ROYAL OBSERVATORY

ANNALS

Number 13

Photoheliographic Results 1972-1976

HERSTMONCEUX: ROYAL GREENWICH OBSERVATORY

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PHOTOHELIOGRAPHIC RESULTS 1972 - 1976

INTRODUCTION

1. GENERAL

This volume contains photoheliographic results for the years 1972 to 1976 inclusive. These are the last photoheliographic results to be published by the Royal Greenwich Observatory. Results for the years 1874 to 1955 were published in the Greenwich Observations under the title "Greenwich Photo-Heliographic Results". For the years 1956 to 1961 they were published in the Royal Observatory Bulletins, Series C, and for the years 1962 to 1971 in the Royal Observatory Annals. The responsibility for the observing programme, which began at Greenwich in 1874, and the publication of the results was taken over by the Heliophysical Observatory, Debrecen, Hungary on 1977 January 1.

During the period 1972 to 1976 the majority of white light photographs were secured at the Royal Greenwich Observatory, Herstmonceux and at the Royal Observatory, Cape Town. The instruments employed at Herstmonceux, Cape and Kodaikanal for the observations are described in R. Obs. Annals No.11, 1975. The gaps in the observations were filled by photographs generously supplied by the Astrophysical Observatory, Kodaikanal, India, the Hale Observatories, Pasadena, U.S.A., the Heliophysical Observatory, Debrecen, Hungary, the Swiss Federal Observatory, Zurich, Switzerland, the Osservatorio Astronomico di Roma, Rome, Italy, and the Tokyo Astronomical Observatory, Tokyo, Japan.

The photographs that were selected for measurement were supplied by the observatories as follows:

	1972	1973	1974	1975	1976
Herstmonceux	179	219	237	233	258
Cape	163	126	108	112	77
Kodaikanal	20	14	17	10	22
Hale	2	4	1	9	7
Debrecen	-	2	-	1	2
Zurich	1	-	1	-	-
Rome	1	-	-	-	-
Tokyo	-	-	1	-	-
Total	366	365	365	365	366

The plates were measured by Ms. C.M. Quarrington and P.J. Rudd. The methods of measurement and reduction are described in R. Obs. Annals No.11, pages 6-7, 1975.

2. DESCRIPTION OF TABLES

(i) Positions and Areas of Sunspots for each Day in the Year.

The measured positions and areas of sunspots are given for each day in the year. The positions are referred firstly to a system of apparent polar coordinates on the Sun's disk and secondly to a system of heliographic coordinates. The table gives:

Col. 1. The month given numerically, the date and decimal of day reckoned from 0^h U.T.
Col. 2. Position angle P of the Sun's axis from the north point.
Col. 3. Heliographic longitude L_o of the centre of the disk.
Col. 4. Heliographic latitude B_o of the centre of the disk.
Col. 5. Number of spot group in order of appearance and in continuation of the group numbers given for the previous year. Single figures (1 = leader, 2 = follower) beneath the number of a spot group indicate the principal and most stable components of that group. (The areas of such components are already included in the total area of the group.) Groups seen on one day only are distinguished by the number of the rotation during which they were observed and suffixed by a number giving the order of their appearance in the rotation.
Col. 6. Distance of spot group from Sun's centre in units of the Sun's radius.
Col. 7. Position angle of spot group measured from the north pole of the Sun's axis in the direction N - E - S - W - N.
Col. 8. Heliographic longitude of spot group derived from the measures using a physical ephemeris based on Carrington's elements.
Col. 9. Heliographic latitude of spot group similarly derived.
Col. 10. Area of umbrae corrected for foreshortening and expressed in millionths of the Sun's visible hemisphere.
Col. 11. Area of whole spots comprising the group similarly expressed.

Notes on the sunspot groups are given at the end of this section.

(ii) General Catalogue of Groups of Sunspots.

(a) This catalogue contains particulars of every group of sunspots which lasted for two or more days, group numbers being in continuation of those given in previous years. The table includes an indication of those groups which may be considered to be members of "recurrent" series of groups which were selected upon the following plan. If any spot when first seen was 75° or more to the east of the central meridian, the Catalogue and, if necessary, the Daily Results, were searched some fifteen to sixteen days earlier to ascertain whether a spot group of similar heliographic longitude and latitude was then near the west limb of the Sun. Similarly, if any spot group when last seen was 75° or more to the west of the central meridian, a search was made fifteen to sixteen days later. When there appeared to be a case of probable continuity between groups in consecutive rotations of the Sun, the character of the groups, their areas and their longitude and latitude were carefully compared before accepting them as a recurrent group.

It should be noted that longitudes are based on the ephemeris for physical observations of the Sun given in the Astronomical Ephemeris, assuming a solar rotation period constant at all latitudes. After an interval of one rotation, recurring groups will, therefore, show in general - apart from any proper motion they may have of their own - apparent drifts in longitude varying in amount according to their respective latitudes. The following table, derived from the formula $\xi = 14^o.37 - 2^o.600 \sin^2\phi$, gives the apparent drift in longitude (ξ) appropriate to different latitudes (ϕ) after an interval of 27 days, a drift forwards corresponding to an increase in heliographic longitude.

Latitude	..	Drift forwards	Latitude	..	Drift backwards
0°	..	5°	20°	..	3°
5°	..	4.5	25°	..	7.5
10°	..	3	30°	..	12.5
15°	..	0.5	35°	..	18

Groups lasting for two or more days are tabulated as follows:

Col. 1. Group number of sunspots.
Col. 2. U.T. of the central meridian passage of each group as deduced from its mean longitude (given in Col. 10). For those groups which are in existence at the time of the central meridian passage of their longitude, the time is given to $0^{d}.01$, corresponding to $0^{\circ}.13$ of solar longitude. In other cases, in which groups disappear before or appear after the central meridian, the deduced time is given to $0^{d}.1$.
Col. 3. Duration of each group in days. Intermittent groups, i.e. groups which are not seen on every day between their first and last appearances, are indicated by two numbers, separated by a solidus. The first represents the number of days on which they are actually observed and the second the number of days covering the extreme limits of observation.
Col. 4. Date on which each group is first seen.
Col. 5. Heliographic longitude from the meridian passing through the centre of the Sun's disk at the time of observation when the group is first seen. Longitudes west of the centre are reckoned as positive.
Col. 6. Date on which each group is last seen.
Col. 7. Heliographic longitude from the meridian passing through the centre of the Sun's disk at the time of observation when the group is last seen. Longitudes west of the centre are reckoned as positive.
Col. 8. Mean area for umbrae, corrected for foreshortening and expressed in millionths of the Sun's visible hemisphere.
Col. 9. Mean area for whole spots similarly expressed.
Col. 10. Mean heliographic longitude of each group.
Col. 11. Mean heliographic latitude of each group.
Col. 12. Reference to recurrent groups. The numeration is in continuation of the recurrent series given in Ledger I of the Greenwich Photo-Heliographic Results for 1955; bracketed numbers indicate the order of a group in the series.

When a group is 80° or more from the Sun's central meridian, or in cases of close proximity to the Sun's limb when only part of the group is visible, the measures for that day are not included in deriving the mean area or the mean longitude and latitude of the group.

(b) The second part of the catalogue contains groups of sunspots seen on one day only. These appear in the Daily Results with a distinctive numeration comprising the number of the rotation during which each was observed and a suffix giving the order of appearance in each rotation. These short-lived groups are usually composed of one or two very small spots. The date of appearance is given in column 2 and the deduced time of the central meridian passage of each spot is given in column 4.

(iii) Total Areas of Sunspots and Faculae.

This table contains total areas of sunspots and faculae (the latter separated into west and east hemispheres) for each day in the year.

The place where the photograph was taken is indicated in the second column by a code as follows:

H = Herstmonceux, C = Cape, K = Kodaikanal, P = Hale, D = Debrecen, Z = Zurich, R = Rome, J = Japan.

The projected areas and those corrected for foreshortening are expressed in millionths of the Sun's apparent disk and visible hemisphere, respectively.

3. SUMMARY OF RESULTS

The rotations adopted in the tables (which are in continuation of those from 1874-1971) correspond to the synodic rotation of the Sun, and the commencement of each is defined by the coincidence of the assumed prime meridian with the central meridian; the assumed prime meridian is the meridian which passed through the ascending node of the Sun's equator on the ecliptic at mean noon on 1854 January 1, and the assumed period of the Sun's sidereal rotation is 25.28 days. The numeration of the rotations is a continuation of Carrington's series, with rotation No. 1 commencing on 1853 November 9. The dates of commencement of the rotations are given in U.T.

(i) Mean Areas of Sunspots and Faculae.

These areas were calculated by taking the means of the areas for each day of observation throughout each rotation of the Sun. The projected areas and those corrected for foreshortening are expressed in millionths of the Sun's apparent disk and visible hemisphere, respectively.

(ii) Mean Heliographic Latitude of Sunspots.

The heliographic latitude of each spot for each day has been multiplied by its area (corrected for foreshortening), and the sum of the products, for spots north of the equator, has been divided by the sum of the corresponding areas to form the mean heliographic latitude of spotted area north of the equator; similarly for spots south of the equator. In forming the mean heliographic latitude of entire spotted area, the algebraic sum of the products for spots north and south of the equator has been divided by the sum of the areas; for the mean distance from the equator of all spots, the numerical sum of the products, without regard to the sign of latitude, has been similarly divided.

The mean areas have been formed by dividing the sum of the daily areas (corrected for foreshortening) by the number of days of observation for each rotation of the Sun and are expressed in millionths of the Sun's visible hemisphere.

A descriptive summary of solar activity during each year is also given.

4. DISTRIBUTION OF SUNSPOTS, 1874-1976

The last printed page contains a diagram showing sunspot latitude plotted against synodic rotation number (and date) for the whole period of the Greenwich photoheliographic observations from 1874 to 1976. Such a diagram was first given for the period 1874 to 1954 in Sunspot and Geomagnetic-Storm Data derived from Greenwich Observations 1874-1954, compiled by H. Spencer Jones, H.M.S.O., 1955.

The diagram consists of a series of vertical lines representing the range in latitude of spot groups plotted against the synodic rotation number which was associated with the group when it was first observed. A vertical line is drawn between the observed maximum and minimum latitude of each spot group. The length of the line for spot groups with less than one degree movement in latitude has been set at one degree. Any overlap in latitude between spot groups with the same synodic rotation number has been ignored.

Underneath the "butterfly" diagram, as an indication of sunspot activity and for comparison, is a diagram of the mean total daily sunspot areas in millionths of the visible hemisphere of the Sun for each synodic rotation. A smooth curve has been drawn through the points using a series of cubic splines fitted over intervals of ten synodic rotations.

5. ACKNOWLEDGEMENTS

These results were compiled under the supervision of Dr B.D. Yallop by Ms C.M. Quarrington and P.J. Rudd. Miss C.Y. Hohenkerk assisted in the preparation of the solar butterfly diagram, which was produced on a Calcomp graph plotter attached to the ICL 1903T.

We are indebted to the directors of the Astrophysical Observatory, Kodaikanal, India, the Hale Observatories, Pasadena, U.S.A., the Heliophysical Observatory, Debrecen, Hungary, the Swiss Federal Observatory, Zurich, Switzerland, the Osservatorio Astronomico di Roma, Rome, Italy and the Tokyo Astronomical Observatory, Tokyo, Japan for their cooperation in supplying photographs to fill the gaps in the Herstmonceux and Cape series.

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1979 December

PHOTOHELIOGRAPHIC RESULTS 1972-1976

TABLES

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jan. 1.323	+ 2.3	347.8	-3.0	22976	.941	256.5	57.9	-13.7	28	158
				1583 01	.375	232.8	5.8	-15.9	0	2
				22975	.263	251.7	2.3	- 7.6	5	55
				22973	.497	31.9	331.4	+22.0	6	41
				22974	.315	93.0	329.5	- 3.8	24	177
				22978	.723	111.5	303.2	-17.5	2	5
2.307	+ 1.8	334.8	-3.1	22976	.997	256.6	60.7	-13.6	13	101
				22975	.495	260.4	4.2	- 7.5	5	38
				22973	.428	8.2	331.1	+21.8	5	29
				22974	.093	96.3	329.5	- 3.7	21	155
				22979	.448	109.8	309.5	-11.5	0	3
				22980	.931	101.3	266.3	-11.7	5	42
3.316	+ 1.3	321.6	-3.2	22975	.684	261.9	4.5	- 7.9	7	40
				22973	.448	339.3	331.3	+21.5	5	34
				22974	.141	265.1	329.6	- 3.9	28	159
				22979	.257	119.2	308.4	-10.3	1	13
				22980	.828	102.3	266.0	-12.0	11	68
				22981	.950	112.5	250.2	-22.3	13	99
4.327	+ 0.8	308.2	-3.4	22975	.832	262.8	4.5	- 7.9	4	37
				22973	.552	319.7	330.8	+21.7	2	17
				22974	.360	267.8	329.3	- 3.9	20	149
				22977	.309	326.6	318.2	+11.6	0	11
				22980	.670	104.4	266.8	-12.1	3	18
				1583 02	.785	73.1	258.5	+11.0	0	5
				22981	.869	114.0	249.3	-22.4	10	100
5.082	+ 0.5	298.3	-3.5	22975	.911	262.9	3.9	- 7.9	2	17
				22982	.855	287.7	354.8	+13.2	2	19
				22973	.652	310.3	330.5	+21.9	1	5
				22974	.517	268.0	329.3	- 4.0	28	132
				22977	.371	308.4	315.4	+10.0	2	11
				22980	.531	108.3	267.3	-12.5	2	12
				22981	.781	116.7	249.3	-22.8	16	73
6.476	- 0.2	279.9	-3.6	22982	.967	283.7	353.6	+12.2	8	66
				22974	.759	267.4	329.3	- 4.3	21	124
				22977	.670	288.9	319.8	+ 9.7	17	128
				22980	.269	126.6	267.2	-12.7	1	6
				22981	.590	124.8	248.4	-22.7	9	31
7.285	- 0.6	269.3	-3.7	22974	.863	267.0	328.8	- 4.5	25	131
				22977	.797	285.7	320.3	+10.1	14	79
				1583 03	.811	299.4	318.2	+21.0	0	11
				1583 04	.376	259.8	291.1	- 7.2	2	11
				22981	.470	134.6	248.1	-22.6	8	44
8.082	- 1.0	258.8	-3.8	22974	.936	266.5	328.1	- 4.6	17	106
				22977	.876	283.8	318.3	+10.1	10	78
				22981	.379	150.2	247.0	-22.8	4	20
				22983	.653	105.0	218.7	-12.6	0	1
				22984	.930	98.2	190.3	- 9.0	3	24

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jan. 9.080	- 1.5	245.6	-3.9	22974	.992	265.9	328.4	- 4.6	15	76
				22977	.950	279.9	316.4	+ 8.1	0	13
				22981	.327	183.3	246.8	-22.9	3	17
				22984	.820	97.8	190.6	- 8.6	12	64
10.575	- 2.2	225.9	-4.0	22981	.457	226.2	246.7	-22.1	0	17
				22983	.184	146.1	219.9	-12.8	3	21
				22984	.550	98.4	192.8	- 8.0	7	51
11.281	- 2.5	216.7	-4.1	22983	.170	208.8	221.4	-12.6	1	6
				22984	.431	101.1	191.4	- 8.5	9	52
12.504	- 3.1	200.6	-4.3	22983	.342	243.0	218.7	-13.0	17	134
				22984	.143	126.7	193.9	- 9.1	17	103
13.281	- 3.5	190.3	-4.3	22983	.486	250.8	218.3	-13.0	10	82
				22984	.116	226.3	195.2	- 8.9	7	92
14.283	- 4.0	177.1	-4.4	22983	.657	254.9	217.6	-13.2	6	37
				22984	.360	256.3	197.8	- 9.0	3	25
				22985	.939	99.8	107.1	-10.7	3	27
				22986	.984	104.0	96.9	-14.6	44	367
15.281	- 4.4	164.0	-4.5	22983	.809	256.8	217.8	-13.3	2	11
				22985	.835	99.2	107.3	-10.2	6	38
				22987	.864	70.7	107.0	+14.1	0	6
				22986	.926	104.4	96.0	-15.0	63	542
16.277	- 4.9	150.9	-4.6	22985	.691	99.5	107.3	- 9.9	1	6
				22987	.749	66.0	106.1	+14.4	9	71
				22986	.829	105.0	95.1	-15.0	52	518
17.286	- 5.4	137.6	-4.7	22988	.439	111.0	112.8	-13.3	2	10
				22987	.609	58.3	105.3	+14.6	7	37
				22986	.676	106.9	95.7	-14.8	52	418
18.284	- 5.8	124.5	-4.8	22989	.802	262.6	177.8	- 8.8	3	23
				22988	.227	122.7	113.2	-11.7	2	15
				22987	.467	44.0	104.9	+15.0	4	14
				22986	.515	111.4	94.8	-15.0	71	547
19.319	- 6.3	110.8	-4.9	22989	.935	262.5	180.3	- 8.7	0	3
				22987	.348	13.9	105.9	+14.7	3	15
				22986	.326	124.3	94.7	-15.3	51	478
20.289	- 6.8	98.0	-5.0	22987	.369	338.2	106.2	+15.0	25	292
				22986	.180	163.1	95.0	-14.9	58	601
21.447	- 7.3	82.8	-5.1	1583 05	.902	256.9	147.5	-14.0	0	5
				22990	.742	299.0	125.4	+17.3	16	75
				22991	.518	245.9	112.2	-16.6	32	151
				22987	.507	311.1	106.0	+14.7	49	299
				22986	.265	227.3	94.4	-15.4	58	488

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_c	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jan. 22.319	- 7.7	71.3	-5.2	22990	.850	294.1	125.5	+17.3	34	263
				22991	.669	250.6	112.4	-16.7	27	183
				22987	.639	299.8	106.1	+14.2	47	321
				22986	.426	243.4	94.5	-15.8	38	345
				1583 06	.269	126.7	58.5	-14.3	1	4
				22992	.443	104.2	45.5	-10.9	1	9
23.426	- 8.2	56.7	-5.3	22990	.953	289.7	126.1	+16.9	53	316
				22991	.830	252.9	112.7	-17.1	12	99
				22987	.805	292.2	106.9	+14.3	29	202
				22986	.616	249.0	93.6	-17.0	40	347
				22993	.142	156.6	53.4	-12.7	3	20
				22992	.198	114.7	46.3	- 9.9	6	28
				22994	.698	65.7	16.2	+12.6	8	30
				22995	.963	102.3	341.8	-13.3	24	179
				22996	.982	104.9	336.8	-15.6	11	56
24.288	- 8.6	45.4	-5.4	22990	.991	287.9	125.4	+16.9	44	244
				22991	.917	253.5	112.2	-17.3	5	42
				22987	.900	288.4	106.8	+13.9	38	247
				22986	.756	251.6	93.9	-17.4	40	262
				22993	.215	231.7	55.3	-12.9	1	6
				1583 07	.293	184.6	46.8	-22.3	0	2
				22997	.177	169.7	43.5	-15.4	6	44
				22994	.554	54.5	17.8	+13.9	3	15
				22995	.900	102.5	341.0	-13.6	29	138
				22996	.928	104.4	336.9	-15.3	11	39
				22998	.993	75.0	324.2	+14.2	8	51
25.376	- 9.0	31.1	-5.5	22987	.978	284.9	107.1	+13.3	29	281
				22986	.888	252.4	93.8	-18.1	48	358
				22992	.241	259.1	44.8	- 7.9	8	70
				22997	.273	229.5	43.4	-15.5	16	141
				22994	.400	29.0	19.5	+15.0	2	15
				22995	.767	102.6	341.1	-13.2	16	172
				22996	.800	105.1	338.1	-15.3	11	56
				22998	.930	72.4	325.2	+14.1	8	85
				22999	.987	74.8	312.4	+13.9	0	25
26.292	- 9.4	19.0	-5.5	22986	.952	251.7	91.7	-19.1	3	44
				22992	.447	262.7	45.5	- 8.2	14	85
				22997	.433	245.0	42.9	-15.6	14	100
				22994	.359	358.0	19.7	+15.4	2	17
				22995	.631	104.5	340.3	-13.4	15	102
				22996	.673	107.8	337.4	-16.0	9	40
				22998	.834	69.3	325.7	+13.9	28	136
				22999	.935	73.2	312.1	+13.5	9	41
27.416	- 9.9	4.2	-5.6	22993	.749	257.3	52.7	-13.2	2	13
				22992	.655	263.9	45.2	- 8.2	20	170
				22997	.639	252.9	43.3	-15.2	18	103
				22994	.446	323.0	20.3	+15.4	1	6
				22996	.435	117.9	340.7	-16.9	2	22
				22995	.433	109.9	339.6	-13.6	11	70
				22998	.677	62.7	326.1	+13.6	22	135

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jan. 27.416	Continued			22999	.819	69.7	312.3	+13.0	4	24
				23000	.877	76.6	304.7	+ 8.8	2	11
28.283	-10.3	352.8	-5.7	22993	.866	258.0	53.0	-13.3	2	29
				22992	.796	264.4	45.7	- 7.9	24	136
				22997	.775	255.1	43.5	-15.1	7	51
				23001	.022	69.1	351.6	- 5.3	1	4
				22996	.279	139.1	341.8	-17.7	3	24
				22995	.253	121.1	340.0	-13.0	5	47
				22998	.543	53.7	326.2	+13.6	14	95
				22999	.700	63.0	312.9	+14.1	4	35
				23000	.753	72.7	306.3	+ 9.0	0	10
29.50†	-10.8	336.8	-5.8	22993	.965	257.2	52.1	-13.9	8	97
				22992	.928	263.4	45.2	- 8.2	9	124
				22997	.911	256.0	42.9	-15.1	8	86
				22994	.727	297.4	18.6	+15.2	0	13
				23001	.286	267.7	353.4	- 6.2	0	8
				22996	.213	209.8	343.1	-16.4	10	65
				22998	.379	30.3	325.5	+13.3	16	94
				22999	.521	49.8	312.6	+14.3	0	8
				23000	.537	68.7	306.6	+ 6.2	0	4
30.447	-11.2	324.3	-5.9	22992	.990	262.8	46.6	- 7.9	14	96
				22997	.978	255.6	43.2	-15.3	10	71
				23002	.775	288.1	12.6	+10.0	3	22
				22996	.351	238.8	342.5	-16.0	29	184
				22998	.332	358.6	324.8	+13.4	21	110
				23000	.378	48.4	307.7	+ 8.9	1	11
31.532	-11.7	310.0	-6.0	23002	.906	285.0	12.8	+10.8	5	43
				22996	.549	248.4	342.1	-16.7	37	263
				22998	.415	322.7	324.9	+13.4	20	97
				23000	.263	12.1	306.8	+ 8.9	2	20
Feb. 1.083	-11.9	302.8	-6.0	23002	.951	284.7	12.6	+12.0	3	38
				22996	.644	251.1	342.1	-16.7	37	196
				22998	.490	311.4	324.9	+13.3	16	71
				23003	.445	309.1	323.3	+10.6	0	4
				23000	.278	348.0	306.1	+ 9.7	3	15
2.083	-12.3	289.6	-6.1	22996	.797	253.5	342.3	-16.8	16	92
				22998	.642	299.1	324.6	+13.2	9	45
				23000	.424	306.7	309.6	+ 8.9	4	13
				23004	.325	251.2	307.8	-11.8	9	47
3.378	-12.8	272.5	-6.2	22996	.938	256.2	343.0	-15.0	0	12
				23003	.810	287.8	324.0	+10.5	0	7
				23000	.631	293.2	308.4	+ 9.3	22	136
				23004	.585	258.6	308.2	-11.7	4	43
				23005	.115	322.6	276.5	- 0.9	1	8
				23006	.968	96.0	196.7	- 7.4	8	49

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Feb. 4.414	-13.2	258.9	-6.2	23000	.801	285.9	310.0	+ 8.7	33	210
				23004	.768	259.5	309.3	-12.0	5	56
				23005	.309	287.5	276.0	- 0.7	15	66
				23006	.889	94.7	195.9	- 7.1	5	33
5.442	-13.7	245.4	-6.3	23000	.929	281.4	312.0	+ 8.1	24	168
				23004	.874	259.2	306.7	-12.4	7	24
				23005	.518	279.4	276.0	- 0.6	13	72
				23007	.259	207.4	252.6	-19.5	8	46
				23006	.777	95.0	194.2	- 7.8	3	24
6.324	-14.0	233.8	-6.3	23000	.990	278.7	314.5	+ 7.6	17	176
				23004	.951	258.9	306.3	-12.5	0	13
				23005	.671	276.2	275.4	- 0.6	7	54
				23007	.392	233.5	253.2	-19.4	25	163
				23008	.156	85.4	224.8	- 5.6	0	2
7.288	-14.4	221.1	-6.4	23005	.832	273.7	277.0	- 0.5	4	21
				23007	.573	243.7	254.1	-20.1	22	142
				23008	.062	275.5	224.6	- 6.1	3	24
				23006	.406	91.2	197.1	- 6.3	0	5
				23009	.557	91.9	187.1	- 6.4	5	19
8.474	-14.8	205.4	-6.5	23007	.761	248.4	254.4	-20.5	18	92
				23008	.317	269.4	224.0	- 6.3	1	3
				23009	.280	95.3	189.2	- 7.7	2	12
				23010	.900	95.3	141.0	- 7.5	5	42
				23011	.972	80.6	130.4	+ 7.5	18	117
				23012	.993	72.6	124.9	+16.3	35	303
9.416	-15.2	193.1	-6.5	23007	.869	250.6	253.5	-20.0	4	35
				23010	.769	94.7	142.6	- 7.8	17	128
				23011	.898	78.6	130.8	+ 7.2	15	83
				23012	.944	70.6	125.6	+15.9	29	168
10.415	-15.5	179.9	-6.6	23007	.936	252.3	250.1	-18.8	3	12
				23010	.587	95.0	143.8	- 8.3	29	182
				23011	.777	75.2	130.9	+ 7.1	3	21
				23012	.857	66.8	125.1	+15.9	27	209
				23013	.982	106.1	99.5	-17.0	34	226
11.483	-15.9	165.8	-6.6	23010	.371	96.1	144.1	- 8.4	49	271
				23011	.610	69.0	131.0	+ 7.1	0	4
				23012	.728	60.3	124.8	+16.1	33	208
				23013	.915	106.1	98.9	-17.4	21	181
				23014	.967	62.8	95.7	+24.1	25	129
12.306	-16.2	155.0	-6.7	23010	.178	101.4	144.9	- 8.6	26	184
				23012	.616	52.6	124.5	+16.2	39	241
				23013	.836	106.2	98.0	-17.2	34	240
				23014	.912	60.1	95.5	+23.7	20	112
				23015	.928	112.0	86.2	-22.9	0	8

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Feb. 13.082	-16.5	144.8	-6.7	23010	.036	163.3	144.2	- 8.7	34	176
				23012	.525	40.7	123.9	+17.1	59	240
				23013	.737	107.4	97.6	-17.3	55	242
				23014	.847	55.8	94.9	+24.2	21	79
				23015	.828	112.1	89.1	-22.0	0	4
14.413	-17.0	127.2	-6.8	23010	.316	263.4	145.6	- 8.5	14	85
				23012	.397	6.6	124.5	+16.3	44	180
				1584 01	.569	6.5	123.1	+27.5	1	4
				23016	.343	111.2	108.1	-13.5	0	17
				23013	.511	113.5	97.9	-17.6	44	207
				23014	.692	44.7	95.3	+23.7	7	54
				23015	.616	116.0	91.0	-21.1	10	55
				23017	.923	97.5	59.3	- 9.5	30	185
15.308	-17.3	115.5	-6.8	23010	.502	265.2	145.7	- 8.3	7	34
				23012	.425	339.0	124.6	+16.5	27	206
				23016	.123	119.2	109.2	-10.2	0	4
				23013	.328	123.5	98.9	-16.9	41	375
				23014	.597	32.7	95.0	+23.7	7	55
				23015	.477	122.5	90.1	-21.0	16	115
				23017	.831	96.1	58.9	- 8.8	25	225
				23018	.932	100.9	46.1	-12.6	3	46
16.357	-17.6	101.7	-6.9	23010	.693	265.2	145.7	- 8.3	3	12
				23012	.538	316.7	124.2	+16.6	39	196
				23016	.162	233.2	109.3	-12.4	0	4
				23019	.100	202.2	103.8	-12.1	0	10
				23013	.195	163.7	98.4	-17.6	45	273
				23014	.519	11.7	95.1	+23.6	8	43
				23015	.319	141.9	89.5	-21.2	39	321
				23017	.663	94.8	59.9	- 8.3	41	258
				23018	.827	101.4	45.4	-13.2	15	110
				23020	.983	80.7	23.6	+ 7.8	82	597
				23021	.992	77.0	21.0	+11.8	0	41
17.742	-18.1	83.4	-6.9	23012	.725	300.9	123.7	+16.6	48	193
				23016	.463	252.2	110.4	-14.3	0	11
				23019	.300	253.1	100.4	-11.6	0	9
				23013	.300	229.6	97.3	-17.9	58	274
				23014	.541	340.3	94.9	+23.7	7	30
				23015	.265	198.0	88.4	-21.4	48	253
				23017	.386	92.5	60.6	- 7.3	33	158
				23018	.657	104.1	42.4	-14.4	95	374
				23020	.888	77.1	22.7	+ 8.1	135	729
				23021	.943	74.5	15.3	+12.1	67	415
18.084	-18.2	78.9	-6.9	23012	.770	298.6	123.7	+16.7	27	181
				23022	.666	307.0	112.7	+17.8	0	4
				23019	.381	255.4	101.0	-11.9	0	5
				23013	.359	236.4	97.2	-18.0	49	317
				23014	.566	333.8	94.7	+23.7	7	27
				23015	.300	212.9	88.9	-21.4	42	211
				23017	.309	91.7	60.8	- 7.1	25	154
				23018	.601	105.3	42.3	-14.7	77	386

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Feb. 18.084	Continued			23020	.844	75.5	23.4	+ 8.3	120	721
				23021	.907	72.9	16.5	+12.3	61	445
19.332	-18.6	62.5	-7.0	23012	.906	292.8	123.3	+17.2	27	205
				23022	.819	295.8	112.5	+16.4	5	29
				23013	.579	248 2	96.8	-18.2	40	315
				23014	.698	315.4	94.8	+23.9	4	28
				23015	.473	233.7	86.8	-22.6	26	159
				23017	.015	102.2	61.6	- 7.2	12	106
				23018	.349	114.1	43.3	-14.8	91	573
				23020	.662	69.2	23.9	+ 8.1	96	1027
				23021	.759	68.1	16.7	+11.6	61	476
				23023	.973	107.5	344.4	-18.5	104	882
20.385	-18.9	48.6	-7.0	23012	.972	289.8	121.7	+17.3	22	177
				23022	.908	292.3	109.8	+16.9	10	45
				23013	.732	251.8	95.4	-18.0	32	289
				23014	.810	306.8	93.8	+24.1	2	14
				23015	.630	242.7	85.7	-22.4	16	71
				23017	.206	269.9	60.5	- 6.9	14	90
				23018	.172	142.5	42.4	-14.8	63	473
				23020	.480	59.8	24.0	+ 7.6	105	898
				23021	.608	60.2	16.1	+11.7	74	572
				23023	.904	106.9	343.3	-18.3	96	803
21.290	-19.2	36.7	-7.0	23013	.857	253.1	96.0	-18.1	29	242
				23014	.906	301.0	94.9	+24.2	2	10
				23015	.785	248.0	88.0	-21.6	3	22
				23017	.421	268.9	61.7	- 6.9	12	96
				23018	.176	218.9	43.2	-14.8	49	384
				23020	.305	36.8	26.1	+ 7.2	107	776
				23021	.459	46.2	17.0	+11.8	59	515
				23023	.797	107.8	343.8	-18.4	91	842
				23024	.957	101.0	322.8	-12.5	0	4
22.297	-19.5	23.4	-7.1	23013	.946	253.3	95.6	-18.0	29	210
				23014	.974	297.4	95.3	+24.6	0	5
				23025	.919	279.3	89.0	+ 5.7	11	40
				23015	.899	249.3	87.9	-21.7	0	5
				23017	.618	268.0	61.7	- 6.8	5	40
				23018	.356	246.3	43.1	-14.9	39	323
				23026	.400	339.7	31.7	+14.9	1	6
				23020	.252	350.7	25.8	+ 7.3	95	779
				23021	.345	20.1	16.5	+11.8	56	518
				23023	.638	109.8	344.5	-18.0	99	755
				23024	.865	99.8	323.0	-12.0	0	6
				23027	.914	80.1	318.7	+ 6.1	0	10
23.374	-19.8	9.2	-7.1	23013	.994	252.3	94.6	-18.3	46	229
				23025	.987	276.3	89.0	+ 5.0	37	179
				23017	.795	267.7	62.0	- 6.1	5	29
				23018	.549	252.4	42.0	-15.5	42	220
				23026	.526	313.1	32.5	+14.5	0	4
				23020	.377	309.9	26.1	+ 7.2	94	790
				23021	.348	337.7	17.0	+11.7	51	388

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Feb. 23.374	Continued			23023	.450	115.9	344.2	-17.8	82	722
				23024	.735	100.4	321.7	-12.4	0	6
				23027	.790	76.5	318.9	+ 6.1	2	7
24.410	-20.1	355.6	-7.1	23017	.920	266.6	62.7	- 5.9	3	11
				23018	.720	255.3	41.7	-15.5	22	146
				23026	.680	301.6	32.3	+15.1	0	4
				23020	.556	294.8	26.0	+ 7.3	101	778
				23021	.487	310.9	17.6	+11.9	31	437
				23023	.263	135.1	344.4	-17.7	102	661
				1585 01	.578	52.1	327.6	+14.4	1	5
25.397	-20.4	342.6	-7.2	23018	.861	256.8	42.6	-15.0	19	155
				23020	.718	287.1	26.2	+ 7.0	77	706
				23021	.650	297.6	18.5	+11.7	39	295
				23028	.460	309.2	3.8	+10.2	1	2
				23023	.179	193.4	345.1	-17.1	112	662
				23029	.995	98.8	257.3	- 9.4	34	306
26.351	-20.7	330.0	-7.2	23018	.962	257.9	45.1	-13.6	7	57
				23020	.851	282.8	26.6	+ 6.9	62	547
				23021	.801	291.0	19.7	+12.1	20	176
				23028	.637	295.7	5.6	+10.2	3	15
				23023	.315	239.6	346.4	-16.0	67	441
				23029	.957	96.7	256.3	- 8.5	39	303
27.339	-20.9	317.0	-7.2	23020	.940	279.7	25.6	+ 6.6	46	426
				23021	.920	286.5	21.3	+12.1	5	24
				23028	.790	289.3	6.2	+10.5	0	14
				23023	.511	250.9	347.0	-15.8	62	387
				23030	.477	55.3	293.7	+ 9.1	2	7
				23029	.864	95.7	256.9	- 8.6	35	266
28.301	-21.2	304.4	-7.2	23020	.996	277.4	27.9	+ 6.6	63	615
				23021	.980	283.7	20.8	+11.8	5	16
				23028	.929	287.1	9.8	+12.9	0	17
				23023	.681	254.9	347.2	-15.5	54	400
				23027	.384	309.2	321.7	+ 7.1	1	5
				23030	.315	29.9	295.3	+ 8.7	2	15
				23031	.279	106.3	288.6	-11.4	4	23
				23032	.753	54.8	263.5	+20.3	3	26
				23029	.729	95.4	257.3	- 8.9	32	173
29.293	-21.4	291.3	-7.2	23023	.825	256.3	347.3	-15.4	36	377
				23033	.501	288.3	319.6	+ 2.7	1	6
				23030	.287	345.8	295.4	+ 8.9	7	55
				23031	.076	151.1	289.2	-11.0	3	32
				23032	.634	44.7	263.0	+20.3	3	16
				23029	.540	95.3	258.4	- 9.0	10	91
				23034	.939	97.6	220.9	- 9.6	12	61
Mar. 1.387	-21.7	276.9	-7.2	23023	.945	256.3	348.8	-15.3	29	266
				23033	.717	277.3	322.0	+ 0.1	0	2
				23030	.429	310.8	296.0	+ 9.4	33	189
				23031	.259	260.0	291.8	- 9.6	1	10

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Mar. 1.387	Continued			23029	.318	97.0	258.3	- 9.1	9	46
				23034	.818	96.5	221.6	- 9.5	11	86
				23035	.973	77.4	202.2	+10.4	5	14
				23036	.984	97.2	196.5	- 8.4	119	826
2.455	-22.0	262.8	-7.2	23023	.995	255.5	348.4	-15.1	10	72
				23030	.626	294.5	297.9	+ 9.1	24	213
				23031	.507	264.6	293.4	- 9.0	1	8
				23029	.110	109.2	256.8	- 9.3	3	38
				23034	.631	94.5	223.5	- 8.5	20	106
				23035	.875	73.2	204.5	+10.8	11	79
				23036	.941	96.4	192.0	- 8.5	252	1312
3.472	-22.2	249.4	-7.2	23030	.798	287.4	299.7	+ 9.2	22	193
				23031	.678	261.8	292.3	-10.9	0	3
				23029	.138	249.6	256.9	- 9.9	0	11
				23037	.349	105.3	229.4	-12.1	1	5
				23034	.422	92.7	224.3	- 7.7	16	118
				23035	.749	68.4	204.4	+10.9	10	89
				23036	.835	95.4	192.4	- 8.5	210	1320
4.418	-22.4	236.9	-7.2	23030	.917	283.0	301.4	+ 8.9	38	185
				23031	.842	264.3	294.6	- 8.7	0	4
				23038	.670	286.2	277.1	+ 5.2	3	29
				23029	.380	265.1	259.3	- 8.5	1	5
				1585 02	.233	281.4	250.1	- 4.4	0	6
				23037	.154	122.4	229.3	-11.9	0	2
				23034	.194	90.5	225.7	- 7.2	12	73
				23035	.602	61.4	204.5	+10.6	7	53
				23036	.696	94.8	192.6	- 8.5	210	1167
5.306	-22.6	225.2	-7.2	23030	.983	280.7	303.1	+ 9.1	6	29
				23038	.784	282.6	275.2	+ 5.2	0	3
				23029	.558	265.0	259.3	- 8.8	0	14
				23034	.037	281.1	227.3	- 6.8	9	54
				23035	.461	49.7	204.4	+10.5	6	23
				23036	.550	94.9	191.7	- 8.7	215	1229
				23039	.978	108.5	145.7	-19.6	30	246
6.652	-22.9	207.5	-7.2	23034	.360	269.7	228.7	- 6.9	6	31
				23035	.306	7.4	205.2	+10.3	2	12
				23036	.271	97.1	191.8	- 8.9	212	1253
				23039	.880	108.7	145.3	-19.9	34	250
7.351	-23.1	198.3	-7.2	23034	.514	269.4	229.3	- 6.5	6	29
				23035	.326	339.1	205.1	+10.4	3	15
				23036	.105	104.7	192.4	- 8.7	235	1246
				23039	.797	109.6	145.5	-19.9	24	227
				23040	.985	71.3	121.2	+16.9	25	163
8.306	-23.3	185.7	-7.2	23034	.696	268.1	230.0	- 6.5	4	19
				23035	.449	312.0	205.5	+10.6	0	5
				23036	.130	257.6	193.1	- 8.8	143	1104
				23039	.665	112.4	145.0	-20.2	31	219
				23040	.935	68.7	120.4	+16.9	36	160

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Mar. 8.306	Continued			23041	.979	73.7	110.1	+14.2	34	231
9.402	-23.5	171.3	-7.2	23034	.866	266.5	231.6	- 6.6	4	13
				23036	.382	264.4	193.8	- 8.8	114	1025
				23039	.482	120.1	145.0	-20.4	24	211
				23040	.832	63.9	120.1	+17.0	22	154
				23041	.926	70.4	106.9	+15.0	86	647
				23042	.972	108.8	93.5	-19.9	14	82
10.372	-23.7	158.5	-7.2	23034	.957	265.1	232.0	- 6.8	7	26
				23036	.576	264.8	193.8	- 8.9	124	904
				23039	.320	137.7	145.2	-20.7	24	181
				23040	.705	57.4	120.4	+16.6	37	177
				23041	.840	66.4	105.7	+15.3	92	730
				23042	.903	108.7	93.2	-19.9	13	89
11.315	-23.9	146.1	-7.2	23036	.732	264.8	193.4	- 8.7	117	889
				23039	.242	174.9	144.7	-21.1	25	196
				23040	.571	47.4	120.2	+16.2	27	196
				23041	.715	60.4	106.1	+15.1	84	631
				23042	.802	109.5	92.8	-19.9	12	80
12.332	-24.1	132.7	-7.2	23036	.876	263.9	194.3	- 8.8	104	758
				23039	.316	219.8	145.1	-21.0	20	180
				23040	.452	27.8	120.0	+16.5	23	134
				23041	.570	50.0	105.9	+15.0	92	600
				23042	.654	112.0	92.7	-19.7	8	82
				23043	.714	72.5	89.5	+ 7.2	5	20
				23044	.746	71.7	87.1	+ 8.5	6	29
13.427	-24.2	118.2	-7.2	23036	.971	262.9	194.9	- 8.6	97	736
				23039	.495	238.8	145.2	-21.2	33	163
				23040	.404	355.7	120.1	+16.4	28	169
				23041	.419	27.6	106.7	+14.7	67	574
				23042	.471	119.6	92.5	-19.9	12	67
				23043	.534	64.4	89.3	+ 7.0	1	17
				23044	.576	64.1	86.8	+ 8.4	9	73
				23045	.903	95.4	53.2	- 8.0	13	56
14.339	-24.4	106.2	-7.2	23036	.964	263.0	181.4	- 8.6	25	155
				23039	.644	245.3	144.9	-21.2	22	125
				23040	.462	330.5	119.9	+16.7	17	127
				23041	.379	2.3	105.3	+15.0	61	417
				23042	.322	134.0	92.0	-19.8	12	54
				23043	.366	50.7	89.7	+ 6.5	5	22
				23044	.427	51.5	86.5	+ 8.6	6	33
				23045	.797	93.3	53.1	- 6.9	20	116
				23046	.981	80.5	28.9	+ 7.8	44	234
15.373	-24.6	92.6	-7.2	23039	.793	249.1	144.8	-20.9	18	139
				1585 03	.705	317.7	124.1	+25.3	3	19
				23040	.589	312.0	119.7	+16.8	16	141
				23041	.434	330.1	105.5	+15.0	48	373
				23047	.148	275.6	101.0	- 6.3	0	2

Continued

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Mar. 15.373	Continued			23042	.218	177.0	91.9	-19.7	3	28
				23043	.239	6.5	91.0	+ 6.5	21	72
				23044	.287	18.9	87.2	+ 8.6	23	195
				23045	.616	91.4	54.5	- 6.5	7	36
				23048	.785	66.3	45.1	+13.6	2	9
				23046	.911	77.9	28.7	+ 7.9	29	203
16.372	-24.7	79.4	-7.1	23039	.900	250.3	144.2	-20.8	18	161
				23040	.723	301.4	119.3	+16.7	14	94
				23041	.570	309.1	106.5	+14.6	42	226
				23047	.310	269.5	97.5	- 6.9	0	1
				23043	.304	313.5	92.1	+ 5.1	15	117
				23042	.294	221.2	91.2	-19.7	2	13
				23044	.308	335.9	86.7	+ 9.2	41	194
				23049	.335	103.9	60.1	-11.3	0	5
				23045	.390	89.5	56.4	- 6.4	7	41
				23046	.801	74.0	28.6	+ 8.3	33	206
17.372	-24.9	66.2	-7.1	23039	.974	250.3	144.5	-20.8	24	95
				23040	.843	295.2	118.9	+16.7	12	92
				23041	.747	296.2	109.8	+14.1	12	78
				23043	.496	292.3	93.5	+ 4.5	22	163
				23042	.463	239.5	91.2	-20.0	4	17
				23044	.437	309.9	86.0	+ 9.5	13	71
				23049	.119	116.4	60.1	-10.1	20	85
				23045	.201	86.2	54.7	- 6.2	9	61
				23046	.654	67.3	28.7	+ 9.0	61	306
18.334	-25.0	53.5	-7.1	23040	.932	291.1	118.6	+16.7	15	115
				23041	.884	289.7	112.3	+13.7	9	66
				23043	.692	283.5	95.8	+ 4.1	26	159
				23042	.615	247.1	90.3	-19.5	3	15
				23044	.604	296.6	86.7	+ 9.7	10	64
				23049	.144	252.2	61.5	- 9.5	13	90
				23045	.063	291.9	56.9	- 5.7	8	44
				23046	.497	58.3	28.3	+ 8.7	38	292
				23050	.611	112.8	17.1	-19.4	11	67
19.412	-25.1	39.3	-7.0	23040	.989	287.9	118.2	+16.4	22	119
				23041	.968	286.3	112.3	+13.7	9	52
				23043	.854	278.4	97.0	+ 3.4	21	131
				23042	.778	250.3	90.3	-19.7	2	7
				23044	.758	289.2	85.7	+ 9.6	2	15
				23049	.360	264.8	60.5	- 8.4	15	82
				23045	.293	273.2	56.4	- 5.8	2	13
				23051	.238	258.7	53.0	- 9.5	1	9
				1585 04	.159	181.3	39.6	-16.2	0	2
				23046	.324	37.6	27.9	+ 7.9	28	202
				23050	.427	122.3	16.9	-19.7	13	72
				23052	.941	78.3	331.0	+ 8.4	67	381
20.351	-25.3	27.0	-7.0	23043	.948	276.0	97.6	+ 3.3	21	135
				23042	.882	248.1	89.1	-22.6	2	16
				23044	.875	284.8	85.8	+ 9.3	0	7
				23053	.693	265.3	71.0	- 8.3	11	64

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Mar. 20.351	Continued			23049	.553	266.2	60.7	- 8.0	12	71
				23045	.496	270.9	56.7	- 5.7	3	10
				23051	.443	264.7	53.3	- 8.6	0	16
				23046	.259	357.6	27.6	+ 7.9	28	208
				23050	.287	141.8	16.1	-19.9	13	73
				23052	.852	75.6	330.6	+ 8.3	86	491
21.516	-25.4	11.6	-7.0	23043	.989	276.1	92.3	+ 4.9	15	119
				23053	.854	265.0	70.5	- 7.9	13	65
				23049	.778	265.6	62.9	- 7.8	3	25
				23051	.675	263.3	54.3	- 9.7	1	6
				23046	.380	312.6	27.9	+ 8.1	53	255
				23050	.230	201.1	16.6	-19.3	27	133
				23052	.684	70.2	331.2	+ 8.1	86	522
22.333	-25.5	0.8	-7.0	23053	.930	264.6	69.7	- 7.6	3	18
				23046	.519	299.3	28.0	+ 8.5	40	294
				23050	.329	227.5	15.7	-19.5	34	193
				23054	.275	2.7	0.1	+ 8.9	2	15
				23055	.377	131.4	343.3	-21.0	1	7
				23052	.544	63.2	331.6	+ 8.1	76	485
				23056	.777	98.7	309.5	-11.2	4	19
23.345	-25.6	347.5	-6.9	23051	.906	261.1	53.0	-11.0	3	23
				23048	.848	290.3	42.1	+13.1	2	17
				23057	.807	293.0	37.2	+13.9	2	15
				23058	.790	295.0	35.1	+14.8	2	7
				23046	.688	289.5	28.2	+ 8.0	27	206
				23050	.499	242.6	15.3	-19.4	20	128
				23054	.356	322.2	0.2	+ 9.5	21	118
				23055	.245	168.6	344.5	-20.7	2	21
				23052	.362	45.6	332.4	+ 7.9	92	472
				23056	.608	99.5	309.9	-11.3	3	28
24.340	-25.7	334.4	-6.9	23048	.937	287.5	41.0	+13.7	3	13
				23057	.918	288.5	37.9	+13.9	3	33
				23058	.901	291.3	34.8	+15.8	3	10
				23046	.828	284.5	28.2	+ 7.9	30	195
				23050	.692	250.1	17.6	-18.7	26	146
				23054	.539	300.5	2.4	+ 9.7	21	166
				23059	.479	249.8	2.1	-15.6	3	13
				23052	.264	7.8	332.3	+ 8.2	73	458
				23056	.418	102.3	309.9	-11.4	9	51
				23060	.572	87.7	299.6	- 4.3	1	4
25.326	-25.8	321.4	-6.8	23057	.982	285.2	38.1	+13.4	6	17
				23046	.929	281.4	28.0	+ 7.9	18	128
				23050	.832	252.1	17.8	-18.7	22	96
				23054	.704	291.3	2.9	+ 9.7	19	141
				23059	.652	253.9	1.8	-15.6	4	25
				23055	.432	232.6	342.9	-21.5	2	22
				23052	.337	321.2	333.6	+ 8.5	53	302
				23056	.191	116.2	311.4	-11.6	8	40
				23060	.361	85.9	300.2	- 4.9	2	11

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Mar. 26.309	-25.9	308.4	-6.8	23046	.986	279.1	27.6	+ 7.7	32	185
				23050	.922	251.8	16.4	-19.4	11	52
				23054	.860	285.2	5.4	+ 9.3	15	67
				23055	.606	243.4	343.8	-21.3	3	32
				23052	.507	299.8	334.7	+ 8.4	28	183
				23056	.100	210.5	311.4	-11.7	0	2
27.305	-25.9	295.3	-6.7	23054	.957	281.7	6.7	+ 9.1	7	29
				1586 01	.878	250.7	357.0	-20.1	0	4
				23055	.755	247.9	343.6	-21.0	2	11
				23052	.693	289.7	336.4	+ 8.4	30	156
				23056	.298	249.7	311.8	-12.4	0	2
28.331	-26.0	281.7	-6.7	23055	.886	250.3	344.4	-20.5	2	9
				23052	.845	284.6	337.3	+ 8.5	27	116
				23061	.979	96.3	203.1	- 7.5	11	64
29.329	-26.1	268.6	-6.7	23052	.943	281.2	337.5	+ 8.2	10	63
				23061	.897	94.8	204.5	- 7.2	17	95
				23062	.953	96.3	195.8	- 8.0	33	166
30.576	-26.2	252.1	-6.6	23063	.353	170.4	248.3	-26.9	3	21
				23061	.742	93.9	204.1	- 7.3	10	61
				23062	.860	95.2	192.5	- 7.9	24	190
31.342	-26.2	242.0	-6.5	23063	.360	198.8	249.4	-26.3	0	10
				23061	.631	94.6	202.7	- 8.0	13	90
				23062	.752	94.8	193.0	- 7.9	29	170
Apr. 1.530	-26.2	226.3	-6.5	23064	.699	255.5	270.6	-14.7	3	25
				23063	.498	227.3	250.2	-25.6	0	5
				23065	.330	70.0	208.3	+ 0.3	0	7
				23061	.445	99.9	200.0	-10.2	4	26
				23062	.521	95.1	194.8	- 8.2	22	134
2.308	-26.3	216.1	-6.4	23064	.815	256.7	270.8	-14.6	0	6
				23065	.196	54.9	206.9	+ 0.1	7	37
				23061	.197	96.5	204.7	- 7.6	0	9
				23062	.373	96.2	194.1	- 8.3	17	141
3.419	-26.3	201.4	-6.4	23065	.169	311.7	208.6	+ 0.1	3	32
				23062	.104	111.3	195.8	- 8.5	12	100
				23066	.968	98.2	125.3	- 9.5	4	17
4.323	-26.3	189.5	-6.3	23065	.327	290.7	207.2	+ 0.6	5	23
				23061	.167	252.5	198.7	- 9.1	0	11
				23062	.127	253.1	196.5	- 8.4	21	83
				23066	.894	97.2	125.8	- 9.3	5	19
5.345	-26.3	176.0	-6.3	23065	.519	282.2	206.3	+ 0.9	3	10
				23061	.408	261.7	200.0	- 9.1	2	7
				23062	.342	261.9	195.9	- 8.6	8	75
				1586 02	.155	253.2	184.6	- 8.7	0	2
				23067	.156	228.3	182.8	-12.1	2	7
				23066	.763	96.7	126.1	- 9.2	5	15

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Apr. 6.327	-26.3	163.0	-6.2	23062	.556	263.5	196.9	- 8.8	7	46
				23067	.361	252.1	183.5	-12.1	11	66
				23068	.416	55.5	142.9	+ 7.8	10	58
				23066	.593	97.3	126.6	- 9.3	3	12
				23069	.959	102.9	88.8	-14.1	12	89
				23070	.984	96.7	82.8	- 7.7	31	222
7.328	-26.3	149.8	-6.1	23062	.733	263.7	197.1	- 8.7	3	23
				23067	.576	258.2	184.8	-11.8	15	104
				23068	.267	26.2	143.0	+ 7.7	14	117
				23066	.391	99.0	126.9	- 9.1	2	23
				23069	.874	103.8	88.6	-15.0	23	149
				23070	.922	95.5	82.3	- 7.5	34	349
8.342	-26.3	136.4	-6.1	23067	.749	259.5	185.1	-11.9	20	91
				23068	.262	334.1	143.0	+ 7.5	10	41
				23066	.167	108.6	127.3	- 9.0	3	11
				23069	.744	105.4	88.5	-15.5	28	147
				23070	.806	94.9	82.6	- 7.5	37	331
				23071	.986	101.5	55.4	-12.3	25	174
9.389	-26.3	122.6	-6.0	23067	.897	260.1	186.8	-11.5	5	36
				23068	.409	303.8	142.6	+ 7.4	4	25
				23066	.096	231.4	127.0	- 9.4	4	23
				23069	.570	108.2	88.6	-15.2	33	198
				23070	.644	94.8	82.5	- 7.7	42	289
				23071	.925	101.0	54.4	-12.5	22	150
10.449	-26.3	108.6	-5.9	1586 03	.919	274.0	174.9	+ 1.3	0	14
				23068	.593	292.3	142.1	+ 8.0	0	4
				23066	.365	261.8	130.0	- 8.5	4	23
				23069	.347	119.5	90.5	-15.4	26	164
				23070	.443	95.8	82.4	- 7.9	42	263
				23071	.827	100.5	52.6	-12.0	25	194
				23072	.986	80.7	29.4	+ 8.1	26	118
11.319	-26.3	97.2	-5.8	23066	.525	263.3	128.8	- 8.5	1	9
				23069	.197	148.0	91.0	-15.4	21	132
				23070	.258	99.3	82.3	- 8.0	30	231
				23071	.706	100.9	52.2	-11.8	21	200
				23072	.939	79.3	28.6	+ 8.0	19	88
12.570	-26.2	80.6	-5.8	23066	.741	262.4	128.6	- 9.5	7	35
				23073	.617	262.6	118.8	- 9.1	3	17
				23069	.260	232.6	92.9	-14.7	16	82
				23070	.049	224.5	82.6	- 7.7	36	299
				23071	.477	103.8	52.6	-11.6	23	206
				1586 04	.511	78.9	50.7	+ 0.6	1	10
				23072	.810	75.6	28.4	+ 8.1	15	103
13.340	-26.2	70.5	-5.7	23066	.847	262.8	128.5	- 9.1	0	8
				23073	.753	263.8	119.5	- 8.4	0	3
				23069	.418	245.8	93.6	-15.1	12	53
				23074	.454	305.6	92.4	+10.0	0	14
				23075	.319	278.5	88.8	- 2.7	0	6

Continued

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Apr. 13.340	Continued			23070	.203	258.0	82.0	- 8.0	34	182
				23071	.311	111.4	53.4	-11.9	14	90
				23072	.703	72.7	28.0	+ 7.9	14	84
14.341	-26.1	57.2	-5.6	23066	.949	262.7	129.2	- 8.7	0	7
				23069	.612	251.9	94.2	-15.4	5	32
				23074	.623	293.1	92.6	+ 9.6	1	10
				23075	.531	272.7	89.2	- 3.3	0	3
				23070	.429	263.4	82.6	- 7.9	24	213
				23071	.116	153.6	54.3	-11.5	10	48
				23072	.534	65.7	27.9	+ 7.8	10	62
15.313	-26.1	44.4	-5.5	23069	.766	254.0	94.2	-15.8	10	34
				23070	.621	264.0	82.8	- 8.0	18	115
				23071	.220	238.3	55.4	-12.1	3	18
				23072	.362	51.7	27.8	+ 7.6	13	80
				23076	.620	93.5	6.1	- 6.5	6	39
				23077	.941	99.9	333.7	-11.1	6	83
				23078	.999	100.5	316.3	-10.7	22	541
16.413	-26.0	29.9	-5.5	23069	.896	255.3	93.8	-15.6	0	5
				23070	.771	264.6	80.5	- 7.6	2	26
				23071	.436	255.7	55.3	-11.1	9	56
				23072	.230	8.2	28.0	+ 7.6	13	75
				23076	.376	94.8	7.9	- 6.8	8	52
				23077	.822	99.6	334.4	-11.0	6	41
				23078	.940	98.6	319.5	- 9.9	58	490
17.335	-25.9	17.7	-5.4	23071	.626	260.0	56.4	-10.4	3	30
				23072	.288	322.5	27.9	+ 7.9	8	60
				23076	.189	97.6	6.9	- 6.7	13	55
				23077	.684	100.4	334.6	-11.0	5	20
				23078	.841	98.4	320.3	- 9.9	89	513
18.312	-25.8	4.8	-5.3	23071	.795	261.2	57.5	-10.2	2	13
				23072	.444	299.8	27.6	+ 7.8	9	73
				23076	.046	233.3	6.9	- 6.9	10	55
				23077	.531	106.4	333.4	-13.1	3	21
				23078	.697	99.2	320.6	-10.2	76	622
				23079	.776	76.4	315.6	+ 7.0	2	7
19.313	-25.7	351.6	-5.2	23071	.931	261.6	60.4	- 9.8	0	9
				23072	.620	289.9	27.5	+ 8.0	10	54
				23076	.243	267.2	5.7	- 5.7	2	23
				23077	.343	111.4	332.6	-12.1	2	23
				23078	.532	100.8	319.7	-10.2	62	529
				23080	.896	67.8	291.5	+17.2	2	5
20.382	-25.6	337.5	-5.1	23072	.786	283.8	27.6	+ 7.5	9	58
				23076	.524	262.5	9.0	- 8.3	4	24
				1587 01	.250	231.0	349.0	-14.0	0	2
				23077	.148	137.2	331.6	-11.3	2	25
				23081	.266	86.9	322.1	- 4.1	0	1
				23078	.325	106.4	319.1	-10.1	63	377
				23080	.767	62.7	292.2	+16.9	2	5

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Apr. 20.382	Continued			23082	.887	102.3	274.8	-13.2	0	2
21.515	-25.5	322.5	-5.0	23072	.918	280.1	27.9	+ 7.2	5	41
				23083	.425	320.8	338.5	+14.3	6	42
				23077	.224	232.0	332.9	-12.8	1	19
				23081	.082	45.5	319.2	- 1.7	1	12
				23078	.111	144.2	318.7	-10.1	40	327
				23084	.957	70.8	252.1	+16.7	22	149
				23085	.947	95.1	251.2	- 6.5	10	67
22.326	-25.4	311.8	-5.0	23072	.976	278.5	28.0	+ 7.2	5	35
				23083	.544	306.3	338.5	+14.3	7	42
				23077	.387	251.2	333.7	-11.7	1	9
				23081	.145	289.8	319.6	- 2.1	6	34
				23078	.149	233.9	318.8	- 9.9	43	253
				23082	.637	105.0	272.7	-13.3	3	12
				23084	.893	68.0	252.0	+17.0	22	173
				23085	.871	94.3	251.1	- 6.2	16	59
23.325	-25.3	298.6	-4.9	23083	.697	296.1	338.6	+14.1	5	26
				23081	.375	274.0	320.5	- 3.0	2	20
				23078	.351	254.7	318.6	- 9.9	23	209
				23082	.464	111.3	272.2	-14.0	20	147
				23084	.778	63.9	252.0	+16.6	28	182
				23085	.734	93.9	251.4	- 6.2	10	45
				23086	.904	84.4	234.6	+ 2.9	0	5
24.315	-25.2	285.5	-4.8	23081	.608	269.6	322.9	- 4.0	11	59
				23078	.548	258.7	318.4	-10.1	29	159
				23087	.463	254.6	312.5	-11.3	1	4
				23088	.356	310.1	301.4	+ 8.6	4	19
				23082	.261	128.5	273.4	-14.0	19	110
				23084	.637	56.6	251.9	+16.5	17	146
				23085	.558	93.7	251.6	- 6.0	4	18
				23086	.796	82.3	233.5	+ 3.2	7	36
25.285	-25.1	272.7	-4.7	23081	.785	268.9	324.4	- 3.7	9	49
				23078	.716	260.5	318.4	-10.0	32	166
				23079	.731	285.5	317.8	+ 7.9	3	10
				23087	.642	258.9	312.4	-10.7	3	19
				23088	.528	295.4	301.4	+ 9.0	7	48
				23082	.163	191.8	274.7	-13.8	14	98
				23084	.493	43.5	252.1	+16.5	25	185
				23085	.354	94.5	252.0	- 5.9	4	18
				23089	.577	39.3	249.6	+22.2	1	7
				23086	.633	78.9	234.4	+ 3.3	17	97
26.088	-25.0	262.1	-4.6	23079	.852	283.1	318.9	+ 8.6	2	12
				23078	.830	261.6	318.3	- 9.5	32	144
				23088	.676	287.6	302.5	+ 8.2	31	111
				23082	.273	234.3	275.2	-13.6	11	60
				23089	.463	19.2	252.7	+21.3	0	6
				23084	.400	24.2	252.3	+16.8	18	136
				23086	.479	74.7	234.6	+ 3.2	14	52

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Apr. 27.309	-24.8	246.0	-4.5	23078	.950	260.9	318.0	-10.0	24	142
				23079	.953	280.3	317.1	+ 8.3	7	36
				23088	.845	282.8	302.1	+ 8.3	80	452
				23082	.528	251.7	276.9	-13.4	4	22
				23084	.384	342.2	253.0	+16.9	24	132
				23089	.450	347.4	252.0	+21.5	0	1
				23086	.217	50.6	236.3	+ 3.5	4	32
28.311	-24.6	232.7	-4.4	23078	.996	260.4	317.9	- 9.9	11	137
				23088	.945	280.7	302.4	+ 8.6	105	697
				23082	.702	255.8	276.8	-13.0	3	14
				23084	.493	317.0	253.2	+16.9	20	122
				1587 02	.399	335.3	242.7	+16.9	1	14
				23086	.168	329.6	237.6	+ 3.9	2	18
				1587 03	.202	26.9	227.5	+ 6.0	1	10
29.082	-24.5	222.5	-4.3	23088	.984	281.0	300.9	+10.0	89	590
				1587 04	.984	291.9	299.5	+20.6	0	11
				23082	.816	257.8	277.1	-12.4	2	7
				23084	.604	306.1	253.1	+17.1	12	82
				23086	.296	299.1	237.5	+ 4.1	2	10
30.347	-24.3	205.8	-4.2	23084	.788	295.1	253.8	+16.7	20	128
				23086	.548	283.8	237.9	+ 3.9	1	5
May 1.347	-24.1	192.6	-4.1	23084	.900	290.9	253.8	+16.8	18	113
				23090	.917	95.0	126.0	- 6.2	6	28
2.351	-23.9	179.3	-4.0	23084	.972	288.5	253.6	+16.9	24	123
				1587 05	.749	244.7	225.8	-21.4	0	14
				1587 06	.757	75.9	131.7	+ 7.9	2	10
				23090	.780	94.9	128.1	- 6.3	2	7
				23091	.993	104.2	95.8	-14.6	9	54
3.396	-23.7	165.5	-3.9	23090	.618	95.8	127.4	- 6.6	0	4
				23092	.878	78.6	105.3	+ 8.0	0	5
				23091	.947	104.4	94.1	-14.9	30	196
4.317	-23.5	153.3	-3.8	1587 07	.755	259.1	202.2	-10.7	2	12
				23090	.482	96.3	124.6	- 6.3	0	3
				23092	.774	75.8	104.2	+ 8.5	2	9
				23091	.861	105.6	94.3	-15.3	48	334
5.078	-23.4	143.3	-3.7	23092	.638	72.6	105.5	+ 8.1	0	4
				23091	.766	107.8	94.2	-15.9	42	242
6.330	-23.1	126.7	-3.6	23090	.058	175.7	126.5	- 6.9	6	33
				23091	.568	112.2	93.8	-15.3	80	598
				23093	.598	73.3	91.6	+ 7.0	4	30
				23094	.695	57.4	88.6	+19.1	3	21
7.356	-22.9	113.2	-3.5	23090	.266	256.8	128.2	- 6.8	1	10
				23095	.392	156.6	103.4	-24.4	0	1
				23091	.382	122.8	93.8	-15.2	86	667
				23093	.407	65.6	91.3	+ 6.4	4	24

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
May 7.356	Continued			23094	.515	45.8	90.4	+17.8	9	49
8.332	-22.7	100.2	-3.4	23095	.361	186.1	102.6	-24.3	1	5
				23091	.229	153.0	94.1	-15.1	101	713
				23094	.387	23.1	91.1	+17.5	10	57
				23093	.239	46.6	90.3	+ 6.1	2	16
9.344	-22.4	86.9	-3.2	23095	.460	218.1	104.9	-24.2	1	9
				23091	.236	210.7	94.0	-14.8	77	538
				23094	.358	349.4	90.8	+17.3	16	118
				23093	.168	338.8	90.3	+ 5.7	3	18
				23096	.312	19.9	80.6	+13.7	0	5
				23097	.843	79.7	30.4	+ 6.8	0	8
				23098	.982	95.9	7.8	- 6.4	35	135
10.319	-22.2	74.0	-3.1	23091	.396	238.9	94.4	-14.7	65	432
				23094	.457	316.8	92.9	+16.4	57	324
				23093	.328	297.2	91.0	+ 5.6	5	23
				23096	.320	336.0	81.7	+13.8	1	2
				23097	.707	77.1	30.2	+ 6.8	2	14
				23098	.916	96.3	7.7	- 7.0	40	254
11.503	-21.9	58.3	-3.0	23091	.619	250.7	95.2	-14.2	50	355
				23094	.641	300.4	93.4	+16.4	86	512
				23093	.552	285.4	90.6	+ 5.9	1	18
				23096	.483	305.0	82.2	+13.3	4	16
				23097	.479	70.1	31.5	+ 6.7	0	6
				23098	.772	96.6	7.9	- 7.0	46	232
				23099	.817	71.9	5.7	+12.8	0	8
				23100	.997	95.4	332.6	- 5.6	16	139
12.322	-21.7	47.5	-2.9	23091	.751	253.8	95.3	-14.0	38	284
				23093	.733	281.0	93.7	+ 6.0	2	11
				23094	.764	295.0	93.6	+16.8	84	529
				23096	.636	295.5	83.6	+13.5	7	31
				23097	.306	58.1	32.4	+ 6.4	1	3
				23098	.639	97.4	8.0	- 7.0	34	265
				23100	.971	94.4	331.3	- 5.0	58	421
13.285	-21.4	34.7	-2.8	23094	.890	290.0	95.1	+16.3	57	479
				23091	.872	255.6	95.0	-13.9	28	273
				23096	.770	290.4	82.5	+13.7	4	21
				23097	.182	17.3	31.6	+ 7.2	1	16
				23098	.451	100.2	8.3	- 7.1	39	265
				23101	.763	72.4	347.1	+11.4	2	5
				23100	.901	94.1	330.6	- 4.9	74	591
				23102	.964	99.1	320.3	- 9.6	8	46
				23103	.996	82.5	310.7	+ 7.1	12	59
14.337	-21.2	20.9	-2.7	23094	.975	287.2	96.3	+16.1	57	409
				23091	.964	256.8	95.4	-13.5	29	230
				23093	.966	278.3	95.2	+ 7.3	0	8
				23096	.897	287.2	82.7	+14.1	2	15
				1587 08	.850	263.1	78.9	- 7.3	0	2

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
May 14.337	Continued			1587 09	.251	293.9	34.1	+ 3.2	1	3
				23098	.213	109.8	9.2	- 6.7	49	347
				23099	.378	44.0	5.3	+13.1	5	35
				23104	.687	114.4	339.8	-18.4	3	12
				23100	.777	94.2	330.0	- 4.9	84	675
				23102	.870	99.5	320.6	- 9.5	9	49
				23103	.952	81.2	309.4	+ 7.6	7	43
				23105	.980	103.1	302.3	-13.4	49	413
				23106	.992	76.4	299.4	+13.1	33	239
15.316	-20.9	7.9	-2.6	23098	.091	206.3	10.2	- 7.2	53	519
				23099	.271	3.1	7.0	+13.0	2	9
				23104	.517	122.5	340.7	-18.3	1	4
				23100	.603	95.6	331.0	- 5.4	78	728
				23102	.739	100.8	320.6	- 9.7	7	39
				23103	.856	79.9	309.9	+ 7.3	6	36
				23106	.941	75.5	299.1	+12.7	48	216
				23105	.935	104.4	299.0	-14.4	122	982
16.354	-20.6	354.2	-2.5	23098	.290	252.1	10.2	- 7.5	63	518
				23099	.328	325.5	5.1	+13.2	1	7
				23107	.266	134.7	343.0	-13.2	0	14
				23100	.395	97.3	331.1	- 5.1	74	566
				23102	.560	103.2	320.7	- 9.4	5	40
				23103	.718	77.0	309.5	+ 7.5	5	28
				23105	.829	104.9	298.8	-13.7	129	1045
				23106	.846	72.6	298.3	+13.2	25	182
17.433	-20.3	339.9	-2.3	23098	.516	259.4	10.5	- 7.4	72	389
				23101	.272	337.5	346.0	+12.2	1	8
				23107	.203	194.9	342.9	-13.6	1	10
				23100	.158	110.0	331.4	- 5.4	74	425
				23108	.397	51.2	321.5	+12.1	1	6
				23102	.345	111.7	321.0	- 9.5	4	17
				23103	.539	71.9	308.9	+ 7.6	3	16
				23105	.679	108.0	298.3	-13.8	171	1203
				23106	.700	67.4	298.3	+13.8	48	302
18.418	-20.0	326.9	-2.2	23098	.698	261.3	10.8	- 7.6	30	192
				23099	.642	293.4	3.9	+12.9	0	6
				23101	.416	307.1	346.7	+12.4	1	5
				23107	.334	236.1	343.3	-12.8	4	23
				23100	.107	238.1	332.1	- 5.4	45	328
				23108	.246	21.9	321.5	+10.9	0	7
				23102	.159	143.2	321.4	- 9.5	0	3
				23103	.346	61.6	309.1	+ 7.3	2	15
				23106	.537	59.7	298.4	+13.7	57	316
				23105	.512	113.8	298.2	-13.8	163	1265
19.304	-19.7	315.1	-2.1	23098	.840	262.4	12.1	- 7.5	27	139
				23101	.569	295.1	346.8	+12.1	0	3
				23107	.505	248.6	343.8	-12.4	0	11
				23100	.313	258.4	333.0	- 5.6	46	327
				23102	.122	212.8	319.0	- 8.0	2	13
				1588 01	.060	269.8	318.6	- 2.1	0	3

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
May 19.304	Continued			23103	.192	29.4	309.7	+ 7.5	2	7
				23106	.396	45.8	298.2	+13.9	57	383
				23105	.354	125.0	297.9	-13.7	156	1192
20.425	-19.4	300.3	-2.0	23098	.951	262.2	12.1	- 8.0	7	55
				23100	.555	262.6	333.8	- 5.7	37	246
				23102	.348	252.3	319.8	- 7.9	0	7
				1588 02	.251	217.1	309.2	-13.5	1	7
				23105	.202	170.5	298.4	-13.4	136	1092
				23106	.273	7.2	298.3	+13.6	44	343
				1588 03	.779	102.1	249.7	-10.6	0	2
21.345	-19.1	288.1	-1.9	23098	.994	262.3	11.6	- 7.9	9	76
				23100	.730	264.0	334.8	- 5.6	36	237
				23106	.324	326.4	298.7	+13.7	42	295
				23105	.269	221.6	298.7	-13.4	139	1025
22.340	-18.8	275.0	-1.8	23100	.878	264.4	336.2	- 5.7	36	211
				23106	.476	304.2	298.8	+13.8	38	233
				23105	.442	242.8	298.7	-13.3	125	909
				23109	.353	200.1	282.4	-21.0	0	2
23.326	-18.5	261.9	-1.6	23100	.960	264.0	335.4	- 6.2	36	299
				23106	.650	294.1	299.5	+14.1	29	201
				23105	.618	250.7	298.6	-13.1	114	833
				23109	.477	227.3	283.8	-20.3	3	14
24.326	-18.1	248.7	-1.5	23106	.796	289.5	299.3	+14.4	18	133
				23105	.773	254.1	298.3	-13.2	120	851
				23109	.634	238.9	283.9	-20.3	4	36
				23110	.994	82.5	165.5	+ 7.2	73	585
25.313	-17.8	235.7	-1.4	23106	.909	286.7	299.6	+14.5	19	112
				23105	.894	256.0	298.4	-13.1	119	999
				23109	.793	245.9	285.7	-19.8	6	34
				23110	.953	81.7	163.9	+ 7.5	148	928
26.326	-17.5	222.3	-1.3	23106	.977	285.5	299.0	+14.8	16	112
				23105	.970	256.7	297.9	-13.2	98	1070
				23109	.864	246.2	279.9	-21.1	2	14
				23110	.859	80.6	163.7	+ 7.4	101	775
27.358	-17.1	208.6	-1.2	23105	.995	254.6	292.5	-15.4	64	572
				23110	.714	77.6	164.1	+ 8.0	98	672
				23111	.983	71.4	130.4	+18.0	6	18
28.324	-16.8	195.8	-1.0	23110	.538	73.3	164.6	+ 8.0	77	522
				1588 04	.762	90.8	146.4	- 1.3	0	5
				23111	.919	69.8	130.9	+18.1	6	29
29.324	-16.4	182.6	-0.9	23112	.195	231.4	191.4	- 7.9	7	40
				23110	.348	62.5	164.5	+ 8.3	106	631
				23111	.809	66.9	131.4	+17.9	6	21
				23113	.995	102.6	98.7	-12.6	31	145

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
May 30.363	-16.0	168.8	-0.8	23112	.413	252.5	192.1	- 7.8	6	24
				23110	.175	22.0	165.0	+ 8.5	86	594
				23114	.332	137.0	155.4	-14.8	2	13
				23111	.659	60.9	131.7	+18.0	3	9
				23115	.790	108.5	118.2	-15.0	0	2
				23113	.950	102.9	97.6	-12.5	14	130
				23116	.961	74.0	95.9	+15.1	16	102
				23117	.990	105.2	87.1	-15.1	66	538
31.382	-15.7	155.3	-0.7	23112	.625	258.5	193.4	- 7.7	0	3
				23110	.235	313.4	165.2	+ 8.6	75	535
				23114	.235	175.8	154.3	-14.2	0	1
				23111	.506	49.4	131.5	+18.5	3	17
				23113	.854	104.2	97.6	-12.4	28	170
				23116	.872	72.2	96.3	+15.0	16	90
				23117	.927	105.8	88.2	-14.8	52	380
				23118	.927	97.2	87.7	- 7.0	0	3
Jun. 1.367	-15.3	142.3	-0.6	23110	.419	292.6	165.2	+ 8.7	89	479
				23111	.389	29.3	130.7	+19.2	0	4
				23115	.452	123.1	119.3	-14.7	5	21
				23113	.720	107.1	97.7	-12.6	15	137
				2	.720	107.1	97.7	-12.6	15	137
				23116	.740	69.1	96.8	+14.9	7	58
				1588 05	.844	130.0	91.9	-33.1	0	4
				23117	.821	107.8	88.6	-14.8	50	306
				23118	.812	97.3	88.4	- 6.2	0	4
				23119	.918	96.2	75.9	- 5.9	3	11
2.533	-14.8	126.9	-0.4	23110	.640	284.3	165.6	+ 8.7	72	422
				23120	.094	172.1	126.1	- 5.7	8	36
				23115	.281	150.5	118.7	-14.5	3	20
				23121	.477	71.9	99.7	+ 8.1	9	39
				23113	.524	113.9	97.6	-12.6	16	164
				2	.526	113.8	97.5	-12.6	14	154
				23116	.547	61.4	97.2	+14.7	8	48
				23117	.650	112.4	88.6	-14.7	52	358
				23118	.668	104.3	86.0	- 9.8	3	19
				23119	.790	99.7	75.3	- 7.9	4	14
3.328	-14.5	116.3	-0.3	23110	.769	281.8	165.8	+ 8.8	63	375
				23120	.217	241.5	127.3	- 6.2	35	184
				23115	.245	187.2	118.2	-14.4	0	2
				23121	.325	62.4	99.5	+ 8.3	11	54
				23113	.381	124.1	97.5	-12.6	23	124
				2	.383	123.9	97.4	-12.6	22	119
				23116	.413	49.8	97.4	+15.1	5	27
				23117	.515	119.3	88.8	-14.8	65	391
				23118	.514	105.5	86.5	- 8.1	4	29
				23119	.657	101.5	76.0	- 7.8	4	29
				23122	.866	79.1	57.1	+ 9.2	9	44
4.146	-14.2	105.5	-0.2	23110	.878	280.9	166.3	+ 9.4	50	324
				23120	.394	254.7	127.9	- 6.1	30	231
				23121	.178	30.8	100.3	+ 8.5	8	51

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jun. 4.146	Continued			23113	.254	147.4	97.5	-12.5	20	122
				2	.254	147.2	97.5	-12.5	20	120
				23116	.301	27.7	97.2	+15.2	2	13
				23117	.374	132.4	89.0	-14.7	43	333
				23118	.340	113.2	87.2	- 7.9	0	10
				23119	.498	103.7	76.5	- 6.9	7	47
				23122	.748	79.5	57.8	+ 7.6	10	49
5.513	-13.7	87.4	-0.1	23110	.981	278.9	165.8	+ 8.7	67	359
				23120	.654	260.4	127.7	- 6.3	31	340
				23121	.258	307.7	99.3	+ 9.0	5	23
				23113	.273	219.4	97.6	-12.2	16	144
				2	.273	219.1	97.5	-12.3	16	139
				23116	.312	327.9	97.3	+15.2	1	4
				23117	.256	186.2	89.1	-14.7	57	328
				23118	.139	186.7	88.4	- 8.0	1	15
				23119	.214	128.2	77.7	- 7.6	97	641
				23122	.491	73.8	59.1	+ 7.8	12	68
				23123	.674	80.8	45.6	+ 6.1	5	29
6.431	-13.3	75.3	+0.1	23120	.802	262.3	128.2	- 6.1	48	312
				23121	.458	288.3	101.2	+ 8.3	1	19
				23113	.431	239.7	97.6	-12.4	16	105
				2	.431	239.7	97.6	-12.4	16	105
				23117	.350	222.7	89.5	-14.8	56	365
				23119	.149	201.0	78.4	- 7.9	115	808
				23122	.292	62.7	60.2	+ 7.7	3	23
				23123	.490	76.1	46.8	+ 6.8	4	23
7.334	-13.0	63.3	+0.2	23120	.910	263.1	128.4	- 6.2	56	332
				23113	.594	248.2	97.6	-12.6	19	108
				2	.594	248.2	97.6	-12.6	19	108
				23117	.495	238.4	89.1	-14.8	58	392
				23119	.299	241.8	78.7	- 7.9	117	713
				23122	.142	358.1	63.6	+ 8.3	0	7
				23124	.433	35.6	47.8	+20.7	4	20
				23123	.315	68.6	46.2	+ 6.7	2	15
8.325	-12.6	50.2	+0.3	23120	.982	263.3	128.9	- 6.6	47	295
				23113	.754	252.7	97.6	-12.8	17	127
				23117	.662	246.5	89.0	-15.0	44	455
				23119	.485	253.1	78.0	- 7.8	146	1026
				23124	.354	8.0	47.2	+20.7	6	38
				23123	.140	34.9	45.6	+ 6.8	1	14
9.488	-12.1	34.8	+0.4	23113	.896	255.3	97.4	-12.9	10	95
				23117	.824	251.7	88.6	-14.7	59	384
				23119	.697	257.7	78.2	- 8.2	123	1088
				23124	.399	330.6	46.9	+20.7	1	6
				23123	.165	299.7	43.1	+ 5.1	1	3
				23125	.282	123.1	21.1	- 8.4	0	1
				1588 06	.765	96.9	345.4	- 5.0	2	3

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jun. 10.077	-11.8	27.0	+0.5	23113	.947	256.6	97.4	-12.5	13	77
				23117	.890	253.8	88.6	-14.1	41	249
				23119	.789	259.7	78.4	- 7.8	125	988
				23124	.475	318.0	46.8	+21.0	1	2
				23123	.282	287.0	42.6	+ 5.2	1	4
				23125	.189	145.4	20.8	- 8.4	1	6
				23126	.994	102.4	303.9	-12.3	9	36
11.430	-11.3	9.1	+0.7	23117	.984	255.1	88.0	-14.5	44	351
				23119	.941	260.5	78.7	- 8.7	103	1001
				1588 07	.746	101.3	321.7	- 7.9	2	5
				23126	.952	104.9	298.0	-13.9	92	540
				2	.972	105.7	293.6	-15.0	48	289
12.404	-10.9	356.2	+0.8	23119	.992	261.1	78.7	- 8.8	90	922
				23127	.813	77.3	302.6	+10.7	0	8
				23126	.844	106.3	300.2	-13.3	79	646
				2	.892	107.4	294.7	-15.0	35	246
13.326	-10.5	344.0	+0.9	1589 01	.263	210.8	351.9	-12.1	0	1
				23126	.713	108.5	300.4	-12.4	113	706
				2	.785	109.7	294.4	-14.7	41	276
14.341	-10.1	330.6	+1.0	1589 02	.378	213.3	343.1	-17.4	0	2
				23128	.284	210.0	338.9	-13.2	1	5
				1589 03	.158	171.3	329.2	- 7.9	0	7
				23127	.506	68.5	302.0	+11.5	3	21
				23126	.543	115.2	300.5	-12.5	108	641
				2	.629	115.0	294.7	-14.6	42	245
15.320	- 9.6	317.6	+1.1	23128	.445	235.8	339.8	-13.4	6	49
				23127	.249	50.4	306.4	+10.2	1	5
				23126	.368	128.7	300.6	-12.2	97	722
				2	.463	124.9	294.7	-14.3	42	277
				1589 04	.531	126.0	291.1	-17.1	3	13
				23129	.811	97.2	264.0	- 5.2	2	19
				23130	.970	82.0	241.9	+ 8.0	68	441
				23131	.995	98.9	234.0	- 8.8	31	167
16.429	- 9.2	302.9	+1.2	23128	.653	247.4	341.1	-13.5	9	56
				1589 05	.229	263.1	316.0	- 0.3	1	8
				23126	.240	168.3	300.1	-12.3	83	575
				2	.299	151.8	294.6	-14.0	36	254
				23129	.600	98.9	266.7	- 4.3	1	10
				23132	.875	119.0	246.0	-24.3	7	44
				23130	.882	81.3	241.5	+ 8.2	54	334
				23131	.946	99.9	232.6	- 8.9	60	408
17.436	- 8.7	289.6	+1.4	23128	.794	252.4	340.4	-13.0	22	150
				23126	.293	214.9	299.5	-12.5	70	464
				2	.277	197.7	294.6	-13.9	32	209
				23129	.379	104.9	268.2	- 4.3	1	7
				23132	.755	124.2	246.6	-24.0	9	38
				23130	.742	80.6	242.2	+ 7.9	39	278
				23131	.840	101.8	233.4	- 9.1	110	578
				1	.814	101.7	236.1	- 8.7	79	413

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jun. 18.369	- 8.3	277.3	+1.5	23128	.901	255.1	340.3	-12.7	18	118
				23126	.428	235.2	298.3	-12.7	53	405
				23132	.626	132.1	247.0	-23.5	3	30
				23130	.585	78.3	242.1	+ 8.0	40	306
				23131	.717	104.1	232.7	- 9.0	132	808
				1	.661	104.3	237.1	- 8.2	82	460
19.297	- 7.9	265.0	+1.6	23128	.973	256.2	340.7	-13.0	5	49
				23126	.576	244.6	297.1	-12.9	42	308
				23129	.113	202.3	267.4	- 4.4	5	20
				23132	.532	145.1	245.6	-24.2	0	11
				23130	.405	73.9	242.0	+ 7.9	43	262
				23131	.535	109.0	234.3	- 8.6	132	752
				1	.488	110.2	237.6	- 8.2	91	484
20.329	- 7.5	251.3	+1.7	23126	.728	250.2	295.9	-13.0	39	273
				23133	.555	283.5	284.3	+ 8.9	3	17
				23129	.315	251.9	268.7	- 4.0	6	15
				23132	.405	175.7	249.4	-22.0	1	5
				23130	.201	55.9	241.7	+ 8.1	40	252
				23131	.344	122.5	234.3	- 9.0	124	748
				1	.301	126.7	237.2	- 8.7	94	498
				23134	.994	87.1	168.0	+ 3.1	19	57
21.606	- 6.9	234.4	+1.9	23126	.887	254.2	295.4	-13.1	35	224
				23133	.794	279.6	286.6	+ 8.7	0	6
				23129	.616	261.2	271.8	- 3.9	1	13
				23132	.483	203.3	246.5	-24.4	0	16
				23130	.177	309.7	242.3	+ 8.3	35	199
				23131	.189	189.7	236.3	- 8.8	121	566
				1	.192	196.4	237.5	- 8.7	107	485
				23135	.404	124.9	214.7	-11.6	28	118
				23136	.908	81.1	169.5	+ 8.9	14	131
				23134	.922	86.4	167.3	+ 4.0	18	86
				23137	.966	84.1	159.7	+ 6.2	22	174
22.600	- 6.4	221.3	+2.0	23126	.963	255.4	294.5	-13.4	30	186
				23138	.441	298.7	244.7	+14.0	3	12
				23130	.371	287.9	242.1	+ 8.4	33	197
				23131	.321	234.2	236.5	- 8.9	114	662
				1	.333	236.0	237.4	- 8.8	107	600
				23135	.254	158.0	215.7	-11.6	31	179
				23136	.798	80.8	168.7	+ 8.5	22	226
				23134	.800	86.2	168.3	+ 4.2	15	84
				23137	.878	84.6	160.0	+ 5.7	22	117
23.335	- 6.1	211.5	+2.1	23126	.995	256.4	294.7	-13.3	32	234
				23139	.786	282.5	262.7	+11.1	0	6
				23138	.573	293.8	244.2	+15.1	3	18
				23130	.520	283.3	242.2	+ 8.6	30	177
				23131	.472	247.0	237.5	- 8.8	93	623
				1	.478	246.9	237.8	- 8.9	85	561
				23135	.254	199.0	216.4	-11.8	17	173
				23134	.682	85.5	168.7	+ 4.6	9	57
				23136	.702	80.2	167.3	+ 8.3	32	239

