	9	11	18.3	9	11	7	22	21	17	27	47	20	26
17	10	11	13	11	6	4	5	5	21.7	36	45	69	42	15	8	11	13	30	27
18	5	6	9	8	7	8	10	7	20.0	11	14	32	26	20	23	35	19	23	21
19	8	10	10	7	9	7	9	8	22.7	22	34	35	19	28	17	29	25	26	23
20	7	8	4	4	2	5	6	4	13.3	17	24	10	9	4	11	15	8	12	14
21	3	2	2	2	2	2	1	2	5.3	6	5	4	5	5	4	2	4	4	9
22	2	6	9	8	8	4	5	6	16.0	5	16	30	26	25	9	13	14	17	14
23	5	7	8	5	3	3	3	5	13.0	13	17	22	13	6	7	6	13	12	11
24	2	2	1	1	0	0	2	2	3.3	5	4	2	2	1	1	5	5	3	4
25	1	1	2	1	0	6	2	5	6.0	3	3	4	2	1	15	5	12	6	9
26	11	6	5	7	7	8	5	9	19.3	46	15	11	19	18	22	11	28	21	17
27	5	7	6	8	8	5	7	8	18.0	12	18	16	22	26	13	20	24	19	17
28	8	1	3	3	4	6	4	5	11.3	21	3	6	6	9	14	9	11	10	12
29	4	5	4	1	3	7	12	11	15.7	10	12	10	3	7	18	53	47	20	18
30	10	8	7	5	4	5	7	8	18.0	34	25	19	12	10	11	20	24	19	22
																		24.2	

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	3 Kn								σn								an								An
1	8	6	8	11	10	9	9	11	2323	5223	21	16	21	45	38	29	27	43	30
2	9	10	8	7	8	8	10	9	2323	3423	28	37	23	20	22	22	37	33	28
3	10	7	7	9	8	11	8	8	5214	2323	38	18	17	31	21	41	24	25	27
4	8	7	8	6	4	8	7	9	2221	3431	21	17	25	14	10	21	19	29	20
5	5	6	5	4	4	5	6	4	3132	3334	12	16	12	9	9	11	15	8	12
6	3	4	4	4	5	6	5	8	3235	3223	6	9	9	8	13	15	12	21	12
7	5	6	11	9	8	9	7	5	2245	3224	11	14	41	31	26	31	20	13	23
8	6	7	5	5	7	10	11	8	1333	4332	16	19	13	12	20	37	43	24	23
9	6	9	6	6	5	6	9	8	1314	3303	16	30	15	15	11	15	28	26	20
10	11	12	14	11	11	8	8	15	3332	3322	41	52	76	49	46	26	23	89	50
11	17	20	17	16	17	13	14	10	6333	4544	141	219	132	118	128	70	78	40	116
12	11	13	12	12	14	12	11	10	3352	4444	43	69	58	53	81	57	43	36	55
13	10	13	14	14	12	10	11	9	4435	1242	40	62	80	86	59	40	50	33	56
14	9	8	14	11	11	10	9	8	3233	3442	28	23	76	48	45	38	29	23	39
15	6	5	8	5	6	7	8	7	2323	4332	15	13	22	13	14	19	25	20	18
16	5	5	4	8	9	8	8	12	3322	4344	11	13	10	23	27	21	26	53	23
17	10	11	13	11	6	5	6	7	3332	1312	38	48	68	43	16	12	15	20	33
18	6	6	8	9	8	8	11	7	1214	2442	14	16	26	28	24	26	42	20	25
19	8	9	9	7	9	8	9	9	2121	0414	24	31	30	18	28	22	29	28	26
20	7	8	5	6	3	6	8	5	1321	5231	17	25	13	14	7	15	22	13	16
21	4	4	3	4	4	3	2	3	3212	5341	9	8	7	8	8	6	4	7	7
22	4	7	9	8	9	5	7	8	2323	1343	8	20	33	23	29	12	19	21	21
23	5	6	7	6	4	5	5	6	2342	5333	11	16	20	15	9	12	11	14	14
24	3	2	2	1	1	0	3	3	3433	2123	7	5	4	3	3	1	7	6	5
25	2	2	3	2	1	8	4	7	3213	3323	4	4	7	4	3	22	8	18	9
26	12	7	6	8	8	9	6	9	4312	4323	51	19	16	25	25	29	16	33	27
27	6	7	7	8	9	7	8	10	1322	3225	15	20	18	26	32	17	26	34	24
28	8	2	4	5	6	7	5	5	3124	2641	22	5	8	12	14	18	12	13	13
29	5	6	6	3	5	8	12	11	2022	3241	12	14	14	6	12	26	58	50	24
30	9	8	7	6	5	6	8	8	1233	2343	31	26	20	14	13	14	25	26	21
																			27.2

MOIS 6 1968

	3 Ks								σs								as								As
1	4	4	4	9	7	8	9	10	3422	1524	10	10	10	31	18	21	29	35	21
2	9	10	8	6	5	4	8	9	6440	4345	31	35	24	15	13	9	26	33	23
3	9	7	7	8	8	10	6	8	6441	2102	31	18	18	26	21	34	15	25	24
4	8	7	5	5	4	5	5	10	2311	1325	22	20	12	13	9	12	12	35	17
5	3	5	3	1	0	1	1	1	0211	1223	6	11	6	2	1	3	3	2	4
6	1	1	2	1	4	2	1	3	2212	2121	2	2	5	2	10	5	2	7	4
7	4	5	9	7	7	9	5	1	4241	1412	8	11	32	17	17	29	13	2	16
8	3	7	4	4	3	8	7	4	1513	0412	7	19	8	9	6	24	18	10	13
9	4	6	7	3	0	1	6	8	1132	1244	9	16	20	7	1	3	14	23	12
10	11	12	14	10	10	7	5	14	3421	2115	41	59	74	34	37	18	13	82	45
11	16	19	15	15	13	11	13	13	4421	1443	104	181	97	99	65	48	67	64	91
12	11	11	14	13	13	11	10	11	4254	1354	49	47	73	70	65	44	38	42	54
13	10	14	15	16	14	11	10	9	4654	1324	38	85	96	114	79	45	40	33	66
14	10	7	14	15	11	11	7	10	4336	2354	35	20	80	89	41	49	19	34	46
15	4	4	7	5	3	3	5	5	1341	0242	9	10	18	13	6	7	12	12	11
16	3	4	2	8	6	6	9	10	2412	2433	7	9	5	21	15	14	28	40	17
17	10	11	13	10	5	1	3	3	4243	3211	34	43	70	40	13	3	7	6	27
18	4	5	10	8	6	7	9	7	1233	1334	8	11	38	25	16	19	28	18	20
19	8	10	10	8	9	5	9	8	3333	2122	21	38	40	21	29	13	29	22	27
20	7	8	3	1	0	3	4	1	4422	1132	18	24	7	3	1	7	9	2	9
21	1	1	0	1	1	0	0	0	2213	3101	2	2	1	3	3	1	0	1	2
22	1	5	9	9	8	3	3	4	2335	2201	2	12	27	29	21	6	6	8	14
23	6	7	8	5	1	1	1	5	6444	2224	14	18	24	11	2	2	2	11	11
24	2	1	0	0	0	0	1	1	2311	0022	4	2	1	1	0	0	2	3	2
25	1	1	0	0	0	3	1	3	2210	0220	2	2	1	0	0	7	2	6	3
26	10	4	3	5	5	6	3	8	3213	4124	40	10	6	13	11	16	7	23	16
27	4	6	5	7	7	4	6	5	1511	2221	9	16	13	18	19	10	15	13	14
28	7	1	2	0	1	4	3	4	4121	2213	20	2	4	1	3	10	6	10	7
29	4	4	3	0	1	4	11	11	4311	3223	9	9	6	1	3	10	47	44	16
30	10	8	7	4	3	3	6	8	4344	5254	38	24	18	10	6	7	15	23	18
																			21.7

