SUPPLIED FOR THE PUBLIC SERVICE.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS

1936.

SUPPLIED FOR THE PUBLIC SERVICE.

RESULTS OF MEASURES MADE AT THE ROYAL OBSERVATORY, GREENWICH, OF

PHOTOGRAPHS OF THE SUN

TAKEN AT GREENWICH, THE CAPE AND KODAIKÁNAL IN THE YEAR

1936

UNDER THE DIRECTION OF

H. SPENCER JONES, Sc.D., F.R.S.

ASTRONOMER ROYAL

Published by Order of the Board of Admiralty in Obedience to His Majesty's Command

Crown Copyright Reserved

LONDON

PUBLISHED BY HIS MAJESTY'S STATIONERY OFFICE

To be purchased directly from H.M. STATIONERY OFFICE at the following addresses:
York House, Kingsway, London, W.C.2; 120 George Street, Edinburgh 2;
26 York Street, Manchester 1; 1 St. Andrew's Crescent, Cardiff;
80 Chichester Street, Belfast;
or through any bookseller

1938.

Price 17s. 6d. net

Blank page retained for pagination

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1936.

INTRODUCTION.

§1. *Positions and Areas of Sun Spots and Faculæ for each Day in the Year* 1936.

The photographs from which these measures were made were taken at the Royal Observatories of Greenwich or of the Cape, and at the Kodaikánal Observatory, Southern India.

The photographs of the Sun obtained at Greenwich were generally taken with the Dallmeyer Photoheliograph of 4 inches aperture (usually stopped down to 2·9 inches); a few photographs were taken with the Thompson Photoheliograph of 9 inches aperture. The diameter of the Sun's image at the secondary focus in both instruments is 7½ inches at the Earth's mean distance.

The photographs from the Cape Observatory were taken under the superintendence of His Majesty's Astronomer at the Cape, Dr. J. Jackson, and those from Kodaikánal under the superintendence of the Director, Dr. T. Royds. At the Cape Observatory the instrument employed was a Dallmeyer photoheliograph giving an image of the Sun about 7½ inches in diameter; at Kodaikánal a Cooke photo-visual object-glass of 6 inches aperture was used, the image of the sun being on about the same scale.

Photographs of the Sun were available for measurement upon each day in **1936**, those finally selected for measurement being supplied by the different observatories as under :

Greenwich	240
Cape	111
Kodaikánal	15
Total	366

The names of those persons who measured the photographs for the year **1936** are as follows :

H. W. Newton P. S. Laurie
H. Barton

At the principal focus of the photoheliographs, excepting that at Kodaikánal, two spider-lines are fixed by which the zero of position-angles on the photographs can be determined. These lines are inclined at an angle of 45° to the celestial equator in the Greenwich and Cape photoheliographs ; in the Kodaikánal instrument there is one wire fixed parallel to the equator.

The zero of position-angles for the photoheliographs has been determined by the measurement of plates which have been exposed twice, with an interval of about 100 seconds between the two exposures, the instrument being firmly clamped. Two images of the Sun, overlapping each other by about a fifth part of the Sun's diameter, were therefore produced upon the plates, and the exposures having been so given that the line joining the cusps passed approximately through the centre of the plates, the inclination of the wires of the photoheliograph to this line was measured with the position-micrometer, and a small correction for the inclination of the Sun's path was then applied. Two zero photographs were usually taken each month at Greenwich and at the Cape.

At Greenwich and the Cape, transits of the Sun were also taken over the two wires ; the times of contact of the first and second limbs of the Sun with the two wires being noted. The ratio of the time taken by the Sun to pass over the NE—SW wire to that taken to pass over the SE—NW wire gives the tangent of the angle made by the Sun's path to the latter wire, the wires being assumed to be at right angles to each other. From this angle, when corrected for the Sun's motion in declination, the correction for the zero position of the wires can be inferred. Transits were taken usually on four or more days during each month.

The following table gives the correction for zero of position thus determined by the two independent methods for the 4-inch Greenwich and Cape Photoheliographs.

Determination of Zero of Position-Angles.

Month, 1936.	Greenwich.		Cape.	
	Photographic.	Visual.	Photographic.	Visual.
	° ′	° ′	° ′	° ′
January	+2 29	+2 21	−0 16	−0 16
February	+2 35	+2 20	−0 23	−0 17
March	+2 20	+2 23	−0 18	−0 16
April	+2 23	+2 22	−0 19	−0 14
May...	+2 21	+2 25	−0 26	−0 17
June...	+2 20	+2 23	−0 27	−0 18
July...	+2 20	+2 21	−0 24	−0 20
August	+2 20	+2 22	−0 20	−0 19
September	+2 25	+2 23	−0 23	−0 17
October	+2 25	+2 22	−0 18	−0 17
November	+2 17	+2 23	−0 23	−0 16
December	+2 17	+2 23	−0 25	−0 19

The Zero-corrections used during the year 1936 in the reduction of the photographs taken at Greenwich were as follows:

		°
4-inch Photoheliograph,	January 1 to March 31	+2·40
	April 1 to August 31	+2·35
	September 1 to December 31 ...	+2·40
9-inch Photoheliograph,	January 1 to December 31	+0·60

The Zero-corrections used in the reductions of the photographs taken at the Cape Observatory were as follows:—

	°
January 1 to May 31	−0·30
June 1 to September 30	−0·35
October 1 to December 31	−0·30

The Zero-correction adopted for the Kodaikánal photographs was + 0°2· throughout the year.

The measures of the photographs were made with a large position-micrometer constructed by Messrs. Troughton and Simms for the measurement of photographs

of the Sun up to 12 inches in diameter. In this micrometer the photograph is held with its film-side uppermost on three pillars fixed on a circular plate, which can be turned through a small angle, about a pivot in its circumference, by means of a screw and antagonistic spring acting at the opposite extremity of the diameter. The pivot of this plate is mounted on the circumference of another circular plate, which can be turned by screw-action about a pivot in its circumference, 90° distant from that of the upper plate, this pivot being mounted on a circular plate with a position-circle which rotates about its centre. By this means small movements in two directions at right angles to each other can be readily given, and the photograph can be accurately centred with respect to the position-circle. When this has been done, a positive eyepiece, having at its focus a glass diaphragm ruled with cross-lines into squares, with sides of one-hundredth of an inch (for measurement of areas), is moved along a slide diametrically across the photograph, the diaphragm being nearly in contact with the photographic film, so that parallax is avoided. The distance of a spot or facula from the centre of the disc is read off by means of a scale and vernier to 1/250th inch (corresponding to 0·001 of the Sun's radius for photographs having a solar diameter of 8 inches). The position-angle is read off on the large position circle which rotates with the photographic plate. The photograph is illuminated by diffused light reflected from white paper placed at an angle of 45° between the photograph and the plate below.

All photographs are measured independently by two persons, and the means taken.

In the case of large or complex groups of spots, the positions of the chief components are measured individually, and also for groups so near the east or west limbs of the Sun that the effects of foreshortening are appreciable. In other cases the position of the centre of a group is estimated in the micrometer. In this respect a difference had been made in the practice during years previous to 1916, where in this section components of groups are given separately and combined into groups in the Ledgers.

When required, corrections are applied to the measured distances and position-angles for differential refraction. The formula is given in the *Introduction* for 1909. It is seldom necessary, however, to apply this correction except to a few photographs taken at Greenwich in mid-winter.

The calculations of heliographic longitude and latitude are made by use of the formulæ given in " Researches on Solar Physics : Heliographical Positions and Areas of Sun Spots observed with the Kew Photoheliograph during the years 1862 and 1863 ", by W. De La Rue, B. Stewart, and B. Loewy. *Phil. Trans.*, 1869. If r be the measured distance of a spot from the centre of the Sun's apparent disc, R the

measured radius of the Sun on the photograph, (R) the tabular semi-diameter of the Sun in arc, and ρ, ρ' the angular distances of a spot from the centre of the apparent disc as viewed from the Sun's centre and from the Earth respectively, ρ is obtained from the equations :

$$\rho' = \frac{r}{R}(R) \; ; \quad \text{and} \quad \sin(\rho + \rho') = \frac{r}{R}.$$

If D and ϕ are the heliographic latitudes of the Earth and the spot respectively referred to the Sun's equator, and l the heliographic longitude of the spot from the solar meridian passing through the centre of the disc, longitudes west of the centre being reckoned as positive, and χ the position-angle from the Sun's axis

$$\sin \phi = \cos \rho \sin D + \sin \rho \cos D \cos \chi$$
$$\sin l = -\sin \chi \sin \rho \sec \phi.$$

The position-angle χ is found from the position-angle from the north point by subtracting P, the position-angle of the north end of the Sun's axis, measured eastward from the north point of the disc. The heliographic longitude of the spot is l+L, where L is the heliographic longitude of the centre of the disc. The three quantities P, D, and L for the time of the exposure of each photograph are derived from the Ephemeris for Physical Observations of the Sun given on p. 570 of the *Nautical Almanac* for 1936.

The inclination of the Sun's axis to the ecliptic is assumed to be 82°45′, the longitude of the ascending node of the Sun's equator on the ecliptic for 1936·0 to be 74°52′·0, and the period of the Sun's sidereal rotation to be 25·38 days ; the meridian which passed through the ascending node on 1854 January 1, Greenwich Mean Noon, being taken as the zero meridian.

§ 2. *General Catalogue of Groups of Sun Spots for* 1936.

The Catalogue contains every group of spots which lasted for two or more days, and the group numbers are in continuation of those given in 1935, and previous years. Groups seen only once are given with a distinctive numeration in a table which follows the Catalogue.

A number of " Revival " groups of spots have been tabulated in series in a table following the Catalogue and table of 1-day spots. The respective groups of each series are in the same heliographic position and were usually seen in consecutive rotations but with definite breaks in their history between each rotation. The latter feature excludes them from being classed as " Recurrent " groups ; they differ from " Intermittent " groups in their being of long-period intermittency. When a

"Recurrent" series forms part of a "Revival" series, a reference is made in the last column of the table. Other groups which are given in detail in Ledger II are also indicated.

§ 3. *Ledgers of the Areas and Heliographic Positions of Groups of Sun Spots for* 1936.

Ledger I.—Recurrent Groups.—This Ledger supersedes the Catalogue of Recurrent Groups of Sun Spots given in years previous to 1916 of the *Greenwich Photo-Heliographic Results*, and the reference numbers of the series are in continuation of those given therein. The groups forming this Ledger have been abstracted from a general Ledger of all spot groups seen throughout the year and were selected upon the following plan, reference being made to the General Catalogue :—If any spot group when first seen was 60° or more to the east of the Central Meridian, then the Catalogue, and, if necessary, the Daily Results also, were searched some fifteen or 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 60° or more to the west of the Central Meridian, then the Catalogue was searched some fifteen or sixteen days later, to ascertain whether a spot group of similar heliographic longitude and latitude was then near the east limb of the Sun. Both the search forward and the search backward have been made in the case of every spot group that was observed close to either the east or west limbs, in order that no possible case of identity might be overlooked. When there appeared to be a case of probable identity between spot groups observed in two consecutive rotations of the Sun, the character of the second group has been carefully compared with that of the first in each of the three elements—area, longitude, and latitude—before accepting it as a Recurrent Group.

Besides the Ledgers of the groups, there have been printed in a similar manner important components of the principal groups. This has been done in all cases where it appeared probable that an individual component lasted to the second or third rotation after its first appearance.

In deriving the proper motions of spots in longitude in Ledgers I and II, the formula adopted as representing the Sun's daily sidereal motion is

$$\xi = 14^\circ \cdot 37 - 2^\circ \cdot 60 \sin^2\phi,$$

where ϕ is the latitude of the spot. *See Greenwich Photo-Heliographic Results*, 1924, § 5.

Ledger II.—Non-Recurrent Groups.—This ledger contains the most important of those groups which do not last to a second rotation. Individual components are also given after their respective groups, where they are large and distinctive.

§ 4. *Total Areas of Sun Spots and Faculæ for each day, and Mean Areas and Mean Heliographic Latitude of Sun Spots and Faculæ for each Rotation of the Sun, and for the year* 1936.

Particulars relating to this section are given in the headings on pages C 142 and 146-7.

§ 5. *Observations of Solar Flocculi made with the Spectrohelioscope in the year* 1936.

This section contains measures of radial velocity of dark hydrogen flocculi seen on the Sun's disc near sunspots. The observations were made at Greenwich with a Spectrohelioscope lent by the Mount Wilson Observatory in the autumn of 1929 and set up in the south attic of the Main Building. The observations were made by Mr. Newton and Mr. Barton.

H. SPENCER JONES.

Royal Observatory, Greenwich,
1938 April 26.

ROYAL OBSERVATORY, GREENWICH.

Positions and Areas of Sun Spots and Faculæ

For each Day in the Year

1936

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1936.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

Col. 1. (1) Time when photograph was taken expressed in days and decimals of a day reckoning from midnight at commencement of year. (2) Place of observation—Greenwich (G), Cape of Good Hope (C), Kodaikánal (K) (3) Date of photograph.

Col. 2. Number of Spot Group in order of appearance and in continuation of the Group-numbers given in previous years. Groups seen on one day only are distinguished by the number of the Rotation during which they were observed and by a letter given in the order of their appearance. When there is no number in the second column it is to be understood that there is a Facula unaccompanied by a Spot.

Col. 3. Distance of Spot Group or Faculæ from Sun's centre in terms of the Sun's radius.

Col. 4. Position Angle of Spot Group or Faculæ measured from the North Pole of the Sun's axis in the direction N., E., S., W., N.

Col. 5. Heliographic Longitude of the Spot Group derived from the measures.

Col. 6. Heliographic Latitude of the Spot Group similarly derived.

Col. 7. Area of Umbræ corrected for foreshortening in millionths of the Sun's visible hemisphere.

Col. 8. Area of Whole Spots composing the Group similarly expressed.

Col. 9. Area of each group of Faculæ similarly expressed. The positions of Faculæ relative to the Spots with which they are associated are indicated by the letters *n*, *s*, *p*, *f*, *c*, denoting respectively, north, south, preceding, following concentric.

In line with the date of each day is given in brackets for the time of photograph the position angle of the Sun's axis from the north point : the heliographic longitude and latitude of the centre of the disc : the total areas of Spots and Faculæ for the day.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
0·312		·785	240·4					166
	11781	·967	284·8	92·5	+13·4	23	133	209*f*
	11789	·518	302·7	45·3	+13·5	17	71	
	11783	·657	234·6	54·8	−24·8	12	66	
	11784	·548	210·0	37·4	−31·1	15	85	
	11785	·440	216·6	35·3	−23·5	47	301	
C	11787	·491	42·9	358·3	+18·2	14	69	
	11788	·506	109·1	349·6	−12·1	95	584	
	1100f	·819	123·6	327·9	−28·8	3	9	92*f*
	11790	·981	64·0	302·8	+24·8	30	209	135*c*
		·920	54·6					152
		·935	110·2					121
Jan. 1			(+ 2·4)	(18·8)	(− 3·0)	(256)	(1527)	(875)
1·422		·879	249·1					140
		·866	237·3					175
	11783	·821	240·3	56·4	−25·9	4	14	440*c*
	11789	·710	293·5	46·2	+14·1	7	15	
	11784	·668	223·3	36·7	−31·7	4	17	
C	11785	·595	232·9	35·3	−23·7	48	288	
	11787	·376	15·1	358·3	+18·0	14	85	
	11788	·277	124·7	350·8	−12·2	167	795	
	11790	·952	59·6	296·5	+27·6	114	825	638*c*
		·887	133·3					111
Jan. 2			(+ 1·9)	(4·2)	(− 3·2)	(358)	(2039)	(1504)
2·396		·882	243·6					1924
		·806	226·4					288
		·764	213·2					112
	11789	·848	289·2	46·9	+14·4	4	8	275*c*
	11785	·732	240·4	35·2	−23·5	39	223	
	1101a	·562	213·4	12·5	−31·0	0	2	
	11787	·377	343·0	358·0	+17·8	14	74	
C	11788	·152	177·6	351·0	−12·0	141	828	
	1101b	·374	17·2	344·8	+17·6	5	15	
	11790	·887	56·7	295·1	+27·3	96	872	676*c*
		·755	55·1					123
		·830	112·4					130
		·891	127·1					164
		·936	64·9					116
		·944	114·6					375
Jan. 3			(+ 1·4)	(351·4)	(− 3·3)	(299)	(2022)	(4183)
1936.			°	°	°			
3·417		·981	239·7					300
		·974	253·6					234
		·973	246·9					509
		·951	285·5					208
		·934	314·5					135
		·918	241·9					1009
		·882	291·7					201
		·881	228·1					847
	11785	·857	244·1	35·1	−23·8	41	196	450*f*
G	11787	·484	317·6	357·8	+17·6	10	64	
	11788	·267	233·5	350·5	−12·4	133	797	
	1101c	·462	152·4	324·0	−27·4	7	27	
	11790	·794	51·2	293·9	+27·3	141	1019	356*c*
		·813	129·5					148
		·849	61·4					118
		·857	116·9					260
		·921	108·7					110
		·963	117·7					218
Jan. 4			(+ 0·9)	(337·9)	(− 3·4)	(332)	(2103)	(5103)
4·388		·963	235·4					628
		·957	288·8					301
		·897	225·8					268
	11785	·940	246·0	34·5	−23·7	72	277	643*sf*
	11787	·622	304·3	357·6	+17·5	12	53	
C	11788	·461	251·0	351·4	−11·7	114	767	
	11790	·704	42·7	292·4	+28·2	191	1098	
		·906	106·4					190
		·919	118·8					301
		·943	64·3					308
Jan. 5			(+ 0·4)	(325·1)	(− 3·5)	(389)	(2195)	(2639)
5·360		·967	227·3					342
		·892	234·1					275
	11785	·989	246·5	34·3	−23·8	49	177	621*sf*
	11787	·757	296·5	357·3	+17·2	9	35	
C	11788	·654	256·3	352·6	−11·7	128	725	
	11790	·604	29·7	292·5	+28·2	162	1084	
		·816	120·3					260
		·828	58·3					269
		·932	61·5					204
Jan. 6			(− 0·1)	(312·3)	(− 3·6)	(348)	(2021)	(1971)
6·617		·959	238·7					258
		·939	228·7					181
	11787	·902	291·3	357·2	+17·3	10	20	404*c*
	11788	·840	259·0	352·8	−11·3	100	539	522*c*
G	11790	·540	8·1	290·9	+28·4	172	1090	
		·817	57·1					65
		·905	64·9					165
		·969	107·9					217
Jan. 7			(− 0·7)	(295·8)	(− 3·8)	(282)	(1649)	(1812)

Group 11789. Jan. 1–3. A pair of spots of which one remains on Jan. 3.
Group 11790. Jan. 1–14. A very large composite spot, preceded by a small regular spot which dies out by Jan. 8. The composite spot tends to spread out in longitude; the preceding part becomes a diminishing cluster of small spots, whilst the following portion remains a large double spot with widely separated umbræ.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
7·352		·930	292·2					247
	11788	·919	259·2	352·9	−11·4	105	590	584*f*
	11790	·539	351·8	291·1	+28·3	117	915	
C		·831	61·4					96
		·922	107·3					219
		·973	102·6					124
Jan. 8			(− 1·0)	(286·1)	(− 3·8)	(222)	(1505)	(1270)
8·396		·959	289·5					211
		·803	234·3					208
	11788	·987	258·5	353·6	−12·0	76	630	576*f*
	11790	·601	334·5	289·5	+28·9	78	779	
C	11791	·987	103·7	191·1	−14·2	36	158	
		·786	109·9					185
		·907	106·7					177
		·978	66·3					73
Jan. 9			(− 1·5)	(272·4)	(− 4·0)	(190)	(1567)	(1430)
9·482		·957	253·3					184
		·911	240·7					350
		·879	301·1					168
		·867	312·4					156
		·849	250·7					142
		·845	223·3					231
		·784	303·5					147
	11790	·702	320·1	289·0	+28·9	83	601	
G	11791	·928	103·5	189·9	−14·1	35	190	252*c*
		·764	106·0					96
		·862	51·5					127
		·875	115·5					190
		·914	63·1					158
		·962	41·5					97
		·964	112·7					231
		·967	51·5					230
Jan. 10			(− 2·1)	(258·1)	(− 4·1)	(118)	(791)	(2759)
10·144		·944	242·4					120
		·885	227·8					193
		·876	299·8					272
	11790	·771	314·8	288·2	+29·6	81	554	390*c*
K	11791	·859	103·6	190·3	−13·8	23	163	
	11792	·992	118·2	165·9	−28·4	46	229	152*p*
		·845	62·2					167
		·849	106·2					329
		·941	47·8					248
Jan. 11			(− 2·4)	(249·3)	(− 4·1)	(150)	(946)	(1871)
1936.			°	°	°			
11·504		·885	224·4					265
		·785	237·4					285
	11790	·895	306·9	287·0	+30·1	80	405	548*c*
	11794	·521	125·8	204·5	−21·5	5	15	
G	11791	·667	105·8	190·2	−13·7	35	171	
	11792	·929	119·0	164·2	−28·4	60	342	305*f*
	11793	·929	110·9	163·3	−21·0	17	145	423*f*
		·850	117·4					203
		·864	38·6					214
Jan. 12			(− 3·0)	(231·4)	(− 4·3)	(197)	(1078)	(2243)
12·431		·922	226·1					146
		·888	242·7					247
		·789	240·6					236
	11790	·954	303·7	285·8	+30·3	70	320	636*c*
C	11794	·395	141·9	204·0	−22·3	12	32	
	11791	·502	110·3	190·3	−13·8	29	157	
	11792	·844	121·5	164·3	−28·7	50	321	423*f*
	11793	·844	111·5	162·5	−20·4	38	192	340*c*
Jan. 13			(− 3·5)	(219·2)	(− 4·4)	(199)	(1022)	(2028)
13·472		·943	223·7					121
		·934	242·6					313
		·898	291·2					103
		·799	304·3					170
		·786	238·0					458
	11790	·994	301·2	285·3	+30·3	66	359	531*c*
G	11794	·305	176·7	204·4	−22·1	10	28	
	11791	·305	122·5	190·2	−13·8	20	134	
	11792	·726	126·1	163·7	−28·6	47	292	389*f*
	11793	·717	113·7	161·4	−19·9	38	231	260*c*
	11795	·943	121·4	135·9	−31·0	42	116	210*c*
	11796	·975	114·3	127·7	−24·7	29	57	259*nf*
Jan. 14			(− 3·9)	(205·5)	(− 4·5)	(252)	(1217)	(2814)
14·410		·926	248·6					185
		·899	237·6					282
		·866	300·4					164
	11791	·168	163·0	190·3	−13·8	20	112	
	11792	·603	133·6	163·5	−28·5	47	317	
C	11793	·558	120·0	162·4	−20·1	42	165	
	11795	·873	123·6	135·1	−31·3	121	667	149*c*
	11796	·909	115·4	128·5	−25·0	5	20	127*c*
		·931	70·6					112
		·973	119·9					243
Jan. 15			(− 4·4)	(193·2)	(− 4·6)	(235)	(1281)	(1262)

Group 11791. Jan. 9–21. Return of Group 11776. A regular spot slowly diminishing; there is a small distant companion on Jan. 18.
Group 11792. Jan. 11–24. A large stable regular spot.
Group 11793. Jan. 12–23. A regular spot followed by a faint cluster which has died out by Jan. 18.
Group 11794. Jan. 12–14. A pair of very small spots.
Group 11795. Jan. 14–26. A very large complex stream developing rapidly from three small spots near the east limb on Jan. 14. The stream at first appears to be developing into one of normal type, but by Jan. 21 it has become complex in character, the numerous component spots being packed so closely that they form almost one very long spot. Throughout these changes, a small companion spot to the leader remains stable.
Group 11796. Jan. 14–26. A stream of normal type with less than the usual separation in longitude between the leader and follower spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
15·403		·968	241·0					223
		·933	296·9					156
	11791	·234	224·9	189·9	−14·1	9	89	
	11792	·486	147·7	163·0	−28·7	52	296	
	11793	·394	134·9	162·8	−20·5	16	153	
C	11795	·762	128·2	135·7	−31·4	112	1018	82*f*
	11796	·829	116·1	125·7	−24·1	19	82	144*c*
		·820	66·9					90
		·930	119·5					294
		·990	120·5					178
Jan. 16			(− 4·9)	(180·1)	(− 4·7)	(208)	(1638)	(1167)
16·600		·933	294·2					142
		·882	303·6					113
		·837	251·0					182
		·764	318·2					184
	11791	·451	247·6	189·7	−14·2	12	80	
	11797	·424	221·2	181·9	−23·1	2	5	
G	11792	·405	176·2	162·6	−28·6	44	260	
	11793	·275	170·7	161·6	−20·4	26	172	
	11795	·624	137·8	134·9	−31·7	157	1146	
	11796	·682	120·8	124·5	−24·1	32	199	
	11798	·932	120·4	96·4	−30·0	0	18	334*s*
		·832	122·5					322
		·952	72·8					98
Jan. 17			(− 5·4)	(164·3)	(− 4·8)	(273)	(1880)	(1375)
17·530		·935	250·5					277
		·837	307·1					246
		·815	245·1					301
	11791	·614	252·7	189·2	−14·4	15	76	
	11797	·575	237·3	183·5	−22·2	2	10	
	11793	·319	212·1	162·5	−20·4	23	131	
	11792	·429	200·9	162·1	−28·4	45	236	
	11795	·520	151·1	135·0	−31·7	150	1011	
G	11796	·546	128·6	124·3	−24·2	57	364	
	11798	·839	123·7	98·0	−30·7	2	8	419*f*
		·736	128·7					211
		·840	107·1					149
		·858	70·9					126
		·921	64·1					198
		·965	105·1					143
		·966	126·5					390
		·989	113·3					354
Jan. 18			(− 5·9)	(152·1)	(− 4·9)	(294)	(1836)	(2814)
1936.			°	°	°			
18·382		·983	252·7					138
		·911	249·1					250
	11791	·752	255·3	189·3	−14·3	22	79	
	11797	·685	241·2	181·5	−23·1	4	14	
	11793	·434	230·9	161·9	−20·5	18	114	
	11792	·509	217·4	161·4	−28·4	48	250	
C	11795	·466	166·8	133·7	−31·8	199	1121	
	11796	·433	140·9	123·5	−24·3	46	367	
		·802	126·1					208
		·927	127·9					384
		·942	72·5					54
		·963	112·3					818
Jan. 19			(− 6·3)	(140·9)	(− 5·0)	(337)	(1945)	(1852)
19·525		·968	305·8					265
		·959	247·4					197
		·958	295·5					179
		·917	316·8					404
		·834	247·5					160
	11791	·895	256·6	189·5	−14·2	10	46	208*sf*
	1101d	·888	295·8	183·9	+20·1	2	8	84*c*
	11793	·622	243·2	162·0	−20·4	18	120	
	11792	·656	231·2	161·2	−28·4	40	241	
G	11795	·470	195·0	134·0	−31·9	207	1324	
	11796	·334	174·2	123·7	−24·5	47	263	
	1101e	·685	132·6	89·6	−31·7	1	6	
	11799	·943	109·0	54·9	−19·6	13	95	386*c*
		·800	132·8					129
		·853	115·0					416
		·862	68·4					85
		·875	130·4					246
		·928	114·6					923
		·974	120·4					258
		·974	73·4					293
		·990	114·5					134
Jan. 20			(− 6·8)	(125·8)	(− 5·1)	(338)	(2103)	(4367)

Group 11797. Jan. 17–19. A tiny group.
Group 11798. Jan. 17–18. A small spot followed by faculæ.
Group 11799. Jan. 20–29. A regular spot from which a portion separates on Jan. 25–26; there are companions on Jan. 20 to Jan. 23.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
20·469		·954	292·8					64
		·949	313·9					289
		·888	242·0					245
	11791	·967	256·8	189·2	−14·1	8	50	265*sf*
	11793	·761	247·4	161·8	−20·4	17	123	
	11792	·774	236·9	160·8	−28·6	51	235	
	11795	·541	211·7	132·9	−32·2	220	1545	
	11796	·373	204·8	123·3	−24·8	41	214	
	1101f	·449	177·8	112·2	−31·7	2	12	
G	11800	·557	129·0	85·0	−25·0	2	9	
	11801	·694	138·2	79·0	−35·3	3	9	
	11799	·838	109·7	56·9	−19·3	22	84	531*c*
	11802	·978	73·8	37·6	+14·6	60	415	315*c*
		·738	116·2					211
		·803	66·6					76
		·817	134·8					171
		·855	119·4					767
		·898	70·5					293
		·973	119·6					322
Jan. 21			(− 7·2)	(113·4)	(− 5·2)	(426)	(2696)	(3549)
21·396		·966	311·8					103
		·949	243·2					341
	11793	·873	249·4	161·7	−20·5	27	133	313*c*
	11792	·871	239·9	160·1	−28·6	59	260	361*f*
	11795	·639	223·0	132·1	−32·3	291	1641	
	11796	·484	226·0	123·6	−24·4	20	126	
	1101g	·178	189·8	103·0	−15·2	1	5	
G	11803	·708	117·8	58·5	−23·1	3	9	
	11799	·701	111·8	57·9	−18·8	29	94	
	11802	·939	71·7	34·0	+15·2	158	705	469*c*
		·818	66·3					224
		·859	118·2					621
		·949	119·6					392
		·969	130·4					346
Jan. 22			(− 7·6)	(101·2)	(− 5·2)	(588)	(2973)	(3170)
22·446	11793	·962	250·4	162·2	−20·3	31	104	484*f*
	11792	·953	241·5	159·8	−28·7	49	274	588*c*
	11795	·763	230·7	131·8	−32·7	252	1550	664*c*
	11796	·655	237·3	124·7	−24·9	17	73	
	11800	·332	178·2	86·7	−24·6	6	16	
	11801	·552	164·9	77·0	−37·3	0	4	
G	11799	·527	118·4	58·1	−19·1	18	92	
	11802	·836	68·4	34·1	+14·8	170	984	765*c*
		·741	120·7					280
		·855	121·4					518
		·929	131·6					564
		·957	119·9					478
Jan. 23			(− 8·1)	(87·4)	(− 5·3)	(543)	(3097)	(4341)
1936.			°	°	°			
23·394		·981	248·1					149
	11792	·990	241·4	158·6	−29·1	65	374	198*c*
	11795	·870	234·9	132·7	−33·0	197	1551	699*c*
	11796	·782	241·5	124·2	−25·4	8	20	234*c*
	11800	·381	208·7	86·5	−24·7	18	62	
	11799	·349	132·9	59·3	−18·9	13	80	
	11802	·715	62·1	34·1	+15·4	158	901	376*f*
C	11804	·961	76·2	2·7	+11·7	4	18	87*f*
	11805	·979	101·7	356·0	−12·5	36	257	236*c*
		·846	133·7					642
		·885	99·3					94
		·901	121·9					405
		·957	66·3					88
		·961	131·1					333
Jan. 24			(− 8·5)	(74·9)	(− 5·4)	(499)	(3263)	(3541)
24·350	11795	·933	236·9	130·4	−32·8	151	1148	435*c*
	11796	·882	244·2	123·5	−25·3	4	22	211*c*
	11800	·498	227·1	85·9	−24·8	9	29	
	11799	·245	165·8	58·7	−19·1	16	68	
	11803	·403	157·0	52·2	−27·1	2	9	
	11802	·568	53·4	34·3	+14·9	127	676	
C	11804	·868	73·2	4·5	+11·6	4	10	101*f*
	11805	·921	101·8	354·8	−13·0	48	194	412*f*
		·770	138·4					193
		·853	122·7					208
		·904	134·2					231
		·934	64·8					130
Jan. 25			(− 9·0)	(62·3)	(− 5·5)	(361)	(2156)	(1921)
25·444		·895	237·4					264
		·766	234·8					213
	11795	·972	237·0	124·9	−33·3	75	370	820*c*
	11796	·965	244·8	123·3	−25·7	8	17	298*f*
	11800	·641	236·8	84·0	−25·0	6	28	
	1101h	·439	224·8	67·5	−23·4	2	25	
	11799	·295	215·8	58·4	−19·3	14	43	
	11803	·332	198·4	54·4	−23·8	6	50	
G	11802	·408	32·6	34·8	+14·6	129	621	
	11804	·725	68·6	4·6	+11·2	6	16	197*f*
	11805	·800	102·2	354·7	−13·1	40	212	350*c*
		·740	136·0					383
		·847	57·6					191
		·863	133·8					334
		·897	105·3					392
		·905	65·6					281
Jan. 26			(− 9·4)	(47·9)	(− 5·6)	(286)	(1382)	(3723)

Group 11800. Jan. 21–26. A feeble group not seen on Jan. 22.
Group 11801. Jan. 21–23. A tiny spot seen only on Jan. 21 and Jan. 23.
Group 11802. Jan. 21–Feb. 2. A large double spot followed by a very long sinuous train of small and unstable components.
Group 11803. Jan. 22–26. One or two small faint spots, not seen on Jan. 23 and 24.
Group 11804. Jan. 24–Feb. 2. A small but persistent group, not seen on Jan. 30.
Group 11805. Jan. 24–Feb. 5. Return of Group 11788. A regular spot shedding a small portion from its following side on Jan. 29 and 30.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
26·412		·964	234·9					174
		·941	254·9					190
		·838	238·6					257
	11799	·438	236·9	57·8	−19·0	10	39	
C	11802	·346	359·5	35·3	+14·5	67	532	
	11804	·565	60·7	5·1	+11·1	1	10	
	11805	·651	104·1	354·8	−13·5	20	185	
		·957	117·3					143
Jan. 27			(− 9·9)	(35·1)	(− 5·7)	(98)	(766)	(764)
27·461		·937	236·3					336
		·895	245·9					287
	11799	·616	246·7	57·8	−18·7	7	22	
	11802	·409	327·7	34·3	+14·6	73	393	
G	11804	·406	44·1	4·6	+11·4	10	36	
	11805	·459	107·5	354·7	−13·0	35	153	
		·911	119·2					156
		·971	63·4					199
		·979	108·6					156
Jan. 28			(−10·3)	(21·3)	(− 5·7)	(125)	(604)	(1134)
28·447		·965	242·8					263
		·873	227·9					209
		·872	245·7					480
		·857	258·8					108
	11799	·767	250·3	57·9	−18·8	5	12	115*sf*
G	11802	·552	308·7	34·8	+15·0	54	332	
	11804	·307	12·6	4·5	+11·6	7	21	
	11805	·259	119·1	355·0	−12·9	29	173	
		·936	61·7					227
		·940	110·7					194
		·989	62·7					282
Jan. 29			(−10·7)	(8·4)	(− 5·8)	(95)	(538)	(1878)
29·518		·939	230·1					171
		·915	248·6					667
		·882	287·6					109
		·877	239·8					279
	11102a	·764	303·4	37·1	+20·5	3	8	
	11802	·719	297·8	35·3	+15·0	44	218	
	11805	·121	185·5	355·0	−12·8	28	136	
G	11806	·970	57·6	284·4	+29·4	18	71	725*c*
		·835	50·2					127
		·842	111·2					196
		·927	132·1					143
		·967	117·2					293
		·986	108·4					158
Jan. 30			(−11·2)	(354·3)	(− 5·9)	(93)	(433)	(2868)
1936.			°	°	°			
30·406		·965	284·4					188
		·959	247·8					691
		·940	238·4					303
	11802	·837	291·4	35·9	+14·2	47	196	192*c*
	11804	·446	312·0	2·3	+11·7	4	21	
C	11805	·236	239·1	354·5	−12·8	26	141	
	11806	·915	54·2	284·5	+29·2	16	90 }	437*c*
	11807	·975	54·5	272·3	+32·6	29	347 }	
		·933	119·5					142
		·944	108·0					392
Jan. 31			(−11·6)	(342·6)	(− 6·0)	(122)	(795)	(2345)
31·451		·962	244·8					547
		·870	241·2					165
		·832	228·5					336
	11802	·942	287·4	36·6	+14·1	38	163	1126*f*
	11804	·642	298·0	4·2	+12·7	7	30	
	11805	·443	253·2	354·5	−12·8	21	134	
	11806	·819	48·2	284·8	+28·8	14	80	340*c*
G	11808	·867	59·6	274·9	+22·5	9	22	176*c*
	11809	·814	108·8	274·6	−18·7	2	3	206*sf*
	11807	·917	50·5	271·9	+32·5	48	258	375*np*
		·802	36·8					108
		·835	123·8					166
		·924	137·3					126
		·971	118·4					266
Feb. 1			(−12·0)	(328·8)	(− 6·0)	(139)	(690)	(3937)
32·529		·947	243·8					200
		·896	234·8					243
		·858	222·8					396
		·776	257·0					117
	11802	·996	284·4	37·5	+13·7	21	80	764*nf*
	11804	·786	291·1	3·1	+12·4	2	7	137*c*
	11805	·642	257·6	354·4	−12·7	23	122	
	11810	·465	255·0	341·8	−12·3	4	12	
G	11811	·543	40·9	292·6	+19·1	2	5	
	11806	·725	38·7	283·4	+29·2	8	28	
	11808	·735	51·8	276·2	+22·2	22	89	85*c*
	11807	·837	44·1	271·0	+32·5	42	223	333*c*
		·806	114·1					173
		·876	139·2					116
		·933	60·8					208
		·937	122·6					238
Feb. 2			(−12·4)	(314·6)	(− 6·1)	(124)	(566)	(3010)

Group 11806. Jan. 30–Feb. 6. Probable return of Group 11790. A regular spot decreasing rapidly; a tiny companion appears on Feb. 6.
Group 11807. Jan. 31–Feb. 11. A stable regular spot with companions from Feb. 4 to 8.
Group 11808. Feb. 1–10. Two small clusters becoming a stream of approximately normal type. The leader spot alone remains on Feb. 8.
Group 11809. Feb. 1–4. A tiny spot not seen on Feb. 2.
Group 11810. Feb. 2–6. A pair of spots, of which one remains on Feb. 6.
Group 11811. Feb. 2–3. A single small spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
33·434		·987	292·2					185
		·954	232·0					285
		·920	259·6					170
		·902	222·6					350
		·896	287·5					365
		·890	239·7					303
		·840	302·0					259
		·831	229·0					357
	11805	·783	258·8	354·4	−12·6	22	114	192*p*
G	11810	·612	257·9	340·3	−12·3	6	14	
	1102b	·253	169·6	299·9	−20·5	1	4	
	11811	·471	25·2	290·5	+19·1	2	7	
	11806	·644	27·4	283·0	+28·9	5	11	
	11808	·624	40·8	276·6	+22·5	32	83	
	11809	·504	118·4	274·8	−19·3	2	10	
	11807	·761	36·8	270·2	+32·1	43	237	1489*c*
		·770	117·1					110
		·867	125·6					228
		·967	108·8					83
Feb. 3			(−12·8)	(302·7)	(− 6·2)	(113)	(480)	(4376)
34·517		·975	283·8					336
		·934	226·6					575
		·933	238·3					223
		·911	297·0					396
		·804	222·0					128
	11805	·909	259·2	354·2	−12·4	26	129	501*c*
	11810	·778	259·6	339·6	−11·9	16	68	
	1102c	·529	1·1	287·8	+25·6	2	5	
	11806	·583	8·8	282·6	+28·9	7	10	
G	11808	·506	17·6	278·9	+22·6	50	178	
	11809	·309	137·0	275·6	−19·1	2	7	
	11807	·683	24·1	269·1	+32·6	52	259	
		·749	129·1					203
		·842	57·2					210
		·870	128·2					176
		·889	110·1					230
		·912	165·2					105
		·980	110·2					160
Feb. 4			(−13·2)	(288·4)	(− 6·2)	(155)	(656)	(3243)
1936.			°	°	°			
35·368		·967	232·0					282
		·950	292·6					172
		·927	249·1					124
	11805	·972	258·8	354·3	−12·3	21	140	210*f*
	11810	·883	260·2	339·6	−11·6	14	67	109*c*
C	11812	·829	253·8	333·3	−16·9	7	36	
	11806	·584	352·6	282·1	+29·0	2	13	
	11808	·488	354·8	279·9	+22·6	55	256	
	11807	·648	11·6	268·3	+33·0	52	229	
	11813	·970	109·7	200·2	−20·6	8	26	287*c*
Feb. 5			(−13·6)	(277·2)	(− 6·3)	(159)	(767)	(1184)
36·384		·973	251·8					185
		·956	227·8					264
	11810	·963	259·8	338·9	−11·5	13	40	183*p*
	11812	·930	254·0	332·8	−17·2	47	215	231*c*
	11808	·542	331·5	280·0	+22·2	47	296	
	11806	·617	337·9	279·1	+28·6	4	17	
G	11807	·635	355·6	267·1	+32·8	47	223	
	11813	·889	109·5	200·8	−20·2	14	22	447*f*
		·847	111·5					233
		·895	53·2					84
		·909	43·4					99
		·975	64·2					278
		·993	115·6					106
Feb. 6			(−14·0)	(263·8)	(− 6·4)	(172)	(813)	(2110)
37·387		·970	232·0					228
		·907	243·1					288
		·763	322·8					336
	11812	·983	252·8	331·2	−18·1	79	288	249*p*
G	11814	·790	290·2	299·6	+11·6	6	24	98*c*
	11808	·652	315·1	280·2	+21·8	49	288	
	11807	·670	340·1	266·3	+32·8	33	196	
	11813	·801	110·3	197·7	−20·0	7	28	427*c*
	11815	·972	115·7	173·0	−26·4	73	416	607*c*
		·912	60·6					382
Feb. 7			(−14·4)	(250·6)	(− 6·4)	(247)	(1240)	(2615)

Group 11812. Feb. 5–7. A pair of spots developing near the west limb.
Group 11813. Feb. 5–16. Intermittent; a scattered stream of small spots, not seen on Feb. 11, 13 and 15.
Group 11814. Feb. 7–9. Two spots developing suddenly near the west limb.
Group 11815. Feb. 7–20. A large stream containing two chief spots and a number of tiny spots sometimes grouped into clusters. The following component breaks up very suddenly after Feb. 16. The whole disturbance at its maximum development extends over 25° of longitude.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
38·375		·957	241·6					185
		·867	313·3					135
		·833	323·5					226
		·828	244·9					233
	11814	·909	286·3	300·4	+11·8	102	524	340*c*
	11816	·868	302·2	290·7	+23·6	11	54	330*c*
	11808	·776	304·9	280·6	+21·6	45	229	752*f*
G	*1102d*	·531	257·5	269·5	−12·1	11	31	
	11807	·734	327·8	265·1	+32·5	37	180	80*c*
	11817	·529	238·8	266·6	−21·5	5	15	
	11818	·651	119·9	199·6	−24·0	3	7	
	11813	·699	112·2	194·2	−20·1	12	43	
	11815	·935	116·9	167·8	−27·5	296	1295	795*c*
		·859	43·3					127
		·868	56·5					174
Feb. 8			(−14·7)	(237·6)	(− 6·5)	(522)	(2378)	(3377)
39·431		·946	305·9					134
		·908	316·1					185
	11814	·986	283·5	302·1	+12·1	95	605	297*c*
	11816	·946	297·7	289·5	+23·5	15	96	190*c*
C	11808	·888	298·7	280·5	+21·8	36	294	427*nf*
	11807	·819	317·7	264·3	+32·3	37	160	150*nf*
	11813	·533	118·1	193·8	−20·1	7	22	
	11815	·845	118·7	167·1	−27·6	250	1057	797*c*
		·969	115·1					259
Feb. 9			(−15·1)	(223·7)	(− 6·5)	(440)	(2234)	(2439)
40·422		·960	310·5					155
		·850	244·5					364
	11808	·958	294·7	279·6	+21·3	36	215	568*nf*
	11807	·897	311·5	263·4	+32·5	28	155	181*nf*
	1102e	·121	169·3	209·4	−13·4	1	2	
C	11813	·369	135·3	194·6	−21·5	11	40	
	11815	·717	122·1	167·8	−27·2	175	946	368*f*
	11819	·841	63·9	158·4	+17·7	4	12	39*c*
	11820	·985	121·6	128·7	−32·1	76	259	226*n*
		·902	116·5					197
		·961	75·0					74
Feb. 10			(−15·5)	(210·7)	(− 6·6)	(331)	(1629)	(2172)
1936.			°	°	°			
41·431		·969	250·9					145
		·961	296·6					184
		·925	240·7					272
	11817	·935	248·5	267·4	−22·5	6	14	137*c*
	11807	·959	307·1	262·6	+32·7	47	171	181*n*
C	11821	·842	247·1	254·4	−22·8	6	16	89*c*
	11815	·581	129·3	167·1	−27·3	192	955	
	11819	·689	55·2	161·1	+17·7	6	23	
	11820	·937	122·1	127·7	−32·3	83	257	500*n*
		·815	121·9					216
		·853	70·5					99
Feb. 11			(−15·9)	(197·4)	(−6·7)	(340)	(1436)	(1823)
42·454		·986	247·9					158
		·888	302·3					200
		·834	233·3					206
	11821	·937	248·3	254·2	−22·6	19	55	148*c*
G	11813	·261	215·6	193·1	−18·8	5	20	
	11815	·441	143·0	166·7	−26·9	196	896	
	11822	·684	65·3	144·7	+11·4	3	6	
	11820	·863	124·0	126·1	−32·5	73	306	665*f*
		·745	123·7					188
Feb. 12			(−16·2)	(183·9)	(− 6·7)	(296)	(1283)	(1565)
43·519		·982	248·4					91
		·930	234·7					339
		·903	304·0					189
	1102f	·979	245·8	249·8	−25·0	0	10	74*c*
G	11818	·446	229·4	191·4	−23·1	7	18	
	11815	·357	168·2	165·2	−27·1	188	784	
	11822	·498	52·2	146·3	+11·5	2	6	
	11820	·757	128·2	125·1	−32·8	49	282	422*f*
		·910	131·6					125
Feb. 13			(−16·6)	(169·9)	(− 6·8)	(246)	(1100)	(1240)
44·476		·967	304·2					93
		·960	235·3					299
		·949	297·5					96
		·889	248·5					200
	11813	·582	247·3	191·6	−18·5	1	4	
	11818	·593	239·3	190·9	−23·3	6	11	
G	11815	·368	195·5	163·6	−27·5	167	728	
	11819	·417	359·7	157·4	+17·7	2	6	
	11822	·366	30·3	146·5	+11·7	17	59	
	11820	·648	134·8	124·3	−32·8	57	272	269*f*
		·933	62·3					155
		·958	118·8					112
		·960	71·4					192
Feb. 14			(−16·9)	(157·3)	(− 6·8)	(250)	(1080)	(1416)

Group 11816. Feb. 8–9. A pair of spots.
Group 11817. Feb. 8–11. Two or three small spots on Feb. 8, after which nothing is seen until Feb. 11, when two small spots appear.
Group 11818. Feb. 8–14. A small spot on Feb. 8: a pair of spots on Feb. 13–14, nothing being seen on the intervening days.
Group 11819. Feb. 10–17. One or two small spots, not seen on Feb. 12–13.
Group 11820. Feb. 10–23. A stable regular spot, representing a return of Group 11795.
Group 11821. Feb. 11–12. A pair of small spots.
Group 11822. Feb. 12–20. A small but persistent stream of ordinary type.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
45·396		·982	294·4					83
		·955	247·3					156
		·812	250·9					175
		·810	304·7					93
	11815	·452	217·5	163·2	−27·5	139	679	
	11819	·476	330·7	159·3	+17·8	18	37	
C	11822	·322	356·6	146·3	+11·9	35	137	
	11820	·548	145·3	123·5	−33·0	51	294	
	11823	·881	69·5	86·9	+14·5	13	27	190*c*
		·888	119·3					102
		·924	57·7					130
		·973	112·4					662
		·977	66·7					74
Feb. 15			(−17·3)	(145·2)	(− 6·8)	(256)	(1174)	(1665)
46·419		·918	298·8					154
		·878	314·4					175
	11813	·914	252·6	198·5	−18·7	2	10	435*s*
	11815	·589	231·0	162·7	−27·6	152	724	
	11819	·579	314·6	157·2	+17·7	2	8	
	11822	·421	317·9	148·4	+11·5	17	44	
C	11820	·464	163·6	122·7	−33·2	63	273	
	1102g	·464	143·8	113·6	−28·5	2	6	
	11823	·740	63·9	88·7	+13·9	9	22	126*f*
	11824	·986	71·8	54·3	+16·5	25	114	142*c*
	11825	·976	106·8	52·9	−17·9	47	180	133*c*
		·920	113·5					772
		·958	127·3					89
Feb. 16			(−17·6)	(131·7)	(− 6·9)	(319)	(1381)	(2026)
47·592		·966	250·2					329
		·945	297·0					92
	11815	·745	239·6	162·2	−26·9	92	466	284*p*
	11819	·756	301·2	159·0	+18·0	6	20	118*c*
	11822	·620	297·8	150·1	+11·1	11	39	
	11820	·453	190·4	121·9	−33·2	46	273	
G	11823	·575	54·5	87·7	+13·4	5	17	
	11824	·924	68·6	52·5	+16·7	28	129	454*n*
	11825	·897	106·1	51·9	−17·5	35	186	319*sf*
		·808	114·4					476
		·934	119·0					331
		·973	74·2					232
Feb. 17			(−18·0)	(116·3)	(− 6·9)	(223)	(1130)	(2635)
1936.			°	°	°			
48·432		·977	294·4					97
		·864	294·7					176
	11815	·854	242·1	163·2	−27·4	104	416	812*c*
	11822	·748	291·1	150·3	+10·7	8	28	
	11820	·506	207·1	121·2	−33·4	51	302	
	11823	·450	34·7	89·9	+14·9	8	49	
	1102h	·493	140·1	84·2	−28·7	2	5	
C	11824	·843	64·9	52·5	+16·7	29	227	125*c*
	11825	·798	106·5	52·1	−17·3	35	206	217*f*
		·752	119·1					319
		·849	136·3					109
		·884	121·1					423
		·936	71·1					358
Feb. 18			(−18·3)	(105·2)	(− 7·0)	(237)	(1233)	(2636)
49·438		·951	290·5					168
		·883	249·8					144
		·859	233·5					520
	11815	·943	244·0	163·5	−26·8	64	344	567*c*
	11822	·875	286·4	150·5	+10·7	8	33	97*nf*
	11820	·608	221·0	120·4	−33·4	43	272	
	11823	·370	6·2	89·6	+14·5	8	33	
C	11825	·643	108·4	52·5	−17·2	30	194	
	11824	·720	58·8	52·2	+16·5	43	235	
		·754	123·2					125
		·812	66·4					277
		·852	110·4					124
		·884	124·0					129
		·931	66·6					297
Feb. 19			(−18·6)	(92·0)	(− 7·0)	(196)	(1111)	(2448)
50·385		·976	256·3					58
		·916	237·5					952
	11815	·992	244·2	164·6	−26·4	35	132	492*c*
	11822	·957	283·7	150·5	+10·9	12	26	235*f*
	11820	·715	229·3	119·7	−33·1	55	286	
	11823	·396	332·5	90·3	+13·6	7	18	
	11826	·390	10·0	75·5	+15·5	5	14	
G	11825	·477	113·7	52·4	−17·3	25	159	
	11824	·587	49·0	52·1	+16·4	41	206	
	11827	·967	111·9	2·7	−23·0	17	68	247*f*
		·855	62·9					523
		·913	124·0					159
		·953	102·9					184
		·971	129·7					269
Feb. 20			(−18·9)	(79·5)	(− 7·0)	(197)	(909)	(3119)

Group 11823. Feb. 15–25. A small spot usually preceded by one or two companions.
Group 11824. Feb. 16–28. A group of stream type in which the preceding part develops only to a small extent.
Group 11825. Feb. 16–28. A stable regular spot, with one or two tiny companions on Feb. 22–23.
Group 11826. Feb. 20–21. On Feb. 20, a close pair of small spots: a wide pair on Feb. 21.
Group 11827. Feb. 20–27. A small regular spot diminishing; another spot appears *f* on Feb. 25.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
51·409		·984	283·0					115
		·965	235·5					474
		·959	248·2					183
	1102i	·929	288·0	131·2	+13·8	5	23	54*f*
	11820	·825	234·0	118·9	−33·4	67	307	547*c*
	11823	·514	311·1	89·3	+13·2	2	8	
	11826	·394	340·6	73·7	+14·7	6	19	
	1102j	·534	10·8	59·7	+24·4	1	2	
C	11828	·354	147·0	53·9	−24·1	0	2	
	11825	·291	129·8	52·5	−17·6	27	179	
	11824	·465	31·6	51·4	+16·3	39	277	
	11829	·512	148·4	47·5	−32·5	22	40	
	11830	·809	123·8	14·4	−31·2	52	142	133*c*
	11827	·891	112·4	2·6	−23·1	19	73	343*f*
	11831	·984	98·4	345·5	− 9·6	22	115	418*p*
		·902	130·5					156
		·970	130·2					374
Feb. 21			(−19·2)	(66·0)	(− 7·1)	(262)	(1187)	(2797)
52·432		·972	284·9					123
		·969	243·0					209
		·823	246·9					111
	11820	·911	236·5	117·6	−33·3	46	298	445*sf*
	11823	·687	293·5	92·2	+10·4	4	22	
	1102k	·296	220·7	64·3	−19·9	2	10	
	11828	·281	190·2	55·6	−23·1	2	15	
	11825	·186	175·5	51·6	−17·7	29	167	
	11824	·401	3·1	51·2	+16·4	37	212	
C	11829	·440	168·7	46·7	−32·5	43	309	
	11832	·402	29·9	40·7	+13·4	2	8	
	11830	·675	128·8	15·0	−30·6	63	343	
	11827	·769	114·3	3·1	−23·1	10	66	256*f*
	11831	·909	96·9	346·7	− 9·2	22	168	271*c*
		·827	100·9					92
		·859	132·1					173
		·917	104·1					221
		·945	131·4					291
		·979	106·4					202
Feb. 22			(−19·5)	(52·5)	(− 7·1)	(260)	(1618)	(2394)
1936.			°	°	°			
53·374		·922	248·9					189
		·848	295·8					129
		·830	222·4					150
	11820	·971	237·4	117·9	−33·3	31	269	523*sf*
	11823	·832	288·2	93·5	+10·8	5	22	93*c*
	11825	·274	225·4	51·9	−18·0	20	136	
	11824	·430	335·8	50·6	+16·0	32	179	
C	11829	·440	193·0	46·3	−32·3	27	190	
	11830	·555	137·6	14·5	−30·5	55	429	
	11827	·632	118·6	3·1	−23·3	8	51	158*f*
	11831	·794	95·6	347·2	− 8·8	41	250	154*sf*
		·784	136·2					110
		·876	125·2					170
		·899	137·2					148
		·930	106·1					193
Feb. 23			(−19·8)	(40·1)	(− 7·1)	(219)	(1526)	(2017)
54·591		·972	236·4					274
		·952	299·8					98
		·946	290·6					233
		·910	228·4					182
		·852	292·2					121
	11823	·959	283·8	95·5	+11·0	14	39	153*c*
	11825	·486	245·4	51·7	−17·9	22	145	
	11824	·585	311·6	51·1	+16·5	65	296	
G	11829	·546	218·2	47·4	−31·9	27	122	
	11832	·451	319·6	41·5	+13·2	2	7	
	11830	·434	160·6	14·5	−31·1	60	232	
	11827	·443	130·8	2·8	−23·4	5	13	
	11831	·602	94·8	346·9	− 8·6	52	327	
	11833	·952	75·0	314·3	+11·9	42	204	260*f*
		·805	136·8					267
		·819	106·2					152
		·894	136·8					219
Feb. 24			(−20·2)	(24·1)	(− 7·1)	(289)	(1385)	(1959)
55·426		·924	241·4					81
		·909	289·0					95
		·815	247·4					214
	11823	·991	284·8	93·1	+13·5	14	83	460*c*
	11825	·635	250·3	51·9	−18·0	22	140	
	11824	·692	301·8	50·6	+15·7	73	431	95*p*
	11829	·658	227·0	47·8	−32·6	15	104	
C	11832	·583	303·0	43·0	+12·2	5	26	
	11830	·416	183·0	14·6	−31·6	56	247	
	11827	·363	140·6	358·6	−23·2	4	24	
	11831	·442	94·6	346·8	− 8·5	40	290	
	11833	·880	72·3	314·4	+11·8	48	224	473*f*
		·850	136·0					163
		·979	111·5					60
Feb. 25			(−20·4)	(13·1)	(− 7·2)	(277)	(1569)	(1641)

Group 11828. Feb. 21–22. A tiny group.
Group 11829. Feb. 21–28. A stream of normal type in which the following part soon disappears.
Group 11830. Feb. 21–Mar. 2. This group commences as a stream of normal type, the following spot breaking up into a cluster by Feb. 24. Contrary to the usual course of development, the leader spot divides on Feb. 26–27 into two parts which separate in longitude.
Group 11831. Feb. 21–Mar. 1. A pair of regular spots with two or three companions.
Group 11832. Feb. 22–28. On Feb. 22, a single small spot not seen on the following day; afterwards, two or three unimportant spots.
Group 11833. Feb. 24–Mar. 6. A stable regular spot; possible return of Group 11814, but continuity not certain.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
56·456		·885	246·9					486
	11825	·788	252·8	51·6	−18·0	24	169	110c
	11824	·825	294·9	50·4	+15·8	54	386	203p
	11829	·775	233·4	46·9	−32·5	22	96	252c
	11832	·747	292·8	44·0	+11·7	16	65	
	11830	·474	209·7	15·4	−31·1	30	97	
C	11827	·289	177·9	358·8	−23·9	2	7	
	11834	·180	175·1	358·6	−17·5	2	4	
	11831	·218	96·3	346·9	− 8·4	27	188	
	11833	·751	67·3	314·6	+11·8	44	207	113f
	11835	·982	106·5	279·1	−17·5	59	300	227c
		·908	70·2					354
		·938	55·1					136
Feb. 26			(−20·7)	(359·5)	(− 7·2)	(280)	(1619)	(1881)
57·355		·946	246·8					578
		·723	301·2					152
	11825	·888	253·5	50·9	−17·9	27	183	177s
	11824	·911	291·4	49·5	+16·1	57	308	473p
	11829	·864	236·5	46·1	−32·4	17	109	362f
	11832	·857	288·5	43·6	+11·8	24	81	161n
	11830	·595	225·5	17·2	−30·9	26	122	
	11827	·347	217·5	0·9	−23·0	1	2	
C	11834	·262	225·3	358·9	−17·6	10	24	
	11831	·024	153·0	347·1	− 8·4	31	97	
	11833	·620	60·3	314·5	+11·8	34	200	
	11835	·932	105·6	278·1	−17·1	57	246 }	722sf
	11836	·969	107·2	270·7	−18·4	16	60 }	
		·779	67·9					103
		·825	58·9					93
		·908	55·8					112
		·966	64·7					61
		·978	118·9					75
Feb. 27			(−20·9)	(347·7)	(− 7·2)	(300)	(1432)	(3069)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
58·613		·980	244·5					172
		·884	296·9					325
		·881	245·8					161
		·861	310·1					204
	11825	·979	253·5	50·8	−17·6	26	115	218sf
	11824	·988	287·9	49·3	+16·3	50	208 }	633c
	11832	·966	285·0	43·7	+12·4	62	194 }	
	11829	·956	238·9	45·1	−31·7	15	66	556f
	11836	·758	235·5	17·4	−30·5	30	124	
	11834	·484	245·1	358·5	−18·1	1	5	
G	11831	·284	266·5	347·7	− 7·9	10	43	
	11833	·423	40·6	314·8	+11·7	43	177	
	11835	·791	106·8	278·8	−17·6	65	277 }	777c
	11836	·851	108·3	272·5	−19·3	17	86 }	
	11837	·930	62·9	268·1	+21·9	23	66	231c
		·779	50·1					124
		·864	60·5					184
		·905	122·8					173
		·942	53·3					403
		·967	113·9					178
Feb. 28			(−21·3)	(331·1)	(− 7·2)	(342)	(1361)	(4339)
59·340		·981	286·6					212
		·971	251·2					86
		·971	239·3					281
		·941	293·0					253
		·910	305·2					145
		·738	231·0					101
	11830	·837	237·2	16·6	−31·2	26	131	175c
C	11831	·440	266·6	347·7	− 8·0	7	54	
	11833	·346	19·0	314·9	+11·8	34	176	
	11835	·681	108·1	278·9	−17·5	43	226 }	222f
	11836	·758	109·4	272·5	−19·3	10	55 }	
	11837	·858	59·6	269·1	+21·4	31	168	152c
		·864	121·4					136
		·918	49·2					435
		·944	112·4					183
		·973	55·1					337
Feb. 29			(−21·4)	(321·5)	(− 7·2)	(151)	(810)	(2718)

Group 11834. Feb. 26–28 One or two small spots.
Group 11835. Feb. 26–Mar. 9. A stream in which the following spot is longer lived than usual.
Group 11836. Feb. 27–Mar. 5. A few unstable spots in the wake of Group 11835.
Group 11837. Feb. 28–Mar. 10. A smallish stream that is comparatively long lived.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
60·413		·969	299·7					177
		·860	236·3					276
		·848	255·9					297
		·841	226·7					117
		·779	243·9					175
	11830	·929	239·4	16·0	−31·0	37	84	284c
	11831	·630	265·7	346·6	− 8·3	7	27	
	11833	·349	338·8	314·8	+11·7	33	172	
	11838	·434	344·7	314·3	+17·5	4	9	
C	11835	·486	113·8	279·7	−17·7	41	181	
	11836	·612	110·5	270·5	−18·1	3	5	
	11837	·741	51·9	268·7	+21·6	53	216	
	11839	·952	68·9	239·0	+17·5	13	48	287sf
		·812	41·1					170
		·838	53·2					192
		·842	115·6					388
		·923	42·3					184
		·942	51·7					397
		·956	125·9					134
Mar. 1			(− 21·7)	(307·4)	(− 7·2)	(191)	(742)	(3078)
61·418		·930	256·0					200
		·929	230·2					147
		·866	243·6					292
		·812	228·8					234
		·802	258·6					368
		·778	214·8					250
	11830	·990	239·4	18·7	−31·2	21	58	435f
	11838	·538	318·8	315·9	+17·1	11	29	
	11833	·474	313·0	314·9	+12·1	34	160	
	11840	·354	341·4	300·8	+12·4	0	2	
C	11835	·315	127·0	279·0	−17·8	38	199	
	11836	·423	123·6	272·2	−20·2	0	7	
	11837	·623	41·0	268·2	+21·5	58	218	
	11839	·861	64·8	239·7	+17·4	11	43 }	324c
	11842	·922	69·4	230·7	+15·8	5	17 }	
	11841	·853	45·7	248·6	+31·6	0	8	496n
		·741	39·8					297
		·858	54·2					184
		·891	125·6					92
		·924	111·0					123
		·970	71·3					85
Mar. 2			(− 22·0)	(294·2)	(− 7·2)	(178)	(741)	(3527)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
62·602		·960	293·1					107
		·942	244·3					338
		·929	263·5					469
		·922	233·4					230
		·888	254·7					137
		·861	223·1					440
	11838	·713	302·0	317·6	+16·6	3	11	
	11833	·656	297·3	315·0	+11·7	29	137	
	11840	·505	312·5	301·0	+13·2	1	2	
	11835	·188	176·3	277·9	−17·9	30	147	
	11837	·512	19·8	267·9	+21·6	48	205	
G	11836	·352	147·1	266·6	−24·1	7	23	
	11839	·733	57·8	238·2	+17·5	23	87	227c
	11842	·795	64·1	230·9	+15·5	3	12	164c
	11843	·878	67·1	221·5	+16·1	6	17	146c
		·774	130·3					138
		·792	33·5					296
		·840	142·1					44
		·868	50·7					153
		·885	130·2					187
		·895	119·5					117
		·898	59·3					99
		·921	110·5					201
Mar. 3			(− 22·3)	(278·6)	(− 7·2)	(150)	(641)	(3493)
63·499		·980	262·5					280
		·978	254·5					258
		·925	236·0					224
		·912	245·9					120
		·905	253·9					281
		·902	225·5					417
	11838	·837	295·3	318·7	+16·6	4	12 }	508f
	11833	·785	290·9	315·0	+11·5	32	138 }	
	11844	·739	313·0	303·0	+24·5	1	7	
	11835	·263	227·1	278·3	−17·3	40	193	
G	11836	·266	202·7	273·0	−21·3	6	40	
	11837	·483	359·1	267·2	+21·5	52	152	
	11841	·714	23·6	246·6	+34·0	3	6	
	11839	·608	48·3	238·4	+17·5	34	117	
	11843	·749	61·4	223·8	+15·8	2	7	196f
		·780	112·7					158
		·811	135·8					178
		·898	184·1					54
		·902	110·6					443
		·953	180·5					54
Mar. 4			(− 22·5)	(266·7)	(− 7·2)	(174)	(672)	(3171)

Group 11838. Mar. 1–5. A single small spot.
Group 11839. Mar. 1–10. A small stream of normal type.
Group 11840. Mar. 2–3. A small spot.
Group 11841. Mar. 2–12. A stream in which the following component is the largest and longest lived. This group appears in a region already marked by extensive faculæ.
Group 11842. Mar. 2–5. A tiny spot following Group 11839.
Group 11843. Mar. 3–5. One or two small spots.
Group 11844. Mar. 4–5. One or two very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
64·458		·968	255·3					108
		·948	226·0					239
		·935	237·6					76
		·873	217·3					112
		·790	291·5					232
	11838	·933	290·7	319·3	+16·3	3	10	
	11833	·897	286·5	315·2	+11·3	20	131	307c
	1103a	·881	294·9	311·0	+17·9	2	7	
	11844	·844	303·3	304·0	+23·0	4	8	88c
	11835	·430	241·9	277·5	−18·2	26	97	
G	11836	·408	230·6	273·9	−21·8	2	6	
	11837	·518	336·5	266·8	+21·2	24	80	
	11845	·425	344·9	260·7	+16·9	4	10	
	11841	·660	11·5	245·1	+33·0	22	71	
	11839	·489	32·5	238·2	+17·3	24	71	
	11842	·547	45·1	230·4	+16·1	1	4	
	11843	·648	53·9	221·2	+16·4	3	8	
		·858	108·7					196
		·907	57·6					156
		·974	115·1					104
Mar. 5			(−22·7)	(254·1)	(− 7·2)	(135)	(503)	(1618)
65·407		·977	225·7					228
		·912	299·1					200
		·902	219·4					156
		·843	309·1					138
	11833	·969	283·6	315·1	+11·2	26	123	473nf
	11835	·592	248·5	276·9	−18·4	20	82	
G	11845	·562	315·4	265·9	+17·0	5	28	
	11837	·598	320·7	265·4	+20·9	13	51	
	11841	·645	356·1	244·6	+32·7	95	464	
	11839	·425	7·8	238·1	+17·6	16	51	
	11846	·967	112·9	165·0	−23·9	29	93	334c
		·877	113·5					227
		·923	59·8					222
		·977	121·1					193
Mar. 6			(−22·9)	(241·6)	(− 7·2)	(204)	(892)	(2171)
1936.			°	°	°			
66·376		·965	284·7					352
		·959	296·5					146
		·918	304·1					115
		·823	303·9					106
	11835	·739	251·7	276·3	−18·4	12	55	87c
	11837	·723	308·3	266·0	+20·9	6	29	
	11845	·696	304·5	265·6	+17·5	31	139	
G	11847	·610	311·5	257·3	+17·5	3	13	
	11848	·444	234·5	251·6	−21·5	26	77	
	11841	·680	340·7	244·3	+32·9	97	492	
	11839	·436	337·6	238·7	+16·6	13	32	
	11846	·898	113·1	164·4	−23·9	29	149	942f
		·971	75·5					68
Mar. 7			(−23·1)	(228·8)	(− 7·2)	(217)	(986)	(1816)
67·367		·864	315·4					122
	11835	·857	252·2	275·2	−18·9	4	18	246c
	11837	·840	300·9	266·2	+21·0	4	28	196c
	11845	·816	297·3	265·0	+17·3	47	206	
	11847	·750	301·5	257·8	+17·8	4	19	
	11848	·601	242·5	250·7	−22·0	70	394	
C	11841	·743	327·7	243·8	+32·5	91	611	
	11839	·552	315·7	239·4	+16·6	5	18	
	11846	·798	114·6	163·5	−23·9	32	152	422c
	11849	·984	110·3	134·4	−21·2	0	16	156p
		·949	124·2					416
Mar. 8			(−23·3)	(215·8)	(− 7·2)	(257)	(1462)	(1558)
68·389		·943	296·5					213
		·928	305·7					277
		·890	258·5					111
		·858	241·7					165
	11835	·948	253·0	274·8	−18·4	3	12	395c
	11845	·917	292·4	264·7	+17·2	55	226	176c
	11847	·854	296·5	255·6	+18·1	4	8	64c
	11848	·750	247·3	250·2	−21·7	82	449	
C	11841	·825	318·5	242·7	+32·8	57	480	359c
	11839	·701	303·8	239·7	+17·2	7	16	
	11850	·555	38·3	181·1	+19·0	14	33	
	11846	·654	118·3	163·5	−23·7	28	151	276c
	11849	·941	111·0	131·1	−22·1	6	12	165p
		·915	117·1					91
		·916	125·6					312
		·922	69·9					109
Mar. 9			(−23·5)	(202·3)	(− 7·2)	(256)	(1387)	(2713)

Group 11845. Mar. 5–10. A small stream.
Group 11846. Mar. 6–18. Return of Group 11815. A stable regular spot followed by extensive faculæ in which a small companion spot is seen on Mar. 8, 9, 13 and 14. Two small attendants appear in front of the leader spot on Mar. 15 and 16.
Group 11847. Mar. 7–9. A diminutive group following Group 11845.
Group 11848. Mar. 7–12. A stream of normal type.
Group 11849. Mar. 8–11. A small but definite spot.
Group 11850. Mar. 9–15. A regular spot followed by a small cluster which has disappeared by Mar. 12.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
69·389		·977	256·8					161
		·971	302·0					180
		·954	244·9					415
	11837	·992	293·1	268·1	+21·7	15	57	140*nf*
	11845	·985	288·6	266·1	+16·8	37	208	372*f*
	11848	·875	249·1	250·5	−21·7	137	654	286*c*
	11841	·900	311·6	241·9	+32·5	75	502	561*c*
	11839	·828	296·3	239·8	+17·0	4	12	343*f*
G	*1103b*	·339	168·9	184·9	−26·6	1	4	
	11850	·452	11·9	183·5	+19·0	30	138	
	11846	·497	127·0	163·5	−23·9	31	140	
	11849	·852	111·9	130·5	−22·4	4	10	220*p*
	11851	·968	110·8	112·1	−21·9	8	35	302*f*
	11852	·988	121·4	105·7	−32·0	68	238	448*c*
		·824	61·7					81
		·842	127·6					557
Mar. 10			(−23·7)	(189·1)	(− 7·2)	(410)	(1998)	(4066)
70·409		·953	313·9					156
		·898	294·3					308
	11848	·953	249·3	249·2	−21·8	84	850	427*c*
	11841	·958	306·7	240·6	+32·1	103	389	319*c*
	11853	·225	227·5	185·6	−15·8	1	3	
	11850	·474	342·3	184·5	+19·6	29	133	
	11854	·524	7·9	171·2	+24·0	4	11	
C	11846	·351	145·5	163·2	−23·8	26	155	
	11849	·718	114·5	130·9	−22·5	3	12	
	11851	·895	110·6	111·7	−21·6	12	47	343*c*
	11852	·927	120·9	107·4	−31·3	78	341	452*c*
		·831	130·7					228
		·951	131·4					136
		·966	75·3					76
Mar. 11			(−23·9)	(175·7)	(− 7·2)	(340)	(1941)	(2445)
71·369		·952	289·0					213
		·910	252·1					101
	11848	·989	247·7	246·5	−23·0	70	415	194*c*
	11841	·991	303·9	239·1	+32·1	47	199	135*f*
	1103c	·667	330·3	185·1	+28·6	3	5	
	11850	·566	321·9	184·8	+19·6	18	95	
C	11854	·536	345·4	171·6	+24·0	2	11	
	11846	·290	179·1	162·8	−24·0	27	149	
	11851	·804	111·3	109·8	−21·3	10	41	154*c*
	11852	·843	121·7	107·1	−30·4	90	487	303*c*
		·886	134·7					119
		·932	71·9					203
		·957	109·4					54
Mar. 12			(−24·1)	(163·1)	(− 7·2)	(267)	(1402)	(1476)
1936.			°	°	°			
72·397		·826	247·3					216
	11850	·685	308·5	184·0	+19·3	16	96	
	11846	·355	213·9	162·0	−24·1	32	164	
	11851	·662	114·0	109·3	−21·1	17	55	
	11852	·715	126·3	107·8	−30·5	100	603	241*f*
C	11855	·900	69·2	89·1	+15·1	2	13	253*c*
		·775	65·0					126
		·806	115·5					68
		·881	128·8					302
		·968	110·5					270
Mar. 13			(−24·3)	(149·5)	(− 7·2)	(167)	(931)	(1476)
73·422		·924	247·7					241
		·805	302·7					157
	11853	·771	255·3	186·6	−15·9	3	7	
	11850	·804	300·2	183·1	+19·0	17	26	
	11854	·709	304·7	169·3	+23·8	3	9	
	11846	·503	233·0	162·0	−24·0	23	160	
G	11851	·459	123·4	111·8	−21·2	14	40	
	11852	·588	134·2	106·8	−30·5	97	490	
	11855	·782	64·3	89·4	+14·9	18	85	
		·777	64·9					153
		·917	131·2					87
		·934	113·0					410
		·963	69·7					362
Mar. 14			(−24·4)	(136·0)	(− 7·2)	(175)	(817)	(1410)
74·402		·971	248·0					78
		·939	303·4					62
		·889	253·9					104
		·809	306·5					154
	11850	·902	295·0	182·6	+18·8	2	5	255*c*
	11846	·654	240·8	161·7	−24·2	38	173	
	11851	·303	144·4	112·2	−21·2	9	26	
	11852	·474	147·9	106·2	−30·4	78	445	
C	11855	·645	56·2	89·5	+15·1	35	122	
	1103d	·821	106·9	67·7	−17·9	0	3	398*s*
	11856	·872	66·4	66·8	+16·6	0	8	308*n*
		·859	135·8					186
		·926	110·5					447
		·958	76·4					201
		·966	97·1					101
		·972	68·4					213
Mar. 15			(−24·6)	(123·1)	(− 7·1)	(162)	(782)	(2507)

Group 11851. Mar. 10–17. A group of small unstable spots.
Group 11852. Mar. 10–23. A stream of normal type. The leader spot develops somewhat irregularly; the follower is exceptionally long lived.
Group 11853. Mar. 11–14. A small spot not seen on Mar. 12 and 13.
Group 11854. Mar. 11–14. A few very small spots.
Group 11855. Mar. 13–18. A short-lived group that commences with quite definite spots, becoming small nebulous markings after Mar. 15.
Group 11856. Mar. 15–25. Intermittent. A single spot not seen on Mar. 18, 19, 20 and 23.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
75·500		·974	254·6					104
		·966	292·6					201
		·922	299·1					141
		·911	244·2					185
		·857	254·2					127
		·755	232·0					167
	11846	·805	245·6	161·6	−23·8	37	177	936*c*
G	11851	·252	193·8	112·3	−21·2	4	16	
	11852	·396	176·9	107·2	−30·3	87	451	
	11855	·487	39·5	89·9	+15·2	28	114	
	11856	·755	60·0	65·6	+17·0	3	18	262*c*
		·751	123·1					116
		·832	108·8					248
		·880	94·9					172
		·901	119·9					246
		·903	69·8					316
Mar. 16			(−24·8)	(108·6)	(− 7·1)	(159)	(776)	(3221)
76·494		·969	297·3					131
		·936	254·9					154
	11846	·907	246·9	161·2	−24·0	28	169	640*f*
	11857	·871	252·1	156·5	−19·0	9	24	96*f*
	11851	·364	227·3	112·1	−21·0	1	2	
	11852	·433	202·5	106·5	−30·5	80	417	
	11855	·376	13·3	90·4	+14·3	12	63	
G	*1103e*	·808	27·9	66·3	+39·3	2	3	
	11856	·632	50·8	64·7	+17·4	3	6	
		·744	62·3					231
		·798	122·7					347
		·845	68·3					147
		·931	121·2					342
		·951	65·7					246
Mar. 17			(−24·9)	(95·5)	(− 7·1)	(135)	(684)	(2334)
77·436		·823	229·4					329
		·748	217·8					116
	11846	·969	246·8	160·3	−24·1	40	149	697*sf*
	11857	·947	252·2	155·4	−19·1	14	40	225*f*
	11852	·522	218·8	105·3	−30·5	81	435	
	11858	·365	239·8	102·3	−17·2	66	206	
	11855	·404	345·7	89·0	+15·9	5	19	
G	11859	·328	180·1	83·2	−26·2	4	10	
	11860	·549	94·2	49·7	− 8·2	7	22	
		·875	128·7					136
		·879	116·2					217
		·903	61·0					329
		·945	102·8					226
		·968	122·4					237
Mar. 18			(−25·0)	(83·1)	(− 7·1)	(217)	(881)	(2512)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
78·523		·987	251·4					200
		·976	242·3					288
		·905	247·9					210
		·901	236·5					340
		·888	329·4					107
		·856	227·8					223
	11852	·670	231·0	105·8	−30·5	64	385	
	11858	·555	248·6	101·5	−17·6	77	402	
	11859	·399	205·1	79·8	−28·0	26	108	
	11860	·322	96·0	50·0	− 8·5	30	86	
G	11861	·803	119·2	16·8	−27·5	3	15	77*c*
	11862	·988	104·3	346·6	−15·1	13	63 }	277*c*
	11863	·992	107·0	344·3	−17·7	42	187 }	
		·802	129·3					147
		·815	51·9					171
		·837	106·9					191
		·926	122·7					284
		·927	110·2					263
		·929	55·2					222
		·953	98·6					126
		·981	133·0					83
Mar. 19			(−25·2)	(68·8)	(− 7·0)	(255)	(1246)	(3209)
79·601		·958	236·7					418
		·900	227·3					177
		·865	228·1					170
	11852	·792	235·9	104·2	−31·0	59	348	235*c*
	11858	·732	252·2	101·3	−17·7	76	370	
	11864	·675	297·0	92·3	+12·3	18	63	
	11859	·537	225·9	80·3	−28·2	68	359	
G	11860	·077	111·9	50·4	− 8·6	15	61	
	1103f	·335	18·9	48·2	+11·4	2	7	
	11861	·656	124·5	17·1	−27·4	3	6	
	11862	·920	103·6	346·8	−15·2	16	39 }	515*c*
	11863	·943	105·7	343·0	−17·1	58	376 }	
		·793	125·1					244
		·819	48·9					106
		·902	96·3					126
		·916	124·7					272
Mar. 20			(−25·3)	(54·5)	(− 7·0)	(315)	(1629)	(2263)

Group 11857. Mar. 17–18. A small spot.
Group 11858. Mar. 18–22. A stream which suddenly develops into one of normal type.
Group 11859. Mar. 18–24. A stream in which the leader spot greatly predominates.
Group 11860. Mar. 18–25. A stream of feeble development.
Group 11861. Mar. 19–20. A pair of tiny spots on Mar. 19; a single spot on the following day.
Group 11862. Mar. 19–29. A single spot.
Group 11863. Mar. 19-April 1. A regular spot followed by unstable companions. On Mar. 28, the spot is elongated and afterwards breaks up into three portions.
Group 11864. Mar. 20–23. A small stream.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
80·451		·973	322·0					104
		·944	229·6					225
		·927	248·3					190
		·898	289·6					150
		·800	229·0					183
		·788	302·9					108
	11852	·877	238·4	103·6	−30·9	53	326	358*c*
	11858	·845	253·3	101·3	−17·8	38	263	173*c*
	11864	·801	291·2	93·0	+12·4	36	161	106*c*
G	11859	·655	234·0	80·1	−28·2	109	517	
	11856	·562	319·0	66·1	+18·6	5	8	
	11860	·131	259·6	50·7	− 8·3	39	116	
	11862	·833	103·1	346·5	−14·8	12	51 }	552*c*
	11863	·871	105·8	342·2	−17·2	77	455 }	
		·834	95·0					130
		·893	120·0					97
		·897	135·5					74
		·943	127·6					138
Mar. 21			(−25·4)	(43·3)	(− 7·0)	(369)	(1897)	(2588)
81·475		·974	285·9					135
		·895	294·7					110
		·879	232·5					120
	11852	·956	239·9	103·7	−30·7	53	420	343*c*
	11858	·945	253·3	101·7	−18·0	46	138	374*c*
	11864	·920	287·1	94·0	+12·7	34	152	317*c*
	11859	·799	240·1	81·2	−27·8	88	456	126*c*
	11856	·709	306·1	67·0	+19·1	3	19	
	11860	·362	265·0	51·1	− 8·2	33	155	
G	11862	·685	103·9	346·6	−14·5	9	51	
	11863	·735	107·5	342·7	−17·5	63	328	
	11865	·946	117·9	318·0	−28·6	3	6	103*f*
		·838	130·7					131
		·841	128·3					146
		·893	102·7					78
		·950	65·5					139
		·951	134·9					195
		·965	76·5					312
Mar. 22			(−25·5)	(29·8)	(− 6·9)	(332)	(1725)	(2629)
1936.			°	°	°			
82·408		·984	252·4					334
		·965	292·0					158
		·832	296·0					229
	11852	·973	238·6	95·8	−32·1	38	141	320*c*
	11864	·980	284·6	93·7	+12·8	20	103	355*c*
	11859	·908	242·0	82·7	−28·2	75	315	347*c*
	11860	·559	265·4	51·6	− 8·3	37	103	
G	11862	·523	106·5	346·4	−14·5	8	41	
	11863	·578	111·7	343·3	−18·0	48	260	
	11865	·882	119·4	316·2	−29·1	4	14	114*c*
		·868	63·6					155
		·914	135·8					270
		·934	73·1					207
		·961	64·8					242
Mar. 23			(−25·6)	(17·5)	(− 6·9)	(230)	(977)	(2731)
83·389		·959	275·7					77
		·956	230·9					150
		·860	246·2					194
	11859	·977	242·8	84·1	−28·0	49	368	429*f*
	11866	·926	288·7	69·2	+14·4	9	26	144*p*
	11856	·927	295·3	67·7	+20·3	5	15	324*f*
	11860	·736	264·9	52·2	− 8·5	11	32	
G	11862	·328	114·7	346·8	−14·4	12	40	
	11863	·389	123·5	344·6	−18·8	36	232	
		·869	73·1					56
		·884	62·3					306
		·891	135·7					206
		·950	68·7					193
		·975	111·6					221
Mar. 24			(−25·7)	(4·6)	(− 6·9)	(122)	(713)	(2300)
84·401		·976	241·8					328
		·947	227·0					116
		·920	249·1					499
		·915	296·1					132
		·903	285·6					184
		·825	238·4					165
		·811	290·2					118
		·787	251·8					164
	11856	·988	291·7	68·8	+20·1	0	13	281*f*
	11866	·984	285·7	68·5	+14·0	5	25	180*n*
C	11860	·840	264·6	48·7	− 8·2	2	4	482*p*
	11862	·157	151·2	346·7	−14·7	9	39	
	11863	·240	150·6	344·1	−18·8	41	232	
	11865	·643	128·0	316·0	−28·9	6	17	
	1104a	·751	57·4	309·4	+18·8	2	14	376*f*
	11867	·902	111·4	286·4	−22·2	6	20	214*c*
		·858	137·8					166
		·890	62·2					129
		·937	102·8					151
		·948	112·5					291
Mar. 25			(−25·8)	(351·2)	(− 6·8)	(71)	(364)	(3976)

Group 11865. Mar. 22–26. One or two tiny spots not seen on Mar. 24.
Group 11866. Mar. 24–25. A very small spot.
Group 11867. Mar. 25–April 5. A stream that lengthens considerably. The follower becomes the largest component, but after a brief maximum it breaks up and dies out as a cluster of tiny spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
85·345		·948	263·9					372
		·943	253·3					364
		·940	288·8					202
		·904	241·0					268
		·807	300·2					197
	11862	·197	222·7	346·7	−15·0	7	22	
	11863	·211	197·7	342·7	−18·4	43	248	
	11865	·541	136·7	313·7	−29·3	4	12	
	1104b	·778	38·3	304·3	+31·9	3	17	
C	11867	·827	115·4	283·7	−24·7	51	364	270*c*
	11868	·969	103·5	262·2	−14·7	21	52	255*n*
	11869	·994	110·5	253·3	−21·0	40	189	257*p*
		·783	99·7					77
		·790	54·5					208
		·830	140·1					134
		·893	101·1					130
		·933	111·5					206
		·950	66·5					321
Mar. 26			(−25·9)	(338·8)	(− 6·8)	(169)	(904)	(3261)
86·375		·959	240·5					251
		·959	252·4					174
		·919	295·1					307
		·837	310·4					117
	11862	·388	246·8	346·8	−15·0	4	11	
	11863	·358	234·3	343·0	−18·4	58	302	
	11870	·135	202·0	328·2	13·9	4	13	
G	11871	·730	16·4	310·1	+37·8	3	7	
	11867	·695	119·4	283·5	−25·0	86	482	
	11868	·892	102·8	261·5	−14·4	52	181	174*c*
	11869	·978	112·3	245·8	−23·1	71	423	612*c*
		·880	114·4					138
		·883	60·8					287
		·946	121·7					108
Mar. 27			(−26·0)	(325·2)	(− 6·7)	(278)	(1419)	(2168)
87·376		·970	240·3					113
		·962	293·7					200
		·839	253·4					121
	11862	·580	253·3	347·0	−15·1	5	10	
	11863	·545	246·4	343·6	−18·3	61	293	
	11870	·321	244·9	329·4	−14·2	21	71	
G	11867	·536	127·7	284·2	−25·0	88	490	
	1104c	·535	120·9	282·5	−21·8	1	5	
	11868	·757	103·7	262·7	−14·8	48	240	277*f*
	11869	·914	112·5	245·5	−23·3	89	491	793*c*
		·897	56·3					174
		·934	69·7					153
Mar. 28			(−26·1)	(312·0)	(− 6·7)	(313)	(1600)	(1831)
1936.			°	°	°			
88·440		·958	231·1					110
		·927	239·7					99
		·920	255·3					271
	11862	·748	255·3	346·4	−15·4	3	18	
	11863	·718	250·9	343·4	−18·2	28	245	
	11870	·540	252·7	330·1	−14·8	35	183	
C	11867	·392	145·0	283·7	−25·1	54	379	
	11868	·562	107·3	264·4	−15·1	31	192	
	11869	·812	113·7	244·4	−23·0	74	521	600*f*
		·787	45·2					235
		·889	66·2					127
		·925	49·1					238
		·966	55·5					448
Mar. 29			(−26·1)	(298·0)	(− 6·6)	(225)	(1538)	(2128)
89·457		·953	259·4					308
		·935	239·8					129
		·884	231·1					141
	11863	·855	252·6	343·6	−18·2	38	175	424*c*
	11870	·724	256·4	331·0	−14·4	44	171	
	11867	·316	181·2	285·0	−24·9	59	305	
G	11868	·355	116·0	265·4	−15·2	62	246	
	11872	·610	46·2	256·9	+19·1	6	17	
	11869	·705	116·8	241·5	−23·4	81	402	164*f*
		·858	43·2					140
		·904	50·0					348
		·951	113·0					291
Mar. 30			(−26·2)	(284·6)	(− 6·6)	(290)	(1316)	(1945)
90·423		·966	264·1					184
		·933	242·5					236
		·866	230·9					287
	11863	·948	252·9	344·2	−18·3	26	124	717*c*
	11870	·864	257·5	332·0	−14·0	24	153	337*c*
	11867	·377	215·0	285·5	−24·3	50	357	
C	11868	·172	153·7	267·3	−15·3	34	196	
	11872	·500	28·7	257·1	+19·6	33	166	
	11869	·570	122·1	240·3	−23·1	75	406	
		·765	36·1					108
		·850	44·3					485
		·906	35·5					113
Mar. 31			(−26·3)	(271·8)	(− 6·5)	(242)	(1402)	(2467)