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jun. 23.335	Continued			23137	.788	84.5	159.7	+ 5.6	11	93
24.338	- 5.7	198.3	+2.2	23139	.913	280.9	263.9	+10.8	3	8
				23130	.698	280.2	242.1	+ 8.6	17	166
				23131	.659	253.7	238.0	- 8.9	85	536
				1	.660	253.7	238.0	- 9.0	82	521
				23135	.400	231.8	216.9	-12.2	24	130
				23134	.491	84.4	169.0	+ 4.6	14	45
				23136	.517	77.3	167.7	+ 8.4	33	230
				23137	.628	83.9	159.5	+ 5.5	10	52
				23140	.943	99.4	128.6	- 8.1	3	20
25.374	- 5.2	184.6	+2.3	23138	.878	285.6	245.3	+14.8	5	21
				23130	.848	279.0	242.3	+ 8.8	23	162
				23131	.820	257.2	238.4	- 9.1	84	461
				1	.821	257.2	238.5	- 9.1	80	444
				1589 06	.691	292.0	226.4	+16.7	0	2
				23135	.578	244.7	216.7	-12.3	14	95
				23141	.204	45.9	176.0	+10.4	0	7
				23134	.268	79.2	169.3	+ 5.1	9	46
				23136	.305	68.4	168.0	+ 8.6	34	180
				23137	.434	82.0	159.1	+ 5.5	1	10
				23140	.838	100.9	128.6	- 7.8	2	10
26.326	- 4.8	171.9	+2.4	23130	.941	279.0	242.0	+ 9.2	26	156
				23131	.924	259.2	238.5	- 9.0	99	464
				1	.925	259.2	238.6	- 9.0	99	454
				1589 07	.905	287.6	236.0	+16.9	2	18
				23135	.750	251.5	218.4	-12.1	15	78
				23141	.146	337.7	175.2	+10.1	1	15
				23134	.061	38.8	169.7	+ 5.1	6	31
				23136	.125	30.5	168.3	+ 8.6	10	68
				23137	.201	66.8	161.2	+ 6.9	0	2
				23140	.696	103.8	129.1	- 7.7	2	8
				23142	.909	83.2	106.7	+ 7.2	13	59
27.622	- 4.2	154.8	+2.5	23130	.998	279.5	241.1	+ 9.6	16	115
				23131	.995	261.0	238.1	- 8.7	75	405
				23135	.902	255.6	217.7	-11.8	19	119
				23141	.378	291.3	175.7	+10.2	1	6
				23134	.273	281.1	170.3	+ 5.5	6	31
				23136	.258	297.4	168.2	+ 9.3	12	58
				1589 08	.228	199.7	159.2	- 9.8	1	4
				23142	.758	82.6	105.7	+ 7.3	26	143
				23143	.933	105.6	87.4	-13.5	32	197
28.313	- 3.9	145.7	+2.6	23135	.957	256.9	217.5	-11.7	12	82
				23141	.517	285.3	176.0	+10.1	0	8
				23134	.420	277.8	170.3	+ 5.6	6	23
				23136	.411	287.3	169.0	+ 9.4	19	115
				23142	.647	81.8	105.6	+ 7.3	26	206
				23144	.753	86.6	97.0	+ 4.3	5	28
				23143	.870	107.2	87.1	-13.5	30	220

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Jun. 29.336	- 3.4	132.1	+2.7	23135	.989	259.3	212.8	-10.2	0	23
				1589 09	.926	247.1	197.0	-19.9	3	21
				23141	.699	279.4	176.1	+ 8.5	0	6
				23134	.625	276.2	170.6	+ 6.0	6	16
				23136	.625	282.1	170.3	+ 9.7	26	149
				1589 10	.292	334.6	139.6	+17.9	0	1
				23142	.460	78.9	105.2	+ 7.5	42	234
				23144	.570	85.8	97.5	+ 4.6	6	53
				23143	.742	111.1	86.9	-13.5	31	205
				23145	.728	99.6	86.2	- 5.0	0	2
				23146	.989	77.1	50.6	+13.1	15	112
30.395	- 2.9	118.1	+2.9	23136	.799	280.3	170.9	+ 9.9	15	103
				23134	.796	275.2	170.8	+ 5.9	4	13
				23140	.267	223.1	128.7	- 8.4	2	14
				23142	.234	67.8	105.5	+ 7.8	62	357
				23144	.363	83.7	96.9	+ 5.0	10	48
				23143	.582	118.5	86.4	-13.6	33	207
				23146	.936	76.4	48.9	+13.7	16	107
July 1.340	- 2.5	105.6	+3.0	23136	.916	278.9	171.9	+ 9.3	17	61
				23134	.894	275.5	168.8	+ 6.2	5	22
				1589 11	.437	198.3	114.0	-21.5	0	4
				23142	.079	0.9	105.5	+ 7.5	60	346
				23144	.093	79.4	100.3	+ 3.9	1	7
				23143	.433	131.7	86.2	-13.9	33	186
				23146	.843	75.8	48.6	+13.6	19	103
2.458	- 2.0	90.8	+3.1	23136	.976	278.8	168.2	+ 9.3	0	10
				23142	.284	286.5	106.7	+ 7.6	43	302
				23145	.136	146.2	86.5	- 3.4	2	17
				23143	.300	164.2	86.0	-13.6	34	191
				23146	.680	72.4	49.0	+14.2	12	67
				23147	.961	82.4	16.9	+ 8.2	71	325
3.328	- 1.6	79.3	+3.2	1589 12	.943	282.7	149.8	+13.0	7	31
				23148	.483	263.2	107.8	- 0.4	5	30
				23142	.460	280.3	106.3	+ 7.5	34	208
				23145	.170	228.9	86.6	- 3.2	2	16
				23143	.310	200.5	85.6	-13.7	33	193
				1589 13	.247	161.4	74.7	-10.3	1	11
				23146	.546	69.1	47.7	+13.9	11	65
				23147	.893	82.4	16.1	+ 8.3	59	331
				23149	.988	100.2	359.0	- 9.5	7	29
4.615	- 1.0	62.2	+3.3	23148	.731	266.8	108.9	0.0	14	74
				23142	.704	276.8	106.8	+ 7.1	26	176
				23150	.557	255.3	94.8	- 5.3	1	4
				23143	.475	232.6	85.0	-13.6	33	209
				23146	.286	50.8	49.1	+13.6	7	52
				23151	.711	98.6	17.7	- 3.7	5	54
				23147	.723	81.2	16.2	+ 8.7	58	352
				23149	.936	102.0	354.0	-10.0	79	431

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
July 5.449	- 0.6	51.2	+3.4	23148	.867	268.1	111.1	+ 0.1	9	47
				23142	.814	275.8	105.6	+ 6.7	16	121
				23150	.717	258.4	95.9	- 5.8	3	26
				23143	.616	242.4	85.2	-13.7	31	203
				23146	.189	20.7	47.3	+13.5	8	62
				23151	.561	101.4	17.9	- 3.5	16	105
				23147	.579	80.2	16.1	+ 8.4	73	440
				23149	.856	103.6	353.8	- 9.8	63	370
6.399	- 0.2	38.6	+3.5	1589 14	.981	274.6	117.3	+ 5.2	6	52
				23142	.914	276.2	104.6	+ 7.1	17	123
				23150	.842	260.7	95.1	- 5.8	4	19
				23143	.757	248.6	84.9	-13.6	28	165
				23146	.231	321.5	47.1	+13.9	7	63
				23151	.326	111.4	21.0	- 3.4	9	46
				23147	.386	75.7	16.5	+ 8.7	67	463
				23149	.725	106.6	354.0	- 9.4	40	291
7.327	+ 0.2	26.3	+3.6	23142	.979	276.2	104.6	+ 6.8	10	139
				23150	.951	263.1	97.6	- 5.4	4	25
				23143	.873	252.2	84.8	-13.6	41	166
				23146	.406	298.2	47.9	+14.4	2	17
				23151	.142	154.6	22.8	- 3.7	11	61
				23147	.179	64.4	17.0	+ 8.0	57	348
				23149	.575	112.5	353.9	- 9.6	55	276
				23152	.970	75.0	310.1	+15.4	0	9
				23153	.994	72.2	302.2	+18.1	10	96
8.913	+ 0.9	5.3	+3.8	23143	.988	255.8	85.0	-13.3	18	147
				23151	.353	249.3	24.6	- 3.6	6	47
				23147	.214	295.1	16.6	+ 8.9	69	436
				23149	.319	137.8	352.8	- 9.9	31	180
				23152	.825	73.9	310.3	+15.3	5	21
				23153	.895	72.1	302.2	+17.6	0	13
				23154	.951	104.3	294.9	-12.3	14*	85
9.356	+ 1.1	359.5	+3.8	23151	.460	255.2	25.8	- 3.3	6	39
				23147	.318	284.9	17.5	+ 8.3	48	298
				23149	.257	153.8	352.9	- 9.5	17	110
				23155	.708	115.9	318.4	-15.1	2	17
				23152	.766	72.6	310.2	+15.7	3	17
				23153	.849	71.5	302.0	+17.6	2	8
				23154	.918	104.7	294.5	-11.8	20	112
10.377	+ 1.6	346.0	+3.9	23151	.647	260.3	25.5	- 3.2	3	18
				23147	.527	279.5	17.5	+ 8.3	51	264
				23149	.272	208.7	353.6	- 9.9	19	107
				23155	.558	126.2	318.2	-15.7	1	8
				23152	.602	68.6	310.5	+15.8	6	18
				23154	.804	107.6	294.7	-11.6	19	97
11.376	+ 2.1	332.8	+4.0	23151	.808	263.9	26.0	- 2.5	8	34
				23147	.706	277.9	17.6	+ 8.4	38	272
				23156	.574	284.5	7.2	+11.6	1	4
				23149	.421	236.8	353.6	- 9.5	33	166

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
July 11.376	Continued			23152	.419	59.5	310.8	+16.0	1	5
				23154	.654	112.8	295.0	-11.5	12	91
12.334	+ 2.5	320.1	+4.1	23151	.918	265.6	26.2	- 2.4	3	23
				23147	.846	277.0	17.9	+ 8.1	39	211
				23156	.740	283.1	7.4	+12.4	7	46
				23149	.592	247.8	353.7	- 9.5	16	79
				23154	.492	122.3	295.1	-11.5	16	89
				23157	.964	82.3	245.2	+ 8.5	13	64
				23158	.987	100.8	240.5	- 9.9	35	280
13.374	+ 3.0	306.3	+4.2	23147	.950	277.0	18.3	+ 8.0	25	159
				23156	.873	280.8	7.1	+11.4	23	139
				23149	.751	253.8	353.1	- 9.1	3	27
				23159	.700	246.1	347.3	-13.2	0	3
				23160	.399	236.7	325.9	- 8.6	1	13
				23154	.332	143.9	294.8	-11.3	13	64
				23157	.880	82.5	244.6	+ 8.6	16	66
				23158	.924	102.6	240.3	-10.0	32	205
				23161	.990	99.2	225.3	- 8.5	16	338
14.331	+ 3.4	293.6	+4.3	23147	.994	277.3	17.4	+ 7.8	20	107
				23156	.957	280.4	6.9	+11.2	54	312
				23149	.878	256.9	353.5	- 9.3	2	14
				23159	.837	251.5	348.0	-12.9	0	4
				23160	.574	248.2	326.1	- 8.6	6	38
				23154	.273	184.4	294.9	-11.4	7	32
				23157	.758	81.9	244.4	+ 8.9	11	53
				23158	.819	105.6	240.6	-10.1	36	228
				23161	.934	101.1	225.8	- 8.8	61	394
15.387	+ 3.9	279.7	+4.4	23156	.998	280.5	6.4	+10.8	49	525
				23160	.754	254.1	326.7	- 8.9	2	14
				23154	.371	222.5	294.4	-11.5	0	7
				23157	.588	80.9	243.9	+ 8.9	11	45
				23158	.660	110.9	241.0	-10.1	47	206
				23161	.823	104.3	226.0	- 9.1	65	429
16.411	+ 4.3	266.1	+4.5	23160	.903	256.3	329.0	-10.3	3	11
				23154	.552	239.7	295.2	-12.2	1	4
				23157	.384	77.9	243.9	+ 8.8	6	29
				23158	.485	120.1	241.0	-10.0	32	232
				23161	.668	109.4	226.6	- 9.3	66	441
17.390	+ 4.7	253.2	+4.6	23154	.714	246.4	295.2	-13.2	2	7
				23162	.483	187.6	257.2	-23.9	9	64
				1590 01	.076	70.6	249.0	+ 6.0	0	2
				23157	.174	66.1	243.9	+ 8.6	7	29
				23158	.325	139.9	241.0	- 9.8	35	238
				23161	.498	118.3	226.9	- 9.5	61	352
				23163	.583	118.9	221.8	-12.4	1	16
				23164	.759	110.0	206.6	-11.8	2	12

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
July 18.331	+ 5.2	240.7	+4.7	23162	.549	212.4	259.3	-23.1	4	15
				23157	.078	335.6	242.6	+ 8.8	6	30
				23158	.252	181.5	241.1	- 9.9	27	206
				23161	.334	136.8	227.4	- 9.5	44	358
				23163	.426	134.3	222.6	-12.8	2	20
				1590 02	.845	94.5	183.5	- 1.2	0	2
19.376	+ 5.6	226.9	+4.8	1590 03	.939	289.2	296.9	+19.6	3	17
				23162	.680	228.7	260.4	-22.6	2	9
				23157	.308	282.7	244.5	+ 8.4	4	18
				23158	.351	224.0	241.2	- 9.9	27	223
				23165	.176	322.8	233.1	+12.8	18	84
				23161	.247	183.3	227.7	- 9.4	36	232
				23163	.316	163.8	221.7	-12.8	1	11
				23164	.425	133.5	208.5	-12.4	4	17
20.331	+ 6.0	214.3	+4.9	23162	.807	235.8	260.8	-23.6	0	4
				23157	.514	278.1	245.1	+ 8.3	5	29
				23158	.512	240.8	241.1	-10.1	18	197
				23165	.348	295.7	233.0	+13.3	17	130
				23161	.343	224.1	228.2	- 9.5	25	181
				23163	.312	203.9	221.6	-11.7	0	2
21.324	+ 6.5	201.1	+5.0	1590 04	.965	255.0	274.0	-13.0	4	29
				23157	.699	277.1	245.4	+ 8.5	8	50
				23158	.679	249.6	241.2	- 9.9	18	199
				23165	.539	287.3	232.9	+13.4	34	154
				23161	.517	242.4	228.7	- 9.4	17	127
				23163	.437	234.0	222.1	-10.2	1	5
				23166	.990	86.2	119.0	+ 4.5	16	102
22.342	+ 6.9	187.6	+5.0	23157	.844	277.0	245.3	+ 8.6	8	37
				23158	.822	254.1	240.9	-10.0	29	186
				23167	.808	257.4	240.1	- 7.0	15	59
				23165	.713	284.3	232.8	+13.7	25	121
				23161	.688	250.4	228.5	- 9.5	17	97
				1590 05	.524	214.6	206.1	-20.6	3	13
				23168	.402	121.4	167.5	- 7.3	0	5
				23166	.931	87.2	119.0	+ 4.4	24	140
23.486	+ 7.4	172.5	+5.2	23157	.953	277.0	245.1	+ 8.3	0	7
				23158	.940	257.1	240.9	-10.2	20	113
				23167	.937	260.6	240.8	- 6.9	16	81
				23165	.859	283.3	231.7	+14.0	14	74
				23161	.852	255.5	229.0	- 9.4	2	20
				23168	.232	168.2	169.8	- 7.9	2	13
				23166	.804	87.9	119.0	+ 4.7	33	129
				23169	.932	95.5	104.4	- 3.2	3	9
24.393	+ 7.8	160.5	+5.2	23158	.990	258.9	241.2	-10.1	24	96
				23167	.988	262.5	240.7	- 6.5	15	146
				23165	.932	283.7	229.7	+14.7	3	13
				23161	.921	256.6	225.9	-10.1	3	6
				23168	.248	205.5	166.7	- 7.7	1	9
				23166	.662	88.7	119.0	+ 4.7	12	107

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
July 24.393	Continued			23169	.830	97.8	105.2	- 3.5	2	8
				23170	.974	106.8	85.8	-15.0	50	505
25.433	+ 8.2	146.7	+5.3	23171	.639	247.6	183.4	- 9.8	0	4
				23168	.368	227.2	162.6	- 9.3	1	6
				23172	.190	77.5	136.0	+ 7.6	3	19
				23166	.466	89.9	119.0	+ 4.7	19	106
				23173	.641	81.9	106.9	+ 9.2	1	4
				23169	.703	102.7	103.4	- 5.0	2	16
				23170	.894	109.7	86.3	-15.0	88	470
				23174	.970	106.2	72.9	-14.3	5	36
26.323	+ 8.6	135.0	+5.4	23171	.763	251.9	182.3	-10.0	2	11
				1590 06	.323	231.1	149.6	- 6.4	0	6
				23172	.047	319.7	136.7	+ 7.4	20	113
				23166	.277	92.0	118.9	+ 4.6	22	97
				23173	.462	80.2	107.6	+ 9.3	1	9
				23169	.538	107.8	104.2	- 4.8	1	12
				23170	.797	113.6	86.0	-15.1	61	376
				23174	.892	109.2	74.7	-14.4	3	13
27.535	+ 9.1	119.0	+5.5	23171	.904	256.5	181.9	- 9.7	3	19
				23168	.689	249.8	159.8	- 9.6	0	3
				23172	.311	277.0	137.0	+ 7.4	42	279
				23166	.012	190.9	119.1	+ 4.8	16	112
				23173	.191	67.2	108.7	+ 9.6	0	22
				23169	.283	126.1	105.7	- 4.2	0	5
				23170	.627	121.9	85.7	-14.8	54	394
				23174	.803	113.1	69.4	-14.8	2	23
				23175	.916	113.5	56.5	-19.0	0	6
28.459	+ 9.4	106.7	+5.5	23172	.519	274.8	138.0	+ 7.3	56	318
				23166	.215	266.9	119.1	+ 4.8	20	99
				23169	.158	158.6	103.4	- 2.9	3	33
				23176	.099	85.6	101.1	+ 6.0	1	10
				23177	.288	126.5	93.4	- 4.4	0	5
				23170	.494	133.9	85.2	-14.8	63	372
				23174	.681	118.7	68.7	-14.6	2	8
				23178	.782	118.0	60.4	-17.6	4	29
				23175	.823	117.7	56.5	-18.9	8	52
29.347	+ 9.8	95.0	+5.6	23172	.695	274.2	139.1	+ 6.9	57	405
				23166	.413	269.4	119.3	+ 4.9	11	94
				23169	.231	231.5	105.3	- 2.7	1	9
				23176	.097	267.2	100.6	+ 5.3	1	9
				23170	.390	152.0	84.1	-14.5	54	307
				23174	.490	134.4	73.8	-14.7	1	3
				23178	.639	126.7	62.6	-17.6	6	45
				23175	.716	123.8	56.1	-19.1	8	38
				23179	.995	78.8	10.1	+11.7	62	457
30.359	+10.2	81.6	+5.7	23172	.859	273.9	140.9	+ 6.3	45	285
				23166	.613	270.7	119.4	+ 4.9	14	87
				23169	.427	250.1	105.2	- 3.1	0	14
				23176	.380	274.2	103.9	+ 6.9	4	25

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
July 30.359	Continued			23177	.259	225.0	92.1	- 4.9	0	5
				23170	.347	185.1	83.4	-14.5	31	251
				23178	.486	142.4	63.6	-17.1	9	43
				23175	.594	134.5	55.0	-19.4	11	46
				23180	.850	97.8	24.3	- 3.5	2	10
				23179	.949	79.2	9.5	+12.0	149	1232
31.483	+10.7	66.7	+5.8	23172	.968	274.3	142.3	+ 5.6	18	107
				23166	.794	271.7	119.3	+ 4.9	11	96
				23176	.634	273.3	106.1	+ 6.5	3	22
				1590 07	.407	235.9	86.5	- 7.7	1	5
				23170	.444	219.8	83.7	-14.4	56	400
				23174	.352	185.9	68.9	-14.6	5	20
				23178	.386	174.6	64.6	-16.7	7	50
				23175	.475	156.4	55.1	-20.0	3	21
				23180	.701	101.9	23.5	- 4.1	8	54
				23179	.836	79.5	9.8	+11.9	201	1227
Aug. 1.378	+11.0	54.9	+5.8	23166	.903	272.6	119.5	+ 4.8	10	74
				23176	.793	273.9	107.5	+ 6.6	0	4
				23170	.563	234.0	82.8	-14.1	54	383
				23174	.431	215.2	69.7	-14.9	0	11
				23178	.412	197.9	62.5	-17.2	17	104
				23175	.441	178.7	54.3	-20.2	2	22
				23180	.536	107.1	24.1	- 4.0	7	33
				23179	.705	78.4	10.1	+12.3	264	1334
2.373	+11.4	41.7	+5.9	23166	.978	273.8	119.8	+ 4.9	21	83
				23170	.710	243.3	82.4	-14.1	44	263
				23174	.573	233.6	70.1	-14.6	4	24
				23178	.532	224.3	64.5	-16.8	9	39
				23175	.485	213.0	57.8	-18.2	4	19
				23180	.341	118.9	24.4	- 3.8	9	46
				23179	.535	76.1	9.8	+12.4	270	1321
				1590 08	.794	110.2	352.3	-12.0	0	7
3.328	+11.8	29.1	+6.0	23170	.834	249.1	82.3	-13.8	35	253
				23178	.682	238.0	66.0	-16.4	5	22
				23180	.177	159.9	25.6	- 3.6	19	92
				23181	.272	147.3	20.6	- 7.3	2	16
				23179	.348	69.3	9.7	+12.7	198	1231
4.115	+12.1	18.7	+6.0	23170	.906	252.5	81.0	-13.0	12	84
				23178	.800	244.7	67.3	-16.0	0	12
				23180	.232	223.7	27.9	- 3.7	13	79
				23181	.244	188.2	20.7	- 7.9	2	15
				23179	.193	51.8	9.8	+12.8	146	1107
5.347	+12.6	2.4	+6.1	23170	.983	255.4	79.8	-13.1	12	71
				23178	.921	248.7	65.9	-16.9	6	25
				23175	.833	242.9	53.7	-18.5	2	6
				23180	.469	251.2	28.7	- 3.2	18	156
				23181	.413	234.9	22.2	- 7.9	6	44
				23179	.176	313.8	9.8	+13.0	194	1221
				23182	.250	150.9	355.4	- 6.5	2	17

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Aug. 6.357	+13.0	349.1	+6.2	23178	.970	250.5	62.0	-17.1	0	14
				1591 01	.968	244.7	60.2	-22.5	0	9
				23180	.663	257.7	29.4	- 3.4	15	157
				23181	.561	246.8	20.2	- 7.4	14	80
				23179	.370	291.0	9.8	+13.4	158	1134
				23182	.259	214.0	357.4	- 6.2	0	2
7.340	+13.3	336.1	+6.2	23180	.821	260.8	30.2	- 3.9	18	102
				1591 02	.770	274.7	26.6	+ 7.6	2	11
				23181	.748	252.8	22.1	- 8.5	22	139
				23179	.567	284.9	10.2	+13.5	161	1063
8.326	+13.7	323.0	+6.3	23180	.930	263.3	30.6	- 3.8	6	72
				23181	.887	256.9	23.7	- 8.5	31	201
				23179	.736	282.7	10.4	+13.6	160	980
				23183	.512	276.9	353.8	+ 8.9	1	4
9.316	+14.1	309.9	+6.4	23181	.974	259.3	25.2	- 8.9	100	523
				23179	.867	282.4	10.4	+13.9	185	1015
				23183	.723	275.6	356.4	+ 8.4	2	10
				23184	.543	290.0	341.9	+16.1	3	15
10.319	+14.4	296.7	+6.4	23181	.997	260.5	20.7	- 8.9	27	271
				23179	.958	282.6	10.8	+13.9	142	1027
				23184	.721	285.7	342.6	+15.7	20	83
11.318	+14.8	283.5	+6.5	23179	.997	284.2	10.1	+14.6	54	540
				23184	.863	284.4	343.5	+15.7	70	431
				23185	.734	113.6	240.1	-12.3	5	40
12.497	+15.2	267.9	+6.5	23184	.964	284.3	343.4	+15.5	135	666
				23186	.697	237.5	305.6	-16.8	0	3
				23187	.370	55.6	249.2	+18.2	1	8
				23185	.562	120.1	238.3	-10.6	8	50
				23188	.832	78.2	211.2	+13.4	6	38
13.336	+15.5	256.8	+6.6	23184	.989	285.8	339.7	+16.5	46	205
				1591 03	.796	272.2	309.7	+ 5.7	0	4
				23186	.815	243.0	306.2	-17.4	8	32
				23187	.222	29.0	250.3	+17.7	1	9
				23189	.309	59.7	240.8	+15.3	0	1
				23185	.410	135.4	239.8	-10.6	10	58
				23188	.695	76.8	212.8	+13.9	10	52
14.446	+15.9	242.1	+6.6	23186	.943	249.7	309.3	-16.6	3	17
				23189	.157	8.9	240.7	+15.5	1	13
				23185	.311	173.4	240.0	-11.3	2	17
				23188	.478	71.7	214.3	+14.5	1	8
				23190	.971	116.7	170.7	-23.9	28	160
15.357	+16.2	230.1	+6.7	23187	.392	299.3	250.9	+17.3	4	22
				23185	.340	216.7	241.9	- 9.2	2	13
				23189	.220	313.0	239.6	+15.2	0	4
				23190	.922	119.9	169.1	-24.2	17	102
				23191	.966	84.9	154.8	+ 6.6	26	95

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Aug. 16.327	+16.5	217.2	+6.7	23187	.564	290.9	250.6	+17.2	1	14
				23185	.510	238.2	243.2	- 9.5	1	8
				23189	.441	290.0	242.5	+14.8	13	66
				23192	.661	114.6	179.7	-10.6	0	5
				23190	.843	125.0	168.0	-24.6	32	150
				23191	.887	85.9	154.4	+ 6.8	10	64
17.507	+16.9	201.7	+6.8	23187	.755	287.5	250.5	+17.6	3	20
				23189	.654	284.6	242.4	+14.6	32	149
				23192	.462	130.2	180.6	-11.0	11	65
				23190	.717	134.8	167.8	-24.7	22	160
				23191	.732	86.9	154.4	+ 6.9	3	21
				1591 04	.833	71.5	145.1	+19.1	0	6
18.326	+17.2	190.8	+6.8	23187	.845	286.9	248.8	+17.9	2	9
				23189	.778	283.0	242.1	+14.4	44	287
				23192	.347	153.5	181.8	-11.3	18	121
				23190	.624	145.5	168.0	-24.6	18	154
19.328	+17.5	177.6	+6.8	23187	.966	285.7	253.7	+16.9	0	4
				23189	.898	282.5	242.1	+14.2	50	355
				23192	.334	197.0	183.3	-11.7	12	82
				23190	.548	163.5	167.7	-24.9	20	130
				23191	.468	89.4	149.6	+ 6.3	0	3
				23193	.938	97.9	108.9	- 4.9	0	9
20.503	+17.9	162.1	+6.9	23189	.980	282.7	241.7	+13.8	44	330
				23192	.496	230.0	184.8	-12.1	5	27
				23190	.530	188.5	167.0	-24.6	18	113
				1591 05	.673	121.5	125.8	-15.0	0	3
				23194	.779	82.7	110.6	+10.0	2	21
				23193	.805	100.4	109.7	- 4.1	15	93
				23195	.965	105.9	89.7	-13.3	0	8
				23196	.993	105.5	81.4	-14.4	0	35
21.329	+18.1	151.1	+6.9	23192	.601	239.0	182.8	-12.1	9	50
				23190	.577	205.3	166.8	-24.6	20	127
				23194	.644	82.6	110.9	+10.0	15	92
				23193	.677	104.2	110.1	- 4.3	15	71
				23195	.922	107.8	86.9	-13.4	6	32
				23196	.962	107.2	79.8	-14.4	20	164
22.316	+18.4	138.1	+7.0	23192	.752	246.8	182.9	-12.3	10	71
				23190	.672	220.0	166.4	-24.8	17	82
				23194	.443	81.0	111.8	+10.2	30	230
				23193	.490	111.8	111.1	- 4.2	8	75
				1591 06	.545	94.4	105.3	+ 3.5	0	3
				23195	.824	110.3	86.0	-12.3	0	8
				23196	.890	110.2	78.8	-14.4	28	197
				23197	.975	110.8	64.3	-18.4	41	254
23.323	+18.7	124.8	+7.0	23192	.870	251.2	182.2	-12.6	14	94
				23190	.777	229.8	165.5	-24.8	11	72
				23194	.207	75.2	113.1	+ 9.9	34	265
				23193	.288	130.1	112.1	- 3.8	11	70

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Aug. 23.323	Continued			23196	.773	115.1	78.7	-14.3	25	201
				23197	.906	114.0	64.3	-18.2	27	201
24.413	+19.1	110.4	+7.0	23192	.972	254.7	184.3	-13.0	0	14
				23190	.883	236.5	164.7	-25.1	7	49
				23194	.074	307.0	113.8	+ 9.6	29	242
				23193	.196	186.4	111.6	- 4.1	7	55
				23198	.455	142.4	93.8	-14.3	1	5
				23196	.615	124.2	78.8	-14.2	34	207
				23197	.790	119.6	64.3	-18.1	16	172
				23199	.972	99.2	35.5	- 7.2	37	293
25.322	+19.3	98.4	+7.1	23190	.949	240.4	163.8	-25.2	4	28
				23194	.290	278.2	115.2	+ 9.1	31	197
				23193	.293	231.3	111.5	- 3.6	8	66
				23198	.414	167.6	93.1	-16.7	1	6
				23196	.483	137.6	78.8	-14.2	22	238
				23197	.679	127.1	63.7	-18.3	19	166
				23199	.903	101.7	35.6	- 7.3	39	268
26.338	+19.6	85.0	+7.1	23194	.520	275.2	116.4	+ 8.8	26	193
				23193	.464	247.7	110.3	- 3.7	16	99
				23198	.415	201.0	93.8	-15.7	0	1
				23200	.240	166.2	81.7	- 6.3	0	2
				23196	.374	165.3	79.3	-14.1	33	208
				23197	.552	140.4	63.3	-18.5	16	144
				23199	.784	104.9	35.4	- 7.0	27	202
				23201	.900	80.6	20.2	+11.5	0	5
				23202	.964	77.9	9.4	+13.5	4	20
27.592	+20.0	68.4	+7.1	23194	.747	275.4	117.0	+ 8.8	26	190
				23193	.691	256.7	110.6	- 3.9	10	63
				23198	.567	229.5	94.8	-15.2	0	6
				23196	.408	207.0	79.3	-14.2	29	191
				23203	.221	329.3	75.1	+18.0	9	54
				23197	.444	169.0	63.3	-18.6	27	163
				23199	.580	113.2	36.0	- 7.2	21	166
				23202	.846	78.2	10.1	+13.7	4	21
				23204	.966	74.6	352.2	+16.7	23	213
28.341	+20.2	58.5	+7.1	23194	.846	276.0	116.6	+ 8.9	34	178
				23193	.815	260.7	112.0	- 3.4	4	35
				23200	.482	242.8	83.9	- 6.2	0	4
				23196	.497	224.8	79.6	-13.9	29	155
				23203	.339	304.1	75.6	+17.7	11	72
				23197	.438	189.3	62.7	-18.4	22	136
				23199	.443	121.6	36.2	- 6.8	23	168
				23205	.731	102.5	13.0	- 4.1	3	25
				23202	.715	78.7	12.6	+13.0	2	29
				23204	.943	74.3	347.0	+17.1	53	449
				23206	.984	73.8	337.4	+17.1	37	125
29.358	+20.4	45.0	+7.2	23194	.949	276.9	117.1	+ 8.8	32	178
				23200	.675	250.9	84.9	- 7.3	45	270
				23196	.653	238.0	79.8	-14.4	33	210

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Aug. 29.358	Continued			23203	.551	291.6	77.5	+17.7	15	98
				23197	.515	212.4	61.9	−18.8	19	114
				23207	.346	166.6	40.3	−12.4	2	9
				23199	.281	147.7	36.4	− 6.6	24	127
				23205	.537	109.7	14.7	− 4.2	5	36
				23202	.566	75.8	10.7	+13.9	15	98
				23204	.831	74.4	348.5	+16.9	56	374
				23208	.976	117.6	332.9	−24.8	10	81
				23206	.951	74.7	332.0	+16.7	34	227
30.322	+20.7	32.3	+7.2	23194	.995	278.2	117.1	+ 8.9	42	232
				23200	.828	255.5	86.1	− 7.7	66	378
				23196	.782	245.6	79.3	−14.0	20	166
				23203	.694	288.9	75.9	+18.2	8	40
				23197	.640	228.7	62.7	−18.8	7	36
				23209	.550	232.2	58.7	−13.2	0	5
				23199	.246	198.2	36.7	− 6.3	12	75
				23207	.348	191.6	36.4	−12.7	0	7
				23201	.199	75.2	21.1	+ 9.9	0	5
				23210	.250	92.1	17.8	+ 6.4	4	22
				23205	.344	124.6	15.9	− 4.3	4	17
				23202	.379	70.8	10.8	+13.8	32	171
				23204	.699	73.2	348.2	+16.8	61	333
				23208	.911	121.5	333.7	−24.8	8	44
				23206	.862	74.6	332.3	+16.9	32	175
31.326	+21.0	19.1	+7.2	23200	.931	258.4	85.9	− 8.0	39	303
				23203	.880	285.4	81.3	+17.0	5	19
				23196	.895	250.5	79.1	−13.9	18	147
				23197	.771	238.2	62.7	−18.7	4	25
				23209	.692	243.1	58.1	−12.6	0	3
				23199	.381	233.9	37.0	− 6.1	7	54
				23210	.013	178.1	19.0	+ 6.5	1	13
				23205	.211	155.6	14.1	− 3.9	0	3
				23202	.178	47.9	11.2	+14.0	29	186
				23204	.512	69.0	349.2	+16.8	46	262
				23208	.814	127.6	334.0	−24.7	4	18
				23206	.721	73.9	333.0	+16.5	25	120
				23211	.892	102.8	317.9	− 7.9	0	10
Sept. 1.329	+21.2	5.8	+7.2	23200	.990	260.3	86.2	− 8.5	32	250
				23203	.966	285.7	82.0	+17.0	0	9
				23196	.967	253.4	78.3	−14.0	26	171
				23199	.561	248.1	37.2	− 5.9	5	33
				23207	.596	234.3	35.6	−14.1	0	1
				23212	.390	233.2	24.0	− 6.6	4	23
				23201	.282	282.6	22.0	+10.4	0	1
				23205	.276	224.2	16.9	− 4.3	4	19
				23202	.153	319.3	11.7	+13.8	18	105
				23204	.322	58.6	349.2	+16.5	36	246
				23206	.529	69.9	334.7	+16.6	10	63
				23208	.707	137.1	333.8	−25.0	3	11
				23211	.742	108.0	320.5	− 8.2	7	37

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Sept. 2.352	+21.5	352.3	+7.2	23199	.732	255.2	37.5	− 5.7	5	22
				23207	.741	244.1	35.4	−13.6	0	3
				23212	.602	247.7	26.3	− 7.2	26	153
				23205	.439	247.1	16.1	− 3.2	3	11
				23202	.341	289.5	11.5	+13.3	12	69
				23204	.155	6.1	351.3	+16.1	23	131
				23206	.330	56.3	335.6	+17.4	5	36
				23208	.595	149.1	332.8	−23.8	1	7
				23211	.589	115.3	319.9	− 8.5	20	130
3.416	+21.7	338.2	+7.2	23199	.874	259.6	37.7	− 5.5	2	12
				23212	.771	254.8	26.6	− 6.8	55	367
				23205	.630	255.6	15.7	− 3.3	1	6
				23202	.588	281.2	14.3	+12.4	0	11
				23204	.266	308.8	350.7	+16.6	22	142
				23206	.187	35.0	331.9	+16.0	9	62
				23208	.525	168.0	331.4	−23.6	1	13
				23211	.400	131.4	320.7	− 8.4	15	78
4.328	+21.9	326.2	+7.2	23199	.954	262.1	37.6	− 5.3	0	7
				23212	.893	258.8	27.9	− 6.6	57	352
				23205	.769	259.5	15.2	− 3.3	0	4
				23202	.690	276.1	10.1	+ 9.5	0	8
				23204	.450	292.6	351.7	+16.5	24	102
				23206	.227	315.5	335.7	+16.4	4	42
				23208	.516	190.1	331.8	−23.2	1	4
				23211	.294	155.4	319.1	− 8.3	7	39
				1592 01	.316	58.0	310.0	+16.6	0	5
5.337	+22.2	312.9	+7.2	23212	.976	261.2	29.0	− 6.9	55	446
				23205	.908	262.3	17.1	− 3.8	3	11
				23204	.636	287.8	352.0	+16.9	10	66
				23213	.611	233.3	343.2	−15.1	7	44
				23206	.372	294.2	333.4	+15.5	5	32
				23211	.297	206.3	320.4	− 8.2	6	34
				23214	.102	110.7	307.4	+ 5.1	1	6
				23215	.320	139.5	300.8	− 6.9	1	5
6.318	+22.4	299.9	+7.2	23212	.995	264.0	23.0	− 5.1	31	175
				23204	.786	286.0	351.9	+17.0	14	99
				23213	.753	242.6	343.5	−15.1	3	23
				23206	.555	286.3	333.3	+15.0	8	50
				23208	.682	220.4	329.0	−24.9	0	6
				23211	.420	231.3	319.2	− 8.3	13	82
				23214	.131	257.4	307.3	+ 5.6	0	2
				23215	.244	190.2	302.4	− 6.6	1	12
7.533	+22.7	283.9	+7.2	23204	.920	285.6	351.7	+17.2	17	94
				23206	.719	286.5	329.8	+16.9	8	58
				23211	.653	248.7	321.6	− 7.9	46	257
				23214	.392	266.8	306.9	+ 5.4	1	4
				23215	.373	228.4	300.1	− 7.3	1	5
				1592 02	.275	41.0	272.9	+19.0	0	4
				23216	.451	63.9	258.8	+18.0	3	27
				1592 03	.477	116.7	258.6	− 5.8	1	9

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Sept. 7.533	Continued			23217	.724	69.1	238.0	+20.0	3	20
8.322	+22.8	273.5	+7.2	23204	.974	286.0	351.6	+17.1	19	66
				23206	.812	286.7	328.0	+17.8	4	15
				23211	.792	254.0	323.5	- 8.0	29	226
				23215	.536	248.8	303.4	- 4.9	7	48
				23216	.300	50.7	259.4	+17.9	2	10
				23217	.593	66.1	238.4	+19.8	26	109
9.315	+23.1	260.3	+7.2	23206	.963	281.2	335.6	+12.7	4	16
				23211	.926	257.5	326.3	- 8.7	23	197
				23215	.730	256.0	305.4	- 5.1	2	8
				23216	.181	358.9	260.5	+17.6	1	9
				23217	.410	55.0	239.5	+20.3	34	172
				23218	.984	104.0	182.8	-12.3	43	247
10.394	+23.3	246.1	+7.2	23211	.991	260.3	326.7	- 8.5	23	155
				23219	.840	278.3	303.7	+10.9	6	38
				23217	.248	22.7	240.3	+20.4	31	193
				23218	.913	107.0	183.0	-12.3	40	207
11.325	+23.4	233.8	+7.2	23219	.922	277.7	301.6	+ 9.9	0	12
				23217	.255	333.3	240.8	+20.3	34	160
				1592 04	.458	191.1	239.2	-19.4	1	9
				23218	.810	111.3	183.4	-12.5	23	138
				23220	.969	102.1	160.0	- 9.8	18	86
12.360	+23.6	220.1	+7.2	23217	.417	303.9	241.7	+20.2	21	163
				23218	.659	118.7	183.9	-12.6	15	91
				23220	.884	105.2	160.4	- 9.8	17	91
13.400	+23.8	206.4	+7.2	23217	.613	294.5	242.8	+20.5	32	134
				23218	.481	132.0	185.1	-12.0	15	80
				23220	.739	110.2	161.8	- 9.6	12	86
14.333	+24.0	194.1	+7.2	23217	.759	290.9	243.1	+20.5	26	123
				23218	.358	158.3	186.3	-12.2	7	56
				23220	.576	118.2	163.3	- 9.6	12	68
				23221	.644	88.9	153.9	+ 6.2	3	18
				23222	.883	80.1	131.5	+12.1	0	5
15.322	+24.2	181.0	+7.2	23217	.878	288.9	242.9	+20.0	20	118
				1592 05	.308	214.2	191.0	- 7.6	1	6
				23218	.355	197.5	187.3	-12.5	13	63
				23220	.406	133.5	163.8	- 9.3	12	63
				23221	.456	90.0	153.8	+ 6.4	5	38
				23222	.739	80.4	133.0	+11.9	3	37
16.377	+24.4	167.1	+7.2	23217	.964	289.1	242.9	+20.2	25	133
				23218	.476	226.5	187.7	-12.3	15	89
				23220	.289	167.1	163.4	- 9.1	26	124
				23221	.228	91.9	153.9	+ 6.6	7	39
				23222	.553	79.6	133.5	+11.7	4	24
				23223	.798	109.3	117.3	-10.7	2	6

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Sept. 17.338	+24.5	154.4	+7.2	23218	.636	240.3	188.7	-12.4	8	35
				23220	.326	213.4	164.8	- 8.7	12	69
				23221	.017	94.8	153.4	+ 7.1	3	33
				23222	.354	72.1	134.3	+12.9	0	2
				1592 06	.894	111.0	94.7	-15.1	0	2
				23224	.975	106.7	80.0	-14.4	29	216
18.073	+24.6	144.7	+7.1	23218	.745	246.6	188.9	-12.1	6	19
				23225	.485	285.2	173.4	+13.6	4	15
				23220	.444	233.6	165.8	- 8.5	7	37
				23221	.156	265.4	153.7	+ 6.3	0	8
				23222	.185	52.9	136.0	+13.5	0	2
				23224	.930	108.7	79.5	-14.4	17	89
19.312	+24.8	128.4	+7.1	23225	.692	281.6	172.3	+13.1	2	8
				23220	.660	248.7	166.6	- 8.3	4	30
				1592 07	.277	79.6	112.4	+ 9.7	0	12
				23224	.805	114.4	79.2	-14.8	21	159
20.328	+24.9	114.9	+7.1	23220	.808	254.4	166.6	- 8.2	6	27
				23221	.612	272.5	152.8	+ 7.2	6	37
				1592 08	.244	214.9	122.9	- 4.5	0	2
				23223	.307	186.3	116.9	-10.6	4	19
				23224	.671	122.2	79.0	-15.2	21	117
				23226	.968	97.7	40.6	- 5.6	22	155
				23227	.989	97.4	34.5	- 6.2	15	60
21.327	+25.1	101.7	+7.1	23220	.918	257.8	166.6	- 8.2	6	25
				23221	.782	273.8	153.4	+ 7.3	13	77
				23223	.389	218.4	115.9	-10.9	5	32
				23224	.523	135.1	79.4	-15.1	24	139
				23226	.888	99.8	40.4	- 5.3	29	199
				23227	.932	99.4	34.4	- 6.1	34	218
				23228	.970	96.2	26.9	- 4.2	49	290
22.421	+25.2	87.3	+7.0	23221	.906	275.5	152.7	+ 7.9	3	18
				23223	.549	237.8	115.4	-10.8	3	26
				23224	.400	160.0	79.2	-15.0	28	151
				23226	.747	103.6	40.7	- 5.3	25	148
				23227	.808	102.6	35.1	- 5.9	57	376
				23228	.880	98.2	26.8	- 3.7	33	223
				23229	.987	82.8	5.8	+ 8.2	19	221
23.382	+25.3	74.6	+7.0	23223	.700	246.4	115.3	-10.9	3	20
				23224	.385	192.7	79.6	-15.0	24	137
				23226	.585	109.1	41.1	- 5.2	22	177
				23227	.667	107.3	35.0	- 6.0	45	382
				23228	.752	101.1	27.1	- 3.6	27	233
				23229	.936	83.9	4.8	+ 8.1	25	177
24.382	+25.4	61.4	+7.0	23223	.848	253.3	116.9	-10.2	4	22
				1592 09	.587	220.4	85.3	-20.1	0	1
				23224	.471	218.9	79.2	-14.8	28	161
				23226	.407	120.1	40.8	- 5.2	34	196
				23230	.508	126.4	36.9	-11.1	0	8

Continued

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Sept. 24.382	Continued			23227	.488	115.6	35.3	- 5.9	53	369
				23228	.587	105.6	27.1	- 3.3	28	220
				23229	.832	84.4	4.8	+ 8.5	23	140
25.326	+25.6	49.0	+6.9	23231	.534	289.1	80.5	+16.0	1	21
				23224	.612	234.1	79.7	-15.0	18	167
				1592 10	.422	205.2	59.7	-15.6	1	5
				23226	.252	145.3	40.7	- 5.1	17	166
				23230	.365	149.2	38.0	-11.4	0	2
				23227	.317	132.7	35.5	- 5.6	54	348
				23228	.405	115.4	27.5	- 3.5	13	174
				23229	.701	84.9	4.3	+ 8.5	9	75
				23232	.982	99.6	331.3	- 8.0	23	93
26.319	+25.6	35.9	+6.9	23231	.720	285.5	81.9	+15.9	11	58
				23224	.757	243.8	80.2	-14.6	13	88
				23226	.228	202.6	40.9	- 5.2	20	155
				23227	.219	181.2	36.1	- 5.7	48	337
				23228	.232	139.8	27.3	- 3.4	12	89
				1592 11	.234	54.9	24.5	+14.5	0	2
				23229	.516	84.9	4.7	+ 8.5	14	72
				23233	.884	104.0	335.8	- 9.0	9	39
				23232	.915	101.7	331.3	- 7.8	16	91
27.316	+25.7	22.7	+6.9	23231	.856	284.4	82.0	+15.8	10	80
				23224	.882	249.2	81.0	-14.7	11	69
				23226	.382	237.2	41.4	- 5.4	20	130
				23227	.331	229.7	37.3	- 5.7	39	248
				23228	.183	208.9	27.8	- 2.3	8	46
				23229	.320	83.5	4.1	+ 8.6	7	41
				23234	.556	64.0	350.7	+19.9	0	4
				23233	.736	108.7	338.1	- 8.8	3	13
				23232	.800	104.9	331.6	- 7.6	13	61
28.336	+25.8	9.2	+6.8	23224	.963	252.2	80.7	-15.1	8	45
				23231	.937	283.8	79.6	+15.2	3	32
				23226	.574	249.6	41.8	- 5.8	19	122
				23227	.516	246.9	37.6	- 5.7	25	143
				23228	.346	245.1	27.5	- 1.9	1	18
				23229	.102	75.6	3.5	+ 8.2	5	20
				23234	.380	55.9	349.9	+18.7	0	2
				23233	.593	116.3	336.8	- 9.4	3	36
				23232	.643	110.9	332.1	- 7.8	15	79
29.316	+25.9	356.3	+6.8	23226	.737	255.3	41.9	- 6.0	10	83
				23227	.684	254.2	37.5	- 5.6	21	131
				1593 01	.259	262.7	11.2	+ 4.7	0	2
				23233	.428	128.9	336.7	- 9.2	7	53
				23232	.472	120.6	332.2	- 7.7	9	65
				1593 02	.786	86.5	304.3	+ 6.9	0	12
				23235	.996	99.9	273.0	- 9.1	11	57
				23236	.993	74.0	271.8	+16.6	17	199
				23237	.994	70.9	271.0	+19.7	9	56

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Sept. 30.356	+26.0	342.6	+6.7	23226	.872	259.1	41.8	- 6.1	9	54
				23227	.827	258.8	37.0	- 5.3	21	87
				23229	.388	278.6	5.4	+ 9.5	0	6
				23233	.284	162.4	337.6	- 9.0	19	128
				23232	.301	144.8	332.6	- 7.6	12	42
				23238	.528	80.7	310.7	+10.6	18	99
				23235	.942	101.7	274.0	- 8.6	13	56
				23236	.933	74.4	272.9	+16.9	15	114
				23237	.942	71.5	271.4	+19.6	10	49
				23239	.988	73.6	260.0	+17.2	0	7
Oct. 1.329	+26.1	329.8	+6.7	23227	.946	261.4	39.6	- 5.8	21	117
				23233	.306	208.2	338.1	- 9.0	22	138
				23232	.253	190.9	332.5	- 7.6	5	17
				23238	.329	77.2	310.8	+10.5	50	267
				23235	.849	104.5	273.7	- 8.6	13	44
				23236	.837	74.2	272.6	+16.8	18	119
				23237	.853	71.1	271.0	+19.5	6	36
				23239	.934	74.2	259.9	+17.1	3	9
				23240	.997	70.4	242.5	+19.9	0	27
2.334	+26.1	316.5	+6.6	1593 03	.915	230.6	12.7	-31.9	0	6
				23233	.452	235.1	338.4	- 8.8	9	59
				23232	.365	229.1	332.6	- 7.4	2	12
				23238	.114	53.0	311.2	+10.5	43	269
				23235	.708	109.6	274.2	- 8.8	9	52
				23236	.693	72.6	273.0	+16.8	22	138
				23237	.726	69.2	270.6	+19.6	5	36
				23241	.972	114.8	244.3	-22.1	9	57
				23240	.959	71.1	242.0	+20.0	12	62
3.343	+26.2	303.2	+6.6	23233	.615	246.9	337.9	- 8.5	6	40
				23232	.542	245.2	332.8	- 7.4	3	20
				23238	.163	296.5	311.7	+10.7	22	145
				23235	.554	116.8	273.2	- 8.7	8	50
				23236	.518	68.3	273.1	+16.7	18	126
				23237	.557	64.5	271.1	+19.4	5	28
				23242	.793	103.7	252.5	- 6.7	4	38
				23241	.899	118.9	245.0	-22.4	8	38
				23240	.873	70.7	242.2	+20.0	11	80
4.334	+26.2	290.1	+6.5	23233	.765	252.6	337.5	- 8.8	2	26
				23232	.710	252.7	333.0	- 7.4	2	6
				23238	.391	281.6	312.9	+10.5	13	89
				1593 04	.443	220.2	307.1	-13.5	2	22
				23243	.216	27.5	284.1	+17.5	1	10
				23235	.379	132.7	273.8	- 8.6	5	24
				23236	.331	56.6	273.4	+16.7	15	99
				23237	.398	54.3	270.1	+19.5	0	7
				23242	.627	109.0	253.6	- 6.5	3	14
				23241	.806	123.8	243.9	-22.1	2	6
				23240	.746	69.4	242.5	+19.6	10	53

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Oct. 5.305	+26.2	277.3	+6.5	23233	.885	256.9	337.7	- 8.4	5	30
				23238	.615	278.1	315.3	+10.1	4	22
				23243	.213	335.2	282.6	+17.5	2	20
				23235	.260	166.6	273.8	- 8.2	6	34
				23236	.190	19.2	273.6	+16.7	15	120
				23242	.436	118.6	254.7	- 6.0	4	36
				23240	.598	65.1	242.2	+19.8	4	27
				23241	.715	132.3	242.2	-23.4	2	14
6.340	+26.3	263.6	+6.4	23233	.967	260.7	337.6	- 7.2	4	26
				23238	.717	279.1	309.6	+11.0	5	29
				23243	.354	303.8	281.5	+17.4	2	8
				23235	.310	216.2	274.2	- 8.1	6	33
				23236	.251	317.8	273.8	+17.0	16	107
				23242	.269	143.0	254.3	- 6.0	6	45
				23241	.575	145.9	243.3	-22.3	3	12
				23240	.420	56.4	242.0	+19.3	1	6
7.383	+26.3	249.9	+6.3	23238	.844	278.8	307.8	+10.8	4	21
				23244	.851	246.0	303.9	-16.5	2	11
				23243	.584	289.7	284.7	+16.5	0	3
				23235	.479	240.1	274.6	- 8.0	1	10
				23236	.436	296.9	273.8	+17.1	16	93
				23242	.234	207.0	256.0	- 5.7	2	29
				23241	.521	160.5	239.0	-23.0	0	1
8.101	+26.3	240.4	+6.3	23244	.917	249.4	303.4	-16.0	3	25
				1593 05	.603	254.7	275.9	- 4.0	0	8
				23235	.608	247.3	274.8	- 8.3	0	5
				23236	.565	291.3	273.7	+17.1	21	79
				23239	.383	303.2	260.0	+18.0	0	7
				23242	.303	226.4	253.1	- 5.9	0	3
9.379	+26.3	223.5	+6.2	23244	.990	252.2	302.7	-16.6	0	14
				23236	.765	287.5	273.2	+17.3	13	67
				23242	.563	250.6	255.6	- 5.5	3	21
10.076	+26.3	214.3	+6.2	23236	.866	287.2	274.5	+17.9	14	71
				23242	.730	256.6	259.7	- 5.4	10	30
				23245	.970	79.3	137.8	+11.9	12	25
11.546	+26.3	195.0	+6.1	23236	.975	286.8	273.0	+17.7	10	59
				23246	.905	278.2	260.1	+10.0	3	21
				23242	.894	259.7	257.0	- 6.3	19	94
12.522	+26.3	182.1	+6.0	23246	.969	278.6	258.4	+ 9.8	0	9
				23242	.961	261.4	254.9	- 6.5	16	123
				23240	.851	291.0	240.2	+21.0	0	2
				1593 06	.126	17.3	179.9	+12.9	0	1
13.432	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Oct. 14.308	+26.3	158.5	+5.9	23247	.061	291.7	161.8	+ 7.2	0	3
				1593 07	.589	92.0	122.5	+ 3.6	0	4
15.394	+26.2	144.2	+5.8	23248	.698	289.9	187.7	+17.9	2	6
				23247	.289	277.5	160.9	+ 7.7	1	5
				23249	.970	98.2	69.3	- 6.4	14	108
				23250	.998	106.0	60.0	-15.4	16	127
16.313	+26.2	132.1	+5.7	1593 08	.949	288.2	204.4	+19.1	10	88
				23248	.827	287.6	187.7	+17.7	2	11
				23245	.062	313.4	134.7	+ 8.2	0	1
				23249	.896	99.6	69.6	- 6.0	10	67
				23250	.968	107.1	59.1	-14.9	75	482
17.549	+26.1	115.8	+5.6	23245	.287	290.0	131.7	+11.0	1	7
				1593 09	.141	84.2	107.7	+ 6.4	1	8
				23249	.769	103.2	67.1	- 6.4	8	62
				23250	.901	110.5	54.7	-15.7	66	605
18.396	+26.1	104.6	+5.6	23249	.647	107.3	66.3	- 6.7	3	61
				23250	.806	114.1	55.0	-15.6	130	536
				1	.783	114.5	57.2	-15.2	115	413
19.361	+26.0	91.9	+5.5	23249	.480	115.1	66.0	- 6.8	13	87
				23250	.662	120.6	55.8	-15.2	104	609
				1	.638	121.4	57.7	-14.8	90	508
				23251	.679	105.0	50.8	- 6.0	0	2
				1593 10	.858	113.2	36.7	-16.6	2	13
				23252	.943	109.2	24.2	-16.0	0	3
				23253	.964	110.7	20.3	-18.2	4	66
20.515	+25.9	76.7	+5.4	23249	.286	137.8	65.6	- 6.9	41	235
				23250	.481	135.5	56.3	-14.9	92	497
				1	.467	136.7	57.4	-14.7	85	445
				23251	.477	110.3	50.1	- 4.6	0	4
				23252	.819	112.9	25.4	-15.2	2	15
				23253	.877	114.4	19.6	-18.3	7	31
21.387	+25.9	65.2	+5.3	23249	.212	183.0	65.8	- 6.8	36	247
				23250	.371	159.2	57.4	-14.9	112	536
				1	.369	159.4	57.5	-14.9	110	520
				23251	.394	116.9	44.6	- 5.3	2	28
				23252	.680	118.2	27.0	-14.5	5	45
				23253	.784	119.6	19.2	-19.1	4	55
				23254	.975	100.5	349.4	- 9.0	39	282
22.186	+25.8	54.6	+5.2	23249	.290	221.4	65.7	- 7.4	21	225
				23250	.350	186.6	57.0	-15.0	75	542
				1	.350	187.2	57.2	-15.0	75	530
				23251	.256	136.7	44.5	- 5.5	5	40
				23252	.577	125.9	25.8	-15.1	9	59
				23253	.696	125.4	17.7	-19.5	4	17
				23254	.919	101.9	349.3	- 8.8	20	96
				23255	.954	108.6	344.8	-15.9	26	66

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Oct. 23.547	+25.7	36.7	+5.1	23249	.530	247.2	66.1	- 7.3	26	161
				23250	.479	224.8	57.0	-15.0	104	547
				1	.482	225.5	57.4	-14.9	96	496
				23256	.375	234.3	54.5	- 7.7	1	6
				23251	.236	223.1	45.9	- 4.8	1	10
				23252	.366	156.9	28.2	-14.5	5	25
				23253	.455	148.0	22.1	-17.6	0	2
				23254	.767	106.9	348.8	- 9.4	14	142
				23255	.824	113.7	345.1	-16.2	15	95
				23257	.989	102.6	316.5	-11.6	162	1485
24.310	+25.6	26.6	+5.1	23249	.663	252.7	66.1	- 7.5	16	101
				23250	.594	236.0	57.1	-15.0	91	596
				1	.598	236.4	57.5	-14.9	88	560
				23256	.513	245.8	54.7	- 7.6	2	15
				23252	.335	183.3	27.7	-14.4	7	44
				23253	.362	173.6	24.2	-15.9	2	14
				23254	.643	111.2	349.3	- 9.4	18	125
				23255	.711	119.4	346.5	-16.5	14	76
				23257	.959	103.8	314.9	-11.7	236	2021
25.492	+25.4	11.0	+5.0	23249	.837	257.7	66.3	- 7.5	4	28
				23250	.770	246.3	57.6	-14.6	93	481
				1	.771	246.4	57.7	-14.6	92	474
				23256	.738	255.1	56.8	- 7.5	3	21
				23252	.419	220.4	27.2	-13.8	5	28
				23253	.419	212.3	24.4	-15.8	1	5
				23254	.429	124.2	350.0	- 9.3	22	120
				23255	.530	132.8	347.2	-16.5	13	76
				23257	.857	106.6	314.3	-11.4	291	2243
26.306	+25.4	0.3	+4.9	23250	.868	249.8	57.5	-14.8	98	448
				1	.868	249.8	57.5	-14.8	98	448
				23251	.700	256.0	43.2	- 6.1	1	16
				23252	.567	235.3	28.9	-14.5	0	3
				23254	.303	146.3	350.5	- 9.7	23	137
				23255	.422	150.8	347.9	-16.8	12	72
				23258	.500	126.1	335.9	-12.7	0	4
				23257	.753	110.0	314.2	-11.5	280	2250
27.304	+25.2	347.1	+4.8	23250	.954	253.0	57.5	-14.6	70	490
				23251	.846	260.3	43.8	- 5.6	2	6
				23254	.255	192.0	350.2	- 9.6	18	104
				23255	.370	183.3	348.4	-16.8	8	50
				23258	.342	149.8	337.0	-12.4	5	26
				23257	.601	116.4	314.0	-11.4	290	2129
				23259	.873	90.0	286.5	+ 2.4	0	4
28.329	+25.1	333.6	+4.7	23250	.997	255.1	57.4	-14.4	64	370
				23251	.958	262.0	45.9	- 6.2	0	4
				1594 01	.409	293.3	356.3	+13.6	1	3
				23254	.374	229.3	350.3	- 9.6	10	65
				23255	.443	214.5	348.7	-16.8	4	17
				23258	.309	187.8	336.1	-13.1	0	3
				23257	.437	130.0	313.7	-11.8	277	1901

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Oct. 28.329	Continued			1594 02	.448	80.8	307.2	+ 8.3	2	18
				23259	.685	92.8	290.6	+ 1.5	1	7
29.344	+24.9	320.2	+4.6	23254	.549	245.1	350.4	- 9.4	11	39
				23255	.585	232.2	349.0	-16.9	3	8
				23260	.237	323.9	328.5	+15.5	1	3
				23257	.304	160.0	314.1	-11.9	252	1903
30.175	+24.8	309.3	+4.5	1594 03	.820	231.2	355.3	-27.8	2	9
				23254	.685	251.0	350.2	- 9.5	7	30
				23255	.705	240.0	348.8	-17.1	0	4
				23260	.412	306.0	329.7	+18.2	0	3
				23257	.293	195.9	313.9	-11.8	220	1489
				1594 04	.235	106.6	296.3	+ 0.6	0	8
				1594 05	.408	57.8	288.2	+16.7	2	5
				23261	.563	114.2	278.0	- 9.4	7	28
31.082	+24.7	297.3	+4.4	23254	.820	255.1	350.6	- 9.5	3	24
				23257	.400	225.6	314.2	-11.9	217	1543
				23259	.195	90.5	286.1	+ 4.2	4	14
				23261	.389	127.8	279.2	- 9.5	9	34
				23262	.551	111.9	266.3	- 8.0	2	8
				23263	.724	76.5	251.3	+12.8	6	16
Nov. 1.460	+24.4	279.1	+4.3	23254	.953	258.9	350.1	- 9.2	7	36
				23257	.630	245.0	314.7	-11.9	199	1701
				23261	.233	179.0	278.9	- 9.1	3	15
				23262	.264	136.7	268.7	- 6.8	2	11
				23263	.437	70.5	254.3	+12.2	1	15
2.375	+24.3	267.1	+4.2	23257	.766	251.0	314.6	-11.6	215	1484
				1594 06	.610	282.7	304.3	+11.0	1	15
				23261	.309	222.7	279.3	- 9.0	2	12
				23262	.197	188.1	268.7	- 7.0	0	1
				23263	.273	53.5	254.1	+13.4	3	21
3.306	+24.1	254.8	+4.1	23257	.886	254.4	315.2	-11.8	121	1197
				23261	.475	241.1	279.6	- 9.5	1	6
				23263	.148	359.9	254.8	+12.6	0	11
4.324	+23.9	241.4	+4.0	23257	.966	256.4	315.0	-12.0	88	934
				1594 07	.733	247.4	285.3	-13.5	2	12
5.431	+23.7	226.8	+3.9	23264	.891	263.0	289.0	- 4.4	18	83
				23265	.454	232.1	248.2	-12.5	1	19
6.328	+23.5	214.9	+3.8	23264	.970	264.9	290.2	- 4.0	92	472
				23265	.586	241.9	246.8	-12.8	4	21
7.314	+23.3	201.9	+3.7	23264	.996	266.3	286.2	- 3.3	22	156
				23265	.753	246.2	247.3	-15.1	3	19
8.519	+23.0	186.1	+3.5	23265	.924	255.5	252.0	-11.9	3	17

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Nov. 9.549	+22.8	172.5	+3.4	23265	.985	255.7	251.2	-13.4	0	12
				23266	.486	274.4	201.4	+ 5.1	1	6
10.299	+22.6	162.6	+3.3	23266	.641	274.4	202.4	+ 5.3	14	60
11.418	+22.4	147.8	+3.2	23266	.828	273.6	203.7	+ 4.8	41	256
				23267	.965	93.7	73.4	- 2.8	8	49
12.294	+22.1	136.3	+3.1	23266	.929	273.8	204.6	+ 4.6	36	312
				23267	.886	94.7	74.4	- 2.7	11	63
				23268	.982	104.5	58.4	-13.6	33	332
13.390	+21.9	121.8	+3.0	23266	.982	274.2	200.9	+ 4.7	11	80
				23267	.727	97.4	75.8	- 3.3	6	41
				23268	.913	106.6	57.8	-13.8	45	382
14.399	+21.6	108.5	+2.9	23267	.534	101.4	77.0	- 3.6	8	31
				1594 08	.589	69.2	74.1	+14.4	3	16
				23268	.799	109.6	57.9	-13.7	41	315
15.400	+21.3	95.3	+2.7	23267	.319	109.6	77.9	- 3.5	1	9
				23268	.651	114.3	57.9	-13.3	34	280
16.325	+21.0	83.2	+2.6	23268	.497	122.8	57.9	-13.2	35	301
17.292	+20.8	70.4	+2.5	23268	.347	142.2	57.8	-13.4	29	245
				1594 09	.315	73.7	52.7	+ 7.5	2	24
				23269	.994	98.6	347.5	- 8.3	9	55
18.286	+20.5	57.3	+2.4	23268	.277	181.6	57.8	-13.6	30	219
				23269	.934	99.0	349.1	- 7.5	6	47
19.306	+20.1	43.9	+2.3	23268	.355	221.3	57.7	-13.2	23	186
				23270	.329	184.1	45.3	-16.8	2	14
				23269	.837	100.0	347.9	- 7.1	27	109
				23271	.990	99.6	322.8	- 9.2	14	86
20.458	+19.8	28.7	+2.1	23268	.540	241.0	57.6	-13.3	34	188
				23270	.432	224.0	46.8	-16.0	14	78
				23272	.443	112.8	4.4	- 7.9	19	118
				23269	.665	103.4	348.1	- 7.2	16	93
				23271	.928	101.0	321.5	- 9.4	14	95
21.416	+19.5	16.0	+2.0	23268	.693	248.3	57.3	-13.3	29	173
				23270	.586	239.8	47.6	-15.4	23	165
				23272	.241	134.8	6.1	- 7.7	11	83
				23269	.489	108.7	348.3	- 7.2	14	68
				23271	.825	102.7	321.6	- 9.3	13	103
				23273	.981	93.0	297.5	- 2.5	28	176
22.297	+19.2	4.4	+1.9	23268	.814	252.0	56.9	-13.4	25	195
				23270	.724	246.5	47.7	-15.3	15	142
				23272	.164	196.3	7.1	- 7.1	15	85

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972	°	°	°			°	°	°		
Nov. 22.297	Continued			23269	.324	118.2	347.8	- 6.9	8	46
				23271	.702	105.2	321.2	- 9.2	15	105
				23273	.925	93.6	297.2	- 2.6	25	143
23.428	+18.8	349.5	+1.8	23268	.930	255.1	56.6	-13.1	32	226
				23270	.880	252.5	49.3	-14.4	21	119
				23272	.339	244.3	7.3	- 6.7	31	169
				23269	.158	163.6	347.0	- 6.9	2	17
				23271	.499	112.2	321.7	- 9.3	23	153
				23273	.795	94.3	297.2	- 2.3	25	131
24.435	+18.5	336.2	+1.6	23268	.987	256.5	56.3	-13.0	27	255
				23270	.970	255.5	51.0	-13.6	13	88
				23272	.561	256.3	9.4	- 6.2	49	367
				23269	.255	235.3	348.4	- 6.7	1	9
				23271	.310	126.6	321.7	- 9.0	10	92
				23273	.637	95.7	297.1	- 2.4	11	107
				23274	.978	103.8	259.3	-13.1	20	143
25.617	+18.1	320.7	+1.5	23272	.764	260.6	9.7	- 6.2	66	423
				23271	.186	185.0	321.6	- 9.1	20	134
				23273	.407	100.2	297.1	- 2.7	11	77
				23274	.889	104.9	259.3	-12.5	29	147
26.440	+17.8	309.8	+1.4	23272	.876	262.3	10.4	- 6.1	42	326
				23275	.439	302.5	332.3	+14.9	2	12
				23271	.278	227.9	321.9	- 9.3	11	73
				23273	.234	105.6	296.8	- 2.2	9	58
				23274	.795	107.0	258.9	-12.6	13	104
27.508	+17.4	295.7	+1.3	23272	.967	263.2	10.5	- 6.2	41	349
				23275	.658	290.1	335.1	+14.0	4	22
				23271	.487	247.6	322.8	- 9.5	16	101
				23273	.067	199.5	297.0	- 2.3	12	67
				23274	.631	110.5	258.8	-11.7	11	100
28.326	+17.1	285.0	+1.2	23272	.987	263.7	5.2	- 6.0	13	144
				23275	.795	286.5	336.5	+13.8	2	5
				23271	.629	252.7	322.4	- 9.8	12	74
				23273	.222	249.1	296.9	- 3.4	10	69
				23274	.484	117.1	259.0	-11.6	10	72
29.290	+16.7	272.3	+1.0	23271	.780	256.3	322.3	-10.0	8	95
				23273	.427	259.6	297.1	- 3.5	6	50
				23276	.345	212.9	283.4	-15.8	1	11
				23274	.317	134.1	258.9	-11.7	9	64
30.562	+16.2	255.5	+0.9	23271	.925	258.8	322.3	-10.0	8	68
				23273	.671	263.9	297.3	- 3.5	3	13
				23276	.526	235.7	282.3	-16.4	26	191
				23274	.228	193.6	258.6	-11.9	12	77
Dec. 1.290	+16.0	245.9	+0.8	23271	.977	259.6	323.1	-10.0	5	29
				23273	.786	264.8	297.4	- 3.6	3	19
				23276	.654	243.5	283.4	-16.3	29	221

Continued

Date	P	L_o	B_o	Group No.	Rad. Dist.	Pos. Angle	Long.	Lat.	Umb.	Whole Spots
				Measures			Position		Area	
1972	°	°	°			°	°	°		
Dec. 1.290	Continued			23274	.305	224.8	258.5	-11.7	10	59
				1595 01	.572	1.0	245.2	+35.5	0	4
2.335	+15.6	232.1	+0.7	23273	.913	265.5	297.7	- 3.8	3	8
				23276	.810	249.1	284.0	-16.3	28	155
				23274	.482	243.8	258.3	-11.6	10	62
				1595 02	.301	85.6	214.7	+ 1.9	0	1
3.281	+15.2	219.7	+0.5	23276	.902	251.7	282.6	-16.2	24	172
				23274	.645	251.0	258.0	-11.6	8	42
				23277	.299	150.3	210.9	-14.5	4	27
4.316	+14.8	206.0	+0.4	23276	.979	253.1	283.3	-16.4	5	43
				23274	.811	255.4	259.0	-11.5	4	23
5.322	+14.4	192.8	+0.3	23274	.917	257.2	258.4	-11.5	5	23
				23277	.424	231.6	212.8	-15.0	4	34
6.426	+13.9	178.2	+0.1	23277	.645	246.3	215.7	-14.9	3	17
				23278	.951	78.7	106.9	+10.8	14	107
7.465	+13.5	164.5	0.0	23277	.803	251.5	216.3	-14.7	2	14
				23278	.880	77.2	103.8	+11.2	30	240
8.479	+13.0	151.2	-0.1	23278	.744	74.6	104.4	+11.3	86	615
9.490	+12.6	137.8	-0.3	23278	.576	70.1	104.5	+11.0	88	715
10.413	+12.2	125.7	-0.4	23278	.387	59.3	105.9	+11.0	67	619
				23279	.492	125.3	101.0	-16.8	1	7
				23280	.483	113.6	98.9	-11.5	4	24
11.281	+11.8	114.3	-0.5	23278	.239	35.5	106.2	+10.7	70	534
				23279	.340	142.6	101.9	-16.1	2	6
				23280	.324	125.3	98.7	-11.2	1	10
				23281	.845	113.1	58.8	-19.6	0	2
				23282	.893	64.8	53.8	+22.1	0	5
12.300	+11.4	100.8	-0.6	23278	.224	329.9	107.4	+10.5	46	364
				23279	.305	171.7	98.2	-18.1	4	23
				23281	.692	117.2	60.4	-18.9	52	234
				23282	.770	61.0	54.6	+21.4	5	26
13.298	+10.9	87.7	-0.8	23278	.386	300.9	107.3	+10.7	44	381
				23279	.352	210.4	98.4	-18.3	3	26
				23281	.539	126.2	60.4	-19.2	61	498
				23282	.626	53.4	55.2	+21.2	4	28
14.079	+10.6	77.4	-0.9	23278	.561	291.3	109.4	+11.0	36	238
				23279	.454	230.6	98.8	-17.5	9	39
				23281	.420	139.5	60.7	-19.4	91	527
				23282	.510	43.1	55.6	+21.0	7	29

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Rad. Dist.	Pos. Angle	Long.	Lat.	Umb.	Whole Spots
				Measures			Position		Area	
1972	°	°	°			°	°	°		
Dec. 15.492	+ 9.9	58.8	-1.0	23278	.816	284.6	112.2	+11.3	42	325
				23279	.676	245.1	98.6	-17.3	7	41
				23281	.321	184.6	60.3	-19.6	89	578
				23282	.368	359.4	59.0	+20.5	2	16
				23283	.244	170.8	56.5	-14.9	2	12
16.483	+ 9.5	45.7	-1.2	23278	.929	282.9	113.1	+11.5	31	242
				23279	.830	249.9	100.2	-17.2	2	12
				23282	.433	327.0	60.2	+20.1	2	23
				23281	.397	216.1	60.0	-19.7	85	621
				23283	.258	218.9	55.2	-12.7	1	7
				23284	.831	99.3	349.9	- 8.4	2	8
				23285	.945	73.1	336.2	+15.5	0	13
17.416	+ 9.1	33.4	-1.3	23278	.969	281.8	108.4	+11.0	25	125
				23279	.924	251.4	99.9	-17.6	0	8
				23281	.536	234.2	60.8	-19.4	82	524
				23283	.431	238.9	55.7	-14.0	0	2
				23286	.348	106.9	13.9	- 7.0	0	4
				23284	.664	100.3	352.3	- 7.8	7	43
				23285	.821	70.4	340.4	+15.2	9	64
18.500	+ 8.6	19.1	-1.4	23278	.987	283.1	99.2	+12.6	7	40
				23281	.712	243.2	61.4	-19.7	61	410
				23286	.124	141.0	14.7	- 6.9	0	9
				23284	.431	105.0	354.4	- 7.7	4	16
				23285	.637	63.9	343.0	+15.1	13	101
				23287	.914	71.1	315.0	+16.5	0	5
19.494	+ 8.1	6.0	-1.5	23281	.858	247.5	63.3	-19.9	65	293
				23286	.171	229.6	13.6	- 7.9	0	2
				23284	.261	113.0	352.1	- 7.3	3	27
				23285	.475	51.9	343.3	+15.5	49	258
				23287	.827	68.4	312.8	+16.7	2	6
20.283	+ 7.7	355.6	-1.6	23281	.932	249.1	63.4	-20.0	54	272
				23284	.105	176.2	355.3	- 7.6	2	18
				23285	.360	33.4	343.8	+15.8	36	272
				23287	.711	63.9	314.0	+16.9	3	19
				23288	.753	73.7	308.4	+11.1	3	16
				23289	.964	85.9	281.4	+ 3.5	0	16
21.324	+ 7.2	341.9	-1.8	23281	.989	250.0	63.1	-20.1	41	380
				23284	.304	251.4	358.7	- 7.2	0	3
				23285	.308	353.7	343.9	+16.0	30	242
				23287	.565	55.2	313.0	+17.2	1	6
				23288	.599	68.4	307.5	+11.2	21	194
				23290	.921	68.4	277.2	+19.1	3	21
22.287	+ 6.8	329.3	-1.9	23284	.484	257.8	357.6	- 7.5	1	12
				23285	.391	321.8	343.8	+16.0	40	228
				1596 01	.213	215.2	336.4	-11.8	1	13
				23291	.154	168.1	327.4	-10.5	1	11
				23287	.409	38.0	314.1	+16.9	1	15
				23288	.423	56.6	308.2	+11.7	60	414
				23290	.832	64.4	276.6	+19.8	4	15

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1972/3	°	°	°			°	°	°		
Dec. 23.308	+ 6.3	315.8	-2.0	23284	.604	261.6	352.7	- 6.7	0	3
				23285	.537	304.5	343.1	+15.8	31	236
				23291	.271	227.4	327.6	-12.5	0	3
				1596 02	.332	214.5	327.2	-17.8	0	2
				23288	.271	27.8	308.4	+11.8	63	398
				23289	.512	77.4	285.8	+ 4.6	0	1
24.292	+ 5.8	302.9	-2.1	23284	.826	260.5	358.2	- 9.0	2	11
				23285	.693	296.2	343.0	+16.1	25	185
				23291	.450	244.3	327.4	-13.2	1	9
				1596 03	.342	247.6	321.5	- 9.5	0	2
				23288	.258	336.0	309.0	+11.4	53	378
25.331	+ 5.3	289.1	-2.3	23284	.934	262.1	358.1	- 8.2	0	6
				23285	.851	290.3	345.0	+15.8	32	160
				23287	.533	305.6	315.8	+16.0	1	12
				23288	.436	301.8	311.3	+11.1	45	431
26.336	+ 4.8	275.9	-2.4	23285	.957	287.2	347.4	+15.6	7	43
				23291	.811	254.7	329.4	-13.8	0	4
				23287	.703	295.5	317.0	+15.7	3	18
				23288	.643	289.9	313.8	+10.7	69	433
27.300	+ 4.4	263.2	-2.5	23291	.904	256.4	327.5	-13.3	5	39
				23288	.797	285.7	314.4	+10.9	53	476
28.413	+ 3.8	248.6	-2.6	23291	.986	255.6	329.2	-14.6	5	70
				23288	.925	283.0	315.0	+11.0	52	503
				1596 04	.616	253.1	285.5	-12.4	0	5
29.492	+ 3.3	234.3	-2.8	23288	.989	281.4	315.0	+10.8	43	330
				23292	.523	243.5	263.3	-15.9	5	48
30.418	+ 2.9	222.2	-2.9	23292	.678	249.1	263.2	-16.2	21	140
				23293	.958	103.1	148.8	-13.3	4	22
				23294	.983	82.4	143.4	+ 7.0	47	372
31.497	+ 2.3	207.9	-3.0	23292	.847	253.4	265.1	-15.6	12	113
				23293	.855	103.0	149.5	-12.6	4	17
				23294	.924	81.6	141.3	+ 6.5	83	690
Jan. 1.276	+ 1.9	197.7	-3.1	23292	.929	254.7	265.8	-15.3	6	28
				23294	.841	79.8	141.4	+ 6.8	78	546
				23295	.989	76.3	117.5	+13.0	0	27
2.498	+ 1.4	181.6	-3.2	1596 05	.951	253.6	253.5	-16.5	0	10
				23296	.260	153.3	174.6	-16.6	1	9
				23293	.566	108.2	148.3	-12.9	1	6
				23294	.651	75.2	142.4	+ 7.0	67	460
				23295	.917	74.5	116.9	+12.8	13	78
3.285	+ 1.0	171.2	-3.3	23297	.578	309.6	199.2	+18.6	5	22
				23296	.238	188.4	173.3	-16.9	2	22
				23294	.510	69.6	142.5	+ 7.3	51	418
				23295	.861	72.5	113.9	+13.2	41	289

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Jan. 4.319	+ 0.5	157.6	-3.4	23297	.743	297.9	201.1	+17.8	2	5
				23296	.354	229.3	173.8	-16.6	1	9
				23293	.262	130.7	145.9	-13.2	1	8
				23294	.307	51.5	143.6	+ 7.6	54	368
				1596 06	.599	66.9	123.6	+10.7	0	3
				23295	.728	68.2	113.8	+13.2	47	350
5.290	0.0	144.8	-3.5	23296	.524	243.1	173.9	-16.8	1	10
				23293	.168	184.2	145.5	-13.1	0	2
				23294	.199	3.3	144.2	+ 7.9	56	374
				23295	.578	60.5	113.8	+13.4	69	414
				23298	.989	108.1	63.0	-18.4	27	115
6.135	- 0.4	133.7	-3.6	23299	.655	257.1	174.2	-11.2	1	8
				23294	.277	318.6	144.3	+ 8.3	39	372
				23295	.440	49.3	113.8	+13.2	75	482
				23298	.944	109.2	63.1	-19.3	18	65
7.111	- 0.9	120.8	-3.8	23299	.813	259.7	175.1	-10.6	13	40
				23294	.455	297.7	144.8	+ 8.7	52	330
				23295	.317	22.0	113.9	+13.3	67	461
				23298	.850	110.3	63.5	-19.1	11	45
8.511	- 1.6	102.4	-3.9	23294	.711	285.5	146.0	+ 8.1	52	332
				23295	.346	328.6	113.0	+13.3	36	396
				23298	.664	113.8	62.7	-18.5	6	32
				23300	.954	74.6	31.7	+13.4	7	34
9.285	- 1.9	92.2	-4.0	23299	.989	259.1	174.0	-11.3	7	20
				23294	.823	282.9	146.1	+ 8.2	38	343
				1596 07	.710	258.7	137.2	-10.8	3	13
				23295	.454	310.0	113.0	+13.2	39	300
				23298	.539	118.9	62.5	-18.5	5	26
				23300	.888	72.7	31.8	+13.3	5	29
				23301	.970	105.6	16.0	-16.1	5	21
10.292	- 2.4	79.0	-4.1	23294	.935	280.6	147.1	+ 8.4	50	312
				23295	.613	298.3	112.5	+13.4	27	200
				23298	.375	132.4	62.1	-18.5	2	11
				23300	.761	69.0	32.3	+13.0	5	22
				23301	.884	105.8	17.0	-15.9	4	33
11.307	- 2.9	65.6	-4.2	23294	.991	279.2	146.8	+ 8.5	30	194
				23295	.770	291.4	112.9	+13.4	20	164
				23298	.264	162.1	60.7	-18.7	2	15
				23300	.600	62.5	32.7	+12.5	3	8
				23301	.783	107.3	14.7	-16.1	3	10
12.310	- 3.4	52.4	-4.3	23295	.914	286.0	116.4	+12.7	19	208
				1596 08	.302	227.0	65.6	-16.0	0	2
				23300	.409	48.2	34.3	+11.7	2	15
				23301	.620	112.2	15.7	-17.0	0	7
				1596 09	.966	71.6	339.6	+16.5	0	8

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Jan. 13.440	- 3.9	37.5	-4.4	23295	.974	285.8	112.6	+14.3	14	137
				23301	.374	121.2	18.2	-15.3	0	13
				23302	.990	79.3	316.8	+ 9.9	31	185
14.444	- 4.4	24.3	-4.5	23301	.190	161.2	20.7	-14.8	3	18
				23302	.935	77.2	316.6	+10.3	58	351
15.451	- 4.9	11.0	-4.6	23298	.809	249.1	64.1	-19.6	2	11
				23300	.496	307.5	34.8	+13.3	1	11
				23302	.829	74.0	317.1	+10.5	38	325
16.470	- 5.3	357.6	-4.7	1597 01	.083	287.0	2.2	- 3.3	0	3
				23302	.691	69.1	316.7	+10.6	43	269
17.284	- 5.7	346.9	-4.8	23303	.165	134.0	340.0	-11.3	1	13
				23302	.552	62.7	317.1	+10.5	36	266
18.276	- 6.2	333.8	-4.9	23304	.614	247.5	10.1	-17.5	9	49
				23303	.160	202.5	337.4	-13.3	0	2
				23305	.194	133.9	325.6	-12.6	4	48
				23302	.388	47.7	316.9	+10.4	38	212
19.285	- 6.6	320.5	-5.0	23304	.779	251.3	11.1	-17.6	10	43
				23305	.160	213.1	325.6	-12.6	4	27
				1597 02	.150	2.0	320.2	+ 3.6	0	6
				23302	.282	14.3	316.5	+10.8	37	226
				23306	.974	78.6	244.9	+ 9.8	5	14
20.323	- 7.1	306.9	-5.1	23304	.889	252.4	9.6	-18.0	5	25
				23305	.353	245.2	326.0	-13.3	7	65
				23302	.324	329.6	316.4	+11.1	26	164
				23306	.893	76.1	245.4	+ 9.9	0	5
21.282	- 7.5	294.2	-5.2	23305	.549	253.8	326.9	-13.2	14	100
				23302	.463	306.8	316.4	+11.2	26	211
				1597 03	.422	26.5	282.9	+17.0	2	14
				23306	.782	72.7	245.1	+10.0	7	50
22.467	- 8.1	278.6	-5.3	23305	.743	255.4	326.3	-14.3	13	105
				23302	.659	294.4	316.3	+11.6	20	176
				23307	.344	119.8	260.7	-14.8	2	15
				23306	.634	66.4	242.6	+10.4	13	69
23.278	- 8.4	267.9	-5.4	23305	.855	256.1	326.8	-14.6	8	54
				23302	.776	290.0	315.9	+11.8	23	165
				23307	.194	144.0	261.2	-14.3	2	39
				1597 04	.419	85.6	243.3	- 3.1	1	8
				23306	.522	59.8	240.7	+10.4	11	76
24.285	- 8.9	254.7	-5.5	23305	.944	255.8	325.9	-15.1	9	69
				23302	.896	286.1	316.1	+11.8	19	143
				23308	.232	244.4	267.0	-11.0	1	11
				23306	.362	42.4	240.4	+10.2	14	65
				23309	.730	98.0	207.7	- 9.6	3	23