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	3 Kn								σn				an				An
1	8	9	8	5	6	5	6	8	4223	2323	22	30	26	12	15	11	15	21	19
2	9	7	7	9	6	6	7	7	1242	4423	29	17	20	27	16	15	20	18	20
3	8	9	13	11	7	9	7	6	3143	2142	26	29	62	42	17	29	19	14	30
4	5	8	9	9	8	7	9	7	2232	2154	11	24	29	27	26	17	30	18	23
5	6	8	5	9	6	8	5	5	4321	2332	15	22	11	31	16	22	12	11	18
6	7	7	7	7	7	5	5	4	3322	2332	18	19	18	20	17	12	11	8	15
7	4	7	9	7	4	7	5	4	3212	2423	10	17	29	20	10	18	11	8	15
8	5	8	7	8	4	7	5	4	1344	4422	13	23	19	26	8	17	12	10	16
9	4	6	6	5	5	5	4	8	4333	5322	8	14	14	11	11	12	8	26	13
10	13	13	10	11	14	7	12	14	3123	1224	67	64	38	45	84	20	53	71	55
11	9	10	7	5	5	7	8	8	1214	4422	32	38	17	12	11	18	26	22	22
12	8	7	4	5	5	7	4	5	2344	5422	26	20	8	12	12	19	8	11	15
13	6	8	6	3	1	13	14	11	2234	2332	15	24	15	6	3	68	76	42	31
14	14	12	7	8	8	7	9	8	2245	4214	76	52	20	23	25	20	33	21	34
15	8	7	5	7	4	5	7	6	3232	2442	21	20	11	17	8	12	19	15	15
16	7	8	6	6	5	11	8	5	4325	3322	18	24	16	14	12	43	22	12	20
17	4	4	5	6	7	5	6	7	1235	3424	8	9	12	14	20	12	16	17	14
18	7	8	5	5	8	10	5	4	2234	5123	18	26	11	13	24	34	11	9	18
19	6	7	7	8	6	8	5	9	2222	4524	14	20	18	22	15	22	13	28	19
20	7	4	2	2	4	4	4	4	2344	2222	20	10	4	5	8	8	9	9	9
21	4	4	5	5	6	8	7	8	3344	4432	9	8	13	11	15	23	20	23	15
22	10	9	11	12	11	8	8	7	5322	3321	38	33	42	53	43	23	26	17	34
23	6	7	11	7	9	9	5	5	1143	5222	15	19	50	19	27	28	11	13	23
24	4	4	6	3	2	2	3	3	4334	4522	9	9	14	7	5	5	6	6	8
25	4	4	6	6	9	8	5	6	3223	2322	8	10	15	15	28	22	11	14	15
26	6	8	8	10	9	8	9	12	2333	3212	15	26	21	39	31	26	29	56	30
27	10	10	9	8	8	3	4	5	2212	3322	35	37	29	22	24	7	10	11	22
28	5	6	5	7	5	7	8	6	2264	3350	12	16	11	17	13	19	24	14	16
29	7	7	6	4	5	5	4	5	2303	4322	18	20	14	9	11	11	9	11	13
30	5	5	5	5	6	7	8	6	3323	2222	12	11	11	11	14	18	22	16	14
31	6	6	6	6	4	4	2	3	2322	4423	16	14	14	15	8	8	5	7	11
																			20.1

MOIS 7 1968

	3 Ks								σs				as				As
1	7	8	7	4	3	3	3	8	4344	1126	20	21	17	8	6	6	7	21	13
2	11	3	4	8	4	4	4	8	3032	1135	41	6	9	22	9	8	9	22	16
3	10	9	13	9	4	5	3	2	4662	4554	35	28	64	29	8	12	7	5	24
4	3	7	8	8	4	3	8	3	2432	1231	7	18	25	22	9	7	21	6	14
5	6	7	3	6	4	4	3	1	6322	4202	16	20	7	14	8	10	6	3	11
6	6	5	5	6	3	1	4	2	6213	1131	15	11	12	14	6	2	9	5	9
7	2	4	8	7	1	3	1	0	2323	1121	4	10	22	20	2	7	2	1	9
8	4	6	7	7	1	1	0	1	4556	3312	8	16	17	17	2	2	1	2	8
9	0	4	4	1	1	0	0	3	1442	2110	1	8	9	3	2	1	1	6	4
10	10	11	9	9	14	4	10	14	4144	3115	37	49	32	32	80	8	37	72	43
11	10	9	4	2	1	2	8	8	4532	2445	35	30	9	4	2	5	22	22	16
12	8	4	1	0	1	3	0	0	8311	3411	25	10	2	1	2	7	1	1	6
13	2	6	6	0	0	9	12	9	2561	0423	4	16	14	1	0	32	54	28	19
14	14	11	4	6	8	3	8	5	3442	2114	71	49	9	15	22	6	26	13	26
15	8	6	4	4	0	0	4	4	5541	1034	22	15	8	9	1	0	9	8	9
16	6	5	4	2	4	9	4	1	6232	1142	14	11	10	5	8	32	9	2	11
17	2	1	1	3	9	1	4	3	1322	3331	5	3	2	6	27	3	10	6	8
18	7	7	4	3	5	6	1	0	4332	4421	18	20	10	7	11	14	3	1	11
19	3	6	5	6	2	6	1	9	2211	1424	7	14	13	16	5	16	3	33	13
20	6	2	0	0	0	0	0	0	5300	0111	15	4	0	0	0	1	1	1	3
21	3	2	2	1	2	3	6	6	2222	3225	7	4	4	2	4	7	16	16	8
22	10	8	10	10	7	4	8	4	4254	1153	34	22	34	39	17	8	21	10	23
23	4	7	9	5	3	7	2	3	4421	2521	9	17	31	12	7	18	4	6	13
24	0	0	4	0	0	0	0	0	1140	1011	1	1	8	0	1	0	1	1	2
25	1	3	6	5	5	2	1	1	2562	4422	2	7	14	12	13	4	2	3	7
26	3	7	4	7	6	5	6	11	1411	3125	7	18	8	18	14	12	16	41	17
27	12	9	8	8	6	0	3	3	6512	4020	56	33	26	22	14	0	7	6	21
28	7	4	1	4	3	4	7	5	5331	0134	17	9	2	8	6	8	20	11	10
29	7	6	4	2	1	0	1	0	5534	3021	17	15	9	4	2	0	2	1	6
30	2	2	2	1	0	2	4	4	2243	1134	5	4	4	2	1	5	9	8	5
31	7	5	3	4	2	1	0	1	4203	2314	18	11	6	10	4	3	1	3	7
																			12.6

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	3 Km								Σ Km	am							Am	Am2
1	8	8	8	4	5	4	5	8	16.7	21	26	21	10	11	8	11	21	16	18
2	10	5	6	8	5	5	6	7	17.3	35	12	15	25	12	12	15	20	18	22
3	9	9	13	10	5	8	5	4	21.0	30	29	63	36	12	21	13	10	27	22
4	4	8	9	8	7	5	8	5	18.0	9	21	27	24	17	12	26	12	19	17
5	6	8	4	8	5	6	4	3	14.7	16	21	9	23	12	16	9	7	14	15
6	6	6	6	7	5	3	4	3	13.3	16	15	15	17	12	7	10	6	12	13
7	3	6	8	7	3	5	3	2	12.3	7	14	26	20	6	12	6	4	12	12
8	4	7	7	8	2	4	3	3	12.7	10	19	18	21	5	10	7	6	12	10
9	2	5	5	3	3	3	2	6	9.7	4	11	11	7	7	7	4	16	8	17
10	12	12	10	10	14	6	11	14	29.7	52	56	35	38	82	14	45	72	49	32
11	10	10	5	4	3	5	8	8	17.7	34	34	13	8	7	12	24	22	19	26
12	8	6	2	3	3	5	2	3	10.7	26	15	5	7	7	13	5	6	11	12
13	4	7	6	2	0	11	13	10	17.7	9	20	14	4	1	50	65	35	25	24
14	14	12	6	7	8	5	9	7	22.7	73	51	14	19	24	13	29	17	30	28
15	8	7	4	5	2	3	6	5	13.3	21	17	9	13	5	6	14	12	12	15
16	6	7	5	4	4	10	6	3	15.0	16	17	13	10	10	37	15	7	16	12
17	3	3	3	4	8	3	5	5	11.3	6	6	7	10	24	7	13	12	11	14
18	7	8	5	4	7	8	3	2	14.7	18	23	11	10	18	24	7	5	15	15
19	5	7	6	7	4	7	4	9	16.3	11	17	16	19	10	19	8	31	16	13
20	7	3	1	1	2	2	2	2	6.7	17	7	2	3	4	4	5	5	6	9
21	4	3	4	3	4	6	7	7	12.7	8	6	9	7	10	15	18	19	12	16
22	10	9	10	11	9	6	8	5	22.7	36	28	38	46	30	16	23	13	29	24
23	5	7	11	6	7	8	4	4	17.3	12	18	41	16	17	23	8	9	18	16
24	2	2	5	1	1	1	1	1	4.7	5	5	11	3	3	3	3	3	5	8
25	2	4	6	6	8	5	3	4	12.7	5	8	15	14	21	13	7	9	12	11
26	5	8	6	9	8	7	8	11	20.7	11	22	15	29	22	19	23	49	24	23
27	11	10	9	8	7	1	4	4	18.0	45	35	28	22	19	3	8	9	21	20
28	6	5	3	5	4	6	8	5	14.0	14	13	6	12	10	14	22	12	13	12
29	7	7	5	3	3	2	3	3	11.0	17	18	12	7	6	5	6	6	10	10
30	4	4	3	3	3	5	6	5	11.0	8	8	7	6	7	11	16	12	9	9
31	7	5	4	5	3	3	1	2	10.0	17	12	10	12	6	6	3	5	9	9
																		16.5	