Group 11868. Mar. 26–April 6. A stream of common type. The leader, a regular spot on Mar. 29, becomes elongated in a longitudinal direction and breaks up after April 2, the preceding portion continuing as a small regular spot.
Group 11869. Mar. 26–April 9. Return of Group 11848. A stream which extends for a considerable distance (16°) in longitude. The follower is a regular spot which survives the preceding part of the stream; its structure is unusual on April 4.
Group 11870. Mar. 27–April 2. A smallish stream in which, as usual, the leader is the longest-lived component.
Group 11871. Mar. 27–April 2. A tiny spot on Mar. 27, after which nothing is seen until April 1 when a group appears near the west limb.
Group 11872. Mar. 30–April 7. A small stream whose axis is highly inclined (about 45°) to the direction of the sun's equator.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
91·327		·924	234·3					70
		·913	225·7					260
		·894	286·5					226
		·860	298·3					198
	11863	·984	251·1	341·0	−19·7	11	25	438*f*
	11870	·958	258·1	334·0	−13·2	15	89	338*f*
	11871	·893	316·1	309·7	+36·0	15	60	96*c*
	11867	·503	231·0	285·2	−24·3	73	332	
C	11868	·221	222·7	268·8	−15·7	42	236	
	11872	·443	7·1	256·6	+19·4	35	198	
	11869	·446	132·9	239·1	−23·6	60	352	
	11873	·783	36·7	225·9	+33·4	3	3	247*f*
		·873	117·7					274
		·935	133·7					203
		·952	106·3					72
		·958	66·1					148
		·979	59·2					197
Apr. 1			(−26·3)	(259·9)	(− 6·5)	(254)	(1295)	(2767)
92·110		·952	284·7					127
		·951	229·7					248
		·893	293·1					205
		·879	237·7					82
		· 67	303·7					93
		·837	221·9					197
	11870	·981	256·2	329·4	−14·7	5	10	298*s*
	11871	·942	311·9	309·4	+35·9	23	121	150*c*
	11867	·656	239·3	287·8	−24·6	53	233	
K	11868	·369	242·3	269·4	−15·9	43	216	
	11872	·454	344·3	257·1	+19·5	23	188	
	11869	·344	149·3	238·6	−23·5	67	389	
	11874	·889	103·9	186·4	−15·2	9	27	132*s*
	11875	·962	69·7	178·7	+17·5	14	38	259*f*
		·908	128·9					190
		·943	66·5					154
		·947	57·1					357
		·962	111·7					112
Apr. 2			(−26·3)	(249·6)	(− 6·4)	(237)	(1222)	(2604)
1936.			°	°	°			
93·413		·945	298·4					156
		·924	226·4					319
	11867	·862	245·5	291·5	−24·3	23	115	518*f*
	11868	·608	252·0	269·2	−16·0	22	119	
	11872	·573	319·7	255·5	+19·9	41	219	
	11869	·307	195·6	237·5	−23·5	56	333	
	11873	·620	6·3	227·8	+31·5	3	6	
C	11874	·686	105·3	189·3	−15·1	6	9	
	11875	·826	64·4	181·5	+16·9	13	91 }	548*c*
	11876	·899	64·1	173·3	+19·9	17	70 }	
	1104d	·904	55·4	175·6	+27·5	2	7	155*n*
	11877	·967	114·2	156·0	−25·0	17	66	346*m*
		·817	133·7					89
		·840	49·8					198
		·859	110·0					146
Apr. 3			(−26·4)	(232·4)	(− 6·4)	(200)	(1035)	(2475)
94·342		·957	225·4					139
		·829	300·6					212
	11867	·945	246·9	291·7	−23·8	17	79	510*f*
	11868	·752	254·2	268·7	−16·0	25	147	267*c*
	11872	·688	308·9	254·8	+20·4	33	198	
	11869	·391	220·2	236·0	−23·4	42	299	
C	11874	·518	108·6	189·7	−15·0	2	5	
	11875	·703	58·4	181·6	+16·7	12	97 }	259*c*
	11876	·807	59·2	172·6	+20·2	22	50 }	
	11877	·907	114·6	154·9	−25·0	15	57	278*n*
		·794	122·2					142
		·838	48·3					187
		·959	120·2					292
Apr. 4			(−26·4)	(220·1)	(− 6·3)	(168)	(932)	(2286)
95·142		·944	224·9					130
		·942	245·0					642
		·911	296·4					113
		·815	313·8					111
	11867	·990	246·6	293·1	−24·0	21	58	
	11868	·865	255·4	269·7	−15·7	23	95	132*c*
	11872	·792	300·8	255·6	+19·6	18	81	276*c*
K	11869	·511	232·8	235·8	−23·6	52	244	
	11874	·440	117·9	185·5	−17·6	1	2	
	11875	·587	49·0	182·0	+17·0	16	67	
	11876	·690	52·6	174·1	+19·6	46	238	
	11877	·829	116·0	154·4	−25·0	17	63	161*c*
		·908	128·4					148
		·912	117·3					201
		·970	121·4					75
Apr. 5			(−26·4)	(209·5)	(− 6·3)	(194)	(848)	(1989)

Group 11873. April 1–7. A small single spot seen on each day except April 2, 4 and 5, in an area of general disturbance marked by bright faculæ.
Group 11874. April 2–5. A pair of small spots on April 2, one component remaining on the following days.
Group 11875. April 2–8. A small regular spot that breaks up on April 6.
Group 11876. April 3–14. A stream, complex in character, which develops immediately following Group 11875.
Group 11877. April 3–7. Return of Group 11846; third appearance. A regular spot disappearing rather suddenly after April 6.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
96·395		·886	307·7					155
		·855	248·1					193
		·853	319·0					153
	11868	·969	255·5	269·6	−15·5	16	75	145c
	11872	·914	297·8	253·7	+22·3	5	16	371c
	11869	·691	242·4	234·6	−23·3	43	234	
	11873	·761	326·2	223·5	+33·8	8	29	251c
	11878	·579	9·4	186·8	+28·6	2	5	
G	11875	·437	25·2	181·8	+17·2	10	63	
	11876	·533	35·7	173·8	+19·7	119	571	
	11877	·667	121·4	154·2	−25·1	15	60	
	11879	·975	75·8	117·8	+12·4	63	177	508c
	11880	·989	120·8	109·7	−31·3	30	131	184c
		·824	126·6					275
		·935	122·0					356
		·957	131·8					121
		·968	113·6					253
Apr. 6			(−26·4)	(193·0)	(− 6·2)	(311)	(1361)	(2965)
97·492		·982	254·3					202
		·938	312·6					144
		·933	249·2					614
		·928	239·2					149
	11872	·981	293·6	253·7	+21·7	0	6	330c
	11869	·834	246·2	234·3	−23·1	36	190	434c
	11873	·863	317·0	224·2	+34·9	2	9	196sp
	11878	·591	347·1	187·1	+29·0	0	2	
G	11875	·411	352·4	181·8	+17·8	7	17	
	11876	·446	11·9	172·9	+19·7	119	883	
	11877	·511	132·0	153·7	−25·5	5	16	
	11879	·892	72·6	118·0	+12·5	47	322	382c
	11880	·937	121·1	109·1	−31·2	18	127	399c
	11881	·984	71·5	101·5	+16·9	11	68	296c
		·915	130·8					226
		·958	109·5					212
Apr. 7			(−26·4)	(178·5)	(− 6·1)	(245)	(1640)	(3584)
1936.			°	°	°			
98·598		·941	307·1					485
		·921	237·2					222
		·899	317·0					233
	11869	·934	247·8	233·5	−22·8	28	201	651p
	11882	·844	292·2	217·8	+15·1	8	12	77c
	11875	·518	324·5	182·5	+19·1	5	10	
	11876	·460	344·2	171·6	+20·2	140	841	
G	11879	·746	67·6	119·3	+12·2	72	259	
	11880	·845	123·4	108·7	−31·1	25	140	552c
	11881	·905	67·6	103·0	+17·3	20	66	
	11883	·996	118·2	76·8	−28·6	37	133	59p
		·870	136·3					186
		·910	115·0					374
		·973	124·7					153
Apr. 8			(−26·4)	(164·0)	(− 6·0)	(335)	(1662)	(2992)
99·526		·976	305·2					202
		·946	238·5					187
		·945	312·6					202
		·831	238·2					269
	11869	·985	247·7	233·2	−23·0	25	158	266c
	11882	·934	288·6	217·9	+15·0	15	34	188c
	11876	·545	324·8	171·2	+20·7	114	928	
G	11879	·607	60·0	119·2	+12·6	51	241	
	11880	·744	127·0	108·1	−30·9	34	172	
	11881	·830	64·5	100·3	+17·2	14	42	379c
	11883	·965	117·9	75·9	−28·5	34	186	254c
		·879	117·2					233
		·940	128·2					286
		·953	61·0					109
		·967	72·4					216
Apr. 9			(−26·4)	(151·7)	(− 6·0)	(287)	(1761)	(2791)

Group 11878. April 6–7. A small short-lived group.
Group 11879. April 6–17. A stream of normal type in which the follower disappears after April 11 and the leader breaks up into a cluster between April 14 and 15.
Group 11880. April 6–19. A stable regular spot with an occasional companion.
Group 11881. April 7–15. A few small unstable spots in an extensive area of faculæ.
Group 11882. April 8–9. A small group near the west limb.
Group 11883. April 8–22. Return of Group 11859. A stable regular spot with tiny companions on April 14, 18, 19 and 20.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
100·485		·982	286·2					104
		·949	251·4					99
		·830	310·8					209
		·795	298·4					166
	11884	·861	250·7	198·4	−19·6	8	25	126*c*
	11876	·663	310·8	171·3	+20·6	132	830	
	11879	·434	44·6	120·9	+12·3	37	232	
	11880	·625	133·9	107·5	−30·7	23	138	
	11881	·701	57·4	100·9	+17·5	9	28	
G	11883	·899	118·7	75·6	−28·3	31	188	243*f*
	11885	·973	72·0	65·0	+16·0	8	43	142*c*
	11886	·980	107·3	59·5	−18·1	10	27	154*c*
		·834	66·6					171
		·901	130·3					217
		·925	163·8					122
		·938	67·8					336
		·963	113·6					212
		·969	98·0					215
Apr. 10			(−26·4)	(139·0)	(− 5·9)	(258)	(1511)	(2516)
101·424		·911	304·9					236
		·894	292·7					120
		·864	254·7					129
	11884	·934	250·1	196·2	−20·7	10	30·	183*np*
	11876	·774	302·7	170·5	+20·5	113	891	416*c*
	11879	·316	13·3	122·4	+12·1	44	233	
	11880	·516	145·6	106·9	−30·6	26	131	
	11881	·548	45·1	102·7	+17·3	4	13	
G	11883	·803	120·9	75·5	−28·0	32	183	312*f*
	1104e	·851	61·3	73·8	+20·7	0	4	266*f*
	11885	·903	68·8	65·5	+16·3	17	52	213*c*
	11886	·921	107·3	59·1	−18·2	5	25	288*f*
	11887	·972	77·9	51·8	+10·3	4	19	312*c*
		·848	111·7					105
		·928	116·4					154
		·929	97·1					330
Apr. 11			(−26·3)	(126·6)	(− 5·8)	(255)	(1581)	(3064)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.		°	°	°	°			
102·395		·990	250·3					117
		·973	291·1					119
		·973	300·9					239
		·945	253·7					136
	11876	·886	296·5	171·3	+20·2	93	741	605*c*
	11879	·344	332·2	123·2	+12·0	38	207	
	11880	·438	164·8	106·2	−30·5	24	136	
	11881	·447	33·0	99·2	+16·4	7	31	
G	11883	·688	125·5	74·6	−27·9	40	197	
	11885	·799	64·9	65·2	+16·0	19	101	152*c*
	11886	·827	108·3	58·2	−18·3	8	24	188*f*
	11887	·887	75·3	53·4	+10·2	30	76	244*c*
		·790	54·3					227
		·797	139·3					92
		·827	95·6					197
		·873	117·2					137
Apr. 12			(−26·3)	(113·8)	(− 5·7)	(259)	(1513)	(2453)
103·357		·965	230·6					49
		·910	249·3					150
		·776	245·6					189
	11876	·957	294·0	170·3	+21·0	81	338	803*c*
	11879	·479	308·8	123·5	+12·1	42	213	
	11880	·433	188·9	105·6	−30·9	29	133	
C	11881	·380	2·6	100·1	+16·5	11	33	
	11883	·559	134·8	74·5	−28·2	31	175	
	11885	·666	57·8	65·3	+16·1	13	58	
	11886	·695	110·4	58·0	−18·2	6	10	
	11887	·762	70·8	54·2	+10·6	36	155	180*c*
		·828	113·2					135
Apr. 13			(−26·2)	(101·1)	(− 5·7)	(249)	(1115)	(1506)
104·372		·958	252·2					200
		·952	240·6					72
		·894	249·6					361
		·843	240·0					247
		·811	227·8					99
	11876	·983	293·4	163·7	+21·7	5	24	300*c*
	11879	·649	296·2	124·1	+12·1	38	213	
	11880	·499	210·4	104·7	−30·8	26	149	
	11881	·459	341·4	96·6	+20·1	2	11	
G	11883	·441	152·4	74·3	−28·4	30	186	
	11885	·518	44·4	65·6	+16·4	12	51	
	11886	·559	116·4	55·8	−19·1	12	26	
	11887	·611	62·8	54·2	+11·5	57	294	
		·828	124·2					119
		·843	141·0					78
		·893	68·0					128
		·952	59·4					163
		·963	122·6					102
		·967	103·8					224
Apr. 14			(−26·2)	(87·7)	(− 5·6)	(182)	(954)	(2093)

Group 11884. April 10–11. A pair of spots of which the follower remains on April 11.
Group 11885. April 10–19. A small stream that is relatively long-lived for its size.
Group 11886. April 10–22. A small spot with a companion on April 14. The group is not seen on April 18–21.
Group 11887. April 11–19. A stream of unstable spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
105·420		·971	249·4					184
		·920	238·1					199
		·911	246·3					216
		·901	228·9					166
	11879	·793	289·7	123·4	+11·9	28	100	307*c*
	11880	·619	224·5	104·1	−30·9	19	125	
	11881	·570	309·2	101·2	+16·1	4	17	
	11883	·392	180·1	74·0	−28·5	29	144	
G	11885	·399	19·9	65·8	+16·5	12	29	
	11886	·369	129·3	56·4	−18·7	15	26	
	11887	·417	47·6	55·7	+11·1	49	150	
	11888	·990	108·7	351·0	−19·3	48	199	85*c*
		·893	104·4					273
		·895	56·5					162
		·910	122·9					67
		·945	64·1					130
Apr. 15			(−26·1)	(73·9)	(− 5·5)	(204)	(790)	(1789)
106·604		·976	243·1					178
		·968	233·3					123
		·773	294·5					334
	11879	·923	285·5	123·4	+12·0	23	67	500*c*
	11880	·760	233·3	103·2	−30·8	19	139	134*sp*
	11883	·454	209·7	73·0	−28·4	26	154	
	11885	·406	339·9	66·6	+17·0	10	40	
G	11887	·286	356·3	59·3	+11·1	20	101	
	11886	·236	166·3	54·8	−18·5	9	19	
	11889	·837	60·7	7·0	+20·8	2	4	131*np*
	11888	·930	109·1	349·5	−19·7	80	356	473*c*
	11890	·973	103·5	340·9	−14·4	30	115 }	126*c*
	11891	·977	100·6	340·0	−11·5	21	108 }	
		·835	108·1					122
Apr. 16			(−26·1)	(58·2)	(− 5·4)	(240)	(1103)	(2121)
1936.			°	°	°			
107·390		·948	253·2					87
		·927	241·4					214
		·923	229·4					255
		·846	293·0					628
	11879	·983	283·0	125·7	+11·7	11	85	567*f*
	11880	·845	236·5	102·9	−30·9	27	146	308*f*
	11883	·545	223·0	72·8	−28·3	24	139	
	11885	·495	320·4	67·1	+17·2	8	14	
G	11892	·371	228·0	64·8	−19·4	7	24	
	11887	·346	324·0	59·8	+11·0	10	67	
	11886	·265	213·4	56·7	−18·1	5	9	
	11889	·753	55·0	6·5	+21·5	0	3	
	11888	·850	109·8	350·0	−19·6	65	388	243*c*
	11890	·920	102·9	340·6	−13·9	23	125 }	876*c*
	11891	·928	99·7	339·5	−11·0	32	200 }	
		·922	122·0					150
		·963	111·6					165
Apr. 17			(−26·0)	(47·9)	(− 5·4)	(212)	(1200)	(3493)
108·446		·974	245·5					391
		·971	232·5					230
		·946	288·7					684
		·890	249·7					184
		·886	226·3					164
		·808	297·3					136
	11880	·936	238·9	102·7	−30·9	15	141 }	269*c*
	11893	·895	242·1	96·5	−27·3	10	32 }	
G	11883	·665	232·6	70·5	−28·0	20	121	
	11885	·639	305·7	66·7	+17·4	5	7	
	11892	·555	242·6	65·2	−19·3	10	31	
	11887	·528	300·2	61·4	+10·6	11	42	
	11888	·706	112·3	350·3	−19·4	62	332	130*f*
	11890	·803	103·7	340·6	−14·1	30	129 }	802*c*
	11891	·809	99·7	339·8	−11·0	52	232 }	
		·910	111·2					214
		·915	121·5					144
Apr. 18			(−25·9)	(33·9)	(− 5·3)	(215)	(1067)	(3348)

Group 11888. April 15–27. A stream of simple formation, consisting of a large regular spot, with a relatively small follower 10° distant in longitude.
Group 11889. April 16–17. A tiny spot.
Group 11890. April 16–28. A small but stable regular spot south of Group 11891.
Group 11891. April 16–27. An active stream in which the components are in continual change.
Group 11892. April 17–19. A small ephemeral stream.
Group 11893. April 18–19. A group forming near the west limb.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
109·391		·959	291·0					254
		·955	249·8					143
		·941	226·8					158
		·819	225·0					97
	11880	·984	239·6	102·2	−30·8	19	88	205*c*
	11893	·968	243·3	97·4	−27·1	31	115	190*c*
	11883	·774	237·9	69·1	−27·8	33	158	83*c*
	11892	·728	247·7	66·9	−19·6	3	10	
G	11885	·766	298·4	66·2	+17·7	2	7	334*p*
	11887	·678	291·8	61·1	+10·5	7	28	
	11888	·540	118·0	351·2	−19·1	64	280	
	11890	·660	105·4	340·6	−14·0	24	112 }	126*f*
	11891	·686	100·9	338·2	−11·2	83	444 }	
		·796	114·0					203
		·817	125·2					116
		·935	67·7					235
		·944	130·6					176
Apr. 19			(−25·8)	(21·4)	(− 5·2)	(266)	(1242)	(2320)
110·736		·946	261·7					378
		·932	294·3					415
		·901	228·6					231
		·885	251·9					140
		·852	284·9					312
	11883	·918	240·7	69·6	−28·9	32	119	382*c*
	1104f	·637	238·9	40·0	−23·3	3	6	
	11888	·308	142·2	352·2	−19·0	63	292	
	11890	·418	113·0	340·4	−14·1	18	88	
G	11891	·413	106·3	340·0	−11·3	83	322	
	11894	·574	111·9	330·1	−16·6	5	11	
	11895	·945	75·4	294·7	+12·0	10	27	171*c*
		·813	62·7					173
		·894	132·2					351
		·938	62·9					146
		·939	49·9					39
		·948	70·5					228
		·967	109·7					131
		·969	117·6					171
Apr. 20			(−25·7)	(3·7)	(− 5·1)	(214)	(865)	(3268)
1936.			°	°	°			
111·365		·966	292·1					312
		·924	233·8					135
		·911	223·5					162
		·891	260·2					209
		·885	285·0					443
	11883	·961	241·5	69·5	−28·7	23	124	489*np*
	11888	·251	166·2	351·8	−19·0	66	273	
C	11891	·276	113·2	340·5	−11·1	72	428	
	11890	·302	122·2	340·2	−14·1	20	93	
	11894	·470	117·3	329·6	−16·9	7	35	
	11895	·902	74·1	293·1	+12·0	2	10	298*n*
		·840	135·0					201
		·877	58·6					124
		·927	114·0					532
		·952	136·4					169
Apr. 21			(−25·6)	(355·4)	(− 5·0)	(190)	(963)	(3074)
112·348		·955	283·3					448
		·861	240·3					84
	11883	·998	241·2	70·9	−29·0	15	66	120*sf*
	1105a	·977	244·9	61·0	−25·6	21	83	298*c*
	11886	·945	249·1	53·5	−21·3	11	48	206*c*
	11888	·293	214·9	352·5	−18·7	47	241	
	11891	·116	167·5	340·9	−11·4	47	315	
G	11890	·163	166·5	340·2	−13·9	18	87	
	11894	·290	133·3	329·8	−16·2	2	9	
		·794	65·0					148
		·840	109·4					166
		·845	121·7					231
		·915	137·7					208
		·930	105·2					116
		·939	117·5					145
Apr. 22			(−25·5)	(342·4)	(− 4·9)	(161)	(849)	(2170)
113·406		·898	235·6					102
	11896	·924	290·1	33·0	+16·5	13	44	248*c*
	11888	·451	237·2	351·9	−18·5	45	233	
	11891	·260	245·5	342·3	−10·8	54	422	
	11890	·250	230·0	339·7	−13·9	17	59	
	1105b	·263	341·2	333·3	+ 9·6	3	10	
	11894	·171	207·4	333·0	−13·5	5	23	
G	11897	·969	49·8	260·6	+37·0	14	46	279*c*
		·756	121·7					292
		·849	107·6					123
		·867	121·1					192
		·916	139·1					172
		·944	66·6					170
		·955	109·6					300
Apr. 23			(−25·4)	(328·4)	(− 4·8)	(151)	(837)	(1878)

Group 11894. April 20–24. A group of feeble development *f* Group 11891.
Group 11895. April 20–30. One or two ephemeral spots seen on April 20 and 21 in an area of faculæ. The group revives on April 26.
Group 11896. April 23–24. A group developing near the west limb.
Group 11897. April 23–28. A small regular spot with a companion on April 27 and 28.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
114·394		·930	235·1					92
		·839	257·7					124
	11896	·985	288·1	33·2	+16·9	0	14	194c
	11888	·619	245·8	351·7	−18·4	35	247	
	11891	·462	254·7	342·2	−11·2	51	348	
	11890	·435	247·4	339·6	−13·9	11	40	
	11894	·325	230·8	330·5	−16·4	3	12	
G	11898	·740	26·3	291·1	+37·2	19	65	
	11897	·909	45·6	261·3	+36·8	17	86	292f
		·839	110·5					308
		·894	65·1					100
		·956	124·1					114
		·956	115·9					228
		·966	57·8					171
Apr. 24			(−25·3)	(315·3)	(− 4·7)	(136)	(812)	(1623)
115·397		·952	300·4					113
		·939	257·7					213
		·877	250·5					236
	11888	·768	249·5	351·3	−18·6	44	250	
	11891	·652	258·1	342·5	−11·2	61	292	
	11890	·617	253·4	339·4	−13·8	8	52	
	11899	·613	229·7	333·7	−27·3	9	30	
	1105c	·351	343·8	307·9	+15·1	2	5	
C	11898	·681	12·9	291·2	+36·9	18	91	
	11897	·834	39·3	261·1	+36·6	10	28	324f
		·843	142·3					361
		·851	116·1					486
		·951	137·2					139
		·957	115·1					474
		·959	73·1					151
		·983	54·5					684
Apr. 25			(−25·1)	(302·1)	(− 4·6)	(152)	(748)	(3181)
116·369		·948	248·4					87
	11888	·885	251·2	351·2	−18·7	29	247	225sf
	11891	·798	259·6	342·1	−11·0	37	173 }	271c
	11890	·774	255·6	339·6	−13·9	7	40 }	
	11899	·755	237·6	334·7	−27·0	48	179	
	11900	·343	232·4	305·6	−16·4	10	26	
	11898	·661	359·4	289·7	+36·7	13	40	
G	11895	·294	0·6	289·0	+12·5	5	14	
	11897	·763	31·0	259·9	+36·8	4	7	
		·784	121·5					199
		·897	114·7					342
		·910	124·8					134
		·931	71·2					138
		·966	55·6					150
Apr. 26			(−25·0)	(289·2)	(− 4·5)	(153)	(726)	(1546)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
117·337		·829	250·3					312
	11888	·964	251·6	351·5	−18·9	33	252	358f
	11891	·901	259·9	340·9	−11·0	16	51 }	506c
	11890	·894	256·4	339·9	−14·1	8	32 }	
	11899	·870	241·3	335·3	−27·1	42	352	132c
	11900	·523	245·5	306·1	−16·4	6	21	
	11895	·386	315·1	292·6	+11·5	8	38	
G	11898	·695	341·9	292·1	+36·8	3	8	
	11897	·716	22·9	256·2	+36·9	5	16	
		·791	115·1					164
		·851	127·5					167
		·893	43·1					69
		·923	53·0					210
		·959	109·3					97
Apr. 27			(−24·9)	(276·5)	(− 4·5)	(121)	(770)	(2015)
118·327		·923	252·0					539
		·883	231·4					131
		·840	294·8					177
	11890	·971	256·3	340·0	−14·4	4	18	686f
	11899	·950	242·9	334·9	−27·1	96	495	430c
G	11900	·691	250·8	306·1	−16·4	3	10	
	11895	·544	300·1	292·0	+11·9	14	22	
	11897	·675	9·8	255·1	+37·2	7	23	
	11901	·985	107·3	182·7	−17·8	14	51	254c
		·836	46·1					216
		·955	47·7					120
Apr. 28			(−24·7)	(263·4)	(− 4·4)	(138)	(619)	(2553)
119·350		·965	251·6					306
		·957	235·7					116
		·884	226·4					91
		·838	253·7					98
		·832	320·2					194
	11899	·982	243·5	329·4	−26·7	23	117	150c
G	*1105d*	·947	290·5	318·4	+17·8	8	11	128f
	11895	·735	290·5	294·4	+11·8	7	13	
	1105e	·532	136·0	225·6	−26·4	1	5	
	11901	·947	108·5	178·5	−18·8	37	89	421c
		·856	48·7					76
		·953	59·2					214
		·976	67·2					202
Apr. 29			(−24·5)	(249·9)	(− 4·3)	(76)	(235)	(1996)

Group 11898. April 24–27. A group of stream type and of feeble development.
Group 11899. April 25–29. A stream of normal type.
Group 11900. April 26–28. A small ephemeral stream.
Group 11901. April 28–May 8. A pair of spots of which the follower remains on May 1. One or two small new spots appear on May 5.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
120·335		·977	288·3					104
		·941	228·2					139
		·939	254·2					147
		·880	316·2					334
		·852	250·1					90
		·814	240·8					140
	11895	·851	286·7	293·0	+11·8	7	22	179c
	11902	·612	54·6	205·5	+17·1	4	9	
G	11901	·862	109·7	177·9	−19·0	17	50	525c
		·842	35·6					104
		·880	44·3					89
		·891	58·0					444
		·940	110·3					203
		·959	64·4					512
		·987	104·6					70
		·987	111·5					273
Apr. 30			(−24·4)	(236·8)	(− 4·2)	(28)	(81)	(3353)
121·401		·946	298·4					173
		·943	312·2					340
		·940	255·2					96
		·939	286·8					268
		·927	228·4					145
		·901	217·5					80
		·877	243·6					360
		·777	331·8					407
	11903	·474	25·5	209·6	+21·3	4	5	
C	11902	·441	37·1	206·8	+16·6	20	45	
	11901	·748	113·2	176·0	−19·8	11	82	296f
	11904	·953	76·2	152·0	+11·8	15	36	283f
		·799	53·7					591
		·867	63·9					328
		·899	139·0					218
		·916	56·7					337
		·932	177·2					65
		·942	112·1					676
May 1			(−24·2)	(222·8)	(− 4·0)	(50)	(168)	(4663)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
122·374		·975	310·6					186
		·953	229·8					126
		·943	243·5					417
		·910	182·4					52
		·904	253·8					158
		·886	220·8					129
		·873	318·0					280
		·817	326·8					142
		·800	244·6					228
	1105f	·405	239·2	231·0	−15·7	2	5	
C	11903	·428	356·3	211·6	+21·2	2	12	
	11902	·350	7·2	207·3	+16·3	10	31	
	1105g	·684	31·0	185·4	+32·1	3	9	
	11901	·605	118·4	175·6	−20·0	8	37	
	11904	·860	74·2	152·5	+11·4	7	17	254f
		·822	61·6					182
		·831	50·8					382
		·847	138·5					147
		·864	112·9					632
		·959	121·6					160
		·969	76·9					298
May 2			(−24·0)	(209·9)	(− 4·0)	(32)	(111)	(3773)
123·571		·952	239·2					153
		·925	315·4					325
		·912	301·2					160
		·902	250·4					222
		·805	240·8					267
	11902	·423	327·0	208·0	+17·0	10	52	
G	11901	·405	132·1	175·6	−19·3	8	26	
	1105h	·726	41·8	160·5	+29·5	4	10	
		·756	116·8					258
		·883	115·6					197
		·888	71·0					490
		·961	72·6					370
		·977	113·5					156
May 3			(−23·8)	(194·1)	(− 3·8)	(22)	(88)	(2598)

Group 11902. April 30–May 6. A stream of small unstable spots.
Group 11903. May 1–6. A small single spot on May 1 and 2: a diminutive stream on May 4–6.
Group 11904. May 1–2. A single spot followed by faculæ.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
124·374		·953	314·4					251
		·929	301·4					182
		·909	245·1					298
		·837	234·6					113
	1105i	·649	298·0	219·7	+14·7	9	36	
	11903	·580	316·2	208·9	+21·3	7	20	
	11902	·522	314·5	206·4	+18·0	4	11	
G	*1105j*	·161	179·9	183·4	−12·9	3	5	
	11901	·306	154·9	175·6	−20·1	7	26	
	1105k	·650	53·8	149·8	+19·4	1	6	
	11905	·873	73·0	124·8	+12·8	7	35	230*c*
	11906	·969	75·8	109·3	+12·8	22	98	310*c*
		·808	70·0					257
		·869	126·2					141
		·940	114·8					204
May 4			(−23·6)	(183·5)	(− 3·7)	(60)	(237)	(1986)
125·562		·980	246·5					224
		·941	303·6					159
		·892	211·8					104
		·876	242·3					409
		·857	290·6					91
		·839	227·6					145
		·830	311·8					158
	11903	·740	304·2	208·8	+21·8	7	22	
	11902	·702	299·8	207·3	+17·6	13	64	
G	11901	·296	211·0	176·9	−18·2	6	33	
	11905	·713	66·6	125·5	+13·8	11	63	
	11906	·866	74·2	109·6	+11·7	5	13	
		·849	117·3					175
		·874	72·7					452
		·946	127·8					283
		·958	117·7					430
May 5			(−23·4)	(167·7)	(− 3·6)	(42)	(195)	(2630)
1936.			°	°	°			
126·420		·943	244·2					286
		·924	288·0					117
		·906	232·8					165
		·899	308·2					262
	11902	·823	293·2	208·4	+16·7	12	72	180*c*
	11903	·835	299·5	207·8	+22·0	4	16	173*p*
	11901	·442	233·2	178·2	−18·5	6	28	
	11907	·366	148·8	144·7	−21·6	1	5	
G	11905	·573	59·7	125·9	+13·7	11	92	
	11908	·704	59·0	117·0	+18·5	0	6	
		·793	68·8					126
		·877	115·5					245
		·899	129·0					184
		·925	69·5					242
		·944	56·2					96
		·974	114·0					98
May 6			(−23·2)	(156·4)	(− 3·5)	(34)	(219)	(2174)
127·564		·988	243·0					202
		·987	287·0					82
		·969	303·2					217
		·953	295·0					241
		·938	235·0					163
		·936	289·0					407
		·896	318·2					114
		·892	247·1					112
		·755	317·4					129
	11901	·621	243·8	177·2	−18·7	1	3	
	11907	·318	191·8	145·3	−21·4	4	16	
	11909	·278	9·4	138·6	+12·4	12	61	
G	11905	·392	41·4	125·9	+13·7	5	17	
	1105l	·934	108·2	72·5	−18·2	7	12	242*c*
	11910	·982	115·3	62·2	−25·4	36	143	500*c*
		·802	57·0					61
		·804	118·7					171
		·822	132·3					197
		·886	66·1					158
		·894	51·7					75
		·908	117·6					201
		·966	98·8					78
		·974	77·7					286
		·980	66·8					290
May 7			(−23·0)	(141·3)	(− 3·4)	(65)	(252)	(3926)

Group 11905. May 4–13. A group of small variable spots.
Group 11906. May 4–5. One or two spots.
Group 11907. May 6–8. One or two short-lived spots.
Group 11908. May 6–9. A pair of small spots on May 6; a single spot on May 9.
Group 11909. May 7–12. A small stream.
Group 11910. May 7–18. Probable return of a group (*1105a*) developing near the west limb on April 22. A stream, in which the leader—somewhat composite in structure—predominates throughout.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
128·343		·984	292·5					392
		·972	287·6					253
		·921	253·8					112
		·920	313·2					116
		·818	312·4					186
		·805	302·8					129
		·803	249·2					146
	11901	·744	246·6	177·2	−19·4	2	3	
	11907	·399	214·7	145·2	−22·3	4	18	
C	11909	·293	334·6	138·3	+12·0	16	64	
	1105m	·275	356·0	132·1	+12·6	4	28	
	11905	·316	15·0	126·2	+14·4	7	49	
	11910	·942	115·9	61·4	−25·5	45	211	570*c*
		·856	120·1					222
		·865	109·4					240
		·904	64·2					311
		·912	77·0					244
		·967	78·2					149
May 8			(−22·8)	(131·0)	(− 3·3)	(78)	(373)	(3070)
129·434		·893	250·9					302
		·890	300·7					348
		·788	311·2					196
		·784	258·2					106
	11909	·454	305·9	138·5	+12·4	28	111	
C	11905	·335	334·9	124·9	+14·4	7	54	
	11908	·401	351·5	120·1	+20·1	1	5	
	11910	·850	117·4	60·5	−24·8	43	225	380*c*
		·790	72·1					151
		·835	57·7					148
		·883	73·0					233
May 9			(−22·5)	(116·5)	(− 3·2)	(79)	(395)	(1864)
130·657		·971	251·8					187
		·949	296·8					430
		·908	323·6					129
		·889	304·0					296
		·878	221·4					95
		·828	244·3					158
G	11909	·666	292·6	139·3	+12·4	14	46	
	11905	·513	305·8	125·8	+14·6	3	8	
	11910	·706	123·3	59·9	−25·1	61	323	119*c*
	11911	·960	108·3	26·8	−18·4	4	12	64*f*
	11912	·989	117·8	18·8	−27·9	69	276	194*f*
		·898	123·2					77
		·927	70·6					120
May 10			(−22·2)	(100·4)	(− 3·1)	(151)	(665)	(1869)
1936.			°	°	°			
131·408		·967	252·9					154
		·951	299·0					285
		·928	227·7					152
		·902	284·0					100
		·867	245·6					308
	11909	·783	287·7	139·9	+11·8	11	47	95*f*
G	11913	·589	45·1	63·9	+21·8	3	6	
	11910	·605	129·0	59·4	−24·9	69	368	
	11914	·884	124·2	31·9	−31·3	5	15	52*c*
	11911	·900	109·0	27·0	−18·4	2	10	108*f*
	11912	·968	117·8	15·7	−27·6	62	426	304*c*
		·843	137·2					88
		·883	68·7					116
May 11			(−22·0)	(90·5)	(− 3·0)	(152)	(872)	(1762)
132·622		·953	248·6					409
		·809	295·1					155
		·786	282·1					101
	11909	·927	284·1	140·9	+11·9	7	12	306*c*
	1105n	·641	242·7	111·4	−19·4	3	12	
G	11913	·430	21·1	64·9	+20·7	5	25	
	11910	·444	147·9	59·4	−24·8	50	310	
	11914	·765	129·7	31·0	−31·3	4	11	
	11912	·878	120·1	15·6	−27·6	100	534	447*c*
		·973	109·3					232
May 12			(−21·7)	(74·4)	(− 2·9)	(169)	(904)	(1650)
133·555		·974	250·9					158
		·967	282·5					264
		·922	235·9					160
		·834	294·1					164
		·824	243·1					221
	11905	·913	288·3	126·0	+15·5	2	8	402*c*
	11913	·405	351·7	65·7	+20·9	5	24	
G	11910	·379	173·4	59·4	−24·7	54	249	
	1105o	·486	126·3	37·7	−19·1	3	10	
	11914	·656	137·3	30·9	−31·1	3	12	
	11912	·786	123·9	14·7	−27·8	132	647	294*f*
		·911	110·7					274
		·953	100·1					334
		·961	63·2					211
		·978	117·1					204
May 13			(−21·5)	(62·1)	(− 2·7)	(199)	(950)	(2686)

Group 11911. May 10–11. A single small spot.
Group 11912. May 10–23. A stream of normal type.
Group 11913. May 11–18. A small but persistent group.
Group 11914. May 11–14. A pair of very small spots of which one alone remains on May 14.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
134·431		·978	286·6					578
		·967	236·8					234
		·942	293·0					220
		·907	287·8					203
		·888	245·7					261
		·849	293·2					165
	1105p	·589	233·8	81·3	−22·5	6	16	
	1105q	·452	239·4	74·2	−15·6	2	11	
	11915	·498	217·9	70·2	−25·5	5	14	
C	11913	·478	326·8	66·7	+21·0	6	14	
	11910	·406	200·2	59·4	−24·9	36	192	
	11914	·572	148·6	30·1	−31·5	1	5	
	11912	·688	129·0	13·5	−27·6	143	707	
		·831	113·4					284
		·850	102·0					227
		·884	60·6					268
		·921	116·8					145
		·927	98·8					232
		·971	107·2					226
		·972	116·3					414
May 14			(−21·2)	(50·5)	(− 2·6)	(199)	(959)	(3457)
135·462		·971	251·2					94
		·960	288·5					232
		·959	244·3					118
		·955	232·2					76
		·882	247·6					84
		·845	235·4					96
	11915	·640	231·7	70·4	−25·4	12	27	
G	11913	·633	308·0	68·9	+20·7	1	3	
	11910	·511	223·4	59·3	−24·1	34	149	
	11912	·563	139·2	12·4	−27·4	122	764	
	11916	·982	70·4	319·4	+18·7	25	99	484*c*
		·843	102·0					210
		·848	118·6					246
		·950	117·2					433
		·952	106·2					118
May 15			(−21·0)	(36·8)	(− 2·5)	(194)	(1042)	(2191)
1936.			°	°	°			
136·353		·965	247·5					137
		·923	238·7					212
		·912	227·7					138
		·846	296·7					85
		·831	241·6					132
	11915	·745	237·1	68·7	−25·5	4	8	
	11913	·732	301·9	66·5	+20·9	10	20	
G	11910	·634	233·9	58·9	−23·8	30	118	
	11912	·467	155·9	12·6	−27·5	95	611	
	11917	·901	119·7	323·2	−27·6	2	6	481*c*
	11916	·933	68·5	318·6	+19·0	21	87	649*c*
		·764	104·5					176
		·768	121·9					160
		·880	107·5					242
		·976	121·1					112
May 16			(−20·7)	(25·0)	(− 2·4)	(162)	(850)	(2524)
137·461		·978	238·3					160
		·963	230·4					113
		·946	292·4					111
		·868	251·4					296
		·868	286·2					96
		·762	291·1					96
	11915	·887	243·7	70·9	−24·3	4	11	323*c*
	11913	·867	296·2	66·7	+21·2	12	46	210*c*
G	11910	·786	241·4	59·1	−23·6	7	26	445*sf*
	11912	·429	180·4	10·6	−27·6	87	573	
	1105r	·349	6·0	8·2	+17·9	1	3	
	11916	·802	65·3	320·6	+18·1	9	39	206*c*
		·793	124·6					159
		·910	122·0					130
		·951	109·2					80
		·957	79·0					124
May 17			(−20·4)	(10·4)	(− 2·3)	(120)	(698)	(2540)
138·335		·949	248·6					400
		·946	235·7					111
		·946	284·5					181
		·942	301·7					107
		·855	287·7					157
	11913	·940	293·5	66·1	+21·2	10	29	149*c*
G	11910	·884	243·5	58·8	−24·3	2	5	569*f*
	11912	·474	202·9	10·8	−27·9	91	476	
	11916	·683	60·4	320·3	+17·9	19	61	
		·842	124·7					95
		·892	76·3					100
		·937	113·7					145
		·954	68·2					105
May 18			(−20·1)	(358·8)	(− 2·2)	(122)	(571)	(2119)

Group 11915. May 14–17. A small group developing in front of Group 11910.
Group 11916. May 15–24. Intermittent: two spots with small companions that have died out by May 20. The area is again marked by tiny spots on May 22 and 24.
Group 11917. May 16–22. A tiny spot seen only on May 16 and 22.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
139·336		·959	282·7					139
		·952	225·6					92
		·937	243·0					778
	11912	·569	219·8	9·8	−27·7	86	395	
	11916	·556	51·4	318·5	+18·4	5	28	
G		·818	111·4					138
		·875	65·3					129
		·928	110·2					249
		·928	121·4					121
		·940	51·2					106
May 19			(−19·8)	(345·6)	(− 2·1)	(91)	(423)	(1752)
140·334		·984	244·6					406
		·915	289·9					90
G	11912	·710	231·7	11·2	−27·6	67	327	
	11918	·289	252·3	348·4	− 6·9	5	12	
		·850	116·5					300
May 20			(−19·5)	(332·4)	(− 2·0)	(72)	(339)	(796)
141·403		·958	239·4					215
	11912	·833	237·3	10·5	−27·8	52	254	383c
	11919	·383	133·8	301·6	−17·0	5	25	
G	11920	·966	121·0	244·9	−30·3	4	17	215c
		·923	67·5					147
		·946	112·5					122
		·994	73·9					101
May 21			(−19·2)	(318·3)	(− 1·8)	(61)	(296)	(1183)
142·398		·804	244·3					211
	11912	·927	240·7	10·8	−27·6	40	213	807c
	11918	·699	260·7	349·0	− 7·7	22	92	
	11916	·417	325·2	319·6	+18·3	4	12	
	11917	·487	206·3	319·1	−27·5	3	6	
	11919	·258	169·2	302·2	−16·3	7	21	
G	11921	·303	40·4	293·6	+11·7	3	9	
	11920	·902	123·5	244·3	−30·7	2	10	154p
	11922	·950	72·3	234·9	+16·2	3	8	240f
		·885	114·5					78
		·933	59·5					93
		·983	113·5					194
May 22			(−18·9)	(305·1)	(− 1·7)	(84)	(371)	(1777)
1936.			°	°	°			
143·421		·911	246·5					164
		·811	238·3					166
	11912	·990	242·4	12·7	− 27·5	48	172	578c
	11918	·850	262·1	349·4	− 7·5	15	73	126c
	1106a	·577	297·6	323·2	+14·1	1	5	
	11919	·317	212·7	301·8	−16·9	20	60	
	11921	·234	341·2	295·9	+11·1	1	4	
G	11923	·924	114·1	225·6	−22·8	3	12	272c
	11924	·970	111·1	216·1	−20·9	15	33	100c
		·852	55·4					98
		·874	69·6					268
		·940	43·8					83
		·950	54·6					109
		·980	73·2					180
		·986	64·6					99
May 23			(−18·6)	(291·5)	(− 1·6)	(103)	(359)	(2243)
144·377		·969	246·6					191
		·956	256·6					200
		·912	302·0					133
		·887	239·6					306
		·856	253·4					143
		·767	236·4					295
	11918	·965	262·0	353·5	− 8·1	9	30	371f
	11916	·739	298·8	322·2	+19·7	1	7	
	11919	·458	235·1	301·9	−16·5	13	62	
G	11921	·402	300·8	299·4	+10·4	29	116	
	11925	·641	16·7	265·7	+36·3	15	45	
	11923	·841	116·5	224·4	−22·8	13	55	134c
	11924	·904	112·5	215·8	−20·9	4	13	133c
	11926	·940	71·9	210·5	+16·4	13	31	218c
	11927	·989	106·4	197·6	−16·4	30	105	119c
		·783	67·4					202
		·885	45·4					147
		·954	63·0					225
May 24			(−18·2)	(278·9)	(− 1·5)	(127)	(464)	(2817)

Group 11918. May 20–24. A small short-lived stream, not seen on May 21.
Group 11919. May 21–27. A stream of small unstable spots.
Group 11920. May 21–22. One tiny spot.
Group 11921. May 22–28. A stream in which the follower is the larger and more symmetrical spot.
Group 11922. May 22–27. A small spot seen on May 22 and 25: a pair on May 27.
Group 11923. May 23–29. A cluster or dwarf stream of small spots.
Group 11924. May 23–24. A couple of very small spots.
Group 11925. May 24–26. A small short-lived stream in fairly high latitude.
Group 11926. May 24–31. A small stream which dies out after May 26, but is represented by a tiny spot on May 31.
Group 11927. May 24–June 4. A spot with double umbra, followed by tiny companions which increase considerably in size for a few days after May 29.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
145·428		·987	263·5					152
		·959	255·1					259
		·959	241·6					191
		·879	241·9					476
		·854	292·5					435
	11919	·641	245·5	302·3	−16·5	15	81	
	11921	·588	290·1	299·0	+10·4	75	369	
	11925	·609	0·3	264·8	+36·0	13	46	
G	11922	·549	59·3	235·9	+15·0	1	4	
	11923	·716	121·7	223·7	−23·1	10	45	
	11926	·845	69·7	209·6	+16·2	15	48	153*c*
	11927	·924	107·1	198·3	−16·3	48	204	339*f*
		·820	112·7					84
		·886	58·3					192
		·946	127·5					122
		·967	118·5					110
May 25			(−17·9)	(265·0)	(− 1·4)	(177)	(797)	(2513)
146·486		·974	251·7					289
		·943	240·5					457
		·941	290·7					461
	11919	·801	250·5	302·6	−16·3	15	46	146*c*
	11921	·754	285·1	298·6	+10·5	57	302	244*c*
	11925	·640	342·1	265·1	+36·2	12	32	
	1106b	·403	207·9	262·7	−22·0	1	5	
G	11928	·327	151·7	241·7	−17·9	0	5	
	11923	·587	131·3	222·3	−23·8	21	60	
	11926	·695	65·6	210·1	+15·7	5	12	
	11927	·795	109·1	199·9	−15·8	58	266	540*f*
		·749	54·3					189
		·913	121·7					133
		·974	59·6					139
May 26			(−17·5)	(251·0)	(− 1·2)	(169)	(728)	(2598)
147·611		·980	288·6					157
		·975	239·4					212
		·850	242·3					86
	11919	·936	253·2	304·7	−16·1	9	20	260*sf*
	11921	·895	282·5	298·6	+10·6	48	255	308*c*
	11928	·317	202·9	243·5	−18·0	12	66	
G	11922	·277	356·5	237·1	+14·9	3	21	
	11923	·429	151·3	223·2	−23·1	6	44	
	11927	·596	114·3	202·0	−15·0	37	184	
		·838	116·9					73
		·910	58·1					158
		·956	105·5					116
		·968	57·7					216
May 27			(−17·1)	(236·1)	(− 1·1)	(115)	(590)	(1586)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
148·354		·961	250·5					195
		·869	296·1					96
		·822	242·9					110
	11921	·961	280·0	299·6	+ 9·3	58	368	354*c*
	11929	·641	242·9	262·9	−17·7	6	12	
	11930	·329	184·9	228·0	−20·0	3	5	
	11928	·411	223·0	243·4	−18·4	14	59	
	11923	·391	169·3	221·8	−23·5	5	20	
G	11927	·451	122·3	203·2	−14·8	43	194	
	11931	·986	106·1	146·3	−16·0	53	222	318*c*
		·841	52·3					80
		·841	61·1					67
		·888	105·3					104
		·954	53·5					151
		·966	113·6					78
		·970	60·7					194
May 28			(−16·9)	(226·3)	(− 1·0)	(182)	(880)	(1747)
149·334		·937	247·7					233
		·917	238·3					148
		·850	314·5					147
	11932	·886	293·1	273·1	+19·9	10	44	47*c*
	11929	·788	249·1	263·4	−16·9	0	4	114*c*
	11928	·571	237·9	243·8	−18·4	11	27	
	11930	·423	218·9	229·6	−20·0	1	5	
	11923	·413	193·7	219·4	−24·4	3	6	
G	11927	·291	148·7	204·3	−15·2	45	220	
	11933	·526	17·0	203·2	+29·2	5	26	
	11931	·940	108·1	144·3	−17·2	69	570	778*c*
		·777	52·0					163
		·882	46·3					120
		·896	119·5					115
		·913	58·3					249
		·937	70·7					161
		·956	77·1					192
May 29			(−16·5)	(213·3)	(− 0·9)	(144)	(902)	(2467)
150·603		·936	310·9					273
		·934	250·1					164
	11932	·971	291·6	271·1	+20·7	10	29	199*c*
	11933	·500	344·9	205·0	+28·0	3	14	
	11927	·280	202·5	202·9	−15·7	44	242	
	11934	·753	51·1	155·3	+27·6	8	21	136*c*
G	11931	·808	111·1	144·5	−17·3	88	555	573*c*
		·824	65·0					121
		·843	76·5					179
		·843	125·1					95
		·941	121·9					107
		·945	75·7					214
		·948	66·3					149
May 30			(−16·1)	(196·5)	(− 0·7)	(153)	(861)	(2210)

Group 11928. May 26–29. A small short-lived stream.
Group 11929. May 28–29. A small spot.
Group 11930. May 28–29. A dot.
Group 11931. May 28–June 7. A stream of changing spots.
Group 11932. May 29–30. A small group near the west limb.
Group 11933. May 29–30. A pair of small spots of which one remains on May 30.
Group 11934. May 30–June 3. One or two very small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
151·347		·969	307·9					227
		·897	247·0					175
		·868	235·0					206
	11935	·776	301·0	232·8	+23·0	11	55	
	11926	·441	313·3	206·2	+16·9	1	5	
G	11927	·366	224·0	202·0	−15·8	58	289	
	11934	·692	47·7	151·8	+27·1	1	6	
	11931	·716	114·4	143·7	−17·7	85	632	226*f*
		·887	63·8					135
		·952	72·4					166
May 31			(−15·8)	(186·7)	(− 0·7)	(156)	(987)	(1135)
152·374		·958	251·2					189
		·887	287·5					74
		·808	236·8					221
G	*1106c*	·932	237·0	238·3	−30·7	3	7	193*c*
	11935	·893	296·0	233·4	+22·8	21	94	142*c*
	11927	·546	241·0	202·7	−15·7	45	284	
	11931	·559	121·8	143·4	−17·5	62	542	
June 1			(−15·4)	(173·1)	(− 0·5)	(131)	(927)	(819)
153·463		·975	239·4					157
		·964	220·6					91
		·954	288·2					254
		·927	249·0					181
		·871	239·6					346
		·839	289·1					312
		·828	302·0					177
	11935	·970	292·4	233·0	+21·5	22	84	280*c*
	11927	·733	249·2	203·8	−15·4	37	222	
C	11936	·564	339·2	172·2	+31·3	7	18	
	11937	·309	162·9	153·3	−17·5	2	10	
	11934	·486	14·8	150·7	+27·5	2	6	
	11931	·380	140·2	144·0	−17·3	78	460	
	11938	·538	139·2	136·1	24·3	29	113	
	1106d	·804	121·6	109·7	25·1	3	8	119*f*
		·893	134·2					97
		·910	117·7					118
		·911	36·0					32
		·918	107·6					61
		·928	145·4					124
June 2			(−15·0)	(158·7)	(− 0·4)	(180)	(921)	(2349)
1936.			°	°	°			
154·377		·965	242·6					280
		·923	288·2					243
		·883	299·6					218
	11935	·992	294·0	228·2	+23·7	0	19	101*n*
	11927	·853	252·0	203·7	−15·4	44	228	390*c*
	11936	·636	326·7	170·8	+31·7	3	6	
G	11934	·474	352·6	150·5	+27·6	5	15	
	11931	·291	174·1	144·8	−17·0	53	336	
	11938	·445	157·4	135·8	−24·5	50	191	
		·956	108·5					146
		·959	74·4					259
		·961	120·4					195
June 3			(−14·6)	(146·6)	(− 0·3)	(155)	(795)	(1832)
155·424		·966	286·3					131
		·958	298·2					177
		·949	233·6					223
	11927	·953	254·0	204·2	−15·2	23	112	638*sf*
	1106c	·403	325·2	146·7	+19·1	1	5	
	11931	·366	216·7	145·9	−17·2	37	221	
G	11938	·418	190·0	137·3	−24·4	79	470	
		·868	111·0					119
		·873	76·5					129
		·886	129·3					110
		·888	63·1					211
		·901	120·2					182
		·957	114·8					272
June 4			(−14·2)	(132·7)	(− 0·2)	(140)	(808)	(2192)
156·416		·974	250·6					636
		·853	242·6					250
	11931	·521	237·6	146·7	16·1	38	178	
	11938	·496	213·2	136·9	−24·4	77	429	
G	11939	·370	337·6	128·2	+19·9	37	117	
	11940	·814	126·6	71·5	−28·9	10	31	150*c*
	11941	·957	114·6	48·3	23·5	3	8	209*sf*
		·889	118·0					334
June 5			(13·8)	(119·6)	(0·0)	(165)	(763)	(1579)
157·392		·942	301·4					288
	11931	·668	246·1	145·9	−15·6	12	61	
	11938	·627	228·9	137·8	−24·2	77	325	
G	11939	·487	314·1	128·4	+19·9	31	182	
	11940	·703	134·9	71·9	−29·6	13	33	
	11941	·903	117·4	45·2	−24·5	10	51	184*c*
		·830	124·2					143
June 6			(−13·5)	(106·7)	(+ 0·1)	(143)	(652)	(615)

Group 11935. May 31–June 3. A small stream.
Group 11936. June 2–3. A pair of small spots of which one remains on June 2.
Group 11937. June 2–8. A tiny spot, *sp* Group 11931, on June 2, and re-appearing on June 8 after that group has disappeared.
Group 11938. June 2–9. A stream of approximately normal type; the leader becomes a double spot on June 9, indicating a fresh spurt of activity.
Group 11939. June 5–10. A small stream in which the following component is the last to disappear.
Group 11940. June 5–9. A stream of feeble development.
Group 11941. June 5–16. A stream of normal type; the leader, a small regular spot, alone remains after June 10.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
158·380		·969	300·2					72
		·961	307·7					71
		·868	249·7					422
		·859	234·4					108
		·847	304·2					124
		·819	291·3					97
	11931	·775	245·9	141·6	−18·3	2	3	188*c*
C	11938	·769	237·9	138·9	−23·9	47	298	183*c*
	11939	·650	301·1	129·7	+19·8	25	131	
	11942	·434	50·1	73·4	+16·3	5	24	
	11940	·578	147·7	73·0	−28·9	18	38	
	11941	·793	121·5	45·9	−24·3	30	84	136*c*
		·934	111·5					86
		·939	77·5					96
June 7			(−13·1)	(93·6)	(+ 0·2)	(127)	(578)	(1583)
159·329		·940	301·3					467
		·897	290·1					141
		·849	282·5					141
	11937	·947	253·2	151·1	−15·7	8	11	835*f*
	11938	·879	242·9	139·2	−23·3	96	654	428*sf*
	11939	·769	295·7	128·2	+19·6	36	134	126*c*
	11940	·505	164·7	72·3	−28·7	12	40	
G	11941	·658	129·1	47·1	−24·2	53	218	
	11943	·972	117·3	6·6	−26·4	38	100	310*c*
		·834	111·6					145
		·859	75·2					84
		·889	121·5					119
		·940	114·2					249
		·969	106·1					101
June 8			(−12·7)	(81·0)	(+ 0·3)	(243)	(1157)	(3146)
160·366		·964	252·3					808
		·958	286·3					150
	11938	·959	245·6	138·9	−23·2	71	600	661*f*
	11939	·869	293·5	125·3	+20·4	23	94	186*c*
	11940	·491	192·0	73·9	−28·2	3	5	
	1106f	·267	336·8	73·5	+14·5	3	7	
G	11942	·303	343·1	72·6	+17·2	5	19	
	11941	·519	145·5	48·5	−24·8	37	167	
	11943	·905	119·9	6·2	−26·6	21	109	464*f*
		·848	120·1					238
		·886	108·5					123
		·951	99·9					266
		·959	110·0					151
June 9			(−12·3)	(67·3)	(+ 0·4)	(163)	(1001)	(3047)
1936.			°	°	°			
161·468		·985	247·2					578
		·887	244·3					132
		·871	296·8					124
	11939	·952	292·1	123·5	+21·2	14	29	306*p*
	11942	·435	308·3	73·4	+16·1	2	10	
	11941	·435	171·0	48·4	−24·8	30	143	
C	*1106g*	·411	14·4	46·3	+24·0	1	2	
	1106h	·752	120·2	8·5	−21·7	0	7	
	11943	·801	124·5	5·3	−26·5	22	98	765*sf*
		·862	113·5					179
		·869	102·5					190
		·943	120·0					158
		·959	105·8					174
June 10			(−11·8)	(52·7)	(+ 0·6)	(69)	(289)	(2606)
162·457	11941	·461	199·0	49·1	−25·0	26	108	
	11944	·602	116·8	5·9	−15·1	6	20	
	11943	·686	132·0	4·9	−26·7	16	76	
		·755	105·6					480
G		·868	123·4					356
		·881	105·4					193
		·915	46·6					63
		·947	119·0					319
		·956	68·4					232
June 11			(−11·4)	(39·6)	(+ 0·7)	(48)	(204)	(1643)
163·333		·962	240·2					74
	11941	·541	216·2	48·6	−25·0	32	119	
	11944	·439	127·8	7·1	−14·8	3	7	
	11943	·587	142·1	4·3	−26·7	14	60	
	11945	·709	57·7	347·6	+22·8	6	16	
		·853	125·5					197
G		·924	112·8					178
		·930	67·4					248
		·932	37·6					79
		·940	49·2					141
		·971	123·9					152
		·975	78·2					214
June 12			(−11·0)	(28·0)	(+ 0·8)	(55)	(202)	(1283)

Group 11942. June 7–10. A very small stream not recorded on June 8.
Group 11943. June 8–14. Return of Group 11912. A regular spot breaking up into fragments on June 12–13.
Group 11944. June 11–12. A tiny group.
Group 11945. June 12–19. A small but persistent group.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
164·381		·966	243·6					220
		·877	234·4					372
		·868	288·0					390
		·865	247·0					298
	11941	·670	229·4	48·2	−25·0	12	51	
	11946	·448	299·0	37·8	+13·3	2	12	
	11943	·498	161·6	4·1	−27·2	13	32	
C	11945	·563	48·6	347·1	+22·6	11	34	
		·786	115·2					148
		·793	129·2					201
		·848	64·6					336
		·897	123·1					388
		·899	43·6					76
		·909	111·8					199
		·914	77·7					504
June 13			(−10·6)	(14·2)	(+ 0·9)	(38)	(129)	(3132)
165·377		·957	284·5					204
		·947	293·5					123
		·922	242·5					781
		·792	234·8					321
	11941	·795	236·5	47·9	−25·2	11	58	
	11946	·660	292·9	40·0	+15·6	0	3	
G	11943	·476	183·8	3·0	−27·3	4	13	
	11945	·428	31·3	347·1	+22·3	15	72	
		·797	115·8					113
		·832	73·7					414
		·858	129·5					161
		·958	110·5					127
June 14			(−10·1)	(1·0)	(+ 1·0)	(30)	(146)	(2244)
166·415		·972	244·1					326
	11941	·900	241·3	47·6	−25·0	6	24	258*f*
	11945	·370	3·1	346·0	+22·8	5	35	
	11947	·991	62·3	265·5	+27·6	14	59	
G	11948	·994	71·1	263·7	+18·9	40	132	117*c*
		·908	113·8					177
		·939	70·4					282
		·959	105·2					59
		·982	62·0					357
June 15			(−9·7)	(347·2)	(+ 1·2)	(65)	(250)	(1576)
1936.			°	°	°			
167·330		·838	246·4					73
	11941	·965	243·3	47·3	−25·3	9	26	340*f*
	11946	·918	288·3	40·8	+17·3	2	6	129*f*
	11945	·411	336·3	345·4	+23·3	10	52	
G	*1107a*	·539	167·7	327·5	−30·3	5	38	
	11947	·956	61·3	264·0	+27·7	26	95	243*c*
	11948	·970	69·2	259·9	+20·5	125	1076	517*c*
		·848	67·5					168
June 16			(−9·3)	(335·1)	(+ 1·3)	(177)	(1293)	(1470)
168·423		·981	240·8					129
	11946	·983	287·4	39·9	+17·4	5	43	170*c*
	11945	·545	314·1	345·9	+23·5	12	55	
	11947	·866	59·5	264·2	+26·7	24	109	181*c*
G	*1107b*	·849	74·7	263·5	+13·7	8	22	
	11948	·885	67·7	260·1	+20·2	151	760	797*c*
		·853	74·7					70
		·978	77·2					228
June 17			(−8·8)	(320·7)	(+ 1·4)	(200)	(989)	(1575)
169·488		·878	239·8					348
	11945	·738	301·7	349·8	+23·8	4	13	
	11947	·751	55·0	263·3	+26·5	18	92	
G	11948	·759	64·4	260·0	+20·1	133	873	457*f*
	11949	·936	67·0	238·6	+22·0	13	29	304*f*
		·920	76·1					151
June 18			(−8·4)	(306·6)	(+ 1·5)	(168)	(1007)	(1260)
170·630		·980	248·9					312
		·943	236·9					428
		·905	250·7					389
		·870	258·7					121
		·813	232·2					304
	11945	·878	297·1	350·4	+24·4	5	15	186*f*
	11950	·838	290·9	346·8	+18·3	13	25	122*c*
	11951	·332	302·5	308·1	+11·9	10	29	
G	11952	·381	320·6	306·2	+18·7	12	43	
	11947	·605	44·8	263·1	+26·9	15	49	
	11948	·594	57·1	259·5	+20·2	100	698	
	11949	·830	64·5	237·9	+21·9	8	33	204*f*
	11953	·959	63·3	219·3	+26·0	24	89	305*c*
		·784	75·5					130
		·867	46·7					92
		·954	116·6					208
		·957	73·9					333
June 19			(−7·9)	(291·5)	(+ 1·7)	(187)	(981)	(3134)

Group 11946. June 13–17. A very small group.
Group 11947. June 15–25. A small stream.
Group 11948. June 15–28. A stream in which there is marked separation in longitude between the leader and follower; between these two components there are variable spots which on some days make up a complex cluster.
Group 11949. June 18–23. A small regular spot dying out.
Group 11950. June 19–20. A pair of small spots.
Group 11951. June 19–23. A small stream appearing at the same time as Group 11952 on the same meridian.
Group 11952. June 19–21. A small stream on the same meridian as Group 11951.
Group 11953. June 19–25. Two or three small spots extending in longitude.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
171·336		·966	255·8					264
		·963	236·4					346
		·905	295·9					235
		·854	235·0					307
	11950	·913	288·8	347·1	+17·8	6	17	104*c*
	11951	·464	292·6	307·9	+11·8	13	41	
	11952	·495	307·2	306·6	+18·9	10	26	
G	11947	·525	33·6	263·1	+27·4	19	45	
	11948	·470	48·1	260·4	+19·8	117	617	
	11949	·743	61·1	237·7	+22·2	7	17	
	11953	·908	61·9	219·2	+26·1	20	63	231*c*
		·906	71·8					256
		·939	119·5					167
		·959	108·6					451
June 20			(−7·6)	(282·1)	(+ 1·7)	(192)	(826)	(2361)
172·300		·976	235·7					155
		·970	288·5					103
		·968	294·1					127
		·871	234·5					182
	11951	·656	285·1	309·3	+11·2	6	23	
	11952	·643	297·5	306·2	+18·7	6	21	
	1107c	·279	347·2	273·0	+17·6	1	5	
	1107d	·342	0·1	269·2	+21·8	4	10	
	11947	·449	13·6	262·5	+27·6	14	55	
G	11948	·342	25·7	260·3	+19·8	85	506	
	11954	·518	61·5	241·2	+15·9	3	5	
	11949	·606	54·3	237·3	+22·2	9	18	
	11953	·809	58·3	219·3	+26·4	15	47	109*c*
	11955	·992	108·5	187·8	−18·1	34	141	118*p*
		·778	70·8					92
		·903	111·2					385
		·906	77·9					122
		·952	61·5					148
June 21			(−7·1)	(269·3)	(+ 1·9)	(177)	(831)	(1541)
1936.			°	°	°			
173·378		·971	240·7					166
		·962	251·3					117
		·933	293·9					152
		·870	241·7					182
		·864	226·9					115
	11951	·847	281·9	312·5	+11·1	5	20	165*f*
	11956	·729	249·8	299·5	−13·1	4	15	
G	*1107e*	·527	308·7	281·1	+21·0	3	11	
	11947	·437	347·1	261·4	+27·1	6	31	
	11948	·320	348·5	259·0	+20·2	71	373	
	11949	·454	39·5	237·0	+22·3	5	18	
	11953	·668	50·7	219·9	+26·6	9	36	
	11955	·949	110·3	185·5	−18·5	54	311	364*c*
		·816	114·7					229
		·871	59·9					135
June 22			(−6·7)	(255·1)	(+ 2·0)	(157)	(815)	(1625)
174·361		·955	245·1					108
	11951	·947	280·9	313·2	+11·0	8	22	338*nf*
	11956	·862	253·4	299·9	−13·1	5	14	84*c*
	11957	·751	230·4	282·4	−26·9	16	79	
	11947	·538	323·1	263·4	+27·3	15	57	
G	11948	·436	316·5	260·7	+20·4	57	278	
	11954	·210	348·9	244·5	+13·9	1	5	
	11949	·356	14·4	236·6	+22·1	0	4	
	11953	·543	39·0	219·7	+26·8	6	20	
	11955	·861	113·1	185·7	−18·5	62	323	243*c*
		·948	57·7					197
		·978	105·4					82
June 23			(−6·2)	(242·1)	(+ 2·1)	(170)	(802)	(1052)
175·351		·971	284·8					340
		·951	255·2					314
		·870	248·0					117
		·813	294·0					78
	11957	·857	235·9	281·8	−27·3	57	242	121*c*
	11947	·683	310·4	265·0	+28·0	4	9	
G	11948	·603	302·4	261·8	+20·7	77	406	
	11954	·358	306·4	246·2	+14·3	5	17	
	11953	·435	17·8	220·5	+26·6	5	11	
	11955	·737	117·8	185·8	−18·4	54	289	107*c*
		·904	55·3					129
		·957	108·0					699
		·982	71·1					91
June 24			(−5·8)	(229·0)	(+ 2·2)	(202)	(974)	(1996)

Group 11954. June 21–27. A very small group, comparatively long-lived for its size.
Group 11955. June 21–July 3. A group of simple formation, comprising a stable regular spot as leader and a smaller spot 8° following in longitude. Between June 28 are 29, there is a sudden development of new spots, and a regular spot emerges as the new follower.
Group 11956. June 22–25. A pair of small spots; though not seen on June 24, a larger spot suggesting a new development, is very near the west limb on June 25.
Group 11957. June 23–25. A group originating near the west limb.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
176·402		·930	291·2					93
	11956	·997	256·7	299·6	−13·1	30	55	101c
	11957	·944	240·3	281·7	−27·0	73	295	232c
	11947	·838	303·3	267·8	+28·7	0	5	109c
	11948	·755	296·1	261·4	+20·9	92	516	270c
	11958	·754	248·4	261·2	−14·5	7	37	
	11954	·525	293·1	244·7	+13·8	5	22	
G	11953	·409	350·5	219·3	+26·0	4	8	
	11959	·377	40·2	200·2	+18·8	11	25	
	11955	·568	127·7	186·9	−18·2	39	258	
	11960	·904	113·2	153·2	−19·8	10	21	927c
		·907	53·1					77
		·916	72·6					171
		·950	64·2					109
		·974	112·9					490
June 25			(−5·3)	(215·0)	(+ 2·3)	(271)	(1242)	(2579)
177·471	11958	·899	252·6	263·1	−14·5	6	16	132f
	11948	·870	293·2	259·8	+21·3	62	413	292c
	11954	·738	286·4	247·5	+13·7	5	18	
	1107f	·742	239·8	243·8	−20·1	5	17	
G	11959	·283	0·6	200·7	+18·7	57	281	
	11955	·419	147·3	187·2	−18·2	31	203	
	11960	·776	117·6	154·3	−19·4	4	18	194f
		·904	63·8					166
		·941	115·1					472
June 26			(−4·8)	(200·9)	(+ 2·4)	(170)	(966)	(1256)
178·385		·959	298·4					282
	11958	·972	255·0	263·8	−13·9	10	33	200f
	11948	·947	292·0	259·4	+21·7	58	285	490c
	11954	·871	284·2	248·9	+13·6	2	9	226f
	11961	·500	333·3	203·6	+28·9	1	5	
	11959	·343	323·2	201·2	+18·4	128	608	
G	11955	·362	173·1	186·2	−18·4	37	194	
	11960	·611	124·0	156·8	−17·7	6	20	
	1107g	·735	67·8	143·3	+17·9	5	12	82c
		·842	119·8					925
		·871	56·7					168
		·879	70·8					168
June 27			(−4·4)	(188·8)	(+ 2·6)	(247)	(1166)	(2541)
1936.			°	°	°			
179·373		·990	254·8					93
		·984	286·0					153
		·938	247·8					112
		·877	295·9					157
		·866	240·5					99
		·861	313·0					92
		·778	301·0					378
	11948	·984	292·6	255·4	+22·7	25	90	293nf
C	*1107h*	·963	283·4	250·1	+13·7	4	7	350f
	1107i	·548	277·3	208·7	+ 6·2	1	2	
	11959	·501	303·4	201·7	+18·4	116	694	
	11955	·398	205·8	186·2	−18·2	42	175	
	11960	·459	138·6	157·2	−17·5	7	21	
		·769	53·2					105
		·801	123·4					504
June 28			(−4·0)	(175·7)	(+ 2·7)	(195)	(989)	(2336)
180·467		·976	283·3					191
		·945	244·7					208
		·937	296·1					251
		·841	298·5					123
		·841	235·2					144
		·837	287·1					173
C		·826	246·9					216
	11959	·680	294·5	201·8	+18·5	103	813	
	11961	·706	306·8	200·5	+27·1	6	19	
	11955	·522	225·7	184·3	−18·7	58	297	
	11960	·403	152·5	150·0	−18·1	12	52	
	11962	·583	134·1	134·6	−21·3	1	10	
June 29			(−3·5)	(161·2)	(+ 2·8)	(180)	(1191)	(1306)
181·332		·961	296·1					266
		·931	287·5					171
		·923	239·7					125
		·914	224·9					51
		·909	249·7					187
		·824	241·0					203
	11961	·834	302·1	202·7	+28·0	25	71	113c
	11959	·808	290·9	202·3	+18·5	117	725	206c
G	11955	·631	234·0	182·4	−19·3	68	345	
	11963	·366	209·5	160·5	−15·7	3	8	
	11960	·352	178·3	149·2	−17·6	6	20	
	1107j	·504	139·5	129·5	−19·7	1	3	
	11964	·979	59·0	71·9	+30·9	21	61	257c
		·949	72·0					236
		·952	113·1					193
June 30			(−3·1)	(149·8)	(+ 2·9)	(241)	(1233)	(2008)

Group 11958. June 25–27. A group originating towards the west limb; apparently it is short lived.
Group 11959. June 25–July 2. A large stream developing rapidly from a pair of small spots on June 25. The leader when fully developed about June 29, appears to have come from the fusion of two spots which are clearly separated on June 27.
Group 11960. June 25–30. A small spot with companions on June 27–30 in an extensive area of faculæ.
Group 11961. June 27–July 2. A tiny spot on June 27 which precedes the development of a group near the west limb.
Group 11962. June 29–July 4. A very small spot seen only on June 29, July 2 and July 4. There is an extensive area of faculæ.
Group 11963. June 30–July 5. A disturbed area, marked by extensive faculæ, producing a small spot on each of the days June 30, July 2, 4 and 5.
Group 11964. June 30–July 3. A wide pair of small spots of which one remains on July 3.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
182·465		·969	249·1					231
	11959	·936	288·5	203·8	+18·4	137	728	402*c*
	11961	·934	299·3	202·4	+28·4	46	316	190*c*
	11955	·792	242·3	182·7	−19·6	49	211	159*c*
	11965	·389	300·4	155·0	+14·1	1	5	
G	11966	·466	14·1	127·3	+29·7	1	5	
	11967	·874	66·5	75·3	+21·9	7	26	97*c*
	11964	·914	57·2	71·4	+31·0	18	58	245*c*
		·925	116·5					436
		·953	61·9					207
July 1			(−2·5)	(134·8)	(+ 3·0)	(259)	(1349)	(1967)
183·443		·978	245·2					235
	11959	·991	287·9	204·3	+18·1	123	724	443*nf*
	11961	·984	298·1	201·5	+28·2	40	149	246*c*
	11955	·897	246·7	182·4	−19·3	33	153	668*c*
	11963	·663	236·5	157·4	−18·8	3	6	
	11965	·587	290·6	156·2	+14·4	20	118	
	1107k	·572	220·9	145·7	−22·7	1	2	
C	11962	·473	203·5	133·5	−22·5	1	4	
	11966	·465	350·9	126·7	+30·3	4	10	
	11967	·756	63·9	75·1	+21·5	17	59	220*c*
	11964	·822	53·9	71·3	+30·9	5	18	248*c*
	1107l	·926	119·7	58·7	−25·9	3	12	522*c*
		·797	122·6					201
		·885	60·1					227
		·968	73·9					459
July 2			(−2·1)	(121·8)	(+ 3·1)	(250)	(1255)	(3469)
184·402		·906	298·1					78
		·854	307·7					127
		·810	246·0					541
	11955	·954	248·3	179·1	−19·6	15	95	598*p*
	11965	·763	286·3	158·0	+14·4	46	226	
	11966	·537	329·5	127·5	+30·5	4	15	
C	11967	·635	59·9	73·2	+21·1	15	73	
	11964	·785	49·5	64·0	+32·8	3	10	125*c*
		·786	56·7					109
		·820	121·7					213
		·837	135·2					254
		·920	73·0					829
		·951	122·7					186
July 3			(−1·7)	(109·1)	(+ 3·2)	(83)	(419)	(3060)
1936.			°	°	°			
185·397		·926	301·6					204
		·813	244·9					587
	11965	·890	284·3	158·6	+14·2	42	254	304*c*
	11963	·909	247·6	158·3	−18·7	2	5	974*c*
C	11962	·765	235·4	139·1	−23·3	2	7	575*c*
	11966	·647	315·0	127·7	+29·9	8	18	
	11967	·490	51·4	71·9	+20·7	23	102	
		·822	71·4					417
		·856	128·8					155
July 4			(−1·2)	(96·0)	(+ 3·3)	(77)	(386)	(3216)
186·370		·935	303·8					135
		·915	248·6					384
		·871	237·6					315
	11965	·970	283·4	159·1	+13·8	40	215	314*c*
	11963	·966	251·8	156·1	−16·6	10	17	592*c*
G	11966	·767	307·2	127·8	+30·0	12	27	89*c*
	11968	·319	194·9	87·9	−14·5	17	59	
	11967	·321	27·7	74·0	+19·8	21	106	
		·928	112·4					148
		·977	104·0					202
July 5			(−0·8)	(83·1)	(+ 3·4)	(100)	(424)	(2179)
187·395		·981	252·1					310
		·971	288·1					127
		·914	244·0					544
	11966	·886	300·9	129·5	+28·8	4	10	121*nf*
	11968	·442	226·1	88·6	−14·5	68	357	
C	11967	·285	342·5	74·7	+19·2	7	19	
		·890	120·5					199
		·933	106·5					397
		·963	118·5					265
		·971	65·9					115
July 6			(−0·3)	(69·5)	(+ 3·5)	(79)	(386)	(2078)
188·444		·963	244·7					448
		·939	301·6					209
		·850	236·0					230
	11968	·611	239·6	88·6	−14·9	69	392	
C	11967	·404	310·1	74·6	+18·4	10	30	
		·785	127·6					250
		·864	109·4					474
		·906	121·2					308
		·922	64·8					114
July 7			(+0·2)	(55·7)	(+ 3·6)	(79)	(422)	(2033)

Group 11965. July 1–5. A smallish stream of normal type.
Group 11966. July 1–6. A group of minor importance.
Group 11967. July 1–11. A small stream of unstable spots.
Group 11968. July 5–11. A stream of normal type.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
189·417		·983	297·4					48
	11968	·750	246·8	88·0	−14·5	95	508	
	11967	·570	296·0	75·2	+17·5	1	3	
G	11969	·670	222·6	73·0	−26·2	12	34	
	11970	·987	68·4	321·6	+21·9	35	159	539c
		·872	60·4					198
		·938	120·4					159
July 8			(+0·6)	(42·8)	(+ 3·7)	(143)	(704)	(944)
190·431		·911	261·3					94
	11968	·875	250·7	87·9	−14·8	77	419	402c
	11969	·791	232·9	73·7	−25·7	15	65	
	1107m	·375	179·0	29·0	−18·1	4	12	
	11970	·927	67·9	321·9	+21·8	59	355	704c
C		·829	70·9					103
		·917	125·7					277
		·926	109·3					181
		·953	76·7					163
		·975	104·7					256
July 9			(+1·1)	(29·4)	(+ 3·8)	(155)	(851)	(2180)
191·430		·854	289·7					350
		·826	304·1					177
		·793	229·9					146
	11968	·959	253·1	87·6	−15·0	74	519	398c
	11969	·883	237·9	72·0	−25·7	14	42	213c
	11971	·790	311·3	61·8	+34·2	2	3	65c
	11970	·825	66·5	321·9	+21·5	82	454	506c
C	11972	·907	106·9	313·2	−13·4	11	34	374c
		·825	113·3					153
		·850	130·7					293
		·867	76·3					234
		·939	73·5					161
		·949	118·2					228
		·972	105·5					130
July 10			(+1·5)	(16·1)	(+ 4·0)	(183)	(1052)	(3428)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
192·350		·924	241·2					357
		·887	301·6					185
	11968	·988	254·5	83·4	−14·6	28	88	209c
	11967	·927	289·1	71·8	+19·1	5	24	296c
	11971	·854	308·2	58·0	+34·2	0	5	120c
	11973	·694	117·9	324·6	−15·8	5	10	
	11970	·708	62·9	321·5	+21·7	87	500	139f
G	11972	·794	110·5	314·3	−13·5	15	48	199c
	11974	·997	68·6	277·2	+21·7	12	85	110n
		·756	75·2					79
		·835	135·1					149
		·859	71·8					168
		·900	121·2					205
		·906	108·1					238
July 11			(+1·9)	(4·0)	(+ 4·0)	(152)	(760)	(2454)
193·378		·983	289·0					215
		·976	244·2					214
		·950	303·2					220
		·821	288·2					322
	11973	·543	129·4	324·6	−16·4	15	68	
	11970	·547	54·7	321·7	+22·0	81	394	
G	11972	·635	118·2	315·3	−14·1	15	39	
	11974	·955	68·7	277·5	+21·6	15	41	490s
		·786	115·4					224
		·834	128·8					135
		·932	65·8					50
		·948	132·2					126
		·965	120·2					261
July 12			(+2·4)	(350·4)	(+ 4·1)	(126)	(542)	(2257)
194·328		·985	303·2					118
		·949	287·5					174
		·919	231·0					146
		·863	287·6					261
	11973	·394	149·8	326·0	−15·7	25	82	
	11970	·406	41·4	321·1	+21·7	70	455	
G	11972	·463	131·0	316·8	−13·7	11	21	
	11974	·879	67·8	277·1	+21·4	12	48	479sf
	11975	·949	70·6	266·1	+19·7	0	8	605n
		·890	134·4					106
		·911	122·4					283
		·932	106·2					125
July 13			(+2·8)	(337·8)	(+ 4·2)	(118)	(614)	(2297)

Group 11969. July 8–10. A small group.
Group 11970. July 8–20. A large stream developing at first in the usual manner; on July 14–15, however, other spots appear near the leader, one of them becoming a regular spot for a few days.
Group 11971. July 10–11. A tiny spot.
Group 11972. July 10–14. A pair of spots separating in longitude; the leader alone remains on July 14.
Group 11973. July 11–16. A small stream.
Group 11974. July 11–19. A single spot.
Group 11975. July 13–23. A disturbed area marked by one or two small spots not recorded on July 17 and 18.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
195·506		·959	286·4					341
		·950	240·4					112
	11973	·350	190·8	326·1	−15·6	25	89	
	11970	·305	4·9	320·6	+22·0	78	508	
	11972	·304	171·4	319·5	−13·0	1	2	
	1108a	·413	162·9	314·9	−18·8	0	4	
C	11976	·777	131·0	281·1	−27·3	3	7	324*n*
	11974	·737	64·7	276·7	+21·4	13	53	
	11975	·854	68·9	264·3	+20·2	4	9	540*nf*
		·901	109·9					190
		·914	56·8					245
		·944	74·2					285
		·980	59·2					192
July 14			(+3·4)	(322·2)	(+ 4·4)	(124)	(672)	(2229)
196·548		·878	248·6					204
		·830	231·0					185
	11973	·452	219·2	325·6	−16·3	9	32	
	11970	·360	323·2	321·7	+21·0	102	663	
G	11976	·656	141·8	281·4	−27·0	3	11	
	11974	·580	58·8	276·4	+21·2	11	42	
	11975	·721	66·2	264·0	+20·0	9	27	266*n*
		·852	72·2					259
		·919	58·0					160
July 15			(+3·8)	(308·4)	(+ 4·4)	(134)	(775)	(1074)
197·332		·911	251·9					374
		·894	237·2					210
	11973	·562	233·6	325·9	−15·4	8	20	
	11970	·479	306·4	322·2	+20·5	128	721	
G	11974	·450	49·8	276·5	+21·0	10	39	
	11975	·597	61·8	264·1	+20·1	3	14	
	11977	·981	108·6	221·4	−17·2	38	229	306*c*
		·832	59·7					108
		·971	67·7					152
July 16			(+4·2)	(298·0)	(+ 4·5)	(187)	(1023)	(1150)
198·495		·956	240·5					168
		·945	252·9					219
		·892	293·6					135
	11970	·666	295·1	322·3	+19·9	93	626	
	11974	·299	19·5	276·5	+20·9	11	25	
C	11978	·296	41·1	270·9	+17·3	13	65	
	11977	·899	111·7	221·8	−17·2	41	227	617*f*
		·879	65·3					167
		·978	61·9					94
		·979	71·7					170
July 17			(+4·7)	(282·6)	(+ 4·6)	(158)	(943)	(1570)
1936.			°	°	°			
199·340		·963	294·1					93
		·878	233·1					115
		·875	246·5					262
		·755	245·4					228
	11970	·799	291·3	323·6	+19·8	75	425	265*p*
G	11974	·278	343·9	276·2	+20·1	8	26	
	11978	·207	356·5	272·3	+16·6	5	25	
	11977	·809	114·9	221·6	−16·9	39	212	735*f*
		·929	73·3					310
		·967	62·7					411
July 18			(+5·1)	(271·5)	(+ 4·7)	(127)	(688)	(2419)
200·396		·947	249·1					248
		·881	249·5					198
	11970	·927	288·7	325·6	+19·1	40	236	1005*nf*
	1108b	·539	308·1	285·0	+23·6	3	9	
	11974	·402	312·1	276·0	+20·2	4	11	
	11978	·319	309·1	272·4	+16·2	3	8	
G	11975	·268	343·1	262·2	+19·6	3	7	
	11977	·669	122·0	221·3	−16·9	44	226	
		·811	71·1					274
		·871	116·3					88
		·900	61·9					458
		·949	114·9					253
July 19			(+5·5)	(257·5)	(+ 4·8)	(97)	(497)	(2524)
201·328		·962	254·5					227
		·899	231·9					176
		·872	250·1					244
	11970	·981	288·3	324·9	+18·9	45	232	1099*nf*
	11975	·376	313·6	261·9	+19·6	5	14	
	11977	·531	133·1	221·4	−16·7	44	222	
G	11979	·949	65·2	173·6	+25·0	3	11	63*c*
	11980	·991	78·3	162·3	+12·2	25	83	
		·813	59·1					293
		·896	116·5					323
		·975	108·5					62
		·980	61·4					84
July 20			(+5·9)	(245·2)	(+ 4·9)	(122)	(562)	(2571)

Group 11976. July 14–15. One or two tiny spots in a large area of faculæ.
Group 11977. July 16–27. A regular spot attended by a subsidiary spot which is absorbed by July 19 or 20 into the penumbra of the main spot, but becomes detached again by July 22. Meanwhile, the axis joining the two umbræ rotates counter-clockwise. A small cluster follows from July 21 to 24.
Group 11978. July 17–19. A short-lived group.
Group 11979. July 20–31. A small spot on July 20, after which nothing is seen until July 29 when a group begins to develop near the west limb.
Group 11980. July 20–30. Return of Group 11965. A regular spot dying out slowly. A small spot appears near its place on July 30.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
202·363		·981	293·4					116
		·963	250·6					159
		·909	290·2					109
		·773	292·3					165
	11975	·521	303·6	259·1	+21·1	4	13	
G	11977	·411	155·0	221·1	−16·9	41	188	
	1108c	·524	150·4	215·3	−22·2	0	1	
	11980	·937	78·8	161·6	+12·2	20	78	263*nf*
		·813	119·3					254
		·894	62·7					255
		·919	104·1					159
		·949	113·4					541
July 21			(+6·4)	(231·5)	(+ 5·0)	(65)	(280)	(2021)
203·390		·956	250·2					69
		·910	240·2					164
		·905	227·4					160
		·849	288·2					406
	11975	·685	298·4	258·5	+22·8	0	5	198*p*
G	11977	·376	187·3	220·7	−16·7	35	169	
	11981	·878	117·8	161·6	−21·3	0	5	585*n*
	11980	·832	78·6	161·5	+12·3	19	99	192*nf*
		·797	58·4					123
		·906	60·4					48
		·953	108·2					292
July 22			(+6·8)	(217·9)	(+ 5·1)	(54)	(278)	(2237)
204·126		·958	242·3					74
		·915	288·7					374
		·913	230·5					65
		·738	307·7					143
	11975	·777	296·3	257·3	+23·5	2	9	249*c*
	11977	·428	208·5	220·4	−17·0	26	155	
K	11982	·320	356·1	209·5	+23·6	7	36	
	11980	·732	77·8	161·2	+12·4	22	89	
	11981	·854	120·7	155·5	−22·7	0	12	304*p*
		·869	56·9					107
		·870	71·8					87
		·913	108·9					298
		·963	120·0					148
July 23			(+7·1)	(208·1)	(+ 5·1)	(57)	(301)	(1849)
1936.			°	°	°			
205·335		·975	291·1					396
		·910	291·5					328
		·864	301·4					148
		·795	290·4					147
	11977	·581	231·9	220·4	−16·4	31	137	
	11983	·523	309·3	218·3	+24·0	3	5	
G	11982	·417	321·1	208·7	+23·8	14	46	
	1108d	·557	219·3	214·2	−20·7	3	8	
	11980	·523	74·5	161·2	+12·5	14	96	
		·784	115·3					276
		·912	124·6					244
		·934	114·1					374
		·938	58·9					124
July 24			(+7·7)	(192·1)	(+ 5·2)	(65)	(292)	(2037)
206·352		·962	295·7					216
		·955	285·4					85
	11977	·731	242·3	220·8	−15·9	13	128	
	11983	·689	300·8	219·2	+24·6	3	6	
	11982	·572	304·4	209·5	+23·3	21	73	
G	11981	·515	158·3	166·8	−23·3	0	8	
	11980	·324	65·9	161·1	+12·6	12	60	
		·842	131·3					254
		·853	118·5					230
		·909	58·3					150
July 25			(+8·1)	(178·7)	(+ 5·3)	(49)	(275)	(935)
207·343	11977	·858	247·9	221·1	−15·8	14	120	534*sf*
	11983	·821	296·7	219·3	+24·8	2	4	51*c*
	11982	·717	296·5	209·4	+22·5	42	225	
	1108e	·574	313·4	193·6	+27·9	3	11	
G	11980	·142	31·7	161·2	+12·3	9	47	
	1108f	·706	160·9	149·0	−36·5	1	4	
	11984	·944	102·5	96·5	− 9·9	3	10	143*f*
		·940	64·0					67
		·969	107·8					251
July 26			(+8·5)	(165·6)	(+ 5·4)	(74)	(421)	(1046)
208·363		·984	294·7					175
	11977	·950	251·3	221·1	−15·8	19	109	507*sf*
	11982	·843	293·5	208·8	+22·7	44	206	311*c*
	11981	·498	200·3	162·8	−22·3	1	5	
G	11980	·196	308·3	161·1	+12·4	9	40	
	11985	·829	63·0	97·5	+25·3	2	8	91*nf*
	11984	·843	105·5	96·8	− 9·9	0	5	
		·886	109·3					456
		·968	71·0					139
July 27			(+8·9)	(152·1)	(+ 5·5)	(75)	(373)	(1679)

Group 11981. July 22–28. Intermittent; a large area of faculæ in which small ephemeral spots appear.
Group 11982. July 23–29. A medium-sized group of unstable spots.
Group 11983. July 24–26. A small spot preceding Group 11982.
Group 11984. July 26–27. A small short-lived spot.
Group 11985. July 27–Aug. 6. A stream, in which the leader is a double spot, the two components combining on August 2.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
209·380		·971	247·7					264
		·883	283·4					89
		·813	302·1					226
		·812	290·4					161
		·790	237·2					189
	11982	·939	292·9	208·8	+23·4	45	121	567c
	11981	·598	217·6	161·9	−23·1	2	4	
	11980	·395	289·1	161·0	+12·6	5	12	
C	11985	·698	58·7	97·4	+25·5	9	20	
	11986	·968	118·9	68·1	−26·1	61	190	500n
	11987	·967	112·1	66·7	−19·7	14	42	328np
		·770	113·8					268
		·846	113·7					186
		·897	70·3					373
		·975	54·7					73
		·990	76·3					62
July 28			(+9·3)	(138·6)	(+ 5·6)	(136)	(389)	(3286)
210·473		·939	288·4					225
		·926	242·6					217
		·913	299·2					278
	11982	·987	295·6	206·2	+26·1	27	112	382s
	11979	·782	300·3	173·2	−26·9	8	21	73c
G	11980	·603	283·4	161·0	+12·5	3	6	
	11985	·570	50·7	94·9	+26·0	12	48	
	11987	·888	115·6	66·2	−19·6	11	34	164c
	11986	·910	121·7	65·2	−25·7	110	520	481c
		·918	54·6					144
		·928	75·4					177
July 29			(+9·8)	(124·2)	(+ 5·6)	(171)	(741)	(2141)
211·334		·971	296·4					178
		·967	246·8					141
		·852	248·9					91
		·831	237·7					295
	11979	·882	298·8	173·7	+28·0	26	72	231c
	11980	·725	285·5	159·0	+15·1	0	4	
	11988	·484	238·5	137·4	− 9·4	1	3	
G	11985	·440	36·3	96·0	+26·1	43	232	
	1108g	·484	137·7	93·1	−15·5	3	5	
	11987	·772	121·6	68·6	−19·8	30	58	159c
	11986	·819	127·1	66·5	−25·6	80	352	381c
		·840	54·3					101
		·842	76·7					152
		·956	73·7					116
		·966	104·4					108
July 30			(+10·1)	(112·8)	(+ 5·7)	(183)	(726)	(1953)
1936.			°	°	°			
212·353		·920	241·8					343
		·856	285·6					155
		·799	242·4					167
	11979	·956	298·0	172·7	+28·4	24	112	384c
	1108h	·582	203·0	114·0	−26·7	5	22	
	11985	·358	11·8	94·6	+26·2	94	457	
C	11987	·635	128·7	67·9	−18·4	25	96	
	11986	·714	135·2	65·5	−25·5	75	405	170c
		·794	78·2					183
		·897	72·3					237
		·920	105·8					253
		·953	121·0					116
		·953	62·6					73
July 31			(+10·6)	(99·3)	(+ 5·8)	(223)	(1092)	(2081)
213·435		·982	246·8					355
		·981	295·9					144
		·950	285·3					180
		·903	247·6					363
		·882	297·8					173
		·840	229·2					232
	11988	·806	253·4	136·4	− 9·6	18	60	144c
G	11985	·383	335·3	95·2	+26·1	97	466	
	11987	·481	145·1	68·3	−17·5	49	172	
	11986	·595	150·2	66·0	−25·4	77	330	
		·796	70·7					253
		·800	111·2					266
		·864	126·0					113
		·955	107·4					209
		·967	71·7					89
Aug. 1			(+11·0)	(85·0)	(+ 5·9)	(241)	(1028)	(2521)
214·426		·959	249·2					186
		·949	288·6					168
		·934	235·8					199
		·829	230·2					207
	11988	·913	255·5	135·7	−10·7	2	5	238n
	1108i	·869	242·9	127·1	−20·0	0	9	135f
	11985	·499	315·0	94·9	+26·0	75	396	
C	*1108j*	·465	332·3	86·3	+29·9	2	10	
	11987	·405	169·8	67·6	−17·5	33	220	
	11986	·535	167·0	64·3	−25·4	38	254	
	1108k	·901	72·8	7·3	+18·0	2	5	94f
		·882	108·5					187
		·892	117·8					122
		·975	105·8					157
Aug. 2			(+11·4)	(71·9)	(+ 5·9)	(152)	(899)	(1693)