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Jan. 25.333	- 9.3	240.9	-5.5	23302	.971	283.8	315.3	+11.9	13	108
				23308	.447	256.3	267.0	-11.0	2	12
				23306	.271	352.3	243.0	+10.0	4	33
				23309	.521	100.5	209.6	-10.2	1	5
26.442	- 9.8	226.3	-5.6	23306	.353	315.6	240.7	+ 9.1	8	58
				23309	.325	106.6	207.9	-10.7	0	6
27.349	-10.2	214.3	-5.7	23306	.517	298.3	241.7	+ 9.1	6	43
28.472	-10.7	199.6	-5.8	23306	.723	289.3	243.2	+ 9.6	2	6
				23310	.778	71.3	151.2	+10.6	2	19
29.279	-11.0	188.9	-5.8	23309	.351	256.8	209.2	-10.1	2	13
				23311	.593	72.2	154.5	+ 5.6	1	18
30.285	-11.5	175.7	-5.9	23311	.410	62.1	154.5	+ 5.5	1	12
				1597 05	.737	81.3	129.1	+ 2.4	2	9
31.297	-11.9	162.4	-6.0	23311	.244	33.1	154.7	+ 5.8	2	17
Feb. 1.377	-12.3	148.2	-6.1	23310	.283	348.1	151.5	+10.0	1	9
2.506	-12.8	133.3	-6.2	1597 06	.749	83.7	85.4	+ 0.6	0	5
				23312	.871	96.1	72.4	- 8.3	31	155
3.297	-13.1	122.9	-6.2	1597 07	.878	254.5	184.6	-16.6	0	4
				1597 08	.403	14.7	116.8	+16.7	0	6
				23312	.751	95.5	74.1	- 8.2	16	127
4.321	-13.5	109.4	-6.3	23312	.590	96.0	73.1	- 8.6	12	143
5.379	-13.9	95.5	-6.3	1597 09	.694	271.7	139.3	- 3.4	4	29
				23312	.374	98.2	73.6	- 8.9	15	75
				23313	.987	82.3	16.0	+ 6.5	25	188
				23314	.989	77.5	15.9	+11.3	54	231
6.083	-14.2	86.2	-6.4	23312	.221	101.2	73.6	- 8.7	2	19
				23314	.954	75.6	15.8	+11.6	39	171
				23313	.952	80.0	15.5	+ 7.5	16	122
7.603	-14.8	66.2	-6.5	23312	.134	250.3	73.5	- 9.0	1	7
				23314	.800	71.0	16.0	+11.0	40	216
				23313	.800	76.4	14.9	+ 6.8	23	167
8.297	-15.0	57.0	-6.5	23315	.571	52.4	29.3	+14.6	1	5
				1597 10	.672	53.7	22.4	+18.0	0	1
				23314	.703	66.8	16.0	+11.1	43	225
				23313	.703	72.8	14.6	+ 7.2	22	147
				23316	.829	66.7	5.1	+15.1	0	6
				23317	.937	100.0	346.9	-11.6	3	6

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Feb. 8.297	Continued			1597.11	.938	95.6	346.9	- 7.5	0	9
9.476	-15.5	41.5	-6.6	23315	.399	34.0	28.4	+12.8	9	58
				23314	.510	55.6	16.3	+10.8	34	215
				23313	.516	64.3	13.7	+ 7.1	19	201
				23317	.838	99.8	344.2	-11.8	0	4
				23318	.924	92.1	334.0	- 4.4	3	14
10.312	-15.8	30.5	-6.6	23315	.342	4.0	29.1	+13.2	8	52
				23314	.384	38.6	16.5	+11.0	26	194
				23313	.375	50.7	13.6	+ 7.4	23	182
				23316	.541	50.6	5.1	+14.1	0	8
				23318	.833	90.6	334.1	- 4.1	4	15
				23319	.982	105.5	310.1	-16.4	33	232
11.292	-16.1	17.6	-6.7	23315	.399	326.3	30.7	+12.8	5	41
				23314	.310	3.9	16.4	+11.3	16	164
				23313	.246	17.2	13.4	+ 6.9	17	128
				23316	.408	31.6	4.9	+13.7	1	12
				23320	.366	37.2	4.7	+10.4	0	9
				23318	.692	89.3	333.8	- 4.4	3	15
				23319	.927	105.3	308.9	-16.7	31	225
12.294	-16.5	4.4	-6.7	23315	.538	305.8	30.8	+12.3	3	26
				23314	.371	325.9	16.6	+11.2	23	153
				23321	.245	222.7	14.4	-16.9	5	26
				23313	.282	324.1	13.9	+ 6.5	18	106
				23320	.291	349.9	7.4	+ 9.9	1	8
				23316	.355	356.5	5.7	+14.0	1	11
				23318	.501	86.7	334.4	- 4.2	4	13
				23319	.815	105.6	309.7	-16.6	22	198
				23322	.970	97.7	287.9	- 9.1	9	47
13.292	-16.8	351.3	-6.8	23315	.685	296.5	30.0	+12.5	4	28
				23314	.518	305.2	16.7	+11.2	25	130
				23321	.444	245.0	16.1	-16.9	1	7
				23313	.440	300.1	13.7	+ 6.4	16	66
				23320	.439	309.3	11.3	+ 9.7	0	7
				23318	.291	82.8	334.5	- 4.4	2	13
				23319	.682	107.6	308.6	-16.9	24	225
				23322	.898	96.7	287.0	- 9.0	19	176
14.298	-17.2	338.0	-6.8	23315	.826	289.9	30.5	+12.2	2	30
				23323	.834	293.7	30.3	+15.4	23	106
				23314	.679	295.0	16.8	+11.3	17	129
				23321	.630	251.0	16.4	-17.2	0	3
				23313	.623	289.6	14.1	+ 6.5	8	47
				23320	.567	299.4	8.0	+10.2	1	8
				1598 01	.091	154.8	335.8	-11.5	0	2
				23318	.072	54.2	334.7	- 4.4	2	8
				23319	.520	111.0	307.7	-16.6	42	260
				23322	.778	96.0	286.7	- 9.0	20	135

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Feb. 15.320	-17.5	324.6	-6.9	23323	.939	289.4	31.1	+15.5	24	179
				23315	.925	286.7	29.5	+12.6	0	14
				23314	.825	289.0	17.1	+11.4	15	98
				23313	.785	283.7	14.5	+ 6.3	5	24
				23318	.179	282.7	334.6	- 4.5	1	8
				23319	.344	120.8	306.7	-16.6	38	292
				23322	.610	96.0	286.9	- 9.1	12	74
16.456	-17.9	309.6	-6.9	23323	.987	288.0	27.7	+16.4	7	27
				23314	.939	285.2	17.1	+11.7	13	63
				23313	.918	280.3	14.8	+ 6.6	5	16
				1598 02	.653	296.7	346.0	+11.5	1	7
				23319	.174	163.6	306.7	-16.5	42	307
				23322	.393	97.0	286.5	- 9.1	15	89
17.317	-18.2	298.3	-6.9	23314	.986	283.2	16.5	+11.6	6	43
				1598 03	.986	286.4	16.0	+14.8	0	6
				23313	.978	278.2	15.1	+ 6.5	5	35
				23319	.220	220.9	306.9	-16.4	43	262
				1598 04	.307	346.0	302.6	+10.3	2	9
				23322	.207	104.3	286.6	- 9.7	5	45
				23324	.966	69.0	226.8	+18.2	4	8
18.421	-18.5	283.7	-7.0	23319	.419	245.3	307.0	-16.4	36	243
				23322	.086	217.5	286.8	-10.9	0	3
				23324	.919	67.3	221.1	+17.6	3	14
19.370	-18.8	271.2	-7.0	23319	.595	251.3	307.1	-16.7	34	243
				23325	.248	135.6	260.8	-17.1	0	4
20.315	-19.1	258.8	-7.0	1598 05	.963	280.7	331.5	+ 8.3	4	23
				23319	.738	253.8	306.3	-16.7	19	175
				23325	.169	194.1	261.3	-16.4	8	41
21.335	-19.4	245.4	-7.1	23319	.876	254.8	307.1	-16.7	33	212
				23325	.307	238.0	261.0	-16.1	7	52
				23324	.573	41.9	221.6	+18.7	1	8
				23326	.890	107.8	182.0	-19.1	2	23
22.382	-19.7	231.6	-7.1	23319	.963	254.5	307.1	-16.8	40	145
				23325	.491	248.1	259.9	-16.8	1	15
				1598 06	.364	298.9	250.1	+ 3.4	0	2
				23326	.765	109.1	181.8	-19.1	3	14
				23327	.878	99.5	169.6	-11.8	2	7
23.397	-20.0	218.2	-7.1	23325	.664	251.8	259.4	-17.3	4	15
				23326	.625	111.8	180.5	-19.1	3	8
				23327	.703	101.8	173.4	-13.4	6	20
				23328	.974	81.0	142.7	+ 7.0	47	269
24.440	-20.3	204.5	-7.2	23329	.939	261.5	275.0	-10.4	3	25
				23325	.813	253.3	259.1	-17.7	2	21
				23327	.516	105.8	173.8	-14.2	4	22
				23328	.911	79.7	140.4	+ 6.3	84	515

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Feb. 25.310	-20.6	193.0	-7.2	23329	.991	260.6	276.0	-10.3	8	38
				23325	.914	254.0	259.9	-17.5	3	18
				23330	.229	1.8	192.6	+ 6.0	1	9
				23327	.335	111.1	174.3	-13.7	1	3
				23328	.809	76.3	140.9	+ 6.6	113	576
26.292	-20.8	180.1	-7.2	23330	.322	315.6	193.1	+ 6.2	6	36
				23327	.126	147.7	176.1	-13.3	0	2
				23328	.661	71.1	141.2	+ 6.8	100	557
27.380	-21.1	165.7	-7.2	23330	.533	293.4	195.1	+ 5.9	5	28
				23328	.463	60.0	142.1	+ 6.7	90	495
28.297	-21.4	153.7	-7.2	23330	.691	286.2	195.4	+ 5.7	6	31
				23327	.400	252.0	176.6	-13.7	1	7
				23328	.315	38.2	142.4	+ 7.2	90	528
Mar. 1.319	-21.6	140.2	-7.2	23330	.834	281.6	195.2	+ 5.5	4	11
				23327	.590	256.2	176.2	-13.9	15	101
				23328	.252	348.8	143.0	+ 7.0	100	506
2.367	-21.9	126.4	-7.2	23330	.928	279.3	193.1	+ 5.8	0	3
				23327	.771	258.5	177.1	-13.5	12	91
				23328	.380	309.9	143.4	+ 7.1	80	474
				23331	.924	67.3	63.2	+17.7	3	8
3.489	-22.2	111.6	-7.2	23327	.912	258.5	178.1	-13.5	5	29
				23328	.569	294.1	143.0	+ 7.2	91	441
				23331	.814	62.4	62.7	+17.5	0	4
4.349	-22.4	100.3	-7.2	23327	.973	257.6	178.0	-13.7	5	14
				23328	.711	287.8	143.1	+ 7.2	66	430
				23332	.983	106.6	19.3	-17.5	23	177
5.301	-22.6	87.8	-7.2	23328	.845	283.3	143.5	+ 7.1	75	386
				23332	.924	106.0	19.3	-17.5	25	133
6.313	-22.8	74.4	-7.2	23328	.940	280.4	142.8	+ 7.1	66	382
				23333	.841	67.7	21.2	+14.3	0	6
				23332	.813	105.4	19.8	-16.7	44	284
7.520	-23.1	58.5	-7.2	23328	.993	277.5	140.4	+ 6.5	29	256
				23333	.658	59.8	22.9	+13.4	10	35
				23332	.639	108.2	19.3	-17.1	29	243
8.372	-23.2	47.3	-7.2	23333	.513	49.5	23.8	+12.8	12	60
				23332	.494	113.2	18.9	-17.6	41	229
				23334	.905	94.4	342.2	- 7.1	21	118
				23335	.989	100.4	324.7	-11.2	30	148
9.411	-23.5	33.6	-7.2	1598 07	.348	340.4	40.4	+11.9	0	1
				23333	.354	21.1	26.1	+12.0	13	68
				23332	.321	127.1	18.0	-18.1	39	149
				23334	.792	93.7	341.0	- 7.3	80	450
				23335	.927	99.1	324.9	-11.1	23	154

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1973	°	°	°			°	°	°		
Mar. 10.434	-23.7	20.1	-7.2	23333	.349	342.1	26.4	+12.1	12	75
				23332	.192	170.1	18.1	-18.1	27	135
				23334	.637	92.8	340.4	- 7.4	96	582
				23335	.812	98.8	325.4	-11.4	32	186
11.340	-23.8	8.2	-7.2	23333	.445	318.8	25.6	+12.6	33	173
				23332	.250	218.6	17.6	-18.3	18	95
				23334	.471	91.5	340.0	- 7.1	88	618
				23335	.653	100.1	327.3	-12.1	42	233
12.374	-24.0	354.6	-7.2	23333	.603	301.6	26.1	+12.2	55	249
				23332	.425	241.0	17.5	-18.5	16	86
				23334	.253	90.8	339.8	- 7.2	84	523
				23335	.446	103.6	328.3	-12.5	55	283
				23336	.754	73.8	307.8	+ 7.2	3	23
13.219	-24.2	343.4	-7.2	23333	.749	292.3	28.2	+11.4	37	260
				23332	.569	247.4	16.9	-18.6	11	46
				23334	.063	86.1	339.8	- 6.9	64	424
				23335	.256	111.9	329.4	-12.4	69	354
				23337	.430	102.8	318.1	-11.9	1	9
14.462	-24.4	327.0	-7.2	23333	.923	285.3	31.9	+11.1	31	227
				23332	.769	251.8	17.2	-18.5	9	46
				23334	.220	269.7	339.7	- 7.1	50	338
				23335	.126	213.1	331.1	-13.2	70	425
				23337	.188	123.5	317.8	-13.0	1	4
15.376	-24.5	315.0	-7.2	23333	.977	283.3	30.6	+11.3	72	545
				23332	.879	252.9	17.1	-18.4	5	21
				23334	.421	268.4	340.0	- 7.2	53	306
				23335	.298	248.5	331.4	-13.1	54	327
				23337	.109	206.8	317.8	-12.7	2	18
				23336	.215	21.4	310.5	+ 4.4	3	9
16.379	-24.7	301.8	-7.1	23332	.957	253.0	16.0	-18.3	11	15
				23334	.610	267.9	339.5	- 6.9	42	332
				23335	.514	255.8	332.4	-13.4	46	280
				23337	.305	249.3	318.7	-13.0	1	13
				23336	.268	325.5	310.5	+ 5.7	5	25
17.399	-24.8	288.3	-7.1	23334	.768	266.9	338.7	- 7.0	50	285
				23335	.711	257.7	333.8	-13.7	41	277
				23337	.510	256.2	318.8	-13.1	0	8
				1599 01	.327	236.9	304.9	-17.0	0	6
				23338	.931	70.1	223.1	+15.6	6	24
18.369	-25.0	275.5	-7.1	23334	.892	265.9	338.9	- 6.9	29	230
				23335	.860	257.9	335.4	-14.0	21	204
				23338	.824	65.8	224.6	+15.3	6	15
19.532	-25.1	260.2	-7.0	23334	.982	264.0	339.7	- 7.2	14	160
				23335	.969	257.3	337.0	-14.0	27	222
				23338	.678	58.6	223.6	+15.0	33	213

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1973	°	°	°			°	°	°		
Mar. 20.424	-25.2	248.4	-7.0	23338	.532	46.7	224.9	+14.9	37	230
21.333	-25.4	236.4	-7.0	23338	.428	29.4	223.9	+15.0	36	267
22.324	-25.5	223.4	-7.0	23338	.368	356.8	224.6	+14.5	38	214
				23339	.981	81.6	145.9	+ 6.8	67	347
23.331	-25.6	210.1	-6.9	23338	.438	325.5	224.9	+14.4	40	207
				1599 02	.422	40.9	193.8	+11.9	0	5
				23339	.911	79.5	146.0	+ 6.5	72	423
24.388	-25.7	196.2	-6.9	23338	.590	307.2	225.2	+14.8	30	173
				23339	.788	75.9	146.0	+ 6.7	70	383
25.385	-25.8	183.0	-6.8	23338	.737	297.5	225.4	+14.8	18	187
				23339	.635	70.6	146.1	+ 6.7	53	323
26.325	-25.9	170.6	-6.8	23338	.860	292.1	226.1	+15.0	22	109
				23339	.470	61.1	146.3	+ 6.9	59	332
27.366	-25.9	156.9	-6.8	23338	.952	287.9	226.2	+14.7	22	76
				23339	.298	37.7	146.3	+ 7.0	49	263
				23340	.981	93.6	77.9	- 4.8	54	463
28.428	-26.0	142.9	-6.7	23339	.246	345.7	146.4	+ 7.0	61	305
				23341	.525	100.1	111.2	-11.0	3	18
				23340	.901	92.1	78.5	- 4.8	79	563
29.326	-26.1	131.0	-6.7	23339	.348	312.3	146.0	+ 7.0	52	353
				23341	.351	105.3	110.9	-11.6	1	10
				23340	.790	91.1	78.8	- 5.0	78	584
30.300	-26.1	118.2	-6.6	23339	.516	295.7	146.0	+ 7.0	48	343
				23340	.634	89.9	78.9	- 5.0	72	634
				23342	.986	76.8	39.8	+11.8	18	113
31.339	-26.2	104.5	-6.6	23339	.697	287.8	146.3	+ 7.4	41	280
				23343	.598	294.7	137.7	+ 9.0	8	23
				23340	.423	87.8	79.5	- 5.0	53	635
				23342	.926	74.0	39.1	+12.1	34	199
Apr. 1.327	-26.2	91.5	-6.5	23339	.833	283.4	146.1	+ 7.4	39	285
				23343	.754	287.6	137.9	+ 8.7	10	80
				23340	.195	83.1	80.3	- 5.1	75	576
				23342	.817	70.0	39.9	+12.2	45	316
2.394	-26.3	77.4	-6.5	23339	.941	280.4	146.1	+ 7.4	39	292
				23343	.898	283.3	139.4	+ 8.9	18	78
				23340	.057	291.3	80.4	- 5.3	97	657
				23342	.661	63.6	40.3	+12.0	47	347
				23344	.993	102.5	353.3	-13.1	18	159

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Apr. 3.334	-26.3	65.0	-6.4	23339	.990	278.5	145.8	+ 7.4	39	306
				23343	.972	280.6	140.0	+ 8.7	0	14
				23345	.651	256.2	105.4	-13.8	1	10
				23340	.256	272.5	79.8	- 5.6	101	885
				23342	.507	53.4	40.5	+11.7	29	301
				23346	.611	105.0	27.7	-14.2	7	25
				23344	.948	101.6	352.8	-13.0	21	181
				23347	.990	104.1	341.8	-14.8	8	39
4.369	-26.3	51.3	-6.3	23345	.792	257.6	103.9	-13.7	2	5
				23340	.483	270.4	80.2	- 5.3	145	862
				1599 03	.320	210.9	61.5	-22.1	0	6
				1599 04	.399	17.7	44.1	+15.9	1	5
				23342	.358	31.0	40.5	+11.6	14	171
				1599 05	.468	144.8	33.6	-28.4	0	5
				23346	.434	107.3	26.2	-13.1	2	12
				23344	.852	101.3	352.6	-12.9	21	156
				23347	.937	103.1	341.0	-14.5	6	43
5.583	-26.3	35.3	-6.3	23340	.723	268.5	81.7	- 5.4	114	845
				23342	.321	343.5	40.6	+11.6	25	208
				23348	.622	95.6	356.7	- 8.4	0	6
				23344	.679	102.6	352.6	-13.1	24	131
				23349	.809	65.7	345.6	+15.4	0	8
				23347	.808	103.3	341.2	-14.4	8	30
6.331	-26.3	25.4	-6.2	23340	.836	267.3	82.2	- 5.7	88	715
				23342	.392	319.9	40.3	+11.4	26	185
				23348	.459	96.6	358.1	- 8.6	5	21
				23344	.548	104.7	352.6	-13.2	23	111
				23349	.703	61.1	346.0	+15.0	2	3
				23347	.698	104.3	341.3	-14.4	8	31
7.406	-26.3	11.2	-6.1	23340	.947	265.9	82.6	- 5.8	61	510
				23342	.562	300.9	40.6	+11.4	14	170
				23348	.243	100.6	357.4	- 8.5	3	42
				23344	.345	112.2	352.2	-13.3	10	63
				23347	.506	108.1	341.6	-14.4	5	9
				23350	.742	96.8	323.2	- 9.2	7	42
8.373	-26.3	358.5	-6.1	23340	.995	264.5	82.9	- 6.1	31	229
				23342	.715	292.9	40.5	+11.6	13	115
				23348	.036	215.9	359.7	- 7.7	7	55
				23344	.164	138.9	352.1	-13.1	3	28
				23347	.322	117.6	341.4	-14.4	4	11
				23351	.401	103.3	335.2	-10.9	0	5
				23350	.573	97.2	323.5	- 9.1	90	499
9.416	-26.3	344.7	-6.0	23342	.856	287.7	40.9	+11.8	9	52
				23348	.254	260.2	359.3	- 8.3	17	68
				23344	.157	228.8	351.6	-11.9	2	25
				23347	.165	159.3	341.3	-14.9	3	17
				23351	.156	131.8	337.9	-11.9	1	5
				23350	.357	97.5	323.9	- 8.3	108	653

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1973	°	°	°			°	°	°		
Apr. 10.332	-26.3	332.6	-5.9	23342	.945	284.7	41.4	+11.8	7	41
				23348	.446	262.3	359.1	- 8.7	14	113
				23344	.324	248.7	350.5	-12.4	2	32
				23347	.220	220.8	341.2	-15.4	2	18
				23350	.163	104.7	323.5	- 8.2	71	549
11.631	-26.3	315.5	-5.8	23348	.696	264.0	359.7	- 8.4	16	109
				23344	.615	257.1	353.2	-12.5	0	7
				23347	.459	247.1	341.4	-15.5	0	8
				23350	.162	254.9	324.5	- 8.2	38	371
				1600 01	.875	115.1	255.0	-24.7	0	18
12.360	-26.2	305.9	-5.8	23348	.797	263.1	358.9	- 9.0	7	33
				23344	.726	257.0	352.3	-13.4	0	3
				23350	.335	262.8	325.3	- 7.8	37	320
				23352	.754	109.3	257.5	-18.3	0	2
13.517	-26.2	290.6	-5.7	23348	.937	262.6	0.4	- 8.9	3	19
				23350	.568	263.8	325.2	- 8.2	40	339
				23352	.563	112.8	257.8	-17.4	0	4
14.317	-26.1	280.0	-5.6	23350	.705	264.1	324.9	- 8.1	48	371
15.417	-26.1	265.5	-5.6	23350	.858	263.5	324.8	- 8.5	34	224
				23353	.416	78.5	241.5	- 0.3	2	7
16.505	-26.0	251.1	-5.5	23350	.960	263.2	325.1	- 8.1	31	354
				23353	.189	57.7	242.0	+ 0.4	2	5
				1600 02	.648	55.5	217.3	+16.9	0	6
17.365	-25.9	239.8	-5.4	23350	.991	262.7	322.7	- 7.9	33	201
				23353	.115	337.3	242.3	+ 0.7	0	3
18.461	-25.9	225.3	-5.3	23354	.718	108.9	180.1	-17.2	0	3
				23355	.979	78.5	148.5	+10.1	33	201
19.326	-25.8	213.9	-5.2	23354	.535	110.1	182.6	-15.0	11	97
				23355	.911	75.6	150.1	+10.8	38	293
20.364	-25.7	200.2	-5.1	23354	.351	122.1	182.2	-15.6	17	144
				23355	.800	72.1	149.5	+11.0	52	392
21.250	-25.6	188.4	-5.1	23354	.203	156.5	183.6	-15.7	15	91
				23355	.665	66.0	150.2	+11.6	49	376
22.707	-25.4	169.2	-4.9	23354	.299	231.1	183.1	-15.6	18	107
				23355	.446	52.7	148.1	+11.0	85	491
				23356	.987	96.1	88.1	- 6.8	70	470
23.329	-25.4	161.0	-4.9	23354	.429	242.8	184.2	-15.7	10	46
				23355	.350	37.8	148.4	+11.2	48	418
				23356	.945	94.3	89.9	- 5.7	46	391
				23357	.965	100.4	85.7	-11.3	4	8
				23358	.973	90.1	84.6	- 1.2	5	14

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Apr. 24.321	-25.2	147.9	-4.8	23354	.642	251.4	186.9	-15.5	6	47
				23355	.281	359.2	148.1	+11.4	37	301
				23356	.847	93.9	89.9	- 5.9	38	368
				23357	.873	100.5	86.9	-11.5	2	12
				23358	.892	90.0	84.9	- 2.2	2	15
25.323	-25.1	134.6	-4.7	23354	.836	255.1	191.1	-15.0	2	12
				23355	.361	320.1	148.3	+11.5	28	241
				23356	.698	93.4	90.4	- 5.7	63	364
				23357	.766	101.0	84.7	-11.4	2	5
				23358	.767	89.4	84.7	- 2.6	0	14
26.332	-24.9	121.3	-4.6	23355	.520	300.5	148.3	+11.1	21	219
				23356	.506	94.6	91.0	- 6.3	49	360
				23358	.584	83.4	86.0	+ 0.1	3	8
27.318	-24.8	108.3	-4.5	23355	.654	292.6	146.1	+11.0	37	346
				23356	.292	96.9	91.4	- 6.3	27	332
				23358	.368	84.1	86.9	- 2.0	2	17
28.319	-24.7	95.0	-4.4	23355	.804	287.4	146.3	+11.1	48	697
				23356	.073	121.6	91.5	- 6.6	15	247
				23358	.148	71.1	87.1	- 1.6	4	49
29.108	-24.5	84.6	-4.3	23355	.896	283.9	146.6	+10.4	113	827
				23356	.131	248.8	91.7	- 7.0	7	76
				23358	.070	303.5	87.9	- 2.1	2	13
				23357	.162	193.5	86.6	-13.4	2	13
30.352	-24.3	68.2	-4.2	23355	.984	281.9	146.5	+10.9	155	919
				23356	.393	264.2	91.2	- 6.2	6	36
				23357	.339	241.4	85.9	-13.3	1	5
				1600 03	.216	271.5	80.6	- 3.8	0	2
May 1.372	-24.1	54.7	-4.1	23356	.614	266.9	92.5	- 5.1	6	17
				23359	.974	102.6	337.4	-13.2	43	391
2.318	-24.0	42.2	-4.0	23356	.775	266.8	93.0	- 5.0	5	14
				23360	.762	259.9	91.7	-10.3	7	68
				23359	.913	102.7	336.3	-13.3	90	727
3.488	-23.7	26.8	-3.9	23356	.914	266.3	92.9	- 5.0	6	17
				23360	.909	260.1	92.1	-10.6	14	86
				23359	.768	104.1	337.0	-13.2	93	605
4.428	-23.6	14.3	-3.8	23356	.981	265.7	93.1	- 5.0	0	11
				23360	.968	259.6	90.0	-11.1	0	18
				1600 04	.644	65.2	337.7	+12.6	0	3
				23359	.610	106.8	337.6	-13.2	90	643
				23361	.813	100.8	320.1	-10.9	0	8
				23362	.969	102.4	298.5	-13.0	18	41
5.337	-23.4	2.3	-3.7	23363	.304	237.0	17.4	-13.1	5	23
				23359	.449	112.1	337.1	-13.0	83	724
				23361	.670	101.8	320.6	-10.6	1	3

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
May 5.337	Continued			23362	.890	102.8	299.5	-13.0	5	50
6.355	-23.2	348.8	-3.6	23363	.522	250.4	19.0	-13.2	1	8
				23359	.261	130.0	337.0	-13.1	52	654
				23362	.765	103.8	299.4	-12.8	3	17
7.328	-22.9	336.0	-3.5	23363	.697	254.3	19.4	-13.3	2	6
				23359	.178	193.9	338.5	-13.4	65	527
				23364	.326	21.3	329.0	+14.2	6	20
				23362	.595	107.4	300.5	-13.0	0	8
8.419	-22.7	321.6	-3.4	23359	.357	240.2	340.0	-13.4	41	436
				23364	.328	332.5	330.5	+13.5	1	5
9.534	-22.4	306.8	-3.2	23359	.587	251.5	341.5	-13.4	33	303
10.365	-22.2	295.8	-3.1	23359	.717	254.5	340.8	-13.2	37	278
				1601 01	.462	263.0	323.2	- 6.0	0	3
11.326	-22.0	283.1	-3.0	23359	.872	256.5	343.5	-13.3	39	230
				1601 02	.626	277.2	321.4	+ 2.1	1	6
				1601 03	.424	262.1	308.0	- 6.1	0	3
12.311	-21.8	270.1	-2.9	23359	.963	256.7	344.5	-13.6	23	159
				1601 04	.184	35.9	263.9	+ 5.6	0	5
13.359	-21.5	256.2	-2.8	23359	.988	258.7	337.6	-11.6	7	42
14.110	.	.	.	-					0	0
15.337	-20.9	230.1	-2.6	23365	.536	103.1	198.3	- 9.2	5	30
				23366	.976	77.1	153.7	+11.9	10	57
				23367	.990	80.2	148.8	+ 9.4	16	80
16.340	-20.7	216.8	-2.5	23365	.340	111.8	198.2	- 9.6	16	109
				23366	.902	75.7	153.8	+11.8	11	58
				23367	.942	79.4	147.4	+ 9.1	47	362
17.351	-20.4	203.4	-2.4	23365	.155	143.4	198.1	- 9.5	2	53
				23366	.780	72.6	154.1	+11.9	4	46
				23367	.843	77.1	147.2	+ 9.5	34	417
18.327	-20.1	190.5	-2.2	23365	.189	228.8	198.8	- 9.3	2	29
				23366	.629	67.7	154.2	+12.0	6	26
				23368	.612	99.6	153.2	- 7.6	0	3
				23367	.700	73.9	147.7	+ 9.5	38	450
19.437	-19.8	175.8	-2.1	23365	.402	250.8	198.4	- 9.5	0	7
				1601 05	.429	304.8	196.9	+12.1	0	5
				23366	.435	57.0	154.1	+11.7	5	15
				23368	.397	98.9	152.8	- 5.5	0	2

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
May 19.437	Continued			23367	.505	66.7	147.9	+ 9.6	45	436
20.310	-19.5	164.3	-2.0	23365	.561	255.9	197.6	- 9.5	0	22
				1601 06	.222	30.8	157.7	+ 8.9	0	11
				23366	.293	35.8	154.2	+11.7	5	18
				23367	.341	52.4	148.4	+10.0	48	412
21.680	-19.1	146.2	-1.9	1601 07	.814	255.6	199.9	-12.8	0	10
				23366	.277	333.0	153.5	+12.4	3	27
				23367	.210	348.4	148.6	+ 9.9	42	362
				23369	.873	87.7	85.7	+ 1.1	6	36
22.323	-18.9	137.7	-1.8	23366	.376	311.9	154.2	+12.7	2	15
				23367	.285	318.2	148.7	+10.5	37	345
				1601 08	.589	100.5	102.1	- 7.6	0	8
				23370	.684	95.3	94.7	- 4.9	2	28
				23371	.778	94.9	86.8	- 4.9	0	4
				23369	.796	86.7	85.2	+ 1.6	6	41
23.365	-18.5	123.9	-1.7	23366	.552	297.9	153.9	+13.5	1	14
				23367	.467	296.5	148.9	+10.5	31	298
				23370	.472	94.6	95.9	- 3.7	1	4
				23369	.619	85.3	85.9	+ 1.6	1	19
				23371	.620	95.8	85.8	- 4.9	0	9
24.476	-18.2	109.2	-1.5	23366	.701	293.0	150.8	+14.7	0	10
				23367	.669	287.8	149.4	+10.6	28	258
				23372	.158	193.3	111.3	-10.4	3	28
				23370	.183	94.2	98.7	- 2.3	7	52
				23369	.382	82.2	87.0	+ 1.6	2	10
				23371	.401	99.0	85.9	- 5.0	10	50
25.345	-17.9	97.7	-1.4	23367	.802	284.2	149.7	+10.4	25	193
				23372	.294	240.1	112.6	- 9.8	5	14
				23370	.026	242.1	99.0	- 2.1	34	198
				1601 09	.241	130.2	87.0	-10.3	0	1
				23369	.193	74.5	87.0	+ 1.5	1	6
				23371	.231	105.7	84.8	- 5.0	6	38
26.283	-17.6	85.3	-1.3	23367	.910	282.1	149.8	+10.4	33	247
				23372	.489	251.6	113.2	-10.0	5	34
				23370	.250	266.7	99.7	- 2.1	39	241
27.388	-17.2	70.7	-1.2	23367	.983	281.1	149.3	+10.6	18	157
				23372	.699	256.4	114.1	-10.3	2	10
				23370	.510	267.9	101.2	- 2.1	36	203
				23371	.263	254.0	85.3	- 5.3	1	20
				1601 10	.476	58.4	46.1	+13.3	3	18
28.410	-16.8	57.1	-1.1	23372	.853	258.1	115.0	-10.7	2	7
				23370	.703	268.5	101.6	- 1.8	35	211
				23373	.350	333.2	66.6	+17.1	2	13

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
May 29.078	-16.6	48.3	-1.0	23370	.808	268.2	102.0	- 2.0	40	240
				23373	.426	317.5	65.7	+17.3	4	21
30.761	-16.0	26.0	-0.8	23370	.948	268.4	97.3	- 1.8	32	193
				23373	.646	297.7	62.5	+16.8	24	144
31.447	-15.7	16.9	-0.7	23373	.817	290.5	69.6	+16.2	20	111
Jun. 1.336	-15.4	5.2	-0.6	23373	.918	287.4	70.5	+15.7	14	87
2.284	-15.0	352.6	-0.5	23373	.961	285.9	70.5	+15.5	11	80
3.375	-14.6	338.2	-0.3	23374	.446	237.5	0.9	-14.1	5	31
				1602 01	.454	130.0	316.9	-17.2	0	3
4.332	-14.2	325.5	-0.2	23374	.593	247.1	359.6	-13.5	1	6
5.356	.	.	.	-					0	0
6.349	-13.4	298.8	0.0	1602 02	.658	290.9	337.9	+13.5	2	5
				23375	.628	68.2	262.1	+13.5	3	24
7.327	-13.1	285.9	+0.1	23376	.146	48.6	279.6	+ 5.6	5	29
				23375	.446	58.6	262.9	+13.5	4	27
				23377	.973	74.1	209.9	+15.5	49	471
				23378	.974	105.3	209.7	-14.8	20	150
8.371	-12.6	272.1	+0.3	1602 03	.344	312.4	287.1	+13.6	0	5
				23376	.138	306.4	278.4	+ 4.9	0	5
				23375	.264	34.0	263.4	+12.9	1	7
				23377	.896	72.9	209.6	+15.4	31	270
				23378	.898	106.9	209.5	-15.0	13	106
9.419	-12.2	258.2	+0.4	23375	.234	352.6	260.0	+13.8	0	6
				23378	.771	110.2	209.8	-15.1	14	97
				23377	.769	70.2	209.7	+15.3	28	278
10.458	-11.8	244.4	+0.5	23375	.398	300.0	265.0	+11.9	0	4
				23378	.607	116.0	210.2	-15.0	9	65
				23377	.606	64.8	209.9	+15.3	22	188
				23379	.774	72.8	195.1	+13.5	0	14
11.653	-11.3	228.6	+0.7	23375	.615	290.1	264.7	+12.7	6	36
				23380	.259	354.3	230.1	+15.5	1	7
				23378	.412	131.3	210.0	-15.1	11	62
				23377	.404	50.4	209.8	+15.5	24	196
				23379	.500	72.0	199.9	+ 9.4	0	1
				23381	.627	115.0	192.8	-14.8	0	1
				23382	.979	77.4	150.8	+12.5	49	281

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Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Jun. 12.323	-11.0	219.7	+0.7	23375	.726	287.5	264.9	+13.1	17	110
				23380	.315	323.5	230.9	+15.3	1	5
				23377	.300	31.8	210.3	+15.5	18	123
				23378	.324	149.2	209.9	-15.4	10	37
				23381	.511	121.4	193.0	-14.7	0	1
				23382	.933	76.9	151.4	+12.4	38	197
13.351	-10.6	206.2	+0.8	23375	.865	285.0	265.1	+13.4	23	169
				23377	.262	344.9	210.2	+15.5	18	112
				23378	.288	192.3	209.8	-15.4	5	31
				23382	.827	75.7	151.3	+12.3	50	315
14.326	-10.2	193.2	+1.0	23375	.950	284.0	264.5	+13.6	33	291
				23377	.385	311.5	210.6	+15.6	10	74
				23378	.395	224.0	209.7	-15.5	5	13
				23382	.687	72.4	151.3	+12.7	30	228
15.334	- 9.7	179.9	+1.1	23375	.991	283.8	262.1	+13.8	34	213
				23377	.552	297.2	210.4	+15.5	8	52
				23378	.558	239.4	209.6	-15.5	3	11
				23382	.541	67.0	149.3	+13.1	19	162
16.319	- 9.3	166.8	+1.2	23377	.713	291.0	210.4	+15.6	2	8
				23378	.719	247.1	210.0	-15.3	2	7
				23383	.410	229.8	185.6	-14.1	1	10
				23382	.365	55.7	148.9	+13.0	19	153
17.392	- 8.8	152.7	+1.3	23377	.858	287.9	210.6	+16.0	2	11
				1602 04	.750	278.3	200.9	+ 7.1	0	3
				23383	.584	241.7	184.7	-14.9	0	1
				23384	.110	32.4	149.3	+ 6.6	1	6
				23382	.210	20.3	148.4	+12.6	16	109
18.385	- 8.4	139.5	+1.4	23377	.948	286.7	210.4	+16.3	0	4
				23382	.235	320.1	148.3	+11.8	9	121
				1602 05	.370	119.7	120.6	- 9.2	0	7
				23385	.964	97.3	65.4	- 6.6	4	17
19.473	- 7.9	125.1	+1.6	23382	.429	294.8	148.4	+11.8	6	66
				23385	.869	99.7	65.5	- 7.6	50	303
				1	.854	99.4	67.3	- 7.2	35	191
				23386	.955	93.7	52.8	- 3.1	27	237
20.456	- 7.5	112.1	+1.7	23382	.623	286.2	149.5	+11.3	9	75
				23385	.732	102.3	66.1	- 7.7	57	437
				1	.710	102.5	67.9	- 7.6	44	292
				23386	.863	94.5	52.9	- 3.0	48	304
				23387	.960	103.1	39.3	-12.1	8	41
21.310	- 7.1	100.8	+1.8	23384	.800	276.7	153.6	+ 6.4	2	15
				23382	.768	283.3	150.2	+11.3	13	84
				23385	.588	105.7	66.1	- 7.7	69	411
				1	.563	106.5	67.9	- 7.7	39	266
				23386	.756	95.8	52.1	- 3.2	72	416
				23387	.890	104.6	39.2	-12.0	12	93

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Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Jun. 22.303	- 6.7	87.6	+1.9	23384	.907	277.4	152.6	+ 7.5	0	8
				23382	.880	281.7	148.9	+11.2	5	29
				23385	.403	113.8	65.9	- 7.5	49	471
				1	.374	116.8	68.0	- 7.9	27	222
				23386	.573	99.2	53.2	- 3.7	46	314
				23387	.781	107.7	38.2	-12.5	11	68
				1602 06	.953	109.0	17.1	-17.4	0	7
23.275	- 6.2	74.8	+2.0	23382	.964	281.3	149.3	+11.4	0	9
				23385	.222	137.7	66.2	- 7.4	53	405
				23386	.381	104.1	53.1	- 3.4	51	309
				23387	.618	113.0	39.3	-12.3	10	53
24.379	- 5.7	60.2	+2.1	23385	.199	212.0	66.2	- 7.5	54	420
				23386	.151	128.7	53.4	- 3.3	28	203
				23387	.389	129.0	42.2	-12.0	5	25
25.410	- 5.3	46.5	+2.3	23385	.376	244.1	66.4	- 7.3	55	418
				23386	.153	231.4	53.3	- 3.2	16	124
				23387	.260	166.4	42.9	-12.3	4	16
26.319	- 4.9	34.5	+2.4	23385	.551	252.4	66.3	- 7.5	44	398
				23386	.337	254.4	53.3	- 2.9	16	101
				23387	.301	211.8	43.8	-12.4	5	21
27.424	- 4.4	19.9	+2.5	23385	.743	257.2	66.7	- 7.8	19	358
				23386	.549	260.7	52.6	- 3.0	11	65
				23387	.481	238.1	44.5	-12.4	16	59
28.528	- 3.9	5.2	+2.6	23385	.887	259.9	66.8	- 7.7	20	235
				23386	.758	264.4	54.1	- 2.5	5	42
				23387	.670	247.6	44.6	-12.7	5	33
				1602 07	.161	157.3	1.7	- 5.9	1	11
29.344	- 3.5	354.4	+2.7	23385	.959	260.9	67.2	- 7.9	12	157
				23386	.867	265.7	54.2	- 2.3	0	7
				23387	.795	251.3	44.9	-13.0	4	34
				23388	.959	98.0	281.6	- 6.9	7	64
				23389	.988	77.9	273.2	+12.4	102	424
30.324	- 3.1	341.5	+2.8	23387	.911	254.2	45.4	-13.1	0	8
				23388	.892	99.3	279.2	- 7.0	12	127
				23389	.936	77.7	272.2	+12.5	74	582
July 1.424	- 2.6	326.9	+3.0	23388	.759	101.6	278.6	- 6.8	9	57
				23389	.823	76.8	272.0	+12.5	79	498
				1	.819	76.8	272.4	+12.5	74	454
2.322	- 2.2	315.0	+3.0	23388	.601	105.3	279.5	- 6.6	1	23
				23389	.688	75.2	272.3	+12.4	66	517
				1	.685	75.1	272.6	+12.4	66	489
3.329	- 1.7	301.7	+3.1	23388	.453	109.7	276.4	- 5.9	10	69
				23389	.507	71.2	272.4	+12.1	75	490
				1	.505	70.8	272.6	+12.3	69	441

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Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
July 4.336	- 1.2	288.4	+3.3	23388	.250	127.9	277.0	- 5.6	6	35
				23389	.316	59.7	272.2	+12.3	79	510
				1	.309	59.2	272.7	+12.2	75	471
5.333	- 0.8	275.2	+3.4	23388	.153	175.4	274.5	- 5.4	12	90
				23389	.166	17.0	272.3	+12.5	80	505
				1	.166	14.6	272.7	+12.6	76	452
6.357	- 0.3	261.6	+3.5	23388	.269	234.1	274.2	- 5.7	16	160
				23389	.244	312.5	272.2	+12.9	84	447
				1	.250	310.5	272.8	+12.7	74	371
				23390	.219	97.6	249.1	+ 1.7	8	43
7.349	+ 0.1	248.5	+3.6	23388	.459	250.1	274.1	- 5.7	11	102
				23389	.421	292.6	271.9	+12.6	79	459
				1	.434	291.7	272.8	+12.4	67	365
				23390	.043	209.8	249.7	+ 1.4	14	92
				23391	.883	104.6	188.2	-11.1	0	10
8.365	+ 0.6	235.1	+3.7	23388	.649	257.1	274.3	- 5.5	5	26
				23389	.616	286.3	272.2	+12.9	57	373
				1	.623	286.1	272.8	+12.9	50	338
				1603 01	.433	293.6	259.0	+13.3	0	4
				23390	.258	262.1	249.8	+ 1.5	7	80
9.327	+ 1.0	222.3	+3.8	23389	.765	282.9	271.9	+12.2	93	575
				23390	.449	265.2	248.8	+ 1.2	7	66
				1603 02	.323	161.6	216.3	-14.0	2	7
10.333	+ 1.5	209.0	+3.9	23389	.887	281.6	271.4	+12.1	112	825
				23390	.627	266.4	247.6	+ 0.8	4	28
				1603 03	.127	92.5	201.7	+ 3.5	0	1
11.318	+ 1.9	196.0	+4.0	23389	.967	281.3	271.5	+11.9	123	820
12.415	+ 2.4	181.4	+4.1	23389	.997	281.8	267.3	+12.1	14	218
				1603 04	.367	225.6	196.9	-10.9	0	2
13.385	+ 2.9	168.6	+4.2	23391	.416	233.8	188.5	-10.2	0	8
				23392	.267	57.7	155.3	+12.3	1	4
14.240	+ 3.2	157.3	+4.3	23391	.574	244.3	188.9	-10.7	3	20
15.097	+ 3.6	145.9	+4.4	23391	.726	250.2	189.9	-11.0	3	38
16.345	+ 4.2	129.4	+4.5	23391	.891	255.0	190.5	-11.2	5	43
17.366	+ 4.6	115.9	+4.6	23391	.969	257.3	190.1	-11.1	9	78
				23393	.560	240.9	145.8	-11.8	3	14
				23394	.229	142.7	107.9	- 5.9	2	14

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1973	°	°	°			°	°	°		
July 18.333	+ 5.0	103.1	+4.7	23392	.749	283.7	151.4	+13.3	3	19
				23393	.739	251.0	148.3	-10.6	2	12
				23394	.213	210.6	109.3	- 5.9	6	40
				23395	.720	69.7	58.2	+17.7	3	20
19.667	+ 5.6	85.5	+4.8	23392	.918	282.9	152.4	+13.7	3	14
				1603 05	.849	257.1	142.0	- 8.3	0	2
				1603 06	.239	230.6	96.1	- 4.0	0	2
				23395	.531	62.2	55.9	+18.5	0	1
20.328	+ 5.9	76.7	+4.8	23392	.970	282.0	153.0	+12.8	0	14
21.354	+ 6.3	63.2	+4.9	23394	.754	257.2	110.7	- 6.3	3	31
22.335	+ 6.8	50.2	+5.0	23394	.895	260.2	112.5	- 6.4	2	10
				23395	.274	318.6	61.0	+16.8	1	5
				1603 07	.353	175.2	48.4	-15.5	0	1
23.433	.	.	.	-					0	0
24.366	+ 7.6	23.3	+5.2	23396	.168	58.3	15.0	+10.2	5	43
25.389	+ 8.1	9.8	+5.3	23396	.127	327.5	13.8	+11.4	0	5
				23397	.982	96.3	291.6	- 5.1	41	177
26.331	+ 8.5	357.3	+5.4	23397	.921	97.7	291.2	- 5.0	32	185
27.372	+ 8.9	343.6	+5.5	23397	.807	100.0	290.9	- 4.7	23	164
28.355	+ 9.3	330.6	+5.5	23397	.661	104.1	290.6	- 5.0	24	168
29.378	+ 9.7	317.0	+5.6	23397	.479	111.9	290.6	- 5.2	24	165
				1604 01	.625	118.1	282.8	-12.4	0	9
30.444	+10.2	302.9	+5.7	23397	.282	131.0	290.6	- 5.1	31	136
31.331	+10.5	291.2	+5.7	23397	.189	178.5	290.9	- 5.1	21	155
Aug. 1.378	+10.9	277.3	+5.8	1604 02	.861	254.8	334.7	- 9.9	2	20
				23397	.304	231.4	291.1	- 5.2	20	145
				23398	.075	10.9	276.5	+10.0	1	38
				23399	.991	100.2	196.2	- 9.2	17	136
2.333	+11.3	264.7	+5.9	23397	.480	248.3	291.2	- 4.9	25	113
				23398	.212	295.9	275.9	+11.1	0	1
				1604 03	.355	343.6	271.1	+25.7	0	4

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1973	°	°	°			°	°	°		
Aug. 2.333	Continued			23399	.939	101.9	196.5	- 9.0	23	116
3.560	+11.8	248.5	+6.0	23397	.705	257.0	291.9	- 4.8	15	48
				23398	.499	281.6	278.2	+10.9	1	7
				1604 04	.333	296.8	266.3	+14.3	1	7
				23399	.810	105.6	196.5	- 8.9	19	101
4.399	+12.1	237.4	+6.0	23397	.831	260.4	292.5	- 4.5	10	53
				23400	.380	88.8	215.0	+ 6.0	11	53
				23399	.681	109.5	197.1	- 8.5	17	141
5.324	+12.5	225.2	+6.1	23397	.930	262.5	292.6	- 4.6	6	21
				23400	.160	88.9	216.0	+ 6.2	11	95
				23399	.523	117.1	197.2	- 8.4	14	94
6.340	+12.9	211.7	+6.2	23401	.515	286.0	242.2	+13.5	0	1
				23400	.089	274.8	216.8	+ 6.6	23	143
				23399	.349	135.1	197.4	- 8.3	15	88
				23402	.911	100.5	147.5	- 6.9	0	14
7.333	+13.2	198.6	+6.2	23400	.327	272.8	217.7	+ 6.8	40	257
				23399	.251	175.6	197.5	- 8.2	14	92
				23402	.797	103.7	147.5	- 7.0	7	22
8.330	+13.6	185.4	+6.3	23400	.562	273.6	219.7	+ 7.2	40	319
				23399	.326	220.6	197.7	- 8.1	13	84
				23402	.650	109.0	147.3	- 7.3	3	29
9.347	+14.0	172.0	+6.3	23401	.959	282.5	246.3	+13.8	0	8
				23400	.760	273.7	221.6	+ 7.0	33	177
				23399	.498	240.7	197.9	- 8.3	5	50
				23402	.438	120.2	149.7	- 6.8	4	31
10.332	+14.3	158.9	+6.4	23400	.889	274.1	221.9	+ 6.6	32	152
				23399	.667	249.3	197.9	- 8.7	6	37
				23402	.282	145.6	149.7	- 7.1	2	16
11.335	+14.7	145.7	+6.5	23400	.972	275.3	222.6	+ 6.7	19	113
				23399	.815	254.5	198.1	- 8.6	0	4
12.394	+15.1	131.7	+6.5	23402	.396	229.3	149.3	- 8.7	0	2
13.325	.	.	.	-					0	0
14.328	.	.	.	-					0	0
15.324	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Aug. 16.323	.	.	.	–					0	0
17.322	.	.	.	–					0	0
18.609	+17.2	49.5	+6.8	23403	.888	78.2	346.3	+13.6	6	19
19.348	+17.4	39.8	+6.8	23403	.793	78.2	347.0	+13.5	2	7
20.380	+17.7	26.1	+6.9	23403	.615	77.3	348.2	+13.2	0	4
21.323	+18.1	13.7	+6.9	23403	.502	76.9	343.8	+12.5	3	22
22.329	+18.4	0.4	+7.0	23403	.301	69.4	343.6	+12.7	3	23
23.326	+18.7	347.2	+7.0	23403	.121	29.8	343.7	+13.0	5	21
24.326	+19.0	334.0	+7.0	23404	.714	276.0	19.8	+ 9.2	2	8
				23403	.251	292.4	347.6	+12.3	0	1
				23405	.961	76.9	259.1	+14.5	28	165
25.414	+19.3	319.6	+7.0	23404	.862	276.1	19.5	+ 8.8	4	16
				23403	.454	285.3	346.2	+13.2	15	77
				23405	.863	77.3	259.5	+14.5	29	184
26.401	+19.6	306.6	+7.1	23404	.955	277.3	19.9	+ 9.1	0	8
				23403	.657	281.5	347.7	+12.9	15	91
				23406	.640	95.2	267.1	+ 2.1	0	3
				23405	.731	76.6	259.4	+14.6	27	195
27.353	+19.8	294.0	+7.1	23403	.820	280.3	349.5	+12.5	12	85
				23406	.437	99.4	268.6	+ 2.3	11	61
				23405	.572	74.3	259.4	+14.8	25	177
				1605 01	.920	75.7	226.3	+15.9	3	17
28.381	+20.1	280.4	+7.1	23403	.943	281.3	351.7	+13.0	3	20
				23406	.231	108.1	267.8	+ 2.9	11	93
				23405	.377	67.2	259.4	+15.0	26	173
				23407	.998	105.4	196.4	-14.7	48	397
29.315	+20.4	268.1	+7.2	23406	.072	191.4	268.9	+ 3.1	18	136
				23405	.205	45.4	259.4	+15.3	19	155
				23408	.363	73.0	247.3	+12.7	0	2
				23407	.974	107.3	194.0	-15.0	119	789
30.372	+20.6	254.1	+7.2	23406	.262	254.6	268.7	+ 3.0	15	92
				23405	.173	327.5	259.6	+15.5	20	162
				23408	.201	50.3	244.9	+14.4	1	15

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Aug. 30.372	Continued			23409	.386	152.7	243.7	-12.9	4	32
				23407	.897	110.6	194.0	-14.9	106	731
				23410	.997	75.6	167.3	+14.8	13	135
31.317	+20.9	241.6	+7.2	23406	.473	262.8	269.5	+ 3.0	9	61
				23405	.335	297.0	259.6	+15.6	27	160
				23411	.192	258.1	252.4	+ 4.8	6	35
				23409	.348	186.9	244.1	-12.9	6	30
				23408	.140	342.5	244.1	+14.8	1	14
				23407	.792	115.1	193.9	-14.8	92	638
				23410	.968	76.9	165.0	+14.5	57	243
Sept. 1.377	+21.2	227.6	+7.2	23406	.676	266.0	269.9	+ 2.7	3	22
				23405	.541	287.6	259.8	+15.5	24	170
				23411	.414	265.9	252.0	+ 4.9	4	37
				23409	.441	219.0	244.1	-13.1	4	28
				23408	.302	297.1	243.7	+14.8	0	2
				23407	.647	122.9	193.6	-14.6	91	706
				23410	.881	77.4	165.3	+14.5	68	360
				23412	.938	108.8	161.1	-14.8	0	3
2.409	+21.4	214.0	+7.2	23405	.716	284.4	259.8	+15.3	27	125
				23411	.624	267.8	252.5	+ 4.3	6	41
				23409	.608	236.7	245.4	-13.3	10	75
				23408	.455	290.4	240.1	+15.6	0	2
				23413	.276	186.4	215.8	- 8.6	3	31
				23414	.342	35.2	201.7	+23.2	7	46
				23407	.496	137.3	193.8	-14.5	89	696
				23410	.742	76.6	165.9	+14.7	60	403
				23412	.828	116.1	163.2	-16.8	36	232
				23415	.977	104.4	138.6	-12.3	0	5
3.488	+21.7	199.7	+7.2	23405	.861	283.3	259.7	+15.1	29	157
				23411	.797	270.6	252.6	+ 4.9	17	99
				23409	.773	246.3	246.2	-13.1	43	249
				23413	.415	227.2	217.7	- 9.4	1	12
				23414	.269	352.2	202.0	+22.6	54	304
				23407	.381	164.6	193.8	-14.3	73	504
				23410	.561	74.9	165.9	+14.4	72	421
				23412	.702	123.3	162.0	-16.9	52	388
				23415	.917	107.5	136.2	-12.9	11	68
4.390	+21.9	187.8	+7.2	23405	.947	283.8	260.0	+15.3	10	111
				23411	.901	273.0	252.3	+ 5.8	2	54
				23409	.896	252.1	248.4	-12.5	30	162
				23413	.577	241.7	218.7	- 9.6	0	3
				23414	.349	321.0	201.5	+22.7	44	458
				23407	.381	196.4	194.2	-14.2	63	422
				23410	.385	69.4	166.1	+14.5	66	471
				23412	.584	133.1	161.5	-17.0	23	271
				23415	.823	111.5	136.2	-13.1	25	80
5.510	+22.2	173.0	+7.2	23411	.998	274.4	259.6	+ 4.9	16	63
				23409	.989	256.1	252.5	-12.5	13	117
				23414	.525	302.1	201.7	+22.5	57	416

Continued

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Sept. 5.510	Continued			23407	.506	224.5	194.4	-14.4	46	308
				23410	.169	43.8	166.1	+14.2	63	452
				23412	.469	152.0	159.8	-17.3	27	193
				23415	.662	118.0	136.4	-12.3	31	251
6.418	+22.4	161.0	+7.2	23409	.999	255.1	246.1	-14.4	22	174
				23408	.987	282.4	243.1	+13.4	7	20
				23414	.667	295.9	201.4	+22.5	50	360
				23407	.637	236.8	194.3	-14.3	34	291
				23410	.144	323.6	166.0	+13.8	50	368
				23412	.426	174.7	158.7	-17.7	21	95
				23415	.515	128.5	136.8	-12.0	37	231
7.337	+22.6	148.9	+7.2	23414	.799	292.5	201.6	+22.2	47	291
				23407	.764	244.0	193.9	-14.5	35	287
				23410	.310	292.2	166.0	+13.6	55	369
				23412	.456	201.1	158.8	-17.9	14	97
				23415	.379	149.3	137.5	-11.8	44	276
8.354	+22.8	135.5	+7.2	23414	.911	291.2	201.9	+22.3	52	273
				23407	.886	249.1	194.1	-14.7	26	277
				23410	.508	284.3	165.8	+13.5	55	334
				23412	.569	222.9	159.4	-17.9	12	63
				23415	.325	186.1	137.5	-11.5	43	363
9.381	+23.0	121.9	+7.2	23414	.979	291.3	201.7	+22.3	27	194
				23407	.967	252.5	194.2	-14.7	44	248
				23410	.690	281.7	165.7	+13.3	66	362
				23412	.692	232.2	157.1	-19.1	3	17
				23416	.569	241.4	152.2	- 9.5	12	77
				23415	.401	218.0	136.4	-11.3	41	356
10.571	+23.2	106.2	+7.2	23410	.856	280.8	165.6	+12.9	67	383
				23412	.864	244.3	160.9	-17.9	0	9
				23416	.760	250.1	152.6	-10.0	42	238
				23415	.577	237.3	135.8	-11.8	26	248
11.328	+23.4	96.2	+7.2	23410	.934	281.4	166.1	+13.2	59	375
				23416	.856	253.7	152.5	- 9.9	20	161
				23415	.695	245.7	136.2	-11.1	16	184
12.324	+23.6	83.1	+7.2	23410	.989	282.3	165.8	+13.2	53	393
				23416	.948	256.9	152.5	- 9.9	21	120
				23415	.836	252.0	136.9	-10.7	0	6
13.353	+23.8	69.5	+7.2	23415	.949	254.1	138.4	-12.5	0	7
14.336	+24.0	56.5	+7.2	23417	.966	101.6	343.3	- 9.1	5	22
15.347	+24.1	43.1	+7.2	23417	.840	103.7	347.9	- 7.4	2	12
				23418	.958	77.1	328.8	+14.4	8	64

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Sept. 16.378	+24.3	29.5	+7.2	1605 02	.389	286.7	51.9	+13.0	1	4
				23419	.308	129.9	15.9	- 4.4	2	20
				23420	.883	109.5	330.9	-13.4	0	29
				23418	.879	77.6	327.4	+14.3	12	91
17.322	+24.5	17.1	+7.2	23419	.171	174.4	16.1	- 2.6	0	2
				23418	.771	77.6	326.3	+14.1	12	79
				1605 03	.846	113.5	323.6	-15.5	0	8
18.312	+24.6	4.0	+7.1	1605 04	.334	224.1	17.5	- 6.9	0	3
				23417	.390	129.5	346.4	- 7.5	1	21
				23420	.629	120.9	330.5	-12.9	0	4
				23418	.601	75.9	327.2	+14.1	8	72
19.421	+24.8	349.4	+7.1	23418	.379	70.6	327.9	+13.8	10	54
20.313	+24.9	337.6	+7.1	23418	.208	53.7	327.7	+14.0	12	49
				23421	.802	90.5	284.3	+ 3.8	0	11
				23422	.978	85.8	259.4	+ 5.6	47	216
				23423	.985	76.9	256.3	+14.1	0	13
21.506	+25.1	321.8	+7.1	23418	.156	324.4	327.2	+14.3	9	44
				23424	.203	356.7	322.5	+18.7	0	3
				23421	.618	91.9	283.7	+ 4.4	4	17
				23422	.882	87.5	259.8	+ 5.5	28	174
				23423	.916	77.7	254.8	+14.1	17	124
22.534	+25.2	308.3	+7.0	23418	.291	295.8	323.9	+14.0	11	66
				23424	.317	308.1	323.4	+18.0	0	6
				23421	.502	92.7	278.2	+ 4.7	0	4
				1606 01	.790	102.0	257.6	- 5.0	0	4
				23422	.776	88.8	257.3	+ 5.4	32	160
				23423	.833	77.9	251.4	+14.0	52	368
23.519	+25.3	295.3	+7.0	23418	.530	286.3	326.8	+14.5	7	27
				23424	.433	300.9	318.3	+19.2	0	7
				23421	.226	97.3	282.3	+ 5.2	2	13
				23422	.573	90.7	260.3	+ 5.4	23	152
				23423	.661	76.4	253.9	+14.2	68	501
				23425	.663	82.1	253.6	+10.5	1	10
24.371	+25.4	284.0	+7.0	23418	.676	284.2	326.5	+14.7	3	18
				23421	.041	142.5	282.6	+ 5.1	7	36
				23422	.406	92.8	260.1	+ 5.2	28	173
				23423	.505	73.9	254.1	+14.1	79	546
				23425	.516	79.9	252.9	+11.2	0	3
				23426	.990	70.2	200.2	+20.5	16	142
25.342	+25.5	271.2	+6.9	23418	.827	283.2	327.3	+14.8	2	8
				23421	.230	263.0	284.4	+ 5.2	1	5
				23422	.189	99.0	260.5	+ 5.1	22	151
				23427	.247	81.3	257.0	+ 8.9	2	19
				1606 02	.474	148.9	256.4	-17.2	1	13
				23423	.315	66.1	254.0	+13.9	106	573

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Sept. 25.342	Continued			23426	.943	70.7	199.8	+20.5	27	143
				23428	.986	107.1	193.4	−15.5	13	66
26.431	+25.6	256.8	+6.9	23418	.941	282.8	327.9	+14.3	0	6
				23421	.451	266.9	283.6	+ 4.8	2	16
				23422	.072	246.2	260.6	+ 5.2	19	152
				23427	.042	6.8	256.6	+ 9.3	1	13
				23423	.127	17.6	254.6	+13.8	89	602
				23426	.836	69.8	200.1	+20.7	28	148
				23428	.916	109.7	193.8	−14.9	11	73
				23429	.993	103.0	175.7	−11.9	9	52
27.317	+25.7	245.1	+6.9	23418	.972	282.9	322.5	+14.1	0	9
				23421	.595	269.9	281.7	+ 5.5	1	15
				23422	.270	264.8	260.7	+ 5.2	19	142
				23427	.203	281.7	256.7	+ 9.1	1	14
				23423	.202	307.6	254.6	+13.8	82	557
				23426	.719	68.0	200.0	+20.5	22	142
				23428	.827	113.8	193.7	−15.2	10	71
				1606 03	.953	135.3	185.1	−39.4	0	4
				23429	.968	106.2	172.2	−13.7	16	209
				23430	.974	78.9	167.4	+12.4	28	183
28.344	+25.8	231.6	+6.8	23421	.774	271.2	282.3	+ 5.3	0	2
				23422	.489	268.4	260.9	+ 5.2	15	113
				23423	.400	289.2	254.4	+13.8	63	425
				23426	.555	62.8	199.9	+20.5	19	108
				23428	.700	120.9	193.2	−15.7	8	58
				23429	.889	108.9	172.0	−13.3	15	141
				23430	.899	79.9	167.0	+12.1	41	198
				1606 04	.980	108.5	156.1	−16.5	0	16
29.347	+25.9	218.4	+6.8	23421	.923	272.7	285.9	+ 5.1	6	26
				23422	.678	270.3	261.1	+ 5.2	15	117
				23423	.594	284.1	254.6	+13.8	55	477
				23426	.385	51.0	199.8	+20.4	16	114
				23428	.547	131.9	193.5	−15.2	4	19
				23429	.765	113.6	172.5	−13.1	8	126
				23430	.774	80.3	167.4	+11.8	32	181
30.326	+26.0	205.4	+6.7	23421	.987	274.2	286.6	+ 5.2	0	7
				23422	.826	272.0	261.2	+ 5.5	13	101
				23423	.757	282.2	254.8	+13.6	64	494
				23426	.259	21.8	199.6	+20.5	16	127
				23428	.405	150.9	193.8	−14.0	6	46
				23429	.629	121.2	172.0	−13.4	15	127
				23430	.618	79.4	167.2	+11.8	39	157
Oct. 1.343	+26.0	192.0	+6.7	23422	.933	273.6	261.2	+ 5.7	31	129
				23423	.881	282.1	254.3	+13.8	87	532
				23426	.273	335.0	199.1	+20.9	20	127
				23428	.364	189.3	195.5	−14.3	8	50
				23429	.476	136.0	172.2	−13.7	13	150
				23430	.422	76.4	167.4	+11.8	28	197

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Oct. 2.319	+26.1	179.1	+6.6	23422	.991	275.1	261.6	+ 6.0	8	61
				23423	.966	282.6	255.1	+13.9	62	479
				23426	.405	309.0	198.8	+21.0	17	105
				23428	.452	216.7	195.3	−14.8	12	94
				23429	.369	159.9	171.7	−13.6	7	96
				23430	.219	65.2	167.5	+11.8	24	161
3.304	+26.1	166.1	+6.6	23423	.989	283.6	248.5	+14.3	21	139
				23426	.567	298.3	198.4	+21.1	16	101
				23428	.589	233.6	195.4	−14.6	11	60
				23429	.361	195.0	171.7	−13.7	5	74
				23430	.092	347.8	167.3	+11.7	32	168
				1606 05	.322	59.8	149.4	+15.6	0	2
4.445	+26.2	151.1	+6.5	23426	.739	292.5	197.9	+20.9	30	134
				23428	.741	243.0	194.0	−14.9	3	30
				23429	.483	222.9	170.8	−14.5	5	69
				23430	.288	287.7	167.3	+11.3	28	179
5.347	+26.2	139.2	+6.5	23426	.854	291.1	197.7	+21.3	19	120
				23428	.869	248.4	195.8	−15.1	2	22
				23429	.602	233.2	169.1	−15.4	6	48
				23430	.477	282.2	167.5	+11.5	25	155
6.467	+26.3	124.4	+6.4	23426	.948	290.1	196.7	+21.1	23	117
				23428	.958	252.1	195.0	−15.0	0	4
				23430	.681	279.7	167.4	+11.3	24	149
				23431	.451	235.6	146.4	− 8.8	0	4
				1606 06	.773	94.7	74.2	+ 0.4	0	7
7.398	+26.3	112.1	+6.4	23426	.994	290.5	197.4	+21.0	9	74
				23430	.821	279.0	167.6	+11.0	23	164
				23431	.629	246.1	147.7	− 9.6	3	14
				23432	.727	92.6	65.7	+ 2.5	0	8
8.392	+26.3	99.0	+6.3	23430	.927	279.7	167.5	+11.3	26	141
				1606 07	.946	248.5	166.5	−18.0	0	14
				23431	.802	253.0	149.9	− 9.6	4	19
				23432	.553	100.8	66.2	− 0.6	1	13
9.345	+26.3	86.4	+6.2	23430	.985	280.6	167.3	+11.5	32	184
				23431	.888	257.2	147.3	− 8.3	12	43
				23432	.350	109.8	67.3	− 0.9	1	7
10.453	+26.3	71.8	+6.2	1606 08	.594	115.9	39.1	− 9.8	0	4
11.692	.	.	.	–					0	0
12.383	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1973	°	°	°			°	°	°		
Oct. 13.387	+26.3	33.1	+6.0	23433	.241	298.4	45.6	+12.4	5	26
14.307	+26.3	21.0	+5.9	23433	.452	286.5	47.3	+12.6	6	29
				1606 09	.643	106.1	342.8	- 5.6	1	8
15.603	+26.2	3.9	+5.8	23433	.721	281.2	50.0	+12.0	2	13
				23434	.543	251.9	34.9	- 4.7	7	42
16.311	+26.2	354.5	+5.7	23433	.832	280.8	51.0	+12.1	0	4
				23434	.668	256.5	35.0	- 4.6	13	65
17.301	+26.2	341.5	+5.7	23433	.901	281.7	46.1	+13.0	15	64
				23434	.817	260.8	35.2	- 4.2	11	37
18.322	+26.1	328.0	+5.6	23433	.970	282.9	44.6	+13.9	22	82
				23434	.953	264.8	39.7	- 3.2	7	21
19.315	.	.	.	-					0	0
20.371	.	.	.	-					0	0
21.367	.	.	.	-					0	0
22.311	+25.8	275.4	+5.3	23435	.964	104.9	202.8	-12.8	36	309
				23436	.988	69.6	193.4	+21.0	7	33
23.328	+25.7	262.0	+5.2	23435	.886	107.4	202.0	-12.8	138	774
				23436	.929	69.7	193.5	+20.8	12	62
24.376	+25.6	248.2	+5.1	23435	.757	111.6	202.2	-12.6	122	790
				23436	.831	68.0	192.7	+21.0	6	32
				23437	.985	79.1	167.5	+11.6	19	88
25.416	+25.5	234.5	+5.0	23438	.334	303.9	251.1	+15.5	2	12
				23435	.604	118.7	201.7	-12.6	100	725
				23436	.696	64.1	192.3	+21.4	5	23
				23437	.919	79.5	167.4	+11.6	17	78
				23439	.981	74.6	154.9	+16.0	17	123
26.386	+25.4	221.7	+4.9	23438	.499	292.5	250.1	+15.3	3	8
				23435	.449	131.4	201.5	-12.6	98	716
				23436	.547	57.4	192.1	+21.3	4	14
				23437	.809	79.4	167.6	+11.4	11	69
				23439	.919	74.6	154.7	+16.0	25	89
27.397	+25.3	208.3	+4.8	23435	.328	159.4	201.6	-13.0	112	829
				23436	.396	42.3	191.8	+21.5	4	18
				23437	.653	77.7	167.9	+11.6	12	77
				23439	.810	73.6	154.5	+16.0	17	109

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1973	°	°	°			°	°	°		
Oct. 28.423	+25.1	194.8	+4.7	23435	.325	200.4	201.4	-13.0	97	722
				23436	.308	11.3	191.1	+22.2	2	8
				23437	.466	73.8	167.7	+11.6	16	93
				23439	.660	71.3	154.5	+15.8	18	119
				23440	.992	85.7	112.2	+ 4.9	0	16
29.417	+25.0	181.7	+4.6	23435	.452	227.8	201.7	-13.3	88	567
				23441	.348	159.5	174.5	-14.4	0	4
				23437	.273	61.6	167.6	+11.9	11	106
				23439	.480	65.3	154.8	+15.6	10	67
				23442	.576	60.1	149.6	+20.5	1	8
				23440	.920	88.2	114.8	+ 3.4	0	20
30.555	+24.8	166.7	+4.5	23435	.632	242.0	201.6	-13.5	67	447
				1607 01	.527	222.8	188.8	-18.5	0	5
				1607 02	.408	211.4	179.4	-15.9	0	1
				23441	.290	193.8	170.7	-11.8	1	10
				23437	.125	352.4	167.7	+11.6	9	83
				23439	.270	45.0	155.3	+15.4	2	17
				23442	.359	43.1	151.7	+19.5	1	40
				23440	.790	89.2	114.5	+ 3.4	4	20
31.312	+24.7	156.7	+4.4	23435	.748	247.5	201.8	-13.5	51	357
				1607 03	.529	218.5	177.2	-20.2	1	4
				23437	.225	302.9	167.8	+11.3	8	75
				23439	.251	21.9	151.1	+17.8	0	1
				23440	.673	90.5	114.5	+ 2.9	3	11
Nov. 1.394	+24.5	142.4	+4.3	23435	.893	252.4	203.4	-13.5	41	329
				23437	.442	287.3	167.8	+11.4	10	62
				23440	.479	92.8	113.9	+ 2.5	1	5
2.432	+24.3	128.7	+4.2	23435	.966	255.0	202.1	-13.3	42	286
				23437	.632	282.9	167.5	+11.4	6	44
				23443	.510	239.5	155.2	-11.2	8	29
				23440	.283	87.3	112.4	+ 4.8	0	1
3.356	+24.1	116.6	+4.1	23437	.777	281.1	167.4	+11.2	7	40
				23443	.676	249.2	156.4	-10.7	6	27
4.292	+24.0	104.2	+4.0	1607 04	.929	253.6	170.4	-13.6	0	3
				23437	.893	280.8	167.5	+11.5	2	16
				23443	.793	251.8	154.3	-11.7	0	2
5.420	+23.8	89.3	+3.9	23437	.995	276.1	173.6	+ 6.5	0	41
6.381	.	.	.	-					0	0
7.383	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Nov. 8.528	.	.	.	–					0	0
9.087	.	.	.	–					0	0
10.229	.	.	.	–					0	0
11.468	+22.4	9.6	+3.2	1607 05	.190	173.2	8.3	- 7.6	0	1
12.288	.	.	.	–					0	0
13.415	+21.9	343.9	+3.0	23444	.954	76.8	271.4	+13.5	17	101
14.410	+21.6	330.8	+2.9	23444	.868	75.9	271.0	+13.6	17	136
15.394	+21.4	317.9	+2.8	23444	.738	74.0	271.1	+13.6	14	86
16.469	+21.1	303.7	+2.6	23444	.554	69.3	271.6	+13.5	21	92
17.435	+20.8	290.9	+2.5	23444	.399	60.4	270.1	+13.7	10	82
18.392	+20.5	278.3	+2.4	23444	.243	36.6	269.8	+13.6	8	43
				23445	.969	102.1	203.6	-11.1	4	17
19.460	+20.2	264.2	+2.3	23444	.233	327.7	271.6	+13.6	3	20
				23446	.176	8.6	262.7	+12.3	0	4
				23445	.868	104.5	205.5	-11.4	0	7
20.416	+19.9	251.7	+2.2	23444	.386	300.8	271.5	+13.4	1	11
				23446	.237	326.1	259.4	+13.4	0	3
21.426	+19.6	238.3	+2.0	23446	.432	296.6	261.6	+13.0	1	11
				23447	.240	148.3	231.0	- 9.7	0	6
				23448	.993	100.3	156.0	-10.0	9	157
22.385	+19.2	225.7	+1.9	23446	.617	288.8	262.4	+13.0	1	10
				23447	.239	214.9	233.6	- 9.3	0	3
				23448	.954	101.6	154.2	-10.4	56	512
23.542	+18.9	210.5	+1.8	23446	.783	284.5	261.2	+12.4	2	5
				23447	.426	241.8	232.8	- 9.9	13	77
				23448	.845	103.5	154.0	-10.4	94	639
24.310	+18.6	200.3	+1.7	23446	.884	284.6	261.8	+13.7	0	2
				23447	.560	249.4	232.3	- 9.9	10	58
				23445	.229	193.8	203.5	-11.1	0	2

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Nov. 24.310	Continued			23448	.736	106.0	154.5	-10.5	104	543
25.415	+18.2	185.8	+1.6	23447	.734	254.7	231.6	-10.1	3	27
				23448	.540	111.8	155.3	-10.2	72	539
26.433	+17.9	172.3	+1.4	1608 01	.953	255.4	243.5	-13.4	4	43
				23445	.561	248.3	204.2	-10.7	7	42
				23449	.237	289.3	185.3	+ 5.9	8	56
				23448	.342	123.7	155.7	- 9.5	44	578
27.431	+17.5	159.2	+1.3	1608 02	.841	258.2	215.5	- 9.2	0	6
				23445	.766	255.1	207.8	-10.5	10	52
				23449	.480	278.9	187.5	+ 5.4	22	89
				23448	.195	162.7	155.8	- 9.4	54	410
28.306	+17.2	147.7	+1.2	23445	.866	257.6	206.7	-10.1	6	36
				23449	.661	277.3	188.7	+ 5.7	10	105
				23448	.237	218.7	156.3	- 9.5	34	357
29.392	+16.8	133.4	+1.1	23445	.951	259.5	204.7	- 9.7	10	46
				23449	.836	275.8	189.8	+ 5.4	20	192
				23450	.716	256.9	178.0	- 8.6	16	69
				23448	.417	244.3	155.6	- 9.4	50	463
30.299	+16.4	121.4	+0.9	23449	.939	275.3	191.1	+ 5.3	21	155
				23450	.851	259.2	178.9	- 8.6	18	112
				23448	.585	252.6	155.7	- 9.3	60	389
Dec. 1.460	+16.0	106.1	+0.8	23450	.982	260.9	184.8	- 8.8	28	130
				23448	.775	256.7	155.8	- 9.7	34	285
2.440	+15.6	93.2	+0.7	23448	.891	257.3	155.3	-11.0	21	172
3.111	+15.3	84.3	+0.6	23448	.950	255.8	155.2	-13.3	51	314
4.501	+14.8	66.0	+0.4	1608 03	.850	73.6	9.0	+14.1	0	4
5.510	.	.	.	–					0	0
6.476	.	.	.	–					0	0
7.291	.	.	.	–					0	0
8.510	+13.1	13.2	-0.1	23451	.931	86.9	304.8	+ 2.9	14	71
9.348	+12.8	2.1	-0.2	23451	.851	86.6	304.1	+ 2.7	6	48

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973	°	°	°			°	°	°		
Dec. 10.471	+12.3	347.4	-0.4	23451	.682	86.1	304.6	+ 2.4	9	43
11.092	+12.0	339.2	-0.4	23451	.575	84.4	304.4	+ 2.8	7	37
12.301	+11.5	323.3	-0.6	23451	.316	80.9	305.1	+ 2.3	7	26
13.483	+10.9	307.7	-0.8	23451	.065	39.4	305.3	+ 2.1	4	14
14.517	+10.5	294.0	-0.9	23451	.200	284.7	305.2	+ 2.0	4	23
15.488	+10.1	281.3	-1.0	23451	.409	276.8	305.1	+ 1.9	2	7
				23452	.993	83.0	198.6	+ 6.9	17	86
16.294	+ 9.7	270.6	-1.1	23451	.569	274.8	305.0	+ 1.8	1	6
				23452	.955	82.1	198.5	+ 7.2	17	104
				23453	.995	107.6	186.7	-17.6	20	139
17.492	+ 9.1	254.9	-1.3	23451	.767	273.3	304.7	+ 1.7	3	10
				23452	.834	80.5	199.1	+ 7.2	14	66
				23453	.941	109.6	185.6	-18.8	26	136
18.514	+ 8.7	241.4	-1.4	23451	.896	272.4	304.7	+ 1.6	2	10
				23454	.522	113.8	212.1	-13.3	1	6
				23452	.683	77.6	199.3	+ 7.3	7	58
				23453	.829	111.5	187.1	-18.4	19	116
19.552	+ 8.2	227.7	-1.5	23454	.319	127.1	212.7	-12.5	2	9
				23452	.491	71.6	199.8	+ 7.5	11	56
				23453	.646	116.3	190.4	-17.8	28	188
20.282	+ 7.8	218.1	-1.6	23454	.223	170.8	216.0	-14.3	4	18
				23452	.352	62.4	199.8	+ 7.8	8	45
				23453	.508	123.3	191.7	-17.6	37	270
21.298	+ 7.3	204.7	-1.7	23454	.299	223.0	216.8	-14.3	2	12
				23452	.184	26.7	199.9	+ 7.7	9	40
				23453	.331	146.5	193.7	-17.6	58	483
				1609 01	.515	132.1	180.5	-21.7	0	5
22.420	+ 6.8	189.9	-1.9	1609 02	.397	247.1	211.7	-10.6	1	5
				23452	.237	314.2	199.8	+ 7.6	6	40
				23453	.290	195.4	194.5	-18.0	86	613
23.311	+ 6.4	178.2	-2.0	23454	.579	244.7	211.0	-16.0	3	20
				23455	.505	249.5	206.9	-11.9	4	18
				23452	.399	294.1	199.7	+ 7.5	6	25
				1609 03	.338	244.2	196.1	-10.3	0	1
				23453	.386	222.7	194.1	-18.3	87	620
				1	.411	226.0	196.3	-18.4	70	466

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1973/4	°	°	°			°	°	°		
Dec. 24.446	+ 5.9	163.2	-2.1	23454	.779	251.6	213.1	-15.6	18	110
				23455	.716	256.0	208.2	-11.4	0	6
				23452	.612	285.2	199.6	+ 7.5	3	19
				23453	.572	240.0	194.6	-18.4	89	582
				1	.595	241.0	196.4	-18.5	79	467
				1609 04	.446	259.2	189.3	- 6.7	0	12
25.328	+ 5.4	151.6	-2.2	23454	.892	254.0	214.1	-15.2	28	322
				23452	.752	281.9	199.4	+ 7.4	3	17
				23453	.717	246.5	195.2	-18.2	82	566
				1	.730	246.9	196.4	-18.2	68	493
				23456	.581	255.8	186.3	-10.0	1	13
26.289	+ 5.0	139.0	-2.4	23454	.972	255.1	215.2	-15.0	40	284
				23452	.879	279.8	199.6	+ 7.5	4	17
				23453	.847	250.4	195.7	-17.8	72	453
				1	.851	250.4	196.2	-17.8	65	428
				23456	.721	257.9	184.6	-10.3	2	8
27.349	+ 4.5	125.0	-2.5	23452	.968	278.1	199.8	+ 7.2	0	4
				23453	.947	251.9	195.9	-17.9	88	536
				23456	.882	262.1	186.7	- 8.1	0	2
28.269	+ 4.0	112.9	-2.6	23453	.992	252.6	195.7	-17.6	63	458
				23456	.973	262.2	189.6	- 8.2	0	4
29.328	.	.	.	-					0	0
30.488	.	.	.	-					0	0
31.472	.	.	.	-					0	0
Jan. 1.317	+ 2.0	59.6	-3.1	23457	.350	129.3	43.3	-15.7	1	4
2.097	+ 1.7	49.3	-3.2	23457	.242	151.7	42.5	-15.4	6	64
3.479	+ 1.0	31.1	-3.3	23457	.279	222.4	42.3	-15.1	19	118
4.509	+ 0.5	17.5	-3.4	23457	.454	243.0	42.2	-15.0	6	40
5.087	+ 0.2	9.9	-3.5	23457	.546	248.2	41.4	-14.7	1	12
6.442	- 0.4	352.1	-3.6	1610 01	.603	220.3	18.9	-30.5	0	3
7.562	- 1.0	337.3	-3.8	23458	.491	69.3	309.9	+ 6.6	1	4

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Jan. 8.282	- 1.3	327.9	-3.9	23458	.360	59.3	309.8	+ 6.9	10	58
				23459	.986	100.1	247.3	-10.6	30	223
9.277	- 1.8	314.7	-4.0	23458	.202	24.4	309.9	+ 6.6	13	68
				23460	.931	75.8	247.8	+11.6	0	3
				23459	.928	99.9	246.5	-10.7	19	173
10.508	- 2.4	298.5	-4.1	23458	.278	310.6	310.7	+ 6.4	17	86
				23460	.775	72.4	250.0	+10.8	5	15
				23459	.788	100.4	246.7	-10.7	25	192
				23461	.984	104.2	218.5	-14.7	11	118
11.292	- 2.8	288.2	-4.2	23458	.430	295.0	311.2	+ 6.6	8	68
				23460	.656	68.3	250.1	+10.7	3	8
				23459	.670	101.4	246.4	-10.7	32	212
				23461	.940	104.4	218.1	-14.9	30	124
12.088	- 3.1	277.7	-4.3	23458	.588	287.1	312.0	+ 6.4	29	115
				23460	.521	60.5	250.3	+11.0	0	4
				23459	.525	103.5	246.6	-10.7	33	190
				23461	.863	104.2	218.2	-14.3	36	119
				23462	.992	106.8	194.2	-17.2	39	226
13.284	- 3.7	262.0	-4.4	23458	.798	281.3	313.7	+ 6.2	19	132
				23459	.303	114.7	245.7	-11.5	22	194
				23461	.708	106.2	217.6	-14.5	18	95
				1610 02	.868	98.9	201.7	- 9.9	0	4
				23462	.923	107.0	194.5	-17.3	29	167
				2	.927	107.2	193.9	-17.6	22	138
14.298	- 4.2	248.6	-4.5	23458	.925	278.4	315.4	+ 6.0	8	63
				23463	.263	323.5	257.7	+ 7.7	3	22
				23459	.136	158.6	245.7	-11.7	26	194
				23461	.540	111.0	217.3	-15.0	12	73
				23462	.818	107.8	194.3	-17.1	14	126
				2	.823	107.9	193.8	-17.2	13	109
				23464	.927	106.4	180.5	-16.9	0	22
				23465	.962	102.8	174.1	-13.5	4	53
15.442	- 4.7	233.6	-4.6	23458	.998	276.9	319.1	+ 6.6	15	122
				23463	.473	296.9	258.7	+ 8.1	7	54
				23459	.239	239.3	245.6	-11.5	17	135
				1610 03	.188	17.1	230.4	+ 5.7	0	2
				23461	.332	123.2	217.0	-14.8	8	55
				23462	.651	111.2	194.3	-17.1	22	181
				2	.659	111.3	193.7	-17.4	18	155
				23464	.810	107.1	180.0	-16.5	2	12
				23465	.873	102.6	172.7	-13.3	13	91
16.520	- 5.2	219.4	-4.7	23463	.697	287.5	261.4	+ 8.6	9	33
				23459	.453	253.9	245.6	-11.4	23	120
				23461	.194	169.7	217.3	-15.6	8	37
				23462	.473	119.1	193.8	-17.5	22	129
				2	.476	119.0	193.6	-17.5	21	125
				23464	.654	110.1	179.6	-16.6	0	3