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	3 Km								Σ Km	am							Am	Am2
1	1	3	4	3	2	1	2	1	5.7	3	6	8	7	5	3	4	3	5	5
2	2	3	3	4	1	1	1	2	5.7	4	7	6	9	3	2	2	5	5	10
3	5	11	9	7	7	9	5	5	19.3	11	41	31	20	17	27	12	11	21	16
4	8	8	6	4	2	1	1	4	11.3	26	22	16	9	4	2	3	10	12	14
5	5	8	4	9	7	8	7	9	19.0	11	21	8	27	20	23	19	27	20	18
6	9	10	7	8	7	5	8	7	20.3	32	37	19	21	17	13	26	17	23	25
7	10	9	9	9	8	7	4	5	20.3	38	29	29	30	24	17	10	13	24	24
8	11	9	10	4	6	3	5	7	18.3	41	31	36	8	14	7	13	18	21	20
9	9	7	7	4	5	7	9	9	19.0	33	18	20	9	12	20	29	28	21	18
10	7	5	6	8	4	6	3	4	14.3	20	13	16	21	9	14	7	10	14	17
11	9	7	7	2	1	2	3	2	11.0	27	19	17	5	2	4	6	4	11	11
12	6	4	4	4	3	3	5	3	10.7	16	8	10	10	7	7	11	7	10	7
13	2	4	1	1	4	7	10	10	13.0	4	8	2	3	10	17	35	40	15	19
14	11	8	10	10	11	8	11	10	26.3	49	23	37	39	45	23	41	34	36	35
15	8	12	11	11	10	9	9	9	26.3	24	53	45	43	37	33	30	29	37	37
16	11	12	10	7	11	13	14	13	30.3	48	53	35	19	41	67	79	61	50	50
17	15	13	12	11	11	13	9	10	31.3	94	69	54	47	49	64	27	39	55	52
18	8	11	11	8	9	8	9	9	24.3	23	43	43	26	29	21	27	31	30	33
19	8	8	8	9	6	6	5	3	17.7	26	22	26	31	16	16	12	7	20	19
20	5	4	5	5	5	7	4	7	14.0	11	8	11	13	12	17	10	17	12	12
21	4	5	7	2	2	1	2	3	8.7	8	12	17	5	4	3	5	6	8	9
22	2	2	3	4	3	2	3	7	8.7	5	4	6	9	6	5	7	18	8	10
23	7	10	7	5	4	8	10	9	20.0	17	40	18	11	9	21	37	29	23	27
24	11	14	13	10	8	5	7	7	25.0	44	73	63	37	24	13	19	18	36	25
25	3	2	1	1	1	1	6	4	6.3	7	5	2	2	2	3	15	10	6	9
26	2	3	3	4	4	3	2	3	8.0	5	6	7	8	10	7	4	7	7	8
27	6	6	4	4	2	1	4	1	9.3	16	15	8	10	4	3	9	3	9	8
28	3	4	3	2	1	1	4	3	7.0	7	9	7	4	3	3	8	7	6	5
29	3	1	1	1	2	1	0	2	3.7	6	3	3	3	4	3	1	4	3	4
30	2	2	1	1	1	1	2	3	4.3	5	4	3	2	2	2	4	6	4	7
31	5	8	6	9	10	11	10	5	21.3	11	25	15	28	39	48	36	12	27	20
																		18.7	

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	3 Kn								σn		an						An
1	3	4	5	5	4	2	3	3	1335	2333	6	9	11	11	8	5	6	7	8
2	3	4	4	6	2	2	1	4	1332	3422	7	9	8	14	5	5	3	8	7
3	5	11	10	8	8	10	6	6	3323	2421	12	44	38	23	23	35	16	15	26
4	8	8	7	5	3	2	3	6	2233	3302	26	21	19	12	6	4	6	15	14
5	6	8	4	10	8	9	8	10	2232	2333	14	22	10	35	26	31	23	36	25
6	9	10	8	9	7	7	9	8	4323	2242	31	36	22	28	18	19	31	21	26
7	10	9	9	9	9	7	6	7	1124	1513	37	31	29	33	29	20	15	19	27
8	11	9	10	4	7	5	7	7	4432	3234	44	31	39	8	19	13	18	20	24
9	9	7	8	5	7	8	9	10	3244	2343	29	20	21	12	18	22	33	36	24
10	8	6	7	8	6	7	5	5	2123	4223	22	15	18	26	14	18	11	13	17
11	8	8	7	3	2	4	4	3	4335	4221	22	22	19	7	4	8	10	7	12
12	6	5	5	5	5	5	5	5	1233	2432	16	12	12	11	12	12	13	11	12
13	3	5	2	2	6	8	11	11	1334	4433	6	12	4	5	15	25	45	44	20
14	13	8	11	11	12	9	12	10	5222	2332	61	25	48	48	56	31	51	35	44
15	9	12	11	11	11	9	8	9	2123	3134	28	51	49	46	44	33	26	33	39
16	11	12	10	8	10	14	14	13	3222	2223	50	58	35	21	40	76	72	65	52
17	14	14	12	12	11	13	10	11	2313	3533	81	72	56	53	46	67	34	43	57
18	8	11	11	9	10	8	9	10	2243	3343	24	48	45	29	34	25	30	36	34
19	9	8	9	10	7	7	7	4	1223	2313	29	25	27	35	19	20	17	10	23
20	5	5	5	7	6	7	5	6	1332	2322	13	12	12	19	15	20	11	16	15
21	4	6	7	3	3	2	4	4	3134	4332	10	14	17	6	6	5	8	10	10
22	3	3	3	5	4	4	5	7	1562	3523	7	7	7	11	9	9	12	19	10
23	6	10	7	5	5	9	11	9	2233	3341	16	40	19	11	13	28	42	31	25
24	11	13	12	10	8	6	8	8	3323	3443	43	68	60	35	25	16	21	21	36
25	4	3	2	2	2	3	8	6	2454	4231	10	6	4	4	4	6	21	15	9
26	3	4	4	4	5	5	2	4	3323	2522	6	9	9	10	11	11	5	10	9
27	6	6	4	5	3	3	5	3	1133	3322	15	15	10	12	6	6	12	6	10
28	4	4	4	3	3	2	5	5	1222	3322	8	10	8	6	6	4	11	11	8
29	3	2	3	2	2	2	1	2	2453	3212	7	4	6	4	5	4	2	5	5
30	3	2	2	2	1	2	3	4	0324	2213	6	5	5	5	3	4	7	8	5
31	5	8	6	9	10	11	10	6	2213	4362	11	22	16	32	37	48	39	16	28
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MOIS 8 1968