Group 11986. July 28–Aug. 8. A stream in which the leader tends to composite structure and is the predominating component.
Group 11987. July 28–Aug. 8. A stream showing at first the greater activity in its following component. New spots in the preceding part develop after Aug. 3.
Group 11988. July 30–Aug. 2. A single spot on July 30: a stream of tiny spots on Aug. 1: a single spot on Aug. 2.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
215·361		·975	257·6					137
		·960	236·1					227
		·936	245·8					137
		·867	231·4					166
	11985	·639	304·4	95·3	+26·0	58	318	
C	11989	·505	211·4	75·7	−19·7	6	18	
	11987	·436	198·4	67·8	−18·4	65	373	
	11986	·532	188·7	64·6	−25·6	44	248	
		·795	116·4					291
		·817	70·9					67
		·924	109·8					186
Aug. 3			(+11·8)	(59·5)	(+ 6·0)	(173)	(957)	(1211)
216·425		·987	249·0					82
		·959	237·9					151
		·912	300·6					138
	11985	·779	298·8	94·7	+26·0	63	286	
G	11989	·661	230·4	78·1	−19·7	14	69	
	11987	·550	223·4	68·8	−17·9	83	329	
	11986	·594	209·5	64·3	−25·2	40	215	
	11990	·989	68·8	322·6	+21·8	75	180	685*p*
		·878	126·4					196
Aug. 4			(+12·2)	(45·5)	(+ 6·1)	(275)	(1079)	(1252)
217·335		·873	246·7					222
	11985	·880	296·5	94·5	+26·2	64	303	373*c*
	11989	·782	238·7	78·4	−19·6	14	70	
	11987	·689	235·5	69·9	−18·1	117	531	
	11986	·696	222·3	64·6	−25·7	34	200	
G	11991	·468	287·6	60·6	+13·5	8	22	
	11992	·927	64·5	325·3	+25·9	7	12 }	962*c*
	11990	·944	69·1	322·0	+21·7	52	230 }	
		·835	133·1					123
		·946	107·6					226
		·948	127·8					143
Aug. 5			(+12·5)	(33·4)	(+ 6·1)	(296)	(1368)	(2049)
1936.			°	°	°			
218·352		·956	251·7					200
	11985	·966	295·4	96·0	+26·1	34	223	488*nf*
	11989	·896	244·5	78·9	−19·6	26	136 }	403*c*
	11987	·828	243·1	70·8	−18·1	84	466 }	
	11986	·814	231·4	65·0	−26·2	27	157	366*c*
G	11991	·664	283·7	61·4	+13·7	19	59	
	11992	·826	62·5	325·6	+26·0	2	8 }	1070*c*
	11990	·863	68·1	320·5	+22·0	57	280 }	
	11993	·986	107·2	302·0	−15·8	15	41	118*c*
		·879	110·5					179
		·968	123·7					278
Aug. 6			(+12·9)	(20·0)	(+ 6·2)	(264)	(1370)	(3102)
219·438		·973	299·4					198
		·930	289·7					126
	11987	·931	247·7	70·4	−18·1	52	288	570*c*
	11986	·913	238·5	64·9	−25·3	11	129	501*sf*
	11991	·822	282·7	61·1	+14·0	19	87	134*c*
C	11994	·671	127·7	331·6	−18·9	6	18	
	11990	·701	64·9	322·6	+21·9	53	253	572*f*
	11995	·920	129·1	308·2	−32·2	15	75	436*c*
	11993	·918	110·1	302·3	−15·6	11	39	345*f*
		·769	112·5					101
Aug. 7			(+13·3)	(5·6)	(+ 6·3)	(167)	(889)	(2983)
220·402	11987	·981	250·5	68·7	−17·6	23	86	451*c*
	11991	·946	282·2	64·7	+13·5	8	17	152*f*
	11986	·972	241·9	64·4	−25·4	19	67	438*sf*
	11990	·548	59·1	322·6	+21·8	47	225	232*f*
	11992	·580	53·2	322·0	+25·7	3	10	
G	11995	·839	134·2	308·3	−31·3	87	356	215*c*
	11993	·819	114·1	302·2	−15·6	12	20	120*f*
	11996	·968	106·0	279·9	−13·7	10	18	185*c*
		·960	74·0					315
		·965	66·9					164
Aug. 8			(+13·7)	(352·9)	(+ 6·3)	(209)	(799)	(2272)

Group 11989. Aug. 3–6. A small group (preceding Group 11987) developing near the west limb.
Group 11990. Aug. 4–15. Return of Group 11970. A spot of moderate size followed by a few small companions in an extensive area of faculæ. Part of this leader spot breaks away between Aug. 7 and 8 and separates widely from the original nucleus.
Group 11991. Aug. 5–8. A small stream.
Group 11992. Aug. 5–13. A small persistent spot with a companion on Aug. 10 in the same area of disturbance as Group 11990.
Group 11993. Aug. 6–10. A single spot.
Group 11994. Aug. 7–9. One or two small spots not seen on Aug. 8.
Group 11995. Aug. 7–17. A stream of spots increasing rapidly to its maximum development on Aug. 9. The follower, somewhat composite in structure, is the largest and longest lived component.
Group 11996. Aug. 8–14. A small group of stream type consisting simply of two spots which separate in longitude.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
221·409		·982	283·6					202
		·981	241·8					260
		·856	251·9					165
	11997	·876	300·9	39·6	+30·0	9	28	81*c*
	11998	·790	287·2	31·7	+17·5	11	32	122*c*
	11994	·454	161·0	330·6	−19·0	0	3	
	11990	·382	47·1	322·2	+21·1	47	203	
G	11992	·446	39·8	321·2	+26·0	3	13	
	11995	·755	142·9	307·4	−31·6	106	562	
	11993	·682	121·4	302·6	−15·7	6	14	142*f*
	11996	·876	110·4	281·8	−14·4	24	51	267*c*
	11999	·967	72·2	263·4	+18·8	27	116	511*f*
		·896	70·6					744
		·935	121·7					207
Aug. 9			(+14·0)	(339·6)	(+ 6·4)	(233)	(1022)	(2701)
222·403		·968	233·2					90
		·948	254·8					170
		·784	245·8					174
	11997	·956	298·8	40·0	+29·3	0	18	114*c*
	11998	·892	286·3	29·9	+17·4	10	20	203*p*
	12000	·619	283·1	4·5	+13·1	15	47	
	11990	·265	10·4	323·5	+21·5	37	166	
G	11992	·346	13·6	321·2	+26·0	4	7	
	11995	·678	154·6	306·5	−31·7	73	483	
	11993	·538	133·6	302·6	−15·8	3	5	
	11996	·763	115·0	281·0	−14·3	28	67	192*c*
	11999	·893	72·2	262·7	+18·8	15	88	684*c*
		·780	67·6					412
		·859	138·2					111
Aug. 10			(+14·4)	(326·4)	(+ 6·4)	(185)	(901)	(2150)
223·397		·986	300·8					53
		·897	252·2					194
		·890	244·6					109
	11998	·967	286·2	29·5	+17·3	4	17	194*p*
	12000	·788	282·0	5·5	+13·4	22	61	195*c*
	11990	·308	328·7	323·2	+21·6	29	139	
	11995	·635	168·2	304·5	−31·8	75	450	
C	11996	·624	122·4	280·5	−14·0	34	102	
	12001	·598	73·8	277·0	+14·8	2	6	
	11999	·779	70·4	262·5	+19·3	20	80	618*c*
		·870	115·2					27
		·908	67·0					288
		·917	132·0					33
		·970	64·2					188
Aug. 11			(+14·8)	(313·3)	(+ 6·5)	(186)	(855)	(1899)
1936.			°	°	°			
224·115		·952	253·0					171
	12000	·894	281·3	7·7	+13·0	28	129	331*c*
	11990	·409	310·6	323·2	+21·5	21	103	
	11992	·434	319·0	322·1	+25·2	2	7	
	11995	·631	179·7	303·6	−32·5	62	377	
K	12002	·418	42·4	285·9	+24·1	7	16	
	11996	·511	132·2	280·9	−14·1	22	59	
	11999	·666	69·0	262·9	+18·7	11	40	
	12003	·949	66·8	231·4	+24·0	9	20	784*c*
		·947	112·2					65
Aug. 12			(+15·0)	(303·8)	(+ 6·5)	(162)	(751)	(1351)
225·385		·915	231·9					184
		·791	235·5					152
	12000	·970	281·4	3·7	+12·6	4	8	283*p*
	1109a	·674	291·2	328·5	+19·0	3	15	
	11990	·610	297·7	322·4	+21·8	14	57	
	11992	·601	305·9	319·7	+26·2	0	6	
	11995	·671	198·3	301·5	−33·1	39	273	
	12002	·311	2·3	286·2	+24·6	9	20	
C	11996	·369	163·5	280·8	−14·1	12	23	
	11999	·455	59·3	262·6	+19·4	47	190	
	12004	·628	129·5	256·5	−17·8	3	7	
	12003	·846	65·7	229·6	+24·0	19	83	347*c*
		·917	111·3					342
		·950	68·5					646
		·979	108·9					132
Aug. 13			(+15·5)	(287·0)	(+ 6·6)	(150)	(682)	(2086)
226·405		·968	233·8					122
		·887	243·3					90
	11990	·762	293·0	322·3	+21·7	8	34	436*p*
	11995	·733	211·4	300·4	−32·8	42	241	403*c*
	12002	·374	327·4	286·3	+24·8	2	7	
	12001	·185	320·8	280·4	+14·8	7	20	
C	11996	·383	195·7	279·6	−15·0	4	17	
	11999	·294	36·4	262·8	+20·1	48	216	
	12004	·468	150·2	259·4	−17·5	5	9	
	12003	·733	63·2	228·0	+23·9	20	91	168*f*
	12005	·903	64·6	208·9	+25·7	0	8 }	682*p*
	12006	·928	69·4	204·8	+21·5	0	5 }	
		·818	118·4					152
		·921	112·4					183
Aug. 14			(+15·8)	(273·5)	(+ 6·6)	(136)	(648)	(2236)

Group 11997. Aug. 9–10. A very small group.
Group 11998. Aug. 9–11. A small group.
Group 11999. Aug. 9–19. A stream of rather unstable spots.
Group 12000. Aug. 10–13. A small stream.
Group 12001. Aug. 11–19. A small group of intermittent activity.
Group 12002. Aug. 12–16. A small spot with a companion on Aug. 13.
Group 12003. Aug. 12–19. A stream of small spots.
Group 12004. Aug. 13–20. One or two small spots not seen on Aug. 16–19.
Group 12005. Aug. 14–17. One or two small spots *np* Group 12006.
Group 12006. Aug. 14–25. Return of Group 11982. A stream of changing spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
227·334		·955	247·9					106
		·827	200·3					50
		·783	303·5					146
		·752	292·5					242
	11990	·875	291·3	322·4	+21·8	7	19	670*p*
	11995	·806	220·7	299·6	−32·4	34	205	788*p*
	12002	·499	310·1	286·0	+24·8	2	6	
	12001	·380	293·7	282·2	+15·0	7	18	
G	11999	·241	357·3	261·9	+20·5	42	178	
	12004	·406	179·7	261·1	−17·2	2	5	
	12003	·605	58·9	226·9	+23·7	29	80	
	12006	·818	68·7	206·6	+21·2	9	28	598*n*
	12007	·976	60·5	182·2	+30·2	62	428	446*c*
		·818	126·5					127
		·832	115·7					184
		·939	69·4					115
Aug. 15			(+16·1)	(261·2)	(+ 6·7)	(194)	(967)	(3472)
228·332		·954	254·3					143
		·951	291·4					656
		·909	231·0					882
		·840	293·9					562
		·816	242·1					206
	11995	·883	227·5	298·3	−32·4	29	149	
	12002	·642	300·9	285·1	+24·6	0	3	
	1109b	·426	261·1	272·8	+ 2·3	1	5	
G	11999	·319	320·7	260·4	+20·8	54	163	
	12003	·451	47·4	226·8	+24·0	17	46	
	12008	·538	115·1	218·7	− 7·3	0	3	
	12009	·699	122·7	210·2	−16·9	4	6	
	12005	·650	60·8	209·8	+23·8	3	6	
	12006	·684	65·5	206·2	+21·5	31	100	
	12007	·935	60·1	178·4	+30·3	104	544	831*c*
		·983	53·3					152
Aug. 16			(+16·5)	(248·0)	(+ 6·7)	(243)	(1025)	(3432)
229·389		·946	249·9					284
		·934	294·8					661
		·809	286·0					97
		·801	243·5					284
	11995	·950	233·0	297·4	−32·0	11	36	549*p*
	12001	·708	284·3	279·1	+14·9	1	4	
	11999	·482	301·8	260·0	+20·8	28	170	
G	12003	·320	23·4	226·2	+23·7	6	19	
	12005	·491	49·2	210·8	+20·8	3	6	
	12009	·538	134·2	210·6	−15·7	10	55	
	12006	·496	57·2	207·6	+21·7	21	105	
	12007	·853	58·2	177·0	+30·5	105	540	1042*c*
	12010	·981	71·4	153·8	+19·5	5	13	249*f*
		·935	78·8					143
		·945	114·2					275
Aug. 17			(+16·8)	(234·1)	(+ 6·8)	(190)	(948)	(3584)
1936.			°	°	°			
230·488		·988	235·8					145
		·971	291·7					131
		·931	249·4					308
		·863	231·6					134
		·833	291·2					328
	12001	·859	282·8	279·3	+14·5	27	108	219*c*
	11999	·651	294·8	257·7	+21·1	21	141	
G	12003	·337	332·2	229·4	+24·0	0	5	
	12008	·235	151·4	213·1	− 5·1	6	21	
	12009	·423	157·6	210·0	−16·3	8	29	
	12006	·318	33·8	208·7	+21·9	26	106	
	12007	·716	53·0	178·1	+30·6	73	401	509*nf*
	12010	·911	71·4	153·3	+19·7	11	25	294*nf*
		·875	119·1					286
		·949	109·6					162
Aug. 18			(+17·2)	(219·6)	(+ 6·8)	(172)	(836)	(2516)
231·123		·947	250·9					146
		·930	236·0					157
		·909	292·8					213
	12001	·920	282·6	278·9	+14·3	26	184	243*c*
	11999	·743	292·0	258·5	+20·9	15	82	417*c*
	12003	·417	316·4	229·5	+24·0	3	6	
K	12009	·370	181·7	211·8	−14·7	2	8	
	12006	·270	8·4	208·8	+22·3	21	196	
	12007	·653	49·4	176·1	+30·7	81	441	278*f*
	12010	·849	70·4	153·0	+20·2	6	20	262*c*
		·848	125·7					248
		·890	112·4					126
Aug. 19			(+17·4)	(211·2)	(+ 6·9)	(154)	(937)	(2090)
232·399		·989	240·0					82
		·988	281·8					85
		·939	224·8					125
		·925	289·4					949
		·875	213·4					152
		·815	300·6					236
		·809	286·1					194
G	12004	·936	247·4	259·6	−18·3	3	13	122*c*
	12006	·346	318·6	208·5	+21·7	56	269	
	1109c	·445	177·6	193·2	−19·3	3	6	
	12007	·496	32·4	176·3	+31·2	75	372	
	12010	·638	68·0	155·7	+19·2	1	5	
		·800	117·2					256
		·900	52·6					182
		·940	114·2					331
Aug. 20			(+17·8)	(194·3)	(+ 6·9)	(138)	(665)	(2714)

Group 12007. Aug. 15–28. Possible return of Group 11979. A group of stream type, in which the leading and following components are widely separated in longitude. The leader, which is a regular spot, has following it a companion with a double umbra.
Group 12008. Aug. 16–18. A tiny spot on Aug. 16; a diminutive stream on Aug. 18.
Group 12009. Aug. 16–19. A small unstable group.
Group 12010. Aug. 17–20. A few small spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
233·474		·986	249·8					146
		·966	289·5					650
		·907	298·1					129
	1109d	·795	240·3	226·6	−18·5	2	6	
	12006	·520	301·8	208·4	+22·0	60	253	
G	12007	·422	12·9	173·8	+31·1	63	344	
	12011	·961	101·7	107·9	− 9·1	3	18	164*c*
		·878	116·7					256
		·903	130·9					223
		·973	116·3					121
Aug. 21			(+18·1)	(180·1)	(+ 6·9)	(128)	(621)	(1689)
234·346		·990	288·2					48
		·963	297·8					75
		·882	243·0					172
		·848	295·4					236
	12011*	·760	293·2	217·3	+22·1	0	4	
G	12006	·648	295·2	207·5	+21·5	58	208	
	12007	·406	351·0	172·8	+30·5	58	258	
	12011	·883	104·3	108·8	− 9·1	30	82	215*c*
	12012	·981	63·0	87·7	+27·8	23	86	139*f*
		·796	120·9					253
		·921	123·0					246
Aug. 22			(+18·4)	(168·6)	(+ 7·0)	(169)	(638)	(1384)
235·364		·966	247·8					139
		·925	292·9					370
		·871	244·5					207
	12006	·800	291·9	207·9	+21·6	42	206	178*c*
	12007	·462	329·9	170·6	+30·2	52	269	
G	12011	·749	108·6	109·3	− 8·9	24	139	214*c*
	12012	·922	62·8	87·4	+27·8	14	93	263*f*
	12013	·989	112·7	77·4	−21·0	30	157	504*p*
		·840	128·9					143
		·901	118·5					156
		·965	73·5					128
Aug. 23			(+18·7)	(155·1)	(+ 7·0)	(162)	(864)	(2302)
1936.			°	°	°			
236·351		·951	249·1					211
		·806	298·4					130
	12011*	·964	291·8	217·9	+22·8	0	17	173*c*
	1109e	·913	277·7	208·5	+ 9·8	0	6	43*p*
	12006	·895	291·0	206·1	+21·9	30	168	632*c*
G	12007	·591	314·8	171·2	+30·7	43	179	
	12011	·577	115·9	110·6	− 8·6	23	89	
	12012	·836	61·3	86·4	+27·6	15	71	226*f*
	12013	·940	115·8	77·0	−21·3	26	103	1306*c*
		·934	101·1					157
		·964	77·3					161
Aug. 24			(+19·0)	(142·1)	(+ 7·0)	(137)	(633)	(3039)
237·349		·983	278·6					152
		·900	302·3					104
		·886	291·8					158
	12006	·965	290·4	205·0	+21·5	11	30	506*n*
	12014	·946	284·1	200·9	+15·6	21	79	200*c*
	1109f	·700	267·1	173·1	− 3·1	1	4	
	12007	·737	306·1	172·7	+30·9	34	153	
	1109g	·089	68·9	124·1	+ 8·9	1	4	
G	12011	·391	130·8	111·6	− 7·9	14	79	
	12015	·546	134·7	105·2	−16·0	3	5	
	12012	·721	57·6	85·5	+27·9	10	54	138*f*
	12013	·855	120·5	76·8	−21·4	32	126	849*c*
	12016	·971	118·7	58·3	−25·6	60	399	584*c*
		·884	76·7					230
		·921	112·7					312
		·938	8·1					59
		·972	54·6					153
Aug. 25			(+19·3)	(128·9)	(+ 7·1)	(187)	(933)	(3445)
238·379		·966	293·0					139
		·854	239·0					191
		·783	231·8					182
	12014	·992	284·2	199·4	+14·9	27	157	58*c*
	12007	·869	301·6	174·7	+30·9	25	128	403*p*
	12011	·254	171·3	113·1	− 7·4	12	58	
G	12015	·426	157·4	105·5	−16·1	16	44	
	12012	·583	50·3	84·9	+28·0	11	34	
	12013	·735	128·2	77·1	−21·5	23	151	
	12016	·903	123·0	58·3	−25·7	66	318	1051*c*
	12017	·972	74·8	37·7	+16·4	4	15	414*f*
		·931	56·2					216
		·967	110·2					176
Aug. 26			(+19·6)	(115·3)	(+ 7·1)	(184)	(905)	(2830)

Group 12011. Aug. 21–31. A pair of spots of which the leader remains after Aug. 25.
Group 12011*. Aug. 22–24. A small single spot, not seen on Aug. 23, *p* Group 12006.
Group 12012. Aug. 22–31. Return of Group 11985. A small regular spot with a train of companions after Aug. 27.
Group 12013. Aug. 23–Sept. 3. A regular spot diminishing rather rapidly after Aug. 29. There are one or two tiny companions on Aug. 25 and 29.
Group 12014. Aug. 25–26. A group developing near the west limb.
Group 12015. Aug. 25–Sept. 1. A pair of spots; the follower breaks up into a cluster on Aug. 28–29 and this has disappeared by Aug. 30.
Group 12016. Aug. 25–Sept. 6. A regular spot near which other spots grow rapidly and coalesce to form a large composite spot by Aug. 29; two small subsidiary streams form in the wake of this large spot, but the whole disturbance decreases rapidly after Aug. 31. A return or revival of Group 12016.
Group 12017. Aug. 26–Sept. 1. A small spot followed by faculæ in which Group 12019 appears on Aug. 29. There is a companion spot on and after Aug. 29.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.		Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.				°	°	°			
239·360			·929	242·4					291
			·908	284·9					129
			·800	242·1					359
		12007	·937	300·1	172·5	+30·7	19	147	1152c
		12011	·311	217·7	113·3	− 7·2	13	57	
	G	12015	·392	188·7	105·8	−15·6	48	231	
		12012	·451	37·3	84·4	+27·7	13	33	
		12013	·616	139·3	76·9	−21·3	23	140	
		12016	·813	128·9	57·9	−25·7	74	382	821f
		12017	·902	74·6	37·2	+16·9	6	13	692f
			·946	113·1					271
Aug. 27				(+19·9)	(102·3)	(+ 7·1)	(196)	(1003)	(3715)
240·411			·979	245·6					262
			·919	290·2					115
			·891	244·5					229
		12007	·992	300·2	173·8	+30·7	0	19	744f
		12011	·483	240·5	113·4	− 7·3	14	55	
		12015	·476	216·7	105·5	−15·5	36	195	
		12012	·366	13·0	83·1	+27·8	10	35	
	G	12013	·518	157·8	76·3	−21·6	29	166	
		12016	·694	139·4	58·5	−25·6	89	769	255f
		12017	·778	74·0	37·2	+16·9	6	11	394f
			·849	116·9					161
			·955	106·0					151
			·965	78·5					214
			·967	65·8					124
Aug. 28				(+20·2)	(88·4)	(+ 7·1)	(184)	(1250)	(2649)
241·356			·963	305·6					397
			·963	250·2					188
			·960	293·6					141
			·875	251·4					70
			·858	241·3					199
		12011	·648	249·8	113·6	− 7·2	9	21	
		12015	·610	232·6	106·0	−15·4	40	160	
		12018	·376	220·6	90·3	− 9·6	3	8	
		12012	·370	343·4	82·8	+27·8	12	28	
	G	12013	·478	180·4	76·2	−21·2	16	114	
		12016	·604	152·2	57·9	−25·3	137	984	
		12017	·629	72·0	37·5	+16·9	0	4	
		12019	·705	73·6	31·3	+16·6	6	24	
			·741	122·9					253
			·879	79·2					261
			·901	111·5					312
			·909	66·8					104
			·946	77·1					146
Aug. 29				(+20·4)	(76·0)	(+ 7·2)	(223)	(1343)	(2071)
1936.				°	°	°			
242·379		1109h	·885	241·3	118·6	−21·2	5	10	164p
		12011	·810	255·1	114·4	− 7·6	8	15	96sf
		12015	·764	242·9	107·0	−15·2	21	92	
		12020	·732	250·7	106·6	− 8·8	11	38	
		12018	·564	241·0	92·3	− 9·6	25	73	
		12012	·488	318·5	83·8	+28·1	13	39	
	G	12013	·524	204·7	75·9	−21·3	16	81	
		12016	·540	172·7	58·1	−25·0	116	894	
		12017	·463	65·3	36·3	+17·6	15	46	
		12019	·523	69·6	31·8	+16·7	3	14	
			·821	115·5					158
			·829	78·1					203
Aug. 30				(+20·7)	(62·4)	(+ 7·2)	(233)	(1302)	(621)
243·333			·960	244·6					232
			·938	232·6					136
		12011	·917	258·2	114·5	− 7·8	11	20 }	413c
		12020	·862	255·2	107·1	− 8·9	12	30 }	
		12015	·871	247·8	106·3	−15·3	14	67	323f
		12018	·715	248·6	92·1	− 9·8	33	199	
	G	12012	·622	308·6	83·3	+28·8	12	58	
		12013	·620	220·5	75·3	−21·5	15	58	
		12016	·553	189·4	55·5	−25·7	149	948	
		12017	·272	50·0	37·3	+17·1	8	15	
			·948	65·0					230
			·980	74·8					335
Aug. 31				(+21·0)	(49·8)	(+ 7·2)	(254)	(1395)	(1669)
244·571			·971	259·8					150
			·951	289·1					43
			·848	238·9					384
		12015	·971	252·5	106·7	−15·0	4	10	159f
		1109i	·978	243·4	106·5	−24·0	12	33	176f
		12018	·879	253·9	92·4	−10·4	15	36	212c
		12013	·769	233·7	75·2	−21·7	11	55	443s
	G	12016	·637	212·5	55·7	−25·7	107	642	
		12017	·187	349·1	35·6	+17·7	5	9	
		1109j	·930	130·5	335·7	−33·4	0	9	62f
		12021	·853	77·2	334·4	+14·7	9	22	208f
		1109k	·940	67·9	322·5	+23·1	3	7	655f
		12022	·966	108·4	321·6	−15·6	4	10	290f
			·885	64·7					97
Sept. 1				(+21·3)	(33·5)	(+ 7·2)	(170)	(833)	(2879)

Group 12018. Aug. 29 Sept. 2. A small stream.
Group 12019. Aug. 29 30. A small ephemeral group.
Group 12020. Aug. 30–31. One or two spots following Group 12011.
Group 12021. Sept. 1–4. A small definite spot.
Group 12022. Sept. 1–8. A small ephemeral group of few spots, not seen on Sept. 5–7.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
245·337		·982	244·1					148
		·981	288·1					103
		·920	242·5					358
		·856	297·3					196
	12018	·946	257·2	92·5	− 9·6	11	36	300*c*
	12013	·851	238·7	74·8	−21·8	9	22	212*c*
	12016	·713	222·1	55·4	−25·8	89	509	
G	12021	·749	77·1	334·7	+14·4	8	20	
	12022	·923	110·5	319·7	−15·7	19	53	490*c*
	12023	·944	62·9	311·7	+27·9	8	21	766*s*
	12024	·982	109·6	307·5	−17·6	12	31	206*f*
		·846	69·8					349
		·959	74·2					308
		·971	123·7					162
Sept. 2			(+21·5)	(23·4)	(+ 7·2)	(156)	(692)	(3598)
246·355		·987	257·3					145
		·943	296·2					114
		·888	243·1					546
	1109l	·961	288·8	85·1	+20·0	7	39	126*c*
	12013	·938	243·3	74·3	−22·0	10	26	523*np*
	12016	·815	230·9	54·4	−25·9	64	435	525*p*
	12025	·379	192·7	14·8	−14·4	2	5	
	12021	·582	75·1	334·5	+14·5	8	16	
C	12026	·738	84·2	322·1	+ 9·1	1	7	59*f*
	12022	·813	115·1	320·3	−15·5	11	34	392*c*
	12023	·869	61·4	310·1	+28·3	4	9	286*c*
	12024	·907	113·1	309·1	−17·4	39	156	301*f*
		·797	69·4					162
		·940	127·1					399
		·941	64·3					273
		·958	74·7					624
Sept. 3			(+21·7)	(9·9)	(+ 7·2)	(146)	(727)	(4475)
247·511		·981	241·2					287
		·971	248·5					195
	12016	·917	237·6	53·8	−25·9	73	399	1023*c*
	12025	·490	222·0	14·3	−14·5	10	28	
	12021	·359	68·0	334·6	+14·5	8	15	
	12022	·618	127·4	324·1	−15·8	1	3	
G	12023	·718	56·6	311·7	+28·6	4	10	269*f*
	12024	·771	119·4	310·1	−17·1	36	148	230*f*
		·868	73·4					533
		·869	133·3					295
		·963	109·3					124
		·967	74·6					372
		·968	127·6					178
Sept. 4			(+22·0)	(354·6)	(+ 7·2)	(132)	(603)	(3506)
1936.			°	°	°			
248·368		·862	239·6					145
	12016	·967	240·8	52·8	−25·9	79	552	769*c*
	12027	·861	286·0	43·2	+17·4	0	9	140*f*
	12025	·616	233·6	14·1	−15·2	11	32	
	12028	·436	295·4	7·6	+17·3	4	8	
	12026	·343	81·4	323·3	+ 9·7	16	37	
	12024	·658	126·1	309·7	−16·7	43	201	
G		·811	138·7					241
		·856	119·0					109
		·876	79·6					129
		·907	111·6					160
		·934	71·0					225
		·935	131·4					300
		·971	65·0					187
Sept. 5			(+22·2)	(343·3)	(+ 7·2)	(153)	(839)	(2405)
249·389		·924	244·6					175
		·844	287·7					274
	12016	·997	241·8	50·7	−27·2	30	85	148*c*
	12027	·958	286·2	44·2	+17·5	12	27	204*c*
	12025	·759	242·4	13·9	−15·4	8	24	114*c*
	12028	·653	286·7	10·3	+16·3	6	15	
G	12026	·115	68·9	323·6	+ 9·6	30	130	
	12024	·520	140·3	309·6	−16·7	39	221	
	12029	·560	67·8	296·8	+18·2	1	3	
		·858	66·7					418
		·874	136·5					250
		·954	68·8					187
Sept. 6			(+22·4)	(329·8)	(+ 7·2)	(126)	(505)	(1770)
250·365		·981	248·9					103
		·878	250·2					246
	1110a	·934	289·4	27·0	+20·6	0	12	262*p*
	12028	·791	285·7	9·5	+16·8	6	26	147*c*
G	12026	·118	288·1	323·5	+ 9·2	34	178	
	12024	·424	162·4	309·3	−16·6	57	224	
		·791	63·0					256
		·899	67·8					255
		·962	60·2					142
Sept. 7			(+22·6)	(317·0)	(+ 7·2)	(97)	(440)	(1411)

Group 12023. Sept. 2–4. A small spot.
Group 12024. Sept. 2–14. A stream consisting at first of a regular spot followed by companions; the nearer of these increases in size and drifts towards the regular spot, being absorbed by it, partially on Sept. 8 and completely on Sept. 9. On Sept. 9, a stream of small spots appears, following in longitude, and this develops into an independent group of bi-polar type.
Group 12025. Sept. 3–6. A diminutive stream.
Group 12026. Sept. 3–12. A stream of spots which are generally unstable until a regular spot forms as the leader after Sept. 7.
Group 12027. Sept. 5–6. One or two very small spots.
Group 12028. Sept. 5–7. One or two small spots.
Group 12029. Sept. 6–13. A disturbed area marked by faculæ in which a small single spot is seen on Sept. 6 and 13.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
251·335		·965	283·5					179
		·956	251·7					220
		·893	285·3					199
	12022	·518	222·4	325·3	−15·7	3	8	
G	12026	·344	276·6	324·3	+ 9·0	46	193	
	12024	·415	193·9	310·0	−16·5	40	198	
	1110b	·561	69·6	270·8	+17·3	3	8	
		·799	68·0					131
		·892	127·1					50
Sept. 8			(+22·9)	(304·1)	(+ 7·2)	(92)	(407)	(779)
252·517		·967	285·3					152
	12026	·617	274·9	326·8	+ 8·7	73	243	
G	12024	·505	219·1	307·8	−16·2	51	243	
		·951	69·1					470
Sept. 9			(+23·1)	(288·5)	(+ 7·2)	(124)	(486)	(622)
253·653		·877	285·9					198
		·824	243·1					248
	12026	·803	275·9	327·3	+ 9·0	91	421	231*c*
	12024	·611	234·2	304·2	−14·7	96	489	
G	12030	·995	108·5	192·1	−17·5	10	43	85*c*
		·866	69·4					570
		·942	75·1					359
		·943	66·3					234
		·965	109·4					85
Sept. 10			(+23·3)	(273·5)	(+ 7·2)	(197)	(953)	(2010)
1936.			°	°	°			
254·358		·954	229·3					148
		·904	289·7					362
		·821	222·3					201
		·785	297·1					370
	12026	·892	276·3	327·8	+ 8·9	86	476	408*c*
	1110c	·903	248·3	324·8	−16·1	0	6	246*p*
G	12024	·705	240·7	303·5	−14·6	87	550	226*p*
	12030	·969	109·6	191·9	−16·9	28	117	221*f*
		·776	70·7					384
		·881	75·1					261
		·898	109·1					71
		·907	65·4					218
Sept. 11			(+23·5)	(264·2)	(+ 7·2)	(201)	(1149)	(3116)
255·106		·964	294·5					240
		·956	250·6					228
		·927	284·9					248
		·904	294·5					351
		·855	225·4					201
		·834	296·5					329
	12026	·955	277·2	327·8	+ 9·0	86	414	392*c*
K	12024	·801	245·4	303·1	−14·8	99	631	334*c*
	12031	·774	62·2	205·0	+25·9	5	13	140*c*
	12030	·925	112·2	190·8	−17·3	33	179	416*f*
	12032	·965	75·5	178·6	+15·8	19	122	414*c*
		·797	75·6					157
		·837	113·4					162
		·919	62·6					343
		·987	56·7					158
Sept. 12			(+23·6)	(254·4)	(+ 7·2)	(242)	(1359)	(4113)
256·447		·986	287·5					231
		·954	233·8					167
		·950	297·1					250
		·910	226·7					102
		·855	238·5					119
		·820	296·9					197
	12024	·929	251·0	301·7	−14·7	99	724	328*c*
G	12029	·879	282·2	298·8	+14·1	2	9	279*nf*
	12033	·629	200·1	251·0	−29·1	1	12	
	12031	·575	54·5	205·6	+25·7	5	22	
	12030	·769	119·5	192·4	−17·2	18	76	213*f*
	12032	·830	75·0	180·2	+16·4	20	72	153*c*
		·792	117·3					139
		·940	56·9					367
Sept. 13			(+23·9)	(236·7)	(+ 7·2)	(145)	(915)	(2545)

Group 12030. Sept. 10–18. A regular spot breaking up after Sept. 12 into a small cluster; some faint markings follow on Sept. 17.
Group 12031. Sept. 12–14. A pair of very small spots of which one alone remains on Sept. 14.
Group 12032. Sept. 12–22. A stream of very unstable components, none predominating in size.
Group 12033. Sept. 13–18. A typical "bi-polar" group with sudden development.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
257·337		·983	235·3					120
		·944	296·4					237
		·941	284·5					238
		·910	224·8					175
		·854	299·8					86
		·820	289·6					148
	12024	·974	253·6	299·1	−14·1	63	510	209*c*
	1110d	·820	279·8	280·4	+12·1	4	12	120*c*
	12033	·691	211·4	249·2	−29·5	89	324	
G	12034	·315	49·5	210·3	+18·7	1	4	
	12031	·437	41·4	206·2	+25·9	3	4	
	12030	·649	127·5	192·4	−17·2	12	65	
	12032	·728	74·8	178·2	+16·0	20	106	65*f*
	12035	·973	109·8	151·6	−17·3	24	155	174*c*
		·840	56·0					229
		·912	53·0					232
		·924	118·6					190
		·973	55·2					192
Sept. 14			(+24·0)	(224·9)	(+ 7·2)	(216)	(1180)	(2415)
258·387		·966	229·3					171
		·963	295·7					185
		·936	280·2					95
		·887	288·6					125
		·835	298·6					112
	12033	·793	222·6	249·2	−30·0	73	440	
	12034	·212	5·6	209·7	+19·3	2	7	
G	12036	·216	38·8	202·9	+16·7	2	14	
	12030	·510	142·8	192·3	−17·0	13	44	
	12032	·526	72·4	179·8	+15·3	40	193	
	12035	·905	113·8	150·7	−17·9	48	266	180*c*
	1110e	·921	53·0	144·7	+36·7	0	11	236*c*
		·815	51·6					261
		·830	123·6					110
Sept. 15			(+24·2)	(211·0)	(+ 7·2)	(178)	(975)	(1475)
259·331		·944	287·2					141
		·899	296·7					114
	12033	·869	229·5	248·0	−29·8	59	362	243*c*
	1110f	·618	277·6	237·0	+10·4	6	20	
	12036	·188	335·6	203·3	+17·0	1	14	
G	12030	·424	166·9	192·9	−17·1	5	12	
	12032	·351	64·8	179·5	+15·4	46	203	
	12035	·807	118·5	150·6	−17·9	38	155	140*c*
	12037	·924	112·6	135·2	−17·7	5	12	134*f*
		·868	52·0					281
Sept. 16			(+24·4)	(198·6)	(+ 7·2)	(160)	(778)	(1053)
1936.			°	°	°			
260·128		·948	296·9					232
		·897	287·6					129
	12033	·931	233·7	247·9	−30·0	55	297	215*c*
	12036	·283	305·7	201·8	+16·4	0	4	
	12030	·417	187·1	191·1	−17·2	4	21	
	12032	·199	43·5	179·9	+15·4	28	137	
K	12035	·728	124·5	148·8	−18·8	29	136	
	12037	·848	116·3	135·2	−17·8	4	12	215*f*
		·795	49·5					214
		·943	102·1					192
		·953	117·8					143
		·986	69·1					61
Sept. 17			(+24·5)	(188·0)	(+ 7·2)	(120)	(607)	(1401)
261·370		·954	293·5					177
		·911	278·3					121
		·896	243·9					105
	12033	·989	238·1	249·1	−30·7	28	154	126*c*
	12036	·612	284·1	209·3	+14·2	1	6	
	12030	·530	216·9	191·2	−18·3	5	19	
	12032	·209	314·1	180·6	+15·4	18	74	
G	12035	·546	140·5	150·3	−18·2	16	79	
	12037	·694	124·9	135·1	−17·7	1	5	
	12038	·896	69·5	107·5	+21·5	14	38	99*c*
	12039	·980	114·1	97·4	−21·8	39	221	497*c*
		·856	105·9					140
		·939	120·4					187
		·955	100·9					113
Sept. 18			(+24·7)	(171·7)	(+ 7·1)	(122)	(596)	(1565)
262·337		·974	279·2					56
		·960	248·0					146
		·938	289·0					109
		·824	292·2					489
	12032	·429	292·2	183·2	+15·8	9	30	
	12035	·452	162·1	150·5	−18·4	13	53	
	12037	·609	138·1	133·3	−20·5	14	28	
C	12038	·764	70·0	109·4	+19·8	14	52	94*c*
	12039	·931	116·9	95·7	−21·8	65	464	1072*c*
		·855	125·4					220
		·892	105·2					323
		·914	134·7					93
		·944	70·8					138
		·961	62·1					154
		·972	103·2					69
		·982	112·9					350
Sept. 19			(+24·8)	(158·9)	(+ 7·1)	(115)	(627)	(3313)

Group 12034. Sept. 14–15. A small single spot.
Group 12035. Sept. 14–20. A stream in which the leading and following components both break up into small clusters.
Group 12036. Sept. 15–18. A stream of small faint spots.
Group 12037. Sept. 16–26. A small single spot until Sept. 19 when a companion appears. This pair of spots then develops into a fairly large group in which the leader is a regular spot and the follower has a double umbra.
Group 12038. Sept. 18–22. A small stream with a brief maximum on Sept. 20.
Group 12039. Sept. 18–29. A cluster of irregular spots drawn out later into a stream.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
263·363		·904	289·6					464
		·782	296·0					207
	12040	·723	245·0	187·4	−12·5	3	6	
	12032	·536	286·6	177·4	+14·8	4	13	
	12035	·443	196·2	152·8	−18·0	10	33	
	12037	·499	157·7	133·8	−20·4	16	52	
G	12038	·577	67·4	111·3	+18·7	24	101	
	12039	·845	122·1	95·0	−22·1	54	549	394*c*
	1110g	·890	106·6	85·2	−11·2	0	4	686*f*
		·794	109·8					203
		·823	143·3					139
		·886	61·4					108
		·902	106·4					99
Sept. 20			(+25·0)	(145·4)	(+ 7·1)	(111)	(758)	(2300)
264·616		·950	289·1					648
		·911	246·3					194
		·862	297·2					210
	12040	·889	252·6	188·7	−11·9	24	67	154*c*
	12037	·467	188·8	133·2	−20·4	62	249	
G	12038	·367	52·2	111·0	+19·6	10	27	
	12039	·710	131·8	94·0	−22·5	68	356	
	12041	·835	124·2	80·1	−23·5	39	161	378*c*
	12042	·963	117·8	59·8	−24·3	40	172	426*nf*
	12043	·972	66·0	50·8	+24·9	4	19	130*f*
		·927	119·4					304
Sept. 21			(+25·2)	(128·8)	(+ 7·0)	(247)	(1051)	(2444)
1936.			°	°	°			
265·445		·976	286·1					76
		·961	248·7					191
		·950	195·7					177
		·776	305·4					142
	12040	·963	255·3	189·9	−12·1	16	40	102*c*
	12032	·889	284·5	181·2	+16·0	0	4	550*c*
	12037	·528	209·1	133·8	−20·6	78	448	
	1110h	·310	198·5	123·6	−10·1	1	2	
	12038	·259	28·2	110·4	+20·1	4	10	
G	12039	·609	142·5	94·4	−22·4	48	232	
	12044	·628	52·3	83·7	+28·4	6	17	
	12041	·740	130·9	80·5	−23·5	30	144	472*f*
	12042	·906	120·3	59·4	−23·6	51	298	426*c*
	12045	·900	76·6	53·1	+15·1	8	16	98*c*
	12043	·916	65·3	51·1	+25·3	5	11	120*f*
	12046	·949	74·9	45·3	+16·5	11	28	188*f*
		·869	124·3					338
		·968	118·7					794
Sept. 22			(+25·3)	(117·9)	(+ 7·0)	(258)	(1250)	(3674)
266·518		·963	296·5					82
		·954	285·8					367
		·914	242·0					218
		·868	297·2					146
		·803	239·3					381
	12037	·649	226·1	133·6	−20·6	68	362	
	12047	·443	11·4	97·8	+32·3	7	22	
	12039	·510	163·8	94·9	−22·3	38	184	
	12048	·496	145·5	86·7	−17·3	2	13	
	12044	·485	39·6	83·2	+28·5	2	5	
G	12041	·608	145·0	81·5	−23·3	51	178	
	12049	·721	128·6	66·7	−21·1	6	14	
	12042	·794	127·4	60·3	−23·8	90	367	501*c*
	12045	·760	76·4	54·1	+14·9	14	41	78*c*
	12043	·803	63·5	51·3	+25·3	3	11	88*c*
	12046	·844	75·0	45·7	+16·4	8	19	245*n*
		·780	134·6					233
		·875	136·1					46
		·915	123·4					1198
		·941	73·1					213
Sept. 23			(+25·4)	(103·7)	(+ 7·0)	(289)	(1216)	(3796)

Group 12040. Sept. 20–22. A small group near the west limb.
Group 12041. Sept. 21–29. A group of stream type which collapses rather suddenly.
Group 12042. Sept. 21–Oct. 2. A regular spot followed by tiny companions. On Sept. 25, a double umbra has developed in the main spot which divides on Sept. 26 into two parts that separate in longitude.
Group 12043. Sept. 21–23. A small single spot.
Group 12044. Sept. 22–23. Two or three tiny spots.
Group 12045. Sept. 22–24. A tiny stream.
Group 12046. Sept. 22–24. A small definite spot, probably representing a return of Group 12027.
Group 12047. Sept. 23–24. A tiny ephemeral group.
Group 12048. Sept. 23–27. A pair of tiny spots on Sept. 23, the leader of which develops partially into a regular spot.
Group 12049. Sept. 23–26. A tiny stream *np* Group 12042.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
267·505		·981	286·6					68
		·939	298·5					58
		·929	308·5					210
		·900	244·5					319
		·849	316·0					59
		·782	308·5					117
	12037	·775	236·6	134·1	−20·2	50	251	239*p*
	12047	·443	349·5	96·2	+32·7	5	7	
	12039	·494	186·3	94·0	−22·3	17	119	
	12048	·409	170·9	86·8	−16·7	17	79	
G	12041	·528	163·2	81·2	−23·3	36	125	
	12049	·598	139·3	66·2	−20·5	6	8	
	12042	·692	136·7	59·5	−24·2	90	420	
	12045	·587	73·8	55·2	+14·9	11	28	
	12046	·709	73·8	45·7	+16·4	3	6	
	12050	·835	130·2	44·7	−27·8	0	8	570*c*
	12051	·973	76·9	13·0	+14·4	9	19	395*c*
		·841	73·3					210
		·942	106·7					59
		·959	101·7					59
Sept. 24			(+25·5)	(90·7)	(+ 7·0)	(244)	(1070)	(2363)
268·371		·968	246·2					290
		·872	298·2					109
		·868	310·8					347
		·854	241·3					278
	12037	·880	242·4	135·3	−20·2	21	162	
	12039	·529	206·5	93·9	−21·5	25	136	
	12048	·415	200·2	87·8	−16·0	9	57	
C	12041	·508	184·4	81·7	−23·4	38	164	
	12049	·514	154·7	65·8	−20·9	4	14	
	12042	·589	149·2	60·1	−23·8	58	349	
	12051	·904	77·2	13·9	+14·5	5	17	393*f*
		·763	134·6					417
		·847	69·0					121
		·866	113·1					237
		·959	105·2					45
Sept. 25			(+25·6)	(79·3)	(+ 6·9)	(160)	(899)	(2237)
1936.			°	°	°			
269·119		·912	308·7					171
		·851	253·1					79
	12037	·957	246·3	138·2	−20·2	14	63	272*f*
	12039	·606	217·5	92·8	−22·3	14	50	
	12048	·496	218·5	88·1	−16·3	10	44	
K	12041	·539	200·3	81·1	−23·5	29	158	
	12049	·485	170·9	64·7	−21·6	3	12	
	12042	·539	162·8	59·4	−24·1	79	359	
	12052	·525	70·4	38·6	+16·0	2	11	
	12051	·819	77·4	14·1	+14·2	7	13	634*f*
		·890	107·6					113
Sept. 26			(+25·7)	(69·4)	(+ 6·9)	(158)	(710)	(1269)
270·679		·903	236·2					129
		·848	290·8					231
		·844	237·8					146
		·810	226·6					133
	1110i	·969	290·7	125·8	+21·7	8	32	207*p*
	12039	·762	234·2	90·2	−21·3	0	10	
	12048	·698	238·1	86·8	−16·3	8	38	
G	12041	·713	227·4	83·5	−23·3	13	58	
	12042	·531	197·6	58·9	−23·6	51	361	
	12052	·228	48·2	38·7	+15·4	20	81	
	12051	·616	74·2	11·1	+15·1	20	71	
	12053	·976	84·3	331·0	+ 7·0	29	182	163*f*
	12054	·983	74·1	328·2	+16·8	125	476	322*c*
		·946	66·0					170
Sept. 27			(+25·8)	(48·8)	(+ 6·8)	(274)	(1309)	(1501)
271·383		·960	239·1					178
		·930	288·3					248
		·929	205·7					96
		·878	241·3					885
		·876	229·4					190
	12041	·769	229·7	79·5	−24·6	12	34	
	12042	·589	211·2	58·9	−23·7	64	367	
	12055	·444	205·9	51·1	−16·8	2	5	
G	12052	·155	9·7	38·0	+15·5	27	133	
	12051	·503	70·8	10·1	+15·4	18	74	
	12053	·925	85·1	331·5	+ 7·1	29	122	124*c*
	12056	·969	112·7	327·7	−19·9	8	18	134*f*
	12054	·948	74·0	327·1	+17·3	107	972	1286*c*
		·859	74·5					213
		·953	62·9					383
		·958	108·4					444
Sept. 28			(+25·9)	(39·5)	(+ 6·8)	(267)	(1725)	(4181)

Group 12050. Sept. 24–29. A conspicuous area of faculæ (probably associated with Group 12016), in which a tiny spot appears on Sept. 24 and a small cluster on Sept. 29.
Group 12051. Sept. 24–Oct. 5. A small spot on Sept. 24–26; afterwards a stream of small unstable spots of which one is left on Oct. 4–5.
Group 12052. Sept. 26–Oct. 2. A single spot on Sept. 26 preceding the development of a small stream of normal type.
Group 12053. Sept. 27–Oct. 6. Return of Group 12026. A regular spot breaking into two parts on Sept. 29, the northern component persisting for several days.
Group 12054. Sept. 27–Oct. 9. A large composite spot resolving into a regular spot preceded and followed by companions. The chief spot develops a double umbra on Oct. 4, partly breaks up and then diminishes rapidly.
Group 12055. Sept. 28–29. One or two faint spots *nf* Group 12042.
Group 12056. Sept. 28–Oct. 9. A tiny stream which expands on Oct. 2 for a few days.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
272·366		·966	289·5					179
		·888	243·4					458
		·881	190·3					122
	12039	·962	242·4	95·4	−24·1	0	20	840*f*
	12041	·860	235·2	77·6	−25·1	13	60	246*sf*
	12042	·692	225·2	58·7	−23·4	52	297	
	12055	·546	226·1	50·6	−16·0	2	8	
	12050	·605	201·1	40·7	−27·6	4	25	
G	12052	·230	309·6	37·0	+15·1	23	100	
	12057	·198	37·1	19·4	+15·8	0	14	
	12051	·318	60·6	9·9	+15·4	19	57	
	12053	·817	86·2	331·5	+ 7·1	19	81	83*c*
	12056	·887	115·4	328·9	−18·8	14	33	432*n*
	12054	·851	74·0	327·8	+17·2	98	730	922*c*
		·899	122·7					101
		·947	63·2					257
		·957	109·2					209
Sept. 29			(+26·0)	(26·5)	(+ 6·8)	(244)	(1425)	(3849)
273·424		·972	245·1					924
		·917	298·2					180
		·892	235·8					716
	12042	·817	235·1	59·3	−23·3	54	258	201*c*
	12058	·592	227·0	39·5	−17·8	8	22	
	12052	·444	291·1	37·9	+15·2	12	39	
	12057	·186	324·2	19·0	+15·3	2	9	
	12051	·158	10·6	10·9	+15·6	21	62	
	12053	·656	87·2	331·5	+ 6·9	18	68	
G	12056	·781	122·3	328·2	−19·9	14	30	150*c*
	12054	·717	72·3	327·1	+17·3	110	678	
	12059	·960	105·4	301·2	−12·7	7	23	215*f*
	12060	·968	72·2	295·8	+19·0	97	450	1521*c*
		·851	62·8					212
		·878	113·6					266
		·941	132·8					137
		·943	62·2					225
		·965	116·3					188
		·987	123·8					258
Sept. 30			(+26·0)	(12·6)	(+ 6·7)	(343)	(1639)	(5193)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
274·392		·987	244·3					130
		·963	237·2					198
		·961	300·7					46
		·900	291·8					62
		·840	229·5					558
		·825	284·5					132
	12042	·913	240·7	59·7	−23·3	34	158	366*c*
	12052	·690	287·3	43·1	+16·7	9	32	
	12058	·730	238·3	40·3	−17·5	8	14	
C	12051	·259	307·5	12·1	+15·6	9	28	
	12053	·478	87·6	331·2	+ 7·1	7	39	
	12056	·638	130·9	329·3	−18·8	8	22	
	12054	·561	68·2	326·8	+17·6	75	553	
	12059	·880	107·9	301·0	−12·2	4	14	113*c*
	12060	·900	71·9	295·1	+19·1	47	346	1536*c*
		·839	60·6					177
		·853	119·1					174
		·950	126·5					357
		·981	109·7					161
Oct. 1			(+26·1)	(359·8)	(+ 6·7)	(201)	(1206)	(4010)
275·505		·980	292·0					81
		·941	283·1					196
		·903	234·1					859
	12042	·984	245·0	60·7	−23·1	19	99	306*f*
	12052	·829	287·2	41·2	+17·9	2	8	207*c*
G	12058	·865	245·2	40·4	−17·6	4	11	136*f*
	12053	·242	86·8	331·1	+ 7·2	9	40	
	12054	·356	57·0	326·9	+17·5	68	497	
	12056	·539	144·6	325·8	−19·8	38	88	
	12060	·772	70·2	294·9	+19·4	73	446	460*f*
	12061	·920	112·2	282·1	−17·4	23	67	124*c*
Oct. 2			(+26·2)	(345·1)	(+ 6·6)	(236)	(1256)	(2369)

Group 12057. Sept. 29–30. A tiny, faint cluster.
Group 12058. Sept. 30–Oct. 3. One or two spots.
Group 12059. Sept. 30–Oct. 10. Return of Group 12024. A single spot, not seen on Oct. 2, with an occasional tiny companion.
Group 12060. Sept. 30–Oct. 12. An extensive area of faculæ (apparently marking a previous sunspot disturbance) in which a very large stream of spots develops. The leader spot is the largest single component, although there is a considerable cluster of unstable spots in the rear of the stream.
Group 12061. Oct. 2–12. A stream of changing spots on Oct. 5; the leader divides into two parts and these drift apart rapidly in longitude, whilst companion spots appear on Oct. 8.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
276·361		·984	250·8					110
		·958	357·2					77
		·948	236·6					950
		·914	287·8					571
		·861	259·3					39
	12058	·939	248·6	40·0	−17·5	6	13	138*f*
	12051	·588	286·9	9·3	+15·2	10	32	
	12053	·049	69·0	331·2	+ 7·6	9	21	
G	12054	·216	31·0	327·1	+17·2	59	455	
	12056	·455	164·8	326·6	−19·4	18	63	
	12059	·607	119·8	301·4	−11·9	6	11	
	12060	·630	66·2	296·1	+19·9	99	541	
	12061	·816	116·6	284·2	−17·2	35	152	135*c*
		·817	54·8					240
		·849	136·2					230
		·947	66·5					293
		·971	131·1					127
Oct. 3			(+26·2)	(333·8)	(+ 6·6)	(242)	(1288)	(2910)
277·405		·988	239·1					406
		·966	284·9					220
		·952	261·5					43
		·949	291·2					168
		·922	249·7					143
	12051	·808	282·2	14·2	+13·7	2	6	363*np*
	12053	·201	277·1	331·6	+ 7·8	6	16	
	12056	·447	197·7	328·2	−18·7	12	50	
G	12054	·219	325·9	327·3	+16·8	57	412	
	12059	·442	134·9	301·4	−11·9	5	9	
	12060	·455	58·0	295·9	+19·9	109	697	
	12061	·681	124·3	284·0	−17·3	39	83	
	12062	·947	81·5	248·2	+10·1	6	28	346*f*
		·869	59·9					107
		·911	69·2					166
		·919	135·2					169
Oct. 4			(+26·3)	(320·0)	(+ 6·5)	(236)	(1301)	(2131)
1936.			°	°	°			
278·527		·934	236·2					130
		·928	252·5					193
		·846	292·9					177
	12051	·913	285·8	11·7	+17·0	5	19	583*p*
	12053	·435	274·2	331·0	+ 7·6	4	12	
	12054	·410	297·1	327·5	+16·7	60	329	
	12056	·551	220·7	327·4	−18·7	17	89	
	12059	·325	170·5	302·1	−12·2	5	12	
G	12060	·275	34·5	295·7	+19·3	142	815	
	12061	·512	140·9	285·5	−17·3	30	129	
	12062	·841	81·5	247·6	+10·6	4	20	268*f*
	12063	·996	103·8	222·2	−13·1	96	415	96*p*
		·865	68·1					188
		·868	140·6					256
		·954	124·9					154
		·976	110·3					101
		·982	66·9					220
Oct. 5			(+26·3)	(305·2)	(+ 6·4)	(363)	(1840)	(2366)
279·396		·966	240·2					93
		·965	284·6					479
		·926	292·9					210
	12053	·604	274·3	331·1	+ 7·7	1	6	
	12056	·688	233·3	329·4	−19·0	15	77	
	12054	·565	290·7	327·2	+16·9	40	244	
	12059	·330	202·9	301·3	−11·3	5	11	
	12060	·227	351·9	295·7	+19·3	173	948	
	12061	·424	164·8	287·1	−17·7	41	157	
G	12064	·668	144·3	268·0	−27·0	12	29	
	12062	·712	81·8	248·2	+10·7	6	9	135*f*
	12063	·957	105·6	223·1	−12·8	68	445	248*c*
	12065	·975	112·2	220·2	−19·9	29	101	231*f*
		·802	67·8					138
		·899	57·5					113
		·905	112·1					46
		·919	129·3					246
		·945	68·8					275
		·982	56·5					241
Oct. 6			(+26·3)	(293·8)	(+ 6·4)	(390)	(2027)	(2455)

Group 12062. Oct. 4–8. A small spot.
Group 12063. Oct. 5–17. A large stable regular spot. There are bright " bridges " across the umbra from Oct. 6 to 11 and from Oct. 15 to 17.
Group 12064. Oct. 6–9. A diminutive stream.
Group 12065. Oct. 6–17. A small regular spot followed by a companion which has disappeared by Oct. 10.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
280·380		·905	276·8					108
		·770	275·5					190
	12056	·808	241·0	328·9	−18·8	13	37	544*c*
	12054	·728	287·0	327·2	+16·7	29	153	
	12059	·462	229·3	301·7	−11·6	2	5	
	12060	·349	309·2	297·3	+18·7	178	882	
	12061	·430	194·2	287·2	−18·3	38	203	
	12064	·580	159·2	267·5	−26·6	19	58	
G	12062	·541	80·4	248·1	+10·4	5	9	
	12066	·852	136·4	236·0	−33·6	4	17	154*c*
	12063	·872	108·6	223·1	−12·8	72	404	707*f*
	12065	·896	114·2	221·6	−18·4	19	99	445*f*
	1111a	·925	76·7	212·5	+14·7	3	5	246*c*
		·800	65·4					258
		·909	68·7					312
		·952	55·6					386
		·980	66·8					273
Oct. 7			(+26·4)	(280·8)	(+ 6·3)	(382)	(1872)	(3623)
281·529		·967	287·0					214
		·908	276·2					335
		·904	222·2					90
		·835	298·2					210
	12056	·923	246·6	328·8	−18·7	23	68	796*c*
	12054	·876	285·4	327·1	+16·5	11	73	584*c*
	12059	·644	243·2	301·4	−11·8	3	6	
	12060	·542	297·0	296·3	+19·6	116	723	
	12061	·575	223·8	290·3	−18·7	49	173	
	12064	·542	183·1	267·5	−26·4	7	24	
G	12062	·308	75·3	248·0	+10·4	2	7	
	12066	·756	147·4	236·3	−34·0	10	27	114*c*
	12063	·727	114·6	223·1	−12·9	81	404	470*f*
	12065	·774	121·2	221·3	−19·1	21	99	368*f*
	12067	·854	54·2	209·6	+33·5	0	4	384*f*
		·816	66·8					458
		·866	76·0					384
		·928	65·6					331
		·938	108·4					159
		·979	73·0					223
Oct. 8			(+26·4)	(265·6)	(+ 6·3)	(323)	(1608)	(5120)
1936.			°	°	°			
282·397		·952	278·2					135
		·937	297·2					234
	12054	·949	285·0	326·5	+16·1	11	35	476*f*
	12056	·970	247·4	326·4	−20·1	27	55	811*c*
	12068	·801	299·3	305·6	+27·0	7	18	184*c*
	12059	·789	247·6	302·6	−13·4	6	15	
	12060	·711	290·4	298·8	+18·8	125	662	
	12061	·699	234·8	291·2	−18·8	25	68	
	12064	·571	196·4	264·6	−27·0	2	5	
G	12066	·684	159·2	237·3	−33·7	18	78	
	12063	·591	122·4	223·5	−13·1	63	380 }	458*f*
	12065	·653	128·6	221·7	−18·8	17	95 }	
	12069	·711	67·3	210·0	+20·4	3	9	
		·791	51·0					126
		·810	64·4					207
		·844	114·8					113
		·922	109·3					142
		·930	61·8					194
		·939	71·6					294
Oct. 9			(+26·4)	(254·2)	(+ 6·2)	(304)	(1420)	(3374)
283·420		·983	251·6					306
		·968	295·8					210
		·964	287·0					213
		·943	304·2					105
		·937	242·2					244
		·886	228·4					154
	12068	·896	297·2	303·9	+27·0	4	15	89*c*
G	12059	·890	254·0	301·2	−11·2	10	29	189*c*
	12060	·849	288·7	298·8	+19·1	120	656	839*c*
	12061	·842	240·6	292·1	−20·6	24	80	338*c*
	12066	·641	176·6	238·1	−33·5	15	46	
	12063	·434	138·3	223·5	−13·0	63	354	
	12065	·518	142·9	221·5	−18·5	13	67	
		·872	72·0					347
		·976	112·8					389
Oct. 10			(+26·4)	(240·7)	(+ 6·1)	(249)	(1247)	(3423)

Group 12066. Oct. 7–13. A pair of spots separating in longitude; the leader remains alone after Oct. 10.
Group 12067. Oct. 8–12. A single spot seen only on Oct. 8, 11 and 12.
Group 12068. Oct. 9–10. A single spot on Oct. 9: a pair of spots on Oct. 10.
Group 12069. Oct. 9–17. A group of changing spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
284·406		·983	243·6					130
		·967	256·2					193
		·964	299·0					279
		·946	231·4					219
		·822	241·8					139
		·768	229·1					207
	12060	·935	288·6	297·5	+19·5	137	893	2114c
	12061	·933	245·4	292·3	−20·3	23	72	501c
	12066	·650	195·4	239·5	−32·7	6	12	
	12063	·342	169·2	223·9	−13·5	57	334	
G	12065	·432	165·0	221·0	−18·5	13	61	
	1111b	·535	154·7	213·4	−22·9	2	5	
	12069	·346	50·2	211·5	+18·6	7	19	
	1111c	·511	146·9	210·6	−19·4	1	4	
	12067	·599	39·2	201·0	+33·0	2	8	
	12070	·644	123·4	193·9	−15·6	6	23	
	12071	·983	109·4	151·1	−17·7	104	454	340c
		·817	69·4					143
		·921	116·2					626
		·938	58·6					153
		·971	50·5					115
Oct. 11			(+26·4)	(227·7)	(+ 6·1)	(358)	(1885)	(5159)
285·617		·953	229·2					127
		·937	247·4					182
		·916	297·6					327
		·888	236·4					144
		·876	218·7					114
	12060	·984	291·3	292·7	+22·0	44	378	756c
	12061	·988	248·8	289·7	−19·8	0	13	139c
	12066	·738	211·6	239·2	−33·5	1	3	
	12063	·392	212·3	224·1	−13·4	67	343	
G	12065	·443	199·4	220·6	−18·7	10	44	
	12072	·257	340·1	217·0	+19·9	7	16	
	12069	·215	359·2	211·9	+18·4	25	86	
	12067	·480	16·2	202·5	+33·3	1	5	
	12070	·464	138·4	193·2	−14·5	5	10	
	12071	·888	113·9	153·3	−18·0	53	337	406c
		·795	123·7					264
		·828	57·2					207
		·927	49·6					176
		·985	109·2					107
Oct. 12			(+26·4)	(211·7)	(+ 6·0)	(213)	(1235)	(2949)
1936.			°	°	°			
288·395		·981	293·6					234
		·979	250·2					118
		·939	301·8					121
		·931	240·0					126
		·902	223·4					115
	12066	·801	220·0	239·2	−33·2	3	11	186s
	12063	·496	229·2	224·0	−13·4	54	327	
	12065	·516	216·6	220·3	−18·8	6	52	
G	12072	·374	310·9	218·8	+19·8	6	10	
	12069	·289	315·2	213·7	+17·5	13	57	
	12070	·370	162·3	194·8	−14·7	24	66	
	12071	·791	118·0	154·4	−17·8	42	299	525c
	12073	·951	111·0	132·7	−17·9	3	14	328c
		·911	46·9					138
		·941	67·7					242
		·957	57·0					151
		·983	102·0					72
Oct. 13			(+26·4)	(201·4)	(+ 5·9)	(151)	(836)	(2356)
287·393		·956	225·8					208
		·914	250·2					92
		·894	297·7					107
		·867	288·9					133
		·864	226·4					173
		·850	277·9					221
		·831	218·9					172
	12063	·646	241·3	223·7	−13·2	57	315	
	12065	·645	231·1	220·2	−18·8	7	42	
C	12072	·546	298·2	219·0	+20·0	4	20	
	12069	·468	296·1	214·3	+17·2	17	51	
	12070	·378	200·5	196·1	−14·8	27	199	
	12074	·527	73·5	157·1	+13·7	1	5	
	12071	·657	126·5	154·7	−18·0	40	276	
	12073	·851	114·3	134·3	−17·1	20	75	389c
		·821	41·9					214
		·871	55·5					205
		·877	68·1					220
		·936	104·2					344
Oct. 14			(+26·3)	(188·3)	(+ 5·9)	(173)	(983)	(2478)

Group 12070. Oct. 11–19. A short stream led by a regular spot which develops suddenly between Oct. 13 and 14.
Group 12071. Oct. 11–22. A stream led by a regular spot that is the sole component after Oct. 17.
Group 12072. Oct. 12–17. A single spot on Oct. 12, 13 and 17: a small cluster on the other days.
Group 12073. Oct. 13–24. A moderate-sized stream developing in the usual manner. The leader breaks up into two or three parts on Oct. 21.
Group 12074. Oct. 14–20. A small stream of which only one component is seen on Oct. 17, 19 and 20.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
288·433		·984	253·0					271
		·945	292·1					127
		·943	278·7					229
		·942	233·2					179
		·917	302·5					197
		·907	224·9					222
	12063	·798	248·3	224·0	−13·4	72	310	
	12065	·787	239·9	220·5	−19·2	7	25	
	12072	·711	293·3	218·5	+20·5	13	60	
	12069	·650	290·1	214·1	+17·3	15	47	
G	*1111d*	·480	314·7	196·5	+25·1	0	2	
	12070	·501	225·4	196·1	−15·1	41	190	
	12074	·341	63·4	156·2	+14·2	5	19	
	12071	·505	142·5	155·7	−18·1	50	265	
	12073	·723	120·7	134·1	−17·2	40	164	
	12075	·843	107·3	119·6	−11·2	10	30	234*c*
		·795	49·7					172
		·864	120·1					241
		·939	49·1					207
		·974	110·0					135
		·976	116·9					198
Oct. 15			(+26·3)	(174·5)	(+ 5·8)	(253)	(1112)	(2412)
289·445	12063	·911	252·5	224·2	−13·4	53	326	276*c*
	12065	·897	244·9	220·5	−19·5	10	20	170*c*
	12072	·852	291·0	219·3	+20·8	12	54 }	157*c*
	12069	·818	287·3	215·9	+17·3	9	21 }	
	12070	·654	238·5	196·4	−15·3	34	171	
	12074	·144	22·2	158·0	+13·3	8	23	
G	12071	·418	166·9	155·5	−18·2	51	231	
	12073	·583	131·4	134·0	−17·5	44	222	
	12075	·690	112·3	120·8	−10·8	17	61	
	12076	·989	78·4	79·0	+12·3	13	36	131*s*
		·885	111·1					100
		·946	120·7					228
		·976	110·9					173
Oct. 16			(+26·3)	(161·2)	(+ 5·7)	(251)	(1165)	(1235)
290·395		·836	305·1					176
	12063	·975	255·4	223·9	−12·8	57	369	216*c*
	12065	·969	248·2	221·1	−19·4	8	34	733*sf*
	12072	·939	290·5	219·1	+21·2	0	13 }	378*c*
	12069	·916	285·5	215·4	+16·4	5	18 }	
	12070	·790	246·2	196·9	−14·8	16	116	169*c*
	12074	·230	300·8	160·3	+12·2	7	17	
C	12071	·426	196·7	156·1	−18·4	32	185	
	12073	·461	149·6	134·6	−17·9	34	212	
	12075	·523	123·7	122·4	−11·8	8	38	
	12076	·936	79·2	78·9	+12·1	21	113	369*f*
	12077	·966	68·7	72·9	+22·0	11	89	246*f*
		·847	121·8					418
		·949	116·8					537
Oct. 17			(+26·2)	(148·7)	(+ 5·6)	(199)	(1204)	(3242)
1936.			°	°	°			
291·411		·978	248·5					301
		·978	241·8					270
		·970	289·2					347
		·929	282·6					184
		·919	205·2					389
		·887	292·5					312
	12070	·907	250·6	197·4	−15·0	15	63	601*sf*
	12074	·431	286·6	160·2	+12·1	11	42	
	12071	·526	220·4	156·3	−18·4	29	210	
G	*1111c*	·435	196·2	142·7	−19·1	1	4	
	12073	·398	178·7	134·8	−17·8	19	101	
	12075	·369	143·6	122·4	−11·8	16	40	
	12076	·841	79·0	77·9	+12·2	17	40	436*f*
	12077	·888	68·0	72·9	+22·0	29	91	421*c*
		·862	120·2					530
		·881	130·7					151
		·960	118·6					621
		·965	67·6					323
		·978	110·0					207
Oct. 18			(+26·2)	(135·3)	(+ 5·5)	(137)	(591)	(5093)
292·390		·966	304·3					253
		·943	293·1					311
	12070	·975	253·3	197·4	−14·9	9	29	525*sf*
	12074	·648	282·3	162·6	+12·1	8	20	
	12071	·651	233·1	155·5	−18·4	25	201	
	12073	·465	214·0	138·1	−17·3	22	77	
	12075	·290	179·6	122·3	−11·2	22	108	
G	12076	·691	78·1	78·8	+12·2	12	34	
	12077	·773	65·8	73·1	+22·0	21	83	308*f*
	12078	·900	122·1	64·8	−25·7	8	21	542*c*
		·774	127·1					367
		·890	67·2					494
		·937	115·1					732
		·967	71·5					212
Oct. 19			(+26·1)	(122·4)	(+ 5·5)	(127)	(573)	(3744)

Group 12075. Oct. 15–24. An unstable stream.
Group 12076. Oct. 16–20. A cluster of small spots.
Group 12077. Oct. 17–23. A double spot in which the separation between the two umbræ is completed across the penumbra by Oct. 20.
Group 12078. Oct. 19–28. An area of feeble but prolonged disturbance.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
293·431		·953	290·2					187
		·904	243·0					295
	12074	·816	280·7	163·4	+11·9	6	11	
	12071	·790	241·4	155·4	−18·5	28	147	340c
	12073	·610	231·0	138·3	−17·8	34	126	
	12075	·362	219·0	122·0	−11·0	40	193	
	12079	·183	58·3	99·5	+10·8	4	15	
G	12076	·501	75·4	79·0	+11·9	4	14	
	12077	·622	60·6	73·0	+22·1	19	92	
	12078	·780	130·0	67·1	−26·0	3	7	211c
	12080	·995	74·8	23·4	+15·7	19	105	
		·788	64·7					179
		·859	121·8					429
		·925	69·8					207
		·962	120·6					378
Oct. 20			(+26·0)	(108·6)	(+ 5·4)	(157)	(710)	(2226)
294·406		·962	245·7					346
		·882	280·1					224
	12071	·890	245·7	154·6	−18·8	23	140	519c
	12073	·753	240·7	139·2	−17·8	32	137	
	12075	·503	236·3	121·0	−11·4	20	91	
	12079	·131	319·3	100·8	+11·0	2	8	
C	12077	·473	50·9	72·6	+22·1	12	54	
	12078	·678	138·1	65·8	−25·7	3	9	
	12080	·971	74·4	19·0	+16·4	90	409	981c
		·765	127·5					270
		·855	70·3					364
		·919	123·3					845
Oct. 21			(+25·9)	(95·8)	(+ 5·3)	(182)	(848)	(3549)
295·492		·812	240·7					272
		·769	306·0					155
	12071	·976	248·8	155·9	−19·3	20	104	327f
	12073	·897	246·7	141·5	−18·2	20	99	331c
	12075	·704	248·2	123·1	−11·2	15	53	
G	*1111f*	·642	253·6	119·6	− 6·3	1	3	
	12077	·328	25·3	72·8	+22·3	7	19	
	12081	·770	132·8	42·1	−27·5	2	7	494f
	12080	·881	72·9	19·7	+17·5	82	431	602c
		·925	126·9					235
		·969	68·1					175
Oct. 22			(+25·8)	(81·5)	(+ 5·2)	(147)	(716)	(2591)
1936.			°	°	°			
296·457		·906	240·4					160
		·856	302·6					212
	12073	·970	249·8	141·7	−18·1	18	89	542f
	12075	·858	254·5	125·7	−10·5	13	55	253c
G	12077	·303	348·5	72·4	+22·3	2	8	
	12078	·527	170·2	63·0	−26·0	8	39	
	12080	·767	72·2	19·2	+16·9	66	404	241c
		·841	134·2					153
Oct. 23			(+25·8)	(68·7)	(+ 5·1)	(107)	(595)	(1561)
297·449		·955	315·2					128
		·952	243·5					195
		·948	298·1					290
		·903	307·1					122
	12073	·993	251·5	136·6	−17·6	28	61	342f
	12075	·956	257·5	127·0	−10·4	7	18	713sf
	1111g	·738	292·1	102·0	+19·6	7	19	
	12078	·535	196·1	65·1	−25·9	8	31	
G	*1111h*	·511	178·7	54·9	−25·6	2	5	
	12081	·585	149·3	36·4	−25·3	2	12	
	12080	·598	68·9	20·2	+16·5	62	373	
		·890	79·9					96
		·905	101·9					81
		·959	71·9					249
		·976	81·4					207
		·981	107·7					305
Oct. 24			(+25·7)	(55·6)	(+ 5·0)	(116)	(519)	(2728)
298·444		·982	255·9					399
		·889	229·1					83
		·885	247·6					224
		·884	238·1					210
	12078	·571	211·5	61·5	−24·4	1	5	
G	12081	·509	166·7	35·1	−24·7	6	19	
	12080	·439	59·7	19·2	+17·3	67	377	
		·917	62·9					169
		·923	81·5					222
		·938	110·1					623
		·945	71·3					272
Oct. 25			(+25·5)	(42·5)	(+ 4·9)	(74)	(401)	(2202)

Group 12079. Oct. 20–21. A pair of small spots on Oct. 20: a single spot on Oct. 21.
Group 12080. Oct. 20–Nov. 1. A sparse stream of considerable extent in longitude. The leader spot, whose contour is broken by a bright encroachment of the photosphere, finally breaks into two parts on Nov. 1.
Group 12081. Oct. 22–30. A fairly large area of faculæ containing small intermittent spots.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
299·436		·949	245·3					232
		·944	289·6					153
		·921	298·2					75
		·891	228·0					150
		·855	239·0					295
		·779	278·6					75
C	12080	·259	37·2	20·0	+16·7	45	244	
	12082	·379	150·2	18·2	−14·3	35	167	
		·846	113·1					326
		·855	70·1					254
		·954	110·9					139
		·958	62·6					146
		·967	75·4					237
Oct. 26			(+25·4)	(29·4)	(+ 4·9)	(80)	(411)	(2082)
300·585		·952	244·2					336
		·943	234·7					147
		·898	281·7					170
		·869	296·0					308
	12078	·810	238·1	62·1	−22·1	3	8	364*sp*
	12081	·572	211·1	33·2	−24·8	1	2	
	12080	·235	329·9	21·3	+16·4	44	184	
	12082	·340	193·6	19·0	−14·5	32	117	
G	12083	·954	117·1	306·1	−24·0	7	18	151*sf*
	12084	·954	71·3	301·5	+19·2	87	420	636*c*
	12085	·994	110·1	293·0	−19·3	31	66	
		·751	121·1					198
		·863	117·9					194
		·870	75·5					263
		·882	59·6					173
		·935	107·3					97
Oct. 27			(+25·3)	(14·3)	(+ 4·7)	(205)	(815)	(3037)
301·401		·978	239·9					150
		·948	280·8					147
		·919	294·7					401
		·812	295·3					225
	12078	·917	242·9	65·4	−22·5	5	16	676*s*
	12081	·666	225·9	34·8	−23·5	9	14	
	12080	·358	304·7	21·3	+16·2	34	184	
C	12082	·428	219·3	19·7	−14·8	17	71	
	1111i	·762	125·4	321·4	−22·6	0	5	109*f*
	12083	·888	120·0	306·5	−23·8	12	59	402*f*
	12084	·884	70·5	301·7	+19·4	57	464	725*c*
	12085	·959	112·0	293·1	−19·5	14	99	254*f*
		·764	74·2					147
		·963	65·9					651
Oct. 28			(+25·1)	(3·5)	(+ 4·7)	(148)	(912)	(3887)
1936.			°	°	°			
302·405		·977	295·8					156
		·976	243·4					310
		·920	236·5					134
		·904	292·2					295
	12081	·794	234·8	35·4	−24·0	7	20	273*sf*
	12080	·539	292·8	21·3	+16·0	33	185	
	12082	·591	236·7	20·9	−14·9	13	28	
C	12083	·789	125·1	305·7	−23·6	12	49	254*f*
	12084	·764	68·7	301·6	+19·1	73	476	579*c*
	12085	·881	115·1	292·7	−19·5	22	82	388*f*
	12086	·946	71·6	279·1	+18·8	3	12	305*f*
	12087	·982	105·2	273·1	−13·9	10	88	148*c*
		·891	66·0					532
		·948	57·0					181
Oct. 29			(+25·0)	(350·3)	(+ 4·6)	(173)	(940)	(3555)
303·602		·976	291·8					140
		·889	231·4					131
	12081	·927	242·6	37·9	−23·3	5	26	257*sf*
	12082	·807	247·8	25·0	−14·9	3	8	198*sf*
	12080	·748	287·5	22·2	+16·0	33	162	
	12083	·640	136·0	305·6	−23·5	6	12	
	12084	·579	63·8	301·4	+18·5	71	324	
	12085	·744	121·8	292·4	−19·8	22	76	185*f*
G	12086	·858	69·4	276·1	+19·9	17	59	264*c*
	12087	·927	108·0	268·9	−14·8	55	275	356*c*
	12088	·987	106·4	255·6	−15·4	21	67	541*c*
		·742	67·3					195
		·836	57·9					300
		·901	130·2					121
		·946	58·3					150
		·982	76·7					104
Oct. 30			(+24·8)	(334·5)	(+ 4·4)	(233)	(1009)	(2942)
304·358		·954	240·7					540
		·903	229·5					159
		·842	248·3					244
	12080	·849	286·1	22·3	+16·0	55	219	574*c*
	12083	·554	147·1	305·4	−23·5	9	32	
C	12084	·463	55·7	300·7	+19·1	50	358	
	12085	·640	128·1	292·3	−19·4	12	66	
	12086	·794	66·9	273·3	+20·9	28	121	220*c*
	12087	·851	110·4	269·1	−14·7	32	221	232*c*
	12088	·963	107·5	252·3	−15·5	20	86	583*c*
		·778	50·3					218
Oct. 31			(+24·7)	(324·5)	(+ 4·4)	(206)	(1103)	(2770)

Group 12082. Oct. 26–30. A small stream showing the usual separation in longitude between the leader and follower spots.
Group 12083. Oct. 27–Nov. 1. A small regular spot with a companion on Oct. 29.
Group 12084. Oct. 27–Nov. 6. Return of Group 12060. A large spot, with double umbra, that eventually divides into three parts between Nov. 1 and 2, and so disappears.
Group 12085. Oct. 27–Nov. 6. A small regular spot slowly diminishing; there is a small follower on Nov. 5.
Group 12086. Oct. 29–Nov. 8. A moderate-sized stream.
Group 12087. Oct. 29–Nov. 9. A stream in which the leader and follower spots are replaced by clusters or partially-formed spots. On Nov. 6, a fresh disturbance takes place at the head of the group, and this results in a new stream led by a regular spot.
Group 12088. Oct. 30–Nov. 11. A stream of changing spots, the following part being the last to disappear.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
305·426		·962	278·5					126
		·957	234·1					156
		·939	251·9					222
		·818	298·8					110
	12080	·950	285·5	22·5	+16·1	35	104	510*f*
	12089	·318	165·5	305·7	−13·6	5	16	
G	12083	·484	169·7	305·0	−24·0	4	10	
	12084	·297	33·9	300·4	+18·5	57	348	
	12085	·505	143·7	291·9	−19·8	13	53	
	12086	·623	63·1	274·4	+19·8	14	102	
	12087	·709	116·3	269·4	−15·0	49	276	
	12088	·886	110·5	251·0	−15·8	40	220	550*f*
Nov. 1			(+24·5)	(310·4)	(+ 4·3)	(217)	(1129)	(1674)
306·392		·958	286·9					200
		·897	296·8					106
	12089	·363	210·4	308·6	−14·1	4	25	
	12084	·259	349·5	300·5	+18·9	20	206	
	12085	·426	166·1	291·5	−20·2	4	37	
	12086	·423	50·9	277·4	+19·3	10	70	
C	12087	·545	125·6	270·6	−14·7	41	267	
	12088	·760	114·6	252·1	−15·5	29	166	
	12090	·847	108·4	242·3	−13·1	4	20	89*c*
	12091	·954	103·0	226·7	−11·1	28	143	297*f*
	12092	·949	76·2	225·9	+14·4	13	53	334*f*
		·946	65·2					161
Nov. 2			(+24·4)	(297·7)	(+ 4·2)	(153)	(987)	(1187)
307·481		·968	291·2					123
		·834	280·9					104
		·832	247·4					256
		·787	238·5					140
		·770	293·8					190
	12089	·502	230·8	307·0	−14·8	16	54	
	12084	·377	313·2	300·2	+18·7	19	77	
	1112a	·343	333·4	292·9	+21·8	2	4	
	12085	·435	197·4	291·3	−20·4	7	24	
	1112b	·434	352·2	287·3	+29·3	2	13	
	12086	·299	20·5	277·0	+20·2	25	179	
C	12087	·418	143·6	268·5	−15·7	33	194	
	12088	·612	122·9	251·2	−16·0	16	117	
	12090	·685	114·0	243·6	−13·1	14	106	
	1112c	·835	65·2	228·3	+22·8	2	7	210*f*
	12091	·854	105·4	226·6	−10·9	28	152	192*f*
	12092	·849	75·8	225·6	+14·1	16	68	391*f*
	12093	·947	105·2	214·0	−12·9	6	20 }	304*c*
	12094	·986	103·7	204·4	−12·8	12	38 }	
		·825	113·0					93
		·872	127·0					188
		·943	117·0					296
		·962	75·7					493
Nov. 3			(+24·2)	(283·4)	(+ 4·0)	(198)	(1053)	(2980)
308·438		·950	283·4					367
		·925	250·3					296
		·886	242·8					214
		·858	291·6					286
	12089	·687	245·4	310·5	−13·5	12	39	
	12084	·539	299·9	300·2	+18·9	9	37	
	12085	·526	219·0	291·3	−20·4	8	16	
	1112d	·421	312·0	289·4	+14·0	0	3	
	12086	·304	339·6	277·2	+20·4	27	176	
	12087	·347	172·8	268·1	−16·1	24	141	
	12088	·475	136·0	250·7	−16·2	36	138	
C	12090	·513	123·0	244·6	−12·7	25	191	
	12091	·725	108·7	226·6	−10·6	33	161	
	12092	·721	74·0	225·3	+14·2	17	76	130*f*
	1112e	·871	75·3	210·4	+14·7	2	8	410*c*
	12093	·852	107·9	214·6	−13·0	8	12 }	367*c*
	12094	·929	105·1	204·2	−12·5	11	46 }	
	12095	·992	75·7	187·4	+14·7	31	176	
		·776	133·0					150
		·835	62·1					180
		·889	120·4					433
		·976	68·0					356
Nov. 4			(+24·0)	(270·7)	(+ 3·9)	(243)	(1220)	(3189)

Group 12089. Nov. 1–4. A short-lived stream of unstable spots.
Group 12090. Nov. 2–11. A stream of bi-polar type *nf* Group 12088.
Group 12091. Nov. 2–13. Return of Group 12063. A stable regular spot with a satellite cluster on Nov. 8.
Group 12092. Nov. 2–11. A small regular spot with a tiny companion on Nov. 5.
Group 12093. Nov. 3–12. A small spot on each day with a companion on Nov. 6 and 10.
Group 12094. Nov. 3–9. A small group not seen on Nov. 6 and 7.
Group 12095. Nov. 4–16. A wide pair of regular spots. A part of the northern section of the leader spot breaks away on Nov. 14.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
309·554		·971	250·5					305
		·963	291·9					249
		·857	302·1					185
		·852	284·5					250
		·811	248·2					139
	12084	·729	291·8	301·3	+18·4	3	9	
	12085	·656	232·5	289·6	−20·3	8	18	
	12086	·452	311·2	277·2	+20·8	34	154	
	12087	·397	213·8	269·2	−15·5	29	125	
	12088	·358	161·4	249·2	−16·0	25	67	
G	12090	·343	146·2	244·8	−12·8	44	250	
	12091	·543	116·6	226·5	−10·7	26	143	
	12092	·542	68·8	224·7	+14·5	17	86	
	12093	·693	112·8	215·3	−12·7	5	12	
	12094	·807	108·4	204·6	−12·4	8	31	126*f*
	12096	·913	109·4	192·6	−16·0	2	8	226*s*
	12097	·943	66·2	185·9	+23·6	6	13	490*sp*
	12095	·958	75·7	182·5	+14·8	103	424	218*c*
	12098	·996	81·2	170·8	+ 9·1	11	138	75*p*
		·919	53·8					207
Nov. 5			(+23·8)	(256·0)	(+ 3·8)	(321)	(1478)	(2470)
310·454		·959	243·4					172
		·953	284·1					285
		·916	301·2					210
		·910	252·0					151
		·873	239·6					139
	12084	·846	289·8	301·0	+18·7	2	8	463*c*
	12085	·790	240·8	291·2	−20·1	7	15	
	1112f	·721	306·6	285·0	+28·2	3	8	
	12086	·613	299·3	278·7	+20·4	16	87	
	12087	·570	237·4	273·7	−14·6	67	379	
	12088	·360	196·8	250·3	−16·4	33	109	
G	12090	·280	183·2	245·0	−12·5	55	214	
	12091	·384	130·0	226·8	−10·7	29	133	
	12092	·370	59·6	225·0	+14·2	14	85	
	12093	·554	120·0	214·8	−12·8	5	13	
	12096	·801	112·0	194·0	−15·1	15	22	118*s*
	12097	·850	63·4	187·7	+24·4	19	45	325*c*
	12095	·882	75·0	182·5	+15·0	79	499	205*c*
	12098	·962	81·4	169·9	+ 9·3	46	218	333*c*
		·795	66·2					252
		·899	54·5					136
		·925	102·4					29
		·952	112·8					159
Nov. 6			(+23·6)	(244·1)	(+ 3·7)	(390)	(1835)	(2977)
1936.			°	°	°			
311·407		·973	300·6					117
		·964	253·4					142
		·960	285·4					317
		·958	294·9					105
		·948	243·1					177
		·894	291·0					596
		·858	241·6					230
		·797	304·8					296
	12086	·775	292·4	280·9	+19·5	10	58	
	12087	·735	246·5	275·5	−14·4	53	398	
	12088	·461	223·0	250·6	−16·2	40	179	
G	12090	·354	219·1	244·8	−12·4	17	151	
	12091	·263	163·2	227·2	−10·9	32	158	
	12092	·214	30·8	225·1	+14·1	13	75	
	12093	·385	136·6	215·9	−12·7	2	6	
	12096	·647	119·9	196·1	−15·8	12	40	
	12097	·744	59·9	186·8	+24·4	14	68	110*c*
	12095	·755	73·4	183·3	+14·8	78	460	239*c*
	12098	·878	81·2	170·2	+ 9·4	41	168	390*f*
		·899	60·6					148
		·910	46·0					162
		·912	118·8					106
		·952	109·8					246
Nov. 7			(+23·4)	(231·6)	(+ 3·6)	(312)	(1761)	(3381)
312·443		·967	290·2					515
		·944	245·2					230
		·921	299·6					376
		·863	306·8					225
	12086	·908	289·4	282·6	+19·0	8	26	336*f*
	12087	·881	251·8	277·4	−14·2	60	349	712*c*
	12088	·626	237·6	251·2	−16·6	16	139	
	12090	·513	238·8	244·5	−12·2	18	81	
	12091	·295	211·7	226·9	−11·0	28	133	
	12092	·224	326·9	225·1	+14·2	11	47	
	12093	·284	173·0	215·9	−12·8	2	5	
G	12094	·376	141·2	203·9	−13·5	2	10	
	12096	·485	132·8	196·3	−16·0	9	31	
	12097	·626	53·4	184·4	+24·8	6	14	
	12095	·583	69·6	183·7	+14·6	88	486	
	12098	·743	80·0	170·2	+ 9·7	26	198	284*f*
	12099	·870	113·6	161·0	−18·5	7	24	277*c*
	1112g	·919	79·8	151·2	+10·7	0	3	88*f*
	12100	·962	110·5	146·2	−18·6	61	285	617*c*
	12101	·991	99·9	136·6	− 9·3	72	307	108*c*
		·822	120·4					96
		·956	116·4					294
Nov. 8			(+23·2)	(217·9)	(+ 3·5)	(414)	(2138)	(4158)