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Jan. 16.520	Continued			23465	.724	103.8	173.3	-13.2	29	117
17.276	- 5.6	209.4	-4.8	23463	.814	284.4	262.1	+ 8.8	2	13
				23459	.595	257.0	245.6	-11.5	7	63
				1610 04	.434	325.8	224.1	+16.3	2	15
				23461	.231	215.5	217.4	-15.5	5	27
				23462	.341	130.7	193.7	-17.4	17	145
				2	.345	130.5	193.5	-17.5	16	138
				23465	.602	106.2	173.1	-13.5	19	155
18.294	- 6.1	196.0	-4.9	23463	.932	281.5	263.4	+ 8.8	0	3
				23459	.761	258.3	245.5	-12.1	14	61
				1610 05	.447	292.6	220.4	+ 5.4	0	5
				23461	.402	241.0	217.3	-15.7	7	19
				1610 06	.275	326.1	204.9	+ 8.3	0	1
				23462	.223	169.5	193.6	-17.5	19	133
				2	.225	168.5	193.3	-17.6	18	125
				23464	.352	131.5	179.9	-18.1	1	27
				23465	.406	113.1	173.5	-13.6	7	43
19.512	- 6.6	180.0	-5.0	23459	.908	259.8	245.5	-11.3	3	13
				23461	.621	251.3	217.5	-15.4	8	19
				23466	.324	303.7	195.6	+ 5.5	3	17
				23462	.309	224.0	192.9	-17.6	17	118
				23464	.215	195.9	183.5	-16.9	1	18
				23467	.339	10.7	176.3	+14.4	1	22
				23465	.179	146.8	174.2	-13.5	10	78
20.087	- 6.9	172.4	-5.0	23461	.717	253.0	217.6	-15.6	3	11
				23466	.457	290.9	197.7	+ 4.8	3	34
				23462	.407	236.1	193.1	-17.8	21	110
				1610 07	.257	250.0	186.5	- 9.9	0	4
				23464	.267	210.4	180.5	-18.2	0	19
				23467	.346	343.1	178.3	+14.2	1	6
				23465	.162	190.0	174.1	-14.2	7	31
21.313	- 7.5	156.3	-5.2	23461	.859	253.3	215.3	-16.9	0	2
				23466	.668	284.1	196.7	+ 5.4	8	53
				23462	.613	246.5	192.4	-18.3	11	88
				23464	.469	246.9	182.7	-15.2	0	4
22.311	- 7.9	143.1	-5.2	23466	.819	280.7	196.9	+ 5.7	33	182
				23462	.767	250.5	192.5	-18.3	6	41
				23464	.683	251.2	185.4	-16.6	1	10
23.463	- 8.4	128.0	-5.3	23466	.942	277.6	197.5	+ 5.3	20	160
				23464	.844	253.2	185.3	-17.0	8	56
24.439	- 8.8	115.1	-5.4	23466	.984	277.2	193.7	+ 6.1	0	17
				23464	.941	253.9	185.8	-17.0	3	21
25.437	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1974	°	°	°			°	°	°		
Jan. 26.328	- 9.7	90.2	-5.6	1610 08	.213	180.4	90.3	-17.9	1	6
27.462	-10.2	75.3	-5.7	1610 09	.280	203.0	82.0	-20.5	0	3
28.388	-10.6	63.1	-5.8	1610 10	.426	117.0	39.9	-16.4	1	6
29.301	.	.	.	-					0	0
30.315	.	.	.	-					0	0
31.385	.	.	.	-					0	0
Feb. 1.337	-12.2	11.1	-6.0	23468	.831	293.5	63.2	+15.6	0	2
				1610 11	.349	321.8	23.7	+ 9.9	0	1
				1610 12	.875	80.8	311.2	+ 5.0	0	6
2.338	-12.6	357.9	-6.1	23468	.928	288.9	63.1	+15.0	0	3
				1611 01	.438	309.7	17.9	+10.4	0	1
				23469	.488	90.7	328.7	- 5.7	0	2
3.412	-13.1	343.8	-6.2	23469	.262	87.9	328.6	- 5.5	2	7
4.303	.	.	.	-					0	0
5.295	.	.	.	-					0	0
6.497	.	.	.	-					0	0
7.408	-14.6	291.2	-6.5	23470	.974	79.7	215.8	+ 8.4	9	38
8.274	-14.9	279.8	-6.5	23470	.919	77.5	214.8	+ 8.7	3	24
				23471	.974	105.1	201.8	-16.2	5	32
9.305	-15.3	266.2	-6.5	23470	.820	74.1	213.4	+ 9.0	2	13
				23471	.900	105.3	201.5	-16.6	39	285
10.291	-15.7	253.2	-6.6	23470	.667	68.8	214.4	+ 8.8	1	15
				23471	.778	105.8	202.1	-16.4	20	286
11.292	-16.0	240.0	-6.7	23470	.471	59.2	216.1	+ 7.8	0	1
				23471	.626	108.6	201.9	-16.7	23	187

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1974	°	°	°			°	°	°		
Feb. 12.411	-16.4	225.3	-6.7	23471	.389	116.3	204.1	-16.2	17	154
				1	.377	116.5	204.8	-16.0	14	142
				23472	.995	106.0	139.7	-16.6	0	20
13.300	-16.7	213.6	-6.8	1611 02	.593	299.3	245.3	+11.1	0	1
				23473	.298	248.9	230.1	-12.6	2	9
				23470	.228	349.7	215.9	+ 6.2	0	6
				1611 03	.045	146.9	212.2	- 8.9	1	13
				23471	.227	135.9	204.2	-16.0	22	147
				1	.218	137.1	204.8	-15.8	19	135
				23472	.958	105.7	139.3	-17.0	11	65
14.408	-17.1	199.0	-6.8	23471	.181	209.0	204.2	-15.8	16	157
				1	.183	211.8	204.7	-15.7	16	142
				23472	.867	105.7	138.5	-17.0	11	87
15.425	-17.5	185.6	-6.8	23473	.740	259.2	233.5	-12.6	11	58
				23471	.348	242.1	204.2	-15.8	23	137
				1	.353	243.2	204.6	-15.6	22	128
				23474	.607	112.6	149.4	-19.0	11	52
				23472	.733	107.4	138.6	-17.3	10	83
16.590	-17.9	170.3	-6.9	23473	.868	258.7	231.0	-13.2	15	100
				23471	.571	251.9	204.5	-15.9	17	150
				1	.573	252.1	204.7	-15.9	17	146
				23474	.406	122.0	149.0	-18.8	21	135
				23472	.545	112.0	138.4	-17.6	12	89
17.297	-18.1	161.0	-6.9	23473	.938	258.4	231.5	-13.2	18	145
				23471	.692	254.2	204.6	-15.9	16	166
				1	.692	254.2	204.6	-15.9	16	166
				1611 04	.238	274.1	174.7	- 5.8	0	2
				23474	.281	136.3	149.2	-18.4	33	235
				23472	.414	118.7	138.6	-17.8	15	90
18.285	-18.4	148.0	-7.0	23473	.984	257.9	228.6	-13.1	17	91
				23471	.837	255.3	205.2	-16.1	25	159
				23474	.201	193.2	150.7	-18.2	53	323
				23472	.247	142.8	139.0	-18.2	13	77
19.298	-18.7	134.6	-7.0	23471	.937	255.5	205.1	-16.0	24	176
				23474	.331	230.9	150.3	-18.7	49	399
				23472	.216	199.8	139.0	-18.7	6	55
20.503	-19.1	118.7	-7.0	23471	.998	255.3	206.5	-15.1	16	78
				23474	.547	246.4	150.5	-18.6	41	382
				23472	.401	237.5	139.6	-19.0	7	30
21.101	-19.3	110.9	-7.0	23474	.662	249.6	151.6	-18.7	80	368
				23472	.476	243.8	137.5	-18.4	5	21
22.682	-19.8	90.0	-7.1	23474	.862	252.5	150.0	-18.6	36	380
				23472	.722	253.7	136.2	-16.6	17	179

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Feb. 23.422	-20.0	80.3	-7.1	23474	.944	252.5	152.1	-18.9	24	207
				23472	.825	254.4	136.2	-16.8	25	160
				23475	.903	70.9	19.1	+13.8	0	3
24.448	-20.3	66.8	-7.1	23474	.980	252.1	146.9	-18.8	26	168
				23472	.931	254.7	136.3	-16.8	34	252
				23475	.797	67.5	17.9	+13.1	2	7
25.491	-20.6	53.1	-7.2	23472	.989	253.9	136.2	-16.9	35	346
				23475	.676	60.4	16.0	+13.8	1	6
26.291	-20.8	42.5	-7.2	23475	.505	46.8	20.3	+13.5	1	21
				23476	.768	76.4	354.1	+ 5.6	0	2
				23477	.966	82.8	328.5	+ 5.0	4	24
27.477	-21.1	26.9	-7.2	23475	.411	27.0	15.9	+14.3	2	14
				1611 05	.419	43.4	9.9	+10.8	2	14
				23476	.494	61.3	1.1	+ 7.2	5	28
				23477	.854	80.0	329.6	+ 4.7	6	38
				1611 06	.937	89.4	317.5	- 2.0	0	3
28.515	-21.4	13.2	-7.2	23475	.369	348.5	17.6	+13.9	0	2
				23476	.316	37.6	2.1	+ 7.4	1	18
				23478	.588	23.0	358.5	+25.7	0	5
				23477	.699	75.5	330.6	+ 4.8	6	38
Mar. 1.317	-21.6	2.7	-7.2	23476	.248	11.6	359.8	+ 6.8	1	14
				23478	.574	8.8	357.0	+27.2	0	3
				23477	.543	69.6	332.1	+ 4.7	6	26
2.398	-21.8	348.4	-7.2	23477	.340	53.1	332.7	+ 4.7	2	10
3.434	.	.	.	-					0	0
4.390	-22.3	322.2	-7.2	1612 01	.908	288.1	24.3	+13.1	0	3
				1612 02	.419	256.4	346.7	-12.2	0	2
				23479	.959	75.8	251.0	+11.4	26	137
5.375	-22.5	309.2	-7.2	23479	.879	72.5	250.5	+11.6	14	89
6.297	-22.7	297.1	-7.2	23479	.764	68.1	250.8	+11.5	10	71
				23480	.957	83.0	225.1	+ 4.5	7	36
7.386	-23.0	282.7	-7.2	23479	.598	59.6	251.1	+11.4	3	19
				23480	.858	80.5	224.8	+ 4.3	4	19
8.315	-23.2	270.5	-7.2	23479	.478	50.8	248.4	+10.8	0	1
				23480	.737	77.6	224.5	+ 4.1	3	14
9.367	-23.4	256.6	-7.2	23481	.309	63.9	240.6	+ 0.8	2	12
				23480	.567	71.4	224.2	+ 4.3	3	13

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Mar. 10.472	-23.6	242.1	-7.2	23479	.359	332.6	251.7	+11.4	1	7
				23481	.141	360.0	242.1	+ 0.9	24	99
				23480	.360	58.1	224.3	+ 4.0	2	9
11.330	-23.8	230.7	-7.2	23481	.252	303.0	242.9	+ 0.8	23	195
				23480	.229	31.2	224.0	+ 4.1	2	5
				23482	.959	105.4	156.2	-16.8	4	37
12.467	-24.0	215.8	-7.2	23481	.492	284.1	244.1	+ 0.5	34	225
				23480	.233	322.2	224.0	+ 3.4	1	6
				23482	.849	104.9	157.2	-16.4	6	35
				23483	.914	105.8	148.9	-17.3	3	5
13.327	-24.1	204.4	-7.2	23481	.662	278.6	245.2	+ 0.2	27	199
				23482	.735	105.4	157.1	-16.2	2	11
				23483	.829	109.4	148.3	-20.1	0	2
14.383	-24.3	190.5	-7.2	23481	.821	274.9	245.2	- 0.1	19	154
				23482	.554	109.0	157.6	-16.4	3	11
				23483	.681	110.7	148.2	-19.3	2	12
				23484	.946	90.2	119.5	- 2.6	0	7
15.304	-24.5	178.4	-7.2	23481	.922	273.1	245.2	0.0	8	109
				23482	.379	116.5	157.7	-16.4	1	14
				23483	.526	122.0	149.6	-22.4	0	4
				23484	.851	88.1	120.3	- 2.2	2	8
16.488	-24.7	162.7	-7.1	23481	.989	271.1	244.1	0.0	7	29
				23483	.300	131.4	149.1	-18.3	1	14
				23484	.682	86.0	120.0	- 2.5	2	8
17.347	-24.8	151.4	-7.1	23483	.269	168.1	148.0	-22.3	1	23
				23485	.376	125.5	132.6	-19.3	0	3
18.385	-24.9	137.7	-7.1	23483	.284	217.8	148.4	-19.9	0	10
				1612 03	.346	118.4	119.3	-16.2	0	2
				23486	.993	97.4	54.1	- 8.2	18	140
19.324	-25.1	125.4	-7.1	23482	.553	251.7	158.3	-15.9	0	3
				23485	.263	211.3	133.7	-20.0	1	7
				23486	.947	96.4	53.6	- 8.3	16	155
20.333	-25.2	112.1	-7.0	1612 04	.794	262.6	165.0	-10.1	0	2
				23482	.694	255.0	156.0	-15.4	0	1
				23483	.570	244.9	145.2	-19.9	1	8
				23486	.843	95.1	54.3	- 8.1	20	116
21.315	-25.3	99.1	-7.0	23482	.847	255.9	157.5	-15.6	2	6
				1612 05	.533	326.9	117.1	+19.8	0	3
				23486	.699	94.9	54.5	- 8.4	22	137
22.313	-25.4	86.0	-7.0	23482	.929	256.3	155.1	-15.2	3	20
				23487	.558	310.6	111.9	+15.0	5	39
				23486	.514	95.1	54.9	- 8.6	17	113

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Mar. 23.344	-25.6	72.4	-6.9	23487	.696	299.5	111.0	+14.6	13	100
				1612 06	.228	205.2	78.3	-18.8	0	1
				23486	.297	96.6	55.1	- 8.6	18	120
24.353	-25.6	59.1	-6.9	23487	.833	293.5	111.2	+15.1	6	67
				23486	.076	116.8	55.2	- 8.8	18	122
25.354	-25.7	45.9	-6.9	23487	.920	288.1	109.8	+13.7	0	6
				23486	.165	257.3	55.2	- 8.8	17	120
26.351	-25.8	32.7	-6.8	23486	.380	262.5	55.1	- 9.1	19	129
27.517	-25.9	17.4	-6.8	23486	.607	263.5	54.9	- 9.3	16	156
28.443	-26.0	5.1	-6.7	23486	.758	263.8	54.7	- 9.1	22	132
				1612 07	.626	258.9	43.9	-12.2	0	3
				23488	.601	292.9	39.0	+ 7.9	1	8
29.422	-26.1	352.2	-6.7	23486	.881	263.2	54.3	- 9.2	19	121
				23488	.756	285.5	39.3	+ 7.1	10	59
30.542	-26.1	337.4	-6.6	23486	.971	262.3	54.1	- 9.0	22	141
				23488	.905	281.0	40.8	+ 7.0	13	85
				23489	.785	99.2	285.5	-11.3	2	21
31.383	-26.2	326.4	-6.6	23488	.968	279.0	40.6	+ 6.9	4	79
				23489	.626	101.8	287.6	-12.5	3	17
				1613 01	.648	96.7	285.8	- 9.3	0	3
				23490	.951	74.7	256.6	+12.3	4	21
Apr. 1.373	-26.2	313.3	-6.5	23489	.419	104.6	288.9	-12.0	2	21
				23490	.863	71.5	256.6	+12.3	2	22
2.538	-26.3	297.9	-6.5	23490	.703	65.6	257.2	+12.0	2	22
3.459	-26.3	285.8	-6.4	23489	.123	219.8	290.4	-11.8	1	3
				23490	.542	56.7	258.4	+11.6	1	17
4.397	-26.3	273.4	-6.3	23489	.254	250.2	287.4	-11.1	1	15
				23490	.408	41.9	257.3	+11.5	2	17
5.316	-26.3	261.3	-6.3	23489	.443	257.7	287.3	-11.0	1	19
				23490	.321	11.9	257.4	+12.0	5	27
6.316	-26.3	248.1	-6.2	23490	.364	329.7	258.9	+12.1	11	115
				1613 02	.196	292.9	258.4	- 1.8	0	2
7.378	-26.3	234.1	-6.2	23490	.516	306.6	259.0	+12.3	23	192
				23491	.743	99.2	185.9	-11.0	3	33

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Apr. 8.378	-26.3	220.8	-6.1	23490	.681	295.3	259.7	+12.2	9	66
				23492	.133	77.7	213.4	- 4.4	2	14
				23491	.617	101.6	182.9	-11.9	4	54
9.313	-26.3	208.5	-6.0	23490	.791	292.7	257.0	+13.8	0	7
				23492	.129	280.5	215.8	- 4.6	2	14
				23491	.460	105.4	181.7	-12.4	16	140
				23493	.702	105.1	164.1	-14.9	5	36
10.326	-26.3	195.1	-6.0	23492	.381	273.0	217.4	- 4.4	7	41
				23491	.234	118.6	183.1	-12.2	63	454
				23493	.506	108.6	165.6	-14.5	3	13
11.485	-26.3	179.8	-5.9	23490	.994	283.7	261.6	+12.8	9	84
				23492	.605	269.3	217.1	- 5.1	11	117
				23491	.141	215.7	184.6	-12.4	70	880
				23493	.313	122.5	164.0	-15.3	2	17
12.331	-26.2	168.7	-5.8	23492	.740	268.3	216.5	- 5.1	8	66
				23491	.298	245.5	184.8	-12.6	127	1097
				23493	.180	155.0	164.2	-15.1	0	9
13.306	-26.2	155.8	-5.7	23492	.879	268.4	217.3	- 4.2	7	50
				23491	.506	254.7	185.7	-12.6	107	991
				23493	.232	222.6	165.2	-15.5	8	56
14.304	-26.1	142.6	-5.7	23492	.929	267.8	210.9	- 4.2	3	30
				23491	.692	257.4	186.2	-12.8	169	1157
				23493	.397	245.6	164.5	-14.7	10	82
15.324	-26.1	129.2	-5.6	23491	.842	259.6	186.7	-11.8	162	1933
				23494	.809	283.6	181.4	+ 7.5	0	2
				23493	.616	253.8	166.7	-14.3	25	145
				23495	.950	97.3	57.1	- 8.7	3	45
16.325	-26.0	115.9	-5.5	23491	.940	259.6	186.5	-11.7	203	2706
				23494	.934	280.3	183.7	+ 7.6	0	19
				23493	.765	256.8	165.8	-13.6	55	353
				23495	.858	96.5	56.7	- 8.4	2	13
17.393	-25.9	101.8	-5.4	23491	.983	258.8	182.0	-12.0	134	1413
				23493	.899	258.3	166.1	-12.8	58	450
				23496	.388	250.2	123.7	-12.5	2	16
				23497	.293	255.4	118.4	- 9.4	0	1
				23495	.708	96.1	56.7	- 8.2	3	21
18.354	-25.9	89.1	-5.3	23493	.971	257.9	165.9	-13.0	33	251
				23496	.583	255.0	124.3	-13.0	18	101
				23497	.508	261.3	119.6	- 9.0	1	16
				23498	.279	298.0	103.3	+ 2.3	1	8
				23499	.237	100.8	75.6	- 7.7	0	1
				23495	.537	96.9	56.7	- 8.2	1	9

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Apr. 19.465	-25.8	74.5	-5.2	23496	.771	257.2	124.8	-13.2	28	256
				23497	.709	262.2	119.7	- 9.2	25	105
				1613 03	.680	298.8	112.4	+15.0	0	2
				23498	.484	286.3	102.1	+ 3.1	0	4
				23495	.308	99.8	56.7	- 8.0	1	11
20.371	-25.7	62.5	-5.2	23496	.893	257.9	125.9	-13.1	37	275
				23497	.853	262.9	121.2	- 8.7	11	124
				23498	.657	279.6	102.8	+ 2.3	4	30
				23495	.115	116.8	56.6	- 8.1	1	3
21.319	-25.6	50.0	-5.1	23496	.971	257.7	126.7	-13.2	32	310
				23497	.951	262.9	122.3	- 8.3	11	84
				23498	.796	276.6	102.1	+ 2.1	7	23
22.740	-25.4	31.2	-5.0	23500	.649	96.6	350.7	- 8.1	1	16
23.326	-25.4	23.5	-4.9	23499	.786	266.4	75.3	- 5.9	0	4
				23500	.542	96.9	350.7	- 7.8	0	7
24.317	-25.3	10.4	-4.8	23500	.337	100.5	350.9	- 8.0	9	64
25.310	-25.1	357.3	-4.7	23500	.122	121.5	351.2	- 8.3	19	138
26.517	-25.0	341.3	-4.6	23500	.178	246.3	350.8	- 8.6	18	88
27.311	-24.9	330.8	-4.5	1614 01	.479	289.0	357.7	+ 4.9	0	3
				23500	.344	259.1	350.6	- 8.0	7	55
28.422	-24.7	316.1	-4.4	23500	.557	261.1	349.8	- 8.6	0	1
29.490	-24.5	302.0	-4.3	23500	.733	263.2	349.2	- 7.9	0	2
				23501	.609	309.5	331.7	+19.0	1	6
				23502	.948	80.3	231.6	+ 7.7	0	7
				23503	.975	92.5	225.0	- 3.4	19	154
30.333	-24.4	290.9	-4.2	23500	.851	261.0	349.2	- 9.9	0	2
				23501	.748	297.9	334.6	+17.4	0	2
				23502	.864	78.5	232.4	+ 7.7	0	2
				23503	.912	91.9	225.1	- 3.4	25	145
May 1.323	-24.2	277.8	-4.1	23504	.382	299.0	297.4	+ 6.7	4	21
				23503	.801	91.1	224.7	- 3.4	17	158
				23505	.959	96.7	204.1	- 7.6	32	312
				23506	.991	102.4	194.8	-12.8	42	445
2.329	-24.0	264.5	-4.0	23504	.603	286.7	299.9	+ 6.6	11	75
				23502	.609	72.1	228.9	+ 7.5	1	7
				23503	.641	90.2	224.7	- 3.2	19	167
				23505	.877	96.3	203.3	- 7.5	37	342

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
May 2.329	Continued			23506	.945	101.9	193.5	-12.6	60	387
3.492	-23.8	249.1	-3.9	23504	.818	281.3	302.8	+ 6.9	13	89
				23507	.485	290.2	276.3	+ 6.1	1	13
				1614 02	.293	97.4	232.2	- 5.9	0	5
				23503	.413	88.8	224.8	- 3.1	22	136
				23505	.724	96.6	202.8	- 7.5	44	335
				23506	.847	102.9	191.5	-13.0	48	514
				23508	.975	102.1	171.7	-12.7	14	106
4.483	-23.6	236.0	-3.8	23504	.940	278.7	305.1	+ 6.8	10	64
				23507	.618	282.7	273.1	+ 4.7	8	54
				23503	.193	86.1	224.9	- 3.0	26	152
				23505	.534	97.3	203.9	- 7.1	32	202
				23506	.701	104.2	192.0	-12.7	53	484
				23508	.901	102.0	171.8	-12.5	28	148
5.094	-23.5	228.0	-3.7	23504	.983	278.1	306.7	+ 7.2	6	57
				23507	.726	280.3	273.6	+ 4.8	8	60
				23509	.635	291.1	264.8	+10.2	0	1
				23503	.053	72.3	225.1	- 2.8	37	139
				23510	.161	96.3	218.8	- 4.7	2	16
				23505	.424	99.8	203.1	- 7.5	35	188
				23506	.607	106.3	191.4	-12.8	78	423
				23508	.838	103.1	171.3	-13.0	23	108
6.339	-23.2	211.5	-3.6	23507	.887	276.5	273.4	+ 4.0	8	78
				23509	.814	286.7	264.0	+11.3	0	4
				23503	.243	273.6	225.5	- 2.6	30	137
				23502	.293	311.0	224.4	+ 7.5	0	1
				23510	.155	260.7	220.3	- 5.0	10	73
				23505	.114	120.1	205.8	- 6.9	15	120
				23511	.333	146.0	200.2	-19.5	0	2
				23506	.359	114.9	192.2	-12.1	62	538
				23508	.645	106.0	172.2	-13.0	10	105
7.339	-23.0	198.3	-3.5	23507	.963	275.6	271.9	+ 4.4	0	21
				23509	.924	283.8	264.3	+11.3	0	3
				23512	.674	259.8	240.4	- 9.4	0	2
				23503	.463	271.5	225.7	- 2.4	22	148
				23510	.402	265.9	221.9	- 4.8	19	107
				23505	.156	248.1	206.6	- 6.8	15	122
				23511	.315	180.2	198.3	-21.8	0	1
				23506	.182	145.7	192.3	-12.1	47	435
				23508	.463	111.8	172.2	-13.0	14	109
				23513	.936	96.5	128.9	- 7.3	0	3
8.317	-22.8	185.3	-3.4	23509	.984	282.0	264.0	+11.1	6	36
				23512	.827	261.6	241.0	- 8.9	0	6
				23503	.653	270.8	225.9	- 2.1	19	132
				23510	.602	267.4	222.3	- 4.3	8	45
				23505	.370	261.4	206.9	- 6.3	14	126
				23506	.187	218.3	192.1	-11.8	58	449
				23514	.140	130.7	179.2	- 8.6	1	10

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POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

					Measures			Position		Area	
Date	P	L_o	B_o	Group No.	Rad. Dist.	Pos. Angle	Long.	Lat.	Umb.	Whole Spots
1974	°	°	°			°	°	°		
May 8.317	Continued			23508	.278	127.1	172.3	-12.9	10	106
				23513	.844	98.6	127.9	- 9.1	0	2
9.340	-22.5	171.8	-3.3	23503	.814	269.6	226.1	- 2.2	19	138
				23510	.788	266.9	223.7	- 4.4	4	15
				23505	.579	262.7	207.0	- 6.9	15	113
				23506	.391	247.7	193.4	-11.6	43	268
				23515	.310	204.9	179.8	-19.5	0	8
				23514	.165	235.8	179.7	- 8.5	0	10
				23508	.167	183.4	172.4	-12.8	15	107
10.347	-22.3	158.5	-3.2	23503	.926	269.0	226.2	- 2.1	15	116
				23510	.907	266.8	223.5	- 4.2	3	24
				23505	.752	263.3	207.1	- 7.1	14	84
				23506	.578	254.3	193.0	-11.6	25	241
				23515	.453	231.0	180.4	-19.5	1	13
				23514	.375	249.5	179.4	-10.5	0	6
				23508	.290	235.1	172.5	-12.6	14	95
11.299	-22.1	145.9	-3.1	23503	.985	268.4	225.8	- 2.1	19	116
				23510	.978	266.4	223.7	- 4.2	0	11
				1614 03	.909	256.6	211.1	-13.5	0	5
				23505	.881	263.2	207.6	- 7.5	12	91
				23506	.742	256.9	193.3	-11.7	27	169
				23515	.607	241.6	180.2	-19.3	1	16
				23514	.534	255.5	177.5	-10.3	0	3
				23508	.474	248.9	172.7	-12.5	15	90
12.325	-21.8	132.3	-3.0	23505	.965	263.2	207.2	- 7.3	8	54
				23506	.875	258.1	193.1	-11.8	7	75
				1614 04	.670	267.0	174.3	- 4.2	0	1
				23508	.657	254.6	172.6	-12.3	15	86
				1614 05	.348	256.0	152.2	- 7.6	0	2
				1614 06	.514	196.6	142.3	-32.3	0	3
13.319	-21.6	119.2	-2.9	23506	.921	258.4	186.1	-11.8	2	40
				23514	.880	263.4	180.7	- 7.2	0	5
				23508	.808	257.2	172.7	-12.0	13	99
				23516	.307	222.2	131.5	-15.9	1	13
				23517	.169	203.2	123.1	-11.7	1	9
14.327	-21.3	105.9	-2.7	23508	.921	258.0	172.7	-12.1	9	61
				23516	.488	240.3	132.0	-16.4	1	4
				23517	.341	239.8	123.4	-12.5	0	4
15.336	-21.0	92.5	-2.6	23508	.983	257.8	172.0	-12.5	12	60
				23518	.370	291.7	112.6	+ 5.4	4	16
16.333	-20.7	79.3	-2.5	23518	.590	281.7	114.7	+ 4.8	6	40
17.320	-20.5	66.3	-2.4	23518	.759	279.7	114.9	+ 5.7	3	15
18.330	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

					Measures			Position		Area	
Date	P	L_o	B_o	Group No.	Rad. Dist.	Pos. Angle	Long.	Lat.	Umb.	Whole Spots
1974	°	°	°			°	°	°		
May 19.344	.	.	.	-					0	0
20.337	.	.	.	-					0	0
21.363	.	.	.	-					0	0
22.317	-18.9	0.2	-1.8	23519	.302	210.9	9.5	-16.7	0	1
				23520	.336	131.6	345.2	-14.6	1	19
23.209	-18.7	348.4	-1.7	23519	.505	237.5	14.7	-17.2	1	7
				1615 01	.700	336.8	8.9	+38.3	0	3
24.349	-18.3	333.3	-1.6	23519	.633	242.9	9.5	-18.0	1	7
25.333	.	.	.	-					0	0
26.315	-17.6	307.3	-1.4	1615 02	.847	290.7	2.9	+16.6	2	25
				23520	.615	247.1	343.0	-14.9	3	25
27.374	-17.3	293.3	-1.2	23520	.773	250.7	342.3	-15.6	40	236
28.375	-16.9	280.0	-1.1	23520	.902	253.1	343.6	-15.6	47	381
				1615 03	.708	278.7	324.5	+ 5.4	2	8
				23521	.969	102.6	204.7	-12.5	0	9
29.372	-16.6	266.8	-1.0	23520	.981	254.8	345.1	-15.1	29	279
				1615 04	.949	103.6	195.7	-13.2	0	3
30.326	-16.2	254.2	-0.9	23522	.999	103.7	167.0	-13.7	23	113
31.513	-15.8	238.5	-0.7	1615 05	.488	106.6	210.4	- 8.6	1	24
				23521	.617	110.3	202.2	-12.9	0	1
				23522	.947	104.7	167.9	-14.1	38	274
Jun. 1.366	-15.5	227.2	-0.6	23521	.391	115.1	206.2	-10.1	1	8
				1615 06	.768	104.0	178.0	-11.1	0	2
				23522	.882	105.6	166.3	-14.0	56	460
2.337	-15.1	214.4	-0.5	23522	.762	108.2	166.3	-14.0	48	474
3.515	-14.7	198.8	-0.4	23521	.248	202.1	204.3	-13.6	11	68
				23522	.559	114.9	167.4	-13.9	33	253
4.335	-14.3	187.9	-0.3	23523	.359	258.5	208.5	- 4.3	1	4
				23521	.371	230.1	204.9	-14.0	7	46
				23522	.412	125.3	167.8	-13.9	23	182
				23524	.887	83.9	125.8	+ 5.2	2	10

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Jun. 5.375	-13.9	174.2	-0.1	23521	.562	245.4	205.8	-13.6	3	15
				23522	.265	154.5	167.5	-13.9	13	141
				23524	.772	82.9	124.0	+ 5.3	29	135
6.396	-13.5	160.7	0.0	23523	.754	258.7	208.9	- 8.5	5	21
				23521	.739	251.4	206.6	-13.6	0	14
				23522	.258	201.1	166.1	-13.9	23	137
				23525	.401	125.0	141.0	-13.3	1	7
				23526	.458	130.7	139.4	-17.3	3	22
				23524	.587	80.9	125.2	+ 5.3	31	212
7.310	-13.2	148.6	+0.1	23523	.880	260.2	209.5	- 8.6	2	14
				23522	.377	230.6	165.9	-13.7	21	161
				1615 07	.282	194.7	152.8	-15.6	0	1
				23526	.300	158.4	142.0	-16.0	0	4
				23524	.382	77.3	126.7	+ 4.9	19	129
8.479	-12.7	133.1	+0.2	23522	.582	244.6	165.8	-14.2	21	137
				23525	.273	213.4	141.9	-12.9	4	26
				23524	.133	52.9	127.0	+ 4.8	16	112
				23527	.953	85.7	61.1	+ 4.2	4	34
9.357	-12.3	121.5	+0.3	23522	.747	251.2	167.9	-13.7	9	79
				23528	.668	261.4	162.9	- 5.4	0	6
				23525	.417	235.9	142.1	-13.1	3	19
				23524	.120	305.0	127.1	+ 4.3	10	76
				23527	.906	84.2	56.8	+ 5.4	16	178
10.335	-11.9	108.5	+0.5	23522	.886	254.0	169.6	-13.8	5	34
				23528	.846	261.0	165.7	- 7.4	6	66
				23525	.571	246.5	140.9	-12.7	3	27
				23524	.367	281.3	129.6	+ 4.5	0	12
				23527	.751	83.4	60.2	+ 5.2	21	186
11.337	-11.5	95.2	+0.6	23522	.969	255.8	170.1	-13.6	0	5
				23528	.958	262.0	168.2	- 7.5	20	167
				23525	.756	253.2	142.8	-12.2	0	5
				23527	.560	81.3	61.6	+ 5.3	43	332
				1	.504	80.7	65.4	+ 5.1	25	174
12.168	-11.2	84.3	+0.7	23528	.996	262.4	168.6	- 7.5	11	56
				23527	.381	77.6	62.4	+ 5.3	57	335
				1	.331	75.8	65.5	+ 5.3	34	206
13.307	-10.7	69.2	+0.8	23527	.133	50.3	63.3	+ 5.7	35	343
				1	.103	36.1	65.7	+ 5.6	24	248
				23529	.978	104.6	351.9	-14.1	49	377
14.322	-10.3	55.7	+0.9	23527	.173	298.8	64.5	+ 5.7	40	257
				1	.192	295.5	65.7	+ 5.7	33	220
				23529	.910	106.2	351.6	-14.2	27	299
15.333	- 9.8	42.4	+1.1	23527	.393	282.9	64.9	+ 6.0	28	198
				1	.407	282.4	65.8	+ 6.0	25	175
				23529	.790	108.8	352.1	-14.1	21	271

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Jun. 16.392	- 9.4	28.3	+1.2	23527	.612	277.8	65.7	+ 5.7	17	107
				1	.614	277.8	65.9	+ 5.7	17	105
				23529	.636	114.2	351.8	-14.1	36	242
17.435	- 8.9	14.5	+1.3	23527	.784	276.3	65.9	+ 5.8	7	46
				1615 08	.411	192.1	19.9	-22.3	0	1
				23529	.466	125.1	351.5	-14.3	29	223
18.333	- 8.5	2.6	+1.4	23527	.892	275.8	65.6	+ 5.8	8	48
				23529	.330	144.8	351.4	-14.2	34	225
19.642	- 8.0	345.3	+1.6	23529	.288	200.0	351.1	-14.1	31	144
20.372	- 7.6	335.7	+1.7	23529	.378	223.4	351.1	-14.3	21	149
21.329	- 7.2	323.0	+1.8	23529	.531	239.7	351.1	-13.9	12	69
22.293	- 6.8	310.2	+1.9	23529	.694	246.9	351.3	-14.3	8	53
23.133	- 6.4	299.1	+2.0	23529	.806	250.7	350.6	-14.2	4	20
24.467	- 5.8	281.5	+2.1	23529	.931	253.6	348.5	-14.4	0	3
				23530	.189	309.3	290.0	+ 9.0	1	13
				1616 01	.152	15.4	279.1	+10.5	0	2
				1616 02	.452	119.0	257.8	-10.7	1	6
				1616 03	.878	98.4	220.7	- 6.3	0	2
25.132	- 5.5	272.7	+2.2	23530	.323	293.5	290.1	+ 9.5	1	6
				1616 04	.688	86.9	229.3	+ 3.7	0	7
26.572	- 4.9	253.6	+2.4	23531	.972	101.9	178.2	-10.9	24	130
27.308	- 4.5	243.8	+2.5	23531	.921	102.8	177.9	-10.8	15	79
28.612	- 4.0	226.6	+2.6	23531	.773	105.9	177.7	-10.5	11	92
				23532	.935	106.4	159.0	-14.3	3	10
				23533	.978	108.0	150.2	-16.9	22	131
29.308	- 3.6	217.4	+2.7	23531	.666	109.2	177.8	-10.6	6	66
				23532	.885	106.8	157.0	-13.5	32	211
				23533	.938	109.1	149.9	-16.9	7	69
30.132	- 3.3	206.5	+2.8	23534	.225	159.5	201.9	- 9.3	6	31
				23531	.529	115.9	177.6	-10.8	10	51
				23532	.781	110.7	157.8	-14.1	50	315
				23533	.866	111.9	149.4	-17.3	15	71

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
July 1.308	- 2.7	190.9	+2.9	23534	.296	221.1	202.3	-10.0	28	87
				23531	.332	135.7	177.3	-10.8	9	59
				23532	.597	118.5	158.3	-14.0	76	626
				23533	.714	117.3	149.6	-16.9	15	74
2.336	- 2.3	177.3	+3.0	23534	.494	243.8	203.9	- 9.9	19	122
				23531	.236	181.6	177.7	-10.5	5	28
				23532	.432	133.1	158.4	-14.2	158	844
				23533	.560	126.5	149.4	-16.7	6	64
3.326	- 1.8	164.2	+3.1	23534	.690	252.6	205.9	- 9.5	35	373
				23531	.330	224.0	177.7	-10.6	2	15
				1616 05	.420	191.6	169.4	-21.1	0	1
				23532	.315	162.0	158.5	-14.2	155	1238
				23533	.419	143.9	149.3	-16.7	8	49
4.356	- 1.3	150.6	+3.2	23534	.837	256.9	206.0	- 9.1	46	388
				23531	.445	235.6	172.5	-11.5	0	1
				23532	.331	204.2	158.6	-14.3	185	1374
				23533	.347	176.1	149.2	-16.9	5	31
5.520	- 0.8	135.2	+3.4	23534	.952	259.5	206.2	- 8.9	49	381
				23531	.661	247.3	173.6	-12.1	2	21
				23532	.494	233.3	159.1	-14.0	159	1123
				23533	.417	213.6	149.1	-17.0	6	28
				23535	.330	156.8	127.5	-14.3	5	45
6.337	- 0.4	124.3	+3.5	23534	.997	261.1	209.2	- 8.6	71	682
				23531	.776	251.3	172.9	-12.1	9	60
				23532	.617	241.6	158.3	-14.1	90	1099
				23533	.527	228.2	148.6	-17.3	5	27
				23535	.299	191.5	127.9	-13.5	14	117
7.383	0.0	110.5	+3.6	23531	.910	254.9	174.3	-12.1	14	119
				23532	.778	248.8	158.6	-13.9	119	1000
				23533	.678	239.7	148.1	-17.2	2	9
				23535	.424	227.1	129.0	-13.3	15	75
8.431	+ 0.5	96.6	+3.7	23531	.986	256.9	175.7	-12.2	7	34
				23532	.905	252.3	159.2	-14.3	115	918
				23533	.819	245.6	147.9	-17.5	2	8
				23535	.624	242.8	131.3	-13.5	4	29
				1616 06	.161	314.9	103.3	+10.2	0	2
				23536	.992	99.1	14.6	- 8.5	73	372
9.327	+ 0.9	84.6	+3.8	23532	.971	254.3	159.3	-14.3	82	888
				23535	.769	249.2	132.2	-13.3	4	16
				23536	.948	100.2	14.4	- 8.4	72	564
10.539	+ 1.5	68.7	+3.9	23536	.823	102.9	14.8	- 8.3	107	577
				1	.820	102.9	15.1	- 8.3	104	555
11.343	+ 1.8	58.1	+4.0	1616 07	.099	325.6	61.3	+ 8.6	0	2
				23536	.702	106.2	15.3	- 8.4	85	537
				1	.701	106.3	15.4	- 8.4	84	529

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
July 12.307	+ 2.3	45.3	+4.1	23536	.540	112.5	15.2	- 8.4	89	416
				1	.534	112.8	15.6	- 8.4	86	376
13.659	+ 2.9	27.4	+4.2	23536	.300	136.2	15.4	- 8.3	93	487
				1	.298	136.4	15.5	- 8.3	93	481
				1616 08	.505	117.9	0.6	- 9.9	0	5
				23537	.775	109.3	339.3	-12.0	5	21
14.391	+ 3.2	17.8	+4.3	23536	.220	170.4	15.6	- 8.2	84	482
				1	.220	170.4	15.6	- 8.2	84	481
				23538	.375	142.0	4.1	-13.0	0	2
				23537	.644	112.7	340.7	-11.0	6	33
				23539	.664	101.0	337.2	- 4.0	3	12
				23540	.992	104.6	296.4	-13.9	18	91
15.103	+ 3.5	8.3	+4.3	23536	.255	210.6	15.8	- 8.3	82	442
				23538	.305	160.3	2.3	-12.3	1	21
				23537	.538	119.6	340.0	-11.5	3	29
				23539	.520	105.6	338.3	- 4.2	1	11
				23540	.961	105.9	296.4	-13.9	15	125
16.446	+ 4.1	350.6	+4.5	23536	.473	243.3	15.7	- 8.2	90	446
				23538	.368	213.5	2.6	-13.4	1	12
				23539	.242	127.9	339.6	- 4.1	0	8
				23537	.366	142.1	337.3	-12.4	51	364
				23540	.835	109.4	296.7	-13.5	21	96
17.424	+ 4.5	337.6	+4.6	23536	.645	251.9	15.7	- 8.0	79	462
				23539	.157	194.6	339.9	- 4.1	1	17
				23537	.278	182.5	338.3	-11.5	55	349
				23540	.703	114.3	296.6	-13.3	18	130
18.332	+ 4.9	325.6	+4.6	23536	.786	256.4	15.8	- 7.7	74	462
				1617 01	.509	256.0	355.1	- 3.0	0	1
				1617 02	.520	232.7	350.7	-14.1	1	7
				23537	.351	219.2	338.6	-11.2	37	263
				2	.341	211.6	336.1	-12.3	17	154
				23540	.566	121.5	296.0	-13.1	18	123
19.330	+ 5.4	312.4	+4.7	23536	.904	259.2	15.8	- 7.6	78	436
				23539	.511	253.8	341.8	- 4.0	1	16
				23537	.519	239.4	339.4	-11.0	20	180
				2	.482	233.4	335.7	-12.3	12	91
				23540	.411	138.7	296.3	-13.4	18	147
20.455	+ 5.9	297.5	+4.8	23536	.982	261.1	15.5	- 7.7	71	514
				23539	.726	260.3	343.1	- 3.6	2	8
				23537	.716	250.2	340.6	-10.5	12	100
				2	.656	245.7	335.0	-11.8	3	30
				23540	.314	174.2	295.6	-13.3	16	119
21.373	+ 6.3	285.4	+4.9	23539	.850	262.0	342.7	- 4.2	2	33
				23537	.845	254.0	341.0	-10.7	9	122
				2	.818	252.1	337.8	-11.5	2	60

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
July 21.373	Continued			23540	.366	211.7	296.7	-13.2	26	110
				1617 03	.288	213.9	294.7	- 8.9	1	13
				23541	.697	115.5	245.2	-13.7	5	37
				23542	.972	101.0	210.3	- 9.5	29	346
22.585	+ 6.8	269.3	+5.0	23539	.974	265.8	345.7	- 2.9	10	80
				23537	.962	257.6	341.9	-10.4	8	83
				23540	.540	236.0	296.6	-13.0	19	138
				23541	.500	129.2	245.9	-13.7	57	298
				23542	.878	103.6	209.6	- 9.4	33	315
23.351	+ 7.1	259.2	+5.1	23540	.664	243.8	296.8	-13.0	20	137
				23541	.400	145.8	245.8	-14.3	46	375
				23542	.782	106.2	209.9	- 9.3	42	310
24.563	+ 7.6	243.2	+5.2	23540	.833	250.9	296.8	-12.7	25	118
				23541	.345	189.9	246.7	-14.6	32	224
				23542	.583	113.2	210.4	- 8.9	33	207
				23543	.982	107.9	166.5	-16.4	24	83
25.324	+ 7.9	233.1	+5.3	23540	.915	253.9	297.1	-12.4	17	96
				23541	.423	215.4	247.7	-15.0	27	225
				23542	.442	122.3	211.0	- 8.7	28	240
				23543	.939	109.6	166.2	-16.3	16	86
26.574	+ 8.5	216.6	+5.4	23540	.991	256.8	297.4	-12.2	8	51
				23541	.640	237.7	250.6	-15.5	22	160
				23542	.266	159.0	211.0	- 9.0	31	180
				23544	.682	110.3	176.3	- 9.6	3	17
				23543	.815	114.3	166.1	-16.2	14	83
27.734	+ 8.9	201.2	+5.5	23541	.815	246.6	251.9	-15.5	20	131
				23542	.304	216.4	211.7	- 8.7	12	86
				23543	.657	122.4	166.1	-16.1	9	63
28.524	+ 9.3	190.8	+5.5	23541	.908	250.2	253.0	-15.3	22	134
				23542	.436	235.9	212.1	- 8.9	17	112
				23544	.357	137.4	176.7	- 9.8	1	4
				23543	.533	132.4	166.7	-15.9	9	66
29.331	+ 9.6	180.1	+5.6	23541	.972	252.7	254.1	-15.3	19	106
				23542	.573	245.5	211.8	- 9.0	7	50
				23544	.290	159.3	174.1	-10.1	1	5
				23543	.431	148.0	166.4	-15.9	13	64
30.563	+10.1	163.8	+5.7	23542	.758	252.7	210.8	- 9.1	9	44
				23544	.329	217.0	175.3	- 9.6	9	49
				23545	.313	196.3	168.9	-11.7	1	5
				23543	.364	186.8	166.4	-15.5	5	22
31.370	+10.4	153.1	+5.7	23542	.869	255.8	211.5	- 9.3	5	14
				23544	.454	236.1	175.5	- 9.3	18	91
				23543	.409	207.6	164.4	-15.6	1	8

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Aug. 1.445	+10.9	138.9	+5.8	23544	.649	249.2	176.6	- 8.7	30	204
				23543	.511	228.4	162.0	-14.4	1	16
2.317	+11.2	127.4	+5.9	23544	.785	254.5	177.1	- 8.3	24	126
				23545	.766	250.2	174.4	-11.0	2	11
				23543	.685	239.0	164.9	-16.0	0	2
3.433	+11.7	112.6	+6.0	23544	.930	258.8	179.6	- 8.1	6	37
				23545	.905	254.8	175.3	-11.0	0	8
4.567	+12.1	97.6	+6.0	23546	.986	100.3	18.6	- 9.1	47	315
5.342	+12.4	87.4	+6.1	23546	.944	102.1	18.3	- 9.3	45	341
				23547	.985	96.9	8.3	- 5.7	19	162
6.333	+12.8	74.3	+6.2	23546	.846	105.0	18.6	- 9.2	49	323
				23547	.939	99.0	5.7	- 6.3	20	151
				23548	.998	109.0	350.8	-18.4	0	95
7.333	+13.1	61.0	+6.2	23546	.710	109.7	18.6	- 9.2	47	335
				23547	.832	101.8	6.2	- 6.2	23	107
				23548	.959	111.6	351.0	-18.6	8	44
8.364	+13.5	47.4	+6.3	23546	.539	117.9	18.7	- 9.0	46	333
				23547	.678	106.3	6.7	- 6.2	20	120
				23548	.884	114.7	349.8	-18.3	5	27
9.315	+13.9	34.8	+6.3	23546	.380	133.2	18.6	- 8.9	47	317
				23547	.492	115.2	8.3	- 6.4	14	50
				1617 04	.648	122.1	0.4	-14.9	0	5
				23548	.777	119.5	349.7	-18.0	2	14
				23549	.859	101.8	337.2	- 6.8	0	4
				23550	.992	82.2	311.3	+ 8.5	9	36
10.313	+14.2	21.6	+6.4	23546	.266	169.3	18.8	- 8.7	42	302
				23547	.324	133.8	8.1	- 6.7	15	95
				23549	.698	106.9	339.5	- 6.9	3	22
				23550	.932	83.4	312.5	+ 8.5	6	35
11.365	+14.6	7.7	+6.5	1617 05	.491	219.4	26.6	-16.1	0	7
				23546	.321	216.7	18.9	- 8.5	60	288
				23547	.225	182.7	8.3	- 6.5	12	80
				23549	.491	115.5	341.4	- 6.4	14	84
				23551	.631	128.5	336.7	-17.5	0	6
				23550	.824	84.6	312.0	+ 8.1	8	28
12.525	+15.0	352.4	+6.5	23546	.507	240.9	18.9	- 8.4	57	301
				23547	.347	229.9	7.8	- 6.6	18	49
				23549	.294	138.5	341.1	- 6.3	66	414
				1	.280	141.6	342.4	- 6.2	44	299
				23551	.478	148.6	337.3	-17.7	8	55
				23552	.497	84.0	322.5	+ 8.6	1	9
				23550	.643	85.0	312.2	+ 8.2	3	19

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Aug. 13.616	+15.4	338.0	+6.6	23546	.692	250.8	19.2	- 8.2	43	253
				23547	.544	246.7	8.1	- 6.7	10	48
				1618 01	.246	266.2	352.2	+ 5.4	0	2
				23548	.458	201.4	348.1	-18.6	0	1
				23549	.223	195.5	341.4	- 5.8	49	283
				1	.225	198.8	342.1	- 5.7	41	239
				23551	.427	173.0	334.8	-18.4	0	5
				23552	.296	82.1	320.8	+ 8.6	0	2
				23550	.434	84.0	312.2	+ 8.5	1	11
				23553	.990	104.8	258.1	-13.6	40	208
14.329	+15.7	328.6	+6.6	23546	.799	254.4	19.4	- 8.2	53	285
				23547	.672	251.9	8.4	- 6.9	9	52
				23554	.554	238.7	357.2	-10.9	5	30
				23549	.304	226.8	341.3	- 5.5	38	292
				1	.313	229.2	342.3	- 5.3	29	238
				23551	.441	194.1	335.0	-18.6	1	9
				23552	.092	28.2	326.0	+11.2	0	8
				23550	.281	81.9	312.3	+ 8.6	4	13
				23553	.957	106.5	258.0	-13.7	35	234
15.331	+16.0	315.3	+6.7	23546	.913	257.9	19.5	- 8.2	53	245
				23547	.818	256.5	8.3	- 7.0	2	18
				23554	.697	248.0	356.2	-10.1	2	5
				23549	.488	247.3	342.1	- 4.9	28	185
				1	.491	247.6	342.3	- 4.8	26	176
				23551	.539	217.4	335.5	-19.0	0	1
				23552	.188	280.5	326.0	+ 8.5	0	2
				23550	.059	57.0	312.5	+ 8.5	1	7
				23553	.874	109.9	257.7	-13.8	35	230
16.332	+16.4	302.1	+6.7	23546	.980	260.2	19.0	- 8.2	67	301
				23547	.929	259.3	8.8	- 7.4	3	9
				23549	.669	255.8	342.5	- 4.4	34	189
				23551	.716	238.1	341.4	-17.0	2	8
				23552	.398	277.2	325.5	+ 9.0	16	120
				23553	.756	115.2	257.4	-14.0	26	195
17.390	+16.7	288.1	+6.7	23549	.828	260.8	342.9	- 3.7	37	211
				23551	.821	243.7	338.2	-17.0	14	110
				23552	.611	276.1	325.9	+ 9.1	32	202
				23553	.605	124.3	257.2	-14.1	45	224
18.446	+17.1	274.1	+6.8	23549	.941	263.9	343.5	- 3.4	33	194
				23551	.932	248.2	339.1	-17.4	22	122
				23552	.792	277.2	326.8	+ 9.8	24	162
				23553	.458	140.7	256.8	-14.2	32	202
19.333	+17.3	262.4	+6.8	23549	.990	265.6	343.7	- 3.4	32	176
				23551	.983	250.6	338.6	-17.5	5	48
				23552	.904	277.1	327.5	+ 9.3	21	127
				23553	.375	165.1	256.7	-14.4	43	203
				23555	.334	124.1	246.4	- 4.2	0	2
				23556	.985	90.1	182.5	+ 1.1	13	110

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Aug. 20.333	+17.7	249.2	+6.9	23552	.983	277.0	329.1	+ 8.2	12	103
				23553	.385	198.8	256.6	-14.5	33	212
				23555	.206	163.4	245.8	- 4.5	0	4
				23556	.919	91.0	182.6	+ 1.8	14	113
21.329	+18.0	236.0	+6.9	23557	.512	233.7	260.8	-11.3	8	41
				23553	.492	222.9	256.2	-14.6	31	218
				23555	.264	225.2	246.8	- 3.9	0	1
				23556	.806	92.8	182.6	+ 1.8	17	136
22.306	+18.3	223.1	+7.0	23557	.676	244.3	261.5	-11.6	19	98
				23553	.632	236.1	255.9	-14.8	37	194
				23556	.652	95.3	182.8	+ 1.8	30	149
23.315	+18.6	209.8	+7.0	23557	.811	250.2	260.8	-11.6	15	95
				23553	.774	244.0	255.7	-15.0	38	223
				23556	.467	100.2	182.5	+ 1.5	21	98
24.299	+18.9	196.8	+7.0	23557	.919	254.1	261.0	-11.5	14	112
				23553	.888	248.9	255.7	-15.1	32	205
				23556	.264	110.5	182.6	+ 1.5	13	81
25.316	+19.2	183.4	+7.0	23557	.980	256.9	259.8	-11.3	5	45
				23553	.965	252.2	255.1	-15.0	47	235
				23556	.098	171.5	182.5	+ 1.5	14	83
26.080	+19.4	173.3	+7.1	23553	.997	252.0	256.0	-17.2	26	128
				23556	.188	238.7	182.5	+ 1.4	11	52
27.344	+19.8	156.6	+7.1	23556	.450	258.5	182.6	+ 1.3	9	61
28.348	+20.0	143.3	+7.1	23556	.640	263.6	182.7	+ 1.4	9	65
29.331	+20.3	130.3	+7.1	23556	.814	266.6	184.5	+ 1.4	12	62
				1618 02	.616	286.6	168.0	+15.8	0	1
30.432	+20.6	115.8	+7.2	23556	.924	268.4	183.0	+ 1.3	9	47
31.376	+20.9	103.3	+7.2	23556	.986	270.0	183.5	+ 1.3	13	67
				23558	.995	98.8	20.6	- 7.9	32	148
Sept. 1.432	+21.1	89.3	+7.2	23558	.942	101.1	20.6	- 7.9	20	144
2.545	+21.4	74.6	+7.2	23558	.829	104.5	20.7	- 7.7	14	125
3.314	+21.6	64.5	+7.2	23558	.722	108.0	20.8	- 7.7	16	149
				23559	.980	94.8	346.8	- 3.2	22	150

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Sept. 4.313	+21.8	51.3	+7.2	23560	.331	169.7	47.8	-11.7	1	5
				23558	.560	115.0	20.6	- 7.4	23	134
				23561	.569	87.4	16.4	+ 7.4	1	6
				23559	.912	96.8	346.4	- 3.1	27	129
				23562	.966	106.3	339.0	-13.6	0	9
5.320	+22.1	38.0	+7.2	23560	.355	201.5	45.6	-12.0	1	7
				23558	.385	129.2	20.6	- 7.1	17	150
				23561	.355	87.9	17.1	+ 7.5	1	9
				23559	.796	99.5	346.4	- 3.1	20	119
				23562	.885	109.9	339.2	-13.9	2	19
6.333	+22.3	24.6	+7.2	23560	.503	232.9	48.6	-11.0	0	4
				1618 03	.109	297.6	30.2	+10.1	0	5
				1618 04	.070	244.9	28.3	+ 5.5	1	3
				23558	.257	164.5	20.7	- 7.1	16	128
				23561	.193	82.0	13.5	+ 8.6	0	1
				23563	.476	134.0	4.2	-12.4	3	30
				23559	.640	103.8	346.3	- 3.1	22	127
				23562	.765	115.0	339.2	-13.8	4	12
7.401	+22.5	10.5	+7.2	23558	.300	215.5	20.5	- 6.9	20	117
				23563	.373	161.6	3.6	-13.4	0	6
				23559	.447	111.9	346.1	- 2.9	19	117
				23562	.613	123.7	339.0	-13.6	1	6
8.415	+22.8	357.1	+7.2	23558	.466	239.2	20.8	- 7.1	13	125
				23559	.260	132.8	346.2	- 3.0	14	125
				23562	.471	139.3	338.8	-14.0	1	5
9.403	+23.0	344.1	+7.2	23558	.634	249.1	20.6	- 7.2	20	115
				23561	.522	274.4	15.7	+ 8.5	0	3
				23559	.182	191.3	346.1	- 3.0	15	101
				23562	.375	165.9	338.7	-14.0	0	2
				23564	.974	83.2	266.5	+ 8.2	113	829
				23565	.987	102.5	265.2	-11.1	21	214
10.321	+23.1	331.9	+7.2	23558	.776	254.5	20.7	- 7.2	18	121
				23561	.718	273.2	18.1	+ 7.4	11	83
				23559	.300	234.5	346.0	- 3.0	13	113
				1619 01	.458	188.1	335.9	-19.6	0	6
				23564	.909	84.4	266.1	+ 8.1	124	873
				23565	.935	105.4	265.2	-11.5	41	325
				23566	.983	107.5	255.4	-15.6	6	48
11.391	+23.4	317.8	+7.2	23558	.904	258.2	20.8	- 7.4	13	94
				23561	.866	274.6	18.1	+ 7.6	47	265
				23563	.791	247.5	6.2	-12.8	0	4
				23559	.508	251.0	346.5	- 3.1	13	89
				23564	.780	85.0	266.2	+ 8.4	144	943
				23565	.823	110.0	265.7	-11.9	20	218
				23566	.917	110.6	255.0	-15.6	8	42

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Sept. 12.551	+23.6	302.5	+7.2	23558	.982	260.8	20.1	- 7.5	17	116
				23561	.970	276.1	18.9	+ 7.7	18	137
				23559	.716	258.0	346.8	- 3.4	16	109
				23564	.580	85.8	266.9	+ 8.3	130	1104
				23565	.653	117.4	266.4	-11.6	12	101
				23566	.792	115.5	254.9	-15.1	9	44
13.685	+23.8	287.5	+7.2	23559	.869	261.8	346.8	- 3.4	9	79
				23565	.461	132.3	267.3	-11.2	13	86
				23564	.351	85.8	266.9	+ 8.2	139	1038
				23566	.641	124.4	254.4	-15.2	7	35
14.334	+23.9	279.0	+7.2	23559	.938	263.5	347.8	- 3.5	0	10
				23564	.206	84.4	267.1	+ 8.2	120	975
				23565	.375	146.7	266.9	-11.1	10	76
				23566	.551	132.9	254.3	-15.4	5	30
15.141	+24.1	268.3	+7.2	23564	.023	35.9	267.5	+ 8.2	114	718
				23565	.318	170.5	265.3	-11.0	3	40
				23566	.452	141.6	251.6	-13.8	2	16
16.314	+24.3	252.8	+7.2	23565	.426	223.0	270.0	-11.2	5	26
				23564	.251	275.9	267.3	+ 8.4	126	924
				23566	.387	183.3	254.2	-15.4	4	17
				23567	.946	83.0	181.2	+ 8.9	3	48
17.325	+24.4	239.5	+7.2	23568	.758	248.4	285.2	-11.2	0	3
				23565	.582	241.3	270.6	-10.1	4	28
				23564	.471	275.0	267.7	+ 8.7	125	692
				23566	.452	212.9	254.1	-15.3	3	11
				23567	.845	83.9	181.4	+ 9.0	4	29
18.332	+24.6	226.2	+7.2	23568	.882	253.4	285.4	-11.0	2	40
				23565	.757	250.0	272.3	-10.0	3	17
				23564	.666	275.4	268.1	+ 8.9	103	703
				23566	.586	231.2	254.3	-15.2	1	4
				23567	.664	83.8	184.3	+ 9.4	3	21
19.360	+24.7	212.6	+7.1	23568	.977	257.5	288.2	-10.5	5	57
				23564	.822	276.0	268.2	+ 9.0	113	678
				23567	.388	79.6	189.9	+10.6	1	9
				1619 02	.617	115.7	178.4	- 9.6	0	1
20.323	+24.9	199.9	+7.1	23564	.929	277.3	268.7	+ 9.4	108	713
				23567	.194	69.1	189.3	+10.9	1	6
21.378	+25.0	186.0	+7.1	23564	.990	279.0	268.5	+ 9.9	51	727
22.384	.	.	.	-					0	0
23.423	+25.3	159.0	+7.0	1619 03	.481	253.4	186.3	- 1.6	0	4

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Sept. 24.396	+25.4	146.1	+7.0	23569	.196	55.8	136.6	+13.2	7	39
25.328	+25.5	133.8	+7.0	23569	.132	332.6	137.4	+13.6	16	84
26.330	+25.6	120.6	+6.9	23569	.323	293.3	138.3	+13.9	13	66
				23570	.927	105.6	55.2	-11.6	0	3
27.524	+25.7	104.9	+6.9	23569	.569	284.7	139.3	+14.0	8	41
				23571	.989	82.1	22.6	+ 8.8	15	127
28.388	+25.8	93.5	+6.8	23571	.943	83.1	22.5	+ 8.8	20	119
				23572	.968	97.7	19.1	- 5.7	4	22
29.411	+25.9	80.0	+6.8	23570	.552	123.0	51.9	-11.5	3	15
				23573	.819	113.3	29.2	-14.6	0	2
				23571	.841	83.9	22.4	+ 8.8	16	115
				23572	.895	100.0	17.9	- 5.8	31	336
30.327	+25.9	67.9	+6.7	23574	.472	287.6	95.4	+14.2	1	9
				23570	.410	138.7	51.9	-11.4	5	55
				23573	.691	119.3	29.5	-14.4	2	19
				23571	.713	84.5	22.2	+ 8.7	18	105
				23572	.781	103.0	18.1	- 5.7	81	447
Oct. 1.344	+26.0	54.4	+6.7	23574	.669	284.2	96.3	+14.4	0	2
				23570	.316	170.6	51.4	-11.4	7	37
				23573	.532	131.1	30.1	-14.3	0	5
				23571	.529	83.0	22.4	+ 9.4	21	146
				23572	.622	108.4	18.2	- 5.9	83	462
				1	.563	109.6	22.4	- 5.2	38	228
2.090	+26.1	44.6	+6.7	23570	.339	202.3	52.1	-11.6	6	39
				23573	.437	145.1	29.7	-14.5	0	1
				23571	.380	78.6	22.5	+10.5	17	99
				23572	.491	114.1	17.9	- 5.6	119	.441
				1	.429	116.7	22.1	- 4.9	59	226
3.326	+26.1	28.3	+6.6	23570	.560	236.7	56.7	-12.1	7	26
				23571	.114	66.8	22.2	+ 9.1	15	96
				23572	.273	141.8	18.6	- 5.8	75	414
				1	.229	153.6	22.4	- 5.2	38	213
4.432	+26.2	13.7	+6.5	23570	.747	246.8	58.2	-12.4	3	31
				23571	.149	285.6	22.0	+ 8.8	9	79
				23572	.230	203.1	18.9	- 5.6	60	420
				1	.251	216.4	22.3	- 5.1	32	237
				23575	.892	115.0	315.3	-18.8	2	40
				23576	.936	86.4	304.0	+ 5.7	0	9
				23577	.993	80.6	289.9	+10.1	17	156
5.328	+26.2	1.9	+6.5	23570	.854	252.0	57.7	-11.7	4	30
				1619 04	.594	307.2	33.7	+26.5	0	1
				1619 05	.532	240.1	29.6	- 9.6	0	4

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Oct. 5.328	Continued			23571	.348	277.5	22.2	+ 8.7	7	52
				23572	.349	233.5	18.2	- 5.7	55	376
				1	.397	240.8	22.1	- 5.0	26	194
				23575	.786	120.3	316.2	-18.8	7	69
				23576	.844	87.4	304.2	+ 5.7	4	31
				23578	.933	104.9	295.2	-11.3	0	6
				23577	.947	80.8	290.1	+10.8	17	151
				23579	.997	79.4	275.5	+11.1	13	119
6.426	+26.3	347.4	+6.4	23570	.957	255.4	58.4	-11.9	0	7
				23571	.573	275.7	22.5	+ 8.6	5	49
				23572	.549	249.4	18.3	- 5.6	43	399
				1	.601	252.6	22.4	- 5.0	31	213
				23575	.638	131.3	317.0	-19.3	8	81
				23576	.689	88.1	303.7	+ 6.0	7	54
				23578	.817	108.7	295.4	-11.3	2	15
				23577	.861	81.7	287.6	+10.4	30	195
				23579	.951	81.9	274.8	+ 9.7	45	448
7.340	+26.3	335.3	+6.4	23571	.737	275.9	23.0	+ 8.7	3	36
				23572	.710	255.4	18.8	- 5.7	59	372
				1	.751	257.2	22.5	- 5.2	40	222
				23575	.510	146.1	317.9	-18.9	4	30
				23576	.513	89.7	304.5	+ 5.6	4	34
				23577	.768	81.2	284.9	+10.9	21	134
				23579	.876	83.2	273.9	+ 9.0	47	570
8.424	+26.3	321.0	+6.3	23571	.877	276.8	22.7	+ 9.0	2	11
				23572	.853	259.0	18.2	- 5.9	48	401
				1	.888	260.4	22.4	- 5.5	31	215
				23575	.426	169.7	316.5	-18.4	13	87
				23576	.285	92.2	304.5	+ 5.4	6	29
				23577	.602	80.5	284.0	+10.8	21	135
				23579	.729	84.0	274.0	+ 8.7	68	760
9.346	+26.3	308.9	+6.3	23571	.962	277.6	23.5	+ 9.0	0	4
				23572	.953	261.6	20.1	- 6.0	58	328
				23575	.432	196.4	316.2	-18.2	41	185
				23576	.049	120.0	306.4	+ 4.9	7	23
				23577	.420	78.3	284.2	+10.6	12	69
				23580	.530	105.5	278.2	- 2.7	0	4
				23579	.563	83.2	274.5	+ 9.0	93	702
10.415	+26.3	294.8	+6.2	23572	.981	262.2	12.5	- 6.4	11	112
				23575	.554	222.3	317.8	-18.4	53	302
				23576	.180	264.2	305.0	+ 5.1	1	10
				1620 01	.206	36.8	287.4	+15.6	1	3
				23577	.208	67.5	283.5	+10.6	27	198
				23580	.356	112.2	275.6	- 1.8	0	2
				23579	.353	83.0	274.1	+ 8.3	60	773
11.363	+26.3	282.2	+6.1	23575	.685	235.1	318.3	-18.1	49	325
				23576	.450	267.7	309.0	+ 4.4	0	1
				23577	.093	343.4	283.8	+11.2	45	303
				23581	.285	167.8	278.7	-10.0	0	1

Continued

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Oct. 11.363	Continued			23579	.166	73.0	273.0	+ 8.8	78	689
12.432	+26.3	268.1	+6.0	23575	.835	243.8	319.9	−17.9	44	261
				23577	.279	291.0	283.5	+11.5	55	460
				23579	.092	303.8	272.6	+ 9.0	90	887
13.140	+26.3	258.8	+6.0	23575	.913	245.9	320.4	−19.1	27	187
				1620 02	.782	265.2	309.8	0.0	0	5
				23577	.435	281.9	284.4	+10.6	88	389
				23581	.426	235.9	279.6	− 8.1	0	2
				23579	.242	281.4	272.6	+ 8.6	111	693
14.354	+26.3	242.8	+5.9	23575	.987	251.2	321.0	−17.4	14	115
				23577	.671	280.2	284.9	+11.2	46	355
				1620 03	.582	251.4	276.3	− 5.7	0	1
				23579	.499	276.9	272.8	+ 8.6	55	682
15.455	+26.2	228.3	+5.8	23577	.835	279.5	285.2	+11.1	42	294
				23579	.704	276.1	273.1	+ 8.5	34	478
16.089	+26.2	219.9	+5.8	23577	.911	278.5	285.9	+10.1	42	201
				23579	.803	274.8	273.5	+ 7.3	45	440
17.328	+26.2	203.6	+5.7	23577	.995	281.2	288.5	+11.7	10	40
				23579	.936	275.8	273.2	+ 7.5	66	501
18.319	+26.1	190.5	+5.6	23579	.993	275.9	273.9	+ 6.5	17	129
19.356	+26.1	176.8	+5.5	23582	.638	274.4	216.5	+ 7.1	3	17
20.492	+26.0	161.8	+5.4	23582	.807	274.9	215.8	+ 7.2	11	65
21.371	+25.9	150.3	+5.4	23582	.916	275.3	216.7	+ 7.0	13	166
22.364	+25.8	137.2	+5.3	23582	.977	276.3	215.0	+ 7.3	18	166
23.453	+25.7	122.8	+5.2	1620 04	.972	258.3	197.6	−10.1	0	9
24.458	.	.	.	–					0	0
25.451	+25.5	96.4	+5.0	23583	.942	98.0	27.0	− 5.8	19	136
26.517	+25.4	82.4	+4.9	23584	.768	112.9	35.8	−14.0	5	35
				23583	.840	100.6	26.4	− 6.1	24	104
				23585	.991	86.1	0.1	+ 4.5	0	15

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Oct. 27.484	+25.3	69.6	+4.8	23586	.304	81.2	52.1	+ 7.2	2	8
				23584	.598	119.9	37.6	−13.2	1	11
				23583	.708	103.5	26.0	− 6.0	15	101
				23585	.927	86.8	1.6	+ 4.7	0	6
28.377	+25.1	57.9	+4.7	1620 05	.246	255.0	71.5	+ 0.9	0	3
				23586	.105	56.5	52.8	+ 8.0	1	10
				23584	.455	132.0	37.6	−13.2	2	21
				23583	.548	108.6	26.5	− 6.0	16	93
				23585	.827	87.1	2.0	+ 5.1	2	8
29.402	+25.0	44.3	+4.6	23584	.343	158.0	36.8	−13.8	1	25
				23583	.359	120.4	26.3	− 6.0	19	86
30.484	+24.8	30.1	+4.5	23584	.353	207.0	39.5	−13.8	0	5
				23583	.192	159.4	26.2	− 5.8	16	99
				23587	.962	111.6	318.8	−19.3	12	91
31.386	+24.7	18.2	+4.4	23583	.221	217.7	25.9	− 5.6	12	65
				23587	.894	114.2	318.7	−19.2	0	5
Nov. 1.544	+24.5	2.9	+4.3	23583	.427	247.4	26.2	− 5.5	7	35
				1620 06	.277	31.9	354.1	+17.8	0	2
				1620 07	.601	127.6	333.0	−17.7	0	7
				23588	.975	78.8	285.5	+11.9	29	159
2.360	+24.4	352.1	+4.2	23583	.583	253.7	26.2	− 5.9	10	75
				23588	.918	78.3	285.4	+12.4	19	136
				23589	.954	80.0	279.3	+10.8	0	11
3.356	+24.2	339.0	+4.1	23583	.749	258.8	26.4	− 5.5	5	46
				23588	.810	76.8	285.2	+13.1	20	264
				23589	.869	82.8	278.7	+ 8.3	0	4
4.376	+24.0	325.6	+4.0	23583	.884	261.9	26.9	− 5.2	2	26
				23588	.638	75.7	286.5	+12.2	13	102
5.593	+23.8	309.5	+3.9	1621 01	.973	257.7	24.9	−11.0	14	94
				23588	.413	68.3	286.5	+12.3	5	58
6.385	+23.6	299.1	+3.8	1621 02	.076	231.9	302.5	+ 1.2	0	4
				23588	.259	57.6	286.2	+11.7	5	28
7.311	+23.4	286.9	+3.7	23590	.117	206.8	289.9	− 2.2	0	4
				23588	.144	7.7	285.7	+11.9	2	21
8.485	+23.2	271.4	+3.6	23590	.252	242.1	284.2	− 3.2	1	9
				1621 03	.214	270.7	283.7	+ 3.7	1	10
9.313	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Nov. 10.374	+22.7	246.5	+3.4	23591	.092	270.4	251.8	+ 3.4	3	24
				1621 04	.401	118.2	225.7	− 7.7	0	2
				23592	.422	79.7	221.8	+ 7.4	1	12
11.312	+22.5	234.1	+3.3	23591	.298	273.1	251.4	+ 4.0	0	6
				23593	.118	40.3	229.7	+ 8.4	0	3
12.453	+22.2	219.1	+3.1	23591	.547	273.0	252.1	+ 4.3	0	1
				23593	.195	288.7	229.7	+ 6.7	3	29
				23592	.093	314.7	222.9	+ 6.9	2	31
13.292	+22.0	208.0	+3.0	23593	.421	279.4	232.6	+ 6.7	1	14
				23592	.297	282.4	224.9	+ 6.6	1	10
14.497	+21.7	192.1	+2.9	1621 05	.464	258.3	219.1	− 2.8	0	1
15.421	+21.4	179.9	+2.8	1621 06	.553	91.2	146.5	+ 1.7	0	10
				23594	.974	77.0	103.1	+13.3	94	541
16.541	+21.1	165.2	+2.7	1621 07	.971	307.6	239.4	+37.0	4	18
				23594	.907	76.3	100.5	+13.6	117	641
				1	.891	76.2	102.6	+13.5	93	487
17.490	+20.8	152.7	+2.5	1621 08	.147	162.4	150.1	− 5.5	1	4
				23594	.793	75.1	100.9	+13.3	94	614
				1	.775	74.9	102.6	+13.3	87	489
18.441	+20.6	140.1	+2.4	23594	.647	72.7	100.9	+12.9	122	669
				1	.628	72.4	102.4	+12.8	106	548
19.423	+20.3	127.2	+2.3	23594	.477	66.1	100.7	+13.2	105	634
				1	.453	65.0	102.3	+13.1	90	501
				23595	.818	90.5	72.5	+ 0.9	4	30
				23596	.980	83.8	48.7	+ 6.5	5	22
20.547	+19.9	112.4	+2.2	23594	.263	43.8	101.7	+13.0	117	527
				1	.256	42.4	102.2	+13.0	115	490
				23595	.621	91.2	74.1	+ 1.0	3	24
				23596	.903	83.7	48.0	+ 6.6	10	63
21.292	+19.7	102.6	+2.1	23594	.187	5.1	101.6	+12.8	68	536
				1	.191	3.8	101.8	+13.0	67	512
				23595	.488	91.0	73.5	+ 1.4	38	206
				23596	.821	83.1	47.6	+ 6.8	0	9
22.082	+19.4	92.1	+2.0	23594	.256	320.3	101.8	+13.3	102	486
				1	.256	320.2	101.8	+13.3	102	483
				23595	.318	91.7	73.7	+ 1.4	10	60
				23596	.707	82.6	47.4	+ 6.6	1	11
23.406	+19.0	74.7	+1.8	23594	.486	294.7	101.5	+13.3	113	544
				23595	.006	121.6	74.4	+ 1.7	25	123
				1621 09	.356	83.6	54.0	+ 4.0	0	35

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Nov. 24.161	+18.7	64.7	+1.7	23594	.628	289.6	102.0	+13.5	88	496
				23595	.177	264.4	74.8	+ 0.7	8	33
25.433	+18.3	48.0	+1.6	23594	.819	284.8	102.1	+13.0	113	528
				23596	.134	16.2	45.8	+ 8.9	3	58
26.306	+18.0	36.5	+1.5	23594	.914	283.2	101.9	+12.6	131	562
				1621 10	.303	317.8	48.6	+14.4	0	10
27.306	+17.6	23.3	+1.4	23594	.981	282.8	102.0	+12.8	75	424
				23597	.203	290.3	34.2	+ 5.3	13	66
28.442	+17.2	8.3	+1.2	23597	.452	279.2	34.8	+ 5.2	6	46
29.450	+16.9	355.0	+1.1	23597	.663	275.0	36.3	+ 4.1	3	19
30.376	+16.5	342.8	+1.0	23597	.807	274.3	36.3	+ 4.0	0	7
				1622 01	.478	302.2	7.6	+15.6	0	1
Dec. 1.371	.	.	.	−					0	0
2.312	.	.	.	−					0	0
3.315	.	.	.	−					0	0
4.529	.	.	.	−					0	0
5.375	+14.5	276.9	+0.3	23598	.245	74.6	263.3	+ 4.0	2	21
6.587	+14.0	261.0	+0.2	23598	.102	325.2	264.3	+ 5.0	0	3
7.447	+13.7	249.6	+0.1	23599	.504	59.7	223.0	+14.7	0	3
8.306	.	.	.	−					0	0
9.438	.	.	.	−					0	0
10.377	.	.	.	−					0	0
11.522	+11.9	195.9	−0.5	23600	.433	64.2	172.7	+10.4	25	139

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974	°	°	°			°	°	°		
Dec. 12.308	+11.6	185.6	-0.6	23600	.290	46.6	173.3	+10.9	19	165
				23601	.991	76.5	104.0	+13.3	37	255
13.585	+11.0	168.8	-0.7	23599	.838	285.8	224.4	+12.8	4	24
				23600	.227	337.1	173.9	+11.3	26	169
				23601	.915	75.4	103.6	+13.0	56	350
14.316	+10.7	159.1	-0.8	23600	.332	309.8	174.2	+11.4	23	214
				23601	.839	73.7	103.6	+13.1	82	482
15.468	+10.2	143.9	-1.0	23600	.532	293.5	173.7	+11.3	17	171
				23601	.673	69.8	103.8	+12.6	67	378
16.313	+ 9.8	132.8	-1.1	23600	.684	288.3	174.2	+11.6	35	274
				23601	.531	63.7	103.7	+12.6	77	412
17.381	+ 9.3	118.8	-1.2	23600	.850	286.0	175.5	+12.8	28	163
				23601	.346	46.2	104.0	+12.6	66	357
18.435	+ 8.8	104.9	-1.3	23600	.928	284.1	171.8	+12.6	6	57
				23601	.245	3.0	104.1	+12.8	54	329
				23602	.945	83.5	34.5	+ 5.7	33	196
19.400	+ 8.4	92.2	-1.5	23600	.990	281.6	173.1	+11.3	7	37
				23603	.770	250.6	140.9	-15.7	2	25
				23601	.326	320.0	104.5	+13.0	61	338
				23604	.358	65.0	73.2	+ 7.3	2	9
				23602	.848	82.2	34.7	+ 5.8	20	172
20.283	+ 8.0	80.5	-1.6	23603	.894	253.1	143.1	-15.7	2	28
				23601	.470	301.9	104.6	+12.9	56	377
				23604	.172	32.5	75.2	+ 6.7	2	18
				23602	.727	80.1	34.6	+ 6.1	20	169
21.290	+ 7.5	67.2	-1.7	23601	.649	292.5	105.1	+13.0	59	326
				23604	.185	321.3	73.9	+ 6.6	2	19
				23602	.543	75.9	35.4	+ 6.1	25	120
22.415	+ 6.9	52.4	-1.8	23601	.818	287.6	105.4	+13.1	38	413
				23604	.367	289.5	72.7	+ 5.3	0	18
				23602	.320	64.8	35.6	+ 6.0	17	101
23.499	+ 6.4	38.1	-2.0	23601	.929	285.4	105.0	+13.5	64	318
				1622 02	.892	280.4	100.3	+ 8.3	2	24
				23604	.573	283.6	72.1	+ 6.1	0	5
				23602	.142	16.8	35.8	+ 5.8	15	106
24.515	+ 5.9	24.8	-2.1	23601	.987	284.0	104.7	+13.4	60	333
				23602	.233	305.1	35.8	+ 5.6	16	92
25.335	+ 5.5	14.0	-2.2	23602	.396	289.4	35.9	+ 5.5	13	67
26.410	+ 5.0	359.8	-2.3	23602	.600	282.9	35.6	+ 5.8	11	61

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1974/5	°	°	°			°	°	°		
Dec. 27.380	+ 4.6	347.0	-2.5	23602	.756	279.0	35.4	+ 5.2	6	24
28.301	+ 4.1	334.9	-2.6	23602	.878	276.8	35.7	+ 4.7	2	17
				23605	.572	301.6	5.1	+15.2	8	65
29.411	+ 3.6	320.3	-2.7	23605	.736	293.2	4.5	+14.9	6	41
				23606	.970	98.8	244.4	- 9.2	4	22
30.515	+ 3.0	305.7	-2.8	23605	.896	287.6	7.3	+14.4	2	17
				23606	.890	98.6	243.0	- 8.9	24	146
31.467	+ 2.6	293.2	-2.9	23606	.773	99.3	242.8	- 9.0	20	129
Jan. 1.427	+ 2.1	280.6	-3.0	23607	.860	280.9	338.8	+ 7.7	10	103
				23606	.612	100.5	243.2	- 8.8	25	191
2.533	+ 1.6	266.0	-3.2	23607	.944	279.4	335.7	+ 7.8	9	50
				23606	.363	106.3	245.4	- 8.8	11	90
				23608	.928	85.0	198.3	+ 3.4	3	11
3.394	+ 1.2	254.6	-3.3	23607	.989	278.6	335.2	+ 8.0	7	81
				23606	.170	121.2	246.2	- 8.3	16	108
				23608	.846	82.7	197.5	+ 4.3	4	43
4.321	+ 0.7	242.4	-3.4	23606	.113	221.2	246.7	- 8.2	7	64
				23608	.713	80.9	197.7	+ 4.1	10	52
5.297	+ 0.2	229.6	-3.5	23606	.307	253.5	246.8	- 8.3	8	51
				23608	.540	76.5	197.9	+ 4.3	10	61
6.294	- 0.3	216.4	-3.6	23606	.518	260.0	247.4	- 8.3	4	29
				23608	.348	66.1	197.9	+ 4.7	3	51
7.422	- 0.8	201.6	-3.7	23606	.774	267.0	252.2	- 4.7	0	7
				23609	.708	288.2	244.5	+10.0	17	93
				23608	.170	21.0	198.1	+ 5.4	3	10
8.483	- 1.3	187.6	-3.9	23609	.854	284.1	244.6	+ 9.9	14	141
				23608	.248	312.8	198.1	+ 5.9	4	25
				23610	.992	75.8	106.4	+13.5	16	142
9.142	- 1.6	178.9	-3.9	23609	.919	283.3	244.2	+10.6	5	43
				23608	.351	294.2	197.6	+ 4.5	4	27
				23610	.971	74.6	104.5	+13.9	25	197
10.317	- 2.2	163.5	-4.0	23608	.592	283.9	198.6	+ 4.8	13	107
				1623 01	.570	129.4	134.6	-24.7	4	51
				23610	.879	72.0	104.3	+13.7	24	228
11.401	- 2.7	149.2	-4.2	23608	.778	279.9	199.3	+ 5.0	12	126
				23610	.747	67.5	104.1	+13.6	34	212

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Jan. 12.266	- 3.1	137.8	-4.2	23608	.886	277.7	199.4	+ 4.8	22	230
				23610	.615	61.4	104.2	+13.5	24	195
				23611	.787	81.5	86.7	+ 4.0	0	5
13.392	- 3.7	123.0	-4.4	23608	.978	275.8	200.3	+ 4.7	26	153
				23610	.440	46.1	104.1	+13.6	19	224
				23611	.603	77.0	87.1	+ 4.3	1	5
14.290	- 4.1	111.2	-4.5	23610	.336	22.2	103.7	+13.6	20	221
				1623 02	.329	59.1	94.8	+ 5.4	0	1
15.499	- 4.7	95.2	-4.6	23610	.346	334.8	103.9	+13.6	25	179
				23612	.130	29.0	91.6	+ 1.9	8	35
16.284	- 5.0	84.9	-4.7	23610	.436	314.6	103.4	+13.3	20	165
				23612	.133	321.4	89.6	+ 1.3	2	17
17.465	- 5.6	69.4	-4.8	23610	.628	299.0	103.7	+13.7	33	179
18.338	- 6.0	57.9	-4.9	23610	.758	292.6	103.7	+13.5	37	187
				23613	.435	65.2	34.6	+ 6.0	2	17
19.488	- 6.5	42.7	-5.0	23610	.891	287.9	103.1	+13.4	31	174
				23613	.232	32.6	35.5	+ 6.3	8	66
20.318	- 6.9	31.8	-5.0	23610	.960	285.7	103.4	+13.5	37	195
				23613	.207	341.3	35.6	+ 6.2	5	49
21.417	- 7.4	17.3	-5.2	23613	.386	299.9	36.9	+ 6.2	11	48
				23614	.319	61.9	1.0	+ 3.7	1	9
22.282	- 7.8	5.9	-5.2	23613	.564	289.0	38.3	+ 6.1	5	37
				23614	.170	21.9	2.3	+ 3.8	0	1
23.459	- 8.3	350.4	-5.3	23613	.701	284.9	33.2	+ 6.5	0	5
				23614	.230	311.5	0.3	+ 3.5	0	4
24.385	- 8.7	338.3	-5.4	1624 01	.793	98.5	285.7	-10.0	0	7
25.499	- 9.2	323.6	-5.5	23615	.310	60.9	307.9	+ 3.3	1	6
26.456	- 9.6	311.0	-5.6	23615	.165	12.0	309.0	+ 3.7	0	2
27.668	.	.	.	-					0	0
28.290	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Jan. 29.283	-10.8	273.8	-5.8	1624 02	.939	96.3	203.5	- 7.9	0	6
30.291	.	.	.	-					0	0
31.593	.	.	.	-					0	0
Feb. 1.363	.	.	.	-					0	0
2.403	-12.5	219.5	-6.1	23616	.892	101.6	155.9	-13.1	7	53
				23617	.941	98.3	148.9	- 9.9	0	6
3.570	-13.0	204.1	-6.2	23616	.743	101.5	156.1	-12.7	26	73
				23617	.813	97.6	149.5	- 9.8	6	30
4.396	-13.3	193.3	-6.2	23616	.591	103.6	157.3	-13.0	13	64
				23617	.682	98.1	150.2	-10.1	0	4
5.572	-13.8	177.8	-6.3	23616	.353	111.5	158.1	-13.4	3	23
				23618	.823	82.9	123.2	+ 2.2	7	53
6.410	-14.1	166.7	-6.4	23616	.194	131.2	158.1	-13.6	3	25
				23618	.668	79.4	125.8	+ 2.3	9	114
7.410	-14.5	153.6	-6.4	23616	.127	202.2	156.4	-13.2	1	14
				23618	.488	73.5	125.8	+ 2.3	32	283
8.613	-15.0	137.7	-6.5	23616	.395	248.7	160.0	-14.3	0	2
				23618	.243	50.6	126.9	+ 2.5	44	298
9.386	-15.2	127.6	-6.5	23618	.156	356.4	128.1	+ 2.4	35	256
				1	.165	342.1	130.5	+ 2.5	25	179
10.377	-15.6	114.5	-6.6	23618	.281	303.6	128.0	+ 2.5	31	266
				1	.317	299.4	130.5	+ 2.6	22	185
11.491	-16.0	99.8	-6.7	23618	.501	287.5	128.3	+ 2.8	17	153
				1	.533	286.8	130.4	+ 3.1	15	116
12.426	-16.4	87.5	-6.7	23618	.688	281.3	129.8	+ 2.7	23	170
				1	.697	281.2	130.6	+ 2.8	21	153
				1624 03	.472	327.2	103.0	+16.8	1	5
13.506	-16.7	73.3	-6.7	23618	.853	277.8	130.9	+ 3.1	29	151
14.396	-17.0	61.6	-6.8	23618	.941	276.0	131.0	+ 3.3	35	157
15.381	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Feb. 16.376	.	.	.	–					0	0
17.311	.	.	.	–					0	0
18.295	.	.	.	–					0	0
19.429	.	.	.	–					0	0
20.388	−19.0	342.7	−7.0	1625 01	.311	349.4	346.0	+10.7	0	3
21.432	−19.3	328.9	−7.1	1625 02	.351	318.0	342.6	+ 8.2	0	2
22.458	.	.	.	–					0	0
23.462	−19.9	302.2	−7.1	23619	.340	104.4	282.6	−11.5	0	2
24.378	−20.2	290.1	−7.1	1625 03	.444	355.6	292.2	+19.0	0	2
				23619	.086	113.9	285.6	− 9.1	4	20
25.426	−20.5	276.4	−7.2	23619	.198	265.2	287.8	− 8.0	4	18
26.439	.	.	.	–					0	0
27.378	.	.	.	–					0	0
28.416	.	.	.	–					0	0
Mar. 1.452	−21.5	223.3	−7.2	23620	.362	341.6	230.0	+12.9	0	1
2.319	−21.7	211.9	−7.2	23620	.472	309.7	233.5	+10.8	6	59
3.406	−22.0	197.6	−7.2	23620	.658	296.5	234.3	+11.3	10	89
4.429	−22.3	184.1	−7.2	23620	.812	289.7	235.1	+11.3	4	54
				1625 04	.883	92.0	121.9	− 5.1	0	2
5.488	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Mar. 6.422	−22.7	157.8	−7.2	23621	.926	80.1	91.4	+ 6.3	3	12
7.597	−23.0	142.3	−7.2	23621	.798	76.5	91.2	+ 6.2	4	24
8.358	−23.1	132.3	−7.2	23622	.364	109.5	111.7	−13.8	2	15
				23621	.687	73.0	91.2	+ 6.1	1	9
9.362	−23.3	119.1	−7.2	23622	.171	135.0	112.0	−14.1	4	40
				23621	.511	65.4	91.4	+ 5.8	1	12
10.083	−23.5	109.6	−7.2	23622	.120	206.0	112.7	−13.4	7	40
				23621	.386	45.1	93.6	+ 8.8	1	11
11.397	−23.7	92.3	−7.2	23622	.368	251.5	113.2	−13.4	4	30
12.333	−23.9	80.0	−7.2	23622	.579	258.1	115.3	−12.7	7	59
13.308	−24.1	67.1	−7.2	23622	.729	258.0	114.2	−13.7	16	126
14.310	−24.3	53.9	−7.2	23622	.876	258.4	115.6	−13.6	39	329
15.431	−24.4	39.1	−7.2	23622	.966	257.9	115.1	−13.5	8	84
				23623	.241	241.1	51.6	−13.6	2	19
16.419	−24.6	26.1	−7.1	23624	.873	261.6	87.4	−10.8	11	47
				23623	.449	252.4	52.2	−14.2	28	160
17.353	−24.7	13.8	−7.1	23624	.950	260.8	86.3	−10.9	21	132
				23623	.626	256.0	52.5	−14.2	35	250
18.349	−24.9	0.7	−7.1	23623	.791	257.3	53.2	−14.4	25	191
19.303	−25.0	348.1	−7.1	23623	.908	256.6	54.0	−15.1	15	124
				1626 01	.705	287.0	30.6	+ 6.7	0	3
20.319	−25.2	334.7	−7.0	23623	.988	253.1	57.1	−17.8	7	53
21.315	.	.	.	–					0	0
22.082	.	.	.	–					0	0
23.493	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Mar. 24.453	.	.	.	–					0	0
25.356	.	.	.	–					0	0
26.489	-25.8	253.3	-6.8	23625	.332	19.6	246.8	+11.3	1	8
27.328	-25.9	242.3	-6.8	23625	.382	350.1	246.2	+15.2	0	3
28.457	.	.	.	–					0	0
29.401	.	.	.	–					0	0
30.429	.	.	.	–					0	0
31.335	.	.	.	–					0	0
Apr. 1.310	.	.	.	–					0	0
2.435	.	.	.	–					0	0
3.344	-26.3	149.7	-6.4	1626 02	.711	61.9	109.5	+14.7	0	17
4.399	.	.	.	–					0	0
5.394	.	.	.	–					0	0
6.397	.	.	.	–					0	0
7.628	-26.3	93.2	-6.2	23626	.786	77.3	43.0	+ 6.0	4	16
8.336	-26.3	83.8	-6.1	23627	.343	68.6	65.3	+ 1.4	0	6
				23626	.663	73.0	44.3	+ 6.4	1	6
9.333	-26.3	70.7	-6.0	23627	.163	37.7	65.0	+ 1.4	2	32
				1626 03	.287	114.2	55.2	-12.6	0	2
				23626	.478	63.8	45.2	+ 6.7	0	4
10.344	-26.3	57.3	-6.0	23627	.208	304.9	67.1	+ 0.9	0	2