	3 Ks								σs		as						As
1	0	2	2	2	1	0	0	0	1212	1110	1	4	5	4	2	1	1	0	2
2	1	3	2	2	0	0	0	1	2113	1003	2	6	5	5	1	0	0	3	3
3	4	10	8	7	5	7	4	3	3311	3110	10	38	23	17	12	18	8	6	17
4	8	8	5	3	1	0	0	3	1431	1011	26	24	12	6	2	0	1	6	10
5	4	8	3	7	6	6	6	7	4321	4404	9	21	7	18	14	16	15	17	15
6	9	10	6	6	6	3	8	5	4322	5021	32	38	16	15	16	6	21	13	20
7	10	8	9	8	7	5	3	3	3154	3325	40	26	29	26	20	13	6	7	21
8	10	9	10	4	4	1	4	6	4511	3246	38	31	34	8	10	2	8	15	18
9	10	6	7	3	3	7	8	7	3243	1325	38	16	18	6	7	19	25	19	19
10	7	5	5	6	2	4	1	3	4212	1222	18	11	13	15	5	10	3	7	10
11	9	7	6	1	0	0	1	0	6421	0021	31	17	14	2	0	0	2	1	8
12	7	2	4	4	1	1	4	1	5243	1233	17	4	8	9	2	2	10	3	7
13	1	2	0	0	2	4	8	10	2100	1535	2	5	0	0	5	8	24	35	10
14	10	8	8	9	10	6	9	10	4210	3524	38	22	26	29	34	15	32	34	29
15	8	12	10	11	9	10	9	8	3533	4145	21	54	40	41	29	34	33	25	35
16	11	11	10	6	11	12	14	12	3142	3412	45	49	35	16	42	58	86	57	49
17	16	13	12	11	12	12	8	10	6313	2524	107	66	53	42	53	60	21	35	55
18	8	10	10	8	8	7	8	8	3431	6551	21	38	40	23	24	17	25	26	27
19	8	7	8	8	5	5	4	1	2411	2442	22	18	26	26	12	11	8	3	16
20	4	2	4	4	4	5	4	7	3334	4434	9	4	10	8	10	13	9	17	10
21	3	4	7	2	0	0	1	1	1344	1012	6	9	17	4	1	0	2	3	5
22	2	0	2	3	1	0	1	7	2124	3124	4	1	4	6	2	1	2	18	5
23	7	11	7	5	3	6	9	8	4342	4421	18	41	18	11	6	14	31	26	21
24	11	14	13	10	8	5	7	6	3142	1212	45	79	67	40	23	11	17	15	37
25	2	2	0	0	0	0	4	3	2200	0031	4	4	0	0	0	0	9	6	3
26	2	2	3	3	4	2	1	2	2212	1231	5	4	6	7	8	4	3	5	5
27	7	6	3	4	1	0	3	0	4621	1010	18	15	7	8	2	0	6	0	7
28	3	4	3	1	0	1	3	2	1312	0243	6	9	6	2	0	2	6	4	4
29	2	1	0	1	1	1	0	1	1212	2212	5	2	1	2	3	2	1	2	2
30	2	2	1	0	1	0	0	1	1220	2112	5	4	2	0	2	1	1	3	2
31	5	9	6	8	11	11	9	4	2624	2441	11	28	15	24	41	49	33	9	26
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	3 Kn								σn								An
1	8	6	7	9	5	5	4	4	6221 2333	26	14	18	33	11	13	8	9	17
2	5	4	7	12	10	6	7	9	3125 2432	11	8	17	55	36	15	17	28	23
3	9	8	9	10	8	10	11	11	4332 2343	29	24	27	38	24	39	41	45	33
4	8	9	8	11	10	9	5	8	1313 2323	26	33	24	45	38	28	12	22	29
5	5	9	10	7	10	5	5	8	2232 3322	11	29	35	20	34	13	13	25	23
6	9	10	9	3	9	10	10	12	0525 3335	28	34	33	6	28	36	37	58	33
7	8	7	9	8	7	6	7	13	2213 3334	24	20	28	25	19	16	20	64	27
8	14	13	12	14	11	14	9	5	2444 3723	79	62	52	78	46	72	30	11	54
9	10	9	7	9	9	6	8	8	2353 3232	34	31	17	29	32	15	22	21	25
10	5	7	6	7	5	7	3	3	2312 3543	12	20	15	20	13	18	7	6	14
11	6	8	4	4	2	1	3	2	2222 4344	14	21	10	8	4	3	6	5	9
12	5	7	10	8	13	11	10	10	2241 3352	11	20	40	26	67	41	35	36	35
13	14	12	11	11	12	12	13	10	3442 1333	72	59	45	50	56	57	68	39	56
14	12	12	12	13	12	11	9	11	6213 4423	60	51	54	61	53	44	29	47	50
15	11	13	11	9	11	14	11	8	3333 3453	46	64	43	27	43	78	44	22	46
16	9	9	5	7	7	5	6	6	2221 2323	27	27	13	17	19	11	15	16	18
17	7	5	8	6	4	4	3	2	1223 2343	17	11	21	14	8	8	7	4	11
18	2	4	2	3	2	3	3	6	3325 3453	4	8	5	6	4	6	7	15	7
19	7	10	8	9	5	5	3	4	2422 3322	20	38	26	29	13	13	6	8	19
20	7	10	1	2	2	4	7	6	3244 4230	18	34	3	5	5	8	17	14	13
21	4	9	9	3	9	11	7	4	2215 1522	9	27	31	7	29	41	20	10	22
22	7	4	4	6	9	6	7	11	2223 3322	20	8	9	14	28	16	19	48	20
23	11	12	8	11	11	12	2	4	2222 3222	50	53	22	43	41	56	5	10	35
24	3	1	2	2	2	2	7	3	2244 4331	6	3	4	5	4	5	17	7	6
25	3	1	1	1	2	4	1	3	1333 2222	7	2	2	3	5	8	3	6	5
26	5	3	5	3	5	5	1	2	2245 3333	11	7	11	7	11	13	2	4	8
27	2	4	3	3	3	1	1	5	3445 3322	4	8	7	6	6	2	2	11	6
28	5	4	6	7	5	7	8	7	2432 3133	12	8	14	18	12	17	22	20	15
29	7	7	5	6	4	7	8	8	3135 3344	19	17	13	14	9	17	25	22	17
30	3	3	2	2	5	6	8	10	1554 2453	7	7	4	5	13	15	23	36	14
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	3 Ks								σs								As
1	9	5	7	8	5	3	0	1	8243 4413	27	11	18	25	12	6	1	2	13
2	3	1	6	10	8	6	5	9	2332 3434	6	2	14	37	23	14	13	27	17
3	9	8	9	9	8	8	9	11	5232 3421	33	22	28	29	21	24	29	45	29
4	7	9	9	10	10	7	3	7	3032 3326	20	29	28	40	39	19	7	17	25
5	5	8	10	7	10	4	4	6	2141 1362	11	26	35	18	34	10	8	15	20
6	10	9	10	2	7	8	9	13	4542 1113	38	31	39	5	17	26	32	64	32
7	10	7	7	7	6	7	10	11	6111 2554	40	17	18	17	16	17	36	48	26
8	16	12	14	16	11	14	10	4	6273 4631	118	54	86	106	45	76	39	8	67
9	9	8	5	8	7	4	7	5	5312 5142	31	21	13	21	19	9	17	11	18
10	5	6	5	6	4	6	0	0	1012 3511	12	15	13	16	9	16	1	1	10
11	5	8	4	2	0	0	0	0	1414 1011	13	21	9	5	1	0	1	1	6
12	3	7	8	6	13	9	9	9	1422 1254	6	18	22	16	65	29	31	33	28
13	13	10	11	11	10	11	11	9	5321 2245	65	40	43	49	37	41	45	31	44
14	12	11	10	11	10	10	8	10	5331 2513	59	45	39	49	37	35	26	40	41
15	11	11	10	8	8	11	11	9	1243 2245	49	47	37	24	21	41	43	33	37
16	8	8	5	5	5	3	5	5	2221 3222	22	22	11	12	12	7	11	12	14
17	6	4	5	4	1	0	1	0	0312 2121	15	9	13	10	3	1	3	1	7
18	0	2	1	1	0	1	1	6	1323 1222	1	5	3	2	1	3	3	15	4
19	8	11	8	8	4	5	1	2	1111 3223	23	45	23	26	9	11	2	4	18
20	7	10	1	0	0	0	5	3	3321 0140	20	38	2	1	0	1	11	6	10
21	4	6	8	2	8	10	5	2	4134 1114	8	16	21	4	26	34	13	5	16
22	8	3	3	7	8	4	6	10	3123 3123	21	7	7	20	24	8	16	37	18
23	12	10	6	8	10	11	1	2	5421 3223	59	38	16	26	39	41	2	4	28
24	4	0	1	0	0	0	5	1	4121 0112	8	1	2	1	0	1	13	3	4
25	2	0	0	1	0	2	0	3	2002 0211	4	0	0	3	0	4	1	6	2
26	5	2	5	2	3	3	0	0	1121 0410	12	5	11	5	6	7	1	0	6
27	0	4	4	0	1	0	0	4	1441 2103	1	9	8	1	2	1	0	10	4
28	5	2	6	7	5	4	6	8	1101 2304	12	5	15	17	11	10	15	23	14
29	9	5	5	4	1	5	7	5	4123 2242	32	12	12	10	3	11	18	12	14
30	2	0	0	1	3	4	7	10	1111 2343	5	1	1	2	6	10	18	40	10
																		19.4