Group 12096. Nov. 5–15. A small nondescript group.
Group 12097. Nov. 5–8. Two or three small spots in a cluster.
Group 12098. Nov. 5–17. A stable regular spot with two small companions on Nov. 11 and 13.
Group 12099. Nov. 8–18. A stream in which the leader is predominant throughout, except on the first two days of development.
Group 12100. Nov. 8–19. A regular spot near which companions, forming and disappearing, nearly coalesce with it.
Group 12101. Nov. 8–20. A large spot preceded by a companion with a double umbra. A sudden change in shape is noticeable in the large spot between Nov. 11 and 13, and it divides into two, the preceding component becoming a regular spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
313·432		·949	298·5					344
		·940	306·6					133
		·939	290·5					426
		·894	247·3					255
	12087	·967	254·4	278·5	−14·1	39	206	560*c*
	12088	·774	245·2	251·9	−16·6	9	33	133*sp*
	12090	·678	247·7	244·7	−12·2	9	24	
	12091	·451	237·0	227·5	−11·0	20	133	
	12092	·386	300·1	225·0	+14·3	11	38	
	12093	·355	202·3	212·9	−15·7	1	5	
G	12094	·287	172·5	202·7	−13·1	2	9	
	12096	·380	154·2	195·0	−16·6	4	30	
	12102	·396	35·9	190·5	+21·9	10	48	
	12095	·399	60·7	183·9	+14·4	77	445	
	12098	·575	77·4	170·3	+10·0	28	166	
	12099	·751	119·0	161·1	−18·8	34	117	
	12100	·885	112·7	145·9	−18·2	54	320	506*c*
	12101	·951	98·6	133·8	− 7·1	164	790	645*c*
		·821	78·2					80
		·890	120·9					172
		·909	59·5					177
Nov. 9			(+22·9)	(204·9)	(+ 3·4)	(462)	(2364)	(3431)
314·435		·983	253·5					348
		·971	290·4					189
		·941	299·9					121
		·934	310·1					115
	12088	·890	249·5	251·9	−16·5	10	31	453*c*
	12090	·823	252·7	245·0	−12·2	6	10	175*c*
	12091	·624	247·6	227·6	−11·1	22	134	
	1112h	·625	297·1	227·6	+19·1	4	12	
	12092	·570	290·7	224·9	+14·3	8	17	
	1112i	·601	308·7	222·7	+24·8	2	8	
	12093	·477	230·7	214·0	−14·4	10	28	
	12103	·684	205·9	213·0	−34·8	3	6	
G	12096	·354	182·9	192·8	−17·3	7	29	
	12102	·321	4·0	190·3	+21·9	4	12	
	12095	·233	35·5	183·7	+14·2	77	430	
	12098	·373	71·1	170·8	+10·0	29	161	
	1112j	·433	83·5	166·2	+ 5·8	2	5	
	12099	·577	129·6	163·8	−18·6	64	223	
	12100	·771	117·9	145·8	−18·8	46	246	404*c*
	12101	·862	100·1	133·2	− 7·0	187	862	558*c*
		·881	110·9					271
		·936	61·2					139
		·943	48·5					169
		·959	105·1					237
		·965	97·0					419
Nov. 10			(+22·7)	(191·7)	(+ 3·3)	(481)	(2214)	(3598)
1936.			°	°	°			
315·121		·937	243·3					172
	12088	·934	252·5	249·7	−15·1	6	22	409*p*
	12090	·897	254·5	244·6	−12·4	4	9	145*f*
	12091	·730	251·4	227·3	−11·2	23	125	
	12092	·687	287·5	225·0	+14·3	4	17	
	12093	·619	242·3	216·8	−14·0	3	10	
	12103	·741	215·5	213·8	−34·2	6	19	
	12096	·381	205·9	192·6	−16·8	9	55	
	12095	·191	352·8	184·0	+14·1	80	389	
	12098	·237	59·7	170·7	+10·0	28	173	
K	12099	·485	140·1	163·5	−18·7	66	372	
	12100	·677	122·9	145·8	−19·0	36	188	
	12101	·772	101·9	133·2	− 7·0	164	923	324*c*
	12104	·790	110·0	133·0	−13·6	13	56	198*c*
		·806	123·3					290
		·904	119·3					217
		·905	98·1					589
		·911	107·8					232
		·928	69·5					141
		·935	59·1					156
Nov. 11			(+22·5)	(182·6)	(+ 3·2)	(442)	(2358)	(2873)
316·419		·977	253·8					251
		·870	296·4					187
		·852	284·5					289
	12091	·888	255·6	226·5	−11·2	18	118	247*f*
	12093	·815	250·7	217·7	−13·7	3	15	164*f*
	12103	·845	225·4	212·0	−34·2	4	16	104*c*
	12096	·581	238·0	196·1	−15·2	29	124	
	12095	·368	301·8	184·2	+14·1	55	366	
C	12098	·162	320·2	171·5	+10·2	17	131	
	12099	·371	176·5	164·1	−18·5	75	326	
	12100	·494	139·4	145·7	−19·0	32	204	
	12101	·562	107·6	133·0	− 7·1	127	820	
	12104	·603	118·2	132·5	−13·9	44	240	
		·761	104·5					469
		·849	65·1					128
		·885	39·6					79
		·940	109·4					274
Nov. 12			(+22·2)	(165·5)	(+ 3·1)	(404)	(2360)	(2192)

Group 12102. Nov. 9–16. A small group developing in front of Group 12097. Fresh activity is shown on Nov. 15.
Group 12103. Nov. 10–13. A small spot with a companion on Nov. 11.
Group 12104. Nov. 11–19. A group of bi-polar type synchronous in development with Group 12101 situated closely northwards.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
317·570		·952	284·9					229
		·915	251·7					221
		·900	298·5					113
		·869	238·9					219
		·860	286·0					212
	12091	·977	257·7	226·9	−11·4	30	122	215*sf*
	1112k	·970	293·1	226·1	+23·1	8	26	165*c*
	12103	·929	231·3	211·2	−34·1	5	12	92*c*
	12096	·766	247·6	197·3	−15·0	17	78	
	12102	·689	294·1	191·7	+18·5	6	14	
G	12095	·583	290·3	184·5	+14·0	68	376	
	12098	·382	290·2	171·6	+10·3	30	152	
	12099	·426	211·4	163·8	−18·4	73	373	
	12100	·376	169·0	146·0	−18·7	31	215	
	12104	·410	133·7	132·6	−13·7	60	254	
	12101	·350	120·1	132·6	− 7·4	142	791	
		·813	112·3					270
		·880	79·6					136
		·908	122·1					206
		·939	114·4					220
		·954	68·1					197
Nov. 13			(+21·9)	(150·3)	(+ 2·9)	(470)	(2413)	(2495)
318·456		·964	296·1					194
		·958	252·8					292
		·946	242·3					249
		·943	230·9					200
		·935	284·3					182
		·851	282·3					83
		·760	303·8					138
	12096	·874	251·2	197·4	−14·9	17	45	364*c*
	12102	·818	290·9	192·2	+18·6	3	3	262*c*
	12095	·726	285·8	184·4	+13·4	55	296	
	12098	·559	284·7	171·9	+10·5	26	139	
G	12099	·545	228·7	164·2	−18·5	63	322	
	12100	·390	199·1	146·4	−18·7	29	195	
	12101	·205	147·9	132·4	− 7·2	109	606	
	12104	·307	158·9	132·2	−13·8	41	181	
	12105	·414	113·0	116·2	− 6·7	2	5	
		·866	76·9					172
		·871	117·5					308
		·928	126·5					305
		·930	62·9					618
		·931	45·9					88
		·981	115·9					232
Nov. 14			(+21·7)	(138·7)	(+ 2·8)	(345)	(1792)	(3687)
1936.			°	°	°			
319·442		·960	282·8					95
		·865	301·2					324
	12096	·944	253·0	194·6	−15·0	6	20	353*c*
	12102	·929	289·6	193·4	+19·2	28	110	200*c*
	12095	·865	283·4	185·2	+12·9	29	233	114*c*
	12098	·729	282·2	172·0	+10·7	20	139	
	12099	·696	239·6	164·8	−18·5	63	339	
	12100	·494	222·2	146·1	−18·8	21	174	
G	12101	·219	217·4	133·4	− 7·3	106	501	
	12104	·309	199·2	131·7	−14·2	23	117	
	12105	·228	136·4	116·6	− 6·8	1	5	
		·795	65·3					125
		·859	128·6					233
		·902	109·8					121
		·903	60·6					301
		·939	118·8					330
		·985	59·0					152
Nov. 15			(+21·4)	(125·7)	(+ 2·7)	(297)	(1638)	(2348)
320·395		·978	250·0					221
		·936	299·9					190
	12102	·985	288·7	193·1	+18·8	23	130	157*c*
	12095	·943	282·9	183·5	+13·0	15	87	305*n*
	12098	·856	281·2	171·7	+11·0	20	115	136*f*
	12099	·821	245·5	164·8	−18·2	51	316	244*c*
	12106	·840	236·1	163·9	−26·2	7	40	
C	12100	·629	235·5	146·1	−18·7	13	102	
	12101	·379	244·2	133·1	− 7·0	67	466	
	12104	·422	227·2	131·6	−14·1	23	100	
		·819	133·9					228
		·838	62·0					268
		·862	119·7					370
		·938	56·7					226
Nov. 16			(+21·1)	(113·1)	(+ 2·6)	(219)	(1356)	(2345)
321·405		·974	287·2					161
		·839	233·2					99
	12098	·952	280·2	171·9	+10·5	21	108	142*f*
	12106	·932	241·1	164·4	−25·7	29	159	155*c*
	12099	·917	248·7	163·7	−18·3	47	286 }	335*c*
C	12107	·899	244·2	160·2	−21·8	11	62 }	
	12100	·770	243·4	146·1	−18·4	13	79	
	12101	·572	253·2	133·2	− 7·4	75	416	
	12104	·579	240·7	131·1	−14·2	9	46	
	12108	·929	113·6	34·4	−20·8	5	28	326*f*
		·850	53·8					158
Nov. 17			(+20·8)	(99·8)	(+ 2·5)	(210)	(1184)	(1376)

Group 12105. Nov. 14–15. A small nebulous spot.
Group 12106. Nov. 16–18. A group developing near the west limb.
Group 12107. Nov. 17–18. A spot originating near the west limb.
Group 12108. Nov. 17–28. An extensive stream in which a very large spot has developed as leader by Nov. 24. The following part of the stream decreases very rapidly after Nov. 25.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
322·415		·922	235·1					120
		·867	281·3					105
		·797	234·3					95
	12106	·984	244·5	163·7	−24·5	22	104	126*f*
	12099	·980	250·7	163·2	−18·3	42	182	237*f*
	12107	·972	246·5	160·5	−22·1	17	79	205*f*
	12100	·887	248·1	146·3	−18·1	11	41	350*s*
	12101	·744	257·7	133·5	− 7·5	64	286	
C	12104	·720	247·5	129·7	−14·2	3	12	
	1112l	·757	46·9	45·5	+32·8	2	6	
	12108	·858	116·6	31·4	−21·2	65	309	294*c*
		·846	71·3					215
		·862	85·6					148
		·899	108·1					185
		·925	124·5					142
		·960	71·1					326
Nov. 18			(+20·5)	(86·5)	(+ 2·4)	(226)	(1019)	(2548)
323·418		·962	280·8					196
		·884	238·2					111
		·765	255·8					234
	12100	·962	250·4	145·4	−18·1	0	14	609*s*
	12101	·880	260·2	134·0	− 7·5	49	279	324*c*
	12104	·849	251·7	129·3	−14·2	4	8	319*c*
C	*1112m*	·475	154·2	60·3	−23·1	2	5	
	12108	·730	122·8	32·1	−21·6	94	567	
		·759	67·0					144
		·881	127·4					198
		·895	70·6					337
		·976	128·6					180
		·977	111·9					136
Nov. 19			(+20·2)	(73·2)	(+ 2·2)	(149)	(873)	(2788)
324·410		·952	250·6					489
		·848	261·7					197
		·841	251·1					120
	12101	·960	261·9	133·3	− 7·2	25	246	330*c*
	1112n	·398	324·3	74·5	+20·9	1	4	
C	12108	·587	132·3	32·5	−21·3	103	645	
		·783	67·9					114
		·817	139·5					90
		·888	61·2					113
		·927	114·4					244
		·928	131·7					182
		·968	106·3					123
Nov. 20			(+19·9)	(60·2)	(+ 2·1)	(129)	(895)	(2002)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
325·458		·956	262·2					469
		·949	254·3					273
		·949	244·1					188
		·946	293·0					140
		·837	294·8					96
G		·819	244·3					228
	12108	·454	150·0	32·4	−21·1	119	649	
		·829	118·2					112
		·864	135·9					177
		·930	109·2					309
		·951	67·8					296
Nov. 21			(+19·6)	(46·4)	(+ 2·0)	(119)	(649)	(2288)
326·492		·905	246·4					96
	12108	·394	178·8	33·2	−21·2	119	638	
G		·824	111·4					221
		·891	63·0					238
		·959	104·9					132
Nov. 22			(+19·2)	(32·7)	(+ 1·9)	(119)	(638)	(687)
327·393		·930	245·9					142
		·878	235·3					164
	12108	·432	205·3	32·3	−21·2	148	991	
	12109	·980	72·9	302·7	+17·1	71	320	270*c*
C		·850	117·1					149
		·887	74·7					247
		·902	64·5					121
		·915	105·7					212
Nov. 23			(+18·9)	(20·9)	(+ 1·7)	(219)	(1311)	(1305)
328·488		·975	244·8					194
		·935	235·6					291
		·915	293·3					210
		·863	246·3					107
		·863	304·4					338
		·847	220·0					78
		·842	233·4					365
C	12108	·553	225·8	31·4	−21·2	143	1243	
	12109	·914	72·4	301·2	+16·7	56	276	1260*f*
		·825	70·1					533
		·877	106·2					247
		·882	119·8					99
		·929	56·1					146
		·954	114·0					120
		·981	107·8					116
Nov. 24			(+18·6)	(6·4)	(+ 1·6)	(199)	(1519)	(4104)

Group 12109. Nov. 23–Dec. 5. This group, a revival of Group 12084, comes round the east limb as a single regular spot, but on Nov. 25 and the following days a very extensive conglomeration of spots develops westwards and northwards. It is interesting to note that, throughout the transit, the regular spot remains narrowly divided from the new spot formation without being absorbed by it.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
329·405		·946	293·0					102
		·939	246·3					135
		·922	302·8					402
		·914	236·6					357
		·813	310·3					196
	12108	·689	235·8	31·9	−21·5	133	1121	
C	*1113a*	·369	145·8	341·9	−16·3	1	4	
	12109	·809	69·8	301·9	+17·1	92	390	330*c*
	12110	·821	104·6	300·5	−11·0	11	44	86*c*
		·899	52·7					99
		·920	67·7					759
		·952	107·0					438
Nov. 25			(+18·2)	(354·3)	(+ 1·5)	(237)	(1559)	(2904)
330·431		·972	243·5					196
		·962	297·7					158
		·903	305·3					156
	12108	·820	242·6	32·0	−21·2	152	947	297*p*
	12109	·653	64·7	302·8	+17·3	134	960	
	12110	·661	108·3	301·2	−10·9	79	333	
C	12111	·932	105·9	273·4	−14·2	18	63 }	274*c*
	12112	·968	104·7	266·4	−13·8	94	778 }	
		·831	67·3					205
		·856	108·0					210
		·930	58·3					192
		·940	69·1					151
Nov. 26			(+17·9)	(340·8)	(+ 1·4)	(477)	(3081)	(1839)
331·556		·963	302·8					190
		·889	289·9					234
		·841	229·0					200
	12108	·938	247·3	33·5	−20·7	132	677	1037*c*
	12109	·466	53·7	303·0	+17·1	197	1267	
	12113	·526	44·1	302·6	+23·2	29	125	
	12110	·456	118·1	301·9	−11·2	76	657	
G	12114	·673	61·5	287·3	+19·6	3	13	
	12111	·828	108·5	272·0	−14·5	35	132 }	503*c*
	12112	·893	106·9	264·3	−14·5	187	1165 }	
	12115	·983	73·5	247·0	+16·4	24	138	314*f*
		·823	57·7					229
		·920	77·2					219
		·925	52·1					296
		·972	106·6					408
Nov. 27			(+17·5)	(326·0)	(+ 1·2)	(683)	(4174)	(3630)
1936.			°	°	°			
332·415		·958	281·6					157
		·944	290·8					195
		·910	303·8					90
		·902	232·3					250
		·838	291·9					237
		·819	221·5					174
	12108	·985	248·7	33·4	−20·7	177	493	1160*c*
	12116	·876	259·1	15·0	− 9·0	11	36	166*f*
	12117	·371	212·3	326·6	−17·1	7	33	
	12110	·288	135·9	303·0	−10·8	107	705	
	12113	·422	27·7	302·5	+22·9	16	79	
G	12109	·346	36·9	302·2	+17·0	211	1425	
	12118	·459	56·7	291·3	+15·5	10	38	
	12114	·541	51·4	288·0	+20·6	5	21	
	12111	·716	111·9	271·5	−14·7	52	313 }	338*f*
	12112	·795	109·1	264·1	−14·3	182	1260 }	
	12119	·922	107·3	249·0	−15·4	17	86	427*c*
	12115	·935	72·5	246·3	+16·7	57	284	398*c*
		·782	60·0					160
		·832	75·0					176
		·878	50·0					316
		·933	117·8					282
		·973	100·8					209
Nov. 28			(+17·2)	(314·7)	(+ 1·1)	(852)	(4773)	(4735)
333·350		·973	244·3					302
	12116	·964	260·4	16·3	− 9·0	11	50	285*f*
	1113b	·930	288·9	9·6	+17·9	5	23	146*c*
	12117	·535	239·4	330·6	−14·8	2	8	
	12110	·205	185·1	303·4	−10·7	78	600	
	12113	·372	357·6	303·3	+22·7	9	40	
	12109	·271	357·2	303·1	+16·6	171	1296	
C	12118	·298	37·2	291·6	+14·7	11	44	
	12111	·555	119·8	272·5	−15·1	36	215	
	12112	·662	113·8	263·7	−14·7	170	1222	
	12119	·813	109·6	250·0	−15·2	20	100	304*c*
	12115	·855	71·4	244·9	+16·3	69	494	179*c*
	12120	·964	101·2	228·5	−10·5	7	24	205*c*
		·950	106·3					158
		·970	71·2					232
Nov. 29			(+16·8)	(302·3)	(+ 1·0)	(589)	(4116)	(1811)

Group 12110. Nov. 25–Dec. 4. An extensive stream on nearly the same meridian as Group 12109 and synchronous with its development. The leader is large when fully grown but is very unstable.
Group 12111. Nov. 26–Dec. 6. Return of Group 12087; a small unstable stream immediately preceding the large group, No. 12112.
Group 12112. Nov. 26–Dec. 8. A very large composite spot, separating into four parts on Dec. 5.
Group 12113. Nov. 27–Dec. 3. A small stream north of Group 12109.
Group 12114. Nov. 27–28. A small ephemeral spot.
Group 12115. Nov. 27–Dec. 10. A large stream developing in the usual manner; considerable changes take place, however, from Dec. 6 to 9 as evidence of renewed activity.
Group 12116. Nov. 28–29. A small regular spot.
Group 12117. Nov. 28–29. A small stream on Nov. 28; a single spot on Nov. 29.
Group 12118. Nov. 28–Dec. 1. A small stream following Group 12109.
Group 12119. Nov. 28–Dec. 7. A stream of generally unimportant spots in the wake of Group 12112.
Group 12120. Nov. 29–Dec. 4. Return of Group 12091: 3rd appearance. A small definite spot with a faint companion on Dec. 2.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
334·098		·986	260·8					190
		·966	287·8					315
		·914	299·1					468
		·900	243·7					242
		·832	285·8					282
	12113	·418	332·2	304·6	+22·5	4	16	
	12110	·278	222·3	303·4	−11·0	84	480	
	12109	·325	326·9	303·1	+16·6	182	1254	
	12118	·235	1·7	292·1	+14·4	12	52	
	12111	·426	129·7	272·8	−14·9	42	209	
K	12121	·484	47·3	270·4	+19·9	8	32	
	12112	·552	119·7	262·9	−15·0	206	1333	
	12119	·711	113·1	249·9	−15·5	28	145	
	12115	·762	68·7	244·9	+16·6	131	691	303*p*
	12120	·905	101·9	228·5	−10·3	7	19	774*c*
	12122	·972	120·1	218·9	−28·9	8	25	281*f*
		·799	124·7					436
		·884	115·8					246
		·907	70·4					358
		·972	113·1					169
Nov. 30			(+16·5)	(292·5)	(+ 0·9)	(712)	(4256)	(4064)
335·463		·941	285·1					133
		·925	250·8					352
		·865	296·4					215
		·808	248·3					142
	12110	·543	248·5	305·3	−10·8	46	263	
	12109	·536	300·2	303·2	+16·2	172	1035	
	12113	·596	308·4	304·7	+22·3	4	14	
	12118	·365	311·6	290·8	+14·6	2	7	
	12111	·271	176·7	273·6	−14·9	28	123	
	12121	·332	13·8	269·7	+19·4	4	19	
	12112	·334	143·5	262·7	−14·8	185	1323	
	12119	·471	124·6	251·0	−14·8	30	142	
G	12115	·532	58·8	246·3	+16·6	105	635	
	12120	·734	104·8	228·5	−10·3	5	11	
	12122	·905	123·9	214·6	−29·9	5	13	306*f*
	12123	·972	126·7	202·1	−35·2	50	318	512*c*
	12124	·986	68·6	194·9	+21·2	48	335	614*p*
	12125	·986	75·6	194·5	+14·3	20	64	207*p*
		·770	67·0					246
		·848	125·5					71
		·866	117·3					112
		·937	58·7					107
		·947	103·2					140
		·970	110·0					184
Dec. 1			(+16·0)	(274·5)	(+ 0·7)	(704)	(4302)	(3341)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
336·480		·959	251·9					226
		·945	292·0					174
		·933	243·3					92
		·832	291·5					188
	12126	·814	248·2	313·2	−17·2	15	68	94*c*
	12110	·732	255·0	306·9	−10·5	43	234	
	12109	·701	292·6	303·3	+16·0	136	943	
	12113	·678	299·2	299·9	+19·8	7	29	
	12121	·391	329·1	273·4	+20·1	1	2	
	12111	·345	216·5	270·8	−15·4	24	94	
	12112	·276	184·2	262·3	−15·3	155	1139	
C	12119	·311	147·6	251·2	−14·5	21	101	
	12115	·384	42·7	245·4	+16·9	104	674	
	1113c	·502	147·0	243·7	−24·2	2	8	
	12120	·571	109·4	228·0	−10·4	5	13	
	12122	·820	128·2	213·2	−30·0	7	23	127*c*
	12123	·922	129·8	200·5	−35·8	55	234	522*c*
	12125	·917	74·7	195·5	+14·2	16	104	645*c*
	12124	·927	67·0	194·9	+21·5	60	387	590*p*
		·848	54·8					114
		·854	105·8					95
		·927	116·4					248
		·976	63·3					178
Dec. 2			(+15·6)	(261·1)	(+ 0·6)	(651)	(4053)	(3293)
337·505		·933	287·7					401
	12126	·926	250·6	313·8	−17·7	12	51	287*c*
	12110	·866	257·0	306·6	−11·0	29	202	496*c*
	12109	·847	288·5	304·0	+15·8	154	882 }	830*c*
	12113	·829	294·0	301·0	+19·9	2	8 }	
	12111	·505	237·7	273·7	−15·1	16	93	
	12112	·362	222·2	262·1	−15·0	133	1013	
	12119	·274	191·4	250·8	−15·0	16	66	
	12115	·280	5·7	245·9	+16·6	79	643	
	12120	·370	119·8	228·6	−10·1	4	6	
G	*1113d*	·565	129·0	219·8	−20·3	2	8	
	12122	·708	135·2	212·7	−29·7	12	48	
	12123	·837	133·7	200·2	−34·9	35	182	555*c*
	12125	·802	73·0	195·6	+13·8	22	86	271*f*
	12124	·828	64·2	194·6	+21·3	48	388	955*f*
	12127	·951	79·4	176·0	+10·3	6	21	184*c*
		·836	117·6					247
		·944	60·4					300
		·955	71·4					179
		·967	107·2					261
Dec. 3			(+15·2)	(247·6)	(+ 0·5)	(570)	(3697)	(4966)

Group 12121. Nov. 30–Dec. 2. A small ephemeral stream.
Group 12122. Nov. 30–Dec. 9. A small but persistent group.
Group 12123. Dec. 1–13. A group of three or four spots at the east limb; of these a regular spot with a small companion remain on Dec. 4.
Group 12124. Dec. 1–13. Probable return of Group 12102. A pair of regular spots, 3° apart in latitude, usually with a few faint companions.
Group 12125. Dec. 1–11. A partially-formed regular spot with a small distant follower on Dec. 5.
Group 12126. Dec. 2–3. A group near the west limb.
Group 12127. Dec. 3–9. Return of Group 12098. A small but definite spot.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
338·423		·981	251·7					285
		·904	243·4					196
		·835	299·5					429
		·805	240·0					192
		·791	252·4					211
		·770	311·9					186
	12110	·950	258·9	306·7	−10·4	41	185	443*f*
	12109	·930	287·2	302·9	+16·1	135	801	1127*n*
	12111	·644	245·5	272·7	−15·2	11	72	
	12112	·505	238·1	261·7	−15·1	150	829	
	12119	·362	220·5	249·6	−15·6	10	62	
	12115	·333	327·1	246·3	+16·4	98	573	
	1113e	·370	196·0	241·7	−21·0	1	5	
G	*1113f*	·216	177·5	234·9	−12·1	2	7	
	12120	·213	146·6	228·7	− 9·9	2	5	
	12122	·624	145·7	211·5	−30·7	17	97	
	12123	·773	139·5	197·5	−35·6	34	144	401*f*
	12125	·653	69·0	196·8	+13·7	20	75	
	12124	·714	59·0	194·4	+21·8	51	310	388*f*
	12127	·865	78·3	176·3	+10·3	7	22	159*c*
		·870	55·6					263
		·870	67·0					142
		·873	107·4					110
		·880	85·2					131
		·950	111·0					850
		·974	63·4					141
		·980	76·7					214
Dec. 4			(+14·8)	(235·5)	(+ 0·3)	(579)	(3187)	(5868)
339·505		·978	255·6					348
		·915	297·0					413
		·905	252·5					222
		·839	306·2					182
		·791	319·0					132
	12109	·982	285·6	299·7	+15·4	85	337	554*n*
	12111	·815	252·6	274·3	−13·9	2	8	317*c*
	12112	·686	247·0	261·9	−15·3	108	720	
	12128	·687	309·8	257·1	+26·2	17	45	
	12119	·522	236·9	248·2	−16·3	5	21	
	12115	·494	304·6	246·2	+16·4	117	654	
	12129	·367	356·9	222·4	+21·6	7	26	
G	12122	·505	168·4	214·5	−29·3	8	17	
	12123	·671	149·9	197·0	−35·1	22	111	
	12125	·467	59·9	196·7	+13·7	17	76	
	12124	·563	48·6	194·2	+22·0	50	305	
	12127	·714	75·8	176·7	+10·2	6	16	64*nf*
		·742	64·4					152
		·766	51·6					276
		·819	105·4					155
		·863	115·6					521
		·904	60·5					146
		·935	76·6					428
		·955	110·8					533
Dec. 5			(+14·4)	(221·2)	(+ 0·2)	(444)	(2336)	(4443)
1936.			°	°	°			
340·347		·967	291·0					181
		·923	301·2					310
		·853	293·4					99
	12111	·886	254·8	271·3	−13·4	4	14	602*p*
	12112	·810	251·3	262·5	−15·0	95	590	312*c*
	12128	·804	303·6	258·3	+26·4	7	32	142*c*
	12130	·747	236·2	252·9	−24·4	3	10	
	12119	·661	245·2	248·6	−16·0	3	18	
	12115	·612	296·6	244·6	+15·9	187	1120	
	12129	·423	331·0	222·8	+21·7	9	25	
	12122	·500	187·8	214·5	−29·4	6	16	
C	12125	·311	41·4	197·9	+13·5	12	63	
	12123	·612	161·8	196·6	−35·3	30	134	
	12124	·451	34·6	194·2	+21·8	45	292	
	12127	·571	72·2	176·7	+10·1	6	13	
	12131	·890	76·2	148·1	+12·3	9	19	209*c*
		·803	120·0					390
		·806	74·2					211
		·828	55·8					130
		·891	112·5					364
		·961	108·4					177
		·966	98·1					496
Dec. 6			(+14·0)	(210·1)	(+ 0·1)	(416)	(2346)	(3623)
341·470		·956	296·2					249
		·937	310·4					220
		·919	229·9					136
	12112	·927	254·0	262·2	−14·8	75	496	902*c*
	12128	·916	299·4	258·4	+26·7	5	16	186*f*
	12130	·886	243·0	254·6	−23·6	4	10	381*f*
	12119	·820	249·6	248·4	−16·6	3	23	535*p*
	12115	·776	290·9	244·1	+16·0	197	1204	465*c*
	1113g	·612	236·6	228·0	−19·6	3	14	
G	12129	·560	311·4	222·1	+21·7	4	16	
	12122	·569	210·1	214·3	−29·3	4	8	
	12125	·245	348·4	198·2	+13·8	11	45	
	12123	·579	181·7	196·5	−35·2	29	132	
	12124	·368	4·0	193·7	+21·5	68	318	
	12127	·367	61·8	176·2	+10·0	5	11	
		·811	117·6					184
		·862	96·8					383
		·933	121·2					148
		·933	110·4					262
		·956	98·8					328
Dec. 7			(+13·6)	(195·3)	(0·0)	(408)	(2293)	(4379)

Group 12128. Dec. 5–8. A small stream on Dec. 5 of which only the leader spot is left on the following days.
Group 12129. Dec. 5–8. A small short-lived group.
Group 12130. Dec. 6–7. A small spot.
Group 12131. Dec. 6–14. A pair of spots on Dec. 6; on Dec. 8, a moderate-sized stream appears.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
342·111		·964	248·2					155
		·917	310·7					237
		·913	228·5					146
		·901	240·3					344
		·890	251·0					471
	12112	·971	254·7	262·3	−14·8	41	281	268*c*
	12128	·958	298·5	257·7	+27·1	3	14	250*f*
	12115	·845	289·1	242·8	+16·0	139	1147	517*c*
	12129	·630	305·5	220·2	+21·3	3	5	
K	12122	·631	219·1	213·9	−29·3	4	10	
	12132	·330	229·9	201·8	−12·4	14	32	
	12125	·306	319·6	198·6	+13·3	4	15	
	12123	·597	193·1	196·4	−35·3	25	117	
	12124	·390	343·4	193·8	+21·7	48	296	
	12127	·243	44·9	176·9	+ 9·7	2	6	
	12131	·637	69·7	149·3	+12·7	13	51	
		·829	99·3					554
		·920	114·0					639
		·931	100·3					258
Dec. 8			(+13·3)	(186·9)	(− 0·1)	(296)	(1974)	(3839)
343·108		·949	251·5					253
		·822	296·2					271
	12115	·939	287·1	242·5	+15·9	115	808	510*c*
	12122	·740	228·7	213·3	−29·4	3	9	
	12132	·529	247·4	203·6	−11·9	8	24	
	12125	·478	300·5	198·8	+13·7	5	21	
K	12123	·655	208·1	196·0	−35·4	16	119	
	12124	·492	320·3	193·5	+21·8	45	257	
	12127	·182	341·9	177·1	+ 9·6	2	4	
	12131	·472	59·9	149·1	+13·4	48	150	
	12133	·849	113·9	118·2	−20·2	19	55	193*c*
		·823	102·7					194
		·985	114·1					158
Dec. 9			(+12·9)	(173·8)	(− 0·3)	(261)	(1447)	(1579)
1936.			°	°	°			
344·392		·974	255·7					237
		·934	292·3					172
		·890	255·1					205
		·857	232·3					281
	12115	·989	287·3	237·5	+17·0	13	69	271*c*
	1113h	·904	301·9	217·2	+28·3	5	24	78*c*
C	12132	·762	255·6	205·4	−11·2	6	32	
	12125	·702	290·3	199·3	+13·8	6	41	
	12123	·765	221·2	194·9	−35·4	22	118	367*f*
	12124	·665	304·8	192·7	+21·9	39	228	
	12131	·275	27·9	149·2	+13·6	33	250	
	1113i	·399	65·3	135·4	+ 9·2	4	9	
	12133	·688	120·1	117·5	−20·4	27	144	130*c*
	12134	·907	115·5	94·1	−23·1	7	25	210*f*
Dec. 10			(+12·3)	(156·8)	(− 0·4)	(162)	(940)	(1951)
345·537		·974	298·8					189
		·936	235·2					517
		·900	256·2					247
		·864	244·6					215
	12125	·865	286·5	200·2	+13·9	4	13	107*c*
	12123	·868	228·7	194·5	−35·2	13	80	529*f*
	12124	·814	298·0	192·3	+22·0	44	222	391*c*
G	12131	·268	333·1	148·8	+13·2	30	216	
	12133	·505	131·5	118·1	−20·0	32	155	
	12134	·779	119·2	94·4	−22·7	3	7	
	12135	·985	111·4	62·4	−21·2	44	214	278*c*
		·822	121·0					136
		·939	69·0					171
		·957	123·1					214
Dec. 11			(+11·8)	(141·7)	(− 0·6)	(170)	(907)	(2994)

Group 12132. Dec. 8–10. A small ephemeral stream.
Group 12133. Dec. 9–19. A stream of changing spots.
Group 12134. Dec. 10–15. A small spot not seen on Dec. 12, 13 and 14.
Group 12135. Dec. 11–22. A large double spot changing considerably after Dec. 15.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
346·247		·956	237·8					254
		·951	257·9					219
		·942	304·3					207
		·930	285·1					185
		·869	224·4					161
		·820	303·3					166
	12123	·927	231·1	195·2	−35·9	29	157	208*c*
K	12124	·891	295·0	192·6	+21·7	26	120	731*c*
	12136	·575	287·1	166·1	+ 9·1	21	81	
	12131	·368	310·1	149·1	+13·0	22	172	
	12133	·409	145·1	118·0	−20·2	25	111	
	12135	·948	112·1	62·3	−21·1	59	349	442*c*
		·890	67·1					143
		·918	123·7					452
		·967	57·7					214
Dec. 12			(+11·5)	(132·4)	(− 0·7)	(182)	(990)	(3382)
347·446		·867	304·2					194
		·863	291·8					75
		·820	247·8					348
		·754	234·8					197
	12123	·980	234·0	192·6	−35·3	27	113	609*sf*
	12124	·972	292·7	191·4	+21·8	20	89	646*c*
	12136	·769	281·7	166·0	+ 8·4	34	175	
G	12131	·574	293·8	149·0	+12·7	18	88	
	12133	·331	184·4	118·1	−20·0	18	68	
	12137	·505	113·9	88·5	−12·5	5	19	
	12135	·838	115·0	62·3	−21·2	84	506	546*c*
	12138	·996	111·4	32·2	−21·3	21	90	205*n*
		·820	60·6					113
		·894	125·2					275
		·916	54·0					261
Dec. 13			(+11·0)	(116·6)	(− 0·8)	(227)	(1148)	(3469)
1936.			°	°	°			
348·104		·977	289·0					221
		·965	230·9					227
		·939	300·0					295
		·885	250·7					311
		·850	310·5					236
		·840	237·7					111
	12136	·869	280·9	167·4	+ 9·0	24	94	
	12131	·695	288·9	150·0	+12·3	8	28	
K	12133	·353	202·1	116·0	−19·9	15	60	
	12137	·368	122·9	89·5	−12·4	4	24	
	12135	·754	118·0	62·5	−21·3	61	394	395*c*
	12138	·971	111·7	32·7	−21·2	49	215	422*n*
		·800	132·1					276
		·864	54·7					368
		·951	74·9					219
		·974	57·4					263
Dec. 14			(+10·7)	(107·9)	(− 0·9)	(161)	(815)	(3344)
349·514		·977	251·9					189
		·953	242·8					264
		·889	250·2					292
		·882	284·0					426
	12136	·974	280·9	165·6	+10·4	4	13	373*s*
	12133	·514	229·7	114·0	−20·3	28	180	
	12134	·408	189·8	93·8	−24·7	0	5	
	12135	·549	129·5	62·5	−21·3	55	356	
G	12138	·864	114·3	31·9	−21·4	48	252	781*c*
		·791	131·4					119
		·850	69·8					224
		·890	51·8					189
		·900	135·1					221
		·949	98·6					143
		·954	125·6					149
		·968	72·3					296
Dec. 15			(+10·0)	(89·4)	(− 1·1)	(135)	(806)	(3666)

Group 12136. Dec. 12–15. A stream of simple formation near the sun's west limb.
Group 12137. Dec. 13–14. A diminutive stream.
Group 12138. Dec. 13–26. Return of Group 12108. A regular spot; there is a small companion on Dec. 21, whilst on Dec. 26 two new spots have appeared indicating a renewal of activity.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
350·476		·967	251·6					284
		·958	282·8					564
		·876	249·4					249
		·872	261·6					491
		·859	239·0					356
	12133	·638	238·1	111·9	−20·6	28	327	
	12135	·418	146·1	62·3	−21·3	56	351	
G	12138	·754	118·3	31·3	−21·7	30	184	263c
		·823	47·0					342
		·824	139·2					247
		·861	119·4					762
		·871	100·4					153
		·890	130·5					99
		·898	69·3					440
		·975	59·3					152
		·978	74·4					193
Dec. 16			(+ 9·6)	(76·7)	(− 1·2)	(114)	(862)	(4595)
351·395		·926	244·2					305
		·915	260·4					576
	12133	·749	243·3	110·0	−20·5	19	140	
	12135	·349	172·6	61·8	−21·4	36	276	
C	12138	·627	125·0	31·1	−22·1	28	163	
		·817	126·4					197
		·865	69·6					206
		·868	112·4					187
Dec. 17			(+ 9·2)	(64·6)	(− 1·3)	(83)	(579)	1(471)
352·410		·976	246·8					290
		·945	260·7					340
	12133	·880	247·1	111·0	−20·7	35	282	400c
	12139	·701	284·3	94·5	+ 9·0	4	12	
	12140	·476	318·9	70·5	+19·6	3	11	
C	12135	·386	206·1	61·7	−21·6	38	225	
	12138	·487	137·8	30·6	−22·3	31	142	
	12141	·994	65·7	329·0	+24·0	0	35	
		·757	134·9					142
		·900	129·6					261
		·944	110·1					297
Dec. 18			(+ 8·7)	(51·2)	(− 1·4)	(111)	(707)	(1730)
1936.			°	°	°			
353·469		·935	238·3					240
		·860	242·2					231
	12133	·965	249·4	111·4	−20·2	50	216	868c
	12139	·879	284·1	97·6	+11·6	47	206	284c
	12140	·591	309·3	66·4	+20·5	2	14	
	12135	·510	228·3	61·3	−21·2	57	374	
G	12138	·372	162·4	30·3	−22·3	30	133	
	12142	·489	141·7	18·0	−24·0	2	7	
	12141	·957	63·9	327·0	+24·3	60	338	501c
	12143	·960	115·7	324·7	−25·1	16	62	267f
		·865	111·4					225
		·867	134·2					281
		·867	50·3					147
Dec. 19			(+ 8·2)	(37·3)	(− 1·6)	(264)	(1350)	(3044)
354·466		·942	244·5					206
		·921	257·8					159
	12139	·963	282·2	97·5	+11·2	62	234	423c
	1113j	·815	292·4	75·9	+17·0	0	5	144c
	12135	·656	239·6	61·2	−20·7	63	382	
	12138	·367	195·1	30·0	−22·4	31	161	
G	12142	·392	172·5	20·9	−24·5	9	39	
	12141	·879	62·1	326·6	+23·3	89	461	726sf
	12143	·893	118·5	323·5	−26·0	23	62	333c
	12144	·980	70·9	307·1	+18·3	20	53	391c
		·923	100·7					250
		·983	103·0					160
Dec. 20			(+ 7·7)	(24·1)	(− 1·7)	(297)	(1397)	(2792)
355·399		·865	293·8					237
		·787	229·9					312
	12139	·987	283·2	91·7	+12·7	12	30	123p
	12135	·791	245·5	61·7	−20·2	34	220	205c
	12138	·451	219·2	29·6	−22·1	42	191	
	12145	·355	331·0	22·1	+16·3	4	15	
	12142	·384	193·9	17·6	−23·6	2	9	
C	12141	·771	56·9	327·2	+23·6	68	426	
	12143	·799	121·9	322·9	−26·1	10	24	236c
	12144	·921	69·4	306·9	+18·1	42	211 }	417c
	12146	·956	71·7	300·4	+16·9	20	104 }	
	12147	·990	119·4	290·6	−29·3	21	106	91c
		·830	100·7					176
		·849	60·9					186
		·929	104·1					168
		·940	60·3					377
Dec. 21			(+ 7·3)	(11·8)	(− 1·8)	(255)	(1336)	(2528)

Group 12139. Dec. 18–21. A stream developing near the west limb.
Group 12140. Dec. 18–19. A very small group.
Group 12141. Dec. 18–30. An extensive stream in which the leader becomes a regular spot. The following part of the stream is a considerable cluster of rapidly changing spots.
Group 12142. Dec. 19–25. A small unstable stream *f* Group 12138.
Group 12143. Dec. 19–30. A small stream or cluster not seen on Dec. 25, 28 and 29.
Group 12144. Dec. 20–28. A small stream whose early development suggests that a larger group would result.
Group 12145. Dec. 21–26. A small short-lived stream.
Group 12146. Dec. 21, 1937–Jan. 1. Return of Group 12109. A regular spot slowly diminishing. On Dec. 27, 28, 30 and 31, some small spots following are included in the group, though it is uncertain whether these may not belong to Group 12150.
Group 12147. Dec. 21–Jan. 2. A stable regular spot with companions on Dec. 28.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
356·461		·974	288·2					93
		·950	236·4					300
		·897	303·5					267
		·837	233·3					491
		·833	314·5					175
	12135	·909	247·7	61·8	−21·0	15	77	652*c*
	12138	·598	233·7	29·1	−22·3	22	148	
	12145	·498	307·6	21·9	+15·8	17	63	
	1114a	·339	240·3	15·2	−11·4	1	2	
	12142	·472	218·4	16·4	−23·4	16	70	
	1114b	·321	175·1	356·1	−20·4	3	12	
G	12141	·634	47·3	327·3	+23·7	109	459	
	12143	·657	127·9	323·0	−25·3	11	28	
	12144	·811	65·8	306·8	+18·2	54	194 }	269*c*
	12146	·870	69·0	299·8	+17·2	17	109 }	
	12148	·900	49·6	301·7	+34·5	10	25	93*c*
	12147	·950	120·7	288·1	−29·6	30	191	454*f*
	12149	·960	64·0	286·8	+24·3	14	27	285*c*
		·766	58·8					120
		·843	106·0					248
		·868	59·3					248
		·915	55·4					128
		·956	108·2					707
Dec. 22			(+ 6·8)	(357·8)	(− 1·9)	(319)	(1405)	(4530)
357·502		·968	248·0					508
		·937	236·7					365
		·929	305·9					304
		·874	226·3					209
		·819	293·3					113
	12138	·744	241·5	28·9	−22·3	32	149	332*p*
	12145	·674	296·5	22·8	+15·8	18	90	
	12142	·623	233·5	17·1	−23·5	17	76	
	1114c	·411	347·8	349·4	+21·5	12	38	
	12141	·492	30·6	328·4	+23·0	103	471	
	12143	·508	140·3	323·2	−24·9	3	20	
G	12144	·670	60·5	306·5	+17·6	30	154	
	12146	·742	64·5	299·8	+17·0	19	112	205*c*
	12148	·826	44·1	299·8	+34·8	19	90	163*c*
	12150	·821	68·1	291·7	+16·5	3	11	100*c*
	12147	·876	123·1	286·6	−29·7	38	205	426*f*
	12149	·884	60·9	286·4	+24·3	9	26	374*c*
	12151	·985	104·5	264·1	−14·6	11	25	152*c*
		·816	51·9					213
		·883	107·7					847
		·917	50·6					134
		·964	58·8					320
Dec. 23			(+ 6·3)	(344·1)	(− 2·1)	(314)	(1467)	(4765)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
358·329		·958	238·1					208
		·936	296·9					181
		·909	228·6					149
		·902	290·5					91
		·892	249·3					343
	12138	·841	244·3	28·2	−22·6	23	124	
	12145	·793	291·5	23·0	+15·5	7	36	82*c*
	12142	·754	239·1	17·0	−21·2	8	60	
	12141	·438	11·9	327·6	+23·1	85	502	
	12143	·422	157·3	322·9	−25·0	4	18	
	12144	·534	52·1	307·1	+17·2	17	93	
	1114d	·579	46·1	306·6	+21·7	1	6	
C	12146	·623	58·3	299·6	+17·2	20	99	
	12148	·752	37·5	299·5	+34·7	30	155	
	12150	·711	63·5	291·7	+16·8	7	36	
	12152	·731	108·3	287·5	−14·8	12	39	
	12147	·797	126·6	285·9	−29·7	27	164	206*f*
	12149	·804	57·9	285·3	+23·8	5	24	108*c*
	12151	·936	104·5	264·2	−14·4	8	17	554*f*
	12153	·944	75·9	263·8	+12·5	6	18	209*p*
	12154	·989	72·2	253·1	+17·2	56	285	399*c*
		·827	109·3					210
		·930	59·3					379
		·963	111·7					145
Dec. 24			(+ 5·9)	(333·2)	(− 2·2)	(316)	(1676)	(3264)
359·417		·919	288·2					218
		·867	295·0					168
		·858	233·2					293
	12138	·938	246·6	27·6	−22·7	24	149	382*p*
	12142	·904	243·1	21·6	−25·1	15	60	347*c*
	12141	·445	341·3	327·7	+22·5	88	499	
	12144	·376	29·1	307·9	+16·9	17	66	
	12146	·457	43·9	299·6	+17·0	24	101	
	12148	·673	27·0	297·2	+34·5	15	58	
	12150	·551	53·9	291·3	+16·9	21	66	
	12152	·567	114·1	286·6	−15·2	9	41	
G	12147	·664	135·3	286·4	−30·0	23	177	
	12149	·654	49·5	286·3	+23·1	9	25	
	12155	·768	70·6	271·0	+13·2	3	7	76*c*
	12153	·827	73·6	264·9	+12·1	13	49	220*c*
	12151	·821	106·6	264·6	−14·9	10	34	462*f*
	12154	·924	70·6	253·5	+16·9	55	214	1130*f*
		·811	52·9					206
		·870	65·6					92
		·928	53·2					330
		·936	117·8					279
		·954	106·3					531
Dec. 25			(+ 5·4)	(318·9)	(− 2·3)	(326)	(1546)	(4734)

Group 12148. Dec. 22–26. A small short-lived stream.
Group 12149. Dec. 22–26. A group showing slight activity only.
Group 12150. Dec. 23–29. A stream, with the largest component in the rear, closely following Group 12146.
Group 12151. Dec. 23–30. Return of Group 12112. A small spot which has disappeared by Dec. 28, but a small group appears near its place on Dec. 29–30.
Group 12152. Dec. 24–27. One or two very small spots.
Group 12153. Dec. 24–Jan. 3. A compact stream of unstable spots.
Group 12154. Dec. 24–Jan. 2. A fairly large regular spot which breaks up on Dec. 30, the component parts separating considerably in longitude before dying out.
Group 12155. Dec. 25–30. A small spot *np* Group 12153, seen only on Dec. 25 and 30.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
360·342		·915	290·5					154
		·915	236·3					294
	12138	·978	245·1	24·2	−24·8	38	190	657*f*
	12145	·972	287·1	21·6	+16·0	8	25	212*c*
	12141	·530	320·5	327·9	+21·8	106	559	
	12143	·464	213·9	323·2	−24·8	8	52	
	1114e	·410	342·8	314·1	+20·6	0	4	
	12144	·332	352·1	309·5	+16·7	11	53	
	12146	·360	19·5	299·5	+17·4	23	87	
	12148	·631	16·3	294·3	+34·8	3	21	
C	12150	·433	39·3	290·1	+17·2	42	181	
	12149	·521	31·9	289·3	+23·8	3	10	
	12152	·380	122·8	287·6	−14·1	2	9	
	12147	·560	146·1	285·7	−29·9	30	175	
	12153	·682	69·5	266·1	+11·9	8	38	
	12151	·689	108·7	263·6	−17·9	6	26	
	12154	·834	67·1	253·3	+17·5	56	300	1019*f*
		·889	47·7					281
		·894	104·3					220
		·945	118·3					299
Dec. 26			(+ 4·9)	(306·7)	(− 2·4)	(344)	(1730)	(3136)
361·438		·971	240·4					199
		·969	288·2					207
		·913	308·0					196
		·867	296·1					151
		·842	225·5					259
	12141	·680	306·5	328·2	+21·7	108	538	
	12143	·611	230·0	323·4	−25·3	7	41	
	12144	·423	320·6	308·5	+16·5	5	30	
	12146	·340	345·6	297·3	+16·6	24	104	
	12150	·352	12·1	287·9	+17·5	14	78	
	12152	·218	158·2	287·5	−14·2	2	6	
	12147	·478	166·2	284·8	−30·1	32	150	
G	12153	·499	61·8	265·8	+11·3	45	174	
	12151	·504	115·4	264·3	−14·7	3	9	
	1114f	·645	50·8	259·9	+21·8	2	8	
	12154	·685	61·5	253·4	+17·0	73	276	
		·783	121·4					277
		·793	107·0					399
		·833	62·6					670
		·853	46·6					184
		·919	128·4					150
		·922	117·2					282
		·935	66·8					367
		·978	102·2					254
Dec. 27			(+ 4·4)	(292·3)	(− 2·6)	(315)	(1414)	(3595)
1936.			°	°	°			
362·445		·965	280·5					117
		·958	297·5					215
		·894	229·1					115
		·884	251·7					231
	12141	·821	299·5	329·3	+22·1	78	400	575*c*
	12156	·758	251·1	327·0	−16·0	5	16	
	12144	·574	307·3	307·6	+17·9	2	13	
	12146	·447	318·0	297·1	+16·7	14	79	
	12150	·379	336·0	288·3	+17·5	4	27	
	1114g	·294	201·3	285·4	−18·5	2	9	
	12147	·468	189·4	284·0	−30·1	24	171	
C	12153	·324	43·7	265·9	+10·8	71	388	
	12154	·537	50·7	253·3	+17·3	61	265	
	12157	·884	100·8	217·1	−10·8	4	8	184*f*
	12158	·950	72·9	208·9	+15·3	13	73	450*f*
	12159	·965	106·2	204·2	−16·4	4	15	230*f*
	12160	·980	99·5	200·5	− 9·8	42	194	270*sp*
		·828	63·5					250
		·845	121·6					193
		·935	57·7					158
		·960	122·3					301
		·969	65·7					249
Dec. 28			(+ 3·9)	(279·0)	(− 2·7)	(324)	(1658)	(3538)
363·353		·946	248·5					143
		·835	254·9					234
	12141	·919	294·9	330·5	+21·5	61	389	690*c*
	12143	·849	239·9	322·2	−26·7	8	20	107*np*
	12146	·597	303·7	298·2	+16·9	12	66	
	12150	·498	312·1	289·7	+16·9	3	21	
	12147	·520	207·7	283·2	−30·0	24	122	
	12153	·243	5·1	265·8	+11·2	74	448	
C	12151	·244	163·9	263·1	−16·3	2	13	
	12154	·422	33·1	253·1	+17·9	59	257	
	12157	·768	102·3	217·4	−11·2	3	13	138*f*
	12158	·863	70·1	209·9	+15·5	8	24	332*f*
	12161	·914	59·3	206·0	+26·4	5	15	257*f*
	12159	·893	106·9	204·5	−16·3	4	23	182*f*
	12160	·920	99·7	200·3	−10·0	34	253	346*f*
	12162	·979	123·1	189·5	−33·0	10	41	205*f*
		·913	123·8					226
Dec. 29			(+ 3·5)	(267·1)	(− 2·8)	(307)	(1705)	(2860)

Group 12156. Dec. 28–30. One or two spots seen on Dec. 28 and 30.
Group 12157. Dec. 28–Jan. 4. A single small spot on each day except Dec. 31, Jan. 1 and 2.
Group 12158. Dec. 28–Jan. 5. A regular spot, breaking up and disappearing rapidly after Jan. 3.
Group 12159. Dec. 28–Jan. 5. A small group showing feeble but sustained activity.
Group 12160. Dec. 28–Jan. 9. A stable regular spot with tiny companions southwards on Dec. 29–31 and Jan. 2–5.
Group 12161. Dec. 29–Jan. 9. A stream of bi-polar type in which the follower is represented at first by a cluster of small spots, whilst the leader is a typical regular spot throughout.
Group 12162. Dec. 29–Jan. 10. Return or revival of Group 12123. A pair of spots near the east limb; the leader dies out by Jan. 5, but new spots develop south of the follower.

POSITIONS and AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
364·472		·936	260·2					175
		·861	289·7					296
		·847	300·9					341
		·818	315·9					251
		·784	253·4					173
	12141	·989	292·6	331·6	+21·8	69	334	826*f*
	12156	·974	254·9	329·3	−15·4	9	20	66*f*
	12143	·947	242·3	322·4	−27·1	3	6	416*c*
	12146	·749	296·4	296·8	+17·3	13	50	
	12147	·640	223·7	282·8	−29·9	21	115	
	12155	·436	308·4	272·7	+12·9	1	3	
	12151	·342	225·4	267·0	−16·7	9	21	
	12153	·334	315·6	266·0	+10·9	72	451	
	12154	·357	357·3	253·3	+17·9	41	158	
	1114h	·437	27·8	239·8	+19·8	5	24	
	12163	·423	150·4	239·1	−24·3	3	15	
G	12157	·576	106·4	218·1	−11·7	2	5	
	12158	·712	64·6	210·6	+15·5	23	94	
	12161	·807	53·6	205·9	+26·6	69	249	285*c*
	12159	·765	109·5	203·7	−16·7	12	37	112*c*
	12160	·790	100·5	200·4	−10·0	44	240	128*c*
	12164	·827	69·2	199·2	+15·3	10	17	275*c*
	1114i	·874	102·2	191·7	−12·1	4	13	240*c*
	12162	·944	124·4	183·8	−33·3	52	202	476*s*
	12165	·962	79·9	179·1	+ 8·9	15	67	564*s*
	12166	·996	78·9	168·5	+10·7	21	117	
		·839	128·0					256
		·840.	116·5					109
		·902	60·1					244
		·928	72·2					114
		·935	115·8					145
		·950	105·0					164
		·964	62·7					231
Dec. 30			(+ 2·9)	(252·3)	(− 2·9)	(498)	(2238)	(5887)

U.T.	Group No.	Measures. Dist.	Measures. Pos. Angle.	Position. Long.	Position. Lat.	Area. Umbræ.	Area. Whole Spots.	Area. Faculæ.
1936.			°	°	°			
365·559		·988	258·4					101
		·967	241·2					104
		·956	293·0					563
		·914	306·8					488
		·913	254·4					110
		·806	256·1					109
		·763	246·1					142
	1114j	·886	246·7	299·1	−21·9	6	18	97*c*
	12146	·877	291·6	296·4	+17·3	6	23	293*c*
	12147	·768	232·2	282·4	−30·2	10	94	
	12153	·530	295·4	267·0	+10·5	41	365	
	12154	·436	325·6	253·0	+18·1	22	94	
G	12163	·383	186·4	240·7	−25·2	7	23	
	12158	·533	53·7	211·6	+15·7	13	94	
	12161	·662	44·9	207·0	+25·3	111	469	
	12159	·585	115·1	204·5	−16·9	6	8	
	12160	·618	102·4	200·4	−10·0	47	224	
	12164	·679	64·4	198·9	+14·7	12	58	
	12165	·816	79·5	184·3	+ 6·8	0	5	205*f*
	12162	·873	127·1	181·6	−33·4	42	193	483*s*
	12166	·943	77·8	168·7	+10·4	22	127	188*c*
		·850	107·0					173
		·938	110·8					200
		·954	131·9					276
Dec. 31			(+ 2·4)	(238·0)	(− 3·0)	(345)	(1795)	(3532)

Group 12163. Dec. 30–Jan. 1. A small short-lived group.
Group 12164. Dec. 30–Jan. 4. A small stream of feeble development.
Group 12165. Dec. 30–Jan. 8. A disturbed area marked by faculæ and a few small spots.
Group 12166. Dec. 30–Jan. 4. A regular spot dying out suddenly.

Blank page retained for pagination

ROYAL OBSERVATORY, GREENWICH.

General Catalogue of Groups of Sun Spots

For the Year

1936

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1936

General Catalogue of Groups of Sun Spots for the Year 1936.

Groups of Sun Spots, lasting for two or more days, are numbered in the *first* column in continuation of the Group-numbers given in 1935 and the previous years. Groups seen only once are not included in this Catalogue but are given with a distinctive enumeration in a following table on p. C85.

The *second* column gives the U.T. of the central meridian passage of each group as deduced from its mean longitude (given in the *tenth* column). For those groups, which are in existence at the time of the central meridian passage of their longitude, the time is given to $0^d{\cdot}01$, corresponding to $0^\circ{\cdot}13$ of solar longitude. In other cases, in which groups disappear before or appear after the central meridian, the deduced time is given to $0^d{\cdot}1$.

The *third* column gives the duration of each group in days. Intermittent Groups, *i.e.*, Groups which are not seen upon the photographs of every day between their first and last appearances, are indicated by a fraction, the numerator of which represents the number of days on which they are actually observed, the denominator being the interval in days between the extreme limits of observation.

The *fifth* and *seventh* columns, headed " Longitude from Central Meridian ", give, for the days on which each Group was first and last seen respectively, the heliographic longitude from the meridian passing through the centre of the Sun's disc at the time of observation ; longitudes west of the centre being reckoned as positive.

The mean Areas for Umbræ and Whole Spots entered in the *eighth* and *ninth* columns are corrected for the effect of foreshortening and are expressed in millionths of the Sun's visible hemisphere.

The *tenth* and *eleventh* columns give the mean heliographic position of the Group in longitude and latitude respectively.

The *twelfth* column gives reference to all Groups contained in Ledgers I and II ; for a Group in Ledger I both its recurrent series number and ts order in the series are also given.

With reference to the identification both of Recurrent and Revival Groups, it should be noted that longitudes are based on the ephemeris given in the *Nautical Almanac*, 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 $\xi = 14^\circ{\cdot}37 - 2^\circ{\cdot}60 \sin^2 \phi$ gives the apparent drift in longitude appropriate to corresponding latitudes after an interval of 27 days.

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

GENERAL CATALOGUE OF SUN SPOTS

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1935-36.		1936.	°	1936.	°			°	°	
11789	Dec. 30·2	3	Jan. 1	+27	Jan. 3	+56	9	31	46·1	+14·0	
90	Jan. 8·02	14	1	−76	14	+80	112	763	290·6	+28·7	I. 1153 (1)
91	15·66	13	9	−81	21	+76	20	112	189·8	−14·0	I. 1150 (3)
92	17·76	14	11	−83	24	+84	49	277	162·2	−28·6	II.
93	17·76	12	12	−68	23	+75	26	149	162·2	−20·4	II.
94	14·6	3	12	−27	14	−1	9	25	204·3	−22·0	
11795	19·93	13	14	−70	26	+77	183	1153	133·7	−32·0	I. 1154 (1)
96	20·61	13	14	−78	26	+75	26	140	124·7	−24·7	II.
97	16·2	3	17	+18	19	+41	3	10	182·3	−22·8	
98	22·7	2	17	−68	18	−54	1	13	97·2	−30·4	
99	25·69	10	20	−71	29	+50	15	63	57·8	−19·1	II.
11800	23·58	5/6	21	−28	26	+36	7	24	85·6	−24·8	II.
01	24·2	2/3	21	−34	23	−10	1	4	78·0	−36·3	
02	27·43	13	21	−76	Feb. 2	+83	97	520	34·9	+14·8	II.
03	25·90	3/5	22	−43	Jan. 26	+6	2	14	55·0	−24·7	
04	29·78	9/10	24	−72	Feb. 2	+48	5	17	4·0	+11·7	II.
11805	30·49	13	24	−79	5	+77	29	161	354·7	−12·8	I. 1152 (2)
06	Feb. 4·93	8	30	−70	6	+15	9	40	283·0	+29·0	I. 1153 (2)
07	6·10	12	31	−70	11	+65	41	220	267·6	+32·6	II.
08	5·25	10	Feb. 1	−54	10	+69	38	195	278·7	+22·1	II.
09	5·6	3/4	1	−54	4	−13	1	5	275·0	−19·0	
11810	Jan. 31·6	5	2	+27	6	+75	11	40	340·0	−11·9	
11	Feb. 4·3	2	2	−22	3	−12	2	6	291·6	+19·1	
12	1·1	3	5	+56	7	+81	27	126	333·0	−17·0	
13	11·53	9/12	5	−77	16	+67	6	18	196·1	−19·8	II.
14	3·6	3	7	+49	9	+78	68	384	300·7	+11·8	I. 1155 (1)
11815	13·89	14	7	−78	20	+85	168	774	165·0	−27·3	I. 1156 (1)
16	4·4	2	8	+53	9	+66	13	75	290·1	+23·6	
17	6·1	2/4	8	+29	11	+70	3	7	267·0	−22·0	
18	11·69	3/7	8	−38	14	+34	2	5	194·0	−23·5	
19	14·37	6/8	10	−52	17	+43	5	13	158·7	+17·8	II.
11820	17·15	14	10	−82	23	+78	55	284	122·1	−33·1	I. 1154 (2)
21	7·1	2	11	+57	12	+70	12	36	254·3	−22·7	
22	15·17	9	12	−39	20	+71	13	42	148·2	+11·3	II.
23	19·56	11	15	−58	25	+80	8	26	90·4	+13·0	II.
24	22·52	13	16	−77	28	+78	44	247	51·4	+16·3	II.
11825	22·48	13	16	−79	28	+80	28	166	51·9	−17·7	II.
26	20·76	2	20	−4	21	+8	6	16	74·6	+15·1	
27	26·30	8	20	−77	27	+13	8	38	1·6	−23·2	II.
28	22·26	2	21	−12	22	+3	1	8	54·8	−23·6	
29	22·87	8	21	−18	28	+74	24	130	46·7	−32·3	II.

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936.	°			°	°	
11830	Feb. 25·24	11	Feb. 21	−52	Mar. 2	+84	44	205	15·6	−31·0	II.
31	27·40	10	21	−80	1	+39	26	160	347·1	− 8·5	II.
32	23·17	6/7	22	−12	Feb. 28	+73	16	54	42·8	+12·4	II.
33	29·85	12	24	−70	Mar. 6	+74	35	171	314·8	+11·7	I. 1155 (2)
34	26·52	3	26	− 1	Feb. 28	+27	4	11	358·7	−17·7	
11835	Mar. 3·68	13	26	−80	Mar. 9	+72	32	144	277·6	−17·9	II.
36	4·14	8	27	−77	5	+20	8	35	271·5	−20·3	II.
37	4·45	11/12	28	−63	10	+79	27	106	267·4	+21·4	II.
38	Feb. 29·7	5	Mar. 1	+ 7	5	+65	5	14	317·2	+16·8	
39	Mar. 6·61	10	1	−68	10	+51	15	50	238·9	+17·2	II.
11840	1·9	2	2	+ 7	3	+22	0	2	300·9	+12·8	
41	6·25	10/11	2	−46	12	+76	54	293	243·7	+32·6	II.
42	7·2	3/4	2	−64	5	−24	2	8	230·7	+15·8	
43	7·9	3	3	−57	5	−33	4	11	222·2	+16·1	
44	1·7	2	4	+36	5	+50	2	8	303·5	+23·8	
11845	4·7	6	5	+ 7	10	+77	30	136	264·7	+17·1	II.
46	12·40	13	6	−77	18	+77	31	152	162·7	−23·9	I. 1156 (2)
47	5·2	3	7	+28	9	+53	4	13	256·9	+17·8	
48	5·7	6	7	+23	12	+83	80	485	250·4	−21·6	I. 1157 (1)
49	14·8	4	8	−81	11	−45	4	11	130·8	−22·3	
11850	10·83	7	9	−21	15	+60	18	75	183·4	+19·2	II.
51	16·29	8	10	−77	17	+17	9	33	111·4	−21·3	II.
52	16·70	14	10	−83	23	+78	77	429	106·0	−30·6	II.
53	10·6	2/4	11	+10	14	+51	1	2	186·1	−15·8	
54	11·79	3/4	11	− 4	14	+33	2	8	170·7	+23·9	
11855	17·95	6	13	−60	18	+ 6	17	69	89·6	+15·1	II.
56	19·68	7/11	15	−56	25	+78	2	8	66·7	+18·4	II.
57	12·9	2	17	+61	18	+72	12	32	156·0	−19·0	
58	17·0	5	18	+19	22	+72	61	276	101·6	−17·7	
59	18·6	7	18	0	24	+80	60	305	81·6	−27·8	I. 1158 (1)
11860	20·90	8	18	−33	25	+58	22	72	50·6	− 8·4	II.
61	23·5	2	19	−52	20	−37	3	10	17·0	−27·4	
62	25·75	11	19	−82	29	+48	8	32	346·7	−14·9	II.
63	26·00	14	19	−84	Apr. 1	+81	48	272	343·4	−18·1	II.
64	17·7	4	20	+38	Mar. 23	+76	27	120	93·2	+12·6	
11865	28·1	4/5	22	−72	26	−25	3	10	316·0	−29·0	
66	19·5	2	24	+65	25	+77	7	26	68·8	+14·2	
67	30·33	12	25	−65	Apr. 5	+84	51	287	286·2	−24·4	II.
68	31·82	12	26	−77	6	+77	35	166	266·6	−15·4	II.
69	Apr. 2·91	15	26	−86	9	+82	60	345	239·0	−23·3	I. 1157 (2)

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936.	°			°	°	
11870	Mar. 27·0	7	Mar. 27	+ 3	Apr. 2	+80	21	99	330·6	−14·2	II.
71	28·55	3/7	27	−15	2	+60	6	27	309·7	+36·6	II.
72	Apr. 1·65	9	30	−28	7	+75	22	121	255·7	+20·2	II.
73	3·94	4/7	Apr. 1	−34	7	+46	2	7	225·4	+33·4	II.
74	6·8	4	2	−63	5	−24	4	11	187·7	−15·7	
11875	7·27	7	2	−71	8	+18	11	55	181·4	+17·5	II.
76	7·98	12	3	−59	14	+76	91	580	172·1	+20·2	II.
77	9·3	5	3	−76	7	−25	14	52	154·6	−25·1	I. 1156 (3)
78	6·85	2	6	− 6	7	+ 9	1	4	187·0	+28·8	
79	11·79	12	6	−75	17	+78	41	196	121·7	+12·2	II.
11880	13·00	14	6	−83	19	+81	24	140	105·8	−30·8	II.
81	13·39	9	7	−77	15	+27	9	34	100·6	+17·3	II.
82	4·5	2	8	+54	9	+66	12	23	217·8	+15·0	
83	15·49	15	8	−87	22	+88	30	160	73·0	−28·3	I. 1158 (2)
84	6·1	2	10	+59	11	+70	9	28	197·3	−20·2	
11885	16·02	10	10	−74	19	+45	11	40	65·9	+16·7	II.
86	16·71	9/13	10	−80	22	+71	6	16	56·9	−18·7	II.
87	16·72	9	11	−75	19	+40	25	104	56·8	+10·8	II.
88	21·68	13	15	−83	27	+75	53	283	351·3	−19·0	II.
89	20·5	2	16	−51	17	−41	1	4	6·8	+21·2	
11890	22·52	13	16	−77	28	+77	17	76	340·1	−14·0	II.
91	22·47	12	16	−78	27	+64	51	278	340·7	−11·1	II.
92	16·0	3	17	+17	19	+46	7	22	65·6	−19·4	
93	13·7	2	18	+63	19	+76	20	74	97·0	−27·2	
94	23·24	5	20	−34	24	+15	4	18	330·6	−15·9	
11895	26·11	7/11	20	−69	30	+56	5	13	292·7	+11·9	II.
96	18·5	2	23	+65	24	+78	6	29	33·1	+16·7	
97	28·7	6	23	−68	28	− 8	10	34	259·0	+36·9	II.
98	26·23	4	24	−24	27	+16	13	51	291·0	+36·9	
99	22·9	5	25	+32	29	+80	49	264	334·6	−27·1	II.
11900	25·1	3	26	+16	28	+43	6	19	305·9	−16·4	
01	May 4·87	11	28	−81	May 8	+46	10	38	176·9	−19·2	II.
02	2·58	7	30	−31	6	+52	10	41	207·1	+17·0	II.
03	2·42	5/6	May 1	−13	6	+51	4	12	209·3	+21·5	
04	6·7	2	1	−71	2	−57	11	26	152·2	+11·6	
11905	8·75	8/10	4	−59	13	+64	5	33	125·6	+14·1	II.
06	10·0	2	4	−74	5	−58	18	56	109·4	+12·2	
07	7·28	3	6	−12	8	+14	3	13	145·1	−21·8	
08	9·28	2/4	6	−39	9	+ 4	0	3	118·6	+19·3	
09	7·72	6	7	− 3	12	+66	15	57	139·2	+12·2	II.

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936.	°			°	°	
11910	May 13·72	12	May 7	−79	May 18	+60	39	193	59·8	−24·7	II.
11	16·2	2	10	−74	11	−64	3	11	26·9	−18·4	
12	17·31	14	10	−82	23	+81	90	494	12·4	−27·6	I. 1159 (1)
13	13·24	8	11	−27	18	+67	6	21	66·2	+21·0	II.
14	15·9	4	11	−59	14	−20	3	11	31·0	−31·3	
11915	13·0	4	14	+20	17	+60	6	15	70·0	−25·2	
16	21·28	7/10	15	−77	24	+43	8	33	319·9	+18·6	II.
17	21·18	2/7	16	−62	22	+14	1	2	321·2	−27·6	
18	19·0	4/5	20	+16	24	+75	10	41	350·1	− 7·6	
19	22·60	7	21	−17	27	+69	12	45	302·4	−16·5	II.
11920	27·0	2	21	−73	22	−61	3	14	244·6	−30·5	
21	22·95	7	22	−12	28	+73	39	203	297·8	+10·6	II.
22	27·62	3/6	22	−70	27	+ 1	1	6	236·0	+15·4	II.
23	28·61	7	23	−66	29	+ 6	9	35	222·9	−23·4	II.
24	29·1	2	23	−75	24	−63	10	23	216·0	−20·9	
11925	25·41	3	24	−13	26	+14	13	41	265·2	+36·2	
26	29·65	4/8	24	−68	31	+20	4	12	209·1	+16·3	
27	30·15	12	24	−81	June 4	+72	44	222	202·4	−15·5	II.
28	27·08	4	26	− 9	May 29	+30	9	39	243·1	−18·2	
29	25·6	2	28	+37	29	+50	3	8	263·2	−17·3	
11930	28·2	2	28	+ 2	29	+16	2	5	228·8	−20·0	
31	June 3·54	11	28	−80	June 7	+48	52	356	144·5	−17·1	II.
32	May 24·9	2	29	+60	May 30	+75	10	36	272·1	+20·3	
33	30·03	2	29	−10	30	+ 8	4	20	204·1	+28·6	
34	June 2·96	4/5	30	−41	June 3	+ 4	3	10	152·1	+27·4	
11935	May 27·8	4	31	+46	3	+82	18	78	233·1	+22·4	
36	June 1·5	2	June 2	+14	3	+24	5	12	171·5	+31·5	
37	2·95	2/7	2	− 5	8	+70	1	3	152·2	−16·6	
38	4·05	8	2	−23	9	+72	66	385	137·6	−24·0	II.
39	4·8	6	5	+ 9	10	+71	28	114	127·2	+20·1	II.
11940	8·97	5	5	−48	9	+ 7	11	29	72·5	−28·9	
41	10·85	12	5	−71	16	+72	22	88	47·7	−24·7	II.
42	8·93	3/4	7	−20	10	+21	3	13	73·1	+16·5	
43	14·08	7	8	−74	14	+ 2	18	70	4·9	−26·8	I. 1159 (2)
44	14·0	2	11	−34	12	−21	4	14	6·5	−15·0	
11945	15·40	8	12	−40	19	+59	8	36	347·4	+23·2	II.
46	11·5	4/5	13	+24	17	+79	2	13	39·6	+15·9	
47	21·72	11	15	−82	25	+53	14	55	263·8	+27·4	II.
48	21·99	14	15	−84	28	+80	94	567	260·2	+20·5	I. 1160 (1)
49	23·7	6	18	−68	23	− 6	7	20	237·5	+22·1	II.

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbrae.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936.	°			°	°	
11950	June 15·4	2	June 19	+55	June 20	+65	10	21	347·0	+18·0	
51	18·2	5	19	+17	23	+71	8	27	310·2	+11·4	
52	18·5	3	19	+15	21	+37	9	30	306·3	+18·8	
53	25·06	7	19	−72	25	+ 4	12	39	219·6	+26·4	II.
54	23·10	6/7	21	−28	27	+60	3	11	245·5	+14·2	II.
11955	27·67	13	21	−82	July 3	+70	48	251	185·0	−18·7	II.
56	19·0	3/4	22	+44	June 25	+85	3	10	299·7	−13·1	
57	20·3	3	23	+40	25	+67	49	205	282·0	−27·1	
58	21·8	3	25	+46	27	+75	8	29	262·7	−14·3	
59	26·41	8	25	−15	July 2	+82	96	553	201·7	+18·5	II.
11960	30·1	6	25	−62	June 30	− 1	8	25	153·4	−18·4	II.
61	26·4	5/6	27	+15	July 2	+80	20	93	202·1	+28·1	
62	July 1·39	3/6	29	−27	4	+43	1	4	135·7	−22·4	
63	June 29·6	4/6	30	+11	5	+73	3	6	158·1	−17·4	
64	July 6·4	4	30	−78	3	−45	12	37	69·6	+31·4	
11965	June 29·8	5	July 1	+20	5	+76	30	164	157·4	+14·2	I. 1161 (1)
66	July 2·00	6	1	− 8	6	+60	6	14	127·8	+29·9	II.
67	6·06	9/11	1	−60	11	+68	10	40	74·0	+19·9	II.
68	5·0	7	5	+ 5	11	+79	67	376	88·1	−14·7	II.
69	6·1	3	8	+30	10	+56	14	47	72·9	−25·9	
11970	14·49	13	8	−81	20	+80	78	464	322·4	+20·8	I. 1162 (1)
71	7·1	2	10	+46	11	+54	1	4	59·9	+34·2	
72	15·0	5	10	−63	14	− 3	11	29	315·8	−13·5	
73	14·26	6	11	−39	16	+28	15	50	325·5	−15·9	II.
74	17·95	9	11	−87	19	+18	10	36	276·6	+21·0	II.
11975	19·06	9/11	13	−72	23	+49	3	10	261·9	+20·7	I. 1160 (2)
76	17·6	2	14	−41	15	−27	3	9	281·2	−27·2	
77	22·15	12	16	−77	27	+69	32	177	221·1	−16·6	II.
78	18·31	3	17	−12	19	+15	7	33	271·9	+16·7	
79	25·76	4/12	20	−72	31	+73	5	18	173·3	+27·1	I. 1163 (1)
11980	26·69	11	20	−83	30	+46	11	53	161·0	+12·7	I. 1161 (2)
81	26·63	5/7	22	−56	28	+23	0	5	161·7	−22·5	II.
82	23·1	7	23	+ 1	29	+82	29	118	209·1	+23·2	I. 1164 (1)
83	22·3	3	24	+26	26	+54	3	5	218·9	+24·5	
84	31·6	2	26	−69	27	−55	2	8	96·6	− 9·9	
11985	31·64	11	27	−55	Aug. 6	+76	50	251	95·6	+26·0	I. 1165 (1)
86	Aug. 2·94	12	28	−70	8	+72	50	271	65·0	−25·6	I. 1165*(1)
87	2·69	12	28	−72	8	+76	51	237	68·4	−18·5	II.
88	July 28·5	3/4	30	+25	2	+64	5	17	136·5	− 9·9	
89	Aug. 2·0	4	Aug. 3	+16	6	+59	15	73	77·8	−19·6	I. 1166 (1)

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936.	°			°	°	
11990	Aug. 10·70	12	Aug. 4	−83	Aug. 15	+61	34	155	322·4	+21·7	I. 1162 (2)
91	3·2	4	5	+27	8	+72	14	46	62·0	+13·7	
92	10·70	7/9	5	−68	13	+33	2	7	322·4	+25·9	II.
93	13·2	5	6	−78	10	−24	9	24	302·3	−15·7	
94	10·0	2/3	7	−34	9	− 9	2	10	331·1	−19·0	
11995	12·16	11	7	−57	17	+63	52	292	303·2	−32·2	II.
96	13·87	7	8	−73	14	+ 6	19	48	280·6	−14·2	II.
97	4·9	2	9	+60	10	+74	4	23	39·8	+29·6	
98	5·6	3	9	+52	11	+76	8	23	30·4	+17·4	
99	15·32	11	9	−76	19	+47	30	133	261·4	+19·9	II.
12000	7·5	4	10	+38	13	+77	17	61	5·4	+13·0	
01	13·95	6/9	11	−36	19	+68	8	38	279·5	+14·7	II.
02	13·47	5	12	−18	16	+37	4	10	285·9	+24·6	
03	17·81	8	12	−72	19	+18	13	44	228·5	+23·9	II.
04	15·49	4/8	13	−30	20	+65	2	4	259·2	−17·7	II.
12005	19·2	3/4	14	−65	17	−23	2	5	209·8	+23·4	} I. 1164 (2)
06	19·42	12	14	−69	25	+76	30	140	207·2	+21·7	
07	21·90	14	15	−79	28	+85	61	315	174·5	+30·7	I. 1163 (2)
08	18·8	2/3	16	−29	18	− 6	2	8	215·9	− 6·2	
09	19·16	4	16	−38	19	+ 1	6	24	210·6	−15·9	
12010	23·4	4	17	−80	20	−39	6	17	154·0	+19·7	
11	26·64	11	21	−72	31	+65	15	58	111·9	− 8·0	II.
11*	18·6	2/3	22	+49	24	+76	0	7	217·6	+22·4	
12	28·70	10	22	−81	31	+34	12	49	84·6	+27·9	I. 1165 (2)
13	29·34	12	23	−78	Sept. 3	+64	20	100	76·1	−21·5	I. 1166 (2)
14	20·0	2	25	+72	Aug. 26	+84	24	118	200·2	+15·2	
12015	27·08	8	25	−24	Sept. 1	+73	23	100	106·0	−15·5	II.
16	31·27	13	25	−71	6	+81	92	603	50·6	−25·6	I. 1165*(2)
17	Sept. 1·31	7	26	−78	1	+ 2	6	16	37·0	+17·1	II.
18	Aug. 28·2	5	29	+14	2	+69	17	70	91·5	− 9·8	
19	Sept. 1·7	2	29	−45	Aug. 30	−31	4	19	31·6	+16·6	
12020	Aug. 27·0	2	30	+44	31	+57	12	34	106·8	− 8·8	
21	Sept. 6·0	4	Sept. 1	−59	Sept. 4	−20	8	18	334·6	+14·5	
22	6·97	5/8	1	−72	8	+21	5	14	322·2	−15·7	II.
23	7·8	3	2	−72	4	−43	5	13	311·2	+28·3	
24	8·16	13	2	−76	14	+74	59	333	306·5	−16·0	I. 1167 (1)
12025	3·0	4	3	+ 5	6	+44	8	22	14·3	−14·9	
26	6·69	8/9	3	−48	12	+73	51	233	325·8	+ 9·2	I. 1168 (1)
27	Aug. 31·8	2	5	+60	6	+74	6	18	43·7	+17·4	I. 1169 (1)
28	Sept. 3·4	3	5	+24	7	+52	5	16	9·1	+16·8	
29	8·82	2/8	6	−33	13	+62	0	1	297·8	+16·2	

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936.	°			°	°	
12030	Sept. 16·84	9	Sept. 10	−81	Sept. 18	+20	15	67	191·9	−17·3	II.
31	15·8	3	12	−49	14	−19	4	13	205·6	+25·8	
32	17·75	11	12	−76	22	+63	19	87	179·9	+15·6	II.
33	12·5	6	13	+14	18	+77	51	265	249·1	−29·8	II.
34	15·5	2	14	−15	15	− 1	2	6	210·0	+19·0	
12035	19·95	7	14	−73	20	+ 7	25	125	150·8	−18·1	II.
36	15·90	4	15	− 8	18	+38	1	10	204·3	+16·1	
37	21·18	11	16	−63	26	+69	30	149	134·6	−19·7	II.
38	23·0	5	18	−64	22	− 8	13	46	109·9	+19·9	
39	24·23	12	18	−74	29	+69	31	195	94·3	−22·2	II.
12040	17·1	3	20	+42	22	+72	14	38	188·7	−12·2	
41	25·26	9	21	−49	29	+51	29	120	80·7	−23·7	II.
42	26·86	12	21	−69	Oct. 2	+76	57	292	59·6	−23·7	II.
43	27·5	3	21	−78	Sept. 23	−52	4	14	51·1	+25·2	
44	25·1	2	22	−34	23	−20	4	11	83·4	+28·4	
12045	27·3	3	22	−65	24	−36	11	28	54·1	+15·0	
46	27·9	3	22	−73	24	−45	7	18	45·6	+16·4	I. 1169 (2)
47	24·03	2	23	− 6	24	+ 6	6	14	97·0	+32·5	
48	24·77	5	23	−17	27	+38	9	46	87·2	−16·5	
49	26·4	4	23	−37	26	− 5	5	12	65·8	−21·0	
12050	28·14	2/6	24	−46	29	+14	1	6	42·7	−27·7	
51	30·48	11/12	24	−78	Oct. 5	+66	10	33	11·8	+15·1	II.
52	28·40	7	26	−31	2	+56	14	58	39·2	+16·0	II.
53	Oct. 3·55	10	27	−78	6	+37	13	59	331·3	+ 7·3	I. 1168 (2)
54	3·87	13	27	−81	9	+72	60	428	327·1	+17·0	II.
12055	Sept. 27·5	2	28	+12	Sept. 29	+24	2	6	50·8	−16·4	
56	Oct. 3·80	12	28	−72	Oct. 9	+72	17	53	328·0	−19·2	II.
57	Sept. 29·92	2	29	− 7	Sept. 30	+ 6	1	12	19·2	+15·6	
58	28·3	4	30	+27	Oct. 3	+66	7	15	40·0	−17·6	
59	Oct. 5·81	10/11	30	−71	10	+60	5	12	301·5	−12·0	I. 1167 (2)
12060	6·19	13	30	−77	12	+81	118	672	296·5	+19·3	I. 1170 (1)
61	6·85	11	Oct. 2	−63	12	+78	30	109	287·8	−18·5	II.
62	9·9	5	4	−72	8	−18	5	15	248·0	+10·4	
63	11·71	13	5	−83	17	+75	64	359	223·7	−13·1	I. 1171 (1)
64	8·43	4	6	−26	9	+10	10	29	266·9	−26·8	
12065	11·92	12	6	−74	17	+72	13	62	220·9	−19·0	II.
66	10·63	7	7	−45	13	+38	8	28	237·9	−33·5	II.
67	13·2	3/5	8	−56	12	− 9	1	3	204·4	+33·3	
68	5·6	2	9	+51	10	+63	6	16	304·8	+27·0	
69	12·49	8/9	9	−44	17	+67	10	34	213·4	+17·9	II.

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936.	°			°	°	
12070	Oct. 13·82	9	Oct. 11	−34	Oct. 19	+75	20	96	195·8	−15·0	II.
71	16·93	12	11	−77	22	+74	41	237	154·9	−18·3	II.
72	12·1	6	12	+ 5	17	+70	7	29	218·6	+20·4	II.
73	18·31	12	13	−69	24	+81	26	120	136·7	−17·7	II.
74	16·56	7	14	−31	20	+55	7	20	159·7	+12·8	II.
12075	19·37	10	15	−55	24	+71	17	69	122·6	−11·1	II.
76	22·7	5	16	−82	20	−30	14	50	78·6	+12·1	
77	23·15	7	17	−76	23	+ 4	14	62	72·8	+22·1	II.
78	23·79	8/10	19	−58	28	+62	4	14	64·4	−24·8	II.
79	21·07	2	20	− 9	21	+ 5	3	12	100·2	+10·9	
12080	27·10	13	20	−85	Nov. 1	+72	54	273	20·7	+16·5	II.
81	25·91	7/9	22	−39	Oct. 30	+63	4	11	36·4	−24·7	II.
82	27·11	5	26	−11	30	+50	20	78	20·6	−14·7	
83	Nov. 1·8	6	27	−68	Nov. 1	− 5	8	30	305·7	−23·7	II.
84	2·15	11	27	−73	6	+57	41	248	301·0	+18·9	I. 1170 (2)
12085	2·85	11	27	−81	6	+47	12	49	291·7	−19·9	II.
86	3·92	11	29	−71	8	+65	17	95	277·6	+19·9	II.
87	4·36	12	29	−77	9	+74	44	257	271·7	−14·9	I. 1172 (1)
88	5·93	13	30	−79	11	+67	23	109	251·1	−16·0	II.
89	1·62	4	Nov. 1	− 5	4	+40	9	34	308·0	−14·0	
12090	6·44	10	2	−55	11	+62	20	106	244·4	−12·6	II.
91	7·76	12	2	−71	13	+77	26	130	226·9	−11·0	I. 1171 (2)
92	7·89	10	2	−72	11	+42	12	56	225·2	+14·3	II.
93	8·65	10	3	−69	12	+52	4	13	215·2	−13·5	II.
94	9·5	5/7	3	−79	9	− 2	5	19	204·0	−12·9	II.
12095	11·03	13	4	−83	16	+70	72	400	183·8	+14·2	I. 1173 (1)
96	10·18	11	5	−63	15	+69	12	44	195·0	−15·8	II.
97	10·8	4	5	−70	8	−34	11	35	186·2	+24·3	
98	12·00	13	5	−85	17	+72	28	156	171·1	+10·1	I. 1174 (1)
99	12·58	11	8	−57	18	+77	53	262	163·4	−18·5	II.
12100	13·90	12	8	−72	19	+72	29	172	146·0	−18·6	II.
01	14·87	13	8	−81	20	+73	107	582	133·2	− 7·2	II.
02	10·42	6/8	9	−14	16	+80	9	40	191·9	+19·8	I. 1175 (1)
03	8·9	4	10	+21	13	+61	4	13	212·5	−34·3	I. 1176 (1)
04	15·00	9	11	−50	19	+56	24	113	131·5	−14·0	II.
12105	16·1	2	14	−22	15	− 9	2	5	116·4	− 6·8	
06	12·5	3	16	+51	18	+77	19	101	164·0	−25·5	
07	12·8	2	17	+60	18	+74	14	70	160·4	−22·0	
08	22·51	12	17	−65	28	+79	116	692	32·5	−21·1	I. 1177 (1)
09	29·32	13	23	−78	Dec. 5	+78	149	957	302·8	+16·6	I. 1178 (1)

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936.		1936.	°	1936-37.	°			°	°	
12110	Nov. 29·23	10	Nov. 25	−54	Dec. 4	+71	59	370	303·9	−10·8	II.
11	Dec. 1·61	11	26	−67	6	+61	24	121	272·6	−14·7	I. 1172 (2)
12	2·33	13	26	−74	8	+75	137	935	263·0	−14·8	I. 1179 (1)
13	Nov. 29·33	7	27	−23	3	+53	10	44	302·7	+21·9	II.
14	30·5	2	27	−39	Nov. 28	−27	4	17	287·6	+20·1	
12115	Dec. 3·70	14	27	−79	Dec. 10	+81	116	744	245·0	+16·4	I. 1180 (1)
16	Nov. 23·8	2	28	+60	Nov. 29	+74	11	43	15·6	− 9·0	
17	27·4	2	28	+12	29	+28	4	20	328·6	−16·0	
18	30·18	4	28	−23	Dec. 1	+16	9	35	291·4	+15·4	
19	Dec. 3·35	10	28	−66	7	+53	15	76	249·7	−15·5	II.
12120	5·0	6	29	−74	4	− 7	5	13	228·5	−10·2	I. 1171 (3)
21	1·72	3	30	−22	2	+12	4	18	271·2	+19·8	
22	6·04	10	30	−74	9	+40	7	27	214·1	−29·6	II.
23	7·35	13	Dec. 1	−72	13	+76	30	151	196·9	−35·4	I. 1176 (2)
24	7·60	13	1	−80	13	+75	46	273	193·6	+21·7	I. 1175 (2)
12125	7·29	11	1	−80	11	+59	12	54	197·8	+13·7	I. 1173 (2)
26	Nov. 28·5	2	2	+52	3	+66	14	60	313·5	−17·4	
27	Dec. 8·90	7	3	−72	9	+ 3	5	13	176·6	+10·0	I. 1174 (2)
28	2·7	4	5	+36	8	+71	8	27	257·9	+26·6	
29	5·5	4	5	+ 1	8	+33	6	18	221·9	+21·6	
12130	3·0	2	6	+43	7	+59	4	10	253·8	−24·0	
31	10·98	8/9	6	−62	14	+42	20	108	149·1	+12·9	II.
32	6·8	3	8	+15	10	+49	9	29	203·6	−11·8	
33	13·57	11	9	−56	19	+74	27	158	114·9	−20·3	II.
34	15·15	3/6	10	−63	15	+ 4	2	6	94·1	−23·5	II.
12135	17·59	12	11	−79	22	+64	50	310	62·0	−21·1	II.
36	9·7	4	12	+34	15	+76	21	91	166·3	+ 9·2	I. 1181 (1)
37	15·5	2	13	−28	14	−18	4	22	89·0	−12·4	
38	20·05	14	13	−84	26	+78	33	169	29·7	−22·3	I. 1177 (2)
39	15·0	4	18	+43	21	+80	38	151	96·5	+10·6	
12140	17·1	2	18	+19	19	+29	2	12	68·4	+20·0	
41	24·70	13	18	−82	30	+79	85	448	328·3	+22·7	I. 1182 (1)
42	20·90	7	19	−19	25	+63	10	46	18·4	−23·6	II.
43	25·10	10/12	19	−73	30	+70	8	28	323·1	−25·6	II.
44	26·28	9	20	−77	28	+29	22	96	307·5	+17·5	II.
12145	20·6	5/6	21	+10	26	+75	9	38	22·3	+15·9	
46	26·97	12	21	−71	Jan. 1	+68	16	79	298·4	+17·1	I. 1178 (2)
47	28·03	13	21	−81	2	+68	25	151	284·4	−30·0	II.
48	27·0	5	22	−56	Dec. 26	−12	15	70	298·5	+34·7	II.
49	27·9	5	22	−71	26	−17	8	22	286·8	+23·9	

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

No. of Group.	U.T. of Central Meridian Passage.	Duration in Days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Mean Area Corrected for Foreshortening. Umbræ.	Mean Area Corrected for Foreshortening. Whole Spots.	Mean Position of Group. Longitude.	Mean Position of Group. Latitude.	Reference to Ledger.
	1936-37.		1936.	°	1936-37.	°			°	°	
12150	Dec. 27·60	7	Dec. 23	−52	Dec. 29	+23	13	60	290·1	+17·0	I. 1178 (2)
51	29·55	7/8	23	−80	30	+15	5	17	264·5	−15·8	I. 1179 (2)
52	27·8	4	24	−46	27	− 5	6	24	287·3	−14·6	
53	29·43	11	24	−69	Jan. 3	+66	39	227	266·0	+11·1	II.
54	30·39	10	24	−80	2	+42	43	182	253·4	+17·4	I. 1180 (2)
12155	28·99	2/6	25	−48	Dec. 30	+20	1	2	271·8	+13·0	
56	24·7	2/3	28	+48	30	+77	5	12	328·2	−15·7	
57	Jan. 2·13	5/8	28	−62	Jan. 4	+30	2	4	217·3	−11·0	II.
58	2·58	9	28	−70	5	+40	11	56	211·4	+15·4	II.
59	3·16	9	28	−75	5	+31	6	20	203·7	−16·8	II.
12160	3·42	13	28	−78	9	+78	40	206	200·4	− 9·8	I. 1183 (1)
61	2·99	12	29	−61	9	+82	74	377	206·0	+25·4	I. 1184 (1)
62	5·15	13	29	−78	10	+66	38	200	177·6	−34·4	I. 1176 (3)
63	Dec. 31·34	3	30	−13	1	+15	4	15	240·9	−24·8	
64	Jan. 3·46	6	30	−53	4	+14	10	32	199·8	+14·5	
12165	4·80	10	30	−73	8	+50	4	20	182·2	+ 7·9	II.
66	5·8	6	30	−84	4	−19	18	119	168·7	+10·5	I. 1181 (2)

GENERAL CATALOGUE OF SUN SPOTS—*continued*.