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Apr. 11.362	-26.3	43.9	-5.9	1626 04	.354	14.1	38.8	+14.1	0	5
12.381	.	.	.	–					0	0
13.319	.	.	.	–					0	0
14.405	.	.	.	–					0	0
15.591	.	.	.	–					0	0
16.349	.	.	.	–					0	0
17.327	.	.	.	–					0	0
18.351	.	.	.	–					0	0
19.512	.	.	.	–					0	0
20.432	.	.	.	–					0	0
21.356	.	.	.	–					0	0
22.332	.	.	.	–					0	0
23.518	-25.4	243.4	-4.9	23628	.932	78.4	176.1	+ 8.9	0	9
24.381	-25.3	232.0	-4.8	23628	.857	75.2	174.9	+10.0	2	22
25.347	.	.	.	–					0	0
26.376	.	.	.	–					0	0
27.333	-24.9	193.0	-4.5	23629	.629	288.5	229.9	+ 7.8	6	25
				23630	.941	87.1	123.1	+ 1.1	15	129
28.347	-24.7	179.6	-4.5	23629	.800	284.4	230.9	+ 8.7	11	75
				23630	.823	85.1	124.7	+ 1.4	6	50

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Apr. 29.351	-24.6	166.3	-4.4	23629	.916	281.5	231.3	+ 8.7	11	86
				23630	.655	82.4	126.0	+ 1.7	1	7
30.342	-24.4	153.2	-4.3	23629	.988	280.9	233.2	+10.1	0	7
				23630	.522	83.8	122.1	- 0.4	0	9
				23631	.920	104.0	86.2	-14.5	0	9
May 1.310	-24.2	140.4	-4.2	23632	.062	153.2	138.8	- 7.3	0	2
				1627 01	.455	69.4	115.2	+ 5.4	0	6
				23631	.798	100.9	87.6	-11.2	2	22
2.438	-24.0	125.5	-4.0	23632	.253	254.7	139.7	- 7.7	35	157
				23630	.106	352.4	126.3	+ 2.0	0	1
				23631	.651	103.9	85.4	-12.1	7	47
3.335	-23.9	113.7	-4.0	23632	.454	260.8	140.4	- 7.7	70	313
				23631	.483	109.2	85.9	-12.6	3	18
4.447	-23.6	99.0	-3.8	23632	.670	262.7	140.9	- 7.7	43	387
				1	.712	263.6	144.2	- 7.2	24	192
				23630	.466	283.1	125.8	+ 2.6	0	4
				23631	.209	128.8	89.4	-11.3	5	48
5.374	-23.5	86.7	-3.7	23632	.806	263.3	140.4	- 7.6	45	433
				1	.839	264.1	143.7	- 7.0	23	231
				23630	.627	278.9	124.9	+ 2.6	0	6
				23631	.160	176.9	86.2	-12.9	3	29
6.094	-23.3	77.2	-3.7	23632	.903	263.4	141.8	- 7.6	37	261
				1	.924	263.7	144.7	- 7.2	25	161
				23631	.189	213.7	83.4	-12.7	0	3
7.407	-23.0	59.8	-3.5	23632	.973	263.2	136.5	- 7.4	5	60
8.362	.	.	.	-					0	0
9.640	.	.	.	-					0	0
10.564	-22.3	18.1	-3.2	23633	.960	95.2	304.3	- 5.9	0	4
11.358	-22.1	7.6	-3.1	23633	.884	95.5	305.5	- 6.3	0	2
12.321	-21.9	354.9	-3.0	23633	.768	96.6	304.8	- 7.0	0	4
13.431	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
May 14.342	.	.	.	-					0	0
15.365	.	.	.	-					0	0
16.337	.	.	.	-					0	0
17.392	.	.	.	-					0	0
18.344	-20.2	275.2	-2.3	1628 01	.143	321.6	280.3	+ 4.1	0	2
19.318	.	.	.	-					0	0
20.348	.	.	.	-					0	0
21.347	.	.	.	-					0	0
22.385	-19.0	221.7	-1.8	23634	.545	103.6	189.5	- 8.9	1	8
23.308	-18.7	209.5	-1.7	23634	.339	111.1	191.0	- 8.6	1	6
24.351	.	.	.	-					0	0
25.363	.	.	.	-					0	0
26.375	.	.	.	-					0	0
27.390	.	.	.	-					0	0
28.339	-17.0	143.0	-1.1	1628 02	.580	265.0	178.2	- 3.8	0	1
29.483	.	.	.	-					0	0
30.328	.	.	.	-					0	0
31.358	-15.9	103.0	-0.8	23635	.962	98.6	29.1	- 8.5	8	33

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Jun. 1.392	-15.6	89.3	-0.7	23635	.863	98.9	30.2	- 8.0	9	43
2.448	-15.2	75.4	-0.5	23635	.721	99.9	29.8	- 7.5	7	33
3.327	-14.8	63.7	-0.4	23635	.633	102.7	25.3	- 8.3	0	1
4.344	-14.4	50.3	-0.3	23635	.401	106.4	27.6	- 6.7	0	5
5.484	-14.0	35.2	-0.1	1628 03	.237	308.6	45.9	+ 8.3	2	17
				23635	.131	205.0	38.4	- 7.0	2	16
6.332	-13.7	23.9	-0.1	23635	.189	230.7	32.4	- 6.9	0	2
7.396	.	.	.	-					0	0
8.326	.	.	.	-					0	0
9.328	.	.	.	-					0	0
10.333	.	.	.	-					0	0
11.333	-11.6	317.8	+0.6	23636	.168	300.7	326.1	+ 5.4	0	2
12.335	-11.2	304.5	+0.7	23636	.396	281.1	327.3	+ 5.0	0	3
13.330	.	.	.	-					0	0
14.338	-10.4	278.0	+0.9	1629 01	.166	311.6	285.1	+ 7.2	1	11
15.721	- 9.8	259.7	+1.1	23637	.553	278.6	292.9	+ 5.6	5	26
16.349	- 9.5	251.4	+1.1	23637	.672	277.2	293.3	+ 5.7	17	98
17.331	- 9.1	238.4	+1.3	23637	.829	276.0	294.1	+ 5.7	31	241
18.337	- 8.6	225.1	+1.4	23637	.931	276.0	293.4	+ 6.1	28	190

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Jun. 19.429	- 8.2	210.6	+1.5	23637	.986	276.0	290.9	+ 6.1	7	20
20.338	.	.	.	-					0	0
21.401	.	.	.	-					0	0
22.722	.	.	.	-					0	0
23.492	- 6.4	156.8	+2.0	23638	.231	192.8	159.8	-11.0	8	46
24.349	- 6.0	145.5	+2.1	23638	.335	229.7	160.4	-10.4	4	28
				23639	.994	83.2	62.0	+ 7.0	20	117
25.351	- 5.5	132.2	+2.2	23638	.530	246.1	161.6	-10.4	7	46
				23639	.942	83.5	62.0	+ 6.8	27	210
26.334	- 5.1	119.2	+2.3	23640	.660	257.8	159.5	- 6.2	6	29
				23638	.672	250.2	159.2	-11.4	9	73
				23639	.840	83.6	62.2	+ 6.6	53	313
				1	.839	83.6	62.3	+ 6.6	53	311
27.339	- 4.6	105.9	+2.4	23640	.816	260.4	159.7	- 6.3	6	26
				23638	.816	254.5	159.0	-11.1	6	52
				23639	.690	82.9	62.5	+ 6.6	49	310
				1	.689	82.9	62.6	+ 6.6	49	306
28.889	- 3.9	85.4	+2.6	23641	.983	259.7	163.9	- 9.6	8	47
				23638	.963	256.9	158.6	-11.8	22	108
				23639	.391	79.8	62.7	+ 6.4	70	303
				1	.390	79.8	62.8	+ 6.3	70	300
29.413	- 3.7	78.5	+2.7	23641	.998	260.3	163.9	- 9.5	16	66
				23638	.986	257.5	157.8	-11.8	7	47
				23639	.284	75.9	62.4	+ 6.5	62	365
				1	.276	75.7	62.9	+ 6.5	60	341
30.335	- 3.3	66.2	+2.8	23639	.091	45.5	62.5	+ 6.4	57	313
				1	.084	41.4	63.1	+ 6.4	54	287
July 1.363	- 2.8	52.6	+2.9	23639	.189	289.9	62.9	+ 6.5	46	369
				1	.193	289.0	63.2	+ 6.4	43	347
2.355	- 2.4	39.5	+3.0	23639	.401	279.6	62.8	+ 6.5	53	325
				1	.408	279.1	63.3	+ 6.4	52	302
				1629 02	.500	79.2	9.9	+ 8.0	0	5

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
July 3.156	- 2.0	28.9	+3.1	23639	.567	275.6	63.3	+ 5.7	52	328
				1	.571	275.6	63.5	+ 5.7	50	305
4.490	- 1.4	11.2	+3.2	23639	.798	275.6	64.1	+ 6.4	63	321
				1	.799	275.6	64.1	+ 6.4	63	320
5.401	- 1.0	359.2	+3.3	23639	.901	275.7	63.4	+ 6.6	74	387
				23642	.886	86.5	296.9	+ 4.6	5	43
6.118	- 0.7	349.7	+3.4	23639	.962	274.8	63.7	+ 5.6	38	261
				23643	.575	107.5	316.3	- 7.1	1	4
				23642	.788	84.1	297.8	+ 6.7	9	48
7.345	- 0.1	333.4	+3.5	23643	.288	131.5	320.9	- 7.5	2	16
				23642	.570	86.2	298.7	+ 5.1	7	42
8.460	+ 0.4	318.7	+3.6	23643	.201	198.1	322.3	- 7.3	1	4
				23642	.352	84.2	298.2	+ 5.5	11	75
9.333	+ 0.8	307.1	+3.7	23642	.162	74.3	298.2	+ 6.2	12	69
10.401	+ 1.3	293.0	+3.9	23642	.108	288.7	298.9	+ 5.8	7	58
				23644	.978	101.0	216.1	- 9.9	22	142
11.374	+ 1.7	280.1	+3.9	23642	.321	272.3	298.8	+ 4.5	15	72
				23644	.912	103.1	215.8	-10.2	25	167
12.451	+ 2.2	265.9	+4.0	23642	.564	272.7	300.2	+ 4.9	35	223
				23644	.788	106.6	215.9	-10.4	15	106
13.449	+ 2.7	252.7	+4.2	23642	.738	273.3	300.2	+ 5.3	66	421
				1630 01	.324	141.9	241.0	-10.7	0	2
				23644	.636	111.0	215.8	- 9.8	14	95
14.353	+ 3.1	240.7	+4.2	23642	.875	273.8	301.7	+ 5.4	66	441
				23644	.484	120.6	215.8	-10.4	14	104
				23645	.959	97.5	168.0	- 5.9	34	325
15.531	+ 3.6	225.1	+4.4	23642	.975	274.6	302.3	+ 5.5	66	467
				23644	.304	147.6	215.6	-10.5	14	106
				23645	.853	99.9	167.7	- 6.0	46	322
16.344	+ 4.0	214.4	+4.4	23642	.990	275.7	296.6	+ 6.2	16	153
				23644	.256	184.9	215.6	-10.3	14	99
				23645	.742	102.3	167.8	- 6.0	44	263
17.449	+ 4.4	199.7	+4.5	23644	.374	228.0	216.1	-10.1	12	79
				23645	.555	108.8	168.0	- 6.4	33	228
18.360	+ 4.8	187.7	+4.6	23644	.530	242.3	216.0	-10.1	8	69
				23645	.394	118.1	167.3	- 6.3	44	285

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
July 19.750	+ 5.5	169.3	+4.7	23644	.757	251.5	216.0	-10.7	9	52
				23646	.564	256.7	202.5	- 3.5	2	9
				23645	.193	173.1	168.0	- 6.2	33	236
20.090	+ 5.6	164.8	+4.8	23644	.804	251.8	215.8	-11.5	9	52
				23646	.637	257.4	203.2	- 4.2	1	7
				23645	.205	198.7	168.6	- 6.4	38	253
21.340	+ 6.1	148.3	+4.9	23644	.933	257.0	215.6	-10.3	3	32
				23645	.397	242.8	169.0	- 5.8	36	228
				23647	.984	82.9	68.3	+ 7.9	19	107
22.470	+ 6.6	133.3	+5.0	23644	.998	258.9	218.3	-10.7	16	66
				23645	.610	254.1	169.3	- 5.5	29	220
				23647	.907	83.8	68.1	+ 7.7	16	135
23.330	+ 7.0	121.9	+5.1	23645	.750	258.7	169.3	- 5.0	22	178
				23647	.805	84.4	68.3	+ 7.5	17	176
24.353	+ 7.4	108.4	+5.2	23645	.881	261.8	169.2	- 4.7	17	164
				23648	.419	78.6	83.9	+ 9.4	9	52
				23647	.638	84.5	68.7	+ 7.5	19	131
25.336	+ 7.8	95.4	+5.2	23645	.966	263.8	169.5	- 4.6	30	161
				23648	.194	70.3	84.8	+ 8.9	9	57
				23647	.447	83.8	68.9	+ 7.5	15	114
26.396	+ 8.3	81.4	+5.3	23648	.099	307.8	85.9	+ 8.8	16	145
				23647	.215	79.3	69.1	+ 7.5	11	97
27.131	+ 8.6	71.7	+5.4	23648	.273	280.1	87.3	+ 7.9	17	131
				23647	.056	50.3	69.2	+ 7.4	10	77
28.337	+ 9.1	55.7	+5.5	23648	.534	276.8	88.0	+ 8.3	38	220
				1	.559	276.1	89.7	+ 7.9	28	165
				23647	.238	279.2	69.3	+ 7.5	12	83
29.344	+ 9.5	42.4	+5.6	23648	.728	276.1	89.2	+ 8.2	25	171
				1	.738	275.8	90.0	+ 8.0	20	153
				23647	.453	275.5	69.3	+ 7.4	10	57
				1630 02	.240	297.5	54.9	+11.8	0	1
30.320	+ 9.9	29.5	+5.6	23648	.871	276.5	90.3	+ 8.5	16	158
				1	.873	276.5	90.5	+ 8.4	16	152
				23647	.641	275.1	69.4	+ 7.6	9	48
				23649	.986	86.7	309.0	+ 4.2	34	276
31.351	+10.3	15.8	+5.7	23648	.958	276.7	89.4	+ 8.1	24	208
				23647	.803	275.0	69.4	+ 7.4	6	40
				23649	.916	87.7	309.5	+ 4.4	51	295
				2	.920	88.0	308.8	+ 4.1	41	224
Aug. 1.406	+10.7	1.9	+5.8	23647	.921	275.8	69.3	+ 7.6	6	18
				23649	.781	88.2	310.5	+ 5.0	61	572
				2	.799	89.0	308.9	+ 4.3	34	227

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Aug. 2.411	+11.2	348.6	+5.9	23647	.984	276.9	68.7	+ 7.9	6	25
				23649	.600	89.1	311.7	+ 5.2	68	642
				2	.636	90.0	309.1	+ 4.5	30	181
3.454	+11.6	334.8	+5.9	23649	.405	90.1	310.9	+ 5.4	80	645
				2	.439	92.0	308.8	+ 4.4	29	189
				23650	.980	83.1	255.7	+ 8.0	118	954
4.351	+11.9	322.9	+6.0	23649	.198	91.9	311.5	+ 5.5	77	635
				2	.230	95.5	309.7	+ 4.6	34	187
				23651	.361	79.8	301.9	+ 9.3	2	9
				23650	.918	83.4	256.0	+ 8.4	126	1227
5.353	+12.3	309.7	+6.1	23649	.034	250.0	311.5	+ 5.4	79	540
				2	.026	192.9	310.0	+ 4.6	40	188
				23651	.121	63.1	303.4	+ 9.2	12	54
				23650	.807	83.8	255.7	+ 8.5	136	1144
6.342	+12.7	296.6	+6.1	23649	.267	267.0	312.1	+ 5.1	84	455
				23651	.155	290.9	305.0	+ 9.2	27	140
				23650	.657	83.7	255.4	+ 8.7	132	1160
7.340	+13.1	283.4	+6.2	23649	.492	268.9	312.8	+ 4.9	65	635
				23651	.369	279.0	305.0	+ 9.1	41	311
				23650	.470	82.8	255.4	+ 8.8	107	1180
8.324	+13.4	270.4	+6.3	23649	.675	270.8	312.8	+ 5.1	60	552
				23651	.584	277.5	306.2	+ 9.5	46	271
				23650	.259	76.3	255.7	+ 9.6	141	1295
9.469	+13.8	255.2	+6.3	23649	.844	271.8	312.8	+ 4.9	47	351
				23651	.795	276.5	308.1	+ 9.0	23	173
				23650	.057	354.2	255.6	+ 9.5	107	1089
10.440	+14.2	242.4	+6.4	23649	.945	272.6	313.4	+ 4.5	46	461
				23651	.903	276.3	307.3	+ 8.4	30	286
				23650	.222	284.7	254.9	+ 9.4	113	1207
11.381	+14.5	230.0	+6.4	23649	.985	273.6	310.2	+ 4.6	6	45
				23651	.981	277.3	309.2	+ 8.4	23	223
				23650	.427	277.6	255.2	+ 9.1	105	1137
				23652	.853	100.6	172.8	- 5.5	0	7
12.349	+14.9	217.2	+6.5	23653	.876	223.1	264.2	-35.4	0	2
				23650	.611	276.3	255.0	+ 9.0	108	996
13.340	+15.2	204.1	+6.5	23653	.943	229.3	264.5	-34.9	0	7
				23650	.772	276.0	254.8	+ 8.8	132	891
14.379	+15.6	190.3	+6.6	23650	.894	276.6	254.0	+ 8.9	95	784
15.341	+15.9	177.6	+6.6	23650	.961	278.3	252.1	+ 9.8	53	392
				23652	.234	160.2	173.1	- 6.0	1	13

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Aug. 16.418	+16.3	163.4	+6.7	23650	.994	280.3	247.8	+11.0	10	68
				23652	.258	209.0	170.6	- 6.3	2	13
				23654	.891	107.0	103.1	-11.8	2	22
17.374	+16.6	150.8	+6.7	23652	.416	238.0	171.4	- 6.4	4	30
				23654	.774	111.1	103.4	-11.6	7	52
18.458	+17.0	136.4	+6.8	23652	.627	250.8	172.9	- 6.4	0	7
				23654	.612	119.5	103.6	-11.8	4	26
19.335	+17.3	124.8	+6.8	1631 01	.545	300.7	155.0	+22.0	0	5
				23654	.442	135.2	106.4	-11.8	1	7
20.319	+17.6	111.8	+6.9	23655	.843	298.0	168.3	+27.2	10	80
				1631 02	.344	87.3	91.6	+ 7.4	2	14
21.524	+18.0	95.9	+6.9	23652	.975	262.7	172.1	- 5.5	5	46
				23655	.959	295.7	170.7	+26.6	12	76
				23656	.276	86.8	79.8	+ 7.5	2	9
22.356	+18.2	84.9	+6.9	23655	.990	295.7	169.1	+26.3	8	32
				23656	.103	67.1	79.4	+ 9.2	0	3
23.347	+18.5	71.8	+7.0	1631 03	.671	273.5	114.1	+ 7.5	3	14
				23656	.134	283.8	79.3	+ 8.7	6	47
24.752	.	.	.	-					0	0
25.399	+19.1	44.7	+7.0	23657	.360	198.3	51.3	-12.9	6	34
26.342	+19.4	32.2	+7.1	23656	.743	275.9	80.5	+ 9.1	0	2
				23657	.483	225.7	53.0	-13.0	31	180
27.347	+19.7	19.0	+7.1	23656	.849	275.1	77.4	+ 8.1	0	2
				23657	.650	238.9	53.8	-13.8	30	177
28.339	+20.0	5.9	+7.1	23657	.817	246.2	56.3	-14.7	20	122
				23658	.704	96.1	321.6	+ 0.8	0	5
29.294	+20.2	353.2	+7.1	23657	.925	250.8	57.6	-14.7	24	104
				23658	.526	102.0	322.4	- 0.1	1	5
30.328	+20.5	339.6	+7.2	23657	.987	254.3	58.0	-14.2	7	47
31.324	+20.8	326.4	+7.2	23658	.139	155.4	323.1	0.0	0	4
Sept. 1.301	+21.0	313.5	+7.2	23658	.208	235.9	323.4	+ 0.4	0	3
				23659	.735	85.9	265.9	+ 7.9	3	17

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Sept. 2.351	+21.3	299.6	+7.2	23660	.658	86.2	258.3	+ 7.9	3	59
3.353	+21.5	286.4	+7.2	1632 01	.323	270.9	305.3	+ 7.1	0	4
				23660	.451	87.2	259.5	+ 7.7	8	75
4.344	+21.8	273.3	+7.2	1632 02	.177	268.6	283.6	+ 6.9	0	2
				23661	.051	327.7	274.9	+ 9.7	0	3
				23659	.137	86.6	265.5	+ 7.6	0	2
				23660	.233	84.8	259.8	+ 8.2	14	148
				23662	.365	80.3	252.0	+10.2	1	28
5.332	+22.0	260.3	+7.2	23660	.026	348.0	260.6	+ 8.7	12	117
				23662	.165	61.8	251.8	+11.6	0	3
6.407	+22.3	246.1	+7.2	23660	.250	277.6	260.5	+ 8.9	8	77
				1632 03	.099	282.2	251.7	+ 8.4	1	20
				23663	.985	101.1	167.7	- 9.6	13	173
7.378	+22.5	233.2	+7.2	23661	.650	277.3	274.0	+10.3	0	7
				23660	.416	272.4	257.9	+ 7.6	1	39
				23663	.920	103.0	168.3	- 8.9	29	103
8.342	+22.7	220.5	+7.2	23661	.756	278.6	269.9	+11.2	0	2
				23660	.674	276.5	263.2	+ 9.7	0	2
				23663	.810	106.0	168.8	- 8.4	19	108
9.325	+22.9	207.5	+7.2	23663	.665	111.6	169.0	- 8.5	14	112
10.340	+23.1	194.1	+7.2	23663	.499	121.3	168.7	- 8.4	16	105
11.336	+23.3	181.0	+7.2	23663	.348	140.9	168.2	- 8.5	17	80
12.370	+23.5	167.3	+7.2	23663	.267	182.1	167.9	- 8.2	19	121
13.315	+23.7	154.8	+7.2	23663	.349	220.3	168.0	- 8.3	19	103
				1632 04	.873	103.4	96.0	- 8.0	0	5
14.415	+23.9	140.3	+7.2	23663	.529	241.5	168.2	- 8.2	13	96
				1632 05	.658	103.5	100.6	- 3.3	0	3
15.337	+24.1	128.2	+7.2	23663	.688	249.5	168.6	- 8.5	12	106
16.669	+24.3	110.6	+7.2	23663	.868	255.7	168.6	- 8.6	9	52
				1632 06	.502	274.0	140.8	+ 8.2	0	3
17.378	+24.4	101.2	+7.2	23663	.937	258.1	169.0	- 8.5	3	29
				23664	.215	83.3	88.8	+ 8.4	2	14

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Sept. 18.358	+24.5	88.3	+7.2	23664	.026	359.7	88.3	+ 8.6	5	45
19.337	+24.7	75.4	+7.1	23664	.220	280.6	88.0	+ 9.3	8	42
20.799	+24.9	56.0	+7.1	23665	.542	264.5	88.6	+ 3.0	2	22
				23664	.534	276.5	88.4	+ 9.5	5	44
				23666	.518	89.9	24.8	+ 6.1	2	23
21.408	+25.0	48.0	+7.1	23665	.669	266.5	89.8	+ 3.0	0	8
				23664	.639	276.7	87.9	+ 9.7	4	31
				1632 07	.335	235.0	63.9	- 4.2	0	1
				23666	.386	90.5	25.2	+ 6.3	4	18
22.344	+25.1	35.7	+7.1	23665	.814	268.4	90.0	+ 2.8	0	8
				23664	.794	276.9	88.6	+ 9.8	2	11
				23666	.176	95.6	25.6	+ 6.0	2	15
23.492	+25.3	20.5	+7.0	1632 08	.074	168.4	19.7	+ 2.9	0	2
24.340	.	.	.	-					0	0
25.370	.	.	.	-					0	0
26.351	.	.	.	-					0	0
27.323	.	.	.	-					0	0
28.372	+25.8	316.1	+6.8	1633 01	.187	217.6	322.6	- 1.7	1	5
29.527	.	.	.	-					0	0
30.573	+25.9	287.1	+6.7	23667	.986	58.2	204.4	+32.4	20	125
Oct. 1.333	+26.0	277.0	+6.7	23667	.960	57.9	202.4	+32.6	20	137
2.407	+26.1	262.9	+6.7	23667	.886	56.5	201.7	+32.6	14	118
3.352	+26.1	250.4	+6.6	23667	.800	53.4	200.8	+32.8	18	146
4.442	+26.2	236.0	+6.6	23667	.673	46.7	200.5	+32.8	20	125

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Oct. 5.380	+26.2	223.6	+6.5	23667	.565	37.1	199.9	+32.7	20	125
6.360	+26.3	210.7	+6.5	23667	.479	20.8	199.1	+32.8	16	136
7.336	+26.3	197.8	+6.4	23667	.445	358.4	198.7	+32.7	19	113
8.401	+26.3	183.8	+6.3	23667	.497	334.6	198.4	+32.7	26	127
				1633 02	.827	107.8	130.7	-10.8	2	12
9.361	+26.3	171.1	+6.3	23667	.593	320.5	197.7	+32.8	19	116
10.433	+26.3	157.0	+6.2	23667	.721	311.1	197.2	+33.0	18	107
11.484	+26.3	143.1	+6.1	23667	.836	305.9	196.8	+33.0	14	105
12.403	+26.3	131.0	+6.1	23667	.915	303.6	196.3	+33.1	22	98
13.300	+26.3	119.2	+6.0	23667	.971	302.7	196.2	+33.1	13	106
				23668	.426	89.6	93.9	+ 5.6	20	87
14.654	+26.3	101.3	+5.9	23668	.085	102.3	96.5	+ 4.9	41	343
15.344	+26.3	92.2	+5.9	23668	.073	256.0	96.2	+ 4.9	54	374
16.423	+26.2	78.0	+5.8	23668	.335	268.0	97.5	+ 4.8	34	267
17.523	+26.2	63.4	+5.7	23668	.569	270.7	98.1	+ 5.1	30	215
				1633 03	.487	318.9	84.4	+26.8	0	10
				23669	.955	88.5	350.8	+ 3.1	4	26
18.405	+26.1	51.8	+5.6	23668	.727	271.4	98.4	+ 4.9	29	244
				23669	.873	89.8	351.1	+ 2.9	0	5
19.092	+26.1	42.7	+5.6	23668	.825	271.9	98.3	+ 4.7	29	178
20.574	+26.0	23.2	+5.5	23668	.965	273.4	98.1	+ 4.7	33	175
21.419	+25.9	12.1	+5.4	23668	.994	274.5	95.8	+ 5.1	9	46
22.364	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975	°	°	°			°	°	°		
Oct. 23.344	.	.	.	-					0	0
24.576	.	.	.	-					0	0
25.324	.	.	.	-					0	0
26.335	.	.	.	-					0	0
27.462	.	.	.	-					0	0
28.310	.	.	.	-					0	0
29.392	.	.	.	-					0	0
30.468	.	.	.	-					0	0
31.489	.	.	.	-					0	0
Nov. 1.296	.	.	.	-					0	0
2.521	.	.	.	-					0	0
3.520	+24.2	199.3	+4.2	23670	.749	98.2	151.5	- 3.3	2	12
4.419	+24.0	187.4	+4.0	23670	.583	102.4	152.8	- 3.8	15	49
				23671	.996	86.5	102.7	+ 3.9	23	137
5.491	+23.8	173.3	+3.9	23670	.358	113.3	154.1	- 4.4	10	53
				23671	.939	87.8	103.5	+ 3.5	55	167
6.385	+23.7	161.5	+3.8	23670	.184	145.5	155.5	- 4.9	11	64
				23671	.851	89.0	103.3	+ 2.9	23	160
7.393	+23.4	148.2	+3.7	23670	.177	216.1	154.2	- 4.5	8	47
				23672	.508	111.6	119.9	- 7.5	1	10
				23671	.700	89.5	103.9	+ 3.0	18	127
8.307	+23.2	136.2	+3.6	23670	.388	248.5	157.3	- 4.7	2	24
				23672	.305	129.3	122.4	- 7.6	1	17
				23671	.530	89.1	104.2	+ 3.5	25	141

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Nov. 9.769	+22.9	116.9	+3.5	23671	.221	91.0	104.2	+ 3.2	20	112
10.400	+22.8	108.6	+3.4	23671	.062	91.9	105.1	+ 3.3	17	138
11.391	+22.5	95.5	+3.3	23673	.909	256.9	159.4	−10.5	0	5
				23672	.492	244.9	122.2	− 9.1	0	3
				23671	.173	271.8	105.4	+ 3.6	22	103
				1634 01	.542	124.7	68.1	−15.0	1	10
12.433	+22.3	81.8	+3.2	23673	.987	258.9	161.6	−10.4	7	34
				23671	.411	271.1	106.0	+ 3.3	12	77
13.573	+22.0	66.7	+3.0	23671	.637	271.7	106.2	+ 3.4	4	50
				23674	.578	84.0	31.6	+ 5.9	5	46
				23675	.997	96.8	342.0	− 6.5	39	261
14.462	+21.7	55.0	+2.9	23671	.788	271.8	106.9	+ 3.3	5	30
				23674	.403	81.7	31.5	+ 6.0	17	77
				23675	.954	97.7	343.2	− 6.5	39	150
15.794	+21.4	37.5	+2.8	1634 02	.933	297.8	104.8	+26.8	0	8
				23674	.095	61.8	32.7	+ 5.3	18	83
				23675	.831	100.0	342.2	− 6.7	55	264
16.281	+21.2	31.1	+2.7	23674	.068	318.1	33.7	+ 5.6	18	68
				23675	.755	101.5	343.1	− 6.8	46	365
17.391	+20.9	16.4	+2.6	23674	.305	280.3	33.9	+ 5.6	8	38
				23675	.564	106.1	343.5	− 6.8	47	430
18.418	+20.6	2.9	+2.5	23674	.527	276.4	34.5	+ 5.4	12	103
				23675	.368	116.1	343.5	− 7.0	62	440
19.522	+20.3	348.3	+2.3	23674	.744	275.0	36.2	+ 5.2	20	115
				23675	.184	151.2	343.2	− 6.9	76	538
20.485	+20.0	335.6	+2.2	23674	.875	274.6	36.5	+ 5.1	62	283
				23675	.209	219.9	343.4	− 7.0	72	416
21.288	+19.8	325.1	+2.1	23674	.953	274.9	37.2	+ 5.3	41	225
				23675	.347	243.2	343.2	− 6.9	63	382
22.445	+19.4	309.8	+2.0	23674	.997	276.4	35.2	+ 6.6	13	65
				23675	.562	254.3	342.7	− 7.0	50	371
23.419	+19.1	296.9	+1.9	23675	.724	258.6	342.4	− 6.9	33	312
24.458	+18.7	283.3	+1.7	23675	.867	261.1	342.7	− 6.8	43	256
25.415	+18.4	270.6	+1.6	23675	.951	262.6	342.0	− 6.5	33	187
26.404	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1975	°	°	°			°	°	°		
Nov. 27.301	.	.	.	–					0	0
28.386	.	.	.	–					0	0
29.541	.	.	.	–					0	0
30.335	.	.	.	–					0	0
Dec. 1.341	.	.	.	–					0	0
2.467	+15.8	177.7	+0.7	1635 01	.415	90.3	153.3	+ 0.5	1	10
				23676	.526	80.6	146.4	+ 5.5	20	119
3.388	+15.4	165.6	+0.6	23676	.341	74.9	146.4	+ 5.6	23	157
4.390	+15.0	152.4	+0.5	23676	.135	49.6	146.4	+ 5.5	19	117
5.331	+14.7	140.0	+0.4	23676	.166	305.2	147.7	+ 5.8	20	102
6.342	+14.2	126.6	+0.2	23676	.390	282.7	149.0	+ 5.1	24	133
7.749	+13.7	108.1	+0.1	23676	.682	277.6	150.7	+ 5.2	15	90
8.505	+13.3	98.1	0.0	23676	.811	276.4	152.0	+ 5.1	13	66
9.474	+12.9	85.4	−0.2	23676	.935	275.8	154.3	+ 5.3	6	33
10.376	.	.	.	–					0	0
11.285	.	.	.	–					0	0
12.288	.	.	.	–					0	0
13.432	+11.2	33.2	−0.7	1635 02	.216	309.3	42.9	+ 7.2	0	8
14.430	+10.7	20.1	−0.8	23677	.587	102.6	344.9	− 8.0	5	37

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1975/6	°	°	°			°	°	°		
Dec. 15.431	+10.3	6.9	−0.9	23677	.405	105.3	343.8	− 7.0	2	34
16.467	+ 9.8	353.2	−1.1	23677	.189	121.7	344.0	− 6.7	1	17
17.521	+ 9.3	339.4	−1.2	23677	.115	223.5	343.9	− 5.9	1	20
18.442	+ 8.9	327.2	−1.3	23677	.302	256.3	344.3	− 5.3	1	6
19.281	+ 8.5	316.1	−1.4	23677	.494	261.4	345.4	− 5.5	1	6
20.135	.	.	.	−					0	0
21.379	.	.	.	−					0	0
22.535	.	.	.	−					0	0
23.283	.	.	.	−					0	0
24.443	+ 6.1	248.2	−2.1	23678	.448	248.1	273.1	−11.4	5	24
				23679	.966	93.5	173.4	− 3.9	4	29
25.297	+ 5.7	236.9	−2.2	23678	.594	255.3	272.5	−10.4	4	17
				23679	.895	93.3	173.6	− 3.9	5	23
26.287	+ 5.2	223.9	−2.3	23679	.771	93.1	173.6	− 3.8	2	13
27.329	.	.	.	−					0	0
28.343	.	.	.	−					0	0
29.298	.	.	.	−					0	0
30.328	.	.	.	−					0	0
31.331	.	.	.	−					0	0
Jan. 1.284	.	.	.	−					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Jan. 2.276	.	.	.	−					0	0
3.593	.	.	.	−					0	0
4.265	.	.	.	−					0	0
5.281	.	.	.	−					0	0
6.466	.	.	.	−					0	0
7.340	.	.	.	−					0	0
8.294	.	.	.	−					0	0
9.410	.	.	.	−					0	0
10.350	.	.	.	−					0	0
11.124	.	.	.	−					0	0
12.460	− 3.1	357.7	−4.2	23680	.596	261.1	34.1	− 8.7	1	12
				23681	.959	100.7	284.0	−11.4	26	172
13.421	− 3.6	345.1	−4.3	23680	.747	262.2	33.4	− 8.7	2	13
				23681	.875	100.4	284.0	−11.2	82	425
14.281	− 4.0	333.7	−4.4	23680	.863	263.4	33.4	− 8.0	2	12
				23681	.772	100.6	283.3	−11.0	57	556
15.471	− 4.5	318.1	−4.6	23681	.569	102.8	283.8	−11.0	50	457
16.281	− 4.9	307.4	−4.6	23681	.415	107.0	283.7	−11.2	39	369
17.331	− 5.4	293.6	−4.7	23681	.199	125.6	284.1	−11.3	40	304
18.413	− 5.9	279.3	−4.8	23681	.147	215.5	284.3	−11.6	48	326
19.575	− 6.4	264.0	−5.0	23681	.365	250.3	284.5	−11.7	15	214

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Jan. 20.581	- 6.9	250.8	-5.0	23681	.566	256.6	284.8	-11.7	17	257
21.419	- 7.3	239.7	-5.1	23681	.713	258.2	285.1	-12.0	17	134
22.568	- 7.8	224.6	-5.2	23681	.869	259.2	285.1	-12.0	19	206
23.397	- 8.2	213.7	-5.3	23681	.945	259.3	284.9	-11.9	13	95
24.451	.	.	.	-					0	0
25.291	.	.	.	-					0	0
26.395	.	.	.	-					0	0
27.428	- 9.9	160.6	-5.6	23682	.098	84.9	155.0	- 5.1	1	5
28.308	.	.	.	-					0	0
29.540	-10.8	132.8	-5.8	23682	.407	274.3	156.7	- 3.6	1	5
30.434	-11.2	121.0	-5.9	23682	.582	272.3	156.5	- 3.4	3	15
31.302	-11.6	109.6	-5.9	23682	.736	271.2	156.9	- 3.2	0	2
Feb. 1.299	.	.	.	-					0	0
2.292	.	.	.	-					0	0
3.309	.	.	.	-					0	0
4.521	.	.	.	-					0	0
5.484	.	.	.	-					0	0
6.410	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Feb. 7.305	.	.	.	-					0	0
8.319	.	.	.	-					0	0
9.460	.	.	.	-					0	0
10.449	.	.	.	-					0	0
11.388	.	.	.	-					0	0
12.292	.	.	.	-					0	0
13.588	-16.7	294.7	-6.7	23683	.102	149.2	291.6	-11.7	12	74
14.356	-16.9	284.6	-6.8	23683	.148	235.0	291.6	-11.6	8	47
15.306	-17.3	272.1	-6.8	1638 01	.700	304.3	309.3	+17.7	0	1
				23683	.341	255.5	291.6	-11.3	6	50
16.294	-17.6	259.1	-6.9	23683	.556	261.0	292.9	-10.7	6	27
17.331	-17.9	245.4	-6.9	23683	.737	261.8	293.1	-10.7	3	23
				23684	.975	91.5	168.1	- 3.0	0	5
18.090	-18.2	235.4	-6.9	23683	.848	261.8	293.8	-10.6	2	6
				23684	.917	91.2	168.8	- 3.9	3	15
19.517	-18.6	216.6	-7.0	23683	.954	258.7	290.0	-12.8	0	4
				23684	.715	87.5	171.1	- 3.1	3	33
20.354	-18.9	205.6	-7.0	23684	.610	86.8	168.1	- 3.6	3	24
21.476	-19.2	190.8	-7.0	23684	.328	78.9	172.1	- 3.1	2	18
22.422	.	.	.	-					0	0
23.293	.	.	.	-					0	0
24.613	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Feb. 25.600	.	.	.	–					0	0
26.292	.	.	.	–					0	0
27.293	.	.	.	–					0	0
28.294	.	.	.	–					0	0
29.294	.	.	.	–					0	0
Mar. 1.468	.	.	.	–					0	0
2.477	.	.	.	–					0	0
3.425	.	.	.	–					0	0
4.470	.	.	.	–					0	0
5.431	.	.	.	–					0	0
6.418	-22.9	7.2	-7.2	23685	.612	273.8	44.7	- 3.5	4	30
7.594	-23.1	351.7	-7.2	23685	.818	269.5	46.6	- 4.6	4	32
				23686	.733	265.4	39.1	- 8.3	2	6
8.391	-23.3	341.2	-7.2	23685	.904	268.0	45.9	- 4.9	3	15
				23686	.846	265.2	39.2	- 7.9	0	4
9.470	-23.5	326.9	-7.2	23687	.667	134.2	292.0	-33.6	4	28
10.397	-23.7	314.7	-7.2	23687	.562	145.0	291.9	-34.0	5	44
11.650	-23.9	298.2	-7.2	23687	.465	166.8	290.9	-34.0	4	39
12.374	-24.1	288.7	-7.2	23687	.454	184.4	291.1	-34.0	6	43
13.350	-24.2	275.8	-7.2	23688	.364	256.8	296.9	-11.5	1	5
				23687	.507	202.2	289.3	-34.9	7	55

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Mar. 14.313	-24.4	263.1	-7.2	23688	.511	259.6	293.9	-11.5	2	16
				23687	.596	216.5	288.6	-35.0	4	38
15.302	-24.6	250.1	-7.2	23688	.685	260.4	293.5	-11.7	1	4
				23687	.706	223.6	287.2	-36.5	2	9
16.303	-24.7	236.9	-7.1	23689	.667	74.7	196.8	+ 4.7	1	6
17.644	-24.9	219.2	-7.1	23689	.439	63.6	196.1	+ 4.7	45	233
				23690	.473	92.7	190.9	- 7.5	4	21
18.302	-25.0	210.5	-7.1	23689	.320	52.1	195.9	+ 4.4	52	347
				23690	.340	93.0	190.6	- 7.7	3	18
19.554	-25.2	194.0	-7.0	23689	.208	345.6	197.0	+ 4.5	63	393
				23690	.047	94.3	191.3	- 7.2	7	42
20.435	-25.3	182.4	-7.0	23689	.331	305.6	198.0	+ 4.3	75	496
				23690	.161	269.5	191.7	- 7.0	2	22
21.363	-25.4	170.2	-7.0	23689	.516	289.5	199.3	+ 3.8	115	684
				23690	.320	264.2	188.9	- 8.5	1	10
22.432	-25.5	156.1	-7.0	23689	.724	282.3	201.0	+ 3.9	92	614
23.379	-25.6	143.6	-6.9	23689	.856	278.8	201.3	+ 3.8	86	626
24.374	-25.7	130.5	-6.9	23689	.953	276.4	202.0	+ 4.0	107	587
				23691	.998	97.4	43.6	- 7.8	32	334
25.489	-25.8	115.8	-6.8	23691	.956	95.3	42.5	- 7.1	142	715
26.082	-25.9	108.0	-6.8	23692	.280	262.5	124.2	- 8.6	1	10
				23691	.906	95.5	42.6	- 7.9	189	813
27.399	-25.9	90.6	-6.7	23693	.606	288.9	125.6	+ 5.8	4	32
				23692	.552	264.5	124.2	- 8.7	4	28
				23691	.733	94.0	43.3	- 7.5	119	906
28.395	-26.0	77.5	-6.7	23693	.768	283.5	125.9	+ 5.9	10	74
				23691	.565	92.9	43.0	- 7.2	86	937
29.365	-26.1	64.7	-6.7	23693	.892	279.7	126.5	+ 5.5	10	54
				23691	.368	94.1	43.0	- 7.7	118	739
30.359	-26.1	51.5	-6.6	23693	.955	278.2	123.1	+ 5.8	4	15
				23691	.155	99.0	42.7	- 7.9	89	686
31.538	-26.2	36.0	-6.5	23691	.118	257.3	42.6	- 8.0	108	615

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Apr. 1.775	-26.2	19.7	-6.5	23691	.395	265.3	43.0	- 7.8	139	695
2.359	-26.3	12.0	-6.4	23691	.505	264.7	42.4	- 8.2	104	606
3.421	-26.3	358.0	-6.4	23691	.698	264.7	42.4	- 8.3	79	586
4.384	-26.3	345.2	-6.3	23691	.838	264.6	42.4	- 8.0	83	581
5.358	-26.3	332.4	-6.3	23691	.939	263.9	42.6	- 7.9	70	556
6.356	-26.3	319.2	-6.2	23691	.992	262.4	42.3	- 8.3	116	490
7.549	.	.	.	-					0	0
8.329	.	.	.	-					0	0
9.549	-26.3	277.1	-6.0	23694	.946	84.2	206.8	+ 3.5	58	286
10.439	-26.3	265.3	-5.9	23694	.858	82.5	207.1	+ 3.3	56	284
11.404	-26.2	252.6	-5.8	1640 01	.600	105.3	216.1	-13.8	0	7
				23694	.723	79.7	207.3	+ 3.3	47	262
12.422	-26.2	239.2	-5.8	23694	.540	74.9	207.8	+ 3.1	45	295
13.354	-26.2	226.8	-5.7	23694	.356	65.4	208.0	+ 3.1	48	276
14.441	-26.1	212.5	-5.6	23694	.169	27.7	208.0	+ 3.0	53	282
				23695	.967	83.7	138.1	+ 4.6	22	156
15.372	-26.1	200.2	-5.5	23694	.198	317.8	207.8	+ 2.9	50	260
				23695	.895	82.1	137.7	+ 4.6	25	157
16.103	-26.0	190.6	-5.5	23694	.336	294.7	208.3	+ 2.8	49	247
				23695	.801	79.9	138.4	+ 4.7	23	166
17.548	-25.9	171.5	-5.4	23694	.616	281.1	208.6	+ 2.5	38	249
				23695	.556	73.6	139.3	+ 4.5	19	135
				23696	.739	97.9	123.8	- 9.4	2	12
18.438	-25.8	159.7	-5.3	23694	.763	277.6	208.7	+ 2.3	43	260
				23695	.387	64.2	139.3	+ 4.7	22	139
				23696	.583	99.6	124.2	- 9.9	6	42

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Apr. 19.513	-25.7	145.5	-5.2	23694	.896	274.9	208.6	+ 2.1	38	241
				23695	.201	31.1	139.6	+ 4.7	17	136
				23696	.344	103.7	125.8	- 9.6	2	26
20.351	-25.6	134.4	-5.1	23694	.964	273.1	208.5	+ 1.6	42	237
				23695	.194	332.1	139.6	+ 4.7	22	129
				23696	.180	114.9	125.0	- 9.4	1	22
21.332	-25.5	121.5	-5.0	1640 02	.741	268.9	169.3	- 4.2	0	2
				23695	.355	297.9	139.8	+ 4.8	16	120
				23696	.104	212.9	124.8	-10.0	0	3
				23697	.983	98.8	41.7	- 9.6	24	203
22.324	-25.4	108.4	-5.0	23695	.542	286.6	139.7	+ 4.7	20	110
				23697	.920	98.3	41.2	- 9.6	37	242
23.368	-25.3	94.6	-4.8	23695	.727	281.3	140.1	+ 4.8	23	117
				23696	.507	263.9	125.0	- 7.3	0	7
				23697	.801	98.3	41.3	- 9.5	37	206
24.398	-25.2	81.0	-4.8	23695	.866	278.4	140.1	+ 4.8	20	130
				1640 03	.811	265.2	135.2	- 6.7	2	10
				23697	.641	99.4	41.2	- 9.7	41	233
25.413	-25.0	67.6	-4.7	23695	.957	276.4	140.0	+ 4.8	12	112
				23697	.453	102.4	41.0	- 9.8	18	185
26.394	-24.9	54.6	-4.6	23695	.998	275.4	140.2	+ 5.0	32	129
				23697	.254	112.1	40.8	- 9.9	24	216
				23698	.846	83.5	357.5	+ 3.0	6	63
27.087	-24.8	45.5	-4.5	23697	.123	140.8	40.9	- 9.9	33	180
				23698	.737	82.0	358.7	+ 2.8	11	42
28.351	-24.6	28.7	-4.4	23697	.228	243.6	40.7	-10.1	42	200
				23698	.517	77.9	358.5	+ 2.4	5	29
29.353	-24.4	15.5	-4.3	23697	.441	257.6	41.3	- 9.3	35	325
30.460	-24.2	0.9	-4.2	23697	.650	261.3	41.3	- 8.8	101	605
May 1.427	-24.1	348.1	-4.1	23697	.802	262.1	41.3	- 8.7	64	472
2.378	-23.9	335.5	-4.0	23697	.921	262.2	42.7	- 8.7	39	319
3.512	-23.7	320.6	-3.9	23697	.982	260.8	39.8	- 9.8	23	187
				23699	.543	66.5	290.4	+ 9.1	1	16
4.325	-23.5	309.8	-3.8	23699	.387	53.8	291.4	+ 9.6	1	7

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

					Measures			Position		Area	
Date	P	L_o	B_o	Group No.	Rad. Dist.	Pos. Angle	Long.	Lat.	Umb.	Whole Spots
1976	°	°	°			°	°	°		
May 5.574	-23.3	293.3	-3.6	23699	.224	7.5	291.6	+ 9.1	2	13
				1641 01	.940	88.1	223.5	+ 0.6	0	3
				23700	.991	88.7	211.1	+ 0.8	17	185
6.322	-23.1	283.4	-3.6	23699	.271	328.4	291.7	+ 9.8	1	11
				23700	.956	88.3	210.7	+ 0.6	19	145
7.327	-22.9	270.1	-3.5	1641 02	.056	9.8	269.6	- 0.3	0	2
				23700	.860	87.3	211.1	+ 0.6	15	157
8.434	-22.6	255.5	-3.3	23700	.703	85.8	211.1	+ 0.5	18	142
9.317	-22.4	243.8	-3.2	23700	.542	84.6	211.3	+ 0.2	20	135
10.373	-22.2	229.8	-3.1	23700	.324	80.2	211.3	+ 0.2	20	131
11.335	-21.9	217.1	-3.0	23700	.115	60.6	211.4	+ 0.2	21	129
				23701	.978	83.0	140.0	+ 6.1	5	21
12.590	-21.6	200.5	-2.9	23700	.199	284.6	211.6	0.0	14	136
				23701	.867	82.0	141.1	+ 5.5	2	16
13.326	-21.4	190.8	-2.8	23700	.354	277.0	211.3	- 0.2	16	145
				23701	.770	80.6	141.3	+ 5.4	2	9
				23702	.994	101.1	107.1	-11.3	12	117
14.374	-21.1	176.9	-2.7	23700	.569	273.5	211.4	- 0.2	22	115
				1641 03	.319	46.7	163.4	+10.0	0	1
				23701	.600	76.6	141.2	+ 5.8	1	9
				23702	.929	99.7	108.7	-10.0	3	43
15.340	-20.9	164.2	-2.6	23700	.737	271.4	211.4	- 0.7	23	174
16.425	-20.6	149.8	-2.5	23700	.881	269.8	211.3	- 1.3	35	153
17.331	-20.3	137.8	-2.3	23700	.961	269.8	211.5	- 0.9	16	101
				1641 04	.676	125.7	100.7	-25.0	0	5
				1641 05	.741	77.7	91.1	+ 7.4	0	2
18.333	-20.0	124.6	-2.2	23703	.942	96.6	54.3	- 7.0	3	24
19.424	-19.7	110.1	-2.1	23703	.823	97.1	54.9	- 7.0	4	22
20.327	-19.4	98.2	-2.0	1641 06	.320	241.8	114.8	-10.6	0	5
				23703	.685	98.2	55.3	- 7.1	2	6
				23704	.855	98.8	39.7	- 8.6	2	7

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

					Measures			Position		Area	
Date	P	L_o	B_o	Group No.	Rad. Dist.	Pos. Angle	Long.	Lat.	Umb.	Whole Spots
1976	°	°	°			°	°	°		
May 21.478	-19.1	83.0	-1.9	23703	.464	102.0	55.8	- 7.2	0	3
				23704	.690	99.9	39.8	- 8.2	3	17
22.321	-18.8	71.8	-1.8	23705	.153	93.4	63.1	- 2.3	0	7
				23704	.543	103.1	39.6	- 8.5	3	18
23.397	-18.4	57.6	-1.6	23705	.132	256.0	64.9	- 3.4	0	4
				1641 07	.300	94.8	40.2	- 3.0	0	3
24.337	-18.1	45.1	-1.5	23703	.227	236.6	56.1	- 8.6	0	5
25.449	.	.	.	-					0	0
26.326	-17.4	18.8	-1.3	23704	.356	249.4	38.4	- 8.4	1	5
27.328	.	.	.	-					0	0
28.381	.	.	.	-					0	0
29.438	.	.	.	-					0	0
30.092	.	.	.	-					0	0
31.414	.	.	.	-					0	0
Jun. 1.384	.	.	.	-					0	0
2.345	.	.	.	-					0	0
3.344	.	.	.	-					0	0
4.431	.	.	.	-					0	0
5.381	.	.	.	-					0	0
6.379	.	.	.	-					0	0
7.331	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Jun. 8.330	-12.5	206.7	+0.3	23706	.587	224.8	233.6	-24.3	3	30
9.326	-12.1	193.5	+0.4	23706	.711	233.7	232.4	-24.5	3	26
10.325	-11.7	180.3	+0.5	23706	.840	239.9	233.1	-24.5	0	4
11.367	.	.	.	–					0	0
12.306	-10.9	154.1	+0.8	23707	.802	153.7	123.9	-45.2	4	25
13.419	-10.4	139.4	+0.9	23707	.759	163.2	121.2	-45.6	0	4
14.337	-10.0	127.2	+1.0	23707	.728	172.7	119.8	-45.0	0	7
				23708	.971	87.2	51.3	+ 2.9	5	33
15.339	- 9.6	114.0	+1.1	23707	.725	184.1	118.2	-45.0	0	3
				23708	.904	87.4	49.4	+ 2.9	11	75
16.244	- 9.2	102.0	+1.2	23708	.789	86.8	50.1	+ 3.3	12	105
17.349	- 8.7	87.3	+1.4	23708	.607	87.0	50.1	+ 2.9	38	249
18.326	- 8.3	74.4	+1.5	23708	.410	86.9	50.3	+ 2.6	31	257
19.247	- 7.9	62.2	+1.6	23708	.206	84.3	50.5	+ 2.7	34	178
20.122	- 7.5	50.6	+1.7	23708	.016	25.7	50.2	+ 2.5	16	101
21.340	- 7.0	34.5	+1.8	23709	.568	270.0	69.0	+ 1.5	13	57
				23708	.290	273.5	51.3	+ 2.8	8	44
22.394	- 6.5	20.6	+1.9	23709	.746	269.7	68.6	+ 1.1	10	65
				23708	.543	273.0	53.3	+ 3.3	1	10
				23710	.951	118.8	312.2	-26.5	11	51
23.325	- 6.1	8.2	+2.1	23709	.879	270.5	69.6	+ 1.4	7	58
				1642 01	.151	272.1	16.9	+ 2.4	0	1
				23710	.864	122.4	314.0	-26.3	23	123
24.337	- 5.7	354.8	+2.2	23709	.973	269.7	71.3	+ 0.2	0	5
				23711	.500	264.0	24.5	- 1.1	1	8
				23710	.761	128.9	313.4	-26.8	14	122

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Jun. 25.342	- 5.2	341.6	+2.3	23711	.697	267.6	25.5	0.0	2	16
				23710	.633	139.3	314.2	-26.5	10	91
26.374	- 4.7	327.9	+2.4	23711	.829	268.0	23.6	- 0.3	2	4
				23710	.531	156.0	314.0	-26.5	14	109
27.424	- 4.3	314.0	+2.5	23710	.490	178.9	313.4	-26.7	8	84
28.363	- 3.8	301.6	+2.6	1643 01	.912	294.8	5.9	+23.6	0	3
				23710	.524	198.6	312.3	-27.0	15	115
29.337	- 3.4	288.7	+2.7	23710	.606	215.2	311.7	-27.0	17	104
30.325	- 2.9	275.6	+2.9	23710	.719	226.3	311.3	-27.4	17	122
July 1.353	- 2.5	262.0	+3.0	23710	.831	233.9	310.9	-27.3	12	117
2.382	- 2.0	248.4	+3.1	23710	.920	238.4	310.1	-27.3	12	64
3.392	- 1.6	235.0	+3.2	23710	.982	240.9	310.5	-27.7	0	12
4.401	- 1.1	221.6	+3.3	23712	.340	340.3	228.7	+21.8	4	20
5.384	- 0.6	208.6	+3.4	23712	.444	318.1	227.3	+22.4	1	14
6.324	- 0.2	196.2	+3.5	1643 02	.677	226.2	228.7	-24.9	0	6
				23712	.557	306.0	225.2	+22.1	3	24
7.325	+ 0.2	182.9	+3.6	23712	.710	298.4	225.3	+22.3	0	8
8.329	.	.	.	–					0	0
9.336	.	.	.	–					0	0
10.358	.	.	.	–					0	0
11.377	.	.	.	–					0	0
12.365	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
July 13.327	.	.	.	-					0	0
14.361	.	.	.	-					0	0
15.602	.	.	.	-					0	0
16.364	.	.	.	-					0	0
17.372	.	.	.	-					0	0
18.573	.	.	.	-					0	0
19.519	.	.	.	-					0	0
20.354	.	.	.	-					0	0
21.383	.	.	.	-					0	0
22.375	.	.	.	-					0	0
23.335	.	.	.	-					0	0
24.360	.	.	.	-					0	0
25.418	.	.	.	-					0	0
26.359	.	.	.	-					0	0
27.326	.	.	.	-					0	0
28.364	.	.	.	-					0	0
29.351	.	.	.	-					0	0
30.347	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
July 31.304	+10.6	225.7	+5.8	1644 01	.812	267.9	279.7	+ 1.7	0	6
Aug. 1.378	+11.0	211.5	+5.8	23713	.990	74.2	128.4	+16.5	64	457
2.443	+11.5	197.4	+5.9	1644 02	.292	90.1	180.4	+ 5.6	1	8
				23713	.930	74.7	128.4	+16.3	87	551
3.601	+11.9	182.1	+6.0	23713	.806	74.0	128.4	+16.4	81	528
4.337	+12.2	172.3	+6.0	23713	.701	72.8	128.2	+16.3	92	589
5.327	+12.6	159.2	+6.1	23713	.525	69.0	128.7	+16.1	87	584
6.331	+13.0	146.0	+6.2	23713	.338	58.4	128.6	+16.1	96	573
7.403	+13.4	131.8	+6.2	23713	.178	18.4	128.4	+15.9	97	539
8.356	+13.7	119.2	+6.3	23713	.224	316.3	128.4	+15.5	85	613
9.335	+14.1	106.2	+6.4	23713	.402	294.7	128.4	+15.5	86	519
				23714	.571	55.1	75.4	+24.5	3	18
				23715	.724	100.9	61.0	- 3.4	2	7
10.333	+14.4	93.0	+6.4	23713	.591	288.0	128.6	+15.7	65	575
				23714	.414	42.2	75.4	+23.9	3	21
11.343	+14.8	79.7	+6.5	23713	.756	285.3	128.7	+15.8	80	530
				23714	.309	11.6	75.8	+24.0	4	28
12.343	+15.2	66.5	+6.5	23713	.882	284.4	128.8	+15.7	72	470
				23714	.331	338.6	74.0	+24.3	1	18
				23715	.183	153.4	61.8	- 2.9	0	7
13.384	+15.5	52.7	+6.6	23713	.967	284.8	128.9	+15.9	57	493
				23714	.460	315.3	73.6	+25.2	4	26
14.412	+15.9	39.1	+6.6	23714	.626	301.1	75.0	+24.2	3	20
15.413	+16.2	25.9	+6.7	23716	.202	149.4	20.0	- 3.3	1	11
16.342	+16.5	13.6	+6.7	23716	.175	209.3	18.5	- 2.0	6	29
17.328	+16.9	0.6	+6.8	23716	.340	243.8	18.3	- 2.2	13	107

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Aug. 18.351	+17.2	347.1	+6.8	23716	.541	254.7	18.5	- 2.4	37	218
19.331	+17.5	334.1	+6.8	23716	.715	259.5	18.6	- 2.6	15	120
				23717	.953	104.3	264.0	-11.4	11	74
20.337	+17.8	320.8	+6.9	23716	.855	263.3	18.7	- 2.1	9	68
				23717	.858	108.0	264.7	-11.5	11	82
21.336	+18.1	307.6	+6.9	23716	.947	264.3	18.1	- 3.1	0	10
				23717	.721	113.6	265.3	-11.6	10	54
22.384	+18.4	293.8	+7.0	23717	.555	123.6	265.7	-11.6	7	79
23.336	+18.7	281.2	+7.0	23717	.412	140.2	265.6	-11.6	10	59
24.331	+19.0	268.0	+7.0	23717	.323	169.9	264.7	-11.5	13	65
25.333	+19.3	254.8	+7.1	23717	.371	209.0	265.3	-11.9	5	31
26.334	+19.6	241.6	+7.1	23717	.502	231.2	265.0	-11.8	3	14
27.373	+19.9	227.8	+7.1	1645 01	.251	104.8	213.8	+ 3.2	0	1
				1645 02	.652	147.2	204.7	-26.6	0	1
28.322	+20.2	215.3	+7.1	1645 03	.162	39.8	209.2	+14.2	0	3
				23718	.996	74.0	129.0	+16.5	11	114
29.320	+20.4	202.1	+7.2	23718	.953	75.0	128.8	+16.5	64	225
30.690	+20.8	184.0	+7.2	23718	.824	75.0	128.2	+16.4	51	204
31.478	+21.0	173.6	+7.2	23718	.703	73.8	129.1	+16.5	48	270
Sept. 1.333	+21.2	162.3	+7.2	23719	.848	288.3	220.7	+19.3	19	115
				23718	.568	71.3	128.4	+16.5	44	236
2.311	+21.5	149.4	+7.2	23719	.945	288.6	221.5	+19.9	16	117
				23718	.389	64.3	128.0	+16.4	39	246
3.330	+21.7	135.9	+7.2	23718	.206	40.1	128.0	+16.2	36	234
4.465	+22.0	121.0	+7.2	23718	.196	321.0	128.3	+15.9	43	272

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Sept. 5.406	+22.2	108.5	+7.2	23718	.363	296.2	128.2	+16.0	38	214
				1645 04	.384	93.3	86.0	+ 5.4	1	5
6.344	+22.4	96.1	+7.2	23718	.542	288.3	128.3	+15.9	40	219
7.325	+22.6	83.2	+7.2	23718	.709	285.5	128.3	+16.0	35	218
8.334	+22.8	69.9	+7.2	23718	.847	284.3	128.3	+15.9	36	235
9.345	+23.1	56.5	+7.2	23718	.943	284.3	128.1	+15.8	34	246
				23720	.648	134.8	27.1	-20.8	1	16
10.347	+23.3	43.3	+7.2	23718	.991	284.8	127.2	+15.6	33	184
				23720	.517	151.7	28.2	-20.0	16	163
11.329	+23.4	30.3	+7.2	23720	.468	173.8	27.3	-20.4	30	299
12.388	+23.6	16.3	+7.2	23721	.574	206.8	32.7	-23.8	1	11
				23720	.502	203.4	28.6	-20.3	38	188
13.083	+23.8	7.2	+7.2	23721	.637	216.1	31.4	-24.3	0	4
				23720	.572	218.5	29.3	-19.8	14	103
14.660	+24.1	346.3	+7.2	23720	.779	236.8	30.1	-20.0	15	45
15.087	+24.1	340.7	+7.2	23720	.839	242.2	32.1	-18.6	4	36
16.324	+24.3	324.4	+7.2	1646 01	.909	240.1	23.2	-23.4	3	18
17.419	+24.5	309.9	+7.2	23722	.784	112.1	262.0	-12.4	9	34
18.425	+24.7	296.6	+7.1	23722	.606	119.8	264.3	-11.4	3	9
19.636	+24.8	280.6	+7.1	1646 02	.205	15.4	277.4	+18.4	0	15
				23722	.428	136.3	263.2	-11.2	0	21
20.391	.	.	.	-					0	0
21.404	.	.	.	-					0	0
22.358	.	.	.	-					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1976	°	°	°			°	°	°		
Sept. 23.383	.	.	.	–					0	0
24.086	.	.	.	–					0	0
25.419	+25.6	204.3	+6.9	23723	.981	118.1	130.7	-25.7	18	111
				23724	.963	75.3	128.8	+15.9	27	176
26.951	+25.7	184.1	+6.9	23723	.887	124.6	129.7	-26.3	25	98
				23724	.814	76.1	129.3	+15.3	29	125
27.346	+25.7	178.9	+6.9	23723	.849	126.9	129.8	-26.2	15	108
				23724	.759	75.8	129.4	+15.2	22	139
28.333	+25.8	165.9	+6.8	23724	.598	73.5	129.6	+15.3	21	151
				23723	.752	134.6	129.3	-26.4	20	145
29.341	+25.9	152.6	+6.8	23725	.465	320.0	172.1	+27.2	0	3
				23724	.413	67.1	129.4	+15.5	18	138
				23723	.647	146.2	129.0	-26.2	21	117
30.554	+26.0	136.6	+6.7	23725	.625	309.9	169.7	+29.2	1	7
				23724	.205	40.0	128.7	+15.7	16	146
				23723	.560	166.4	128.1	-26.2	16	112
Oct. 1.389	+26.1	125.5	+6.7	23726	.445	352.3	129.6	+32.7	7	49
				23724	.172	339.1	129.2	+15.8	23	154
				23723	.545	184.9	128.5	-26.1	17	121
2.337	+26.1	113.0	+6.6	23724	.311	302.5	128.8	+16.0	17	139
				23726	.501	333.2	128.6	+32.8	10	82
				23723	.586	204.1	128.4	-25.8	11	96
3.365	+26.2	99.5	+6.6	23726	.616	316.5	129.4	+32.2	16	75
				23724	.509	290.8	129.0	+16.1	23	171
				23723	.681	219.7	128.3	-25.7	13	134
4.344	+26.2	86.5	+6.5	23724	.680	286.5	129.0	+15.9	15	152
				23723	.786	229.4	127.9	-25.9	14	99
				23726	.722	309.1	127.7	+32.0	5	26
5.456	+26.2	71.9	+6.5	23724	.840	285.0	129.3	+16.0	16	116
				23723	.895	236.6	128.0	-25.9	17	84
				23726	.833	303.9	125.8	+31.6	2	12
6.598	+26.3	56.8	+6.4	23724	.948	284.4	129.0	+15.7	21	121
				23723	.970	240.9	127.5	-26.2	18	118
				23726	.929	300.4	125.1	+30.6	3	21
7.415	+26.3	46.0	+6.3	23724	.989	285.1	128.8	+15.8	15	89
				23723	.998	240.6	127.9	-28.6	16	80
				23726	.966	300.1	122.1	+30.7	4	17
8.619	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1976	°	°	°			°	°	°		
Oct. 9.690	.	.	.	–					0	0
10.701	.	.	.	–					0	0
11.585	.	.	.	–					0	0
12.454	+26.3	339.6	+6.0	23727	.854	125.3	289.0	-25.8	2	11
				23728	.979	100.1	262.7	- 8.5	21	106
13.385	+26.3	327.3	+6.0	23727	.743	133.6	290.6	-26.0	2	10
				23728	.918	102.3	262.4	- 8.8	11	58
14.308	+26.3	315.1	+5.9	23727	.663	141.9	288.1	-26.1	9	83
				23728	.822	104.9	261.8	- 8.7	9	41
15.362	+26.2	301.2	+5.8	23727	.586	157.4	286.6	-27.0	24	174
				23728	.672	110.2	261.7	- 8.9	3	16
16.573	+26.2	285.2	+5.7	23727	.546	182.3	286.6	-27.2	33	219
				23728	.506	126.1	260.6	-12.1	0	4
17.394	+26.1	274.4	+5.7	23727	.572	197.5	285.5	-27.4	43	220
				23728	.350	141.0	261.5	-10.2	1	9
				23729	.949	118.6	207.8	-24.8	0	3
18.479	+26.1	260.1	+5.6	23727	.651	214.5	284.5	-27.3	22	211
				23728	.268	188.1	262.3	- 9.7	1	19
				23729	.855	122.3	208.2	-23.8	0	2
19.349	+26.0	248.6	+5.5	23727	.740	224.9	284.4	-27.1	20	108
				23728	.364	220.0	262.3	-10.8	0	6
				23729	.759	129.7	208.7	-24.8	0	8
20.357	+25.9	235.3	+5.4	23727	.835	231.3	282.6	-27.8	8	66
				23728	.516	241.6	262.6	- 9.4	3	24
				1647 01	.527	153.0	220.3	-22.6	1	9
				1647 02	.749	92.4	187.0	+ 1.8	2	12
21.324	+25.9	222.6	+5.3	1647 03	.994	232.2	300.2	-36.5	9	37
				23728	.674	249.3	262.2	- 9.6	3	28
22.307	+25.8	209.6	+5.2	23728	.817	253.6	262.2	-10.1	0	7
				23730	.522	34.4	189.7	+30.4	2	21
23.363	+25.7	195.7	+5.2	23730	.415	11.6	190.2	+29.0	19	203
				23731	.978	119.6	122.3	-27.5	10	76
24.316	+25.6	183.1	+5.1	23730	.423	344.8	190.4	+29.0	25	273
				23731	.923	123.0	122.3	-27.8	6	94

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Oct. 25.087	+25.5	172.9	+5.0	23730	.487	327.9	190.1	+29.1	68	319
				23731	.861	125.5	121.3	−26.9	10	40
26.424	+25.3	155.3	+4.9	23730	.644	312.3	188.4	+29.7	65	426
				23731	.725	136.5	121.1	−27.6	3	11
27.433	+25.2	142.0	+4.8	23730	.763	306.0	187.2	+30.0	37	345
				23731	.626	148.7	120.5	−27.8	0	7
28.540	+25.1	127.4	+4.7	23730	.863	301.8	184.7	+29.6	10	107
				23731	.552	163.0	117.0	−27.1	0	1
29.788	+24.9	110.9	+4.5	23730	.976	298.4	188.9	+28.6	36	174
30.476	+24.8	101.9	+4.5	23730	.987	299.7	183.6	+30.0	13	94
				1647 04	.560	186.0	105.7	−29.2	0	1
31.417	+24.6	89.5	+4.4	1647 05	.672	196.4	102.9	−35.7	0	1
Nov. 1.289	+24.5	78.0	+4.3	1647 06	.794	202.2	102.2	−43.2	0	3
2.576	+24.2	61.0	+4.2	23731	.902	233.5	117.8	−30.2	0	10
3.392	.	.	.	–					0	0
4.397	.	.	.	–					0	0
5.388	.	.	.	–					0	0
6.358	.	.	.	–					0	0
7.549	.	.	.	–					0	0
8.704	.	.	.	–					0	0
9.438	.	.	.	–					0	0
10.408	.	.	.	–					0	0
11.383	.	.	.	–					0	0

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Measures: Group No.	Measures: Rad. Dist.	Measures: Pos. Angle	Position: Long.	Position: Lat.	Area: Umb.	Area: Whole Spots
1976	°	°	°			°	°	°		
Nov. 12.470	.	.	.	–					0	0
13.332	.	.	.	–					0	0
14.449	.	.	.	–					0	0
15.429	+21.3	251.5	+2.7	1648 01	.891	293.6	313.1	+22.2	2	7
16.271	.	.	.	–					0	0
17.085	+20.8	229.7	+2.5	23732	.992	79.8	146.9	+10.4	38	207
18.296	+20.4	213.7	+2.4	23732	.919	78.9	147.3	+11.1	24	244
19.378	+20.1	199.5	+2.3	23732	.800	78.1	146.9	+10.9	33	225
20.358	+19.8	186.6	+2.1	23732	.642	75.7	147.4	+10.8	27	218
				1	.634	75.6	148.0	+10.7	27	197
21.407	+19.5	172.7	+2.0	23732	.446	69.9	147.6	+10.6	26	223
				1	.445	69.5	147.7	+10.7	26	214
22.290	+19.2	161.1	+1.9	23732	.281	56.8	147.3	+10.7	34	229
				1	.278	56.1	147.6	+10.7	32	210
23.390	+18.8	146.6	+1.8	23732	.159	356.1	147.2	+10.8	31	183
				1	.160	354.7	147.5	+10.9	30	172
24.333	+18.5	134.2	+1.7	23732	.274	306.5	147.1	+11.0	21	210
25.462	+18.1	119.3	+1.5	23732	.490	290.5	147.0	+11.2	28	175
26.296	+17.8	108.3	+1.4	23732	.644	286.0	147.2	+11.3	33	188
27.421	+17.4	93.5	+1.3	23732	.815	282.9	147.3	+11.2	28	205
28.253	+17.1	82.5	+1.2	23732	.909	281.3	147.3	+10.7	45	191

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1976	°	°	°			°	°	°		
Nov. 29.333	+16.7	68.3	+1.0	23732	.981	281.4	146.9	+11.4	21	241
30.622	.	.	.	–					0	0
Dec. 1.410	.	.	.	–					0	0
2.476	.	.	.	–					0	0
3.423	.	.	.	–					0	0
4.477	.	.	.	–					0	0
5.461	.	.	.	–					0	0
6.433	+13.9	334.7	+0.1	1649 01	.941	58.8	267.8	+29.1	0	6
7.531	+13.4	320.2	0.0	23733	.815	82.3	266.1	+ 6.3	2	7
8.395	+13.1	308.8	−0.1	23734	.446	25.4	296.8	+23.5	4	35
				23733	.689	80.7	265.8	+ 6.3	10	64
9.423	+12.6	295.3	−0.3	23734	.426	16.6	287.7	+23.8	0	5
				23733	.490	77.5	266.7	+ 5.8	15	125
10.411	+12.2	282.3	−0.4	23733	.263	68.2	268.2	+ 5.2	35	234
11.474	+11.7	268.3	−0.5	23733	.094	0.7	268.2	+ 4.8	46	263
12.297	+11.4	257.4	−0.6	23733	.206	297.3	268.0	+ 4.8	39	292
13.431	+10.9	242.5	−0.8	23733	.450	281.3	268.6	+ 4.3	30	228
14.296	+10.5	231.1	−0.9	23733	.614	278.0	268.5	+ 4.2	25	226
				23735	.443	185.2	233.7	−26.9	8	59
				23736	.991	77.9	149.5	+11.8	15	134
15.434	+ 9.9	216.1	−1.0	23733	.802	276.1	269.0	+ 4.3	34	201
				23735	.518	212.7	234.3	−26.7	14	122
				23736	.932	76.7	148.3	+11.9	36	157

POSITIONS AND AREAS OF SUNSPOTS FOR EACH DAY IN THE YEAR

Date	P	L_o	B_o	Group No.	Measures Rad. Dist.	Measures Pos. Angle	Position Long.	Position Lat.	Area Umb.	Area Whole Spots
1976	°	°	°			°	°	°		
Dec. 16.383	+ 9.5	203.6	−1.1	23733	.910	275.3	268.7	+ 4.3	42	211
				23735	.642	229.0	236.0	−25.8	10	73
				23736	.834	75.3	148.4	+11.6	30	174
				23737	.869	119.7	146.6	−26.0	2	13
17.410	+ 9.0	190.1	−1.3	23733	.984	274.6	269.4	+ 4.2	66	330
				23735	.767	235.8	235.0	−26.4	10	44
				23736	.694	71.1	148.1	+12.0	35	146
				23737	.741	124.8	147.6	−25.9	3	28
18.099	+ 8.7	181.0	−1.4	23735	.849	238.5	235.2	−27.1	7	45
				23736	.578	67.3	148.1	+11.7	31	142
				23737	.667	129.5	146.2	−26.1	0	4
				1649 02	.883	40.5	131.4	+41.2	0	2
19.090	+ 8.3	167.9	−1.5	23735	.931	242.4	234.4	−26.1	8	46
				23736	.404	55.1	148.2	+11.9	33	147
20.377	+ 7.7	151.0	−1.6	23736	.234	10.9	148.4	+11.6	24	161
21.287	+ 7.2	139.0	−1.8	23736	.279	325.4	148.3	+11.5	13	143
22.471	+ 6.7	123.4	−1.9	23736	.474	298.1	148.5	+11.1	27	149
23.296	+ 6.3	112.5	−2.0	23736	.619	291.2	148.4	+11.3	13	135
24.466	+ 5.7	97.1	−2.2	23736	.798	285.8	148.4	+11.2	23	150
				23738	.978	109.1	19.4	−19.1	31	223
25.438	+ 5.2	84.3	−2.3	23736	.910	283.0	148.6	+10.9	18	140
				23738	.931	110.3	16.5	−19.7	25	183
26.462	+ 4.8	70.8	−2.4	23736	.978	281.5	147.9	+10.7	15	107
				23738	.841	112.5	15.2	−20.1	35	295
27.306	+ 4.3	59.7	−2.5	23738	.719	115.4	16.2	−19.8	24	223
28.283	+ 3.9	46.8	−2.6	23738	.567	121.6	16.2	−19.5	22	203
29.465	+ 3.3	31.3	−2.8	23738	.353	142.4	18.1	−18.9	20	147
				1649 03	.471	32.4	15.7	+20.7	0	2
30.101	+ 3.0	22.9	−2.8	23738	.288	168.1	19.3	−19.1	27	129
31.087	+ 2.5	9.9	−3.0	23738	.325	209.4	19.6	−19.3	27	133

Group	1972	
22979	Jan 2 - 3	A single diffuse spot.
22980	Jan 2 - 6	A few variable spots.
22981	Jan 3-10	Nominally a single irregular spot, seen as two close spots on Jan 6, 8 and 10.
22982	Jan 5 - 6	Two spots on Jan 5; a single spot on Jan 6.
22983	Jan 8-15	Initially a single spot which reappears on Jan 10 as a few single spots. These develop after Jan 11 to form a compact stream with multiple irregular leaders and a larger irregular follower which alone survives on Jan 15, although much diminished.
22984	Jan 8-14	Widely-scattered spots, gradually forming a small stream of irregular components by Jan 12 and fading thereafter.
22985	Jan 14-16	A few fading spots of which only one remains on Jan 16.
22986	Jan 14-26	A highly-irregular stream of complex components dominated by two intricate followers which alone remain on Jan 26.
22987	Jan 15-25	Several small, widely-separated spots developing rapidly after Jan 19 to form two, and then three components. The two followers disintegrate slowly after Jan 22.
22988	Jan 17-18	Scattered spots.
22989	Jan 18-19	A single spot.
22990	Jan 21-24	A spot with multiple fading, following companions.
22991	Jan 21-24	A compact, complex cluster of highly-irregular spots, fading significantly after Jan 22.
22992	Jan 22-30	A few intermittent spots forming a compact stream after their reappearance.
22993	Jan 23-29	A few variable, intermittent spots.
22994	Jan 23-29	One or two intermittent spots.
22995	Jan 23-28	A variable complex stream.
22996	Jan 23-Feb 3	A few variable spots developing strongly after Jan 28 to form a compact stream which thereafter slowly declines.
22997	Jan 24-30	Multiple spots forming a simple stream by Jan 25 and subsequently fading, to leave a persistent irregular follower.
22998	Jan 24-Feb 2	A regular spot with occasional companions until Feb 1 when the spot divides.
22999	Jan 25-29	A single irregular spot becoming two spots on the last two days.
23000	Jan 27-Feb 6	A single spot developing slowly after Jan 29 to form a simple stream by Feb 3.
23001	Jan 28-29	A single spot.
23002	Jan 30-Feb 1	A small basic stream.
23003	Feb 1 - 3	One or two intermittent spots.
23004	Feb 2 - 6	A simple stream, decaying rapidly after Feb 4.
23005	Feb 3 - 7	Initially a single spot which develops into a small stream and decays after Feb 5.
23006	Feb 3 - 7	One or two intermittent spots.
23007	Feb 5-10	Two complex components, the leader of which decays gradually while the follower disintegrates after Feb 6.
23008	Feb 6 - 8	A single spot on the first and last days; two spots on Feb 7.
23009	Feb 7 - 8	Two spots.
23010	Feb 8-16	A steadily-developing stream, dying slowly after Feb 11 to leave only the original leader by Feb 16.
23011	Feb 8-11	A single diminishing spot.
23012	Feb 8-20	A regular spot with many variable close companions between Feb 11 and 18.
23013	Feb 10-23	An irregular spot, with variable companions forming several small leaders by Feb 15 which fade to leave the original spot by Feb 19.
23014	Feb 11-22	A single spot, seen with a companion on Feb 13.
23015	Feb 12-22	A single spot, developing after Feb 13 to form a complex stream which fades rapidly after Feb 16.
23016	Feb 14-17	A single spot throughout, apart from the first day when two spots are visible.
23017	Feb 14-24	Multiple widely-scattered spots, decaying to leave a few single spots.
23018	Feb 15-26	A rapidly growing complex stream with multiple leaders and a regular follower with companions which gradually decays after Feb 19.
23019	Feb 16-18	A few variable spots.
23020	Feb 16-28	A large, multiple-umbraed spot with many irregular followers the whole of which develops to form a compact complex structure by Feb 9 and thereafter gradually fades.
23021	Feb 16-28	A variable complex stream.
23022	Feb 18-20	A few spots.
23023	Feb 19-Mar 2	A simple stream comprising several irregular followers and a regular leader with variable companions whose umbra divides on Feb 25 prior to the spot's division two days later, by which time the followers have faded considerably.
23024	Feb 21-23	A single spot.
23025	Feb 22-23	Two spots.
23026	Feb 22-24	Two spots until Feb 24 when only one is seen.
23027	Feb 22-28	A single intermittent spot.
23028	Feb 25-28	Variable spots.
23029	Feb 25-Mar 5	A simple stream in which the follower decays by Feb 29 and the leader disintegrates into scattered spots which rapidly disperse, leaving a single spot on Mar 3.
23030	Feb 27-Mar 5	A steadily developing stream reaching maximum area on Mar 2 and subsequently decaying.
23031	Feb 28-Mar 4	A few spots until Mar 2 after which only one spot is seen.
23032	Feb 28-29	A single spot.
23033	Feb 29-Mar 1	A single spot.
23034	Feb 29-Mar 10	A simple stream with variable followers which decay completely by Mar 5 to leave a single, diminished spot.
23035	Mar 1 - 8	An irregular spot with a following companion which has died out by Mar 6.
23036	Mar 1 - 14	A complex extended stream of two primary irregular components with numerous associated and intermediate companions.
23037	Mar 3 - 4	A single spot.
23038	Mar 4 - 5	Two distorted spots on Mar 4; a small spot on the following day.
23039	Mar 5-17	A single spot with occasional companions.
23040	Mar 7-19	A single spot, seen with leading companions on Mar 10, 11 and 12.
23041	Mar 8-19	A compact stream of irregular components and variable companions. The followers disintegrate after Mar 11 and fade to leave the original leader, now much diminished, by Mar 18.
23042	Mar 9-20	A single spot, seen with a companion on Mar 17.