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	3 Km								Σ Km	am							Am	Am2
1	8	5	7	9	5	4	2	3	14.3	26	12	18	29	12	9	5	6	15	20
2	4	2	6	11	9	6	6	9	17.7	9	5	15	46	29	15	15	27	20	19
3	9	8	9	10	8	9	10	11	24.7	31	23	27	34	23	31	35	45	31	29
4	8	9	8	11	10	8	4	7	21.7	23	31	26	43	38	23	9	20	27	28
5	5	9	10	7	10	5	4	7	19.0	11	28	35	19	34	11	10	20	21	23
6	9	9	10	2	8	9	10	13	23.3	33	32	36	5	23	31	34	61	32	27
7	9	7	8	8	7	6	9	12	22.0	32	18	23	21	18	16	28	56	27	42
8	15	12	13	15	11	14	10	4	31.3	99	58	69	92	46	74	34	10	60	44
9	9	8	6	8	8	5	7	6	19.0	33	26	15	25	25	12	19	16	21	25
10	5	7	6	7	5	7	2	2	13.7	12	17	14	18	11	17	4	4	12	14
11	5	8	4	3	1	1	1	1	8.0	13	21	10	7	2	2	3	3	8	11
12	4	7	9	8	13	10	9	10	23.3	8	19	31	21	66	35	33	35	31	29
13	13	11	11	11	11	11	12	10	30.0	68	50	44	50	47	49	56	35	50	49
14	12	11	11	12	11	10	9	11	29.0	59	48	46	55	45	39	28	43	45	45
15	11	12	10	8	9	12	11	9	27.3	47	56	40	25	32	59	43	27	41	35
16	8	8	5	6	6	4	5	6	16.0	25	25	12	14	16	9	13	14	16	22
17	6	4	7	5	3	2	2	1	10.0	16	10	17	12	6	4	5	3	9	9
18	1	3	2	2	1	2	2	6	6.3	2	6	4	4	2	5	5	15	5	11
19	8	11	8	9	5	5	2	3	17.0	22	41	25	28	11	12	4	6	19	15
20	7	10	1	1	1	2	6	4	10.7	19	36	2	3	2	4	14	10	11	12
21	4	8	8	3	9	10	7	3	17.3	9	21	26	6	28	38	17	7	19	15
22	8	4	4	7	8	5	7	11	18.0	21	8	8	17	26	12	17	43	19	25
23	12	11	7	10	10	11	2	3	22.0	54	45	19	35	40	48	4	7	32	23
24	3	1	1	1	1	1	6	2	5.3	7	2	3	3	2	3	15	5	5	9
25	2	0	0	1	1	3	1	3	3.7	5	1	1	3	3	6	2	6	3	5
26	5	3	5	3	4	4	0	1	8.3	12	6	11	6	9	10	1	2	7	6
27	1	4	4	2	2	0	0	5	6.0	2	8	8	4	4	1	1	11	5	7
28	5	3	6	7	5	5	7	8	15.3	12	6	14	18	12	13	18	21	14	12
29	8	6	5	5	3	6	8	7	16.0	26	14	13	12	6	14	21	17	15	13
30	3	2	1	1	4	5	7	10	11.0	6	4	3	3	10	12	20	38	12	18
																		21.1	

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	3 Km								Σ Km	am							Am	Am2
1	12	12	4	8	7	7	7	8	21.7	52	52	9	22	20	17	17	24	27	38
2	15	14	12	15	15	10	8	11	33.3	92	83	55	92	88	36	24	41	64	55
3	16	12	12	13	6	2	3	0	21.3	104	60	54	68	14	5	6	1	39	32
4	2	2	3	1	2	7	3	2	7.3	4	4	6	2	5	17	6	5	6	6
5	1	1	3	6	4	1	0	1	5.7	2	2	7	14	9	3	0	2	5	8
6	2	1	10	7	5	4	6	4	13.0	4	3	38	17	12	9	14	10	13	13
7	8	8	9	2	4	8	12	9	20.0	23	24	28	5	10	24	55	31	25	18
8	8	4	3	4	3	6	6	5	13.0	23	8	7	10	6	14	14	12	12	16
9	8	6	2	1	5	9	5	5	13.7	21	15	4	3	13	27	12	13	14	13
10	8	2	4	5	3	1	0	4	9.0	26	4	9	12	7	2	1	8	9	10
11	1	2	4	2	2	2	4	5	7.3	3	5	10	4	4	4	8	11	6	19
12	11	12	13	14	11	15	16	12	34.7	45	55	62	76	49	88	119	56	69	48
13	13	10	11	11	11	10	8	9	27.7	64	37	46	42	41	39	22	33	41	45
14	8	9	5	7	8	8	7	9	20.3	25	27	13	17	24	22	19	29	22	22
15	2	4	4	6	4	5	2	4	10.3	5	8	8	14	10	13	4	9	9	12
16	0	3	6	3	7	6	5	4	11.3	1	7	16	7	17	15	13	9	11	12
17	7	7	6	5	7	6	6	7	17.0	17	20	15	11	18	14	15	20	16	16
18	8	8	7	6	3	4	4	6	15.3	21	22	17	14	6	8	9	16	14	14
19	4	1	4	6	8	3	11	11	16.0	9	2	9	16	21	7	46	44	19	16
20	7	4	8	7	7	6	3	1	14.3	18	8	26	17	17	14	7	3	14	15
21	1	1	2	3	1	2	2	1	4.3	2	3	4	7	3	5	4	3	4	5
22	1	2	1	0	1	0	1	2	2.7	2	4	3	1	3	1	3	4	3	3
23	0	1	1	1	1	5	5	4	6.0	1	3	3	3	2	11	12	8	5	6
24	4	4	2	4	4	9	10	4	13.7	9	10	5	10	9	27	35	8	14	13
25	2	5	7	8	8	2	5	6	14.3	5	12	20	22	26	5	11	16	15	14
26	1	1	4	5	1	2	8	8	10.0	3	3	8	11	3	4	23	24	10	12
27	6	4	7	4	5	4	3	4	12.3	15	10	20	8	13	8	7	8	11	11
28	3	2	5	3	4	3	3	11	11.3	6	4	12	7	10	7	6	45	12	16
29	9	8	8	11	14	18	16	12	32.0	32	22	21	45	82	171	105	52	66	42
30	7	5	5	10	11	8	8	11	21.7	19	12	11	35	47	26	22	41	27	60
31	11	10	12	19	22	20	18	16	42.7	48	35	57	199	321	231	162	116	146	95
																		24.1	