SUNSPOTS SEEN ON ONE DAY ONLY, 1936.

The groups of sunspots tabulated below were seen on one day only and appear in the *Daily Results* with a distinctive enumeration, comprising the number of the Rotation during which each was observed and a letter given in order of appearance. These short-lived groups are usually composed of one or two very small spots. The deduced time of central meridian passage of each spot is given in the fourth column of the table.

No. of Rotn.	Date.	Longitude from Central Meridian.	U.T. of Central Meridian Passage.	Area Corrected for Foreshortening.		Position of Group.	
				Umbræ.	Whole Spots.	Longitude.	Latitude.
		°				°	°
1100f	Jan. 1	−50·9	Jan. 5·2	3	9	327·9	−28·8
1101a	Jan. 3	+21·1	Jan. 1·8	0	2	12·5	−31·0
b	3	− 6·6	3·9	5	15	344·8	+17·6
c	4	−13·9	5·5	7	27	324·0	−27·4
d	20	+58·1	16·1	2	8	183·9	+20·1
e	20	−36·2	23·3	1	6	89·6	−31·7
f	21	− 1·2	21·6	2	12	112·2	−31·7
g	22	+ 1·8	22·3	1	5	103·0	−15·2
h	26	+19·6	25·0	2	25	67·5	−23·4
1102a	Jan. 30	+42·8	Jan. 27·3	3	8	37·1	+20·5
b	Feb. 3	− 2·8	Feb. 3·6	1	4	299·9	−20·5
c	4	− 0·6	4·6	2	5	287·8	+25·6
d	8	+31·9	6·0	11	31	269·5	−12·1
e	10	− 1·3	10·5	1	2	209·4	−13·4
f	13	+79·9	7·5	0	10	249·8	−25·0
g	16	−18·1	17·8	2	6	113·6	−28·5
h	18	−21·0	20·0	2	5	84·2	−28·7
i	21	+65·2	16·5	5	23	131·2	+13·8
j	21	− 6·3	21·9	1	2	59·7	+24·4
k	22	+11·8	21·5	2	10	64·3	−19·9
1103a	Mar. 5	+56·9	Mar. 1·1	2	7	311·0	+17·9
b	10	− 4·2	10·7	1	4	184·9	−26·6
c	12	+22·0	10·7	3	5	185·1	+28·6
d	15	−55·4	19·6	0	3	67·7	−17·9
e	17	−29·2	19·7	2	3	66·3	+39·3
f	20	− 6·3	21·1	2	7	48·2	+11·4
1104a	Mar. 25	−41·8	Mar. 28·6	2	14	309·4	+18·8
b	26	−34·5	29·0	3	17	304·3	+31·9
c	28	−29·5	30·6	1	5	282·5	−21·8
d	Apr. 3	−56·8	Apr. 7·7	2	7	175·6	+27·5
e	11	−52·8	15·4	0	4	73·8	+20·7
f	20	+36·3	18·0	3	6	40·0	−23·3
1105a	Apr. 22	+78·6	Apr. 16·4	21	83	61·0	−25·6
b	23	+ 4·9	23·0	3	10	333·3	+ 9·6
c	25	+ 5·8	25·0	2	5	307·9	+15·1
d	29	+68·5	24·2	8	11	318·4	+17·8
e	29	−24·3	May 1·2	1	5	225·6	−26·4
f	May 2	+21·1	Apr. 30·8	2	5	231·0	−15·7
1105g	May 2	−24·5	May 4·2	3	9	185·4	+32·1
h	3	−33·6	6·1	4	10	160·5	+29·5
i	4	+36·2	1·6	9	36	219·7	+14·7
j	4	− 0·1	4·4	3	5	183·4	−12·9
k	4	−33·7	6·9	1	6	149·8	+19·4
l	7	−68·8	12·8	7	12	72·5	−18·2
m	8	+ 1·1	8·3	4	28	132·1	+12·6
n	12	+37·0	9·8	3	12	111·4	−19·4
o	13	−24·4	15·4	3	10	37·7	−19·1
p	14	−30·8	16·8	6	16	81·3	−22·5
q	14	+23·7	12·6	2	11	74·2	−15·6
r	17	− 2·2	17·6	1	3	8·2	+17·9
1106a	May 23	+31·7	May 21·0	1	5	323·2	+14·1
b	26	+11·7	25·6	1	5	262·7	−22·0
c	June 1	+65·2	27·4	3	7	238·3	−30·7
d	2	−49·0	June 6·2	3	8	109·7	−25·1
e	4	+14·0	3·4	1	5	146·7	+19·1
f	9	+ 6·2	8·9	3	7	73·5	+14·5
g	10	− 6·4	11·0	1	2	46·3	+24·0
h	10	−44·2	13·8	0	7	8·5	−21·7
1107a	June 16	− 7·6	June 16·9	5	38	327·5	−30·3
b	17	−57·2	21·7	8	22	263·5	+13·7
c	21	+ 3·7	21·0	1	5	273·0	+17·6
d	21	− 0·1	21·3	4	10	269·2	+21·8
e	22	+26·0	20·4	3	11	281·1	+21·0
f	26	+42·9	23·2	5	17	243·8	−20·1
g	27	−45·5	30·8	5	12	143·3	+17·9
h	28	+74·4	22·7	4	7	250·1	+13·7
i	28	+33·0	25·9	1	2	208·7	+ 6·2
j	30	−20·3	31·9	1	3	129·5	−19·7
k	July 2	+23·9	30·6	1	2	145·7	−22·7
l	2	−63·1	July 7·2	3	12	58·7	−25·9
m	9	− 0·4	9·5	4	12	29·0	−18·1
1108a	July 14	− 7·3	July 15·1	0	4	314·9	−18·8
b	19	+27·5	17·3	3	9	285·0	+23·6
c	21	−16·2	22·6	0	1	215·3	−22·2
d	24	+22·1	22·7	3	8	214·2	−20·7
e	26	+28·0	24·2	3	11	193·6	+27·9
f	26	−16·6	27·6	1	4	149·0	−36·5
g	30	−19·7	31·8	3	5	93·1	−15·5
h	31	+14·7	30·2	5	22	114·0	−26·7
i	Aug. 2	+55·2	29·3	0	9	127·1	−20·0

GENERAL CATALOGUE OF SUN SPOTS—*continued.*

SUNSPOTS SEEN ON ONE DAY ONLY, 1936—*continued.*

No. of Rotn.	Date.	Longitude from Central Meridian.	U.T. of Central Meridian Passage.	Area Corrected for Foreshortening. Whole Umbræ.	Area Corrected for Foreshortening. Whole Spots.	Position of Group. Longitude.	Position of Group. Latitude.
		°				°	°
1108j	Aug. 2	+14·4	Aug. 1·3	2	10	86·3	+29·9
k	2	−64·6	7·3	2	5	7·3	+18·0
1109a	Aug. 13	+41·5	Aug. 10·2	3	15	328·5	+19·0
b	16	+24·8	14·5	1	5	272·8	+ 2·3
c	20	− 1·1	20·5	3	6	193·2	−19·3
d	21	+46·5	18·0	2	6	226·6	−18·5
e	24	+66·4	19·3	0	6	208·5	+ 9·8
f	25	+44·2	22·0	1	4	173·1	− 3·1
g	25	− 4·8	25·7	1	4	124·1	+ 8·9
h	30	+56·2	26·1	5	10	118·6	−21·2
i	Sept. 1	+73·0	27·0	12	33	106·5	−24·0
j	1	−57·8	Sept. 5·9	0	9	335·7	−33·4
k	1	−71·0	6·9	3	7	322·5	+23·1
l	3	+75·2	Aug. 28·7	7	39	85·1	+20·0
1110a	Sept. 7	+70·0	Sept. 2·1	0	12	27·0	+20·6
b	8	−33·3	10·9	3	8	270·8	+17·3
c	11	+60·6	6·8	0	6	324·8	−16·1
d	14	+55·5	10·1	4	12	280·4	+12·1
e	15	−66·3	20·4	0	11	144·7	+36·7
f	16	+38·4	13·4	6	20	237·0	+10·4
g	20	−60·2	24·9	0	4	85·2	−11·2
h	22	+ 5·7	22·0	1	2	123·6	−10·1
i	27	+77·0	21·9	8	32	125·8	+21·7
1111a	Oct. 7	−68·3	Oct. 12·6	3	5	212·5	+14·7
b	11	−14·3	12·5	2	5	213·4	−22·9
c	11	−17·1	12·7	1	4	210·6	−19·4
d	15	+22·0	13·8	0	2	196·5	+25·1
e	18	+ 7·4	17·8	1	4	142·7	−19·1
f	22	+38·1	19·6	1	3	119·6	− 6·3
g	24	+46·4	20·9	7	19	102·0	+19·6
h	24	− 0·7	24·5	2	5	54·9	−25·6
i	28	−42·1	31·6	0	5	321·4	−22·6
1112a	Nov. 3	+ 9·5	Nov. 2·7	2	4	292·9	+21·8
b	3	+ 3·9	3·2	2	13	287·3	+29·3
c	3	−55·1	7·7	2	7	228·3	+22·8
d	4	+18·7	3·0	0	3	289·4	+14·0
e	4	−60·3	9·0	2	8	210·4	+14·7
f	6	+40·9	3·4	3	8	285·0	+28·2
g	8	−66·7	13·5	0	3	151·2	+10·7
h	10	+35·9	7·7	4	12	227·6	+19·1
i	10	+31·0	8·1	2	8	222·7	+24·8
j	10	−25·5	12·4	2	5	166·2	+ 5·8
k	13	+75·8	7·8	8	26	226·1	+23·1
l	18	−41·0	21·5	2	6	45·5	+32·8
m	19	−12·9	20·4	2	5	60·3	−23·1
n	20	+14·3	19·3	1	4	74·5	+20·9
1113a	Nov. 25	−12·4	Nov. 26·3	1	4	341·9	−16·3
b	29	+67·3	24·2	5	23	9·6	+17·9
c	Dec. 2	−17·4	Dec. 3·8	2	8	243·7	−24·2
d	3	−27·8	5·6	2	8	219·8	−20·3
e	4	+ 6·2	4·0	1	5	241·7	−21·0
f	4	− 0·6	4·5	2	7	234·9	−12·1
g	7	+32·7	5·0	3	14	228·0	−19·6
h	10	+60·4	5·8	5	24	217·2	+28·3
i	10	−21·4	12·0	4	9	135·4	+ 9·2
j	20	+51·8	16·5	0	5	75·9	+17·0
1114a	Dec. 22	+17·4	Dec. 21·1	1	2	15·2	−11·4
b	22	− 1·7	22·6	3	12	356·1	−20·4
c	23	+ 5·3	23·1	12	38	349·4	+21·5
d	24	−26·6	26·3	1	6	306·6	+21·7
e	26	+ 7·4	25·8	0	4	314·1	+20·6
f	27	−32·4	29·9	2	8	259·9	+21·8
g	28	+ 6·4	28·0	2	9	285·4	−18·5
h	30	−12·5	31·4	5	24	239·8	+19·8
i	30	−60·6	1937. Jan. 4·1	4	13	191·7	−12·1
j	Dec. 31	+61·1	1936. Dec. 26·9	6	18	299·1	−21·9

REVIVAL GROUPS of SUN SPOTS, 1936.

Groups of spots occupying the same heliographic position in consecutive rotations of the Sun but with definite breaks in their history are termed "Revivals". Such groups have been abstracted from the preceding Catalogue and are grouped in series in the following table. When a "Recurrent" series forms part of a "Revival" series, a reference is given in the last column of the table. Groups that are given in detail in Ledger II. are also indicated.

No.	No. of Group.	U.T. of Central Meridian Passage.	Rotation.	Duration in days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Area.	Mean Position. Longitude.	Mean Position. Latitude.	Reference to Ledger.
		1936.			1936.	°	1936.	°		°	°	
1	11794	Jan. 14·6	1101	3	Jan. 12	−27	Jan. 14	− 1	25	204	−22	
	11813	Feb. 11·53	1102	9/12	Feb. 5	−77	Feb. 16	+67	18	196	−20	II.
	18	11·69	1102	3/7	8	−38	14	+34	5	194	−23	
2	11795	Jan. 19·93	1101	13	Jan. 14	−70	Jan. 26	+77	1153	134	−32	I. 1154
	11820	Feb. 17·15	1102	14	Feb. 10	−82	Feb. 23	+78	284	122	−33	
	52	Mar. 16·70	1103	14	Mar. 10	−83	Mar. 23	+78	429	106	−31	II.
	80	Apr. 13·00	1104	14	Apr. 6	−83	Apr. 19	+81	140	106	−31	II.
3	11799	Jan. 25·69	1101	10	Jan. 20	−71	Jan. 29	+50	63	58	−19	II.
	11825	Feb. 22·48	1102	13	Feb. 16	−79	Feb. 28	+80	166	52	−18	II.
4	11802	Jan. 27·43	1101	13	Jan. 21	−76	Feb. 2	+83	520	35	+15	II.
	32	Feb. 23·17	1102	6/7	Feb. 22	−12	Feb. 28	+73	54	43	+12	II.
5	11803	Jan. 25·90	1101	3/5	Jan. 22	−43	Jan. 26	+ 6	14	55	−25	
	28	Feb. 22·26	1102	2	Feb. 21	−12	Feb. 22	+ 3	8	55	−24	
6	11809	Feb. 5·6	1102	3/4	Feb. 1	−54	Feb. 4	−13	5	275	−19	
	11835	Mar. 3·68	1103	13	26	−80	Mar. 9	+72	144	278	−18	II.
	36	4·14	1103	8	27	−77	5	+20	35	271	−20	II.
7	11821	Feb. 7·1	1102	2	Feb. 11	+57	Feb. 12	+70	36	254	−23	
	48	Mar. 5·7	1103	6	Mar. 7	+23	Mar. 12	+83	485	250	−22	I. 1157
	69	Apr. 2·91	1104	15	26	−86	Apr. 9	+82	345	239	−23	
8	11823	Feb. 19·56	1102	11	Feb. 15	−58	Feb. 25	+80	26	90	+13	II.
	55	Mar. 17·95	1103	6	Mar. 13	−60	Mar. 18	+ 6	69	90	+15	II.
	64	17·7	1103	4	20	+38	23	+76	120	93	+13	
9	11841	Mar. 6·25	1103	10/11	Mar. 2	−46	Mar. 12	+76	293	244	+33	II.
	73	Apr. 3·94	1104	4/7	Apr. 1	−34	Apr. 7	+46	7	225	+33	II.
10	11843	Mar. 7·9	1103	3	Mar. 3	−57	Mar. 5	−33	11	222	+16	
	82	Apr. 4·5	1104	2	Apr. 8	+54	Apr. 9	+66	23	218	+15	
11	11847	Mar. 5·2	1103	3	Mar. 7	+28	Mar. 9	+53	13	257	+18	
	72	Apr. 1·65	1104	9	30	−28	Apr. 7	+75	121	256	+20	II.
12	11850	Mar. 10·83	1103	7	Mar. 9	−21	Mar. 15	+60	75	183	+19	II.
	75	Apr. 7·27	1104	7	Apr. 2	−71	Apr. 8	+18	55	181	+17	II.
13	11853	Mar. 10·6	1103	2/4	Mar. 11	+10	Mar. 14	+51	2	186	−16	
	74	Apr. 6·8	1104	4	Apr. 2	−63	Apr. 5	−24	11	188	−16	
14	11856	Mar. 19·68	1103	7/11	Mar. 15	−56	Mar. 25	+78	8	67	+18	II.
	66	19·5	1103	2	24	+65	25	+77	26	69	+14	
	85	Apr. 16·02	1104	10	Apr. 10	−74	Apr. 19	+45	40	66	+17	II.
15	11862	Mar. 25·75	1104	11	Mar. 19	−82	Mar. 29	+48	32	347	−15	II.
	90	Apr. 22·52	1105	13	Apr. 16	−77	Apr. 28	+77	76	340	−14	II.

REVIVAL GROUPS of SUN SPOTS, 1936—*continued.*

No.	No. of Group.	U.T. of Central Meridian Passage.	Rotation.	Duration in days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Area.	Mean Position. Longitude.	Mean Position. Latitude.	Reference to Ledger.
		1936.			1936.	°	1936.	°		°	°	
16	11870	Mar. 27·0	1104	7	Mar. 27	+ 3	Apr. 2	+80	99	331	−14	II.
	94	Apr. 23·24	1105	5	Apr. 20	−34	Apr. 24	+15	18	331	−16	
17	11871	Mar. 28·55	1104	3/7	Mar. 27	−15	Apr. 2	+60	27	310	+37	II.
	98	Apr. 26·23	1105	4	Apr. 24	−24	Apr. 27	+16	51	291	+37	
18	11879	Apr. 11·79	1104	12	Apr. 6	−75	Apr. 17	+78	196	122	+12	II.
	905	May 8·75	1105	8/10	May 4	−59	May 13	+64	33	126	+14	II.
19	11895	Apr. 26·11	1105	7/11	Apr. 20	−69	Apr. 30	+56	13	293	+12	II.
	11921	May 22·95	1106	7	May 22	−12	May 28	+73	203	298	+11	II.
20	11899	Apr. 22·9	1105	5	Apr. 25	+32	Apr. 29	+80	264	335	−27	II.
	11917	May 21·18	1106	2/7	May 16	−62	May 27	+14	2	321	−28	
21	11900	Apr. 25·1	1105	3	Apr. 26	+16	Apr. 28	+43	19	306	−16	
	19	May 22·60	1106	7	May 21	−17	May 27	+69	45	302	−17	II.
22	11902	May 2·58	1105	7	Apr. 30	−31	May 6	+52	41	207	+17	II.
	26	29·65	1106	4/8	May 24	−68	31	+20	12	209	+16	
23	11907	May 7·28	1105	3	May 6	−12	May 8	+14	13	145	−22	
	38	June 4·05	1106	8	June 2	−23	June 9	+72	385	138	−24	II.
	62	July 1·39	1107	3/6	June 29	−27	July 4	+43	4	136	−22	
24	11910	May 13·72	1105	12	May 7	−79	May 18	+60	193	60	−25	II.
	41	June 10·85	1106	12	June 5	−71	June 16	+72	88	48	−25	II.
25	11929	May 25·6	1106	2	May 28	+37	May 29	+50	8	263	−17	
	58	June 21·8	1107	3	June 25	+46	June 27	+75	29	263	−14	
26	11935	May 27·8	1106	4	May 31	+46	June 3	+82	78	233	+22	
	49	June 23·7	1107	6	June 18	−68	June 23	− 6	20	238	+22	II.
27	11937	June 2·95	1106	2/7	June 2	− 5	June 8	+70	3	152	−17	
	60	30·1	1107	6	25	−62	30	− 1	25	153	−18	II. }
	63	29·6	1107	4/6	30	+11	July 5	+73	6	158	−17	
28	11948	June 21·99	1107	14	June 15	−84	June 28	+80	567	260	+20	} I. 1160.
	75	July 19·06	1108	9/11	July 13	−72	July 23	+49	10	262	+21	
	99	Aug. 15·32	1109	11	Aug. 9	−76	Aug. 19	+47	133	261	+20	II.
29	11969	July 6·1	1107	3	July 8	+30	July 10	+56	47	73	−26	
	86	Aug. 2·94	1108	12	28	−70	Aug. 8	+72	271	65	−26	} I. 1165*
	12016	31·27	1109	13	Aug. 25	−71	Sept. 6	+81	603	51	−26	
	50	Sept. 28·14	1110	2/6	Sept. 24	−46	29	+14	6	43	−28	
	81	Oct. 25·91	1111	7/9	Oct. 22	−39	Oct. 30	+63	11	36	−25	II.
30	11973	July 14·26	1108	6	July 11	−39	July 16	+28	50	325	−16	II.
	94	Aug. 10·0	1109	2/3	Aug. 7	−34	Aug. 9	− 9	10	331	−19	
	12022	Sept. 6·97	1110	5/8	Sept. 1	−72	Sept. 8	+21	14	322	−16	II.
	56	Oct. 3·80	1111	12	28	−72	Oct. 9	+72	53	328	−19	II.
31	11983	July 22·3	1108	3	July 24	+26	July 26	+54	5	219	+24	
	12011*	Aug. 18·6	1109	2/3	Aug. 22	+49	Aug. 24	+76	7	218	+22	

REVIVAL GROUPS of SUN SPOTS, 1936—*continued.*

No.	No. of Group.	U.T. of Central Meridian Passage.	Rotation.	Duration in days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Area.	Mean Position. Longitude.	Mean Position. Latitude.	Reference to Ledger.
		1936.			1936.	°	1936.	°		°	°	
32	11992	Aug. 10·70	1109	7/9	Aug. 5	−68	Aug. 13	+33	7	322	+26	II.
	12023	Sept. 7·8	1110	3	Sept. 2	−72	Sept. 4	−43	13	311	+28	
	68	Oct. 5·6	1111	2	Oct. 9	+51	Oct. 10	+63	16	305	+27	
33	11993	Aug. 13·2	1109	5	Aug. 6	−78	Aug. 10	−24	24	302	−16	
	12024	Sept. 8·16	1110	13	Sept. 2	−76	Sept. 14	+74	333	307	−16	I. 1167
	59	Oct. 5·81	1111	10/11	30	−71	Oct. 10	+60	12	302	−12	I. 1167
	89	Nov. 1·62	1112	4	Nov. 1	− 5	Nov. 4	+40	34	308	−14	
	126	Nov. 28·5	1113	2	Dec. 2	+52	Dec. 3	+66	60	314	−17	
34	11998	Aug. 5·6	1108	3	Aug. 9	+52	Aug. 11	+76	23	30	+17	
	12017	Sept. 1·31	1109	7	26	−78	Sept. 1	+ 2	16	37	+17	II.
	19	1·7	1109	2	29	−45	Aug. 30	−31	19	32	+17	II.
	52	28·40	1110	7	Sept. 26	−31	Oct 2	+56	58	39	+16	II.
35	12005	Aug. 19·2	1109	3/4	Aug. 14	−65	Aug. 17	−23	5	209	+25	I. 1164 pt.
	31	Sept. 15·8	1110	3	Sept. 12	−49	Sept. 14	−19	13	206	+26	
36	12014	Aug. 20·0	1109	2	Aug. 25	+72	Aug. 26	+84	118	200	+15	
	36	Sept. 15·90	1110	4	Sept. 15	− 8	Sept. 18	+38	10	204	+16	
37	12028	Sept. 3·4	1109	3	Sept. 5	+24	Sept. 7	+52	16	9	+17	
	51	30·48	1110	11/12	24	−78	Oct. 5	+66	33	12	+15	II.
38	12029	Sept. 8·82	1110	2/8	Sept. 6	−33	Sept. 13	+62	1	298	+16	
	60	Oct. 6·19	1111	13	30	−77	Oct. 12	+81	672	296	+19	I. 1170
	84	Nov. 2·15	1112	11	Oct. 27	−73	Nov. 6	+57	248	301	+19	I. 1170
	12109	Nov. 29·32	1113	13	Nov. 23	−78	Dec. 5	+78	957	303	+17	I. 1178
	146	Dec. 26·97	1114	12	Dec. 21	−71	Jan. 1	+68	79	298	+17	I. 1178
	150	27·60	1114	7	23	−52	Dec. 29	+23	60	290	+17	I. 1178
39	12030	Sept. 16·84	1110	9	Sept. 10	−81	Sept. 18	+20	67	192	−17	II.
	70	Oct. 13·82	1111	9	Oct. 11	−34	Oct. 19	+75	96	196	−15	II.
	94	Nov. 9·5	1112	5/7	Nov. 3	−79	Nov. 9	− 2	19	204	−13	II.
	96	10·18	1112	11	5	−63	15	+69	44	195	−16	II.
	132	Dec. 6·8	1113	3	Dec. 8	+15	Dec. 10	+49	29	204	−12	
40	12034	Sept. 15·5	1110	2	Sept. 14	−15	Sept. 15	− 1	6	210	+19	
	69	Oct. 12·49	1111	8/9	Oct. 9	−44	Oct. 17	+67	34	213	+18	II.
41	12035	Sept. 19·95	1110	7	Sept. 14	−73	Sept. 20	+ 7	125	151	−18	II.
	71	Oct. 16·93	1111	12	Oct. 11	−77	Oct. 22	+74	237	155	−18	II.
42	12037	Sept. 21·18	1110	11	Sept. 16	−63	Sept. 26	+69	149	135	−20	II.
	73	Oct. 18·31	1111	12	Oct. 13	−69	Oct. 24	+81	120	137	−18	II.
	100	Nov. 13·90	1112	12	Nov. 8	−72	Nov. 19	+72	172	146	−19	II.
43	12042	Sept. 26·86	1110	12	Sept. 21	−69	Oct. 2	+76	292	60	−24	II.
	49	26·4	1110	4	23	−37	Sept. 26	− 5	12	66	−21	II.
	78	Oct. 23·79	1111	8/10	Oct. 19	−58	Oct. 28	+62	14	64	−25	II.
44	12057	Sept. 29·92	1110	2	Sept. 29	− 7	Sept. 30	+ 6	12	19	+16	
	80	Oct. 27·10	1111	13	Oct. 20	−85	Nov. 1	+72	273	21	+16	II.

REVIVAL GROUPS of SUN SPOTS, 1936.—*continued*

No.	No. of Group.	U.T. of Central Meridian Passage.	Rotation.	Duration in days.	First Seen. Date.	First Seen. Longitude from Central Meridian.	Last Seen. Date.	Last Seen. Longitude from Central Meridian.	Area.	Mean Position. Longitude.	Mean Position. Latitude.	Reference to Ledger.
		1936.			1936.	°	1936.	°		°	°	
45	12061	Oct. 6·85	1111	11	Oct. 2	−63	Oct. 12	+78	109	288	−18	II.
	85	Nov. 2·85	1112	11	27	−81	Nov. 6	+47	49	292	−20	II.
46	12086	Nov. 3·92	1112	11	Oct. 29	−71	Nov. 8	+65	95	278	+20	II.
	121	Dec. 1·72	1113	3	Nov. 30	−22	Dec. 2	+12	18	271	+20	
47	12088	Nov. 5·93	1112	13	Oct. 30	−79	Nov. 11	+67	109	251	−16	II.
	119	Dec. 3·35	1113	10	Nov. 28	−66	Dec. 7	+53	76	250	−15	II.
48	12095	Nov. 11·03	1112	13	Nov. 4	−83	Nov. 16	+70	400	184	+14	} I. 1173
	125	Dec. 7·29	1113	11	Dec. 1	−80	Dec. 11	+59	54	198	+14	
	164	Jan. 3·46	1114	6	30	−53	Jan. 4	+14	32	200	+14	
49	12098	Nov. 12·00	1112	13	Nov. 5	−85	Nov. 17	+72	156	171	+10	} I. 1174
	127	Dec. 8·90	1113	7	Dec. 3	−72	Dec. 9	+ 3	13	177	+10	
	165	Jan. 4·80	1114	10	Dec. 30	−73	Jan. 8	+50	20	182	+ 8	II.
50	12117	Nov. 27·4	1113	2	Nov. 28	+12	Nov. 29	+28	20	329	−16	
	56	Dec. 24·7	1114	2/3	Dec. 28	+48	Dec. 30	+77	12	328	−16	

ROYAL OBSERVATORY, GREENWICH.

Ledgers of Groups of Sun Spots

For the Year

1936

Ledger I.—Recurrent Groups

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936.

The time (U.T.) at which the photograph was taken is expressed in the *first* column by the day of the year and decimal of a day reckoned from Greenwich Mean Midnight.

The place where the photograph was taken is also indicated in the *first* column. A photograph taken at Greenwich is indicated by the letter G, and those taken at the Cape and Kodaikánal by the letters C and K respectively.

The Projected Area of the Umbræ and Whole Spots, given in the *second* and *third* columns, is the area as it is measured on the photograph, uncorrected for the effect of foreshortening, and expressed in millionths of the Sun's apparent disc.

The area corrected for foreshortening given in the *fourth* and *fifth* columns is expressed in millionths of the Sun's visible hemisphere.

The longitude given in the *sixth* column is based on the ephemeris given in the *Nautical Almanac*, assuming a daily sidereal motion of $14^\circ \cdot 18$, due to the Sun's rotation, constant at all latitudes ; this corresponds to Carrington's assumed rotation period of 25·38 days.

The proper motion given in the *seventh* column is derived from the difference of longitude thus computed from the measured positions on any given day and the first day on which the group of spots or single spot is visible, after the correction for the motion appropriate to the latitude has been applied according to the formula, $\xi = 14^\circ \cdot 37 - 2^\circ \cdot 60 \sin^2 \phi$. A *plus* sign indicates a motion forwards ; a *minus* sign a motion backwards relative to the position on the first day.

The remaining columns correspond to those with similar headings in the preceding Section.

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

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936.

No. 1152. Latitude −12°·4.
Group 11788 in Rotation 1101.
,, 11805 ,, ,, 1102.

Group 11788. 1935, Dec. 29–1936, Jan. 9. A large stream approximately of normal type. The leader, *a*, which becomes a large regular spot, is the predominant feature. The original follower, *b*, a small regular spot, dies out whilst another spot, *c*, a few degrees preceding it in longitude, becomes the chief representative of this part of the stream.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
$\bar{3}$·416 G	11	55	16	80	346·4	0·0	−12·2	−70·6
$\bar{2}$·130 K	22	114	24	123	345·0	−1·5	−12·7	−62·6
$\bar{1}$·122 K	110	388	82	285	348·0	+1·5	−12·3	−46·5
0·312 C	162	1005	95	584	349·6	+3·0	−12·1	−29·2
1·422 C	318	1518	167	795	350·8	+4·1	−12·2	−13·4
2·396 C	276	1623	141	828	351·0	+4·3	−12·0	− 0·4
3·417 G	256	1542	133	797	350·5	+3·7	−12·4	+12·6
4·388 C	202	1360	114	767	351·4	+4·5	−11·7	+26·3
5·360 C	193	1092	128	725	352·6	+5·6	−11·7	+40·3
6·617 G	109	585	100	539	352·8	+5·8	−11·3	+57·0
7·352 C	83	468	105	590	352·9	+5·8	−11·4	+66·8
8·396 C	25	208	76	630	353·6	...	−12·0	+81·2
Means ...	...	...	100	556	350·1	...	−12·0	...
Spot *a*.								
$\bar{2}$·130 K	10	36	10	35	348·9	0·0	−12·4	−58·7
1·122 K	50	223	36	158	350·1	+1·1	−12·2	−44·4
0·312 C	108	736	62	420	351·9	+2·8	−12·1	−26·9
1·422 C	216	1102	112	573	352·9	+3·8	−11·8	−11·3
2·396 C	183	1055	93	538	353·4	+4·2	−11·6	+ 2·0
3·417 G	191	1124	99	584	353·4	+4·1	−11·6	+15·5
4·388 C	158	1073	90	612	353·2	+3·9	−11·4	+28·1
5·360 C	166	980	111	657	353·2	+3·8	−11·4	+40·9
6·617 G	100	554	93	515	353·2	+3·7	−11·1	+57·4
7·352 C	83	468	105	590	352·9	+3·4	−11·4	+66·8
8·396 C	25	208	76	630	353·6	...	−12·0	+81·2
Spot *b*.								
0·312 C	37	177	23	110	344·0	0·0	−12·4	−34·8
1·422 C	44	154	24	83	343·8	−0·3	−12·4	−20·4
2·396 C	17	62	9	32	343·6	−0·5	−11·9	− 7·8
3·417 G	13	65	7	33	343·3	−0·9	−11·8	+ 5·4
Spot *c*.								
0·312 C	17	92	10	54	347·1	0·0	−12·2	−31·7
1·422 C	58	262	31	139	347·3	+0·1	−12·8	−16·9
2·396 C	64	404	33	206	346·2	−1·1	−12·9	− 5·2
3·417 G	43	310	22	158	345·7	−1·6	−13·2	+ 7·8
4·388 C	44	287	24	155	345·2	−2·2	−13·0	+20·1
5·360 C	21	83	13	50	345·4	−2·1	−12·9	+33·1
6·617 G	9	31	7	24	345·4	−2·1	−13·1	+49·6

No. 1152.—*continued.*

Group 11805. Jan. 24–Feb. 5. A regular spot, *a* of Group 11788, shedding a small portion on the following side on Jan. 29–30.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
23·394 C	15	107	36	257	356·0	+5·3	−12·5	−78·9
24·350 C	38	153	48	194	354·8	+4·1	−13·0	−67·5
25·444 G	49	257	40	212	354·7	+3·9	−13·1	−53·2
26·412 C	31	280	20	185	354·8	+3·9	−13·5	−40·3
27·461 G	63	274	35	153	354·7	+3·7	−13·0	−26·6
28·447 G	56	333	29	173	355·0	+4·0	−12·9	−13·4
29·518 G	56	273	28	136	355·0	+3·9	−12·8	+ 0·7
30·406 C	50	276	26	141	354·5	+3·3	−12·8	+11·9
31·451 G	37	239	21	134	354·5	+3·3	−12·8	+25·7
32·529 G	35	187	23	122	354·4	+3·1	−12·7	+39·8
33·434 G	28	143	22	114	354·4	+3·0	−12·6	+51·7
34·517 G	22	108	26	129	354·2	+2·8	−12·4	+65·8
35·368 C	10	67	21	140	354·3	+2·8	−12·3	+77·1
Means ...	...	...	29	161	354·7	...	−12·8	...

No. 1153. Latitude +28°·8.
Group 11790 in Rotation 1101.
,, 11806 ,, ,, 1102.

Group 11790. Jan. 1–14. A very large composite spot preceded by a small regular spot which dies out by Jan. 8. The composite spot tends to spread out in longitude; the preceding part becomes a diminishing cluster of small spots, whilst the following portion remains a large double spot with widely separated umbræ.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
0·312 C	12	83	(30	209	302·8	...	+24·8)	−76·0
1·422 C	68	495	114	825	296·5	0·0	+27·6	−67·7
2·396 C	91	807	96	872	295·1	−0·9	+27·3	−56·3
3·417 G	170	1224	141	1019	293·9	−1·8	+27·3	−44·0
4·388 C	272	1572	191	1098	292·4	−2·9	+28·2	−32·7
5·360 C	260	1735	162	1084	292·5	−2·4	+28·2	−19·8
6·617 G	290	1839	172	1090	290·9	−3·5	+28·4	− 4·9
7·352 C	197	1543	117	915	291·1	−3·0	+28·3	+ 5·0
8·396 C	126	1257	78	779	289·5	−4·1	+28·9	+17·1
9·482 G	119	853	83	601	289·0	−4·2	+28·9	+30·9
10·144 K	104	710	81	554	288·2	−4·7	+29·6	+38·9
11·504 G	71	363	80	405	287·0	−5·3	+30·1	+55·6
12·431 C	43	196	70	320	285·8	−6·2	+30·3	+66·6
13·472 G	15	82	66	359	285·3	−6·2	+30·3	+79·8
Means ...	...	...	112	763	290·6	...	+28·7	...

Group 11806. Jan. 30–Feb. 6. A regular spot decreasing rapidly; a tiny companion appears on Feb. 6.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
29·518 G	9	35	18	71	284·4	−0·5	+29·4	−69·9
30·406 C	13	73	16	90	284·5	0·0	+29·2	−58·1
31·451 G	15	91	14	80	284·8	+0·7	+28·8	−44·0
32·529 G	11	39	8	28	283·4	−0·3	+29·2	−31·2
33·434 G	7	17	5	11	283·0	−0·3	+28·9	−19·7
34·517 G	11	17	7	10	282·6	−0·2	+28·9	− 5·8
35·368 C	4	21	2	13	282·1	−0·4	+29·0	+ 4·9
36·384 G	6	26	4	17	279·1	−3·0	+28·6	+15·3
Means ...	...	...	9	40	283·0	...	+29·0	...

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1154.** Latitude −32°·5.
Group 11795 in Rotation 1101.
,, 11820 ,, ,, 1102.

Group 11795. Jan. 14–26. A very large complex stream developing rapidly from three small spots near the east limb on Jan. 14. The stream at first appears to be developing into one of normal type, but by Jan. 21 it has become complex in character, the numerous component spots being packed so tightly that they form almost one very long spot on Jan. 21. Throughout these changes, a small companion spot, *d*, to the leader remains stable.

Date U.T. Place.	Projected Area Whole Spots.	Projected Area Umbræ Spots.	Corrected Area Whole Spots.	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
13·472 G	28	78	42	116	135·9	0·0	−31·0	−69·6
14·410 C	119	655	121	667	135·1	−0·3	−31·3	−58·1
15·403 C	142	1306	112	1018	135·7	+0·9	−31·4	−44·4
16·600 G	246	1786	157	1146	134·9	+0·8	−31·7	−29·4
17·530 G	255	1719	150	1011	135·0	+1·4	−31·7	−17·1
18·382 C	352	1970	199	1121	133·7	+0·6	−31·8	− 7·2
19·525 G	365	2337	207	1324	134·0	+1·5	−31·9	+ 8·2
20·469 G	368	2591	220	1545	132·9	+0·9	−32·2	+19·5
21·396 G	444	2519	291	1641	132·1	+0·6	−32·3	+30·9
22·446 G	324	1996	252	1550	131·8	+0·9	−32·7	+44·4
23·394 C	204	1536	197	1551	132·7	+2·4	−33·0	+57·8
24·350 C	107	791	151	1148	130·4	+0·6	−32·8	+68·1
25·444 G	35	166	(75	370	124·9	...	−33·3)	+77·0
Means ...	...	...	183	1153	133·7	...	−32·0	...
Spot *d*.								
16·600 G	20	108	12	65	138·9	0·0	−28·5	−25·4
17·530 G	24	93	13	52	139·6	+1·1	−28·8	−12·5
18·382 C	19	69	10	38	139·9	+1·7	−28·7	− 1·0
19·525 G	22	139	12	78	140·3	+2·6	−28·2	+14·5
20·469 G	26	82	16	50	140·6	+3·3	−28·4	+27·2
21·396 G	17	63	12	43	140·2	+3·3	−28·6	+39·0
22·446 G	17	56	15	49	140·4	+3·9	−28·8	+53·0
23·394 C	8	46	10	55	139·7	+3·6	−29·2	+64·8

Group 11820. Feb. 10–23. A stable regular spot.

40·422 C	27	92	76	259	128·7	...	−32·1	−82·0
41·431 C	59	182	83	257	127·7	+7·5	−32·3	−69·7
42·454 G	74	312	73	306	126·1	+6·6	−32·5	−57·8
43·519 G	65	371	49	282	125·1	+6·1	−32·8	−44·8
44·476 G	87	419	57	272	124·3	+5·8	−32·8	−33·0
45·396 C	86	489	51	294	123·5	+5·5	−33·0	−21·7
46·419 C	113	487	63	273	122·7	+5·3	−33·2	− 9·0
47·592 G	83	488	46	273	121·9	+5·1	−33·2	+ 5·6
48·432 C	88	521	51	302	121·2	+4·9	−33·4	+16·0
49·438 C	69	432	43	272	120·4	+4·7	−33·4	+28·4
50·385 G	78	403	55	286	119·7	+4·5	−33·1	+40·2
51·409 C	76	349	67	307	118·9	+4·3	−33·4	+52·9
52·432 C	38	248	46	298	117·6	+3·6	−33·3	+65·1
53·374 C	15	131	31	269	117·9	+4·4	−33·3	+77·8
Means ...	...	...	55	284	122·1	...	−33·1	...

No. **1155.** Latitude +11°·7.
Group 11814 in Rotation 1102.
,, 11833 ,, ,, 1103.

Group 11814. Feb. 7–9. Two spots developing suddenly near the west limb.

Date U.T. Place.	Projected Area Whole Spots.	Projected Area Umbræ Spots.	Corrected Area Whole Spots.	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
37·387 G	8	30	6	24	299·6	0·0	+11·6	+49·0
38·375 G	86	436	102	524	300·4	+0·7	+11·8	+62·8
39·431 C	35	228	95	605	302·1	+2·3	+12·1	+78·4
Means ...	...	...	68	384	300·7	...	+11·8	...

Group 11833. Feb. 24–Mar. 6. A stable regular spot. (Continuity with Group 11814 not certain.)

54·591 G	26	127	42	204	314·3	+13·3	+11·9	−69·8
55·426 C	46	215	48	224	314·4	+13·3	+11·8	−58·7
56·456 C	59	276	44	207	314·6	+13·4	+11·8	−44·9
57·355 C	53	312	34	200	314·5	+13·2	+11·8	−33·2
58·613 G	79	322	43	177	314·8	+13·4	+11·7	−16·3
59·340 C	65	333	34	176	314·9	+13·5	+11·8	− 6·6
60·413 C	63	325	33	172	314·8	+13·3	+11·7	+ 7·4
61·418 C	59	281	34	160	314·9	+13·3	+12·1	+20·7
62·602 G	44	208	29	137	315·0	+13·3	+11·7	+36·4
63·499 G	40	172	32	138	315·0	+13·2	+11·5	+48·3
64·458 G	18	117	20	131	315·2	+13·4	+11·3	+61·1
65·407 G	13	62	26	123	315·1	+13·2	+11·2	+73·5
Means ...	...	...	35	171	314·8	...	+11·7	...

No. **1156.** Latitude −25°·5.
Group 11815 in Rotation 1102.
,, 11846 ,, ,, 1103.
,, 11877 ,, ,, 1104.

Group 11815. Feb. 7–20. A large stream containing two chief spots, *a* and *b*, and a number of tiny spots sometimes grouped in clusters. The following component, *b*, breaks up very suddenly after Feb. 16. The whole disturbance at its maximum development extends over 25° of longitude.

37·387 G	35	201	(73	416	173·0	...	−26·4)	−77·6
38·375 G	193	848	296	1295	167·8	0·0	−27·5	−69·8
39·431 C	254	1099	250	1057	167·1	−0·4	−27·6	−56·6
40·422 C	239	1313	175	946	167·8	+0·6	−27·2	−42·9
41·431 C	307	1548	192	955	167·1	+0·2	−27·3	−30·3
42·454 G	353	1611	196	896	166·7	+0·1	−26·9	−17·2
43·519 G	350	1456	188	784	165·2	−1·1	−27·1	− 4·7
44·476 G	311	1349	167	728	163·6	−2·4	−27·5	+ 6·3
45·396 C	247	1206	139	679	163·2	−2·5	−27·5	+18·0
46·419 C	249	1172	152	724	162·7	−2·8	−27·6	+31·0
47·592 G	122	612	92	466	162·2	−2·9	−26·9	+45·9
48·432 C	110	433	104	416	163·2	−1·7	−27·4	+58·0
49·438 C	42	223	64	344	163·5	−1·1	−26·8	+71·5
50·385 G	11	33	35	132	164·6	...	−26·4	+85·1
Means ...	...	...	168	774	165·0	...	−27·3	...

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1156.** Group 11815.—*continued.*

Spot *a.*

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
37·387 G	31	181	61	355	174·0	0·0	−26·4	−76·6
38·375 G	61	270	70	308	173·4	−0·3	−26·3	−64·2
39·431 C	79	458	66	380	172·4	−1·0	−26·8	−51·3
40·422 C	100	594	67	398	172·3	−0·8	−26·6	−38·4
41·431 C	104	594	61	350	171·5	−1·3	−26·4	−25·9
42·454 G	105	440	57	238	170·7	−1·8	−25·8	−13·2
43·519 G	96	432	51	229	170·2	−2·0	−25·9	+ 0·3
44·476 G	92	429	50	232	169·5	−2·4	−25·9	+12·2
45·396 C	69	424	40	246	169·2	−2·5	−26·0	+24·0
46·419 C	76	386	49	251	168·8	−2·6	−26·1	+37·1
47·592 G	52	268	44	228	168·9	−2·1	−25·7	+52·6
48·432 C	44	202	49	224	168·9	−1·9	−25·9	+63·7
49·438 C	21	113	41	218	168·6	−1·9	−25·7	+76·6

Spot *b.*

38·375 G	65	227	122	427	161·6	0·0	−27·9	−76·0
39·431 C	117	364	130	404	160·8	−0·4	−28·2	−62·9
40·422 C	88	389	71	315	160·9	+0·1	−28·1	−49·8
41·431 C	130	525	86	346	160·5	+0·1	−28·2	−36·9
42·454 G	92	397	53	230	160·3	+0·3	−28·2	−23·6
43·519 G	105	449	57	242	160·0	+0·4	−28·2	− 9·9
44·476 G	135	578	72	312	159·7	+0·5	−28·2	+ 2·4
45·396 C	118	594	65	327	159·4	+0·6	−28·2	+14·2
46·419 C	134	622	80	373	158·6	+0·2	−28·3	+26·9
47·592 G	46	235	33	167	158·4	+0·4	−28·6	+42·1
48·432 C	46	143	39	120	157·4	−0·2	−28·9	+52·2
49·438 C	13	78	15	92	157·1	−0·1	−28·6	+65·1
50·385 G	7	13	14	26	156·9	0·0	−28·4	+77·4

Group 11846. March 6–18. A stable regular spot (probably *a* of Group 11815) followed by extensive faculæ in which a small companion spot is seen on Mar 8, 9, 13 and 14. Two small attendants appear in front of *a* on Mar. 15 and 16.

65·407 G	15	48	29	93	165·0	−0·8	−23·9	−76·6
66·376 G	26	132	29	149	164·4	−1·1	−23·9	−64·4
67·367 C	38	182	32	152	163·5	−1·7	−23·9	−52·3
68·389 C	42	228	28	151	163·5	−1·4	−23·7	−38·8
69·389 G	53	242	31	140	163·5	−1·2	−23·9	−25·6
70·409 C	49	292	26	155	163·2	−1·2	−23·8	−12·5
71·369 C	51	288	27	149	162·8	−1·3	−24·0	− 0·3
72·397 C	62	310	32	164	162·0	−1·8	−24·1	+12·5
73·422 G	40	277	23	160	162·0	−1·5	−24·0	+26·0
74·402 C	57	262	38	173	161·7	−1·5	−24·2	+38·6
75·500 G	44	211	37	177	161·6	−1·3	−23·8	+53·0
76·494 G	24	143	28	169	161·2	−1·4	−24·0	+65·7
77·436 G	20	75	40	149	160·3	−2·0	−24·1	+77·2
Means ...	...	...	31	152	162·7	...	−23·9	...

No. **1156.**—*continued.*

Group 11877. Apr. 3–7. A regular spot (probably *a* of Group 11815) disappearing rather suddenly after Apr. 6.

d					°	°	°	°
93·413 C	9	34	17	66	156·0	−1·6	−25·0	−76·4
94·342 C	13	48	15	57	154·9	−2·5	−25·0	−65·2
95·142 K	19	71	17	63	154·4	−2·7	−25·0	−55·1
96·395 G	22	89	15	60	154·2	−2·6	−25·1	−38·8
97·492 G	9	27	5	16	153·7	−2·7	−25·5	−24·8
Means ...	...	...	14	52	154·6	...	−25·1	...

No. **1157.** Latitude −22°·5.
Group 11848 in Rotation 1103.
,, 11869 ,, ,, 1104.

Group 11848. Mar. 7–12. A stream of normal type: *a* and *b* are the leader and follower spots respectively.

66·376 G	46	139	26	77	251·6	0·0	−21·5	+22·8
67·367 C	110	628	70	394	250·7	−0·7	−22·0	+34·9
68·389 C	106	587	82	449	250·2	−1·0	−21·7	+47·9
69·389 G	131	632	137	654	250·5	−0·5	−21·7	+61·4
70·409 C	53	496	84	850	249·2	−1·6	−21·8	+73·5
71·369 C	23	138	(70	415	246·5	...	−23·0)	+83·4
Means ...	...	...	80	485	250·4	...	−21·6	...

Spot *a.*

66·376 G	24	55	14	31	253·7	0·0	−21·1	+24·9
67·367 C	55	293	36	190	254·4	+0·9	−21·3	+38·6
68·389 C	47	250	39	205	254·7	+1·4	−21·0	+52·4
69·389 G	40	161	48	192	255·1	+2·0	−21·0	+66·0
70·409 C	17	247	35	506	253·3	+0·4	−21·1	+77·6

Spot *b.*

66·376 G	22	84	12	46	250·0	0·0	−21·8	+21·2
67·367 C	55	335	34	204	248·5	−1·3	−22·3	+32·7
68·389 C	51	299	37	215	247·3	−2·3	−22·1	+45·0
69·389 G	62	304	58	283	246·8	−2·6	−22·3	+57·7
70·409 C	32	204	43	275	245·2	−4·0	−22·4	+69·5
71·369 C	19	117	54	330	245·1	...	−22·9	+82·0

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. 1157.—*continued.*

Group 11869. Mar. 26–Apr. 9. A stream which extends for a considerable distance (16°) in longitude. The follower, *b*, is a regular spot which survives the preceding part of the stream; the structure of *b* is unusual on Apr. 4.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
85·345 C	9	43	(40	189	253·3	...	−21·0)	−85·5
86·375 G	27	169	71	423	245·8	− 2·0	−23·1	−79·4
87·376 G	71	373	89	491	245·5	− 2·1	−23·3	−66·5
88·440 C	84	588	74	521	244·4	− 3·0	−23·0	−53·6
89·457 G	115	559	81	402	241·5	− 5·7	−23·4	−43·1
90·423 C	123	660	75	406	240·3	− 6·7	−23·1	−31·5
91·327 C	107	624	60	352	239·1	− 7·7	−23·6	−20·8
92·110 K	126	725	67	389	238·6	− 8·1	−23·5	−11·0
93·413 C	107	637	56	333	237·5	− 8·9	−23·5	+ 5·1
94·342 C	78	553	42	299	236·0	−10·3	−23·4	+15·9
95·142 K	89	420	52	244	235·8	−10·3	−23·6	+26·3
96·395 G	62	339	43	234	234·6	−11·3	−23·3	+41·6
97·492 G	40	211	36	190	234·3	−11·4	−23·1	+55·8
98·598 G	20	146	28	201	233·5	−12·0	−22·8	+69·5
99·526 G	9	56	25	158	233·2	...	−23·0	+81·5
Means ...	...	...	60	345	239·0	...	−23·3	...

Spot *b* (probably *b* of Group 11848).

86·375 G	9	49	43	235	239·0	...	−24·0	−86·2
87·376 G	31	193	50	311	238·9	− 7·1	−24·1	−73·1
88·440 C	39	307	39	307	238·1	− 7·7	−24·1	−59·9
89·457 G	75	408	56	306	237·7	− 7·9	−24·0	−46·9
90·423 C	86	477	54	301	237·3	− 8·1	−24·0	−34·5
91·327 C	82	516	47	294	237·2	− 8·0	−23·8	−22·7
92·110 K	106	613	57	331	237·1	− 8·0	−23·8	−12·5
93·413 C	90	542	47	282	236·4	− 8·4	−23·6	+ 4·0
94·342 C	78	553	42	299	236·0	− 8·7	−23·4	+15·9
95·142 K	89	420	52	244	235·8	− 8·7	−23·6	+26·3
96·395 G	62	339	43	234	234·6	− 9·7	−23·3	+41·6
97·492 G	40	211	36	190	234·4	− 9·7	−23·1	+55·8
98·598 G	20	146	28	201	233·5	−10·4	−22·8	+69·5
99·526 G	9	56	25	158	233·2	...	−23·0	+80·5

No. 1158. Latitude −28°·1.
Group 11859 in Rotation 1103.
,, 11883 ,, ,, 1104.

Group 11859. Mar. 18–24. A stream in which the leader spot, *a*, greatly predominates.

77·436 G	7	18	4	10	83·2	0·0	−26·2	+ 0·1
78·523 G	48	198	26	108	79·8	−3·0	−28·0	+11·0
79·601 G	115	608	68	359	80·3	−2·1	−28·2	+25·8
80·451 G	163	773	109	517	80·1	−1·9	−28·2	+36·8
81·475 G	105	531	88	456	81·2	−0·4	−27·8	+51·4
82·408 G	64	367	75	315	82·7	+1·4	−28·2	+65·2
83·389 G	22	162	49	368	84·1	+3·2	−28·0	+79·5
Means ...	...	...	60	305	81·6	...	−27·8	...

No. 1158. Group 11859.—*continued.*

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
78·523 G	22	119	12	65	81·4	0·0	−27·3	+12·6
79·601 G	53	305	32	183	82·8	+1·8	−27·8	+28·3
80·451 G	99	477	68	329	83·4	+2·7	−28·2	+40·1
81·475 G	75	438	66	385	83·9	+3·6	−28·2	+54·1
82·408 G	53	323	65	274	84·1	+4·2	−28·2	+66·6
83·389 G	20	158	46	363	84·1	+4·6	−28·0	+79·5

Group 11883. Apr. 8–22. A stable regular spot (*a* of Group 11859) with tiny companions on Apr. 14, 18, 19 and 20.

98·598 G	7	25	37	133	76·8	...	−28·6	−87·2
99·526 G	18	99	34	186	75·9	+2·6	−28·5	−75·8
100·485 G	27	166	31	188	75·6	+2·7	−28·3	−63·4
101·424 G	38	220	32	183	75·5	+3·0	−28·0	−51·1
102·395 G	58	285	40	197	74·6	+2·4	−27·9	−39·2
103·357 C	52	291	31	175	74·5	+2·7	−28·2	−26·6
104·372 G	54	332	30	186	74·3	+2·9	−28·4	−13·4
105·420 G	54	266	29	144	74·0	+3·0	−28·5	+ 0·1
106·604 G	47	275	26	154	73·0	+2·5	−28·4	+14·8
107·390 G	40	232	24	139	72·8	+2·6	−28·3	+24·9
108·446 G	31	180	20	121	70·5	+0·7	−28·0	+36·6
109·391 G	42	198	33	158	69·1	−0·3	−27·8	+47·7
110·736 G	26	95	32	119	69·6	+0·7	−28·9	+65·9
111·365 C	13	70	23	124	69·5	+0·9	−28·7	+74·1
112·348 G	2	9	15	66	70·9	...	−29·0	+88·5
Means ...	...	...	30	160	73·0	...	−28·3	...

No. 1159. Latitude −27°·2.
Group 11912 in Rotation 1105.
,, 11943 ,, ,, 1106.

Group 11912. May 10–23. A stream of normal type: *a* and *b* are the leader and follower spots respectively.

130·657 G	21	84	(69	276	18·8	...	−27·9)	−81·6
131·408 G	32	224	62	426	15·7	0·0	−27·6	−74·8
132·622 G	96	513	100	534	15·6	+0·3	−27·6	−58·8
133·555 G	159	794	132	647	14·7	−0·2	−27·8	−47·4
134·431 C	206	1021	143	707	13·5	−1·1	−27·6	−37·0
135·462 G	199	1259	122	764	12·4	−1·9	−27·4	−24·4
136·353 G	166	1071	95	611	12·6	−1·4	−27·5	−12·4
137·461 G	155	1030	87	573	10·6	−3·0	−27·6	+ 0·2
138·335 G	159	835	91	476	10·8	−2·5	−27·9	+12·0
139·336 G	141	645	86	395	9·8	−3·1	−27·7	+24·2
140·334 G	94	460	67	327	11·2	−1·4	−27·6	+38·8
141·403 G	58	276	52	254	10·5	−1·7	−27·8	+52·2
142·398 G	30	155	40	213	10·8	−1·0	−27·6	+65·7
143·421 G	14	50	48	172	12·7	...	−27·5	+81·2
Means ...	...	...	90	494	12·4	...	−27·6	...

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1159.** Group 11912.—*continued.*

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
130·657 G	21	84	69	276	18·8	...	−27·9	−81·6
131·408 G	23	178	40	313	17·7	0·0	−27·8	−72·8
132·622 G	59	331	58	324	18·0	+0·7	−28·0	−56·4
133·555 G	68	378	52	287	17·8	+0·9	−28·0	−44·3
134·431 C	81	405	53	267	17·6	+1·0	−27·8	−32·9
135·462 G	91	518	54	306	17·0	+0·7	−27·8	−19·8
136·353 G	59	451	33	253	16·6	+0·6	−27·8	− 8·4
137·461 G	64	328	36	184	16·0	+0·4	−27·6	+ 5·6
138·335 G	82	349	48	202	15·3	0·0	−27·8	+16·5
139·336 G	68	303	43	191	14·6	−0·3	−27·6	+29·0
140·334 G	57	269	42	199	14·1	−0·5	−27·6	+41·7
141·403 G	39	207	37	199	13·6	−0·6	−27·6	+55·3
142·398 G	23	132	33	190	13·0	−0·8	−27·4	+67·9
143·421 G	14	50	48	172	12·7	...	−27·5	+81·2

Spot *b*.

133·555 G	41	119	38	111	7·7	0·0	−27·9	−54·4
134·431 C	57	233	43	177	7·1	−0·3	−28·2	−43·4
135·462 G	62	344	40	220	6·2	−0·8	−28·4	−30·6
136·353 G	75	351	44	207	5·4	−1·3	−28·4	−19·6
137·461 G	64	365	36	204	4·7	−1·6	−28·6	− 5·7
138·335 G	52	326	29	183	4·0	−2·0	−28·8	+ 5·2
139·336 G	46	242	27	143	3·4	−2·3	−28·6	+17·8
140·334 G	23	114	15	114	2·7	−2·6	−28·6	+30·3
141·403 G	14	46	11	35	1·8	−3·1	−28·4	+43·5
142·398 G	7	23	7	23	0·6	−4·0	−28·4	+55·5

Group 11943. June 8–14. A regular spot (*a* of Group 11912) breaking up into fragments on June 12–13.

159·329 G	18	48	38	100	6·6	−1·2	−26·4	−74·4
160·366 G	18	94	21	109	6·2	−1·3	−26·6	−61·1
161·468 C	27	118	22	98	5·3	−1·8	−26·5	−47·4
162·457 G	23	110	16	76	4·9	−1·8	−26·7	−34·7
163·333 G	23	97	14	60	4·3	−2·1	−26·7	−23·7
164·381 C	22	56	13	32	4·1	−2·0	−27·2	−10·1
165·377 G	7	23	4	13	3·0	−2·7	−27·3	+ 2·0
Means ...	...	...	18	70	4·9	...	−26·8	...

No. **1160.** Latitude +20°·6.
Group 11948 in Rotation 1107.
,, 11975 ,, ,, 1108.

Group 11948. June 15–28. A stream in which there is marked separation in longitude between the leader and follower, *a* and *b* respectively; between these two components there are variable spots which on some days make up a complex cluster. *a* appears to come from the sudden disruption of a larger spot between June 16 and 17.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
166·415 G	9	30	(40	132	263·7	...	+18·9)	−83·5
167·330 G	62	525	125	1076	259·9	0·0	+20·5	−75·2
168·423 G	144	714	151	760	260·1	+0·3	+20·2	−60·6
169·488 G	175	1137	133	873	260·0	+0·4	+20·1	−46·6
170·630 G	162	1125	100	698	259·5	0·0	+20·2	−32·0
171·336 G	203	1076	117	617	260·4	+1·0	+19·8	−21·7
172·300 G	159	949	85	506	260·3	+1·1	+19·8	− 9·0
173·378 G	133	704	71	373	259·0	−0·1	+20·2	+ 3·9
174·361 G	103	498	57	278	260·7	+1·7	+20·4	+18·6
175·351 G	122	645	77	406	261·8	+3·0	+20·7	+32·8
176·402 G	120	670	92	516	261·4	+2·7	+20·9	+46·4
177·471 G	60	402	62	413	259·8	+1·2	+21·3	+58·9
178·385 G	37	194	58	285	259·4	+1·0	+21·7	+70·6
179·373 C	9	33	(25	90	255·4	...	+22·7)	+79·7
Means ...	...	...	94	567	260·2	...	+20·5	...

Spot *a*.

167·330 G	32	235	56	409	262·3	0·0	+19·3	−72·8
168·423 G	35	115	33	107	265·0	+2·8	+19·3	−55·7
169·488 G	39	231	27	162	264·9	+2·9	+19·0	−41·7
170·630 G	32	192	19	111	265·8	+3·9	+18·8	−25·7
171·336 G	42	208	23	112	266·6	+4·8	+18·7	−15·5
172·300 G	37	194	19	101	267·3	+5·7	+18·1	− 2·0
173·378 G	46	129	24	68	268·4	+6·9	+18·0	+13·3
174·361 G	25	92	14	53	269·0	+7·6	+18·4	+26·9
175·351 G	14	79	10	54	269·7	+8·5	+18·5	+40·7
176·402 G	9	51	8	46	269·9	+8·8	+18·2	+54·9

Spot *b*.

167·330 G	30	290	69	667	258·0	0·0	+21·3	−77·1
168·423 G	65	400	73	452	258·3	+0·4	+21·2	−62·4
169·488 G	74	513	60	416	257·6	−0·1	+21·2	−49·0
170·630 G	74	494	47	316	257·2	−0·4	+21·4	−34·3
171·336 G	67	370	40	218	257·3	−0·2	+21·7	−24·8
172·300 G	74	397	40	214	256·9	−0·4	+21·7	−12·4
173·378 G	51	305	27	162	256·6	−0·6	+21·9	+ 1·5
174·361 G	60	323	33	178	256·3	−0·8	+21·7	+14·2
175·351 G	53	277	32	166	256·2	−0·7	+22·0	+27·2
176·402 G	35	229	24	160	256·1	−0·7	+22·1	+41·1
177·471 G	23	166	21	153	256·1	−0·6	+22·3	+55·2
178·385 G	18	134	24	177	255·7	−0·8	+22·4	+66·9
179·373 C	9	33	25	90	255·4	−1·0	+22·7	+79·7

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1160.**—*continued.*

Group 11975. July 13–23. A disturbed area marked by one or two small spots not recorded on July 17 and 18.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
194·328 G	0	5	0	8	266·1	+9·8	+19·7	−71·7
195·506 C	4	9	4	9	264·3	+8·1	+20·2	−57·9
196·548 G	12	37	9	27	264·0	+8·0	+20·2	−44·4
197·332 G	5	23	3	14	264·1	+8·2	+20·1	−33·9
198·495 C	0	0	0	0	...	...	...	...
199·340 G	0	0	0	0	...	...	...	...
200·396 G	5	14	3	7	262·2	+6·7	+19·6	+ 4·7
201·328 G	9	25	5	14	261·9	+6·5	+19·6	+16·7
202·363 G	7	23	4	13	259·1	+3·8	+21·1	+27·6
203·390 G	0	7	0	5	258·5	+3·4	+22·8	+40·6
204·126 K	2	11	2	9	257·3	+2·3	+23·5	+49·2
Means ...	...	...	3	10	261·9	...	+20·7	...

No. **1161.** Latitude +13°·4.
Group 11965 in Rotation 1107.
,, 11980 ,, ,, 1108.

Group 11965. July 1–5. A smallish stream of normal type, *a* being a regular spot as the leader.

182·465 G	2	9	1	5	155·0	0·0	+14·1	+20·2
183·443 C	33	192	20	118	156·2	+1·2	+14·4	+34·4
184·402 C	60	290	46	226	158·0	+2·9	+14·4	+48·9
185·397 C	38	229	42	254	158·6	+3·5	+14·2	+62·6
186·370 G	19	99	40	215	159·1	+3·9	+13·8	+76·0
Means ...	...	...	30	164	157·4	...	+14·2	...

Spot *a*.

183·443 C	13	67	8	42	158·7	0·0	+13·7	+36·9
184·402 C	38	210	30	168	159·8	+1·1	+14·1	+50·8
185·397 C	25	158	29	185	160·8	+2·0	+13·7	+64·8
186·370 G	14	83	32	191	161·0	+2·3	+13·3	+77·9

Group 11980. July 20–30. A regular spot, *a* of Group 11965, dying out slowly. A small spot appears near its place on July 30.

201·328 G	7	23	25	83	162·3	...	+12·2	−82·9
202·363 G	14	55	20	78	161·6	+2·0	+12·2	−69·9
203·390 G	21	110	19	99	161·5	+1·8	+12·3	−56·4
204·126 K	30	122	22	89	161·2	+1·5	+12·4	−46·9
205·335 G	23	163	14	96	161·2	+1·4	+12·5	−30·9
206·352 G	23	113	12	60	161·1	+1·3	+12·6	−17·6
207·343 G	18	92	9	47	161·2	+1·3	+12·3	− 4·4
208·363 G	18	78	9	40	161·1	+1·2	+12·4	+ 9·0
209·380 C	9	22	5	12	161·0	+1·0	+12·6	+22·4
210·473 G	5	9	3	6	161·0	+0·9	+12·5	+36·8
211·334 G	0	5	0	4	159·0	−1·1	+15·1	+46·2
Means ...	...	...	11	53	161·0	...	+12·7	...

No. **1162.** Latitude +21°·2.
Group 11970 in Rotation 1108.
,, 11990 ,, ,, 1109.

Group 11970. July 8–20. A large stream developing at first in the usual manner with *a* and *b* as the leader and follower respectively. On July 14–15, other spots appear, however, near *a*, one of them becoming a regular spot for a few days.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
189·417 G	11	51	35	159	321·6	...	+21·9	−81·2
190·431 C	45	274	59	355	321·9	0·0	+21·8	−67·5
191·430 C	93	511	82	454	321·9	+0·1	+21·5	−54·2
192·350 G	123	711	87	500	321·5	−0·1	+21·7	−42·5
193·378 G	138	656	81	394	321·7	+0·2	+22·0	−28·7
194·328 G	127	829	70	455	321·1	−0·2	+21·7	−16·7
195·506 C	147	968	78	508	320·6	−0·5	+22·0	− 1·6
196·548 G	189	1241	102	663	321·7	+0·7	+21·0	+13·3
197·332 G	224	1264	128	721	322·2	+1·3	+20·5	+24·2
198·495 C	138	920	93	626	322·3	+1·6	+19·9	+39·7
199·340 G	90	502	75	425	323·6	+3·0	+19·8	+52·1
200·396 G	30	179	40	236	325·6	+5·2	+19·1	+68·1
201·328 G	18	92	45	232	324·9	+4·6	+18·9	+79·7
Means ...	...	...	78	464	322·4	...	+20·8	...

Spot *a*.

189·417 G	2	14	4	32	325·2	0·0	+21·7	−77·6
190·431 C	16	134	18	154	325·4	+0·4	+20·7	−64·0
191·430 C	49	239	40	194	325·6	+0·7	+20·5	−50·5
192·350 G	42	284	28	187	326·0	+1·2	+20·7	−38·0
193·378 G	69	222	39	127	325·9	+1·3	+20·9	−24·5
194·328 G	42	254	22	135	325·7	+1·2	+20·7	−12·1
195·506 C	40	270	21	140	325·4	+1·1	+20·7	+ 3·2
196·548 G	111	578	60	312	325·3	+1·2	+19·8	+16·9
197·332 G	132	769	77	446	325·5	+1·5	+19·6	+27·5
198·495 C	89	629	62	440	325·6	+1·8	+19·0	+43·0
199·340 G	69	407	60	354	325·7	+2·0	+19·2	+54·2
200·396 G	30	179	40	236	325·6	+2·0	+19·1	+68·1
201·328 G	18	92	45	232	324·9	+1·5	+18·9	+79·7

Spot *b*.

189·417 G	9	37	31	127	320·7	...	+22·0	−82·1
190·431 C	25	118	36	172	319·5	0·0	+22·7	−69·9
191·430 C	40	250	38	240	318·4	−1·0	+22·6	−57·7
192·350 G	69	358	51	265	318·7	−0·5	+22·6	−45·3
193·378 G	60	365	37	226	318·4	−0·7	+22·9	−32·0
194·328 G	60	457	34	256	318·3	−0·6	+22·9	−19·5
195·506 C	67	477	36	253	317·4	−1·3	+23·3	− 4·8
196·548 G	60	321	32	170	316·2	−2·4	+23·7	+ 7·8
197·332 G	39	215	21	118	315·5	−3·0	+23·9	+17·5
198·495 C	27	103	17	64	314·6	−3·7	+24·7	+32·0
199·340 G	9	35	6	25	314·3	−3·9	+23·7	+42·8

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued*.

No. **1162**.—*continued*.

Group 11990. Aug. 4–15. A spot of moderate size (perhaps *a* of Group 11970) followed by a few small companions in an extensive area of faculæ. Part of this spot breaks away between Aug. 7 and 8 and separates widely from the original nucleus.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
216·425 G	23	55	75	180	322·6	...	+21·8	−82·9
217·335 G	34	152	52	230	322·0	+1·0	+21·7	−71·4
218·352 G	53	283	57	280	320·5	−0·3	+22·0	−59·5
219·438 C	75	359	53	253	322·6	+1·9	+21·9	−43·0
220·402 G	77	376	47	225	322·6	+2·1	+21·8	−30·3
221·409 G	87	373	47	203	322·2	+1·8	+21·1	−17·4
222·403 G	71	319	37	166	323·5	+3·3	+21·5	− 2·9
223·397 C	55	262	29	139	323·2	+3·1	+21·6	+ 9·9
224·115 K	38	187	21	103	323·2	+3·2	+21·5	+19·4
225·385 C	22	92	14	57	322·4	+2·6	+21·8	+35·4
226·405 C	11	44	8	34	322·3	+2·6	+21·7	+48·8
227·334 G	7	18	7	19	322·4	+2·9	+21·8	+61·2
Means ...	...	...	34	155	322·4	...	+21·7	...

No. **1163**. Latitude +28°·9.
Group 11979 in Rotation 1108.
,, 12007 ,, ,, 1109.

Group 11979. July 20–31. A small spot on July 20, after which nothing is seen until July 29 when a group begins to develop near the west limb.

201·328 G	2	7	3	11	173·6	0·0	+25·0	−71·6
202·363 G	0	0	0	0	...	...	...	...
203·390 G	0	0	0	0	...	...	...	...
204·126 K	0	0	0	0	...	...	...	...
205·335 G	0	0	0	0	...	...	...	...
206·352 G	0	0	0	0	...	...	...	...
207·343 G	0	0	0	0	...	...	...	...
208·363 G	0	0	0	0	...	...	...	...
209·380 C	0	0	0	0	...	...	...	...
210·473 G	10	26	8	21	173·2	+3·4	+26·9	+49·0
211·334 G	25	69	26	72	173·7	+4·3	+28·0	+60·9
212·353 C	13	67	24	112	172·7	+3·7	+28·4	+73·4
Means ...	...	...	5	18	173·3	...	+27·1	...

Group 12007. Aug. 15–28. A group of stream type in which the leading and following components, *a* and *b* respectively, are widely separated in longitude. *a*, which is a regular spot, has following it a companion, *c*, with a double umbra. This group appears to be a revival rather than a return of Group 11979, although spot *b* occupies nearly the same position as that group, as seen on July 29–31.

227·334 G	27	191	(62	428	182·2	...	+30·2)	−79·0
228·332 G	71	376	104	544	178·4	+16·1	+30·3	−69·6
229·389 G	111	568	105	540	177·0	+15·1	+30·5	−57·1
230·488 G	100	549	73	401	178·1	+16·6	+30·6	−41·5
231·123 K	124	676	81	441	176·1	+14·9	+30·7	−35·1
232·399 G	129	646	75	372	176·3	+15·7	+31·2	−18·0
233·474 G	114	620	63	344	173·8	+13·6	+31·1	− 6·3
234·346 G	103	464	58	258	172·8	+13·0	+30·5	+ 4·2
235·364 G	91	471	52	269	170·6	+11·2	+30·2	+15·5
236·351 G	68	283	43	179	171·2	+12·2	+30·7	+29·1
237·349 G	46	200	34	153	172·7	+14·1	+30·9	+43·8
238·379 G	27	125	25	128	174·7	+16·5	+30·9	+59·4
239·360 G	14	96	19	147	172·5	+14·8	+30·7	+70·2
240·411 G	0	5	0	19	173·8	...	+30·7	+85·4
Means ...	...	...	61	315	174·5	...	+30·7	...

No. **1163**. Group 12007.—*continued*.

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
227·334 G	23	173	50	375	182·8	+20·0	+30·2	−78·4
228·332 G	41	239	50	289	182·3	+20·0	+30·4	−65·7
229·389 G	66	378	57	325	181·9	+20·0	+30·9	−52·2
230·488 G	59	331	41	228	181·3	+19·8	+31·0	−38·3
231·123 K	63	418	40	263	181·0	+19·8	+31·3	−30·2
232·399 G	64	315	36	176	180·5	+19·9	+31·3	−13·8
233·474 G	55	296	30	163	179·6	+19·4	+31·3	− 0·5
234·346 G	46	228	26	128	178·9	+19·1	+31·5	+10·3
235·364 G	46	214	27	126	178·1	+18·7	+31·4	+23·0
236·351 G	36	187	24	123	177·1	+18·1	+31·3	+35·0
237·349 G	32	164	25	130	176·6	+18·0	+31·2	+47·7
238·379 G	18	109	19	116	176·4	+18·2	+31·1	+61·1
239·360 G	9	82	15	134	175·7	+18·0	+30·8	+73·4
240·411 G	0	5	0	19	173·8	...	+30·7	+85·4

Spot *c*.

227·334 G	4	18	12	53	179·0	...	+29·6	−82·2
228·332 G	21	87	29	118	179·0	+16·7	+30·1	−69·0
229·389 G	27	82	25	75	178·6	+16·7	+30·4	−55·5
230·488 G	23	125	16	89	178·3	+16·8	+30·4	−41·3
231·123 K	35	152	22	96	178·4	+17·2	+30·8	−32·8
232·399 G	36	196	21	112	178·4	+17·8	+31·3	−15·9
233·474 G	34	176	19	97	177·5	+17·3	+31·3	− 2·6
234·346 G	25	100	14	56	177·0	+17·2	+31·4	+ 3·3
235·364 G	18	93	10	54	176·3	+16·9	+30·9	+21·2
236·351 G	9	18	6	12	175·7	+16·7	+31·5	+33·6
237 349 G	5	9	4	7	175·4	+16·8	+31·3	+46·5

Spot *b*.

228·332 G	9	50	25	137	166·4	...	+29·7	−81·6
229·389 G	14	96	19	130	165·4	+ 3·5	+29·4	−68·7
230·488 G	18	93	16	84	164·6	+ 3·1	+28·9	−55·0
231·123 K	25	106	19	82	164·1	+ 2·9	+29·0	−47·1
232·399 G	27	130	17	81	163·0	+ 2·4	+28·8	−31·3
233·474 G	25	148	14	84	161·8	+ 1·6	+28·6	−18·3
234·346 G	27	125	15	68	161·2	+ 1·4	+28·7	− 7·4
235·364 G	27	164	15	89	160·1	+ 0·7	+28·8	+ 5·0
236·351 G	23	78	13	44	159·4	+ 0·4	+28·7	+17·3
237·349 G	9	27	5	16	158·7	+ 0·1	+28·9	+29·8
238·379 G	9	16	6	12	158·2	0·0	+29·1	+42·9
239·360 G	5	14	4	13	157·6	− 0·1	+29·3	+55·3

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. 1164. Latitude +23°·2.
Group 11982 in Rotation 1108.
" 12005 } " " 1109.
" 12006 }

Group 11982. July 23–29. A medium-sized group of unstable spots.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
204·126 K	13	68	7	36	209·5	0·0	+23·6	+ 1·4
205·335 G	25	85	14	46	208·7	−0·5	+23·8	+16·6
206·352 G	34	118	21	73	209·5	+0·5	+23·3	+30·8
207·343 G	60	315	42	225	209·4	+0·6	+22·5	+43·8
208·363 G	46	221	44	206	208·8	+0·2	+22·7	+56·7
209·380 C	30	81	45	121	208·8	+0·4	+23·4	+70·2
210·473 G	9	37	27	112	206·2	...	+26·1	+82·0
Means ...	...	...	29	118	209·1	...	+23·2	...

Group 12005. Aug. 14–17. One or two small spots *np* Group 12006.

226·405 C	0	7	0	8	208·9	+4·2	+25·7	−64·6
227·334 G	0	0	0	0	...	...	...	...
228·332 G	5	9	3	6	209·8	+5·5	+23·8	−38·2
229·389 G	5	11	3	6	210·8	+6·7	+20·8	−23·3
Means ...	...	...	2	5	209·8	...	+23·4	...

Group 12006. Aug. 14–25. A stream of changing spots.

226·405 C	0	4	0	5	204·8	+0·1	+21·5	−68·7
227·334 G	11	32	9	28	206·6	+2·1	+21·2	−54·6
228·332 G	46	146	31	100	206·2	+1·9	+21·5	−41·8
229·389 G	37	182	21	105	207·6	+3·5	+21·7	−26·5
230·488 G	48	202	26	106	208·7	+4·8	+21·9	−10·9
231·123 K	40	376	21	196	208·8	+5·1	+22·3	− 2·4
232·399 G	104	501	56	269	208·5	+5·0	+21·7	+14·2
233·474 G	102	435	60	253	208·4	+5·2	+22·0	+28·3
234·346 G	89	318	58	208	207·5	+4·5	+21·5	+38·9
235·364 G	50	249	42	206	207·9	+5·1	+21·6	+52·8
236·351 G	26	150	30	168	206·1	+3·5	+21·9	+64·0
237·349 G	5	16	11	30	205·0	+2·6	+21·5	+76·1
Means ...	...	...	30	140	207·2	...	+21·7	...

No. 1165. Latitude +26°·9.
Group 11985 in Rotation 1108.
" 12012 " " 1109.

Group 11985. July 27–Aug. 6. A stream in which the leader, *a*, is a double spot, the two components combining on Aug. 2.

208·363 G	2	9	2	8	97·5	0·0	+25·3	−54·6
209·380 C	13	29	9	20	97·4	+0·2	+25·5	−41·2
210·473 G	21	78	12	48	94·9	−1·9	+26·0	−29·3
211·334 G	78	417	43	232	96·0	−0·5	+26·1	−16·8
212·353 C	175	853	94	457	94·6	−1·5	+26·2	− 4·7
213·435 G	179	859	97	466	95·2	−0·6	+26·1	+10·2
214·426 C	129	678	75	396	94·9	−0·5	+26·0	+23·0
215·361 C	89	488	58	318	95·3	+0·2	+26·0	+35·8
216·425 G	78	355	63	286	94·7	0·0	+26·0	+49·2
217·335 G	60	288	64	303	94·5	+0·1	+26·2	+61·1
218·352 G	18	115	34	223	96·0	+1·9	+26·1	+76·0
Means ...	...	...	50	251	95·6	...	+26·0	...

No. 1165. Group 11985.—*continued.*

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
210·473 G	12	41	7	25	95·6	0·0	+25·3	−28·6
211·334 G	55	284	30	156	97·1	+1·8	+25·7	−15·7
212·353 C	62	268	33	142	96·7	+1·7	+25·3	− 2·6
213·435 G	115	552	62	300	97·5	+2·9	+25·5	+12·5
214·426 C	71	440	42	260	97·7	+3·5	+25·5	+25·8
215·361 C	67	386	44	255	97·2	+3·3	+25·7	+37·7
216·425 G	55	268	46	222	97·0	+3·4	+25·9	+51·5
217·335 G	37	174	41	195	96·8	+3·5	+25·9	+63·4
218·352 G	16	110	31	216	96·6	+3·7	+26·0	+76·6

Group 12012. Aug. 22–31. A small regular spot (probably *a* of Group 11985) with a train of companions after Aug. 27.

234·346 G	9	34	23	86	87·7	...	+27·8	−80·9
235·364 G	11	73	14	93	87·4	+0·3	+27·8	−67·7
236·351 G	16	78	15	71	86·4	−0·3	+27·6	−55·7
237·349 G	14	75	10	54	85·5	−0·9	+27·9	−43·4
238·379 G	18	55	11	34	84·9	−1·1	+28·0	−30·4
239·360 G	23	59	13	33	84·4	−1·3	+27·7	−17·9
240·411 G	18	64	10	35	83·1	−2·3	+27·8	− 5·3
241·356 G	23	52	12	28	82·8	−2·2	+27·8	+ 6·8
242·379 G	23	68	13	39	83·8	−0·9	+28·1	+21·4
243·333 G	18	91	12	58	83·3	−1·1	+28·8	+33·5
Means ...	...	...	12	49	84·6	...	+27·9	...

No. 1165.* Latitude −25°·6.
Group 11986 in Rotation 1108.
" 12016 " " 1109.

Group 11986. July 28–Aug. 8. A stream in which the leader, *a*, tends to composite structure and is the predominating component.

209·380 C	31	97	(61	190	68·1	...	−26·1)	−70·5
210·473 G	94	443	110	520	65·2	0·0	−25·7	−59·0
211·334 G	93	407	80	352	66·5	+1·6	−25·6	−46·3
212·353 C	103	571	75	405	65·5	+0·9	−25·5	−33·8
213·435 G	121	528	77	330	66·0	+1·7	−25·4	−19·0
214·426 C	64	428	38	254	64·3	+0·3	−25·4	− 7·6
215·361 C	76	420	44	248	64·6	+0·8	−25·6	+ 5·1
216·425 G	64	343	40	215	64·3	+0·9	−25·2	+18·8
217·335 G	49	289	34	200	64·6	+1·4	−25·7	+31·2
218·352 G	32	187	27	157	65·0	+2·1	−26·2	+45·0
219·438 C	9	107	11	129	64·9	+2·3	−25·3	+59·3
220·402 G	9	32	19	67	64·4	+2·1	−25·4	+71·5
Means ...	...	...	50	271	65·0	...	−25·6	...

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1165.*** Group 11986.—*continued.*

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
209·380 C	31	97	61	190	68·1	0·0	−26·1	−70·5
210·473 G	74	354	83	396	67·4	−0·4	−25·9	−56·8
211·334 G	73	302	62	257	67·2	−0·3	−25·3	−45·6
212·353 C	74	495	52	346	67·4	+0·2	−25·4	−31·9
213·435 G	82	447	51	277	67·3	+0·4	−25·2	−17·7
214·426 C	44	357	26	211	66·6	0·0	−25·6	− 5·3
215·361 C	60	384	35	227	65·6	−0·7	−25·7	+ 6·1
216·425 G	55	311	35	196	65·6	−0·4	−25·3	+20·1
217·335 G	44	266	31	186	65·6	−0·1	−25·6	+32·2
218·352 G	27	169	23	144	65·3	−0·2	−25·4	+45·3
219·438 C	9	107	11	129	64·9	−0·2	−25·3	+59·3
220·402 G	9	32	19	67	64·4	−0·4	−25·4	+71·5

Group 12016. Aug. 25–Sept. 6. A regular spot near which other spots grow rapidly and coalesce to form a large composite spot by Aug. 29; two small subsidiary streams form in the wake of this large spot, but the whole disturbance decreases rapidly after Aug. 31. Perhaps a revival only and not an actual return of Group 11986.

237·349 G	30	196	60	399	58·3	+1·0	−25·6	−70·6
238·379 G	57	274	66	318	58·3	+1·3	−25·7	−57·0
239·360 G	87	445	74	382	57·9	+1·2	−25·7	−44·4
240·411 G	128	1112	89	769	58·5	+2·1	−25·6	−29·9
241·356 G	219	1580	137	984	57·9	+1·8	−25·3	−18·1
242·379 G	196	1512	116	894	58·1	+2·3	−25·0	− 4·3
243·333 G	248	1583	149	948	55·5	0·0	−25·7	+ 5·7
244·571 G	167	990	107	642	55·7	+0·6	−25·7	+22·2
245·337 G	125	717	89	509	55·4	+0·5	−25·8	+32·0
246·355 C	75	506	64	435	54·4	−0·2	−25·9	+44·5
247·511 G	59	322	73	399	53·8	−0·5	−25·9	+59·2
248·368 G	41	286	79	552	52·8	−1·2	−25·9	+69·5
249·389 G	5	14	(30	85	50·7	...	−27·2)	+80·9
Means ...	...	...	92	603	50·6	...	−25·6	...

No. **1166.** Latitude −20°·6.
Group 11989 in Rotation 1108.
,, 12013 ,, ,, 1109.

Group 11989. Aug. 3–6. A small group (preceding Group 11987) developing near the west limb.

215·361 C	11	31	6	18	75·7	0·0	−19·7	+16·2
216·425 G	21	105	14	69	78·1	+2·5	−19·7	+32·6
217·335 G	18	87	14	70	78·4	+3·0	−19·6	+45·0
218·352 G	23	121	26	136	78·9	+3·6	−19·6	+58·9
Means ...	...	...	15	73	77·8	...	−19·6	...

No. **1166.**—*continued.*

Group 12013. Aug. 23–Sept. 3. A regular spot diminishing rather rapidly after Aug. 29. There are one or two tiny companions on Aug. 25 and 29.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
235·364 G	9	48	30	157	77·4	+4·3	−21·0	−77·7
236·351 G	18	71	26	103	77·0	+4·1	−21·3	−65·1
237·349 G	32	130	32	126	76·8	+4·0	−21·4	−52·1
238·379 G	32	207	23	151	77·1	+4·4	−21·5	−38·2
239·360 G	36	223	23	140	76·9	+4·4	−21·3	−25·4
240·411 G	50	287	29	166	76·3	+3·9	−21·6	−12·1
241·356 G	29	199	16	114	76·2	+3·9	−21·2	+ 0·2
242·379 G	27	137	16	81	75·9	+3·8	−21·3	+13·5
243·333 G	23	91	15	58	75·3	+3·3	−21·5	+25·5
244·571 G	14	70	11	55	75·2	+3·4	−21·7	+41·7
245·337 G	9	23	9	22	74·8	+3·1	−21·8	+51·4
246·355 C	7	18	10	26	74·3	+2·7	−22·0	+64·4
Means ...	...	...	20	100	76·1	...	−21·5	...

No. **1167.** Latitude −14°·0.
Group 12024 in Rotation 1110.
,, 12059 ,, ,, 1111.

Group 12024. Sept. 2–14. A stream consisting at first of a regular spot, *a*, followed by companions; the nearer of these increases in size and drifts towards *a*, being absorbed by it, partially on Sept. 8 and completely on Sept. 9. On Sept. 9, a stream of small spots appears, following in longitude, and this develops into an independent group of bipolar type.

245·337 G	5	11	12	31	307·5	0·0	−17·6	−75·9
246·355 C	33	132	39	156	309·1	+1·6	−17·4	−60·8
247·511 G	45	189	36	148	310·1	+2·5	−17·1	−44·5
248·368 G	64	303	43	201	309·7	+2·1	−16·7	−33·6
249·389 G	64	377	39	221	309·6	+1·9	−16·7	−20·2
250·365 G	104	407	57	224	309·3	+1·6	−16·6	− 7·7
251·335 G	73	359	40	198	310·0	+2·3	−16·5	+ 5·9
252·517 G	88	420	51	243	307·8	0·0	−16·2	+19·3
253·653 G	150	755	96	489	304·2	−3·6	−14·7	+30·7
254·358 G	122	767	87	550	303·5	−4·3	−14·6	+39·3
255·106 K	117	750	99	631	303·1	−4·8	−14·8	+48·7
256·447 G	68	527	99	724	301·7	−6·2	−14·7	+65·0
257·337 G	29	235	63	510	299·1	−8·9	−14·1	+74·2
Means ...	...	...	59	333	306·5	...	−16·0	...

Spot *a*.