Group	1972	
23043	Mar 12-21	An irregular spot which develops into a highly-irregular cluster after Mar 14 and thereafter elongates to form a simple stream by Mar 17. The followers break up after this date, leaving the original spot alone by Mar 19.
23044	Mar 12-20	An irregular spot with companions, developing strongly after Mar 14 and subsequently disintegrating. Closely following group 23043.
23045	Mar 13-20	A few variable scattered spots.
23046	Mar 14-26	A single spot with numerous intermittent northerly and leading companions.
23047	Mar 15-16	A single spot
23048	Mar 15-24	One or two intermittent spots.
23049	Mar 16-21	A simple stream of initial rapid growth, decaying slowly after Mar 19.
23050	Mar 18-26	A compact stream, disintegrating after Mar 19 to form small spots which gradually fade.
23051	Mar 19-23	A few intermittent spots.
23052	Mar 19-29	A developing complex stream of which the irregular followers decay after Mar 24 to leave a few fading leaders.
23053	Mar 20-22	A few small spots, appearing to the west of the central meridian.
23054	Mar 22-27	A simple variable stream.
23055	Mar 22-28	A few intermittent spots.
23056	Mar 22-27	A cluster of small spots forming a variable stream by Mar 24.
23057	Mar 23-25	One or two close spots.
23058	Mar 23-24	A single spot.
23059	Mar 24-25	A spot with a few companions.
23060	Mar 24-25	A single spot.
23061	Mar 28-Apr 5	Intermittent spots.
23062	Mar 29-Apr 7	A spot with variable following companions.
23063	Mar 30-Apr 1	Three spots on the first day; a single spot thereafter.
23064	Apr 1 - 2	A single spot.
23065	Apr 1 - 5	A variable equatorial stream.
23066	Apr 3-14	A single spot until Apr 6 after which multiple spots appear, although soon disperse, to leave a single spot on the last day.
23067	Apr 5 - 9	Initially a single spot which acquires a companion on the following day. The follower disintegrates and fades to leave a single spot on Apr 9.
23068	Apr 6-10	A variable fading stream.
23069	Apr 6-16	An extended simple stream, fading from the rear after Apr 11.
23070	Apr 6-16	A short stream with a prominent irregular follower which disintegrates after Apr 12.
23071	Apr 8-19	Numerous variable spots.
23072	Apr 10-22	A single spot.
23073	Apr 12-13	A single diminishing spot.
23074	Apr 13-14	Two faint, irregular spots.
23075	Apr 13-14	A single spot.
23076	Apr 15-20	A simple variable stream.
23077	Apr 15-22	Scattered variable spots.
23078	Apr 15-28	Several irregular components coalescing to form a complex structure with associated companions, which disintegrates after Apr 20 to leave a single spot with occasional leading companions.
23079	Apr 18-27	Intermittent spots.

Group	1972	
23080	Apr 19-20	A single spot.
23081	Apr 20-25	Several variable spots.
23082	Apr 20-29	An intermittent spot developing rapidly after Apr 22 to form a simple short-lived stream which has diminished to a single spot by Apr 28.
23083	Apr 21-23	Several spots.
23084	Apr 21-May 2	A regular spot with an occasional following companion.
23085	Apr 21-25	A single spot.
23086	Apr 23-30	A simple short-lived stream which fades to a single spot by Apr 28.
23087	Apr 24-25	A single spot.
23088	Apr 24-29	Several small spots developing strongly after Apr 25 to form two main irregular components with intermediate companions.
23089	Apr 25-27	A single spot.
23090	May 1 - 7	Variable intermittent spots.
23091	May 2-14	A stream of complex irregular components, developing dramatically after May 5 into two close, highly-complex irregular structures. These gradually separate and become more uniform in outline although the smaller, following component fades steadily to leave the original leader, now a regular spot, alone by May 14.
23092	May 3 - 5	A single spot on the first and last days; seen with a few minute companions on May 4.
23093	May 6-14	A variable cluster of small, irregular spots, not seen on May 13.
23094	May 6-14	A few irregular spots developing steadily to become a basic stream by May 10, after which the irregular followers slowly fade.
23095	May 7 - 9	A single spot on the first two days; three spots on May 9.
23096	May 9-14	A few variable spots.
23097	May 9-13	A few small spots.
23098	May 9-21	A complex stream, fragmenting after May 12, after which further development occurs; the group decays slowly from May 17.
23099	May 11-18	A few variable, intermittent spots.
23100	May 11-23	An extended stream of which the followers decay slowly after May 17.
23101	May 13-19	A single intermittent spot.
23102	May 13-20	A single spot, fragmenting after May 18.
23103	May 13-19	A single spot, seen with a few tiny companions after May 16.
23104	May 14-15	A single spot.
23105	May 14-27	Two large irregular spots with variable intermediate companions which gradually fade.
23106	May 14-26	Initially a single spot. Several followers appear after May 16 forming a compact ring of spots which fades after May 22 to leave the single spot alone by May 26.
23107	May 16-19	Variable spots.
23108	May 17-18	A few tiny compact spots.
23109	May 22-26	A few small spots.
23110	May 24-Jun 5	A stream of highly-irregular complex components which condenses to leave a compact group of spots by May 31 and fades thereafter.
23111	May 27-Jun 1	A single spot seen with a companion from May 29.
23112	May 29-31	A small compact stream on the first two days; a single spot on May 31.

Group	1972	
23113	May 29-Jun 10	A regular spot seen with variable leading companions between Jun 2 and 5.
23114	May 30-31	Three spots on May 30; a single spot on the following day.
23115	May 30-Jun 3	Variable intermittent spots.
23116	May 30-Jun 5	A single spot.
23117	May 30-Jun 11	A regular leader with a closely following companion accompanied by numerous following companions.
23118	May 31-Jun 5	Variable and at times scattered spots.
23119	Jun 1-12	Initially a single spot. A few companions appear until Jun 5 when a massive development occurs and a vaguely fan-shaped group of multiple highly-irregular components is formed. The following regions coalesce by Jun 8 to form a single complex structure which then becomes attached to the large leader.
23120	Jun 2 - 8	A simple stream, the followers of which fade to leave a single spot by Jun 7.
23121	Jun 2 - 6	A tiny stream which collapses to leave a few variable spots by Jun 5.
23122	Jun 3 - 7	A sparsely populated stream.
23123	Jun 5-10	A few variable spots.
23124	Jun 7-10	A spot with several leading companions until Jun 8; a single spot thereafter.
23125	Jun 9-10	A tiny spot.
23126	Jun 10-23	An expanding extensive stream with multiple irregular leaders and a regular follower.
23127	Jun 12-15	Variable compact, intermittent spots.
23128	Jun 14-19	A compact cluster of spots.
23129	Jun 15-21	Variable intermittent spots.
23130	Jun 15-27	An irregular spot with many umbrae which gradually assumes a regular configuration. Variable following companions are also seen.
23131	Jun 15-27	An extensive stream comprising a large regular leader with many variable following companions.
23132	Jun 16-21	A few variable spots.
23133	Jun 20-21	Two spots.
23134	Jun 20-Jul 1	Two close spots, the follower of which fades by Jun 27. An occasional companion is seen with the remaining diminishing spot.
23135	Jun 21-29	A simple thinly-populated stream.
23136	Jun 21-Jul 2	An irregular complex component with several companions, disintegrating after Jun 24 and thereafter fading to leave a single spot by Jun 30.
23137	Jun 21-26	A single spot which elongates and divides by Jun 24 and subsequently diminishes and separates.
23138	Jun 22-25	A few spots, not seen on Jun 24, reappearing as a faint spot on Jun 25.
23139	Jun 23-24	A single spot.
23140	Jun 24-30	A single spot which reappears on Jun 30 as two spots.
23141	Jun 25-29	One or two small spots.
23142	Jun 26-Jul 7	A cluster of small spots developing into an irregular stream of complex components; fading after Jul 2.
23143	Jun 27-Jul 8	A regular spot with an occasional companion.
23144	Jun 28-Jul 1	A short-lived cluster of spots.
23145	Jun 29-Jul 3	Variable intermittent spots.
23146	Jun 29-Jul 7	A small, thinly populated stream
23147	Jul 2-14	A single spot with numerous, predominantly northerly companions.
23148	Jul 3 - 5	Variable spots.
23149	Jul 3-14	An irregular spot with multiple leading companions which gradually fade. The following spot disintegrates and slowly fades.
23150	Jul 4 - 7	Several spots.
23151	Jul 4-12	A thin stream, of which the followers slowly fade.
23152	Jul 7-11	A single spot.
23153	Jul 7 - 9	A single diminishing spot.
23154	Jul 8-17	A single spot.
23155	Jul 9-10	A few small spots.
23156	Jul 11-15	A few rapidly developing spots.
23157	Jul 12-23	A single spot seen with several intermittent companions after Jul 17.
23158	Jul 12-24	A single spot with occasional companions.
23159	Jul 13-14	A single tiny spot.
23160	Jul 13-16	A few faint, variable spots.
23161	Jul 13-24	A spot with several companions, disintegrating and fading after Jul 18.
23162	Jul 17-20	Three spots on Jul 17; a single spot thereafter.
23163	Jul 17-21	A few faint, variable spots.
23164	Jul 17-19	Intermittent spots.
23165	Jul 19-24	A complex stream, the followers being more prominent.
23166	Jul 21-Aug 2	A single spot seen with companions on Jul 27.
23167	Jul 22-24	A spot, with a companion on Jul 22 only.
23168	Jul 22-27	A few intermittent diminishing spots.
23169	Jul 23-30	A few faint variable spots.
23170	Jul 24-Aug 5	A compact stream with a dominant irregular follower.
23171	Jul 25-27	One or two small spots.
23172	Jul 25-31	A developing stream until Jul 29 and fading thereafter.
23173	Jul 25-27	Diverging spots.
23174	Jul 25-Aug 2	Intermittent variable spots.
23175	Jul 27-Aug 5	A cluster of numerous variable spots, becoming intermittent after Aug 1.
23176	Jul 28-Aug 1	A few variable spots.
23177	Jul 28-30	A single spot on Jul 28; next seen as two spots on Jul 30.
23178	Jul 28-Aug 6	A slowly developing stream, decaying after Aug 1.
23179	Jul 29-Aug 11	A large irregular composite spot with multiple umbrae and variable companions.
23180	Jul 30-Aug 8	Scattered spots forming a stream by Aug 3, after which the followers fade to leave a single spot on Aug 8.
23181	Aug 3-10	A few spots developing steadily after Aug 5.
23182	Aug 5 - 6	Four spots on Aug 5; a single spot on the following day.
23183	Aug 8 - 9	A single spot on Aug 8; two widely-separated spots on Aug 9.
23184	Aug 9-13	A rapidly developing stream consisting of two main components with scattered intermittent companions.
23185	Aug 11-16	Faint scattered variable spots.
23186	Aug 12-14	Two separated spots although only the leader remains by Aug 14.
23187	Aug 12-19	Two intermittent variable spots.
23188	Aug 12-14	A small cluster of variable spots.
23189	Aug 13-20	One or two small spots developing into a stream after Aug 15.
23190	Aug 14-25	An irregular spot with several slowly-fading companions.
23191	Aug 15-19	A single intermittent spot, seen with a tiny companion on Aug 17.
23192	Aug 16-24	A simple variable stream.
23193	Aug 19-28	A thin stream of spots.
23194	Aug 20-30	A developing stream whose followers fade after Aug 24 to leave the original leader by Aug 28.

Group	1972	
23195	Aug 20-22	A single spot on the first and last days; two spots on Aug 21.
23196	Aug 20-Sep 1	A spot with variable companions.
23197	Aug 22-31	A spot with occasional companions which divides and fades after Aug 26.
23198	Aug 24-27	Variable spots.
23199	Aug 24-Sep 4	A single spot deforming and slowly disintegrating after Aug 25 and subsequently fading to a single diminished spot by Sep 1.
23200	Aug 26-Sep 1	An intermittent spot developing strongly after Aug 28 to form a compact stream with three main components.
23201	Aug 26-Sep 1	A single intermittent spot.
23202	Aug 26-Sep 4	One or two small spots developing after Aug 28 into a compact stream of irregular components which disintegrate, disperse and fade after Aug 31.
23203	Aug 27-Sep 1	A simple stream whose followers fade after Aug 30.
23204	Aug 27-Sep 8	Multiple scattered spots gradually forming a stream whose followers rapidly fade to leave the original leader by Sep 6.
23205	Aug 28-Sep 5	A few small variable spots.
23206	Aug 28-Sep 9	Widely-variable scattered spots.
23207	Aug 29-Sep 2	A single intermittent spot.
23208	Aug 29-Sep 6	One or two small intermittent spots.
23209	Aug 30-31	A single faint spot.
23210	Aug 30-31	Two spots on Aug 30; the follower has divided by the next day.
23211	Aug 31-Sep 10	A thinly-populated stream, developing after Sep 5, although the followers fade rapidly after Sep 8 to leave only the original leader.
23212	Sep 1 - 6	A developing stream.
23213	Sep 5 - 6	Multiple fading spots.
23214	Sep 5 - 7	A single spot.
23215	Sep 5 - 9	Several variable spots.
23216	Sep 7 - 9	Several fading spots.
23217	Sep 7-16	Initially a developing stream. After Sep 10 the followers fade to leave a regular spot by Sep 13. A small following companion is seen on Sep 15.
23218	Sep 9-18	A thin variable stream.
23219	Sep 10-11	A small cluster of spots.
23220	Sep 11-21	A single spot with occasional followers.
23221	Sep 14-22	Variable intermittent spots.
23222	Sep 14-18	A few small spots.
23223	Sep 16-24	A few intermittent spots.
23224	Sep 17-28	A single spot with an occasional following companion, which fragments after Sep 23 and fades thereafter.
23225	Sep 18-19	Four spots on Sep 18; a single spot on the following day.
23226	Sep 20-30	A single spot with occasional companions.
23227	Sep 20-Oct 1	A developing compact, complex stream of irregular components which elongates and slowly fades after Sep 27.
23228	Sep 21-28	A regular spot, with several leading companions which fade by Sep 27, by which time the main spot has disintegrated and subsequently fades rapidly.
23229	Sep 22-30	A single spot with one or more leading companions until Sep 26 after which the spot breaks up and fades. Not seen on Sep 29.
23230	Sep 24-25	A single faint spot.
23231	Sep 25-28	A short stream of small spots.
23232	Sep 25-Oct 4	A single spot.
23233	Sep 26-Oct 6	A gradually-developing simple stream until Oct 1 after which the leading components slowly fade to leave a few variable spots.
23234	Sep 27-28	A single spot on Sep 27; two spots on the following day.
23235	Sep 29-Oct 8	A single spot with occasional companions.
23236	Sep 29-Oct 11	A single spot with occasional companions.
23237	Sep 29-Oct 4	A single spot throughout except Oct 3 when two spots are seen.
23238	Sep 30-Oct 7	A simple stream comprising two main components, the follower of which disintegrates and fades after Oct 2 while the original leader continues to diminish and is seen with a small leading companion on Oct 6.
23239	Sep 30-Oct 8	A single spot on Sep 30; two spots, almost in contact on Oct 1. Not seen again until Oct 8 when a tiny spot is visible.
23240	Oct 1-12	A single intermittent spot.
23241	Oct 2 - 7	A few variable spots.
23242	Oct 3-12	Variable spots.
23243	Oct 4 - 7	A few variable spots.
23244	Oct 7 - 9	A few small spots.
23245	Oct 10-17	An intermittent spot until Oct 17 when two spots are visible.
23246	Oct 11-12	Two spots on Oct 11; a single spot on the following day.
23247	Oct 14-15	Two spots on Oct 14; a single spot on Oct 15.
23248	Oct 15-16	A single spot.
23249	Oct 15-25	A single spot with followers developing which together increase after Oct 19 to form a simple stream which slowly fades from Oct 23.
23250	Oct 15-28	A large regular leader with several small scattered following companions which fade to leave the original spot by Oct 26.
23251	Oct 19-28	A few changeable spots.
23252	Oct 19-26	A spot with variable companions.
23253	Oct 19-25	A few small spots.
23254	Oct 21-Nov 1	A spot with occasional companions.
23255	Oct 22-30	A spot with an occasional far-removed following companion.
23256	Oct 23-25	One or two small spots.
23257	Oct 23-Nov 4	A very extensive complex structure with multiple umbrae. The leading portion forms a regular mass and gradually drifts away from the remainder of the component after Oct 27 and thereafter slowly diminishes.
23258	Oct 26-28	Two spots.
23259	Oct 27-31	One or two small spots returning on Oct 31 as a small cluster of spots.
23260	Oct 29-30	A single spot.
23261	Oct 30-Nov 3	Two small, close clusters of spots until Nov 1 when only one spot is seen.
23262	Oct 31-Nov 2	A few decaying spots.
23263	Oct 31-Nov 3	A few small spots.
23264	Nov 5 - 7	Two developing spots.
23265	Nov 5 - 9	A few faint scattered variable spots.
23266	Nov 9-13	A compact developing stream.
23267	Nov 11-15	A single irregular spot.
23268	Nov 12-24	A single spot with an occasional companion whose umbra splits and divides after Nov 15. The follower so produced fades by Nov 20 and leaves a regular spot.
23269	Nov 17-24	A variable stream fading rapidly after Nov 22.

Group	1972/3	
23270	Nov 19-24	A simple stream of small individual components of which the followers die out by Nov 24.
23271	Nov 19-Dec 1	A single spot with occasional companions.
23272	Nov 20-28	A small stream, developing more strongly after Nov 23 to form a larger stream whose intermediate companions soon fade, leaving two main components.
23273	Nov 21-Dec 2	A slowly-diminishing spot with occasional companions.
23274	Nov 24-Dec 5	A single spot.
23275	Nov 26-28	One or two small spots.
23276	Nov 29-Dec 4	Two rapidly-developing spots, the follower of which slowly breaks up after Nov 30.
23277	Dec 3 - 7	A few tiny intermittent spots, seen as a single, more stable spot from Dec 6.
23278	Dec 6-18	A quickly-developing complex stream, elongating and fading after Dec 11.
23279	Dec 10-17	A few variable spots.
23280	Dec 10-11	A few small spots.
23281	Dec 11-21	A rapidly-developing stream whose complex followers fade after Dec 16.
23282	Dec 11-16	Variable spots.
23283	Dec 15-17	One or two faint spots.
23284	Dec 16-25	Variable spots.
23285	Dec 16-26	A few developing spots forming a simple stream of two main components.
23286	Dec 17-19	A few small spots.
23287	Dec 18-26	One or two intermittent spots.
23288	Dec 20-29	A developing complex extended stream.
23289	Dec 20-23	Two spots on Dec 20; a single spot when next seen on Dec 23.
23290	Dec 21-22	A few spots.
23291	Dec 22-28	One or two faint intermittent spots.
23292	Dec 29-Jan 1	A short-lived irregular stream.
23293	Dec 30-Jan 5	One or two small intermittent spots.
23294	Dec 30-Jan 11	A compound spot with numerous following companions which fade gradually to leave the original leader with variable attendant companions by Jan 9.
23295	Jan 1-13	A complex cluster of irregular spots elongating after Jan 4 to form an extended stream which fades after Jan 6.
23296	Jan 2 - 5	One or two small spots.
23297	Jan 3 - 4	Several decaying spots.
23298	Jan 5-15	A single intermittent spot except for Jan 11 when several spots are seen.
23299	Jan 6 - 9	Two intermittent spots.
23300	Jan 8-15	A single spot dividing after Jan 11 and becoming intermittent; reappearing on Jan 15 as a single spot.
23301	Jan 9-14	A few variable spots.
23302	Jan 13-25	An irregular spot with numerous variable companions.
23303	Jan 17-18	Decaying spots.
23304	Jan 18-20	A simple fading stream.
23305	Jan 18-24	A variable cluster of small spots.
23306	Jan 19-28	A thin stream of spots collapsing after Jan 24 to leave numerous fading spots.
23307	Jan 22-23	Several spots.
23308	Jan 24-25	Two spots.
23309	Jan 24-29	A few intermittent spots.
23310	Jan 28-Feb 1	A few intermittent spots.
23311	Jan 29-31	A few faint, irregular spots.

Group	1973	
23312	Feb 2 - 7	A few spots.
23313	Feb 5-17	A single spot with multiple umbrae. Variable companions appear but fade, together with the spot.
23314	Feb 5-17	A single regular spot of which a small section becomes detached after Feb 11 and forms several slowly-fading followers.
23315	Feb 8-15	A small compact stream.
23316	Feb 8-12	A few small intermittent spots.
23317	Feb 8 - 9	A single tiny spot.
23318	Feb 9-15	A single spot.
23319	Feb 10-22	A single spot with a double umbra and a few following companions, the leader of which develops to form an irregular component with variable companions.
23320	Feb 11-14	Variable scattered spots.
23321	Feb 12-14	Fading spots.
23322	Feb 12-18	A compact cluster of numerous variable spots.
23323	Feb 14-16	Two spots with companions, in close proximity to group 23315.
23324	Feb 17-21	One or two intermittent spots.
23325	Feb 19-25	Variable spots.
23326	Feb 21-23	Two spots until Feb 23 when only a single spot is seen.
23327	Feb 22-Mar 4	Variable intermittent spots.
23328	Feb 23-Mar 7	A simple stream with numerous small followers, decaying after Feb 28.
23329	Feb 24-25	A single spot appearing near the west limb.
23330	Feb 25-Mar 2	A few variable spots.
23331	Mar 2 - 3	A single spot.
23332	Mar 4-16	A single spot, initially with predominently leading variable companions which gradually fade, together with the main spot.
23333	Mar 6-15	A spot with a few following companions developing steadily after Mar 10 to form a stream of numerous irregular components which coalesce and slowly fade.
23334	Mar 8-19	A small cluster of spots rapidly enlarging to form two irregular structures with companions which break up and fade after Mar 11.
23335	Mar 8-19	A single spot with developing leading companions after Mar 9, forming a classic stream by Mar 14 and slowly fading thereafter.
23336	Mar 12-16	Intermittent spots.
23337	Mar 13-17	A few very faint diffuse spots.
23338	Mar 17-27	One or two small spots developing strongly to form a compact stream whose followers fade, leaving a single, now regular spot by Mar 27.
23339	Mar 22-Apr 3	A regular spot with numerous variable southerly and following companions.
23340	Mar 27-Apr 8	A large, very complex irregular stream.
23341	Mar 28-29	Three spots on Mar 28; a single spot on the following day.
23342	Mar 30-Apr 10	Initially a cluster of irregular spots forming, after Apr 3, a single spot with variable following companions.
23343	Mar 31-Apr 3	Variable spots
23344	Apr 2-12	A spot with several companions, disintegrating after Apr 8 to leave scattered fading spots.
23345	Apr 3 - 4	Two spots.
23346	Apr 3 - 4	Decaying spots.
23347	Apr 3-11	A single spot appearing with companions after Apr 7.
23348	Apr 5-13	A slowly-developing stream of irregular spots, fading after Apr 10.

Group	1973	
23349	Apr 5 - 6	A single spot.
23350	Apr 7-17	A rapidly-developing cluster of complex irregular spots, elongating slowly after Apr 9 and fading.
23351	Apr 8 - 9	Two spots on Apr 8; a single spot on the following day.
23352	Apr 12-13	A single tiny spot.
23353	Apr 15-17	A single spot.
23354	Apr 18-25	A complex stream of small spots.
23355	Apr 18-30	A steadily-developing irregular stream of complex components fading significantly after Apr 24, although development re-occurs after Apr 27 and a large complex mass with a few small close spots is formed.
23356	Apr 22-May 4	A large, highly-irregular spot with multiple leading companions disintegrating after Apr 27 and fading to leave a single spot by May 2.
23357	Apr 23-30	One or two intermittent spots.
23358	Apr 23-29	A few variable spots.
23359	May 1-13	An extensive irregular stream of multiple complex components, fading steadily after May 5.
23360	May 2 - 4	Multiple spots appearing near the west limb.
23361	May 4 - 5	A single spot.
23362	May 4 - 7	Two spots with occasional companions.
23363	May 5 - 7	A single spot seen with a leading companion on May 5.
23364	May 7 - 8	Two spots on May 7; a single spot on May 8.
23365	May 15-20	A compact variable stream.
23366	May 15-24	A single spot seen with numerous scattered companions after May 19.
23367	May 15-27	A complex irregular spot with several companions. After May 22 it assumes a regular configuration with the generation of several leading companions which slowly fade, together with the main spot.
23368	May 18-19	A single spot.
23369	May 21-25	A few spots.
23370	May 22-30	A developing stream.
23371	May 22-27	Variable intermittent spots.
23372	May 24-28	A single spot with an occasional companion.
23373	May 28-Jun 2	Variable spots.
23374	Jun 3 - 4	Decaying spots.
23375	Jun 6-15	One or two small spots developing after Jun 10 into a simple stream.
23376	Jun 7 - 8	Fading spots.
23377	Jun 7-18	A diminishing spot with variable companions.
23378	Jun 7-16	A diminishing spot with occasional companions.
23379	Jun 10-11	One or two faint spots.
23380	Jun 11-12	Decaying spots.
23381	Jun 11-12	A single tiny spot.
23382	Jun 11-23	Initially a compact stream, dispersing after Jun 14 and thereafter becoming variable in appearance although fading overall, to leave scattered spots by Jun 21.
23383	Jun 16-17	Fading spots.
23384	Jun 17-22	A few intermittent spots.
23385	Jun 18-29	A developing stream reaching maturity on Jun 22, after which the following components advance to merge with the original leader to form a complex structure by Jun 26 which continues to diminish.
23386	Jun 19-29	A simple stream fading slowly after Jun 21.
23387	Jun 20-30	A spot with variable following companions undergoing brief development after Jun 26 which is followed by rapid decay after Jun 27.
23388	Jun 29-Jul 8	A thin line of spots developing erratically after Jul 2 to form an irregular complex stream by Jul 6, although rapid decay occurs after this date.
23389	Jun 29-Jul 12	A large irregular spot with variable companions. Following components develop after Jul 2 and remain fairly static until Jul 9 when considerable development is seen to occur.
23390	Jul 6-10	Variable scattered spots.
23391	Jul 7-17	Variable intermittent spots.
23392	Jul 13-20	A single spot, reappearing as two spots from Jul 18.
23393	Jul 17-18	A few variable spots.
23394	Jul 17-22	Variable intermittent spots.
23395	Jul 18-22	A few variable intermittent spots.
23396	Jul 24-25	Decaying spots.
23397	Jul 25-Aug 5	A variable spot with companions, diminishing progressively after Aug 1.
23398	Aug 1 - 3	Variable spots.
23399	Aug 1-11	A single diminishing spot with occasional companions.
23400	Aug 4-11	An extended, enlarging complex stream, the following regions of which decay after Aug 8.
23401	Aug 6 - 9	A single intermittent spot.
23402	Aug 6-12	A few variable intermittent spots.
23403	Aug 18-28	A few variable spots developing significantly after Aug 24.
23404	Aug 24-26	A single spot.
23405	Aug 24-Sep 4	A regular spot seen with an occasional tiny companion.
23406	Aug 25-Sep 1	A steadily-developing irregular stream, fading after Aug 29.
23407	Aug 28-Sep 9	A compact complex stream of irregular components whose followers fade steadily after Sep 4.
23408	Aug 29-Sep 6	Variable intermittent spots.
23409	Aug 30-Sep 6	Two main components with occasional small companions.
23410	Aug 30-Sep 12	A single spot with variable companions.
23411	Aug 31-Sep 5	A simple variable stream.
23412	Sep 1-10	A rapidly-developing complex stream of irregular components of which the leaders slowly fade after Sep 3, leaving a now diminished following component with occasional companions.
23413	Sep 2 - 4	Decaying spots.
23414	Sep 2 - 9	A regular leader with slowly-fading following companions.
23415	Sep 2-13	A few spots developing after Sep 4 into an irregular scattered stream of multiple components which fades rapidly after Sep 10.
23416	Sep 9-12	A small irregular stream.
23417	Sep 14-18	One or two intermittent spots.
23418	Sep 15-27	A single spot with variable companions, one of which is seen alone on Sep 27.
23419	Sep 16-17	A few small spots.
23420	Sep 16-18	Intermittent spots.
23421	Sep 20-30	Variable spots.
23422	Sep 20-Oct 2	An irregular spot with a double umbra which never quite achieves separation, although elongation occurs.
23423	Sep 20-Oct 3	A fairly compact stream comprising two main leader and follower components with variable intermediate companions which fade to leave the two original spots, now diminished, by Sep 29.
23424	Sep 21-23	A few faint spots.
23425	Sep 23-24	One or two small spots.
23426	Sep 24-Oct 7	A single spot with occasional companions.

Group	1973/4	
23427	Sep 25-27	A few spots.
23428	Sep 25-Oct 6	A single spot with companions, developing after Oct 1 to form a simple short lived stream.
23429	Sep 26-Oct 5	A cluster of multiple tiny irregular spots, coalescing to form a tight cluster of larger components by Oct 1.
23430	Sep 27-Oct 9	A single regular spot.
23431	Oct 6 - 9	A single spot until Oct 9 when a thin stream of spots is seen.
23432	Oct 7 - 9	A single spot.
23433	Oct 13-18	Variable spots.
23434	Oct 15-18	Two spots until Oct 18 when only the leader is seen.
23435	Oct 22-Nov 2	Three large components arranged in stream formation, of which the intermediate component merges with the leader after Oct 25 while the follower slowly fades, to leave a single, now only slightly irregular spot by Nov 2.
23436	Oct 22-28	A single spot.
23437	Oct 24-Nov 5	A single spot seen with an occasional following companion.
23438	Oct 25-26	A single spot and companion.
23439	Oct 25-31	A single spot fragmenting after Oct 28.
23440	Oct 28-Nov 2	A single spot.
23441	Oct 29-30	A single spot.
23442	Oct 29-30	Diverging spots.
23443	Nov 2 - 4	A few fading spots.
23444	Nov 13-20	A small variable stream of irregular spots.
23445	Nov 18-29	Intermittent spots.
23446	Nov 19-24	A few variable spots.
23447	Nov 21-25	A few spots, forming a short lived stream from Nov 23.
23448	Nov 21-Dec 3	A large irregular spot with numerous following companions, distorting and fragmenting after Nov 25 to leave widely scattered spots from Nov 29.
23449	Nov 26-30	A variable stream.
23450	Nov 29-Dec 1	A variable cluster of small spots, the following spots fading rapidly after Nov 30.
23451	Dec 8-18	A single spot.
23452	Dec 15-27	A single spot.
23453	Dec 16-28	A steadily-developing stream ultimately comprising a regular leader with a compact cluster of small following companions.
23454	Dec 18-26	A few small intermittent spots developing to form a simple stream after Dec 23.
23455	Dec 23-24	Two spots on Dec 23; a single spot on the following day.
23456	Dec 25-28	A few small spots.
23457	Jan 1 - 5	A simple, compact stream.
23458	Jan 7-15	A compact, variable stream.
23459	Jan 8-19	A single spot with variable companions.
23460	Jan 9-12	A single spot.
23461	Jan 10-21	A single spot seen with occasional companions.
23462	Jan 12-22	A regular spot with a single, leading companion.
23463	Jan 14-18	Variable spots.
23464	Jan 14-24	Variable intermittent spots.
23465	Jan 14-20	Two spots with intermediate, scattered companions.
23466	Jan 19-24	A developing complex stream.
23467	Jan 19-20	Several small spots.
23468	Feb 1 - 2	One or two tiny spots.
23469	Feb 2 - 3	Two close spots on Feb 2; a single spot on the following day.
23470	Feb 7-13	A few variable, intermittent spots.

Group	1974	
23471	Feb 8-20	A single spot, becoming regular with several variable, following companions.
23472	Feb 12-25	Initially a single regular spot, distending after Feb 18 and fading, although further development occurs after Feb 21 to form a stream with two main components.
23473	Feb 13-18	Several intermittent spots, developing after their reappearance on Feb 15 to form a straggling stream.
23474	Feb 15-24	A rapidly developing complex, irregular stream.
23475	Feb 23-28	Variable spots.
23476	Feb 26-Mar 1	Variable spots.
23477	Feb 26-Mar 2	Two spots with occasional companions.
23478	Feb 28-Mar 1	One or two small spots.
23479	Mar 4-10	An irregular slowly fragmenting spot, not seen on Mar 9.
23480	Mar 6-12	A single bright spot with occasional companions.
23481	Mar 9-16	A compact, complex stream whose followers decay slowly after Mar 12.
23482	Mar 11-22	Variable intermittent spots.
23483	Mar 12-20	Small, faint, intermittent spots.
23484	Mar 14-16	A single spot.
23485	Mar 17-19	Two very faint spots on Mar 17; a single spot when next seen on Mar 19.
23486	Mar 18-30	A single regular spot, seen with a following companion between Mar 19 and 21.
23487	Mar 22-25	A simple stream.
23488	Mar 28-31	A single spot, seen with a following companion on Mar 29.
23489	Mar 30-Apr 5	Variable intermittent spots.
23490	Mar 31-Apr 11	A slowly developing stream reaching maturity on Apr 7 and fading thereafter.
23491	Apr 7-17	A rapidly developing cluster of multiple, irregular spots, elongating to form a stream by Apr 11, which coalesces slowly after Apr 14 to leave a single extensive region on Apr 16.
23492	Apr 8-14	A slowly developing, thin stream.
23493	Apr 9-18	A few scattered spots developing, after Apr 12, into a ragged stream achieving uniformity by Apr 16.
23494	Apr 15-16	A single spot.
23495	Apr 15-20	A single spot.
23496	Apr 17-21	A simple stream, with a single, intermediate spot from Apr 19.
23497	Apr 17-21	Variable spots.
23498	Apr 18-21	Variable spots.
23499	Apr 18-23	A single, intermittent spot.
23500	Apr 22-30	Several small spots developing to form a compact cluster by Apr 25; elongating and fading thereafter.
23501	Apr 29-30	A single spot.
23502	Apr 29-May 6	A single, intermittent spot.
23503	Apr 29-May 11	A regular spot.
23504	May 1 - 5	A simple, decaying stream.
23505	May 1-12	A single spot with numerous variable companions.
23506	May 1-13	A complex, irregular stream.
23507	May 3 - 7	A small, variable stream.
23508	May 3-15	A regular spot, seen with occasional companions after May 9.
23509	May 5 - 8	A single spot.
23510	May 5-11	Scattered spots forming a short-lived stream which decays to leave a single spot after May 8.
23511	May 6 - 7	One or two small spots.
23512	May 7 - 8	A single spot.
23513	May 7 - 8	A single spot.

Group	1974	
23514	May 8-13	Scattered spots, not seen on May 12.
23515	May 9-11	A few small spots.
23516	May 13-14	A few small spots.
23517	May 13-14	A few small spots.
23518	May 15-17	A single spot with a decaying follower.
23519	May 22-24	Variable spots.
23520	May 22-29	An intermittent stream, developing rapidly after its reappearance on May 26.
23521	May 28-Jun 6	One or two small, intermittent spots forming a small cluster after reappearing on Jun 3.
23522	May 30-Jun 11	A scattered stream of numerous small spots.
23523	Jun 4- 7	A single, intermittent spot.
23524	Jun 4-10	Two components with variable associated companions.
23525	Jun 6-11	Several variable spots, not seen on Jun 7.
23526	Jun 6- 7	A single spot.
23527	Jun 8-18	A simple stream, of which the followers slowly fade after Jun 13.
23528	Jun 9-12	A small stream of spots.
23529	Jun 13-24	A double umbraed spot, dividing after Jun 18, with several variable companions.
23530	Jun 24-25	A few small spots.
23531	Jun 26-Jul 8	A single irregular spot, slowly diminishing, seen with a following campanion on Jul 1. Developing again after Jul 4 into a triangular shaped cluster.
23532	Jun 28-Jul 9	A small cluster of irregular spots developing rapidly and forming two large, complex structures by Jul 3.
23533	Jun 28-Jul 8	A single diminishing spot.
23534	Jun 30-Jul 6	A steadily growing stream.
23535	Jul 5- 9	An irregular, compact stream, the followers of which decay after Jul 7.
23536	Jul 8-20	A large, regular spot seen occasionally with following companions.
23537	Jul 13-22	A fast developing stream until Jul 16; thereafter slowly fading.
23538	Jul 14-16	Variable spots.
23539	Jul 14-22	Variable spots.
23540	Jul 14-26	A single spot with occasional following companions.
23541	Jul 21-29	Two close, complex components gradually drifting apart.
23542	Jul 21-31	Initially a single spot, the trailing edge of which fragments after Jul 24 to form following companions.
23543	Jul 24-Aug 2	A single spot, with occasional companions, fading after Jul 28.
23544	Jul 26-Aug 3	A few intermittent spots developing after Jul 29 to form a small, irregular stream.
23545	Jul 30-Aug 3	A few intermittent spots.
23546	Aug 4-16	A single, regular spot with occasional companions.
23547	Aug 5-16	A single spot with occasional leading and following companions.
23548	Aug 6-13	Several variable, intermittent spots.
23549	Aug 9-19	A rapidly developing stream led by a regular spot, which alone remains, with occasional companions, from Aug 16.
23550	Aug 9-15	A single, bright spot.
23551	Aug 11-19	Variable spots.
23552	Aug 12-20	A few faint spots, developing after Aug 15 to form a moderate-sized cluster.
23553	Aug 13-26	A regular spot.
23554	Aug 14-15	A few fading spots.
23555	Aug 19-21	One or two very faint spots.
23556	Aug 19-31	A single spot with occasional following companions.
23557	Aug 21-25	A small cluster, forming a stream by Aug 23.
23558	Aug 31-Sep 12	A single, regular spot.

Group	1974/5	
23559	Sep 3-14	A single regular spot with an occasional tiny companion.
23560	Sep 4- 6	A single spot, seen with a small companion on the last day.
23561	Sep 4-12	A single, intermittent spot, growing rapidly after Sep 9 to form two main components.
23562	Sep 4- 9	A single spot.
23563	Sep 6-11	One or two intermittent spots.
23564	Sep 9-21	A large spot whose trailing penumbra contains an extended, irregular structure which separates from the main spot by Sep 18.
23565	Sep 9-18	Variable spots.
23566	Sep 10-18	A single, bright spot.
23567	Sep 16-20	A few small spots whose followers fade after Sep 18.
23568	Sep 17-19	Variable spots, enlarging as they approach the west limb.
23569	Sep 24-27	An irregular spot with variable followers.
23570	Sep 26-Oct 6	Variable intermittent spots.
23571	Sep 27-Oct 9	A single spot seen with northerly companions between Oct 1 and 4.
23572	Sep 28-Oct 10	A simple stream led by a regular spot.
23573	Sep 29-Oct 2	A few variable spots.
23574	Sep 30-Oct 1	One or two small spots.
23575	Oct 4-14	A thin stream until Oct 8 when rapid development produces a complex stream.
23576	Oct 4-11	Variable spots.
23577	Oct 4-17	A simple stream whose regular follower develops, after Oct 9, into a large, complex, three-component structure.
23578	Oct 5- 6	A single spot.
23579	Oct 5-18	A very extensive, highly irregular, complex cluster.
23580	Oct 9-10	One or two small spots.
23581	Oct 11-13	A few variable, intermittent spots.
23582	Oct 19-22	A rapidly developing stream appearing near the west limb.
23583	Oct 25-Nov 4	A single spot with occasional companions.
23584	Oct 26-30	A small variable stream.
23585	Oct 26-28	One or two small spots.
23586	Oct 27-28	A few small spots.
23587	Oct 30-31	A single spot.
23588	Nov 1- 7	A compact cluster of irregular spots.
23589	Nov 2- 3	Two faint spots on Nov 2; a single spot on Nov 3.
23590	Nov 7- 8	A few small, variable spots.
23591	Nov 10-12	Three spots on Nov 10; a single spot thereafter.
23592	Nov 10-13	Variable intermittent spots.
23593	Nov 11-13	Variable spots.
23594	Nov 15-27	A large regular spot with occasional following companions.
23595	Nov 19-24	A compact, variable stream.
23596	Nov 19-25	Variable scattered spots.
23597	Nov 27-30	Two slowly fading spots of which only one remains by Nov 30.
23598	Dec 5- 6	A few diminishing spots.
23599	Dec 7-13	A few intermittent spots.
23600	Dec 11-19	A variable stream.
23601	Dec 12-24	A single regular spot, seen with a leading companion on Dec 15.
23602	Dec 18-28	A single spot with occasional companions.
23603	Dec 19-20	Two spots.
23604	Dec 19-23	One or two small spots.
23605	Dec 28-30	Two spots.
23606	Dec 29-Jan 7	A simple stream.
23607	Jan 1- 3	One or two spots appearing near the west limb.
23608	Jan 2-13	A single spot with occasional following companions.
23609	Jan 7- 9	A single spot, seen with one or two following companions on the first and last days.
23610	Jan 8-20	A single spot, seen with an attendant companion on Jan 15.
23611	Jan 12-13	A single spot.

Group	1975	
23612	Jan 15-16	Two irregular components.
23613	Jan 18-23	A simple, variable stream.
23614	Jan 21-23	A single spot.
23615	Jan 25-26	A single spot.
23616	Feb 2- 8	A simple stream.
23617	Feb 2- 4	One or two small spots.
23618	Feb 5-14	A simple stream, the followers of which fade slowly after Feb 10.
23619	Feb 23-25	A few variable spots.
23620	Mar 1- 4	A very simple stream.
23621	Mar 6-10	A single spot until Mar 10 when several scattered spots are visible.
23622	Mar 8-15	A simple irregular stream forming a tight cluster after Mar 12.
23623	Mar 15-20	A small stream of irregular spots.
23624	Mar 16-17	Two spots.
23625	Mar 26-27	Two spots on Mar 26; a single spot on the following day.
23626	Apr 7- 9	A single spot, seen with a following companion on Apr 7.
23627	Apr 8-10	A single spot on Apr 8 and 10; several larger spots on Apr 9.
23628	Apr 23-24	One or two small, faint spots.
23629	Apr 27-30	Two close spots.
23630	Apr 27-May 5	One or two small, intermittent spots.
23631	Apr 30-May 6	Variable spots.
23632	May 1- 7	A simple stream of two components and intermediate companions.
23633	May 10-12	One or two faint spots.
23634	May 22-23	A single spot.
23635	May 31-Jun 6	A few variable spots.
23636	Jun 11-12	Two faint spots on Jun 11; a single spot on the following day.
23637	Jun 15-19	A short stream of two main irregular components.
23638	Jun 23-29	A small, variable stream.
23639	Jun 24-Jul 6	A large regular spot with variable following companions.
23640	Jun 26-27	Two or three small spots.
23641	Jun 28-29	A single spot.
23642	Jun 5-16	Multiple scattered spots forming a compact, irregular stream by Jul 11.
23643	Jul 6- 8	A few variable spots.
23644	Jul 10-22	A single spot with occasional companions.
23645	Jul 14-25	A regular spot with numerous variable companions.
23646	Jul 19-20	A single spot.
23647	Jul 21-Aug 2	A single spot with an occasional companion.
23648	Jul 24-31	A compact, irregular stream, of which most of the irregular components have faded by Jul 28 to leave a regular leader and slowly fading followers.
23649	Jul 30-Aug 11	A compact cluster of irregular spots with the exception of a single following regular component.
23650	Aug 3-16	A large complex, irregular stream.
23651	Aug 4-11	A developing stream of variable spots.
23652	Aug 11-21	A few intermittent, variable spots.
23653	Aug 12-13	A single spot.
23654	Aug 16-19	A few variable spots.
23655	Aug 20-22	Two spots.
23656	Aug 21-27	Variable, intermittent spots.
23657	Aug 25-30	A simple stream.
23658	Aug 28-Sep 1	A few faint intermittent spots.
23659	Sep 1- 4	A single intermittent spot, seen with several following companions on Sep 1.
23660	Sep 2- 8	A short-lived, variable, complex stream.
23661	Sep 4- 8	One or two small, intermittent spots.

Group	1975/6	
23662	Sep 4- 5	A few small spots.
23663	Sep 6-17	A single spot with occasional companions.
23664	Sep 17-22	A simple, elongating stream.
23665	Sep 20-22	A few small spots.
23666	Sep 20-22	Two spots with occasional companions.
23667	Sep 30-Oct 13	A single spot seen with occasional companions.
23668	Oct 13-21	A simple stream led by a regular spot which alone remains on Oct 18.
23669	Oct 17-18	A single spot.
23670	Nov 3- 8	A simple stream.
23671	Nov 4-14	A single spot with numerous variable companions.
23672	Nov 7-11	A few small, intermittent spots.
23673	Nov 11-12	Two spots on Nov 11; a single spot on the following day.
23674	Nov 13-22	A variable stream.
23675	Nov 13-25	Initially a single spot, seen later with leading components which gradually fade to leave the original spot and a southerly, fading component.
23676	Dec 2- 9	A variable irregular stream.
23677	Dec 14-19	A few small, variable spots.
23678	Dec 24-25	A spot, with a few leading companions on Dec 24 only.
23679	Dec 24-26	A single spot.
23680	Jan 12-14	A few small spots.
23681	Jan 12-23	An irregular stream with a complex leader which divides after Jan 18.
23682	Jan 27-31	A single, intermittent spot.
23683	Feb 13-19	A small, variable stream.
23684	Feb 17-21	A few variable spots.
23685	Mar 6- 8	A few spots.
23686	Mar 7- 8	A single spot.
23687	Mar 9-15	Variable spots.
23688	Mar 13-15	One or two small spots.
23689	Mar 16-24	A complex, irregular stream.
23690	Mar 17-21	Two spots with occasional companions.
23691	Mar 24-Apr 6	A large, complex, irregular component with occasional companions.
23692	Mar 26-27	A few small spots.
23693	Mar 27-30	A simple stream.
23694	Apr 9-20	A regular spot with variable leading and following companions.
23695	Apr 14-26	A single spot with occasional companions.
23696	Apr 17-23	Variable intermittent spots.
23697	Apr 21-May 3	A single spot, with variable companions becoming abundant after Apr 28.
23698	Apr 26-28	A few small spots.
23699	May 3- 6	A few small spots.
23700	May 5-17	A regular spot with occasional companions.
23701	May 11-14	Two spots on May 11; a single spot thereafter.
23702	May 13-14	Two spots.
23703	May 18-24	One or two intermittent spots.
23704	May 20-26	A few intermittent spots.
23705	May 22-23	A single faint spot.
23706	Jun 8-10	Variable spots.
23707	Jun 12-15	Decaying spots.
23708	Jun 14-22	A slowly developing complex stream, gradually fading after Jun 18.
23709	Jun 21-24	A few fading spots.
23710	Jun 22-Jul 3	A single spot with occasional following companions.
23711	Jun 24-26	One or two small spots.
23712	Jul 4- 7	A few variable spots.
23713	Aug 1-13	A large spot with variable companions.

Group	1976/7	
23714	Aug 9-14	Variable spots.
23715	Aug 9-12	A single, intermittent spot.
23716	Aug 15-21	A variable cluster.
23717	Aug 19-26	A single spot with occasional companions.
23718	Aug 28-Sep 10	A regular spot with occasional companions.
23719	Sep 1- 2	Two spots with companions.
23720	Sep 9-15	A complex, irregular, variable stream fading after Sep 11.
23721	Sep 12-13	A few small spots.
23722	Sep 17-19	A few small spots.
23723	Sep 25-Oct 7	A single spot with an infrequent companion.
23724	Sep 25-Oct 7	A single spot with an occasional companion.
23725	Sep 29-30	A few small spots.
23726	Oct 1- 7	Two variable spots.
23727	Oct 12-20	A simple variable stream.
23728	Oct 12-22	A few faint, variable spots.
23729	Oct 17-19	One or two faint spots.
23730	Oct 22-30	A compact cluster of irregular spots, elongating to form a a stream after Oct 25.
23731	Oct 23-Nov 2	A single, intermittent spot.
23732	Nov 17-29	A regular spot with occasional following companions.
23733	Dec 7-17	A simple stream led by a regular spot which alone remains on Dec 16.
23734	Dec 8- 9	A few diminishing spots.
23735	Dec 14-19	Variable spots.
23736	Dec 14-26	A regular spot with occasional companions.
23737	Dec 16-18	A few small spots.
23738	Dec 24-Jan 5	A simple stream, of which many of the followers die out by Dec 30 to leave the original leader.

GENERAL CATALOGUE OF SUNSPOTS

No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1971/2	d	1972	°	1972	°			°	°	
22979	Jan 4.3	2	Jan 2	-25	Jan 3	-13	1	8	308.9	-10.9	
22980	7.5	5	2	-69	6	-13	4	29	266.7	-12.2	
1	8.88	8	3	-71	10	+21	8	50	248.2	-22.6	
2	Dec 31.8	2	5	+57	6	+74	5	43	354.2	+12.7	
3	Jan 11.11	7/ 8	8	-40	15	+54	5	37	218.9	-12.9	
4	13.06	7	8	-68	14	+21	8	59	193.1	- 8.7	
22985	19.6	3	14	-70	16	-44	3	24	107.2	-10.3	
6	20.54	13	14	-80	26	+73	52	446	94.7	-15.8	2147(3)
7	19.67	11	15	-57	25	+76	22	162	106.2	+14.4	
8	19.1	2	17	-25	18	-11	2	13	113.0	-12.5	
9	14.1	2	18	+53	19	+70	2	13	179.1	- 8.7	
22990	18.2	4	21	+43	24	+80	37	225	125.6	+17.1	2149(1)
1	19.2	4	21	+29	24	+67	19	119	112.4	-16.9	
2	24.29	8/ 9	22	-26	30	+82	10	78	45.5	- 8.7	
3	23.69	5/ 7	23	- 3	29	+75	2	24	53.3	-13.2	
4	26.31	6/ 7	23	-41	29	+42	2	14	18.7	+14.6	
22995	29.2	6	23	-75	28	-13	17	118	340.6	-13.4	
6	29.21	12	23	-80	Feb 3	+70	15	87	340.6	-16.2	2150(1)
7	24.46	7	24	- 2	Jan 30	+79	11	85	43.2	-15.3	2151(1)
8	30.37	10	24	-81	Feb 2	+35	17	96	325.3	+13.5	
9	31.3	5	25	-79	Jan 29	-24	3	27	312.5	+13.8	
23000	31.70	11	27	-60	Feb 6	+81	9	60	307.8	+ 8.7	
1	28.31	2	28	- 1	Jan 29	+17	1	6	352.5	- 5.7	
2	26.8	3	30	+48	Feb 1	+70	4	34	12.7	+10.9	
3	30.5	2/ 3	Feb 1	+21	3	+52	0	4	323.6	+10.5	
4	31.7	5	2	+18	6	+73	5	37	307.7	-12.1	
23005	Feb 3.1	5	3	+ 4	7	+56	8	44	276.2	- 0.7	
6	9.2	4/ 5	3	-76	7	-24	3	22	196.0	- 7.2	
7	4.9	6	5	+ 7	10	+70	13	82	253.0	-19.7	
8	7.03	3	6	- 9	8	+19	1	10	224.5	- 6.0	
9	9.8	2	7	-34	8	-16	4	16	188.1	- 7.1	
23010	13.12	9	8	-65	16	+44	20	124	144.2	- 8.3	
1	14.1	4	8	-75	11	-35	9	56	130.8	+ 7.2	
2	14.65	13	8	-81	20	+73	35	200	124.1	+16.5	2149(2)
3	16.68	14	10	-80	23	+85	40	264	97.3	-17.7	2147(4)
4	16.86	12	11	-70	22	+72	9	49	95.0	+23.9	
23015	17.37	11	12	-69	22	+65	18	111	88.3	-21.8	
6	15.78	4	14	-19	17	+27	0	9	109.2	-12.6	
7	19.45	11	14	-68	24	+67	19	123	60.9	- 7.3	
8	20.79	12	15	-69	26	+75	44	271	43.3	-14.5	2151(2)
9	16.4	3	16	+ 2	18	+22	0	8	101.7	-11.9	

GENERAL CATALOGUE OF SUNSPOTS

No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1972	d	1972	°	1972	°			°	°	
23020	Feb 22.18	13	Feb 16	-78	Feb 28	+84	93	731	25.0	+ 7.4	2152(1)
1	22.73	13	16	-81	28	+77	44	356	17.7	+11.9	
2	15.6	3	18	+34	20	+61	5	26	111.7	+17.0	2153(1)
3	25.17	13	19	-78	Mar 2	+86	78	600	345.5	-17.0	2150(2)
4	26.9	3	21	-74	Feb 23	-48	0	5	322.5	-12.3	
23025	17.3	2	22	+66	23	+80	24	110	89.0	+ 5.3	
6	21.6	3	22	+ 8	24	+37	0	5	32.2	+14.8	
7	27.12	3/ 7	22	-65	28	+17	0	3	319.8	+ 6.4	
8	23.6	4	25	+21	28	+65	1	12	6.3	+10.9	
9	Mar 2.84	10	25	-85	Mar 5	+34	14	105	257.7	- 9.0	
23030	Feb 28.80	8	27	-23	5	+78	17	111	297.8	+ 9.1	
1	29.27	6	28	-16	4	+58	2	13	291.7	-10.1	
2	Mar 2.4	2	28	-41	Feb 29	-28	3	21	263.3	+20.3	
3	Feb 27.1	2	29	+28	Mar 1	+45	1	4	320.8	+ 1.4	
4	Mar 5.19	11	29	-70	10	+74	10	56	226.8	- 7.5	
23035	6.88	8	Mar 1	-75	8	+20	6	36	204.5	+10.6	
6	7.75	14	1	-80	14	+75	169	1079	193.0	- 8.7	2154(1)
7	5.0	2	3	-20	4	- 8	1	4	229.3	-12.0	
8	1.4	2	4	+40	5	+50	2	16	276.1	+ 5.2	
9	11.39	13	5	-80	17	+78	25	184	145.0	-20.6	
23040	13.31	13	7	-77	19	+79	23	142	119.8	+16.7	2149(3)
1	14.24	12	8	-76	19	+73	55	399	107.5	+14.7	2153(2)
2	15.44	12	9	-78	20	+62	7	46	91.7	-20.0	2147(5)
3	15.35	10	12	-43	21	+81	15	93	92.8	+ 5.3	
4	15.83	9	12	-46	20	+59	12	76	86.5	+ 9.0	
23045	18.20	8	13	-65	20	+30	9	47	55.2	- 6.4	
6	20.26	13	14	-77	26	+79	35	224	28.2	+ 8.1	2152(2)
7	14.9	2	15	+ 9	16	+18	0	2	99.2	- 6.6	
8	19.16	3/10	15	-48	24	+67	1	4	42.7	+13.5	
9	17.77	6	16	-19	21	+51	11	60	61.0	- 9.2	
23050	21.14	9	18	-37	26	+68	20	107	16.6	-19.3	
1	18.3	4/ 5	19	+14	23	+66	1	11	53.4	- 9.7	2155(1)
2	24.40	11	19	-68	29	+69	57	330	333.5	+ 8.3	
3	17.1	3	20	+44	22	+69	9	49	70.4	- 7.9	
4	22.17	6	22	- 1	27	+71	14	89	2.9	+ 9.4	
23055	23.63	6/ 7	22	-18	28	+63	2	15	343.8	-21.0	
6	26.14	6	22	-51	27	+17	4	24	310.6	-11.6	
7	19.5	3	23	+50	25	+77	4	22	37.7	+13.7	
8	19.7	2	23	+48	24	+61	3	9	34.9	+15.3	
9	22.3	2	24	+28	25	+40	4	19	2.0	-15.6	
23060	27.0	2	24	-35	25	-21	2	8	299.9	- 4.6	
1	Apr 3.36	8/ 9	28	-79	Apr 5	+24	6	40	202.2	- 8.3	
2	3.89	10	29	-73	7	+47	18	113	195.2	- 8.3	2154(2)
3	Mar 30.79	3	30	- 4	1	+24	1	12	249.3	-26.3	
4	29.2	2	Apr 1	+44	2	+55	2	16	270.7	-14.7	

No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1972	d	1972	°	1972	°			°	°	
23065	Apr 2.96	5	Apr 1	-18	Apr 5	+30	4	22	207.5	+ 0.4	
6	9.02	12	3	-76	14	+72	3	17	127.5	- 9.1	
7	4.7	5	5	+ 7	9	+64	11	61	184.6	-11.9	
8	7.87	5	6	-20	10	+34	8	49	142.7	+ 7.7	
9	11.76	11	6	-74	16	+64	17	99	91.3	-15.2	
23070	12.45	11	6	-80	16	+51	30	230	82.3	- 7.8	
1	14.51	12	8	-81	19	+69	12	92	55.0	-11.4	2155(2)
2	16.55	13	10	-79	22	+76	12	72	28.0	+ 7.7	2152(3)
3	9.7	2	12	+38	13	+49	2	10	119.1	- 8.7	
4	11.7	2	13	+22	14	+35	1	12	92.5	+ 9.8	
23075	11.9	2	13	+18	14	+32	0	5	89.0	- 3.0	
6	18.14	6	15	-38	20	+32	7	41	7.1	- 6.8	
7	20.69	8	15	-71	22	+22	3	30	333.4	-11.8	
8	21.78	14	15	-88	28	+85	48	328	319.0	-10.0	2156(1)
9	21.90	4/10	18	-49	27	+71	1	7	317.3	+ 8.0	
23080	23.8	2	19	-60	20	-45	2	5	291.8	+17.0	
1	21.59	6	20	-15	25	+52	5	29	321.4	- 3.1	
2	25.12	9/10	20	-63	29	+55	8	47	274.9	-13.4	
3	20.3	3	21	+16	23	+40	6	37	338.5	+14.2	
4	26.80	12	21	-70	May 2	+74	21	139	252.7	+16.8	
23085	26.9	5	21	-71	Apr 25	-21	9	41	251.5	- 6.2	
6	28.08	8	23	-64	30	+32	6	32	235.8	+ 3.5	
7	22.3	2	24	+27	25	+40	2	12	312.4	-11.0	
8	23.1	6	24	+16	29	+78	53	320	301.8	+ 8.8	2157(1)
9	26.90	3	25	-23	27	+ 6	0	5	251.4	+21.7	
23090	May 6.33	6/ 7	May 1	-67	May 7	+15	2	12	126.8	- 6.5	
1	8.77	13	2	-84	14	+75	56	405	94.5	-14.7	2158(1)
2	8.0	3	3	-60	5	-38	1	6	105.0	+ 8.2	
3	8.97	8/ 9	6	-35	14	+74	2	16	91.8	+ 6.2	
4	8.92	9	6	-38	14	+76	42	278	92.5	+17.1	2159(1)
23095	8.08	3	7	-10	9	+18	1	5	103.6	-24.3	
6	9.69	6	9	- 6	14	+62	3	15	82.2	+13.7	
7	13.6	5	9	-57	13	- 3	1	9	31.2	+ 6.8	
8	15.19	13	9	-79	21	+84	41	276	9.6	- 7.2	
9	15.51	5/ 8	11	-53	18	+37	1	8	5.4	+13.0	
23100	17.99	13	11	-86	23	+74	57	421	332.6	- 5.4	
1	16.92	4/ 7	13	-48	19	+32	1	3	346.6	+12.0	
2	18.91	8	13	-75	20	+19	4	27	320.4	- 9.1	2156(2)
3	19.7	7	13	-84	19	- 5	4	24	309.4	+ 7.5	2157(2)
4	17.4	2	14	-41	15	-27	2	8	340.2	-18.4	
23105	20.55	14	14	-79	27	+84	126	991	298.7	-13.5	2160(1)
6	20.54	13	14	-81	26	+77	37	236	298.8	+13.8	
7	17.18	4	16	-11	19	+29	1	15	343.2	-13.0	
8	18.8	2	17	-18	18	- 5	1	7	321.5	+11.5	
9	21.7	5	22	+ 7	26	+58	3	20	283.1	-20.5	

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No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1972	d	1972	°	1972	°			°	°	
23110	May 30.65	13	May 24	-83	June 5	+78	86	551	165.0	+ 8.4	2161(1)
1	June 2.2	6	27	-78	1	-12	4	16	131.1	+18.3	
2	May 28.6	3	29	+ 9	May 31	+38	4	22	192.3	- 7.8	
3	June 4.75	13	29	-84	June 10	+70	17	125	97.6	-12.6	2158(2)
4	May 31.4	2	30	-14	May 31	- 1	1	7	154.8	-14.5	
23115	June 3.16	4/ 5	30	-51	June 3	+ 2	2	9	118.6	-14.7	
6	4.81	7	30	-73	5	+10	8	49	96.9	+15.0	2159(2)
7	5.41	13	30	-82	11	+79	52	358	88.8	-14.7	2162(1)
8	5.53	6	31	-68	5	+ 1	1	13	87.4	- 7.8	
9	6.27	12	June 1	-66	12	+83	77	579	77.4	- 7.7	
23120	2.46	7	2	- 1	8	+79	36	247	127.8	- 6.2	2163(1)
1	4.56	5	2	-27	6	+26	7	37	100.0	+ 8.4	
2	7.63	5	3	-59	7	0	7	38	59.6	+ 8.1	
3	8.72	6	5	-42	10	+16	2	15	45.0	+ 6.1	
4	8.55	4	7	-16	10	+20	3	17	47.2	+20.8	
23125	10.5	2	9	-14	10	- 6	1	4	20.9	- 8.4	
6	16.77	14	10	-83	23	+83	70	474	298.4	-12.9	2160(2)
7	16.4	3/ 4	12	-54	15	-11	1	9	303.7	+10.8	
8	13.6	6	14	+ 8	19	+76	10	71	340.2	-13.1	
9	19.09	6/ 7	15	-54	21	+37	2	12	267.8	- 4.3	
23130	21.03	13	15	-76	27	+86	37	244	242.0	+ 8.3	2164(1)
1	21.51	13	15	-84	27	+83	105	601	235.7	- 8.9	2165(1)
2	20.67	6	16	-57	21	+12	3	24	246.8	-23.7	
3	17.7	2	20	+33	21	+52	2	12	285.4	+ 8.8	
4	26.52	12	20	-83	July 1	+63	9	41	169.4	+ 5.2	
23135	22.94	9	21	-20	June 29	+81	20	122	216.7	-11.9	
6	26.55	12	21	-65	July 2	+77	20	131	169.0	+ 9.0	2161(2)
7	27.2	6	21	-75	June 26	-11	11	75	159.9	+ 5.9	
8	20.8	3/ 4	22	+23	25	+61	3	13	244.7	+14.6	
9	19.4	2	23	+51	24	+66	2	7	263.3	+10.9	
23140	29.60	4/ 7	24	-70	30	+11	1	7	128.7	- 8.0	2163(2)
1	26.03	5	25	- 9	29	+44	0	8	175.8	+ 9.9	
2	July 1.33	12	26	-65	July 7	+78	31	201	105.7	+ 7.3	
3	2.83	12	27	-67	8	+80	31	191	85.9	-13.6	2162(2)
4	1.9	4	28	-49	1	- 5	6	34	97.9	+ 4.4	
23145	2.79	3/ 5	29	-46	3	+ 7	1	7	86.4	- 3.9	
6	5.66	9	29	-82	7	+22	11	72	48.5	+13.8	
7	8.03	13	July 2	-74	14	+84	55	325	17.0	+ 8.4	
8	1.1	3	3	+29	5	+60	9	50	109.3	- 0.1	
9	9.81	12	3	-80	14	+60	33	186	353.5	- 9.6	
23150	2.1	4	4	+33	7	+71	3	19	95.8	- 5.6	
1	7.57	9	4	-45	12	+66	7	47	23.1	- 3.3	2166(1)
2	13.1	5	7	-76	11	-22	3	14	310.4	+15.6	
3	13.7	3	7	-84	9	-58	1	11	302.1	+17.6	
4	14.24	10	8	-70	17	+42	10	59	294.9	-11.8	2160(3)

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No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1972	d	1972	°	1972	°			°	°	
23155	July 12.5	2	July 9	-41	July 10	-28	2	13	318.3	-15.4	
6	8.8	5	11	+34	15	+87	21	125	7.2	+11.7	2167(1)
7	18.05	12	12	-75	23	+73	8	38	244.5	+ 8.6	2164(2)
8	18.32	13	12	-80	24	+81	30	209	240.9	-10.0	2165(2)
9	10.2	2	13	+41	14	+54	0	4	347.6	-13.1	
23160	11.8	4	13	+20	16	+63	3	19	326.9	- 9.1	
1	19.34	12	13	-81	24	+65	36	240	227.3	- 9.4	
2	16.9	4	17	+ 4	20	+47	4	23	259.4	-23.3	
3	19.75	5	17	-31	21	+21	1	11	222.0	-12.0	
4	20.8	2/ 3	17	-47	19	-18	2	10	207.5	-12.1	
23165	19.0	6	19	+ 6	24	+69	19	96	232.2	+13.7	
6	27.52	13	21	-82	Aug 2	+78	18	102	119.2	+ 4.8	
7	18.3	3	22	+52	July 24	+80	16	70	240.4	- 7.0	
8	24.03	5/ 6	22	-20	27	+41	1	6	165.3	- 8.4	
9	28.62	8	23	-68	30	+24	2	13	104.6	- 3.7	
23170	30.20	13	24	-75	Aug 5	+77	47	318	83.7	-14.3	2162(3)
1	22.7	3	25	+37	July 27	+63	2	11	182.5	- 9.8	
2	26.05	7	25	-11	31	+76	34	218	138.6	+ 6.9	
3	28.4	3	25	-40	27	-10	1	12	107.7	+ 9.4	
4	31.16	8/ 9	25	-74	Aug 2	+28	2	15	71.0	-14.6	
23175	Aug 1.33	8/10	27	-63	5	+51	4	21	55.6	-19.2	
6	July 28.67	5	28	- 6	1	+53	2	14	103.8	+ 6.3	
7	29.52	2/ 3	28	-13	July 30	+11	0	3	92.7	- 4.7	
8	31.69	10	28	-46	Aug 6	+73	6	38	63.9	-16.9	2168(1)
9	Aug 4.77	14	29	-85	11	+87	186	1158	10.0	+13.0	2167(2)
23180	3.50	10	30	-57	8	+68	12	80	26.9	- 3.7	2166(2)
1	3.85	8	Aug 3	- 9	10	+84	25	145	22.1	- 8.1	
2	5.80	2	5	- 7	6	+ 8	1	10	356.4	- 6.4	
3	5.9	2	8	+31	9	+46	2	7	355.1	+ 8.7	
4	6.8	5	9	+32	13	+83	57	299	342.9	+15.7	2169(1)
23185	14.57	6	11	-43	16	+26	5	31	240.5	-10.6	
6	9.5	3	12	+38	14	+67	4	17	307.0	-16.9	
7	13.80	7/ 8	12	-19	19	+76	2	11	250.6	+17.5	
8	16.7	3	12	-57	14	-28	6	33	212.8	+13.9	
9	14.49	8	13	-16	20	+80	23	151	241.5	+14.7	
23190	20.12	12	14	-71	25	+66	18	111	167.1	-24.7	
1	21.2	4/ 5	15	-75	19	-28	8	37	153.3	+ 6.6	
2	18.96	9	16	-38	24	+74	9	59	182.5	-11.9	2170(1)
3	24.38	10	19	-69	28	+54	9	64	110.8	- 4.0	
4	24.12	11	20	-52	30	+85	26	179	114.3	+ 9.4	
23195	26.1	3	20	-72	22	-52	2	16	87.5	-13.0	
6	26.78	13	20	-81	Sept 1	+73	26	188	79.1	-14.2	2162(4)
7	27.98	10	22	-74	Aug 31	+44	20	141	63.3	-18.5	2168(2)
8	25.66	4	24	-17	27	+27	1	5	93.9	-15.5	
9	30.00	12	24	-75	Sept 4	+71	17	119	36.6	- 6.4	

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	1972	d	1972	°	1972	°			°	°	
23200	Aug 26.37	6/ 7	Aug 26	- 3	Sept 1	+80	25	160	84.5	- 7.1	
1	31.17	3/ 7	26	-65	1	+16	0	2	21.1	+10.6	
2	31.92	10	26	-76	4	+44	12	72	11.2	+13.1	2167(3)
3	26.9	6	27	+ 7	1	+76	8	49	77.9	+17.6	
4	Sept 2.51	13	27	-76	8	+78	32	197	350.2	+16.8	
23205	Aug 31.60	9	28	-46	5	+64	3	15	15.4	- 3.8	
6	Sept 3.82	13	28	-81	9	+75	12	75	332.9	+16.2	2169(2)
7	Aug 29.97	4/ 5	29	- 5	2	+43	0	4	36.9	-13.2	
8	Sept 3.86	8/ 9	29	-72	6	+29	3	20	332.4	-24.3	
9	Aug 28.3	2	30	+26	Aug 31	+39	0	4	58.4	-12.9	
23210	31.38	2	30	-15	31	0	3	18	18.4	+ 6.5	
1	Sept 4.73	11	31	-61	Sept 10	+81	17	109	320.9	- 8.2	2171(1)
2	Aug 30.7	6	Sept 1	+18	6	+83	39	268	26.8	- 6.8	2172(1)
3	Sept 3.0	2	5	+30	6	+44	5	34	343.3	-15.1	
4	5.77	3	5	- 6	7	+23	1	4	307.2	+ 5.4	
23215	6.13	5	5	-12	9	+45	2	16	302.4	- 6.2	
6	9.37	3	7	-25	9	0	2	15	259.6	+17.8	
7	10.78	10	7	-46	16	+76	25	133	241.0	+20.2	2173(1)
8	14.97	10	9	-78	18	+44	19	103	185.7	-12.3	2170(2)
9	6.1	2	10	+58	11	+68	3	25	302.6	+10.4	
23220	16.62	11	11	-74	21	+65	12	64	163.9	- 9.0	
1	17.41	8/ 9	14	-40	22	+65	4	30	153.5	+ 6.9	
2	18.9	5	14	-63	18	- 9	1	14	133.7	+12.4	
3	20.23	6/ 9	16	-50	24	+55	2	14	116.3	-10.7	
4	23.00	12	17	-74	28	+71	20	128	79.7	-14.8	2162(5)
23225	15.9	2	18	+29	19	+44	3	12	172.8	+13.3	
6	25.92	11	20	-74	30	+59	21	144	41.1	- 5.5	
7	26.28	12	20	-81	Oct 1	+70	38	251	36.4	- 5.8	
8	26.97	8	21	-75	Sept 28	+18	21	162	27.3	- 3.2	2172(2)
9	28.69	8/ 9	22	-82	30	+23	10	66	4.5	+ 8.6	
23230	26.2	2	24	-25	25	-11	0	5	37.4	-11.2	
1	22.9	4	25	+32	28	+70	6	48	81.0	+15.7	
2	Oct 1.14	10	25	-78	Oct 4	+43	10	49	332.2	- 7.6	2171(2)
3	Sept 30.74	11	26	-60	6	+74	8	53	337.5	- 8.7	
4	29.8	2	27	-32	Sept 28	-19	0	3	350.3	+19.3	
23235	Oct 5.55	10	29	-83	Oct 8	+34	7	34	274.0	- 8.4	
6	5.60	13	29	-85	11	+78	16	99	273.4	+17.1	
7	5.8	6	29	-85	4	-20	5	31	270.8	+19.5	
8	2.73	8	30	-32	7	+58	20	118	311.3	+10.6	
9	6.62	3/ 9	30	-83	8	+20	0	2	259.9	+17.6	
23240	7.99	7/12	Oct 1	-87	12	+58	3	21	241.8	+19.9	2173(2)
1	7.9	6	2	-72	7	-11	4	21	243.0	-22.6	
2	6.98	10	3	-51	12	+73	7	43	255.1	- 6.0	
3	4.86	4	4	- 6	7	+35	1	10	283.2	+17.2	
4	3.3	3	7	+54	9	+79	2	17	303.3	-16.4	

No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1972	d	1972	°	1972	°			°	°	
23245 Oct	16.11	3/ 8	Oct 10	-77	Oct 17	+16	2	4	134.7	+10.4	
6	6.7	2	11	+65	12	+76	2	15	259.2	+ 9.9	
7	14.1	2	14	+ 3	15	+17	1	4	161.3	+ 7.5	
8	12.1	2	15	+44	16	+56	2	9	187.7	+17.8	
9	21.27	11	15	-75	25	+55	17	126	66.7	- 6.9	
23250	22.02	14	15	-84	28	+84	93	531	56.8	-15.0	2174(1)
1	22.83	8/10	19	-41	28	+72	1	11	46.1	- 5.5	
2	24.29	8	19	-68	26	+29	4	28	26.8	-14.8	
3	24.73	7	19	-72	25	+13	3	27	21.1	-17.8	
4	27.09	12	21	-76	Nov 1	+71	16	100	349.9	- 9.4	2175(1)
23255	27.28	9	22	-70	Oct 30	+40	11	52	347.4	-16.6	
6	22.1	3	23	+18	25	+46	2	14	55.3	- 7.6	
7	29.78	13	23	-80	Nov 4	+74	224	1733	314.4	-11.7	2176(1)
8	28.12	3	26	-24	Oct 28	+ 3	2	11	336.3	-12.7	
9	31.8	3/ 5	27	-61	31	-11	1	5	287.7	+ 2.7	
23260	28.7	2	29	+ 8	30	+21	1	3	329.1	+16.8	
1 Nov	1.47	5	30	-31	Nov 3	+25	4	19	279.0	- 9.3	
2	2.31	3	31	-31	2	+ 2	1	7	267.9	- 7.3	
3	3.39	4	31	-46	3	0	3	16	253.6	+12.7	
4 Oct	31.7	3	Nov 5	+62	7	+84	55	278	289.6	- 4.2	
23265 Nov	3.7	5	5	+22	9	+79	2	18	249.1	-13.1	
6	7.2	5	9	+29	13	+79	23	159	203.0	+ 4.9	
7	16.9	5	11	-74	15	-17	7	39	75.7	- 3.2	
8	18.27	13	12	-78	24	+80	32	254	57.5	-13.4	2174(2)
9	23.53	8	17	-83	24	+12	11	56	348.1	- 7.1	2175(2)
23270	19.0	6	19	+ 1	24	+75	15	101	47.9	-15.2	
1	25.52	13	19	-81	Dec 1	+77	13	94	322.0	- 9.5	2176(2)
2	22.02	9	20	-24	Nov 28	+80	34	240	8.1	- 6.8	
3	27.40	12	21	-79	Dec 2	+66	12	77	297.2	- 2.9	
4	30.31	12	24	-77	5	+66	12	76	258.8	-11.9	
23275	24.6	3	26	+22	Nov 28	+52	3	13	334.6	+14.2	
6	28.5	6	29	+11	Dec 4	+77	19	132	283.2	-16.2	
7 Dec	3.72	4/ 5	Dec 3	- 9	7	+52	3	18	213.9	-14.8	
8	11.79	13.	6	-71	18	+80	51	400	107.5	+11.0	
9	12.39	8	10	-25	17	+67	4	20	99.6	-17.4	
23280	12.5	2	10	-27	11	-16	3	17	98.8	-11.3	
1	15.33	11	11	-55	21	+81	64	396	61.0	-19.5	2177(1)
2	15.67	6	11	-61	16	+15	3	21	56.4	+21.1	
3	15.72	3	15	- 2	17	+22	1	7	55.8	-13.9	
4	20.34	10	16	-56	25	+69	2	15	354.9	- 7.7	
23285	21.24	11	16	-70	26	+72	25	164	343.0	+15.7	
6	18.88	3	17	-20	19	+ 8	0	5	14.1	- 7.3	
7	23.40	7/ 9	18	-64	26	+41	1	9	314.5	+16.6	
8	23.70	10	20	-47	29	+81	47	360	310.7	+11.2	2178(1)
9	25.7	2/ 4	20	-74	23	-30	0	4	283.6	+ 4.0	

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	1972/3	d	1972/3	°	1972/3	°			°	°	
23290 Dec	26.3	2	Dec 21	-65	Dec 22	-53	4	18	276.9	+19.4	
1	22.40	6/ 7	22	- 2	28	+81	1	11	327.9	-12.7	
2	27.2	4	29	+29	Jan 1	+68	11	82	264.4	-15.7	
3 Jan	5.07	5/ 7	30	-73	5	+ 1	1	8	147.6	-13.0	
4	5.36	13	30	-79	11	+81	56	410	143.9	+ 7.7	
23295	7.64	13	Jan 1	-80	13	+75	39	290	113.9	+13.3	
6	3.08	4	2	- 7	5	+29	1	13	173.9	-16.7	
7	1.1	2	3	+28	4	+44	4	14	200.1	+18.2	
8	11.52	8/11	5	-82	15	+53	5	21	62.7	-18.9	2177(2)
9	3.0	3/ 4	6	+41	9	+82	5	16	174.6	-10.9	
23300	13.78	6/ 8	8	-71	15	+24	3	15	32.9	+12.9	
1	15.0	6	9	-76	14	- 4	3	17	17.1	-15.9	
2	19.60	13	13	-81	25	+74	31	218	316.4	+11.0	2178(2)
3	17.90	2	17	- 7	18	+ 4	1	8	338.7	-12.3	
4	15.5	3	18	+36	20	+63	8	39	10.3	-17.7	
23305	18.86	7	18	- 8	24	+71	8	67	326.2	-13.7	
6	25.19	10	19	-76	28	+44	7	42	242.8	+ 9.8	
7	23.8	2	22	-18	23	- 7	2	27	260.9	-14.6	
8	23.4	2	24	+12	25	+26	2	12	267.0	-11.0	
9	27.78	4/ 6	24	-47	29	+20	1	8	208.6	-10.2	
23310 Feb	1.13	2/ 5	28	-48	Feb 1	+ 3	1	6	151.3	+10.3	
1 Jan	31.9	3	29	-35	Jan 31	- 8	1	16	154.6	+ 5.6	
2 Feb	7.05	6	Feb 2	-61	Feb 7	+ 7	13	88	73.4	- 8.6	
3	11.53	13	5	-80	17	+77	16	110	14.4	+ 6.8	
4	11.38	13	5	-80	17	+78	27	156	16.4	+11.3	
23315	10.37	8	8	-28	15	+65	4	32	29.8	+12.9	
6	12.23	4/ 5	8	-52	12	+ 1	0	7	5.2	+14.2	
7	13.7	2	8	-70	9	-57	2	5	345.5	-11.7	
8	14.58	7	9	-68	15	+10	3	12	334.3	- 4.3	
9	16.62	13	10	-80	22	+76	34	232	307.5	-16.6	
23320	12.03	4	11	-13	14	+30	1	8	7.8	+10.0	
1	11.4	3	12	+10	14	+38	2	12	15.6	-17.0	
2	18.17	7	12	-77	18	+ 3	11	81	286.9	- 9.4	
3	10.4	3	14	+52	16	+78	18	104	29.7	+15.8	
4	23.0	3/ 5	17	-71	21	-24	2	6	223.2	+18.2	
23325	20.21	7	19	-10	25	+67	4	24	260.2	-17.0	
6	26.2	3	21	-63	23	-38	3	15	181.4	-19.1	
7	26.65	10/11	22	-62	Mar 4	+78	5	27	175.3	-13.5	
8 Mar	1.15	13	23	-76	7	+82	84	463	142.4	+6.9	2179(1)
9 Feb	19.1	2	24	+71	Feb 25	+83	3	25	275.0	-10.4	
23330	25.23	6	25	0	Mar 2	+67	4	20	194.1	+ 5.8	
1 Mar	7.2	2	Mar 2	-63	3	-49	2	6	63.0	+17.6	
2	10.60	13	4	-81	16	+74	23	124	18.0	-18.0	
3	9.97	10	6	-53	15	+76	28	170	26.3	+12.3	
4	13.48	12	8	-65	19	+80	56	364	340.0	- 7.1	

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	1973	d	1973	°	1973	°			°	°	
23335	Mar 14.19	12	Mar 8	-83	Mar 19	+77	44	268	330.6	-12.8	2180(1)
6	15.78	3/ 5	12	-47	16	+ 9	2	11	309.6	+ 5.8	
7	15.13	5	13	-25	17	+30	1	10	318.2	-12.7	
8	22.22	11	17	-65	27	+69	26	156	224.8	+14.9	
9	28.18	13	22	-78	Apr 3	+81	54	327	146.1	+ 7.0	2179(2)
23340	Apr 2.19	13	27	-79	8	+84	85	661	80.1	- 5.2	2181(1)
1	Mar 30.8	2	28	-32	Mar 29	-20	2	14	111.0	-11.3	
2	Apr 5.20	12	30	-78	Apr 10	+69	23	185	40.4	+11.7	
3	Mar 28.7	4	31	+33	3	+75	9	49	138.8	+ 8.8	
4	Apr 8.84	11	Apr 2	-84	12	+47	11	74	352.2	-12.9	
23345	Mar 31.3	2	3	+41	4	+53	2	8	104.7	-13.7	
6	Apr 6.2	2	3	-37	4	-25	5	19	26.9	-13.7	
7	9.67	9	3	-83	11	+26	5	21	341.3	-14.7	2180(2)
8	8.35	9	5	-39	13	+70	8	52	358.8	- 8.5	
9	9.3	2	5	-50	6	-39	1	6	345.8	+15.2	
23350	10.95	11	7	-48	17	+83	50	372	324.4	- 8.4	
1	10.0	2	8	-23	9	- 7	1	5	336.5	-11.4	
2	16.0	2	12	-48	13	-33	0	3	257.6	-17.9	
3	17.20	3	15	-24	17	+ 3	1	5	241.9	+ 0.3	
4	21.57	8	18	-45	25	+57	10	68	184.2	-15.7	
23355	24.31	13	18	-77	30	+78	57	440	148.1	+11.0	2182(1)
6	28.58	13	22	-81	May 4	+79	22	186	91.5	- 5.8	2181(2)
7	29.01	5/ 8	23	-75	Apr 30	+18	1	5	86.0	-12.2	
8	29.01	7	23	-76	29	+ 3	3	19	86.0	- 1.7	
9	May 7.08	13	May 1	-77	May 13	+81	57	473	339.3	-13.3	
23360	Apr 28.6	3	2	+50	4	+76	7	57	91.3	-10.7	
1	May 8.5	2	4	-54	5	-42	1	6	320.4	-10.7	
2	10.1	4	4	-76	7	-36	7	29	299.5	-13.0	
3	4.1	3	5	+15	7	+44	3	12	18.6	-13.2	
4	7.80	2	7	- 7	8	+ 9	4	13	329.8	+13.8	
23365	17.74	6	15	-32	20	+33	4	42	198.2	- 9.4	
6	21.12	10	15	-76	24	+42	5	29	153.7	+12.4	
7	21.50	13	15	-81	27	+79	36	328	148.6	+10.0	2182(2)
8	21.2	2	18	-37	19	-23	0	3	153.0	- 6.5	
9	26.2	5	21	-61	25	-11	3	22	86.2	+ 1.5	
23370	25.25	9	22	-43	30	+71	25	152	98.9	- 2.5	
1	26.25	5/ 6	22	-51	27	+15	3	20	85.7	- 5.0	
2	24.2	5	24	+ 2	28	+58	3	19	113.2	-10.2	
3	27.6	6	28	+10	June 2	+78	13	76	67.6	+16.4	
4	June 1.7	2	June 3	+23	4	+34	3	19	0.3	-13.8	
23375	9.01	10	6	-37	15	+82	10	75	263.6	+13.2	2183(1)
6	7.85	2	7	- 6	8	+ 6	3	17	279.0	+ 5.2	
7	13.05	12	7	-76	18	+71	18	149	210.1	+15.6	
8	13.08	10	7	-76	16	+43	9	58	209.8	-15.2	
9	14.0	2	10	-49	11	-29	0	8	197.5	+11.4	

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	1973	d	1973	°	1973	°			°	°	
23380	June 11.5	2	June 11	+ 2	June 12	+11	1	6	230.5	+15.4	
1	14.4	2	11	-36	12	-27	0	1	192.9	-14.7	
2	17.62	13	11	-78	23	+75	20	141	149.7	+12.1	2182(3)
3	14.9	2	16	+19	17	+32	1	6	185.1	-14.5	
4	17.45	3/ 6	17	- 3	22	+65	1	5	151.8	+ 6.8	
23385	23.92	12	18	-74	29	+73	41	336	66.2	- 7.5	
6	24.91	11	19	-72	29	+60	29	193	53.2	- 3.1	
7	25.74	11	20	-73	30	+64	7	41	42.2	-12.4	
8	July 5.20	10	29	-73	July 8	+39	9	75	276.9	- 6.1	
9	5.57	14	29	-81	12	+86	83	550	272.0	+12.4	2183(2)
23390	7.31	5	July 6	-13	10	+39	8	62	249.0	+ 1.3	
1	11.81	6/11	7	-60	17	+74	2	18	189.3	-10.9	
2	14.56	4/ 8	13	-13	20	+76	1	6	153.0	+13.0	
3	15.0	2	17	+30	18	+45	3	13	147.1	-11.2	
4	17.80	4/ 6	17	- 8	22	+62	2	16	110.1	- 6.1	
23395	21.72	3/ 5	18	-45	22	+11	1	5	58.4	+17.7	
6	25.04	2	24	- 8	25	+ 4	3	24	14.4	+10.8	
7	31.32	12	25	-78	Aug 5	+68	23	128	291.3	- 4.9	
8	Aug 1.41	3	Aug 1	- 1	3	+30	1	15	276.9	+10.7	
9	7.43	11	1	-81	11	+52	13	81	197.4	- 8.5	
23400	5.79	8	4	-22	11	+77	26	164	218.9	+ 6.6	
1	3.9	2/ 4	6	+31	9	+74	0	2	244.2	+13.7	
2	11.13	6/ 7	6	-64	12	+18	2	16	148.5	- 7.3	
3	23.35	11	18	-63	28	+71	6	34	346.8	+12.9	
4	20.9	3	24	+46	26	+73	2	11	19.7	+ 9.0	
23405	29.96	12	24	-75	Sept 4	+72	24	161	259.6	+15.1	2184(1)
6	29.27	7	26	-40	1	+42	10	67	268.6	+ 2.7	
7	Sept 3.92	13	28	-84	9	+72	68	491	194.0	-14.6	2185(1)
8	Aug 31.14	6/ 9	29	-21	6	+82	0	4	244.0	+14.5	
9	30.96	8	30	-10	6	+85	16	99	246.3	-12.9	
23410	Sept 6.06	14	30	-87	12	+83	62	378	165.8	+13.9	2186(1)
1	Aug 30.5	6	31	+11	5	+87	7	53	252.4	+ 4.9	2187(1)
2	Sept 6.48	10	Sept 1	-67	10	+55	19	137	160.3	-17.3	
3	2.2	3	2	+ 2	4	+31	1	15	217.4	- 9.2	
4	3.34	8	2	-12	9	+80	42	293	201.7	+22.5	2188(1)
23415	8.25	12	2	-75	13	+69	23	173	136.9	-11.9	
6	7.1	4	9	+30	12	+69	24	149	152.4	- 9.8	
7	19.7	3/ 5	14	-73	18	-18	2	11	345.9	- 8.0	
8	21.14	13	15	-74	27	+77	7	45	326.7	+14.3	
9	17.4	2	16	-14	17	- 1	1	11	16.0	- 3.5	
23420	20.8	2/ 3	16	-59	18	-34	0	11	330.7	-13.2	
1	24.46	11	20	-53	30	+81	2	15	282.9	+ 4.9	
2	26.17	13	20	-78	Oct 2	+83	24	148	260.3	+ 5.4	2187(2)
3	26.63	14	20	-81	3	+82	69	473	254.2	+13.9	2184(2)
4	21.5	3	21	+ 1	Sept 23	+23	0	5	321.4	+18.6	