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	3 Kn								σn		an						An
1	11	12	5	8	8	7	7	9	3353	3656	46	51	11	25	23	19	19	29	28
2	15	14	12	15	16	11	8	11	1225	2223	87	83	53	100	105	42	26	41	67
3	15	13	11	13	6	4	4	1	2222	1323	87	62	41	67	15	8	8	3	36
4	3	3	4	1	3	7	3	4	4523	3613	6	7	8	3	6	17	7	8	8
5	2	2	4	7	4	2	0	2	4422	3314	4	4	8	18	10	5	1	4	7
6	2	2	9	7	6	5	7	6	2412	2253	5	4	31	18	14	11	19	14	15
7	8	8	9	4	6	9	13	10	2235	3153	23	23	30	9	15	29	67	39	29
8	8	4	4	5	3	7	6	6	2333	3443	26	8	9	13	7	17	16	14	14
9	8	7	3	2	7	9	5	6	3444	4314	23	20	6	5	17	27	12	14	16
10	9	3	4	7	4	2	1	4	4323	2323	33	6	10	17	9	4	3	9	11
11	2	3	4	2	2	2	4	5	5533	3423	5	6	10	5	4	5	9	11	7
12	11	12	13	14	12	15	17	12	2433	3422	48	57	66	74	56	97	122	59	72
13	13	11	11	11	12	11	8	10	4343	4333	67	44	49	46	51	46	26	34	45
14	8	9	7	8	9	9	8	10	1313	4645	26	28	17	22	28	29	21	35	26
15	2	3	4	6	5	6	3	5	3221	3434	5	7	9	15	11	16	6	13	10
16	1	4	7	4	8	7	6	5	3342	3312	3	9	20	9	22	19	14	11	13
17	7	6	6	5	8	7	7	8	2113	3252	18	16	15	12	22	18	17	23	18
18	7	8	7	6	3	4	4	6	2211	4232	19	22	17	16	6	9	10	16	14
19	4	1	4	7	8	3	11	11	2323	3254	8	3	9	17	26	7	44	41	19
20	7	4	9	8	7	5	4	2	3424	5442	18	9	30	22	19	13	9	4	16
21	2	2	2	2	1	3	2	3	4543	3433	4	4	4	5	3	7	4	6	5
22	1	2	1	1	2	1	1	2	3343	3323	3	4	2	2	4	3	3	5	3
23	1	1	2	2	1	5	5	4	3334	3313	2	3	4	4	3	12	13	10	6
24	4	4	3	4	4	9	10	4	3432	2333	9	10	6	10	9	30	37	9	15
25	2	6	8	8	9	3	5	6	2423	8434	5	14	21	25	31	7	11	16	16
26	2	2	4	6	2	2	8	8	3423	3322	5	5	10	14	4	5	25	25	12
27	6	4	8	4	5	4	3	4	4333	3324	16	10	22	9	13	10	7	8	12
28	3	2	6	2	4	4	3	10	5434	3222	6	5	14	5	10	8	7	38	12
29	10	8	7	11	14	18	16	11	3212	3322	36	23	19	42	76	173	111	46	66
30	7	6	5	10	11	8	8	11	3123	3252	20	16	12	40	50	26	24	43	29
31	12	10	13	19	21	21	17	15	5332	3554	51	36	67	193	279	282	144	99	144
																			25.5

MOIS 10 1968

	3 Ks								σs		as						As
1	12	12	3	7	7	6	6	7	1223	1554	57	53	7	20	17	16	14	18	25
2	15	14	12	14	14	9	8	11	5221	2244	96	82	57	84	71	31	22	42	61
3	17	12	13	13	5	1	1	0	3244	4320	121	57	67	70	13	3	3	0	42
4	1	1	1	0	2	6	3	1	2121	2213	2	2	3	1	4	16	6	3	5
5	0	0	3	4	4	0	0	0	0112	1101	0	1	6	10	8	1	0	1	3
6	1	1	11	6	4	3	4	3	3332	2242	3	2	46	16	10	7	10	7	13
7	8	8	8	0	3	7	11	8	1211	1143	23	25	26	1	6	18	43	24	21
8	7	4	2	3	3	5	5	4	4511	1343	20	8	5	7	6	12	13	10	10
9	7	4	1	0	4	8	5	5	4321	1123	18	10	2	1	9	26	11	12	11
10	7	1	4	4	3	0	0	3	7341	1100	20	2	8	8	6	1	0	6	6
11	0	2	4	1	1	1	3	5	1132	3112	1	5	9	3	3	2	6	11	5
12	11	12	12	14	11	14	16	12	2113	2432	43	53	57	78	41	79	117	54	65
13	13	9	11	10	9	9	7	9	4022	1246	61	29	42	37	32	31	17	31	35
14	8	8	4	5	7	6	7	8	2113	3445	25	26	9	13	20	14	17	22	18
15	2	4	3	5	4	4	1	2	3111	3322	4	8	6	13	9	10	2	5	7
16	0	3	5	2	5	4	5	3	0112	1242	0	6	13	5	13	10	11	7	8
17	6	8	6	4	5	4	5	6	1123	1242	16	23	15	10	13	10	13	16	15
18	8	8	7	5	3	3	3	6	3212	1026	24	21	18	12	6	6	7	16	14
19	4	0	4	6	7	3	11	11	3132	1022	9	1	10	15	17	6	47	47	19
20	7	3	8	5	6	6	2	1	5223	0233	18	6	21	12	15	15	4	3	12
21	0	1	2	4	2	1	2	0	1233	2221	1	2	4	9	4	3	4	1	4
22	0	2	1	0	1	0	1	2	1231	2022	1	4	3	1	3	0	3	4	2
23	0	1	1	1	0	4	5	3	0211	1321	0	2	2	2	1	10	11	6	4
24	4	4	2	5	4	8	9	3	1322	4442	8	9	4	11	9	24	33	7	13
25	2	5	7	7	8	1	4	6	1243	6235	5	11	19	20	22	3	10	16	13
26	1	1	3	4	1	1	8	8	2201	3233	2	2	7	8	2	3	21	24	9
27	6	4	7	3	5	3	3	4	3212	1104	14	10	18	7	13	6	6	9	10
28	2	2	5	4	4	3	3	12	1224	5111	5	4	11	9	10	6	6	53	13
29	9	8	8	11	15	18	15	12	1214	6472	29	21	23	48	89	169	99	57	67
30	7	4	4	9	11	8	7	10	4110	3163	18	9	9	29	44	26	20	40	24
31	11	10	11	20	23	19	19	17	1422	3666	45	34	47	205	364	180	180	134	149
																			22.7

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	3 Kn								σn		an						Δn
1	14	7	7	14	22	20	17	22	3333	2316	72	19	20	84	324	230	139	287	147
2	18	16	14	11	14	14	10	15	2532	3422	166	110	76	48	80	75	35	94	86
3	16	10	11	7	14	13	9	8	3421	3585	104	39	45	18	80	65	29	23	50
4	8	9	11	13	14	7	13	8	3234	5263	21	33	50	67	73	19	70	25	45
5	2	4	5	6	7	1	7	6	3434	2344	4	10	13	16	19	3	19	16	13
6	3	3	2	4	4	5	8	10	2221	3242	6	6	5	9	8	11	25	40	14
7	10	9	11	7	11	4	2	2	2452	7233	36	31	50	18	47	8	4	5	25
8	1	3	7	7	11	8	7	8	3342	5224	2	7	17	19	43	24	19	23	19
9	10	9	10	12	12	11	9	4	4123	4652	36	31	38	51	54	42	29	9	36
10	4	9	3	10	11	11	7	6	2424	3624	8	30	7	36	47	44	18	15	26
11	9	8	9	8	12	6	1	3	3533	6336	28	25	28	23	57	14	3	7	23
12	6	2	2	2	2	2	0	2	4423	3424	14	4	5	4	5	5	1	4	5
13	1	4	4	6	5	4	7	6	3431	3262	3	8	9	16	12	9	17	16	11
14	2	2	2	2	2	4	5	6	3442	3323	4	5	5	5	5	9	12	15	8
15	3	4	4	3	1	1	1	1	1222	3322	6	10	8	6	2	3	2	2	5
16	3	4	2	9	13	12	10	10	3350	3123	6	8	5	28	67	59	38	36	31
17	9	6	9	6	11	13	12	11	1132	7532	29	15	30	15	42	70	54	41	37
18	11	10	10	11	4	9	8	9	4535	2163	49	38	34	48	9	29	24	27	32
19	7	5	5	7	6	5	1	2	4322	2322	17	11	11	20	14	11	3	4	11
20	2	4	4	13	14	10	9	6	3423	3241	5	8	8	61	74	37	28	14	29
21	5	4	2	2	4	8	7	8	3233	2543	11	9	5	4	8	23	17	24	13
22	4	1	3	4	5	3	6	7	3231	2103	10	3	6	8	11	7	14	20	10
23	5	9	4	2	4	2	1	4	1432	2212	13	29	10	5	10	5	2	10	11
24	4	3	2	3	3	7	4	5	3130	2323	10	7	4	6	6	18	9	11	9
25	7	5	5	5	8	6	8	1	3223	2242	19	12	11	13	22	14	25	3	15
26	4	2	4	5	7	7	6	6	3123	2442	8	5	9	13	19	19	14	15	13
27	9	7	5	5	5	6	6	8	2222	1445	29	20	12	11	12	15	16	21	17
28	4	5	4	8	5	4	9	7	2232	3223	8	12	10	22	13	10	27	20	15
29	7	3	4	3	5	6	1	1	2221	3422	18	7	8	7	12	16	3	2	9
30	0	0	1	1	2	2	4	4	0021	2323	0	0	2	2	4	5	10	9	4
																			25.6