245·337 G	5	9	12	21	308·8	0·0	−17·6	−74·6
246·355 C	24	101	27	114	310·5	+1·7	−17·4	−59·4
247·511 G	36	166	28	128	310·8	+1·9	−17·3	−43·8
248·368 G	36	232	23	151	311·1	+2·2	−16·9	−32·2
249·389 G	32	225	19	130	311·1	+2·1	−16·8	−18·7
250·365 G	68	244	37	134	311·2	+2·2	−16·5	− 5·8
251·335 G	68	323	37	178	310·5	+1·5	−16·4	+ 6·4
252·517 G	54	294	32	173	310·8	+1·7	−16·5	+22·3
253·653 G	54	303	38	212	311·1	+2·0	−16·2	+37·6
254·358 G	45	249	36	202	311·0	+2·0	−16·2	+46·8
255·106 K	33	173	34	178	311·2	+2·0	−16·1	+56·8
256·447 G	14	61	30	132	310·6	+1·4	−15·9	+73·9

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1167.**—*continued.*

Group 12059. Sept. 30–Oct. 10. A single spot, not seen on Oct. 2, with an occasional companion.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.	Latitude.	Long. from C.M.
d					°	°	°
273·424 G	4	13	7	23	301·2	−7·4	−12·7	−71·4
274·392 C	4	13	4	14	301·0	−7·6	−12·2	−58·8
275·505 G	0	0	0	0	...	...	...	...
276·361 G	9	18	6	11	301·4	−7·3	−11·9	−32·4
277·405 G	9	16	5	9	301·4	−7·3	−11·9	−18·6
278·527 G	9	22	5	12	302·1	−6·7	−12·2	− 3·1
279·396 G	9	20	5	11	301·3	−7·5	−11·3	+ 7·5
280·380 G	4	9	2	5	301·7	−7·1	−11·6	+20·9
281·529 G	4	9	3	6	301·4	−7·5	−11·8	+35·8
282·397 G	7	18	6	15	302·6	−6·3	−13·4	+48·4
283·420 G	9	27	10	29	301·2	−7·7	−11·2	+60·5
Means ...	...	...	5	12	301·5	...	−12·0	...

No. **1168.** Latitude +8°·2.
Group 12026 in Rotation 1110.
,, 12053 ,, ,, 1111.

Group 12026. Sept. 3–12. A stream of spots which are generally unstable until a regular spot, *a*, forms as the leader after Sept. 7.

246·355 C	2	9	1	7	322·1	0·0	+ 9·1	−47·8
247·511 G	0	0	0	0	...	...	...	...
248·368 G	30	70	16	37	323·3	+0·9	+ 9·7	−20·0
249·389 G	61	261	30	130	323·6	+1·1	+ 9·6	− 6·2
250·365 G	68	352	34	178	323·5	+0·9	+ 9·2	+ 6·5
251·335 G	86	361	46	193	324·3	+1·5	+ 9·0	+20·2
252·517 G	113	382	73	243	326·8	+3·9	+ 8·7	+38·3
253·653 G	108	499	91	421	327·3	+4·2	+ 9·0	+53·8
254·358 G	78	423	86	476	327·8	+4·6	+ 8·9	+63·6
255·106 K	49	232	86	414	327·8	+4·5	+ 9·0	+73·4
Means ...	...	...	51	233	325·8	...	+ 9·2	...

Spot *a*.

251·335 G	27	140	15	77	328·1	0·0	+ 8·6	+24·0
252·517 G	77	224	51	148	329·6	+1·3	+ 8·4	+41·1
253·653 G	61	282	55	254	330·4	+2·0	+ 8·3	+56·9
254·358 G	50	294	60	356	330·6	+2·1	+ 8·3	+66·4
255·106 K	36	178	69	344	330·2	+1·6	+ 8·3	+75·8

Group 12053. Sept. 27–Oct. 6. A regular spot (*a* of Group 12026) breaking into two parts on Sept. 29, the northern component persisting for several days.

270·679 G	13	81	29	182	331·0	+0·3	+ 7·0	−77·8
271·383 G	22	94	29	122	331·5	+0·7	+ 7·1	−68·0
272·366 G	22	94	19	81	331·5	+0·5	+ 7·1	−55·0
273·424 G	27	103	18	68	331·5	+0·4	+ 6·9	−41·1
274·392 C	13	69	7	39	331·2	−0·1	+ 7·1	−28·6
275·505 G	18	76	9	40	331·1	−0·3	+ 7·2	−14·0
276·361 G	18	42	9	21	331·2	−0·3	+ 7·6	− 2·6
277·405 G	11	31	6	16	331·6	−0·1	+ 7·8	+11·6
278·527 G	9	22	4	12	331·0	−0·8	+ 7·6	+25·8
279·396 G	2	9	1	6	331·1	−0·8	+ 7·7	+37·3
Means ...	...	...	13	59	331·3	...	+ 7·3	...

No. **1169.** Latitude +16°·9.
Group 12027 in Rotation 1109.
,, 12046 ,, ,, 1110.

Group 12027. Sept. 5–6. One or two very small spots.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.	Latitude.	Long. from C.M.
d					°	°	°
248·368 G	0	9	0	9	43·2	0·0	+17·4	+59·9
249·389 G	7	16	12	27	44·2	+1·0	+17·5	+74·4
Means ...	...	...	6	18	43·7	...	+17·4	...

Group 12046. Sept. 22–24. A small definite spot.

265·445 G	7	18	11	28	45·3	+2·6	+16·5	−72·6
266·518 G	9	20	8	19	45·7	+3·0	+16·4	−58·0
267·505 G	4	9	3	6	45·7	+3·1	+16·4	−45·0
Means ...	...	...	7	18	45·6	...	+16·4	...

No. **1170.** Latitude +19°·1.
Group 12060 in Rotation 1111.
,, 12084 ,, ,, 1112.

Group 12060. Sept. 30–Oct. 12. An extensive area of faculæ (apparently marking a previous sunspot disturbance) in which a very large stream of spots develops. The leader spot, *a*, is the largest single component, although there is a considerable cluster of unstable spots in the rear of the stream.

273·424 G	45	208	97	450	295·8	0·0	+19·0	−76·8
274·392 C	41	301	47	346	295·1	−0·6	+19·1	−64·7
275·505 G	94	567	73	446	294·9	−0·7	+19·4	−50·2
276·361 G	153	831	99	541	296·1	+0·6	+19·9	−37·7
277·405 G	195	1239	109	697	295·9	+0·5	+19·9	−24·1
278·527 G	274	1570	142	815	295·7	+0·3	+19·3	− 9·5
279·396 G	338	1844	173	948	295·7	+0·4	+19·3	+ 1·9
280·380 G	336	1659	178	882	297·3	+2·1	+18·7	+16·5
281·529 G	191	1190	116	723	296·3	+1·2	+19·6	+30·7
282·397 G	178	926	125	662	298·8	+3·8	+18·8	+44·6
283·420 G	124	687	120	656	298·8	+3·9	+19·1	+58·1
284·406 G	91	615	137	893	297·5	+2·7	+19·5	+69·8
285·617 G	16	138	(44	378	292·7	...	+22·0)	+81·0
Means ...	...	...	118	672	296·5	...	+19·3	...

Spot *a*.

274·392 C	24	159	24	157	299·5	0·0	+17·9	−60·3
275·505 G	54	317	39	231	298·3	−1·1	+18·7	−46·8
276·361 G	91	508	56	315	298·9	−0·4	+18·8	−34·9
277·405 G	112	624	60	337	299·8	+0·6	+18·7	−20·2
278·527 G	138	687	70	350	300·2	+1·1	+18·5	− 5·0
279·396 G	147	759	75	387	300·5	+1·4	+18·4	+ 6·7
280·380 G	160	799	86	431	301·1	+2·1	+18·4	+20·3
281·529 G	111	724	70	456	301·6	+2·7	+18·2	+36·0
282·397 G	93	617	69	457	301·6	+2·8	+18·1	+47·4
283·420 G	89	462	90	467	301·7	+3·0	+18·7	+61·0
284·406 G	62	351	102	576	301·0	+2·4	+18·4	+73·3

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. 1170.—*continued.*

Group 12084. Oct. 27–Nov. 6. A large spot (perhaps *a* of Group 12060), with double umbra, that eventually divides into three parts between Nov. 1 and 2 and so disappears. There is an apparent rotation of the spot in a counter-clockwise direction. Two or three companions precede the main spot from Oct. 28 to Nov. 1.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
300·585 G	53	256	87	420	301·5	+4·3	+19·2	−72·8
301·401 C	54	435	57	464	301·7	+4·6	+19·4	−61·8
302·405 C	94	622	73	476	301·6	+4·6	+19·1	−48·7
303·602 G	114	526	71	324	301·4	+4·5	+18·5	−33·1
304·358 C	89	629	50	358	300·7	+3·8	+19·1	−23·8
305·426 G	110	671	57	348	300·4	+3·6	+18·5	−10·0
306·392 C	38	397	20	206	300·5	+3·8	+18·9	+ 2·8
307·481 C	36	143	19	77	300·2	+3·6	+18·7	+16·8
308·438 C	15	63	9	37	300·2	+3·7	+18·9	+29·5
309·554 G	4	13	3	9	301·3	+4·9	+18·4	+45·3
310·454 G	2	9	2	8	301·0	+4·7	+18·7	+56·9
Means ...	...	...	41	248	301·0	...	+18·9	...

No. 1171. Latitude −11°·5.
Group 12063 in Rotation 1111.
„ 12091 „ „ 1112.
„ 12120 „ „ 1113.

Group 12063. Oct. 5–17. A large stable regular spot. There are bright "bridges" across the umbra from Oct. 6 to 11 and from Oct. 15 to 17.

278·527 G	18	78	96	415	222·2	...	−13·1	−83·0
279·396 G	40	262	68	445	223·1	0·0	−12·8	−70·7
280·380 G	71	400	72	404	223·1	−0·1	−12·8	−57·7
281·529 G	111	553	81	404	223·1	−0·2	−12·9	−42·5
282·397 G	102	613	63	380	223·5	+0·1	−13·1	−30·7
283·420 G	115	644	63	354	223·5	0·0	−13·0	−17·2
284·406 G	107	630	57	334	223·9	+0·4	−13·5	− 3·8
285·617 G	124	635	67	343	224·1	+0·5	−13·4	+12·4
286·395 G	93	564	54	327	224·0	+0·3	−13·4	+22·6
287·393 C	88	484	57	315	223·7	−0·1	−13·2	+35·4
288·433 G	88	378	72	310	224·0	+0·1	−13·4	+49·5
289·445 G	44	272	53	326	224·2	+0·2	−13·4	+63·0
290·395 C	26	167	57	369	223·9	−0·2	−12·8	+75·2
Means ...	...	...	64	359	223·7	...	−13·1	...

Group 12091. Nov. 2–13. A stable regular spot with a satellite cluster on Nov. 8.

306·392 C	17	87	28	143	226·7	+1·3	−11·1	−71·0
307·481 C	30	160	28	152	226·6	+1·1	−10·9	−56·8
308·438 C	46	224	33	161	226·6	+1·0	−10·6	−44·1
309·554 G	44	243	26	143	226·5	+0·8	−10·7	−29·5
310·454 G	53	247	29	133	226·8	+1·0	−10·7	−17·3
311·407 G	61	304	32	158	227·2	+1·3	−10·9	− 4·4
312·443 G	54	256	28	133	226·9	+0·9	−11·0	+ 9·0
313·432 G	35	237	20	133	227·5	+1·4	−11·0	+22·6
314·435 G	35	210	22	134	227·6	+1·4	−11·1	+35·9
315·121 K	32	171	23	125	227·3	+1·1	−11·2	+44·7
316·419 C	17	109	18	118	226·5	+0·2	−11·2	+61·0
317·570 G	13	53	30	122	226·9	+0·5	−11·4	+76·6
Means ...	...	...	26	130	226·9	...	−11·0	...

No. 1171.—*continued.*

Group 12120. Nov. 29–Dec. 4. A small definite spot with a faint companion on Dec. 2.

d					°	°	°	°
333·350 C	4	13	7	24	228·5	+0·7	−10·5	−73·8
334·098 K	6	16	7	19	228·5	+0·6	−10·3	−64·0
335·463 G	7	15	5	11	228·5	+0·5	−10·3	−46·0
336·480 C	8	21	5	13	228·0	−0·1	−10·4	−33·1
337·505 G	7	11	4	6	228·6	+0·4	−10·1	−19·0
338·423 G	4	9	2	5	228·7	+0·5	− 9·9	− 6·8
Means ...	...	...	5	13	228·5	...	−10·2	...

No. 1172. Latitude −14°·8.
Group 12087 in Rotation 1112.
„ 12111 „ „ 1113.

Group 12087. Oct. 29–Nov. 9. A stream in which the leader and follower spots are replaced by clusters or partially-formed spots. On Nov. 6, a fresh disturbance takes place at the head of the group, and this results in a new stream led by a regular spot.

302·405 C	4	34	(10	88	273·1	...	−13·9)	−77·2
303·602 G	40	202	55	275	268·9	0·0	−14·8	−65·6
304·358 C	34	233	32	221	269·1	+0·2	−14·7	−55·4
305·426 G	68	388	49	276	269·4	+0·5	−15·0	−41·0
306·392 C	69	445	41	267	270·6	+1·6	−14·7	−27·1
307·481 C	61	350	33	194	268·5	−0·5	−15·7	−14·9
308·438 C	45	262	24	141	268·1	−0·9	−16·1	− 2·6
309·554 G	53	230	29	125	269·2	+0·2	−15·5	+13·2
310·454 G	110	622	67	379	273·7	+4·7	−14·6	+29·6
311·407 G	70	534	53	398	275·5	+6·4	−14·4	+43·9
312·443 G	57	328	60	349	277·4	+8·3	−14·2	+59·5
313·432 G	20	101	39	206	278·5	+9·4	−14·1	+73·6
Means ...	...	...	44	257	271·7	...	−14·9	...

Group 12111. Nov. 26–Dec. 6. A small unstable stream immediately preceding the large group, No. 12112.

330·431 C	13	46	18	63	273·4	+4·0	−14·2	−67·4
331·556 G	39	148	35	132	272·0	+2·5	−14·5	−54·0
332·415 G	72	434	52	313	271·5	+2·0	−14·7	−43·2
333·350 C	61	355	36	215	272·5	+3·0	−15·1	−29·8
334·098 K	77	380	42	209	272·8	+3·3	−14·9	−19·7
335·463 G	55	237	28	123	273·6	+4·1	−14·9	− 0·9
336·480 C	46	178	24	94	270·8	+1·2	−15·4	+ 9·7
337·505 G	28	161	16	93	273·7	+4·1	−15·1	+26·1
338·423 G	17	111	11	72	272·7	+3·1	−15·2	+37·2
339·505 G	2	9	2	8	274·3	+4·7	−13·9	+53·1
340·347 C	4	13	4	14	271·3	+1·7	−13·4	+61·2
Means ...	...	...	24	121	272·6	...	−14·7	...

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1173.** Latitude +14°·0.
Group 12095 in Group 1112.
" 12125 " " 1113.

Group 12095. Nov. 4–16. A wide pair of regular spots, *a* and *b*. A part of the northern section of *a* breaks away on Nov. 14.

Date U.T. Place.	Projected Area Whole Umbræ	Projected Area Spots.	Corrected Area Whole Umbræ	Corrected Area Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
308·438 C	8	46	(31	176	187·4	...	+14·7)	−83·3
309·554 G	56	254	103	424	182·5	0·0	+14·8	−73·5
310·454 G	75	471	79	499	182·5	0·0	+15·0	−61·6
311·407 G	103	600	78	460	183·3	+0·7	+14·8	−48·3
312·443 G	143	784	88	486	183·7	+1·1	+14·6	−34·2
313·432 G	142	817	77	445	183·9	+1·3	+14·4	−21·0
314·435 G	149	837	77	430	183·7	+1·0	+14·2	− 8·0
315·121 K	158	763	80	389	184·0	+1·3	+14·1	+ 1·4
316·419 C	101	674	55	366	184·2	+1·4	+14·1	+18·7
317·570 G	111	611	68	376	184·5	+1·7	+14·0	+34·2
318·456 G	76	406	55	296	184·4	+1·6	+13·4	+45·7
319·442 G	29	229	29	233	185·2	+2·3	+12·9	+59·5
320·395 C	10	59	15	87	183·5	+0·6	+13·0	+70·4
Means ...	...	...	72	400	183·8	...	+14·2	...

Spot *a*.

308·438 C	8	46	31	176	187·4	...	+14·7	−83·3
309·554 G	28	180	39	254	186·4	0·0	+14·4	−69·6
310·454 G	44	261	41	243	186·6	+0·2	+14·5	−57·5
311·407 G	66	342	47	243	186·7	+0·2	+14·3	−44·9
312·443 G	88	451	52	266	186·7	+0·2	+14·2	−31·2
313·432 G	85	497	45	263	186·8	+0·3	+14·1	−18·1
314·435 G	96	526	49	268	186·8	+0·2	+13·8	− 4·9
315·121 K	97	471	49	240	186·9	+0·3	+13·7	+ 4·3
316·419 C	67	447	37	246	186·9	+0·2	+13·7	+21·4
317·570 G	70	383	44	241	187·3	+0·6	+13·4	+37·0
318·456 G	46	262	35	199	187·4	+0·7	+12·9	+48·7
319·442 G	20	170	21	182	187·9	+1·1	+12·6	+62·2

Spot *b*.

309·554 G	28	74	64	170	178·0	0·0	+15·0	−78·0
310·454 G	31	210	31	256	178·2	+0·2	+15·2	−65·9
311·407 G	37	258	31	217	178·5	+0·4	+15·2	−53·1
312·443 G	55	333	36	220	178·6	+0·5	+15·1	−39·3
313·432 G	57	320	32	182	178·7	+0·6	+14·7	−26·2
314·435 G	53	311	28	162	178·8	+0·6	+14·7	−12·9
315·121 K	61	292	31	149	178·8	+0·6	+14·7	− 3·8
316·419 C	34	227	18	120	179·1	+0·8	+14·8	+13·6
317·570 G	33	206	19	122	179·7	+1·4	+14·9	+ 29·4
318·456 G	26	131	17	88	179·7	+1·4	+14·4	+41·0
319·442 G	9	59	8	51	179·8	+1·4	+14·0	+54·1

No. **1173.**—*continued.*

Group 12125. Dec. 1–11. A partially-formed regular spot with a small distant follower on Dec. 5. Its identity with *a* of Group 12095 is uncertain, but not improbable in view of the movement of the spot in longitude during the present transit of the disk.

Date U.T. Place.	Projected Area Whole Umbræ	Projected Area Spots.	Corrected Area Whole Umbræ	Corrected Area Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
335·463 G	7	22	20	64	194·5	...	+14·3	−80·0
336·480 C	13	84	16	104	195·5	+ 8·1	+14·2	−65·6
337·505 G	26	104	22	86	195·6	+ 8·1	+13·8	−52·0
338·423 G	30	114	20	75	196·8	+ 9·3	+13·7	−38·7
339·505 G	30	135	17	76	196·7	+ 9·2	+13·7	−24·5
340·347 C	23	119	12	63	197·9	+10·3	+13·5	−12·2
341·470 G	22	87	11	45	198·2	+10·6	+13·8	+ 2·9
342·111 K	8	28	4	15	198·6	+11·0	+13·3	+11·7
343·108 K	8	36	5	21	198·8	+11·1	+13·7	+25·0
344·392 C	8	59	6	41	199·3	+11·6	+13·8	+42·5
345·537 G	4	13	4	13	200·2	+12·5	+13·9	+58·5
Means ...	...	...	12	54	197·8	...	+13·7	...

No. **1174.** Latitude +10°·1.
Group 12098 in Rotation 1112.
" 12127 " " 1113.

Group 12098. Nov. 5–17. A stable regular spot with two small companions on Nov. 11 and 13.

309·554 G	2	26	11	138	170·8	...	+ 9·1	−85·2
310·454 G	26	122	46	218	169·9	0·0	+ 9·3	−74·2
311·407 G	39	162	41	168	170·2	+0·2	+ 9·4	−61·4
312·443 G	35	267	26	198	170·2	+0·1	+ 9·7	−47·7
313·432 G	46	272	28	166	170·3	+0·1	+10·0	−34·6
314·435 G	53	298	29	161	170·8	+0·5	+10·0	−20·9
315·121 K	55	339	28	173	170·7	+0·3	+10·0	−11·9
316·419 C	34	256	17	131	171·5	+0·9	+10·2	+ 6·0
317·570 G	55	281	30	152	171·6	+0·9	+10·3	+21·3
318·456 G	44	231	26	139	171·9	+1·1	+10·5	+33·2
319·442 G	28	190	20	139	172·0	+1·1	+10·7	+46·3
320·395 C	21	120	20	115	171·7	+0·7	+11·0	+58·6
321·405 C	13	67	21	108	171·9	+0·8	+10·5	+72·1
Means ...	...	...	28	156	171·1	...	+10·1	...

Group 12127. Dec. 3–9. A small but definite spot.

337·505 G	4	13	6	21	176·0	+3·1	+10·3	−71·6
338·423 G	7	22	7	22	176·3	+3·3	+10·3	−59·2
339·505 G	9	22	6	16	176·7	+3·6	+10·2	−44·5
340·347 C	10	21	6	13	176·7	+3·5	+10·1	−33·4
341·470 G	9	21	5	11	176·2	+2·9	+10·0	−19·1
342·111 K	4	12	2	6	176·9	+3·5	+ 9·7	−10·0
343·108 K	4	8	2	4	177·1	+3·6	+ 9·6	+ 3·3
Means ...	...	...	5	13	176·6	...	+10·0	...

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. 1175. Latitude +20°·8.
Group 12102 in Rotation 1112.
" 12124 " " 1113.

Group 12102. Nov. 9–16. A small group developing in front of Group 12097. Fresh activity is shown on Nov. 15.

Date U.T. Place.	Projected Area Whole Umbræ	Projected Area Spots.	Corrected Area Whole Umbræ	Corrected Area Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
313·432 G	18	88	10	48	190·5	0·0	+21·9	−14·4
314·435 G	7	22	4	12	190·3	−0·1	+21·9	− 1·4
315·121 K	0	0	0	0	...	...	...	...
316·419 C	0	0	0	0	...	...	...	...
317·570 G	9	20	6	14	191·7	+1·8	+18·5	+41·4
318·456 G	4	4	3	3	192·2	+2·4	+18·6	+53·5
319·442 G	20	81	28	110	193·4	+3·7	+19·2	+67·7
320·395 C	8	46	23	130	193·1	...	+18·8	+80·0
Means ...	...	...	9	40	191·9	...	+19·8	...

Group 12124. Dec. 1–13. A pair of regular spots, 3° apart in latitude, usually with a few faint companions.

335·463 G	16	113	48	335	194·9	+7·4	+21·2	−79·6
336·480 C	46	293	60	387	194·9	+7·6	+21·5	−66·2
337·505 G	54	434	48	388	194·6	+7·4	+21·3	−53·0
338·423 G	71	434	51	310	194·4	+7·4	+21·8	−41·1
339·505 G	84	506	50	305	194·2	+7·3	+22·0	−27·0
340·347 C	81	519	45	292	194·2	+7·4	+21·8	−15·9
341·470 G	126	596	68	318	193·7	+7·1	+21·5	− 1·6
342·111 K	88	543	48	296	193·8	+7·3	+21·7	+ 6·9
343·108 K	78	446	45	257	193·5	+7·1	+21·8	+19·7
344·392 C	58	340	39	228	192·7	+6·5	+21·9	+35·9
345·537 G	52	258	44	222	192·3	+6·2	+22·0	+50·6
346·247 K	24	110	26	120	192·6	+6·6	+21·7	+60·2
347·446 G	10	43	20	89	191·4	+5·6	+21·8	+74·8
Means ...	...	...	46	273	193·6	...	+21·7	...

No. 1176. Latitude −34°·9.
Group 12103 in Rotation 1112.
" 12123 " " 1113.

Group 12103. Nov. 10–13. A small spot with a companion on Nov. 11.

314·435 G	4	9	3	6	213·0	...	−34·8	+21·3
315·121 K	8	26	6	19	213·8	+1·3	−34·2	+31·2
316·419 C	4	17	4	16	212·0	+0·3	−34·2	+46·5
317·570 G	4	9	5	12	211·2	+0·3	−34·1	+60·9
Means ...	...	...	4	13	212·5	...	−34·3	...

No. 1176.—*continued.*

Group 12123. Dec. 1–13. A group of three or four spots at the east limb; of these, a regular spot with a small companion remain on Dec. 4.

d					°	°	°	°
335·463 G	24	152	50	318	202·1	+3·0	−35·2	−72·4
336·480 C	42	180	55	234	200·5	+2·1	−35·8	−60·6
337·505 G	39	200	35	182	200·2	+2·4	−34·9	−47·4
338·423 G	43	184	34	144	197·5	+0·4	−35·6	−38·0
339·505 G	33	165	22	111	197·0	+0·6	−35·1	−24·2
340·347 C	48	213	30	134	196·6	+0·7	−35·3	−13·5
341·470 G	48	217	29	132	196·5	+1·4	−35·2	+ 1·2
342·111 K	40	189	25	117	196·4	+1·7	−35·3	+ 0·5
343·108 K	24	181	16	119	196·0	+2·0	−35·4	+22·2
344·392 C	29	153	22	118	194·9	+1·7	−35·4	+38·1
345·537 G	13	80	13	80	194·5	+2·1	−35·2	+52·8
346·247 K	22	119	29	157	195·2	+3·2	−35·0	+62·8
347·446 G	11	45	27	113	192·6	+1·4	−35·3	+76·0
Means ...	...	...	30	151	196·9	...	−35·4	...

No. 1177. Latitude −21°·7.
Group 12108 in Rotation 1112.
" 12138 " " 1113.

Group 12108. Nov. 17–28. An extensive stream in which a very large spot, *a*, has developed as leader by Nov. 24. The following part of the stream decreases very rapidly after Nov. 25.

321·405 C	4	21	5	28	34·4	0·0	−20·8	−65·4
322·415 C	67	319	65	309	31·4	−2·8	−21·2	−55·1
323·418 C	130	772	94	567	32·1	−2·0	−21·6	−41·1
324·410 C	166	1032	103	645	32·5	−1·4	−21·3	−27·7
325·458 G	209	1144	110	649	32·4	−1·3	−21·1	−14·0
326·492 G	218	1167	110	638	33·2	−0·4	−21·2	− 0·5
327·393 C	266	1783	148	991	32·3	−1·1	−21·2	+11·4
328·488 C	234	2049	143	1243	31·4	−1·8	−21·2	+25·0
329·405 C	194	1619	133	1121	31·9	−1·2	−21·5	+37·6
330·431 C	171	1072	152	947	32·0	−0·9	−21·2	+51·2
331·556 G	89	458	132	677	33·5	+0·8	−20·7	+67·5
332·415 G	56	158	177	493	33·4	+0·8	−20·7	+78·7
Means ...	...	...	116	692	32·5	...	−21·1	...

Spot *a*.

323·418 C	50	304	34	207	36·3	0·0	−20·7	−36·9
324·410 C	101	588	61	353	36·1	0·0	−20·7	−24·1
325·458 G	105	613	58	337	36·5	+0·5	−20·7	− 0·9
326·492 G	105	576	57	311	36·5	+0·7	−20·7	+ 3·8
327·393 C	153	1040	86	582	35·1	−0·5	−20·7	+14·2
328·488 C	146	1150	91	713	35·3	−0·2	−20·5	+28·0
329·405 C	98	984	71	708	35·2	−0·1	−20·8	+40·0
330·431 C	125	738	116	686	35·4	+0·3	−20·4	+54·6
331·556 G	74	384	115	595	35·5	+0·6	−20·2	+69·5
332·415 G	52	143	174	469	34·9	...	−20·2	+80·2

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. 1177.—*continued.*

Group 12138. Dec. 13–26. A regular spot (evidently *a* of Group 12108); there is a small companion on Dec. 21, whilst on Dec. 26, two new spots have appeared indicating a renewal of activity.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
347·446 G	4	17	(21	90	32·2	...	−21·3)	−84·4
348·104 K	24	105	49	215	32·7	+0·5	−21·2	−75·2
349·514 G	48	255	48	252	31·9	−0·1	−21·4	−57·5
350·476 G	39	242	30	184	31·3	−0·5	−21·7	−45·4
351·395 C	44	254	28	163	31·1	−0·6	−22·1	−33·5
352·410 C	54	250	31	142	30·6	−0·9	−22·3	−20·6
353·469 G	56	246	30	133	30·3	−1·0	−22·3	− 7·0
354·466 G	58	298	31	161	30·0	−1·1	−22·4	+ 5·9
355·399 C	75	341	42	191	29·6	−1·4	−22·1	+17·8
356·461 G	35	238	22	148	29·1	−1·7	−22·3	+31·3
357·502 G	43	199	32	149	28·9	−1·7	−22·3	+44·8
358·329 C	25	135	23	124	28·2	−2·3	−22·6	+55·0
359·417 G	17	104	24	149	27·6	−2·7	−22·7	+68·7
360·342 C	16	78	38	190	24·2	−6·0	−24·8	+77·5
Means ...	...	...	33	169	29·7	...	−22·3	...

No. 1178. Latitude +16°·8.
Group 12109 in Rotation 1113.
{ ,, 12146
{ ,, 12150 ,, ,, 1114.

Group 12109. Nov. 23–Dec. 5. This group, a revival of Group 12084, comes round the east limb as a single regular spot, *a*, but on Nov. 25 and the following days a very extensive conglomeration of spots develops westwards and northwards. It is interesting to note that throughout the transit, *a* remains narrowly divided from the new spot formation without being absorbed by it.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
327·393 C	29	130	(71	320	302·7	...	+17·1)	*−78·2
328·488 C	46	226	56	276	301·2	0·0	+16·7	−65·2
329·405 C	109	459	92	390	301·9	+0·7	+17·1	−52·4
330·431 C	200	1444	134	960	302·8	+1·7	+17·3	−38·0
331·556 G	345	2241	197	1267	303·0	+1·9	+17·1	−23·0
332·415 G	395	2674	211	1425	302·2	+1·1	+17·0	−12·5
333·350 C	328	2485	171	1296	303·1	+2·0	+16·6	+ 0·8
334·098 K	347	2381	182	1254	303·1	+2·1	+16·6	+10·6
335·463 G	291	1746	172	1035	303·2	+2·2	+16·2	+28·7
336·480 C	196	1342	136	943	303·3	+2·3	+16·0	+42·2
337·505 G	169	949	154	882	304·0	+3·1	+15·8	+56·4
338·423 G	102	586	135	801	302·9	+2·0	+16·1	+67·4
339·505 G	33	130	(85	337	299·7	...	+15·4)	+78·5
Means ...	...	...	149	957	302·8	...	+16·6	...

No. 1178. Group 12109—*continued.*

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
327·393 C	29	130	71	320	302·7	...	+17·1	*−78·2
328·488 C	46	226	56	276	301·2	0·0	+16·7	−65·2
329·405 C	69	330	59	284	301·0	−0·2	+16·0	−53·3
330·431 C	79	353	54	240	300·6	−0·5	+16·3	−40·2
331·556 G	117	542	67	309	300·2	−0·9	+16·0	−25·2
332·415 G	139	729	74	386	300·7	−0·4	+15·8	−14·0
333·350 C	94	723	49	376	300·4	−0·7	+16·1	− 1·9
334·098 K	125	743	65	386	300·9	−0·1	+15·8	+ 8·4
335·463 G	122	579	71	336	300·4	−0·6	+15·8	+25·9
336·480 C	104	477	70	320	300·1	−0·9	+15·8	+39·0
337·505 G	87	367	74	312	300·2	−0·7	+15·7	+52·6
338·423 G	59	260	71	312	299·9	−1·0	+15·8	+64·4
339·505 G	33	130	85	337	299·7	−1·2	+15·4	+78·5

Group 12146. Dec. 21–1937, Jan. 1. A regular spot (apparently *a* of Group 12109) slowly diminishing. On Dec. 27, 28, 30 and 31, some small spots following are included in the group, though it is uncertain whether these may not belong to Group 12150.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
355·399 C	12	62	20	104	300·4	−0·1	+16·9	−71·4
356·461 G	17	108	17	109	299·8	−0·6	+17·2	−58·0
357·502 G	26	151	19	112	299·8	−0·6	+17·0	−44·3
358·329 C	31	154	20	99	299·6	−0·8	+17·2	−33·6
359·417 G	43	181	24	101	299·6	−0·7	+17·0	−19·3
360·342 C	42	162	23	87	299·5	−0·8	+17·4	− 7·2
361·438 G	45	196	24	104	297·3	−3·0	+16·6	+ 5·0
362·445 C	25	141	14	79	297·1	−3·1	+16·7	+18·1
363·353 C	19	106	12	66	298·2	−2·0	+16·9	+31·1
364·472 G	17	66	13	50	296·8	−3·4	+17·3	+44·5
365·559 G	6	22	6	23	296·4	−3·8	+17·3	+58·4
366·329 C	2	12	3	18	296·4	−3·7	+17·3	+68·5
Means ...	...	...	16	79	298·4	...	+17·1	...

Group 12150. Dec. 23–29. A stream, with the largest component in the rear, closely following Group 12146.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
357·502 G	4	13	3	11	291·7	− 8·7	+16·5	−52·4
358·329 C	10	50	7	36	291·7	− 8·7	+16·8	−41·5
359·417 G	35	111	21	66	291·3	− 9·0	+16·9	−27·6
360·342 C	75	328	42	181	290·1	−10·2	+17·2	−16·6
361·438 G	26	147	14	78	287·9	−12·4	+17·5	− 4·4
362·445 C	8	50	4	27	288·3	−11·9	+17·5	+ 9·3
363·353 C	6	37	3	21	289·7	−10·5	+16·9	+22·6
Means ...	...	...	13	60	290·1	...	+17·0	...

* On account of poor definition of the photograph, measures are not included for this day in taking means.

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued*.

No. **1179**. Latitude −15°·3.
Group 12112 in Rotation 1113.
,, 12151 ,, ,, 1114.

Group 12112. Nov. 26–Dec. 8. A very large composite spot, separating into four parts on Dec. 5.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
330·431 C	48	397	94	778	266·4	0·0	−13·8	−74·4
331·556 G	169	1059	187	1165	264·3	−2·1	−14·5	−61·7
332·415 G	223	1528	182	1260	264·1	−2·3	−14·3	−50·6
333·350 C	257	1833	170	1222	263·7	−2·7	−14·7	−38·6
334·098 K	345	2220	206	1333	262·9	−3·5	−15·0	−29·6
335·463 G	350	2497	185	1323	262·7	−3·8	−14·8	−11·8
336·480 C	297	2191	155	1139	262·3	−4·2	−15·3	+ 1·2
337·505 G	249	1892	133	1013	262·1	−4·4	−15·0	+14·5
338·423 G	256	1420	150	829	261·7	−4·8	−15·1	+26·2
339·505 G	156	1048	108	720	261·9	−4·6	−15·3	+40·7
340·347 C	113	702	95	590	262·5	−4·0	−15·0	+52·4
341·470 G	56	373	75	496	262·2	−4·3	−14·8	+66·9
342·111 K	20	137	41	281	262·3	−4·2	−14·8	+75·4
Means ...	...	...	137	935	263·0	...	−14·8	...

Group 12151. Dec. 23–30. A small spot which has disappeared by Dec. 28, but a small group appears near its place on Dec. 29–30.

357·502 G	4	9	11	25	264·1	−2·5	−14·6	−80·0
358·329 C	6	12	8	17	264·2	−2·5	−14·4	−69·0
359·417 G	11	39	10	34	264·6	−2·1	−14·9	−54·3
360·342 C	8	37	6	26	263·6	−3·1	−17·9	−43·1
361·438 G	6	15	3	9	264·3	−2·4	−14·7	−28·0
362·445 C	0	0	0	0	...	...	...	...
363·353 C	4	25	2	13	263·1	−3·6	−16·3	− 4·0
364·472 G	17	39	9	21	267·0	+0·3	−16·7	+14·7
Means ...	...	...	5	17	264·5	...	−15·8	...

No. **1180**. Latitude +16°·9.
Group 12115 in Rotation 1113.
,, 12154 ,, ,, 1114.

Group 12115. Nov. 27–Dec. 10. A large stream developing in the usual manner; considerable changes take place, however, from Dec. 6 to 9 as evidence of renewed activity. *a* and *b* represent the preceding and following spots of the group; *c* is a new formation in the middle of the stream.

331·556 G	9	52	24	138	247·0	0·0	+16·4	−79·0
332·415 G	39	204	57	284	246·3	−0·7	+16·7	−68·4
333·350 C	73	514	69	494	244·9	−2·0	+16·3	−57·4
334·098 K	170	892	131	691	244·9	−2·0	+16·6	−47·6
335·463 G	177	1068	105	635	246·3	−0·6	+16·6	−28·2
336·480 C	194	1246	104	674	245·4	−1·5	+16·9	−15·7
337·505 G	151	1237	79	643	245·9	−0·9	+16·6	− 1·7
338·423 G	182	1074	98	573	246·3	−0·5	+16·4	+10·8
339·505 G	199	1132	117	654	246·2	−0·6	+16·4	+25·0
340·347 C	292	1745	187	1120	244·6	−2·1	+15·9	+34·5
341·470 G	243	1493	197	1204	244·1	−2·6	+16·0	+48·8
342·111 K	138	1178	139	1147	242·8	−3·9	+16·0	+55·9
343·108 K	76	537	115	808	242·5	−4·2	+15·9	+68·7
344·392 C	4	21	(13	69	237·5	...	+17·0)	+80·7
Means ...	...	...	116	744	245·0	...	+16·4	...

No. **1180**, Group 12115—*continued*.

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
331·556 G	9	52	24	138	247·0	0·0	+16·4	−79·0
332·415 G	13	104	17	132	248·6	+1·6	+17·0	−66·1
333·350 C	48	272	43	245	247·1	+0·2	+16·3	−55·2
334·098 K	89	448	65	327	247·9	+1·0	+16·5	−44·6
335·463 G	82	499	47	284	249·9	+3·0	+16·9	−24·6
336·480 C	96	485	51	257	250·1	+3·2	+17·3	−11·0
337·505 G	69	454	36	236	251·0	+4·2	+17·3	+ 3·4
338·423 G	69	412	38	227	252·2	+5·4	+17·5	+16·7
339·505 G	67	299	42	185	253·4	+6·6	+16·7	+32·2
340·347 C	42	322	30	232	253·8	+7·1	+16·3	+43·7
341·470 G	26	180	26	182	254·3	+7·6	+16·3	+59·0
342·111 K	16	100	22	135	254·0	+7·3	+16·7	+67·1
343·108 K	4	20	12	58	253·3	+6·6	+17·5	+79·5

Spot *b*.

332·415 G	26	100	40	152	244·4	0·0	+16·5	−70·3
333·350 C	25	242	26	249	242·5	−1·9	+16·6	−59·8
334·098 K	81	444	66	364	241·7	−2·6	+16·9	−50·8
335·463 G	78	495	48	307	241·8	−2·5	+16·7	−32·7
336·480 C	75	606	41	333	241·9	−2·4	+16·6	−19·2
337·505 G	52	599	27	311	241·8	−2·4	+15·8	− 5·8
338·423 G	78	536	41	279	241·7	−2·5	+15·7	+ 6·2
339·505 G	61	595	34	333	241·8	−2·4	+16·0	+20·6
340·347 C	142	949	87	579	241·5	−2·7	+16·0	+31·4
341·470 G	122	857	90	634	240·9	−3·2	+16·3	+45·6
342·111 K	68	728	60	641	240·7	−3·4	+16·1	+53·8
343·108 K	48	322	62	415	239·7	−4·4	+16·8	+65·9
344·392 C	4	21	13	69	237·5	...	+17·0	+80·7

Spots *c*.

335·463 G	17	74	10	44	245·6	0·0	+16·3	−28·9
336·480 C	23	155	12	84	246·3	+0·7	+15·9	−14·8
337·505 G	30	184	16	96	246·8	+1·3	+15·9	− 0·8
338·423 G	35	126	19	67	247·0	+1·5	+16·1	+11·5
339·505 G	71	238	41	136	247·0	+1·5	+15·9	+25·8
340·347 C	108	474	70	309	246·9	+1·4	+15·8	+36·8
341·470 G	95	456	81	388	247·5	+2·1	+15·5	+52·2
342·111 K	54	350	57	371	247·5	+2·1	+15·7	+60·6
343·108 K	24	195	41	335	246·1	+0·7	+15·7	+72·3

Group 12154. Dec. 24–Jan. 2. A fairly large regular spot which breaks up on Dec. 30, the component parts separating considerably in longitude before dying out.

358·329 C	17	87	56	285	253·1	...	+17·2	−80·1
359·417 G	43	166	55	214	253·5	+7·3	+16·9	−65·4
360·342 C	62	333	56	300	253·3	+7·2	+17·5	−53·4
361·438 G	108	406	73	276	253·4	+7·3	+17·0	−38·9
362·445 C	104	449	61	265	253·3	+7·2	+17·3	−25·7
363·353 C	108	468	59	257	253·1	+7·1	+17·9	−14·0
364·472 G	78	298	41	158	253·3	+7·3	+17·9	+ 1·0
365·559 G	39	168	22	94	253·0	+7·0	+18·1	+15·0
366·329 C	21	102	12	60	252·8	+6·8	+18·1	+24·9
367·448 G	6	22	4	16	254·8	+8·9	+15·9	+41·7
Means ...	...	...	43	182	253·4	...	+17·4	...

LEDGER I.—RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

No. **1181.** Latitude +9°·9.
Group 12136 in Rotation 1113.
,, 12166 ,, ,, 1114.

Group 12136. Dec. 12–15. A stream of simple formation near the sun's west limb.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
346·247 K	34	133	21	81	166·1	0·0	+ 9·1	+33·7
347·446 G	44	226	34	175	166·0	−0·2	+ 8·4	+49·4
348·104 K	24	94	24	94	167·4	+1·1	+ 9·0	+59·5
349·514 G	2	6	4	13	165·6	−0·9	+10·4	+76·2
Means ...	...	...	21	91	166·3	...	+ 9·2	...

No. **1181.**—*continued.*

Group 12166. Dec. 30–Jan. 4. A regular spot dying out rapidly.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
364·472 G	4	22	21	117	168·5	...	+10·7	−83·8
365·559 G	15	86	22	127	168·7	+0·4	+10·4	−69·3
366·329 C	17	175	17	175	169·3	+0·9	+10·5	−58·6
367·448 G	39	207	28	149	168·7	+0·2	+10·5	−44·4
368·349 C	33	196	20	120	168·5	−0·1	+10·7	−32·8
369·393 C	8	40	4	22	168·1	−0·6	+10·5	−19·4
Means ...	...	...	18	119	168·7	...	+10·5	...

ROYAL OBSERVATORY, GREENWICH.

Ledgers of Groups of Sun Spots

For the Year

1936

Ledger II.—Non-Recurrent Groups

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936.

The time (U.T.) at which the photograph was taken is expressed in the *first* column by the day of the year and decimal of a day, reckoned from Greenwich Mean Midnight.

The place where the photograph was taken is also indicated in the *first* column. A photograph taken at Greenwich is indicated by the letter G, and those taken at the Cape and Kodaikánal by the letters C and K, respectively.

The projected Area of the Umbræ and Whole Spots, given in the *second* and *third* columns, is the area as it is measured on the photograph uncorrected for the effect of foreshortening, and expressed in millionths of the Sun's apparent disc.

The area corrected for foreshortening given in the *fourth* and *fifth* columns is expressed in millionths of the Sun's visible hemisphere.

The longitude given in the *sixth* column is based on the ephemeris given in the *Nautical Almanac*, assuming a daily sidereal motion of 14°·18, due to the Sun's rotation, constant at all latitudes ; this corresponds to Carrington's assumed rotation period of 25·38 days.

The proper motion given in the *seventh* column is derived from the difference of longitude thus computed from the measured positions on any given day and the first day on which the group of spots or single spot is visible, after the correction for the motion appropriate to the latitude has been applied according to the formula, $\xi = 14^\circ{\cdot}37 - 2^\circ{\cdot}60 \sin^2\phi$. A *plus* sign indicates a motion forwards, a *minus* sign a motion backwards relative to the position on the first day.

The remaining columns correspond to those with similar headings in the preceding Section.

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

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936.

Group 11792.

Jan. 11–24. A large stable regular spot.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
10·144 K	12	60	46	229	165·9	...	−28·4	−83·4
11·504 G	45	255	60	342	164·2	0·0	−28·4	−67·2
12·431 C	54	345	50	321	164·3	+0·5	−28·7	−54·9
13·472 G	65	406	47	292	163·7	+0·3	−28·6	−41·8
14·410 C	75	503	47	317	163·5	+0·5	−28·5	−29·7
15·403 C	92	520	52	296	163·0	+0·4	−28·7	−17·1
16·600 G	80	473	44	260	162·6	+0·4	−28·6	− 1·7
17·530 G	82	430	45	236	162·1	+0·3	−28·4	+10·0
18·382 C	83	431	48	250	161·4	0·0	−28·4	+20·5
19·525 G	61	365	40	241	161·2	+0·3	−28·4	+35·4
20·469 G	65	298	51	235	160·8	+0·2	−28·6	+47·4
21·396 G	58	258	59	260	160·1	−0·1	−28·6	+58·9
22·446 G	30	168	49	274	159·8	0·0	−28·7	+72·4
23·394 C	19	109	65	374	158·6	...	−29·1	+83·7
Means ...	...	...	49	277	162·2	...	−28·6	...

Group 11793.

Jan. 12–23. A regular spot followed by a faint cluster which has died out by Jan. 18.

11·504 G	13	108	17	145	163·3	0·0	−21·0	−68·1
12·431 C	41	206	38	192	162·5	−0·7	−20·4	−56·7
13·472 G	54	324	38	231	161·4	−1·7	−19·9	−44·1
14·410 C	70	274	42	165	162·4	−0·5	−20·1	−30·8
15·403 C	29	282	16	153	162·8	0·0	−20·5	−17·3
16·600 G	50	330	26	172	161·6	−1·1	−20·4	− 2·7
17·530 G	43	248	23	131	162·5	0·0	−20·4	+10·4
18·382 C	33	208	18	114	161·9	−0·5	−20·5	+21·0
19·525 G	28	187	18	120	162·0	−0·3	−20·4	+36·2
20·469 G	22	160	17	123	161·8	−0·4	−20·4	+48·4
21·396 G	27	133	27	133	161·7	−0·4	−20·5	+60·5
22·446 G	17	58	31	104	162·2	+0·3	−20·3	+74·8
Means ...	...	...	26	149	162·2	...	−20·4	...

Group 11796.

Jan. 14–26. A stream of normal type showing less than the normal separation in longitude between the leader and follower spots.

13·472 G	13	26	29	57	127·7	0·0	−24·7	−77·8
14·410 C	4	17	5	20	128·5	+1·1	−25·0	−64·7
15·403 C	21	92	19	82	125·7	−1·5	−24·1	−54·4
16·600 G	47	291	32	199	124·5	−2·4	−24·1	−39·8
17·530 G	95	610	57	364	124·3	−2·3	−24·2	−27·8
18·382 C	83	661	46	367	123·5	−2·9	−24·3	−17·4
19·525 G	89	497	47	263	123·7	−2·4	−24·5	− 2·1
20·469 G	77	398	41	214	123·3	−2·5	−24·8	+ 9·9
21·396 G	35	221	20	126	123·6	−2·0	−24·4	+22·4
22·446 G	26	110	17	73	124·7	−0·6	−24·9	+37·3
23·394 C	10	25	8	20	124·2	−0·9	−25·4	+49·3
24·350 C	4	21	4	22	123·5	−1·3	−25·3	+61·2
25·444 G	4	9	8	17	123·3	−1·2	−25·7	+75·4
Means ...	...	...	26	140	124·7	...	−24·7	...

Group 11799.

Jan. 20–29. A regular spot from which a portion separates on Jan. 25–26; there are companions on Jan. 20 to Jan. 23.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
19·525 G	9	65	13	95	54·9	0·0	−19·6	−70·9
20·469 G	24	92	22	84	56·9	+2·1	−19·3	−56·5
21·396 G	41	135	29	94	57·9	+3·2	−18·8	−43·3
22·446 G	30	158	18	92	58·1	+3·5	−19·1	−29·3
23·394 C	25	150	13	80	59·3	+4·7	−18·9	−15·6
24·350 C	31	130	16	68	58·7	+4·2	−19·1	− 3·6
25·444 G	26	82	14	43	58·4	+4·0	−19·3	+10·5
26·412 C	17	69	10	39	57·8	+3·5	−19·0	+22·7
27·461 G	11	35	7	22	57·8	+3·6	−18·7	+36·5
28·447 G	6	15	5	12	57·9	+3·8	−18·8	+49·5
Means ...	...	...	15	63	57·8	...	−19·1	...

Group 11800.

Jan. 21–26. A feeble group not seen on Jan. 22.

20·469 G	4	15	2	9	85·0	0·0	−25·0	−28·4
21·396 G	0	0	0	0	...	...	...	...
22·446 G	11	30	6	16	86·7	+2·2	−24·6	− 0·7
23·394 C	33	115	18	62	86·5	+2·3	−24·7	+11·6
24·350 C	15	50	9	29	85·9	+1·9	−24·8	+23·6
25·444 G	9	43	6	28	84·0	+0·3	−25·0	+36·1
Means ...	...	...	7	24	85·6	...	−24·8	...

Group 11802

Jan. 21–Feb. 2. A large double spot, *a*, followed by a very long sinuous train of small and unstable spots.

20·469 G	26	175	(60	415	37·6	...	+14·6)	−75·8
21·396 G	96	490	158	705	34·0	0·0	+15·2	−67·2
22·446 G	184	1063	170	984	34·1	+0·1	+14·8	−53·3
23·394 C	216	1252	158	901	34·1	+0·1	+15·4	−40·8
24·350 C	206	1109	127	676	34·3	+0·2	+14·9	−28·0
25·444 G	233	1133	129	621	34·8	+0·7	+14·6	−13·1
26·412 C	127	1001	67	532	35·3	+1·2	+14·5	+ 0·2
27·461 G	132	708	73	393	34·3	+0·2	+14·6	+13·0
28·447 G	90	548	54	332	34·8	+0·7	+15·0	+26·4
29·518 G	60	302	44	218	35·3	+1·1	+15·0	+41·0
30·406 C	50	213	47	196	35·9	+1·7	+14·2	+53·3
31·451 G	25	107	38	163	36·6	+2·4	+14·1	+67·8
32·529 G	4	15	21	80	37·5	...	+13·7	+82·9
Means ...	...	...	97	520	34·9	...	+14·8	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11802—*continued.*

Spot *a.*

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Lati-tude.	Long. from C.M.
d					°	°	°	°
20·469 G	26	175	60	415	37·6	0·0	+14·6	−75·8
21·396 G	57	369	68	438	38·6	+1·0	+14·4	−62·6
22·446 G	117	661	95	535	38·8	+1·1	+14·2	−48·6
23·394 C	115	819	76	541	39·2	+1·5	+14·5	−35·7
24·350 C	115	752	67	436	38·9	+1·2	+14·2	−23·4
25·444 G	151	773	82	417	38·5	+0·7	+14·2	− 9·4
26·412 C	96	784	51	416	38·1	+0·3	+14·3	+ 3·0
27·461 G	104	557	58	312	37·8	0·0	+14·4	+16·5
28·447 G	73	462	45	282	37·6	−0·3	+14·2	+29·2
29·518 G	52	243	38	180	37·4	−0·5	+14·4	+43·1
30·406 C	38	146	36	139	37·6	−0·3	+13·8	+55·0
31·451 G	17	87	27	137	38·1	+0·1	+13·7	+69·3
32·529 G	4	15	21	80	37·5	...	+13·7	+82·9

Group 11804.

Jan. 24–Feb. 2. A small but persistent group not seen on Jan. 30.

23·394 C	2	10	4	18	2·7	0·0	+11·7	−72·2
24·350 C	4	10	4	10	4·5	+1·7	+11·6	−57·8
25·444 G	9	22	6	16	4·6	+1·7	+11·2	−43·3
26·412 C	2	17	1	10	5·1	+2·1	+11·1	−30·0
27·461 G	18	67	10	36	4·6	+1·6	+11·4	−16·7
28·447 G	13	39	7	21	4·5	+1·4	+11·6	− 3·9
29·518 G	0	0	0	0	...	...	...	...
30·406 C	8	38	4	21	2·3	−1·0	+11·7	+19·7
31·451 G	11	46	7	30	4·2	+0·8	+12·7	+35·4
32·529 G	2	9	2	7	3·1	−0·4	+12·4	+48·5
Means ...	...	...	5	17	4·0	...	+11·7	...

Group 11807.

Jan. 31–Feb. 11. A stable regular spot with companions from Feb. 4 to 8.

30·406 C	13	157	29	347	272·3	0·0	+32·6	−70·3
31·451 G	39	208	48	258	271·9	+0·2	+32·5	−56·9
32·529 G	46	245	42	223	271·0	−0·2	+32·5	−43·6
33·434 G	56	308	43	237	270·2	−0·4	+32·1	−32·5
34·517 G	76	377	52	259	269·1	−0·9	+32·6	−19·3
35·368 C	79	349	52	229	268·3	−1·2	+33·0	− 8·9
36·384 G	72	345	47	223	267·1	−1·8	+32·8	+ 3·3
37·387 G	50	292	33	196	266·3	−2·1	+32·8	+15·7
38·375 G	51	247	37	180	265·1	−2·7	+32·5	+27·5
39·431 C	42	184	37	160	264·3	−2·9	+32·3	+40·6
40·422 C	25	138	28	155	263·4	−3·3	+32·5	+52·7
41·431 C	27	98	47	171	262·6	−3·5	+32·7	+65·2
Means ...	...	...	41	220	267·6	...	+32·6	...

Group 11808.

Feb. 1–10. Two small clusters becoming a stream of approximately normal type. The leader spot, *a*, alone remains on Feb. 8.

d					°	°	°	°
31·451 G	9	22	9	22	274·9	0·0	+22·5	−53·9
32·529 G	30	122	22	89	276·2	+1·5	+22·2	−38·4
33·434 G	50	130	32	83	276·6	+2·1	+22·5	−26·1
34·517 G	87	306	50	178	278·9	+4·5	+22·6	− 9·5
35·368 C	96	447	55	256	279·9	+5·7	+22·6	+ 2·7
36·384 G	78	494	47	296	280·0	+6·0	+22·2	+16·2
37·387 G	74	438	49	288	280·2	+6·4	+21·8	+29·6
38·375 G	57	290	45	229	280·6	+6·9	+21·6	+43·0
39·431 C	33	272	36	294	280·5	+7·0	+21·8	+56·8
40·422 C	21	125	36	215	279·6	+6·3	+21·3	+68·9
Means ...	...	...	38	195	278·7	...	+22·1	...

Spot *a.*

34·517 G	61	221	35	128	280·5	0·0	+22·3	− 7·9
35·368 C	77	334	44	190	281·2	+0·9	+22·4	+ 4·0
36·384 G	61	405	37	243	281·1	+0·9	+21·8	+17·3
37·387 G	63	405	42	267	280·9	+0·9	+21·7	+30·3
38·375 G	57	290	45	229	280·6	+0·8	+21·6	+43·0
39·431 C	33	272	36	294	280·5	+0·9	+21·8	+56·8
40·422 C	21	125	36	215	279·6	+0·2	+21·3	+68·9

Group 11813.

Feb. 5–16. Intermittent; a scattered stream of small spots, not seen on Feb. 11, 13 and 15.

35·368 C	4	13	8	26	200·2	0·0	−20·6	−77·0
36·384 G	13	20	14	22	200·8	+0·7	−20·2	−63·0
37·387 G	8	34	7	28	197·7	−2·3	−20·0	−52·9
38·375 G	17	61	12	43	194·2	−5·7	−20·1	−43·4
39·431 C	12	37	7	22	193·8	−6·0	−20·1	−29·9
40·422 C	21	75	11	40	194·6	−5·1	−21·5	−16·1
41·431 C	0	0	0	0	...	...	...	...
42·454 G	9	39	5	20	193·1	−6·3	−18·8	+ 9·2
43·519 G	0	0	0	0	...	...	...	...
44·476 G	2	7	1	4	191·6	−7·6	−18·5	+34·3
45·396 C	0	0	0	0	...	...	...	...
46·419 C	2	8	2	10	198·5	−0·5	−18·7	+66·8
Means ...	...	...	6	18	196·1	...	−19·8	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued*.

Group 11819.

Feb. 10–17. One or two small spots not seen on Feb. 12–13.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
40·422 C	4	13	4	12	158·4	0·0	+17·7	−52·3
41·431 C	8	33	6	23	161·1	+2·8	+17·7	−36·3
42·454 G	0	0	0	0	...	...	...	...
43·519 G	0	0	0	0	...	...	...	...
44·476 G	4	11	2	6	157·4	−0·8	+17·7	+ 0·1
45·396 C	32	65	18	37	159·3	+1·2	+17·8	+14·1
46·419 C	4	13	2	8	157·2	−0·9	+17·7	+25·5
47·592 G	8	26	6	20	159·0	+1·0	+18·0	+42·7
Means ...	...	...	5	13	158·7	...	+17·8	...

Group 11822.

Feb. 12–20. A small but persistent stream of ordinary type.

42·454 G	4	9	3	6	144·7	0·0	+11·4	−39·2
43·519 G	4	11	2	6	146·3	+1·5	+11·5	−23·6
44·476 G	32	109	17	59	146·5	+1·6	+11·7	−10·8
45·396 C	66	259	35	137	146·3	+1·3	+11·9	+ 1·1
46·419 C	31	80	17	44	148·4	+3·3	+11·5	+16·7
47·592 G	17	61	11	39	150·1	+4·9	+11·1	+33·8
48·432 C	10	38	8	28	150·3	+5·1	+10·7	+45·1
49·438 C	8	32	8	33	150·5	+5·2	+10·7	+58·5
50·385 G	7	15	12	26	150·5	+5·1	+10·9	+71·0
Means ...	...	...	13	42	148·2	...	+11·3	...

Group 11823.

Feb. 15–25. A small spot usually preceded by one or two companions.

45·396 C	12	25	13	27	86·9	0·0	+14·5	−58·3
46·419 C	12	29	9	22	88·7	+1·7	+13·9	−43·0
47·592 G	9	28	5	17	87·7	+0·7	+13·4	−28·6
48·432 C	16	88	8	49	89·9	+2·8	+14·9	−15·3
49·438 C	16	63	8	33	89·6	+2·5	+14·5	− 2·4
50·385 G	13	34	7	18	90·3	+3·1	+13·6	+10·8
51·409 C	4	13	2	8	89·3	+2·0	+13·2	+23·3
52·432 C	6	32	4	22	92·2	+4·9	+10·4	+39·7
53·374 C	6	25	5	22	93·5	+6·1	+10·8	+53·4
54·591 G	8	22	14	39	95·5	+8·1	+11·0	+71·4
55·426 C	4	23	14	83	93·1	...	+13·5	+80·0
Means ...	...	...	8	26	90·4	...	+13·0	...

Group 11824.

Feb. 16–28. A group of stream type in which the preceding part develops only to a small extent.

d					°	°	°	°
46·419 C	8	38	25	114	54·3	0·0	+16·5	−77·4
47·592 G	22	100	28	129	52·5	−1·8	+16·7	−63·8
48·432 C	31	243	29	227	52·5	−1·9	+16·7	−52·7
49·438 C	59	327	43	235	52·2	−2·1	+16·5	−39·8
50·385 G	67	335	41	206	52·1	−2·1	+16·4	−27·4
51·409 C	70	488	39	277	51·4	−2·8	+16·3	−14·6
52·432 C	68	390	37	212	51·2	−3·0	+16·4	− 1·3
53·374 C	59	325	32	179	50·6	−3·6	+16·0	+10·5
54·591 G	106	484	65	296	51·1	−3·1	+16·5	+27·0
55·426 C	106	628	73	431	50·6	−3·6	+15·7	+37·5
56·456 C	61	443	54	386	50·4	−3·7	+15·8	+50·9
57·355 C	48	260	57	308	49·5	−4·6	+16·1	+61·8
58·613 G	16	66	50	208	49·3	−4·8	+16·3	+78·2
Means ...	...	...	44	247	51·4	...	+16·3	...

Group 11825.

Feb. 16–28. A stable regular spot with one or two tiny companions on Feb. 22–23.

46·419 C	21	80	47	180	52·9	0·0	−17·9	−78·8
47·592 G	31	166	35	186	51·9	−0·9	−17·5	−64·4
48·432 C	42	248	35	206	52·1	−0·7	−17·3	−53·1
49·438 C	46	298	30	194	52·5	−0·2	−17·2	−39·5
50·385 G	44	279	25	159	52·4	−0·3	−17·3	−27·1
51·409 C	52	344	27	179	52·5	−0·2	−17·6	−13·5
52·432 C	56	326	29	167	51·6	−1·0	−17·7	− 0·9
53·374 C	38	262	20	136	51·9	−0·7	−18·0	+11·8
54·591 G	39	254	22	145	51·7	−0·8	−17·9	+27·6
55·426 C	34	215	22	140	51·9	−0·5	−18·0	+38·8
56·456 C	30	209	24	169	51·6	−0·8	−18·0	+52·1
57·355 C	25	169	27	183	50·9	−1·5	−17·9	+63·2
58·613 G	11	48	26	115	50·8	−1·5	−17·6	+79·7
Means ...	...	...	28	166	51·9	...	−17·7	...

Group 11827.

Feb. 20–27. A small regular spot diminishing; another spot appears *f* on Feb. 25.

50·385 G	9	35	17	68	2·7	0·0	−23·0	−76·8
51·409 C	17	67	19	73	2·6	+0·1	−23·1	−63·4
52·432 C	13	84	10	66	3·1	+0·8	−23·1	−49·4
53·374 C	13	80	8	51	3·1	+1·0	−23·3	−37·0
54·591 G	9	24	5	13	2·8	+1·0	−23·4	−21·3
55·426 C	8	44	4	24	358·6	−3·0	−23·2	−14·5
56·456 C	4	13	2	7	358·8	−2·6	−23·9	− 0·7
57·355 C	2	4	1	2	0·9	−0·3	−23·0	+13·2
Means ...	...	...	8	38	1·6	...	−23·2	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11829.

Feb. 21–28. A stream of normal type in which the *f* part soon disappears.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
51·409 C	38	69	22	40	47·5	0·0	−32·5	−18·5
52·432 C	77	552	43	309	46·7	−0·2	−32·5	− 5·8
53·374 C	49	342	27	190	46·3	−0·1	−32·3	+ 6·2
54·591 G	46	204	27	122	47·4	+1·7	−31·9	+23·3
55·426 C	23	158	15	104	47·8	+2·5	−32·6	+34·7
56·456 C	36	158	22	96	46·9	+2·2	−32·5	+47·4
57·355 C	17	110	17	109	46·1	+1·9	−32·4	+58·4
58·613 G	9	39	15	66	45·1	+1·6	−31·7	+74·0
Means ...	...	...	24	130	46·7	...	−32·3	...

Group 11830.

Feb. 21–Mar. 2. This group commences as a stream of normal type, the following spot breaking up into a cluster by Feb. 24. Contrary to the usual course of development, the leader spot divides on Feb. 26–27 into two parts which separate in longitude.

51·409 C	61	166	52	142	14·4	0·0	−31·2	−51·6
52·432 C	92	504	63	343	15·0	+1·1	−30·6	−37·5
53·374 C	90	709	55	429	14·5	+1·1	−30·5	−25·6
54·591 G	107	418	60	232	14·5	+1·7	−31·1	− 9·6
55·426 C	101	448	56	247	14·6	+2·2	−31·6	+ 1·5
56·456 C	54	346	30	197	15·4	+3·5	−31·1	+15·9
57·355 C	42	196	26	122	17·2	+5·8	−30·9	+29·5
58·613 G	40	162	30	124	17·4	+6·6	−30·5	+46·3
59·340 C	29	144	26	131	16·6	+6·2	−31·2	+55·1
60·413 C	26	61	37	84	16·0	+6·1	−31·0	+68·6
61·418 C	6	17	21	58	18·7	...	−31·2	+84·5
Means ...	...	...	44	205	15·6	...	−31·0	...

Group 11831.

Feb. 21–Mar. 1. A pair of regular spots with two or three companions.

51·409 C	8	42	22	115	345·5	...	− 9·6	−80·5
52·432 C	19	138	22	168	346·7	0·0	− 9·2	−65·8
53·374 C	51	305	41	250	347·2	+0·4	− 8·8	−52·9
54·591 G	83	523	52	327	346·9	−0·1	− 8·6	−37·2
55·426 C	72	523	40	290	346·8	−0·3	− 8·5	−26·3
56·456 C	52	367	27	188	346·9	−0·3	− 8·4	−12·6
57·355 C	63	194	31	97	347·1	−0·3	− 8·4	− 0·6
58·613 G	20	83	10	43	347·7	+0·2	− 7·9	+16·6
59·340 C	13	97	7	54	347·7	+0·1	− 8·0	+26·2
60·413 C	12	42	7	27	346·6	−1·2	− 8·3	+39·2
Means ...	...	...	26	160	347·1	...	− 8·5	...

Group 11832.

Feb. 22–28. On Feb. 22 a single small spot not seen on the following day; afterwards, two or three unimportant spots.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
52·432 C	4	15	2	8	40·7	0·0	+13·4	−11·8
53·374 C	0	0	0	0	...	...	...	...
54·591 G	4	13	2	7	41·5	+0·6	+13·2	+17·4
55·426 C	8	42	5	26	43·0	+2·1	+12·2	+29·9
56·456 C	21	87	16	65	44·0	+3·0	+11·7	+44·5
57·355 C	25	84	24	81	43 6	+2·6	+11·8	+55·9
58·613 G	33	101	62	194	43·7	+2·6	+12·4	+72·6
Means ...	...	...	16	54	42·8	...	+12·4	...

Group 11835.

Feb. 26–Mar. 9. A stream in which the following spot is longer lived than usual.

56·456 C	21	110	59	300	279·1	...	−17·5	−80·4
57·355 C	42	181	57	246	278·1	0·0	−17·1	−69·6
58·613 G	79	340	65	277	278·8	+0·8	−17·6	−52·3
59·340 C	64	331	43	226	278·9	+0·9	−17·5	−42·6
60·413 C	72	318	41	181	279·7	+1·8	−17·7	−27·7
61·418 C	72	374	38	199	279·0	+1·1	−17·8	−15·2
62·602 G	59	289	30	147	277·9	+0·1	−17·9	− 0·7
63·499 G	77	372	40	193	278·3	+0·5	−17·3	+11·6
64·458 G	48	176	26	97	277·5	−0·2	−18·2	+23·4
65·407 G	31	130	20	82	276·9	−0·7	−18·4	+35·3
66·376 G	17	75	12	55	276·3	−1·3	−18·4	+47·5
67·367 C	4	19	4	18	275·2	−2·3	−18·9	+59·4
68·389 C	2	8	3	12	274·8	−2·7	−18·4	+72·5
Means ...	...	...	32	144	277·6	...	−17·9	...

Group 11836.

Feb. 27–Mar. 5. A few unstable spots in the wake of Group 11835.

57·355 C	8	30	16	60	270·7	0·0	−18·4	−77·0
58·613 G	18	90	17	86	272·5	+2·0	−19·3	−58·6
59·340 C	13	72	10	55	272·5	+2·0	−19·3	−49·0
60·413 C	4	8	3	5	270·5	+0·1	−18·1	−36·9
61·418 C	0	13	0	7	272·2	+2·0	−20·2	−22·0
62·602 G	13	44	7	23	266·6	−3·5	−24·1	−12·0
63·499 G	11	77	6	40	273·0	+3·1	−21·3	+ 6·3
64·458 G	4	11	2	6	273·9	+4·1	−21·8	+19·8
Means ...	...	...	8	35	271·5	...	−20·3	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11837.

Feb. 28–Mar. 10. A smallish stream that is comparatively long lived.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
58·613 G	17	50	23	66	268·1	0·0	+21·9	−63·0
59·340 C	32	173	31	168	269·1	+1·1	+21·4	−52·4
60·413 C	71	292	53	216	268·7	+0·9	+21·6	−38·7
61·418 C	91	343	58	218	268·2	+0·5	+21·5	−26·0
62·602 G	83	355	48	205	267·9	+0·4	+21·6	−10·7
63·499 G	92	266	52	152	267·2	−0·2	+21·5	+ 0·5
64·458 G	42	138	24	80	266·8	−0·4	+21·2	+12·7
65·407 G	22	82	13	51	265·4	−1·6	+20·9	+23·8
66·376 G	9	40	6	29	266·0	−0·9	+20·9	+37·2
67·367 C	4	30	4	28	266·2	−0·5	+21·0	+50·4
68·389 C	0	0	0	0	...	...	...	...
69·389 G	4	15	15	57	268·1	+1·7	+21·7	+79·0
Means ...	...	...	27	106	267·4	...	+21·4	...

Group 11839.

Mar. 1–10. A small stream of normal type.

60·413 C	8	30	13	48	239·0	0·0	+17·5	−68·4
61·418 C	17	65	11	43	239·7	+0·8	+17·4	−54·5
62·602 G	31	118	23	87	238·2	−0·7	+17·5	−40·4
63·499 G	55	185	34	117	238·4	−0·5	+17·5	−28·3
64·458 G	42	123	24	71	238·2	−0·7	+17·3	−15·9
65·407 G	29	93	16	51	238·1	−0·7	+17·6	− 3·5
66·376 G	24	58	13	32	238·7	−0·1	+16·6	+ 9·9
67·367 C	8	30	5	18	239·4	+0·7	+16·6	+23·6
68·389 C	10	23	7	16	239·7	+1·0	+17·2	+37·4
69·389 G	4	13	4	12	239·8	+1·1	+17·0	+50·7
Means ...	...	...	15	50	238·9	...	+17·2	...

Group 11841.

Mar. 2–12. A stream in which the following component is the largest and longest lived. This group appears in a region already marked by extensive faculæ.

61·418 C	0	8	0	8	248·6	0·0	+31·6	−45·6
62·602 G	0	0	0	0	...	...	...	...
63·499 G	4	9	3	6	246·6	−0·8	+34·0	−20·1
64·458 G	33	108	22	71	245·1	−1·8	+33·0	− 0·0
65·407 G	145	710	95	464	244·6	−1·7	+32·7	+ 3·0
66·376 G	144	726	97	492	244·3	−1·5	+32·9	+15·5
67·367 C	123	827	91	611	243·8	−1·4	+32·5	+28·0
68·389 C	63	543	57	480	242·7	−2·0	+32·8	+40·4
69·389 G	66	440	75	502	241·9	−2·2	+32·5	+52·8
70·409 C	60	226	103	389	240·6	−2·9	+32·1	+64·9
71·369 C	13	55	47	199	239·1	−3·9	+32·1	+76·0
Means ...	...	...	54	293	243·7	...	+32·6	...

Group 11845.

Mar. 5–10. A small stream.

d					°	°	°	°
64·458 G	7	18	4	10	260·7	0·0	+16·9	+ 6·6
65·407 G	9	46	5	28	265·9	+5·2	+17·0	+24·3
66·376 G	44	200	31	139	265·6	+5·0	+17·5	+36·8
67·367 C	55	240	47	206	265·0	+4·4	+17·3	+49·2
68·389 C	44	179	55	226	264·7	+4·1	+17·2	+62·4
69·389 G	13	70	37	208	266·1	+5·6	+16·8	+77·0
Means ...	...	...	30	136	264·7	...	+17·1	...

Group 11850.

Mar. 9–15. A regular spot followed by a small cluster which has disappeared by Mar. 12.

68·389 C	23	55	14	33	181·1	0·0	+19·0	−21·2
69·389 G	53	246	30	138	183·5	+2·5	+19·0	− 5·6
70·409 C	51	234	29	133	184·5	+3·6	+19·6	+ 8·8
71·369 C	30	155	18	95	184·8	+4·0	+19·6	+21·7
72·397 C	23	141	16	96	184·0	+3·3	+19·3	+34·5
73·422 G	20	31	17	26	183·1	+2·5	+19·0	+47·1
74·402 C	2	4	2	5	182·6	+2·0	+18·8	+59·5
Means ...	...	...	18	75	183·4	...	+19·2	...

Group 11851.

Mar. 10–17. A group of small unstable spots.

69·389 G	4	18	8	35	112·1	0·0	−21·0	−77·0
70·409 C	10	44	12	47	111·7	−0·2	−21·6	−64·0
71·369 C	12	49	10	41	109·8	−2·0	−21·3	−53·3
72·397 C	25	81	17	55	109·3	−2·3	−21·1	−40·2
73·422 G	26	71	14	40	111·8	+0·3	−21·2	−24·2
74·402 C	17	51	9	26	112·2	+0·9	−21·2	−10·9
75·500 G	7	31	4	16	112·3	+1·1	−21·2	+ 3·7
76·494 G	2	4	1	2	112·1	+1·1	−21·0	+16·6
Means ...	...	...	9	33	111·4	...	−21·3	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11852.

Mar. 10–23. A stream of normal type. The leader spot, *a*, develops somewhat irregularly ; the follower, *b*, is exceptionally long lived.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
69·389 G	22	77	68	238	105·7	...	−32·0	−83·4
70·409 C	57	249	78	341	107·4	0·0	−31·3	−68·3
71·369 C	98	517	90	487	107·1	+0·2	−30·4	−56·0
72·397 C	137	829	100	603	107·8	+1·4	−30·5	−41·7
73·422 G	158	793	97	490	106·8	+0·9	−30·5	−29·2
74·402 C	138	783	78	445	106·2	+0·7	−30·4	−16·9
75·500 G	159	825	87	451	107·2	+2·3	−30·3	− 1·4
76·494 G	145	751	80	417	106·5	+2·0	−30·5	+11·0
77·436 G	139	742	81	435	105·3	+1·3	−30·5	+22·2
78·523 G	95	572	64	385	105·8	+2·3	−30·5	+37·0
79·601 G	69	420	59	348	104·2	+1·3	−31·0	+49·7
80·451 G	49	305	53	326	103·6	+1·1	−30·9	+60·3
81·475 G	31	228	53	420	103·7	+1·6	−30·7	+73·9
82·408 G	18	66	(38	141	95·8	...	−32·1)	+78·3
Means ...	...	...	77	429	106·0	...	−30·6	...

Spot *a*.

72·397 C	60	379	41	258	110·2	0·0	−29·3	−39·3
73·422 G	81	393	48	235	110·8	+1·1	−29·3	−25·2
74·402 C	68	400	37	220	110·2	+0·9	−29·5	−12·9
75·500 G	95	541	51	292	110·3	+1·5	−29·5	+ 1·7
76·494 G	79	436	44	244	109·9	+1·5	−29·5	+14·4
77·436 G	66	405	40	243	109·5	+1·5	−29·4	+26·4
78·523 G	60	347	42	243	109·4	+1·9	−29·5	+40·6
79·601 G	49	253	44	224	108·8	+1·8	−29·6	+54·3
80·451 G	31	181	37	214	108·3	+1·6	−29·6	+65·0
81·475 G	13	124	30	285	109·2	+3·0	−29·5	+79·4

Spot *b*.

69·389 G	18	64	59	210	105·0	...	−32·3	−84·1
70·409 C	40	168	58	245	104·9	0·0	−32·2	−70·8
71·369 C	34	215	34	217	103·8	−0·6	−32·3	−59·3
72·397 C	43	273	33	210	103·1	−0·7	−32·3	−46·4
73·422 G	40	282	26	183	102·3	−1·0	−32·2	−33·7
74·402 C	53	294	31	173	101·5	−1·2	−32·2	−21·6
75·500 G	57	255	32	143	101·1	−1·0	−32·1	− 7·5
76·494 G	48	253	26	139	100·3	−1·3	−32·1	+ 4·8
77·436 G	44	251	25	143	99·7	−1·4	−32·0	+16·6
78·523 G	35	225	22	142	99·3	−1·2	−31·9	+30·5
79·601 G	20	168	15	124	98·3	−1·6	−32·1	+43·8
80·451 G	18	124	16	112	97·6	−1·8	−32·1	+54·3
81·475 G	18	104	23	135	97·4	−1·5	−32·2	+67·6
82·408 G	18	66	38	141	95·8	−2·6	−32·1	+78·3

Group 11855.

Mar. 13–18. A short-lived group that commences with quite definite spots which become small nebulous markings after Mar. 15.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
72·397 C	2	11	2	13	89·1	0·0	+15·1	−60·4
73·422 G	22	106	18	85	89·4	+0·3	+14·9	−46·6
74·402 C	53	188	35	122	89·5	+0·4	+15·1	−33·6
75·500 G	49	198	28	114	89·9	+0·8	+15·2	−18·7
76·494 G	22	116	12	63	90·4	+1·2	+14·3	− 5·1
77·436 G	9	35	5	19	89·0	−0·2	+15·9	+ 5·9
Means ...	...	...	17	69	89·6	...	+15·1	...

Group 11856.

Mar. 15–25. Intermittent ; a single spot not seen on Mar. 18, 19, 20 and 23.

74·402 C	0	8	0	8	66·8	0·0	+16·6	−56·3
75·500 G	4	24	3	18	65·6	−1·1	+17·0	−43·0
76·494 G	4	9	3	6	64·7	−2·0	+17·4	−30·8
77·436 G	0	0	0	0	...	...	...	...
78·523 G	0	0	0	0	...	...	...	...
79·601 G	0	0	0	0	...	...	...	...
80·451 G	9	13	5	8	66·1	−0·3	+18·6	+22·8
81·475 G	4	27	3	19	67·0	+0·7	+19·1	+37·2
82·408 G	0	0	0	0	...	...	...	...
83·389 G	4	11	5	15	67·7	+1·5	+20·3	+63·1
84·401 C	0	4	0	13	68·8	+2·7	+20·1	+77·6
Means ...	...	...	2	8	66·7	...	+18·4	...

Group 11860.

Mar. 18–25. A stream of feeble development.

77·436 G	13	37	7	22	49·7	0·0	− 8·2	−33·4
78·523 G	58	163	30	86	50·0	+0·2	− 8·5	−18·8
79·601 G	28	122	15	61	50·4	+0·4	− 8·6	− 4·1
80·451 G	75	230	39	116	50·7	+0·6	− 8·3	+ 7·4
81·475 G	62	289	33	155	51·1	+0·9	− 8·2	+21·3
82·408 G	62	173	37	103	51·6	+1·3	− 8·3	+34·1
83·389 G	14	42	11	32	52·2	+1·7	− 8·5	+47·6
84·401 C	2	4	2	4	48·7	−1·9	− 8·2	+57·5
Means ...	...	...	22	72	50·6	...	− 8·4	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11862.

Mar. 19–29. A single spot.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
78·523 G	4	20	13	63	346·6	...	−15·1	−82·2
79·601 G	13	31	16	39	346·8	0·0	−15·2	−67·7
80·451 G	13	57	12	51	346·5	−0·3	−14·8	−56·8
81·475 G	13	75	9	51	346·6	−0·2	−14·5	−43·2
82·408 G	13	69	8	41	346·4	−0·5	−14·5	−31·1
83·389 G	22	75	12	40	346·8	−0·1	−14·4	−17·8
84·401 C	17	77	9	39	346·7	−0·2	−14·7	− 4·5
85·345 C	13	43	7	22	346·7	−0·2	−15·0	+ 7·9
86·375 G	7	20	4	11	346·8	−0·1	−15·0	+21·6
87·376 G	9	16	5	10	347·0	+0·1	−15·1	+35·0
88·440 C	4	24	3	18	346·4	−0·6	−15·4	+48·4
Means ...	...	...	8	32	346·7	...	−14·9	...

Group 11863.

Mar. 19–Apr. 1. A regular spot, *a*, followed by unstable companions. On Mar. 28, *a* is elongated and afterwards breaks up into three portions.

78·523 G	11	49	(42	187	344·3	...	−17·7)	−84·5
79·601 G	40	254	58	376	343·0	0·0	−17·1	−71·5
80·451 G	77	442	77	455	342·2	−0·7	−17·2	−61·1
81·475 G	86	446	63	328	342·7	−0·2	−17·5	−47·1
82·408 G	79	429	48	260	343·3	+0·5	−18·0	−34·2
83·389 G	66	430	36	232	344·6	+1·8	−18·8	−20·0
84·401 C	81	452	41	232	344·1	+1·4	−18·8	− 7·1
85·345 C	84	486	43	248	342·7	+0·1	−18·4	+ 3·9
86·375 G	107	563	58	302	343·0	+0·4	−18·4	+17·8
87·376 G	102	490	61	293	343·6	+1·1	−18·3	+31·6
88·440 C	39	340	28	245	343·4	+0·9	−18·2	+45·4
89·457 G	40	182	38	175	343·6	+1·2	−18·2	+59·0
90·423 C	17	80	26	124	344·2	+1·9	−18·3	+72·4
91·327 C	4	9	(11	25	341·0	...	−19·7)	+81·1
Means ...	...	...	48	272	343·4	...	−18·1	...

Spot *a*.

78·523 G	11	49	42	187	344·3	...	−17·7	−84·5
79·601 G	27	155	37	214	344·6	0·0	−18·1	−69·9
80·451 G	55	256	52	243	344·5	0·0	−18·1	−58·8
81·475 G	55	305	39	217	344·8	+0·3	−18·4	−45·0
82·408 G	66	354	40	212	344·6	+0·2	−18·5	−32·9
83·389 G	64	417	35	225	344·6	+0·3	−18·8	−20·0
84·401 C	73	419	37	214	344·4	+0·1	−18·8	− 6·8
85·345 C	71	428	36	218	344·2	0·0	−18·9	+ 5·4
86·375 G	89	448	48	242	343·8	−0·3	−18·6	+18·6
87·376 G	93	457	56	274	343·7	−0·4	−18·4	+31·7
88·440 C	39	340	28	245	343·4	−0·6	−18·2	+45·4
89·457 G	40	182	38	175	343·6	−0·3	−18·2	+59·0
90·423 C	17	80	26	124	344·2	+0·3	−18·3	+72·4

Group 11867.

Mar. 25–Apr. 5. A stream that lengthens considerably. The follower, *b*, becomes the largest component, but after a brief maximum, it breaks up and dies out as a cluster of tiny spots.

d					°	°	°	°
84·401 C	6	18	6	20	286·4	0·0	−22·2	−64·8
85·345 C	60	415	51	364	283·7	−2·5	−24·7	−55·1
86·375 G	125	697	86	482	283·5	−2·4	−25·0	−41·7
87·376 G	147	822	88	490	284·2	−1·4	−25·0	−27·8
88·440 C	101	697	54	379	283·7	−1·7	−25·1	−14·3
89·457 G	113	577	59	305	285·0	−0·1	−24·9	+ 0·4
90·423 C	93	662	50	357	285·5	+0·6	−24·3	+13·7
91·327 C	125	564	73	332	285·2	+0·6	−24·3	+25·3
92·110 K	81	344	53	233	287·8	+3·4	−24·6	+38·2
93·413 C	24	116	23	115	291·5	+7·4	−24·3	+59·1
94·342 C	11	52	17	79	291·7	+7·8	−23·8	+71·6
95·142 K	6	17	21	58	293·1	...	−24·0	+83·6
Means ...	...	...	51	287	286·2	...	−24·4	...

Spot *a*.

86·375 G	36	133	23	84	290·9	0·0	−23·6	−35·2
87·376 G	40	249	22	139	290·9	+0·2	−23·1	−21·1
88·440 C	43	258	22	134	291·4	+1·0	−23·0	− 6·6
89·457 G	78	249	41	132	292·0	+1·8	−23·1	+ 7·4
90·423 C	39	228	21	125	291·7	+1·7	−23·1	+19·9
91·327 C	37	198	23	121	291·9	+2·1	−23·8	+32·0
92·110 K	52	261	36	183	291·9	+2·3	−23·5	+42·3
93·413 C	22	112	22	112	292·2	+2·9	−24·1	+59·8
94·342 C	11	52	17	79	291·7	+2·6	−23·8	+71·6
95·142 K	6	17	21	58	293·1	...	−24·0	+83·6

Spot *b*.

85·345 C	34	278	31	252	282·5	0·0	−25·3	−56·3
86·375 G	62	435	45	313	281·1	−1·1	−25·8	−44·1
87·376 G	87	466	54	289	280·2	−1·7	−26·3	−31·8
88·440 C	52	400	29	224	279·6	−2·0	−26·2	−18·4
89·457 G	31	306	16	162	278·6	−2·6	−26·7	− 6·0
90·423 C	26	301	14	160	278·0	−2·9	−26·2	+ 6·2
91·327 C	49	181	27	101	277·6	−3·1	−26·0	+17·7
92·110 K	29	83	17	50	277·1	−3·3	−26·3	+27·5
93·413 C	2	4	1	3	276·4	−3·6	−24·5	+44·0

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11868.

Mar. 26–Apr. 6. A stream of common type. The leader, a regular spot on Mar. 29, becomes elongated in a longitudinal direction and breaks up after Apr. 2, the preceding portion continuing as a small regular spot.

Date U.T. Place.	Projected Area: Whole	Projected Area: Umbræ	Corrected Area: Whole	Corrected Area: Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
85·345 C	10	26	21	52	262·2	0·0	−14·7	−76·6
86·375 G	47	162	52	181	261·5	−0·7	−14·4	−63·7
87·376 G	63	313	48	240	262·7	+0·5	−14·8	−49·3
88·440 C	51	316	31	192	264·4	+2·2	−15·1	−33·6
89·457 G	115	459	62	246	265·4	+3·2	−15·2	−19·2
90·423 C	65	383	34	196	267·3	+5·1	−15·3	− 4·5
91·327 C	83	462	42	236	268·8	+6·6	−15·7	+ 8·9
92·110 K	79	400	43	216	269·4	+7·2	−15·9	+19·8
93·413 C	34	187	22	119	269·2	+6·9	−16·0	+36·8
94·342 C	34	194	25	147	268·7	+6·4	−16·0	+48·6
95·142 K	24	95	23	95	269·7	+7·4	−15·7	+60·2
96·395 G	8	38	16	75	269·6	+7·3	−15·5	+76·6
Means ...	...	...	35	166	266·6	...	−15·4	...

Group 11870

Mar. 27–Apr. 2. A smallish stream in which, as usual, the leader is the longest-lived component.

86·375 G	8	26	4	13	328·2	0·0	−13·9	+ 3·0
87·376 G	40	135	21	71	329·4	+1·2	−14·2	+17·4
88·440 C	58	307	35	183	330·1	+1·8	−14·8	+32·1
89·457 G	60	236	44	171	331·0	+2·7	−14·4	+46·4
90·423 C	24	155	24	153	332·0	+3·7	−14·0	+60·2
91·327 C	9	52	15	89	334·0	+5·6	−13·2	+74·1
92·110 K	2	4	5	10	329·4	+1·0	−14·7	+79·8
Means ...	...	...	21	99	330·6	...	−14·2	...

Group 11871.

Mar. 27–Apr. 2. A tiny spot on Mar. 27, after which nothing is seen until Apr. 1 when a group appears near the west limb.

86·375 G	4	9	3	7	310·1	0·0	+37·8	−15·1
87·376 G	0	0	0	0	...	...	...	...
88·440 C	0	0	0	0	...	...	...	...
89·457 G	0	0	0	0	...	...	...	...
90·423 C	0	0	0	0	...	...	...	...
91·327 C	13	54	15	60	309·7	+3·2	+36·0	+49·8
92·110 K	16	81	23	121	309·4	+3·5	+35·9	+59·8
Means ...	...	...	6	27	309·7	...	+36·6	...

Group 11872.

Mar. 30–Apr. 7. A small stream whose axis is highly inclined (about 45°) to the direction of the sun's equator.

89·457 G	9	27	6	17	256·9	0·0	+19·1	−27·7
90·423 C	56	288	33	166	257·1	+0·3	+19·6	−14·7
91·327 C	62	353	35	198	256·6	−0·1	+19·4	− 3·3
92·110 K	41	335	23	188	257·1	+0·5	+19·5	+ 7·5
93·413 C	67	358	41	219	255·5	−0·9	+19·9	+23·1
94·342 C	47	290	33	198	254·8	−1·5	+20·4	+34·7
95·142 K	22	100	18	81	255·6	−0·6	+19·6	+46·1
96·395 G	4	13	5	16	253·7	−2·4	+22·3	+60·7
97·492 G	0	2	0	6	253·7	−2·2	+21·7	+75·2
Means ...	...	...	22	121	255·7	...	+20·2	...

Group 11873.

Apr. 1–7. A small single spot seen on each day except Apr. 2, 4 and 5, in an area of general disturbance marked by bright faculæ.

91·327 C	4	4	3	3	225·9	0·0	+33·4	−34·0
92·110 K	0	0	0	0	...	...	...	...
93·413 C	4	9	3	6	227·8	+3·1	+31·5	− 4·6
94·342 C	0	0	0	0	...	...	...	...
95·142 K	0	0	0	0	...	...	...	...
96·395 G	11	38	8	29	223·5	+0·6	+33·8	+30·5
97·492 G	2	9	2	9	224·2	+2·0	+34·9	+45·7
Means ...	...	...	2	7	225·4	...	+33·4	...

Group 11875.

Apr. 2–8. A small regular spot that breaks up on Apr. 6.

92·110 K	8	21	14	38	178·7	0·0	+17·5	−70·9
93·413 C	15	103	13	91	181·5	+2·9	+16·9	−50·9
94·342 C	17	138	12	97	181·6	+3·0	+16·7	−38·5
95·142 K	25	108	16	67	182·0	+3·4	+17·0	−27·5
96·395 G	18	112	10	63	181·8	+3·3	+17·2	−11·2
97·492 G	13	31	7	17	181·8	+3·3	+17·8	+ 3·3
98·598 G	9	18	5	10	182·5	+4·1	+19·1	+18·5
Means ...	...	...	11	55	181·4	...	+17·5	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11876.

Apr. 3–14. A stream, complex in character, which develops immediately following Group 11875.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
93·413 C	15	62	17	70	173·3	0·0	+19·9	−59·1
94·342 C	26	60	22	50	172·6	−0·6	+20·2	−47·5
95·142 K	67	345	46	238	174·1	+1·0	+19·6	−35·4
96·395 G	202	966	119	571	173·8	+0·9	+19·7	−19·2
97·492 G	213	1577	119	883	172·9	+0·1	+19·7	− 5·6
98·598 G	250	1491	140	841	171·6	−1·1	+20·2	+ 7·6
99·526 G	192	1557	114	928	171·2	−1·4	+20·7	+19·5
100·485 G	197	1234	132	830	171·3	−1·2	+20·6	+32·3
101·424 G	143	1129	113	891	170·5	−1·8	+20·5	+43·9
102·395 G	89	690	93	741	171·3	−0·9	+20·2	+57·5
103·357 C	47	191	81	338	170·3	−1·8	+21·0	+69·2
104·372 G	2	9	(5	24	163·7	...	+21·7)	+76·0
Means ...	...	...	91	580	172·1	...	+20·2	...

Group 11879.

Apr. 6–17. A stream of normal type in which the follower, *b*, disappears after Apr. 11, and the leader, *a*, breaks up into a cluster between Apr. 14 and 15.