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	1973/4	d	1973/4	°	1973/4	°			°	°	
23425	Sept 26.7	2	Sept 23	-42	Sept 24	-31	1	7	253.2	+10.8	
6	30.81	14	24	-84	Oct 7	+85	21	124	199.0	+20.8	2188(2)
7	26.44	3	25	-14	Sept 27	+12	1	15	256.8	+ 9.1	
8	Oct 1.16	12	25	-78	Oct 6	+71	7	49	194.4	-14.9	2185(2)
9	2.89	10	26	-81	5	+30	10	116	171.6	-13.8	
23430	3.21	13	27	-78	9	+81	29	169	167.4	+11.7	2186(2)
1	4.7	4	Oct 6	+22	9	+61	5	20	147.8	- 9.1	
2	10.9	3	7	-46	9	-19	1	9	66.4	+ 0.3	
3	12.3	6	13	+13	18	+77	8	36	47.4	+12.7	
4	13.2	4	15	+31	18	+72	10	41	36.2	- 4.2	
23435	27.88	12	22	-73	Nov 2	+73	83	571	202.0	-13.0	2189(1)
6	28.6	7	22	-82	Oct 28	- 4	6	26	192.3	+21.4	2188(3)
7	30.48	13	24	-81	Nov 5	+84	10	68	167.6	+11.5	2186(3)
8	24.2	2	25	+17	Oct 26	+28	3	10	250.6	+15.4	
9	31.5	7	25	-80	31	- 6	13	75	154.3	+16.1	
23440	Nov 3.5	6	28	-83	Nov 2	-16	2	11	114.0	+ 3.4	
1	Oct 30.11	2	29	- 7	Oct 30	+ 4	1	7	172.6	-13.1	
2	31.8	2	29	-32	30	-15	1	24	150.6	+20.0	
3	31.4	3	Nov 2	+27	Nov 4	+50	5	19	155.3	-11.2	
4	Nov 18.94	8	13	-73	20	+20	11	71	271.0	+13.6	
23445	23.95	7/12	18	-75	29	+71	3	17	205.1	-10.7	2189(2)
6	19.67	6	19	- 2	24	+61	1	6	261.5	+13.0	
7	21.89	5	21	- 7	25	+46	5	34	232.3	- 9.8	
8	27.73	13	21	-82	Dec 3	+71	56	433	155.3	-10.2	
9	25.2	5	26	+13	Nov 30	+70	16	119	188.5	+ 5.5	
23450	25.8	3	29	+45	Dec 1	+79	21	104	180.6	- 8.7	
1	Dec 13.70	11	Dec 8	-68	18	+63	5	27	304.8	+ 2.2	
2	21.69	13	15	-83	27	+75	7	41	199.5	+ 7.5	
3	22.22	13	16	-84	28	+83	61	415	192.6	-18.1	2190(1)
4	20.60	8/ 9	18	-29	26	+76	11	87	213.9	-14.5	2191(1)
23455	21.1	2	23	+29	24	+45	2	12	207.5	-11.7	
6	22.7	4	25	+35	28	+77	1	7	186.8	- 9.2	
7	Jan 2.63	5	Jan 1	-16	Jan 5	+32	7	48	42.3	-15.2	
8	9.52	9	7	-27	15	+86	13	74	311.6	+ 6.5	
9	14.50	12	8	-81	19	+66	20	141	245.9	-11.3	
23460	14.2	4	9	-67	12	-27	2	8	249.6	+11.0	
1	16.67	12	10	-80	21	+59	12	53	217.3	-15.3	2191(2)
2	18.47	11	12	-84	22	+49	19	133	193.6	-17.5	2190(2)
3	13.4	5	14	+ 9	18	+67	4	25	260.7	+ 8.4	
4	19.33	10/11	14	-68	24	+71	1	17	182.3	-16.9	
23465	19.99	7	14	-75	20	+ 2	13	81	173.6	-13.5	
6	18.2	6	19	+16	24	+79	13	89	196.9	+ 5.3	
7	19.71	2	19	- 4	20	+ 6	1	14	177.3	+14.3	
8	28.4	2	Feb 1	+52	Feb 2	+65	0	3	63.1	+15.3	
9	Feb 4.6	2	2	-29	3	-15	1	5	328.6	- 5.6	

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No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1974	d	1974	°	1974	°			°	°	
23470	Feb 13.18	6/ 7	Feb 7	-75	Feb 13	+ 2	2	14	215.1	+ 8.2	
1	14.05	13	8	-78	20	+88	22	182	203.8	-16.1	
2	19.03	14	12	-86	25	+83	14	99	138.1	-17.6	
3	11.9	5/ 6	13	+17	18	+81	9	62	231.5	-12.9	
4	18.11	10	15	-36	24	+80	39	276	150.3	-18.7	2192(1)
23475	28.16	6	23	-61	28	+ 4	1	9	17.8	+13.7	
6	Mar 1.6	4	26	-48	Mar 1	- 3	2	16	359.3	+ 6.7	
7	3.7	5	26	-74	2	-16	5	27	330.7	+ 4.8	
8	1.7	2	28	-15	1	- 6	0	4	357.7	+26.4	
9	9.82	6/ 7	Mar 4	-71	10	+10	8	46	250.6	+11.3	
23480	11.80	7	6	-72	12	+ 8	3	15	224.4	+ 4.1	
1	10.35	8	9	-16	16	+81	20	142	243.6	+ 0.4	
2	16.93	9/12	11	-75	22	+69	2	12	157.0	-16.0	
3	17.59	8/ 9	12	-67	20	+33	1	9	148.2	-199.	2192(2)
4	19.7	3	14	-71	16	-43	1	8	119.9	- 2.4	
23485	18.73	2/ 3	17	-19	19	+ 8	0	3	133.1	-19.7	
6	24.69	13	18	-84	30	+77	19	130	54.7	- 8.8	2193(1)
7	20.4	4	22	+26	25	+64	6	53	111.0	+14.6	
8	25.8	4	28	+34	31	+74	7	58	39.9	+ 7.2	
9	Apr 3.30	6/ 7	30	-52	Apr 5	+26	1	14	287.8	-11.6	
23490	5.58	11/12	31	-70	11	+82	5	46	257.8	+12.2	
1	11.11	11	Apr 7	-48	17	+80	92	945	184.8	-12.1	
2	8.78	7	8	- 7	14	+68	6	47	215.5	- 4.6	
3	12.59	10	9	-44	18	+77	20	141	165.2	-14.4	
4	11.3	2	15	+52	16	+68	0	11	182.5	+ 7.5	
23495	20.8	6	15	-72	20	- 6	2	17	56.8	- 8.3	2193(2)
6	15.6	5	17	+22	21	+77	23	192	125.1	-13.0	
7	16.0	5	17	+17	21	+72	10	66	120.2	- 8.9	
8	17.3	4	18	+14	21	+52	3	16	102.6	+ 2.4	
9	19.39	2/ 6	18	-14	23	+52	0	1	75.4	- 6.8	
23500	25.83	9	22	-41	30	+58	6	41	350.3	- 8.4	
1	27.1	2	29	+30	30	+44	1	4	333.1	+18.2	
2	May 4.99	4/ 8	29	-70	May 6	+13	0	2	229.3	+ 7.6	
3	5.29	13	29	-77	11	+80	22	141	225.3	- 2.8	
4	Apr 29.5	5	May 1	+20	5	+79	9	61	302.4	+ 6.8	
23505	May 6.80	12	1	-74	12	+75	23	174	205.4	- 7.2	
6	7.78	13	1	-83	13	+67	46	362	192.5	-12.2	
7	1.6	5	3	+27	7	+74	5	45	273.7	+ 4.8	
8	9.31	13	3	-77	15	+79	15	98	172.2	-12.6	2194(1)
9	2.3	4	5	+37	8	+79	2	11	264.3	+11.0	
23510	5.54	7	5	- 9	11	+78	7	42	222.0	- 4.5	
1	7.27	2	6	-11	7	0	0	2	199.2	-20.7	
2	4.1	2	7	+42	8	+56	0	4	240.7	- 9.2	
3	12.6	2	7	-69	8	-58	0	3	128.4	- 8.2	
4	8.77	5/ 6	8	- 6	13	+62	0	6	179.3	- 9.0	

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	1974	d	1974	°	1974	°			°	°	
23515	May 8.7	3	May 9	+ 8	May 11	+34	1	12	180.1	-19.4	
6	12.4	2	13	+12	14	+26	1	9	131.7	-16.1	
7	13.0	2	13	+ 4	14	+18	1	7	123.3	-12.1	
8	13.7	3	15	+20	17	+49	4	24	114.1	+ 5.3	
9	21.5	3	22	+ 9	24	+36	1	5	11.2	-17.3	
23520	23.55	5/ 8	22	-15	29	+78	15	118	343.8	-15.2	2195(1)
1	June 3.05	7/10	28	-75	June 6	+46	2	16	205.0	-12.9	
2	5.89	13	30	-87	11	+75	24	195	167.4	-13.9	2194(2)
3	2.7	3/ 4	June 4	+21	7	+61	2	10	209.0	- 7.1	
4	8.98	7	4	-62	10	+21	15	98	126.5	+ 4.9	
23525	7.82	5/ 6	6	-20	11	+48	2	14	141.7	-12.8	
6	7.9	2	6	-21	7	- 7	2	13	140.7	-16.7	
7	13.77	11	8	-72	18	+63	27	203	63.1	+ 5.6	
8	6.0	4	9	+41	12	+84	9	80	165.6	- 6.8	
9	19.20	12	13	-77	24	+67	23	173	351.2	-14.2	2195(2)
23530	23.8	2	24	+ 9	25	+17	1	10	290.1	+ 9.2	
1	July 2.42	13	26	-75	July 8	+79	9	58	176.2	-11.2	
2	3.76	12	28	-68	9	+75	102	804	158.5	-14.1	
3	4.47	11	28	-76	8	+51	8	51	149.2	-17.0	
4	June 30.28	7	30	- 5	6	+85	31	230	204.4	- 9.5	2196(1)
23535	July 5.94	5	July 5	- 8	9	+48	8	56	129.6	-13.6	
6	14.57	13	8	-82	20	+78	84	485	15.4	- 8.1	2197(1)
7	17.27	10	13	-48	22	+73	21	154	339.7	-11.2	
8	15.51	3	14	-14	16	+12	1	12	3.0	-12.9	
9	17.16	8/ 9	14	-41	22	+76	2	21	341.0	- 3.9	
23540	20.53	13	14	-81	26	+81	19	122	296.5	-13.2	
1	24.12	9	21	-40	29	+74	28	188	249.0	-14.8	2198(1)
2	27.00	11	21	-75	31	+58	22	173	210.9	- 9.1	2196(2)
3	30.43	10	24	-77	Aug 2	+38	9	49	165.6	-15.8	
4	29.61	8/ 9	26	-40	3	+67	10	59	176.4	- 9.2	
23545	29.9	3/ 5	30	+ 5	3	+63	1	5	172.9	-11.2	
6	Aug 10.53	13	Aug 4	-79	16	+77	50	303	18.9	- 8.7	2197(2)
7	11.37	12	5	-79	16	+67	14	78	7.7	- 6.6	
8	12.74	5/ 8	6	-84	13	+10	2	12	349.7	-18.4	
9	13.37	11	9	-58	19	+81	30	188	341.3	- 5.4	2199(1)
23550	15.6	7	9	-84	15	- 3	4	19	312.3	+ 8.4	
1	13.66	9	11	-31	19	+76	6	40	337.4	-17.8	
2	14.55	9	12	-30	20	+80	12	82	325.6	+ 9.1	
3	19.77	14	13	-80	26	+83	36	214	256.7	-14.4	2198(2)
4	12.2	2	14	+29	15	+41	4	18	356.7	-10.5	
23555	20.55	3	19	-16	21	+11	0	2	246.3	- 4.2	
6	25.36	13	19	-80	31	+80	14	88	182.8	+ 1.5	
7	19.5	5	21	+25	25	+76	12	78	260.8	-11.5	2200(1)
8	Sept 6.63	13	31	-83	Sept 12	+78	17	127	20.6	- 7.4	2197(3)
9	9.22	12	Sept 3	-78	14	+69	16	106	346.5	- 3.2	2199(2)

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	1974	d	1974	°	1974	°			°	°	
23560	Sept 4.61	3	Sept 4	- 4	Sept 6	+24	1	5	47.3	-11.6	
1	6.92	7/ 9	4	-35	12	+76	9	56	16.8	+ 7.8	2201(1)
2	9.8	6	4	-72	9	- 5	1	9	339.0	-13.8	
3	7.84	3/ 6	6	-20	11	+48	1	7	4.7	-12.9	
4	15.22	13	9	-78	21	+83	122	849	267.3	+ 8.5	2202(1)
23565	15.20	10	9	-79	18	+46	13	113	267.5	-11.1	2200(2)
6	16.21	9	10	-77	18	+28	5	27	254.2	-15.2	2198(3)
7	21.4	5	16	-72	20	-11	2	23	185.2	+ 9.8	
8	13.8	3	17	+46	19	+76	2	33	286.3	-10.9	
9	25.02	4	24	-10	27	+34	11	58	137.9	+13.7	
23570	Oct 1.31	9/11	26	-65	Oct 6	+71	3	22	54.8	-11.7	
1	3.76	13	27	-82	9	+75	11	76	22.5	+ 9.0	2201(2)
2	4.07	13	28	-74	10	+78	60	368	18.5	- 5.8	2197(4)
3	3.2	4	29	-51	2	-15	1	7	29.6	-14.5	
4	Sept 28.2	2	30	+28	1	+42	1	6	95.8	+14.3	
23575	Oct 8.66	11	Oct 4	-58	14	+78	24	153	317.9	-18.5	2203(1)
6	9.63	8	4	-70	11	+27	4	24	305.2	+ 5.4	
7	11.14	14	4	-84	17	+85	37	240	285.2	+10.8	2204(1)
8	10.4	2	5	-67	6	-52	1	11	295.3	-11.3	
9	12.03	14	5	-86	18	+83	66	635	273.5	+ 8.6	2202(2)
23580	11.8	2	9	-31	10	-19	0	3	276.9	- 2.2	
1	11.60	2/ 3	11	- 4	13	+21	0	1	279.1	- 9.1	
2	16.4	4	19	+40	22	+78	9	83	216.3	+ 7.1	
3	30.76	11	25	-69	Nov 4	+61	13	79	26.4	- 5.8	2197(5)
4	29.92	5	26	-47	Oct 30	+10	2	19	37.5	-13.6	
23585	Nov 1.6	3	26	-82	28	-56	1	7	1.8	+ 4.9	
6	Oct 28.8	2	27	-18	28	- 5	2	9	52.4	+ 7.6	
7	Nov 4.9	2	30	-71	31	-60	6	48	318.7	-19.2	2203(2)
8	7.4	7	Nov 1	-77	Nov 7	- 1	13	110	285.9	+12.2	2204(2)
9	7.9	2	2	-73	3	-60	0	8	279.0	+ 9.6	2202(3)
23590	7.3	2	7	+ 3	8	+13	1	7	287.0	- 2.7	
1	10.0	3	10	+ 5	12	+33	1	10	251.8	+ 3.9	
2	12.14	3/ 4	10	-25	13	+17	1	13	223.2	+ 7.0	
3	11.57	3	11	- 4	13	+25	1	15	230.7	+ 7.3	
4	21.37	13	15	-77	27	+79	104	555	101.5	+13.1	2205(1)
23595	23.47	6	19	-55	24	+10	15	79	73.8	+ 1.2	
6	25.5	5/ 7	19	-79	25	- 2	3	23	47.5	+ 7.1	
7	26.4	4	27	+11	30	+54	6	35	35.4	+ 4.6	
8	Dec 6.37	2	Dec 5	-14	Dec 6	+ 3	1	12	263.8	+ 4.5	
9	9.42	2/ 7	7	-27	13	+56	1	4	223.7	+13.7	
23600	13.22	9	11	-23	19	+81	22	169	173.7	+11.5	
1	18.47	13	12	-82	24	+80	62	368	104.3	+13.0	2205(2)
2	23.71	11	18	-70	28	+61	16	102	35.4	+ 5.7	
3	15.6	2	19	+49	20	+63	2	27	142.0	-15.7	
4	20.82	5	19	-19	23	+34	1	14	73.4	+ 6.4	

No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1974/5	d	1974/5	°	1974/5	°			°	°	
23605	Dec 26.0	3	Dec 28	+30	Dec 30	+62	5	41	5.6	+14.8	
6	Jan 4.06	10	29	-76	Jan 7	+51	12	84	245.8	- 8.2	
7	Dec 28.1	3	Jan 1	+58	3	+81	10	77	337.2	+ 7.7	
8	Jan 7.67	12	2	-68	13	+77	10	75	198.4	+ 4.7	
9	4.2	3	7	+43	9	+65	12	92	244.4	+10.2	
23610	14.85	13	8	-81	20	+72	27	196	103.8	+13.6	2205(3)
1	16.1	2	12	-51	13	-36	1	5	86.9	+ 4.1	
2	15.85	2	15	- 4	16	+ 5	5	26	90.6	+ 1.6	
3	20.02	6	18	-23	23	+43	5	37	35.7	+ 6.2	
4	22.64	3	21	-16	23	+10	0	5	1.2	+ 3.7	
23615	26.6	2	25	-16	26	- 2	1	4	308.4	+ 3.5	
6	Feb 7.11	7	Feb 2	-64	Feb 8	+22	8	36	157.4	-13.3	
7	7.7	3	2	-71	4	-43	2	13	149.5	- 9.9	
8	9.37	10	5	-55	14	+69	26	190	127.8	+ 2.6	
9	24.74	3	23	-20	25	+11	3	13	285.3	- 9.5	
23620	28.7	4	Mar 1	+ 7	Mar 4	+51	5	51	233.2	+11.6	
1	Mar 11.4	5	6	-66	10	-16	2	14	91.8	+ 6.6	
2	9.77	8	8	-21	15	+76	11	90	113.7	-13.5	
3	14.4	6	15	+13	20	+82	21	149	52.7	-14.3	
4	11.8	2	16	+61	17	+73	16	90	86.8	-10.9	
23625	27.01	2	26	- 7	27	+ 4	1	6	246.5	+13.2	
6	Apr 11.3	3	Apr 7	-50	Apr 9	-26	2	9	44.2	+ 6.4	
7	9.70	3	8	-19	10	+10	1	13	65.8	+ 1.2	
8	28.7	2	23	-67	24	-57	1	16	175.5	+ 9.4	
9	24.5	4	27	+37	30	+80	9	62	230.7	+ 8.4	
23630	May 2.50	7/ 9	27	-70	May 5	+38	2	23	124.7	+ 1.6	
1	5.41	7	30	-67	6	+ 6	3	25	86.3	-12.5	
2	1.31	7	May 1	- 2	7	+77	38	259	140.3	- 7.6	
3	16.1	3	10	-74	12	-50	0	3	304.9	- 6.4	
4	24.8	2	22	-32	23	-19	1	7	190.2	- 8.7	
23635	June 5.85	7	31	-74	June 6	+ 8	4	19	30.4	- 7.6	
6	10.7	2	June 11	+ 8	12	+23	0	3	326.7	+ 5.2	
7	13.2	5	15	+33	19	+80	20	139	293.4	+ 5.8	2206(1)
8	23.3	7	23	+ 3	29	+79	9	59	159.8	-11.0	
9	30.59	13	24	-83	July 6	+74	54	317	62.9	+ 6.4	2207(1)
23640	23.3	2	26	+40	June 27	+54	6	28	159.6	- 6.2	
1	22.9	2	28	+79	29	+86	8	47	163.9	- 9.6	
2	July 9.93	12	July 5	-62	July 16	+82	27	178	299.3	+ 5.4	2206(2)
3	8.38	3	6	-33	8	+ 4	1	8	319.8	- 7.3	
4	16.23	13	10	-77	22	+85	13	92	215.8	-10.3	
23645	19.81	12	14	-73	25	+74	34	239	168.5	- 5.7	
6	17.2	2	19	+33	20	+38	2	8	202.8	- 3.9	
7	27.34	13	21	-80	Aug 2	+80	13	90	68.9	+ 7.5	2207(2)
8	25.94	8	24	-25	July 31	+74	19	143	87.3	+ 8.5	
9	Aug 5.19	13	30	-81	Aug 11	+80	65	526	311.8	+ 5.0	

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	1975/6	d	1975/6	°	1975/6	°			°	°	
23650	Aug 9.49	14	Aug 3	-79	Aug 16	+84	113	1035	255.0	+ 9.0	
1	5.65	8	4	-21	11	+79	26	183	305.8	+ 9.0	
2	15.75	6/11	11	-57	21	+76	1	11	172.1	- 6.0	
3	8.8	2	12	+47	13	+60	0	5	264.3	-35.1	
4	20.9	4	16	-60	19	-19	4	27	104.1	-11.7	
23655	15.9	3	20	+57	22	+84	11	78	169.5	+26.9	
6	22.78	5/ 7	21	-16	27	+59	1	9	79.3	+ 8.5	
7	24.6	6	25	+ 7	30	+78	20	111	55.0	-13.9	
8	31.61	4/ 5	28	-44	Sept 1	+10	0	3	322.6	+ 0.3	
9	Sept 4.9	2/ 4	Sept 1	-48	4	- 8	1	5	265.7	+ 7.7	
23660	5.35	7	2	-41	8	+43	7	74	260.0	+ 8.4	
1	4.4	3/ 5	4	+ 2	8	+49	0	2	272.9	+10.4	
2	6.0	2	4	-21	5	- 9	1	16	251.9	+10.9	
3	12.29	12	6	-78	17	+68	15	99	168.4	- 8.5	
4	18.35	6	17	-12	22	+53	4	31	88.3	+ 9.2	
23665	18.3	3	20	+33	22	+54	1	13	89.5	+ 2.9	
6	23.1	3	20	-31	22	-10	3	19	25.2	+ 6.1	
7	Oct 7.25	14	30	-83	Oct 13	+77	18	120	198.9	+32.8	
8	14.97	9	Oct 13	-25	21	+84	34	235	97.1	+ 5.0	
9	23.0	2	17	-73	18	-61	2	16	350.9	+ 3.0	
23670	Nov 6.93	6	Nov 3	-48	Nov 8	+21	8	42	154.2	- 4.3	
1	10.68	11	4	-85	14	+52	20	111	104.9	+ 3.3	
2	9.42	3/ 5	7	-28	11	+27	0	6	121.5	- 8.1	
3	6.5	2	11	+64	12	+80	4	20	160.5	-10.5	
4	16.04	10	13	-35	22	+85	22	115	34.2	+ 5.5	
23675	19.93	13	13	-85	25	+71	52	343	342.9	- 6.8	
6	Dec 4.64	8	Dec 2	-31	Dec 9	+69	18	102	149.1	+ 5.4	
7	17.14	6	14	-35	19	+29	2	20	344.4	- 6.4	
8	22.6	2	24	+25	25	+36	5	21	272.8	-10.9	
9	30.1	3	24	-75	26	-50	4	22	173.5	- 3.9	
23680	Jan 9.7	3	Jan 12	+36	Jan 14	+60	2	12	33.6	- 8.5	
1	18.03	12	12	-74	23	+71	35	293	284.3	-11.5	
2	27.76	4/ 5	27	- 6	31	+47	1	5	156.3	- 3.8	
3	Feb 13.79	7	Feb 13	- 3	Feb 19	+73	5	33	292.1	-11.3	
4	23.1	5	17	-77	21	-19	2	19	169.6	- 3.3	
23685	Mar 3.5	3	Mar 6	+38	Mar 8	+65	4	26	45.7	- 4.3	
6	4.0	2	7	+47	8	+58	1	5	39.1	- 8.1	
7	12.26	7	9	-35	15	+37	5	37	290.1	-34.6	
8	11.9	3	13	+21	15	+44	1	8	294.8	-11.6	
9	19.21	9	16	-40	24	+72	71	443	198.6	+ 4.2	2208(1)
23690	19.81	5	17	-28	21	+19	3	23	190.7	- 7.6	
1	31.03	14	24	-87	Apr 6	+83	111	703	42.7	- 7.8	2209(1)
2	24.9	2	26	+16	Mar 27	+34	3	19	124.2	- 8.7	
3	24.8	4	27	+35	30	+72	7	44	125.3	+ 5.7	
4	Apr 14.78	12	Apr 9	-70	Apr 20	+74	47	265	208.0	+ 2.8	2208(2)

GENERAL CATALOGUE OF SUNSPOTS

No. of Group	U.T. of C.M.P.	Duration	First Seen Date	First Seen Long. from C.M.	Last Seen Date	Last Seen Long. from C.M.	Corrected Mean Area Umb.	Corrected Mean Area Whole Spots	Mean Position Long.	Mean Position Lat.	Ref.
	1976	d	1976	°	1976/7	°			°	°	
23695	Apr 19.98	13	Apr	14 -74	Apr	26 +86	20	134	139.3	+ 4.7	2210(1)
6	21.08	6/ 7		17 -48		23 +30	2	16	124.8	- 9.3	
7	27.40	13		21 -80	May	3 +79	41	282	41.3	- 9.5	2209(2)
8	30.7	3		26 -57	Apr	28 -30	7	45	358.2	+ 2.7	
9	May 5.73	4	May	3 -30	May	6 + 8	1	12	291.3	+ 9.4	
23700	11.78	13		5 -82		17 +74	20	139	211.3	- 0.1	2208(3)
1	17.1	4		11 -77		14 -36	3	14	140.9	+ 5.7	2210(2)
2	19.5	2		13 -84		14 -68	3	43	108.7	-10.0	
3	23.58	5/ 7		18 -70		24 +11	1	9	55.3	- 7.4	
4	24.78	4/ 7		20 -59		26 +20	1	7	39.4	- 8.4	
23705	22.91	2		22 - 9		23 + 7	0	6	64.0	- 2.9	
6	June 6.3	3	June	8 +27	June	10 +53	2	20	233.0	-24.4	
7	14.83	4		12 -30		15 + 4	1	10	120.8	-45.2	
8	20.12	9		14 -76		22 +33	17	117	50.7	+ 2.9	
9	18.7	4		21 +35		24 +76	8	46	69.6	+ 1.1	
23710	27.55	12		22 -68	July	3 +76	13	93	312.3	-26.9	
1	22.1	3		24 +30	June	26 +56	2	9	24.5	- 0.5	
2	July 4.0	4	July	4 + 7	July	7 +42	2	17	226.6	+22.1	
3	Aug 7.65	13	Aug	1 -83	Aug	13 +76	82	547	128.5	+15.9	2211(1)
4	11.71	6		9 -31		14 +36	3	22	74.9	+24.3	
23715	12.7	2/ 4		9 -45		12 - 5	1	4	61.4	- 3.1	
6	15.96	7		15 - 6		21 +71	12	80	18.7	- 2.5	
7	24.56	8		19 -70		26 +24	9	57	265.0	-11.6	
8	Sept 3.91	14		28 -86	Sept	10 +84	42	235	128.3	+16.2	2211(2)
9	Aug 27.9	2	Sept	1 +58		2 +72	18	116	221.1	+19.6	
23720	Sept 11.43	7		9 -29		15 +51	17	121	29.0	-20.0	
1	11.2	2		12 +16		13 +24	1	8	32.0	-24.1	
2	21.0	3		17 -48		19 -17	4	21	263.2	-11.7	
3	Oct 1.14	13		25 -74	Oct	7 +82	17	112	128.8	-26.0	2212(1)
4	1.12	13		25 -76		7 +83	21	144	129.1	+15.7	2211(3)
23725	Sept 28.0	2		29 +20	Sept	30 +33	1	5	170.9	+28.2	
6	Oct 1.3	7	Oct	1 + 4	Oct	7 +76	7	40	126.9	+31.8	
7	16.48	9		12 -51		20 +47	18	122	286.4	-26.9	
8	18.33	11		12 -77		22 +53	5	29	262.0	- 9.7	
9	22.4	3		17 -67		19 -40	0	4	208.2	-24.5	
23730	23.89	9		22 -20		30 +82	33	234	188.7	+29.4	
1	29.07	7/11		23 -73	Nov	2 +57	3	22	120.3	-27.8	2212(2)
2	Nov 23.34	13	Nov	17 -83		29 +79	29	211	147.2	+11.0	2213(1)
3	Dec 11.50	11	Dec	7 -54	Dec	17 +79	31	198	267.9	+ 5.0	
4	9.7	2		8 -12		9 - 8	2	20	292.2	+23.6	
23735	14.0	6		14 + 3		19 +67	10	65	234.8	-26.5	
6	20.58	13		14 -82		26 +77	25	146	148.3	+11.5	2213(2)
7	20.7	3		16 -57		18 -35	2	15	146.8	-26.0	
8	30.43	13		24 -78	Jan	5 +79	23	161	18.6	-19.4	

GENERAL CATALOGUE OF SUNSPOTS SEEN ON ONE DAY ONLY

No. of Group	Date		Longitude from C.M.	U.T. of C.M.P.		Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1972		°	1971/2				°	°
1583 01	Jan	1	+18.0	Dec	31.0	0	2	5.8	-15.9
02		4	-49.7	Jan	8.1	0	5	258.5	+11.0
03		7	+49.0		3.6	0	11	318.2	+21.0
04		7	+21.8		5.6	2	11	291.1	- 7.2
05		21	+64.7		16.5	0	5	147.5	-14.0
06		22	-12.8		23.3	1	4	58.5	-14.3
07		24	+ 1.4		24.2	0	2	46.8	-22.3
1584 01	Feb	14	- 4.1	Feb	14.7	1	4	123.1	+27.5
1585 01		24	-28.0		26.5	1	5	327.6	+14.4
02	Mar	4	+13.2	Mar	3.4	0	6	250.1	- 4.4
03		15	+31.5		13.0	3	19	124.1	+25.3
04		19	+ 0.2		19.4	0	2	39.6	-16.2
1586 01		27	+61.7		22.6	0	4	357.0	-20.1
02	Apr	5	+ 8.6	Apr	4.7	0	2	184.6	- 8.7
03		10	+66.3		5.4	0	14	174.9	+ 1.3
04		12	-30.0		14.8	1	10	50.7	+ 0.6
1587 01		20	+11.5		19.5	0	2	349.0	-14.0
02		28	+10.0		27.6	1	14	242.7	+16.9
03		28	- 5.3		28.7	1	10	227.5	+ 6.0
04		29	+76.9		23.3	0	11	299.5	+20.6
05	May	2	+46.5		28.8	0	14	225.8	-21.4
06		2	-47.6	May	6.0	2	10	131.7	+ 7.9
07		4	+48.6	Apr	30.6	2	12	202.2	-10.7
08		14	+58.1	May	9.9	0	2	78.9	- 7.3
09		14	+13.2		13.3	1	3	34.1	+ 3.2
1588 01		19	+ 3.4		19.0	0	3	318.6	- 2.1
02		20	+ 8.9		19.8	1	7	309.2	-13.5
03		20	-50.6		24.3	0	2	249.7	-10.6
04		28	-49.4	June	1.1	0	5	146.4	- 1.3
05	June	1	-50.4		5.2	0	4	91.9	-33.1
06		9	-49.5		13.2	2	3	345.4	- 5.0
07		11	-47.4		15.0	2	5	321.7	- 7.9
1589 01		13	+ 7.9		12.7	0	1	351.9	-12.1
02		14	+12.5		13.4	0	2	343.1	-17.4
03		14	- 1.4		14.4	0	7	329.2	- 7.9
04		15	-26.6		17.3	3	13	291.1	-17.1
05		16	+13.1		15.4	1	8	316.0	- 0.3
06		25	+41.8		22.2	0	2	226.4	+16.7
07		26	+64.1		21.5	2	18	236.0	+16.9
08		27	+ 4.5		27.3	1	4	159.2	- 9.8
09		29	+64.9		24.4	3	21	197.0	-19.9
10		29	+ 7.5		28.8	0	1	139.6	+17.9
11	July	1	+ 8.4		30.7	0	4	114.0	-21.5
12		3	+70.6		28.0	7	31	149.8	+13.0
13		3	- 4.6	July	3.7	1	11	74.7	-10.3
14		6	+78.7	June	30.4	6	52	117.3	+ 5.2
1590 01		17	- 4.1	July	17.7	0	2	249.0	+ 6.0
02		18	-57.2		22.7	0	2	183.5	- 1.2

GENERAL CATALOGUE OF SUNSPOTS SEEN ON ONE DAY ONLY

No. of Group	Date		Longitude from C.M.	U.T. of C.M.P.		Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1972/3		°	1972				°	°
1590 03	July	19	+70.0	July	14.1	3	17	296.9	+19.6
04		21	+72.9		15.8	4	29	274.0	-13.0
05		22	+18.5		20.9	3	13	206.1	-20.6
06		26	+14.6		25.2	0	6	149.6	- 6.4
07		31	+19.8		30.0	1	5	86.5	- 7.7
08	Aug	2	-49.4	Aug	6.1	0	7	352.3	-12.0
1591 01		6	+71.1		1.0	0	9	60.2	-22.5
02		7	+50.6		3.5	2	11	26.6	+ 7.6
03		13	+52.9		9.3	0	4	309.7	+ 5.7
04		17	-56.5		21.8	0	6	145.1	+19.1
05		20	-36.3		23.2	0	3	125.8	-15.0
06		22	-32.8		24.8	0	3	105.3	+ 3.5
1592 01	Sept	4	-16.2	Sept	5.6	0	5	310.0	+16.6
02		7	-10.9		8.4	0	4	272.9	+19.0
03		7	-25.2		9.4	1	9	258.6	- 5.8
04		11	+ 5.4		10.9	1	9	239.2	-19.4
05		15	+10.0		14.6	1	6	191.0	- 7.6
06		17	-59.7		21.9	0	2	94.7	-15.1
07		19	-16.0		20.5	0	12	112.4	+ 9.7
08		20	+ 8.0		19.7	0	2	122.9	- 4.5
09		24	+23.8		22.6	0	1	85.3	-20.1
10		25	+10.7		24.5	1	5	59.7	-15.6
11		26	-11.4		27.2	0	2	24.5	+14.5
1593 01		29	+14.9		28.2	0	2	11.2	+ 4.7
02		29	-52.0	Oct	3.3	0	12	304.3	+ 6.9
03	Oct	2	+56.3	Sept	28.1	0	6	12.7	-31.9
04		4	+17.0	Oct	3.0	2	22	307.1	-13.5
05		8	+35.5		5.4	0	8	275.9	- 4.0
06		12	- 2.2		12.7	0	1	179.9	+12.9
07		14	-36.0		17.0	0	4	122.5	+ 3.6
08		16	+72.3		10.8	10	88	204.4	+19.1
09		17	- 8.1		18.2	1	8	107.7	+ 6.4
10		19	-55.2		23.5	2	13	36.7	-16.6
1594 01		28	+22.7		26.6	1	3	356.3	+13.6
02		28	-26.4		30.3	2	18	307.2	+ 8.3
03		30	+46.1		26.7	2	9	355.3	-27.8
04		30	-13.0		31.2	0	8	296.3	+ 0.6
05		30	-21.0		31.8	2	5	288.2	+16.7
06	Nov	2	+37.2		30.6	1	15	304.3	+11.0
07		4	+43.9		32.0	2	12	285.3	-13.5
08		14	-34.5	Nov	17.0	3	16	74.1	+14.4
09		17	-17.7		18.6	2	24	52.7	+ 7.5
1595 01	Dec	1	- 0.7	Dec	1.3	0	4	245.2	+35.5
02		2	-17.4		3.7	0	1	214.7	+ 1.9
1596 01		22	+ 7.2		21.7	1	13	336.4	-11.8
02		23	+11.3		22.4	0	2	327.2	-17.8
03		24	+18.6		22.9	0	2	321.5	- 9.5
04		28	+37.0		25.6	0	5	285.5	-12.4
05	Jan	2	+71.9		28.0	0	10	253.5	-16.5

No. of Group	Date		Longitude from C.M.	U.T. of C.M.P.		Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1973		°	1973				°	°
1596 06	Jan	4	-34.0	Jan	6.9	0	3	123.6	+10.7
07		9	+45.0		5.9	3	13	137.2	-10.8
08		12	+13.2		11.3	0	2	65.6	-16.0
09		12	-72.7		17.8	0	8	339.6	+16.5
1597 01		16	+ 4.6		16.1	0	3	2.2	- 3.3
02		19	- 0.3		19.3	0	6	320.2	+ 3.6
03		21	-11.3		22.1	2	14	282.9	+17.0
04		23	-24.7		25.1	1	8	243.3	- 3.1
05		30	-46.6	Feb	2.8	2	9	129.1	+ 2.4
06	Feb	2	-47.9		6.1	0	5	85.4	+ 0.6
07		3	+61.7	Jan	29.6	0	4	184.6	-16.6
08		3	- 6.1	Feb	3.8	0	6	116.8	+16.7
09		5	+43.8		2.1	4	29	139.3	- 3.4
10		8	-34.6		10.9	0	1	22.4	+18.0
11		8	-70.1		13.6	0	9	346.9	- 7.5
1598 01		14	- 2.2		14.5	0	2	335.8	-11.5
02		16	+36.4		13.7	1	7	346.0	+11.5
03		17	+77.7		11.4	0	6	16.0	+14.8
04		17	+ 4.3		17.0	2	9	302.6	+10.3
05		20	+72.7		14.8	4	23	331.5	+ 8.3
06		22	+18.5		21.0	0	2	250.1	+ 3.4
07	Mar	9	+ 6.8	Mar	8.9	0	1	40.4	+11.9
1599 01		17	+16.6		16.1	0	6	304.9	-17.0
02		23	-16.3		24.6	0	5	193.8	+11.9
03	Apr	4	+10.2	Apr	3.6	0	6	61.5	-22.1
04		4	- 7.2		4.9	1	5	44.1	+15.9
05		4	-17.8		5.7	0	5	33.6	-28.4
1600 01		11	-60.4		16.2	0	18	255.0	-24.7
02		16	-33.8		19.1	0	6	217.3	+16.9
03		30	+12.4		29.4	0	2	80.6	- 3.8
04	May	4	-36.6	May	7.2	0	3	337.7	+12.6
1601 01		10	+27.3		8.3	0	3	323.2	- 6.0
02		11	+38.3		8.4	1	6	321.4	+ 2.1
03		11	+24.9		9.4	0	3	308.0	- 6.1
04		12	- 6.2		12.8	0	5	263.9	+ 5.6
05		19	+21.0		17.8	0	5	196.9	+12.1
06		20	- 6.6		20.8	0	11	157.7	+ 8.9
07		21	+53.8		17.6	0	10	199.9	-12.8
08		22	-35.6		25.0	0	8	102.1	- 7.6
09		25	-10.7		26.2	0	1	87.0	-10.3
10		27	-24.5		29.2	3	18	46.1	+13.3
1602 01	June	3	-21.3	June	5.0	0	3	316.9	-17.2
02		6	+39.1		3.4	2	5	337.9	+13.5
03		8	+15.1		7.2	0	5	287.1	+13.6
04		17	+48.3		13.7	0	3	200.9	+ 7.1
05		18	-18.9		19.8	0	7	120.6	- 9.2
06		22	-70.5		27.6	0	7	17.1	-17.4
07		28	- 3.6		28.8	1	11	1.7	- 5.9
1603 01	July	8	+23.9	July	6.6	0	4	259.0	+13.3

GENERAL CATALOGUE OF SUNSPOTS SEEN ON ONE DAY ONLY

No. of Group	Date		Longitude from C.M.	U.T. of C.M.P.		Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1973/4		°	1973/4				°	°
1603 02	July	9	- 6.0	July	9.8	2	7	216.3	-14.0
03		10	- 7.3		10.9	0	1	201.7	+ 3.5
04		12	+15.4		11.2	0	2	196.9	-10.9
05		19	+56.5		15.4	0	2	142.0	- 8.3
06		19	+10.6		18.9	0	2	96.1	- 4.0
07		22	- 1.7		22.5	0	1	48.4	-15.5
1604 01		29	-34.2	Aug	1.0	0	9	282.8	-12.4
02	Aug	1	+57.3	July	28.0	2	20	334.7	- 9.9
03		2	+ 6.4	Aug	1.8	0	4	271.1	+25.7
04		3	+17.8		2.2	1	7	266.3	+14.3
1605 01		27	-67.7	Sept	1.5	3	17	226.3	+15.9
02	Sept	16	+22.4		14.7	1	4	51.9	+13.0
03		17	-53.4		21.4	0	8	323.6	-15.5
04		18	+13.5		17.3	0	3	17.5	- 6.9
1606 01		22	-50.7		26.4	0	4	257.6	- 5.0
02		25	-14.8		26.5	1	13	256.4	-17.2
03		27	-60.0	Oct	1.9	0	4	185.1	-39.4
04		28	-75.5		4.1	0	16	156.1	-16.5
05	Oct	3	-16.7		4.6	0	2	149.4	+15.6
06		6	-50.2		10.3	0	7	74.2	+ 0.4
07		8	+67.5		3.3	0	14	166.5	-18.0
08		10	-32.7		12.9	0	4	39.1	- 9.8
09		14	-38.2		17.2	1	8	342.8	- 5.6
1607 01		30	+22.1		28.9	0	5	188.8	-18.5
02		30	+12.7		29.6	0	1	179.4	-15.9
03		31	+20.5		29.8	1	4	177.2	-20.2
04	Nov	4	+66.2		30.3	0	3	170.4	-13.6
05		11	- 1.3	Nov	11.6	0	1	8.3	- 7.6
1608 01		26	+71.2		21.0	4	43	243.5	-13.4
02		27	+56.3		23.2	0	6	215.5	- 9.2
03	Dec	4	-57.0	Dec	8.8	0	4	9.0	+14.1
1609 01		21	-24.2		23.1	0	5	180.5	-21.7
02		22	+21.7		20.8	1	5	211.7	-10.6
03		23	+17.9		22.0	0	1	196.1	-10.3
04		24	+26.0		22.5	0	12	189.3	- 6.7
1610 01	Jan	6	+26.8	Jan	4.4	0	3	18.9	-30.5
02		13	-60.2		17.8	0	4	201.7	- 9.9
03		15	- 3.2		15.7	0	2	230.4	+ 5.7
04		17	+14.7		16.2	2	15	224.1	+16.3
05		18	+24.4		16.4	0	5	220.4	+ 5.4
06		18	+ 8.9		17.6	0	1	204.9	+ 8.3
07		20	+14.1		19.0	0	4	186.5	- 9.9
08		26	+ 0.1		26.3	1	6	90.3	-17.9
09		27	+ 6.7		27.0	0	3	82.0	-20.5
10		28	-23.2		30.1	1	6	39.9	-16.4
11	Feb	1	+12.6		31.4	0	1	23.7	+ 9.9
12		1	-59.9	Feb	5.9	0	6	311.2	+ 5.0
1611 01		2	+19.9	Jan	31.8	0	1	17.9	+10.4

GENERAL CATALOGUE OF SUNSPOTS SEEN ON ONE DAY ONLY

No. of Group	Date	Longitude from C.M.	U.T. of C.M.P.	Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1974	°	1974			°	°
1611 02	Feb 13	+31.7	Feb 10.9	0	1	245.3	+11.1
03	13	- 1.4	13.4	1	13	212.2	- 8.9
04	17	+13.7	16.3	0	2	174.7	- 5.8
05	27	-17.0	28.8	2	14	9.9	+10.8
06	27	-69.4	Mar 4.7	0	3	317.5	- 2.0
1612 01	Mar 4	+62.1	Feb 27.7	0	3	24.3	+13.1
02	4	+24.5	Mar 2.5	0	2	346.7	-12.2
03	18	-18.4	19.8	0	2	119.3	-16.2
04	20	+52.9	16.3	0	2	165.0	-10.1
05	21	+17.9	20.0	0	3	117.1	+19.8
06	23	+ 5.9	22.9	0	1	78.3	-18.8
07	28	+38.7	25.5	0	3	43.9	-12.2
1613 01	31	-40.6	Apr 3.5	0	3	285.8	- 9.3
02	Apr 6	+10.4	5.5	0	2	258.4	- 1.8
03	19	+38.0	16.6	0	2	112.4	+15.0
1614 01	27	+26.9	25.3	0	3	357.7	+ 4.9
02	May 3	-16.9	May 4.8	0	5	232.2	- 5.9
03	11	+65.2	6.4	0	5	211.1	-13.5
04	12	+42.0	9.1	0	1	174.3	- 4.2
05	12	+19.8	10.8	0	2	152.2	- 7.6
06	12	+10.0	11.6	0	3	142.3	-32.3
1615 01	23	+20.5	21.7	0	3	8.9	+38.3
02	26	+55.6	22.1	2	25	2.9	+16.6
03	28	+44.5	25.0	2	8	324.5	+ 5.4
04	29	-71.1	June 3.8	0	3	195.7	-13.2
05	31	-28.1	2.6	1	24	210.4	- 8.6
06	June 1	-49.3	5.1	0	2	178.0	-11.1
07	7	+ 4.2	7.0	0	1	152.8	-15.6
08	17	+ 5.3	17.0	0	1	19.9	-22.3
1616 01	24	- 2.3	24.6	0	2	279.1	+10.5
02	24	-23.6	26.3	1	6	257.8	-10.7
03	24	-60.7	29.1	0	2	220.7	- 6.3
04	25	-43.3	28.4	0	7	229.3	+ 3.7
05	July 3	+ 5.2	July 2.9	0	1	169.4	-21.1
06	8	+ 6.6	7.9	0	2	103.3	+10.2
07	11	+ 3.2	11.1	0	2	61.3	+ 8.6
08	13	-26.8	15.7	0	5	0.6	- 9.9
1617 01	18	+29.5	16.1	0	1	355.1	- 3.0
02	18	+25.1	16.4	1	7	350.7	-14.1
03	21	+ 9.3	20.7	1	13	294.7	- 8.9
04	Aug 9	-34.5	Aug 11.9	0	5	0.4	-14.9
05	11	+18.9	9.9	0	7	26.6	-16.1
1618 01	13	+14.2	12.5	0	2	352.2	+ 5.4
02	29	+37.7	26.5	0	1	168.0	+15.8
03	Sept 6	+ 5.6	Sept 5.9	0	5	30.2	+10.1
04	6	+ 3.7	6.1	1	3	28.3	+ 5.5
1619 01	10	+ 3.9	10.0	0	6	335.9	-19.6

GENERAL CATALOGUE OF SUNSPOTS SEEN ON ONE DAY ONLY

No. of Group	Date	Longitude from C.M.	U.T. of C.M.P.	Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1974/5	°	1974/5			°	°
1619 02	Sept 19	-34.2	Sept 22.0	0	1	178.4	- 9.6
03	23	+27.3	21.4	0	4	186.3	- 1.6
04	Oct 5	+31.8	Oct 2.9	0	1	33.7	+26.5
05	5	+27.8	3.2	0	4	29.6	- 9.6
1620 01	10	- 7.3	11.0	1	3	287.4	+15.6
02	13	+51.0	9.3	0	5	309.8	0.0
03	14	+33.5	11.8	0	1	276.3	- 5.7
04	23	+74.8	17.8	0	9	197.6	-10.1
05	28	+13.7	27.3	0	3	71.5	+ 0.9
06	Nov 1	- 8.8	Nov 2.2	0	2	354.1	+17.8
07	1	-29.9	3.8	0	7	333.0	-17.7
1621 01	5	+75.4	Oct 30.9	14	94	24.9	-11.0
02	6	+ 3.4	Nov 6.1	0	4	302.5	+ 1.2
03	8	+12.3	7.6	1	10	283.7	+ 3.7
04	10	-20.8	11.9	0	2	225.7	- 7.7
05	14	+26.9	12.5	0	1	219.1	- 2.8
06	15	-33.4	18.0	0	10	146.5	+ 1.7
07	16	+74.2	10.9	4	18	239.4	+37.0
08	17	- 2.6	17.7	1	4	150.1	- 5.5
09	23	-20.7	25.0	0	35	54.0	+ 4.0
10	26	+12.1	25.4	0	10	48.6	+14.4
1622 01	30	+24.7	28.5	0	1	7.6	+15.6
02	Dec 23	+62.2	Dec 18.8	2	24	100.3	+ 8.3
1623 01	Jan 10	-28.9	Jan 12.5	4	51	134.6	-24.7
02	14	-16.4	15.5	0	1	94.8	+ 5.4
1624 01	24	-52.6	28.4	0	7	285.7	-10.0
02	29	-70.3	Feb 3.6	0	6	203.5	- 7.9
03	Feb 12	+15.5	11.3	1	5	103.0	+16.8
1625 01	20	+ 3.3	20.1	0	3	346.0	+10.7
02	21	+13.7	20.4	0	2	342.6	+ 8.2
03	24	+ 2.1	24.2	0	2	292.2	+19.0
04	Mar 4	-62.2	Mar 9.1	0	2	121.9	- 5.1
1626 01	19	+42.5	16.1	0	3	30.6	+ 6.7
02	Apr 3	-40.2	Apr 6.4	0	17	109.5	+14.7
03	9	-15.5	10.5	0	2	55.2	-12.6
04	11	- 5.1	11.7	0	5	38.8	+14.1
1627 01	May 1	-25.2	May 3.2	0	6	115.2	+ 5.4
1628 01	18	+ 5.1	18.0	0	2	280.3	+ 4.1
02	28	+35.2	25.7	0	1	178.2	- 3.8
03	June 5	+10.8	June 4.7	2	17	45.9	+ 8.3
1629 01	14	+ 7.1	13.8	1	11	285.1	+ 7.2
02	July 2	-29.6	July 4.6	0	5	9.9	+ 8.0
1630 01	13	-11.7	14.3	0	2	241.0	-10.7
02	29	+12.5	28.4	0	1	54.9	+11.8

No. of Group	Date		Longitude from C.M.	U.T. of C.M.P.		Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1975/6		°	1975/6				°	°
1631 01	Aug	19	+30.2	Aug	17.1	0	5	155.0	+22.0
02		20	-20.2		21.9	2	14	91.6	+ 7.4
03		23	+42.3		20.1	3	14	114.1	+ 7.5
1632 01	Sept	3	+18.9	Sept	1.9	0	4	305.3	+ 7.1
02		4	+10.2		3.6	0	2	283.6	+ 6.9
03		6	+ 5.6		6.0	1	20	251.7	+ 8.4
04		13	-58.8		17.8	0	5	96.0	- 8.0
05		14	-39.7		17.4	0	3	100.6	- 3.3
06		16	+30.2		14.4	0	3	140.8	+ 8.2
07		21	+15.9		20.2	0	1	63.9	- 4.2
08		23	- 0.9		23.6	0	2	19.7	+ 2.9
1633 01		28	+ 6.5		27.9	1	5	322.6	- 1.7
02	Oct	8	-53.1	Oct	12.4	2	12	130.7	-10.8
03		17	+20.9		15.9	0	10	84.4	+26.8
1634 01	Nov	11	-27.4	Nov	13.5	1	10	68.1	-15.0
02		15	+67.4		10.7	0	8	104.8	+26.8
1635 01	Dec	2	-24.4	Dec	4.3	1	10	153.3	+ 0.5
02		13	+ 9.7		12.7	0	8	42.9	+ 7.2
1638 01	Feb	15	+37.3	Feb	12.5	0	1	309.3	+17.7
1640 01	Apr	11	-36.4	Apr	14.2	0	7	216.1	-13.8
02		21	+47.8		17.7	0	2	169.3	- 4.2
03		24	+54.2		20.3	2	10	135.2	- 6.7
1641 01	May	5	-69.8	May	10.9	0	3	223.5	+ 0.6
02		7	- 0.5		7.4	0	2	269.6	- 0.3
03		14	-13.6		15.4	0	1	163.4	+10.0
04		17	-37.1		20.1	0	5	100.7	-25.0
05		17	-46.7		20.9	0	2	91.1	+ 7.4
06		20	+16.6		19.1	0	5	114.8	-10.6
07		23	-17.4		24.7	0	3	40.2	- 3.0
1642 01	June	23	+ 8.6	June	22.7	0	1	16.9	+ 2.4
1643 01		28	+64.3		23.5	0	3	5.9	+23.6
02	July	6	+32.5	July	3.9	0	6	228.7	-24.9
1644 01		31	+54.0		27.2	0	6	279.7	+ 1.7
02	Aug	2	-17.0	Aug	3.7	1	8	180.4	+ 5.6
1645 01		27	-14.0		28.4	0	1	213.8	+ 3.2
02		27	-23.2		29.1	0	1	204.7	-26.6
03		28	- 6.1		28.8	0	3	209.2	+14.2
04	Sept	5	-22.6	Sept	7.1	1	5	86.0	+ 5.4
1646 01		16	+58.9		11.9	3	18	23.2	-23.4
02		19	- 3.3		19.9	0	15	277.4	+18.4
1647 01	Oct	20	-15.0	Oct	21.5	1	9	220.3	-22.6
02		20	-48.3		24.0	2	12	187.0	+ 1.8

GENERAL CATALOGUE OF SUNSPOTS SEEN ON ONE DAY ONLY

No. of Group	Date		Longitude from C.M.	U.T. of C.M.P.		Area Corrected for Foreshortening: Umbrae	Area Corrected for Foreshortening: Whole Spots	Position of Group: Long.	Position of Group: Lat.
	1976		°	1976				°	°
1647 03	Oct	21	+77.6	Oct	15.4	9	37	300.2	-36.5
04		30	+ 3.9		30.2	0	1	105.7	-29.2
05		31	+13.5		30.4	0	1	102.9	-35.7
06	Nov	1	+24.3		30.5	0	3	102.2	-43.2
1648 01		15	+61.6	Nov	10.8	2	7	313.1	+22.2
1649 01	Dec	6	-66.9	Dec	11.5	0	6	267.8	+29.1
02		18	-49.6		21.9	0	2	131.4	+41.2
03		29	-15.6		30.6	0	2	15.7	+20.7

TOTAL AREAS OF SUNSPOTS AND FACULAE FOR EACH DAY IN THE YEAR

1972 JANUARY

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1	C	87	631	458	199	65	438	492	222
2	C	64	482	125	261	49	368	250	451
3	C	97	598	83	907	65	413	169	1213
4	C	59	504	83	821	39	337	73	868
5	K	82	399	228	307	53	269	234	261
6	H	75	448	713	690	56	355	928	822
7	C	61	340	604	521	49	276	669	766
8	K	32	208	664	535	34	229	689	750
9	K	24	134	328	398	30	170	429	382
10	H	17	155	487	649	10	89	599	686
11	C	19	107	377	428	10	58	429	459
12	H	67	456	778	271	34	237	824	337
13	C	32	326	772	209	17	174	965	348
14	C	33	256	251	785	56	456	338	1017
15	C	58	475	513	740	71	597	609	837
16	C	76	684	461	818	62	595	568	871
17	C	91	693	417	647	61	465	476	832
18	C	135	1019	514	420	80	599	649	451
19	C	102	931	471	324	54	496	571	360
20	C	161	1723	219	459	83	893	263	506
21	H	272	1819	659	302	155	1018	780	404
22	C	222	1693	387	262	148	1125	452	306
23	H	188	1347	530	466	186	1277	522	640
24	C	156	952	857	418	185	1090	1053	588
25	C	147	1245	964	766	138	1203	1261	996
26	C	129	789	669	546	94	565	947	675
27	H	125	847	477	541	82	554	559	573
28	C	86	625	492	387	60	431	528	425
29	H	65	569	735	259	51	499	1098	383
30	H	107	657	639	454	78	494	984	498
31	H	108	693	648	573	64	423	689	617

1972 FEBRUARY

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1	K	92	484	260	300	59	324	398	342
2	K	60	296	80	200	38	197	76	197
3	C	46	339	902	357	35	255	925	426
4	H	78	480	1032	652	58	365	1339	774
5	H	64	392	725	715	55	334	1080	708
6	C	61	442	621	222	49	408	1114	242
7	C	54	343	504	399	34	211	543	501
8	H	52	319	477	531	79	569	559	945
9	H	58	386	660	702	65	414	726	907
10	H	95	634	542	933	96	650	659	1221
11	H	167	1010	443	1062	128	793	507	1324
12	C	166	1105	432	1113	119	785	650	1277
13	K	264	1176	220	1440	169	741	225	1333
14	H	234	1195	217	543	150	787	255	617
15	C	206	1723	336	611	126	1060	541	802
16	H	353	2340	316	513	272	1865	444	888
17	P	653	3173	527	750	491	2446	489	848
18	K	572	3349	400	530	408	2451	364	552
19	C	617	4904	825	750	466	3800	944	984
20	C	622	4925	1131	835	434	3432	1368	1061
21	C	571	4624	963	899	352	2891	1142	1121
22	C	553	4506	1024	875	335	2697	1382	1028
23	C	518	4011	1005	623	359	2574	1668	638
24	H	454	3558	795	391	260	2042	878	356
25	H	414	2953	745	153	282	2126	775	340
26	C	247	1856	951	539	198	1539	1003	869
27	C	182	1278	913	869	150	1124	1202	927
28	C	157	1077	777	596	164	1290	1102	614
29	C	90	829	668	361	72	638	818	421

1972 MARCH

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1	C	159	1032	827	350	207	1439	832	667
2	H	257	1566	758	635	321	1828	968	858
3	H	301	2053	645	840	259	1739	688	870
4	H	372	2118	649	845	271	1524	833	846
5	C	404	2331	404	318	266	1598	543	591
6	H	456	2714	1089	352	254	1546	1103	427
7	H	520	2872	1122	869	293	1680	1173	1047
8	C	375	2749	531	552	248	1738	602	891
9	H	352	2969	440	1166	264	2132	566	1539
10	H	418	2950	550	1431	297	2107	581	1462
11	C	387	2886	382	839	265	1992	396	1082
12	C	356	2482	704	683	258	1803	816	753
13	H	327	2304	539	781	260	1855	814	971
14	H	273	1708	660	1300	212	1283	970	1851
15	H	267	1907	432	1472	170	1217	400	1543
16	H	266	1591	761	697	172	1058	777	807
17	H	259	1440	871	630	177	968	922	731
18	H	205	1381	1108	853	133	912	1150	922
19	H	196	1202	1107	1064	182	1085	1332	1233
20	H	223	1427	909	955	176	1091	1279	1053
21	H	299	1637	588	522	198	1125	757	501
22	H	274	1761	455	790	160	1031	523	769
23	H	303	1770	933	467	174	1035	979	488
24	H	275	1759	1201	467	172	1089	1425	672
25	H	197	1153	1589	1000	134	782	1916	1145
26	C	86	543	603	506	89	521	811	504
27	C	49	265	778	151	39	202	955	139
28	H	35	160	600	511	40	189	738	809
29	H	43	228	556	545	60	324	691	736
30	C	45	315	615	573	37	272	850	578
31	C	58	383	581	431	42	270	728	354

1972 APRIL

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1	H	49	335	345	535	29	197	455	595
2	C	45	357	368	313	24	193	358	361
3	H	33	269	601	256	19	149	641	410
4	C	54	246	606	833	31	136	802	1295
5	H	35	209	357	1037	20	116	562	1364
6	H	71	455	156	1329	74	493	171	1802
7	H	109	888	515	1521	91	765	473	1617
8	H	146	871	603	892	123	795	655	988
9	C	155	1006	649	812	110	721	769	950
10	H	170	1099	302	1152	123	780	501	1348
11	C	145	1065	228	900	92	660	229	1028
12	H	176	1333	403	1130	101	752	384	1301
13	H	138	793	643	676	74	440	636	796
14	C	92	659	925	1012	50	375	992	1221
15	C	87	581	1494	916	78	910	1527	1280
16	H	106	768	1505	1213	96	745	1606	1298
17	H	150	858	564	270	118	678	709	269
18	C	152	1193	873	458	102	791	1067	412
19	C	130	1080	785	305	78	643	842	410
20	H	144	893	1151	350	80	494	1398	389
21	C	118	951	437	535	85	657	461	644
22	H	153	905	868	507	103	617	927	522
23	C	138	1020	569	558	88	634	730	566
24	C	153	915	579	526	92	551	598	668
25	H	183	1130	982	632	115	697	1108	892
26	K	162	804	559	404	108	521	650	534
27	C	165	941	957	451	143	817	1333	486
28	C	117	799	495	209	143	1012	758	324
29	K	56	380	321	197	105	700	504	352
30	C	26	167	693	396	21	133	752	690

1972 MAY

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1	H	21	123	578	533	24	141	654	705
2	H	17	114	610	1107	37	208	703	1256
3	C	20	138	275	957	30	205	389	1116
4	C	53	372	352	1133	52	358	405	1237
5	K	54	318	208	384	42	246	220	396
6	C	154	1132	495	484	93	682	676	688
7	C	183	1383	220	495	100	751	350	590
8	H	222	1532	147	646	114	791	173	782
9	H	202	1387	238	759	132	831	334	962
10	C	267	1643	396	716	170	1049	398	766
11	C	282	1742	682	660	203	1286	665	799
12	C	256	1742	1073	685	224	1544	1140	1061
13	H	230	1800	1082	1149	225	1755	1197	1341
14	C	301	2257	787	1099	328	2480	1166	1489
15	C	367	3160	667	1053	317	2533	977	1197
16	H	443	3542	740	1196	302	2400	838	1119
17	C	604	3808	710	453	375	2376	745	446
18	H	520	3742	630	528	302	2160	825	651
19	H	523	3771	734	390	290	2078	781	434
20	H	420	3269	837	356	225	1752	983	423
21	C	398	2871	778	212	226	1633	1168	342
22	H	325	2248	1353	516	199	1355	1427	706
23	C	248	1810	1078	522	182	1347	1312	593
24	C	199	1432	1127	330	215	1605	1381	518
25	H	225	1603	722	287	292	2073	787	396
26	H	163	1384	653	240	217	1971	1125	233
27	H	153	1075	677	343	168	1262	1011	525
28	H	136	910	619	676	83	556	711	841
29	C	227	1316	200	978	150	837	250	1140
30	H	230	1545	92	1492	193	1412	149	2075
31	C	234	1632	245	1805	174	1199	326	2213

1972 JUNE

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1	H	259	1553	667	1587	169	1024	940	2144
2	C	278	1781	232	711	175	1120	267	841
3	C	354	2036	467	723	219	1259	578	943
4	K	267	1882	190	317	170	1180	180	326
5	C	444	3062	245	1227	292	1951	395	1291
6	C	435	2961	667	668	243	1655	668	712
7	C	412	2572	902	734	256	1587	947	944
8	H	376	2861	1148	897	261	1955	1505	1148
9	C	258	2110	1139	1048	196	1580	1106	1169
10	K	207	1531	1019	526	191	1362	1205	610
11	H	147	1158	1024	1002	241	1897	1568	1258
12	H	106	939	621	1297	169	1576	966	1350
13	H	159	991	633	554	113	707	752	581
14	C	187	1136	545	501	112	676	691	555
15	C	239	1733	504	492	208	1416	528	789
16	C	274	1856	547	892	215	1435	585	1131
17	H	346	2136	1184	780	251	1515	1318	771
18	C	366	2503	1060	457	246	1667	1110	517
19	H	382	2331	1083	426	227	1402	1267	486
20	C	386	2350	807	482	232	1367	921	735
21	H	429	2252	968	565	274	1533	1167	697
22	H	426	2573	713	529	270	1663	1029	514
23	H	333	2363	690	345	227	1620	1014	537
24	C	299	1857	415	225	189	1187	530	342
25	C	234	1352	706	683	172	994	754	900
26	C	162	874	760	594	174	899	794	665
27	H	131	730	646	1233	188	1078	888	1443
28	H	130	883	404	1094	98	682	531	1368
29	H	183	1109	322	1277	129	822	575	1441
30	H	231	1366	299	1267	142	849	316	1539

TOTAL AREAS OF SUNSPOTS AND FACULAE FOR EACH DAY IN THE YEAR

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1972 JULY									
1	C	218	1226	537	626	135	729	566	607
2	C	210	1260	858	836	162	912	966	1021
3	H	216	1282	614	741	159	914	713	932
4	H	272	1696	714	1070	223	1352	742	1319
5	C	307	1943	774	627	219	1374	760	694
6	H	267	1825	1392	1058	178	1222	1650	1290
7	C	276	1553	942	1009	190	1137	1142	1141
8	P	227	1417	655	798	143	929	827	811
9	C	161	994	717	1111	98	601	813	1223
10	C	160	839	534	604	99	512	592	659
11	C	145	881	1094	514	93	572	1145	562
12	H	125	714	588	542	129	792	583	835
13	C	114	742	716	616	129	1014	863	807
14	H	162	968	1222	794	197	1182	1435	904
15	H	172	981	1036	621	174	1226	1567	659
16	H	170	1132	874	668	108	717	917	664
17	H	209	1289	864	497	117	720	823	706
18	C	156	1197	885	582	83	631	946	716
19	H	175	1145	772	553	95	611	901	568
20	C	118	981	515	570	65	543	621	560
21	C	133	896	336	314	98	666	410	347
22	C	144	767	784	482	121	658	716	523
23	H	88	424	978	588	90	446	1108	646
24	H	61	508	691	967	110	890	1001	1212
25	C	126	713	279	869	119	661	356	1051
26	H	162	942	485	1383	110	637	584	1585
27	H	201	1474	940	1411	117	863	924	1635
28	H	270	1586	722	998	157	926	791	1081
29	C	241	1582	368	769	201	1367	402	1008
30	C	266	1930	456	901	265	1998	524	1119
31	H	392	2530	733	1145	313	2002	895	1310
1972 OCTOBER									
1	H	201	1102	787	933	138	774	960	1218
2	H	167	1051	953	1032	111	691	1181	1210
3	H	130	887	368	768	85	565	459	865
4	H	92	611	547	614	55	356	654	668
5	C	69	529	617	422	42	303	673	506
6	H	72	458	661	235	43	266	839	259
7	H	41	280	669	423	25	168	765	489
8	K	37	189	500	266	24	127	661	257
9	C	21	124	301	313	16	102	316	362
10	K	34	125	482	390	36	126	450	502
11	H	24	130	1180	813	32	174	1303	880
12	H	9	77	678	423	16	135	1014	470
13	C	0	0	516	495	0	0	614	603
14	C	0	12	474	518	0	7	576	615
15	H	13	89	544	822	33	246	709	1043
16	C	56	378	493	483	97	649	550	658
17	H	75	636	555	819	76	682	642	1086
18	Z	162	731	166	956	133	597	162	1094
19	H	183	1117	200	676	123	780	226	757
20	C	248	1375	193	493	142	782	224	499
21	H	312	1793	488	820	198	1193	528	1331
22	K	243	1761	201	544	160	1045	285	687
23	H	325	2049	319	836	328	2473	476	1172
24	C	374	2714	373	459	386	2992	427	614
25	H	503	3410	716	762	432	3002	855	989
26	C	536	3845	467	575	414	2930	468	631
27	C	568	4059	693	618	393	2809	801	750
28	C	544	3690	595	468	359	2388	817	584
29	C	507	3708	373	341	267	1953	520	504
30	K	448	2982	311	361	238	1576	386	444
31	K	437	2982	251	260	241	1639	237	277

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1972 AUGUST									
1	C	520	2906	989	2168	354	1965	1151	2072
2	C	576	2879	1047	968	361	1802	1254	1071
3	H	460	2833	1159	585	259	1614	1412	746
4	K	326	2441	421	453	173	1297	505	513
5	C	438	2845	744	755	240	1540	990	887
6	H	339	2494	675	951	187	1396	920	1104
7	H	319	2072	758	493	203	1315	956	628
8	C	253	1579	1279	488	198	1257	1317	736
9	H	241	1301	1975	931	290	1563	2168	1227
10	H	116	758	1458	941	189	1381	1779	1025
11	H	87	585	1305	905	129	1011	1538	964
12	C	91	501	878	489	150	765	1081	464
13	H	57	305	689	700	75	361	832	823
14	H	25	160	765	491	35	215	889	627
15	H	40	203	803	859	49	236	964	1080
16	H	70	384	664	1349	57	307	803	1412
17	C	108	628	578	732	71	421	601	810
18	H	118	839	895	390	82	571	874	416
19	C	99	699	821	622	82	583	946	747
20	C	78	528	644	931	84	630	885	1061
21	H	108	651	503	845	85	536	715	1132
22	H	149	1068	631	1318	134	920	806	1528
23	H	170	1264	353	878	122	903	329	990
24	C	170	1332	762	740	131	1037	959	931
25	H	179	1424	695	1116	124	969	870	1409
26	C	196	1405	341	1090	122	874	626	1234
27	H	219	1505	432	1025	149	1067	594	1394
28	H	249	1613	1002	1288	218	1376	1053	1424
29	H	371	2270	1104	1116	290	1822	1267	1376
30	H	357	2058	1323	1037	296	1706	1472	1049
31	H	248	1554	1175	809	178	1163	1315	827
1972 NOVEMBER									
1	H	323	2745	748	484	212	1778	978	585
2	H	286	2002	616	209	221	1533	699	248
3	C	113	1151	1064	277	122	1214	1121	408
4	C	47	504	1485	340	90	946	1769	421
5	C	19	110	668	435	19	102	937	511
6	C	53	268	490	202	96	493	646	259
7	C	8	55	509	127	25	175	584	158
8	H	2	13	384	220	3	17	558	283
9	H	2	15	577	359	1	18	854	430
10	C	21	93	273	306	14	60	340	415
11	H	50	314	413	316	49	305	530	543
12	C	51	418	443	316	80	707	591	361
13	H	50	403	230	634	62	503	435	777
14	H	67	459	348	893	52	362	406	1162
15	H	54	443	174	1083	35	289	230	1231
16	C	61	523	252	771	35	301	241	992
17	C	61	519	179	633	40	324	212	743
18	C	61	455	465	866	36	266	534	1139
19	C	79	520	537	1011	66	395	643	1191
20	H	152	880	478	1075	97	572	587	1650
21	H	150	985	293	923	118	768	308	1325
22	C	136	938	633	824	103	716	704	958
23	H	177	1058	850	752	134	815	969	775
24	H	145	1155	523	544	131	1061	720	636
25	H	172	1087	418	407	126	781	455	419
26	H	99	716	654	610	77	573	736	726
27	C	94	683	357	189	84	639	485	322
28	C	61	431	484	347	47	364	667	440
29	C	41	354	558	442	24	220	579	466
30	H	78	548	664	206	49	349	770	287

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1972 SEPTEMBER									
1	H	180	1151	1024	671	145	969	1500	695
2	H	164	976	521	408	95	562	680	451
3	H	164	1069	781	249	105	691	845	233
4	H	114	694	761	284	93	563	821	482
5	H	78	523	881	665	88	644	1005	905
6	C	68	462	770	968	70	449	969	1197
7	H	111	658	959	452	80	478	1075	421
8	C	105	603	1067	473	87	474	1279	476
9	C	101	593	693	242	107	649	812	489
10	C	106	632	769	505	100	593	1017	592
11	H	104	541	419	780	76	405	528	1077
12	H	77	520	68	317	53	345	145	354
13	C	91	469	165	363	59	300	159	369
14	H	73	408	767	620	48	270	788	769
15	C	81	477	873	611	54	325	908	668
16	H	114	590	813	700	79	415	948	756
17	C	55	355	327	764	52	357	371	899
18	K	38	205	185	392	34	170	187	454
19	H	34	268	563	824	27	209	592	1150
20	H	71	402	586	1036	74	417	735	1257
21	H	148	901	1014	1431	160	980	1160	1846
22	H	197	1263	449	1145	168	1163	623	1296
23	H	206	1576	504	730	146	1126	608	768
24	C	282	1840	621	707	170	1117	637	873
25	H	217	1756	650	863	136	1051	693	1064
26	C	234	1566	848	902	143	931	985	1103
27	C	180	1123	794	849	111	692	855	924
28	H	117	749	786	775	79	497	912	746
29	C	79	607	737	595	84	658	824	783
30	H	150	815	1030	570	117	642	1176	846
1972 DECEMBER									
1	C	69	489	664	190	47	332	700	212
2	C	53	299	504	189	41	226	615	182
3	C	42	266	471	252	36	241	560	361
4	R	6	45	1004	681	9	66	1039	794
5	C	10	80	295	231	9	57	307	327
6	H	13	93	108	487	17	124	102	605
7	H	30	247	249	434	32	254	291	452
8	H	115	824	368	553	86	615	372	561
9	H	143	1169	368	412	88	715	543	568
10	H	133	1195	249	478	72	650	300	684
11	C	142	1069	84	723	73	557	101	833
12	C	179	1123	199	585	107	647	262	664
13	C	193	1630	272	450	112	933	288	546
14	K	253	1469	50	220	143	833	51	259
15	H	236	1583	315	249	142	972	310	301
16	H	188	1403	574	681	123	926	627	807
17	C	171	1103	313	667	123	770	452	798
18	H	111	794	507	820	85	581	713	973
19	H	162	819	617	801	119	586	613	814
20	C	119	798	786	734	98	613	789	831
21	C	107	923	638	608	96	846	807	642
22	C	194	1280	733	553	108	708	790	611
23	C	173	1180	586	199	94	643	668	209
24	C	141	1029	688	219	81	585	859	363
25	C	114	967	554	428	78	609	647	618
26	C	112	716	680	616	79	498	764	653
27	C	68	609	1092	551	58	515	1198	651
28	H	43	418	1257	239	57	578	1542	347
29	H	22	181	951	411	48	378	1169	507
30	H	49	358	996	314	72	534	1159	408
31	H	82	671	670	561	99	820	890	709

TOTAL AREAS OF SUNSPOTS AND FACULAE FOR EACH DAY IN THE YEAR

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1973 JANUARY									
1	C	89	621	333	698	84	601	377	893
2	C	116	794	198	678	82	563	353	826
3	C	142	1091	94	513	99	751	80	575
4	C	172	1222	322	603	105	743	321	759
5	C	233	1463	271	427	153	915	284	574
6	K	223	1635	148	336	133	927	192	461
7	K	247	1554	59	364	143	876	57	428
8	C	152	1279	94	313	101	794	150	382
9	C	133	1032	386	627	102	752	512	816
10	C	91	619	511	667	88	578	550	695
11	C	45	318	554	397	58	391	649	444
12	C	21	214	366	324	21	240	507	418
13	H	15	141	694	703	45	335	1171	955
14	H	48	287	325	596	61	369	355	698
15	H	47	398	433	541	41	347	484	577
16	H	63	397	389	281	43	272	437	289
17	C	63	469	545	535	37	279	693	712
18	C	94	567	605	313	51	311	642	336
19	C	94	558	723	514	56	316	880	687
20	C	65	460	536	274	38	259	649	283
21	C	81	629	471	273	49	375	607	314
22	H	70	541	563	379	48	365	589	524
23	C	62	488	839	460	45	342	943	527
24	C	54	348	545	535	46	311	612	584
25	C	20	144	302	157	20	158	458	159
26	H	15	119	304	217	8	64	377	371
27	C	10	73	366	324	6	43	403	458
28	H	4	33	368	378	4	25	460	442
29	C	6	54	335	377	3	31	418	422
30	C	4	34	168	526	3	21	232	569
31	C	4	34	251	304	2	17	302	289
1973 APRIL									
1	C	255	1919	411	539	169	1257	382	558
2	H	312	2141	279	356	219	1533	347	536
3	H	283	2506	223	514	206	1761	417	751
4	C	314	2081	260	825	191	1265	277	904
5	H	251	1810	258	559	171	1228	302	582
6	H	206	1403	976	673	152	1066	1191	713
7	H	105	887	729	369	100	836	828	399
8	H	200	1224	348	369	148	942	575	351
9	H	257	1498	492	347	140	820	500	360
10	H	176	1409	798	337	96	753	858	405
11	H	96	932	776	574	54	513	866	604
12	H	79	649	549	403	44	358	618	495
13	H	67	580	823	428	43	362	849	471
14	C	68	527	656	438	48	371	731	462
15	C	39	245	558	329	36	231	730	322
16	H	22	220	439	191	33	365	617	160
17	H	9	61	643	540	33	204	984	589
18	H	13	87	202	483	33	204	208	653
19	H	50	409	214	395	49	390	218	491
20	H	95	743	203	349	69	536	205	317
21	K	102	741	84	156	64	467	98	207
22	P	211	1237	432	748	173	1068	392	1123
23	C	142	1135	327	874	113	877	361	1166
24	H	124	1068	192	1096	85	743	205	1123
25	H	147	1012	113	714	95	636	97	733
26	H	125	1009	238	294	73	587	261	499
27	H	114	1191	351	453	66	695	440	518
28	C	97	1422	506	187	67	993	523	195
29	K	124	941	326	284	124	929	417	430
30	D	70	420	363	862	162	962	592	1143

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1973 FEBRUARY									
1	C	2	17	450	293	1	9	489	393
2	H	30	160	346	606	31	160	476	754
3	C	21	183	126	358	16	137	190	351
4	C	19	231	241	533	12	143	272	521
5	C	58	315	504	600	98	523	442	862
6	K	38	218	170	350	57	312	203	568
7	H	78	475	780	630	64	390	813	770
8	C	97	558	536	672	69	399	639	825
9	H	111	837	238	608	65	492	336	755
10	C	122	910	137	600	94	683	204	731
11	C	101	867	158	443	73	594	202	518
12	C	130	895	274	589	86	588	285	720
13	C	137	918	317	466	91	652	415	559
14	C	168	1069	463	537	115	728	439	566
15	C	133	960	761	381	95	689	792	439
16	H	128	845	501	304	83	509	797	327
17	C	105	653	571	158	65	408	872	237
18	H	68	460	263	121	39	260	263	136
19	C	55	398	486	337	34	247	559	386
20	C	42	330	518	275	31	239	532	351
21	C	49	340	434	308	43	295	489	360
22	H	30	134	296	209	46	183	380	241
23	H	42	188	187	198	60	312	239	288
24	H	81	507	403	568	93	583	405	737
25	C	139	727	477	403	126	644	616	390
26	C	162	909	595	382	106	595	730	399
27	H	169	924	417	658	95	523	498	803
28	C	182	1058	222	434	97	566	279	403
1973 MAY									
1	C	29	206	231	627	49	408	242	938
2	H	89	706	410	683	102	809	411	796
3	H	136	864	1001	727	113	708	1077	748
4	H	152	1066	479	569	108	724	696	659
5	C	163	1384	407	495	94	800	484	554
6	C	105	1294	242	176	56	679	244	168
7	H	140	1095	421	296	73	561	461	349
8	H	77	819	443	318	42	441	544	383
9	H	52	489	694	318	33	303	762	319
10	H	50	392	773	262	37	281	882	250
11	H	41	240	1176	285	40	239	1222	290
12	H	14	96	1007	309	23	164	998	412
13	C	2	13	662	209	7	42	874	247
14	K	0	0	337	316	0	0	501	431
15	H	19	98	331	582	31	167	349	946
16	H	71	503	263	492	74	529	321	591
17	H	47	613	0	424	40	516	0	385
18	H	69	748	240	469	46	508	293	488
19	H	87	809	0	195	50	465	0	368
20	H	98	866	115	664	53	463	124	832
21	P	94	808	278	629	51	435	238	617
22	H	85	799	274	516	47	441	279	552
23	H	61	601	355	437	34	344	456	577
24	H	85	667	470	585	50	408	503	635
25	H	121	741	447	458	71	450	409	464
26	H	113	733	872	471	77	522	1005	500
27	H	78	494	263	515	60	408	507	689
28	H	58	333	160	597	39	231	154	729
29	K	53	322	427	662	44	261	397	753
30	H	58	344	1077	1020	56	337	1259	1070
31	H	23	129	737	626	20	111	1087	629

Date and Place		Projected Area: Whole Spots Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Spots Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1973 MARCH									
1	C	220	1156	149	425	119	618	146	500
2	C	166	1002	191	276	95	576	210	314
3	H	153	755	110	209	96	474	129	201
4	C	103	679	307	402	94	621	402	525
5	C	100	518	459	672	100	519	483	777
6	C	96	603	607	672	110	672	759	617
7	C	69	492	544	331	68	534	771	368
8	H	118	648	330	540	104	555	463	630
9	H	214	1081	616	649	155	822	899	747
10	H	260	1524	363	1014	167	978	357	1230
11	C	314	1937	545	726	181	1119	675	834
12	C	382	2100	545	642	213	1164	630	655
13	K	329	1967	470	665	182	1093	495	765
14	H	273	1744	1134	418	161	1040	1182	500
15	H	245	1487	684	363	189	1226	937	434
16	H	164	1087	488	121	105	665	696	198
17	H	125	798	475	341	97	600	414	388
18	C	53	435	470	246	56	449	536	281
19	H	69	487	667	134	74	595	1014	129
20	H	62	390	632	177	37	230	803	227
21	H	64	483	644	500	36	267	820	537
22	H	98	536	534	377	105	561	640	492
23	H	131	733	345	513	112	635	415	595
24	H	136	754	390	679	100	556	457	664
25	H	106	753	868	356	71	510	905	447
26	H	127	699	279	513	81	441	316	607
27	H	128	735	479	878	125	802	563	1098
28	H	191	1114	156	556	143	886	189	621
29	H	196	1398	345	613	131	947	336	651
30	C	201	1610	260	444	138	1090	260	500
31	C	192	1741	444	725	136	1137	489	845
1973 JUNE									
1	C	11	69	368	156	14	87	446	128
2	H	5	32	702	323	11	80	814	307
3	H	9	60	241	230	5	34	323	271
4	H	2	9	518	334	1	6	644	362
5	H	0	0	495	231	0	0	542	272
6	H	7	44	680	230	5	29	699	264
7	H	48	396	966	483	78	677	1036	908
8	H	42	368	771	460	45	393	796	560
9	H	55	493	380	1219	42	381	486	1250
10	H	49	428	357	380	31	271	435	329
11	H	97	665	357	472	91	584	365	708
12	H	106	610	196	588	84	473	179	685
13	H	125	803	368	598	96	627	378	533
14	H	92	675	299	519	78	606	383	623
15	H	60	436	207	967	64	438	451	1148
16	H	41	323	313	774	24	178	285	925
17	H	36	245	495	564	19	130	504	547
18	H	20	260	565	645	13	149	680	766
19	H	79	565	403	806	83	606	659	1144
20	H	145	1047	599	807	122	857	631	989
21	H	236	1423	530	1060	168	1019	509	1150
22	H	185	1502	612	566	111	897	766	584
23	H	215	1450	394	520	114	776	556	568
24	H	170	1270	472	334	87	648	428	385
25	H	141	1049	531	486	75	558	524	629
26	H	113	894	496	404	65	520	579	406
27	H	73	693	870	441	46	482	1254	465
28	H	34	343	714	46	31	321	685	69
29	H	49	310	958	208	125	686	1047	489
30	H	65	537	648	728	86	717	764	1158