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	3 Ks								σs		as						As
1	16	7	5	14	21	21	18	23	7314	6484	115	20	13	86	252	254	153	334	153
2	20	17	14	11	12	13	13	14	3122	4342	220	143	74	41	56	69	67	82	94
3	17	9	11	7	12	11	7	6	5213	4453	123	32	49	19	58	45	20	14	45
4	5	11	12	13	12	8	11	7	1311	5244	12	45	57	62	60	21	48	20	41
5	2	3	4	4	5	1	4	4	2131	2234	4	6	9	9	11	2	9	8	7
6	2	2	1	4	3	3	6	10	1323	1124	5	5	2	9	6	6	15	34	10
7	9	10	10	7	9	2	1	2	1415	4231	32	35	34	19	29	4	3	5	20
8	2	4	4	6	10	8	7	6	2122	1342	4	8	10	16	37	24	20	16	17
9	10	9	10	10	10	8	7	4	1132	5444	34	32	39	40	34	24	18	8	29
10	4	7	3	8	9	8	5	7	1334	4614	8	20	6	21	29	21	12	17	17
11	8	7	8	9	10	4	0	3	3410	1311	24	19	23	29	37	10	1	6	19
12	3	0	1	2	0	1	0	1	2112	1213	7	1	2	4	1	2	1	3	3
13	1	3	5	7	3	4	7	5	2211	2351	2	6	12	17	7	9	18	12	10
14	1	2	1	2	3	3	4	6	2221	1232	2	4	2	5	6	7	10	16	7
15	3	6	6	4	0	1	0	2	1244	1112	7	15	14	9	1	2	1	4	7
16	4	4	4	9	14	12	8	12	3334	2115	9	9	9	32	72	53	26	54	33
17	10	6	11	7	10	11	13	11	3221	5442	40	14	42	17	34	49	61	47	38
18	11	9	11	10	3	8	8	8	4221	3132	49	29	43	37	6	26	21	21	29
19	5	5	4	8	7	3	1	4	1132	3024	13	12	10	25	20	6	2	8	12
20	1	3	3	12	14	11	10	7	2221	4433	3	7	6	57	76	45	36	20	31
21	4	5	4	3	4	6	5	6	3130	1010	9	13	10	6	8	15	13	15	11
22	5	2	3	4	4	2	7	8	1413	3153	13	5	7	10	9	5	19	21	11
23	6	8	5	2	3	1	2	7	2232	2213	15	22	12	5	7	2	5	20	11
24	9	4	3	4	1	7	5	7	2123	2123	29	9	7	9	3	18	12	20	13
25	10	6	5	5	8	5	8	1	3214	2233	37	15	13	13	21	11	24	3	17
26	3	3	3	5	6	8	7	7	0111	0144	6	6	6	13	15	23	18	18	13
27	8	5	6	6	5	7	7	8	3332	4344	21	13	14	15	11	20	17	23	17
28	5	6	3	5	4	5	9	9	2021	3255	11	15	7	12	10	11	33	29	16
29	8	4	3	3	4	5	2	3	3122	1121	24	8	7	7	8	13	4	6	10
30	1	0	1	1	1	2	4	3	3022	3231	3	0	2	3	3	4	9	6	4
																			24.8

MOIS 11 1968

	3 Km								Σ Km	am							Am	Am2
1	15	7	6	14	22	20	17	22	41.0	94	19	16	85	288	242	146	311	150	154
2	19	17	14	11	13	14	12	15	38.3	193	126	75	44	68	72	51	88	90	120
3	16	10	11	7	13	12	8	7	28.0	114	36	47	18	69	55	25	18	48	52
4	6	10	12	13	13	7	12	8	27.0	16	39	54	64	66	20	59	22	43	34
5	2	4	5	5	6	1	6	5	11.3	4	8	11	12	15	3	14	12	10	17
6	2	2	2	4	3	4	7	10	11.3	5	5	4	9	7	9	20	37	12	17
7	10	9	11	7	10	3	1	2	17.7	34	33	42	19	38	6	3	5	23	18
8	1	4	6	7	10	8	7	7	16.7	3	8	14	17	40	24	19	20	18	22
9	10	9	10	11	11	9	8	4	24.0	35	31	38	46	44	33	23	8	32	27
10	4	8	3	9	10	9	6	6	18.3	8	25	7	29	38	33	15	16	21	24
11	8	8	8	8	11	5	1	3	17.3	26	22	26	26	47	12	2	7	21	18
12	5	1	1	2	1	1	0	2	4.3	11	2	3	4	3	3	1	4	4	8
13	1	3	4	6	4	4	7	6	11.7	2	7	10	16	10	9	18	14	11	7
14	1	2	2	2	2	4	5	6	8.0	3	4	4	5	5	8	11	15	7	9
15	3	5	5	3	0	1	0	1	6.0	7	13	11	7	1	2	1	3	6	9
16	3	4	3	9	13	12	9	11	21.3	7	9	7	30	70	56	32	45	32	23
17	10	6	10	6	10	12	12	11	25.7	35	15	36	16	38	59	57	44	38	42
18	11	9	10	11	3	9	8	8	23.0	49	33	38	42	7	28	22	24	30	31
19	6	5	4	8	7	4	1	3	12.7	15	11	10	22	17	9	2	6	12	16
20	2	3	3	12	14	11	9	7	20.3	4	7	7	59	75	41	32	17	30	19
21	4	5	3	2	4	7	6	7	12.7	10	11	7	5	8	19	15	19	12	18
22	5	2	3	4	4	3	6	8	11.7	12	4	7	9	10	6	16	21	11	13
23	6	8	5	2	4	2	2	6	11.7	14	26	11	5	8	4	4	15	11	11
24	7	4	2	4	2	7	5	6	12.3	19	8	5	8	4	18	11	15	11	12
25	9	5	5	5	8	5	8	1	15.3	28	13	12	13	21	12	25	3	16	13
26	3	2	3	5	7	8	6	7	13.7	7	5	7	13	17	21	16	17	13	14
27	8	6	5	5	5	7	7	8	17.0	25	16	13	13	12	17	17	22	17	16
28	4	5	4	7	5	4	9	8	15.3	9	13	9	17	11	10	30	25	16	15
29	8	3	4	3	4	6	2	2	10.7	21	7	8	7	10	15	4	4	10	10
30	0	0	1	1	1	2	4	3	4.0	1	0	2	3	3	4	10	7	4	7
																		25.3	