96·395 G	29	83	63	177	117·8	0·0	+12·4	−75·2
97·492 G	42	291	47	322	118·0	+0·3	+12·5	−60·5
98·598 G	98	343	72	259	119·3	+1·7	+12·2	−44·7
99·526 G	81	383	51	241	119·2	+1·6	+12·6	−32·5
100·485 G	67	416	37	232	120·9	+3·4	+12·3	−18·1
101·424 G	83	439	44	233	122·4	+5·0	+12·1	− 4·2
102·395 G	72	390	38	207	123·2	+5·8	+12·0	+ 9·4
103·357 C	74	373	42	213	123·5	+6·2	+12·1	+22·4
104·372 G	58	323	38	213	124·1	+6·9	+12·1	+36·4
105·420 G	34	122	28	100	123·4	+6·3	+11·9	+49·5
106·604 G	18	52	23	67	123·4	+6·4	+12·0	+65·2
107·390 G	4	32	11	85	125·7	+8·7	+11·7	+77·8
Means ...	...	...	41	196	121·7	...	+12·2	...

Spot *a*.

96·395 G	18	54	35	104	119·9	0·0	+12·2	−73·1
97·492 G	22	179	22	181	120·7	+0·9	+12·2	−57·8
98·598 G	58	175	41	124	122·0	+2·3	+12·5	−42·0
99·526 G	54	253	33	154	122·4	+2·7	+12·4	−29·3
100·485 G	58	349	32	192	122·8	+3·2	+12·1	−16·2
101·424 G	74	403	39	214	123·1	+3·6	+11·9	− 3·5
102·395 G	72	390	38	207	123·2	+3·7	+12·0	+ 9·4
103·357 C	74	373	42	213	123·5	+4·1	+12·1	+22·4
104·372 G	58	323	38	213	124·1	+4·8	+12·1	+36·4
105·420 G	34	122	28	100	123·4	+4·2	+11·9	+49·5
106·604 G	18	52	23	67	123·4	+4·3	+12·0	+65·2

Group 11879—*continued.*

Spot *b*.

96·395 G	11	29	28	73	116·1	0·0	+12·4	−76·9
97·492 G	20	112	25	141	114·2	−1·8	+12·7	−64·3
98·598 G	18	114	15	95	114·1	−1·8	+12·8	−49·9
99·526 G	27	130	18	87	114·0	−1·9	+13·2	−37·7
100·485 G	9	67	5	40	113·6	−2·2	+13·7	−25·4
101·424 G	9	36	5	19	113·8	−1·9	+13·7	−12·8

Group 11880.

Apr. 6–19. A stable regular spot with an occasional companion.

96·395 G	9	40	30	131	109·7	...	−31·3	−83·3
97·492 G	13	90	18	127	109·1	0·0	−31·2	−69·4
98·598 G	27	150	25	140	108·7	+0·1	−31·1	−55·3
99·526 G	45	229	34	172	108·1	0·0	−30·9	−43·6
100·485 G	36	215	23	138	107·5	−0·1	−30·7	−31·5
101·424 G	45	226	26	131	106·9	−0·3	−30·6	−19·7
102·395 G	43	242	24	136	106·2	−0·5	−30·5	− 7·6
103·357 C	52	241	29	133	105·6	−0·6	−30·9	+ 4·5
104·372 G	46	257	26	149	104·7	−1·0	−30·8	+17·0
105·420 G	29	196	19	125	104·1	−1·1	−30·9	+30·2
106·604 G	25	180	19	139	103·2	−1·4	−30·8	+45·0
107·390 G	29	157	27	146	102·9	−1·3	−30·9	+55·0
108·446 G	11	101	15	141	102·7	−1·0	−30·9	+68·8
109·391 G	7	32	19	88	102·2	...	−30·8	+80·8
Means ...	...	...	24	140	105·8	...	−30·8	...

Group 11881.

Apr. 7–15. A few small unstable spots in an extensive area of faculæ.

97·492 G	4	25	11	68	101·5	0·0	+16·9	−77·0
98·598 G	17	56	20	66	103·0	+1·5	+17·3	−61·0
99·526 G	15	47	14	42	100·3	−1·1	+17·2	−51·4
100·485 G	12	40	9	28	100·9	−0·5	+17·5	−38·1
101·424 G	8	23	4	13	102·7	+1·4	+17·3	−23·9
102·395 G	13	56	7	31	99·2	−2·1	+16·4	−14·6
103·357 C	18	52	11	33	100·1	−1·2	+16·5	− 1·0
104·372 G	4	20	2	11	96·6	−4·6	+20·1	+ 8·9
105·420 G	7	29	4	17	101·2	0·0	+16·1	+27·3
Means ...	...	...	9	34	100·6	...	+17·3	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936.—*continued.*

Group 11885.

Apr. 10–19. A small stream that is relatively long lived for its size.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Lati-tude.	Long. from C.M.
d					°	°	°	°
100·485 G	4	20	8	43	65·0	0·0	+16·0	−74·0
101·424 G	15	45	17	52	65·5	+0·5	+16·3	−61·1
102·395 G	22	123	19	101	65·2	+0·2	+16·0	−48·6
103·357 C	19	87	13	58	65·3	+0·4	+16·1	−35·8
104·372 G	22	87	12	51	65·6	+0·7	+16·4	−22·1
105·420 G	22	54	12	29	65·8	+0·9	+16·5	− 8·1
106·604 G	18	72	10	40	66·6	+1·8	+17·0	+ 8·4
107·390 G	14	25	8	14	67·1	+2·3	+17·2	+19·2
108·446 G	7	11	5	7	66·7	+1·9	+17·4	+32·8
109·391 G	2	9	2	7	66·2	+1·4	+17·7	+44·8
Means ...	...	...	11	40	65·9	...	+16·7	...

Group 11886.

Apr. 10–22. A small spot with a companion on Apr. 14. The group is not seen on Apr. 18–21.

100·485 G	4	11	10	27	59·5	0·0	−18·1	−79·5
101·424 G	4	20	5	25	59·1	−0·3	−18·2	−67·5
102·395 G	9	27	8	24	58·2	−1·2	−18·3	−55·6
103·357 C	9	15	6	10	58·0	−1·3	−18·2	−43·1
104·372 G	20	43	12	26	55·8	−3·4	−19·1	−31·9
105·420 G	27	47	15	26	56·4	−2·7	−18·7	−17·5
106·604 G	18	36	9	19	54·8	−4·2	−18·5	− 3·4
107·390 G	9	18	5	9	56·7	−2·3	−18·1	+ 8·8
108·446 G	0	0	0	0	...	...	...	...
109·391 G	0	0	0	0	...	...	...	...
110·736 G	0	0	0	0	...	...	...	...
111·365 C	0	0	0	0	...	...	...	...
112·348 G	7	32	11	48	53·5	−5·1	−21·3	+71·1
Means ...	...	...	6	16	56·9	...	−18·7	...

Group 11887.

Apr. 11–19. A stream of unstable spots.

101·424 G	2	9	4	19	51·8	0·0	+10·3	−74·8
102·395 G	28	69	30	76	53·4	+1·5	+10·2	−60·4
103·357 C	46	202	36	155	54·2	+2·2	+10·6	−46·9
104·372 G	91	466	57	294	54·2	+2·1	+11·5	−33·5
105·420 G	89	272	49	150	55·7	+3·5	+11·1	−18·2
106·604 G	39	194	20	101	59·3	+7·0	+11·1	+ 1·1
107·390 G	18	126	10	67	59·8	+7·4	+11·0	+11·9
108·446 G	18	72	11	42	61·4	+8·9	+10·6	+27·5
109·391 G	11	41	7	28	61·1	+8·5	+10·5	+39·7
Means ...	...	...	25	104	56·8	...	+10·8	...

Group 11888.

Apr. 15–27. A stream of simple formation, consisting of a large regular spot, *a*, with a relatively small follower, *b*, 10° distant in longitude.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Lati-tude.	Long. from C.M.
d					°	°	°	°
105·420 G	14	58	(48	199	351·0	...	−19·3)	−82·9
106·604 G	56	263	80	356	349·5	0·0	−19·7	−68·7
107·390 G	68	412	65	388	350·0	+0·6	−19·6	−57·9
108·446 G	88	475	62	332	350·3	+1·0	−19·4	−43·6
109·391 G	108	477	64	280	351·2	+1·9	−19·1	−30·2
110·736 G	120	558	63	292	352·2	+3·1	−19·0	−11·5
111·365 C	126	525	66	273	351·8	+2·7	−19·0	− 3·6
112·348 G	90	464	47	241	352·5	+3·5	−18·7	+10·1
113·406 G	81	416	45	233	351·9	+3·0	−18·5	+23·5
114·394 G	54	386	35	247	351·7	+2·9	−18·4	+36·4
115·397 C	57	320	44	250	351·3	+2·6	−18·6	+49·2
116·369 G	27	231	29	247	351·2	+2·5	−18·7	+62·0
117·337 G	18	136	33	252	351·5	+2·9	−18·9	+75·0
Means ...	...	...	53	283	351·3	...	−19·0	...

Spot *a*.

105·420 G	14	58	48	199	351·0	...	−19·3	−82·9
106·604 G	40	225	51	288	350·7	0·0	−19·7	−67·5
107·390 G	54	358	49	326	351·6	+1·0	−19·6	−56·3
108·446 G	68	400	46	272	352·1	+1·6	−19·1	−41·8
109·391 G	90	423	52	245	352·7	+2·2	−18·9	−28·7
110·736 G	104	513	54	267	353·1	+2·7	−18·9	−10·6
111·365 C	109	477	57	248	352·8	+2·5	−18·7	− 2·6
112·348 G	86	446	45	232	352·6	+2·4	−18·7	+10·2
113·406 G	81	416	45	233	351·9	+1·8	−18·5	+23·5
114·394 G	54	386	35	247	351·7	+1·6	−18·4	+36·4
115·397 C	57	320	44	250	351·3	+1·3	−18·6	+49·2
116·369 G	27	231	29	247	351·2	+1·3	−18·7	+62·0
117·337 G	18	136	33	252	351·5	+1·7	−18·9	+75·0

Spot *b*.

106·604 G	16	38	29	68	343·4	0·0	−19·8	−74·8
107·390 G	14	54	16	62	343·3	0·0	−20·2	−64·6
108·446 G	18	68	15	55	342·9	−0·3	−19·4	−51·0
109·391 G	14	45	9	29	343·0	−0·1	−19·9	−38·4
110·736 G	16	45	9	25	343·0	+0·1	−20·3	−20·7
111·365 C	17	48	9	25	343·2	+0·3	−20·0	−12·2
112·348 G	4	18	2	9	343·4	+0·7	−20·1	+ 1·0

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11890.

Apr. 16–28. A small but stable regular spot south of Group 11891.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
106·604 G	14	54	30	115	340·9	0·0	−14·4	−77·3
107·390 G	18	99	23	125	340·6	−0·4	−13·9	−67·3
108·446 G	36	155	30	129	340·6	−0·4	−14·1	−53·3
109·391 G	36	169	24	112	340·6	−0·4	−14·0	−40·8
110·736 G	32	160	18	88	340·4	−0·7	−14·1	−23·3
111·365 C	39	179	20	93	340·2	−0·9	−14·1	−15·2
112·348 G	36	171	18	87	340·2	−0·9	−13·9	− 2·2
113·406 G	32	113	17	59	339·7	−1·5	−13·9	+11·3
114·394 G	20	72	11	40	339·6	−1·6	−13·9	+24·3
115·397 C	13	83	8	52	339·4	−1·8	−13·8	+37·3
116·369 G	9	50	7	40	339·6	−1·7	−13·9	+50·4
117·337 G	7	29	8	32	339·9	−1·4	−14·1	+63·4
118·327 G	2	9	4	18	340·0	−1·3	−14·4	+76·6
Means ...	...	...	17	76	340·1	...	−14·0	...

Group 11891.

Apr. 16–27. An active stream in which the components are in continual change.

106·604 G	9	47	21	108	340·0	0·0	−11·5	−78·2
107·390 G	23	149	32	200	339·5	−0·6	−11·0	−68·4
108·446 G	59	274	52	232	339·8	−0·4	−11·0	−54·1
109·391 G	122	646	83	444	338·2	−2·1	−11·2	−43·2
110·736 G	152	588	83	322	340·0	− 0·4	−11·3	−23·7
111·365 C	139	822	72	428	340·5	+0·1	−11·1	−14·9
112·348 G	95	629	47	315	340·9	+0·4	−11·4	− 1·5
113·406 G	105	811	54	422	342·3	+1·7	−10·8	+13·9
114·394 G	91	621	51	348	342·2	+1·5	−11·2	+26·9
115·397 C	92	443	61	292	342·5	+1·7	−11·2	+40·4
116·369 G	45	208	37	173	342·1	+1·2	−11·0	+52·9
117·337 G	14	45	16	51	340·9	−0·1	−11·0	+64·4
Means ...	...	...	51	278	340·7	...	−11·1	...

Group 11895.

Apr. 20–30. One or two ephemeral spots seen on Apr. 20 and 21 in an area of faculæ. The group revives on Apr. 26.

110·736 G	6	18	10	27	294·7	0·0	+12·0	−69·0
111·365 C	2	9	2	10	293·1	−1·6	+12·0	−62·3
112·348 G	0	0	0	0	...	...	...	...
113·406 G	0	0	0	0	...	...	...	...
114·394 G	0	0	0	0	...	...	...	...
115·397 C	0	0	0	0	...	...	...	...
116·369 G	9	27	5	14	289·0	−6·1	+12·5	− 0·2
117·337 G	14	70	8	38	292·6	−2·6	+11·5	+16·1
118·327 G	23	38	14	22	292·0	−3·3	+11·9	+28·6
119·350 G	9	18	7	13	294·4	−1·0	+11·8	+44·5
120·335 G	7	23	7	22	293·0	−2·5	+11·8	+56·2
Means ...	...	...	5	13	292·7	...	+11·9	...

Group 11897.

Apr. 23–28. A small regular spot with a companion on Apr. 27 and 28.

d					°	°	°	°
113·406 G	7	23	14	46	260·6	0·0	+37·0	−67·8
114·394 G	14	72	17	86	261·3	+1·4	+36·8	−54·0
115·397 C	11	31	10	28	261·1	+2·0	+36·6	−41·0
116·369 G	5	9	4	7	259·9	+1·5	+36·8	−29·3
117·337 G	7	23	5	16	256·2	−1·5	+36·9	−20·3
118·327 G	11	34	7	23	255·1	−1·8	+37·2	− 8·3
Means ...	...	...	10	34	259·0	...	+36·9	...

Group 11899.

Apr. 25–29. A stream of normal type.

115·397 C	13	48	9	30	333·7	0·0	−27·3	+31·6
116·369 G	63	235	48	179	334·7	+1·3	−27·0	+45·5
117·337 G	41	343	42	352	335·3	+2·3	−27·1	+58·8
118·327 G	57	296	96	495	334·9	+2·2	−27·1	+71·5
119·350 G	9	45	(23	117	320·4	...	−26·7)	+79·5
Means ...	...	...	49	264	334·6	...	−27·1	...

Group 11901.

Apr. 28–May 8. A pair of spots of which the follower remains on May 1. One or two small new spots appear on May 5.

118·327 G	5	18	14	51	182·7	...	−17·8	−80·7
119·350 G	23	58	37	89	178·5	0·0	−18·8	−71·4
120·335 G	18	50	17	50	177·9	−0·5	−19·0	−58·9
121·401 C	15	110	11	82	176·0	−2·3	−19·8	−46·8
122·374 C	13	59	8	37	175·6	−2·6	−20·0	−34·3
123·571 G	14	48	8	26	175·6	−2·5	−19·3	−18·5
124·374 G	14	50	7	26	175·6	−2·4	−20·1	− 7·9
125·562 G	11	64	6	33	176·9	−1·0	−18·2	+ 9·2
126·420 G	11	50	6	28	178·2	+0·3	−18·5	+21·8
127·564 G	2	5	1	3	177·2	−0·6	−18·7	+35·9
128·343 C	2	4	2	3	177·2	−0·5	−19·4	+46·2
Means ...	...	...	10	38	176·9	...	−19·2	...

Group 11902.

Apr. 30–May 6. A stream of small unstable spots.

120·335 G	7	14	4	9	205·5	0·0	+17·1	−31·3
121·401 C	36	81	20	45	206·8	+1·3	+16·6	−16·0
122·374 C	18	60	10	31	207·3	+1·9	+16·3	− 2·6
123·571 G	18	95	10	52	208·0	+2·6	+17·0	+13·9
124·374 G	7	18	4	11	206·4	+1·0	+18·0	+22·9
125·562 G	18	91	13	64	207·3	+2·0	+17·6	+39·6
126·420 G	14	82	12	72	208·4	+3·1	+16·7	+52·0
Means ...	...	...	10	41	207·1	...	+17·0	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued*.

Group 11905.

May 4–13. A group of small variable spots.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
124·374 G	7	34	7	35	124·8	0·0	+12·8	−58·7
125·562 G	16	89	11	63	125·5	+0·7	+13·8	−42·2
126·420 G	18	150	11	92	125·9	+1·0	+13·7	−30·5
127·564 G	9	32	5	17	125·9	+1·0	+13·7	−15·4
128·343 C	13	92	7	49	126·2	+1·3	+14·4	− 4·8
129·434 C	13	101	7	54	124·9	−0·1	+14·4	+ 8·4
130·657 G	5	14	3	8	125·8	+0·8	+14·6	+25·4
131·408 G	0	0	0	0	...	...	...	...
132·622 G	0	0	0	0	...	...	...	...
133·555 G	2	7	2	8	126·0	+0·9	+15·5	+63·9
Means ...	...	...	5	33	125·6	...	+14·1	...

Group 11909.

May 7–12. A small stream.

127·564 G	23	118	12	61	138·6	0·0	+12·4	− 2·7
128·343 C	31	123	16	64	138·3	−0·4	+12·0	+ 7·3
129·434 C	51	198	28	111	138·5	−0·2	+12·4	+22·0
130·657 G	21	68	14	46	139·3	+0·5	+12·4	+38·9
131·408 G	14	59	11	47	139·9	+1·0	+11·8	+49·4
132·622 G	5	9	7	12	140·9	+1·9	+11·9	+66·5
Means ...	...	...	15	57	139·2	...	+12·2	...

Group 11910.

May 7–18. A stream, in which the leader—somewhat composite in structure—predominates throughout.

127·564 G	14	57	36	143	62·2	0·0	−25·4	−79·1
128·343 C	31	145	45	211	61·4	−0·6	−25·5	−69·6
129·434 C	45	240	43	225	60·5	−1·2	−24·8	−56·0
130·657 G	87	456	61	323	59·9	−1·5	−25·1	−40·5
131·408 G	110	583	69	368	59·4	−1·8	−24·9	−31·1
132·622 G	89	557	50	310	59·4	−1·5	−24·8	−15·0
133·555 G	99	459	54	249	59·4	−1·2	−24·7	− 2·7
134·431 C	66	350	36	192	59·4	−1·0	−24·9	+ 8·9
135·462 G	58	258	34	149	59·3	−0·8	−24·1	+22·5
136·353 G	47	183	30	118	58·9	−1·0	−23·8	+33·9
137·461 G	9	32	7	26	59·1	−0·5	−23·6	+48·7
138·335 G	2	5	2	5	58·8	−0·6	−24·3	+60·0
Means ...	...	...	39	193	59·8	...	−24·7	...

Group 11913.

May 11–18. A small but persistent group.

d					°	°	°	°
131·408 G	5	9	3	6	63·9	0·0	+21·8	−26·6
132·622 G	9	46	5	25	64·9	+1·2	+20·7	− 9·5
133·555 G	9	43	5	24	65·7	+2·1	+20·9	+ 3·6
134·431 C	11	25	6	14	66·7	+3·2	+21·0	+16·2
135·462 G	2	5	1	3	68·9	+5·6	+20·7	+32·1
136·353 G	14	27	10	20	66·5	+3·3	+20·9	+41·5
137·461 G	12	46	12	46	66·7	+3·7	+21·2	+56·3
138·335 G	7	21	10	29	66·1	+3·2	+21·2	+67·3
Means ...	...	...	6	21	66·2	...	+21·0	...

Group 11916.

May 15–24. Intermittent: two spots with small companions that have died out by May 20. The area is again marked by tiny spots on May 22 and 24.

135·462 G	10	36	25	99	319·4	0·0	+18·7	−77·4
136·353 G	16	62	21	87	318·6	−0·7	+19·0	−66·4
137·461 G	10	46	9	39	320·6	+1·3	+18·1	−49·8
138·335 G	28	89	19	61	320·3	+1·1	+17·9	−38·5
139·336 G	9	46	5	28	318·5	−0·6	+18·4	−27·1
140·334 G	0	0	0	0	...	...	...	...
141·403 G	0	0	0	0	...	...	...	...
142·398 G	7	21	4	12	319·6	+0·7	+18·3	+14·5
143·421 G	0	0	0	0	...	...	...	...
144·377 G	2	9	1	7	322·2	+3·5	+19·7	+43·3
Means ...	...	...	8	33	319·9	...	+18·6	...

Group 11919.

May 21–27. A stream of small unstable spots.

141·403 G	9	46	5	25	301·6	0·0	−17·0	−16·7
142·398 G	14	41	7	21	302·2	+0·6	−16·3	− 2·9
143·421 G	37	114	20	60	301·8	+0·2	−16·9	+10·3
144·377 G	23	110	13	62	301·9	+0·4	−16·5	+23·0
145·428 G	23	124	15	81	302·3	+0·8	−16·5	+37·3
146·486 G	18	55	15	46	302·6	+1·1	−16·3	+51·6
147·611 G	7	14	9	20	304·7	+3·2	−16·1	+68·6
Means ...	...	...	12	45	302·4	...	−16·5	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11921.

May 22–28. A stream in which the follower is the larger and more symmetrical spot.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
142·398 G	5	18	3	9	293·6	0·0	+11·7	−11·5
143·421 G	2	7	1	4	295·9	+2·2	+11·1	+ 4·4
144·377 G	52	213	29	116	299·4	+5·6	+10·4	+20·5
145·428 G	119	593	75	369	299·0	+5·1	+10·4	+34·0
146·486 G	74	399	57	302	298·6	+4·6	+10·5	+47·6
147·611 G	43	227	48	255	298·6	+4·5	+10·6	+62·5
148·354 G	32	202	58	368	299·6	+5·4	+ 9·3	+73·3
Means ...	...	...	39	203	297·8	...	+10·6	...

Group 11922.

May 22–27. A small spot seen on May 22 and 25: a pair on May 27.

142·398 G	2	5	3	8	234·9	0·0	+16·2	−70·2
143·421 G	0	0	0	0	...	...	...	...
144·377 G	0	0	0	0	...	...	...	...
145·428 G	2	7	1	4	235·9	+1·0	+15·0	−29·1
146·486 G	0	0	0	0	...	...	...	...
147·611 G	5	41	3	21	237·1	+2·2	+14·9	+ 1·0
Means ...	...	...	1	6	236·0	...	+15·4	...

Group 11923.

May 23–29. A cluster or dwarf stream of small spots.

143·421 G	2	9	3	12	225·6	0·0	−22·8	−65·9
144·377 G	14	60	13	55	224·4	−1·0	−22·8	−54·5
145·428 G	14	64	10	45	223·7	−1·5	−23·1	−41·3
146·486 G	34	96	21	60	222·3	−2·6	−23·8	−28·7
147·611 G	11	80	6	44	223·2	−1·5	−23·1	−12·9
148·354 G	9	37	5	20	221·8	−2·7	−23·5	− 4·5
149·334 G	5	11	3	6	219·4	−4·9	−24·4	+ 6·1
Means ...	...	...	9	35	222·9	...	−23·4	...

Group 11927.

May 24–June 4. A spot, *a*, with double umbra, followed by tiny companions which increase considerably in size for a few days after May 29. *a* shows an unusually large drift forwards in longitude.

d					°	°	°	°
144·377 G	9	32	30	105	197·6	...	−16·4	−81·3
145·428 G	36	157	48	204	198·3	0·0	−16·3	−66·7
146·486 G	70	323	58	266	199·9	+1·6	−15·8	−51·1
147·611 G	60	296	37	184	202·0	+3·7	−15·0	−34·1
148·354 G	76	346	43	194	203·2	+4·9	−14·8	−23·1
149·334 G	85	422	45	220	204·3	+6·0	−15·2	− 9·0
150·603 G	84	464	44	242	202·9	+4·6	−15·7	+ 6·4
151·347 G	110	536	58	289	202·0	+3·7	−15·8	+15·3
152·374 G	76	474	45	284	202·7	+4·4	−15·7	+29·6
153·463 C	51	300	37	222	203·8	+5·5	−15·4	+45·1
154·377 G	46	238	44	228	203·7	+5·4	−15·4	+57·1
155·424 G	14	69	23	112	204·2	+5·9	−15·2	+71·5
Means ...	...	...	44	222	202·4	...	−15·5	...

Spot *a*.

144·377 G	9	32	30	105	197·6	...	−16·4	−81·3
145·428 G	32	147	41	188	198·6	0·0	−16·1	−66·4
146·486 G	60	298	49	244	200·2	+1·6	−15·7	−50·8
147·611 G	55	282	34	175	202·4	+3·8	−15·0	−33·7
148·354 G	69	330	39	185	203·2	+4·6	−14·8	−23·1
149·334 G	78	401	41	209	204·6	+6·0	−15·1	− 8·7
150·603 G	50	309	26	161	205·3	+6·7	−15·3	+ 8·8
151·347 G	46	270	25	148	205·8	+7·2	−15·5	+19·1
152·374 G	37	213	23	132	206·1	+7·5	−15·4	+33·0
153·463 C	27	164	21	126	206·3	+7·7	−15·5	+47·6
154·377 G	18	110	19	114	206·7	+8·1	−15·5	+60·1
155·424 G	7	27	14	52	207·1	+8·5	−15·6	+74·4

Group 11931.

May 28–June 7. A stream of changing spots.

148·354 G	18	76	53	222	146·3	...	−16·0	−80·0
149·334 G	48	384	69	570	144·3	0·0	−17·2	−69·0
150·603 G	105	645	88	555	144·5	+0·2	−17·3	−52·0
151·347 G	121	875	85	632	143·7	−0·5	−17·7	−43·0
152·374 G	104	897	62	542	143·4	−0·8	−17·5	−29·7
153·463 C	145	849	78	460	144·0	−0·2	−17·3	−14·7
154·377 G	101	642	53	336	144·8	+0·7	−17·0	− 1·8
155·424 G	69	412	37	221	145·9	+1·8	−17·2	+13·2
156·416 G	64	306	38	178	146·7	+2·6	−16·1	+27·1
157·392 G	19	90	12	61	145·9	+1·9	−15·6	+39·2
158·380 C	2	4	2	3	141·6	−2·4	−18·3	+48·0
Means ...	...	...	52	356	144·5	...	−17·1	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11938.

June 2–9. A stream of approximately normal type; the leader becomes a double spot on June 9, indicating a fresh spurt of activity.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
153·463 C	48	190	29	113	136·1	0·0	−24·3	−22·6
154·377 G	89	343	50	191	135·8	−0·1	−24·5	−10·8
155·424 G	144	854	79	470	137·3	+1·7	−24·4	+ 4·6
156·416 G	134	746	77	429	136·9	+1·5	−24·4	+17·3
157·392 G	120	502	77	325	137·8	+2·6	−24·2	+31·1
158·380 C	61	381	47	298	138·9	+4·0	−23·9	+45·3
159·329 G	90	633	96	654	139·2	+4·5	−23·3	+58·2
160·366 G	41	345	71	600	138·9	+4·5	−23·2	+71·6
Means ...	...	...	66	385	137·6	...	−24·0	...

Group 11939.

June 5–10. A small stream in which the following component is the last to disappear.

156·416 G	69	216	37	117	128·2	0·0	+19·9	+ 8·6
157·392 G	55	320	31	182	128·4	+0·3	+19·9	+21·7
158·380 C	38	200	25	131	129·7	+1·7	+19·8	+36·1
159·329 G	46	172	36	134	128·2	+0·3	+19·6	+47·2
160·366 G	23	94	23	94	125·3	−2·4	+20·4	+58·0
161·468 C	9	18	14	29	123·5	−4·1	+21·2	+70·8
Means ...	...	...	28	114	127·2	...	+20·1	...

Group 11941.

June 5–16. A stream of normal type; the leader, a small regular spot, alone remains after June 10.

156·416 G	2	5	3	8	48·3	0·0	−23·5	−71·3
157·392 G	9	44	10	51	45·2	−2·8	−24·5	−61·5
158·380 C	36	102	30	84	45·9	−1·9	−24·3	−47·7
159·329 G	79	326	53	218	47·1	−0·4	−24·2	−33·9
160·366 G	62	285	37	167	48·5	+1·2	−24·8	−18·8
161·468 C	55	259	30	143	48·4	+1·4	−24·8	− 4·3
162·457 G	46	193	26	108	49·1	+2·4	−25·0	+ 9·5
163·333 G	55	202	32	119	48·6	+2·1	−25·0	+20·6
164·381 C	18	76	12	51	48·2	+2·0	−25·0	+34·0
165·377 G	14	71	11	58	47·9	+2·0	−25·2	+46·9
166·415 G	5	21	6	24	47·6	+2·0	−25·0	+60·4
167·330 G	5	14	9	26	47·3	+1·9	−25·3	+72·2
Means ...	...	...	22	88	47·7	...	−24·7	...

Group 11945.

June 12–19. A small but persistent group.

d					°	°	°	°
163·333 G	9	23	6	16	347·6	0·0	+22·8	−40·4
164·381 C	18	56	11	34	347·1	−0·3	+22·6	−27·1
165·377 G	28	131	15	72	347·1	−0·1	+22·3	−13·9
166·415 G	9	64	5	35	346·0	−1·0	+22·8	− 1·2
167·330 G	18	94	10	52	345·4	−1·3	+23·3	+10·3
168·423 G	21	93	12	55	345·9	−0·6	+23·5	+25·2
169·488 G	5	18	4	13	349·8	+3·5	+23·8	+43·2
170·630 G	5	14	5	15	350·4	+4·4	+24·4	+58·9
Means ...	...	...	8	36	347·4	...	+23·2	...

Group 11947.

June 15–25. A small stream.

166·415 G	4	16	14	59	265·5	...	+27·6	−81·7
167·330 G	16	57	26	95	264·0	0·0	+27·7	−71·1
168·423 G	25	108	24	109	264·2	+0·6	+26·7	−56·5
169·488 G	23	120	18	92	263·3	+0·1	+26·5	−43·3
170·630 G	25	78	15	49	263·1	+0·3	+26·9	−28·4
171·336 G	32	78	19	45	263·1	+0·6	+27·4	−19·0
172·300 G	24	97	14	55	262·5	+0·3	+27·6	− 6·8
173·378 G	11	56	6	31	261·4	−0·4	+27·1	+ 6·3
174·361 G	25	97	15	57	263·4	+1·9	+27·3	+21·3
175·351 G	7	14	4	9	265·0	+3·9	+28·0	+36·0
176·402 G	0	5	0	5	267·8	+7·1	+28·7	+52·8
Means ...	...	...	14	55	263·8	...	+27·4	...

Group 11949.

June 18–23. A small regular spot dying out.

169·488 G	9	21	13	29	238·6	0·0	+22·0	−68·0
170·630 G	9	37	8	33	237·9	−0·5	+21·9	−53·6
171·336 G	9	23	7	17	237·7	−0·6	+22·2	−44·4
172·300 G	14	28	9	18	237·3	−0·8	+22·2	−32·0
173·378 G	9	32	5	18	237·0	−0·9	+22·3	−18·1
174·361 G	0	7	0	4	236·6	−1·1	+22·1	− 5·5
Means ...	...	...	7	20	237·5	...	+22·1	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11953.

June 10–25. Two or three small spots extending in longitude.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
170·630 G	14	51	24	89	219·3	0·0	+26·0	−72·2
171·336 G	16	53	20	63	219·2	+0·1	+26·1	−62·9
172·300 G	18	55	15	47	219·3	+0·5	+26·4	−50·0
173·378 G	13	53	9	36	219·9	+1·5	+26·6	−35·2
174·361 G	10	34	6	20	219·7	+1·6	+26·8	−22·4
175·351 G	9	19	5	11	220·5	+2·7	+26·6	− 8·5
176·402 G	7	14	4	8	219·3	+1·9	+26·0	+ 4·3
Means ...	...	...	12	39	219·6	...	+26·4	...

Group 11954.

June 21–27. A very small group comparatively long-lived for its size.

172·300 G	5	9	3	5	241·2	0·0	+15·9	−28·1
173·378 G	0	0	0	0	...	...	...	...
174·361 G	2	9	1	5	244·5	+3·2	+13·9	+ 2·4
175·351 G	9	32	5	17	246·2	+4·9	+14·3	+17·2
176·402 G	9	37	5	22	244·7	+3·4	+13·8	+29·7
177·471 G	7	25	5	18	247·5	+6·1	+13·7	+46·6
178·385 G	2	9	2	9	248·9	+7·5	+13·6	+60·1
Means ...	...	...	3	11	245·5	...	+14·2	...

Group 11955.

June 21–July 3. A group of simple formation, comprising a stable regular spot, *a*, as leader and a smaller spot 8° following in longitude. Between June 28 and 29, there is a sudden development of new spots, and a regular spot emerges as the new follower.

172·300 G	9	37	(34	141	187·8	...	−18·1)	−81·5
173·378 G	32	198	54	311	185·5	0·0	−18·5	−69·6
174·361 G	64	335	62	323	185·7	+0·3	−18·5	−56·4
175·351 G	72	392	54	289	185·8	+0·5	−18·4	−43·2
176·402 G	64	427	39	258	186·9	+1·6	−18·2	−28·1
177·471 G	57	369	31	203	187·2	+2·0	−18·2	−13·7
178·385 G	69	365	37	194	186·2	+1·1	−18·4	− 2·6
179·373 C	76	319	42	175	186·2	+1·2	−18·2	+10·5
180·467 C	99	506	58	297	184·3	−0·7	−18·7	+23·1
181·332 G	105	533	68	345	182·4	−2·5	−19·3	+32·6
182·465 G	61	257	49	211	182·7	−2·1	−19·6	+47·9
183·443 C	29	134	33	153	182·4	−2·3	−19·3	+60·6
184·402 C	9	58	(15	95	179·1	...	−19·6)	+70·0
Means ...	...	...	48	251	185·0	...	−18·7	...

Group 11955—*continued.*

Spot *a*.

d					°	°	°	°
172·300 G	9	37	34	141	187·8	...	−18·1	−81·5
173·378 G	23	166	34	242	187·0	0·0	−18·3	−68·1
174·361 G	55	289	51	269	187·4	+0·5	−18·3	−54·7
175·351 G	58	337	42	243	187·4	+0·6	−18·1	−41·6
176·402 G	55	397	33	238	187·4	+0·6	−18·2	−27·6
177·471 G	55	360	30	198	187·2	+0·5	−18·2	−13·7
178·385 G	60	323	32	171	187·3	+0·7	−18·1	− 1·5
179·373 C	54	268	30	147	187·4	+0·9	−17·9	+11·7
180·467 C	45	245	27	147	187·5	+1·0	−17·8	+26·3
181·332 G	37	157	25	107	187·8	+1·4	−17·6	+38·0
182·465 G	12	72	11	65	187·8	+1·5	−17·4	+53·0
183·443 C	9	45	12	61	187·9	+1·7	−17·4	+66·1

Group 11959.

June 25–July 2. A large stream developing rapidly from a pair of small spots on June 25. The leader, when fully developed about June 29 appears to have come from the fusion of two spots which are clearly separated on June 27.

176·402 G	21	46	11	25	200·2	0·0	+18·8	−14·8
177·471 G	109	539	57	281	200·7	+0·6	+18·7	− 0·2
178·385 G	241	1137	128	608	201·2	+1·1	+18·4	+12·4
179·373 C	201	1206	116	694	201·7	+1·7	+18·4	+26·0
180·467 C	148	1180	103	813	201·8	+1·9	+18·5	+40·6
181·332 G	134	850	117	725	202·3	+2·5	+18·5	+52·5
182·465 G	97	516	137	728	203·8	+4·0	+18·4	+69·0
183·443 C	35	205	123	724	204·3	...	+18·1	+82·5
Means ...	...	...	96	553	201·7	...	+18·5	...

Group 11960.

June 25–30. A small spot with companions on June 27–30 in an extensive area of faculæ.

176·402 G	9	18	10	21	153·2	0·0	−19·8	−61·8
177·471 G	5	23	4	18	154·3	+1·2	−19·4	−46·6
178·385 G	10	32	6	20	156·8	+3·7	−17·7	−32·0
179·373 C	13	38	7	21	157·2	+4·2	−17·5	−18·5
180·467 C	22	94	12	52	150·0	−2·9	−18·1	−11·2
181·332 G	11	37	6	20	149·2	−3·7	−17·6	− 0·6
Means ...	...	...	8	25	153·4	...	−18·4	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Date U.T. Place.	Projected Area: Whole	Projected Area: Umbræ Spots.	Corrected Area: Whole	Corrected Area: Umbræ Spots.	Longitude and Proper Motion.		Lati-tude.	Long. from C.M.
Group 11966.								
July 1–6. A group of minor importance.								
d					°	°	°	°
182·465 G	2	9	1	5	127·3	0·0	+29·7	− 7·5
183·443 C	7	18	4	10	126·7	−0·1	+30·3	+ 4·9
184·402 C	7	25	4	15	127·5	+1·1	+30·5	+18·4
185·397 C	13	27	8	18	127·7	+1·7	+29·9	+31·7
186·370 G	14	35	12	27	127·8	+2·3	+30·0	+44·7
187·395 C	4	9	4	10	129·5	+4·4	+28·8	+60·0
Means ...	...	...	6	14	127·8	...	+29·9	...
Group 11967.								
July 1–11. A small stream of unstable spots.								
182·465 G	7	25	7	26	75·3	0·0	+21·9	−59·5
183·443 C	22	78	17	59	75·1	−0·1	+21·5	−46·7
184·402 C	22	111	15	73	73·2	−1·9	+21·1	−35·9
185·397 C	42	180	23	102	71·9	−3·1	+20·7	−24·1
186·370 G	39	201	21	106	74·0	−0·9	+19·8	− 9·1
187·395 C	13	36	7	19	74·7	−0·1	+19·2	+ 5·2
188·444 C	18	54	10	30	74·6	0·0	+18·4	+18·9
189·417 G	2	5	1	3	75·2	+0·7	+17·5	+32·4
190·431 C	0	0	0	0	...	...	...	...
191·430 C	0	0	0	0	...	...	...	...
192·350 G	4	18	5	24	71·8	−2·4	+19·1	+67·8
Means ...	...	...	10	40	74·0	...	+19·9	...
Group 11968.								
July 5–11. A stream of normal type. *a* is the leader and *b* the follower.								
186·370 G	32	111	17	59	87·9	0·0	−14·5	+ 4·8
187·395 C	123	642	68	357	88·6	+0·7	−14·5	+19·1
188·444 C	109	620	69	392	88·6	+0·7	−14·9	+32·9
189·417 G	125	667	95	508	88·0	0·0	−14·5	+45·2
190·431 C	76	406	77	419	87·9	−0·1	−14·8	+58·5
191·430 C	42	274	74	519	87·6	−0·4	−15·0	+71·5
192·350 G	9	28	(28	88	83·4	...	−14·6)	+79·4
Means ...	...	...	67	376	88·1	...	−14·7	...
Spot *a*.								
186·370 G	14	37	7	20	90·0	0·0	−14·8	+ 6·9
187·395 C	65	357	36	200	90·5	+0·5	−14·8	+21·0
188·444 C	51	321	34	212	91·8	+1·8	−15·2	+36·1
189·417 G	42	252	35	209	92·6	+2·5	−15·1	+49·8
190·431 C	22	143	27	174	93·0	+2·9	−15·4	+63·6
191·430 C	13	120	33	302	93·0	+2·9	−15·7	+76·9
Spot *b*.								
d					°	°	°	°
186·370 G	18	74	10	39	86·8	0·0	−14·2	+ 3·7
187·395 C	58	285	32	157	85·7	−1·1	−13·9	+16·2
188·444 C	49	272	29	163	85·2	−1·6	−14·1	+29·5
189·417 G	74	360	53	256	84·8	−2·1	−14·1	+42·0
190·431 C	54	263	50	245	84·7	−2·2	−14·2	+55·3
191·430 C	29	154	41	217	83·5	−3·4	−14·2	+67·4
192·350 G	9	28	28	88	83·4	−3·5	−14·6	+79·4
Group 11973.								
July 11–16. A small stream.								
192·350 G	7	14	5	10	324·6	0·0	−15·8	−39·4
193·378 G	25	115	15	68	324·6	0·0	−16·4	−25·8
194·328 G	46	148	25	82	326·0	+1·4	−15·7	−11·8
195·506 C	45	168	25	89	326·1	+1·5	−15·6	+ 3·9
196·548 G	16	56	9	32	325·6	+1·0	−16·3	+17·2
197·332 G	14	32	8	20	325·9	+1·3	−15·4	+27·9
Means ...	...	...	15	50	325·5	...	−15·9	...
Group 11974.								
July 11–19. A single spot.								
192·350 G	2	14	12	85	277·2	...	+21·7	−86·8
193·378 G	9	25	15	41	277·5	0·0	+21·6	−72·9
194·328 G	12	46	12	48	277·1	−0·3	+21·4	−60·7
195·506 C	18	71	13	53	276·7	−0·5	+21·4	−45·5
196·548 G	18	69	11	42	276·4	−0·6	+21·2	−32·0
197·332 G	18	69	10	39	276·5	−0·4	+21·0	−21·5
198·495 C	22	49	11	25	276·5	−0·3	+20·9	− 6·1
199·340 G	16	50	8	26	276·2	−0·4	+20·1	+ 4·7
200·396 G	7	19	4	11	276·0	−0·5	+20·2	+18·5
Means ...	...	...	10	36	276·6	...	+21·0	...
Group 11977.								
July 16–27. A regular spot attended by a subsidiary spot which is absorbed by July 19 or 20 into the penumbra of the main spot but becomes detached again by July 22. Meanwhile the axis joining the two umbræ rotates counter-clockwise. A small cluster follows from July 21 to 24.								
197·332 G	14	87	38	229	221·4	0·0	−17·2	−76·6
198·495 C	36	201	41	227	221·8	+0·4	−17·2	−60·8
199·340 G	46	249	39	212	221·6	+0·2	−16·9	−49·9
200·396 G	65	336	44	226	221·3	0·0	−16·9	−36·2
201·328 G	74	375	44	222	221·4	+0·1	−16·7	−23·8
202·363 G	74	341	41	188	221·1	−0·2	−16·9	−10·4
203·390 G	65	313	35	169	220·7	−0·6	−16·7	+ 2·8
204·126 K	47	282	26	155	220·4	−0·9	−17·0	+12·3
205·335 G	51	226	31	137	220·4	−0·8	−16·4	+28·3
206·352 G	18	175	13	128	220·8	−0·4	−15·9	+42·1
207·343 G	14	124	14	120	221·1	−0·1	−15·8	+55·5
208·363 G	12	69	19	109	221·1	−0·1	−15·8	+69·0
Means ...	...	...	32	177	221·1	...	−16·6	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued*.

Group 11981.

July 22–28. Intermittent; a large area of faculæ in which small ephemeral spots appear.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
a					°	°	°	°
203·390 G	0	5	0	5	161·6	0·0	−21·3	−56·3
204·126 K	0	13	0	12	155·5	−6·0	−22·7	−52·6
205·335 G	0	0	0	0	...	...	...	...
206·352 G	0	14	0	8	166·8	+5·8	−23·3	−11·9
207·343 G	0	0	0	0	...	...	...	...
208·363 G	2	9	1	5	162·8	+2·2	−22·3	+10·7
209·380 C	4	7	2	4	161·9	+1·5	−23·1	+23·3
Means ...	...	...	0	5	161·7	...	−22·5	...

Group 11987.

July 28–Aug. 8. A stream showing at first the greater activity in its following component. New spots in the preceding part develop after Aug. 3.

209·380 C	7	22	14	42	66·7	0·0	−19·7	−71·9
210·473 G	10	32	11	34	66·2	−0·4	−19·6	−58·0
211·334 G	37	75	30	58	68·6	+2·0	−19·8	−44·2
212·353 C	40	148	25	96	67·9	+1·4	−18·4	−31·4
213·435 G	87	302	49	172	68·3	+1·9	−17·5	−16·7
214·426 C	60	400	33	220	67·6	+1·3	−17·5	− 4·3
215·361 C	117	673	65	373	67·8	+1·5	−18·4	+ 8·3
216·425 G	138	545	83	329	68·8	+2·6	−17·9	+23·3
217·335 G	167	765	117	531	69·9	+3·8	−18·1	+36·5
218·352 G	96	529	84	466	70·8	+4·7	−18·1	+50·8
219·438 C	34	200	52	288	70·4	+4·4	−18·1	+64·8
220·402 G	9	34	23	86	68·7	+2·7	−17·6	+75·8
Means ...	...	...	51	237	68·4	...	−18·5	...

Group 11992.

Aug. 5–13. A small persistent spot with a companion on Aug. 10 in the same area of disturbance as Group 11990.

217·335 G	5	9	7	12	325·3	0·0	+25·9	−68·1
218·352 G	2	9	2	8	325·6	+0·6	+26·0	−54·4
219·438 C	0	0	0	0	...	...	...	...
220·402 G	5	16	3	10	322·0	−2·4	+25·7	−30·9
221·409 G	5	23	3	13	321·2	−2·9	+26·0	−18·4
222·403 G	7	14	4	7	321·2	−2·6	+26·0	− 5·2
223·397 C	0	0	0	0	...	...	...	...
224·115 K	4	13	2	7	322·1	−1·1	+25·2	+18·3
225·385 C	0	9	0	6	319·7	−3·1	+26·2	+32·7
Means ...	...	...	2	7	322·4	...	+25·9	...

Group 11995.

Aug. 7–17. A stream of spots increasing rapidly to its maximum development on Aug. 9. The follower, *b*, somewhat composite in structure, is the largest and longest-lived component. *a* is the leader.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
a					°	°	°	°
219·438 C	13	60	15	75	308·2	0·0	−32·2	−57·4
220·402 G	94	385	87	356	308·3	+0·6	−31·3	−44·6
221·409 G	137	735	106	562	307·4	+0·3	−31·6	−32·2
222·403 G	105	699	73	483	306·5	−0·1	−31·7	−19·9
223·397 C	115	689	75	450	304·5	−1·5	−31·8	− 8·8
224·115 K	96	585	62	377	303·6	−2·0	−32·5	− 0·2
225·385 C	58	407	39	273	301·5	−3·4	−33·1	+14·5
226·405 C	57	329	42	241	300·4	−4·0	−32·8	+26·9
227·334 G	41	244	34	205	299·6	−4·3	−32·4	+38·4
228·332 G	27	141	29	149	298·3	−5·0	−32·4	+50·3
229·389 G	7	23	11	36	297·4	−5·3	−32·0	+63·3
Means ...	...	...	52	292	303·2	...	−32·2	...

Spot *a*.

221·409 G	18	96	13	67	312·0	0·0	−28·7	−27·6
222·403 G	14	71	9	45	312·8	+1·2	−28·5	−13·6
223·397 C	13	40	13	24	313·2	+2·0	−28·4	− 0·1
224·115 K	17	34	11	21	313·2	+2·3	−28·7	+ 9·4
225·385 C	9	20	6	14	313·1	+2·7	−28·7	+26·1
226·405 C	2	9	2	7	312·9	+2·9	−29·2	+39·4

Spot *b*.

220·402 G	44	174	44	172	305·7	0·0	−32·8	−47·2
221·409 G	76	396	61	317	305·0	−0·1	−33·1	−34·6
222·403 G	73	481	52	342	303·6	−1·0	−33·2	−22·8
223·397 C	89	582	59	384	302·8	−1·2	−32·8	−10·5
224·115 K	66	498	43	324	302·2	−1·4	−33·2	− 1·6
225·385 C	49	387	33	259	301·2	−1·6	−33·0	+14·2
226·405 C	55	320	40	234	300·1	−2·2	−32·8	+26·6
227·334 G	41	244	34	205	299·6	−2·1	−32·4	+38·4
228·332 G	27	141	29	149	298·3	−2·9	−32·4	+50·3
229·389 G	7	23	11	36	297·4	−3·2	−32·0	+63·3

Group 11996.

Aug. 8–14. A small group of stream type consisting simply of two spots which separate in longitude.

220·402 G	5	9	10	18	279·9	0·0	−13·7	−73·0
221·409 G	23	50	24	51	281·8	+1·9	−14·4	−57·8
222·403 G	37	87	28	67	281·0	+1·0	−14·3	−45·4
223·397 C	53	159	34	102	280·5	+0·5	−14·0	−32·8
224·115 K	38	101	22	59	280·9	+0·9	−14·1	−22·9
225·385 C	22	42	12	23	280·8	+0·7	−14·1	− 6·2
226·405 C	7	31	4	17	279·6	−0·5	−15·0	+ 6·1
Means ...	...	...	19	48	280·6	...	−14·2	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 11999.

Aug. 9–19. A stream of rather unstable spots.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
221·409 G	14	60	27	116	263·4	0·0	+18·8	−76·2
222·403 G	14	80	15	88	262·7	−0·6	+18·8	−63·7
223·397 C	25	100	20	80	262·5	−0·7	+19·3	−50·8
224·115 K	17	59	11	40	262·9	−0·2	+18·7	−40·9
225·385 C	84	340	47	190	262·6	−0·4	+19·4	−24·4
226·405 C	90	411	48	216	262·8	0·0	+20·1	−10·7
227·334 G	82	346	42	178	261·9	−0·8	+20·5	+ 0·7
228·332 G	103	311	54	163	260·4	−2·2	+20·8	+12·4
229·389 G	52	301	28	170	260·0	−2·5	+20·8	+25·9
230·488 G	32	214	21	141	257·7	−4·7	+21·1	+38·1
231·123 K	19	110	15	82	258·5	−3·8	+20·9	+47·3
Means	...	...	30	133	261·4	...	+19·9	...

Group 12001.

Aug. 11–19. A small group of intermittent activity.

223·397 C	4	9	2	6	277·0	0·0	+14·8	−36·3
224·115 K	0	0	0	0	...	...	...	...
225·385 C	0	0	0	0	...	...	...	...
226·405 C	13	40	7	20	280·4	+3·3	+14·8	+ 6·9
227·334 G	13	34	7	18	282·2	+5·1	+15·0	+21·0
228·332 G	0	0	0	0	...	...	...	...
229·389 G	2	5	1	4	279·1	+2·0	+14·9	+45·0
230·488 G	28	110	27	108	279·3	+2·1	+14·5	+59·7
231·123 K	21	146	26	184	278·9	+1·7	+14·3	+67·7
Means ...	...	...	8	38	279·5	...	+14·7	...

Group 12003.

Aug. 12–19. A stream of small spots.

224·115 K	6	13	9	20	231·4	0·0	+24·0	−72·4
225·385 C	19	88	19	83	229·6	−1·5	+24·0	−57·4
226·405 C	27	122	20	91	228·0	−2·9	+23·9	−45·5
227·334 G	45	128	29	80	226·9	−3·7	+23·7	−34·3
228·332 G	30	82	17	46	226·8	−3·6	+24·0	−21·2
229·389 G	10	37	6	19	226·2	−3·9	+23·7	− 7·9
230·488 G	0	9	0	5	229·4	−0·5	+24·0	+ 9·8
231·123 K	4	11	3	6	229·5	−0·2	+24·0	+18·3
Means ...	...	...	13	44	228·5	...	+23·9	...

Group 12004.

Aug. 13–20. One or two small spots not seen on Aug. 16–19.

d					°	°	°	°
225·385 C	4	11	3	7	256·5	0·0	−17·8	−30·5
226·405 C	9	15	5	9	259·4	+3·0	−17·5	−14·1
227·334 G	4	9	2	5	261·1	+4·7	−17·2	− 0·1
228·332 G	0	0	0	0	...	...	...	...
229·389 G	0	0	0	0	...	...	...	...
230·488 G	0	0	0	0	...	...	...	...
231·123 K	0	0	0	0	...	...	...	...
232·399 G	2	9	3	13	259·6	+3·5	−18·3	+65·3
Means ...	...	...	2	4	259·2	...	−17·7	...

Group 12011.

Aug. 21–31. A pair of spots of which the leader remains after Aug. 25.

233·474 G	2	10	3	18	107·9	0·0	− 9·1	−72·2
234·346 G	28	77	30	82	108·8	+0·8	− 9·1	−59·8
235·364 G	32	182	24	139	109·3	+1·1	− 8·9	−45·8
236·351 G	37	146	23	89	110·6	+2·3	− 8·6	−31·5
237·349 G	25	146	14	79	111·6	+3·2	− 7·9	−17·3
238·379 G	23	112	12	58	113·1	+4·5	− 7·4	− 2·2
239·360 G	25	107	13	57	113·3	+4·6	− 7·2	+11·0
240·411 G	25	96	14	55	113·4	+4·5	− 7·3	+25·0
241·356 G	14	32	9	21	113·6	+4·6	− 7·2	+37·6
242·379 G	9	18	8	15	114·4	+5·3	− 7·6	+52·0
243·333 G	9	16	11	20	114·5	+5·2	− 7·8	+64·7
Means ...	...	...	15	58	111·9	...	− 8·0	...

Group 12015.

Aug. 25–Sept. 1. A pair of spots; the follower breaks up into a cluster on Aug. 28–29, and this has disappeared by Aug. 30.

237·349 G	5	9	3	5	105·2	0·0	−16·0	−23·7
238·379 G	28	79	16	44	105·5	+0·3	−16·1	− 9·8
239·360 G	89	428	48	231	105·8	+0·6	−15·6	+ 3·5
240·411 G	64	344	36	195	105·5	+0·3	−15·5	+17·1
241·356 G	64	251	40	160	106·0	+0·8	−15·4	+30·0
242·379 G	27	119	21	92	107·0	+1·8	−15·2	+44·6
243·333 G	14	66	14	67	106·3	+1·1	−15·3	+56·5
244·571 G	2	5	4	10	106·7	+1·5	−15·0	+73·2
Means ...	...	...	23	100	106·0	...	−15·5	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12017.

Aug. 26–Sept. 1. A small spot followed by faculæ in which Group 12019 appears on Aug. 29. There is a companion spot on and after Aug. 29.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
238·379 G	2	7	4	15	37·7	0·0	+16·4	−77·6
239·360 G	5	11	6	13	37·2	−0·5	+16·9	−65·1
240·411 G	7	14	6	11	37·2	−0·4	+16·9	−51·2
241·356 G	0	7	0	4	37·5	−0·1	+16·9	−38·5
242·379 G	27	82	15	46	36·3	−1·3	+17·6	−26·1
243·333 G	14	29	8	15	37·3	−0·2	+17·1	−12·5
244·571 G	9	18	5	9	35·6	−1·9	+17·7	+ 2·1
Means ...	...	...	6	16	37·0	...	+17·1	...

Group 12022.

Sept. 1–8. A small ephemeral group of few spots, not seen on Sept. 5–7.

244·571 G	2	5	4	10	321·6	0·0	−15·6	−71·9
245·337 G	14	41	19	53	319·7	−1·9	−15·7	−63·7
246·355 C	13	40	11	34	320·3	−1·3	−15·5	−49·6
247·511 G	2	5	1	3	324·1	+2·5	−15·8	−30·5
248·368 G	0	0	0	0	...	...	...	...
249·389 G	0	0	0	0	...	...	...	...
250·365 G	0	0	0	0	...	...	...	...
251·335 G	5	14	3	8	325·3	+3·7	−15·7	+21·2
Means ...	...	...	5	14	322·2	...	−15·7	...

Group 12030.

Sept. 10–18. A regular spot breaking up after Sept. 12 into a small cluster; some faint markings follow on Sept. 17.

253·653 G	2	9	10	43	192·1	...	−17·5	−81·4
254·358 G	14	59	28	117	191·9	0·0	−16·9	−72·3
255·106 K	25	138	33	179	190·8	−1·1	−17·3	−63·6
256·447 G	23	97	18	76	192·4	+0·6	−17·2	−44·3
257·337 G	18	99	12	65	192·4	+0·6	−17·2	−32·5
258·387 G	22	76	13	44	192·3	+0·6	−17·0	−18·7
259·331 G	9	22	5	12	192·9	+1·2	−17·1	− 5·7
260·128 K	8	38	4	21	191·1	−0·6	−17·2	+ 3·1
261·370 G	9	32	5	19	191·2	−0·4	−18·3	+19·5
Means ...	...	...	15	67	191·9	...	−17·3	...

Group 12032.

Sept. 12–22. A stream of very unstable components, none predominating in size.

d					°	°	°	°
255·106 K	10	65	19	122	178·6	0·0	+15·8	−75·8
256·447 G	23	81	20	72	180·2	+1·6	+16·4	−56·5
257·337 G	27	145	20	106	178·2	−0·4	+16·0	−46·7
258·387 G	68	326	40	193	179·8	+1·2	+15·3	−31·2
259·331 G	84	380	46	203	179·5	+0·9	+15·4	−19·1
260·128 K	54	268	28	137	179·9	+1·3	+15·4	− 8·1
261·370 G	36	144	18	74	180·6	+2·0	+15·4	+ 8·9
262·337 C	17	54	9	30	183·2	+4·6	+15·8	+24·3
263·363 G	7	22	4	13	177·4	−1·2	+14·8	+32·0
264·616 G	0	0	0	0	...	...	...	...
265·445 G	0	4	0	4	181·2	+2·6	+16·0	+63·3
Means ...	...	...	19	87	179·9	...	+15·6	...

Group 12033.

Sept. 13–18. A typical "bi-polar" group with sudden development.

256·447 G	2	18	1	12	251·0	0·0	−29·1	+14·3
257·337 G	129	471	89	324	249·2	−1·4	−29·5	+24·3
258·387 G	90	541	73	440	249·2	−0·9	−30·0	+38·2
259·331 G	59	357	59	362	248·0	−1·7	−29·8	+49·4
260·128 K	40	218	55	297	247·9	−1·4	−30·0	+59·9
261·370 G	8	43	28	154	249·1	+0·2	−30·7	+77·4
Means ...	...	...	51	265	249·1	...	−29·8	...

Group 12035.

Sept. 14–20. A stream in which the leading and following components both break up into small clusters.

257·337 G	11	73	24	155	151·6	0·0	−17·3	−73·3
258·387 G	41	224	48	266	150·7	−0·8	−17·9	−60·3
259·331 G	45	184	38	155	150·6	−0·9	−17·9	−48·0
260·128 K	40	186	29	136	148·8	−2·6	−18·8	−39·2
261·370 G	27	131	16	79	150·3	−1·1	−18·2	−21·4
262·337 C	24	94	13	53	150·5	−0·8	−18·4	− 8·4
263·363 G	18	59	10	33	152·8	+1·6	−18·0	+ 7·4
Means ...	...	...	25	125	150·8	...	−18·1	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12037.

Sept. 16–26. A small single spot until Sept. 19 when a companion appears. This pair of spots then develops into a fairly large group in which the leader is a regular spot and the follower has a double umbra.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
259·331 G	4	9	5	12	135·2	0·0	−17·7	−63·4
260·128 K	4	13	4	12	135·2	+0·1	−17·8	−52·8
261·370 G	2	7	1	5	135·1	+0·1	−17·7	−36·6
262·337 C	22	44	14	28	133·3	−1·6	−20·5	−25·6
263·363 G	27	90	16	52	133·8	−1·0	−20·4	−11·6
264·616 G	108	437	62	249	133·2	−1·5	−20·4	+ 4·4
265·445 G	133	760	78	448	133·8	−0·8	−20·6	+15·9
266·518 G	103	547	68	362	133·6	−0·8	−20·6	+29·9
267·505 G	63	316	50	251	134·1	−0·2	−20·2	+43·4
268·371 C	20	152	21	162	135·3	+1·0	−20·2	+56·0
269·119 K	8	37	14	63	138·2	+4·0	−20·2	+68·8
Means ...	...	...	30	149	134·6	...	−19·7	...

Group 12039.

Sept. 18–29. A cluster of irregular spots drawn out later into a stream.

261·370 G	16	90	39	221	97·4	0·0	−21·8	−74·3
262·337 C	48	344	65	464	95·7	−1·5	−21·8	−63·2
263·363 G	58	590	54	549	95·0	−2·0	−22·1	−50·4
264·616 G	97	504	68	356	94·0	−2·8	−22·5	−34·8
265·445 G	77	371	48	232	94·4	−2·3	−22·4	−23·5
266·518 G	65	316	38	184	94·9	−1·6	−22·3	− 8·8
267·505 G	31	208	17	119	94·0	−2·3	−22·3	+ 3·3
268·371 C	42	232	25	136	93·9	−2·2	−21·5	+14·6
269·119 K	21	79	14	50	92·8	−3·2	−22·3	+23·4
270·679 G	0	13	0	10	90·2	−5·5	−21·3	+41·4
271·383 G	0	0	0	0	...	...	...	...
272·366 G	0	11	0	20	95·4	0·0	−24·1	+68·9
Means ...	...	...	31	195	94·3	...	−22·2	...

Group 12041.

Sept. 21–29. A group of stream type, which collapses rather suddenly.

264·616 G	43	178	39	161	80·1	0·0	−23·5	−48·7
265·445 G	41	194	30	144	80·5	+0·6	−23·5	−37·4
266·518 G	80	282	51	178	81·5	+1·8	−23·3	−22·2
267·505 G	62	215	36	125	81·2	+1·8	−23·3	− 9·5
268·371 C	65	282	38	164	81·7	+2·5	−23·4	+ 2·4
269·119 K	49	265	29	158	81·1	+2·0	−23·5	+11·7
270·679 G	18	81	13	58	83·5	+4·8	−23·3	+34·7
271·383 G	15	43	12	34	79·5	+1·0	−24·6	+40·0
272·366 G	13	62	13	60	77·6	−0·7	−25·1	+51·1
Means ...	...	...	29	120	80·7	...	−23·7	...

Group 12042.

Sept. 21–Oct. 2. A regular spot followed by tiny companions. On Sept. 25, a double umbra has developed in the main spot which divides on Sept. 26 into two parts that separate in longitude.

264·616 G	22	94	40	172	59·8	0·0	−24·3	−69·0
265·445 G	43	254	51	298	59·4	−0·2	−23·6	−58·5
266·518 G	109	446	90	367	60·3	+0·9	−23·8	−43·4
267·505 G	128	609	90	420	59·5	+0·4	−24·2	−31·2
268·371 C	93	562	58	349	60·1	+1·2	−23·8	−19·2
269·119 K	133	605	79	359	59·4	+0·6	−24·1	−10·0
270·679 G	87	611	51	361	58·9	+0·5	−23·6	+10·1
271·383 G	105	598	64	367	58·9	+0·7	−23·7	+19·4
272·366 G	76	428	52	297	58·7	+0·7	−23·4	+32·2
273·424 G	63	299	54	258	59·3	+1·5	−23·3	+46·7
274·392 C	28	131	34	158	59·7	+2·1	−23·3	+59·9
275·505 G	7	36	19	99	60·7	+3·4	−23·1	+75·6
Means ...	...	...	57	292	59·6	...	−23·7	...

Group 12051.

Sept. 24–Oct. 5. A small spot on Sept. 24, 25 and 26; afterwards a stream of small unstable spots of which one is left on Oct. 4 and 5.

267·505 G	4	9	9	19	13·0	0·0	+14·4	−77·7
268·371 C	4	15	5	17	13·9	+0·9	+14·5	−65·4
269·119 K	8	15	7	13	14·1	+1·1	+14·2	−55·3
270·679 G	31	112	20	71	11·1	−1·9	+15·1	−37·7
271·383 G	31	128	18	74	10·1	−3·0	+15·4	−29·4
272·366 G	36	107	19	57	9·9	−3·2	+15·4	−16·6
273·424 G	40	121	21	62	10·9	−2·2	+15·6	− 1·7
274·392 C	17	54	9	28	12·1	−1·0	+15·6	+12·3
275·505 G	0	0	0	0	...	...	...	...
276·361 G	16	51	10	32	9·3	−3·8	+15·2	+35·5
277·405 G	2	7	2	6	14·2	+1·1	+13·7	+54·2
278·527 G	4	16	5	19	11·7	−1·5	+17·0	+66·5
Means ...	...	...	10	33	11·8	...	+15·1	...

Group 12052.

Sept. 26–Oct. 2. A single spot on Sept. 26 preceding the development of a small stream of normal type.

269·119 K	4	19	2	11	38·6	0·0	+16·0	−30·8
270·679 G	40	159	20	81	38·7	+0·1	+15·4	−10·1
271·383 G	52	260	27	133	38·0	−0·6	+15·5	− 1·5
272·366 G	44	194	23	100	37·0	−1·6	+15·1	+10·5
273·424 G	22	69	12	39	37·9	−0·7	+15·2	+25·3
274·392 C	13	47	9	32	43·1	+4·5	+16·7	+43·3
275·505 G	2	9	2	8	41·2	+2·6	+17·9	+56·1
Means ...	...	...	14	58	39·2	...	+16·0	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12054.

Sept. 27–Oct. 9. A large composite spot resolving into a regular spot preceded and followed by companions. The chief spot develops a double umbra on Oct. 4, partly breaks up and then diminishes rapidly.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
270·679 G	47	179	125	476	328·2	...	+16·8	−80·6
271·383 G	69	627	107	972	327·1	0·0	+17·3	−72·4
272·366 G	103	762	98	730	327·8	+0·7	+17·2	−58·7
273·424 G	156	950	110	678	327·1	+0·1	+17·3	−45·5
274·392 C	125	922	75	553	326·8	−0·2	+17·6	−33·0
275·505 G	129	937	68	497	326·9	−0·1	+17·5	−18·2
276·361 G	116	892	59	455	327·1	+0·2	+17·2	− 6·7
277·405 G	112	807	57	412	327·3	+0·4	+16·8	+ 7·3
278·527 G	109	598	60	329	327·5	+0·6	+16·7	+22·3
279·396 G	67	406	40	244	327·2	+0·4	+16·9	+33·4
280·380 G	40	209	29	153	327·2	+0·4	+16·7	+46·4
281·529 G	11	71	11	73	327·1	+0·3	+16·5	+61·5
282·397 G	7	22	11	35	326·5	−0·2	+16·1	+72·3
Means ...	...	...	60	428	327·1	...	+17·0	...

Group 12056.

Sept. 28–Oct. 9. A tiny stream which expands on Oct. 2 for a few days.

271·383 G	4	9	8	18	327·7	0·0	−19·9	−71·8
272·366 G	13	31	14	33	328·9	+1·3	−18·8	−57·6
273·424 G	18	38	14	30	328·2	+0·7	−19·9	−44·4
274·392 C	13	34	8	22	329·3	+1·9	−18·8	−30·5
275·505 G	65	147	38	88	325·8	−1·5	−19·8	−19·3
276·361 G	33	112	18	63	326·6	−0·6	−19·4	− 7·2
277·405 G	22	89	12	50	328·2	+1·0	−18·7	+ 8·2
278·527 G	29	147	17	89	327·4	+0·3	−18·7	+22·2
279·396 G	22	111	15	77	329·4	+2·4	−19·0	+35·6
280·380 G	16	44	13	37	328·9	+2·0	−18·8	+48·1
281·529 G	18	53	23	68	328·8	+2·0	−18·7	+63·2
282·397 G	13	27	27	55	326·4	−0·3	−20·1	+72·2
Means ...	...	...	17	53	328·0	...	−19·2	...

Group 12061.

Oct. 2–12. A stream of changing spots; on Oct. 5, the leader divides into two parts and these drift apart rapidly in longitude, whilst companion spots appear on Oct. 8.

275·505 G	18	53	23	67	282·1	0·0	−17·4	−63·0
276·361 G	40	174	35	152	284·2	+ 2·2	−17·2	−49·6
277·405 G	56	122	39	83	284·0	+ 2·0	−17·3	−36·0
278·527 G	51	223	30	129	285·5	+ 3·6	−17·3	−19·7
279·396 G	75	284	41	157	287·1	+ 5·3	−17·7	− 6·7
280·380 G	69	368	38	203	287·2	+ 5·4	−18·3	+ 6·4
281·529 G	82	286	49	173	290·3	+ 8·6	−18·7	+24·7
282·397 G	35	98	25	68	291·2	+ 9·6	−18·8	+37·0
283·420 G	26	84	24	80	292·1	+10·5	−20·6	+51·4
284·406 G	16	51	23	72	292·3	+10·8	−20·3	+64·6
285·617 G	0	4	0	13	289·7	+ 8·3	−19·8	+78·0
Means ...	...	...	30	109	287·8	...	−18·5	...

Group 12065.

Oct. 6–17. A small regular spot followed by a companion which has disappeared by Oct. 10.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
279·396 G	13	46	29	101	220·2	0·0	−19·9	−73·6
280·380 G	17	89	19	99	221·6	+1·5	−18·4	−59·2
281·529 G	27	127	21	99	221·3	+1·3	−19·1	−44·3
282·397 G	26	146	17	95	221·7	+1·8	−18·8	−32·5
283·420 G	22	115	13	67	221·5	+1·6	−18·5	−19·2
284·406 G	24	111	13	61	221·0	+1·2	−18·5	− 6·7
285·617 G	18	78	10	44	220·6	+0·9	−18·7	+ 8·9
286·395 G	11	89	6	52	220·3	+0·7	−18·8	+18·9
287·393 C	11	64	7	42	220·2	+0·7	−18·8	+31·9
288·433 G	9	31	7	25	220·5	+1·1	−19·2	+46·0
289·445 G	9	18	10	20	220·5	+1·2	−19·5	+59·3
290·395 C	4	17	8	34	221·1	+1·8	−19·4	+72·4
Means ...	...	...	13	62	220·9	...	−19·0	...

Group 12066.

Oct. 7–13. A pair of spots separating in longitude; the leader remains alone after Oct. 10.

280·380 G	4	18	4	17	236·0	0·0	−33·6	−44·8
281·529 G	13	36	10	27	236·3	+1·0	−34·0	−29·3
282·397 G	27	115	18	78	237·3	+2·5	−33·7	−16·9
283·420 G	22	71	15	46	238·1	+3·9	−33·5	− 2·6
284·406 G	9	18	6	12	239·5	+5·9	−32·7	+11·8
285·617 G	2	4	1	3	239·2	+6·4	−33·5	+27·5
286·395 G	4	13	3	11	239·2	+6·8	−33·2	+37·8
Means ...	...	...	8	28	237·9	...	−33·5	...

Group 12069.

Oct. 9–17. A group of changing spots.

282·397 G	4	13	3	9	210·0	0·0	+20·4	−44·2
283·420 G	0	0	0	0	...	...	...	...
284·406 G	13	36	7	19	211·5	+1·6	+18·6	−16·2
285·617 G	49	169	25	86	211·9	+2·1	+18·4	+ 0·2
286·395 G	25	111	13	57	213·7	+3·9	+17·5	+12·3
287·393 C	30	90	17	51	214·3	+4·6	+17·2	+26·0
288·433 G	22	71	15	47	214·1	+4·4	+17·3	+39·6
289·445 G	11	24	9	21	215·9	+6·3	+17·3	+54·7
290·395 C	4	15	5	18	215·4	+5·8	+16·4	+66·7
Means ...	...	...	10	34	213·4	...	+17·9	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12070.

Oct. 11–19. A short stream led by a regular spot which develops suddenly between Oct. 13 and 14.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
284·406 G	9	36	6	23	193·9	0·0	−15·6	−33·8
285·617 G	9	18	5	10	193·2	−0·7	−14·5	−18·5
286·395 G	44	122	24	66	194·8	+0·9	−14·7	− 6·6
287·393 C	51	368	27	199	196·1	+2·2	−14·8	+ 7·8
288·433 G	73	331	41	190	196·1	+2·1	−15·1	+21·6
289·445 G	53	258	34	171	196·4	+2·4	−15·3	+35·2
290·395 C	19	142	16	116	196·9	+2·9	−14·8	+48·2
291·411 G	13	53	15	63	197·4	+3·4	−15·0	+62·1
292·390 G	4	13	9	29	197·4	+3·4	−14·9	+75·0
Means ...	...	...	20	96	195·8	...	−15·0	...

Group 12071.

Oct. 11–22. A stream led by a regular spot, *a*, that is the sole component after Oct. 17.

284·406 G	48	204	104	454	151·1	0·0	−17·7	−76·6
285·617 G	49	311	53	337	153·3	+2·3	−18·0	−58·4
286·395 G	51	367	42	299	154·4	+3·4	−17·8	−47·0
287·393 C	62	420	40	276	154·7	+3·8	−18·0	−33·6
288·433 G	86	462	50	265	155·7	+4·9	−18·1	−18·8
289·445 G	93	418	51	231	155·5	+4·7	−18·2	− 5·7
290·395 C	59	338	32	185	156·1	+5·4	−18·4	+ 7·4
291·411 G	49	356	29	210	156·3	+5·7	−18·4	+21·0
292·390 G	38	305	25	201	155·5	+4·9	−18·4	+33·1
293·431 G	35	181	28	147	155·4	+4·9	−18·5	+46·8
294·406 C	21	128	23	140	154·6	+4·2	−18·8	+58·8
295·492 G	9	46	20	104	155·9	+5·5	−19·3	+74·4
Means ...	...	...	41	237	154·9	...	−18·3	...

Spot *a*.

284·406 G	31	124	58	233	155·9	0·0	−16·9	−71·8
285·617 G	31	200	31	198	156·0	+0·2	−17·3	−55·7
286·395 G	38	278	30	217	156·5	+0·7	−17·4	−44·9
287·393 C	49	334	31	214	156·8	+1·1	−17·8	−31·5
288·433 G	73	413	42	235	157·1	+1·5	−17·8	−17·4
289·445 G	75	369	41	203	156·8	+1·2	−18·2	− 4·4
290·395 C	59	338	32	185	156·1	+0·6	−18·4	+ 7·4
291·411 G	49	356	29	210	156·3	+0·9	−18·4	+21·0
292·390 G	38	305	25	201	155·5	+0·1	−18·4	+33·1
293·431 G	35	181	28	147	155·4	+0·1	−18·5	+46·8
294·406 C	21	128	23	140	154·6	−0·6	−18·8	+58·8
295·492 G	9	46	20	104	155·9	+0·7	−19·3	+74·4

Group 12072.

Oct. 12–17. A single spot on Oct. 12, 13 and 17: a small cluster on the other days.

d					°	°	°	°
285·617 G	13	31	7	16	217·0	0·0	+19·9	+ 5·3
286·395 G	11	18	6	10	218·8	+1·9	+19·8	+17·4
287·393 C	6	34	4	20	219·0	+2·2	+20·0	+30·7
288·433 G	18	84	13	60	218·5	+1·9	+20·5	+44·0
289·445 G	13	57	12	54	219·3	+2·8	+20·8	+58·1
290·395 C	0	9	0	13	219·1	+2·7	+21·2	+70·4
Means ...	...	...	7	29	218·6	...	+20·4	...

Group 12073.

Oct. 13–24. A moderate-sized stream developing in the usual manner. The leader breaks up into two or three parts on Oct. 21.

286·395 G	2	9	3	14	132·7	0·0	−17·9	−68·7
287·393 C	21	79	20	75	134·3	+1·6	−17·1	−54·0
288·433 G	54	226	40	164	134·1	+1·5	−17·2	−40·4
289·445 G	71	358	44	222	134·0	+1·5	−17·5	−27·2
290·395 C	62	377	34	212	134·6	+2·2	−17·9	−14·1
291·411 G	35	185	19	101	134·8	+2·4	−17·8	− 0·5
292·390 G	40	137	22	77	138·1	+5·7	−17·3	+15·7
293·431 G	54	199	34	126	138·3	+6·0	−17·8	+29·7
294·406 C	43	181	32	137	139·2	+6·9	−17·8	+43·4
295·492 G	18	88	20	99	141·5	+9·3	−18·2	+60·0
296·457 G	9	44	18	89	141·7	+9·6	−18·1	+73·0
297·449 G	7	15	28	61	136·6	...	−17·6	+81·0
Means ...	...	...	26	120	136·7	...	−17·7	...

Group 12074.

Oct. 14–20. A small stream of which only one component is seen on Oct. 17, 19 and 20.

287·393 C	2	9	1	5	157·1	0·0	+13·7	−31·2
288·433 G	9	35	5	19	156·2	−1·0	+14·2	−18·3
289·445 G	15	46	8	23	158·0	+0·8	+13·3	− 3·2
290·395 C	13	34	7	17	160·3	+3·0	+12·2	+11·6
291·411 G	13	49	11	42	160·2	+2·9	+12·1	+24·9
292·390 G	13	31	8	20	162·6	+5·2	+12·1	+40·2
293·431 G	7	13	6	11	163·4	+5·9	+11·9	+54·8
Means ...	...	...	7	20	159·7	...	+12·8	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12075.

Oct. 15–24. An unstable stream.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
288·433 G	11	33	10	30	119·6	0·0	−11·2	−54·9
289·445 G	24	88	17	61	120·8	+1·1	−10·8	−40·4
290·395 C	13	64	8	38	122·4	+2·6	−11·8	−26·3
291·411 G	29	75	16	40	122·4	+2·5	−11·8	−12·9
292·390 G	42	208	22	108	122·3	+2·3	−11·2	− 0·1
293·431 G	75	362	40	193	122·0	+1·9	−11·0	+13·4
294·406 C	34	158	20	91	121·0	+0·9	−11·4	+25·2
295·492 G	22	75	15	53	123·1	+2·8	−11·2	+41·6
296·457 G	13	57	13	55	125·7	+5·3	−10·5	+57·0
297·449 G	4	11	7	18	127·0	+6·6	−10·4	+71·4
Means ...	...	...	17	69	122·6	...	−11·1	...

Group 12077.

Oct. 17–23. A double spot in which the separation between the two umbræ is complete across the penumbra by Oct. 20.

290·395 C	6	47	11	89	72·9	0·0	+22·0	−75·8
291·411 G	27	84	29	91	72·9	+0·2	+22·0	−62·4
292·390 G	27	106	21	83	73·1	+0·6	+22·0	−49·3
293·431 G	29	144	19	92	73·0	+0·6	+22·1	−35·6
294·406 C	21	94	12	54	72·6	+0·4	+22·1	−23·2
295·492 G	13	35	7	19	72·8	+0·8	+22·3	− 8·7
296·457 G	4	15	2	8	72·4	+0·6	+22·3	+ 3·7
Means ...	...	...	14	62	72·8	...	+22·1	...

Group 12078.

Oct. 19–28. An area of feeble but prolonged disturbance.

292·390 G	7	18	8	21	64·8	0·0	−25·7	−57·6
293·431 G	4	9	3	7	67·1	+2·6	−26·0	−41·5
294·406 C	4	13	3	9	65·8	+1·5	−25·7	−30·0
295·492 G	0	0	0	0	...	...	...	...
296·457 G	13	66	8	39	63·0	−0·7	−26·0	− 5·7
297·449 G	13	53	8	31	65·1	+1·7	−25·9	+ 9·5
298·444 G	2	8	1	5	61·5	−1·7	−24·4	+19·0
299·436 C	0	0	0	0	...	...	...	...
300·585 G	4	9	3	8	62·1	−0·5	−22·1	+47·8
301·401 C	4	13	5	16	65·4	+3·0	−22·5	+61·9
Means ...	...	...	4	14	64·4	...	−24·8	...

Group 12080.

Oct. 20–Nov. 1. A sparse stream of considerable extent in longitude. The leader spot, *a*, whose contour is broken by a bright encroachment of the photosphere, finally breaks into two parts on Nov. 1.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
293·431 G	4	22	19	105	23·4	...	+15·7	−85·2
294·406 C	43	205	90	409	19·0	0·0	+16·4	−76·8
295·492 G	79	407	82	431	19·7	+0·7	+17·5	−61·8
296·457 G	86	522	66	404	19·2	+0·2	+16·9	−49·5
297·449 G	99	593	62	373	20·2	+1·3	+16·5	−35·4
298·444 G	120	679	67	377	19·2	+0·3	+17·3	−23·3
299·436 C	87	475	45	244	20·0	+1·1	+16·7	− 9·4
300·585 G	84	354	44	184	21·3	+2·4	+16·4	+ 7·0
301·401 C	63	341	34	184	21·3	+2·4	+16·2	+17·8
302·405 C	55	309	33	185	21·3	+2·5	+16·0	+31·0
303·602 G	44	216	33	162	22·2	+3·4	+16·0	+47·7
304·358 C	59	233	55	219	22·3	+3·5	+16·0	+57·8
305·426 G	22	66	35	104	22·5	+3·7	+16·1	+72·1
Means ...	...	...	54	273	20·7	...	+16·5	...

Spot *a*.

293·431 G	4	22	19	105	23·4	...	+15·7	−85·2
294·406 C	34	175	58	301	21·9	0·0	+15·9	−73·9
295·492 G	66	314	64	305	22·3	+0·4	+16·1	−59·2
296·457 G	66	376	48	274	22·2	+0·3	+16·1	−46·5
297·449 G	75	475	46	290	22·0	+0·2	+16·2	−33·6
298·444 G	79	425	43	230	21·9	+0·1	+16·4	−20·6
299·436 C	68	407	35	208	21·8	0·0	+16·5	− 7·6
300·585 G	75	330	39	172	22·2	+0·4	+16·4	+ 7·9
301·401 C	55	322	30	174	22·1	+0·3	+16·2	+18·6
302·405 C	55	305	33	183	21·8	+0·1	+16·0	+31·5
303·602 G	44	216	33	162	22·2	+0·5	+16·0	+47·7
304·358 C	59	233	55	219	22·3	+0·6	+16·0	+57·8
305·426 G	22	66	35	104	22·5	+0·8	+16·1	+72·1

Group 12081.

Oct. 22–30. A fairly large area of faculæ containing small intermittent spots.

295·492 G	2	9	2	7	42·1	0·0	−27·5	−39·4
296·457 G	0	0	0	0	...	...	...	...
297·449 G	4	20	2	12	36·4	−5·2	−25·3	−19·2
298·444 G	11	33	6	19	35·1	−6·2	−24·7	− 7·4
299·436 C	0	0	0	0	...	...	...	...
300·585 G	2	4	1	2	33·2	−7·6	−24·8	+18·9
301·401 C	13	21	9	14	34·8	−5·7	−23·5	+31·3
302·405 C	8	25	7	20	35·4	−4·9	−24·0	+45·1
303·602 G	4	20	5	26	37·9	−2·1	−23·3	+63·4
Means ...	...	...	4	11	36·4	...	−24·7	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12083.

Oct. 27–Nov. 1. A small regular spot with a companion on Oct. 29.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
300·585 G	4	11	7	18	306·1	0·0	−24·0	−68·2
301·401 C	11	55	12	59	306·5	+0·6	−23·8	−57·0
302·405 C	15	61	12	49	305·7	0·0	−23·6	−44·6
303·602 G	9	18	6	12	305·6	+0·2	−23·5	−28·9
304·358 C	15	53	9	32	305·4	+0·2	−23·5	−19·1
305·426 G	7	18	4	10	305·0	0·0	−24·0	− 5·4
Means ...	...	...	8	30	305·7	...	−23·7	...

Group 12085.

Oct. 27–Nov. 6. A small regular spot slowly diminishing; there is a small follower on Nov. 5.

300·585 G	7	15	31	66	293·0	...	−19·3	−81·3
301·401 C	8	57	14	99	293·1	0·0	−19·5	−70·4
302·405 C	21	78	22	82	292·7	−0·3	−19·5	−57·6
303·602 G	29	101	22	76	292·4	−0·5	−19·8	−42·1
304·358 C	19	102	12	66	292·3	−0·5	−19·4	−32·2
305·426 G	22	92	13	53	291·9	−0·8	−19·8	−18·5
306·392 C	8	68	4	37	291·5	−1·0	−20·2	− 6·2
307·481 C	13	44	7	24	291·3	−1·1	−20·4	+ 7·9
308·438 C	13	27	8	16	291·3	−1·0	−20·4	+20·6
309·554 G	11	27	8	18	289·6	−2·6	−20·3	+33·6
310·454 G	9	18	7	15	291·2	−0·9	−20·1	+47·1
Means ...	...	...	12	49	291·7	...	−19·9	...

Group 12086.

Oct. 29–Nov. 8. A moderate-sized stream.

302·405 C	2	8	3	12	279·1	0·0	+18·8	−71·2
303·602 G	18	62	17	59	276·1	−2·9	+19·9	−58·4
304·358 C	34	148	28	121	273·3	−5·6	+20·9	−51·2
305·426 G	22	159	14	102	274·4	−4·4	+19·8	−36·0
306·392 C	19	127	10	70	277·4	−1·3	+19·3	−20·3
307·481 C	49	344	25	179	277·0	−1·5	+20·2	− 6·4
308·438 C	51	338	27	176	277·2	−1·2	+20·4	+ 6·5
309·554 G	62	276	34	154	277·2	−1·1	+20·8	+21·2
310·454 G	26	138	16	87	278·7	+0·5	+20·4	+34·6
311·407 G	13	73	10	58	280·9	+2·8	+19·5	+49·3
312·443 G	7	22	8	26	282·6	+4·6	+19·0	+64·7
Means ...	...	...	17	95	277·6	...	+19·9	...

Group 12088.

Oct. 30–Nov. 11. A stream of changing spots, the following part being the last to disappear.

d					°	°	°	°
303·602 G	7	22	21	67	255·6	0·0	−15·4	−78·9
304·358 C	11	47	20	86	252·3	−3·3	−15·5	−72·2
305·426 G	38	207	40	220	251·0	−4·6	−15·8	−59·4
306·392 C	38	215	29	166	252·1	−3·5	−15·5	−45·6
307·481 C	25	186	16	117	251·2	−4·4	−16·0	−32·2
308·438 C	64	244	36	138	250·7	−4·9	−16·2	−20·0
309·554 G	46	125	25	67	249·2	−6·4	−16·0	− 6·8
310·454 G	62	204	33	109	250·3	−5·3	−16·4	+ 6·2
311·407 G	72	318	40	179	250·6	−4·9	−16·2	+19·0
312·443 G	25	217	16	139	251·2	−4·3	−16·6	+33·3
313·432 G	11	42	9	33	251·9	−3·6	−16·6	+47·0
314·435 G	9	28	10	31	251·9	−3·6	−16·5	+60·2
315·121 K	4	16	6	22	249·7	−5·8	−15·1	+67·1
Means ...	...	...	23	109	251·1	...	−16·0	...

Group 12090.

Nov. 2–11. A stream of bipolar type *nf* Group 12088.

306·392 C	4	21	4	20	242·3	0·0	−13·1	−55·4
307·481 C	21	156	14	106	243·6	+1·2	−13·1	−39·8
308·438 C	44	329	25	191	244·6	+2·2	−12·7	−26·1
309·554 G	83	469	44	250	244·8	+2·3	−12·8	−11·2
310·454 G	107	418	55	214	245·0	+2·4	−12·5	+ 0·9
311·407 G	31	282	17	151	244·8	+2·2	−12·4	+13·2
312·443 G	31	140	18	81	244·5	+1·8	−12·2	+26·6
313·432 G	13	35	9	24	244·7	+1·9	−12·2	+39·8
314·435 G	7	11	6	10	245·0	+2·2	−12·2	+53·3
315·121 K	4	8	4	9	244·6	+1·7	−12·4	+62·0
Means ...	...	...	20	106	244·4	...	−12·6	...

Group 12092.

Nov. 2–11. A small regular spot with a tiny companion on Nov. 5.

306·392 C	8	34	13	53	225·9	0·0	+14·4	−71·8
307·481 C	17	72	16	68	225·6	−0·3	+14·1	−57·8
308·438 C	23	106	17	76	225·3	−0·7	+14·2	−45·4
309·554 G	30	147	17	86	224·7	−1·3	+14·5	−31·3
310·454 G	26	158	14	85	225·0	−1·0	+14·2	−19·1
311·407 G	26	147	13	75	225·1	−1·0	+14·1	− 6·5
312·443 G	22	92	11	47	225·1	−1·0	+14·2	+ 7·2
313·432 G	20	70	11	38	225·0	−1·1	+14·3	+20·1
314·435 G	13	28	8	17	224·9	−1·2	+14·3	+33·2
315·121 K	6	24	4	17	225·0	−1·2	+14·3	+42·4
Means ...	...	...	12	56	225·2	...	+14·3	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12093.

Nov. 3–12. A small spot on each day with a companion on Nov. 6 and 10.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
307·481 C	4	13	6	20	214·0	0·0	−12·9	−69·4
308·438 C	8	13	8	12	214·6	+0·6	−13·0	−56·1
309·554 G	7	18	5	12	215·3	+1·2	−12·7	−40·7
310·454 G	9	22	5	13	214·8	+0·7	−12·8	−29·3
311·407 G	4	11	2	6	215·9	+1·7	−12·7	−15·7
312·443 G	4	9	2	5	215·9	+1·7	−12·8	− 2·0
313·432 G	2	9	1	5	212·9	−1·4	−15·7	+ 8·0
314·435 G	18	50	10	28	214·0	−0·3	−14·4	+22·3
315·121 K	4	16	3	10	216·8	+2·4	−14·0	+34·2
316·419 C	4	17	3	15	217·7	+3·3	−13·7	+52·2
Means ...	...	...	4	13	215·2	...	−13·5	...

Group 12094.

Nov. 3–9. A small group, not seen on Nov. 6 and 7.

307·481 C	4	13	12	38	204·4	0·0	−12·8	−79·0
308·438 C	8	34	11	46	204·2	−0·3	−12·5	−66·5
309·554 G	9	37	8	31	204·6	+0·1	−12·4	−51·4
310·454 G	0	0	0	0	...	...	...	...
311·407 G	0	0	0	0	...	...	...	...
312·443 G	4	18	2	10	203·9	−0·8	−13·5	−14·0
313·432 G	4	18	2	9	202·7	−2·1	−13·1	− 2·2
Means ...	...	...	5	19	204·0	...	−12·9	...

Group 12096.

Nov. 5–15. A small nondescript group.