Date and Place		Projected Area: Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1973 JULY									
1	H	102	644	531	946	88	555	794	931
2	H	99	789	414	473	67	540	506	400
3	H	147	968	415	69	85	559	352	65
4	H	163	1035	347	104	85	545	334	143
5	H	180	1174	392	196	92	595	433	267
6	H	210	1259	393	380	108	650	495	386
7	C	191	1209	135	326	104	663	174	381
8	H	111	788	311	1117	69	483	277	1398
9	H	137	875	764	845	102	648	663	977
10	H	109	813	856	901	116	854	903	923
11	C	58	423	483	506	123	820	610	502
12	H	2	42	416	346	14	220	786	392
13	H	2	21	196	716	1	12	347	906
14	K	4	32	289	310	3	20	252	381
15	K	4	52	194	486	3	38	203	677
16	H	5	39	335	856	5	43	420	954
17	H	15	90	276	587	14	106	336	661
18	H	24	147	530	635	14	91	508	602
19	H	2	21	382	461	3	19	420	494
20	H	0	7	484	668	0	14	701	700
21	C	4	40	202	202	3	31	177	216
22	C	4	20	462	427	3	16	439	414
23	C	0	0	414	471	0	0	418	422
24	H	9	85	495	323	5	43	506	313
25	H	16	78	242	288	41	182	237	455
26	H	25	146	879	416	32	185	917	740
27	C	27	195	650	1107	23	164	726	1357
28	H	37	253	276	1610	24	168	425	1552
29	C	42	303	123	390	24	174	109	319
30	D	59	260	238	137	31	136	288	166
31	H	41	304	346	231	21	155	437	263
1973 AUGUST									
1	H	48	410	322	253	40	339	326	440
2	H	60	288	265	416	48	234	404	607
3	H	48	213	92	263	36	163	94	252
4	H	57	366	252	390	38	247	224	361
5	C	51	365	825	224	31	210	805	295
6	H	73	462	549	298	38	246	632	298
7	C	112	691	435	167	61	371	510	179
8	H	96	729	310	218	56	432	640	240
9	H	60	378	378	630	42	266	451	689
10	C	42	228	312	190	40	205	290	209
11	C	9	57	557	267	19	117	584	314
12	C	0	4	334	358	0	2	398	359
13	H	0	0	264	378	0	0	451	408
14	H	0	0	195	194	0	0	182	199
15	H	0	0	563	470	0	0	579	522
16	H	0	0	276	160	0	0	423	174
17	C	0	0	224	336	0	0	329	590
18	P	6	18	147	439	6	19	148	499
19	C	2	9	233	355	2	7	243	345
20	H	0	7	240	275	0	4	210	258
21	C	4	38	348	89	3	22	372	175
22	C	7	44	745	433	3	23	877	708
23	H	9	41	195	389	5	21	258	482
24	C	17	106	242	762	30	174	241	864
25	H	62	340	91	674	48	277	96	814
26	H	59	414	490	878	42	297	632	924
27	H	78	512	367	412	51	340	434	439
28	C	80	569	485	529	88	683	591	670
29	C	126	940	243	487	156	1082	318	561
30	H	174	1259	137	364	159	1167	153	395
31	H	234	1467	252	800	198	1181	233	883
1973 SEPTEMBER									
1	H	267	1865	376	488	194	1328	403	583
2	C	358	2523	451	616	238	1656	462	677
3	H	549	3443	601	555	352	2202	616	599
4	H	426	3313	660	250	263	2032	697	265
5	C	399	2893	572	209	253	1800	866	199
6	C	332	2307	451	429	221	1539	679	440
7	H	313	2108	374	181	195	1320	411	175
8	H	265	1852	929	692	188	1310	993	732
9	H	229	1542	486	181	193	1254	723	172
10	H	167	1125	668	170	135	878	670	146
11	H	86	703	882	362	95	720	985	342
12	H	30	202	524	79	74	519	725	100
13	H	0	5	600	305	0	7	754	371
14	H	2	11	147	351	5	22	305	447
15	C	6	50	165	638	10	76	166	760
16	H	18	160	248	562	15	144	231	601
17	C	15	114	383	537	12	89	437	531
18	C	15	169	351	702	9	100	357	921
19	H	18	99	509	452	10	54	630	595
20	H	43	207	250	758	59	289	275	1078
21	C	63	386	76	817	58	362	95	923
22	H	120	761	68	610	95	608	56	605
23	H	157	1102	360	495	101	710	375	501
24	H	210	1402	336	213	133	918	362	343
25	H	277	1580	259	495	174	978	242	605
26	C	260	1789	304	729	159	1062	356	803
27	C	265	1890	238	977	179	1346	326	1298
28	H	233	1553	325	630	161	1061	348	766
29	H	203	1594	492	1143	136	1060	551	1196
30	C	226	1537	650	747	153	1059	789	726
1973 OCTOBER									
1	H	232	1560	727	425	187	1185	763	394
2	C	150	1118	563	98	130	996	765	114
3	C	121	784	445	227	85	544	606	281
4	H	107	686	290	90	66	412	364	91
5	H	76	496	459	180	52	345	456	224
6	C	50	311	552	161	47	281	653	156
7	C	32	238	411	312	35	260	438	305
8	H	26	160	480	268	31	187	530	311
9	H	24	118	480	223	45	234	619	234
10	H	0	7	289	399	0	4	457	520
11	P	0	0	199	326	0	0	232	344
12	H	0	0	66	288	0	0	61	273
13	H	9	51	155	221	5	26	162	215
14	C	13	65	108	313	7	37	100	332
15	H	13	89	391	380	9	55	383	399
16	C	19	101	367	270	13	69	373	287
17	C	26	99	407	504	26	101	476	625
18	C	15	54	214	428	29	103	340	607
19	C	0	0	64	675	0	0	168	685
20	C	0	0	139	417	0	0	141	358
21	C	0	0	396	322	0	0	469	410
22	C	21	178	150	567	43	342	158	759
23	H	138	768	178	832	150	836	190	869
24	H	173	1102	99	475	147	910	135	501
25	H	190	1324	88	727	141	961	76	927
26	H	218	1469	253	715	141	896	294	821
27	H	257	1844	440	633	145	1033	517	631
28	H	242	1728	352	363	133	958	380	578
29	H	199	1367	343	551	110	772	429	690
30	H	134	1023	308	429	84	623	397	435
31	C	89	648	382	340	63	448	343	341
1973 NOVEMBER									
1	C	56	418	556	294	52	396	581	367
2	H	44	270	583	165	56	360	712	196
3	C	16	91	393	338	13	67	435	363
4	C	2	19	588	246	2	21	610	239
5	H	0	9	385	209	0	41	533	178
6	H	0	0	374	198	0	0	448	220
7	C	0	0	276	307	0	0	271	397
8	H	0	0	253	198	0	0	252	218
9	K	0	0	204	296	0	0	232	415
10	K	0	0	92	61	0	0	133	65
11	H	0	2	77	352	0	1	77	393
12	C	0	0	244	328	0	0	242	354
13	H	11	61	329	219	17	101	371	305
14	H	18	136	121	627	17	136	164	794
15	H	20	116	363	583	14	86	477	624
16	H	35	153	286	539	21	92	309	577
17	H	17	151	283	339	10	82	322	354
18	H	17	92	395	527	12	60	476	658
19	H	7	55	594	461	3	31	628	461
20	H	2	27	286	503	1	14	295	560
21	H	4	70	328	425	10	174	406	493
22	H	37	335	187	875	57	525	231	1086
23	H	127	834	384	876	109	721	420	960
24	C	158	840	431	505	114	605	469	514
25	H	124	945	219	337	75	566	302	316
26	H	111	1290	547	198	63	719	657	202
27	H	158	1034	304	314	86	557	349	321
28	C	86	887	326	148	50	498	350	175
29	H	141	1178	744	132	96	770	811	155
30	C	131	857	537	326	99	656	642	448
1973 DECEMBER									
1	H	54	411	1152	186	62	415	1660	193
2	H	20	157	663	130	21	172	798	113
3	K	32	199	740	61	51	314	1045	65
4	H	0	4	640	239	0	4	755	263
5	H	0	0	391	152	0	0	466	182
6	H	0	0	336	141	0	0	362	139
7	C	0	0	53	295	0	0	62	307
8	C	10	52	63	157	14	71	75	224
9	C	6	50	167	230	6	48	192	262
10	H	13	63	217	151	9	43	253	204
11	K	12	61	244	173	7	37	247	199
12	C	13	50	220	533	7	26	240	650
13	H	9	28	76	379	4	14	82	433
14	H	9	45	76	303	4	23	73	341
15	H	8	35	54	249	19	93	74	367
16	C	16	102	167	503	38	249	225	1053
17	H	36	180	173	638	43	212	176	779
18	H	37	235	141	868	29	190	141	902
19	H	66	402	184	628	41	253	204	725
20	C	88	583	136	752	49	333	137	839
21	C	130	1021	199	710	69	540	240	723
22	H	177	1259	346	465	93	658	354	480
23	C	181	1254	209	167	100	684	219	234
24	H	171	1154	324	216	110	729	400	240
25	C	145	1128	335	240	114	918	304	228
26	C	102	647	754	293	118	762	842	338
27	C	57	351	848	250	88	542	1048	360
28	C	17	123	796	324	63	462	1097	420
29	C	0	0	529	135	0	0	601	129
30	C	0	0	500	344	0	0	579	408
31	H	0	0	162	195	0	0	287	241

TOTAL AREAS OF SUNSPOTS AND FACULAE FOR EACH DAY IN THE YEAR

Date and Place		Projected Area: Whole Umb.	Projected Area: Whole Spots	Projected Area: Faculae West	Projected Area: Faculae East	Corrected Area: Whole Umb.	Corrected Area: Whole Spots	Corrected Area: Faculae West	Corrected Area: Faculae East
1974 JANUARY									
1	C	2	8	136	292	1	4	161	310
2	K	12	125	151	162	6	64	198	191
3	H	37	226	215	173	19	118	221	245
4	C	10	71	209	239	6	40	240	331
5	K	2	20	70	231	1	12	75	276
6	H	0	4	194	529	0	3	161	637
7	H	2	6	194	357	1	4	247	416
8	C	29	186	136	429	40	281	208	634
9	C	40	266	157	533	32	244	216	665
10	C	74	466	63	678	58	411	66	848
11	C	88	537	63	512	73	412	77	619
12	K	148	696	101	502	137	654	100	726
13	C	113	798	178	545	88	592	171	675
14	C	104	789	354	656	67	553	397	759
15	C	111	864	323	355	84	652	498	361
16	H	149	727	518	602	91	439	575	694
17	C	88	716	220	230	52	418	229	234
18	C	85	515	293	491	48	292	277	492
19	H	76	528	422	249	43	285	556	230
20	K	64	393	271	40	35	215	336	33
21	C	30	227	324	126	19	147	428	164
22	C	48	276	629	52	40	233	614	68
23	H	22	168	324	65	28	216	427	96
24	C	2	21	492	63	3	38	669	54
25	H	0	0	433	141	0	0	688	180
26	C	2	13	199	73	1	6	229	93
27	H	0	6	152	54	0	3	229	87
28	C	2	10	136	73	1	6	181	102
29	C	0	0	126	188	0	0	173	306
30	C	0	0	52	283	0	0	67	397
31	H	0	0	0	196	0	0	0	244
1974 FEBRUARY									
1	C	0	10	283	188	0	9	349	219
2	C	0	8	177	220	0	6	210	260
3	H	4	13	369	163	2	7	594	190
4	C	0	0	42	345	0	0	61	392
5	C	0	0	63	272	0	0	74	328
6	H	0	0	0	184	0	0	0	222
7	H	4	17	0	423	9	38	0	563
8	C	4	34	137	622	8	56	189	832
9	C	38	265	137	621	41	298	153	748
10	C	27	384	94	470	21	301	124	524
11	C	36	294	168	379	23	188	252	395
12	H	30	289	228	314	17	174	282	376
13	C	54	381	147	179	36	241	141	220
14	H	41	396	239	174	27	244	298	189
15	H	88	530	185	76	55	330	198	59
16	H	102	742	510	119	65	474	597	155
17	C	126	963	454	106	82	638	556	138
18	C	161	990	550	179	108	650	638	213
19	C	123	984	453	179	79	630	507	277
20	H	85	704	304	119	64	490	413	137
21	K	126	587	347	72	85	389	422	80
22	H	61	634	583	209	53	559	661	289
23	H	45	320	447	415	49	370	558	500
24	C	38	262	464	243	62	427	722	280
25	C	13	112	180	84	36	352	363	97
26	C	4	51	74	244	5	47	98	299
27	H	24	141	154	384	15	97	206	443
28	C	10	101	106	202	7	63	132	216
1974 MARCH									
1	C	13	77	180	74	7	43	210	99
2	H	4	20	187	154	2	10	271	172
3	H	0	0	132	143	0	0	172	158
4	H	15	85	297	341	26	142	345	536
5	H	13	86	374	286	14	89	473	357
6	C	17	112	265	594	17	107	323	755
7	H	8	51	220	484	7	38	229	597
8	C	4	21	310	480	3	15	382	560
9	C	8	44	202	267	5	25	292	273
10	H	54	226	66	341	27	115	84	463
11	C	51	409	138	989	29	237	191	1495
12	H	70	444	0	781	44	271	0	915
13	C	43	316	106	524	29	212	131	537
14	H	28	216	209	297	24	184	203	350
15	C	10	126	439	224	11	135	540	243
16	H	6	46	374	198	10	51	569	200
17	C	2	51	330	75	1	26	403	105
18	H	4	59	187	231	18	152	250	320
19	C	13	118	353	321	17	165	400	460
20	C	23	143	277	256	21	127	294	281
21	C	34	207	321	343	24	146	341	381
22	C	41	274	685	289	25	172	817	334
23	C	53	376	633	172	31	221	912	200
24	C	42	317	483	193	24	189	493	219
25	H	33	241	254	111	17	126	301	126
26	C	34	239	161	215	19	129	281	231
27	C	26	249	150	128	16	156	158	197
28	H	31	190	245	100	23	143	210	106
29	H	31	193	367	122	29	180	363	172
30	C	24	168	356	226	37	247	430	185
31	H	8	84	277	156	11	120	440	224
1974 APRIL									
1	H	6	60	156	190	4	43	146	215
2	H	2	31	33	122	2	22	33	120
3	H	4	36	112	156	2	20	167	189
4	C	6	58	238	334	3	32	279	379
5	C	11	87	108	205	6	46	146	309
6	H	20	218	101	111	11	117	115	123
7	H	44	374	157	325	26	225	173	395
8	H	24	208	146	347	15	134	177	386
9	C	39	338	195	401	23	197	199	410
10	H	140	982	135	404	73	508	162	449
11	C	162	1978	184	250	92	1098	269	267
12	C	252	2196	369	347	135	1172	386	427
13	C	206	1862	206	194	122	1097	202	197
14	H	263	1843	360	124	182	1269	448	146
15	C	213	2350	804	162	190	2125	723	238
16	H	213	2338	866	258	260	3091	1103	338
17	C	110	986	793	205	197	1901	1555	220
18	H	51	347	575	101	54	386	815	101
19	H	74	504	538	134	54	378	613	143
20	H	54	433	711	282	53	432	816	346
21	C	31	231	502	164	50	417	639	190
22	H	2	25	170	136	1	16	255	131
23	H	0	16	248	147	0	11	342	207
24	C	17	120	143	132	9	64	169	157
25	C	37	275	152	153	19	138	166	163
26	H	36	174	226	214	18	88	297	299
27	H	14	109	125	227	7	58	169	282
28	H	0	2	146	316	0	1	182	328
29	C	11	85	209	297	20	169	192	448
30	H	20	126	249	159	25	151	249	183
1974 MAY									
1	H	56	527	351	668	95	936	441	972
2	H	126	974	317	771	128	978	377	1037
3	C	178	1442	132	934	142	1198	127	1039
4	C	227	1591	187	913	157	1104	249	879
5	K	307	1547	416	532	189	992	505	613
6	H	247	1898	363	465	135	1058	380	577
7	H	221	1765	421	420	117	951	711	576
8	C	207	1635	286	726	116	912	367	882
9	H	163	1106	285	410	96	659	317	424
10	H	101	831	524	388	72	579	611	403
11	H	83	554	945	114	74	501	1083	141
12	C	33	242	795	66	30	221	919	82
13	C	21	194	1038	33	17	166	1191	39
14	H	9	62	512	0	10	69	789	0
15	H	12	53	204	68	16	76	360	107
16	H	9	64	251	68	6	40	262	96
17	C	4	20	555	44	3	15	629	67
18	H	0	0	501	80	0	0	626	98
19	C	0	0	133	77	0	0	233	70
20	H	0	0	149	217	0	0	192	297
21	H	0	0	149	137	0	0	178	139
22	C	2	38	78	166	1	20	94	162
23	H	2	16	218	274	1	10	297	319
24	H	2	11	138	171	1	7	165	208
25	H	0	0	0	172	0	0	0	250
26	C	6	67	167	134	5	50	160	156
27	H	50	300	149	207	40	236	168	399
28	H	43	346	367	618	49	398	424	813
29	C	11	113	390	943	29	282	569	1139
30	H	2	11	195	1010	23	113	265	1166
31	C	26	222	111	500	39	299	163	556
1974 JUNE									
1	C	55	454	190	722	57	470	200	744
2	C	62	615	267	946	48	474	333	906
3	C	78	551	178	357	44	321	218	389
4	H	59	433	207	379	33	242	298	434
5	H	67	470	160	550	45	291	198	560
6	H	108	705	563	207	63	413	666	241
7	H	76	559	772	289	42	309	867	369
8	H	76	516	828	219	45	309	823	372
9	H	51	453	735	276	38	358	849	318
10	H	45	416	1079	149	35	325	1135	124
11	H	83	656	794	0	63	509	1082	0
12	K	106	629	523	53	68	391	711	79
13	H	90	838	449	253	84	720	560	566
14	H	101	757	357	288	67	556	503	393
15	H	76	698	265	645	49	469	329	644
16	H	83	544	69	218	53	349	132	180
17	H	60	454	150	58	36	270	142	70
18	H	71	470	541	196	42	273	567	301
19	H	60	276	493	309	31	144	728	341
20	H	39	277	69	219	21	149	82	215
21	H	21	117	104	207	12	69	90	224
22	H	12	76	150	173	8	53	155	243
23	K	4	24	461	225	4	20	446	289
24	H	4	46	554	311	2	26	741	365
25	K	2	22	215	485	1	13	303	521
26	H	11	62	80	608	24	130	88	655
27	H	12	62	161	564	15	79	163	671
28	H	25	180	115	598	36	233	135	631
29	H	44	345	323	750	45	346	457	818
30	K	105	611	0	582	81	468	0	643

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1974 JULY									
1	H	212	1386	58	370	128	846	81	347
2	H	334	1893	58	242	188	1058	74	276
3	H	363	3009	575	414	200	1676	509	401
4	H	410	3076	484	265	236	1794	528	283
5	H	331	2358	818	415	221	1598	994	538
6	H	204	2183	863	242	189	1985	1245	239
7	H	192	1510	1036	58	150	1203	1076	55
8	H	128	953	772	35	201	1363	988	128
9	H	90	811	716	161	158	1468	882	238
10	H	122	659	93	150	107	577	97	177
11	H	122	771	115	173	85	539	172	190
12	H	150	701	184	543	89	416	231	633
13	P	183	966	148	326	98	513	188	332
14	H	183	1037	0	208	111	620	0	420
15	K	175	1034	0	214	102	628	0	302
16	H	279	1609	495	368	163	926	719	394
17	H	255	1597	322	218	153	958	450	184
18	H	193	1282	289	0	130	856	249	0
19	H	136	978	334	69	117	779	303	107
20	H	76	577	714	323	101	741	813	365
21	H	82	615	737	668	72	661	1040	857
22	H	173	1137	311	610	127	914	515	625
23	H	168	1282	299	553	108	822	572	565
24	H	150	920	127	496	114	632	109	659
25	H	125	975	104	541	88	647	111	685
26	H	118	729	150	806	78	491	313	905
27	H	60	411	173	138	41	280	163	124
28	H	66	433	184	252	49	316	182	283
29	H	46	258	231	219	40	225	293	225
30	H	39	200	518	104	24	120	513	88
31	H	39	191	631	80	24	113	657	107
1974 AUGUST									
1	H	48	339	518	265	31	220	578	396
2	H	32	172	527	276	26	139	540	330
3	H	5	35	448	264	6	45	485	267
4	H	16	108	459	115	47	315	666	250
5	H	37	284	333	184	64	503	476	360
6	H	67	467	286	447	69	569	372	638
7	H	97	619	196	507	78	486	237	648
8	H	113	764	46	437	71	480	86	453
9	H	116	712	0	572	72	426	0	668
10	H	118	819	69	183	66	454	57	220
11	H	172	900	355	412	94	493	449	538
12	H	279	1543	207	389	153	847	284	457
13	H	187	1098	160	309	143	813	166	445
14	H	190	1223	230	195	145	923	253	269
15	H	132	799	471	298	121	693	523	363
16	H	145	901	733	401	148	822	877	440
17	H	178	1042	986	390	128	747	1063	475
18	H	126	780	824	286	111	680	995	309
19	H	114	599	721	525	114	666	1171	635
20	H	78	527	413	733	59	432	560	883
21	H	90	614	229	812	56	396	292	879
22	H	130	672	149	354	86	441	129	421
23	H	103	569	331	549	74	416	302	584
24	H	66	434	423	423	59	398	471	446
25	H	54	309	434	413	66	363	655	495
26	K	25	123	341	310	37	180	374	350
27	H	16	109	308	137	9	61	382	167
28	H	14	100	182	68	9	65	260	101
29	H	14	75	500	239	12	63	570	283
30	H	7	36	466	103	9	47	528	197
31	H	12	55	466	159	45	215	668	215
1974 SEPTEMBER									
1	H	14	98	375	318	20	144	502	427
2	H	16	141	433	477	14	125	564	572
3	H	32	268	364	796	38	299	466	930
4	H	66	353	171	387	52	283	239	502
5	C	61	471	176	814	41	304	190	1024
6	H	78	535	170	521	46	310	215	530
7	H	74	454	226	237	40	246	237	235
8	H	52	473	249	226	28	255	252	262
9	H	120	838	79	316	169	1264	96	648
10	H	199	1479	237	611	213	1569	221	802
11	H	292	1975	475	577	245	1655	473	544
12	H	280	2274	408	147	202	1611	511	156
13	H	303	2231	520	147	168	1238	510	145
14	H	262	2106	430	260	135	1091	511	266
15	K	239	1540	440	147	119	774	597	182
16	H	262	1900	68	227	138	1015	55	300
17	H	238	1325	260	362	136	763	267	429
18	H	167	1152	236	361	112	785	238	424
19	H	133	819	519	180	119	745	588	227
20	H	83	546	610	259	109	719	744	236
21	C	15	216	689	142	51	727	1017	126
22	H	0	0	325	235	0	0	402	272
23	H	0	7	313	291	0	4	374	292
24	H	14	77	417	316	7	39	441	342
25	H	32	167	531	124	16	84	567	137
26	H	25	128	518	258	13	69	608	279
27	H	17	105	269	571	23	168	337	768
28	H	15	92	235	281	24	141	271	459
29	H	49	454	247	560	50	468	297	618
30	H	139	852	213	551	107	635	275	626
1974 OCTOBER									
1	H	179	1051	290	437	111	652	343	513
2	K	247	1026	281	188	142	580	359	252
3	H	183	1027	123	268	97	536	160	404
4	C	144	1095	239	552	91	735	242	731
5	H	146	1082	224	1052	107	839	269	1318
6	C	164	1449	173	1137	140	1248	240	1673
7	H	175	1409	335	1284	138	1176	355	1402
8	H	212	1901	589	878	158	1423	578	934
9	H	299	1877	512	457	211	1315	702	511
10	H	261	2410	423	535	153	1400	473	660
11	H	313	2440	177	256	172	1319	174	336
12	H	336	2937	500	435	189	1608	623	534
13	K	397	2211	329	196	226	1276	341	236
14	H	168	1751	354	211	115	1153	415	277
15	H	95	1006	929	275	76	772	925	292
16	K	89	694	795	248	87	641	822	266
17	C	49	367	1520	160	76	541	1789	188
18	C	4	32	344	161	17	129	528	170
19	H	4	27	322	165	3	17	349	160
20	H	13	77	330	55	11	65	378	67
21	H	11	135	253	66	13	166	359	92
22	H	7	73	352	143	18	166	490	165
23	H	0	4	165	187	0	9	191	185
24	H	0	0	176	88	0	0	166	91
25	H	13	92	319	473	19	136	317	644
26	C	32	162	129	729	29	154	173	792
27	H	28	180	176	913	18	126	226	973
28	H	34	229	363	517	21	135	437	596
29	H	37	207	143	495	20	111	178	621
30	H	38	254	143	407	28	195	197	590
31	H	24	132	77	484	12	70	64	587
1974 NOVEMBER									
1	H	26	151	242	704	36	203	314	888
2	C	32	236	255	861	29	222	260	1162
3	C	29	377	383	649	25	314	321	642
4	H	22	182	550	462	15	128	615	502
5	H	16	149	550	242	19	152	647	255
6	H	9	64	341	528	5	32	433	693
7	C	4	50	254	244	2	25	327	298
8	H	4	37	217	402	2	19	258	457
9	C	0	0	404	340	0	0	447	324
10	H	9	74	209	374	4	38	269	435
11	C	0	17	508	287	0	9	469	303
12	H	11	120	569	219	5	61	617	219
13	C	4	44	445	307	2	24	492	370
14	H	0	2	359	348	0	1	425	491
15	H	44	268	839	316	94	551	803	473
16	H	103	553	788	526	121	659	1064	638
17	H	120	760	413	511	95	618	541	526
18	H	188	1021	282	511	122	669	372	581
19	H	191	1159	228	643	114	686	235	878
20	H	239	1108	608	859	130	614	703	1130
21	C	200	1424	180	541	106	751	218	504
22	K	217	1069	193	476	113	557	246	521
23	Z	246	1265	1150	657	138	702	1357	790
24	J	153	837	323	564	96	529	316	521
25	H	138	725	642	390	116	586	690	449
26	C	107	480	295	349	131	572	308	376
27	C	54	294	622	232	88	490	864	284
28	H	11	83	370	293	6	46	481	340
29	H	4	28	360	326	3	19	347	432
30	C	0	10	474	496	0	8	465	557
1974 DECEMBER									
1	C	0	0	348	305	0	0	484	276
2	C	0	0	442	243	0	0	606	246
3	C	0	0	147	211	0	0	182	220
4	H	0	0	206	315	0	0	222	316
5	H	4	42	307	154	2	21	337	165
6	H	0	7	163	174	0	3	159	177
7	H	0	4	130	119	0	3	172	137
8	C	0	0	252	241	0	0	219	296
9	C	0	0	262	240	0	0	277	235
10	H	0	0	405	66	0	0	507	72
11	H	45	251	369	65	25	139	371	64
12	C	47	386	316	158	56	420	416	310
13	H	100	639	347	315	86	543	341	338
14	C	134	932	252	356	105	696	340	356
15	H	128	850	76	260	84	549	123	230
16	C	180	1100	210	388	112	686	179	422
17	H	155	842	218	229	94	520	214	276
18	H	130	811	325	596	93	582	469	674
19	H	145	884	163	380	92	581	369	351
20	C	131	959	84	293	80	592	93	286
21	C	136	736	241	73	86	465	268	67
22	C	75	703	157	84	55	532	150	107
23	H	80	478	485	292	81	453	585	402
24	H	49	287	108	227	76	425	176	230
25	C	23	124	115	147	13	67	114	148
26	H	17	97	400	358	11	61	451	373
27	C	8	31	616	241	6	24	581	229
28	C	15	124	472	272	10	82	523	259
29	H	11	67	488	325	10	63	585	444
30	H	24	149	216	151	26	163	218	169
31	H	26	164	140	344	20	129	209	344

TOTAL AREAS OF SUNSPOTS AND FACULAE FOR EACH DAY IN THE YEAR

Date and Place		Projected Area Whole Spots Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Whole Spots Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1975 JANUARY									
1	C	50	408	83	229	35	294	79	211
2	C	29	210	114	302	23	151	182	314
3	C	37	284	157	282	27	232	225	382
4	C	30	200	188	491	17	116	195	484
5	C	32	200	198	449	18	112	216	380
6	C	12	146	177	283	7	80	159	236
7	H	30	160	173	205	20	110	153	164
8	C	27	234	282	344	34	308	255	413
9	K	24	180	410	300	34	267	490	445
10	C	50	476	167	345	41	386	239	412
11	C	61	442	209	501	46	338	215	522
12	C	59	530	303	417	46	430	319	410
13	H	48	476	511	424	46	382	664	415
14	C	38	419	283	272	20	222	347	294
15	H	63	406	130	205	33	214	130	182
16	C	39	331	125	136	22	182	145	170
17	H	52	279	76	108	33	179	101	128
18	C	52	276	199	241	39	204	175	264
19	H	43	288	355	140	39	240	369	158
20	C	31	207	336	399	42	244	404	379
21	H	21	106	260	184	12	57	327	195
22	C	8	63	168	335	5	38	205	431
23	H	0	15	367	379	0	9	392	395
24	H	0	9	500	283	0	7	562	255
25	H	2	11	228	271	1	6	280	285
26	H	0	4	87	206	0	2	107	205
27	H	0	0	242	88	0	0	252	107
28	C	0	0	178	105	0	0	210	92
29	C	0	4	84	199	0	6	85	256
30	C	0	0	94	230	0	0	76	209
31	H	0	0	281	217	0	0	244	203
1975 APRIL									
1	C	0	0	162	216	0	0	196	209
2	C	0	0	65	65	0	0	82	63
3	H	0	25	167	156	0	17	186	189
4	H	0	0	145	145	0	0	191	226
5	C	0	0	65	260	0	0	93	380
6	C	0	0	43	130	0	0	59	157
7	H	4	20	179	347	4	16	151	347
8	H	2	20	428	213	1	12	406	191
9	H	4	74	369	290	2	38	438	319
10	H	0	4	403	112	0	2	493	158
11	H	0	9	334	190	0	5	380	271
12	C	0	0	76	163	0	0	72	190
13	C	0	0	141	76	0	0	186	74
14	C	0	0	173	141	0	0	161	161
15	H	0	0	67	180	0	0	56	200
16	H	0	0	180	146	0	0	267	157
17	C	0	0	98	272	0	0	88	387
18	C	0	0	228	109	0	0	285	124
19	C	0	0	65	239	0	0	80	269
20	H	0	0	123	236	0	0	176	349
21	H	0	0	203	147	0	0	232	207
22	H	0	0	158	56	0	0	231	80
23	H	0	7	203	181	0	9	217	221
24	H	2	23	79	102	2	22	63	96
25	H	0	0	68	124	0	0	86	123
26	C	0	0	77	371	0	0	105	563
27	D	19	127	0	178	21	154	0	239
28	H	21	147	169	407	17	125	180	431
29	H	11	81	294	384	12	93	374	418
30	H	0	25	338	294	0	25	525	329

Date and Place		Projected Area Whole Spots Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Whole Spots Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1975 FEBRUARY									
1	C	0	0	325	345	0	0	333	341
2	C	6	52	84	230	7	59	104	279
3	H	42	133	359	228	32	103	335	221
4	H	22	111	130	412	13	68	160	513
5	H	16	104	65	250	10	76	72	230
6	H	20	219	0	337	12	139	0	342
7	H	58	521	76	130	33	297	64	113
8	H	85	581	163	337	44	300	204	368
9	H	70	505	326	282	35	256	391	327
10	C	59	509	221	316	31	266	298	316
11	C	29	265	263	242	17	153	209	234
12	H	35	257	543	303	24	175	588	332
13	H	30	159	326	249	29	151	372	296
14	H	24	107	371	381	35	157	403	378
15	C	0	0	263	231	0	0	273	217
16	C	0	0	359	137	0	0	362	135
17	C	0	0	137	158	0	0	122	144
18	C	0	0	159	306	0	0	146	293
19	H	0	0	185	99	0	0	207	94
20	H	0	7	143	262	0	3	154	328
21	H	0	4	44	120	0	2	50	133
22	H	0	0	65	195	0	0	82	235
23	H	0	4	141	76	0	2	180	110
24	H	9	43	0	55	4	22	0	74
25	H	9	35	55	0	4	18	61	0
26	H	0	0	44	0	0	0	54	0
27	H	0	0	154	0	0	0	141	0
28	H	0	0	165	0	0	0	223	0
1975 MAY									
1	H	2	43	68	237	2	30	96	242
2	H	79	379	45	68	42	205	56	86
3	H	130	590	204	249	73	331	199	291
4	H	73	675	285	273	48	439	276	292
5	H	61	579	362	113	48	468	346	139
6	K	32	232	412	42	37	264	459	55
7	C	2	29	308	187	5	60	391	248
8	H	0	0	399	205	0	0	458	266
9	H	0	0	158	273	0	0	186	310
10	H	0	2	148	239	0	4	190	368
11	C	0	2	88	220	0	2	121	256
12	H	0	5	137	137	0	4	164	137
13	C	0	0	176	264	0	0	256	311
14	H	0	0	125	181	0	0	150	180
15	H	0	0	216	285	0	0	214	293
16	C	0	0	78	144	0	0	86	141
17	C	0	0	89	33	0	0	112	27
18	C	0	4	0	144	0	2	0	148
19	C	0	0	111	0	0	0	94	0
20	H	0	0	273	0	0	0	245	0
21	H	0	0	160	0	0	0	191	0
22	C	2	13	144	234	1	8	170	334
23	H	2	11	0	252	1	6	0	259
24	C	0	0	0	300	0	0	0	347
25	C	0	0	66	256	0	0	87	298
26	H	0	0	57	0	0	0	62	0
27	H	0	0	115	46	0	0	152	60
28	H	0	2	137	138	0	1	179	166
29	H	0	0	46	57	0	0	65	95
30	C	0	0	0	45	0	0	0	67
31	H	5	18	0	103	8	33	0	258

Date and Place		Projected Area Whole Spots Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Whole Spots Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1975 MARCH									
1	H	0	2	66	66	0	1	81	100
2	C	11	104	85	202	6	59	81	201
3	H	15	134	55	242	10	89	49	294
4	H	4	66	363	297	4	56	393	292
5	C	0	0	202	287	0	0	241	317
6	H	2	9	121	264	3	12	172	321
7	H	4	29	253	396	4	24	328	379
8	C	6	41	180	308	3	24	227	268
9	C	11	100	171	384	5	52	200	485
10	K	16	101	62	216	8	51	71	256
11	H	7	55	77	319	4	30	92	335
12	C	11	96	361	202	7	59	338	177
13	C	21	173	427	160	16	126	429	147
14	C	38	320	342	128	39	329	403	118
15	H	8	81	330	143	10	103	440	156
16	H	62	333	649	286	39	207	773	377
17	H	68	474	506	374	56	382	679	494
18	H	31	234	385	77	25	191	422	111
19	C	13	109	310	235	15	127	342	287
20	C	2	17	312	151	7	53	434	197
21	C	0	0	215	130	0	0	284	154
22	K	0	0	133	165	0	0	262	229
23	C	0	0	302	108	0	0	347	90
24	H	0	0	189	244	0	0	201	269
25	H	0	0	144	176	0	0	166	188
26	H	2	16	167	145	1	8	237	209
27	C	0	6	75	75	0	3	66	84
28	H	0	0	156	133	0	0	194	184
29	H	0	0	0	78	0	0	0	99
30	H	0	0	300	189	0	0	359	281
31	H	0	0	278	167	0	0	380	178
1975 JUNE									
1	H	9	44	183	183	9	43	177	204
2	H	9	46	103	114	7	33	119	101
3	H	0	2	0	137	0	1	0	175
4	C	0	9	0	167	0	5	0	207
5	C	8	64	0	167	4	33	0	194
6	H	0	5	138	57	0	2	164	79
7	H	0	0	80	69	0	0	97	73
8	H	0	0	138	127	0	0	139	176
9	H	0	0	58	173	0	0	77	204
10	H	0	0	196	0	0	0	248	0
11	H	0	5	115	92	0	2	151	140
12	H	0	5	323	161	0	3	376	224
13	H	0	0	196	69	0	0	226	96
14	C	2	22	168	0	1	11	216	0
15	P	9	44	118	74	5	26	134	63
16	H	25	145	242	0	17	98	258	0
17	H	35	271	368	0	31	241	364	0
18	H	21	141	254	173	28	190	325	214
19	H	2	7	81	92	7	20	155	82
20	H	0	0	0	46	0	0	0	54
21	H	0	0	46	116	0	0	51	142
22	P	0	0	103	59	0	0	131	76
23	C	16	90	56	201	8	46	61	242
24	H	12	81	0	138	24	145	0	396
25	H	30	221	0	184	34	256	0	284
26	H	81	495	69	347	68	415	100	354
27	H	85	540	265	242	61	388	244	202
28	P	145	635	280	103	100	458	468	120
29	H	124	724	104	150	85	478	274	145
30	H	113	624	69	81	57	313	72	77

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1975 JULY									
1	H	90	724	81	69	46	369	102	70
2	H	97	605	0	81	53	330	0	71
3	K	86	542	0	86	52	328	0	124
4	C	76	389	369	157	63	321	308	216
5	C	67	379	460	303	79	430	474	341
6	K	34	212	364	321	48	313	478	316
7	H	17	99	197	115	9	58	262	107
8	H	23	147	185	69	12	79	183	102
9	H	23	136	174	150	12	69	222	188
10	H	23	175	311	185	29	200	320	238
11	H	49	274	208	196	40	239	245	217
12	H	76	499	69	173	50	329	96	185
13	C	111	720	413	268	80	518	357	288
14	H	107	798	483	357	114	870	479	526
15	H	106	752	415	426	126	895	621	463
16	H	93	589	276	323	74	515	715	310
17	H	78	527	230	196	45	307	296	214
18	H	95	642	277	162	52	354	304	145
19	P	80	545	250	118	44	297	245	146
20	K	88	568	299	225	48	312	360	276
21	H	76	481	150	127	58	367	194	183
22	H	62	474	81	299	61	421	124	356
23	C	49	445	257	312	39	354	211	331
24	H	62	452	598	196	45	347	592	164
25	H	62	403	253	104	54	332	379	111
26	H	53	477	92	0	27	242	132	0
27	K	51	406	0	64	27	208	0	91
28	H	87	534	0	69	50	303	0	78
29	H	53	338	69	162	35	229	53	207
30	H	42	324	184	266	59	482	177	428
31	H	62	409	323	380	81	543	381	435
1975 OCTOBER									
1	H	11	78	112	134	20	137	105	294
2	C	13	110	108	238	14	118	161	312
3	H	22	176	167	379	18	146	175	392
4	H	29	185	167	156	20	125	238	155
5	C	32	207	151	0	20	125	133	0
6	H	29	238	357	0	16	136	380	0
7	H	34	202	358	0	19	113	421	0
8	H	46	233	167	100	28	139	228	89
9	H	31	188	0	156	19	116	0	160
10	H	24	149	0	89	18	107	0	85
11	H	16	116	111	111	14	105	98	260
12	H	18	80	333	367	22	98	384	491
13	C	43	209	334	237	33	193	452	233
14	H	82	683	67	111	41	343	75	88
15	H	107	745	0	0	54	374	0	0
16	H	64	504	0	0	34	267	0	0
17	H	51	388	244	232	34	251	221	319
18	H	40	341	89	365	29	249	84	501
19	K	33	202	227	310	29	178	229	346
20	H	18	93	287	539	33	175	451	706
21	C	2	11	149	384	9	46	204	397
22	H	0	0	288	199	0	0	376	250
23	H	0	0	165	418	0	0	252	473
24	H	0	0	22	297	0	0	27	304
25	C	0	0	0	309	0	0	0	300
26	C	0	0	0	236	0	0	0	218
27	H	0	0	88	88	0	0	83	105
28	C	0	0	106	0	0	0	131	0
29	H	0	0	0	143	0	0	0	235
30	H	0	0	77	165	0	0	80	179
31	H	0	0	88	198	0	0	71	194

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1975 AUGUST									
1	H	81	732	242	483	67	590	258	470
2	H	110	1038	126	378	74	667	217	353
3	H	195	1563	0	264	198	1599	0	526
4	H	258	2240	0	401	205	1871	0	489
5	H	344	2542	57	344	227	1738	61	300
6	H	416	2902	69	173	243	1755	96	190
7	H	376	3764	275	103	213	2126	282	134
8	H	434	3749	321	172	247	2118	347	167
9	H	293	2755	528	206	177	1613	517	241
10	C	274	2896	602	290	189	1954	728	436
11	H	201	2162	320	275	134	1412	625	303
12	H	167	1575	160	366	108	998	162	330
13	H	168	1139	481	126	132	898	484	172
14	H	85	707	849	229	95	784	1048	317
15	H	32	245	344	195	54	405	682	294
16	H	9	62	91	183	14	103	278	278
17	C	16	121	78	310	11	82	78	288
18	H	7	52	0	92	4	33	0	88
19	C	2	22	111	210	1	12	89	254
20	C	15	114	333	145	12	94	331	144
21	H	14	82	364	319	19	131	624	281
22	H	2	16	228	136	8	35	396	168
23	H	16	113	239	284	9	61	303	298
24	P	0	0	305	0	0	0	273	0
25	H	11	64	205	216	6	34	239	378
26	H	55	317	182	319	31	182	232	480
27	H	46	271	262	604	30	179	291	692
28	H	23	148	284	569	20	127	313	699
29	H	20	89	681	512	25	109	827	593
30	C	2	15	341	683	7	47	400	845
31	C	0	9	176	583	0	4	182	742
1975 NOVEMBER									
1	C	0	0	234	85	0	0	207	69
2	H	0	0	264	66	0	0	303	78
3	H	2	15	363	165	2	12	437	149
4	H	28	105	220	154	38	186	295	241
5	C	57	215	275	0	65	220	353	0
6	H	46	294	154	473	34	224	149	505
7	H	43	292	0	286	27	184	0	377
8	C	48	316	0	222	28	182	0	278
9	P	39	218	112	308	20	112	145	340
10	H	33	274	0	121	17	138	0	99
11	H	46	230	231	77	23	121	251	88
12	H	24	151	99	209	19	111	183	184
13	H	23	195	154	77	48	357	192	149
14	H	61	270	370	370	61	257	320	556
15	P	97	465	1032	502	73	355	983	605
16	C	97	615	284	516	64	433	390	532
17	C	93	781	105	105	55	468	93	102
18	H	136	993	240	87	74	543	288	118
19	C	177	1211	337	168	96	653	321	178
20	H	201	1089	339	318	134	699	350	401
21	C	143	855	211	221	104	607	303	241
22	H	85	626	87	87	63	436	172	96
23	C	46	431	282	147	33	312	230	166
24	H	43	256	554	174	43	256	637	239
25	C	21	117	345	94	33	187	486	146
26	H	0	0	76	0	0	0	81	0
27	C	0	0	0	0	0	0	0	0
28	H	0	0	109	98	0	0	101	135
29	H	0	0	348	108	0	0	419	96
30	C	0	0	84	84	0	0	103	77

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1975 SEPTEMBER									
1	H	5	30	0	547	3	20	0	515
2	H	5	89	68	284	3	59	62	266
3	H	14	141	148	148	8	79	130	155
4	H	29	357	386	239	15	183	413	350
5	H	25	241	216	239	12	120	257	334
6	H	23	252	431	397	22	270	597	552
7	H	25	163	396	510	30	149	538	619
8	H	23	131	396	624	19	112	406	637
9	H	20	168	318	125	14	112	325	103
10	H	27	183	474	0	16	105	527	0
11	H	32	149	317	0	17	80	495	0
12	H	36	232	0	90	19	121	0	138
13	H	36	197	351	294	19	108	448	365
14	C	22	167	239	305	13	99	258	266
15	H	18	154	316	271	12	106	309	354
16	H	9	57	238	192	9	55	255	195
17	H	7	47	372	282	5	43	460	277
18	H	9	90	113	136	5	45	211	153
19	H	16	81	0	237	8	42	0	291
20	P	15	152	0	86	9	89	0	110
21	H	14	94	134	201	8	58	150	318
22	H	6	51	292	269	4	34	259	317
23	H	0	4	224	302	0	2	273	305
24	H	0	0	191	258	0	0	306	245
25	C	0	0	108	163	0	0	122	220
26	H	0	0	156	382	0	0	207	472
27	C	0	0	391	141	0	0	492	193
28	H	2	9	78	269	1	5	108	293
29	H	0	0	0	200	0	0	0	151
30	H	7	42	0	67	20	125	0	83
1975 DECEMBER									
1	C	0	0	84	84	0	0	109	130
2	H	37	219	0	249	21	129	0	373
3	H	44	295	0	284	23	157	0	293
4	H	37	231	0	327	19	117	0	349
5	C	40	201	0	94	20	102	0	119
6	C	44	244	0	84	24	133	0	96
7	P	22	133	359	166	15	90	388	247
8	H	15	78	260	195	13	66	219	191
9	H	4	24	195	130	6	33	215	117
10	C	0	0	125	83	0	0	182	69
11	C	0	0	0	209	0	0	0	399
12	C	0	0	126	147	0	0	126	169
13	H	0	15	87	98	0	8	117	148
14	H	9	61	87	261	5	37	90	312
15	H	4	63	87	272	2	34	85	305
16	H	2	33	163	0	1	17	179	0
17	H	2	39	65	162	1	20	94	227
18	H	2	11	348	174	1	6	418	195
19	C	2	10	135	166	1	6	203	197
20	K	0	0	180	60	0	0	247	86
21	C	0	0	166	104	0	0	246	81
22	C	0	0	83	229	0	0	110	278
23	C	0	0	229	104	0	0	228	107
24	H	11	58	261	227	9	53	316	356
25	C	10	48	83	229	9	40	87	299
26	C	2	17	83	271	2	13	145	274
27	C	0	0	249	114	0	0	272	99
28	C	0	0	146	73	0	0	189	58
29	C	0	0	187	146	0	0	165	158
30	C	0	0	0	187	0	0	0	169
31	C	0	0	240	0	0	0	221	0

TOTAL AREAS OF SUNSPOTS AND FACULAE FOR EACH DAY IN THE YEAR

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1976 JANUARY									
1	C	0	0	52	0	0	0	61	0
2	C	0	0	73	0	0	0	117	0
3	H	0	0	304	0	0	0	358	0
4	C	0	0	104	0	0	0	129	0
5	C	0	0	145	0	0	0	152	0
6	H	0	0	141	281	0	0	228	421
7	C	0	0	0	219	0	0	0	244
8	C	0	0	84	271	0	0	69	261
9	H	0	0	130	65	0	0	138	89
10	C	0	0	31	0	0	0	32	0
11	K	0	0	160	70	0	0	211	71
12	H	17	118	65	216	27	184	85	356
13	H	84	431	206	239	84	438	228	260
14	C	73	721	219	312	59	568	231	247
15	H	82	751	216	65	50	457	309	58
16	C	71	671	94	83	39	369	105	66
17	C	79	596	63	0	40	304	63	0
18	C	94	646	136	0	48	326	163	0
19	H	28	399	238	173	15	214	321	253
20	H	28	424	0	217	17	257	0	278
21	H	24	189	185	217	17	134	191	238
22	H	19	205	281	76	19	206	304	71
23	H	9	63	304	239	13	95	374	211
24	H	0	0	184	109	0	0	293	147
25	C	0	0	146	63	0	0	170	77
26	H	0	0	43	195	0	0	62	200
27	H	2	11	76	304	1	5	95	362
28	C	0	0	52	157	0	0	75	188
29	H	2	9	130	227	1	5	138	245
30	H	4	24	163	249	3	15	191	268
31	C	0	2	95	53	0	2	121	95
1976 APRIL									
1	P	255	1278	43	100	139	695	48	130
2	H	180	1047	145	67	104	606	184	86
3	H	113	843	156	145	79	586	158	162
4	H	91	637	257	156	83	581	272	216
5	H	49	389	145	190	70	556	204	235
6	H	31	132	111	99	116	490	275	121
7	H	0	0	0	112	0	0	0	141
8	H	0	0	0	67	0	0	0	87
9	H	38	188	45	269	58	286	55	361
10	H	58	294	0	291	56	284	0	309
11	H	65	374	67	313	47	269	100	346
12	H	76	498	0	45	45	295	0	40
13	H	90	516	0	134	48	276	0	191
14	H	116	636	78	213	75	438	91	326
15	H	121	652	0	325	75	417	0	429
16	K	119	665	63	448	72	413	88	554
17	H	94	634	67	180	59	396	92	183
18	H	106	663	136	147	71	441	141	177
19	H	72	532	427	45	57	403	430	57
20	H	68	423	339	79	65	388	433	110
21	H	38	311	396	181	40	328	500	263
22	H	63	377	113	248	57	352	154	306
23	H	76	420	224	191	60	330	266	177
24	H	85	500	338	101	63	373	338	129
25	H	39	396	327	79	30	297	383	119
26	H	59	504	248	158	62	408	410	181
27	K	80	414	231	251	44	222	340	265
28	H	90	440	350	225	47	229	568	343
29	H	63	585	102	147	35	325	121	234
30	H	154	920	306	79	101	605	320	128

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1976 FEBRUARY									
1	C	0	0	147	0	0	0	176	0
2	C	0	0	146	0	0	0	197	0
3	C	0	0	63	126	0	0	91	170
4	H	0	0	76	282	0	0	85	300
5	H	0	0	65	205	0	0	75	205
6	H	0	0	303	130	0	0	395	167
7	C	0	0	73	42	0	0	85	42
8	C	0	0	74	42	0	0	116	49
9	H	0	0	130	130	0	0	152	141
10	H	0	0	130	282	0	0	175	271
11	H	0	0	217	54	0	0	271	64
12	C	0	0	94	115	0	0	117	161
13	H	24	148	130	163	12	74	163	244
14	C	17	92	0	73	8	47	0	109
15	C	11	97	42	158	6	51	40	210
16	C	11	44	0	158	6	27	0	179
17	C	4	34	137	63	3	28	136	117
18	K	4	18	101	101	5	21	95	128
19	H	4	48	239	229	3	37	317	256
20	K	4	38	132	101	3	24	176	135
21	H	4	35	0	130	2	18	0	146
22	C	0	0	0	42	0	0	0	41
23	C	0	0	0	74	0	0	0	69
24	H	0	0	76	120	0	0	73	140
25	H	0	0	143	0	0	0	155	0
26	C	0	0	53	0	0	0	77	0
27	C	0	0	85	85	0	0	85	108
28	C	0	0	74	0	0	0	117	0
29	C	0	0	0	0	0	0	0	0
1976 MAY									
1	H	77	566	248	0	64	472	219	0
2	C	31	251	154	0	39	319	186	0
3	H	11	99	226	68	24	203	391	96
4	H	2	14	0	136	1	7	0	200
5	H	10	77	192	386	19	201	239	559
6	H	13	106	79	102	20	156	153	147
7	H	16	166	57	363	15	159	82	418
8	H	25	202	0	239	18	142	0	269
9	H	34	227	0	170	20	135	0	174
10	H	39	248	91	91	20	131	122	76
11	H	43	265	68	79	26	150	96	173
12	H	29	282	0	205	16	152	0	221
13	H	34	309	0	262	30	271	0	506
14	H	40	237	0	171	26	168	0	247
15	H	32	237	80	376	23	174	64	353
16	C	33	146	199	0	35	153	212	0
17	H	9	66	240	137	16	108	383	208
18	H	2	16	91	341	3	24	80	408
19	H	5	25	91	262	4	22	126	311
20	H	4	25	80	217	4	18	93	238
21	H	5	30	172	80	3	20	168	83
22	C	4	44	89	78	3	25	99	89
23	C	0	16	111	0	0	7	129	0
24	H	0	9	206	0	0	5	210	0
25	H	0	0	80	0	0	0	138	0
26	H	2	9	69	0	1	5	62	0
27	H	0	0	91	0	0	0	77	0
28	H	0	0	183	0	0	0	196	0
29	H	0	0	103	0	0	0	106	0
30	K	0	0	0	32	0	0	0	38
31	H	0	0	0	92	0	0	0	92

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1976 MARCH									
1	H	0	0	66	0	0	0	55	0
2	H	0	0	66	77	0	0	84	89
3	H	0	0	0	77	0	0	0	76
4	H	0	0	0	165	0	0	0	175
5	H	0	0	66	55	0	0	82	67
6	H	7	48	132	154	4	30	184	211
7	H	6	46	165	176	6	38	134	174
8	H	2	17	187	77	3	19	196	91
9	H	7	42	88	55	4	28	186	80
10	H	9	72	88	121	5	44	106	203
11	H	7	68	176	66	4	39	185	86
12	H	11	77	55	66	6	43	51	94
13	C	15	105	74	96	8	60	98	140
14	C	10	90	160	0	6	54	179	0
15	C	4	19	75	0	3	13	117	0
16	C	2	9	96	75	1	6	86	62
17	H	89	456	363	0	49	254	511	0
18	C	105	691	204	64	55	365	328	97
19	H	136	852	0	0	70	435	0	0
20	H	145	979	154	0	77	518	174	0
21	H	199	1191	77	0	116	694	113	0
22	H	128	849	231	0	92	614	237	0
23	H	89	651	542	0	86	626	536	0
24	H	68	406	509	133	139	921	631	156
25	H	87	426	256	633	142	715	386	1002
26	K	164	713	135	436	190	823	160	521
27	H	178	1336	78	211	127	966	75	218
28	H	155	1644	222	167	96	1011	180	180
29	H	229	1425	311	145	128	793	338	208
30	H	177	1365	311	78	93	701	513	103
31	H	215	1220	0	78	108	615	0	101
1976 JUNE									
1	H	0	0	241	0	0	0	354	0
2	H	0	0	0	81	0	0	0	102
3	H	0	0	0	149	0	0	0	177
4	H	0	0	57	46	0	0	82	66
5	H	0	0	69	58	0	0	106	61
6	H	0	0	0	57	0	0	0	61
7	H	0	0	161	162	0	0	178	188
8	H	5	48	127	139	3	30	136	144
9	H	5	37	69	80	3	26	60	72
10	H	0	5	69	92	0	4	60	115
11	H	0	0	104	58	0	0	136	62
12	H	5	30	173	207	4	25	292	220
13	H	0	5	46	81	0	4	58	66
14	H	2	25	69	151	5	40	78	275
15	H	9	70	0	253	11	78	0	321
16	K	15	129	0	753	12	105	0	746
17	H	60	397	81	242	38	249	80	296
18	H	58	469	127	69	31	257	149	87
19	K	66	349	321	0	34	178	409	0
20	K	32	201	321	0	16	101	326	0
21	H	37	179	289	208	21	101	360	272
22	H	23	135	150	92	22	126	172	156
23	H	30	182	92	207	30	182	93	266
24	H	20	175	358	254	15	135	430	264
25	H	18	164	231	92	12	107	336	87
26	H	25	189	184	12	16	113	201	9
27	H	14	147	254	0	8	84	343	0
28	H	25	198	161	81	15	118	218	123
29	H	28	166	0	184	17	104	0	196
30	H	23	171	12	81	17	122	9	73

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1976 JULY									
1	H	14	131	127	0	12	117	107	0
2	H	9	51	242	69	12	64	322	116
3	H	0	5	115	0	0	12	201	0
4	H	7	37	81	242	4	20	95	347
5	H	2	25	127	392	1	14	170	418
6	H	5	48	150	300	3	30	142	352
7	H	0	12	266	150	0	8	301	204
8	H	0	0	161	207	0	0	155	227
9	H	0	0	266	127	0	0	316	140
10	C	0	0	67	78	0	0	89	98
11	H	0	0	81	196	0	0	118	258
12	H	0	0	127	196	0	0	152	189
13	H	0	0	0	243	0	0	0	261
14	H	0	0	0	115	0	0	0	149
15	H	0	0	69	0	0	0	100	0
16	H	0	0	0	58	0	0	0	78
17	H	0	0	46	0	0	0	74	0
18	H	0	0	161	81	0	0	228	112
19	H	0	0	231	207	0	0	361	245
20	H	0	0	69	265	0	0	58	310
21	H	0	0	92	150	0	0	101	204
22	H	0	0	69	81	0	0	105	80
23	H	0	0	208	58	0	0	303	87
24	H	0	0	0	0	0	0	0	0
25	H	0	0	0	81	0	0	0	128
26	H	0	0	46	208	0	0	74	238
27	H	0	0	0	139	0	0	0	145
28	H	0	0	69	196	0	0	62	202
29	H	0	0	69	150	0	0	63	250
30	H	0	0	69	322	0	0	70	345
31	H	0	7	69	81	0	6	58	66
1976 OCTOBER									
1	H	87	594	0	78	47	324	0	96
2	C	66	563	130	76	38	317	118	87
3	C	84	610	250	227	52	380	267	306
4	H	47	383	157	302	34	277	161	346
5	H	36	216	468	167	35	212	499	169
6	H	24	152	423	156	42	260	558	151
7	H	8	47	424	156	35	186	614	150
8	H	0	0	234	100	0	0	312	166
9	P	0	0	85	284	0	0	118	349
10	P	0	0	0	170	0	0	0	154
11	H	0	0	0	67	0	0	0	109
12	H	11	55	89	245	23	117	79	325
13	H	11	60	100	267	13	68	132	266
14	C	24	172	0	269	18	124	0	225
15	H	44	307	0	55	27	190	0	81
16	H	55	375	55	167	33	223	81	347
17	H	73	380	55	154	44	232	61	180
18	H	35	360	0	132	23	232	0	208
19	H	27	168	344	222	20	122	320	224
20	H	17	145	409	99	14	111	467	100
21	C	6	50	225	0	12	65	296	0
22	C	4	45	161	0	2	28	230	0
23	C	38	402	214	235	29	279	241	319
24	C	49	568	43	160	31	367	97	181
25	K	128	599	0	184	78	359	0	196
26	H	103	666	0	121	68	437	0	106
27	H	48	458	275	66	37	352	271	70
28	C	11	111	192	0	10	108	308	0
29	P	17	76	253	84	36	174	495	75
30	H	4	33	110	66	13	95	285	91
31	H	0	2	0	154	0	1	0	171

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1976 AUGUST									
1	H	18	131	46	69	64	457	49	168
2	H	66	425	80	172	88	559	105	260
3	H	96	629	0	253	81	528	0	230
4	C	132	842	0	134	92	589	0	124
5	H	149	997	46	0	87	584	37	0
6	H	181	1079	0	69	96	573	0	108
7	H	190	1061	0	218	97	539	0	318
8	C	165	1194	111	212	85	613	113	208
9	H	165	990	103	137	91	544	152	133
10	H	110	969	69	69	68	596	62	61
11	H	112	750	172	57	84	558	198	56
12	H	71	495	401	0	73	495	363	0
13	H	37	303	424	0	61	519	566	0
14	C	4	31	156	0	3	20	298	0
15	H	2	21	126	69	1	11	201	89
16	H	11	57	80	57	6	29	74	67
17	H	25	201	149	0	13	107	185	0
18	H	62	367	57	0	37	218	76	0
19	H	28	215	57	114	26	194	45	202
20	H	20	155	194	354	20	150	187	392
21	C	13	82	155	266	10	64	246	240
22	H	11	132	0	0	7	79	0	0
23	H	18	107	0	0	10	59	0	0
24	H	25	123	0	0	13	65	0	0
25	H	9	57	0	0	5	31	0	0
26	H	5	25	0	0	3	14	0	0
27	H	0	4	0	68	0	2	0	90
28	C	2	29	0	132	11	117	0	191
29	C	40	139	110	110	64	225	108	202
30	P	58	232	290	131	51	204	373	134
31	C	68	386	88	143	48	270	143	125
1976 NOVEMBER									
1	C	0	4	75	64	0	3	69	55
2	H	0	9	352	132	0	10	421	173
3	H	0	0	77	22	0	0	116	22
4	H	0	0	121	0	0	0	109	0
5	H	0	0	275	132	0	0	346	120
6	C	0	0	64	149	0	0	66	165
7	H	0	0	121	264	0	0	180	374
8	P	0	0	112	280	0	0	108	338
9	H	0	0	0	304	0	0	0	298
10	H	0	0	132	132	0	0	179	119
11	H	0	0	0	175	0	0	0	200
12	H	0	0	0	65	0	0	0	58
13	C	0	0	0	74	0	0	0	73
14	H	0	0	65	163	0	0	52	235
15	H	2	7	87	186	2	7	84	205
16	K	0	0	111	322	0	0	170	327
17	K	10	54	0	130	38	207	0	161
18	C	19	195	138	222	24	244	168	303
19	C	40	271	0	455	33	225	0	530
20	C	42	336	0	391	27	218	0	362
21	C	46	399	0	284	26	223	0	273
22	C	65	439	0	147	34	229	0	153
23	H	61	361	76	0	31	183	72	0
24	C	40	403	116	0	21	210	116	0
25	C	48	305	147	0	28	175	201	0
26	C	51	289	106	0	33	188	169	0
27	H	33	239	206	0	28	205	212	0
28	K	38	161	161	0	45	191	176	0
29	C	8	95	284	53	21	241	400	61
30	H	0	0	154	66	0	0	225	64

Date and Place		Projected Area Umb.	Projected Area Whole Spots	Projected Area Faculae West	Projected Area Faculae East	Corrected Area Umb.	Corrected Area Whole Spots	Corrected Area Faculae West	Corrected Area Faculae East
1976 SEPTEMBER									
1	H	93	512	237	68	63	351	220	54
2	C	84	531	264	77	55	363	333	115
3	H	70	459	0	0	36	234	0	0
4	H	84	533	68	0	43	272	66	0
5	H	72	408	0	0	39	219	0	0
6	H	68	368	68	148	40	219	67	222
7	H	50	309	34	148	35	218	27	143
8	H	39	252	181	0	36	235	163	0
9	H	25	190	226	90	35	262	253	80
10	H	36	330	181	0	49	347	337	0
11	C	53	529	0	0	30	299	0	0
12	H	67	343	0	0	39	199	0	0
13	K	23	175	0	0	14	107	0	0
14	H	18	57	180	68	15	45	195	81
15	K	4	40	240	230	4	36	247	396
16	C	2	15	285	373	3	18	354	423
17	H	11	43	180	260	9	34	310	389
18	H	5	14	79	214	3	9	80	278
19	D	0	67	261	372	0	36	403	330
20	H	0	0	0	79	0	0	0	66
21	H	0	0	0	0	0	0	0	0
22	H	0	0	0	0	0	0	0	0
23	H	0	0	56	0	0	0	123	0
24	K	0	0	73	147	0	0	110	209
25	D	22	140	480	518	45	287	582	826
26	P	57	237	86	556	54	223	142	616
27	H	45	296	90	303	37	247	111	300
28	H	61	434	90	181	41	296	87	164
29	H	65	434	101	0	39	258	147	0
30	H	60	482	45	0	33	265	71	0
1976 DECEMBER									
1	H	0	0	0	0	0	0	0	0
2	H	0	0	0	87	0	0	0	96
3	H	0	0	0	0	0	0	0	0
4	H	0	0	0	163	0	0	0	172
5	H	0	0	54	173	0	0	58	178
6	H	0	4	0	260	0	6	0	381
7	H	2	9	54	271	2	7	73	275
8	H	22	157	130	414	14	99	149	384
9	H	26	228	141	195	15	130	192	254
10	H	67	452	217	184	35	234	304	195
11	H	91	524	325	195	46	263	448	297
12	C	75	571	147	167	39	292	237	215
13	H	54	407	260	292	30	228	317	306
14	C	59	502	220	188	48	419	260	187
15	H	91	565	305	305	84	480	293	359
16	H	85	494	471	306	84	471	538	299
17	K	90	426	483	313	114	548	636	304
18	K	58	289	240	60	38	193	282	110
19	K	66	303	181	90	41	193	238	149
20	C	46	314	115	73	24	161	227	83
21	C	25	275	241	63	13	143	249	76
22	H	48	263	65	65	27	149	71	87
23	C	21	212	114	270	13	135	160	348
24	H	41	276	65	248	54	373	54	417
25	H	32	251	390	629	43	323	404	842
26	H	43	365	195	605	50	402	258	610
27	C	33	310	73	293	24	223	113	265
28	C	38	333	63	0	22	203	72	0
29	H	37	278	76	0	20	149	101	0
30	K	52	248	0	40	27	129	0	68
31	K	52	251	50	240	27	133	72	293

SUMMARY OF RESULTS FOR 1972

MEAN AREAS OF SUNSPOTS AND FACULAE FOR EACH ROTATION OF THE SUN FROM 1972 JANUARY 1 TO 1972 DECEMBER 19

No. of Rotation	Rotation Commenced			Days Photographed	Mean Projected Daily Area: Umbrae	Whole Spots	Faculae	Mean Corrected Daily Area: Umbrae	Whole Spots	Faculae
1583	1971	December	31.40	27	97	713	992	73	531	1201
1584	1972	January	27.74	27	242	1656	1236	171	1181	1532
1585		February	24.08	28	303	2023	1473	220	1483	1741
1586		March	22.40	27	111	724	1426	79	533	1681
1587		April	18.68	27	155	1068	1227	120	827	1495
1588		May	15.91	27	314	2202	1432	222	1577	1749
1589		June	12.12	27	259	1612	1476	187	1172	1751
1590		July	9.32	28	224	1397	1549	160	1016	1782
1591		August	5.53	27	172	1123	1731	144	939	2043
1592		September	1.77	27	123	786	1322	92	588	1554
1593		September	29.04	28	148	961	1153	120	802	1397
1594		October	26.33	27	161	1157	1031	114	823	1297
1595		November	22.63	27	115	805	901	79	551	1053
Mean Areas of Sunspots and Faculae for 1972				366	184	1234	1303	135	916	1558

MEAN HELIOGRAPHIC LATITUDE OF SUNSPOTS FOR EACH ROTATION OF THE SUN FROM 1972 JANUARY 1 TO 1972 DECEMBER 19

No. of Rotation	Rotation Commenced			Days Photographed	Northern Spots: Mean Daily Area	Mean Hel. Lat.	Southern Spots: Mean Daily Area	Mean Hel. Lat.	All Spots: Mean Hel. Lat.	Mean Dist. fm. Equator
						°		°	°	°
1583	1971	December	31.40	27	142	14.69	390	13.50	-5.99	13.82
1584	1972	January	27.74	27	555	11.14	627	15.50	-2.99	13.45
1585		February	24.08	28	627	10.81	855	11.47	-2.04	11.19
1586		March	22.40	27	157	8.16	375	10.55	-5.02	9.84
1587		April	18.68	27	286	13.23	541	10.75	-2.46	11.61
1588		May	15.91	27	403	9.90	1174	11.23	-5.82	10.89
1589		June	12.12	27	442	8.35	731	10.73	-3.54	9.84
1590		July	9.32	28	554	10.69	462	11.39	+0.66	11.01
1591		August	5.53	27	531	13.89	408	12.73	+2.33	13.39
1592		September	1.77	27	143	15.23	445	8.02	-2.37	9.77
1593		September	29.04	28	110	15.23	693	12.04	-8.30	12.47
1594		October	26.33	27	33	5.86	789	11.50	-10.80	11.27
1595		November	22.63	27	191	11.66	360	13.52	-4.78	12.87
Mean Heliographic Latitude of Sunspots for 1972				366	328	11.35	588	11.74	-3.46	11.60

SUMMARY OF SOLAR ACTIVITY FOR 1972

Chief features of the record for 1972 are as follows:

(1) Activity decreased slightly and the mean daily area of sunspots fell to 916 millionths from 990 millionths in 1971

(2) The largest spot group crossed the Sun's central meridian on October 29.78 in Latitude 12°S; its mean area was 1733 millionths. There were ten groups with mean areas exceeding 500 millionths, including three with mean areas exceeding 1000 millionths

(3) There was one spot-free day during the year, on October 13

(4) The ratio of mean corrected areas of faculae/sunspots was 1.70, and that of mean corrected areas of umbrae/whole spots 0.147

(5) The number and distribution, northern and southern hemispheres, of spot groups of

(a) two days' duration or longer

(b) one day's duration

were as follows:

	(a)	(b)
Northern spots	129	42
Southern spots	182	54
	311	96

(6) The following table gives the mean daily areas of sunspots (projected and corrected values) and faculae (corrected only) for each calendar month

Month	Spots: Projected	Spots: Corrected	Faculae Corrected
January	703	522	1214
February	1852	1338	1567
March	1666	1208	1741
April	766	572	1580
May	1768	1319	1623
June	1828	1322	1761
July	1207	929	1757
August	1390	1052	2051
September	793	605	1593
October	1384	1017	1316
November	662	555	1305
December	801	562	1188

SUMMARY OF RESULTS FOR 1973

MEAN AREAS OF SUNSPOTS AND FACULAE FOR EACH ROTATION OF THE SUN

FROM 1972 DECEMBER 20 TO 1974 JANUARY 5

No. of Rotation	Rotation Commenced			Days Photographed	Mean Projected Daily Area: Umbrae	Whole Spots	Faculae	Mean Corrected Daily Area: Umbrae	Whole Spots	Faculae
1596	1972	December	19.95	27	111	807	1024	85	611	1236
1597	1973	January	16.29	28	54	379	836	40	272	1000
1598		February	12.63	27	130	771	844	93	553	999
1599		March	11.96	27	185	1252	983	130	883	1145
1600		April	8.26	28	107	821	933	83	623	1099
1601		May	5.51	27	63	523	904	43	348	1041
1602		June	1.73	27	81	596	1038	59	435	1201
1603		June	28.92	27	63	426	931	50	339	1063
1604		July	26.13	28	32	206	753	22	139	878
1605		August	22.36	27	160	1112	888	120	823	1020
1606		September	18.61	27	108	725	795	78	521	912
1607		October	15.90	27	68	463	699	50	331	805
1608		November	12.20	28	47	355	749	36	265	873
1609		December	9.51	27	50	340	633	38	259	754
Mean Areas of Sunspots and Faculae for 1973				365	90	628	851	66	456	993

MEAN HELIOGRAPHIC LATITUDE OF SUNSPOTS FOR EACH ROTATION OF THE SUN

FROM 1972 DECEMBER 20 TO 1974 JANUARY 5

No. of Rotation	Rotation Commenced			Days Photographed	Northern Spots: Mean Daily Area	Mean Hel. Lat.	Southern Spots: Mean Daily Area	Mean Hel. Lat.	All Spots: Mean Hel. Lat.	Mean Dist. fm Equator
						°		°	°	°
1596	1972	December	19.95	27	544	10.87	67	17.15	+7.79	11.56
1597	1973	January	16.29	28	197	10.09	75	12.87	+3.77	10.86
1598		February	12.63	27	277	7.98	275	13.32	-2.63	10.64
1599		March	11.96	27	352	10.06	531	7.76	-0.65	8.68
1600		April	8.26	28	213	10.97	411	9.53	-2.54	10.02
1601		May	5.51	27	180	10.39	168	9.36	+0.86	9.89
1602		June	1.73	27	174	13.73	261	7.21	+1.15	9.82
1603		June	28.92	27	285	11.90	54	7.15	+8.85	11.14
1604		July	26.13	28	52	7.35	87	6.55	-1.37	6.85
1605		August	22.36	27	402	15.18	421	13.98	+0.26	14.57
1606		September	18.61	27	451	13.01	70	13.53	+9.45	13.08
1607		October	15.90	27	70	13.71	261	12.81	-7.24	13.00
1608		November	12.20	28	47	8.96	218	10.08	-6.68	9.88
1609		December	9.51	27	28	6.18	232	17.45	-14.91	16.23
Mean Heliographic Latitude of Sunspots for 1973				365	227	11.46	230	10.95	+0.18	11.20

SUMMARY OF SOLAR ACTIVITY FOR 1973

Chief features of the record for 1973 are as follows:

(1) Activity continued to decrease and the mean daily area of sunspots fell to 456 millionths from 916 millionths in 1972

(2) The largest spot group crossed the Sun's central meridian on April 2.19 in latitude 5°S; its mean area was 661. There were only two other groups with mean areas exceeding 500 millionths

(3) There were 25 spot-free days during the year

(4) The ratio of mean corrected areas of faculae/sunspots was 2.18, and that of mean corrected areas of umbrae/whole spots 0.145

(5) The number and distribution, northern and southern hemispheres, of spot groups of

(a) two days' duration or longer

(b) one day's duration

were as follows:

	(a)	(b)
Northern spots	78	35
Southern spots	89	50
	167	85

(6) The following table gives the mean daily areas of sunspots (projected and corrected values) and faculae (corrected only) for each calendar month.

Month	Spots: Projected	Corrected	Faculae Corrected
January	568	399	1007
February	575	424	973
March	1014	722	1122
April	1050	765	1078
May	589	411	1102
June	567	441	1216
July	391	282	1050
August	321	262	848
September	1276	883	1080
October	561	407	813
November	329	243	820
December	309	251	815

SUMMARY OF RESULTS FOR 1974

MEAN AREAS OF SUNSPOTS AND FACULAE FOR EACH ROTATION OF THE SUN FROM 1974 JANUARY 6 TO 1974 DECEMBER 25

No. of Rotation	Rotation Commenced		Days Photographed	Mean Projected Daily Area: Umbrae	Whole Spots	Faculae	Mean Corrected Daily Area: Umbrae	Whole Spots	Faculae
1610 1974	January	5.84	27	47	305	550	35	226	674
1611	February	2.18	28	45	331	495	34	254	614
1612	March	1.52	27	25	173	590	18	125	727
1613	March	28.83	27	74	669	540	61	568	660
1614	April	25.10	28	76	547	656	53	396	796
1615	May	22.33	27	55	419	729	41	313	871
1616	June	18.53	27	131	905	648	94	667	764
1617	July	15.73	27	105	682	665	76	504	811
1618	August	11.95	27	85	516	783	68	407	947
1619	September	8.20	28	137	930	682	98	684	814
1620	October	5.47	27	105	822	808	74	576	953
1621	November	1.76	27	80	459	893	58	335	1035
1622	November	29.07	27	58	373	508	42	271	577
Mean Areas of Sunspots and Faculae for 1974			365	77	535	653	56	400	782

MEAN HELIOGRAPHIC LATITUDE OF SUNSPOTS FOR EACH ROTATION OF THE SUN FROM 1974 JANUARY 6 TO 1974 DECEMBER 25

No. of Rotation	Rotation Commenced		Days Photographed	Northern Spots: Mean Daily Area	Mean Hel. Lat.	Southern Spots: Mean Daily Area	Mean Hel. Lat.	All Spots: Mean Hel. Lat.	Mean Dist. fm Equator
					°		°	°	°
1610 1974	January	5.84	27	52	6.64	175	14.18	-9.43	12.46
1611	February	2.18	28	13	8.27	241	17.14	-15.84	16.69
1612	March	1.52	27	56	5.26	70	8.90	-2.62	7.28
1613	March	28.83	27	33	10.13	535	11.97	-10.67	11.86
1614	April	25.10	28	24	6.33	372	9.37	-8.41	9.18
1615	May	22.33	27	103	5.53	210	13.85	-7.46	11.10
1616	June	18.53	27	1	8.28	666	12.23	-12.19	12.22
1617	July	15.73	27	4	8.35	500	10.32	-10.18	10.30
1618	August	11.95	27	72	4.71	335	9.61	-7.09	8.75
1619	September	8.20	28	470	8.73	214	7.70	+3.59	8.41
1620	October	5.47	27	423	9.09	154	11.12	+3.71	9.63
1621	November	1.76	27	326	12.12	10	7.47	+11.56	11.99
1622	November	29.07	27	269	11.55	2	15.81	+11.35	11.58
Mean Heliographic Latitude of Sunspots for 1974			365	138	9.31	261	11.49	-4.28	10.73

SUMMARY OF SOLAR ACTIVITY FOR 1974

Chief features of the record for 1974 are as follows:

(1) Activity remained fairly constant although the mean daily area of sunspots fell slightly to 400 millionths from 456 millionths in 1973

(2) The largest spot group crossed the Sun's central meridian on April 11.11 in latitude 12°S; its mean area was 945 millionths. There were five groups with mean areas exceeding 500 millionths

(3) There were 23 spot-free days during the year

(4) The ratio of mean corrected areas of faculae/sunspots was 1.96, and that of mean corrected areas of umbrae/whole spots 0.140

(5) The number and distribution, northern and southern hemispheres, of spot groups of

(a) two days' duration or longer

(b) one day's duration

were as follows:

	(a)	(b)
Northern spots	59	37
Southern spots	91	46
	150	83

(6) The following table gives the mean daily areas of sunspots (projected and corrected values) and faculae (corrected only) for each calendar month

Month	Spots: Projected	Spots: Corrected	Faculae Corrected
January	279	205	641
February	329	253	623
March	167	128	702
April	613	514	632
May	504	383	857
June	411	293	844
July	1146	831	800
August	543	432	892
September	769	584	828
October	882	603	939
November	420	310	1031
December	344	252	586

SUMMARY OF RESULTS FOR 1975

MEAN AREAS OF SUNSPOTS AND FACULAE FOR EACH ROTATION OF THE SUN

FROM 1974 DECEMBER 26 TO 1976 JANUARY 11

No. of Rotation	Rotation Commenced		Days Photographed	Mean Projected Daily Area: Umbrae	Whole Spots	Faculae	Mean Corrected Daily Area: Umbrae	Whole Spots	Faculae
1623 1974	December	26.40	28	33	248	554	26	190	606
1624 1975	January	22.73	27	18	132	485	12	83	509
1625	February	19.07	28	12	87	385	9	66	442
1626	March	18.40	27	1	11	364	1	10	435
1627	April	14.69	27	16	109	384	11	83	463
1628	May	11.93	27	1	8	220	1	6	257
1629	June	8.14	27	39	234	249	27	164	306
1630	July	5.34	28	65	448	461	52	364	538
1631	August	1.55	27	132	1136	508	91	778	629
1632	August	28.78	27	16	124	542	11	83	635
1633	September	25.05	27	28	192	344	20	136	415
1634	October	22.33	28	31	194	387	23	139	441
1635	November	18.64	27	36	228	310	24	150	364
1636	December	15.95	27	1	8	259	1	6	307
Mean Areas of Sunspots and Faculae for 1975			365	32	235	391	23	168	456

MEAN HELIOGRAPHIC LATITUDE OF SUNSPOTS FOR EACH ROTATION OF THE SUN

FROM 1974 DECEMBER 26 TO 1976 JANUARY 11

No. of Rotation	Rotation Commenced		Days Photographed	Northern Spots: Mean Daily Area	Mean Hel. Lat.	Southern Spots: Mean Daily Area	Mean Hel. Lat.	All Spots: Mean Hel. Lat.	Mean Dist. fm Equator
					°		°	°	°
1623 1974	December	26.40	28	158	10.57	32	9.59	+7.20	10.41
1624 1975	January	22.73	27	71	2.62	11	12.53	+0.53	3.99
1625	February	19.07	28	10	10.11	56	13.39	-9.85	12.90
1626	March	18.40	27	4	6.88	7	15.86	-7.60	12.60
1627	April	14.69	27	16	5.29	67	8.04	-5.49	7.51
1628	May	11.93	27	1	8.00	6	7.87	-6.11	7.88
1629	June	8.14	27	143	6.37	21	10.45	+4.22	6.90
1630	July	5.34	28	219	6.28	146	7.13	+0.92	6.62
1631	August	1.55	27	751	8.18	28	12.47	+7.45	8.33
1632	August	28.78	27	33	8.16	50	9.18	-2.30	8.78
1633	September	25.05	27	135	17.78	1	8.00	+17.66	17.44
1634	October	22.33	28	59	4.02	80	6.61	-2.07	5.51
1635	November	18.64	27	56	5.37	94	6.92	-2.30	6.34
1636	December	15.95	27	0	0.00	6	6.42	-6.42	6.42
Mean Heliographic Latitude of Sunspots for 1975			365	123	8.26	45	8.56	+3.79	8.34

SUMMARY OF SOLAR ACTIVITY FOR 1975

Chief features of the record for 1975 are as follows:

(1) Activity generally decreased during the year and the mean daily area of sunspots fell to 168 millionths from 400 millionths in 1974

(2) The largest spot group crossed the Sun's central meridian on August 9.49 in latitude 9°N; its mean area was 1035 millionths. There were only two groups with mean areas exceeding 500 millionths

(3) There were 102 spot-free days during the year

(4) The ratio of mean corrected areas of faculae/sunspots was 2.71 and that of mean corrected areas of umbrae/whole spots 0.137

(5) The number and distribution, northern and southern hemispheres, of spot groups of

(a) two days' duration or longer

(b) one day's duration

were as follows:

	(a)	(b)
Northern spots	43	26
Southern spots	30	13
	73	39

(6) The following table gives the mean daily areas of sunspots (projected and corrected values) and faculae (corrected only) for each calendar month

Month	Spots: Projected	Spots: Corrected	Faculae Corrected
January	205	155	542
February	129	80	416
March	81	64	515
April	19	17	440
May	83	60	344
June	141	107	298
July	454	354	492
August	1016	702	688
September	109	74	530
October	166	114	392
November	334	235	468
December	57	34	340

SUMMARY OF RESULTS FOR 1976

MEAN AREAS OF SUNSPOTS AND FACULAE FOR EACH ROTATION OF THE SUN FROM 1976 JANUARY 12 TO 1976 DECEMBER 31

No. of Rotation		Rotation Commenced		Days Photographed	Mean Projected Daily Area: Umbrae	Mean Projected Daily Area: Whole Spots	Mean Projected Daily Area: Faculae	Mean Corrected Daily Area: Umbrae	Mean Corrected Daily Area: Whole Spots	Mean Corrected Daily Area: Faculae
1637	1976	January	12.29	28	22	188	281	15	128	332
1638		February	8.63	27	3	22	175	2	13	211
1639		March	6.96	27	99	632	281	69	433	351
1640		April	3.27	28	73	462	337	58	357	426
1641		April	30.53	27	19	136	240	16	120	300
1642		May	27.75	27	13	84	228	9	56	271
1643		June	23.95	27	7	56	267	5	39	325
1644		July	21.15	28	55	364	201	39	262	243
1645		August	17.37	27	42	259	150	30	186	179
1646		September	13.63	27	26	179	349	21	137	432
1647		October	10.90	27	26	187	249	20	137	307
1648		November	7.20	28	18	127	214	14	98	247
1649		December	4.51	27	46	308	393	35	225	474
Mean Areas of Sunspots and Faculae for 1976				366	34	225	257	25	164	313

MEAN HELIOGRAPHIC LATITUDE OF SUNSPOTS FOR EACH ROTATION OF THE SUN FROM 1976 JANUARY 12 TO 1976 DECEMBER 31

No. of Rotation		Rotation Commenced		Days Photographed	Northern Spots: Mean Daily Area	Northern Spots: Mean Hel. Lat. °	Southern Spots: Mean Daily Area	Southern Spots: Mean Hel. Lat. °	All Spots: Mean Hel. Lat. °	All Spots: Mean Dist. fm Equator °
1637	1976	January	12.29	28	0	0.00	128	11.28	-11.28	11.28
1638		February	8.63	27	0	26.00	13	8.55	-8.45	8.60
1639		March	6.96	27	154	4.15	279	8.59	-4.06	7.01
1640		April	3.27	28	180	3.47	176	8.85	-2.62	6.13
1641		April	30.53	27	47	0.99	73	6.11	-3.32	4.10
1642		May	27.75	27	46	2.58	10	28.56	-3.07	7.29
1643		June	23.95	27	3	20.51	36	26.24	-22.93	25.83
1644		July	21.15	28	256	16.11	6	2.29	+15.70	15.81
1645		August	17.37	27	124	16.37	61	13.42	+6.52	15.39
1646		September	13.63	27	79	17.99	59	25.24	-0.49	21.09
1647		October	10.90	27	73	29.24	64	24.12	+4.37	26.86
1648		November	7.20	28	98	10.96	0	0.00	+10.96	10.96
1649		December	4.51	27	152	8.04	73	21.02	-1.36	12.25
Mean Heliographic Latitude of Sunspots for 1976				366	91	11.13	73	12.83	+0.46	11.89

SUMMARY OF SOLAR ACTIVITY FOR 1976

Chief features of the record for 1976 are as follows:

(1) Activity remained very constant and the mean daily area of sunspots was 164 millionths compared with 168 millionths in 1975

(2) The largest spot group crossed the Sun's central meridian on March 31.03 in latitude 8°S; its mean area was 703 millionths. There were only two groups with mean areas exceeding 500 millionths

(3) There were 107 spot-free days during the year

(4) The ratio of mean corrected areas of faculae/sunspots was 1.91, and that of mean corrected areas of umbrae/whole spots 0.152

(5) The number and distribution, northern and southern hemispheres, of spot groups of

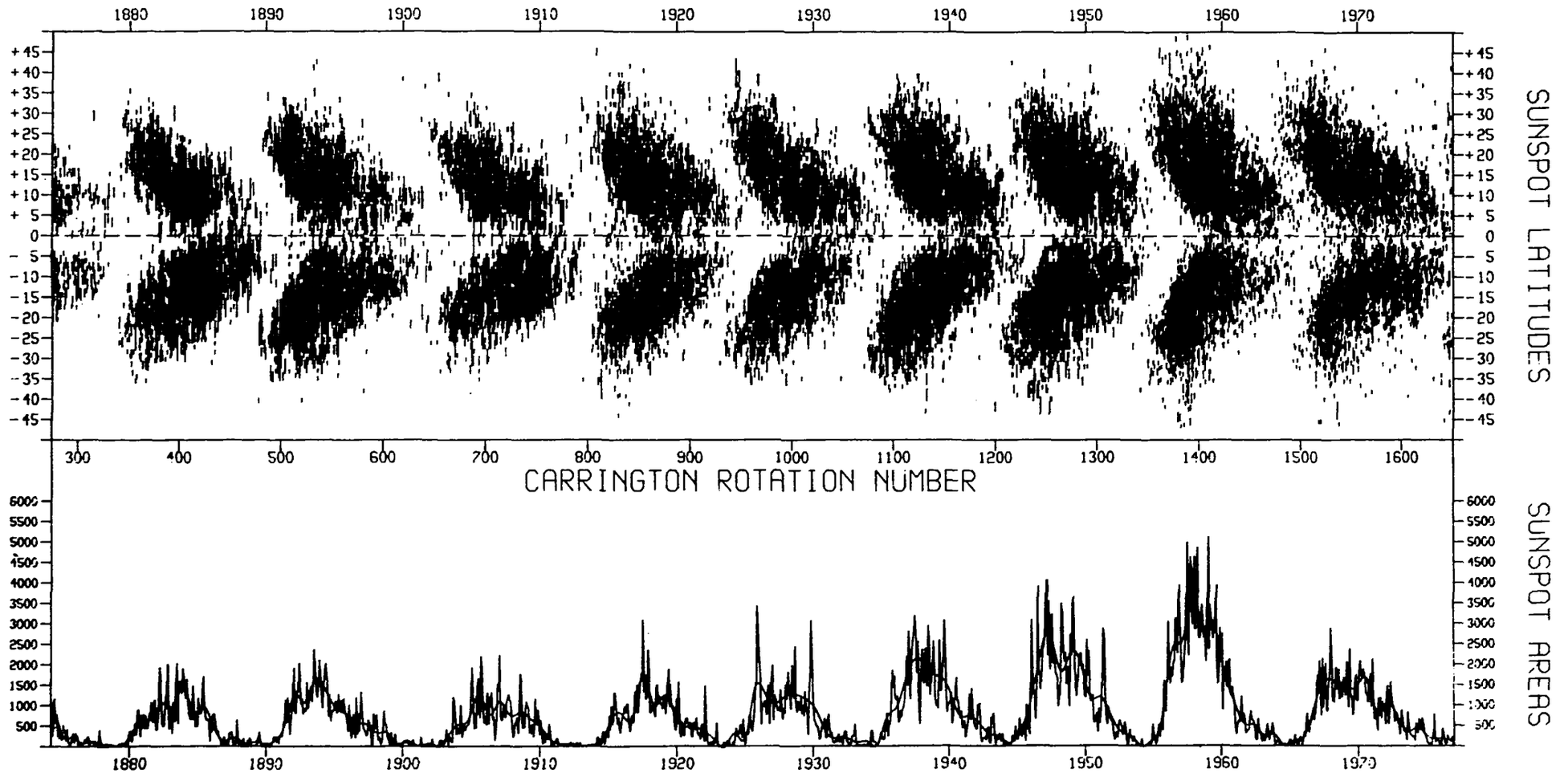
(a) two days' duration or longer

(b) one day's duration

were as follows:

	(a)	(b)
Northern spots	22	17
Southern spots	37	15
	59	32

(6) The following table gives the mean daily areas of sunspots (projected and corrected values) and faculae (corrected only) for each calendar month

Month	Spots: Projected	Spots: Corrected	Faculae: Corrected
January	170	115	314
February	19	11	235
March	477	336	324
April	509	376	413
May	118	104	275
June	116	76	306
July	10	9	293
August	394	291	225
September	240	169	304
October	245	182	363
November	119	92	277
December	268	196	421

SOLAR BUTTERFLY DIAGRAM 1874-1976