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	3 Km								Σ Km	am							Am	Am2
1	5	5	4	7	9	8	5	2	15.0	11	13	9	18	29	26	12	5	15	12
2	2	2	6	7	6	7	6	8	14.7	5	5	14	17	16	19	16	23	14	19
3	6	11	8	9	10	10	10	10	24.7	14	44	24	28	39	37	34	36	32	29
4	9	3	10	12	9	12	11	8	24.7	32	6	40	53	31	54	48	22	36	38
5	6	7	13	14	11	8	11	6	25.3	15	20	67	75	48	26	45	16	39	34
6	9	7	5	7	2	1	4	5	13.3	30	20	13	17	5	3	9	13	14	16
7	3	1	1	3	3	7	4	4	8.7	6	2	3	6	7	19	10	8	8	10
8	5	7	9	6	9	5	7	8	18.7	12	17	29	16	30	13	19	25	20	15
9	4	1	3	4	4	4	7	9	12.0	8	3	6	10	9	10	18	29	12	19
10	9	9	9	9	8	1	4	7	18.7	28	29	31	28	21	3	10	18	21	17
11	4	4	3	2	3	9	8	5	12.7	10	9	7	4	7	28	26	12	13	14
12	9	7	4	4	4	4	6	2	13.3	30	19	8	10	10	9	16	5	13	13
13	5	3	1	4	3	8	8	4	12.0	12	7	3	8	6	21	26	9	12	10
14	3	3	4	4	4	2	1	3	8.0	7	6	8	10	10	5	3	6	7	10
15	5	5	7	1	6	5	6	8	14.3	13	11	17	3	14	12	15	22	13	12
16	6	8	5	5	7	4	8	6	16.3	14	26	11	12	19	10	26	14	17	15
17	6	4	4	4	3	2	2	2	9.0	16	8	10	8	6	4	5	5	8	11
18	6	5	4	4	6	6	8	7	15.3	16	13	9	10	16	16	26	20	16	15
19	9	7	8	7	8	8	8	7	20.7	31	18	24	20	23	23	22	19	23	18
20	5	3	5	3	2	1	2	3	8.0	12	6	11	6	4	2	4	6	6	14
21	7	6	8	9	8	9	7	11	21.7	17	14	21	27	24	31	20	49	25	20
22	10	8	7	6	8	9	7	2	19.0	40	22	17	16	21	30	17	5	21	22
23	5	4	8	8	11	9	9	8	20.7	12	10	22	21	41	29	30	26	24	20
24	7	5	7	3	6	5	3	11	15.7	18	11	17	7	15	13	6	43	16	30
25	11	13	13	11	5	7	4	7	23.7	41	67	65	50	11	17	10	18	35	24
26	4	3	4	5	2	2	5	5	10.0	10	6	8	11	5	4	13	11	9	15
27	5	9	10	11	9	5	4	4	19.0	11	28	37	42	30	13	9	8	22	16
28	2	3	5	6	6	6	4	5	12.3	4	7	12	15	16	16	10	13	12	12
29	4	3	3	6	8	9	8	9	16.7	10	6	6	14	21	29	23	28	17	15
30	3	4	4	7	8	4	7	5	14.0	7	9	10	18	24	10	19	13	14	16
31	8	3	3	4	5	7	9	10	16.3	26	6	6	10	11	19	29	35	18	16
																		17.8	

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	3 Kn								σn								An
1	5	6	5	7	10	10	5	1	2222	5543	11	14	12	20	37	34	13	3	18
2	2	3	5	7	6	8	6	6	2232	2741	4	6	12	18	15	24	16	15	14
3	5	11	8	9	10	10	9	11	2312	4444	12	48	26	29	40	39	32	44	34
4	10	3	11	12	10	13	12	8	3432	5333	39	7	43	53	36	67	56	25	41
5	7	8	14	15	12	8	12	7	1242	3532	17	23	77	92	60	26	51	19	46
6	9	8	6	8	3	2	4	4	1235	2333	31	24	15	23	6	4	8	10	15
7	3	1	2	3	4	8	5	4	3233	2522	7	2	4	6	8	22	11	8	9
8	5	6	9	7	9	5	8	8	3243	5233	12	15	30	18	33	12	23	26	21
9	4	2	3	5	5	5	6	8	3143	3454	9	5	7	11	11	13	16	25	12
10	9	8	8	9	8	2	4	7	3213	3334	33	26	26	29	24	5	9	19	21
11	5	4	3	1	4	9	9	5	2312	3343	12	9	7	3	8	30	31	13	14
12	8	8	3	4	5	5	7	3	2222	5320	26	21	7	8	11	11	18	6	14
13	6	3	1	3	3	8	9	4	1531	3252	15	7	2	7	7	21	27	9	12
14	2	2	3	4	5	2	1	2	3312	3232	4	5	7	8	11	4	3	4	6
15	4	5	5	1	6	5	5	7	3322	2243	9	11	12	3	16	11	13	18	12
16	5	8	4	5	8	4	9	6	2223	5453	13	24	10	12	23	9	27	16	17
17	7	4	4	4	4	2	2	1	4311	2312	18	8	8	8	8	5	5	3	8
18	7	6	4	4	6	6	8	8	4251	4242	17	15	9	9	15	15	25	21	16
19	8	6	6	6	8	9	8	8	2111	3444	25	16	16	15	26	27	26	23	22
20	5	3	5	3	2	2	1	1	4123	3222	11	7	11	6	4	4	3	3	6
21	7	6	6	7	8	9	8	12	4211	5663	17	15	16	20	25	28	25	53	25
22	10	8	6	6	8	9	7	2	5212	3422	35	23	15	14	24	32	19	5	21
23	4	4	7	7	11	10	10	9	3331	3565	9	10	20	18	50	37	36	31	26
24	7	5	6	3	7	7	4	11	2111	4514	20	12	16	7	18	18	8	41	18
25	9	13	11	11	4	6	4	7	1223	2125	32	67	46	43	10	15	9	17	30
26	3	3	3	4	2	2	5	3	0352	3323	6	6	6	10	5	5	11	7	7
27	6	8	10	11	10	7	4	4	5223	3124	14	26	35	44	38	17	9	8	24
28	2	3	5	5	7	7	5	5	3132	5335	4	7	11	11	17	19	12	13	12
29	5	3	2	5	8	10	8	9	4333	4456	11	7	5	12	24	34	26	31	19
30	4	5	5	8	8	4	8	6	3324	3254	9	13	13	21	25	9	23	14	16
31	9	4	3	3	5	8	9	11	5244	5524	27	8	6	7	13	23	31	44	20
																			18.6

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	3 Ks								σs								As
1	5	5	3	6	7	7	5	3	1111	3125	12	13	7	16	20	18	11	7	13
2	3	2	6	6	7	6	6	9	2312	4024	6	4	16	16	17	15	15	32	15
3	6	10	8	9	10	10	10	9	1324	6332	16	40	22	27	38	36	36	29	31
4	8	2	10	12	9	11	10	7	5434	4255	25	5	38	53	27	41	40	19	31
5	5	6	12	12	10	8	10	6	1522	3243	13	16	57	57	36	25	38	14	32
6	9	6	5	5	1	1	4	6	0223	2236	29	16	11	12	3	2	9	16	12
7	3	0	1	3	3	6	4	4	0111	2533	6	1	2	6	7	16	10	9	7
8	5	7	9	6	8	6	6	8	4320	3024	11	20	29	15	26	15	15	23	19
9	3	1	3	4	3	4	7	10	2243	2154	6	2	6	9	7	8	19	34	11
10	8	9	10	8	7	1	5	7	3131	1244	24	32	35	26	17	2	11	18	21
11	4	4	3	2	3	8	8	4	4322	1133	9	9	6	4	6	26	21	10	11
12	10	7	4	5	4	3	6	2	1112	3112	34	18	9	12	10	7	14	4	14
13	4	3	2	4	2	7	8	4	3214	2323	10	7	5	9	5	20	25	9	11
14	4	3	4	5	4	3	1	4	3031	3134	10	6	10	13	10	6	3	8	8
15	7	5	8	1	5	5	7	8	5323	4342	17	11	22	3	12	12	17	25	15
16	6	9	5	5	6	5	8	5	1424	2323	16	29	12	12	16	12	25	12	17
17	5	4	5	4	2	1	2	3	1114	2212	13	8	12	8	4	3	5	6	7
18	6	5	4	5	7	7	8	7	2313	4414	14	12	9	12	18	18	26	18	16
19	10	8	9	8	8	7	7	6	2212	2330	37	21	32	25	21	20	19	15	24
20	5	3	4	3	2	0	3	4	1233	2113	12	6	10	6	4	1	6	9	7
21	7	6	8	10	8	10	6	11	4411	1123	17	14	26	34	23	34	16	44	26
22	11	8	7	7	7	9	6	2	3235	1521	44	21	20	18	18	27	16	5	21
23	6	4	8	8	9	8	8	8	5211	1225	16	10	23	23	32	21	25	22	22
24	6	5	7	3	5	4	2	11	1212	3123	16	11	17	7	12	9	5	44	15
25	11	13	14	12	5	7	4	7	1344	3535	49	66	84	56	12	19	10	19	39
26	5	3	4	5	3	2	6	6	1121	1255	13	6	10	13	6	4	15	15	10
27	4	9	10	11	8	4	4	4	1042	2344	8	29	39	41	21	9	9	9	21
28	2	3	5	7	6	5	4	5	1244	4245	5	6	13	20	14	12	9	12	11
29	4	3	4	7	7	8	7	8	3114	1353	9	6	8	17	18	24	19	24	16
30	2	3	3	6	8	4	6	5	1110	1564	5	6	7	15	23	10	15	11	12
31	8	2	3	5	4	6	9	8	3424	2275	24	4	7	13	9	16	27	25	16
																			17.1

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