309·554 G	2	7	2	8	192·6	0·0	−16·0	−63·4
310·454 G	18	26	15	22	194·0	+1·4	−15·1	−50·1
311·407 G	18	61	12	40	196·1	+3·5	−15·8	−35·5
312·443 G	17	53	9	31	196·3	+3·7	−16·0	−21·6
313·432 G	8	55	4	30	195·0	+2·4	−16·6	− 9·9
314·435 G	13	55	7	29	192·8	+0·2	−17·3	+ 1·1
315·121 K	16	102	9	55	192·6	0·0	−16·8	+10·0
316·419 C	46	202	29	124	196·1	+3·5	−15·2	+30·6
317·570 G	22	101	17	78	197·3	+4·7	−15·0	+47·0
318·456 G	16	44	17	45	197·4	+4·8	−14·9	+58·7
319·442 G	4	13	6	20	194·6	+2·0	−15·0	+68·9
Means ...	...	...	12	44	195·0	...	−15·8	...

Group 12099.

Nov. 8–18. A stream in which the leader, *a*, is predominant throughout, except on the first two days of development.

d					°	°	°	°
312·443 G	7	24	7	24	161·0	0·0	−18·5	−56·9
313·432 G	44	153	34	117	161·1	+0·2	−18·8	−43·8
314·435 G	103	363	64	223	163·8	+2·9	−18·6	−27·9
315·121 K	115	644	66	372	163·5	+2·7	−18·7	−19·1
316·419 C	138	600	75	326	164·1	+3·4	−18·5	− 1·4
317·570 G	131	668	73	373	163·8	+3·2	−18·4	+13·5
318·456 G	106	540	63	322	164·2	+3·6	−18·5	+25·5
319·442 G	90	486	63	339	164·8	+4·3	−18·5	+39·1
320·395 C	59	363	51	316	164·8	+4·4	−18·2	+51·7
321·405 C	38	231	47	286	163·7	+3·3	−18·3	+63·9
322·415 C	17	74	42	182	163·2	+2·9	−18·3	+76·7
Means ...	...	...	53	262	163·4	...	−18·5	...

Spot *a*.

314·435 G	61	234	37	140	165·9	0·0	−18·3	−25·8
315·121 K	55	262	31	147	166·4	+0·5	−18·2	−16·2
316·419 C	101	470	55	254	166·0	+0·2	−18·0	+ 0·5
317·570 G	96	528	54	296	165·7	0·0	−18·0	+15·4
318·456 G	89	462	53	277	165·5	−0·1	−18·2	+26·8
319·442 G	81	469	57	328	165·1	−0·4	−18·4	+39·4
320·395 C	59	363	51	316	164·8	−0·6	−18·2	+51·7
321·405 C	38	231	47	286	163·7	−1·7	−18·3	+63·9
322·415 C	17	74	42	182	163·2	−2·1	−18·3	+76·7

Group 12100.

Nov. 8–19. A regular spot near which companions, forming and disappearing, sometimes nearly coalesce with it.

312·443 G	34	157	61	285	146·2	0·0	−18·6	−71·7
313·432 G	50	300	54	320	145·9	−0·2	−18·2	−59·0
314·435 G	59	315	46	246	145·8	−0·3	−18·8	−45·9
315·121 K	53	276	36	188	145·8	−0·2	−19·0	−36·8
316·419 C	56	357	32	204	145·7	−0·2	−19·0	−19·8
317·570 G	57	399	31	215	146·0	+0·2	−18·7	− 4·3
318·456 G	54	362	29	195	146·4	+0·7	−18·7	+ 7·7
319·442 G	37	305	21	174	146·1	+0·4	−18·8	+20·4
320·395 C	21	160	13	102	146·1	+0·5	−18·7	+33·0
321·405 C	17	101	13	79	146·1	+0·6	−18·4	+46·3
322·415 C	10	38	11	41	146·3	+0·8	−18·1	+59·8
323·418 C	0	8	0	14	145·4	0·0	−18·1	+72·2
Means ...	...	...	29	172	146·0	...	−18·6	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12101.

Nov. 8–20. A large spot, *b*, preceded by a companion, *a*, with a double umbra. A sudden change in shape is noticeable in *b* between Nov. 11 and 13, and it divides into two parts, b_1, and b_2, the preceding component, b_1, becoming a regular spot.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
312·443 G	20	85	(72	307	136·6	...	− 9·3)	−81·3
313·432 G	96	477	164	790	133·8	0·0	− 7·1	−71·1
314·435 G	189	878	187	862	133·2	−0·8	− 7·0	−58·5
315·121 K	207	1166	164	923	133·2	−0·9	− 7·0	−49·4
316·419 C	210	1356	127	820	133·0	−1·2	− 7·1	−32·5
317·570 G	266	1484	142	791	132·6	−1·8	− 7·4	−17·7
318·456 G	214	1188	109	606	132·4	−2·2	− 7·2	− 6·3
319·442 G	209	979	106	501	133·4	−1·3	− 7·3	+ 7·7
320·395 C	124	867	67	466	133·1	−1·7	− 7·0	+20·0
321·405 C	123	683	75	416	133·2	−1·8	− 7·4	+33·4
322·415 C	84	381	64	286	133·5	−1·6	− 7·5	+47·0
323·418 C	47	265	49	279	134·0	−1·3	− 7·5	+60·8
324·410 C	14	139	25	246	133·3	−2·1	− 7·2	+73·1
Means ...	...	...	107	582	133·2	...	− 7·2	...

Spot *a*.

312·443 G	20	85	72	307	136·6	...	− 9·3	−81·3
313·432 G	26	184	36	254	137·0	0·0	− 8·8	−67·9
314·435 G	53	278	48	250	136·8	−0·4	− 8·8	−54·9
315·121 K	45	313	33	232	136·7	−0·6	− 9·0	−45·9
316·419 C	63	260	37	151	137·0	−0·4	− 8·6	−28·5
317·570 G	64	258	33	134	137·0	−0·6	− 8·7	−13·3
318·456 G	48	207	24	106	137·0	−0·8	− 8·8	− 1·7
319·442 G	41	183	21	95	136·8	−1·1	− 9·0	+11·1
320·395 C	23	107	13	60	136·8	−1·2	− 8·7	+23·7
321·405 C	13	59	8	38	136·6	−1·6	− 9·0	+36·8
322·415 C	17	71	14	57	136·8	−1·5	− 8·7	+50·3
323·418 C	8	46	9	53	136·8	−1·7	− 8·6	+63·6

Spot *b* (becoming b_1 and b_2).

313·432 G	70	293	128	536	131·3	0·0	− 6·3	−73·6
314·435 G	136	600	139	612	131·8	+0·3	− 6·5	−59·9
315·121 K	162	853	131	691	131·8	+0·2	− 6·7	−50·8
316·419 C	147	1096	90	669	131·8	+0·1	− 6·8	−33·7

Spot b_1.

317·570 G	88	451	47	239	134·0	0·0	− 7·1	−16·3
318·456 G	74	388	38	198	134·3	+0·2	− 6·9	− 4·4
319·442 G	83	408	42	208	134·3	0·0	− 6·7	+ 8·6
320·395 C	67	365	36	197	134·3	−0·1	− 6·5	+21·2
321·405 C	63	328	39	203	134·5	−0·1	− 6·7	+34·7
322·415 C	50	176	38	134	134·8	+0·1	− 7·0	+48·3
323·418 C	29	164	31	175	134·8	−0·1	− 7·2	+61·6
324·410 C	10	105	19	197	134·3	−0·7	− 7·1	+74·1

Group 12101—*continued.*

Spot b_2.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ Spots.	Corrected Area Whole	Corrected Area Umbræ Spots.	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
317·570 G	114	775	62	418	130·4	0·0	− 6·8	−19·9
318·456 G	92	593	47	302	130·5	0·0	− 6·8	− 8·2
319·442 G	85	388	43	198	130·1	−0·6	− 6·8	+ 4·4
320·395 C	34	395	18	209	129·9	−0·9	− 6·8	+16·8
321·405 C	34	202	20	119	129·9	−1·1	− 6·9	+30·1
322·415 C	17	134	12	95	130·5	−0·6	− 7·5	+44·0
323·418 C	10	55	9	51	129·6	−1·7	− 7·7	+56·4
324·410 C	4	34	6	49	129·1	−2·3	− 7·6	+68·9

Group 12104.

Nov. 11–19. A group of bipolar type synchronous in development with Group 12101 situated closely northwards.

315·121 K	16	69	13	56	133·0	0·0	−13·6	−49·6
316·419 C	69	384	44	240	132·5	−0·5	−13·9	−33·0
317·570 G	109	463	60	254	132·6	−0·5	−13·7	−17·7
318·456 G	79	344	41	181	132·2	−0·9	−13·8	− 6·5
319·442 G	43	225	23	117	131·7	−1·5	−14·2	+ 6·0
320·395 C	42	181	23	100	131·6	−1·6	−14·1	+18·5
321·405 C	14	76	9	46	131·1	−2·1	−14·2	+31·3
322·415 C	4	17	3	12	129·7	−3·6	−14·2	+43·2
323·418 C	4	8	4	8	129·3	−4·0	−14·2	+56·1
Means ...	...	...	24	113	131·5	...	−14·0	...

Group 12110.

Nov. 25–Dec. 4. An extensive stream on nearly the same meridian as Group 12109 and synchronous with its development. The leader, *a*, is large when fully grown but is very unstable.

329·405 C	13	50	11	44	300·5	0·0	−11·0	−53·8
330·431 C	117	500	79	333	301·2	+0·6	−10·9	−39·6
331·556 G	135	1169	76	657	301·9	+1·2	−11·2	−24·1
332·415 G	204	1347	107	705	303·0	+2·2	−10·8	−11·7
333·350 C	152	1175	78	600	303·4	+2·5	−10·7	+ 1·1
334·098 K	161	923	84	480	303·4	+2·4	−11·0	+10·9
335·463 G	76	435	46	263	305·3	+4·2	−10·8	+30·8
336·480 C	59	320	43	234	306·9	+5·7	−10·5	+45·8
337·505 G	30	202	29	202	306·6	+5·3	−11·0	+59·0
338·423 G	26	117	41	185	306·7	+5·3	−10·4	+71·2
Means ...	...	...	59	370	303·9	...	−10·8	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12110—*continued.*

Spot *a*.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
330·431 C	61	318	40	207	302·3	0·0	−10·7	−38·5
331·556 G	48	462	28	268	303·0	+1·5	−11·1	22·1
332·415 G	130	885	68	460	305·0	+2·5	−10·5	−9·7
333·350 C	119	907	61	463	305·3	+2·7	−10·3	+3·0
334·098 K	103	558	54	290	306·3	+3·6	−10·1	+13·8
335·463 G	65	378	40	231	307·2	+4·4	−10·3	+32·7
336·480 C	59	320	43	234	306·9	+4·0	−10·5	+45·8
337·505 G	30	202	29	202	306·6	+3·6	−11·0	+59·0
338·423 G	26	117	41	185	306·7	+3·6	−10·4	+71·2

Group 12113.

Nov. 27–Dec. 3. A small stream north of Group 12109.

331·556 G	50	213	29	125	302·6	0·0	+23·2	−23·4
332·415 G	30	143	16	79	302·5	0·0	+22·9	−12·2
333·350 C	17	75	9	40	303·3	+1·0	+22·7	+1·0
334·098 K	8	30	4	16	304·6	+2·4	+22·5	+12·1
335·463 G	7	22	4	14	304·7	+2·8	+22·3	+30·2
336·480 C	10	42	7	29	299·9	−1·9	+19·8	+38·8
337·505 G	2	9	2	8	301·0	−0·6	+19·9	+53·4
Means ...	...	...	10	44	302·7	...	+21·9	...

Group 12119.

Nov. 28–Dec. 7. A stream of generally unimportant spots in the wake of Group 12112.

332·415 G	13	67	17	86	249·0	0·0	−15·4	−65·7
333·350 C	23	117	20	100	250·0	+1·0	−15·2	−52·3
334·098 K	40	204	28	145	249·9	+0·9	−15·5	−42·6
335·463 G	52	250	30	142	251·0	+2·0	−14·8	−23·5
336·480 C	42	192	21	101	251·2	+2·2	−14·5	−9·9
337·505 G	31	128	16	66	250·8	+1·8	−15·0	+3·2
338·423 G	19	117	10	62	249·6	+0·6	−15·6	+14·0
339·505 G	9	35	5	21	248·2	−0·8	−16·3	+27·0
340·347 C	4	27	3	18	248·6	−0·4	−16·0	+38·5
341·470 G	4	26	3	23	248·4	−0·6	−16·6	+53·1
Means ...	...	...	15	76	249·7	...	−15·5	...

Group 12122.

Nov. 30–Dec. 9. A small but persistent group.

334·098 K	4	12	8	25	218·9	0·0	−28·9	−73·6
335·463 G	4	11	5	13	214·6	−3·7	−29·9	−59·9
336·480 C	8	27	7	23	213·2	−4·6	−30·0	−47·9
337·505 G	17	67	12	48	212·7	−4·7	−29·7	−34·9
338·423 G	26	152	17	97	211·5	−5·5	−30·7	−24·0
339·505 G	13	30	8	17	214·5	−2·0	−29·3	−6·7
340·347 C	10	27	6	16	214·5	−1·6	−29·4	+4·4
341·470 G	7	13	4	8	214·3	−1·3	−29·3	+19·0
342·111 K	6	16	4	10	213·9	−1·4	−29·3	+27·0
343·108 K	4	12	3	9	213·3	−1·6	−29·4	+39·5
Means ...	...	...	7	27	214·1	...	−29·6	...

Group 12131.

Dec. 6–14. A pair of spots on Dec. 6; on Dec. 8, a moderate-sized stream appears.

340·347 C	8	17	9	19	148·1	0·0	+12·3	−62·0
341·470 G	0	0	0	0	...	...	...	...
342·111 K	20	78	13	51	149·3	+1·1	+12·7	−37·6
343·108 K	84	263	48	150	149·1	+0·8	+13·4	−24·7
344·392 C	63	481	33	250	149·2	+0·9	+13·6	−7·6
345·537 G	56	416	30	216	148·8	+0·4	+13·2	+7·1
346·247 K	40	321	22	172	149·1	+0·6	+13·0	+16·7
347·446 G	30	145	18	88	149·0	+0·5	+12·7	+32·4
348·104 K	12	40	8	28	150·0	+1·4	+12·3	+42·1
Means ...	...	...	20	108	149·1	...	+12·9	...

Group 12133.

Dec. 9–19. A stream of changing spots.

343·108 K	20	58	19	55	118·2	0·0	−20·2	−55·6
344·392 C	40	209	27	144	117·5	−0·5	−20·4	−39·3
345·537 G	54	269	32	155	118·1	+0·2	−20·0	−23·6
346·247 K	46	203	25	111	118·0	+0·2	−20·2	−14·4
347·446 G	34	128	18	68	118·1	+0·4	−20·0	+1·5
348·104 K	28	113	15	60	116·0	−1·6	−19·9	+8·1
349·514 G	48	311	28	180	114·0	−3·4	−20·3	+24·6
350·476 G	43	503	28	327	111·9	−5·4	−20·6	+35·2
351·395 C	25	187	19	140	110·0	−7·2	−20·5	+45·4
352·410 C	33	271	35	282	111·0	−6·1	−20·7	+59·8
353·469 G	26	113	50	216	111·4	−5·5	−20·2	+74·1
Means ...	...	...	27	158	114·9	...	−20·3	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12134.

Dec. 10–15. A small spot not seen on Dec. 12, 13 and 14.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
344·392 C	6	21	7	25	94·1	0·0	−23·1	−62·7
345·537 G	4	9	3	7	94·4	+0·6	−22·7	−47·3
346·247 K	0	0	0	0	...	...	...	...
347·446 G	0	0	0	0	...	...	...	...
348·104 K	0	0	0	0	...	...	...	...
349·514 G	0	9	0	5	93·8	+0·8	−24·7	+ 4·4
Means ...	...	...	2	6	94·1	...	−23·5	...

Group 12135.

Dec. 11–22. A large double spot changing considerably after Dec. 15.

345·537 G	16	78	44	214	62·4	0·0	−21·2	−79·3
346·247 K	38	225	59	349	62·3	0·0	−21·1	−70·1
347·446 G	92	557	84	506	62·3	+0·2	−21·2	−54·3
348·104 K	80	519	61	394	62·5	+0·5	−21·3	−45·4
349·514 G	91	594	55	356	62·5	+0·7	−21·3	−26·9
350·476 G	102	639	56	351	62·3	+0·6	−21·3	−14·4
351·395 C	67	520	36	276	61·8	+0·3	−21·4	− 2·8
352·410 C	71	416	38	225	61·7	+0·3	−21·6	+10·5
353·469 G	99	644	57	374	61·3	+0·1	−21·2	+24·0
354·466 G	95	579	63	382	61·2	+0·1	−20·7	+37·1
355·399 C	42	272	34	220	61·7	+0·7	−20·2	+49·9
356·461 G	13	65	15	77	61·8	+1·0	−21·0	+64·0
Means ...	...	...	50	310	62·0	...	−21·1	...

Group 12142.

Dec. 19–25. A small unstable stream *f* Group 12138.

353·469 G	4	13	2	7	18·0	0·0	−24·0	−19·3
354·466 G	17	73	9	39	20·9	+3·1	−24·5	− 3·2
355·399 C	4	17	2	9	17·6	0·0	−23·6	+ 5·8
356·461 G	28	123	16	70	16·4	−0·9	−23·4	+18·6
357·502 G	26	119	17	76	17·1	0·0	−23·5	+33·0
358·329 C	10	79	8	60	17·0	+0·1	−21·2	+43·8
359·417 G	13	52	15	60	21·6	+4·9	−25·1	+62·7
Means ...	...	...	10	46	18·4	...	−23·6	...

Group 12143.

Dec. 19–30. A small stream or cluster not seen on Dec. 25, 28 and 29.

d					°	°	°	°
353·469 G	9	35	16	62	324·7	0·0	−25·1	−72·6
354·466 G	21	56	23	62	323·5	−0·9	−26·0	−60·6
355·399 C	12	29	10	24	322·9	−1·2	−26·1	−48·9
356·461 G	17	43	11	28	323·0	−0·8	−25·3	−34·8
357·502 G	6	35	3	20	323·2	−0·3	−24·9	−20·9
358·329 C	8	33	4	18	322·9	−0·4	−25·0	−10·3
359·417 G	0	0	0	0	...	...	...	...
360·342 C	15	92	8	52	323·2	+0·5	−24·8	+16·5
361·438 G	11	65	7	41	323·4	+1·0	−25·3	+31·1
362·445 C	0	0	0	0	...	...	...	...
363·353 C	8	21	8	20	322·2	+0·4	−26·7	+55·1
364·472 G	2	4	3	6	322·4	+0·9	−27·1	+70·1
Means ...	...	...	8	28	323·1	...	−25·6	...

Group 12144.

Dec. 20–28. A small stream whose early development suggests that a larger group would result.

354·466 G	8	22	20	53	307·1	0·0	+18·3	−77·0
355·399 C	33	166	42	211	306·9	−0·2	+18·1	−64·9
356·461 G	63	227	54	194	306·8	−0·2	+18·2	−51·0
357·502 G	45	229	30	154	306·5	−0·5	+17·6	−37·6
358·329 C	29	158	17	93	307·1	+0·2	+17·2	−26·1
359·417 G	31	121	17	66	307·9	+1·0	+16·9	−11·0
360·342 C	21	100	11	53	309·5	+2·7	+16·7	+ 2·8
361·438 G	9	54	5	30	308·5	+1·7	+16·5	+16·2
362·445 C	4	21	2	13	307·6	+0·9	+17·9	+28·6
Means ...	...	...	22	96	307·5	...	+17·5	...

Group 12147.

Dec. 21–1937, Jan. 2. A stable regular spot with companions on Dec. 28.

355·399 C	6	31	21	106	290·6	...	−29·3	−81·2
356·461 G	19	121	30	191	288·1	0·0	−29·6	−69·7
357·502 G	37	199	38	205	286·6	−1·0	−29·7	−57·5
358·329 C	33	200	27	164	285·9	−1·3	−29·7	−47·3
359·417 G	35	264	23	177	286·4	−0·3	−30·0	−32·5
360·342 C	50	291	30	175	285·7	−0·6	−29·9	−21·0
361·438 G	56	264	32	150	284·8	−1·0	−30·1	− 7·5
362·445 C	42	300	24	171	284·0	−1·3	−30·1	+ 5·0
363·353 C	42	210	24	122	283·2	−1·7	−30·0	+16·1
364·472 G	32	177	21	115	282·8	−1·6	−29·9	+30·5
365·559 G	13	121	10	94	282·4	−1·5	−30·2	+44·4
366·329 C	25	144	24	135	282·0	−1·6	−30·1	+54·1
367·448 G	9	82	13	118	281·3	−1·8	−30·6	+68·2
Means ...	...	...	25	151	284·4	...	−30·0	...

LEDGER II.—NON-RECURRENT GROUPS of SUN SPOTS for the YEAR 1936—*continued.*

Group 12148.

Dec. 22–26. A small short-lived stream.

Date U.T. Place.	Projected Area Whole	Projected Area Umbræ	Corrected Area Whole	Corrected Area Umbræ	Longitude and Proper Motion.		Latitude.	Long. from C.M.
d					°	°	°	°
356·461 G	9	22	10	25	301·7	0·0	+34·5	−56·1
357·502 G	22	101	19	90	299·8	−1·2	+34·8	−44·3
358·329 C	40	204	30	155	299·5	−1·0	+34·7	−33·7
359·417 G	21	86	15	58	297·2	−2·6	+34·5	−21·7
360·342 C	4	33	3	21	294·3	−4·9	+34·8	−12·4
Means ...	...	...	15	70	298·5	...	+34·7	...

Group 12153.

Dec. 24–Jan. 3. A compact stream of unstable spots.

358·329 C	4	12	6	18	263·8	0·0	+12·5	−69·4
359·417 G	15	56	13	49	264·9	+1·0	+12·1	−54·0
360·342 C	12	56	8	38	266·1	+2·1	+11·9	−40·6
361·438 G	79	303	45	174	265·8	+1·7	+11·3	−26·5
362·445 C	133	728	71	388	265·9	+1·7	+10·8	−13·1
363·353 C	145	873	74	448	265·8	+1·5	+11·2	− 1·3
364·472 G	136	851	72	451	266·0	+1·6	+10·9	+13·7
365·559 G	69	618	41	365	267·0	+2·5	+10·5	+29·0
366·329 C	56	383	38	257	267·1	+2·5	+10·4	+39·2
367·448 G	48	264	42	232	267·2	+2·5	+10·3	+54·1
368·349 C	17	58	21	73	266·8	+2·1	+10·5	+65·5
Means ...	...	...	39	227	266·0	...	+11·1	...

Group 12157.

Dec. 28–Jan. 4. A single small spot on each day except Dec. 31, Jan. 1 and 2.

362·445 C	4	8	4	8	217·1	0·0	−10·8	−61·9
363·353 C	4	17	3	13	217·4	+0·2	−11·2	−49·7
364·472 G	4	9	2	5	218·1	+0·8	−11·7	−34·2
365·559 G	0	0	0	0	...	...	...	...
366·329 C	0	0	0	0	...	...	...	...
367·448 G	0	0	0	0	...	...	...	...
368·349 C	4	12	2	6	216·1	−1·6	−10·4	+14·8
369·393 C	2	6	1	3	217·9	+0·1	−10·8	+30·4
Means ...	...	...	2	4	217·3	...	−11·0	...

Group 12158.

Dec. 28–Jan. 5. A regular spot breaking up and disappearing rapidly after Jan. 3.

362·445 C	8	46	13	73	208·9	0·0	+15·3	−70·1
363·353 C	8	25	8	24	209·9	+1·0	+15·5	−57·2
364·472 G	32	132	23	94	210·6	+1·7	+15·5	−41·7
365·559 G	22	160	13	94	211·6	+2·7	+15·7	−26·4
366·329 C	27	150	15	82	212·1	+3·2	+15·5	−15·8
367·448 G	19	117	10	62	212·4	+3·5	+15·4	− 0·7
368·349 C	12	67	6	36	212·7	+3·8	+15·3	+11·4
369·393 C	10	44	6	26	212·3	+3·4	+15·2	+24·8
370·510 G	6	17	4	12	212·4	+3·4	+15·6	+39·6
Means ...	...	...	11	56	211·4	...	+15·4	...

Group 12159.

Dec. 28–Jan. 5. A small group showing feeble but sustained activity.

362·445 C	2	8	4	15	204·2	0·0	−16·4	−74·8
363·353 C	4	21	4	23	204·5	+0·3	−16·3	−62·6
364·472 G	15	48	12	37	203·7	−0·4	−16·7	−48·6
365·559 G	9	13	6	8	204·5	+0·4	−16·9	−33·5
366·329 C	8	17	4	10	204·6	+0·5	−16·4	−23·3
367·448 G	17	28	9	15	203·0	−1·0	−17·3	−10·1
368·349 C	17	92	9	48	202·1	−1·9	−17·3	+ 0·8
369·393 C	8	25	4	13	203·4	−0·6	−17·1	+15·9
370·510 G	4	11	2	7	203·4	−0·6	−17·1	+30·6
Means ...	...	...	6	20	203·7	...	−16·8	...

Group 12165.

Dec. 30–Jan. 8. A disturbed area marked by faculæ and a few small spots

364·472 G	8	35	15	67	179·1	0·0	+ 8·9	−73·2
365·559 G	0	6	0	5	184·3	+5·0	+ 6·8	−53·7
366·329 C	0	8	0	6	180·3	+0·9	+ 6·8	−47·6
367·448 G	19	82	11	48	183·0	+3·5	+ 8·6	−30·1
368·349 C	8	37	4	20	181·7	+2·1	+ 8·2	−19·6
369·393 C	4	8	2	4	182·6	+2·8	+ 7·2	− 4·9
370·510 G	9	39	5	20	182·5	+2·5	+ 7·9	+ 9·7
371·398 C	0	8	0	4	182·5	+2·4	+ 7·8	+21·4
372·412 G	9	39	6	24	182·4	+2·2	+ 7·9	+34·7
373·497 G	2	4	2	3	183·7	+3·3	+ 8·9	+50·2
Means ...	...	...	4	20	182·2	...	+ 7·9	...

Blank page retained for pagination

ROYAL OBSERVATORY, GREENWICH.

Total Areas of Sun Spots and Faculæ

Projected and Corrected for Foreshortening
for each Day, and

Mean Areas and Mean Heliographic Latitude of Sun Spots and Faculæ

for each Rotation of the Sun
and for the Year

1936

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936.

The Mean Time (U.T.) at which the photograph was taken is expressed by the month, day of month, and decimal of a day, reckoned from Greenwich Mean Midnight.

The place where the photograph was taken is indicated in the second column. A photograph taken at Greenwich is indicated by the letter G, and those taken at the Cape and Kodaikánal, by the letters C and K respectively.

The Projected Area is the area as it is measured on the photograph, uncorrected for the effect of foreshortening and expressed in millionths of the Sun's apparent disc.

The Area Corrected for Foreshortening is expressed in millionths of the Sun's visible hemisphere.

U.T.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1936.	d							
January	1·312	C	372	2186	717	256	1527	875
	2·422	C	510	2697	1425	358	2039	1504
	3·396	C	460	2914	3949	299	2022	4183
	4·417	G	499	3131	4252	332	2103	5103
	5·388	C	543	3206	1992	389	2195	2639
	6·360	C	480	2927	1462	348	2021	1971
	7·617	G	408	2441	1582	282	1649	1812
	8·352	C	280	2011	1123	222	1505	1270
	9·396	C	163	1517	1124	190	1567	1430
	10·482	G	145	996	2362	118	791	2759
	11·144	K	140	938	1794	150	946	1871
	12·504	G	190	1007	1986	197	1078	2243
	13·431	C	211	1075	1778	199	1022	2028
	14·472	G	232	1227	2417	252	1217	2814
	15·410	C	308	1669	1008	235	1281	1262
	16·403	C	301	2375	868	208	1638	1167
	17·600	G	449	3045	1291	273	1880	1375
	18·530	G	505	3154	2356	294	1836	2814
	19·382	C	586	3395	1285	337	1945	1852
	20·525	G	565	3508	3311	338	2103	4367
	21·469	G	598	3790	3074	426	2696	3549
	22·396	G	706	3775	2648	588	2973	3170
	23·446	G	622	3589	4002	543	3097	4341
	24·394	C	524	3304	3098	499	3263	3541
	25·350	C	409	2281	1685	361	2156	1921
	26·444	G	380	1852	3434	286	1382	3723
	27·412	C	177	1367	590	98	766	764
	28·461	G	224	1084	789	125	604	1134
	29·447	G	165	935	1461	95	538	1878
	30·518	G	129	621	2149	93	433	2868
	31·406	C	134	757	1604	122	795	2345
February	1·451	G	138	717	3416	139	690	3937
	2·529	G	139	648	2622	124	566	3010
	3·434	G	160	657	3176	113	480	4376
	4·517	G	224	915	2703	155	656	3243
	5·368	C	214	1000	737	159	767	1184
	6·384	G	211	1066	1394	172	813	2110
	7·387	G	205	1104	2090	247	1240	2615
	8·375	G	448	2026	3339	522	2378	3377

U.T.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1936.	d							
February	9·431	C	386	1885	2049	440	2234	2439
	10·422	C	339	1760	1812	331	1629	2172
	11·431	C	411	1888	1408	340	1436	1823
	12·454	G	453	2010	1417	296	1283	1565
	13·519	G	432	1874	1066	246	1100	1240
	14·476	G	445	1912	1067	250	1080	1416
	15·396	C	443	2044	1157	256	1174	1665
	16·419	C	444	1917	1623	319	1381	2026
	17·592	G	292	1481	2220	223	1130	2635
	18·432	C	301	1579	2629	237	1233	2636
	19·438	C	240	1375	2264	196	1111	2448
	20·385	G	238	1160	2229	197	909	3119
	21·409	C	344	1597	2001	262	1187	2797
	22·432	C	381	2337	2027	260	1618	2394
	23·374	C	321	2179	1959	219	1526	2017
	24·591	G	428	2069	1541	289	1385	1959
	25·426	C	402	2296	1238	277	1569	1641
	26·456	C	342	2017	1774	280	1619	1881
	27·355	C	344	1586	2546	300	1432	3069
	28·613	G	324	1310	3458	342	1361	4339
	29·340	C	216	1150	2083	151	810	2718
March	1·413	C	264	1093	2741	191	742	3078
	2·418	C	268	1167	3452	178	741	3527
	3·602	G	246	1064	3306	150	641	3493
	4·499	G	287	1112	2875	174	672	3171
	5·458	G	208	734	1401	135	503	1618
	6·407	G	264	1171	1558	204	892	2171
	7·376	G	314	1390	1397	217	986	1816
	8·367	C	348	1987	1373	257	1462	1558
	9·389	C	298	1639	2413	256	1387	2713
	10·389	G	356	1771	3202	410	1998	4066
	11·409	C	292	1583	1837	340	1941	2445
	12·369	C	235	1229	1140	267	1402	1476
	13·397	C	249	1372	1455	167	931	1476
	14·422	G	274	1300	1133	175	817	1410
	15·402	C	267	1300	2143	162	782	2507
	16·500	G	263	1289	2471	159	776	3221
	17·494	G	208	1051	2207	135	684	2334
	18·436	G	320	1317	2130	217	881	2512

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936—*continued.*

U.T.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1936. March	d 19·523	G	349	1690	2463	255	1246	3209
	20·601	G	402	2051	1951	315	1629	2263
	21·451	G	470	2288	2454	369	1897	2588
	22·475	G	360	1809	2020	332	1725	2629
	23·408	G	248	1159	1949	230	977	2731
	24·389	G	135	740	1796	122	713	2300
	25·401	C	118	608	3358	71	364	3976
	26·345	C	186	1055	2610	169	904	3261
	27·375	G	325	1646	1574	278	1419	2168
	28·376	G	434	2158	1587	313	1600	1831
	29·440	C	337	2272	1869	225	1538	2128
	30·457	G	452	2040	1707	290	1316	1945
	31·423	C	378	2228	2172	242	1402	2467
April	1·327	C	407	2122	2144	254	1295	2767
	2·110	K	361	1935	1839	237	1222	2604
	3·413	C	286	1525	2309	200	1035	2475
	4·342	C	230	1344	2280	168	932	2286
	5·142	K	254	1160	1730	194	848	1989
	6·395	G	369	1727	2290	311	1361	2965
	7·492	G	336	2267	2614	245	1640	3584
	8·598	G	437	2242	2372	335	1662	2992
	9·526	G	371	2396	2068	287	1761	2791
	10·485	G	355	2128	1917	258	1511	2516
	11·424	G	345	2137	2655	255	1581	3064
	12·395	G	334	1882	2191	259	1513	2453
	13·357	C	317	1452	1303	249	1115	1506
	14·372	G	297	1537	1595	182	954	2093
	15·420	G	276	1044	1531	204	790	1789
	16·604	G	246	1177	1907	240	1103	2121
	17·390	G	236	1299	2812	212	1200	3493
	18·446	G	275	1349	2772	215	1067	3348
	19·391	G	348	1645	1967	266	1242	2320
	20·736	G	349	1446	2594	214	865	3268
	21·365	C	332	1666	2511	190	963	3074
	22·348	G	243	1359	1635	161	849	2170
	23·406	G	249	1462	1547	151	837	1878
	24·394	G	209	1267	1221	136	812	1623
	25·397	C	216	1067	2399	152	748	3181
	26·369	G	196	871	1480	153	726	1546
	27·337	G	116	693	1831	121	770	2015
	28·327	G	103	409	1788	138	619	2553
	29·350	G	48	137	1419	76	235	1996
	30·335	G	32	87	2738	28	81	3353
May	1·401	C	67	222	4170	50	168	4663
	2·374	C	50	181	3377	32	111	3773
	3·571	G	37	157	2245	22	88	2598
	4·374	G	71	256	1616	60	237	1986
	5·562	G	59	287	2188	42	195	2630
	6·420	G	50	318	1888	34	219	2174
	7·564	G	60	251	2689	65	252	3926
	8·343	C	91	450	2373	78	373	3070
	9·434	C	111	548	1936	79	395	1864
1936. May	d 10·657	G	136	629	1438	151	665	1869
	11·408	G	168	898	1398	152	872	1762
	12·622	G	209	1157	1328	169	904	1650
	13·555	G	279	1339	2068	199	950	2686
	14·431	C	307	1475	2519	199	959	3457
	15·462	G	287	1599	1563	194	1042	2191
	16·353	G	250	1359	2287	162	850	2524
	17·461	G	192	1169	2446	120	698	2540
	18·335	G	196	950	1741	122	571	2119
	19·336	G	150	691	1325	91	423	1752
	20·334	G	165	786	540	72	339	796
	21·403	G	69	331	923	61	296	1183
	22·398	G	97	392	1431	84	371	1777
	23·421	G	80	283	1650	103	359	2243
	24·377	G	141	542	2408	127	464	2817
	25·428	G	231	1070	2031	177	797	2513
	26·486	G	223	959	2210	169	728	2598
	27·611	G	149	782	1113	115	590	1586
	28·354	G	174	794	1149	182	880	1747
	29·334	G	176	960	2036	144	902	2467
	30·603	G	209	1176	1965	153	861	2210
	31·347	G	249	1498	980	156	987	1135
June	1·374	G	202	1463	717	131	927	819
	2·463	C	280	1446	1949	180	921	2349
	3·377	G	250	1264	1336	155	795	1832
	4·424	G	229	1344	1727	140	808	2192
	5·416	G	281	1309	1158	165	763	1579
	6·392	G	221	1004	523	143	652	615
	7·380	C	175	793	1636	127	578	1583
	8·329	G	259	1255	2645	243	1157	3146
	9·366	G	163	878	2135	163	1001	3047
	10·468	C	97	426	2012	69	289	2606
	11·457	G	78	335	1568	48	204	1643
	12·333	G	92	334	896	55	202	1283
	13·381	C	62	210	2946	38	129	3132
	14·377	G	49	230	2039	30	146	2244
	15·415	G	27	131	961	65	250	1576
	16·330	G	112	759	1029	177	1293	1470
	17·423	G	201	954	1173	200	989	1575
	18·488	G	212	1296	1199	168	1007	1260
	19·630	G	270	1467	2573	187	981	3134
	20·336	G	306	1364	1748	192	826	2361
	21·300	G	256	1269	1181	177	831	1541
	22·378	G	213	1103	1368	157	815	1625
	23·361	G	235	1114	812	170	802	1052
	24·351	G	277	1352	1393	202	974	1996
	25·402	G	292	1474	2073	271	1242	2579
	26·471	G	250	1395	1113	170	966	1256
	27·385	G	373	1778	2323	247	1166	2541
	28·373	C	303	1604	2117	195	989	2336
	29·467	C	280	1823	1126	180	1191	1306
	30·332	G	294	1543	1564	241	1233	2008

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936—*continued.*

U.T.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1936.	d							
July	1·465	G	215	1083	1548	259	1349	1967
	2·443	C	155	730	2694	250	1255	3469
	3·402	C	102	497	2748	83	419	3060
	4·397	C	97	449	3349	77	386	3216
	5·370	G	109	455	1514	100	424	2179
	6·395	C	140	687	1428	79	386	2078
	7·444	C	127	674	1778	79	422	2033
	8·417	G	157	774	533	143	704	944
	9·431	C	146	782	1707	155	851	2180
	10·430	C	159	858	3184	183	1052	3428
	11·350	G	163	848	2149	152	760	2454
	12·378	G	195	856	1623	126	542	2257
	13·328	G	204	1065	1741	118	614	2297
	14·506	C	220	1236	1806	124	672	2229
	15·548	G	240	1419	1150	134	775	1074
	16·332	G	275	1475	792	187	1023	1150
	17·495	C	222	1295	1097	158	943	1570
	18·340	G	161	850	2193	127	688	2419
	19·396	G	117	580	2288	97	497	2524
	20·328	G	110	522	1899	122	562	2571
	21·363	G	95	421	1616	65	280	2021
	22·390	G	86	435	2195	54	278	2237
	23·126	K	92	496	1771	57	301	1849
	24·335	G	109	497	1689	65	292	2037
	25·352	G	80	429	815	49	275	935
	26·343	G	103	566	910	74	421	1046
	27·363	G	80	391	1394	75	373	1679
	28·380	C	94	258	2694	136	389	3286
	29·473	G	149	625	1565	171	741	2141
	30·334	G	240	987	1820	183	726	1953
	31·353	C	340	1675	1832	223	1092	2081
August	1·435	G	408	1760	2129	241	1028	2521
	2·426	C	261	1541	1362	152	899	1693
	3·361	C	293	1612	1032	173	957	1211
	4·425	G	324	1403	771	275	1079	1252
	5·335	G	347	1629	1667	296	1368	2049
	6·352	G	257	1347	2677	264	1370	3102
	7·438	C	171	882	2595	167	889	2983
	8·402	G	218	886	1621	209	799	2272
	9·409	G	298	1333	2082	233	1022	2701
	10·403	G	271	1310	2093	185	901	2150
	11·397	C	281	1306	1763	186	855	1899
	12·115	K	237	1103	985	162	751	1351
	13·385	C	232	1053	1465	150	682	2086
	14·405	C	218	1016	2384	136	648	2236
	15·334	G	234	1013	3376	194	967	3472
	16·332	G	289	1093	2726	243	1025	3432
	17·389	G	244	1224	2747	190	948	3584
	18·488	G	242	1198	2235	172	836	2516
	19·123	K	218	1355	2121	154	937	2090
	20·399	G	242	1174	2302	138	665	2714
1936.	d							
August	21·474	G	220	1072	1085	128	621	1689
	22·346	G	229	898	1219	169	638	1384
	23·364	G	193	1023	1813	162	864	2302
	24·351	G	165	742	2312	137	633	3039
	25·349	G	175	838	2594	187	933	3445
	26·379	G	194	900	2310	184	905	2830
	27·360	G	279	1369	3376	196	1003	3715
	28·411	G	292	1922	2149	184	1250	2649
	29·356	G	363	2169	1723	223	1343	2071
	30·379	G	374	2141	665	233	1302	621
	31·333	G	384	2183	1241	254	1395	1669
September	1·571	G	224	1171	2318	170	833	2879
	2·337	G	176	856	2632	156	692	3598
	3·355	C	155	771	3645	146	727	4475
	4·511	G	143	607	2880	132	603	3506
	5·368	G	160	732	1863	153	839	2405
	6·389	G	159	728	1546	126	505	1770
	7·365	G	179	800	1250	97	440	1411
	8·335	G	169	748	610	92	407	779
	9·517	G	201	802	373	124	486	622
	10·653	G	260	1263	1795	197	953	2010
	11·358	G	214	1254	3150	201	1149	3116
	12·106	K	207	1202	3376	242	1359	4113
	13·447	G	127	768	2213	145	915	2545
	14·337	G	226	1051	1861	216	1180	2415
	15·387	G	229	1217	1262	178	975	1475
	16·331	G	212	1011	982	160	778	1053
	17·128	K	146	731	1137	120	607	1401
	18·370	G	113	490	1012	122	596	1565
	19·337	C	129	604	2625	115	627	3313
	20·363	G	154	940	2134	111	758	2300
	21·616	G	313	1334	1818	247	1051	2444
	22·445	G	340	1695	3010	258	1250	3674
	23·518	G	418	1769	3551	289	1216	3796
	24·505	G	359	1589	2146	244	1070	2363
	25·371	C	248	1371	2126	160	899	2237
	26·119	K	246	1116	1233	158	710	1269
	27·679	G	252	1306	1086	274	1309	1501
	28·383	G	302	1768	3046	267	1725	4181
	29·366	G	318	1769	3286	244	1425	3849
	30·424	G	392	1855	3573	343	1639	5193
October	1·392	C	265	1590	3454	201	1206	4010
	2·505	G	337	1836	2072	236	1256	2369
	3·361	G	389	2129	2241	242	1288	2910
	4·405	G	411	2329	1461	236	1301	2131
	5·527	G	507	2698	1842	363	1840	2366
	6·396	G	593	3039	1651	390	2027	2455
	7·380	G	599	2911	3131	382	1872	3623
	8·529	G	474	2382	4707	323	1608	5120
	9·397	G	412	2009	2894	304	1420	3374

TOTAL AREAS of SUN SPOTS and FACULÆ for EACH DAY in the YEAR 1936—*continued*.

U.T.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1936.	d							
October	10·420	G	322	1641	2806	249	1247	3423
	11·406	G	327	1730	4058	358	1885	5159
	12·617	G	282	1397	2208	213	1235	2949
	13·395	G	241	1293	1863	151	836	2356
	14·393	C	271	1548	2314	173	983	2478
	15·433	G	370	1655	1808	253	1112	2412
	16·445	G	337	1550	914	251	1165	1235
	17·395	C	221	1291	2504	199	1204	3242
	18·411	G	186	853	3849	137	591	5093
	19·390	G	189	867	3049	127	573	3744
	20·431	G	222	983	2075	157	710	2226
	21·406	C	170	796	2860	182	848	3549
	22·492	G	145	664	2390	147	716	2591
	23·457	G	125	704	1441	107	595	1561
	24·449	G	140	727	1654	116	519	2728
	25·444	G	133	720	1562	74	401	2202
	26·436	C	150	784	1757	80	411	2082
	27·585	G	214	869	2592	205	815	3037
	28·401	C	183	1057	3141	148	912	3887
	29·405	C	220	1183	3031	173	940	3555
	30·602	G	269	1176	2379	233	1009	2942
	31·358	C	261	1445	2460	206	1103	2770
November	1·426	G	298	1632	1434	217	1129	1674
	2·392	C	209	1440	767	153	987	1187
	3·481	C	297	1613	2581	198	1053	2980
	4·438	C	344	1757	2779	243	1220	3189
	5·554	G	413	1881	1918	321	1478	2470
	6·454	G	547	2514	2594	390	1835	2977
	7·407	G	455	2582	2925	312	1761	3381
	8·443	G	469	2476	3398	414	2138	4158
	9·432	G	509	2674	2637	462	2364	3431
	10·435	G	674	3136	2905	481	2214	3598
	11·121	K	678	3620	2639	442	2358	2873
	12·419	C	679	3972	2157	404	2360	2192
	13·570	G	781	4102	2009	470	2413	2495
	14·456	G	597	3128	2944	345	1792	3687
	15·442	G	462	2517	1932	297	1638	2348
	16·395	C	293	1840	2070	219	1356	2345
	17·405	C	240	1350	1078	210	1184	1376
	18·415	C	200	913	2090	226	1019	2548
	19·418	C	185	1061	2378	149	873	2788
	20·410	C	182	1179	1592	129	895	2002

U.T.		Place.	Projected Area.			Area Corrected for Foreshortening.		
			Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1936.	d							
November	21·458	G	209	1144	1751	119	649	2288
	22·492	G	218	1167	628	119	638	687
	23·393	C	295	1913	1051	219	1311	1305
	24·488	C	280	2275	3511	199	1519	4104
	25·405	C	318	2136	2457	237	1559	2904
	26·431	C	549	3459	1525	477	3081	1839
	27·556	G	840	5360	2849	683	4174	3630
	28·415	G	1082	6753	3875	852	4773	4735
	29·350	C	950	6708	1319	589	4116	1811
	30·098	K	1196	7216	3489	712	4256	4064
December	1·463	G	1078	6616	2411	704	4302	3341
	2·480	C	984	6212	2637	651	4053	3293
	3·505	G	820	5459	4768	570	3697	4966
	4·423	G	789	4361	5443	579	3187	5868
	5·505	G	605	3325	3787	444	2336	4443
	6·347	C	622	3500	3248	416	2346	3623
	7·470	G	534	2896	3913	408	2293	4379
	8·111	K	356	2257	3265	296	1974	3839
	9·108	K	312	1581	1313	261	1447	1579
	10·392	C	228	1364	1690	162	940	1951
	11·537	G	199	1123	2512	170	907	2994
	12·247	K	204	1111	2627	182	990	3382
	13·446	G	233	1193	2945	227	1148	3469
	14·104	K	176	915	2780	161	815	3344
	15·514	G	189	1175	2897	135	806	3666
	16·476	G	184	1384	4156	114	862	4595
	17·395	C	136	961	1325	83	579	1471
	18·410	C	170	981	1342	111	707	1730
	19·469	G	278	1468	2211	264	1350	3044
	20·466	G	318	1600	2064	297	1397	2792
	21·399	C	283	1500	2311	255	1336	2528
	22·461	G	415	1807	3766	319	1405	4530
	23·502	G	448	2097	4174	314	1467	4765
	24·329	C	400	2148	2477	316	1676	3264
	25·417	G	454	2194	3816	326	1546	4734
	26·342	C	499	2515	2431	344	1730	3136
	27·438	G	503	2247	3277	315	1414	3595
	28·445	C	442	2309	2719	324	1658	3538
	29·353	C	428	2318	2367	307	1705	2860
	30·472	G	569	2600	5024	498	2238	5887
	31·559	G	493	2580	2960	345	1795	3532

MEAN AREAS of SUN SPOTS and FACULÆ for each ROTATION of the SUN, from 1936, Jan. 3 to Dec. 21.

The Mean Areas have been formed by taking the means of the areas for each day of observation throughout each Rotation of the Sun, the Projected Areas being the areas as measured on the photographs and expressed in millionths of the Sun's apparent disc, and the Areas Corrected for Foreshortening being expressed in millionths of the Sun's visible hemisphere.

The Rotations adopted in the following table (which is in continuation of those for the years 1873–1935 printed in the Greenwich Observations for 1884 and succeeding years) 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 being that meridian which passed through the ascending node of the Sun's equator on the ecliptic at mean noon on January 1, 1854, and the assumed period of the Sun's sidereal rotation being 25·38 days. The numeration of the rotations is in continuation of Carrington's series (*Observations of Solar Spots made at Redhill* by R. C. Carrington, F.R.S.), No. 1 being the rotation commencing 1853 November 9. The dates of commencement of the rotations are given in Greenwich Mean Time, reckoning from midnight.

No. of Rotation.	Date of Commencement of each Rotation.			No. of Days on which Photographs were taken.	Mean of Daily Areas.					
					Projected			Corrected for Foreshortening.		
					Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1101	1936	January	2·74	27	380	2315	2101	285	1714	2481
1102		January	30·08	27	307	1514	1961	240	1178	2410
1103		February	26·42	28	291	1406	2169	232	1130	2583
1104		March	24·74	27	321	1697	2140	236	1231	2600
1105		April	21·01	27	154	789	2078	115	578	2546
1106		May	18·25	28	170	839	1600	123	612	1965
1107		June	14·45	27	203	1047	1718	169	873	2097
1108		July	11·65	27	195	972	1671	145	706	2006
1109		August	7·86	27	246	1227	2110	181	895	2551
1110		September	4·11	27	230	1130	2035	186	943	2456
1111		October	1·38	28	293	1502	2439	214	1092	3011
1112		October	28·67	27	380	2063	2209	272	1453	2643
1113		November	24·98	27	505	3060	2784	372	2201	3307

MEAN AREAS of SUN SPOTS and FACULÆ for the YEAR 1936.

The Mean Projected Areas are expressed in millionths of the Sun's apparent disc.

The Mean Areas Corrected for Foreshortening are expressed in millionths of the Sun's visible hemisphere.

Year.	No. of Days on which Photographs were taken.	Mean of Daily Areas.					
		Projected.			Corrected for Foreshortening.		
		Umbræ.	Whole Spots.	Faculæ.	Umbræ.	Whole Spots.	Faculæ.
1936	366	288	1529	2106	217	1141	2545

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS for each ROTATION of the SUN, from 1936, Jan. 3 to Dec. 21.

The numbers given in the accompanying table have been formed as follows :—

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 Mean Heliographic Latitude of Spotted Area North of 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 ; and for the Mean Distance from the Equator of all Spots the numerical sum of the products, without regard to the sign of the 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.

No. of Rotation.	Date of Commencement of each Rotation.	No. of Days on which Photographs were taken.	Spots North of the Equator		Spots South of the Equator		Mean Heliographic Latitude of entire Spotted Area.	Mean Distance from Equator of all Spots.
			Mean of Daily Areas.	Mean Heliographic Latitude.	Mean of Daily Areas.	Mean Heliographic Latitude.		
1101	1936 January 2·74	27	557	23°·15	1157	25°·23	− 9°·51	24°·56
1102	January 30·08	27	393	20·83	785	25·78	− 10·23	24·13
1103	February 26·42	28	373	21·22	758	23·51	− 8·76	22·76
1104	March 24·74	27	454	17·95	777	21·82	− 7·14	20·39
1105	April 21·01	27	84	19·39	494	22·48	− 16·39	22·03
1106	May 18·25	28	111	16·31	501	20·80	− 14·07	19·98
1107	June 14·45	27	625	20·33	248	18·15	+ 9·39	19·71
1108	July 11·65	27	383	22·02	324	20·37	+ 2·60	21·26
1109	August 7·86	27	395	24·70	500	24·06	− 2·55	24·34
1110	September 4·11	27	306	14·55	637	21·05	− 9·50	18·94
1111	October 1·38	28	573	18·30	519	16·37	+ 1·83	17·38
1112	October 28·67	27	443	15·34	1011	14·68	− 5·53	14·88
1113	November 24·98	27	1046	17·22	1155	17·97	− 1·25	17·62

MEAN HELIOGRAPHIC LATITUDE of SUN SPOTS for the YEAR 1936.

Year	No. of Days on which Photographs were taken.	Spots North of the Equator.		Spots South of the Equator.		Mean Heliographic Latitude of entire Spotted Area.	Mean Distance from Equator of All Spots.
		Mean of Daily Areas.	Mean Heliographic Latitude.	Mean of Daily Areas.	Mean Heliographic Latitude.		
1936	366	463	19°·36	678	21°·02	−4°·63	20°·35

Blank page retained for pagination

ROYAL OBSERVATORY, GREENWICH.

Observations of Solar Flocculi

Made with the

Spectrohelioscope

In the Year

1936

GREENWICH PHOTO-HELIOGRAPHIC RESULTS, 1936

Blank page retained for pagination

OBSERVATIONS OF SOLAR FLOCCULI MADE WITH THE SPECTROHELIOSCOPE IN THE YEAR 1936.

The following observations relate to dark filaments or flocculi visible on the Sun's disc in the light of $H\alpha$ in the immediate vicinity of sunspots, the object of the measures being to determine the motion of these hydrogen flocculi in the line of sight*.

The observations were made at the Royal Observatory, Greenwich, with a spectrohelioscope† lent by the Mount Wilson Observatory and described by Dr. Hale in the *Astrophysical Journal*, **70**, 265–311, 1929. The spectrum is formed by a Rowland grating ruled with 14,438 lines to the inch, the observations being made in the light of $H\alpha$. The portion of the grating covered by the solar beam contains about 43,000 lines. The first order spectrum was used throughout the year, the scale being 1 mm. = 4·35 A. The width of the second slit was usually 0·1 mm. The diameter of the monochromatic image of the sun's disc at the second slit is about 50 mm., of which a strip 6 mm. wide and 28 mm. long is rendered visible by the rotating rectangular prisms. The eyepiece used magnifies twice.

Measures of radial velocity are taken with the "line-shifter", whose scale from 0–10 divisions = 0·37 A. = 17 km./sec. at $H\alpha$. The zero of the $H\alpha$ line is determined from measures of the darkest part of the line in an undisturbed portion of the sun near the centre of the disc. The purpose of the observations being to locate large radial velocities, measured displacements are interpreted as being due to Doppler effects.

The probable error of a single measure of radial velocity, as determined from a number of successive readings, is about 3 km./sec., including the probable error of the zero determination. Three or four measures being generally made on each flocculus, the probable errors of the tabulated values in the third column of the following Table do not usually exceed 2 km./sec., except, perhaps in the case of the larger velocities which have accordingly been rounded off to the nearest 5 km./sec.

* An analysis of the radial velocities of dark *Ha* markings near sunspots, observed at the Royal Observatory, Greenwich, 1930–33, is given in *Monthly Notices*, **94**, 472, 1934.

† In January, the spectrohelioscope was transferred from its temporary mounting on wooden stands to brick piers keyed to the concrete floor of the south attic of the Main Building. A marked improvement resulted in the stability of the instrument, as well as some improvement in the definition of the image. No observations of the sun with the spectrohelioscope were possible during January on account of these alterations.

The systematic error for the smallest velocities observed is less than 0·5 km./sec., as is shown by measures of the Sun's equatorial rotation taken at the limbs.

In the following Table, the headings of which are self-explanatory, particulars are given of each dark flocculus as follows—

(1) The measured component of the radial velocity in km./sec., + indicating motion inwards to the Sun and — outwards from the Sun.

Where two values are given it is to be understood, unless otherwise stated in the footnotes, that different velocities were observed along the length of the flocculus, and that the tabulated values are the extreme velocities measured, which in nearly all cases correspond to the opposite ends of the marking. In those cases in which one end of a flocculus, showing progressive velocities along its length, appeared to touch a sunspot, the radial velocity observed at that extremity of the flocculus is printed in heavy type.

(2) (*a*) The apparent length of the flocculus in minutes of arc, read by means of a scale inserted in the field. An asterisk denotes that the marking was small and roughly circular in shape. The diameters of these circular markings are of the order of 10″.

(*b*) The apparent least distance in minutes of arc from the centre of the nearest sunspot or group of spots. In those cases (indicated by dots in the appropriate column) it was not possible to obtain a measure.

(*c*) The position of the flocculus relative to the group of associated sunspots or to a single component of the group. In cases where a sunspot has been designated in the *Ledgers* in the preceding *Results*, the appropriate letter *a* (the leader of the group) or *b* (the follower) has been added. The abbreviations *n*, *s*, *f*, *p*, *c*, stand respectively for, north, south, following, preceding, central.

(3) Particulars of the associated group of sunspots, abstracted from the *General Catalogue*, including the longitude from the Sun's central meridian at the time of observing the flocculus (deduced from the mean longitude of the sunspots).

Notes have been added of unusual features seen at the time of observation. Flocculi which were apparently descending into sunspots with progressive velocities and which showed a definite curvature of shape are also noted.

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

Dark *Hα* Flocculi.								Associated Group of Sunspots.					
Reference Number.	Date and Time. U.T.			Measured Radial Velocity km./sec.	Length.	Least Distance from Sunspot.	Position relative to Sunspot or Group.	Number of Group.	Longitude from Central Meridian.	Central Meridian. Passage.		Latitude.	Area.
		d	h		′	′			°		d	°	
1	Feb.	6	11·4	−45	1·2	0·4	*n a*	11808	+16	Feb.	5·25	+22	195
2		6	11·4	+26	*	1·0	*sp a*	08	+16				
3		6	12·2	−37	*	2·1	*n*	07	+ 5		6·10	+33	220
4		6	12·2	+29	1·1	2·2	*n*	07	+ 5				
5	Feb.	7	9·8	−60 to +66	1·5	1·2	*s*	11807	+17	Feb.	6·10	+33	220
5		7	10·0	+84					+17				
6		7	10·0	−37 to +34	1·3	1·2	*sf*	07	+17				
7		7	10·5	+21	1·2	1·0	*n a*	15	−85	Feb.	13·89	−27	774
8		7	11·7	−36	*	0·5	*f*	15	−84				
9		7	10·7	−13 to +27	* *	0·2	*p*	14	+51		3·6	+12	384
10	Feb.	8	9·9	−34	0·4	0·4	*f b*	11815	−72	Feb.	13·89	−27	774
11		8	10·0	+43	*	0·8	*sp a*	15	−72				
12		8	10·1	+46	0·5	0·6	*s*	14	+63		3·6	+12	384
13		8	10·2	+31	0·6	0·6	*f*	14	+64				
14		8	10·3	−16	1·1	0·4	*s*	14	+64				
15	Feb.	9	15·5	+72	*	1·0	*sf b*	11815	−56	Feb.	13·89	−27	774
16		10	10·8	−19	1·2	0·6	*f b*	15	−45				
17		10	11·5	+56	0·5	1·0	*sf b*	15	−45				
18		10	12·5	+42	1·0	0·9	*f b*	15	−44				
19		12	10·6	+33	1·7	0·9	*f b*	15	−19				
20	Feb.	12	10·7	0	3·0	2·0	*nf b*	11815	−19	Feb.	13·89	−27	774
21		12	12·4	−27	0·2	0·4	*sf b*	15	−18				
22		12	12·5	+ 6 to +**26**	1·0	0·2	*p b*	15	−18				
23		12	13·3	−34	*	1·8	*sf a*	15	−18				
24		12	15·4	− 7 to +**24**	0·6	0·3	*p b*	15	−16				
25	Feb.	13	10·2	−23 to +56	3·0	1·2	*np b*	11815	− 6	Feb.	13·89	−27	774
26		13	10·6	−22 to +50	2·5	2·0	*nf b*	15	− 6				
27		13	10·7	− 1	1·5	0·8	*s a*	15	− 6				
28		13	11·0	−34	0·5	2·0	*f b*	15	− 6				
29		13	11·0	−31 to +19	3·0	2·0	*n b*	15	− 6				
30	Feb.	14	9·8	+45	*	0·8	*f b*	11815	+ 7	Feb.	13·89	−27	774
31		14	10·1	+40	*	0·2	*s b*	15	+ 7				
32		14	10·1	+31	*	0·5	*f*	22	−10		15·17	+11	42
33		14	12·1	+10	1·8	0·6	*p b*	15	+ 8		13·89	−27	774
34		14	12·1	+51	*	1·0	*nf b*	15	+ 8				
35	Feb.	14	12·1	+10	2·0	0·8	*f b*	11815	+ 8	Feb.	13·89	−27	774
36			12·7-13·4	−210 to +220	..	..	*c*	15	+ 9				
37		20	11·5	+39	*	0·2	*nf*	24	−27		22·52	+16	247
38		24	14·8	+41	1·2	0·7	*nf*	30	− 8		25·24	−31	205
39	Mar.	16	12·3	−20 to + 9	2·0	0·7	*sfb*	52	− 2	Mar.	16·70	−31	420
40	Mar.	16	12·3	+ 6	1·2	0·6	*nb*	11852	− 2	Mar.	16·70	−31	420
41		17	11·8	−22 to + 6	3·0	0·7	*sf b*	52	+10				
42		17	12·3	−31 to +33	0·2	1·5	*nf a*	52	+11				
43		18	9·6	−46 to +**46**	*	0·0	*nf*	58	+18		17·0	−18	276
44		18	9·7	−34 to +**70**	1·2	0·2	*c*	58	+18				

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

Dark *Ha* Flocculi.							Associated Group of Sunspots.					
Reference Number.	Date and Time. U.T.			Measured Radial Velocity km./sec.	Length.	Least Distance from Sunspot.	Position relative to Sunspot or Group.	Number of Group.	Longitude from Central Meridian.	Central Meridian. Passage.		Latitude.	Area.
		d	h		′	′			°		d	°	
45	Mar.	18	9·7	+40	*	..	*c*	11858	+18	Mar.	17·0	−18	276
46		18	9·9-10·3	−32 to +**55**	*	0·1	*nf*	58	+19				
47		18	10·4	−40 to +**60**	*	0·1	*nf*	58	+19				
48		18	10·6	+37	0·8	1·1	*sp*	58	+19				
49		18	15·2	− 6 to +**24**	1·1	0·0	*s*	58	+22				
50	Mar.	18	10·3	+36	*	..	*s*	11855	+ 6	Mar.	17·95	+15	69
51		21	11·0	+**33**	*	0·1	*fa*	59	+38		18·6	−28	305
52		21	11·4	−24 to +35	*	0·1	*sa*	52	+63		16·70	−31	429
52		21	11·5	+55					+63				
53		22	11·8	− 4 to +**41**	1·0	0·3	*na*	52	+76				
54		24	10·7	+41	1·0	..	*p*	56	+63		19·68	+18	8
55	Mar.	24	14·9	+38	0·5	..	*p*	11856	+65	Mar.	19·68	+18	8
56		28	10·7	−60 to +37	*	0·5	*na*	67	−25		30·33	−24	287
57	Apr.	9	13·0	+36	0·3	0·2	*c*	76	+21	Apr.	7·98	+20	580
58		11	10·8	+ 7	*	0·2	*c*	79	− 4		11·79	+12	196
59		18	10·0	+32	*	1·0	*c*	91	−54		22·47	−11	278
60	Apr.	18	10·1	+65	*	0·3	*p*	11891	−53	Apr.	22·47	−11	278
61		24	12·0	+35	*	0·4	*n*	98	−23		26·23	+37	51
62		26	9·9	−17 to +**42**	0·6	0·0	*c*	99	+46		22·9	−27	264
62		26	10·7	−21 to +35					+47				
63		26	11·0	−23	0·4	0·7	*c*	99	+47				
64		26	10·8	+ 3	3·0	0·7	*f*	91	+53		22·47	−11	278
65	Apr.	26	10·9	+43	0·8	0·2	*p*	11897	−30	Apr.	28·7	+37	34
66		26	11·0	+ 1	2·5	1·0	*s*	97	−30				
67		26	11·2	−34 to +46	*	0·3	*f*	11900	+18		25·1	−16	19
68		26	11·2	+40	*	0·2	*p*	0	+18				
69		29	14·9	−36 to +46	*	..	*s*	***1105d***	+60		24·2	+18	11
70	May	5	10·2	+35	*	0·3	*np*	11905	−44	May	8·75	+14	33
71		5	10·5	+32	*	0·2	*sf*	05	−44				
72		5	10·6	0 to +37	3·2	..	*c*	01	+ 8		4·87	−19	38
73		6	9·9	+57	1·0	..	*f*	07	−11		7·28	−22	13
74		6	10·0	+52	0·5	..	*c*	07	−11				
75	May	6	9·8	−38 to +41	*	..	*p*	11905	−31	May	8·75	+14	33
76		7	14·9	− 4	2·0	..	*nf*	05	−15				
77		11	11·2	+ 2	*	0·8	*s*	10	−30		13·72	−25	193
78		16	8·6	+46	0·3	0·4	*np a*	11912	−13	May	17·31	−28	494
79		16	8·7	− 2	1·8	0·2	*c*	12	−13				

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

Dark *Ha* Flocculi.								Associated Group of Sunspots.					
Reference Number.	Date and Time. U.T.			Measured Radial Velocity km./sec.	Length.	Least Distance from Sunspot.	Position relative to Sunspot or Group.	Number of Group.	Longitude from Central Meridian.	Central Meridian. Passage.		Latitude.	Area.
		d	h		′	′			°		d	°	
80	May	16	8·8	− 5	1·8	0·8	*c*	11912	−13	May	17·31	−28	494
81		18	8·9	− 1	2·2	0·8	*c*	12	+14				
82		18	9·1	+ 2	1·0	0·7	*f b*	12	+14				
83		18	9·0	− 3	2·0	0·6	*p*	16	−38		21·28	+19	33
84		19	8·9	−16	2·5	..	*n*	16	−25				
85	May	19	11·8	+ 1	2·7	0·8	*sf a*	11912	+29	May	17·31	−28	494
86		19	13·8	+**47**	0·2	0·2	*s b*	12	+30				
87		19	13·8	+35	0·4	0·5	*s b*	12	+30				
88		19	13·8	+**35**	0·7	0·3	*sf a*	12	+30				
89		20	9·0	+ 1	3·0	0·7	*sf a*	12	+40				
90	May	22	9·2	+ 1	4·2	..	*s*	11919	− 3	May	22·60	−17	45
91		24	10·1	+29	*	0·8	*c*	21	+19		22·95	+11	203
92		24	10·2	+34	*	0·4	*c*	21	+19				
93		24	10·4	+43	0·3	0·2	*f*	19	+24		22·60	−17	45
94		25	9·2	+36	*	0·2	*p*	21	+32		22·95	+11	203
95	May	25	9·5	−24 to +32	*	0·7	*c*	11921	+32	May	22·95	+11	203
96		25	9·8	−21 to +29	0·3	0·5	*f*	21	+32				
97		25	9·6	+38	0·8	..	*f*	25	0		25·41	+36	41
98		25	9·3	−44	*	0·6	*s*	27	−63		30·15	−16	222
99		25	9·5	+28	0·6	0·2	*np*	23	−42		28·61	−23	35
100	May	26	11·6	−40	} 1·7	1·0	*sf*	11921	+47	May	22·95	+11	203
100		26	12·0	+38					+47				
101		26	11·6	+**45**	*	0·3	*f*	21	+47				
102		29	8·5	−28	*	1·5	*n*	31	−69	June	3·54	−17	356
103		29	11·0	−35	1·2	1·0	*nf*	31	−67				
104		29	11·0	+52	1·1	0·9	*f*	31	−67				
105	May	29	10·1	+14 to +**55**	*	0·3	*n a*	11927	−10	May	30·15	−15	222
106		31	9·3	+30	0·8	0·4	*n*	35	+47		27·8	+22	78
107	June	3	9·8	+ 7 to +**47**	0·8	0·2	*n f*	27	+56		30·15	−15	222
108		4	14·8	0	3·0	0·6	*n*	31	+14	June	3·54	−17	356
109		5	16·0	0 to +**60**	2·0	0·2	*c*	31	+28				
110	June	8	8·6	+60	*	0·6	*s f*	11939	+47	June	4·8	+20	114
111		8	10·0	−27	*	0·8	*s f*	38	+58		4·05	−24	385
112		9	8·7	−40	*	0·1	*c*	38	+60				
113		9	8·9	−27	*	1·0	*n*	38	+60				
114		12	8·6	− 2 to +**42**	1·2	0·2	*n*	41	+20		10·85	−25	88

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

Dark *Ha* Flocculi.							Associated Group of Sunspots.				
Reference Number.	Date and Time. U.T.	Measured Radial Velocity km./sec.	Length.	Least Distance from Sunspot.	Position relative to Sunspot or Group.	Number of Group.	Longitude from Central Meridian.	Central Meridian Passage.	Latitude.	Area.
	d h		′	′			°	d	°	
115	June 16 10·3	+60	*	0·3	*sa*	11948	−74	June 21·99	+20	567
115	16 10·8	+36					−73			
116	16 10·5	+36	0·3	0·3	*p b*	48	−73			
117	16 10·6	−47	0·3	0·2	*p b*	48	−73			
118	16 10·8	−41	*	0·3	*s a*	48	−73			
119	16 14·1	−46 to +33	*	0·3	*s a*	48	−71			
120	June 16 15·4	−44 to +55	*	0·3	*s a*	11948	−71	June 21·99	+20	567
121	17 8·6	+65	1·0	0·2	*s a*	48	−61			
122	17 9·2	−34 to +35	*	0·7	*s a*	48	−61			
123	17 9·5	−34 to +49	0·8	0·0	*s a*	48	−61			
124	17 10·4	−100	1·5	0·8	*s a*	48	−60			
124	17 10·9	**+150**	1·0	0·1	*s a*	48	−60			
125	June 17 11·1	−55	* *	0·3	*s a*	11948	−60	June 21·99	+20	567
125	17 11·6	+115					−60			
126	17 13·4	+26	0·8	0·4	*s a*	48	−59			
127	17 8·7	−31 to +55	0·3	0·2	*c*	47	−58	21·72	+27	55
128	17 8·9	−38 to +33	2·0	0·6	*n p*	47	−58			
129	19 15·3	−39 to **+65**	0·7	0·0	*c*	52	+15	18·5	+19	30
130	June 20 8·9	+24	0·8	1·0	*np b*	11948	−21	June 21·99	+20	567
131	20 9·0	− 2	0·8	0·1	*c*	52	+25	18·5	+19	30
132	22 8·9	+43	*	0·2	*c*	48	+ 5	21·99	+20	567
133	22 15·4	+50	*	..	*c*	48	+ 9			
134	22 15·4	+38	*	0·8	*nf a*	48	+ 9			
135	June 22 9·0	− 2 to **+35**	0·9	0·1	*sf*	11955	−70	June 27·67	−19	251
136	23 10·7	+38	*	1·0	*f a*	48	+19	21·99	+20	567
137	23 11·7	−42 to +45	1·6	..	*c*	55	−55	27·67	−19	251
138	24 10·1	+34	*	0·6	*p a*	55	−43			
139	24 10·6	−28	0·2	0·8	*n a*	55	−43			
140	June 25 9·6	+31	0·9	..	*sf*	11960	−62	June 30·1	−18	25
141	25 9·6	+ 4	0·6	..	*n*	60	−62			
142	25 9·8	− 2	0·3	0·2	*np*	48	+45	21·99	+20	567
143	27 11·2	− 3	2·0	..	*s*	60	−35	30·1	−18	25
144	July 8 10·0	+80	*	0·6	*nf b*	68	+45	July 5·0	−15	376
145	July 8 10·1	−26	0·2	0·6	*sf b*	11968	+45	July 5·0	−15	376
146	8 10·5	+31	*	0·8	*n b*	68	+45			
147	8 13·1	−39	0·9	0·6	*f b*	68	+47			
148	11 8·8	+32	*	0·7	*sp b*	70	−41	14·49	+21	464
149	11 9·0	+37	*	0·6	*f a*	70	−41			
150	July 12 10·0	+42	* *	0·3	*n*	11973	−24	July 14·26	−16	50
150	12 10·2	−17 to **+48**	0·5	0·0	*p*	73	−24			
151	14 11·2	−60 to +36	*	0·7	*p a*	70	0	14·49	+21	464
152	14 11·4	+50	*	0·5	*s a*	70	0			
153	15 13·7	+55	1·0	0·2	*n a*	70	+14			
154	16 8·6	− 1	2·5	0·2	*c*	70	+25			

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

Dark *Hα* Flocculi.								Associated Group of Sunspots.					
Reference Number.	Date and Time. U.T.			Measured Radial Velocity km./sec.	Length.	Least Distance from Sunspot.	Position relative to Sunspot or Group.	Number of Group.	Longitude from Central Meridian.	Central Meridian. Passage.		Latitude.	Area.
		d	h		′	′			°		d	°	
155	July	16	8·8	+31	*	0·3	*sf a*	11970	+25	July	14·49	+21	464
156		16	8·9	+37	*	0·6	*nf a*	70	+25				
157		20	8·5	+30	* *	0·2	*n p*	77	−24		22·15	−17	177
158		20	8·6	+ 2	1·0	1·0	*f*	77	−24				
159		20	8·6	−13 to +21	2·2	1·5	*sf*	77	−24				
160	July	24	11·5	+ 1	1·6	0·9	*f*	11977	+31	July	22·15	−17	177
161		24	11·7	+44	*	0·2	*s p*	82	+18		23·1	+23	118
162		27	14·5-15·3	−165 to +55	3·0	..	..	..	+60		..	..	..
163		28	13·8	−23 to +32	* *	0·3	*c*	85	−40		31·64	+26	251
164		28	14·0	+39	0·3	0·3	*s*	86	−71	Aug.	2·94	−26	271
165	July	30	9·3	−36 to +**40**	0·8	0·0	*sp*	11986	−47	Aug.	2·94	−26	271
166		30	11·1	−32 to +**65**	1·0	0·1	*p*	86	−46				
167		30	11·1	+47	0·2	0·9	*n*	86	−46				
168		30	10·4	+55	*	..	*f*	85	−16	July	31·64	+26	251
169	Aug.	6	9·4	+52	1·0	1·5	*n p*	87	+49	Aug.	2·69	−18	237
170	Aug.	10	10·3	+42	*	..	*p*	12000	+39	Aug.	7·5	+13	61
171		14	9·4	+45	*	0·5	*n*	11999	−12		15·32	+20	133
172		15	10·2	+44	*	0·8	*p*	99	+ 1				
173		15	10·3	+ 1	2·0	0·4	*c*	99	+ 1				
174		16	8·8	−25 to +22	3·2	0·4	*nf*	12006	−40		19·42	+22	140
174		16	10·0	−20 to +42					−40				
175	Aug.	20	10·5	−60 to +70	*	0·3	*p*	12006	+13	Aug.	19·42	+22	140
176		22	9·5	+ 2	4·0	0·8	*p*	07	+ 7		21·90	+31	315
177		22	9·5	+32	*	0·2	*s*	11	−56		26·64	− 8	58
178		22	9·7	+36	* *	0·8	*p*	06	+39		19·42	+22	140
179		26	11·2	−46 to +20	3·0	1·0	*p*	16	−63		31·27	−26	603
180	Aug.	27	9·7	−23	0·4	0·8	*p*	12011	+10	Aug.	26·64	− 8	58
181		27	10·5	−37 to +23	1·2	0·8	*p*	11	+11				
182		27	9·8	+15 to +**49**	0·5	0·0	*n*	15	+ 4		27·08	−16	100
183		27	9·9	+ 1 to +36	3·0	0·1	*n p*	16	−51		31·27	−26	603
184		27	9·9	0	0·8	1·4	*sp*	16	−51				
185	Aug.	27	10·0	+35	* *	1·8	*p*	12016	−51	Aug.	31·27	−26	603
186		27	10·9	+37	1·2	1·5	*p*	16	−50				
187		27	13·5	+28 to +60	1·2	1·5	*p*	16	−49				
188		28	11·1	−38	1·8	1·7	*nf*	16	−37				
189		28	11·7	+26 to +**75**	0·8	0·1	*f*	16	−37				
190	Aug.	28	11·7	−37 to +31	1·2	1·5	*sp*	12016	−37	Aug.	31·27	26	603
191		29	8·9-9·7	−35 to +31	2·0	1·5	*sp*	16	−25				
192	Sept.	5	9·5	−**14** to −130	0·6	0·1	*sp*	16	+68				
192		5	9 6	+11 to +**60**					+68				
193		11	9·4	−11	0·9	0·5	*n a*	24	+43	Sept.	8·16	−16	333
194		11	9·5	+41	*	0·8	*s*	26	+62		6·69	+ 9	233

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

Dark *Ha* Flocculi.							Associated Group of Sunspots.					
Reference Number.	Date and Time. U.T.		Measured Radial Velocity km./sec.	Length.	Least Distance from Sunspot.	Position relative to Sunspot or Group.	Number of Group.	Longitude from Central Meridian.	Central Meridian. Passage.		Latitude.	Area.
	d	h		′	′			°		d	°	
195	Sept. 14	8·9	+16 to +**46**	0·8	0·1	*n p*	12033	+25	Sept.	12·5	−30	265
195	14	9·3	+ 2 to +**51**					+25				
196	22	11·2	−41 to +50	*	..	*f*	41	−37		25·26	−24	120
197	22	11·6	−42	0·9	0·1	*nf*	42	−58		26·86	−24	292
198	22	11·7	+27	0·5	0·3	*np*	42	−58				
199	23	13·5	+80	*	0·8	*p*	41	−22		25·26	−24	120
200	Sept. 23	13·7	−70 to +**85**	0·7	0·1	*c*	12041	−22	Sept.	25·26	−24	120
201	23	14·6	−35 to +**40**	0·8	0·0	*n*	39	− 8		24·23	−22	195
202	23	14·8	−26	* *	0·9	*c*	37	+32		21·18	−20	149
203	28	9·0	−38	0·2	1·2	*s*	54	−73	Oct.	3·87	+17	428
204	28	9·5	+22 to +**60**	0·7	0·1	*p*	54	−72				
205	Sept. 29	9·2	+24 to +**49**	1·0	0·2	*n p*	12042	+33	Sept.	26·86	−24	292
206	29	10·0	−45 to +41	1·9	1·0	*f*	54	−59	Oct.	3·87	+17	428
207	29	10·4	−30 to +47	*	1·0	*f*	53	−54		3·55	+ 7	59
208	Oct. 3	9·3	−37 to +38	0·3	0·7	*s p*	61	−46		6·85	−18	109
209	4	10·8	−70 to +55	0·7	0·6	*sp a*	60	−23		6·19	+19	672
210	Oct. 5	12·1	+24 to +**85**	2·5	0·0	*s a*	12060	− 9	Oct.	6·19	+19	672
211	5	12·2	−35 to +29	1·3	1·0	*npa*	60	− 9				
212	5	12·2	−23	*	0·7	*p a*	60	− 9				
213	6	10·2	−31	0·5	0·7	*f a*	60	+ 3				
214	8	13·0	+40	1·0	0·6	*f a*	60	+32				
215	Oct. 10	10·2	−30 to +42	*	..	*p*	12059	+61	Oct.	5·81	−12	12
216	10	10·5	−21 to +45	0·8	0·5	*f a*	60	+56		6·19	+19	672
217	11	10·6	−29 to +40	1·2	0·2	*c*	60	+69				
218	15	10·7	+38	0·4	0·2	*f*	74	−15		16·56	+13	20
219	15	10·9	−35	1·0	0·2	*c*	73	−38		18·31	−18	120
220	Oct. 15	11·0	+38	0·7	1·0	*s*	12073	−38	Oct.	18·31	−18	120
221	15	11·2	+**29**	*	0·1	*n*	73	−37				
222	15	11·3	− 5	2·8	1·0	*p*	73	−37				
223	15	12·2	+31	*	0·4	*f*	75	−51		19·37	−11	69
224	16	9·9	−35	0·5	..	*sp*	69	+52		12·49	+18	34
225	Oct. 16	10·2	+18	*	0·4	*f*	12071	− 7	Oct.	16·93	−18	237
226	16	10·2	− 1	2·0	0·6	*s*	71	− 7				
227	16	10·4	+35	0·4	0·3	*f*	75	−39		19·37	−11	69
228	16	10·4	−32	0·3	0·4	*s*	75	−39				
229	18	10·5	+35	*	0·8	*n a*	71	+20		16·93	−18	237
230	Oct. 18	10·6	−10 to +15	2·0	0·8	*s*	12071	+20	Oct.	16·93	−18	237
231	18	11·1	−21	0·8	2·5	*s p*	76	−56		22·7	+12	50
232	20	9·8	+33	0·8	0·4	*p*	73	+28		18·31	−18	120
233	20	11·6	−27 to +43	1·0	0·4	*n*	73	+29				
234	20	11·6	−23 to +36	1·2	0·7	*sp*	73	+29				
235	Oct. 20	9·9	−16 to +21	1·0	0·8	*f*	12071	+46	Oct.	16·93	−18	237
236	22	12·0	+38	*	0·7	*nf*	80	−61		27·10	+16	273
237	22	12·4	−42	0·6	3·0	*nf*	80	−60				
238	22	12·3	−42	*	0·8	*n*	71	+74		16·93	−18	237
239	24	11·0	+21 to +46	2·0	0·7	*c*	80	−35		27·10	+16	273

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

Dark *Ha* Flocculi.								Associated Group of Sunspots.					
Reference Number.	Date and Time. U.T.			Measured Radial Velocity km./sec.	Length.	Least Distance from Sunspot.	Position relative to Sunspot or Group.	Number of Group.	Longitude from Central Meridian.	Central Meridian. Passage.		Latitude.	Area.
		d	h		′	′			°		d	°	
240	Oct.	24	11·2	+42	*	0·6	*spa*	12080	−35	Oct.	27·10	+16	273
241		25	11·5	−18	0·7	1·0	*fa*	80	−21				
242		28	9·9	−27 to +29	1·2	1·1	*sf*	84	−63	Nov.	2·15	+19	248
243		28	10·0	−18 to +44	1·8	0·9	*n f*	84	−62				
244		28	10·2	−34	*	0·8	*sp*	80	+17	Oct.	27·10	+16	273
245	Oct.	29	9·0	−39	0·2	..	*s*	12081	+46	Oct.	25·91	−25	11
246	Nov.	6	11·3	−61 to +29	0·2	..	*f*	87	+28	Nov.	4·36	−15	257
247		6	11·4	+39	0·6	..	*f*	87	+28				
248		7	12·7	+34	0·8	0·5	*nf*	87	+42				
249		7	12·9	+27	*	0·3	*p a*	95	−46		11·03	+14	400
250	Nov.	8	11·0	−43 to +37	1·0	0·0	*c*	12100	−72	Nov.	13·90	−19	172
251		8	11·2	+40	*	0·8	*p a*	095	−34		11·03	+14	400
252		8	11·5	−50 to +55	*	0·9	*p a*	095	−34				
253		9	10·4	+36	0·8	0·7	*n a*	095	−21				
254		9	11·1	−70 to +37	1·0	0·4	*n a*	095	−21				
255	Nov.	9	11·3	−16 to +50	1·7	..	*c*	12099	+41	Nov.	12·58	−18	262
256		9	11·6	−32 to +29	1·0	0·3	*f b*	101	−71		14·87	−7	582
257		10	11·6	−32 to +16	1·1	0·9	*s b*	101	−58				
258		14	11·1	−35	*	0·9	*p*	101	−5				
259		21	12·0	−27 to +39	0·3	0·8	*f a*	108	−13		22·51	−21	692
260	Dec.	4	9·7	+39	0·8	0·5	*sp*	12112	+27	Dec.	2·33	−15	935
261		7	10·6	+42	0·3	1·6	*s*	115	+49		3·70	+16	744
262		15	10·0	−32	0·5	0·7	*f*	138	−61		20·05	−22	160
263		15	11·8	−30 to +36	*	0·5	*f*	133	+25		13·57	−20	158
264		19	10·0	−38 to +65	0·5	0·1	*c*	39	+58		15·0	+11	151
265	Dec.	19	11·5	−32	0·7	0·8	*c*	12139	+59	Dec.	15·0	+11	151
266		19	11·0	0	2·2	0·8	*f*	38	−8		20·05	−22	160
267		19	11·3	+45	*	0·2	*n*	41	−69		24·70	+23	448
268		22	9·9	−110	*	0·8	*n a*	41	−30				
269		22	10·0	−55	0·2	0·2	*s a*	41	−30				
270	Dec.	22	10·2	>−300	0·7	0·9	*p a*		−30	Dec.	24·70	+23	448
270		22	10·3	−45	0·7	0·9	*p a*	12141	−30				
270		22	10·9	+44	0·3	0·8	*p a*		−30				
271		30	10·2	−30 to +55	0·7	0·0	*f a*	12161	−47	Jan.	2·99	+25	377
272		30	12·2	−34 to +55	0·7	0·2	*sa*	61	−46				

NOTES.

Reference Number.

1. Associated with a minor bright chromospheric eruption ($11^h 22^m$ to $11^h 31^m$ U.T.) 0′·8 preceding *a* of Group 11808.

3., 4. Occurring at the same time as a bright eruption preceding Group 11807.

7. Associated with a bright eruption at the opposite side (*s*) of the leading sunspot of Group 11815.

8., 9., 15. Each of these is associated with a bright chromospheric eruption.

Reference Number.

18. Situated near some small patches of enhanced emission.

23. Associated with a bright eruption recorded from $13^h 08^m$ to $13^h 21^m$.

36. These values are the limiting components of radial velocity of an eruptive dark flocculus, or series of flocculi, associated with a major bright chromospheric eruption commencing at $12^h 30^m$ and fading out at $13^h 27^m$. The associated phenomena are described in the *Journal* of the British Astronomical Association **46**, 196-200, 1936.

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

NOTES—*continued.*

Reference Number.

39. A ∫-shaped marking giving a measured velocity of −20 km./sec. farthest from the sunspot and +9 km./sec. at the end nearest to the spot.

41. A marking nearly identical with No. 39 but with the outward component of velocity nearest the sunspot.

42. The outward (−) component of radial velocity is first seen alone at $12^h\ 13^m$; about 4 minutes later the inward (+) component appears, and the two persist together until the observation ceases at $12^h\ 53^m$, the + component being west of the − component.

44. At the reading of the "line-shifter" corresponding to +70 km./sec., the marking contracts to a dot projected over the penumbra of the sunspot.

45. At the reading corresponding to +40 km./sec., eight small dark markings are visible between the two chief sunspots of the group.

46. The − component of radial velocity is the first to appear, the + component following about 3 minutes later; the − component decreases in magnitude and disappears about $10^h\ 2^m$, whilst the + component increases numerically and is represented by a very dense marking. The extreme velocities measured are tabulated.

47. An absorption marking with outward component of velocity of 40 km./sec. at a distance of 0′·4 north of the sunspot is drawn into it in a counter-clockwise direction.

48. Associated with a minor bright eruption.

52. Associated with a minor bright eruption observed from $11^h\ 25^m$ to $12^h\ 0^m$.

56. The + (inward) component of radial velocity is east of the − component.

62. Associated with some points of enhanced emission.

67. The + component is nearer the sunspot than the − component.

69. The + component is slightly west of the − component.

72. The western tip of the filament has a measured velocity of +37 km./sec.

94. Three dots that persist for an hour.

95. The + component is about 0′·2 westwards of the − component of radial velocity.

96. The − component of radial velocity appears before the + component which disappears last and is a little nearer the sunspot. Activity is first seen at $9^h\ 48^m$, and it persists until $10^h\ 23^m$.

100. } These absorption markings are associated with a brilliant
101. } chromospheric eruption adjacent to the following sunspot of Group 11921. No. 101 comprises two dense dots on the north-preceding edge of the penumbra of this sunspot.

109. Associated with a small but brilliant eruption from $16^h\ 01^m$ to $16^h\ 16^m$.

Reference Number.

112. Situated between the double umbra of a sunspot and near a patch of enhanced emission.

114. This marking moves downwards in a clockwise direction into a sunspot.

121. Adjacent to a patch of enhanced emission.

122. These are the extreme values measured between $8^h\ 58^m$ and $9^h\ 23^m$. The + component is a little west of the − component.

124. Associated with a bright chromospheric eruption; changes are too rapid to follow in detail.

125. Associated with a bright eruption observed from $11^h\ 00^m$ to $11^h\ 20^m$.

126. Associated with a bright eruption.

129. This marking enters the rear sunspot of the group with an observed component of radial velocity of +65 km./sec.

133. } Associated with a minor bright eruption.
134. }

150. Three or four dense blobs giving a measured velocity of +42 km./sec.

151. The + component of radial velocity is 1½′ nearer the sunspot than is the − component.

153. Associated with a bright eruption.

162. These are maximum velocities recorded during the eruption of a dark marking observed between $14^h\ 30^m$ and $15^h\ 21^m$. The + component is not seen until $14^h\ 37^m$. No sunspot is near this position, which is approximately latitude 27°s and 17° east of the C.M.

166. } Associated with a bright eruption.
167. ∫

174. The end of the filament near the sunspot has the outward component of radial velocity.

175. The measured maximum velocities are tabulated of an eruption in which the outward component is first seen.

181. Associated with a bright eruption.

186. A very dense marking associated with a bright eruption.

188. } Associated with a very bright eruption, seen in $H\beta$ as well as in
189. } $H\alpha$, observed between $10^h\ 9^m$ and $11^h\ 30^m$.
190. }

191. The maximum velocities between $8^h\ 56^m$ and $9^h\ 44^m$ are tabulated, the − component appearing first and disappearing at about $9^h\ 30^m$ and the + component appearing at $9^h\ 19^m$ and outlasting the former.

192. This filament, possessing at first an outward component of radial velocity and followed by an inward velocity, is continued beyond the limb as two jet-like prominences about 2′ in height.

OBSERVATIONS OF SOLAR FLOCCULI made with the SPECTROHELIOSCOPE in the YEAR 1936.

NOTES—*continued.*

Reference Number.

195. This descends into the leader sunspot.

196. The — component of radial velocity is slightly east of the + component.

200. These are the extreme velocities measured at the beginning and ending of an eruptive dark flocculus associated with a bright eruption seen from $13^h\ 31^m$ to $13^h\ 55^m$. At $13^h\ 44^m$, the dark marking is very dense and extends over the leader sunspot of Group 12041.

207. The — component of radial velocity (−30 km./sec.) is about 0′·8 west of the + component (+ 47 km./sec.).

209. This is associated with a small patch of enhanced emission.

210. The measured velocity of +24 km./sec. refers to the marking as a whole: that of +85 km./sec. to its western extremity where it enters a small sunspot south of the leader spot of Group 12060.

215. The + component of radial velocity appears about 1′ west of the — component.

227. } Associated with a small bright eruption.
228. }

241. Associated with a small bright eruption.

Reference Number.

246. } Associated with a small bright eruption.
247. }

252. Associated with a small bright eruption.

255. The — component of radial velocity is represented by a marking 0′·8 in length and the + component by a small blob.

261. This marking, observed from $10^h\ 17^m$ to $10^h\ 55^m$, appears larger and denser than the umbra of the middle sunspot of Group 12115 when viewed in the same wavelength (corresponding to +42 km./sec.). A small patch of enhanced emission at zero velocity is observed nearby.

263. A small patch of enhanced emission is just north of the absorption marking.

264. At the reading of the line shifter giving +65 km./sec., the marking appears to enter the leader sunspot.

265. Associated with a bright eruption on the *f* edge of the leader sunspot.

270. This rapidly changing absorption marking is associated with a bright eruption on the *p* edge of the leader sunspot.

271. The *f* end of the marking disappears into a small sunspot which follows the leader spot of the group.

S.O. Code No. 31-36-0-36

SUPPLIED FOR THE PUBLIC SERVICE.

GREENWICH PHOTO-HELIOGRAPHIC RESULTS

1936.